

Effingham County Recreation Complex

Springfield, GA

Lighting System

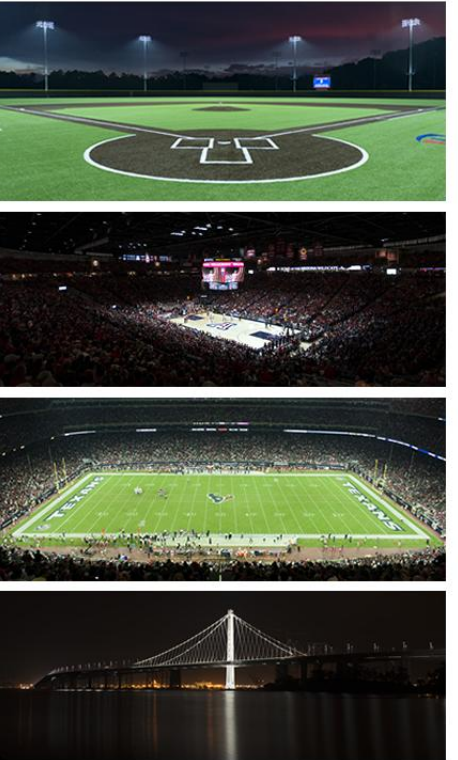
Pole/Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	70'	70'	1	TLC-LED-1500	1.41 kW	A
		70'	3	TLC-LED-1200	3.51 kW	A
		18'	1	TLC-BT-575	0.57 kW	A
A3-A4	60'	60'	3	TLC-LED-900	2.64 kW	B
		16'	1	TLC-BT-575	0.57 kW	B
		70'	2	TLC-LED-1500	2.82 kW	A
B1	70'	70'	3	TLC-LED-1200	3.51 kW	A
		19'	1	TLC-BT-575	0.57 kW	A
		70'	2	TLC-LED-1500	2.82 kW	A
B2	70'	70'	2	TLC-LED-550	1.08 kW	D
		70'	3	TLC-LED-1200	3.51 kW	A
		19'	1	TLC-BT-575	0.57 kW	A
		70'	1	TLC-LED-1200	1.17 kW	B
B3-B4	70'	70'	3	TLC-LED-1500	4.23 kW	B
		18'	1	TLC-BT-575	0.57 kW	B
		70'	2	TLC-LED-1200	2.34 kW	A
C1	70'	70'	2	TLC-LED-1500	2.82 kW	A
		19'	2	TLC-BT-575	1.15 kW	A
		70'	1	TLC-LED-900	0.88 kW	C
F1	70'	70'	2	TLC-LED-550	1.08 kW	D
		70'	4	TLC-LED-1200	4.68 kW	C
		19'	2	TLC-BT-575	1.15 kW	C
		70'	1	TLC-LED-900	0.88 kW	C
F2	70'	70'	2	TLC-LED-1200	2.34 kW	A
		70'	2	TLC-LED-1500	2.82 kW	A
		70'	4	TLC-LED-1200	4.68 kW	C
		19'	2	TLC-BT-575	1.15 kW	A
		19'	2	TLC-BT-575	1.15 kW	C
F3-F4	70'	70'	1	TLC-LED-900	0.88 kW	C
		70'	4	TLC-LED-1200	4.68 kW	C
		19'	2	TLC-BT-575	1.15 kW	C
13			84		84.80 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Field 2	37.42 kW	34
B	Field 3	18.38 kW	18
C	Football	26.84 kW	28
D	Playground	2.16 kW	4

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	20
TLC-LED-1200	LED 5700K - 75 CRI	1170W	150,000	>120,000	>120,000	>120,000	34
TLC-LED-1500	LED 5700K - 75 CRI	1410W	181,000	>120,000	>120,000	>120,000	16
TLC-LED-550	LED 5700K - 75 CRI	540W	67,000	>120,000	>120,000	>120,000	4
TLC-LED-900	LED 5700K - 75 CRI	880W	104,000	>120,000	>120,000	>120,000	10

Single Luminaire Amperage Draw Chart							
Driver Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage							
TLC-BT-575	3.3	3.2	2.9	2.5	2.0	1.8	1.5
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8	3.0
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6	3.6
TLC-LED-550	3.2	3.0	2.8	2.4	1.9	1.8	1.4
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9	2.3

From Hometown to Professional



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Effingham County Recreation Complex

Springfield, GA

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
150' Spill	Horizontal	0.03	0.00	0	-	-	A,B,C	80
150' Spill	Max Vertical Illuminance Metric	0.09	0.00	0	-	-	A,B,C	80
150' Spill Max Candela	Max Candela (by Fixture)	2090.34	0.94	6031	6410.20	2221.85	A,B,C	80
Field 2 (Infield)	Horizontal Illuminance	51.74	38.83	59	1.52	1.33	A	34
Field 2 (Outfield)	Horizontal Illuminance	32.09	25.51	41	1.62	1.26	A	34
Field 3 (Infield)	Horizontal Illuminance	52.41	38.26	60	1.57	1.37	B	18
Field 3 (Outfield)	Horizontal Illuminance	32.42	22.90	45	1.98	1.42	B	18
Football	Horizontal Illuminance	32.82	29.82	36	1.19	1.10	C	28
Playground	Horizontal	22.36	15.45	29	1.86	1.45	D	4



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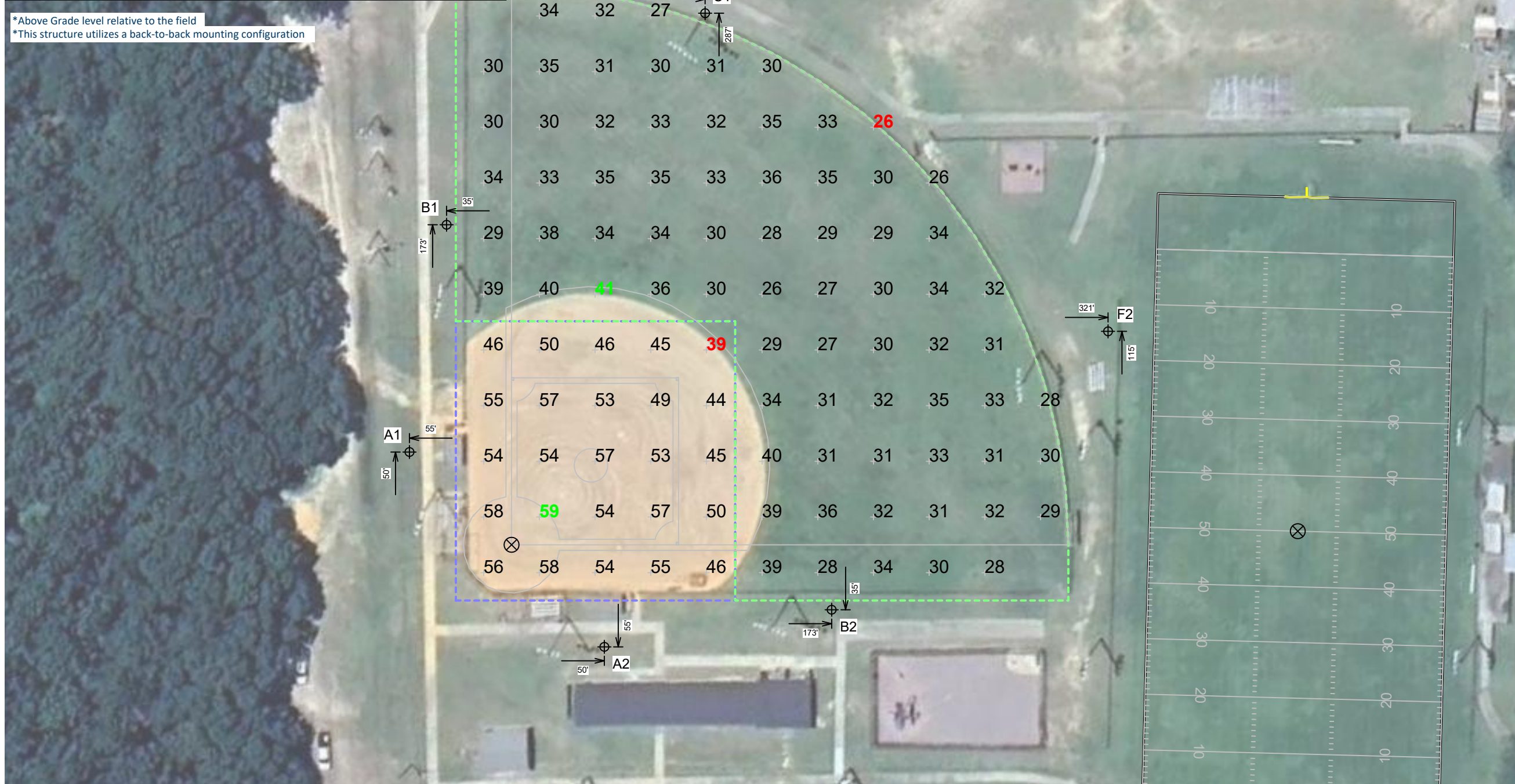
Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	70'	TLC-LED-1200	3	3	0
				70'	TLC-LED-1500	1	1	0
				18'	TLC-BT-575	1	1	0
1	B1	70'	-	70'	TLC-LED-1200	3	3	0
				70'	TLC-LED-1500	2	2	0
				70'	TLC-LED-550	2*	0	2
				19'	TLC-BT-575	1	1	0
1	B2	70'	-	70'	TLC-LED-1200	3	3	0
				70'	TLC-LED-1500	2	2	0
				70'	TLC-LED-550	2*	0	2
				19'	TLC-BT-575	1	1	0
1	C1	70'	-	70'	TLC-LED-1200	2	2	0
				70'	TLC-LED-1500	2	2	0
				19'	TLC-BT-575	2	2	0
1	F2	70'	-	70'	TLC-LED-1200	4/2*	2	4
				70'	TLC-LED-1500	2*	2	0
				70'	TLC-LED-900	1	0	1
				19'	TLC-BT-575	4	2	2
6	Totals					43	34	9

*Above Grade level relative to the field
 *This structure utilizes a back-to-back mounting configuration

Grid Summary	
Name	Field 2
Size	300'/300'/300' - basepath 90'
Spacing	30.0' x 30.0'
Height	3.0' above grade

	MAINTAINED HORIZONTAL FOOTCANDLES	
	Infield	Outfield
Guaranteed Average	50	30
Scan Average	51.74	32.09
Maximum	59	41
Minimum	38.83	25.51
Avg/Min	1.33	1.26
Guaranteed Max/Min	2	2.5
Max/Min	1.52	1.62
UG (adjacent pts)	1.19	1.36
CU	0.70	
No. of Points	25	73
LUMINAIRE INFORMATION		
Applied Circuits	A	
No. of Luminaires	34	
Total Load	37.42 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) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



Equipment List For Areas Shown

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
2	A3-A4	60'	-	60'	TLC-LED-900	3	3	0
				15.5'	TLC-BT-575	1	1	0
2	B3-B4	70'	-	70'	TLC-LED-1200	1	1	0
				70'	TLC-LED-1500	3	3	0
				18'	TLC-BT-575	1	1	0
4	Totals					18	18	0

*Above Grade level relative to the field



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Grid Summary	
Name	Field 3
Size	198'/210'/190' - basepath 60'
Spacing	20.0' x 20.0'
Height	3.0' above grade

	MAINTAINED HORIZONTAL FOOTCANDLES	
	Infield	Outfield
Guaranteed Average	50	30
Scan Average	52.41	32.42
Maximum	60	45
Minimum	38.26	22.90
Avg/Min	1.37	1.42
Guaranteed Max/Min	2	2.5
Max/Min	1.57	1.98
UG (adjacent pts)	1.18	1.55
CU	0.69	
No. of Points	25	75
LUMINAIRE INFORMATION		
Applied Circuits	B	
No. of Luminaires	18	
Total Load	18.38 kW	

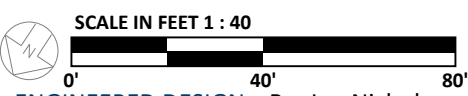
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Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.

NOTES: Trees near the field will have to be trimmed or removed to prevent any light blockage



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



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Effingham County Recreation Complex

Springfield, GA

Grid Summary	
Name	Football
Size	360' x 160'
Spacing	30.0' x 30.0'
Height	3.0' above grade

Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average	30
Scan Average	32.82
Maximum	36
Minimum	29.82
Avg/Min	1.10
Guaranteed Max/Min	2.5
Max/Min	1.19
UG (adjacent pts)	1.18
CU	0.64
No. of Points	72
LUMINAIRE INFORMATION	
Applied Circuits	C
No. of Luminaires	28
Total Load	26.84 kW

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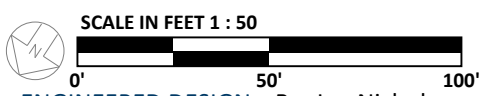
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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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				Luminaires				
Pole								
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
1	F1	70'	-	70'	TLC-LED-1200	4	4	0
				70'	TLC-LED-550	2*	0	2
				70'	TLC-LED-900	1	1	0
				19'	TLC-BT-575	2	2	0
1	F2	70'	-	70'	TLC-LED-1200	4/2*	4	2
				70'	TLC-LED-1500	2*	0	2
				70'	TLC-LED-900	1	1	0
				19'	TLC-BT-575	4	2	2
2	F3-F4	70'	-	70'	TLC-LED-1200	4	4	0
				70'	TLC-LED-900	1	1	0
				19'	TLC-BT-575	2	2	0
4	Totals					36	28	8

*Above Grade level relative to the field
 *This structure utilizes a back-to-back mounting configuration



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ILLUMINATION SUMMARY

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Springfield, GA

Grid Summary	
Name	150' Spill
Spacing	30.0' x 10.0'
Height	3.0' above grade

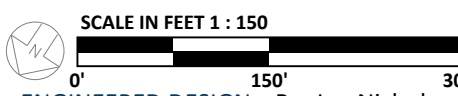
Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average	0.03
Maximum	0
Minimum	0.00
Avg/Min	-
Max/Min	-
UG (adjacent pts)	0.00
CU	0.00
No. of Points	107
LUMINAIRE INFORMATION	
Applied Circuits	A,B,C
No. of Luminaires	80
Total Load	82.64 kW

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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ILLUMINATION SUMMARY

Effingham County Recreation Complex

Springfield, GA

Grid Summary	
Name	150' Spill
Spacing	30.0' x 10.0'
Height	3.0' above grade

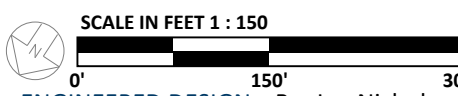
Illumination Summary	
MAINTAINED MAX VERTICAL FOOTCANDLES	
Entire Grid	0.09
Scan Average	0.09
Maximum	0
Minimum	0.00
Avg/Min	-
Max/Min	-
UG (adjacent pts)	0.00
CU	0.00
No. of Points	107
LUMINAIRE INFORMATION	
Applied Circuits	A,B,C
No. of Luminaires	80
Total Load	82.64 kW

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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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ILLUMINATION SUMMARY

Effingham County Recreation Complex

Springfield, GA

Grid Summary	
Name	150' Spill Max Candela
Spacing	30.0' x 10.0'
Height	5.0' above grade

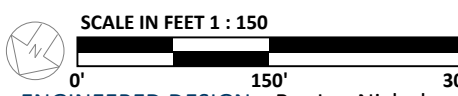
Illumination Summary	
MAINTAINED MAX CANDELA (PER FIXTURE)	
Entire Grid	
Scan Average	2090.34
Maximum	6031
Minimum	0.94
Avg/Min	2221.85
Max/Min	6410.20
UG (adjacent pts)	0.00
CU	0.00
No. of Points	107
LUMINAIRE INFORMATION	
Applied Circuits	A,B,C
No. of Luminaires	80
Total Load	82.64 kW

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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ILLUMINATION SUMMARY

Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
1	B2	70'	-	70'	TLC-LED-1200	3	0	3
				70'	TLC-LED-1500	2	0	2
				70'	TLC-LED-550	2*	2	0
				19'	TLC-BT-575	1	0	1
1	F1	70'	-	70'	TLC-LED-1200	4	0	4
				70'	TLC-LED-550	2*	2	0
				70'	TLC-LED-900	1	0	1
				19'	TLC-BT-575	2	0	2
2	Totals					17	4	13

*Above Grade level relative to the field
 *This structure utilizes a back-to-back mounting configuration



Effingham County Recreation Complex

Springfield, GA

Grid Summary	
Name	Playground
Spacing	10.0' x 10.0'
Height	3.0' above grade

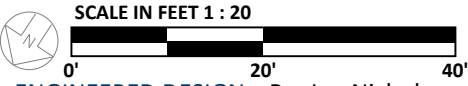
Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average	22.36
Maximum	29
Minimum	15.45
Avg/Min	1.45
Max/Min	1.86
UG (adjacent pts)	1.29
CU	0.37
No. of Points	45
LUMINAIRE INFORMATION	
Applied Circuits	D
No. of Luminaires	4
Total Load	2.16 kW

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

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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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ILLUMINATION SUMMARY

Effingham County Recreation Complex

Springfield, GA

Equipment Layout

INCLUDES:

- Field 2
- Field 3
- Football

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

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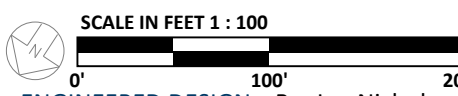
Equipment List For Areas Shown

QTY	LOCATION	POLE SIZE	GRADE ELEVATION	Luminaires		
				ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE
2	A1-A2	70'	-	70'	TLC-LED-1200	3
				70'	TLC-LED-1500	1
				18'	TLC-BT-575	1
2	A3-A4	60'	-	60'	TLC-LED-900	3
				15.5'	TLC-BT-575	1
1	B1	70'	-	70'	TLC-LED-1200	3
				70'	TLC-LED-1500	2
				19'	TLC-BT-575	1
1	B2	70'	-	70'	TLC-LED-1200	3
				70'	TLC-LED-1500	2
				70'	TLC-LED-550	2*
2	B3-B4	70'	-	70'	TLC-LED-1200	1
				70'	TLC-LED-1500	3
				18'	TLC-BT-575	1
1	C1	70'	-	70'	TLC-LED-1200	2
				70'	TLC-LED-1500	2
				19'	TLC-BT-575	2
1	F1	70'	-	70'	TLC-LED-1200	4
				70'	TLC-LED-550	2*
				70'	TLC-LED-900	1
1	F2	70'	-	70'	TLC-LED-1200	4/2*
				70'	TLC-LED-1500	2*
				19'	TLC-BT-575	2
2	F3-F4	70'	-	70'	TLC-LED-1200	4
				70'	TLC-LED-900	1
				19'	TLC-BT-575	2
13	Totals					84

*This structure utilizes a back-to-back mounting configuration

Single Luminaire Amperage Draw Chart

Driver Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)					
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
Single Phase Voltage						
TLC-BT-575	3.3	3.2	2.9	2.5	2.0	1.8
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6
TLC-LED-550	3.2	3.0	2.8	2.4	1.9	1.8
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9



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EQUIPMENT LAYOUT