INITIAL STUDY FOR:

SAN MARINO HIGH SCHOOL POOL EXPANSION

prepared for:

SAN MARINO UNIFIED SCHOOL DISTRICT

Contact:
Julie Boucher
Assistant Superintendent,
Business Services

prepared by:

THE PLANNING CENTER

Contact:
Barbara Wu
Director, School
Facilities Planning

OCTOBER 2008

========*San Marino Unified School District*========
ADMINISTRATIVE OFFICES
TELEPHONE: [626] 299-7000
FAX: [626] 299-7010
1665 WEST DRIVE
SAN MARINO, CALIFORNIA 91108-2594

October 31, 2008

NOTICE OF PREPARATION AND NOTICE OF PUBLIC SCOPING MEETING

PROJECT NAME: San Marino High School Pool Expansion
PROJECT ADDRESS: 2701 Huntington Drive, San Marino, California
COMMENT DUE DATE: 4:30 P.M., December 1, 2008

Under the California Environmental Quality Act, the San Marino Unified School District (SMUSD) will be the Lead Agency for the subject project and will be preparing an environmental impact report (EIR) for the project identified herein. This Notice of Preparation (NOP) is being sent in compliance with Title 14, Chapter 3, Sections 15082, 15103, and 15375 of the California Code of Regulations.

Comments and concerns regarding the environmental issues associated with the subject project are requested from organizations and individuals. For agencies reviewing this notice, we request your review as to the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by SMUSD when considering any permit or other approval that your agency must issue for the project.

PROJECT DESCRIPTION: The proposed project involves the expansion of the San Marino High School swimming pool. Three scenarios are currently being considered by the District: Scenario A would entail the expansion of the pool in its current location, and Scenario B and Scenario C would involve relocating the pool to the area of the basketball courts, and relocating the basketball courts to the areas of the pool and Michael White Adobe. The proposed project would require the removal of the Michael White Adobe, a locally historic landmark. If technically and economically feasible, the building would be relocated. If it is determined that the relocation of the Adobe is infeasible, it would be demolished.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The Initial Study completed for the proposed project concluded that cultural resources and noise will be further analyzed in the EIR. A copy of the Initial Study prepared for the proposed project is available for public review at the following repositories:

San Marino Unified School District
1665 West Drive
San Marino, CA 91108

San Marino High School
2701 Huntington Drive
San Marino, California 91108

San Marino City Hall
2200 Huntington Drive
San Marino, CA 91108

Crowell Public Library
1890 Huntington Drive
San Marino, CA 91108

PUBLIC SCOPING MEETING DATE AND LOCATION: The SMUSD will be holding a public scoping meeting to solicit public comments regarding issues to be addressed in the Draft EIR. The scoping meeting will provide information regarding the project and the anticipated scope of analyses to be contained in the Draft EIR. The SMUSD encourages all interested individuals and organizations to attend this meeting.

Date:	November 13, 2008
Time:	7:30 PM
Location:	San Marino Unified School District Board Room 1665 West Drive San Marino, California 91108

SUBMISSION OF COMMENTS: The enclosed materials reflect the scope of the proposed project, which may be of interest to you and/or the organization you represent. All comments will be considered in the preparation of the Draft EIR. Written comments must be submitted to the below contact by 4:30 PM on December 1, 2008. Written comments will also be accepted at the public scoping meeting described above.

Julie Boucher, Assistant Superintendent, Business Services
San Marino Unified School District
1665 West Drive
San Marino, CA 91108
Tel: 626.299.7000, Extension 390
Fax: 626.299.7010

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prepared for:

SAN MARINO UNIFIED SCHOOL DISTRICT

1665 West Drive
San Marino, CA 91108
Tel: 626.299.7000 Ext. 390 • Fax: 626.299.7010
Website: www.san-marino.k12.ca.us

Contact:
Julie Boucher
Assistant Superintendent, Business Services

prepared by:

THE PLANNING CENTER

9841 Airport Boulevard, Suite 1010
Los Angeles, CA 90045
Tel: 310.670.9221 • Fax: 310.670.9512
Website: www.planningcenter.com

Contact:
Barbara Wu
Director, School Facilities Planning

AAL-06.0E

OCTOBER 2008

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1. Introduction

The San Marino Unified School District is proposing to expand the existing San Marino High School swimming pool. The District is considering three scenarios, all of which would require removal of the Michael White Adobe, a locally designated historic landmark.

All projects in the State of California are required to undergo an environmental review to determine the environmental impacts associated with implementation of the project in accordance with the California Environmental Quality Act (CEQA; Public Resources Code [PRC], §§ 21000 et al. 2004). CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of proposed activities and the ways to avoid or reduce the environmental effects by requiring implementation of feasible alternatives or mitigation measures. CEQA applies to all California government agencies at all levels, including local agencies, regional agencies, and state agencies, boards, commissions, and special districts. The District is the Lead Agency for an environmental impact report (EIR) to be prepared for the proposed project described in this Initial Study. As such, the District is required to conduct an environmental review to analyze the potential environmental effects associated with the proposed project.

1.1 PROJECT LOCATION

The project site is in the center of San Marino High School at 2701 Huntington Drive, in the City of San Marino, Los Angeles County. It is approximately two miles south of Interstate 210 (I-210), and approximately three miles east of State Route 110 (SR-110). The campus is on the north side of Huntington Drive, between Winston Avenue on the west and Gainsborough Drive on the east. Figure 1, *Regional Location*, and Figure 2, *Local Vicinity*, illustrate the project site in its regional and local contexts.

1.2 ENVIRONMENTAL SETTING

1.2.1 Existing Land Use

As illustrated in Figure 3, *Aerial Photograph,* the project site is in the center of the high school, in the midst of the school's recreational facilities. The project site is noncontinuous. It consists of two halves separated by a small parking area and a driveway that provides vehicular access to the high school football stadium and Michael White Adobe. A cell tower and the Raymond Fault are also in this area.

The northern half of the site contains three full basketball courts and one half-court. The southern half contains an L-shaped swimming pool and the Michael White Adobe. The pool is 75 feet by 45 feet and includes a shallow area of 35 feet by 37 feet. This configuration allows for six competitive swimming lanes and meets California Interscholastic Federation (CIF) competition requirements for six-lane swimming, a water polo area of play using wall-mounted goals, and one-meter diving. The pool, however, does not meet CIF's preferred specifications.

The Michael White Adobe is a recognized historic structure. It is known to have existed as early as 1845. The structure is vacant, and the interior walls show evidence of damage and deterioration. Photographs can be seen in Figure 4, *Michael White Adobe*. The structural integrity of the building has not been determined; however, several signs of structural problems have been observed in the building, including termites and

signs of decay. Additionally, the building does not meet requirements of the California Field Act, which requires school buildings to meet high standards of building safety, with particular regard for earthquake safety. For these reasons, the building is considered unsafe for occupation. A fence surrounds the property and prevents unauthorized entry.

1.2.2 Surrounding Land Use

The project site is immediately bordered by the varsity baseball field and football stadium to the east, tennis courts to the north, student parking and the school's large gymnasium to the west, and the small gymnasium to the south. Figure 5, *Surrounding Development,* provides recent photographs of the recreational uses surrounding the building. San Marino High School serves grades 9–12 and had an enrollment of 1,137 during the 2007–2008 school year. The school operates on a traditional calendar during the months of August through June. Summer school is provided at the campus each year and ends the last week of July.

San Marino High School is in a residential neighborhood and surrounded by single-family homes on all four sides. The Rubio Wash Flood Channel, an open drainage structure, separates the school from the residences to the west. A small landscaped area is at the northwest corner of Huntington Drive and Gainsborough Drive, and commercial uses line Huntington Drive immediately west of the project site and approximately one quarter-mile east of the project site.

1.3 PROJECT DESCRIPTION

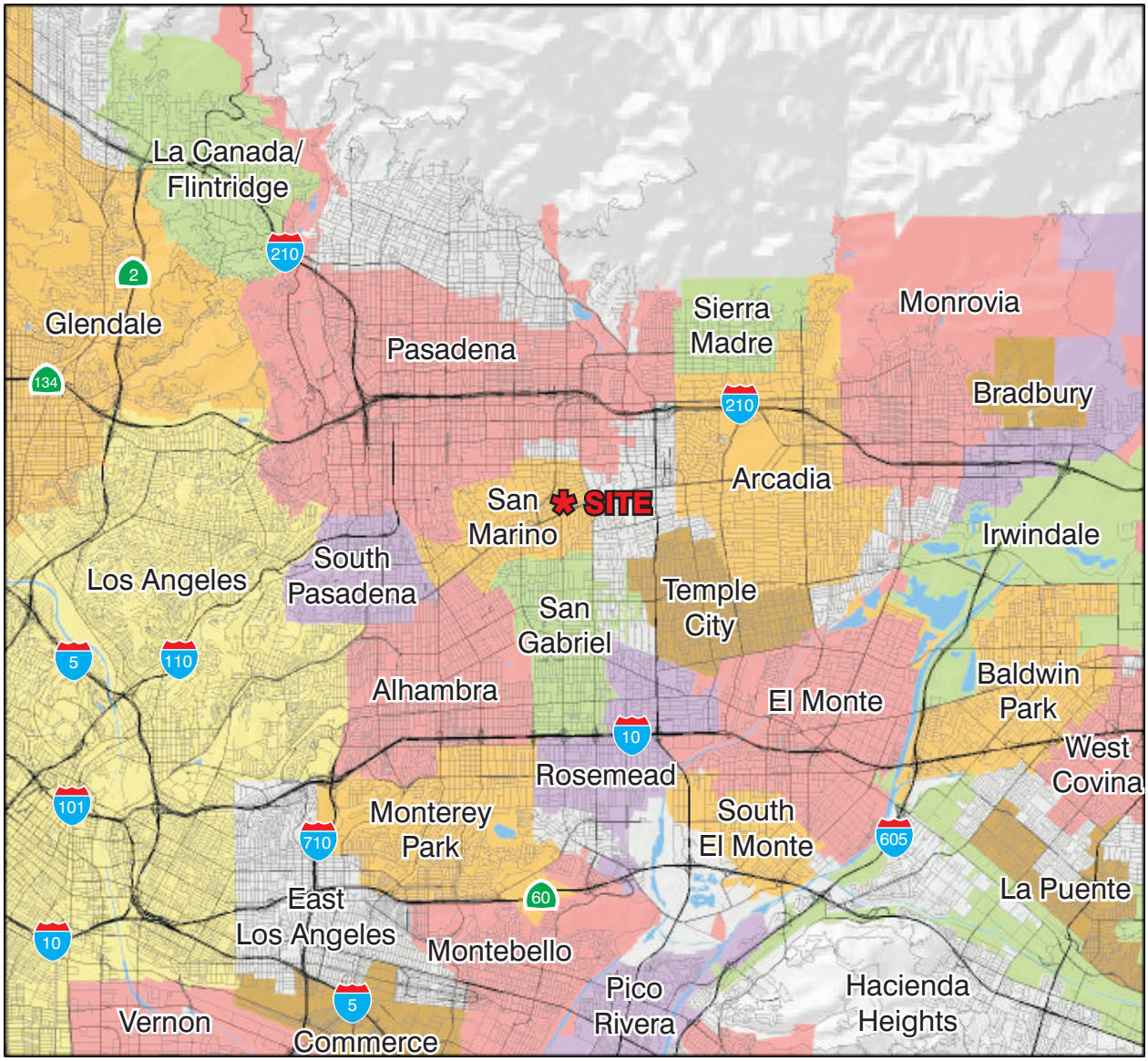
1.3.1 Proposed Land Use

The proposed project involves the expansion of the San Marino High School swimming pool. Three scenarios are currently being considered by the District: Scenario A would entail the expansion of the pool in its current location, and Scenario B and Scenario C would involve relocating the pool to the area of the basketball courts, and relocating the basketball courts to the areas of the pool and Michael White Adobe. Development of any of the three scenarios, as described below, would require the removal of the Adobe and would need to be implemented in two separate phases.

Phase I

The first phase of the proposed project is the removal of the Michael White Adobe, a designated City of San Marino landmark. If technically and economically feasible, the building would be relocated to a public location and preserved in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings (National Park Service 1995) and *Moving Historic Buildings* by John Obed Curtis (National Park Service 1979). The receiving site for the building has not been identified at this time, but potential sites include Lacy Park; the Old Mill; and the Huntington Library, Art Collections, and Botanical Gardens, all of which are within one mile of the project site. Preparations for the relocation of the Michael White Adobe, including the stabilization of the building and the preparation of the receiving site would begin in the summer of 2009 after certification of the EIR and project approval. Selection of qualified firms, preparation of the plans, and the implementation of the necessary improvements to stabilize the Adobe and prepare the receiving site would take a few months. The relocation itself would likely occur during winter break of 2009, if all the work is completed in time, or spring break of 2010. The building would likely be separated into two parts, which would be relocated and reassembled. Temporary bleachers would be installed at the current location of the Michael White Adobe for spectator viewing of pool events.

Regional Location



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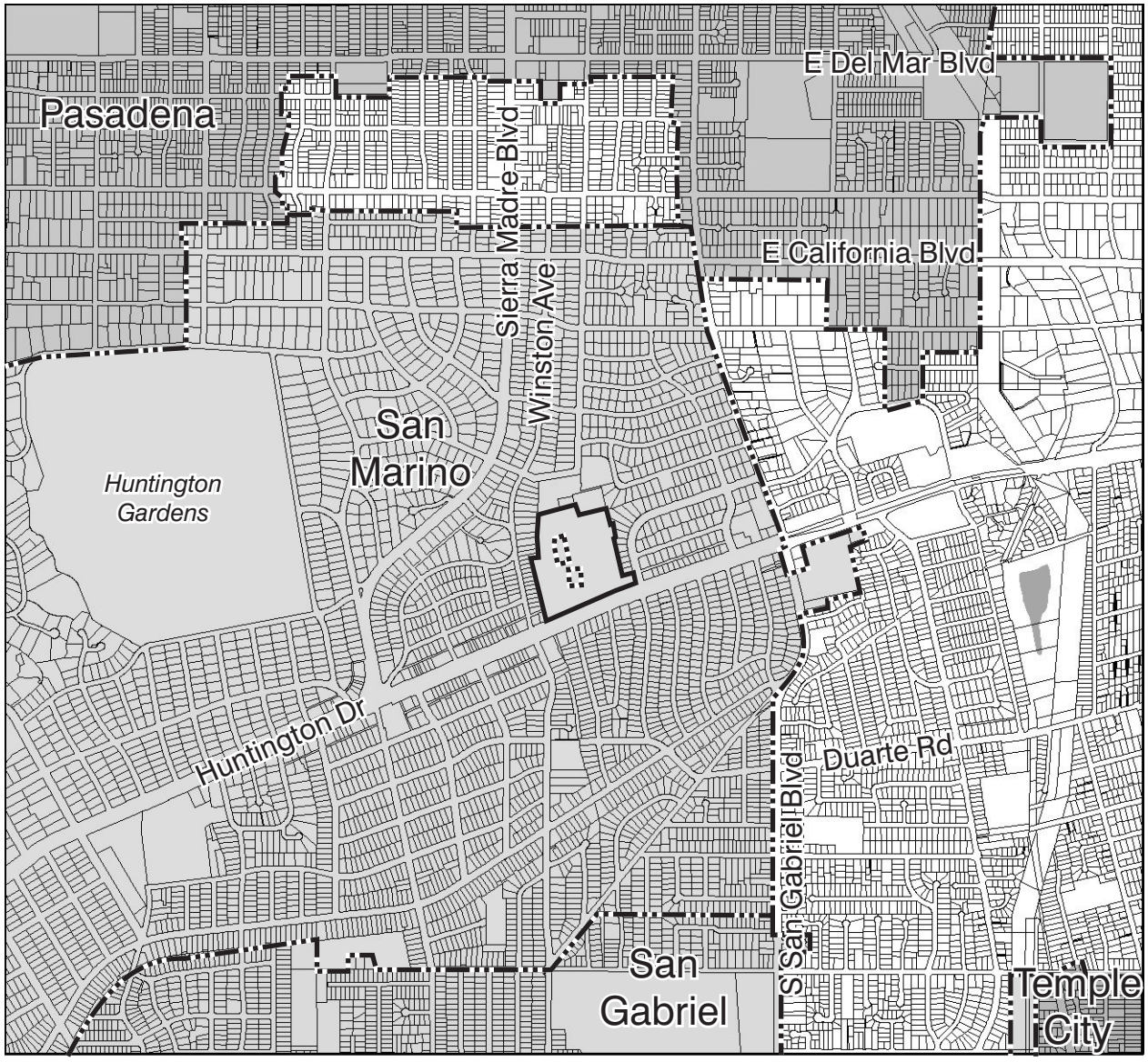
Local Vicinity



San Marino High School Boundary

Site Boundary

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Aerial Photograph

Site Boundary

Raymond Earthquake Fault

Rubio Wash Flood Channel

Cell Tower

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Scale (Feet)

Source: Google Maps 2008

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Michael White Adobe

Exterior

Interior

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Surrounding Development

View looking north across swimming pool, toward Michael White Adobe.

View looking west across varsity baseball field. The Michael White Adobe is visible in the center of the photograph.

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If relocation is deemed technically or economically infeasible, the Michael White Adobe would be demolished. Demolition of the Adobe would take one to two weeks and would occur during the summer of 2009, when school is not in session. After the building is removed, the area of the Adobe's footprint would be prepared to allow for the installation of temporary bleachers for spectator viewing of pool events. Demolition of the buildings and installation of the bleachers would be completed prior to the start of the 2009–2010 school year.

Phase II

Phase II would begin once the District is able to raise the funds to implement one of three proposed development scenarios. The District expects that sufficient funding would be available by the summer of 2010. Prior to the implementation of one of the three scenarios described below, the bleachers installed as part of Phase I would be removed.

Scenario A – Expanded Pool Plan

Under this scenario, the pool would be expanded in its current location. The expanded pool would be 75 feet long by 82 feet wide with shallow water along the north side. The new pool surface area would be 6,150 square feet. This would allow for eight swimming lanes and a water polo area of play that is 56 feet wide. The pool deck north of the pool would also be expanded and would be 30 feet wide along the entire northern edge of the pool. The pool would be lighted for evening use. The design of the expanded pool proposed under Scenario A is illustrated in Figure 6, *Expanded Pool Plan*. Construction of Scenario A would occur between November 2010 and July 2011.

Scenario B – New Pool Plan 1

Under this scenario, a new pool would be created where the basketball courts are currently. The existing pool would be removed and replaced with two full basketball courts (see Figure 7, *Relocated Basketball Courts)*. Both the pool and basketball courts would be lighted for evening use. The new pool would be 75 feet by 82 feet, the same size as the expanded pool proposed in Scenario A. However, Scenario B would allow for a much larger deck and storage areas. Two new buildings would be constructed in the northern part of the project site: a 650-square foot boys' restroom and locker room and a 1,500-square foot building that would house the pool equipment room, chemical storage rooms, a deck equipment storage room, and coaches' offices. A generator may be installed in this building. The existing girls' restroom, immediately north of the existing basketball courts, would continue to operate. The design of the new pool proposed under Scenario B is illustrated in Figure 8, *New Pool Plan 1*. Under Scenario B, construction of the new pool would occur between November 2010 and December 2011. Demolition of the existing pool and the creation of the basketball courts would occur after the new pool is built and would take approximately four months, between January 2012 and April 2012.

Scenario C – New Pool Plan 2

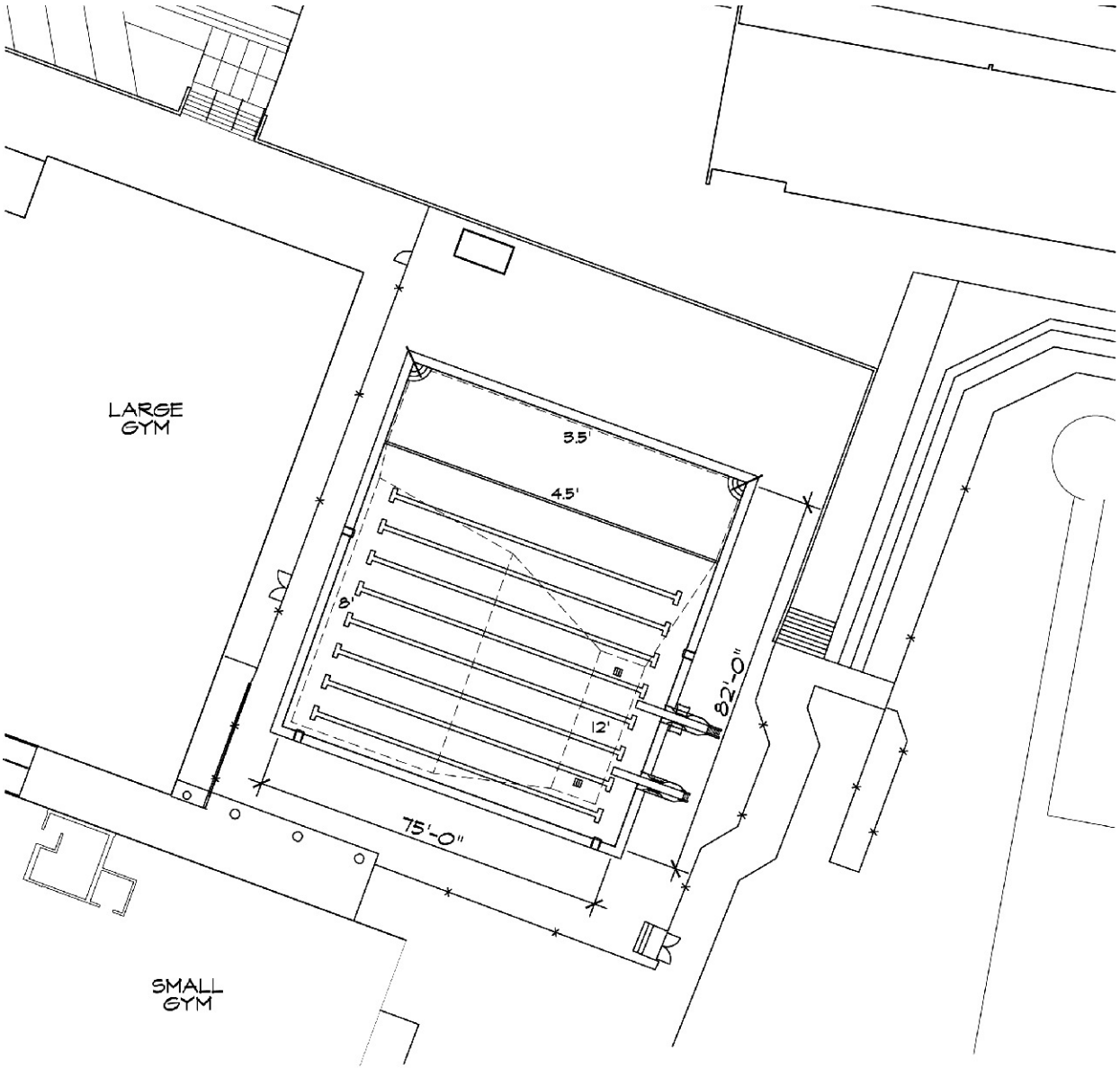
Similar to Scenario B, Scenario C would replace the existing pool with two full basketball courts and would create a new pool where the basketball courts are currently, and both the pool and basketball courts would be lighted for evening use. Scenario C would also construct two new buildings with the same design as the buildings proposed in Scenario B, but slightly farther north. Scenario C proposes a larger pool than Scenario B. The pool would have dimensions of 75 feet by 110 feet. This would allow for ten competitive swimming lanes and would meet the preferred CIF competition requirements for swimming, water polo with floating goals, and one-meter diving. This scenario would have less deck space than Scenario B. The design of the

new pool proposed under Scenario C is illustrated in Figure 9, *New Pool Plan 2*. The construction schedule for Scenario C is the same as that proposed for Scenario B.

1.4 EXISTING ZONING AND GENERAL PLAN

The City of San Marino General Plan Land Use Map designates the project site as "Community Use," and the City's Zoning Map designates the site as R-1 District V, which is a residential designation.

Expanded Pool Plan



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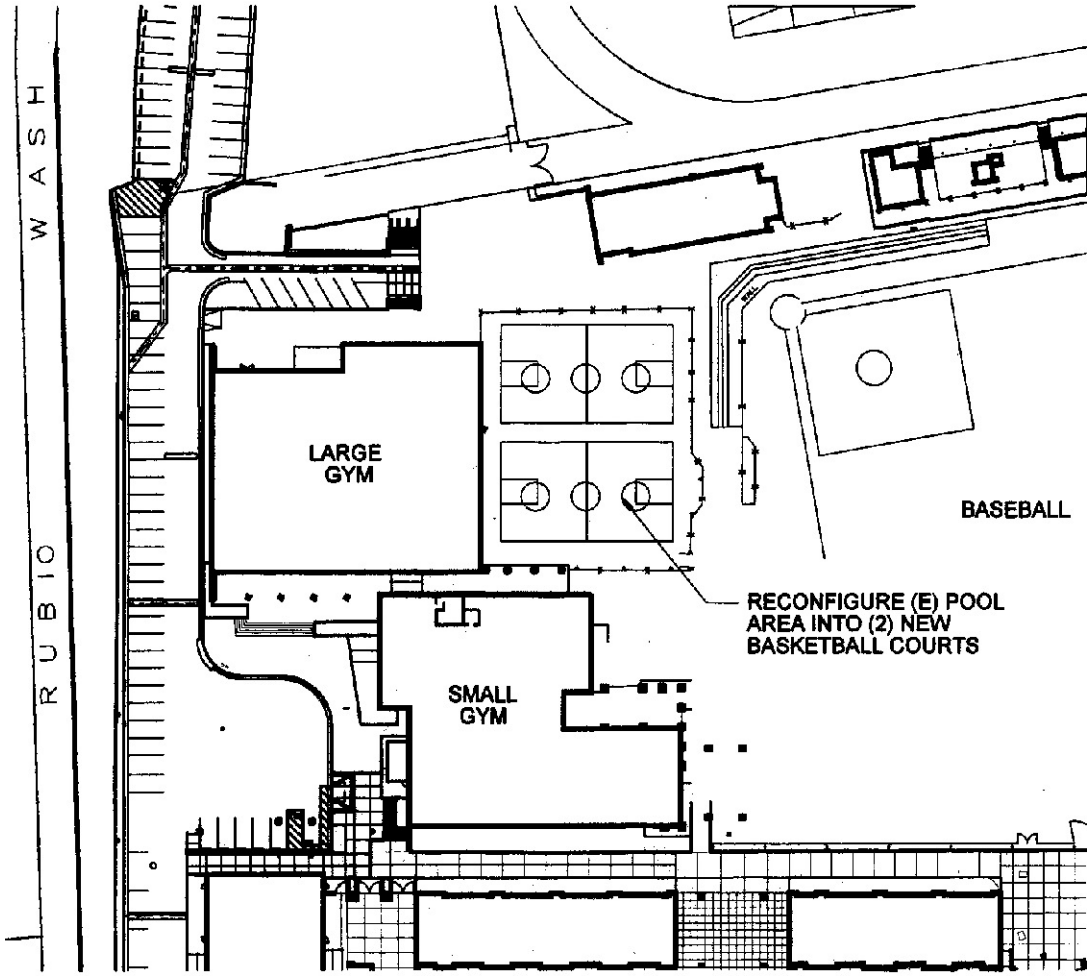
Relocated Basketball Courts



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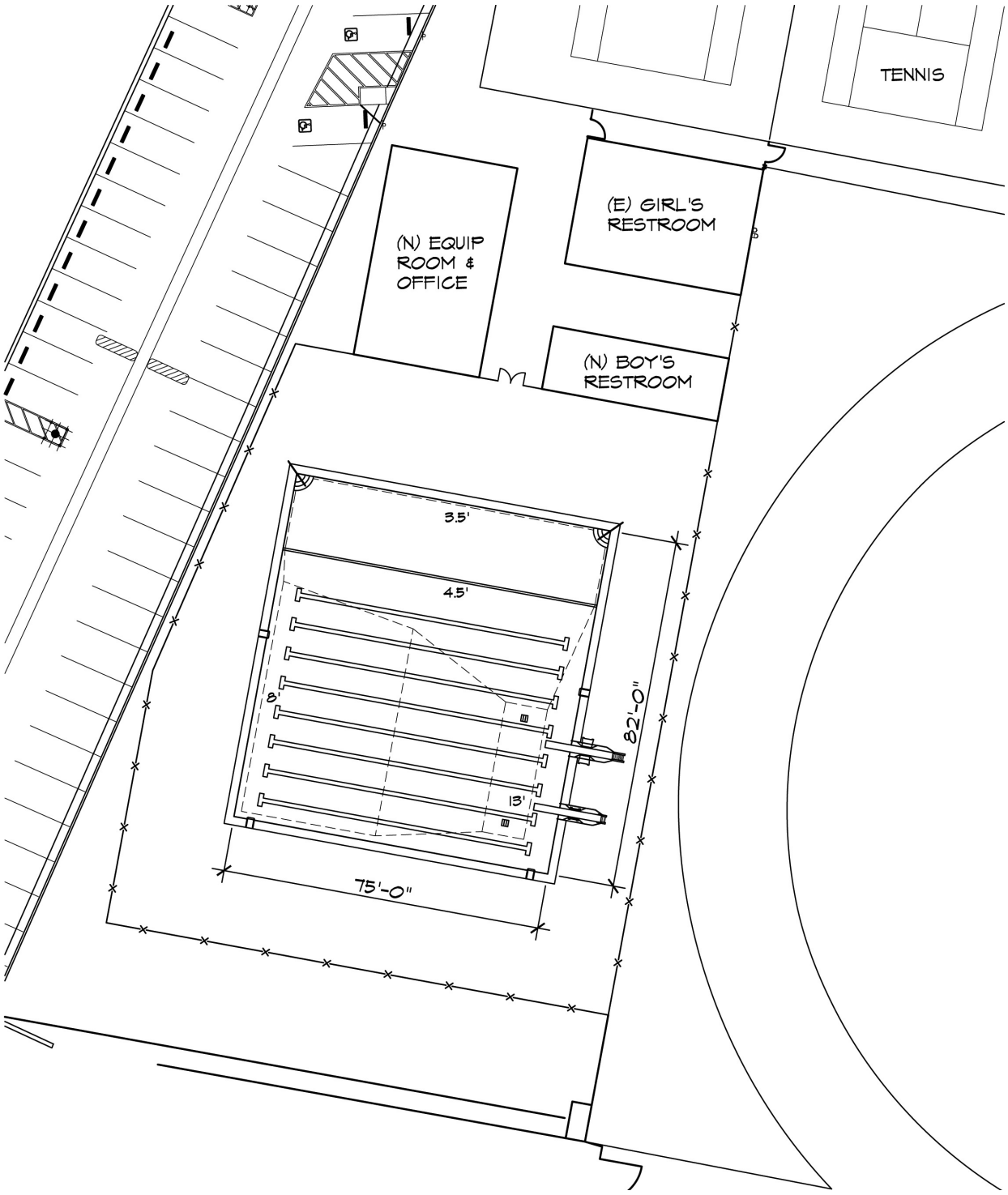
New Pool Plan 1



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Source: Carmichael-Kemp Architects 2008

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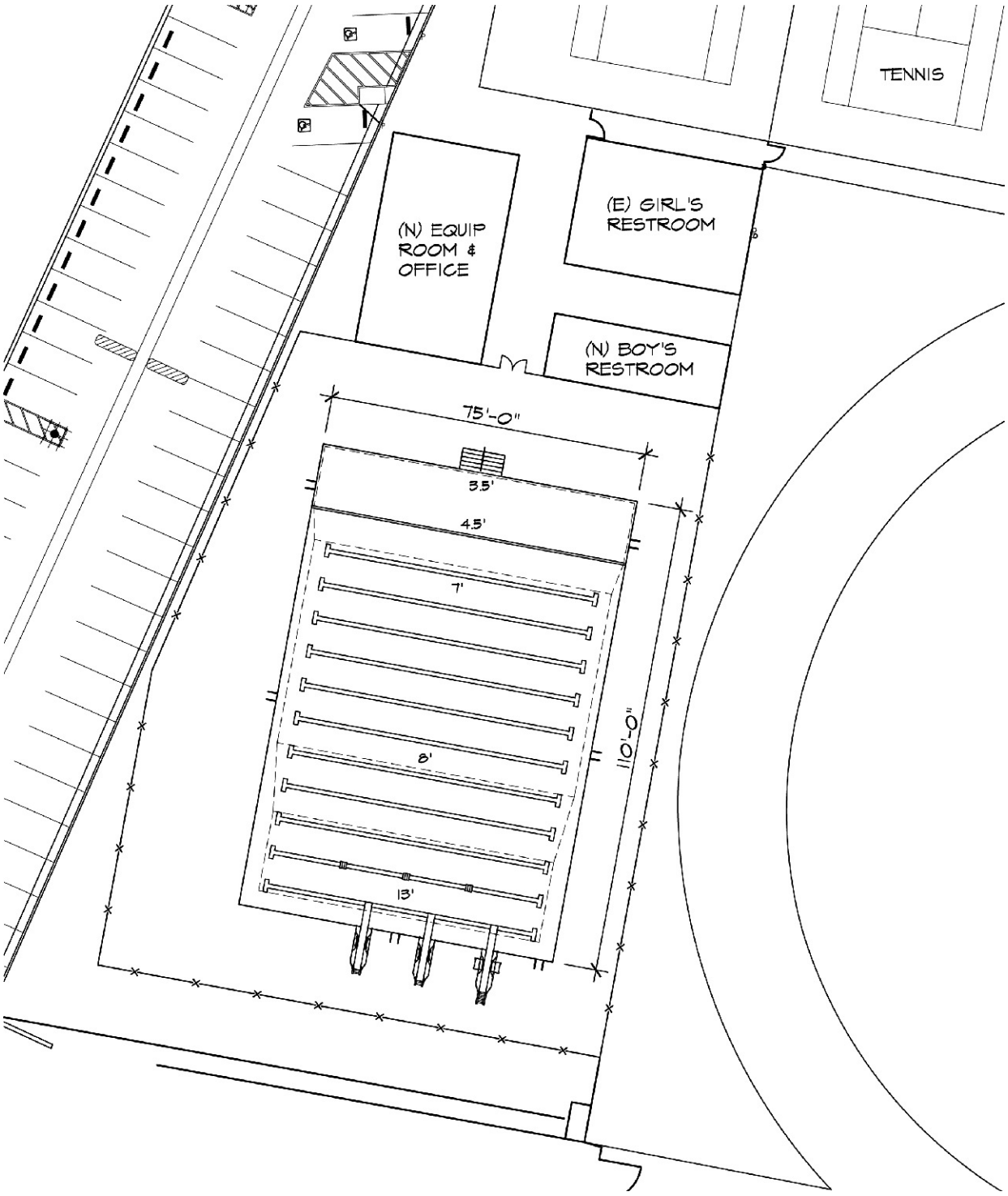
New Pool Plan 2



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Source: Carmichael-Kemp Architects 2008

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2. Environmental Checklist

2.1 BACKGROUND

1. **Project Title:** San Marino High School Pool Expansion

2. **Lead Agency Name and Address:**
   San Marino Unified School District
   1665 West Drive
   San Marino, CA 91108

3. **Contact Person and Phone Number:**
   Julie Boucher, Assistant Superintendent, Business Services
   626.299.7000, Ext. 390

4. **Project Location:** The project site is in the center of San Marino High School at 2701 Huntington Drive, in the City of San Marino, Los Angeles County.

5. **Project Sponsor's Name and Address:**
   San Marino Unified School District
   1665 West Drive
   San Marino, CA 91108

6. **General Plan Designation:** The City of San Marino General Plan Land Use Map designates the project site as "Community Use."

7. **Zoning:** The City of San Marino Zoning Map designates the site as R-1 District V, which is a residential designation.

8. **Description of Project**: The proposed project involves the expansion of the San Marino High School swimming pool. Three scenarios are currently being considered by the District: Scenario A would entail the expansion of the pool in its current location, and Scenario B and Scenario C would involve relocating the pool to the area of the basketball courts, and relocating the basketball courts to the areas of the pool and Michael White Adobe.

   The proposed project would require the removal of the Michael White Adobe, a locally designated historic landmark. If technically and economically feasible, the building would be relocated. If it is determined that the relocation of the Adobe is infeasible, it would be demolished.

9. **Surrounding Land Uses and Setting**: The project site is within the campus of San Marino High School. It is immediately bordered by the varsity baseball field and football stadium to the east, tennis courts to the north, student parking and the large gymnasium to the west, and the small gymnasium to the south. San Marino High School is in a residential neighborhood and surrounded by single-family residences on all four sides.

10. **Other Public Agencies Whose Approval Is Required**:
Division of the State Architect

2.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

2.3 DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

On the basis of this initial evaluation:

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

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

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

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

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

Julie a Boucher
Signature

October 22, 2008
Date

Julie Boucher
Printed Name

San Marino Unified School District
For

2.4 EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they would reduce the effect to a less than significant level.

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) **Earlier Analyses Used.** Identify and state where they are available for review.

   b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) **Mitigation Measures.** For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significant.

Issues	*Potentially Significant Impact*	*Less Than Significant With Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	
II. AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	X			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
VII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
VIII. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) 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?				X
j) Inundation by seiche, tsunami, or mudflow?				X
IX. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
XI. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIII. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
XV. TRANSPORTATION/TRAFFIC. Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?			X	
e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	

Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
XVII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	X			
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

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3. Environmental Analysis

Section 2.3 provided a checklist of environmental impacts. This section provides an evaluation of the impact categories and questions contained in the checklist and identifies mitigation measures, if applicable.

3.1 AESTHETICS

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

No Impact. There are no scenic vistas in the vicinity of the project site. The project site and surrounding area are relatively flat and have been developed with San Marino High School, single-family residences, and other urban uses. The proposed project would improve athletic facilities at the school. Any new structures would be relatively small and unobtrusive. The proposed project would not impact any scenic vistas. No further analysis is required.

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

No Impact. The nearest officially designated state scenic highway is State Route 2 (SR-2), approximately eight miles northwest of the project site. Portions of I-210, approximately four miles west of the project site, are considered eligible state scenic highways, but are not officially designated. The project site is not visible from SR-2, I-210, or any other scenic highways. Therefore, the proposed project would not impact any scenic resources within a state scenic highway. No further analysis is required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The proposed project would result in the removal of a historic building from San Marino High School and the creation of athletic facilities in its place. The building is an adobe that existed as early as 1845 and is likely eligible for listing on the California Register of Historic Resources for its contribution to California history and cultural heritage, association with important persons in our past, and/or may likely yield information important to history. The building is not visible from the street or any other public views, and it appears dilapidated, out of place, and incompatible with the surrounding school uses.

Project implementation would remove the Adobe and either expand the existing swimming pool or create new basketball courts in its place, both of which would be more compatible with the existing character and quality of the site and surroundings than the building. Therefore, impacts would be less than significant, and no further analysis is required.

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

Less Than Significant Impact. The proposed project would improve and expand athletic facilities at San Marino High School. The improved facilities would include lighting for evening use of the facilities. Any new lighting installed by the proposed project would be similar to existing lighting for athletic fields on the campus. As the project site is in the center of the school, the lights would not be adjacent to residences or other sensitive light receptors, and would not have a noticeable affect on day or nighttime views.

The proposed project would expand or relocate the pool. The pool would reflect light and may be a source of glare, and the proposed project may therefore alter the glare of the project site. However, under any of the proposed scenarios, the pool would not be visible from adjacent roadways, and glare from the pool would not result in significant impacts. Impacts related to light and glare created by the proposed project would be less than significant. No further analysis is required.

3.2 AGRICULTURE RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

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

No Impact. The project site and surrounding area is fully developed. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the project site, and the proposed project would not convert any farmland to nonagricultural uses. No impacts would occur as a result of the proposed project, and no further analysis is required.

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

No Impact. The City of San Marino General Plan Land Use Map designates the project site as "Community Use," and the City's Zoning Map designates the site as R-1 District V, which is a residential designation. The proposed project would not affect any land zoned for agricultural use. Furthermore, the proposed project would not alter the use of any land. It would expand and improve existing athletic facilities. The proposed project would not conflict with existing zoning for agricultural use, or with a Williamson Act contract. No impacts would occur as a result of the proposed project, and no further analysis is required.

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

No Impact. The proposed project would expand and improve existing athletic facilities at the school. The project would not affect farmland either directly or indirectly. No farmland would be converted to non-agricultural use, and no impacts would occur as a result of the proposed project. No further analysis is required.

3.3 AIR QUALITY

The Air Quality section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O_3), carbon monoxide (CO), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), sulfur oxides (SO_x), oxides of nitrogen (NO_x), and lead (Pb). Areas are classified under the federal Clean Air Act as either attainment or nonattainment areas for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the South Coast Air Quality Management District (SCAQMD), is designated by both the state and the United States Environmental Protection Agency (USEPA) as a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. This section analyzes the type and quantity of air pollutant emissions that would be generated by the construction and operation of the

proposed project. In addition, this section analyzes the project's contribution to global climate change impacts in California through an analysis of project-related greenhouse gas (GHG) emissions. The primary GHG of concern is carbon dioxide (CO_2) because it constitutes the majority (99 percent) of project-related GHG emissions. A background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling can be found in Appendix A to this Initial Study.

Methodology

Projected construction- and operation-related air pollutant emissions are calculated using the Urban Emissions (URBEMIS2007) inventory model distributed by the SCAQMD. The URBEMIS2007 computer model compiles an emissions inventory of construction, stationary, and vehicle emissions sources. The calculated emissions of the project are compared to thresholds of significance for individual projects using the SCAQMD's *CEQA Air Quality Analysis Guidance Handbook*.

Thresholds of Significance

CEQA allows for the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. The SCAQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

Regional Significance Thresholds

The SCAQMD has adopted regional construction and operational emissions thresholds to determine project-specific and cumulative impacts on air quality within the SoCAB, as shown in Table 1.

Table 1
SCAQMD Significance Thresholds

Air Pollutant	*Construction Phase*	*Operational Phase*
Volatile Organic Gases (VOC)	75 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Coarse Inhalable Particulates (PM_{10})[1]	150 lbs/day	150 lbs/day
Fine Inhalable Particulates ($PM_{2.5}$)[1]	55 lbs/day	55 lbs/day

Source: SCAQMD 1993
[1] SCAQMD threshold for fine particulates adopted October 6, 2006.

CO Hotspot Analysis

The localized CO impacts are based on the California CO standards:

- 1-hour = 20 parts per million
- 8-hour = 9 parts per million

The SCAQMD requires the assessment of CO hot spots at congested intersections for which project traffic would travel. Exceedance of the one- and eight-hour ambient air quality standards would constitute a significant air quality impact.

Localized Significance Thresholds

The SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the project site (off-site mobile-source emissions are not included the LST analysis). LSTs are the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS. LSTs are based on the ambient concentrations of that pollutant within the project air pollutant monitoring station area, or source receptor area (SRA) and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects of five acres and less. Table 2 lists the LSTs for Scenario A of the proposed project, which is for a 0.50-acre project site in SRA 8 with sensitive receptors within 25 meters from on-site activities. Table 3 lists the LSTs for Scenarios B and C, which involve a 1.05-acre project site within SRA 8 with sensitive receptors within 25 meters from on-site activities.

Table 2
SCAQMD Localized Significance Thresholds
For a 0.50-Acre Project Site in SRA 8 at 25 Meters – Scenario A

Air Pollutant	*Construction Phase (lbs/day)*	*Operational Phase (lbs/day)*
Nitrogen Oxides (NO_X)	126	126
Carbon Monoxide (CO)	449	449
Coarse Inhalable Particulates (PM_{10})	4	1
Fine Inhalable Particulates ($PM_{2.5}$)	3	1

Source: SCAQMD 2006, Appendix A: Based on LSTs for a project site in SRA 8 that is 0.50 acres at a distance of 25 meters (82 feet) between the source and receptor.

Table 3
SCAQMD Localized Significance Thresholds
For a 1.05-Acre Project Site in SRA 8 at 25 Meters – Scenarios B & C

Air Pollutant	*Construction Phase (lbs/day)*	*Operational Phase (lbs/day)*
Nitrogen Oxides (NO_X)	129	129
Carbon Monoxide (CO)	461	461
Coarse Inhalable Particulates (PM_{10})	4	1
Fine Inhalable Particulates ($PM_{2.5}$)	3	1

Source: SCAQMD 2006, Appendix A: Based on LSTs for a project site in SRA 8 that is 1.05 acres at a distance of 25 meters (82 feet) between the source and receptor.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the Air Quality Management Plan (AQMP). It fulfills

the CEQA goal of informing decision makers of the environmental efforts of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to clean air goals contained in the AQMP. There are two key indicators of consistency:

- Indicator 1: Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the ambient air quality standards or interim emission reductions in the AQMP.

- Indicator 2: Whether the project would exceed the assumptions in the AQMP. The AQMP strategy is, in part, based on projections from local general plans.

Emissions generated by construction and operation of the proposed project would be under the SCAQMD emission thresholds. Therefore the project would not be considered by the SCAQMD to be a substantial source of air pollutant emissions and would be consistent with the AQMP under the first indicator. San Marino High School is an existing school and the proposed project would not introduce new uses that would exceed the regional air emissions inventory assumptions of the AQMP. In addition, the proposed project would not introduce new vehicle trips and therefore mobile-source emissions should be similar to the existing uses. Furthermore, the project is not considered by the Southern California Association of Governments to be a regionally significant project that would warrant a consistency review for criteria emissions. Therefore, the proposed project would not exceed the assumptions in the AQMP and would be consistent under the second indicator. Consequently, the project would not conflict with or obstruct implementation of the AQMP and impacts are less than significant in this regard. This issue will not be addressed further in the EIR.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. The first phase of the project would involve the removal of the Michael White Adobe building next to the existing San Marino High School swimming pool. After removal of the Adobe, one of three building scenarios would occur. Under Scenario A, the existing swimming pool (4,670 square feet) would be expanded to the increased dimensions of 75 feet by 82 feet (6,150 square feet). Under Scenario B, the swimming pool would be relocated to the site of the existing basketball courts and the basketball courts would be relocated to the site of the existing swimming pool. Under Scenario B, the dimensions of the new pool would be the same as under Scenario A. Additionally, two structures (boys' restroom and an equipment/office building) would be constructed under Scenario B. Scenario C would be similar to Scenario B; however, the dimensions of the pool would be increased to 75 feet by 110 feet (8,250 square feet) resulting in a smaller deck area. Air pollutant emissions associated with the project could occur over the short term for site preparation and building construction activities. In addition, a minimal increase in emissions would result from the long-term operation of the completed project from facility-related energy consumption and on-site stationary source emissions.

Short-Term Air Quality Impacts

Construction activities would result in the generation of air pollutants. These emissions would primarily be 1) exhaust emissions from powered construction equipment, 2) dust generated by demolition, earthmoving, excavation, and other construction activities, 3) motor vehicle emissions, and 4) emissions of volatile organic compounds from the application of asphalt, paints, and coatings.

Phase I of construction is estimated to initiate at the end of June of 2009 and completed at the end of August 2009 (two months). Phase II of construction is estimated to start November of 2010 and be completed end of April 2012 (18 months) for the worst-case scenario (Scenario C). Construction emissions were estimated using the SCAQMD's URBEMIS2007 inventory model and are included in Tables 4 and 5.

Phase I

The worst-case scenario of Phase I, as it relates to air quality impacts, assumes the demolition of the Michael White Adobe building. Demolition is estimated to begin in summer of 2009 and last one month. It is also assumed that one tractor, one excavator, and dump truck would be needed to demolish the existing structure. If the historic structure is found to have lead paint and/or asbestos, the District's contractor would be required to comply with the SCAQMD permit conditions set forth for demolition under Rule 1403 (see Section 3.7, *Hazards and Hazardous Materials*). Demolition emissions were estimated using URBEMIS2007 and are included in Table 4. As shown in this table, all emissions from construction-related activities are less than their respective SCAQMD threshold values. Therefore, impacts from emissions related to construction activities would be less than significant. No mitigation measures are required. This issue will not be analyzed in the EIR.

Table 4
Maximum Daily Construction Emissions

Source	Pollutants (lb/day)						
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Demolition	1	6	4	0	1	1	578
Maximum Daily Construction	1	6	4	0	1	1	578
SCAQMD Threshold	75	100	550	150	150	55	NA
Exceeds Threshold	No	No	No	No	No	No	NA

Source: URBEMIS2007 Version 9.2.4

Phase II

Scenario C would be the worst-case construction scenario because it would consist of the removal of the existing basketball courts and swimming pool, filling of the existing swimming pool after its removal, and construction of the new expanded swimming pool (75 feet by 110 feet), new basketball courts, boy's restroom, and the office/equipment room. As shown in Table 5, construction-related emissions would not exceed the SCAQMD regional thresholds for criteria pollutants. Because Scenario C would be the worst-cast scenario, it can be assumed that construction-related emissions from Scenarios A and B would also be under the SCAQMD regional thresholds. Consequently, construction-related impacts would be less than significant. No mitigation measures are required, and this issue will not be addressed further in the EIR.

Table 5
Maximum Daily Construction Emissions[1]

Source	Pollutants (lb/day)						
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Demolition[2]	1	7	5	0	1	1	745
Building Construction	2	15	9	0	1	1	1,246
Architectural Coating	8	<1	<1	0	0	0	12
Demolition[3]	1	5	4	0	1	<1	673
Asphalt Paving	2	11	8	0	1	1	1,208
Maximum Daily Construction	10	15	9	0	1	1	1,257
SCAQMD Threshold	75	100	550	150	150	55	NA
Exceeds Threshold	No	No	No	No	No	No	NA

Source: URBEMIS2007 Version 9.2.4.
[1] Based on Scenario C, which is the worst-case scenario.
[2] Demolition of basketball courts.
[3] Demolition of the swimming pool.

Long-Term Operation-Related Impacts

Long-term air emission impacts are those associated with changes in stationary and mobile sources related to the proposed project. As the project would replace the existing facilities with similar facilities, no new vehicle trips would be generated by the project. While the project would expand and/or replace the existing pool and construct a new restroom and equipment/office building, emissions generated by these new stationary sources would be minimal and would not exceed the SCAQMD regional emissions thresholds. Consequently, as minimal additional vehicle trips would be generated by the project from potential increased use of the pool by the community and any increase in emissions from new stationary sources would be minimal, the impact from the project would be less than significant. No mitigation measures are required and this issue will not be analyzed further in an EIR.

Greenhouse Gas Emissions

The SCAQMD, Office of Planning and Research, and California Air Resources Board (CARB) have not formally adopted regional emissions thresholds for GHG emissions. However, the SCAQMD is currently in the process of drafting thresholds for CO_2 emissions for construction and operation of a project. According to the SCAQMD Working Group's second revised proposed significance threshold approach, the draft threshold for construction is 6,500 metric tons total for the entire construction period and the draft threshold for operation is 6,500 metric tons per year of operation. As shown in Table 6, construction of the project would not exceed the draft SCAQMD threshold. Furthermore, as no additional vehicle trips would be generated by the project and any increase in emissions from new stationary sources would be minimal, GHG emissions from the new on-site sources is also less than significant. Because the project would not exceed the draft SCAQMD threshold, CO_2 emissions are likely not to be considered substantial enough to result in a significant cumulative impact relative to GHG emissions and climate change impacts. Therefore the project's cumulative contribution to GHG emissions is less than significant. No mitigation measures are required. This issue will not be addressed further in the EIR.

Table 6
Project-Generated Greenhouse Gas Emissions

Source	CO_2 Emissions Metric Tons
Construction	
Construction Emissions[1]	218
Draft SCAQMD Threshold[2]	6,500
Exceeds Significance Thresholds?	No

Source: URBEMIS2007, Version 9.2.4.
Note: One short ton is equivalent to 0.9071847 metric ton.
[1] Includes construction-related CO_2 emissions from Phases I and II.
[2] The SCAQMD has proposed, but not yet adopted, a significance threshold of 6,500 metric tons of CO_2 for construction and 6,500 tons/year for operation.

c) 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 that exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. The SoCAB is designated by the USEPA and CARB as in nonattainment for O_3, PM_{10}, and $PM_{2.5}$. In accordance with SCAQMD methodology, any project that does not exceed or can be mitigated to less than the daily threshold values does not add significantly to a cumulative impact. The URBEMIS modeling demonstrates that construction activities would not result in emissions in excess of the SCAQMD threshold values and therefore the project does not add significantly to any cumulative impact. Furthermore, as any additional vehicle trips generated by the project would be negligible and any increase in emissions from new stationary sources would be minimal, operation of the project would also not add significant to any cumulative impact. Consequently, no mitigation measures are necessary. This issue will not be addressed further in the EIR.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The project could expose sensitive receptors to elevated pollutant concentrations if it would cause or contribute significantly to elevated pollutant concentration levels. Unlike the mass (weight) of construction and operational emissions shown in Tables 3 and 4 (pounds per day), localized concentrations refer to the amount of pollutant in a volume of air (ppm or $\mu g/m^3$) and can be correlated to potential health effects.

CO Hotspot Analysis

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. However, the proposed project would not introduce new uses that would generate new mobile sources. Consequently, the project would not expose sensitive receptors to substantial CO concentrations, and no significant impact would result from this project, and no mitigation measures are necessary. This issue will not be addressed further in the EIR.

Construction LSTs

Emissions generated from construction activities are anticipated to cause temporary increases in pollutant concentrations. In accordance with SCAQMD methodology, only on-site stationary sources and mobile equipment occurring on the project site are included in the analysis.

Phase I

The worst case scenario of this phase assumes that demolition of the Adobe would coincide with summer school activities. Table 7 shows the maximum daily construction emissions (pounds per day) generated during Phase I activities compared with the screening level LSTs for a 0.50-acre site for the nearest sensitive receptors, which are the students on-site. As shown in this table, maximum daily combined emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ from the project would not exceed the LSTs, and therefore would not result in exposure of on-site sensitive receptors to substantial pollutant. Consequently, construction emissions generated by the project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant. This issue will not be addressed further in the EIR.

Table 7
Maximum Daily Construction Emissions Compared with the LST – Phase I

Source	Pollutants (lbs/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	5	4	1	1
Max Daily Construction	**5**	**4**	**1**	**1**
SCAQMD LST	129	461	4	3
Exceeds Threshold	No	No	No	No

Source: URBEMIS2007 Version 9.2.4, and SCAQMD 2003, Appendix A: Based on LSTs for a project site in SRA 8 with a 0.50-acre site and a distance of 25 meters (82 feet) between the source and receptor.
[1] Maximum daily emissions less on-road emissions from construction activities.

Phase II

Table 8 shows the maximum daily construction emissions (pounds per day) generated during Scenario C construction activities compared with the screening level LSTs for a 1.05-acre site. Analysis is conducted for on-site receptors, as construction activities may coincide with on-site school activities. As shown in this table, maximum daily combined emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ from the project would not exceed the LSTs, and therefore would not result in exposure of on-site sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant and no mitigation measures are required. This issue will not be addressed further in the EIR.

Table 8
Maximum Daily Construction Emissions Compared with the LST – Phase II

Source	Pollutants (lbs/day)[1, 2]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition[3]	1	4	1	1
Building Construction	2	8	1	1
Architectural Coating	10	0	0	0
Asphalt Paving	2	7	1	1
Maximum Daily Construction	**13**	**8**	**1**	**1**
SCAQMD LST	129	461	4	3
Exceeds Threshold	No	No	No	No

Source: URBEMIS2007 Version 9.2.4, and SCAQMD 2003, Appendix A: Based on LSTs for a project site in SRA 8 with a 1.05-acre site and a distance of 25 meters (82 feet) between the source and receptor.
[1] Maximum daily emissions less on-road emissions from construction activities.
[2] Based on Scenario C, which is the worst-case scenario.
[3] Based on demolition of basketball courts.

Operational LSTs

Because the proposed project would not generate many, if any, new vehicle trips and any increase in stationary source emissions from a larger pool and structures would be minimal, the project would not significant elevate pollutant concentrations during operation of the project. No mitigation measures are required. This issue will not be addressed in the EIR.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Project construction would involve the use of heavy equipment creating exhaust pollutants from on-site earth movement and from equipment bringing asphalt and other building materials to the site. With regard to nuisance odors, any air quality impacts would be confined to the immediate vicinity of the equipment itself. By the time such emissions reach any sensitive receptor sites away from the project site, they are typically diluted to well below any level of air quality concern. An occasional "whiff" of diesel exhaust from passing equipment and trucks accessing the site from public roadways may result. Such brief exhaust odors are an adverse, but not significant, air quality impact. No objectionable odors are anticipated to result from the operational phase of the proposed project. Furthermore, odor complaints are subject to SCAQMD Rule 402, Nuisance, which requires that odors not result in a nuisance or annoyance to the public. Therefore, impacts from objectionable odors are less than significant and no mitigation measures are necessary. This issue will not be addressed further in the EIR.

3.4 BIOLOGICAL RESOURCES

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

No Impact. There are no candidate, sensitive, or special status species as designated by the California Department of Fish and Game or the US Fish and Wildlife Service on or in the vicinity of the project site. The project site and surrounding area is fully developed. There is no native habitat on or in the vicinity of the project site. The project would have no adverse impact on sensitive or special status species directly or by

modifying habitat. No impacts would occur as a result of the proposed project. No further analysis is required.

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

No Impact. The project site is currently developed with a building and athletic facilities. There is no riparian habitat on the project site. No sensitive natural communities exist on or in the vicinity of the project site. No impacts to sensitive natural communities would occur as result of the proposed project, and no further analysis is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project site is developed with a building and athletic facilities, and the surrounding areas are developed with school and residential uses. There are no federally protected wetlands such as streams, marshes, or vernal pools on or near the project site. The Rubio Wash Flood Channel runs immediately west of the project site. The flood channel is a man-made structure that contains no habitat and is not a biologically sensitive wetland. No impacts to wetlands would occur as a result of the proposed project, and no further analysis is required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact. There are no migration corridors, native habitat, wildlife, or wildlife nursery sites in the vicinity of the project site. The project would be required to comply with the federal Migratory Bird Treaty Act. This would include conducting a nesting bird survey of trees near the project site to confirm the absence of nesting birds that could be affected by demolition activities. Compliance with the Treaty Act would reduce project impacts to fish or wildlife species, wildlife corridors, or wildlife nursery to less than significant. No further analysis is required.

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

Less Than Significant Impact. The proposed project will not affect any protected biological resources. However, the proposed project may require the removal of some trees. The City of San Marino has regulations governing the removal of trees. Specifically, trees of at least 24 inches in diameter and at least 15 feet high cannot be removed from public property without a City-approved permit. However, the project site is part of San Marino High School, which is owned by the District. The site is therefore not within City property or right-of-way, and no permits from the City of San Marino would be required for the removal of trees. The proposed project would not conflict with any local policies or ordinance protecting biological resources. Impacts would be less than significant, and no further analysis is required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site and surrounding area are fully developed. The proposed project would replace a vacant building with athletic facilities and would not develop any previously undeveloped land. There is no native habitat on or in the vicinity of the project site, and the project site has not been designated for preservation or open space. Therefore, the proposed project would not conflict with any habitat conservation plan. No impacts would occur as a result of the proposed project. No further analysis is required.

3.5 CULTURAL RESOURCES

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Potentially Significant Impact. Section 10564.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally a resource is considered to be "historically significant," if it meets one of the following criteria:

i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

ii) Is associated with the lives of persons important in our past;

iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

iv) Has yielded, or may be likely to yield, information important in prehistory or history.

Review of the Historic Property Data File for Los Angeles County (dated June 11, 2007) indicates that the subject property was previously surveyed as a "3S," which means it "appears eligible for NR [National Register of Historic Places] as an individual property through survey evaluation." Properties listed in the National Register of Historic Places are automatically included on the California Register of Historical Resources. As the subject property is eligible for the NR, it is therefore also eligible for the California Register. The property is also a locally designated historic landmark. Because the subject property is locally designated, it is a historical resource and has presumptive significance under CEQA. According to CEQA Guidelines, a project would result in a significant impact to historical resources if it would cause a substantial adverse change in the significance of a historical resource. Impacts to the Michael White Adobe are potentially significant. This issue will be analyzed further in the EIR.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Potentially Significant Impact. According to CEQA Guidelines Section 15064.5 and California Public Resources Code Section 21083.1, the proposed project would have a significant impact if it would cause a substantial adverse change in the significance of a unique archeological resource, i.e., an artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality (such as being the oldest or best available examples

of its type) or is directly associated with a scientifically recognized important prehistoric or historic event or person.

The proposed project would remove the Michael White Adobe. According to *San Marino: From Ranch to City*, a history written by Midge Sherwood, the Michael White Adobe is the oldest residence in the City of San Marino. Implementation of the proposed project would disturb soils near the foundation of the historic building and may uncover archaeological resources important to the City's history. The proposed project would also expand the existing pool or create a new pool in the northern portion of the project site, which would require ground-disturbing activities. These ground-disturbing activities may uncover previously undiscovered resources. The project could have a potentially significant impact to archaeological resources if uncovered resources are not properly curated. This issue will be addressed in the EIR.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Impact. The proposed project would remove an existing building and would expand or relocate a swimming pool. These actions would require ground-disturbing activities, which may disturb previously undiscovered paleontological resources below the surface of the project site. Impacts to paleontological resources could be potentially significant if uncovered resources are not properly curated. This issue will be addressed in the EIR.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. There are no known human remains on the project site. However, the proposed project would involve ground-disturbing activities, which could disturb undiscovered human remains. If human bone is discovered during geologic testing or during construction, work shall immediately cease and the procedures described in Section 7050.5 of the California Health and Safety Code shall be followed. Section 7050.5 requires notification of the coroner. If the coroner determines that the remains are those of a Native American, the applicant shall notify the Native American Heritage Commission by phone within 48 hours. Following notification of the Native American Heritage Commission, the procedures described in Section 5097.94 and Section 5097.98 of the California Public Resources Code shall be followed. Conformance with standard conditions concerning the discovery of human remains would ensure that impacts related to human remains would be less than significant. This issue will not be examined further in the EIR.

3.6 GEOLOGY AND SOILS

Several geotechnical investigations of San Marino High School have been completed for previous projects. The following analysis is based in part on the following studies:

- *Report of Geotechnical Investigation: Proposed Classroom Buildings*, Law/Crandall, December 8, 1997.
- *Geotechnical Consultation, Update of Geologic-Seismic Evaluation and Geotechnical Recommendations, Proposed Building R and Modernization of Existing Buildings, Existing San Marino High School*, Mactec, February 5, 2004.
- *Geotechnical Investigation: Athletic Track and Field Renovation: San Marino High School*, Geobase, April 2005.

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

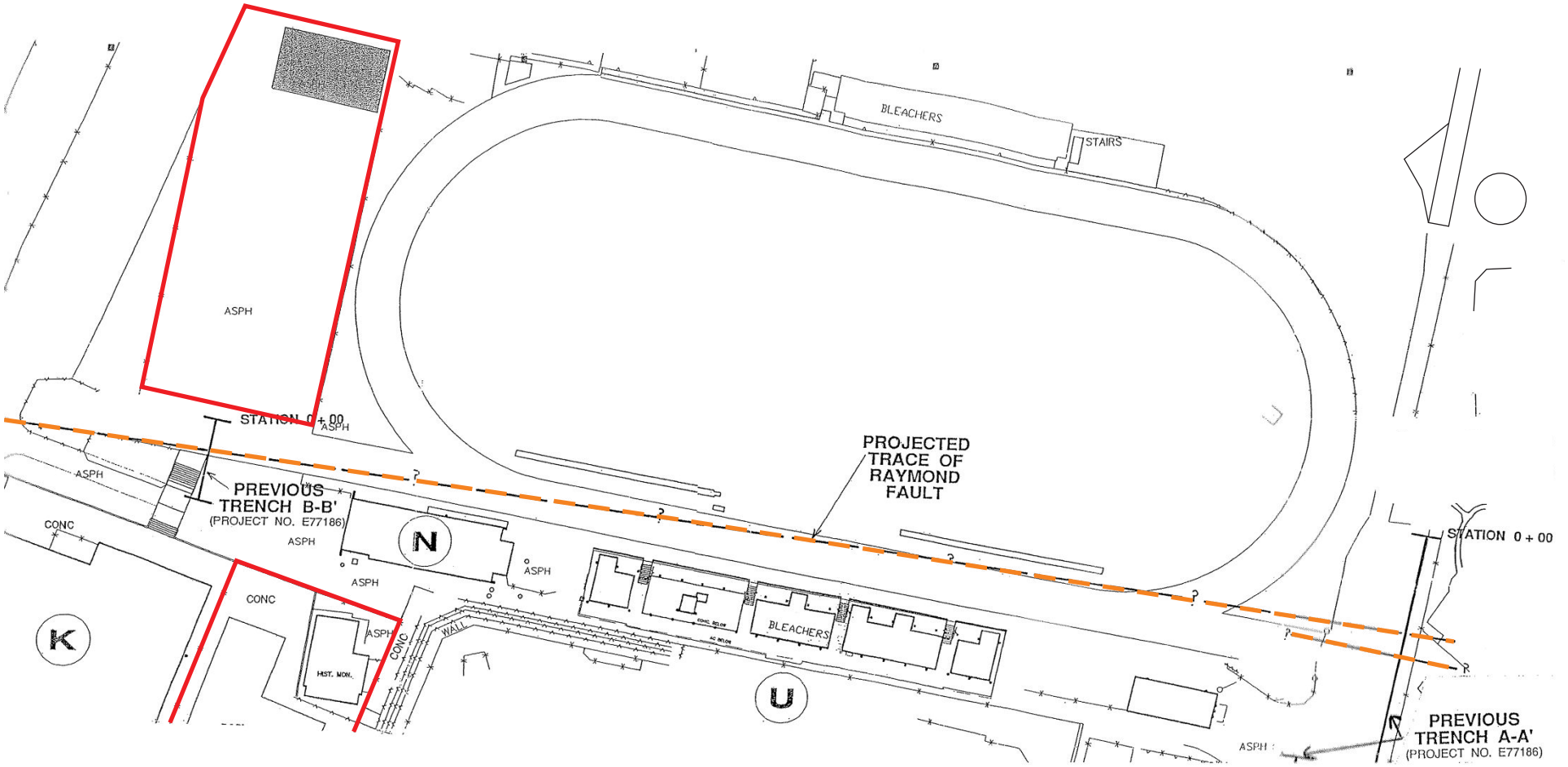
Less Than Significant Impact. Fault rupture occurs when an active fault displaces in two separate directions during an earthquake. Fault rupture hazards can be estimated based on a site's proximity to an active or potentially active fault and the designation of the site as being within an Alquist-Priolo Special Study Zone, as defined by the Alquist-Priolo Earthquake Fault Zone Act of 1972.

The entire project site is within an Alquist-Priolo Earthquake Fault Zone. The location of faults can be determined through geologic cuts known as trenching. Based on previous trenching completed south of the existing basketball courts at San Marino High School, it has been confirmed that an active fault known as the Raymond Fault traverses the campus. As shown in Figure 10, *Location of Raymond Fault*, the fault runs in between the existing basketball courts in the northern portion of the project site and the Michael White Adobe and existing pool in the southern part of the project site. It is a high-angle reverse fault, thrusting basement rocks north of the fault over sediments to the south.

In accordance with Education Code Section 17212.5, the proposed project would be prohibited from placing buildings or structures on the Raymond Fault or any other potential fault traces that can reasonably be expected to rupture within the life of a building or structure. Under Scenario A, the proposed expanded pool would be approximately 100 feet south of the Raymond Fault. Under Scenarios B and C, the proposed pool would be over 50 feet north of and the two new buildings would be approximately 200 feet north of the Raymond Fault. Additionally, in keeping with Education Code Sections 17212 and 17212.5 and the California Geologic Survey – Note 48, if Scenario B or C were selected, additional geological and soil engineering studies would be completed by either a certified engineering geologist or registered geotechnical engineer. The studies would require additional trenching in order to confirm that development of the new structures would not be placed on or within 50 feet of a fault.

Design and development of the proposed project would comply with all applicable building and safety codes, including the California Code of Regulations, Title 24, California Building Code (CBC). Adherence to the CBC would be enforced by the Division of the State Architect (DSA), which is responsible for ensuring structural safety, fire and life safety, and accessibility of California's K-12 schools and community colleges, and would reduce a potentially significant impact associated with rupture of a known earthquake fault to a level below significance. Additionally, the proposed project would not increase enrollment at San Marino High School and therefore would not expose more people to additional risks. Therefore, with the compliance to established building and safety codes enforced by DSA, impacts would not be significant, and this issue will not be further addressed in the EIR.

Location of Raymond Fault



Site Boundary

Raymond Earthquake Fault

0 90

Scale (Feet)

Source: Geobase 2005

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ii) Strong seismic ground shaking?

Less Than Significant Impact. All areas in southern California, including the project site, may be subject to earthquakes. The Raymond fault traverses the high school, and there are several other active faults nearby, including the Sierra Madre fault zone, approximately three miles north of the project site, and the Verdugo fault zone, approximately seven miles north of the project site. The proposed project would create improvements to a site in a seismically active area, including a swimming pool and potentially two new buildings under Scenarios B and C.

The proposed project would be required to comply with the seismic safety requirements of the CBC, and compliance with CBC requirements would be confirmed by the DSA. Furthermore, the proposed project consists of improvements to an existing and operating high school, and would not increase enrollment or result in programmatic changes to the operation of the school. The new structures proposed under Scenarios B and C would be similar to existing structures at the school. Compliance with established rules and regulations would reduce impacts related to seismic ground shaking to less than significant.

Furthermore, the current structural integrity of the Adobe is unknown. As the building was built in the 1800s, it is possible that it may not be able to withstand a strong earthquake. The removal of the building would remove a potential hazard to the campus and would make the school safer in the event of an earthquake. The proposed project would not result in significant impacts related to strong seismic ground shaking, and no further analysis is required.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction happens when loose, saturated sand and gravel deposits lose their load-supporting capability when subjected to intense shaking. Liquefaction potential varies based upon on-site soil composition and groundwater depth. The project site is not in or adjacent to a liquefaction zone as designated by the State of California Seismic Hazard Zones El Monte Quadrangle Official Map or the Mt. Wilson Quadrangle Official Map. In 2005, Geobase, a geotechnical consulting firm, performed a geotechnical investigation for a previous project at the track field adjacent to the project site. Geobase determined that the soils underlying the school are dense and that groundwater is at a depth of more than 50 feet below the surface. Based on these factors, Geobase concluded that the potential for liquefaction at the project site is low. Furthermore, the proposed project would be required to comply with the CBC, which would ensure that the proposed project is not subject to a significant risk of seismic ground failure. Implementation of the proposed project would not expose people or structures to impacts related to ground failure. No significant impacts would occur as a result of the proposed project, and no further analysis is required.

iv) Landslides?

No Impact. The project site is flat and is not in a landslide zone as designated by the State of California Seismic Hazard Zones El Monte Quadrangle Official Map or the Mt. Wilson Quadrangle Official Map. Furthermore, the proposed project consists of improvements to an existing and operating high school. Implementation of the proposed project would not expose people or structures to impacts related to landslides. No impacts associated with landslides would occur as a result of the proposed project, and no further analysis is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Erosion is the movement of rock fragments and soil from one place to another. Precipitation, running water, waves, and wind are all agents of erosion. Significant erosion typically occurs on steep slopes where stormwater and high winds can carry topsoil down hillsides.

The project site is flat and currently developed. Very small amounts of on-site soils would be prone to erosion during the removal or demolition of the Michael White Adobe and construction of the athletic facilities. However, after completion of the proposed project, there would be no bare soil on the project site, so the site would have little susceptibility to erosion. Therefore, project-related erosion impacts would be less than significant. No further analysis is required.

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

Less Than Significant Impact. The proposed project consists of improvements to an existing school. As stated above, the site is not in a landslide zone, and according to the 2005 Geobase report, San Marino High School is underlain by dense sandy materials that are not susceptible to significant settlement. The report also determined that, due to the topography of the project site, the potential for lateral spreading or landsliding is very low. Mandatory compliance with the CBC would ensure that risks related to unstable soils would be reduced to a level below significance, and no further analysis is required.

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

Less Than Significant Impact. The 2005 Geobase report determined that the potential for expansive soils at the school is "low" to "very low." Furthermore, the proposed project would be required to comply with the CBC. Compliance with the CBC would ensure that the proposed project would not be subject to risks related to expansive soils. No significant impacts would occur as a result of the proposed project, and no further analysis is required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed project would not increase enrollment at San Marino High School and would not require the need for onsite wastewater disposal systems. No septic tanks or alternative wastewater disposal systems would be installed, and no impacts would occur. No further analysis is required.

3.7 HAZARDS AND HAZARDOUS MATERIALS

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

Less Than Significant Impact. The creation of athletic facilities and the demolition of the building, should it be demolished, could involve the transport of fuels, lubricating fluids, solvents, and other substances. However, the duration of these activities would be short and would not require the handling of significant amounts of these substances. Large quantities of materials considered hazardous would not be used during demolition efforts. The storage, handling, and disposal of hazardous materials are regulated by the EPA, Occupational Safety and Health Administration (OSHA), and the San Marino Fire Department. Compliance

with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner, and would minimize the potential for safety impacts to occur. After implementation of these standards and regulations, risks involving hazardous materials arising from project demolition would be a less than significant impact. No further analysis is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. As stated above, the use of hazardous substances by the project would be required to comply with regulations issued and enforced by the EPA, OSHA, and the San Marino Fire Department. The relocation and renovation, or demolition, of the Michael White Adobe would be required to comply with Rule 1403 of the SCAQMD. Rule 1403 regulates demolition, renovation, and asbestos removal projects. It is intended to limit emissions of hazardous materials including asbestos-containing materials (ACM) due to demolition and renovation activities. At this time, it is unknown if the Michael White Adobe contains ACM or other hazardous building materials, such as lead paint. If ACM or lead paint is present in the building, compliance with all applicable state and federal regulations, including SCAQMD Rule 1403, would reduce associated impacts to less than significant. Compliance with existing laws and regulations would reduce risks arising from accidental spills and upsets of hazardous materials to a less than significant impact. No further analysis is required.

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

Less Than Significant Impact. The project site is on the campus of San Marino High School. While the project would handle hazardous materials during construction activities, the storage, use, and transport of those materials would comply with existing regulations enforced by several agencies, as stated above. As stated in Section 3.3, *Air Quality*, the project would also result in some emissions during construction and demolition activities, should the Adobe be demolished. However, demolition would occur during the summer months, when the school is not occupied by students or teachers.

The proposed project would result in a larger swimming pool on campus, and Scenarios B and C of the proposed project would also create two new buildings. As discussed in Section 3.3, *Air Quality*, the air emissions associated with the implementation and operation of the proposed project would be less than significant. The proposed project may slightly increase the use of materials necessary for the cleaning and maintenance of the proposed enlarged pool. Additionally, a generator may be installed, which could produce hazardous emissions. However, use of chemicals for pool maintenance and cleaning, and emissions from the generator, would be negligible. Therefore, impacts associated with the use and generation of hazardous materials are not expected to pose a significant hazard to San Marino High School or other schools in the vicinity of the site. Impacts would be less than significant. No further analysis is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. A database search was conducted for the project site by EDR. The executive summary of the EDR report can be found in Appendix B of this document. The complete report is available at the District office for review upon request. The database search is used to identify properties that may be listed on agency records of sites containing hazardous materials or sites with a record of hazardous conditions. The project site is not listed on any databases, and the closest facilities identified in the report are more than one-

quarter mile north of the site. Due to the distance between the project site and the closest facilities, it is not anticipated that any potential hazards associated with these facilities would affect the project site. No significant impacts would occur, and no further analysis is required.

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

No Impact. There are no airports within two miles of the project site. The nearest public airport is El Monte Airport, approximately four miles east of the project site, in the City of El Monte. Project implementation would not result in an airport-related safety hazard. No impacts would result from the proposed project, and no further analysis is required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are no private airstrips or heliports within the vicinity of the project site. The nearest facility is the California Title Building Heliport, approximately three miles west of the project site, in the City of South Pasadena. Under Scenario A, no new standing structures would be created. Under Scenarios B and C, two buildings would be constructed in the northern portion of the project site. The structures would serve as a men's restroom and an equipment room. Both would be single-story and would not be taller than other structures on campus. Some new lights would be installed for the basketball courts and swimming pool. However, these lights would not be taller than existing structures on campus. The proposed project would not result in an airstrip-related safety hazard. No impacts would result from the proposed project, and no further analysis is required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed project would improve the athletic facilities of San Marino High School. This would require the removal of the Michael White Adobe. If feasible, the building would be relocated to a nearby site that is yet to be determined. The building would likely be separated into two parts, which would be relocated and reassembled. This would be completed in accordance with all applicable rules and regulations, and would not affect any adopted emergency response plans or emergency evacuation plans. Any impacts that would occur would be less than significant, and no further analysis is required.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project site is in an area developed with residential uses and roadways, and is not in an area containing dense vegetation (flammable brush) or considered wildland. There are no wildlands on the project site or in the vicinity of the project site. Furthermore, San Marino High School is currently in operation, and the proposed project involves no permanent changes to the operation of the school. The proposed project would not expose people or structures to a risk from wildland fires. No impacts would occur as a result of the proposed project, and no further analysis is required.

3.8 HYDROLOGY AND WATER QUALITY

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. Activities associated with demolition of the building and the improvements to athletic facilities may result in a temporary increase in runoff of water and dirt. This may result in short term impacts to water quality. The District would follow best management practices (BMPs) designed to minimize these impacts. BMPs may include, but are not limited to, those measures specified in the California Storm Water Best Management Practice Handbook for Municipal, Industrial/Commercial and Construction Activity and those measures identified by any other agency with jurisdiction over the proposed project site, including covering all demolition material and waste, development and implementation of a spill prevention/recovery plan, use of water trucks to prevent dust emissions, and vehicle and equipment management. The proposed project, once completed, would not generate waste or otherwise adversely affect the water quality of the area. No long-term impacts on water quality would occur as a result of the proposed project, and short-term impacts would be less than significant. No further analysis is required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. No groundwater would be used for the project, and no interference with groundwater recharge is expected. Ground-disturbing activities under Scenario A are limited to the removal of the Adobe and expansion of the swimming pool in its current location. Ground-disturbing activities under Scenarios B and C include the creation of a new swimming pool and the construction of two new buildings, as well as the removal of the Adobe. None of the ground-disturbing activities are of a large enough scale to significant affect groundwater supplies. Furthermore, the entire site is currently developed and covered with impervious surfaces, and the proposed project would not substantially increase impervious surfaces. Therefore, no significant impacts would occur, and no further analysis is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

Less Than Significant Impact. The proposed project would not alter the course of a stream or river and is not expected to substantially alter the drainage pattern of the site. The project site is currently developed. The proposed expansion of the outdoor athletic facilities would not substantially increase impervious surfaces on the site. Implementation of the proposed project would not result in substantial erosion or siltation. No significant impacts would result, and no further analysis is required.

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

Less Than Significant Impact. As stated above, the proposed project would not alter the course of any stream or river and is not expected to substantially alter the drainage of the site. The proposed project would not substantially increase the amount of impervious surfaces at the project site. No flooding would result from the proposed project. No significant impacts would occur, and no further analysis is required.

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. The proposed project would not substantially increase the amount of impervious surfaces at the project site. Therefore, the project is not expected to cause any substantial increase in runoff and is not expected to impact the capacity of the storm drains. No significant impacts would occur as a result of the proposed project, and no further analysis is required.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. The proposed project is not expected to result in substantial soil erosion and would not otherwise substantially degrade water quality. The project is very small and therefore has little capacity to affect water quality. No significant impacts would occur as a result of the proposed project, and no further analysis is required.

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

No Impact. According to the Federal Emergency Management Agency Flood Insurance Rate Map, the proposed project is in Flood Zone X, which is an area of minimal flood hazard. Furthermore, the proposed project does not include the development of housing and would not result in the relocation of housing. No impacts would occur, and no further analysis is required.

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

No Impact. As stated above, the project site is not within a 100-year flood hazard area. No impacts would occur, and no further analysis is required.

i) 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?

No Impact. The proposed project would expand athletic facilities at an existing campus. No programmatic changes to San Marino High School would occur. No people would be placed at increased risk by the proposed project. No impacts would occur as a result of the proposed project, and no further analysis is required.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. The project site is approximately three miles south of the Eaton Canyon Reservoir. There is a smaller body of water along the Eaton Wash, approximately one mile east of the project site. Due to the distance and intervening structures between any nearby bodies of water and the project site, the potential for a seiche at the Eaton Canyon Reservoir to inundate the project site with water is low.

A tsunami is a series of ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. The project site is approximately 25 miles inland, and therefore is not at risk from tsunamis.

A mudflow is a type of landslide composed of saturated rock debris and soil with a consistency of wet cement. The project area is nearly flat. There are no slopes in the vicinity of the site that would be at risk of flooding due to mudflow.

The proposed project consists of improvements to athletic facilities and would not result in programmatic changes to San Marino High School. Therefore, the proposed project would not expose any people or structures to increased risk of inundation by tsunami or mudflow. No impacts would occur as a result of the proposed project, and no further analysis is required.

3.9 LAND USE AND PLANNING

a) Physically divide an established community?

No Impact. The proposed project would remove a building from the San Marino High School Campus and replace it with additional athletic facilities. The project would not affect the operation of the school. The school is surrounded by residential uses. Removal of the building would not divide the residential community in which the school is located. No impacts would occur as a result of the proposed project, and no further analysis is required.

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

No Impact. The proposed project consists of improvements to athletic facilities on an existing campus. It would therefore not alter the land use of the project site. Furthermore, the project would conform to the existing general plan land use designation and zoning designation. As the proposed project would not alter the use of the project site, no impacts would occur, and no further analysis is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The project site and surrounding area is fully developed. The proposed project would replace a vacant building with athletic facilities and would not develop any previously undeveloped land. There is no native habitat on or in the vicinity of the project site, and the project site has not been designated for preservation or open space. Therefore, the proposed project would not conflict with any habitat conservation plan. No impacts would occur as a result of the proposed project. No further analysis is required.

3.10 MINERAL RESOURCES

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The project site is currently developed with a vacant building and athletic facilities. The proposed project would remove the building and replace it with improved athletic facilities. This would not result in the loss of availability of any mineral resources. No impacts would occur as a result of the proposed project, and no further analysis is required.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The proposed project would not result in the loss of availability of locally important mineral resources. No impacts would occur, and no further analysis is required.

3.11 NOISE

Noise is unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, San Marino Unified School District, and the City of San Marino have established criteria to protect public health and safety and to prevent disruption of certain human activities. Characterization of noise and vibration, existing regulations, and calculations for construction noise and vibration levels can be found in Appendix C to this Initial Study.

Noise Metrics

The community noise equivalent level (CNEL) is the average level of sound over a 24-hour period. It applies a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours. The A-weighted decibel (dBA) is a special frequency-dependent rating scale which is usually used to relate noise to human sensitivity by discriminating against frequencies in a manner approximating the sensitivity of the human ear due to the limited hearing range of humans.

Existing Noise Environment

The project site is the San Marino High School campus, which currently has an enrollment of 1,096 students for the 2008–2009 academic year. The existing ambient noise environment in the vicinity of the project site includes stationary noise from use of the on-site athletic hardcourts and playfields and noise from the parking lot, as well as mobile-source noise from traffic on Huntington Drive south of the school.

Sensitive Noise Receptors

Certain land uses are particularly sensitive to noise and vibration. Sensitive uses include residential areas where quiet environments are necessary for enjoyment and public health and safety. Residential receptors border the existing San Marino High School site to the east, west, north, and south across Huntington Drive. Other noise-sensitive receptors include the students.

Methodology

The analysis of noise impacts considers project construction and operations noise as defined by the State of California interior noise standard and noise compatibility criteria, the Federal Transit Administration (FTA) criteria for vibration impacts, and the San Marino Unified School District for noise impacts. Based on the criteria listed above, the proposed project would have a significant adverse noise impact if the project results in any of the following:

Noise

- Project-related mobile-source noise would increase the CNEL at any noise-sensitive receptor by an audible amount of 3 dBA or more when the CNEL is 65 dB or greater in the vicinity of noise-sensitive

land uses. A minimum 3 dB change in noise levels is necessary for human hearing to discern a change in noise levels.

- New stationary-source noise generated at the project site would substantially increase the ambient noise environment.

- New noise-sensitive outdoor uses would be exposed to exterior noise levels that exceed 65 dBA CNEL (state of California land use compatibility criteria).

Groundborne Vibration

- Project-related construction activities would exceed the FTA's vibration criteria of 78 VdB for daytime vibration-induced annoyance to residents/students in nearby structures.

- Project related construction activities would result in vibration levels strong enough to result in structural damage.

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Potentially Significant Impact. The proposed project would remove the Michael White Adobe building in Phase I and expand the swimming pool facilities in Phase II. Expansion of the pool and/or relocation of the basketball courts and swimming pool would require construction activities and would increase the intensity of the use of the project site. The proposed project may also install a generator on the project site. These activities could potentially elevate ambient noise levels at the nearest sensitive receptors and exceed noise compatibility standards. Further evaluation in the EIR is necessary to determine if the proposed project would exceed noise standards or expose people to excessive noise levels. Mitigation will be incorporated as needed.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. The proposed project would generate vibration during construction activities from use of heavy construction equipment. However, no pile driving, blasting, or other vibration-intensive activity would be required in the construction effort. Construction equipment would produce vibration from vehicle travel as well as construction activities.

Unlike noise, vibration levels are not additive because vibration is the result of a single event that occurs only when construction equipment is operating in close proximity to nearby vibration-sensitive structures. Vibration is typically sensed at nearby structures when objects within the structure generate noise from the vibration such as rattling windows or picture frames. It is typically not perceptible in outdoor environments, and therefore impacts are based on the distance to the nearest structure.

Vibration-Induced Structural Damage

The FTA has established vibration level thresholds that would cause damage to building structures. The FTA criteria for vibration induced structural damage is 0.2 inch per second for the peak particle velocity (PPV) for wood-framed structures. Vibration impacts on nearby sensitive structures is analyzed for Phases I and II of the proposed project.

Phase I – Off-Site Structures

Under Phase I, the nearest off-site structure to the project site would be the single-family residence to the west 305 feet from the boundary of the site. As shown in Table 9, operation of small off-road construction equipment, jackhammers, and loaded trucks would result in PPV levels that are below the FTA's criteria for vibration induced structural damage. Therefore, project construction activities associated with the potential demolition of the Michael White Adobe building would not result in vibration-induced structural damage to buildings near the project site and impacts would be less than significant without mitigation.

Table 9
Vibration Source Levels for Construction Equipment at Nearest Off-Site Structure – Structural Damage Assessment for Phase I

Equipment	Maximum RMS Velocity at 305 feet (in/sec)[1]	Significance Threshold (in/sec)	Exceeds Significance Threshold?
Small Off-Road Construction Equipment[2]	0.000	0.2	No
Jackhammer	0.001	0.2	No
Loaded trucks	0.002	0.2	No

Source: Based on methodology from FTA 2006.
Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.
NA: Not Applicable
[1] At a distance of 305 feet from the western project boundary to the nearest residential structure to the west of the project site.
[2] Vibration levels from the listed off-road construction equipment are equivalent to vibration levels generated by a small bulldozer.

Phase II – Off-Site Structures

In Phase II, Scenario C is the worst-case construction scenario because the nearest off-site vibration-sensitive structures are 215 feet west of the project site. As shown in Table 10, operation of small off-road construction equipment, jackhammers, and loaded trucks would result in PPV levels that are below the FTA's criteria for vibration-induced structural damage. It can be assumed that the impacts from vibration-induced structural damage from construction activities related to development of Scenarios A and B would also result in PPV levels that are below the criteria. Therefore, construction activities would not result in vibration-induced structural damage to buildings near the project site, and vibration impacts would be less than significant without mitigation.

Table 10
Vibration Source Levels for Construction Equipment at Nearest Off-Site Structure – Structural Damage Assessment for Phase II

Equipment	Maximum RMS Velocity at 215 feet (in/sec)[1]	Significance Threshold (in/sec)	Exceeds Significance Threshold?
Small Off-Road Construction Equipment[2]	0.000	0.2	No
Jackhammer	0.001	0.2	No
Loaded trucks	0.003	0.2	No

Source: Based on methodology from FTA 2006.
Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.
NA: Not Applicable
[1] At a distance of 215 feet from the western project boundary to the nearest residential structure to the west of the project site.
[2] Vibration levels from the listed off-road construction equipment are equivalent to vibration levels generated by a large bulldozer.

Vibration Annoyance

Tables 11 and 12 list the maximum and average vibration source levels for construction equipment anticipated to be used at the project site. Maximum vibration is based on construction equipment operating directly adjacent to the property line. However, because construction activities are typically distributed throughout the project site, construction vibration is based on average vibration levels (i.e., levels that would be experienced by sensitive receptors the majority of the time) that exceed the FTA's infrequent events criterion for residential land uses. Impact of vibration annoyance on nearby sensitive structures is analyzed for Phases I and II of the proposed project.

Phase I – Off-Site Receptors

The distance from the center of the site to the nearest sensitive use is approximately 350 feet and is used to calculate the average vibration level. The FTA criteria for perceptible levels of vibration during the daytime is 78 vibration velocity decibels (VdB) for residential uses. While construction equipment could be operating as close as 305 feet from the nearest residential structure, the majority of heavy construction activities would be farther away. In addition, heavy construction equipment would only be in operation for a short period during grading activities. As shown in Table 11, average vibration levels would not exceed the FTA criteria for vibration annoyance. Because Phase I project demolition activities would not generate average vibration levels that exceed the FTA's vibration annoyance threshold, no significant vibration impact from exposure of persons to excessive levels of vibration would occur during project construction activities. Therefore, Phase I project development impacts related to vibration annoyance would be less than significant without mitigation. This issue will not be analyzed in the EIR.

Table 11
Phase I Vibration Levels from Construction Equipment at Nearest Residences – Vibration Annoyance

Equipment	*Maximum Vibration Levels at 305 feet (VdB)[1]*	*Average Vibration Levels at 350 feet (VdB)[2]*	*Significance Threshold (VdB)*	*Exceeds Significance Threshold?*
Small Off-Road Construction Equipment[3]	36	35	78	No
Jackhammer	57	56	78	No
Loaded trucks	64	63	78	No

Source: Based on methodology from FTA 2006.
[1] At a distance of 305 feet from where any small off-road construction equipment, loaded trucks, or jackhammer is in operation to the nearest residential structure.
[2] At an average distance of 350 feet (center of Michael White Adobe building site to nearest off-site vibration sensitive structure).
[3] Vibration levels from the listed off-road construction equipment are equivalent to vibration levels generated by a small bulldozer.

Phase II – Off-Site Receptors

As in the analysis of vibration-induced structural damage, Scenario C is the worst-case scenario for vibration annoyance. Under this scenario, the nearest off-site vibration-sensitive structure is 215 feet west of the site. The distance from the center of the site to the nearest vibration-sensitive structure to the west is approximately 270 feet. As in the Phase I analysis, this distance is used to calculate the average vibration level. As shown in Table 12, average vibration levels would not exceed the FTA criteria for vibration annoyance and therefore would not expose persons to excessive levels of vibration during Phase II construction activities. Additionally, as Scenario C is the worst-case scenario, it is assumed that Scenario A

and B construction activities would also not result in significant vibration impacts. Consequently, vibration annoyance impacts from the development of Phase II would be less than significant, and no mitigation would be required. This issue will not be discussed further in the EIR.

Table 12
Phase II Vibration Levels from Construction Equipment at Nearest Residences – Vibration Annoyance

Equipment	Maximum Vibration Levels at 215 feet (VdB)[1]	Average Vibration Levels at 270 feet (VdB)[2]	Significance Threshold (VdB)	Exceeds Significance Threshold?
Small Off-Road Construction Equipment[3]	39	37	78	No
Jackhammer	60	58	78	No
Loaded trucks	67	65	78	No

Source: Based on methodology from FTA 2006.
[1] At a distance of 215 feet from where any small off-road construction equipment, loaded trucks, jackhammer, or any machinery that generate equivalent vibration levels is in operation to the nearest classroom structure.
[2] At an average distance of 270 feet from center of new pool construction site to nearest off-site vibration-sensitive structure.
[3] Vibration levels from the listed off-road construction equipment are equivalent to vibration levels generated by a small bulldozer.

On-Site Receptors

If construction activities associated with Phase I or Phase II occur during the school year, vibration generated by construction activities has the potential to disrupt classroom activities. The nearest classroom structure from the center of a construction area associated with either Phase I or Phase II is 245 feet. As shown in Table 13, average vibration levels would not exceed the FTA criteria for vibration annoyance and therefore would not expose students to excessive levels of vibration. Consequently, vibration annoyance impacts would be less than significant, and no mitigation would be required. This issue will not be discussed further in the EIR.

Table 13
Vibration Levels from Construction Equipment at Nearest Classroom – Vibration Annoyance

Equipment	Maximum Vibration Levels at 170 feet (VdB)[1]	Average Vibration Levels at 245 feet (VdB)[2]	Significance Threshold (VdB)	Exceeds Significance Threshold?
Small Off-Road Construction Equipment[3]	41	38	78	No
Jackhammer	62	59	78	No
Loaded trucks	69	66	78	No

Source: Based on methodology from FTA 2006.
[1] At a distance of 170 feet from where any small off-road construction equipment, loaded trucks, jackhammer, or any machinery that generate equivalent vibration levels is in operation to the nearest classroom structure.
[2] At an average distance of 245 feet from center of new pool construction site to nearest classroom.
[3] Vibration levels from the listed off-road construction equipment are equivalent to vibration levels generated by a small bulldozer.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. The proposed project would expand the school's athletic facilities, increasing the intensity of the use of the project site, and potentially increasing the noise generated at the project site. Scenarios B and C would relocate the pool, which could change the ambient noise levels of the project site and surrounding areas. Scenarios B and C would also create two new buildings, one of which may include a generator. These activities may substantially increase the ambient noise environment and may be potentially significant. For these reasons, further evaluation in the EIR is necessary to determine if the proposed project would exceed noise standards or expose people to excessive noise levels.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potentially Significant Impact. During the construction phase of the proposed project, noise levels associated with construction activities could substantially increase the ambient noise environment. Further evaluation in the EIR is necessary to determine the noise impacts on sensitive receptors in the vicinity of the project site. Mitigation will be incorporated as needed.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose students or staff to excessive noise levels?

No Impact. There are no public airports within two miles of the project site, and the site is not within an airport land use plan. Therefore, project residents and workers would not be exposed to significant levels of airport-related noise. No mitigation measures are necessary. This issue will not be discussed further in the EIR.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project is not within the vicinity of a private airstrip. Therefore, no significant impacts would occur from airport noise, and no mitigation measures are necessary. This issue will not be discussed further in the EIR.

3.12 POPULATION AND HOUSING

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. No programmatic changes would be made to the school as a result of the proposed project, and the proposed project would not affect school capacity or enrollment. The proposed project would not induce population growth. No impacts would occur, and no further analysis is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. No housing would be affected by the proposed project. The proposed project would not displace housing or necessitate the construction of housing. No impacts would occur, and no further analysis is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would improve athletic facilities on an existing campus. The proposed project would not displace any people and would not require the construction of replacement housing. No impacts would occur as a result of the proposed project, and no further analysis is required.

3.13 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?

Less Than Significant Impact. The San Marino Fire Department provides fire protection and other emergency services to the project area. It operates from 2200 Huntington Drive, approximately one-half mile west of the project site. The proposed project would not increase enrollment or capacity at the school or the population of the project area. Due to the Civic Center Act, these facilities would be available for community use when not in use by the school or for a District-sponsored function. By improving the athletic facilities of the high school, the proposed project may increase the intensity or frequency of use of the facilities. However, it would not result in any programmatic changes at San Marino High School. Therefore, the proposed project would not increase the need for fire protection services. No significant impacts to fire protection services would occur as a result of the proposed project, and no further analysis is required.

b) Police protection?

Less Than Significant Impact. The San Marino Police Department provides police protection to the project area. It operates from 2200 Huntington Drive, approximately one-half mile west of the project site. The proposed project would not increase enrollment or capacity at the school or the population of the project area. Due to the Civic Center Act, these facilities would be available for community use when not in use by the District. By improving the athletic facilities of the school, the proposed project may increase the intensity or frequency of use of the facilities. However, it would not result in any programmatic changes at San Marino High School. Therefore, the proposed project would not increase the need for police protection services. No significant impacts to police protection services would occur as a result of the proposed project, and no further analysis is required.

c) Schools?

No Impact. The proposed project entails the expansion of existing athletic facilities at San Marino High School. As stated above, the proposed project would not increase school enrollment or capacity or induce population growth. The proposed project would increase the amount of useable space on the San Marino

High School campus and would therefore have a beneficial effect on the school. The proposed project would not require closing the school for any length of time. The proposed project would therefore have no impact on school services, and no further analysis is required.

d) Parks?

No Impact. As stated above, the proposed project would not result in an increase in school enrollment or capacity or induce population growth. Therefore, the proposed project would not increase the demand for parks or result in additional use of parks. No impacts would occur as a result of the proposed project, and no further analysis is required.

e) Other public facilities

No Impact. The proposed project would not result in an increase in school enrollment or capacity or induce population growth. Therefore, the project would not have a substantial adverse impact on public facilities, such as libraries. No impacts would occur, and no further analysis is required.

3.14 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project would expand athletic facilities at San Marino High School. Due to the Civic Center Act, these facilities would be available for community use when not in use by the school or by a District-sponsored function. The proposed project would not increase enrollment or capacity of the school or the population of the area. Therefore, it would not increase the use of existing neighborhood and regional parks or other recreational facilities. No impacts would occur as a result of the proposed project, and no further analysis is required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. The proposed project would either expand the existing swimming pool into the space currently occupied by the Michael White Adobe or relocate the pool to the space currently occupied by basketball courts. New recreational facilities, in the form of an expanded pool or a new pool and new basketball courts, would be created. The environmental impacts associated with the proposed project are analyzed throughout this Initial Study and the EIR that will be prepared for the proposed project. Implementation of the proposed project would not require the construction or expansion of additional recreational facilities that would have an adverse effect on the environment. No impact would occur, and no further analysis is required.

3.15 TRANSPORTATION/TRAFFIC

a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Less Than Significant Impact. Project implementation would not result in an increase in enrollment at the school or an increase in the population within the project area, which would affect long-term traffic load and capacity of the street system. Phase I of the proposed project, however, would require use of construction

vehicles, which would likely access the project site via Huntington Drive and would be staged at the parking lot along the west side of the campus and the driveway separating the project site. An increase in traffic due to construction vehicles would be negligible.

The proposed improved athletic facilities would be available for use by the public when not in use by the District, in accordance with the Civic Center Act. The proposed expansion of the pool may result in increased use of the pool and an increase in trips to and from the project site. However, if this increase occurs, it would be small, and the proposed project would not result in a substantial increase in the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections. No substantial increase in traffic would result from the project implementation, and no further analysis is required.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. The proposed project would not increase student enrollment at the school or population in the project area. Any increase in traffic resulting from increased use of the athletic facilities on the campus would be negligible. Therefore, the proposed project would not cause a decrease in the level of service standard for any roads or highways. No significant impacts would occur, and no further analysis is required.

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

No Impact. Under Scenario A, the proposed project would create no new structures. Under Scenarios B and C, the proposed project would create two small structures in the center of an existing school, near the football stadium. Structures developed as a part of the proposed project would be one story and would not be taller than existing school buildings. Therefore, the proposed project would have no impact on air traffic patterns and would not create any safety risks associated with changes in air traffic patterns. No impacts would occur, and no further analysis is required.

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

Less Than Significant Impact. The project would not change the design of roadways in the project area, nor would it introduce incompatible uses onto roadways in the project area. If the Michael White Adobe is relocated, speed bumps would be removed from the San Marino High School parking lot to prevent shaking of the building. The speed bumps would be replaced immediately. The project would not cause any hazards due to design features of roadways or incompatible uses of roadways. Impacts would be less than significant, and no further analysis is required.

e) Result in inadequate emergency access?

Less Than Significant Impact. The proposed project would expand the athletic facilities on the San Marino High School campus within the area of a vacant building. It would not alter access to the project site for emergency vehicles. The proposed project would not result in inadequate emergency access, and no further analysis is required.

f) Result in inadequate parking capacity?

Less Than Significant Impact. The proposed project consists of the expansion of athletic facilities on the campus of San Marino High School for school use. The proposed project would not increase student enrollment or capacity at the school or the population of the area. Parking associated with the potential use of the facilities by community members during nonschool hours could be accommodated by the existing parking lots provided on the campus. The proposed project would not result in inadequate parking capacity. No further analysis is required.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. As described above, no increase in school enrollment or capacity or population in the project area would occur as a result of the project. The proposed project would not substantially increase traffic or alter the design of roadways. The proposed project would not conflict with any adopted policies, plans, or programs supporting alternative transportation. No impact would occur. No further analysis is required.

3.16 UTILITIES AND SERVICE SYSTEMS

a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The proposed project would expand the San Marino High School pool facilities. A small amount of wastewater would be generated temporarily due to construction activities. As stated in Section 3.8a, construction would follow BMPs intended to minimize the generation of wastewater. The proposed project would result in a larger pool on campus, which may result in a slight increase in wastewater generation. However, the pool would include a circulation system to clean the water, and the increase in wastewater generation would be negligible. Scenarios B and C of the proposed project would also create a new men's restroom on the project site. However, as the proposed project would not increase in enrollment or result in any substantial programmatic changes at the school, the creation of a new restroom would not significantly increase wastewater generation. Therefore, the proposed project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. Impacts would be less than significant, and no further analysis is required.

b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. The proposed project would not increase enrollment in the school or population in the area, which typically increases demand for water and increases wastewater generation. The proposed project would increase the size of the swimming pool at the project site. This may result in a slight increase in water consumption and wastewater generation. However, the pool would include a circulation system, and the increase in water consumption and wastewater generation would be negligible. Scenarios B and C of the proposed project would also create a new men's restroom on the project site. However, as the proposed project would not increase in enrollment or result in any programmatic changes at the school, the creation of a new restroom would not substantially increase water consumption or wastewater generation. Therefore, no water or wastewater treatment facilities would be required due to the proposed project.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. Because the proposed project would not substantially increase the amount of impervious surfaces at the project site, the proposed project would not increase surface runoff. Therefore, no new stormwater drainage facilities or expansion of existing facilities would be required. No significant impacts would result, and no further analysis is required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. As stated above, no increase in enrollment at San Marino High School or in the population of the area would occur as a result of the proposed project. As stated above, the proposed project would result in a pool slightly larger than the existing pool. This may result in a slight increase in water consumption. However, as the pool would include a circulation system to clean and recirculate water, this increase would be negligible. No new or expanded entitlements would be required due to the proposed project. Impacts to water supply would be less than significant, and no further analysis is required.

e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant Impact. As stated above, the proposed project would only generate a small amount of wastewater during demolition activities. After completion, the proposed project may slightly increase wastewater generation, due to the creation of a larger pool under. This increase would be insubstantial. Therefore, impacts to wastewater treatment providers would be less than significant, and no further analysis is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. If the relocation of the Michael White Adobe is determined to be infeasible, the proposed project would demolish the structure, which would generate demolition debris. The nearest landfill is the Scholl Canyon Landfill, in the City of Glendale, California. The Scholl Canyon Landfill currently takes in between 1,100 and 1,200 tons of solid waste per day. If it continues to accept waste at this rate, it is not expected to reach capacity until 2023. The Scholl Canyon Landfill and other landfills in the project area have sufficient capacity to accommodate the solid waste that would be generated by the proposed project. Impacts would be less than significant, and no further analysis is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The following federal and state laws and regulations govern solid waste disposal. The USEPA administers the Resource Conservation and Recovery Act of 1976 and the Solid Waste Disposal Act of 1965, which govern solid waste disposal. In the State of California, Assembly Bill (AB) 939 (Integrated Solid Waste Management Act of 1989; Public Resources Code 40050 et seq.) requires every California city and county to divert 50 percent of its waste from landfills by the year 2000 by such means as recycling, source reduction, and composting. In addition, AB 939 requires each county to prepare a countywide siting element specifying areas for transformation or disposal sites to provide capacity for solid waste that cannot be reduced or recycled for a 15- year period. AB 1327, the California Solid Waste Reuse and Recycling Access Act of 1991, requires local agencies to adopt ordinances mandating the use of recyclable materials in development

projects. The project would comply with all laws and regulations governing solid waste, such as those listed above. Therefore, no impact to federal, state, or local statutes and regulations related to solid waste would occur. No further analysis is required.

3.17 MANDATORY FINDINGS OF SIGNIFICANCE

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

Potentially Significant Impact. The proposed project may result in the removal of trees or other vegetation from the project site. However, these trees are ornamental. Additionally, the project site is developed and in an urban environment; no sensitive or special status species or habitat are on or in the vicinity of the project site. Impacts related to biological resources on the project site would be less than significant. The proposed project would also result in the relocation or demolition of the Michael White Adobe, a recognized historic building. The project would have the potential to impact or eliminate a significant historic resource. The proposed project would require the preparation of an EIR to address impacts to historic and cultural resources.

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

Potentially Significant Impact. The proposed project may contribute to cumulatively considerable impacts related to cultural resources and noise levels, which will be addressed in the EIR. Specifically, the proposed demolition of the historic building, if approved, may result in cumulative impacts to historic resources. Further analysis of this issue is required as part of the environmental review process.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. As discussed in Section 3.5, *Cultural Resources*, the proposed project has the potential to significantly impact a historical resource and noise levels in the project vicinity, and as discussed in Section 3.11, *Noise*, the proposed project has the potential to increase noise to a significant level at the project site. These impacts could be potentially significant and cause adverse effects on human beings. Both impacts to cultural resources and noise levels will be further analyzed as part of the environmental review process.

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5. List of Preparers

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Appendix A.
Air Quality Calculations

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Air Quality Appendix

The Air Quality section addresses the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. Air pollutants of concern include ozone, carbon monoxide, particulate matter, and oxides of nitrogen. This section analyzes the type and quantity of emissions that would be generated by the construction and operation of the proposed project.

Climate/Meteorology

Air quality is affected by both the rate and location of pollutant emissions and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The City of San Marino is located within the South Coast Air Basin (SoCAB). The SoCAB incorporates approximately 12,000 square miles within four counties – San Bernardino, Riverside, Los Angeles, and Orange – including some portions of what was previously known as the Southeast Desert Air Basin. In May 1996, the boundaries of the South Coast Air Basin were changed by the California Air Resources Board (CARB) to include the Beaumont-Banning area.

The distinctive climate of the SoCAB is determined by its terrain and geographic location. The SoCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds.

The vertical dispersion of air pollutants in the SoCAB is hampered by the presence of persistent temperature inversions. High-pressure systems, such as the semi-permanent high-pressure zone in which the SoCAB is located, are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, resulting in the formation of high-level subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer, and together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low-level inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 mph, smog potential is greatly reduced.

Air Quality Regulations, Plans and Policies

The Federal Clean Air Act (FCAA) was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 Clean Air Act Amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including non-attainment requirements for areas not meeting National Ambient Air Quality Standards (NAAQS) and the Prevention of Significant Deterioration (PSD) program. The 1990 Amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States.

In 1988, the State Legislature passed the California Clean Air Act (CCAA), which established California's air quality goals, planning mechanisms, regulatory strategies and standards of progress for the first time. The CCAA provides the State with a comprehensive framework for air quality planning regulation. The CCAA requires attainment of state ambient air quality standards by the earliest practicable date. Attainment Plans are required for air basins in violation of the

state ozone (O3), carbon monoxide (CO), sulfur dioxide (SO2), nitrogen dioxide (NO2), and particulate matter (PM10 and PM2.5) standards. Preparation of and adherence to attainment plans are the responsibility of the local air pollution districts or air quality management districts.

State and federal agencies have set ambient air quality standards for certain air pollutants. NAAQS have been established for the following criteria pollutants: CO, O3, SO2, NO2, lead (Pb), and respirable particulate matter (PM10 and PM2.5). The state standards for these criteria pollutants are more stringent than the corresponding federal standards. Table 1 summarizes the state and federal standards.

Table 1
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	NA	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Motor vehicles.
	8 hours	0.07 ppm	0.075[1] ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, CO interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide (NO_2)[2]	Annual Arithmetic Mean	0.30 ppm	0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	*		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.03 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	*		
	24 hours	0.04 ppm	0.14 ppm		
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	50 $\mu g/m^3$	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$		
Respirable Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	15 $\mu g/m^3$		
	24 hours	*	35 $\mu g/m^3$		
Lead (Pb)	Monthly	1.5 $\mu g/m^3$	*	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurologic dysfunction (in severe cases).	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	*	1.5 $\mu g/m^3$		
Sulfates (SO_4)	24 hours	25 $\mu g/m^3$	*	Decrease in ventilatory functions; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage.	Industrial processes.

Source: California Air Resources Board, updated April 2008.
ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
* = standard has not been established for this pollutant/duration by this entity.
[1] The USEPA recently revised the 8-hour O_3 standard from 0.08 ppm to 0.075 ppm, effective May 2008.
[2] The Nitrogen Dioxide ambient air quality standard was amended on February 22, 2007, to lower the 1-hr standard to 0.18 ppm and establish a new annual standard of 0.030 ppm.

Areas are classified under the Federal Clean Air Act as either "attainment" or "non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. The SoCAB is designated by both the state and the USEPA as a non-attainment area for O_3, PM_{10} and $PM_{2.5}$.

AB32: Global Warming Solutions Act

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as greenhouse gases (GHG) to the atmosphere. The primary source of these GHG is from fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor, CO_2, methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming effect to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.

Assembly Bill 32 (AB32), the Global Warming Solutions Act, was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG. AB32 follows the emissions reduction targets established in Executive Order S-3-05, signed on June 1, 2005, which requires the state's global warming emissions to be reduced to 1990 levels by the year 2020 and by 80 percent of 1990 levels by year 2050. Projected GHG emissions in California are estimated at 596 million metric tones of CO_{2e}. In December 2007, the California Air Resources Board (CARB) approved a 2020 emissions limit of 427 million metric tonnes of CO_{2e} for the state. The 2020 target requires emissions reductions of 169 million metric tones, approximately 30 percent of the projected emissions. Pursuant to the requirements of AB 32, the state's reduction in global warming emissions will be accomplished through an enforceable statewide cap on global warming emissions that will be phased in starting in 2012.

In order to effectively implement the cap, AB 32 directs CARB to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels by January 2008. The Climate Action Registry Reporting Online Tool (CARROT) was established to track GHG emissions. By January 1, 2009, CARB must prepare a plan demonstrating how the 2020 deadline can be met or earlier. However, as immediate progress in reducing GHG can and should be made, AB 32 directed CARB and the newly created California Climate Action Team (CAT) to identify a list of "discrete early action GHG reduction measures" that can be adopted and made enforceable by January 1, 2010. CAT is a consortium of representatives from state agencies that have been charged with coordinating and implementing GHG emission reduction programs that fall outside of CARB's jurisdiction. In June 2007, CARB adopted 37 early actions for reducing GHG emissions, of which three were identified as discrete early action measures. Since adoption of the initial early actions, CARB has expanded the early action list to include a total of 44 measures. In June 2008, CARB released the *Climate Change Draft Scoping Plan* (Scoping Plan) with addition GHG emission reduction measures. The draft Scoping Plan describes the proposed cap and trade program covering 85 percent of the state's GHG emissions, proposals for requiring utilities to produce a third of their energy from renewal sources, and implementation of the California Clean Car Law.[1] Several other initiatives and measures include full deployment of the Million Solar Roofs initiative, high-speed rail, water-related energy efficiency measures, and proposed regulations to reduce emissions from trucks and ships at California's ports.

To address GHG emission and global climate change in General Plans and CEQA documents, Senate Bill 97 (Chapter 185, 2007) requires the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines on how to address global warming emissions and mitigate project-generated GHG. OPR is required to prepare, develop, and transmit these guidelines on

[1] Implementation of the California Clean Car law includes implementation of the Low Carbon Fuel standard, which requires a waiver from the USEPA in order for California to implement.

or before July 1, 2009 and directs OPR to adopt the CEQA guidelines by January 1, 2010. In addition, for projects where GHG emissions are considered significant, the California Attorney General has prepared a fact sheet listing various mitigation measures to reduce the project's contribution to global climate change impacts.

Existing Air Quality

Existing levels of ambient air quality and historical trends and projections in the City of San Marino, in the vicinity of the proposed residential project, are best documented by measurements taken by the SCAQMD. The City of San Marino is located within Source Receptor Area (SRA) 8 – San Gabriel Valley (West San Gabriel Valley). The SCAQMD air quality monitoring station in SRA 8 located closest to the project site is the Pasadena Monitoring Station located approximately 1.75 miles west of the project site at 752 S Wilson Avenue in the City of Pasadena. The Pasadena Monitoring Station monitors O_3, NO_2, CO, and $PM_{2.5}$. As this monitoring station does not monitor SO_2 and PM_{10}, data was supplemented from the Los Angeles – North Main Street Monitoring Station located 8.35 miles southwest of the project site at 1630 North Main Street in the City of Los Angeles for these criteria pollutants. The most current five years of data monitored at this monitoring station is included in Table 2.

Table 2
Ambient Air Quality Monitoring Summary

Pollutant/Standard	*2003*	*2004*	*2005*	*2006*	*2007*
Ozone[1]					
Max. 1-Hour Conc. (ppm)	0.152	0.130	0.145	0.151	0.149
Max. 8-Hour Conc. (ppm)	0.108	0.102	0.114	0.117	0.101
State 1-Hour $\geq$ 0.09 ppm (days exceed threshold)	44	27	13	26	13
Federal 8-Hour > 0.08 ppm (days exceed threshold)	28	10	5	7	6
Carbon Monoxide[1]					
Max. 8-Hour Conc. (ppm)	3.73	3.46	2.83	2.80	2.28
State 8-Hour > 9 ppm (days exceed threshold)	0	0	0	0	0
Federal 8-Hour $\geq$ 9 ppm (days exceed threshold)	0	0	0	0	0
Nitrogen Dioxide[1]					
Max. 1-Hour Conc. (ppm)	0.140	0.117	0.104	0.120	0.092
State 1-Hour $\geq$ 0.25[2] ppm (days exceed threshold)	0	0	0	0	0
Sulfur Dioxide[2]					
Max 24-Hour Conc. (ppm)	0.006	0.015	0.010	0.006	0.005
State 24-Hour $\geq$ 0.04 ppm (days exceed threshold)	0	0	0	0	0
Federal 24-Hour $\geq$ 0.14 ppm (days exceed threshold)	0	0	0	0	0
Coarse Particulates (PM_{10})[2]					
Max. 24-Hour Conc. ($\mu g/m^3$)	81.0	72.0	70	59.0	78.0
State 24-Hour > 50 $\mu g/m^3$ (days exceed threshold)	6	5	3	3	5
Federal 24-Hour > 150 $\mu g/m^3$ (days exceed threshold)	0	0	0	0	0
Fine Particulates ($PM_{2.5}$)[1]					
Max. 24-Hour Conc. ($\mu g/m^3$)	89.0	59.4	62.8	45.8	68.8
Federal 24-Hour > 65[5] $\mu g/m^3$ (days exceed threshold)	1	0	0	0	1

Source: California Air Resources Board, accessed September 30, 2008.
ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
[1] Data obtained from the Pasadena Monitoring Station, located at 752 S Wilson Av, Pasadena CA 91702.
[2] Data obtained from the Los Angeles – North Main Street Monitoring Station, located at 1630 North Main Street, Los Angeles CA 90012.

The data show recurring violations of both the state and federal ozone. The data also indicate that the area consistently exceeds the state PM_{10} standards and have exceeded the federal $PM_{2.5}$ standard twice in the past 5 years with recorded measurement data. The CO, SO_2, and NO_2 standard have not been violated in the last five years at this station.

Sensitive Receptors

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

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

The nearest off-site sensitive receptors under Phase I are the residences 250 feet to the west of the proposed project site and the residences approximately 560 feet to the east. Under Scenario A of Phase II, the nearest off-site sensitive receptors would be similar to Phase I. Nearest off-site sensitive receptors for Scenarios B and C of Phase II would be the residences approximately 120 feet to the west and residences approximately 510 feet north from the proposed project site.

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\AAL-06\AQ\Adobe.urb924
Project Name: SMHS - Scenario C
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	1.15	5.63	4.41	0.00	0.40	0.50	0.90	0.08	0.46	0.54	578.37

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)							

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 6/29/2009-8/28/2009 Active	**1.15**	**5.63**	**4.41**	**0.00**	**0.40**	**0.50**	**0.90**	**0.08**	**0.46**	**0.54**	**578.37**
Demolition 06/29/2009-08/28/2009	1.15	5.63	4.41	0.00	0.40	0.50	0.90	0.08	0.46	0.54	578.37
Fugitive Dust	0.00	0.00	0.00	0.00	0.39	0.00	0.39	0.08	0.00	0.08	0.00
Demo Off Road Diesel	1.10	5.15	3.68	0.00	0.00	0.48	0.48	0.00	0.44	0.44	460.87
Demo On Road Diesel	0.03	0.45	0.17	0.00	0.00	0.02	0.02	0.00	0.02	0.02	55.29
Demo Worker Trips	0.02	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.22

Phase Assumptions

Phase: Demolition 6/29/2009 - 8/28/2009 - Default Demolition Description
Building Volume Total (cubic feet): 19469.97
Building Volume Daily (cubic feet): 939.25
On Road Truck Travel (VMT): 13.05
Off-Road Equipment:
1 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: F:\AAL-06\AQ\Adobe.urb924
Project Name: SMHS - Scenario C
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (lbs/day unmitigated)	1.15	5.63	4.41	0.00	0.40	0.50	0.90	0.08	0.46	0.54	578.37

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)							

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 6/29/2009-8/28/2009 Active	**1.15**	**5.63**	**4.41**	**0.00**	**0.40**	**0.50**	**0.90**	**0.08**	**0.46**	**0.54**	**578.37**
Demolition 06/29/2009-08/28/2009	1.15	5.63	4.41	0.00	0.40	0.50	0.90	0.08	0.46	0.54	578.37
Fugitive Dust	0.00	0.00	0.00	0.00	0.39	0.00	0.39	0.08	0.00	0.08	0.00
Demo Off Road Diesel	1.10	5.15	3.68	0.00	0.00	0.48	0.48	0.00	0.44	0.44	460.87
Demo On Road Diesel	0.03	0.45	0.17	0.00	0.00	0.02	0.02	0.00	0.02	0.02	55.29
Demo Worker Trips	0.02	0.03	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.22

Phase Assumptions

Phase: Demolition 6/29/2009 - 8/28/2009 - Default Demolition Description
Building Volume Total (cubic feet): 19469.97
Building Volume Daily (cubic feet): 939.25
On Road Truck Travel (VMT): 13.05
Off-Road Equipment:
1 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: F:\AAL-06\AQ\Adobe.urb924
Project Name: SMHS - Scenario C
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (tons/year unmitigated)	0.03	0.13	0.10	0.00	0.01	0.01	0.02	0.00	0.01	0.01	13.01

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)							

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009	0.03	0.13	0.10	0.00	0.01	0.01	0.02	0.00	0.01	0.01	13.01
Demolition 06/29/2009-08/28/2009	0.03	0.13	0.10	0.00	0.01	0.01	0.02	0.00	0.01	0.01	13.01
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.02	0.12	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	10.37
Demo On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
Demo Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40

Phase Assumptions

Phase: Demolition 6/29/2009 - 8/28/2009 - Default Demolition Description
Building Volume Total (cubic feet): 19469.97
Building Volume Daily (cubic feet): 939.25
On Road Truck Travel (VMT): 13.05
Off-Road Equipment:
1 Skid Steer Loaders (44 hp) operating at a 0.55 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\AAL-06\AQ\Scenario_C.urb924
Project Name: SMHS - Scenario C
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	2.41	14.69	9.15	0.00	0.77	1.24	1.31	0.16	1.14	1.14	1,267.68
2011 TOTALS (lbs/day unmitigated)	12.40	13.95	9.12	0.00	0.01	1.18	1.18	0.00	1.08	1.09	1,282.36
2012 TOTALS (lbs/day unmitigated)	1.79	10.80	8.46	0.00	0.26	0.92	0.93	0.05	0.84	0.85	1,208.06

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.44	0.13	4.70	0.00	0.02	0.02	91.63

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.44	0.13	4.70	0.00	0.02	0.02	91.63

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 11/3/2010-11/29/2010	1.01	6.63	4.75	0.00	**0.77**	0.54	**1.31**	**0.16**	0.50	0.66	744.52
Demolition 11/03/2010-11/29/2010	1.01	6.63	4.75	0.00	0.77	0.54	1.31	0.16	0.50	0.66	744.52
Fugitive Dust	0.00	0.00	0.00	0.00	0.76	0.00	0.76	0.16	0.00	0.16	0.00
Demo Off Road Diesel	0.93	5.80	3.66	0.00	0.00	0.51	0.51	0.00	0.47	0.47	544.60
Demo On Road Diesel	0.06	0.78	0.30	0.00	0.00	0.03	0.04	0.00	0.03	0.03	106.62
Demo Worker Trips	0.02	0.05	0.79	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.30
Time Slice 11/30/2010-12/31/2010	2.41	**14.69**	**9.15**	0.00	0.00	**1.24**	1.24	0.00	**1.14**	**1.14**	1,267.68
Building 11/30/2010-12/31/2011	2.41	14.69	9.15	0.00	0.00	1.24	1.24	0.00	1.14	1.14	1,267.68
Building Off Road Diesel	2.38	14.54	8.36	0.00	0.00	1.23	1.23	0.00	1.13	1.13	1,163.58
Building Vendor Trips	0.01	0.11	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.00	21.31
Building Worker Trips	0.02	0.04	0.70	0.00	0.00	0.00	0.01	0.00	0.00	0.00	82.80

Time Slice 1/3/2011-11/30/2011 Active	2.27	13.94	9.00	0.00	0.00	1.18	1.18	0.00	1.08	1.08	1,267.66
Building 11/30/2010-12/31/2011	2.27	13.94	9.00	0.00	0.00	1.18	1.18	0.00	1.08	1.08	1,267.66
Building Off Road Diesel	2.24	13.80	8.27	0.00	0.00	1.17	1.17	0.00	1.08	1.08	1,163.58
Building Vendor Trips	0.01	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.31
Building Worker Trips	0.02	0.04	0.65	0.00	0.00	0.00	0.01	0.00	0.00	0.00	82.78
Time Slice 12/1/2011-12/30/2011	**12.40**	13.95	9.12	0.00	0.01	1.18	1.18	0.00	1.08	1.09	**1,282.36**
Building 11/30/2010-12/31/2011	2.27	13.94	9.00	0.00	0.00	1.18	1.18	0.00	1.08	1.08	1,267.66
Building Off Road Diesel	2.24	13.80	8.27	0.00	0.00	1.17	1.17	0.00	1.08	1.08	1,163.58
Building Vendor Trips	0.01	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.31
Building Worker Trips	0.02	0.04	0.65	0.00	0.00	0.00	0.01	0.00	0.00	0.00	82.78
Coating 12/01/2011-12/31/2011	10.13	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.70
Architectural Coating	10.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.70
Time Slice 1/2/2012-3/1/2012 Active	0.82	5.32	4.36	0.00	0.26	0.44	0.70	0.05	0.40	0.46	673.46
Demolition 01/01/2012-03/01/2012	0.82	5.32	4.36	0.00	0.26	0.44	0.70	0.05	0.40	0.46	673.46
Fugitive Dust	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.05	0.00	0.05	0.00
Demo Off Road Diesel	0.79	5.07	3.60	0.00	0.00	0.42	0.42	0.00	0.39	0.39	544.60
Demo On Road Diesel	0.02	0.21	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	35.60
Demo Worker Trips	0.02	0.04	0.68	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.26
Time Slice 3/2/2012-4/30/2012 Active	1.79	10.80	8.46	**0.00**	0.01	0.92	0.93	0.00	0.84	0.85	1,208.06
Asphalt 03/02/2012-04/30/2012	1.79	10.80	8.46	0.00	0.01	0.92	0.93	0.00	0.84	0.85	1,208.06
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.23
Paving Worker Trips	0.05	0.09	1.59	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.61

Phase Assumptions

Phase: Demolition 11/3/2010 - 11/29/2010 - Basketball Court

Building Volume Total (cubic feet): 34435.63

Building Volume Daily (cubic feet): 1811.19

On Road Truck Travel (VMT): 25.16

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

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Phase: Demolition 1/1/2012 - 3/1/2012 - Swimming Pool
Building Volume Total (cubic feet): 26605.45
Building Volume Daily (cubic feet): 604.8
On Road Truck Travel (VMT): 8.4
Off-Road Equipment:
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Paving 3/2/2012 - 4/30/2012 - Default Paving Description
Acres to be Paved: 0.31
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/30/2010 - 12/31/2011 - Default Building Construction Description
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
2 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day

Phase: Architectural Coating 12/1/2011 - 12/31/2011 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.07	0.06	0.00	0.00	0.00	83.20
Hearth - No Summer Emissions							
Landscape	0.37	0.06	4.64	0.00	0.02	0.02	8.43
Consumer Products	0.00						
Architectural Coatings	0.06						
TOTALS (lbs/day, unmitigated)	0.44	0.13	4.70	0.00	0.02	0.02	91.63

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: F:\AAL-06\AQ\Scenario_C.urb924
Project Name: SMHS - Scenario C
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	2.41	14.69	9.15	0.00	0.77	1.24	1.31	0.16	1.14	1.14	1,267.68
2011 TOTALS (lbs/day unmitigated)	12.40	13.95	9.12	0.00	0.01	1.18	1.18	0.00	1.08	1.09	1,282.36
2012 TOTALS (lbs/day unmitigated)	1.79	10.80	8.46	0.00	0.26	0.92	0.93	0.05	0.84	0.85	1,208.06

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.07	0.07	0.06	0.00	0.00	0.00	83.20

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.07	0.07	0.06	0.00	0.00	0.00	83.20

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 11/3/2010-11/29/2010	1.01	6.63	4.75	0.00	**0.77**	0.54	**1.31**	**0.16**	0.50	0.66	744.52
Demolition 11/03/2010-11/29/2010	1.01	6.63	4.75	0.00	0.77	0.54	1.31	0.16	0.50	0.66	744.52
Fugitive Dust	0.00	0.00	0.00	0.00	0.76	0.00	0.76	0.16	0.00	0.16	0.00
Demo Off Road Diesel	0.93	5.80	3.66	0.00	0.00	0.51	0.51	0.00	0.47	0.47	544.60
Demo On Road Diesel	0.06	0.78	0.30	0.00	0.00	0.03	0.04	0.00	0.03	0.03	106.62
Demo Worker Trips	0.02	0.05	0.79	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.30

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Time Slice 11/30/2010-12/31/2010	2.41	**14.69**	**9.15**	0.00	0.00	**1.24**	1.24	0.00	**1.14**	**1.14**	1,267.68
Building 11/30/2010-12/31/2011	2.41	14.69	9.15	0.00	0.00	1.24	1.24	0.00	1.14	1.14	1,267.68
Building Off Road Diesel	2.38	14.54	8.36	0.00	0.00	1.23	1.23	0.00	1.13	1.13	1,163.58
Building Vendor Trips	0.01	0.11	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.00	21.31
Building Worker Trips	0.02	0.04	0.70	0.00	0.00	0.00	0.01	0.00	0.00	0.00	82.80
Time Slice 1/3/2011-11/30/2011 Active	2.27	13.94	9.00	0.00	0.00	1.18	1.18	0.00	1.08	1.08	1,267.66
Building 11/30/2010-12/31/2011	2.27	13.94	9.00	0.00	0.00	1.18	1.18	0.00	1.08	1.08	1,267.66
Building Off Road Diesel	2.24	13.80	8.27	0.00	0.00	1.17	1.17	0.00	1.08	1.08	1,163.58
Building Vendor Trips	0.01	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.31
Building Worker Trips	0.02	0.04	0.65	0.00	0.00	0.00	0.01	0.00	0.00	0.00	82.78
Time Slice 12/1/2011-12/30/2011	**12.40**	13.95	9.12	0.00	0.01	1.18	1.18	0.00	1.08	1.09	**1,282.36**
Building 11/30/2010-12/31/2011	2.27	13.94	9.00	0.00	0.00	1.18	1.18	0.00	1.08	1.08	1,267.66
Building Off Road Diesel	2.24	13.80	8.27	0.00	0.00	1.17	1.17	0.00	1.08	1.08	1,163.58
Building Vendor Trips	0.01	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.31
Building Worker Trips	0.02	0.04	0.65	0.00	0.00	0.00	0.01	0.00	0.00	0.00	82.78
Coating 12/01/2011-12/31/2011	10.13	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.70
Architectural Coating	10.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.01	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.70
Time Slice 1/2/2012-3/1/2012 Active	0.82	5.32	4.36	0.00	0.26	0.44	0.70	0.05	0.40	0.46	673.46
Demolition 01/01/2012-03/01/2012	0.82	5.32	4.36	0.00	0.26	0.44	0.70	0.05	0.40	0.46	673.46
Fugitive Dust	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.05	0.00	0.05	0.00
Demo Off Road Diesel	0.79	5.07	3.60	0.00	0.00	0.42	0.42	0.00	0.39	0.39	544.60
Demo On Road Diesel	0.02	0.21	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	35.60
Demo Worker Trips	0.02	0.04	0.68	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.26
Time Slice 3/2/2012-4/30/2012 Active	1.79	10.80	8.46	**0.00**	0.01	0.92	0.93	0.00	0.84	0.85	1,208.06
Asphalt 03/02/2012-04/30/2012	1.79	10.80	8.46	0.00	0.01	0.92	0.93	0.00	0.84	0.85	1,208.06
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.72	10.64	6.84	0.00	0.00	0.91	0.91	0.00	0.84	0.84	979.23
Paving On Road Diesel	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.23
Paving Worker Trips	0.05	0.09	1.59	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.61

Phase Assumptions

Phase: Demolition 11/3/2010 - 11/29/2010 - Basketball Court
Building Volume Total (cubic feet): 34435.63
Building Volume Daily (cubic feet): 1811.19
On Road Truck Travel (VMT): 25.16
Off-Road Equipment:
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Demolition 1/1/2012 - 3/1/2012 - Swimming Pool
Building Volume Total (cubic feet): 26605.45
Building Volume Daily (cubic feet): 604.8
On Road Truck Travel (VMT): 8.4
Off-Road Equipment:
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Paving 3/2/2012 - 4/30/2012 - Default Paving Description
Acres to be Paved: 0.31
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/30/2010 - 12/31/2011 - Default Building Construction Description
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
2 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day

Phase: Architectural Coating 12/1/2011 - 12/31/2011 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.07	0.06	0.00	0.00	0.00	83.20
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	0.06						
TOTALS (lbs/day, unmitigated)	0.07	0.07	0.06	0.00	0.00	0.00	83.20

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: F:\AAL-06\AQ\Scenario_C.urb924
Project Name: SMHS - Scenario C
Project Location: South Coast AQMD
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (tons/year unmitigated)	0.04	0.24	0.15	0.00	0.01	0.02	0.03	0.00	0.02	0.02	22.29
2011 TOTALS (tons/year unmitigated)	0.41	1.81	1.17	0.00	0.00	0.15	0.15	0.00	0.14	0.14	164.96
2012 TOTALS (tons/year unmitigated)	0.06	0.34	0.27	0.00	0.01	0.03	0.03	0.00	0.03	0.03	40.19

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.08	0.02	0.86	0.00	0.00	0.00	16.72

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.08	0.02	0.86	0.00	0.00	0.00	16.72

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010	0.04	0.24	0.15	0.00	0.01	0.02	0.03	0.00	0.02	0.02	22.29
Demolition 11/03/2010-11/29/2010	0.01	0.06	0.05	0.00	0.01	0.01	0.01	0.00	0.00	0.01	7.07
Fugitive Dust	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.01	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.17
Demo On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01
Demo Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
Building 11/30/2010-12/31/2011	0.03	0.18	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	15.21
Building Off Road Diesel	0.03	0.17	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	13.96
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Building Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99

2011	0.41	1.81	1.17	0.00	0.00	0.15	0.15	0.00	0.14	0.14	164.96
Building 11/30/2010-12/31/2011	0.29	1.81	1.17	0.00	0.00	0.15	0.15	0.00	0.14	0.14	164.80
Building Off Road Diesel	0.29	1.79	1.08	0.00	0.00	0.15	0.15	0.00	0.14	0.14	151.27
Building Vendor Trips	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.77
Building Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.76
Coating 12/01/2011-12/31/2011	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
Architectural Coating	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
2012	0.06	0.34	0.27	0.00	0.01	0.03	0.03	0.00	0.03	0.03	40.19
Demolition 01/01/2012-03/01/2012	0.02	0.12	0.10	0.00	0.01	0.01	0.02	0.00	0.01	0.01	14.82
Fugitive Dust	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.02	0.11	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	11.98
Demo On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78
Demo Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05
Asphalt 03/02/2012-04/30/2012	0.04	0.23	0.18	0.00	0.00	0.02	0.02	0.00	0.02	0.02	25.37
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.04	0.22	0.14	0.00	0.00	0.02	0.02	0.00	0.02	0.02	20.56
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
Paving Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57

Phase Assumptions

Phase: Demolition 11/3/2010 - 11/29/2010 - Basketball Court
Building Volume Total (cubic feet): 34435.63
Building Volume Daily (cubic feet): 1811.19
On Road Truck Travel (VMT): 25.16
Off-Road Equipment:
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Demolition 1/1/2012 - 3/1/2012 - Swimming Pool
Building Volume Total (cubic feet): 26605.45
Building Volume Daily (cubic feet): 604.8
On Road Truck Travel (VMT): 8.4
Off-Road Equipment:
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

10/5/2008 08:55:05 PM

Phase: Paving 3/2/2012 - 4/30/2012 - Default Paving Description
Acres to be Paved: 0.31
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/30/2010 - 12/31/2011 - Default Building Construction Description
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
2 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day

Phase: Architectural Coating 12/1/2011 - 12/31/2011 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Area Source Unmitigated Detail Report:
AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.01	0.01	0.00	0.00	0.00	15.18
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.07	0.01	0.85	0.00	0.00	0.00	1.54
Consumer Products	0.00						
Architectural Coatings	0.01						
TOTALS (tons/year, unmitigated)	0.08	0.02	0.86	0.00	0.00	0.00	16.72

Area Source Changes to Defaults

GHG Emissions from Off-Site Energy use from On-Site Energy Production

Conversion Factors

0.0005	lbs in a ton	
0.000293	BTU (British Thermal Units) in a kwh	
471,000,000	tons of CO2e in 1990 and Goal for 2020	emissions inventory of GHG emissions for the State of California in1990

Project Information

NA	0	sqft	From Google-Earth 2007
School	2,150	sqft	From Project Description

Energy Use note: New structures would be constructed to meet newer California Building Code energy efficiency requirements

Commercial Energy Use Based on US Energy Information Administration www.eia.doe.goc/emeu/cbecs Table C.14. 2001.

11.0	kwh/SqFT/Year		US Energy Information Admininstration www.eia.doe.gov/emeu/cbecs/
	Table C14 - Education		2003 Commercial Buildings Energy Consumption Survey

Residential Energy Use Based on US Energy Information Administration www.eia.doe.gov/emeu/recs/ Table CE1-6.2u. Released December 2006.

46.7	1000 BTU/SqFT/Year		US Energy Information Admininstration www.eia.doe.gov/emeu/recs/
	Total Households	Table CE1-6.2u	Residential Energy Consumption Survey 2001
13.7	kwh/Sqft/Year		

California Energy Emission Factors

0.61	lbs of CO2/kwh	for California	US EUA http://www.eia.doe.gov/oiaf/1605/ee-factors.html
0.0000067	lbs of CH4/kwh	for California	US EUA http://www.eia.doe.gov/oiaf/1605/ee-factors.html
0.00000378	lbs of N20/kwh	for California	US EUA http://www.eia.doe.gov/oiaf/1605/ee-factors.html

GHG Potential - Coversion to CO2e	CH4	N20
	21	310
lbs of CO2e/kwh	**0.611**	

GHG Calculations

Energy Use Calculations - Existing

0	sqft	of demolition		
0	lbs of CO2e/Year		-	lbs/day
0	tons of CO2e/Year			

Energy Use Calculations - Project

2,150	sqft	of proposed building total		
17,984	lbs of CO2e/Year		49	lbs/day
9	tons of CO2e/Year			

Energy Use Calculations - Net Increase

17,984	lbs of CO2e/Year		49	lbs/day
9	tons of CO2e/Year			

Net Increase CO2 from URBEMIS2007 and Energy Use Calculations

		Existing	Project	Net Increase	Net as Percent of State
Construction	tons of CO2e/Year		240		0.0000005
Operation - Mobile Sources	tons of CO2e/Year	0	0	0	0.0000000
Operation - Area Sources	tons of CO2e/Year	0	17	17	0.0000000
Operation - Energy Use	tons of CO2e/Year	0	9	9	0.0000000
			Total tons/year	26	0.0000001

Construction Localized Significance Thresholds - San Marino HS Pool Renovation - Scenario A

SRA No.	Acres	Source Receptor Distance (meters)
8	0.5	25

Source Receptor Area	**West San Gabriel Valley**
Distance (meters)	25
NOx	**126**
CO	**449**
PM10	**4**
PM2.5	**3**

	NOx	CO	PM10	PM2.5
Demolition				
Fine Grading				
Trenching				
Building Construction				
Asphalt Paving				
Achitectural Coatings				

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	126	127	148	191	300
	1	126	127	148	191	300
		126	127	148	191	300
CO	1	449	637	941	1811	5907
	1	449	637	941	1811	5907
		449	637	941	1811	5907
PM10	1	4	11	27	58	152
	1	4	11	27	58	152
		4	11	27	58	152
PM2.5	1	3	4	7	18	77
	1	3	4	7	18	77
		3	4	7	18	77

	NOx	CO	PM10	PM2.5
Demolition	0	0	0	0
Fine Grading	0	0	0	0
Trenching	0	0	0	0
Building Construction	0	0	0	0
Asphalt Paving	0	0	0	0
Achitectural Coatings	0	0	0	0
LST Thresholds	126	449	4	3
Amount Exceeding Thresholds	0	0	0	0

West San Gabriel Valley

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	126	127	148	191	300
CO	449	637	941	1811	5907
PM10	4	11	27	58	152
PM2.5	3	4	7	18	77

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
8	1	8	1
Distance Increment Below			
25			
Distance Increment Above			
50			

Updated: 4/18/2008 - Table C-1. 2003 – 2005

Operation Localized Significance Thresholds - San Marino HS Pool Renovation

SRA No.	Acres	Source Receptor Distance (meters)
8	0.50	25

Source Receptor Area **West San Gabriel Valley**
Distance (meters) 25
NOx **126**
CO **449**
PM10 **1**
PM2.5 **1**

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	126	127	148	191	300
	1	126	127	148	191	300
		126	127	148	191	300
CO	1	449	637	941	1811	5907
	1	449	637	941	1811	5907
		449	637	941	1811	5907
PM10	1	1	3	7	14	37
	1	1	3	7	14	37
		1	3	7	14	37
PM2.5	1	1	1	2	5	19
	1	1	1	2	5	19
		1	1	2	5	19

West San Gabriel Valley
0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	126	127	148	191	300
CO	449	637	941	1811	5907
PM10	1	3	7	14	37
PM2.5	1	1	2	5	19

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
8	1	8	1
Distance Increment Below			
25			
Distance Increment Above			
50			

	NOx	CO	PM10	PM2.5
Stationary Sources				
Mobile sources	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

	NOx	CO	PM10	PM2.5
Operation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
LST Thresholds	126	449	1	1
Amount Exceeding Thresholds	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Total VMT — Total Feet 0
Total Trips — Feet per trip travel onsite
Total Feet Traveled onsite - Percent of MMT #DIV/0!

	NOx	CO	PM10	PM2.5
Mobile-Source Emissions (highest)				
% Mobile Source Emissions onsite	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Updated: 4/18/2008 - Table C-1. 2003 – 2005

Construction Localized Significance Thresholds - San Marino HS Pool Renovation - Scenario B & C

SRA No.	Acres	Source Receptor Distance (meters)
8	1.05	25

Source Receptor Area	**West San Gabriel Valley**
Distance (meters)	25
NOx	**129**
CO	**461**
PM10	**4**
PM2.5	**3**

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	126	127	148	191	300
	2	180	175	190	227	321
		129	129	150	193	301
CO	1	449	637	941	1811	5907
	2	681	938	1295	2263	6465
		461	652	959	1834	5935
PM10	1	4	11	27	58	152
	2	6	19	34	66	160
		4	11	27	58	152
PM2.5	1	3	4	7	18	77
	2	4	5	9	21	82
		3	4	7	18	77

West San Gabriel Valley

1.05 Acres

	25	**50**	**100**	**200**	**500**
NOx	129	129	150	193	301
CO	461	652	959	1834	5935
PM10	4	11	27	58	152
PM2.5	3	4	7	18	77

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
8	1	8	2
Distance Increment Below			
25			
Distance Increment Above			
50			

	NOx	CO	PM10	PM2.5
Demolition				
Building Construction				
Architectural Coating				
Demolition				
Asphalt Paving				

Demolition	0	0	0	0	0
Fine Grading	0	0	0	0	0
Trenching	0	0	0	0	0
Demolition	0	0	0	0	0
Asphalt Paving	0	0	0	0	0
	0	0	0	0	0
LST Thresholds		129	461	4	3
Amount Exceeding Thresholds		0	0	0	0

Updated: 4/18/2008 - Table C-1. 2003 – 2005

Operation Localized Significance Thresholds - San Marino HS Pool Renovation

SRA No.	Acres	Source Receptor Distance (meters)
8	1.05	25

Source Receptor Area **West San Gabriel Valley**
Distance (meters) 25
NOx **129**
CO **461**
PM10 **1**
PM2.5 **1**

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	126	127	148	191	300
	2	180	175	190	227	321
		129	129	150	193	301
CO	1	449	637	941	1811	5907
	2	681	938	1295	2263	6465
		461	652	959	1834	5935
PM10	1	1	3	7	14	37
	2	2	5	9	16	39
		1	3	7	14	37
PM2.5	1	1	1	2	5	19
	2	1	2	3	5	20
		1	1	2	5	19

West San Gabriel Valley
1.05 Acres

	25	**50**	**100**	**200**	**500**
NOx	129	129	150	193	301
CO	461	652	959	1834	5935
PM10	1	3	7	14	37
PM2.5	1	1	2	5	19

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
8	1	8	2
Distance Increment Below			
25			
Distance Increment Above			
50			

	NOx	CO	PM10	PM2.5
Stationary Sources				
Mobile sources	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

	NOx	CO	PM10	PM2.5
Operation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
LST Thresholds	129	461	1	1
Amount Exceeding Thresholds	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Total VMT — Total Feet 0
Total Trips — Feet per trip travel onsite
Total Feet Traveled onsite - Percent of MMT #DIV/0!

	NOx	CO	PM10	PM2.5
Mobile-Source Emissions (highest)				
% Mobile Source Emissions onsite	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Updated: 4/18/2008 - Table C-1. 2003 – 2005

Appendix B.
Executive Summary of EDR Radius Map Report

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San Marino High School
2701 Huntington Drive
San Marino, CA 91108

Inquiry Number: 2333504.1s
October 06, 2008

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

2701 HUNTINGTON DRIVE
SAN MARINO, CA 91108

COORDINATES

Latitude (North):	34.126560 - 34° 7' 35.6''
Longitude (West):	118.099360 - 118° 5' 57.7''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	398622.7
UTM Y (Meters):	3776539.8
Elevation:	605 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	34118-B1 MOUNT WILSON, CA
Most Recent Revision:	1994
South Map:	34118-A1 EL MONTE, CA
Most Recent Revision:	1994

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
SAN MARINO UNIFIED SCHOOL DISTRIC 2701 HUNTINGTON DR SAN MARINO, CA 91108	HAZNET EMI	N/A
SAN MARINO UNIFIED SCHOOL DIST 2701 HUNTINGTON DR SAN MARINO, CA 91108	HAZNET	N/A
SAN MARINO UNIFIED SCHOOL DISTRIC 2701 HUNTINGTON DR SAN MARINO, CA 91108	HAZNET	N/A
SAN MARINO HIGH 2701 HUNTINGTON DR. SAN MARINO, CA 91108	FINDS	110021912714

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
LIENS 2	CERCLA Lien Information
CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA - Transporters, Storage and Disposal
RCRA-LQG	RCRA - Large Quantity Generators
RCRA-SQG	RCRA - Small Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator
RCRA-NonGen	RCRA - Non Generators
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
SCRD DRYCLEANERS	State Coalition for Rededication of Drycleaners Listing

STATE AND LOCAL RECORDS

HIST Cal-Sites	Historical Calsites Database

EXECUTIVE SUMMARY

CA BOND EXP. PLAN - Bond Expenditure Plan
SCH - School Property Evaluation Program
Toxic Pits - Toxic Pits Cleanup Act Sites
SWF/LF - Solid Waste Information System
CA WDS - Waste Discharge System
WMUDS/SWAT - Waste Management Unit Database
SWRCY - Recycler Database
CA FID UST - Facility Inventory Database
SLIC - Statewide SLIC Cases
AOCONCERN - San Gabriel Valley Areas of Concern
UST - Active UST Facilities
HIST UST - Hazardous Substance Storage Container Database
LIENS - Environmental Liens Listing
AST - Aboveground Petroleum Storage Tank Facilities
SWEEPS UST - SWEEPS UST Listing
CHMIRS - California Hazardous Material Incident Report System
LA Co. Site Mitigation - Site Mitigation List
DEED - Deed Restriction Listing
VCP - Voluntary Cleanup Program Properties
DRYCLEANERS - Cleaner Facilities
LOS ANGELES CO. HMS - HMS: Street Number List
WIP - Well Investigation Program Case List
CDL - Clandestine Drug Labs
RESPONSE - State Response Sites
HAULERS - Registered Waste Tire Haulers Listing
ENVIROSTOR - EnviroStor Database

TRIBAL RECORDS

INDIAN RESERV - Indian Reservations
INDIAN ODI - Report on the Status of Open Dumps on Indian Lands
INDIAN LUST - Leaking Underground Storage Tanks on Indian Land
INDIAN UST - Underground Storage Tanks on Indian Land
INDIAN VCP - Voluntary Cleanup Priority Listing

EDR PROPRIETARY RECORDS

Manufactured Gas Plants - EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STATE AND LOCAL RECORDS

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOSCO S.S. #4356	***2390 HUNTINGTON***	***SW 1/4 - 1/2 (0.322 mi.)***	***B6***	***11***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 07/03/2008 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CONOCOPHILLIPS COMPANY# 254356 Facility Status: Leak being confirmed	2390 E HUNTINGTON DRIVE	SW 1/4 - 1/2 (0.322 mi.)	B5	10
SAN MARINO EXXON Facility Status: Leak being confirmed	2995 HUNTINGTON DR, E	E 1/4 - 1/2 (0.466 mi.)	7	12

Notify 65: Notify 65 records contain facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk. The data come from the State Water Resources Control Board's Proposition 65 database.

A review of the Notify 65 list, as provided by EDR, and dated 10/21/1993 has revealed that there is 1 Notify 65 site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
STORM DRAIN	SAN GABRIEL / LOMBARD	NNE 1/2 - 1 (0.572 mi.)	8	13

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
1X MCKESSON DRUG CO	HAZNET, LUST, CHMIRS
UNION OIL SERVICE STATION LEAS	HIST UST
1X SAN MARINO UNIFIED SCHOOL DISTRICT	HAZNET
SAN MARINO HIGH SCHOOL	ERNS
BUD'S CLEANERS	SLIC

Appendix C.
Noise Calculations

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Noise Appendix

Characteristics of Sound

Sound is a pressure wave transmitted through the air. When an object vibrates, it radiates part of its energy as acoustical pressure in the form of a sound wave. Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). The standard unit of measurement of the loudness of sound is the decibel (dB). The human hearing system is not equally sensitive to sound at all frequencies. Sound waves below 16 Hz are not heard at all and are "felt" more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Because of the physical characteristics of noise transmission and noise perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1, Change in Sound Pressure Level, dB, presents the subjective effect of changes in sound pressure levels. Typical human hearing can detect changes of approximately 3 dBA or greater under normal conditions. Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A change of 5 dBA or greater is typically noticeable to most people in an exterior environment and a change of 10 dBA is perceived as a doubling (or halving) of the noise.

Table 1
Change in Sound Pressure Level, dB

Change in Apparent Loudness	
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies and Hansen, Engineering Noise Control, 1988.

Point and Line Sources

Noise may be generated from a point source, such as a piece of construction equipment, or from a line source, such as a road containing moving vehicles. Because noise spreads in an ever-widening pattern, the given amount of noise striking an object, such as an eardrum, is reduced with distance from the source. This is known as "spreading loss." The typical spreading loss for point source noise is 6 dBA per doubling of the distance from the noise source.

A line source of noise, such as vehicles proceeding down a roadway, would also be reduced with distance, but the rate of reduction is affected by of both distance and the type of terrain over

which the noise passes. Hard sites, such as developed areas with paving, reduce noise at a rate of 3 dBA per doubling of the distance while soft sites, such as undeveloped areas, open space and vegetated areas reduce noise at a rate of 4.5 dBA per doubling of the distance. These represent the extremes and most areas would actually contain a combination of hard and soft elements with the noise reduction placed somewhere in between these two factors. Unfortunately the only way to actually determine the absolute amount of attenuation that an area provides is through field measurement under operating conditions with subsequent noise level measurements conducted at varying distances from a constant noise source.

Objects that block the line of sight attenuate the noise source if the receptor is located within the "shadow" of the blockage (such as behind a sound wall). If a receptor is located behind the wall, but has a view of the source, the wall would do little to reduce the noise. Additionally, a receptor located on the same side of the wall as the noise source may experience an increase in the perceived noise level, as the wall would reflect noise back to the receptor compounding the noise.

Noise Metrics

Several rating scales (or noise "metrics") exist to analyze adverse effects of noise, including traffic-generated noise, on a community. These scales include the equivalent noise level (L_{eq}), the community noise equivalent level (CNEL) and the day/night noise level (L_{dn}). L_{eq} is a measurement of the sound energy level averaged over a specified time period.

The CNEL noise metric is based on 24 hours of measurement. CNEL differs from L_{eq} in that it applies a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when quiet time and sleep disturbance is of particular concern). Noise occurring during the daytime period (7:00 AM to 7:00 PM) receives no penalty. Noise produced during the evening time period (7:00 to 10:00 PM) is penalized by 5 dB, while nighttime (10:00 PM to 7:00 AM) noise is penalized by 10 dB. The L_{dn} noise metric is similar to the CNEL metric except that the period from 7:00 to 10:00 PM receives no penalty. Both the CNEL and L_{dn} metrics yield approximately the same 24-hour value (within 1 dB) with the CNEL being the more restrictive (i.e., higher) of the two.

Regulatory Environment

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. Potential noise and vibration impacts were evaluated based on the State of California's interior noise standards and noise compatibility criteria, the Federal Transit Administration (FTA) criteria for vibration impacts, and the City of San Marino Municipal Code to determine whether a significant adverse noise impact would result from the construction and operation of the proposed project.

State of California Noise Standards

Interior Noise Standards

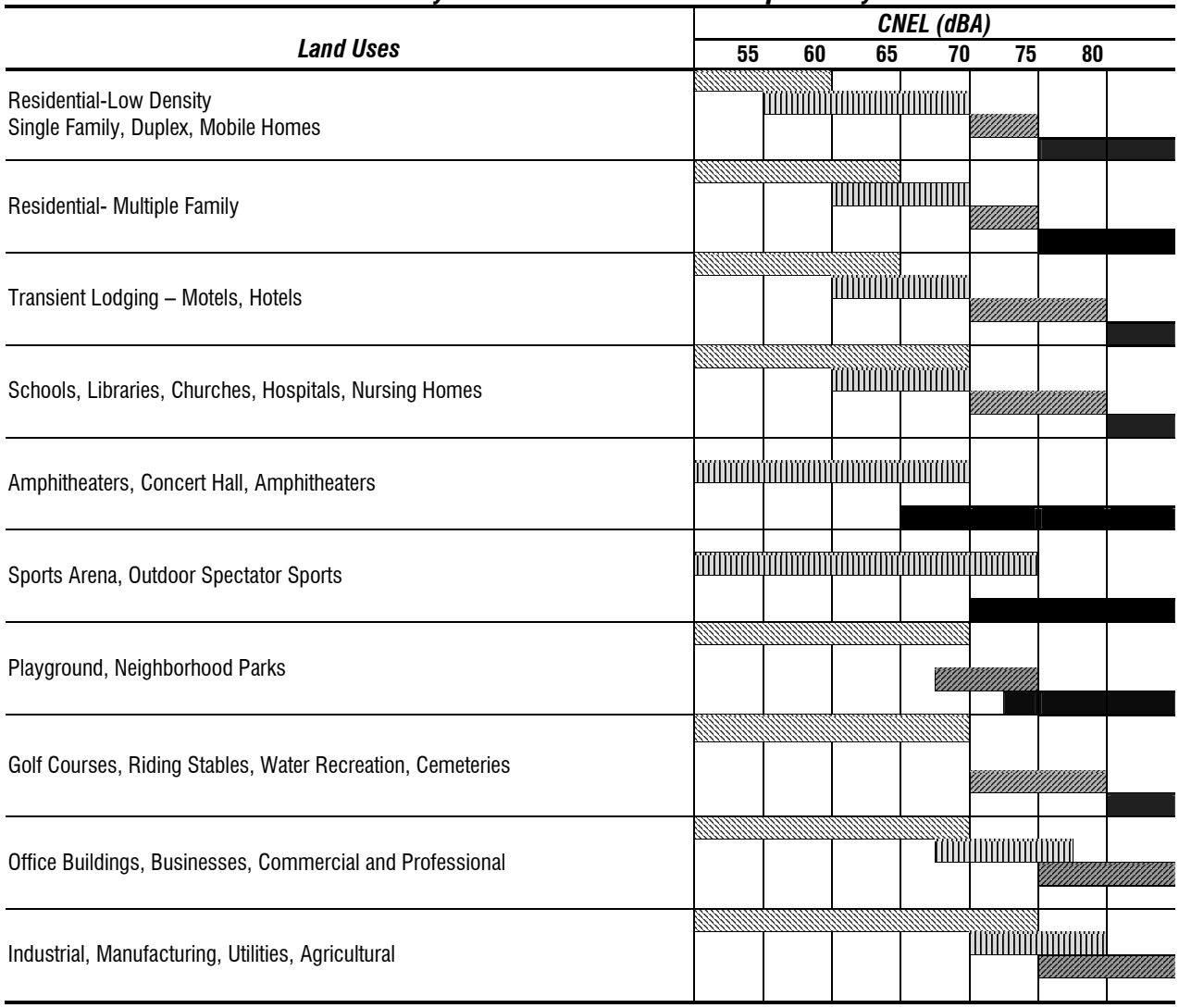
The state of California's noise insulation standards are codified in the California Code of Regulations, Title 24, *Building Standards Administrative Code*, Part 2, *California Building Code*. These noise standards are applied tor new construction in California for the purpose of interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources

create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

Noise Compatibility

Table 2 shows a land use compatibility chart for community noise adopted by the State of California as part of General Plan Guidelines. This table provides urban planners with a tool to gauge the compatibility of new land uses relative to existing and future noise levels. It identifies normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements.

Table 2
Community Noise and Land Use Compatibility



Explanatory Notes

Normally Acceptable:
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable:
New construction/development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.

Normally Unacceptable:
New construction/development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable:
New construction/development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be useable.

Source: California Office of Noise Control. *Guidelines for the Preparation and Content of Noise Elements of the General Plan.* February 1976. Adapted from the US EPA Office of Noise Abatement Control, Washington D.C. Community Noise. Prepared by Wyle Laboratories. December 1971.

City of San Marino Noise Regulations

City of San Marino Ambient Base Noise Level

Where ambient noise levels are less than the ambient base noise level as set forth in the City of San Marino Municipal Code, Chapter XIV, Article 4, Section 14.04.04, and as shown in Table 3, the ambient base noise levels shall be used.

Table 3
City of San Marino Ambient Base Noise Level

Land Use/Zone	*Time Interval*	*Ambient Base Noise Levels (dBA)*
R-1 Residential	7:00 a.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	45
R-1 Residential Corridor[1]	7:00 a.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	45
Commercial	7:00 a.m. to 10:00 p.m.	65
	10:00 p.m. to 7:00 a.m.	50

Source: City of San Marino, City of San Marino Municipal Code. Chapter XIV, Article 4, Section 14.04.04.
Notes: Any noise at a level which exceeds the ambient base level as set forth in this Section by more than 10 dB, when measured at any adjacent privately owned residential property line, shall constitute proof of a violation of this section.
[1] Residential corridor shall mean any residential property located within 150 feet of a commercial zone or from any portion of Huntington Drive not abutting a commercial Area.

City of San Marino Stationary Source Noise Level Restrictions

The City of San Marino regulates noise through the Chapter XIV, Article 4, Section 14.04.05. Pursuant to the City's Municipal Code, the City restricts any person from generating noise at any adjacent residential property line at a level that exceeds a noise level of 65 dB from any parcel in an R-1 zone and 75 dB from any parcel in a C-1 Zone, Park and Recreational Zone, or Historical and Cultural Zone. These standards do not gauge the compatibility of developments in the noise environment, but provide restrictions on the amount and duration of noise generated at a property, as measured at the property line of the noise receptor. The City's noise ordinance is designed to protect people from objectionable nontransportation noise sources such as music, construction activity, machinery, pumps, and air conditioners.

City of San Marino Construction Hours

According to Chapter XIV, Article 4, Section 14.04.07, of the City's Municipal Code, it is unlawful to operate equipment or perform any outside construction on buildings, structures, or projects within a residential zone or 500 feet within a residential zone that would require a building, plumbing, electrical or grading permit in a manner that the associated noise produced would violate the noise standard of Section 14.04.05 of the City Municipal Code, unless a permit has been obtained from the Planning and Building Director.

Federal Transit Administration

The City of San Marino prohibits vibration sources that generate vibration levels that can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument. The human reaction to various levels of vibration is highly subjective. The FTA provides criteria, shown in Table 4, for acceptable levels of groundborne vibration for various

types of land uses that are sensitive to vibration based on the relative perception of a vibration event.

Table 4
Groundborne Vibration and Noise Impact Criteria – Human Annoyance

Land Use Category	*Max L_v (VdB)[1]*	*Description*
Workshop	90	Distinctly felt vibration. Appropriate to workshops and nonsensitive areas
Office	84	Felt vibration. Appropriate to offices and non-sensitive areas.
Residential – Daytime	78	Barely felt vibration. Adequate for computer equipment.
Residential – Nighttime	72	Vibration not felt, but groundborne noise may be audible inside quiet rooms.

Source: United States Department of Transportation Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment,* May 2006
[1] As measured in 1/3 octave bands of frequency over the frequency ranges of 8 to 80 Hz.

In addition to the vibration annoyance standards presented above, the FTA also applies standards for construction vibration damage, as shown in Table 5. Structural damage is possible for typical residential construction when the peak particle velocity (PPV) exceeds 0.2 inch per second. This criterion is the threshold at which there is a risk of damage to normal dwelling houses.

Table 5
Groundborne Vibration and Noise Impact Criteria – Structural Damage

Building Category	*PPV (in/sec)*	*VdB*
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Nonengineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA, *Transit Noise and Vibration Assessment,* May 2006.
Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

Construction Generated Vibration - San Marino HS Pool Renovation

Vibration Annoyance Criteria

Receptor:	Phase I Average Vibration Level - West Residences	Closest Distance (feet):	350
Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB	
Small bulldozer	58	35	
Jackhammer	79	56	
Loaded trucks	86	63	
	Criteria	78	

Receptor:	Phase I Maximum Vibration Levels - West Residences	Average Distance (feet):	305
Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB	
Small bulldozer	58	36	
Jackhammer	79	57	
Loaded trucks	86	64	
	Criteria	78	

Receptor:	Phase II Average Vibration Level - West Residences	Closest Distance (feet):	270
Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB	
Small bulldozer	58	37	
Jackhammer	79	58	
Loaded trucks	86	65	
	Criteria	78	

Receptor:	Phase II Average Vibration Level - West Residences	Average Distance (feet):	215
Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB	
Small bulldozer	58	39	
Jackhammer	79	60	
Loaded trucks	86	67	
	Criteria	78	

Receptor:	Maximum Vibration Level - Classroom Bldging	Closest Distance (feet):	170
Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB	
Small bulldozer	58	41	
Jackhammer	79	62	
Loaded trucks	86	69	
	Criteria	78	

Receptor:	Average Vibration Level - Classroom Building South	Average Distance (feet):	245
Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB	
Small bulldozer	58	38	
Jackhammer	79	59	
Loaded trucks	86	66	
	Criteria	78	

Vibration Structural Damage Criteria

	Criteria	0.200

Receptor:	Phase I Maximum Vibration Levels - West Residences	Closest Distance (feet):	305
Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second	
Small bulldozer	0.003	0.000	
Jackhammer	0.035	0.001	
Loaded trucks	0.076	0.002	
	Criteria	0.200	

Receptor:	Phase II Maximum Vibration Levels - West Residences	Closest Distance (feet):	215
Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second	
Small bulldozer	0.003	0.000	
Jackhammer	0.035	0.001	
Loaded trucks	0.076	0.003	
	Criteria	0.200	

[1] Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet

Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

Impact Assessment (2006).