TABLE OF CONTENTS

7.0 MITIGATION MONITORING AND REPORTING PROGRAM	7-1
7.1 MITIGATION MONITORING REQUIREMENTS	7-1
7.2 MITIGATION MONITORING PROCEDURES	7-2

TABLES

Table 7.A: Mitigation and	Monitoring Reporting	Program7-	3
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7.0 MITIGATION MONITORING AND REPORTING PROGRAM

7.1 MITIGATION MONITORING REQUIREMENTS

Public Resources Code Section 21081.6 (enacted by the passage of Assembly Bill 3180) mandates that the following requirements shall apply to all reporting or mitigation monitoring programs:

- I. The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.
- II. The lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.
- III. A public agency shall provide the measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.
- IV. Prior to the close of the public review period for a draft environmental impact report or mitigated negative declaration, a responsible agency, or a public agency having jurisdiction over natural resources affected by the project, shall either submit to the lead agency complete and detailed performance objectives for mitigation measures which would address the significant effects on the environment identified by the responsible agency or agency having jurisdiction over natural resources affected by the project, or refer the lead agency to appropriate, readily available guidelines or reference documents. Any mitigation over natural resources affected by the project shall be limited to measures which mitigate impacts to resources affected by the project shall be limited to measures which mitigate to, that agency. Compliance or noncompliance by a responsible agency or agency having jurisdiction over natural resources affected by a project with that requirement shall not limit that authority of the responsible agency or agency having jurisdiction over natural resources affected by a project, or the authority of the lead agency, condition, or deny projects as provided by this division or any other provision of law.

7.2 MITIGATION MONITORING PROCEDURES

The mitigation monitoring and reporting program has been prepared in compliance with Public Resources Code Section 21081.6. It describes the requirements and procedures to be followed by the City of Long Beach to ensure that all mitigation measures adopted as part of the proposed Long Beach Sports Park will be carried out as described in this EIR.

Table 7.A lists each of the mitigation measures specified in this EIR and identifies the party or parties responsible for implementation and monitoring of each measure.

Table 7.A: Mitigation and Monitoring Reporting Program

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
4.1 La	nd Use		
4.1.1	Development of the commercial parcel will adhere to the requirements of the CCA Zone and the City Parking Code, as determined by the City Zoning Administrator at the time of Site Plan Review and Plan Check. The need for subsequent CEQA action will be determined by the City of Long Beach Environmental Planning Officer.	City of Long Beach Zoning Administrator/ Environmental Planning Officer	Site Plan Review and Plan Check
4.1.2	City Council approval of the proposed project shall include a General Plan Amendment from LUD 9G (Industrial) to LUD 11 (Open Space and Park) and LUD 8A (Traditional Retail Strip Commercial), a zone change from Industrial (IM) and Institutional (I) to Park (P) and Community Commercial-Automobile Oriented (CCA), and a Standard Variance from parking requirements. The Director of Planning and Building shall implement the approved General Plan Amendment upon approval and the Zone Change after second Council reading of the ordinance.	City of Long Beach Director of Planning and Building	General Plan Amendment: Upon Approval by City Council Zone Change: After second Council reading of the ordinance
4.1.3	The City Zoning Administrator shall ensure at the time of plan check, that project plans include a six-foot-high opaque fence around all operating oil wells. Wells that are visible to the public from on-site pedestrian areas will be surrounded by a fence designed in a manner that is consistent with the overall project design. The project operators shall ensure that all wells remain accessible for maintenance and repair and to City Fire Department standards.	City of Long Beach Zoning Administrator/ City of Long Beach Fire Chief	Plan Check/Ongoing
4.2 Po	pulation and Housing		
No mit	tigation is required.		
4.3 Ge	ology and Soils		
4.3.1	Appropriate seismic design provisions shall be implemented with project design and construction in accordance with governing building codes. Unless superseded by other regulatory provisions or standards, seismic design criteria shall be developed on the basis of the requirements of the current UBC and reviewed and approved by the City Building Official prior to issuance of building permits. The following UBC design parameters are based on the 1997 UBC, Volume 2, Chapter 16, Divisions IV and V. These parameters are	City of Long Beach Building Official/Director of Public Works	Prior to issuance of building permits

Mitiga	ntion Measures		Responsible Party	Timing for Mitigation Measure
	considered applicable for t pending any more recent u design values are required spectra or site period), as a	he seismic design evaluation of proposed structures apdates of the UBC, or unless more site-specific by the project structural engineer (e.g., response approved by the City Building Official.		
	Project Site Seismic Desi	gn Parameters		
	Seismic Zone Factor Z: Soil Profile Type: Design Fault: Fault Distance: Prior to issuance of buildin (or designee) is required to all structures are designed a Seismic Zone 4.	0.4 S _D Newport Inglewood <1.24 miles (2 kilometers) ng permits, the City of Long Beach Building Official o review and approve final design plans to ensure that to resist earthquake forces as defined by the UBC for		
4.3.2	All habitable structures she Alquist-Priolo Special Stu- the project geotechnical co Final foundation setback re and mapping of the fault tr appropriate projection of t foundation setback shall be Official prior to issuance of	all be set back a minimum of 50 feet from the current dies Zone or the Special Studies Zone as modified by onsultant based upon additional soil and fault study. ecommendations shall be based on in-grading review race by the project geotechnical consultant, including he exposed conditions. All recommendations for final e reviewed and approved by the City Building of building permits.	City of Long Beach City Building Official	Prior to issuance of building permits
4.3.3	Remedial treatment shall be underlying alluvium that a saturated in the future and slopes, and associated imp within a 1:1 (45-degree) de structures, slopes, and assoc supporting these improvem and/or undocumented/uner planned improvements sha	be required for any of the existing fills and/or re comprised of loose sandy soils that may become are also intended for support of planned structures, rovements. In general, foundation soils that are ownward projection from the perimeter of proposed ociated improvements shall be considered as nents. Remedial treatment of highly compressible soil ngineered fill that are intended for the support of all be performed, as required by the City of Long	City of Long Beach Building Official	Prior to issuance of building permits

Mitigat	tion Measures	Responsible Party	Timing for Mitigation Measure
4.3.4	Beach Building Official. Removal and replacement of these unsuitable soils as compacted fill is considered the most straightforward method of remedial treatment. Alternative remediation measures, such as in-situ densification and/or installation of deep foundations, may be used in areas of the site where existing constraints make removal and compaction cost-prohibitive or difficult due to property line constraints. Site-specific final design evaluation and grading plan review shall be performed by the project geotechnical consultant, including assessment of possible remedial alternatives prior to the start of grading construction. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final written report, subject to review by the City of Long Beach Building Official prior to issuance of grading permits. Proposed permanent cut and fill slopes shall not exceed a surface gradient of 2:1 (horizontal:vertical). Pending future final design evaluations, granular soils shall be evaluated inundation area of planned detention basins, and/or this portion of the slope can be reinforced appropriately. Additional site-specific final design evaluations shall be performed by the project geotechnical consultant to evaluate the stability conditions of proposed slopes, including the surficial stability/erosion potential, and with particular regard to slopes within the planned detention basins. Grading plan review shall also be performed by the project geotechnical design evaluation have been appropriately incorporated into the project plans. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading constructions, and the recommendations of the project geotechnical consultant to evaluate the stability conditions of proposed slopes including the surficial stabili	City of Long Beach Building Official	Prior to issuance of grading permits

Mitigat	tion Measures	Responsible Party	Timing for Mitigation Measure
4.3.5	In general, proposed temporary cut slopes shall not exceed a gradient of 1:1 (horizontal:vertical). Pending future site-specific final design evaluations, planned construction slope excavations at a 1:1 gradient (45-degree angle) shall not exceed a height of 16 feet, and those excavated at a 1.5:1 gradient shall not exceed a height of 37 feet. Proposed temporary slope excavations in undocumented fill and alluvium adjacent to Spring Street and California Avenue shall be subject to additional site-specific exploration, testing, and stability evaluations by the project geotechnical consultant to refine and enhance the preliminary recommendations. Grading plan review shall also be performed by the project geotechnical consultant prior to the start of grading to verify that the recommendations developed during the geotechnical design evaluation have been appropriately incorporated into the project geotechnical consultant during excavation to assess and mitigate potential unanticipated structural anomalies and/or unforeseen groundwater conditions. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final report, subject to review by the City of Long Beach Building Official prior to issuance of grading permits.	City of Long Beach Building Official	Prior to issuance of grading permits

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
4.3.6	Unreinforced fill slopes shall not exceed a gradient of 2:1 (horizontal:vertical). Any portion of a proposed slope with gradients steeper than 2:1 shall require appropriate reinforcement and/or installation of a retaining wall. The project geotechnical consultant shall perform additional site-specific final design evaluations of the proposed retaining walls to refine and enhance the preliminary recommendations. These evaluations shall address wall drainage and surficial stability/erosion potential of the adjoining sections of the fill slope. Geotechnical evaluations of proposed retaining walls within planned detention basins shall also include development of the appropriate geotechnical criteria for the wall design under rapid draw-down groundwater conditions. Grading plan review shall also be performed by the project geotechnical consultant prior to the start of grading to verify that the recommendations developed during the geotechnical design evaluation have been appropriately incorporated in the project plans. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final report, subject to review by the City of	City of Long Beach Building Official	Prior to issuance of grading permits
4.3.7	The surficial stability/erosion potential of the proposed graded slopes shall be evaluated by the project geotechnical consultant as a part of the geotechnical design evaluation. Best management practices (BMPs) shall be employed during construction to minimize the potential for erosion, and the project shall conform to applicable National Pollution Discharge Elimination System (NPDES) requirements and regulations. Appropriate landscape planting shall be installed as soon as is practical after completion of grading, particularly in the graded slope areas. Erosion control recommendations and design provisions shall be developed and incorporated into grading plans prepared by the project civil engineer for implementation during construction. Grading plans shall be reviewed and approved by the project geotechnical consultant prior to the start of grading construction. BMP development and implementation should be closely coordinated with the water quality requirements of the project construction and operation standard urban storm water mitigation plans	City of Long Beach Building Official	Prior to issuance of grading permits

Mitiga	ation Measures	Responsible Party	Timing for Mitigation Measure
4.3.8	[SUSMP]. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final report, subject to review by the City of Long Beach Building Official prior to issuance of grading permits Proposed grading shall be implemented to provide relatively uniform soil	City of Long	Prior to issuance of grading and
	conditions in the upper portion of the building areas. A moderate level of moisture shall be installed and maintained in the fill/foundation soils to minimize future volume changes. Appropriate drainage provisions as designed and/or recommended by the project civil engineer and geotechnical consultant shall be implemented to minimize future soil moisture changes. Subsurface drainage improvements shall be approved by the City of Long Beach Building Official prior to issuance of grading permits. On-site inspection during grading shall be conducted by the Building Official or a designee to ensure compliance with City-approved drainage design and soil mixture and recompaction. Additional site testing and final design evaluations regarding the possible presence of significant volumes of expansive soils on site shall be performed by the project geotechnical consultant to refine and enhance the preliminary recommendations. Grading plan review shall also be performed by the project geotechnical consultant prior to the start of grading to verify that the recommendations developed during the geotechnical design evaluation have been appropriately incorporated in the project plans. Final design and recommendations regarding expansive soils shall be based on testing and analyses of the near-surface soils following the completion of grading. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final report, subject to review by the Building Official prior to issuance of grading permits.	Beach Building Official	building permits

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
7.3.7	be considered and evaluated for installation in other areas where the proposed ground surface is near the buried surface of the underlying San Pedro formation. Pending future additional site-specific evaluations, canyon-type subdrains shall be installed along the flanks of the previously existing drainage course at elevations that will daylight at the northeasterly perimeter of the planned large detention basin. Some consideration shall also be given to installation of a central canyon type subdrain within the planned compacted fill along an approximation of the original flowline alignment. The recommended subdrain shall be constructed with a minimum drainage gradient of one percent. Design of underdrain systems for the playing fields shall be undertaken by a specialized consultant with specific expertise in this type of design. These measures shall conform to the recommendations of the project geotechnical consultant and the project civil engineer. As recommended by the project geotechnical consultant in a final report, proposed subdrain systems shall be integrated with planned storm drains (see also Section 4.4, Water Resources), as approved by the Building Official prior to issuance of grading permits.	Beach Building Official	permits
	by the project geotechnical consultant prior to the start of grading to verify that recommendations developed during the geotechnical design process are appropriately incorporated in the project plan. The project geotechnical consultant shall review construction excavations during excavation to assess possible unforeseen groundwater conditions and to approve as-built locations and construction materials/methods for recommended subdrains. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final report, subject to review by the Building Official prior to issuance of grading permits.		

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
4.3.10	Surface drainage provisions for the project shall be evaluated and designed by the project civil engineer and shall be reviewed and approved by the project geotechnical consultant prior to the start of grading activities. Design and grading construction shall be performed in accordance with the requirements of the UBC applicable at the time of grading, appropriate local grading regulations, and the recommendations of the project geotechnical consultant as summarized in a final report, subject to review by the City Building Official prior to issuance of grading permits.	City of Long Beach Building Official	Prior to issuance of grading and building permits
4.4 Hy	drology and Water Quality		
4.4.1	The City of Long Beach shall ensure that construction plans for the project shall include features meeting the applicable construction activities BMPs and erosion and sediment control BMPs published in the <i>California Stormwater BMP Handbook—Construction Activity</i> . The construction contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) to the City that shall include the BMP types listed in the handbook. The SWPPP shall be prepared by a civil or environmental engineer and will be reviewed and approved by the City Building Official prior to the issuance of any grading or building permits. The plan shall reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and systems, design and engineering methods, and such other provisions that are appropriate. A copy of the SWPPP shall be kept at the project site.	City of Long Beach Building Official/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading and construction activities
	The construction contractor shall be responsible for performing and documenting the application of BMPs identified in the SWPPP. The construction contractor shall inspect BMP facilities before and after every rainfall event predicted to produce observable runoff and at 24-hour intervals during extended rainfall events, except on days when no ongoing site activity takes place. Prestorm activities will include inspection of the major storm drain grate inlets and examination of other on-site surface flow channels and swales, including the removal of any debris that blocks the flow path. Poststorm activities will include inspection of the grate inlets, looking for evidence of unpermitted discharges. The construction contractor shall implement corrective		

Mitiga	ation Measures	Responsible Party	Timing for Mitigation Measure
	actions specified by the City of Long Beach Building Official, as necessary, at the direction of the Director of Public Works. Inspection records and compliance certification reports shall be submitted to the Director of Public Works on a monthly basis and shall be maintained for a period of three years. Inspection schedules shall be monthly during the dry season and weekly during the wet season for the duration of project construction or until all lots and common areas are landscaped.		
4.4.2	The City of Long Beach shall ensure that the project complies with the requirements of the State General Construction Activity NPDES Permit. The construction contractor shall demonstrate to the City that coverage has been obtained under the State General Construction Activity NPDES Permit by providing a copy of the NOI submitted to the SWRCB and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) number or other proof of filing to the City of Long Beach Building Official.	City of Long Beach Building Official/ Construction Contractor	Prior to issuance of grading permits
4.4.3	The City of Long Beach shall ensure that a project SUSMP is prepared for the project in accordance with the Los Angeles County SUSMP and the Municipal NPDES Permit. The project SUSMP shall identify all of the nonstructural and structural BMPs that will be implemented as part of the project in order to reduce impacts to water quality to the maximum extent practicable by addressing typical land use pollutants and pollutants that have impaired the Los Angeles River. The SUSMP shall be reviewed and approved by the Building Official prior to issuance of a grading permit.	City of Long Beach Building Official/ Construction Contractor	Prior to issuance of grading permits
4.4.4	Prior to approval of a Final Parcel Map, the City of Long Beach Director of Public Works/City Engineer shall review and approve a final hydrology plan. The hydrology plan shall include any on-site structures or modifications of existing drainage facilities necessary to accommodate increased runoff resulting from the proposed project and shall indicate project contributions to the regional storm water drainage system.	City of Long Beach Director of Public Works/ City Engineer	Prior to approval of a Final Parcel Map
4.4.5	Prior to approval of a Final Parcel Map, the City of Long Beach shall, under the direction of the Director of Public Works, design a plan to ensure ongoing maintenance for permanent BMPs. This plan shall include a statement from the	City of Long Beach Parks, Recreation, and	Prior to approval of a Final Parcel Map

Mitig	ation Measures	Responsible Party	Timing for Mitigation Measure
	Director of Parks, Recreation, and Marine indicating the City's acceptance of responsibility for all structural and Treatment Control BMP maintenance until the time the property is transferred. All future transfers of the property to a private or public owner shall have conditions requiring the recipient to assume responsibility for the maintenance of any structural or Treatment Control BMP. The condition of transfer shall include a provision requiring the property owner to conduct a maintenance inspection at least once a year and retain proof of inspection. In addition, educational materials indicating locations of storm water facilities and how maintenance can be performed shall accompany first deed transfers.	Marine/Director of Public Works	
4.5 Bi	ological Resources		
4.5.1	Prior to issuance of any demolition or grading permits, a City of Long Beach Building Official shall verify that tree and shrub removal on the project site is allowed between August 1 to December 31, which is outside the normal nesting season for most raptors and other birds protected by the Migratory Bird Treaty Act. If it is necessary to conduct tree and shrub removal between January 1 and July 31, a qualified biologist must be retained by the City of Long Beach to survey the area for active nests prior to removal and to monitor the area during the removal process. In the event of discovery of active nests in an area to be cleared, protective measures shall be taken to avoid any impacts to the nests until the nesting activity is completed.	City of Long Beach Building Official	Verification: Prior to issuance of grading permits Activity: Tree and shrub removal allowed between August 1 and December 31
4.5.2	Prior to issuance of grading permits and, subject to the approval of the City of Long Beach Director of Planning and Building, project plans shall specify a native vegetation area adjacent to the southern boundary of the project site in order to create open habitat with isolated patches of dense shrubs suitable for nesting by the loggerhead shrike. The planting shall extend along the top and banks of the slope and shall not be less than 25 feet in width. The native vegetation area will be located adjacent to the cemetery, which may provide a suitable area for foraging. Plant material in the native vegetation area will include coyote brush (<i>Baccharis pilularis</i>) and needlegrass (<i>Nassella</i> sp.), as well as elderberry (<i>Sambucus mexicana</i>) planted in isolated clumps rather than uniformly. Understory species and any species that might be too invasive (e.g.,	City of Long Beach Director of Planning and Building	Prior to issuance of grading permits

Mitiga	Mitigation Measures		Timing for Mitigation Measure
	mulefat, <i>Baccharis salicifolia</i>) will be avoided, as they would alter the open habitat quality of the potential nesting area.		
4.5.3	Prior to the issuance of grading permits, the City of Long Beach Director of Planning and Building shall verify that authorization has been obtained from: (1) the U.S. Army Corps of Engineers (Corps) under the Section 404 Permit program for the discharge of fill material into the jurisdictional drainages; and (2) the California Department of Fish Game (CDFG) under Section 1602 of the California Fish and Game Code for the alteration of a streambed. In addition, standard conditions of the Corps permits require Section 401 water quality certification by the Regional Water Quality Control Board (RWQCB). In order to obtain these authorizations, the City shall develop a mitigation plan subject to review and approval by the appropriate resource agencies (Corps, CDFG, and RWQCB) to compensate for the loss of the riparian habitat. (See Mitigation Measure 4.5.4.)	City of Long Beach Director of Planning and Building	Prior to issuance of grading permits
4.5.4	Prior to the issuance of certificates of occupancy, the City shall develop off-site mitigation for wetlands, including the restoration of 0.6 acre of riparian habitat (2:1 mitigation ratio for 0.08 acre of cattail marsh in the channel, and 1:1 mitigation ratio for the 0.41 acre of wetlands in the detention basin). The total wetlands mitigation requirement is 0.6 acre. The proposed mitigation site is located on the west bank of the San Gabriel River adjacent to El Dorado Park Golf Course and shall be made part of the Section 404 Permit required in Mitigation Measure 4.5.3. Off-site mitigation shall be constructed and maintained by the City of Long Beach, subject to verification by the Director of Planning and Building, in accordance with the mitigation plan approved by the appropriate resource agencies (Corps, CDFG, and RWQCB).	City of Long Beach Director of Planning and Building	Prior to issuance of certificates of occupancy
4.5.5	Prior to issuance of grading permits, project plans subject to the approval of the City of Long Beach Director of Planning and Building shall specify that the on- site stilling basin will be planted with California native wetland species. The stilling basin will be subject to routine maintenance and cleaning. The planting of native wetland species in the stilling basin is provided in addition to the 0.6- acre off-site mitigation area.	City of Long Beach Director of Planning and Building	Prior to issuance of grading permits

6

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
4.6 Cu	Itural and Paleontological Resources		
4.6.1	The Compressor Building and ancillary facilities shall be thoroughly documented through HABS/HAER-like (Historic American Building Survey/Historic American Engineering Record) Level 1 prior to the beginning of any demolition activity at this site. The documentation shall be submitted to the City's Historical Preservation Officer for review and approval prior to issuance of demolition permits	City of Long Beach Historic Preservation Officer	Prior to issuance of demolition permits
4.6.2	 Prior to issuance of demolition permits, detailed plans/programs shall be submitted for review and approval by the City's Historic Preservation Officer, addressing the following: The salvage of significant machinery and engineering components associated with the Compressor House, and the donation and curation of those items at a designated museum facility, shall be considered. 	City of Long Beach Historic Preservation Officer	Prior to issuance of demolition permits
	• Development of an interpretive program for schools in the Long Beach area shall be considered. This program could discuss the petroleum industry, associated technology, and the role the petroleum industry played in the historic development of the City of Long Beach.		
	• Utilizing new technologies, consideration shall be given to developing a virtual tour of the facility prior to its alteration.		
	• The history of Lomita-Petrolane and/or its interpretation shall be integrated into the design of the proposed Long Beach Sports Park.		
4.6.3	Prior to issuance of building permits, detailed plans addressing the visual impact of the proposed development on the Lomita Gasoline Company Office Building shall be submitted for review and approval by the City's Historic Preservation Officer. Visual impacts to the office building shall be minimized through the use of decorative landscaping, choice of appropriate construction materials, and design of surrounding improvements.	City of Long Beach Historic Preservation Officer	Prior to issuance of building permits
4.6.4	In conjunction with the submittal of applications for rough grading permits for the proposed project, the Director of Planning and Building shall verify that a paleontologist who is listed on the County of Los Angeles list of certified	City of Long Beach Director of Planning and	Verification: Prior to issuance of grading permits

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
paleontologists has been retained and will be on site during all rough grading and other significant ground-disturbing activities in paleontologically sensitive sediments. The sensitive sediments that have been identified within the project include the Lower to Middle Pleistocene San Pedro Formation and the Middle to Upper Pleistocene undifferentiated terrace deposits. A paleontologist will not be required on site for excavation in Quaternary colluvial/alluvial sediments unless it is determined that these sediments do in fact contain paleontological resources. A paleontologist will not be required on site if excavation is only occurring in artificial fill.	Building	Activity: Ongoing during grading or earth-clearing activities
The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) consistent with the Guidelines of the Society of Vertebrate Paleontology (SVP 1995). This program should include, but not be limited to, the following:		
• A preconstruction field assessment to locate fossils at surface exposures prior to the commencement of grading. Salvage of any fossils located during this assessment, including processing standard samples of matrix for the recovery of small vertebrate fossils.		
Attendance at the pregrade conference.		
• Monitoring of excavation by a qualified paleontological monitor in areas identified as likely to contain paleontological resources. The monitor should be equipped to salvage fossils as they are unearthed in order to avoid construction delays and to remove samples of sediments that have been determined likely to contain remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert equipment in order to allow removal of abundant or large specimens. If major paleontological resources that require long-term halting or redirecting of grading are discovered, the paleontologist shall report such findings to the Director of Planning and Building.		
• Because the underlying marine sediments may contain abundant fossil remains that can only be recovered by a screening and picking matrix, it is recommended that these sediments occasionally be spot-screened through		

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	one-eighth to one-twentieth mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples, up to 6,000 pounds, shall be collected and processed through one-twentieth mesh screens to recover additional fossils.		
	• Preparation of recovered specimens to a point of identification and permanent preservation. This includes the washing and picking of mass samples to recover small invertebrate and vertebrate fossils.		
	• Identification and curation of specimens into a museum repository with permanent retrievable storage.		
	• Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the Department of Planning and Building, would signify completion of the program to mitigate impacts to paleontological resources.		
4.6.5	In conjunction with the submittal of applications for rough grading permits, the Director, Department of Planning and Building, shall verify that a Los Angeles County certified archaeologist has been retained, shall be present at the pregrading conference, and shall establish procedures for temporarily halting or redirecting work if unrecorded archaeological resources are discovered during grading to permit the sampling, identification, and evaluation of archaeological materials as appropriate. The cultural resource management program will include resource monitoring during project grading of archaeologically sensitive sediments to ensure that unidentified cultural resources are not affected by the proposed undertaking. If archaeological materials are identified during construction, standard professional archaeological practices shall be initiated to characterize the resources and mitigate any impacts to those resources. Included within this program will be the development of a curation agreement for the permanent care of materials collected from the project. This agreement would be negotiated with a suitable repository.	City of Long Beach Director of Planning and Building	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earth-clearing activities
4.6.6	In the event human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County	City of Long Beach Director of	Triggered if human remains are found on the project site; the Los

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the descendant may inspect the site of the discovery. The descendant shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	Planning and Building/ Construction Contractor	Angeles County Coroner must be notified immediately.
4.7 Pu 4.7.1	blic Services and Utilities The City of Long Beach, in cooperation with the LBPD, shall develop and implement a security plan prior to commercial operation of the proposed project. The applicant shall incorporate CPTED principles and other crime prevention features that may include, but are not limited to, strategically placed lighting, the use of vines or planted coverings on walls to discourage graffiti, and video surveillance. The safety plan may also include clearly defined rules of play and conduct to be enforced by park employees. The Director of Planning and Building shall verify inclusion of physical public safety measures at the time of Plan Check. Operational conditions will be specified in the lease agreement.	City of Long Beach Director of Planning and Building	Plan Check
4.7.2	A solid waste management plan for the proposed project shall be developed and submitted to the City of Long Beach Director of Public Works for review and approval prior to issuance of grading permits. The plan shall identify methods to promote recycling and reuse of construction materials as well as safe disposal consistent with the policies and programs outlined by the City of Long Beach. The plan shall identify methods of incorporating source reduction and recycling techniques into project construction and operation in compliance with State and local requirements such as those described in Chapter 14 of the California Code of Regulations and AB939.	City of Long Beach Director of Public Works	Prior to issuance of grading permit

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
4.7.3	Prior to issuance of building permits, the Director of Planning and Building shall verify that adequate storage space for the collection and loading of recyclable materials has been included in the design of buildings and waste collection points throughout the project site (including the commercial parcel, Sports Park, and youth golf center) to encourage recycling.	City of Long Beach Director of Planning and Building	Prior to issuance of building permits
4.8 Air 4.8.1	Quality The City of Long Beach shall ensure that the project complies with regional	City of Long	Verification: Prior to issuance of
	rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable dust suppression techniques from Rule 403 are summarized below. The construction contractor shall be responsible for compliance with applicable regional rules. Following are the applicable Rule 403 measures:	Beach Director of Planning and Building/ Construction Contractor	Activity: Ongoing during grading or earth-clearing activities
	• Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).		
	• Water active sites at least twice daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)		
	• All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) Section 23114 (freeboard means vertical space between the top of the load and top of the trailer).		
	• Pave construction access roads at least 100 feet onto the site from main road.		
	• Traffic speeds on all unpaved roads shall be reduced to 15 mph or less.		

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
4.8.2	 The City of Long Beach shall require use of dust suppression measures in the SCAQMD CEQA Air Quality Handbook. The construction contractor shall be responsible for implementation of dust suppression measures. Revegetate disturbed areas as quickly as possible. All excavating and grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 mph. All streets shall be swept once per day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water). Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash trucks and any equipment leaving the site each trip. All on-site roads shall be paved as soon as feasible, watered periodically, or chemically stabilized. 	City of Long Beach Director of Planning and Building/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earth-clearing activities
	• The area disturbed by clearing, grading, earthmoving, or excavation operations shall be minimized at all times.		
4.8.3	The construction contractor shall select the construction equipment used on site based on low-emission factors and high energy efficiency. Prior to issuance of grading permits, the City of Long Beach Director of Planning and Building shall verify that construction grading plans include a statement that all construction equipment will be tuned and maintained in accordance with the manufacturer's specifications.	City of Long Beach Director of Planning and Building/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earth-clearing activities
4.8.4	The construction contractor shall utilize electric or diesel-powered equipment in lieu of gasoline-powered engines where feasible.	City of Long Beach Director of Planning and Building/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earth-clearing activities
4.8.5	Prior to issuance of grading permits, the City of Long Beach Director of Planning and Building shall verify that construction grading plans include a statement that work crews will shut off equipment when not in use. During	City of Long Beach Director of Planning and	Verification: Prior to issuance of grading permits

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	smog season (May through October), the overall length of the construction period will be extended, thereby decreasing the size of the area prepared each day, to minimize vehicles and equipment operating at the same time.	Building/ Construction Contractor	Activity: Ongoing during grading or earth-clearing activities
4.8.6	The construction contractor shall time the construction activities so as to not interfere with peak-hour traffic and minimize obstruction of through traffic lanes adjacent to the site; if necessary, a flagperson shall be retained to maintain safety adjacent to existing roadways.	City of Long Beach Director of Planning and Building/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earth-clearing activities
4.8.7	The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew.	City of Long Beach Director of Planning and Building/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earth-clearing activities
4.8.8	The City of Long Beach shall ensure that the project complies with the SCAQMD rules and regulations on the use of architectural coatings, which include use of pre-coated/natural-colored building materials, using water-based or low-VOC coating, and using coating transfer or spray equipment with high transfer efficiency. The construction contractor shall be responsible for compliance with applicable SCAQMD Rules and Regulations.	City of Long Beach Building Official/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earth-clearing activities
4.8.9	The project is expected to create total (vehicular and stationary) daily emissions exceeding the daily emissions thresholds established by the SCAQMD. The City of Long Beach shall ensure that the project complies with Title 24 of the California Code of Regulations established by the Energy Commission regarding energy conservation standards. During Plan Check, the City of Long Beach Building Official shall verify that the following measures are incorporated into project building plans:	City of Long Beach Building Official	Plan Check

Mitiga	Mitigation Measures		Timing for Mitigation Measure
	• Solar or low-emission water heaters shall be used with combined space/water heater units.		
	• Double-paned glass or window treatment for energy conservation shall be used in all exterior windows.		
4.9 Tr	affic and Circulation		
4.9.1	Prior to issuance of the first grading permit, the City of Long Beach, under the direction of the Director of Public Works, shall execute an agreement with the City of Signal Hill to contribute a fair-share portion of the total costs for street improvements identified in Mitigation Measures 4.9.2 through 4.9.5. These fees shall be paid incrementally per lot or development site prior to issuance of certificates of occupancy for such structures. Fees shall be provided by the City of Long Beach Director of Public Works.	City of Long Beach Director of Public Works	Prior to issuance of grading permits
4.9.2	Atlantic Avenue at Spring Street: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall widen Atlantic Avenue to provide a separate northbound right-turn lane to proceed eastbound on Spring Street. Alternatively, in the event that needed right-of-way cannot be acquired, it is recommended that the traffic signal be modified to provide protected/permissive southbound left-turn phasing on Atlantic Avenue. Projected year 2006 p.m. peak-hour traffic volumes warrant the installation of separate left-turn phasing on Atlantic Avenue. The project's fair-share responsibility to implement this improvement totals 12.5 percent.	City of Long Beach Director of Public Works	Prior to issuance of certificates of occupancy
4.9.3	Orange Avenue at Spring Street: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall convert the existing southbound right-turn lane to provide a second through lane on Orange Avenue and restripe Orange Avenue south of Spring Street to provide two southbound departure lanes. Prior to issuance of any certificates of occupancy, the City of Long Beach shall also provide a separate eastbound right-turn lane on Spring Street to proceed northbound on Orange Avenue and modify the traffic signal per City of Signal Hill requirements. The project's fair-share responsibility to implement this	City of Long Beach Director of Public Works	Prior to issuance of certificates of occupancy

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	improvement totals 39.1 percent. Implementation of this improvement is subject to the approval of the City of Signal Hill.		
4.9.4	I-405 SB ramps at Orange Avenue: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall install a three-phase traffic signal at the I-405 southbound ramps and Orange Avenue intersection. The project's fair-share responsibility to implement this improvement totals 42.2 percent. Implementation of this improvement is subject to the approval of the City of Signal Hill and Caltrans.	City of Long Beach Director of Public Works	Prior to issuance of certificates of occupancy
4.9.5	32nd Street at Orange Avenue: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall upgrade the existing signal from a pretimed (fixed time) signal to an actuated signal. The project's fair-share responsibility to implement this improvement totals 28.0 percent. Implementation of this improvement is subject to the approval of the City of Signal Hill.	City of Long Beach Director of Public Works	Prior to issuance of certificates of occupancy
4.9.6	28th Street/Project Driveway Nos. 3 and 5: Prior to issuance of certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall install street improvements and signage restricting access to "right in/right out" at Project Driveway Nos. 3 and 5. The City of Long Beach may also install a "pork chop" in the Project Driveways to restrict the turning movements of vehicles exiting the project site as determined by the City of Long Beach Traffic Engineer. Implementation of these improvements is subject to the approval of the City of Signal Hill.	City of Long Beach Director of Public Works / City of Long Beach Traffic Engineer	Prior to issuance of certificates of occupancy
4.9.7	Orange Avenue at 28th Street/Project Driveway-No.4: Prior to the issuance of any certificate of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall install a traffic signal at the intersection of Orange Avenue and 28th Street per the City of Signal Hill requirements. Implementation of this improvement is subject to the approval of the City of Signal Hill.	City of Long Beach Director of Public Works	Prior to issuance of certificates of occupancy
4.9.8	Prior to the issuance of a grading permit, the City of Long Beach shall, under the direction of the City of Long Beach Traffic Engineer, design and implement a construction area traffic management plan. The plan shall be designed by a registered Traffic Engineer and shall address traffic control for any street	City of Long Beach Traffic Engineer	Prior to issuance of grading permits

Mitiga	ation Measures	Responsible Party	Timing for Mitigation Measure
	closure, detour, or other disruption to traffic circulation and public transit routes. The plan shall identify the routes that construction vehicles will use to access the site, the hours of construction traffic, traffic controls and detours, off- site vehicle staging areas, and parking areas for the project. The plan shall also require the City to keep all haul routes clean and free of debris including but not limited to gravel and dirt.		
4.9.9	Prior to issuance of grading permits, the City of Long Beach shall, under the direction of the Director of Public Works, complete a detailed sight distance analysis for the proposed project driveways along Orange Avenue. The sight distance analysis shall be prepared according to the City of Long Beach Zoning Code and the Caltrans Highway Design Manual standards and guidelines, and indicate limited use areas (i.e., low height landscaping), and on-street parking restrictions (i.e., red curb), if necessary. The findings of the sight distance analysis shall be included in a report subject to review and approval by the Directors of Planning and Building and Public Works, or designees.	City of Long Beach Director of Public Works	Prior to issuance of grading permits
4.9.10	Orange Avenue: In conjunction with the development of the Long Beach Sports Park, the City of Long Beach, under the direction of the Director of Public Works, shall widen and improve Orange Avenue bordering the project site in accordance with the City of Signal Hill Secondary Highway street standards and the streetscape concepts included in this EIR (Section 4.12, Aesthetics). South of Spring Street, Orange Avenue is designated as a Secondary Highway in the City of Signal Hill Circulation Element with an 80- foot-wide right-of way section. Improvements will be completed prior to issuance of any certificates of occupancy for the project site. Implementation of this improvement is subject to the approval of the City of Signal Hill. ¹	City of Long Beach Director of Public Works	Prior to issuance of certificates of occupancy
4.9.11	California Avenue: In conjunction with the development of the Long Beach Sports Park, the City of Long Beach, under the direction of the Director of Public Works, shall widen and improve California Avenue along project	City of Long Beach Director of Public Works	Prior to issuance of certificates of occupancy

¹ This improvement is not required in order to reduce a project impact, but is included in the MMRP in order to facilitate tracking of coordination and implementation.

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	frontage in accordance with the City of Signal Hill Secondary Modified Highway street standards and the streetscape concepts included in this EIR (Section 4.12, Aesthetics). South of Spring Street, California Avenue is designated as a Secondary Modified Highway in the City of Signal Hill Circulation Element with a 70-foot right-of way section. Improvements will be completed prior to issuance of any certificates of occupancy for the project site. Implementation of this improvement is subject to the approval of the City of Signal Hill. ¹		
4.10 R	ecreation		
No mit	igation is required.		
4.11 N	Dise		
4.11.1	Construction will be limited to the hours of 7:00 a.m. to 10:00 p.m. Monday through Friday in accordance with the City of Long Beach's standards. No construction activities are permitted outside of these hours or on weekends and federal holidays.	City of Long Beach Director of Planning and Building/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading and construction activities
4.11.2	The following measures are included to further reduce potential construction noise impacts on nearby sensitive receptors:a. During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.	City of Long Beach Director of Planning and Building/ Construction Contractor	Verification: Prior to issuance of grading permits Activity: Ongoing during grading and construction activities
	b. The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project		

¹ This improvement is not required in order to reduce a project impact, but is included in the MMRP in order to facilitate tracking of coordination and implementation.

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	construction.		
4.12 A	esthetics		
4.12.1	The preliminary lighting plan shall be finalized as part of subsequent refinements in site master planning prior to City authorization to construct. The plan shall be designed to prevent light spillage in excess of that which has been referenced and analyzed in this EIR. Prior to issuance of building permits, the lighting plan shall be reviewed and approved by a City of Long Beach Director of Planning and Building, demonstrating that project lighting has no more effect on off-site properties than what is described in this EIR.	City of Long Beach Director of Planning and Building	Prior to issuance of building permits
4.12.2	Prior to issuance of certificates of occupancy, a qualified lighting engineer/consultant to the City of Long Beach Department of Planning and Building shall verify that energy-efficient luminaries that control light energy are used and that exterior lighting is directed downward and away from adjacent streets and adjoining land uses in a manner designed to minimize off-site spillage. The lighting engineer/consultant shall further verify that more than 60 percent of the total light output is below the maximum candle power (center of the beam) which is directed at the field to be illuminated so that spill light and glare are minimized.	City of Long Beach Director of Planning and Building	Prior to issuance of certificates of occupancy
4.12.3	Prior to issuance of certificates of occupancy, a Building Official shall verify that the lighting plan restricts operational hours as follows: 100 percent illumination from dusk to close of sports activities; 50 percent illumination from the close of sports activities until one hour after all patrons have departed the site; and only security level lighting from one hour after closure until dawn.	City of Long Beach Building Official	Prior to issuance of certificates of occupancy
4.13 F	Dre-Demolition surveys: Prior to issuance of any demolition grading or street	City of Long	Prior to issuance of any
7.13.1	work permits for the project, pre-demolition surveys for ACMs and LBPs (including sampling and analysis of all suspected building materials) and inspections for PCB-containing electrical fixtures will be performed. All inspections, surveys, and analyses shall be performed by appropriately licensed and qualified individuals in accordance with applicable regulations (e.g., ASTM E 1527-00, and 40 CFR, Subchapter R, Toxic Substances Control Act [TSCA], Part 716). All identified ACMs, LBPs, and PCB-containing electrical fixtures	Beach Department of Public Works/ Department of Human and Health Services	demolition, grading, or street work permits

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	shall be removed, handled, and properly disposed of by appropriately licensed contractors according to all applicable regulations during demolition of structures (40 CFR, Subchapter R, TSCA, Parts 745, 761, 763). Air monitoring shall be completed by appropriately licensed and qualified individuals in accordance with applicable regulations both to ensure adherence to applicable regulations and to provide safety to workers and the adjacent community (e.g., SCAQMD). The City of Long Beach Public Works Department shall provide documentation (including all required waste manifests, sampling and air monitoring analytical results, etc.) to the Department of Human and Health Services that abatement of any ACMs, LBPs, or PCB containing electrical fixtures identified in these structures has been completed in full compliance with all applicable regulations and approved by the appropriate regulatory agency(ies) (40 CFR, Subchapter R, TSCA, Parts 716, 745, 761, 763, 795).		
4.13.2	 Health and Safety Plan: Prior to issuance of any demolition, grading, or street work permits for the project, a Health and Safety Plan shall be prepared by the City of Long Beach or its contractor in coordination with the LARWQCB for all workers in accordance with federal, State, and local regulations for use during construction. The Health and Safety Plan shall include: A summary of all potential risks to construction workers, monitoring programs, maximum exposure limits for all site chemicals, and emergency procedures The identification of a site health and safety officer Methods of contact, phone number, office location, and responsibilities of the site health and safety officer be contacted immediately 	City of Long Beach Community Development Department/ Executive Officer of the LARWQCB	Prior to issuance of any demolition, grading, or street work permits
	 by the contractor should any potentially toxic chemical be detected above the exposure limits, or if evidence of soil contamination is encountered during site preparation and construction Specification that the City of Long Beach Fire Department is to be potified 		
	- Specification that the City of Long Beach The Department is to be notified		

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	if evidence of soil contamination is encountered		
	• Specification that an on-site monitor will be present to perform monitoring and/or soil and air sampling during grading, trenching, or cut or fill operations		
	The Health and Safety Plan is to be approved by the LARWQCB and provided to all contractors on the project site. The Health and Safety Plan is required to be amended as needed if different site conditions are encountered by the site health and safety officer.		
4.13.3	SWPPP: Prior to issuance of a grading permit, the construction contractor shall submit a SWPPP to the City that shall include the BMP types listed in the <i>California Stormwater BMP Handbook—Construction Activity</i> . The SWPPP shall be prepared by a civil or environmental engineer and will be reviewed and approved by the Director of Public Works in accordance with Mitigation Measure 4.4.1	City of Long Beach Director of Public Works / Construction Contractor	Prior to issuance of grading permits
4.13.4	Soil Management Plan: Prior to issuance of any demolition, grading, or street work permits for the project, the procedures to be followed in the event discolored and/or odiferous soil is discovered will be provided in a site-specific Soil Management Plan. The Soil Management Plan is to be approved by the LARWQCB and provided to all contractors on the project site.	Executive Officer of the LARWQCB / Construction Contractors	Prior to issuance of any demolition, grading, or street work permits
4.13.5	Emergency Action Plan: Prior to issuance of any demolition, grading, or street work permits for the project, an Emergency Action Plan will be prepared by the City addressing responsible actions required in the event of damage to the operating oil wells during site grading activities. This plan is required to be approved by the City of Long Beach Fire Chief prior to initiating grading activities. The Emergency Action Plan is to be provided to all contractors on the project site.	City of Long Beach Fire Chief	Prior to issuance of any demolition, grading, or street work permits
4.13.6	Methane testing is required to reduce or eliminate the identified potential impacts resulting from the possible presence of methane on the site in the postgrading condition: Prior to issuance of any building permits for the project, but not before 30 days after rough grading, methane testing will be performed when the project site is at final rough grade. Soil gas probes shall extend	City of Long Beach Building Official	Prior to issuance of any building permits for the project but not before 30 days after rough grading

Mitiga	tion Measures	Responsible Party	Timing for Mitigation Measure
	approximately five feet below the cut/interface at each fill testing location, and in areas of cut, the depth of the probes shall be 20 feet bgs. Prior to issuance of any building permit or authorization to construct hardscape, the Building Official shall review and approve a report by a registered geologist reporting methane testing results and recommendations. Based on the results of this additional methane testing, mitigation, if warranted to keep the risk of explosion to within acceptable risk parameters (more than likely consisting of a passive venting system), will be required to be implemented prior to construction of each structure and areas of hardscape.		
4.13.7	Prior to issuance of grading permits, the project proponent shall demonstrate to the satisfaction of the Building Official and the City of Long Beach Fire Chief that adequate clearance and access to idle and active wells on the project site will be maintained for mobile rigs and well workover equipment, or alternatively that the well operations have been shut down temporarily and in accordance with applicable DOGGR and City regulations in order to allow for safe grading operations.	City of Long Beach Fire Chief/Building Official	Prior to issuance of grading permits
4.13.8	The City of Long Beach is required to perform soil and air sampling during grading, trenching, and cut or fill operations, and to provide an on-site, third-party monitor of these efforts. The third-party monitor shall be allowed to inspect the monitoring and testing activities on-site as well as the records and test results. The purpose of the monitoring and testing activities is to ensure that surface soil conditions, conditions of exposed soils, and air conditions are safe and acceptable for on-site workers as well as for residents and workers of properties adjacent to the site. The third-party monitor is also responsible for monitoring compliance with any mitigation related to dust control, as included in Section 4.8, Air Quality. The third-party monitor will be responsible for preparing and submitting weekly activity reports and testing results to the City of Long Beach Building Official.	City of Long Beach Building Official	Verification: Prior to issuance of grading permits Activity: Ongoing during grading or earthmoving activities
4.13.9	Prior to issuance of building permits, the project applicant shall provide plans and specifications to the Building Official and the City of Long Beach Fire Chief demonstrating the following: all active wells shall be provided with safety shutdown devices. All active wells and associated equipment within the project site shall be enclosed by a minimum six-foot-high fence, to be	City of Long Beach Fire Chief/Building Official	Prior to issuance of building permits

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
 configured to allow necessary servicing. Suitable gates, capable of allowing passage of large workover equipment, shall be provided in the enclosures. Each enclosure shall be graded to ensure containment of potential spills within the enclosure. To restrict access, the use of climbable landscaping around the perimeters of the enclosures shall be avoided. The project proponent shall demonstrate to the satisfaction of the Fire Chief (or his/her representative) that suitable safety and fire protection measures (i.e., setbacks) have been incorporated into the project design (see Mitigation Measure 4.13.11). 4.13.10 Subject to verification by the Building Official, the City shall require that all new or relocated pipelines on or adjacent to the project site be equipped with check valves in a manner that reduces the risk of pipeline leaks on site, prior to the issuance of building permits for the proposed project. 	City of Long Beach Building Official	Prior to the issuance of building permits
4.13.11 Fire Safety Study: Prior to issuance of grading permits, the City or its contractor will prepare a fire safety study of all of the operating oil wells, proposed building setbacks, and site design to the satisfaction of the Fire Chief and Building Official. The purpose of the study is to determine the base level of protection that the CFC provides and recommend alternative safety measures. The alternative safety measures will provide the nonconforming distance requirements with an equal or greater level of safety as prescribed by the Code. The safety measures may include:	Chief of the Long Beach Fire Department/ Building Official	Prior to issuance of grading permits
• Install an in-ground concrete cellar box around oil wells in conjunction with the installation and maintenance of one-inch-thick steel plate covers on top of the cellar box with a maximum nine-square-foot opening to permit penetration of the wellhead. The installation of a float-controlled automatic shut-off switch for the well pump is also recommended.		
• Use exterior, well-facing walls of rated construction and limited or protected openings to protect the buildings and occupants.		

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
 Openings and/or exterior walls may be protected by an open-head (deluge) water curtain installed in accordance with the requirements of the City of Long Beach (City). Please note that the deluge water curtain system should be installed at the exterior of the building directly beneath the eaves. The sprinkler system should comply with applicable standards and other requirements of the City, and is intended to cool the wall of the structure to provide protection from an adjacent fire exposure. Sprinklers for this application should be wax coated to minimize corrosion and should be installed in accordance with the manufacturer's listing, but not to exceed a 6-foot spacing. In addition, the sprinklers should be connected to an approved alarm bell to provide occupant notification. Heat detectors (135° or similar) are requirements to activate the deluge water curtain system. This will require separate submittal(s) to the Long Beach Fire Department by a licensed installing contractor. 		
• Maintain daily operator surveillance of oil well sites to assist the operator to detect potential problems with the active wells.		
• Code complying clearances of weeds and debris must be maintained for fire prevention, as well as for well maintenance.		
• Shield oil wells with a non-combustible barrier at least six feet in height between the respective oil wells and the structures, if necessary. The barrier may consist of any noncombustible materials including but not limited to concrete masonry unit (CMU) walls, metal panels, or other approved assemblies.		

Mitigation Measures	Responsible Party	Timing for Mitigation Measure
 Maintenance of an area 25 feet from wells that is free of source of ignition, including but not limited to dry weeds, grass, rubbish, or other combustible material. All nonactive wells will be abandoned, or reabandoned if necessary, in accordance with DOGGR standards. The study will quantify the equivalent level of safety offered by the current applicable code (2001 CFC) in order to establish appropriate benchmarks. These benchmarks will be used when determining appropriate mitigation measures for the non-conforming building separation distances. Specifically, it is the intent to provide an equivalent or greater level of safety to that intended by the code for actual hazards associated with the location of the structures. 		

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