Appendix B.1

Supplemental Lighting Report Memorandum

Harvard-Westlake River Park Project
Studio City, CA

Lighting

Memo Update to Technical Report dated October 2021

Prepared by

Studio K1
DESIGNING LIGHT

July 2022

Memo

The sports lighting for the Harvard-Westlake River Park Project (Project), serving two multi-purpose athletic fields, a 52-meter pool, and eight tennis courts, has been updated in order to reduce the number of light poles, improve lighting at the facilities for visibility and participant safety, and reduce light spillover onto adjoining properties. Musco Lighting has provided updated documentation that demonstrates the new locations and configuration of the sports lighting as well as the footcandles and candela of the Project, dated May 6, 2022 (see **Appendix 1** of this report for the Musco data). StudioK1 has reviewed the documentation provided and has evaluated the Project for any possible impacts to the receptors previously studied in the October 2021 Lighting Technical Report.

Updates to the sports lighting plans consist of:

1) At Field A, a reduction from six, 70-foot poles to four, 80-foot poles

2) At Field B, a reduction from seven poles that varied in height from 60 to 80 feet to four, 80-foot poles.

3) At the swimming pool, a reduction from fourteen poles that varied in height from 21 to 60 feet to four, 55-foot poles.

4) At the tennis courts, a reduction from twelve, 40-foot poles to ten, 40-foot poles[1].

Table 2 - *Summary of Calculated Off-Site Illuminance* from the October 2021 Lighting Technical Report was updated accordingly and is included on page 3 of this memorandum. As the revised figures demonstrate, the footcandles of illumination produced by the sports lighting revision show a reduction from the original design, except at receptor #9 for which illumination was calculated to increase negligibly by a few hundredths of a footcandle. All measurements remain far below the LAMC and RIO thresholds for illumination. Using the revised candela plot from Musco Lighting, a similar result for offsite glare, or candela per square meter (cd/m^2), was observed. As shown in **Table 3** – *Summary of Calculated Off-Site Luminance* on page 4, minor fluctuations in glare were calculated. Decreases ranged from 0.3 to 9.7 cd/m^2 (the largest decrease being located at the property line adjacent to the Zev Greenway), while increases ranged from 0.1 to 2.0 cd/m^2. All such increases are very minor and comparable to the light produced by a single candle flame. Further, the revised sports lighting system continues to be a significant improvement over existing conditions which produce offsite glare as high as 3,500 cd/m^2 at adjacent residences and 4,375 cd/m^2 along the Zev Greenway given the imprecise optics and shallow orientation of the existing driving range and tennis court lights.

[1] The reduction of two poles at the tennis courts was accomplished by relocating those luminaires to nearby poles at the swimming pool.

Summary of Calculated Off-Site Illuminance						
Receptor (* = Sensitive)	**Location**	**Project Illuminance (footcandles)**		**LAMC Thresholds**		**LAMC Compliant**
		Horizontal	**Vertical**	**Horizontal**	**Vertical**	
1*	4155 Bellaire Ave.	0.00	**0.01** ~~0.02~~	2.00	2.00	YES
2*	4202 Bellaire Ave.	**0.02** ~~0.04~~	**0.05** ~~0.09~~	2.00	2.00	YES
3*	4202 Beeman Ave.	**0.02** ~~0.03~~	**0.05** ~~0.07~~	2.00	2.00	YES
4*	12501-12509 Valley Spring Ln.	0.00	0.00	2.00	2.00	YES
5*	4122 Whitsett Ave.	**0.01** ~~0.05~~	**0.03** ~~0.09~~	2.00	2.00	YES
6*	4068 Whitsett Ave.	**0.00** ~~0.02~~	**0.00** ~~0.06~~	2.00	2.00	YES
7	4203 Babcock Ave.	0.00	0.00	2.00	2.00	YES
8	4202 Babcock Ave.	0.00	0.00	2.00	2.00	YES
9	4110 Whitsett Ave.	**0.06** ~~0.02~~	**0.09** ~~0.04~~	2.00	2.00	YES
10	4108 Whitsett Ave.	**0.03** ~~0.04~~	0.08	2.00	2.00	YES
11	4104 Whitsett Ave.	0.01	**0.03** ~~0.04~~	2.00	2.00	YES
12	4100 Whitsett Ave.	0.01	**0.01** ~~0.02~~	2.00	2.00	YES
RIO	Property Line	**0.05** ~~0.06~~	**0.02** ~~0.07~~	0.20	0.20	YES
	15-feet Beyond Property	**0.00** ~~0.01~~	**0.00** ~~0.02~~	0.01	n/a	YES

Table 2 - Summary of Calculated Off-Site Illuminance

Summary of Calculated Off-Site Luminance			
Receptor (* = Sensitive)	**Location**	**Glare Intensity (cd/m2)**	
		Existing	**Project**
1*	4155 Bellaire Ave.	550	**4.1** ~~3.3~~
2*	4202 Bellaire Ave.	0	**6.4** ~~7.7~~
3*	4202 Beeman Ave.	230	**6.9** ~~7.4~~
4*	12501-12509 Valley Spring Ln.	720	**0.2** ~~0.1~~
5*	4122 Whitsett Ave.	1500	**6.3** ~~5.0~~
6*	4068 Whitsett Ave.	3500	**0.7** ~~5.8~~
7	4203 Babcock Ave.	900	**2.2** ~~1.1~~
8	4202 Babcock Ave.	3200	**0.2** ~~0.5~~
9	4110 Whitsett Ave.	2500	**7.1** ~~5.4~~
10	4108 Whitsett Ave.	2350	**7.2** ~~5.2~~
11	4104 Whitsett Ave.	2400	**4.9** ~~5.8~~
12	4100 Whitsett Ave.	3700	**1.3** ~~2.5~~
RIO	Property Line	4375	**3.9** ~~13.6~~
	15-feet Beyond Property	4375	**1.7** ~~4.0~~

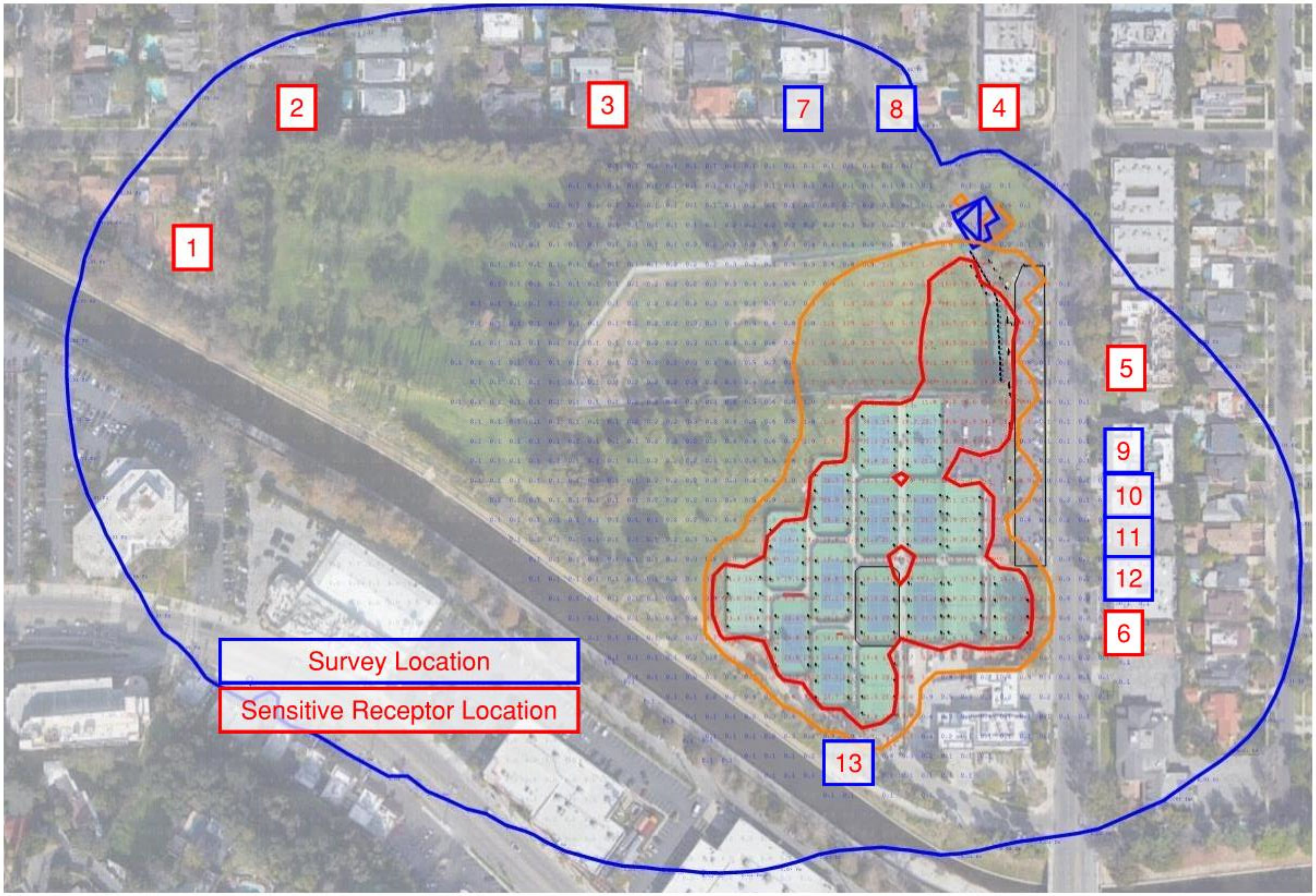
Table 3 - Summary of Calculated Off-Site Luminance

*Views obstructed/limited by landscape between receptor and Project Site

**Calculated values do not account for landscape (new or proposed)

The improvement in Project Site lighting conditions and decrease in neighborhood lighting impacts following Project implementation can also be viewed graphically via illuminance plots. As described in the October 2021 Lighting Technical Report, existing lighting extends well beyond the Project Site boundary (**Figure 5** - *Existing Off-Site Illuminance*). This simulation, for both existing and post-Project conditions, does not account for landscaping, changes in elevation, intervening structures, or geography of the Project Site that might reduce lighting views to some areas. The blue isoline included in the figure represents the extent of measurable lighting that is produced by sources on the existing Project Site. By contrast, the Project's sports lighting system is shown in **Figure 8** – *Off-Site Illuminance*, revised to reflect the aforementioned changes in lighting design. Similar to the Project's original lighting layout, the revised design reflects tighter control of onsite light sources and yields a significant reduction in offsite glare, reducing the lighting impacts that the surrounding neighborhoods would experience.

Figure 5 – Existing Off-Site Illuminance



SCALE: 1" = 200'-0"

ISOLINE COLOR LEGEND

BLUE - 0 FOOTCANDLES

ORANGE - 1 FOOTCANDLES

RED - 10 FOOTCANDLES

HARVARD-WESTLAKE EXISTING SITE
PHOTOMETRICS - ILLUMINANCE

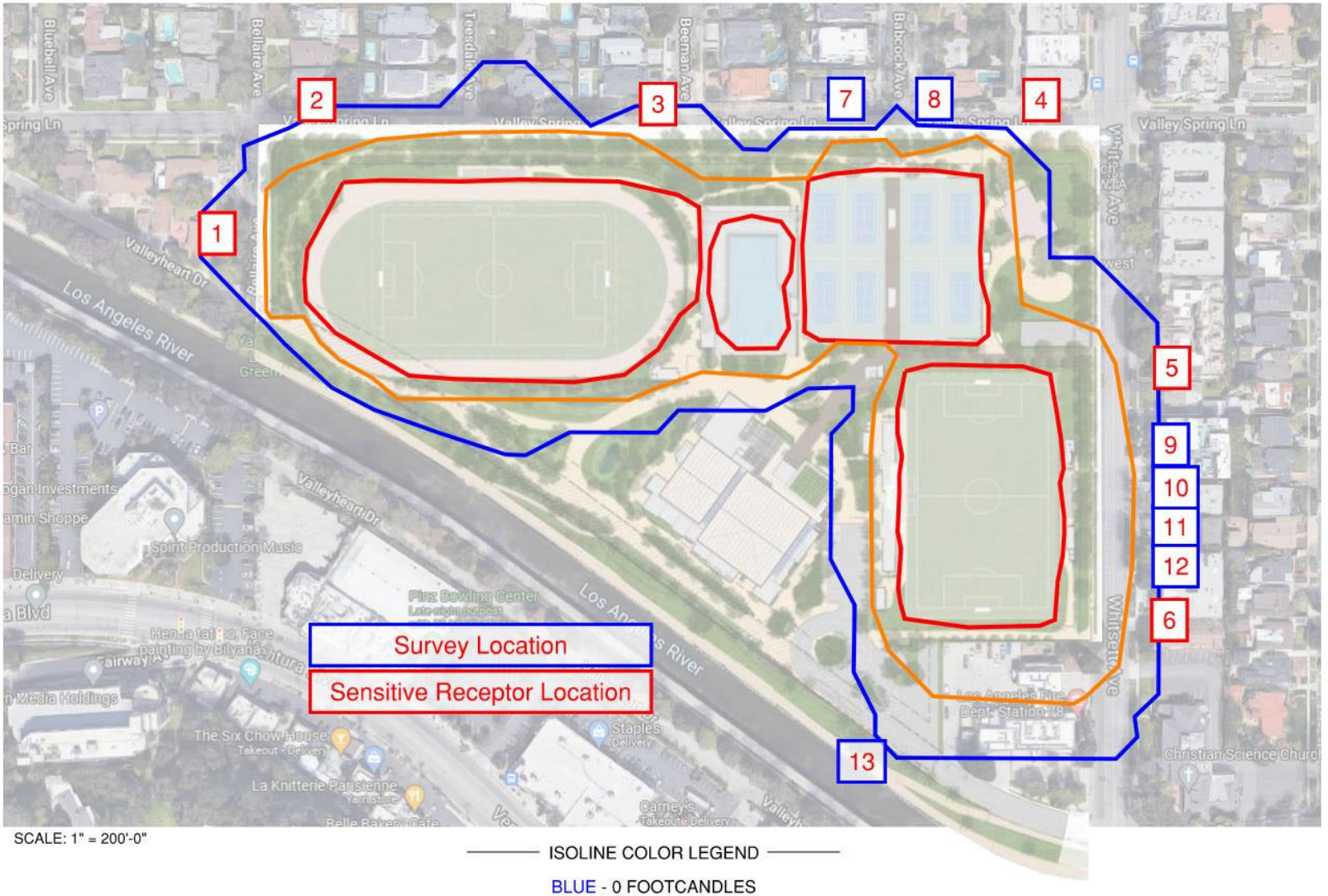


Figure 8 – Off-Site Illuminance