5. Environmental Analysis

5.1 AESTHETICS

This section of the DSEIR describes the impacts of the Proposed Project on existing land form and aesthetic characteristics, as compared to the Certified EIR. The information in this section is based on the Certified EIR, field reconnaissance, review of the Project Site, aerial photographs, and topographical mapping.

5.1.1 Environmental Setting

Visual Setting

Scenic Features

The Certified EIR discussed the visual setting associated with the development of the 2011 Approved Project adjacent to various arterial highways and state and federal highways. None of the roadways discussed in the Certified EIR are designated County or State scenic highways, although Sand Canyon Avenue is designated as a highway with rural/natural character. The City's General Plan also designates Interstate 5 (I-5) as an urban character Scenic Highway. The project site is within the boundaries of the 2011 Approved Project; therefore, it would not be subject to any scenic highways.

Generally, views of the former military base are from the surrounding highways. From these highways, a variety of land uses, structures, and facilities of differing ages, sizes, and architectural styles may be viewed. Though agricultural areas are adjacent to and within the base, the predominant features are associated with the military use of the former MCAS El Toro, including runways, aprons, hangars, warehouses, barracks housing, recreational facilities, an abandoned golf course, single-family housing, offices, and commercial structures. However, since certification of the 2003 OCGP EIR, over 1,000 pre-existing buildings, structures, and ancillary facilities have been demolished; a portion of the pre-existing runway has been removed; and the Great Park Western Sector Development Plan (Phase 1) has been established on the western edge of the former military base.

The Project Site is located in the northeast portion of the Certified EIR boundaries, in the northwest corner of Development District 5 near the intersection of Irvine Boulevard and Desert Storm Drive. The city of Lake Forest and the James A. Musick Facility are to the east of the Project Site. The project site is surrounded by currently vacant former MCAS El Toro uses, and no sensitive uses such as residences are in the project vicinity.

The 2011 Approved Project Site abuts the Irvine Spectrum to the east and south; existing and developing residential developments are located to the north and west. Further to the south are residential areas of the cities of Laguna Woods and Laguna Hills. Portions of these communities are at higher elevations and therefore have panoramic views of the 2011 Approved Project Site. However, the Project Site is located toward north of the 2011 Approved Project boundaries and would not be visible from residences of Laguna Woods or Laguna Hills.

AESTHETICS

Landform

The topography of the Project Site is nearly flat, with surface elevation ranging between approximately 410 feet and 400 feet above mean sea level ("amsl"), sloping gently toward the west and southwest.

Light Sources

The Project Site and its surroundings are vacant and contain no light sources except for street lights.

Regulatory Setting

Local regulations, plans, and guidelines that guide the visual character of the City of Irvine are summarized below.

City of Irvine Municipal Code and Zoning Ordinance

The City of Irvine Municipal Code and Zoning Ordinance identify land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and development projects. The following provisions from the City's Municipal Code and Zoning Ordinance help minimize aesthetics and light and glare impacts associated with new development projects. While developments within the 2011 Approved Project boundaries are required to comply with these regulations, mandatory compliance by the District is not warranted.

Irvine Municipal Code, Title 5 (Planning), Division 9 (Building Regulations), Chapter 5 (Uniform Security Code). The Uniform Security Code is designed, in part, to limit light and glare to the extent feasible while providing sufficient light in a safe manner. Section 5-9-517 (Special Nonresidential Building Provisions) of Chapter 5 discusses standards and requirements for lighting and glare in the City, including heights of lighting fixtures; design, installation, and maintenance of lighting fixtures; standards for new development of multifamily and non-residential development; lighting for parking areas; and sign illumination.

Irvine Zoning Ordinance, Chapter 3-16 (Lighting). As required by Chapter 3-16 of the City's Zoning Ordinance, outdoor lighting is required to be designed and installed so that all direct rays are confined to the site and adjacent properties are protected from glare. The level of lighting on the site shall comply with the requirements of the City's Uniform Security Code (Irvine Municipal Code, Title 5, Division 9, Chapter 5).

Irvine Zoning Ordinance, Chapter 3-15 (Landscaping). This chapter of the Zoning Ordinance outlines the minimum site landscaping and maintenance requirements. This chapter also outlines the screening and landscaping requirements for parking areas and parking structures.

Irvine Zoning Ordinance, Chapter 3-37 (Zoning District Land Use Regulations and Development Standards). This chapter of the Zoning Ordinance outlines the regulations and development standards that are applicable to land uses proposed throughout the various planning areas of the City, including setbacks, building heights, landscaping, and maximum building intensity (IBC only).

Irvine Zoning Ordinance, Division 7 (Signs). The intent of this division of the Zoning Ordinance, also known as the Sign Ordinance, is to promote and protect the public health, safety and welfare by

regulating existing and proposed signs of all types within the City. This division outlines the standards and regulations that apply to the design and installation of signage, including quantity, location, dimensions, lighting, etc.

5.1.2 Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, the District has determined that a project would normally have a significant effect on the environment if the project would:

AE-1 Have a substantial adverse effect on a scenic vista.

AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

AE-3 Substantially degrade the existing visual character or quality of the site and its surroundings.

AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The Initial Study, included ad Appendix A, substantiates that the following impacts of the proposed high school as compared to the 2011 Approved Project, would be than significant:

- Threshold AE-1
- Threshold AE-2

These impacts will not be addressed in the following analysis.

5.1.3 2011 Approved Project

Visual Character Impacts

The Certified EIR concluded that with compliance with the City's Zoning Ordinance, including City approval of architectural plans, landscape plans, and signage for each development to ensure new development is consistent with the City's Land Use Element, Circulation Element design policies, Zoning Ordinance, and the City's Landscape Ordinance and Guideline Manual, impacts to the visual character of the 2011 Approved Project would be less than significant.

Light and Glare Impacts

Mitigation measures in the Certified EIR and associated mitigation monitoring and reporting program (MMRP) for the 2011 Approved Project requires the City Community Development Department to review lighting plans and signage plans for new development and require a design-level glare impact analysis for the use of mirrored and highly reflective surfaces to ensure that there will be minimal light intrusion and spillover into adjacent residential areas. Therefore, light and glare impacts of the 2011 Approved Project were determined to be less than significant after implementation of mitigation.

5.1.4 2012 Modified Project

Visual Characteristic Impacts

The 2012 SSEIR concluded that the overall aesthetic impact of the 2012 Modified Project would be similar to the impact of the 2011 Approved Project. The bulk and massing of the proposed structures under the 2012 Modified Project would be similar to those considered in the Certified EIR. Moreover, the changes would likely provide more opportunities for landscaping and parkland.

Light and Glare Impacts

As with the 2011 Approved Project, implementation of the land uses associated with the 2012 Modified Project would be required to adhere to the provision of the Uniform Security Code (Chapter 5 of the Irvine Municipal Code) and Chapter 3-16 (Lighting) of the City's Zoning Ordinance. The Uniform Security Code outlines standards and requirements for lighting and glare in the City, including heights of lighting fixtures; design, installation, and maintenance of lighting fixtures; standards for new development of multifamily and nonresidential development; lighting for parking areas; and sign illumination. Additionally, development associated with the 2012 Modified Project would be required to implement the light and glare mitigation measures of the Certified EIR. Therefore, upon implementation of the existing regulations and mitigation measures from the Certified EIR, light and glare impacts of the 2012 SSEIR were determined to be less than significant.

5.1.5 Environmental Impacts of High School No. 5

Existing Plans, Programs, and Policies

The following measures are existing plans, programs, or policies ("PPPs") that were developed as a result of the Certified EIR, which will help to reduce and avoid potential impacts related to aesthetics. Note that the Mitigation Agreement between the District and Heritage Fields provides for the site to be delivered to the District after mass grading and with utilities and road network installed. These mitigation measures are applicable to the community developer and not directly to the District.

PPP 1-1 Prior to the issuance of building permits, the applicant shall demonstrate they have met the Irvine Uniform Security Code requirements for lighting by providing the below listed items for a complete review by the Police Department. Failure to provide a complete lighting package will result in the delay of satisfaction of this condition (City Standard Condition 3.6).

a. Electrical plan showing light fixture locations, type of light fixture, height of light fixture, and point-by-point photometric lighting analysis overlaid on the landscape plan with a tree legend. The photometric plan should only show those fixtures used to meet the Irvine Uniform Security Code requirements.

b. Corresponding fixture cut-sheets (specifications) of those lights used to meet the Irvine Uniform Security Code.

c. Site plan demonstrating that landscaping shall not be planted so as to obscure required light levels.

d. Site plans that are full-scale and legible.

Additional Plans, Programs, and Policies

There are no additional plans, programs, and policies applicable to the Proposed Project.

Impact Threshold Analysis

The following impact analysis addresses impacts that the Initial Study for the proposed project disclosed as potentially significant impacts. The applicable potential impacts are identified in brackets after the impact statement.

IMPACT 5.1-1 DEVELOPMENT OF THE PROPOSED PROJECT WOULD CHANGE, BUT NOT SUBSTANTIALLY DEGRADE, THE VISUAL CHARACTER OF THE PROJECT AREA COMPARED TO LAND USES TO BE DEVELOPED UNDER THE 2011 APPROVED PROJECT. [IMPACT AE-3]

Impact Analysis:

2011 Approved Project

The proposed high school includes a full complement of buildings, including 2-story classroom buildings, administrative/food service building, 720-seat performing arts center, campus center building, main gymnasium, and locker room building; and a practice gymnasium, aquatics building, and portable classrooms in the future. The school's sports and recreational amenities would include a 2,940-seat stadium for football, track, soccer, and lacrosse on artificial turf field and synthetic track, aquatics complex, hard courts, tennis courts, softball/baseball/soccer fields, shot put area, and discus throw area. Nighttime lighting would also be provided for practices and spectator events for all recreational amenities.

The TTOD zone allows a mix of land uses including educational and recreational land uses. The proposed high school is a permitted use under this zoning designation; therefore, general visual impacts from the proposed development would be consistent with those assumed in the Certified EIR. However, though the Certified EIR determined that the visual appearance of the project area would result in less than significant impacts provided that developments within the planning area comply with development standards in the city's zoning ordinance, the District is not subject to the city's zoning ordinance pursuant to Government Code 53094(b). Irvine Zoning Ordinance, Section 3.37.39, 8.1 *Trails and Transit Oriented Development*, establishes development standards such as minimum site size, site coverage, building height, building setbacks, etc. While the zoning provisions are inapplicable, the Proposed Project is compatible with the design elements of the city's development standards because the current site plan meets the city's maximum building height, site coverage, and building setback standards.

The maximum building height is set at 70 feet for nonresidential uses in TTOD zone, and the tallest building on campus would be the performing arts center at 55 feet in height. The gymnasium would be the second tallest building at 38 feet, and other buildings would range from 16 feet to 33 feet. Moreover, the City's minimum building setback from major highways is 45 feet and from commuter highways is 15 feet. The school buildings would be located more than 500 feet from Irvine Boulevard (major highway) and more than 150 feet away from "B" Street (commuter highway).

The proposed high school would be of a quality design that avoids continuous rooflines or massive big-box style structures, compatible with the overall mixed-use character of the project area as analyzed in the Certified EIR. The campus is configured so that athletic facilities are located toward Irvine Boulevard and main school buildings and parking lots are located near "LQ" Street and the campus would provide landscaping around the campus boundaries. Although the District is not required to adhere to the landscaping and maintenance requirements outlined in Chapter 3-17 (Landscaping) of the Irvine Zoning Ordinance, compatible landscaping and maintenance program would be provided, similar to other District schools in the City of Irvine. The campus would also be regularly maintained by school staff to ensure that the campus is kept clean. The District is considering the installation of security fencing and gates between buildings in the academic core, but not around the entire campus so that the walkable, pedestrian friendly character of the TTOD zoning is maintained. Therefore, the conclusion of the Project's impact on aesthetics would be similar to the 2011 Approved Project, and would not be greater than those described in the Certified EIR.

Stadium Bleachers

The home-side metal bleachers would be 20 feet tall, 206 feet wide, and 55 feet deep, and would be placed on the south side of the field and track. The back of the home side bleachers would face the parking lot. The visitor-side metal bleachers would be 14 feet tall, 223 feet wide, and 35 feet deep, and would be installed on the north side of the track and field, adjacent to the tennis courts. Therefore, the bleachers would not face the adjacent properties directly, and limited shielding from intervening uses would be provided. In addition, there are no residential receptors near the project site currently. The visual impacts from the stadium would not be significant.

Impacts of the 2011 Approved Project on the visual character of the 2011 Approved Project Site and its surroundings were determined to be less than significant assuming compliance with existing City ordinances and policies. Although the District is not required to comply with those regulatory standards, the proposed high school design features would effectively achieve the same goals as the city's ordinances would, so that comparable visual effects occur with project implementation. The net incremental impact of the Proposed Project on the visual character of the project site and its surroundings would be less than significant, and the overall impact is similar to that analyzed in the Certified EIR.

Mitigation Program and Net Impact

No additional mitigation measures are introduced here in this DSEIR as net impacts on visual character would be less than significant.

2012 Modified Project

The 2012 DSSEIR included a high school at its current location, but no specific visual impact of the high school and its ancillary facilities were reviewed. The visual impacts of the proposed high school would be same as the analysis discussed above for the 2011 Approved Project.

Impacts of the Proposed Project on the visual character of the 2012 Modified Project Site and its surroundings would be less than significant. Although the District is not required to comply with local regulatory standards, the Proposed Project would effectively achieve the same goals as the city's ordinances. Based on the visual characteristics of the Project as proposed, the net incremental impact on

the visual character of the 2012 Modified Project Site and its surroundings would also be less than significant, and the overall impact is similar to that analyzed in the 2012 DSSEIR.

Mitigation Program and Net Impact

No additional mitigation measures are introduced here in this DSEIR as net impacts on visual character would be less than significant.

IMPACT 5.1-2 DEVELOPMENT OF THE PROPOSED PROJECT WOULD NOT RESULT IN SUBSTANTIALLY GREATER LIGHT AND GLARE IMPACTS COMPARED TO LAND USES PROPOSED IN THE 2011 APPROVED PROJECT. [IMPACT AE-4]

Impact Analysis: The Proposed Project would involve installation of stadium lights to provide illumination for evening events and activities. While the exact height and number of fixtures per pole are unknown, the District would use the light pole design (or similar) shown in Figure 5.1-1, *Light Pole Schematic*, and Figure 5.1-2, *Individual Fixture Assembly*, to help reduce and avoid potential impacts related to light and glare.

2011 Approved Project

Nighttime illumination and glare analysis addresses the effects of a project's exterior lighting upon adjoining uses and areas. Light and glare impacts are determined through a comparison of the existing light sources with the anticipated lighting conditions upon project implementation. The following definitions include terms that are found throughout the lighting analysis and the EIR.

A foot-candle ("fc") is a unit of measure of the intensity of light falling on a surface equal to one lumen per square foot (Musco Lighting 2013). The foot-candle is a unit based on English measurements. Although foot-candles are considered obsolete in some scientific circles, they are nevertheless used because many existing light meters are calibrated in foot-candles. Moonlight produces approximately 0.01 fc, while sunlight can produce up to 10,000 fc. The general benchmarks for light levels are shown in Table 5.1-1.

Lumen is a measurement of light energy or of light emitted from a light source.

Illuminance is the amount of light present on a surface or plane, typically expressed in a horizontal plane (i.e., on the ground) or in a vertical plane (i.e., on the side of a building).

Luminaire (light fixture) a complete lighting unit consisting of a lamp or lamps and ballast(s) (when applicable) together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply.

Spill Light is light falling where it is not wanted or needed (also known as light trespass, stray light, obtrusive light). Stadium spill light is light that trespasses beyond the intended area and illuminates adjacent properties.

Table 5.1-1
Light Levels

Outdoor Light	Foot-candle
Direct Sunlight	10,000
Full Daylight	1,000
Overcast Day	100
Dusk	10
Twilight	1
Deep Twilight	0.1
Full Moon	0.01
Quarter Moon	0.001
Moonless Night	0.0001
Overcast Night	0.00001
Gas station canopies	25–30
Typical neighborhood streetlight	1.0–5.0

Source: Musco Lighting 2012; The Engineering ToolBox 2013.

Sky Glow is the amount of light reflecting into the night sky that reduces visibility of the sky and stars. It is a concern in many jurisdictions, especially those with observatories. The City of Irvine does not have lighting regulations for stadium lighting.

Glare is an intense and blinding light that reduces visibility; a light within the field of vision that is brighter than the brightness to which the eyes are adapted.

Direct glare is caused by looking at an unshielded lamp or a light at maximum candlepower. Direct glare is dependent on the light source's brightness, the contrast between the light source and brightness of the surrounding environment, the size of the light source, and its position.

Discomfort glare is glare that produces discomfort, but does not necessarily diminish visual performance. Disability glare is glare resulting in reduced visual performance and visibility, and is often accompanied by discomfort. Glare can be uncomfortable and/or disabling, and for all receptors glare is unacceptable.

Light and Glare Thresholds

Light and glare would have a significant impact if the project would create substantial glare or if project lighting would substantially exceed industry lighting standards. There are no existing limits for light and glare defined by adopted City regulations or requirements that apply to the Proposed Project. The Los Angeles Unified School District defines a threshold of "no more than two foot-candles, measured at the residential property line" for stadium lighting (Program EIR for the New School Construction Program,

2004). This threshold is consistent with Chapter 9, Article 3, Section 93.0117 of the City of Los Angeles zoning code, which states, "No exterior light source may cause more than two foot-candles of lighting intensity or generate direct glare onto exterior glazed windows or glass doors; elevated habitable porch, deck, or balcony; or any ground surface intended for uses such as recreation, barbecue or lawn areas or any other property containing a residential unit or units." In the absence of established light and glare threshold, the District reasonably inferred that the purpose of this analysis, light trespass is considered significant if the new lights result in a 2.0 fc increase in light at the property line of a sensitive receptor, such as a residence. However, for biological resources, a more stringent 0.5 fc increase in light near light-sensitive natural habitat is considered significant. The same stringent 0.5 fc threshold level was applied to District's University High School stadium lighting project, which was certified in 2009, where the nighttime light poles were installed adjacent to Mason Park, which contained sensitive biological resources.

Athletic Amenities Lighting and Glare

For the purposes of this analysis, it is assumed that the District would prepare a detailed lighting plan for elevated lighting fixtures for the stadium, aquatic complex, tennis courts, and ball fields. Use of this nighttime lighting system for practices and games would increase nighttime light intensity levels near the source. Field lighting would include high intensity lamps, which, if not installed properly, could cause glare impacts for sensitive receptors in the surrounding sensitive areas. Details of the lighting poles and specifications are not available currently. However, it is anticipated that the light fixtures would use various available technologies such as individually shielded luminaries, reflective housing around the lamp, various lighting modes, and steep aiming angles to provide glare control. The light fixtures would be further controlled by the mounting height and remote lighting control system. Precise position of the fixtures, accurate focusing of the light beams, and the shielding of the arc of the beams would minimize glare impacts at surrounding sensitive uses and roadways. As part of the project, qualified personnel retained to install the lights would ensure that the lights are properly adjusted and maintained so that glare would not adversely impact the surrounding areas. Although the actual light plans are currently unavailable, it is anticipated that the field lighting system would be substantially similar to that of the University High School's fixtures and this analysis assumed the same lighting equipment specifications as the University High School stadium.

The nearest sensitive receptors from the nighttime lighting sources are the Agua Chinon Channel immediately west of "B" Street, Natural Communities Conservation Plan (NCCP) Preservation on the northeast corner of the Project Site across Irvine Boulevard, and the wildlife corridor, approximately 0.25 mile to the east. Agua Chinon Channel would be improved as a soft-bottom natural floodway integrated with habitat, recreation, and trail system.

For the stadium use, the highest light levels are anticipated during football games at an average 50 fc,[1] and the lighting system would operate at lower levels for other athletic events such as track and soccer games. The nearest sensitive biological resource areas from the stadium lights are across Irvine Boulevard and "LQ" Street, both over 500 feet from the Project Site. As shown in Figure 5.1-3, *Conceptual Nighttime lighting Contours – Football Stadium*, the light levels are anticipated to be less than 0.5 fc beyond Irvine Boulevard or "LQ" Streets. Therefore, the stadium lights are not anticipated to adversely impact the NCCP Preservation or the Wildlife Corridor.

[1] An average 50-foot-candle is based on the NCAA Best Lighting Practices for intercollegiate play football games.

As shown in Figure 5.1-3, there are sufficient distances between the light sources and sensitive receptors to protect adjacent uses from adverse spill light and glare impacts. The Project Site is surrounded primarily by TTOD Zoned properties except for the NCCP Preservation at the northeast corner, and TTOD zone allows residential uses, which are considered sensitive receptors. As part of the project, field measurements would be taken after the installation to demonstrate that actual spill light levels at adjacent residential property lines do not exceed 2.0 fc and do not exceed 0.5 fc at sensitive natural habitat areas. To be consistent with the Wildlife Corridor Plan, the District will employ a standard of 0.10 fc (maximum) as measured at the base of the interior berm of western boundary of the Wildlife Corridor Feature. Each luminaire would be adjusted until light levels at residential property lines are at a minimum while still providing the recommended 50 fc average across the play field.

Other Light and Glare Sources

In addition to the athletic amenities, the Proposed Project would involve nighttime lighting from the parking lots, walkways, and buildings. The City of Irvine's Uniform Security Code (Chapter 5 of the Irvine Municipal Code) and Chapter 3-16 (Lighting) of the City's Zoning Ordinance provides for various lighting sources throughout campus other than for athletic amenities so that all direct rays are confined to the site and adjacent properties are protected from glare. The Uniform Security Code outlines standards and requirements for heights, design, installation, and maintenance of lighting fixtures, including lighting for parking areas and sign illumination. Although the Project is not subject to these requirements, compliance with lighting requirements of the Division of the State Architect would accomplish the equivalent and mitigation for spillover lighting would ensure that the safe levels of light are provided on campus and that no significant spillover impacts would occur.

Furthermore, the school buildings would not involve mirrored or highly reflective surfaces as shown in Figure 3-6, *Performing Arts Center Building Elevations*, and no visual impairment to motorists or other visual nuisance is anticipated.

Therefore, there are no new impacts, as compared to those identified in the Certified EIR, related to nighttime lighting and glare associated with the Proposed Project. The net incremental impact of the proposed high school construction and operation relating to light and glare would be less than significant, and the overall impact is similar to that analyzed in the Certified EIR.

Mitigation Program and Net Impact

Mitigation measure AE-1 has been provided to reduce light and glare impacts to a less than significant level. With mitigation, net impacts on parking capacity would not be significant.

2012 Modified Project

The 2012 DSSEIR included a high school at its current location but no specific visual impacts to surrounding areas, including light and glare impacts of the high school and its ancillary facilities were reviewed. No substantial changes in the visual character of the project area would occur under the 2012 Modified Project. The light and glare impacts of the proposed high school would be generally the same as the analysis for the 2011 Approved Project, because no sensitive receptors, including biological resources would be located closer to the lighting sources. The net incremental impact of the proposed high school development and operation relating to light and glare would be less than significant with mitigation.

Mitigation Program and Net Impact

Mitigation measure AE-1 has been provided to reduce light and glare impacts to a less than significant level. With mitigation, net impacts on parking capacity would not be significant.

5.1.6 Cumulative Impacts

2011 Approved Project

The proposed high school is an allowed use under the 2011 Approved Project and the Proposed Project would not substantially change the visual quality of the project area to result in area-wide aesthetic and light and glare impacts. The Proposed Project would be located within the future Great Park Neighborhoods and is intended to help create a cohesive community of residential and other support uses. Aesthetic impacts would generally affect the area immediately surrounding the project site, and development of a high school would be compatible with the other allowed uses in the TTOD zone and would be similar to impacts analyzed under the Certified EIR.

The stadium lighting would likely generate more light and glare impacts compared to the 2011 Approved Project. However, the lighting and glare impacts would be localized and generally confined to the area immediately adjacent to the lighting fixtures; therefore, would not result in cumulative significant impacts. Net incremental impacts of the Proposed Project in combination with impacts of cumulative development would not result in substantial cumulative impacts concerning visual character or light and glare.

5.1.7 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, standard conditions of approval, and PPPs, Impacts 5.1-1 and 5.1-2 would be less than significant.

5.1.8 Applicable Mitigation Measures from the 2011 Approved Project and 2012 Modified Project

The Mitigation Agreement between the District and Heritage Fields provides for the site to be delivered to the District in a super pad condition, mass graded and compacted, with backbone infrastructure installed (roadway, storm drains, sanitary sewer, water, etc.) and stubbed wet and dry utilities. The following mitigation measures are applicable to the community developer and not directly to the District.

2011 Approved Project

A-1 Prior to issuance of building grading permits, lighting plans and signage plans for residential or non-residential new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.

A-2 Prior to the issuance of building grading permits for residential and non-residential development, and during the master plan review process for future development in the project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are

discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.

2012 Modified Project

Same as the 2011 Approved Project.

5.1.9 Additional Mitigation Measures for the Proposed Project

Impact 5.1-2

The following mitigation measure has incorporated to ensure that assumptions made for the above lighting analysis are in substantial conformance with the actual outcome of the Proposed Project.

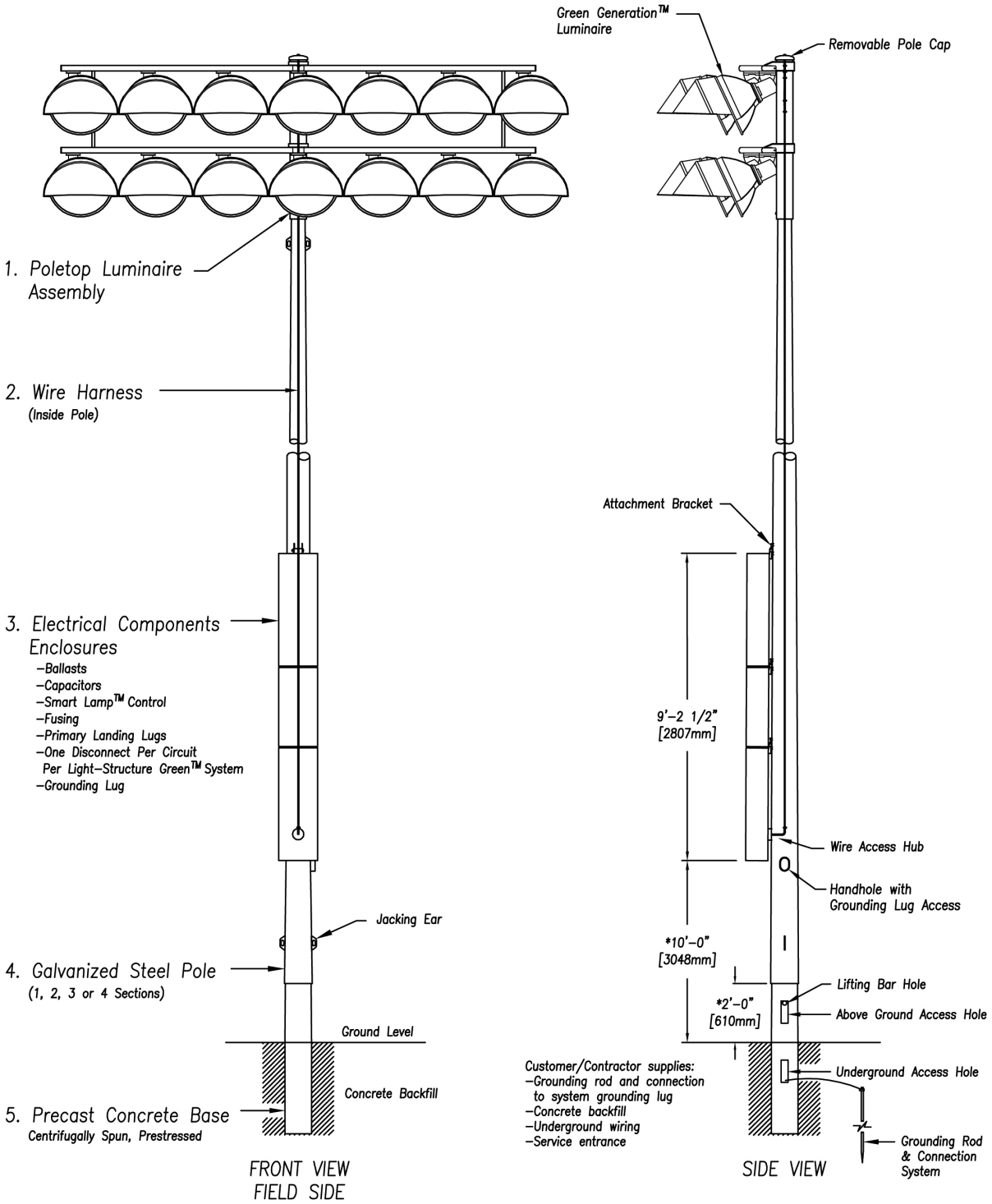
AE-1 Irvine Unified School District (IUSD) shall design exterior lighting to minimize off-site spillover and glare. Designs shall include specifications for light pole locations, heights, luminaires, shields, etc. such that site-specific photometric plans demonstrate spillover horizontal foot-candle (fc) levels do not exceed 2.0 fc at the property boundary opposite LQ Street, 0.10 fc at the base of the interior berm of western boundary of the Wildlife Corridor Feature, and 0.5 fc where adjacent to any other sensitive biological resources. IUSD shall take a field measurement after nighttime lighting installation to demonstrate that actual spill light levels adjacent to sensitive resources are a close match to the levels presented by the photometric plans. Each luminaire affixed on the poles shall be adjusted so that no lighting levels exceed 2.0 fc, 0.10 fc or 0.5 fc as specified above, respectively.

AE-2 Events shall be scheduled to ensure that field activities are concluded by 10 PM and field lights are off or substantially dimmed (allowing for safe exit) by 10 PM.

5.1.10 Level of Significance After Additional Mitigation

With implementation of the mitigation measure outlined above, potential impacts of the Proposed Project associated with light and glare would be reduced to a level that is less than significant. Therefore, no significant impacts relating to aesthetics or light and glare would result from the Proposed Project.

Light Pole Schematic



Notes:
1. This drawing is not to scale.
2. * This dimension for reference only. Variances may occur depending on steel pole tolerances, concrete tolerances, galvanizing thickness, hole depth accuracy.
3. Musco provides a base installation bar, an installation level modified for taper, and installation wedges.
4. Provisions for auxiliary equipment such as speaker or security lighting can be incorporated.
5. Copyright 1991, 2005 Musco Lighting. Patents issued and pending.

Source: Musco Green Generation Lighting

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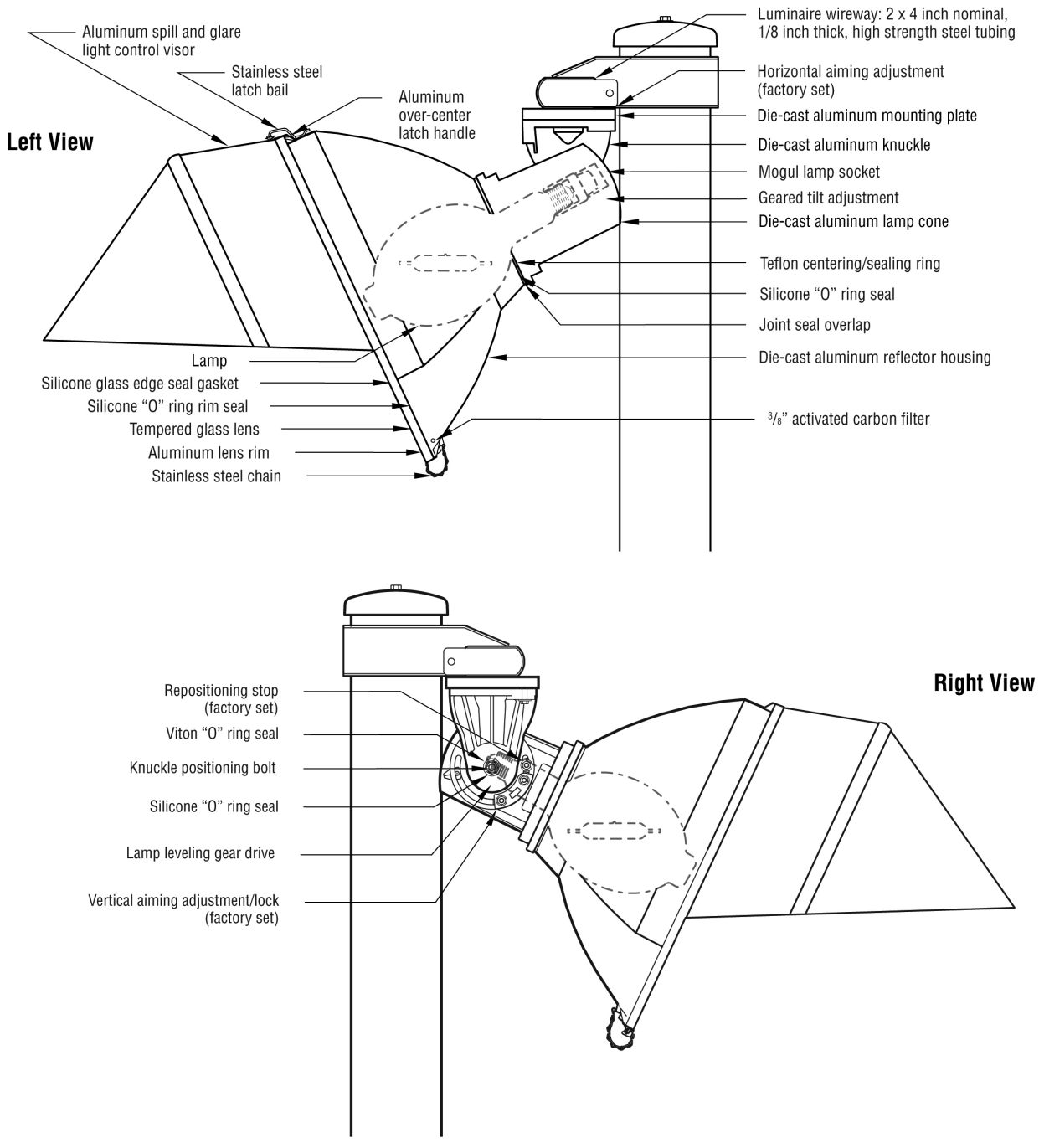
Individual Fixture Assembly



Source: Musco Green Generation Lighting

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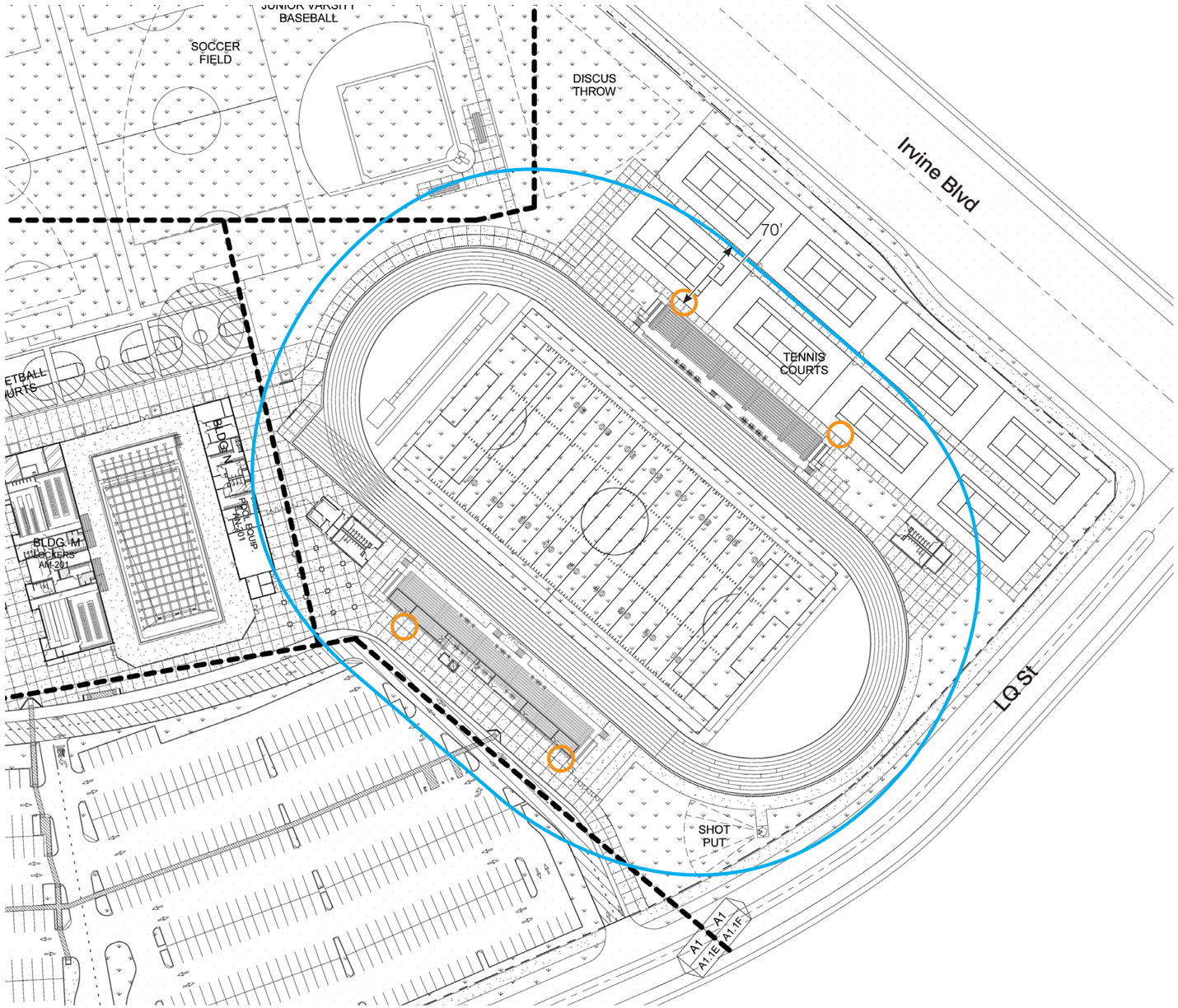
Conceptual Nightime Lighting Contours - Football Stadium



Source: MUSCO (2006)*

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