PUBLIC REVIEW DRAFT

COLLEGE PARK HIGH SCHOOL ATHLETIC FACILITIES IMPROVEMENTS PROJECT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

LSA

March 2014

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE COLLEGE PARK HIGH SCHOOL ATHLETIC FACILITIES IMPROVEMENTS PROJECT

NOTICE IS HEREBY GIVEN that the Governing Board of the Mount Diablo Unified School District (District) has completed an Initial Study/Mitigated Negative Declaration for the proposed College Park High School Athletic Facilities Improvements Project in accordance with the California Environmental Quality Act.

Project Location: The proposed project is located within the College Park High School campus located at 201 Viking Drive in the City of Pleasant Hill, Contra Costa County. The 7.6-acre project site consists of the school's combined football/soccer field and running track and surrounding area.

Proposed Project: The District is proposing to introduce new permanent lighting fixtures to illuminate the sports field as well as the right and center field of the baseball diamond on a limited basis, install a new Public Address (PA) system, construct new bleachers to meet the demand for seating capacity at the sports field, construct new accessory athletic facilities, and complete improvements to the existing sports field entry driveway and plaza.

Findings: The Initial Study prepared by the District was undertaken for the purpose of deciding whether the project may have a significant effect on the environment. On the basis of the Initial Study, District staff has concluded that the project will not have a significant effect on the environment and, therefore, has prepared a Mitigated Negative Declaration. The project site is not on a list of hazardous waste sites compiled pursuant to Government Code Section 65962.5.

Public Review: Copies of the Initial Study/Mitigated Negative Declaration are on file and available for review at the District's website (www.mdusd.org) and at the following locations:

- Mount Diablo Unified School District Office, 1936 Carlotta Drive, Concord, California
- College Park High School Campus Office, 201 Viking Drive, Pleasant Hill, California
- Measure C 2010 Office,3333 Ronald Way, Concord, California
- Contra Costa County Library, Pleasant Hill Branch, 1750 Oak Park Blvd, Pleasant Hill, California

Written comments will be accepted from April 1, 2014, to April 30, 2014. During this comment period, a public meeting will be held at College Park High School on April 17, 2014, at 6:30 p.m. in the school library. Comments from all Responsible Agencies are requested. Any person wishing to comment on the Draft Initial Study/Mitigated Negative Declaration must submit written comments to the following address:

Timothy M. Cody
Interim Special Project Manager 2010 Measure C
3333 Ronald Way
Concord, CA 94519
925-682-8000 ext. 85615
codyt@mdusd.org

PUBLIC REVIEW DRAFT

COLLEGE PARK HIGH SCHOOL ATHLETIC FACILITIES IMPROVEMENTS PROJECT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Submitted to:

Mount Diablo Unified School District
1936 Carlotta Drive
Concord, California 94519

Prepared by:

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Berkeley, California 94710
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LSA

March 2014

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I. INTRODUCTION AND PROJECT DESCRIPTION

A. INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) evaluates the potential environmental impacts anticipated to result from construction and operation of the College Park High School Athletic Facilities Improvements Project (proposed project). This IS/MND is being prepared to conform to the requirements of the California Environmental Quality Act (CEQA) and the *CEQA Guidelines* (California Code of Regulations Section 15000 *et. seq.*). The Mount Diablo Unified School District (District) is the Lead Agency for environmental review.

According to *CEQA Guidelines* Section 15070, a public agency shall prepare a proposed Negative Declaration or a Mitigated Negative Declaration when:

- The Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
- The Initial Study identifies potentially significant effects, but:
    - Revisions in the project plans made by, or agreed to, by the applicant before a proposed Mitigated Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur;
    - There is no substantial evidence, in light of the whole record before the agency, that the project, as revised, may have a significant effect on the environment.

This IS/MND evaluates the potential environmental impacts that might reasonably be anticipated to result from implementation of the proposed project, as described in further detail below, and provides the general public with relevant environmental information to use in considering the proposed project. It is intended that this IS/MND be used for appropriate discretionary and ministerial decisions and approvals necessary to implement the proposed project. These actions may include, but are not limited to, the following:

- Project approval by the Mount Diablo Unified School District Board of Education;
- Approval of Construction Bids/Contracts by the Board; and
- Division of State Architect Plans and Specifications Approval.

B. PROJECT LOCATION

The proposed project is located within the College Park High School campus (herein referred to as the College Park campus) located at 201 Viking Drive in the City of Pleasant Hill, Contra Costa County. The project site itself is located on the western edge of the campus towards the southwest corner. A student/staff parking lot is located to the north of the project site, and a baseball diamond and open field are located to the east.

The campus is located near other educational uses: Diablo Valley College (DVC), a two-year community college, is directly north of the project site, and Valley View Middle School is directly east. A residential neighborhood borders the project site and high school campus to the west and the Civic Center Office Park borders the site to the south. Figures 1 and 2 depict the project in its regional and local settings.

The City of Pleasant Hill General Plan identifies the land use for the high school campus as School. This General Plan category includes child day care facilities and commercial or educational athletic facilities, such as sports training centers.[1] The City of Pleasant Hill Zoning map identifies the campus as Residential 7 (R-7). The purpose of the R-7 Zoning District is to allow for high density single-family residential land use at densities from 4.6 to 7.3 units per net acre.[2] Schools require a use permit within the R-7 Zoning District unless a specific project is exempt from the City's zoning ordinance. The District plans to adopt a resolution exempting this project from the City of Pleasant Hill's zoning ordinance; therefore, this project is not subject to the City's regulations.

C. EXISTING CONDITIONS

College Park High School is part of the District and has a 2013/2014 school year enrollment of approximately 1,925 high school students. The high school campus is approximately 38 acres in size and includes academic facilities (classrooms, library, and multi-purpose rooms) and athletic facilities (football/soccer field, track, baseball and softball fields, swimming pool, gym, and basketball courts). The majority of the structures are located on the northeast side of campus, and the majority of the athletic facilities are located on the south and west side of the campus. Currently, permanent light fixtures illuminate the pool area and south side of the campus during evening activities. Surface parking lots are located in the northern part of the campus and vehicular access is provided by Viking Drive.

The project site is located at the western edge of the campus interior. Existing conditions at and existing uses of the project site and surrounding area are described below.

1. Project Site

The 7.6-acre project site consists of the school's combined football/soccer field and running track (hereafter referred to as the sports field) and surrounding area and is generally flat, with the exception of an 8- to 10-foot berm located along the northern border of the project site and a much taller slope (approximately 20 to 25 feet tall) along the site's western boundary, beyond which the residential area to the west sits on a plateau.

Several accessory structures within the project site support the use of the sports field. Near the entrance, three storage units (which are each approximately 384, 600, and 240 square feet in size) are used to house track equipment and football/soccer equipment. The storage units are located on an unpaved portion of the entrance area; water collects near the storage units during winter and fall. These units are currently full and cannot accommodate any additional equipment. Two portable restrooms are also located near the stadium entrance.

[1] Pleasant Hill, City of, 2003. *City of Pleasant Hill General Plan 2003*. July 21.

[2] Pleasant Hill, City of, 2012. Municipal Code. Title 18: Planning and Land Use, Chapter 20: Residential Districts. September 17.

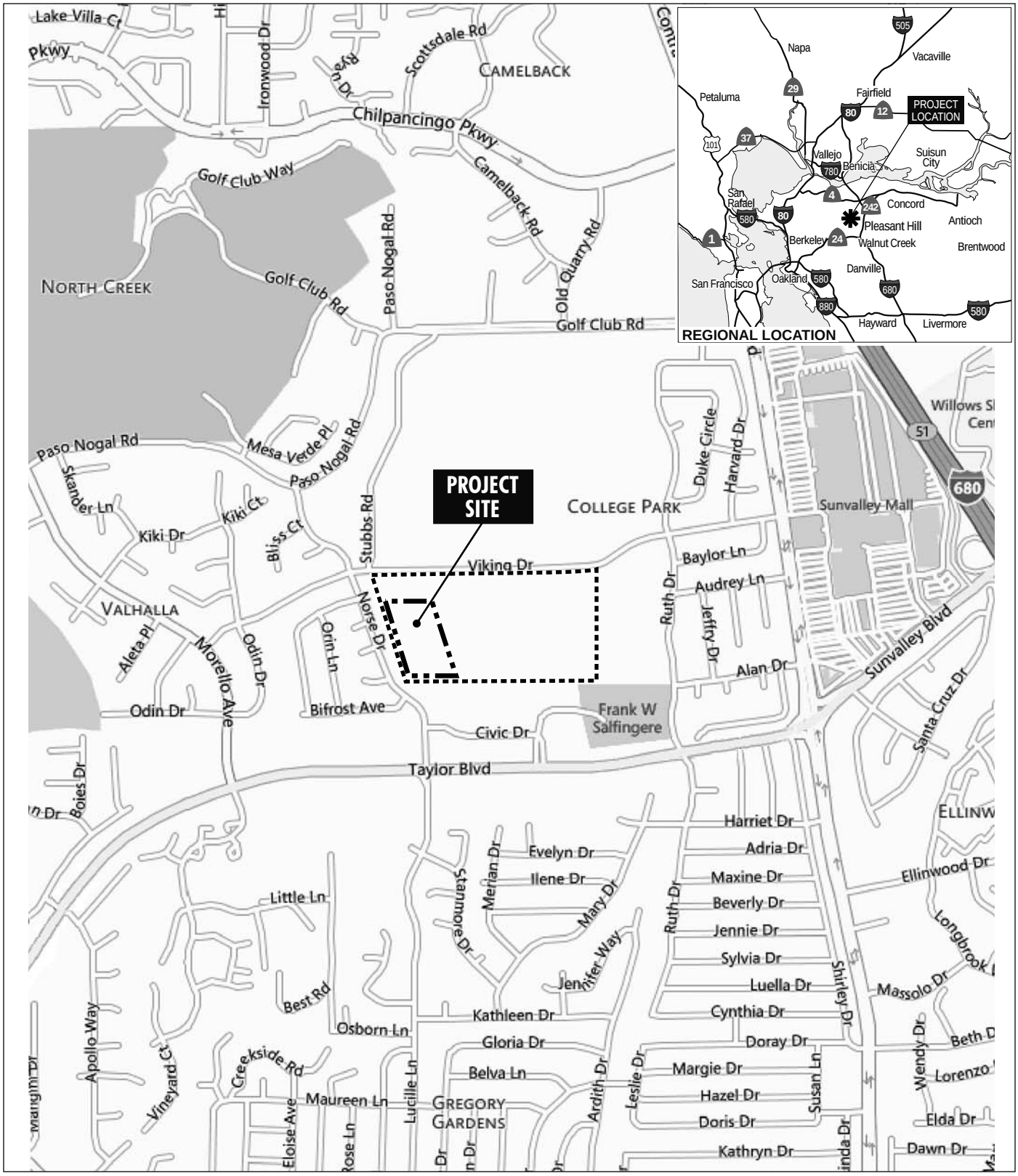

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FIGURE 1

College Park High School
Athletic Facilities Improvements Project
Project Vicinity and Regional Location

SOURCES: BING MAPS; LSA ASSOCIATES, INC., 2013.

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MDUSD Resolution No. 14/15-01
Exhibit B

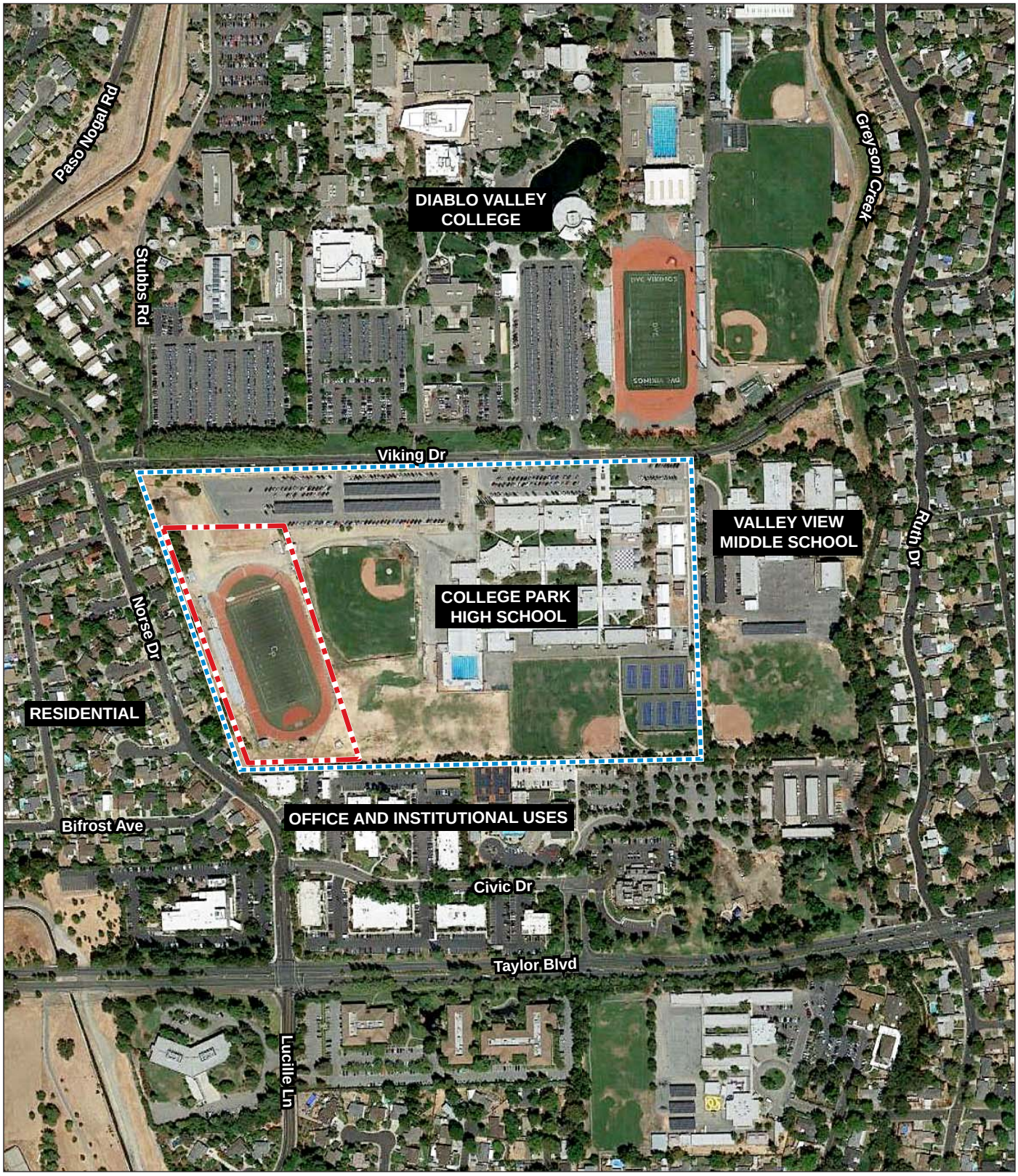

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FIGURE 2

N

0 550 1100

FEET (APPROXIMATE)

Project Site

College Park High School Campus

College Park High School
Athletic Facilities Improvements Project
Aerial View of the Project Site and Surrounding Land Uses

SOURCES: GOOGLE EARTH, 8/29/12; LSA ASSOCIATES, INC., 2013.

I:\MTD1302 College Park HS\graphics\ai\MND Fig_2.ai (2/11/13)

A portable lighting system is currently used by a local youth football team during October through November to extend practice by one hour at the end of day light saving time, until approximately 6:30 p.m. The lighting system is rented from an agency for this two-month period and is stored on the field area when not in use.

Sports field spectators for both home and visiting teams currently sit in the raised bleachers on the west side of the field. The raised bleachers (approximately 260 feet by 40 feet) have an approximate seating capacity for 1,450 and are located approximately 55 feet from the existing single-family residential homes that border the campus to the west. At the highest point, the bleachers rise to 25½ feet. A table that can be set up for the clock operator and announcer is also located within the bleachers.

There is no direct access to the project site from the street or sidewalk; instead, users[3] park (or walk through) the staff/student parking lot. From the parking lot, the sports field is accessed by an approximately 12-foot asphalt pathway, which extends approximately 450 feet between the staff/student parking lot and the northern perimeter of the baseball diamond. A chain-link fence with a walk-through gate marks the entrance to the field. Access to the field is generally locked when school is not in session.

2. Athletic Facility Uses

The existing sports field is used daily, Monday through Friday for physical education classes from 8:00 a.m. to 2:30 p.m. A total of approximately 487 events are held at the facility during after-school hours (3:00 p.m. to 9:00 p.m. during the weekday and 8:00 a.m. to 8:00 p.m. on the weekends) throughout the school year. As shown in Table 1, during after school hours, the sports field is currently used for the following games and practices: freshman football games (currently, varsity and junior varsity games are held at the nearby DVC campus) and football practice for all three teams, including varsity and junior varsity practices; soccer games and practices; lacrosse games and practices; and track and field meets and practices. Soccer games are not held during the evening hours; however, play-off games could run until 9:30 p.m. during February. The main track and football facility are used by the high school's football teams during the fall season for practice-only, with exception of the freshmen team that plays home games on the field. The facility is also used by the soccer teams during the winter season and track and field and lacrosse teams during the spring season. During the summer season, when the high school is on recess, community soccer and football teams use the facility from 3:00 p.m. to 9:00 p.m. on weekdays and from 8:00 a.m. 8:00 p.m. on the weekends. From August to the start of the school year, the high school's sporting programs also use the field for off-season training and practice leagues.

Additionally, the existing baseball diamond, which is located immediately east of the site, is used for baseball games and practices, February through June, from 3:00 p.m. to 7:00 p.m. A total of approximately 118 events may be held during the baseball season.

[3] The term "users" refers to all people who utilize the facilities in the project site, which includes players, visiting teams, spectators, and District and College Park staff.

Table 1: Existing and Future Uses at the College Park Campus Sports Field and Baseball Diamond

Type of Use or Event	Existing Events	Number of Events with Proposed Light Use	Number of Events with Proposed PA System	Approximate Number of Spectators	Time of Year Activities Occur	Days of the Week	Time Frame [a]
FOOTBALL							
Football Games							
Varsity [b]	5	5	5	700[c]	August – November	Friday	7:00 p.m. – 10:00 p.m.
Junior Varsity [b]	5	5	5	300	August – November	Friday	4:30 p.m. – 6:30 p.m.
Freshman	5	5	5	200	August – November	Thursday	5:00 p.m. – 7:00 p.m.
Total Football Games	**15**	**15**	**15**				
Football Practices	70	70	0	5	August – November	Monday – Friday	3:00 p.m. – 7:00 p.m.
Football Play-off Games	1	1	1	1,800		Friday	6:00 p.m. – 10:30 p.m.
Total Football Events	**86**	**86**	**16**				
SOCCER							
Soccer Games, varsity & junior varsity (Men and Women)	12	12	12	100	December – February	Tuesday & Thursday	5:00 p.m. – 9:00 p.m.
Soccer Practice (Men and Women)	12	0	0	5	December – February	Monday – Sat	3:00 p.m. – 7:00 p.m.
Soccer Play-offs (Men and Women)	2	2	2	100	February	Tuesday – Thursday	7:00 p.m. – 9:30 p.m.
Total Soccer Events	**26**	**14**	**14**				
LACROSSE AND TRACK & FIELD							
Lacrosse Games (Men and Women)	20	0	2	75	February – May	Tuesday – Thursday	5:30 p.m. – 7:00 p.m.
Lacrosse, Track & Field Practice	75	0	0	5	February – May	Monday – Friday	3:00 p.m. – 7:00 p.m.
Track & Field Meets	3	0	3	100	March – May	Friday	
Total Lacrosse and Track & Field Events	**98**	**0**	**5**				
COMMUNITY AND YOUTH SPORTS							
Community User/Youth Soccer	200	0	0	200	Year Round	Daily	Monday – Friday: 4:00 p.m. – 8:30 p.m. Saturday & Sunday: 8:00 a.m. – 8:00 p.m. (no later than sunset)
Community User/Youth Football	20	0	0	50	August – November	Tuesday – Thursday	6:00 p.m. 8:30 p.m.
Total Community Events	**220**	**0**	**0**				
BASEBALL							
Baseball Games							
Varsity	14	14	14	100	March – May	Tuesday & Thursday	3:00 p.m. – 6:00 p.m.
Junior Varsity	12	12	0	35	March – May	Tuesday & Thursday	3:00 p.m. – 6:00 p.m.
Freshman	12	12	0	35	March – May	Tuesday & Thursday	3:00 p.m. – 6:00 p.m.
Total Baseball Games	**38**	**38**	**14**				
Baseball Practices	80	80	0	5	February – May	Monday – Friday	3:00 p.m. – 7:00 p.m.
Baseball Play-off Games	1	1	0	200	May	TBD	3:00 p.m. – 6:00 p.m.
Total Baseball Events	**119**	**119**	**14**				
TOTAL EVENTS	**549**	**219**	**49**				

[a] Listed time frames are inclusive of entire events.

[b] Varsity and junior varsity football games are currently held at the DVC campus; however, these events would transfer back to the College Park campus with implementation of the proposed project.

[c] Indicates average attendance totals. Depending on how well the team is doing, attendance can reach as high as 1,500; however, this is not typical.

Source: College Park High School, Mount Diablo Unified School District, 2013.

D. PROPOSED PROJECT

Currently, the sports field lacks permanent lighting and the baseball field lacks adequate lighting for evening games. Given this, varsity and junior varsity football games are currently held at the DVC campus sports field immediately across the street from the College Park campus. The sports field also lacks sufficient formal seating capacity for some competitions. In addition, accessory sports field structures such as the existing storage room, are not sufficient to serve the existing activities. The District is therefore proposing to introduce new permanent lighting fixtures to illuminate the sports field as well as the right and center field of the baseball diamond on a limited basis, install a new Public Address (PA) system, construct new bleachers to meet the demand for seating capacity at the sports field, construct new accessory athletic facilities, and complete improvements to the existing sports field entry driveway and plaza, which will fulfill the following objectives:

- Provide night time lighting to allow operation of field and track facilities during the evening hours;
- Allow varsity and junior varsity football games to take place on-campus;
- Extend the student school day by allowing evening practices at the main field and track;
- Provide separate seating for visiting team spectators;
- Modernize concession stand, restroom, storage and team room facilities; and
- Increase student school spirit and pride by holding more College Park High School events on campus.

On June 8, 2010, District voters approved Measure C, a $348 million general obligation bond measure intended to allow for improvements at the various campuses throughout the District. Funding for the design and construction of the proposed project is being provided through Measure C.

The proposed project, including installation of lighting, new bleachers, and accessory structures is described in detail below. The overall conceptual site plan is shown in Figure 3.

1. Lighting

The proposed project includes the installation of a new permanent lighting system which would illuminate the sports field and the right and center field of the baseball diamond during evening practices and competitions. The proposed field lights would consist of six 80-foot tall light poles, three on each side of the sports field, as shown in Figure 4. The poles would be made of galvanized steel anchored into the ground with concrete bases. Minor excavation would be required to construct the foundations for each pole and underground trenching for electrical connections.

The three poles on the west side of the field would each hold nine lamp fixtures directed towards the sports field. The three poles on the east side of the field would each hold ten lamp fixtures; seven of these would be directed towards the sports field and three would be directed towards the baseball diamond. A total of 48 lamp fixtures would illuminate the sports field and 9 lamp fixtures would illuminate the right and center field of the baseball diamond. Each fixture would be made of aluminum with a mirror-polished interior, light hood, and visor to direct light onto the main field and track and/or baseball outfield as applicable to increase light beam control and efficiency, with the intent of reducing the amount of spill light. The lamp fixtures would be equipped with 1,500-watt lamps.

It is anticipated that field light use would end at 8:30 p.m. for soccer and 10:00 p.m. for football games. Other weeknight and weekend uses would be limited to practices that would end at 8:30 p.m. and playoff games, which would end at 9:00 p.m. for soccer and lacrosse and 10:00 p.m. for football.

Community users, such as the Heritage Soccer Club, Martinez-Pleasant Hill Futbol Club, Pleasant Hill-Martinez Soccer Association and the Rebels, would use the field during the weekend and on weekdays by permit only. Currently, no night games are approved. For these uses, field lighting would not occur beyond 9:00 p.m. and would be by permit only.

2. Public Address System

The proposed project would also include a new PA system for school and outside group users. The PA system would include speakers on each side of the sports field. Speakers would be mounted to the light poles and directionally focused to the center of the field (away from the west side home bleachers) and toward the east side (visitor) bleachers. The PA system would be limited to use between 7:00 a.m. and 10:00 p.m. The PA system would be subject to a volume control governor and would not exceed 85 dBA $_{max}$ (refer to discussion under Section XII, Noise).

3. Spectator Bleachers

The proposed project includes construction of a new 500-seat capacity bleacher on the east side of the sports field for use by visiting team spectators. As shown in Figure 5, the bleachers would be approximately 90 by 30 feet and would include a 48- by 14-foot staircase and ramp. At their highest point, the bleachers would be 15 feet tall.

4. Accessory Structures

Two new accessory structures and an improved entrance to the sports field area would also be constructed as part of the proposed project. The floor plans for the two new structures are shown in Figure 5. The first structure would be located near the sports field entrance and would consist of a new 1,473 square-foot building housing concessions, restrooms, storage, and a ticket booth. This structure would replace temporary structures that are currently in use. The floor plan for the concessions structure is shown in Figure 5. The second structure would consist of an 836 square-foot team room and storage area located on the northern side of the stadium near the runners' starting blocks. The existing 600- square foot storage room would remain the same.

As shown in Figure 6, improvements to the existing entry driveway would consist of widening the existing pedestrian entrance by approximately 8 feet (to a maximum of 20 feet). Additional modifications include a curb to be installed to control the dirt and water that currently runs over the existing pathway when it rains.

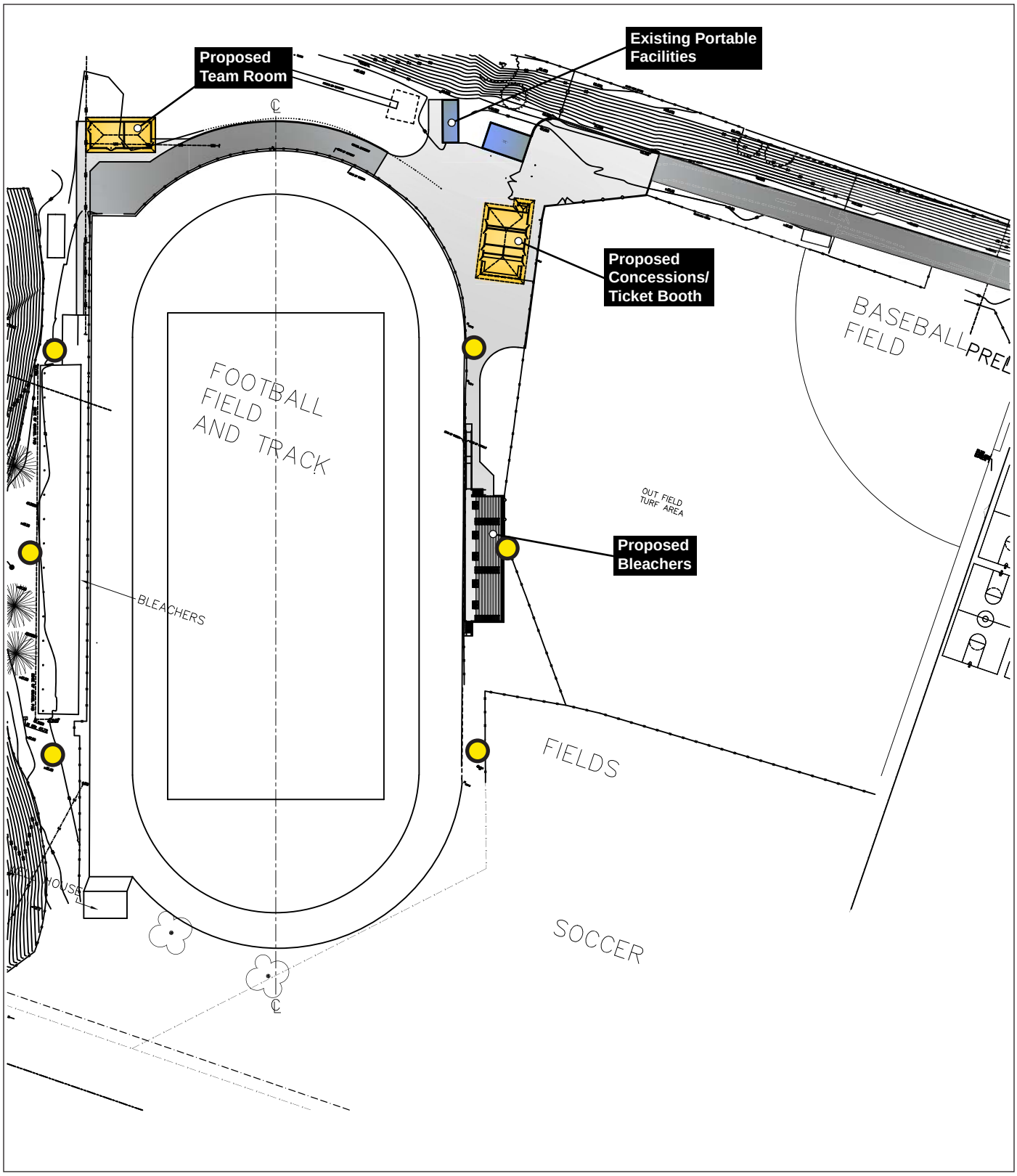

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FIGURE 3

Light Pole Locations

Note: **See Figure 6 for Floor Plans and Cross Sections of New Structures.**

0 75 150
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College Park High School
Athletic Facilities Improvements Project
Preliminary Concept Plan

SOURCE: VERDE DESIGN, NOVEMBER 20, 2012.

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MDUSD Resolution No. 14/15-01
Exhibit B

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	F1-F3	80'	-	80'	1500W MZ	7/3*	7	3
2	F4, F6	80'	-	80'	1500W MZ	9	9	0
1	F5	80'	-	80'	1500W MZ	9	9	0
6	TOTALS					57	48	9

* This structure utilizes a back-to-back mounting configuration

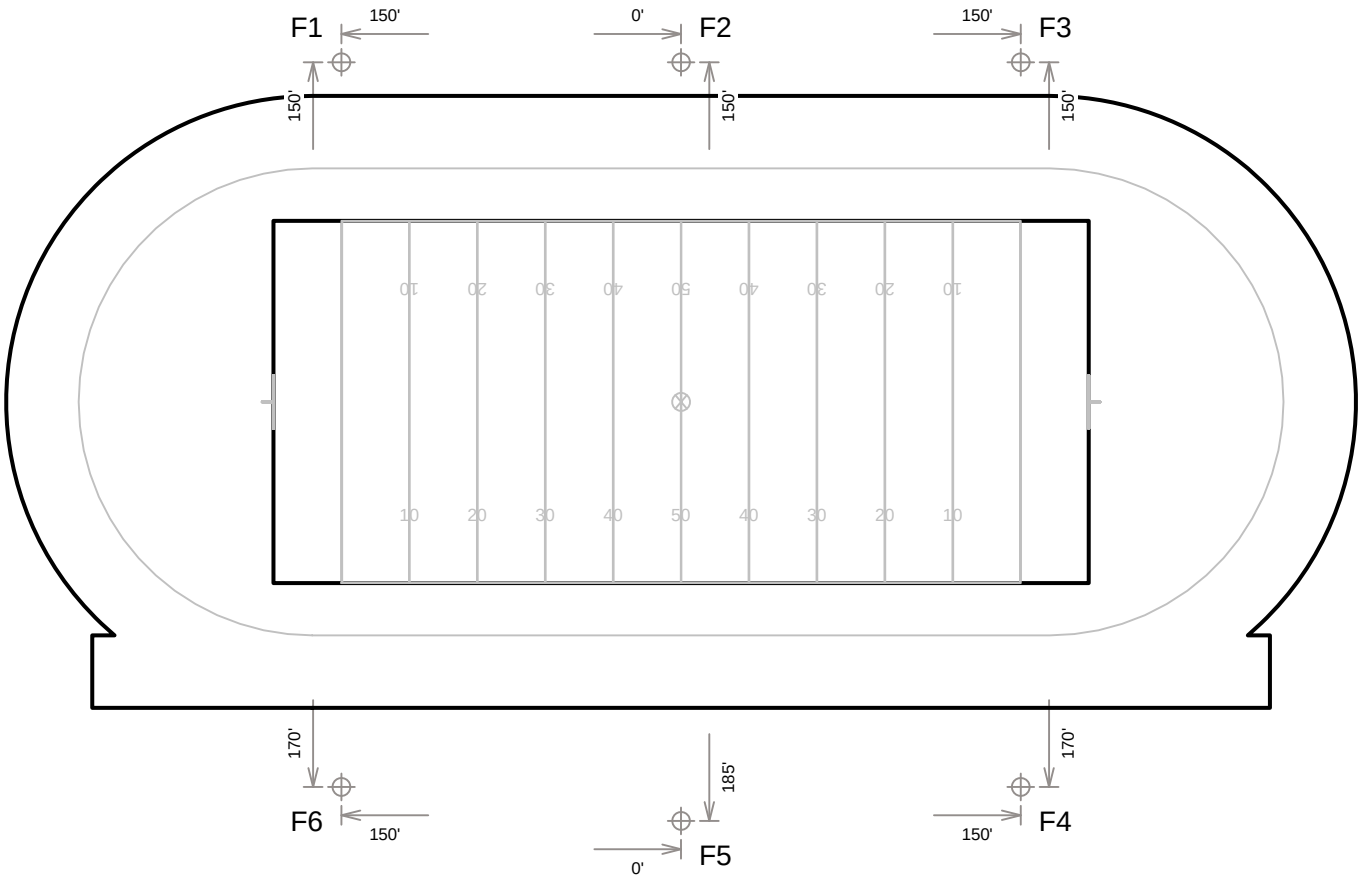

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FIGURE 4

N

0 100 200

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College Park High School
Athletic Facilities Improvements Project
Preliminary Lighting Plan

SOURCE: MUSCO SPORTS LIGHTING, LLC, OCTOBER 2012.

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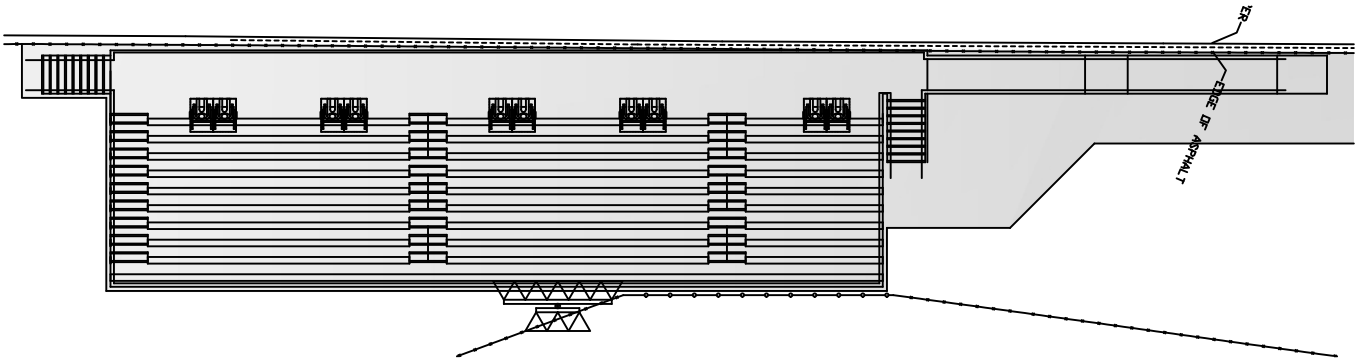
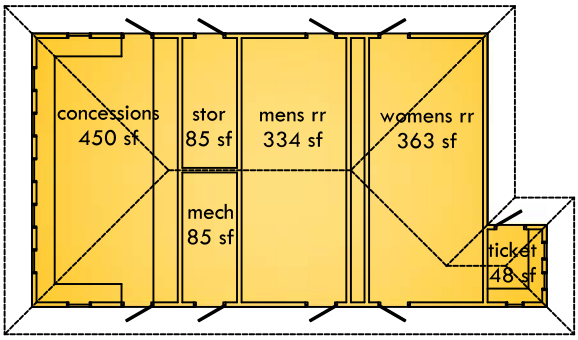
MDUSD Resolution No. 14/15-01
Exhibit B



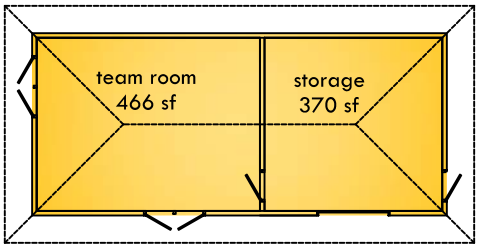
Enlarged Plan - 500 seat elevated visitors bleachers

0 15 30
FEET



total
1473 sf

Floor Plan - Concession / Restroom / Ticket



total
836 sf

Floor Plan - Team Room / Storage

0 15 30
FEET

LSA

FIGURE 5

College Park High School
Athletic Facilities Improvements Project
Preliminary Bleacher and Floor Plans

SOURCE: VERDE DESIGN, NOVEMBER 20, 2012.

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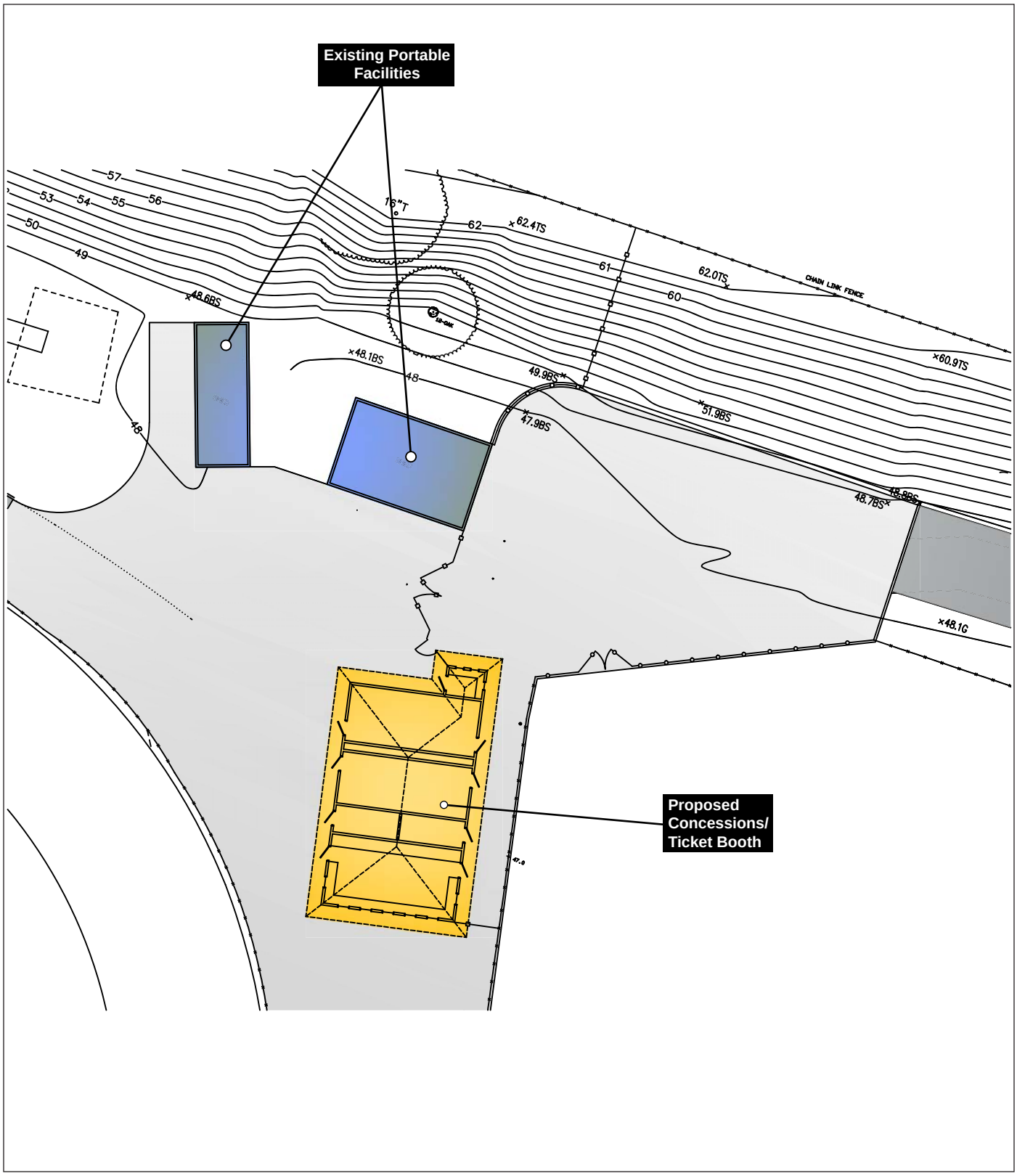

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FIGURE 6

N

0 30 60

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College Park High School
Athletic Facilities Improvements Project
Preliminary Athletic Field Entry Plan

SOURCE: VERDE DESIGN, NOVEMBER 20, 2012.

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MDUSD Resolution No. 14/15-01
Exhibit B

5. Events and Attendance

As shown in Table 1, with the proposed lighting system, the school's soccer, lacrosse, track and field, and baseball teams would play the same number of games currently played at the campus without lighting. Attendance at high school sporting events, such as track, lacrosse, or soccer competitions currently held at the sports field is typically between 75 and 100 spectators. Average attendance at community events, such as youth soccer, is about 200 spectators. With the possible extension of some of these games into the evening hours, it is anticipated that overall attendance at each of these events could increase by about 10 percent.

The number of football games would increase by a total of ten games as the varsity and junior varsity games, which are currently held in the evening hours at the DVC campus, would be moved back to the high school campus. Attendance at these games is generally as low as 300 and as high as 700 spectators, depending on the opposing team and how well the home team is performing. The analysis in this report assumes that *average* football game attendance at the high school campus would be about 500 per game with implementation of the proposed improvements and transfer of varsity and junior varsity football games back to the College Park campus. On occasion, depending on how well the team is doing, attendance can reach as high as 1,500, although this level of attendance is not typical and does not represent an average scenario. It should be emphasized that these ten additional football games would be taking place across Viking Drive (at the College Park campus) from where they currently occur (at DVC).

All other events would generally remain the same with the addition of the field lighting. Attendance at baseball games would not increase with the addition of outfield lighting because hours for these games would not be extended. Use of the outfield lighting could increase into the evening hours for practices, but attendance would not increase.

With the addition of the 500-seat visitor bleachers, total formal seating capacity at the sports field would be increased to approximately 2,000. However, this level of attendance would only be reached for about four to six competitions annually, such as homecoming and playoff events. The new bleachers are intended to meet the demand for additional formal seating at the sports field and to provide seating for visiting spectators. Therefore, the maximum attendance at competitions would not substantially increase with the provision of additional seating.

6. Construction

Construction drawings are currently in the planning process with work expected to begin as early as June 2014 and as late as summer 2015. Construction is currently anticipated to last approximately 5 months. No encroachment of public right-of-way or private property would be required. All campus athletic activities would continue to operate during construction. However, activities on the football field and track could be temporarily suspended for approximately four weeks during light pole installation. Activities displaced by temporary construction activities would likely occur in the nearby grass area on the campus, at Valley View Middle School, or on another nearby field.

7. Security Plan

Football games are supervised by school administrators and the Pleasant Hill Police Department assists when needed. All PE classes are supervised by the teacher(s) and coaches supervise the current

daily practices and other scheduled events. College Park High School follows standard security and safety protocols that are in place at all District school sites.

E. PROJECT APPROVALS

The review and approvals that would be required for the project by the District and the California Division of the State Architect (DSA) are described below.

1. CEQA Review

As part of project approval, adoption of this IS/MND by the District would constitute the appropriate level of environmental review for the proposed project.

2. California Department of General Services, Division of the State Architect (DSA)

The DSA's primary role in State government is to ensure that California's K-12 schools and community colleges are seismically safe and accessible to all. DSA fulfills this role by reviewing construction project plans for structural safety, fire and life safety, and accessibility (that is, access by disabled persons). In this role, DSA works closely with school districts and designers. Design-level drawings, including all structural elements of the proposed installation of the field lighting would be subject to the DSA review and approval process.

II. DRAFT MITIGATED NEGATIVE DECLARATION

Project Name: College Park High School Athletic Facilities Improvements Project

Project Location: The 7.6-acre project site is located within the College Park High School campus located at 201 Viking Drive in the City of Pleasant Hill, Contra Costa County. The project site itself is located on the western edge of the campus towards the southwest corner.

Description of Project: The District is proposing to install permanent lighting fixtures to illuminate the existing campus sports field as well as the right and center field of the baseball diamond on a limited basis, install a new PA system, construct new bleachers to meet the demand for seating capacity at the sports field, construct new accessory athletic facilities, and complete improvements to the existing sports field entry driveway and plaza.

Findings: It is hereby determined that, based on the information contained in the attached Initial Study, the project would not have a significant adverse effect on the environment.

Mitigation measures necessary to avoid or reduce the project's potentially significant effects to a less-than-significant level on the environment are detailed on the following pages. These mitigation measures are hereby incorporated and fully made part of this Draft Mitigated Negative Declaration. The project applicant has hereby agreed to incorporate as part of the project and implement each of the identified mitigation measures, which would be adopted as part of the Mitigation Monitoring and Reporting Program.

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3/27/14
Date

Timothy M. Cody
Interim Special Project Manager
2010 Measure C Projects
Mount Diablo Unified School District

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III. ENVIRONMENTAL CHECKLIST

1. **Project Title:** College Park High School Athletic Facilities Improvements Project

2. **Lead Agency Name and Address:**

   Mount Diablo Unified School District
   1936 Carlotta Drive
   Concord, CA 94519

3. **Contact Person and Phone Number:**

   Timothy M. Cody, Interim Special Project Manager, 2010 Measure C Projects
   (925) 682-8000, ext. 85615

4. **Project Location:**

   College Park High School
   201 Viking Drive
   Pleasant Hill, CA 94523

5. **Project Sponsor's Name and Address:**

   Mount Diablo Unified School District
   1936 Carlotta Drive
   Concord, CA 94519

6. **City of Pleasant Hill General Plan Designation:** School (S)

7. **City of Pleasant Hill Zoning:** Residential 7 (R-7)

8. Description of Project: The District is proposing to construct a permanent lighting system to illuminate the existing sports field and the right and center field of the baseball diamond on a limited basis, install a PA system, construct new bleachers to increase the formal seating capacity at the sports field, construct new accessory athletic facilities, and complete improvements to the existing sports field entry driveway and plaza. Refer to Chapter I, Introduction and Project Description, for a more detailed description of the proposed project.

9. Surrounding Land Uses and Setting: The campus is located near other educational uses: Diablo Valley College (DVC), a two-year community college, is directly north of the project site, and Valley View Middle School is directly east. A residential neighborhood borders the project site and high school campus to the west and the Civic Center Office Park borders the site to the south.

10. Other agencies whose approval is required: California Department of General Services, Division of the State Architect

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

Determination. (To be completed by the Lead Agency.)

On the basis of this initial evaluation:

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

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3/27/14

Timothy M. Cody
Interim Special Project Manager, 2010 Measure C Projects
Mount Diablo Unified School District

Date

ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. 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 which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

a) Have a substantial adverse effect on a scenic vista? ***(Less-Than-Significant Impact)***

A scenic vista is considered a view point that offers expansive views of a highly valued landscape for the benefit of the general public. The City of Pleasant Hill General Plan designates certain scenic routes within the City and applies a 50-foot setback for development within the scenic route corridors. Viking Drive is not considered a scenic route in the City's General Plan. The General Plan (Table CD3) also identifies certain scenic vista points, none of which are located in the immediate vicinity of the high school campus.

Development of the proposed project would result in construction of new permanent lighting fixtures mounted on 80-foot poles and other accessory structures, including new bleachers. However, the site is located in an urbanized area within an existing high school campus (and is located near other educational institutions with similar facilities), and would not be highly visible from surrounding public vantage points. In addition, the site is relatively level and is situated about 30 feet below the residential areas to the west; views of the campus from the public roadways in this area are largely unavailable because of the topography and existing vegetation.

While the project would include six 80-foot tall poles with lighting fixtures, given the lack of scenic views within the immediate vicinity of the site and the overall expanse of scenic vistas available from points further away, development and improvements associated with the proposed project would not have a substantial adverse effect on a scenic vista.

As discussed in Section XII, Noise installation of the new PA system would require implementation of one of the two mitigation options outlined in Mitigation Measure NOISE-2 to reduce the impact associated with operational noise levels to a less-than-significant level. The first option would require installation of a 6-foot tall clear acrylic sound wall system along the residential property line,

extending 100 feet north and 100 feet south of the end of the western bleachers. If implemented, this sound wall would maintain the existing private views from the rear yards of the residential properties as these views would not be substantially obstructed. Furthermore, although the visual conditions in and around the project site would change with implementation of this mitigation, loss of views of scenic vistas or of the project site itself as seen from private property are not considered to be significant impacts under CEQA. The criteria for "substantial adverse effects" and "substantial degradation of the visual character or quality of the site and its surroundings" are evaluated based on views from public areas or a large number of residents, as these are experienced by more people and with greater frequency. In addition, neither the City nor the District has any standards or policies which explicitly protect views from private property.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway? ***(No Impact)***

The project site is not within any portion of an officially designated State scenic highway.[4] The closest officially designated State scenic highways include segments of Interstate 680 (I-680) and State Route 24 (SR 24), which are located approximately 6 miles south of the project site. The project site is not visible from these designated routes. Therefore, the proposed project would have no impact on scenic resources within view of a State scenic highway.

c) Substantially degrade the existing visual character or quality of the site and its surroundings? ***(Less-Than-Significant Impact)***

A project would typically degrade the existing visual character or quality of a site and its surroundings if it would introduce visual elements that change the character of the site or surroundings and thus adversely affects the overall visual quality. The proposed project would result in the development of improvements to existing athletic facilities within a developed high school campus. While the project would result in a change in the visual character of the project site, the change would be consistent with the visual character one would expect to encounter at a high school campus.

The new 80-foot tall lighting fixtures would be visible from the surrounding area, particularly from the residences located immediately to the west of the site. However, existing trees and shrubs situated in between the residential homes and the high school campus would partially shield views of the proposed light poles and fixtures. Because there are no unique visual features associated with the high school campus and surrounding area and the proposed project would not block any protected or natural scenic views, the proposed project would not substantially degrade the existing visual character for the surrounding area. Therefore, this impact would be less than significant. Also refer to Section I.a for a description of the secondary effects to the visual character of the site and surroundings associated with implementation of Mitigation Measure NOISE-2. The visual quality of the project site's surroundings as a result of the project lighting is discussed in detail in Section I.d, below.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ***(Potentially Significant Unless Mitigation Incorporated)***

[4] California Department of Transportation, 2013. California Scenic Highway Mapping System. Website: www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm (accessed June 12).

Existing Light Sources. Currently, the existing sources of nighttime lighting within in the vicinity of the project site are typical of urbanized areas, and include lighting sources such as pole street lights, building lights, vehicle headlamps, and interior lighting visible through windows. In addition, the football field and pool located at the eastern end of the DVC campus (about 1/3-mile from the project site) are also lit by permanent pole mounted lights during evening events.

Existing nighttime lighting sources within the College Park campus include a portable lighting system that is used by a local youth football team at the sports field during October through November, 12 permanent 50-foot-tall light poles that illuminate the pool area (approximately 600 feet east of the sports field) during evening swim meets and morning and evening practices, tennis court lighting (located approximately 2,000 feet east of the sports field), and safety lighting throughout the campus interior.

Proposed Light Sources. The proposed project would introduce new sources of light and glare to the project site. The project includes the installation of a new permanent field lighting system, which would be operated up until 10:30 p.m. for some events. The proposed field lights would consist of six 80-foot tall light poles surrounding the sports field. Three light poles would be located on the west side of the field and three light poles would be located on the east side of the field. A total of 48 lamp fixtures would illuminate the sports field and 9 would illuminate the right and center field of the baseball field, which is located east of the sports field. The lamp fixtures on the light poles would be equipped with 1,500-watt lamps. The proposed project would allow for high school and community sports events to extend beyond dusk and into nighttime hours. All proposed lighting is intended to adequately illuminate the sports field to assure safety for sports field users. Installation of the proposed light fixtures and poles would change daytime and nighttime views of the project site. As described in Section I.c, the light fixtures and poles would be visible during the daytime, and during their use at nighttime. Views of the lighted sports field from the residential areas to the west would be somewhat obstructed by existing vegetation that borders the campus.

The proposed light pole locations and the orientation of the light fixtures are designed to minimize potential light spill beyond the perimeter of the sports field.[5] Refer to Figure 4 for the locations of the proposed light poles. Each light fixture would be shielded by a light hood and 14-inch visor and would be equipped with 1,500-watt Green Generation® lamps. The proposed lighting fixtures would allow various lighting modes to be programmed depending on an event. For example, a lower-wattage power setting could be used to allow for lower light levels during sports practices, and/or housekeeping/field maintenance.

For a high school facility with a spectator capacity under 5,000, the Illuminating Engineering Society of North America (IESNA) RP-6 *Current Recommended Practice for Sports and Recreational Area Lighting* recommends an average light level of 50 horizontal footcandles[6] for football and soccer fields. According to the project's illumination summary found in Appendix A and in Table 2 below, when in use, the proposed lamp fixtures would generate averages of 50.8 footcandles for the football/soccer field and 18.8 footcandles for the track. The most frequent light use would be during

[5] Spill light is light that illuminates surfaces beyond the area intended to be illuminated.

[6] A footcandle is a common unit of measurement used to calculate adequate lighting levels of workspaces in buildings or outdoor space. It is used to describe the light level that a lamp is expected to provide over the long-term. A horizontal footcandle is the amount of light striking horizontal plane and a vertical footcandle is the amount of light striking vertical plane.

practices, which could operate under lower lighting conditions. These averages would be generally consistent with the IESNA recommended light level.

Table 2: Illumination Summary for Football, Track, and Soccer Horizontal Footcandles

	Football/Soccer	Track
Minimum	37.0	1.0
Maximum	58.0	57.0
Average	50.8	18.8

Source: MUSCO, 2012.

Operation of the proposed light fixtures would be limited for school-related events anticipated throughout the year, typically from dusk until 10:00 p.m. on weekdays and from dusk until 7:00 p.m. on Saturdays. It is anticipated that field light use would end at 6:00 p.m. for baseball games (which would include lighting the outfield of the baseball diamond only); at 7:00 p.m. for freshman and junior varsity football games and all high school sports practices; at 9:00 p.m. for soccer games; and, at 10:00 p.m. for varsity football games (with the exception that lights may be used until 10:30 p.m. when football playoff events are held at the campus). For community uses, field lights would not be used. The proposed field lights would likely be turned on during months with shorter daylight (typically between November and early March) and would light the field for no more than 2 hours during days with a shorter daylight period. In months with longer daylight, typically during the spring and summer months, the proposed field lights would be turned on later (at dusk), and the lighted hours of the sports field could be shorter than the listed time frame.[7] The proposed field lights would likely be turned on 1 to 1½ hours after the 5:00 p.m. start time for months with a longer daylight period (typically between April and August), and would result in fewer lighted hours of the sports field.

Project Impacts. As previously described, the project site is located adjacent to a residential neighborhood, which is situated on a plateau about 20 to 25 feet above the site to the west. Potential impacts associated with the introduction of new permanent lighting fixtures at the College Park campus, which could result in spillover light affecting the nearby residential neighborhood and sky glow affecting night time views in the area, are discussed below.

Spillover Light. The City of Pleasant Hill does not have specific environmental thresholds for spillover light. Examples of commonly experienced light levels in other settings are shown below:

- Full moonlit night: approximately 0.01 footcandle
- Typical neighborhood streetlight: 1 to 5 footcandles
- Main road intersection street lighting: 2.5 to 3 footcandles
- Residential lighting at night: 7 to 10 footcandles
- Dusk: approximately 10 footcandles
- Gas station canopies: 25 to 30 footcandles

[7] In Pleasant Hill, sunsets generally occur during the following time frames for each season: Fall (September to November): 7:40 p.m. to 4:50 p.m.; Winter (December to February): 4:50 p.m. to 6:00 p.m.; Spring (March to May): 6:00 p.m. to 8:25 p.m.; and Summer (June to August): 8:25 p.m. to 7:40 p.m.

For the purposes of this analysis, the District has selected a very conservative significance threshold of spill light over 1.0 footcandle on adjacent properties. Because most of the existing nighttime lighting in the immediate vicinity of the site consists of street lighting, the 1.0 footcandle threshold would represent spillover light as great as the lowest amount of neighborhood street lighting (which ranges from 1 to 5 footcandles).

The project's illumination summary also analyzed average vertical and horizontal footcandle values for spill light under lighting conditions at the fence-line of the adjacent residential neighborhood, located west of the project site. Horizontal footcandles measure the amount of light falling on the ground and vertical footcandles measure the amount of light falling on objects extending above the ground (e.g. a fence). As shown in Table 3 below, the anticipated light levels within the adjacent residential neighborhood range from 0.16 to 0.72 vertical footcandles, with an average of 0.45 vertical footcandles, and 0.02 to 0.21 horizontal footcandles, with an average of 0.09 horizontal footcandles. The maximum values for the residential area would be well below the recommended maximum level of 1.0 footcandle.

Temporary portable lighting fixtures are currently used at the sports field; however, these temporary fixtures would no longer be used with installation of the proposed field lights. In addition, the existing pool facility located approximately 600 feet east of the sports field is illuminated by permanent light fixtures for about an hour and a half in the morning, 3 days per week and for up to two and a half hours per evening up to 5 days per week, between the months of September through November and February through May. These lights illuminate the pool facility only and do not affect lighting conditions in or around the sports field or adjacent residential areas. In addition, the tennis courts that are located at the southeast corner of the campus are also lit during the evening hours; however, this light source would not combine with the new field lighting as it is approximately 2,000 feet from the sports field. In addition, sports facilities at the DVC campus are lit during evening events; however, this light source does not substantially affect lighting conditions in and around the residential areas adjacent to the project site, due to the distance from the site and location of the facilities in an urban area.

Table 3: Illumination Summary for 150-Foot Radius Spill Light under Lighting Conditions (Footcandles)

	Horizontal	Maximum Vertical
Minimum	0.02	0.16
Maximum	0.21	0.72
Average	0.09	0.45

Source: MUSCO, 2012.

The use of the proposed field lighting system would incrementally add to existing light levels for a short duration (up to 3 hours), each time the light fixtures are used. Although individual views from some of the adjacent residences may be affected, there are other existing light sources in the project vicinity that already cause some light spillover. In addition, each fixture would have a mirror polished interior, light hood, and visor to direct light onto the main field and track to reduce the amount of spill light. The nighttime lighting levels from the proposed lighted sports field in the vicinity of the project site, including the adjacent residential area, would be similar to the existing nighttime lighting conditions in the area, and, with implementation of Mitigation Measure AES-1, below would not pose a safety hazard or create substantial spill light or obtrusive light.

Additionally, because the project itself would not generate a substantial amount of spillover light and, due to the distance of other substantial sources of light from the project site (such as athletic facility lights used at the DVC campus and pool and tennis court lighting within the campus interior), it is not expected that new lighting facilities at the high school would combine with other light sources in the vicinity to create a cumulatively-considerable impact to night time views related to light spillover outside of the campus.

Sky Glow. Sky glow is the light that "spills" into the sky above the horizon during night time. The light can then illuminate moisture or other particles in the atmosphere, creating a dispersion of artificial light effect. Sky glow can increase due to meteorological conditions (such as the presence of fog) or for situations where increased moisture is in the air. As sky glow may vary based on the meteorological conditions, quantification of the sky glow that may be created by a project would be difficult to predict.

Given that the project site is located within an existing school campus with existing night time lighting in an urban area, sky glow from the campus and surrounding land uses currently exists. Development of the project would add additional lighting fixtures to the project site, which would likely increase the amount of sky glow. However, as discussed in detail above, use of the sports field (and lighting) would end by 10:00 p.m. at the latest during regular events, and most evening use would end by 9:00 p.m. When play-off football games are held however, lights may be in use until 10:30 p.m., although this would occur only every few years.

Although spillover light and sky glow generated by the proposed project is not considered to be substantial in the context of existing lighting conditions in this urban area, implementation of the following mitigation measure would further ensure that potential impacts to views from lighting associated with the project would be less than significant.

Mitigation Measure AES-1: The Mount Diablo Unified School District shall implement the following measures to reduce potential light spillover:

- Lighted use of the sports field shall conclude by 10:00 p.m., with pole lighting turned off no later than 10:00 p.m. This 10:00 p.m. ending time coincides with the required time for end use of the PA system. The only exception is for football play-off games, which may extend the use of the lighting system until 10:30 p.m.
- When the sports field is not in use, pole lighting shall be turned off.
- Sports field lighting shall be designed to minimize visibility of light source and glare impacts by directing lighting downward and towards the field, and not illuminating areas outside of the College Park campus. The spill and glare features utilized (including shields) shall be capable of reducing spill, glare, and sky glow from the sports field lighting.
- For concurrent events at the College Park campus that require the use of sports field, pool, and/or baseball lighting, the District shall operate the field light levels at the lowest acceptable setting for safety depending on the type of field use. This includes flexibility of light level settings for practices where the full competitive safety light levels may not be needed.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURAL AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land 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 non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

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 a non-agricultural use? ***(No Impact)***

The project site is located within the existing College Park campus, which is developed with classroom, recreational, and administrative structures and is located in an urban area in the City of Pleasant Hill. There are no agricultural resources located within or adjacent to the project site. Additionally, the site is classified as "Urban and Built-Up Land" by the State Department of Conservation.[8] The proposed project would not result in an impact related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? ***(No Impact)***

The College Park campus is zoned Residential 7 (R-7) on the City of Pleasant Hill Zoning Map.[9] The site is not under a Williamson Act contract.[10] Development of the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? ***(No Impact)***

The developed project site is located within an existing high school campus and is zoned R-7 on the City of Pleasant Hill Zoning Map.[11] The proposed project would not result in the loss of forest land or conversation of forest land to non-forest uses.

d) Result in the loss of forest land or conversion of forest land to non-forest use? ***(No Impact)***

Please refer to Section II.c. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest uses.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use? ***(No Impact)***

Please refer to Sections II.a. and II.c. The project site is located within an existing high school campus in a developed area and would not result in: the extension of infrastructure into an undeveloped area, the development of urban uses on a greenfield site, or other physical changes that would result in the conversion of farmland to non-agricultural uses or forest land to non-forest uses. The proposed project would not adversely affect agricultural or forestry resources.

[8] California Department of Conservation, 2011. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. *Contra Costa County Important Farmland 2010* (map). Website: ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/con10.pdfU (accessed December 17, 2012). October.

[9] Pleasant Hill, City of, 2011. *City of Pleasant Hill Zoning Map.* Website: www.ci.pleasant-hill.ca.us/DocumentCenter/Home/View/276 (accessed December 17, 2012). May 16.

[10] California Department of Conservation, 2007. Division of Land Resource Protection. *Contra Costa County Williamson Act Lands 2007* (map).Website: ftp.consrv.ca.gov/pub/dlrp/WA/Contra_Costa_WA_06_07.pdf (accessed December 19, 2012). March 26.

[11] Pleasant Hill, City of, 2011, op. cit.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. 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 non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

The project site is located in the San Francisco Bay Area Air Basin, and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}, $PM_{2.5}$), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal $PM_{2.5}$ 24-hour standard.

Pollutant monitoring results for the years 2010 through 2012 at the nearest ambient monitoring station, which is located in Concord on Treat Boulevard, indicate that air quality in the region has generally been good. There were two recorded days above the State 1-hour ozone standard in 2010 and 2011, while there were no exceedances in 2012. There were four recorded days above the State 8-hour ozone standard in 2010, five days in 2011, and three days in 2012. There was also one day above the federal 8-hour ozone standard in 2010, and two days in 2011 and 2012. In 2011, there was one recorded day above the State 24-hour PM_{10} standard. In addition, there was one recorded day above the federal 24-hour $PM_{2.5}$ standard in 2010, two days in 2011, and no exceedances in 2012. No exceedances of the federal or State CO, NO_2, and SO_2 standards were recorded in this area during the 3-year period.

a) Conflict with or obstruct implementation of the applicable air quality plan? ***(Less-Than-Significant Impact)***

An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a non-attainment area. The main purpose of an air quality plan is to bring an area into compliance with the requirements of federal and State air quality standards.

The BAAQMD is responsible for developing a Clean Air Plan[12] which guides the region's air quality planning efforts to attain the California Ambient Air Quality Standard (CAAQS). The BAAQMD 2010 Clean Air Plan (CAP) is the latest Clean Air Plan which contains district-wide control measures to reduce ozone precursor emissions (i.e., reactive organic gases [ROG] and oxides of nitrogen [NO_x]), particulate matter, and greenhouse gas emissions.

The current CAP, which was adopted on September 15, 2010, by the BAAQMD Board of Directors:

- Updates the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone;
- Provides a control strategy to reduce ozone, particulate matter (PM), toxic air contaminants (TACs), and greenhouse gases in a single, integrated plan;
- Reviews progress in improving air quality in recent years; and
- Establishes emission control measures to be adopted or implemented in the 2010 to 2012 timeframe.

The primary goals of the CAP are to: attain air quality standards; reduce population exposure to air pollutants and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect the climate. Control measures included in the CAP are not applicable to the proposed project as the control measures are related to stationary emissions sources (e.g., cement kilns, refineries) and transportation. The proposed project would result in improvements to existing athletic facilities at an existing high school; the project would not result in an increase in student capacity at the project site.

The proposed project would not conflict with any of the control measures identified in the CAP designed to bring the region into attainment. Additionally, the proposed project would not increase population or substantially increase vehicle miles traveled because a substantial increase in spectators is not anticipated with the proposed improvements to the existing athletic facilities. Therefore, the proposed project would not conflict with, or obstruct implementation of, the BAAQMD CAP.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? ***(Potentially Significant Unless Mitigation Incorporated)***

Air pollutant emissions associated with the proposed project would primarily occur over the short-term in association with construction activities, including demolition, excavation and vehicle/ equipment use. Long-term operational emissions typically result from vehicle trips to and from the project site; however, as described in Section XVI, Transportation/Traffic, the proposed project would not increase the student population on the site or generate a substantial number of new vehicle

[12] Bay Area Air Quality Management District, 2010. *Bay Area 2010 Clean Air Plan*. September.

trips. The following is a description of potential air quality violations that could occur as a result of short-term construction emissions, including fugitive dust, and long-term operational emissions.

Construction Period Impacts. Construction vehicle traffic, the use of construction equipment, and wind blowing over exposed earth would emit exhaust and dust that affect local and regional air quality. The BAAQMD CEQA Air Quality Guidelines include screening criteria to provide an indication of whether a proposed project could result in potentially significant air quality impacts.[13] According to the BAAQMD, if the screening criteria are not exceeded by a proposed project, an additional detailed air quality assessment of a project's emissions would not be required.

According to BAAQMD, a high school construction project that would include the addition of greater than 3,261 students or 277,000 square feet of facilities would be potentially significant. Construction of the proposed project would take about 5 months and would be limited to the installation of field lighting and bleachers at the existing sports field, construction of two new accessory structures totaling about 1,939 square feet, minor excavation work for utility installation, and widening of the existing entrance driveway. The project would not add additional students. Therefore, project emissions would be well below the BAAQMD's criteria for construction emissions. However, the BAAQMD requires that all projects implement best management practices to reduce construction fugitive dust impacts. Implementation of the following mitigation measure would further reduce already less-than-significant construction period emissions.

Mitigation Measure AIR-1: The following construction practices shall be implemented at the project site during construction of the project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

[13] On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD *CEQA Air Quality Guidelines*. The court did not determine whether the thresholds of significance were valid on their merits, but found that adoption of the threshold was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA. In May 2012, the BAAQMD filed an appeal of the court's decision. In August 2013, the First District Court of Appeal overturned the trial court and held that the thresholds of significance were not subject to CEQA review. The BAAQMD has not reinstated the 2011 Guidelines; however, the District notes that the Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or the evidence supporting the thresholds. The District finds that, despite the court ruling, the science and reasoning contained in the BAAQMD 2011 *CEQA Air Quality Guidelines* provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 *CEQA Air Quality Guidelines*.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes. Clear signage on this measure shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign with the telephone number and person to contact at Mount Diablo Unified School District regarding dust complaints shall be posted at the site. This person shall respond and take corrective action in regard to complaints within 48 hours.

Operational Emissions – Regional Emissions Analysis. Long-term air emission impacts are associated with stationary sources and mobile sources. Stationary source emissions result from the consumption of natural gas and electricity. Mobile source emissions result from vehicle trips and result in air pollutant emissions affecting the entire air basin. For operational criteria pollutants, the BAAQMD has established a screening level size of 311,000 square feet or 2,390 students for high school projects. As described in the project description, the proposed project includes minor improvements to existing athletic facilities and would not add any additional students. Therefore, according to the BAAQMD, the project would not have the potential to result in significant operational emissions.

The primary source of emissions for land use projects is typically motor vehicle emissions. The proposed project would not generate new vehicle emissions as no increase in use is anticipated to occur with installation of the various athletic facility improvements. Therefore, no increase in vehicle miles traveled (VMT) would result with development of the proposed project. As such, the proposed project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

Localized CO Impacts. The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emission concentrations. According to the BAAQMD *CEQA Air Quality Guidelines*, the proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

The proposed project would not conflict with an applicable congestion management program for designated roads or highways, the regional transportation plan or other agency plans. Additionally, traffic volumes on roadways in the project vicinity are well below the screening criteria of 24,000

vehicles per hour,[14] and the project is not expected to generate substantial peak hour trips. Therefore, the proposed project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour and would not result in localized CO concentrations that would exceed State or federal standards.

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

CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. According to the BAAQMD, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Therefore, if daily average or annual emissions of operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed project would result in a cumulatively significant impact.

As discussed above, implementation of the proposed project would generate less-than-significant regional emissions. Therefore, the proposed project would not result in individually significant impacts and therefore would not make a cumulatively considerable contribution to regional air quality impacts.

d) Expose sensitive receptors to substantial pollutant concentrations? ***(Potentially Significant Unless Mitigation Incorporated)***

The nearest sensitive receptors to the project site include residences located west of the site on Norse Drive, the rear yards of which border the school's western property line. Construction of the proposed lighting poles would occur approximately 85 feet east from the closest residence. Construction of other new facilities would occur between 145 and 525 feet from the nearest residences. Classrooms are located much farther away, on the eastern side of the campus, and would not be substantially affected by construction activities, particularly since most construction activities would occur during the summer months, when school is not in session.

Health risks from TACs are a function of both concentration and duration of exposure. A project would have result in a significant health risk if it would:

- Individually expose sensitive receptors (such as residential areas) to toxic air contaminants in excess of the following thresholds:
    - Increased cancer risk greater than 10.0 in one million;
    - Increased non-cancer risk of greater than 1.0 on the Hazard Index (chronic or acute);
    - Ambient $PM_{2.5}$ increase greater than 0.3 $\mu g/m^3$ annual average; or

[14] Pleasant Hill, City of, 2003. *City of Pleasant Hill General Plan 2003*. July 21.

- Cumulatively exposing sensitive receptors to toxic air contaminants in excess of the following thresholds:
    - Increased cancer risk greater than 100.0 in one million;
    - Increased non-cancer risk of greater than 10.0 on the Hazard Index (chronic);
    - Ambient $PM_{2.5}$ increase greater than 0.8 $\mu g/m^3$ annual average;

Construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks throughout the construction period. Additionally, construction-related sources are mobile and transient in nature, and the emissions occur within the project site with concentrations dispersing rapidly with distance. Mitigation Measure AIR-1 would help to reduce construction pollutant concentrations during the construction period by minimizing the idling time of diesel powered construction equipment and requiring that all construction equipment is maintained and properly tuned. Additionally, the project construction duration is expected to be 5 months, which is very short relative to the 70 year exposure duration for which risk levels are measured. Therefore, the proposed project would not be expected to expose sensitive receptors to substantial pollutant concentrations, such that the established thresholds would be exceeded.

e) Create objectionable odors affecting a substantial number of people? ***(Less-Than-Significant Impact)***

The proposed project would not involve permanent land uses or activities that would generate objectionable odors. Construction-related activities, such as exhaust from construction vehicles and equipment and building materials, may result in objectionable odors; however, these odors would be temporary and short in duration. Once operational, the proposed project would not create objectionable odors affecting a substantial number of people.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. 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 Game or U.S. 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, regulations or by the California Department of Fish and Game or U.S. 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, 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?	☐	☐	☐	☒

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 Game or U.S. Fish and Wildlife Service? ***(Less-Than-Significant Impact)***

The project site, which is located within the existing College Park campus, is situated in an urban area and is surrounded by residential, commercial, and other educational uses. The project site consists of the existing sports field and associated facilities. The sports field consists of artificial turf, a synthetic running track, bleachers, and fencing. The remainder of the site consists of grass and a few scattered

ornamental trees. All vegetation on the project site consists of ornamental, non-native landscaping. The site has little wildlife habitat value and no sensitive wildlife or plant species are known or expected to inhabit the project site.

Artificial night lighting is known to have adverse consequences on landscapes such as riparian corridors, urban-rural interfaces, natural habitats adjacent to urban communities, and open spaces; however, no such natural areas occur within or in the vicinity of the site.

Artificial night lighting can also adversely affect wildlife species by disrupting the foraging behavior and predation risk for certain nocturnal species, for example, or by leading to increased mortality of migrating birds. The field lighting system would be used for a limited number of evening hours and would be turned off when the facility is not in use. Additionally, the campus and surrounding area are currently subject to a considerable amount of artificial night lighting, including primarily street and parking lot lights, and interior lighting visible from windows. Although the proposed field light fixtures would be pointed at a downward angle toward the field, and designed to minimize the amount of light spilling over to adjacent land uses, the new lighting would increase the existing artificial light in the area. However, the wildlife species occurring on-site are relatively common urban species that have adapted to artificial night lighting. For this reason, the increase in ambient lighting would not substantially affect wildlife species that may be present on or adjacent to the project site.

Given the above, the proposed project would not have a substantial adverse effect on any special-status wildlife or plant species.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(No Impact)***

The project site is located within a developed area of an existing high school and does not support any riparian habitat or other sensitive natural communities.[15] Therefore, the proposed project would not have an impact on any riparian habitat or other sensitive natural community.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ***(No Impact)***

The project site is completely developed with urban land uses and is not located in an area that supports any wetlands, drainages, or water bodies as defined by Section 404 of the Clean Water Act and would not result in the direct removal, filling, or hydrological interruption of such wetlands.[16] Therefore, the proposed project would not have a substantial adverse effect on federally protected wetlands.

[15] San Francisco Estuary Institute, 2012. Bay Area Aquatic Resource Inventory (BAARI). BAARI Modern Habitats. Record search executed December 19, 2012. Website: www.californiawetlands.net/tracker/ba/map.

[16] Ibid.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ***(Less-Than-Significant Impact)***

The project site is located within an existing high school campus and and wildlife associated with the project site would likely be adapted to disturbed urban sites and would not be substantially affected by the proposed project. Trees and shrubs have the potential to support nests of common native bird species, which are protected under the federal Migratory Bird Treaty Act and California Fish and Wildlife Code. However, no trees or shrubs would be removed or otherwise disturbed by the proposed project.

In addition, it is possible that birds may pass through the area during a seasonal migration. However, the project site currently contains little habitat value for migrating birds and the addition of lighting to the sports field is unlikely to interfere with migration patterns. Lighting would be directed downward and would be consistent with the lighting levels that surround the high school campus in this urban area.

Given the above, the proposed project would not substantially interfere with the movement of wildlife species 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? ***(No Impact)***

The proposed project would not result in the removal of any trees on the project site, or otherwise be subject to any local policies or ordinances protecting biological resources. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources.

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? ***(No Impact)***

The proposed project is located in an urban area and would not conflict with the provisions of any adopted or other approved local, region, or State habitat conservation plan.

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

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? ***(Potentially Significant Unless Mitigation Incorporated)***

The project site is located within an existing high school campus originally built in 1960.[17] The project site is highly disturbed and is not identified as a potential historic resource in the City of Pleasant Hill General Plan.[18] However, the possibility remains that a currently unknown historic resource, as defiend by CEQA Guidelines Section 15064.5, could be encountered during construction activities. Implementation of the following mitigation measure would ensure that potential impacts to historic resources that may be encountered during project activities would be reduced to a less-than-significant level.

> Mitigation Measure CULT-1: Should an archaeological resource be encountered during project construction activities, the construction contractor shall halt construction within 25 feet of the find and immediately notify the Mount Diablo Unified School District. Construction activities shall be redirected and a qualified archaeologist, in consultation with the District, shall: 1) evaluate the archaeological deposit to determine if it meets the CEQA definition of a historical or unique archaeological resource and 2) make recommendations about the treatment of the deposit, as warranted. If the deposit does meet the CEQA definition of a historical or unique archaeological resource, then it shall be avoided to the extent feasible by project construction activities. If avoidance is not feasible, then adverse effects to the deposit shall be mitigated as specified in CEQA Guidelines Section 15126.4(b) (for historic resources) or CEQA Section 21083.2 (for unique archaeological resources). This mitigation may include, but is not limited to, a thorough recording of the resource on Department of Parks and Recreation Form 523 records, or archaeological data recovery excavation. If data recovery excavation is warranted,

[17] Mount Diablo Unified School District, 2013. *2007-2008 Executive Summary School Accountability Report Card.* Website: www.mdusd.k12.ca.us/mdusd/reportcards/high/collegepark.htm (accessed May 21).

[18] Pleasant Hill, City of, 2003. *City of Pleasant Hill General Plan 2003.* July 21.

CEQA Guidelines Section 15126.4(b)(3)(C), which requires a data recovery plan prior to data recovery excavation, shall be followed. If the significant identified resources are unique archaeological resources, mitigation of these resources shall be subject to the limitations on mitigation measures for archaeological resources identified in CEQA Sections 21083.2(c) through 21083.2(f).

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ***(Potentially Significant Unless Mitigation Incorporated)***

Archeological deposits are typically found near creeks and other waterways. There are no creeks or other waterways within or immediately adjacent to the project site; however, Crystal Creek is located approximately 515 feet east of the project site. The potential for surface and subsurface archaeological resources to be present at the project site is considered to be low and the likelihood of discovering resources during the excavation required to complete the proposed project is unlikely. However, implementation of Mitigation Measure CULT-1 would ensure that potential impacts to archaeological resources would be reduced to a less-than-significant level.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ***(Potentially Significant Unless Mitigation Incorporated)***

Although there is no documentation that suggests paleontological resources are present within the project site, there is a possibility that construction activities could uncover paleontological resources beneath the surface. Implementation of the following mitigation measure would ensure that potential impacts to paleontological resources would be reduced to a less-than-significant level.

Mitigation Measure CULT-2: If paleontological resources are encountered during site preparation or grading activities, all work within 25 feet of the discovery shall be redirected until a qualified paleontologist has assessed the discoveries and made recommendations. Paleontological resources include fossil plants and animals, and evidence of past life such as trace fossils and tracks.

If the paleontological resources are found to be significant, adverse effects to such resources shall be avoided by project activities to the extent feasible. If project activities cannot avoid the resources, the adverse effects shall be mitigated in accordance with *CEQA Guidelines* Section 15126.4(b)(3). Mitigation may include data recovery and analysis, preparation of a final report, and the formal transmission or delivery of any fossil material recovered to a paleontological repository, such as the University of California Museum of Paleontology (UCMP). Upon completion of project activities, the final report shall document methods and findings of the mitigation and be submitted to the Mount Diablo Unified School District, the City of Pleasant Hill, and a suitable paleontological repository.

d) Disturb any human remains, including those interred outside of formal cemeteries? ***(Potentially Significant Unless Mitigation Incorporated)***

The potential to uncover Native American human remains exists in locations throughout California. Although not anticipated, human remains could be identified during site-preparation and grading activities and could result in a significant impact to Native American cultural resources.

Implementation of the following mitigation measure would reduce potential adverse impacts to human remains to a less-than-significant level.

> Mitigation Measure CULT-3: If human remains are encountered during construction activities, work within 25 feet of the discovery shall be redirected and the Contra Costa County Coroner shall be notified immediately. At the same time, an archaeologist shall be contacted to assess the situation and consult with the appropriate agencies. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.
>
> Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. MDUSD shall follow the recommendations outlined in the report and the report shall be submitted to the Mount Diablo Unified School District, the City of Pleasant Hill, and the Northwest Information Center.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. 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?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

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 groundshaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides? ***(Less-Than-Significant Impact/Potentially Significant Unless Mitigation Incorporated)***

Fault Rupture. The San Francisco Bay Area is a seismically active region that is subject to frequent earthquakes; there are 30 known faults in the Bay Area that are considered capable of generating earthquakes. The Concord-Green Valley fault is the nearest active fault to the project site and is located 2.5 miles northeast of the site. Table 4 shows active faults within the project vicinity.

Table 4: Active Faults within the Project Vicinity

Fault	Proximity to Project		Earthquake Probability (percent)[a]	Earthquake Intensity
	Miles	Direction		
Concord-Green Valley	2.5	northeast	3	IX-Violent
Calaveras	8.2	south	7	VII-Strong
Mount Diablo	10.5	southeast	1	VIII-Very Strong
Greenville	6.0	southeast	3	VII-Strong
Hayward	14.0	southwest	31	VI-Moderate

[a] The probability of a 6.7 or greater earthquake over the next 30 years (from 2007 to 2036).
[b] Earthquake intensity based on the six-level Modified Mercalli Intensity scale.

Source: United States Geological Survey, 2008; Association of Bay Area Governments, 2003.

Fault rupture typically occurs along existing faults that have ruptured the surface in the past. No portion of the project site is within an Alquist-Priolo Earthquake Fault Zone (A-PEFZ),[19] and no active faults have been mapped on the project site by the United States Geological Survey (USGS) or the California Geological Survey.[20] Since faults with known surface rupture have been mapped in California, and none are known to occur at the project site, the potential for impacts to occur as a result of fault rupture would be less than significant.

Groundshaking. The San Francisco Bay Area region contains active faults and is considered a region of high seismic activity. An "active" fault is defined by the State of California as a fault that has had surface displacement within Holocene time period (approximately the last 10,000 years).[21] Thus, groundshaking is likely to occur within the life of the proposed project as a result of future earthquakes.

As shown in Table 4, the closest fault to the project site is the Concord-Green Valley fault, approximately 2.5 miles northeast. Other active faults near the project site include the Calaveras, Mount Diablo, Greenville and Hayward faults. Due to the project site's location in a seismically active region, it is likely that the new facilities will experience groundshaking during a seismic event.

The following mitigation measure, which requires the District to include analysis of the potential for strong seismic shaking as part of the design-level geotechnical investigation to be prepared for the proposed project and implementation of seismic resistant design elements, would reduce the potential exposure of people and structures to adverse seismic impacts at the project site to a less-than-significant level.

> Mitigation Measure GEO-1a: Prior to the beginning of grading or construction for the proposed project, a design-level geotechnical investigation shall be prepared by a licensed professional and submitted to the District and the California Division of the State Architect (DSA) for review and approval. The geotechnical investigation shall determine the proposed project's geotechnical conditions and geohazards, including seismic shaking, subsidence, collapse, soil expansion, and differential settlement. The investigation shall identify engineering techniques appropriate to minimize potential geohazard damage.
>
> The analysis presented in the geotechnical investigation shall conform to the California Division of Mines and Geology recommendations presented in the Guidelines for Evaluating Seismic Hazards in California. Briefly, the guidelines recommend that the investigation include: a site screening evaluation; an evaluation of on- and off-site geologic hazards; a quantitative evaluation of hazard potential; a detailed field investigation; an estimation of ground-motion parameters; an evaluation of landslide, liquefaction, lateral-spreading and ground-displacement hazards; and recommendations to reduce identified hazards.

[19] California Geological Survey, 1993. Department of Conservation, *Alquist-Priolo Fault Zones*. Website: www.quake.ca.gov/gmaps/ap/ap_maps.htm (accessed December 17, 2012).

[20] United States Geological Survey and California Geological Survey, 2006. Quaternary fault and fold database for the United States. Website: earthquakes.usgs.gov/regional/qfaults/ (accessed December 17, 2012).

[21] California Geological Survey, 2007. Department of Conservation, *Fault-Rupture Hazard Zones in California.* Website: ftp.consrv.ca.gov/PUB/DMG/PUBS/SP/SP42.PDF (accessed December 17, 2012).

The geotechnical investigation report shall include a finding that the proposed development fully complies with the California Building Code and DSA requirements. The CBC was developed to ensure that compliant structures would be "earthquake-resistant," not "earthquake-proof." The CBC is intended to protect people inside buildings by preventing collapse and allowing for safe evacuation. Structures built according to code should resist minor earthquakes undamaged, resist moderate earthquakes without significant structural damage, and resist severe earthquakes without collapse.

Mitigation Measure GEO-1b: Design of the proposed project shall include evaluation of fixtures, furnishings, and fasteners with the intent of minimizing collateral injuries to building occupants from falling fixtures or furnishings during the course of a violent seismic event.

Mitigation Measure GEO-1c: All design measures, recommendations, design criteria, and specifications set forth in the design-level geotechnical investigation shall be implemented.

Liquefaction. Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic groundshaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. This can result in structural damage to buildings or infrastructure. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths.

Review of the official seismic hazard map for the project area indicates the site is not within a mapped zone for which an evaluation of soil liquefaction is required.[22] Any site-specific liquefaction hazards at the project site would be addressed by the geotechnical investigation and implementation of seismic resistant design elements required by Mitigation Measure GEO-1, above. Therefore, with implementation of Mitigation Measure GEO-1, potential impacts associated with seismic-induced groundshaking would be reduced to a less-than-significant level.

Landslides. Slope stability issues can result in either slow slumping earth movements or rapid landslide events. The majority of the project site is nearly level, with the exception of an 8- to 10-foot berm located north of the site and a much taller slope (approximately 20-25 feet tall) along the site's western boundary, beyond which the residential area to the west sits on a plateau. Project improvements occurring at the base of this berm would be limited to the installation of three of the light fixtures which would illuminate the sports field. However, the site is not located within a mapped landslide or landslide hazard area, or within an official zone of "Required Investigation" for seismically-induced landsliding.[23] In addition, the proposed project would incorporate all relevant State and local building standards, as well as measures identified in Mitigation Measure GEO-1, and would not create slope instability hazards. With implementation of Mitigation Measure GEO-1, potential impacts associated with landslides would be less than significant.

[22] California Geological Survey, 2006. *Seismic Hazard Zones Map, Walnut Creek Quadrangle.* Website: gmw.consrv.ca.gov/shmp/html/pdf_maps_no.html (accessed December 17, 2012).

[23] California Geological Survey, 2006, op. cit.

b) Result in substantial soil erosion or the loss of topsoil? ***(Less-Than-Significant Impact)***

The potential for soil erosion exists during the period of earthwork activities and between the time when earthwork is completed and new vegetation is established or hardscape is installed. However, with present construction techniques and compliance with agency requirements that limit soil erosion during construction, the potential for soil erosion on the project site would be reduced. Long-term soil erosion on the project site would be reduced by landscaping and hardscape areas, such as walkways, designed with appropriate surface drainage facilities. Therefore, this impact would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ***(Potentially Significant Unless Mitigation Incorporated)***

While the project site is adjacent to a berm and a steeper slope that places the site about 20-25 feet below the adjacent residential area to the west, the remainder of the site is generally level, with an elevation of approximately 40 feet relative to the National Geodetic Vertical Datum (NGVD).[24] Soils at and adjacent to the project site, as mapped by the Natural Resource Conservation Service, consist of Cropley Clay (CkB), of 2 to 5 percent slopes, Cut and Fill (CnE), of 9 to 30 percent slopes, and Tierra Loam (TaC), of 2 to 9 percent slopes.[25]

CkB is a moderately well-drained clay, up to 60 inches thick; CnE is a well-drained clay loam, clay and weathered bedrock, of 0 to 8 inches, 8 to 27 inches, and 27 to 31 inches thick respectively; and TaC is moderately well drained loam, clay and silty clay loam, of 0 to 25 inches, 25 to 59 inches, and 59 to 71 inches thick respectively.[26] The presence of a high school at the project site since the early 1960s suggests that the project site does not have significant geotechnical constraints. However, no buildings or other permanent structures are located within the specific area where the proposed project would be located. Thus, the site may have specific geotechnical issues. Absent proper construction and geotechnical mitigation, the soils could have the potential for lateral spreading, subsidence, or collapse. Mitigation Measure GEO-1, which requires analysis of the potential for unstable soils impacts as part of the design-level geotechnical investigation to be prepared for the proposed project and implementation of instability-countering design elements, would reduce this potential impact to a less-than-significant level.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? ***(Potentially Significant Unless Mitigation Incorporated)***

Expansive soils expand and contract in response to changes in soil moisture, most notably when near surface soils change from saturated to a low moisture content condition, and back again. Clayey and silty loams, such as those mapped at the project site, have the potential to shrink and swell, which could cause damage to the proposed light poles and accessory structures. Mitigation Measure GEO-1,

[24] United States Geological Survey, 2012, op. cit.

[25] Natural Resources Conservation Service, 2012. Web Soil Survey: websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx (accessed December 17, 2012).

[26] Ibid.

which requires a design-level geotechnical investigation to be prepared for the proposed project and implementation of instability-countering design elements, would reduce the potential impacts from expansive soils to a less-than-significant level.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? ***(No Impact)***

The proposed project would not involve the use of septic tanks or alternative wastewater disposal systems, nor would it change the current systems utilized by the school. The restrooms within the new concessions/ticket booth would connect to the existing municipal wastewater system. Therefore, no impact would occur.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. 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 gases?	☐	☐	☒	☐

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ***(Less-Than-Significant Impact)***

Construction- and operation-period greenhouse gas emissions that could be generated by the proposed project are discussed below.

Construction Emissions. Construction activities, such as site preparation, excavation and site grading, would require the use of on-site heavy-duty construction vehicles and the use of equipment for hauling materials to and from the site. Motor vehicles would also be used to transport the construction crew, all of which would produce combustion emissions from these various sources.

During construction of the proposed project, greenhouse gases would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates greenhouse gases such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. The only greenhouse

gas with well-studied emissions characteristics and published emissions factors for construction equipment is CO_2.

The BAAQMD does not have a quantitative threshold of significance for construction-related greenhouse gas emissions. Therefore, the threshold is based on a qualitative evaluation of whether the proposed project implements applicable BAAQMD Best Management Practices. Implementation of Mitigation Measure AIR-1 would reduce greenhouse gas emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment. Therefore, project construction impacts associated with the release of greenhouse gas emissions would be considered less than significant.

Operational Greenhouse Gas Emissions. Long-term operation of the proposed project would generate greenhouse gas emissions from mobile sources and indirect emissions from sources associated with energy consumption. Mobile-source emissions of greenhouse gases would include project-generated vehicle trips associated with students, coaches, visitors and other trips to the project site. Emissions would also be generated at off-site utility providers as a result of demand for electricity by the proposed project.

The BAAQMD developed a screening level to provide a conservative indication of whether a project could result in a potentially significant greenhouse gas impact. If the screening level is not exceeded, additional analysis is not necessary. According to the screening tables provided by the BAAQMD, a high school project of more than 277,000 square feet would generate potentially significant greenhouse gas emissions. The proposed project includes the construction of athletic support facilities including a new lighting system, 500-spectator-capacity bleachers, and less than 2,000 square feet of new structures, which is well below the potentially significant screening level size. Therefore, operation of the proposed project would not generate significant greenhouse gas emissions and would have a less-than-significant impact on operational greenhouse gas emissions.

In addition, the heating and cooling systems in the new building would use variable refrigerant flow, to reduce energy use on the site.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ***(Less-Than-Significant Impact)***

The California Environmental Protection Agency Climate Action Team (CAT) and the California Air Resources Board (ARB) have developed several reports to achieve the Governor's greenhouse gas targets, which rely on voluntary actions by California businesses, local government and community groups, and State incentive and regulatory programs. These include the CAT 2006 Report to Governor Schwarzenegger and the Legislature, the ARB 2007 Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California, and the ARB Climate Change Scoping Plan: a Framework for Change. The reports identify strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32. The adopted Scoping Plan includes proposed greenhouse gas reductions from direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as cap-and-trade systems.

In addition to reducing greenhouse gas emissions to 1990 levels by 2020, AB 32 directed ARB to identify a list of "discrete early action greenhouse gas reduction measures" that can be adopted and made enforceable by January 1, 2010. In June 2007 ARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on High Global Warming Potential Refrigerants, and Landfill Methane Capture). The ARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures.

ARB's focus in identifying the 44 early action items was to recommend measures that ARB staff concluded were "expected to yield significant greenhouse gas emission reductions, and likely to be cost-effective and technologically feasible." The combination of early action measures is estimated to reduce Statewide greenhouse gas emissions by nearly 16 million metric tons (MMT). Accordingly, the 44 early action items focus on industrial production processes, agriculture, and transportation sectors.

Early action items associated with industrial production and agriculture do not apply to the proposed project. The transportation sector early action items, which include truck efficiency, low carbon fuel standard, proper tire inflation, truck stop electrification and strengthening light duty vehicle standards, are either not specifically applicable to the proposed project or, if implemented, would result in a reduction of greenhouse gas emissions associated with the proposed project (i.e., emissions from vehicles traveling to the project site would be reduced due to implementation of light duty vehicle standards). Measures implemented as part of the Scoping Plan at the Statewide level that would reduce project-specific emissions include emission reductions, such as light-duty vehicle greenhouse gas standards ("Pavley standards"), low carbon fuel standard, and energy efficiency measures (i.e., electricity use associated with the project lighting).

As previously discussed, the proposed project does not exceed the BAAQMD threshold of significance for greenhouse gas emissions. The BAAQMD approach to developing a threshold of significance for greenhouse gas emissions has been to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce Statewide greenhouse gas emissions. The project's greenhouse gas emissions are below this threshold, and, therefore, would not conflict with any applicable plan, policy or regulation for the purpose of reducing greenhouse gas emissions.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. 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 or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f) For a project located 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?	☐	☐	☐	☒

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ***(Less-Than-Significant Impact)***

The proposed project would not include the routine transport, use, or disposal of hazardous waste. Although small quantities of commercially available hazardous material could be used during project construction activities (e.g., diesel fuels, oils, and lubricants) and for landscape maintenance within the project area, these materials would not be used in sufficient quantities to pose a threat to human or environmental health. The amount of these hazardous materials present during construction would be limited, would be in compliance with existing federal, State, and local regulations, and would not be considered a significant hazard. Therefore, development of 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, and impacts associated with these activities would be considered less than significant.

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? ***(Less-Than-Significant Impact)***

The project site is located within an existing high school campus and the proposed project includes the installation of new lighting, bleachers, and accessory structures at the existing athletic field. Hazardous materials would not be used during project operation.

Construction of the proposed project would involve the use and disposal of chemical agents, solvents, paints, and other hazardous materials that are commonly associated with construction activities. The amount of these chemicals present during construction would be limited, would be used in compliance with existing government regulations (federal, State, regional, and local) and would not result in a significant hazard. Development and operation of the proposed project is unlikely to create a significant hazard to the public or the environment through the accidental release of hazardous materials into the environment; therefore, this impact would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ***(Less-Than-Significant Impact)***

Refer to Section VIII.b. The use of hazardous materials, such as commercially-available fuels, during construction activities would not create hazardous conditions or result in the emission of hazardous materials. The proposed project would handle limited amounts of hazardous materials during construction activities on the high school campus. Construction activities would occur over a short duration (approximately 5 months) and would result in a less-than-significant impact related to hazardous emissions.

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? ***(No Impact)***

The project site does not include any active sites listed on the Regional Water Quality Control Board's (Water Board) leaking underground storage (LUST) database[27] or the Water Board's spills, leaks, investigations, and cleanups (SLIC) database,[28] two of the component databases that comprise the State Cortese List of known hazardous materials sites compiled pursuant to Government Code Section 65962.5. The site does include a former LUST, but the site has been closed and is no longer active. Active sites are not listed for the project site on other components of the Cortese List, including the Department of Toxic Substances Control hazardous waste and substances list.[29] Therefore, no impacts associated with these hazardous materials lists are expected to occur.

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

The project site is located approximately 1.3 miles southwest of Buchanan Field Airport (the nearest airport); approximately 17.5 miles northeast of Oakland International Airport; approximately 22.8 miles north of the Livermore Municipal Airport; and over 20 miles south of Travis Air Force Base.

The project site is within the Airport Influence Area of Buchanan Field Airport, which is governed by Contra Costa Airport Land Use Compatibility Plan (ALUP).[30] However, the proposed project is not within any of the four safety compatibility zones established by the Contra Costa ALUP and therefore would not pose a hazard to future project users or aircraft passengers. The project includes construction of a visitor bleacher (15 feet tall), six light poles (80 feet tall) and two one-story accessory structures. These improvements would be well below the 173 foot height limit set by the Contra Costa ALUP for the project site; therefore, the proposed project would not pose a hazard to air flight.

Because the proposed project would be compatible with the policies contained in the Contra Costa ALUP, safety impacts associated with proximity to the Buchanan Airport would be less-than-significant.

f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ***(No Impact)***

The project site is not located within the vicinity of a private airstrip. Therefore, implementation of the proposed project would not expose people to airport-related hazards.

[27] Regional Water Quality Control Board, 2011. LUSTIS Database. Website: geotracker.waterboards.ca.gov/ (accessed December 17, 2012).

[28] Regional Water Quality Control Board, 2011. SLIC Database. Website: geotracker.waterboards.ca.gov/ (accessed December 17, 2012).

[29] California, State of, 2011. Department of Toxic Substances Control. Hazardous Waste and Substances Site List. Website: www.dtsc.ca.gov/database/Calsites/CorteseList.cfm (accessed December 3, 2012).

[30] Contra Costa County Airport Land Use Commission, 2000. *Contra Costa Airport Land Use Compatibility Plan*. December 13.

*g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? **(No Impact)***

The installation of the lighting system and other project improvements would not interfere with an adopted emergency response plan or emergency evacuation plan. Additionally, in the event of a power outage, each of the proposed light fixtures would be equipped with two emergency lights that would automatically turn on to ensure the safe exit of spectators from the bleachers and players from the field. Therefore, the proposed project would not impair implementation of or physically interfere with any emergency response or evacuation plans and no impact would occur.

*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? **(No Impact)***

The project site is within an existing high school campus and is surrounded by development on all sides. Development of the proposed project would not expose people or structures to a significant risk associated with wildland fires. Therefore, implementation of the proposed project would not expose people or structures to a risks associated with wildland fires.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. 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?	☐	☒	☐	☐

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 which 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 which would impede or redirect flood flows?	☐	☐	☐	☒
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam?	☐	☐	☐	☒
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

a) Violate any water quality standards or waste discharge requirements? ***(Potentially Significant Unless Mitigation Incorporated)***

The State Water Resources Control Board and nine Regional Water Quality Control Boards regulate water quality of surface water and groundwater bodies throughout California. In the Bay Area, including the project site, the San Francisco Bay Regional Water Quality Control Board (Water Board) is responsible for implementation the Water Quality Control Plan (Basin Plan). The Basin Plan establishes beneficial water uses for waterways and water bodies within the region.

Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Program (established through the federal Clean Water Act). The NPDES program objective is to control and reduce pollutant discharges to surface water bodies. Compliance with NPDES permits is mandated by State and federal statutes and regulations. Locally, the NPDES Program is administered by the Water Board.

The Contra Costa Clean Water Program (CCCWP), which includes representatives of Contra Costa County,[31] incorporated cities in the County, and the Contra Costa County Flood Control and Water Conservation District, maintains compliance with the NPDES Storm Water Discharge Permit and promotes storm water pollution prevention within that context. County compliance with the NPDES permit is mandated by State and federal laws, statutes, and regulations. Participating agencies must comply with the provisions of the County permit by ensuring that new development and adaptive reuse mitigate, to the maximum extent practicable, water quality impacts to stormwater runoff both during construction and operation periods of projects. The new permit was enacted in December 2009.

According to the water quality control plans of the Water Board, any construction activities, including grading, that would result in the disturbance of one acre or more would require compliance with the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity (Construction General Permit). Because the proposed project would disturb more than one acre, it would be subject to a Construction General Permit.

New development and significant adaptive reuse projects, which create/replace over 10,000 square feet of impervious surface, are subject to the Provision C.3 of the County's NPDES permit. The goal of Provision C.3 is to include appropriate source control, site design, and stormwater treatment measures in new development and adaptive reuse projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and adaptive reuse projects. Provision C.3 helps to reduce potential water quality impacts associated with the proposed project. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques. As of December 1, 2012, development projects that create or replace 2,500 square feet or more of impervious surface must prepare a Stormwater Control Plan (SCP). This requirement is part of the municipalities' comprehensive effort to reduce runoff pollution and is mandated by Provision C.3.i in the county's NPDES permit.[32] The proposed project would result in 44,390 square feet of impervious surface, and would also be subject to these requirements.

It should be noted that final project plans and specifications of the proposed project would be subject to the California Division of the State Architect's (DSA) review and approval process. Additionally, the proposed project has incorporated stormwater retention features into the proposed project.

Implementation of the following mitigation measures by the District would ensure that the proposed project complies with the Water Board's water quality standards by reducing the potential construction- and operation-period impacts to water quality standards or waste discharge requirements to a less-than-significant level:

> Mitigation Measure HYD-1: Consistent with the requirements of the Statewide Construction General Permit, the District shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce potential adverse impacts to surface water quality through the project construction period. The SWPPP shall be designed to address the following objectives:

[31] San Francisco Bay Regional Water Quality Control Board, 1995. *Water Quality Control Plan*, June 21.

[32] Contra Costa Clean Water Program, 2013. New Development/C.3. Website: www.cccleanwater.org/c3.html (accessed January 24).

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
2. Where not otherwise required to be under a Water Board permit, all non-storm water discharges are identified and either eliminated, controlled, or treated; and
3. Site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available/Best Conventional Technology (BAT/BCT) standard.

The SWPPP shall be prepared by a Qualified SWPPP Developer. The SWPPP shall include the minimum BMPs required for this type of project (based on final determination of the project's Risk Level status, to be determined as part of the Notice of Intent for coverage under the Construction General Permit). These include: BMPs for erosion and sediment control, site management/housekeeping/waste management, management of non-stormwater discharges, runon and runoff controls, and BMP inspection/maintenance/repair activities. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook-Construction.

The SWPPP shall include a construction site monitoring program that identifies requirements for dry weather visual observations of pollutants at all discharge locations, and as appropriate (depending on the Risk Level), sampling of the site effluent and receiving waters. A Qualified SWPPP Practitioner shall be responsible for implementing the BMPs at the site and performing all required monitoring and inspection/maintenance/repair activities.

Mitigation Measure HYD-2: The District shall fully comply with the Water Board stormwater permit requirements, including Provision C.3 of the MRP. This will require preparation and implementation of a Stormwater Control Plan (SCP) for the proposed project. The SCP would act as the overall program document designed to provide measures to mitigate potential water quality impacts associated with the operation of the proposed project. At a minimum, the SCP for the proposed project shall include:

1. An inventory and accounting of existing and proposed impervious areas.
2. Low Impact Development (LID) design details incorporated into the project. Specific LID design may include, but is not limited to: using pervious pavements and green roofs, dispersing runoff to landscaped areas, and/or routing runoff to rain gardens, cisterns, swales, and other small-scale facilities distributed throughout the site.
3. Measures to address potential stormwater contaminants. These may include measures to cover or control potential sources of stormwater pollutants at the project site.
4. A Draft Stormwater Facility Operation and Maintenance Plan for the project site, which will include periodic inspection and maintenance of the storm drainage system. Persons responsible for performing and funding the requirements of this plan shall be identified. This plan must be finalized prior to issuance of construction permits for the project.

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)? ***(Potentially Significant Unless Mitigation Incorporated)***

The proposed project would connect to the existing water delivery system and would not include the use of groundwater (e.g., by installation of pumping or water supply wells), and would therefore not lower the groundwater table as a result of groundwater extraction.

During construction, it is possible that groundwater could be encountered and require dewatering and disposal. Should dewatering be required, the appropriate permits for discharge into the storm or sanitary sewer system would be obtained. Any dewatering activity would be expected to be temporary and affect only the uppermost water-bearing zone, not the deeper regional aquifer.

The minor increase in impervious surfaces (approximately 22,987 square feet) that would result from development of the project, particularly expansion of the public pathway that enters the project site, may affect groundwater levels through a reduction in groundwater recharge through stormwater percolation. However, with implementation of Mitigation Measures HYD-1 and HYD-2, which would result in the reintroduction of collected stormwater back in the ground through Low Impact Design details, the proposed project would have a less-than-significant impact on groundwater.

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? ***(Potentially Significant Unless Mitigation Incorporated)***

The proposed project would not alter the course of a stream or a river. The project site is in an urban area and although the proposed project would result in a change to the existing drainage pattern on the site, some of the proposed improvements are intended to improve on-site drainage, particularly in the area of the existing pedestrian walkway. Compliance with standard stormwater management measures and implementation of Mitigation Measures HYD-1 and HYD-2 would ensure that development of the proposed project would not 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 which would result in flooding on- or off-site? ***(Potentially Significant Unless Mitigation Incorporated)***

No alteration of stream or river is proposed. The proposed project would result in an increase in impervious surfaces (see discussion under Section IX.b, above); however, compliance with standard stormwater management measures and implementation of Mitigation Measures HYD-1 and HYD-2 would serve to reduce the rate and amount of surface runoff and would ensure that the project design results in a less-than-significant impact related to on- or off-site flooding.

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? ***(Potentially Significant Unless Mitigation Incorporated)***

The proposed project would result in a minor increase in impervious surfaces (see discussion under Section IX.b, above). However, compliance with standard stormwater management measures and implementation of Mitigation Measures HYD-1 and HYD-2 would reduce potential pollutants in stormwater runoff to a less-than-significant level.

f) Otherwise substantially degrade water quality? ***(Potentially Significant Unless Mitigation Incorporated)***

Operation of the proposed project would not result in any substantial changes to on-site water quality, with the exception of potential impacts associated with stormwater runoff. Compliance with standard stormwater management measures and implementation of Mitigation Measures HYD-1 and HYD-2 would reduce the impacts to the less-than-significant level.

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? ***(No Impact)***

The project site does not include housing and is not located within a 100-year flood hazard area as mapped by the Federal Emergency Management Agency (FEMA).[33] Therefore, no housing would be placed within a 100-year flood zone.

h) *Place* within a 100-year flood hazard area structures which would impede or redirect flood flows? ***(No Impact)***

Please refer to Section IX.g. The project site is not located within the 100-year flood zone and development of the site would not impede or redirect potential flood flows.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding of as a result of the failure of a levee or dam? ***(No Impact)***

Please refer to Section IX.g. In addition, the project site is not within an inundation zone for Pleasant Hill.[34] Therefore, the proposed project would not pose a significant risk to people or structures as a result of levee or dam failure.

j) Inundation by seiche, tsunami, or mudflow? ***(No Impact)***

No enclosed surface water bodies, which might lead to a seiche, are located in the project vicinity. The California Emergency Management Agency, the California Geological Survey and the Tsunami Research Center (University of Southern California) produced tsunami inundation maps for Contra Costa County. The location of the project site, located at an elevation of 40 feet relative to the

[33] Federal Emergency Management Agency, 2012. Stay Dry v2.0 data for Pleasant Hill, California. Website: hazards.fema.gov/femaportal/wps/portal/NFHLWMSkmzdownload (accessed December 18, 2012).

[34] Association of Bay Area Governments, 2012. *Earthquake and Hazards Information GIS System, Dam Failure Inundation*. Website: gis.abag.ca.gov/Website/DamInundation/ (accessed December 7, 2012).

National Geodetic Vertical Datum (NGVD),[35] and greater than 11 miles inland from San Francisco Bay, is not included in the areas which would be affected by a tsunami.[36] Therefore, tsunamis would not affect the project site. The project site is located within a developed high school campus and would not be subject to mudflow.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
X. 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?	☐	☐	☐	☒

a) Physically divide an established community? ***(No Impact)***

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and an outlying area.

Development of the proposed project would not alter the existing configuration of the high school, substantially affect circulation patterns in the neighborhood, nor result in any physical barriers to movement in or around the site. Therefore, the proposed project would not result in the physical division of 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? ***(Less-Than-Significant Impact)***

[35] United States Geological Survey, 2012, op. cit.

[36] California Emergency Management Agency and California Geological Survey, 2009. Contra Costa County Tsunami Inundation Maps. Website: www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/ContraCosta/Pages/ContraCosta.aspx (accessed January 1, 2012). July 29.

The high school campus lies within the City of Pleasant Hill limits. Although not subject to the local jurisdiction's building requirements, the high school campus is designated as School (S) under the City's General Plan[37] and is zoned Residential 7 (R-7) under the City's Zoning Ordinance,[38] which imposes a use permit upon the proposed project. However, the District plans to exempt the proposed project from the City's Zoning Ordinance by adopting an exemption resolution under Government Code Section 53094. The proposed project would result in the construction of additional athletic facilities to support the ongoing use of the existing sports field within the high school campus. Therefore, the proposed project would not conflict with any applicable land use plan, policy or regulation, and this impact would be less than significant.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan? ***(No Impact)***

Refer to Section IV.f. The proposed project would not conflict with any applicable habitat conservation or natural community conservation plans.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. 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?	☐	☐	☐	☒

*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? (****No Impact)***

The project site is located within a high school campus in an urban area. No known mineral resources or mineral recovery sites are within or adjacent to the project site. Therefore, the proposed project would not result in the loss of availability if a known mineral resource of value to the region or residents of the State or the loss of availability of a locally-important mineral resource recovery site.

[37] Pleasant Hill, City of, 2003. *City of Pleasant Hill General Plan 2003*. July 21.

[38] Pleasant Hill, City of, 2012. Title 18: Planning and Land Use, Chapter 20: Residential Districts.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? ***(No Impact)***

Please refer to Section XI.a.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. 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 applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne 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 or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Characteristics of Sound. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a ten-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements which better represent how humans are more sensitive to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Regulatory Framework. The City of Pleasant Hill addresses noise in the Safety and Noise Element[39] of the City's General Plan and in the Municipal Code.[40] The Noise Element contains the City's land use compatibility standards for community noise environments. These noise land use compatibility standards are shown in Table 5. These standards establish the City's guidelines for acceptable noise environments for proposed land use development. For example, the City considers environments with noise levels of up to 70 dBA L_{dn} to be normally acceptable for new school land use development, while environments with noise levels from 70 dBA to 80 dBA L_{dn} are considered normally unacceptable for new school development. Environments considered "normally acceptable" are satisfactory for the specified land use based upon the assumption that any buildings involved are of normal construction without any special noise insulation requirements; while environments considered to be "normally unacceptable" are generally discouraged from development of the specified land use unless a detailed analysis of the noise reduction requirements are made and needed noise insulation features are included in the project design. As noted previously, the College Park campus is zoned R-7 on the City of Pleasant Hill Zoning Map. However, the existing land use is and has been school land use. Therefore, for purposes of this analysis, the acceptability of the project site for the proposed type of development (expanded school uses) will be compared to the noise land use compatibility standard for new school land use development shown in Table 5.

Construction noise impacts are evaluated for compliance with the City's Noise Ordinance found in Section 9.15.040 of the Municipal Code. This ordinance limits the permissible hours of construction activities that could result in noise impacts to a residential land use to the hours of 7:30 a.m. to 7:00 p.m. on weekdays; and to 9:00 a.m. to 6:00 p.m. on Saturdays and Sundays. No such construction is permitted on City-recognized holidays. Construction activities that could result in noise impacts to a residential land use are not permitted outside of these hours unless an exemption is permitted from the City manager.

[39] Pleasant Hill, City of, 2003. *City of Pleasant Hill General Plan 2003*. July.

[40] Pleasant Hill, City of, 2012. *Pleasant Hill Municipal Code*. September.

Table 5: Noise and Land Use Compatibility Standards

Land Use Category	Community Noise Exposure in Decibels (CNEL) or Day/Night Average Noise Level in Decibels (Ldn) 55	60	65	70	75	80
Residential – Low Density (Single-Family, Duplex, Mobile Homes)						
Residential – Multi-Family						
Transient Lodging (Motels, Hotels)						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Professional Centers						
Industrial, Manufacturing, Utilities, Agriculture						

	NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.		NORMALLY UNACCEPTABLE New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	CONDITIONALLY ACCEPTABLE New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise reduction features included in the design. Conventional construction, but with windows closed and fresh air supply systems or air conditioning will normally suffice.		CLEARLY UNACCEPTABLE New construction or development should generally not be undertaken.

Source: Pleasant Hill, City of, 2003. *Pleasant Hill General Plan 2003.* July.

The noise ordinance of the Municipal Code also restricts the noncommercial use of sound-amplifying equipment. The only permitted use is for sounds of music, human voice, or both. The operation of such equipment is permitted only between 9:00 a.m. and 11:00 p.m. Monday through Saturday; no operation of sound-amplifying equipment is permitted on Sundays or legal holidays without the express written approval of the City. The volume of sound from this equipment shall be so controlled so that it is no unreasonably loud, raucous, jarring, disturbing, or a nuisance to a reasonable person.

The Municipal Code also establishes the City's noise performance standards[41] for operations of existing land uses. These standards specify that no use and activity shall create ambient noise levels measured at the property line which exceed the applicable performance standard for the receiving land use. For example, the noise level performance standard for residential zoned districts is 50 dBA L_{dn}.

It should be noted that the performance standards, Ordinance 18.50.060, goes on to specify that these noise standards shall be modified to account for the effects of time and duration of the impact of noise levels. In residential zones, the noise standard of 50 dBA L_{dn} shall be 5 dBA lower between 10:00 p.m. and 7:00 a.m. (nighttime hours). However, this modification of the standard is indeterminable, since, as explained above, the L_{dn} is a 24-hour sound level measurement that is already weighted to account for quieter noise levels during nighttime hours. Therefore, for purposes of this analysis, the project's operational noise impacts on off-site residential receptors will be compared to the 50 dBA L_{dn} noise performance standard as measured at receiving residential property lines.

Existing Noise Conditions. Existing noise conditions in the project vicinity were documented through a noise monitoring effort. The purpose of ambient noise monitoring is to document the existing noise environment and capture the noise levels associated with operations and activities in the project area. During May 21 - 23, 2013, an LSA noise technician conducted a 24-hour ambient noise measurement adjacent to the residential property line on the western border of the project site. Additional short-term (15-minute) measurements were taken on Tuesday, May 21, 2011, between the hours of 2:30 p.m. and 4:30 p.m. at four separate locations along the project's western boundary near the closest off-site sensitive receptors. The noise monitoring locations are shown in Figure 7. The short-term noise monitoring data sheets are also provided in Appendix B. Table 6 summarizes the noise measurement results of the short-term and long-term ambient noise measurements.

[41] Ibid. Section 18.50.060.

FIGURE 7

College Park High School
Athletic Facilities Improvements Project
Noise Monitoring Locations

SOURCES: GOOGLE EARTH, 8/29/12; LSA ASSOCIATES, INC., 2013.

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MDUSD Resolution No. 14/15-01
Exhibit B

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Table 6: Ambient Noise Monitoring Results, dBA

Short-Term Measurements					
Site #	**Location**	**Start Time**	**L_{eq}**	**L_{max}**	**L_{min}**
ST-1	Northwest corner of project site	2:45 p.m.	61.9	82.8	44.6
ST-2	North end of western bleachers	3:15 p.m.	50.0	74.9	40.9
ST-3	Property line behind western bleachers	3:38 p.m.	62.6	85.6	39.2
ST-4	Southwest corner of project site	4:01 p.m.	55.1	78.3	40.1
Long-Term Measurement					
Site #	**Location**	**L_{dn}**			
LT-1	Residential property line behind western bleachers	58			

Notes: ST = short-term; LT = long-term

Source: LSA Associates, Inc., May 2013.

The primary noise source in the project vicinity observed during noise monitoring was traffic noise on Viking Drive, parking lot activity noise, and distant aircraft noise. It was noted that a few student athletes were using the track and field facilities; however, the noise measurements documented the background ambient noise levels on a typical school day when no major athletic events were occurring on the track or football field facility.

For the purposes of this analysis, in order to provide a conservative calculation of the existing operational L_{dn} for existing event use of the football field, the following conditions were used:

- The existing average attendance for existing events is approximately 200 spectators. It was assumed that all of these spectators occupy the existing (western) bleachers.
- The average distance from the center of the home (western) bleachers to the nearest residential unit is 100 feet.
- The spectator noise sources are assumed to all generate peak vocal level at the same time (this includes the assumption that it would be possible to maintain a distance of 3 feet from all individuals since it is assumed that each remains a point source) using maximum shouting levels for 5 minutes each hour, loud voices for 10 minutes each hour, and raised voices for 45 minutes of each hour. This is a worst case scenario since, if the number of people generating peak vocal level at the same time decreases, the maximum noise level from them would be lower, even though the lower noise levels would be spread out and last longer than the designated time periods as stated above.
- The background daytime and nighttime ambient average hourly noise levels ($L_{eq(h)}$) were assumed to be the same as those measured during the 24-hour long-term noise measurement (59 dBA and 48 dBA $L_{eq(h)}$ respectively).
- The combined shielding provided by the solid bottom bleachers, the sound of spectators in the home bleachers being directed away from the off-site receptors and toward the field, and the existing topographical slope feature blocking the direct line of sight from the residences to the bleachers would reduce the calculated noise levels by at least 8 dBA.

The tables showing the inputs and calculations for the L_{dn} based on the above assumptions are provided in Appendix B. The results show that existing event day noise levels range up to 59 dBA L_{dn}, as measured at the nearest residential property line. This represents a 1 dBA increase over existing measured background ambient noise levels.

An analysis of potential noise impacts associated with project construction and operation activities is provided as follows.

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? ***(Potentially Significant Unless Mitigation Incorporated)***

The District is proposing to introduce permanent new lighting fixtures to illuminate the sports field and the right and center fields of the baseball field on a limited basis, construct new bleachers to provide formal seating for visiting spectators, construct new accessory athletic facilities, and complete improvements to the existing sports field entry driveway and plaza. Potential construction- and operation-period noise impacts are discussed below.

Construction Noise Impacts. Construction is expected to begin in June 2014 and last approximately 5 months. No encroachment of public rights-of-way or private property would be required. All campus athletic activities would continue to operate during construction. However, activities on the football field and track could be temporarily suspended for approximately 4 weeks during light pole installation.

The following two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project site. Although there would be a relatively high single event noise exposure, the effect on longer term (hourly or daily) ambient noise levels would be small. Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 7 lists typical construction equipment noise levels recommended for noise impact assessments for large complex projects, based on a distance of 50 feet between the equipment and a noise receptor. Typical noise levels range up to 91 dBA L_{max} at 50 feet during the noisiest construction phases. It is important to note that the installation of the light poles and accessory structures would involve only a few of these vehicles or pieces of equipment. Because the noisiest construction equipment is earthmoving equipment, the excavation and installation of the footings for the light poles is expected to generate the highest noise levels. Construction of the proposed project is expected to require the use of front-end loaders, compactors, hydraulic backhoes, and haul trucks.

Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings. Impact equipment such as pile drivers are not expected to be used during construction of this proposed project. As shown in Table 7, the typical maximum noise level generated by backhoes and front-end loaders is assumed to be 86 dBA L_{max} at 50 feet from the operating equipment. The maximum noise level generated by compactors or rollers is approximately 80 dBA L_{max} at 50 feet. The maximum noise level generated by haul trucks operating at full power is approximately 88 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound sources with equal strength would increase the noise level by 3 dBA. Assuming each piece of construction equipment operates at some distance apart from the other equipment, the worst-case combined noise level during this phase of construction would be 91 dBA L_{max} at a distance of 50 feet from an active construction area.

Table 7: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Range of Maximum Sound Levels (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Dozers	77 to 90	85
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86

Source: Bolt, Beranek & Newman, 1987. *Noise Control for Buildings and Manufacturing Plants.*

The proposed bleachers would be approximately 90 by 30 feet and would include a 48- by 14-foot staircase and ramp. They would consist of a 500-seat capacity bleacher structure on the east side of the sports field for use by visiting team spectators. One accessory athletic facility structure would consist of a new 1,473 square-foot building housing concessions, restrooms, storage, and a ticket booth that would be located near the sports field entrance. This structure would replace temporary structures that are currently in use. The second structure would consist of a 466 square-foot team room and storage area located on the northern side of the stadium near the runners' starting blocks of the track. Minor excavation would be required to construct the foundations for each light pole and underground trenching for electrical connections. Minor excavation for footings and foundation construction would be required for the proposed bleachers and accessory athletic facility structures.

Construction noise impacts are evaluated for compliance with the City's Noise Ordinance found in Section 9.15.040 of the Municipal Code. This ordinance limits the permissible hours of construction activities that could result in noise impacts to a residential land use to the hours of 7:30 a.m. to 7:00 p.m. on weekdays; and to 9:00 a.m. to 6:00 p.m. on Saturdays and Sundays. No noise producing construction activity is permitted on City-recognized holidays. Construction activities that could result in noise impacts to a residential land use are not permitted outside of these hours unless an exemption is permitted from the City manager.

The closest residential land uses to the project site are those located west of the project site on Norse Drive, whose rear yards face the school's western property line. The construction footprint for the

new lighting poles would be approximately 85 feet from the closest residence. The proposed team room/storage building construction footprint would be located approximately 145 feet from the nearest of these residences. The proposed visitor bleachers construction footprint would be located approximately 505 feet from these nearest residences. The proposed concession/restroom/ticket building construction footprint would be located approximately 525 feet from the nearest residence.

Due to the geometric spreading characteristic of noise, maximum noise levels from construction activities would attenuate to 86 dBA L_{max} as measured at the nearest residential property line. Construction noise levels as measured at the nearest school classroom buildings, located over 500 feet from the proposed construction areas, would attenuate to below 70 dBA L_{max}. However, it should be noted that construction is scheduled to begin in June 2014. Therefore, the noisiest phases of construction, the site preparation phase when the heaviest types of construction equipment are used, would occur when school is not in session.

Although there would be a relatively high single event noise exposure, the effect on longer term (hourly or daily) ambient noise levels would be small. Implementation of standard noise reduction measures (including required use of approved mufflers on equipment) and compliance with the City's Municipal Code ordinances establishing permissible hours of noise-producing construction activity near residential land uses would reduce short-term construction impacts to a less-than-significant level. Therefore, implementation of the following mitigation measure, which details these requirements, would reduce the potential construction period noise impact to a less-than-significant level.

> Mitigation Measure NOISE-1a: The construction contractor shall ensure that all construction equipment utilize appropriate sound muffling devices, which shall be properly maintained and used at all times such equipment is in operation.
>
> Mitigation Measure NOISE-1b: Where feasible, the project contractor shall place all stationary construction equipment so that emitted noise is directed away from the closest off-site sensitive receptors.
>
> Mitigation Measure NOISE-1c: The construction contractor shall locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during construction.
>
> Mitigation Measure NOISE-1d: The construction contractor shall ensure that all noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours of 7:30 a.m. to 7:00 p.m. on weekdays; and to 9:00 a.m. to 6:00 p.m. on Saturdays and Sundays. No noise producing construction activity is permitted on City-recognized holidays. Construction activities that could result in noise impacts to a residential land use are not permitted outside of these hours unless an exemption is permitted from the City Manager. The loudest phases of construction (i.e., excavation and site preparation) shall be scheduled, to the extent feasible, to occur during periods when school is not in session.

Operational Noise Impacts. As shown in Table 5, the City considers environments with noise levels of up to 70 dBA L_{dn} to be normally acceptable for new school land use development. This standard is used to determine whether the existing noise environment would be compatible with the

proposed land use. Based on the noise measurement results, the existing background ambient noise levels of 58 dBA L_{dn} are considered normally acceptable for new school development. Therefore, the proposed project would not expose persons to noise levels in excess of standards established in the General Plan for the proposed land use, and on-site noise impacts would be considered less-than-significant.

Project-related noise impacts to off-site land uses are determined in comparison to whether the proposed project would result in a substantial temporary, periodic, or permanent increase in ambient noise levels in the project vicinity above levels existing without the proposed project. Audible increases in noise levels generally refer to a change of 3.0 dBA or greater, since this level has been found to be barely perceptible in exterior environments. Therefore, for the purposes of this analysis, a substantial increase is defined to be 4 dBA or greater as measured at a receiving noise sensitive land use in the project vicinity. The primary operational noise sources associated with implementation of the proposed project would be student athlete participants and spectators yelling and talking during athletic events held at the sports field as well as use of the proposed PA system.

Implementation of the proposed project is not anticipated to result in a significant increase in vehicle trips, but would primarily only result in redirecting some trips that currently go to DVC campus sporting facilities (for junior varsity and varsity football games). Therefore, the proposed project is not expected to result in any significant permanent increase in traffic noise levels on local roadways in the project vicinity.

Implementation of the proposed lighting system would result in extended hours of use and increased attendance at the high school campus sports field. With the proposed lighting system, the school's soccer, lacrosse, track and field, and baseball teams would play the same number of games currently played at the campus without lighting (as shown in Table 1). However, as described in the project description, with the possible extension of some of these games into the evening hours, it is anticipated that overall attendance at each of these events could increase by about 10 percent. A characteristic of sound is that it takes an approximate 25 percent increase in a single noise source (such as spectator attendance and activity in the bleachers) to result in even a 1 dBA increase in the resulting noise level. Therefore, the anticipated attendance increase of 10 percent for soccer, lacrosse, track and field, and baseball events would not result in even a perceptible change in the existing daily ambient noise environment in the project vicinity. Therefore, project operational noise impacts associated with these sporting events would result in a less-than-significant increase in the ambient noise environment compared to noise levels without the project.

However, the installation of lighting would also permit extended hours for football events at the project site compared to existing conditions. The number of football games would increase by a total of ten games as the varsity and junior varsity games, which are currently held in the evening hours at the DVC campus, would be moved back to the high school campus. In addition, the junior varsity and varsity football games would result in the greatest hourly use per day and the greatest hourly attendance for events at the project site.

With the addition of the visitor bleachers, total formal seating capacity at the sports field would be increased to approximately 2,000 spectators. However, this level of attendance would only be reached for about four to six competitions annually, such as homecoming and playoff events. The new bleachers are intended to meet the demand for additional formal seating at the sports field and to provide seating for visiting spectators. The junior varsity and varsity football games at the high

school campus are expected to result in average attendance of approximately 700; this would be an increase of approximately 500 spectators compared to existing attendance at other events, which generally do not exceed 200 spectators.

The closest off-site noise sensitive receptors to the project site are the residential land uses west of the project site, whose nearest property line is located approximately 85 feet from the project boundaries. The nearest façade of these residential units is located approximately 100 feet from the center of the nearest (western) bleachers. The modeling results show that noise from spectators in the proposed visitor (eastern) bleachers would not substantially affect these sensitive land uses due to the noise reduction that results from distance attenuation (20 dBA reduction at 500 feet compared to the noise level as measured at 50 feet from the source). Therefore, this analysis focuses on noise impacts from spectators in or in the immediate vicinity of the home (western) bleachers and the maximum noise levels that would be expected from spectator noise and use of the proposed PA system.

The solid bottom of the existing bleachers provides some shielding from spectator noise for the residential properties behind (to the west of) the bleachers. In addition, the existing topography of the residential land uses, which are located at the top of a slope behind the bleachers, also provides shielding by blocking the line of sight from the residences to the western bleachers. This shielding provides a reduction in noise levels compared to noise at the same distance in an open field with a direct line of sight to the noise source.

For the purposes of this analysis, in order to provide a conservative calculation of the operational L_{dn} of a Friday with junior varsity and varsity football games (freshman games occur on Thursdays) all being played, the following conditions were used:

- The existing average attendance for existing events is approximately 200 spectators. It was assumed that all of these spectators occupy the existing (western) bleachers.
- Project operational noise levels were calculated by assuming that, of the expected average attendance of 700 spectators, a conservative average of approximately 500 spectators could occupy the home (western) bleachers while 200 spectators could occupy the proposed visitor (eastern) bleachers during the entire game time from 3:00 p.m. to 10:00 p.m. for both junior varsity and varsity games.
- The average distance from the center of the home (western) bleachers to the nearest residential property line is 95 feet. The average distance from the center of the proposed visitor (eastern) bleachers to the nearest residential property line is 505 feet.
- The average distance from the anticipated location of the proposed PA speakers on the west side of the field to the nearest residential property line is 90 feet. PA speakers on the east side of the field would be located over 505 feet from the nearest residential property line.
- The spectator noise sources are assumed to all generate peak vocal level at the same time (this includes the assumption that it would be possible to maintain a distance of 3 feet from all individuals since it is assumed that each remains a point source) using maximum shouting levels for 5 minutes each hour, loud voices for 10 minutes each hour, and raised voices for 45 minutes of each hour. This is a worst case scenario since, if the number of people generating peak vocal level at the same time decreases, the maximum noise level from them would be lower, even though the lower noise levels would be spread out and last longer than the designated time periods as stated above.

- The PA system is assumed to be used to the extent that maximum loud voice levels would be generated for 5 minutes each hour, loud voice levels for 15 minutes each hour, and raised voice levels for 15 minutes of each hour.
- The combined shielding provided by the solid bottom bleachers, the sound of spectators in the home bleaches being directed away from the off-site receptors and toward the field, and the existing topographical slope feature blocking the direct line of sight from the residences to the bleachers would result in a perceived halving of the loudness behind the western bleachers compared to directly in front of them (a minimum reduction of 10 dBA). No shielding reduction was calculated for noise from the visitor (eastern) bleachers and PA speakers as they directly face the nearest residential land uses west of the project site.
- Directionally focusing the home (west-side) PA speakers away from the nearest off-site receptors and toward the field would reduce the calculated noise levels from these speakers by at least 10 dBA.

The tables showing the inputs and calculations for the L_{dn} based on the above assumptions are provided in Appendix B.

Based on these conditions, the calculated day-night 24-hour average noise level for Friday football games (junior varsity and varsity) could range up to approximately 58 dBA L_{dn} as measured at the nearest residential property line. This ambient noise level is considered "normally acceptable" for new school and new residential development (as shown in Table 5). However, this noise level exceeds the Municipal Code performance standard of Ordinance 18.50.060, which states that no use or activity shall create ambient noise levels in excess of 50 dBA L_{dn} as measured at a residential property line. Therefore, project operational noise levels would result in the exposure of persons to noise levels in excess of City standards, which would be a significant impact and mitigation measures must be considered.

Installation of a minimum 6 foot high sound wall along the property line of the residential land use west of the project site would effectively block the sound and lower the receiving noise levels by a minimum of 8 dBA. This would reduce project noise levels to meet the City's performance standard of 50 dBA L_{dn} as measured at a residential receiving property line. The mitigated noise modeling tables showing this reduction are provided in Appendix B. This mitigation measure would effectively reduce the proposed project's operational noise impacts to a less-than-significant level.

However, such a system could create secondary impacts by blocking existing views to the east from these homes. Therefore, such a sound wall system should utilize available "clear sound wall" technology (made of clear acrylic material) which would effectively block the sound levels while also minimizing impacts to private views. Refer to Section I, Aesthetics for a discussion of the potential secondary visual resource impacts of this noise reduction measure.

Therefore, the District shall implement the following mitigation measure:

> Mitigation Measure NOISE-2: Prior to installation of the proposed PA system, the District shall incorporate the following measure into the project design. A minimum 6-foot tall sound wall system shall be installed along the residential property line extending 100 feet north and 100 feet south of the end of the western (home) bleachers (as shown in Figure 8). This would reduce periodic event day noise levels by at least 8 dBA. In order to minimize the visual

impact of such a sound wall system, it should be constructed utilizing an industry-recognized "clear sound wall system" made of clear acrylic material. It may be constructed so that the lower portion of the wall, 2 to 3 feet in height, is constructed of solid material such as CMU block, with 3 to 4 feet of clear acrylic glass on top.

Implementation of Mitigation Measure NOISE-2 would reduce the proposed project's operational noise impacts to a less-than-significant level.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? ***(Potentially Significant Unless Mitigation Incorporated)***

Refer to Section XII.a. No permanent noise sources that would expose persons to excessive groundborne vibration or noise levels would be located within the project site. Construction activities associated with implementation of the proposed project are not expected to result in excessive groundborne vibration or groundborne noise levels with implementation of multi-part Mitigation Measure NOISE-1. Therefore, implementation of the proposed project would not permanently expose persons within or around the project site to excessive groundborne vibration or noise.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? ***(No Impact)***

The proposed project would only cause temporary or periodic increases in ambient noise levels since the fields and related improvements are not used continuously. Thus, there would be no substantial permanent increase in ambient noise levels caused by the proposed project and no impact.

LSA

FIGURE 8

N

0 100 200

FEET (APPROXIMATE)

Soundwall Location

Project Boundary

College Park High School
Athletic Facilities Improvements Project
Soundwall Location Map

SOURCES: GOOGLE EARTH, 8/29/12; LSA ASSOCIATES, INC., 2013.

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MDUSD Resolution No. 14/15-01
Exhibit B

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d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? ***(Potentially Significant Unless Mitigation Incorporated)***

Refer to Section XII.a. Project-related construction activities could result in high intermittent noise levels of up to 86 dBA L_{max} at nearby residential land uses. This noise would result from the temporary use of construction equipment. As discussed above, implementation of Mitigation Measure NOISE-1, including permissible hours of construction, would reduce potential impacts associated with construction-related noise to a less-than-significant level.

As previously discussed in Section XII.a., the calculated day-night 24-hour average noise level for Friday football games (junior varsity and varsity) could range up to approximately 58 dBA L_{dn} as measured at the nearest residential property line. When this "event noise level" is combined with existing background noise levels, the 24-hour L_{dn} would range up to 61 dBA as measured at the nearest residential property line.

This project operational noise level represents a 3 dBA periodic increase compared to the measured ambient noise levels (taken on a day with no school event use of the sports field). This also represents a 2 dBA increase over calculated ambient noise levels for existing event days with the highest average attendance. This periodic increase in ambient noise levels would be considered barely perceptible compared to existing non-event day ambient noise levels. As noted previously, audible increases in noise levels generally refer to a change of 3.0 dBA or greater, since this level has been found to be barely perceptible in exterior environments. Therefore, for the purposes of this analysis, a substantial increase is defined to be 4 dBA or greater as measured at a receiving noise sensitive land use in the project vicinity.

However, the operational noise modeling results (provided in Appendix B) show that with implementation of Mitigation Measure NOISE-2, the combined event noise levels plus existing background noise levels would result in an L_{dn} of 59 dBA as measured at the nearest residential property line. This would represent only a 1 dBA periodic increase over the existing measured ambient noise levels (taken on a day with no school event use of the sports field). In addition, an L_{dn} of 59 dBA is equivalent to calculated noise level for event days that have the highest average attendance (i.e., no increase over the existing event day calculated L_{dn}). Therefore, implementation of Mitigation Measure NOISE-2 would ensure that project operational periodic increases would be reduced to a less-than-significant level.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ***(Less-Than-Significant Impact)***

The project site is located approximately 1.3 miles southwest of Buchanan Field Airport (the nearest airport); approximately 17.5 miles northeast of Oakland International Airport; approximately 22.8 miles north of the Livermore Municipal Airport; and over 20 miles south of Travis Air Force Base. While aircraft noise is generally audible on the project site, due to the distance from the airports and the orientation of runways and flight patterns, the project site does not lie within the 55 dBA CNEL noise contours of any airport. Therefore, the impact of noise levels from aviation sources would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? ***(No Impact)***

The project site is not located in the vicinity of a private airstrip. Therefore, implementation of the proposed project would not expose people to excessive noise levels, and no impact would occur.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? ***(No Impact)***

The proposed project would result in the construction of new permanent field lighting, bleachers, and accessory structures to serve the existing sports field at the high school campus. The proposed project is intended to enhance the existing athletic facilities at the campus and would not increase student enrollment or staff capacity. Construction and operation of the proposed project would not directly or indirectly induce population growth.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? ***(No Impact)***

The project site is located within an existing high school campus, which does not include housing. Development of the proposed project would not remove existing housing.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? ***(No Impact)***

Please refer to Section XIII.b. The proposed project would not displace people, and would not necessitate the construction of replacement housing elsewhere.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☐	☒

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection, police protection, schools, parks, other public facilities? ***(Less-Than-Significant Impact)***

Fire Protection. Fire protection and life safety services are provided by the Contra Costa County Fire Protection District (CCCFPD). The CCCFPD operates 26 stations which serve the cities of Antioch, Clayton, Concord, Lafayette, Martinez, Pittsburg, Pleasant Hill, San Pablo, and Walnut Creek; and also serves the unincorporated communities of Bay Point, Clyde, El Sobrante, Pacheco, and Port Chicago.[42] Two CCCFPD fire stations (Stations 2 and 5) currently serve the City of Pleasant

[42] Contra Costa County Fire Protection District, 2011. Station Address. Website: www.cccfpd.org/stationaddress.html (accessed November 14).

Hill. The closest CCCFPD station and first responder to calls from the College Park campus is Station 5, located at 205 Boyd Road, approximately 2.5 miles north of the project site.[43]

The construction of the new lighting facilities, bleachers, and associated accessory structures would allow existing games and practices for football, soccer, lacrosse, track/field, and other athletic activities to extend into the evening hours which, in some cases, could result in a minor increase in attendance at some events. In addition, the installation of sports field lighting would allow existing varsity and junior varsity football games (which are currently held across the street at the DVC campus) to be relocated back to the College Park campus. Attendance at the varsity and junior varsity football games would be similar to existing attendance since these games are already held in the evening hours and are already located within the immediate vicinity of the high school. Given that these football games have the highest overall attendance, the minor increase in attendance at some other competitions would not substantially increase the demand for fire services.

The proposed project would not result in a significant impact on the physical environment due to the incremental increase in demand for fire protection and life safety services; construction and operation of the proposed project would have a less-than-significant impact on fire protection and safety services and facilities.

Police Protection. Police services are provided by the Pleasant Hill Police Department (PHPD). The PHPD headquarters is located at 330 Civic Drive, less than 1 mile south of the project site. The PHPD currently employs a total of 60 officers and civilian employees.

The construction of the new lighting facilities, bleachers, and associated accessory structures would allow existing games and practices for football, soccer, lacrosse, track/field, and other athletic activities to extend into the evening hours which, in some cases, could result in a minor increase in attendance at some events. In addition, the installation of sports field lighting would allow existing varsity and junior varsity football games (which are currently held across the street at the DVC campus) to be relocated back to the College Park campus. Footballs games are supervised by school administrators and the PHPD assists on an as-needed basis. Attendance at the varsity and junior varsity football games would be similar to existing attendance at the DVC campus since these games are already held in the evening hours and are already located within the immediate vicinity of the high school. Given that these football games have the highest overall attendance, the minor increase in attendance at some other competitions would not substantially increase the overall demand for police services. Rather, existing demand for police services related to high school football games at the DVC campus would be relocated to the high school campus and demand would be similar to existing conditions. However, events not sponsored by the high school may not have adequate security for nighttime events. Events not sponsored by the high school would be subject to the District's facility use permit application process, which requires additional supervision.

Given the above, the proposed project would not result in a significant impact on the physical environment due to the incremental increase in demand for police services; construction and operation of the proposed project would have a less-than-significant impact on police services and facilities.

[43] Leach, Ted, 2012. Fire Inspector, Contra Costa County Fire Protection District. Written communication with LSA Associates, Inc. December 12.

Schools. Construction of the proposed athletic facilities would serve existing demand at the campus and would not affect the existing school population or increase school enrollment at the College Park campus or other local schools.

Parks. There are 15 park and open space areas and recreational facilities within the City of Pleasant Hill. The following park and open space areas and recreational facilities are located within a 1-mile radius of the project site: Las Juntas Open Space, Chilpancingo Park, Paso Nogal Park, Sherman Acres Park, the Winslow Center, the Pleasant Hill Senior Center, Pleasant Hill Park, Pleasant Hill Aquatic Park and Pleasant Hill Teen Center.

The construction of the new permanent field lighting facilities, bleachers, and associated accessory structures would allow existing games and practices for football, soccer, lacrosse, track/field, and other athletic activities to extend into the evening hours which, in some cases, could result in a minor increase in attendance at some events. However, as described above, the proposed project is primarily intended to serve existing demand for athletic facilities on the existing high school campus (including allowing existing football games held at the DVC campus to relocate back to the high school campus), and this minor increase would not be substantial. Therefore, the potential minimal amount of increased attendance is unlikely to increase the use of nearby parks and recreational facilities. The proposed project would not result in increased demand for park facilities such that new park facilities would have to be constructed. Therefore, the proposed project would have no measureable impact on local or regional parks.

Other Public Facilities. The proposed project would not directly affect the existing school population, and would not result in an increase of the local resident population. The proposed project would not affect demand for other public facilities such as libraries and community centers.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. 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?	☐	☒	☐	☐

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

The construction of the new lighting facilities, bleachers, and associated accessory structures would allow existing games and practices for football, soccer, lacrosse, track/field, and other athletic activities to extend into the evening hours which, in some cases, could result in a minor increase in attendance at some events. However, as described above, the proposed project is primarily intended to serve existing demand for athletic facilities on the existing high school campus (including allowing existing football games held at the DVC campus to relocate back to the high school campus), and this minor increase would not be substantial. Therefore, the potential minimal amount of increased attendance is unlikely to increase the use of nearby parks and recreational facilities. Moreover, the proposed project would reduce the use of the DVC campus's recreational facilities by relocating existing high school events to the project site. Therefore, the proposed project would not result in the physical deterioration of any parks or recreational facilities and this impact would be less than significant.

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

The proposed project includes the construction of athletic facilities that might have an adverse effect on the environment. Mitigation measures have been specified throughout this document to reduce potentially significant impacts to a less-than-significant level.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. 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?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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 that 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 polices, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

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? ***(Less-Than-Significant Impact)***

Under existing conditions, attendance at track, lacrosse, or soccer competitions currently held at the sports field is typically between 75 and 100 spectators. Attendance at community soccer events can, however, average about 200 spectators. With the possible extension of some of these games into the evening hours, it is anticipated that overall attendance at each of these events could increase by about 10 percent. For these events, it is anticipated that the proposed project will increase attendance by 10 percent, or at most 20 spectators. Even if all spectators drive to the facility, the increase of 20 trips would be minor. Since a typical high school with 1,925 students generates approximately 3,292 daily trips, the increase in attendance during regular events and competitions would be less than significant when compared to the existing traffic generated by the school.

The number of football games held at the College Park campus would increase by a total of ten games as the varsity and junior varsity games, which are currently held in the evening hours at the DVC campus, would be moved back to the College Park campus. Attendance at these games is generally between a low of 300 and a high of 700, depending on the opposing team and how well the home team is performing, resulting in an average attendance of 500 spectators. These spectators would shift from the existing DVC campus to the College Park campus with installation of the new lighting system.

This change, which would transfer attendance from a location immediately across the street from the College Park campus, is unlikely to substantially change traffic patterns. Therefore, the increased attendance at the high school for football games would balance out the decrease in spectators at the DVC campus, and would not result in new trips and would not increase traffic congestion in the area.

With the addition of the visitor bleachers, total formal seating capacity at the sports field would be increased to approximately 2,000. However, this level of attendance would only be reached for about four to six competitions annually, such as homecoming and playoff events. These events are also held at the DVC stadium, which has a capacity of approximately 7,000 spectators. Parking would continue to be available at the DVC campus as overflow for events at the high school campus.

Given that the proposed project would only change the location of the games with the highest attendance and that the configuration of available parking spaces at the College Park and DVC campuses would not change, attendees would not change their mode of travel to attend events at the improved high school campus athletic facilities. The proposed project would not change the mode of transportation for the users of the facility or increase congestion. Therefore, the impact of the proposed project on the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, would be less than significant. In addition, the proposed project would widen the existing pedestrian access roadway to the sports field, improving on-site pedestrian circulation and access.

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?* ***(Less-Than-Significant Impact)***

As discussed in Section XVI.a, the proposed project would not generate new vehicle trips on a permanent basis, and would not exceed any level of service standards, travel demand measures or other standards developed by the Contra Costa Transportation Authority, the congestion management agency for the City of Pleasant Hill. The Contra Costa Transportation Authority has established a level-of-service standard of LOS E for all parts of the Congestion Management Plan (CMP) network except those that were already operating at worse levels of service in 1991.[44] For short-range analysis of land use impacts, the CMP relies on the traffic impact analysis required by the Growth Management Program, which will be continued under Measure J. That program requires every jurisdiction to conduct a traffic impact analysis for any proposed development project, development plan, or General Plan Amendment that would generate more than 500 vehicle trips in the peak hour. Regional Transportation Planning Committees (RTPC) are allowed to use lower thresholds than the 500 trips.

The project is in the TRANSPAC (Transportation Partnership and Cooperation) RTPC area which uses the 500 net new peak hour trips as the threshold for requiring a traffic impact analysis. Since the proposed project is forecast to generate less than 500 net new trips, based on the CMP thresholds, it does not meet the threshold for requiring a traffic impact analysis. Therefore, the proposed project would not conflict with an applicable congestion management program.

[44]Contra Costa Transportation Authority, 2011. Contra Costa Congestion Management Program. November 16.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? ***(No Impact)***

Implementation of the proposed project would not result in changes to air traffic patterns.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ***(Less-Than-Significant Impact)***

Ingress and egress to the project site would primarily be via existing driveways on Viking Drive. The proposed project would not substantially increase hazards due to a design feature.

Existing parking areas on the College Park campus provide about 317 spaces for students, 4 visitor spaces, and 11 handicap spaces. In addition, parking spaces at the DVC campus are available for use by College Park High School students and visitors during certain periods and depending whether or not DVC classes are in session. For example, when not in session, parking at the DVC campus is free. For Friday night football games, which are currently held at the DVC campus, the DVC parking lot next to the stadium is free and the lot is generally full in addition to the parking facilities at the College Park campus if it is a big game. Given that existing football games held at the DVC campus result in full lots at both campuses, the transfer of games back to the College Park campus would not alter existing parking conditions during these events. It is expected that the College Park campus's parking facilities would continue to be filled, as would available facilities at DVC. Pedestrian flows between the two campuses would continue to be similar and would not result in any traffic conflicts as these conditions already occur without incidents. Therefore, the proposed project would not create any new hazards related to traffic or pedestrian circulation.

e) Result in inadequate emergency access? ***(Less-Than-Significant Impact)***

The proposed project would not close or modify any driveways and would not change emergency access to the high school campus. Emergency access to the project site would be provided by driveways on Viking Way. Driveways and parking areas within the project site would provide adequate space for emergency vehicles to maneuver. Therefore, impacts associated with inadequate emergency access would be less than significant.

f) Conflict with adopted polices, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? ***(Less-Than-Significant Impact)***

Implementation of the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities. The proposed project would not significantly change the number of spectators or the mode of transportation that spectators take to attend events. As a result, the proposed project would not significantly impact transit, bicycle or pedestrian plans or facilities.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. 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 storm water 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 which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
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?	☐	☐	☒	☐

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? ***(Less-Than-Significant Impact)***

Wastewater treatment services in Pleasant Hill, including the high school campus, are provided by the Central Contra Costa Sanitary District (CCCSD). All wastewater collected within the District is transported to the CCCSD Waste Water Treatment Plant (WWTP) near the junction of Interstate 680 and Highway 4. The CCCSD's current discharge permit allows an average dry weather flow rate of 53.8 million gallons per day (mgd). The actual average dry weather flow in 2011 was 34.3 mgd or

approximately 64 percent of capacity.[45] The project site is currently served by utility infrastructure, including sanitary sewer and water lines.

The proposed project includes additional facilities to support the existing sports field and athletic activities at the high school campus. The new concessions/ticket room would include restroom facilities, which would replace the portable facilities located at the site. Any additional wastewater generated by the proposed project would be minimal and would not exceed the capacity of the WWTP, which has available capacity for the next several decades, based upon expected connection rates to CCCSD's collection system.[46] The proposed project would not exceed the wastewater treatment requirements established by the 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? ***(Less-Than-Significant Impact)***

Wastewater Infrastructure. The proposed project involves athletic facilities improvements, and would not result in an increase in student capacity at the College Park campus. As discussed above (Section XVII.a), the proposed project would generate a minimal amount of wastewater, which would not exceed the capacity of the existing wastewater treatment plant or existing sewer infrastructure serving the project site. As previously noted, the CCCSD average daily dry weather flow in 2011 was approximately 34.3 mgd (approximately 64 percent of capacity). Any additional wastewater generated by the proposed project would represent only a small percentage of the CCCSD's permitted treatment capacity. Therefore, the increase in wastewater generated by the proposed project would not require the construction of new wastewater treatment facilities, or the expansion of existing facilities.

The project site is served by existing wastewater infrastructure. Specifically, the proposed project would connect to existing 4-inch diameter private main, located on the high school campus. From there, flow would travel by gravity to public mains within Viking Drive. Given that any increase in wastewater generated at the site would be small, these lines would have sufficient capacity to accommodate the proposed project.

Water Infrastructure. The project site is within the Contra Costa Water District's (CCWD) service area. The project site is served by water infrastructure and would connect to existing water delivery infrastructure at Viking Drive. The CCWD has a total planned supply of 214,900 acre-feet per year (af/yr). As of 2010, adjusted water use was 169,000 af/yr (approximately 79 percent of capacity). As discussed below in Section XVII.d, the proposed project would not substantially increase demand for water and would therefore not exceed the capacity of the existing water treatment plant. The proposed project would not require the construction of new water treatment facilities, or the expansion of existing facilities.

[45] Leavitt, Russell B., 2012. Engineering Assistant III, Central Contra Costa Sanitary District. Written communication with LSA Associates, Inc. December 11.

[46] Ibid.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? ***(Less-Than-Significant Impact)***

Please refer to Section XVII.a. The proposed project is located at the existing high school campus, which is already served by stormwater infrastructure. While construction of the project would require some modifications to existing stormwaterr infrastructure, this would occur on site and would not result in 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? ***(Less-Than-Significant Impact)***

The CCWD is almost entirely dependent on the Sacramento-San Joaquin Delta for its water supply. CCWD's primary source is the United States Bureau of Reclamation's Central Valley Project (CVP). CVP water consists of unregulated and regulated flows from storage releases from Shasta, Folsom, and Clair Engle reservoirs into the Sacramento River. Other sources include the San Joaquin River, Mallard Slough, recycled water, a minor amount of local well water, and water transfers.[47]

The CCWD projects that it will have adequate water supply to meet future demand. The CCWD anticipates that net water deliveries, which include recycled water, will grow to 155,600 af/yr in 2015, 173,100 af/yr in 2025 and 187,100 af/yr in 2035. Total planned supply is expected to increase as well, growing to 234,100 af/yr in 2015, 256,000 af/yr in 2025 and 261,700 af/yr in 2035.[48] The proposed project includes facilities that would generate a very minor increase in demand for water and therefore would not require new or expanded entitlements for water supplies.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ***(Less-Than-Significant Impact)***

Please refer to Section XVI.a for a discussion of the project's impacts to wastewater treatment. The proposed project would generate a minimal amount of wastewater and therefore would not exceed the capacity of the exiting wastewater treatment plant, resulting in a less-than-significant impact on the capacity of existing wastewater treatment facilities.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? ***(Less-Than-Significant Impact)***

The proposed project would result in the construction of new lighting poles, bleachers, and accessory structures to support existing athletic facilities at the high school campus. The project would generate marginal amounts of additional solid waste related to these activities. All construction waste associated with the proposed project would adhere to State requirements related to disposal. The small amount of waste generated by the proposed project would not exceed the capacity of any landfill serving the project area, resulting in a less-than-significant impact to landfill capacity.

[47] Contra Costa County Water District, 2011. *Urban Water Management Plan.* June.

[48] Ibid.

*g) Comply with federal, State, and local statutes and regulations related to solid waste**? (Less-Than-Significant Impact)***

Refer to Section XVII.f. The proposed project would comply with federal, State, and local statutes and regulations related to solid waste.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII.	**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 wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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 which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐
d)	Does the project have the potential to achieve short-term environmental goals to the disadvantage of longer-term goals?	☐	☐	☐	☒

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

Implementation of the proposed project could degrade the quality of the environment; however, implementation of Mitigation Measures CULT-1, CULT-2, and CULT-3 would ensure that potential impacts related to cultural resources would be reduced to less-than-significant levels. With mitigation, the proposed project would not: 1) substantially degrade the quality of the environment; 2) substantially reduce the habitat of a fish or wildlife species; 3) cause a fish or wildlife species population to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major period of California history.

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

The impacts of the proposed project would be individually limited and not cumulative considerable. All environmental impacts that could occur as a result of implementation of the proposed project would be reduced to less-than-significant levels through implementation of the mitigation measures recommended in this document.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?* ***(Potentially Significant Unless Mitigation Incorporated)***

With implementation of the mitigation measures included in this document, including Mitigation Measures NOISE-1, NOISE-2, and AIR-1, the proposed project would not result in environmental effects that would cause substantial direct or indirect adverse effects to human beings.

d) *Does the project have the potential to achieve short-term goals to the disadvantage of longer-term goals?* ***(No Impact)***

All potential impacts of the proposed project would be reduced to less-than-significant levels through the incorporation of the various mitigation measures set forth above in this Initial Study Checklist/Mitigated Negative Declaration. Furthermore, none of the potential impacts in their pre-mitigation state would raise issues of a temporal nature. In the absence of conscientiously implemented mitigation measures, the forecast impacts would still be temporary in nature. None represent a commitment to a physical change on the high school site that would have irremediable long-term consequences.

IV. REPORT PREPARATION

A. REPORT PREPARERS

LSA Associates, Inc.

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Berkeley, CA 94710

Shannon Allen, AICP, Principal-in-Charge
Theresa Wallace, Senior Planner/Project Manager
Amy Fischer, Associate Air Quality/GCC Specialist
Phil Ault, Noise Specialist
Patty Linder, Graphics/Document Production
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Meghan Macias, Associate Transportation Planner

B. REFERENCES

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C. COMMUNICATION

Leach, Ted, 2012. Fire Inspector, Contra Costa County Fire Protection District. Written communication with LSA Associates, Inc. December 12.

Leavitt, Russell B., 2012. Engineering Assistant III, Central Contra Costa Sanitary District. Written communication with LSA Associates, Inc. December 11.

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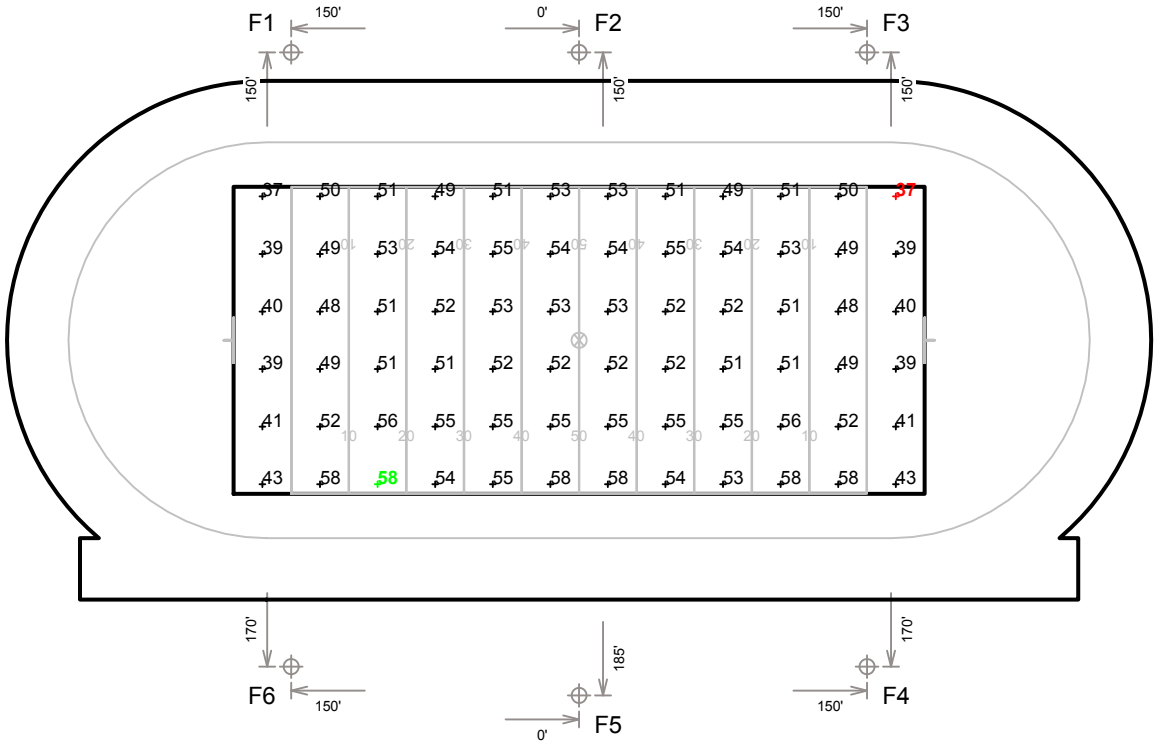
APPENDIX A

ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	F1-F3	80'	-	80'	1500W MZ	7/3*	7	3
2	F4, F6	80'	-	80'	1500W MZ	9	9	0
1	F5	80'	-	80'	1500W MZ	9	9	0
6	TOTALS					57	48	9

* This structure utilizes a back-to-back mounting configuration



MY PROJECT

Name:	**College Park High School Football**
Location:	Pleasant Hill,CA

GRID SUMMARY

Name:	**Football**
Size:	360' x 160'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Guaranteed Average:	**50**
Scan Average:	50.8
Maximum:	58
Minimum:	37
Avg / Min:	1.37
Guaranteed Max / Min:	**2**
Max / Min:	1.57
UG (adjacent pts):	1.36
CV:	0.11
No. of Points:	72
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	48
Avg KW:	75.07 (81.6 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

By:	**Eric Svenby**	
File # / Date:	124145FB	25-Oct-12

SCALE IN FEET 1 : 100

0' 100' 200'

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

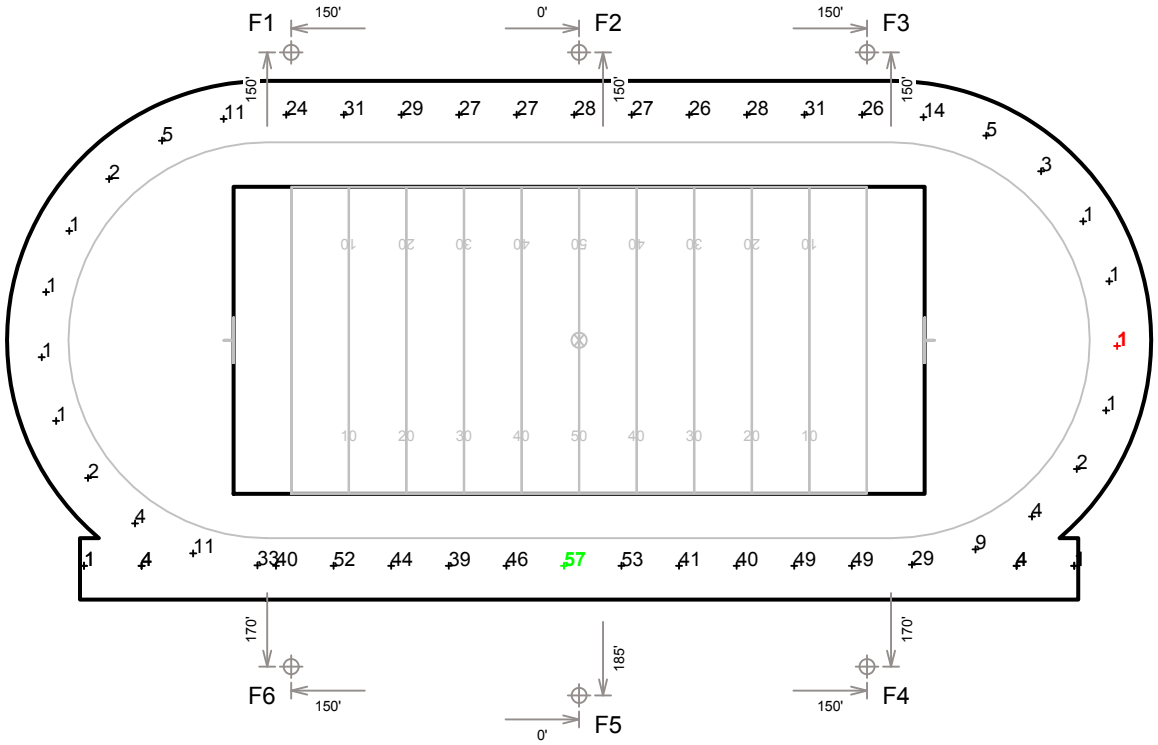
MDUSD Resolution No. 14/15-01
Exhibit B

ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	F1-F3	80'	-	80'	1500W MZ	7/3*	7	3
2	F4, F6	80'	-	80'	1500W MZ	9	9	0
1	F5	80'	-	80'	1500W MZ	9	9	0
6	TOTALS					57	48	9

* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 100

0' 100' 200'

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

MDUSD Resolution No. 14/15-01
Exhibit B

MY PROJECT

Name:	**College Park High School Football**
Location:	Pleasant Hill,CA

GRID SUMMARY

Name:	**Track**
Size:	Irregular
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	**18.8**
Maximum:	57
Minimum:	1
Avg / Min:	21.20
Max / Min:	**64.70**
UG (adjacent pts):	0.00
CV:	0.96
No. of Points:	52
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	48
Avg KW:	75.07 (81.6 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

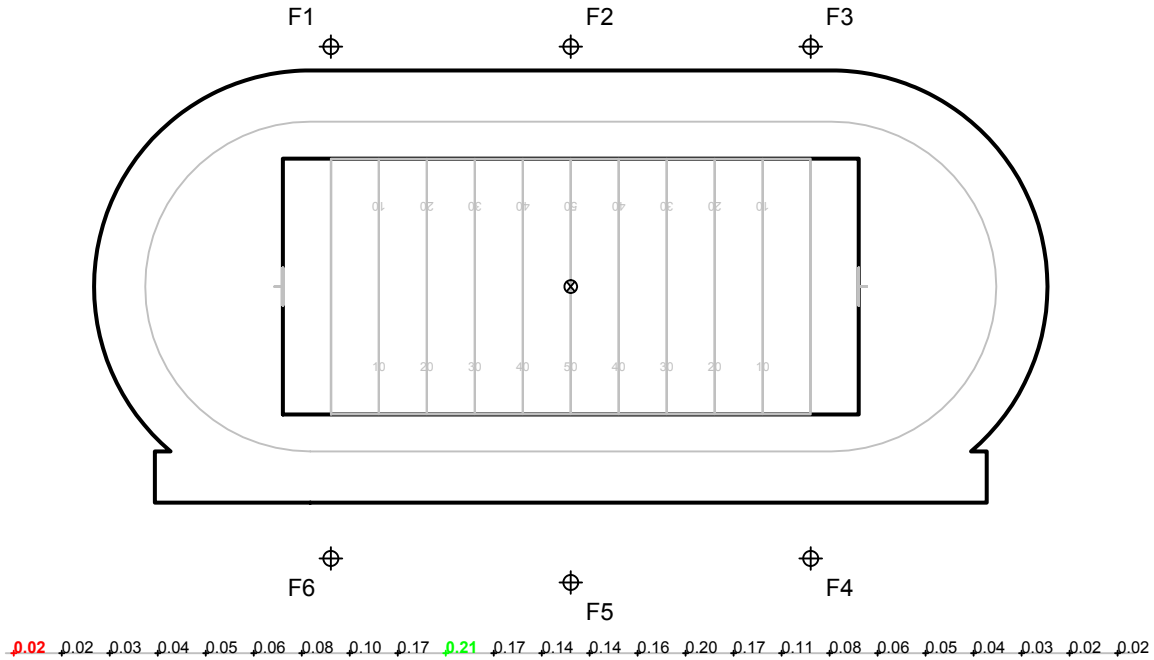
By:	**Eric Svenby**	
File # / Date:	124145FB	25-Oct-12

ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	F1-F3	80'	-	80'	1500W MZ	7/3*	10	0
2	F4, F6	80'	-	80'	1500W MZ	9	9	0
1	F5	80'	-	80'	1500W MZ	9	9	0
6	TOTALS					57	57	0

* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 120

0' 120' 240'

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

MDUSD Resolution No. 14/15-01
Exhibit B

MY PROJECT

Name:	**College Park High School Football**
Location:	Pleasant Hill,CA

GRID SUMMARY

Name:	**Spill @ 150' (+23' elev.)**
Spacing:	30.0'
Height:	23.0' above grade

CONSTANT ILLUMINATION

SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	**0.090**
Maximum:	0.21
Minimum:	0.02
No. of Points:	24
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	57
Avg KW:	89.15 (96.9 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

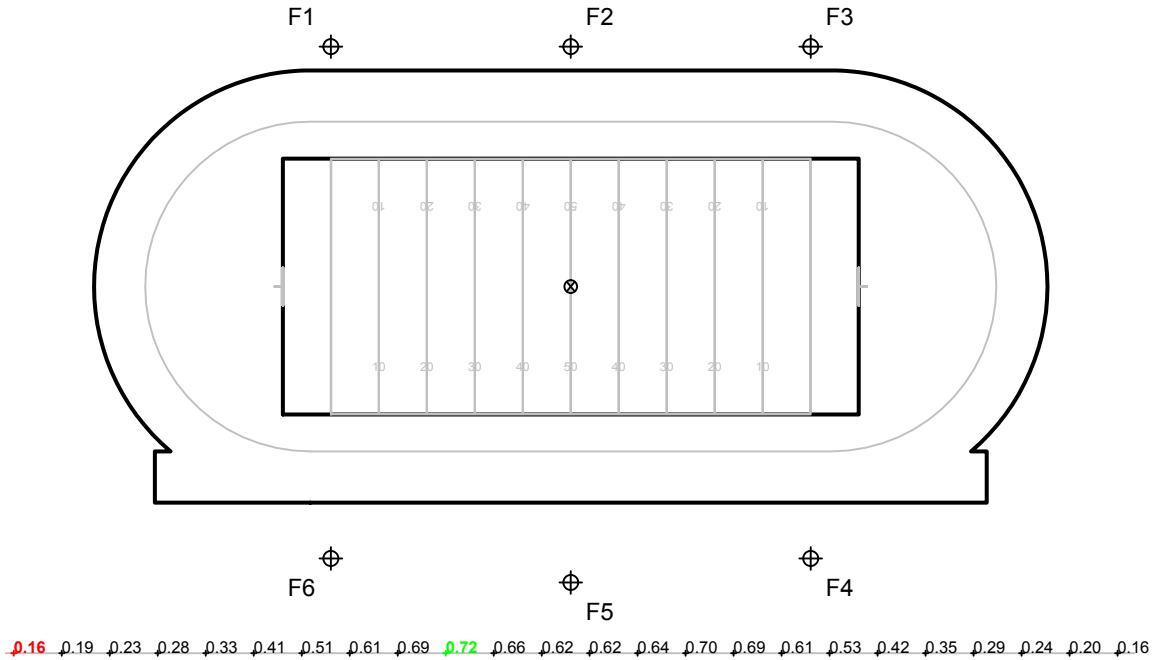
By:	**Eric Svenby**	
File # / Date:	124145FB	25-Oct-12

ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	F1-F3	80'	-	80'	1500W MZ	7/3*	10	0
2	F4, F6	80'	-	80'	1500W MZ	9	9	0
1	F5	80'	-	80'	1500W MZ	9	9	0
6	TOTALS					57	57	0

* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 120

0' 120' 240'

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

MDUSD Resolution No. 14/15-01
Exhibit B

MY PROJECT

Name:	**College Park High School Football**
Location:	Pleasant Hill,CA

GRID SUMMARY

Name:	**Spill @ 150' (+23' elev.)**
Spacing:	30.0'
Height:	23.0' above grade

CONSTANT ILLUMINATION

SUMMARY	MAX VERTICAL FOOTCANDLES
	Entire Grid
Scan Average:	**0.452**
Maximum:	0.72
Minimum:	0.16
No. of Points:	24
LUMINAIRE INFORMATION	
Luminaire Type:	Green Generation
Rated Lamp Life:	5,000 hours
Avg Lumens / Lamp:	134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	57
Avg KW:	89.15 (96.9 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

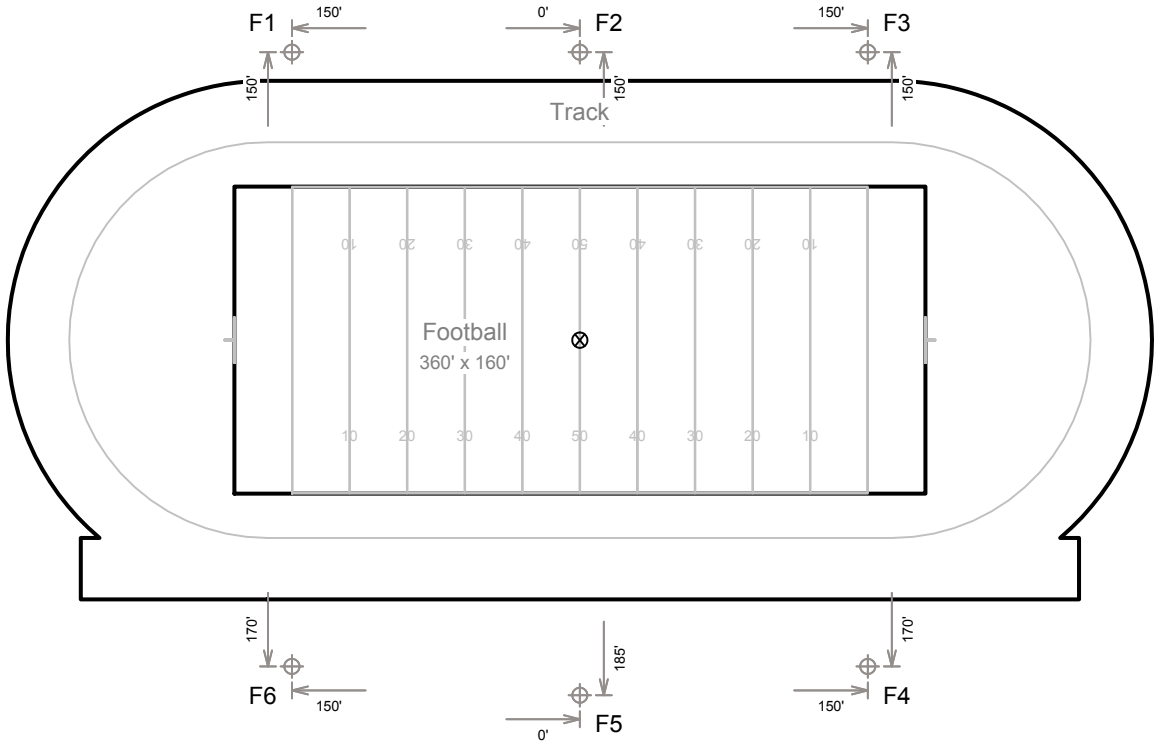
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

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

ENGINEERED DESIGN

By:	**Eric Svenby**	
File # / Date:	124145FB	25-Oct-12

ILLUMINATION SUMMARY



MY PROJECT

Name:	**College Park High School Football**
Location:	Pleasant Hill,CA

EQUIPMENT LAYOUT

INCLUDES:
· Football
· Track

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 ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
3	F1-F3	80'	-	80'	1500W MZ	7/3*
2	F4, F6	80'	-	80'	1500W MZ	9
1	F5	80'	-	80'	1500W MZ	9
6	TOTALS					57

* This structure utilizes a back-to-back mounting configuration

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1500 watt MZ	8.6	8.3	7.5	6.5	5.1	-	3.7

SCALE IN FEET 1 : 100

0' 100' 200'

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

ENGINEERED DESIGN

By:	**Eric Svenby**	
File # / Date:	124145FB	25-Oct-12

MDUSD Resolution No. 14/15-01
Exhibit B

EQUIPMENT LAYOUT

APPENDIX B

NOISE DATA

Measured LDN

Long-term Noise Measurement Results

Date	Time	Duration	Leq
21May 13	17:00:00	3600	50.2
21May 13	18:00:00	3600	52.7
21May 13	19:00:00	3600	58.6
21May 13	20:00:00	3600	53.8
21May 13	21:00:00	3600	46.5
21May 13	22:00:00	3600	42.5
21May 13	23:00:00	3600	46.2
22May 13	0:00:00	3600	42.3
22May 13	1:00:00	3600	40.3
22May 13	2:00:00	3600	39.2
22May 13	3:00:00	3600	40.2
22May 13	4:00:00	3600	40.6
22May 13	5:00:00	3600	43.9
22May 13	6:00:00	3600	51.9
22May 13	7:00:00	3600	52.4
22May 13	8:00:00	3600	53.3
22May 13	9:00:00	3600	51.6
22May 13	10:00:00	3600	51.2
22May 13	11:00:00	3600	50.2
22May 13	12:00:00	3600	49.3
22May 13	13:00:00	3600	55.1
22May 13	14:00:00	3600	48.5
22May 13	15:00:00	3600	51.1
22May 13	16:00:00	3600	50.4
22May 13	17:00:00	3600	70.1
22May 13	18:00:00	3600	52.7
22May 13	19:00:00	3600	53.2
22May 13	20:00:00	3600	52.9
22May 13	21:00:00	3600	45.2
22May 13	22:00:00	3600	43.8
22May 13	23:00:00	3600	43
23May 13	0:00:00	3600	41.3
23May 13	1:00:00	3600	40.3
23May 13	2:00:00	3600	40.1
23May 13	3:00:00	3600	40
23May 13	4:00:00	3600	41.1
23May 13	5:00:00	3600	64
23May 13	6:00:00	3600	50.2
23May 13	7:00:00	3600	49.8

Based on Long-term Noise Measurement

Ldn Calculations					
	Time	Leq(h)	Leq'	0.1*Leq	antiLog
Night	12:00 AM	42.3	52.3	5.23	169824.4
	1:00 AM	40.3	50.3	5.03	107151.9
	2:00 AM	39.2	49.2	4.92	83176.38
	3:00 AM	40.2	50.2	5.02	104712.9
	4:00 AM	40.6	50.6	5.06	114815.4
	5:00 AM	43.9	53.9	5.39	245470.9
	6:00 AM	51.9	61.9	6.19	1548817
Day	7:00 AM	52.4	52.4	5.24	173780.1
	8:00 AM	53.3	53.3	5.33	213796.2
	9:00 AM	51.6	51.6	5.16	144544
	10:00 AM	51.2	51.2	5.12	131825.7
	11:00 AM	50.2	50.2	5.02	104712.9
	12:00 PM	49.3	49.3	4.93	85113.8
	1:00 PM	55.1	55.1	5.51	323593.7
	2:00 PM	48.5	48.5	4.85	70794.58
	3:00 PM	51.1	51.1	5.11	128825
	4:00 PM	50.4	50.4	5.04	109647.8
	5:00 PM	70.1	70.1	7.01	10232930
	6:00 PM	52.7	52.7	5.27	186208.7
	7:00 PM	53.2	53.2	5.32	208929.6
	8:00 PM	52.9	52.9	5.29	194984.5
	9:00 PM	45.2	45.2	4.52	33113.11
Night	10:00 PM	43.8	53.8	5.38	239883.3
	11:00 PM	43.0	53.0	5.3	199526.2
			10*Log10(Sum/24)		58.00378
			24 Hour Ldn		58

Existing Event-Day LDN

Existing "Event Day" with Freshman, JV and Varsity football games - Home (Western) Bleachers							
	Freshman football game						
Number of people, Distance	Shout/Yell		Loud Voice		Raised Voice		
	dBA		dBA		dBA		
	Male	Female	Male	Female	Male	Female	
1 person at 3 feet (Lmax)	88	82	75	71	65	62	
128 males / 128 females at 3 feet (Lmax)	109	103	96	92	86	83	
128 males / 128 females at 50 feet (Lmax)	84	78	71	67	61	58	*<(-25 dBA due to distance attenuation)*
256 people at 50 feet (Lmax)	85.0		72.5		62.8		*<Male/Female combined*
~200 people at 50 feet (Lmax)	84.0		71.5		61.8		*<an approximate 20% decrease from 256 people would represent an approximate 1 dBA decrease*

Existing "Event Day" Leq(h) Calculation

		Reference Noise Level at 50 ft (dBA) Lmax	Percent Occurs each Hour	Average Distance to Closest Receptor (ft)	Ground Effect	Shielding[1] (dBA)	Calculated (dBA) as measured at closest receptor		Energy	
							Lmax	Leq		
5min	Shout/Yell	84.0	8.3	100	0.5	10	66.4	55.7	4413141.012	367761.751
10min	Loud Voice	71.5	16.7	100	0.5	10	53.9	46.1	247152.7653	41192.12755
45min	Raised Voice	61.8	75.0	100	0.5	10	44.2	43.0	26537.49182	19903.11886
								Event Leq(h)		**56.3**
								Event Leq(h) + Existing Background		**60.3**

[1] Shielding accounts for solid bottom bleachers, sound being directed away from off-site receptors/toward the field, and existing topography.
(Assumes noise level behind bleachers is perceived as half as loud as directly in front. Therefore = -10 dB)

Existing "Event Day Plus Existing Background" Ldn Calculation					
	Time	Hourly Leq	Leq'	0.1*Leq	antiLog
Night	12:00 AM	48	58.0	5.8	630957.344
	1:00 AM	48	58.0	5.8	630957.344
	2:00 AM	48	58.0	5.8	630957.344
	3:00 AM	48	58.0	5.8	630957.344
	4:00 AM	48	58.0	5.8	630957.344
	5:00 AM	48	58.0	5.8	630957.344
	6:00 AM	48	58.0	5.8	630957.344
Day	7:00 AM	59	59.0	5.9	794328.235
	8:00 AM	59	59.0	5.9	794328.235
	9:00 AM	59	59.0	5.9	794328.235
	10:00 AM	59	59.0	5.9	794328.235
	11:00 AM	59	59.0	5.9	794328.235
	12:00 PM	59	59.0	5.9	794328.235
	1:00 PM	59	59.0	5.9	794328.235
	2:00 PM	59	59.0	5.9	794328.235
	3:00 PM	59	59.0	5.9	794328.235
	4:00 PM	60.3	60.3	6.02545513	1060364.39
	5:00 PM	60.3	60.3	6.02545513	1060364.39
	6:00 PM	60.3	60.3	6.02545513	1060364.39
	7:00 PM	59	59.0	5.9	794328.235
	8:00 PM	59	59.0	5.9	794328.235
	9:00 PM	59	59.0	5.9	794328.235
Night	10:00 PM	48	58.0	5.8	630957.344
	11:00 AM	48	58.0	5.8	630957.344
			10*Log10(Sum/24)		58.8440941
			24 Hour Ldn		59

Increase over Existing Background (a "No Event" Day): **1** dBA

Operational LDN

Project "Event Day" with Freshman, JV and Varsity football games - Home (Western) Bleachers							
Number of people, Distance	Shout/Yell		Loud Voice		Raised Voice		
	dBA		dBA		dBA		
	Male	Female	Male	Female	Male	Female	
1 person at 3 feet (Lmax)	88	82	75	71	65	62	
256 males / 256 females at 3 feet (Lmax)	112	106	99	95	89	86	
256 males / 256 females at 50 feet (Lmax)	87	81	74	70	64	61	*<(-25 dBA due to distance attenuation)*
512 people at 50 feet (Lmax)	88.0		75.5		65.8		*<Male/Female combined*
~500 people at 50 feet (Lmax)	88.0		75.5		65.8		

Project "Event Day" with Freshman, JV and Varsity football games - Visitor (Eastern) Bleachers							
Number of people, Distance	Shout/Yell		Loud Voice		Raised Voice		
	dBA		dBA		dBA		
	Male	Female	Male	Female	Male	Female	
1 person at 3 feet (Lmax)	88	82	75	71	65	62	
128 males / 128 females at 3 feet (Lmax)	109	103	96	92	86	83	
128 males / 128 females at 50 feet (Lmax)	84	78	71	67	61	58	*<(-25 dBA due to distance attenuation)*
256 people at 50 feet (Lmax)	85.0		72.5		62.8		*<Male/Female combined*
~200 people at 50 feet (Lmax)	84.0		71.5		61.8		*<an approximate 20% decrease from 256 people would represent an approximate 1 dBA decrease*

Project "Event Day" Leq(h) Calculation

			Reference Noise Level at 50 ft (dBA) Lmax	Percent Occurs each Hour	Average Distance to Closest Receptor (ft)	Ground Effect	Shielding[1] (dBA)	Calculated (dBA) as measured at closest receptor		Energy	
								Lmax	Leq		
West-side PA	5min	**PA System (Max Loud Voice)** [2]	85	8.3	90	0.75	10	68.0	57.2	6280592.424	523382.702
	15min	**PA System (Loud Voice)** [3]	79	25.0	90	0.75	10	62.0	56.0	1577613.489	394403.3723
	15min	**PA System (Raised Voice)** [4}	73	25.0	90	0.75	10	56.0	50.0	396278.5917	99069.64794
West-side spectators	5min	**Shout/Yell**	88.0	8.3	95	0.75	10	70.3	59.5	10733723.19	894476.9324
	10min	**Loud Voice**	75.5	16.7	95	0.75	10	57.8	50.0	601129.5267	100188.2545
	45min	**Raised Voice**	65.8	75.0	95	0.75	10	48.1	46.8	64544.9784	48408.7338
East-side PA	5min	**PA System (Max Loud Voice)** [2]	85	8.3	505	0.75	0	57.4	46.6	547162.3701	45596.86418
	15min	**PA System (Loud Voice)** [3]	79	25.0	505	0.75	0	51.4	45.4	137440.9733	34360.24333
	15min	**PA System (Raised Voice)** [4}	73	25.0	505	0.75	0	45.4	39.4	34523.61161	8630.902901
East-side Spectators	5min	**Shout/Yell**	84.0	8.3	505	0.75	0	56.4	45.6	431955.5076	35996.2923
	10min	**Loud Voice**	71.5	16.7	505	0.75	0	43.8	36.1	24191.15952	4031.859919
	45min	**Raised Voice**	61.8	75.0	505	0.75	0	34.1	32.9	2597.473255	1948.104941
										Event Leq(h)	**63.0**
										Event Leq(h) + Existing Background	**64.0**

[1] Shielding accounts for solid bottom bleachers, sound being directed away from off-site receptors/toward the field, and existing topography.
(Assumes noise level behind bleachers is perceived as half as loud as directly in front. Therefore = -10 dB)
[2] Assumes PA system configuration comparable to YVHS (85 dB as measured at center of bleachers).
[3] Assumes PA system configuration comparable to YVHS (79 dB as measured at center of bleachers).
[4] Assumes PA system configuration comparable to YVHS (73 dB as measured at center of bleachers).

Operational LDN

Project "Event Day" Ldn Calculation					
	Time	**Hourly Leq**	**Leq'**	**0.1*Leq**	**antiLog**
Night	12:00 AM	0	0.0	0	0
	1:00 AM	0	0.0	0	0
	2:00 AM	0	0.0	0	0
	3:00 AM	0	0.0	0	0
	4:00 AM	0	0.0	0	0
	5:00 AM	0	0.0	0	0
	6:00 AM	0	0.0	0	0
Day	7:00 AM	0	0.0	0	0
	8:00 AM	0	0.0	0	0
	9:00 AM	0	0.0	0	0
	10:00 AM	0	0.0	0	0
	11:00 AM	0	0.0	0	0
	12:00 PM	0	0.0	0	0
	1:00 PM	0	0.0	0	0
	2:00 PM	0	0.0	0	0
	3:00 PM	63.0	63.0	6.3	1995262.315
	4:00 PM	63.0	63.0	6.3	1995262.315
	5:00 PM	63.0	63.0	6.3	1995262.315
	6:00 PM	63.0	63.0	6.3	1995262.315
	7:00 PM	63.0	63.0	6.3	1995262.315
	8:00 PM	63.0	63.0	6.3	1995262.315
	9:00 PM	63.0	63.0	6.3	1995262.315
Night	10:00 PM	0	0.0	0	0
	11:00 PM	0	0.0	0	0
				10*Log10(Sum/24)	57.64886798
				24 Hour Ldn	58 *"Event Ldn"*

Operational LDN

Project "Event Day Plus Existing Background" Ldn Calculation					
	Time	**Hourly Leq**	**Leq'**	**0.1*Leq**	**antiLog**
Night	12:00 AM	48	58.0	5.8	630957.3445
	1:00 AM	48	58.0	5.8	630957.3445
	2:00 AM	48	58.0	5.8	630957.3445
	3:00 AM	48	58.0	5.8	630957.3445
	4:00 AM	48	58.0	5.8	630957.3445
	5:00 AM	48	58.0	5.8	630957.3445
	6:00 AM	48	58.0	5.8	630957.3445
Day	7:00 AM	58	58.0	5.8	630957.3445
	8:00 AM	58	58.0	5.8	630957.3445
	9:00 AM	58	58.0	5.8	630957.3445
	10:00 AM	58	58.0	5.8	630957.3445
	11:00 AM	58	58.0	5.8	630957.3445
	12:00 PM	58	58.0	5.8	630957.3445
	1:00 PM	58	58.0	5.8	630957.3445
	2:00 PM	58	58.0	5.8	630957.3445
	3:00 PM	64.0	64.0	6.4	2511886.432
	4:00 PM	64.0	64.0	6.4	2511886.432
	5:00 PM	64.0	64.0	6.4	2511886.432
	6:00 PM	64.0	64.0	6.4	2511886.432
	7:00 PM	64.0	64.0	6.4	2511886.432
	8:00 PM	64.0	64.0	6.4	2511886.432
	9:00 PM	64.0	64.0	6.4	2511886.432
Night	10:00 PM	48	58.0	5.8	630957.3445
	11:00 AM	48	58.0	5.8	630957.3445
				10*Log10(Sum/24)	60.71720649
				24 Hour Ldn	61

"Event Ldn" Plus Existing Background Noise Level

Increase over Existing Background (a "No Event" Day): **3** dBA

Increase over Existing "Event Day": **2** dBA

Mitigated Operational LDN

Project "Event Day" with Freshman, JV and Varsity football games - Home (Western) Bleachers							
Number of people, Distance	**Shout/Yell**		**Loud Voice**		**Raised Voice**		
	dBA		**dBA**		**dBA**		
	Male	**Female**	**Male**	**Female**	**Male**		**Female**
1 person at 3 feet (Lmax)	88	82	75	71	65		62
256 males / 256 females at 3 feet (Lmax)	112	106	99	95	89		86
256 males / 256 females at 50 feet (Lmax)	87	81	74	70	64		61
512 people at 50 feet (Lmax)	88.0		75.5		65.8		
~500 people at 50 feet (Lmax)	88.0		75.5		65.8		

<(-25 dBA due to distance attenuation)
<Male/Female combined

Project "Event Day" with Freshman, JV and Varsity football games - Visitor (Eastern) Bleachers							
Number of people, Distance	**Shout/Yell**		**Loud Voice**		**Raised Voice**		
	dBA		**dBA**		**dBA**		
	Male	**Female**	**Male**	**Female**	**Male**		**Female**
1 person at 3 feet (Lmax)	88	82	75	71	65		62
128 males / 128 females at 3 feet (Lmax)	109	103	96	92	86		83
128 males / 128 females at 50 feet (Lmax)	84	78	71	67	61		58
256 people at 50 feet (Lmax)	85.0		72.5		62.8		
~200 people at 50 feet (Lmax)	84.0		71.5		61.8		

<(-25 dBA due to distance attenuation)
<Male/Female combined
<an approximate 20% decrease from 256 people would represent an approximate 1 dBA decrease

Project MITIGATED "Event Day" Leq(h) Calculation (with minimum 6 foot high soundwall along residential property line)

			Reference Noise Level at 50 ft (dBA) Lmax	Percent Occurs each Hour	Average Distance to Closest Receptor (ft)	Ground Effect	Shielding[1] (dBA)	6 Foot High Soundwall Reduction	Calculated (dBA) as measured at closest receptor		Energy	
									Lmax	Leq		
West-side PA	5min	**PA System (Max Loud Voice)** [2]	85	8.3	90	0.75	10	8	68.0	49.2	6280592.424	82950.56814
	15min	**PA System (Loud Voice)** [3]	79	25.0	90	0.75	10	8	62.0	48.0	1577613.489	62508.72198
	15min	**PA System (Raised Voice)** [4]	73	25.0	90	0.75	10	8	56.0	42.0	396278.5917	15701.48106
West-side spectators	5min	**Shout/Yell**	88.0	8.3	95	0.75	10	8	70.3	51.5	10733723.19	141765.0401
	10min	**Loud Voice**	75.5	16.7	95	0.75	10	8	57.8	42.0	601129.5267	15878.76824
	45min	**Raised Voice**	65.8	75.0	95	0.75	10	8	48.1	38.8	64544.9784	7672.267266
East-side PA	5min	**PA System (Max Loud Voice)** [2]	85	8.3	505	0.75	0	8	57.4	38.6	547162.3701	7226.615963
	15min	**PA System (Loud Voice)** [3]	79	25.0	505	0.75	0	8	51.4	37.4	137440.9733	5445.731575
	15min	**PA System (Raised Voice)** [4]	73	25.0	505	0.75	0	8	45.4	31.4	34523.61161	1367.905925
East-side Spectators	5min	**Shout/Yell**	84.0	8.3	505	0.75	0	8	56.4	37.6	431955.5076	5705.027862
	10min	**Loud Voice**	71.5	16.7	505	0.75	0	8	43.8	28.1	24191.15952	639.0067339
	45min	**Raised Voice**	61.8	75.0	505	0.75	0	8	34.1	24.9	2597.473255	308.753826
											Event Leq(h)	**55.0**
											Event Leq(h) + Existing Background	**60.0**

[1] Shielding accounts for solid bottom bleachers, sound being directed away from off-site receptors/toward the field, and existing topography.
[2] Assumes PA system configuration comparable to YVHS (85 dB as measured at center of bleachers).
[3] Assumes PA system configuration comparable to YVHS (79 dB as measured at center of bleachers).
[4] Assumes PA system configuration comparable to YVHS (73 dB as measured at center of bleachers).

Mitigated Operational LDN

Project MITIGATED "Event Day" Ldn Calculation					
	Time	**Hourly Leq**	**Leq'**	**0.1*Leq**	**antiLog**
Night	12:00 AM	0	0.0	0	0
	1:00 AM	0	0.0	0	0
	2:00 AM	0	0.0	0	0
	3:00 AM	0	0.0	0	0
	4:00 AM	0	0.0	0	0
	5:00 AM	0	0.0	0	0
	6:00 AM	0	0.0	0	0
Day	7:00 AM	0	0.0	0	0
	8:00 AM	0	0.0	0	0
	9:00 AM	0	0.0	0	0
	10:00 AM	0	0.0	0	0
	11:00 AM	0	0.0	0	0
	12:00 PM	0	0.0	0	0
	1:00 PM	0	0.0	0	0
	2:00 PM	0	0.0	0	0
	3:00 PM	55.0	55.0	5.5	316227.766
	4:00 PM	55.0	55.0	5.5	316227.766
	5:00 PM	55.0	55.0	5.5	316227.766
	6:00 PM	55.0	55.0	5.5	316227.766
	7:00 PM	55.0	55.0	5.5	316227.766
	8:00 PM	55.0	55.0	5.5	316227.766
	9:00 PM	55.0	55.0	5.5	316227.766
Night	10:00 PM	0	0.0	0	0
	11:00 PM	0	0.0	0	0
				10*Log10(Sum/24)	49.64886798
				24 Hour Ldn	50 *"Event Ldn"*

Mitigated Operational LDN

Project MITIGATED "Event Day Plus Existing Background" Ldn Calculation					
	Time	Hourly Leq	Leq'	0.1*Leq	antiLog
Night	12:00 AM	48	58.0	5.8	630957.3445
	1:00 AM	48	58.0	5.8	630957.3445
	2:00 AM	48	58.0	5.8	630957.3445
	3:00 AM	48	58.0	5.8	630957.3445
	4:00 AM	48	58.0	5.8	630957.3445
	5:00 AM	48	58.0	5.8	630957.3445
	6:00 AM	48	58.0	5.8	630957.3445
Day	7:00 AM	58	58.0	5.8	630957.3445
	8:00 AM	58	58.0	5.8	630957.3445
	9:00 AM	58	58.0	5.8	630957.3445
	10:00 AM	58	58.0	5.8	630957.3445
	11:00 AM	58	58.0	5.8	630957.3445
	12:00 PM	58	58.0	5.8	630957.3445
	1:00 PM	58	58.0	5.8	630957.3445
	2:00 PM	58	58.0	5.8	630957.3445
	3:00 PM	60.0	60.0	6	1000000
	4:00 PM	60.0	60.0	6	1000000
	5:00 PM	60.0	60.0	6	1000000
	6:00 PM	60.0	60.0	6	1000000
	7:00 PM	60.0	60.0	6	1000000
	8:00 PM	60.0	60.0	6	1000000
	9:00 PM	60.0	60.0	6	1000000
Night	10:00 PM	48	58.0	5.8	630957.3445
	11:00 AM	48	58.0	5.8	630957.3445
			10*Log10(Sum/24)		58.68406237
			24 Hour Ldn		59

"Event Ldn" Plus Existing Background Noise Levels

Increase over Existing Background (a "No Event" Day): **1** dBA

Increase over Existing "Event Day": **0** dBA