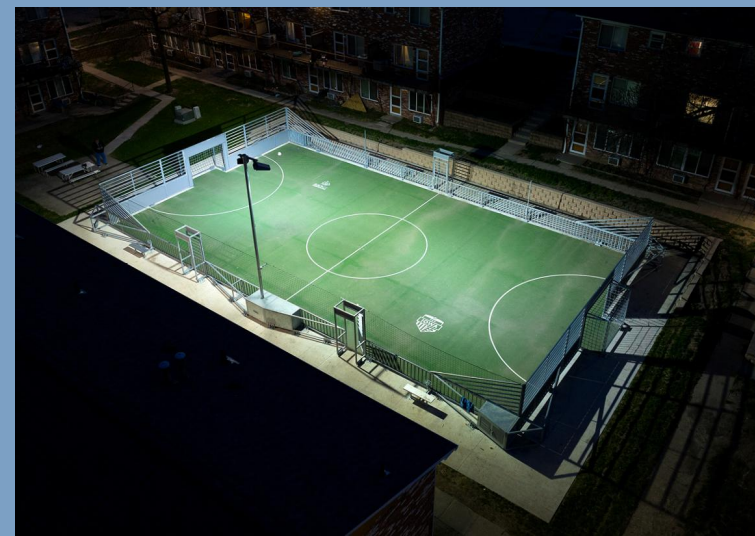
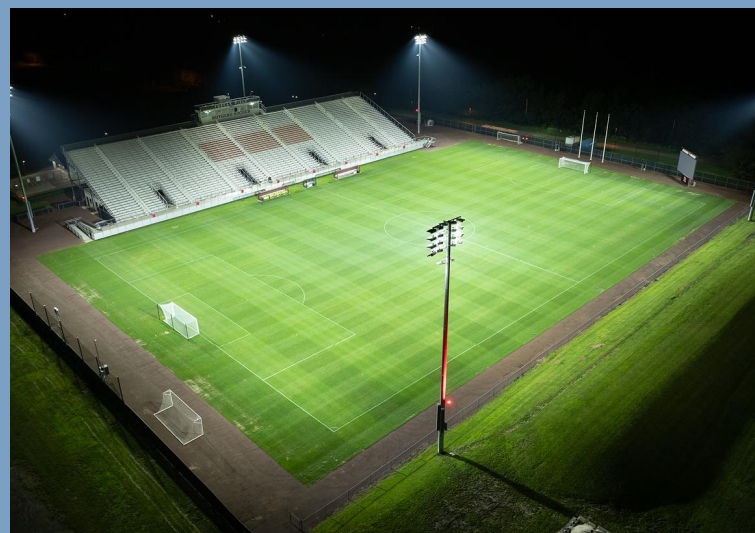




Byron Center Middle School, Byron Center, Michigan, USA



Oakridge Apartments Mini-Pitch, Des Moines, Iowa, USA



Rutgers University Yurcak Field, Piscataway, New Jersey, USA



Sports Illustrated Stadium, Harrison, New Jersey, USA

Amend Park Soccer Phase 2

Billings, MT



Sales Representative: Justin Carleton · Designed By: Ethan Banks · Design No.: 216081C · June 25, 2026

Amend Park Soccer Phase 2
Billings,MT

LIGHTING SYSTEM

Structure/Fixture Summary						
Structure ID	Structure Height	Fixt. Attachment Ht.	Fixture Qty	Fixture Type	Load	Circuit
P1-P2	100'	100'	7	TLC-LED-1500	9.87 kW	C
P3	100'	100'	3	TLC-LED-1500	4.23 kW	C
		100'	3	TLC-LED-1500	4.23 kW	D
P4	100'	100'	6	TLC-LED-1500	8.46 kW	D
P5-P6	100'	100'	7	TLC-LED-1500	9.87 kW	D
P7	100'	100'	6	TLC-LED-1500	8.46 kW	D
P8	100'	100'	3	TLC-LED-1500	4.23 kW	C
		100'	3	TLC-LED-1500	4.23 kW	D
8			52		73.32 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
C	Soccer Zone 1	28.20 kW	20
D	Soccer Zone 2	45.12 kW	32

Fixture Type Summary							
Type	Circuit	Source	Wattage	Lumens	L90	L80	Quantity
TLC-LED-1500	C	LED 5700K - 75 CRI	1410W	181,000	>120,000	>120,000	20
TLC-LED-1500	D	LED 5700K - 75 CRI	1410W	181,000	>120,000	>120,000	32

Single Fixture Amperage Draw Chart							
Driver Specifications (.90 min power factor)			Line Amperage Per Fixture (max draw)				
Single Phase Voltage			208 (60)	220 (60)	240 (60)	277 (60)	347 (60)
TLC-LED-1500			8.4	7.9	7.3	6.3	5.0

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination Ave					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
150' Spill @ 3ft.	Horizontal Illuminance	0.1169	0.05	0.27	5.540	2.416	C,D	52
150' Spill @ 5ft.	Max Candela Metric	7640.3286	3927.58	15562.08	3.962	1.945	C,D	52
150' Spill @ 5ft.	Max Vertical Illuminance Metric	0.2206	0.09	0.45	5.204	2.532	C,D	52
Full Soccer	Horizontal Illuminance	30.68	22	39	1.81	1.41	C,D	52
House Spill @ 5ft.	Max Candela Metric	1854.3821	0.38	3593.63	9573.328	4940.019	C,D	52
House Spill @ 5ft.	Max Vertical Illuminance Metric	0.0434	0.00	0.09	-	-	C,D	52

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

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

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.



Equipment List For Areas Shown							
Structure				Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6
8	Totals					52	0

Above Field Level is height of fixtures above area shown



Amend Park Soccer Phase 2

Billings,MT

Grid Summary	
Name:	Full Soccer
Size:	500' x 500'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

Illumination Summary	
	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	30.68
Maximum:	39
Minimum:	22
Avg/Min:	1.41
Max/Min:	1.81
UG (adjacent pts):	1.30
CU:	0.84
No. of Points:	289
FIXTURE INFORMATION	
Applied Circuits:	C,D
No. of Fixtures:	52
Total Load:	73.32 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.

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.



Equipment List For Areas Shown							
Structure				Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6
8	Totals					52	52

Above Field Level is height of fixtures above area shown



Amend Park Soccer Phase 2

Billings,MT

Grid Summary	
Name:	Soccer Zone 1
Size:	500' x 500'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

Illumination Summary	
	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	31.11
Maximum:	39
Minimum:	23
Avg/Min:	1.36
Max/Min:	1.73
UG (adjacent pts):	1.30
CU:	0.84
No. of Points:	85
FIXTURE INFORMATION	
Applied Circuits:	C
No. of Fixtures:	20
Total Load:	73.32 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.

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.



Equipment List For Areas Shown								
Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7	0
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6	0
8	Totals					52	52	0

Above Field Level is height of fixtures above area shown



Amend Park Soccer Phase 2

Billings,MT

Grid Summary	
Name:	Soccer Zone 2
Size:	500' x 500'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

Illumination Summary	
	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	30.50
Maximum:	39
Minimum:	22
Avg/Min:	1.40
Max/Min:	1.77
UG (adjacent pts):	1.29
CU:	0.59
No. of Points:	204
FIXTURE INFORMATION	
Applied Circuits:	D
No. of Fixtures:	32
Total Load:	73.32 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.

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.



Equipment List For Areas Shown							
Structure				Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6
8	Totals					52	52

Above Field Level is height of fixtures above area shown



Amend Park Soccer Phase 2

Billings,MT

Grid Summary	
Name:	House Spill @ 5ft.
Spacing:	30.0'
Height:	5.0' above grade

Illumination Summary	
	INITIAL CANDELA (PER FIXTURE)
Scan Average:	Entire Grid 1854.3821
Maximum:	3593.63
Minimum:	0.38
CU:	0.00
No. of Points:	33
FIXTURE INFORMATION	
Applied Circuits:	C,D
No. of Fixtures:	52
Total Load:	73.32 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.

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.



Equipment List For Areas Shown							
Structure				Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6
8	Totals					52	52

Above Field Level is height of fixtures above area shown



Amend Park Soccer Phase 2

Billings,MT

Grid Summary	
Name:	House Spill @ 5ft.
Spacing:	30.0'
Height:	5.0' above grade

Illumination Summary	
INITIAL MAX VERTICAL FOOTCANDLES	
Entire Grid	
Scan Average:	0.0434
Maximum:	0.09
Minimum:	0.00
CU:	0.00
No. of Points:	33
FIXTURE INFORMATION	
Applied Circuits:	C,D
No. of Fixtures:	52
Total Load:	73.32 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.

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.



Equipment List For Areas Shown							
Structure				Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6
8	Totals					52	52

Above Field Level is height of fixtures above area shown



Amend Park Soccer Phase 2

Billings,MT

Grid Summary

Name: 150' Spill @ 3ft.
Spacing: 30.0'
Height: 3.0' above grade

Illumination Summary

INITIAL HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	0.1169
Maximum:	0.27
Minimum:	0.05
CU:	0.00
No. of Points:	98
FIXTURE INFORMATION	
Applied Circuits:	C,D
No. of Fixtures:	52
Total Load:	73.32 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.

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.



Equipment List For Areas Shown							
Structure				Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6
8	Totals					52	52

Above Field Level is height of fixtures above area shown





SCALE IN FEET 1 : 120

0'

120'

240'

ENGINEERED DESIGN By: Ethan Banks • File #216081C • 25-Jun-26

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

Amend Park Soccer Phase 2

Billings,MT

Grid Summary	
Name:	150' Spill @ 5ft.
Spacing:	30.0'
Height:	5.0' above grade

Illumination Summary	
	INITIAL CANDELA (PER FIXTURE)
Scan Average:	Entire Grid 7640.3286
Maximum:	15562.08
Minimum:	3927.58
CU:	0.00
No. of Points:	98
FIXTURE INFORMATION	
Applied Circuits:	C,D
No. of Fixtures:	52
Total Load:	73.32 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.

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

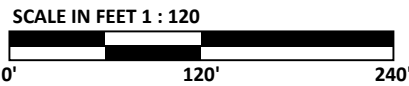
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC.
©1981, 2026 Musco Sports Lighting, LLC.

ILLUMINATION SUMMARY

Structure				Fixtures				
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7	7	0
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6	6	0
8	Totals					52	52	0



ILLUMINATION SUMMARY

Grid Summary	
Name:	150' Spill @ 5ft.
Spacing:	30.0'
Height:	5.0' above grade

INITIAL MAX VERTICAL FOOTCANDLES	
	Entire Grid
Scan Average:	0.2206
Maximum:	0.45
Minimum:	0.09
CU:	0.00
No. of Points:	98
FIXTURE INFORMATION	
Applied Circuits:	C,D
No. of Fixtures:	52
Total Load:	73.32 kW

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



Amend Park Soccer Phase 2

Billings,MT

Equipment Layout

INCLUDES:
· Soccer

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.

Equipment List For Areas Shown

Structure				Fixtures		
QTY	STRUCTURE ID	SIZE	GLOBAL ELEVATION	ABOVE GLOBAL LEVEL	FIXTURE TYPE	QTY/POLE
4	P1-P2 P5-P6	100'	-	100'	TLC-LED-1500	7
4	P3-P4 P7-P8	100'	-	100'	TLC-LED-1500	6
8	Totals					52

Above Global Level is height of fixtures above design (0,0,0)

Single Fixture Amperage Draw Chart

Driver Specifications (.90 min power factor)	Line Amperage Per Fixture (max draw)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6

