

Scotland Hall Road MCFC

Manchester,North West

Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
P1	10.0	9.2	2	TLC-LED-400	0.40 kW	A
P2	10.0	9.2	1	TLC-LED-400	0.20 kW	A
P3	10.0	9.2	1	TLC-LED-400	0.20 kW	A
		7.5	1	CREE OSQ	0.10 kW	B
P4	10.0	9.2	2	TLC-LED-400	0.40 kW	A
		7.5	1	CREE OSQ	0.10 kW	B
P5-P8	1.2	1.2	1	CREE PWY	0.03 kW	B
8			12		1.54 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	MUSCO LED	1.2 kW	6
B	CREE LED	0.34 kW	6

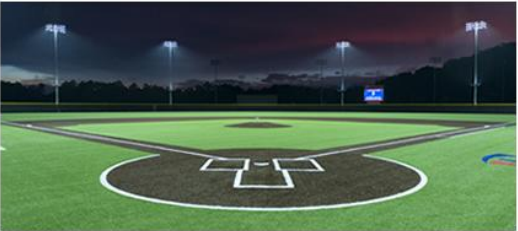
Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
CREE PWY	LED 5700K - 70 CRI	34W	2,228	--	--	--	4
CREE OSQ	LED 5700K - 70 CRI	104W	15,939	--	--	--	2
TLC-LED-400	LED 5700K - 75 CRI	400W	23,250	>120,000	>120,000	>120,000	6

** TLC-400 FIXTURES SET TO 50% OUTPUT

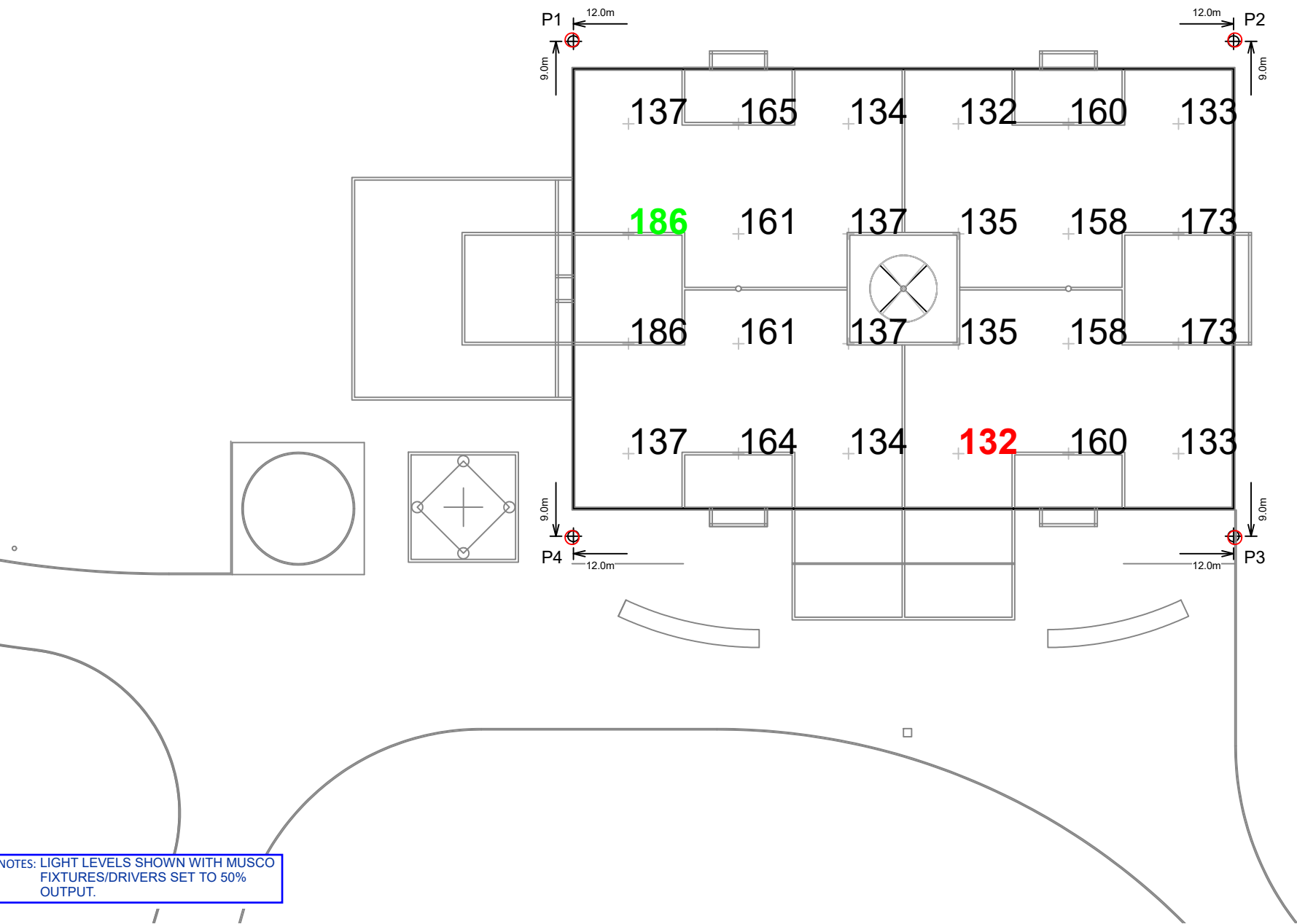
Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Min/Max	Min/Ave		
01 Mini Football	Horizontal Illuminance	151	132	186	0.71	0.88	A	6
02 Ancillary Area	Horizontal	123	80	179	0.45	0.65	A	6
03 Pathway	Horizontal	27.9	3	150	0.02	0.11	B	6
04 LTW - Amos Ave	Max Vertical Illuminance Metric	0.09	0.01	0.26	0.03	0.11	A,B	12
05 Mini Football Spill	Horizontal Illuminance	4.16	0	192	0.00	0.00	A,B	12

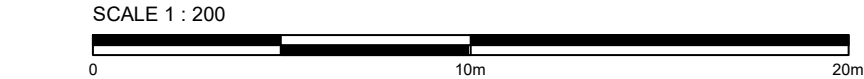
From Hometown to Professional



EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P1	10m	-	10m	TLC-LED-400	2	2	0
1	P2	10m	-	10m	TLC-LED-400	1	1	0
1	P3	10m	-	7.5m	CREE OSQ	1	0	1
				10m	TLC-LED-400	1	1	0
1	P4	10m	-	7.5m	CREE OSQ	1	0	1
				10m	TLC-LED-400	2	2	0
4	TOTALS					8	6	2



NOTES: LIGHT LEVELS SHOWN WITH MUSCO
FIXTURES/DRIVERS SET TO 50%
OUTPUT.



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GRID SUMMARY	
Name:	01 Mini Football
Size:	24.0m x 16.0m
Spacing:	4.0m x 4.0m
Height:	1.0m above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL LUX	
	Entire Grid
Guaranteed Average:	120
Scan Average:	150.73
Maximum:	186
Minimum:	132
Guaranteed Min / Avg:	0.6
Min / Avg:	0.87
Min / Max:	0.71
UG (adjacent pts):	1.36
No. of Points:	24
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	6
Total Load:	1.2 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.



EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P1	10m	-	10m	TLC-LED-400	2	2	0
1	P2	10m	-	10m	TLC-LED-400	1	1	0
1	P3	10m	-	7.5m	CREE OSQ	1	0	1
				10m	TLC-LED-400	1	1	0
1	P4	10m	-	7.5m	CREE OSQ	1	0	1
				10m	TLC-LED-400	2	2	0
4	TOTALS					8	6	2

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GRID SUMMARY	
Name:	02 Ancillary Area
Spacing:	4.0m x 4.0m
Height:	1.0m above grade

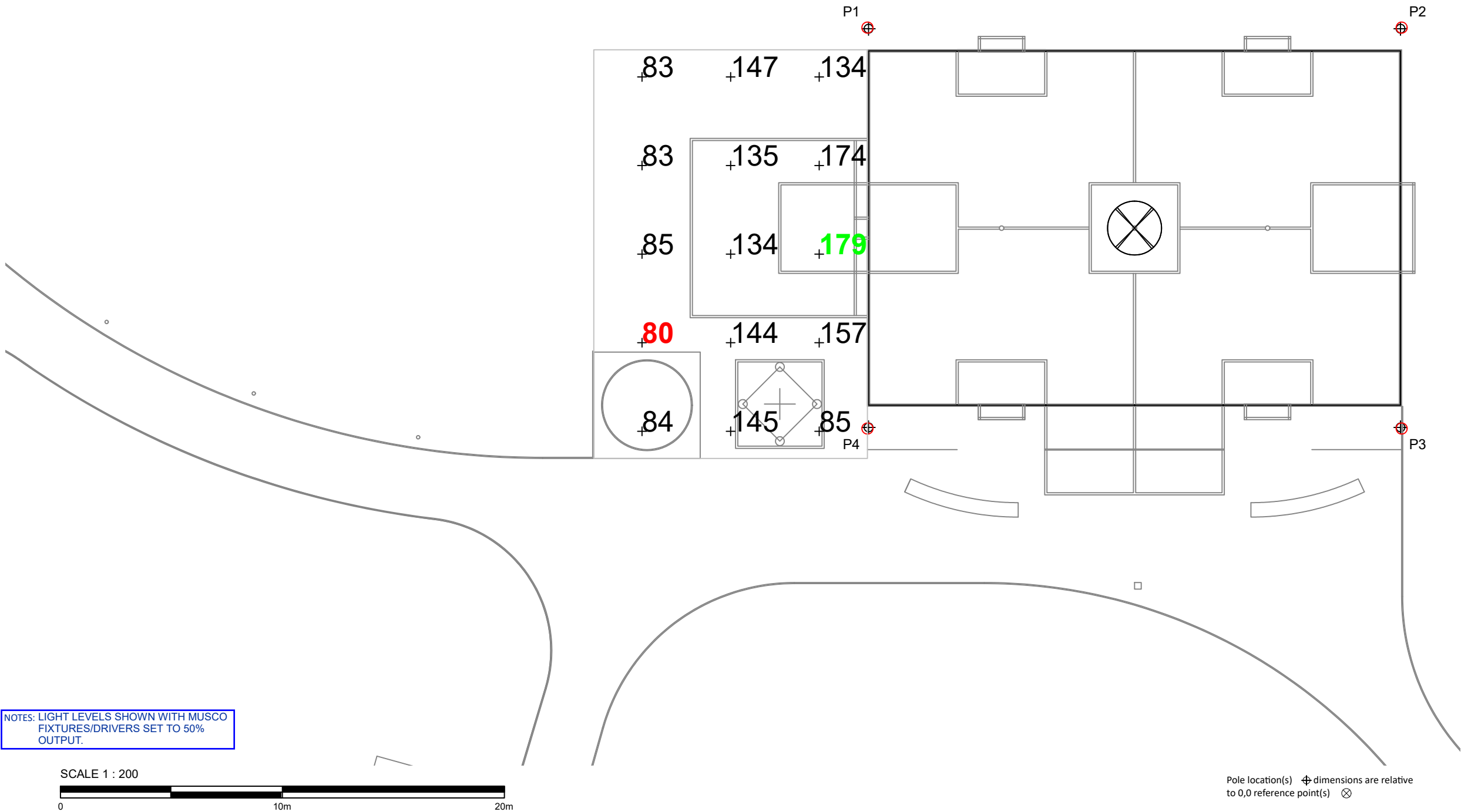
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL LUX	
Scan Average:	Entire Grid 123.25
Maximum:	179
Minimum:	80
Min / Avg:	0.65
Min / Max:	0.45
UG (adjacent pts):	1.84
No. of Points:	15
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	6
Total Load:	1.2 kW

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

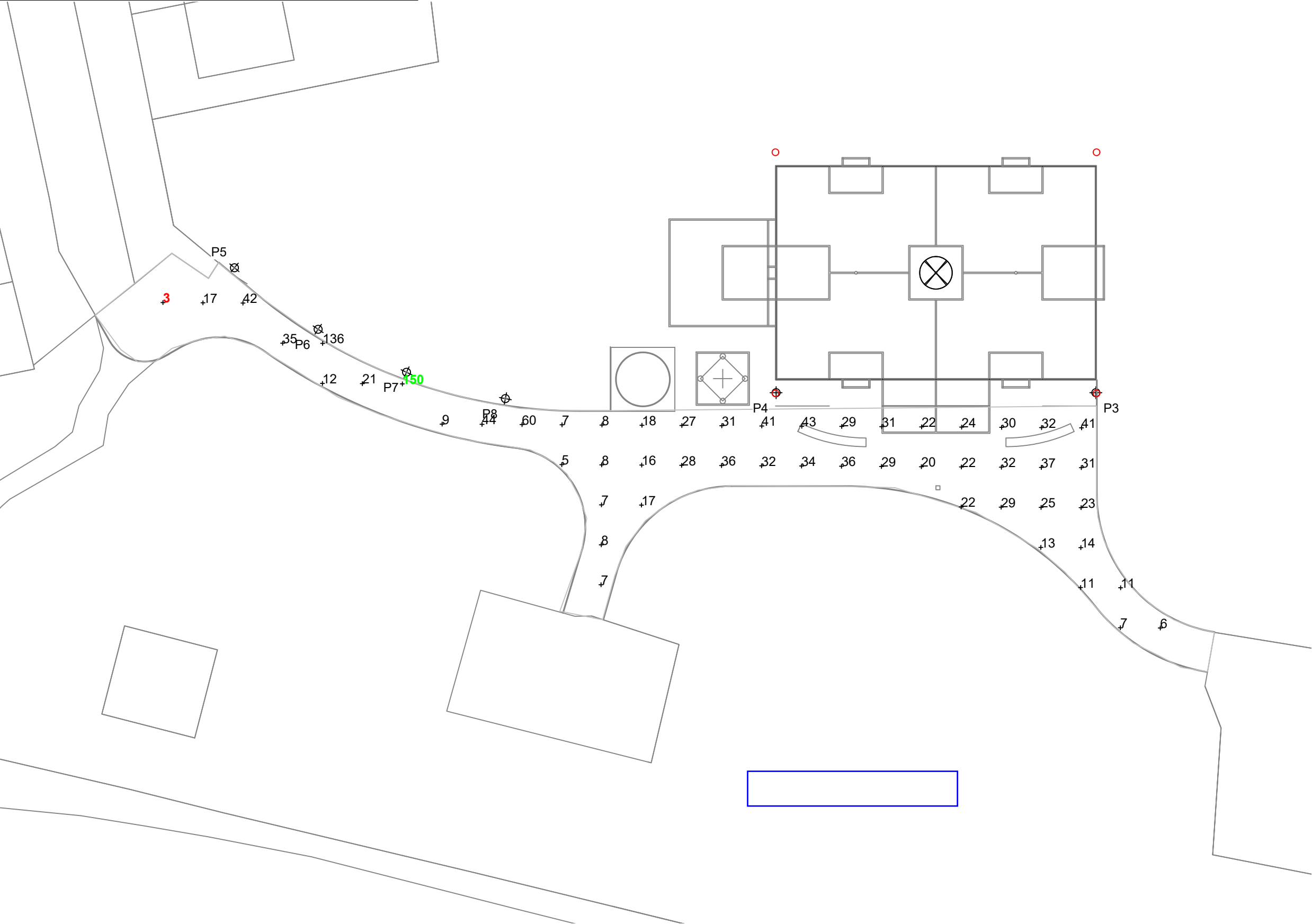
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P3	10m	-	7.5m	CREE OSQ	1	1	0
				10m	TLC-LED-400	1	0	1
1	P4	10m	-	7.5m	CREE OSQ	1	1	0
				10m	TLC-LED-400	2	0	2
4	P5-P8	1.2m	-	1.2m	CREE PWY	1	1	0
6	TOTALS					9	6	3



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GRID SUMMARY	
Name:	03 Pathway
Spacing:	3.0m x 3.0m
Height:	0.0m above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL LUX	
Scan Average:	Entire Grid 27.85
Maximum:	150
Minimum:	3
Min / Avg:	0.10
Min / Max:	0.02
UG (adjacent pts):	11.32
No. of Points:	53
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	6
Total Load:	0.34 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.

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



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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P1	10m	-	10m	TLC-LED-400	2	2	0
1	P2	10m	-	10m	TLC-LED-400	1	1	0
1	P3	10m	-	7.5m	CREE OSQ	1	1	0
				10m	TLC-LED-400	1	1	0
1	P4	10m	-	7.5m	CREE OSQ	1	1	0
				10m	TLC-LED-400	2	2	0
4	P5-P8	1.2m	-	1.2m	CREE PWY	1	1	0
8	TOTALS					12	12	0

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GRID SUMMARY	
Name:	05 Mini Football Spill
Size:	24.0m x 16.0m
Spacing:	4.0m x 4.0m
Height:	0.0m above grade

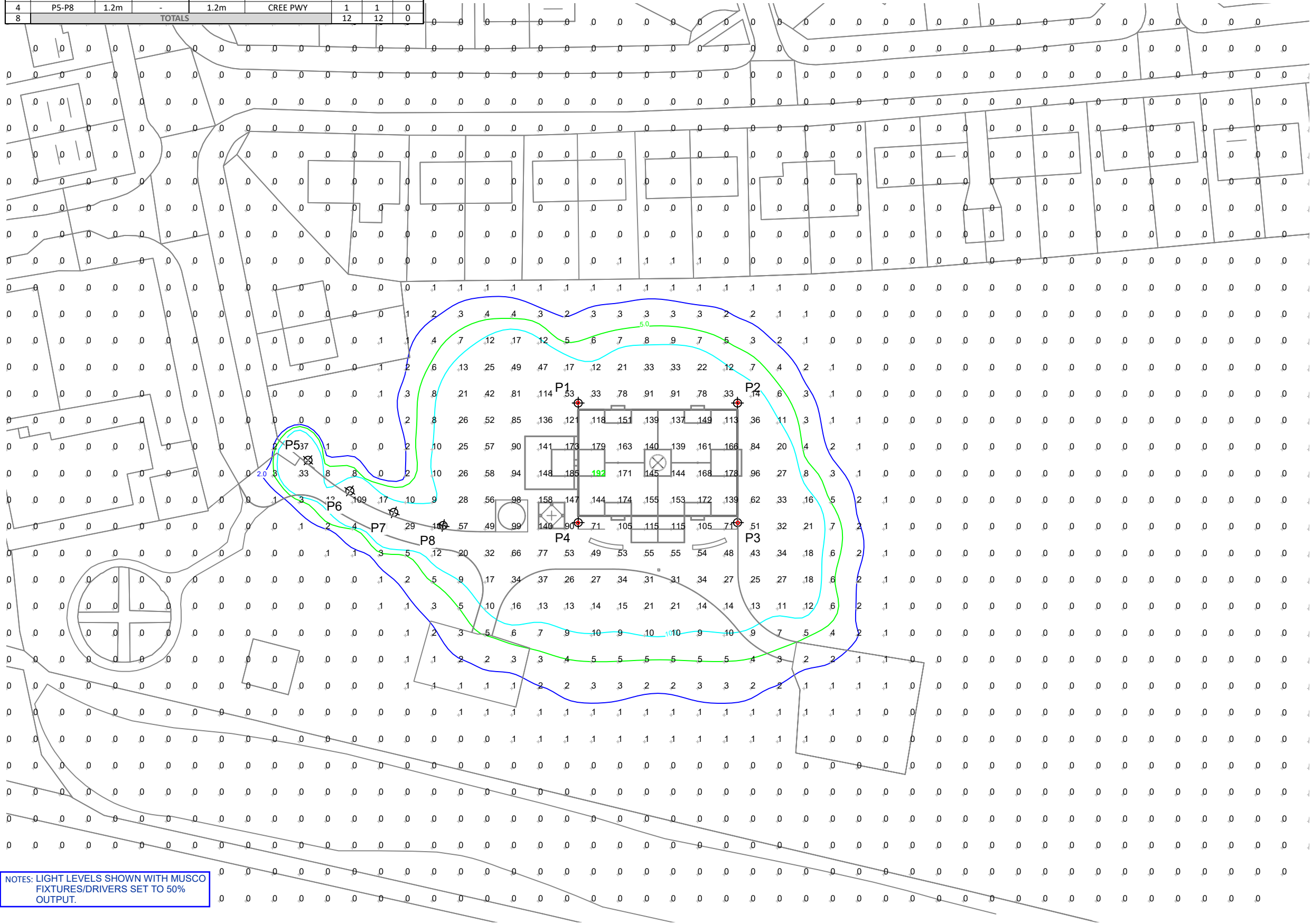
ILLUMINATION SUMMARY	
HORIZONTAL LUX	
Scan Average:	Entire Grid 4.1613
Maximum:	191.55
Minimum:	0.00
No. of Points:	2500
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	12
Total Load:	1.54 kW

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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: LIGHT LEVELS SHOWN WITH MUSCO
FIXTURES/DRIVERS SET TO 50%
OUTPUT.



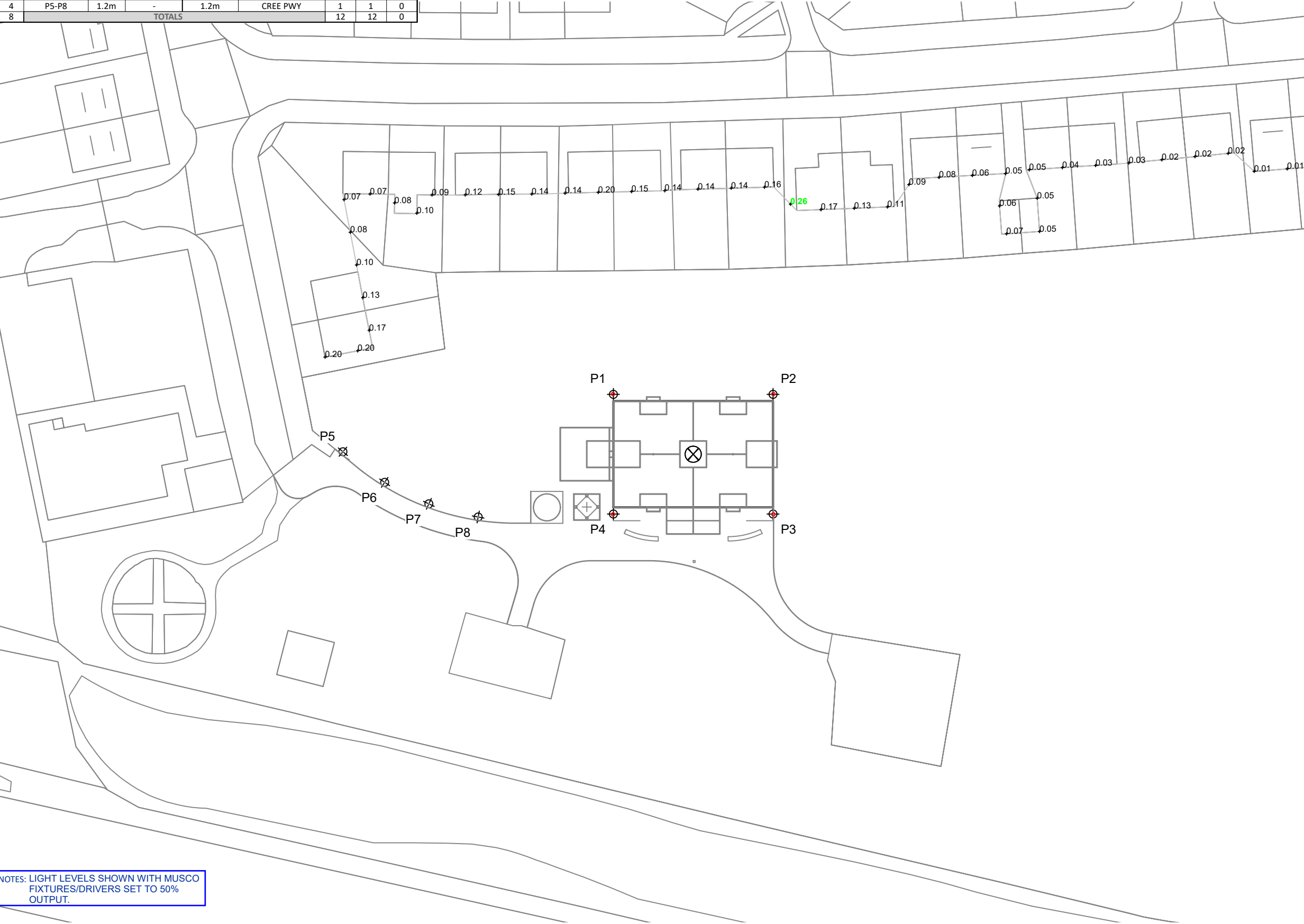
Pole location(s) ⚓ dimensions are relative
to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P1	10m	-	10m	TLC-LED-400	2	2	0
1	P2	10m	-	10m	TLC-LED-400	1	1	0
1	P3	10m	-	7.5m	CREE OSQ	1	1	0
				10m	TLC-LED-400	1	1	0
1	P4	10m	-	7.5m	CREE OSQ	1	1	0
				10m	TLC-LED-400	2	2	0
4	P5-P8	1.2m	-	1.2m	CREE PWY	1	1	0
8	TOTALS					12	12	0



NOTES: LIGHT LEVELS SHOWN WITH MUSCO
FIXTURES/DRIVERS SET TO 50%
OUTPUT.



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

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GRID SUMMARY	
Name:	04 LTW - Amos Ave
Spacing:	5.0m
Height:	1.5m above grade

ILLUMINATION SUMMARY	
MAX VERTICAL LUX	
Scan Average:	Entire Grid 0.0919
Maximum:	0.26
Minimum:	0.01
No. of Points:	46
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	12
Total Load:	1.54 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

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EQUIPMENT LAYOUT

INCLUDES:
· Mini Football

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

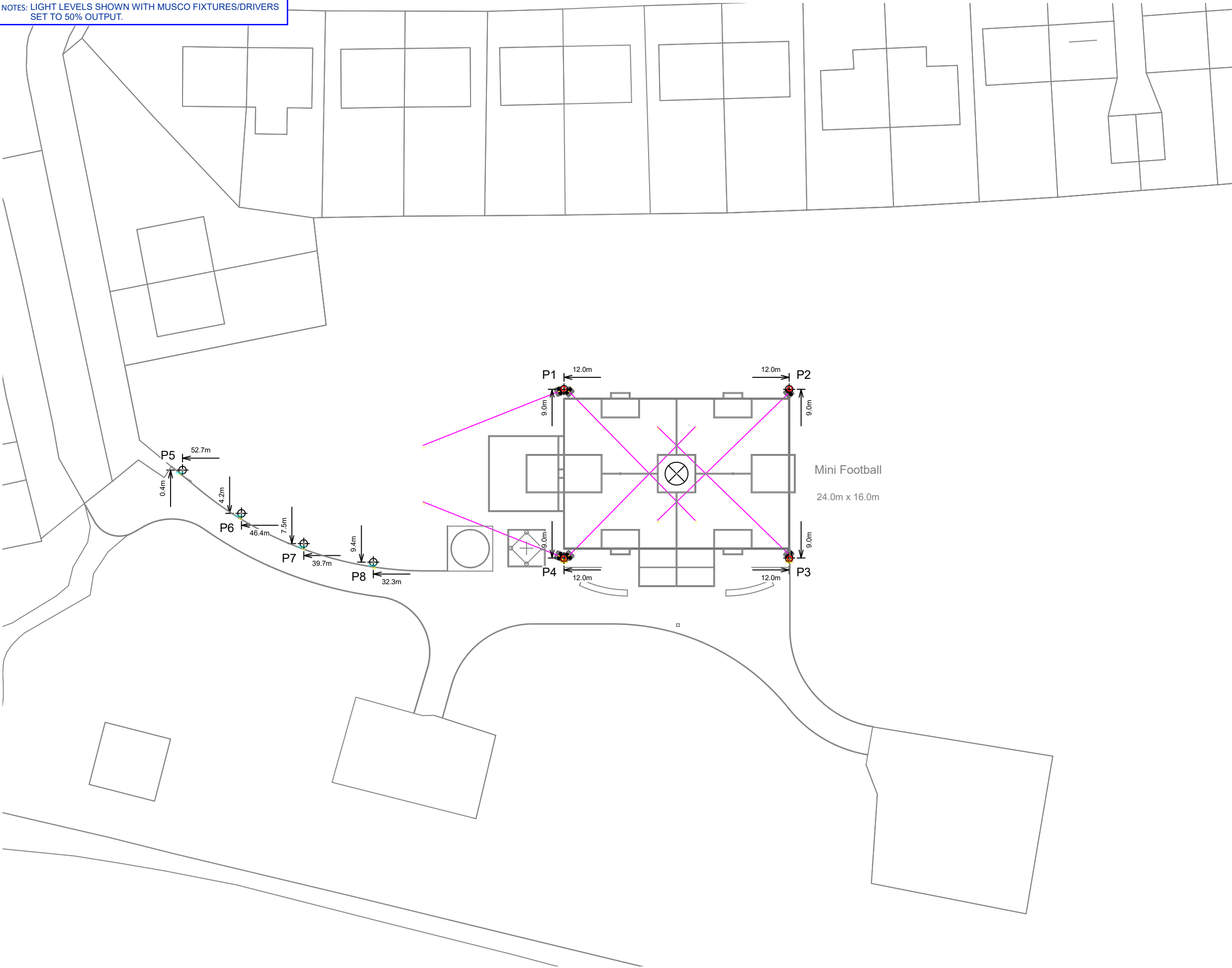
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	Luminaires	
				MOUNTING HEIGHT	LUMINAIRE TYPE
1	P1	10m	-	10m	TLC-LED-400
1	P2	10m	-	10m	TLC-LED-400
1	P3	10m	-	7.5m	CREE OSQ
				10m	TLC-LED-400
1	P4	10m	-	7.5m	CREE OSQ
				10m	TLC-LED-400
4	P5-P8	1.2m	-	1.2m	CREE PWY
8	TOTALS				12

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)					
	220 (50)	230 (50)	240 (50)	380 (50)	400 (50)	415 (50)
Single Phase Voltage						
Cree PWY	-	-	-	-	-	-
Cree OSQ	-	-	-	-	-	-
TLC-LED-400	2.2	2.1	2.0	1.3	1.2	1.2



SCALE 1 : 400
0 10m 20m

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



Pole ID	Dimensioned From	Pole Location		Light Bank Mounting Height	Reflector NEMA Type	Number	Aiming Point			Aiming Angle		Circuit
		X	Y				X	Y	Z	HOR	VER	
P1	Mini Football	-12.00	9.00	10.00	7	2	-27.01	3.02	0.00	R 68.3	29.20	A
					7	3	1.98	-4.98	0.00	L 44.4	24.38	A
P2	Mini Football	12.00	9.00	10.00	7	4	-2.02	-4.98	0.00	R 45.8	24.09	A
P3	Mini Football	12.00	-9.00	10.00	7	5	-2.02	4.99	0.00	L 45.8	24.08	A
					OSQ-4M	6	12.00	-9.30	0.00	L -0.0	90.00	B
P4	Mini Football	-12.00	-9.00	10.00	7	7	1.98	4.99	0.00	R 44.4	24.37	A
					7	8	-27.01	-3.02	0.00	L 68.3	29.20	A
					OSQ-4M	9	-12.00	-9.30	0.00	L -0.0	90.00	B
P5	Mini Football	-52.66	0.38	1.20	PWY-5M	1	-52.96	0.02	0.00	L -0.0	80.00	B
P6	Mini Football	-46.38	-4.24	1.20	PWY-5M	12	-46.63	-4.62	0.00	L -0.0	80.00	B
P7	Mini Football	-39.74	-7.47	1.20	PWY-5M	11	-39.94	-7.89	0.00	L -0.0	80.00	B
P8	Mini Football	-32.32	-9.44	1.20	PWY-5M	10	-32.41	-9.90	0.00	L -0.0	80.00	B

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Zone Description	Circuits
Zone1	A
Zone2	A,B
Zone3	B

