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# BEAUMONT HIGH SCHOOL EXPANSION

for Beaumont Unified School District

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## Abbreviations and Acronyms

### ABBREVIATIONS AND ACRONYMS

|            |  |
|------------|--|
| AAQS       | ambient air quality standards  |
| AB         | Assembly Bill  |
| ACM        | asbestos-containing materials  |
| ADT        | average daily traffic  |
| amsl       | above mean sea level   |
| AQMP       | air quality management plan  |
| AST        | aboveground storage tank   |
| BAU        | business as usual  |
| bgs        | below ground surface   |
| BMP        | best management practices  |
| CAA        | Clean Air Act  |
| CAFE       | corporate average fuel economy                                       |
| CalARP     | California Accidental Release Prevention Program                     |
| CalEMA     | California Emergency Management Agency                               |
| Cal/EPA    | California Environmental Protection Agency                           |
| CAL FIRE   | California Department of Forestry and Fire Protection                |
| CALGreen   | California Green Building Standards Code                             |
| Cal/OSHA   | California Occupational Safety and Health Administration             |
| CalRecycle | California Department of Resources, Recycling, and Recovery          |
| Caltrans   | California Department of Transportation                              |
| CARB       | California Air Resources Board                                       |
| CBC        | California Building Code   |
| CCAA       | California Clean Air Act   |
| CCR        | California Code of Regulations                                       |
| CDE        | California Department of Education                                   |
| CDFW       | California Department of Fish and Wildlife                           |
| CEQA       | California Environmental Quality Act                                 |
| CERCLA     | Comprehensive Environmental Response, Compensation and Liability Act |
| cfs        | cubic feet per second  |
| CGS        | California Geologic Survey   |
| CMP        | congestion management program  |

## Abbreviations and Acronyms

|                   |  |
|-------------------|--|
| CNDDDB            | California Natural Diversity Database              |
| CNEL              | community noise equivalent level                   |
| CO                | carbon monoxide                                    |
| CO <sub>2</sub> e | carbon dioxide equivalent                          |
| Corps             | US Army Corps of Engineers                         |
| CSO               | combined sewer overflows                           |
| CUPA              | Certified Unified Program Agency                   |
| CWA               | Clean Water Act                                    |
| dB                | decibel  |
| dba               | A-weighted decibel                                 |
| DPM               | diesel particulate matter                          |
| DTSC              | Department of Toxic Substances Control             |
| EIR               | environmental impact report                        |
| EPA               | United States Environmental Protection Agency      |
| EPCRA             | Emergency Planning and Community Right-to-Know Act |
| FEMA              | Federal Emergency Management Agency                |
| FHWA              | Federal Highway Administration                     |
| FTA               | Federal Transit Administration                     |
| GHG               | greenhouse gases                                   |
| GWP               | global warming potential                           |
| HCM               | Highway Capacity Manual                            |
| HQTA              | high quality transit area                          |
| HVAC              | heating, ventilating, and air conditioning system  |
| IPCC              | Intergovernmental Panel on Climate Change          |
| L <sub>dn</sub>   | day-night noise level                              |
| L <sub>eq</sub>   | equivalent continuous noise level                  |
| LBP               | lead-based paint                                   |
| LCFS              | low-carbon fuel standard                           |
| LOS               | level of service                                   |
| LST               | localized significance thresholds                  |
| M <sub>w</sub>    | moment magnitude                                   |
| MCL               | maximum contaminant level                          |
| MEP               | maximum extent practicable                         |

## Abbreviations and Acronyms

|                 |   |
|-----------------|---|
| mgd             | million gallons per day                             |
| MMT             | million metric tons                                 |
| MPO             | metropolitan planning organization                  |
| MT              | metric ton  |
| MWD             | Metropolitan Water District of Southern California  |
| NAHC            | Native American Heritage Commission                 |
| NO <sub>x</sub> | nitrogen oxides                                     |
| NPDES           | National Pollution Discharge Elimination System     |
| O <sub>3</sub>  | ozone   |
| OES             | California Office of Emergency Services             |
| PM              | particulate matter                                  |
| POTW            | publicly owned treatment works                      |
| ppm             | parts per million                                   |
| PPV             | peak particle velocity                              |
| RCRA            | Resource Conservation and Recovery Act              |
| REC             | recognized environmental condition                  |
| RMP             | risk management plan                                |
| RMS             | root mean square                                    |
| RPS             | renewable portfolio standard                        |
| RWQCB           | Regional Water Quality Control Board                |
| SB              | Senate Bill   |
| SCAG            | Southern California Association of Governments      |
| SCAQMD          | South Coast Air Quality Management District         |
| SIP             | state implementation plan                           |
| SLM             | sound level meter                                   |
| SoCAB           | South Coast Air Basin                               |
| SO <sub>x</sub> | sulfur oxides                                       |
| SQMP            | stormwater quality management plan                  |
| SRA             | source receptor area [or state responsibility area] |
| SUSMP           | standard urban stormwater mitigation plan           |
| SWP             | State Water Project                                 |
| SWPPP           | Storm Water Pollution Prevention Plan               |
| SWRCB           | State Water Resources Control Board                 |

## Abbreviations and Acronyms

|        |   |
|--------|---|
| TAC    | toxic air contaminants                  |
| TNM    | transportation noise model              |
| tpd    | tons per day                            |
| TRI    | toxic release inventory                 |
| TTCP   | traditional tribal cultural places      |
| USFWS  | United States Fish and Wildlife Service |
| USGS   | United States Geological Survey         |
| UST    | underground storage tank                |
| UWMP   | urban water management plan             |
| V/C    | volume-to-capacity ratio                |
| VdB    | velocity decibels                       |
| VHFHSZ | very high fire hazard severity zone     |
| VMT    | vehicle miles traveled                  |
| VOC    | volatile organic compound               |
| WQMP   | water quality management plan           |
| WSA    | water supply assessment                 |

# 1. Executive Summary

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## 1.1 INTRODUCTION

This draft environmental impact report (Draft EIR) addresses the environmental effects associated with the implementation of the proposed Beaumont High School Expansion. The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental consequences before taking action on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental consequences in order to inform the public and support informed decisions by local and state governmental agency decision makers.

This Draft EIR has been prepared pursuant to the CEQA (Public Resources Code [PRC], Division 13, §§ 21000 et seq. [CEQA Statute] and the California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, §§ 15000 et seq. [CEQA Guidelines]).

Data for this Draft EIR is derive from on-site field observations, analysis of adopted plans, programs and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments. The Beaumont Unified School District (District), as the lead agency, has reviewed all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment.

## 1.2 ENVIRONMENTAL PROCEDURES

This Draft EIR has been prepared pursuant to CEQA to assess the environmental effects associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. CEQA established six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the

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environmental consequences of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided or reduced to less than significant levels.

## 1.2.1 EIR Format

**Chapter 1. Executive Summary:** Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

**Chapter 2. Introduction:** Describes the purpose of this EIR, background on the project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

**Chapter 3. Project Description:** A detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

**Chapter 4. Environmental Setting:** A description of the physical environmental conditions in the vicinity of the project as they existed at the time the notice of preparation was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the project's environmental impacts.

**Chapter 5. Environmental Analysis:** Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed development in the area.

**Chapter 6. Significant Unavoidable Adverse Impacts:** Describes the significant unavoidable adverse impacts of the proposed project, if any.

**Chapter 7. Alternatives to the Proposed Project:** Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative, Foreseeable Future Condition Alternative, No Athletic Field and Play Court Reconfiguration.

## 1. Executive Summary

**Chapter 8. Impacts Found Not to Be Significant:** Analyzes the potential impacts of the project that were determined not to be significant and were therefore not discussed in detail in Chapter 5 of this EIR.

**Chapter 9. Significant Irreversible Changes Due to the Proposed Project:** Describes the significant irreversible environmental changes associated with the project.

**Chapter 10. Growth-Inducing Impacts of the Project:** Describes the ways in which the proposed project may result in an increase in employment or population that could result in new physical or environmental impacts.

**Chapter 11. List of Preparers:** Identifies the individuals who prepared the EIR and technical studies and their areas of technical specialty.

**Bibliography:** Bibliographical references and organizations and persons consulted for information sources and technical data are footnoted throughout this EIR; therefore a stand-alone bibliography section is not required.

**Appendices:** The appendices for this document comprise these supporting documents:

- Appendix A. Notice of Preparation and Comments
- Appendix B. Air Quality, Greenhouse Gas, & Energy Modeling Data
- Appendix C. Noise Modeling Data
- Appendix D. Geotechnical Investigation
- Appendix E. Traffic and Access Analysis

### 1.2.2 Type and Purpose of This Draft EIR

This Draft EIR has been prepared as a “Project EIR,” defined by Section 15161 of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3). This type of EIR examines the environmental impacts of a specific development project and should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation.

## 1.3 PROJECT LOCATION

The project site is within the main campus of Beaumont High School, at 39139 Cherry Valley Boulevard, City of Beaumont, County of Riverside, California (Assessor’s Parcel Numbers [APN] 403-200-011). Although the Athletic Complex is part of the high school it has a separate address—200 W. Brookside Avenue—and two APNs (405-240-006: stadium and soccer field; 405-240-005: baseball fields). APN 405-240-005 also includes the District Administration Center (3.5 acres). This entire area is not part of the project and would not be affected by the proposed school campus improvements. The area of disturbance and physical campus improvements are limited to 34 acres of the 62-acre main campus.

## 1. Executive Summary

### 1.4 PROJECT SUMMARY

The proposed project would make changes to Beaumont High School to facilitate a campus that accommodates the anticipated need for additional student seats and improved traffic circulation. Physical improvements would occur on the north half of the main campus, with no changes to the Athletic Complex. The 2019-20 year student enrollment was 2,990, and the current seating capacity is 3,880. The project would increase seating capacity to a maximum of 5,244. Compared to existing conditions, at full buildout the project would result in an increase of 1,364 seats, and at maximum enrollment, the project would result in an increase of 2,234 students.

Demolition and removal, new construction, and reconfiguration would occur on the north half of the main campus with no changes to the Athletic Complex.

#### ■ **Demolition and Removal**

- Roundabout entry drive
- A portion of Parking Lot E and all of Lot D
- Turf athletic fields
- 8 basketball courts and 8 tennis courts

#### ■ **New Construction**

- Entry plaza and walkway along drop-off/pick-up zone
- Lunch shelter
- Storage and restroom building near the athletic field area
- Two 25,000-square-foot, 2-story classroom buildings with 42 classrooms and up to 1,344 seats, and an open courtyard between buildings.

#### ■ **Reconfigure Parking and Circulation**

- Lot E would be expanded to the south to provide an additional 225 spaces (total of 455 spaces). A new enter-only drive along Cherry Valley Boulevard would provide a second access point for students and would relieve congestion at the main entry stop light.
- Lot D would be moved north and increased by 15 spaces (total of 199 spaces). This lot would have the entry drive and the drop-off/pick-up zone around the outside.
- Driveway on Cherry Valley Boulevard (2-lane entry, 3-lane exit) would be extended to provide significantly more stacking and a longer drop-off/pick-up zone; lane configuration would be the same.

#### ■ **Reconstruct Athletic Facilities**

The fields would be reconstructed for better access and space: baseball and 2 softball practice fields, running track, 2 soccer fields, 8 basketball courts, and 8 tennis courts.

### 1.5 SUMMARY OF PROJECT ALTERNATIVES

CEQA requires that a Draft EIR include a discussion of reasonable project alternatives that would “feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant



## 1. Executive Summary

effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines § 15126.6). The following three project alternatives were identified and analyzed for relative impacts as compared to the proposed project:

- No Project Alternative
- Foreseeable Future Condition Alternative
- No Athletic Field and Play Court Reconfiguration

These alternatives were developed to address the mitigated significant impact of the project. Please refer to Chapter 7 of this Draft EIR for a complete discussion of each of the alternatives and their associated impacts.

### 1.5.1 No Project Alternative

The CEQA Guidelines require the analysis of a No Project Alternative. This analysis must discuss the existing site conditions as well as what would be reasonably expected in the foreseeable future based on any current plans if the project were not approved. The No Project Alternative must be consistent with available infrastructure and community services.

This discussion compares the environmental effects of the campus and school program remaining in their existing condition against the environmental effects if the project were approved. Under the No Project Alternative, the improvements to Beaumont High School would not occur. Because residential development in the surrounding communities is either already being constructed or is approved or in the planning stages, student generation is inevitable. Because the school district only has one standard high school, even without the project, students would attend Beaumont High School. Without the two new classroom buildings and the 42 classrooms, eventually students would be placed in overcrowded classrooms, or the District would need to resort to year-round school. With overcrowded classrooms the educational environment would suffer, and a larger number of students may struggle with their education.

Under this Alternative the parking lots and circulation pattern remain the same; drop-off and pick-up procedures would continue to be slow and inefficient and would worsen. As the student numbers increase, pedestrian and vehicular traffic would significantly worsen and may result in increased hazards for students and drivers. The backup during drop-off and pick-up may extend out of the campus and onto Cherry Valley Boulevard. Without the expanded parking lot, parking would become more difficult and may spill onto the surrounding roadways. Students that drive and park would need to walk farther, increasing hazards from accidents.

The athletic fields and play courts would not be reconfigured, and the increased number of students would need to share fields and courts that may have less supervision because of the current distance between facilities.

## 1. Executive Summary

### 1.5.2 Foreseeable Future Condition Alternative

Because residential development in the surrounding communities is either already being constructed, is approved, or in the planning stages, student generation is inevitable. Because the school district only has one standard high school, even without the project, students would attend Beaumont High School. This alternative would be similar to the No Project Alternative; however, under the Foreseeable Future Condition Alternative, the District would install portable buildings to accommodate the future increase in students. Up to 42 portable classroom buildings would need to be placed on the campus. Because of the space limitations on the campus the additional classroom buildings would likely be placed on athletic fields. The loss of a baseball field or soccer field would significantly impact the athletic program at the school. No other improvements to Beaumont High School would occur.

Under this Alternative, the parking lots and circulation pattern remain the same; drop-off and pick-up procedures would continue to be slow and inefficient and would worsen. As the student numbers increase, pedestrian and vehicular traffic would significantly worsen and may result in increased hazards for students and drivers. The backup during drop-off and pick-up may extend out of the campus and onto Cherry Valley Boulevard. Without the expanded parking lot, parking would become more difficult and may spill onto the surrounding roadways. Students that drive and park would need to walk farther, increasing hazards from accidents.

The athletic fields and play courts would not be reconfigured, and a larger number of students would need to share fields and courts that may have less supervision because of the current distance between facilities.

### 1.5.3 No Athletic Field and Play Court Reconfiguration

Under the No Athletic Field and Play Court Reconfiguration, all project components would be constructed except the reconfiguration. Improvements would include the parking lot and circulation and entry plaza, two new classroom buildings, lunch shelter, and landscaping. Because of the location of the new buildings and parking expansion, the campus would lose 8 tennis courts and 8 basketball courts. The athletic program would be required to cut these sports which would significantly affect the school.

## 1.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this Draft EIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override the environmental impacts, which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed school changes are compatible with the character of the existing area.

## 1. Executive Summary

4. Whether there are any better alternatives to the project that would reduce community concern and achieve most of the basic project objectives.

### 1.7 AREAS OF CONTROVERSY

No comment letters were submitted to the District in response to the project-related Notice of Preparation. The District also anticipates that the adjacent residents may be concerned with air quality, noise, and traffic from the proposed changes to the campus.

### 1.8 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1-1 summarizes the conclusions of the environmental analysis contained in this EIR.

## 1. Executive Summary

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## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

| Environmental Impact  | Level of Significance Before Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
| <b>5.1 AIR QUALITY</b>  |   |  |  |
| <b>Impact 5.1-1.</b> Conflict with or obstruct implementation of the applicable air quality plan?   | Less Than Significant                   | No Mitigation Measures Required  | Less Than Significant                  |
| <b>Impact 5.1-2.</b> Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | Potentially Significant                 | <p>AQ-1 During construction, the construction contractor(s) shall limit the hauling of soil generated from grading/excavation activities to a maximum of 95 trucks per day (191 one-way soil haul trips per day if 16 cubic yard trucks are used) assuming a one-way haul distance of 20 miles. If the truck haul distance for soil export is greater than 20 miles one way, as identified by the contractor(s), then hauling shall be restricted to no more than 3,820 miles per day. Where feasible, haul trucks with engines that are 2010 or newer shall be used for soil hauling activities. These requirements shall be noted on all construction management plans and verified by the Beaumont Unified School District (District) prior to issuance of any construction permits and during the soil-disturbing phase.</p> <p>AQ-2 The Beaumont Unified School District (District) shall specify in the construction bid that the construction contractor(s) shall, at minimum, use equipment that meets the EPA's Tier 3 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all site preparation and grading activities, unless it can be demonstrated to District that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 3 emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations.</p> <p>Prior to construction, the project engineer shall ensure that all building demolition plans clearly show the requirement for EPA Tier 3 emissions standards for construction equipment over 50 horsepower for the specific activities stated above. During construction, the construction contractor shall maintain a list of all operating equipment associated with site preparation and grading in use on the site for verification by the District. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance</p> | Less Than Significant                  |

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

| Environmental Impact  | Level of Significance Before Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
|   |   | with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9. |  |
| <b>Impact 5.1-3.</b> Expose sensitive receptors to substantial pollutant concentrations?  | Less Than Significant                   | No Mitigation Measures Required  | Less Than Significant                  |
| <b>Impact 5.1-4.</b> Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?   | Less Than Significant                   | No Mitigation Measures Required  | Less Than Significant                  |
| <b>5.2 GREENHOUSE GAS EMISSIONS</b>   |   |  |  |
| <b>Impact 5.2-1.</b> Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?   | Less Than Significant                   | No Mitigation Measures Required  | Less Than Significant                  |
| <b>Impact 5.2-2.</b> Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?  | Less Than Significant                   | No Mitigation Measures Required  | Less Than Significant                  |
| <b>5.3 NOISE</b>  |   |  |  |
| <b>Impact 5.3-1.</b> Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | Less Than Significant                   | No Mitigation Measures Required  | Less Than Significant                  |
| <b>Impact 5.3-2.</b> Generation of excessive groundborne vibration or groundborne noise levels?   | Less Than Significant                   | No Mitigation Measures Required  | Less Than Significant                  |

## 1. Executive Summary

**Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation**

| Environmental Impact  | Level of Significance Before Mitigation | Mitigation Measures             | Level of Significance After Mitigation |
|---|---|---------------------------------|--|
| <b>Impact 5.3-3.</b> For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | Less Than Significant                   | No Mitigation Measures Required | Less Than Significant                  |

## 1. Executive Summary

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## 2. Introduction

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### 2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. This draft environmental impact report (Draft EIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment” (CEQA § 21067). The Beaumont Unified School District (District) has the principal responsibility for approval of the Beaumont High School Expansion project. For this reason, the District is the CEQA lead agency for this project.

The intent of the Draft EIR is to provide sufficient information on the potential environmental impacts of the proposed Beaumont High School Expansion to allow the District to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the District are described in Section 3.4, *Intended Uses of the EIR*.

This Draft EIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, §§ 15000 et seq.)

The overall purpose of this Draft EIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed Beaumont High School Expansion project. This Draft EIR analyzes environmental impacts and identifies significant impacts; evaluates alternatives to the project; and outlines mitigation measures to reduce or avoid significant impacts.

## 2. Introduction

### 2.2 NOTICE OF PREPARATION

The District determined that an EIR would be the appropriate CEQA document for this project and distributed a Notice of Preparation (NOP) on June 19, 2020 (see Appendix A). In compliance with CEQA Guidelines §§ 15060(d) and 15082, the District did not prepare an initial study and instead worked directly on the Draft EIR. During the NOP public review period (June 19, 2020 to July 20, 2020) one comment letter was received. The NOP and SCAQMD comment letter is in Appendix A of this EIR.

The NOP process helps determine the scope of the environmental issues to be addressed in the Draft EIR. Based on this process and the analysis in Chapter 8, certain environmental topics were identified as having the potential to result in significant impacts. Topics considered potentially significant are addressed in Chapter 5 of this Draft EIR, and topics identified as less than significant or of no impact are addressed in Chapter 8.

### 2.3 SCOPE OF THIS DRAFT EIR

Pursuant to §§ 15126.2 and 15126.4 of the CEQA Guidelines, the Draft EIR should identify any potentially significant adverse impacts and recommend mitigation that would reduce to levels of insignificance or eliminate these impacts. The information in Chapter 3, *Project Description*, establishes the basis for analyzing future, project-related environmental impacts.

#### 2.3.1 Impacts Considered Less Than Significant

During preparation of the Draft EIR, the District determined that 17 environmental impact topics (shown below) would not be significantly affected by the proposed project. The less than significant findings are substantiated in Chapter 8, *Impacts Found Not to Be Significant*, in this Draft EIR.

- |                                    |                                 |                               |
|------------------------------------|---------------------------------|-------------------------------|
| • Aesthetics                       | • Hazards & Hazardous Materials | • Recreation                  |
| • Agriculture & Forestry Resources | • Hydrology & Water Quality     | • Transportation              |
| • Biological Resources             | • Land Use & Planning           | • Tribal Cultural Resources   |
| • Cultural Resources               | • Mineral Resources             | • Utilities & Service Systems |
| • Energy                           | • Population & Housing          | • Wildfire                    |
| • Geology & Soils                  | • Public Services               |                               |

#### 2.3.2 Potentially Significant Adverse Impacts

The District determined that three environmental topics—Air Quality, Greenhouse Gas Emissions, and Noise—have potentially significant impacts; these topics are analyzed in Chapter 5.

#### 2.3.3 Unavoidable Significant Adverse Impacts

Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. This Draft EIR did not identify any significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the proposed project.

## 2. Introduction

### 2.4 FINAL EIR CERTIFICATION

This Draft EIR is being circulated for a 45-day public review. Interested agencies and members of the public are invited to provide written comments on the Draft EIR to the District address shown on the title page of this document. Upon completion of the 45-day review period, the District will review all written comments received and prepare written responses for each. The Final EIR will incorporate all written comments, responses to the comments, and any changes to the Draft EIR that result from comments. The Final EIR will be reviewed by District Board of Trustees for potential certification as the environmental document for the project. All persons who comment on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing before the District Board of Trustees.

The Draft EIR is available to the general public for review at Beaumont Unified School District, Facilities Planning Department, 350 W. Brookside Avenue, Beaumont, CA 92223-0187, and on the District's website at [https://www.beaumontusd.us/apps/pages/Facilities\\_Projects](https://www.beaumontusd.us/apps/pages/Facilities_Projects).

### 2.5 MITIGATION MONITORING

Public Resources Code § 21081.6 requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code § 21081 or adopted a Negative Declaration pursuant to § 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration.

The Mitigation Monitoring and Reporting Program for the Beaumont High School Expansion will be completed prior to consideration of the project by the District Board of Trustees.

## 2. Introduction

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## 3. Project Description

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### 3.1 PROJECT LOCATION

The project site is within the main campus of Beaumont High School, at 39139 Cherry Valley Boulevard, City of Beaumont, County of Riverside, California (Assessor's Parcel Numbers [APN] 403-200-011 (see Figure 3-1, *Regional Location*, and Figure 3-2, *Local Vicinity*). Although the Athletic Complex is part of the high school it has a separate address—200 W. Brookside Avenue—and two APNs (405-240-006: stadium and soccer field; 405-240-005: baseball fields).

APN 405-240-005 also includes the District Administration Center (3.5 acres). This facility is not part of the project and would not be affected by the proposed school campus improvements. The area of disturbance and physical campus improvements are limited to 34 acres of the 62-acre main campus (see Figure 3-3, *Aerial Photograph*, and Figure 3-4, *Assessor's Parcel Numbers*).

The high school main (north) entrance is on Cherry Valley, the south entrance is on Brookside Avenue east of the drainage channel, and the Athletic Complex is on Brookside Avenue west of the drainage channel.

### 3.2 STATEMENT OF OBJECTIVES

Objectives for the Beaumont High School Expansion project will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

- **Objective #1:** Increase the safety and security of the staff and students through the campus circulation modifications and reconfiguration
- **Objective #2:** Accommodate anticipated student increase generated from new residential development in surrounding communities.
- **Objective #3:** Promote a healthier environment through the use of green technology in new buildings.
- **Objective #4:** Limit the disruption of the student educational experience during the construction of the project by limiting the timing, number, duration of phases.
- **Objective #5:** Promote a safer environment for students by consolidating the physical education spaces.
- **Objective #6:** Promote College and Career readiness by incorporating Career Technical Education (CTE) classrooms and labs on campus.

### 3. Project Description

## 3.3 PROJECT DEFINITION

“Project,” as defined by the CEQA Guidelines, means:

... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)...enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700. (14 Cal. Code of Reg. § 15378[a])

## 3.4 PROJECT CHARACTERISTICS

The project would make changes to Beaumont High School to accommodate the anticipated need for additional student seats and improved traffic circulation. Physical improvements would occur on the main campus of Beaumont High School at 39139 Cherry Valley Boulevard.

During the 2019-20 year student enrollment was 2,990, and the current seating capacity is 3,880. The project would increase seating capacity to a maximum of 5,244. Compared to existing conditions, at full buildout the project would result in an increase of 1,364 seats, and at maximum enrollment, the project would result in an increase of 2,234 students.

### 3.4.1 Project Components

Physical improvements would occur on the north half of the main campus, with no changes to the Athletic Complex. Campus work would include demolition and removal, new construction, and reconfiguration on about 34 acres of the 62-acre main campus (see Figure 3-5, *Conceptual Site Plan*).

#### ■ Demolition and Removal

- Roundabout entry drive
- A portion of Parking Lot E and all of Lot D
- Turf athletic fields
- 8 basketball courts
- 8 tennis courts

#### ■ New Construction

- Entry plaza and walkway along drop-off/pick-up zone
- Lunch shelter
- Storage and restroom building near athletic fields
- Two 25,000-square-foot, 2-story classroom buildings with 42 classrooms and up to 1,344 seats—with open courtyard between buildings.

### 3. Project Description

- The first building would have 18 classrooms (up to 576 students at 32 per classroom) and a room dedicated to teacher office space.<sup>1</sup> Of the 18 classrooms, 11 would be used for instruction for all six periods each day.
- The second building would have 24 standard classrooms (up to 768 students) and administrative space.
- The school currently has 2,990 students and has seats for an 3,880 students. The goal is to house up to 5,244 students.

#### ■ Reconfigured Parking and Circulation

- Lot E would be expanded to the south to provide an additional 225 spaces (total of 455 spaces). A new driveway along Cherry Valley Boulevard would provide a second access point for students and would relieve congestion at the main entry stop light. The new driveway would be approximately 200 feet west of the school's existing driveway on Cherry Valley Boulevard. A "No Left Turn" sign would be installed on westbound Cherry Valley Boulevard to prohibit left turns into the new driveway. The driveway would be designated "enter-only" and would only accommodate eastbound right turns.
- Lot D would be moved north and increased by 15 spaces (total of 199 spaces). This lot would have the entry drive and the drop-off/pick-up zone around the outside.
- Driveway on Cherry Valley Boulevard (2-lane entry, 3-lane exit) would be extended to provide significantly more stacking and a longer drop-off/pick-up zone; lane configuration would be the same.

#### ■ Reconfigured Athletic Fields and Play Courts

- The fields and courts would be reconfigured for better access, space, and supervision
  - 1 baseball and 2 softball practice fields
  - Running track around the perimeter of the fields
  - Open field that would accommodate 2 soccer fields
  - 8 basketball courts and 8 tennis courts

Other school facilities would remain the same, and no changes to operations, school-related events, or community use would occur.

### Landscaping

Vegetation on-site is limited to ornamental trees along slopes, in tree wells on parking lots, and in small open space areas. Removal of some trees would be required to accommodate the new buildings and reconfigured parking lots. Trees along perimeter slopes would not be affected. New trees would be planted in the parking lot and entry plaza, and between new buildings.

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<sup>1</sup> This is a pilot program that, if successful, will be replicated throughout the campus where the opportunity exists. If the pilot is unsuccessful, the District will convert the teacher office space to a classroom that will house up to 32 students.

### 3. Project Description

#### 3.4.2 Construction Phasing

Project construction is anticipated to start in 4th quarter of 2020 (Q4-2020) and is expected to take two years to complete. The existing northeast turf fields would be used for the staging area/construction lay-down area. The following is the anticipated project construction schedule.

- **Classroom Buildings.** Construct classroom building 1 (2020 to 2021); classroom building 2, lunch shelter, entry plaza (2021 to 2022)
  - Demolition: 500 cubic yards (cy) asphalt; 400 cy concrete
  - Rough grading: 1,200 cy soil export; 5,800 cy soil import
- **Athletic Fields**
  - Demolition: 0 cy asphalt; 300 cy concrete
  - Rough grading: 22,500 cy soil export; 11,600 cy soil import
- **Parking Lots**
  - Demolition: 1,400 cy asphalt; 1,000 cy concrete
  - Rough grading: 15,600 cy soil export; 10,200 cy soil import
  - Utility trenches would be excavated for new parking lot lights (7 to 10 feet deep)
- **Site Finishing and New Drought-Tolerant Landscaping**

### 3.5 INTENDED USES OF THE EIR

This Draft EIR examines the environmental impacts of the proposed project. This Draft EIR also addresses various actions by others to adopt and implement the proposed project. It is the intent of this Draft EIR to evaluate the environmental impacts of the proposed project, thereby enabling the District, other responsible agencies, and interested parties to make informed decisions with respect to the requested entitlements. The anticipated approvals required for this project are:



### 3. Project Description

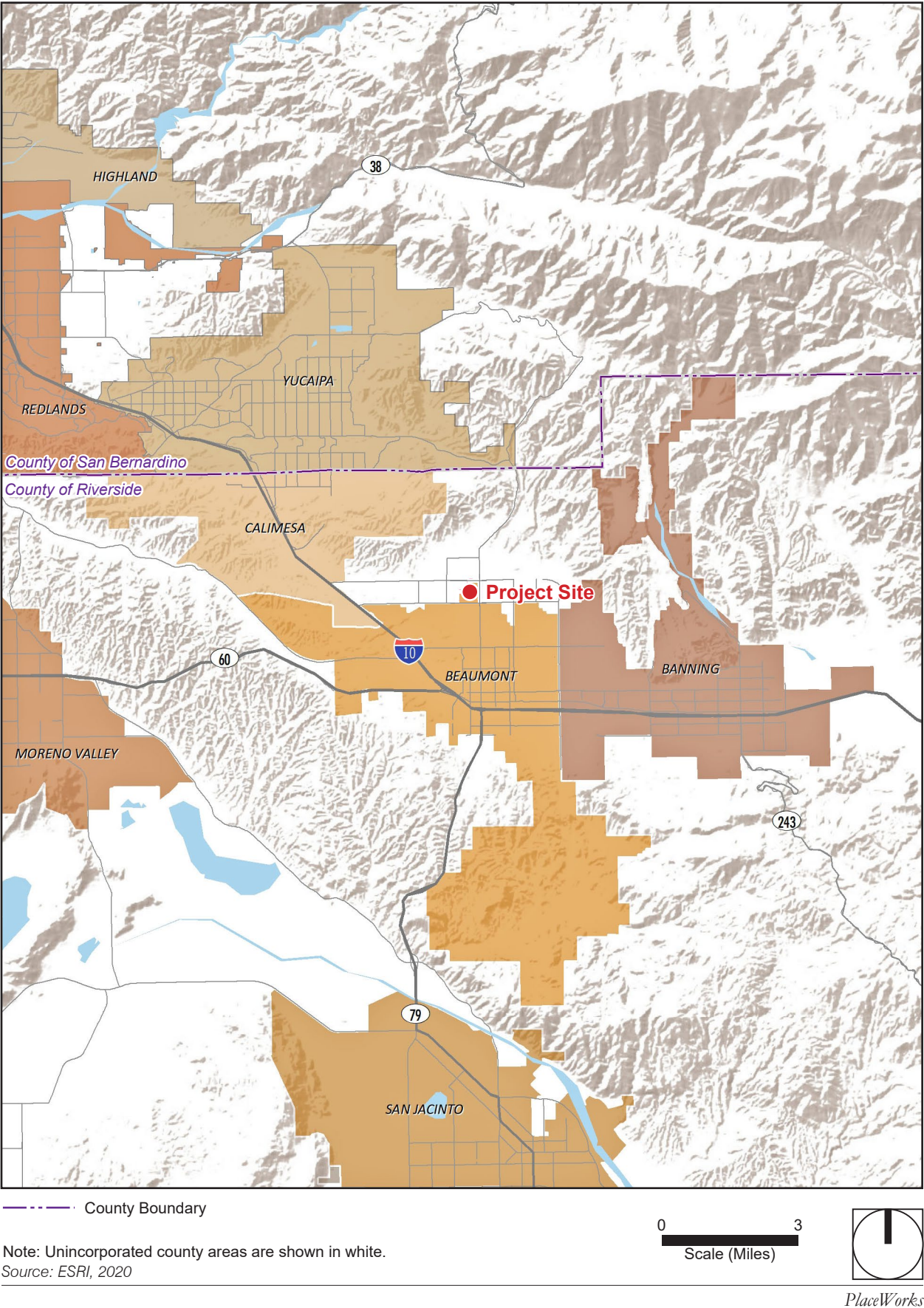
**Table 3-1 Anticipated Agency Actions**

| Lead Agency   | Action   |
|---|--|
| Beaumont Unified School District  | Certify Environmental Impact Report and adopt Mitigation Monitoring and Reporting Program.   |
|   | Approve Project  |
| Responsible Agencies  | Action   |
| City of Beaumont Fire Service   | Approval of plans for emergency access and emergency evacuation. DSA approval of the fire/life safety portion of a project requires local fire authority review of: elevator/stair access for emergency rescue and patient transport; access roads, fire lane markings, pavers, and gate entrances; fire hydrant location and distribution; and fire flow (location of post indicator valve, fire department connection, and detector check valve assembly). |
| City of Beaumont Public Works Department                                      | Permit for curb, gutter, and other off-site improvements on Cherry Valley Boulevard. Approval of construction-related haul route.  |
| California Department of General Services, Division of State Architect (DSA)  | Plan review and construction oversight, including structural safety, fire and life safety, and access compliance.  |
| California Department of Education, School Facilities Planning Division (CDE) | If the District is requesting funds from the State Allocation Board, it must have the plans reviewed and approved by the CDE (Education Code § 17070.50) prior to submitting a funding request. Approval of design for educational appropriateness.  |
| Santa Ana Regional Water Quality Control Board (SARWQCB)                      | Issue National Pollution Discharge Elimination System (NPDES) permit; Clean Water Act § 401 Water Quality Certification.   |
| State Water Resources Control Board (SWRCB)                                   | Review of Notice of Intent (NOI) to obtain permit coverage; issuance of general permit for discharges of stormwater associated with construction activity; review of Storm Water Pollution Prevention Plan (SWPPP).  |
| South Coast Air Quality Management District                                   | Review and file submittals for Rule 403, Fugitive Dust.  |

### 3. Project Description

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Figure 3-1 - Regional Location  
3. Project Description

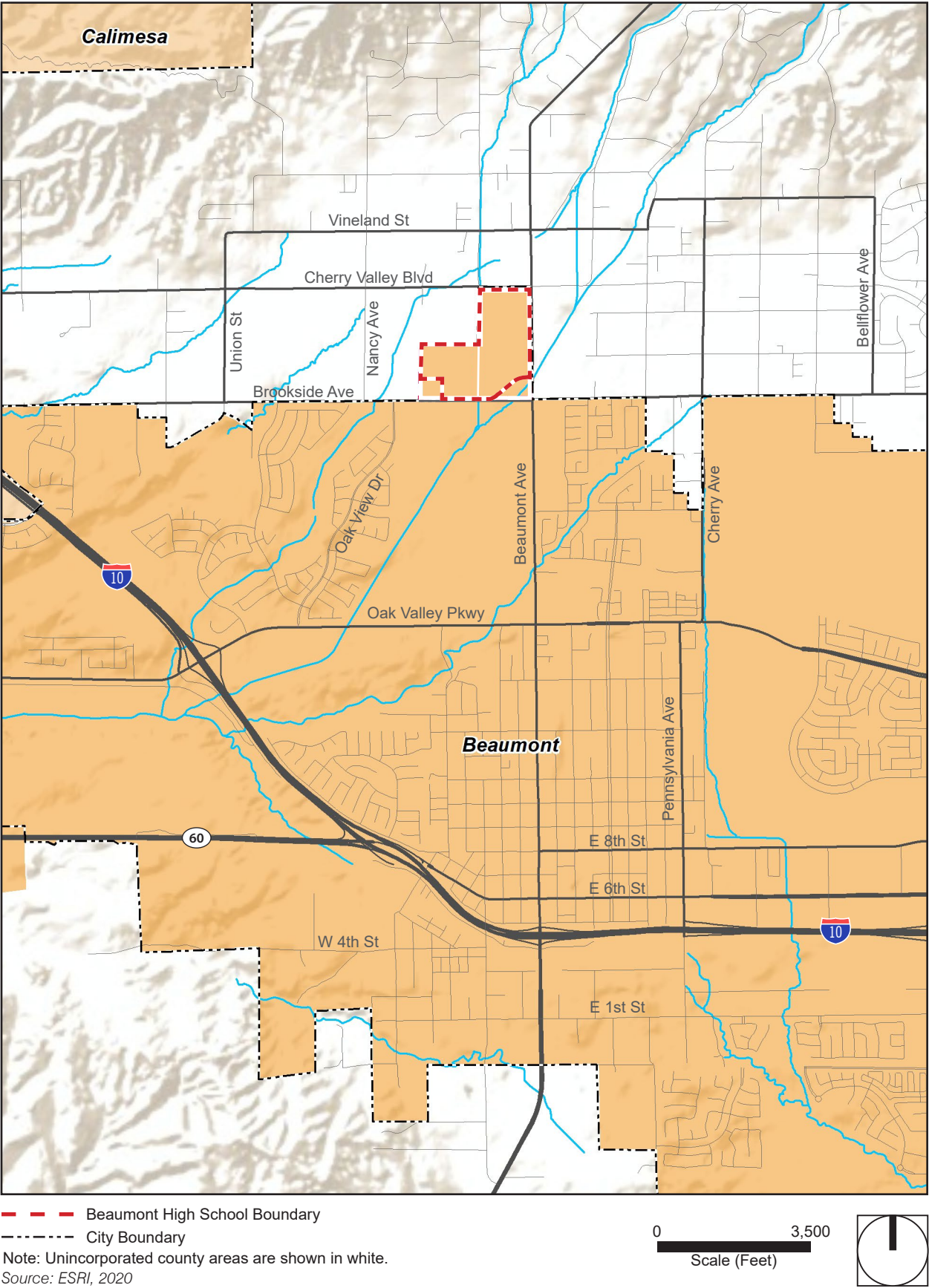


### 3. Project Description

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Figure 3-2 - Local Vicinity  
3. Project Description



### 3. Project Description

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Figure 3-3 - Aerial Photograph  
3. Project Description



### 3. Project Description

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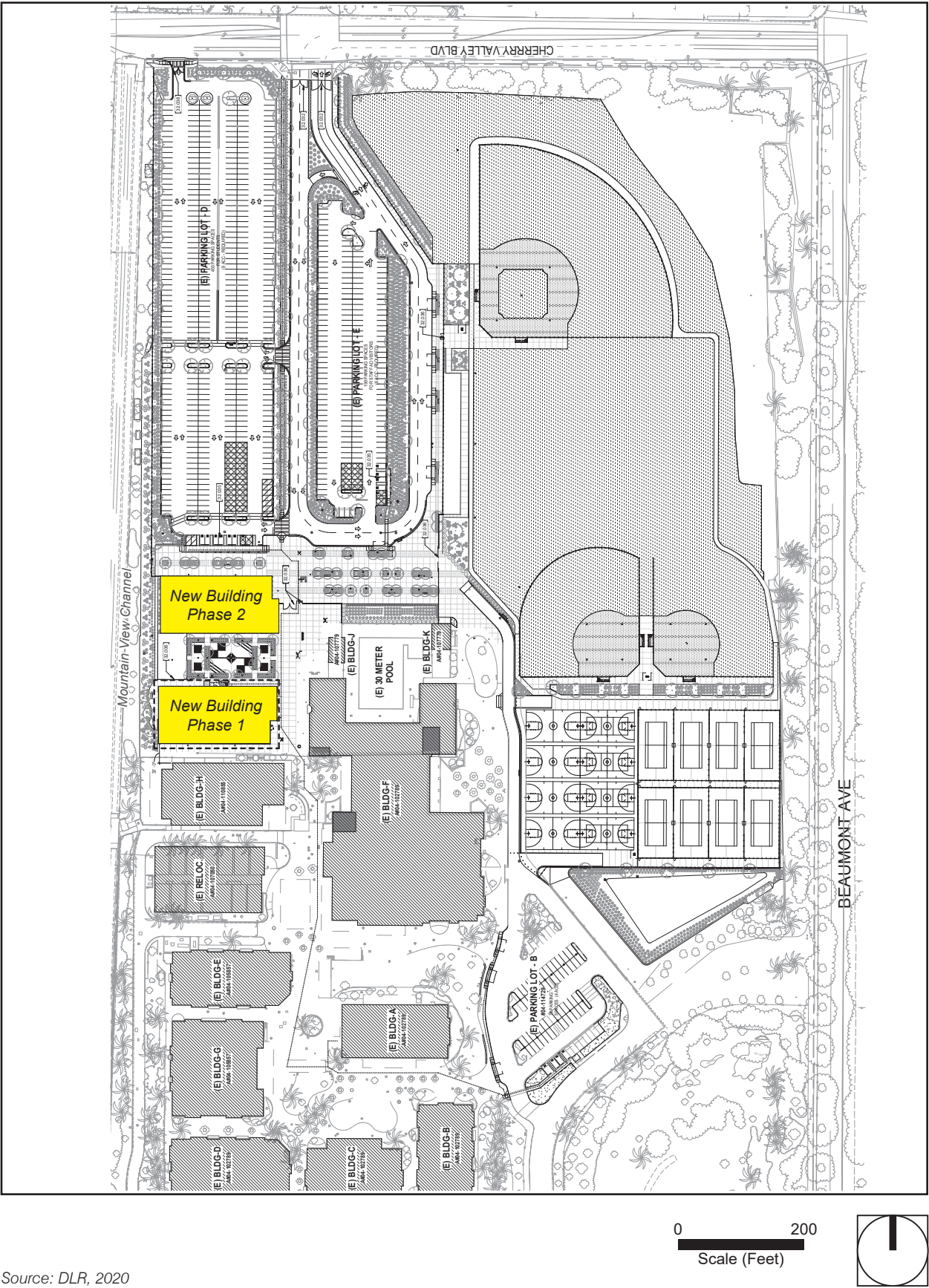




### 3. Project Description

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Figure 3-5 - Conceptual Site Plan  
3. Project Description



### 3. Project Description

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## 4. Environmental Setting

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### 4.1 INTRODUCTION

This section provides a “description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective” (Guidelines § 15125[a]), pursuant to provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed project.

### 4.2 REGIONAL ENVIRONMENTAL SETTING

The Beaumont Unified School District (District) serves portions of the cities of Beaumont, Banning, and Calimesa and portions of unincorporated Riverside and San Bernardino Counties. The District has 14 schools: 7 elementary schools, 2 middle schools, 1 elementary/middle (K-8) school (scheduled to open in August of 2021), 1 comprehensive high school, 1 alternative high school, 1 independent study program, and 1 adult education school. The alternative high school is for student credit recovery and the independent study program serves students from elementary through high school who need an alternative school model.

The project site is in the northern part of the city of Beaumont, about 3 miles east of Interstate 10 (I-10), 2.5 miles northeast of State Route 60 (SR-60), and about 3 miles north of SR-79. Regional access to the school includes Beaumont Avenue, Brookside Avenue, Cherry Valley Boulevard, Cougar Way, Oak Valley Parkway, Oak View Drive, and I-10.

### 4.3 LOCAL ENVIRONMENTAL SETTING

#### 4.3.1 Project Location

The project site is within the main campus of Beaumont High School, at 39139 Cherry Valley Boulevard, City of Beaumont, County of Riverside, California (Assessor's Parcel Numbers [APN] 403-200-011) (see Figure 3-1, *Regional Location*, and Figure 3-2, *Local Vicinity*). Although the Athletic Complex is part of the high school it has a separate address—200 W. Brookside Avenue—and two APNs (405-240-006: stadium and soccer field; 405-240-005: baseball fields) (see Figure 3-3, *Aerial Photograph*, and Figure 3-4, *Assessor's Parcel Numbers*).

APN 405-240-005 also includes the District Administration Center (3.5 acres). This facility is not part of the project and would not be affected by the proposed school campus improvements. The area of disturbance and physical campus improvements are limited to 34 acres of the 62-acre main campus.

The high school main (north) entrance is on Cherry Valley, the south entrance is on Brookside Avenue east of the drainage channel, and the Athletic Complex is on Brookside Avenue west of the drainage channel.

### 3. Environmental Setting

#### 4.3.2 Surrounding Land Uses

The project site and surrounding areas are generally flat. Areas to the west, north, and east are in the County of Riverside, outside Beaumont city boundaries.

**North:** Cherry Valley Boulevard and the Royal Coach Mobile Home Park (senior community), gas station, Cherry Valley Grange Community Center, and rural residential.

**South:** Brookside Avenue, sports park, vacant land, earthen portion of Noble Creek Channel, Beaumont-Cherry Water District Noble Creek Recharge Facility, Brookside Elementary School.

**East:** Beaumont Avenue, Beaumont-Cherry Water District Noble Creek Recharge Facility, and the concrete-lined portion of Noble Creek channel.

**West:** rural residential, vacant land, small local businesses (RV storage, dentist, hay/straw sales).

In the southwest corner, the District Administration Center has administrative offices for business and education support, maintenance and operations, and nutrition services. Administration facilities consist of two main buildings: Building A has the administration offices; Building B has maintenance and operations, child nutrition offices, and three warehouses—(1) child nutrition warehouse; (2) grounds warehouse (maintenance of district equipment such as landscape equipment, etc.); and (3) maintenance warehouse (general district building maintenance). The site drains toward the southwest corner of the District Administration Center site and is collected in a five-foot-deep retention basin. The parking spaces for staff, in front of the service building, are also available for major evening high school athletic events.

### 4.4 EXISTING CONDITIONS

#### 4.4.1 Existing Land Use

The high school campus is divided by the Mountain View Channel (stormwater drainage facility maintained by Riverside County Flood Control District)<sup>1</sup>—the academic core/main campus is east of the channel and Athletic Complex is west of the channel. A pedestrian bridge links the two sides of the school.

**Athletic Complex.** The 34.5-acre Athletic Complex was constructed in 2013 and has a 5,000-seat football/soccer stadium, two baseball fields (varsity and junior varsity), and a softball field. There are two parking lots with a total of about 600 spaces. This site is lower than the surrounding area, and slopes up to roughly 25 feet high are on the north, east, and west sides.

**Main Campus.** Beaumont High School opened in 2006 with 96 classrooms for students in grades 9 through 12. In the 2010-11 school year, enrollment was 2,396 students; in 2018-19 it was 2,858;<sup>2</sup> and in 2019-20 it was 2,990. The school has seats for up to 3,880 students, including about 448 in portable classrooms. The main

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<sup>1</sup> Riverside County Flood Control District. Master Drainage Plan (MDP) and Area Drainage Plan (MDP)  
<http://www.floodcontrol.co.riverside.ca.us/MasterPlan.aspx>

<sup>2</sup> California Department of Education, 2018-19 Enrollment by Grade, Beaumont Senior High School Report.  
<https://data1.cde.ca.gov/dataquest/dqcensus/EnrGrdYears.aspx?cds=33669933330479&agglevel=school&year=2018-19>



## 4. Environmental Setting

campus encompasses 62 acres at an elevation ranging from 2,698 feet above mean sea level at the southwest corner to 2,780 feet at the northeast corner.

The high school has 8 permanent buildings: gymnasium (includes food service, theatre, performing arts, lockers), Administration (includes library), and 6 classroom buildings; it also has 14 portable classroom buildings and an outdoor swimming pool, athletic fields and courts. There are four parking lots with a total of 635 spaces: Lot D (student lot, north end of campus adjacent to Cherry Valley Boulevard) has 230 spaces, Lot E (staff and visitor lot, east of tennis courts) has 184 spaces, Lot B (east of campus buildings) has 67 spaces, and Lot A (south end of campus adjacent to Brookside Avenue) has 172 spaces.

Stormwater from the main campus drains to the concrete-lined Mountain View Channel through three inlets. This channel provides flood control and drainage from the Mountain View detention basin about 2 miles to the north to the Noble Creek channel (earthen) to the south. The main campus also drains to a large flood control basin adjacent to the southeastern corner of the school; the basin drains south to the Noble Creek channel. During construction of the high school, the property was raised by placing 15 to 25 feet of engineered compacted artificial fill material to remove the campus from the flood zone.

**School Operations.** The high school is on a two-semester, single-track schedule that serves 9th through 12th grades. School hours are 7:50 am to 2:58 pm.

**School-Related Events.** The campus has after-school programs for the students, such as special-interest clubs, and extracurricular activities that end later than 3:00 pm. There are also occasional nighttime and weekend events during the school year. Some of these events are campuswide, such as school plays and open houses, and others are grade specific, such as commencement.

**Community Use.** In compliance with the Civic Center Act, the campus is available for community use at selected times when not in use by the District.<sup>3</sup>

### 4.4.2 General Plan and Zoning

The City of Beaumont General Plan Land Use designation for the property is ‘Public Facilities,’<sup>4</sup> and the zoning is PF (Public Facilities).<sup>5</sup>

## 4.5 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Cumulative impacts are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (14 CCR [CA Code of Regulations] § 15355). Cumulative impacts are the change caused by the incremental impact of the project evaluated in the EIR together with the incremental impacts from closely related past, present, and reasonably

<sup>3</sup> California Education Code §§ 38130–38139.

<sup>4</sup> City of Beaumont. General Plan. Approved March 2007. Land Use Element.  
<https://beaumontca.gov/DocumentCenter/View/66/Printable-General-Plan-Map?bidId=>

<sup>5</sup> City of Beaumont. Zoning Map.  
<http://bmmaps.maps.arcgis.com/apps/webappviewer/index.html?id=0ecc31e3daa45c9b713853988cbcdff0>

### 3. Environmental Setting

foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130 of the CEQA Guidelines states that cumulative impacts must be discussed when the project's incremental effect is cumulatively considerable.<sup>6</sup> It further states that this discussion must reflect the level and severity of the impact and the likelihood of occurrence, but not in as great a level of detail as for the project.

The information used in an analysis of cumulative impacts comes from one of two sources (per 14 CCR § 15130 [b][1]):

- A. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency.
- B. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

The cumulative impact analyses in this EIR use a combination of Sources A and B. Depending on the environmental category, the cumulative impact analysis in each topical section of this EIR may use either source. Some impacts are site adjacent and others may have impacts outside the immediate vicinity, such as traffic.

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<sup>6</sup> 14 CCR § 15065 (a)(3) "Cumulatively considerable" means that 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 of probable future projects.



## 5. Environmental Analysis

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Chapter 5 describes the environmental setting of the proposed project, analyzes its effects and the significance of impacts. This chapter has a separate section for each environmental topic that was determined to need further study in the EIR. This scope was determined during the notice of preparation (NOP) comment period from June 19, 2020, to July 20, 2020 (see Appendix A). Environmental topics and their corresponding sections are:

- 5.1 Air Quality
- 5.2 Greenhouse Gas Emissions
- 5.3 Noise

Sections 5.1 through 5.3 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures, if required, to reduce significant impacts. The residual impacts following the implementation of any mitigation measure are also discussed. The remaining 17 environmental topics are analyzed in Chapter 8.

### Organization of Environmental Analysis

To assist the reader with comparing information between environmental topics, each section is organized under eight major headings:

- Environmental Setting
- Thresholds of Significance
- Environmental Impacts
- Cumulative Impacts
- Applicable Regulations
- Level of Significance
- Mitigation Measures
- Level of Significance After Mitigation

In addition, Chapter 1, *Executive Summary*, has a table that summarizes all impacts by environmental topic.

### Terminology Used in This Draft EIR

The level of significance is identified for each impact in this Draft EIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

## 5. Environmental Analysis

- **No impact.** The project would not change the environment.
- **Less than significant.** The project would not cause any substantial, adverse change in the environment.
- **Less than significant with mitigation incorporated.** The EIR includes mitigation measures that avoid or reduce project-related substantial adverse impacts on the environment.
- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level, or mitigation measures are available but do not reduce impacts to less than significant.

## 5. Environmental Analysis

### 5.1 AIR QUALITY

This section of the Draft Environmental Impact Report (Draft EIR) evaluates the potential for the Beaumont High School Expansion project (proposed project) to impact air quality in a local and regional context. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling for the proposed project is included in Appendix B of this Draft EIR. Transportation-sector impacts are based on trip generation, as provided in the Traffic and Access Analysis (Appendix E). Cumulative air quality impacts are based on the regional boundaries of the South Coast Air Basin (SoCAB).

#### 5.1.1 Environmental Setting

##### 5.1.1.1 AIR POLLUTANTS OF CONCERN

###### *Criteria Air Pollutants*

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb) are primary air pollutants. Of these, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. VOC and NO<sub>x</sub> are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants.

Each of the primary and secondary criteria air pollutants and its known health effects is described below.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation.<sup>1,2</sup> The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels.<sup>3</sup>

<sup>1</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>2</sup> US Environmental Protection Agency (USEPA). 2019. Criteria Air Pollutants. <https://www.epa.gov/criteria-air-pollutants>.

<sup>3</sup> California Air Resources Board (CARB). 2017, May 5. Area Designations Maps/State and National. <http://www.arb.ca.gov/design/design.htm>.

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### AIR QUALITY

- **Volatile Organic Compounds (VOC)** are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of ozone ( $O_3$ ), South Coast AQMD has established a significance threshold for this pollutant.<sup>4</sup>
- **Nitrogen Oxides ( $NO_x$ )** are a byproduct of fuel combustion and contribute to the formation of  $O_3$ ,  $PM_{10}$ , and  $PM_{2.5}$ . The two major forms of  $NO_x$  are nitric oxide (NO) and nitrogen dioxide ( $NO_2$ ). The principal form of  $NO_2$  produced by combustion is NO, but NO reacts with oxygen to form  $NO_2$ , creating the mixture of NO and  $NO_2$  commonly called  $NO_x$ .  $NO_2$  acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however,  $NO_2$  is only potentially irritating. There is some indication of a relationship between  $NO_2$  and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm).  $NO_2$  absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure.<sup>5,6</sup> The SoCAB is designated as an attainment area for  $NO_2$  under the National AAQS California AAQS.<sup>7</sup>
- **Sulfur Dioxide ( $SO_2$ )** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of  $SO_2$ .<sup>8,9</sup> When sulfur dioxide forms sulfates ( $SO_4$ ) in the atmosphere, together these pollutants are referred to as sulfur oxides ( $SO_x$ ). Thus,  $SO_2$  is both a primary and secondary criteria air pollutant. At sufficiently high concentrations,  $SO_2$  may irritate the upper respiratory tract. At lower concentrations and when combined with particulates,  $SO_2$  may do greater harm by injuring lung tissue. The SoCAB is designated as attainment under the California and National AAQS.<sup>10</sup>
- **Suspended Particulate Matter ( $PM_{10}$  and  $PM_{2.5}$ )** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or  $PM_{10}$ , include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or  $PM_{2.5}$ , have an

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<sup>4</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>5</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>6</sup> US Environmental Protection Agency (USEPA). 2019. Criteria Air Pollutants. <https://www.epa.gov/criteria-air-pollutants>.

<sup>7</sup> California Air Resources Board (CARB). 2017, May 5. Area Designations Maps/State and National. <http://www.arb.ca.gov/design/design.htm>.

<sup>8</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>9</sup> US Environmental Protection Agency (USEPA). 2019. Criteria Air Pollutants. <https://www.epa.gov/criteria-air-pollutants>.

<sup>10</sup> California Air Resources Board (CARB). 2018, June 12 (updated). Air Quality Standards and Area Designations. <http://www.arb.ca.gov/design/design.htm>.

## 5. Environmental Analysis

### AIR QUALITY

aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM<sub>10</sub> and PM<sub>2.5</sub> may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems.<sup>11</sup>

- The US Environmental Protection Agency's (EPA) scientific review concluded that PM<sub>2.5</sub>, which penetrates deeply into the lungs, is more likely than PM<sub>10</sub> to contribute to health effects and at concentrations that extend well below those allowed by the current PM<sub>10</sub> standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.<sup>12</sup> There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.00004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs.<sup>13</sup> However, the EPA or California Air Resources Board (CARB) have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by the CARB as a carcinogen.<sup>14</sup> Particulate matter can also cause environmental effects such as visibility impairment,<sup>15</sup> environmental damage,<sup>16</sup> and aesthetic damage.<sup>17,18,19</sup> The SoCAB is a nonattainment area for PM<sub>2.5</sub> under California and National AAQS and a nonattainment area for PM<sub>10</sub> under the California AAQS.<sup>20</sup>

<sup>11</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>12</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>13</sup> South Coast Air Quality Management District (SCAQMD). 2016, February. 2016 Air Quality Management Plan National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>.

<sup>14</sup> California Air Resources Board (CARB). 1998, April 22. The Report on Diesel Exhaust. <http://www.arb.ca.gov/toxics/dieseltac/de-fnds.htm>.

<sup>15</sup> PM<sub>2.5</sub> is the main cause of reduced visibility (haze) in parts of the United States.

<sup>16</sup> Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

<sup>17</sup> Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

<sup>18</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>19</sup> US Environmental Protection Agency (USEPA). 2019, June 11 (updated). Criteria Air Pollutants. <https://www.epa.gov/criteria-air-pollutants>.

<sup>20</sup> CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM<sub>10</sub> to attainment for PM<sub>10</sub> under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM<sub>10</sub> standards during the period from 2004 to 2007. In June 2013, the EPA approved the State of California's request to redesignate the PM<sub>10</sub> nonattainment area to attainment of the PM<sub>10</sub> National AAQS, effective on July 26, 2013.

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- **Ozone (O<sub>3</sub>)** is commonly referred to as “smog” and is a gas that is formed when VOCs and NO<sub>x</sub>, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O<sub>3</sub> is a secondary criteria air pollutant. O<sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O<sub>3</sub> poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O<sub>3</sub> can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O<sub>3</sub> also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O<sub>3</sub> also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O<sub>3</sub> harms sensitive vegetation during the growing season.<sup>21,22</sup> The SoCAB is designated as extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour).<sup>23</sup>
- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ.<sup>24,25</sup> The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA’s regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.<sup>26</sup> As a result of these violations, the Los Angeles

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<sup>21</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>22</sup> US Environmental Protection Agency (USEPA). 2018, October 31 (updated). Ground Level Ozone Basics.

<sup>23</sup> California Air Resources Board (CARB). 2017, May 5. Area Designations Maps/State and National. <http://www.arb.ca.gov/desig/desig.htm>.

<sup>24</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>25</sup> US Environmental Protection Agency (USEPA). 2018, March (updated). Criteria Air Pollutants. <https://www.epa.gov/criteria-air-pollutants>.

<sup>26</sup> Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012).

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County portion of the SoCAB is designated nonattainment under the National AAQS for lead.<sup>27</sup> Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the project.

Table 5.1-1 summarizes the potential health effects associated with the criteria air pollutants.

**Table 5.1-1 Criteria Air Pollutant Health Effects Summary**

| Pollutant  | Health Effects   | Examples of Sources  |
|--|--|--|
| Carbon Monoxide (CO)                                       | <ul style="list-style-type: none"> <li>Chest pain in heart patients</li> <li>Headaches, nausea</li> <li>Reduced mental alertness</li> <li>Death at very high levels</li> </ul> | Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves            |
| Ozone (O <sub>3</sub> )                                    | <ul style="list-style-type: none"> <li>Cough, chest tightness</li> <li>Difficulty taking a deep breath</li> <li>Worsened asthma symptoms</li> <li>Lung inflammation</li> </ul> | Atmospheric reaction of organic gases with nitrogen oxides in sunlight   |
| Nitrogen Dioxide (NO <sub>2</sub> )                        | <ul style="list-style-type: none"> <li>Increased response to allergens</li> <li>Aggravation of respiratory illness</li> </ul>  | Same as carbon monoxide sources  |
| Particulate Matter (PM <sub>10</sub> & PM <sub>2.5</sub> ) | <ul style="list-style-type: none"> <li>Hospitalizations for worsened heart diseases</li> <li>Emergency room visits for asthma</li> <li>Premature death</li> </ul>              | Cars and trucks (particularly diesels)<br>Fireplaces and woodstoves<br>Windblown dust from overlays, agriculture, and construction |
| Sulfur Dioxide (SO <sub>2</sub> )                          | <ul style="list-style-type: none"> <li>Aggravation of respiratory disease (e.g., asthma and emphysema)</li> <li>Reduced lung function</li> </ul>                               | Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes                      |
| Lead (Pb)  | <ul style="list-style-type: none"> <li>Behavioral and learning disabilities in children</li> <li>Nervous system impairment</li> </ul>  | Contaminated soil  |

Source: California Air Resources Board (CARB). 2018, June 12 (updated). Air Quality Standards and Area Designations. <http://www.arb.ca.gov/design/design.htm>. South Coast AQMD. 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

### Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. 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." A substance that is listed as a hazardous air pollutant pursuant to § 112(b) of the federal Clean Air Act (42 United States Code § 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it determines that

<sup>27</sup> South Coast Air Quality Management District (SCAQMD). 2012, May 4. Final 2012 Lead State Implementation Plan: Los Angeles County. <http://www3.aqmd.gov/hb/attachments/2011-2015/2012May/2012-May4-030.pdf>.

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the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

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 TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., 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.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs.<sup>28</sup> Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

#### ***Diesel Particulate Matter***

In 1998, CARB identified diesel particulate matter (DPM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory systems and may exacerbate existing allergies and asthma systems (USEPA 2002).

CARB has promulgated specific rules to limit TAC emissions, found in the California Code of Regulations (CCR):

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools

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<sup>28</sup> California Air Resources Board (CARB). 1999. California Air Resources Board (CARB). Final Staff Report: Update to the Toxic Air Contaminant List. <https://ww3.arb.ca.gov/toxics/id/finalstaffreport.htm>.



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- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

#### 5.1.1.2 REGULATORY BACKGROUND

AAQS have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of TACs. The project site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast AQMD as well as the California AAQS adopted by CARB and National AAQS adopted by the EPA. Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized in this section.

#### Federal and State

##### *Ambient Air Quality Standards*

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.1-2. These pollutants are ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

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**Table 5.1-2 Ambient Air Quality Standards for Criteria Air Pollutants**

| Pollutant  | Averaging Time          | California Standard <sup>1</sup>          | Federal Primary Standard <sup>2</sup> | Major Pollutant Sources  |
|--|-------------------------|---|---------------------------------------|--|
| Ozone (O <sub>3</sub> )                                  | 1 hour                  | 0.09 ppm                                  | *                                     | Motor vehicles, paints, coatings, and solvents.  |
|  | 8 hours                 | 0.070 ppm                                 | 0.070 ppm                             |  |
| Carbon Monoxide (CO)                                     | 1 hour                  | 20 ppm                                    | 35 ppm                                | Internal combustion engines, primarily gasoline-powered motor vehicles.  |
|  | 8 hours                 | 9.0 ppm                                   | 9 ppm                                 |  |
| Nitrogen Dioxide (NO <sub>2</sub> )                      | Annual Arithmetic Mean  | 0.030 ppm                                 | 0.053 ppm                             | Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.   |
|  | 1 hour                  | 0.18 ppm                                  | 0.100 ppm                             |  |
| Sulfur Dioxide (SO <sub>2</sub> )                        | Annual Arithmetic Mean  | *   | 0.030 ppm                             | Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.  |
|  | 1 hour                  | 0.25 ppm                                  | 0.075 ppm                             |  |
|  | 24 hours                | 0.04 ppm                                  | 0.14 ppm                              |  |
| Respirable Coarse Particulate Matter (PM <sub>10</sub> ) | Annual Arithmetic Mean  | 20 µg/m <sup>3</sup>                      | *                                     | Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).  |
|  | 24 hours                | 50 µg/m <sup>3</sup>                      | 150 µg/m <sup>3</sup>                 |  |
| Respirable Fine Particulate Matter (PM <sub>2.5</sub> )  | Annual Arithmetic Mean  | 12 µg/m <sup>3</sup>                      | 12 µg/m <sup>3</sup>                  | Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).  |
|  | 24 hours                | *   | 35 µg/m <sup>3</sup>                  |  |
| Lead (Pb)  | 30-Day Average          | 1.5 µg/m <sup>3</sup>                     | *                                     | Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.   |
|  | Calendar Quarter        | *   | 1.5 µg/m <sup>3</sup>                 |  |
|  | Rolling 3-Month Average | *   | 0.15 µg/m <sup>3</sup>                |  |
| Sulfates (SO <sub>4</sub> )                              | 24 hours                | 25 µg/m <sup>3</sup>                      | *                                     | Industrial processes.  |
| Visibility Reducing Particles                            | 8 hours                 | ExCo = 0.23/km<br>visibility of 10≥ miles | No Federal Standard                   | Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. |

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**Table 5.1-2 Ambient Air Quality Standards for Criteria Air Pollutants**

| Pollutant        | Averaging Time | California Standard <sup>1</sup> | Federal Primary Standard <sup>2</sup> | Major Pollutant Sources   |
|------------------|----------------|----------------------------------|---------------------------------------|---|
| Hydrogen Sulfide | 1 hour         | 0.03 ppm                         | No Federal Standard                   | Hydrogen sulfide (H <sub>2</sub> S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.                                      |
| Vinyl Chloride   | 24 hours       | 0.01 ppm                         | No Federal Standard                   | Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents. |

Source: California Air Resources Board (CARB). 2016, October 1. Ambient Air Quality Standards. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

Notes: ppm: parts per million; µg/m<sup>3</sup>: micrograms per cubic meter

\* Standard has not been established for this pollutant/duration by this agency.

<sup>1</sup> California standards for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>2</sup> National standards (other than O<sub>3</sub>, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

California has also adopted a host of other regulations that reduce criteria pollutant emissions:

- **AB 1493: Pavley Fuel Efficiency Standards.** Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.
- **SB 1078 and SB 107: Renewables Portfolio Standard.** A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the standard, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010.
- **20 CCR: Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (§§ 1601–1608) were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances.

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- **24 CCR, Part 6: Building and Energy Efficiency Standards.** Energy conservation standards for new residential and nonresidential buildings adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977.
- **24 CCR, Part 11: Green Building Standards Code.** Establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.<sup>29</sup>

### Regional

#### *Air Quality Management Planning*

South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

#### *2016 AQMP*

On March 3, 2017, South Coast AQMD adopted the 2016 AQMP as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031
- 2012 National annual PM<sub>2.5</sub> standard by 2025<sup>30</sup>
- 2006 National 24-hour PM<sub>2.5</sub> standard by 2019
- 1997 National 8-hour ozone standard by 2023
- 1979 National 1-hour ozone standard by year 2022

It is projected that total NO<sub>x</sub> emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022,<sup>31</sup> which requires reducing NO<sub>x</sub> emissions in the SoCAB to 250 tpd. This is approximately 45 percent more reductions than existing regulations for the 2023 ozone standard and 55 percent more reductions than existing regulations to meet the 2031 ozone standard.

Reducing NO<sub>x</sub> emissions would also reduce PM<sub>2.5</sub> concentrations in the SoCAB. However, as the goal is to meet the 2012 federal annual PM<sub>2.5</sub> standard no later than year 2025, the South Coast AQMD is seeking to reclassify the SoCAB from “moderate” to “serious” nonattainment under this federal standard. A “moderate” nonattainment would require meeting the 2012 federal standard by no later than 2021.

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<sup>29</sup> The green building standards became mandatory in the 2010 edition of 24 CCR, Part 11: Green Building Standards Code.

<sup>30</sup> The 2016 AQMP requests a reclassification from moderate to serious nonattainment for the 2012 National PM<sub>2.5</sub> standard.

<sup>31</sup> South Coast Air Quality Management District (SCAQMD). 2017, March 4. Final 2016 Air Quality Management Plan. <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>.

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Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP will be implemented in collaboration between CARB and the EPA.<sup>32</sup>

#### *Lead Implementation Plan*

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007-to-2009 period. The remainder of the SoCAB, outside the Los Angeles County nonattainment area, remained in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

#### *South Coast AQMD Rules and Regulations*

All projects are subject to South Coast AQMD rules and regulations in effect at the time of activity, including:

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the US Bureau of Mines.
- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to

<sup>32</sup> South Coast Air Quality Management District (SCAQMD). 2017, March 4. Final 2016 Air Quality Management Plan. <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>.

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earth moving and grading activities. In general, the rule prohibits new developments from the installation of wood-burning devices.

- **Rule 445, Wood Burning Devices.** This rule is intended to reduce the emission of particulate matter from wood-burning devices and applies to manufacturers and sellers of wood-burning devices, commercial sellers of firewood, and property owners and tenants that operate a wood-burning device.
- **Rule 1113, Architectural Coatings.** This rule serves to limit the VOC content of architectural coatings used on projects in the South Coast AQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the South Coast AQMD must comply with the current VOC standards set in this rule.
- **Rule 1403, Asbestos Emissions from Demolition/Renovation Activities.** The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfiling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

#### 5.1.1.3 EXISTING CONDITIONS

##### South Coast Air Basin

The project site lies in the SoCAB, which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds.<sup>33</sup>

##### Meteorology

###### *Temperature and Precipitation*

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the project site that best represents the climatological conditions of the project area is the

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<sup>33</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

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Beaumont #2 Station (ID 040609). The lowest average temperature is reported at 38.4°F in January, and the highest average temperature is 95.5°F in July.<sup>34</sup>

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall historically averages 17.81 inches per year in the project area.<sup>35</sup>

#### *Humidity*

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB.<sup>36</sup>

#### *Wind*

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.<sup>37</sup>

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<sup>34</sup> Western Regional Climate Center (WRCC). 2020, January 31 (accessed). Riverside Citrus Exp., California ([Station ID] 047473): Period of Record Monthly Climate Summary, 07/01/1948 to 09/30/2009. Western U.S. Climate Summaries. <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7473>.

<sup>35</sup> Western Regional Climate Center (WRCC). 2020, January 31 (accessed). Riverside Citrus Exp., California ([Station ID] 047473): Period of Record Monthly Climate Summary, 07/01/1948 to 09/30/2009. Western U.S. Climate Summaries. <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7473>.

<sup>36</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

<sup>37</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

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#### *Inversions*

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area.<sup>38</sup>

#### **SoCAB Nonattainment Areas**

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- ***Unclassified.*** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- ***Attainment.*** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- ***Nonattainment.*** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- ***Nonattainment/Transitional.*** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 5.1-3.

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<sup>38</sup> South Coast Air Quality Management District (SCAQMD). 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.



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**Table 5.1-3 Attainment Status of Criteria Air Pollutants in the South Coast Air Basin**

| Pollutant         | State                   | Federal  |
|-------------------|-------------------------|--|
| Ozone – 1-hour    | Extreme Nonattainment   | No Federal Standard                                  |
| Ozone – 8-hour    | Extreme Nonattainment   | Extreme Nonattainment                                |
| PM <sub>10</sub>  | Serious Nonattainment   | Attainment/Maintenance                               |
| PM <sub>2.5</sub> | Nonattainment           | Nonattainment <sup>1</sup>                           |
| CO                | Attainment              | Attainment   |
| NO <sub>2</sub>   | Attainment              | Attainment/Maintenance                               |
| SO <sub>2</sub>   | Attainment              | Attainment   |
| Lead              | Attainment              | Nonattainment (Los Angeles County only) <sup>2</sup> |
| All others        | Attainment/Unclassified | Attainment/Unclassified                              |

Source: California Air Resources Board (CARB). 2018, June 12. Air Quality Standards and Area Designations. <http://www.arb.ca.gov/design/design.htm>

<sup>1</sup> The South Coast AQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under federal PM<sub>2.5</sub> standard.

<sup>2</sup> In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

### Multiple Air Toxics Exposure Study IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the SoCAB. In 2008, the South Coast AQMD conducted its third update to the MATES study (MATES III). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the cancer risk.<sup>39</sup>

The South Coast AQMD recently released the fourth update (MATES IV). The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources while 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basin-wide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period.<sup>40</sup>

The Office of Environmental Health Hazard Assessment (OEHHA) updated the guidelines for estimating cancer risks on March 6, 2015. The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, the South Coast AQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed

<sup>39</sup> South Coast Air Quality Management District (SCAQMD). 2008, September. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III). <https://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii>.

<sup>40</sup> South Coast Air Quality Management District (SCAQMD). 2015, October 3. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV). <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf>.

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updated methods identified in MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk).<sup>41</sup>

### Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the South Coast AQMD. The project site is within Source Receptor Area (SRA) 29: Banning Airport.<sup>42</sup> The air quality monitoring station closest to the project site is the Banning Airport Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.<sup>43</sup> Data from this station includes O<sub>3</sub>, NO<sub>2</sub>, and PM<sub>10</sub> and is summarized in Table 5.1-4. Data from the Palm Springs – Fire Station Monitoring Station was used to supplement data for PM<sub>2.5</sub>. The data show that the area regularly exceeds the state and federal one-hour and eight-hour O<sub>3</sub> standards and state PM<sub>10</sub> within the last five recorded years.

**Table 5.1-4 Ambient Air Quality Monitoring Summary**

| Pollutant/Standard  | Number of Days Thresholds Were Exceeded and<br>Maximum Levels |        |        |        |        |
|---|---|--------|--------|--------|--------|
|   | 2014  | 2015   | 2016   | 2017   | 2018   |
| <b>Ozone (O<sub>3</sub>)<sup>1</sup></b>                        |   |        |        |        |        |
| State 1-Hour ≥ 0.09 ppm (days exceed threshold)                 | 22  | 16     | 26     | 50     | 33     |
| State 8-hour ≥ 0.07 ppm (days exceed threshold)                 | 58  | 46     | 52     | 82     | 69     |
| Federal 8-Hour > 0.075 ppm (days exceed threshold)              | 38  | 25     | 39     | 64     | 43     |
| Max. 1-Hour Conc. (ppm)   | 0.114   | 0.124  | 0.128  | 0.128  | 0.119  |
| Max. 8-Hour Conc. (ppm)   | 0.097   | 0.097  | 0.106  | 0.105  | 0.106  |
| <b>Nitrogen Dioxide (NO<sub>2</sub>)<sup>2</sup></b>            |   |        |        |        |        |
| State 1-Hour ≥ 0.18 ppm (days exceed threshold)                 | 0   | 0      | 0      | 0      | 0      |
| Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)              | 0   | 0      | 0      | 0      | 0      |
| Max. 1-Hour Conc. (ppb)   | 0.0523  | 0.0469 | 0.0469 | 0.0563 | 0.0506 |
| <b>Coarse Particulates (PM<sub>10</sub>)<sup>1</sup></b>        |   |        |        |        |        |
| State 24-Hour > 50 µg/m <sup>3</sup> (days exceed threshold)    | 0   | 1      | 3      | 1      | 0      |
| Federal 24-Hour > 150 µg/m <sup>3</sup> (days exceed threshold) | 0   | 0      | 0      | 0      | 0      |
| Max. 24-Hour Conc. (µg/m <sup>3</sup> )                         | 45.0  | 139.0  | 65.0   | 97.9   | 39.3   |
| <b>Fine Particulates (PM<sub>2.5</sub>)<sup>2</sup></b>         |   |        |        |        |        |
| Federal 24-Hour > 35 µg/m <sup>3</sup> (days exceed threshold)  | 0   | 0      | 0      | 0      | 0      |
| Max. 24-Hour Conc. (µg/m <sup>3</sup> )                         | 11.4  | 22.7   | 14.7   | 14.5   | 66.3   |

Source: California Air Resources Board (CARB). 2020. Air Pollution Data Monitoring Cards (2014, 2015, 2016, 2017, and 2018).

<https://www.arb.ca.gov/adam/topfour/topfour1.php>

ppm: parts per million; parts per billion, µg/m<sup>3</sup>: micrograms per cubic meter

Notes: \* Data not available.

<sup>1</sup> Data obtained from the Banning Airport Station.

<sup>2</sup> Data obtained from the Palm Spring- Fire Station Monitoring Station.

<sup>41</sup> South Coast Air Quality Management District (SCAQMD). 2015, October 3. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV). <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf>.

<sup>42</sup> Per South Coast AQMD Rule 701, an SRA is defined as follows: “A source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured. Any of the areas can be a source area, a receptor area, or both a source and receptor area”. There are 37 SRAs within the South Coast AQMD’s jurisdiction.

<sup>43</sup> Locations of the SRAs and monitoring stations are shown here: <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.

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#### Existing Conditions

The existing Beaumont High School currently generates criteria air pollutant emissions from natural gas use for energy, heating, and cooking; vehicle trips associated with students and staff; and area sources such as landscaping equipment and consumer cleaning products.

#### Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to 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 cardio-respiratory diseases.

Residential areas are considered to be sensitive receptors to air pollution because residents (such as children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as 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. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public. The nearest sensitive receptors to the proposed project site are the students of Beaumont High School.

#### 5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
- AQ-3 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

##### 5.1.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation based on substantial evidence.

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#### Regional Significance Thresholds

South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB, shown in Table 5.1-5. The table lists thresholds that are applicable for all projects uniformly, regardless of size or scope. There is growing evidence that although ultrafine particulate matter contributes a very small portion of the overall atmospheric mass concentration, it represents a greater proportion of the health risk from PM. However, the EPA and CARB have not adopted AAQS to regulate ultrafine particulate matter; therefore, South Coast AQMD has not developed thresholds for them.

**Table 5.1-5 South Coast AQMD Significance Thresholds**

| Air Pollutant   | Construction Phase | Operational Phase |
|---|--------------------|-------------------|
| Reactive Organic Gases (ROGs)/Volatile Organic Compounds (VOCs) | 75 lbs/day         | 55 lbs/day        |
| Nitrogen Oxides (NO <sub>x</sub> )                              | 100 lbs/day        | 55 lbs/day        |
| Carbon Monoxide (CO)  | 550 lbs/day        | 550 lbs/day       |
| Sulfur Oxides (SO <sub>x</sub> )                                | 150 lbs/day        | 150 lbs/day       |
| Particulates (PM <sub>10</sub> )                                | 150 lbs/day        | 150 lbs/day       |
| Particulates (PM <sub>2.5</sub> )                               | 55 lbs/day         | 55 lbs/day        |

Source: South Coast AQMD. 2019, April. South Coast AQMD Air Quality Significance Thresholds. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases cancer risk (PM<sub>2.5</sub>, TACs)
- Aggravates respiratory disease (O<sub>3</sub>, PM<sub>2.5</sub>)
- Increases bronchitis (O<sub>3</sub>, PM<sub>2.5</sub>)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O<sub>3</sub>)
- Reduces resistance to infections and increases fatigue (O<sub>3</sub>)
- Reduces lung growth in children (PM<sub>2.5</sub>)
- Contributes to heart disease and heart attacks (PM<sub>2.5</sub>)
- Contributes to premature death (O<sub>3</sub>, PM<sub>2.5</sub>)
- Contributes to lower birth weight in newborns (PM<sub>2.5</sub>) <sup>44</sup>

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of PM<sub>2.5</sub> is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of

<sup>44</sup> South Coast Air Quality Management District (SCAQMD). 2015. Health Effects of Air Pollution. <http://www.aqmd.gov/docs/default-source/publications/brochures/the-health-effects-of-air-pollution-brochure.pdf>.

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Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB.<sup>45</sup>

South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions in Table 5.1-5 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. The thresholds are based on the trigger levels for the federal New Source Review (NSR) Program. The NSR Program was created to ensure projects are consistent with attainment of health-based federal AAQS. Regional emissions from a single project do not single-handedly trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed above. Projects that do not exceed the South Coast AQMD regional significance thresholds in Table 5.1-5 would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emissions in Table 5.1-5, emissions would cumulatively contribute to the nonattainment status and would contribute in elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 5.1-5, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above.

South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno* (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978. Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National AAQS and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. However, if a project in the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standards are met in the SoCAB.

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<sup>45</sup> South Coast Air Quality Management District (SCAQMD). 2015, October. "Blueprint for Clean Air: 2016 AQMP White Paper." 2016 AQMP White Papers Web Page. <https://www.aqmd.gov/docs/default-source/Agendas/aqmp/white-paper-working-groups/wp-blueprint-final.pdf?sfvrsn=2>.

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#### CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hot spot analysis conducted for the attainment by the South Coast AQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.<sup>46</sup> As identified in the South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide, peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection.<sup>47,48</sup> Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.<sup>49</sup>

#### Localized Significance Thresholds

South Coast AQMD identifies localized significance thresholds (LST), shown in Table 5.1-6. Emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> generated at a project site could expose sensitive receptors to substantial concentrations of criteria air pollutants. Off-site mobile-source emissions are not included in the LST analysis. A project would generate a significant impact if it generates emissions that would violate the AAQS when added to the local background concentrations.

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<sup>46</sup> The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

<sup>47</sup> South Coast Air Quality Management District (SCAQMD). 2003, August. 2003 Air Quality Management Plan. Appendix V. <https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp>.

<sup>48</sup> South Coast Air Quality Management District (SCAQMD). 1992. Federal Attainment Plan for Carbon Monoxide.

<sup>49</sup> Bay Area Air Quality Management District (BAAQMD). 2017, May. California Environmental Quality Act Air Quality Guidelines. [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en).

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**Table 5.1-6 South Coast AQMD Localized Significance Thresholds**

| Air Pollutant (Relevant AAQS)   | Concentration          |
|---|------------------------|
| 1-Hour CO Standard (CAAQS)  | 20 ppm                 |
| 8-Hour CO Standard (CAAQS)  | 9.0 ppm                |
| 1-Hour NO <sub>2</sub> Standard (CAAQS)   | 0.18 ppm               |
| Annual NO <sub>2</sub> Standard (CAAQS)   | 0.03 ppm               |
| 24-Hour PM <sub>10</sub> Standard – Construction (South Coast AQMD) <sup>1</sup>  | 10.4 µg/m <sup>3</sup> |
| 24-Hour PM <sub>2.5</sub> Standard – Construction (South Coast AQMD) <sup>1</sup> | 10.4 µg/m <sup>3</sup> |
| 24-Hour PM <sub>10</sub> Standard – Operation (South Coast AQMD) <sup>1</sup>     | 2.5 µg/m <sup>3</sup>  |
| 24-Hour PM <sub>2.5</sub> Standard – Operation (South Coast AQMD) <sup>1</sup>    | 2.5 µg/m <sup>3</sup>  |
| Annual Average PM <sub>10</sub> Standard (South Coast AQMD) <sup>1</sup>          | 1.0 µg/m <sup>3</sup>  |

Source: South Coast Air Quality Management District (South Coast AQMD). 2019, April (revised). South Coast AQMD Air Quality Significance Thresholds.  
ppm – parts per million; µg/m<sup>3</sup> – micrograms per cubic meter

<sup>1</sup> Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM<sub>10</sub> and PM<sub>2.5</sub>, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5.1-6 for projects under 5-acres. These “screening-level” LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.1-6.

In accordance with South Coast AQMD’s LST methodology, the screening-level construction LSTs are based on the acreage disturbed per day based on equipment use. The screening-level construction LSTs for the project site in SRA 29 are shown in Table 5.1-7 for receptors within 82 feet (25 meters).

**Table 5.1-7 South Coast AQMD Screening-Level Construction Localized Significance Thresholds**

| Acreage Disturbed            | Threshold (lbs/day) <sup>1</sup>   |                      |   |  |
|------------------------------|------------------------------------|----------------------|---|--|
|                              | Nitrogen Oxides (NO <sub>x</sub> ) | Carbon Monoxide (CO) | Coarse Particulates (PM <sub>10</sub> ) | Fine Particulates (PM <sub>2.5</sub> ) |
| ≤1.00 Acre Disturbed Per Day | 103                                | 1,000                | 6.00                                    | 4.00                                   |
| 1.31 Acres Disturbed Per Day | 117                                | 1,169                | 7.25                                    | 4.62                                   |
| 1.81 Acres Disturbed Per Day | 140                                | 1,439                | 9.24                                    | 5.62                                   |
| 5.00 Acres Disturbed Per Day | 236                                | 2,817                | 20.99                                   | 11.00                                  |

Sources: South Coast Air Quality Management District (South Coast AQMD). 2008, July. Final Localized Significance Threshold Methodology. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>; South Coast Air Quality Management District (South Coast AQMD). 2011. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/calmod-guidance.pdf>.

<sup>1</sup> LSTs are based on receptors within 82 feet (25 meters) in SRA 29.

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Because the project is not an industrial project that has the potential to emit substantial sources of stationary emissions, operational LSTs are not an air quality impact of concern associated with the project.

### Health Risk

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 5.1-8 lists the TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478)). CEQA does not require CEQA-level environmental document to analyze the environmental effects of attracting development and people to an area. However, the environmental document must analyze the impacts of environmental hazards on future users, when a proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects.

**Table 5.1-8 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds**

|   |                           |
|---|---------------------------|
| Maximum Incremental Cancer Risk           | ≥ 10 in 1 million         |
| Cancer Burden (in areas ≥ 1 in 1 million) | > 0.5 excess cancer cases |
| Hazard Index (project increment)          | ≥ 1.0                     |

Source: South Coast Air Quality Management District (South Coast AQMD). 2019, April (revised). South Coast AQMD Air Quality Significance Thresholds.

## 5.1.3 Environmental Impacts

### 5.1.3.1 METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project. South Coast AQMD's *CEQA Air Quality Handbook* (Handbook) and updates on its website are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts.<sup>50</sup> The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs, and they were used in this analysis.

Air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.25. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual

<sup>50</sup> South Coast Air Quality Management Plan (South Coast AQMD). 1993. California Environmental Quality Act Air Quality Handbook.



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only). Construction criteria air pollutant emissions modeling is included in Appendix B of this Draft EIR. The calculated emissions of the project are compared to thresholds of significance for individual projects using the South Coast AQMD's Handbook. Following is a summary of the assumptions used for the proposed project analysis.

#### Construction Phase

Construction would include demolition, site preparation, grading, off-site hauling of demolition debris and earthwork material, building construction, athletic field installation, asphalt paving, architectural coating, and finishing and landscaping on 34 acres of the approximately 62-acre campus. The proposed project is anticipated to start in 4th quarter of 2020 (Q4-2020) and is expected to take 2 years to complete. Construction air pollutant emissions are based on the preliminary information provided or verified by the District.

#### Operational Phase

- **Transportation.** The primary source of mobile criteria air pollutant emissions is tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel). For particulate matter, brake and tire wear and fugitive dust are created by vehicles traveling roadways. The average daily trip (ADT) generation for weekday trips was provided by Garland Associates (traffic subconsultant). The average trip length of 3.28 miles per student vehicle trip is based on information provided by the District. Average trip lengths for staff and vendor trips are based on CalEEMod defaults. Furthermore, a 15 percent reduction was applied to student trips to account for carpooling. Project-related on-road criteria air pollutant emissions are based on calendar year 2021 emission rates from EMFAC2017 (v. 1.0.2) for the project buildout year.
- **Area Sources.** Area source emissions from use of consumer cleaning products, landscaping equipment, and VOC emissions from paints are based on CalEEMod default values, information provided by the District, and the square footage of the proposed buildings and surface parking lot areas.
- **Energy.** Criteria air pollutant emissions from energy use (natural gas used for cooking, heating, etc.) are based on the CalEEMod defaults for natural gas usage for nonresidential land uses. Criteria air pollutant emissions from energy use are associated with natural gas used for heating.

#### 5.1.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.1-1: The proposed project is consistent with the applicable air quality management plan. [Threshold AQ-1]**

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A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality

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concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP.

The regional emissions inventory for the SoCAB is compiled by South Coast AQMD and SCAG. Regional population, housing, and employment projections developed by SCAG are based, in part, on cities' general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP. These demographic trends are incorporated into SCAG's regional transportation plan/sustainable communities strategy to determine priority transportation projects and vehicle miles traveled in the SCAG region. The AQMP strategy is based on projections from local general plans.

Changes in population, housing, or employment growth projections have the potential to affect SCAG's demographic projections and therefore the assumptions in South Coast AQMD's AQMP. Based on the scope and nature of the project, the athletic field installation, ancillary structures, and new classroom buildings would not result in an increase in population and employment in Beaumont. Finally, the long-term emissions generated by the proposed project would not produce criteria air pollutants that exceed the South Coast AQMD significance thresholds for project operations (see Impact 5.1-3). South Coast AQMD's significance thresholds identify whether a project has the potential to cumulatively contribute to the SoCAB's nonattainment designations. Because the project would not exceed the South Coast AQMD's regional significance thresholds, and growth is consistent with regional growth projections, the project would not interfere with South Coast AQMD's ability to achieve the long-term air quality goals identified in the AQMP. Therefore, the proposed project would be consistent with the AQMP, and impacts would be less than significant.

***Level of Significance:*** Less Than Significant.

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**Impact 5.1-2: Construction activities associated with the proposed project would generate short-term emissions in exceedance of South Coast AQMD's threshold criteria. [Threshold AQ-2]**

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Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Construction of the proposed project would generate criteria air pollutants associated with construction equipment exhaust and fugitive dust from demolition and debris haul, grading and soil haul, trenching, athletic field installation, architectural coating, pavement of asphalt and non-asphalt surfaces, and finishing and landscaping of the site. Air pollutant emissions from construction activities on-site would vary daily as construction activity levels change. An estimate of maximum daily construction emissions for the proposed project is provided in Table 5.1-9.

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**Table 5.1-9 Maximum Daily Regional Construction Emissions**

| Construction Phase  | Pollutants<br>(lb/day) <sup>1,2</sup> |                 |     |                 |                  |                   |
|---|---------------------------------------|-----------------|-----|-----------------|------------------|-------------------|
|   | VOC                                   | NO <sub>x</sub> | CO  | SO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>Year 2020</b>  |                                       |                 |     |                 |                  |                   |
| Asphalt Demolition and Demolition Haul  | 3                                     | 36              | 23  | <1              | 3                | 2                 |
| Site Preparation and Grading/Grading Soil Haul                                      | 7                                     | 143             | 47  | <1              | 13               | 6                 |
| <b>Year 2021</b>  |                                       |                 |     |                 |                  |                   |
| Utilities Trenching   | <1                                    | 4               | 5   | <1              | <1               | <1                |
| Utilities Trenching, Athletic Fields Installation, and Building Construction        | <1                                    | 4               | 5   | <1              | <1               | <1                |
| Athletic Fields Installation and Building Construction                              | 6                                     | 43              | 45  | <1              | 9                | 3                 |
| Building Construction, Paving, and Finishing and Landscaping                        | 7                                     | 56              | 62  | <1              | 10               | 4                 |
| Building Construction, Paving, Finishing and Landscaping, and Architectural Coating | 22                                    | 58              | 68  | <1              | 12               | 4                 |
| <b>Maximum Daily Construction Emissions</b>   |                                       |                 |     |                 |                  |                   |
| Maximum Daily Emissions   | 22                                    | 143             | 68  | <1              | 13               | 6                 |
| South Coast AQMD Regional Construction Threshold                                    | 75                                    | 100             | 550 | 150             | 150              | 55                |
| <b>Significant?</b>   | No                                    | Yes             | No  | No              | No               | No                |

Source: CalEEMod Version 2016.3.2.25.

<sup>1</sup> Based on the preliminary information provided by the District. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

The SoCAB is designated nonattainment for O<sub>3</sub> and PM<sub>2.5</sub> under the California and National AAQS, nonattainment for PM<sub>10</sub> under the California AAQS,<sup>51</sup> and nonattainment for lead (Los Angeles County only) under the National AAQS. According to South Coast AQMD methodology, any project that does not exceed or can be mitigated to less than the daily threshold values would not add significantly to a cumulative impact.<sup>52</sup> As shown in Table 5.1-9, the maximum daily emissions for VOC, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> from construction-related activities would be less than their respective South Coast AQMD regional significance threshold values. However, the construction-related NO<sub>x</sub> emissions generated from the overlapping athletic field installation, site preparation, grading, and grading soil haul activities would exceed the South Coast AQMD regional significance threshold. Therefore, short-term air quality impacts from project-related construction activities would be potentially significant. Mitigation Measures AQ-1 and AQ-2 would reduce impacts to less than significant.

**Level of Significance:** Potentially Significant. Mitigation Measures AQ-1 and AQ-2 would reduce impacts to less than significant.

<sup>51</sup> Portions of the SoCAB along SR-60 in Los Angeles, Riverside, and San Bernardino counties are proposed nonattainment for NO<sub>2</sub> under the California AAQS.

<sup>52</sup> South Coast Air Quality Management District (South Coast AQMD). 1993. California Environmental Quality Act Air Quality Handbook.

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#### Impact 5.1-3: Long-term operation of the project would not generate emissions in exceedance of South Coast AQMD's threshold criteria. [Threshold AQ-2]

Buildout of the proposed project would generate an increase in criteria air pollutant emissions from transportation (i.e., vehicle trips), area sources (e.g., landscaping equipment, architectural coating), and energy (i.e., natural gas used for heating and cooking). As shown in Table 5.1-10, the maximum daily operation emissions would be less than their respective South Coast AQMD regional significance threshold values. Projects that do not exceed the South Coast AQMD regional significance thresholds would not result in an incremental increase in health impacts in the SoCAB from project-related increases in criteria air pollutants. Therefore, impacts to the regional air quality associated with operation of the project would be less than significant.

**Table 5.1-10 Maximum Daily Regional Operation Emissions**

| Source                                     | Maximum Daily Emissions (lbs/Day) |                 |            |                 |                  |                   |
|--|-----------------------------------|-----------------|------------|-----------------|------------------|-------------------|
|  | VOC                               | NO <sub>x</sub> | CO         | SO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Area                                       | 2                                 | <1              | <1         | <1              | <1               | <1                |
| Energy                                     | <1                                | <1              | <1         | <1              | <1               | <1                |
| Mobile <sup>1</sup>                        | 9                                 | 6               | 56         | <1              | 14               | 4                 |
| <b>Total</b>                               | <b>11</b>                         | <b>6</b>        | <b>57</b>  | <b>&lt;1</b>    | <b>14</b>        | <b>4</b>          |
| <b>South Coast AQMD Regional Threshold</b> | <b>55</b>                         | <b>55</b>       | <b>550</b> | <b>150</b>      | <b>150</b>       | <b>550</b>        |
| <b>Exceeds Threshold?</b>                  | No                                | No              | No         | No              | No               | No                |

Source: CalEEMod Version 2016.3.2.25. Highest winter or summer emissions are reported.

Notes: lbs = Pounds.

<sup>1</sup> Trips are based on data in the Traffic and Access Analysis in Appendix E of this Draft EIR.

**Level of Significance:** Less Than Significant.

#### Impact 5.1-4: Construction activities associated with the proposed project would expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3]

This impact analysis describes changes in localized impacts from short-term construction activities. The proposed project could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass of emissions shown in the regional emissions analysis in Table 5.1-9, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or µg/m<sup>3</sup>) and can be correlated to potential health effects.

### Construction-Phase LSTs

Screening-level LSTs (pounds per day) are the amount of project-related mass emissions at which localized concentrations (ppm or µg/m<sup>3</sup>) could exceed the AAQS for criteria air pollutants for which the SoCAB is designated nonattainment. The screening-level LSTs are based on the project site size and distance to the nearest sensitive receptor and are based on the California AAQS, which are the most stringent AAQS, established to protect sensitive receptors most susceptible to respiratory distress. Table 5.1-11 shows the

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maximum daily construction emissions (pounds per day) generated during on-site construction activities compared with the South Coast AQMD's screening-level LSTs, for sensitive receptors within 82 feet (25 meters). As shown in the table, the construction of the proposed project would not generate construction-related on-site emissions that would exceed the screening-level LSTs. Thus, project-related construction activities would not have the potential to expose sensitive receptors to substantial pollutant concentrations. Therefore, localized air quality impacts from construction activities would be less than significant, and no mitigation measures are necessary.

**Table 5.1-11 Construction Emissions Compared to the Screening-Level LSTs**

|  | Pollutants(lbs/day) <sup>1</sup> |              |                               |                                |
|--|----------------------------------|--------------|-------------------------------|--------------------------------|
|  | NO <sub>x</sub>                  | CO           | PM <sub>10</sub> <sup>2</sup> | PM <sub>2.5</sub> <sup>2</sup> |
| <b>South Coast AQMD ≤1.00 -acre LST</b>  | <b>103</b>                       | <b>1,000</b> | <b>6.00</b>                   | <b>4.00</b>                    |
| Asphalt Demolition and Demolition Haul   | 33                               | 22           | 2.61                          | 1.69                           |
| Utilities Trenching  | 4                                | 5            | 0.24                          | 0.22                           |
| <b>Exceeds LST?</b>  | No                               | No           | No                            | No                             |
| <b>South Coast AQMD 1.31-Acre LSTs</b>   | <b>117</b>                       | <b>1,169</b> | <b>7.25</b>                   | <b>4.62</b>                    |
| Building Construction, Paving, and Finishing and Landscaping                       | 31                               | 33           | 1.68                          | 1.56                           |
| Building Construction, Paving, Finishing and Landscaping and Architectural Coating | 33                               | 34           | 1.77                          | 1.66                           |
| <b>Exceeds LST?</b>  | No                               | No           | No                            | No                             |
| <b>South Coast AQMD 1.81-Acre LSTs</b>   | <b>140</b>                       | <b>1,439</b> | <b>9.24</b>                   | <b>5.62</b>                    |
| Athletic Fields Installation, Utilities Trenching, and Building Construction       | 4                                | 5            | 0.24                          | 0.22                           |
| Athletic Fields Installation and Building Construction                             | 18                               | 18           | 1.00                          | 0.94                           |
| <b>Exceeds LST?</b>  | No                               | No           | No                            | No                             |
| <b>South Coast AQMD 5.00-Acre LSTs</b>   | <b>236</b>                       | <b>2,817</b> | <b>20.99</b>                  | <b>11.00</b>                   |
| Site Preparation and Grading/Grading Soil Haul                                     | 51                               | 33           | 6.09                          | 3.60                           |
| <b>Exceeds LST?</b>  | No                               | No           | No                            | No                             |

Source: CalEEMod Version 2016.3.2.25.; South Coast Air Quality Management District (South Coast AQMD). 2008, July. Final Localized Significance Threshold Methodology. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>; South Coast Air Quality Management District (South Coast AQMD). 2011. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/cal-eemod-guidance.pdf>.

Notes: In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment occurring on the project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the site.

<sup>1</sup> Based on information provided or verified by the District. Where specific information regarding project-related construction activities or processes was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by the South Coast AQMD.

<sup>2</sup> Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

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#### Construction Health Risk

The OEHHA issued updated guidance for the preparation of health risk assessments in March 2015.<sup>53</sup> It has also developed a cancer risk factor and noncancer chronic reference exposure level for DPM based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. In addition, South Coast AQMD currently does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. Emissions from construction equipment primarily consist of DPM. The project is anticipated to be developed over 2 years, which would limit the exposure of on- and off-site receptors. Based on guidance from South Coast AQMD, construction risk is extrapolated based on the LST analysis.<sup>54</sup> As described above, construction activities would not exceed the screening-level construction LSTs. For the reasons stated above, it is anticipated that construction emissions would not pose a threat to on- and off-site receptors, and project-related construction health impacts would be less than significant.

**Level of Significance:** Less Than Significant.

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#### **Impact 5.1-5: Operation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3]**

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This impact analysis describes changes in localized impacts from long-term operation of the project. The proposed project could expose sensitive receptors to elevated pollutant concentrations during operational activities if it would cause or contribute significantly to elevated levels. Unlike the mass of emissions shown in the regional emissions analysis in Table 5.1-10, which is described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or  $\mu\text{g}/\text{m}^3$ ) and can be correlated to potential health effects.

#### Operational Phase LSTs

Operation of the proposed project would not generate substantial quantities of emissions from on-site, stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions require a permit from South Coast AQMD, such as chemical processing or warehousing operations where substantial truck idling could occur on-site. The proposed project does not fall within these categories of uses. Therefore, net localized air quality impacts from project-related operations would be less than significant.

#### Carbon Monoxide Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm.

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<sup>53</sup> Office of Environmental Health Hazard Assessment (OEHHA). 2015, February. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments.  
[http://oehha.ca.gov/air/hot\\_spots/2015/2015GuidanceManual.pdf](http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf).

<sup>54</sup> South Coast Air Quality Management District (South Coast AQMD). 2013 to 2020. South Coast Air Quality Management District Annual Update Workshop. Usually conveyed by Michael Krause, manager of NOx/SOx, RECLAIM, Toxics/VOC Rules 3.

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Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. The SoCAB has been designated in attainment of both the National and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact.<sup>55</sup> The proposed project would generate a net increase of 1,240 AM peak hour trips, which is substantially below the incremental increase in peak hour vehicle trips needed to generate a significant CO impact. Implementation of the project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project site.

**Level of Significance:** Less Than Significant.

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**Impact 5.1-6: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. [Threshold AQ-4]**

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The threshold for odor is if a project creates an odor nuisance pursuant to South Coast AQMD Rule 402, Nuisance, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. The proposed project involves construction of new athletic facilities, ancillary structures, and classroom buildings on the existing school campus and schools do not fall within the objectionable odors land uses. Emissions from construction equipment, such as diesel exhaust and volatile organic compounds from architectural coatings and paving activities may generate odors. However, these odors would be low in concentration, temporary, and would not affect a substantial number of people. Odor impacts would be less than significant.

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<sup>55</sup> Bay Area Air Quality Management District (BAAQMD). 2017, May. California Environmental Quality Act Air Quality Guidelines.

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*Level of Significance:* Less than Significant.

#### 5.1.4 Cumulative Impacts

In accordance with South Coast AQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Consistent with the methodology, projects that do not exceed the regional significance thresholds would not result in significant cumulative impacts. Cumulative projects in the local area include new development and general growth in the proposed project area. The greatest source of emissions in the SoCAB is mobile sources. Due to the extent of the area potentially impacted by cumulative emissions (i.e., the SoCAB), South Coast AQMD considers a project cumulatively significant when project-related emissions exceed the South Coast AQMD regional emissions thresholds shown in Table 5.1-5.<sup>56</sup>

#### Construction

The SoCAB is designated nonattainment for O<sub>3</sub> and PM<sub>2.5</sub> under the California and National AAQS and nonattainment for PM<sub>10</sub> and lead (Los Angeles County only) under the National AAQS. Construction of cumulative projects will further degrade the regional and local air quality. As shown in Table 5.1-9, project-related construction activities would generate short-term emissions that would exceed the South Coast AQMD regional emissions threshold for NO<sub>x</sub>. Therefore, the proposed project's contribution to cumulative air quality impacts would be cumulatively considerable. However, as discussed below in Section 5.1.8, with incorporation of mitigation, project-related construction emissions would be reduced to below the regional significance threshold for NO<sub>x</sub> and reduce construction-related cumulative impacts to less than significant.

#### Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by South Coast AQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Because implementation of the project would provide a closer option for future students within the school district, it would reduce vehicle miles traveled and related mobile emissions. Operation of the proposed project would not result in emissions in excess of the South Coast AQMD regional emissions thresholds. Therefore, the proposed project's contribution to cumulative air quality impacts would not be cumulatively considerable.

#### 5.1.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.1-1, 5.1-3, 5.1-4, 5.1-5, and 5.1-6.

Without mitigation, the following impact would be **potentially significant**:

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<sup>56</sup> South Coast Air Quality Management District (South Coast AQMD). 1993. California Environmental Quality Act Air Quality Handbook.



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- **Impact 5.1-2 and Cumulative** Construction activities associated with the proposed project could result in a cumulatively considerable net increase of NO<sub>x</sub>.

### 5.1.6 Mitigation Measures

#### Impact 5.1-2

AQ-1 During construction, the construction contractor(s) shall limit the hauling of soil generated from grading/excavation activities to a maximum of 95 trucks per day (191 one-way soil haul trips per day if 16 cubic yard trucks are used), assuming a one-way haul distance of 20 miles. If the truck haul distance for soil export is greater than 20 miles one way, as identified by the contractor(s), then hauling shall be restricted to no more than 3,820 miles per day. Where feasible, haul trucks with engines that are 2010 or newer shall be used for soil hauling activities. These requirements shall be noted on all construction management plans and verified by the Beaumont Unified School District (District) prior to issuance of any construction permits and during the soil-disturbing phase.

AQ-2 The Beaumont Unified School District (District) shall specify in the construction bid that the construction contractor(s) shall, at minimum, use equipment that meets the EPA's Tier 3 emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower for all site preparation and grading activities, unless it can be demonstrated to the District that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by Tier 3 emissions standards for a similarly sized engine, as defined by the California Air Resources Board's regulations.

Prior to construction, the project engineer shall ensure that all building demolition plans clearly show the requirement for EPA Tier 3 emissions standards for construction equipment over 50 horsepower for the specific activities stated above. During construction, the construction contractor shall maintain a list of all operating equipment associated with site preparation and grading in use on the site for verification by the District. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to 5 minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

### 5.1.7 Level of Significance After Mitigation

#### Impact 5.1-2

Implementation of Mitigation Measures AQ-1 and AQ-2, which require extension of the grading soil haul duration to match the duration of the entire grading phase, would limit construction-related emissions from

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the operation of construction equipment. As shown in Table 5.1-12, with the implementation of Mitigation Measures AQ-1 and AQ-2, construction-related NO<sub>x</sub> emissions would be reduced to below the South Coast AQMD regional emissions threshold. Project and cumulative construction-related air quality impacts under Impact 5.1-2 would be reduced to less than significant.

**Table 5.1-12 Maximum Daily Regional Construction Emissions with Mitigation**

| Construction Phase  | Pollutants<br>(lb/day) <sup>1,2</sup> |                 |     |                 |                  |                   |
|---|---------------------------------------|-----------------|-----|-----------------|------------------|-------------------|
|   | VOC                                   | NO <sub>x</sub> | CO  | SO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>Year 2020</b>  |                                       |                 |     |                 |                  |                   |
| Asphalt Demolition and Demolition Haul  | 3                                     | 36              | 23  | <1              | 3                | 2                 |
| Site Preparation and Grading/Grading Soil Haul                                      | 3                                     | 87              | 58  | <1              | 14               | 7                 |
| <b>Year 2021</b>  |                                       |                 |     |                 |                  |                   |
| Utilities Trenching   | <1                                    | 4               | 5   | <1              | <1               | <1                |
| Utilities Trenching, Athletic Fields Installation, and Building Construction        | <1                                    | 4               | 5   | <1              | <1               | <1                |
| Athletic Fields Installation and Building Construction                              | 6                                     | 43              | 45  | <1              | 9                | 3                 |
| Building Construction, Paving, and Finishing and Landscaping                        | 7                                     | 56              | 62  | <1              | 10               | 4                 |
| Building Construction, Paving, Finishing and Landscaping, and Architectural Coating | 22                                    | 58              | 68  | <1              | 12               | 4                 |
| <b>Maximum Daily Construction Emissions</b>   |                                       |                 |     |                 |                  |                   |
| Maximum Daily Emissions   | 22                                    | 87              | 68  | <1              | 134              | 7                 |
| South Coast AQMD Regional Construction Threshold                                    | 75                                    | 100             | 550 | 150             | 150              | 55                |
| <b>Significant?</b>   | No                                    | No              | No  | No              | No               | No                |

Source: CalEEMod Version 2016.3.2.25

<sup>1</sup> Based on the preliminary information provided by the District. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by South Coast AQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers. Also incorporates Mitigation Measures AQ-1 and AQ-2.

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### 5.2 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (Draft EIR) evaluates the potential for implementation of the Beaumont High School Expansion project (proposed project) to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough to result in a measurable increase in global concentrations of GHG, climate change impacts of a project are considered on a cumulative basis.

This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (South Coast AQMD). GHG emissions modeling was conducted using the California Emissions Estimator Model (CalEEMod), version 2016.3.2.25, and model outputs are in Appendix B of this Draft EIR.

#### Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide (CO<sub>2</sub>) over a given period of time (20, 100, and 500 years). CO<sub>2</sub> has a GWP of 1.
- **Carbon dioxide-equivalent (CO<sub>2</sub>e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO<sub>2</sub> that would cause the same amount of warming. CO<sub>2</sub>e is based on the GWP ratios between the various GHGs relative to CO<sub>2</sub>.
- **MTCO<sub>2</sub>e.** Metric ton of CO<sub>2</sub>e.
- **MMTCO<sub>2</sub>e.** Million metric tons of CO<sub>2</sub>e.

#### 5.2.1 Environmental Setting

##### 5.2.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The “greenhouse effect” is the natural process that retains heat in the troposphere, which is the bottom layer of the atmosphere. Without the greenhouse effect, thermal energy would escape into space, resulting in a much colder and inhospitable planet. GHGs are the components of the atmosphere responsible for the greenhouse effect. The amount of heat that is retained is proportional to the concentration of GHGs in the atmosphere. As more GHGs are released into the atmosphere, GHG concentrations increase and the atmosphere retains more heat, increasing the effects of climate change.

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The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.<sup>1,2</sup> The major GHGs applicable to the proposed project are briefly described.

- **Carbon dioxide (CO<sub>2</sub>)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N<sub>2</sub>O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.2-1. The GWP is used to convert GHGs to CO<sub>2</sub>-equivalence (CO<sub>2</sub>e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fifth Assessment Report (AR5) GWP values for CH<sub>4</sub>, a project that generates 10 MT of CH<sub>4</sub> would be equivalent to 280 MT of CO<sub>2</sub>.<sup>3,4</sup>

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<sup>1</sup> Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (California Air Resources Board (CARB). 2017, March 14. Final Proposed Short-Lived Climate Pollutant Reduction Strategy. <https://www.arb.ca.gov/cc/shortlived/shortlived.htm>). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

<sup>2</sup> Intergovernmental Panel on Climate Change (IPCC). 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press. [https://www.ipcc.ch/site/assets/uploads/2018/03/WGI\\_TAR\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/WGI_TAR_full_report.pdf).

<sup>3</sup> CO<sub>2</sub>-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere..

<sup>4</sup> Intergovernmental Panel on Climate Change (IPCC). 2013. Fifth Assessment Report: Climate Change 2013. New York: Cambridge University Press.

## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

**Table 5.2-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>**

| GHGs  | Carbon Dioxide (CO <sub>2</sub> ) | Methane <sup>1</sup> (CH <sub>4</sub> ) | Nitrous Oxide (N <sub>2</sub> O) |
|---|-----------------------------------|---|----------------------------------|
| <b>Second Assessment</b>  |                                   |   |                                  |
| Atmospheric Lifetime (Years)                                      | 50 to 200                         | 12 (±3)                                 | 120                              |
| Global Warming Potential Relative to CO <sub>2</sub> <sup>2</sup> | 1                                 | 21                                      | 310                              |
| <b>Fourth Assessment</b>  |                                   |   |                                  |
| Atmospheric Lifetime (Years)                                      | 50 to 200                         | 12                                      | 114                              |
| Global Warming Potential Relative to CO <sub>2</sub> <sup>2</sup> | 1                                 | 25                                      | 298                              |
| <b>Fifth Assessment<sup>3</sup></b>                               |                                   |   |                                  |
| Atmospheric Lifetime (Years)                                      | 50 to 200                         | 12                                      | 121                              |
| Global Warming Potential Relative to CO <sub>2</sub> <sup>2</sup> | 1                                 | 28                                      | 265                              |

Source: Intergovernmental Panel on Climate Change (IPCC). 1995. Second Assessment Report: Climate Change 1995 [https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc\\_sar\\_wg\\_i\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_sar_wg_i_full_report.pdf); Intergovernmental Panel on Climate Change (IPCC). 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press. [https://www.ipcc.ch/site/assets/uploads/2018/02/ar4\\_syr\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ar4_syr_full_report.pdf); Intergovernmental Panel on Climate Change (IPCC). 2013. Fifth Assessment Report: Climate Change 2013. New York: Cambridge University Press.

**Notes:**

- <sup>1</sup> The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO<sub>2</sub> is not included.
- <sup>2</sup> Based on 100-year time horizon of the GWP of the air pollutant compared to CO<sub>2</sub>.
- <sup>3</sup> The GWP values in the IPCC's Fifth Assessment Report (2013)<sup>5</sup> reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO<sub>2</sub>. However, South Coast AQMD uses the AR4 GWP values to maintain consistency in statewide GHG emissions modeling. In addition, the 2017 Scoping Plan Update was based on the AR4 GWP values.

### California's GHG Sources and Relative Contribution

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the GWPs in IPCC's AR4.<sup>6</sup> Based on these GWPs, California produced 424.10 MMTCO<sub>2</sub>e GHG emissions in 2017. The California Air Resources Board (CARB) categorizes GHG generation into the following seven sectors.<sup>7</sup>

- **Transportation.** Consists of direct tailpipe emissions from on-road vehicle and direct emissions from off-road transportation mobile sources, intrastate aviation, rail, and watercraft. Emissions are generated from the combustion of fuels in on- and off-road vehicles in addition to aviation, rail, and ships.
- **Electric.** Includes emissions from instate power generation (including the portion of cogeneration emissions attributed to electricity generation) and emissions from imported electricity.
- **Industrial.** Includes emissions primarily driven by fuel combustion from sources that include refineries, oil and gas extraction, cement plants, and the portion of cogeneration emissions attribute to thermal energy output.

<sup>5</sup> Intergovernmental Panel on Climate Change (IPCC). 2013. Fifth Assessment Report: Climate Change 2013. New York: Cambridge University Press. [https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_all\\_final.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf).

<sup>6</sup> Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

<sup>7</sup> California Air Resources Board (CARB). 2019, August 26. California Greenhouse Emissions for 2000 to 2017: Trends of Emissions and Other Indicators. <https://www.arb.ca.gov/cc/inventory/data/data.htm>.

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### GREENHOUSE GAS EMISSIONS

- **Commercial and Residential.** Accounts for emissions generated from combustion of natural gas and other fuels for household and commercial business use, such as space heating, cooking, and hot water or steam generation. Emissions associated with electricity usage are accounted for in the Electric Sector.
- **Recycling and Waste.** Consists of emissions generated at landfills and from commercial-scale composting.
- **Agriculture.** Primarily includes methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions generated from enteric fermentation and manure management from livestock. Also accounts for emissions associated with crop production (fertilizer use, soil preparation and disturbance, and crop residue burning) and fuel combustion associated with stationary agricultural activities (e.g., water pumping, cooling or heating buildings).
- **High Global Warming Potential Gases.** Associated with substitutes for ozone-depleting substances, emissions from electricity transmission and distribution system, and gases emitted in the semiconductor manufacturing process. Substitutes for ozone-depleting substances are used in refrigeration and air conditioning equipment, solvent cleaning, foam production, fire retardants, and aerosols.

California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent), high GWP (4.7 percent), and recycling and waste (2.1 percent).<sup>8</sup>

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG-emitting activities statewide were 424 MMTCO<sub>2</sub>e, 5 MMTCO<sub>2</sub>e lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 MMTCO<sub>2</sub>e below the 1990 level and the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 MTCO<sub>2</sub>e per capita to 10.7 MTCO<sub>2</sub>e per capita in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) has declined 41 percent since the 2001 peak, while the state's gross domestic product has grown 52 percent during the same period. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy).<sup>9</sup>

### Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human

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<sup>8</sup> California Air Resources Board (CARB). 2019, August 26. 2019 Edition California Greenhouse Gas Inventory for 2000-2017: By Category as Defined in the 2008 Scoping Plan. <https://www.arb.ca.gov/cc/inventory/data/data.htm>.

<sup>9</sup> California Air Resources Board (CARB). 2019, August 26. 2019 Edition California Greenhouse Gas Inventory for 2000-2017: By Category as Defined in the 2008 Scoping Plan. <https://www.arb.ca.gov/cc/inventory/data/data.htm>.

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activities. The amount of CO<sub>2</sub> in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation.<sup>10</sup> These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.<sup>11</sup> In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime.<sup>12</sup>

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

### Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide, average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada.<sup>13</sup> The years from 2014 through 2016 have shown unprecedented temperatures

<sup>10</sup> Intergovernmental Panel on Climate Change (IPCC). 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press.

<sup>11</sup> California Climate Action Team (CAT). 2006, March. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

<sup>12</sup> Intergovernmental Panel on Climate Change (IPCC). 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press.

<sup>13</sup> California Climate Change Center (CCCC). 2012, July. Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California.

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with 2014 being the warmest.<sup>14</sup> By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels.<sup>15</sup>

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms.<sup>16</sup> Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with unprecedented dry years occurring in 2014 and 2015.<sup>17</sup> Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015.<sup>18</sup> According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.2-1), and the inertia of the Earth’s climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 5.2-2 and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

**Table 5.2-2 Summary of GHG Emissions Risks to California**

| Impact Category         | Potential Risk   |
|-------------------------|--|
| Public Health Impacts   | Heat waves will be more frequent, hotter, and longer<br>Fewer extremely cold nights<br>Poor air quality made worse<br>Higher temperatures increase ground-level ozone levels |
| Water Resources Impacts | Decreasing Sierra Nevada snow pack<br>Challenges in securing adequate water supply<br>Potential reduction in hydropower<br>Loss of winter recreation                         |
| Agricultural Impacts    | Increasing temperature<br>Increasing threats from pests and pathogens<br>Expanded ranges of agricultural weeds<br>Declining productivity<br>Irregular blooms and harvests    |

<sup>14</sup> Office of Environmental Health Hazards Assessment (OEHHA). 2018, May. Indicators of Climate Change in California. <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>.

<sup>15</sup> California Climate Change Center (CCCC). 2012, July. Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California.

<sup>16</sup> California Climate Action Team (CAT). 2006, March. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

<sup>17</sup> Office of Environmental Health Hazards Assessment (OEHHA). 2018, May. Indicators of Climate Change in California. <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>.

<sup>18</sup> Office of Environmental Health Hazards Assessment (OEHHA). 2018, May. Indicators of Climate Change in California. <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf>.



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**Table 5.2-2 Summary of GHG Emissions Risks to California**

| Impact Category                        | Potential Risk  |
|--|---|
| Coastal Sea Level Impacts              | Accelerated sea level rise<br>Increasing coastal floods<br>Shrinking beaches<br>Worsened impacts on infrastructure  |
| Forest and Biological Resource Impacts | Increased risk and severity of wildfires<br>Lengthening of the wildfire season<br>Movement of forest areas<br>Conversion of forest to grassland<br>Declining forest productivity<br>Increasing threats from pest and pathogens<br>Shifting vegetation and species distribution<br>Altered timing of migration and mating habits<br>Loss of sensitive or slow-moving species |
| Energy Demand Impacts                  | Potential reduction in hydropower<br>Increased energy demand  |

**Sources:**

California Energy Commission (CEC). 2006. Our Changing Climate: Assessing the Risks to California. 2006 Biennial Report. CEC-500-2006-077. California Climate Change Center.  
California Energy Commission (CEC). 2009, May. The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California. CEC-500-2008-0077.  
California Climate Change Center (CCCC). 2012, July. Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California.  
California Natural Resources Agency (CNRA). 2014, July. Safeguarding California: Reducing Climate Risk: An Update to the 2009 California Climate Adaptation Strategy. [https://resources.ca.gov/CNRALegacyFiles/docs/climate/Final\\_Safeguarding\\_CA\\_Plan\\_July\\_31\\_2014.pdf](https://resources.ca.gov/CNRALegacyFiles/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf).

### 5.2.1.2 REGULATORY BACKGROUND

This section describes the federal, state, and local regulations applicable to GHG emissions.

#### Federal

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 US Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission reduction requirements but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.<sup>19</sup>

To regulate GHGs from passenger vehicles, the EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and SF<sub>6</sub>—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the proposed project's GHG emissions inventory

<sup>19</sup> US Environmental Protection Agency (USEPA). 2009, December. EPA: Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity. [https://archive.epa.gov/epapages/newsroom\\_archive/newsreleases/08d11a451131bca585257685005bf252.html](https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html).

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because they constitute the majority of GHG emissions; they are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

#### *US Mandatory Reporting Rule for GHGs (2009)*

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MTCO<sub>2</sub>e or more per year are required to submit an annual report.

#### *Update to Corporate Average Fuel Economy Standards (2021 to 2026)*

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. However, on March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. However, consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America, and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet the CAFE standards established in 2021 for model years 2017 to 2025.<sup>20</sup>

#### *EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)*

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new, large stationary sources of emissions such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule which became effective on August 19, 2019. The ACE rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO<sub>2</sub> emissions from coal-fired power plants.

### **State**

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Orders S-03-05 and B-30-15, Assembly Bill (AB) 32, Senate Bill (SB) 32, and SB 375.

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<sup>20</sup> California Air Resources Board (CARB). 2019, September 5 (accessed). California and major automakers reach groundbreaking framework agreement on clean emission standards. <https://ww2.arb.ca.gov/news/california-and-major-automakers-reach-groundbreaking-framework-agreement-clean-emission>.

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### *Executive Order S-03-05*

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

### *Assembly Bill 32, the Global Warming Solutions Act (2006)*

State of California guidance and targets for reductions in GHG emissions are generally embodied in the Global Warming Solutions Act, adopted with passage of AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 emissions reduction goal established in Executive Order S-03-05.

### *CARB 2008 Scoping Plan*

The first Scoping Plan was adopted by CARB on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be 596 MMTCO<sub>2</sub>e in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMTCO<sub>2</sub>e (471 million tons) for the state (CARB 2008). To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MTCO<sub>2</sub>e per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

### *First Update to the Scoping Plan*

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 MMTCO<sub>2</sub>e 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 MMTCO<sub>2</sub>e.<sup>21</sup>

As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. The update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goal, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals.<sup>22</sup> CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing

<sup>21</sup> California Air Resources Board (CARB). 2014, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006. <http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm>.

<sup>22</sup> California Air Resources Board (CARB). 2014, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006. <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>.

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toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit.<sup>23</sup>

#### *Executive Order B-30-15*

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaptation strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

#### *Senate Bill 32 and Assembly Bill 197*

In September 2016, Governor Brown signed Senate Bill 32 and Assembly Bill 197, making the Executive Order goal for year 2030 into a statewide, mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

#### *2017 Climate Change Scoping Plan*

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO<sub>2e</sub> for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.<sup>24</sup>

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission vehicle technologies; continued investment in renewables such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten emissions limits for criteria air pollutants and toxic air contaminants on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

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<sup>23</sup> California Air Resources Board (CARB). 2014, May 15. First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006. <http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm>.

<sup>24</sup> California Air Resources Board (CARB). 2017, November. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. [https://www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf).

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- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission (ZE) buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency by 25 percent by 2030 and utilizes near-zero emissions technology and deployment of ZE trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to these statewide strategies, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and recommended local actions to reduce GHG emissions—for example, statewide targets of no more than 6 MTCO<sub>2e</sub> or less per capita by 2030 and 2 MTCO<sub>2e</sub> or less per capita by 2050. CARB recommends that local governments evaluate and adopt quantitative, locally appropriate goals that align with the statewide per capita targets and sustainable development objectives, and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the “business as usual” yardstick—that is, what would the GHG emissions look like if the state did nothing at all beyond the policies that are already required and in place to achieve the 2020 limit, as shown in Table 5.2-3. It includes the existing renewables requirements, advanced clean cars, the “10 percent” LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put

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into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 MMTCO<sub>2</sub>e above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

**Table 5.2-3 2017 Climate Change Scoping Plan Emissions Reductions Gap**

| Modeling Scenario                      | 2030 GHG Emissions<br>MMTCO <sub>2</sub> e |
|--|--|
| Reference Scenario (Business-as-Usual) | 389  |
| With Known Commitments                 | 320  |
| 2030 GHG Target                        | 260  |
| Gap to 2030 Target                     | 60   |

Source: California Air Resources Board. 2017, November. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. [https://www.arb.ca.gov/cc/scopingplan/2030sp\\_pp\\_final.pdf](https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf).

Table 5.2-4 provides estimated GHG emissions compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

**Table 5.2-4 2017 Climate Change Scoping Plan Emissions Change by Sector**

| Scoping Plan Sector            | 1990<br>MMTCO <sub>2</sub> e | 2030 Proposed Plan Ranges<br>MMTCO <sub>2</sub> e | % Change from 1990 |
|--------------------------------|------------------------------|---|--------------------|
| Agricultural                   | 26                           | 24 to 25  | -8% to -4%         |
| Residential and Commercial     | 44                           | 38 to 40  | -14% to -9%        |
| Electric Power                 | 108                          | 30 to 53  | -72% to -51%       |
| High GWP                       | 3                            | 8 to 11   | 267% to 367%       |
| Industrial                     | 98                           | 83 to 90  | -15% to -8%        |
| Recycling and Waste            | 7                            | 8 to 9  | 14% to 29%         |
| Transportation (including TCU) | 152                          | 103 to 111  | -32% to -27%       |
| Net Sink <sup>1</sup>          | -7                           | TBD   | TBD                |
| Sub Total                      | 431                          | 294 to 339  | -32% to -21%       |
| Cap-and-Trade Program          | NA                           | 34 to 79  | NA                 |
| Total                          | 431                          | 260   | -40%               |

Source: California Air Resources Board (CARB). 2017, November. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. [https://www.arb.ca.gov/cc/scopingplan/2030sp\\_pp\\_final.pdf](https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf).

Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.

<sup>1</sup> Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

### Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range

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transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035.<sup>25</sup> The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 MMTCO<sub>2e</sub> of reductions by 2020 and 15 MMTCO<sub>2e</sub> of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met.<sup>26</sup>

#### *2017 Update to the SB 375 Targets*

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and released another update in February 2018. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing. The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which for 2035, translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted sustainable communities strategies (SCS). As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 MMTCO<sub>2e</sub> in 2035 compared to the current targets. For the next round of SCS updates, CARB's updated targets for the SCAG region are an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent).<sup>27</sup> CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018, are subject to these new targets.

<sup>25</sup> California Air Resources Board (CARB). 2010, August. Staff Report Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375. [https://ww3.arb.ca.gov/cc/sb375/staffreport\\_sb375080910.pdf](https://ww3.arb.ca.gov/cc/sb375/staffreport_sb375080910.pdf).

<sup>26</sup> California Air Resources Board (CARB). 2010, August. Staff Report Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375. [https://ww3.arb.ca.gov/cc/sb375/staffreport\\_sb375080910.pdf](https://ww3.arb.ca.gov/cc/sb375/staffreport_sb375080910.pdf).

<sup>27</sup> California Air Resources Board (CARB). 2018, February. Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets. <https://www.arb.ca.gov/cc/inventory/data/data.htm>.

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#### *SCAG's Regional Transportation Plan / Sustainable Communities Strategy*

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan. For the SCAG region, the 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) was adopted on April 7, 2016, and is an update to the 2012 RTP/SCS.<sup>28</sup> SCAG released the draft 2020-2045 RTP/SCS (Connect SoCal); adopted the plan for the limited purpose of transportation conformity on May 7, 2020; and will consider the plan in 120 days.<sup>29</sup> In general, the SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through horizon year 2045.<sup>30</sup> Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. Additionally, Connect SoCal also forecasts that implementation of the plan will reduce VMT per capita in year 2045 by 4.1 percent compared to baseline conditions for that year. Connect SoCal includes a “Core Vision” that centers on maintaining and better managing the transportation network for moving people and goods while expanding mobility choices by locating housing, jobs, and transit closer together and increasing investments in transit and complete streets.<sup>31</sup>

#### *Transportation Sector Specific Regulations*

##### *Assembly Bill 1493*

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car

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<sup>28</sup> Southern California Association of Governments. 2016, April 7. Final 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): A Plan for Mobility, Accessibility, Sustainability, and a High Quality of Life. <http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx>.

<sup>29</sup> Southern California Association of Governments (SCAG). 2020, May 7. Adopted Connect SoCal Plan: The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of The Southern California Association of Governments. <https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx>

<sup>30</sup> Southern California Association of Governments (SCAG). 2020, May 7. Adopted Connect SoCal Plan: The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of The Southern California Association of Governments. <https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx>

<sup>31</sup> Southern California Association of Governments (SCAG). 2020, May 7. Adopted Connect SoCal Plan: The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of The Southern California Association of Governments. <https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx>



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program, by 2025 new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

#### ***Executive Order S-01-07***

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO<sub>2</sub>e gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

#### ***Executive Order B-16-2012***

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.

#### ***Renewables Portfolio: Carbon Neutrality Regulations***

##### ***Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08***

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

##### ***Senate Bill 350***

Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

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#### *Senate Bill 100*

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

#### *Executive Order B-55-18*

Executive Order B-55-18, signed September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO<sub>2</sub>e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

#### *Energy Efficiency Regulations*

##### *California Building Code: Building Energy Efficiency Standards*

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2019 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect on January 1, 2020.

The 2019 standards move towards cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multi-family buildings of 3 stories and less. Four key areas the 2019 standards will focus on include 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements.<sup>32</sup> Under the 2019 standards, nonresidential buildings and multifamily residential buildings of four stories or more will be 30 percent more energy efficient compared to the 2016 standards while single-family homes will be 7 percent more energy efficient.<sup>33</sup> When accounting for the electricity generated by the solar photovoltaic

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<sup>32</sup> California Energy Commission (CEC). 2018. News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. [http://www.energy.ca.gov/releases/2018\\_releases/2018-05-09\\_building\\_standards\\_adopted\\_nr.html](http://www.energy.ca.gov/releases/2018_releases/2018-05-09_building_standards_adopted_nr.html).

<sup>33</sup> California Energy Commission (CEC). 2018. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. [http://www.energy.ca.gov/title24/2019standards/documents/2018\\_Title\\_24\\_2019\\_Building\\_Standards\\_FAQ.pdf](http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf).

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system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards.<sup>34</sup>

### ***California Building Code: CALGreen***

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.<sup>35</sup> The mandatory provisions of CALGreen became effective January 1, 2011. The CEC adopted the voluntary standards of the 2019 CALGreen on October 3, 2018. The 2019 CALGreen standards became effective January 1, 2020.

### ***2006 Appliance Efficiency Regulations***

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006 and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

### ***Solid Waste Diversion Regulations***

#### ***AB 939: Integrated Waste Management Act of 1989***

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

#### ***AB 341***

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.208 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

#### ***AB 1327***

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption

<sup>34</sup> California Energy Commission (CEC). 2018. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. [http://www.energy.ca.gov/title24/2019standards/documents/2018\\_Title\\_24\\_2019\\_Building\\_Standards\\_FAQ.pdf](http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf).

<sup>35</sup> The green building standards became mandatory in the 2010 edition of the code.

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by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

#### ***AB 1826***

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

#### ***Water Efficiency Regulations***

##### ***SBX7-7***

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

##### ***AB 1881, Water Conservation in Landscaping Act***

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

#### ***Short-Lived Climate Pollutant Reduction Strategy***

##### ***Senate Bill 1383***

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH<sub>4</sub>. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state’s approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants.

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Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use.<sup>36</sup> In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

#### 5.2.1.3 EXISTING CONDITIONS

The project site currently houses Beaumont High School. The existing high school operations currently generate greenhouse emissions from transportation, area sources, energy use, water use/wastewater generation, and solid waste disposal.

### 5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

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

#### 5.2.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

South Coast AQMD has adopted a significance threshold of 10,000 MTCO<sub>2</sub>e per year for permitted (stationary) sources of GHG emissions for which South Coast AQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, South Coast AQMD identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency.<sup>37</sup> This following tiered approach has not been formally adopted by South Coast AQMD.

- **Tier 1.** If a project is exempt from CEQA, project-level and contribution to significant cumulative GHG emissions are less than significant.

<sup>36</sup> California Air Resources Board (CARB). 2017, March 14. Final Proposed Short-Lived Climate Pollutant Reduction Strategy. <https://www.arb.ca.gov/cc/shortlived/shortlived.htm>.

<sup>37</sup> South Coast Air Quality Management District (South Coast AQMD). 2010, September 28. Agenda for Meeting 15. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group. [http://www.aqmd.gov/docs/default-source/ccqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ccqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2).

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- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (e.g., city or county), project-level and contribution to significant cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level criterion, project-level and contribution to significant cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The South Coast AQMD Working Group identified that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. South Coast AQMD identified a screening-level threshold of 3,000 MTCO<sub>2</sub>e annually for all land use types. The bright-line screening-level criteria are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions.<sup>38</sup> South Coast AQMD recommends use of the 3,000 MTCO<sub>2</sub>e interim bright-line screening-level criterion for all project types.<sup>39</sup>

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.<sup>40</sup>

The South Coast AQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 MTCO<sub>2</sub>e per year per service population (MTCO<sub>2</sub>e/year/SP) for project-level analyses and 6.6 MTCO<sub>2</sub>e/year/SP for plan level projects (e.g., program-level projects such as general

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<sup>38</sup> South Coast Air Quality Management District (South Coast AQMD). 2008. Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf).

<sup>39</sup> South Coast Air Quality Management District (South Coast AQMD). 2010, September 28. Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf).

<sup>40</sup> South Coast AQMD had identified an efficiency target for projects that exceed the bright-line threshold: a 2020 efficiency target of 4.8 MTCO<sub>2</sub>e per year per service population (MTCO<sub>2</sub>e/year/SP) for project-level analyses and 6.6 MTCO<sub>2</sub>e/year/SP for plan-level projects (e.g., general plans). Service population is generally defined as the sum of residential and employment population of a project. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.<sup>40</sup>

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plans) for the year 2020.<sup>41</sup> The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.<sup>42</sup>

#### Summary

For purposes of this analysis, because the District has not developed its own numeric GHG significance threshold, the South Coast AQMD Working Group's bright-line screening-level criterion of 3,000 MTCO<sub>2e</sub> per year is used as the significance threshold for this project. If the project operation-phase emissions exceed this criterion, GHG emissions would be considered potentially significant in the absence of mitigation measures.

#### 5.2.2.2 MASS EMISSIONS AND HEALTH EFFECTS

On December 24, 2018, in *Sierra Club et al. v. County of Fresno et al.* (Friant Ranch), the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. The EIR prepared for the project, a master planned retirement community in Fresno County, showed that project-related mass emissions would exceed the San Joaquin Valley Air Pollution Control District's regional significance thresholds. In its findings, the California Supreme Court affirmed the holding of the Court of Appeal that EIRs for projects must not only identify impacts to human health, but also provide an "analysis of the correlation between the project's emissions and human health impacts" related to each criteria air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

In 2009, the EPA issued an endangerment finding for six GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) in order to regulate GHG emissions from passenger vehicles. The endangerment finding is based on evidence that shows an increase in mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heat waves and elevated ozone levels. The effects of climate change are identified in Table 5.2-2. While effects such as sea level rise and extreme weather can indirectly impact human health, neither the EPA nor CARB has established ambient air quality standards for GHG emissions. The state's GHG reduction strategy outlines a path to avoid the most catastrophic effects of climate change. Yet the state's GHG reduction goals and strategies are based on the state's path toward reducing statewide cumulative GHGs as outlined in AB 32, SB 32, and Executive Order S-03-05. As described further below, the two significance thresholds that South Coast AQMD uses to analyze GHG impacts are based on achieving those statewide GHG reduction goals (Impact 5.2-1, relying on the South Coast AQMD's recommended bright-line screening-level criterion; and Impact 5.2-2, relying on consistency with policies or plans adopted to reduce GHG emissions). Further, because no single project is large enough to result in a measurable increase in global concentration of GHG emissions, climate change impacts of a project are considered on a cumulative basis. Without federal ambient air quality standards for GHG emissions and given the cumulative nature of GHG emissions and the South Coast AQMD's significance thresholds that are tied to reducing the state's

<sup>41</sup> It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

<sup>42</sup> South Coast AQMD took the 2020 statewide GHG reduction target for land use only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

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cumulative GHG emissions, it is not feasible at this time to connect the project's specific GHG emissions to the potential health impacts of climate change.

### 5.2.3 Environmental Impacts

#### 5.2.3.1 METHODOLOGY

This GHG emissions evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG emissions impacts are likely in conjunction with the type and scale of development associated with the proposed project. As stated, GHG emissions are calculated using the CalEEMod.

The following provides a summary of the assumptions used for the proposed project analysis. GHG emissions modeling datasheets are in Appendix B.

#### Construction Phase

Construction would entail demolition and debris haul, grading and soil haul, trenching, construction of the proposed athletic facilities and new classroom buildings, architectural coating, and finishing and landscaping on 34 acres of the 62.34-acre project site. The proposed project is anticipated to start in the 4th quarter of 2020 (Q4-2020) and is expected to take two years to complete. However, for the most conservative results, construction modeling assumed a construction period of 10 months, from Q4-2020 to Q3-2021, based on preliminary data provided by the Beaumont Unified School District (District). GHG emissions are based on construction durations provided by the District. Annual average construction emissions were amortized over 30 years and included in the emissions inventory to account for one-time GHG emissions from the construction phase of the project.

#### Operational Phase

- **Transportation:** The primary source of mobile GHG emissions is tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel). The average daily trip (ADT) generation for weekday trips is found in the Traffic and Access Analysis in Appendix E of this Draft EIR. The average trip length of 3.28 miles per student vehicle trip is based on information provided by the District. Average trip lengths for staff and vendor trips are based on CalEEMod defaults. Furthermore, a 15 percent reduction was applied to student trips to account for carpooling. Project-related on-road GHG emissions are based on calendar year 2021 emission rates from EMFAC2017 (v. 1.0.2) for the project buildout year.
- **Area Sources.** Area sources generated from use of consumer products and cleaning supplies are based on CalEEMod default emission rates and the assumed building square footages.
- **Energy:** GHG emissions from energy use (i.e., natural gas and electricity) are based on the CalEEMod default natural gas and electricity usage rates. New buildings are modeled to comply with the 2019 Building Energy Efficiency Standards, which are 30 percent more energy efficient for nonresidential buildings than the 2016 Building Energy Efficiency Standards.
- **Solid Waste Disposal:** Indirect emissions from waste generation are based on the CalEEMod defaults.



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- **Water/Wastewater:** Emissions of GHG are associated with the embodied energy used to supply, treat, and distribute water. Total water demand and wastewater generation are based on CalEEMod default generation rates.

Life cycle emissions are not included in the GHG analysis consistent with California Resources Agency directives.<sup>43</sup> Black carbon emissions are not included in the GHG analysis because CARB does not include it in the state's AB 32/SB 32 inventory but treats this short-lived climate pollutant separately.<sup>44</sup>

### 5.2.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.2-1: Implementation of the proposed project would not generate a net increase in GHG emissions, either directly or indirectly, that would have a significant impact on the environment. [Threshold GHG-1]**

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Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

Project-related construction and operation-phase GHG emissions are shown in Table 5.2-6. As shown in the table, the proposed project would generate GHG emissions from vehicle trips generated by the project (e.g., students), energy use (indirectly from purchased electricity use and directly through fuel consumed for building heating), and area sources (e.g., landscaping equipment used on-site, consumer products, coatings). Annual average construction emissions were amortized over 30 years and included in the emissions inventory to account for one-time GHG emissions from the construction phase of the project. Overall, development and operation of the proposed project would not generate annual emissions that exceed the South Coast AQMD bright-line threshold of 3,000 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) per year.<sup>45</sup> Therefore, the proposed project's cumulative contribution to GHG emissions would be less than significant.

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<sup>43</sup> Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analysis was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials is also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (Governor's Office of Planning and Research (OPR). 2008, June. CEQA and Climate Change: Addressing Climate Change through CEQA Review. Technical Advisory. <http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>).

<sup>44</sup> Particulate matter emissions, which include black carbon, are analyzed under *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017a).

<sup>45</sup> South Coast Air Quality Management District (South Coast AQMD). 2010, September 28. Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15. <http://www.aqmd.gov/docs/default->

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**Table 5.2-6 Project-Related Operation GHG Emissions**

| Source  | GHG<br>(MTCO <sub>2</sub> e/Year) |
|---|-----------------------------------|
| Area  | <1                                |
| Energy  | 119                               |
| Mobile (Vehicle Trips)                        | 1,889                             |
| Solid Waste                                   | 207                               |
| Water   | 94                                |
| Amortized Construction Emissions <sup>1</sup> | 48                                |
| <b>Total</b>                                  | <b>2,357</b>                      |
| South Coast AQMD Bright-Line Threshold        | 3,000 MTCO <sub>2</sub> e/Yr      |
| <b>Exceeds Bright-Line Threshold?</b>         | <b>No</b>                         |

Source: CalEEMod, Version 2016.3.2.25.

Notes: MTons = metric tons; MTCO<sub>2</sub>e = metric ton of carbon dioxide equivalent

<sup>1</sup> Total construction emission are amortized over 30 years per South Coast AQMD methodology.

**Level of Significance:** Less Than Significant.

#### **Impact 5.2-2: Implementation of the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. [Threshold GHG-2]**

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and SCAG's RTP/SCS. A consistency analysis with these plans is presented below.

#### **CARB Scoping Plan**

CARB's Scoping Plan is California's GHG reduction strategy to achieve the state's GHG emissions reduction target established by AB 32, which is to return to 1990 emission levels by year 2020. The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool that is used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts.

Since adoption of the 2008 Scoping Plan, state agencies have adopted programs identified in the plan, and the legislature has passed additional legislation to achieve the GHG reduction targets. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the Corporate Average Fuel Economy standards, and other early action measures as necessary to ensure the state is on target to achieve the GHG emissions reduction goals of AB 32. Also, new buildings are required to comply with the latest applicable Building Energy Efficiency Standards and CALGreen. On December 24, 2017, CARB adopted the Final 2017 Climate Change Scoping Plan Update to address the new 2030 interim target to achieve a 40

source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf.

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### GREENHOUSE GAS EMISSIONS

percent reduction below 1990 levels by 2030, established by SB 32.<sup>46</sup> While measures in the Scoping Plan apply to state agencies and not the proposed project, the project's GHG emissions would be reduced by statewide compliance with measures that have been adopted since AB 32 and SB 32 were adopted. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan, and impacts would be less than significant.

#### SCAG's Regional Transportation Plan / Sustainable Communities Strategy

SCAG released the draft 2020-2045 RTP/SCS (Connect SoCal) on November 7, 2019, adopted Connect SoCal in May 2020 for the purpose of transportation conformity, and anticipates full consideration of Connect SoCal by the Board in Fall 2020. Connect SoCal finds that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options would be consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal is to plan for the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands.<sup>47</sup> Connect SoCal's transportation projects help more efficiently distribute population, housing, and employment growth, and forecast development is generally consistent with regional-level general plan data to promote active transportation and reduce GHG emissions. The projected regional development, when integrated with the proposed regional transportation network in Connect SoCal, would reduce per-capita GHG emissions related to vehicular travel and achieve the GHG reduction per capita targets for the SCAG region.

The Connect SoCal Plan does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency to governments and developers. The proposed project would provide additional facilities for existing and future students of Beaumont High School. The project would serve the local population within the nearby surrounding communities. Serving the local community may reduce vehicle miles traveled by providing a closer option for future students. Therefore, the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the Connect SoCal Plan, and impacts would be less than significant.

**Level of Significance:** Less Than Significant.

### 5.2.4 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, Impact 5.2-1 is not a project-specific impact, but the proposed project's contribution to a cumulative impact. Implementation of the proposed project would not result in annual emissions that would exceed South Coast AQMD's bright-line threshold. Therefore, project-related GHG emissions and their

<sup>46</sup> California Air Resources Board. 2017, November. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. [https://www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf).

<sup>47</sup> Southern California Association of Governments (SCAG). 2020, May 7. Adopted Connect SoCal Plan: The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of The Southern California Association of Governments. <https://www.connectsocial.org/Pages/Connect-SoCal-Final-Plan.aspx>

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contribution to global climate change would not be cumulatively considerable, and GHG emissions impacts would be less than significant.

#### **5.2.5 Level of Significance Before Mitigation**

The following impacts would be less than significant: 5.2-1 and 5.2-2.

#### **5.2.6 Mitigation Measures**

No mitigation measures are required.

#### **5.2.7 Level of Significance After Mitigation**

Impacts would be less than significant.

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### 5.3 NOISE

This section of the Draft Environmental Impact Report (Draft EIR) evaluates the potential for implementation of the Beaumont High School Expansion project to result in noise and vibration impacts. This section discusses the fundamentals of sound; examines federal, state and local noise guidelines, policies, and standards; and evaluates potential noise and vibration impacts associated with the proposed project. The analysis in this section is based in part on the noise modeling data in Appendix C of this Draft EIR.

#### 5.3.1 Environmental Setting

##### 5.3.1.1 NOISE AND VIBRATION FUNDAMENTALS

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level ( $L_{eq}$ ); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the  $L_{eq}$  metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level ( $L_n$ ).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the  $L_{50}$  level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The  $L_{10}$  level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and

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this is often known as the “intrusive sound level.” The  $L_{90}$  is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”

- **Day-Night Sound Level ( $L_{dn}$  or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 pm to 10:00 pm and 10 dB from 10:00 pm to 7:00 am. For general community/environmental noise, CNEL and  $L_{dn}$  values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive, that is, higher than the  $L_{dn}$  value). As a matter of practice,  $L_{dn}$  and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.
- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

### Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

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

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

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#### Sound Measurement

Sound intensity is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, while 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called  $L_{eq}$ ), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the  $L_{50}$  noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the  $L_2$ ,  $L_8$  and  $L_{25}$  values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These "L" values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed below. Other values typically noted during a noise survey are the  $L_{min}$  and  $L_{max}$ . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, an artificial dB increment is added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level ( $L_{dn}$ ). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 pm to 10:00 pm and 10 dBA for the hours from 10:00 pm to 7:00 am. The  $L_{dn}$  descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 pm and 10:00 pm. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

#### Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing

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body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 190 dBA will rupture the eardrum and permanently damage the inner ear. Table 5.3-1 shows typical noise levels from familiar noise sources.

**Table 5.3-1 Typical Noise Levels**

| Common Outdoor Activities          | Noise Level (dBA) | Common Indoor Activities                    |
|------------------------------------|-------------------|---|
| Onset of physical discomfort       | 120+              |   |
|                                    |                   |   |
|                                    | 110               | Rock Band (near amplification system)       |
| Jet Flyover at 1,000 feet          |                   |   |
|                                    | 100               |   |
| Gas Lawn Mower at three feet       |                   |   |
|                                    | 90                |   |
| Diesel Truck at 50 feet, at 50 mph |                   | Food Blender at 3 feet                      |
|                                    | 80                | Garbage Disposal at 3 feet                  |
| Noisy Urban Area, Daytime          |                   |   |
|                                    | 70                | Vacuum Cleaner at 10 feet                   |
| Commercial Area                    |                   | Normal speech at 3 feet                     |
| Heavy Traffic at 300 feet          | 60                |   |
|                                    |                   | Large Business Office                       |
| Quiet Urban Daytime                | 50                | Dishwasher Next Room                        |
|                                    |                   |   |
| Quiet Urban Nighttime              | 40                | Theater, Large Conference Room (background) |
| Quiet Suburban Nighttime           |                   |   |
|                                    | 30                | Library                                     |
| Quiet Rural Nighttime              |                   | Bedroom at Night, Concert Hall (background) |
|                                    | 20                |   |
|                                    |                   | Broadcast/Recording Studio                  |
|                                    | 10                |   |
|                                    |                   |   |
| Lowest Threshold of Human Hearing  | 0                 | Lowest Threshold of Human Hearing           |
|                                    |                   |   |

California Department of Transportation. 2013, September. Technical Noise Supplement ("TeNS").

### Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium, such as the ground or a building. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary



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sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers.

### *Amplitude*

Vibration amplitudes are usually described in terms of the peak particle velocity (PPV). PPV is the maximum instantaneous peak of the vibration signal. The units for PPV are normally inches per second (in/sec). Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 5.3-2 shows the human response and the effects on buildings from continuous vibration (in terms of various levels of PPV).

**Table 5.3-2 Human Reaction to Typical Vibration Levels**

| Vibration Level<br>Peak Particle Velocity | Human Reaction   | Effect on Buildings  |
|---|--|--|
| 0.006–0.019 in/sec                        | Threshold of perception, possibility of intrusion  | Vibrations unlikely to cause damage of any type  |
| 0.08 in/sec                               | Vibrations readily perceptible   | Recommended upper level of vibration to which ruins and ancient monuments should be subjected  |
| 0.10 in/sec                               | Level at which continuous vibration begins to annoy people   | Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings   |
| 0.20 in/sec                               | Vibrations annoying to people in buildings   | Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings                     |
| 0.4–0.6 in/sec                            | Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges | Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage |

California Department of Transportation. 2013, September. Transportation and Construction Vibration Manual.

### 5.3.1.2 REGULATORY BACKGROUND

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

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#### State

##### *CALGreen*

The California Green Building Standards Code (CALGreen) has requirements for insulation that affect exterior-interior noise transmission for non-residential structures. Pursuant to CALGreen Section 5.507.4.1, Exterior Noise Transmission, an architectural acoustics study may be required when a project site is within a 65 dBA CNEL or L<sub>dn</sub> noise contour of an airport, freeway or expressway, railroad, industrial source or fixed-guideway source. Where noise contours are not readily available, if buildings are exposed to a noise level of 65 dBA L<sub>eq</sub> during any hour of operation, specific wall and ceiling assembly and sound-rated windows may be necessary to reduce interior noise to acceptable levels.

##### *Title 5 California Department of Education*

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

##### *California State Land Use Compatibility Guidelines for Noise*

The State of California Governor's Office of Planning and Research's Noise Compatibility Guidelines derived from the State General Plan Guidelines and are designed to ensure that proposed land uses are compatible with the predicted future noise environment. At different exterior noise levels, individual land uses are identified as "clearly acceptable," "normally acceptable," "normally unacceptable," or "clearly unacceptable." A "conditionally acceptable" designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a "normally acceptable" designation indicates that standard construction can occur with no special noise reduction requirements. The City of Beaumont has adopted local noise and land use compatibility guidelines as discussed below.

#### Local Regulations

##### *County of Riverside Municipal Code*

The County of Riverside regulates and enforces noise standards through its Code of Ordinances Chapter 9.52, Noise Regulation.<sup>1</sup> The County establishes exterior noise standards that limit noise levels during daytime and nighttime hours. Noise standards are summarized below in Table 5.3-3.

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<sup>1</sup> Riverside County. May 2019. County of Riverside Code of Ordinances.  
[https://library.municode.com/ca/riverside\\_county/codes/code\\_of\\_ordinances?nodeId=TTT9PUPEMOWE\\_CH9.52NORE](https://library.municode.com/ca/riverside_county/codes/code_of_ordinances?nodeId=TTT9PUPEMOWE_CH9.52NORE).

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**Table 5.3-3 County of Riverside Exterior Noise Standards**

| General Plan Foundation Component | General Plan Land Use Designation | Maximum Decibel Level (dBA L <sub>max</sub> ) |                    |
|-----------------------------------|-----------------------------------|---|--------------------|
|                                   |                                   | 7:00 AM – 10:00 PM                            | 10:00 PM – 7:00 AM |
| Community Development             | Residential <sup>1</sup>          | 55  | 45                 |
|                                   | Commercial <sup>2</sup>           | 65  | 55                 |
|                                   | Light Industrial                  | 75  | 55                 |
|                                   | Heavy Industrial                  | 75  | 75                 |
|                                   | Business Park                     | 65  | 45                 |
|                                   | Public Facility                   | 65  | 45                 |
|                                   | Specific Plan Residential         | 55  | 45                 |
|                                   | Specific Plan Commercial          | 65  | 55                 |
|                                   | Specific Plan Light Industrial    | 75  | 55                 |
|                                   | Specific Plan Heavy Industrial    | 75  | 75                 |
| Rural Community                   | Estate Density Residential        | 55  | 45                 |
|                                   | Very Low Density Residential      |   |                    |
|                                   | Low Density Residential           |   |                    |
| Rural                             | Rural Residential                 | 45  | 45                 |
|                                   | Rural Mountainous                 |   |                    |
|                                   | Rural Desert                      |   |                    |
| Agriculture                       | Agriculture                       | 45  | 45                 |
| Open Space                        | Conservation                      | 45  | 45                 |
|                                   | Conservation Habitat              |   |                    |
|                                   | Recreation                        |   |                    |
|                                   | Rural                             |   |                    |
|                                   | Watershed                         |   |                    |
|                                   | Mineral Resources                 | 75  | 45                 |

Source: County of Riverside Code of Ordinances, Chapter 9.52 – Noise Regulation, § 9.52.040.

<sup>1</sup> Estate Density Residential, Very Low Density Residential, Low Density Residential, Medium Density Residential, Medium High Density Residential, High Density Residential, Very High Density Residential, Highest Density Residential

<sup>2</sup> Retail Commercial, Office Commercial, Tourist Commercial, Community Center

The following are exempt from the County's exterior noise standards:

- Public or private schools and school-sponsored activities.
- Private construction projects located within one-quarter of a mile from an inhabited dwelling, provided that:
  - Construction does not occur between the hours of 6:00 pm and 6:00 am during the months of June through September
  - Construction does not occur between the hours of 6:00 pm and 7:00 am during the months of October through May.
- Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of 7:00 am and 8:00 pm; and

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- Heating and air conditioning equipment.

#### *City of Beaumont General Plan Safety Element*

The safety element of the City of Beaumont General Plan has noise and land use compatibility standards for exterior noise exposure. The compatibility standards show school uses have a maximum desirable noise level of 60 dBA CNEL and a maximum acceptable noise level of 70 dBA CNEL. Table 5.3-4 summarizes the desirable maximum noise levels and maximum acceptable noise levels for all land uses. In addition to noise and land use compatibility standards, other applicable goals and policies from the safety element are:

- **Goal 6:** The City of Beaumont will strive to control the adverse effects of noise in the environment.
- **Safety Element Policy 25:** The City of Beaumont will incorporate noise considerations into land use planning decisions.
- **Safety Element Policy 27:** The City of Beaumont shall promote the effective enforcement of City, State, and Federal noise standards by all appropriate City divisions.

**Table 5.3-4 Noise and Land Use Compatibility Table, City of Beaumont**

| Land Use                                | Desirable Maximum<br>dBA (CNEL) | Maximum Acceptable<br>dBA (CNEL) |
|---|---------------------------------|----------------------------------|
| Single-family Residential               | 55                              | 65                               |
| Multiple-family Residential             | 60                              | 65                               |
| 6 <sup>th</sup> Street Corridor Overlay | 65                              | 70                               |
| Public facilities (including schools)   | 60                              | 70                               |
| All commercial & mixed-uses             | 65                              | 75                               |
| Industrial                              | 70                              | 75                               |

Source: City of Beaumont General Plan Safety Element, Table 5-1.

#### *City of Beaumont Municipal Code*

Chapter 9.02, Noise Control, of the Beaumont Municipal Code provides noise standards for exterior noise sources, exemptions, and special provisions for noise control. Table 5.3-5 summarizes the noise standards known as Base Ambient Noise Levels (BANLs). Other applicable standards from the municipal code are discussed below.

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**Table 5.3-5 City of Beaumont Base Ambient Noise Levels**

| Zone Use                 | Decibel Level, dBA |                    |
|--------------------------|--------------------|--------------------|
|                          | 7:00 AM – 10:00 PM | 10:00 PM – 7:00 AM |
| Residential <sup>1</sup> | 55                 | 45                 |
| Industrial & Commercial  | 75                 | 50                 |

Source: City of Beaumont Municipal Code, Section 9.02.050

<sup>1</sup> Noise levels shall not exceed the following for residential zones:

- 5 dBA above the BANL for 15 minutes in any hour ( $L_{25}$ )
- 10 dBA above the BANL for 5 minutes in any hour ( $L_5$ )
- 15 dBA above the BANL for 1 minutes in any hour ( $L_2$ )
- 20 dBA above the BANL for 0 minutes in any hour ( $L_{max}$ )

Under Section 9.02.110 of the municipal code, construction, landscape, maintenance or repair activities shall not exceed the permitted sound levels between the hours of 7:00 am and 6:00 pm. Activity from mentioned activities shall not result in exceedance of 55 dBA, for intervals of more than 15 minutes, of interior noise levels at the nearest residence or school at any time. If the construction site is within a quarter mile of an occupied residence, no construction activities shall take place between the hours of 6:00 pm to 6:00 am during the months of June through September and 6:00 pm to 7:00 am October through May. Machinery, equipment, fans and air conditioning units shall not exceed the BANL by 5 dBA of the source's property line.

#### 5.3.1.3 EXISTING CONDITIONS

The project site is surrounded by various land uses. To the north there is a mobile home park, to the east is the Beaumont-Cherry Water District Noble Creek Recharge Facility, to the south is vacant land and an earthen portion of the Noble Creek Channel, and to the west are commercial uses and small businesses. The project site is predominantly characterized by adjacent roadway traffic noise.

To properly assess potential short-term and long-term noise impacts, the existing ambient noise baseline needs to be determined. This was done by using a version of the Federal Highway Administration Traffic Noise Prediction Model (FHWA RD-77-108). Model inputs include existing average daily traffic volumes (ADT) provided by Garland Associates; vehicle mix; and day, evening, and night splits based on the County of Riverside County General Plan Noise Appendix I. Roadway speed limits and number of roadway lanes were identified using aerial photography from Google Earth. Table 5.3-6 shows the existing dBA CNEL values at 50 feet from the nearest travel lane centerline for roadway segments in the project vicinity.

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**Table 5.3-6 FHWA RD 77-108 Existing Traffic Noise Modeling**

| Roadway Segment                                    | Existing ADT | dBA CNEL at 50 feet |
|--|--------------|---------------------|
| Beaumont Avenue - North of Cherry Valley Blvd      | 5,000        | 65.9                |
| Beaumont Ave - Cherry Valley Blvd to Brookside Ave | 9,400        | 71.4                |
| Beaumont Ave - South of Brookside Ave              | 13,900       | 73.1                |
| Cherry Valley Blvd - West of School Site           | 12,100       | 71.6                |
| Cherry Valley Blvd - West of Beaumont Ave          | 9,900        | 70.8                |
| Cherry Valley Blvd - East of Beaumont Ave          | 5,500        | 67.3                |
| Brookside Avenue - West of School Site             | 10,500       | 71.0                |
| Brookside Avenue - West of Beaumont Ave            | 11,000       | 70.3                |
| Brookside Avenue - East of Beaumont Ave            | 6,600        | 68.1                |

Source: Garland Associates. June, 2020. Traffic and Access Analysis for the Proposed Beaumont High School Expansion.

### Sensitive Receptors

Certain land uses, such as residences, schools, and hospitals, are particularly sensitive to noise and vibration. Sensitive receptors include residences, senior housing, schools, places of worship, and recreational areas. These uses are regarded as sensitive because they are where citizens most frequently engage in activities which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, working from home, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not particularly sensitive to noise or vibration.

Off-campus sensitive receptors in the immediate project vicinity include the residential uses (mobile park) to the north located in unincorporated Riverside County. For school projects that conduct construction activity while school is in session, students are also considered sensitive receptors. Other receptors beyond open space and commercial uses also include residential uses to the west and east, Beaumont Sports park to the southeast, and Brookside Elementary School to the southwest.

### 5.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

- N-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- N-2 Generation of excessive groundborne vibration or groundborne noise levels.

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N-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

#### 5.3.2.1 CONSTRUCTION NOISE THRESHOLDS

The nearest sensitive receptors are outside the City limits. The County of Riverside Municipal Code does not establish construction noise level limits. Therefore, for the purposes of this analysis, the Federal Transit Administration (FTA) threshold of 80 dBA  $L_{eq}(8hr)$  is used to assess construction noise impacts.<sup>2</sup>

The City of Beaumont does establish interior noise standards, however. Interior noise levels shall not exceed 55 dBA during the hours of 7:00 am to 6:00 pm due to construction activities at the nearest residence or school, as established in Section 9.02.1110 of the City of Beaumont Municipal Code.

#### 5.3.2.2 TRANSPORTATION THRESHOLD

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, a significant impact would occur if a 3 dBA CNEL or greater increase would occur when the existing environment is 55 dBA CNEL or greater at a residential receptor.

#### 5.3.2.3 STATIONARY THRESHOLD

As discussed above, the City's and County's noise ordinances establish noise level standards at receiving land use properties. The nearest sensitive receptors are outside the city limits and, therefore, project-related stationary noise in excess of the County Code standards would result in a significant impact.

#### 5.3.2.4 VIBRATION THRESHOLD

The nearest sensitive receptors are outside the city limits, and neither the City's municipal Code nor the County of Riverside's Code of Ordinances has established vibration thresholds. Therefore, for the purposes of this analysis, the FTA threshold of 0.2 inches/second (in/sec) peak particle velocity (PPV) will be used to assess vibration impacts at nonengineered structures (e.g., wood-frame residential).<sup>3</sup>

### 5.3.3 Environmental Impacts

#### 5.3.3.1 METHODOLOGY

This noise evaluation was prepared in accordance with the requirements of CEQA to determine if the proposed project would result in significant construction and operational impacts at nearby sensitive receptors.

<sup>2</sup> Federal Transit Administration (FTA). 2018, September. *Transit Noise and Vibration Impact Assessment*.

<sup>3</sup> Federal Transit Administration (FTA). 2018, September. *Transit Noise and Vibration Impact Assessment*.

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### NOISE

Construction noise modeling was conducted using the FHWA Roadway Construction Noise Model (RCNM). Traffic noise increases were modeled with the Federal Highway Administration RD-77-108 spreadsheet (FHWA RD-77-108) using average daily segment volumes, roadway speeds, number of lanes, and vehicle mix. The ADT generation for weekday trips was provided by Garland Associates (traffic subconsultant).

#### 5.3.3.2 IMPACT ANALYSIS

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**Impact 5.3-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project that would not exceed standards. [Threshold N-1]**

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Two types of short-term noise could occur during construction: (1) mobile-source noise from transport of workers, material deliveries, and debris and soil haul and (2) stationary-source noise from use of construction equipment. Existing uses surrounding the project site would be exposed to construction noise. Construction equipment would include saws, excavators, dozers, graders, scrapers, tractors, loaders, backhoes, cranes, forklifts, generators, welders, pavers, rollers and air compressors. Construction is anticipated to begin Q4-2020 and be completed by Q3-2022.

#### Construction Vehicles

The transport of workers and materials to and from the construction site would incrementally increase noise levels along local roadways in the project vicinity to gain access to the project site. Individual construction vehicle pass-bys and haul trucks may create momentary noise levels of up to 85 dBA ( $L_{max}$ ) at 50 feet from the vehicle, but these occurrences would generally be temporary and short lived. Construction generates temporary trips from workers and vendors. Existing traffic volumes range from 5,500 ADT to 11,000 ADT (Table 5.3-6). A maximum of 1,047 worker and vendor trips during overlapping construction phases—building construction, paving, finish and landscaping, and architectural coating—would result in a temporary traffic noise increase of up to 0.8 dBA. Haul trucks would be used for demolition debris and soil hauling. Haul truck trips are anticipated to be up to 17 trips per day for a maximum of 22 workdays. Noise related to construction trips would be indiscernible and short-term, and therefore impacts would be less than significant.

#### Construction Equipment

Noise generated during construction is based on the type of equipment used, the location of the equipment relative to sensitive receptors, and the timing and duration of the noise-generating activities. Each phase of construction involves the use of different construction equipment and therefore each phase has its own distinct noise characteristics. Noise levels from construction activities are dominated by the loudest piece of construction equipment. The dominant noise source is typically the engine, although work piece noise (such as dropping of materials) can also be noticeable.

The noise produced during each phase is determined by combining the  $L_{eq}$  contributions from the 3 loudest pieces of equipment used at a given time. Construction activities associated with the proposed project would not require blasting or pile driving. Construction noise quite often exhibits a high degree of variability because factors such as noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase result in different noise levels at a given sensitive



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receptor. Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of 85 dBA at 50 feet. Since noise from construction equipment is intermittent and diminishes at a rate of 6 dBA per doubling distance,<sup>4</sup> the average noise levels at noise-sensitive receptors would be lower, because mobile construction equipment would move around the site with different loads and power requirements. Noise levels from project-related construction activities were calculated from the simultaneous use of the top three loudest construction equipment at spatially averaged distances (i.e., from the acoustical center of the general construction site/activity phases) to the property line of the nearest sensitive receptors.

To calculate construction noise as it affects sensitive receptors, the FHWA RCNM noise model was used. The RCNM includes reference noise levels for numerous equipment pieces. Since the RCNM calculations do not account for shielding due to intervening buildings and structures, ground effects, or air absorption, the results of these calculations are conservative (that is, they represent a “worst case” scenario).

Using methodologies and inputs employed in the air quality assessment, the expected construction equipment mix was estimated and categorized by construction activity and phasing. The associated, aggregate sound levels—grouped by construction phase and activity—are summarized in Tables 5.3-7 and 5.3-8.

#### *Off-Site Residential*

The nearest sensitive receptors are north of the project site. To the west there are commercial uses, open space to the east, and to the south is the existing school campus. Construction noise was analyzed based on the activity phase, its location, related equipment mix, and approximate distance to the nearest sensitive receptor as measured from the acoustical center of the activity phase. As shown in Table 5.3-7, the nearest activity phases to the sensitive receptors to the north (mobile homes) are paving and asphalt demolition, which are also the loudest activity phases. Exterior construction-related noise levels would reach up to 64 dBA  $L_{eq}$  at the property line of mobile homes to the north, across Cherry Valley Boulevard, which would not exceed the threshold of 80 dBA  $L_{eq}$ . Impacts would be less than significant.

**Table 5.3-7 Project-Related Construction Noise Levels at Off-Campus Receptors**

| Activity Phase              | RCNM Reference $L_{eq}$ at 50 feet | Nearest Sensitive Receptor Distance <sup>1</sup> | Exterior Noise Level at Nearest Sensitive Receptor | Exceeds 80 dBA Exterior $L_{eq}$ ? |
|-----------------------------|------------------------------------|--|--|------------------------------------|
| Asphalt Demolition          | 85                                 | 540  | 64   | No                                 |
| Paving                      | 85                                 | 540  | 64   | No                                 |
| Site Prep and Grading       | 85                                 | 600  | 63   | No                                 |
| Utility Trenching           | 77                                 | 600  | 55   | No                                 |
| Athletic Field Installation | 83                                 | 930  | 57   | No                                 |
| Building Construction       | 83                                 | 1,130  | 55   | No                                 |
| Architectural Coating       | 74                                 | 1,130  | 47   | No                                 |

Calculations performed with the FHWA's RCNM software are included in Appendix C of this EIR.

<sup>1</sup> Distance measurements were taken from the acoustical center of the construction activity phases.

<sup>4</sup> The sound attenuation rate of 6 dBA is generally conservative. Attenuation provided by existing buildings and structures around the project site are not taken into account.

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#### *On-Site School Classrooms*

Construction activities work could occur while school is in session and, therefore, temporary construction noise increases are analyzed to determine the impact to the student learning environment.

As mentioned above, construction noise was analyzed based on activity phase, the distance from the activity phases to the nearest receptors, and equipment mix. The nearest on-campus building presumed to have instructional classrooms is approximately 180 feet north from building construction activities (as measured from the acoustical center of the building construction). At that distance, exterior noise levels could reach up to approximately 71 dBA  $L_{eq}$ . Typical exterior-to-interior noise attenuation is 25 dBA with windows closed, resulting in interior noise levels of approximately 46 dBA  $L_{eq}$  (see Table 5.3-8). Interior noise levels would not exceed the 55 dBA  $L_{eq}$  interior noise standard set forth in Section 9.02.110 of the City of Beaumont Municipal Code. Therefore, impacts would be less than significant.

**Table 5.3-8 Project-Related Construction Noise Levels at On-Campus Receptors**

| Activity Phase              | RCNM Reference<br>Leq at 50 feet | Nearest Sensitive<br>Receptor Distance <sup>1</sup> | Noise Level at Nearest<br>On-campus Receptor | Interior Noise<br>Level, dBA $L_{eq}$ <sup>2</sup> | Exceeds 55 dBA<br>$L_{eq}$ ? |
|-----------------------------|----------------------------------|---|--|--|------------------------------|
| Asphalt Demolition          | 85                               | 600   | 63   | 38   | No                           |
| Paving                      | 85                               | 600   | 63   | 38   | No                           |
| Site Prep and Grading       | 85                               | 780   | 61   | 36   | No                           |
| Utility Trenching           | 77                               | 780   | 53   | 28   | No                           |
| Athletic Field Installation | 83                               | 670   | 60   | 35   | No                           |
| Building Construction       | 83                               | 180   | 71   | 46   | No                           |
| Architectural Coating       | 74                               | 180   | 63   | 38   | No                           |

Calculations performed with the FHWA's RCNM software are included in Appendix C of this EIR.

<sup>1</sup> Distance measurements were taken from the acoustical center of the construction activity phases.

<sup>2</sup> Interior to exterior attenuation with doors and windows close of 25 dBA  $L_{eq}$  is applied.

**Level of significance:** Less Than Significant.

**Impact 5.3-2 Project implementation would result in long-term operation-related noise that would not exceed standards. [Threshold N-1]**

#### **Stationary Noise**

##### *HVAC Noise*

Heating, ventilation, and air conditioning (HVAC) systems will be installed at the new proposed classroom buildings. Typical HVAC equipment generates noise levels ranging up to 72 dBA at distance of 3 feet. The nearest residential receptors are to the north are approximately 1,000 feet from proposed classroom buildings. At that distance, noise levels would be indiscernible and additionally, noise from HVAC equipment is exempt from the County's noise standards. Impacts would be less than significant.

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### NOISE

#### *Student Recreational Noise*

The existing high school currently has a student capacity of 3,880 students. Implementation of the proposed project would increase student capacity to 5,244, resulting in a net increase of 1,364 students. This would be an approximately 35 percent increase in student capacity. However, it is not anticipated that all students would be outside in the same location at once for recess/lunch, PE class, or after-school activities (including use of new field improvements), for example. Assuming that outdoor student participation during school and after school hours would result in a proportional 26 percent increase, this would result in a 1.3 dBA increase.<sup>5</sup> A 1.3 dBA noise increase would not be readily perceptible. Although additional speakers would be installed at the new fields so that students can be alerted in the event of an emergency, there would not be a new public address system for athletic events or other recreational activities; therefore, impacts would be less than significant.

Lighting for the tennis courts is proposed, and evening use of the tennis fields would be no later than 9:00 pm. Though hours would be extended for evening use, the proposed project would relocate the tennis courts approximately 580 feet south of the existing tennis courts. This would be 580 feet further from the nearest sensitive receptors to the north, and no amplified sound is proposed. Noise due to extended evening use of the tennis fields would be less than significant.

#### **Traffic Noise**

Noise impacts can be divided into three categories. The first is “audible” impacts, which refer to increases in noise level that are perceptible to humans. Audible increases in general community noise levels generally refer to a change of 3 dBA or more since this level has been found to be the threshold of perceptibility in exterior environments. The second category, “potentially audible” impacts, refers to a change in noise level between 1 and 3 dBA. The last category includes changes in noise level of less than 1 dBA that are typically “inaudible” to the human ear except under quiet conditions in controlled environments. Note that a doubling of traffic flows (i.e., 10,000 vehicles per day to 20,000 per day) would be needed to create a 3 dBA CNEL increase in traffic-generated noise levels. An increase of 3 dBA CNEL or greater in existing environments of 55 dBA CNEL or greater would result in a potentially significant impact.

To determine the traffic noise level increase due to the project, the existing ADT volumes were compared to the existing plus project ADT volumes. Table 5.3-9 summarizes project-related traffic noise increases, which were estimated to be 0.8 dBA or less on all traffic study roadway segments. Since the noise level increase due to project-generated traffic would be less than 3 dBA, the proposed project would not cause a substantial permanent noise level increase at surrounding noise-sensitive receptors. This is a less than significant impact. Cumulative traffic noise increase is discussed below in Section 5.3.4, *Cumulative Impacts*.

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<sup>5</sup> Calculated using logarithmic function  $\text{dBA increase} = 10 \cdot \log(5,244/3,880)$ .

## 5. Environmental Analysis

### NOISE

**Table 5.3-9 Project-Related Traffic Noise Increase**

| Roadway Segment                                    | ADT Volumes         |                       |                   |                     | dBA CNEL at 50 feet From the Roadway Centerline |                       |                       |                         | Noise Increase in dBA CNEL |                     |
|--|---------------------|-----------------------|-------------------|---------------------|---|-----------------------|-----------------------|-------------------------|----------------------------|---------------------|
|  | Existing No Project | Existing Plus Project | Future No Project | Future Plus Project | Existing  | Existing Plus Project | Cumulative No Project | Cumulative Plus Project | Project Noise Increase     | Cumulative Increase |
| Beaumont Avenue - North of Cherry Valley Boulevard | 5,000               | 5,090                 | 5,300             | 5,390               | 65.9  | 66.0                  | 66.2                  | 66.2                    | 0.1                        | 0.3                 |
| Beaumont Ave - Cherry Valley Blvd to Brookside Ave | 9,400               | 10,290                | 10,000            | 10,890              | 71.4  | 71.8                  | 71.7                  | 72.1                    | 0.4                        | 0.6                 |
| Beaumont Ave - South of Brookside Ave              | 13,900              | 15,040                | 14,700            | 15,840              | 73.1  | 73.5                  | 73.4                  | 73.7                    | 0.3                        | 0.6                 |
| Cherry Valley Blvd - West of School Site           | 12,100              | 14,620                | 12,800            | 15,320              | 71.6  | 72.5                  | 71.9                  | 72.7                    | 0.8                        | 1.0                 |
| Cherry Valley Blvd - West of Beaumont Ave          | 9,900               | 10,930                | 10,500            | 11,530              | 70.8  | 71.2                  | 71.0                  | 71.4                    | 0.4                        | 0.7                 |
| Cherry Valley Blvd - East of Beaumont Ave          | 5,500               | 5,550                 | 5,800             | 5,850               | 67.3  | 67.3                  | 67.5                  | 67.6                    | 0.0                        | 0.3                 |
| Brookside Avenue - West of School Site             | 10,500              | 11,230                | 11,100            | 11,830              | 71.0  | 71.3                  | 71.3                  | 71.5                    | 0.3                        | 0.5                 |
| Brookside Avenue - West of Beaumont Ave            | 11,000              | 11,300                | 11,700            | 12,000              | 70.3  | 70.4                  | 70.6                  | 70.7                    | 0.1                        | 0.4                 |
| Brookside Avenue - East of Beaumont Ave            | 6,600               | 6,650                 | 7,000             | 7,050               | 68.1  | 68.1                  | 68.3                  | 68.4                    | 0.0                        | 0.3                 |

Source: The average daily segment volumes was provided by Garland Associates (traffic subconsultant).

### Noise and Land Use Compatibility

The FHWA traffic noise prediction model shows that existing ambient noise levels would range between 65.9 to 73.6 dBA CNEL within 50 feet of the nearest travel lane centerline in the project vicinity. Cumulative plus project traffic noise levels along Cherry Valley Boulevard, Beaumont Avenue, and Brookside Avenue are estimated to be up to 72.1 dBA CNEL at 50 feet. The new proposed classroom buildings are approximately 950 feet from the nearest roadway centerline to the north. Table 5.3-10 shows the attenuation at 950 feet from the three adjacent roadways (nearest distance conservatively applied to all surrounding roadways). The safety element of the Beaumont General Plan indicates that new school uses have a “maximum desirable dBA” in exterior noise environments below 60 dBA CNEL. Cumulative (future) plus project ambient noise levels would be up to 59.3 dBA CNEL at the nearest proposed building setback. Therefore, impacts would be less than significant.

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**Table 5.3-10 Traffic Noise Levels from Adjacent Project Site Roadways**

| Roadway Segment                                    | dBA CNEL at 50 feet From the Roadway Centerline |                       |                       |                         | dBA CNEL at 950 feet From the Roadway Centerline |                       |                       |                         |
|--|---|-----------------------|-----------------------|-------------------------|--|-----------------------|-----------------------|-------------------------|
|  | Existing  | Existing Plus Project | Cumulative No Project | Cumulative Plus Project | Existing   | Existing Plus Project | Cumulative No Project | Cumulative Plus Project |
| Beaumont Ave - Cherry Valley Blvd to Brookside Ave | 71.4  | 71.8                  | 71.7                  | 72.1                    | 58.6   | 59.0                  | 58.9                  | 59.3                    |
| Cherry Valley Blvd - West of Beaumont Ave          | 70.8  | 71.2                  | 71.0                  | 71.4                    | 58.0   | 58.4                  | 58.2                  | 58.6                    |
| Brookside Avenue - West of Beaumont Ave            | 70.3  | 70.4                  | 70.6                  | 70.7                    | 57.5   | 57.6                  | 57.8                  | 57.9                    |

Source: Garland & Associates.

**Level of Significance:** Less Than Significant.

### **Impact 5.3-3: The project would not create excessive short-term or operational groundborne vibration and groundborne noise. [Threshold N-2]**

Potential vibration impacts associated with development projects are usually related to the use of heavy construction equipment during the demolition and grading phases of construction. Construction can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures.

For reference, a peak particle velocity of 0.2 in/sec PPV is used as the limit for nonengineered timber and masonry buildings (which would apply to the surrounding structures) (FTA 2018). At a distance greater than 25 feet, construction-generated vibration levels would be less than the 0.2 PPV in/sec threshold.

The nearest off-campus receptors are the mobile homes to the north and structures to the west, approximately 75 feet from any proposed construction, demolition, or paving activities (as measured from the edge of construction to the nearest structure). Vibration levels at the nearest sensitive receptors, shown in Table 5.3-11, would be less than 0.2 in/sec PPV. Therefore, impacts would be less than significant.

## 5. Environmental Analysis

### NOISE

**Table 5.3-11 Construction Vibration Levels**

| Equipment        | in/sec PPV                  |  |
|------------------|-----------------------------|--|
|                  | Reference levels at 25 feet | Sensitive Receptors<br>75 feet north and east <sup>1</sup> |
| Vibratory Roller | 0.21                        | 0.040  |
| Large Bulldozer  | 0.089                       | 0.017  |
| Caisson Drilling | 0.089                       | 0.017  |
| Loaded Trucks    | 0.076                       | 0.015  |
| Jackhammer       | 0.035                       | 0.007  |
| Small Bulldozer  | 0.003                       | 0.001  |

Source: FTA 2018.

<sup>1</sup> As measured from the edge of construction site.

### Operational Vibration

The operation of the proposed project would not include any substantial long-term vibration sources. Thus, no significant vibration effects from operations sources would occur.

**Level of Significance:** Less Than Significant.

#### **Impact 5.3-4: The proximity of the project site to an airport or airstrip would not result in exposure of future workers to excessive airport-related noise. [Threshold N-3]**

The school is not in an airport land use plan area or within two miles of an airport or private airstrip. The project would not expose people residing or working in the project area to excessive noise.

**Level of Significance:** No Impact

### 5.3.4 Cumulative Impacts

A cumulative traffic noise increase greater than the 3 dBA CNEL would be significant, but the relative contribution from project traffic is calculated to contribute 1 dBA CNEL or more to the overall cumulative increase. As shown in Table 5.3-9, the cumulative traffic noise increase would be 1.0 dBA CNEL or less, which does not exceed the 3 dBA CNEL significance threshold. Therefore, the proposed project traffic noise combined with cumulative projects would not result in a significant impact.

### 5.3.5 Level of Significance Before Mitigation

The following impacts would be less than significant: 5.3-1, 5.3-2, and 5.3-3.

### 5.3.6 Mitigation Measures

No mitigation measures required

## 5. Environmental Analysis

### NOISE

#### 5.3.7 Level of Significance After Mitigation

Impacts would be less than significant.

## 5. Environmental Analysis

### NOISE

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## 6. Significant Unavoidable Adverse Impacts

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At the end of Chapter 1, *Executive Summary*, is a table that summarizes the environmental impacts. The California Environmental Quality Act (CEQA) Guidelines, § 15126.2(b), requires a discussion of any significant impacts that cannot be reduced to levels of insignificance. Analysis in this Draft EIR did not identify any CEQA-related significant unavoidable adverse impacts.

## 6. Significant Unavoidable Adverse Impacts

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## 7. Alternatives to the Proposed Project

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### 7.1 INTRODUCTION

#### 7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would “feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines § 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the proposed project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- “[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” (15126.6[b])
- “The specific alternative of ‘no project’ shall also be evaluated along with its impact.” (15126.6[e][1])
- “The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” (15126.6[e][2])
- “The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.” (15126.6[f])
- “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, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)” (15126.6[f][1]).

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- “Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.” (15126.6[f][2][A])
- “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.” (15126.6[f][3])

For each development alternative, this analysis:

- Describes the alternative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to § 15126.6(d) of the CEQA Guidelines, “[i]f an alternative would cause...significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.”

### 7.1.2 Project Objectives

As described in Section 3.2, the following objectives have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental Objectives for the Beaumont High School Expansion project will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

- **Objective #1:** Increase the safety and security of the staff and students through the campus circulation modifications and reconfiguration
- **Objective #2:** Accommodate anticipated student increase generated from new residential development in surrounding communities.
- **Objective #3:** Promote a healthier environment through the use of green technology in new buildings.
- **Objective #4:** Limit the disruption of the student educational experience during the construction of the project by limiting the timing, number, and duration of phases.
- **Objective #5:** Promote a safer environment for students by consolidating the physical education spaces.
- **Objective #6:** Promote College and Career readiness by incorporating Career Technical Education (CTE) classrooms and labs on campus.

### 7.1.3 Potentially Significant Impacts of the Project

A primary consideration in defining project alternatives is their potential to reduce or eliminate significant impacts and to meet most of the objectives. Pursuant to CEQA Guidelines Section 15126.6[b], alternatives to

## 7. Alternatives to the Proposed Project

the proposed project include those that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede attainment of the project objectives to some degree or would be more costly.

In accordance with the thresholds of significance required by CEQA, the proposed Beaumont High School Expansion project was found to result in no significant unavoidable impacts. Additionally, the surrounding community has not expressed concerns about the project. Therefore, this chapter considers alternatives to significant impacts that are already mitigated to less than significant. These alternatives attempt to reduce potential effects of construction-related air quality impacts.

Construction-related NO<sub>x</sub> emissions generated from the overlapping athletic field installation, site preparation, grading, and grading soil haul activities would exceed the South Coast AQMD regional significance threshold. Therefore, short-term air quality impacts from project-related construction activities would be potentially significant.

### 7.2 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Three alternatives were determined to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic project objectives. Aside from the No Project – No Improvements Alternative, two alternatives were developed.

- No Project Alternative
- Foreseeable Future Condition Alternative
- No Athletic Field and Play Court Reconfiguration

An EIR must also identify an “environmentally superior” alternative, and where the No Project Alternative is identified as environmentally superior, the EIR is must identify as environmentally superior an alternative from the others evaluated. Each alternative’s environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior. Only impacts found significant and unavoidable are used in making the determination of whether an alternative is environmentally superior or inferior to the proposed project; however, without significant impacts, the determination is based on whether the alternative would have an adverse or a mitigating effect. Section 7.5, *Environmentally Superior Alternative*, identifies the alternative that was determined to be environmentally superior. The proposed project is analyzed in detail in Chapter 5 and Chapter 8 of this Draft EIR.

#### 7.2.1 No Project Alternative

The CEQA Guidelines require the analysis of a No Project Alternative. This analysis must discuss the existing site conditions as well as what would be reasonably expected in the foreseeable future based on any current plans if the project were not approved. The No Project Alternative must be consistent with available infrastructure and community services.

This discussion compares the environmental effects of the campus and school program remaining in their existing condition against the environmental effects if the project were approved. Under the No Project

## 7. Alternatives to the Proposed Project

Alternative, the improvements to Beaumont High School would not occur. Because residential development in the surrounding communities is either already being constructed or is approved or in the planning stages, student generation is inevitable. Because the school district only has one standard high school, even without the project, students will attend Beaumont High School. Without the two new classroom buildings and the 42 classrooms, eventually students will be placed in overcrowded classrooms or the District will need to resort to year-round school. With overcrowded classrooms, the educational environment will suffer and more students may struggle with their education.

Under this Alternative the parking lots and circulation pattern remain the same; drop-off and pick-up procedures would continue to be slow and inefficient and would worsen. As the student numbers increase, pedestrian and vehicular traffic would significantly worsen and may result in increased hazards for students and drivers. The backup during drop-off and pick-up may extend out of the campus and onto Cherry Valley Boulevard. Without the expanded parking lot, parking would become more difficult and may spill onto the surrounding roadways. Students that drive and park would need to walk farther, increasing hazards from accidents.

The athletic fields and play courts would not be reconfigured, and the increased number of students would need to share fields and courts that may have less supervision because of the current distance between facilities.

### 7.2.2 Foreseeable Future Condition Alternative

Because residential development in the surrounding communities is either already being constructed, is approved, or in the planning stages, student generation is inevitable. Because the school district only has one standard high school, even without the project, students will attend Beaumont High School. This alternative would be similar to the No Project Alternative; however, under the Foreseeable Future Condition Alternative, the District would install portable buildings to accommodate the future increase in students. Up to 42 portable classroom buildings would need to be placed on the campus. Because of the space limitations on the campus, the additional classroom buildings would likely be placed on athletic fields. The loss of a baseball field or soccer field would significantly impact the athletic program at the school. No other improvements to Beaumont High School would occur.

Under this Alternative the parking lots and circulation pattern remain the same; drop-off and pick-up procedures would continue to be slow and inefficient and would worsen. As the student numbers increase, pedestrian and vehicular traffic would significantly worsen and may result in increased hazards for students and drivers. The backup during drop-off and pick-up may extend out of the campus and onto Cherry Valley Boulevard. Without the expanded parking lot, parking would become more difficult and may spill onto the surrounding roadways. Students that drive and park would need to walk farther, increasing hazards from accidents.

The athletic fields and play courts would not be reconfigured, and the increased number of students would need to share fields and courts that may have less supervision because of the current distance between facilities.

## 7. Alternatives to the Proposed Project

### 7.2.3 No Athletic Field and Play Court Reconfiguration

Under the No Athletic Field and Play Court Reconfiguration, all project components would be constructed except the reconfiguration. Improvements would include the parking lot and circulation and entry plaza, two new classroom buildings, lunch shelter, and landscaping. Because of the location of the new buildings and parking expansion, the campus would lose 8 tennis courts and 8 basketball courts. The athletic program would be required to cut these sports which would significantly affect the school.

## 7.3 ALTERNATIVES ANALYSIS

### 7.3.1 No Project Alternative

Under the No Project Alternative, the high school improvements and new classroom buildings would not be completed, and the campus would remain in its current condition. No physical changes would occur on the campus.

#### 7.3.1.1 ABILITY TO REDUCE ENVIRONMENTAL IMPACTS

This alternative would eliminate construction-related impacts on air quality. Also other environmental effects, such as GHG and noise, would be reduced. However, the inevitable increase in students would result in other increased impacts on the education and campus programs, and on student and driver safety.

#### 7.3.1.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

The No Project Alternative would meet one of the project objectives. Because this alternative would not involve any construction, there would be no possibility of classroom disruption.

- **Objective #4: Limit** the disruption of the student educational experience during the construction of the project by limiting the timing, number, duration of phases

This alternative would not meet five of the six project objectives because no improvements or new building construction would occur on campus.

- **Objective #1:** Increase the safety and security of the staff and students through the campus circulation modifications and reconfiguration
- **Objective #2:** Accommodate anticipated student increase generated from new residential development in surrounding communities
- **Objective #3:** Promote a healthier environment through the use of green technology in new buildings
- **Objective #5:** Promote a safer environment for students by consolidating the physical education spaces
- **Objective #6:** Promote College and Career readiness by incorporating Career Technical Education (CTE) classrooms and labs on campus

## 7. Alternatives to the Proposed Project

### 7.3.2 Foreseeable Future Condition Alternative

This alternative would be similar to the No Project Alternative; however, under the Foreseeable Future Condition Alternative the District would install portable buildings to accommodate the future increase in students. Up to 42 portable classroom buildings would need to be placed on the campus. Because of the space limitations on the campus the additional classroom buildings would likely be placed on athletic fields. No other project-related improvements would occur.

#### 7.3.2.1 ABILITY TO REDUCE ENVIRONMENTAL IMPACTS

Under this alternative, the air quality impacts from construction would be significantly reduced. Some construction would be required for installation of portable buildings, but would not have a significant environmental impact. Also, other environmental effects, such as GHG and noise, would be reduced. However, the inevitable increase in students would result in other increased impacts on the education and campus programs and on student and driver safety.

#### 7.3.2.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

The Foreseeable Future Condition Alternative would meet one of the project objectives. Because classroom buildings would be installed, the increase in students would be accommodated.

- **Objective #2:** Accommodate anticipated student increase generated from new residential development in surrounding communities

This alternative would not meet five of the six project objectives because no improvements or new building construction would occur on campus.

- **Objective #1:** Increase the safety and security of the staff and students through the campus circulation modifications and reconfiguration
- **Objective #3:** Promote a healthier environment through the use of green technology in new buildings
- **Objective #4:** Limit the disruption of the student educational experience during the construction of the project by limiting the timing, number, duration of phases
- **Objective #5:** Promote a safer environment for students by consolidating the physical education spaces
- **Objective #6:** Promote College and Career readiness by incorporating Career Technical Education (CTE) classrooms and labs on campus

### 7.3.3 No Athletic Field and Play Court Reconfiguration

Under the No Athletic Field and Play Court Reconfiguration all project components would be constructed except the reconfiguration. Improvements would include the parking lot and circulation and entry plaza, two



## 7. Alternatives to the Proposed Project

new classroom buildings, lunch shelter, and landscaping. Because of the location of the new buildings and parking expansion, the campus would lose 8 tennis courts and 8 basketball courts.

### 7.3.3.1 ABILITY TO REDUCE ENVIRONMENTAL IMPACTS

Under this alternative the air quality impacts from construction would be reduced. Construction would be required for project components, but would not have a significant environmental impact. Also, other environmental effects, such as GHG and noise, would be reduced.

### 7.3.3.2 ABILITY TO ACHIEVE PROJECT OBJECTIVES

The No Athletic Field and Play Court Reconfiguration Alternative would meet five of the six objectives.

- **Objective #1:** Increase the safety and security of the staff and students through the campus circulation modifications and reconfiguration
- **Objective #2:** Accommodate anticipated student increase generated from new residential development in surrounding communities
- **Objective #3:** Promote a healthier environment through the use of green technology in new buildings
- **Objective #4:** Limit the disruption of the student educational experience during the construction of the project by limiting the timing, number, duration of phases
- **Objective #6:** Promote College and Career readiness by incorporating Career Technical Education (CTE) classrooms and labs on campus

This alternative would not meet one project objectives because the athletic fields and play courts would not be reconfigured.

- **Objective #5:** Promote a safer environment for students by consolidating the physical education spaces.

## 7.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Athletic Field and Play Court Reconfiguration Alternative has been identified as “environmentally superior” to the proposed project. This alternative would reduce air quality impacts and would meet five of the six project objectives.

## 7. Alternatives to the Proposed Project

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## 8. Impacts Found Not to Be Significant

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California Public Resources Code § 21003 (f) states: “...it is the policy of the state that...[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment.” This policy is reflected in the California Environmental Quality Act Guidelines (CEQA Guidelines) § 15126.2(a), which states that “[a]n EIR [environmental impact report] shall identify and focus on the significant environmental impacts of the proposed project” and § 15143, which states that “[t]he EIR shall focus on the significant effects on the environment.” Guidelines § 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the Draft EIR (Chapter 5).

This chapter includes the analysis for the environmental topics where the project would have either no impact or a less than significant impact, as shown below.

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Aesthetics                       | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation                  |
| <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Hydrology & Water Quality     | <input type="checkbox"/> Transportation              |
| <input type="checkbox"/> Biological Resources             | <input type="checkbox"/> Land Use & Planning           | <input type="checkbox"/> Tribal Cultural Resources   |
| <input type="checkbox"/> Cultural Resources               | <input type="checkbox"/> Mineral Resources             | <input type="checkbox"/> Utilities & Service Systems |
| <input type="checkbox"/> Geology & Soils                  | <input type="checkbox"/> Population & Housing          | <input type="checkbox"/> Wildfire                    |
| <input type="checkbox"/> Energy                           | <input type="checkbox"/> Public Services               |  |

The following 3 topics are analyzed in Chapter 5 of this EIR.

- |                                      |   |                                |
|--------------------------------------|---|--------------------------------|
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Noise |
|--------------------------------------|---|--------------------------------|

### 8.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

## 8. Impacts Found Not to Be Significant

### a) Have a substantial adverse effect on a scenic vista?

**No Impact.** The project site is already developed as a high school. The Beaumont General Plan does not identify any designated scenic vistas.<sup>1</sup> The city's southern sphere of influence zone has a significant amount of native vegetation within a series of hills known as the Badlands. The City gives “special attention” to the Badlands area and ridgelines, and they could be categorized as scenic.

The high school campus and surrounding areas are flat and are not near any ridgelines or the Badlands area. Additionally, most views around the school toward the west are obstructed by buildings and/or trees. The project would not have an adverse effect on a scenic vista. No impact would occur.

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

**No Impact.** There are no officially designated or eligible state scenic highways in Beaumont. There are no natural rock outcroppings or historic buildings on campus. Project development would not damage scenic resources within a state scenic highway; therefore, no impacts would occur.

### c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

**Less Than Significant Impact.** The high school campus is in an area that does not qualify as an “urbanized area.”<sup>2</sup>

Views from publicly accessible vantage points are from surrounding roadways toward the developed high school campus and Athletic Complex. The new and reconfigured facilities (parking lot, athletic fields, classroom buildings) would be typical of a high school campus and would not be inconsistent or out of scale with the other school facilities. Beaumont HS was opened in 2006 and has been a part of the community for the last 14 years. The improvements would be constructed within the confines of the existing high school campus, and no new property would be acquired.

The project would not substantially change or degrade the existing visual character or quality of public views of the campus or its surroundings.

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<sup>1</sup> City of Beaumont. General Plan. Approved March 2007. Land Use Element.  
<https://www.beaumontca.gov/DocumentCenter/View/63/General-Plan?bidId=>

<sup>2</sup> PRC § 21071/CEQA Guidelines § 15191(m)(1). For an incorporated city, “urbanized area” means a city that either by itself or in combination with two contiguous incorporated cities has a population of at least 100,000 persons. The city of Beaumont had a population of about 49,241 (U.S. Census Bureau. 2018 Population Estimate. the 2018 Estimate for two contiguous cities are Banning (31,253) and Calimesa (8,937). Total population is about 89,500.  
[https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml))

## 8. Impacts Found Not to Be Significant

### d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

**Less Than Significant Impact.** The two major causes of light pollution are spill light and glare. Spill light is caused by misdirected light that illuminates areas outside the area intended to be lit. Glare occurs when a bright object is against (or reflects off) a dark background or shiny surface.

The campus is surrounded by scattered rural developed land uses. The existing campus generates nighttime light from parking lot, building lights (interior and exterior), and athletic fields. Surrounding land uses also generate light from street lights along newer developments, and commercial and school parking lot, gas station, vehicle, and building lights.

The project would not significantly increase nighttime lighting in the area because the new buildings would replace existing portable buildings and would be on the interior of the campus. The reconfigured parking lot would have similar lighting to the existing lots. Furthermore, the project does not include any new sources of high-intensity nighttime lighting, such as stadium lights. All lights on new buildings and any new site lighting would be focused and directed on campus and would not spill light or glare off the campus. Light and glare impacts would be less than significant.

## 8.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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

**No Impact.** The project would not convert farmland to nonagricultural uses.

Although Beaumont is mostly undeveloped, nearly one-half of the City's land area consists of vacant land (approximately 1,279 acres within City limits, 6,000 acres within the City's sphere of influence, and 9,000 acres in the Planning Area). Much of the vacant land is suitable for agricultural usage, though due to the amount of urbanization taking place in the community, the pressures for additional development severely constrain the viability of agriculture as a continued/permanent use.<sup>3</sup>

<sup>3</sup> City of Beaumont. General Plan. Approved March 2007. Resource Management Element.  
<https://www.beaumontca.gov/DocumentCenter/View/63/General-Plan?bidId=>

## 8. Impacts Found Not to Be Significant

There is no Farmland of Statewide Importance in the city. Most land is classified as Farmland of Local Importance or Urban and Built-Up Land.<sup>4</sup> Two areas are designated farmland: Dowling Fruit Orchard near the I-10 / SR-60 interchange is Prime Farmland and Unique Farmland, and Bingham's Wholesale Nursery at W. 1st Street / Veile Avenue is Unique Farmland.<sup>5</sup>

There is no agricultural or farm use on or in the vicinity of the school campus; therefore, no project-related farmland conversion would occur. The campus is fully developed and is not mapped as important farmland on the California Important Farmland Finder.<sup>6</sup> No impact would occur.

### **b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**No Impact.** The California Land Conservation Act of 1965 (Williamson Act) enables counties and cities to designate agricultural preserves and offer preferential taxation based on a property's agricultural-use value rather than on its market value. In return for the preferential tax rate, the landowner is required to sign a contract with the county or city, in which the landowner agrees not to develop the land for a minimum 10-year period. There are no areas in the city that area zoned for agricultural use.<sup>7</sup> The City of Beaumont General Plan Land Use designation for the property is Public Facilities, and the zoning is PF (Public Facilities). The school is not used for agricultural purposes and is not bound by a Williamson Act contract.

### **c) Conflict with existing zoning for, or cause rezoning of, forest land (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))?**

**No Impact.** Project development would not conflict with existing zoning for forest land, timberland, or timberland production. Forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Timberland is defined as "land...which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees."<sup>8</sup>

The school property is zoned PF (Public Facilities); it is not zoned for forest land or timberland use. No impact would occur.

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<sup>4</sup> Division of Land Resource Protection (DLRP). California Important Farmland Finder.  
<https://maps.conservation.ca.gov/dlrp/ciff/>.

<sup>5</sup> State of California. Natural Resources Agency. Department of Conservation. Riverside County Important Farmland 2016. Sheet 1 of 3. Published July 2017. <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Riverside.aspx>

<sup>6</sup> Division of Land Resource Protection (DLRP). California Important Farmland Finder.  
<https://maps.conservation.ca.gov/dlrp/ciff/>.

<sup>7</sup> City of Beaumont. Zoning Map.  
<http://bmmaps.maps.arcgis.com/apps/webappviewer/index.html?id=0eccc31e3daa45c9b713853988cbcdf0>

<sup>8</sup> California Public Resources Code (PRC) § 12220.  
[https://leginfo.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=12220.&lawCode=PRC](https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=12220.&lawCode=PRC)

## 8. Impacts Found Not to Be Significant

### d) Result in the loss of forest land or conversion of forest land to non-forest use?

**No Impact.** Construction of the project would not result in the loss or conversion of forest land. No vegetation on-site is cultivated for forest resources. Vegetation is limited to ornamental trees, shrubs, and turf. No forest land would be affected by the project. No impact would occur.

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

**No Impact.** There is no mapped important farmland or forest land on and near the campus, and project development would not indirectly cause conversion of such land to nonagricultural or nonforest use. No impact would occur.

## 8.3 BIOLOGICAL RESOURCES

This section is based, in part, on the Biological Resources and Impact Analysis conducted in 2010.<sup>9</sup> No significant changes have occurred on campus since the analysis was conducted.

Would the project:

### a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

**No Impact.** The main campus plant communities consist of 32.48 acres of ‘ornamental’ (landscape and turf) and 25.09 acres of ‘developed’ (buildings, hardscape, parking lots and roads). The Riversidian alluvial fan sage scrub is recognized as a sensitive habitat by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and the California Department of Fish and Wildlife. This habitat occurs in a semi-natural condition along parts of adjacent Noble Creek channel (open gravelly, sandy alluvial wash) near the southeast corner of the school campus. The earthen flood control basin contains some riparian herb/marsh species and is surrounded by ornamental landscape. The project would have no impacts to the Noble Creek channel or the basin. The Mountain View Channel is concrete lined and lacks vegetation. No sensitive habitat exist on the main campus or near the area of disturbance for the project (northern half of the main campus). No impact would occur.

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<sup>9</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix C. Technical Memorandum. Beaumont High School Expansion, Biological Resources and Impact Analysis

## 8. Impacts Found Not to Be Significant

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

**No Impact.** Sensitive natural communities are natural communities that are known to provide habitat for sensitive animal or plant species or are known to be important wildlife corridors. Riparian habitats occur along the banks of rivers and streams. Noble Creek channel is an ephemeral (alluvial) wash. The earthen flood control basin contains some riparian herb/marsh species and is surrounded by ornamental landscape. No locally designated natural communities or riparian habitats exist on the campus. The project site (northern half of campus) is neither within nor proximate to any riparian habitat or other sensitive natural community, significant ecological area, land trust, or conservation plan. No impact would occur.

**c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**No Impact.** Wetlands are defined under the federal Clean Water Act as land that is flooded or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that normally does support, a prevalence of vegetation adapted to life in saturated soils. Wetlands include playas, ponds, and wet meadows; lakes and reservoirs; rivers, streams, and canals; estuaries; and beaches and rocky shores.<sup>10</sup> The active campus is fully developed, and there are no protected wetlands on-site. The Mountain View Channel and Noble Creek channel are classified as “riverine.” The riverine system includes all wetlands and deep-water habitats within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts in excess of 5 percent. A channel is an open conduit, either naturally or artificially created, which periodically or continuously contains moving water or which forms a connecting link between two bodies of standing water.<sup>11</sup> There are no wetlands on campus.<sup>12</sup> Both channels are not part of the active campus and are fenced to prevent trespass. No impact would occur.

**d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**Less Than Significant Impact.** The campus is surrounded by fencing and developed with buildings, asphalt and concrete surfaces, turf playfields, and landscaped areas. The off-campus Noble Creek channel is a wildlife movement corridor and may provide seasonal aquatic connectivity between the San Bernardino Mountains and areas to the south of the school. The active campus has no native habitat and no wildlife corridors and is not available for overland wildlife movement. It does not have surface water and therefore is not suitable as part of a movement or migration corridor for fish or aquatic birds. There are several ornamental landscape trees and shrubs that could be used for nesting by migratory birds. When removing trees or vegetation, in compliance with California Fish and Game Code §§ 3503, 3503.5, 3513, and 3800, the District is required to avoid the

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<sup>10</sup> Southern California Wetlands Recovery Project. <https://scwrp.org/>

<sup>11</sup> U.S. Fish and Wildlife Service. Classification of Wetlands and Deepwater Habitats of the United States. <https://www.fws.gov/wetlands/documents/classwet/>

<sup>12</sup> U.S. Fish and Wildlife Service. National Wetlands Inventory. <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>



## 8. Impacts Found Not to Be Significant

incidental loss of fertile eggs or nestlings or other activities that lead to nest abandonment. Therefore, the District will conduct a preconstruction survey prior to removal of trees if construction-related vegetation removal occurs during nesting season (typically between February 1 and September 1). The District will comply with the existing regulations. The project would not interfere with the movement of any native resident or wildlife species or with established native resident or migratory wildlife corridors. Impacts would be less than significant.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**Less Than Significant Impact.** The area of disturbance on the school campus does have any native oak trees or significant ecological areas. Trees in the north part of the main campus are ornamental landscape trees. The project would require the removal of some trees, and landscape plan includes planting of new trees on campus. Trees would be planted at the appropriate size and maturity for the space and will be selected from Districts Approved Plant List. The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No impacts would occur.

**f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**Less Than Significant Impact.** The school is within the boundary of the Western Riverside County MSHCP. The City of Beaumont and Riverside County are signatories of the MSHCP. However, the Beaumont Unified School District is not a signatory to the plan and is not required to participate. The project site is not located in an area designated for conservation or preservation under the plan and is not within a specific linkage area. The project would not interfere with achieving City of Beaumont conservation targets.

## 8.4 CULTURAL RESOURCES

Would the project:

**a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?**

**No Impact.** Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally a resource is considered “historically significant” if it meets one of the following criteria:

- i) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- ii) Is associated with the lives of persons important in our past;
- iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- iv) Has yielded, or may be likely to yield, information important in prehistory or history.

## 8. Impacts Found Not to Be Significant

Beaumont High School opened in 2006. Resources younger than 45 years old are usually not evaluated for eligibility for listing on the California Register of Historic Resources. Additionally, the project does not include the demolition or removal of any buildings. The project would not substantially diminish the significance of a historical resource: no impact would occur.

### **b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

**No Impact.** Archaeological resources are cultural resources of prehistoric or historic origin that reflect human activity. Archaeological resources include both structural ruins and buried resources. The term “unique archaeological resources” is defined in PRC § 21083.2(g) as:

... ‘unique archaeological resources’ means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

A Cultural Resources Record Search was conducted at the University of California, Riverside Eastern Information Center in February 2009.<sup>13</sup> At least 14 area-specific studies and 3 general overview studies were completed within a one-mile radius of the school; six resources were identified. However, none of these resources are on the campus and none would be impacted by the project. Additionally, the soil on campus was previously disturbed during construction of the school. Artificial fill material ranging from 15 to 25 feet deep underlies the school campus. Because of the significant ground disturbance, project construction would not encounter archaeological resources. No impacts would occur.

### **c) Disturb any human remains, including those interred outside of dedicated cemeteries?**

**No Impact.** Extensive earthwork was involved for the construction of the high school; therefore, human remains are not anticipated to be found on the campus. No impacts would occur.

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<sup>13</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix D. Cultural Resources Records Search.

## 8. Impacts Found Not to Be Significant

### 8.5 ENERGY

Would the project:

- a) **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

**Less than Significant Impact.** The project would result in short-term construction and long-term operational energy consumption.

#### Short-Term Construction

Construction of the project would require energy use to power the construction equipment. The energy use would vary during different phases of construction—the majority of construction equipment during demolition and grading would be gas powered or diesel powered, and the later construction phases would require electricity-powered equipment for interior construction and architectural coatings. Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. Transportation energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel and/or gasoline.

Construction activities would be subject to applicable regulations such as anti-idling measures, limits on duration of activities, and the use of alternative fuels, thereby reducing energy consumption. There are no aspects of the project that would foreseeably result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities. For example, there are no unusual characteristics that would directly or indirectly cause construction activities to be any less efficient than would otherwise occur elsewhere (restrictions on equipment, labor, types of activities, etc.). The project would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities.

#### Long-Term Operation

The project site is already developed as a high school and consumes electrical and gas energy. Operation of the new buildings and possibly a few additional parking lot lights would not generate a significant increase in the demand for electricity or natural gas compared to existing conditions. During operation, energy is used for heating, cooling, and ventilation of buildings; water heating; equipment; appliances; indoor, outdoor, perimeter, and parking lot lighting; and security systems.

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle to incorporate new energy efficiency technologies.<sup>14</sup> The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018, and went into effect for new construction starting January 1, 2020. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation

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<sup>14</sup> The California Energy Code, part 6 of the California Building Standards Code which is title 24 of the California Code of Regulations, also titled The Energy Efficiency Standards for Residential and Nonresidential Buildings.

## 8. Impacts Found Not to Be Significant

requirements; 4) and nonresidential lighting requirements.<sup>15</sup> Under the 2019 standards, nonresidential buildings (which include school buildings) will be 30 percent more energy efficient compared to the 2016 standards.<sup>16</sup> The new buildings would be significantly more energy efficient than the existing buildings on campus.

Because the school district only has one high school, even without the project, all students will attend Beaumont High School. The project would provide space for the additional students. The project would not result in inefficient, wasteful, and unnecessary consumption of energy during construction or operation. Impacts would be less than significant.

### **b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

**Less Than Significant Impact.** The state's electricity grid is transitioning to renewable energy under California's Renewable Energy Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered carbon neutral. Executive Order S-14-08, signed in November 2008, expanded the state's renewable portfolios standard (RPS) to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Senate Bill 350 (de Leon) was signed into law September 2015 and established tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. Senate Bill 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. On September 10, 2018, Governor Brown signed Senate Bill 100 (SB 100), which raised California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also established a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under SB 100 the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The new buildings would be significantly more energy efficient than the existing buildings on campus. The project would be reviewed by DSA for compliance with design and construction and energy compliance, and it would not conflict with state or local plans for renewable energy or energy efficiency. Impacts would be less than significant.

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<sup>15</sup> California Energy Commission (CEC). 2018. News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. [http://www.energy.ca.gov/releases/2018\\_releases/2018-05-09\\_building\\_standards\\_adopted\\_nr.html](http://www.energy.ca.gov/releases/2018_releases/2018-05-09_building_standards_adopted_nr.html).

<sup>16</sup> California Energy Commission (CEC). 2018. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. [http://www.energy.ca.gov/title24/2019standards/documents/2018\\_Title\\_24\\_2019\\_Building\\_Standards\\_FAQ.pdf](http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf).

## 8. Impacts Found Not to Be Significant

### 8.6 GEOLOGY AND SOILS

Would the project:

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

**No Impact.** The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazards of surface faulting and fault rupture on habitable buildings. Fault rupture generally occurs within 50 feet of an active fault line and is limited to the immediate area of the fault. Active earthquake faults are faults where surface rupture has occurred within the last 11,000 years.

The school does not lie within or immediately adjacent to a fault-rupture hazard zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act. The nearest Alquist-Priolo Earthquake Fault Zone is along the Cherry Valley segment of the San Geronio Pass fault zone, approximately one mile north-northeast of the school.<sup>17</sup> No impact would occur.

ii) **Strong seismic ground shaking?**

**Less Than Significant Impact.** The project would not increase exposure of people or structures to earthquake impacts. Southern California is a seismically active region. Impacts from ground shaking could occur many miles from an earthquake epicenter. The potential severity of ground shaking depends on many factors, including the distance from the originating fault, the earthquake magnitude, and the nature of the earth materials beneath a given site. There are several known faults in the Beaumont region. The San Andreas Fault Zone is about six miles northeast; Banning Fault Zone, considered a branch of the San Andreas, is about one mile north; and the San Jacinto Fault Zone is about six miles southwest of the school.

The closest historically active surface fault, near the southwest corner of the District Administration Center site, is a splay of the Beaumont Plains fault, mapped as potentially active by Riverside County. The fault line runs 60 feet west of the Administration Center. The potential for future surface rupture of active faults outside of the fault setback zone (60 feet) is considered low.<sup>18</sup>

<sup>17</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix E. Geohazard Study Report.

<sup>18</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix F. Geotechnical Investigation and Geologic Hazards Evaluation

## 8. Impacts Found Not to Be Significant

The new buildings would be designed in accordance with the California Building Code, the California Geological Survey “Guidelines for Evaluating and Mitigating Seismic Hazards in California,”<sup>19</sup> and “Checklist for the Review of Geologic/Seismic Reports for California Schools, Hospitals, and Essential Services Buildings.”<sup>20</sup> The project also requires review from the DSA for compliance with design and construction and accessibility standards and codes, including seismic requirements. The District, with oversight from DSA, would comply with these requirements in the design and construction of the new buildings. Seismic ground shaking impacts would be less than significant.

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

**Less Than Significant Impact.** Liquefaction refers to loose, saturated sand or gravel deposits that lose their load-supporting capability when subjected to intense shaking. Liquefaction potential varies based upon three main contributing factors: 1) cohesionless, granular soils having relatively low densities (usually of Holocene age); 2) shallow groundwater (generally less than 50 feet); and 3) moderate to high seismic ground shaking.

The school and surrounding area are located in an area with low susceptibility to liquefaction. In addition, regional groundwater maps and groundwater data indicate that shallow groundwater conditions do not exist locally, nor have they existed historically.<sup>21</sup> No groundwater or perched water was encountered during field exploration to a maximum depth of 50.5 feet. Historical groundwater elevations near Beaumont High School were approximately 2,260 feet.<sup>22</sup> Liquefaction hazards would be less than significant.

### iv) Landslides?

**Less Than Significant Impact.** Landslides are a type of erosion in which masses of earth and rock move downslope as a single unit. Susceptibility of slopes to landslides and lurching (earth movement at right angles to a cliff or steep slope during ground shaking) depend on several factors, which are usually present in combination—steep slopes, condition of rock and soil materials, the presence of water, formational contacts, geologic shear zones, and seismic activity.

There are minor graded stabilized slopes on the perimeter of the main campus. The relatively flat topography at the main campus precludes stability problems. Significant slopes are not located on or near the school. Therefore, the site is not considered susceptible to seismically induced landslides. The project would not expose people or the new school buildings to adverse effects from landslides. Landslide impacts would be less than significant.

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<sup>19</sup> California Geological Survey “Guidelines for Evaluating and Mitigating Seismic Hazards in California,” published in 1997 by the California Department of Mines and Geology as Special Publication 117 (SP117), and revised and readopted September 11, 2008, and published by the California Department of Conservation, California Geological Survey (formerly known as DMG).

<sup>20</sup> California Geological Survey. October 2013.

[http://www.conservation.ca.gov/cgs/information/publications/cgs\\_notes/note\\_48/Documents/Note\\_48.pdf](http://www.conservation.ca.gov/cgs/information/publications/cgs_notes/note_48/Documents/Note_48.pdf)

<sup>21</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix F. Geotechnical Investigation and Geologic Hazards Evaluation

<sup>22</sup> Earth Systems Pacific. 2020, March 20. Geotechnical Engineering, Geohazards, and Percolation Testing Report. Proposed New Classroom. Beaumont High School. 39139 Cherry Valley Boulevard, Beaumont, Riverside County, California.

## 8. Impacts Found Not to Be Significant

### b) Result in substantial soil erosion or the loss of topsoil?

#### **Less Than Significant Impact.**

#### **Construction Phase**

The native topsoil was removed and replaced with stable fill material during development of the campus; therefore, the project would not result in the loss of topsoil.<sup>23</sup>

Erosion is a normal and inevitable geologic process whereby earthen materials are loosened, worn away, decomposed or dissolved, and moved from one place to another. Precipitation, running water, waves, and wind are all agents of erosion. Ordinarily, erosion proceeds imperceptibly, but when the natural equilibrium of the environment is changed, the rate of erosion can be greatly accelerated. This can create aesthetic as well as engineering problems on undeveloped sites. Accelerated erosion in an urban area can cause damage by undermining structures; blocking storm drains; and depositing silt, sand, or mud on roads and in tunnels. Eroded materials can eventually be deposited in local waters, where the carried silt remains suspended in the water for some time, constituting a pollutant and altering the normal balance of plant and animal life.

Project-related construction activities would expose soil through excavation, grading, and trenching, and thus could cause erosion during heavy winds or rain storms. Construction projects of one acre or more are regulated under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ) issued by the State Water Resources Control Board. The District would obtain coverage by preparing and implementing a Stormwater Pollution Prevention Plan (SWPPP), estimating sediment risk from construction activities to receiving waters, and specifying best management practices (BMPs) that would be incorporated into the construction plan to minimize stormwater pollution. Categories of BMPs used in SWPPPs are described in Table 8-1. The project would disturb approximately 34 acres of the 62-acre main campus; thus, construction would be subject to the Statewide Construction General Permit and implementation of BMPs specified in the SWPPP. Construction-phase soil erosion impacts would be less than significant.

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<sup>23</sup> Topsoil is the thin, rich layer of soil where most nutrients for plants are found and where most land-based biological activity takes place. The loss of topsoil through erosion is a major agricultural problem.

## 8. Impacts Found Not to Be Significant

**Table 8-1 Construction BMPs**

| Category  | Purpose  | Examples  |
|---|--|---|
| Erosion Controls and Wind Erosion Controls                        | Cover and/or bind soil surface, to prevent soil particles from being detached and transported by water or wind.  | Mulch, geotextiles, mats, hydroseeding, earth dikes, swales.  |
| Sediment Controls   | Filter out soil particles that have been detached and transported in water.  | Barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basin; cleaning measures such as street sweeping.                          |
| Tracking Controls   | Minimize the tracking of soil off-site by vehicles.  | Stabilized construction roadways and construction entrances/exits; entrance/outlet tire wash.   |
| Non-storm Water Management Controls                               | Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges. | BMPs specifying methods for: paving and grinding operations; cleaning, fueling, and maintenance of vehicles and equipment; concrete curing; concrete finishing. |
| Waste Management and Controls (i.e., good housekeeping practices) | Management of materials and wastes to avoid contamination of stormwater.   | Spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes.  |

Source: California Stormwater Quality Association (CASQA), California Construction Best Management Practices Handbook, January 2015.

### Operational Phase

After completion of the project, ground surfaces would be either asphalt parking lot, hardscape, buildings, or maintained landscaping and turf fields, and no large areas of exposed soil would be left to erode. The new buildings and other campus improvements would not cause an increase in erosion of soils off campus. Operational-phase soil erosion impacts would be less than significant.

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

**Less Than Significant Impact.** Hazards arising from liquefaction and landslides would be less than significant, as discussed above in Sections 3.7.a (iii) and (iv). The campus is underlaid with 15 to 25 feet of engineered compacted artificial fill placed during construction of the high school. Beneath the fill material is Quaternary alluvial deposits ranging in age from the late Pleistocene to the Holocene.

**Lateral spreading.** Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The campus is not prone to lateral spreading because near-surface site sediments are not prone to liquefaction.

**Subsidence.** The major cause of ground subsidence is withdrawal of groundwater. The project would not withdraw groundwater. The potential for subsidence cracking is considered low. In September 2006 Phase I of the Beaumont-Cherry Water District (BCVWD) Noble Creek Recharge Facility (east of the school) and



## 8. Impacts Found Not to Be Significant

associated project components were constructed. This phase of the facility provided 8.3 acres of wetted bottom for recharge. The facility was expanded in 2013 to meet the growing need to recharge water in the BCVWD. The Phase II expansion provided an additional 14.44 acres of wetted bottom for recharge, that is, about 1.79 times additional capacity.<sup>24</sup> Project would not result in significant hazards to people or structures due to ground subsidence, and impacts would be less than significant.

**Seismically Induced Settlement.** In contrast to liquefaction, which occurs in saturated sand or gravel, seismically induced settlement occurs in dry sands and is often caused by loose to medium-dense granular soils densified during ground shaking. Seismic settlement is not considered a geotechnical constraint to the project. Project development would not subject people or structures to substantial hazards arising from seismic settlement, and impacts would be less than significant.

**Compressible and Collapsible Soils.** Soil compressibility refers to a soil's potential for settlement when subjected to increased loads, as from a fill surcharge or a structure. Collapsible soils are typically geologically young, unconsolidated sediments of low density that may compress under the weight of structures.

The campus was constructed with engineered, compacted, artificial fill material that was moisture conditioned and compacted to at least 90 percent of the maximum dry density. The campus has a low risk of collapse. As part of the DSA review process for the proposed project, the District is required to comply with a final, engineering-level geotechnical report and will include identification of site preparation, specific locations and methods for fill placement, temporary shoring, groundwater seismic design features, excavation stability, foundations, soil stabilization, establishment of any deep foundations, concrete slabs and pavements, surface drainage, cement type and corrosion measures, erosion control, shoring and internal bracing, and plan review.

The project design and construction would incorporate all recommended measures in the engineering-level geotechnical report to ensure that safety is not compromised, as required by existing regulations. Compliance with recommendations of the geotechnical investigation would minimize hazards from unstable soils, and impacts would be less than significant.

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

**Less Than Significant Impact.** Expansive soils possess clay particles that react to moisture changes by shrinking when dry or swelling when wet. These soils have the potential to crack building foundations and, in some cases, structurally distress the buildings themselves. Minor-to-severe damage to overlying structures is possible.

The compacted artificial fill and alluvial soils on-site have a very low expansion potential. Therefore, the project would not expose people or the new school buildings to significant adverse effects associated with expansive soils. Impacts would be less than significant.

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<sup>24</sup> Beaumont-Cherry Valley Water District. Noble Creek Recharge Facility. <https://bcvwd.org/noblecreekrecharge/>

## 8. Impacts Found Not to Be Significant

- e) **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

**Less Than Significant Impact.** The existing campus does not use septic tanks or other alternative wastewater disposal systems. No impact would occur.

- f) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**No Impact.** A paleontological resource is a natural resource characterized as faunal or floral fossilized remains but may also include specimens of nonfossil material dating to any period preceding human occupation. Many fossils have been found in Riverside County; the oldest fossils date from the Late Jurassic Period (150 million years ago). By the Late Cretaceous Period, at the end of the age of dinosaurs, fossils found include ammonites, clams, and giant oysters.<sup>25</sup> “Given the nature of alluvial deposits throughout the City [of Beaumont], prehistoric cultural remains (fossils) may be present.”<sup>26</sup> Older Quaternary alluvium may contain fossils or other paleontological resources. The campus has undergone extensive earthwork (excavation and grading) and the campus has 15 to 25 feet of engineered fill material. The deepest excavation would be the utility trenches at 7 to 10 feet. New construction would not disturb native alluvial soils. Therefore, discovery of paleontological resources is unlikely. No impacts to paleontological resources would occur.

## 8.7 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?**

**Less Than Significant Impact.** Construction of the proposed project would likely involve the use of some hazardous materials, such as vehicle fuels, lubricants, greases, and transmission fluids in construction equipment, and paints and coatings in building construction. However, the project site is developed and operating as a high school, and no significant hazardous materials are being used or stored that would be removed during construction. No routine transport, use, or disposal of hazardous materials currently occurs on-site, and no new or expanded handling of hazardous materials would result from project implementation.

Operation of the project would involve the use of small amounts of hazardous materials for cleaning and maintenance purposes typical of janitorial staff, and pesticides by school maintenance staff. The use, storage, transport, and disposal of hazardous materials by school staff is already occurring, and the District is complying with existing regulations of several agencies, including the Department of Toxic Substances

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<sup>25</sup> Riverside County General Plan, Environmental Impact Report No. 521. February 2015.

[https://planning.rctlma.org/Portals/14/genplan/general\\_plan\\_2015/DEIR%20521/04-09\\_CulturalAndPaleoResrcs.pdf](https://planning.rctlma.org/Portals/14/genplan/general_plan_2015/DEIR%20521/04-09_CulturalAndPaleoResrcs.pdf)

<sup>26</sup> City of Beaumont. General Plan. Approved March 2007. Resource Management Element.

<https://www.beaumontca.gov/DocumentCenter/View/63/General-Plan?bidId=>

## 8. Impacts Found Not to Be Significant

Control, US Environmental Protection Agency, Occupational Safety and Health Administration, and the County Fire Department. Impacts would be less than significant.

**a) 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?**

**Less Than Significant Impact.** Very little has changed in the surrounding area, and the new classroom buildings would not place students closer to hazards.

The use, handling, storage, and disposal of hazardous materials in the course of project construction and operation would not pose a substantial hazard to the public or the environment from reasonably foreseeable accidental release. Compliance with the previously discussed regulations is already standard practice at the campus, including training administrators and staff to safely contain and clean up hazardous materials spills; maintenance of hazardous materials spill containment and cleanup supplies on-site; implementing evacuation procedures as needed; and contacting the appropriate hazardous materials emergency response agency immediately pursuant to requirements of regulatory agencies. Impacts from reasonably foreseeable upset and accident conditions would be less than significant.

Long-term operation of the project would involve very little transport, use, or disposal of any hazardous materials, especially since it is an expansion of the existing high school. The types of hazardous materials associated with operation of the project would generally be limited to those associated with janitorial, maintenance, and repair activities, such as commercial cleaners, solvents, lubricants, paints, etc. Additionally, certain academic courses may involve small quantities of chemicals, solvents, and paints. These materials would be used in small quantities and would be stored in compliance with established federal, state, and local health and safety requirements.

The high school site was cleared by the DTSC and a No Further Action letter was issued.<sup>27</sup> Therefore, the potential for the project's operation to result in a release, accidental or otherwise, of any hazardous materials into the environment is considered less than significant.

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

**Less Than Significant Impact.** Brookside Elementary School is within 0.25 mile of Beaumont High School. Mountain View Middle School is 0.36 mile from the high school. The project would not emit hazardous emissions or handle significant quantities of hazardous or acutely hazardous materials, substances, or waste. Hazardous materials expected at the existing campus would be associated with janitorial, maintenance, and repair activities. These materials would be used in small quantities and would be stored in compliance with established state and federal requirements. Additionally, construction materials and site cleanup would comply with existing regulations. Operation of construction equipment and heavy trucks during project construction would generate diesel emissions, which are considered hazardous; however, the project construction period

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<sup>27</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix I. Phase I Environmental Site Assessment Addendum Proposed Beaumont High School (September 11, 2000).

## 8. Impacts Found Not to Be Significant

would be temporary. Health risk is based upon the conservative assumption that exposure is continuous and occurs over a 70-year lifetime. A determination of risk is not appropriate for short-term construction activities. Exposure to diesel exhaust during the construction period would not pose substantial hazards to persons at Brookside Elementary School or the students and staff at Beaumont High School. Impacts would be less than significant.

- c) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**Less Than Significant Impact.** California Government Code § 65962.5 requires the California Environmental Protection Agency to compile a list (updated at least annually) of hazardous waste and substances release sites, known as the Cortese List or California Superfund. California Government Code § 65962.5 requires the compiling of lists of the following types of hazardous materials sites: hazardous waste facilities; hazardous waste discharges for which the State Water Quality Control Board has issued certain types of orders; public drinking water wells containing detectable levels of organic contaminants; underground storage tanks with reported unauthorized releases; and solid waste disposal facilities from which hazardous waste has migrated.

Five environmental lists were searched for hazardous materials sites on the school campus and within a 2,000-foot radius from the center of the main campus:

- GeoTracker. State Water Resources Control Board (SWRCB 2020)<sup>28</sup>
  - 38766 Cherry Valley Boulevard. Leaking Underground Storage Tank (LUST) Cleanup Site. Cleanup completed and case closed
  - Shell Station (former Exxon, then Texaco). 10501 Beaumont Avenue. Permitted underground storage tank (UST)
  - Texaco. 10501 Beaumont Avenue. LUST Cleanup Site. Cleanup completed and case closed
- EnviroStor. Department of Toxic Substances Control.<sup>29</sup> An investigation was conducted at Beaumont High School for the athletic facility, and the case is listed as “No Action Required.” No contaminants were found on campus.
- EJScreen. US Environmental Protection Agency.<sup>30</sup> No listings.
- EnviroMapper. US Environmental Protection Agency.<sup>31</sup> No listings.

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<sup>28</sup> State Water Resources Control Board (SWRCB). 2020, March 29 (accessed). GeoTracker. <http://geotracker.waterboards.ca.gov/>.

<sup>29</sup> Department of Toxic Substances Control (DTSC). 2020a, March 29 (accessed). EnviroStor. <http://www.envirostor.dtsc.ca.gov/public/>.

<sup>30</sup> US Environmental Protection Agency (USEPA). 2020, March 29 (accessed). EJSCREEN. <https://ejscreen.epa.gov/mapper/>.

<sup>31</sup> USEPA. 2020, March 29 (accessed). EnviroMapper for EnviroFacts. <https://enviro.epa.gov/facts/multisystem.html>

## 8. Impacts Found Not to Be Significant

- Solid Waste Information System (SWIS). California Department of Resources Recovery and Recycling.<sup>32</sup> No listings.

Additionally, hazard assessments were conducted for the high school project in 2000—a Phase I Environmental Site Assessment (ESA) in May 2000<sup>33</sup> and a Phase I ESA Addendum (Limited Phase II Environmental Site Assessment) in September 2000.<sup>34</sup> State and local databases were searched:

- USEPA National Priority List (NPL) and Proposed NPL
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- CERCLIS-No Further Response Actions Planned list (CERCLIS-NFRAP)
- Federal Emergency Response Notification System (ERNS)
- Resource Conservation and Recovery Act Generators List (RCRA Generators)
- RCRA Corrective Action Sites Treatment, Storage, and Disposal Facilities List
- State Sites and State Spill Sites Lists (Cal-Sites Database)

The potential for soil and/or groundwater to be contaminated beneath the high school site was determined to be low. Additionally, based on soil testing, no petroleum hydrocarbon vapor from the gas station has impacted the school campus. Conditions surrounding the high school have not significantly changed since 2000. The project would not create a hazard to the public because of a hazardous materials site pursuant to Government Code § 65962.5.

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

**No Impact.** The school is not in an airport land use plan area or within two miles of an airport. The project would not expose people residing or working in the project area to hazards. No impacts would occur.

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

**Less Than Significant Impact.** The District maintains and implements the emergency evacuation plan for Beaumont High School. The project would not interfere with implementation of the evacuation plan. All staging of construction equipment and materials would be done off public roadways and fire access routes.

Emergency preparedness and response planning and coordination would be coordinated through the District's Risk Management Department's Emergency Preparedness Team. The existing school currently has a school

<sup>32</sup> California Department of Resources Recycling and Recovery (CalRecycle). 2020, March 29 (accessed). SWIS Facility/Site Search. <https://www2.calrecycle.ca.gov/SWFacilities/Directory/>.

<sup>33</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix I. Phase I Environmental Site Assessment Proposed High School (May 17, 2000).

<sup>34</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix I. Phase I Environmental Site Assessment Addendum Proposed Beaumont High School (September 11, 2000).

## 8. Impacts Found Not to Be Significant

safety plan in compliance with the District's "safe school plans." Additionally, the city of Beaumont has a local hazard mitigation plan (2012),<sup>35</sup> which was approved by the Federal Emergency Management Agency. Project construction would not interfere with any other existing emergency response plans or emergency evacuation plans. No emergency response impact would occur.

### f) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

**Less Than Significant Impact.** The project site is in an area that is predominantly rural residential. There is no wildland vegetation in the vicinity of the school. There are no significant areas of wildland brush, grass, trees, or other natural fuel sources in close proximity to the school that may present a significant fire hazard. Changes to the existing campus would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.

## 8.8 HYDROLOGY AND WATER QUALITY

Would the project:

### a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

**Less Than Significant Impact.** A significant impact would occur if the project discharges water that does not meet the quality standards of agencies which regulate surface water quality and water discharge into stormwater drainage systems. A significant impact would also occur if the project does not comply with surface water quality regulations as governed by the State Water Resources Control Board.

New construction projects can result in two types of water quality impacts: (1) short-term impacts from discharge of soil through erosion, sediments, and other pollutants during construction and (2) long-term impacts from impervious surfaces (buildings, roads, parking lots, and walkways) that prevent water from being absorbed into the ground, thereby increasing the pollutants in stormwater runoff. Impervious surfaces can increase the concentration of pollutants in stormwater runoff, such as oil, fertilizers, pesticides, trash, soil, and animal waste. Runoff from short-term construction and long-term operation can flow directly into lakes, local streams, channels, and storm drains and eventually be released untreated into the ocean.

The project would be constructed in an area that is already developed and already producing nonpoint-source pollutants.<sup>36</sup> The campus improvements would not impact groundwater quality.

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<sup>35</sup> Beaumont Local Hazard Mitigation Plan. June 2012. <http://beaumontca.gov/DocumentCenter/View/29599/Beaumont-LHMP-?bidId=>

<sup>36</sup> **Point source pollution:** The EPA defines point-source pollution as any single identifiable source of pollution from which pollutants are discharged, such as a pipe, ditch, ship or factory smokestack. Factories and sewage treatment plants are two common types of point sources.

**Nonpoint source pollution** is caused by broadly distributed and disconnected sources of pollution, such as rain and snowmelt runoff, spills, leaks, and sediment erosion.

## 8. Impacts Found Not to Be Significant

### Construction Phase

Construction projects of one acre or more are regulated under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ) issued by the State Water Resources Control Board. Project applicants obtain coverage by developing and implementing a SWPPP, estimating pollutants from construction activities to receiving waters, and specifying BMPs that would be incorporated into the construction plan to minimize stormwater pollution. Project construction would be subject to the Statewide Construction General Permit and implementation of BMPs specified in the SWPPP. Construction phase impacts would be less than significant.

### Operation Phase

After completion of the project, ground surfaces at the campus would be either buildings, hardscape, parking lots, or maintained landscaping, and no large areas of exposed soil would be left to erode off the campus. The project would not significantly increase the amount of impervious surfaces on campus. Water quality features are already on campus (detention basins and large turf fields). The campus would not discharge increased stormwater runoff or pollutants. Operational phase impacts would be less than significant.

#### **b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

**No Impact.** The project would not decrease groundwater supplies. Groundwater was not encountered in any of the borings excavated on-site to a maximum depth of 51.5 feet below the existing ground surface (bgs) during the geotechnical investigations, and the groundwater level is 400 or more feet bgs. Historically, the shallowest groundwater levels are expected to have been about 300 feet bgs.<sup>37</sup> The project does not include new groundwater wells that would extract groundwater from the aquifer. Construction and operation of the school improvements would not lower the groundwater table or deplete groundwater supplies. Furthermore, the school campus does not provide intentional groundwater recharge. Therefore, the project would not interfere with groundwater recharge. Impacts would be less than significant.

#### **c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

##### **i) Result in a substantial erosion or siltation on- or off-site?**

#### **Less Than Significant Impact.**

Beaumont's location at the top of the San Geronio Pass causes streams in and around the City to drain into three distinct drainage area. San Timoteo Creek drains westward from San Geronio Pass into the Santa Ana River Basin. Two drainage areas lie west of the peak of the pass. Part of the area drains generally south into Potrero Creek that traverses the "Badlands" area to flow into the San Jacinto River,

<sup>37</sup> PlaceWorks (formerly The Planning Center). February 2010. Mitigated Negative Declaration and Initial Study for Beaumont High School Expansion, Sports Complex, and Administration Center. Appendix F. Geotechnical Investigation and Geologic Hazards Evaluation

## 8. Impacts Found Not to Be Significant

which also flows into the Santa Ana River Basin. The third drainage area drains east into Smith Creek. Smith Creek descends into the east side of San Geronio Pass into the Whitewater River, continuing southeast through the Coachella Valley into the Salton Sea.<sup>38</sup>

The Noble Creek Channel is adjacent to the school campus on the south. The creek flows southwest to Little San Geronio Creek, then to San Timoteo Creek to the Santa Ana River, and finally into the ocean between Newport Beach and Huntington Beach.

The school is fully developed, and the new buildings and other improvements would not significantly increase impermeable surfaces on campus. Upon project completion, drainage from the campus would remain the same.

### Construction Phase

During construction, erosion and siltation from the disturbed areas may occur. Construction-related activities that expose soils to rainfall/runoff and wind are primarily responsible for erosion. Construction activities would expose soil through excavation, grading, and trenching. Unless adequate erosion controls are installed and maintained during construction, sediment may enter storm drains. The project construction would be subject to the Statewide Construction General Permit and implementation of BMPs specified in the SWPPP. These requirements include provisions for erosion and pollution control measures to ensure water quality in stormwater runoff. Additionally, South Coast AQMD has regulations that require control of windblown soil. Impacts would be less than significant.

### Operation Phase

Upon project completion, drainage from the campus would continue to be captured on-site or conveyed via the same storm drains as with existing conditions. The entire campus would discharge a similar amount of stormwater. No areas of exposed soil would be left to erode following project completion. Thus, project development would not cause substantial erosion. Impacts would be less than significant.

#### ii) **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?**

**Less Than Significant Impact.** Stormwater runoff is conveyed to on-campus retention basins, planted areas, and playfields that can function as retention basins and eliminate the additional runoff created by the impervious surfaces. Stormwater that does not evaporate or percolate into the ground is conveyed to drainage channels. The project would increase impervious surfaces by about four acres (6 percent increase on main campus): about two acres for the parking lot expansion and two acres for the relocated tennis and basketball courts. The drainage pattern and the flow and rate of stormwater runoff from the campus after project completion may increase slightly; however, because of existing drainage system and flood control measures, the project would not result in flooding on or off campus. Impacts would be less than significant.

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<sup>38</sup> City of Beaumont. General Plan. Approved March 2007. Safety Element.  
<https://www.beaumontca.gov/DocumentCenter/View/63/General-Plan?bidId=>



## 8. Impacts Found Not to Be Significant

### **iii) 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?**

**Less Than Significant Impact.** Project-related changes to the campus would not result in a significant increase in runoff. Because of existing drainage system and water quality measures already in place, the new buildings and other campus improvements would not increase pollutants in stormwater that drains to the Noble Creek channel. Impacts would be less than significant.

### **iv) Impede or redirect flood flows?**

**No Impact.** Prior to the construction of Beaumont High School, the main campus and a portion of the Athletic Complex were within the 100-year flood zone. Construction of the high school and measures to reduce the flooding threat, by raising the main campus elevation, removed both sides from the 100-year flood zone. The project would be constructed in the north part of the main campus and would not impede or redirect flood flows. No impact would occur.

### **d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

**No Impact.** The campus is outside of Federal Emergency Management Agency 100-year flood zone.

A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam or other artificial body of water. There are no large confined bodies of water in or near the city.<sup>39</sup>

Tsunamis are a type of earthquake-induced flooding produced by large-scale sudden disturbances of the sea floor. Tsunami waves interact with the shallow sea floor when approaching a landmass, resulting in an increase in wave height and a destructive wave surge into low-lying coastal areas. The campus is over 50 miles inland from the Pacific Ocean. Therefore, the campus is outside the tsunami hazard zone and would not be affected by a tsunami.

The project would not release pollutants as the result of floods, tsunami, or seiche. No impact would occur.

### **e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

**No Impact.** In September 2006 Phase I of the BCVWD Noble Creek Recharge Facility (east of the school) and associated project components were constructed. This phase of the facility provided 8.3 acres of wetted bottom for recharge. The facility was expanded in 2013 to meet the growing need to recharge water in the BCVWD to provide an additional 14.44 acres of wetted bottom for recharge, adding over 1.79 times the

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<sup>39</sup> City of Beaumont. General Plan. Approved March 2007. Safety Element.  
<https://www.beaumontca.gov/DocumentCenter/View/63/General-Plan?bidId=>

## 8. Impacts Found Not to Be Significant

capacity of Phase I.<sup>40</sup> The project would not conflict or obstruct this sustainable groundwater management plan.

The project construction would be subject to the Statewide Construction General Permit and implementation of BMPs specified in the SWPPP. After completion of the project, ground surfaces would be either hardscape or maintained landscape. Additionally, the project would not affect groundwater quality. No impact would occur.

### 8.9 LAND USE AND PLANNING

Would the project:

**a) Physically divide an established community?**

**No Impact.** The campus is fully developed. The project would take place within the campus boundaries and would not divide an established community. No impact would occur.

**b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

**Less Than Significant Impact.** The zoning for the school property is zoning is PF (Public Facilities).<sup>41</sup> The City of Beaumont General Plan Land Use designation for the school property is “Public Facilities.”<sup>42</sup>

The project will have DSA oversight, and the District’s DSA inspector would perform inspections to ensure the project meets state requirements. The campus improvements do not represent a change in land use and would not conflict with existing plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. Impacts would be less than significant.

### 8.10 MINERAL RESOURCES

Would the project:

**a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?**

**No Impact.** The project site is developed and operating as high school and Athletic Complex. The project would not remove any operating mineral resources recovery sites or result in the loss of availability of a known mineral resource. No impact would occur.

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<sup>40</sup> Beaumont-Cherry Valley Water District. Noble Creek Recharge Facility. <https://bcvwd.org/noblecreekrecharge/>

<sup>41</sup> City of Beaumont. Zoning Map.

<http://bmmaps.maps.arcgis.com/apps/webappviewer/index.html?id=0eccc31e3daa45c9b713853988cbef0>

<sup>42</sup> City of Beaumont. General Plan. Approved March 2007. Land Use Element.

<https://beaumontca.gov/DocumentCenter/View/66/Printable-General-Plan-Map?bidId=>

## 8. Impacts Found Not to Be Significant

- b) **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**No Impact.** There are no significant mineral extraction activities in the City of Beaumont.<sup>43</sup> The school project would not impact the availability of a locally important mineral resource. No impacts would occur.

### 8.11 POPULATION AND HOUSING

Would the project:

- a) **Induce substantial unplanned 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)?**

**No Impact.** The project would make physical changes to an existing campus and would not induce population growth. New roads, expanded utility lines, and housing that could induce population growth would not be constructed or be required as part of the school project. No impacts related to population growth would occur.

- b) **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

**No Impact.** No people or housing would be displaced, and no replacement housing would be required. No housing impacts would occur.

### 8.12 PUBLIC SERVICES

Would the project 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 public services:

- a) **Fire protection?**

**Less Than Significant Impact.** Fire services for the project site are provided by the nearest fire stations: Riverside County Station #22 (Cherry Valley Fire Station) at 10055 Avenida Miravilla, Cherry Valley; Station #66 (Beaumont Fire Service) at 628 Maple Avenue, Beaumont; California Department of Forestry and Fire Protection, Riverside County Fire Station #20 (Beaumont Fire Station) at 1550 E 6th Street, Beaumont; and Station #21 (Calimesa Fire Station) at 906 Park Ave, Calimesa. The Cherry Valley Fire Station is the closest and provides medical, rescue, and fire safety education in Cherry Valley.

The Beaumont fire stations are contracted with the County of Riverside Fire Department in the event of a large-scale emergency.

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<sup>43</sup> City of Beaumont. General Plan. Approved March 2007. Resource Management Element.  
<https://beaumontca.gov/DocumentCenter/View/66/Printable-General-Plan-Map?bidId=>

## 8. Impacts Found Not to Be Significant

The project would increase students at the high school. Project operation would not involve the use, manufacture, or storage of toxic or otherwise hazardous materials; generate a significant fire hazard; impair fire department access to the school; or result in an increase in residential population in the area. The project would not negatively impact the ability of the Beaumont Fire Service to provide adequate service, because the existing high school is already under jurisdiction of the fire service. The new buildings would have automated sprinkler systems. Site plans would be submitted to the fire service for review of fire access and fire protection facilities prior to construction. The District would comply with the fire service's requirements for water flow, and access plans would be approved through the Division of the State Architect. It is anticipated that the fire service would continue to have sufficient manpower to serve the project area. The project would not negatively impact the ability of the Beaumont Fire Service to provide adequate fire service. Impacts would be less than significant.

### b) Police protection?

**Less Than Significant Impact.** The school is served by the Beaumont Police Department at 660 Orange Avenue. Police service needs are related to the size of the population and geographic area served, the numbers and types of calls for service, and other community characteristics. The project would not induce population growth; the increase in student seating would accommodate the growth already occurring in Beaumont. The project may cause a very slight increase in demands for police services during construction from possible trespass, theft, and/or vandalism. Active construction areas would be fenced, and the entire campus is currently fenced and would remain secured outside of work hours. Any increase in police demands would be temporary and would not require construction of new or expanded police facilities. General campus activities are under the supervision of the school administrators and staff. It is anticipated that the police department would continue to have sufficient manpower to serve the project site. The project would not create a significant increase in demand for police services. Impacts would be less than significant.

### c) Schools?

**No Impact.** School services are related to the size of the residential population, the geographic area served, and community characteristics. The project would not increase the population in the attendance boundary. The project would be a benefit to the students, staff, and the community by reducing overcrowding. No impact would occur.

### d) Parks?

**No Impact.** Impacts to public parks and recreational facilities are generally caused by population or employment growth. The project would not increase population or significantly increase employment. Therefore, physical impacts to parks and recreation from increased population growth would not occur. No impacts to parks would occur.

### e) Other public facilities?

**No Impact.** The project would not result in impacts associated with the provision of other new or physically altered public facilities (e.g., libraries, hospitals, childcare, teen or senior centers). Physical impacts to public services are usually associated with population in-migration and growth, which increase the demand for public

## 8. Impacts Found Not to Be Significant

services and facilities. The project would not result in population growth. Therefore, no impacts to other public facilities would occur.

### 8.13 RECREATION

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

**No Impact.** The project would not increase the use of existing neighborhood and regional parks or other recreational facilities. It would not increase population in the surrounding community. Therefore, it would not cause physical deterioration of neighborhood and regional parks or other recreational facilities. The project would not result in the need for construction of new recreational facilities. No impacts to parks would occur.

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

**No Impact.** The project includes reconfiguration of the athletic fields:

- 1 baseball and 2 softball practice fields would be turned so entry would be from one open courtyard.
- Track would be realigned around the perimeter of the fields.
- An open field would accommodate 2 soccer fields between the baseball and softball fields.
- 8 basketball courts and 8 tennis courts would be moved to south of the softball fields.

The environmental effects of the construction and operation are considered throughout the environmental analysis in this Initial Study. The project would not require the construction or expansion of additional recreational facilities, which could have an adverse effect on the environment. No impacts to recreational facilities would occur.

### 8.14 TRANSPORTATION

Would the project:

- a) **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

**Less than Significant Impact.** An analysis was conducted to evaluate the circulation system conflicts of the proposed project and to assess the proposed access system relative to visibility and vehicle queuing (stacking). The methodology for the study was to 1) establish the existing baseline conditions on the streets that provide access to the school, 2) project the future baseline traffic conditions for the anticipated opening of the expanded school, 3) estimate the amount of additional traffic that would be generated by the expanded school, 4) conduct a comparative analysis of circulation conditions with and without the proposed project, 5) evaluate the adequacy of the circulation system.. The analysis addresses the morning peak hour and the afternoon peak hour for school traffic.

## 8. Impacts Found Not to Be Significant

### Street Network

The streets that provide access to the school include Beaumont Avenue, Brookside Avenue, and Cherry Valley Boulevard.

Beaumont Avenue is a two-lane, north-south street that abuts the east side of the school campus. It has two lanes in the vicinity of the school and widens to four lanes south of the study area at Oak Valley Parkway. Beaumont Avenue has an interchange with Interstate 10 approximately three miles south of the school site. The speed limit on Beaumont Avenue ranges from 35 to 50 miles per hour.

Brookside Avenue is a two-lane, east-west street that abuts the south side of the school campus. The school's existing south access driveway is located on the north side of Brookside Avenue west of Beaumont Avenue. The speed limit on Brookside Avenue is 40 miles per hour.

Cherry Valley Boulevard is a two-lane, east-west street that abuts the north side of the school campus. The school's existing north access driveway is on the south side of Cherry Valley Boulevard west of Beaumont Avenue. The speed limit on Cherry Valley Boulevard is 45 miles per hour west of Beaumont Avenue and 40 miles per hour east of Beaumont Avenue.

### Project-Generated Traffic

The volumes of traffic that would be generated by the school expansion were determined to estimate the impacts of the project on the study area streets and intersections. The trip generation rates and the anticipated volumes of traffic that would be generated by the expanded school are shown in Table 8-2. The table shows the traffic volumes for the existing 2,990 students, for the expanded capacity for 5,244 students, and the net increase in traffic associated with the additional 2,254 students.

**Table 8-2 Project Generated Traffic**

| Land Use                                 | AM Peak Hour |       |     | PM Peak Hour |     |       | Daily Traffic |
|--|--------------|-------|-----|--------------|-----|-------|---------------|
|  | Total        | In    | Out | Total        | In  | Out   |               |
| Trip Generation Rates                    |              |       |     |              |     |       |               |
| High School (trips per student)          | 0.55         | 68%   | 32% | 0.33         | 32% | 68%   | 2.03          |
| Generated Traffic Volumes                |              |       |     |              |     |       |               |
| Existing High School<br>(2,990 students) | 1,644        | 1,118 | 526 | 987          | 316 | 671   | 6,070         |
| Expanded School<br>(5,244 students)      | 2,884        | 1,961 | 923 | 1,731        | 554 | 1,177 | 10,650        |
| Net Increase<br>(2,254 students)         | 1,240        | 843   | 397 | 744          | 238 | 506   | 4,580         |

### Motorized Transportation

The intersection of Cherry Valley Boulevard and the school's north driveway would not cause a significant increase in traffic because a new driveway would be provided on Cherry Valley Boulevard at the northwest corner of the school campus, approximately 200 feet west of the school's existing driveway on Cherry Valley Boulevard. A "No Left Turn" sign would be installed on westbound Cherry Valley Boulevard to prohibit left

## 8. Impacts Found Not to Be Significant

turns into the new driveway. This driveway would be an “inbound only” driveway and would only accommodate right turns into the school from eastbound Cherry Valley Boulevard. It was assumed that 50 percent of the traffic entering the school from eastbound Cherry Valley Boulevard would use the new driveway and that 50 percent of the traffic would use the existing signalized entrance at the north driveway.

The increase in traffic would affect the local intersections, including Beaumont Avenue/Cherry Valley Blvd, Cherry Valley Blvd/School’s North Driveway, Brookside Ave/School’s South Driveway, and Beaumont Avenue/Brookside Avenue by increasing the amount of time vehicles would wait at the light. However, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system.

### Nonmotorized Transportation and Transit

The proposed school expansion may increase nonmotorized transportation as some of the students and staff would travel to and from the school as pedestrians or on bicycles. The streets in the immediate vicinity of the school have sidewalks or trails along the side of the street adjacent to the school. The three signalized intersections in the study area are equipped with painted crosswalks and pedestrian crossing signals, and the intersection of Brookside Avenue and the school’s south driveway, which is a three-way stop, has painted crosswalks on Brookside Avenue and across the driveway.

Bike lanes are currently in place on Beaumont Avenue and Cherry Valley Boulevard in the project area, and the school has bike racks on the campus for use by students and staff. With regard to public transit, Beaumont Transit Services operates Route 3/4 on Beaumont Avenue and Cherry Valley Boulevard adjacent to the school site, and a bus shelter is currently in place on the south side of Cherry Valley Boulevard east of the school’s north driveway.

The proposed school expansion project would not adversely affect the performance or safety of any transit or nonmotorized transportation facilities (pedestrians and bicycles) and would not conflict with any adopted plans, policies, or programs relative to these alternative transportation modes. The existing school is consistent with such plans and policies—sidewalks/walking trails are in place along the streets abutting the campus, bike lanes are provided on the streets adjacent to the school, bike racks are provided on campus, and a bus route operates adjacent to the school site. These existing amenities would accommodate and increase pedestrian and bike and transit use in the school area. No impacts would occur.

#### **b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?**

**Less than Significant Impact.** With the California Natural Resources Agency’s certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by “level of service” and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA (Pub. Resources Code, § 21099, subd. (b)(3)). CEQA Guidelines § 15064.3(b) identifies four criteria for analyzing transportation impacts through vehicle miles traveled (VMT). The project is anticipated to result in increased student population on the project site.

## 8. Impacts Found Not to Be Significant

Schools are a local-serving land use and are identified as examples of potential mitigation measures and alternatives to reduce VMT.<sup>44</sup>

Based on a short, unofficial survey of school staff, the District estimates that about 15 percent of the high school students carpool. Additionally, some people drop off and pick up students as they travel to and from other destinations, such as work or shopping.

The attendance boundary for the high school includes most of Beaumont and parts of Banning, Calimesa, unincorporated Riverside and San Bernardino Counties. The new classroom buildings would accommodate an increase in students anticipated from new residential developments (estimated 11,440 units), including:

- **Beaumont:** Sundance (currently nearing buildout), Fairway Canyon SCPGA (Tract No. 31462, Tract No. 36558, and Tract No. 36783), Four Seasons (Tract No. 32260 & 33096), Heartland – Olivewood
- **Banning:** Atwell (previously known as Butterfield SP)
- **Calimesa:** Summerwind Ranch, 2,700-unit apartment complex (planning stage)

Because these developments and the students they generate are within the attendance boundary of the Beaumont USD, these student will attend Beaumont HS. The distance students travel to school will be the same with and without the proposed project. Without the project, students would be housed in portable buildings on campus. Therefore, the project would not increase VMT, and impacts would be less than significant.

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

**Less than Significant Impact.** The increased traffic, the increased number of pedestrians and bicyclists, and the increased number of vehicular turning movements at the school entrances and at the nearby intersections may result in an increased number of traffic conflicts and a corresponding increase in the probability of an accident. These impacts are not considered significant because the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity. There are no severe visibility constraints associated with curves or hills at the school's access driveways. The school is an established part of the neighborhood and is not a new land use. The proposed project would, therefore, be a compatible use in the area and would not substantially increase hazards due to any design features. Impacts would be less than significant.

### d) Result in inadequate emergency access?

**Less Than Significant Impact.** The existing and proposed access and circulation features at the school, including the on-site roadways, parking lots, and fire lanes, would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. Site access would be provided via the driveways on Cherry Valley Boulevard and Brookside Avenue. On-site emergency access lanes would be provided for access to the school buildings, and all access features will be subject to and must satisfy the design requirements

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<sup>44</sup> California Office of Planning and Research. Technical Advisory On Evaluating Transportation Impacts In CEQA.  
[https://opr.ca.gov/docs/20190122-743\\_Technical\\_Advisory.pdf](https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf)



## 8. Impacts Found Not to Be Significant

of the District, the City of Beaumont, and the California Division of the State Architect. The project would not, therefore, result in inadequate emergency access. Impacts would be less than significant.

### 8.15 TRIBAL CULTURAL RESOURCES

Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and requires meaningful consultation with California Native American tribes on potential impacts to tribal cultural resources, which are defined in PRC § 21074 as:

... sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources.

As part of the AB 52 process, Native American tribes must submit a written request to the District (lead agency) to be notified of projects within their traditionally and culturally affiliated area. The District must provide written, formal notification to those tribes within 14 days of deciding to undertake a project. The tribe must respond to the District within 30 days of receiving this notification if they want to engage in consultation on the project, and the District must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either 1) the parties agree to mitigation measures to avoid a significant effect on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached.

**a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

**i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code § 5020.1(k)<sup>45</sup>**

**No Impact.** The school and Athletic Complex are not old enough to be listed in the California Historical Resources, the National Register of Historic Places lists, or other local register of historical resources. The site does not contain any resources considered historically significant as defined by PRC § 15064.5. The project would not result in any substantial adverse change in a TCR defined pursuant to PRC §§ 5024.1 and 5020.1(k). No impacts would occur.

**ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource**

<sup>45</sup> Public Resources Code section 5020.1 (k) Local register of historical resources" means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.

## 8. Impacts Found Not to Be Significant

**Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

**No Impact.** The main campus is underlain by 15 to 25 feet of engineered artificial fill material. Project-related earthwork would not encounter native soils that have not been disturbed during construction of the school. Therefore, the project would not uncover previously unidentified TCRs.

Additionally, the District has not received any requests to be notified of projects from any tribes. No impacts to TRCs would result from the project pursuant to criteria in subdivision (c) of PRC § 5024.1.

### 8.16 UTILITIES AND SERVICE SYSTEMS

Would the project:

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

**Less Than Significant Impact.** The campus is in the city of Beaumont and is completely developed and using utilities. The project would serve existing and future students living in the region and would not increase the overall student population or utility demands in the District. Students will be attending school in the local area and use utilities even without the project. The new buildings would require electric power and natural gas but would be significantly more energy efficient than the other, older buildings on campus. The project would not require the relocation or construction of new water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities. Impacts would be less than significant.

- b) **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

**Less Than Significant Impact.** The Beaumont-Cherry Valley Water District provides water service to the school and Athletic Complex. The school project would serve existing and future students living in the BCVWD's 28-square-mile service area and would not increase the student population or utility demands in the District. Students will be attending this school and using water even without the project. Following project completion, the overall water demand for BCVWD would be reduced because about four acres of irrigated turf would be converted to hardscape: parking lot and tennis and basketball courts. Impacts would be less than significant.

- c) **Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

**Less Than Significant Impact.** The City of Beaumont is responsible for the collection and treatment of municipal wastewater through the Beaumont Wastewater Treatment Plant. The project includes construction of two new classroom buildings and additional students that would generate wastewater.

## 8. Impacts Found Not to Be Significant

The school project would serve existing and future students living in the Wastewater Treatment Plant service area and would not increase the student population or utility demands in area. Students will be attending this school and generating wastewater even without the project. Following project completion, the overall treatment demand for the plant would not significantly increase. Impacts would be less than significant.

### **d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

**Less Than Significant Impact.** The Lamb Canyon Landfill, El Sobrante Landfill, and the Badland Landfill, all operated by the Riverside County Waste Management District, are the three county landfills that currently serve the project area. Lamb Canyon Landfill is the primary landfill serving the high school campus and Athletic Complex.

Demolition of the athletic fields, hardscape, and portable buildings would generate demolition debris. The California Green Building Standards Code (CALGreen; 24 CCR Part 1, § 5.408.1.1) requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. The District would comply with these established standards. Therefore, demolition would not adversely impact landfill capacity.

The school project would not introduce a new landfill demand to the area served by Lamb Canyon Landfill. The project would serve existing and future students. Beaumont High School is the only high school in the district, and students in the area will attend this school with or without the project. Students are already generating solid waste in the school district. The project would not impair the attainment of solid waste reduction goals. Impacts would be less than significant.

### **e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

**Less Than Significant Impact.** The campus administrators and the District currently comply with federal, state, and local statutes and regulations related to solid waste, and will continue this practice. Section 5.408 of CALGreen requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. Construction of the project would adhere to these established standards. No impact would occur.

## 8.17 WILDFIRE

Wildland fire protection in California is the responsibility of either the local government, state, or the federal government. State responsibility areas (SRA) are the areas in the state where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The SRA forms one large area over 31 million acres to which the California Department of Forestry and Fire Protection (CAL FIRE) provides a basic level of wildland fire prevention and protection services.

Local responsibility areas (LRA) include incorporated cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and

## 8. Impacts Found Not to Be Significant

by CAL FIRE under contract to local government. Riverside County Fire Department, in cooperation with CAL FIRE, provides fire and emergency services to residents of unincorporated areas of Riverside County and to partner cities, including Beaumont and 20 other cities.<sup>46</sup>

CAL FIRE uses an extension of the SRA Fire Hazard Severity Zone model as the basis for evaluating fire hazard in LRAs. The local responsibility area hazard rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area. Fire hazard severity zones (FHSZ) are identified by moderate, high and very high in an SRA, and very high in an LRA.

In the LRA, the nearest FHSZ is about 0.75 mile northeast along Noble Creek. In the SRA, the nearest FHSZ is 0.75 mile northwest toward the San Geronio Mountain foothills.<sup>47</sup> Land between the edge of the nearest FHSZ and the school is primarily rural residential. The school is not in or adjacent to an SRA or lands classified as a high fire hazard severity zone.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

### a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

**Less than Significant Impact.** The emergency response plans and emergency evacuation plans in effect are through the County, the City, and the school district.

**County.** Under the Federal Disaster Mitigation Act of 2000, local governments in the United States, including counties, cities, and tribes, are required to prepare a local hazards mitigation plan as a condition of receiving federal disaster mitigation funds. This plan identifies the hazards that have occurred or may occur in the study area and provides mitigation strategies or action items designed to save lives and reduce the destruction of property.

Riverside County Emergency Management Department is involved in emergency responses; threat summaries and assessments; and procedures for responding agencies as well as County agencies that would be involved in coordinating and managing responses. The Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan identifies the county's hazards, reviews and assesses past disaster occurrences, estimates the probability of future occurrences, and sets goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards.<sup>48</sup>

**City.** The City of Beaumont Police Department's Office of Emergency Services (OES) provides emergency management services citywide, in cooperation with County agencies and special districts. During an active

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<sup>46</sup> Riverside County Fire Department Service Area. 2020. <http://www.rvcfire.org/ourDepartment/ServiceArea/Pages/default.aspx>

<sup>47</sup> California Department of Forestry and Fire Prevention (CAL FIRE). The Fire and Resource Assessment Program (FRAP). Very High Fire Hazard Severity Zones (FHSZ) in SRA and LRA. FHSZ Viewer. <http://egis.fire.ca.gov/FHSZ/> and Very High Fire Hazard Severity Zones (FHSZ) in Beaumont. <https://osfm.fire.ca.gov/media/5907/beaumont.pdf>

<sup>48</sup> County of Riverside. Multi-Jurisdictional Local Hazard Mitigation Plan July 2018. [https://www.rivcoemd.org/Portals/0/FINAL%20PUBLIC%20VERSION%20Riv\\_Co\\_%202018%20Multi%20Jurisdictional%20Local%20Hazard%20Mitigation%20Plan.pdf](https://www.rivcoemd.org/Portals/0/FINAL%20PUBLIC%20VERSION%20Riv_Co_%202018%20Multi%20Jurisdictional%20Local%20Hazard%20Mitigation%20Plan.pdf)

## 8. Impacts Found Not to Be Significant

incident such as a fire or flood requiring emergency sheltering, OES helps to facilitate the resources necessary for first responders to protect the community.<sup>49</sup>

**District.** California Education Code Section 32286 requires each school site to review and update its school safety plan, which must be developed and written by a School Site Council or its designated Safety Planning Committee in collaboration with teachers, classified staff, parents, and first responders to ensure they are up to date and complete. The plans must have policies and procedures addressing critical issues, including: disaster preparedness; crisis response; mental and physical health; earthquake emergencies; school learning environment; discipline, suspension, and/or expulsion; hate crime reporting; child abuse reporting; release of a pesticide or toxic substance; and more.<sup>50</sup>

Emergency preparedness and response planning and coordination is currently coordinated through the District's Risk Management Staff and Emergency Preparedness Team. The school has an emergency evacuation plan in compliance with the District's safe school plan.

Additionally, the District and the Beaumont Police Department work in partnership to address issues such as: crisis intervention, emergency preparedness, communications strategies, and collaborative training.

Project construction would not interfere with existing emergency response plans or emergency evacuation plans. When complete, the project would improve emergency access on campus by enhancing the vehicle circulation. Emergency response impact would be less than significant.

### **b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

**No Impact.** Wildland fire is an overarching term describing any nonstructure fire that occurs in vegetation and natural fuels. Wildland fire encompasses both prescribed fire and wildfire. A wildfire is an unplanned fire caused by lightning or other natural causes, by accidental (or arson-caused) human ignitions, or by an escaped prescribed fire.<sup>51</sup> Fire hazard severity zones in wildlands are determined based on the probability of burning; estimated flame sizes expected based on fuels, slope, and expected fire weather; and the amount of firebrands (embers) expected to land on the area.

The campus is in a predominantly rural residential area, and there is no wildland susceptible to wildfire on or adjacent the school. Furthermore, CAL FIRE does not classify any adjacent areas as a very high FHSZ. Project development would not place people or structures at risk from wildfire. No impact would occur.

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<sup>49</sup> City of Beaumont Police Department. Office of Emergency Services. 2020. <http://beaumontpd.org/oes/>

<sup>50</sup> California Department of Education (CDE). Memo from Tom Torlakson, State Superintendent of Public Instruction. February 24, 2016. <https://www.cde.ca.gov/nr/el/le/yr16ltr0224.asp>

<sup>51</sup> National Park Service. Wildland Fire Program. Wildfires, Prescribed Fires, and Fuels. April 2020. <https://www.nps.gov/orgs/1965/wildfires-prescribed-fires-fuels.htm>

## 8. Impacts Found Not to Be Significant

- c) **Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

**No Impact.** The campus improvements would not require the installation of new infrastructure that may exacerbate fire risk. No impact would occur.

- d) **Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

**No Impact.** The campus is surrounded by generally flat topography. There are no vegetated slopes susceptible to wildfire in the surrounding area. The project would not result in runoff, postfire slope instability, or significant drainage changes. No impact would occur.

## 9. Significant Irreversible Changes Due to the Proposed Project

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Section 15126.2(c) of the CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. In the case of the proposed school project, implementation would involve two new classroom buildings, parking and circulation improvements, and reconfiguration of the athletic fields.

The project would include construction of improvements and operation of two new buildings. Therefore, additional commitment of nonrenewable and/or slowly renewable energy resources, natural resources, and human resources would be necessary.

Nonrenewable and slowly renewable construction materials would include items like lumber and other forest products, aggregate materials used in concrete and asphalt, such as sand and stone; water; petrochemical construction materials such as plastic; petroleum-based construction materials; steel, copper, lead, other metals; and other similar resources.

The commitment of limited resources would also include fossil fuels and operational materials/resources, and the transportation of goods and people to and from the campus. The consumption of such resources would represent a long-term commitment of those resources; however, it would not be considered substantial.

## 9. Significant Irreversible Changes Due to the Proposed Project

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## 10. Growth-Inducing Impacts of the Proposed Project

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Pursuant to §§ 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?
- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

**Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?**

The proposed Beaumont High School Expansion consists of improvements and new classroom buildings at an existing school campus. The school is in a developed area served by existing infrastructure facilities, including water and sewer mains and electricity and natural gas and storm drains (see section 8.18, *Utilities and Service Systems*, in Chapter 8 of this Draft EIR). The improvements would only affect the existing school campus and would not require construction or extension of major infrastructure and would not remove obstacles to growth or affect population growth.

## 10. Growth-Inducing Impacts of the Proposed Project

### **Would this project result in the need to expand one or more public services to maintain desired levels of service?**

The project is not growth inducing. Compared to existing conditions, at full buildout the project would result in an increase of 1,364 seats, and at maximum enrollment, the project would result in an increase of 2,234 students. However, the project would not result in the need for additional public services (see section 8.14, *Public Services* in Chapter 8 of this Draft EIR).

### **Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?**

Construction of the proposed project would generate short-term construction employment, which would be absorbed from the regional labor force and would not attract new workers to the region. Operation of the project would result in a minor increase in total employment at the District—to accommodate the increase in student enrollment—that would also be absorbed from the regional labor force. Because the project would accommodate students from existing and future residential development, it would not result in other economic effects.

### **Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?**

The attendance boundary for the high school includes most of Beaumont and parts of Banning, Calimesa, and unincorporated Riverside County. The new classroom buildings would accommodate an increase in students anticipated from new residential developments, including four projects in Beaumont, one in Banning, and two in Calimesa. These developments would add a total of about 11,440 housing units, and the project is required to accommodate the anticipated increase in students from these housing units.

District approval of the proposed project would not set a precedent that could encourage and facilitate local and regional activities and government actions that could significantly affect the environment. School expansion and campus improvements are common statewide and nationwide.

# 11. List of Preparers

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Director of Facilities

## 11.2 CEQA CONSULTANT

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## 11. List of Preparers

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