

**PROPOSED SITE LAYOUT**

**SOFTBALL FACILITY IS A CURRENT FACILITY**



CONCEPTUAL MASTER PLAN





# Fort Worth Christian School Softball

North Richard Hills TX

## Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1	60'	60'	3	TLC-LED-900	2.67 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
		40'	1	TLC-LED-400	0.40 kW	B
A2	60'	60'	3	TLC-LED-900	2.67 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
		40'	2	TLC-LED-400	0.80 kW	B
		70'	5	TLC-LED-1200	5.85 kW	A
B1	70'	16'	1	TLC-BT-575	0.58 kW	A
		70'	5	TLC-LED-1200	5.85 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
B2	70'	16'	1	TLC-BT-575	0.58 kW	A
		40'	2	TLC-LED-400	0.80 kW	B
		60'	2	TLC-LED-1200	2.34 kW	C
T1-T4	60'	60'	1	TLC-LED-900	0.89 kW	C
		60'	1	TLC-LED-900	0.89 kW	C
T5-T8	60'	60'	2	TLC-LED-1200	2.34 kW	D
		60'	1	TLC-LED-900	0.89 kW	D
<b>12</b>			<b>49</b>		<b>47.18 kW</b>	

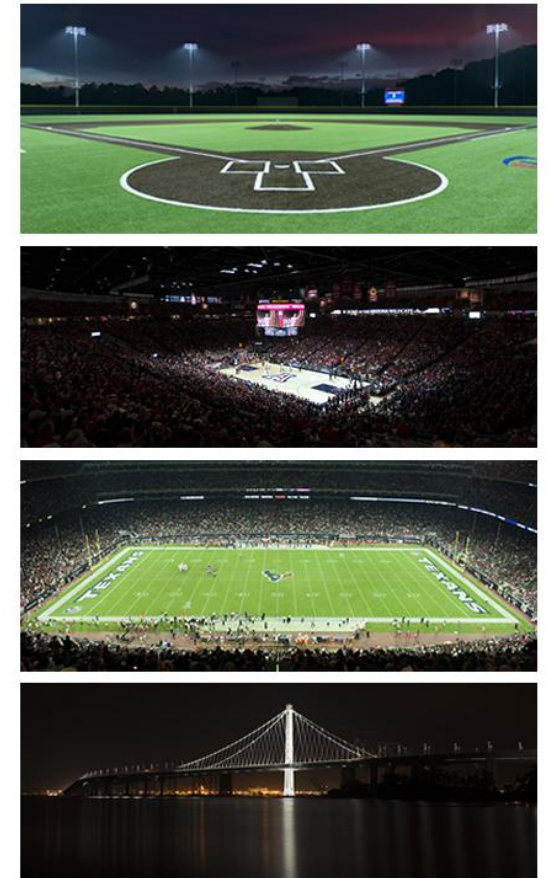
Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Softball	19.34 kW	20
B	Security	2.0 kW	5
C	Tennis 1-4	12.92 kW	12
D	Tennis 5-8	12.92 kW	12

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1200	LED 5700K - 75 CRI	1170W	136,000	>120,000	>120,000	>120,000	26
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	14
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	4
TLC-LED-400	LED 5700K - 75 CRI	400W	46,500	>120,000	>120,000	>120,000	5

## Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Blanket Grid	Horizontal Illuminance	15.9	0	68	0.00		A,B,C,D	49
Property Line Spill	Horizontal	0.01	0	0.08	0.00		A,B,C,D	49
Softball (Infield)	Horizontal Illuminance	51.5	38	64	1.67	1.36	A	20
Softball (Outfield)	Horizontal Illuminance	35.2	21	46	2.20	1.68	A	20
Tennis 1-4	Horizontal Illuminance	54.7	35	68	1.93	1.56	C	12
Tennis 5-8	Horizontal Illuminance	53.4	34	67	1.98	1.57	D	12

## From Hometown to Professional



**We Make It Happen®**

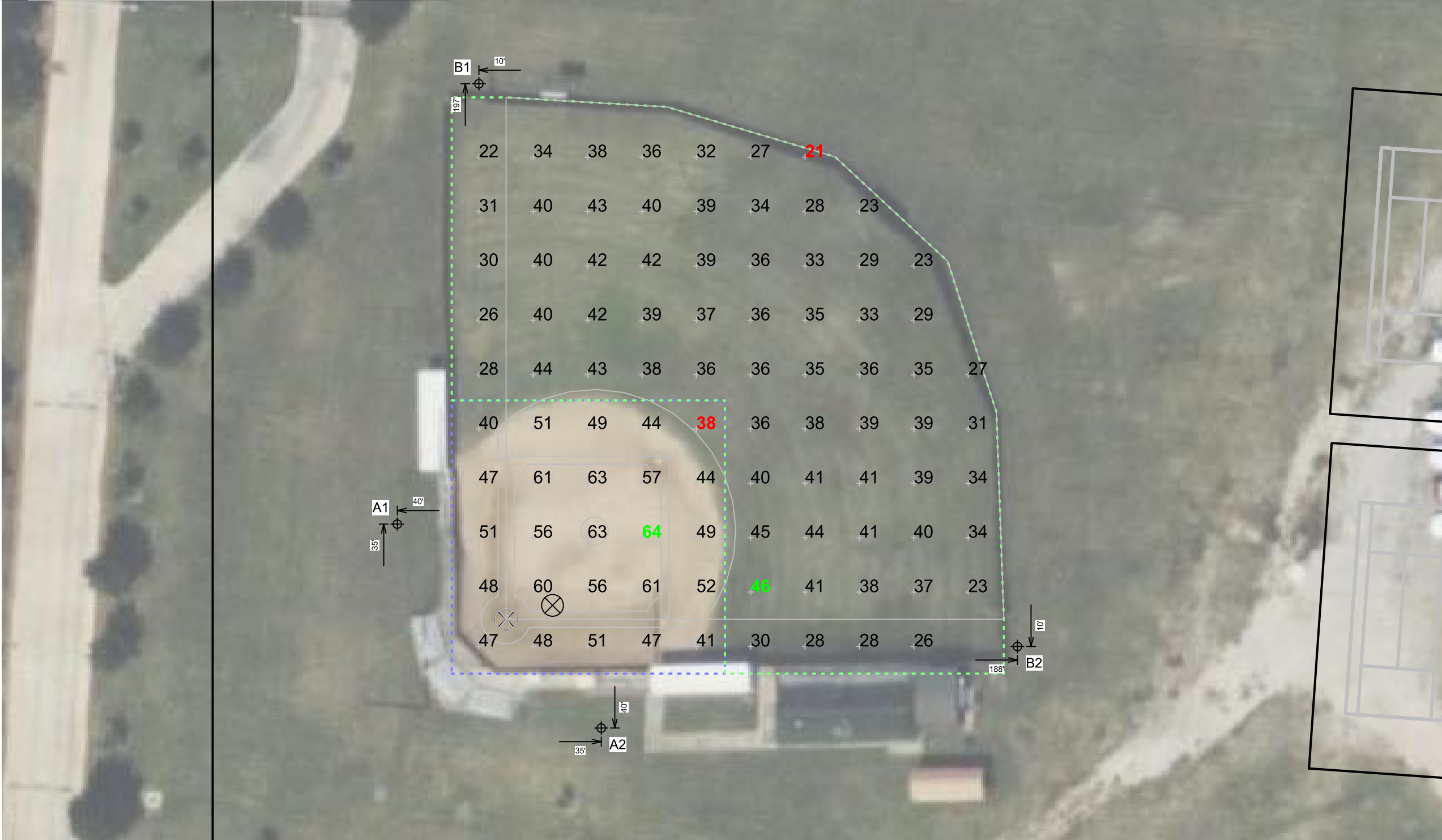
**EQUIPMENT LIST FOR AREAS SHOWN**

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	60'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	1	0	1
				60'	TLC-LED-900	3	3	0
1	A2	60'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	2	0	2
				60'	TLC-LED-900	3	3	0
1	B1	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
				15.5'	TLC-BT-575	1	1	0
1	B2	70'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	2	0	2
				70'	TLC-LED-1200	5	5	0
4	TOTALS					25	20	5

**Fort Worth Christian School Softball  
North Richard Hills TX**

GRID SUMMARY	
Name:	Softball
Size:	Irregular 192' / 207' / 183'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	51.54	35.19
Maximum:	64	46
Minimum:	38	21
Avg / Min:	1.36	1.70
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.67	2.20
UG (adjacent pts):	1.30	1.59
CU:	0.69	
No. of Points:	25	67
LUMINAIRE INFORMATION		
Applied Circuits:	A	
No. of Luminaires:	20	
Total Load:	19.34 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.



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2022 Musco Sports Lighting, LLC.



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

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	TLC-LED-900	1	1	0
				60'	TLC-LED-1200	2	2	0
4	TOTALS					12	12	0

Fort Worth Christian School Softball  
North Richard Hills TX

GRID SUMMARY	
Name:	Tennis 1-4
Size:	4 Court - 12' Spacing
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	54.71
Maximum:	68
Minimum:	35
Avg / Min:	1.54
Guaranteed Max / Min:	2
Max / Min:	1.93
UG (adjacent pts):	0.00
CU:	0.92
No. of Points:	60
LUMINAIRE INFORMATION	
Applied Circuits:	C
No. of Luminaires:	12
Total Load:	12.92 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) ⊗



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2022 Musco Sports Lighting, LLC.



EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T5-T8	60'	-	60'	TLC-LED-900	1	1	0
				60'	TLC-LED-1200	2	2	0
4	TOTALS					12	12	0

**Fort Worth Christian School Softball**  
North Richard Hills TX

GRID SUMMARY	
Name:	Tennis 5-8
Size:	4 Court - 12' Spacing
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

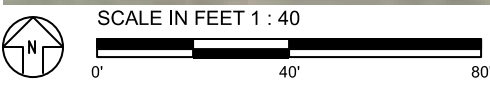
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	53.42
Maximum:	67
Minimum:	34
Avg / Min:	1.57
Guaranteed Max / Min:	2
Max / Min:	1.98
UG (adjacent pts):	0.00
CU:	0.90
No. of Points:	60
LUMINAIRE INFORMATION	
Applied Circuits:	D
No. of Luminaires:	12
Total Load:	12.92 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) ⊗



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2022 Musco Sports Lighting, LLC.

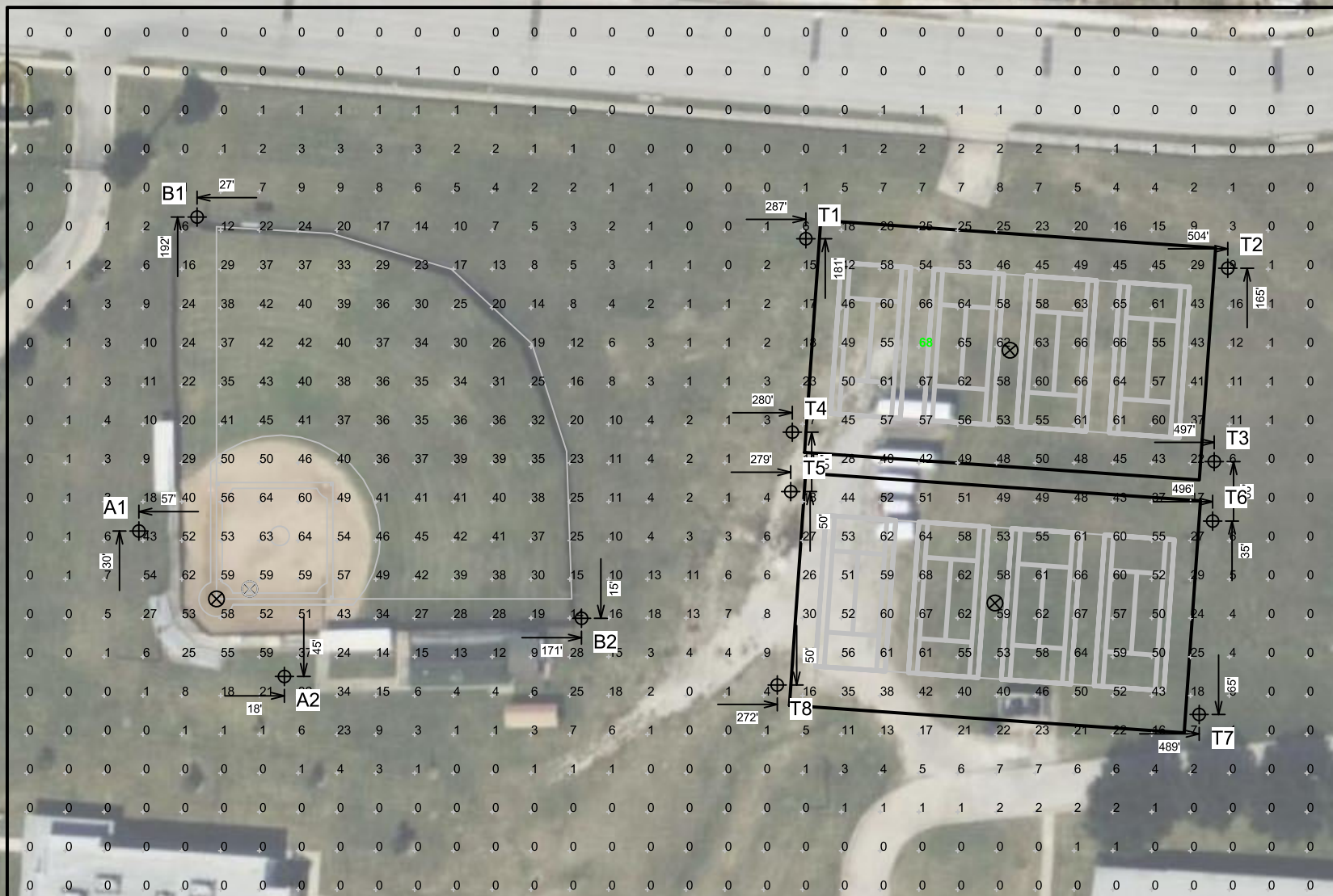
**EQUIPMENT LIST FOR AREAS SHOWN**

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	60'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	1	1	0
				60'	TLC-LED-900	3	3	0
1	A2	60'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	2	2	0
				60'	TLC-LED-900	3	3	0
1	B1	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
1	B2	70'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	2	2	0
				70'	TLC-LED-1200	5	5	0
8	T1-T8	60'	-	60'	TLC-LED-900	1	1	0
				60'	TLC-LED-1200	2	2	0
12	TOTALS					49	49	0

**Fort Worth Christian School Softball  
North Richard Hills TX**

GRID SUMMARY	
Name:	Blanket Grid
Size:	685' x 460'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	15.93
Maximum:	68
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	1141.47
CU:	0.96
No. of Points:	782
LUMINAIRE INFORMATION	
Applied Circuits:	A, B, C, D
No. of Luminaires:	49
Total Load:	47.18 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	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	60'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	1	1	0
				60'	TLC-LED-900	3	3	0
1	A2	60'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	2	2	0
				60'	TLC-LED-900	3	3	0
1	B1	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
1	B2	70'	-	15.5'	TLC-BT-575	1	1	0
				40'	TLC-LED-400	2	2	0
				70'	TLC-LED-1200	5	5	0
8	T1-T8	60'	-	60'	TLC-LED-900	1	1	0
				60'	TLC-LED-1200	2	2	0
12	TOTALS					49	49	0

**Fort Worth Christian School Softball**  
North Richard Hills TX

GRID SUMMARY	
Name:	Property Line Spill
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0122
Maximum:	0.08
Minimum:	0.00
No. of Points:	48
LUMINAIRE INFORMATION	
Applied Circuits:	A, B, C, D
No. of Luminaires:	49
Total Load:	47.18 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) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2022 Musco Sports Lighting, LLC.



**EQUIPMENT LAYOUT**

**INCLUDES:**

- Blanket Grid
- Softball
- Tennis 1-4
- Tennis 5-8

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

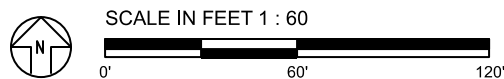
**Installation Requirements:** Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

**EQUIPMENT LIST FOR AREAS SHOWN**

QTY	LOCATION	SIZE	GRADE ELEVATION	Luminaires		
				MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
1	A1	60'	-	15.5'	TLC-BT-575	1
				40'	TLC-LED-400	1
				60'	TLC-LED-900	3
1	A2	60'	-	15.5'	TLC-BT-575	1
				40'	TLC-LED-400	2
				60'	TLC-LED-900	3
1	B1	70'	-	15.5'	TLC-BT-575	1
1	B2	70'	-	70'	TLC-LED-1200	5
				40'	TLC-LED-400	2
8	T1-T8	60'	-	70'	TLC-LED-1200	5
				60'	TLC-LED-900	1
2				60'	TLC-LED-900	2
				60'	TLC-LED-1200	2
12	TOTALS					49

**SINGLE LUMINAIRE AMPERAGE DRAW CHART**

Ballast 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	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
TLC-LED-1200	7.0	6.6	6.1	5.2	4.2	3.0
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.3
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.5
TLC-LED-400	2.3	2.2	2.0	1.7	1.4	1.0



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



**We Make It Happen.**

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2022 Musco Sports Lighting, LLC.