Chico High School Athletic Fields Project

DRAFT INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

CHICO UNIFIED SCHOOL DISTRICT

Prepared for:

CHICO UNIFIED SCHOOL DISTRICT
1163 SEVENTH STREET
CHICO CA, 95928

Prepared by:

Michael Baker INTERNATIONAL

140 INDEPENDENCE CIRCLE, SUITE C
CHICO, CA 95973

APRIL 2017

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CHICO HIGH SCHOOL

ATHLETIC FIELDS PROJECT

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MICHAEL BAKER INTERNATIONAL
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1.0 Introduction

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is an Initial Study, with supporting environmental studies, which concludes that a Mitigated Negative Declaration is the appropriate California Environmental Quality Act (CEQA) document for the proposed Chico High School Athletic Fields Project (project, proposed project). This Mitigated Negative Declaration has been prepared in accordance with CEQA, Public Resources Code (PRC) Section 21000 et seq., and the State CEQA Guidelines, California Code of Regulations (CCR) Section 15000 et seq.

An initial study is conducted by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with CEQA Guidelines Section 15063, an environmental impact report (EIR) must be prepared if an initial study indicates that the proposed project under review may have a potentially significant impact on the environment which cannot be initially avoided or mitigated to a level that is less than significant. A negative declaration may be prepared if the lead agency also prepares a written statement describing the reasons why the proposed project would not have a significant effect on the environment and therefore why it does not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

a) The initial study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or

b) The initial study identifies potentially significant effects, but:

   (1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and

   (2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are adopted in the proposed project in accordance with CEQA Guidelines Section 15070(b), including the adoption of mitigation measures included in this document, a mitigated negative declaration is prepared.

1.2 LEAD AGENCY

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." Based on the criterion above, the Chico Unified School District is the lead agency for the proposed Chico High School Athletic Fields Project.

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed project. This document is divided into the following sections:

1.0 Introduction – This section provides an introduction and describes the purpose and organization of the document.

2.0 Project Information – This section provides general information regarding the proposed project, including the project title, lead agency and address, contact person, brief description of the project location, General Plan land use designation and zoning district, identification of surrounding land uses, and identification of other public agencies whose review, approval, and/or permits may be required. Also listed in this section is a checklist of the environmental factors are analyzed for their potential to be affected by the project.

3.0 Project Description – This section provides a detailed description of the proposed project.

4.0 Environmental Checklist – This section describes the environmental setting and overview for each of the environmental subject areas, and evaluates a range of impacts classified as "no impact," "less than significant impact," "less than significant impact with mitigation incorporated," and "potentially significant impact" in response to the environmental checklist.

5.0 References – This section identifies documents, websites, people, and other sources consulted during the preparation of this Initial Study.

1.4 EVALUATION OF ENVIRONMENTAL IMPACTS

Section 4.0, Environmental Checklist, is the analysis portion of this Initial Study. The section provides an evaluation of the potential environmental impacts of the project. Section 4.0 includes 19 environmental issue subsections, including CEQA Mandatory Findings of Significance. The environmental issue subsections, numbered 1 through 19, consist of the following:

1. Aesthetics
2. Agriculture and Forest Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Geology and Soils
7. Greenhouse Gases
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Land Use and Planning
11. Mineral Resources
12. Noise
13. Population and Housing
14. Public Services
15. Recreation
16. Transportation/Traffic
17. Tribal Cultural Resources
18. Utilities and Service Systems
19. Mandatory Findings of Significance

Each environmental issue subsection is organized in the following manner:

The **Overview** summarizes the existing conditions at the regional, subregional, and local levels, as appropriate, and identifies applicable plans and technical information for the particular issue area.

The **Checklist Discussion/Analysis** provides a detailed discussion of each of the environmental issue checklist questions. The level of significance for each topic is determined by considering the predicted magnitude of the impact. Four levels of impact significance are evaluated in this Initial Study:

No Impact: No project-related impact to the environment would occur with project development.

Less Than Significant Impact: The impact would not result in a substantial adverse change in the environment. This impact level does not require mitigation measures.

Less Than Significant Impact With Mitigation Incorporated: An impact that may have a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (CEQA Guidelines Section 15382). However, the incorporation of mitigation measures that are specified after analysis would reduce the project-related impact to a less than significant level.

Potentially Significant Impact: An impact that is potentially significant but for which mitigation measures cannot be immediately suggested or the effectiveness of potential mitigation measures cannot be determined with certainty, because more in-depth analysis of the issue and potential impact is needed. In such cases, an EIR is required.

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2.0 PROJECT INFORMATION

1. **Project title:** Chico High School Athletic Fields Project

2. **Lead agency name and address:** Chico Unified School District (CUSD)
1163 East Seventh Street
Chico, CA 95928

3. **Contact person and phone number:** Julia Kistle, Director of Facilities and Construction
(530) 891-3209

4. **Project location:** 901 Esplanade
Chico, CA 95926
Latitude 39°44'05"N, Longitude 121°50'49"W
(APN: 003-140-002)

5. **Project sponsor's name and address:** Chico Unified School District
1163 East Seventh Street
Chico, CA 95928

6. **General Plan designation:** PFS (Public Facilities and Services)

7. **Zoning:** PQ (Public/Quasi Public Facilities)

8. **Description of project:** The proposed project is a completion of the various components identified in the Chico High School Physical Education/Athletics Master Plan. The proposed project includes the following primary elements:

Phase I: Stadium and Amenities

- Field and spectator lighting
- Electronic scoreboard
- Bleachers - aluminum I-beam construction (seating for approximately 3,300 home/495 visitor)
- Press box - 240 square feet
- Welcoming entry building: tickets, concessions, and restrooms - approximately 1,500 square feet
- Electrical service building
- A foul ball screen between the southern baseball field and track

Future Phase: Baseball and Softball Fields

- Reconfiguration of the softball fields
- Field lighting for softball and baseball fields and flexible field space
- Natural grass or All-Weather Fields
- Covered dugouts
- Fencing, including removable outfield fencing that will allow PE use of the outfield grass
- Batting cages, including power
- Access to restrooms/drinking fountains

- Equivalent spectator seating (picnic tables, bleachers, etc.).

Future Phase: Soccer Field and Tennis Courts

- Soccer field lighting
- All weather field 70 yards x 116 yards
- Maintenance building - 400 square feet

Future Phase: Stadium

- Classroom space / team rooms - 13,000 square feet
- Storage facilities - approximately 4,500 square feet

9. Surrounding land uses and setting: The campus is surrounded by an older, predominantly single-family residential neighborhood, with the exception of the area south of the sports field, which includes a number of student housing buildings and the Student Health Center for California State University, Chico. In addition, Chico State's athletic fields including Nettleton Stadium (baseball), the Chico state stadium (track and field), three soccer fields, tennis courts, and a softball field are all located within 0.1 miles to the west of the project site.

10. Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

State of California

- California Department of General Services, Division of the State Architect – Building permits
- California Department of Education, School Facilities Planning Division – Project plan approval

Regional Agencies

- Central Valley Regional Water Quality Control Board – NPDES permit
- Butte County Air Quality Management District

11. Environmental factors potentially affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "potentially significant impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forest Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology and Soils
☐	Greenhouse Gases	☐	Hazards and Hazardous Materials	☐	Hydrology and Water Quality
☐	Land Use and Planning	☐	Mineral Resources	☐	Noise
☐	Population and Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Tribal Cultural Resources	☐	Utilities and Service Systems
☐	Mandatory Findings of Significance				

12. Determination: (to be completed by the lead agency)

On the basis of this initial evaluation:

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

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

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

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

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

Signature	Date
Julia M. Kistle Printed Name	Chico Unified School District Lead Agency
Director of Facilities and Construction Title	

3.0 Project Description

3.1 PROJECT LOCATION

The Chico High School (CHS) campus is located at 901 Esplanade in the City of Chico (see **Figure 3.0-1, Regional Vicinity)**. The CHS campus is bounded by The Esplanade to the east, W. Sacramento Avenue to the north, W. Lincoln Avenue and Legion Avenue to the south, and Warner Street to the west. The L-shaped campus is one block north of the Bidwell Mansion State Historic Park and adjacent to portions of the California State University, Chico (Chico State) facilities. The CHS campus is approximately 1 mile west of State Route (SR) 99, the only major highway in the greater Chico area.

3.2 EXISTING USE AND CONDITIONS

The proposed project site is located in central Chico in a highly urbanized and densely built-out portion of the city on fairly level topography (see **Figure 3.0-2, Aerial View**). The CHS campus (39 acres) is currently occupied by approximately 248,454 square feet of building space. The campus is composed of 16 large buildings, 25 portable classrooms, and various smaller buildings that accommodate classroom, administration, gymnasium, library, theater, fitness lab, and storage uses. The campus also has five parking lots, a sports field, two baseball and two softball fields, a soccer field, and basketball and tennis courts, as well as a number of lawn areas with large mature trees. See **Figure 3.0-3, Existing Site** for an illustration of the existing CHS campus.

The main entry to the CHS campus is located on The Esplanade between W. Sacramento Avenue and W. Lincoln Avenue. The main student drop-off/pickup area is located on The Esplanade frontage street and is not directly located on The Esplanade. Additional vehicular and pedestrian entry points are available from W. Sacramento Avenue and W. Lincoln Avenue.

The CHS campus is surrounded by an older, predominantly single-family residential neighborhood, with the exception of the area south of the sport field, which includes a number of student housing buildings and the Chico State Student Health Center. Additionally, Chico State's athletic fields including Nettleton Stadium (baseball), the Chico state stadium (track and field), three soccer fields, tennis courts, and a softball field are all located within 0.1 miles to the west of the project site.

3.3 PROJECT CHARACTERISTICS

The proposed project is a completion of the various components identified in the Chico High School Physical Education/Athletics Master Plan, which was approved in 2014 by the Board of Education of the Chico Unified School District. Some of the projects listed in the Master Plan have been completed and are not a part of this CEQA analysis. No changes to existing campus buildings or parking areas are proposed for this project. While the CHS campus is approximately 39 acres in size, the proposed project site comprises only approximately 19.5 acres. The proposed project includes the following primary elements (see **Figure 3.0-4, Proposed Project Site Plan**):

Phase I: Stadium and Amenities

- Field and spectator lighting
- Electronic scoreboard
- Bleachers - aluminum I-beam construction (seating for approximately 3,300 home/495 visitor)
- Press box - 240 square feet
- Welcoming entry building: tickets, concessions, and restrooms - approximately 1,500 square feet

- Electrical service building
- A foul ball screen between the southern baseball field and track

Future Phase: Baseball and Softball Fields

- Reconfiguration of the softball fields
- Field lighting for softball and baseball fields and flexible field space
- Natural grass or All-Weather Fields
- Covered dugouts
- Fencing, including removable outfield fencing that will allow physical education (PE) use of the outfield grass
- Batting cages, including power
- Access to restrooms/drinking fountains
- Equivalent spectator seating (picnic tables, bleachers, etc.)

Future Phase: Soccer Field and Tennis Courts

- Soccer field lighting
- All weather field 70 yards by 116 yards
- Maintenance building - 400 square feet

Future Phase: Stadium

- Classroom space / team rooms - 13,000 square feet
- Storage facilities - approximately 4,500 square feet

An additional soccer field would be located between the existing student parking lot at the corner of W. Sacramento Avenue and Warner Street and the existing softball fields. Additionally, the existing shot-put facilities would be moved to the northwest of the stadium field.

CONSTRUCTION TIMING

Phase I

Those elements listed under Phase I are expected to begin construction in late summer 2017 and be completed by the end of November 2017. Completion of the stadium's field lighting, scoreboard, bleachers/press box, and entry building will occur during this time period. All of these components would have minimal ground-disturbing activities, other than installation of footings for the light poles, scoreboard, bleachers/press box, and the modular entry building, and trenching to provide electricity, water, and sanitary sewers for restroom and concession facilities. Placement of the stadium bleachers would also require the removal of the trees lining Warner Street adjacent to the stadium. However, these trees will be replaced per PG&E guidelines for landscaping near power lines requiring a low growth type of tree.

Future Phase

Construction of those elements listed under Future Phase are dependent on the availability of funding and, at this time, no start of construction has been determined. It is anticipated that construction of the Future Phase components will not start until 2018 or later.

FIELD USE

CHS has never had lights for the sports fields; as such, it is not possible to identify the use of the fields at night for sporting events or practices using historical data from CHS. However, information

is available from Pleasant Valley High School (PVHS), which does have lights as well as evening practices and games. It is anticipated that CHS will have a similar field use schedule. This past year at PVHS, the lights were used five days a week. Fall sports rotated in the evenings between field hockey and football practices; in addition, the PVHS band practiced on Monday nights. Cheer practiced on Tuesdays and Thursday nights after freshman football games. During soccer season, the male and female teams split time on the field in the evenings. This spring (2017), PVHS has lacrosse, rugby, Chico Cal (club soccer), and sometimes Butte United (club soccer) that play during the evenings. PVHS currently hosts approximately four events that require evening lights during the spring and summer, which include graduation and athletic events.

At CHS, with the addition of field lighting, the following field uses are anticipated: fall teams will practice later, especially with daylight savings. Both football and field hockey will use the stadium field. In the winter, both the female and male soccer teams will have later practices as well as have matches at night. The Chico Junior Panthers Pop Warner teams practice at CHS, but have not been authorized to use the field at night where lights would be required. In addition, it is anticipated that Invitational, League/Sectional track meets would occur from March through June.

TABLE 3.0-1
CHICO HIGH SCHOOL SPORTS SCHEDULE

SPORT	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Field Hockey		Games										
Boys Soccer				▨	Games							
Girls Soccer				▨	Games							
Fresh/Soph Girls Soccer							Games					
Track									Invitational, League/Section meets			
Football	▨	Games										

Notes: ▨ = Practice

ANTICIPATED SPORTING EVENT ATTENDANCE

Implementation of the proposed project would allow for games and track meets to occur during the evening hours. Lighting of the stadium, baseball, softball, and soccer fields would increase the use of those facilities. While spectator counts for these sports always vary by opponent and sport, estimates of the anticipated spectators for the various events, based on past CHS game experience, is provided below.

- 1,900 spectators for varsity football games
- 300 spectators for male and female soccer games
- 150 spectators for baseball games
- 150 spectators for field hockey games
- 75 spectators for softball games

As shown, varsity football is the highest patronized sporting event for CHS and therefore represents the greatest potential for impacts to the physical environment during the operation of the proposed project. CHS currently plays all of its night football games at PVHS because it has lighted facilities. Ticket sales from the 2016/17 season show that the average attendance is approximately 1,900 persons. During the upcoming 2017/18 football season, CHS will play home varsity football

games six times between late August and early November, all occurring on Friday nights. Starting times are at 7:30 p.m. and are generally over by 10:30 p.m. Lights would be turned off no later than 11:00 p.m.

FIELD USE GROWTH ESTIMATE

CEQA requires an analysis of how and to what extent a proposed project would impact the existing physical environment. As discussed in CEQA Guidelines Section 15064(d):

> "In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project."

As a part of this analysis, the identification of the site's uses and existing conditions is used as a baseline to determine how the proposed project would result in a change to this condition. Existing uses for the playing fields include the use of these fields for school athletic classes during the school day as well as after-school extracurricular activities such as football and baseball practice. The proposed project would not change these practices, although new team rooms might make it more accommodating. While components of the proposed project, including the construction of a classroom/team rooms building, welcoming entry building, storage facilities, etc., would result in short-term construction impacts, these facilities would not be the cause of substantial increased operational use of the athletic facilities. The main difference between the current operational condition of the athletic fields and the proposed project would be the ability to use the fields at night, which is currently not possible, and the addition of permanent seating at the stadium. As such, the main effect of the proposed project would be the addition of field lighting and increased seating at the stadium.

In order to determine the effect that stadium lighting and seating would have on the surrounding area, an estimate of increased use over existing conditions is necessary. While other sporting events, such as baseball, softball, and soccer games would also draw spectators, the attendance at these games is considerably less than those of the varsity football games. Additionally, while the stadium is slated to have a total seating capacity of 3,795, historical attendance data indicates that this seating capacity would only be possibly reached during graduation ceremonies and possibly varsity football games between CHS and PVHS. Graduation ceremonies would only occur once per year, and a CHS home game with PVHS would only occur once every two years. Because of these limited occurrences, these attendance factors are not considered in this Initial Study as they do not represent a frequent use factor for the proposed project.

As the varsity football games represent the highest attendance for sporting events at the school, the average attendance factor of 1,900 spectators plus 100 persons for coaches, players, and cheerleaders will be used for determining the potential for impacts to the physical environment with implementation of the proposed project during project operation. In other words, at the project site, the most lighting, traffic, noise, air quality and greenhouse gas emissions, water use, and trash would occur during a nighttime varsity football game.

The construction of the various new facilities proposed as part of the project are also considered in this Initial Study. However, potential environmental affects resulting from these construction activities, are generally short term and only last as long as construction of the project.

FIGURE 3.0-1
Regional Vicinity

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FIGURE 3.0-2
Project Location

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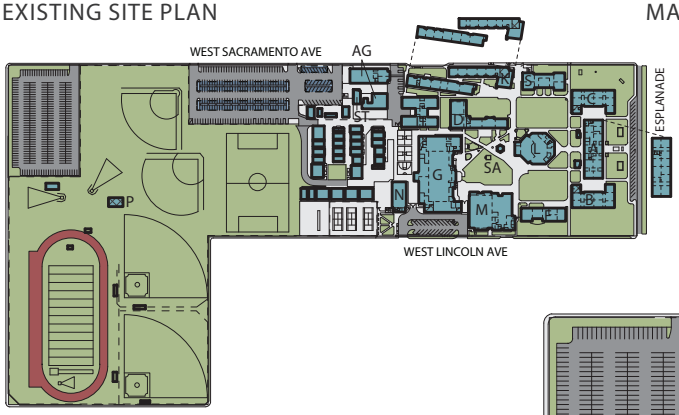
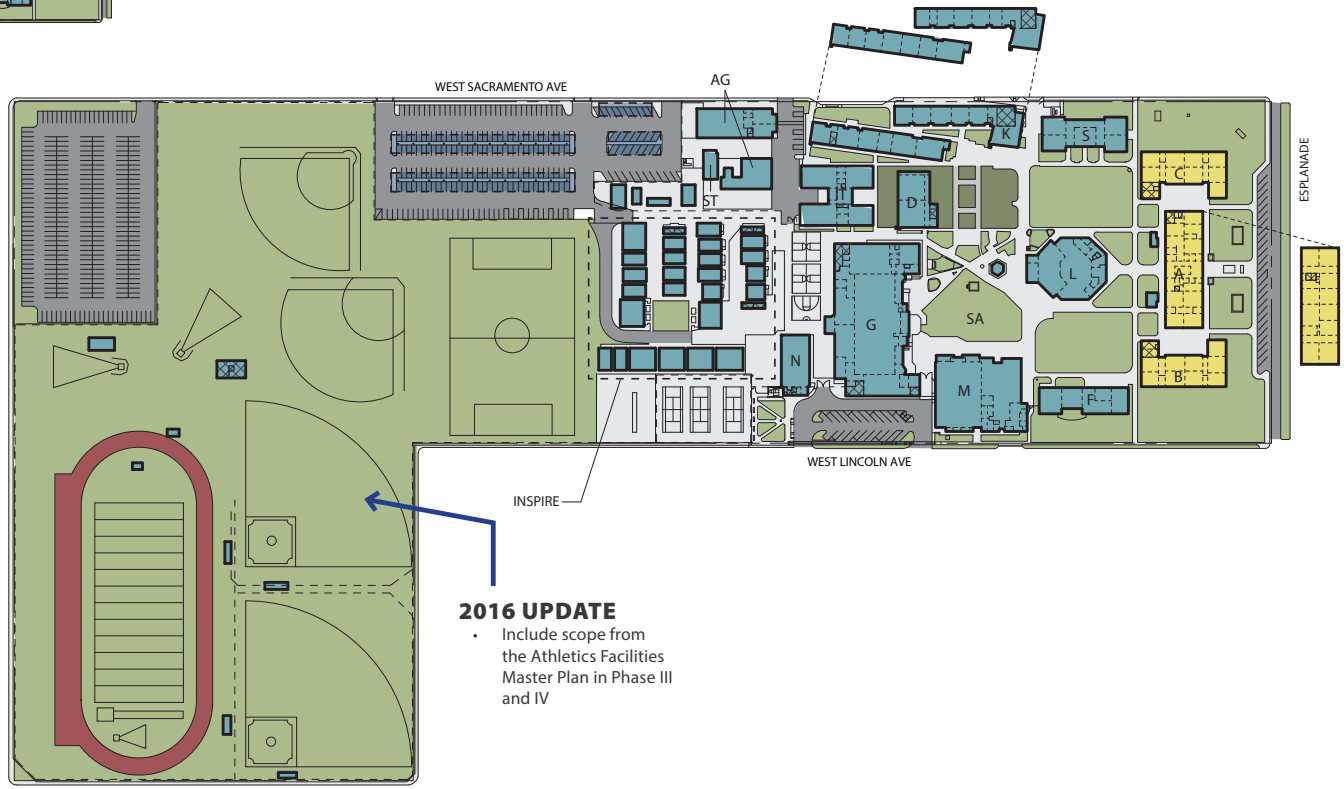
EXISTING SITE PLAN



MASTER SITE PLAN



LEGEND

- Existing Building
- Existing Concrete
- Existing Paving
- Existing Playground Area
- Existing Turf/Planter/Field
- Existing Shade Structure
- Restrooms
- New Building
- Building Modernization
- Building Renovation
- Building Addition
- New Concrete
- New Paving
- New Playground Area
- New Turf/Planter/Field
- Solar and/or Shade Structure
- Future Phase - Beyond FMP

BUILDING DESIGNATIONS

Existing

A	Administration & Classrooms
AG	Classrooms (Agriculture)
B	Classrooms
C	Classrooms
D	Classrooms (Music)
F	Classrooms (Art)
G	Gym & Locker Rooms
H	Classrooms (Home Ec.)
IT	Industrial Technology
J	Classrooms
K	Classrooms
L	Library & Theater Classrooms
M	Lincoln Hall
N	Fitness Lab
P	Restroom
S	Classrooms
SA	Associated Students Building
ST	Storage

Phase VI

A	Administration & Classroom Modernization
B	Classroom Modernization
C	Classroom Modernization

(Athletic Fields to be developed separately)

Source: CUSD, 2016

0 200 400
FEET

FIGURE 3.0-3
Existing Site Plan

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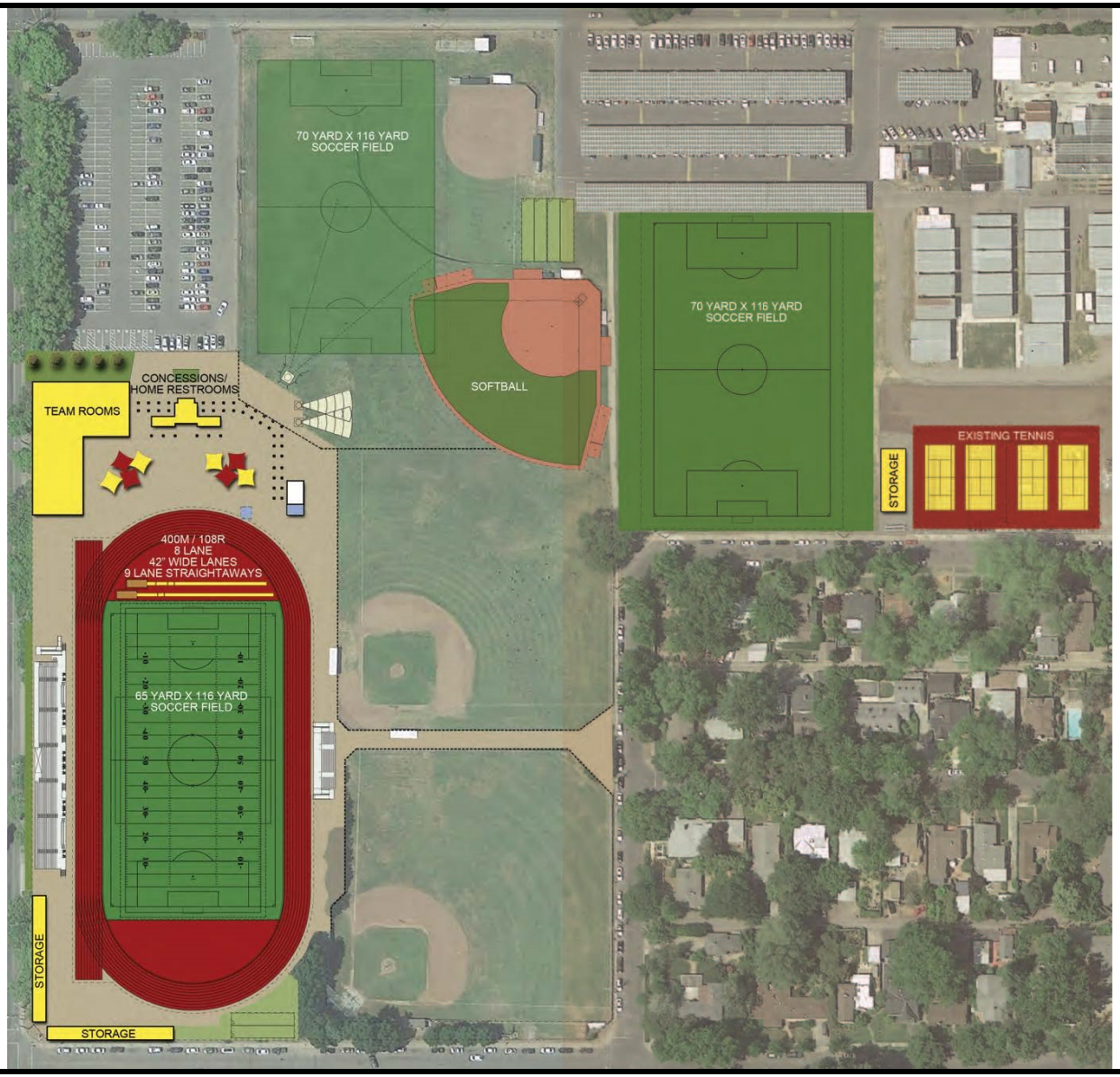

Source: CUSD, 2016

Not To Scale

FIGURE 3.0-4
Proposed Project Site Plan

Michael Baker
INTERNATIONAL

3.4 REQUIRED PERMITS AND APPROVALS

LEAD AGENCY APPROVAL

CUSD is the lead agency for the proposed project. In order to approve the proposed project, the CUSD Board of Education (Board) must first adopt the IS/MND, approve the proposed project, and file a Notice of Determination (NOD) within five working days. The Board will consider the information contained in the IS/MND in making its decision to approve or deny the proposed project. The IS/MND is intended to disclose to the public the proposed project's details, analyses of the proposed project's potential environment impacts, and identification of feasible mitigation that will reduce potentially significant impacts to less than significant levels.

Other agency approvals include:

- Construction general permit from the State Water Resources Control Board (SWRCB)
- Project plan approval from the California Department of Education, School Facilities Planning Division
- Building permits from the California Department of General Services, Division of the State Architect

3.5 RELATIONSHIP OF PROJECT TO OTHER PLANS AND PROJECTS

CITY OF CHICO GENERAL PLAN

The City of Chico General Plan is the primary document governing land use development in the city. The General Plan was last adopted in April 2011.

The City's General Plan includes numerous goals and policies pertaining to sustainability; land use; circulation; community design; downtown; economic development; housing; parks, public facilities, and services; open space and environment; cultural resources and historic preservation; safety; and noise. Public schools in the state of California are considered state property and are therefore not subject to the local jurisdiction's General Plan. However, as a matter of practice, CUSD abides by the Chico General Plan goals and policies in the development and implementation of new projects within the district's facilities.

CHICO UNIFIED SCHOOL DISTRICT FACILITIES MASTER PLAN

The purpose of the Chico Unified School District Facilities Master Plan is to provide a fact-based, data-driven report for CUSD staff and the CUSD Board to make decisions related to CUSD educational facilities that best serve the needs of all present and future students. The Facilities Master Plan guides the CUSD in constructing new facilities; evaluating existing facilities and programs by site, age, and type; and integrating student enrollments in the decision-making processes for current, planned, and future facilities. The Facilities Master Plan was approved on April 14, 2014, and updated in 2016.

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4.0 ENVIRONMENTAL CHECKLIST

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

OVERVIEW

The project site is located within the urbanized area of Chico. The construction and site improvements would occur completely on the existing Chico High School (CHS) campus. The L-shaped campus is bordered by W. Sacramento Avenue on the north, The Esplanade on the east, W. Lincoln Avenue and Legion Avenue on the south, and Warner Street on the west. All of the proposed project's improvements would occur on the western half of the campus.

The campus is one block north of the Bidwell Mansion State Historic Park and adjacent to or three blocks north of the Chico State facilities. The campus is approximately 1 mile west of SR 99, the only major highway in the greater Chico area. The CHS campus is located in a highly urbanized area on fairly level topography. The campus is surrounded by an older, predominantly single-family residential neighborhood, with the exception of the area south of the football field, which includes a number of student housing buildings and the Chico State Student Health Center. See **Figure 3.0-3, Existing Site,** for an illustration of the existing CHS campus.

The proposed project site is a 19.5-acre area within the larger 39-acre CHS campus and contains the school's athletic fields and courts, including a football field, two baseball and two softball fields, a soccer field, and basketball and tennis courts.

Views available from the project site and vicinity include those found in a fully developed dense urban setting, mainly roadways and urban development. The City of Chico General Plan Environmental Impact Report (2010) identifies scenic vistas in the Chico area, including views of the transition between landscapes (Sierra Nevada foothills to the east and the Central Valley to the west), the agricultural landscape, the foothills and rising elevations to the east of Chico, the major creeks, and Bidwell Park. These scenic vistas are not visible from the project site or from residential areas adjoining the campus.

The Chico General Plan (2011) has many policies and actions that address visual quality and urban design. However, because CHS is a state-owned facility, as are all public schools in California, the construction and operation of the proposed project would not be subject to the policies outlined

in the General Plan. Nor does the proposed project require the approval of the Chico City Council or Planning Commission to implement the project.

There are no officially designated state scenic highways within the Chico area or Butte County. SR 70 north of Oroville to the county line is an eligible scenic highway but it has not been officially designated as such at this time.

DISCUSSION OF IMPACTS

a) *No Impact*. Scenic vistas include natural features such as topography, watercourses, rock outcrops, natural vegetation, and man-made alterations to the landscape. The project site is fully developed and consists of a high school campus. The project's surrounding vicinity is urban and is fully developed with residential and Chico State uses. While the City of Chico identifies views of the transition between landscapes (Sierra Nevada foothills to the east and the Central Valley to the west), the agricultural landscape, the foothills and rising elevations to the east of Chico, the major creeks, and Bidwell Park as scenic resources, with the exception of distant mountain views, views of these scenic resources cannot be seen from the site due to intervening buildings.

   The project site does not contain unique visual features that would distinguish it from surrounding areas, nor is it located within a designated scenic vista. While the project would construct four banks of stadium field lighting, the proposed project is not considered an impediment to scenic vistas as no formal scenic vistas are identified in the area. Furthermore, distant views of the mountains would not be blocked by the field lighting monopoles during the day as the light banks would be at such height as to not block views. As such, the project would have no impact on scenic vistas.

b) *No Impact*. The project would be located on a developed high school campus. No state scenic highways are in the area. Therefore, the project would have no impact on scenic resources within a state scenic highway.

c) *Less Than Significant Impact*. The proposed project site is a developed high school campus, with all construction taking place within the 19.5-acre athletic field and track area at the west end of the school campus. The addition of stadium bleachers, field lighting, a stadium entry building, covered dugouts, baseball and softball spectator seating, and team rooms would not change the overall visual character of the site because the site is used for athletic events currently. The additional amenities would provide for a more comfortable experience for spectators and athletes alike. The proposed improvements are what is typically found at a high school. No improvements are proposed that would be uncharacteristic of uses found at a typical high school. The project site would continue to be used as it is currently and would not result in a substantial degradation of the site.

   The project proposes no changes to the area surrounding the project site. All proposed changes would occur on the site. The project would not substantially degrade the existing character surrounding the site as no change in character to these areas would occur with implementation of the project.

   Implementation of the proposed project would not detract from the visual character of the site, as these improvements would be consistent with the existing uses currently on the project site and are consistent with characteristics found at a high school.

Construction activities associated with the project have the potential to cause temporary changes in the existing visual features at the site, which would be visible to residents living close to the school site and school staff and students. These changes would include the presence of construction equipment, materials storage, vegetation (landscape and turf) removal, and exposed soil during site preparation. However, such activities are temporary and would cease with completion of these activities. Due to the temporary nature of this impact, this impact is considered less than significant.

d) *Less Than Significant Impact with Mitigation Incorporated*. Individuals have a range of reactions to the perceived effects of lighting on the environment. As such, whether light is obtrusive is generally based on perception, but is also a function of the actual amount of light emitted from a source. The following are examples of light levels, expressed in foot-candles:[1]

- Direct sunlight - 10,000
- Full daylight - 1,000
- Twilight - 1
- Full moon - 0.1
- Covered parking lot - 5
- Gas station canopy - 12.5
- Department store - 40
- Grocery store - 50

Source: Engineering Toolbox, n.d.; Energy Trust of Oregon 2013.

Typical nighttime street lighting requirements are 1- to 3 foot-candles, which is considered to be unobtrusive. Glare created by sports-lighting systems can be measured for impairment of view. A typical example of glare effects is the car headlight. When viewed directly in front of a vehicle with the headlights on full beam, vision is impaired, resulting in disabling glare. However, when viewed from the side, the same headlights would not impair vision.

Spill Light—Spill light or light trespass is the light that illuminates surfaces beyond the property line. Typically, spill lighting is from a more horizontal source such as streetlights and way-finding/security lighting than sky glow, which emanates from a more vertical source into the atmosphere. Spill light can be accurately calculated and the effects of spill light can be measured for general understanding and comparison. However, light that is considered to be obtrusive is a subject of debate. A spill light impact is generally considered significant if the increase in spill lighting would exceed 1 foot-candle at the property line of the nearest sensitive receptor, sky glow is perceptibly increased, or glare is at a level such that it impairs vision.

Sky Glow—Sky glow is the light that illuminates the sky above the horizon and reflects off of moisture and other tiny particles in the atmosphere. Sky glow would be considered a significant impact if it were a permanent addition to the environment. Additionally, in the case of the proposed project, a significant impact could occur if the proposed field lighting were

[1] Foot-candle (fc): A unit of measure of the intensity of light falling on a surface, equal to one lumen per square foot and originally defined with reference to a standardized candle burning at one foot from a given surface. One fc = 0.01609696 watts.

uncontrolled and would significantly increase sky glow. Control features are available on the light sources to reduce sky glow and glare from nighttime lighting. These control features direct light downward, thereby reducing the spill of light that causes sky glow, and reducing glare.

Due to the urbanized nature of the surrounding area, a significant amount of ambient nighttime light currently exists, reducing the views of stars and affecting views of the nighttime sky. Streetlights provide the majority of light along the streets that surround the campus; security and parking lot lighting on campus, as well as at surrounding residential uses, also contribute to nighttime lighting conditions. These lighting features are not considered substantial sources of nighttime illumination and are required by the City of Chico for minimum lighting.

Glare—Glare can be described as direct or reflected light, which can then result in discomfort or disability. A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

Lighting Analysis

No new light or glare sources visible beyond the project site would be introduced during construction of the proposed project. All construction work would be performed during normal daylight construction hours, thereby eliminating any need for temporary light sources necessary for nighttime work.

As discussed in Section 3.0, the proposed project involves the installation and operation of field and spectator lighting for the football stadium to occur by the end of November 2017. In addition, future phases anticipate the installation of lighting for the baseball and softball fields. As a part of the stadium field lighting portion of the project, an illumination analysis was completed by Musco Lighting (Musco 2017). This analysis used a typical lighting system for a high school football stadium which included four 90-foot monopoles. The lighting specifics are as follows:

Pole Number	Pole Height	Fixture Height	Fixture Qty	Load	Lighting Area
1 and 2	90 feet	90 ft	11	12.65 kW	Field
(east side – lights		25 ft	1	1.15 kW	Field
facing west)		70 ft	1	0.40 kW	Egress
3 and 4	90 feet	90 ft	11	12.65 kW	Field
(west side – lights		25 ft	1	1.15 kW	Field
facing east)		70 ft	2	0.80 kW	Egress

The new light poles would provide an average of 50 foot-candles across the athletic field and 17.4 foot-candles for the track area. The design of the proposed field lighting was selected in order to minimize spill light onto adjacent uses.

Figure 4.1-1, **Illumination Summary**, shows the locations of the four light poles and illumination characteristics for the proposed stadium field lighting, and locations where spill lighting would occur off-site. As shown, light from the field lighting would spill off-site onto two front yards on Warner Street, the parking lot for the CSUC Student Health Center, a small portion of Whitney Hall, and the front of Sutter Hall. As shown, the light would not penetrate into any homes on Warner Street or the surrounding area. Stadium lighting would not affect the portion of Whitney Hall that is within the light envelope, as this building has no windows on that portion of the building. As shown in **Figure 4.1-1**, the entire front of Sutter Hall North would be within the light

envelope. The first floor of Sutter Hall is mainly the dining center, and light from the CHS stadium would not affect an already lighted area. However, the stadium lights may penetrate into the Sutter Hall student housing windows along Legion Avenue. While this may be of some concern, CHS stadium lighting is required to be shut off by 11:00 p.m. by the CUSD. This and the limited number of nights the stadium would be used (six times for football between August and December and four times for soccer between December and March) would confine lighting impacts from that stadium to a very small time period. As such, lighting impacts for the stadium lights would be less than significant.

The lighting specifications for future lights at the baseball, softball, and soccer fields have not been determined at this time because of the unknown status of when these facilities may be constructed. As such, the potential to impact surrounding uses with this lighting cannot be determined. However, as with the stadium lighting, baseball, softball, and soccer field lighting can be designed to limit the amount of off-site light spill. To ensure that this will be achieved, mitigation measure **MM 4.1.1** has been included in this document. Incorporation of this mitigation measure would reduce lighting impacts for the baseball, softball, and soccer field lights to a less than significant level.

The illumination analysis also includes a glare impact illustration. **Figure 4.1-2, Glare Analysis**, illustrates the glare characteristics for the proposed stadium field lighting. Significant glare is considered to be from 25,000 to 75,000 candelas.[2] As shown on this figure, glare from the proposed stadium lights is possible on the properties west of the stadium and on Whitney and Sutter Halls south of the stadium. However, this glare is 5,000 candelas or less and therefore is less than the significant glare threshold of 25, 000 to 75,000 candelas and as such would not result in discomfort or disability. As such the proposed project would be a less than significant impact with regard to glare.

As with light spill, glare potential for the future baseball, softball, and soccer field lighting has not been determined at this time. As such, the potential for glare impacts to surrounding uses cannot be determined. However, this field lighting can be designed to limit the amount of off-site light glare. To ensure that this will be achieved, mitigation measure **MM 4.1.1** has been included in this document. Incorporation of this mitigation measure would reduce glare impacts for the baseball, softball, and soccer field lights to a less than significant level.

The proposed project would include use of the athletic field after dark. Although the athletic field is permitted for use until 11:00 p.m., in the event that the field is not being utilized the entire duration, the lights will be promptly shut off. By restricting the number of nighttime hours that the athletic field lighting is operational and because the field would not be a permanent or frequent source of nighttime illumination, the potential contribution to sky glow in the area is reduced. Therefore, as the proposed athletic field lighting will be heavily controlled (via directional, addition of visors, hours of operation), the proposed project will result in a less than significant sky glow impact.

MITIGATION MEASURES

MM 4.1.1 All new baseball, softball, and soccer field lighting fixtures shall be designed, located, installed, aimed downward or toward structures, and maintained in good order to prevent glare, light trespass, and light pollution off-site. Lighting fixtures shall be mounted, aimed, and shielded so that their beams fall within the primary

[2] A common candle emits light with a luminous intensity of roughly one candela.

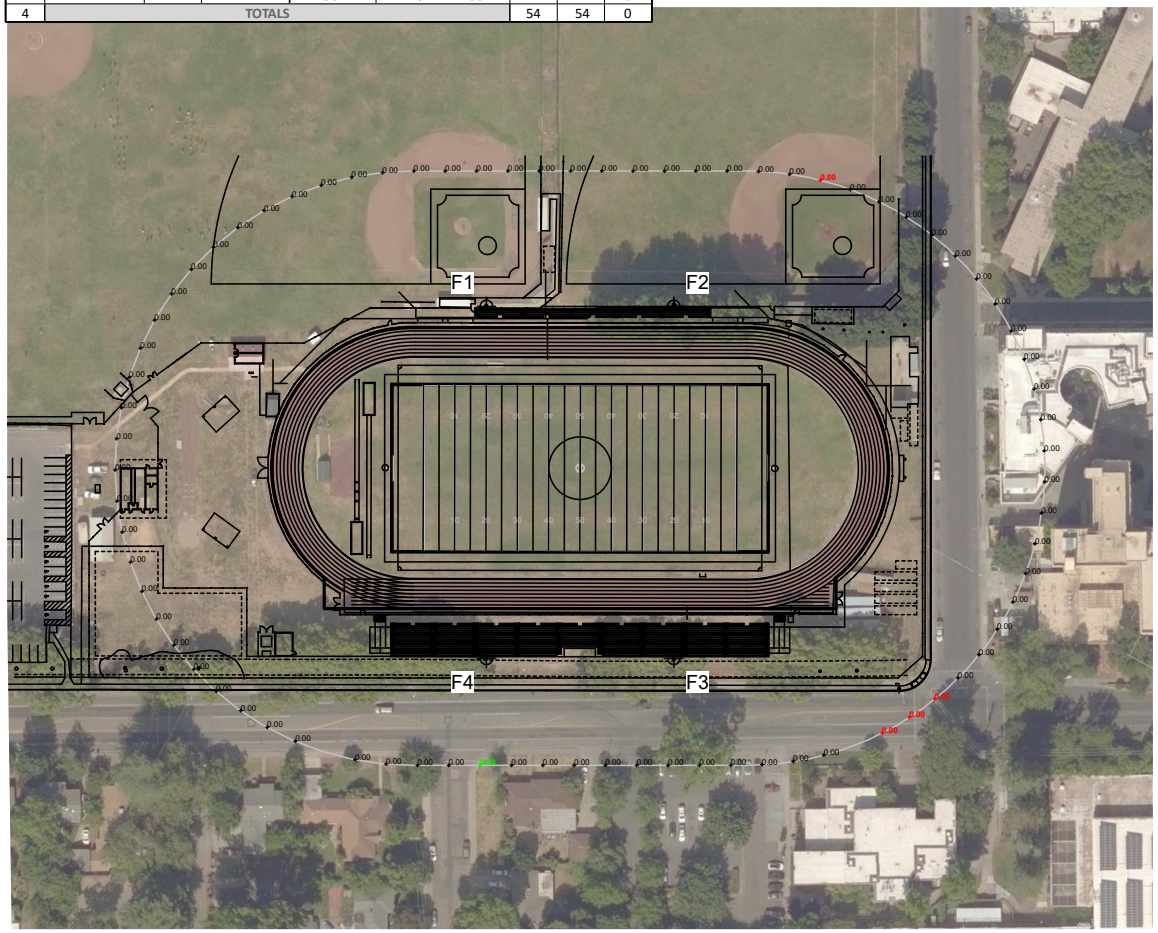
playing area and their immediate surroundings, and shall not exceed 1 foot-candle at the property line of the nearest sensitive receptor. The sports lighting shall be turned off as soon as possible following the end of the event when players and spectators are leaving the field. Where feasible, a low-level lighting system shall be used to facilitate spectators leaving the facility, cleanup, nighttime maintenance, and other closing activities.

Timing/Implementation: *As part of field lighting design*

Enforcement/Monitoring: *Chico Unified School District*

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	90'	-	70'	TLC-LED-400	1	1	0
				25'	TLC-LED-1150	1	1	0
				90'	TLC-LED-1150	11	11	0
2	F3-F4	90'	-	70'	TLC-LED-400	2	2	0
				25'	TLC-LED-1150	1	1	0
				90'	TLC-LED-1150	11	11	0
4	TOTALS					54	54	0



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

Source: Musco Lighting

GRID SUMMARY

Name:	**Track Spill**
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	**0.001**
Maximum:	0.00
Minimum:	0.00
No. of Points:	79

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 38,600 lumens
No. of Luminaires:	**54**
Total Load:	57.6 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>51,000	>51,000	>51,000
TLC-LED-400	61,000	>72,000	>72,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

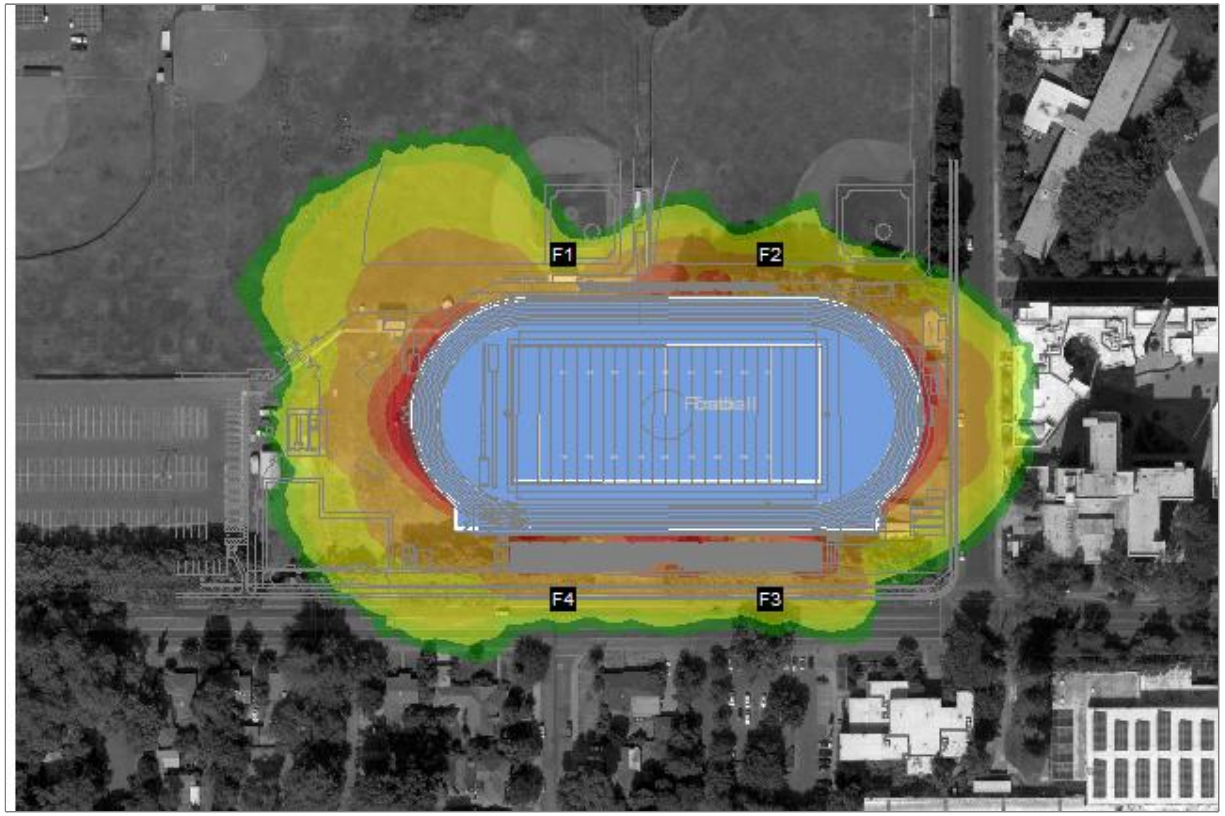
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

0 75 150
FEET

FIGURE 4.1-1
Illumination Summary

Michael Baker INTERNATIONAL



Candelas: + 150,000 100,000 50,000 5,000 1,000 500 250

Source: Musco Lighting

GLARE IMPACT

Summary

Map indicates the maximum candela an observer would see when facing the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

GLARE

Candela Levels

High Glare: 150,000 or more candela
Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

Significant Glare: 25,000 to 75,000 candela
Equivalent to high beam headlights of a car.

Minimal to No Glare: 500 or less candela
Equivalent to 100W incandescent light bulb.

0 75 150
FEET

FIGURE 4.1-2
Glare Analysis

Michael Baker INTERNATIONAL

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.2 AGRICULTURE AND FOREST 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. 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 nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526 and by Government Code Section 51104(f)), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use?	☐	☐	☐	☒

OVERVIEW

The California Department of Conservation manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service. The California Department of Conservation manages an interactive website called the California Important Farmland Finder. This website program identifies the project site as being urban and built-up land, and therefore, not considered to be agriculturally important land.

The project site is fully developed with existing educational uses and no farmland exists within the area. The nearest agriculturally important farmland is 0.6 miles north and 0.6 miles west of the project site. The project would be located on a developed educational campus site. This site is not subject to a Williamson Act contract, and the site is zoned PQ (Public/Quasi Public Facilities) in the City of Chico Zoning Ordinance. This zoning district was not intended for agricultural uses. The project site contains no forest or timber resources and is not zoned for forestland protection or

timber production. The entirety of the proposed project would occur on the existing 39-acre school campus. The project site is not located adjacent to or within the vicinity of any farmland. Therefore, the proposed project would result in no impact to agricultural or forest resources.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.3 AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

OVERVIEW

The project site is located in the northern Sacramento Valley. The Sacramento Valley is located between two mountain ranges to the east and the west and is bordered at its northern end by more mountains. This topography is conducive to trapping air pollutants. The problem is exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. Prevailing winds in the area are from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Butte County is located in the Northern Sacramento Valley Air Basin (NSVAB), which also includes Shasta, Tehama, Glenn, Colusa, Sutter, and Yuba counties.

Both the US Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone, carbon monoxide (CO), particulate matter (PM), nitrogen oxides (NO_x), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Butte County portion of the Sacramento Valley is designated as a nonattainment area for ozone, coarse particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) for state standards and ozone and $PM_{2.5}$ for federal standards (CARB 2015).

In Butte County, the air quality regulating authority is the Butte County Air Quality Management District (BCAQMD). The BCAQMD monitors air quality in the county and serves as the lead agency

responsible for implementing and enforcing federal, state, and Butte County air quality regulations. Air pollution sources in the county include seasonal burning of agricultural fields, dust from agricultural operations, and motor vehicle emissions.

DISCUSSION OF IMPACTS

a) *No Impact*. As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The North Sacramento Valley Planning Area (NSVPA) 2015 Air Quality Attainment Plan is the most recent air quality planning document covering Butte County (SVBAPCC 2016). Air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards for ozone and particulate matter. State law makes CARB the lead agency for all purposes related to the Air Quality Attainment Plan. Local air districts prepare air quality attainment plans and submit them to CARB for review and approval. The NSVPA 2015 Air Quality Attainment Plan includes forecast reactive organic gases (ROG) and NO_x emissions (ozone precursors) for the entire NSVPA through the year 2020. These emissions are not appropriated by county or municipality. The Butte County portion of the NSVPA is classified as being in a nonattainment status for state and federal ozone standards.

According to the BCAQMD, the consistency of the proposed project with the NSVPA 2015 Air Quality Attainment Plan, which is also the State Implementation Plan for the air basin, should be determined by both (a) the project's consistency with population and vehicle use projections utilized by the Air Quality Attainment Plan and (b) the extent to which the project implements transportation control measures in the plan (BCAQMD 2014).

The project would not represent a new type of land use on the site or a wholly new land use or air emissions generation source. No population growth would occur as a result of the project. When complete, the project would not result in an increase existing traffic in the Chico area as this traffic currently goes to PVHS for CHS nighttime athletic events. As discussed in detail below, the proposed project would result in negligible operational-related criteria air pollutants and/or precursor emissions and would not exceed BCAQMD thresholds of significance.

As the project would not result in an increase in population or generate new Chico area traffic and would not disrupt or hinder implementation of any NSVPA Air Quality Attainment Plan control measures, no impact would occur.

b) *Less Than Significant Impact*. Implementation of the proposed project would result in air quality impacts during project construction and operation.

CONSTRUCTION EMISSIONS

Implementation of the proposed project would result in short-term emissions from construction activities. Construction-generated emissions would be short term and of temporary duration, lasting only as long as construction activities occur. Emissions commonly associated with construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust, the dominant source of PM_{10} and $PM_{2.5}$ (particulate matter smaller than 2.5 microns) emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities. Off-road construction equipment is often diesel-powered and can be a substantial source of NO_X emissions, in addition to PM_{10} and $PM_{2.5}$ emissions. Worker commute trips and architectural coatings are dominant sources of ROG emissions.

The predicted maximum daily emissions of ROG, NO_x, PM_{10}, $PM_{2.5}$, and CO associated with project construction are summarized in **Table 4.3-1**.

TABLE 4.3-1
PROJECT CONSTRUCTION EMISSIONS (MAXIMUM) - POUNDS PER DAY

Construction Phase	ROG	NOx	PM_{10}	$PM_{2.5}$	CO
2017 Emissions	22.26	58.09	21.12	12.63	65.16
BCAQMD Daily Thresholds	**137**	**137**	**80**	**None**	**None**
Exceed BCAQMD Daily Thresholds?	No	No	No	N/A	N/A

*Source: CalEEMod, version 2016.3.1. See **Appendix 4.3** for emission model outputs.*
Note: To model a worst case scenario, all construction phases were assumed to occur simultaneously.

The predicted annual emissions of ROG, NO_x, PM_{10}, $PM_{2.5}$, and CO associated with project construction are summarized in **Table 4.3-2**.

TABLE 4.3-2
PROJECT CONSTRUCTION EMISSIONS (MAXIMUM) - METRIC TONS PER YEAR

Construction Phase	ROG	NOx	PM_{10}	$PM_{2.5}$	CO
2017 Emissions	0.87	2.57	0.40	0.20	2.46
BCAQMD Annual Thresholds	**4.5**	**4.5**	**80**	**None**	**None**
Exceed BCAQMD Annual Thresholds?	No	No	No	N/A	N/A

*Source: CalEEMod, version 2016.3.1. See **Appendix 4.3** for emission model outputs.*
Note: To model a worst case scenario, all construction phases were assumed to occur simultaneously.

As shown in **Tables 4.3-1** and **4.3-2**, daily and annual construction emissions associated with the project would not exceed the BCAQMD significance thresholds. Therefore, the construction impact is less than significant.

OPERATIONAL EMISSIONS

Operational air quality impacts could include emissions from facility operations, including landscape maintenance equipment and indirect emissions from the use of field lights . Since CHS currently plays all of its night football games at PVHS, the trips associated with the football games already exist. Therefore, the project would not increase existing traffic and thus would not increase existing Chico area traffic-generated emissions.

Long-term operational emissions associated with the proposed project are summarized in **Table 4.3-3.**

TABLE 4.3-3
PROJECT OPERATIONAL EMISSIONS (MAXIMUM) - POUNDS PER DAY

Operational Activities	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO
Summer Emissions	1.01	0.10	0.01	0.01	0.08
Winter Emissions	1.01	0.10	0.01	0.01	0.08
BCAQMD Threshold	**25**	**25**	**80**	**None**	**None**
Exceed BCAQMD Threshold?	No	No	No	N/A	N/A

*Source: CalEEMod, version 2016.3.1. See **Appendix 4.3** for emission model outputs.*

As shown in **Table 4.3-3**, operational daily emissions associated with the project would not exceed the BCAQMD significance thresholds. Therefore, the operational impact is less than significant.

c) *Less Than Significant Impact.* The region is nonattainment for federal O_3 and $PM_{2.5}$ standards, as well as for state O_3, PM_{10}, and $PM_{2.5}$ standards (CARB 2015). Due to the region's nonattainment status, if project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_x), $PM_{2.5}$, or PM_{10} would exceed the long-term thresholds, the project's cumulative impacts would be considered significant. As discussed in Issue b), long-term thresholds are not exceeded. Furthermore, the project would not increase existing traffic in the project area; thus, it would not increase existing traffic-generated air pollutants. This results in operational air quality impacts that are considered less than significant.

d) *Less Than Significant Impact*. Sensitive land uses are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive receptors are residences, schools, hospitals, and day care centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65 years old, children under the age of 14, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

AIR TOXICS (TACS) GENERATED DURING PROJECT CONSTRUCTION

Sources of construction-related air toxics potentially affecting these sensitive receptors include off-road diesel-powered equipment. Construction would result in the generation of diesel particulate matter (diesel PM) emissions from the use of off-road diesel equipment required for construction activities. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to toxic air contaminant emission levels that exceed applicable

standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic and would occur over several locations isolated from one another. The duration of exposure would be short, and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. Furthermore, construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions. For these reasons, diesel PM generated by construction activities, in and of itself, would not be expected to expose sensitive receptors to substantial amounts of air toxics. Impacts would be less than significant.

AIR TOXICS (TACS) GENERATED DURING PROJECT OPERATIONS

Operation of the proposed project would not result in the development of any substantial sources of air toxics, as the improvements at the school would not substantially change existing activities on the project site. There are no stationary sources nor delivery trucks associated with the operations of the project. Therefore, the project is not a source of TACS and there would be no impact as a result of the project during project operations.

e) *No Impact*. Individual responses to odors are highly variable and can result in various effects, including psychological (i.e., irritation, anger, or anxiety) and physiological (i.e., circulatory and respiratory effects, nausea, vomiting, and headache). Generally, the impact of an odor results from a variety of interacting factors such as frequency, duration, offensiveness, location, and sensory perception.

During construction, the proposed project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources.

CARB's (2005) Air Quality and Land Use Handbook identifies the sources of the most common operational odor complaints received by local air districts. Typical sources include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The project does not contain any of the land uses identified as typically associated with emissions of objectionable odors. As such, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.4 BIOLOGICAL RESOURCES. 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 US Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

OVERVIEW

This section describes the natural resources present within and immediately surrounding the project area and includes a discussion of the special-status species potentially occurring there. Also included is an analysis of impacts that could occur to biological resources due to implementation of the proposed project and appropriate mitigation measures to reduce or avoid those impacts. The analysis of biological resources presented in this section is based on a review of the current project description and available literature, as well as a site visit and survey conducted by a Michael Baker International biologist on March 30, 2017.

REGULATORY SETTING

This section summarizes laws and regulations that apply to species and habitat. It also identifies environmental review and consultation requirements, as well as permits and approvals that may be required from local, state, and federal agencies, depending on whether protected species or habitats are present and on the location and type of development.

FEDERAL

Endangered Species Act

The federal Endangered Species Act of 1973 (FESA), as amended, provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code [USC] Sections 1531–1544). FESA defines "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, Part 222, of the Code of Federal Regulations (50 Code of Federal Regulations [CFR] 222) further defines "harm" to include "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering."

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Part 21). The majority of birds found in the project area would be protected under the MBTA.

STATE

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of endangered and threatened species [California Fish and Game Code (FGC) Section 2070]. The CDFW also maintains a list of "candidate species," which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of "species of special concern," which serves to monitor species in decline, and others on species "watch lists." State-listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from the CDFW would be in the form of an incidental take permit.

California Fish and Game Code

Birds of Prey

Under FGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the FGC or any regulation adopted pursuant thereto.

Fully Protected Species

California statutes also afford fully protected status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit.

Local

City of Chico Municipal Code Chapter 16.66: Tree Preservation Regulations

Municipal Code Chapter 16.66 (Tree Preservation Regulations) applies to all undeveloped property within the city which is 10,000 square feet or greater in size and all property that requires discretionary approval of a land use entitlement. A tree is defined in the code as:

1. Any live woody plant having a single perennial stem of 18 inches or more in diameter, or multistemmed perennial plant greater than 15 feet in height having an aggregate circumference of 40 inches or more, measured at four feet six inches above adjacent ground;

2. Any tree that meets the following criteria:

12-inch Diameter and Breast Height or greater	**6-inch Diameter at Breast Height or greater**
All Oaks (*Quercus*)	Blue oak *(Q. douglassii)*
Sycamores (*Platanus racemosa*)	Canyon live oak (*Q.chrysolepsis*)
Oregon ash (*Fraxinus latifolia*)	Interior live oak (*Q. wislizenii*)
Big leaf maple (*Acer macrophyllum*)	California buckeye (*Aesculus californica*)
	Madrone (*Arbutus menziessii*)
	Toyon (*Heteromeles arbutifolia*)
	Redbud (*Cercis occidentalis*)
	California bay (*Umbellularia californica)*
	Pacific dogwood (*Cornus nuttallii*)

3. Any tree or trees required to be preserved as part of an approved building permit, grading permit, demolition permit, encroachment permit, use permit, tentative or final subdivision map; or
4. Any tree or trees required to be planted as a replacement for an unlawfully removed tree or trees.

No person shall remove, cause to be removed, or effectively remove any tree from any property which is subject to this chapter without obtaining a permit from the director of the public works department or his/her designee. Any person wishing to remove one or more trees shall apply to the director for a permit. The application for a permit shall be made on forms provided by the public works department and shall include information described in Municipal Code Section 16.66.070.

Nongovernmental Agency

California Native Plant Society

The CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. The CNPS utilizes the data to create and maintain a list of native California plants that have low numbers or limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2017). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

The following identifies the definitions of the CNPS listings:

List 1A: Plants presumed extirpated in California and either rare or extinct elsewhere

List 1B: Plants that are rare, threatened, or endangered in California and elsewhere

List 2A: Plants presumed extirpated in California, but common elsewhere

List 2B: Plants that are rare, threatened, or endangered in California, but are more common elsewhere

All of the plant species on List 1 and 2 meet the requirements of the Native Plant Protection Act, Section 1901, Chapter 10, or FGC Sections 2062 and 2067, and are eligible for state listing. Plants appearing on List 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered "significant." Classifications for plants on List 3 (plants about which more information is needed) and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions are provided or impact analysis was performed on species with these classifications.

METHODOLOGY

A Michael Baker International biologist conducted an evaluation of the project to characterize the environmental setting on and adjacent to the proposed project area. The evaluation involved a thorough query of available data and literature from local, state, federal, and nongovernmental agencies, and site surveys to collect site-specific data regarding habitat suitability for special-status species and identify any potentially jurisdictional waters.

Database searches were performed on the following websites:

- US Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) tool (2017a)
- USFWS Critical Habitat Portal (2017b)
- CDFW California Natural Diversity Database (CNDDB) (2017a)
- CNPS Inventory of Rare, Threatened, and Endangered Plants of California (2017)

A search of IPaC (2017a) was conducted for the project area to identify federally listed species under USFWS jurisdiction that may be affected by the proposed project. In addition, a query of the USFWS's Critical Habitat Portal was conducted to identify any designated critical habitat on or in the vicinity of the project area. The CNDDB provided a list of processed and unprocessed occurrences of special-status species identified within the Hamlin Canyon, Paradise West, Richardson Springs, Chico, Ord Ferry, Nord, Nelson, Llano Seco, and Shippee California, US Geological Survey (USGS) 7.5 minute quadrangles (quads). The CNPS database was also queried

to identify special-status plant species with the potential to occur in the aforementioned USGS quads. The raw data returned from the database queries is provided in **Appendix 4.4**.

ENVIRONMENTAL SETTING

The project area was defined using the boundaries of the work area identified in the Chico High School Physical Education/Athletics Master Plan. The project area is relatively flat and is within the existing Chico High School. The project area is bordered by other school facilities to the northeast, W. Sacramento Avenue to the north, Warner Street to the west, Legion Avenue to the south, and residential houses in the surrounding area. Chico State is located southwest of the project. Big Chico Creek is located approximately 780 feet south of the project area.

The project area consists of athletic facilities including softball fields, tennis courts, two baseball fields, soccer field, running track, and mowed grass. There are landscaped trees located within and around the project area. These species include California black walnut (*Juglans hindsii*), Chinese pistache (*Pistacia chinensis*), and other ornamental species. There are three vegetative communities in the project area: disturbed, ornamental, and urban. Vegetation communities and land uses in the project site are discussed below and shown in **Figure 4.4-1**.

Disturbed Habitat

Disturbed habitat occurs in areas of frequent and repeated disturbance (e.g., vehicle activities, mowing), such as along roadsides, trails, and parking lots, and is found in close proximity to urban or developed areas. The mowed grass surrounding the athletic facilities and baseball courts is considered disturbed habitat and may support various weedy flora such as bromes (*Bromus* sp.), wild oats (*Avena* sp.), milk thistle (*Silybum marianum*), and other nonnative species. Other species observed on-site include baby blue eyes (*Nemophila menziesii*) and little mallow (*Malva parviflora*).

The project area contains approximately 9 acres of disturbed habitat which is surrounded by urban development and roads. The disturbed habitat is routinely mowed and managed.

Wildlife species typically found in disturbed habitat include western fence lizard (*Sceloporus occidentalis*), black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), western harvest mouse (*Reithrodontomys megalotis*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), and common raven (*Corvus corax*).

FIGURE 4.4-1
Vegetation Map

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Ornamental

Several native and ornamental trees and shrubs are located on the western boundary of the project and within the project area between the running track and baseball field. These species include, but are not limited to, Chinese hackberry and California walnut.

There is roughly 1 acre of ornamental tree habitat in the project site?. This vegetative community often supports nesting raptors, corvids, and other avian species, with the potential to support various roosting bat species and western gray squirrel (*Sciurus griseus*).

Urban

Urban habitat includes all of the developed land uses such as paved roads, buildings, and concrete or gravel lots that generally preclude the reestablishment of vegetation. The developed portions of the project site include the tennis courts, running track, baseball and softball fields, and paved areas. There are approximately 10 acres of developed habitat within the project area.

These areas do not generally provide suitable habitat for many species; however, some species are suited to developed areas. Wildlife species commonly found in urbanized areas include mockingbird (*Mimus polyglottos*), house finch, rock dove (*Columbidae spp.*), and raccoon (*Procyon lotor*).

DISCUSSION OF IMPACTS

a) Less than Significant with Mitigation Incorporated. Candidate, sensitive, or special-status species are commonly characterized as species that are at potential risk to their persistence in a given area or across their range. These species have been identified and assigned a status ranking by governmental agencies such as the CDFW and the USFWS, or nongovernmental organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special-status species are defined by the following codes:

1) Listed, proposed, or candidates for listing under the federal Endangered Species Act (50 CFR Section 17.11 – listed; 61 Federal Register [FR] 7591, February 28, 1996, candidates)

2) Listed or proposed for listing under the California Endangered Species Act (FGC 1992 Section 2050 et seq.; 14 CCR Section 670.1 et seq.)

3) Designated as Species of Special Concern by the CDFW

4) Designated as Fully Protected by the CDFW (FGC Sections 3511, 4700, 5050, 5515)

5) Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380) including CNPS List Rank 1B, 2A and 2B

The query of the USFWS, CNPS, and CNDDB databases, combined with the site visits and surveys, identified habitat for several special-status species with the potential to occur in the project area. Refer to **Figure 4.4-2** for a depiction of CNDDB occurrences within 1 mile of the project area.

Western Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is a California species of special concern; it has no federal status. Western burrowing owls prefer nesting in mammal burrows in open areas of dry, open, rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub with gullies, washes, arroyos, and along the edges of human disturbed lands.

While the disturbed habitat may provide suitable habitat for burrowing owl, no small burrows (i.e., home of primary prey species, and preferred starting point for burrowing owl burrows) were observed during the site visit. Therefore, due to the lack of available burrows and prey source, this species is not expected to occur within the project site.

Raptors and Migratory Birds

Various migratory and resident raptors and other birds have the potential to inhabit the project site. Some species are afforded specific protection such as Swainson's hawk, which is listed as threatened under CESA, and white-tailed kite (*Elanus leucurus*), which is a CDFW fully protected species. However, raptor and other bird species such as American kestrel (*Falco sparverius*), merlin (*Falco columbarius*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), California horned lark (*Eremophila alpestris actia*), and loggerhead shrike (*Lanius ludovicianus*), species on the CDFW Watch List, are not protected under the FESA/CESA. Nonetheless, the nests of all raptor species are protected under the MBTA and FGC Section 3503.5. The nests of nearly all avian species are protected under the MBTA, which makes it illegal to destroy active bird nests.

The large Chinese pistache trees, California walnut, and mature ornamental trees in and adjacent to the project area may provide suitable nesting habitat for raptors and other birds. The disturbed habitat is suitable foraging habitat for some raptors and other birds as well as nesting habitat for ground-nesting birds such as killdeer (*Charadrius vociferous*). Construction activities involving tree removal, demolition, grading, and vegetation clearing may cause direct mortality or damage to nests. In addition, construction activities near active nests may result in nest abandonment, which would be a significant impact. Therefore, **MM 4.4.1** through **MM 4.4.3** are incorporated into this Initial Study, which would require that preconstruction surveys be conducted by a qualified biologist to identify any potential nests and buffers for any active nests. Implementation of these mitigation measures will reduce impacts to a less than significant level.

Special-status Bats

The database queries identified three special-status bat species in the project vicinity: western mastiff bat (*Eumops perotis*), western red bat (*Lasiurus blossevillii*), and pallid bat (*Antrozous pallidus*), all CDFW species of special concern. Habitat on-site for bat species consists of foraging habitat, night-roosting cover, maternity roost sites, and winter hibernacula. These bat species may forage in a variety of habitats. In general, the CDFW is most concerned about the loss of maternity roosting sites. Suitable roosting sites for these species include caves, rock crevices, cliffs, buildings, tree bark, and snags. The mature trees and buildings within the project site may provide marginally suitable roosting habitat for the bat species listed above, and therefore they have the potential to occur in the project area.

The large Chinese pistache, California walnut, and other mature ornamental trees may provide suitable roosting habitat for various special-status bat species and the disturbed habitat provides suitable foraging habitat. Construction activities involving tree removal may cause direct mortality or damage to nests. Therefore, **MM 4.4.4** through **MM 4.4.7** are incorporated into this Initial Study,

which would require preconstruction surveys for roosting bats and require work to only occur during daylight hours. Implementation of these mitigation measures will reduce impacts to a less than significant level.

MM 4.4.1 If clearing and/or construction activities would occur during the bird breeding season (typically January through July for raptors and February 15 through August 15 for other birds), preconstruction surveys to identify active nests shall be conducted within 14 days of construction initiation, particularly vegetation clearing and ground-disturbing activities. Surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 200-foot buffer (if feasible). If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than seven days.

MM 4.4.2 If an active nest is located during preconstruction surveys, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is deemed inactive by a qualified biologist. Restrictions shall include establishment of exclusion zones (no ingress of personnel or equipment) at a minimum radius of 300 feet around an active raptor nest, and 100 feet around other active bird nest(s). Activities permitted within exclusion zones and the size may be adjusted through consultation with the California Department of Fish and Wildlife.

MM 4.4.3 Vegetation containing active nests that must be removed as part of the project shall be removed during the non-breeding season (August 16 through December 31).

MM 4.4.4 Construction-related activities shall occur only during daylight hours.

MM 4.4.5 Prior to the removal of any trees or buildings, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, Chico Unified School District shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed prior to roosting season (typically May to August) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, then no further action is required if the trees and buildings are removed prior to the next breeding season. If removal is delayed, then an additional survey shall be conducted 30 days prior to removal to ensure that a new colony has not established itself.

MM 4.4.6 If a female or maternity colony of bats are found on the project site, and the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the

timing of the construction activities outside of the maternity roosting season (after July 31 and before March 1).

MM 4.4.7 If an active nursery roost is documented on-site and the project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Nonbreeding bats shall be safely evicted, under the direction of a bat specialist in coordination with CDFW.

b) No Impact. Sensitive habitats include (a) areas of special concern to resource agencies; (b) areas protected under CEQA; (c) areas designated as sensitive natural communities by the CDFW; (d) areas outlined in FGC Section 1600; (e) areas regulated under Clean Water Act Section 404; and (f) areas protected under local regulations and policies. The project area does not contain any sensitive habitats or protected communities. No impact would occur.

c) No Impact. The project area is located in an urban environment with routinely mowed grass and athletic facilities. There are no wetlands or other waters of the US on-site, and no impact would occur.

d) No Impact. A review of the CDFW Biogeographic Information & Observation System (BIOS) (2017b) was performed for the project to determine if the project area is located within an Essential Connectivity Area. The project area does not occur within an Essential Connectivity Area. Furthermore, the project area is located within an urbanized area used by the school to conduct athletic facilities and is surrounded by urban development. As such, no impact would occur.

e) No Impact. The proposed project would involve the removal of mature trees. However, these trees are to be replaced in-kind as a part of the project. The City of Chico Municipal Code Chapter 16.66 (Tree Preservation Regulations) applies to all undeveloped property in the city which is 10,000 square feet or greater in size and all property that requires discretionary approval of a land use entitlement. The proposed project does not require discretionary approval from the City of Chico. Additionally, as a state property, the proposed project is not subject to Municipal Code Chapter 16.66. Therefore this requirement does not apply to the project. As such, no impact would occur.

f) No Impact. The proposed project is in the City of Chico, which is a participating member of the Butte Regional Conservation Plan. The Butte Regional Conservation Plan is both a habitat conservation plan and natural community conservation plan; however, it has not been adopted to date. Therefore, the proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. As a result, there would be no impact.

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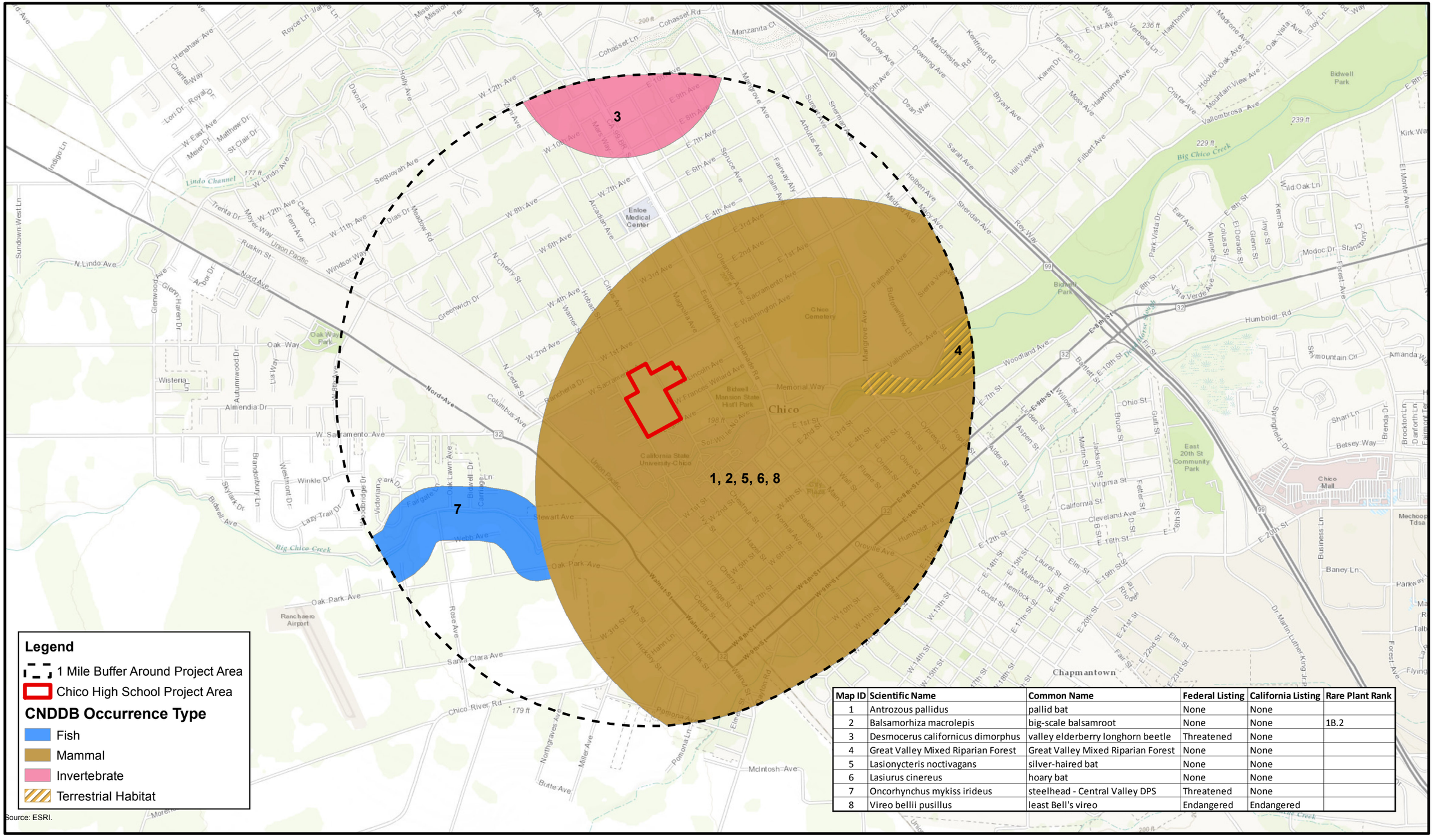

Map ID	Scientific Name	Common Name	Federal Listing	California Listing	Rare Plant Rank
1	Antrozous pallidus	pallid bat	None	None	
2	Balsamorhiza macrolepis	big-scale balsamroot	None	None	1B.2
3	Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Threatened	None	
4	Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	None	None	
5	Lasionycteris noctivagans	silver-haired bat	None	None	
6	Lasiurus cinereus	hoary bat	None	None	
7	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	Threatened	None	
8	Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered	

Figure 4.4-2
Previously Recorded Occurrences of Special-Status Species within One-Mile of the Project Study Area

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	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.5 CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

OVERVIEW

Chico is located within the boundaries of Konkow or Northwestern Maidu territory. Further, the city is still home to a vibrant Native American community as exemplified by the Mechoopda Indian Tribe of the Chico Rancheria.

A records search conducted at the Northeast Information Center of the California Historical Resources Information System at California State University, Chico, for the City of Chico's General Plan update identified 244 known archaeological sites and isolated features/artifacts, including prehistoric and historic sites, within the city's planning area. There are 177 prehistoric sites, 53 historic sites, and 11 sites that contain both prehistoric and historic elements. The majority of the prehistoric sites were bedrock milling stations and lithic scatters (e.g., areas representing the manufacture of stone tools) located along creeks and streams such as Mud Creek and Big Chico Creek. These are areas of high archaeological sensitivity. Many Mechoopda villages were located along these drainages as recently as the late nineteenth century.

Historic sites in Chico primarily consist of residential and commercial buildings, but several trails and other linear features (e.g., the Southern Pacific Railroad alignment, historic roads, and wagon wheel ruts) are located throughout the city's planning area. One historic district and 497 properties in the city are listed in the current Office of Historic Preservation Directory of Properties, and an additional 17 properties are listed in the vicinity of Chico. The directory identifies 122 properties listed in the National Register of Historic Places (National Register) and California Register of Historical Resources (California Register); 80 properties that are eligible for inclusion in the National Register; 121 properties that appear eligible for listing in a local historic register; and 168 properties

that are not eligible for inclusion in the National Register. More than 250 resources are listed on the City of Chico Historic Resources Inventory (Chico 2010, pp. 4.11-5–4.11-6).

The following historical information about Chico High School was extracted from "Centennial Highs: Chico High Alums Look Back at Their Formative Years," printed in the *Chico News and Review*, September 5, 2002.

In 1902, a bond measure was passed which allowed the construction of Chico's first high school. The school began later that year, however, classes were held on the third floor of the old Oakdale School, near the junction of Eighth and Broadway streets. Finally, in 1905, the first Chico High building was completed and opened to 46 students and three teachers. This new building, which no longer exists, was located where Chico State's Meriam Library stands today. In January 1911, Chico High was damaged by fire and the rest of the school year was held at a local church. The following July, the damage was repaired to the school and the school's first library was created.

In 1920, construction began on a new high school at the current school campus location. On October 1, a cornerstone was laid 300 feet back from the street. But the school didn't officially open for classes until April 28, 1922, nearly two years later. In 1936, construction began on a new gym.

After a successful bond election in 1950, five new structures were added to the campus, including Lincoln Hall, the Ag Building, and the Home Economics Building, or the H wing. In 1953, all ninth-graders moved down to the new junior high school. Just over 1,300 students remained, as well as a staff of 61 faculty members. This separation would continue until 1994, when the ninth-graders were moved back to the high school, where they are today.

In the 1960s, Chico High saw many drastic changes, such as the arrival of a new, crosstown rival when Pleasant Valley High School opened. Soon after that the Almond Bowl was born, beginning a spirited tradition that remains to this day. But the most significant change of the decade resulted from a decision that making school's beautiful front building earthquake safe was too expensive; it was subsequently demolished to make room for an administration and classroom building.

DISCUSSION

a) *Less Than Significant With Mitigation Incorporated*. The proposed project would involve improvements to the existing athletic facilities and construction of bleachers, storage facilities, an entry building, and team rooms on the CHS campus within the areas of the existing fields. The football, baseball, softball, and soccer fields are not considered to be of any historical importance and not identified as such by the California State Historical Resources Commission, the Chico General Plan or General Plan EIR, or the Chico Historic Resources Inventory. No changes to existing CHS buildings would occur with implementation of the proposed project. Improvements to the athletic fields and construction of bleachers, storage facilities, an entry building, and team rooms would occur within the existing field area and would not result in physical changes to the existing CHS buildings or their historic context. However, unanticipated and accidental historical discoveries are possible during project implementation, especially during excavation, and have the potential to impact unknown historical resources. As such, mitigation measure **MM 4.5.1** has been incorporated into the proposed project. This mitigation measure requires proper mitigation for the discovery of unknown historical resources and therefore, this impact would be less than significant.

b) *Less Than Significant With Mitigation Incorporated*. The entire project site has been developed and used for school-related activities for many years, and no known cultural resources or significant archaeological resources have been identified within the project area. Unanticipated and accidental archaeological discoveries are possible during project implementation, especially during excavation, and have the potential to impact unique archaeological resources. As such, mitigation measures **MM 4.5.1** and **MM 4.5.3** have been incorporated into the proposed project. These mitigation measures require proper mitigation for the discovery of unknown archaeological resources and therefore, this impact would be less than significant.

c) *Less Than Significant Impact With Mitigation Incorporated*. No known paleontological resources exist within the project area. Regardless, unanticipated and accidental paleontological discoveries are possible during project implementation, especially during any excavation, and have the potential to impact unique paleontological resources. Therefore, for the proposed project, mitigation measure **MM 4.5.2** has been incorporated into the project to ensure the protection of undiscovered paleontological resources. This mitigation measure requires proper mitigation for the discovery of unknown paleontological resources and therefore, this impact would be less than significant.

d) *Less Than Significant Impact With Mitigation Incorporated*. While there are no records to indicate that a cemetery, burial ground, or other archaeological resource was ever found on the school campus, there is the possibility that human remains could be encountered below the surface during construction activities. Therefore, mitigation measure **MM 4.5.3** has been incorporated into the project to ensure the protection of undiscovered human remains.

MITIGATION MEASURES

MM 4.5.1 If any prehistoric and/or historic resources or other indications of cultural resources are found during future development of the site, all work in the immediate vicinity of the find must stop and the project construction contractor shall immediately notify the Chico Unified School District. An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the finds and recommend appropriate mitigation measures.

Timing/Implementation: *During grading and construction activities*

Monitoring/Enforcement: *Chico Unified School District; project contractor*

MM 4.5.2 If any paleontological resources are found during future development of the site, all work in the immediate vicinity of the find must stop and the project construction contractor shall immediately notify the Chico Unified School District. A qualified paleontologist (i.e., one with a graduate degree in paleontology, geology, or related field and having demonstrated experience in the vertebrate, invertebrate, or botanical paleontology of California) shall be retained to evaluate the finds and recommend appropriate mitigation measures.

Timing/Implementation: *During grading and construction activities*

Monitoring/Enforcement: *Chico Unified School District; project contractor*

MM 4.5.3 If human remains are discovered during future development of the site, all work must stop in the immediate vicinity of the find, and the county coroner must be

notified, according to California Health and Safety Code Section 7050.5. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

Timing/Implementation: *During grading and construction activities*

Monitoring/Enforcement: *Chico Unified School District; project contractor*

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.6 GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Section 1803.5.3 of the 2016 California Building Code, creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

OVERVIEW

The topography of the proposed project site is flat, with no significant topographic features. The site is located within the Great Valley geomorphic province, which is primarily relatively flat alluvial plain, about 50 miles wide and 400 miles long, with thick sequences of sedimentary deposits of Jurassic through Holocene age. Boundaries of the Great Valley geomorphic province are the Klamath and Cascade mountain ranges on the north, the Sierra Nevada mountain range on the east, and the Coast Ranges on the west.

The geologic history of the area includes a mixture of ancient marine and alluvial deposits. Up to 155 million years ago, periods of volcanic activity and uplifting were followed by periods of uplifting and folding, which formed the Coast Ranges. The Sacramento Valley floor is a structural

trough formed by the uplift of the mountains surrounding it. This trough has been filled in by sequences of marine and alluvial sediments ranging in age from 135 million years ago to the present.

According to the Natural Resources Conservation Service (NRCS) through the Web Soil Survey database, project site soils are composed of Vina fine sandy loam. The Web Soil Survey also identifies drainage, flooding, erosion, runoff, and the linear extensibility potential for the project soils. According to this survey, the soils are well drained and have a negligible runoff potential, but are susceptible to water erosion from sheet flows, as shown in **Table 4.6-1**. The soil composition of the project site allows for a rare frequency of flooding and a low linear extensibility (shrink-swell) (NRCS 2016).

TABLE 4.6-1
PROJECT SOIL CHARACTERISTICS

Soil	Percentage of Site	Drainage	Flooding Frequency Class	Erosion Hazard[1]	Runoff Potential	Linear Extensibility[2]
Vina fine sandy loam, sandy substratum, 0 to 2 percent slopes	100%	Well drained	Rare	Class 1	Negligible	0.8%

Source: NRCS 2016

Notes:

1. *Erosion Classes. There are five kinds of accelerated erosion: 1 - Water erosion, sheet, 2 - Water erosion, rill, 3 -Water erosion, gully, 4 - Water erosion, tunnel, and 5 - Wind erosion.*
2. *Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent, moderate if 3 to 6 percent, high if 6 to 9 percent, and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.*

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The board defined an active fault as one which has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term *sufficiently active* was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term *well-defined*, which relates to the ability to locate a Holocene fault as a surface or near-surface feature (CGS 2010b, p. 4).

The nearest fault to the project site is the Chico Monocline fault, which trends in a northwest–southeast direction from just north of Durham-Dayton Highway and east of the Butte College Campus to just north of Little Antelope Creek in Tehama County. This fault is classified as a Quaternary time fault and is considered to be a potentially active fault by the California Geological Survey (CGS) (2010a). The Chico Monocline fault is approximately 4.5 miles to the east of the project site (CGS 2010a). This fault is classified as a Quaternary time fault and is considered to be a potentially active fault by the California Geological Survey (CGS) (2010a). The Corning fault, which runs in a north–south direction from just north of Willows to the southeastern portion of

Red Bluff, is approximately 9 miles to the west of the project site. The Corning fault is also a Quaternary time fault and is therefore potentially active (CGS 2010a).

The Alquist-Priolo Earthquake Fault Zoning Act (1972) and the Seismic Hazards Mapping Act (1990) direct the State Geologist to delineate regulatory Zones of Required Investigation to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-triggered ground failures. Cities and counties affected by the zones must regulate certain development projects within them. These acts also require sellers of real property (and their agents) within a mapped hazard zone to disclose at the time of sale that the property is in such a zone.

The project site is not located in an Alquist-Priolo Earthquake Zone. The nearest fault zone mapped by the CGS under the Alquist-Priolo Earthquake Fault Zoning Act is the Bangor fault, which is located approximately 30 miles southeast of Chico. The CGS does not identify Chico as a city affected by this fault or any other Alquist-Priolo Earthquake Fault Zone (CGS 2015).

DISCUSSION OF IMPACTS

a)

i) *No Impact*. The proposed project site is not located within an Alquist-Priolo Earthquake Zone (CGS 2010c, 2015). There would be no impact related to fault rupture.

ii) *Less Than Significant Impact*. According to CGS's Earthquake Shaking Potential for California mapping, the proposed project site is located in an area which is distant from known, active faults and will experience lower levels of groundshaking less frequently. In most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area (CGS 2016). The proposed project includes the construction of buildings, light poles and bleachers, which may be affected by a seismic event. However, all structures would be required to comply with the 2016 California Building Code, including the required seismic mitigation standards. Because of the required compliance with the California Building Code seismic mitigation standards and the distance from active faults, the proposed project would have a less than significant impact related to strong ground shaking.

iii) *Less Than Significant Impact*. Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:

- Loss of bearing strength – soils liquefy and lose the ability to support structures
- Lateral spreading – soils slide down gentle slopes or toward stream banks
- Flow failures – soils move down steep slopes with large displacement
- Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking
- Flotation – floating of light buried structures to the surface
- Settlement – settling of ground surface as soils reconsolidate
- Subsidence – compaction of soil and sediment

Liquefaction potential has been found to be greatest where the groundwater level and loose sands occur within a depth of about 50 feet or less. According to the NRCS, the project site soil, Vina fine sandy loam, has a sand content of 76 percent. The California Department of Water Resources (DWR) monitors depth to groundwater throughout the state. According to information provided by the DWR, there are multiple groundwater monitoring wells in the City of Chico. The closest well to the project site is located in the area of Nord Avenue and Kennedy Avenue. The most recent data for this well is from October 2016. At that time, the groundwater was encountered 53.5 feet below ground surface. The highest recorded groundwater depth was 12.9 feet below ground surface in May 1983 (DWR 2017). Based on these conditions only, the project site could have a liquefaction potential. However, due to the low potential for ground shaking, as discussed under Issue a) ii) above, the site would not be susceptible to liquefaction. In addition, compliance with the general and special requirements of the California Building Code and other regulations, plans, and standards required by the Division of the State Architect regarding seismic safety, the proposed project would result in less than significant impacts with regards to seismic-related ground failure, including liquefaction.

iv) No Impact. The project site has flat topography, indicating no potential for landslides.

b) *Less Than Significant Impact*. Construction activities during project site development, such as grading, excavation, and soil hauling, would disturb soils and potentially expose them to wind and water erosion. The project applicant will be required to prepare a stormwater pollution prevention plan (SWPPP) to comply with the Regional Water Quality Control Board's (RWQCB) General Construction Storm Water Permit. The SWPPP will identify best management practices (BMPs) to be implemented on the project site to minimize soil erosion and protect local waterways and existing drainage systems. Compliance with the State's General Construction Storm Water Permit would minimize soil erosion and loss of topsoil from project implementation and would reduce this impact to a level of less than significant.

c) *Less Than Significant Impact.* The potential for landslides on the project site was addressed under Issue a)iv) and was determined to have no impact. Due to the flat topography of the proposed project site, the potential for lateral spreading is considered very low. Additionally, as indicated under Issue a)(iii) above, the soils on the proposed project site are not susceptible to liquefaction. The potential for lateral spreading, liquefaction, subsidence, and other types of ground failure or collapse was addressed under Issue a)iii) above and was determined to be a less than significant impact.

d) *Less Than Significant Impact*. Expansive or shrink-swell soils are soils that swell when subjected to moisture and shrink when dry. Expansive soils typically contain clay minerals that attract and absorb water, greatly increasing the volume of the soil. This increase in volume can cause damage to foundations, structures, and roadways. Linear extensibility is used to determine the expansion potential of soils. The expansion/shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent. As identified by the NRCS and indicated in **Table 4.6-1**, the proposed project site is located on soils that have a very low linear extensibility (0.8 percent). As such, expansion mitigation is not required. Therefore, the proposed project would have a less than significant impact regarding expansive soils.

e) *No Impact*. The proposed project would not require the treatment of wastewater. No septic tanks or alternative wastewater disposal systems will be installed on the site.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.7 GREENHOUSE GASES. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	☐	☐	☒	☐

OVERVIEW

Greenhouse gases (GHGs) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Table 4.7-1 provides descriptions of the primary GHGs attributed to global climate change, including a description of their physical properties, primary sources, and contribution to the greenhouse effect.

TABLE 4.7-1
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon dioxide (CO_2)	CO_2 is a colorless, odorless gas and is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
Methane (CH_4)	CH_4 is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH_4 is emitted from both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (livestock intestinal fermentation and manure management), biomass burning, and waste management. These activities release significant quantities of CH_4 to the atmosphere. Natural sources of CH_4 include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years.[2]

Nitrous oxide (N_2O)	N_2O is a clear, colorless gas with a slightly sweet odor. N_2O is produced by natural and human-related sources. Primary human-related sources are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1] EPA 2017a, [2] EPA 2017b, [3] EPA 2017c

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

DISCUSSION OF IMPACTS

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

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

Thresholds of significance illustrate the extent of an impact and are a basis from which to apply mitigation measures. Numerical significance thresholds for GHG emissions resulting from land use development projects have not been established in Butte County. Rather, the BCAQMD recommends compliance with a qualified GHG Reduction Strategy or consistency with the goals of AB 32. The Chico Climate Action Plan does not have any thresholds and does not present any method of determining if a school project is consistent with the Climate Action Plan. Therefore, the projected emissions are compared to the nearest air district that does have a threshold. In this case, the Tehama County Air Pollution Control District (TCAPCD) has a recommended threshold of 900 metric tons of CO_2e annually. While significance thresholds used in Tehama County are not binding on the BCAQMD or the Chico Unified School District, they are instructive for comparison purposes. The project would be considered to have a significant impact if projected emissions would exceed 900 metric tons of CO_2e annually.

CONSTRUCTION GHG EMISSIONS

Construction of the proposed project would result in direct emissions of GHGs from construction. The approximate quantity of daily GHG emissions generated by construction equipment utilized to build the proposed project is depicted in **Table 4.7-2.**

TABLE 4.7-2
CONSTRUCTION GHG EMISSIONS – METRIC TONS PER YEAR

Construction Activities	CO_2e
2017	479
TCAPCD Potentially Significant Impact Threshold	900
Exceed TCAPCD Threshold?	**No**

*Source: CalEEMod, version 2016.3.1. See **Appendix 4.7** for emission model outputs.*
Note: To model a worst case scenario, all construction phases were assumed to occur simultaneously.

As shown, construction would generate approximately 479 metric tons of CO_2e annually. Therefore, because the project is below TCAPCD's annual threshold of 900 metric tons of CO_2e, the impact is less than significant.

OPERATIONAL GHG EMISSIONS

As stated above, there would also be long-term regional emissions associated with project-related new indirect-source emissions, such as electricity usage associated with the proposed project. Since CHS currently plays all of its night football games at PVHS, the trips associated with the football games are already existing. Therefore, the project would not increase existing traffic and thus would not increase existing traffic-generated GHG emissions. The project's long-term operations emissions are shown in **Table 4.7-3.**

TABLE 4.7-3
OPERATIONAL GHG EMISSIONS – METRIC TONS PER YEAR

Emissions Source	CO_2e
Area Source (landscaping, hearth)	0
Energy	90
Mobile	0
Waste	9
Water	13
Total	**112**
TCAPCD Potentially Significant Impact Threshold	900
Exceed TCAPCD Threshold?	**No**

*Source: CalEEMod, version 2016.3.1. See **Appendix 4.7** for emission model outputs.*

As shown, energy usage from project operations would generate approximately 112 metric tons of CO_2e annually. Therefore, since the project is below TCAPCD's annual threshold of 900 metric tons of CO_2e, the impact is less than significant.

b) *Less Than Significant Impact*. The project is subject to compliance with the Global Warming Solutions Act (AB 32). As identified under Issue a), project-generated GHG emissions would not exceed GHG significance thresholds, which were prepared with the purpose of complying with the requirements of AB 32. Therefore, the project would not conflict with AB 32. The impact is less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.8 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?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

OVERVIEW

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, Section 25501 as follows:

> *"Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to*

human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment .

A hazardous material is defined in 22 CCR Section 662601.10 as follows:

A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Most hazardous materials regulation and enforcement in Butte County is managed by the Butte County Environmental Health Department, which refers large cases of hazardous materials contamination or violations to the Central Valley Regional Water Quality Control Board (RWQCB) and the California Department of Toxic Substances Control (DTSC). It is not at all uncommon for other agencies, such as the BCAQMD and both the federal and state Occupational Safety and Health Administrations, to become involved when issues of hazardous materials arise.

Under Government Code Section 65962.5, both the DTSC and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. The project site is not listed by the DTSC or SWRCB as a hazardous substances site on the list of hazardous waste sites compiled pursuant to Government Code Section 65962.5 ("Cortese List"). A search of the DTSC (2017) and SWRCB (2017) lists identified four open cases of hazardous waste violations within a half mile of the project site. However, due to their locations and distances from the project site, these sites will not result in hazards at the project site.

TABLE 4.8-1
OPEN HAZARDOUS SUBSTANCES SITES WITHIN A HALF MILE OF PROJECT

Name	EnviroStor or GeoTracker Site Location	Potential Contaminants of Concern	Current Status
Chico Groundwater Central Plume	Chico area groundwater	tetrachloroethylene (PCE)	Active
Chico Groundwater Southwest Plume	Chico area groundwater	tetrachloroethylene (PCE)	Active
Esplanade Cleaners	164 E. 2nd Avenue	tetrachloroethylene (PCE)	Active
Norge Village Cleaners	254 E. 1st Street	tetrachloroethylene (PCE)	Certified / operation & maintenance

Source: SWRCB 2017; DTSC 2017

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The project would not generate any hazardous materials, and only a minimal

amount of routine day-to-day materials would be stored on-site for the maintenance of the athletic fields and track. All materials would be used, stored, and disposed in accordance with existing regulations and product labeling and would not create a significant hazard to the public or to the environment.

The project site has already been in operation as a high school and implementation of the proposed project would not introduce any new hazardous materials–related hazards to the public or to the environment that have not already been considered.

b) *Less Than Significant Impact With Mitigation Incorporated*. As discussed in Issue a) above, the proposed project would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or the environment. Potential construction-related hazards could be created during the course of project construction at the project site, given that construction activities would involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The Phase I construction is scheduled to begin in the late summer of 2017 and last until the end of November 2017. The construction period for the Future Phase of the project is not known, as construction depends on available funding.

To ensure that the safety of students, staff, and campus visitors is maintained throughout the construction process, various safety measures are needed. Additionally, given the developed nature of the project site, it is possible for underground utility and service lines to be in the vicinity of the trenching and foundation excavations. Potential impacts from risk of upset would be temporary and only be during project construction, but are considered potentially significant due to the potential for student, staff, and visitor interaction. As such, mitigation measure **MM 4.8.1,** which would limit this interaction, is necessary to reduce this impact to a less than significant level.

Exposure to unanticipated hazardous substances could also occur from previously unidentified soil contamination caused by migrating contaminants originating at nearby listed sites. Generally speaking, exposure to hazardous materials during construction activities could occur as a result of any of the following, and construction workers would be at greatest risk of exposure:

- Direct dermal contact with hazardous materials.
- Incidental ingestion of hazardous materials (usually due to improper hygiene, when workers fail to wash their hands before eating, drinking, or smoking).
- Inhalation of airborne dust that may be contaminated with hazardous materials.

If any previously unidentified sources of contamination are encountered during excavation, the construction activities required could pose health and safety risks capable of resulting in various short-term or long-term adverse health effects in exposed persons. To address the potential for encountering unknown contamination within the proposed project area, mitigation measure **MM 4.8.2** would reduce the potential risk of contamination by implementing investigation and remediation efforts at the proposed project site.

MITIGATION MEASURES

MM 4.8.1 The construction staging areas for the project site shall be identified on the project plans, including the area that will be used for storing materials and equipment. Where feasible, storage areas shall be located away from sensitive uses (nearby classrooms, drainages, etc.). During project construction, the staging area shall be fenced and secured and shall have access restricted. When on-site maintenance fueling, equipment cleaning, etc., is required, all of these activities shall occur within the construction staging area, and best practices, such as the use of drip pans, shall be used to address potential leakage from construction equipment.

The construction site itself shall be barricaded/fenced in such a way as to ensure students, staff, and campus visitors are not able to enter. Access routes, delivery access, and parking areas for the contractor's employees shall be separated from student traffic, and weekly safety meetings and preconstruction safety instruction for on-site personnel, as well as background checks for on-site personnel, shall also be required of the construction contractor.

Timing/Implementation: Prior to project construction

Enforcement/Monitoring: Chico Unified School District; project contractor

MM 4.8.2 In the event that previously unknown or unidentified soil and/or groundwater contamination that could present a threat to human health or the environment is encountered during construction in the proposed project area, construction activities in the immediate vicinity of the contamination shall cease immediately. If contamination is encountered, a Risk Management Plan shall be prepared and implemented that (1) identifies the contaminants of concern and the potential risk each contaminant would pose to human health and the environment during construction and post-development and (2) describes measures to be taken to protect workers, and the public from exposure to potential site hazards. Such measures could include options such as physical site controls during construction, remediation, long-term monitoring, post-development maintenance or access limitations, or some combination thereof. Depending on the nature of contamination, if any, appropriate agencies shall be notified (e.g., City of Chico Fire Department). If needed, a Site Health and Safety Plan that meets Occupational Safety and Health Administration requirements shall be prepared and in place prior to commencement of work in any contaminated area.

Timing/Implementation: During project construction

Enforcement/Monitoring: Chico Unified School District; project contractor

c) *Less Than Significant Impact*. The project site is located on an existing high school campus. Other than CHS, the nearest public school to the project site is Citrus Avenue Elementary School, approximately .25 miles to the north. None of the proposed new sports and athletic field uses would emit any hazardous emissions. There is a potential that common household hazardous materials may be stored in the proposed new buildings, including cleaning solutions, bleach, and lawn care materials. These materials would be stored, used, and disposed of in accordance with product label instructions and existing state and local regulations. Due to the commonplace nature of the substances to be used, the small amount

to be stored, and compliance with existing standards and regulations, this impact is considered less than significant.

d) *Less Than Significant Impact.* Under Government Code Section 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations on the project site. Therefore, the project site and the proposed project are not on a parcel included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC 2017; SWRCB 2017). As a result, this would not create a significant hazard to the public or to the environment.

e) *No Impact*. The Chico Municipal Airport, at 150 Airpark Avenue, is located approximately 4.5 miles north of the proposed project site. According to the Butte County Airport Land Use Compatibility Plan (ALUCP), developed by the Butte County Airport Land Use Commission (ALUC), the proposed project site is not located within the Chico airport compatibility zone (Butte 2002). There would be no impact.

f) *No Impact*. The proposed project site is not located within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the project area. Therefore, no impact would occur.

g) *Less Than Significant Impact*. The Butte County Office of Emergency Management has an online link to an emergency preparedness web page stating that in the event of mandatory evacuation, residents will be advised of safe routes to follow, locations of shelters, and other actions that may need to be taken. Butte County has several means of notifying the public of emergencies and possible evacuations, which include a prerecorded telephone message, email message, local radio and television station announcements, and the Emergency Broadcast System. In the event of extreme cases and/or the inability to contact residents in another manner, the Police Department would go door to door. Construction of the proposed project would not obstruct evacuation routes or access to critical emergency facilities as all construction would occur on the existing school campus. This impact is less than significant.

h) *No Impact*. The project site is located in a fully built-out urban environment. The city is not identified by the California Department of Forestry and Fire Protection (Cal Fire) as a community at risk from wildfire (CalFire 2008). Therefore, there would be no impact regarding wildland fire hazards as a result of the project.

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

OVERVIEW

The Federal Emergency Management Agency (FEMA) has prepared a Flood Insurance Rate Map (FIRM) depicting flood hazard areas in Chico. According to FEMA (2011), no portion of the project site or surrounding area are located within the 100-year floodplain (Flood Map 06007C0505E).

The project area is within the jurisdictional boundaries of the Central Valley RWQCB, one of nine regional boards in the state. The Central Valley RWQCB is the largest water board region, stretching from the Oregon border to the northern tip of Los Angeles County in central California. Specifically, the RWQCB identifies potential water quality problems, confirms and characterizes water quality problems through assessments, remedies problems through imposing or enforcing appropriate measures, and monitors problem areas to assess effectiveness of remedial measures. Remedies for problems include prevention and cleanup. Common means of prevention are the issuance of National Pollutant Discharge Elimination System (NPDES) permits, waste discharge requirements, and discharge prohibitions and restrictions. Cleanup is implemented through enforcement measures such as cease and desist orders and cleanup and abatement orders.

No natural water features exist on the project site. The nearest water feature is Big Chico Creek which is approximately 800 feet south of the southernmost portion of the project site. Big Chico Creek originates from a series of springs, at an elevation of about 5,400 feet, northeast of the city on the southwest flanks of Colby Mountain. The watershed also encompasses three smaller drainages to the north: Sycamore, Mud, and Rock Creeks. Big Chico Creek flows a distance of 45 miles from its origin, crossing portions of Butte and Tehama Counties, to its confluence with the Sacramento River, at an elevation of 120 feet, west of the City of Chico (Chico 2010, p. 4.9-2).

Water service in the project area is provided by the California Water Service Company. Cal Water obtains groundwater from subbasins of the Sacramento Valley Groundwater Basin, including the Vina Subbasin, the West Butte Subbasin, and the East Butte Subbasin (Chico 2010, p. 4.12-35). DWR's Bulletin 118 provides groundwater basin information such as groundwater storage capacity, level trends, budget, and water quality. Bulletin 118 is currently being updated by DWR; however, this update has not been completed at the time of this writing. As such, information from the 2004 Bulletin 118, which is the most recent completed update, is provided for the West Butte, East Butte, and Vina Subbasins below.

The West Butte Subbasin is bounded on the west and south by the Sacramento River, on the north by Big Chico Creek, on the northeast by the Chico Monocline, and on the east by Butte Creek. The subbasin is hydrologically contiguous with the Vina and East Butte Subbasins at depth and is approximately 181,560 aces in size. The total storage capacity of the West Butte Subbasin is estimated to be approximately 2,794,330 acre feet. In the Chico area, groundwater levels in the unconfined portion of the aquifer system are about 5–7 feet during normal precipitation and up to approximately 16 feet during periods of drought. Annual fluctuation in the confined or semiconfined portion of the aquifer system is approximately 15–25 feet during normal years and up to approximately 30 feet during periods of drought. Long-term comparison of spring-to-spring groundwater levels indicates a 10–15 foot decline in levels since the 1950s (DWR 2004a).

The East Butte Subbasin is bounded on the west and northwest by Butte Creek, on the northeast by the Cascade Ranges, on the southeast by the Feather River, and on the south by the Sutter Buttes. The East Butte Subbasin is approximately 265,390 acres in size. The total storage capacity of the East Butte Subbasin is estimated to be approximately 3,128,959 acre feet. For wells constructed in confined and composite portions of the aquifer, the increased use of groundwater in the northern portion of the subbasin has resulted in wide seasonal fluctuations in groundwater levels. In the northern portion of the subbasin, composite well fluctuations average about 15 feet

during normal years and 30–40 feet during drought years.[3] Annual groundwater fluctuations in the confined and semiconfined aquifer system ranges from 15–30 feet during normal years. In the subbasin portion located within the southern part of Butte County, groundwater level fluctuations for composite wells average about 4 feet during normal years and up to 10 feet during drought years. The groundwater fluctuations for wells constructed in the confined and semiconfined aquifer system average 4 feet during normal years and up to 5 feet during drought years (DWR 2004b).

The Vina Subbasin is bounded on the west by the Sacramento River, on the north by Deer Creek, on the east by the Chico Monocline, and on the south by Big Chico Creek. The Vina Subbasin is approximately 125,640 acres in size and has a total storage capacity estimated to be approximately 1,468,239 acre feet. Evaluation of groundwater level data at the northern edge of the Cal Water service area (just north of Chico) shows an average seasonal fluctuation in groundwater levels of approximately 10 feet during years of normal precipitation. Long-term comparison of spring-to-spring groundwater levels shows a decline in levels associated with the above drought periods with recovery to pre-drought conditions of the early 1970s. Further long-term comparison of spring-to-spring groundwater levels indicates a 10–15 foot decline in groundwater levels since the 1950s (DWR 2017). Areas unaffected by municipal water use reflect the natural groundwater table distribution and direction of movement. Year-round extraction of groundwater for municipal use in the Chico area causes several small groundwater depressions that tend to alter the natural southwesterly movement of groundwater in the area (DWR 2001). In the Chico area, groundwater levels in the unconfined portion of the aquifer system are about 5–7 feet during normal precipitation and up to approximately 16 feet during periods of drought. Annual fluctuation in the confined or semiconfined portion of the aquifer system is approximately 15–25 feet during normal years and up to approximately 30 feet during periods of drought. Long-term comparison of spring-to-spring groundwater levels for confined or semiconfined portions of the aquifer system indicates a 10–15 foot decline in groundwater levels since the 1950s (DWR 2004c).

The school campus is connected to the City of Chico's stormwater drainage system.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*. There is potential for the proposed project to result in degradation of water quality during both the construction and operational phases. Polluted runoff from the project site during construction could include sediment from soil disturbances and oil and grease from construction equipment.

During construction, soil would be exposed to natural processes such as precipitation (depending on the time of year) and runoff. Stormwater discharges generated during construction activities could cause an array of physical, chemical, and biological water quality impacts. Specifically, the physical, chemical, and biological integrity of surface runoff water could become compromised. The interconnected process of erosion, sediment transport, and delivery is the primary pathway for introducing key pollutants, such as nutrients (particularly phosphorous), metals, and organic compounds, into aquatic systems.

However, because the project site is over 1 acre in size, regulations as part of the NPDES permitting process require the Chico Unified School District or its contractor to prepare an

[3] Composite wells are monitoring wells that represent groundwater levels that combine confined and unconfined portions of the aquifer system.

SWPPP pursuant to RWQCB standards and subject to RWQCB review for each component of the proposed project. The SWPPP will include measures designed to reduce or eliminate erosion and runoff into waterways. BMPs include wattles, covering of stockpiles, silt fences, and other physical means of slowing stormwater flow from the graded areas to allow sediment to settle before entering stormwater channels. The method used would be described in the SWPPP and may vary depending on the circumstances of construction. Additionally, the proposed project would not violate any waste discharge requirements. Because of these standard procedures and the requirement to prepare an SWPPP, project impacts to water quality are considered to be less than significant.

b) *Less Than Significant Impact*. Implementation of the proposed project would not result in a depletion of groundwater supplies and would not interfere with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Full construction of the proposed project would result in a total of approximately 19,400 square feet of new impervious structures (storage facilities–4,500 square feet; entry building–1,500 square feet; classroom space/team rooms–13,000 square feet; and maintenance building–400 square feet). The project site is located in the West Butte groundwater Subbasin, which is approximately 181,560 acres in size (DWR 2004a). The proposed project's new impervious surfaces represent 0.0002 percent of the total groundwater basin area.[4] New impervious surfaces, covering 0.0002 percent of the possible groundwater recharge area, would not represent substantial interference with groundwater recharge potential. In addition, all rainwater flowing off of the new impervious structures would flow into the existing stormwater facilities or onto the pervious areas surrounding the new structures. This would allow the stormwater to infiltrate into the groundwater basin as it does currently, resulting in a less than significant impact to groundwater recharge.

Potable water for CHS is supplied by Cal Water, which uses groundwater as its source of water. As the proposed project would not result in an increase in enrollment capacity, no substantial increase in water demand is anticipated. Therefore, no impacts to groundwater supply would occur. The project site is located within an established educational campus, and no new roads or extensions of existing roads are proposed. The project does not include the construction of any new homes or businesses which would require additional water supplies. Operation of the proposed project would not increase demand for or otherwise deplete groundwater supplies. This impact would be less than significant.

c) *Less Than Significant Impact*. The project site is fully developed with educational, sports fields and amenities, uses and does not contain any surface water features. The proposed project site is located in an urbanized area and is not adjacent to any streams, rivers, lakes, or major drainage channels. The closest waterbody is Big Chico Creek, approximately 800 feet from the project site. Existing stormwater runoff from the proposed project site and surrounding area is removed by way of street flows and storm drains, some of which flow into Big Chico Creek. The proposed project includes new buildings and structures that would alter site drainage. However, off-site drainage would not be affected during operation of proposed project. While on-site drainage and off-site may be affected during construction, the project applicant will be required to prepare an SWPPP in order to comply with the RWQCB's General Construction Storm Water Permit. The SWPPP will identify BMPs to be implemented on the project site to minimize soil erosion and protect existing drainage systems. Compliance with existing

[4] West Butte subbasin = 181,560 acres X 43,560 sq. ft. per acre = 7,908,753,600 sq. ft. Project surfaces = 19,400 sq. ft. 19,400 sq. ft. / 7,908,753,600 sq. ft. = 0.0002 percent.

regulations developed to minimize erosion and siltation would reduce this impact to a less than significant level.

d) *Less Than Significant Impact*. As indicated under Issue c) above, the proposed project site is located in an urbanized area and is not adjacent to any streams, rivers, lakes, or major drainage channels. Therefore, implementation of the proposed project would not result in the alteration of the course of a natural waterway nor substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site. The proposed project would involve some minor changes to the amount of impervious surfaces because of the impervious new structures. However, any stormwater flowing from these structures would be routed into existing drainage facilities. The drainage pattern at the project site and in the surrounding areas, as well as surface runoff conditions after implementation of the proposed project, would be similar to existing conditions and would not result in on- or off-site flooding. Therefore, the proposed project would have a less than significant impact on causing flooding on- or off-site.

e) *Less Than Significant Impact*. See discussion of Issues a) and c), above. Although minor changes to the amount of impervious surfaces on the site would occur, implementation of the proposed project would not alter the existing drainage patterns on the site. However, polluted runoff from the project site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and gross pollutants such as trash and debris. Compliance with NPDES permit requirements would ensure that BMPs would be implemented during the construction phase to effectively minimize excessive soil erosion and sedimentation and eliminate non-stormwater discharge off-site. As required by law, BMPs would be included as part of the proposed project to ensure that potentially significant impacts are reduced to less than significant levels. Therefore, impacts associated with stormwater volumes and polluted runoff during the construction of the proposed project would be less than significant.

   Activities associated with operation of the proposed project are not expected to generate substances that can degrade the quality of water runoff. While potential impacts could result from vehicles and other users at the proposed project site during subsequent sporting events, all potential impacts to water quality would be reduced by stormwater pollution control measures and wastewater discharge BMPs already required at the project site as a part of school operation. Therefore, impacts during operation would be considered less than significant.

f) *Less Than Significant Impact*. The proposed project would not otherwise result in degradation of water quality. Compliance with NPDES permit requirements, including SWPPP implementation, would ensure that potential water quality impacts are less than significant.

g) *No Impact*. According to FEMA flood hazard maps (Map 06007C0505E), the project site is not located within a flood zone. Further, the project does not propose the development of housing. Therefore, implementation of the proposed project will not have an impact related to flooding.

h) *No Impact*. Please refer to Issue g) above.

i) *Less Than Significant Impact*. The project site is not protected by levees from any flood hazard. However, dam failure, another potential flooding risk, is the collapse or failure of an impoundment that causes significant downstream flooding. Large dams that could inundate significant portions of Chico, or watersheds in the Chico area, include Shasta Dam (in Shasta

County), Oroville Dam on the Feather River, and Black Butte Dam on Stony Creek (Chico 2007). Prior to the terrorist attacks of September 11, 2001, public information was available that provided structural ratings for dams throughout the country. Since that time, this information has been classified and is not readily available. Dams are regulated by the Division of Safety of Dams of the DWR and are routinely inspected during their impoundment life, which includes monitoring for compliance with seismic stability standards. Thus, dam failure is not considered a reasonably foreseeable event, and the proposed project would not affect dam operations. As such, the proposed project would have a less than significant impact from dam or levee failure.

j) *Less Than Significant Impact*. No large bodies of water exist near the proposed project site. The CHS campus is not located within a potential tsunami or seiche inundation area. Damage to the campus due to a seiche, a seismic-induced wave generated in a restricted body of water, is not likely because no such bodies of water are in close proximity to the CHS campus. Additionally, the campus is located in a developed urban area that is not prone to flooding. Therefore, no mudflows are anticipated at the campus. A less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.10 LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

OVERVIEW

The proposed project would further develop an existing school campus to incorporate elements meant to provide for better athletic facilities and uses at the campus. The City of Chico General Plan identifies the project site as being within the PFS (Public Facilities and Services) land use designation and within the PQ (Public/Quasi Public Facilities) zoning district. The General Plan classifies the PFS designation as an area that includes sites for schools, hospitals, governmental offices, airports, and other facilities that have a unique public character (Chico 2011, p. 3.14). Chico Municipal Code Section 19.50.010 describes the PQ zoning district as an area appropriate for the wide range of public, institutional, and auxiliary uses that are established in response to the health, safety, cultural, and welfare needs of the city. The PQ zoning district is primarily intended to implement the PFS land use designation of the General Plan. The use of the project site as a high school is consistent with the uses allowed for both the PFS land use designation and the PQ zoning district.

The Butte Regional Conservation Plan (BRCP) is being developed by the Butte County Association of Governments on behalf of Butte County, the Cities of Chico, Oroville, Gridley, and Biggs, Caltrans District 3, the Western Canal Water District, the Richvale Irrigation District, the Biggs West-Gridley Water District, and the Butte Water District. The BRCP is both a federal habitat conservation plan and a state natural community conservation plan. It provides streamlined state and federal endangered species act and wetlands permitting for transportation projects, land development, and other covered activities over the 50-year term of the permits. It also provides comprehensive species, wetlands, and ecosystem conservation and contributes to the recovery of endangered species within the plan area. The BRCP covers approximately the western half of Butte County, and includes the entire extent of vernal pool landscapes within Butte County. The plan area focuses on the areas of greatest conflict between growth and development and federal and state protected species. While much of the work for the BRCP has been completed, it has not yet been adopted by the various jurisdictions and agencies.

DISCUSSION OF IMPACTS

a) *No Impact*. The project would not divide an established residential community, as the project would occur entirely on an existing school campus.

b) *No Impact*. The City of Chico General Plan and zoning code identifies the site as being within PFS (Public Facilities and Services) land use designation and within the PQ (Public/Quasi Public Facilities) zoning district. The project's proposed uses would be consistent with these land use designations. As such, the proposed project would not conflict with applicable land use plans, policies, or regulations, and no impact would occur.

c) *No Impact*. There is no adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan that governs the project site. Therefore, the proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan. There would be no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.11 MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

OVERVIEW

There are no active mines within or near the project site and no known areas with mineral resources on the project site.

DISCUSSION OF IMPACTS

a) *No Impact*. No mineral resource recovery sites are located on or in the immediate vicinity of the project site. Implementation of the proposed project would not result in the loss of availability of a known mineral resource or resource recovery site.

b) *No Impact*. Please refer to Issue a).

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.12 NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

OVERVIEW

NOISE FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels (in L_{dn}/CNEL).

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways, and hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (EPA 1971).

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

VIBRATION

Ground vibration can be measured several ways to quantify the amplitude of vibration produced. This can be through peak particle velocity or root mean square velocity. These measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

EXISTING AMBIENT NOISE MEASUREMENTS

In order to quantify existing ambient noise levels in the project area, Michael Baker International conducted four short-term noise measurements on March 31, 2017 (see **Appendix 4.12**). The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site. The 10-minute measurements were taken between 2:00 and 3:00 p.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in **Table 4.12-1.**

Table 4.12-1

Existing Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	Hobart Street and West Sacramento Avenue	62.2	51.2	77.8	2:04 p.m.
2	Warner Street and Brice Avenue	58.3	48.9	67.6	2:19 p.m.
3	Legion Avenue and Citrus Avenue	60.4	51.5	76.9	2:35 p.m.
4	West Lincoln Avenue and Arcadian Avenue	58.2	51.6	71.7	2:51 p.m.

See **Appendix 4.12** for noise measurement outputs.

As shown, the ambient recorded noise levels near the project site ranged from 58.2 dBA to 62.2 dBA L_{eq}. The most common noise in the project vicinity is produced by automotive vehicles (cars, trucks, buses, motorcycles). Traffic moving along streets and freeways produces a sound level that remains relatively constant and is part of the city's minimum ambient noise level. Vehicular noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact With Mitigation Incorporated*.

Construction Term. Noise levels in the project area would temporarily increase due to short-term construction activities. Construction-related noise increases would be temporary and would vary depending on the type of activities and equipment used.

Excavation and grading activities are typically involved in the site preparation phase of the project and usually generate the highest noise levels. Construction-related noise impacts would typically occur during the initial earthwork phases. These phases of construction have the potential to create the highest levels of noise. Typical noise levels generated by construction equipment are shown in **Table 4.12-2**. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be due to random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts).

TABLE 4.12-2
TYPICAL CONSTRUCTION NOISE LEVELS

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	L_{max}	L_{eq}
Air Compressor	80	76
Backhoe/Front End Loader	80	76
Compactor (Ground)	80	73
Concrete Mixer Truck	85	81
Concrete Mixer (Vibratory)	80	73
Concrete Pump Truck	82	75
Concrete Saw	90	83
Crane	85	77
Dozer/Grader/Excavator/Scraper	85	81
Drill Rig Truck	84	77
Generator	82	79
Gradall	85	81
Hydraulic Break Ram	90	80
Jackhammer	85	78
Impact Hammer/Hoe Ram (Mounted)	90	83
Pavement Scarifier/Roller	85	78
Paver	85	82
Pneumatic Tools	85	82
Pumps	77	74

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	
	L_{max}	L_{eq}
Truck (Dump/Flat Bed)	84	80

Source: FTA 2006a

As depicted in **Table 4.12-2**, noise levels associated with individual construction equipment used for typical construction projects can reach levels of up to approximately 83 dBA L_{eq} at a distance of 50 feet.

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

Section 9.38.060 of the City of Chico Municipal Code exempts construction noise if it occurs between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays, and 7:00 a.m. and 9:00 p.m. on other days, construction, alteration, or repair of structures shall be subject to one of the following limits:

- No individual device or piece of equipment shall produce a noise level exceeding eighty-three (83) dBA at a distance of twenty-five (25) feet from the source. If the device or equipment is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close as possible to twenty-five (25) feet from the equipment.

- The noise level at any point outside of the property plane of the project shall not exceed eighty-six (86) dBA.

During the construction phase of the project, exterior noise levels resulting from construction could affect nearby sensitive receivers. As shown in **Table 4.12-2**, noise levels associated with individual construction equipment used for typical construction projects can reach levels of up to approximately 83 dBA Leq at a distance of 50 feet. However, it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the sensitive receptors.

According to the Federal Highway Administration's Roadway Construction Noise Model (FHWA-HEP-05-054), which models construction noise accounting for typical construction equipment fleets and the size of the construction site, construction noise outside of the property plane would not exceed 86 dBA (FTA 2006b). Therefore, construction noise associated with the project is less than significant.

Operational Noise. Long-term noise-related impacts associated with the proposed project would include increased uses of existing athletic fields and associated vehicle traffic to the project site during nighttime athletic events over existing conditions.

Stationary Sources—Operational impacts associated with the project include noise increases from people arriving to and leaving games, cheering spectators, music from speakers and school bands, and public announcement (PA) system use. There are expected to be six varsity football games at CHS between late August and early November, which will occur on Friday nights between 7:30 p.m. and 10:30 p.m. Acoustical studies of high school football games with approximately 1,500 attendees had levels of 61 L_{eq} dBA at a distance of 250 feet from the

center of the field (J. C. Brennan & Associates 2015). This noise measurement included crowd noise, the band performing, and the PA system. The nearest sensitive receptors are the residential areas located approximately 270 feet from the center of the field (near the intersection of Warner Street and Brice Avenue). Using this information and an attenuation rate of about 6 dBA per doubling of distance between the noise source and the receptor, the nearest residences will experience noise levels between 60 and 61 L_{eq} dBA over the course of a game.

While the City of Chico promulgates noise level standards to address long-term noise sources, the noise associated with the proposed project is not a long-term source due to the very intermittent nature of the proposed activities. For instance, the most intensive activity instigated by the project would be football games; however, these events would occur only six times a year. The other major event that will occur at the high school is graduation, which will occur once a year. Due to the intermittent, and relatively short duration of the project's noise generated activities, impacts are less than significant.

Mobile Sources—Since CHS currently plays all of its night football games at PVHS, the trips associated with the football games are already existing. Although the project would not increase existing Chico area traffic, the trips to the nighttime sporting events at CHS would be rerouted to and concentrated to areas around the school. However, the events which draw a majority of attendees, such as a varsity football game, would not occur during peak traffic hours when traffic noise is at its peak. Additionally, the football games that draw large crowds are infrequent events, occurring only six times a year. The other major event that will occur at the high school is graduation, which will occur once a year.

For these reasons, this impact is considered less than significant.

b) *Less Than Significant Impact*. Sources of earthborne vibration include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, earthborne vibration may be described by amplitude and frequency. Increases in groundborne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities.

Construction activities are expected to use equipment such as backhoes, bulldozers, draglines, front loaders, and earthmoving and compacting equipment, which includes compactors, scrapers, and graders. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. This evaluation uses Caltrans's (2004) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for older residential buildings. This is also the level at which vibrations may begin to annoy people in buildings. **Table 4.12-3** displays vibration levels for typical construction equipment.

TABLE 4.12-3
TYPICAL CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer/Tractor	0.003

Source: FTA 2006; Caltrans 2004

It is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure. The nearest off-site structure to any of the construction areas is a residence 50 feet away. Based on the vibration levels presented in **Table 4.12-3**, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.2 inches per second peak particle velocity at 25 feet. Therefore, predicted vibration levels at the nearest off-site structures would not exceed recommended criteria. Once operational, the project would not be a source of groundborne vibration. For these reasons, the impact would be less than significant.

c) *Less Than Significant Impact*. See discussion above in Issue a), Long Term.

d) *Less Than Significant Impact With Mitigation Incorporated*. See discussion above in Issue a), Short Term.

e) *No Impact.* According to the Butte County Airport ALUCP, the proposed project site is not located within the Chico airport compatibility zone (Butte 2002). The project is also not located within 2 miles of any existing airports and would not be anticipated to expose people residing or working in the project area to excessive noise levels. No impact would occur in this regard.

f) *No Impact*. The project site is not in the vicinity of a private airstrip. Therefore, there would be no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.13 POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

OVERVIEW

The project site is located in Chico on an existing high school campus. No residences are proposed as part of the project.

DISCUSSION OF IMPACTS

a) *No Impact*. The project site is located within an established school campus, and no new roads or extensions of existing roads are proposed. The project does not include the construction of any new homes or businesses. The objective of the proposed project is to provide athletic field/track improvements and lighting. Therefore, direct or indirect increases in population growth would not occur as a result of the proposed project.

b) *No Impact*. The project site is within the CHS campus. No residences would be displaced or removed as a result of the proposed project, and the project would have no impact on existing housing.

c) *No Impact*. As discussed under Issue b), the project would not involve the removal or relocation of any housing and would therefore not displace any people or necessitate the construction of any replacement housing.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.14 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 following public services:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

OVERVIEW

FIRE PROTECTION

The City of Chico Fire Department (Chico Fire) provides fire protection and emergency medical services to the project site. Chico Fire services include fire suppression, emergency medical service, rescue service, hazardous material emergency service, public assists (post-fire/accident cleanup, water removal, flooding assistance, assistance to the Police Department), fire prevention and life safety, and emergency preparedness including operation of the Emergency Operations Center at the Fire Training Center. Chico Fire has mutual aid agreements with Cal Fire and the Butte County Fire Department. Chico Fire currently operates 4 fire stations and has 64 full-time personnel, 62 of whom are uniformed firefighters. There are currently 9 active volunteer firefighters in the department. The fire station closest to the project site is Station #2 located near the corner of The Esplanade and Fifth Avenue, approximately 0.6 miles away. Equipment at this station includes a fire engine, a patrol vehicle, and a foam trailer (Chico 2017a).

POLICE PROTECTION

The Chico Police Department (Chico PD) provides law enforcement services to the project site. If requested by the Butte County Sheriff's Office or the California Highway Patrol, Chico PD may provide assistance on a case-by-case basis. Chico PD has 140 full-time employees with an additional 100 police volunteers, including Volunteers in Police Service, Explorers, chaplains, and interns. Chico PD personnel are organized into two divisions: Operations and Support. The Operations Division comprises the Patrol Section, Special Operations Section, and Animal Control Unit. The Support Division comprises the Communications Section, Records Section, Property Section, Detective Bureau, Juvenile Bureau, Crime Analysis Unit, Training Unit, and Tech Services Unit. Business Services for the Chico PD and the Public Information Unit are managed out of the Office of the Chief of Police. The department recently adopted a new community policing emphasis and command structure to better serve the needs of the community, and enhance that interaction. This new command structure consists of a deputy chief, five lieutenants, and two civilian managers, all under the Office of the Chief of Police. Of the five lieutenants, three are assigned as watch commanders, each with a geographic area of responsibility, classified as east, west, or central (Chico 2017b).

SCHOOLS

The Chico Unified School District was formed in 1965 and now serves a 322-square-mile area that includes the entire city as well as the surrounding unincorporated areas of Butte County. The district operates eleven kindergarten through 6th grade (K–6) elementary schools, one kindergarten through 8th grade (K–8) open structure classroom school, three junior high schools, two comprehensive high schools, one continuation high school, one charter high school, one independent study program, and one community day school.

PARKS

Park, recreation, and open space resources, facilities, and services have historically been provided by both the City of Chico Park Division and the Chico Area Recreation and Park District (CARD). In the past, the City had primary responsibility for Bidwell Park and neighborhood parks and CARD had primary responsibility for recreation programming and community parks. In 2010, the City of Chico and CARD entered into a Memorandum of Understanding of Intergovernmental Cooperation, Coordination and Understanding that streamlines the provision of parks and recreational services to the City and surrounding community through a realignment of the roles and responsibilities of each agency. Through this arrangement, the City will retain ownership and maintenance responsibility for Bidwell Park, creekside greenways, and City-owned preserves, while CARD will assume ownership and operation of the various other developed parks and recreation systems in the city.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact.* The proposed project would not require any additional Chico Fire facilities, equipment, and/or staff and is not anticipated to create an additional burden on Chico Fire.

   Chico Fire requires emergency vehicle access to all portions of the proposed site. In addition, water for fire suppression must be available to the site. The project site provides fire lanes and fire hydrants to the campus; water pressures on the site exceed the minimum required for fire suppression support. Compliance with these requirements would ensure that this impact is less than significant.

b) *Less Than Significant Impact.* The proposed project would not result in a significant increase in demand for police protection resulting in new or expanded police facilities. Police facilities and the need for expanded facilities are based on the staffing levels these facilities have to accommodate. Police staffing levels are generally based on the population/police officer ratio, and an increase in population is usually the result of an increase in housing or employment. Because the proposed project would not increase the population of Chico, the project would not result in the need for increase in police protection or police facilities. Therefore, the proposed project would have a less than significant impact in this area.

c) *No Impact*. The purpose of the proposed project is the improvement of existing athletic facilities. This development will not result in an increase of student population at CHS. The proposed project does not result in an increase in housing or population in the city which would require additional educational facilities. No increase in student enrollment is proposed as part of this project. Therefore, the proposed project would have no impact in this area.

d) *No Impact*. While improvements are being made to the on-site athletic fields and track, the students at CHS may not be able to use these recreational amenities. However, this impact would be temporary and less than significant since other recreational amenities would still be

available on-site. Given that the proposed project would not increase the enrollment capacity of the school or increase the City's population, the project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Adequate recreational facilities would continue to be provided on-campus during construction as not all proposed improvements would happen concurrently. Students would not need to use off-site recreational facilities. Therefore, the proposed project would not require the construction or expansion of off-campus recreational facilities and would also not result in an increase in demand for parks and recreation facilities in the surrounding area.

e) *No Impact*. As the proposed project does not result in an increase in housing or population in the city, the project is not anticipated to have significant impacts on other public facilities.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.15 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?	☐	☐	☐	☒
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?	☐	☐	☒	☐

OVERVIEW

Chico currently includes a total of 4,317 acres of park, recreation, and open space areas, including Bidwell Park. Park, recreation, and open space resources, facilities, and services are provided by both the City of Chico Park Division and CARD.

DISCUSSION OF IMPACTS

a) *No Impact*. See the discussion in subsection 4.14d), Parks. While improvements are being made to the on-site athletic fields and track, the students at CHS would be able to use these recreational amenities as not all proposed improvements would occur concurrently. Any impact during construction would be temporary and not result in the need for additional facilities. The proposed project would not require additional staffing at nearby parks and recreation-oriented public facilities. Additionally, significant and/or accelerated deterioration at parks and recreation-oriented public facilities from possible increased usage is not expected because the proposed project would not result in an increase use of these facilities.

b) *Less Than Significant Impact*. The proposed project would result in a change of the existing athletic amenities at CHS. These improvements would not require the construction or expansion of additional off-campus recreational facilities. The environmental impacts of the proposed project are analyzed in this Initial Study and it has been determined through this analysis that the proposed project would not result in an adverse physical effect on the environment with implementation of the mitigation measures identified in this Initial Study. As such, the proposed project would have a less than significant impact in this issue area.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.16 TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

OVERVIEW

The L-shaped CHS campus is bordered by W. Sacramento Avenue on the north, The Esplanade on the east, W. Lincoln Avenue and Legion Avenue on the south, and Warner Street on the west.

The major thoroughfare in the vicinity is The Esplanade. SR 99 is located approximately 1.3 miles east of the project site. SR 32 (Nord Avenue) is approximately a half mile to the west of the project site. Depending on the starting point, the site can be accessed from W. Sacramento Avenue, W. Lincoln Avenue, or Warner Street. All surrounding roadways are fully developed with curb, gutter, and sidewalk improvements. The intersections of W. Sacramento Avenue/Esplanade, W. Lincoln Avenue/Esplanade, Legion Avenue/Warner Street and Warner Street/W. Sacramento Avenue are all signalized.

The school campus has five parking lots. The nearest lots to the athletic fields would be two located on W. Sacramento Avenue. The lot most likely to be used for the stadium would be the lot at the northwestern corner of the campus. This lot has approximately 260 spaces, including

spaces compliant with the Americans with Disabilities Act of 1990, and an area for bus parking. The other large lot on W. Sacramento has approximately 240 spaces.

TRIP GENERATION

It is expected that the highest trip-generating use of the new athletic facilities will be varsity football games, which typically occur at 7:30 p.m. on Friday evenings. During the 2017 season, CHS is scheduled to have six home games during the period from August 25 to November 3. Other events could be hosted at the facility throughout the year, including junior varsity and freshman football games, soccer matches, and track meets. However, varsity football games have historically drawn the most spectators. These events are not considered part of the school's typical weekday trip generation because they occur infrequently throughout the year and often on days (e.g., Friday) that fall outside the Tuesday to Thursday range, which is considered the typical weekday for commuter traffic. Further, varsity football games typically start after the commuter peak period has ended. Some events (e.g., junior varsity football games) may take place during the weekday p.m. commute peak, but only a few of these events are expected during the year and they generate a much smaller amount of spectator traffic.

Development of the proposed project would not increase traffic related to team practices as the teams already practice on the existing fields, the team members are already at the school as part of their everyday school schedule, and the proposed improvements would not result in increased participation in the practices.

The trip generation potential of the proposed stadium is not documented in land uses contained in the *Trip Generation* manual published by the Institute of Transportation Engineers (ITE). Athletic facilities are typically constructed in conjunction with the adjacent school and are thereby accounted for in the trip generation potential of the school. The school itself is the largest trip generator on a typical weekday, so separate traffic operations analyses are not usually required for athletic facilities.

Further, school athletic fields are built to host a relatively small number of events per year with varying levels of attendance. As such, data collection at a similar facility would be difficult because usage varies widely on a day-to-day or week-to-week basis, and is specific to an individual site. However, attendance at CHS's varsity football night games can be determined based on ticket sales for their home night games played at PVHS. The average ticket sales at these games is 1,900 tickets. Varsity football games have the highest attendance and therefore would represent the largest amount of traffic caused by implementation of the proposed project. This number and other typical high school attendance factors can be used to calculate the potential number of vehicle trips at the stadium during a night home game. The assumptions to determine the potential vehicle trips are shown in **Table 4.16-1**, below.

TABLE 4.16-1
VARSITY FOOTBALL GAME TRIP GENERATION ASSUMPTIONS

TRIP FACTORS	ASSUMPTIONS
Average size of events	2,000 persons (average attendance 1,900, plus 100 staff and players)
Typical time of event	7:30 p.m. to 10:00 p.m.
Typical day of event	Friday
Mode split of attendees	Assumed 85% automobile, 15% walking/biking
Vehicle occupancy of attendees	2.5 persons per vehicle
Total one-way vehicle trips	680

The average size of events includes 100 staff and players, as well as athletic trainers and cheerleaders, who would already be at the stadium before most of the crowd arrives. It is assumed that the away team arrives by bus. Based on the 2017 schedule, all of CHS's varsity football games start at 7:30 p.m. on Friday, and it is assumed that this will continue to be the case in the coming years. The average vehicle occupancy is derived from previously published traffic impact studies, such as the *Walla Walla High School Track and Football Stadium Relocation – Transportation Review* completed by Kittelson & Associates (2015) and the *Traffic Study for John Glenn High School Athletic Fields Improvement Project* prepared by the KOA Corporation (2017). The average vehicular occupancy for these types of events is generally higher than for commuting trips as people are more likely to travel together as groups (e.g., families and friends arriving together).

Based on these assumptions, it is estimated that there could be up to 680 vehicles (1,900 average attendance + 100 staff and players = 2,000 people x 85 percent vehicle mode of travel rate / 2.5 persons/vehicle = 680 vehicles) traveling to CHS for a varsity football game, which currently would travel to PVHS. However, these would be new trips to CHS during night games, which currently do not occur at the school. These vehicles would not all arrive during a single hour, with the staff and players and some spectators arriving more than an hour before the game.

During the 2015–16 school year, CHS had a student enrollment of 1,770 (CHS 2016). The ITE *Trip Generation* manual estimates that a high school with 1,770 students will generate approximately 734 trips during a typical weekday a.m. peak hour; however, this would typically occur in a more condensed time period than arrivals for a sporting event. Given the likely spread of arrivals, the peak hour of traffic traveling to the school for a game is expected to be lower than what would be expected for a school of CHS's size during a typical weekday a.m. peak hour.

PUBLIC TRANSIT

CHS is served by a number of public transit bus routes from Butte Regional Transit (B-Line). Routes 8 and 9 travel up and down Warner Street, providing bus transit from 6:30 a.m. to 10:00 p.m. Routes 15 and 16 provide bus transportation for the length of The Esplanade, from 6:30 a.m.–9:30 p.m. for Route 15 and 7:30 a.m.–6:30 p.m. for Route 16.

PEDESTRIAN AND BICYCLE

The Chico Urban Area Bicycle Plan (2012) identifies existing and planned bikeway facilities in the city. The facilities identified in the Master Plan are defined as follows.

- Class I Bike Path. Provides a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal cross flows by motorists. Caltrans standards call for Class I bikeways to have a minimum of 8 feet of pavement with 2-foot graded shoulders on either side, for a total right-of-way of 12 feet. These bikeways must also be at least 5 feet from the edge of a paved roadway.

- Class II Bike Lane. Provides a restricted right-of-way designated for the exclusive or semi exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted. Caltrans standards generally require a 5-foot bike lane from face of curb or edge of roadway with a 6-inch white stripe separating the roadway from the bike lane.

- Class III Bike Route. Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists. Roadways designated as Class III bike routes

should have sufficient width to accommodate motorists, bicyclists, and pedestrians. Other than a street sign, there are no special markings required for a Class III bike route.

Pedestrian facilities are available adjacent to the site by existing sidewalks on all of the surrounding roadways. The city has the most extensive bikeway system in Butte County. Existing bicycle transportation facilities include 52.9 miles of Class I bicycle facilities, 80.2 miles of Class II bicycle lanes, and 82.0 miles of Class III routes, for a total of 215.3 miles. Identified bicycle facilities adjacent to the project site include a Class II bike lane on Warner Street, a Class I bike path through the CHS campus, and a Class III bike route on Citrus Avenue and The Esplanade.

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact*.

Construction Traffic. During construction, it is anticipated that traffic impacts would be primarily due to construction worker trips, the movement of heavy equipment that would be used for construction to and from the site, and material hauling. The total number of construction-related trips would vary from month to month depending on the type and intensity of construction work being performed. However, due to the limited amount of construction, the number of construction workers for the project would not be substantial and would not result in a substantial increase in traffic in the area.

Operational Traffic. The largest traffic volume during operation of the proposed project's athletic improvements would occur during a varsity football game, which in essence would be relocated trips currently going to PVHS to attend a game. Because the most direct routes to the proposed project site would be via W. Sacramento Avenue and Warner Street, it is assumed that the majority of traffic attending a sporting event at CHS would use these two two-lane roadways to access the site. The City of Chico General Plan identifies these roadways as arterial roadways (Chico 2011). Vehicle traffic operations conditions at intersections and roadway segments can be described in terms of level of service (LOS). LOS is a common qualitative measurement of the effects that various factors such as speed, travel time, traffic interruptions, freedom to maneuver, and safety have on traffic operations from the perspective of the driver. Intersection and roadway segment LOS criteria range from A, representing the best conditions, to F, representing overcapacity conditions. LOS E represents "at capacity" operations. The Transportation Research Board developed empirical LOS standards that were published in the 2000 edition of the *Highway Capacity Manual 2000* (HCM), which was current at the time the Chico General Plan EIR was produced. The HCM was updated in 2010.

Table 4.16-2 describes HCM 2000 criteria for peak-hour LOS by roadway function and shows the PM peak hour traffic volume thresholds for each LOS. Except as noted in the table, the thresholds represent two-way traffic volumes.

TABLE 4.16-2
HCM 2000 PM PEAK HOUR ROADWAY SEGMENT LOS THRESHOLDS

Facility Type	Level of Service					
	A	B	C	D	E	F
Minor 2-Lane Highway	90	200	680	1,410	1,740	>1,740
Major 2-Lane Highway	120	290	790	1,600	2,050	>2,050
4-Lane, Multilane Highway[1]	1,070	1,760	2,530	3,280	3,650	>3,650
Major 2-Lane Collector	–	–	550	1,180	1,520	>1,520
2-Lane Arterial	–	–	970	1,760	1,870	>1,870
4-Lane Arterial, Undivided	–	–	1,750	2,740	2,890	>2,890
4-Lane Arterial, Divided	–	–	1,920	3,540	3,740	>3,740
6-Lane Arterial, Divided	–	–	2,710	5,320	5,600	>5,600
8-Lane Arterial, Divided	–	–	3,720	7,110	7,470	>7.470
2-Lane Freeway[1]	1,110	2,010	2,880	3,570	4,010	>4,010
2-Lane Freeway + Auxiliary Lane[1]	1,410	2,550	3,640	4,490	5,035	>5,035
3-Lane Freeway[1]	1,700	3,080	4,400	5,410	6,060	>6,060
3-Lane Freeway + Auxiliary Lane[1]	2,010	3,640	5,180	6,350	7,100	>7,100
4-Lane Freeway[1]	2,320	4,200	5,950	7,280	8,140	>8,140
6-Lane Freeway	3,400	6,160	8,800	10,820	12,120	>12,120
6-Lane Freeway + Auxiliary Lane	3,740	6,720	9,580	11,760	13,160	>13,160

Source: Chico 2010, Table 4.5-1
Notes: [1] LOS capacity threshold is for one direction.
– LOS is not achievable due to type of facility.

The Chico General Plan EIR provides an analysis of the city's roadway networks and the acceptable LOS for certain roadways. Both W. Sacramento Avenue and Warner Street are included in this analysis. **Table 4.16-3** identifies the existing PM peak hour[5] conditions and the acceptable LOS for these streets near the project site.

[5] In urban and suburban areas, the peak hour normally occurs every weekday, during what is considered "rush hour" traffic.

TABLE 4.16-3
HCM 2000 PM PEAK HOUR ROADWAY SEGMENT LOS THRESHOLDS

Roadway Segment	Facility Type	General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
W. Sacramento Avenue					
Hobart St to Citrus Ave	2-Lane Arterial	D	600	0.32	C
Warner Street					
W Sacramento Ave to Stadium Way	2-Lane Arterial	E	800	0.43	C

Source Chico 2010, Table 4.5-5
Note: V/C = volume to capacity

As shown, W. Sacramento Avenue and Warner Street, adjacent to the site, have an existing LOS C during the PM peak hour period and a General Plan threshold of LOS D and E, respectively. As shown in **Table 4.16-2**, two-lane arterials have a volume of 1,760 vehicles for a LOS D and 1,870 for a LOS E. The addition of the proposed project's game day traffic of 680 vehicles would not increase the LOS for the two roadways segments beyond the acceptable thresholds. In addition, these game day events would only occur on an occasional basis, because the games' start at 7:30 p.m. would only occur at the end of the PM peak hour. Chico's rush hour is generally over by 6:00 p.m., and not all of the 680 vehicles would use these roadways to access the site. Therefore, the proposed project would have a less than significant impact on established level of service standards for all site access roads.

b) *No Impact*. See discussion for Issue a) above. The City of Chico General Plan Circulation Element includes a number of policies intended to improve the City's roadway, bicycle, pedestrian, and public transit circulation system. The Butte County Association of Governments 2016 Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS) also includes policies for improving the transportation system in Butte County. As discussed above, the proposed project would have a less than significant impact on established level of service standards for all site access roads. The proposed project is an existing school facility, and the proposed project would not add new streets or bicycle/pedestrian paths to the City's existing circulation system. In addition, project implementation would not result in a change to the existing bicycle, pedestrian, or public transit routes or result in the need for expanding these routes. Finally, the proposed project would not result in a conflict with transportation/traffic-related policies listed in the Chico General Plan or the RTP/SCS. The project would have no impact.

c) *No Impact*. The project would not affect air traffic volumes. The project is located outside the airport land use influence area of the Chico Municipal Airport; therefore, it would not affect flight patterns or interfere with airport operations. There would be no impact.

d) *No Impact*. No change in existing access points/roadways are proposed with implementation of the project. Access to the project site would be provided by existing access points. The existing access points would not create hazards due to design features or incompatible uses. There would be no impact.

e) *No Impact*. Emergency vehicles would access the site from The Esplanade, W. Sacramento Avenue, Warner Street, or W. Lincoln Avenue, as they would currently. No changes in emergency vehicle access are proposed for the project. The existing on-site access would

continue to accommodate through-movements of emergency vehicles. There would be no impact from the proposed project.

f) *No Impact*. The project proposes the construction of improvements to existing athletic facilities as well as the addition of design components to improve enjoyment of these facilities and allow for expanded use. CHS is already served by bus routes and bike/pedestrian paths. Implementation of the proposed project would not decrease the ability to use these facilities. The proposed project will not conflict with adopted plans for alternative transportation and would not have an impact on alternative transportation.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.17 TRIBAL CULTURAL RESOURCES. 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:				
a) 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 section 5020.1(k), or?	☐	☒	☐	☐
b) 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

OVERVIEW

Chico is located within the boundaries of Konkow or Northwestern Maidu territory. Further, the city is still home to a vibrant Native American community as exemplified by the Mechoopda Indian Tribe of the Chico Rancheria.

A records search conducted at the Northeast Information Center of the California Historical Resources Information System at California State University, Chico, for the City of Chico's General Plan update identified 244 known archaeological sites and isolated features/artifacts, including prehistoric and historic sites, within the city's planning area. The majority of the prehistoric sites were bedrock milling stations and lithic scatters (e.g., areas representing the manufacture of stone tools) located along creeks and streams such as Mud Creek and Big Chico Creek. These are areas of high archaeological sensitivity. Many Mechoopda villages were located along these drainages as recently as the late nineteenth century.

Historic sites in Chico primarily consist of residential and commercial buildings, but several trails and other linear features (e.g., the Southern Pacific Railroad alignment, historic roads, and wagon wheel ruts) are located throughout the city's planning area. One historic district and 497 properties in the City of Chico are listed in the current Office of Historic Preservation Directory of Properties, and an additional 17 properties are listed in the vicinity of Chico. The directory identifies 122 properties listed in the National Register and California Register; 80 properties that are eligible for inclusion in the National Register; 121 properties that appear eligible for listing in a local historic register; and 168 properties that are not eligible for inclusion in the National Register. More than

250 resources are listed on the City of Chico Historic Resources Inventory (Chico 2010, pp. 4.11-5–4.11-6).

The football, baseball, softball, and soccer fields are not considered to be of any historical importance and are not identified as such by the California State Historical Resources Commission, the Chico General Plan or General Plan EIR, or the Chico Historic Resources Inventory.

DISCUSSION

a) *Less Than Significant With Mitigation Incorporated*. The proposed project would involve improvements to the existing athletic facilities and construction of bleachers, storage facilities, an entry building, and team rooms on the CHS campus within the areas of the existing fields. The football, baseball, softball, and soccer fields are not considered to be of any historical importance and are not identified as such by the California State Historical Resources Commission, the Chico General Plan or General Plan EIR, or the Chico Historic Resources Inventory. No changes to existing CHS buildings would occur with implementation of the proposed project. Improvements to the athletic fields and construction of bleachers, storage facilities, an entry building, and team rooms would occur within the existing field area and would not result in changes to the existing CHS buildings. However, unanticipated and accidental historical discoveries are possible during project implementation, especially during excavation, and have the potential to impact unknown historical resources. As such, mitigation measure **MM 4.5.1** have been incorporated into the proposed project.

b) *Less Than Significant With Mitigation Incorporated*. The entire project site has been developed and used for school-related activities for many years, and no known cultural resources or significant archaeological resources have been identified within the project area. The site has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. However, unanticipated and accidental discovery of California Native American tribal cultural resources are possible during project implementation, especially during excavation, and have the potential to impact unique cultural resources. As such, mitigation measures **MM 4.5.1** and **MM 4.5.3** have been incorporated into the proposed project.

MITIGATION MEASURES

Implement mitigation measures **MM 4.5.1** and **MM 4.5.3**.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.18 UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

OVERVIEW

The City of Chico Public Works is responsible for wastewater and storm drainage services for the city, including CHS. Water service in the project area is provided by Cal Water. Solid waste disposal in Chico is provided by two companies: Norcal Waste Systems of Butte County and North Valley Waste Management.

WASTEWATER COLLECTION AND TREATMENT

The City of Chico maintains facilities to convey, treat, and dispose of municipal wastewater generated within city limits. Wastewater in the city is either discharged to septic systems or routed to the sanitary sewer system. Wastewater discharged to septic systems eventually percolates into the aquifer underlying the city.

The city's gravity-flow sewer system consists of gravity sewers and pumping stations to collect wastewater from residential, commercial, and industrial customers.

The city's sanitary sewer system includes 388 miles of pipelines, consisting of 384 miles of gravity sewers and 4 miles of force mains, with 14 lift stations (Chico 2014, p. i). Once collected, wastewater is discharged to trunk sewers and conveyed to the Water Pollution Control Plant (WPCP) for treatment.

Wastewater treatment is provided by the WPCP, located at 4827 Chico River Road, approximately 4 miles southwest of the city in the western portion of Butte County. The WPCP serves development both within and outside the city limits. The WPCP is a modern 12 million gallon per day (mgd) capacity, secondary treatment, activated sludge, wastewater treatment plant with future expandability to 15 mgd capacity (Chico 2017c). As of 2015, the average daily dry weather flow was approximately 6.0 mgd (Central Valley RWQCB 2016).

WATER SERVICES

Water service in the project area is provided by Cal Water, which supplies water service to 1.7 million people (435,000 connections) in California. In Butte County, Cal Water obtains groundwater from subbasins of the Sacramento Valley Groundwater Basin, including the Vina Subbasin, the West Butte Subbasin, and the East Butte Subbasin (Chico 2010, p. 4.12-35). The Cal Water *Chico-Hamilton City District 2015 Urban Water Management Plan* (UWMP) provides water supply and demand information through 2040. The water supply available to the city is identified in the UWMP and is based on three water supply condition scenarios: average/normal water year, single dry water year, and multiple dry water years. As shown in **Table 4.18-1**, Cal Water has adequate water supply to meet projected demand through 2040 for all scenarios. Because Cal Water obtains its water from groundwater, allocated supply is not a factor in the 2015 UWMP. The City would pump sufficient amounts of groundwater to supply the needs of its water customers.

TABLE 4.18-1
WATER SUPPLY AND DEMAND

	Water Supply and Demand by Year (acre feet)				
	2020	**2025**	**2030**	**2035**	**2040**
Normal Year Scenario					
Supply	29,397	32,162	33,981	35,916	37,974
Demand	29,397	32,162	33,981	35,916	37,974
Supply/Demand Difference	0	0	0	0	0
Single Dry Year Scenario					
Supply	31,978	34,986	36,965	39,070	41,309
Demand	31,978	34,986	36,965	39,070	41,309
Supply/Demand Difference	0	0	0	0	0
Multiple Dry Years Scenario (3rd Year shown)					
Supply	31,978	34,986	36,965	39,070	41,309
Demand	31,978	34,986	36,965	39,070	41,309
Supply/Demand Difference	0	0	0	0	0

Source Cal Water 2015, Tables 3-4, 7-2, 7-3, and 7-4.

STORM DRAINAGE

The existing storm drainage system in the city is generally a conventional drop inlet storm drainage pipeline collection and conveyance system. This system collects storm runoff from rain that falls upon local neighborhoods and conveys this runoff to the creeks that flow through the city. The surface drainage system that collects overland storm runoff from adjacent properties consists of paved street shoulders with curbs and gutters, dirt or gravel street shoulders with curbs, or dirt or gravel shoulders shaped to form a roadside swale. These surface drainage systems transport runoff from the city's underground pipe system and/or to the creeks that flow through the city. There are five channels traversing the urban area that accept stormwater runoff: Comanche Creek, Little Chico Creek, Big Chico Creek, Lindo Channel, and Mud/Sycamore Creek (Chico 2007, p. 5-39).

SOLID WASTE

Chico Resource and Recycling Division provides solid waste and recycling collection in the city. As shown in **Table 4.18-2**, the majority of the city's solid waste is disposed of at the Neal Road Recycling and Waste Facility. According to the figures published by the California Department of Resources Recycling and Recovery (CalRecycle) (2017a), in 2015, the Neal Road Recycling and Waste Facility received approximately 77.8 percent of Chico's solid waste, or 68,933 tons. As of July 2009, the Neal Road Recycling and Waste Facility had a remaining capacity of 20 million cubic yards.

TABLE 4.18-2
SOLID WASTE DISPOSAL FACILITIES USED BY THE CITY OF CHICO

Destination Facility	Solid Waste Disposal (tons/year)			Landfill Information		
	2013	2014	2015	Remaining Capacity (cubic yards)	Remaining Capacity Date	Cease Operation Date
Altamont Landfill & Resource Recvry	-	3	270	64,400,000	12/31/14	1/1/2025
Anderson Landfill, Inc.	45	19	31	11,914,025	3/16/2008	1/1/2093
Azusa Land Reclamation Co. Landfill	39	19	39	51,512,201	9/30/12	1/1/2045
Forward Landfill, Inc.	138	105	59	22,100,000	12/31/2012	1/1/2020
Highway 59 Disposal Site	-	58	-	28,025,334	9/1/2005	1/1/2030
McKittrick Waste Treatment Site	24	-	-	769,790	4/5/2012	12/31/2059
Monterey Peninsula Landfill	-	1	7	48,560,000	12/31/2004	2/28/2107
Neal Road Recycling and Waste Fclty	64,109	64,679	68,933	20,874,970	7/1/2009	1/1/2033
North County Landfill & Recycling	185	58	188	35,400,000	12/31/2009	12/31/2048
Potrero Hills Landfill	6	-	45	13,872,000	1/1/2006	2/14/2048
Recology Hay Road	37	-	47	30,433,000	7/28/2010	1/1/2077
Recology Ostrom Road LF Inc.	8,543	3,550	3,020	39,223,000	6/1/2007	12/31/2066
Sacramento County Landfill (Kiefer)	252	191	139	112,900,000	9/12/2005	1/1/2064
Yolo County Central Landfill	37	24	28	n/a	n/a	1/1/2081
Yearly Total	73,415	68,706	72,806			
Average per Resident (lbs/day)	4.6	4.3	4.5			

Source: CalRecycle 2017a, 2017b, and 2017c

DISCUSSION OF IMPACTS

a) *No Impact*. CHS is connected to the City of Chico's existing wastewater collection treatment system, which includes the WPCP. The wastewater treatment plant is currently in compliance with all wastewater standards and treatment requirements of the Central Valley RWQCB. The proposed project would not result in an increase of student population, thus requiring an expanded capacity or revision of standards and treatment at the WPCP. The chemical and physical characteristics of wastewater flows from the new restrooms would be the same as existing flows from the campus. As such, the development of the proposed project would not result in the City or the WPCP exceeding the wastewater standards of the Central Valley RWQCB.

b) *No Impact*. There is no proposed increase in student capacity as part of this project. The project would result in a minimal additional demand for water from the City's water supply and increase in wastewater flows entering the City's wastewater treatment plant as a result of project operation. However, the use of CHS for night games would result in a decrease in water and wastewater demand at PVHS as bacilli the project would just result in a shift in venue for the various sporting events. As such, the project would not result in the construction of new water or wastewater facilities that would result in a physical impact to the environment. Therefore, the project will have no impact on water and wastewater facilities.

c) *Less Than Significant Impact*. Implementation of the proposed project would increase the amount of impervious surfaces on the project site, which would result in a slight increase stormwater runoff. However, existing on-site drainage retention facilities at CHS are sufficient to accommodate this increase in stormwater runoff as the proposed project would not result in a large increase in impervious surfaces. The school is connected to the City of Chico's storm drain system. Therefore, the proposed project would have a less than significant impact.

d) *Less Than Significant Impact*. CHS is provided domestic water service by Cal Water. While the proposed project would construct new restroom facilities, there would be no increase in student population. Therefore, water service demand would not be substantially greater than the existing demand for water service. This impact is considered less than significant.

e) *Less Than Significant Impact*. The project site is currently provided sanitary sewer service by the City of Chico through its wastewater collection and treatment system. The City of Chico currently generates wastewater which is treated at the WPCP. Capacity at the WPCP is 12 mgd and average wastewater flow is 6.0 mgd. While the proposed project would construct new restroom facilities, no increase in student population is anticipated with development of the proposed project. The proposed project would not result in substantially greater wastewater collection and treatment demand than that associated with current operations at the project site. The impact is less than significant.

f) *Less Than Significant Impact*. As no increase in student population is anticipated with development of the proposed project, the proposed project would not significantly increase the amount of solid waste already generated by CHS. While the proposed project would allow the use of the stadium and athletic fields at night, this use would not substantially increase the City's solid waste production as the solid waste currently attributed to CHS use at the PVHS stadium would no longer be produced. The Neal Road Recycling and Waste Facility has projected adequate capacity through 2033. Once this facility is closed, the City will have to find an alternative disposal site. However, the proposed project would not substantially increase solid waste in the city and existing landfills have sufficient capacity to accommodate

the relatively minor amounts of waste that would be generated by the proposed project. This is a less than significant impact.

g) *Less Than Significant Impact*. The proposed project is required to comply with all state and federal statutes regarding solid waste. This impact is considered less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4.19 MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wild-life population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	☐	☐	☒	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION OF IMPACTS

a) *Less Than Significant Impact With Mitigation Incorporated*. As discussed in subsection 4.4 Biological Resources, the proposed project may impact special-status bird and bat species. However, mitigation measures **MM 4.4.1** through **MM 4.4.7** would reduce these impacts to less than significant levels. Additionally, the proposed project has the potential to impact undiscovered cultural resources, as discussed in subsection 4.5 Cultural Resources. However, with implementation of mitigation measures **MM 4.5.1** through **MM 4.5.3**, these potential impacts would be reduced to a level that is considered less than significant.

b) *Less Than Significant Impact*. The proposed project would take place on an existing school campus and would improve existing athletic facilities. While the project does include the addition of lighting facilities for the stadium, baseball, softball, and soccer fields, these facilities would not impact the scenic quality or substantially increase nighttime glare and sky glow in the area on a cumulative basis as these facilities would be used for short periods of time and would not result in a continual increase in nighttime glare or sky glow. The proposed project would have a less than significant cumulative impact.

c) *Less Than Significant Impact With Mitigation Incorporated*. With implementation of proposed mitigation measures, such as **MM 4.1.1**, **MM 4.8.1**, and **MM 4.12.1**, the various improvements to the CHS athletic facilities would not result in adverse impacts on human beings.

5.0 REFERENCES

5.1 DOCUMENTS REFERENCED IN INITIAL STUDY AND/OR INCORPORATED BY REFERENCE

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APPENDIX 4.3
AIR QUALITY

Chico High School Athletic Fields Project

Butte County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	19.05	Acre	19.05	829,818.00	0
Unrefrigerated Warehouse-No Rail	19.64	1000sqft	0.45	19,640.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assumed all phases overlapped for a worst case scenario.

Vehicle Trips - No increase in ADT over existing conditions.

Energy Use - Lighting energy based on lighting specifications.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	78.00
tblConstructionPhase	NumDays	300.00	78.00
tblConstructionPhase	PhaseEndDate	2/11/2019	11/30/2017
tblConstructionPhase	PhaseEndDate	12/17/2018	11/30/2017
tblConstructionPhase	PhaseEndDate	9/11/2017	8/14/2017
tblConstructionPhase	PhaseStartDate	1/15/2019	8/15/2017
tblConstructionPhase	PhaseStartDate	10/24/2017	8/15/2017
tblConstructionPhase	PhaseStartDate	8/29/2017	8/1/2017
tblEnergyUse	LightingElect	0.00	0.09
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	22.0014	59.8483	60.9958	0.1261	18.2379	2.8803	21.1182	9.9762	2.6499	12.6261	0.0000	12,748.1955	12,748.1955	1.5499	0.0000	12,786.9441
Maximum	**22.0014**	**59.8483**	**60.9958**	**0.1261**	**18.2379**	**2.8803**	**21.1182**	**9.9762**	**2.6499**	**12.6261**	**0.0000**	**12,748.1955**	**12,748.1955**	**1.5499**	**0.0000**	**12,786.9441**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	22.0014	59.8483	60.9958	0.1261	18.2379	2.8803	21.1182	9.9762	2.6499	12.6261	0.0000	12,748.1955	12,748.1955	1.5499	0.0000	12,786.9441
Maximum	**22.0014**	**59.8483**	**60.9958**	**0.1261**	**18.2379**	**2.8803**	**21.1182**	**9.9762**	**2.6499**	**12.6261**	**0.0000**	**12,748.1955**	**12,748.1955**	**1.5499**	**0.0000**	**12,786.9441**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Energy	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0079**	**0.0958**	**0.0845**	**5.7000e-004**	**0.0000**	**7.2900e-003**	**7.2900e-003**	**0.0000**	**7.2900e-003**	**7.2900e-003**		**114.9682**	**114.9682**	**2.2200e-003**	**2.1100e-003**	**115.6519**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Energy	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0079**	**0.0958**	**0.0845**	**5.7000e-004**	**0.0000**	**7.2900e-003**	**7.2900e-003**	**0.0000**	**7.2900e-003**	**7.2900e-003**		**114.9682**	**114.9682**	**2.2200e-003**	**2.1100e-003**	**115.6519**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2017	8/14/2017	5	10	
2	Building Construction	Building Construction	8/15/2017	11/30/2017	5	78	
3	Architectural Coating	Architectural Coating	8/15/2017	11/30/2017	5	78	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 29,460; Non-Residential Outdoor: 9,820; Striped Parking Area: 49,789 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	71.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	357.00	139.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1672	0.1632	1.4048	1.7700e-003	0.1717	1.6900e-003	0.1734	0.0455	1.5700e-003	0.0471		174.9051	174.9051	0.0125		175.2176
Total	**0.1672**	**0.1632**	**1.4048**	**1.7700e-003**	**0.1717**	**1.6900e-003**	**0.1734**	**0.0455**	**1.5700e-003**	**0.0471**		**174.9051**	**174.9051**	**0.0125**		**175.2176**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1672	0.1632	1.4048	1.7700e-003	0.1717	1.6900e-003	0.1734	0.0455	1.5700e-003	0.0471		174.9051	174.9051	0.0125		175.2176
Total	**0.1672**	**0.1632**	**1.4048**	**1.7700e-003**	**0.1717**	**1.6900e-003**	**0.1734**	**0.0455**	**1.5700e-003**	**0.0471**		**174.9051**	**174.9051**	**0.0125**		**175.2176**

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3462	27.2279	7.5422	0.0541	1.3560	0.3223	1.6784	0.3903	0.3084	0.6987		5,656.9141	5,656.9141	0.5699		5,671.1607
Worker	3.3165	3.2370	27.8618	0.0351	3.4046	0.0336	3.4382	0.9030	0.0311	0.9341		3,468.9504	3,468.9504	0.2479		3,475.1487
Total	**4.6627**	**30.4649**	**35.4041**	**0.0892**	**4.7606**	**0.3559**	**5.1165**	**1.2933**	**0.3395**	**1.6328**		**9,125.8644**	**9,125.8644**	**0.8178**		**9,146.3094**

3.3 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3462	27.2279	7.5422	0.0541	1.3560	0.3223	1.6784	0.3903	0.3084	0.6987		5,656.9141	5,656.9141	0.5699		5,671.1607
Worker	3.3165	3.2370	27.8618	0.0351	3.4046	0.0336	3.4382	0.9030	0.0311	0.9341		3,468.9504	3,468.9504	0.2479		3,475.1487
Total	**4.6627**	**30.4649**	**35.4041**	**0.0892**	**4.7606**	**0.3559**	**5.1165**	**1.2933**	**0.3395**	**1.6328**		**9,125.8644**	**9,125.8644**	**0.8178**		**9,146.3094**

3.4 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.2319					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**13.5642**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6596	0.6438	5.5412	6.9800e-003	0.6771	6.6800e-003	0.6838	0.1796	6.1900e-003	0.1858		689.9033	689.9033	0.0493		691.1360
Total	**0.6596**	**0.6438**	**5.5412**	**6.9800e-003**	**0.6771**	**6.6800e-003**	**0.6838**	**0.1796**	**6.1900e-003**	**0.1858**		**689.9033**	**689.9033**	**0.0493**		**691.1360**

3.4 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.2319					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**13.5642**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6596	0.6438	5.5412	6.9800e-003	0.6771	6.6800e-003	0.6838	0.1796	6.1900e-003	0.1858		689.9033	689.9033	0.0493		691.1360
Total	**0.6596**	**0.6438**	**5.5412**	**6.9800e-003**	**0.6771**	**6.6800e-003**	**0.6838**	**0.1796**	**6.1900e-003**	**0.1858**		**689.9033**	**689.9033**	**0.0493**		**691.1360**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	10.52	10.52	10.52	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	10.52	10.52	10.52	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.488379	0.037237	0.184894	0.132358	0.042014	0.007577	0.018418	0.076572	0.001721	0.001591	0.006262	0.001327	0.001651
Unrefrigerated Warehouse-No Rail	0.488379	0.037237	0.184894	0.132358	0.042014	0.007577	0.018418	0.076572	0.001721	0.001591	0.006262	0.001327	0.001651

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
NaturalGas Unmitigated	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	977.157	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Total		**0.0105**	**0.0958**	**0.0805**	**5.7000e-004**		**7.2800e-003**	**7.2800e-003**		**7.2800e-003**	**7.2800e-003**		**114.9597**	**114.9597**	**2.2000e-003**	**2.1100e-003**	**115.6428**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.977157	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Total		**0.0105**	**0.0958**	**0.0805**	**5.7000e-004**		**7.2800e-003**	**7.2800e-003**		**7.2800e-003**	**7.2800e-003**		**114.9597**	**114.9597**	**2.2000e-003**	**2.1100e-003**	**115.6428**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Unmitigated	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Total	**0.9974**	**4.0000e-005**	**3.9900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.4700e-003**	**8.4700e-003**	**2.0000e-005**		**9.0400e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Total	**0.9974**	**4.0000e-005**	**3.9900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.4700e-003**	**8.4700e-003**	**2.0000e-005**		**9.0400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Chico High School Athletic Fields Project

Butte County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	19.05	Acre	19.05	829,818.00	0
Unrefrigerated Warehouse-No Rail	19.64	1000sqft	0.45	19,640.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assumed all phases overlapped for a worst case scenario.

Vehicle Trips - No increase in ADT over existing conditions.

Energy Use - Lighting energy based on lighting specifications.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	78.00
tblConstructionPhase	NumDays	300.00	78.00
tblConstructionPhase	PhaseEndDate	2/11/2019	11/30/2017
tblConstructionPhase	PhaseEndDate	12/17/2018	11/30/2017
tblConstructionPhase	PhaseEndDate	9/11/2017	8/14/2017
tblConstructionPhase	PhaseStartDate	1/15/2019	8/15/2017
tblConstructionPhase	PhaseStartDate	10/24/2017	8/15/2017
tblConstructionPhase	PhaseStartDate	8/29/2017	8/1/2017
tblEnergyUse	LightingElect	0.00	0.09
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	22.2560	58.0858	65.1584	0.1335	18.2379	2.8803	21.1182	9.9762	2.6499	12.6261	0.0000	13,492.3901	13,492.3901	1.5296	0.0000	13,530.6310
Maximum	**22.2560**	**58.0858**	**65.1584**	**0.1335**	**18.2379**	**2.8803**	**21.1182**	**9.9762**	**2.6499**	**12.6261**	**0.0000**	**13,492.3901**	**13,492.3901**	**1.5296**	**0.0000**	**13,530.6310**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	22.2560	58.0858	65.1584	0.1335	18.2379	2.8803	21.1182	9.9762	2.6499	12.6261	0.0000	13,492.3901	13,492.3901	1.5296	0.0000	13,530.6310
Maximum	**22.2560**	**58.0858**	**65.1584**	**0.1335**	**18.2379**	**2.8803**	**21.1182**	**9.9762**	**2.6499**	**12.6261**	**0.0000**	**13,492.3901**	**13,492.3901**	**1.5296**	**0.0000**	**13,530.6310**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Energy	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0079**	**0.0958**	**0.0845**	**5.7000e-004**	**0.0000**	**7.2900e-003**	**7.2900e-003**	**0.0000**	**7.2900e-003**	**7.2900e-003**		**114.9682**	**114.9682**	**2.2200e-003**	**2.1100e-003**	**115.6519**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Energy	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0079**	**0.0958**	**0.0845**	**5.7000e-004**	**0.0000**	**7.2900e-003**	**7.2900e-003**	**0.0000**	**7.2900e-003**	**7.2900e-003**		**114.9682**	**114.9682**	**2.2200e-003**	**2.1100e-003**	**115.6519**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2017	8/14/2017	5	10	
2	Building Construction	Building Construction	8/15/2017	11/30/2017	5	78	
3	Architectural Coating	Architectural Coating	8/15/2017	11/30/2017	5	78	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 29,460; Non-Residential Outdoor: 9,820; Striped Parking Area: 49,789 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	71.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	357.00	139.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1799	0.1315	1.6143	2.0300e-003	0.1717	1.6900e-003	0.1734	0.0455	1.5700e-003	0.0471		200.3770	200.3770	0.0141		200.7281
Total	**0.1799**	**0.1315**	**1.6143**	**2.0300e-003**	**0.1717**	**1.6900e-003**	**0.1734**	**0.0455**	**1.5700e-003**	**0.0471**		**200.3770**	**200.3770**	**0.0141**		**200.7281**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1799	0.1315	1.6143	2.0300e-003	0.1717	1.6900e-003	0.1734	0.0455	1.5700e-003	0.0471		200.3770	200.3770	0.0141		200.7281
Total	**0.1799**	**0.1315**	**1.6143**	**2.0300e-003**	**0.1717**	**1.6900e-003**	**0.1734**	**0.0455**	**1.5700e-003**	**0.0471**		**200.3770**	**200.3770**	**0.0141**		**200.7281**

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2999	26.2206	6.7236	0.0554	1.3560	0.3182	1.6742	0.3903	0.3044	0.6947		5,795.4428	5,795.4428	0.5128		5,808.2635
Worker	3.5675	2.6071	32.0168	0.0402	3.4046	0.0336	3.4382	0.9030	0.0311	0.9341		3,974.1436	3,974.1436	0.2786		3,981.1078
Total	**4.8674**	**28.8277**	**38.7404**	**0.0956**	**4.7606**	**0.3518**	**5.1124**	**1.2933**	**0.3355**	**1.6288**		**9,769.5864**	**9,769.5864**	**0.7914**		**9,789.3714**

3.3 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2999	26.2206	6.7236	0.0554	1.3560	0.3182	1.6742	0.3903	0.3044	0.6947		5,795.4428	5,795.4428	0.5128		5,808.2635
Worker	3.5675	2.6071	32.0168	0.0402	3.4046	0.0336	3.4382	0.9030	0.0311	0.9341		3,974.1436	3,974.1436	0.2786		3,981.1078
Total	**4.8674**	**28.8277**	**38.7404**	**0.0956**	**4.7606**	**0.3518**	**5.1124**	**1.2933**	**0.3355**	**1.6288**		**9,769.5864**	**9,769.5864**	**0.7914**		**9,789.3714**

3.4 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.2319					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**13.5642**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7095	0.5185	6.3675	8.0000e-003	0.6771	6.6800e-003	0.6838	0.1796	6.1900e-003	0.1858		790.3759	790.3759	0.0554		791.7609
Total	**0.7095**	**0.5185**	**6.3675**	**8.0000e-003**	**0.6771**	**6.6800e-003**	**0.6838**	**0.1796**	**6.1900e-003**	**0.1858**		**790.3759**	**790.3759**	**0.0554**		**791.7609**

3.4 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	13.2319					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**13.5642**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.7095	0.5185	6.3675	8.0000e-003	0.6771	6.6800e-003	0.6838	0.1796	6.1900e-003	0.1858		790.3759	790.3759	0.0554		791.7609
Total	**0.7095**	**0.5185**	**6.3675**	**8.0000e-003**	**0.6771**	**6.6800e-003**	**0.6838**	**0.1796**	**6.1900e-003**	**0.1858**		**790.3759**	**790.3759**	**0.0554**		**791.7609**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	10.52	10.52	10.52	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	10.52	10.52	10.52	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.488379	0.037237	0.184894	0.132358	0.042014	0.007577	0.018418	0.076572	0.001721	0.001591	0.006262	0.001327	0.001651
Unrefrigerated Warehouse-No Rail	0.488379	0.037237	0.184894	0.132358	0.042014	0.007577	0.018418	0.076572	0.001721	0.001591	0.006262	0.001327	0.001651

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
NaturalGas Unmitigated	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	977.157	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Total		**0.0105**	**0.0958**	**0.0805**	**5.7000e-004**		**7.2800e-003**	**7.2800e-003**		**7.2800e-003**	**7.2800e-003**		**114.9597**	**114.9597**	**2.2000e-003**	**2.1100e-003**	**115.6428**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.977157	0.0105	0.0958	0.0805	5.7000e-004		7.2800e-003	7.2800e-003		7.2800e-003	7.2800e-003		114.9597	114.9597	2.2000e-003	2.1100e-003	115.6428
Total		**0.0105**	**0.0958**	**0.0805**	**5.7000e-004**		**7.2800e-003**	**7.2800e-003**		**7.2800e-003**	**7.2800e-003**		**114.9597**	**114.9597**	**2.2000e-003**	**2.1100e-003**	**115.6428**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Unmitigated	0.9974	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Total	**0.9974**	**4.0000e-005**	**3.9900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.4700e-003**	**8.4700e-003**	**2.0000e-005**		**9.0400e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2828					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.8000e-004	4.0000e-005	3.9900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.4700e-003	8.4700e-003	2.0000e-005		9.0400e-003
Total	**0.9974**	**4.0000e-005**	**3.9900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.4700e-003**	**8.4700e-003**	**2.0000e-005**		**9.0400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX 4.7
GREENHOUSE GAS EMISSIONS

Chico High School Athletic Fields Project

Butte County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	19.05	Acre	19.05	829,818.00	0
Unrefrigerated Warehouse-No Rail	19.64	1000sqft	0.45	19,640.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	71
Climate Zone	3			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assumed all phases overlapped for a worst case scenario.

Vehicle Trips - No increase in ADT over existing conditions.

Energy Use - Lighting energy based on lighting specifications.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	78.00
tblConstructionPhase	NumDays	300.00	78.00
tblConstructionPhase	PhaseEndDate	2/11/2019	11/30/2017
tblConstructionPhase	PhaseEndDate	12/17/2018	11/30/2017
tblConstructionPhase	PhaseEndDate	9/11/2017	8/14/2017
tblConstructionPhase	PhaseStartDate	1/15/2019	8/15/2017
tblConstructionPhase	PhaseStartDate	10/24/2017	8/15/2017
tblConstructionPhase	PhaseStartDate	8/29/2017	8/1/2017
tblEnergyUse	LightingElect	0.00	0.09
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.8724	2.5726	2.4551	5.2000e-003	0.2947	0.1049	0.3996	0.1052	0.0989	0.2041	0.0000	477.2009	477.2009	0.0591	0.0000	478.6787
Maximum	**0.8724**	**2.5726**	**2.4551**	**5.2000e-003**	**0.2947**	**0.1049**	**0.3996**	**0.1052**	**0.0989**	**0.2041**	**0.0000**	**477.2009**	**477.2009**	**0.0591**	**0.0000**	**478.6787**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.8724	2.5726	2.4551	5.2000e-003	0.2947	0.1049	0.3996	0.1052	0.0989	0.2041	0.0000	477.2008	477.2008	0.0591	0.0000	478.6786
Maximum	**0.8724**	**2.5726**	**2.4551**	**5.2000e-003**	**0.2947**	**0.1049**	**0.3996**	**0.1052**	**0.0989**	**0.2041**	**0.0000**	**477.2008**	**477.2008**	**0.0591**	**0.0000**	**478.6786**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2017	9-30-2017	1.6363	1.6363
		Highest	1.6363	1.6363

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1820	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Energy	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	89.5436	89.5436	3.5500e-003	1.0100e-003	89.9330
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	3.7472	0.0000	3.7472	0.2215	0.0000	9.2836
Water						0.0000	0.0000		0.0000	0.0000	1.4409	7.1493	8.5902	0.1483	3.5600e-003	13.3593
Total	**0.1839**	**0.0175**	**0.0151**	**1.0000e-004**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**5.1881**	**96.6936**	**101.8817**	**0.3733**	**4.5700e-003**	**112.5767**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1820	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Energy	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	89.5436	89.5436	3.5500e-003	1.0100e-003	89.9330
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	3.7472	0.0000	3.7472	0.2215	0.0000	9.2836
Water						0.0000	0.0000		0.0000	0.0000	1.4409	7.1493	8.5902	0.1483	3.5600e-003	13.3593
Total	**0.1839**	**0.0175**	**0.0151**	**1.0000e-004**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**5.1881**	**96.6936**	**101.8817**	**0.3733**	**4.5700e-003**	**112.5767**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2017	8/14/2017	5	10	
2	Building Construction	Building Construction	8/15/2017	11/30/2017	5	78	
3	Architectural Coating	Architectural Coating	8/15/2017	11/30/2017	5	78	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 19.05

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 29,460; Non-Residential Outdoor: 9,820; Striped Parking Area: 49,789 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	71.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	357.00	139.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	12.54	10.52	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2614	0.1173	1.9000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	17.6672	17.6672	5.4100e-003	0.0000	17.8025
Total	**0.0248**	**0.2614**	**0.1173**	**1.9000e-004**	**0.0903**	**0.0144**	**0.1047**	**0.0497**	**0.0132**	**0.0629**	**0.0000**	**17.6672**	**17.6672**	**5.4100e-003**	**0.0000**	**17.8025**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	7.3000e-004	6.8800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.8194	0.8194	6.0000e-005	0.0000	0.8209
Total	**7.8000e-004**	**7.3000e-004**	**6.8800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.8194**	**0.8194**	**6.0000e-005**	**0.0000**	**0.8209**

3.2 Site Preparation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2614	0.1173	1.9000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	17.6672	17.6672	5.4100e-003	0.0000	17.8025
Total	**0.0248**	**0.2614**	**0.1173**	**1.9000e-004**	**0.0903**	**0.0144**	**0.1047**	**0.0497**	**0.0132**	**0.0629**	**0.0000**	**17.6672**	**17.6672**	**5.4100e-003**	**0.0000**	**17.8025**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8000e-004	7.3000e-004	6.8800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.8194	0.8194	6.0000e-005	0.0000	0.8209
Total	**7.8000e-004**	**7.3000e-004**	**6.8800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.8194**	**0.8194**	**6.0000e-005**	**0.0000**	**0.8209**

3.3 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1215	1.0356	0.7091	1.0500e-003		0.0697	0.0697		0.0655	0.0655	0.0000	93.7922	93.7922	0.0231	0.0000	94.3699
Total	**0.1215**	**1.0356**	**0.7091**	**1.0500e-003**		**0.0697**	**0.0697**		**0.0655**	**0.0655**	**0.0000**	**93.7922**	**93.7922**	**0.0231**	**0.0000**	**94.3699**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0510	1.0550	0.2728	2.1400e-003	0.0511	0.0125	0.0635	0.0148	0.0119	0.0267	0.0000	202.9848	202.9848	0.0190	0.0000	203.4590
Worker	0.1212	0.1123	1.0645	1.4100e-003	0.1272	1.3100e-003	0.1285	0.0338	1.2100e-003	0.0351	0.0000	126.7681	126.7681	8.7700e-003	0.0000	126.9873
Total	**0.1723**	**1.1673**	**1.3373**	**3.5500e-003**	**0.1782**	**0.0138**	**0.1920**	**0.0486**	**0.0132**	**0.0618**	**0.0000**	**329.7528**	**329.7528**	**0.0277**	**0.0000**	**330.4463**

3.3 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1215	1.0356	0.7091	1.0500e-003		0.0697	0.0697		0.0655	0.0655	0.0000	93.7921	93.7921	0.0231	0.0000	94.3698
Total	**0.1215**	**1.0356**	**0.7091**	**1.0500e-003**		**0.0697**	**0.0697**		**0.0655**	**0.0655**	**0.0000**	**93.7921**	**93.7921**	**0.0231**	**0.0000**	**94.3698**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0510	1.0550	0.2728	2.1400e-003	0.0511	0.0125	0.0635	0.0148	0.0119	0.0267	0.0000	202.9848	202.9848	0.0190	0.0000	203.4590
Worker	0.1212	0.1123	1.0645	1.4100e-003	0.1272	1.3100e-003	0.1285	0.0338	1.2100e-003	0.0351	0.0000	126.7681	126.7681	8.7700e-003	0.0000	126.9873
Total	**0.1723**	**1.1673**	**1.3373**	**3.5500e-003**	**0.1782**	**0.0138**	**0.1920**	**0.0486**	**0.0132**	**0.0618**	**0.0000**	**329.7528**	**329.7528**	**0.0277**	**0.0000**	**330.4463**

3.4 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0852	0.0729	1.2000e-004		6.7600e-003	6.7600e-003		6.7600e-003	6.7600e-003	0.0000	9.9577	9.9577	1.0500e-003	0.0000	9.9840
Total	**0.5290**	**0.0852**	**0.0729**	**1.2000e-004**		**6.7600e-003**	**6.7600e-003**		**6.7600e-003**	**6.7600e-003**	**0.0000**	**9.9577**	**9.9577**	**1.0500e-003**	**0.0000**	**9.9840**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0241	0.0223	0.2117	2.8000e-004	0.0253	2.6000e-004	0.0256	6.7300e-003	2.4000e-004	6.9700e-003	0.0000	25.2116	25.2116	1.7400e-003	0.0000	25.2552
Total	**0.0241**	**0.0223**	**0.2117**	**2.8000e-004**	**0.0253**	**2.6000e-004**	**0.0256**	**6.7300e-003**	**2.4000e-004**	**6.9700e-003**	**0.0000**	**25.2116**	**25.2116**	**1.7400e-003**	**0.0000**	**25.2552**

3.4 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0130	0.0852	0.0729	1.2000e-004		6.7600e-003	6.7600e-003		6.7600e-003	6.7600e-003	0.0000	9.9577	9.9577	1.0500e-003	0.0000	9.9840
Total	**0.5290**	**0.0852**	**0.0729**	**1.2000e-004**		**6.7600e-003**	**6.7600e-003**		**6.7600e-003**	**6.7600e-003**	**0.0000**	**9.9577**	**9.9577**	**1.0500e-003**	**0.0000**	**9.9840**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0241	0.0223	0.2117	2.8000e-004	0.0253	2.6000e-004	0.0256	6.7300e-003	2.4000e-004	6.9700e-003	0.0000	25.2116	25.2116	1.7400e-003	0.0000	25.2552
Total	**0.0241**	**0.0223**	**0.2117**	**2.8000e-004**	**0.0253**	**2.6000e-004**	**0.0256**	**6.7300e-003**	**2.4000e-004**	**6.9700e-003**	**0.0000**	**25.2116**	**25.2116**	**1.7400e-003**	**0.0000**	**25.2552**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	10.52	10.52	10.52	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	10.52	10.52	10.52	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.488379	0.037237	0.184894	0.132358	0.042014	0.007577	0.018418	0.076572	0.001721	0.001591	0.006262	0.001327	0.001651
Unrefrigerated Warehouse-No Rail	0.488379	0.037237	0.184894	0.132358	0.042014	0.007577	0.018418	0.076572	0.001721	0.001591	0.006262	0.001327	0.001651

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	70.5108	70.5108	3.1900e-003	6.6000e-004	70.7871
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	70.5108	70.5108	3.1900e-003	6.6000e-004	70.7871
NaturalGas Mitigated	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	19.0329	19.0329	3.6000e-004	3.5000e-004	19.1460
NaturalGas Unmitigated	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	19.0329	19.0329	3.6000e-004	3.5000e-004	19.1460

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	356662	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	19.0329	19.0329	3.6000e-004	3.5000e-004	19.1460
Total		**1.9200e-003**	**0.0175**	**0.0147**	**1.0000e-004**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**	**0.0000**	**19.0329**	**19.0329**	**3.6000e-004**	**3.5000e-004**	**19.1460**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	356662	1.9200e-003	0.0175	0.0147	1.0000e-004		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	19.0329	19.0329	3.6000e-004	3.5000e-004	19.1460
Total		**1.9200e-003**	**0.0175**	**0.0147**	**1.0000e-004**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**	**0.0000**	**19.0329**	**19.0329**	**3.6000e-004**	**3.5000e-004**	**19.1460**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	74849.6	21.7746	9.8000e-004	2.0000e-004	21.8599
Unrefrigerated Warehouse-No Rail	167529	48.7362	2.2000e-003	4.6000e-004	48.9271
Total		**70.5108**	**3.1800e-003**	**6.6000e-004**	**70.7871**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	74849.6	21.7746	9.8000e-004	2.0000e-004	21.8599
Unrefrigerated Warehouse-No Rail	167529	48.7362	2.2000e-003	4.6000e-004	48.9271
Total		**70.5108**	**3.1800e-003**	**6.6000e-004**	**70.7871**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1820	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Unmitigated	0.1820	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0516					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1303					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Total	**0.1820**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.9000e-004**	**6.9000e-004**	**0.0000**	**0.0000**	**7.4000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0516					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1303					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.9000e-004	6.9000e-004	0.0000	0.0000	7.4000e-004
Total	**0.1820**	**0.0000**	**3.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.9000e-004**	**6.9000e-004**	**0.0000**	**0.0000**	**7.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.5902	0.1483	3.5600e-003	13.3593
Unmitigated	8.5902	0.1483	3.5600e-003	13.3593

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	4.54175 / 0	8.5902	0.1483	3.5600e-003	13.3593
Total		**8.5902**	**0.1483**	**3.5600e-003**	**13.3593**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	4.54175 / 0	8.5902	0.1483	3.5600e-003	13.3593
Total		**8.5902**	**0.1483**	**3.5600e-003**	**13.3593**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.7472	0.2215	0.0000	9.2836
Unmitigated	3.7472	0.2215	0.0000	9.2836

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	18.46	3.7472	0.2215	0.0000	9.2836
Total		**3.7472**	**0.2215**	**0.0000**	**9.2836**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	18.46	3.7472	0.2215	0.0000	9.2836
Total		**3.7472**	**0.2215**	**0.0000**	**9.2836**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX 4.12
NOISE MEASUREMENTS

Summary

File Name on meter	EF_HS.027
File Name on PC	SLM_0003788_EF_HS_027.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	Chico High School Athletic Fields Project Site 4
Start	2017-03-31 14:51:12
Stop	2017-03-31 15:01:12
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-03-31 13:13:53
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.6**	73.6	78.6
Under Range Limit	**25.3**	24.8	31.3
Noise Floor	15.9	15.7	21.4

Results

LA_{Seq}	58.2 dB		
LASE	86.0 dB		
EAS	44.554 µPa²h		
$LA_{Speak\ (max)}$	2017-03-31 14:51:15	86.5 dB	
LAS_{max}	2017-03-31 14:52:08	71.7 dB	
LAS_{min}	2017-03-31 14:57:49	51.6 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{Speak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{Speak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LA_{Speak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**
	58.2	58.2	-99.9

LC_{Seq}	73.4 dB	
LA_{Seq}	58.2 dB	
LCS_{eq} - LA_{Seq}	15.1 dB	
LAI_{eq}	61.2 dB	
LA_{eq}	58.2 dB	
LAI_{eq} - LA_{eq}	3.0 dB	

	A		
	dB	**Time Stamp**	**dB**
L_{eq}	58.2		-99.9
$L_{S(max)}$	71.7	2017/03/31 14:52:08	-99.9

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{S(min)}$	51.6	2017/03/31 14:57:49	-99.9
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{Peak(max)}$	86.5	2017/03/31 14:51:15	-99.9

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	62.1	dB
LAS10.00	61.0	dB
LAS33.30	57.9	dB
LAS50.00	56.1	dB
LAS66.60	55.0	dB
LAS90.00	53.4	dB

Calibration History

Preamp	Date	dB re. 1V/Pa
Direct	2017-01-03 10:54:35	-27.0
Direct	2017-01-03 10:30:13	-26.0
Direct	2014-07-01 09:45:44	-27.0
PRMLxT1L	2017-03-31 13:13:53	-26.6
PRMLxT1L	2017-03-14 08:18:51	-26.6
PRMLxT1L	2017-03-10 10:18:04	-26.5
PRMLxT1L	2017-03-07 09:33:39	-26.7
PRMLxT1L	2017-03-07 09:33:11	-26.6
PRMLxT1L	2017-01-05 08:48:43	-26.7
PRMLxT1L	2017-01-05 08:46:51	-26.7
PRMLxT1L	2017-01-05 08:46:31	-26.7

Summary

File Name on meter	EF_HS.026
File Name on PC	SLM_0003788_EF_HS_026.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	Chico High School Athletic Fields Project Site 3
Start	2017-03-31 14:35:17
Stop	2017-03-31 14:45:17
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-03-31 13:13:53
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.6**	73.6	78.6
Under Range Limit	**25.3**	24.8	31.3
Noise Floor	15.9	15.7	21.4

Results

LA_{Seq}	60.5 dB		
LASE	88.2 dB		
EAS	74.040 µPa²h		
$LA_{Speak\ (max)}$	2017-03-31 14:43:22	95.3 dB	
LAS_{max}	2017-03-31 14:44:30	76.9 dB	
LAS_{min}	2017-03-31 14:38:22	51.5 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LA_{Speak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LA_{Speak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LA_{Speak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**
	60.5	60.5	-99.9

LC_{Seq}	70.8 dB
LA_{Seq}	60.5 dB
LCS_{eq} - LA_{Seq}	10.4 dB
LAI_{eq}	65.0 dB
LA_{eq}	60.4 dB
LAI_{eq} - LA_{eq}	4.6 dB

	A		
	dB	**Time Stamp**	**dB**
L_{eq}	60.4		-99.9
$L_{S(max)}$	76.9	2017/03/31 14:44:30	-99.9

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{S(min)}$	51.5	2017/03/31 14:38:22	-99.9
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{Peak(max)}$	95.3	2017/03/31 14:43:22	-99.9

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	64.8	dB
LAS10.00	62.1	dB
LAS33.30	58.4	dB
LAS50.00	56.9	dB
LAS66.60	55.8	dB
LAS90.00	53.6	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2017-01-03 10:54:35	-27.0
Direct	2017-01-03 10:30:13	-26.0
Direct	2014-07-01 09:45:44	-27.0
PRMLxT1L	2017-03-31 13:13:53	-26.6
PRMLxT1L	2017-03-14 08:18:51	-26.6
PRMLxT1L	2017-03-10 10:18:04	-26.5
PRMLxT1L	2017-03-07 09:33:39	-26.7
PRMLxT1L	2017-03-07 09:33:11	-26.6
PRMLxT1L	2017-01-05 08:48:43	-26.7
PRMLxT1L	2017-01-05 08:46:51	-26.7
PRMLxT1L	2017-01-05 08:46:31	-26.7

Summary

File Name on meter	EF_HS.025
File Name on PC	SLM_0003788_EF_HS_025.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	Chico High School Athletic Fields Project Site 2
Start	2017-03-31 14:19:49
Stop	2017-03-31 14:29:49
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-03-31 13:13:53
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.6**	73.6	78.6
Under Range Limit	**25.3**	24.8	31.3
Noise Floor	15.9	15.7	21.4

Results

L_{ASeq}	58.3 dB		
LASE	86.1 dB		
EAS	45.146 µPa²h		
$L_{ASpeak\ (max)}$	2017-03-31 14:21:47	89.5 dB	
L_{ASmax}	2017-03-31 14:22:37	67.6 dB	
L_{ASmin}	2017-03-31 14:25:07	48.9 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{ASpeak} > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{ASpeak} > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
L_{ASpeak} > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**
	58.3	58.3	-99.9

L_{CSeq}	67.7 dB
L_{ASeq}	58.3 dB
L_{CSeq} - L_{ASeq}	9.4 dB
L_{AIeq}	60.3 dB
L_{Aeq}	58.3 dB
L_{AIeq} - L_{Aeq}	2.0 dB

	A		
	dB	**Time Stamp**	**dB**
L_{eq}	58.3		-99.9
$L_{S(max)}$	67.6	2017/03/31 14:22:37	-99.9

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{S(min)}$	48.9	2017/03/31 14:25:07	-99.9
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9
$L_{Peak(max)}$	89.5	2017/03/31 14:21:47	-99.9

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	63.1	dB
LAS10.00	62.0	dB
LAS33.30	58.5	dB
LAS50.00	56.3	dB
LAS66.60	54.0	dB
LAS90.00	51.2	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
Direct	2017-01-03 10:54:35	-27.0
Direct	2017-01-03 10:30:13	-26.0
Direct	2014-07-01 09:45:44	-27.0
PRMLxT1L	2017-03-31 13:13:53	-26.6
PRMLxT1L	2017-03-14 08:18:51	-26.6
PRMLxT1L	2017-03-10 10:18:04	-26.5
PRMLxT1L	2017-03-07 09:33:39	-26.7
PRMLxT1L	2017-03-07 09:33:11	-26.6
PRMLxT1L	2017-01-05 08:48:43	-26.7
PRMLxT1L	2017-01-05 08:46:51	-26.7
PRMLxT1L	2017-01-05 08:46:31	-26.7

Summary

File Name on meter	EF_HS.024
File Name on PC	SLM_0003788_EF_HS_024.00.ldbin
Serial Number	0003788
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	Chico High School Athletic Fields Project Site 1
Start	2017-03-31 14:04:14
Stop	2017-03-31 14:14:14
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-03-31 13:13:53
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
OBA Range	High
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	A Weighting
OBA Max Spectrum	At LMax

Overload	120.3 dB		
	A	**C**	**Z**
Under Range Peak	**76.6**	73.6	78.6 dB
Under Range Limit	**25.3**	24.8	31.3 dB
Noise Floor	15.9	15.7	21.4 dB

Results

LASeq	62.2 dB		
LASE	90.0 dB		
EAS	111.084 µPa²h		
LASpeak (max)	2017-03-31 14:13:46	90.4 dB	
LASmax	2017-03-31 14:13:47	77.8 dB	
LASmin	2017-03-31 14:06:45	51.2 dB	
SEA	-99.9 dB		

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LASpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LASpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LASpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**	**Lden**
	62.2	62.2	-99.9	62.2

LCSeq	77.1 dB	
LASeq	62.2 dB	
LCSeq - LASeq	14.9 dB	
LAIeq	63.9 dB	
LAeq	62.2 dB	
LAIeq - LAeq	1.7 dB	

	A		**C**	
	dB	**Time Stamp**	**dB**	**Time Stamp**
Leq	62.2		-99.9	
LS(max)	77.8	2017/03/31 14:13:47	-99.9	1970/01/01 0:00:00

$L_{F(max)}$	-99.9	1970/01/01 0:00:00	-99.9	1970/01/01 0:00:00
$L_{I(max)}$	-99.9	1970/01/01 0:00:00	-99.9	1970/01/01 0:00:00
$L_{S(min)}$	51.2	2017/03/31 14:06:45	-99.9	1970/01/01 0:00:00
$L_{F(min)}$	-99.9	1970/01/01 0:00:00	-99.9	1970/01/01 0:00:00
$L_{I(min)}$	-99.9	1970/01/01 0:00:00	-99.9	1970/01/01 0:00:00
$L_{Peak(max)}$	90.4	2017/03/31 14:13:46	-99.9	1970/01/01 0:00:00

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	66.8	dB
LAS10.00	65.6	dB
LAS33.30	61.9	dB
LAS50.00	59.6	dB
LAS66.60	57.6	dB
LAS90.00	54.7	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**
Direct	2017-01-03 10:54:35	-27.0	2.5
Direct	2017-01-03 10:30:13	-26.0	
Direct	2014-07-01 09:45:44	-27.0	61.7
PRMLxT1L	2017-03-31 13:13:53	-26.6	48.6
PRMLxT1L	2017-03-14 08:18:51	-26.6	42.4
PRMLxT1L	2017-03-10 10:18:04	-26.5	39.5
PRMLxT1L	2017-03-07 09:33:39	-26.7	48.9
PRMLxT1L	2017-03-07 09:33:11	-26.6	55.6
PRMLxT1L	2017-01-05 08:48:43	-26.7	68.6
PRMLxT1L	2017-01-05 08:46:51	-26.7	63.2
PRMLxT1L	2017-01-05 08:46:31	-26.7	68.4