

# McKeel Academy Baseball And Softball

Lakeland, FL

## Lighting System

### Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	70'	70'	5	TLC-LED-1200	5.85 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
B1	70'	70'	2	TLC-LED-1200	2.34 kW	A
		70'	3	TLC-LED-1500	4.23 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
		60'	2	TLC-LED-1500	2.82 kW	A
B2	70'	70'	2	TLC-LED-1200	2.34 kW	A
		70'	3	TLC-LED-1500	4.23 kW	A
		16'	1	TLC-BT-575	0.58 kW	A
		70'	1	TLC-LED-1200	1.17 kW	A
C1	70'	70'	2	TLC-LED-1500	2.82 kW	A
		70'	1	TLC-LED-900	0.88 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
		70'	2	TLC-LED-1200	2.34 kW	A
C2	70'	70'	2	TLC-LED-1500	2.82 kW	A
		70'	2	TLC-BT-575	1.15 kW	A
		16'	2	TLC-LED-1200	2.34 kW	A
6			38		42.29 kW	

### Circuit Summary

Circuit	Description	Load	Fixture Qty
A	Baseball	42.29 kW	38

### Fixture Type Summary

Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1200	LED 5700K - 75 CRI	1170W	150,000	>120,000	>120,000	>120,000	17
TLC-LED-1500	LED 5700K - 75 CRI	1410W	181,000	>120,000	>120,000	>120,000	12
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	8
TLC-LED-900	LED 5700K - 75 CRI	880W	104,000	>120,000	>120,000	>120,000	1

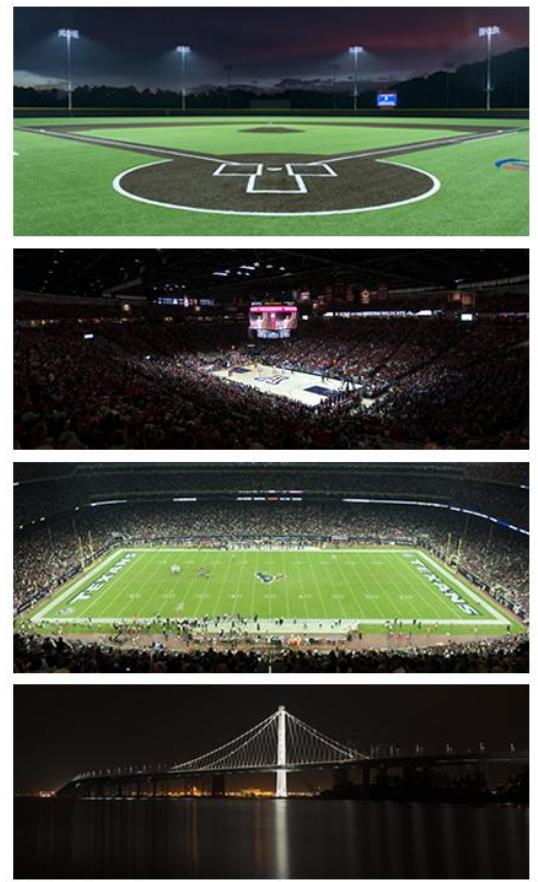
### Single Luminaire Amperage Draw Chart

Driver (.90 min power factor)	Max Line Amperage Per Luminaire						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage	6.9	6.5	6.0	5.2	4.2	3.8	3.0
TLC-LED-1200	8.4	7.9	7.3	6.3	5.0	4.6	3.6
TLC-LED-1500	3.4	3.2	2.9	2.5	2.0	1.8	1.5
TLC-BT-575	5.2	4.9	4.5	3.9	3.1	2.9	2.3
TLC-LED-900							

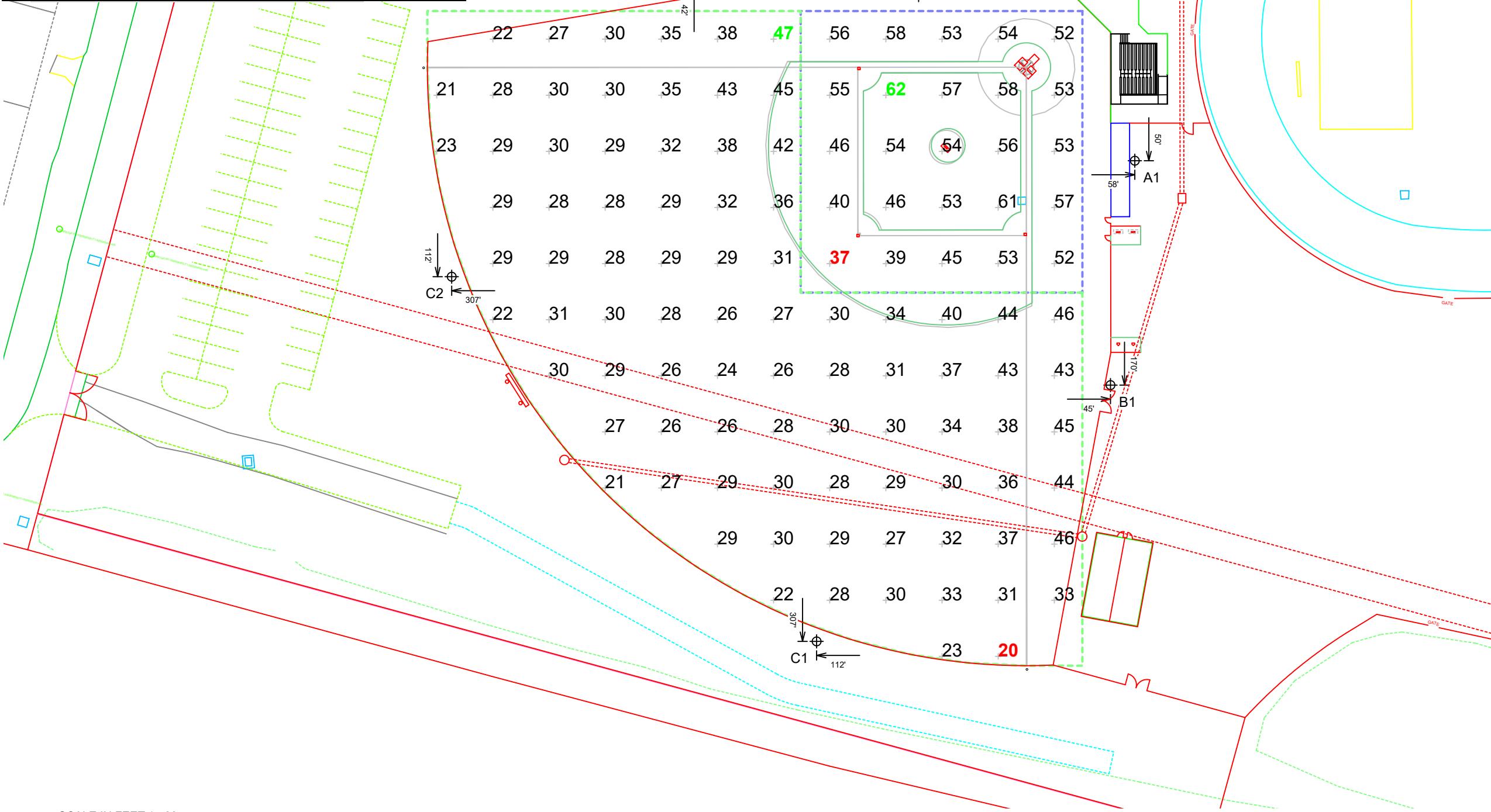
### Light Level Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Baseball (Infield)	Horizontal Illuminance	52.1	37	62	1.69	1.41	A	38
Baseball (Outfield)	Horizontal Illuminance	31.3	20	47	2.31	1.57	A	38

From Hometown to Professional



EQUIPMENT LIST FOR AREAS SHOWN									
Pole			Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
2	A1-A2	70'	-	15.5' 70'	TLC-BT-575 TLC-LED-1200	1 5	1 5	0 0	
1	B1	70'	-	70' 15.5' 60' 70'	TLC-LED-1200 TLC-BT-575 TLC-LED-1500 TLC-LED-1500	2 1 2 3	2 1 2 3	0 0 0 0	
1	B2	70'	-	70' 15.5' 70'	TLC-LED-1200 TLC-BT-575 TLC-LED-1500	2 1 3	2 1 3	0 0 0	
1	C1	70'	-	70' 70' 15.5' 70'	TLC-LED-1500 TLC-LED-900 TLC-BT-575 TLC-LED-1200	2 1 2 1	2 1 2 1	0 0 0 0	
1	C2	70'	-	70' 15.5' 70'	TLC-LED-1500 TLC-BT-575 TLC-LED-1200	2 2 2	2 2 2	0 0 0	
6	TOTALS			38	38	0			



GRID SUMMARY	
Name:	Baseball
Size:	320'/320'/320' - basepath 90'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Infield	Outfield
Guaranteed Average:	50 30
Scan Average:	52.05 31.33
Maximum:	62 47
Minimum:	37 20
Avg / Min:	1.42 1.53
Guaranteed Max / Min:	2 2.5
Max / Min:	1.69 2.31
UG (adjacent pts):	1.19 1.51
CU:	0.67
CV:	0.12 0.20
No. of Points:	25 86
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	38
Total Load:	42.29 kW

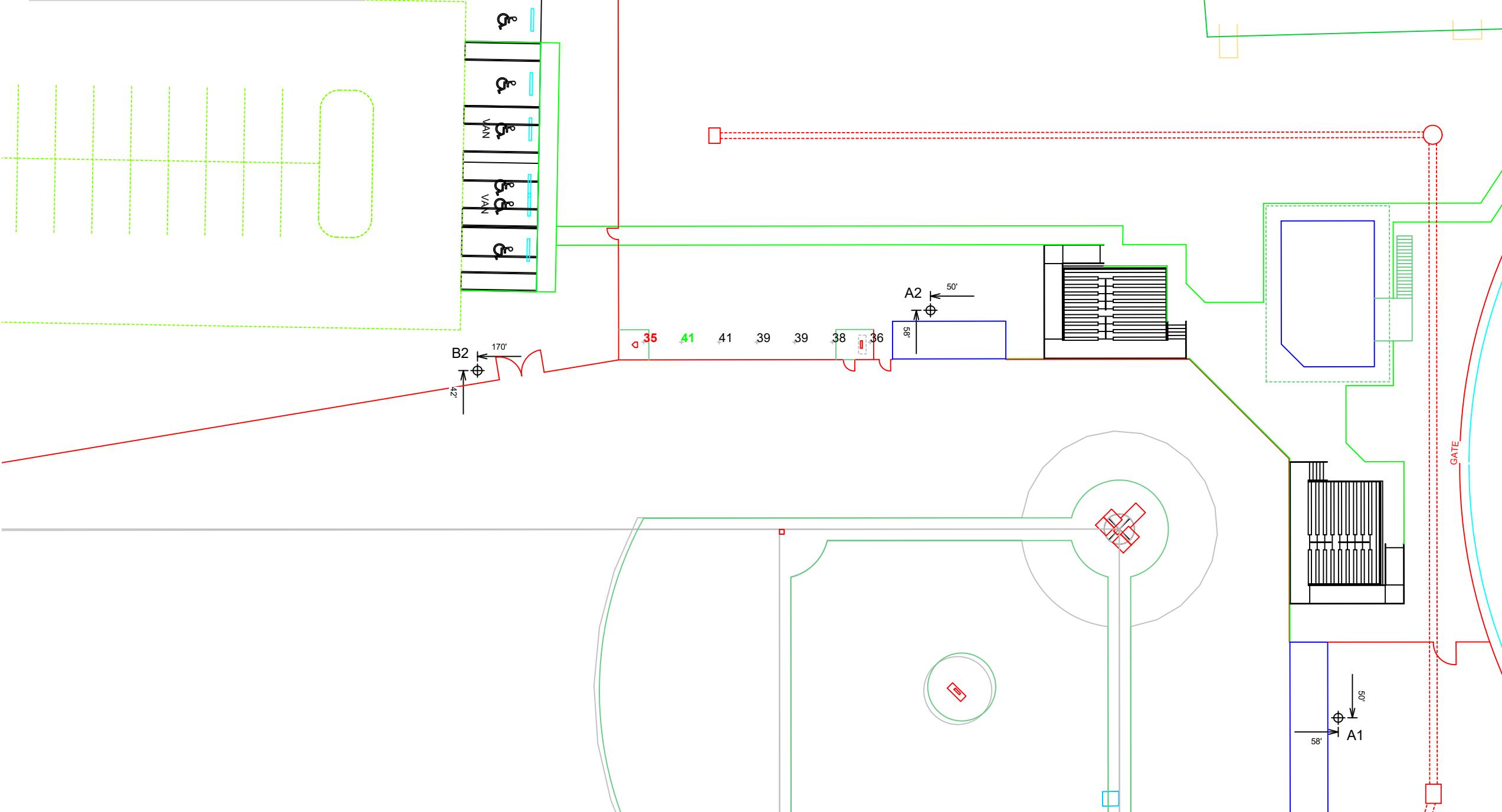
**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

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

EQUIPMENT LIST FOR AREAS SHOWN									
Pole			Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
2	A1-A2	70'	-	15.5' 70'	TLC-BT-575 TLC-LED-1200	1 5	1 5	0 0	
1		70'		70' 15.5' 60' 70'	TLC-LED-1200 TLC-BT-575 TLC-LED-1500 TLC-LED-1500	2 1 2 3	2 1 2 3	0 0 0 0	
1	B2	70'	-	70' 15.5' 70'	TLC-LED-1200 TLC-BT-575 TLC-LED-1500	2 1 3	2 1 3	0 0 0	
1	C1	70'	-	70' 70' 15.5' 70'	TLC-LED-1500 TLC-LED-900 TLC-BT-575 TLC-LED-1200	2 1 2 1	2 1 2 1	0 0 0 0	
1	C2	70'	-	70' 15.5' 70'	TLC-LED-1500 TLC-BT-575 TLC-LED-1200	2 2 2	2 2 2	0 0 0	
6	TOTALS			38	38	0			



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

McKeel Academy Baseball And Softball  
Lakeland, FL

GRID SUMMARY	
Name:	Bullpen 1st Base
Size:	
Spacing:	10.0' x 10.0'
Height:	3.0' above grade
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	38.30
Scan Average:	38.30
Maximum:	41
Minimum:	35
Avg / Min:	1.11
Max / Min:	1.18
UG (adjacent pts):	1.18
CU:	0.01
CV:	0.06
No. of Points:	7
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	38
Total Load:	42.29 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.

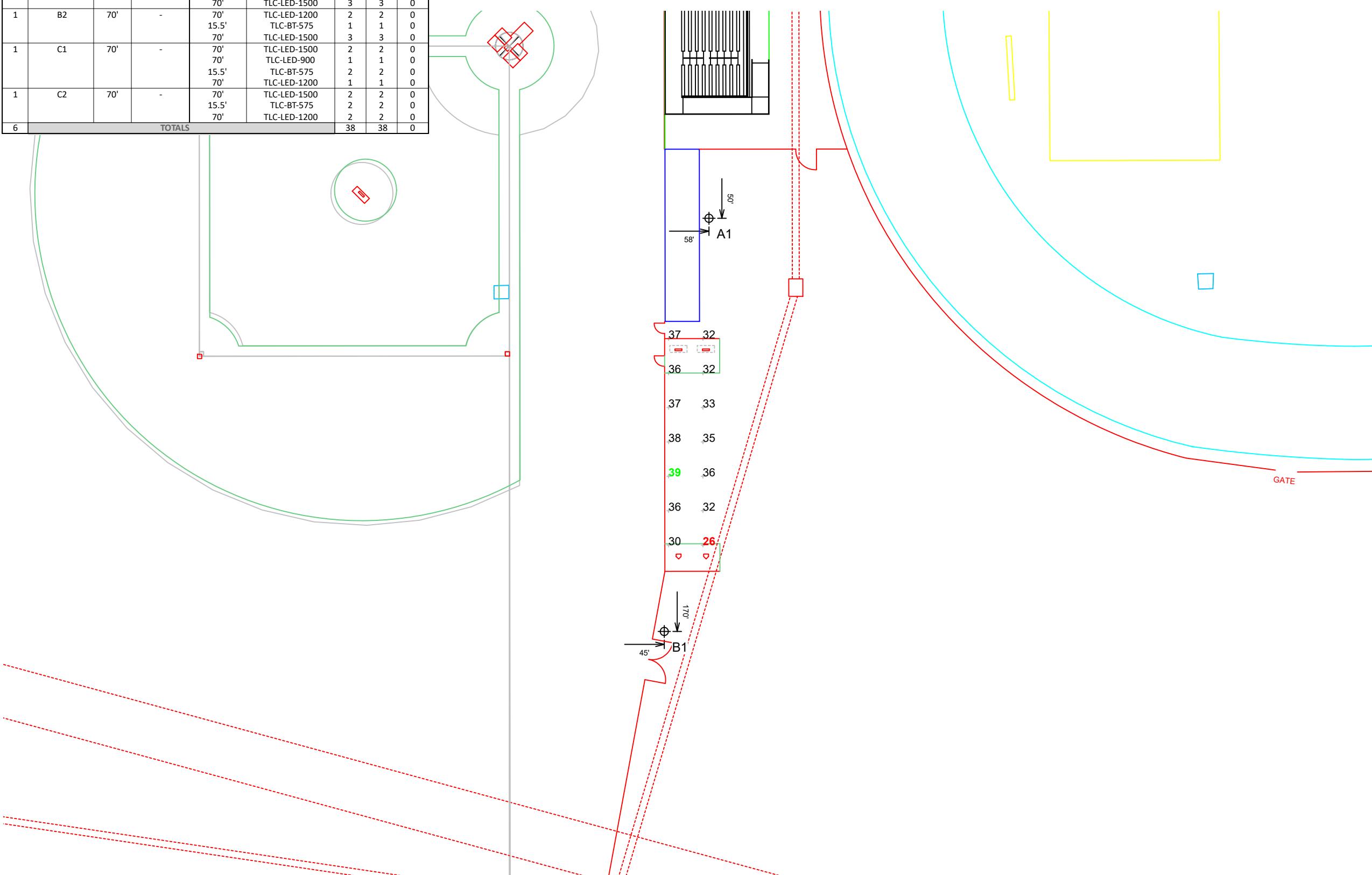
**Installation Requirements:** Results assume  $\pm 3\%$  nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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Equipment List for Areas Shown				Pole					Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS					
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0					
				70'	TLC-LED-1200	5	5	0					
1	B1	70'	-	70'	TLC-LED-1200	2	2	0					
				15.5'	TLC-BT-575	1	1	0					
				60'	TLC-LED-1500	2	2	0					
				70'	TLC-LED-1500	3	3	0					
1	B2	70'	-	70'	TLC-LED-1200	2	2	0					
				15.5'	TLC-BT-575	1	1	0					
				70'	TLC-LED-1500	3	3	0					
1	C1	70'	-	70'	TLC-LED-1500	2	2	0					
				70'	TLC-LED-900	1	1	0					
				15.5'	TLC-BT-575	2	2	0					
				70'	TLC-LED-1200	1	1	0					
1	C2	70'	-	70'	TLC-LED-1500	2	2	0					
				15.5'	TLC-BT-575	2	2	0					
				70'	TLC-LED-1200	2	2	0					
6	TOTALS					38	38	0					



McKeel Academy Baseball And Softball  
Lakeland,FL

GRID SUMMARY	
<b>Name:</b>	<b>Bullpen 3rd Base</b>
<b>Size:</b>	320' / 320' / 320' - basepath 90'
<b>Spacing:</b>	10.0' x 10.0'
<b>Height:</b>	3.0' above grade
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
<b>Scan Average:</b>	<b>34.17</b>
Maximum:	39
Minimum:	26
Avg / Min:	1.29
<b>Max / Min:</b>	<b>1.46</b>
UG (adjacent pts):	1.21
CU:	0.01
CV:	0.10
No. of Points:	14
LUMINAIRE INFORMATION	
Applied Circuits:	A
<b>No. of Luminaires:</b>	<b>38</b>
Total Load:	42.29 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.

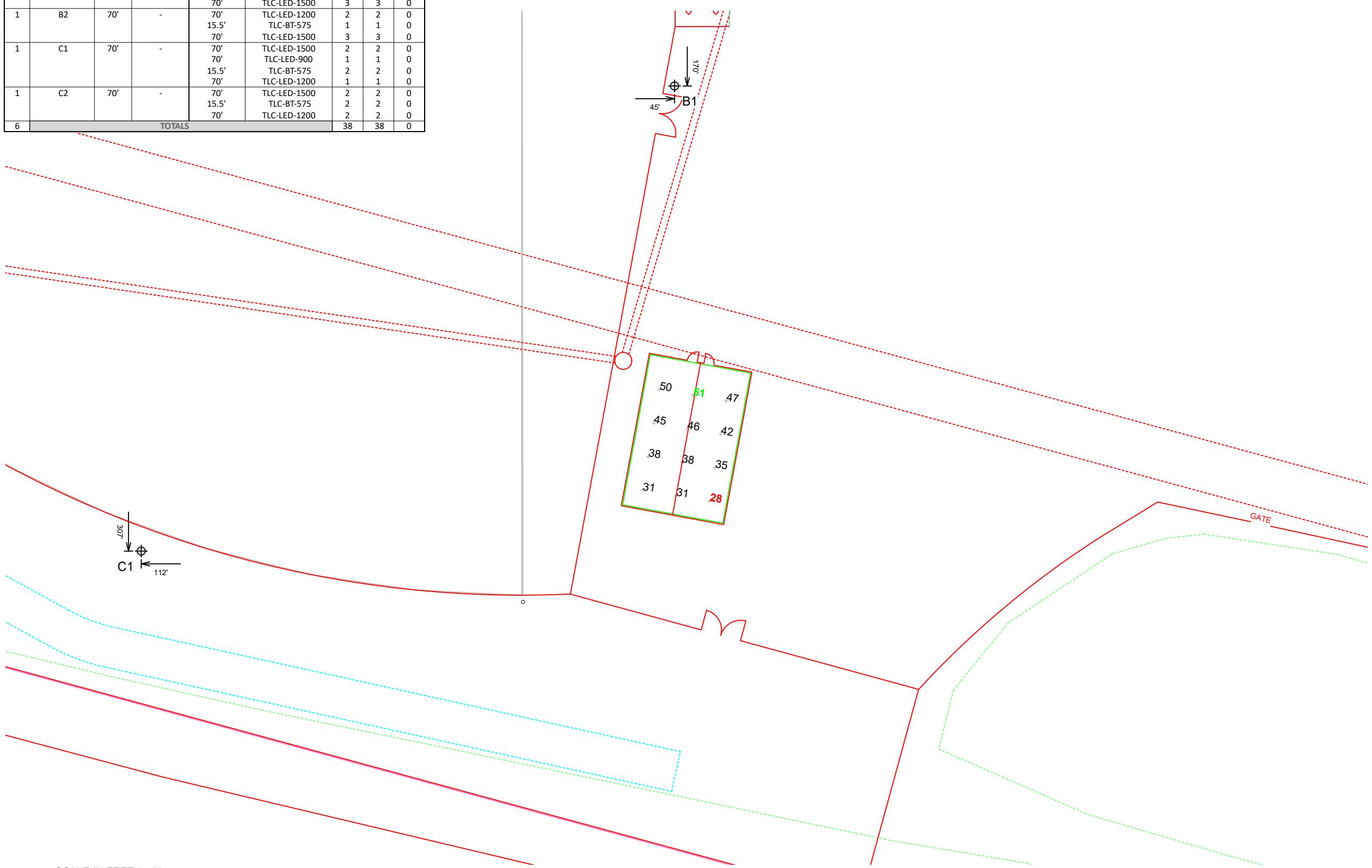
- **Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "**Musco Control System Summary**" for electrical sizing.

**Installation Requirements:** Results assume  $\pm 3\%$  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)  $\otimes$

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Equipment List for Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1200	5	5	0
1	B1	70'	-	70'	TLC-LED-1200	2	2	0
				15.5'	TLC-BT-575	1	1	0
				60'	TLC-LED-1500	2	2	0
				70'	TLC-LED-1500	3	3	0
1	B2	70'	-	70'	TLC-LED-1200	2	2	0
				15.5'	TLC-BT-575	1	1	0
				70'	TLC-LED-1500	3	3	0
1	C1	70'	-	70'	TLC-LED-1500	2	2	0
				70'	TLC-LED-900	1	1	0
				15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	1	1	0
1	C2	70'	-	70'	TLC-LED-1500	2	2	0
				15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1200	2	2	0
6	TOTALS					38	38	0



McKeel Academy Baseball And Softball  
Lakeland,FL

GRID SUMMARY	
<b>Name:</b>	<b>BB Batting Cage</b>
<b>Size:</b>	320'/320'/320' - basepath 90'
<b>Spacing:</b>	10.0' x 10.0'
<b>Height:</b>	3.0' above grade
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
<b>Scan Average:</b>	<b>40.11</b>
Maximum:	51
Minimum:	28
Avg / Min:	1.45
<b>Max / Min:</b>	<b>1.83</b>
UG (adjacent pts):	1.27
CU:	0.01
CV:	0.20
No. of Points:	12
LUMINAIRE INFORMATION	
Applied Circuits:	A
<b>No. of Luminaires:</b>	<b>38</b>
Total Load:	42.29 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  $\pm 3\%$  nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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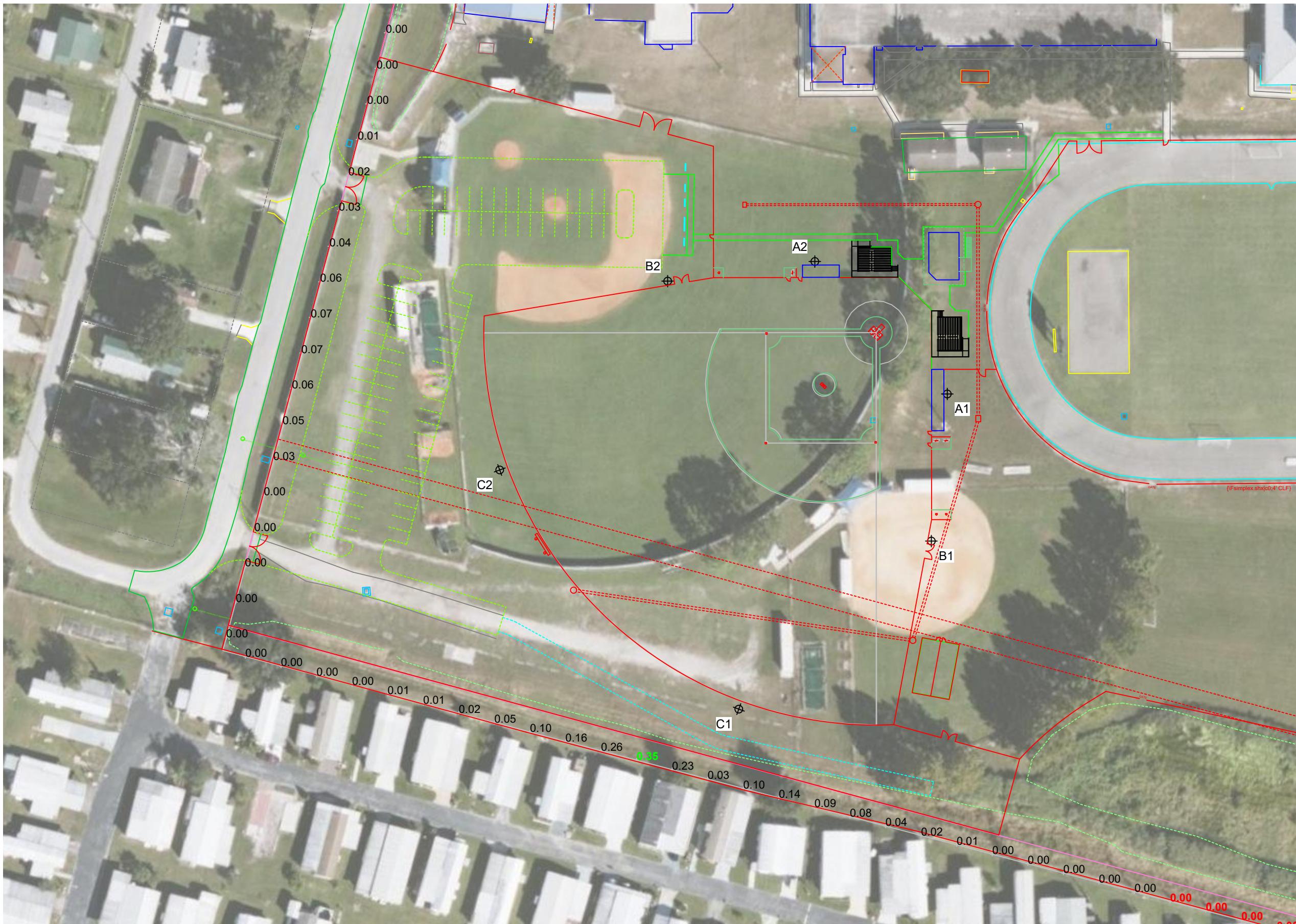
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Pole location(s)  $\oplus$  dimensions are relative to 0.0 reference point(s)  $\otimes$

SCALE IN FEET 1 : 30

ENGINEERED DESIGN By: Curt Lamberson : File #220117 BB : 06-Mar-23

## ILLUMINATION SUMMARY



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



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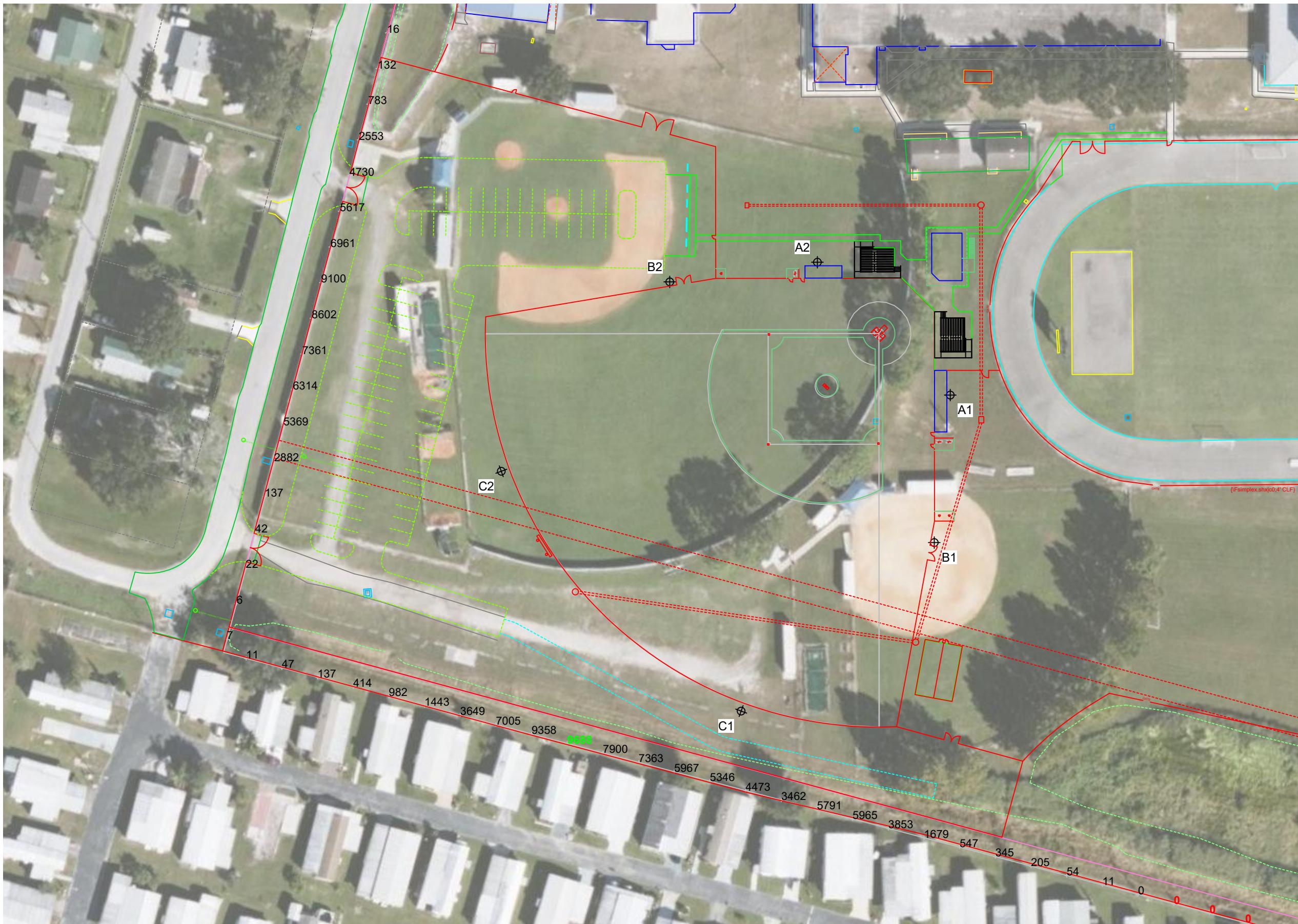
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SCALE IN FEET 1 : 80

0' 80' 160'

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



McKeel Academy Baseball And Softball  
Lakeland, FL

**GRID SUMMARY**

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

**ILLUMINATION SUMMARY**

CANDELA (PER FIXTURE)

Entire Grid

Scan Average: 2121.6809

Maximum: 9687.63

Minimum: 0.00

No. of Points: 69

LUMINAIRE INFORMATION

Applied Circuits: A

No. of Luminaires: 38

Total Load: 42.29 kW

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

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



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**EQUIPMENT LAYOUT**

**INCLUDES:**  
- Baseball

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

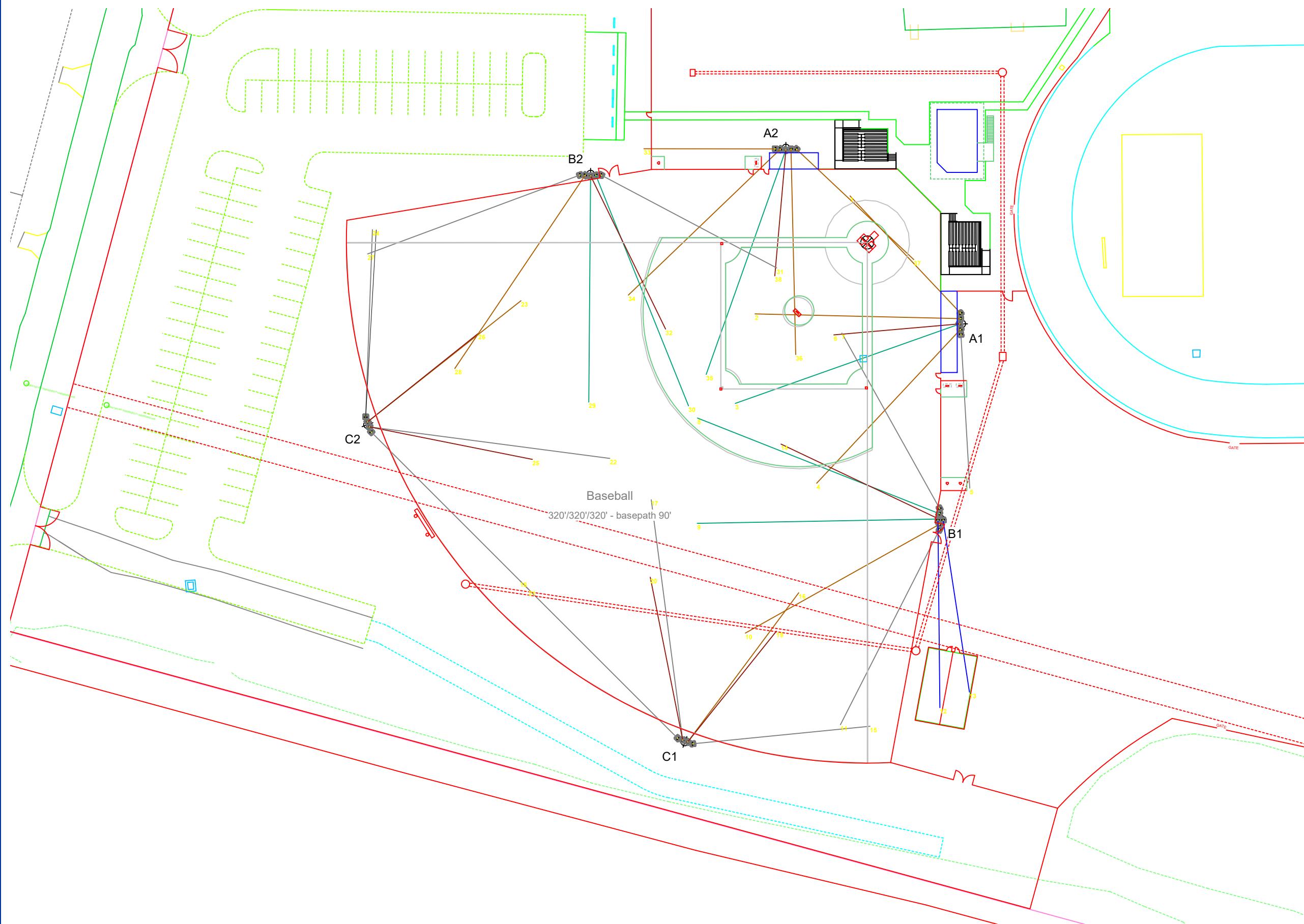
**Installation Requirements:** Results assume  $\pm 3\%$  nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

**EQUIPMENT LIST FOR AREAS SHOWN**

QTY	LOCATION	CLASS	GRADE ELEVATION	Luminaires		
				MOUNTING HEIGHT	LUMINAIRE TYPE	QTY POLE
2	A1-A2	LSS70C	-	15.5' 70'	TLC-BT-575 TLC-LED-1200	1 5
				15.5' 60' 70'	TLC-LED-1200 TLC-BT-575 TLC-LED-1500	2 1 3
1	B1	LSS70D	-	70'	TLC-LED-1200	2
				15.5' 70'	TLC-BT-575 TLC-LED-1500	1 3
1	B2	LSS70D	-	70'	TLC-LED-1200	2
				15.5' 70'	TLC-BT-575 TLC-LED-1500	1 3
1	C1	LSS70C	-	70'	TLC-LED-1500	2
				15.5' 70'	TLC-LED-900 TLC-BT-575 TLC-LED-1200	1 2 1
1	C2	LSS70C	-	70'	TLC-LED-1500	2
				15.5' 70'	TLC-BT-575 TLC-LED-1200	2 2
6					<b>TOTALS</b>	38

**SINGLE LUMINAIRE AMPERAGE DRAW CHART**

Driver (.90 min power factor)	Line Amperage Per Luminaire (max draw)					
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9



**EQUIPMENT LAYOUT**

**INCLUDES:**  
- Baseball

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

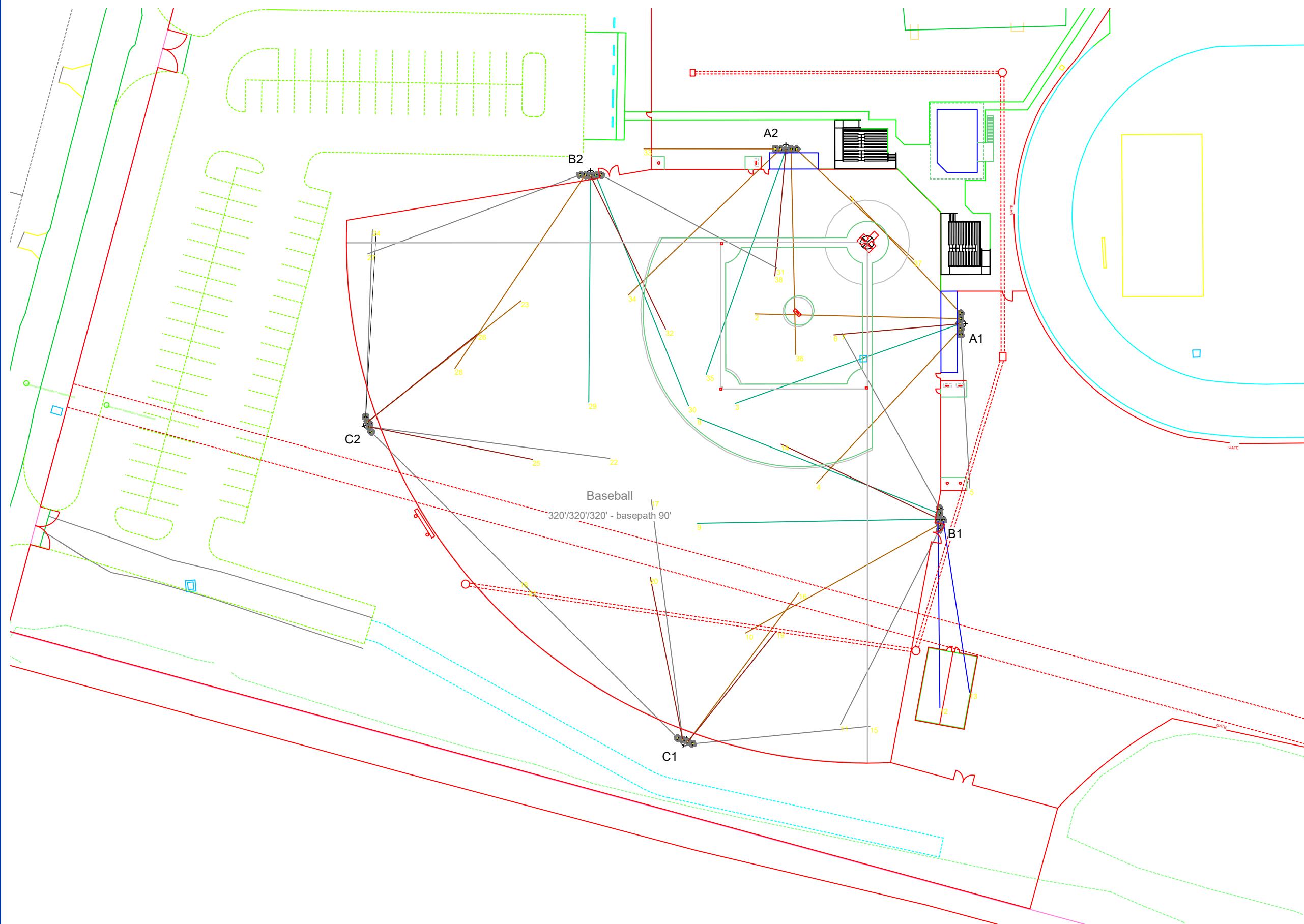
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**EQUIPMENT LIST FOR AREAS SHOWN**

QTY	LOCATION	CLASS	GRADE ELEVATION	Luminaires		
				MOUNTING HEIGHT	LUMINAIRE TYPE	QTY POLE
2	A1-A2	LSS70C	-	15.5' 70'	TLC-BT-575 TLC-LED-1200	1 5
				15.5' 60' 70'	TLC-LED-1200 TLC-BT-575 TLC-LED-1500	2 1 3
1	B1	LSS70D	-	70'	TLC-LED-1200	2
				15.5' 70'	TLC-BT-575 TLC-LED-1500	1 3
1	B2	LSS70D	-	70'	TLC-LED-1200	2
				15.5' 70'	TLC-BT-575 TLC-LED-1500	1 3
1	C1	LSS70C	-	70'	TLC-LED-1500	2
				15.5' 70'	TLC-LED-900 TLC-BT-575 TLC-LED-1200	1 2 1
1	C2	LSS70C	-	70'	TLC-LED-1500	2
				15.5' 70'	TLC-BT-575 TLC-LED-1200	2 2
6					<b>TOTALS</b>	38

**SINGLE LUMINAIRE AMPERAGE DRAW CHART**

Driver (.90 min power factor)	Line Amperage Per Luminaire (max draw)					
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)
TLC-LED-1500	8.4	7.9	7.3	6.3	5.0	4.6
TLC-LED-1200	6.9	6.5	6.0	5.2	4.2	3.8
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8
TLC-LED-900	5.2	4.9	4.5	3.9	3.1	2.9



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



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**EQUIPMENT LAYOUT**