

Lighting System

Pole/Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
F1- F4	100'	100'	2	TLC-LED-1200	2.34 kW	A
		100'	8	TLC-LED-1500	11.28 kW	A
		70'	1	TLC-RGBW	0.64 kW	B
4			44		57.04 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Football	54.48 kW	40
B	Bleachers	2.56 kW	4

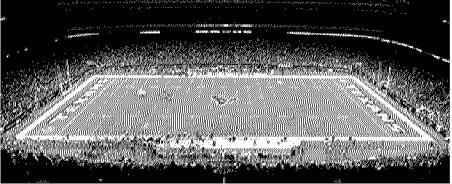
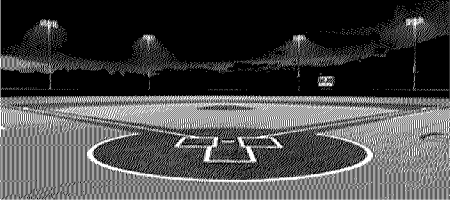
Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1200	LED 5700K - 75 CRI	1170W	150,000	>120,000	>120,000	>120,000	8
TLC-LED-1500	LED 5700K - 75 CRI	1410W	181,000	>120,000	>120,000	>120,000	32
TLC-RGBW	LED 5700K - 75 CRI	640W	28,500	>120,000	>120,000	>120,000	4

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-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-RGBW	4.5	4.3	3.8	3.3	2.7	1.9	1.9

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Away Bleachers	Horizontal	3.21	1	4	4.29	3.32	B	4
Blanket Spill	Horizontal Illuminance	16.65	0	75	10020.65	2218.21	A,B,C	44
Football	Horizontal Illuminance	52.59	48	62	1.30	1.11	A,C	40
Home Bleachers	Horizontal	3.36	2	4	2.63	2.20	B	4
Property Glare	Max Candela (by Fixture)	56928.40	7086	109743	15.49	8.03	A,B,C	44
Property Spill	Horizontal	0.24	0	1	171.55	40.71	A,B,C	44
Soccer	Horizontal Illuminance	52.28	47	61	1.29	1.11	A	40
Track	Horizontal Illuminance	30.08	11	43	4.06	2.81	A	40

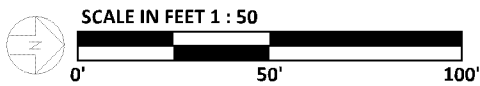
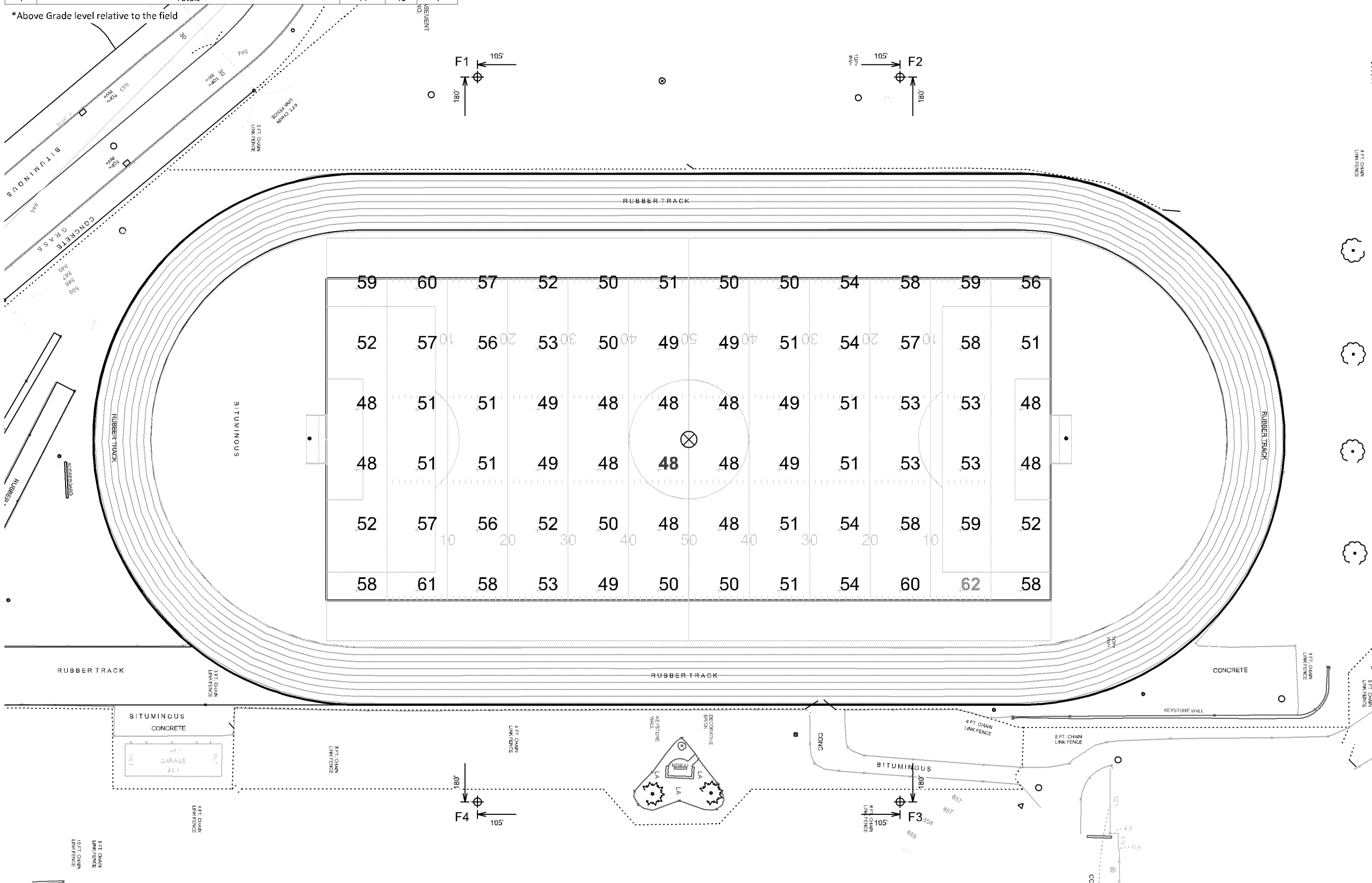
From Hometown to Professional



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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
4	F1-F4	100'	-	100'	TLC-LED-1200	2	2	0
				100'	TLC-LED-1500	8	8	0
				70'	TLC-RGBW	1	0	1
4	Totals					44	40	4

*Above Grade level relative to the field



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

PL202300158

Bloomington Thomas Jefferson Football

Bloomington MN

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	50
Scan Average	52.59
Maximum	62
Minimum	48
Avg/Min	1.11
Guaranteed Max/Min	2
Max/Min	1.30
UG (adjacent pts)	1.13
CU	0.48
No. of Points	72
LUMINAIRE INFORMATION	
Applied Circuits	A,C
No. of Luminaires	40
Total Load	54.48 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.

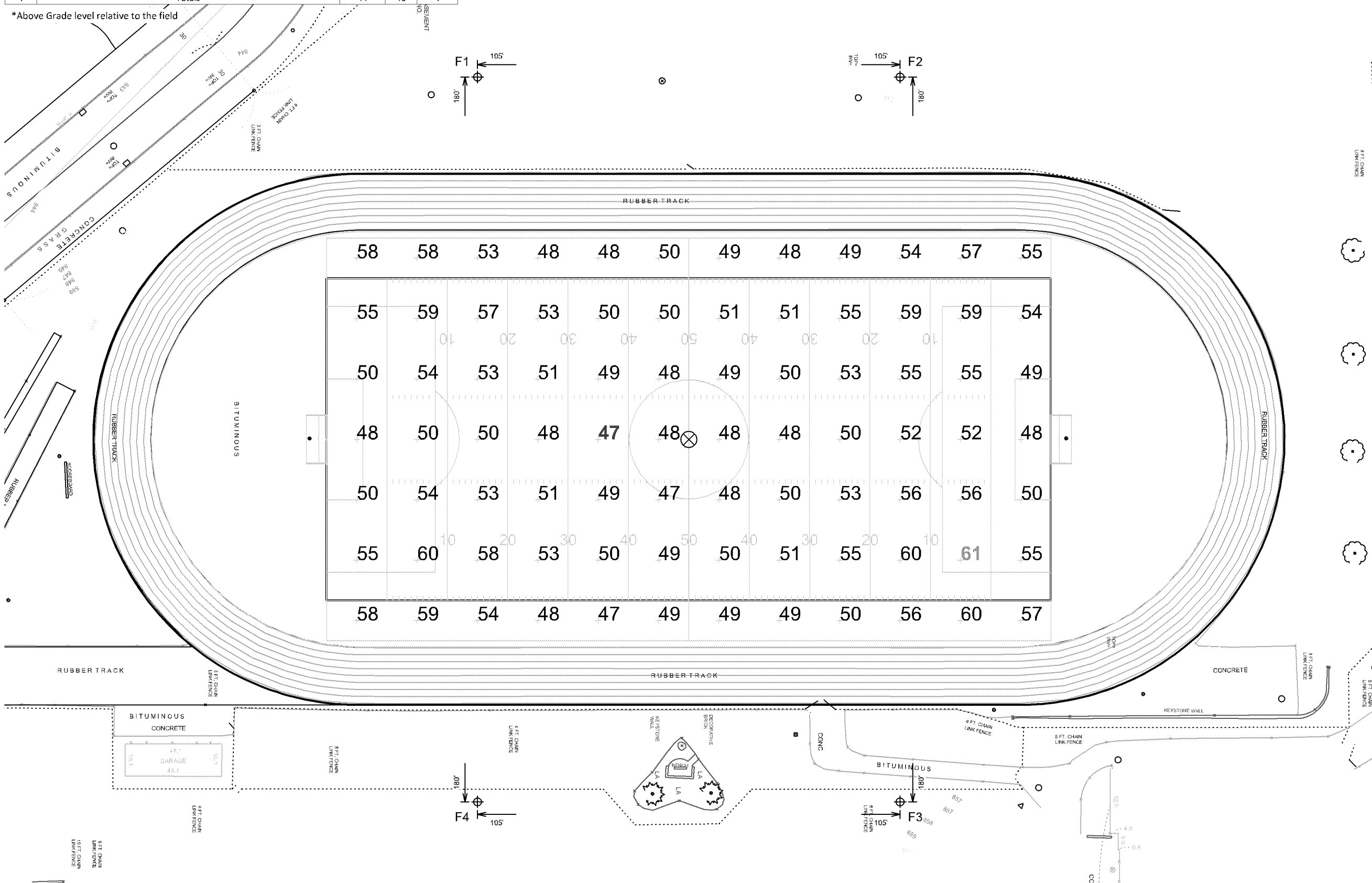


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ILLUMINATION SUMMARY

Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	F1-F4	100'	-	100'	TLC-LED-1200	2	2	0
				100'	TLC-LED-1500	8	8	0
				70'	TLC-RGBW	1	0	1
4	Totals					44	40	4

*Above Grade level relative to the field



Bloomington Thomas Jefferson Football

Bloomington MN

Grid Summary	
Name Soccer	
Size 360' x 200'	
Spacing 30.0' x 30.0'	
Height 3.0' above grade	

Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average	50
Scan Average	52.28
Maximum	61
Minimum	47
Avg/Min	1.11
Guaranteed Max/Min	2
Max/Min	1.29
UG (adjacent pts)	1.13
CU	0.56
No. of Points	84
LUMINAIRE INFORMATION	
Applied Circuits	A
No. of Luminaires	40
Total Load	54.48 kW

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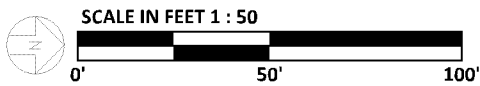
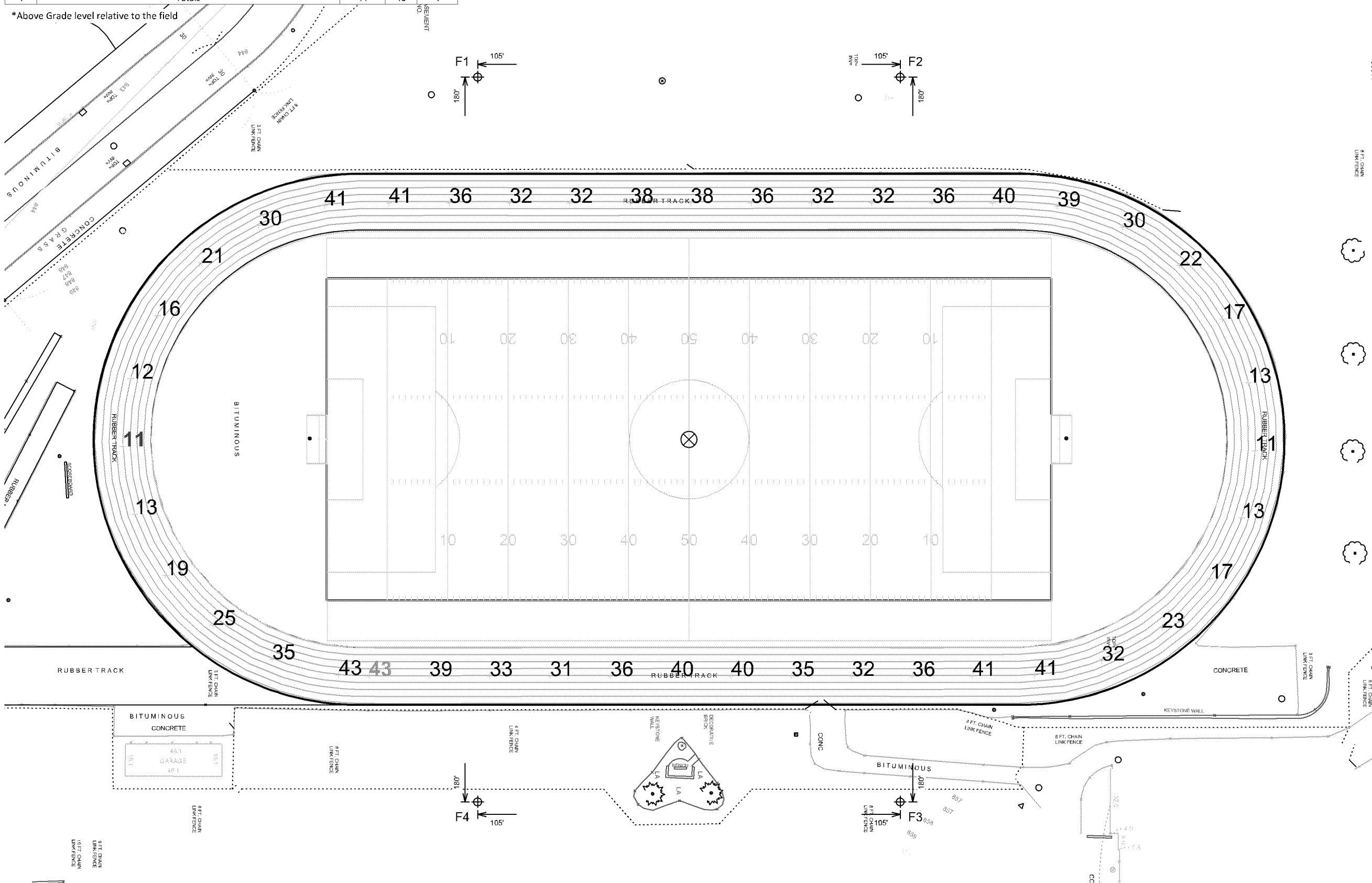
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ILLUMINATION SUMMARY

Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	F1-F4	100'	-	100'	TLC-LED-1200	2	2	0
				100'	TLC-LED-1500	8	8	0
				70'	TLC-RGBW	1	0	1
4	Totals					44	40	4

*Above Grade level relative to the field



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

PL202300158

Bloomington Thomas Jefferson Football

Bloomington MN

Grid Summary	
Name Track	
Size Irregular	
Spacing 30.0' x 30.0'	
Height 3.0' above grade	

Illumination Summary	
	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average	30.08
Maximum	43
Minimum	11
Avg/Min	2.81
Max/Min	4.06
UG (adjacent pts)	0.00
CU	0.17
No. of Points	44
LUMINAIRE INFORMATION	
Applied Circuits	A
No. of Luminaires	40
Total Load	54.48 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.



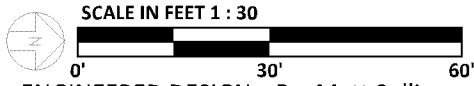
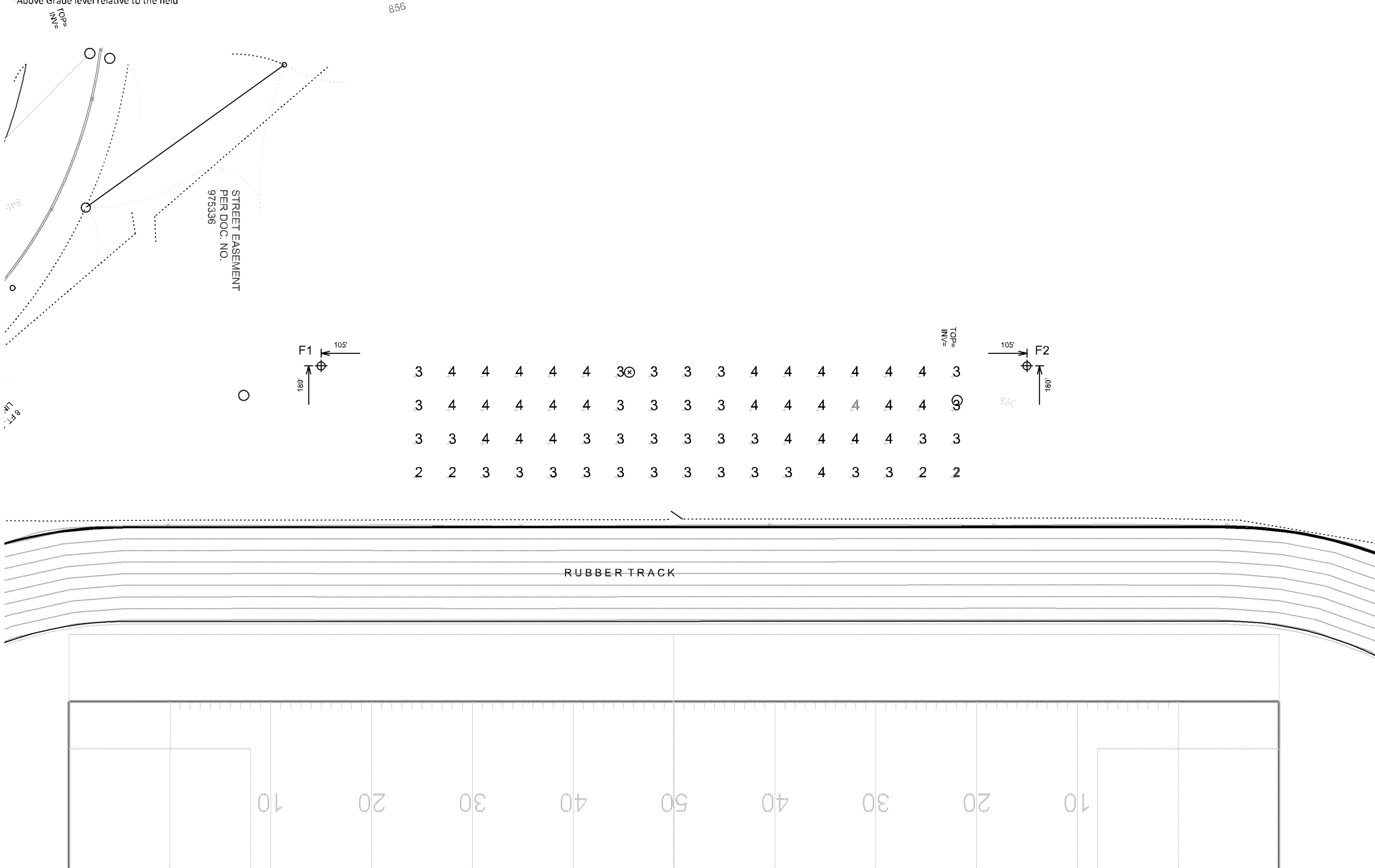
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ILLUMINATION SUMMARY

Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	F1-F4	100'	-	100'	TLC-LED-1200	2	0	2
				100'	TLC-LED-1500	8	0	8
				70'	TLC-RGBW	1	1	0
4	Totals					44	4	40

*Above Grade level relative to the field



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PL202300158

Bloomington Thomas Jefferson Football

Bloomington MN

Grid Summary
Name Home Bleachers
Size 360' x 200'
Spacing 10.0' x 10.0'
Height 3.0' above grade

Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average	3.36
Maximum	4
Minimum	2
Avg/Min	2.20
Max/Min	2.63
UG (adjacent pts)	1.66
CU	0.24
No. of Points	68
LUMINAIRE INFORMATION	
Applied Circuits	B
No. of Luminaires	4
Total Load	2.56 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.



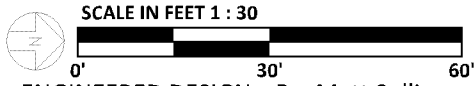
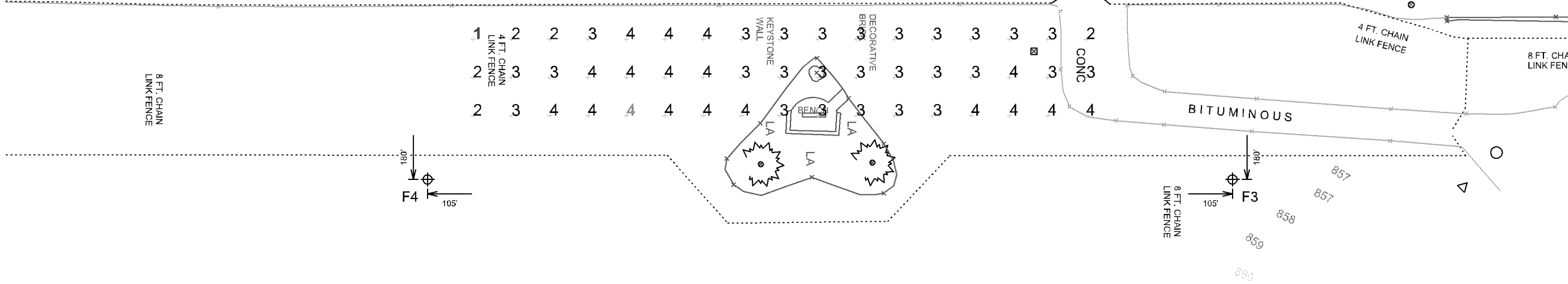
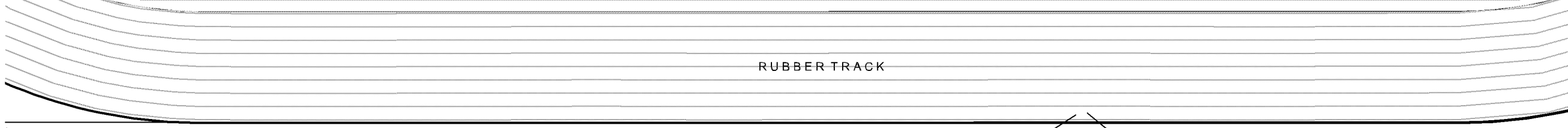
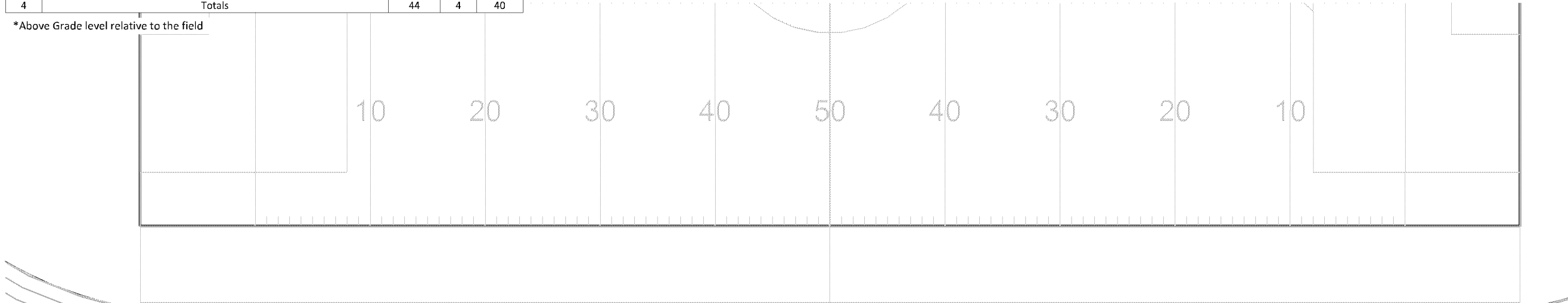
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ILLUMINATION SUMMARY

Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	F1-F4	100'	-	100'	TLC-LED-1200	2	0	2
				100'	TLC-LED-1500	8	0	8
				70'	TLC-RGBW	1	1	0
4	Totals					44	4	40

*Above Grade level relative to the field



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

PL202300158

Bloomington Thomas Jefferson Football

Bloomington MN

Grid Summary
Name Away Bleachers
Size 360' x 200'
Spacing 10.0' x 10.0'
Height 3.0' above grade

Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average	3.21
Maximum	4
Minimum	1
Avg/Min	3.32
Max/Min	4.29
UG (adjacent pts)	1.81
CU	0.17
No. of Points	51
LUMINAIRE INFORMATION	
Applied Circuits	B
No. of Luminaires	4
Total Load	2.56 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

Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	F1-F4	100'	-	100'	TLC-LED-1200	2	2	0
				100'	TLC-LED-1500	8	8	0
				70'	TLC-RGBW	1	1	0
4				Totals		44	44	0

*Above Grade level relative to the field

PL202300158

Bloomington Thomas Jefferson Football

Bloomington MN

Grid Summary	
Name	Blanket Spill
Size	875' x 575'
Spacing	10.0' x 10.0'
Height	3.0' above grade

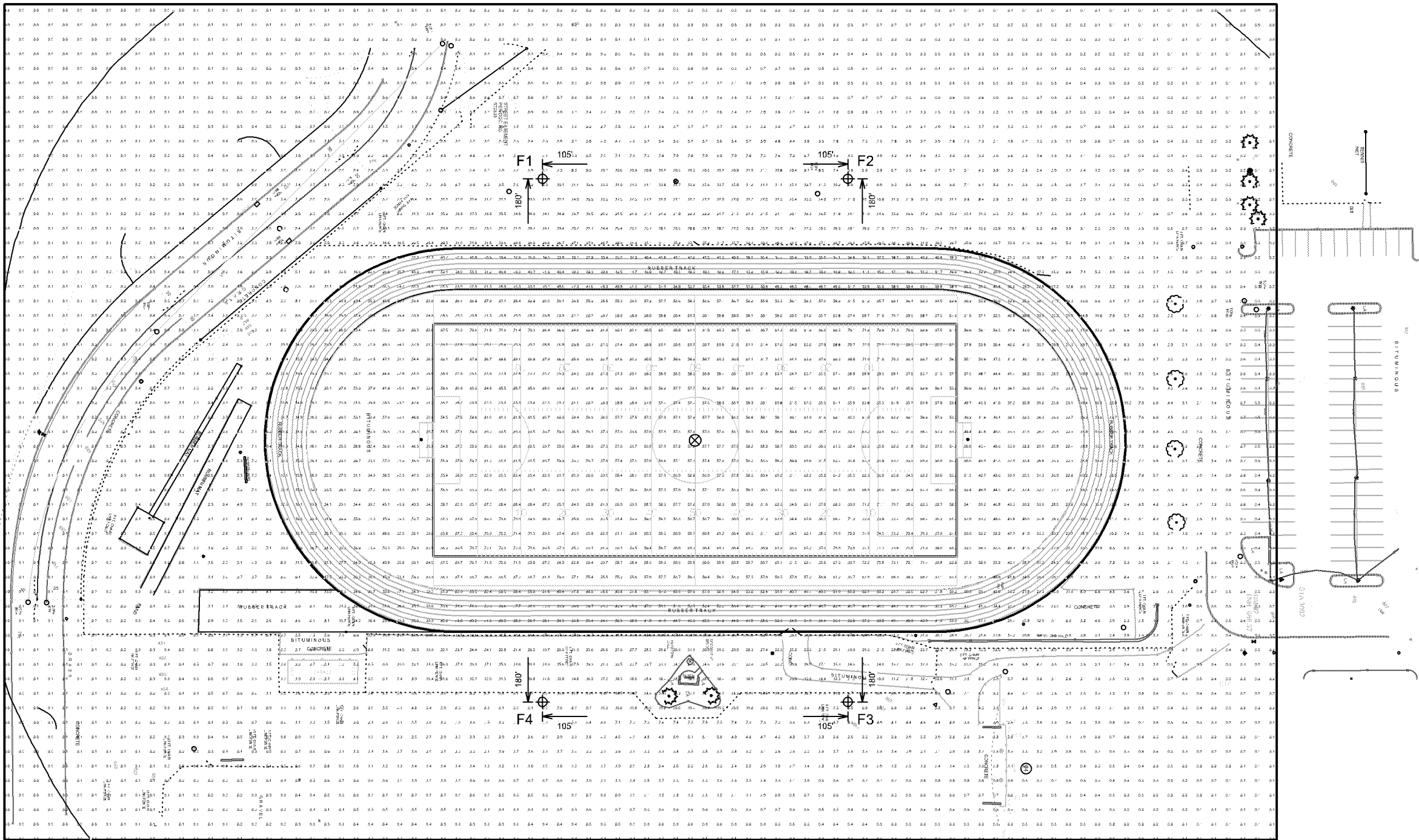
Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average	16.65
Maximum	75
Minimum	0
Avg/Min	2218.21
Max/Min	10020.65
UG (adjacent pts)	1.74
CU	0.99
No. of Points	5104
LUMINAIRE INFORMATION	
Applied Circuits	A,B,C
No. of Luminaires	44
Total Load	57.04 kW

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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.



Equipment List For Areas Shown								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
4	F1-F4	100'	-	100'	TLC-LED-1200	2	2	0
				100'	TLC-LED-1500	8	8	0
				70'	TLC-RGBW	1	1	0
4	Totals				44	44	0	

*Above Grade level relative to the field

PL202300158

Bloomington Thomas Jefferson Football

Bloomington MN

Grid Summary	
Name	Property Spill
Size	360' x 200'
Spacing	30.0' x 10.0'
Height	3.0' above grade

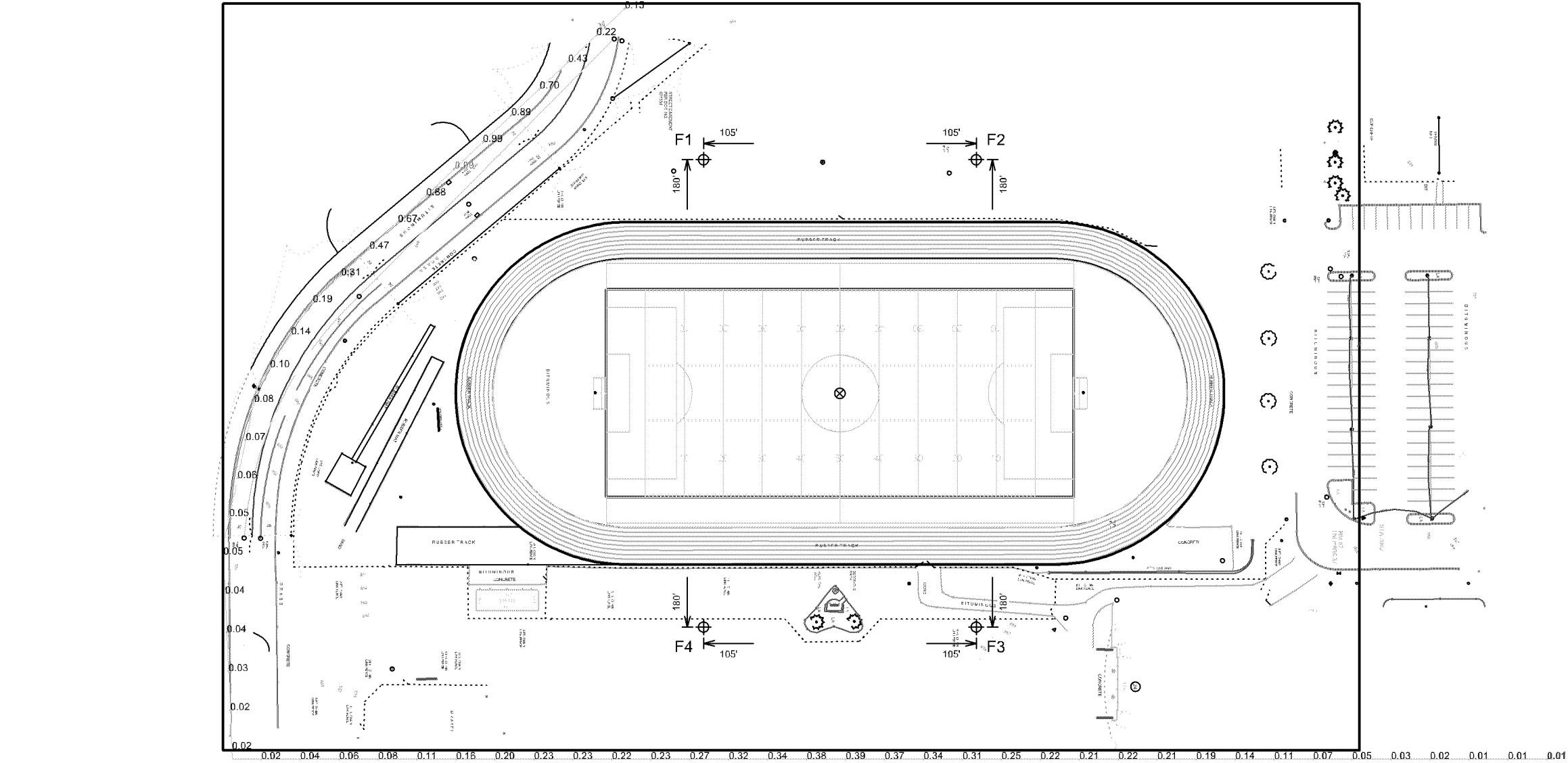
Illumination Summary	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average	0.24
Maximum	1
Minimum	0
Avg/Min	40.71
Max/Min	171.55
UG (adjacent pts)	0.00
CU	0.00
No. of Points	58
LUMINAIRE INFORMATION	
Applied Circuits	A,B,C
No. of Luminaires	44
Total Load	57.04 kW

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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
4	F1-F4	100'	-	100'	TLC-LED-1200	2	2	0
				100'	TLC-LED-1500	8	8	0
				70'	TLC-RGBW	1	1	0
4	Totals					44	44	0

*Above Grade level relative to the field

PL202300158

Bloomington Thomas Jefferson Football

Bloomington MN

Grid Summary		
Name	Property	Glare
Size 360' x 200'		
Spacing 30.0' x 10.0'		
Height 3.0' above grade		

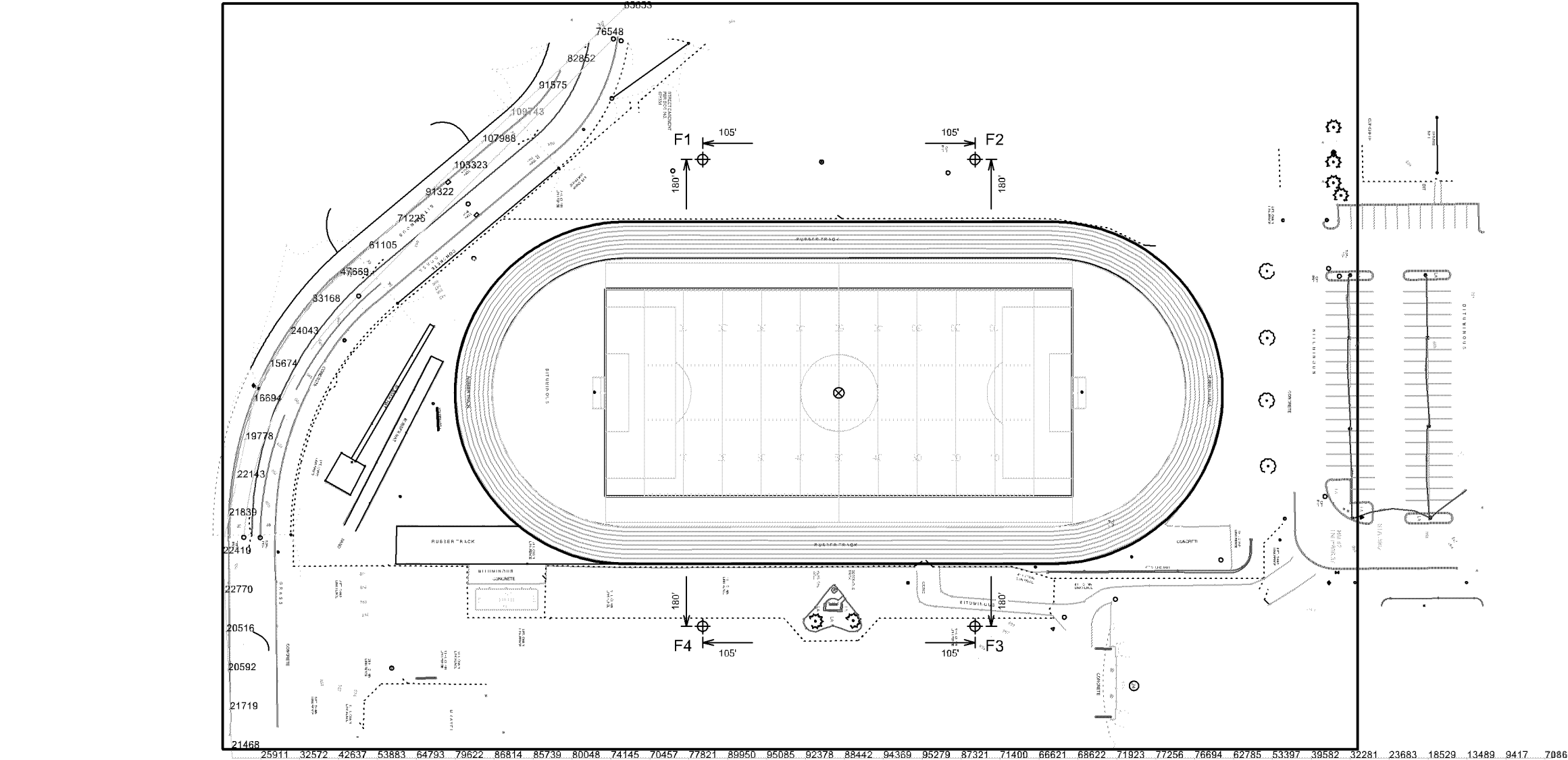
Illumination Summary	
MAINTAINED MAX CANDELA (PER FIXTURE)	
	Entire Grid
Scan Average	56928.40
Maximum	109743
Minimum	7086
Avg/Min	8.03
Max/Min	15.49
UG (adjacent pts)	0.00
CU	0.00
No. of Points	58
LUMINAIRE INFORMATION	
Applied Circuits	A,B,C
No. of Luminaires	44
Total Load	57.04 kW

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Equipment Layout

- INCLUDES:
- Blanket Spill
 - Football
 - Soccer
 - Track

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

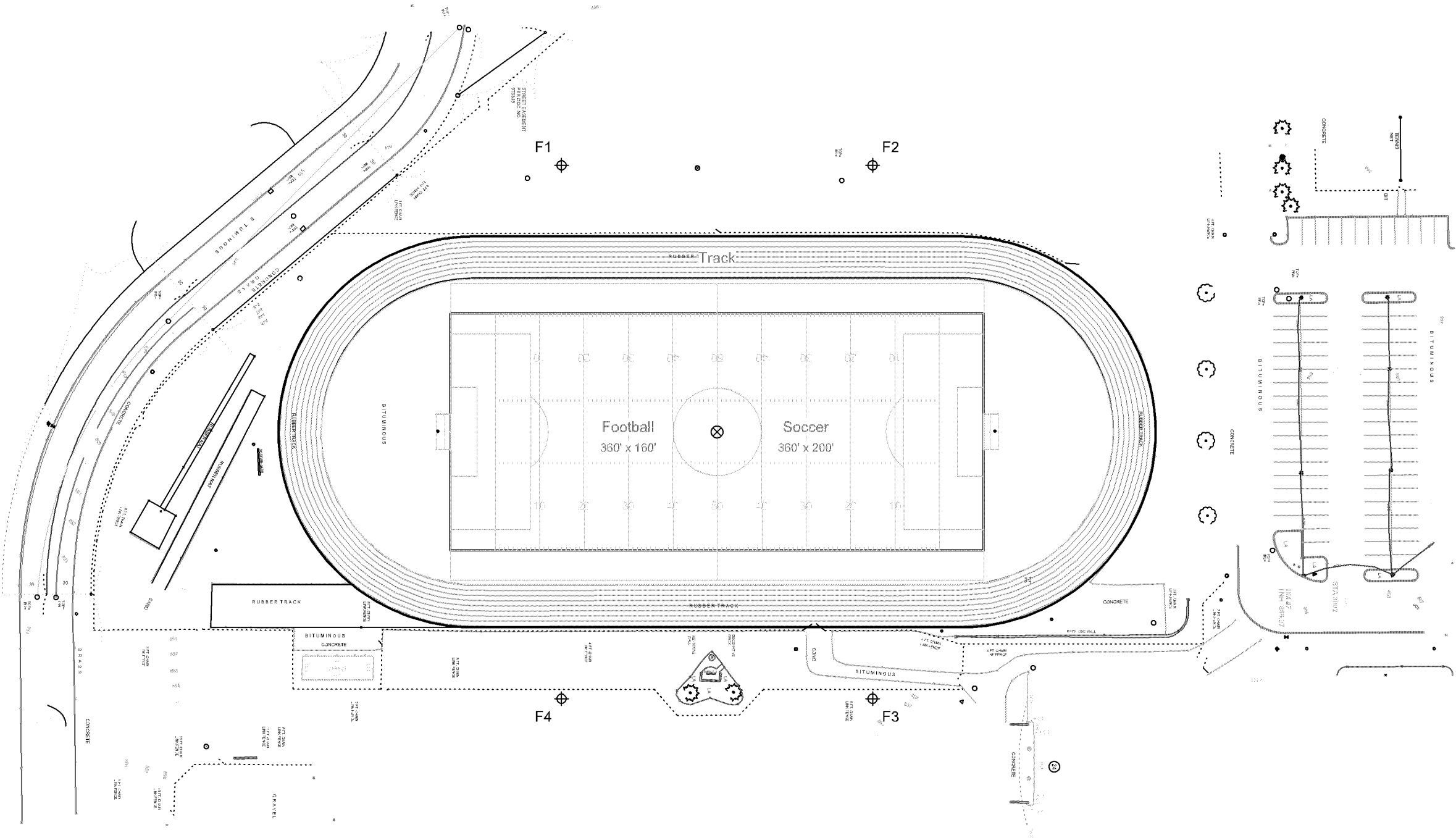
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Equipment List For Areas Shown

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	ABOVE GRADE LEVEL	LUMINAIRE TYPE	QTY/POLE
4	F1-F4	100'	-	100'	TLC-LED-1200	2
				100'	TLC-LED-1500	8
				70'	TLC-RGBW	1
4	Totals					44

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	6.9	6.5	6.0	5.2	4.2	3.8	3.0
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-RGBW	4.5	4.3	3.8	3.3	2.7	1.9	1.9



SCALE IN FEET 1 : 80



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