TABLE OF CONTENTS

4.12 AESTHETICS 4.12-1
4.12.1 INTRODUCTION 4.12-1
4.12.2 EXISTING ENVIRONMENTAL SETTING 4.12-1
4.12.3 METHODOLOGY 4.12-11
4.12.4 THRESHOLDS OF SIGNIFICANCE CRITERIA 4.12-11
4.12.5 IMPACTS AND MITIGATION MEASURES 4.12-12
4.12.6 CUMULATIVE IMPACTS 4.12-38
4.12.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION 4.12-38

FIGURES

Figure 4.12.1: View Location Map 4.12-3
Figure 4.12.2: Existing Visual Character 4.12-5
Figure 4.12.3: Project Site Views (East) 4.12-7
Figure 4.12.4: Project Site Views (West) 4.12-9
Figure 4.12.5: California Avenue Streetscape Development Options 4.12-17
Figure 4.12.6: Orange Avenue Streetscape Development Options 4.12-19
Figure 4.12.7: Cross Section Location Map 4.12-21
Figure 4.12.8: Cross Sections G-G and F-F 4.12-23
Figure 4.12.9: Cross Sections A-A and B-B 4.12-25
Figure 4.12.10: Cross Sections C-C and D-D 4.12-27
Figure 4.12.11: Conceptual Lighting Plan for Softball Diamonds 4.12-31
Figure 4.12.12: Spill Light at Maximum Footcandles 4.12-33

TABLES

Table 4.12.A: Footcandle Levels from Common Light Sources 4.12-30

4.12 AESTHETICS

4.12.1 INTRODUCTION

This section provides a discussion of the existing visual and aesthetic resources on the project site and in the surrounding area as well as analysis of potential impacts from implementation of the proposed project. A field survey of the project site and the immediately surrounding area (areas within view of the site) was conducted to evaluate the existing setting and develop an informed assessment of the potential effects of the proposed project on visual and aesthetic resources. The City of Long Beach's Strategic Plan was also reviewed for applicable goals and policies.

4.12.2 EXISTING ENVIRONMENTAL SETTING

Existing Visual Character in the Vicinity of the Project Site

The project site is located within the Los Angeles coastal plain at the northwest extremity of a ridge-like topographic high that extends for approximately three miles across the Cities of Signal Hill and Long Beach. This topographic high reaches a maximum elevation of 340 feet at the crest of Signal Hill to the southeast. It is part of a larger northwesterly-trending alignment of low hills and mesas that extend across the Los Angeles coastal plain between Newport Beach and Beverly Hills.

The proposed project site is located south of Spring Street and is bound by California Avenue on the west, Orange Avenue on the east, and the Long Beach Municipal and Sunnyside Cemeteries on the south. The surrounding area is composed primarily of one- and two-story commercial and industrial land uses. Properties surrounding the project site include vacant land and various industrial and commercial uses. Commercial developments, storage tanks, and a privately operated golf driving range are located south of the cemeteries, across Willow Street. Located to the north of the project site, across Spring Street, are commercial and industrial uses, including a multi-tenant office building, crane storage, and a retail camper outlet.

Signal Hill Petroleum, Inc. (SHPI) operates a petroleum processing and gas production facility east of the project site. Other land uses east of the project site include commercial offices and additional oil extraction wells. Warehouses, storage tanks, vacant land, and additional extraction wells are located west of the project site. A Zone Change has been proposed for the west side of California Avenue (in the City of Signal Hill) from Commercial Office and Commercial General Zoning to General Industrial. The General Industrial zoning designation provides opportunities for heavy industrial uses that can coexist with adjacent light industrial and commercial development.

Figure 3.2 in Section 3.0, Project Description, is an aerial photograph showing the existing project site and surrounding land uses. Photographs that show the existing visual character of the project site and the surrounding area are shown in Figure 4.12.2, and a view location key map, Figure 4.12.1, shows the location of the representative views or the point from which the photograph was taken.

Although the project site is located entirely within the City of Long Beach, the City of Signal Hill is adjacent to the site along Orange and California Avenues and across a portion of Spring Street. The vacant areas near the project site are the largest single vacant land areas remaining in the City of Signal Hill. The areas surrounding the project site in Signal Hill are designated in the City of Signal Hill General Plan for general commercial and industrial uses. Also, the City of Signal Hill's General Plan Petroleum Production overlay district identifies land east, west, and north of the project site in Signal Hill as areas characterized by petroleum production activity. Section 4.1 of this document describes existing and planned development in the vicinity of the project site in both the City of Signal Hill and the City of Long Beach.

Existing Visual Character of the Project Site

The proposed project site is industrial along the periphery, with vacant areas and oil-producing wells interspersed throughout. The site is surrounded by urbanization in most directions. Photographs taken on the project site are shown on Figures 4.12.3 and 4.12.4 (refer to Figure 4.12.1 for the location from which the photograph was taken). The project site is predominantly comprised of disturbed, developed land with rolling topography and scattered undeveloped areas of sparse grassland, ruderal vegetation, and isolated pockets of mature non-native trees in the site interior. The dominant natural visual feature on site is the topographic high point on Exxon Hill (Figure 4.3.1). The Hill is located in the southeast quadrant of the project site and originally extended to an elevation of approximately 145 feet. The surface elevation of the Hill is approximately 135 feet, with 10 feet having been removed some time in the past. Views from Exxon Hill (not legally accessible to the public) include sweeping views across the City to the downtown area, the Port of Long Beach to the southwest, and the San Gabriel Mountains to the north. Prominent man-made features include operating oil wells, old storage tanks, a natural gas processing plant, and other oil production related infrastructure scattered over the majority of the project area, as illustrated in site photographs and on Figure 3.2, Aerial Photograph.

Existing land uses on the site include a County of Los Angeles detention basin and small unattached buildings and other improvements associated with the leaseholders on the City's land. The Lomita-Petrolane compressor building near the corner of Spring Street and Orange Avenue, a concrete and asphalt recycling business along California Avenue, a sandblasting business along Orange Avenue, a body shop in the northwestern corner of the parcel at the corner of Spring Street and California Avenue, and an auto tow yard in the center of the project site near the concrete and asphalt recycling business occupy the majority of the site. Structures are generally low profile (one story) with the exception of the compressor building, which has apparatus reaching approximately 35 feet in height. Several of the structures on site are generally run down and visually unattractive, including the Lomita-Petrolane compressor building in the northwest quadrant of the project site. There are remnants of previous existing structures in the western portion of the site where foundation pads and partially demolished concrete walls can be seen. The site is also characterized by a high level of ground disturbance resulting from oil wells and oil storage tanks, the installation of buried oil lines, slope reinforcement, bulldozed roads, and other oil drilling-related infrastructure throughout the site.

The existing project site is a partially operating oil field containing 46 wells (see Figure 4.1.2). There are two additional wells located adjacent to the project site. Of the 48 wells, 15 are currently producing oil. The remaining wells are currently either idle or abandoned. All of the existing operating oil pumps are enclosed by fences. Since 1921, oil field operations on site have included oil well drilling, production, and associated support activities. Derricks were historically used for oil

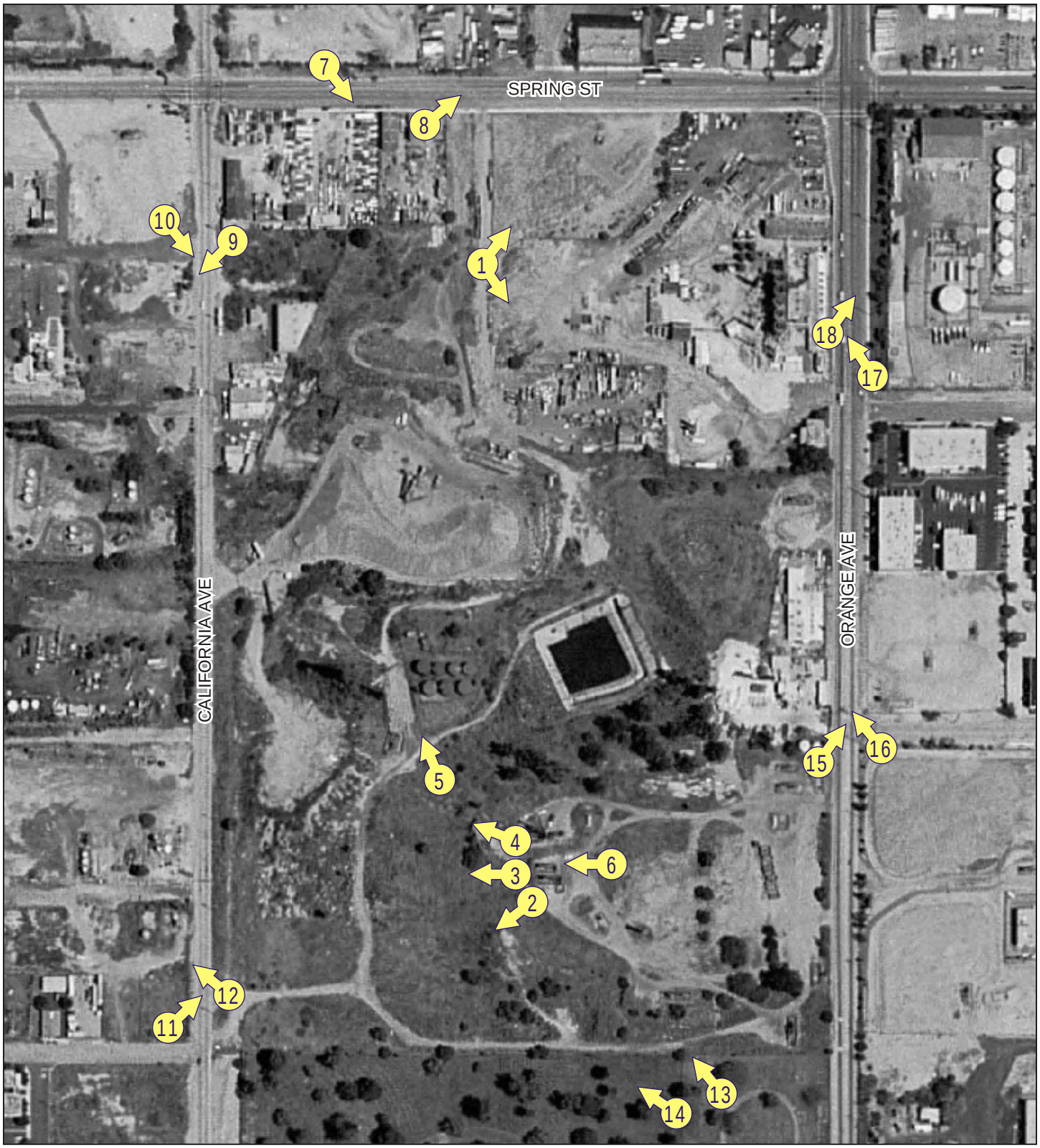

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FIGURE 4.12.1

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NO SCALE
SOURCE: EAGLE AERIAL.

Long Beach Sports Park
View Location Map

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Photo 7 - Spring Street looking southeast.

Photo 8 - Spring Street looking northeast.

Photo 9 - California Avenue looking southwest.

Photo 10 - California Avenue looking southeast.

Photo 11 - California Avenue looking northeast.

Photo 12 - California Avenue looking northwest.

Photo 13 - View north from cemetery.

Photo 14 - View northwest from cemetery.

Photo 15 - Orange Avenue looking northwest.

Photo 16 - Orange Avenue looking northwest.

Photo 17 - Orange Avenue looking southwest.

Photo 18 - Orange Avenue looking northeast.

LSA

FIGURE 4.12.2

Long Beach Sports Park

Existing Visual Character

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Photo 1 - Panorama looking east across site.

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FIGURE 4.12.3

Long Beach Sports Park

Project Site View (East)

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Photo 2 - View southwest from hilltop on-site.

Photo 3 - View northwest from hilltop on-site.

Photo 4 - View west from hilltop on-site.

Photo 5 - View of old storage tanks looking northwest on-site.

Photo 6 - Operating oil wells on hilltop.

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FIGURE 4.12.4

Long Beach Sports Park

Project Site View (West)

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pumping, but beam pump[1] and submersible pump wells[2] are currently used on active wells. See Table 4.1.A for a summary of the existing wells on the site. The locations of existing wells are depicted in Figure 4.1.2.

In summary, the project site has experienced extensive visual alteration over many decades. Current businesses and oil drilling activities dating from the 1920s have physically altered the entire project site so that no portion of the site is in its original natural state. The existing aesthetic quality can be described as visually degraded and disturbed by prior human activities. Although the City of Long Beach owns most of the property, the project site is not open to the public. There are no public viewpoints on the project site. General vistas of the project area are available to passing motorists from surrounding streets, and portions of the southern area of the site can be viewed from the adjacent cemeteries.

4.12.3 METHODOLOGY

The project proposes to change the land use of the site from predominantly undeveloped land to commercial recreation uses and commercial development. The potential exists for impacts to the viewsheds of surrounding areas, including adjacent historic buildings and cemeteries, as well as to motorists passing through the area on surrounding streets, including Spring Street, Orange Avenue, and California Avenue due to landform alteration, land use intensification, and potential view obstruction.

This section assesses the aesthetic compatibility of the proposed project with the surrounding area and potential impacts to any sensitive viewers that may exist in the project vicinity. The potential aesthetic impacts of the proposed project are further evaluated considering such factors as the scale, mass, proportion, orientation, and landscaping/buffering associated with the design of the proposed project.

Sensitive viewers are generally associated with land uses such as residential, school, church and passive open space/recreation uses. In the project vicinity, the majority of surrounding land uses would not be considered sensitive viewers. Visitors to the adjacent cemeteries to the south of the project site could be considered sensitive viewers, although such exposure would be limited and episodic in nature. Distant views of the site may be available from portions of Signal Hill as well.

4.12.4 THRESHOLDS OF SIGNIFICANCE CRITERIA

The project will, at a minimum, be considered to have a significant effect related to aesthetics if it can be reasonably argued that any of the following may occur:

- Adverse effect on a viewshed from a public viewing area (such as a park, scenic highway, roadway, or other scenic vista);

---

1 Beam pump wells are wells whose fluid is being lifted by rods and pumps activated by electric motor-driven beam pump rig units.

2 Submersible pump wells are wells whose fluid is being pumped by an electrical pump that is placed below the level of fluid in that well.

- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantial degradation of the existing visual character or quality of the site and its surroundings; or
- Creation of a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Visual impacts are considered potentially significant where they would contribute to a substantial, demonstrable degradation of the existing visual character or quality of a site. This determination is based on several criteria, including observer position, views, and changes in the characteristics of the views. The key factor is the extent to which the project is compatible with the character, scale, bulk, and form of surrounding development.

Light impacts are generally considered an annoyance, while impacts from glare can sometimes present safety hazards. For the purposes of this EIR, light and glare are considered to have a significant impact if the project would create substantial glare directed toward surrounding streets or if project lighting would substantially exceed established lighting standards typical in the area. It should be noted that the Long Beach Municipal Code does not contain any lighting standards.

4.12.5 IMPACTS AND MITIGATION MEASURES

As the following discussion describes, the proposed project will substantially alter the existing visual character of the project site and increase the intensity of on-site activities. However, changes to a viewshed are not by definition adverse or significant. There must be an additional finding that the project degrades or damages a viewshed for an impact to be significant and adverse, in accordance with the thresholds defined above.

The first visual impact will be the demolition of existing tenant structures in accordance with lease agreements. Only demolition of historic structures requires documentation. The second visual impact will be the result of project grading—drastically changing what the site looks like.

As Figure 3.4 illustrates, the majority of the site will be covered in sports fields and parking areas after project implementation. Various structures are also planned, including a golf training facility, two soccer pavilions, and three concession buildings. The proposed Sports Park will include six replica softball/baseball fields, four soccer fields, volleyball courts, a skate park, and miscellaneous support facilities. The project also includes development of a youth golf training center with a driving range, chip-and-putt putting green, and ancillary golf facilities. In the northern portion of the project site, an area will be reserved for future commercial development.

Proposed structures would be described as modern architecture. The facilities will use a variety of materials and unobtrusive earth-tone colors. Buildings will not exceed a 30-foot height limit. The Sports Park will be fenced with 42-inch fences around the parking areas and an eight-foot fence around the remainder of the site, with additional fences and netting around the ball fields and golf driving area ranging from 24 to 42 feet in height. A landscaped setback will surround the entire site outside the proposed fencing.

The layout of the recreation uses and parking areas reflects the major physical features of the site, including the Cherry Hill Fault and topographic and geologic variations across the site. Grading and retention requirements, and the simultaneous continued operation of 19 (17 on site and 2 adjacent) oil wells on or in close proximity to the project site have also influenced the conceptual site plan (Figure 3.4).

The proposed landscape design includes approximately 900 canopy trees and palms throughout the project site and the parking areas, intended to create a sense of place, provide shade, and offer visual screening. For example, shade trees will be used in the parking areas; palms are incorporated into the main pedestrian plaza areas; accent trees will be planted at entrances and driveways; and evergreens will provide visual screening of the sports fields.

The evergreen trees are to be located at the perimeter of the outfield fence at each ball field and will act as a screen and visual backdrop to the spectator fencing improvements. They will also be used in addition to the perimeter fencing around the entire project boundary to provide privacy and to create a park-like setting. Along the south edge of the property, a native vegetation area with isolated patches of dense shrubs will be planted. Figure 3.8 depicts the concept landscape plan for the project.

The following aesthetic impacts that could result from implementation of the proposed project were evaluated and considered less than significant.

Less Than Significant Impacts

Effects on Scenic Vistas. Scenic vistas are defined to be greater than one mile from a receptor and consist of horizon line views. As has been described, all areas surrounding the project site are of a land use character similar to the project area and thus are not considered sensitive receptors. There are no aesthetic or visual resources located on the project site or in the surrounding vicinity that have been designated in any City or other agency policy or plan. The project site, as previously noted, can be considered visually degraded in its existing state.

The proposed project will substantially alter the visual character of the site by providing for the removal of dilapidated buildings and other signs of deterioration and blight. Therefore, the effect of the project on any scenic vistas that may exist from distant off-site areas is not considered adverse. The proposed plan also incorporates extensive perimeter landscape setbacks along street frontages as well as internal landscaping around sports facilities and in parking lots, which would act to visually screen the site and planned facilities from horizon line views that may exist in the higher elevations of more distant surrounding areas. As discussed in the following section, varied site topography will also limit the extent of facilities visible from surrounding areas depending on the vantage point of the viewer. The majority of the project area will also be devoted to playing fields. Few structures are planned, and none will exceed 30 feet in height. Project design sensitive to surrounding uses and topography will alleviate any potential impacts to scenic vistas, and no mitigation measures are considered necessary.

Damage to a Scenic Resource. There are no City or other agency designated scenic resources or unique physical features such as rock outcroppings or designated historic structures on the project site, and no scenic highways are located in the project vicinity.

Relatively natural features remaining on the project site include scattered pockets of trees that are ornamental escapees from nearby landscaping and Exxon Hill, the topographic high point on site. The majority of the project site has been previously disturbed by grading associated with railroad, flood control, and oil facilities and other business activities. Vegetation consists of introduced and nonnative species. These trees are generally very mature and in relatively good health and contribute positively to the existing visual character of the otherwise visually deteriorated conditions on site. All existing trees would be removed with the implementation of the proposed project due to grading and site preparation requirements. Their removal would be minimized, however, by replacement with new and more intense landscaping proposed by the project.

The high point on the site, Exxon Hill, is not a designated scenic resource. Although views of surrounding areas and downtown Long Beach are available from this portion of the site, they are not publicly accessible or designated as a public viewpoint. Grading required for the project will alter the elevation of the hill; however, views of surrounding areas will continue to be available from vantage points in the Sports Park parking lot and a plaza near the batting cages. Therefore, project impacts related to alteration of Exxon Hill are considered less than significant.

One historic building is located on site: the Lomita-Petrolane Compressor Building. The historic Lomita-Petrolane office building is located on an outparcel adjacent to the project site. A historic landmark cemetery is also located adjacent to the project site. Both the compressor building and the office building have been previously identified as eligible for listing on the National Register for Historic Places. Neither structure has been designated a historic landmark by the City of Long Beach. The Compressor Building will be demolished as part of project implementation, resulting in a significant adverse project impact related to Cultural Resources. A detailed discussion of historical resources and mitigation measures is contained in Section 4.6, Cultural Resources. As discussed above, no adverse visual impacts are expected in relation to the cemetery.

The Lomita-Petrolane Office Building's surroundings and views of the building will be affected by project implementation. The development of the Sports Park and demolition of the Compressor Building will alter the views from the Office Building. Views from the Office Building are not currently scenic and are not protected public scenic views. The existing views from the building are somewhat limited by its location on a sloping site where the ground level adjacent to the project site is substantially below street grade. The proposed project will change the overall visual setting of the area from one characterized by oil extraction activities to one of active recreation and office uses. In addition, construction of a perimeter wall around the baseball/softball fields will further alter the views from the building.

However, these changes will not be adverse nor will they result in substantial damage to a designated scenic resource. Changes to the views from the Office Building will be substantial, but not adverse, because the overall improvement of the site from the current blighted condition to a recreational facility has a beneficial effect. As a result, there is no significant impact and mitigation measures are not necessary.

Degradation of the Existing Visual Character or Quality of the Site and Its Surroundings. Implementation of the proposed project would remove the deteriorated conditions that presently exist

on-site as a result of past and present land uses. As described in preceding sections, the proposed project would incorporate landscape measures that would minimize any potentially adverse effects on the visual character and quality of the project site. Although the majority of the site has been previously disturbed and contains little native vegetation, it may still offer some visual relief to the surrounding urban area in its existing condition.

Site preparation for the proposed project would require the removal of approximately 32,180 cubic yards of stockpiled materials on site and substantial grading (700,970 cubic yards of cut and 604,290 cubic yards of fill). Approximately 64,500 cubic yards of soil would be exported. Although the proposed project would alter the existing topography and intensity of development on most of the site and would substantially change the visual character of the site, these changes are not considered adverse relative to the existing conditions on site.

The following sub-sections address changes in edge conditions from foreground vantage points along adjacent streets and the cemeteries to the south of the project site. The project site is not open to the public, and no designated public viewpoints would be affected by implementation of the proposed project. Aesthetic impacts would be greatest to those receptors with unobstructed views in closest proximity to the project site. General vistas of the project area are available to passing motorists from surrounding streets, and portions of the southern area of the site can be viewed from the adjacent cemeteries.

As stated above, the project site will be screened from surrounding areas by extensive landscaping. Figures 4.12.5 and 4.12.6 provide development options (Condition 1: With Parkway and Condition 2: Without Parkway) for California and Orange Avenues. As the figures show, the proposed project includes the development of sidewalks along California and Orange Avenues. Areas between the fence and the sidewalk will be landscaped along the entire perimeter of the project site, and parkways will be installed where space permits. To allow for the installation of parkways (trees in street rights-of-way), the sidewalk will curve in (toward project site fencing) where sufficient space for parkways exists and curve out (away from project fencing) to allow for landscape setbacks where sufficient space for parkways does not exist. The setback and parkway landscaping will screen the project site from the public on California and Orange Avenues and simultaneously provide motorists with an aesthetically pleasing entrance to a recreational facility.

Visitors to the adjacent cemeteries to the south of the project site are considered sensitive viewers—usually those viewers associated with land uses such as residential, school, church, and passive open space/recreation—although such exposure would be limited and episodic in nature. In the project vicinity, the majority of surrounding land uses would not have what are considered sensitive viewers.

The figures referred to below are cross sections of the project site showing changes in on-site topography. Figure 4.12.7 provides a cross section location map.

Views from Spring Street, Orange Avenue, and California Avenue. As illustrated in Cross sections G-G and F-F on Figure 4.12.8, two baseball diamonds are planned along the Spring Street frontage. The diamonds will be located at elevations ranging from approximately 15 feet above Spring Street near the corner of Orange Avenue to approximately 8 feet below to the west

along Spring Street with outfield areas located adjacent to the street. A service vehicle access road and perimeter landscape screening would separate the fields from the street. Cross sections also illustrate the changes in landform that would occur and the resulting edge conditions.

The Orange Avenue project frontage would include baseball diamonds at the north end near Spring Street, with parking lots and the golf driving range located toward the southern boundary, as illustrated in Figure 3.4, Conceptual Site Plan. Cross sections A-A through D-D (Figures 4.12.9 and 4.12.10) illustrate the changes in landform that would occur along Orange Street and the resulting edge conditions. Planned facilities generally slope away from Orange Avenue. Parking areas and other facilities would also be screened by perimeter as well as internal landscaping.

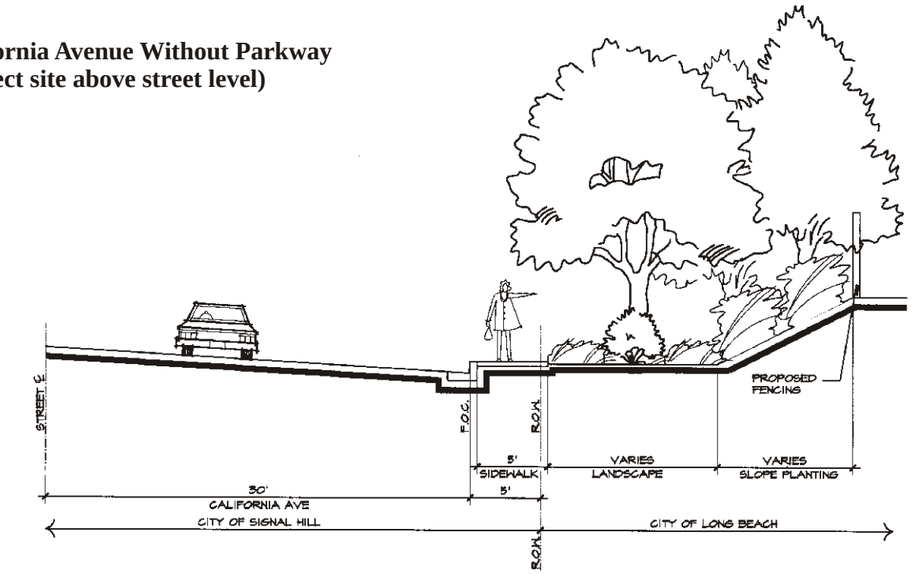
Cross sections A-A through D-D (Figures 4.12.9 and 4.12.10) also illustrate the changes in landform that would occur along California Avenue. Facilities that would be located on this frontage include soccer fields and baseball diamonds. The planned soccer fields would vary from approximately six to eight feet below street grade, and baseball fields would vary from approximately 12 to 21 feet above street grade. A service vehicle access road and perimeter landscape screening would separate the fields from the street. Perimeter landscaping will also extend along the planned soccer fields.

As previously described, both existing and planned land uses along these adjacent street corridors are mixed commercial and industrial uses and are not considered sensitive viewers. Figure 4.12.2 illustrates the character of uses along these streets. The proposed project would be different but compatible with the existing visual character of surrounding development or degrade the visual quality of the area. Project design elements sensitive to the surrounding area, including directional lighting and landscaping, reduces potential impacts to the visual setting, and no mitigation measures are considered necessary.

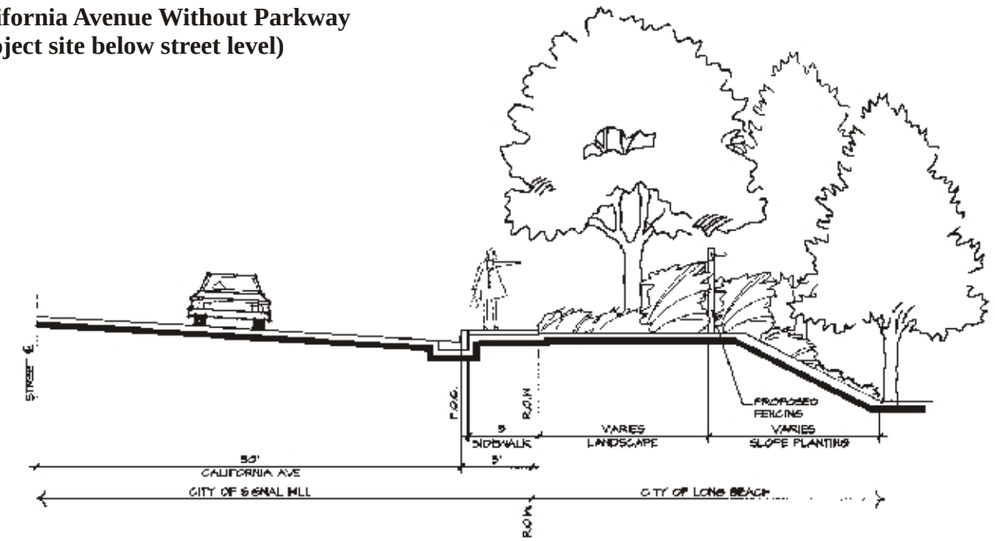
Motorists traveling along Spring Street, Orange Avenue, or California Avenue would primarily experience a landscaped streetscape after project implementation. The current visual character along these streets is not visually appealing, as illustrated in the Site Photographs. No adverse impacts to views experienced by motorists are anticipated. Project design features will act to diminish any potential impacts to the visual setting, and no mitigation measures are considered necessary.

Views from the Sunnyside and Long Beach Municipal Cemeteries. As previously noted, visitors to these cemeteries could be considered sensitive viewers. As Figure 4.12.2 illustrates, operating oil wells are visible from the adjacent cemetery. A portion of the property line abutting the cemetery has a concrete wall that screens the southwest portion of the project site from the adjacent cemetery. Soccer fields and a golf driving range are planned along the south property line. Cross sections E-E through G-G (Figure 4.12.8) illustrate the changes in landform that are planned along the property line in proximity to the cemeteries. Cross section D-D also provides a profile extending from Orange Avenue to California Avenue through the proposed sports facilities.

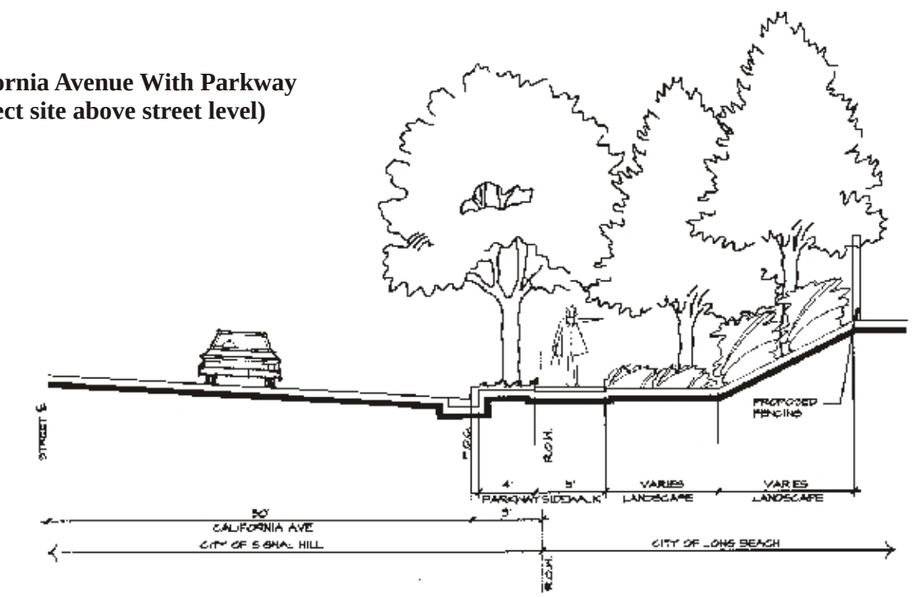
California Avenue Without Parkway
(project site above street level)



California Avenue Without Parkway
(project site below street level)



California Avenue With Parkway
(project site above street level)



California Avenue With Parkway
(project site below street level)

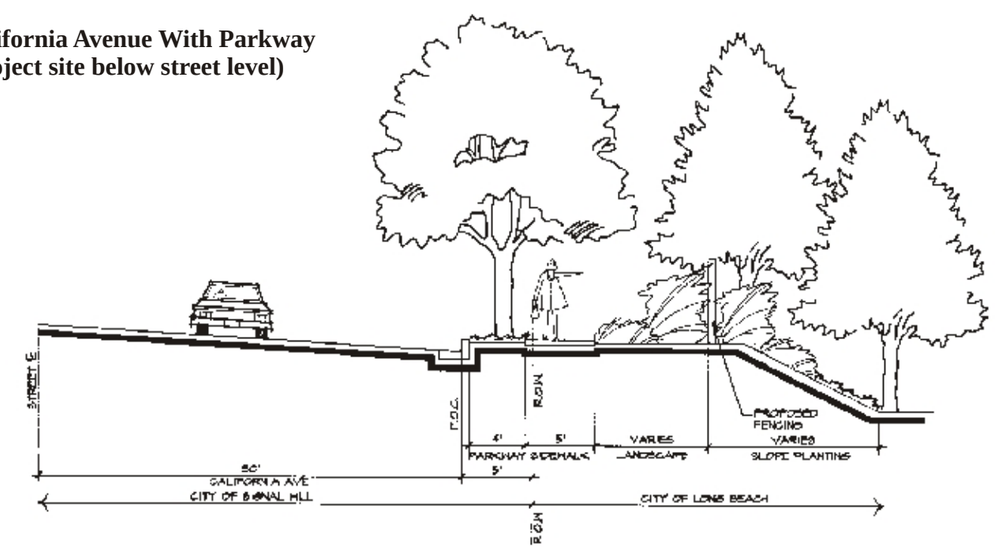


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FIGURE 4.12.5

ABBREVIATIONS
R.O.W. RIGHT OF WAY
F.O.C. FACE OF CURB

Long Beach Sports Park
California Avenue

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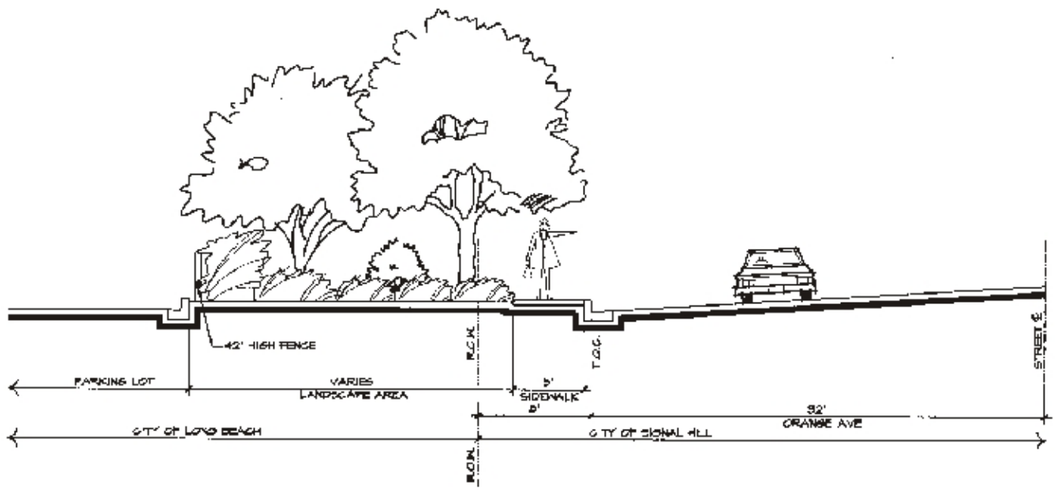
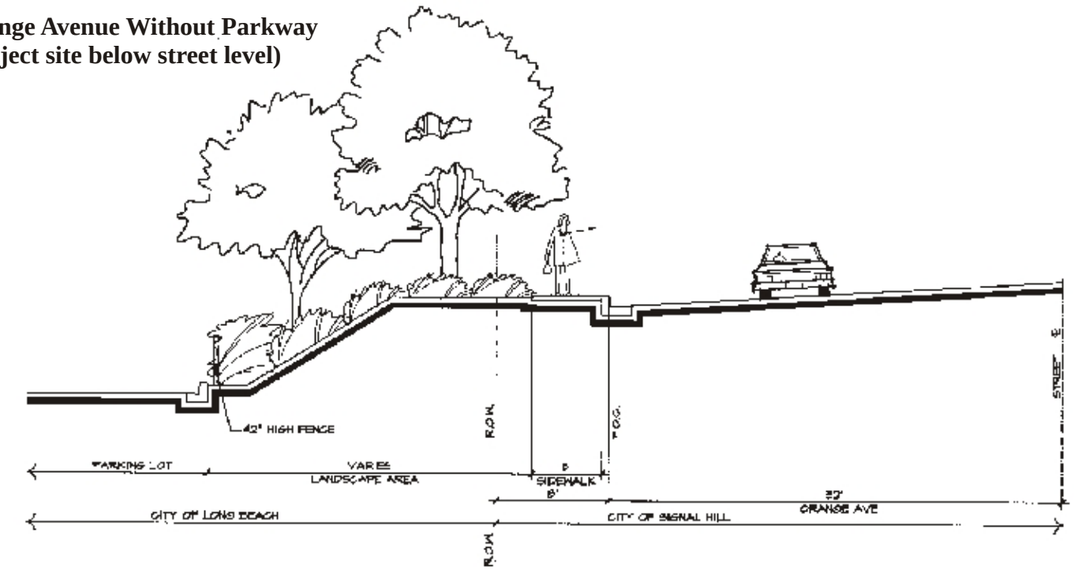
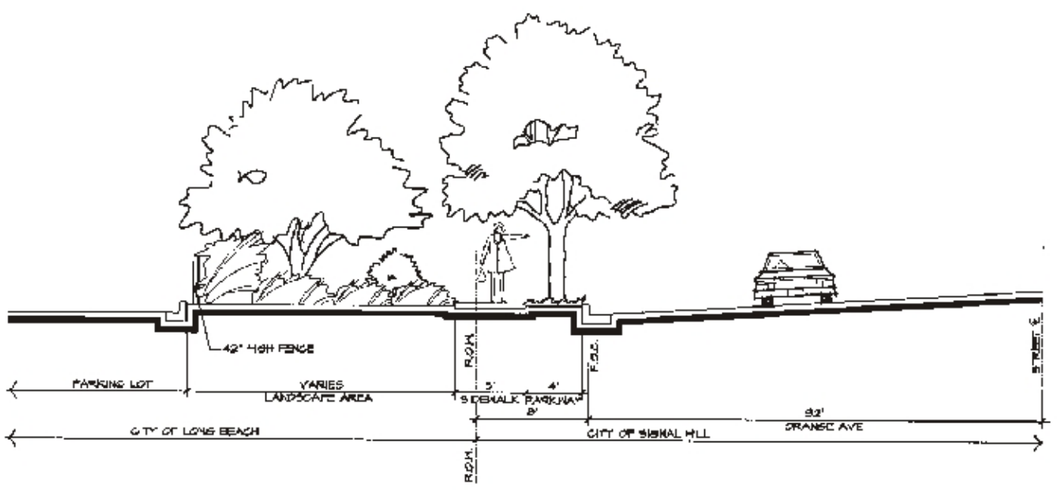
Orange Avenue Without Parkway
(project site above street level)



Orange Avenue Without Parkway
(project site below street level)



Orange Avenue With Parkway
(project site above street level)



Orange Avenue With Parkway
(project site below street level)

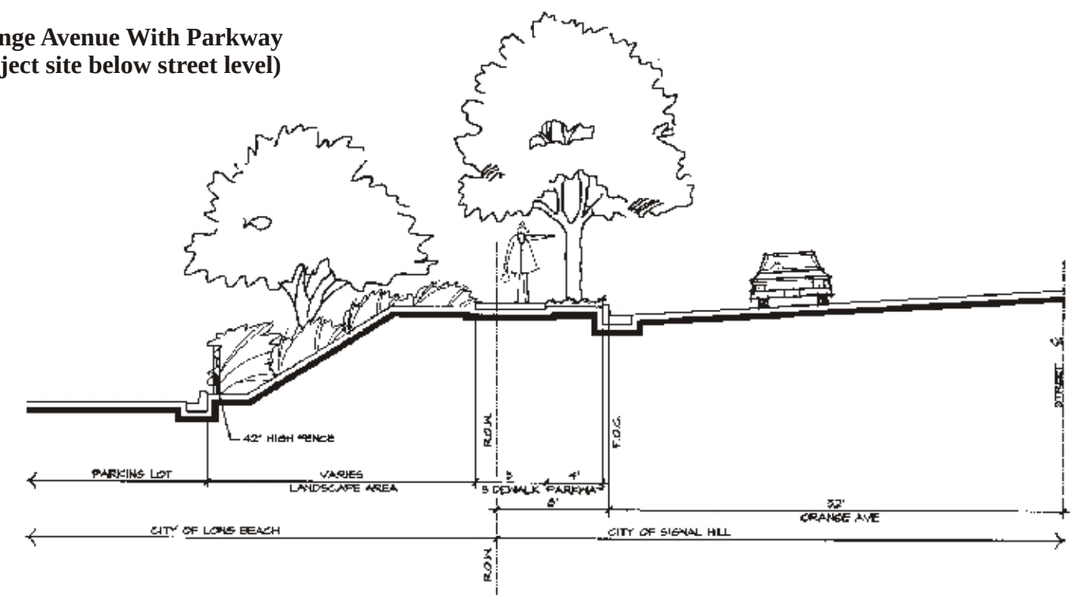


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FIGURE 4.12.6

ABBREVIATIONS
R.O.W. RIGHT OF WAY
F.O.C. FACE OF CURB

Long Beach Sports Park
Orange Avenue

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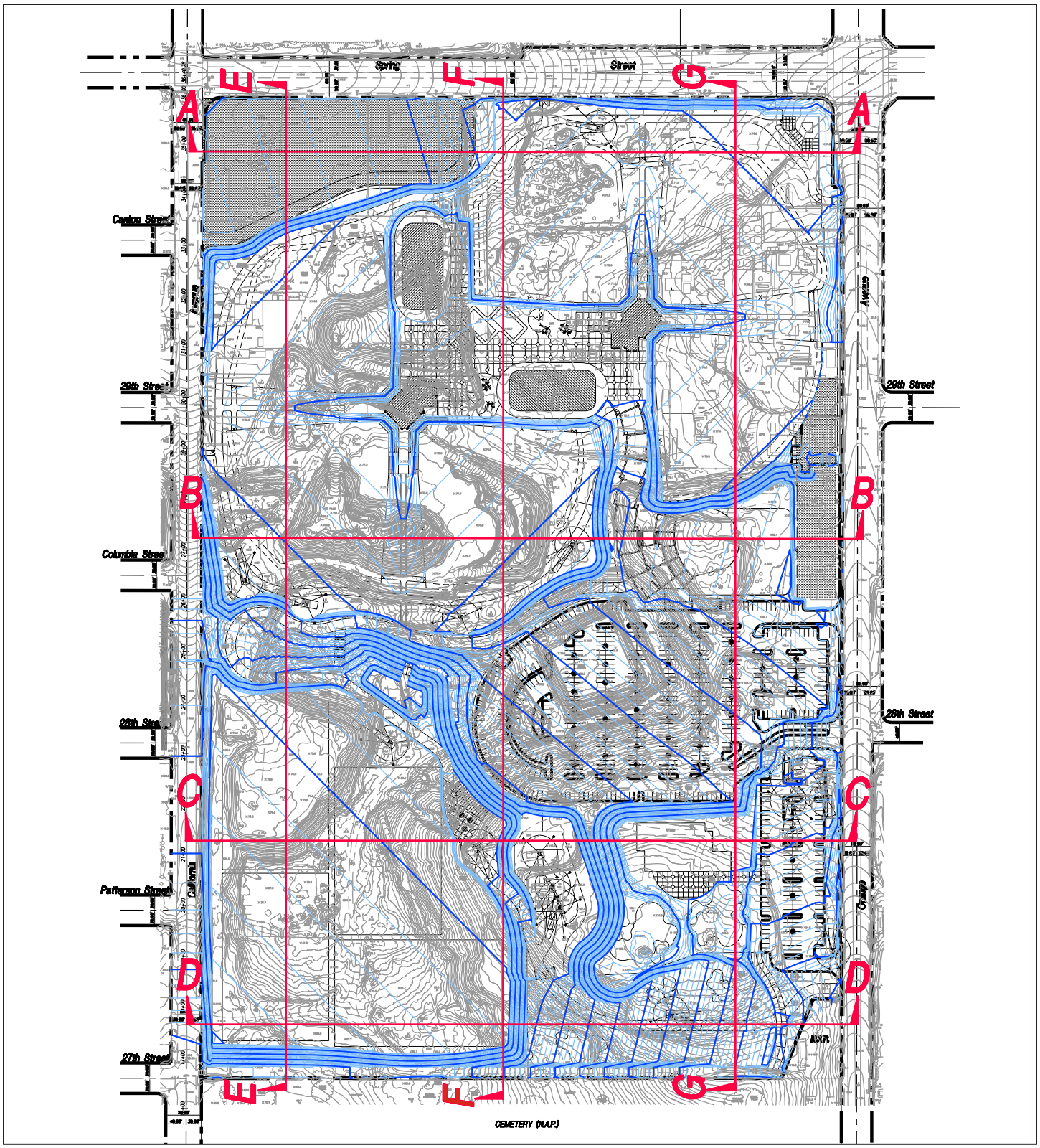

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FIGURE 4.12.7

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NO SCALE
SOURCE: PBS&J

Long Beach Sports Park
Cross Section Location Map

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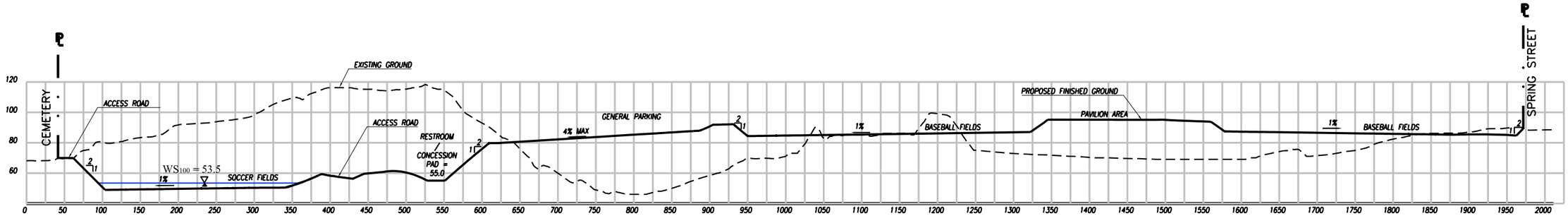
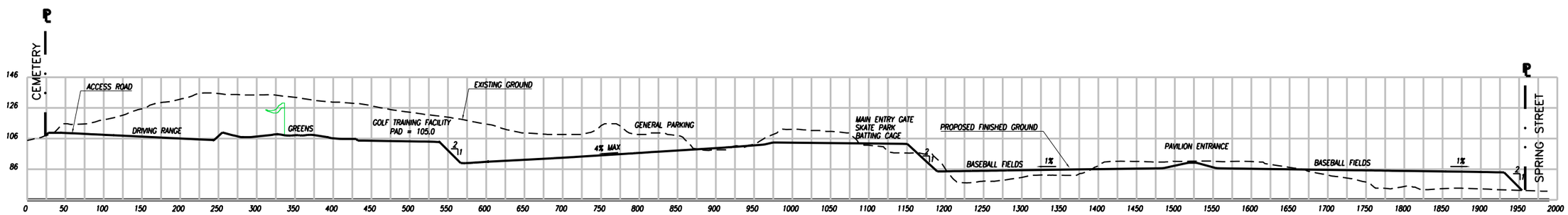


SECTION "F–F"



SECTION "G–G"

LSA

FIGURE 4.12.8

NO SCALE

SOURCE: PBS&J

I:\CLB231\G\Aesthetics\Sections F&G.cdr (6/16/04)

Long Beach Sports Park

Cross Sections F-F and G-G

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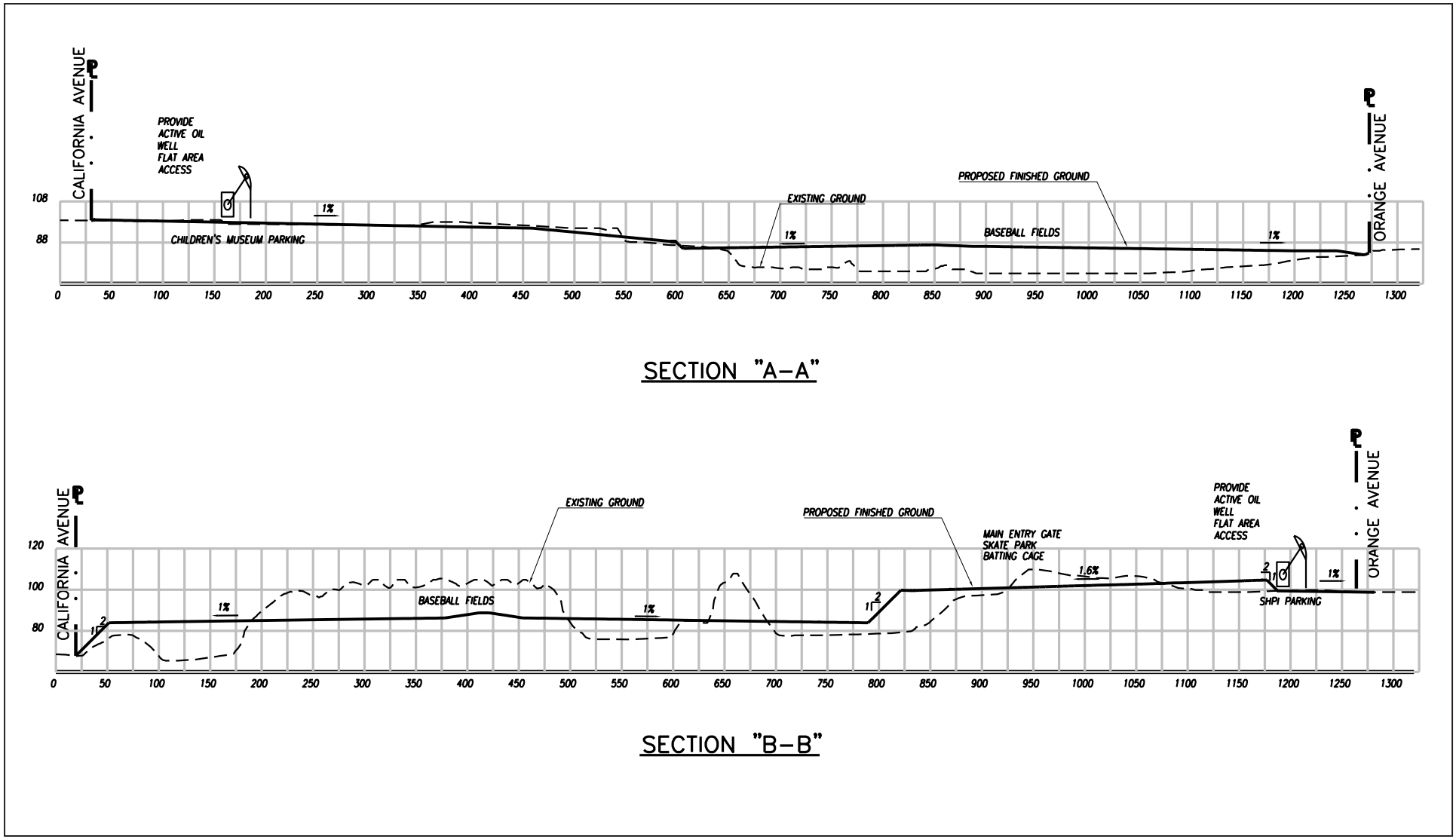

LSA

FIGURE 4.12.9

NO SCALE

SOURCE: PBS&J

Long Beach Sports Park

Cross Sections A-A and B-B

I:\CLB231\G\Aesthetics\Sections A&B.cdr (6/16/04)

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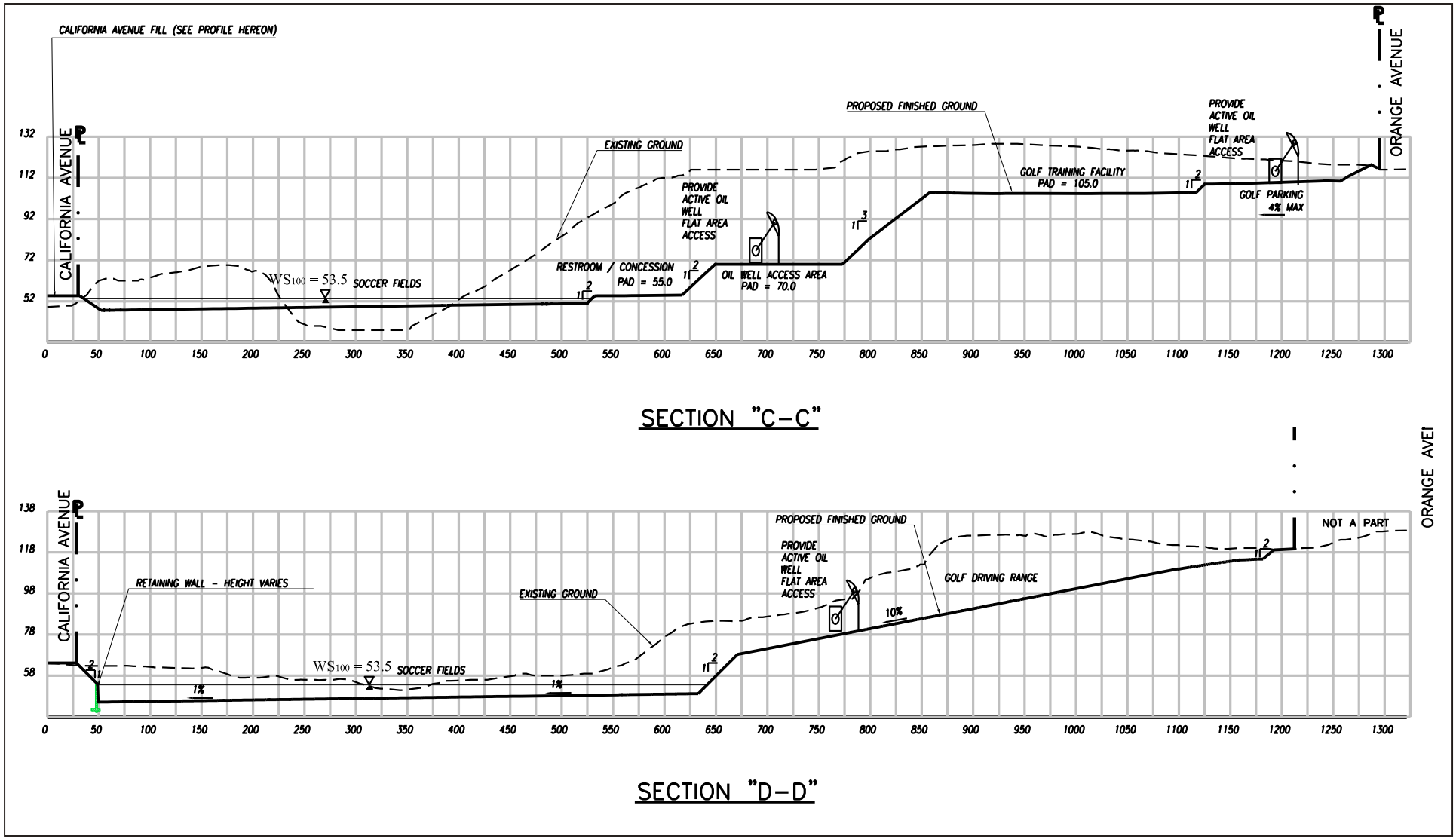

LSA

FIGURE 4.12.10

NO SCALE

SOURCE: PBS&J

Long Beach Sports Park

Cross Sections C-C and D-D

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Soccer fields will be located at elevations ranging from approximately 10 to 25 feet below the grade of California Avenue and approximately 25 feet below the adjacent cemetery to the south of the project site, as illustrated in Cross sections C-C through F-F (Figures 4.12.8 and 4.12.10), which would act to diminish their visibility from off-site areas. The adjacent slope banks would be heavily landscaped as well. The golf driving range would be constructed at a similar grade as the adjacent cemetery, with a containment fence planned in addition to landscape screening. No structures would be located in proximity to the south property line.

Visitors to the adjacent cemeteries south of the project site would be limited in number and periodic in nature. Further, the change in views from these areas will not be worsened or further degraded by project implementation, as they are degraded in their present condition. After project implementation, viewers would primarily experience a landscaped edge that would screen the project site to a greater degree than occurs at present. Consequently, no adverse visual impacts to visitors to adjacent cemeteries are anticipated.

Potentially Significant Impacts

Creation of a New Source of Light and Glare. The project area is presently characterized by a relatively low level of nighttime lighting used primarily for security purposes on industrial properties and street lighting along adjacent roadways. The proposed Sports Park, including parking areas, concessions, and restaurant facilities, will involve nighttime operations. All facilities will be lighted to accommodate planned nighttime activities and to provide for security after facilities are closed. As indicated on Figure 3.5, Proposed Project Site Plan, sports fields for baseball and soccer are planned in proximity to adjacent roadways. Proposed lighting will generate new spill light and glare. Sky glow may occur periodically under certain weather conditions.

“Spill light” is defined as light that trespasses or spills out of the intended area and illuminates adjacent property, and is generally considered unwanted. Spill light is measured in terms of illuminance or footcandles[1] (fc). Table 4.12.A provides examples of illumination levels from common sources such as daylight. “Glare” refers to the sensation experienced looking into an excessively bright light source that causes a reduction in the ability to see or causes discomfort. “Sky glow” refers to light that spills into the sky above the horizon and illuminates moisture and other tiny particles in the air. This typically can occur during foggy conditions, and can affect the ability of players to see the ball in flight. Sky glow is generally measured in illuminance at a specified level above the height of light poles.

[1] A footcandle is a unit of measure of the intensity of light falling on a surface, equal to one lumen per square foot and organelle defined with reference to a standardized candle burning at one foot from a given surface. Source: The American Heritage Dictionary of the English Language, Fourth Edition, Houghton Mifflin Company, 2000.

Table 4.12.A: Footcandle Levels from Common Light Sources

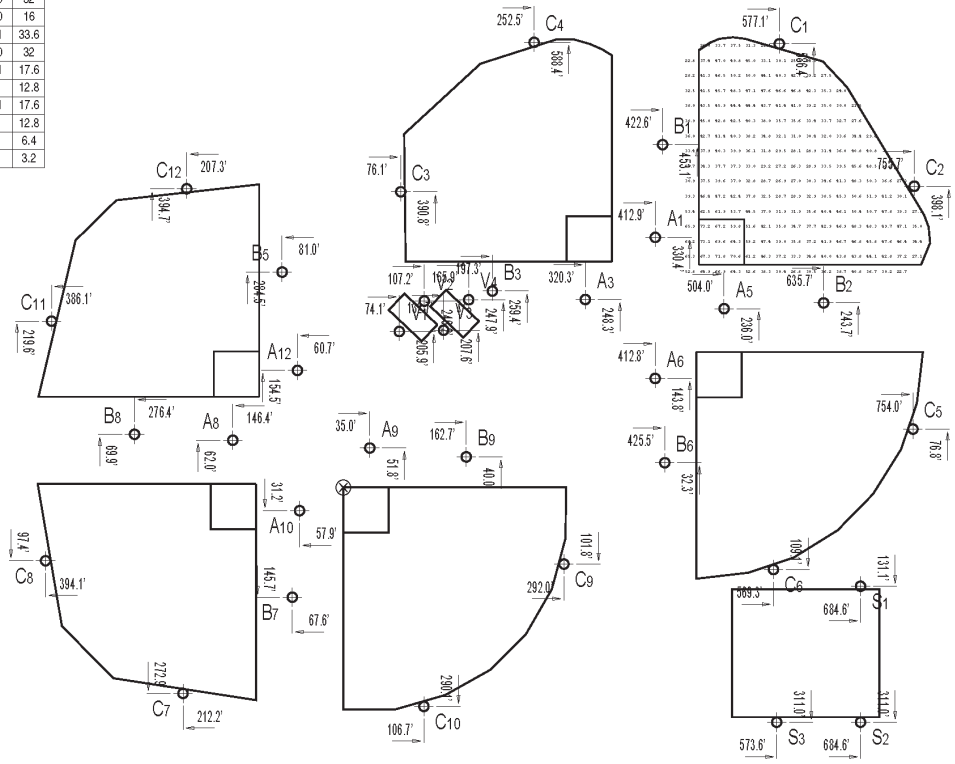
Source	Footcandles (fc)
Starlight	0.0002
Moonlight	0.02
Direct Sunlight	5,000-10,000
Office Lighting	70-150

The following paragraphs briefly describe the proposed lighting and potential impacts that may be anticipated at each type of facility in the project. Additional detailed information is contained in preliminary photometric diagrams prepared by Musco Lighting and contained in Appendix F of this EIR. Photometric analysis took into consideration the proposed grading plan and variations in topography, but does not account for screening measures such as perimeter landscaping. It should be emphasized that this assessment of potential lighting impacts is based on a conceptual lighting scheme, and refinements in design and specifications may occur with finalization of project design under review by the City of Long Beach.

Baseball Fields. A total of six baseball fields are planned at the northern end of the project site. This portion of the site will be illuminated by a total of 35 light poles ranging in height from 50 to 80 feet, with fixtures to be mounted at pole tops and directed toward the infield areas. Outfield fencing along the grandstands adjacent to the edge of the project site would vary from 25 to 28 feet in height. Each baseball field is proposed to be fenced and illuminated in a similar manner, with some light poles positioned between fields serving more than one field. A typical baseball diamond would be illuminated by 44-46 luminaires or lights fixtures. Baseball fields will be located at elevations ranging from approximately 15 feet above Spring Street near the corner of Orange Avenue to approximately 8 feet below to the west along Spring Street, as illustrated in Cross sections G-G and F-F on Figure 4.12.8. Figure 4.12.11 illustrates the preliminary concept for lighting the northern portion of the project site, including baseball fields, volleyball courts, and the skate park/batting cage facility.

For purposes of worst-case analysis, the anticipated illumination levels at the field to be located at the northeast corner of the site, closest to Willow Street and Orange Avenue, are described. Appendix F contains computer-generated lighting analyses of all proposed play fields. Baseball fields would generate the most intense lighting levels. Light poles to be located at the edge of the outfield are planned to be 70 feet high. Figure 4.12.12 indicates that during the “initial illumination” period, defined as the first 100 hours of operation when fixtures are being broken in, up to a maximum of approximately 52 fc and an average of 38 fc could be generated in outfield areas. At a distance of 150 feet from the property line, these lighting levels are estimated to generate approximately 0.25 fc of light on average, and 0.56 fc maximum during the initial break-in period. After the initial break-in period, levels of illumination decrease over the useful life of the fixtures, and generally decline approximately 20 percent over that lifespan.

EQUIPMENT LISTING						
Pole count	Pole location	Mounting height	Pole size	Elev.	Fixt. /unit	Kilow /unit
1	A1	60'	60'	0'	8	12.8
1	A3	60'	60'	0'	4	6.4
1	A5	60'	60'	0'	8	12.8
1	A6	60'	60'	0'	4	6.4
1	A8	60'	60'	0'	8	12.8
1	A9	60'	60'	0'	4	6.4
1	A10	60'	60'	0'	8	12.8
1	A12	60'	60'	0'	4	6.4
2	B1-B2	80'	80'	0'	20	32
3	B3-B6	80'	80'	0'	10	16
1	B7	80'	80'	0'	21	33.6
1	B8	80'	80'	0'	20	32
1	B9	80'	80'	0'	11	17.6
5	C1-C5	70'	70'	0'	8	12.8
1	C6	70'	70'	0'	11	17.6
6	C7-C12	70'	70'	0'	8	12.8
3	S1-S3	50'	50'	0'	4	6.4
4	V1-V4	50'	50'	0'	2	3.2



INITIAL ILLUMINATION
BASEBALL
HORIZONTAL FOOTCANDLES
ON PLANE AT Z= 3

	Infield	Outfield
Target Points:	25	183
Average:	62.62	37.73
Maximum:	73.23	51.88
Minimum:	44.46	21.14
Avg/Min:	1.409	1.784
Max/Min:	1.647	2.454
UG (Adj pts)	1.238	1.651
CV:	0.118	0.191

Number of Luminaires:	44
* KW Consumption:	462.40
**Average Tilt Factor:	0.971
***Recoverable Light Loss Factors: x	1.000
Total Light Loss Factor(LLF)	0.971

*Refer to amperage draw for electrical sizing.

** Additional non-recoverable Light Loss Factors are design constants equal to 1.0 at maintained illumination levels.

*** Includes Luminaire Dirt Depreciation and Lamp Lumen Depreciation - per IESNA Lighting Handbook 9th Edition, page 9-17.

NOTE: Light level averages and uniformities are guaranteed by MUSCO. However, individual location measurements may vary from computer predictions.

INSTALLATION REQUIREMENTS:
Results assume +-3% nominal voltage at load side of ballast box and poles located within 3 feet of design locations.

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Pole location dimensions are relative to 0,0 reference point ⊗.

⊕ = Pole Location

LSA

FIGURE 4.12.11

N

0 175 250
FEET

SOURCE: MUSCO SPORTS LIGHTING

Long Beach Sports Park

Conceptual Lighting Plan for Softball Diamonds

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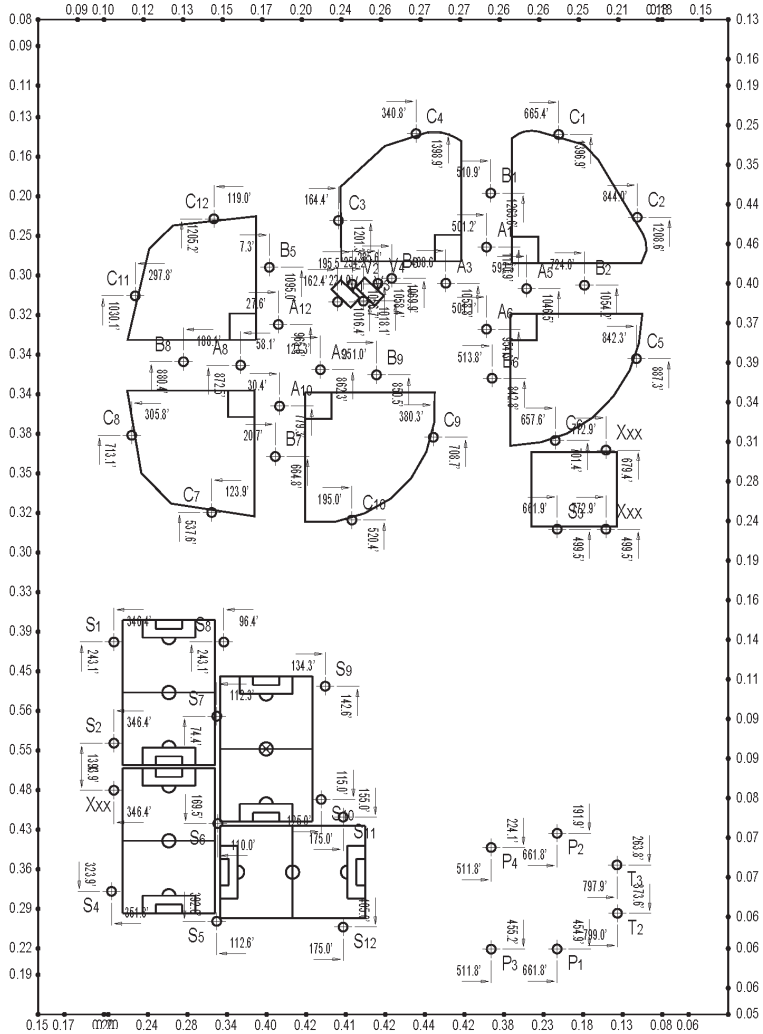
EQUIPMENT LISTING						
Pole count	Pole location	Mounting height	Pole size	Elev.	Fixt. /unit	Kilow /unit
1	A1	60'	60'	0'	8	12.8
1	A3	60'	60'	0'	4	6.4
1	A5	60'	60'	0'	8	12.8
1	A6	60'	60'	0'	4	6.4
1	A8	60'	60'	0'	8	12.8
1	A9	60'	60'	0'	4	6.4
1	A10	60'	60'	0'	8	12.8
1	A12	60'	60'	0'	4	6.4
2	B1-B2	80'	80'	0'	20	32
3	B3-B6	80'	80'	0'	10	16
1	B7	80'	80'	0'	21	33.6
1	B8	80'	80'	0'	20	32
1	B9	80'	80'	0'	11	17.6
5	C1-C5	70'	70'	0'	8	12.8
1	C6	70'	70'	0'	11	17.6
6	C7-C12	70'	70'	0'	8	12.8
4	P1-P4	80'	80'	0'	4	6.4
2	S1-S2	70'	70'	0'	9	14.4
1	S3	50'	50'	0'	4	6.4
1	S4	80'	80'	0'	9	14.4
1	S5	80'	80'	0'	18	28.8
1	S6	80'	80'	0'	27	43.2
1	S7	70'	70'	0'	18	28.8
5	S8-S12	70'	70'	0'	9	14.4
2	T2-T3	60'	60'	0'	4	6.4
4	V1-V4	50'	50'	0'	2	3.2
2	XXX-XXX	50'	50'	0'	4	6.4
1	XXX	80'	80'	0'	9	14.4



INITIAL SPILL LIGHT
MAXIMUM FOOTCANDLES

Target Points:	90
Average:	0.25
Maximum:	0.56
Minimum:	0.05
Avg/Min:	4.576
Max/Min:	10.529

Number of Luminaires:	457
* KW Consumption:	731.20
**Average Tilt Factor:	0.964
***Recoverable Light Loss Factors: x	1.000
Total Light Loss Factor(LLF)	0.964

*Refer to amperage draw for electrical sizing.

** Additional non-recoverable Light Loss Factors are design constants equal to 1.0 at maintained illumination levels.

*** Includes Luminaire Dirt Depreciation and Lamp Lumen Depreciation - per IESNA Lighting Handbook 9th Edition, page 9-17.

NOTE: Light level averages and uniformities are guaranteed by MUSCO. However, individual location measurements may vary from computer predictions.

INSTALLATION REQUIREMENTS:
Results assume +-3% nominal voltage at load side of ballast box and poles located within 3 feet of design locations.

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⊕ = Pole Location

LSA

Pole location dimensions are relative to 0,0 reference point ⊗.

N

0 210 420
FEET

SOURCE: MUSCO SPORTS LIGHTING

FIGURE 4.12.12

Long Beach Sports Park

Spill Light at Maximum Footcandles

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Orange Avenue varies from a right-of way width of 60–80 feet; Spring Street has a right-of way width of 80–100 feet; and California Avenue has a 60-foot right-of way. The level of spill light estimated to be generated by the proposed ball fields at a distance of 150 feet from the property line is less than that generated by a typical street light, which ranges from approximately 3.0–5.0 fc, depending on the type of fixture.

Uses surrounding the project site along Orange Avenue and Spring Street are not considered sensitive receptors, and most would not be in active operation during the nighttime hours when baseball fields would be lighted. Compliance with recommended light control parameters developed by Musco Lighting will control any potentially adverse impacts from spill light or glare in these adjacent areas to ensure that impacts are no greater than what is reported in the analysis above. These guidelines are outlined in mitigation measures at the end of this section. With incorporation of these measures, any potentially significant impacts from spill light and glare generated by proposed baseball fields along Orange Avenue and Spring Streets are reduced to below a level of significance.

Skate Park/Batting Cage Facility. Three light poles 50 feet in height, containing 15 luminaires or light fixtures, are planned to surround the proposed skate park and batting cage located along Orange Avenue adjacent to baseball fields. The skate park/batting cage facility will be located at an elevation approximately 5 feet above the grade of Orange Avenue, as illustrated in Cross section B-B in Figure 4.12.9. (Diagrams illustrating the proposed lighting scheme for the skate park/batting cage facility are contained in Appendix F.)

During the “initial illumination” period, these fixtures are estimated to generate approximately 38 fc of light on average and a maximum of approximately 56 fc. Spill light that could be generated at a distance of 150 feet from the property line in proximity to the skate park/batting cage is estimated to range from approximately 0.21–0.31 fc. After the initial break–in period, levels of illumination decrease over the useful life of the fixtures, and generally decline approximately 20 percent over that lifespan. These estimates do not take into consideration screening measures such as perimeter landscape planting, which can be anticipated to further reduce spill light in off-site areas.

Uses along Orange Avenue adjacent to the project site are not considered sensitive receptors, and most would not be in active operation during the nighttime hours when facilities would be lighted. Compliance with recommended light control parameters developed by Musco Lighting will control any potentially adverse impacts to adjacent areas to ensure that impacts are no greater than what is reported in the analysis above. These guidelines are outlined in mitigation measures at the end of this section. With incorporation of these measures, any potentially significant impacts from spill light and glare generated by the proposed skate park/batting cage facility along Orange Avenue are reduced to below a level of significance.

Driving Range/Golf Training Facility. The driving range and golf training facility to be located along Orange Avenue at the southeast corner of the project area are proposed to be illuminated by six light poles ranging in height from 60 to 80 feet and containing a total of 24 luminaires or light fixtures. The driving range/golf training facility will be located at an elevation approximately 15–

20 feet below the grade of Orange Avenue and sloping away from the street, as illustrated in Cross section D-D in Figure 4.12.10. Diagrams illustrating the proposed lighting scheme for the driving range/golf training facility are contained in Appendix F.

During the "initial illumination" period these fixtures are estimated to generate approximately 24.0 fc of light on average and a maximum of approximately 33.0 fc. Spill light that could be generated at a distance of 150 feet from the property line in proximity to the driving range/golf training facility is estimated to range from approximately 0.05–0.08 fc adjacent to Orange Avenue to 0.44–0.06 fc to the south in adjacent cemetery areas to the south. After the initial break-in period, levels of illumination decrease over the useful life of the fixtures, and generally decline approximately 20 percent over that lifespan. These estimates do not take into consideration screening measures such as perimeter landscape planting, which can be anticipated to further reduce spill light in off-site areas.

Uses located adjacent to the proposed driving range/golf training facility are not considered sensitive receptors and would not be in active operation during the nighttime hours when facilities would be lighted. Compliance with recommended light control parameters developed by Musco Lighting will control any potentially adverse impacts to adjacent areas to ensure that impacts are no greater than what is reported in the analysis above. These guidelines are outlined in mitigation measures at the end of this section. With incorporation of these measures, any potentially significant impacts from light and glare generated by the proposed driving range /golf training facility along Orange Avenue and in adjacent areas located south of the property line are reduced to below a level of significance.

Soccer Fields. A total of four soccer fields are planned at the southeast corner of the project site. This portion of the site will be illuminated by a total of 18 light poles ranging in height from 60 to 80 feet, with fixtures to be mounted at pole tops. Each soccer field is proposed to be illuminated in a similar manner. A typical soccer field would be illuminated by 36 luminaires or light fixtures. Soccer fields will be located at elevations ranging from approximately 10 to 25 feet below the grade of California Avenue and approximately 25 feet below the adjacent cemetery to the south of the project site, as illustrated in Cross sections C-C through F-F in Figures 4.12.8 and 4.12.10. Diagrams illustrating the proposed lighting scheme for soccer fields are contained in Appendix F.

For purposes of "worst case" analysis, the soccer field to be located at the southeast corner of the project area adjacent to the property line abutting the cemetery and California Avenue is discussed. Light poles to be located at the edge of the fields are planned to be 80 feet in height. During the "initial illumination" period, up to a maximum of approximately 51 fc and an average of 38 fc could be generated. At a distance of 150 feet from the property line, these lighting levels are estimated to generate approximately 0.19–0.56 fc of light along California Avenue, and 0.15–0.44 fc along the south property line during the initial break-in period. After the initial break-in period, levels of illumination decrease over the useful life of the fixtures, and generally decline approximately 20 percent over that lifespan. These estimates do not take into consideration screening measures such as perimeter landscape planting, which can be anticipated to further reduce spill light in off-site areas. The difference in elevation below grade with adjacent areas also minimizes light spill.

California Avenue has a 60-foot right-of-way. The level of spill light estimated to be generated by the proposed soccer fields at a distance of 150 feet from the property line along California Avenue is less than that generated by a typical street light, which range from approximately 3.0–5.0 fc, depending on the type of fixture.

Uses located adjacent to the proposed soccer fields are not considered sensitive receptors and would not be in active operation during the nighttime hours when fields would be lighted. Compliance with recommended light control parameters developed by Musco Lighting will control any potentially adverse impacts to adjacent areas to ensure that impacts are no greater than what is reported in the analysis above. These guidelines are outlined in mitigation measures at the end of this section. With incorporation of these measures, any potentially significant impacts from spill light and glare generated by the proposed soccer fields along California Avenue and in adjacent areas located south of the property line are reduced below a level of significance.

Parking Areas. Lighting in the parking areas along Orange Avenue is anticipated to average approximately 1.0 fc in intensity. The parking areas will be set back approximately 35 feet from Orange Avenue with landscape screening as illustrated on Figure 3.4, Conceptual Site Plan. No off-site spill impacts from parking areas are anticipated.

Mitigation Measures

The change in the visual characteristics of the site as a result of the proposed project will have a potentially adverse effect on the adjacent historic office building. Mitigation measures to address impacts to historic resources are addressed in Section 4.6, Cultural Resources, of this EIR.

Lighting effects of the proposed project do not exceed thresholds of significance. The lighting plans for the sports facilities are designed to minimize off-site light and glare. Precautionary Mitigation Measures 4.12.1–4.12.3 are recommended to further minimize light and glare effects.

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 grading 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.

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.

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.

4.12.6 CUMULATIVE IMPACTS

Construction of the proposed project, when considered in conjunction with other existing and planned developments in proximity to the project, will continue the pattern of infill urban development within this area of the City. The cumulative study area for aesthetic impacts is limited to the immediately adjacent area within view of the project site. Table 4.1.J provides a list of future projects in the study area. (Please see Figure 4.1.8, Related Projects, for their locations.)

The City of Long Beach is a heavily urbanized area with a wide variety of established land uses and few large undeveloped parcels. Similarly, the City of Signal Hill is largely built out. The land use patterns around the project site have been established, with industrial and commercial land uses to the north, east, and west, and institutional land uses to the south.

The proposed project will not have a significant cumulative impact on the visual environment, as the project site has long been occupied by urban uses and planned for development. The proposed project will not generate significant adverse effects on adjacent land uses, with exception of the Lomita-Petrolane office building and the existing compressor building, which were evaluated above for visual impacts and also evaluated as historic resources in Chapter 4.6, Cultural Resources. The proposed improvements are compatible in character with the surrounding area. There are no known visual incompatibilities between the proposed project and planned future projects located in the surrounding area. Therefore, the contribution of the proposed project to potential cumulative visual/aesthetic impacts in the study area is considered less than significant.

4.12.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project results in an infill development on a parcel within an established urban community. As a result of project implementation, there will be a change in land use of the property from a relatively low-intensity combination of oil production and industrial uses to a commercial Sports Park, youth golf center, and commercial site.

Incorporation of Mitigation Measures 4.12.1 through 4.12.3 will reduce any potentially significant impacts due to the creation of new sources of light and glare to less than significant levels. Project impacts on the Lomita-Petrolane office building and the existing compressor building will remain significant after implementation of Mitigation Measures 4.6.1 through 4.6.5.