Crawford High School and Mann Middle School Athletic Facility Upgrade and Modernization Project Final Environmental Impact Report

Volume II—Final Environmental Impact Report

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Acronyms and Abbreviations

°F	degrees Fahrenheit
$\mu g/m^3$	micrograms per cubic meter
A.D.	Anno Domini
AB 32	Assembly Bill 32
ACM	asbestos-containing materials
ADT	Average Daily Traffic
APCD	Air Pollution Control District
APE	Area of Potential Effects
ARB	California Air Resources Board
B.P.	Before Present
BMPs	best management practices
Board	Board of Education
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CCP	Cities for Climate Protection
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA Checklist	CEQA Initial Study/Environmental Checklist Form
CH_4	methane
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPAP	Climate Protection Action Plan
CRHR	California Register of Historical Resources
District	San Diego Unified School District
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DSP	Digital Signal Processor
DTSC	Department of Toxic Substances Control

EIR	Environmental Impact Report
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute
ESA	Environmental Site Assessment
ESL	Environmentally Sensitive Lands
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GWP	Global Warming Potential
HASP	Health and Safety Plan
HAZWOPER	Hazardous Wastes Operations and Emergency Response
HFCs	hydrofluorocarbons
HRA	health risk assessment
HRB	Historical Resources Board
I-15	Interstate 15
I-8	Interstate 8
IESNA	Illuminating Engineering Society of North America
ILE	Institution of Lighting Engineers
LAN	local area network
LOS	Level of Service
M.E.	Medical Examiner
MBTA	Migratory Bird Treaty Act
MLDs	Most Likely Descendants
MMRP	Mitigation and Monitoring Reporting Program
MSCP	Multiple Species Conservation Program
MT	metric ton
$MTCO_2e$	metric ton of carbon dioxide equivalent
MTS	Metropolitan Transit System
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NRHP	National Register of Historic Places
O_3	ozone

OEHHA	Office of Environmental Health Hazard Assessment
OHWM	ordinary high-water mark
OSHA	Occupational Safety and Health
P.I.	Principal Investigator
PA	public announcement
PFCs	perfluorinated carbons
PM	particulate matter
PM10	particulate matter less than 10 microns in diameter
PM2.5	particulate matter less than 2.5 microns in diameter
ppb	parts per billion
ppm	parts per million
PRC	Public Resources Code
project	Crawford High School and Mann Middle School Modernization Project
R.E.	Resident Engineer
RAQS	Regional Air Quality Strategy
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
SR-94	State Route 94
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TIS	Traffic Impact Study
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
USTs	underground storage tanks
v/c	volume-to-capacity ratio

Foreword

The San Diego Unified School District (District) prepared a Draft Environmental Impact Report (EIR) for the Crawford High School and Mann Middle School Athletic Facility Upgrade and Modernization (SCH 2013031019) project (project) and circulated the Draft EIR for a 45-day public review period pursuant to requirements of Chapter 3, Sections 15080 to 15097, of the California Environmental Quality Act (CEQA). The review period gives agencies, organizations, and members of the public the opportunity to review the Draft EIR and provide comments on the document and the environmental analysis presented therein. The 45-day review period commenced on May 16, 2014, and ended on June 30, 2014. During the review period, the District received 21 letters from reviewing agencies, organizations, and individuals commenting on the Draft EIR. Subsequent to circulation of the Draft EIR for public review, modifications were made by the District to the project. As a result, the District prepared a Recirculated Draft EIR for additional public review.

The project description was revised to reflect Civic Center Act uses and to incorporate recent revisions to District Administrative Procedures. In July 2014, the District revised Administrative Procedure 9229 regarding use of District athletic fields and lighted stadiums in accordance with the Civic Center Act, and the project description was modified to reflect these revisions. Pursuant to District policy and the Civic Center Act, the new athletic stadium and other athletic facilities proposed at Crawford High School and Mann Middle School could possibly be used by third parties for events. This was clarified in July 2014, when the District revised Administrative Procedure 9229 regarding use of District athletic fields and lighted stadiums in accordance with the Civic Center Act. There are currently no plans or proposals for third-party use of the proposed stadium; however, it is possible that third-party uses may occur in the future in accordance with District policy. The Recirculated Draft EIR contained revisions to reflect the possibility that athletic fields could be used for third-party uses and showed changes to the site plans for the Crawford and Mann campuses developed by the District subsequent to submittal of the original Draft EIR for public review.

Section 15088.5(a) of the State CEQA Guidelines requires that an EIR be recirculated for an additional public review when significant new information is added to the EIR after public notice is given of the availability of the Draft EIR for public review, but before certification. Information resulting in the need to recirculate an EIR can include changes in the project or environmental setting as well as additional data or other information. The Recirculated Draft EIR was made available for public review pursuant to the State CEQA Guidelines for another 45-day public review period. The 45-day review period commenced on December 5, 2014, and ended on January 19, 2015. During the review period, the District received 58 letters from reviewing agencies, organizations, and individuals commenting on the Draft EIR.

This Final EIR contains responses to all comment letter received during both public review periods (See Volume I of the Final EIR). In response to some of the comments received from public respondents, the Final EIR contains revisions that clarify and/or correct the Recirculated Draft EIR, where necessary. All revisions to the EIR are marked in ~~strikeout~~/<u>underline</u> format, with strikeouts indicating deletions, and underlines indicating additions. No “significant new information” is presented in the Final EIR that would require recirculation of the Recirculated Draft EIR pursuant to Section 15088.5(a) of the State CEQA Guidelines. Specifically, the Final EIR does not conclude that (1) a new significant environmental impact would result from the project or from a new mitigation measure proposed for implementation; (2) a substantial increase in the severity of an

environmental impact would result from the project; (3) a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it; or (4) the [Recirculated] Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Executive Summary

Project Synopsis

The San Diego Unified School District (District) is the Lead Agency preparing this environmental impact report (EIR) for the proposed Crawford High School and Mann Middle School Athletic Facility Upgrade and Modernization Project (Project). The purpose of this EIR is to provide the decision-making body at the District and the general public with information concerning the environmental impacts associated with the proposed project. This EIR assesses impacts that would result with project implementation, presents mitigation measures that would avoid or reduce the level of impacts deemed to be significant, and provides alternatives that would reduce or avoid environmental impacts.

The proposed project consists of a collection of proposed improvements at Crawford High School and Mann Middle School, located in the City of San Diego. These proposed improvements can generally be separated into two broad categories:

- Athletic facility improvements for Crawford High School; and
- Modernization improvements for both Crawford High School and Mann Middle School.

The athletic facility improvements are a separate and discrete project from other improvements, which will require specific authorization from the District and separate funding. The proposed athletic facility improvements at Crawford High School would relocate the football field to a new Athletic Stadium, which would be developed at the location of the existing baseball fields, tennis courts, parking area, and three school buildings on the northern half of the school property. A new baseball field would be constructed at the location of the current football field, and additional parking and new tennis courts would be constructed on the Mann Middle School property immediately north of the high school. The existing softball field at the southern end of the Crawford High School campus would also be improved. Design features are proposed by the District to reduce lighting and noise associated with the new Athletic Stadium.

The proposed project also includes modernization improvements for Crawford High School and Mann Middle School, which are both aging facilities. These improvements would provide a safe and contemporary learning environment and include new buildings and major renovations to existing buildings, technology upgrades consistent with the i21 Interactive Classroom Initiative, renovations of various learning environments and support areas, infrastructure repairs and upgrades, and improvements for Americans with Disabilities Act (ADA) compliance. The project would not increase the overall student capacity at the schools. The modernization improvements would be completed over multiple years based on funding, logistics, and other factors, and they are not scheduled to begin until 2015. Specific designs of the individual improvements have not yet been developed by the District. Therefore, this EIR analyzes the modernization improvements at a programmatic level. As specific designs for future modernizations are developed, the District will conduct additional review in compliance with the California Environmental Quality Act (CEQA) to identify if there are additional significant environmental impacts not identified in this EIR and determine what additional documentation is necessary.

The primary objectives of the athletic facility upgrade and modernization project are to renovate and upgrade the high school's athletic facilities, provide safe and modern amenities, and achieve ADA compliance at the high school and middle school.

Summary of Significant Effects

This EIR has been prepared to assess the potentially significant effects on the environment that could result from implementation of the proposed project and the feasible mitigation measures that could be implemented to reduce significant impacts. A summary of the proposed project's potential impacts and recommended mitigation measures is provided in Table ES-1, immediately following this Executive Summary. The table also identifies the level of significance of each impact after implementation of the recommended mitigation measures.

Based on the data and conclusions of the EIR, implementation of the proposed project would result in significant impacts on aesthetics, biological resources, cultural resources, hazards and hazardous materials, and noise at Crawford High School. Significant impacts on biological resources, cultural resources, and hazards and hazardous materials would occur at Mann Middle School. The operational aesthetics and noise impacts associated with the athletic improvements at Crawford High School would be significant and unavoidable. All other identified impacts would be mitigated to a level below significance with adoption of the recommended mitigation measures.

Areas of Controversy Known to the Lead Agency

Section 15123(b)(2) of the State CEQA Guidelines requires that an EIR disclose areas of controversy that have been raised by agencies and the public. The District has received comments identifying sources of controversy from agencies and the public through the Notice of Preparation comment letters and public workshops. A brief listing of the general issues raised is presented below.

- Concerns about traffic, crime, litter, and noise generated by the proposed nighttime use of athletic facilities.
- Concerns about visibility as well as the light and glare impacts associated with the proposed light poles at the stadium.
- Concerns about parking availability during events held at the athletic facilities.
- Inquiries about the use of school facilities by groups other than the District.
- Adequacy of the utilities that would serve the proposed improvements.

The proposed project is located within an urbanized area in the Mid-City: Eastern Area Community, which is within the boundaries of the City of San Diego. The site is zoned Residential-Multiple Unit (RM-1-1), Residential-Multiple and Single Unit (RM-1-1, RM-1-3, RS-1-7), Central Urbanized Planned District (CUPD-CU-2-4), and Mid-City Communities Planned District (MCCPD-MR-3000), and is designated as "Institutional & Public and Semi-Public Facilities" by the City of San Diego's General Plan. A feature of the new Athletic Stadium would be the installation of lighting. The stadium lights exceed height maximums for structures proposed within residential zones. However, the District is not required to comply with the requirements of zoning restrictions such as obtaining a discretionary use permit from the City if a two-thirds vote of the

Board of Education approves the Project. The District, in 2012, by two-thirds vote of the Board, rendered the zoning ordinance inapplicable in accordance with Section 53094 of the California Government Code.

Issues to Be Resolved

As discussed in detail in Section 3.1, "Aesthetics," and Section 3.5, "Noise," significant and unavoidable aesthetics and noise impacts have been identified as a result of the lighting and crowd- and public address (PA) announcement-related noise associated with operation of the proposed Athletic Stadium. The Board must review the proposed project and determine if the proposed project, or one of the alternatives presented in Chapter 7, or some combination of the project components, should be adopted and implemented. Concurrently or prior to approving the proposed project, the Board would be required to certify the Final EIR, determine whether and how to mitigate significant impacts, and adopt associated findings (Statement CEQA Guidelines Section 15091) for all significant impacts within the EIR. Furthermore, a Statement of Overriding Considerations pursuant to State CEQA Guidelines Section 15093 would be required for the significant and unavoidable aesthetics and noise impacts.

Project Alternatives

Per State CEQA Guidelines Section 15126.6, an EIR shall consider a range of alternatives that would meet most of the project objectives and would avoid or reduce any significant impacts of the proposed project. The range of alternatives analyzed also must be feasible and consider not adopting the proposed project by comparing the advantages and disadvantages of implementing the proposed project. As discussed in Chapter 7, "Alternatives," the following alternatives were considered but rejected:

- Alternative Site Location
- No Stadium Lighting Alternative
- Lowered or Retractable Lights Alternative
- Maintain Existing Stadium Seating Capacity Combined with Ticket Maximum Alternative
- Construction Noise Avoidance Alternative

The following alternatives were considered and analyzed in detail in Chapter 7 of this EIR.

No Project/Existing Stadium Alternative

The No Project/Existing Stadium Alternative assumes that the athletic improvements would not be implemented; however, the building modernization improvements under Propositions S and Z would be implemented. The District would not implement the upgrades associated with the Athletic Stadium and all existing athletic facilities would remain as they are under existing conditions. No PA system or increase in the stadium capacity would be implemented under this alternative. The No Project/Existing Stadium Alternative would avoid the significant project impacts associated with aesthetics, biological resources, cultural resources, hazards and hazardous materials, and noise; however, this alternative would not meet the basic objectives of the proposed project. The No Project/Existing Stadium Alternative is not recommended for selection and implementation.

Avoid Underground Storage Tank Alternative

Under this alternative any ground disturbing activities associated with modernization activities at Crawford High School within the vicinity of the underground storage tank (UST) would be avoided. A 1,000-gallon UST is located near the school's parking area at the northeast corner of the gym and a 5,000-gallon diesel UST is located near the southeast corner of building 600, near the southern edge of the site, as shown in Figure 3.4-1 of Section 3.4, "Hazards and Hazardous Materials." Under this alternative, improvements involving ground disturbance to these area would not be allowed. The Avoid Underground Storage Tank Alternative would carry forward the other modernization improvements for the remaining buildings on the project site, including Mann Middle School, and would result in upgrades to the athletic facilities, similar to the proposed project. As a result, impacts on hazards and hazardous materials identified in Section 3.4 would be avoided. Other impacts related to aesthetics, cultural resources, noise, and parking would be similar to the proposed project with implementation of this alternative. Avoidance of this area would likely not preclude the District from meeting the project objectives, including the objective to "[c]onduct major building systems repair and replacement," because almost all of the site modernization improvements anticipated by Propositions S and Z could be implemented. As such, the Avoid Underground Storage Tank Alternative would not preclude the District from fully achieving all of the project objectives.

Avoid Construction during Nesting Season

As discussed in Section 3.2, "Biological Resources," vegetation occurring on site and in the vicinity of the project may provide suitable habitat for migratory birds, especially songbirds and raptors protected under the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code, which prohibit the take or destruction of migratory birds, raptors, their nests, or eggs. Impacts on nesting birds protected by the MBTA and similar provisions of the Fish and Game code could occur if construction work is conducted during the nesting season, defined by the California Department of Fish and Wildlife (CDFW) as February 1 through August 15.

Under this alternative construction would not take place within 50 feet of the existing vegetation during the nesting season. Construction would take place on the remainder of the site during the nesting season. Avoidance of construction within 50 feet of vegetation during the nesting season would avoid the impact identified in Section 3.2 of the EIR.

Table ES-1. Summary of Significant Impacts and Mitigation Measures

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
3.1 Aesthetics		
Crawford High School		
Aes-1: Implementation of the proposed project would result in the contribution of up to 1.46 vertical footcandle and 0.88 horizontal footcandle at the eastern property line and 0.94 vertical footcandle at the western property line, which are all above the 0.8-footcandle threshold. Light trespass from the six proposed stadium lights would exceed 0.8-footcandle at 11 residences. The potential for the project to adversely affect a substantial number of people is very low; however, the District has determined that the lights could have a significant impact due to light trespass.	~~No feasible measures were identified.~~ **Aes-MM-1:** The District shall provide and install, upon request of the homeowner, light blocking blinds (or shades) in the bedrooms of the 11 homes identified in the EIR that 1) have bedroom windows with a direct or indirect line of sight to the football field and/or associated lighting elements and 2) that are calculated by the lighting analysis to be impacted by the Project-related lighting levels by more than 0.79 footcandles. The light blocking blinds or shades shall be certified by the manufacturer to block at least 90% of incoming light. District shall notify the homeowners of the availability of the blinds or shades prior to installation of the stadium field lighting and shall install the blinds (or shades) prior to operating the field lighting.	Significant and Unavoidable

Mann Middle School		
None	N/A	N/A
3.2 Biological Resources		
Crawford High School		
Bio-1a: Construction activities at Crawford High School during the breeding season could affect nesting birds and therefore would be considered significant. Mitigation measures proposed to offset these impacts are presented below. If nesting birds are not detected during the preconstruction survey, project impacts would not be considered significant, and no mitigation would be necessary.	**Bio-MM-1:** If impacts on vegetation are proposed to occur during the breeding season (February 1 through August 15), a preconstruction survey must be conducted to determine if any protected birds are nesting within or immediately adjacent (out to 50 feet) to any vegetation within the impact areas. The survey shall include all vegetation and ground area within an approximately 50-foot area surrounding the proposed construction footprint, including adjacent vegetation that may be situated outside of the site boundary. The preconstruction nesting bird survey shall be conducted by a qualified biologist to identify nests or nesting activity no more than 7 days prior to commencing project activities. An additional inspection shall be conducted immediately prior to grading, demolition, and/or vegetation clearing. If an active nest of a native bird species is found, a 50-foot no-work buffer zone shall be placed around the nest until the adults are no longer using it or the young have fledged. Given the existing conditions on the site and in the adjacent areas, it is anticipated that the 50-foot buffer will suffice because the project area is considered urban and surrounded by	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	development. The final buffer width may, however, vary depending on the nesting species and shall be determined by a qualified biologist at the time of discovery. The extent of the buffer will also vary based on site conditions and type of work to be conducted, but will not likely include the need for sound walls that are more typically associated with federally listed species, which have no potential to occur in the study area. Should construction continue into the following year's nesting season, additional preconstruction surveys would be necessary.	
Mann Middle School		
Bio-1b: Construction activities at Mann Middle School during the breeding season could affect nesting birds and therefore would be considered significant. Mitigation measures proposed to offset these impacts are presented below. If nesting birds are not detected during the preconstruction survey, project impacts would not be considered significant, and no mitigation would be necessary.	**Bio-MM-1:** If impacts on vegetation are proposed to occur during the breeding season (February 1 through August 15), a preconstruction survey must be conducted to determine if any protected birds are nesting within or immediately adjacent (out to 50 feet) to any vegetation within the impact areas. The survey shall include all vegetation and ground area within an approximately 50-foot area surrounding the proposed construction footprint, including adjacent vegetation that may be situated outside of the site boundary. The preconstruction nesting bird survey shall be conducted by a qualified biologist to identify nests or nesting activity no more than 7 days prior to commencing project activities. An additional inspection shall be conducted immediately prior to grading, demolition, and/or vegetation clearing. If an active nest of a native bird species is found, a 50-foot no-work buffer zone shall be placed around the nest	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	until the adults are no longer using it or the young have fledged. Given the existing conditions on the site and in the adjacent areas, it is anticipated that the 50-foot buffer will suffice because the project area is considered urban and surrounded by development. The final buffer width may, however, vary depending on the nesting species and shall be determined by a qualified biologist at the time of discovery. The extent of the buffer will also vary based on site conditions and type of work to be conducted, but will not likely include the need for sound walls that are more typically associated with federally listed species, which have no potential to occur in the study area. Should construction continue into the following year's nesting season, additional preconstruction surveys would be necessary.	
3.3 Cultural Resources		
Crawford High School		
CR-1a: The project at Crawford High School could result in direct or indirect significant impacts on a unique paleontological resource or site. Impacts on paleontological resources could occur from subsurface grading that disturbs underlying Eocene or Pleistocene/Pliocene age deposits, which could contain paleontological resources. Additionally, construction and associated grading could occur within formations known to contain paleontological resources. Impacts on paleontological resources associated with construction would be significant.	**CR-MM-1:** A Qualified Paleontologist shall prepare a *Paleontological Assessment Report* that includes record searches and reviews of the existing literature for the project area in order to determine the likelihood of fossils being impacted. If the report identifies impacts on highly sensitive paleontological deposits that cannot be avoided, the following additional measures shall be implemented to recover remains before they are lost or destroyed. • If highly sensitive fossil-bearing deposits are likely to be impacted and the proposed construction methodology would allow for the	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	recovery of fossils, then the following measures would be incorporated into the project Mitigation and Monitoring Reporting Program (MMRP). ○ If mitigation is necessary, then a Qualified Paleontologist shall attend preconstruction meetings to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A Qualified Paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the County for at least 1 year. ○ A Paleontological Monitor shall be on site on a full-time basis during the original cutting of previously undisturbed deposits of high sensitivity formations to inspect exposures for contained fossils. The Paleontological Monitor shall work under the direction of the Qualified Paleontologist. A Paleontological Monitor is defined as an individual who has experience in the collection and salvage of fossil materials. ○ If discovered, the Qualified Paleontologist (or Paleontological Monitor) shall recover fossils. In most cases, this fossil salvage can be completed in a short period of time; however, some fossil specimens, such as a complete large mammal skeleton, may	

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	require an extended salvage period. In these instances the Qualified Paleontologist (or Paleontological Monitor) would be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for recovering small fossil remains, such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on site. ○ Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and catalogued. ○ Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) in a scientific institution with permanent paleontological collections, such as the San Diego Natural History Museum. Donation of the fossils shall be accompanied by financial support for initial specimen storage. • A final data recovery report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.	
CR-2a: The project at Crawford High School could result in a significant impact on human remains, including those interred outside of formal cemeteries. Construction and associated grading could occur within sediments where human remains might unexpectedly occur. Impacts on human remains associated with construction	**CR-MM-2:** The discovery of human remains demands that certain laws and protocols be followed before proceeding with any action that might disturb the remains further. If human remains are discovered, then PRC Section 5097.98 and State and Heath Code Section 7050.5 shall be followed as specified below:	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
would be significant.	• The Archaeological Principal Investigator (P.I.) shall first notify the project's Resident Engineer (R.E.), who shall then notify the appropriate District staff. • The Lead Archaeologist shall then notify the Medical Examiner (M.E.), after consultation with the R.E., either in person or via telephone. • Work shall be immediately diverted away from the discovery. • The P.I. and M.E. shall decide if a field examination is necessary. • If the remains are determined to be Native American, the M.E. shall contact the California NAHC. By law, only the M.E. can make this call. • The NAHC shall contact the P.I. within 24 hours after notification by the M.E. The NAHC shall also notify the person or persons determined to be the MLDs. • The P.I. and MLD shall consult and coordinate on the proper and respectful treatment of the remains. In most instances, the disposition of the human remains shall be determined by the MLD and P.I. • If the human remains are not Native American, then the P.I. shall contact the M.E. and discuss the historical context of the find, whereupon the M.E. shall decide the appropriate course of action in accordance with PRC Section 5097.98.	

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
Mann Middle School		

CR-1b: The project at Mann Middle School could result in direct or indirect significant impacts on a unique paleontological resource or site. Impacts on paleontological resources could occur from subsurface grading that disturbs underlying Eocene or Pleistocene/Pliocene age deposits, which could contain paleontological resources. Additionally, construction and associated grading could occur within formations known to contain paleontological resources. Impacts on paleontological resources associated with construction would be significant.	**CR-MM-1:** A Qualified Paleontologist shall prepare a *Paleontological Assessment Report* that includes record searches and reviews of the existing literature for the project area in order to determine the likelihood of fossils being impacted. If the report identifies impacts on highly sensitive paleontological deposits that cannot be avoided, the following additional measures shall be implemented to recover remains before they are lost or destroyed.
	• If highly sensitive fossil-bearing deposits are likely to be impacted and the proposed construction methodology would allow for the recovery of fossils, then the following measures would be incorporated into the project Mitigation and Monitoring Reporting Program (MMRP).
	  ○ If mitigation is necessary, then a Qualified Paleontologist shall attend preconstruction meetings to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A Qualified Paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the County for at least 1 year.
	  ○ A Paleontological Monitor shall be on site on a full-time basis during the original cutting of previously undisturbed deposits of high
		Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	sensitivity formations to inspect exposures for contained fossils. The Paleontological Monitor shall work under the direction of the Qualified Paleontologist. A Paleontological Monitor is defined as an individual who has experience in the collection and salvage of fossil materials. ○ If discovered, the Qualified Paleontologist (or Paleontological Monitor) shall recover fossils. In most cases, this fossil salvage can be completed in a short period of time; however, some fossil specimens, such as a complete large mammal skeleton, may require an extended salvage period. In these instances the Qualified Paleontologist (or Paleontological Monitor) would be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for recovering small fossil remains, such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on site. ○ Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and catalogued. ○ Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) in a scientific institution with permanent paleontological collections, such as the San Diego Natural History Museum. Donation of the fossils shall be accompanied by financial support for initial specimen storage. • A final data recovery report shall be completed that outlines the results of the mitigation	

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.	
CR-2b: The project at Mann Middle School could result in a significant impact on human remains, including those interred outside of formal cemeteries. Construction and associated grading could occur within sediments where human remains might unexpectedly occur. Impacts on human remains associated with construction would be significant.	**CR-MM-2:** The discovery of human remains demands that certain laws and protocols be followed before proceeding with any action that might disturb the remains further. If human remains are discovered, then PRC Section 5097.98 and State and Heath Code Section 7050.5 shall be followed as specified below: • The Archaeological Principal Investigator (P.I.) shall first notify the project's Resident Engineer (R.E.), who shall then notify the appropriate District staff. • The Lead Archaeologist shall then notify the Medical Examiner (M.E.), after consultation with the R.E., either in person or via telephone. • Work shall be immediately diverted away from the discovery. • The P.I. and M.E. shall decide if a field examination is necessary. • If the remains are determined to be Native American, the M.E. shall contact the California NAHC. By law, only the M.E. can make this call. • The NAHC shall contact the P.I. within 24 hours after notification by the M.E. The NAHC shall also notify the person or persons determined to be the MLDs. • The P.I. and MLD shall consult and coordinate on the proper and respectful treatment of the remains. In most instances, the disposition of the	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	human remains shall be determined by the MLD and P.I. • If the human remains are not Native American, then the P.I. shall contact the M.E. and discuss the historical context of the find, whereupon the M.E. shall decide the appropriate course of action in accordance with PRC Section 5097.98.	
3.4 Hazards and Hazardous Materials		
Crawford High School		
Haz-1: Project activities at Crawford High School could result in direct or indirect significant impacts related to upset and accident conditions involving the release of hazardous materials into the environment during construction involving the disturbance of subsurface materials within proximity of the 5,000 or 8,967 gallon USTs or undocumented fill.	**Haz-MM-1:** Prior to the issuance of construction permits at Crawford High School, a Master Soil Management Plan shall be prepared to establish protocol for encountering hazardous materials during construction, including two USTs and/or undocumented fill. Generally, the procedures that could be implemented to minimize hazards during construction include the following: • Periodic site inspections. • Notification for disturbance of subsurface materials. • Segregation of excavated materials that are contaminated, potentially contaminated, or clean soil/materials per Environmental Professional guidance. • Determination of soils suitable for possible on- or offsite reuse. • Stockpile management (includes implementation of BMPs and odor/vapor control measures). • Waste characterization (involves stockpile	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	sampling). • Management of contaminated soil or waste transport and disposal. • Documentation of contaminated soils or wastes if encountered.	
Haz-2a: Construction activities at Crawford High School could result in direct or indirect significant impacts related to upset and accident conditions involving the release of lead-based paint into the environment during demolition of the administration building, and buildings 100 and 200.	**Haz-MM-2:** Prior to the issuance of construction permits for modernization improvements, a Site-Specific Health and Safety Plan (HASP) shall be prepared in accordance with the requirements of the Master Community Health and Safety Plan (CHSP) to minimize community exposure to hazards (both on- and off site) and to foster community awareness of potentially hazardous materials. The HASP shall be prepared in accordance with federal and state Occupational Safety and Health (OSHA) Hazardous Wastes Operations and Emergency Response (HAZWOPER) Standards; Code of Federal Regulations, Title 29, Section 1910.120; and California Code of Regulations, Title 8, Section 5192. The CHSP and site-specific health and safety plan will be applied during any project construction activities that involve disturbance of lead-based paint. Generally, the procedures that could be implemented to minimize hazards during construction include the following: • Evaluation of potential public exposure to hazards. • Action planning to reduce airborne concentrations if found. • Documentation of daily instrument readings. • Implementation of administrative and engineering control methods (e.g., reduce public	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	access; prevent or minimize fugitive vapors, odors, and dust; and reduce noise and other physical hazards). • Implementation of site security. • Daily backfilling (when feasible) or fencing off of open excavations. • Use of metal, water-tight roll-off bins, and multiple liners for temporary storage or stockpiled materials. • Onsite vehicle traffic backing. • Implementation of BMPs pertaining to hazardous materials. • Emergency planning in case of accidental or unauthorized release. • Providing public notice and Proposition 65 Warning required under Section 25249.6 of the State of California Health and Safety Code.	
Haz-3a: Construction activities at Crawford High School could result in direct or indirect significant impacts related to emitting or handling hazardous materials near a school involving disturbance of lead-based paint materials at the administration building or buildings 100 and/or 200.	Implement Haz-MM-1 and Haz-MM-2.	Less than Significant
Haz-4: Crawford High School is located on a list of hazardous materials sites that could create a significant hazard to the public or the environment.	Implement Haz-MM-1 and Haz-MM-2.	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
Mann Middle School		
Haz-2b: Construction activities at Mann Middle School could result in direct or indirect significant impacts related to upset and accident conditions involving the release of lead-based paint into the environment during the demolition and reconfiguration of buildings 100 and 200.	Implement Haz-MM-1 and Haz-MM-2.	Less than Significant
Haz-3b: Construction activities at Mann Middle School could result in direct or indirect significant impacts related to emitting or handling hazardous materials near a school involving disturbance of lead-based paint materials at buildings 100 and 200.	Implement Haz-MM-1 and Haz-MM-2.	Less than Significant
3.5 Noise		
Crawford High School		
NS-1a: Generate construction noise in excess of a City of San Diego noise limit or create a substantial temporary increase in ambient noise levels in the project vicinity during construction. During the construction of the proposed Athletic Stadium, tennis courts, and baseball/softball complex, the estimated construction noise level would increase the noise levels at residential areas R1, R2, R3, and R4, and at classrooms surrounding the construction sites over the City's noise limit of 75 dBA Leq. Therefore, when construction activities occur near the residential areas and classrooms, the construction noise impact would be significant.	**NS-MM-1:** Implement construction site noise control measures. The District shall require all contractors to adhere to the following noise abatement measures. • An onsite construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to the District shall be established prior to construction commencement that shall allow for resolution of noise problems through coordination directly between the District and the City that cannot be immediately solved by the site supervisor. The District shall be responsible for ensuring implementation. • Contractor shall comply with manufacturers'	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
	muffler requirements on all construction equipment engines. • Contractor shall turn off construction equipment when not in use, where applicable. • Contractor shall locate stationary equipment as far as practical from receiving properties. • Contractor shall use temporary sound barriers or sound curtains[1] around loud stationary equipment when the construction activity would generate noise in excess of 75 dBA over any 1-hour period at impacted residences and classrooms if the other noise reduction methods are not effective or when appropriate to resolve a noise complaint. • Contractor shall provide advance written notification of construction activities to residences around the construction site. Notification will include a brief overview of the proposed construction activity and its purpose and schedule. It also will include the name and contact information of the project manager or representative responsible for resolving any noise concerns.	
NS-2: Generate noise from football/soccer games in excess of City of San Diego noise limit. The estimated noise levels are greater than the existing ambient noise level (48–56 dBA Leq) and would exceed the City's noise limits (50 dBA Leq between 7 a.m. and 7 p.m., and 45 dBA between 7 p.m. and 10 p.m. for single-family residences; 55	**NS-MM-2:** Implement noise-reduction design features as part of the Athletic Stadium design. The District shall ensure that noise-reduction design features are implemented to the extent feasible to reduce the potential noise impacts during the football games and other events. The District shall retain a qualified acoustical consultant to review the	Significant and Unavoidable

[1] Sound curtains are modular flexible noise reduction curtains that are typically made of vinyl coated polyester with padded fiberglass absorbers. Sound curtains combine both noise blocking and noise absorbing features.

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
dBA Leq between 7 a.m. and 7 p.m., and 50 dBA between 7 p.m. and 10 p.m. for multi-family residences). Therefore, operation of the new Athletic Stadium would result in significant noise impacts at nearby residential areas R1, R2, R4, and R6.	design of the proposed PA system and any sound attenuation measures to be implemented to reduce noise impacts to nearby residences. Measures that can be used to reduce noise include, but are not limited to, the following: • Design the PA system to provide adequate speech intelligibility to the seating areas while maintaining minimal sound transmission to adjacent residential areas. This can be accomplished by using a distributed speaker system that utilizes a large number of small speakers placed throughout the seating area as opposed to several large speakers mounted high on poles. The speakers should be highly directional to focus sound energy on the seating area. • Add shielding materials along the back of the bleachers to block the line of sight between the crowd and adjacent residences.	
Mann Middle School		
NS-1b: Generate construction noise in excess of City of San Diego noise limit or create a substantial temporary increase in ambient noise levels in the project vicinity during construction. During the construction of the proposed new classroom building, parking lot, basketball courts, and landscaping, the estimated construction noise level would increase the noise levels at residential area R6 and at classrooms surrounding the construction sites over the noise limit of 75 dBA Leq. Therefore, when the construction activities occur near the residential area and classrooms, the construction noise impact would be significant.	Implement NS-MM-1.	Less than Significant

Impact(s)	Recommended Mitigation Measure(s)	Significance of Impact(s) After Mitigation
NS-3: Result in sound levels at the new classroom building in excess of the CCR interior noise limit. The classrooms facing 54th Street could experience interior noise levels exceeding the noise standards of 45 dBA CNEL. This noise impact at the building is therefore potentially significant.	**NS-MM-3:** Conduct site-specific building acoustical analysis and implement noise control treatments where required. • The District shall retain a qualified acoustical consultant to review final site plans, building elevations, and floor plans prior to construction to calculate expected interior noise levels as required by state noise regulations. Project-specific acoustical analyses are required by the California Building Code to confirm that the design results in interior noise levels reduced to 45 dBA CNEL or lower. The specific determination of what noise insulation treatments are necessary shall be completed on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the District along with the building plans, and shall be approved prior to issuance of a building permit. • Special building techniques (e.g., sound-rated windows and building façade treatments) shall be implemented as recommended by the qualified acoustical consultant to maintain interior noise levels at or below acceptable levels. These treatments may include, but are not limited to, sound-rated windows and doors, sound-rated wall constructions, acoustical caulking, and protected ventilation openings. Preliminary calculations indicate that classrooms nearest to and facing 54th Street with direct line of sight to the roadway would require sound-rated windows and doors to assure that the interior average noise level guidelines are met.	Less than Significant

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Chapter 1
Introduction

The San Diego Unified School District (District) is the Lead Agency in preparing this Final Environmental Impact Report (EIR) for the proposed Crawford High School and Mann Middle School Athletic Facility Upgrade and Modernization Project (project). The purpose of this document is to provide the decision-making body at the District and the general public with information concerning the environmental impacts associated with the proposed project. The EIR assesses impacts that would result from the proposed project, presents mitigation measures that would avoid or reduce the level of impacts deemed to be significant, and provides alternatives that would reduce or avoid environmental impacts.

The proposed project consists of a collection of proposed improvements at Crawford High School and Mann Middle School, in the City of San Diego (City). These proposed improvements can generally be separated into two broad categories:

- Athletic facility improvements for Crawford High School; and
- Modernization improvements for both Crawford High School and Mann Middle School.

The athletic facility improvements would be a separate and discrete project from other improvements, which would require specific authorization from the District and separate funding. The proposed athletic facility improvements at Crawford High School would relocate the football field to a new Athletic Stadium, which would be developed at the location of the existing baseball fields, tennis courts, parking area, and three school buildings on the northern half of the school property. A new baseball field would be constructed at the location of the current football field, and additional parking and new tennis courts would be constructed on the Mann Middle School property immediately north of the high school. The existing softball field at the southern end of the Crawford High School campus would also be improved. Design features are proposed by the District to reduce lighting and noise associated with the new Athletic Stadium.

The proposed project also includes modernization improvements for Crawford High School and Mann Middle School, which are both aging facilities. These improvements would provide a safe and contemporary learning environment and include new buildings and major renovations to existing buildings, technology upgrades consistent with the i21 Interactive Classroom Initiative, renovations of various learning environments and support areas, infrastructure repairs and upgrades, and improvements for Americans with Disabilities Act (ADA) compliance. The project would not increase the overall student capacity at the schools. The modernization improvements would be completed over multiple years based on funding, logistics, and other factors, and they are not scheduled to begin until 2015. Specific designs of the individual improvements have not yet been developed by the District. Therefore, this EIR analyzes the modernization improvements at a programmatic level. As specific designs for future modernizations are developed, the District will conduct additional review in compliance with the California Environmental Quality Act (CEQA) to identify if there are additional significant environmental impacts not identified in this EIR and determine what additional documentation is necessary.

A more detailed description of the improvements included in the project and covered by this EIR is provided in Chapter 2, “Environmental Setting and Project Description.”

1.1 Background

1.1.1 San Diego Unified School District

The District serves more than 132,000 students in preschool through grade 12 and is the second largest school district in California. The student population is extremely diverse, representing more than 15 ethnic groups and more than 60 languages and dialects. Since its founding on July 1, 1854, the District has grown from a small, rented school building with one teacher to its current size—more than 225 educational facilities with 15,924 full-time equivalent employees. More than 6,000 teachers are in classrooms at the district's various educational facilities, which include 107 traditional elementary schools, 11 K–8 schools, 24 traditional middle schools, 28 high schools, 45 charter schools, and 13 atypical/alternative schools.

The District is proud to call itself one of the top large urban school districts in the United States. Its students have earned top scores on state and national tests, and its staff have also earned top scores for its leadership in areas such as technology, curriculum, neighborhood and specialty schools, career-technical education, and food services. The District's graduates include some of the nation's top scientists, writers, and leaders, as well as Hall of Fame sports stars. The mission of the District is as follows:

> All San Diego students will graduate with the skills, motivation, curiosity, and resilience to succeed in their choice of college and career in order to lead and participate in the society of tomorrow.

Fulfillment of this mission is currently charted through the District's Vision 2020 plan. This plan is a focused, long-term roadmap for student success, culminating in the graduation of the Class of 2020. The overarching goal of the plan is to ensure a quality educational experience for present and future students, and several of its goals emphasize the value of safe and modern school facilities in student growth and achievement. Vision 2020 sees San Diego's schools as true neighborhood learning centers, where student learning extends beyond the school site and includes multiple benefits to the surrounding neighborhoods.

1.1.2 Long-Range Facilities Master Plan and Proposition S

In 2008, the District updated its Long-Range Facility Master Plan and developed the Proposition S bond proposal to fund a portion of it. This plan identifies and prioritizes District-wide needs for renovation and expansion of existing facilities and for new school construction. The Master Plan update was based on a comprehensive assessment of needs and extensive outreach among District stakeholders to share findings from the assessment; discuss costs, funding sources, and priorities; and seek input. Outreach included the following:

- High school cluster meetings (with over 710 participants and more than 1,400 volunteer hours by non-District staff)
- Principal surveys (approximately 170 returned)
- Ad Hoc Task Force on the Bond (approximately 25 board-appointed volunteers; six meetings held)
- District Facilities Task Force (approximately 50 members; four meetings held)

The majority of the District's 200 plus sites were built 20 to 50 years ago, and half of its buildings are more than 45 years old. The Master Plan update concluded that significant facility improvements were necessary to meet current educational needs; support 21st century teaching and learning; and ensure a safe, secure, and healthy environment for students and staff.

On November 4, 2008, nearly 69% of San Diego voters passed the $2.1 billion general obligation bond measure, Proposition S, which included a list of specific projects to repair, renovate, and revitalize neighborhood schools. Proposition S extends the previous voter-approved Proposition MM tax rate ($66.70 per $100,000 assessed value of taxable property) from 2029 to 2044. Proposition S funds must be used for the projects listed in the bond language placed before the voters, and cannot be used for teacher or administrative salaries. For more information on Proposition S, visit http://www.sandi.net/props/.

Undertakings allowed under Proposition S include the following improvements at Crawford High School and Mann Middle School.

Crawford High School

School Improvements to Support Student Health, Safety, and Security

- Replace obsolete fire alarm and emergency communications system
- Renovate food service area, including cafeteria, to increase service efficiency, provide healthier food choices for students, and create multi-use flexible spaces that could be used for study halls, video rooms, etc.
- Install security lighting, as well as increase vandalism and intrusion safeguards, including modifications to fencing and gates, to secure site
- Remove or minimize risks of any potentially hazardous material throughout the facility
- Improve student drop-off and pick-up areas
- Reconfigure pedestrian circulation and layout on site in conjunction with the modified layout of Mann Middle School
- Install air-conditioning in educational spaces

Projects to Improve School Accessibility, Code Compliance Upgrades

- Renovate existing restrooms and locker rooms including faculty facilities
- Renovate gym, including new bleachers, to meet accessibility regulations
- Improve accessibility to all classrooms, labs, restrooms, and other school facilities to comply with accessibility regulations including ADA Titles I & II
- Install three-compartment sink in kitchen
- Replace old stadium bleachers and press box with elevator/lift
- Upgrade fields, including path of travel, for safe use and compliance with accessibility regulations
- New compliant ticket booths
- Repair/replace/remove old portable classrooms

- Renovate/reconfigure stadium restrooms and include concessions to provide compliant accessibility
- Provide accessible weight room/fitness space

Major Building Systems Repair/Replacement

- Repair site sidewalks and hardscape areas, including ramps and stairs as needed
- Repair/upgrade building roofing, interiors, exteriors, finishes, fixtures and windows as needed
- Repair/replace outdated heating and ventilation systems where needed
- Replace aging wiring and upgrade electrical systems as needed
- Repair/replace/upgrade performance spaces

Mann Middle School

School Improvements to Support Student Health, Safety and Security

- Install security lighting, as well as increase vandalism and intrusion safeguards, including modifications to fencing and gates
- Provide site safety communication system
- Install air-conditioning in learning environments
- Renovate food service areas to increase service efficiency, provide healthier food choices and improve eating environment

Projects to Improve School Accessibility, Code Compliance Upgrades

- Improve accessibility to all classrooms, labs, restrooms and other school facilities to comply with accessibility regulations, including ADA Title I and II
- Meet new, stringent health standards by renovating kitchens and food service areas

Major Building Systems Repair/Replacement

- Repair/replace inadequate permanent and portable classrooms and school buildings with permanent cost-effective construction
- Repair/replace/upgrade performance spaces/multipurpose rooms

1.1.3 Proposition Z

On November 6, 2012, San Diego voters approved Proposition Z, a $2.8 billion bond proposition that enables the District to maintain safe and productive learning environments for students during the state's ongoing budget crisis. Undertakings allowed under Proposition Z at Crawford High School and Mann Middle School include the following.

Crawford High School

Building Systems Repair and Replacement

- Significant repair and replacement needs exist, new buildings to replace current facilities

School Improvements to Support Student Learning and Instruction

- Provide up-to-date classroom and instructional technology required for 21st century student learning and teaching
- Upgrade wired and wireless infrastructure and equipment to support technology systems and leverage federal and state matching funds for school technology programs

College, Career and Technical Education Facility Improvements

- Construct college, career and technical education facilities

School Improvements to Support Student Health, Safety and Security

- Provide school site security improvements, including increased lighting, fencing, and vandalism and intrusion safeguards
- Upgrade and expand student food service areas and kitchens
- Replace obsolete fire alarms and update emergency communications systems

Improve School Accessibility and Code Compliance Upgrades

- Improve accessibility for disabled persons and comply with Americans with Disabilities Act (ADA) and Title 24
- Modernize and renovate physical education facilities, playgrounds and fields to comply with Title IX gender equity requirements

Quality Neighborhood Schools

- Remove or replace old and inadequate buildings with new facilities
- Improve physical education, athletic facilities and turf fields
- Construct new visual and performing arts theater

Mann Middle School

Building Systems Repair and Replacement

- Significant repair and replacement needs exist, new buildings to replace current facilities

School Improvements to Support Student Learning and Instruction

- Provide up-to-date classroom and instructional technology required for 21st century student learning and teaching
- Upgrade wired and wireless infrastructure and equipment to support technology systems and leverage federal and state matching funds for school technology programs
- College, Career and Technical Education Facility Improvements
- Construct college, career and technical education facilities

School Improvements to Support Student Health, Safety and Security

- Provide school site security improvements, including increased lighting, fencing, and vandalism and intrusion safeguards
- Upgrade and expand student food service areas and kitchens
- Replace obsolete fire alarms and update emergency communications systems

Improve School Accessibility and Code Compliance Upgrades

- Improve accessibility for disabled persons and comply with Americans with Disabilities Act (ADA) and Title 24

Quality Neighborhood Schools

- Improve visual and performing arts facilities
- Remove or replace old and inadequate buildings with new facilities

1.2 Project Objectives

Crawford High School and Mann Middle School were built in 1958 and 1952, respectively, and the majority of their buildings, structures, and infrastructure are more than 50 years old. Prior to Propositions S and Z being placed on the ballot for consideration, District architects conducted an assessment of the Crawford High School and Mann Middle School facilities, and the District coordinated with school staff and stakeholders to refine the assessment and identify needed improvements to the schools. The review identified the need for renovations and upgrades to the schools' athletic facilities to provide safe and modern amenities and to achieve ADA compliance. These improvements were included in Proposition S. Additional funding was approved for these facilities in accordance with Proposition Z. The improvements identified as a part of Propositions S and Z are a general list of goals for improvements and modernization activities and therefore also contribute to the objectives of the project.

Athletic Facility Upgrade Objectives

- Upgrade athletic facilities and fields, including path of travel, for safe use and compliance with accessibility regulations.
- Upgrade athletic facilities and fields to improve physical education and to bring facilities into conformance with contemporary standards and expectations.
- Renovate gym to meet accessibility regulations.
- Replace the existing fields with new synthetic turf.
- Replace existing track and field with an all-weather track.
- Install a new lighting and public announcement (PA) system, scoreboard, goal posts, and new home and visitor entrance gates for the football field area.
- Construct new restrooms, ticket booths, concession stand, and athletic equipment storage facilities for football field area.
- Install new scoreboards, fencing, and backstops as appropriate at all field areas.

- Construct bleachers at new fields to meet accessibility regulations.
- Replace tennis courts.
- Maintain or increase on-site parking spaces.

Facility Modernization Objectives

- Improve student learning and instruction.
- Improve student health, safety, and security.
- Improve school accessibility and code compliance.
- Conduct major building systems repair and replacement.
- Substantially renovate the existing Crawford High School theater to provide a new visual and performing arts theater.

1.3 Notice of Preparation

This EIR has been prepared in compliance with CEQA (Public Resources Code [PRC], Section 21000, et seq.) and the procedures for implementation of CEQA set forth in the *Guidelines for Implementation of CEQA* (California Code of Regulations [CCR], Section 15000, et seq.; State CEQA Guidelines). The District is the Lead Agency in the preparation of this EIR, as defined by Section 15051 of the State CEQA Guidelines.

Prior to the preparation of this EIR, and during the early stages of the environmental review process for the project, the District prepared a Notice of Preparation (NOP) and submitted it to various public agencies and the public at large for a 30-day review period. In addition, the District held a scoping meeting on March 4, 2013, at Crawford High School for the proposed project. Based on public comment at the scoping meeting as well as written comments, the District extended the NOP review period to April 22, 2013. The NOP described the project, provided notification of EIR preparation, and solicited comments from the public to guide the District's determination of the scope of the EIR and the environmental issues that should be reviewed in the EIR. The District has reviewed all NOP response letters received during the review period and has considered relevant content as the EIR process progressed. A copy of the NOP is included in Appendix A to this EIR.

1.4 Scope of the EIR

The EIR provides a detailed description of the project (Chapter 2) and a summary of all environmental review conducted for the project (Chapters 3 through 8). Prior to the preparation of this EIR, the District prepared a CEQA Initial Study/Environmental Checklist Form (CEQA Checklist) for the project that identified the environmental impacts that would potentially occur as a result of project implementation. The CEQA Checklist, which is included in Appendix A of this EIR, considers environmental issue areas pursuant to the District's *Significance Criteria and General Guidelines for an Environmental Impact Report*. The environmental issue areas identified in the CEQA Checklist as being potentially significant and that must be addressed by this EIR were air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, recreation, transportation/traffic, and mandatory findings of significance.

Additional environmental review was conducted for these issue areas, and the results are presented in Chapters 3, 5, and 6 along with mitigation measures that the District has incorporated into the project to avoid some of the impacts or reduce them to less-than-significant levels. Not all significant impacts identified in the EIR can be mitigated to less-than-significant levels.

1.5 Intended Uses of the Final EIR

The purpose of this document is to inform the District's decision-making body, agencies, and members of the public as to the nature of the project; the ways in which the project would affect the physical environment; and the measures that the District would implement to mitigate for the identified environmental impacts. The EIR will be used by the District's Board of Education (Board) during the decision-making process for the project. The Board must first decide whether to certify the EIR, signifying that the document adequately complies with environmental review procedures required by CEQA, and then must use the descriptions and analysis presented in the document to make an informed decision on approval of the athletic facility upgrades.

The modernization improvements at both Crawford High School and Mann Middle School would be completed over multiple years, depending on funding, logistics, and other factors. They are scheduled to begin in late 2015. Specific designs of the individual improvements have not yet been developed by the District. Therefore, this EIR analyzes the modernization improvements at a programmatic level. As specific designs for future modernizations are developed the District will conduct separate environmental review in compliance with CEQA to identify if there are additional significant environmental impacts not identified in this EIR and determine what additional documentation is necessary.

1.6 Matrix of Project Approvals and Permits

The environmental review process for the project involves responsible agencies that would need to grant approvals or permits in order for the project to be implemented. Table 1-1 lists the permits and other approvals required of the project by agencies other than the District.

Table 1-1. Permits and Agency Approvals

Responsible Agency	Permit/Approval
Office of the Division of State Architect	Compliance
City of San Diego	Public right-of-way permits

Chapter 2

Environmental Setting and Project Description

2.1 Environmental Setting

The proposed project would be implemented on the existing properties of Crawford High School and Mann Middle School. Separate environmental settings are described for each of the schools below. The environmental analysis in Chapter 3 also covers each school site individually.

2.1.1 Regional Setting

Crawford High School and Mann Middle School are located within the City of San Diego, California, in the community of El Cerrito~~s~~. The project's location relative to the greater surrounding region is depicted on Figure 2-1. Regional access is provided by either Interstate 8 (I-8) or State Route 94 (SR-94), both of which travel in an east–west direction throughout San Diego County. Access to the school sites is provided by major roadways, including El Cajon Boulevard and 54th Street. The schools are located adjacent to one another and are separated by Trojan Avenue, which runs in an east–west direction between 54th and 56th streets. The schools are situated in a predominantly residential area of the community.

2.1.2 Location and Description of School Sites

As shown on Figure 2-2, the Crawford High School campus is bordered by Colts Way, Sharron Place, and Trojan Avenue at 4191 Colts Way; and Mann Middle School is located north of Trojan Avenue at the intersection with 54th Street (4345 54th Street).

2.1.2.1 Crawford High School

Crawford High School is located on a 26.9-acre, District-owned site at 4191 Colts Way in the City of San Diego, California. Access to Crawford High School is provided via Trojan Avenue Boulevard, Sharron Place, and Colts Way. Originally opened in 1958, the school was split into four schools in 2004, consisting of the School of Law and Business (LAB), Multimedia and Visual Arts School (MVAS), Invention and Design Educational Academy (IDEA), and the Community Health and Medical Practices School (CHAMPS). Crawford High School is currently a comprehensive, neighborhood school and is no longer split into four schools.

Directly north of the school (and west of the stadium) is Mann Middle School. Other existing and proposed surrounding land uses include single-/multi-family residences to the east; the University Care Center, commercial/retail development, and multi-family residences to the south; and single- and multi-family residences and the Colina Del Sol Recreation Center to the west. Enrollment during the 2010–2011 school year at Crawford High School was 1,298 students. The 2013-2014 enrollment is 1,222 students. According to the District's Long Range Facilities Master Plan, student population is expected to increase by the 2016–2017 school year to approximately 1,434 students (District 2011a).

The Crawford High School campus includes 85 classrooms (70 permanent and 15 portable) and 14 permanent office and administrative buildings comprising a total of approximately 176,555 square feet (District 2011a). Existing recreational facilities include a baseball field and six tennis courts, adjacent and east of the administration building and buildings 100 and 200. An existing stadium (including a football/soccer field and a track) is located adjacent to the high school site, at the southeast corner of Trojan Avenue and 56th Street. There are about 1,000 seats at the existing stadium, including handicap areas; however, attendance has not historically exceeded 350 persons. A second baseball field exists south of the gymnasium, in the southeastern corner of the school site. There are no existing lighting improvements for any of the outdoor recreation areas. An overview of current sports schedules is provided in Table 2-1.

Table 2-1. Crawford High School Athletic Events Schedule

Sport	Hours Played[1]	# of Home Games
Fall (August–December)		
Football	2:15 p.m.–6 p.m.	5[3]
Cross-Country	2:15 p.m.–6 p.m.	5
Winter (January–March)		
Boys Soccer	2:15 p.m.–6 p.m.	5[3]
Girls Soccer	2:15 p.m.–6 p.m.	5
Spring (April–May)		
Football	2:15 p.m.–6 p.m.	0
Track and Field	2:15 p.m.–6 p.m.	5
Boys Lacrosse[2]	2:15 p.m.–6 p.m.	5
Girls Lacrosse[2]	2:15 p.m.–6 p.m.	5
Club (March–June)		

Source: District (2012).
[1] 6 p.m. is a late time for only a few practices.
[2] Beginning Spring.
[3] Playoffs are not included in this number.

A total of 195 parking spaces at Crawford High School are located throughout the site for faculty and visitors (see Figure 2-3). Faculty parking is located at the eastern project boundary, behind the gymnasium, and includes 76 paved asphalt spaces. The faculty parking area is bordered by single- and multi-family residences to the north and east, respectively, and access is provided via a chain-link gate at the end of Spartan Drive, which dead ends into a cul-de-sac before entering the faculty parking lot. Visitor parking (75 spaces) is located in a lot at the front of the school between Sharron Place and the high school's existing tennis courts/baseball field complex. The remaining spaces are located along the southern school property (38 spaces) and just south of the faculty parking (6 spaces). Access to these two areas is provided via chain-link gates at cul-de-sacs at the end of Colts Way and Vale Way/56th Street, respectively.

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Figure 2-1
Vicinity Map
Crawford High School & Mann Middle School Modernization Project

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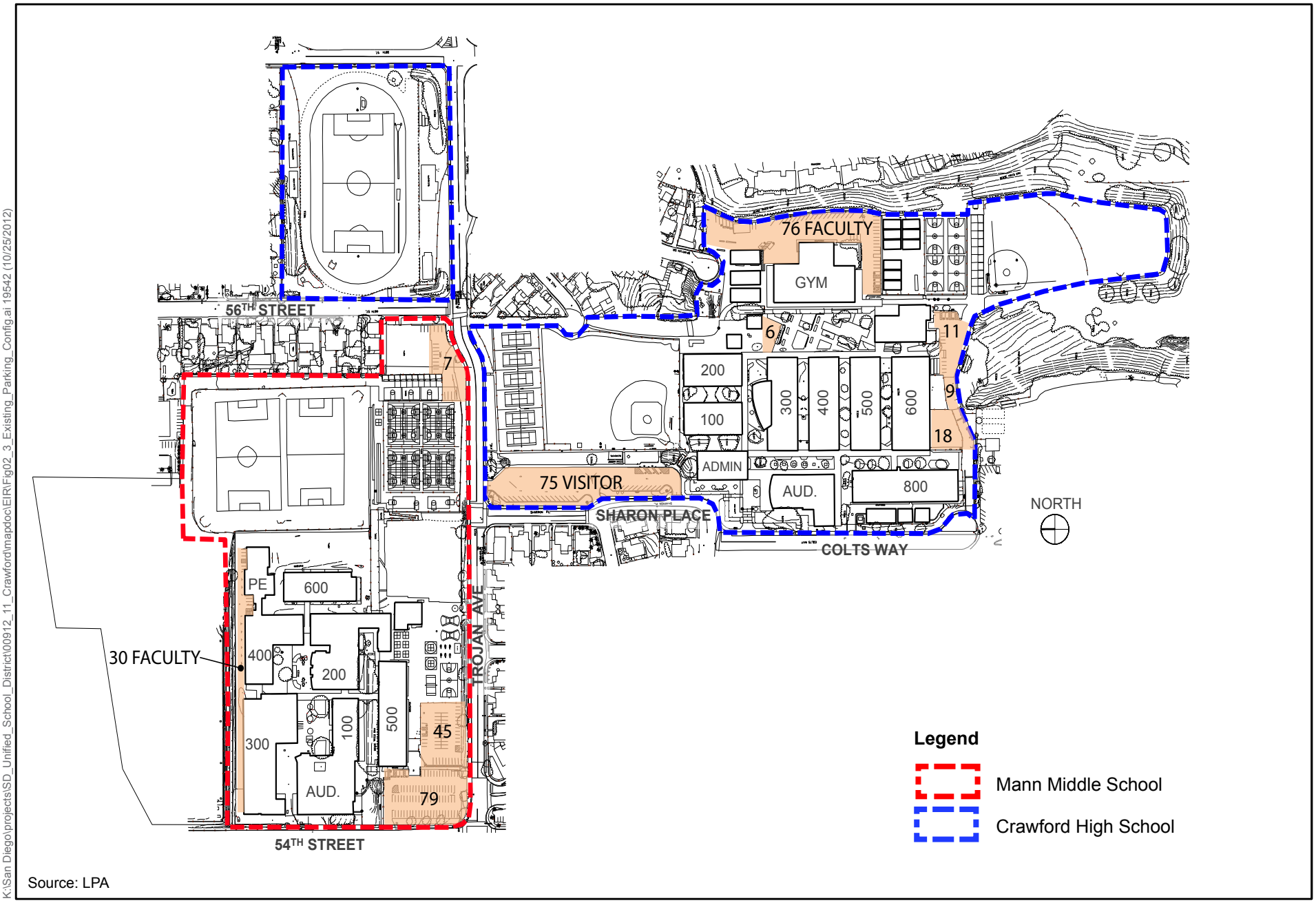
Figure 2-2
Project Location Map
Crawford High School & Mann Middle School Modernization Project



Source: LPA

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Figure 2-3
Existing Parking Configurations
Crawford High School & Mann Middle School Modernization Project

2.1.2.2 Mann Middle School

Mann Middle School is located on a 24.5-acre, District-owned site at 4345 54th Street in the City of San Diego, California. Access to Crawford High School is provided via El Cajon Boulevard, 54th Street, and Trojan Avenue. The school was opened in 1952 and serves grades 6 through 8. Existing and proposed surrounding land uses include commercial/retail development and single- and multi-family residences to the north; single- and multi-family residences and the Crawford High School football field/stadium to the east; Crawford High School and single-family residences to the south; and multi-family residences and commercial/ retail development, including the San Diego County Family Resource Center, to the west. Enrollment during the 2010–2011 school year at the middle school was 827 students (Ed-data 2012). The 2013–2014 enrollment is approximately 844 students. Student population is expected to decrease by the 2016–2017 school year to approximately 781 students (District 2011b).

The middle school campus includes 73 permanent classrooms and 16 permanent office and administrative buildings comprising a total of approximately 179,593 square feet. There is an existing recreational area that includes two multi-purpose fields and four backstops at the northeastern corner of the school site, which does not include any lighting improvements. Other recreational improvements at Mann Middle School include an approximately 80,000-square-foot paved asphalt area in the eastern part of the school site with 10 painted multi-purpose courts (i.e., basketball, volleyball, soccer) with basketball hoops and 10 handball backstops/courts and other miscellaneous recreational activities (i.e., four square, hopscotch, etc.). An approximately 37,000-square-foot paved asphalt area with similar recreational activities (i.e., basketball, hopscotch, four square, etc.) occurs further west, near Building 500 along Trojan Avenue.

Parking areas at Mann Middle School include 161 spaces, most of which occur at the corner of 54th Street and Trojan Avenue (Figure 2-3). Faculty parking includes 30 paved asphalt spaces, and access is provided via a driveway along 54th Street at the school's western boundary. A chain-link fence and gate at the driveway restricts after-hours access onto the campus. A total of 124 spaces are provided at the southwestern corner of the school property within two lots separated by an approximately 6-foot-tall chain-link fence atop a four-foot-tall concrete wall. Access to both lots is achieved from a single-access point along Trojan Avenue. Lastly, there are seven parking spots at the school's southeastern corner. Access to these spaces is provided by a driveway just south of the intersection of Trojan Way and 56th Street, which is also protected by an existing chain-link gate.

2.2 Project Description

The proposed project consists of a collection of proposed improvements at Crawford High School and Mann Middle School. These proposed improvements can generally be separated into two broad categories:

- Athletic facility improvements for Crawford High School; and
- Modernization improvements for both Crawford High School and Mann Middle School.

As discussed further below, it is currently planned that the athletic facility improvements will occur first and the modernization improvements after. While it is planned that improvements at the two schools would be coordinated and generally on a similar schedule it is possible that they may need to occur separately. Therefore, the proposed improvements for the schools are discussed separately below for each school site.

These proposed improvements are a culmination of a series of community based task force meetings. The result is a road map for the near and long- term growth and redevelopment for the school campuses. An overview of all major physical improvements proposed for both schools is shown in Figure 2-4.

2.2.1 Crawford High School

An overview of all major physical improvements proposed for Crawford High School is provided in Figure 2-4. Figure 2-5 shows those improvements that constitute the proposed football stadium project for the school, which is discussed further in the following section.

2.2.1.1 Athletic Facility Improvements

The proposed athletic facility improvements at Crawford High School would involve the existing facilities on the northern half of the school property which consists of the existing baseball fields and six tennis courts, and the existing football/soccer field and track at the northeastern corner of 56th Street and Trojan Avenue; and the existing softball field at the southern end of the property. It would also affect the administration building, building 100, building 200, and the 75 visitor parking spaces along Sharron Place on the Crawford High School property; and the existing hard courts and adjacent areas on the Mann Middle School property immediately north of the high school would also be affected. The different components of these improvements are described below.

Athletic Stadium

After substantial coordination with the community, it was determined that the football field should be relocated to be contiguous with the high school campus. Therefore, the proposed project includes the relocation of the existing football/soccer field and track at the northeastern corner of 56th Street and Trojan Avenue to a new Athletic Stadium at the southeastern corner of Sharon Place and Trojan Avenue. The relocation onto the main campus would displace the existing baseball field and 6 tennis courts that are currently in that location. These facilities would be relocated and replaced as discussed further below. Accommodating the Athletic Stadium would require demolition of the administration building, building 100, and building 200. These facilities are not proposed for immediate replacement as there is sufficient space and capacity within the other existing facilities on the high school for the school's current enrollment. The proposed project does require some modernization to building 800, the first floor of which would be used to accommodate the school's administration functions after the project, and the modernization improvements discussed further below include some new classrooms. Lastly, as discussed further below, the project would displace the 75 existing visitor parking spaces along Sharron Place.

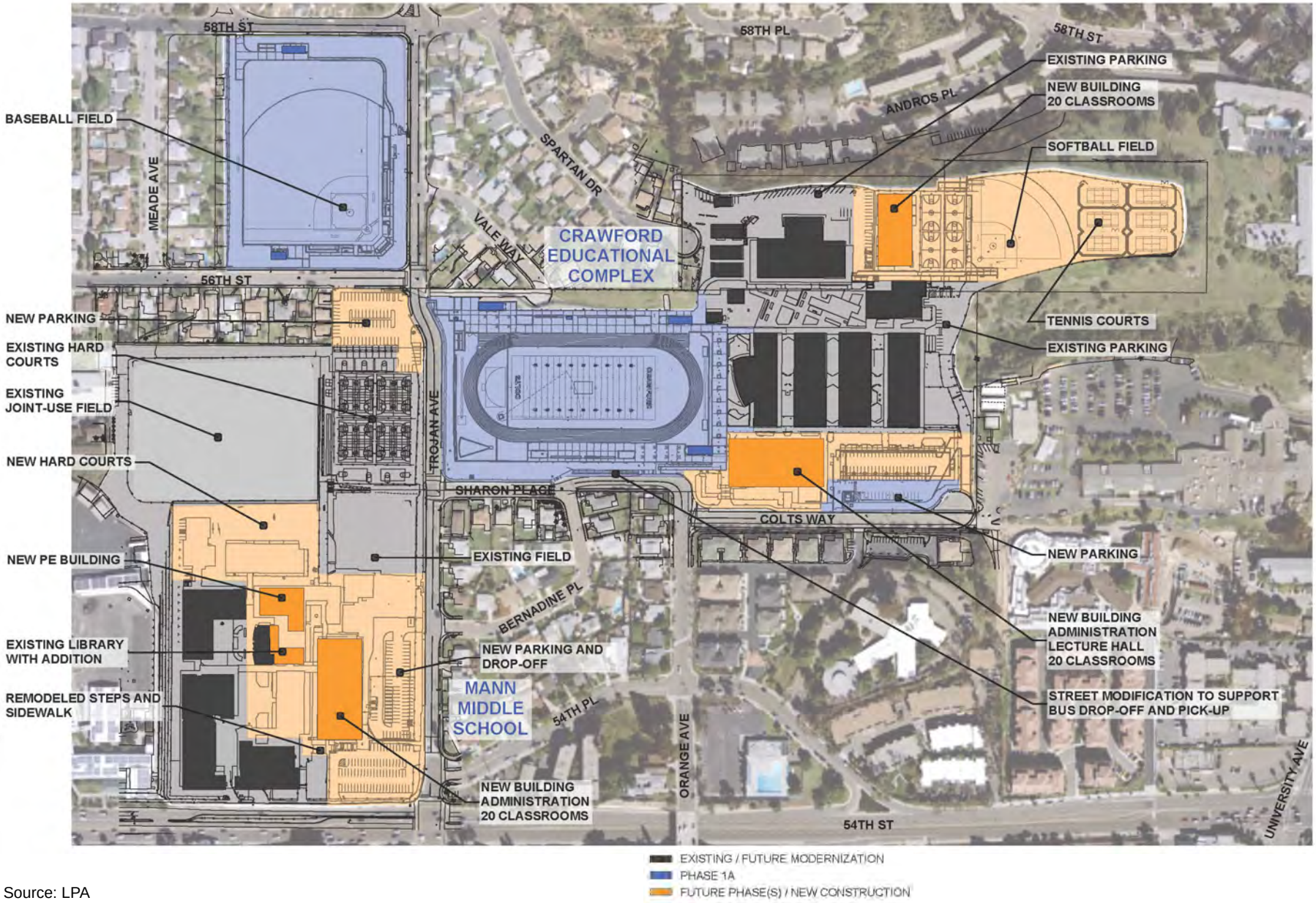

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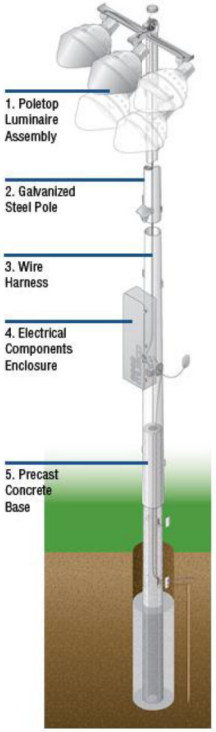
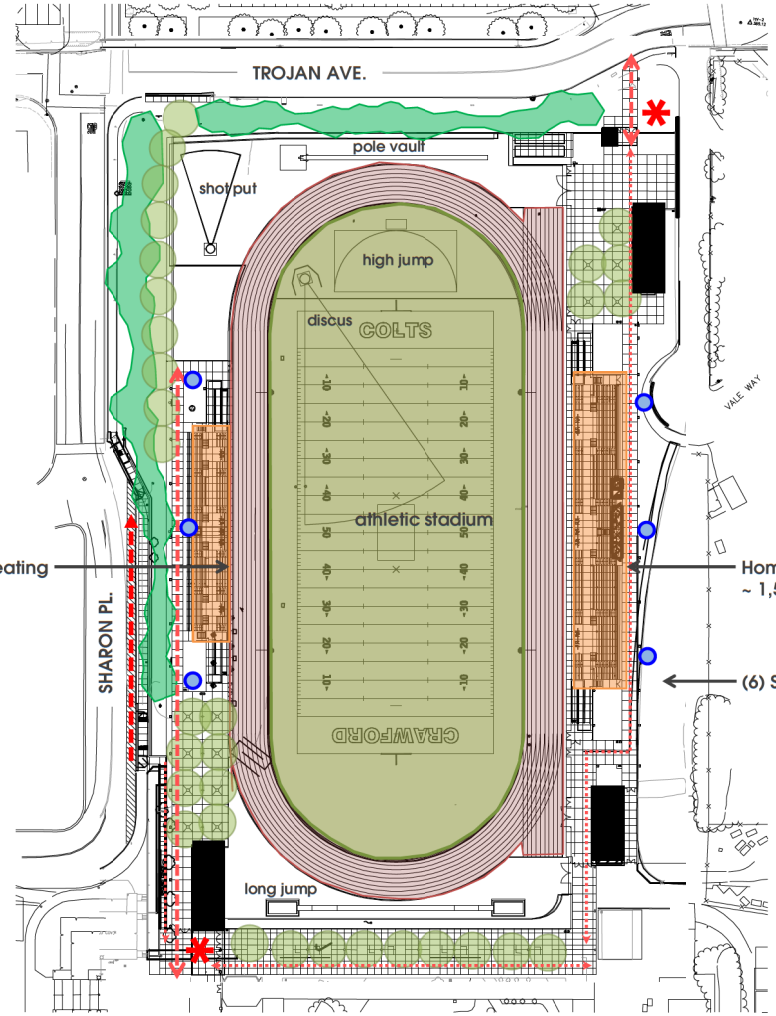
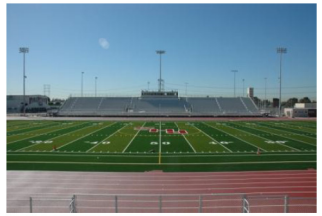
Figure 2-4
Overview of All School Improvements
Crawford High School & Mann Middle School Modernization Project

LIGHT HOODS



LIGHT POLES





Source: LPA

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Figure 2-5
Proposed Football Stadium (Crawford High School)
Crawford High School & Mann Middle School Modernization Project

Compared to the existing facilities, which include 30 year old bleachers and a decomposed granite track, the new Athletic Stadium would significantly improve safety, ADA accessibility, and the overall quality of the facilities for the students and spectators. As shown on Figure 2-5, the Athletic Stadium would include:

- A new artificial turf field
- An all-weather synthetic track
- 1,500 home and 750 visitor bleacher seats with ADA accessibility
- Stadium lighting (six-pole) configuration
- A new press box with an elevator for ADA accessibility
- A new Public Address (PA) announcement system, scoreboard, and goal posts
- New athletic equipment storage facilities, bathrooms, snack bar and ticket booths
- New home and visitor entrance gates
- General site improvements (i.e., grading, drainage, irrigation systems, sidewalks, gates, fences, and landscaping)

Athletic Stadium Lighting and PA

The new Athletic Stadium lighting would consist of six 90-foot-tall stadium light poles, with three poles on either side of the complex behind the bleacher seats. To minimize light trespass on the surrounding residential community, the proposed lighting system has been specifically designed with cutoff devices, highly efficient reflectors, and 14-inch visors that would capture and redirect primary light onto the field and reduce spill light off the field. Additionally, the high mounting height of the luminaires would allow the lamps to be installed with a narrow beam angle to specifically direct light downward, onto the field of play and away from adjacent residential properties.

A new PA system would also be included in the Athletic Stadium. The PA would be used mainly for football games but may also be used for track and field meets and other events. Design features proposed to be incorporated in the PA system are listed in Section 2.3.2.

Athletic Stadium Usage

School Use of Athletic Stadium

The new Athletic Stadium is anticipated to accommodate uses and events typical of other contemporary high school athletic fields. These uses could include high school practices and competitions (games) and special high school events such as graduation, playoff games, and pep rallies. Compared to the existing high school field, the use of the Athletic Stadium is expected to be expanded. This is expected to occur due to increased demand (resulting from an expanding athletic program and because the new field may be preferred over other older fields) and because the lights would accommodate usage after sunset.

Approving and scheduling uses of the new Athletic Stadium would be under the ultimate authority of the Board of Education (Board). However, the Principal and Athletic Director would have responsibility for coordinating and scheduling day-to-day usage. The schedule for using the Athletic Stadium would have the potential to change every year as athletic programs expand and change, and

as different needs and events are identified. Therefore, it is difficult to forecast what the likely usage of the Athletic Stadium will be. The Athletic Stadium is proposed to be available for use any day of the week up until a mandatory cutoff time for the lights of 11 p.m. The typical uses associated with an athletic stadium are provided in Table 2-2. Not all of these uses currently occur at the school but they are considered likely to occur with the implementation of the Athletic Stadium.

As shown in Table 2-2, various games, practices, and events are anticipated that would require the use of the stadium lights. Table 2-2 provides the typical ending time for those activities. The school would minimize the operation of the lights when they are not in use. Typically, once an activity that has required the lights has ended, the lights would be dimmed. This would allow for sufficient lighting for attendees to safely depart and for clean-up/breakdown. It is anticipated that breakdown would take no longer than an hour at which time the lights would be turned off. For example, for a football game that ends at 9 p.m., the lights would be dimmed at 9 p.m. and the lights would typically be turned off by 10 p.m. As mentioned above, a mandatory cutoff of 11 p.m. would be established to ensure that for any event, the lights are off by 11 p.m.

Third-Party Use of Athletic Stadium

There are currently no plans or proposals for third-party use of the proposed stadium; however, it is possible that third-party uses may occur in the future in accordance with District policy. In July 2014, the District revised Administrative Procedure 9229, which regulates the use of District athletic fields and lighted stadiums under the Civic Center Act. Under the Civic Center Act, organizations, clubs, and associations formed for recreational, educational, political, economic, artistic, or moral purposes are permitted by state law and district policy to use school buildings and grounds. “Civic Center use” must not interfere with instructional programs or other public school purposes. The District shall consider athletic fields to be reserved for exclusive use of schools Monday through Friday, including evenings.

The Board of Education may adopt site-specific field use policies that take into consideration the specific needs and constraints of the campus, including the specific needs and practices of the school, the adequacy and condition of the facility, the physical location of the site, the needs of the community, the impact of the proposed use on the surrounding community, and the extent to which negative impacts on the surrounding community can be reduced by the employment of reasonable restrictions. The Board has not yet adopted a site-specific field use policy for the existing or proposed Crawford High School field.

Athletic Stadium Weekly Usage Estimate

To provide a conservative assessment of potential impacts resulting from the use of the new Athletic Stadium, this document considers the potential effects of usage of the stadium for school or third parties on any day of the week. It was also assumed that the lights could be used any day up to 11 p.m. and that any of the events could experience an attendance level and noise generation similar to that of a homecoming football game. However, as shown on Table 2-2, even with a robust athletic program and some accommodation of other general school uses, it is unlikely that intensive school events, such as a homecoming football game, would occur on a frequent basis.

Table 2-2. Typical High School Stadium School Usage

Use/Activity	Season	Number per Season*	Attendance	Typical Days	Typical Ending Time	Lights Likely to Be Used
School Uses						
Football Games - Var	Aug-Nov	5	High	Fri	9 pm	Y
Football Games - JV		5	Med	Thurs/Fri	7 pm	Y
Football Games – Fros/Soph		5	Med	Thurs/Fri	7 pm	Y
Football Practice		Daily	Low	Mon-Fri	6 pm	Y
Marching Band Practice		Daily	Low	Mon-Fri	6 pm	Y
Color Guard Practice		Daily	Low	Mon-Fri	6 pm	Y
Field Hockey Games		10	Med	Any	7 pm	Y
Field Hockey Practice		Daily	Low	Mon-Fri	6 pm	Y
Cross Country Practice		Daily	Low	Mon-Fri	4 pm	N
Cheerleading Practice	Aug-Feb	Daily	Low	Mon-Fri	6 pm	Y
Soccer Games - Boys	Dec-Feb	10	Med	Any	7 pm	Y
Soccer Games - Girls		10	Med	Any	7 pm	Y
Soccer Practice - Boys		Daily	Low	Mon-Fri	6 pm	Y
Soccer Practice - Girls		Daily	Low	Mon-Fri	6 pm	Y
Lacrosse Games - Boys	Mar-Jun	10	Med	Any	7 pm	N
Lacrosse Games - Girls		10	Med	Any	7 pm	N
Lacrosse Practice - Boys		Daily	Low	Mon-Fri	6 pm	N
Lacrosse Practice - Girls		Daily	Low	Mon-Fri	6 pm	N
Track Meets		5	Med	Any	6 pm	N
Track Practice		Daily	Low	Mon-Fri	6 pm	N
Graduation	June	1	High	Any	6 pm	N
Other School Events	Any	>5	Med	Any	9 pm	Y

* All numbers are approximate

Attendance: Low=<50; Med=50-300; High=300-1500+ attendees

Baseball and Softball Field

As shown on Figure 2-4, the proposed project includes a new baseball field, which could also accommodate a soccer field, at the location of the existing football/soccer field and track at the northeastern corner of 56th Street and Trojan Avenue. This improvement would offset the loss of the existing baseball field at the southeast corner of Sharron Place and Trojan Avenue to the corner of 56th, while also providing upgrades compared to the existing facilities. To prepare the site for the baseball field, the existing football facilities on the site (bleachers, team room/storage building) would be removed and/or demolished. The new field would include new ADA accessible bleacher seating for 120 persons. New dugouts, a new announcer's booth, concessions stand, and ADA accessible restrooms would also be provided. Batting cages also would be installed along the Trojan Avenue side of the complex, near the ticket entrance. Trees and other landscaping improvements would be installed along Trojan Avenue, extending midway down 56th and 58th Streets, and pedestrian access to the site from the main campus will be enhanced for safety and accessibility to the extent feasible. Maintenance access to the fields would be provided along 58th Street towards the middle of the fields.

Tennis Courts

The proposed project includes constructing six tennis courts at the southern portion of the site adjacent to the proposed softball field. The six new tennis courts would be used by the two schools. Access to the tennis courts from the high school would be enhanced with safety and ADA accessibility (Path-of-Travel) improvements. No lighting facilities are proposed at the tennis courts.

Softball Field

The proposed project also includes improvements to the existing softball field on the south end of the Crawford High School property. These improvements include a new grass field, dugouts, backstop and fencing, batting cage, and drinking fountains.

Parking

The proposed project includes changes to parking that would result in a total of 266 on-site parking spaces, for a net addition of 90 spaces compared to the existing 195 spaces, as shown in Table 2-3 and on Figure 2-4. As discussed above, the 75 visitor spaces along Sharron Place would be replaced by the new Athletic Stadium. However, as shown in Table 2-3, to accommodate for these removed spaces, additional spaces would be constructed within the Crawford High School campus. Additional spaces would also be available on the Mann Middle School campus if necessary.

Table 2-3. Crawford High School Parking Summary

Location	Existing Spaces	Proposed Spaces	Net Change
South of Building 600	38	38	0
East of Gymnasium	76	57	0
West of Gymnasium	6	6	0
Along Sharron Place	75	0	-75
East of Colts Way	0	93	93
Corner of 56th St and Trojan Avenue	0	72	72[1]
Total	**195**	**266**	**90**

Source: District (2012).
[1] Parking at Mann Middle School would be used for future parking to serve both schools.

Construction

The new Athletic Stadium and the other athletic facility upgrades would be completed in a single phase of construction over an approximate 18-month construction period. During construction of the project, the construction activities would be limited to 7 a.m. to 7 p.m. to comply with the City of San Diego's noise ordinance. Most of the construction activities would be onsite; however, onsite grading for the Athletic Stadium may involve importing soils to fill 25% of the site. Additionally, minor offsite improvements in already disturbed areas such as utility connections and access improvements are anticipated.

2.2.1.2 Modernization Improvements

The modernization improvements would be completed over multiple years based on funding, logistics, and other factors. The major physical improvements are not scheduled to begin until 2016. Specific construction phasing for modernization improvements would be determined by the District as specific designs are developed for the improvements.

Specific designs for the modernization improvements have not yet been developed by the District. Therefore, this EIR addresses the modernization improvements at a programmatic level. As specific designs for future modernization activities are developed the District would conduct additional environmental review in compliance with CEQA to identify if there are additional significant environmental impacts not identified in this EIR and to determine what additional documentation is necessary.

With the exception of a few major building proposals, the modernization tasks would result in little physical change to the existing campus. The various modernization proposals considered for this EIR are described below:

Major Building Systems Repair and Replacement. The proposed project includes the construction of a new two- to three-story classroom building to the south of the gym. There are currently portable classrooms in this location, which would be replaced by the approximately 20-classroom building. The new classroom building would also provide some additional replacement capacity to offset the loss of space resulting from the demolition of buildings 100 and 200 with the

new Athletic Stadium. Another new building would provide administrative space, a lecture hall, and 20 classrooms. This building would replace the administrative space and classrooms in the existing building 800 and would also replace some of the classroom space lost when the portables to the west are removed to provide more parking spaces with the Athletic Stadium project. The lecture hall in this new building would also replace the auditorium building that would be demolished and replaced with the new building. These two new classroom buildings would not increase student capacity compared to existing conditions. The existing capacity of the high school is approximately 2,000 students, with 85 classrooms. (However, the school is not currently operating at capacity. Enrollment is approximately 1,222 students, with 77 classrooms in use.) With completion of the Athletic Stadium project, which will remove classrooms, and the two new classroom buildings, which will offset some of the lost classrooms, the capacity of the school will be approximately 1,600, with approximately 83 classrooms.

The proposed project includes major renovations to the existing theater to modernize, provide improved ADA accessibility, and provide improved visual and performing arts facilities. The renovations would generally conform to the existing footprint of the theater and would not result in an increase in seating capacity.

The proposed project also includes improvement proposals to repair, replace, or upgrade the following, as needed: sidewalks and hardscape areas, including ramps and stairs; building roofing, interiors, exteriors, finishes, fixtures, and windows; outdated heating and ventilation systems; and aging wiring and electrical systems.

Student Learning and Instruction. The proposed project includes 21st century technology upgrades, including audio-visual projection capabilities for all students and a wireless network to support student learning and instruction, as identified in Proposition S and Z.

Student Health, Safety, and Security. Other modernization improvements included in the proposed project consist of:

- Replacing the existing fire alarm and emergency communications system
- Installing security lighting
- Modifying the existing fencing and gates to secure the site against vandals and intruders
- Removing or minimizing risks to potentially hazardous materials on site
- Reconfiguring pedestrian circulation (student drop-off and pick-up areas would be constructed in front of building 800 along Colts Way to increase student safety)
- Upgrading educational spaces with air conditioning
- Renovating food service areas to increase service efficiency and to provide healthier food choices for students
- Multi-use flexible spaces would be created for alternative purposes (e.g., study halls, video rooms, etc.)

School Accessibility and Code Compliance. The proposed project also includes other upgrades to achieve compliance with ADA Titles I and II. These types of improvements would be made to all classrooms, labs, restrooms, and other school facilities.

2.2.2 Mann Middle School

As with Crawford High School, the modernization improvements would be completed over multiple years based on funding, logistics, and other factors. The first major physical improvements are scheduled to begin late 2015. The ultimate conceptual layout of the proposed Mann Middle School improvements is shown on Figure 2-4. Specific construction phasing for modernization improvements would be determined by the District as specific designs are developed for the improvements. During construction of the project, the construction activities would be limited to 7 a.m. to 7 p.m. to comply with the City of San Diego's noise ordinance.

Also, similar to Crawford High School, specific designs for the modernization improvements have not yet been developed by the District. Therefore, this EIR addresses the modernization improvements at a programmatic level. As specific designs for future modernization activities are developed the District would conduct additional environmental review in compliance with CEQA to identify if there are additional significant environmental impacts not identified in this EIR and to determine what additional documentation is necessary.

The various modernization proposals considered for this EIR are described below:

Major Building Systems Repair and Replacement. The proposed project includes proposals to repair or replace inadequate permanent and portable classrooms and school buildings with permanent cost-effective construction. One story buildings would replace the majority of the existing buildings in a similar footprint. A two- to three-story building containing 20 classrooms and administration space would replace Building 500. The existing library building would also be expanded. New landscaping and hardscaping improvements would be added throughout the campus.

Performance spaces and multi-purpose rooms (for example, the physical education building) would also be repaired, replaced, or upgraded to meet current needs. Improvements to the existing physical education building would include reconfiguration of the existing locker room to provide for boys' and girls' lockers and restroom facilities, as well as new construction of a multi-purpose divisible activity room, storage areas, and staff facilities (such as restrooms, offices, and a meeting room). Outside the physical education building, new physical education hard courts would be constructed. Landscaping improvements would be provided throughout this area as well.

Student Learning and Instruction. The proposed modernization improvements include 21st century technology upgrades, such as audio-visual projection capabilities for all students and a wireless network to support student learning and instruction. Also, fiber optics in classrooms would be enhanced to increase bandwidth to facilitate multiple concurrent applications. The library, which is within a portion of building 200, would be reconfigured and modernized, and the remaining portions of the building would be demolished and replaced with a new upper level quad, which is an outdoor area with landscape and hardscape improvements.

Student Health, Safety, and Security. Security lighting and modifications to existing fencing and gates and improvements to the site safety communication system would be installed to secure the site against vandals and intruders. Other safety improvements would include removing or minimizing risks to potentially hazardous materials on site. All educational spaces would be upgraded with air conditioning, and food service areas would be renovated to increase service efficiency and provide healthier food choices for students.

A new 160-space parking lot and drop-off area in the southeast corner of the Mann Middle School property would be constructed, in addition to a new "front door" to the campus, promoting safer access for students. Landscaping upgrades are included as part of the proposed project on the northern and southern boundaries of the proposed parking lot. Another "front door" would be located in the southwestern corner of the school property, between the Auditorium, Building 500, and the new classroom building.

School Accessibility and Code Compliance. The proposed project includes provisions to upgrade school sites to achieve compliance with ADA Titles I and II. These types of improvements would be made to all classrooms, labs, restrooms, and other school facilities. Kitchen facilities would be renovated to meet new, stringent health standards.

Parking. Proposed parking improvements at Mann Middle School would result in a net addition of 29 spaces compared to existing conditions, as shown in Table 2-4 and Figure 2-4. As discussed above, 160 new visitor and faculty stalls would be constructed along Trojan Avenue to account for the 124 spaces that would be removed with the construction of the new classroom building at the intersection of 54th Street and Trojan Avenue. Also, 7 existing spaces near the intersection of 56th Street and Trojan Avenue would be removed from the school's parking supply, and 72 new spots would be used as parking for both Mann Middle School and Crawford High School.

Table 2-4. Mann Middle School Parking Summary

Location	Existing Spaces	Proposed Spaces	Net Change
Along Trojan Avenue	0	160	160
Northern Property Line	30	30	0
54th Street/Trojan Avenue Intersection	124	0	-124
Other Parking Areas	7	0	-7
Total	**161**	**190**	**29**[1]

Source: District (2012).

[1] 72 parking spaces at Mann Middle School would be used for future parking to serve both Mann Middle School and Crawford High School but offset the loss of spaces on the high school property and are therefore not included in these numbers.

2.3 Stadium Operations/Design Features

2.3.1 Stadium Lighting

The stadium lighting to be installed at the new Crawford High School Athletic Stadium is designed to be fully shielded and directed onto the stadium field. A mandatory cutoff of 11 p.m. would be established for use of the lights. As noted in Table 2-2, the latest that games and practices are anticipated to end is approximately 9:00 p.m.

2.3.2 Public Announcement System

The new Crawford High School Athletic Stadium PA System would incorporate the following design features:

1. All speakers installed on the stadium lighting poles would have adjustable coverage patterns and would be attached to the poles with a three-point support system to allow for maximum adjustability.
2. The coverage patterns of loudspeakers would be adjusted to fit the minimal area of coverage to maximize the sound levels for the audience and minimize the bleed over into the adjacent areas.
3. The speakers would be Bi-Amped (high frequency and mid-range frequency on one amplifier and low frequency on another amplifier) to allow for maximum adjustability for providing power to the speakers. Each amplifier can be individually adjusted.
4. All sound signaling to the loudspeakers would be controlled by a Digital Signal Processor (DSP), which is capable of providing equalization, loudspeaker cluster and driver alignment delays, band pass filters, additional filters and crossover adjustments. The DSP has an available Ethernet port on the unit that may be used to network the equipment into the local area network (LAN). This allows for building of different control profiles for different speaker configurations. This may be used to allow for use of all speakers or a portion of the speakers depending on the needs of the event.
5. A separate mixer would be provided with the system to adjust inputs and microphones and control the levels. The mixer is a portable type 16-channel unit with an interface that allows direct connection to a laptop or personal computer for additional programming control of the system.

2.3.3 Stadium Bleachers

The proposed aluminum bleachers to be constructed on the home and visitor sides of the stadium would include metal backing on the back side of the bleachers to reduce crowd noise generated during an event.

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Chapter 3
Environmental Analysis

This chapter contains the analysis for the environmental effects that were found to be significant during the preparation of this EIR. Each section contains a description of the existing conditions, CEQA impact significance criteria, an analysis of the potential impacts, and mitigation proposed to reduce those impacts. The following resource areas are described and analyzed in this chapter.

- Aesthetics (including Light and Glare)
- Biological Resources
- Cultural and Paleontological Resources
- Hazards and Hazardous Materials
- Noise

Environmental effects that were found not to be significant are discussed in Chapter 5. Cumulative effects are described in Chapter 6.

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Section 3.1
Aesthetics

This section evaluates existing and proposed aesthetic conditions at and around the proposed project. Technical information relative to the proposed lighting improvements is based on a September 2013 lighting analysis conducted by Musco Lighting, Inc. and a subsequent lighting memo prepared by ICF International. The lighting memo as well as the lighting analysis provided by Musco is provided as Appendix B to this EIR and the findings are discussed and summarized in the following section.

3.1.1 Existing Conditions

3.1.1.1 Crawford High School

As shown in Figure 2-2, the Crawford High School campus consists of an existing school, athletic fields, and hardcourt and parking areas in a built-out neighborhood comprising residential, recreational, and school development. Existing buildings on the site consist of single-story classroom buildings, administrative buildings, storage areas, and other ancillary use buildings related to school, including permanent and portable classrooms. Most of the school's buildings occur in the northeastern and central portions of the project site and parking areas are located internally. Athletic fields occur on the southern and northern portions of the campus and include a dirt softball field, a natural turf football field and stadium seating with dirt track, a baseball diamond. There are no existing lighting improvements and all sporting events held on campus occur during daylight hours.

3.1.1.2 Mann Middle School

As shown in Figure 2-2, existing buildings on the site consist of single-story classroom buildings, administrative buildings, storage areas, and other ancillary use buildings related to school, including permanent and portable classrooms. Most of the school's buildings occur in the northwestern and central portions of the project site. Parking areas are located internally. Athletic fields occur on the eastern portions of the campus. Hardscape with basketball courts as well as racquet ball courts are located on the eastern portion of the campus.

3.1.2 Impact Significance Criteria

According to State CEQA Guidelines, Section 15186 and Appendix G, the proposed project would have a significant impact on aesthetics if it would result in any of the following.

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway.
3. Substantially degrade the existing visual character or quality of the site and its surroundings.
4. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

Thresholds for Significance Associated with Lighting

In order to evaluate potential impacts resulting from the create of a new source of substantial light or glare that would affect nighttime visual character and views in the area, standards developed by the Institution of Lighting Engineers (ILE), the Illuminating Engineering Society of North America (IESNA), and the Electric Power Research Institute (EPRI), were used as the basis to determine if illuminance produced by the proposed project would be significant. Light trespass varies according to surrounding environmental characteristics, and as such, the IESNA Lighting Handbook, Ninth Edition (2000)[1] utilizes a concept of "environmental zones," ranging from E1 (most sensitive) to E4 (least sensitive). Areas that are more rural in character, and therefore exhibit few existing sources of light, are more susceptible to impacts resulting from the installation of new lighting sources. By contrast, urbanized areas are characterized by a large number of existing lighting sources and are therefore less susceptible to adverse effects associated with new lighting sources. Consequently, lighting zone designations are applied according to the amount and intensity of existing lighting sources in the area. Crawford High School would be categorized as an E3, which denotes areas of medium ambient brightness, such as urban residential areas. The recommended environmental zone E3 light trespass standard is 0.8 footcandle during pre-curfew hours and 0.2 footcandle during post-curfew hours.

For the purposes of this document, the School District has determined that light trespass impacts may be considered significant if illuminance produced by the project would exceed 0.8 footcandle during pre-curfew hours (prior to 10 p.m.) and 0.2 footcandle during post-curfew hours (after 10 p.m.), as measured on the vertical and horizontal planes, at the property line of an adjacent residential use. In determining if a significant impact would occur, consideration is also given to whether exceedance of these standards is expected to adversely affect a substantial number of people. Lighting standards are sometimes applied at the property line of the proposed use; however, this would not be appropriate for an urban site such as this, which is bordered by already-lit public roads.

Sky glow impacts would be significant if the lighting would emit a substantial amount of upward light and glare impacts would be significant if lighting was unshielded and/or installed at a height or angle that would result in direct views of the main beam from an off-site location, such as a residence.

[1] In 2011, IESNA published the Tenth Edition of its Lighting Handbook. The Tenth Edition included an update to the "environmental zones" by renaming them, adding a zone "0", and modifying descriptions and recommendations for each zone. The School District has reviewed and considered the updated handbook and decided to continue using the Ninth Edition recommendations for consistency among its projects. The IESNA has no regulatory standing and it is the School District's authority as CEQA Lead Agency to determine the appropriate threshold to use in reviewing its actions. The Ninth Edition standards have been implemented by numerous jurisdictions for several years and are still in use by many agencies today.

3.1.3 Impact Analysis

3.1.3.1 Effects on Existing Visual Character and Views

Crawford High School

The proposed project site is not designated as being part of a scenic vista, nor is it visible from a scenic highway. The site also does the site contain significant scenic resources such as visually significant trees or rock outcroppings. Therefore, regardless of the proposed physical change to the project site, an impact for these issue areas would not occur.

The proposed modernization and athletic facilities improvements associated with the project would not substantially degrade the exiting visual quality of the site and surrounding area. The majority of the improvements associated with the modernization of Crawford High School would involve minor upgrades to existing facilities and minimal exterior physical changes. Even some of the more noticeable exterior modernization improvements such as relocating athletic facilities would have a negligible effect on the overall character of the high school campus as the project site has been developed as a high school and is developed with educational structures and athletic improvements.

The proposed project would result in noticeable alterations to the existing high school campus from its present day form. The most noticeable change would be the new Athletic Stadium, which would be located where there are currently classrooms and an administration building, baseball fields, tennis courts, and parking areas. The Athletic Stadium would include a new synthetic turf field, athletic and visitor amenities such as restrooms and concessions, bleacher seating for the stadium, and stadium light standards. The Athletic Stadium would also include new chain link fences, gates, and posts, and a new irrigation system and landscaping. While the athletic facilities improvements would change some visible elements within portions of the high school site, they would not be considered a substantial change or degradation to the existing visual character of the site, which would continue to appear as a high school campus.

Further, specific design features (i.e., building style, materials, colors, etc.) would be consistent with the *Landscape Design and Site Development Guidelines* for San Diego City Schools (SDUSD, 2006). These guidelines were developed by the District to provide a comprehensive preliminary evaluation of those characteristics of a school campus that have an impact, not only on the learning environment, but on neighboring properties and the community as a whole. Schools often become the focus of a neighborhood, and therefore a highly used and visual element. The document provides guidelines for construction of new schools and reconstruction of existing facilities. These guidelines include design concepts for school facilities and neighborhood interface, and extensive landscape design standards.

Consideration was given to the proposed lights for the Athletic Stadium because they would result in a new addition to the project site that would be visible from surrounding areas, including residences. The proposed project includes six 90-foot-tall light standards around the Athletic Stadium so that the stadium can be used in the late afternoons and evenings for games, practices and other events. As previously stated, there are no scenic vistas in the vicinity of the proposed project. However, the surrounding area was also surveyed for public vantage points where views may be available of the new lights. The survey revealed that there are several limited public areas where the lights would be visible by people driving, biking or walking along 54th Street, 56th Street, 58th Street, El Cajon Boulevard, Trojan Avenue, Colts Way, Spartan Drive, and Vale Way in the vicinity of the

project. However, as the majority of these people will be travelling along busy roadways, affected views are anticipated to be brief in duration and the sensitivity of views of motorists, bicyclists, and pedestrian are considered to be moderately low. Additionally, while some of the views include the ocean in the distant background, they are mainly of ~~these views include~~ an urban area and are not considered to be scenic or otherwise protected views. Therefore, although the light poles would be visible from public vantage points from areas in the project vicinity, the addition of the light poles is not considered to be a substantial change to the urban visual character of the area that includes the two existing school campuses as well as residential, commercial, and other recreational uses. Therefore the addition of the stadium light poles would represent a less than significant impact to the existing visual character of the site.

To assist the public with envisioning the approximate location and height of the proposed lights, the District provided a height demonstration in August 2013. A total of six, 5-foot-diameter balloons were flown at approximately 80 feet for a period of four hours[2]. The balloons were placed in the locations anticipated for the lights as a part of the stadium design. The balloon demonstration confirmed that the proposed lights would be visible from public roadways in the project vicinity, including all of the roadways immediately surrounding the campus as well as larger roadways in the project vicinity. Figures 3.1-1 and 3.1-2a through 3.1-2e show views from major roadways including 54th Street, 56th Street, 58th Street, El Cajon Boulevard, Trojan Avenue, Colts Way, Spartan Drive, and Vale Way. The lights would also be visible from existing homes surrounding the site to the west, north and east of the campus.

It is acknowledged that the new stadium lights would affect private views from residences in the surrounding areas. However, CEQA does not require a project to evaluate the aesthetic impacts on views from private properties. The focus of the CEQA analysis is on public spaces.

In summary, there are no scenic vistas or sensitive public vantage points in the area, the project site is already developed as a high school campus, and the overall character of the project site would remain as a high school campus. The proposed school facilities would be designed and constructed consistent with the District's Landscape Design and Site Development Guidelines. Therefore, impacts related to degrading the existing visual character or quality of the site as well as views of the existing campus would, therefore, remain less than significant with implementation of the proposed project.

Mann Middle School

Similar to Crawford High School, there are no scenic vistas or sensitive public vantage points in the area, the project site is already developed, and the overall character of the project site would remain as a middle school campus with the proposed improvements associated with the project. The proposed school facilities would be designed and constructed consistent with the District's Landscape Design and Site Development Guidelines. Therefore, impacts related to degrading the existing visual character or quality of the site as well as views of the existing campus would, therefore, remain less than significant with implementation of the project.

[2] In August 2013, the District considered 80-foot-high light standards but has since changed its proposal to 90-foot-high standards in an effort to further reduce light trespass and glare on neighboring properties. Since the balloon demonstration was voluntary and a change in height of 10 feet would not substantially alter the scale of the proposed light standards, an additional demonstration was not determined to be necessary.

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Figure 3.1-1
Height Demonstration Photo Location Map
Crawford High School & Mann Middle School Modernization Project

Photo 1

Photo 2

Source: ICF International

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Figure 3.1-2a
Photos of Height Demonstration
Crawford High School & Mann Middle School Modernization Project

Photo 3

Photo 4

Source: ICF International

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Figure 3.1-2b
Photos of Height Demonstration
Crawford High School & Mann Middle School Modernization Project

Photo 5

Photo 6

Source: ICF International

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Figure 3.1-2c
Photos of Height Demonstration
Crawford High School & Mann Middle School Modernization Project

Photo 7

Photo 8

Source: ICF International

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Figure 3.1-2d
Photos of Height Demonstration
Crawford High School & Mann Middle School Modernization Project

Photo 9

Photo 10

Source: ICF International

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Figure 3.1-2e
Photos of Height Demonstration
Crawford High School & Mann Middle School Modernization Project

3.1.3.2 Effects on Sky Glow/Light and Glare and Light Trespass

Crawford High School

The proposed project would include various light sources. In some cases the building upgrades would result in the replacement of existing light sources and in other cases they will be new, such as for new buildings and the new athletic facilities. Most lights would primarily be used for security and safety, would illuminate a targeted area, and would use shields and/or visors to minimize light spill to surrounding areas. As this form of lighting is common employed in development throughout the City, no significant impacts are associated with security lighting are anticipated. However, the project also includes the installation of six stadium lights at the proposed Athletic Stadium and would allow for games, practices, and other events that currently occur during the day to occur into the late afternoon and evenings (see Section 2.2.1.2 of the Project Description of more details). Because these types of lights are not common light fixtures in the area, this section provides a more focused analysis on potential impacts related to light and glare.

This analysis accounts for the following features that are incorporated into the proposed project design to minimize impacts from the proposed stadium lights:

- The proposed lighting system has been specifically designed with cutoff devices, highly efficient reflectors, and 14-inch visors that would capture and redirect primary light onto the field and reduce spill light off the field.
- The high mounting height of the luminaires would allow the lamps to be installed with a narrow beam angle to specifically direct light downward, onto the field of play and away from adjacent properties.
- Lighting fixtures at the football stadium would be installed at approximately 90 feet in height to focus lighting on the field.

Sky Glow

The project site is located in an urbanized area with medium ambient brightness and is not sensitive to the effects of sky glow. Furthermore, the project site is located approximately 43 miles southwest of Palomar Mountain Observatory and would not adversely affect astronomical research activities at that facility. The height of the proposed light standards would allow for each luminary to be mounted with a narrow beam angle, which would focus light downward, thereby limiting the amount of light that is cast off-site onto the surrounding neighborhood. In addition, the proposed luminaries would be designed to reduce the amount of light emitted on an upward plane and would feature a highly efficient reflector and 14-inch visor would block upward light. These design features would minimize sky glow to the maximum extent feasible. Based on the physical characteristics of the area surrounding the project site and the design of the proposed light fixtures, implementation of the proposed project would result in a less than significant impact associated with sky glow and no mitigation is required.

Glare

Potential glare impacts associated with installation of the proposed light standards would be less than significant because the high mounting height of the fixtures and the reflective insert included in each luminaire would ensure the main beam of the lamp would be focused

downward onto the field of play and would minimize a direct line-of-site to the lamps from off-site locations. These design features would minimize potential glare impacts to the maximum extent feasible and that implementation of the project would result in a less-than-significant impact associated with glare.

Light Trespass

The spill of light beyond a property line is referred to as light trespass. Light trespass can be measured on the vertical plane (e.g., light shining through a window) and a horizontal plane (e.g., light falling on a bed). When the proposed stadium lights are used in the evenings, they would generate sufficient light that some spill beyond the school's property line is anticipated. To estimate the likely spill effects, Musco Lighting, Inc., ran a series of models consistent with industry standards to estimate the vertical and horizontal light spill beyond the school property.

As shown in Figures 3.1-3 and 3.1-4, the models indicated that implementation of the proposed project would result in the contribution of up to 1.46 vertical footcandle at the eastern property line and 0.94 vertical footcandle at the western property line, both of which are above the 0.8-footcandle threshold. Musco conducted further analysis to determine which specific properties may be affected by light trespass from the stadium lights at or exceeding 0.8 footcandles. The following properties were identified as potentially being affected:

- 5485 Trojan Way;
- 4216, 4224, 4332, and 4242 Sharron Place;
- 5435, 5447, 5601, and 5606 Vale Way; and
- 5464, and 5474 Orange Avenue.

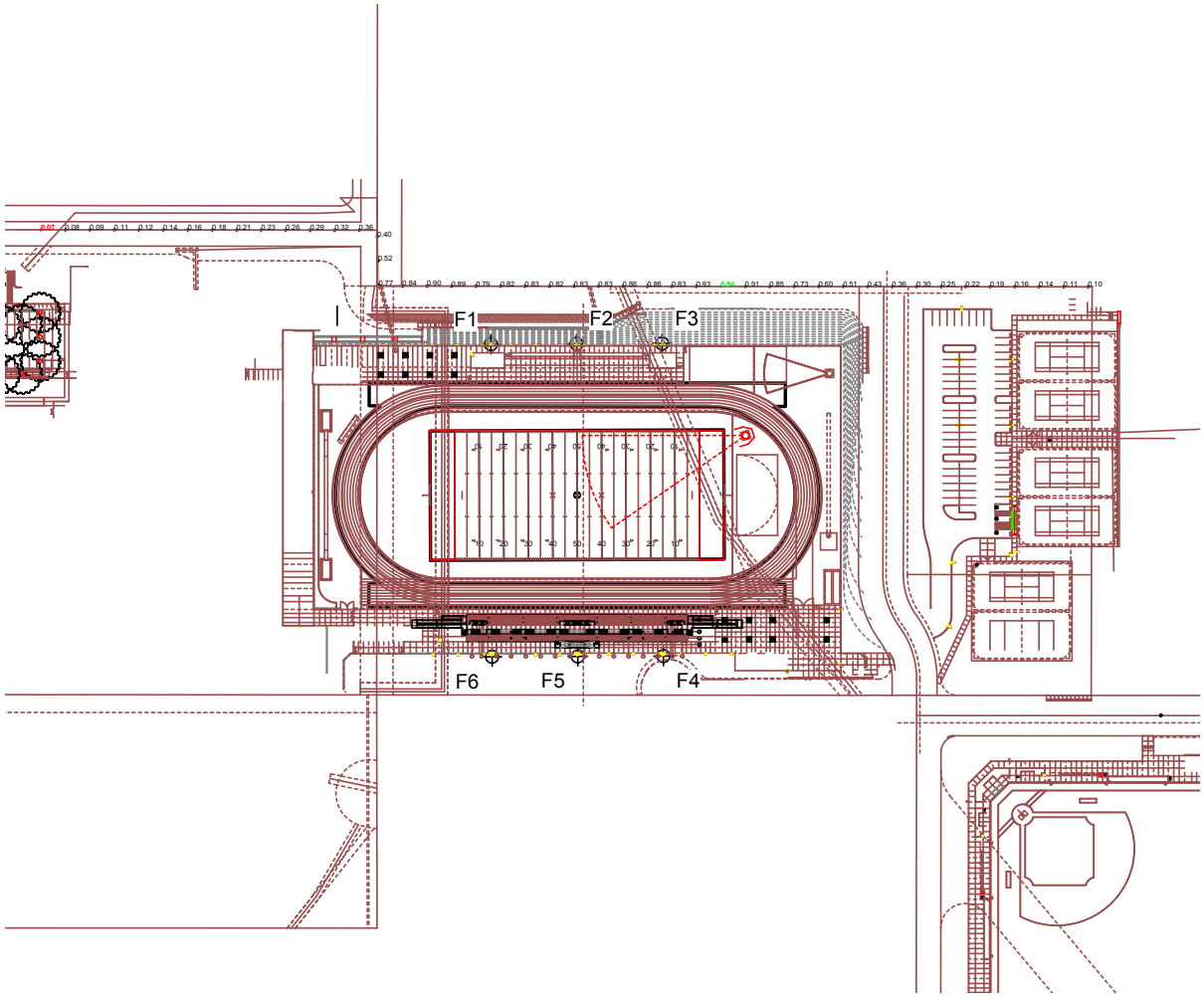
As shown in Figures 3.1-5 and 3.1-6 spill light associated with the proposed lighting elements was modelled to result in a horizontal illumination that would be approximately 0.88 footcandle at the eastern property line (which is greater than the 0.8-footcandle threshold) and 0.32 horizontal footcandle at the western property line.

As described above, light trespass from the six proposed stadium lights would exceed 0.8 footcandle at up to 11 residences adjacent to the proposed stadium. However, in determining the significance of the impact, 11 residences is not a substantial number in the context of the much larger surrounding residential community. Nor is it anticipated that people will be harmed by the operation of the lights. To some, they will most likely be a nuisance, and they could affect nighttime views from some homes; however, these are not significant impacts under CEQA. The potential for impacting sleep is low as they will not be operated through the night and, if necessary, residents can use shutters or black out curtains to block to the light. Therefore, the potential for the project to adversely affect a substantial number of people is very low. Nevertheless, in deference to its neighbors that have indicated concern regarding the lights, the District has determined that the lights could have a significant impact due to light trespass and has explored all feasible measures for reducing those impacts.

Although no current plans exist to rent out the athletic stadium for third-party use, the District may allow third parties to utilize the proposed stadium primarily on weekends. As discussed in Section 2.2.1.1, to provide a conservative assessment of potential impacts resulting from the use of the new Athletic Stadium, the Draft EIR considers the potential effects of usage of the stadium on any day of the week. It was also assumed that the lights could be used any day up to 11 p.m. and that any of the

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	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	11	11	0
3	F4-F6	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	12	12	0
6	TOTALS					87	87	0



SCALE IN FEET 1 : 200

0' 200' 400'

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

Source: Musco Sports Lighting, LLC

MY PROJECT

Name:	**Crawford High School Football**
Location:	San Diego,CA

GRID SUMMARY

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

CONSTANT ILLUMINATION

SUMMARY	MAX VERTICAL FOOTCANDLES
	Entire Grid
Scan Average:	**0.481**
Maximum:	0.94
Minimum:	0.07
No. of Points:	46
LUMINAIRE INFORMATION	
Luminaire Type:	LED / SSL / Green Generation
Rated Lamp Life:	100,000 / 5,000 hrs
Avg Lumens / Lamp:	3,950 / 134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	87
Avg KW:	109.5 (119.48 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:	**Joel Stout**	
File # / Date:	28831-r12	18-Oct-13

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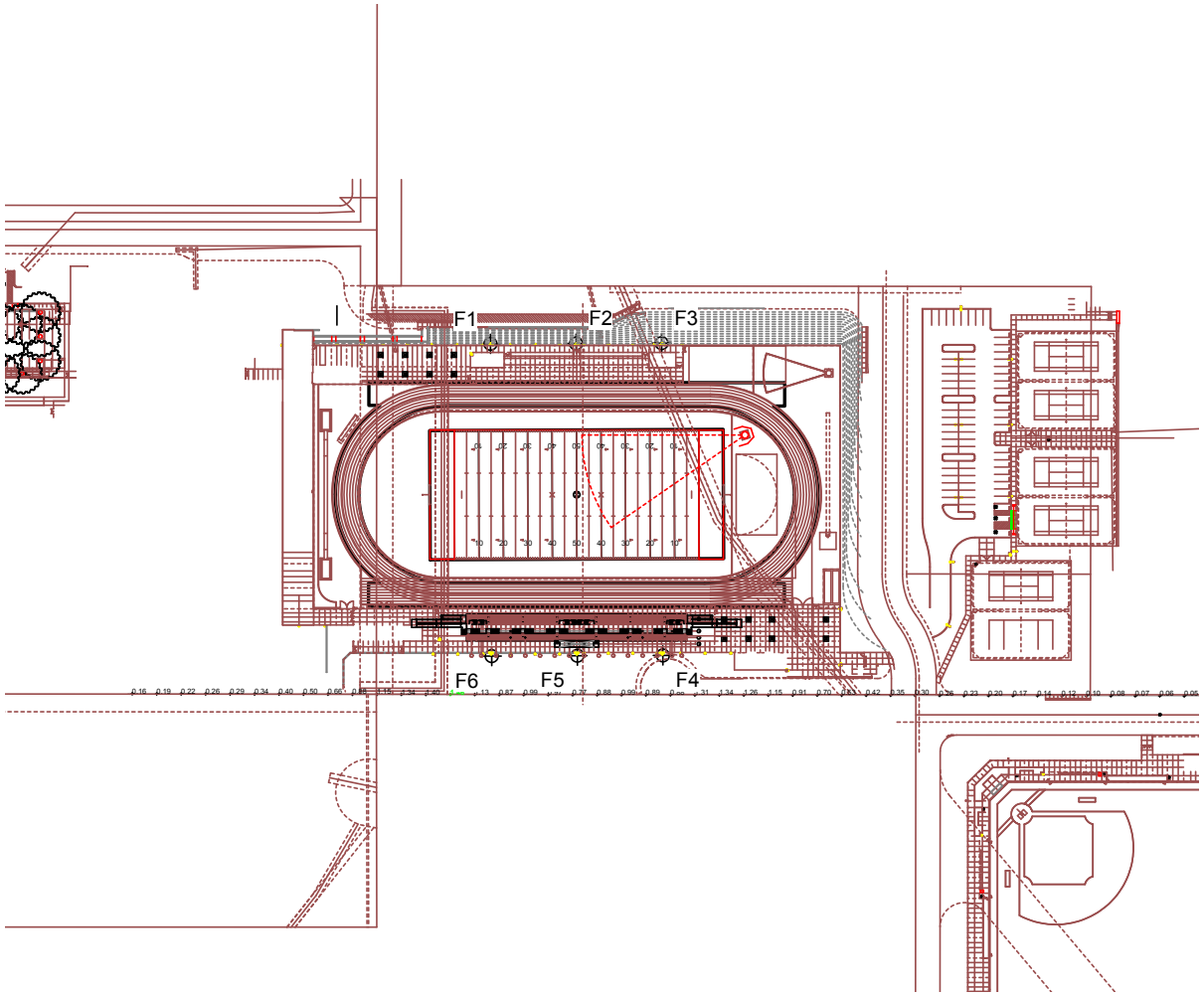
Figure 3.1-3
Vertical Light Trespass West of Stadium
Crawford High School & Mann Middle School Modernization Project

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	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	11	11	0
3	F4-F6	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	12	12	0
6	TOTALS					87	87	0



SCALE IN FEET 1 : 200

0' 200' 400'

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

Source: Musco Sports Lighting, LLC

MY PROJECT

Name:	**Crawford High School Football**
Location:	San Diego,CA

GRID SUMMARY

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

CONSTANT ILLUMINATION

SUMMARY	MAX VERTICAL FOOTCANDLES
	Entire Grid
Scan Average:	**0.574**
Maximum:	1.46
Minimum:	0.03
No. of Points:	48
LUMINAIRE INFORMATION	
Luminaire Type:	LED / SSL / Green Generation
Rated Lamp Life:	100,000 / 5,000 hrs
Avg Lumens / Lamp:	3,950 / 134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	87
Avg KW:	109.5 (119.48 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:	**Joel Stout**	
File # / Date:	28831-r12	18-Oct-13

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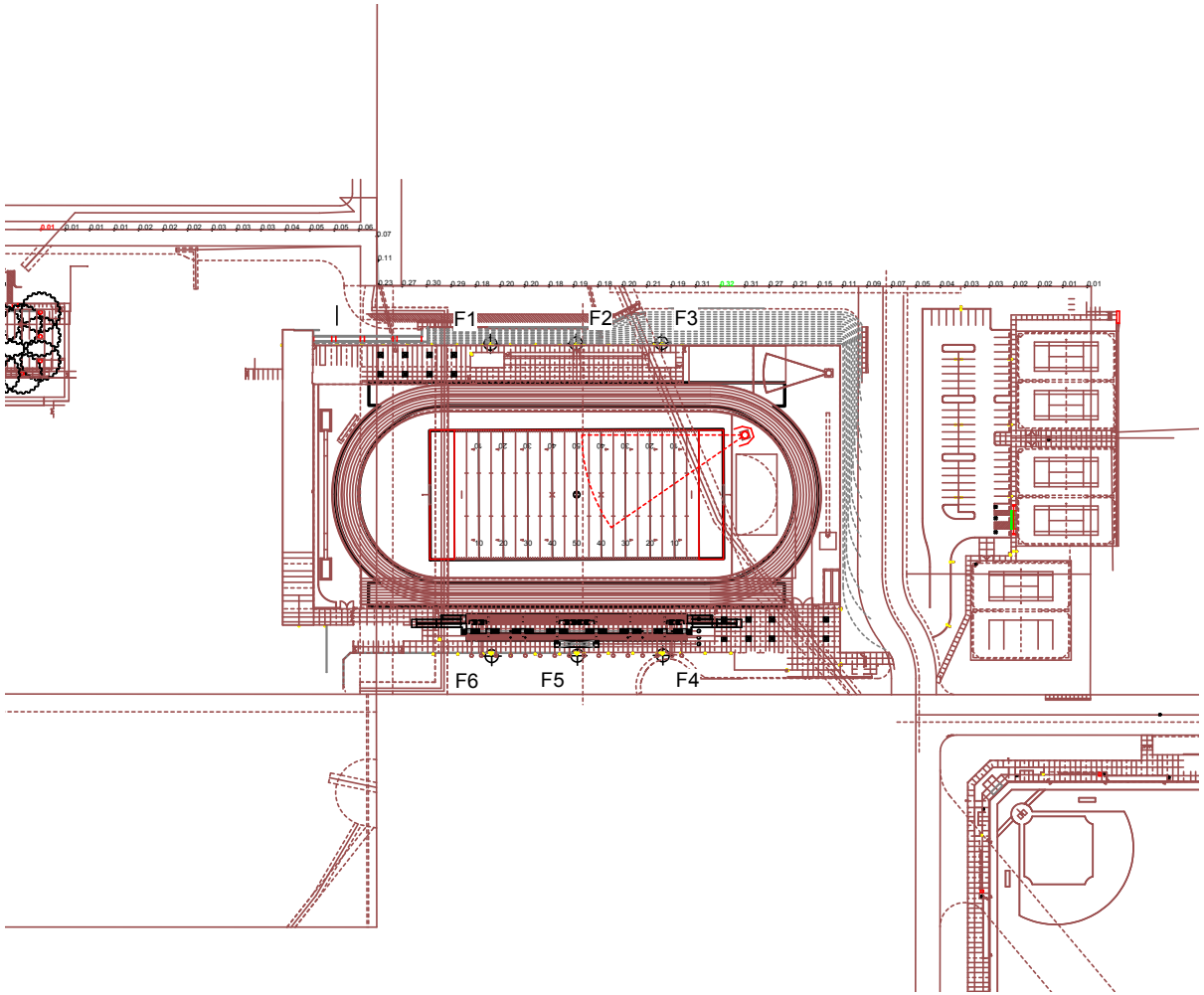
Figure 3.1-4
Vertical Light Trespass East of Stadium
Crawford High School & Mann Middle School Modernization Project

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	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	11	11	0
3	F4-F6	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	12	12	0
6	TOTALS					87	87	0



SCALE IN FEET 1 : 200

0' 200' 400'

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

Source: Musco Sports Lighting, LLC

MY PROJECT	
Name:	**Crawford High School Football**
Location:	San Diego,CA

GRID SUMMARY	
Name:	**West Spill**
Spacing:	30.0'
Height:	3.0' above grade

CONSTANT ILLUMINATION	
SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	**0.118**
Maximum:	0.32
Minimum:	0.01
No. of Points:	46
LUMINAIRE INFORMATION	
Luminaire Type:	LED / SSL / Green Generation
Rated Lamp Life:	100,000 / 5,000 hrs
Avg Lumens / Lamp:	3,950 / 134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	87
Avg KW:	109.5 (119.48 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:	**Joel Stout**	
File # / Date:	28831-r12	18-Oct-13

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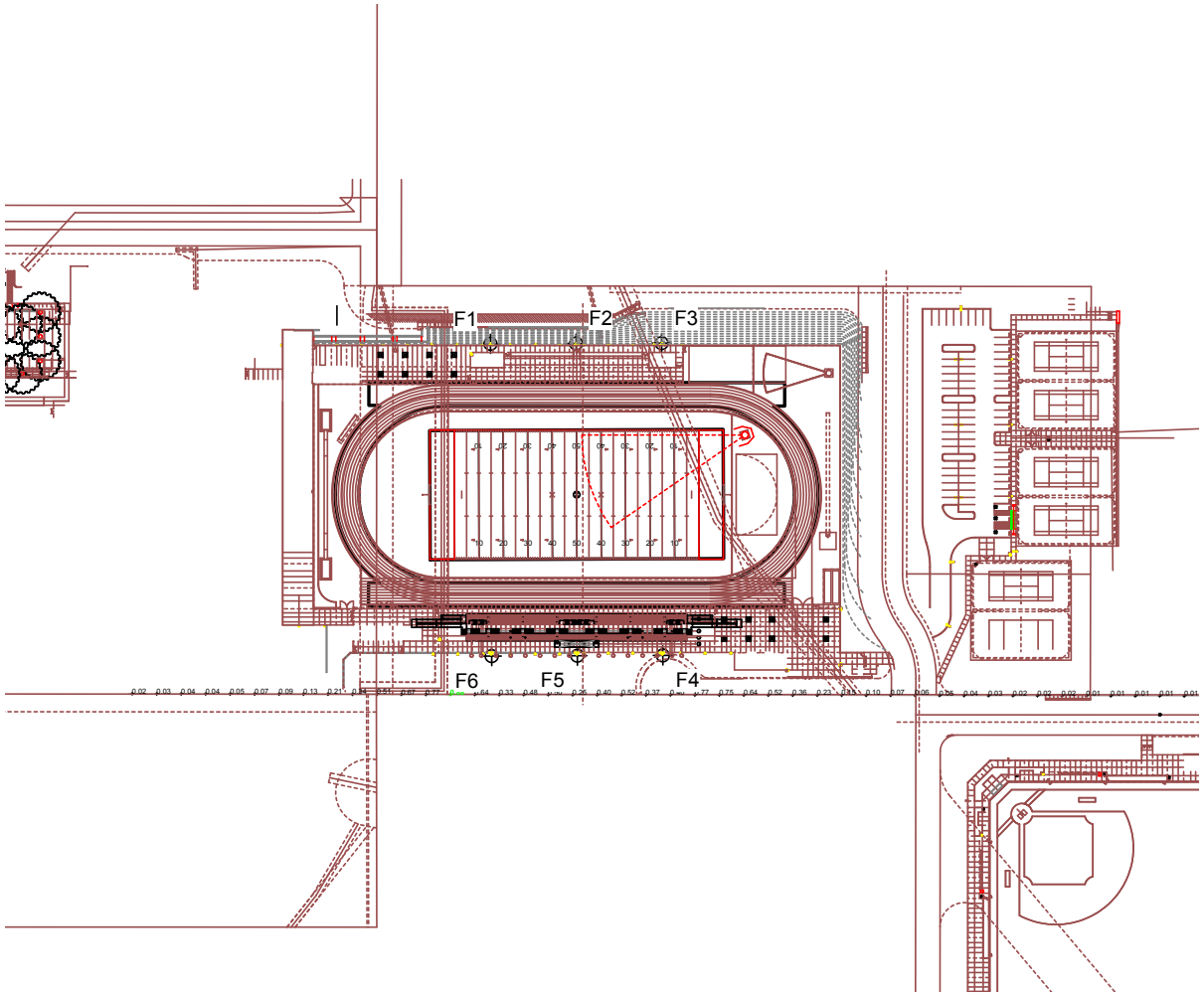
Figure 3.1-5
Horizontal Light Trespass West of Stadium
Crawford High School & Mann Middle School Modernization Project

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	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	11	11	0
3	F4-F6	90'	-	60'	24 LED	3	3	0
				90'	1500W MZ	12	12	0
6	TOTALS					87	87	0



SCALE IN FEET 1 : 200

0' 200' 400'

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

Source: Musco Sports Lighting, LLC

MY PROJECT	
Name:	Crawford High School Football
Location:	San Diego,CA

GRID SUMMARY	
Name:	East Spill
Spacing:	30.0'
Height:	3.0' above grade

CONSTANT ILLUMINATION	
SUMMARY	HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	0.242
Maximum:	0.88
Minimum:	0.00
No. of Points:	48
LUMINAIRE INFORMATION	
Luminaire Type:	LED / SSL / Green Generation
Rated Lamp Life:	100,000 / 5,000 hrs
Avg Lumens / Lamp:	3,950 / 134,000
Avg Lamp Tilt Factor:	1.000
No. of Luminaires:	87
Avg KW:	109.5 (119.48 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:	Joel Stout	
File # / Date:	28831-r12	18-Oct-13

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Figure 3.1-6
Horizontal Light Trespass East of Stadium
Crawford High School & Mann Middle School Modernization Project

events could experience an attendance level and noise generation similar to that of a homecoming football game. As discussed above, use of the lights at a stadium event would result in significant and unavoidable impacts related to light trespass. The analysis and impact conclusions made above would apply to any lighted event held at the stadium. Considering that the analysis conducted for the Draft EIR assumed that the lights could be used any day of the week and that the significant impacts identified in the Draft EIR would occur with every lighted event, the rental of the stadium to third parties on weekends or during the week would not result in additional significant impacts related to light trespass beyond those identified above. Additional mitigation measures would also not be required to address rental to third parties because the impact associated with light trespass would not be increased or reduced based on the events that would occur on the field.

Mann Middle School

The proposed improvements at Mann Middle School would include various light sources. In some cases, these would replace existing light sources (e.g., within building upgrades). In other cases, they would be new (e.g., within new buildings and parking lots). Most lights would be used for security and safety and would illuminate a targeted area. Shields and/or visors would be used to minimize light spill to surrounding areas. Because this form of lighting is commonly employed in development throughout the City, no significant impacts are anticipated.

3.1.3.3 Significant Impacts

Aes-1: Implementation of the proposed project would result in the contribution of up to 1.46 vertical footcandle and 0.88 horizontal footcandle at the eastern property line and 0.94 vertical footcandle at the western property line, which are all above the 0.8-footcandle threshold. Light trespass from the six proposed stadium lights would exceed 0.8 footcandle at 11 residences. The potential for the project to adversely affect a substantial number of people is very low; however, the District has determined that the lights could have a significant impact due to light trespass.

3.1.3.4 Mitigation Measures

The District has integrated measures into the design of the project to reduce light trespass from the site. These include increasing the height of the light poles, using extended shielding on the lights, using internal reflectors to focus the lights, and providing site specific calibration so that lighting standards for the field are achieved while areas that do not need to be lit are minimized. Additionally, to be consistent with past project approvals, the District will implement the following measure:

Aes-MM-1: The District shall provide and install, upon request of the homeowner, light blocking blinds (or shades) in the bedrooms of the 11 homes identified in the EIR that 1) have bedroom windows with a direct or indirect line of sight to the football field and/or associated lighting elements and 2) that are calculated by the lighting analysis to be impacted by the Project-related lighting levels by more than 0.79 footcandles. The light blocking blinds or shades shall be certified by the manufacturer to block at least 90% of incoming light. District shall notify the homeowners of the availability of the blinds or shades prior to installation of the stadium field lighting and shall install the blinds (or shades) prior to operating the field lighting.

No other feasible mitigation measures have been identified.

3.1.3.5 Significance of Impacts after Mitigation

Aes-1a: Implementation of the measure described in mitigation measure Aes-MM-1 would potentially address impacts on sleep deprivation from lighting on adjacent properties; however, it requires willing participation by the affected property owners. Additionally, while the issue of sleep deprivation would be addressed if this measure is implemented, residents have expressed other concerns with the lighting trespass to their property, such as nighttime views and character. Therefore, the District has concluded that this measure will not reduce the significant lighting impacts to a less-than-significant level. No feasible mitigation measures to further reduce the light trespass resulting from the proposed project have been identified, so the impact would remain significant and unavoidable.

Section 3.2
Biological Resources

ICF International biology staff conducted a site visit of the Crawford High School and Mann Middle School in September 2013. The purpose of the visit was to determine the habitat types present, the potential for sensitive species to occur in the canyon adjacent to the south end of Crawford High School, and the potential for nesting birds to occur within both school sites. This section summarizes the findings of the visit and a discussion of sensitive species known to occur within 1 mile of the project site.

For this biological resources section, the term *study area* is defined as the project site and the canyon adjacent to the south end of Crawford High School. The term *project site* is defined as the parcel boundaries of Crawford High School and Mann Middle School where the project work is expected to take place.

3.2.1 Existing Conditions

This section describes the existing biological conditions on the study area.

3.2.1.1 Vegetation

Crawford High School

The project site is developed with existing structures and athletic fields. Vegetation consists entirely of ornamental species including Aleppo pine (*Pinus halepensis*), bottlebrush (*Callistemon* sp.), Mexican fan palm (*Washingtonia robusta*), Brazilian pepper tree (*Schinus terebinthifolius*), golden wattle (*Acacia cyclops*), and golden raintree (*Koelreuteria paniculata*). Directly south of the project site is a canyon, which is comprised of native and naturalized species. Three vegetation types occur within the canyon: bare ground, disturbed coastal sage scrub, and coastal sage scrub. A complete list of all plant species identified within the canyon directly adjacent to the site is included in Appendix C.

Bare Ground

Bare ground typically occurred in areas that had severe erosion, areas that had been recently graded and or mowed, or other areas mostly devoid of vegetation.

Disturbed Coastal Sage Scrub

Disturbed coastal sage scrub is typified by coastal sage scrub that has been degraded in quality. Within the canyon this vegetation type was dominated by common nonnative grasses such as oat (*Avena* sp.) and red brome (*Bromus madritensis*), as well as sea fig (*Carpobrotus edulis*), with a low cover of California sagebrush (*Artemisia californica*) and portions of bare ground.

Coastal Sage Scrub

Coastal Sage Scrub is typified by a high dominance of laurel sumac (*Malosma laurina*) and a lesser co-dominance of California sagebrush with some lemonadeberry (*Rhus integrifolia*).

Mann Middle School

The project site is developed with existing structures and athletic fields. Vegetation consists entirely of ornamental species such as bottlebrush, Brazilian pepper tree, golden wattle, blue gum (*Eucalyptus globulus*) and cape leadwort (*Plumbago auriculata*).

3.2.1.2 Wildlife

Crawford High School

Wildlife species in the study area were detected visually, aurally, and through sign, such as scat and tracks. Wildlife species observed during the survey consisted entirely of species often found in highly developed areas. These include mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), western scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), and western side-blotched lizard (*Uta stansburiana*).

The study area is not likely utilized for regional wildlife movement because it is surrounded entirely by development and lacks the necessary topography (such as a drainage and/or ridgeline) that would channel animals through the area. The adjacent canyon to the south is surrounded by development and is not connected to any open space. The area is likely used by common birds and other small animals typical of a developed environment.

Mann Middle School

Wildlife species in the project site were detected visually, aurally, and through sign, such as scat and tracks. Wildlife species observed during the survey consisted entirely of species often found in highly developed areas. These include mourning dove, black phoebe, common raven, bushtit (*Psaltriparus minimus*), and house finch.

The project site is not likely utilized for regional wildlife movement because it is entirely surrounded by development and lacks the necessary topography to channel animals through the area. The area is likely used by common birds and other small animals typical of a developed environment.

3.2.1.3 Special-Status Species

Plant or wildlife species may be considered to have special status because of declining populations, vulnerability to habitat change, or restricted distributions. For the purposes of this report, special-status species include those that are federally or state-listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act or California Endangered Species Act. Special-status species also include those species that are listed as rare under the Native Plant Protection Act; California Species of Special Concern or California Fully Protected Species; and California Rare Plant Rank included on Lists 1A, 1B, 2A, 2B, or 3 by the California Native Plant Society (CNPS) and California Department of Fish and Wildlife (CDFW).

Crawford High School

California Natural Diversity Database (CNDDB) searches indicated that five special-status species have been previously observed and documented within 1 mile of the study area. These special-status species include four plant species and one mammal: Orcutt's brodiaea (*Brodiaea orcuttii*), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), San Diego mesa mint (*Pogogyne abramsii*), wart-stemmed lilac (*Ceanothus verrucosus*), and the western mastiff bat (*Eumops perotis californicus*). No special-status vegetation communities or habitats occur within the project site. Within the adjacent canyon, one special-status vegetation community occurs—coastal sage scrub. A description of this vegetation community is provided in Section 3.2.1.1, "Vegetation."

No special-status plant species were detected during the field investigation; however, the field review was performed when many special-status plants would not have been detectible. Nevertheless, the study area does not support potentially suitable habitat for any of the four special-status plant species reported from the literature search. The habitat requirements for each of the special-status plant species reported in the literature that occur in the project vicinity are summarized in Appendix C. The summary indicates that the likelihood is less than reasonable for any of the four special-status plant species to occur on or adjacent to the project site. As described previously, the site is developed and is dominated by ornamental and nonnative species. Special-status plants are not expected to occur on developed land, and rare plant surveys are not recommended or warranted for the project site.

No special-status wildlife species were detected during the field investigation. Developed land does not support potentially suitable habitat for the one special-status wildlife species (western mastiff bat) reported from the literature search. However, marginally suitable foraging habitat is present within the study area, and it is conceivable the species may forage above the study area, although routine use is not expected. The habitat requirements for the special-status wildlife species reported in the literature that occur in the project vicinity are summarized in Appendix C. The summary indicates that the likelihood is less than reasonable that the one special-status species would occur in the study area.

Mann Middle School

Conditions and findings for Mann Middle School are the same as those discussed for Crawford High School. No special-status plant species and no special-status wildlife species were detected during the field investigation. No potentially suitable habitat for either special-status plant or animal species was detected in the study area.

3.2.1.4 Nesting Birds

Crawford High School

Vegetation occurring on site and in the vicinity of Crawford High School may provide suitable habitat for migratory birds, especially songbirds and raptors protected under the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code, which prohibit the take or destruction of migratory birds, raptors, their active nests, or eggs. Impacts on nesting birds protected by the MBTA and similar provisions of the Fish and Game Code could occur if construction work takes place during the nesting season, generally defined by CDFW as February 1 through August 15.

Mann Middle School

Vegetation occurring on site and in the vicinity of Mann Middle School may provide suitable habitat for migratory birds, especially songbirds and raptors protected under the MBTA and the California Fish and Game Code, which prohibit the take or destruction of migratory birds, raptors, their active nests, or eggs. Impacts on nesting birds protected by the MBTA and similar provisions of the Fish and Game Code could occur if construction work takes place during the nesting season, generally defined by CDFW as February 1 through August 15.

3.2.1.5 Jurisdictional Waters and Wetlands

Jurisdictional waters and wetlands of the U.S. are defined as areas that are subject to federal regulation in accordance with the provisions of Sections 401 and 404 of the Clean Water Act of 1972. Regulations that direct the implementation of this statute are developed by the Environmental Protection Agency (EPA) and United States Army Corps of Engineers (USACE). Any project applicant that proposes to impact waters or wetlands as defined by the Clean Water Act must acquire permits from the USACE for such actions. Federal wetlands are delineated based on the presence or absence of three parameters defined by the USACE: wetland hydrology, soils, and vegetation. The limit of USACE non-wetland waters of the U.S. is delineated using the Ordinary High Water Mark (OHWM) and presence or assumed presence of a significant nexus to Traditional Navigable Water(s). The limits of ordinary high water for distinct water bodies such as bays and lakes are relatively clear. However, in southern California where stream flows are often seasonal, ordinary high water is more difficult to assess and must be determined by the presence of water marks, debris accumulated during high water events, or the presence of a distinct channel bank.

If a project would result in an impact on state waters/streambeds, the project applicant must comply with California Fish and Game Code 1602 as regulated and defined by the CDFW. Unlike the USACE, the CDFW defines jurisdiction by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. Furthermore, CDFW jurisdiction often extends to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that support hydrologic functions within the riparian system. CDFW jurisdiction typically does not include features without a discernible bed and bank, such as swales, vernal pools, or wet meadows. It is common that wetlands and waters of the U.S. under the jurisdiction of the USACE are also considered to be CDFW jurisdictional wetlands.

If a project were to result in an impact on waters and wetlands of the U.S. or state-regulated waters, Water Quality Certification or a waiver would be required for compliance with Section 401 of the Clean Water Act and California's Porter-Cologne Water Quality Control Act. This certification or waiver is issued by the State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB).

The above permits, agreements, and/or certifications for impacts on jurisdictional waters and wetlands are triggered by direct encroachment and not the potential for indirect effects.

Crawford High School

The project site is entirely developed with no evidence of any jurisdictional features. During the site visit no federal or state jurisdictional waters or wetlands were detected in the canyon adjacent to the school. This determination is based on the absence of hydrophytic vegetation, wetland hydrology, an ordinary high water mark, and other geological and hydrological indicators typically associated with jurisdictional features.

Mann Middle School

The project site is entirely developed with no evidence of any jurisdictional features.

3.2.2 Impact Significance Criteria

According to the State CEQA Guidelines, Appendix G, the project would result in a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

3.2.3 Impact Analysis

3.2.3.1 Plants, Wildlife, Special-Status Species, and Natural Communities

Crawford High School

No significant impacts on plants, wildlife, or special-status species are anticipated with implementation of the proposed project. The plant and wildlife species that were present during surveys of the area, and that are expected to continue to be present, are common and characteristic of disturbed and developed areas. Special-status species were not detected during surveys of the study area. Given its current developed condition and the disturbance from adjacent roads and residential development, special-status species are unlikely to utilize the study area.

No sensitive natural communities exist on the project site. One sensitive natural community, coastal sage scrub, occurs adjacent to the south end of the project site and hence within the study area. This natural community is entirely surrounded by development, has no connectivity to open space, and is

of limited size, which negates its ability to support sensitive species typically associated with coastal sage scrub, such as the federally listed coastal California gnatcatcher (*Polioptila californica californica*). The sage scrub and canyon are outside the project footprint, well south of the proposed improvements. Consequently, athletic field improvements and modernization activities, which would primarily occur at the north end of the project site, would have no impacts on sage scrub or other sensitive natural habitats.

The project proposes to add four light poles to the Athletic Stadium. This lighting would be constructed to the standards for shielding neighborhoods from excessive lighting, and most of the light would be directed onto the playing field. The lighting analysis completed for the project determined that the light spill would not exceed thresholds for adverse light trespass. In addition, the usage of this lighting would be restricted to 3-hour football events, approximately 15 times each year. Because there are no special-status species occurring within the project vicinity and the wildlife species (such as raccoon [*Procyon lotor*], Virginia opossum [*Didelphis virginiana*]) that may be present would be accustomed to nighttime lighting from living in an already developed area, there would be no significant lighting impacts on wildlife species.

The proposed project is expected to have no impact on native wildlife movement because there is no wildlife corridor is the project vicinity.

Mann Middle School

Conditions and findings for Mann Middle School are the same as those discussed for Crawford High School. No special-status plant or wildlife species were detected during the field investigation. No potentially suitable habitat for either special-status plant or wildlife species was detected in the project site, and there is no wildlife corridor in the project vicinity.

3.2.3.2 Nesting Birds

Crawford High School

Impacts on nesting birds protected by the MBTA and similar provisions of the Fish and Game Code may occur if work is conducted during the breeding season (February 1 through August 15). Potential impacts could include direct impacts on nests and fledgling birds, as well as indirect impacts from construction noise. Thus, the proposed project is expected to have potential significant but mitigable impacts on nesting birds.

Mann Middle School

Impacts on nesting birds protected by the MBTA and similar provisions of the Fish and Game Code may occur if work is conducted during the breeding season (February 1 through August 15). Potential impacts could include direct impacts on nests and fledgling birds, as well as indirect impacts from construction noise. Thus, the proposed project is expected to have potential significant but mitigable impacts on nesting birds.

3.2.3.3 Hydrology and Jurisdictional Waters and Wetlands

Crawford High School

As discussed further in Section 5.2.3, "Hydrology and Water Quality," no impacts on the overall hydrology and drainage characteristics of the site are anticipated as a result of project construction. Implementation of the athletic field improvements and modernization of school facilities would not result in a substantial increase in the extent of impervious surfaces or affect the location of existing drainage outlets. Surface water would continue to flow across the campus and discharge downstream within an existing storm drain system located in the roadways surrounding the campus. No stormwater structures or other changes to the stormwater conveyance would be incorporated into the project design elements.

No jurisdictional waters or wetlands are within or adjacent to the project site; therefore, no impacts on jurisdictional waters or wetlands are anticipated as a result of project construction.

As discussed in Section 5.2.3, "Hydrology and Water Quality," construction activities would incorporate best management practices (BMPs) in association with a Stormwater Pollution Prevention Plan (SWPPP) to ensure that no indirect impacts would occur.

Mann Middle School

As discussed further in Section 5.2.3, "Hydrology and Water Quality," no impacts on the overall hydrology and drainage characteristics of the site are anticipated as a result of project construction. Implementation of the modernization of school facilities would not result in a substantial increase in the extent of impervious surfaces or affect the location of existing drainage outlets. Surface water would continue to flow across the campus and discharge downstream within an existing storm drain system located in the roadways surrounding the campus. No stormwater structures or other changes to the stormwater conveyance would be incorporated into the project design elements.

No jurisdictional waters or wetlands are within or adjacent to the project site; therefore, no impacts on jurisdictional waters or wetlands are anticipated as a result of project construction.

As discussed in Section 5.2.3, "Hydrology and Water Quality," construction activities would incorporate BMPs in association with a SWPPP to ensure that no indirect impacts would occur.

3.2.3.4 Consistency with Local Ordinances

Crawford High School

Although the District is not subject to the requirements of the City of San Diego Land Development Code, based on the following impact analysis, it is anticipated that the project as planned would conform with the guidelines in the code, including the Environmentally Sensitive Lands regulations that facilitate implementation of the City of San Diego's Multiple Species Conservation Program.

Mann Middle School

Although the District is not subject to the requirements of the City of San Diego Land Development Code, based on the following impact analysis, it is anticipated that the project as planned would conform with the guidelines in the code, including the Environmentally Sensitive Lands regulations that facilitate implementation of the City of San Diego's Multiple Species Conservation Program.

3.2.3.5 Consistency with Biological Guidelines for the San Diego Land Development Code and the San Diego Multiple Species Conservation Plan

Crawford High School

The project site is not located within or adjacent to a Multiple Habitat Planning Area. A Tier II sensitive vegetation community—coastal sage scrub—occurs adjacent to the project site within the canyon south of the project site. However, this canyon is not expected to receive impacts from the project, as much of the external project work—building removal, and placing of asphalt and athletic facility upgrades—is being conducted at the northern end of the school. The study area does not contain and is not adjacent to any jurisdictional wetland or water features. No Multiple Species Conservation Plan–listed species was detected during the site visit, nor does any habitat for a Multiple Species Conservation Plan–listed species occur within the project site or study area. The adjacent canyon does not have sufficient size, quality, or connectivity to be utilized by any sensitive species and is likely only utilized by species commonly found in urban areas. As such, this project is not in conflict with either the San Diego Land Development Code or the Multiple Species Conservation Plan.

Mann Middle School

The project site has the same conditions as those listed for Crawford High School. As such, this project is not in conflict with either the San Diego Land Development Code or the Multiple Species Conservation Plan.

3.2.3.6 Significant Impacts

Crawford High School

Bio-1a: Construction activities at Crawford High School during the breeding season could affect nesting birds and therefore would be considered significant. Mitigation measures proposed to offset these impacts are presented below. If nesting birds are not detected during the preconstruction survey, project impacts would not be considered significant, and no mitigation would be necessary.

Mann Middle School

Bio-1b: Construction activities at Mann Middle School during the breeding season could affect nesting birds and therefore would be considered significant. Mitigation measures proposed to offset these impacts are presented below. If nesting birds are not detected during the preconstruction survey, project impacts would not be considered significant, and no mitigation would be necessary.

3.2.3.7 Mitigation

Bio-MM-1: If impacts on vegetation are proposed to occur during the breeding season (February 1 through August 15), a preconstruction survey must be conducted to determine if any protected birds are nesting within or immediately adjacent (out to 50 feet) to any vegetation within the impact

areas. The survey shall include all vegetation and ground area within an approximately 50-foot area surrounding the proposed construction footprint, including adjacent vegetation that may be situated outside of the site boundary.

The preconstruction nesting bird survey shall be conducted by a qualified biologist to identify nests or nesting activity no more than 7 days prior to commencing project activities. An additional inspection shall be conducted immediately prior to grading, demolition, and/or vegetation clearing. If an active nest of a native bird species is found, a 50-foot no-work buffer zone shall be placed around the nest until the adults are no longer using it or the young have fledged. Given the existing conditions on the site and in the adjacent areas, it is anticipated that the 50-foot buffer will suffice because the project area is considered urban and surrounded by development.

The final buffer width may, however, vary depending on the nesting species and shall be determined by a qualified biologist at the time of discovery. The extent of the buffer will also vary based on site conditions and type of work to be conducted, but will not likely include the need for sound walls that are more typically associated with federally listed species, which have no potential to occur in the study area.

Should construction continue into the following year's nesting season, additional preconstruction surveys would be necessary.

3.2.3.8 Significance of Impacts after Mitigation

Crawford High School

Bio-1a: Implementation of the measures described in mitigation measure Bio-MM-1 would reduce potentially significant impacts on nesting birds to a less-than-significant level.

Mann Middle School

Bio-1b: Implementation of the measures described in mitigation measure Bio-MM-1, would reduce potentially significant impacts on nesting birds to a less-than-significant level.

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Section 3.3

Cultural and Paleontological Resources

This section summarizes the results reported in two Historic Resources Evaluation Reports prepared for Crawford High School and Mann Middle School, which are included as Appendix D of this EIR. For purposes of CEQA, cultural resources consist of historical resources, unique archaeological resources, and paleontological resources. A review of existing data was necessary to identify the locations of previously recorded cultural resources within the project's Area of Potential Effects (APE). Data collected, reviewed, and synthesized for this section were derived from the following.

- South Coastal Information Center (SCIC) database of the California Historical Resources Information System (CHRIS)
- National Register of Historic Places (NRHP)
- California Register of Historical Resources (CRHR)
- California Points of Historical Interest
- California Inventory of Historic Resources
- City of San Diego Landmarks Register
- San Diego History Center, Balboa Park
- San Diego City Public Library, California Room, Downtown Branch
- Minutes of the Quarterly Meetings of the State Historical Resources Commission
- Historic Sanborn Maps
- Historic U.S. Geological Survey (USGS) Topographic Quadrangles
- Historic Aerials
- Consultation with the California Native American Heritage Commission (NAHC)
- Consultation with Native American Most Likely Descendants (MLDs)

Based on records searches and archival research, this section describes the existing cultural and paleontological resources that could be adversely affected by the proposed project and the applicable laws and regulations related to cultural resources. It concludes with an analysis of the proposed project's effect on (1) historical resources, (2) unique archaeological resources, (3) paleontological resources, and (4) buried human remains.

3.3.1 Existing Conditions

3.3.1.1 Cultural Resources Setting

Background

Crawford High School and Mann Middle School are located in a part of the City of San Diego that was once occupied by the Kumeyaay, who are also known as the Diegueños, Ipai, and Tipai (Luomala 1978). Prior to their migration into San Diego County, archaeologists divided the prehistory of the County into artifactual units based on the remains recovered from the sites they once occupied. These manifestations have been labeled Early Archaic, Middle Archaic, and Late Archaic. Early Archaic peoples, circa 9,000 to 7,000 years Before Present (B.P.), have also been called San Dieguito, who were believed to be a culture primarily living off the hunting of large game, possibly the last surviving megafauna from the Pleistocene (Warren et al. 1998). They were, in turn, followed by Middle Archaic cultures, variously called the La Jollan (coastal) or Pauma (interior North County), who lived primarily as hunter-gather-fishers exploiting resources as they became seasonally available (Warren 1964); they relied extensively on the acquisition and processing of seed-producing plant remains. The Late Archaic peoples or Kumeyaay, are believed to have originated in the California desert areas and moved west as the interior continued to become increasingly arid, around 1,500 years ago. They maintained a lifestyle heavily reliant on acorns from oak trees, and the hunting and gathering of smaller game and seed-producing plants. The Kumeyaay were displaced into the foothills after the appearance of the Spanish, who arrived as settlers in Anno Domini (A.D.) 1769, when they founded Mission San Diego de Alcalá (Pourade 1960). After Mexican independence, the Missions were secularized in 1834, and those Kumeyaay living there were forced to move into interior areas or take menial jobs in Old Town San Diego (Carrico 2008). After Mexico lost its war with the United States, the lands now comprising San Diego County came under American jurisdiction in 1848.

Following the discovery of gold at Sutter's Fort in 1849, peoples of all nationalities flooded into California, and California officially became part of the United States in 1851 (Bancroft 1888). San Diego has seen its boom and bust years, but after World War II, a steady influx of people pushed the City's population to its present status as the eighth largest in the nation. To accommodate the rapid population growth that followed World War II the San Diego Unified School District needed to keep pace by constructing numerous schools in the City, especially in areas then feeling the burgeoning suburban boon.

Historic Inventory

Crawford High School

Will C. Crawford High School was evaluated in accordance with Section 15064.5(a) (2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the Public Resources Code, and determined not to be a historical resource for the purposes of CEQA.

Crawford High School does not appear to meet the criteria for listing on the CRHR due to insufficient historic significance. The Crawford High School complex consists of 10 permanent buildings constructed in 1957, a large two-story permanent building constructed in 1962, and single- and two-room classroom buildings and portable buildings located at the northeast, southeast, and

southwest corners of the campus. The school is one of 16 middle, junior, and high schools, in addition to 63 elementary schools, that architect Clyde Hufbauer designed during the 1950s and 1960s. Hufbauer is known for mid-century modern designs, and is considered a San Diego-area master architect. Apart from two homes constructed for his family, his most notable works are educational buildings and complexes developed during the post–World-War II years. Crawford High School's present-day buildings 100–600, administration building, auditorium, gymnasium, campus entry landscaping, and cafeteria were all constructed in 1957. In 1961, Hufbauer also drew up plans for building 800, which was constructed in 1962. The library addition to building 300 and the large courtyard area with the benches and steel shelter north of the cafeteria were constructed after 2000.

Although many of the original buildings retain historic integrity, additions to some buildings, construction of non-original buildings, and landscaping changes have diminished the campus's historic integrity of design and feeling in some places. These changes somewhat diminish the capacity of the school as a whole to convey its period of potential significance, which is 1957, the year the original school facilities were completed. The school also does not appear to be eligible for landmark listing by the City of San Diego Historical Resources Board (HRB). The school is not listed by the City's HRB, nor noted by San Diego Modernists as an exemplary example of Clyde Hufbauer's work.

Most built environments are associated with population growth; that is, they are developed as part of planning for, or in response to, population growth. Associations between built environment resources and population growth are commonplace. Were such associations treated as qualification for historical significance, then all buildings, complexes, and infrastructure surviving from an era of growth would be considered historical resources. However, not all built resources developed during a given era can qualify as significant. Crawford High School does not appear to be associated with any discrete event of historical significance to San Diego, the State of California, or the United States. Hence, it does not appear to meet Criterion 1 for listing in the CRHR. Although the school is associated with an important San Diego architect, such associations are properly assessed with reference to Criterion 3 of the CRHR. Crawford High School does not appear to have associations with other individuals important to local, state, or national history and does not, therefore, appear to be eligible for the CRHR under Criterion 2. Despite the association with master architect Clyde Hufbauer, Crawford High School also does not appear to be eligible for the CRHR under Criterion 3 for historic architectural significance. The school does not appear to be a master work of mid-century modernist architecture. Criterion 4 relates primarily to archaeological data and would not normally factor into an evaluation of an above-ground resource, such as Crawford High School, unless archaeological sites had been previously recorded within the school limits; but that is not the case for the high school.

Mann Middle School

Mann Middle School was evaluated in accordance with Section 15064.5(a) (2)–(3) of the State CEQA Guidelines, using the criteria outlined in PRC Section 5024.1, and was determined not to be a historical resource for the purposes of CEQA. The project would not cause a substantial adverse change in the significance of a historical resource as defined by 15064.5 of the State CEQA Guidelines.

Mann Middle School does not appear to meet the criteria for listing on the CRHR due to insufficient historic significance and the diminished historic integrity of the complex as a whole. The school consists of eight permanent buildings constructed mainly in two phases from 1952 to 1958. New buildings and additions were also undertaken in 1964 and 2004. The primary architectural style

represented is the International Style. Most of the original buildings have a horizontal emphasis executed through elongated plans, low-pitched gable or shed roofs, and repetitively patterned large window banks. Frank L. Hope Sr., a San Diego–area master architect, designed the original layout for Mann Middle School in 1951–1952. He then also designed the school additions that were completed in 1954, 1958, and 1964. The period of potential significance is 1952–1954, the years during which the originally planned buildings were constructed.

The school also does not appear to be eligible for landmark listing by the City's HRB, nor is the school is listed by the City's HRB, nor noted by San Diego Modernists as an exemplary example of Frank L. Hope's work. Most built environments are associated with population growth, as products of either planning for or accommodating such growth. If association with commonplace growth was a qualification for historical significance, then all buildings, complexes, and infrastructure surviving from the era would be considered historical resources. However, not all built resources developed during a given era can qualify as significant. Mann Middle School does not appear to be associated with discrete events of historical significance to San Diego, the State of California, or the United States. Hence, it does not appear to meet Criterion 1 for listing in the CRHR. Although the school is associated with an important San Diego architect, such associations are properly assessed with reference to Criterion 3 of the CRHR. The school does not appear to have associations with other individuals important to the history of San Diego, the State of California, or the United States. It does not, therefore, appear to be eligible for the CRHR under Criterion 2. Despite the association with master architect Frank L. Hope Sr., Mann Middle School does not appear to be eligible for the CRHR under Criterion 3 for historic architectural significance. The school also does not appear to be a master work of mid-century modernist architecture. Criterion 4 relates primarily to archaeological data and would not normally factor into an evaluation of an above-ground resource, such as Mann Middle School, unless archaeological sites had been previously recorded within the school limits; but that is not the case for the middle school.

Archaeological Records Search

Crawford High School

A records search was conducted by the SCIC for the high school, the results of which were received on July 31, 2013. SCIC is the local repository acting on behalf of the State Office of Historic Preservation's CHRIS. The SCIC reviews their digitized records to identify previously recorded archaeological sites within the record search limits; SCIC also identifies any previously conducted cultural resource studies, and provides historical maps of the area and copies of all relevant archaeological site record forms. The results of this search failed to identify any resources within the footprint of Crawford High School or the surrounding area.

ICF also conducted a search of historic maps and aerials to determine the likelihood of buried cultural materials to be present within the high school campus. Because the school was built in 1957, the archival search concentrated on whether buildings or other features had been present prior to the school's construction. Historic aerials were accessed online at www.historicaerials.com. The earliest aerial photograph dated to 1953 and showed no standing structures within the school property. The earliest USGS topographic maps on file for this area date to 1942, 1947, and 1955. These also indicated that no structures had been built on the school property during this timeframe.

Mann Middle School

A records search was also conducted by the SCIC for the middle school, the results of which were received on July 31, 2013. The archaeological and historical files at San Diego State University failed to identify any resources within the footprint of Mann Middle School or the surrounding area. No prehistoric archaeological sites were identified in the area of Mann Middle School by the SCIC.

ICF also conducted a search of historic maps and aerials to determine the likelihood of buried cultural materials to be present within the middle school campus. Because the school was built in 1952, the archival search concentrated on whether buildings or other features had been present prior to the school's construction. Historic aerials were accessed online at www.historicaerials.com. The earliest aerial photograph dated to 1953 and showed no standing structures within the school property. The earliest USGS topographic maps on file for this area date to 1942, 1947, and 1955. These also indicated that no structures had been built on the school property during this timeframe.

Field Surveys

Crawford High School

ICF historian/architectural historian Dr. Timothy Yates surveyed and recorded Crawford High School on August 2, 2012, making note of the school's design and layout, and taking numerous photographs. California Department of Parks and Recreation (DPR) site record forms were filled out (Appendix D). On August 6, 2012, Dr. Yates also researched the construction of the school using original plans on file at the Architectural Archives of the District's Maintenance and Operations Center. Additional research on the school's architect and the historic context of the school's development was conducted online and at the San Diego History Center and the Main Branch of the San Diego Public Library. A subsequent Historical Resources Evaluation Report was prepared by Dr. Yates and Mr. Martin Rosen, also of ICF (Yates and Rosen 2012a).

Mann Middle School

Dr. Yates surveyed and recorded Mann Middle School on August 2, 2012, making note of the school's design and layout, and taking numerous photographs. California DPR site record forms were filled out. On August 6, 2012, Dr. Yates also researched the construction of the school using original plans on file at the Architectural Archives of the District's Maintenance and Operations Center. Additional research on the school's architect and the historic context of the school's development was conducted online and at the San Diego History Center and the Main Branch of the San Diego Public Library. A subsequent Historical Resources Evaluation Report was prepared by Dr. Yates and Mr. Rosen (Yates and Rosen 2012b).

3.3.1.2 Paleontological Resources Setting

Crawford High School and Mann Middle School

Both Crawford High School and Mann Middle School are built on the mesas south of Mission Valley on relatively level land. The sediments that underlie the schools are composed of conglomerate formations that were deposited quite separately in time (Kennedy and Tan 2005). Most of Crawford High School sits upon the San Diego Formation, which dates to the late Pliocene to early Pleistocene, or roughly 1–3 million years ago. Most of Mann Middle School is underlain by the Pomerado

Formation, which dates from the late Eocene, circa 34–45 million years ago. These ages are significantly older than the first appearances of humans on the North American continent. They are, however, a time of significant fossil deposits in the San Diego region. The City of San Diego paleontological guidelines (City of San Diego 2007) defines these formations thusly:

- San Diego Formation: The formation is exposed extensively from Otay Mesa and Otay Ranch to Mission Valley, with isolated occurrences stretched out along the Rose Canyon Fault Zone at Tecolote Canyon, Balboa Avenue, Rose Canyon, and all along the southern slopes of Mount Soledad from Interstate 5 to the sea cliffs at Pacific Beach. The San Diego Formation is a marine sedimentary deposit. The formation has rich fossil beds that have yielded extremely diverse assemblages of marine organisms. In addition, rare remains of terrestrial mammals and fossil wood and leaves have been discovered here. This diverse group of fossils represents one of the most important sources in the world of information on Pliocene marine organisms and environments. As such, it is given high paleontological resource sensitivity.
- Pomerado Formation: The Pomerado Formation is a subgroup of the larger Poway Conglomerate Group. The lower (oldest) portion of the deposit has produced remains of fossil terrestrial mammals including primates, protoreondonts, and insectivores. The middle part of the conglomerate has yielded remains of near shore marine molluscs, as well as unidentifiable mammal bone fragments. The upper conglomerate member has yielded a single fragmentary jaw of an unidentified artiodactyl. The Pomerado Conglomerate crops out from La Mesa to the south to at least Miramar Reservoir in the north, and from there eastward to Santee. The Pomerado Conglomerate is assigned high paleontological resource sensitivity in Scripps Ranch and Tierrasanta, and moderate sensitivity in all other areas of the City.

3.3.2 Impact Significance Criteria

The following significance criteria are based on State CEQA Guidelines, Appendix G, and provide the basis for determining the significance of impacts associated with cultural and paleontological resources resulting from implementation of the proposed project. The project would have a significant impact on cultural and paleontological resources if it would result in any of the following:

1. Cause a substantial adverse change in the significance of a historical resource as defined by 15064.5 of the State CEQA Guidelines.
2. Cause a substantial adverse change in the significance of an archeological resource pursuant to 15064.5 of the State CEQA Guidelines.
3. Directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature.
4. Disturb human remains, including those interred outside of formal cemeteries.

Clarification of Thresholds used for Archaeological and Historic Resources

CEQA requires public agencies to evaluate the implications of their project(s) on the environment and includes significant historical resources as part of the environment.

According to CEQA, a project that causes a substantial adverse change in the significance of a historical resource or a unique archaeological resource has a significant effect on the environment (State CEQA Guidelines 15064.5, PRC Section 21083.2). CEQA defines a substantial adverse change as:

- Physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired; or
- Demolition or material alteration of the physical characteristics that convey the resource's historical significance and justify its designation as a historical resource.

Public agencies must treat any cultural resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant (14 CCR 15064.5). A historic resource is considered significant if it meets the definition of an historical resource or unique archaeological resource.

The term *historical resource* includes but is not limited to any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (PRC Section 5020.1(j)). Historical resources may be designated as such through three different processes:

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC Section 5020.1(k))
2. A local survey conducted pursuant to PRC Section 5024.1(g)
3. The property is listed in or eligible for listing in the NRHP (PRC Section 5024.1(d)(1))

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR (14 CCR 4852), which states that a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4. It has yielded, or may be likely to yield, information important in prehistory or history.

To be considered a historical resource for the purposes of CEQA, the resource must also have integrity, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR (14 CCR 4852(c)).

Any important building, structure, sign, interior element and fixture, feature, site, place, district, area, or object in the City of San Diego may be designated as historic by the City's HRB if it meets any of the following criteria:

a. Exemplifies or reflects special elements of the City's, a community's, or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development.

b. Is identified with persons or events significant in local, state, or national history.

c. Embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship.

d. Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman.

e. Is listed or has been determined eligible by the National Park Service for listing on the NRHP or is listed or has been determined eligible by the State Historic Preservation Officer (SHPO) for listing on the California Register of Historical Resources.

f. Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements that have a special character, historical interest, or aesthetic value or that represents one or more architectural periods or styles in the history and development of the City.

3.3.3 Impact Analysis

3.3.3.1 Archaeological Resources

Crawford High School

As documented above under Section 3.3.1, "Existing Conditions," the potential for any intact buried historical deposits within the school property is low. Because the land remained vacant until the high school was built, any encounter of historical refuse that may be discovered during construction could have originated anywhere and could not be associated with a single household or business. Because of this lack of association, the refuse would not be useful for any archaeological research and would not be considered to be a valuable archaeological resource. As such, impacts associated with the discovery of historical refuse during construction activities (e.g., building demolition, grading) are considered to be less than significant, and no mitigation measures would be required.

It is highly unlikely that human remains would occur within the Crawford High School footprint because of the nature of its past developmental history; however, if remains were discovered during construction and measures were not implemented to adequately address the discovery, a significant impact would occur. As such, the project could result in the disturbance of human remains, including those interred outside of formal cemeteries, which would constitute a significant impact.

Mann Middle School

As documented above under Section 3.3.1, "Existing Conditions," the potential for any intact buried historical deposits within the school property is low. Because the land remained vacant until the school was built, any encounter or discovery of historical refuse during construction could have originated anywhere and could not be associated with a single household or business. Because of this lack of association, the refuse would not be useful for any archaeological research and would not be considered to be a valuable archaeological resource. As such, impacts associated with the discovery of historical refuse during construction activities are considered to be less than

significant, and no mitigation measures would be required. Consequently, the project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines.

It is highly unlikely that human remains would occur within the Mann Middle School footprint because of the nature of its past developmental history; however, if remains were discovered during construction and measures were not implemented to adequately address the discovery, a significant impact would occur. As such, the project could result in the disturbance of human remains, including those interred outside of formal cemeteries, which would constitute a significant impact.

3.3.3.2 Historic Resources

Crawford High School

Three buildings on the Crawford High School campus would be demolished, including classroom buildings 100, 200, and the administration building; however, Crawford High School is not considered eligible for the CRHR and is not of historic significance. Building modification also would include changes to the interior of the buildings and exterior modifications would be made associated with ADA improvements (such as the addition of ramps). Changes also would occur to the existing stadium and associated athletic facilities; however, these facilities are not considered part of a historic complex, and impacts would be less than significant. Therefore, the proposed site modernization improvements, including classroom and administration building demolition and athletic facilities improvements, would not result in a substantial adverse change to a historical resource as defined by Section 15064.5 of the State CEQA Guidelines. No mitigation measures would be necessary.

Mann Middle School

Some modifications to existing buildings would occur at Mann Middle School, including improvements at the library annex (building 200) and reconfiguration of building 500, which would be upgraded to serve as an administrative area; however, Mann Middle School is not considered eligible for the CRHR and is not of historic significance. Building modification would also occur to the interior of the buildings, and exterior modifications would be made associated with ADA improvements (such as the addition of ramps). Because the middle school site is not considered eligible for the CRHR, the proposed site modernization improvements would not result in a substantial adverse change to a historical resource as defined by Section 15064.5 of the State CEQA Guidelines. No mitigation measures would be necessary.

3.3.3.3 Paleontological Resources

Crawford High School

As discussed in Section 3.3.1.2, “Paleontological Resources Setting,” the rock units underlying Crawford High School are sensitive for fossil discoveries. If any fossils were destroyed during project construction, a significant impact would occur. Construction activities could encounter fossils depending on where construction occurs, how it occurs, the depth of excavation required, and how large an exposure is created. As such, the proposed project could result in a significant impact on paleontological resources, and mitigation measures would be necessary to reduce impacts to a level below significance.

Mann Middle School

As discussed Section 3.3.1.2, "Paleontological Resources Setting," the rock units underlying Mann Middle School are sensitive for fossil discoveries. If any fossils were destroyed during project construction, a significant impact would occur. Construction activities could encounter fossils depending on where construction occurs, how it occurs, the depth of excavation required, and how large an exposure is created. As such, the proposed project could result in a significant impact on paleontological resources, and mitigation measures would be necessary to reduce impacts to a level below significance.

3.3.3.4 Significant Impacts

CR-1a: The project at Crawford High School could result in direct or indirect significant impacts on a unique paleontological resource or site. Impacts on paleontological resources could occur from subsurface grading that disturbs underlying Eocene or Pleistocene/Pliocene age deposits, which could contain paleontological resources. Additionally, construction and associated grading could occur within formations known to contain paleontological resources. Impacts on paleontological resources associated with construction would be significant.

CR-1b: The project at Mann Middle School could result in direct or indirect significant impacts on a unique paleontological resource or site. Impacts on paleontological resources could occur from subsurface grading that disturbs underlying Eocene or Pleistocene/Pliocene age deposits, which could contain paleontological resources. Additionally, construction and associated grading could occur within formations known to contain paleontological resources. Impacts on paleontological resources associated with construction would be significant.

CR-2a: The project at Crawford High School could result in a significant impact on human remains, including those interred outside of formal cemeteries. Construction and associated grading could occur within sediments where human remains might unexpectedly occur. Impacts on human remains associated with construction would be significant.

CR-2b: The project at Mann Middle School could result in a significant impact on human remains, including those interred outside of formal cemeteries. Construction and associated grading could occur within sediments where human remains might unexpectedly occur. Impacts on human remains associated with construction would be significant.

3.3.3.5 Mitigation Measures

CR-MM-1: A Qualified Paleontologist shall prepare a *Paleontological Assessment Report* that includes record searches and reviews of the existing literature for the project area in order to determine the likelihood of fossils being impacted. If the report identifies impacts on highly sensitive paleontological deposits that cannot be avoided, the following additional measures shall be implemented to recover remains before they are lost or destroyed.

- If highly sensitive fossil-bearing deposits are likely to be impacted and the proposed construction methodology would allow for the recovery of fossils, then the following measures would be incorporated into the project Mitigation and Monitoring Reporting Program (MMRP).
    - If mitigation is necessary, then a Qualified Paleontologist shall attend preconstruction meetings to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A Qualified Paleontologist is

defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the County for at least 1 year.

  - A Paleontological Monitor shall be on site on a full-time basis during the original cutting of previously undisturbed deposits of high sensitivity formations to inspect exposures for contained fossils. The Paleontological Monitor shall work under the direction of the Qualified Paleontologist. A Paleontological Monitor is defined as an individual who has experience in the collection and salvage of fossil materials.
  - If discovered, the Qualified Paleontologist (or Paleontological Monitor) shall recover fossils. In most cases, this fossil salvage can be completed in a short period of time; however, some fossil specimens, such as a complete large mammal skeleton, may require an extended salvage period. In these instances the Qualified Paleontologist (or Paleontological Monitor) would be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for recovering small fossil remains, such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on site.
  - Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and catalogued.
  - Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) in a scientific institution with permanent paleontological collections, such as the San Diego Natural History Museum. Donation of the fossils shall be accompanied by financial support for initial specimen storage.

- A final data recovery report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

CR-MM-2: The discovery of human remains demands that certain laws and protocols be followed before proceeding with any action that might disturb the remains further. If human remains are discovered, then PRC Section 5097.98 and State and Heath Code Section 7050.5 shall be followed as specified below:

- The Archaeological Principal Investigator (P.I.) shall first notify the project's Resident Engineer (R.E.), who shall then notify the appropriate District staff.
- The Lead Archaeologist shall then notify the Medical Examiner (M.E.), after consultation with the R.E., either in person or via telephone.
- Work shall be immediately diverted away from the discovery.
- The P.I. and M.E. shall decide if a field examination is necessary.
- If the remains are determined to be Native American, the M.E. shall contact the California NAHC. By law, only the M.E. can make this call.
- The NAHC shall contact the P.I. within 24 hours after notification by the M.E. The NAHC shall also notify the person or persons determined to be the MLDs.

- The P.I. and MLD shall consult and coordinate on the proper and respectful treatment of the remains. In most instances, the disposition of the human remains shall be determined by the MLD and P.I.
- If the human remains are not Native American, then the P.I. shall contact the M.E. and discuss the historical context of the find, whereupon the M.E. shall decide the appropriate course of action in accordance with PRC Section 5097.98.

3.3.3.6 Significance of Impacts after Mitigation

Crawford High School

CR-MM-1a: Implementation of the measures described in mitigation measure CR-MM-1would reduce potentially significant impacts on a unique paleontological resource or site or unique geological feature to a less-than-significant level.

CR-MM-2a: Implementation of the measures described in mitigation measure CR-MM-2 would reduce potentially significant impacts on any human remains, including those interred outside of formal cemeteries, to a less-than-significant level.

Mann Middle School

CR-MM-1b: Implementation of the measures described in mitigation measure CR-MM-1would reduce potentially significant impacts on a unique paleontological resource or site or unique geological feature to a less-than-significant level.

CR-MM-2b: Implementation of the measures described in mitigation measure CR-MM-2 would reduce potentially significant impacts on any human remains, including those interred outside of formal cemeteries, to a less-than-significant level.

Section 3.4
Hazards and Hazardous Materials

In support of the Crawford High School and Mann Middle School Athletic Facility Upgrade and Modernization Project, Ninyo and Moore prepared a *Hazardous Materials Evaluation* (see Appendix E), that included the review of a *Limited Lead Investigation Report* prepared by Kleinfelder (September 16, 2003) and a *Phase I Environmental Site Assessment* prepared by URS (October 14, 2002). This section of the EIR summarizes the findings from these reports.

3.4.1 Existing Conditions

Based on the review of the *Phase I Environmental Site Assessment* (ESA) prepared by URS, Ninyo and Moore determined that both project sites were vacant, undeveloped land prior to construction of the schools between 1952 and 1957. The report noted that issues related to former underground storage tanks (USTs), lead-based paint, and undocumented fill soil could result in environmental impacts associated with the proposed construction and improvement activities.

3.4.1.1 Crawford High School

Initial construction of Crawford High School included the installation of two diesel fuel USTs to provide fuel to boilers on site and one waste oil UST. As shown on Figure 3.4-1, one 1,000-gallon diesel UST was located in a parking area near the northeast corner of the gym and a 5,000-gallon diesel UST was located near the southeast corner of building 600 near the southern edge of the school site. The 5,000 gallon UST was in the approximate site of a filled depression or drainage. These two USTs were subsequently removed in 1988, and removal activities were monitored for the 1,000 gallon UST. The 5,000-gallon UST's removal was not monitored, and no soil samples were collected; however, soils in the vicinity reportedly were excavated and removed from the school site. Later observations revealed that about 141 cubic yards of soil were impacted with petroleum hydrocarbons at depths between 8 and 24 feet below ground surface. In 2000, the County of San Diego Department of Environmental Health issued a closure for the release of contaminated soils within the 141 cubic yard area and required that subsurface construction activities be managed in accordance with applicable legal requirements. A third waste oil UST (8,976-gallon capacity) had been installed in 1957. However, no additional information on that UST exists, and it is possible that it still exists on site. A review of historical aerial photographs and topographic maps indicate the presence of a natural depression or drainage extending south from the southern central portion of the site (Figure 3.4-1). This depression was filled between 1955 and 1957. The details of the filling operation were not documented; thus, the source and type of material used for fill are unknown.

School facilities comprise the central portion of the site and include classrooms, administration buildings, service buildings, storage buildings, utility buildings, and asphalt-paved parking lots. Because the existing school buildings were constructed in the 1950s, it is presumed that all buildings at Crawford High School contain lead-based paint. Furthermore, erosion and weathering of lead-based paint may have contaminated the soil around those buildings painted with lead-based paint. However, buildings on site have not been tested to definitively determine the presence or

absence of lead-based paint. It is anticipated that buildings constructed prior to the 1970s also contain asbestos. Asbestos, common in building products through the 1970s, is presumed to exist in the floor tile, ceiling tile, and roofing materials. At this time, none of the school facilities have been tested to confirm the presence or absence of asbestos.

3.4.1.2 Mann Middle School

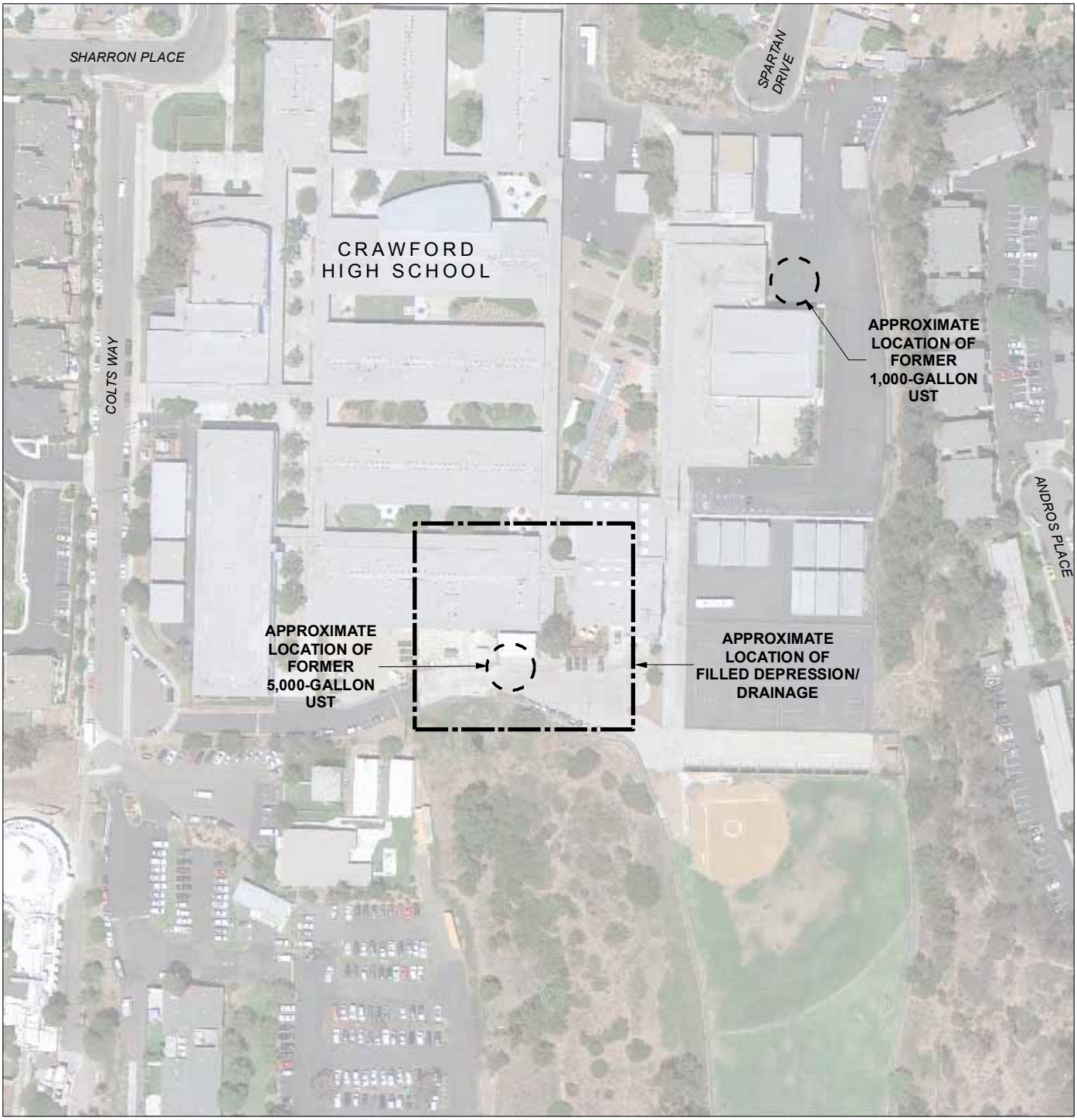
There are no known records of any USTs within the Mann Middle School campus. As with the Crawford High School site, buildings on the Mann Middle School site constructed during or before the 1970s could contain hazardous building materials, including lead-based paint and asbestos.

3.4.2 Impact Significance Criteria

The following significance criteria are based on State CEQA Guidelines, Appendix G, and provide the basis for determining the significance of impacts associated with hazards and hazardous materials. The project would result in a significant impact on hazards and hazardous materials if it would result in any of the following:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment (State CEQA Guidelines Section 15186).
5. 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, result in a safety hazard for the people residing or working in the area.
6. For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
8. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

As discussed in the NOP prepared for the proposed project (Appendix A), impacts regarding safety hazards associated with a public or private airport and a risk of wildland fires would not occur. As such, thresholds 1 and 5–8 were dismissed in the NOP and are not discussed further in this EIR.



SOURCE: AERIAL IMAGERY - PHOTO DATE: AUGUST, 2010; (C) GOOGLE EARTH, 2012.

NOTES:
UST - UNDERGROUND STORAGE TANK

DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

SCALE IN FEET

0 75 150 300

N

Source: Ninyo & Moore

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Figure 3.4-1
Underground Storage Tank Location
Crawford High School & Mann Middle School Modernization Project

3.4.3 Impact Analysis

The proposed project may result in hazardous materials impacts as a result of pre-existing underground storage tanks and associated contaminated soils, as well as the likely presence of lead-based paint and asbestos in school buildings.

3.4.3.1 Release Hazardous Materials into the Environment

Crawford High School

There have been three documented USTs installed within the Crawford High School campus. Two were removed in 1988, but the removal of the 5,000-gallon UST was not monitored, and soil samples were not collected. Also, there is no documentation that a third UST (8,967-gallon UST) was ever removed. As noted above, the County of San Diego issued a closure letter for the 1,000 gallon UST and no potentially significant impacts are anticipated with this UST; however, there is the potential to encounter either contaminated soils related to the 5,000-gallon UST or the 8,967-gallon UST. Disturbance of contaminated soils or an existing UST could result in the potential for the exposure of contaminated soils during the school modernization improvements. Further, there is undocumented fill soil in the southern central portion of the site for which there are no documented details. As such, the potential for persons to be exposed to contaminated soils during construction is considered to be a potentially significant impact on the public or the environment, and mitigation measures would be necessary to reduce or avoid the potential for exposure to petroleum hydrocarbon–impacted soil to occur during construction.

Other potential contaminants and hazardous materials that may be released into the environment include lead-based paint and asbestos. The 2002 Phase I ESA report establishes that a representative of the District confirmed that lead-based paint was known to be on site. Because some of the school buildings were built in the mid-1950s, they were likely painted with lead-based paint; however, no lead testing has been done to determine if the particular buildings that would be modified or demolished—including the administration building, building 100, and building 200—contain lead-based paint. Furthermore, it is possible that weathering and erosion of lead-based paint into soils in the vicinity of the buildings have resulted in contamination of soils. Soil samples for lead testing have been collected from the soils adjacent to the library site and there was no elevated concentration of lead. Soils in the vicinity of the remaining buildings have not been tested for lead. Therefore, disturbance of these soils during modernization efforts could result in exposure of construction workers to hazardous materials and a significant impact could occur.

The disturbance of asbestos would be avoided by complying with the EPA's asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations, which are further discussed in Chapter 5, "Environmental Effects Found Not to Be Significant," section 5.2.1, "Air Quality." Because demolition and renovation activities would be completed in compliance with the asbestos NESHAP, which includes notification requirements and other mitigation strategies to avoid environmental hazards associated with the exposure of asbestos fibers, impacts are anticipated to be less than significant.

Mann Middle School

As with the facilities at Crawford High School, the buildings at Mann Middle School were constructed prior to 1978. Thus, it is anticipated that asbestos and lead paint exists in those buildings as well. The proposed improvements at Mann Middle School would involve the demolition of building 100 and building 200, both of which were constructed in 1952. Compliance with the EPA's NESHAP regulations would be required prior to demolition activities, which would avoid a significant impact related to the exposure of asbestos. However, the proposed project has the potential to result in a significant impact during the disposal of building materials if lead-based paint is released into the environment during the demolition and reconfiguration of buildings 100 and 200.

3.4.3.2 Emit or Handle Hazardous Materials Near a School

Crawford High School

As discussed above project-related actions have the potential to disturb and expose people to hazardous materials based on the historical documentation of two USTs (one of which may still be on site), an area containing undocumented fill, and the potential for demolition activities at the administration building and buildings 100 and 200 to encounter lead-based paint. Although standard compliance with NESHAP regulations would reduce potentially significant impacts related to asbestos to a level below significance, other significant impacts related to hazardous materials emissions within the Crawford High School campus would remain, and mitigation measures would be required.

Mann Middle School

There are no known USTs or other areas of hazardous materials beneath the ground on the Mann Middle School campus; however, due to the age of the classroom buildings, hazardous materials such as asbestos and lead-based paint are likely to be encountered at the middle school. Standard compliance with NESHAP regulations are expected to reduce any potentially significant impacts related to asbestos to a level below significance. Building demolition and reconfiguration actions at buildings 100 and 200 could involve lead-based paint that could emit hazardous materials near a school, and a significant impact could result. Therefore, hazardous materials emissions within the Mann Middle School campus are considered to be potentially significant, and mitigation measures would be required.

3.4.3.3 Be Located on a List of Hazardous Materials Sites

Crawford High School

Pursuant to a review of both the GeoTracker (State Water Resources Control Board) and EnviroStor (State Department of Toxic Substances Control [DTSC]) databases, Crawford High School is included as an inactive site in need of further evaluation for potential lead contamination associated with prior USTs (DTSC 2012). Although there are no other open UST cases at the Crawford High School site (GeoTracker 2012), there is the potential to encounter either contaminated soils where the former 5,000-gallon UST was located and removed, or at the site of the 8,967-gallon UST, which may still be located underground on the campus. Impacts are considered to be potentially significant and mitigation measures would be necessary.

Mann Middle School

There are no known or documented USTs within the Mann Middle School campus, and a search of the GeoTracker and EnviroStor databases revealed no potentially hazardous resources within the project site (DTSC 2012, GeoTracker 2012). No impact would occur.

3.4.3.4 Significant Impacts

Crawford High School

Haz-1: Project activities at Crawford High School could result in direct or indirect significant impacts related to upset and accident conditions involving the release of hazardous materials into the environment during construction involving the disturbance of subsurface materials within 10 feet of the 5,000 or 8,967 gallon USTs or undocumented fill.

Haz-2a: Construction activities at Crawford High School could result in direct or indirect significant impacts related to upset and accident conditions involving the release of lead-based paint into the environment during demolition of the administration building, and buildings 100 and 200.

Haz-3a: Construction activities at Crawford High School could result in direct or indirect significant impacts related to emitting or handling hazardous materials near a school involving disturbance of lead-based paint materials at the administration building or buildings 100 and/or 200.

Haz-4: Crawford High School is located on a list of hazardous materials sites that could create a significant hazard to the public or the environment.

Mann Middle School

Haz-2b: Construction activities at Mann Middle School could result in direct or indirect significant impacts related to upset and accident conditions involving the release of lead-based paint into the environment during the demolition and reconfiguration of buildings 100 and 200.

Haz-3b: Construction activities at Mann Middle School could result in direct or indirect significant impacts related to emitting or handling hazardous materials near a school involving disturbance of lead-based paint materials at buildings 100 and 200.

3.4.3.5 Mitigation Measures

Haz-MM-1: Prior to the issuance of construction permits at Crawford High School, a Master Soil Management Plan shall be prepared to establish protocol for encountering hazardous materials during construction, including two USTs and/or undocumented fill. Generally, the procedures that could be implemented to minimize hazards during construction include the following:

- Periodic site inspections.
- Notification for disturbance of subsurface materials.
- Segregation of excavated materials that are contaminated, potentially contaminated, or clean soil/materials per Environmental Professional guidance.
- Determination of soils suitable for possible on- or offsite reuse.
- Stockpile management (includes implementation of BMPs and odor/vapor control measures).

- Waste characterization (involves stockpile sampling).
- Management of contaminated soil or waste transport and disposal.
- Documentation of contaminated soils or wastes if encountered.

Haz-MM-2: Prior to the issuance of construction permits for modernization improvements, a Site-Specific Health and Safety Plan (HASP) shall be prepared in accordance with the requirements of the Master Community Health and Safety Plan (CHSP) to minimize community exposure to hazards (both on- and off site) and to foster community awareness of potentially hazardous materials. The HASP shall be prepared in accordance with federal and state Occupational Safety and Health (OSHA) Hazardous Wastes Operations and Emergency Response (HAZWOPER) Standards; Code of Federal Regulations, Title 29, Section 1910.120; and California Code of Regulations, Title 8, Section 5192.

The CHSP and site-specific health and safety plan will be applied during any project construction activities that involve disturbance of lead-based paint. Generally, the procedures that could be implemented to minimize hazards during construction include the following:

- Evaluation of potential public exposure to hazards.
- Action planning to reduce airborne concentrations if found.
- Documentation of daily instrument readings.
- Implementation of administrative and engineering control methods (e.g., reduce public access; prevent or minimize fugitive vapors, odors, and dust; and reduce noise and other physical hazards).
- Implementation of site security.
- Daily backfilling (when feasible) or fencing off of open excavations.
- Use of metal, water-tight roll-off bins, and multiple liners for temporary storage or stockpiled materials.
- Onsite vehicle traffic backing.
- Implementation of BMPs pertaining to hazardous materials.
- Emergency planning in case of accidental or unauthorized release.
- Providing public notice and Proposition 65 Warning required under Section 25249.6 of the State of California Health and Safety Code.

3.4.3.6 Significance of Impacts after Mitigation

Crawford High School

Haz-1: Implementation of the measures identified in mitigation measure Haz-MM-1 would reduce the impact related to the release of hazardous materials into the environment to a less-than-significant level.

Haz-2a: Implementation of the measures identified in mitigation measures Haz-MM-1 and Haz-MM-2 would reduce the impact related to the release of hazardous materials into the environment to a less-than-significant level.

Haz-3a: Implementation of the measures identified in mitigation measures Haz-MM-1 and Haz-MM-2 would reduce the impact related to emitting or handling hazardous materials near a school to a less-than-significant level.

Haz-4: Implementation of the measures identified in mitigation measures Haz-MM-1 and Haz-MM-2 would reduce the impact related to the location of Crawford High School on a hazardous materials site to a less-than-significant level.

Mann Middle School

Haz-2b: Implementation of the measures identified in mitigation measures Haz-MM-1 and Haz-MM-2 would reduce the impact related to the release of hazardous materials into the environment to a less-than-significant level.

Haz-3b: Implementation of the measures identified in mitigation measures Haz-MM-1 and Haz-MM-2 would reduce the impact related to emitting or handling hazardous materials near a school to a less-than-significant level.

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Section 3.5
Noise

This section describes the potential noise impacts related to construction and operation of the project based on the noise assessment memorandum prepared by ICF International (see Appendix F). The section includes a review of existing conditions, a summary of applicable policies and regulations related to noise, and an analysis of noise impacts resulting from construction and operation of the project. Where feasible, mitigation measures are recommended to reduce the level of expected impacts.

3.5.1 Existing Conditions

3.5.1.1 Noise Terminology

The following are brief definitions of noise terminology used in this evaluation. Detailed discussion of noise levels of combined noise sources, human sound perception for various increases of noise levels, and sound attenuation are include in Appendix F.

- **Sound**. A vibratory disturbance transmitted by pressure waves through a medium such as air and capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise**. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB)**. A measure of sound based on a logarithmic scale that indicates the squared ratio of actual sound pressure level to a reference sound pressure level (20 micropascals).
- **Weighted Decibel (dBA)**. A measure of sound that is weighted to take into account the varying sensitivity of the human ear to different frequencies of sound. The dBA scale is the most widely used for environmental noise assessments. Typical A-weighted noise levels for various types of sound sources are summarized in Table 3.5-1.
- **Equivalent Sound Level (Leq)**. Leq represents an average of the sound energy occurring over a specified period. In effect, Leq is the steady-state sound level that would contain the same acoustical energy as the time-varying sound that actually occurs during the monitoring period. The 1-hour A-weighted equivalent sound level (Leq 1h) is the energy average of A-weighted sound levels occurring during a 1-hour period.
- **Maximum Sound Levels (Lmax)**. The maximum (Lmax) sound levels measured during a monitoring period.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7 p.m. to 10 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10 p.m. to 7 a.m.

Table 3.5-1. Typical A-Weighted Sound Levels

Common Outdoor Activities	Sound Level (dBA)[1]	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 mph at 50 feet		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower at 100 feet	70	Vacuum cleaner at 3 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban area, daytime	50	Dishwasher in next room
Quiet urban area, nighttime	40	Theater, large conference room (background)
Quiet suburban area, nighttime		
	30	Library
Quiet rural area, nighttime		Bedroom at night, concert hall (background)
Rustling of leaves	20	
		Broadcast/recording studio
	10	
	0	

Source: California Department of Transportation (2009).
[1] dBA = A-Weighted Decibel

3.5.1.2 Existing Noise Environment

A single study area for existing noise conditions was established for both school sites due to their proximity to one another. The study area is defined as the noise-sensitive land uses in the vicinity of the two school sites that would be potentially impacted by elevated noise and vibration levels generated by project construction activities and project operation activities. Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include residences, hospitals, schools, guest lodgings, libraries, and certain types of passive recreational uses, such as parks to be used for reading, conversation, and meditation (Federal Transit Administration 2006). The existing land uses surrounding Crawford High School and Mann Middle School are summarized below:

- Single-family and multi-family residences (R1) located along Sharron Place and Colts Way, to the west of the proposed Athletic Stadium and front entry area of Crawford High School.

- Single-family residential area (R2) located along Vale Way, Spartan Drive, and Trojan Avenue, to the east of the proposed Athletic Stadium and to the south of proposed baseball/softball complex at Crawford High School.
- Single-family residences (R3) located along 58th Street and Meade Avenue, to the east and north of the proposed baseball/softball complex.
- Single-family residences (R4) located along 56th Street, to the west of the proposed baseball/softball complex and to the north of the proposed tennis courts and overflow parking lot for Crawford High School.
- Single-family and multi-family residences (R5) located on 54th Street, to the west of the front entry of Mann Middle School.
- Single-family residences (R6) located on Trojan Avenue, to the south of the parking lot/drop-off area at Mann Middle School.

Table 3.5-2 summarizes the approximate distances from noise-sensitive land use areas to the closest construction sites and operation activities.

Table 3.5-2. Noise-sensitive Land Uses and Distances to Construction and Operation Activities

Area	Area Description	Closest Distance to Construction Activities (feet)	Closest Distance to Operation Activities (feet)
R1	Single-family and multi-family residences located along Sharron Place and Colts Way.	100 (Crawford High School Athletic Stadium and entry area in front of building 800)	150 (Crawford High School Athletic Stadium)
R2	Single-family residential area located along Vale Way, Spartan Drive, and Trojan Avenue (east of 56th Street).	60 (Crawford High School Athletic Stadium)	80 (Crawford High School Athletic Stadium)
R3	Single-family residences located along 58th Street and Meade Avenue.	100 (Crawford High School baseball/softball complex)	Similar to existing athletic activities
R4	Single-family and multi-family residences located along 56th Street.	50 (Crawford High School tennis courts)	600 (Crawford High School Athletic Stadium)
R5	Single-family and multi-family residences located on 54th Street.	150 (Mann Middle School new classroom building)	170 (HVAC at Mann Middle School new classroom building)
R6	Single-family residences located on Trojan Avenue (west of 56th Street).	100 (Mann Middle School parking lot, basketball courts, and landscape)	600 (Crawford High School Athletic Stadium)

Onsite noise-sensitive uses include classrooms and other school-related facilities such as outdoor play and eating areas.

The existing ambient noise environment in the project vicinity is characteristic of a suburban environment with local vehicle traffic being the dominate noise source. In the area immediately adjacent to both school sites, sporting activities in the current ball fields are a source of noise. There are no lights at any of the fields so all current activities are limited to daylight hours. No PA systems are currently used at the existing ball fields. To generally quantify existing ambient noise levels in the project area, five 15-minute, short-term measurements were conducted on March 23 and April 19, 2013, at various locations around the project site. Figure 3.5-1 shows the short-term noise measurement sites. Table 3.5-3 summarizes the results of the noise measurements. The noise environment in the area consists of noise from traffic along 54th Street, Trojan Avenue, and local residential streets. Other noise sources in the project vicinity are typical of residential land uses, such as cars starting up, barking dogs, and occasional activities such as landscape maintenance. The ambient noise level in the project area is about 48–52 dBA Leq at the residential areas on local residential streets and 56–57 dBA Leq at the residential area along 54th Street and Trojan Avenue.

Table 3.5-3. Summary of Existing Ambient Noise Levels

Site	Site Description	Starting Date/ Time	Measured Noise Level (dBA)	
			Leq	Lmax
ST1	4191 Colts Way at the Crawford High School entry area	March 23, 2013 1:15 p.m.	51.9	68.8
ST2	4232 Sharon Place	March 23, 2013/ 1:45 p.m.	56.4	74.2
ST3	On the football/soccer field, behind 5643 Meade Avenue	March 23, 2013/ 2:45 p.m.	48.3	63.4
ST4	5606 Vale Way	March 23, 2013/ 3:25 p.m.	48.2	64.0
ST5	4345 54th Street on the Mann Middle School parking lot	April 19, 2013/ 10:15 a.m.	57.4	66.8

ST = short-term (15 minutes) ambient noise measurement; dBA = A-Weighted Decibel; Leq = Equivalent Sound Level; Lmax = maximum sound level.

3.5.1.3 Noise Regulations

Construction noise within the City of San Diego is governed by the City's Municipal Code Section 59.5.0404. The relevant parts are cited below:

(a) It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with the exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator.

(b) Except as provided in subsection C hereof, it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 dBA during the 12-hour period from 7:00 a.m. to 7:00 p.m.

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Figure 3.5-1
Short-Term Noise Measurement Sites
Crawford High School & Mann Middle School Modernization Project

Operation noise within the City of San Diego is governed by the City's Municipal Code Section 59.5.0401, which established the allowable noise limits at the property boundaries for different land use zones. The relevant parts are cited below:

(a) It shall be unlawful for any person to cause noise by any means to the extent that the one-hour average sound level exceeds the applicable limit given in the following table, at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced. The noise subject to these limits is that part of the total noise at the specified location that is due solely to the action of said person.

(b) The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.

The noise limits for residential zones are summarized below in Table 3.5-4. The applicable requirement is a function of the time-of-day and land use zone.

Table 3.5-4. City of San Diego Property Line Noise Limits

Receiving Land Use	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.
Single Family Residential[1]	50 dBA Leq	45 dBA Leq	40 dBA Leq
Multi-Family Residential	55 dBA Leq	50 dBA Leq	45 dBA Leq
All Other Residential[2]	60 dBA Leq	55 dBA Leq	50 dBA Leq

The District has adopted City noise standards for the analysis of the project's noise impacts. Because evening sport events at the school site are not expected to extend beyond 10 p.m., for single-family residences to west of the project, the operation noise limits permitted under the City's noise standards would be 50 dBA Leq between 7 a.m. and 7 p.m. and 45 dBA between 7 p.m. and 10 p.m.; for multi-family residences, the operation noise limits would be 55 dBA Leq between 7 a.m. and 7 p.m. and 50 dBA between 7 p.m. and 10 p.m.

As discussed in Section 3.5.1.2, "Existing Noise Environment," classrooms and certain types of school-related facilities within the school are considered noise-sensitive uses. However, they are within the project site as part of the project improvements; the City's noise ordinance exempts the noise generated within the property from the noise standard (providing that such activities are measured at or beyond the property line). Therefore, project-related noise generation at onsite classrooms and other noise-sensitive uses are not evaluated further in this analysis.

California Code of Regulations Title 24 includes sound transmission control requirements that establish uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family units. Specifically, Title 24 states that interior noise levels attributable to exterior sources (greater than 60 dBA CNEL) shall not exceed 45 dBA CNEL in any habitable room of new dwellings. Because the project would build a new classroom building in the Mann Middle School, it would be subject to the Title 24 Noise Insulation Standards and the City's noise ordinance.

3.5.2 Impact Significance Criteria

The following significance criteria from the City of San Diego are based on State CEQA Guidelines, Appendix G, and provide the basis for determining the significance of noise impacts resulting from implementation of the proposed project. The project would have a significant impact in terms of noise if it would:

1. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, as follows.
   - Generate construction noise in excess of 75 dBA Leq at noise-sensitive land uses over any one-hour between 7:00 a.m. to 7:00 p.m.
   - Generate operation noise from sport events in excess of noise limits listed in Table 3.5-4 at noise-sensitive land uses.
   - Result in an increase in operational traffic noise of greater than 3 dB over the traffic noise levels without the project at existing noise-sensitive land uses. The 3 dB is generally considered to be the threshold of a perceptible change.
2. Result in sound levels that adversely affect the educational program, as follows.
   - Expose new project classrooms greater than 45 dBA CNEL of interior noise level.
3. Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
4. Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
5. Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
6. Expose people residing or working the project area to excessive noise levels where the project is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport.
7. Expose people residing or working in the project area to excessive noise levels where the project is within the vicinity of a private airstrip.

As discussed in the NOP prepared for the proposed project (Appendix A), impacts regarding noise related to an airport or private airstrip would not be significant. The nearest airport is the Montgomery Field Airport, located approximately 5 miles northwest of the project. There is no other private airstrip or public airport located within the immediate vicinity of the project. The project would not expose the facility or students to excessive noise levels from airport or aircraft operations. Therefore, thresholds 6 and 7 were dismissed in the NOP and are not discussed further in this EIR.

3.5.3 Impact Analysis

3.5.3.1 Analysis Methods

This noise impact analysis evaluates the temporary noise increase associated with project construction activities, long-term operational noise generated by activities at the new Athletic Stadium and baseball/softball complex and by heating, ventilation, and air conditioning (HVAC) condensers at the new classroom building, and traffic noise associated with project-related traffic increase.

Noise impacts associated with onsite construction activities were evaluated using the construction equipment noise data in the Federal Highway Administration (FHWA) roadway construction noise model (RCNM). Table 3.5-4 presents typical noise levels for the types of construction equipment that would be used for the project. The noise levels listed represent the A-weighted Lmax, measured at a distance of 50 feet from the construction equipment and the utilization factors for the equipment, defined as the fraction of time that the equipment typically runs at maximum capacity (FHWA 2006). The utilization factor is used to estimate Leq values from Lmax values.

Table 3.5-5. Typical Maximum Noise Emission Levels by Construction Equipment

Equipment	Acoustical Utilization Factor (%)	Typical Noise Level at 50 Feet from Source (dBA)	
		Lmax	Leq
Backhoe	40	78	74
Crane	16	81	73
Concrete mixer truck	40	79	75
Drill rig	20	84	77
Dozer	40	82	78
Drum mixer	50	80	77
Dump truck	40	76	72
Excavator	40	81	77
Front-end loader	40	79	75
Grader	40	85	81
Pickup truck	40	75	71
Roller	20	80	73
Scraper	40	84	80

Source: FHWA (2006).
dBA = A-weighted decibels; Lmax = maximum sound level; Leq = equivalent sound level.

Noise impacts associated with increase traffic volumes generated by the new football stadium were evaluated for the Existing, Existing plus Project, Cumulative No Project, and Cumulative plus Project conditions, using a spreadsheet based on the FHWA traffic noise model (TNM). This spreadsheet calculates the traffic noise levels at a fixed distance from the centerline of a roadway based on the traffic volume, speed, and truck percentage that is predicted to occur under each condition. The traffic data used in this analysis were based on the traffic impact study report provided by the project traffic consultant (Appendix F). Traffic noise was evaluated in terms of how project-related traffic noise increases could affect existing noise-sensitive land uses on existing roadways.

Operational noise impacts associated with activities at the new Athletic Stadium and new stationary sources (i.e., PA system) for the new stadium are evaluated based on the proposed project layout and the noise measurements taken at an existing similar football stadium during a nighttime football game. The results of the noise measurements at the similar football stadium and the analysis of possible noise-related impacts caused by the future football games and other similar events at the new Athletic Stadium are described in Appendix F.

Noise generated by point sources (e.g., construction equipment and stationary operational equipment) was estimated to include point-source attenuation of 6 dB per doubling of distance. Noise generated by line sources (e.g., vehicles traveling on streets) was estimated to include line-source attenuation of 3 dB per doubling of distance from the noise source.

3.5.3.2 Construction Impacts

Crawford High School

During construction of the modernization and athletic facilities improvements at Crawford High School, construction activities would be limited to the hours of 7 a.m. to 7 p.m. to comply with the City of San Diego's noise ordinance. Construction for the athletic facilities upgrades and the modernization improvements would occur over an 18-month period.

The construction activities for modernization improvements are expected to be conducted on a small scale using small equipment, lasting a short duration, and mostly contained within the existing buildings on the school property. Additionally, existing school buildings are mostly located farther away from the noise-sensitive land uses. Therefore, noise generated by the modernization improvements is not expected to result in significant noise impacts at noise-sensitive land uses. As such, the analysis of noise impacts during construction focused primarily on noise generation associated with demolition of the administration building, demolition of buildings 100 and 200, and construction of new athletic facilities, because the construction activities are located closer to the noise-sensitive land uses adjacent to the school sites and are expected to last longer and use larger construction equipment. Table 3.5-2 summarizes the construction activities for the proposed project elements that would affect the noise-sensitive land uses adjacent to the high school.

Mann Middle School

Similar to the discussion for Crawford High School, construction of the modernization improvements at Mann Middle School would be limited to the hours of 7 a.m. to 7 p.m. to comply with the City of San Diego's noise ordinance and are expected to be small in scale using small equipment, take place over a short time period, and mostly be contained within the existing buildings on the school property. Therefore, noise generated by the modernization improvements is not expected to result in significant noise impacts at noise-sensitive land uses. Table 3.5-2 summarizes the construction activities for the proposed project elements that would affect the noise-sensitive land uses adjacent to the middle school.

Onsite Construction Noise

Crawford High School

Construction activities for building demolition and the athletic facilities upgrades would require the use of heavy equipment that could temporarily increase noise levels at land uses near the work areas. Noise levels generated during construction would vary dependent on the types of construction equipment used, site geometry (i.e., shielding from intervening terrain or other structures), and the distance between the noise source and receiver. Noise from construction equipment would likely be audible at on- and offsite noise-sensitive land uses surrounding the work sites. Table 3.5-5 presents typical noise levels for various types of construction equipment that would be used for the athletic facilities upgrades at Crawford High School. To evaluate the construction noise impacts at adjacent noise-sensitive land uses, construction equipment that would result in the highest noise level was used to estimate the noise levels at various distances from the construction sites, as shown in Table 3.5-6. Calculations assumed simultaneous operation of the three loudest pieces of equipment (a dozer, a grader, and a scraper) proposed to be used for the athletic facilities upgrades. The estimated construction noise levels reflect a conservative condition where the loudest pieces of equipment are assumed to operate simultaneously for a 1-hour period. In reality, construction activities would likely be intermittent, so actual noise levels could be somewhat lower than the estimated noise levels.

Table 3.5-6. Estimated Construction Noise Levels at Crawford High School

Noise-Sensitive Land Use Area	Closest Distance to Construction Activities (feet)	Noise Level Leq (dBA)
R1	100 (Athletic Stadium and entry area in front of building 800)	77
R2	60 (Athletic Stadium)	83
R3	100 (baseball/softball complex)	77
R4	50 (tennis courts)	85
Crawford Classrooms	100 (Athletic Stadium and entry area in front of building 800)	77

Leq = equivalent sound levels; dBA = A-weighted decibel.
Onsite noise levels are estimated based on noise generated from the three loudest pieces of equipment proposed to be used for athletic facilities upgrades.

During construction of the tennis courts, estimated construction noise levels would be as high as 85 dBA Leq at single-family residences (R4) to the north of proposed tennis courts. Although the actual noise levels could be lower than estimated noise levels, the construction noise at residential

areas R1, R2, R3, and R4 would exceed the City's noise limit of 75 dBA Leq.[1] In addition, the construction activities would also increase the noise levels at classrooms surrounding the construction sites over the noise limit of 75 dBA Leq. Therefore, when the construction activities associated with the proposed improvements at Crawford High School occur near the residential areas and classrooms, the construction noise impact would be significant.

Mann Middle School

Construction activities for building demolition would require the use of heavy equipment that could temporarily increase noise levels at land uses near the work areas. Noise levels generated during construction would vary dependent on the types of construction equipment used during construction activity, site geometry (i.e., shielding from intervening terrain or other structures), and the distance between the noise source and receiver. Noise from construction equipment would likely be audible at on- and offsite noise-sensitive land uses surrounding the work sites. Table 3.5-5 presents typical noise levels for various types of construction equipment that would be used for the demolition of existing buildings and the construction of new classroom buildings and parking lots at Mann Middle School. To evaluate the construction noise impacts at adjacent noise-sensitive land uses, construction equipment that would result in the highest noise level is used to estimate the noise levels at various distances from the construction sites, as shown in Table 3.5-7.

Table 3.5-7. Estimated Construction Noise Levels at Mann Middle School

Noise-Sensitive Land Use Area	Closest Distance to Construction Activities (feet)	Noise Level Leq (dBA)
R5	150 (new classroom building)	72
R6	100 (parking lot, basketball courts, and landscape)	77
Mann Classrooms	25 (new classroom building, parking lot, basketball courts, and landscape)	91

Leq = equivalent sound levels; dBA = A-weighted decibel.

During construction of the proposed parking lot and basketball courts, estimated construction noise levels would be as high as 77 dBA Leq at single-family residences (R6) to the south of the proposed parking lot and basketball courts. Although the actual noise levels could be lower than estimated noise levels, the construction noise at residential areas R6 would exceed the City's noise limit of 75 dBA Leq.[2] In addition, the construction activities would also increase the noise levels at classrooms surrounding the construction sites over the noise limit of 75 dBA Leq. Construction activities are not expected to cause the exceedance of the City's noise limit (75 dBA Leq) at the

[1,2] The City's noise ordinance specifically states that construction shall not exceed 75 dBA Leq at the property boundary of a land use that is zoned residential. For the purposes of this analysis, a noise threshold of 75 dBA Leq has been extended to classroom facilities for the project site as well because the City does not designate a noise threshold for school-related facilities.

residential area R5; however, the construction noise would likely be substantially higher than the typical ambient daytime noise levels (48 to 57 dBA) measured at these areas. Therefore, when the construction activities associated with the proposed improvements at Mann Middle School occur near the residential areas and classrooms, the construction noise impact would be significant.

Onsite Construction Groundborne Vibration

Crawford High School

The operation of heavy construction equipment can generate localized groundborne vibration at buildings adjacent to the construction site, especially during the operation of high-impact equipment, such as pile drivers. Vibration from non-impact construction activity and truck traffic is typically below the threshold of perception when the activity is more than about 50 feet from the noise-sensitive land uses (Federal Transit Administration 2006). Consequently, for construction activities without the use of high-impact equipment and construction sites that are more than 50 feet from noise-sensitive land uses, groundborne vibration impacts are expected to be less than significant.

Within the project area, the nearest single-family residences are about 50 feet from the proposed construction site of the proposed tennis courts. Additionally, the project construction would not involve the use of high-impact equipment, such as a pile driver. Therefore, the impact from groundborne vibration perceived by residents to the north from construction would be less than significant.

Mann Middle School

Similar to Crawford High School, the nearest single-family residences are about 100 feet from the proposed construction site of the new parking lot and drop-off area. Construction activities would be located more than 50 feet from the nearest noise-sensitive land uses, and high-impact equipment, such as a pile driver, would not be used during construction. Therefore, the impact from groundborne vibration perceived by residents to the south of the proposed parking lot from construction would be less than significant.

3.5.4 Operation Impacts

Crawford High School

Long-term operational noise associated with the project includes noise generated by new sources or increased levels of activities at the school and noise generated by increased project traffic on local streets. Implementation of the modernization improvements would not involve the installation of sound-generating equipment or cause an increase in vehicle traffic; therefore, there would be no operational noise impacts associated with the modernization improvements. The new baseball/softball complex would not involve the installation of sound-generating equipment or cause a substantial increase in sporting activities at the field. Noise generated by activities at the new baseball/softball complex is anticipated to be similar to noise generated by existing football/soccer activities at the current location, and there would be no operational noise impacts associated with the new complex. As such, the analysis of noise impacts associated with the

implementation of the project focuses primarily on noise generation by activities at the new Athletic Stadium and traffic associated with the increased activities at the stadium.

Mann Middle School

Long-term operational noise associated with the project includes noise generated by new sources or increased levels of activities at the school and noise generated by the increased project traffic on local streets. Implementation of the modernization improvements would not cause an increase in vehicle traffic; however, the installation of HVAC units at the new middle school buildings are considered noise generating sources and could potentially cause noise concerns at noise-sensitive uses adjacent to the equipment.

Onsite Operation Noise

Crawford High School

The project would result in the replacement of an existing baseball field and tennis courts with a new Athletic Stadium with increased bleacher seating on the home and visitor sides to accommodate 2,250 persons. The new Athletic Stadium would also be equipped with a new PA system and stadium lights. Noise from most events and athletic program practices and games are expected to be similar to existing conditions at the school and the main noise sources associated with them are whistles and fans cheering. The addition of the lights could allow some of these noise sources to extend later into the evening; however, spectator attendance at events other than football games is minimal. Only football games and select other events such as track and field meets are expected to utilize the PA.

Noise sources associated with the football games generally consist of pre-game music played from the loudspeakers, the PA announcer during the games, fans cheering, and fans stomping on aluminum bleachers. Currently, there are no lights at the stadium, which limits games to daylight hours. With the new stadium lights, the project would shift most of the football games to the evening hours, which may start as early as 6:30 p.m. and end about 9:00 p.m.

The average noise levels generated during the football games are estimated using noise measurements taken at James Madison High School, which is within the San Diego Unified School District and was recently upgraded with similar athletic field improvements. Measurements were taken on November 2, 2012, during a nighttime football game with 1,021 attendees. Noise levels were highly variable due to the impulsive nature of the noise sources (pregame music, PA announcer, band playing, and fans cheering). The results of the noise measurements and the noise activities at the Madison High School football game are described further in Appendix F.

Based on the noise measurement at noise-sensitive land uses surrounding the James Madison High School stadium, noise levels generated by the pregame music and PA system during the games are summarized in Table 3.5-8. Design measures listed in Section 2.3, “Stadium Operations/Design Features,” would be implemented as a part of the PA system design. However, the noise levels used in this analysis are based on measurements taken at James Madison High School. Noise-related impacts associated with fans cheering would be variable depending on the number of fans at specific events. The design capacity of the stadium would be approximately 2,250 spectators. Although the school expects actual typical attendance figures of 500–700 fans, the traffic impact study (Appendix F) conservatively evaluates the attendance based a projected future ticket sales of 434

for non-homecoming games and 775 for homecoming games with stadium lights. Based on the noise measurements for the football game with 1,021 attendees, noise levels associated with fan cheering ranged from 55 to 59 dBA Leq at 350 feet; with 775 attendees, noise levels associated with fan cheering would range from 54 to 58 BA Leq at 350 feet. Table 3.5-8 summarized the noise levels generated by fans cheering during a sporting event.

Table 3.5-8. Estimated Operation Noise Levels

Noise-Sensitive Land Use Area	Closest Distance to Proposed Activities (feet)	Noise Level Leq (dBA)
R1	150 (Athletic Stadium)	67–71 (speakers) 61–65 (cheer)
R2	80 (Athletic Stadium)	68–75 (speakers) 67–71 (cheer)
R3	Similar to existing athletic activities	Same as existing
R4	600 (Athletic Stadium)	59–61 (speakers) 49–53 (cheer)
R6	600 (Athletic Stadium)	59–61 (speakers) 49–53 (cheer)
Leq = equivalent sound levels; dBA = A-weighted decibel.		

As shown in Table 3.5-8, the estimated noise levels during a football event are greater than the existing ambient noise level (48–56 dBA Leq) and would exceed the City noise limits shown in Table 3.5-3 (50 dBA Leq between 7 a.m. and 7 p.m. and 45 dBA between 7 p.m. and 10 p.m. for single-family residences; 55 dBA Leq between 7 a.m. and 7 p.m. and 50 dBA between 7 p.m. and 10 p.m. for multi-family residences). The football events would occur only periodically due to a limited number of nighttime games during each football season, and noise levels would be intermittent and variable depending on the size of the crowd and the number of PA announcements. Other uses that could involve use of the PA or spectators in quantities that would generate substantial noise would be sporadic and limited. However, when these events do occur, operation of the new Athletic Stadium would result in significant noise impacts at nearby residential areas R1, R2, R4, and R6.

Although no current plans exist to rent out the athletic stadium for third-party use, the District may allow third parties to utilize the proposed stadium primarily on weekends. Considering there are no plans or proposals for specific uses, is it difficult to speculate on the type of noise that a third-party event would generate. The most common third-party uses are club sports, which do not have substantial attendees to cheer and make noise and do not use the PA. However, there is a possibility that a third-party use could be proposed that would have higher attendance than that typically associated with club sports and use the PA and, in such a case, the use could have an impact similar to that identified for the football games. It is anticipated that third-party events held at the stadium with attendance similar to a football game would be sporadic and limited. Additional mitigation measures would also not be required to address rental to third parties because the impact associated with noise would be primarily from fans cheering and the PA system and would not be reduced or increased based on the type of activity on the field.

Mann Middle School

Proposed project improvements at Mann Middle School would include the construction of a new classroom building at the northeast corner of the 54th Street/Trojan Avenue intersection and could include the installation of HVAC units at the new building. HVAC units are typically considered noise generating sources and could potentially cause noise concerns at noise-sensitive uses adjacent to the equipment. The HVAC units for the new classroom building are expected to be installed on the roof or adjacent to the building, and would be approximately 170 feet from the nearest residential uses (R5) on the west side of 54th Street. Because traffic on 54th Street is the dominate noise source in the vicinity, the HVAC units would not generate noise that would be audible to nearby residential uses (R5). The noise impact associated with the operation of HVAC units would be less than significant.

Onsite Operation Groundborne Vibration

Crawford High School

Use of the stadium and/or the athletic fields would be similar to the existing activities conducted within the high school site, which are not expected to involve the use of heavy construction equipment. Therefore, the impact would be less than significant.

Mann Middle School

Operation of HVAC units at the new classroom building is not expected to generate noticeable groundborne vibration. Therefore, the impact would be less than significant.

Traffic Noise

Crawford High School

There is no City ordinance or regulation that would be applicable to traffic noise generated by increased project vehicle trips. Therefore, to evaluate the potential traffic noise impact, a substantial increase of 3 dBA, which is generally considered to be the threshold of a perceptible change, was used for this assessment.

During the football games and other large events, project-generated traffic would mostly travel on 54th Street, 56th Street, and Trojan Avenue to the school. In the project vicinity, noise-sensitive land uses along these streets could be affected by the increase in traffic noise caused by the project. Table 3.5-9 summarizes the increase in traffic noise levels (Leq) during peak hour along 54th Street, 56th Street, and Trojan Avenue as a result of project-generated traffic. Traffic noise levels (Leq) were estimated based on the PM peak traffic volumes that are predicted to occur for a homecoming game.

As shown in Table 3.5-9, traffic noise is expected to increase by less than 3 dB as a result of the project under both existing and cumulative conditions. 2035 Cumulative plus Project traffic noise levels along project-access streets are also expected to increase by less than 3 dB compared to the Existing No Project condition. Therefore, the project would not result in in an increase in traffic noise that is greater than 3 dB under any of the conditions evaluated. The traffic noise impact would be less than significant, and no mitigation is required.

Table 3.5-9. Estimated Traffic Noise Increase Resulting from Athletic Facilities Upgrades

Street	Segment	Distance to Center of Road (feet)	No Project Condition Leq (dBA)	With Project Condition Leq (dBA)	Project Contribution to Noise Increase (dBA)
2012 Existing Condition					
54th Street	South of Trojan Avenue	80	63.0	63.2	0.2
56th Street	North of Trojan Avenue	60	52.4	54.2	1.8
Trojan Avenue	East of 54th Street	60	56.8	59.3	2.5
2035 Cumulative Condition					
54th Street	South of Trojan Avenue	80	63.4	63.6	0.2
56th Street	North of Trojan Avenue	60	52.8	54.4	1.6
Trojan Avenue	East of 54th Street	60	57.1	59.5	2.4

Mann Middle School

None of the proposed improvements at Mann Middle School are anticipated to affect operational traffic conditions, and impacts would be less than significant. No mitigation is required.

Building Interior Noise Levels

Crawford High School

No new classroom buildings would be constructed with project approval and implementation. As such, no impacts are anticipated, and no mitigation is required.

Mann Middle School

The project would be required to meet the interior noise standard of 45 dBA CNEL for the new classroom building on 54th Street in the Mann Middle School because the building would be exposed to an exterior traffic noise level in excess of 60 dBA (see Table 3.5-9). Based on the projected traffic on 54th Street, the exterior traffic noise level at the building is estimated to be approximately 66 dBA CNEL under the Existing plus Project condition and the Cumulative plus Project condition. Project building materials would need to be designed to provide an exterior to interior sound reduction of 20 dB for classrooms facing the street. Normal construction materials and techniques will typically provide a minimum reduction of 15 dB in exterior to interior sound levels if there are no openings such as windows, doors, or ventilation ports on the sides of the buildings that are exposed to traffic noise. Therefore, the classrooms facing 54th Street could experience interior noise levels exceeding the noise standard of 45 dBA CNEL. This noise impact at the building is therefore potentially significant.

3.5.4.2 Significant Impacts

Crawford High School

NS-1a: Generate construction noise in excess of a City of San Diego noise limit or create a substantial temporary increase in ambient noise levels in the project vicinity during construction.

During the construction of the proposed Athletic Stadium, tennis courts, and baseball/softball complex, the estimated construction noise level would increase the noise levels at residential areas R1, R2, R3, and R4, and at classrooms surrounding the construction sites over the City's noise limit of 75 dBA Leq. Therefore, when construction activities occur near the residential areas and classrooms, the construction noise impact would be significant.

NS-2: Generate noise from football/soccer games in excess of City of San Diego noise limit.

The estimated noise levels (Table 3.5-8) are greater than the existing ambient noise level (48–56 dBA Leq) and would exceed the City's noise limits shown in Table 3.5-4 (50 dBA Leq between 7 a.m. and 7 p.m., and 45 dBA between 7 p.m. and 10 p.m. for single-family residences; 55 dBA Leq between 7 a.m. and 7 p.m., and 50 dBA between 7 p.m. and 10 p.m. for multi-family residences). Therefore, operation of the new Athletic Stadium would result in significant noise impacts at nearby residential areas R1, R2, R4, and R6.

Mann Middle School

NS-1b: Generate construction noise in excess of City of San Diego noise limit or create a substantial temporary increase in ambient noise levels in the project vicinity during construction.

During the construction of the proposed new classroom building, parking lot, basketball courts, and landscaping, the estimated construction noise level would increase the noise levels at residential area R6 and at classrooms surrounding the construction sites over the noise limit of 75 dBA Leq. Therefore, when the construction activities occur near the residential area and classrooms, the construction noise impact would be significant.

NS-3: Result in sound levels at the new classroom building in excess of the CCR interior noise limit.

The classrooms facing 54th Street could experience interior noise levels exceeding the noise standards of 45 dBA CNEL. This noise impact at the building is therefore potentially significant.

3.5.4.3 Mitigation Measures

NS-MM-1: Implement construction site noise control measures.

The District shall require all contractors to adhere to the following noise abatement measures.

- An onsite construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to the District shall be established prior to construction commencement that shall allow for resolution of noise problems through coordination directly between the District and the City that cannot be immediately solved by the site supervisor. The District shall be responsible for ensuring implementation.

- Contractor shall comply with manufacturers' muffler requirements on all construction equipment engines.
- Contractor shall turn off construction equipment when not in use, where applicable.
- Contractor shall locate stationary equipment as far as practical from receiving properties.
- Contractor shall use temporary sound barriers or sound curtains[3] around loud stationary equipment when the construction activity would generate noise in excess of 75 dBA over any 1-hour period at impacted residences and classrooms if the other noise reduction methods are not effective or when appropriate to resolve a noise complaint.
- Contractor shall provide advance written notification of construction activities to residences around the construction site. Notification will include a brief overview of the proposed construction activity and its purpose and schedule. It also will include the name and contact information of the project manager or representative responsible for resolving any noise concerns.

NS-MM-2: Implement noise-reduction design features as part of the Athletic Stadium design.

The District shall ensure that noise-reduction design features are implemented to the extent feasible to reduce the potential noise impacts during the football games and other events. The District shall retain a qualified acoustical consultant to review the design of the proposed PA system and any sound attenuation measures to be implemented to reduce noise impacts to nearby residences. Measures that can be used to reduce noise include, but are not limited to, the following:

- Design the PA system to provide adequate speech intelligibility to the seating areas while maintaining minimal sound transmission to adjacent residential areas. This can be accomplished by using a distributed speaker system that utilizes a large number of small speakers placed throughout the seating area as opposed to several large speakers mounted high on poles. The speakers should be highly directional to focus sound energy on the seating area.
- Add shielding materials along the back of the bleachers to block the line of sight between the crowd and adjacent residences.

NS-MM-3: Conduct site-specific building acoustical analysis for the new classroom building on 54th Street and implement noise control treatments where required.

- The District shall retain a qualified acoustical consultant to review final site plans, building elevations, and floor plans prior to construction to calculate expected interior noise levels as required by state noise regulations. Project-specific acoustical analyses are required by the California Building Code to confirm that the design results in interior noise levels reduced to 45 dBA CNEL or lower. The specific determination of what noise insulation treatments are necessary shall be completed on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the District along with the building plans, and shall be approved prior to issuance of a building permit.
- Special building techniques (e.g., sound-rated windows and building façade treatments) shall be implemented as recommended by the qualified acoustical consultant to maintain interior noise

[3] Sound curtains are modular flexible noise reduction curtains that are typically made of vinyl coated polyester with padded fiberglass absorbers. Sound curtains combine both noise blocking and noise absorbing features.

levels at or below acceptable levels. These treatments may include, but are not limited to, sound-rated windows and doors, sound-rated wall constructions, acoustical caulking, and protected ventilation openings. Preliminary calculations indicate that classrooms nearest to and facing 54th Street with direct line of sight to the roadway would require sound-rated windows and doors to assure that the interior average noise level guidelines are met.

3.5.4.4 Significance of Impacts after Mitigation

Crawford High School

NS-1a: Implementation of mitigation measure NS-MM-1 would reduce impacts related to the generation of construction noise in excess of City of San Diego noise limits to a less-than-significant level.

NS-2: Implementation of mitigation measure NS-MM-2 would reduce the potential noise impacts during football games to the extent feasible. However, noise levels still have the potential to exceed the City noise limits at nearby residences. This impact is therefore considered to be significant and unavoidable.

Mann Middle School

NS-1b: Implementation of mitigation measure NS-MM-1 would reduce impacts related to the generation of construction noise in excess of City of San Diego noise limits to a less-than-significant level.

NS-3: Implementation of mitigation measure NS-MM-3 would reduce this impact to a less-than-significant level by requiring calculation of interior noise levels based on final site plans.

Chapter 4
Growth Inducement

The proposed project would result in the construction of athletic and school building facilities. All proposed actions at Crawford High School and Mann Middle School are intended to improve and upgrade the existing campuses and would not result in expanded or new classrooms, expansion of the existing campus boundaries, school enrollment growth, or any other type of expansion. As such, the proposed improvements would not be considered to be growth inducing.

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Chapter 5
Environmental Effects Found Not to Be Significant

This chapter discusses environmental issue areas that were found not to be significant during preparation of the CEQA Checklist (Appendix A), and issue areas found not to be significant during the EIR process.

5.1 Effects Found Not to Be Significant During the Initial Study Process

A CEQA Checklist was prepared during the preliminary environmental review of this project, which determined that the project would not have a significant impact on agricultural resources, mineral resources, population and housing, public services, and recreation. A discussion of these issue areas, including the reasoning behind the finding that there would be no associated significant environmental impacts, is provided below.

5.1.1 Agricultural Resources

Crawford High School

There is no agricultural land on the project site or in the vicinity of the project site. Accordingly, the site and the surrounding area is shown as Urban and Built Up Land on the Farmland Mapping and Monitoring Program maps published by the California Department of Conservation (CDC 2008). The sites are not subject to agricultural zoning or Williamson Act contracts.[1] The project would not convert any agricultural land to non-agricultural uses and would not otherwise affect agriculture in any way. Therefore, there would be no impact with respect to agricultural resources.

Mann Middle School

There is no agricultural land on the project site or in the vicinity of the project site. Accordingly, the site and the surrounding area is shown as Urban and Built Up Land on the Farmland Mapping and Monitoring Program maps published by the California Department of Conservation (CDC 2008). The sites are not subject to agricultural zoning or Williamson Act contracts. The project would not convert any agricultural land to non-agricultural uses, and would not otherwise affect agriculture in any way. Therefore, there would be no impact with respect to agricultural resources.

[1] Williamson Act contracts are agreements between a land owner and the relevant jurisdiction that designate land as an agricultural preserve in exchange for reduced property tax obligations on the subject land.

5.1.2 Geology and Soils

Crawford High School

All project impacts related to geology and soils would be less than significant. Design and construction of the proposed project elements would comply with all seismic-safety development requirements, including Title 24 standards of the 2010 California Building Code (based on the 2009 International Building Code). Conformance with all applicable seismic-safety development requirements would minimize seismic ground shaking effects in the event of a major earthquake and ensure that the potential seismic or geologic hazard impacts are not significant.

The project site is located in a known seismically active region where the potential for seismic-related hazards exists. However, all project improvements would occur within the existing school campus, which has a low potential for ground-failure because the site has been previously graded and developed. Additionally, design and construction of all project elements would comply with applicable seismic-safety development requirements to minimize seismic ground shaking effects and ensure that potential seismic or geologic hazard impacts are not significant.

The proposed school improvements, including the stadium site and athletic fields, would not result in substantial soil erosion or the loss of topsoil. Soils under the school site are classified as Huerhuero-Urban land complex on the northern portion of the campus, including the existing stadium site, and Diablo-Urban land complex on the southern portion (USDA 2012). Soils in these groups have been altered through cut and fill operations for development and have low erodibility within development areas (USDA 1973). All construction activities would occur within the existing developed campus and, therefore, would not result in substantial soil erosion. In addition, the site is relatively level, limiting the opportunity for rapid stormwater runoff, which would exacerbate erosion potential. Impacts would therefore be less than significant.

The project is not anticipated to have significant impacts associated with unstable soil, including expansive soils, on- or offsite lateral spreading, subsidence, liquefaction, or collapse. The project site and surrounding area are currently developed on relatively level terrain considered to have a low to moderate risk for geologic hazards (City of San Diego 2008). As identified above, soils that underlay the site are classified as Huerhuero-Urban and Diablo-Urban land complex. The likelihood of liquefaction is low to moderate considering the moderate quantity of sand in these soils (USDA 2012). Also, because of previous onsite grading activities, the potential for near surface expansive soils at the project site is considered low. Furthermore, the construction activities of the proposed project would not require substantial grading or excavation. Therefore, impacts would be less than significant.

Implementation of the project would not result in any impacts regarding inadequate soils to support septic systems. Crawford High School uses the existing sewer system for the disposal of wastewater, and would not use septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact.

Mann Middle School

The potential for seismic hazards exists at the project site because, like all of San Diego County, it is located in a known seismically active region. There are no active or potentially active faults located within the project site; however, a potentially active fault exists just west of the school, generally

following 54th Street (City of San Diego 2008). A seismic event on this fault could cause significant groundshaking on the proposed project site. Therefore, the potential exists for health and safety risks associated with a seismic hazard on the project site.

School facility improvements, as proposed by the project, would be implemented in conformance with all seismic-safety development requirements, including Title 24 standards of the 2010 California Building Code (based on the 2009 International Building Code). Compliance with these seismic-safety development requirements would minimize seismic ground shaking effects in the event of a major earthquake and ensure that the potential seismic or geologic hazard impacts are not significant. Therefore, there would be less-than-significant impacts associated with this issue.

Although the project site is located in a known seismically active region, impacts associated with seismic-related ground failure would not be significant. All project improvements would occur within the existing campus, which is already graded and developed and, therefore, has a low potential for ground-failure. Additionally, implementation of all project improvements would comply with the applicable seismic-safety development requirements to lessen seismic ground shaking effects and ensure that potential seismic or geologic hazard impacts are not significant. Therefore, impacts associated with this issue would be less than significant.

Substantial soil erosion or the loss of topsoil would not occur with implementation of the project because all construction activities would occur within the existing developed campus. The school site is underlain with soils classified as Redding-Urban land complex on the northern portion of the school campus and Diablo-Urban land complex on the southern portion (USDA 2012). Soils in both of these groups have been altered through cut-and-fill operations for development and have low erodibility within developed areas (USDA 1973). All project improvements would occur within the existing campus and, therefore, would not result in substantial soil erosion. Additionally, the school site is relatively level, which limits the opportunity for rapid stormwater runoff that could intensify erosion potential. Therefore, impacts associated with this issue would be less than significant.

Significant impacts associated with unstable soil, including expansive soils, on- or offsite lateral spreading, subsidence, liquefaction, or collapse, with implementation of the project would not occur. The project site and surrounding area are currently developed on relatively level terrain considered to have a low to moderate risk for geologic hazards (City of San Diego 2008). As previously described, soils underneath the school are classified as Redding-Urban and Huerhuero-Urban land complex. The likelihood of liquefaction is low to moderate considering the moderate quantity of sand in these soils (USDA 2012). Also, because the site is developed and previously graded, the potential for near surface expansive soils at the project site is considered low. Lastly, the construction activities of the proposed project would not require substantial grading or excavation. Therefore, impacts associated with these issues would be less than significant.

The project would not result in any impacts regarding inadequate soils to support septic systems. The existing sewer system is used for the disposal of wastewater at the middle school; therefore, the project would not use septic tanks or alternative wastewater disposal systems. There would be no impact associated with this issue.

5.1.3 Mineral Resources

Crawford High School

The project involves the modernization of an existing school site where no mineral extraction or other mining operations exist. In addition, the District does not intend to remove the school, and, therefore, the site would not be available for mineral extraction activities in the future. Consequently, there would be no impact with respect to mineral resources.

Mann Middle School

The project involves the modernization of existing school sites where no mineral extraction or other mining operations exist. In addition, the District does not intend to remove the school, and, therefore, the site would not be available for mineral extraction activities in the future. Consequently, there would be no impact with respect to mineral resources.

5.1.4 Population and Housing

Crawford High School

The project site is within existing school property in a built-out urbanized community and would not impact population or housing in the area. Under the project, existing school facilities would be renovated, and circulation and access would be improved. As part of the reconfiguration, student drop-off and pick-up areas would be constructed in front of building 800 along Colts Way to increase student safety. The upgrades included in the project would not increase the capacity or operations of the existing high school, and would not result in the extension of public roads or other infrastructure. Therefore, there would be no impacts associated with these issues.

Mann Middle School

The proposed project would not impact population or housing in the area. The project would occur within existing school property in a high-density neighborhood and would not displace any housing or people. A new 160-space parking lot and drop-off area in the southeast corner of the Mann Middle School property would be constructed. Parking improvements within the project site would result in a net addition of 29 spaces compared to existing conditions. Although this would represent an increase in total parking spaces, the proposed project's facility and access upgrades would not increase school capacity or operations, and would not result in the extension of public roads or other infrastructure. Therefore, there would be no impacts.

5.1.5 Public Services

Crawford High School

The proposed project consists of the modernization of an existing school site and would not result in substantial adverse physical impacts on public services. The project would not increase the capacity or operations of the existing school, and would not result in the extension of public roads or other infrastructure. Project implementation may require additional police protection services during night games several times per year; however, this would not result in the construction of any new

police protection facilities (e.g., police stations) to accommodate the proposed project; thus, no additional public services would be required. Existing public services response times and the adequacy of existing public services would not be significantly affected. Therefore, impacts on public services would be less than significant.

Additional police protection may be required for third-party events that could be held at the stadium on weekends. However, it is not anticipated requests for police services at third-party events on weekends throughout the year would require construction of new police facilities. Therefore, impacts on public services associated with third-party use of the stadium would be less than significant.

Mann Middle School

Improvements to the existing school site would not result in substantial adverse physical impacts on public services. No additional public services would be required because the project would not increase the capacity or operations of the existing school and would not result in the extension of public roads or other infrastructure. Therefore, there would be no impacts on public services.

5.1.6 Recreation

Crawford High School

The proposed school improvements would not result in an impact on recreational facilities. The project would upgrade and replace existing athletic facilities within the Crawford High School campus. Project implementation would not increase the capacity of the existing school and would not generate additional demand for recreational uses. Additionally, implementation of the project would not require the provision of new recreational facilities. Therefore, there would be no impact.

Mann Middle School

The proposed school improvements would not result in an impact on recreational facilities. The project would upgrade and replace existing athletic facilities within the Mann Middle School campus. Project implementation would not increase the capacity of the existing school and would not generate additional demand for recreational uses. Additionally, implementation of the project would not require the provision of new recreational facilities. Therefore, there would be no impact.

5.1.7 Utilities and Service Systems

Crawford High School

The project would not result in an increase in student capacity or school operations. Also, implementation of the proposed project would not result in greater demand for wastewater services, stormwater drainage, or water supplies. Therefore, there would be no impact on these utilities and services.

The project would be served by a permitted landfill capable of accommodating project waste and would comply with all applicable regulations related to solid waste. During construction, non-recyclable solid waste would be taken to a permitted landfill with sufficient capacity to accommodate the project's disposal needs. During operation, the project would continue to generate

municipal solid waste, acceptable for waste haulers and landfill operators. In addition, the school would continue to comply with federal, state, and local regulations related to solid waste. Therefore, impacts associated with these issues would be less than significant.

Mann Middle School

The project would not result in an increase in student capacity or school operations. Also, implementation of the proposed project would not result in greater demand for wastewater services, stormwater drainage, or water supplies. Therefore, there would be no impact on these utilities and service systems.

Implementation of the school modernization project would not result in significant impacts on solid waste. Solid waste generated by the school would continue to be served by a permitted landfill with sufficient capacity to accommodate the project's disposal needs. The school would also continue to comply with all applicable regulations associated with solid waste. Therefore, impacts regarding these issues would be less than significant.

5.2 Effects Found Not to Be Significant During the EIR Process

Environmental issue areas that were identified as potentially significant during the preparation of the CEQA Checklist (see Appendix A to this EIR) were investigated further during the preparation of the EIR. During this investigation, it was determined that the proposed project would not have a significant impact on air quality, greenhouse gases, hydrology and water quality, land use and planning, or transportation and traffic. A discussion of each of these issues is provided below.

5.2.1 Air Quality

5.2.1.1 Existing Conditions

Crawford High School and Mann Middle School

Both Crawford High School and Mann Middle School are located in the San Diego Air Basin (SDAB). Climate in southern California, including the SDAB, is controlled largely by the strength and position of a subtropical high-pressure cell over the Pacific Ocean. Precipitation is mostly limited to a few storms during the winter season. Winds in the vicinity of the project site are usually driven by the dominant land/sea breeze circulation system. Temperature inversions, which can trap air pollutants near the ground, are common during the summer months when daytime winds are light. Wind patterns can also concentrate and carry pollutants from nearby areas, most notably Los Angeles, adding to the local pollutant mix.

The weather station closest to the project sites is the La Mesa Station (COOP ID 044735), which is approximately 3.25 miles to the east of the project area. Given its proximity, historic climatic conditions at La Mesa are assumed to be representative of the prevailing climatic conditions. The annual average temperature at La Mesa Field is 64 degrees Fahrenheit (°F), with an average winter temperature of 56°F and an average summer temperature of 71°F. Total annual precipitation

averages 13 inches. Precipitation occurs mostly during the winter and relatively infrequently during the summer (WRCC 2013a). The predominant wind direction at San Diego/Lindbergh Field is from the west–northwest, with an average wind speed of 5.8 miles per hour (WRCC 2013b).

The air quality management agencies of direct importance in the project area are the EPA, the California Air Resources Board (ARB), and the San Diego Air Pollution Control District (SDAPCD). EPA and ARB have established common national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively, for the following pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), ozone (O_3), lead (Pb), and particulate matter, including particulate matter less than or equal to 10 microns in diameter (PM10) and particulate matter less than or equal to 2.5 microns in diameter (PM2.5). CAAQS are generally more stringent than the corresponding NAAQS, and also include additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. ARB and SDAPCD are responsible for ensuring that these standards are met. Table 5-1 summarizes the NAAQS and CAAQS and the respective attainment status of San Diego County.

Note that ozone is not emitted directly into the air, but is instead formed by a photochemical reaction between volatile organic compounds (VOCs) and NO_X (knows as ozone precursors) emissions in the atmosphere in the presence of sunlight.

Table 5-1. Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average |Time	California Standards	National Standards[1]		Attainment Status of San Diego County[2]	
			Primary	Secondary	State	National
Ozone	1-hour	0.09 ppm	None	None	Nonattainment	--[3]
	8–hour	0.070 ppm	0.075 ppm	0.075 ppm	Nonattainment	Marginal Nonattainment
Particulate Matter (PM10)	24-hour	50 μg/m³	150 μg/m³	150 μg/m³	Nonattainment	Attainment
	Annual mean	20 μg/m³	None	None	Nonattainment	--
Fine Particulate Matter (PM2.5)	24-hour	None	35 mg/m³	35 mg/m³	--	Attainment
	Annual mean	12 μg/m³	12.0 μg/m³	15.0 μg/m³	Nonattainment	Attainment
Carbon Monoxide	8-hour	9.0 ppm	9 ppm	None	Attainment	Attainment/ Maintenance
	1-hour	20 ppm	35 ppm	None	Attainment	Attainment/ Maintenance
Nitrogen Dioxide	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm	Attainment	Attainment
	1-hour	0.18 ppm	0.100	None	Attainment	Attainment
Sulfur Dioxide[4]	Annual mean	None	0.030 ppm	None	--	Attainment
	24-hour	0.04 ppm	0.014 ppm	None	Attainment	Attainment
	3-hour	None	None	0.5 ppm	--	--
	1-hour	0.25 ppm	0.075 ppm	None	Attainment	Attainment

Criteria Pollutant	Average |Time	California Standards	National Standards[1]		Attainment Status of San Diego County[2]	
			Primary	Secondary	State	National
Lead	30-day Average	1.5 μg/m³	None	None	Attainment	--
	Calendar quarter	None	1.5 μg/m³	1.5 μg/m³	--	Attainment
	3-month average	None	0.15 μg/m³	0.15 μg/m³	--	Attainment
Visibility Reducing Particles	8-hour	--[5]	None	None	Unclassified	--
Sulfates	24-hour	25 μg/m³	None	None	Attainment	--
Hydrogen Sulfide	1-hour	0.03 ppm	None	None	Unclassified	--
Vinyl Chloride	24-hour	0.01 ppm	None	None	Unclassified	--

Sources: ARB 2012a, 2012b; EPA 2012a, 2013.

Notes:

ppm= parts per million

μg/m³ = micrograms per cubic meter

[1] National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

[2] Local monitoring data are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are further defined as:

- Nonattainment—assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- Maintenance—assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- Attainment—assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- Unclassified—assigned to areas were data are insufficient to determine whether a pollutant is violating the standard in question.

[3] The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for State Implementation Plans.

[4] The annual and 24-hour NAAQS for SO_2 only apply for 1 year after designation of the new 1-hour standard to those areas that were previously nonattainment for 24-hour and annual NAAQS.

[5] CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer – visibility of 10 miles or more due to particles when relative humidity is less than 70%.

Sensitive Receptors

Sensitive receptors are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land. Sensitive members of the population include those who may be more negatively affected by poor air quality than other members of the population, such as children, the elderly, or the infirm. In general, residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks typically contain a high concentration of these sensitive population groups.

Crawford High School

Crawford High School is irregularly-shaped and disconnected from the existing football stadium. The high school site is bordered by residents to the west and east, with vacant land and commercial uses to the south, and Mann Middle School to the north. Sensitive receptors are active at all the surrounding land uses except for the vacant land to the south of Crawford High School, including at Mann Middle and Crawford High Schools themselves. The closest single-family homes are located immediately adjacent to school boundaries.

Mann Middle School

Mann Middle School is a square-shaped parcel and is directly bordered by a mix of residential homes to the east and south with commercial uses to the north and west. Sensitive receptors are active at all the surrounding land uses except for the vacant land to the south of Crawford High School, including at Mann Middle and Crawford High Schools themselves. The closest single-family homes are located immediately adjacent to school boundaries.

5.2.1.2 Impact Significance Criteria

The following significance criteria are based on State CEQA Guidelines, Appendix G, and provide the basis for determining the significance of air quality impacts resulting from implementation of the proposed project. The project would result in a significant impact on air quality if it would result in any of the following:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

With respect to violating air quality standards, the adopted State CEQA Guidelines allow for the use of thresholds adopted by the local air pollution control agencies. In this case, the Air Quality Impact Assessment trigger levels, as identified in SDAPCD's Regulation II, Rule 20.2, Table 20-2-1, are used as a screening criterion for potential significance of air quality impacts and have been adopted to ensure reduced air quality violations. Any project would be considered to have a potentially significant air quality impact if the project's emission levels were to exceed any of the criteria presented in Table 5-2.

Table 5-2. SDAPCD Screening Level Thresholds[1]

Air Contaminant	Emission Rate (lb/hr)	(lb/day)	(tons/yr)
CO	100	550	100
NO_X	25	250	40
PM10	--	100	15
PM2.5[2]	--	55	10
SO_X	25	250	40
Pb[3]	--	3.2	0.6
VOC[4]	--	75	15

Source: SDAPCD Regulation II, Rule 20.2., SCAQMD 2011, City of San Diego 2011.

[1] EPA's "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards," published September 8, 2005.

[2] Thresholds taken from South Coast Air Quality Management District (SCAQMD) (2011).

[3] Lead and lead compounds.

[4] The City of San Diego's CEQA Significance Determination Threshold for VOC threshold is based on SCAQMD levels and the Monterey Bay Air Pollution Control District (APCD), which has similar federal and state attainment status as San Diego.

5.2.1.3 Impact Analysis

Methodology

A detailed description of the emission calculation methodology is contained in Appendix G of this Draft EIR. A summary of the methodology is provided below.

Construction

Construction activities associated with the project would generate short-term emissions of VOC, NO_X, CO, SO_2, PM10, and PM2.5. Construction-related mass daily emissions associated with off- and on-road fuel combustion, fugitive PM10 and PM2.5 from demolition and ground disturbance, and off-gassing from architectural coatings and asphalt paving were estimated using a combination of methodologies and emissions factors within the California Emissions Estimator Model (CalEEMod) (version 2013.2), exhaust emission factors from the ARB's EMFAC2011 model, and re-entrained road dust methodology from the EPA. Project-specific construction assumptions were not available. Accordingly, equipment assumptions for the building modernization improvements were based on the *Final Initial Study/Mitigated Negative Declaration for the Bell Middle School Modernization Project* due to similarities in project size and design (District 2012). Equipment assumptions for the athletic field expansion were based on CalEEMod defaults and expected land use characteristics.

Exposure to construction-related diesel particulate matter (DPM) was assessed by predicting the health risks in terms of excess cancer and non-cancer hazard impacts. A screening-level health risk assessment (HRA) was performed according to the following steps.

1. Evaluate increased DPM cancer risk and the DPM non-cancer hazard impact based on the mass emissions of PM10 exhaust.

2. Use EPA's AERSCREEN model, which is the screening-level model for AERMOD, to predict hourly PM10 concentrations at sensitive land uses.
3. Calculate the project-level cancer risk and non-cancer hazard index for project construction based on the AERSCREEN hourly concentrations and the construction durations using Office of Environmental Health Hazard Assessment (OEHHA)–approved methodology.

Operation

Operation of the project would generate emissions of VOC, NO_X, CO, SO_2, PM10, and PM2.5 that could result in long-term impacts on ambient air quality.

Mobile and area source emissions associated with existing conditions and the project were estimated using CalEEMod, EMFAC2011, and vehicle trip data provided by KOA Corporation (Appendix H). Potential CO hotspots at four study area intersections were also evaluated under existing (2012), near-term (2015), and horizon year (2035) traffic conditions. CO concentrations were estimated using EMFAC2011, the CALINE4 dispersion model, peak-hour traffic data provided by KOA Corporation (Appendix H), and local climate data.

Conflict with or Obstruct Implementation of the Applicable Air Quality Plan

Crawford High School

San Diego County is currently designated as a nonattainment area for the 2008 federal 8-hour ozone standard and the state ozone, PM10, and PM2.5 standards (EPA 2013, ARB 2012a). The San Diego Regional Air Quality Strategy (RAQS) is the region's plan for improving air quality and attaining the federal and state air quality standards (SDAPCD 2009). The RAQS relies on information from ARB and the San Diego Association of Governments (SANDAG) to project future emissions and determine appropriate emissions reduction strategies. On December 5, 2012, SDAPCD adopted the *Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County* for the 8-hour ozone standards, which revises the County's portion of the State Implementation Plan (SIP) (SDAPCD 2012).

A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds estimates used to develop applicable air quality plans, which, in turn, would generate emissions not accounted for in the regional emissions budgets. Therefore, the proposed project is evaluated to determine if it is consistent with the land use designations and growth anticipated in the RAQS and ozone maintenance plan prepared for the San Diego region.

The purpose of the proposed project is to implement needed school facilities improvements as identified in Propositions S and Z and would not result in additional student capacity. The proposed project would not permanently change the existing or planned transportation network or traffic patterns in the area. The project would also not add any additional capacity to existing roadways. Likewise, the project would not conflict with any applicable land use plan or policy, because the project does not involve changes to the land usage of the project area. The project area remains an educational high school land use area with athletic facilities. The proposed project would generate emissions (discussed below), but emissions would be below respective thresholds and are not expected to impede attainment or maintenance of the NAAQS or CAAQS. Consequently, the project would not conflict with or obstruct implementation of RAQS or ozone SIP. Therefore, the impact would be less than significant.

Mann Middle School

As noted in the discussion for Crawford High School, conflicts with the San Diego RAQS can only occur if a project would result in population or employment growth that would exceed the estimates in the RAQS. Because the needed school facilities improvements identified in Propositions S and Z would not add student capacity or increase employment, no conflicts would occur, and the impact would be less than significant.

Violate Air Quality Standards or Contribute Substantially to an Existing or Projected Air Quality Violation

Construction

Crawford High School

Construction activities associated with the proposed project would generate short-term emissions of VOC, NO_X, CO, PM10, and PM2.5 (see Section 5.2.2, "Greenhouse Gases," for the discussion of greenhouse gas (GHG) emissions). Emissions would originate from construction equipment exhaust, employee vehicle exhaust, and haul truck vehicle exhaust. Construction-related emissions would vary substantially depending on the level of activity, the specific construction operations, and wind and precipitation conditions.

Construction emissions from heavy-duty equipment and worker and haul trips were estimated using emission factors and methodologies within CalEEMod and the ARB's EMFAC2011. Based on information provided by the District, it was assumed that construction would occur between June 2014 and November 2019 (see Appendix G for detailed descriptions of the construction phases). Construction activities during several of these phases would likely occur concurrently. To ensure a conservative analysis, maximum daily emissions during these periods of overlap were estimated assuming all equipment would operate simultaneously. An estimate of the maximum daily emissions associated with athletic field and building modernization construction at Crawford High School is presented in Table 5-3.

Table 5-3. Estimated Daily Criteria Pollutant Emissions from Construction for Crawford High School (pounds per day)

Date	VOC	NO_X	CO	SO_2	PM10	PM2.5
Athletic Facilities	17.1	51.4	99.9	0.1	17.3	4.0
Building Modernization	55.7	143.2	252.8	0.3	11.9	9.5
SDAPCD Trigger Levels	**75**	**250**	**550**	**250**	**100**	**55**
Exceed Trigger Levels?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Appendix G.

As shown in Table 5-3, the maximum daily emissions during construction are estimated to be below SDAPCD trigger levels used by the City of San Diego for any given year of construction. Accordingly, this impact is considered less than significant. No mitigation is required.

Mann Middle School

Based on information provided by the District, it was assumed that construction of the modernization improvements at Mann Middle School would occur between December 2016 and November 2019 (see Appendix G for detailed descriptions of the construction phases). Construction activities during several of these phases would likely occur concurrently. To ensure a conservative analysis, maximum daily emissions during these periods of overlap were estimated assuming all equipment would operate simultaneously at Mann Middle School. It was assumed that building modernization construction at Crawford High School and Mann Middle School would not overlap and occur on the same day.

An estimate of the maximum daily emissions associated with building modernization at Mann Middle School is presented in Table 5-4. Note that the maximum day assumes all site improvement and modernization work at Mann Middle School would occur on a given day

Table 5-4. Estimated Daily Criteria Pollutant Emissions from Construction for Mann Middle School (pounds per day)

Date	VOC	NO_X	CO	SO_2	PM10	PM2.5
Building Modernization	55.7	143.2	252.8	0.3	11.9	9.5
SDAPCD Trigger Levels	**75**	**250**	**550**	**250**	**100**	**55**
Exceed Trigger Levels?	*No*	*No*	*No*	*No*	*No*	*No*
Source: Appendix G.						

Operation

Crawford High School

The improvements at Crawford High School would result in building modernization and the replacement of the existing sports field with a new field at a different location within school boundaries. The proposed sports field replacement would increase the bleacher capacity, add nighttime lighting, and utilize turf instead of grass fields. Operation of the project would generate emissions of VOC, NO_X, CO, SO_2, PM10, and PM2.5 that could result in long-term impacts on ambient air quality. Increased bleacher capacity would result in increased motor vehicle trips during evening football games. Additionally, the upgraded fields and new support facilities (booths, restrooms, concession stands, and storage facilities) would result in increased area sources (consumer products, coatings, space/water heating) of emissions. Replacing grass with turf would eliminate landscaping requirements for the field itself. The difference in operational emissions between the athletic field improvements and existing conditions represents the net impact of the project analyzed in this analysis.

Building modernization would not affect facility energy consumption (e.g., electricity, natural gas) or vehicle trip characteristics, relative to existing conditions. Accordingly, building upgrades would not result in increased direct or indirect operational criteria pollutants, relative to existing conditions. Rather, replacement of inefficient building fixtures and other retrofits would likely reduce energy consumption and result in a regional reduction of criteria air pollutants. Accordingly, the operational assessment focuses exclusively on emissions generated by expansion of the athletic fields.

Operation of the project has the potential to generate emissions primarily associated with new mobile and area sources. Mobile sources include increased player and spectator vehicle trips. Area sources include off-gassing during the reapplication of architectural coatings, consumer products (e.g., cleaning supplies), and onsite natural gas combustion. Each of these sources was taken into account in calculating the project's long-term operational emissions, which were quantified using CalEEMod (version 2013.2) and traffic data provided in the traffic impact study (see Appendix H). CalEEMod was also used to estimate emissions benefits associated with reduced landscaping activity from installation of artificial turf. Estimated net operational emissions, which represent the difference in emissions between the athletic field improvements and existing conditions, are presented in Table 5-5.

Table 5-5. Estimated Daily Operational Emissions at Crawford High School (pounds per day)

Source	VOC	NO_X	CO	SO_2	PM10	PM2.5
Existing Stadium						
Landscaping	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
New Stadium						
New Vehicle Trips	1.8	1.6	7.5	<0.1	0.9	0.3
Coatings and Consumer Products	7.7	--	--	--	--	--
Onsite Energy Use	0.1	0.9	0.7	<0.1	0.1	0.1
New Stadium Total Daily	*9.6*	*2.5*	*8.2*	*<0.1*	*1.0*	*0.3*
Project Increment over Existing Conditions	9.6	2.5	8.2	<0.1	1.0	0.3
SDAPCD Trigger Levels	**75**	**250**	**550**	**250**	**100**	**55**
Exceed Trigger Levels?	No	No	No	No	No	No

Source: Appendix G.

As shown in Table 5-5, operation of the project is expected to result in minor increases in VOC, NO_X, CO, PM10, and PM2.5, relative to existing conditions. These increases are expected to be well below applicable SDAPCD trigger levels used by the City of San Diego. Moreover, modernization upgrades would involve increased use of insulation within the school structures and installation of more efficient appliances/equipment, leading to lower operational GHGs by way of less energy consumption. These savings could potentially offset a portion of the operational emissions shown in Table 5-5. Accordingly, this impact is considered less than significant. No mitigation is required.

Mann Middle School

Building modernization improvements at Mann Middle School would not affect facility energy consumption (e.g., electricity, natural gas) or vehicle trip characteristics, relative to existing conditions. Accordingly, building upgrades would not result in increased direct or indirect operational criteria pollutants, relative to existing conditions. Rather, replacement of inefficient building fixtures and other retrofits would likely reduce energy consumption and result in a regional reduction of criteria air pollutants. Impacts would remain less than significant.

Concurrent Construction and Operational Emissions

Due to the project schedule, some overlap between the construction and operation of the project is expected to occur during the time the new stadium is operational while building modernization efforts are ongoing. The stadium is expected to be operational by the end of year 2015, while modernization improvements are expected to last until November 2019. Table 5-6 summarizes the combined modernization construction and net new stadium operational emissions that result on a given day as these activities overlap.

As shown in Table 5-6, however, maximum daily emissions from the combined construction and operational activity are anticipated to remain below SDAPCD trigger levels used by the City of San Diego. Accordingly, this impact is considered less than significant. No mitigation is required.

Table 5-6. Combined Daily Construction and Operational Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_2	PM10	PM25
Maximum Modernization Construction[1]	17.9	146.8	252.8	0.3	11.9	9.5
Maximum Stadium Operations[2]	9.5	1.6	7.5	0.0	0.9	0.3
Maximum Daily Overlap	**27.4**	**148.4**	**260.3**	**0.3**	**12.8**	**9.7**
SDAPCD Trigger Levels	**75**	**250**	**550**	**250**	**100**	**55**
Exceed Trigger Levels?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Appendix G.

[1] Maximum daily modernization construction emissions are presented in Table 5-4.

[2] Maximum daily operational emissions are the net new operational emissions over existing conditions presented in Table 5-5.

Result in Cumulatively Considerable Net Increase of any Criteria Pollutant for which the Project Region Is Nonattainment under an Applicable Federal or State Ambient Air Quality Standard

Crawford High School

The SDAB is currently in marginal nonattainment for the federal 8-hour ozone standard (2008 standard) as well as state ozone, PM10, and PM2.5 standards, as a result of past and present projects, and will be further impeded by reasonably foreseeable future projects (EPA 2013, ARB 2012a). Therefore, the emissions of concern within the SDAB are ozone precursors (VOC and NO_X), PM10, and PM2.5. The project would result in a cumulatively considerable net increase of these pollutants if emissions exceed the SDAPCD Trigger Levels shown in Table 5-2. In addition, cumulative impacts could occur if emissions of concern from other past, present, or reasonably foreseeable future projects within proximity of the project would expose nearby receptors to substantial pollutant concentrations.

As discussed under "Violate Air Quality Standards or Contribute Substantially to an Existing or Projected Air Quality Violation," above, the project would have a less-than-significant direct impact on air quality during construction and operation (see Tables 5-4, 5-5, and 5-5). Construction activities might occur during the same period as other projects in the SDAB. Possible cumulative

impacts on air quality as a result of these combined activities would be addressed by the standard SDAPCD measures that apply to construction projects, in addition to project-level mitigation strategies identified for each project. Likewise, project-related operational emissions are expected to be minor and far below SDAPCD thresholds. Therefore, implementation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Mann Middle School

As discussed above for Crawford High School, Mann Middle School construction activities might occur during the same period as other projects in the SDAB. Possible cumulative impacts on air quality as a result of these combined activities would be addressed by the standard SDAPCD measures that apply to construction projects, in addition to project-level mitigation strategies identified for each project. Likewise, project-related operational emissions are expected to be minor and far below SDAPCD thresholds. Therefore, implementation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

Crawford High School

Diesel Particulate Matter

DPM is classified as a carcinogenic toxic air contaminant (TAC) by the ARB. TACs are pollutants that may result in an increase in mortality or serious illnesses or pose a present or potential hazard to human health. Health effects related to TACs include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. Heavy-duty construction equipment and haul trucks represent sources of DPM from project construction.

Construction of the project would occur within an existing school facility, which would be considered a sensitive receptor. There are also several homes located immediately adjacent to the school boundaries. Construction activities, such as building modernization and electrical installation, could potentially occur during the school year and expose students to elevated concentrations of DPM, which are characterized as PM10 exhaust in this analysis.

A screening-level HRA was performed using the AERSCREEN dispersion model and estimated PM10 exhaust emissions (see Table 5-3). Since health risk is based on the summation of all emissions emanating from a project, the health risk assessment herein considers all pollutants associated with activities at both school sites.

The results of the HRA are summarized in Table 5-7 and are compared to SDCAPCD's risk thresholds. Table 5-7 presents the maximum construction-related health risks for exposed adults and students. Health impacts were estimated assuming all construction activity would occur on the same day (rather than by phase). This approach ensures a conservative, worst-case screening assessment.

Table 5-7. Maximum Project-Level Health Risks during Construction

Exposed Subgroup	Non-Cancer Hazard Index	Increased Cancer Risk (per million)
Adult[1]	0.0939	1.97E-04
Student[2]	0.0939	4.42E-05
SDCAPCD Thresholds	**1.0**	**10**
Exceed Thresholds?	*No*	*No*

Source: Appendix G
[1] Maximum concentrations would occur at 133 feet from the center of the school boundaries, which is inside the project area boundary itself.
[2] Because construction could occur during the school year, DPM concentrations at the construction fence line were used to evaluate health risks to students.

As shown in Table 5-7, project construction would not result in significant increases of the non-cancer hazard index or cancer risk. Therefore, the project-level impact is considered less than significant. No mitigation is required.

Carbon Monoxide Hot-Spots

Traffic generated by the athletic field improvements would have the potential to create CO hotspots at nearby roadways and intersections. Existing (2012), near-term (2015), and horizon year (2035) traffic conditions were modeled to evaluate CO concentrations relative to the state and federal air quality standards (see Table 5-1). CO concentrations were modeled at the following study area intersections, as identified in the traffic impact assessment for the project: Collwood Boulevard/Montezuma Road, 54th Street/El Cajon Boulevard, and 54th Street/University Avenue. Detailed information on emissions modeling and quantification methods can be found in Appendix G. Table 5-8 presents the results of the CO hotspot modeling and indicates that CO concentrations are not expected to contribute to any new localized violations of the 1- or 8-hour ambient air quality standards. Consequently, this impact is considered less than significant. No mitigation is required. Note that it is assumed that there would be no new motor vehicle trips associated with building modernization.

Table 5-8. Modeled CO Concentrations at Affected Intersections[1]

		Existing No Project		Existing Project		Near-Term No Project		Near-Term Project		Horizon No Project		Horizon Project	
Intersection	Receptor[2]	1-hr[3,4]	8-hr[3,4]	1-hr[3,4]	8-hr[3,4]	1-hr[3,4]	8-hr[3,4]	1-hr[3,4]	8-hr[3,4]	1-hr[3,4]	8-hr[3,4]	1-hr[3,4]	8-hr[3,4]
Collwood Blvd/ Montezuma Rd	1	7.1	5.2	7.2	5.3	6.1	4.5	6.2	4.6	4.2	3.2	4.2	3.2
	2	6.5	4.8	6.5	4.8	5.6	4.1	5.7	4.2	4.0	3.0	4.0	3.0
	3	7.0	5.1	7.0	5.1	6.1	4.5	6.1	4.5	4.1	3.1	4.1	3.1
	4	6.3	4.6	6.3	4.6	5.5	4.1	5.5	4.1	4.0	3.0	4.0	3.0
54th St/ El Cajon Blvd	5	5.6	4.1	5.6	4.1	5.0	3.7	5.1	3.8	3.8	2.9	3.8	2.9
	6	5.9	4.4	6.0	4.4	5.3	3.9	5.3	3.9	3.9	3.0	3.9	3.0
	7	5.7	4.2	5.8	4.3	5.2	3.9	5.2	3.9	3.8	2.9	3.8	2.9
	8	5.5	4.1	5.6	4.1	4.9	3.7	5.0	3.7	3.8	2.9	3.8	2.9
54th St/ University Ave	9	6.3	4.6	6.3	4.6	5.4	4.0	5.5	4.1	3.9	3.0	3.9	3.0
	10	6.4	4.7	6.4	4.7	5.6	4.1	5.6	4.1	4.0	3.0	4.0	3.0
	11	5.9	4.4	5.9	4.4	5.2	3.9	5.2	3.9	3.9	3.0	3.9	3.0
	12	5.8	4.3	5.9	4.4	5.2	3.9	5.2	3.9	3.8	2.9	3.8	2.9

Source: Appendix G.

[1] Background concentrations of 2.8 and 2.77 ppm were added to the modeling 1-hour and 8-hour results, respectively.

[2] Receptors are located 100 feet from the center of each intersection diagonal, 71 feet from the roadway centerline, and at the boundary of the mixing zone.

[3] The federal and state 1-hour standards are 35 and 20 ppm, respectively.

[4] The federal and state 8-hour standards are 9 and 9.0 ppm, respectively.

Asbestos

Demolition of the athletic facilities or modernization of the existing school facility could result in disturbance of asbestos-containing materials (ACM) if asbestos was historically used for building insulation or other building materials. Consequently, the project would be required to comply with the EPA's asbestos NESHAP regulations if asbestos is present at the existing facilities. The asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of ACM. The asbestos NESHAP regulations are included in SDAPCD's *Regulation XI, National Emission Standards for Hazardous Air Pollutants (NESHAPS), Subpart M (National Emission Standard for Asbestos), Rule 361.150 Standard for Waste Disposal for Manufacturing, Fabricating, Demolition, Renovation, and Spraying Operations.*

The asbestos NESHAP regulations specify work practices to be followed during demolition and renovation of all structures, installations, and buildings (excluding residential buildings that have four or fewer dwelling units). In addition, the regulations require the owner of the building and/or the contractor to notify applicable state and local agencies and/or EPA regional offices before all demolitions or before renovations of buildings that contain a certain threshold amount of asbestos. Compliance with the asbestos NESHAP regulations, which would be mandatory in the event ACM is found on site, would mitigate any asbestos-related impact to a less-than-significant level.

Mann Middle School

Diesel Particulate Matter

As with Crawford High School, there are several homes located immediately adjacent to the Mann Middle School boundaries. As shown in Table 5-7, construction-related health risks for exposed adults and students from the combined construction activities at both school sites would not result in significant increases of the non-cancer hazard index or cancer risk. Therefore, the project-level impact is considered less than significant. No mitigation is required.

Carbon Monoxide Hot-Spots

Construction at Mann Middle School would only include building modernization. It is assumed that there would be no new motor vehicle trips associated with building modernization. Therefore, CO concentrations are not expected to contribute to any new localized violations of the 1- or 8-hour ambient air quality standards. Consequently, this impact is considered less than significant. No mitigation is required

Asbestos

As with Crawford High School, modernization of the existing school facility could result in disturbance of asbestos-containing materials (ACM) if asbestos was historically used for building insulation or other building materials. Consequently, the project would be required to comply with the EPA's asbestos NESHAP regulations if asbestos is present at the existing facilities. The asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of ACM. The asbestos NESHAP regulations are included in SDAPCD's *Regulation XI, National Emission Standards for Hazardous Air Pollutants (NESHAPS), Subpart M (National Emission Standard for Asbestos), Rule 361.150 Standard for Waste Disposal for Manufacturing, Fabricating, Demolition, Renovation, and Spraying Operations.*

The asbestos NESHAP regulations specify work practices to be followed during demolition and renovation of all structures, installations, and buildings (excluding residential buildings that have four or fewer dwelling units). In addition, the regulations require the owner of the building and/or the contractor to notify applicable state and local agencies and/or EPA regional offices before all demolitions or before renovations of buildings that contain a certain threshold amount of asbestos. Compliance with the asbestos NESHAP regulations, which would be mandatory in the event ACM is found on site, would mitigate any asbestos-related impact to a less-than-significant level.

Create Objectionable Odors Affecting a Substantial Number of People

Crawford High School

Although offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and air districts. Project-related odor emissions would be evident in the area immediately surrounding Crawford High School during the construction period. Potential sources that may emit odors during construction activities include diesel exhaust and architectural coating of buildings. Project operations may result in odors from the use of architectural coatings for athletic facility maintenance, although these odors are expected to be minor and localized to the athletic complex. Accordingly, construction and operation of the project would not result in nuisance odors that would violate SDAPCD Rule 51. This impact is considered less than significant. No mitigation is required.

Mann Middle School

As with Crawford High School, some project-related odors would exist in the areas immediately surrounding Mann Middle School during construction and may involve diesel exhaust and architectural coating of buildings. No additional sources of objectionable odors are expected from project operations, as they would continue to involve school activities similar to the existing conditions. As such, the proposed modernization improvements during construction would not result in nuisance odors that would violate SDAPCD Rule 51, and impacts would be less than significant. No mitigation is required.

5.2.2 Greenhouse Gases

5.2.2.1 Existing Conditions

Crawford High School and Mann Middle School

The following discussion summarizes the GHG analysis presented in the *Technical Assumptions and Air Quality and Greenhouse Gas Impact Analysis for the Crawford High School and Mann Middle School Modernization Project*, which is included as Appendix G to this EIR.

Climate change is a term used to describe large-scale shifts in existing patterns in the earth's climate system. Although the climate has historically responded to natural drivers, recent climate change has been unequivocally linked to increasing concentrations of GHGs in the earth's lower atmosphere (Intergovernmental Panel on Climate Change 2007a). The rapid loading of GHGs into the atmosphere is primarily due to the burning of fossil fuels since the industrial revolution.

Higher concentrations of heat-trapping GHGs in the atmosphere result in increasing global surface temperatures, a phenomenon commonly referred to as global warming. Warming of the earth's lower atmosphere induces large-scale changes in planetary systems, including ocean circulation patterns, precipitation patterns, global ice cover, and biological distributions (Intergovernmental Panel on Climate Change 2007a, 2007b). Key characteristics of the primary GHGs identified by the Intergovernmental Panel on Climate Change are summarized in Table 5-9. Unlike criteria air pollutants, which occur locally or regionally, the long atmospheric lifetimes of these GHGs allow them to be well-mixed in the atmosphere and transported over distances.

Although there is currently no federal law specifically related to climate change or the reduction of GHGs, the EPA is developing proposed regulations under the Clean Air Act that may be adopted in the next 2 years. California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. Of particular importance is Assembly Bill 32 (AB 32), which establishes a statewide goal to reduce GHG emissions back to 1990 levels by 2020. The governor has also issued several executive orders related to the state's evolving climate change policy.

The City of San Diego has taken steps to address climate change at the local level. In 2002, the City adopted the Sustainable Community Program, which established the partnership with the Cities for Climate Protection (CCP) Campaign. The City also became a charter member of the California Climate Action Registry. The Sustainable Community Program also established the City's GHG reduction goal of 15% below 1990 levels.

The City also adopted the 2005 Climate Protection Action Plan (CPAP), which describes the City's commitment to reducing greenhouse gas emissions. The City's GHG emission inventory states that City residents, businesses, and municipal operations produced about 15.5 million tons of GHGs in 1990, the baseline year. The CPAP projected 2010 GHG emissions to top 22.5 million tons. However, by adopting a goal of 15% reduction of baseline levels, it was estimated that 2010 emissions could be reduced to 13.2 million tons. As of the time of this analysis, the City has yet to provide an update regarding whether the 15% reduction goal was achieved.

Table 5-9. Key Characteristics of Principle Greenhouse Gases

GHG	Primary Emissions Sources	Global Warming Potential (GWP)[1]	Atmospheric Lifetime (years)[2]	Atmospheric Abundance (2005)
Carbon dioxide (CO_2)	• Burning of fossil fuels • Gas flaring • Cement production • Land use change	1	50–200	391 ppm
Methane (CH_4)	• Burning of fossil fuels • Agriculture processes • Livestock • Landfill outgassing • Land use change	21	9–15	1,871 ppb

GHG	Primary Emissions Sources	Global Warming Potential (GWP)[1]	Atmospheric Lifetime (years)[2]	Atmospheric Abundance (2005)
Nitrous oxide (N_2O)	• Burning of fossil fuels • Agriculture processes • Nitric acid production • Nylon production	310	120	323 ppb
Hydrofluorocarbons (HFCs)	• Commercial, industrial, and consumer products • Air conditioners and refrigerants	140–11,700	1.5–264	3.9–65 ppt
Perfluorinated carbons (PFCs)	• Aluminum production • Semiconductor manufacturing	6,500–9,200	10,000–50,000	2.9–74 ppt
Sulfur hexafluoride (SF_6)	• Power distribution • Semiconductor manufacturing	23,900	3,200	7.4 ppt

Sources: Intergovernmental Panel on Climate Change (2007a), Carbon Dioxide Information Analysis Center (2012).
[1] The GWP is used to describe emissions of GHGs in terms of a single gas, known as carbon dioxide equivalent (CO_2e). GHGs are expressed as CO_2e by normalizing emissions to CO_2, which as a GWP of 1.
[2] Defined as the half-life of the gas.
Notes:
ppm = parts per million
ppb = parts per billion
ppt = parts per trillion

5.2.2.2 Impact Significance Criteria

The following significance criteria are based on Appendix G of the State CEQA Guidelines and provide the basis for determining significance of impacts associated with greenhouse gases resulting from the implementation of the proposed project.

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

The District has not yet formally adopted specific thresholds of significance with regards to GHG emissions in CEQA documents. However, the County of San Diego has formally adopted guidelines for evaluating the significance of climate change impacts. The guidelines identify a tiered approach to determining significance of project-related GHG emissions. Two bright-light numeric thresholds have been adopted for annual emissions: 10,000 metric ton carbon dioxide equivalent ($MTCO_2e$) for stationary source projects and 2,500 $MTCO_2e$ for other development projects (County of San Diego 2012). The City of San Diego has also identified an interim GHG threshold for commercial and residential land use development projects. This interim threshold is based on the 900 metric ton (MT) screening threshold in the California Air Pollution Control Officers Association (CAPCOA) report *CEQA & Climate Change* and serves as a conservative screening threshold (City of San Diego 2010).

The County GHG thresholds were developed to evaluate operational-related GHG emissions, as opposed to construction-related emissions. Indeed, no air district within the state has adopted construction-related GHG emissions thresholds. However, by way of comparison, criteria pollutant thresholds for project operations are often equal to or more stringent than those adopted for construction emissions. Accordingly, operational thresholds can be used to provide a conservative analysis of construction-related GHG emissions. A significant amount of GHG emissions is therefore defined as 2,500 $MTCO_2e$ per year, consistent with the County's guidance.[2] In accordance with the State CEQA guidelines and scientific consensus regarding the cumulative nature of GHGs, the following analysis includes a cumulative, rather than project-level, evaluation of GHG impacts.[3]

5.2.2.3 Impact Analysis

GHG emissions associated with construction and operation of the project were quantified using standard and accepted software tools, techniques, and emission factors. A summary of the methodology is provided below. A full list of assumptions can be found in Appendix G.

Generate Greenhouse Gas Emissions during Construction and Operations

Crawford High School

Construction

The improvements at Crawford High School would generate short-term emissions of CO_2, CH_4, and N_2O associated with building modernization and the replacement of the existing sports field. Emissions would originate from mobile and stationary construction equipment exhaust, as well as employee and haul truck vehicle exhaust. Emissions were estimated using emission factors and methodologies from CalEEMod (version 2013.2) as well as EMFAC 2011, as discussed in Section 5.2.1, "Air Quality." Emissions of CO_2, CH_4, and N_2O are summed annually and reported in terms of CO_2 equivalent (CO_2e), which accounts for the relative warming potential (i.e., global warming potential [GWP]).

Table 5-10 summarizes the results of the emissions modeling. (See Attachment A of Appendix G for technical details regarding emissions modeling.) As shown in Table 5-10, an estimated 2,459 $MTCO_2e$ would be emitted over the approximately 5.5-year construction period. Consistent with the County's GHG guidance, the project-related GHG emissions were amortized over a 30-year period, which results in an annual GHG emission rate of approximately 82 $MTCO_2e$. The amortized 30-year average GHG emission rate is considerably lower than the County's 2,500 MT threshold. However, consistent with County guidance, the amortized construction total was added to and analyzed with the operational emissions discussed below. Note that given the cumulative nature of GHG emissions and assessments within CEQA, the emissions shown in Table 5-10 considers all emissions associated with activities at both school sites.

[2] Consistent with City and County guidance, construction emissions are amortized over 30 years to obtain an annual GHG estimate.

[3] Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors), which are primarily pollutants of regional and local concern. Given their long atmospheric lifetimes, GHGs tend to accumulate in the atmosphere. Therefore, GHG impacts are inherently cumulatively considerable.

Operation

Improvements associated with athletic field improvements at Crawford High School would generate long-term emissions of CO_2, CH_4, and N_2O. Primary sources of emissions include vehicle exhaust, energy usage, water consumption, and waste generation. GHG emissions associated with existing and project conditions were estimated using CalEEMod defaults and vehicle trip data provided by KOA Corporation (Appendix H). Emissions are presented in terms of CO_2e.

Long-term project operations would result in GHG emissions as a result of fuel combustion from increased on road motor vehicles, as well as new natural gas, electricity, water consumption, and solid waste generation by the athletic facilities. As discussed in Section 5.2-1, "Air Quality," building upgrades would not result in increased operational emissions, relative to existing conditions. Rather, replacement of inefficient building fixtures and other retrofits would likely reduce energy consumption and result in a regional reduction of GHG emissions. Accordingly, the operational assessment focuses exclusively on GHG emissions generated by expansion of the athletic fields.

Table 5-10. Construction-Related Greenhouse Gas Emissions (metric tons per year)

	Construction Equipment			Onroad Vehicles		
Year	CO_2	CH_4	N_2O	CO_2	Other[1]	CO_2e
Athletic Facilities Improvements and Construction						
Demolition	38	0.00	0.00	14	0.21	52
Site Preparation	19	0.00	0.00	8	0.12	27
Grading	29	0.00	0.00	14	0.21	43
Building Construction	493	0.03	0.01	414	6.72	919
Paving	21	0.00	0.00	16	0.32	37
Architectural Coating	1	0.00	0.00	2	0.04	3
Building Modernization at Crawford High School and Mann Middle School						
Trench and Install Electrical and Low Voltage Duct Bank	307	0.02	0.01	10	0.47	320
Modernization Work in Existing Buildings	384	0.02	0.01	53	2.52	443
Site Improvements (General)b	254	0.01	0.01	27	1.29	285
Site Improvements (Hardscape, Landscape)	256	0.01	0.01	54	2.58	315
Total Construction Emissions	**1,802**	**0.10**	**0.05**	**611**	**29.03**	**2,458**
Amortized Total[2]	--	--	--	--	--	*82*

Source: ICF emissions modeling (Appendix G: Attachment A).

[1] Includes CH_4, N_2O, and other trace GHGs emitted by onroad vehicles.

[2] Total construction emissions were divided by 30 to obtain the amortized emissions total.

The athletic field improvements would generate direct and indirect operational GHG emissions. Sources of direct emissions include mobile vehicle trips and natural gas combustion. Indirect emissions would be generated by electricity use, waste generation, and water consumption. Similar sources are currently operating under existing conditions, although additional emissions are currently generated by field irrigation and landscaping (which are not required as part of the athletic field improvements). Estimated existing and project-related operational emissions during opening year 2015 are presented in Table 5-11.

Table 5-11. Estimated Net Operational Emissions at Crawford High School (metric tons per year)

Source	CO_2	CH_4	N_2O	CO_2e
Existing Stadium				
Landscaping (grass fields)	<1	<0.01	<0.01	<1
Irrigation Water	27	<0.01	<0.01	27
Total Existing Stadium Emissions	*27*	*<0.01*	*<0.01*	*27*
New Stadium				
New Vehicle Trips	28	<0.01	<0.01	28
Electricity Use (outdoor lighting)	293	0.01	<0.01	294
Increased Visitor Waste Generation	<1	0.01	0.00	<1
Increased Visitor Indoor Water Consumption	39	0.28	0.01	47
Total New Stadium Emissions	*360*	*0.30*	*0.01*	*369*
Project Net Over Existing	**332**	**0.30**	**0.01**	**342**
Amortized Construction Total[2]	--	--	--	82
Amortized Construction plus Operations	--	--	--	424
County Threshold	**--**	**--**	**--**	**2,500**
Significant?	--	--	--	*No*

Source: Emissions modeling (Appendix G).

[1] The athletic field improvements will reduce water demand associated with field irrigation through the installation of synthetic turf instead of existing grass.

[2] Construction emissions are summarized in Table 5-10.

As shown in Table 5-11, long-term operation of the athletic facilities would result in net increase of 342 $MTCO_2e$ per year over existing conditions. Combined with amortized construction, the project would result in net increase of approximately 424 $MTCO_2e$ per year over existing conditions. Note that the majority of this increase is attributable to the increase in outdoor lighting associated with the new stadium. The 424 $MTCO_2e$ per year net increase is considerably lower than the 2,500 MT per year threshold used by the County. Moreover, building modernization upgrades, which were not quantified herein, would involve increased use of insulation within the school structures and installation of more efficient appliances/equipment, leading to lower operational GHGs by way of reduced energy consumption. These savings could potentially offset a portion of the operational emissions shown in Table 5-11. Note that the indirect GHG calculations (electricity, water, waste) do not take into account the ARB's Scoping Plan Reduction Strategies, which aim to reduce GHG emissions from all emission sectors, including electricity (i.e., Renewable Portfolio Standard) and waste (i.e., Landfill Methane Control) reduction efforts. Thus, GHG impacts associated with project construct would be less than significant.

Mann Middle School

Construction

Similar to the discussion above for Crawford High School, building modernization improvements at Mann Middle School would generate short-term emissions of CO_2, CH_4, and N_2O. Given the cumulative nature of GHG emissions and assessments within CEQA, the emissions shown in Table 5-10 considers all emissions associated with activities at both the Crawford High School and Mann Middle School sites. As shown in Table 5-10, the amortized 30-year average GHG emission rate is considerably lower than the County's 2,500 MT threshold.

Operation

Building modernization improvements at Mann Middle School would not affect facility energy consumption (e.g., electricity, natural gas, water, waste) or vehicle trip characteristics, relative to existing conditions. Accordingly, building upgrades would not result in increased direct or indirect operational GHG emissions, relative to existing conditions. Rather, replacement of inefficient building fixtures and other retrofits would likely reduce energy consumption and result in a regional reduction of GHG emissions. Impacts would remain less than significant.

Conflict with an Applicable Plan, Policy, or Regulation

Crawford High School

The District, the City, and SDAPCD have yet to adopt a qualified plan, policy, or regulation to reduce GHG emissions. Therefore, the most applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions is AB 32, which codified the state's GHG emissions reduction targets for the future.

ARB adopted the AB 32 Scoping Plan as a framework for achieving AB 32. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. These strategies are geared towards sectors and activities that generate significant amounts of GHGs. For example, the majority of measures address building energy, waste and wastewater generation, goods movement, on-road transportation, water usage, and high global warming potential gases. Although expansion of the athletic fields includes several of these sources, activities associated with the project are not considered by the AB 32 Scoping Plan as having a high potential to emit GHGs. This statement is substantiated by the project-level emissions analysis, which demonstrates that the GHG emission rate is considerably lower than the 2,500 MT per year threshold used by the County of San Diego. The emissions are also less than the interim screening threshold of 900 MT per year used by the City of San Diego. Consequently, none of the AB 32 reduction strategies are applicable to construction of the project. Facility upgrades associated with long-term operation of the project are consistent with AB 32 because they would result in energy efficiency and building energy enhancements. Likewise, installation of artificial turf would reduce water consumption and pressure on natural resources. Implementation of the project would therefore not conflict with implementation of AB 32, and this impact is considered less than significant.

Mann Middle School

As with Crawford High School, GHG emission rate associated with project-related activities at Mann Middle School is considerably lower than the 2,500 MT per year threshold used by the County of San Diego. Facility upgrades associated with long-term operation of the project are consistent with AB 32 because they would result in energy efficiency and building energy enhancements. Thus, implementation of the project would therefore not conflict with implementation of AB 32, and this impact is considered less than significant.

5.2.3 Hydrology and Water Quality

5.2.3.1 Existing Conditions

Crawford High School

The El Cerrito neighborhood, including the proposed project, is located within the Chollas Subarea, which is part of the San Diego Mesa Hydrologic Area and Pueblo San Diego Hydrologic Unit. The topography of the site is very flat and includes about 26.9 acres of impervious area associated with school buildings, paved walkways and roads, and storage facilities. Crawford High School is located in a developed and urban area. No water features exist in the vicinity of the site. Runoff from the site flows from the south to the north and discharges to a public concrete-lined drainage ditch located north of the site. Based on a review of the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) maps, the project site is not located within a 100-year flood zone (FEMA 1997). Some rainfall at the south end of the school could flow into the open space canyon directly south of the school but would flow away from the school. There are no other identified flooding issues associated with the project site.

Mann Middle School

The El Cerrito neighborhood, including the proposed project, is located within the Chollas Subarea, which is part of the San Diego Mesa Hydrologic Area and Pueblo San Diego Hydrologic Unit. The topography of the site is very flat and includes about 24.5 acres of impervious area associated with school buildings, paved walkways and roads, and storage facilities. Mann Middle School is located in a developed and urban area. No water features exist in the vicinity of the site. Runoff from the site flows from the north to the south and discharges to a public concrete-lined drainage ditch located south of the site. Based on a review of FEMA maps, the project site is not located within a 100-year flood zone (FEMA 1997). There are no other identified flooding issues associated with the project site.

5.2.3.2 Impact Significance Criteria

According to State CEQA Guidelines, Section 15186 and Appendix G, the proposed project would have a significant impact on hydrology and water quality if it would result in any of the following.

1. Violate any water quality standards or waste discharge requirements.
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in 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 that would not support existing land uses or planned uses for which permits have been granted).

3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite.
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite.
5. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
6. Otherwise substantially degrade water quality.
7. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
8. Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
9. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
10. Contribute to inundation by seiche, tsunami, or mudflow.

As discussed in the NOP prepared for the proposed project (Appendix A), no impacts regarding 100-year flood hazards, levee or dam failure, or inundation by a seiche, tsunami, or mudflow are expected to occur. Thresholds 7–10 were dismissed in the NOP and are not discussed further in this EIR.

5.2.3.3 Impact Analysis

Crawford High School

The proposed project athletic field upgrades and modernization improvements at Crawford High School would not include any features, such as the use of chemicals or other activities or operations, that would directly discharge pollutants into surface or groundwater supplies, and the specific design of all project facilities and operations would be required to comply with local, state, and federal water quality standards or waste discharge requirements for pollutants. Operation of the campus would incorporate site planning, design, and maintenance strategies to maintain or restore the existing hydrologic functions on the site in terms of temperature, rate, volume, and duration of flow. During construction, impacts on hydrologic functions would be avoided through the implementation of BMPs, required as part of a SWPPP, to minimize erosion effects and ensure that significant water quality impacts during the construction phase would not occur. Implementation of the BMPs and SWPPP is a standard District procedure for school modernization projects. The BMPs that would be incorporated into the project design to address Low Impact Development, Site Design, Source Control, and Treatment Control are outlined below. Additionally, groundwater monitoring and reporting is currently conducted by the District in accordance with RWQCB San Diego Region Order No. 97-11 to ensure water quality standards are met. With implementation of the BMPs, a SWPPP during construction and groundwater monitoring, design impacts as well as short-term

construction impacts associated with water quality standards or waste discharge requirements would be less than significant.

Low Impact Development and Site Design BMPs

- Do not disturb natural drainage systems.
- Replicate the site's natural drainage patterns.
- Concentrate or cluster development on the least environmentally sensitive portions of the site while leaving the remaining land in a natural undisturbed condition.
- Minimize soil compaction at the subgrade of bioretention and infiltration areas.
- Maintain minimum required square footage for all buildings.
- Maintain minimum sidewalk widths as required by the District.
- Reconfigure parking lot stalls with fewer stalls and more efficient lanes.
- Install landscaping and/or decompressed granite (DG) in lieu of pavement.
- Control and treat flows in landscaping or other controls prior to reaching existing natural drainage systems.

Source Control BMPs

- Restrict access to the area and equipment.
- Avoid hosing down the site.
- Perform regular pavement sweeping.
- Place trash receptacles at appropriate locations.
- Cover trash enclosures and ensure run-on is deterred.
- Train employees to properly dispose of wastes.
- Recycle.
- Store waste and recycling materials in paper containers.
- Limit significant materials inventory.
- Provide a roof to cover the source area.
- Control roof downspout discharge.
- Minimize stormwater run-on from adjacent properties.
- Reduce waste.
- Routinely clean catch basins.
- Stencil signs on storm drain inlets.
- Conduct a refresher course in operating and safety procedures.
- Dispose of obsolete equipment, inoperable vehicles, and surplus materials.
- Check vehicles and equipment for leaks.

- Discharge wash water to a sanitary sewer.
- Reduce the amount of liquid cleaning agents used.
- Use solvents efficiently.
- Use a door skirt or seal.
- Employ proper handling procedures to transport materials and waste.
- Properly dispose of sediment generated by cleaning sanitary sewer lines.
- Establish integrated pest control (establish within the District).
- Conduct pesticide operations under the supervisor of licensed applicator.
- Divert drainage to treatment facility/sanitary sewer.
- Regularly inspect and maintain stormwater conveyance systems.
- Regularly inspect and test equipment.
- Prepare appropriate spill prevention and response plans.
- Conduct personnel training regarding the SWPPP.
- Control dust and particulates.
- Do not pour or dispose of water into storm drains.
- Routinely report any observed non-stormwater drainages.
- Revegetate barren areas.
- Mulch exposed areas.
- Use soil blinders.
- Reduce flow velocity at outlet.
- Use erosion control blankets.

Treatment Control BMPs

- Establish bioretention facilities.
- Implement infiltration facilities or practices.

Mann Middle School

The proposed project modernization improvements at Mann Middle School would not include any features, such as the use of chemicals or other activities or operations, that would directly discharge pollutants into surface or groundwater supplies, and the specific design of all project facilities and operations would be required to comply with local, state, and federal water quality standards or waste discharge requirements for pollutants. Operation of the campus would incorporate site planning, design, and maintenance strategies to maintain or restore the existing hydrologic functions on the site in terms of temperature, rate, volume, and duration of flow. During construction, impacts on hydrologic functions would be avoided through the implementation of BMPs, required as part of a SWPPP, to minimize erosion effects and ensure that significant water

quality impacts during the construction phase would not occur. Implementation of the BMPs and SWPPP is a standard District procedure for school modernization projects. The BMPs that would be incorporated into the project design to address Low Impact Development, Site Design, Source Control, and Treatment Control are outlined below. Additionally, groundwater monitoring and reporting is currently conducted by the District in accordance with RWQCB San Diego Region Order No. 97-11 to ensure water quality standards are met. With implementation of the BMPs, a SWPPP during construction, and groundwater monitoring, design impacts as well as short-term construction impacts associated with water quality standards or waste discharge requirements would be less than significant.

Low Impact Development and Site Design BMPs

- Do not disturb natural drainage systems.
- Replicate the site's natural drainage patterns.
- Concentrate or cluster development on the least environmentally sensitive portions of the site while leaving the remaining land in a natural undisturbed condition.
- Minimize soil compaction at the subgrade of bioretention and infiltration areas.
- Maintain minimum required square footage for all buildings.
- Maintain minimum sidewalk widths as required by the District.
- Reconfigure parking lot stalls with fewer stalls and more efficient lanes.
- Install landscaping and/or decompressed granite (DG) in lieu of pavement.
- Control and treat flows in landscaping or other controls prior to reaching existing natural drainage systems.

Source Control BMPs

- Restrict access to the area and equipment.
- Avoid hosing down the site.
- Perform regular pavement sweeping.
- Place trash receptacles at appropriate locations.
- Cover trash enclosures and ensure run-on is deterred.
- Train employees to properly dispose of wastes.
- Recycle.
- Store waste and recycling materials in paper containers.
- Limit significant materials inventory.
- Provide a roof to cover the source area.
- Control roof downspout discharge.
- Minimize stormwater run-on from adjacent properties.
- Reduce waste.

- Routinely clean catch basins.
- Stencil signs on storm drain inlets.
- Conduct refresher courses in operating and safety procedures.
- Dispose of obsolete equipment, inoperable vehicles, and surplus materials.
- Check vehicles and equipment for leaks.
- Discharge wash water to a sanitary sewer.
- Reduce the amount of liquid cleaning agents used.
- Use solvents efficiently.
- Use a door skirt or seal.
- Employ proper handling procedures to transport materials and waste.
- Properly dispose of sediment generated by cleaning sanitary sewer lines.
- Establish integrated pest control (establish within the District).
- Conduct pesticide operations under the supervisor of licensed applicator.
- Divert drainage to treatment facility/sanitary sewer.
- Regularly inspect and maintain stormwater conveyance systems.
- Regularly inspect and test equipment.
- Prepare appropriate spill prevention and response plans.
- Conduct personnel training regarding SWPPP.
- Control dust and particulates.
- Do not pour or dispose of water into storm drains.
- Routinely report any observed non-stormwater drainages.
- Revegetate barren areas.
- Mulch exposed areas.
- Use soil blinders.
- Reduce flow velocity at outlet.
- Use erosion control blankets.

Treatment Control BMPs

- Establish bioretention facilities.
- Implement infiltration facilities or practices.

5.2.4 Land Use and Planning

5.2.4.1 Existing Conditions

Crawford High School

The proposed project is located within an urbanized area in the El Cerrito neighborhood, which is within the boundaries of the City of San Diego. The site is zoned Residential-Multiple Unit (RM-1-1) and is designated as "Institutional & Public and Semi-Public Facilities" by the City of San Diego's General Plan.

It is not anticipated that implementation of the proposed stadium improvements—including the proposed lights—would be incompatible with operations for airports within the City. The project site is located outside of the Airport Influence Areas identified in the Airport Land Use Compatibility Plans for the San Diego International Airport, Montgomery Field, and Marine Corps Air Station Miramar. The project site is also located outside of the Airport Approach Overlay Zone and the Airport Environs Overlay Zone for the San Diego International Airport identified in Section 132.02 and Section 132.03, respectively, of the City Municipal Code. The project site location and the proposed height of the lights also appear to be outside of the Federal Aviation Administration (FAA) notification requirements (Title 14, Code of Federal Regulations, Part 77, Objects Affecting Navigable Airspace) for these types of structures. However, if requested by the FAA, the District will comply with any additional notification or requests.

Mann Middle School

The proposed project is located within an urbanized area in the El Cerrito neighborhood, which is within the boundaries of the City of San Diego. The site is zoned Residential-Multiple Unit (RM-1-1) and is designated as "Institutional & Public and Semi-Public Facilities" by the City of San Diego's General Plan.

It is not anticipated that implementation of the proposed stadium improvements would be incompatible with operations for airports within the City. The project site is located outside of the Airport Influence Areas identified in the Airport Land Use Compatibility Plans for the San Diego International Airport, Montgomery Field, and Marine Corps Air Station Miramar. The project site is also located outside of the Airport Approach Overlay Zone and the Airport Environs Overlay Zone for the San Diego International Airport identified in Section 132.02 and Section 132.03, respectively, of the City Municipal Code. The project site location and the proposed height of the lights also appear to be outside of the FAA notification requirements (Title 14, Code of Federal Regulations, Part 77, Objects Affecting Navigable Airspace) for these types of structures. However, if requested by the FAA, the District will comply with any additional notification or requests.

5.2.4.2 Impact Significance Criteria

According to State CEQA Guidelines, Section 15186 and Appendix G, the proposed project would have a significant impact on land use and planning if it would result in any of the following.

1. Physically divide an established community.

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

As discussed in the NOP (Appendix A), the proposed project would involve school facilities upgrades that would be internal to the existing high school and middle school, and would not physically divide an established community; also there are no applicable habitat or natural community conservation plans on the project site. As such, thresholds 1 and 3 above are not discussed further in this EIR.

5.2.4.3 Impact Analysis

Crawford High School

The City of San Diego's 2008 General Plan and Municipal Code establish permitted land uses and implement development regulations and restrictions within its jurisdiction. A conflict might occur with the City of San Diego's Municipal Code, Section 132.0505, with regard to the proposed six new 80–foot-high stadium lights. However, in accordance with Section 53904 of the California Government Code

> … the governing board of a school district, that has complied with the requirements of Section 65352.2 of this code and Section 21151.2 of the Public Resources Code, by a vote of two-thirds of its members, may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district. The governing board of the school district may not take this action when the proposed use of the property by the school district is for non-classroom facilities, including, but not limited to, warehouses, administrative buildings, and automotive storage and repair buildings.

A two-thirds vote of the Education Board to render the zoning ordinance inapplicable in accordance with Section 53094 of the California Government Code was approved by the District in 2012. Therefore, the City's regulations pertaining to zoning are not applicable to the proposed project.

Mann Middle School

The City of San Diego's 2008 General Plan and Municipal Code establish permitted land uses and implement development regulations and restrictions within its jurisdiction. In accordance with Section 53904 of the California Government Code

> … the governing board of a school district, that has complied with the requirements of Section 65352.2 of this code and Section 21151.2 of the Public Resources Code, by a vote of two-thirds of its members, may render a city or county zoning ordinance inapplicable to a proposed use of property by the school district. The governing board of the school district may not take this action when the proposed use of the property by the school district is for non-classroom facilities, including, but not limited to, warehouses, administrative buildings, and automotive storage and repair buildings.

A two-thirds vote of the Education Board to render the zoning ordinance inapplicable in accordance with Section 53094 of the California Government Code was approved by the District in 2012. Therefore, the City's regulations pertaining to zoning are not applicable to the proposed project.

5.2.5 Transportation and Traffic

KOA Corporation prepared a Traffic Impact Study (TIS) in August 2013 to evaluate potential impacts associated with the proposed athletic facilities improvements at Crawford High School. The TIS includes a review of the existing 2012 and 2014 conditions and projected project conditions using a site specific trip generation rate based on evening football games that would occur between the hours of 6:30 p.m. and 10:00 p.m. The Athletic Stadium is proposed to be available for use any day of the year up to a mandatory cutoff of 11 p.m. for the stadium lights. The typical uses associated with an athletic stadium are provided in Table 2-2. As noted in Table 2-2, the latest that games and practices are anticipated to end is approximately 9:00 p.m. The findings of the traffic study are summarized below and also provided as Appendix H of this EIR.

5.2.5.1 Existing Conditions

Crawford High School

Existing Circulation System

Regional circulation in the vicinity of Crawford High School is provided by Interstate 15 (I-15), and local circulation is mostly by El Cajon Boulevard, Collwood Boulevard, 54th Street, and University Avenue. KOA determined that these four local roadways would most likely be affected by project traffic, all of which are operated and maintained by the City of San Diego. Streets are defined as arterials, collectors, or residential roads pursuant to City definitions. Figure 1 of the TIS shows the major roadway features in the vicinity of Crawford High School and the specific intersections studied.

Existing Traffic Volumes and Operations

To assess the existing operations in the project area, KOA conducted traffic counts when Crawford High School was in session. Counts were made for 13 roadway segments and 11 intersections in June 2012 and are shown in Tables 5-12 and 5-13. The existing traffic volumes of the roadway segments and intersections are also shown in Table 5 of the TIS and Table 4 of the TIS, respectively.

Counts for roadway segments are listed in terms of Average Daily Traffic (ADT), or the average number of vehicle trips determined to travel along the segment throughout a 24-hour period. Counts for intersections were determined during the PM "peak hour" timeframe, or when traffic is heaviest on the local roadways and/or would be most affected by traffic associated with evening football games, and during the attendance peak of football games. Evening peak hour (PM peak) counts were conducted between 5:00 p.m. and 6:00 p.m. and game peak counts were conducted between 5:45 p.m. and 6:45 p.m.

A Level of Service (LOS) grade was assigned for each of the studied intersections and roadway segments. LOS is a commonly used rating system that indicates the quality of traffic flow and is expressed using a letter-graded scale, with LOS "A" being the most effective and LOS "F" the least effective. For a roadway segment, LOS is determined by the volume-to-capacity ratio (v/c), which compares the existing ADT on the roadway segment to the segment's ADT capacity of effective operation (as determined by the City). Capacities for the studied segments were assigned pursuant to the City's roadway classification system. For an intersection, LOS was determined by the delay experienced at the intersection during the PM peak hour.

According to the thresholds used in KOA's analysis, an intersection or roadway is considered to be operating effectively and at an acceptable level if its LOS is assigned a grade of D or less. Any feature operating at LOS E or LOS F is considered to be operating at an unacceptable level. By these standards, three roadway segments are operating below acceptable levels (LOS E or F) while all study area intersections are currently operating at acceptable levels.

Table 5-12. Existing Conditions – Roadway Segments

Roadway Segment					
Name	Link	Capacity (LOS E)	Average Daily Traffic (ADT)	Volume/ Capacity Ratio (v/c)	Level of Service (LOS)
Collwood Blvd	South of Montezuma Rd	15,000	22,193	1.480	**F**
Collwood Blvd	North of Monroe Ave	15,000	21,953	1.464	**F**
Collwood Blvd	South of Monroe Ave	15,000	21,663	1.444	**F**
54th St	North of El Cajon Blvd	40,000	22,674	0.567	C
54th St	El Cajon Blvd to Trojan Ave	40,000	22,246	0.556	C
54th St	North of University Ave	40,000	23,726	0.593	C
54th St	South of University Ave	40,000	21,913	0.548	C
Sharron Pl	South of Trojan Ave	10,000	1,618	0.162	A
56th St	South of El Cajon Blvd	10,000	2,107	0.211	A
El Cajon Blvd	East of 54th St	40,000	23,459	0.600	C
Trojan Ave	East of 54th St	10,000	4,064	0.406	B
Trojan Ave	East of Sharron Pl	10,000	3,153	0.315	A
University Ave	52nd St to 54th St	30,000	22,138	0.738	D

Table 5-13. Existing Conditions – Intersections

	Commuter Peak (5:00 p.m.–6:00 p.m.)		Game Peak (5:45 p.m.–6:45p.m.)	
Intersection	Delay	LOS	Delay	LOS
Collwood Blvd/Montezuma Rd	26.1	C	19.9	B
Collwood Blvd/Collwood Way	13.8	B	10.0	A
Collwood Blvd/Monroe Ave	20.0	B	15.3	B
Collwood Blvd/54th St	19.2	B	17.1	B
54th St//El Cajon Blvd	41.6	D	39.0	D
56th St//El Cajon Blvd	7.3	A	7.2	A
54th St/Trojan Ave	23.4	C	23.2	C
Sharron Pl/Trojan Ave	7.6	A	7.4	A
56th St/Trojan Ave	8.0	A	7.6	A
52nd St/University Ave	21.1	C	18.6	B
54th St/University Ave	44.6	D	41.2	D

Additional 2014 traffic counts were collected at several roadways in the vicinity of Crawford High School to determine whether the 2012 Friday data shown in Tables 5-12 and 5-13 had effectively captured the most congested day and time period. A full week of 24-hour roadway segment counts was collected at six locations adjacent to the project site from March 4th to March 10th, 2014. Based on the count comparison, Friday (2012 and/or 2014) ADT counts are the highest day of the week. The 2012 Friday ADT counts are typically higher the 2014 seven-day ADT counts, with only two exceptions where the 2012 Friday counts are slightly (1% to 2%) lower than the new 2014 counts. Considering the 2014 Friday ADT counts are consistent with the 2012 Friday ADT counts it was determined that the traffic analysis, utilizing the 2012 Friday ADT count data, had effectively captured the most congested day and time period.

Existing Parking

The Crawford High School campus includes 38 marked stalls south of building 600, 76 marked stalls east of the gymnasium, 6 marked stalls west of the gymnasium, and 75 marked stalls along Sharron Place, for a total of 195 marked stalls.

Mann Middle School

Existing Circulation System

Regional circulation in the vicinity of Mann Middle School is provided by I-15 and local circulation is mostly by El Cajon Boulevard, Collwood Boulevard, 54th Street, and University Avenue. Because the project does not propose any significant infrastructure improvements at the middle school that are likely to increase traffic flow, a detailed traffic analysis was not conducted.

Existing Traffic Volumes and Operations

Because Mann Middle School is adjacent to Crawford Middle School, the existing traffic volumes and operations assessed for Crawford are likely to be comparable to the values determined in the Crawford traffic study.

Existing Parking

The Mann Middle School campus includes 124 marked stalls in two lots at the southwest end of the school at the intersection of Trojan Avenue and 54th Street, 30 marked stalls along the northern boundary of the school, and 7 marked stalls at the southeast corner of the school, for a total of 161 marked stalls.

5.2.5.2 Impact Significance Criteria

The following significance criteria are based on State CEQA Guidelines, Appendix G, and provide the basis for determining the significance of impacts associated with transportation and traffic resulting from implementation of the proposed project. The project would result in a significant impact on transportation and traffic if it would:

1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation

system, including but not limited to intersections, streets highways and freeways, pedestrian and bicycle paths, and mass transit.

2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in the location that results in substantial safety risks.
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
5. Result in inadequate emergency access.
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
7. Result in inadequate parking capacity.

The District uses the City's current thresholds for the determination of significance pursuant to the first criterion listed above. According to the adopted thresholds for roadway segments, such a substantial increase in traffic is indicated by a reduction of operation to LOS E or LOS F and a project-related increase in v/c of greater than 0.02 and 0.01, respectively. In the event either of these thresholds is exceeded for a study area roadway segment, an HCM Urban Street peak hour segment analysis is conducted and identifies an impact if the travel speed is decreased by more than 1 mile per hour at LOS E and 0.5 mile per hour for LOS F.

According to the adopted thresholds for intersections, such a substantial increase in traffic is indicated by a reduction of operation to LOS E or LOS F and a project-related increase in delay by greater than 2.0 seconds. Assessment of impacts pursuant to the first criterion will meet the second criterion as well.

5.2.5.3 Impact Analysis

Crawford High School

The proposed Athletic Stadium could accommodate up to 2,250 spectators; however, based on typical athletic program attendance information at Crawford High School and other schools in the District, attendance is estimated at 434 for non-homecoming football games and 775 for homecoming games with stadium lights, and far less for all other athletic program games and events. The estimated attendance figures at the proposed Athletic Stadium during a homecoming game considered the highest historic game ticket sales data for Crawford High School (369 attendees) and applied an average growth rate of 110% for homecoming ticket sales, consistent with observed increases in attendance at 12 other high schools with evening lighted games in the District. Projected attendance at non-homecoming games was estimated based on the relative difference between the two game types, or 56% less attendees than a homecoming game.

When school events attract spectators, those spectators add additional traffic to the local roadway system and result in additional parking demands. The events that attract the most spectators are football games and, therefore, they are the focus of this analysis. Evening football games would begin as early as 6:30 p.m. and end about 9:00 p.m. Based on data collected at the site and at Madison High

School, and meeting discussions between KOA and the City of San Diego, KOA determined that an average non-homecoming football game would result in 91 commuter PM peak hour trips (5:00 to 6:00 p.m.) and 173 game PM peak hour trips (5:45p.m. to 6:45 p.m.). Homecoming games would result in 144 commuter peak hour trips and 273 game peak hour trips. Since the current trips for existing afternoon games would be shifted to evening, an existing trip credit adjustment was made, resulting in an estimated 226 non-homecoming net daily trips and 406 homecoming net daily trips associated with the proposed project. Project traffic generation was estimated for both home and visitor attendees, and the breakdown of PM peak hour trips is shown for non-homecoming and homecoming games in Table 5-14.

Parking demand under project conditions was estimated based upon historic attendance records obtained from the District for both a homecoming and non-homecoming football game event. The parking needed for each event also assumes parking for game officials, support staff, and other individuals involved with an event.

Circulation System Performance

Roadway Segments

Figures 5-1a and 5-1b depict the ADT along each of the study area roadway segments for non-homecoming and homecoming games, respectively, and Table 5-15 illustrates how the proposed project would affect the v/c ratio on each of the 13 roadway segments under both scenarios. As shown, operations along all study area roadway segments under the proposed project would operate at acceptable LOS. As such, impacts on roadway segments would be less than significant with implementation of the proposed project during non-homecoming and homecoming games.

Although no current plans exist to rent out the athletic stadium for third-party use, the District may allow third parties to utilize the proposed stadium primarily on weekends. Fields are reserved for exclusive use by schools Monday through Friday, including evenings. As a result, third parties could utilize the athletic stadium for events primarily on weekends. As a part of the traffic study completed for the Draft EIR, 2014 traffic counts were collected at several roadways in the vicinity of Crawford High School to determine whether the 2012 Friday data shown in Tables 5-12 and 5-13 had effectively captured the most congested day and time period. A full week of 24-hour roadway segment counts was collected at six locations adjacent to the project site from March 4 to March 10, 2014. Based on the count comparison, Friday (2012 and/or 2014) ADT counts are the highest of the week. Attendance at third-party events is not anticipated to be higher than that associated with a homecoming game. As a result, the conclusions presented above and in Table 5-15 regarding effects of traffic from homecoming stadium events on roadway segments would apply to traffic associated with third-party events held on weekends. Impacts on roadway segments associated with traffic generated by third-party events on weekends would, therefore, be less than significant.

Intersections

Figures 5-2a through 5-2d and Table 5-16 show the 11 study area intersection traffic volumes during the PM peak hour for non-homecoming and homecoming games during the commuter and game peak hours. As shown, all intersection operations would remain at LOS D or better during non-homecoming and homecoming games during the peak and game peak hours, and impacts are considered to be less than significant.

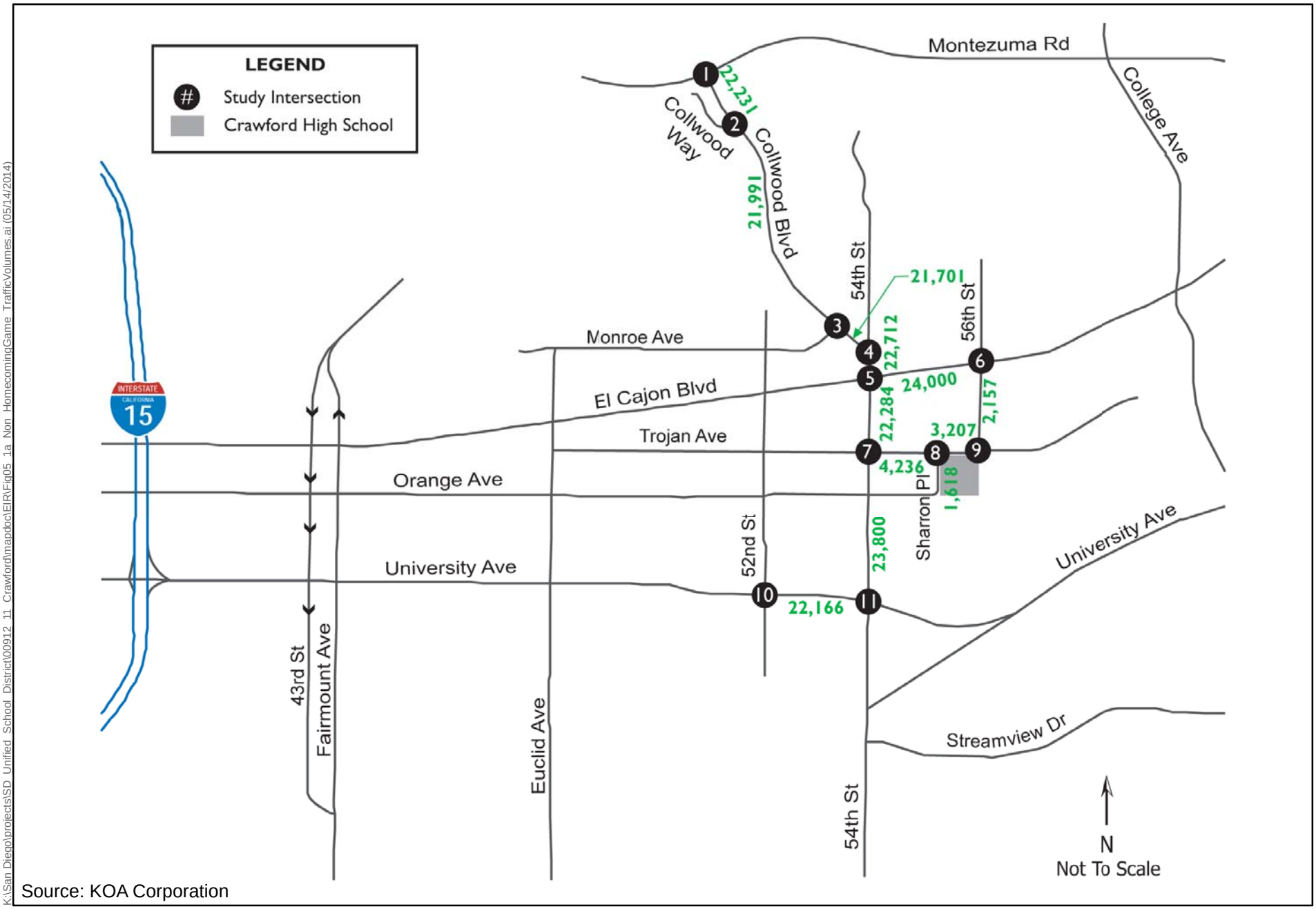
As described above under "Roadway Segments," the conclusions presented in the traffic study regarding effects of traffic from homecoming stadium events on roadway segments and intersections would apply to traffic associated with third-party events held on weekends. As shown in Table 5-16, impacts of traffic from stadium events such as a homecoming game would not result in significant adverse impacts on LOS at local intersections. Impacts on intersections associated with traffic generated by third-party events on weekends would, therefore, also be less than significant.

Congestion Management Plan

The SANDAG Congestion Management Program (CMP) is intended to determine if a large project (greater than 2,400 daily trips or more than 200 peak hour trips) would adversely impact the CMP transportation system. The project is estimated to generate 273 PM peak hour trips. Therefore, CMP system roadways within the study area were reviewed to determine if an arterial analysis would be required. Because the study area does not include roadways identified in the CMP system roadway list, a CMP arterial analysis was not required. The list of CMP system roadways is included in Appendix C of the TIS.

Air Traffic

The project does not include any components that would result in an increase in air traffic volume, the site design would not include tall buildings that could affect air traffic patterns, and the project would not otherwise result in effects on air traffic. Therefore, the proposed project would not result in a significant impact on air traffic.



Source: KOA Corporation

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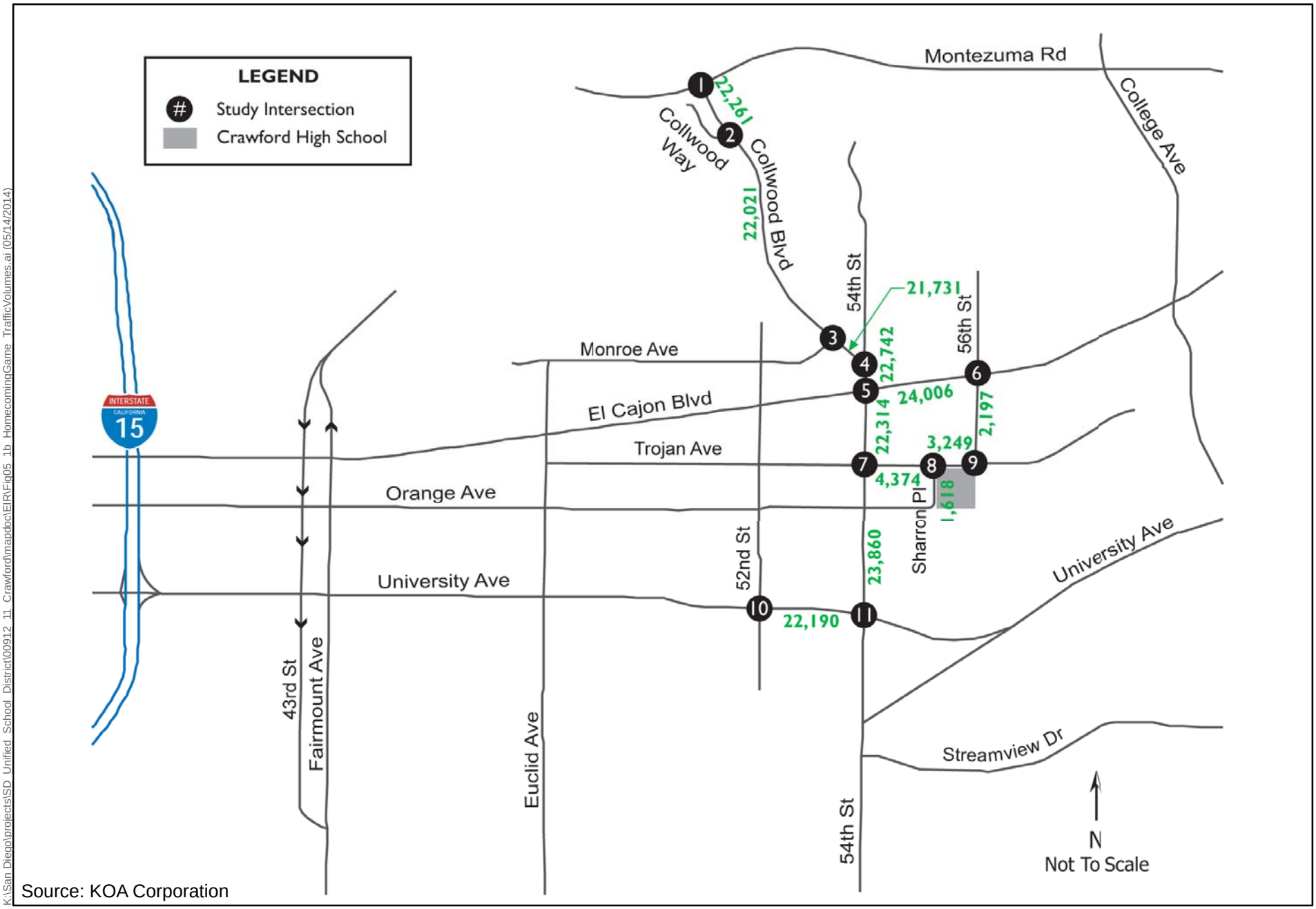
Figure 5-1a
Non-Homecoming Game Friday Traffic Volumes
Crawford High School & Mann Middle School Modernization Project



Source: KOA Corporation

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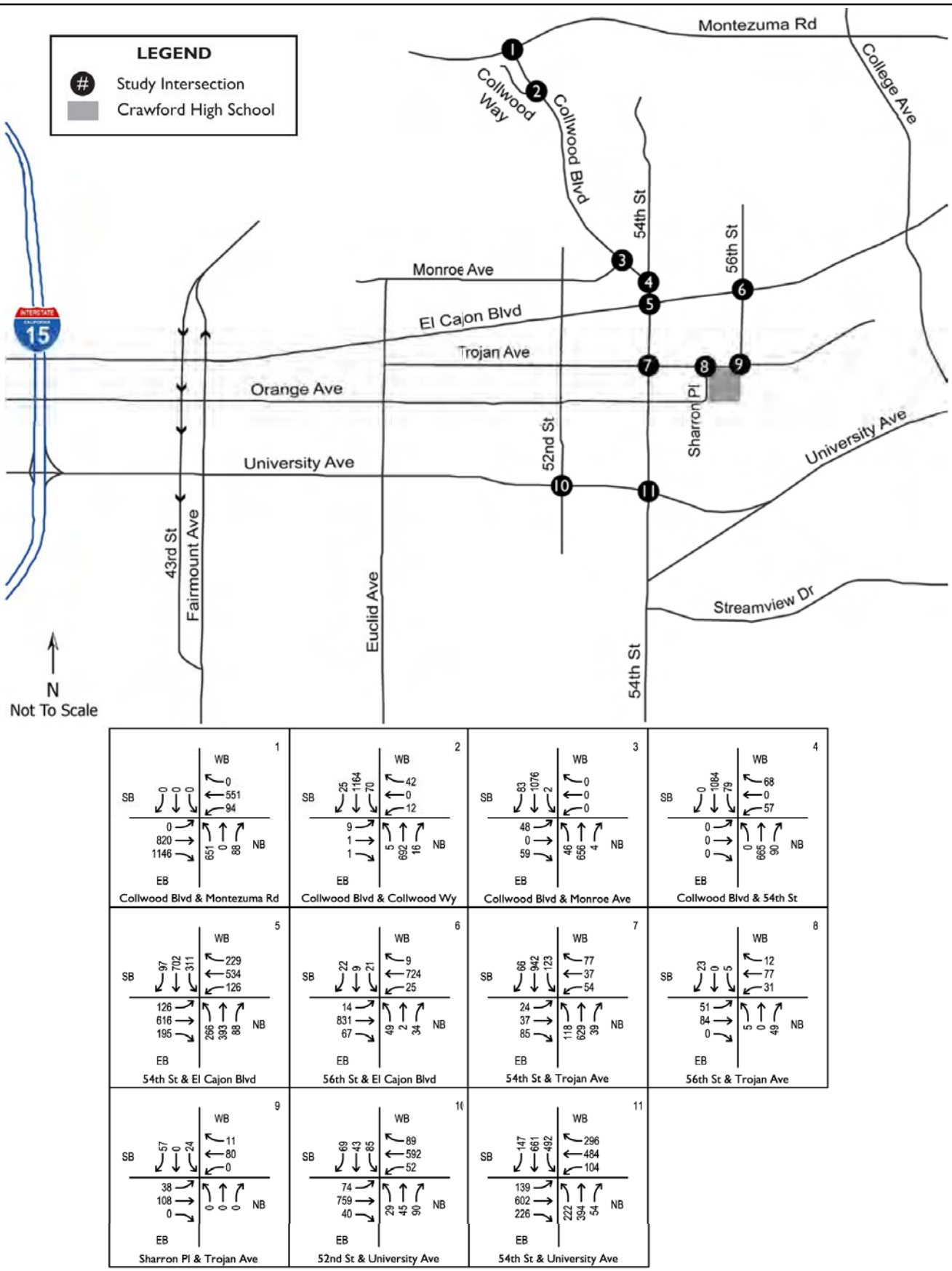
Figure 5-1b
Homecoming Game Friday Traffic Volumes
Crawford High School & Mann Middle School Modernization Project



Source: KOA Corporation

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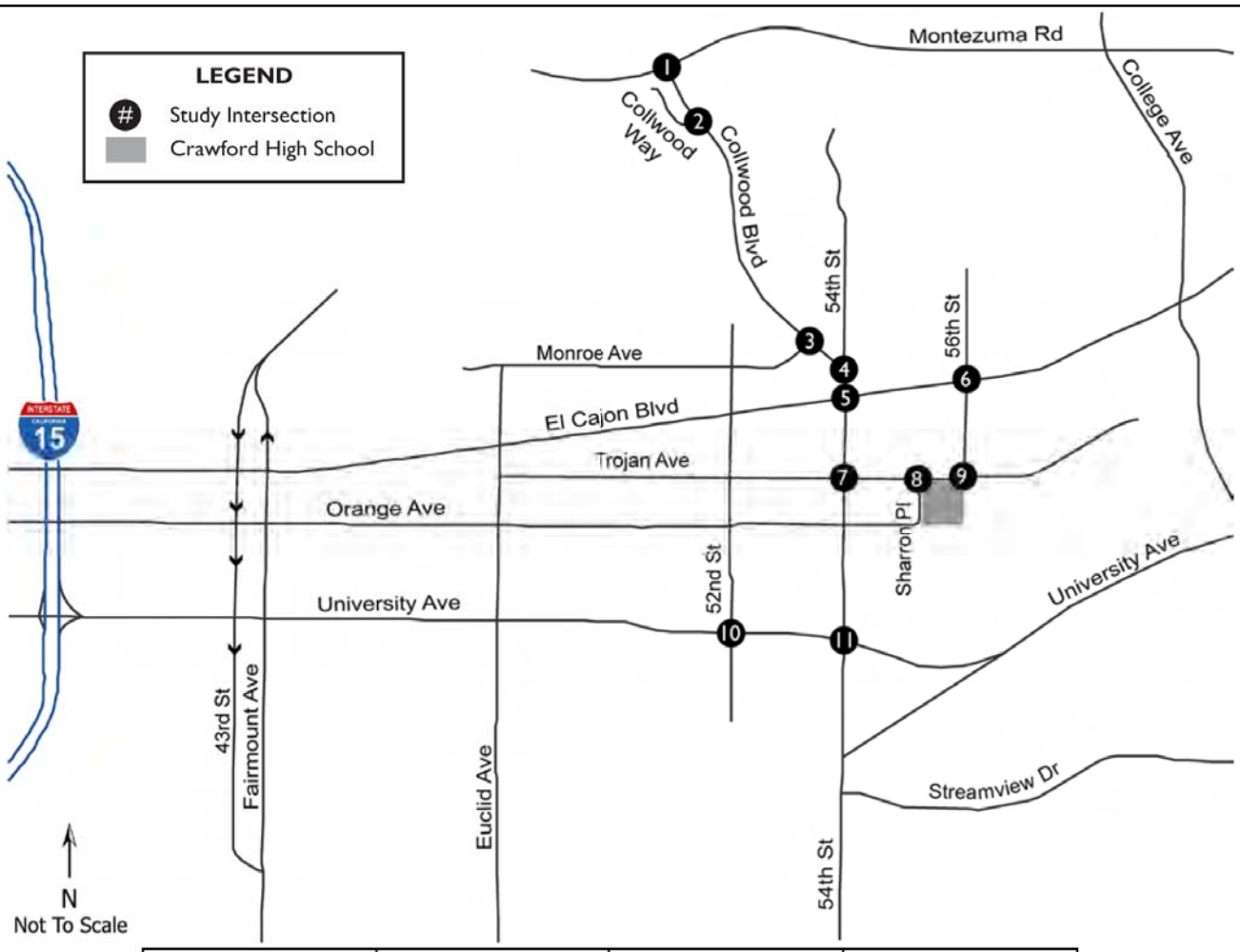
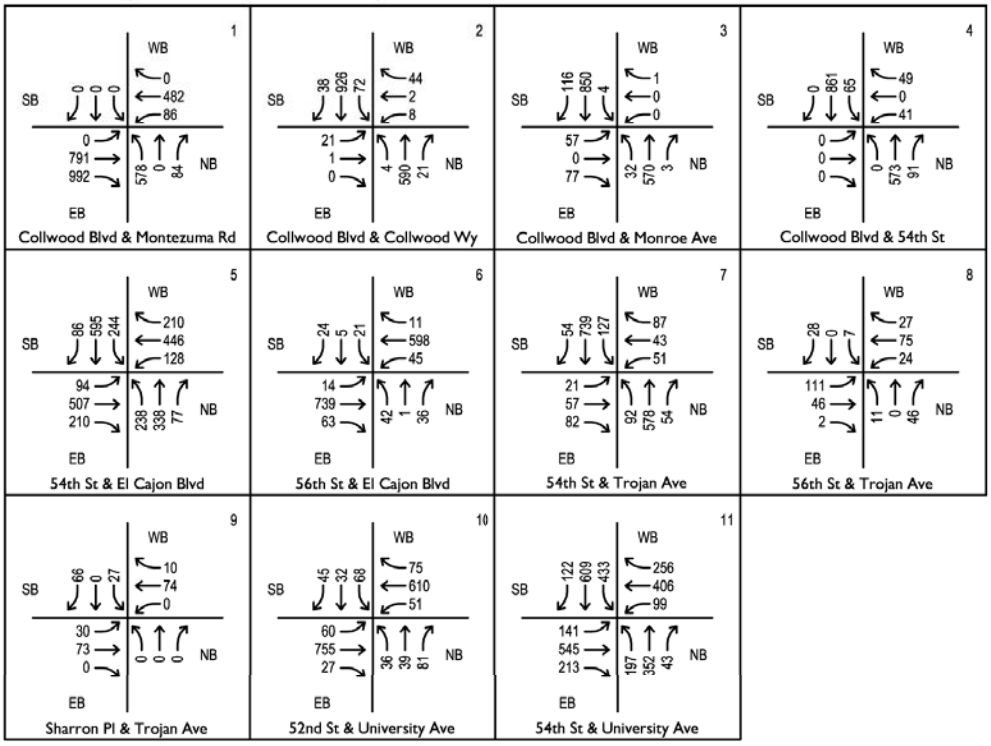
Figure 5-2a
Non-Homecoming Game Commuter Peak Hour Traffic Volumes
Crawford High School & Mann Middle School Modernization Project





Source: KOA Corporation

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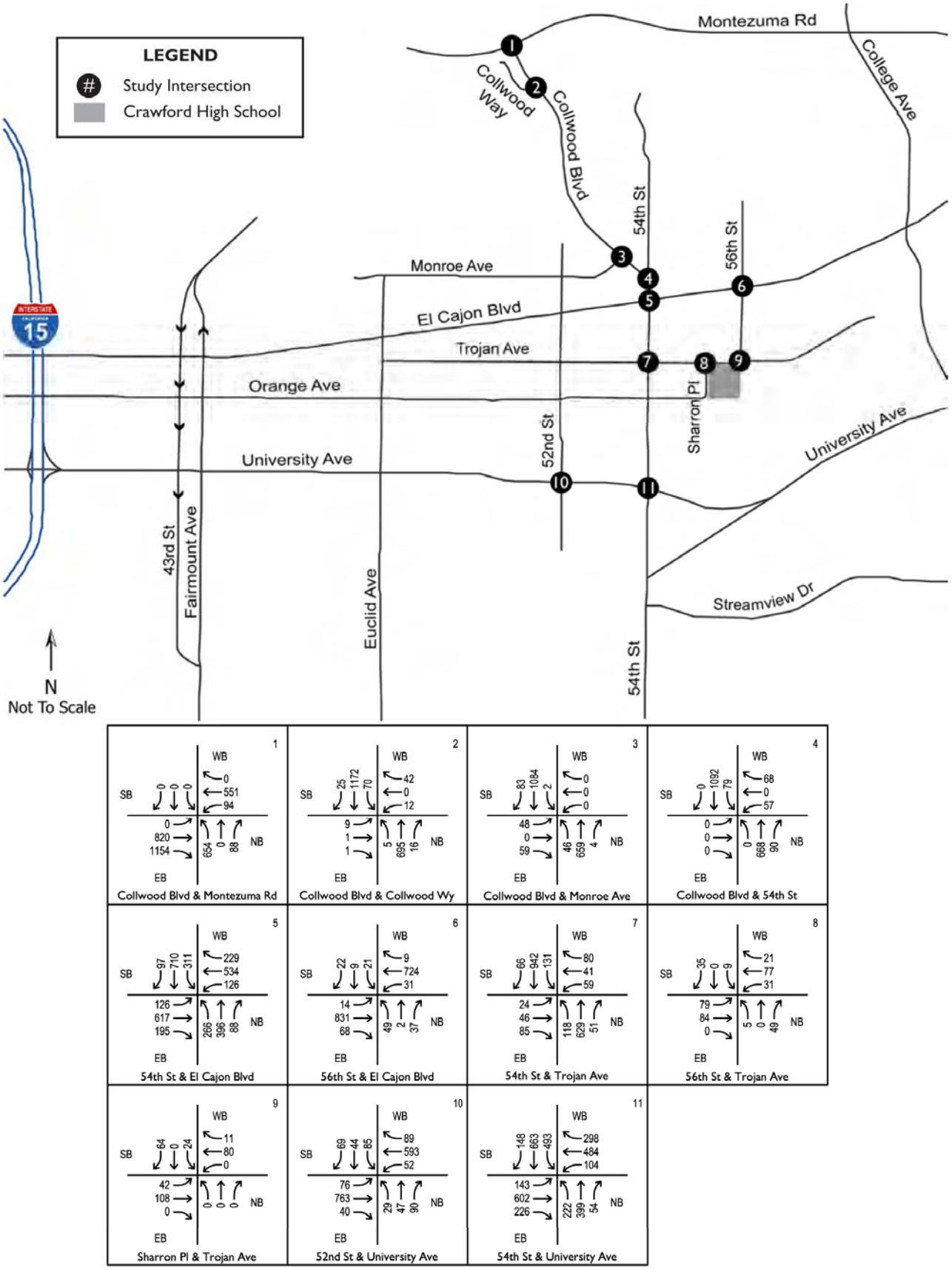
Figure 5-2b
Non-Homecoming Game PM Peak Hour Traffic Volumes
Crawford High School & Mann Middle School Modernization Project



Source: KOA Corporation

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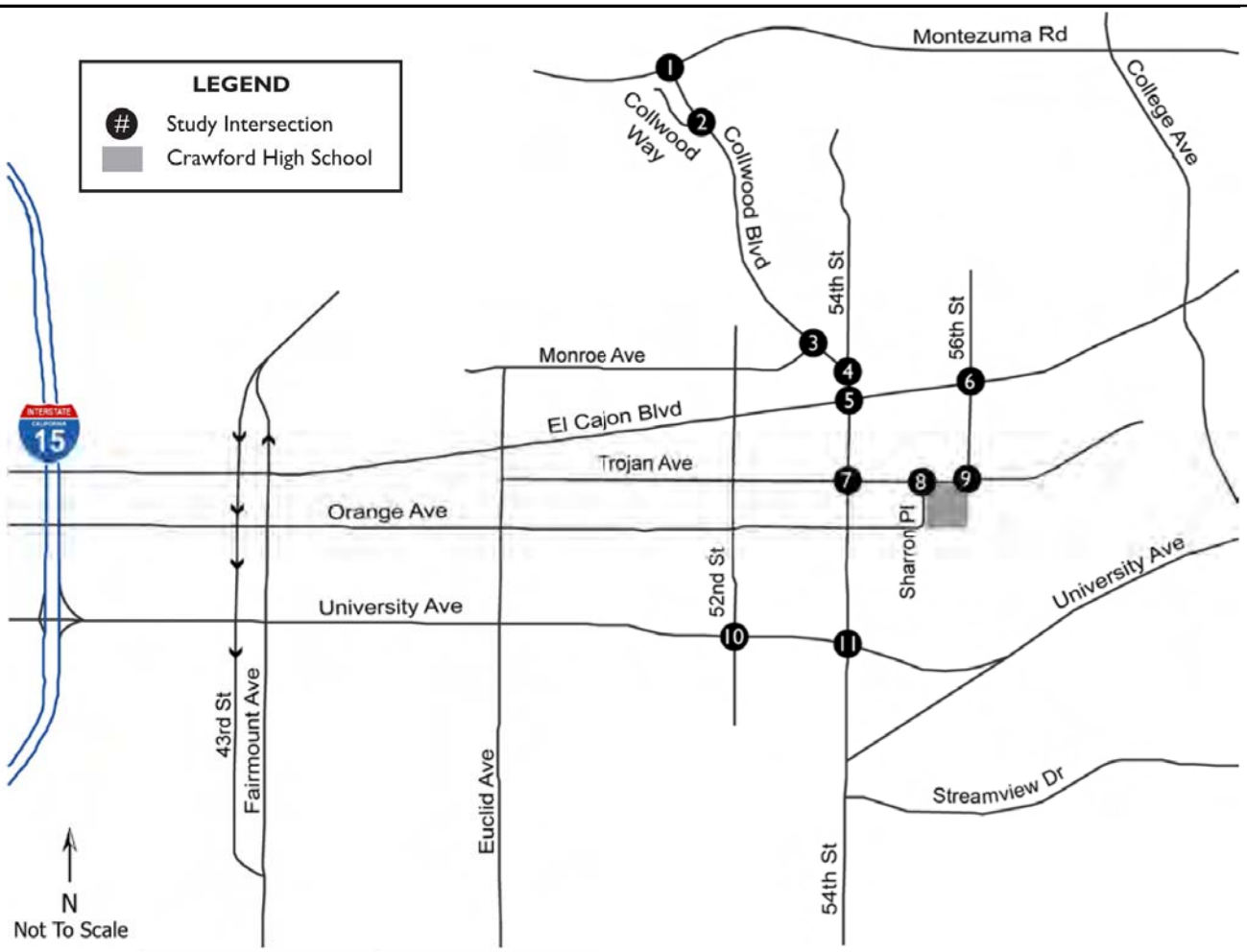
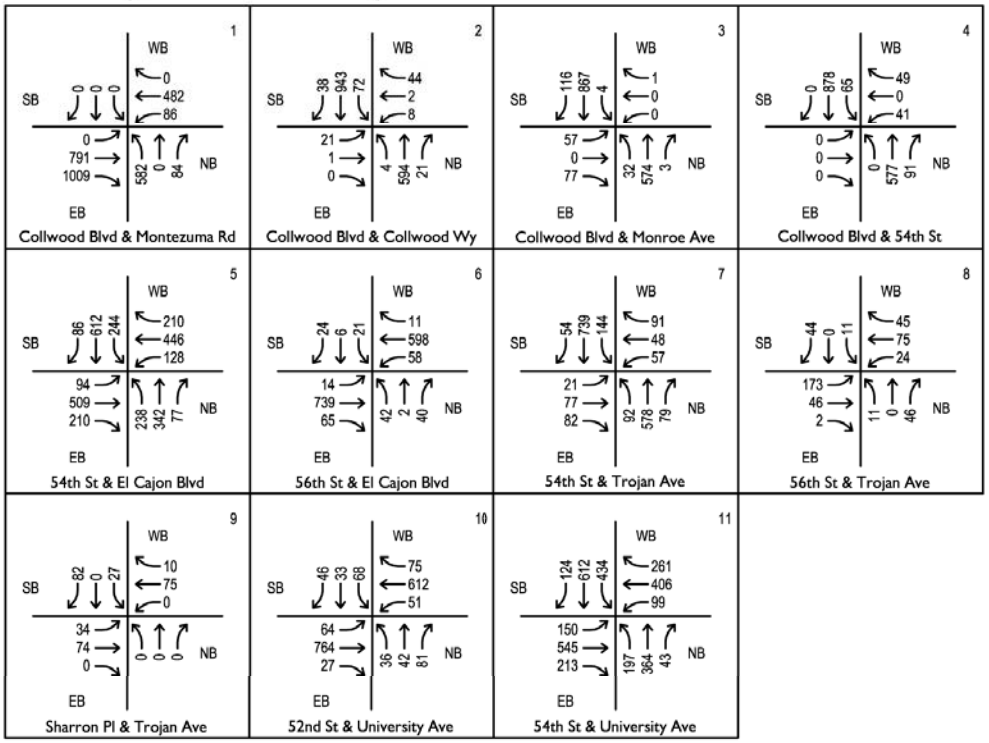
Figure 5-2c
Homecoming Game Commuter Peak Hour Traffic Volumes
Crawford High School & Mann Middle School Modernization Project





Source: KOA Corporation

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Figure 5-2d
Homecoming Game PM Peak Hour Traffic Volumes
Crawford High School & Mann Middle School Modernization Project

Table 5-14. Project Traffic Generation

Component		Non-Homecoming Game							Homecoming Game						
			Commuter Peak (5:00 p.m.–6:00 p.m.)			Game Peak (5:45 p.m.–6:45 p.m.)				Commuter Peak (5:00 p.m.–6:00 p.m.)			Game Peak (5:45 p.m.–6:45 p.m.)		
Project	Trip	Daily Trips	Total	In	Out	Total	In	Out	Daily Trips	Total	In	Out	Total	In	Out
Home Attendee	Existing[1]	100	18	12	6	34	27	7	154	28	19	9	52	42	10
	Future[2]	258	46	32	14	88	70	18	440	79	55	24	150	120	30
	Net Increase	158	28	20	8	54	43	11	286	51	36	15	98	78	20
	Impact on Analysis Period[3]	158	46	32	14	88	70	18	286	79	55	24	150	120	30
Visitor Attendee	Existing[1]	182	33	23	10	62	50	12	242	44	30	14	82	66	16
	Future[2]	250	45	31	14	85	68	17	362	65	45	20	123	98	25
	Net Increase	68	12	8	4	23	18	5	120	21	15	6	41	32	9
	Impact on Analysis Period[3]	68	45	31	14	85	68	17	120	65	45	20	123	98	25
Total Project Impact on Analysis Period [3]		**226**	**91**	**63**	**28**	**173**	**138**	**35**	**406**	**144**	**100**	**44**	**273**	**218**	**55**

[1] Source: Appendix H, Table i-3, "Existing Trip Generation Calculations Without Lights."

[2] Source: Appendix H, Table i-4, "Future Trip Generation Calculations With Lights."

[3] Net daily trip impacts on the analysis period include the existing daily trip credit adjustment because current trips for existing afternoon games would be shifted to evenings. No trip credit for commuter and game peak hours.

Table 5-15. Existing with Project – Roadway Segments

Roadway Segment		Current Street Section[1]	Roadway LOS E Capacity[2]	Existing 2012 Traffic												
				Existing Count			With Non-Homecoming Game					With Homecoming Game				
Name	Link			ADT	VC	LOS	ADT	VC	LOS	Change	Impact[3]	ADT	VC	LOS	Change	Impact[3]
Collwood Blvd	South of Montezuma Rd	2C	15,000	22,193	1.480	F	22,231	1.482	F	0.002	No	22,261	1.484	F	0.004	No
Collwood Blvd	North of Monroe Av	2C	15,000	21,953	1.464	F	21,991	1.466	F	0.002	No	22,021	1.468	F	0.004	No
Collwood Blvd	South of Monroe Av	2C	15,000	21,663	1.444	F	21,701	1.447	F	0.003	No	21,731	1.449	F	0.005	No
54th St	North of El Cajon Blvd	4D	40,000	22,674	0.567	C	22,712	0.568	C	0.001	No	22,742	0.569	C	0.002	No
54th St	El Cajon Blvd – Trojan Av	4D	40,000	22,246	0.556	C	22,284	0.557	C	0.001	No	22,314	0.558	C	0.002	No
54th St	North of University Av	4D	40,000	23,726	0.593	C	23,800	0.595	C	0.002	No	23,860	0.597	C	0.004	No
54th St	South of University Av	4D	40,000	21,913	0.548	C	21,945	0.549	C	0.001	No	21,969	0.549	C	0.001	No
Sharron Pl	South of Trojan Ave	2U	10,000	1,618	0.162	A	1,618	0.162	A	0.000	No	1,618	0.162	A	0.000	No
56th St	South of El Cajon Blvd	2U	10,000	2,107	0.211	A	2,157	0.216	A	0.005	No	2,197	0.220	A	0.009	No
El Cajon Blvd	East of 54th St	4D	40,000	23,994	0.600	C	24,000	0.600	C	0.000	No	24,006	0.600	C	0.000	No
Trojan Ave	East of 54th St	2U	10,000	4,064	0.406	B	4,236	0.424	B	0.018	No	4,374	0.437	B	0.031	No
Trojan Ave	East of Sharron Pl	2U	10,000	3,153	0.315	A	3,207	0.321	A	0.006	No	3,249	0.325	A	0.010	No
University Ave	52nd St – 54th St	4U	30,000	22,138	0.738	D	22,166	0.739	D	0.001	No	22,190	0.740	D	0.002	No

[1] C = Collector (with two-way left-turn lane); U = Undivided (with striped centerline); D = Divided (with median).
[2] Source: *City of San Diego Traffic Impact Study Manual* (July 1998), Table 2.
[3] Project impact threshold (v/c ratio): LOS E > 0.02; LOS F > 0.01.

Table 5-16. Existing with Project – Intersections

Study Area Intersection	Existing Count		Non-Homecoming Game		Project Delay	Project Impact[2]	Homecoming Game		Project Delay	Project Impact[2]
	Delay[1]	LOS	Delay[1]	LOS			Delay[1]	LOS		
Existing 2012 Commuter Peak (5:00 p.m.–6:00p.m.) Conditions										
Collwood Blvd/ Montezuma Rd	26.1	C	27.0	C	0.9	No	27.4	C	1.3	No
Collwood Blvd/ Collwood Way	13.8	B	14.3	B	0.5	No	14.5	B	0.7	No
Collwood Blvd/ Monroe Ave	20.0	B	20.7	C	0.7	No	21.1	C	1.1	No
Collwood Blvd/ 54th St	19.2	B	19.2	B	0.0	No	19.2	B	0.0	No
54th St/ El Cajon Blvd	41.6	D	41.7	D	0.1	No	41.7	D	0.1	No
56th St/ El Cajon Blvd	7.3	A	7.6	A	0.3	No	7.8	A	0.5	No
54th St/ Trojan Ave	23.4	C	25.2	C	1.8	No	26.1	C	2.7	No
Sharron Pl/ Trojan Ave	7.6	A	7.9	A	0.3	No	8.2	A	0.6	No
56th St/ Trojan Ave	8.0	A	8.1	A	0.1	No	8.1	A	0.1	No
52nd St/ University Ave	21.1	C	21.2	C	0.1	No	21.2	C	0.1	No
54th St/ University Ave	44.6	D	44.9	D	0.3	No	45.1	D	0.5	No

Study Area Intersection	Existing Count Delay[1]	Existing Count LOS	Non-Homecoming Game Delay[1]	Non-Homecoming Game LOS	Project Delay	Project Impact[2]	Homecoming Game Delay[1]	Homecoming Game LOS	Project Delay	Project Impact[2]
Existing 2012 Game Peak (5:45 a.m.–6:45 p.m.) Conditions										
Collwood Blvd/ Montezuma Rd	19.9	B	20.3	C	0.4	No	20.4	C	0.5	No
Collwood Blvd/ Collwood Way	10.0	B	10.1	B	0.1	No	10.2	B	0.2	No
Collwood Blvd/ Monroe Ave	15.3	B	15.5	B	0.2	No	15.7	B	0.4	No
Collwood Blvd/ 54th St	17.1	B	17.0	B	-0.1	No	17.0	B	-0.1	No
54th St/ El Cajon Blvd	39.0	D	38.9	D	-0.1	No	38.9	D	-0.1	No
56th St/ El Cajon Blvd	7.2	A	7.6	A	0.4	No	7.9	A	0.7	No
54th St/ Trojan Ave	23.2	C	25.9	C	2.7	No	27.2	C	4.0	No
Sharron Pl/ Trojan Ave	7.4	A	8.0	A	0.6	No	8.5	A	1.1	No
56th St/ Trojan Ave	7.6	A	7.6	A	0.0	No	7.7	A	0.1	No
52nd St/ University Ave	18.6	B	18.8	B	0.2	No	18.9	B	0.3	No
54th St/ University Ave	41.2	D	41.6	D	0.4	No	41.9	D	0.7	No

[1] Highway Capacity Manual (HCM) average control delay in vehicles per seconds.
[2] Project impact threshold: LOS E > 2.0; LOS F > 1.0.

Design Hazards/Emergency Access

The existing surrounding circulation network would not change during construction or upon implementation of the proposed project. Access to the school would continue to be provided by 54th Street from the west, El Cajon Boulevard from the north, and University Avenue from the south. Access to the sports field would continue to be accessed via the south end of 56th Street. Additionally, the sports field is not expected to be worked on concurrently with the sports field at Mann Middle School, allowing for overflow use during construction. These existing school access points would continue to be used once the proposed project is implemented, and there would be no impact related to a design hazard or inadequate emergency access.

Alternative Transportation

The proposed project would not adversely affect alternative transportation programs. Crawford High School would continue to be served by the San Diego Metropolitan Transit System (MTS), which operates four routes within the study area (MTS Routes #1, #7, #15, and #955), and the proposed project would not interfere with these existing bus routes. Further, bike lanes along Collwood Boulevard would not be affected, and existing bicycle racks at the school site would continue to encourage students to ride bicycles to school. Therefore, the proposed project would not result in a significant impact on alternative transportation.

Parking

Parking demand for homecoming and non-homecoming games under the proposed project would be met by available parking spaces within Crawford High School and Mann Middle School and impacts would be less than significant. As shown on Table 5-17, the parking supply under the proposed project would exceed the parking demand by 55 spaces for a homecoming game and by 202 spaces during the non-homecoming game event. During a homecoming game, Table 5-17 shows that sufficient parking spaces would be available on the two school properties; additionally, a substantial amount of on-street spaces would be available within a quarter mile of the school.

Table 5-17. Parking Demand and Supply

Component	Homecoming Game	Non-Homecoming Game
Total Parking Demand	401	254
On-Site Parking Supply	266	266
On-Site Net Parking	-135	12
Off-Site Mann Middle School Parking [1]	190	190
Total Parking Supply	456	456
Total Parking Surplus	**55**	**202**

1. Approximately 223 on-street spaces are also available within ¼ mile of Crawford High School.

An assessment of potential impacts on the adjacent residential neighborhood due to parking intrusion and potential safety issues was performed for the homecoming game event, which would likely be the most attended event that the stadium would accommodate. In an effort to reduce the demand for offsite spaces within the neighborhood during a homecoming game, approximately 190

spaces of overflow parking would be accommodated at Mann Middle School, which is located directly across Trojan Avenue from the high school and is owned by the District. Pedestrian access from Mann Middle School to the project site is available immediately across Trojan Avenue via a stop-controlled intersection and a marked yellow crosswalk at Trojan Avenue and Sharron Place. With this overflow parking, the parking demand could be satisfied by the parking spaces on the two school properties. However, in reality, it is likely that many patrons will use the on-street parking close to the school as they may find those parking spaces more convenient that some of the on-campus parking.

Based on a nearby public on-street parking survey conducted by KOA, 449 spaces were counted within ¼ mile of the high school. Observed parking use within ¼ mile concluded that 223 spaces were unoccupied by residents along surrounding roadways and that these spaces could be utilized for football game and other event parking if needed.

In the short-term, there may be a greater demand on the on-street parking if the proposed parking improvements at Mann Middle School are not completed prior to the first football game event. In the worst case, on-site parking supply could be deficient by up to 200 spaces during a homecoming game and 53 spaces during a non-homecoming game. However, there is sufficient on-street parking to satisfy this temporary situation and the school could implement additional management strategies to decrease demand if it were determined necessary.

Once the parking improvements are completed, on-street parking is not anticipated to be needed between the anticipated parking opportunities at Crawford High School and Man Middle School, except during the most highly attended events such as a homecoming football game. Use of on-street parking is expected to occur as a result of it being more convenient but sufficient supply exists. Therefore, impacts on parking would remain less than significant.

Although no current plans exist to rent out the athletic stadium for third-party use, the District may allow third parties to utilize the proposed stadium primarily on weekends. Parking lots on the school campus would be made available for these events. Considering that attendance at third-party events is not anticipated to exceed that of a homecoming game, available parking on existing and planned parking lots within Crawford High School and Mann Middle School would also be adequate for parking needs of third-party events. As with school events, in the short term there may be a greater demand on the on-street parking if the proposed parking improvements at Mann Middle School are not completed prior to the first third-party event held at the stadium. However, as noted above, the existing supply of on-street parking is sufficient to accommodate overflow from the campus parking lots. Therefore, impacts on parking associated with third-party events would be less than significant.

Mann Middle School

The proposed project does not have a component that is expected to cause additional traffic to the roadway system.

Circulation System Performance

Roadway Segments

Table 5-15 depicts the current ADT and LOS values along all 13 study area roadway segments for the adjacent Crawford High School project. Because no impact is expected from that project component, no impact is expected for Mann Middle School.

Intersections

Table 5-16 depicts the current average delay time and LOS values for the 11 intersections for the adjacent Crawford High School project. Because a less-than-significant impact is expected from that project component, a less-than-significant impact is expected for Mann Middle School.

Congestion Management Plan

The SANDAG CMP is intended to determine if a large project (greater than 2,400 daily trips or more than 200 peak hour trips) will adversely impact the CMP transportation system. Because the project area does not include roadways identified in the CMP system roadway list, a CMP arterial analysis was not required, and no impact is expected. The list of CMP system roadways is included in Appendix C of the TIS.

Air Traffic

The project does not include any components that would result in an increase in air traffic volume, the site design would not include tall buildings that could affect air traffic patterns, and the project would not otherwise result in effects on air traffic. As a result, the proposed project would not result in a significant impact on air traffic.

Design Hazards/Emergency Access

The existing surrounding circulation network would not change during construction or upon implementation of the proposed project. Access to the school would continue to be provided by 54th Street from the west, El Cajon Boulevard from the north, and University Avenue from the south. Access to the sports field would continue to be accessed through school grounds. Additionally, the sports field is not expected to be worked on concurrently with the sports field at Crawford High School, allowing for overflow use during construction. These existing school access points would continue to be used once the proposed project is implemented, and there would be no impact related to a design hazard or inadequate emergency access.

Alternative Transportation

The proposed project would not adversely affect alternative transportation programs. Mann Middle School would continue to be served by the San Diego MTS, which operates four routes within the study area (MTS Routes #1, #7, #15, and #955), and the proposed project would not interfere with these existing bus routes. Further, bike lanes along Collwood Boulevard would not be affected, and existing bicycle racks at the school site would continue to encourage students to ride bicycles to school. As a result, the proposed project would not result in a significant impact on alternative transportation.

Parking

The proposed modernization efforts would not increase the student population or demand for parking. No offsite parking would be required nor is any anticipated as a result of the proposed project. Therefore, impacts on parking would remain less than significant.

Chapter 6
Cumulative Impacts

Cumulative impacts, as opposed to the project-level impacts analyzed in Chapter 3, "Environmental Analysis," are impacts on the physical environment that result from the incremental impacts of the proposed project when added to other past, present, and reasonably foreseeable future projects. The intent of this cumulative impacts discussion, as required by Section 15130 of the State CEQA Guidelines, is to account for any impact that may not be considered significant when considering the project on its own, but that may be part of a larger regional trend or that may combine with similar impacts of other projects and that will together be considered significant.

6.1 Methodology

6.1.1 Scope of Analysis

A cumulative impacts analysis establishes a geographic scope in which cumulative conditions will be considered, known as the *cumulative study area*. The cumulative study area established for the proposed project includes the future attendance area of the high school and middle school. According to Section 15130 of the State CEQA Guidelines, there are two methods by which to establish the scope of a cumulative impacts analysis within the assumed area.

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

The cumulative impacts analysis conducted for the proposed project considered a combination of both methods. A list of projects under construction, approved, and in the planning process but not yet approved within the surrounding community was obtained in mid-September 2013 by a community planner for the Mid-City: Eastern Area community (Michael Prinz pers. comm.). The list of total projects (see Table 6-1) includes three under construction, one recently approved, and one in the planning process, for a total of five specific cumulative projects within an approximate 2-mile radius of the high school and middle school. Also, quantitative technical analyses for cumulative impacts related to transportation and traffic, air quality, greenhouse gases, and noise addressed cumulative impacts by apply growth factors derived and modified from figures published by SANDAG. Other cumulative analyses for issues such as aesthetics and cultural resources considered five listed cumulative projects and assumed that a certain amount of redevelopment in accordance with the City of San Diego General Plan and Mid-City Communities Plan would occur in the cumulative study area between now and 2035.

Table 6-1. List of Cumulative Projects within 2 Miles of the Proposed Project

No	Name	Details	Distance from Project	Status
1	Mesa Commons	33 residential condominiums between El Cajon Boulevard and Catoctin Drive, east of Art Street	1 mile northeast	Under Construction
2	Carmel Luxury Apartments	332 multi-family residential units and commercial space at 63rd Street and El Cajon Blvd	0.75 mile northeast	Under Construction
3	YMCA	53,000 square feet of interior recreational space at Fairmount Avenue and El Cajon Boulevard.	1.5 miles west	Under Construction
4	Ocean Discovery Institute	New education facility at Thorn Street and Van Dyke Avenue	1.8 miles southwest	Approved
5	Plan Amendment and Rezone	Mixed Use residential and commercial uses proposed on 36 acres at University Avenue, Chollas Parkway, and 54th Street	0.4 miles southwest	In Planning Process
Source: City of San Diego (2013).				

6.1.2 Cumulative Growth Factor

The long-term growth assumption used for quantitative cumulative analysis was based on KOA's methods included in Appendix H. KOA developed two cumulative timeframes for years 2015 and 2035 and assumed a 1% and 9% growth rate for each, respectively. The 1% growth factor was applied to represent 2015 Near-Term conditions, while the 9% growth factor was applied to represent 2035 Horizon Year conditions based on 2035 SANDAG model roadway segment volumes.

6.2 Cumulative Impact Analysis

6.2.1 Aesthetics

6.2.1.1 Crawford High School

The aesthetics geographic scope consists of the surrounding Mid-City community, which is currently built out. Additional growth would not impinge upon any undeveloped land that provides visual relief to the community. Growth within the Mid-City community would be subject to the San Diego General Plan and the Mid-City Communities Plan, and, as required by these planning documents, the architecture of any future development would need to be compatible with the visual setting of the surrounding community. The proposed project consists of improvements on an existing high school campus that would be similarly compatible with the surrounding urban setting. As such, it is not anticipated that implementation of the project, in combination with future redevelopment efforts, would result in adverse cumulative impacts on views or visual character.

As discussed in Section 3.1, the proposal project would result in significant lighting impacts as a result of the new stadium lights. The project site is in an urban area and the ambient light at nighttime has generally increased over the years as the City of San Diego is more intensely

developed. While the gradual increase in ambient lighting has likely reduced nighttime views by the public of stars, the skyline, and other viewing opportunities, it is generally expected of an urban setting and therefore not considered a significant cumulative impact. Further, it is not expected that the lighting generated by the proposed project would be added to by any other lighting source to result in a more severe impact. The significant lighting impacts discussed in Section 3.1 are project level impacts which would not have a considerable contribution to a cumulatively significant lighting impact.

6.2.1.2 Mann Middle School

The aesthetics geographic scope consists of the surrounding Mid-City community, which is currently built out. Additional growth would not impinge upon any undeveloped land that provides visual relief to the community. Growth within the Mid-City community would be subject to the San Diego General Plan and the Mid-City Communities Plan, and, as required by these planning documents, the architecture of any future development would need to be compatible with the visual setting of the surrounding community. The proposed project consists of improvements on an existing middle school campus that would be similarly compatible with the surrounding urban setting. As such, it is not anticipated that implementation of the project, in combination with future redevelopment efforts, would result in adverse cumulative impacts on aesthetics.

6.2.2 Air Quality

ICF International prepared an air quality and greenhouse gas technical memorandum for the project, which included analysis of cumulative air quality impacts and the project's contribution to these impacts (Appendix G). Project-level and cumulative air quality impacts were determined to be less than significant and are addressed in Chapter 5, "Environmental Effects Found Not to Be Significant," Section 5.2.1, of this EIR. The following discussion summarizes the cumulative analysis contained in Section 5.2.1.

6.2.2.1 Crawford High School

A cumulative impact on air quality would occur if the emissions of cumulative projects would combine to exceed acceptable ambient pollutant levels or conflict with the applicable air quality plan. The geographic scope for air quality includes the entire SDAB because as air quality plans and threshold levels are established at the air basin–wide level. Cumulative impacts on sensitive receptors and odors are considered at a more localized level due to the more limited area of dispersion, and include the surrounding neighborhoods and areas in proximity to the source of the odor, respectively.

The SDAB is currently in nonattainment for the federal 8-hour ozone standard as well as state ozone, PM10, and PM2.5 standards, which is a result of past and present projects and will be further impeded by reasonably foreseeable future projects (EPA 2012, ARB 2011b). Therefore, the emissions of concern within the SDAB are ozone precursors (VOC and NO_X), PM10, and PM2.5. The project would result in a cumulatively considerable net increase of these pollutants if emissions exceed the SDAPCD Screening Level Thresholds shown in Chapter 5, Table 5-2. In addition, cumulative impacts could occur if emissions of concern from other past, present, or reasonably foreseeable future projects in proximity to the proposed project would expose nearby receptors to substantial pollutant concentrations.

The project would have a less-than-significant direct impact on air quality during construction and operation (see Tables 5.2-3, 5.2-4, and 5.2-5). Construction activities might occur during the same period as other projects in the SDAB. However, possible cumulative impacts on air quality resulting from these combined activities would be addressed by the standard SDAPCD measures that apply to construction projects, in addition to project-level mitigation strategies identified for each project. Likewise, project-related operational emissions are expected to be minor and far below SDAPCD thresholds. Therefore, implementation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.

With respect to pollutant concentrations, the project would not create substantial pollutant concentrations at nearby intersections during cumulative near-term (2015) and horizon year (2035) traffic conditions (see Table 5-12 and Section 5.2.2, "Greenhouse Gases"). Detailed information on emissions modeling and quantification methods can be found in Appendix A of this EIR's Appendix G. Table 5-7 presents the results of the CO hotspot modeling and indicates that CO concentrations are not expected to contribute to any new localized violations of the 1- or 8-hour ambient air quality standards. Consequently, this impact is considered less than significant. No mitigation is required.

6.2.2.2 Mann Middle School

The proposed improvements for Mann Middle School were considered in the cumulative assessment discussed above under Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative air quality impacts are considered less than significant.

6.2.3 Biological Resources

6.2.3.1 Crawford High School

As discussed in Section 3.2, "Biological Resources," no significant impacts on plants, wildlife, or special-status species are anticipated with implementation of the athletic field improvements and modernization activities. Plant and wildlife species present during surveys of the area were common species, characteristic of disturbed and developed areas. Special-status species were not present during surveys of the project site. Given the current developed condition of the site and the disturbance from adjacent roads and residential development, special-status species are unlikely to utilize the project site. In addition, as discussed in Section 3.2, no impacts on jurisdictional waters or wetlands are anticipated as a result of project construction. The high school site and surrounding areas do not include any identified federal or state jurisdictional waters.

The area surrounding the site is predominantly built out with urban and residential uses. The City of San Diego provided a list of five foreseeable future discretionary projects in the area (Table 6-1). However, implementation for each of these future private development projects completed in the area would be subject to the requirements of the Multiple Species Conservation Program (MSCP) Subarea Plan and the Environmentally Sensitive Lands (ESL) Regulations. Both the MSCP and ESL provide for protection of biological resources on a Citywide basis. Compliance with the MSCP and the ESL would ensure that the impacts of future development would not be cumulatively significant.

Impacts on nesting birds protected by the MBTA and similar provisions of the Fish and Game Code may occur if work is conducted during the breeding season (February 1 through August 15). If nesting birds are detected during preconstruction surveys, there could be direct impacts on nests and fledgling birds, as well as indirect impacts from construction noise. Thus, the proposed project is expected to have potential significant but mitigable impacts on nesting birds. Mitigation is identified in Section 3.2 to address potential indirect impacts of construction on nesting birds. Based on the input from the City, it is not anticipated that any other construction projects would occur in the project vicinity while the school improvements are being constructed. As a result, it is not anticipated that project construction would contribute to a cumulative impact on nesting birds.

6.2.3.2 Mann Middle School

The proposed improvements for Mann Middle School would have the same cumulative considerations as those discussed above for Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative biology impacts are considered less than significant.

6.2.4 Cultural and Paleontological Resources

6.2.4.1 Crawford High School

The area surrounding the high school site is composed of residential development that is similar to that on the site. It is likely that many structures in the surrounding area are well maintained as good representations of architectural styles prominent in San Diego during the early part of the 20th century. As redevelopment occurs within the community to provide increased density and additional commercial opportunities for residents, existing structures may be demolished to create developable land. Demolition may include residences and other structures that would be eligible for inclusion in the California Register of Historical Resources and/or the City of San Diego Historical Resources Inventory, as are certain features of the respective alternative sites. A significant cumulative impact could occur if CEQA-significant historical resources were removed by future projects in the community.

However, historical review of prospective project sites for future redevelopment will, in accordance with CEQA, identify any significant resources and present mitigation to prevent a significant cultural resources impact associated with removal of structures with historic value. Therefore, it is not likely that a significant cumulative impact with respect to historical resources will occur in the surrounding area as a result of future development in the area.

As discussed in Section 3.3, “Cultural and Paleontological Resources,” no cultural or archeological resources were identified on the site, and, as such, the project would not contribute to any cumulative adverse impacts on cultural or archaeological resources.

As discussed in Section 3.3, paleontological resources were identified within the site. The project proponent would be required to implement a monitoring program during construction to avoid impacts on any paleontological resources associated with grading at the Crawford High School campus. Implementation of this monitoring program will ensure that the project does not contribute to any cumulative adverse impacts on paleontological resources.

6.2.4.2 Mann Middle School

The proposed improvements for Mann Middle School would have the same cumulative considerations as those discussed above for Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative cultural and paleontological resources impacts are considered less than significant.

6.2.5 Geology and Soils

6.2.5.1 Crawford High School

The geographic scope for geology and soils includes areas that could be affected by the proposed project, in addition to surrounding areas that could potentially affect people and property at Crawford High School. The proposed project would not result in significant geology and soils impacts, and any future redevelopment in the surrounding area would be subject to the same building code regulations and considerations as the project to account for potential seismic hazards and site-specific geologic and soils concerns. The less-than-significant impacts identified for the project related to geology and soils would not contribute to a cumulative impact.

6.2.5.2 Mann Middle School

The proposed improvements for Mann Middle School would have the same cumulative considerations as those discussed above for Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative geology and soils impacts are considered less than significant.

6.2.6 Greenhouse Gases

6.2.6.1 Crawford High School

ICF International prepared an air quality and greenhouse gas technical memorandum for the project, which included analysis of cumulative GHG impacts and the project's contribution to these impacts (Appendix G). Project-level and cumulative GHG impacts were determined to be less than significant and are addressed in Section 5.2.2, "Greenhouse Gases," of this EIR. The following discussion summarizes the analysis contained in Section 5.2.2.

In terms of GHG and climate change, both are exclusively cumulative impacts, and there are no non-cumulative GHG emission impacts from a climate change perspective. As such, GHGs and climate change are cumulatively considerable even though the contribution may be individually limited (CAPCOA 2008). The County of San Diego methodology and thresholds used to analyze GHG-related impacts are thus cumulative in nature.

As shown in Chapter 5, "Environmental Effects Found Not to Be Significant," Tables 5.2-9 and 5.2-10, short-term construction and long-term operation of the project would result in emissions considerably lower than the 2,500 MT per year threshold used by the County. Moreover, building modernization upgrades, which were not quantified herein, would involve increased use of insulation within the school structures and installation of more efficient appliances/equipment, leading to lower operational GHGs by way of reduced energy consumption. These savings could potentially offset a portion of the operational emissions shown in Table 5-10. Therefore, the project would not contribute to a cumulatively significant impact related to GHGs and climate change. No mitigation is required.

6.2.6.2 Mann Middle School

The proposed improvements for Mann Middle School were considered in the cumulative assessment discussed above under Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative greenhouse gas emissions impacts are considered less than significant.

6.2.7 Hazards and Hazardous Materials

6.2.7.1 Crawford High School

The hazards and hazardous materials geographic scope of analysis consists of the areas that could be affected by proposed project activities as well as areas affected by other projects whose activities could directly or indirectly affect the proposed activities on the project site. Records searches covering the areas within 0.25 mile of the project site were conducted to determine if redevelopment in the surrounding area could potentially result in a cumulatively considerable impact related to the release of hazardous materials into the environment.

Based on the record searches conducted on Geotracker and Envirostor, the Crawford High School campus is listed as an inactive site in need of further evaluation. However, there are currently no open case hazardous materials sites within 0.25 mile of Crawford High School, and present and reasonably foreseeable future projects would be subject to federal, state, and local hazardous materials laws. Therefore, cumulative effects related to hazardous materials from past, present, and reasonably foreseeable future projects would be less than cumulatively significant.

As discussed in Section 3.4, "Hazards and Hazardous Materials," the potential hazard related to the possibility of asbestos or lead-based paint being released into the environment would be addressed by mitigation measure Haz-MM-1 prior to and during project construction. The proposed mitigation measure would be limited to the project site and would not affect surrounding land uses. Additionally, the potential environmental effect related to hazards and hazardous materials identified in this EIR is limited to the project site, and development of any other project in the vicinity would not affect the conclusions of the analysis or alter any of the mitigation requirements. Therefore, the project would not contribute to a significant cumulative effect related to hazards and hazardous materials.

6.2.7.2 Mann Middle School

The proposed improvements for Mann Middle School would have the same cumulative considerations as those discussed above for Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative hazards and hazardous materials impacts are considered less than significant.

6.2.8 Hydrology and Water Quality

6.2.8.1 Crawford High School

The geographic scope for hydrology and water quality includes the surrounding watershed. Future development that could contribute to a cumulative hydrology and water quality impact would be subject to the same requirements as the proposed project and would be required to apply with the

RWQCB for a National Pollutant Discharge Elimination System permit, which would include BMPs to prevent water quality impacts during construction and operation. Therefore, the project would not contribute to a significant cumulative effect related to hydrology and water quality.

6.2.8.2 Mann Middle School

The proposed improvements for Mann Middle School would have the same cumulative considerations as those discussed above for Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative hydrology and water quality impacts are considered less than significant.

6.2.9 Noise

6.2.9.1 Crawford High School

The geographic scope for cumulative noise impacts includes the areas surrounding the project site that were evaluated and analyzed at the project-level in Section 3.5, "Noise." Project construction would result in a temporary increase in noise levels in the immediate vicinity of the construction areas; however, the noise impact would be reduced to a less-than-significant level with the implementation of mitigation measure NS-MM-1. There are no other approved or planned projects in the areas surrounding the project site; however, one approved project (#4, Ocean Discovery Institute) and one planned project (#5, Plan Amendment and Rezone) are listed within the 2-mile cumulative study area. The approved cumulative project #4 is located about 1.8 miles from the high school. Although specific details regarding construction schedule are unknown for this cumulative project, construction noise is not anticipated to contribute to a cumulatively considerable impact if both projects were constructed at the same given the considerable distance between the two. Cumulative project #5 involves a request for a rezone and a plan amendment and does not include any entitlements; therefore, there would be no construction activities associated with cumulative project #5. As a result, construction noise associated with Crawford High School would not contribute to a cumulatively considerable impact on noise.

Project operation could generate elevated noise levels from the new Athletic Stadium during game events. Implementation of mitigation measure NS-MM-2 would reduce the noise impact, but the impact from the games would still be significant and unavoidable. However, the onsite noise impact from football games would be highly localized, and there are no other approved or planned projects within 0.5 mile of the project that would generate noise to the ambient noise environment. As discussed in Section 3.5, traffic noise would contribute to a significant cumulative noise impact if noise levels were to increase by 3 dB as a result of the project. As shown below in Table 6-2, traffic generated by football games would increase noise levels by 1.6 dBA or less and would not result in a cumulative traffic noise impact in 2035. Therefore, project operational noise and project-related traffic noise would not contribute to a cumulatively considerable impact.

6.2.9.2 Mann Middle School

The proposed improvements for Mann Middle School would have the same cumulative construction noise considerations as those discussed above for Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative construction noise impacts are considered less than significant.

Table 6-2. Cumulative Traffic Noise Increase Resulting from Athletic Facilities Upgrades (2035)

Street	Segment	Distance to Center of Road (feet)	No Project Condition Leq (dBA)	With Project Condition Leq (dBA)	Project Contribution to Noise Increase (dBA)
54th Street	North of Trojan Ave	80	63.4	63.6	0.2
56th Street	North of Trojan Ave	60	52.8	54.4	1.6
Trojan Avenue	East of 54th St	60	57.1	59.5	2.4

Project operations at Mann Middle School would continue similar to existing conditions because no increase in student population or any increase in events is anticipated as a result of the proposed project. Although the proposed HVAC units would somewhat increase the operational noise levels at Mann Middle School, surrounding traffic would dominate localized noises, and even when considered with the list of cumulative projects (Table 6-1), the noise contribution from the HVAC units would not contribute to a cumulatively considerable impact on noise.

6.2.10 Transportation and Traffic

6.2.10.1 Crawford High School

The geographic scope for cumulative traffic impacts related to project activities at Crawford High School includes the roadway segments and intersections that were evaluated for traffic at the project-level in Section 5.2.5, "Transportation and Traffic." A project would result in a significant cumulative impact on transportation and traffic if it would contribute a substantial amount of trips to a roadway segment or intersection that is anticipated to operate at an unacceptable level under long-term conditions. Two future years, 2015 and 2035, were developed to address potential cumulative traffic impacts.

The TIS prepared by KOA (see Appendix H) included an analysis of long-term traffic impacts under two future scenarios. These future scenarios assumed an ambient background traffic growth of 1% and 9% for both 2015 (Near-Term) and 2035 (Horizon Year), respectively. Traffic generation associated with the proposed project was added to both the estimated cumulative 2015 and 2035 conditions. The thresholds used to determine if the project's traffic would adversely affect the studied roadway segments and intersections under 2015 and 2035 conditions are the same as those used for direct project impacts. These thresholds are listed in Section 5.2.5.

Roadway Segments (2015 Near-Term and 2035 Horizon Year)

Table 6-3 shows how cumulative traffic would affect the v/c ratio on roadway segments in the area under Near-Term conditions in 2015 for non-homecoming and homecoming games at Crawford High School. As shown, no segments would operate at unacceptable levels with the addition of the proposed project, and cumulative impacts in 2015 (Near-Term) would remain less than significant for all study area roadway segments under both the non-homecoming and homecoming game scenarios.

Table 6-4 shows how cumulative traffic would affect the v/c ratio on roadway segments in the area under Horizon Year conditions in 2035 for non-homecoming and homecoming games. As shown, no segments would operate at unacceptable levels with the addition of the

Table 6-3. Near-Term 2015 with Crawford High School Project—Roadway Segments

Roadway Segment (Daily Capacity Analysis)		Without Project		With Non-Homecoming Game				With Homecoming Game			
Name	Link	v/c	LOS	v/c	LOS	Change	Significant Impact?	v/c	LOS	Change	Significant Impact?
Collwood Boulevard	South of Montezuma Rd	1.522	F	1.524	F	0.002	No	1.526	F	0.004	No
	North of Monroe Ave	1.498	F	1.500	F	0.002	No	1.502	F	0.004	No
	South of Monroe Ave	1.478	F	1.480	F	0.002	No	1.482	F	0.004	No
54th Street	North of El Cajon Blvd	0.580	C	0.581	C	0.001	No	0.581	C	0.001	No
	El Cajon Blvd – Trojan Ave	0.569	C	0.570	C	0.001	No	0.571	C	0.002	No
	North of University Ave	0.606	C	0.608	C	0.0021	No	0.610	C	0.004	No
	South of University Ave	0.561	C	0.561	C	0.000	No	0.562	C	0.001	No
Sharron Place	South of Trojan Ave	0.163	A	0.163	A	0.000	No	0.163	C	0.000	No
56th Street	South of El Cajon Blvd	0.213	A	0.218	A	0.005	No	0.222	A	0.009	No
El Cajon Boulevard	East of 54th St	0.628	C	0.628	C	0.000	No	0.628	C	0.000	No
Trojan Avenue	East of 54th St	0.411	B	0.428	B	0.017	No	0.442	B	0.031	No
	East of Sharron Pl	0.319	A	0.324	A	0.005	No	0.328	A	0.009	No
University Avenue	52nd St – 54th St	0.804	D	0.805	D	0.001	No	0.806	D	0.002	No

Table 6-4. Horizon Year 2035 with Crawford High School Project—Roadway Segments

Roadway Segment (Daily Capacity Analysis)		Without Project		With Non-Homecoming Game				With Homecoming Game			
Name	Link	v/c	LOS	v/c	LOS	Change	Significant Impact?	v/c	LOS	Change	Significant Impact?
Collwood Boulevard	South of Montezuma Rd	1.640	F	1.642	F	0.002	No	1.644	F	0.004	No
	North of Monroe Ave	1.615	F	1.618	F	0.003	No	1.620	F	0.005	No
	South of Monroe Ave	1.593	F	1.593	F	0.003	No	1.598	F	0.005	No
54th Street	North of El Cajon Blvd	0.625	C	0.626	C	0.001	No	0.627	C	0.002	No
	El Cajon Blvd – Trojan Ave	0.613	C	0.614	C	0.001	No	0.615	C	0.002	No
	North of University Ave	0.654	C	0.656	C	0.002	No	0.657	C	0.003	No
	South of University Ave	0.604	C	0.605	C	0.001	No	0.606	C	0.002	No
Sharron Place	South of Trojan Ave	0.176	A	0.176	A	0.000	No	0.176	A	0.000	No
56th Street	South of El Cajon Blvd	0.230	A	0.235	A	0.005	No	0.239	A	0.009	No
El Cajon Boulevard	East of 54th St	0.676	C	0.676	C	0.000	No	0.676	C	0.000	No
Trojan Avenue	East of 54th St	0.443	B	0.460	B	0.017	No	0.474	B	0.031	No
	East of Sharron Pl	0.344	A	0.349	A	0.005	No	0.353	A	0.009	No
University Avenue	52nd St – 54th St	0.804	D	0.805	D	0.001	No	0.806	D	0.002	No

proposed project, and cumulative impacts in 2035 (Horizon Year) would remain less than significant for all study area roadway segments under both the non-homecoming and homecoming game scenarios.

Intersections (2015 Near-Term and 2035 Horizon Year)

Table 6-5 shows how the 2015 Near-Term traffic conditions with the proposed project would affect delay at intersections during the commuter and game peak hours. All of the study area intersections are anticipated to operate at acceptable levels under 2015 conditions without and with the addition of project-related traffic. There are no cumulative impacts on intersections identified in 2015; therefore, the proposed project would not contribute to a cumulatively significant impact in the 2015 Near-Term condition.

Table 6-6 shows how the Horizon Year 2035 traffic conditions with the proposed project would affect delay at intersections. All of the study area intersections are anticipated to operate at acceptable levels under 2035 conditions without and with the addition of project-related traffic. There are no cumulative impacts on intersections identified in 2035; therefore, the proposed project would not contribute to a cumulatively significant impact in the Horizon Year 2035 condition.

6.2.10.2 Mann Middle School

Increased traffic as a result of the modernization improvements would occur during construction only because project-related actions would not increase student capacity or involve any athletic upgrades that would result in increased transportation or traffic impacts once the project is completed. As such, project actions at Mann Middle School would not contribute a significant cumulative transportation and traffic impact, and no mitigation measures would be necessary.

6.2.11 Utilities and Service Systems

Crawford High School

The proposed project would not result in expanded student capacity, and no additional demand or services from utility providers would be required. Any future projects in the City of San Diego would be required to evaluate their demand for utilities on a project-by-project basis and coordinate with the utility provider to ensure adequate provision of services. As such, the proposed project would not contribute to cumulative impacts on utilities and service systems.

Mann Middle School

The proposed improvements for Mann Middle School would have the same cumulative considerations as those discussed above for Crawford High School. Therefore, the conclusions are the same for Mann Middle School and cumulative utilities and service systems impacts are considered less than significant.

Table 6-5. Near-Term 2015 with Crawford High School Project—Intersections

Intersection	Without Project		Non-Homecoming		Project Delay (sec/veh)	Significant Impact?	Homecoming		Project Delay (sec/veh)	Significant Impact?
	Delay	LOS	Delay	LOS			Delay	LOS		
Near-Term 2015 Commuter Peak (5:00–6:00 p.m.) Conditions										
Collwood Boulevard/ Montezuma Road	27.9	C	29.1	C	1.2	No	29.6	C	1.7	No
Collwood Boulevard/ Collwood Way	14.8	B	15.5	B	0.7	No	15.8	B	1.0	No
Collwood Boulevard/ Monroe Avenue	21.5	C	22.4	C	0.9	No	22.9	C	1.4	No
Collwood Boulevard/ 54th Street	19.3	B	19.4	B	0.1	No	19.4	B	0.1	No
54th Street/ El Cajon Boulevard	42.7	D	42.8	D	0.1	No	42.8	D	0.1	No
56th Street/ El Cajon Boulevard	7.0	A	7.4	A	0.4	No	7.6	A	0.6	No
54th Street/ Trojan Avenue	23.3	C	25.2	C	1.9	No	26.1	C	2.8	No
Sharron Place/ Trojan Avenue	7.6	A	7.9	A	0.3	No	8.2	A	0.6	No
56th Street/ Trojan Avenue	8.0	A	8.1	A	0.1	No	8.2	A	0.2	No
52nd Street/ University Avenue	21.1	C	21.2	C	0.1	No	21.3	C	0.2	No
54th Street/ University Avenue	45.1	D	45.4	D	0.3	No	46.0	D	0.9	No

Intersection	Without Project Delay	Without Project LOS	Non-Homecoming Delay	Non-Homecoming LOS	Project Delay (sec/veh)	Significant Impact?	Homecoming Delay	Homecoming LOS	Project Delay (sec/veh)	Significant Impact?
Near-Term 2015 Game Peak (5:45–6:45 p.m.) Conditions										
Collwood Boulevard/ Montezuma Road	20.5	C	20.9	C	0.4	No	21.1	C	0.6	No
Collwood Boulevard/ Collwood Way	10.1	B	10.2	B	0.1	No	10.3	B	0.2	No
Collwood Boulevard/ Monroe Avenue	15.6	B	15.9	B	0.3	No	16.1	B	0.5	No
Collwood Boulevard/ 54th Street	17.1	B	17.0	B	-0.1	No	17.0	B	-0.1	No
54th Street/ El Cajon Boulevard	39.5	D	39.5	D	0.0	No	39.5	D	0.0	No
56th Street/ El Cajon Boulevard	6.9	A	7.3	A	0.	No	7.7	A	0.8	No
54th Street/ Trojan Avenue	23.0	C	25.8	C	2.8	No	27.2	C	4.2	No
Sharron Place/ Trojan Avenue	7.4	A	8.0	A	0.6	No	8.5	A	1.1	No
56th Street/ Trojan Avenue	7.6	A	7.6	A	0.0	No	7.7	A	0.1	No
52nd Street/ University Avenue	18.6	B	18.8	B	0.2	No	18.9	B	0.3	No
54th Street/ University Avenue	41.5	D	41.9	D	0.4	No	42.1	D	0.6	No

sec/veh = seconds per vehicle

Table 6-6. Horizon Year 2035 with Crawford High School Project—Intersections

Intersection	Without Project		Non-Homecoming		Project Delay (sec/veh)	Significant Impact?	Homecoming		Project Delay (sec/veh)	Significant Impact?
	Delay	LOS	Delay	LOS			Delay	LOS		
Near-Term 2035 Commuter Peak (5:00–6:00 p.m.) Conditions										
Collwood Boulevard/ Montezuma Road	36.5	D	38.5	D	2.0	No	39.4	D	2.9	No
Collwood Boulevard/ Collwood Way	20.6	C	22.1	C	1.5	No	22.8	C	2.2	No
Collwood Boulevard/ Monroe Avenue	30.1	C	32.0	C	1.9	No	33.0	C	2.9	No
Collwood Boulevard/ 54th Street	20.1	C	20.2	C	0.1	No	20.2	C	0.1	No
54th Street/ El Cajon Boulevard	44.6	D	44.7	D	0.1	No	44.7	D	0.1	No
56th Street/ El Cajon Boulevard	7.2	A	7.5	A	0.3	No	7.7	A	0.5	No
54th Street/ Trojan Avenue	24.2	C	26.1	C	1.9	No	27.0	C	2.8	No
Sharron Place/ Trojan Avenue	7.7	A	8.0	A	0.3	No	8.6	A	0.6	No
56th Street/ Trojan Avenue	8.2	A	8.2	A	0.0	No	8.3	A	0.1	No
52nd Street/ University Avenue	21.6	C	21.8	C	0.2	No	21.8	C	0.2	No
54th Street/ University Avenue	48.0	D	48.3	D	0.3	No	48.6	D	0.6	No

Intersection	Without Project		Non-Homecoming		Project Delay (sec/veh)	Significant Impact?	Homecoming		Project Delay (sec/veh)	Significant Impact?
	Delay	LOS	Delay	LOS			Delay	LOS		
Near-Term 2035 Game Peak (5:45–6:45 p.m.) Conditions										
Collwood Boulevard/ Montezuma Road	21.9	C	22.6	C	0.7	No	22.9	C	1.0	No
Collwood Boulevard/ Collwood Way	10.9	B	11.1	B	0.2	No	11.2	B	0.3	No
Collwood Boulevard/ Monroe Avenue	17.1	B	17.7	B	0.6	No	17.9	B	0.8	No
Collwood Boulevard/ 54th Street	17.3	B	17.4	B	0.1	No	17.4	B	0.1	No
54th Street/ El Cajon Boulevard	40.4	D	40.4	D	0.0	No	40.4	D	0.0	No
56th Street/ El Cajon Boulevard	7.1	A	7.5	A	0.4	No	7.8	A	0.7	No
54th Street/ Trojan Avenue	23.5	C	26.2	C	2.7	No	27.4	C	3.9	No
Sharron Place/ Trojan Avenue	7.5	A	8.1	A	0.6	No	8.6	A	1.1	No
56th Street/ Trojan Avenue	7.6	A	7.7	A	0.1	No	7.8	A	0.2	No
52nd Street/ University Avenue	19.0	B	19.1	B	0.1	No	19.2	B	0.2	No
54th Street/ University Avenue	42.9	D	43.3	D	0.4	No	43.6	D	0.7	No

sec/veh = seconds per vehicle;

Chapter 7
Alternatives

Section 15126.6(a) of the State CEQA Guidelines requires an EIR to analyze a range of project alternatives that would "feasibly attain most of the basic objectives of the project but which would avoid or substantially lessen any of the significant effects of the project." Alternatives analysis must also include a brief comparative evaluation of the "No Project Alternative," which assumes that none of a project's features would be constructed or implemented and that the site would continue to exist and operate in its current condition. The factors that may be taken into account when addressing the feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, and whether access to the alternative site can be reasonably acquired or controlled (State CEQA Guidelines Section 15126.6(f)(1)). Alternative locations may be analyzed if the lead agency determines that implementation of a project on an offsite location is possible. The decision to select alternative locations needs to be based on whether offsite locations will avoid or substantially reduce any of the significant effects of the project. The lead agency may also make the determination that no feasible alternative locations exist; the reasoning behind this determination must be disclosed in the alternatives analysis. Three alternatives to the proposed project are analyzed in this chapter and discussed in terms of their merits relative to the proposed project. A discussion of each alternative is provided below and includes the following.

- Alternative 1—No Project/Existing Stadium Alternative
- Alternative 2—Avoid Underground Storage Tank Alternative
- Alternative 3—Avoid Nesting Season Alternative

7.1 Alternatives Considered but Rejected

7.1.1 Alternative Site Location

This alternative considered the relocation of the proposed project. The proposed modernization improvements at Crawford High School and Mann Middle School would involve upgrades to existing buildings on the school campuses and could only occur on the existing school campuses. As such, an alternative site would not be feasible for the modernization improvements.

Alternative sites were considered for the athletic facility upgrades; however, due to the built-out condition of the surrounding neighborhood and the lack of space to accommodate an Athletic Stadium and baseball/softball complex that would be accessible to students at Crawford High School, no feasible alternative sites were identified. As such, an alternative evaluating the components of the proposed project on an alternative site is rejected.

7.1.2 No Stadium Lighting Alternative

The No Stadium Lighting Alternative considered the components of the proposed project, with the exception that there would be no lighting at the Athletic Stadium. All other actions, including the modernization improvements and other athletic facility upgrades including the increase to the

stadium seating capacity, would occur under this alternative. As a result of this alternative not including stadium lighting, future football and other athletic events could not occur during non-daylight hours and would continue to occur in the afternoon. As discussed in Chapter 1, "Introduction," one project objective is to "[i]nstall a new lighting and public announcement (PA) system, scoreboard, goal posts, and new home and visitor entrance gates for the football field area" to allow for nighttime games. Because this alternative would be in direct conflict with this objective, it is considered but rejected.

As discussed in Section 3.1, "Aesthetics," the estimated light generated by the stadium lights would spill horizontally at the eastern and western property lines, resulting in more than 0.8 footcandle of light at up to 11 adjacent residences. Therefore, it is concluded that operation of the new Athletic Stadium could result in significant aesthetics impacts. These impacts associated with light trespass would be avoided under this alternative.

As discussed in Section 3.5, "Noise," and as shown in Table 3.5-6, the estimated noise levels generated by a stadium are greater than the existing ambient noise level (approximately 48–57 dBA L_{eq}) and would exceed the City noise limits shown in Table 3.5-4 (50 dBA L_{eq} between 7 a.m. and 7 p.m. and 45 dBA between 7 p.m. and 10 p.m. and 45 dBA between 7 p.m. and 10 p.m. for single-family residences; 55 dBA between 7 p.m. and 10 p.m. for multi-family residences). Therefore, operation of the new Athletic Stadium would result in significant noise impacts at nearby residences during nighttime hours. The impact associated with noise exceeding the night time threshold would be avoided under this alternative. However, noise generated from pre-game music played from the loudspeakers and PA announcer during the games combined with crowd noise would still exceed the daytime thresholds. As a result implementation of this alternative would not avoid the impact associated with noise levels that would exceed the daytime standards.

7.1.3 Lowered or Retractable Lights Alternative

The District has received some comments that it should consider lower stadium lights or lights that can be lowered or removed when not in use. The purpose of such an alternative as suggested by commenters is to reduce the impact of the light standards on views from surrounding residents. However, as discussed in Section 3.1, "Aesthetics," private views do not need to be addressed under CEQA and impacts to views were determined to be less than significant. State CEQA Guidelines specify that project alternatives avoid or substantially lessen significant effects of the project. Therefore, because this alternative would not meet the requirements of CEQA it is rejected.

7.1.4 Maintain Existing Stadium Seating Capacity Combined with Ticket Maximum Alternative

Under this alternative no increase in the stadium seating capacity would be completed. The existing stadium seating capacity would remain after other stadium improvements are implemented. Under this alternative the ticket sales would be capped to minimize the number of people attending each game.

As discussed in Section 3.5, "Noise," and as shown in Table 3.5-8, the estimated noise levels generated by a stadium are greater than the existing ambient noise level (48–57 dBA L_{eq}) and would exceed the City noise limits shown in Table 3.5-3 (50 dBA L_{eq} between 7 a.m. and 7 p.m. and 45 dBA between 7 p.m. and 10 p.m. and 45 dBA between 7 p.m. and 10 p.m. for single-family residences; and 55 dBA between 7 p.m. and 10 p.m. for multi-family residences). Therefore, operation of the new Athletic

Stadium would result in significant noise impacts at nearby residences. This impact would be reduced if the stadium seating was not increased beyond existing levels. However, noise generated from pre-game music played from the loudspeakers and PA announcer during the games would be louder than the fan cheering noise. As a result, regardless of the number of attendees, the use of the PA system and the band music would cause the noise levels to exceed the daytime and nighttime standards.

As discussed in Chapter 1, "Introduction," one project objective is to construct bleachers at the new fields. As a part of construction of the new bleachers the District is expanding the capacity of the stadium seating to meet to address increased attendance levels at night games. Because this alternative would be in direct conflict with this objective, it is considered but rejected.

7.1.5 Construction Noise Avoidance Alternative

As discussed in Section 3.5, "Noise," during the construction of Athletic Stadium, tennis courts, and baseball/softball complex, the estimated construction noise level would be as high as 85 dBA Leq at the nearest single-family residences to the west of the proposed Athletic Stadium improvements and at classrooms on the Crawford High School campus. Although the actual noise levels could be lower than estimated noise levels, the construction noise would exceed the City's noise limit of 75 dBA Leq. Therefore, when the construction activities occur near the tennis courts and classrooms, the construction noise impact at these sensitive receptors would be significant.

Under this alternative construction noise would be reduced by reducing the amount of equipment used near the residential areas west of the proposed Athletic Stadium and near the high school classrooms. A noise monitor would be onsite to ensure that noise levels did not exceed the 75 dBA Leq. Construction is anticipated to be completed within one year. Any reduction in the amount of equipment used would increase the construction length considerably in the vicinity of the residences and high school classrooms. In addition the potential exists that implementation of noise reduction measures required by the mitigation measure NS-MM-1 could reduce noise levels during construction to acceptable levels without needing to reduce the amount of construction equipment used. As a result, this alternative is not carried forward.

7.2 Alternatives Carried Forward

7.2.1 No Project/Existing Stadium Alternative

The No Project Alternative assumes that the athletic improvements would not be implemented; however, the building modernization improvements under Proposition S and Z would be implemented. The District would not implement the upgrades associated with the Athletic Stadium or baseball/softball complex; and all existing athletic facilities would remain as they are under existing conditions. No PA system or increase to the stadium capacity would be implemented under the No Project Alternative.

As discussed in Section 3.1, "Aesthetics," the estimated light generated by the stadium lights would spill horizontally at the eastern and western property lines and exceed the 0.8-footcandle threshold at up to 11 residences. Therefore, operation of the new Athletic Stadium could result in significant aesthetics impacts. There are no existing outdoor lighting improvements for athletic events on the high school campus and lighting impacts related to spillover would not occur with the current stadium operations.

Similarly, as discussed in Section 3.5, "Noise," and as shown in Table 3.5-6, the estimated noise levels generated by a stadium are greater than the existing ambient noise level (48–56 dBA L_{eq}) and would exceed the City noise limits shown in Table 3.5-4 (50 dBA L_{eq} between 7 a.m. and 7 p.m. and 45 dBA between 7 p.m. and 10 p.m. and 45 dBA between 7 p.m. and 10 p.m. for single-family residences; 55 dBA between 7 p.m. and 10 p.m. for multi-family residences). Therefore, operation of the new Athletic Stadium would result in significant noise impacts at nearby residences during nighttime hours. Noise generated from pre-game music played from the loudspeakers and PA announcer during the games combined with increased crowd noise would not occur with the current stadium operations. As a result, implementation of the No Project Alternative would avoid the noise impact.

Because the No Project Alternative avoids the project's impacts, it is considered environmentally superior to all of the project alternatives. State CEQA Guidelines Section 15126.6(e)(2) requires a lead agency to identify an "environmentally superior alternative" from among the other alternatives examined if the No Project Alternative is environmentally superior to the alternatives. Therefore, a discussion is provided below regarding identification of an environmentally superior alternative.

7.2.2 Avoid Underground Storage Tank Alternative

Crawford High School within the vicinity of the underground storage tank (UST) would be avoided. A 1,000-gallon UST is located near the school's parking area at the northeast corner of the gym and a 5,000-gallon diesel UST is located near the southeast corner of building 600, near the southern edge of the site, as shown in Figure 3.4-1 of Section 3.4, "Hazards and Hazardous Materials." Under this alternative, improvements involving ground disturbance to these area would not be allowed. The Avoid Underground Storage Tank Alternative would carry forward the other modernization improvements for the remaining buildings on the project site, including Mann Middle School, and would result in upgrades to the athletic facilities, similar to the proposed project. As a result, impacts on hazards and hazardous materials identified in Section 3.4 would be avoided. Other impacts related to aesthetics, cultural resources, noise, and parking would be similar to the proposed project with implementation of this alternative. Avoidance of this area would likely not preclude the District from meeting the project objectives, including the objective to "[c]onduct major building systems repair and replacement," because almost all of the site modernization improvements anticipated by Propositions S and Z could be implemented. As such, the Avoid Underground Storage Tank Alternative would not preclude the District from fully achieving all of the project objectives.

7.2.3 Avoid Construction During Nesting Season

As discussed in Section 3.2, "Biological Resources," vegetation occurring on site and in the vicinity of the project may provide suitable habitat for migratory birds, especially songbirds and raptors protected under the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code, which prohibit the take or destruction of migratory birds, raptors, their nests, or eggs. Impacts on nesting birds protected by the MBTA and similar provisions of the Fish and Game code could occur if construction work is conducted during the nesting season, defined by the California Department of Fish and Wildlife (CDFW) as February 1 through August 15.

Under this alternative construction would not take place within 50 feet of the existing vegetation during the nesting season. Construction would take place on the remainder of the site during the nesting season. Avoidance of construction within 50 feet of vegetation during the nesting season would avoid the impact identified in Section 3.2 of the EIR.

7.3 Environmentally Superior Alternative

Table 7-1 compares the significance of the potential impacts for the proposed project with the alternatives considered. State CEQA Guidelines Section 15126.6(e)(2) requires that an EIR identify which alternative is the environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must also identify which of the other alternatives is environmentally superior. Based on the analysis of the alternatives the Environmentally Superior Alternative is the No Project/Existing Stadium Alternative because the alternative would reduce but not avoid the noise impact and would avoid all other impacts. Of the remaining feasible alternatives the Avoid Underground Tank Storage Alternative would be environmentally superior because it would avoid an impact associated with disturbance and removal of a UST.

Table 7-1. Alternatives Comparison—Significant Impacts

Environmental Issues (Direct and/ or Cumulative)[1]	Proposed Project		Avoid Nesting Season Alternative		Avoid UST Alternative		No Project Alternative	
	Impact	Significance	Impact	Significance	Impact	Significance	Impact	Significance
Aesthetics	Light trespass to adjacent residences	SU	Light trespass to adjacent residences	SU	Light trespass to adjacent residences	SU	--	--
Biological Resources	Disturb nesting birds	LTS with mitigation	--	--	Disturb nesting birds	LTS with mitigation	--	--
Cultural and Paleontological Resources	Disturb human remains	LTS with mitigation	Disturb human remains	LTS with mitigation	Disturb human remains	LTS with mitigation	--	--
	Disturb Eocene or Pleistocene/ Pliocene-age deposits.	LTS with mitigation	Disturb Quaternary-age old paralic deposits	LTS with mitigation	Disturb Quaternary-age old paralic deposits	LTS with mitigation	--	--
Hazards and Hazardous Materials	Exposure to petroleum hydrocarbon- and lead-impacted soils during construction	LTS after mitigation	Exposure to petroleum hydrocarbon-impacted soils during construction	LTS with mitigation	--	--	--	--
Noise	Temporary increase in construction noise	LTS after mitigation	Temporary increase in construction noise	LTS with mitigation	Temporary increase in construction noise	LTS after mitigation	--	--
	Noise from football games	SU	Noise from football games	SU	Noise from football games	SU	Noise from football games	SU
	Noise from softball sporting events	LTS after mitigation	Noise from softball sporting events	LTS after mitigation	Noise from softball sporting events	LTS after mitigation	--	--

[1] Agricultural Resources, Mineral Resources, Population and Housing, Public Services, and Recreation were found not to be significant during the Initial Study process. Aesthetics, Geology and Soils, Hydrology and Water Quality, Land Use and Planning, Transportation and Traffic, Utilities and Service Systems, Greenhouse Gases, and Air Quality were found not to be significant during the EIR process.

LTS = less than significant; SU = significant and unavoidable.

Chapter 8
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Chapter 9

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