Appendix

Appendix C Lighting Plans for Indian Springs High School

Appendix

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Indian Springs High School Athletic Playfields

San Bernardino, CA

Lighting System

ole / Fixture						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1	70'	70'	4	TLC-LED-1200	4.68 kW	A
		16'	1	TLC-BT-575	0.58 kW	В
		70'	3	TLC-LED-1200	3.51 kW	В
		16'	1	TLC-BT-575	0.58 kW	Α
A2	60'	60'	3	TLC-LED-1200	3.51 kW	В
		16'	1	TLC-BT-575	0.58 kW	В
A3	70'	70'	4	TLC-LED-1200	4.68 kW	А
		70'	4	TLC-LED-1200	4.68 kW	С
		16'	1	TLC-BT-575	0.58 kW	С
		16'	1	TLC-BT-575	0.58 kW	А
A4	70'	70'	4	TLC-LED-1200	4.68 kW	С
		16'	1	TLC-BT-575	0.58 kW	С
A5-A6	70'	70'	1	TLC-LED-1200	1.17 kW	F
A3-A0	70				_	
	001	70'	2	TLC-LED-900	1.78 kW	F
B1	80'	80'	5	TLC-LED-1500	7.15 kW	В
		16'	2	TLC-BT-575	1.15 kW	В
		80'	4	TLC-LED-1500	5.72 kW	Н
B2	70'	70'	5	TLC-LED-1500	7.15 kW	В
		16'	2	TLC-BT-575	1.15 kW	В
В3	80'	80'	8	TLC-LED-1500	11.44 kW	Α
		80'	8	TLC-LED-1500	11.44 kW	С
		22'	1	TLC-BT-575	0.58 kW	С
		16'	1	TLC-BT-575	0.58 kW	A
B4	80'	80'	8	TLC-LED-1500	11.44 kW	А
U-1	00	16'	1	TLC-BT-575	0.58 kW	A
DE	001					
B5	80'	80' 80'	6 2	TLC-LED-1500 TLC-LED-900	8.58 kW 1.78 kW	C
	001	16'	1	TLC-BT-575	0.58 kW	С
B6-B7	80'	80'	8	TLC-LED-1200	9.36 kW	F
C1	80'	80'	2	TLC-LED-1200	2.34 kW	A
		80'	1	TLC-LED-900	0.89 kW	A
		16'	1	TLC-BT-575	0.58 kW	Α
C2	80'	80'	5	TLC-LED-1200	5.85 kW	G
		80'	1	TLC-LED-900	0.89 kW	A
		16'	1	TLC-BT-575	0.58 kW	А
		80'	2	TLC-LED-1200	2.34 kW	А
C3	70'	70'	1	TLC-LED-1200	1.17 kW	С
		70'	3	TLC-LED-1500	4.29 kW	С
		16'	1	TLC-BT-575	0.58 kW	С
C4	80'	80'	3	TLC-LED-1500	4.29 kW	С
	00	80'	1	TLC-LED-900	0.89 kW	C
	701	16'	1	TLC-BT-575	0.58 kW	C
D1	70'	70'	3	TLC-LED-1200	3.51 kW	A
		70'	1	TLC-LED-900	0.89 kW	A
		16'	1	TLC-BT-575	0.58 kW	А
D2	80'	80'	5	TLC-LED-1200	5.85 kW	G
		80'	1	TLC-LED-900	0.89 kW	Α
		16'	1	TLC-BT-575	0.58 kW	Α
		80'	3	TLC-LED-1200	3.51 kW	Α
D3	70'	70'	4	TLC-LED-1500	5.72 kW	С
P1-P2	70'	70'	5	TLC-LED-1200	5.85 kW	G
	70'	70'	5	TLC-LED-1500	7.15 kW	Н
P3			1	1		
P3 T1		60'	1	TI C-I FD-1200	1 17 kW	ח
P3 T1	60'	60'	1 2	TLC-LED-1200 TLC-LED-900	1.17 kW 1.78 kW	D D

From Hometown to Professional











Indian Springs High School Athletic Playfields San Bernardino, CA

Pole / Fixture	e Summary					
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
		60'	2	TLC-LED-1200	2.34 kW	D
		60'	2	TLC-LED-900	1.78 kW	D
T3, T6	60'	60'	3	TLC-LED-900	2.67 kW	D
T4	60'	60'	3	TLC-LED-1200	3.51 kW	E
		60'	2	TLC-LED-1200	2.34 kW	D
		60'	1	TLC-LED-900	0.89 kW	D
T5	60'	60'	3	TLC-LED-1200	3.51 kW	D
		60'	3	TLC-LED-1200	3.51 kW	Е
		60'	1	TLC-LED-900	0.89 kW	D
T7-T8	60'	60'	3	TLC-LED-1200	3.51 kW	Е
31			199		231.39 kW	

From Hometown to Professional











Indian Springs High School Athletic Playfields San Bernardino, CA

Circuit Summ	Circuit Summary									
Circuit	Description	Load	Fixture Qty							
Α	Varsity Baseball	52.1 kW	46							
В	Varsity Softball	24.77 kW	22							
С	JV Baseball	50.97 kW	42							
D	Tennis 1-5	20.04 kW	20							
Е	Tennis 6-8	14.04 kW	12							
F	Practice Softball	24.62 kW	22							
G	Practice North	23.4 kW	20							
Н	Practice South	21.45 kW	15							

Fixture Type Summary							
Туре	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	65
TLC-LED-1200	LED 5700K - 75 CRI	1170W	136,000	>120,000	>120,000	>120,000	91
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	23
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	20

Light Level Summary

Calculation Grid Summary											
Grid Name	Calculation Metric	Ave	Min	Illumination Max	Max/Min	Ave/Min	Circuits	Fixture Qty			
9th St. Spill	Horizontal	0	0	0.01	0.00	7.00,	A,B,C,D,E, F,G,H	199			
9th St. Spill	Max Candela (by Fixture)	1939	133	4827	36.36	14.60	A,B,C,D,E, F,G,H	199			
9th St. Spill	Max Vertical Illuminance Metric	0.02	0	0.04	62.11		A,B,C,D,E, F,G,H	199			
Del Rosa Drive Spill	Horizontal	0.01	0	0.06	0.00		A,B,C,D,E, F,G,H	199			
Del Rosa Drive Spill	Max Candela (by Fixture)	3702	0.44	15921	36405.21	8414.25	A,B,C,D,E, F,G,H	199			
Del Rosa Drive Spill	Max Vertical Illuminance Metric	0.04	0	0.18	0.00		A,B,C,D,E, F,G,H	199			
JV Baseball Blanket Grid	Horizontal	26.6	0	65	272.23		С	42			
JV Baseball (Infield)	Horizontal Illuminance	54	39	65	1.67	1.38	С	42			
JV Baseball (Outfield)	Horizontal Illuminance	33.7	22	53	2.36	1.53	С	42			
JVBB 1st Base Bullpen	Horizontal	22.8	5	37	7.34	4.56	С	42			
JVBB 3rd Base Bullpen	Horizontal	14.9	4	34	8.67	3.73	С	42			
Practice North	Horizontal Illuminance	30.1	20	37	1.81	1.51	G	20			
Practice Softball (Infield)	Horizontal Illuminance	51.3	44	59	1.34	1.17	F	22			
Practice Softball (Outfield)	Horizontal Illuminance	33.8	20	46	2.27	1.69	F	22			
Practice South	Horizontal Illuminance	30.1	21	42	1.98	1.43	F,H	37			
Tennis 1-5	Horizontal Illuminance	51	38	70	1.87	1.34	D	20			
Tennis 6-8	Horizontal Illuminance	58.1	40	69	1.74	1.45	Е	12			
VBB 1st Base Bullpen	Horizontal	23.9	12	32	2.64	1.99	Α	46			
VBB 3rd Base Bullpen	Horizontal	20.2	8	29	3.50	2.53	Α	46			
VSB 1st Base Bullpen	Horizontal	11.5	1	32	24.15	11.50	В	22			
VSB 3rd Base Bullpen	Horizontal	13.8	3	29	8.74	4.60	В	22			
Varsity Baseball (Infield)	Horizontal Illuminance	54	41	65	1.60	1.32	Α	46			
Varsity Baseball (Outfield)	Horizontal Illuminance	31.6	24	46	1.95	1.32	Α	46			
Varsity Softball (Infield)	Horizontal Illuminance	52.2	38	64	1.69	1.37	В	22			
Varsity Softball (Outfield)	Horizontal Illuminance	30.7	21	43	2.11	1.46	В	22			
West Spill	Horizontal	0.30	0	1.51	0.00		A,B,C,D,E, F,G,H	199			
West Spill	Max Candela (by Fixture)	8986	2.65	29960	11308.30	3391.07	A,B,C,D,E, F,G,H	199			
West Spill	Max Vertical Illuminance Metric	0.52	0	2.17	0.00		A,B,C,D,E, F,G,H	199			

From Hometown to Professional













Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY Name: Varsity Softball Size: 225'/230'/230' - basepath 60' Spacing: 20.0' x 20.0' Height: 3.0' above grade

ILLUMINATION S	ILLUMINATION SUMMARY										
MAINTAINED HORIZONTA	AL FOOTCANDL	ES									
	Infield	Outfield									
Guaranteed Average:	50	30									
Scan Average:	52.2	30.7									
Maximum:	64	43									
Minimum:	38	21									
Avg / Min:	1.38	1.50									
Guaranteed Max / Min:	2	2.5									
Max / Min:	1.69	2.11									
UG (adjacent pts):	1.30	1.46									
CU:	0.65										
No. of Points:	25	98									
LUMINAIRE INFORMATIO	N										
Applied Circuits:	В										
No. of Luminaires:	22										
Total Load:	24.77 kW										

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





to 0,0 reference point(s) \otimes



Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: VSB 1st Base Bullpen
Size: 225'/230'/230' - basepath 60'

Spacing: 10.0' x 10.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY Entire Grid Scan Average: Maximum: 32 Minimum: Avg / Min: 8.58 Max / Min: 24.15 UG (adjacent pts): 1.89 CU: 0.02 No. of Points: 51 LUMINAIRE INFORMATION Applied Circuits: B No. of Luminaires: 22 Total Load: 24.77 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

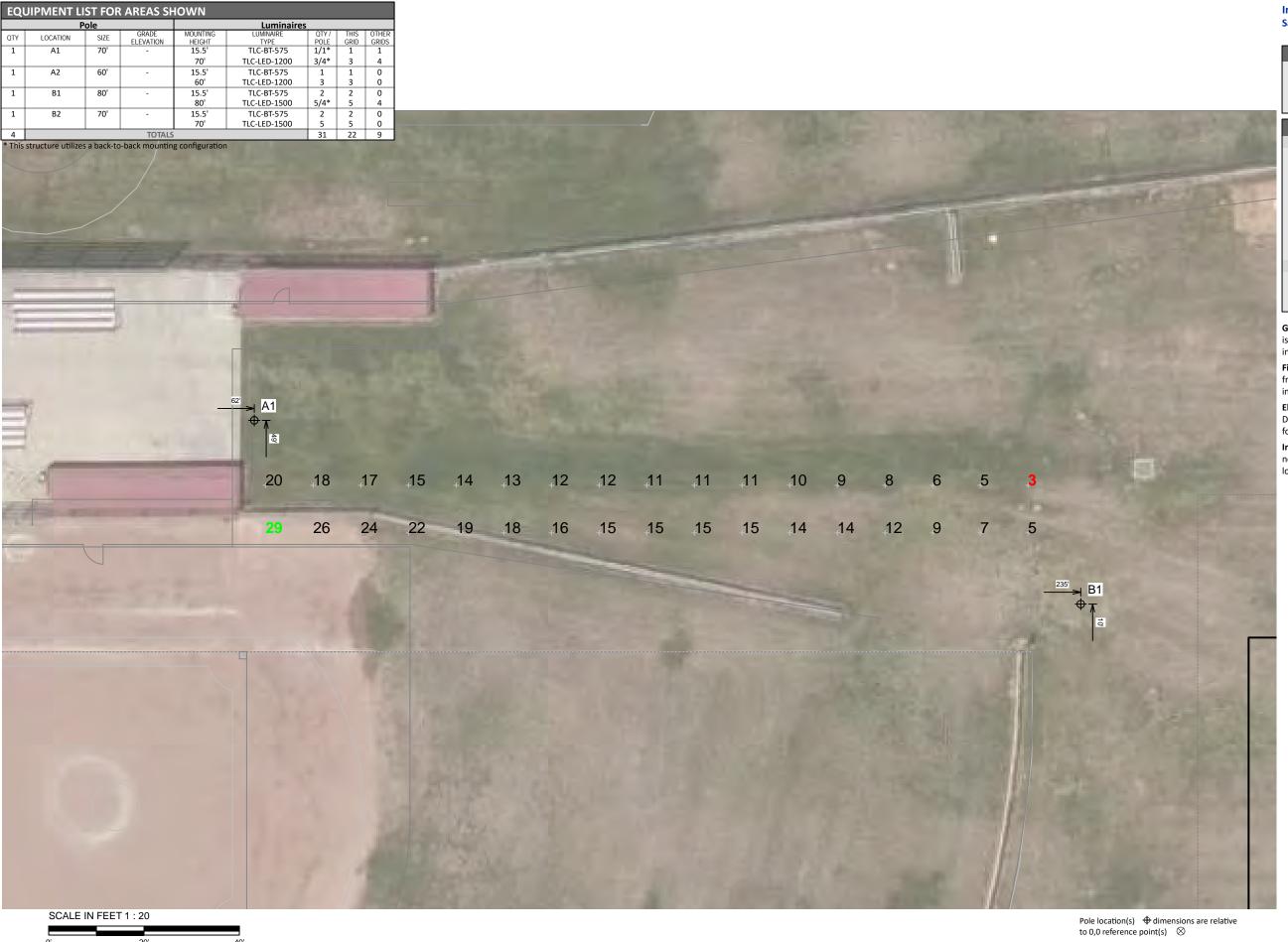
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





to 0,0 reference point(s) \otimes



Indian Springs High School Athletic Playfields San Bernardino, CA

Rame: VSB 3rd Base Bullpen
Size: 225'/230'/230' - basepath 60'
Spacing: 10.0' x 10.0'

Height: 3.0' above grade

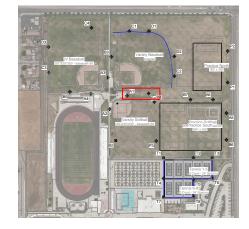
ILLUMINATION SUMMARY MAINTAINED HORIZONTAL FOOTCANDLES **Entire Grid** Scan Average: Maximum: 29 Minimum: Avg / Min: 4.19 Max / Min: UG (adjacent pts): 1.51 CU: 0.02 No. of Points: 34 LUMINAIRE INFORMATION Applied Circuits: B No. of Luminaires: 22 Total Load: 24.77 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

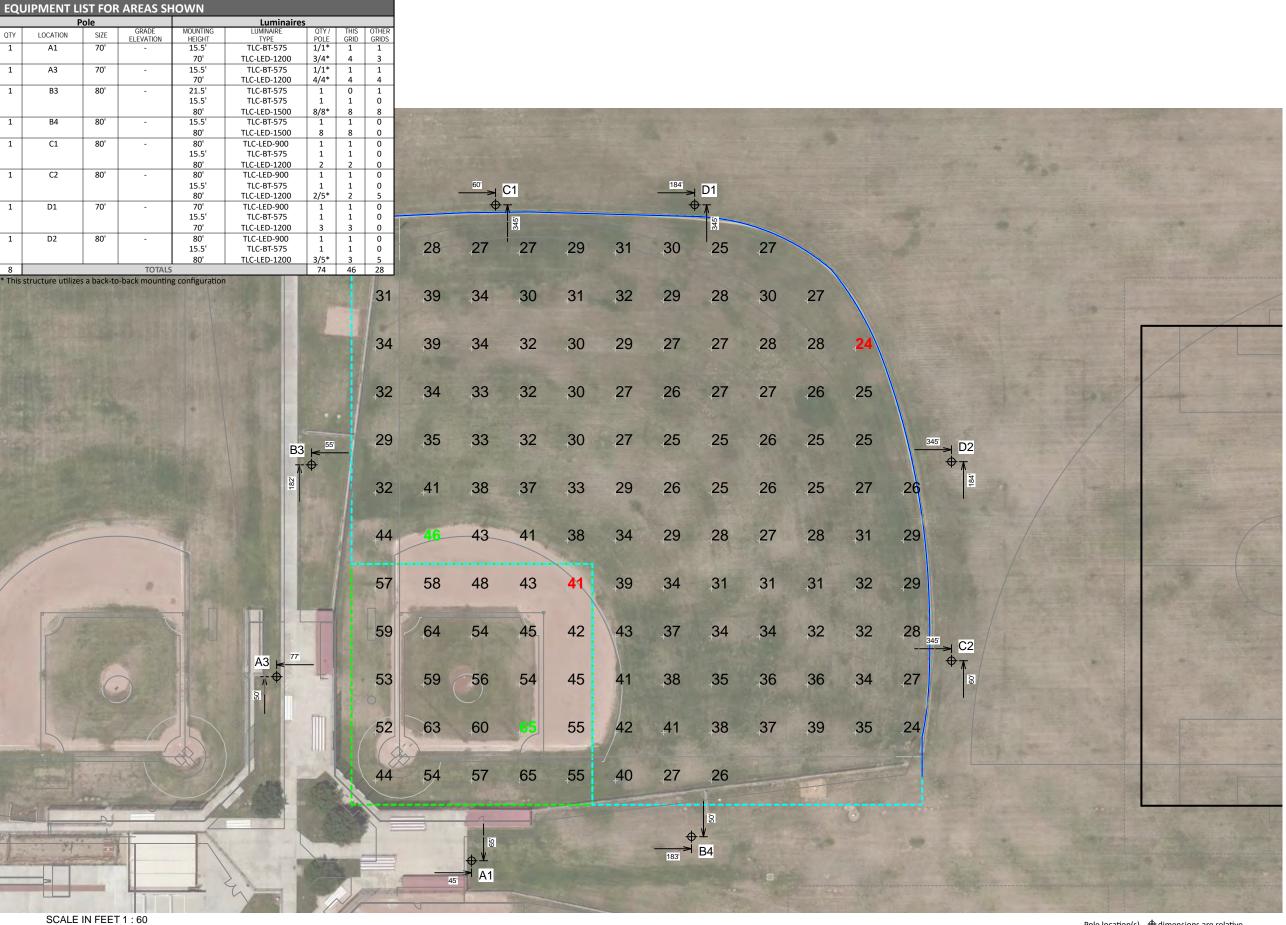
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.







Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

No. of Luminaires: 46

Total Load: 52.1 kW

Name: Varsity Baseball Size: Irregular 338' / 402' / 327' Spacing: 30.0' x 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY Infield Outfield **Guaranteed Average:** 31.6 Scan Average: 54.0 Maximum: 65 46 24 Minimum: 41 Avg / Min: 1.34 1.32 Guaranteed Max / Min: 2.5 Max / Min: 1.60 1.95 UG (adjacent pts): 1.22 1.51 CU: 0.75 106 No. of Points: 25 Applied Circuits: A

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





to 0,0 reference point(s) \otimes

TY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE	QTY/	THIS	
1	A1	70'	- ELEVATION	15.5'	LUMINAIRE TYPE TLC-BT-575	QTY / POLE 1/1* 3/4*	1 4	OTHER GRIDS 1
1	A3	70'	-	70' 15.5'	TLC-LED-1200 TLC-BT-575 TLC-LED-1200	1/1* 4/4*	1	1 4
1	В3	80'	-	70' 21.5'	TLC-BT-575	1	0	1
		001		15.5' 80'	TLC-BT-575 TLC-LED-1500	1 8/8*	8	8
1	B4	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	1 8	8	0
1	C1	80'	-	80' 15.5'	TLC-LED-900 TLC-BT-575	1	1	0
1	C2	80'	-	80'	TLC-LED-1200 TLC-LED-900	1	1	0
				15.5' 80'	TLC-BT-575 TLC-LED-1200	1 2/5*	2	5
1	D1	70'	-	70' 15.5'	TLC-LED-900 TLC-BT-575	1 1	1	0
1	D2	80'	-	70' 80'	TLC-LED-1200 TLC-LED-900	3	3	0
-	52			15.5' 80'	TLC-BT-575 TLC-LED-1200	1	1	0
8 * This st	ructure utilize	s a hack-to	TOTALS			3/5* 74	46	5 28
	SCALE	IN EEET	1 : 20	1100	DESCRIPTION OF THE PERSON NAMED IN			
	SUALE	IIN FEE I	1.20					

EQUIPMENT LIST FOR AREAS SHOWN

ENGINEERED DESIGN By: Brendon Guler · File #207886C · 03-Jun-21

Indian Springs High School Athletic Playfields San Bernardino, CA

RRID SUMMARY

Name: VBB 3rd Base Bullpen
Size: Irregular 338' / 402' / 327'
Spacing: 10.0' x 10.0'

Spacing: 10.0' x 10.0' Height: 3.0' above grade

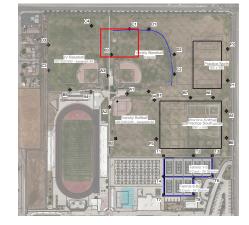
ILLUMINATION SUMMARY MAINTAINED HORIZONTAL FOOTCANDLES **Entire Grid** Scan Average: Maximum: 29 Minimum: Avg / Min: 2.40 Max / Min: 3.50 UG (adjacent pts): 1.48 CU: 0.01 No. of Points: 36 LUMINAIRE INFORMATION Applied Circuits: A No. of Luminaires: 46 Total Load: 52.1 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





to 0,0 reference point(s) \otimes



Indian Springs High School Athletic Playfields San Bernardino, CA

RID SUMMARY

Name: VBB 1st Base Bullpen
Size: Irregular 338' / 402' / 327'
Spacing: 10.0' x 10.0'
Height: 3.0' above grade

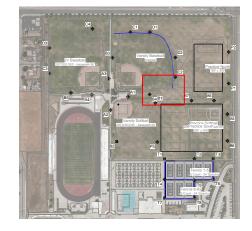
ILLUMINATION SUMMARY MAINTAINED HORIZONTAL FOOTCANDLES **Entire Grid** Scan Average: Maximum: 32 Minimum: 12 Avg / Min: 1.96 Max / Min: UG (adjacent pts): 1.54 CU: 0.01 No. of Points: 26 LUMINAIRE INFORMATION Applied Circuits: A No. of Luminaires: 46 Total Load: 52.1 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

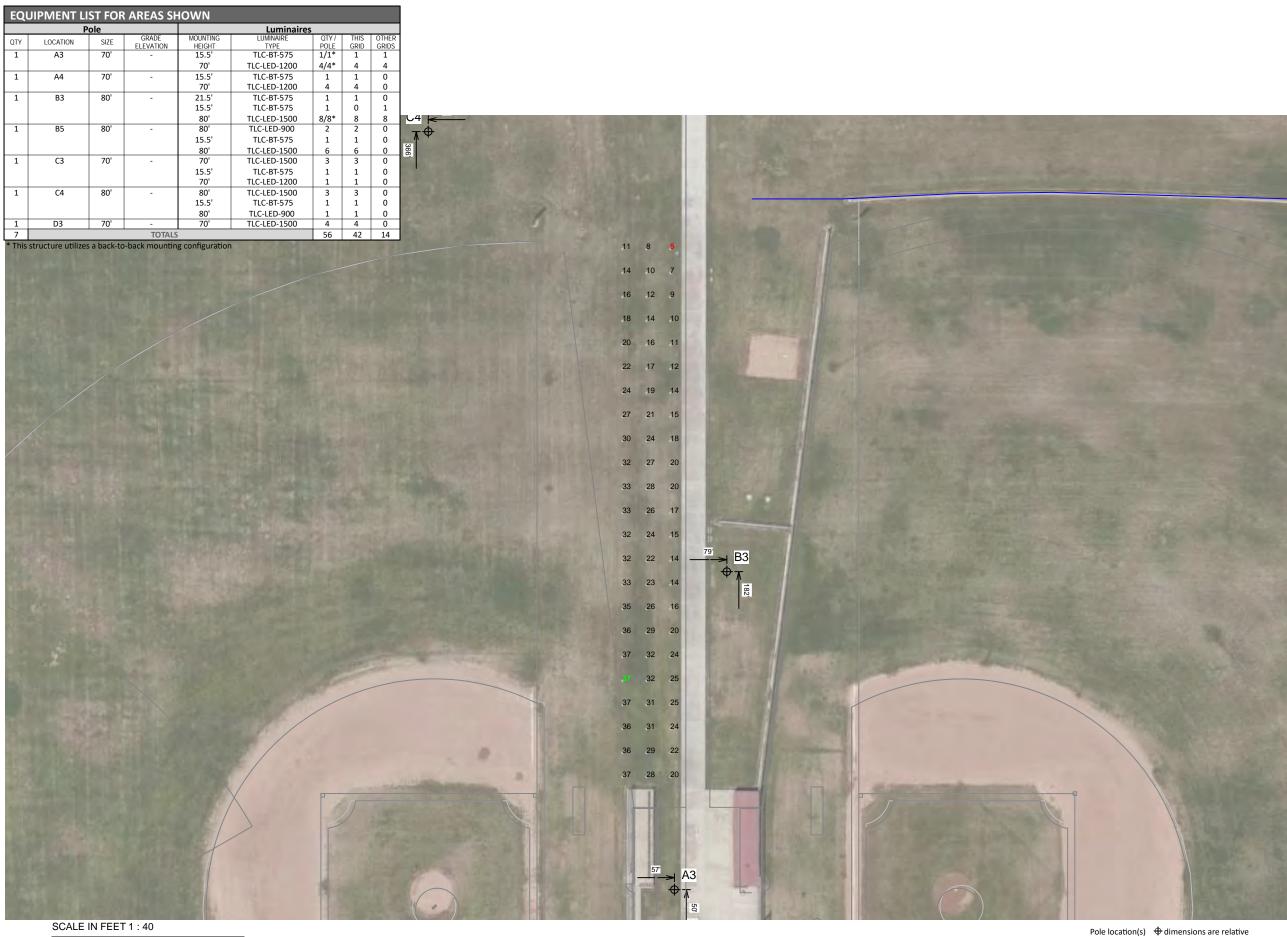
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.







Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: JVBB 1st Base Bullpen

Size: 320'/320'/320' - basepath 90'
Spacing: 10.0' x 10.0'

Height: 3.0' above grade

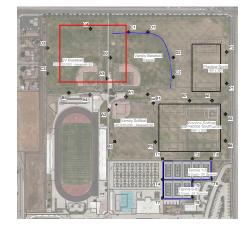
ILLUMINATION SUMMARY Entire Grid Scan Average: Maximum: 37 Minimum: 4.47 Avg / Min: Max / Min: UG (adjacent pts): 1.62 CU: 0.03 No. of Points: 69 LUMINAIRE INFORMATION Applied Circuits: C No. of Luminaires: 42 Total Load: 50.97 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

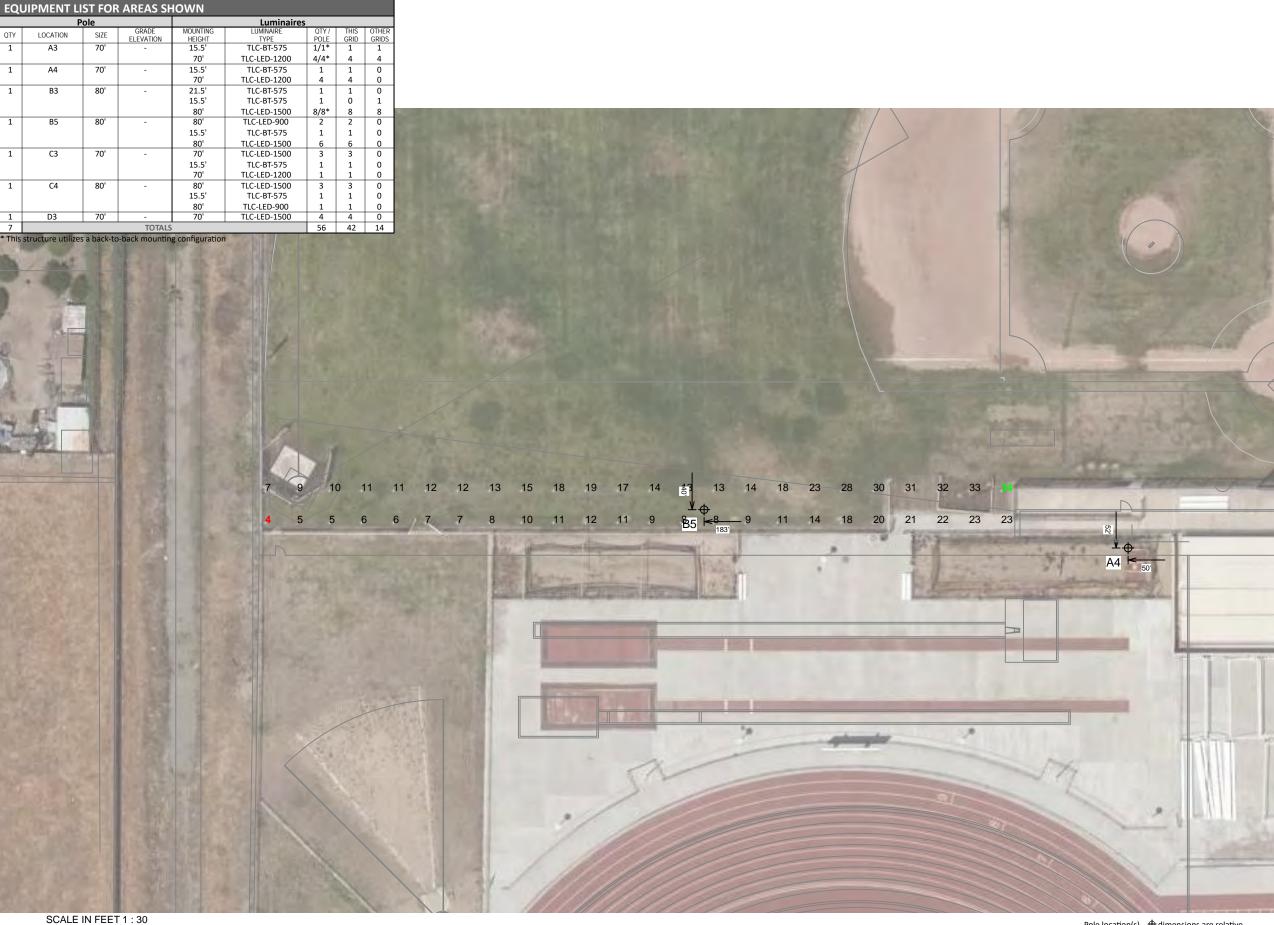
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





to 0,0 reference point(s) \otimes



Pole location(s) \oplus dimensions are relative to 0,0 reference point(s) \otimes

Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: JVBB 3rd Base Bullpen
Size: 320'/320'/320' - basepath 90'
Spacing: 10.0' x 10.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY **Entire Grid** Scan Average: Maximum: Minimum: Avg / Min: 3.85 Max / Min: UG (adjacent pts): 1.84 CU: 0.01 No. of Points: 48 LUMINAIRE INFORMATION Applied Circuits: C No. of Luminaires: 42 Total Load: 50.97 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





Luminaires LOCATION 4/4* 70' TLC-LED-1200 TLC-BT-575 15.5' TLC-LED-1200 21.5' TLC-BT-575 В3 80' TLC-BT-575 15.5' TLC-LED-1500 8/8* TLC-LED-900 15.5' TLC-BT-575 TLC-LED-1500 TLC-LED-1500 C3 70' 15.5' TLC-BT-575 TLC-LED-1200 C4 TLC-LED-1500 80' 80' 15.5' TLC-BT-575 TLC-LED-900 TLC-LED-1500 56 42 14 24 26 * This structure utilizes a back-to-back mounting con 28 31 37 39 28 25 31 26 43 35 D3 |< 319 28 24 27 41 42 39 36 29 24 26 31 39 40 38 B3 37 35 29 25 26 40 23 32 44 42 /26 37 30 26 31 38 26 46 **TTO** 29 34 49 32 29 27 55 60 36 33 33 36 57 62 54 А3 35 45 49 61 65 63 52 53 61 63 54 36 37 41 47 55 52 31 SCALE IN FEET 1:60

EQUIPMENT LIST FOR AREAS SHOWN

ENGINEERED DESIGN By: Brendon Guler · File #207886C · 03-Jun-21

Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: JV Baseball

Size: 320'/320'/320' - basepath 90' Spacing: 30.0' x 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY Infield Outfield **Guaranteed Average:** 33.7 Scan Average: 54.0 53 Maximum: 65 22 Minimum: 39 Avg / Min: 1.50 1.39 Guaranteed Max / Min: 2.5 Max / Min: 1.67 2.36 UG (adjacent pts): 1.29 1.65 CU: 0.70 86 No. of Points: 25

Applied Circuits: C No. of Luminaires: 42

Total Load: 50.97 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

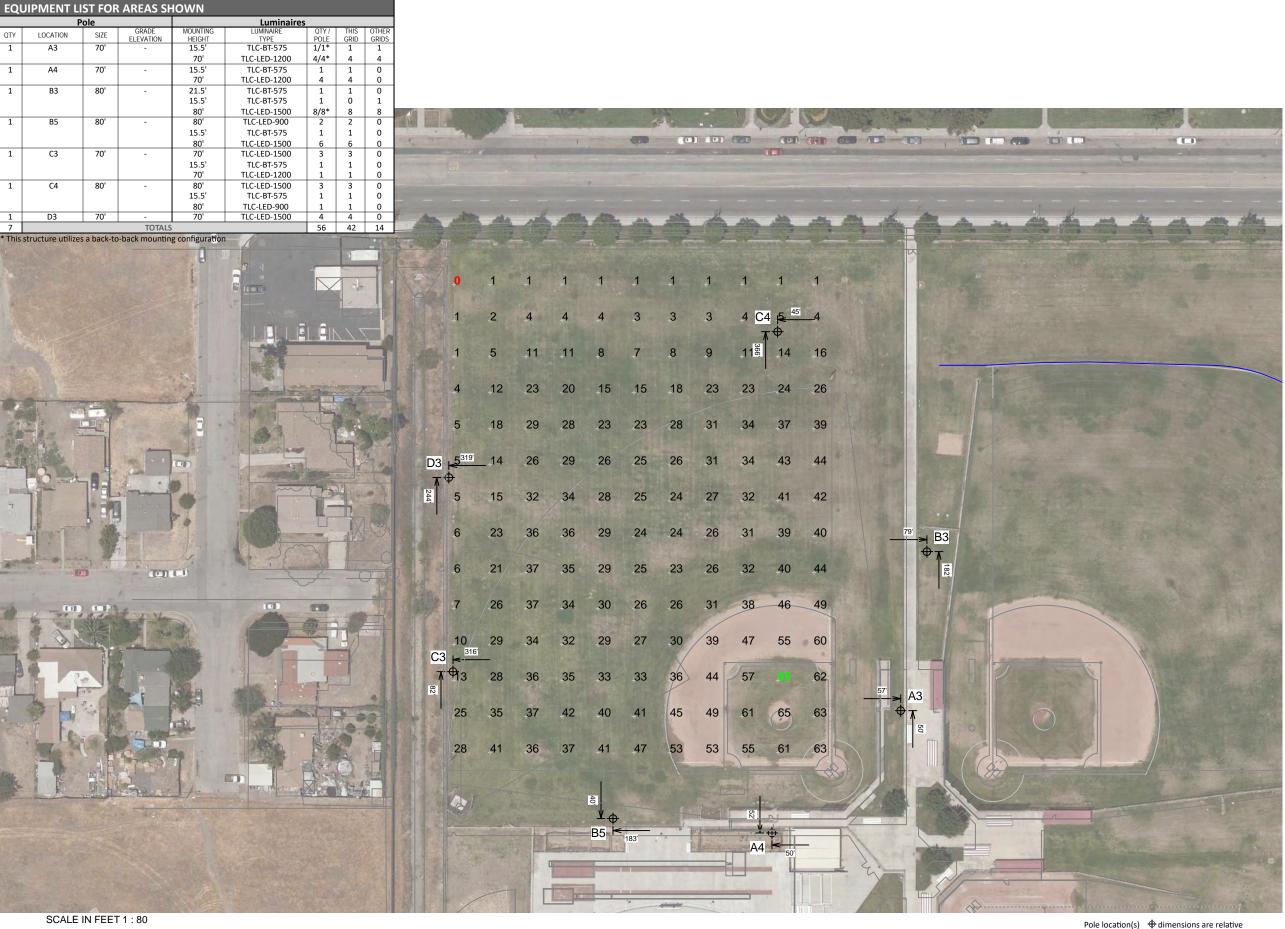
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





to 0,0 reference point(s) \otimes



Indian Springs High School Athletic Playfields San Bernardino, CA

Rame: JV Baseball Blanket Grid
Size: 320'/320'/320' - basepath 90'
Spacing: 30.0' x 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY Entire Grid Scan Average: Maximum: 65 Minimum: 110.81 Avg / Min: Max / Min: 272.23 UG (adjacent pts): 5.38 CU: 0.67 No. of Points: 154 LUMINAIRE INFORMATION Applied Circuits: C No. of Luminaires: 42 Total Load: 50.97 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





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to 0,0 reference point(s) \otimes

EQUIPMENT LIST FOR AREAS SHOWN Luminaires LOCATION TYPE TLC-LED-1200 60' TLC-LED-900 TLC-LED-900 60' TLC-LED-1200 TLC-LED-1500 TLC-LED-900 T3, T6 60' TLC-LED-1200 T4 TLC-LED-900 TLC-LED-1200 3/3* TLC-LED-900 * This structure utilizes a back-to-back mounting configuration 51 49 48 40 47 56 43 46 58 63 55 52 50 51 42 52 50 57 58 49 45 59 56 56 53 66 52 43 52 48 67 47 58 60 43 48 48 70 50 54 57 51 44 51 63 52 46 55 50 48 55 55 53 56 49 57 50 50 40 41 SCALE IN FEET 1:30

ENGINEERED DESIGN By: Brendon Guler · File #207886C · 03-Jun-21

Indian Springs High School Athletic Playfields San Bernardino, CA

Rame: Tennis 1-5
Size: 5 Court - 24' Spacing
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

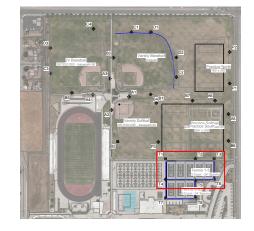
ILLUMINATION SUMMARY MAINTAINED HORIZONTAL FOOTCANDLES **Entire Grid Guaranteed Average:** Scan Average: 51.0 Maximum: 38 Minimum: Avg / Min: 1.35 Guaranteed Max / Min: Max / Min: 1.87 UG (adjacent pts): 0.00 CU: 0.69 No. of Points: 75 Applied Circuits: D No. of Luminaires: 20 Total Load: 20.04 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

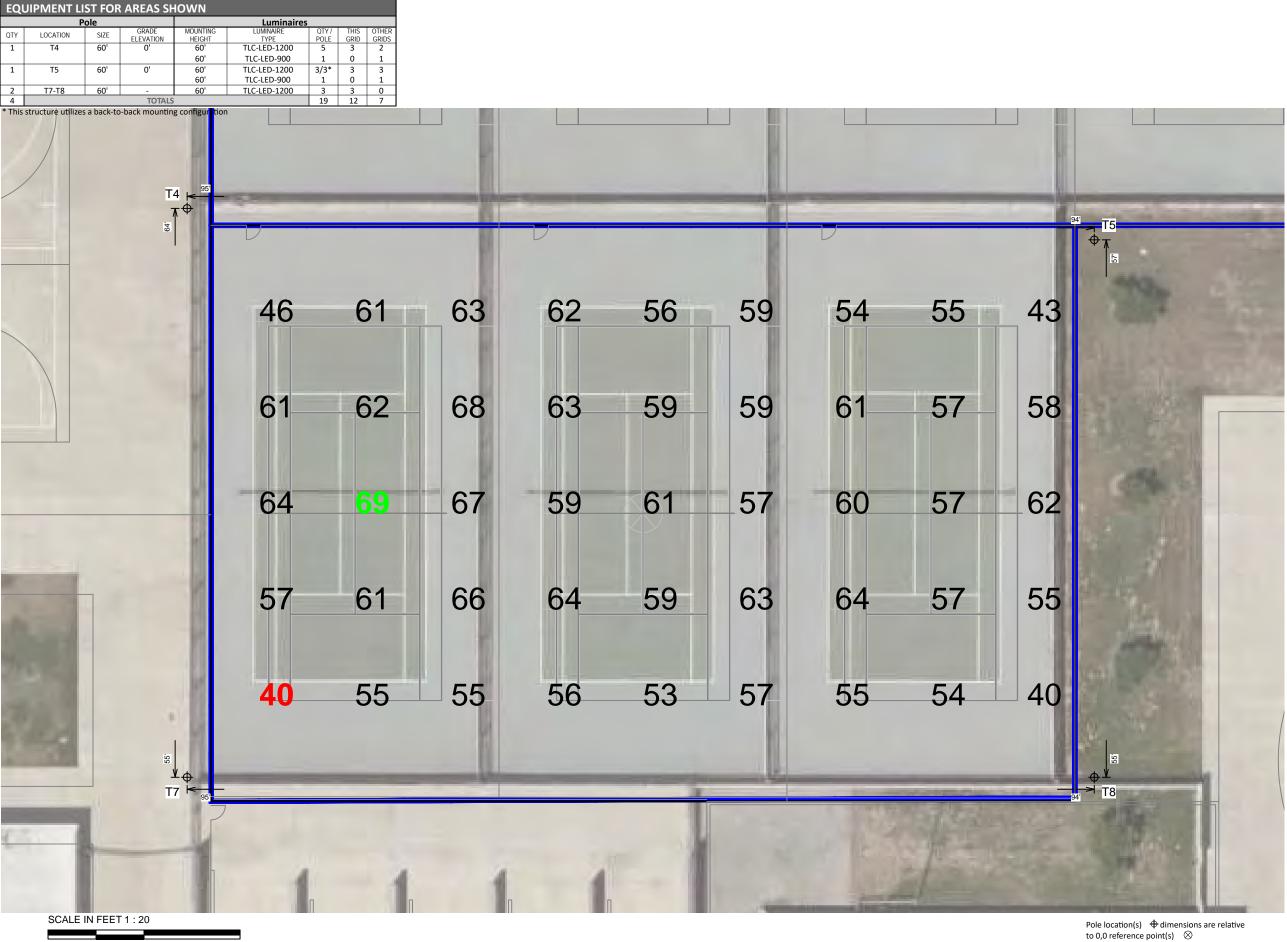
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





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to 0,0 reference point(s) \otimes



Indian Springs High School Athletic Playfields San Bernardino, CA

Rame: Tennis 6-8
Size: 3 Court - 24' Spacing
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

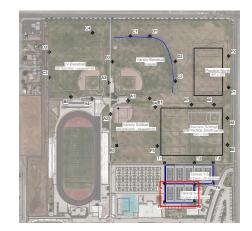
ILLUMINATION SUMMARY Entire Grid Guaranteed Average: Scan Average: 58.1 Maximum: 69 Minimum: Avg / Min: 1.46 Guaranteed Max / Min: Max / Min: 1.74 0.00 UG (adjacent pts): CU: 0.65 No. of Points: 45 LUMINAIRE INFORMATION Applied Circuits: E No. of Luminaires: 12 Total Load: 14.04 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

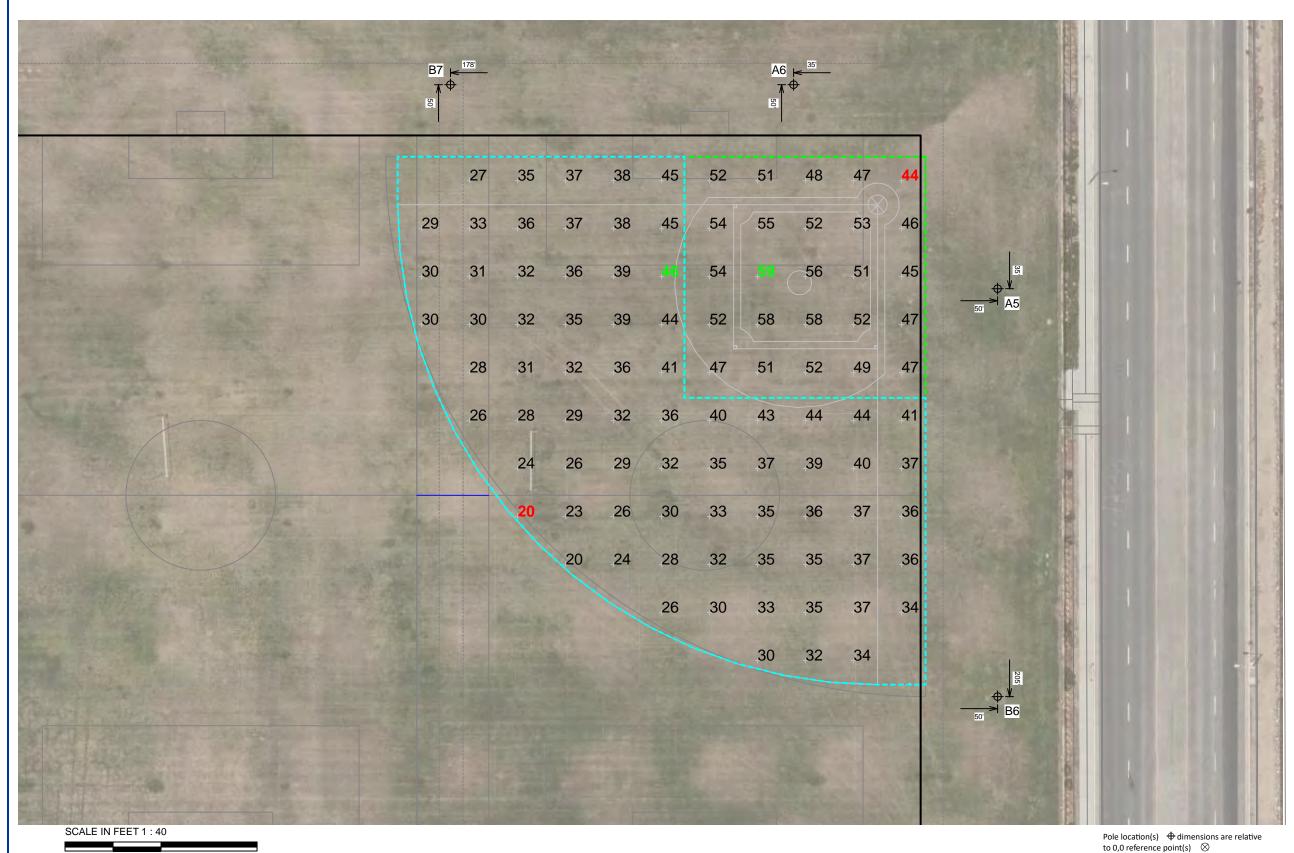
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





EQI	EQUIPMENT LIST FOR AREAS SHOWN												
	Pole Luminaires												
OTY	LOCATION	SIZE	GRADE	MOUNTING	LUMINAIRE	QTY /	THIS	OTHER					
QII	LOCATION		ELEVATION	HEIGHT	TYPE	POLE	GRID	GRIDS					
2	A5-A6	70'	-	70'	TLC-LED-1200	1	1	0					
				70'	TLC-LED-900	2	2	0					
2	B6-B7	80'	-	80'	TLC-LED-1200	8	8	0					
4		22	22	0									



Indian Springs High School Athletic Playfields San Bernardino, CA

RID SUMMARY

Name: Practice Softball
Size: 200'/200'/200' - basepath 60'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

ILLUMINATION S	UMMARY									
MAINTAINED HORIZONTA	MAINTAINED HORIZONTAL FOOTCANDLES									
	Infield	Outfield								
Scan Average:	51.3	33.8								
Maximum:	59	46								
Minimum:	44	20								
Avg / Min:	1.15	1.69								
Max / Min:	1.34	2.27								
UG (adjacent pts):	1.17	1.27								
CU:	0.53									
No. of Points:	25	73								
LUMINAIRE INFORMATIO	N									
Applied Circuits:	F									
No. of Luminaires:	22									
Total Load:	24.62 kW									

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

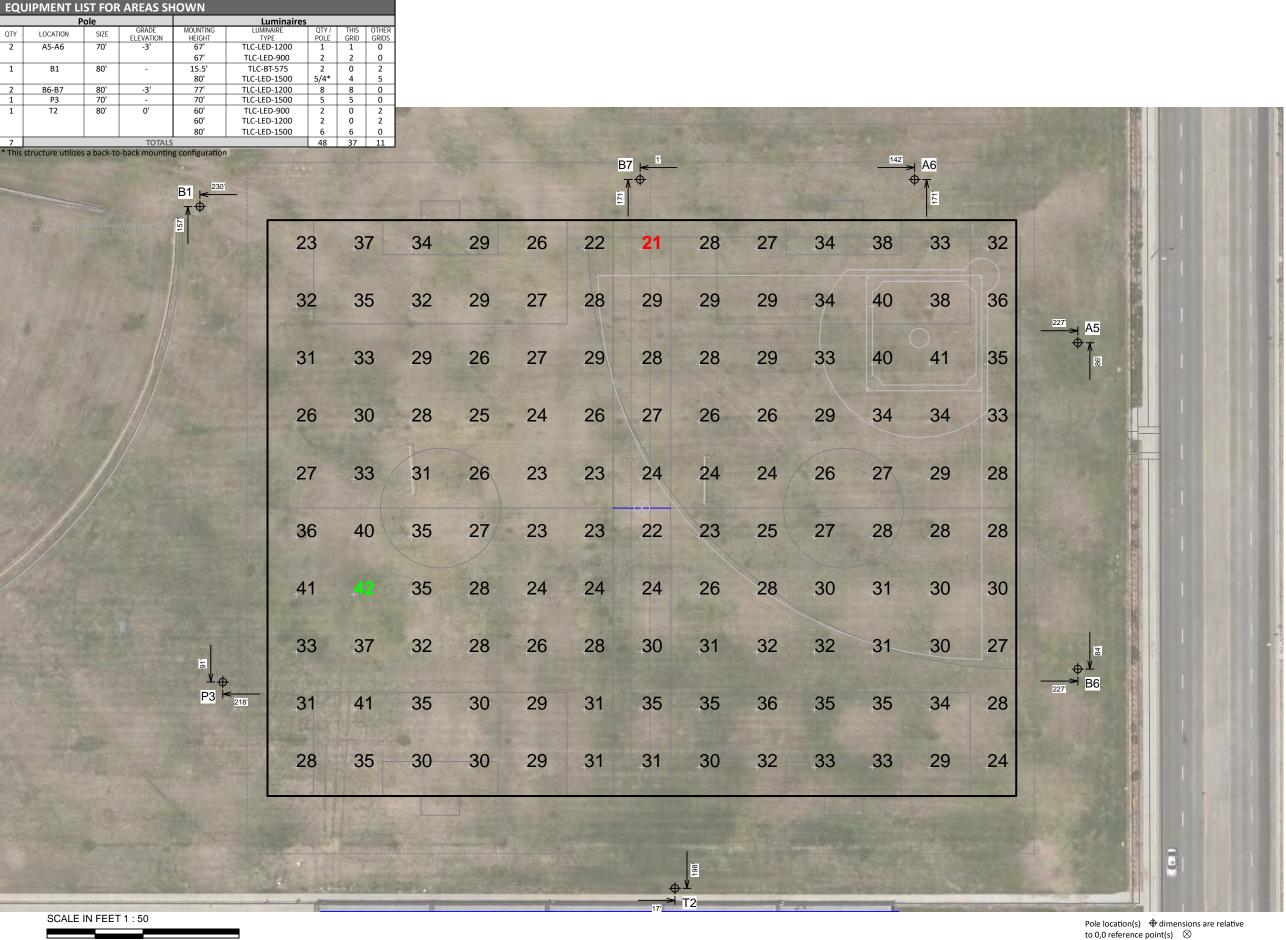
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.







Indian Springs High School Athletic Playfields San Bernardino, CA

RID SUMMARY

Name: Practice South
Size: 390' x 300'
Spacing: 30.0' x 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY Entire Grid Scan Average: Maximum: 42 Minimum: 21 Avg / Min: 1.41 Max / Min: 1.57 UG (adjacent pts): CU: 0.66 No. of Points: 130 LUMINAIRE INFORMATION Applied Circuits: F, H No. of Luminaires: 37 Total Load: 46.07 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

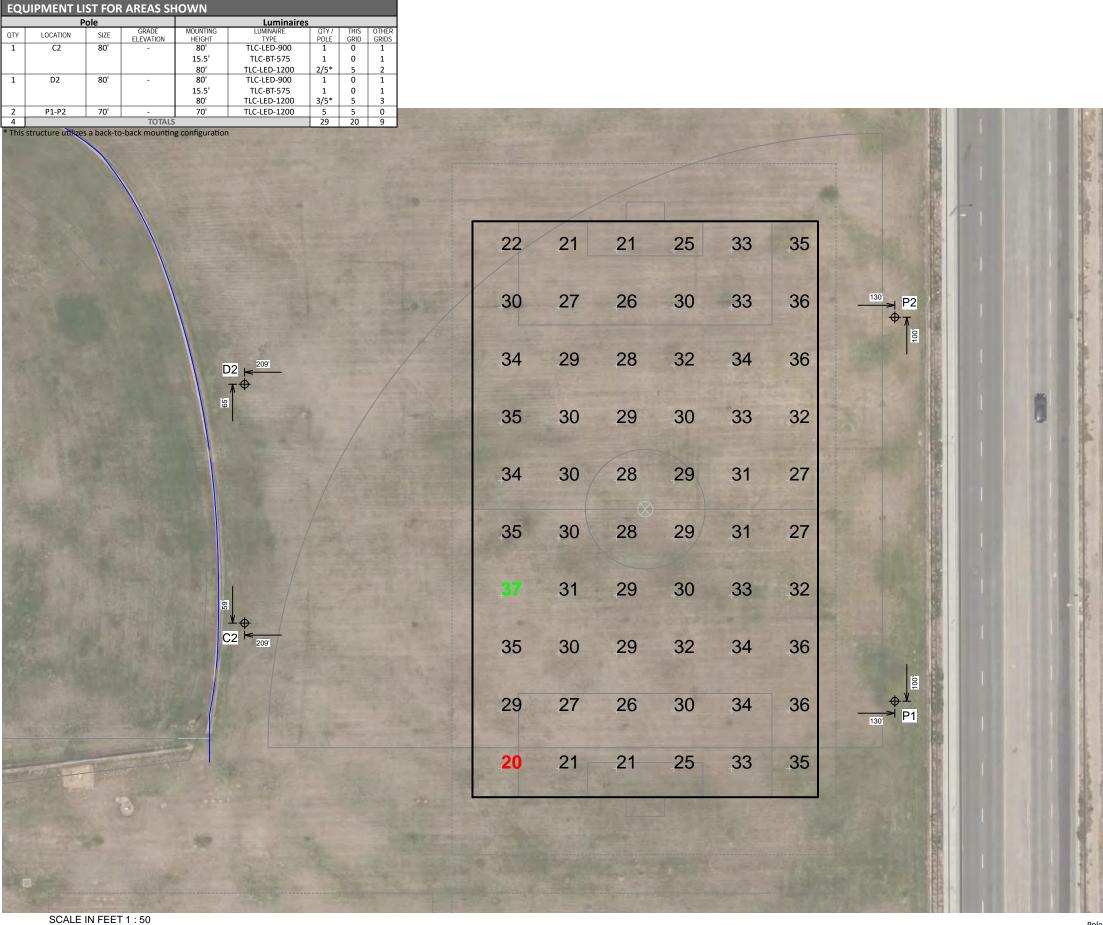
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.







Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY	
Name:	Practice North
Size:	180' x 300'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION S	UMMARY	
MAINTAINED HORIZONTA	L FOOTCANDLE	S
	Entire Grid	
Scan Average:	30.1	
Maximum:	37	
Minimum:	20	
Avg / Min:	1.48	
Max / Min:	1.81	
UG (adjacent pts):	1.45	
CU:	0.59	
No. of Points:	60	
LUMINAIRE INFORMATIO	N	
Applied Circuits:	G	
No. of Luminaires:	20	
Total Load:	23.4 kW	

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

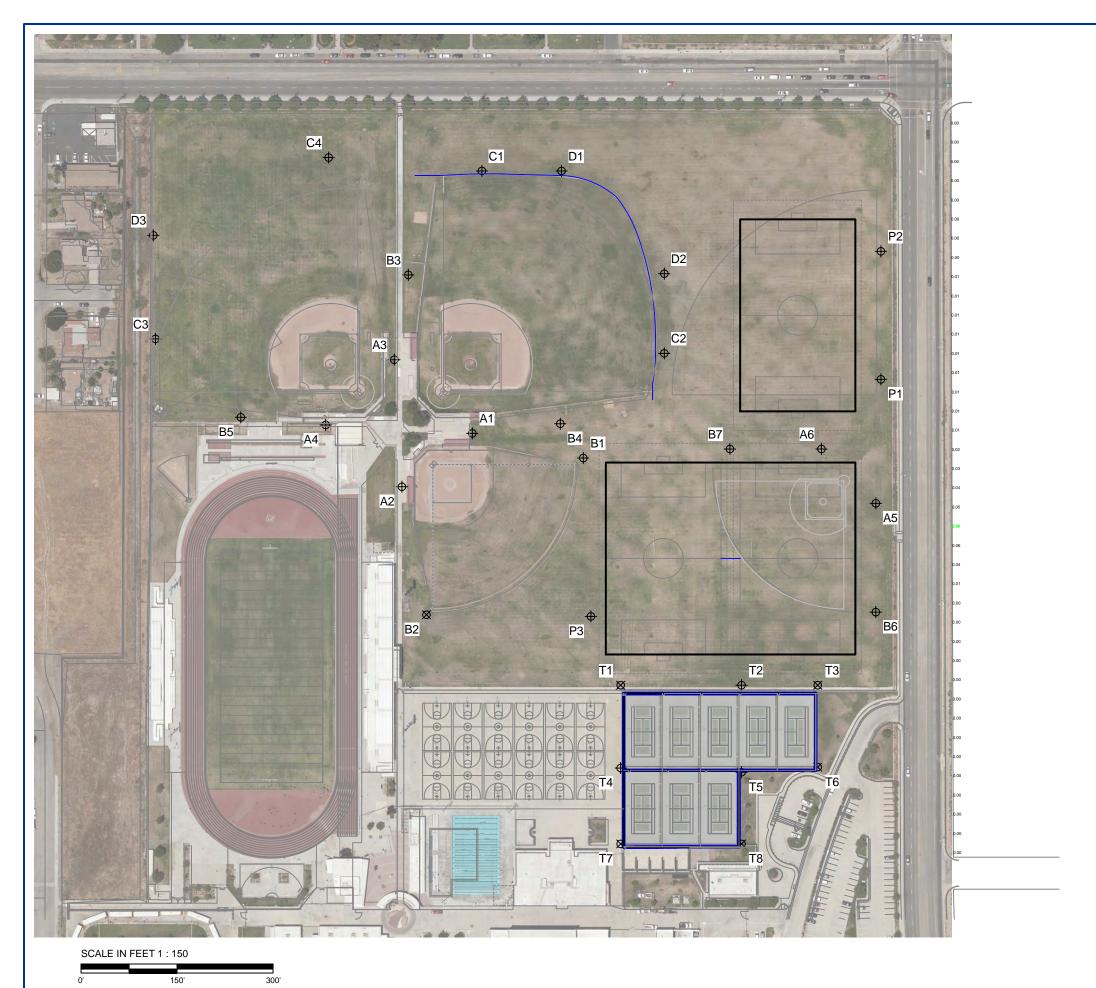
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.







Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: Del Rosa Drive Spill
Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Entire Grid

Scan Average: 0.010
Maximum: 0.06
Minimum: 0.00

No. of Points: 39
LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199
Total Load: 231.39 kW

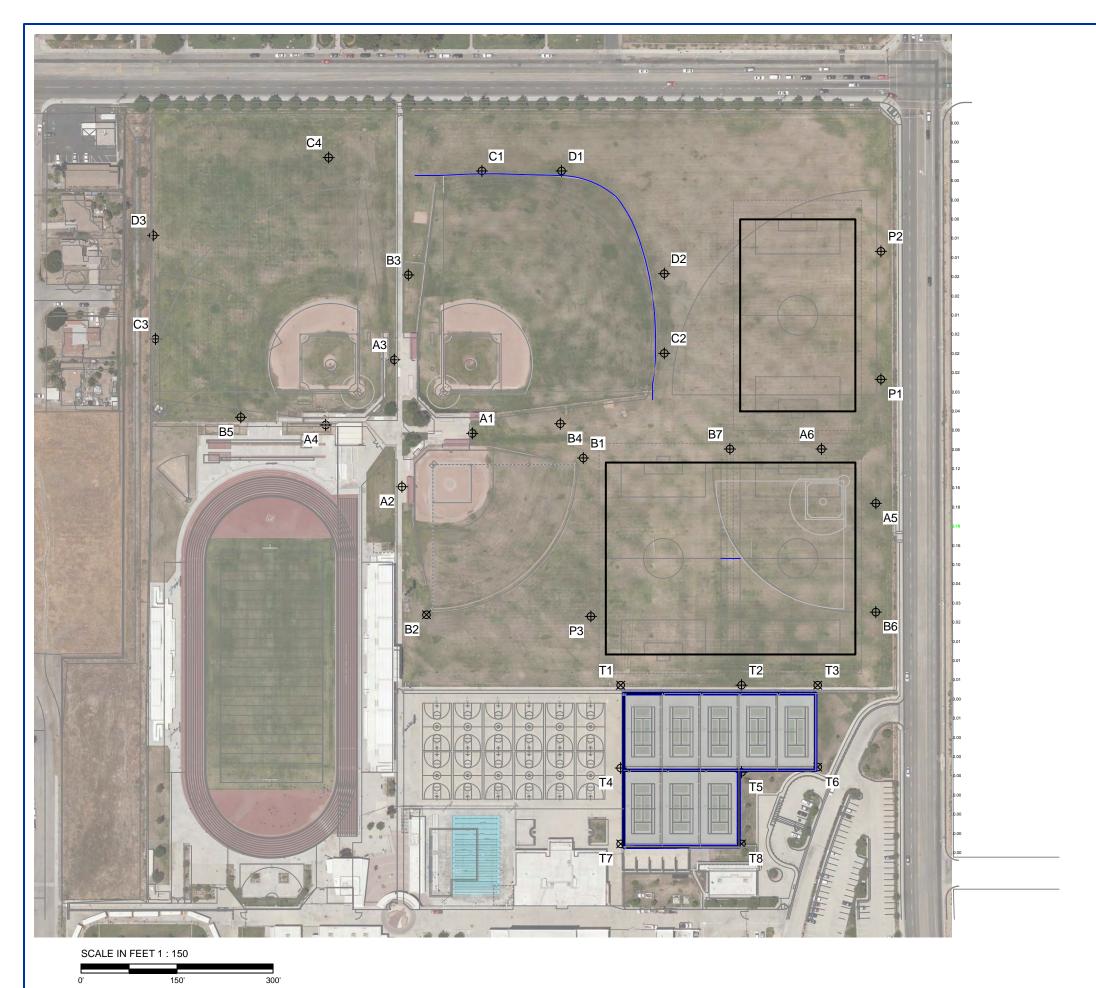
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





Pole location(s) \oplus dimensions are relative to 0,0 reference point(s) \otimes

Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: Del Rosa Drive Spill

Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid

Scan Average: 0.035 Maximum: 0.18

Minimum: 0.00 No. of Points: 39

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199

Total Load: 231.39 kW

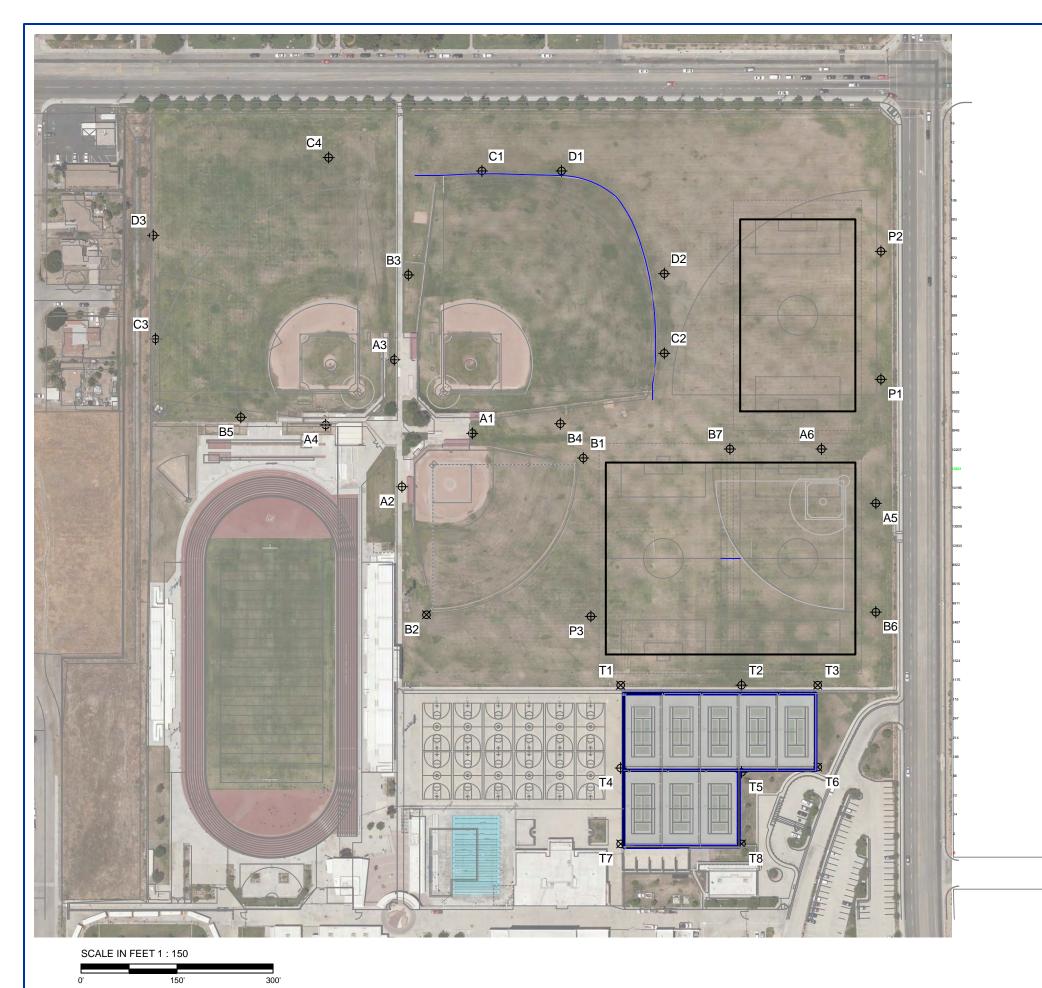
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





to 0,0 reference point(s) \otimes

Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: Del Rosa Drive Spill Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY CANDELA (PER FIXTURE)

Entire Grid Scan Average: 3702.271 Maximum: 15921.38 Minimum: 0.44 No. of Points: 39

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H No. of Luminaires: 199 Total Load: 231.39 kW

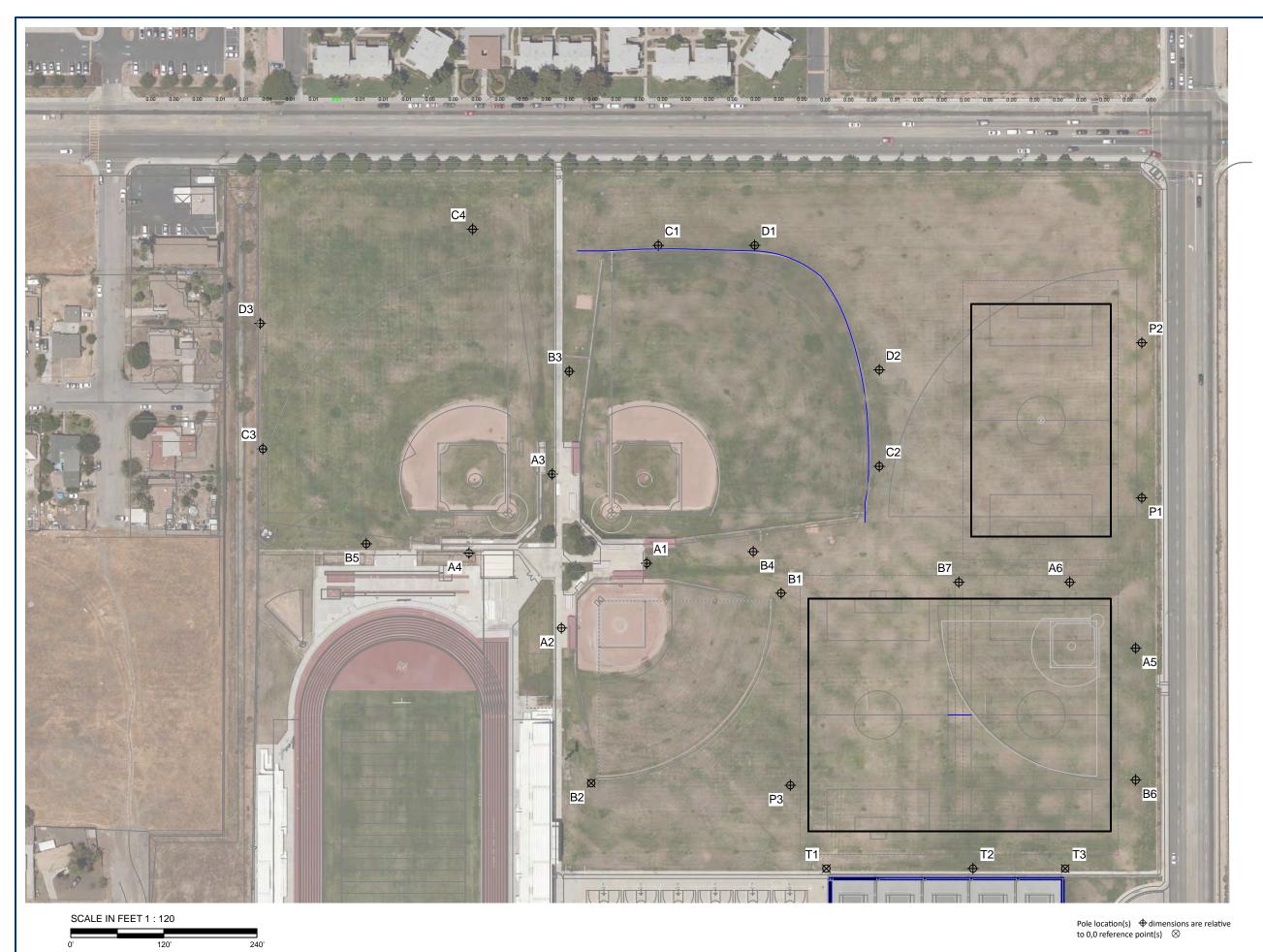
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: 9th St. Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

Entire Grid
Scan Average: 0.004
Maximum: 0.01

Minimum: 0.00
No. of Points: 44

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199
Total Load: 231.39 kW

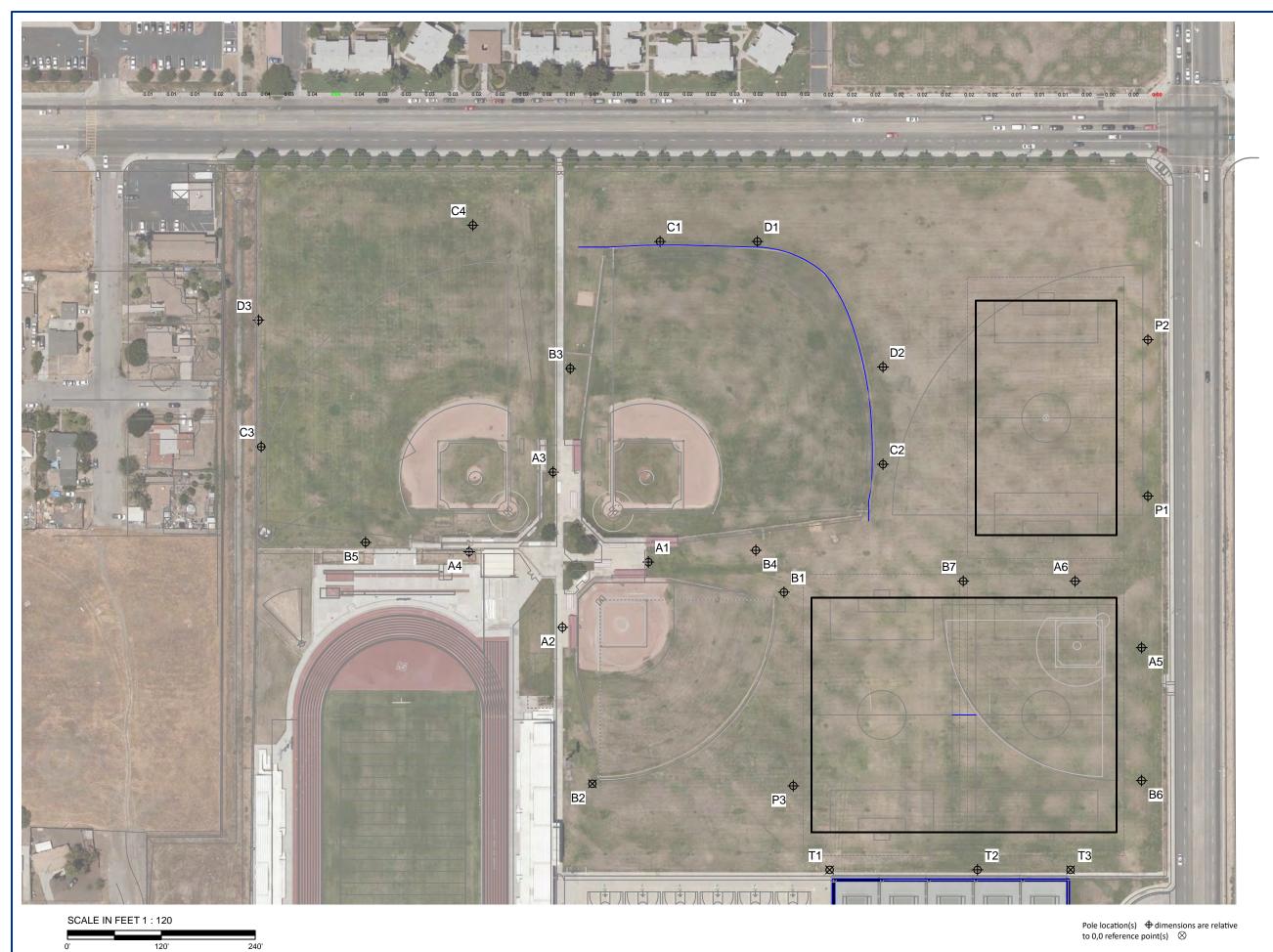
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen



Indian Springs High School Athletic Playfields
San Bernardino, CA

GRID SUMMARY

Name: 9th St. Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid

Scan Average: 0.020
Maximum: 0.04
Minimum: 0.00

No. of Points: 44

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199 Total Load: 231.39 kW

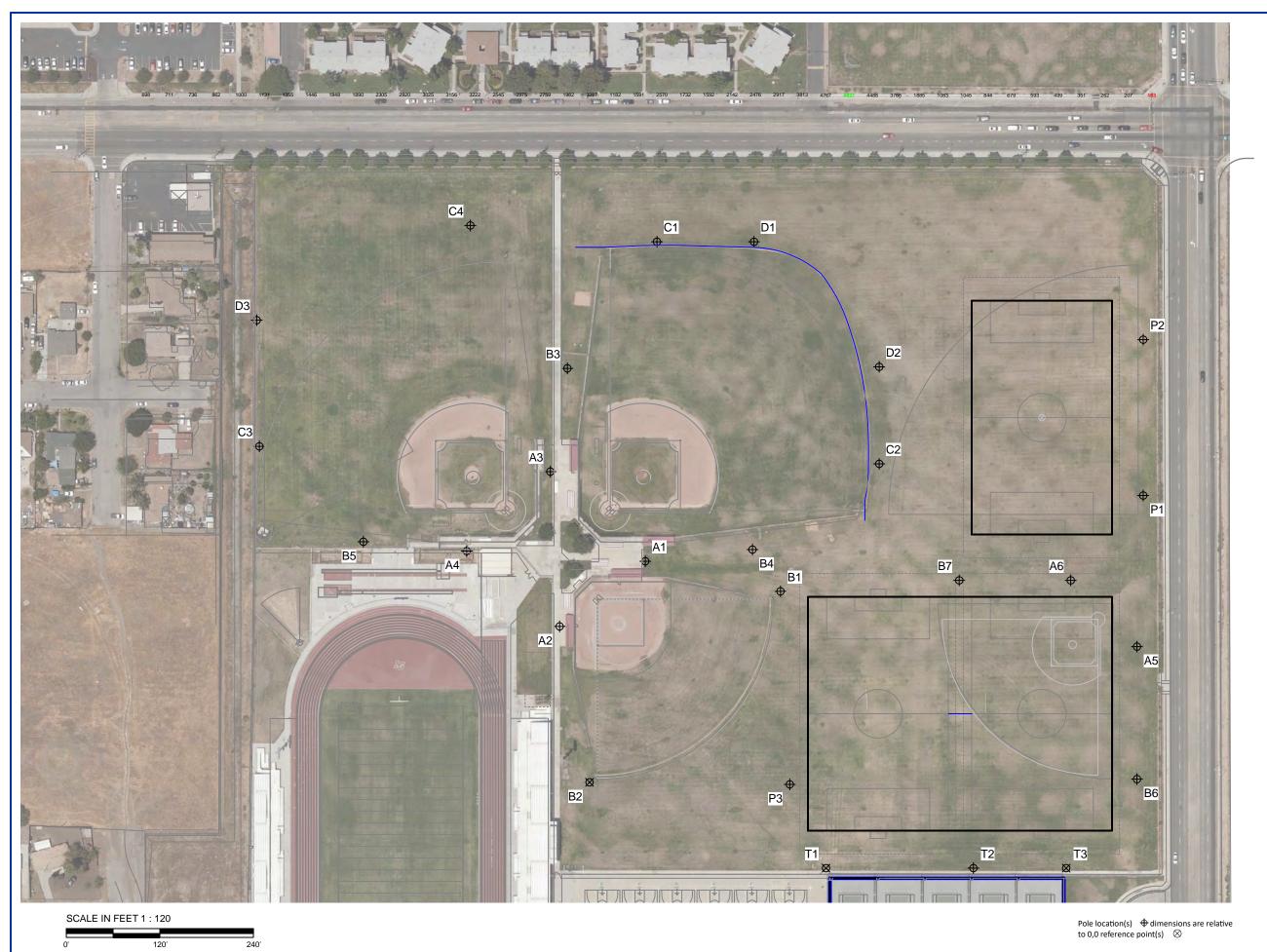
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen



Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: 9th St. Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

Entire Grid

 Scan Average:
 1938.517

 Maximum:
 4826.51

 Minimum:
 132.73

 No. of Points:
 44

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199

Total Load: 231.39 kW

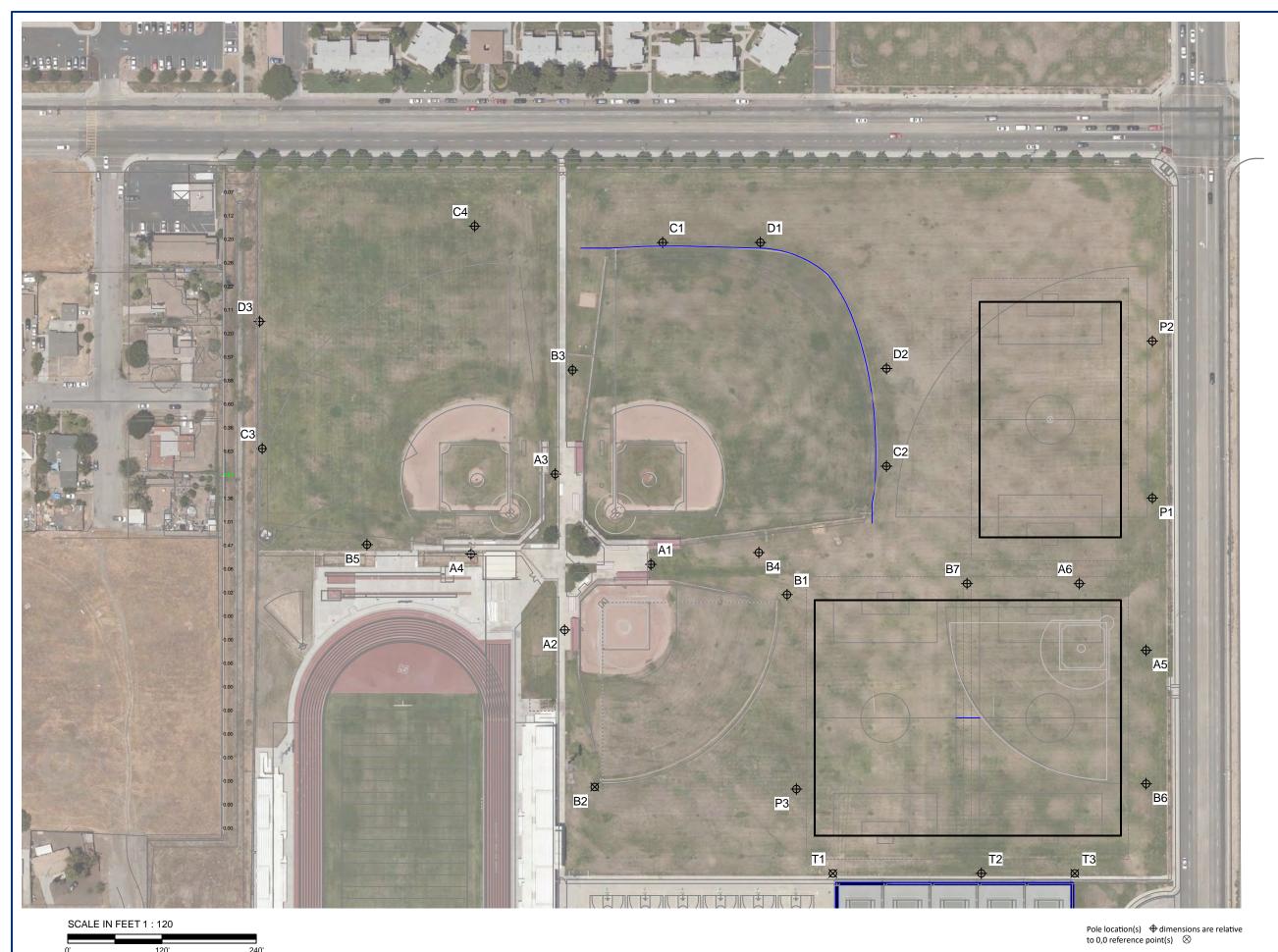
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.





Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: West Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

Scan Average: 0.302
Maximum: 1.51
Minimum: 0.00
No. of Points: 28

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199
Total Load: 231.39 kW

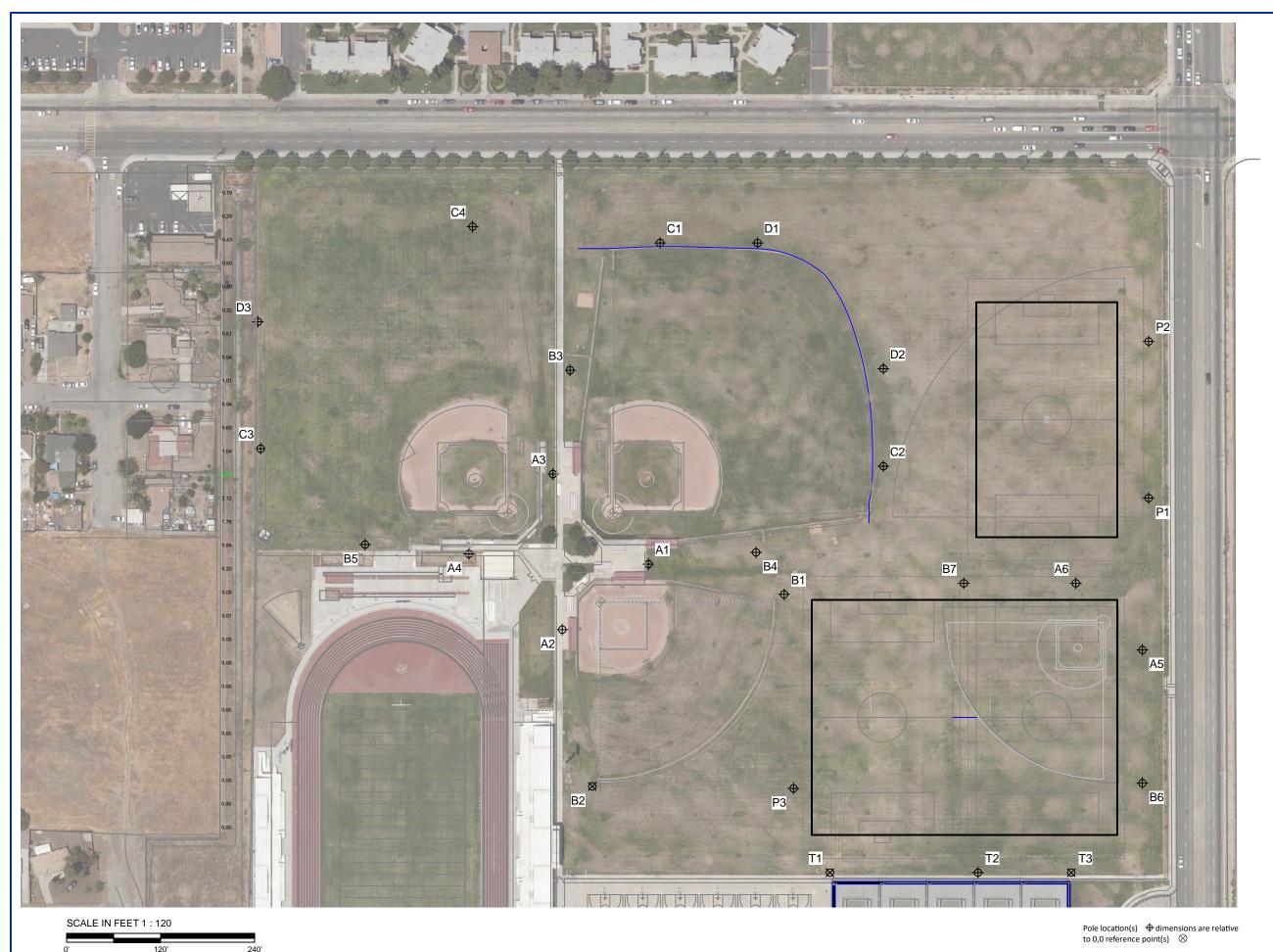
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen.



Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: West Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid

Scan Average: 0.520
Maximum: 2.17
Minimum: 0.00

No. of Points: 28

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199

No. of Luminaires: 199
Total Load: 231.39 kW

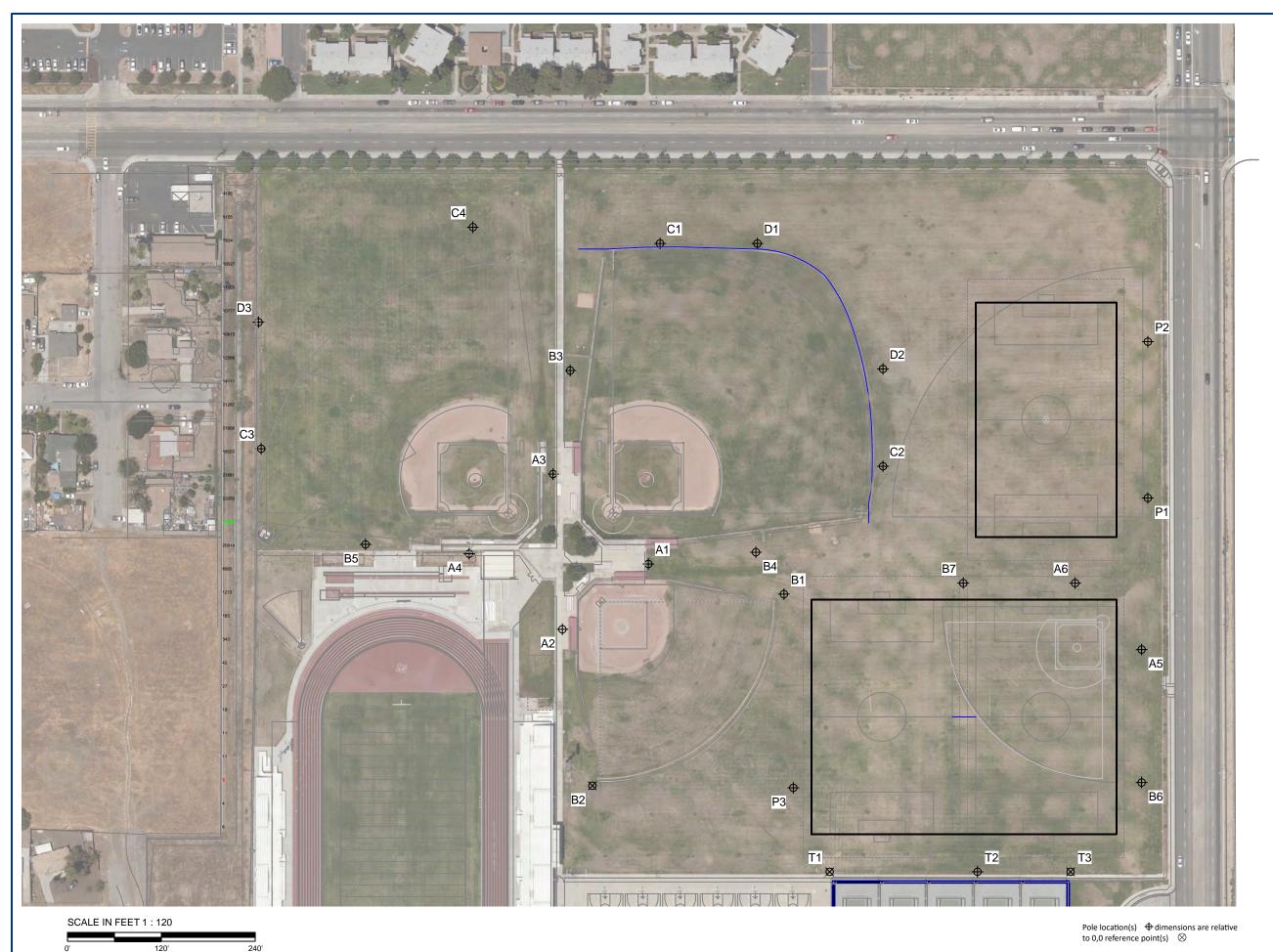
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen



Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY

Name: West Spill
Spacing: 30.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY
CANDELA (PER FIXTURE)

Scan Average: Entire Grid 8986.342
Maximum: 29960.09

Minimum: 2.65 No. of Points: 28

LUMINAIRE INFORMATION

Applied Circuits: A, B, C, D, E, F, G, H

No. of Luminaires: 199 Total Load: 231.39 kW

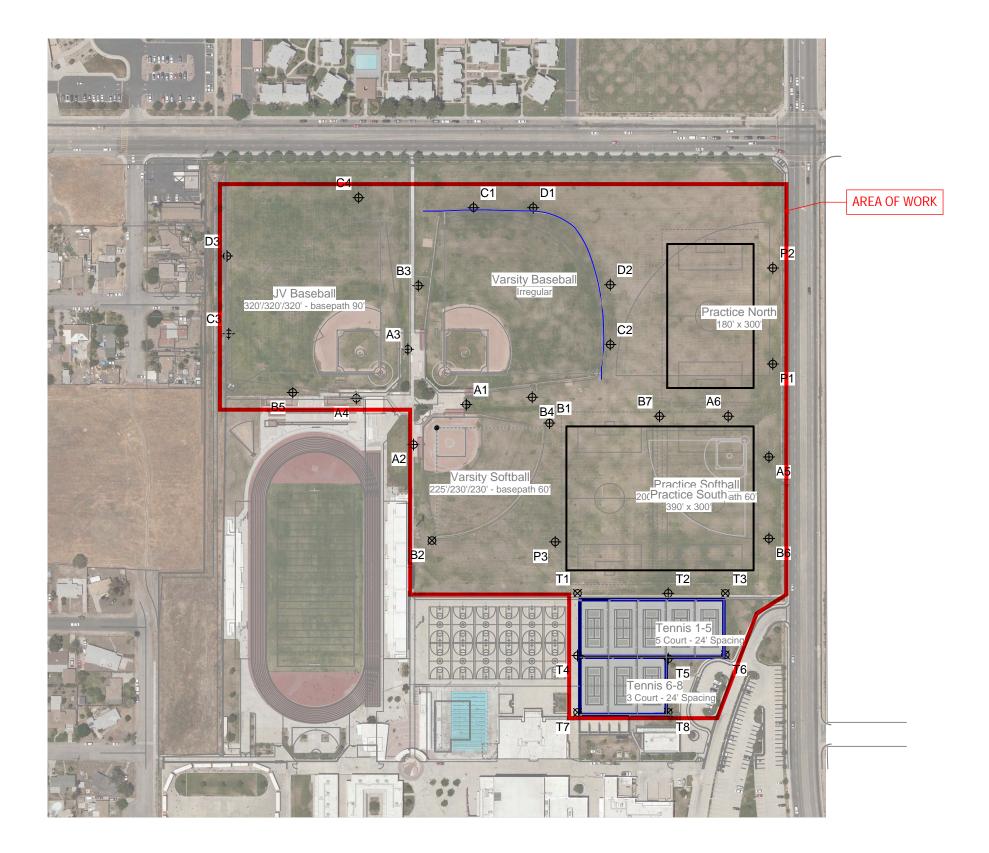
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

We Make It Happen



SCALE IN FEET 1 : 200 0' 200' 400'

Pole location(s) \bigoplus dimensions are relative to 0,0 reference point(s) \bigotimes

Indian Springs High School Athletic Playfields San Bernardino, CA

EQUIPMENT LAYOUT

INCLUDES:

- · JV Baseball
- · Practice North
- · Practice Softball
- Practice South
- · Tennis 1-5
- · Tennis 6-8
- · Varsity Baseball · Varsity Softball

Electrical System Requirements: Refer to Amperage

Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

CINICLE LUINGINIAIRE ANGRERA CE RRAIM CHART											
SINGLE LUMINAIRE AMPERAGE DRAW CHART											
Ballast Specifications		Line A	mper	age Pe	er Lum	ninaire	9				
(.90 min power factor)			(r	nax drav	v)						
Single Phase Voltage	208	220 (60)	240 (60)	277 (60)	347 (60)	380	480				
TLC-LED-1500	8.5	8.1	7.4	6.4	5.1	4.7	3.7				
TLC-LED-1200	7.0	6.6	6.1	5.2	4.2	4.0	3.0				
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9	2.3				
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8	1.5				





SCALE IN FEET 1:60

ENGINEERED DESIGN By: Brendon Guler · File #207886C · 09-Jul-21

Indian Springs High School Athletic Playfields San Bernardino, CA

GRID SUMMARY Name: Grid Size: 5 Court - 24' Spacing Spacing: 10.0' x 10.0'

Height: 3.0' above grade

ILLUMINATION SUMMARY Entire Grid Scan Average: Maximum: 47 Minimum: Avg / Min: 5225.76 Max / Min: UG (adjacent pts): 4.23 CU: 0.01 No. of Points: 1166 LUMINAIRE INFORMATION Applied Circuits: A, B, C, D, E, F, G, H No. of Luminaires: 199 Total Load: 231.39 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



to 0,0 reference point(s) \otimes