
APPENDIX C

LIGHTING DATA

Carmel High School Football

Carmel,CA

Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
F1-F2	70'	70'	8	TLC-LED-1500	11.44 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
		60'	1	TLC-RGBW	0.64 kW	B
F3-F4	80'	80'	8	TLC-LED-1500	11.44 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
		60'	1	TLC-RGBW	0.64 kW	B
4			44		52.92 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	FF/TR	50.36 kW	40
B	Egress	2.56 kW	4

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	32
TLC-RGBW	LED 5700K - 75 CRI	640W	28,500	>120,000	>120,000	>120,000	4
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	8

Light Level Summary

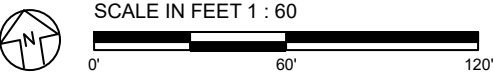
Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Away Bleachers	Horizontal	3.97	2	8	4.55	1.99	B	4
Bleachers	Horizontal	3.39	1	5	6.19	3.39	B	4
Football	Horizontal Illuminance	52.2	42	62	1.47	1.24	A	40
Property Spill	Horizontal	0	0	0.02	0.00		A,B	44
Property Spill	Max Candela (by Fixture)	507	0	1847	0.00		A,B	44
Property Spill	Max Vertical Illuminance Metric	0.01	0	0.04	0.00		A,B	44
Track	Horizontal Illuminance	16.2	1	48	93.90	16.24	A,B	44

From Hometown to Professional



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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	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2	0
				70'	TLC-RGBW	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-RGBW	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



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

Carmel High School Football

Carmel,CA

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:	52.16
Maximum:	62
Minimum:	42
Avg / Min:	1.23
Guaranteed Max / Min:	2
Max / Min:	1.47
UG (adjacent pts):	1.42
CU:	0.62
No. of Points:	72

LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	40
Total Load:	50.36 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	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	44	0



Carmel High School Football

Carmel,CA

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: 16.24
Maximum: 48
Minimum: 1
Avg / Min: 31.59
Max / Min: 93.90
UG (adjacent pts): 0.00
CU: 0.12
No. of Points: 45

LUMINAIRE INFORMATION

Applied Circuits: A, B
No. of Luminaires: 44
Total Load: 52.92 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 $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



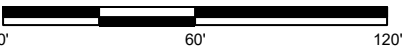
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ILLUMINATION SUMMARY



SCALE IN FEET 1 : 60



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	0	2
				70'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	0	8
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	0	2
				60'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	0	8
4	TOTALS					44	4	40

Carmel High School Football

Carmel,CA

GRID SUMMARY		
Name:	Bleachers	
Size:	Irregular	
Spacing:	10.0' x 10.0'	

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	3.39
Maximum:	5
Minimum:	1
Avg / Min:	3.93
Max / Min:	6.19
UG (adjacent pts):	2.15
CU:	0.20
No. of Points:	66
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	4
Total Load:	2.56 kW

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

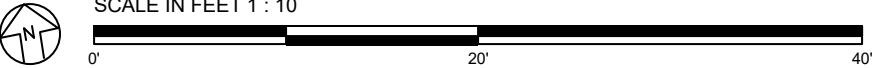
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	0	2
				70'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	0	8
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	0	2
				60'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	0	8
4	TOTALS					44	4	40



ENGINEERED DESIGN By: H.Sabers · File #162576D · 16-Jun-21

Carmel High School Football

Carmel,CA

GRID SUMMARY	
Name:	Away Bleachers
Size:	Irregular
Spacing:	10.0' x 10.0'

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	3.97
Maximum:	8
Minimum:	2
Avg / Min:	2.37
Max / Min:	4.55
UG (adjacent pts):	1.54
CU:	0.04
No. of Points:	12
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	4
Total Load:	2.56 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	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2	0
				70'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	44	0



SCALE IN FEET 1 : 200



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

Carmel High School Football

Carmel,CA

GRID SUMMARY

Name: Property Spill
Spacing: 30.0'
Height: 23.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Entire Grid
Scan Average: 0.0025
Maximum: 0.02
Minimum: 0.00
No. of Points: 102

LUMINAIRE INFORMATION

Applied Circuits: A, B
No. of Luminaires: 44
Total Load: 52.92 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.



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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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2	0
				70'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	44	0



Carmel High School Football

Carmel,CA

GRID SUMMARY

Name: Property Spill
Spacing: 30.0'
Height: 23.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
Scan Average: 0.0077
Maximum: 0.04
Minimum: 0.00
No. of Points: 102

LUMINAIRE INFORMATION

Applied Circuits: A, B
No. of Luminaires: 44
Total Load: 52.92 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 $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



SCALE IN FEET 1 : 200



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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2	0
				70'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-RGBW	1	1	0
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	44	0



SCALE IN FEET 1 : 200



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

Carmel High School Football

Carmel,CA

GRID SUMMARY

Name: Property Spill
Spacing: 30.0'
Height: 23.0' above grade

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)

Entire Grid
Scan Average: 506.5653
Maximum: 1846.52
Minimum: 0.00
No. of Points: 102

LUMINAIRE INFORMATION

Applied Circuits: A, B
No. of Luminaires: 44
Total Load: 52.92 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.



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ILLUMINATION SUMMARY



Carmel High School Football

Carmel,CA

EQUIPMENT LAYOUT

INCLUDES:

- Football
- Track

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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2
				70'	TLC-RGBW	1
				80'	TLC-LED-1500	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2
				60'	TLC-RGBW	1
				80'	TLC-LED-1500	8
4	TOTALS					44

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1500	8.5	8.1	7.4	6.4	5.1	4.7	3.7
TLC-RGBW	3.4	3.2	3.0	2.6	2.0	-	1.5
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8	1.5



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EQUIPMENT LAYOUT



SCALE IN FEET 1 : 200



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



Control System Summary

Project Specific Notes:

Egrees fixtures contactors will be house in the ALIC cabinet run at 208V 3 Phase.

F1: 2.98 Amps

F2: 2.98 Amps

F3: 2.98 Amps

F4: 2.98 Amps

Project Information

Project #: 162576
 Project Name: Carmel High School Football
 Date: 07/23/21
 Project Engineer: Hunter Sabers
 Sales Representative: Bob Crookham
 Control System Type: Control-Link™ Control and Monitoring System with Show-Light™ Entertainment Package
 Communication Type: PowerLine-ST
 Scan: 162576D
 Document ID: 162576P1V5-0723085442
 Distribution Panel Location or ID: Carmel HS
 Total # of Distribution Panel Locations for Project: 1
 Design Voltage/Hertz/Phase: 208/60/3
 Control Voltage: 120

Equipment Listing

DESCRIPTION	APPROXIMATE SIZE
1. Control and Monitoring Cabinet	24 X 48
QTY	SIZE (AMPS)
Total Contactors	4 60 AMP
Total Off/On/Auto Switches:	2

Materials Checklist

Contractor/Customer Supplied:

- ☐ A dedicated control circuit must be supplied per distribution panel location
 - If the control voltage is NOT available, a control transformer is required
- ☐ Electrical distribution panel to provide overcurrent protection for circuits
 - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- ☐ Wiring
 - See chart on page 2 for wiring requirements
 - Equipment grounding conductor and splices must be insulated (per circuit)
 - Lightning ground protection (per pole), if not Musco supplied
- ☐ Electrical conduit wireway system
 - Entrance hubs rated NEMA 4, must be die-cast zinc, PVC, or copper-free die-cast aluminum
- ☐ Mounting hardware for cabinets
- ☐ Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- ☐ Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.

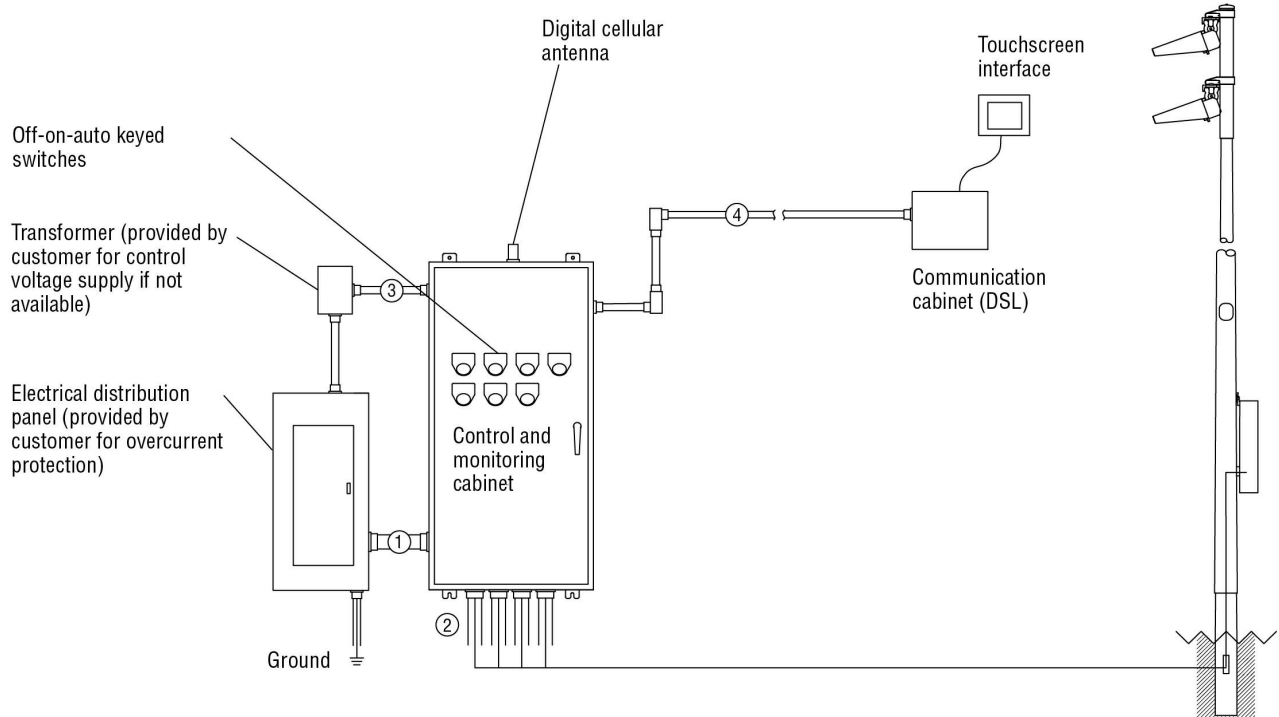
Note: Activation may take up to 1 1/2 hours.

IMPORTANT NOTES

- Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
- In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
- One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are 100% rated for the published continuous load. All contactors are 3 pole.
- If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
- A single control circuit must be supplied per control system.
- Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements.

Control•Link® Control and Monitoring System



Conduit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	MUSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
2	Load power to lighting circuits, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
3	Control power (dedicated, 20A)	3	12	*C	N/A	No	C,E
4	Communication cable to touchscreen	*F	*F	*C	1500	No	C,E,F

* Notes:

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.
- F. Cat5e cable (Belden 7937A or equal) is required. DSL modem (inside cabinet) receives power over DSL cable. Communication cabinet requires connection to earth ground. Standard wall outlet is required to power touchscreen. Touchscreen connects to communication cabinet with Ethernet cable (<300 ft.).

R60-104-00_D

IMPORTANT: Control wires (3) and communication wire (4) must be in separate conduit from line and load power wires (1, 2).



Control System Summary

Carmel High School Football / 162576 - 162576D
Carmel HS - Page 3 of 4

SWITCHING SCHEDULE

Field/Zone Description	Zones
Football	1
Egress	2

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 1553.0
	SEALED: 179.8

CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
F1	Football	10	10	47.2	60	C1	1
F2	Football	10	10	47.2	60	C2	1
F3	Football	10	10	47.2	60	C3	1
F4	Football	10	10	47.2	60	C4	1

*Full Load Amps based on amps per driver.



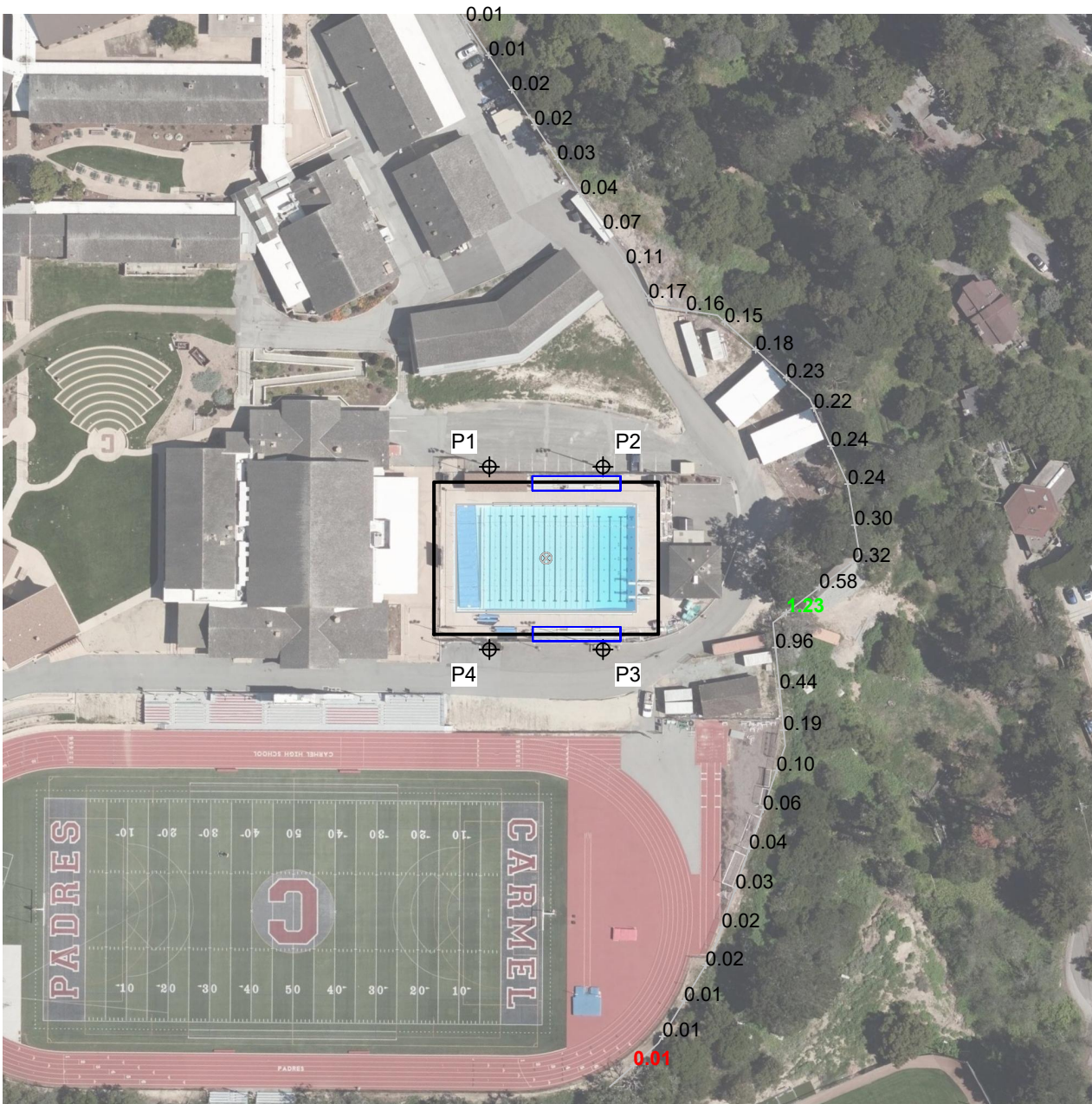
Control System Summary

Carmel High School Football / 162576 - 162576D
Carmel HS - Page 4 of 4

PANEL SUMMARY						
CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
1	1	C1	Pole F1	47.17		
1	1	C2	Pole F2	47.17		
1	1	C3	Pole F3	47.17		
1	1	C4	Pole F4	47.17		

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	Football	F1	C1
			F2	C2
			F3	C3
			F4	C4
Zone 2	2	Egress	F1	
			F2	
			F3	
			F4	

EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
4	TOTALS					14	14
							0



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

Name: 0ft Tree Property Line Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Entire Grid
Scan Average: 0.1952
Maximum: 1.23
Minimum: 0.01
No. of Points: 32

LUMINAIRE INFORMATION

Applied Circuits: A
No. of Luminaires: 14
Total Load: 22.4 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 $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



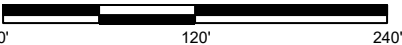
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ILLUMINATION SUMMARY



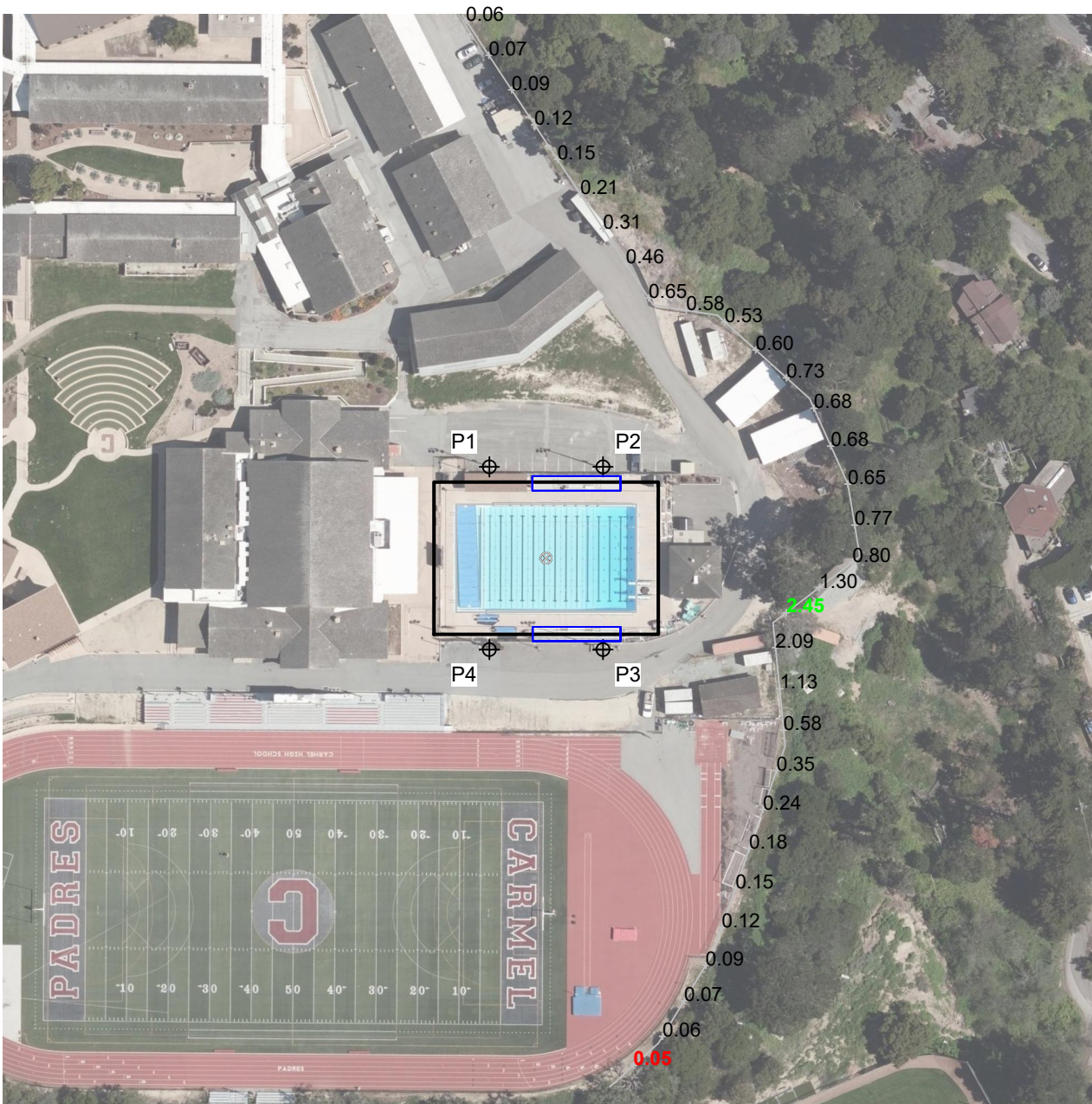
SCALE IN FEET 1 : 120



ENGINEERED DESIGN By: Bryce Miles · File #216273 - Original HID · 22-Nov-21

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
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
4	TOTALS					14	14
							0



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

Name: 0ft Tree Property Line Spill
Spacing: 30.0'
Height: 3.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
Scan Average: 0.5306
Maximum: 2.45
Minimum: 0.05
No. of Points: 32

LUMINAIRE INFORMATION

Applied Circuits: A
No. of Luminaires: 14
Total Load: 22.4 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.



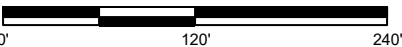
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ILLUMINATION SUMMARY



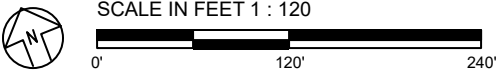
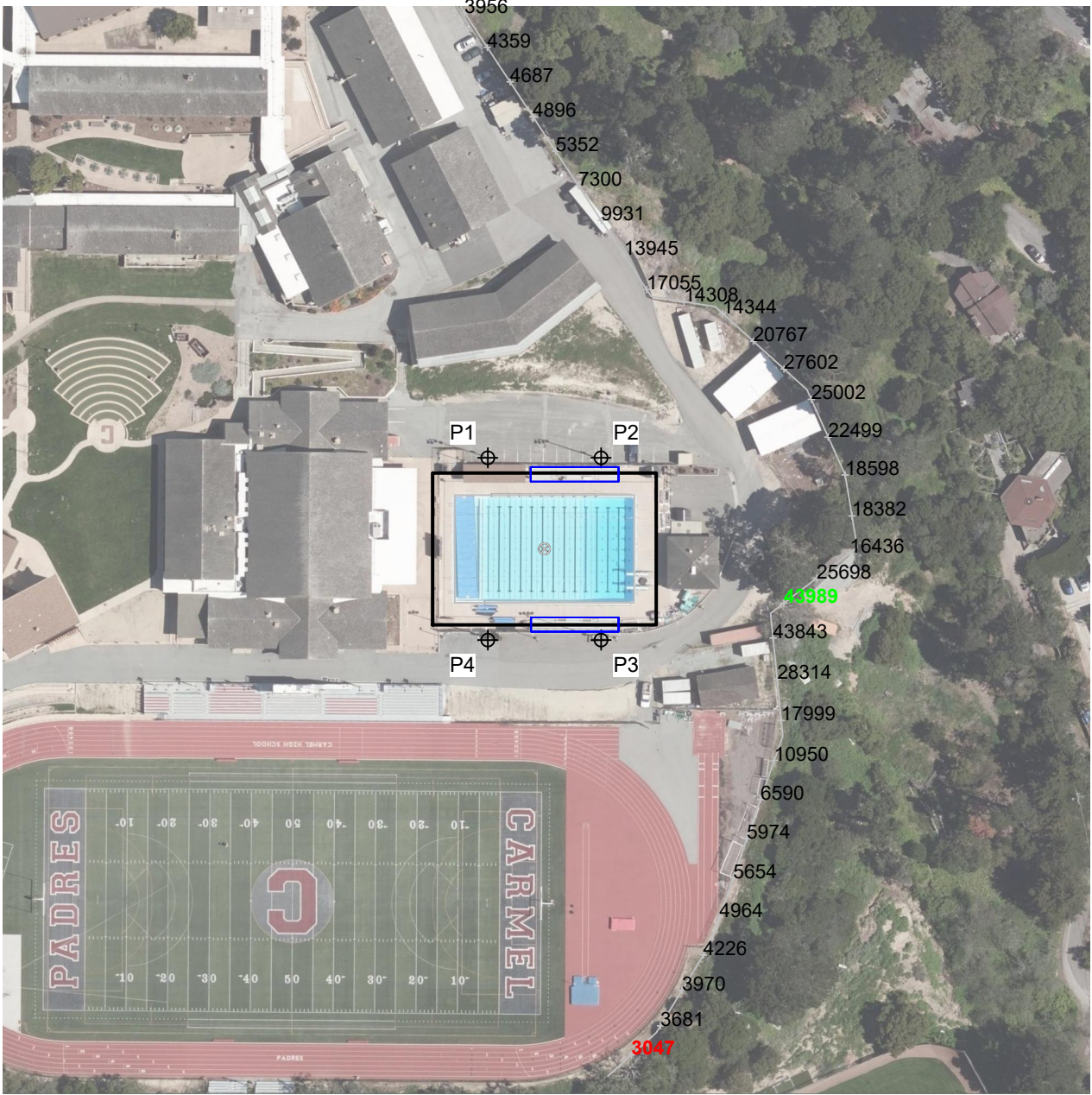
SCALE IN FEET 1 : 120



ENGINEERED DESIGN By: Bryce Miles · File #216273 - Original HID · 22-Nov-21

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
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
4	TOTALS					14	14
							0



ENGINEERED DESIGN By: Bryce Miles · File #216273 - Original HID · 22-Nov-21

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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	0ft Tree Property Line Spill
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 14322.3896
Maximum:	43988.84
Minimum:	3046.58
No. of Points:	32
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	14
Total Load:	22.4 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.

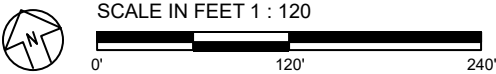
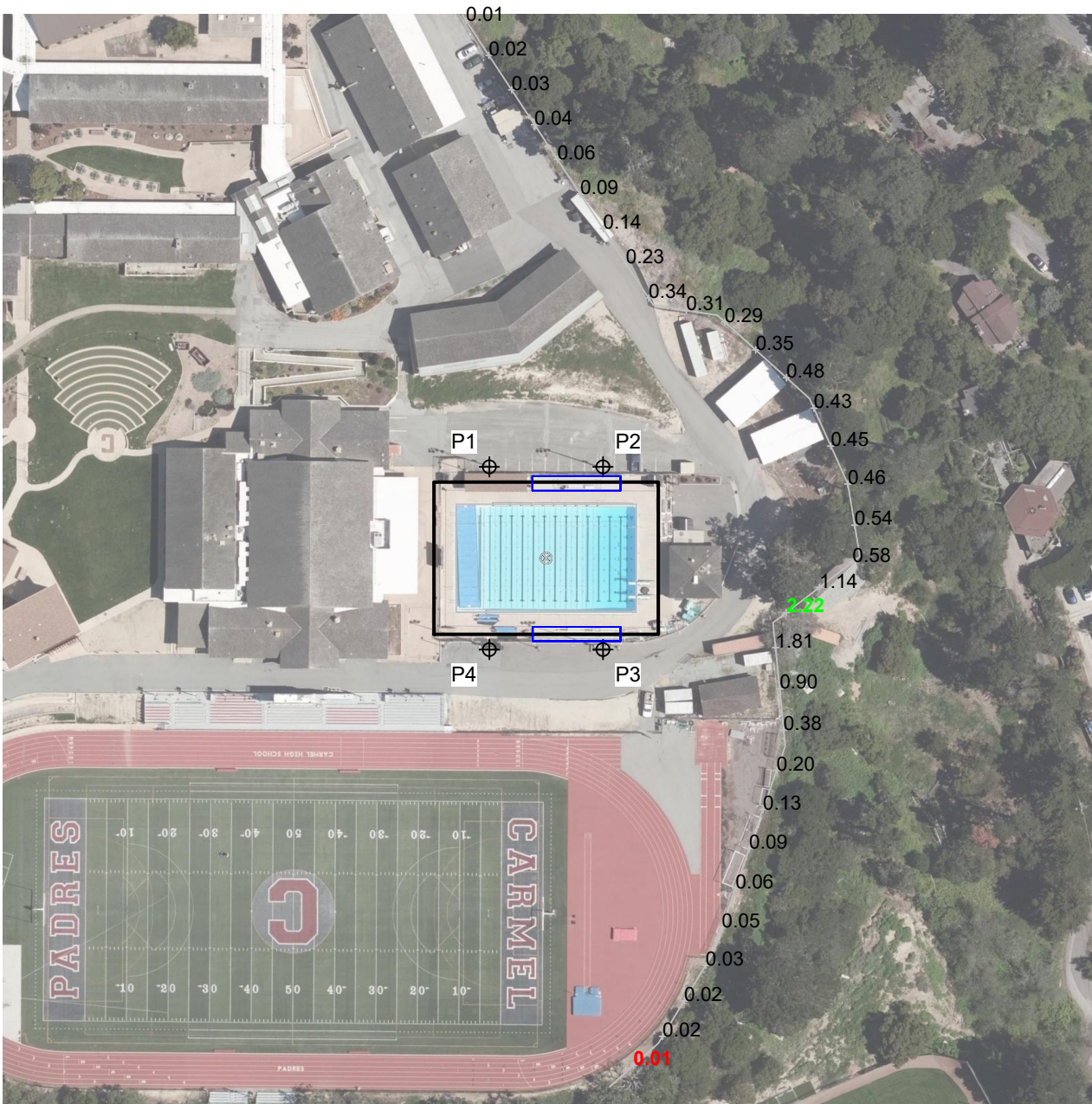
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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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
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
4	TOTALS					14	14
							0



ENGINEERED DESIGN By: Bryce Miles · File #216273 - Original HID · 22-Nov-21

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	-15ft Tree Property Line Spill
Spacing:	30.0'
Height:	-12.0' above grade

ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.3718
Maximum:	2.22
Minimum:	0.01
No. of Points:	32
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	14
Total Load:	22.4 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.

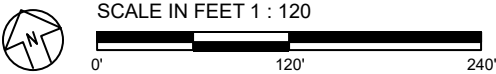
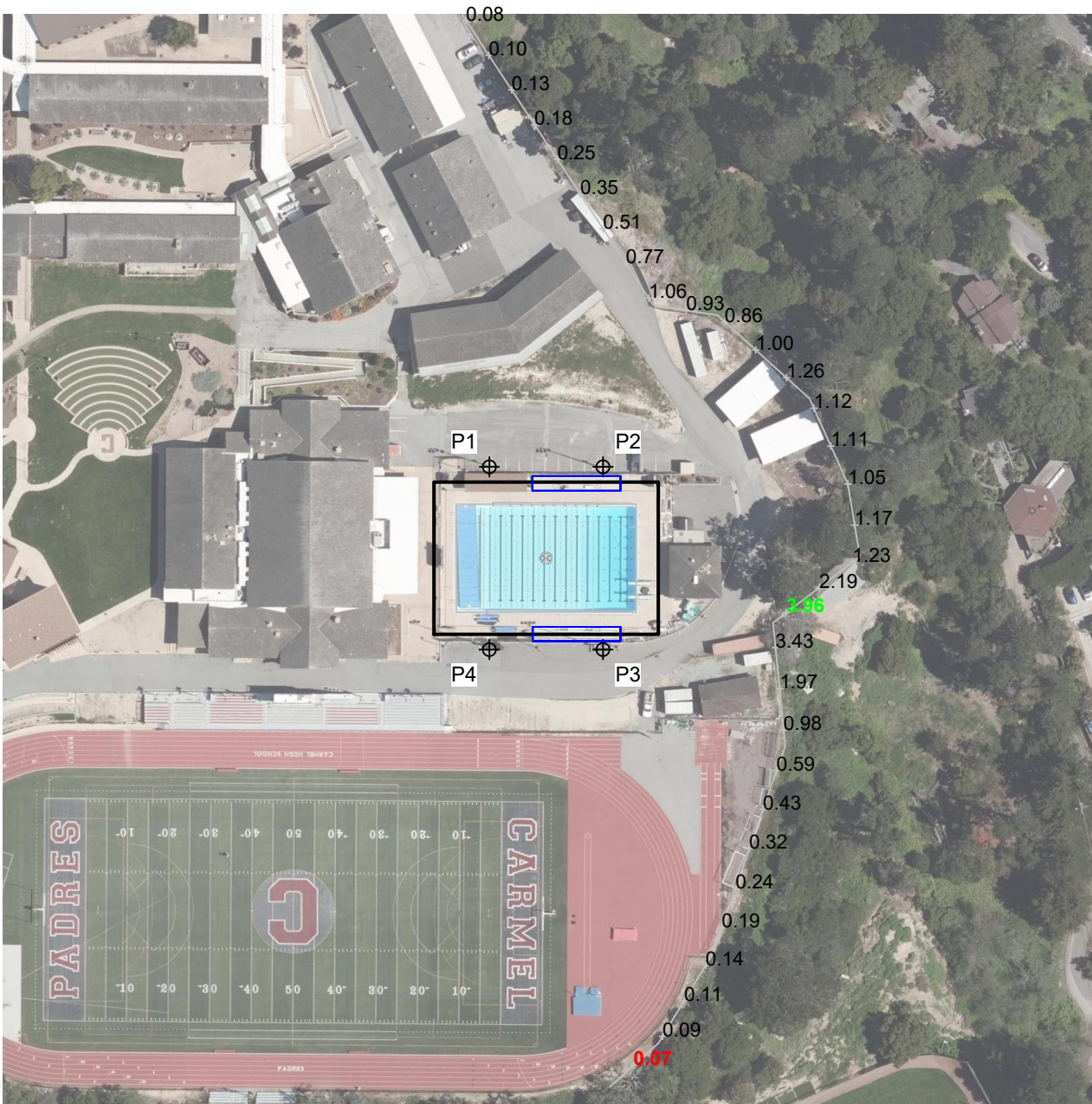


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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
4	TOTALS					14	14
							0



ENGINEERED DESIGN By: Bryce Miles · File #216273 - Original HID · 22-Nov-21

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	-15ft Tree Property Line Spill
Spacing:	30.0'
Height:	-12.0' above grade

ILLUMINATION SUMMARY	
MAX VERTICAL FOOTCANDLES	
Scan Average:	Entire Grid 0.8710
Maximum:	3.96
Minimum:	0.07
No. of Points:	32
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	14
Total Load:	22.4 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.



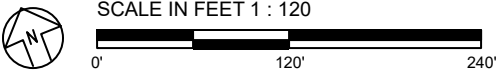
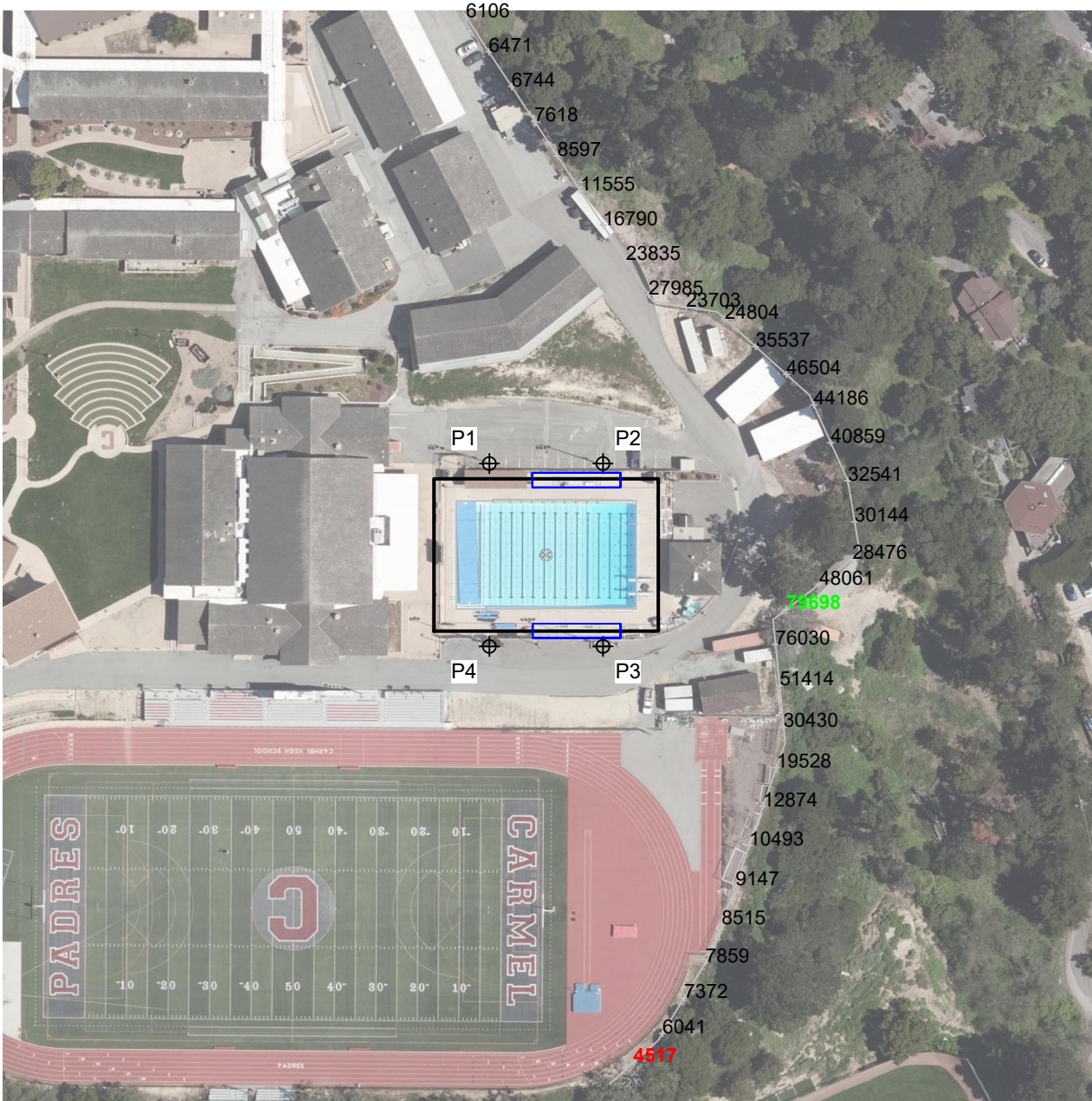
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ILLUMINATION SUMMARY

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
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
4	TOTALS					14	14
							0



ENGINEERED DESIGN By: Bryce Miles · File #216273 - Original HID · 22-Nov-21

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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	-15ft Tree Property Line Spill
Spacing:	30.0'
Height:	-12.0' above grade

ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 24826.0508
Maximum:	79697.73
Minimum:	4516.94
No. of Points:	32
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	14
Total Load:	22.4 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.



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ILLUMINATION SUMMARY

Carmel Pool Retrofit

Carmel,CA

Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
P1	50'	50'	1	TLC-LED-900	0.89 kW	A
		50'	1	TLC-LED-900	0.89 kW	C
P2	50'	50'	2	TLC-LED-900	1.78 kW	A
		50'	1	TLC-LED-900	0.89 kW	C
P3-P4	70'	70'	2	TLC-LED-900	1.78 kW	A
		70'	1	TLC-LED-900	0.89 kW	C
4			11		9.79 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Pool	6.23 kW	7
C	Egress	3.56 kW	4

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	11

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Egress	Horizontal Illuminance	16	1	34	63.82	16.04	C	4
North Bleachers	Horizontal Illuminance	17.3	15	20	1.33	1.15	A	7
Pool	Horizontal Illuminance	42.8	28	51	1.81	1.53	A,C	11
Property Spill	Horizontal	0	0	0	0.00		A,B	7
Property Spill	Max Candela (by Fixture)	0.97	0	59.5	0.00		A,B	7
Property Spill	Max Vertical Illuminance Metric	0	0	0	0.00		A,B	7
South Bleachers	Horizontal Illuminance	26.8	21	33	1.55	1.27	A	7

From Hometown to Professional



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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
1	P1	50'	10'	60'	TLC-LED-900	2	2	0
1	P2	50'	10'	60'	TLC-LED-900	3	3	0
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	3	0
4	TOTALS					11	11	0

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Pool
Size:	162' x 110'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average:	40
Scan Average:	42.81
Maximum:	51
Minimum:	28
Avg / Min:	1.52
Guaranteed Max / Min:	2
Max / Min:	1.81
UG (adjacent pts):	1.37
CU:	0.67
No. of Points:	150

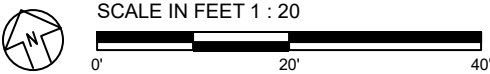
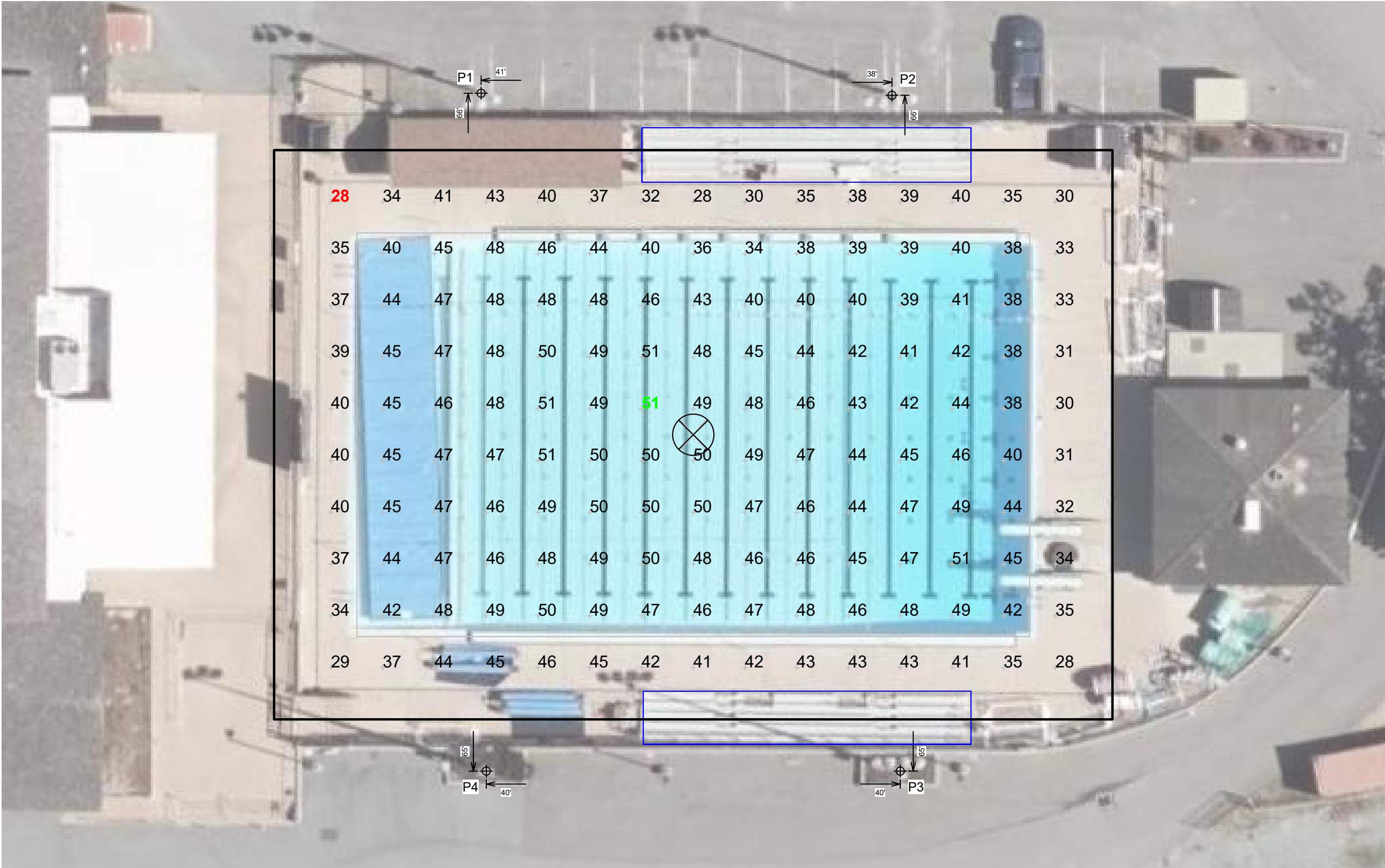
LUMINAIRE INFORMATION	
Applied Circuits:	A, C
No. of Luminaires:	11
Total Load:	9.79 kW

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) ⊗



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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	50'	10'	60'	TLC-LED-900	2	1	1
1	P2	50'	10'	60'	TLC-LED-900	3	2	1
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	2	1
4	TOTALS					11	7	4

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	North Bleachers
Spacing:	10.0' x 10.0'
Height:	6.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	17.26
Maximum:	20
Minimum:	15
Avg / Min:	1.18
Max / Min:	1.33
UG (adjacent pts):	0.00
CU:	0.02
No. of Points:	6
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	7
Total Load:	6.23 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.





SCALE IN FEET 1 : 30



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	50'	10'	60'	TLC-LED-900	2	1	1
1	P2	50'	10'	60'	TLC-LED-900	3	2	1
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	2	1
4	TOTALS					11	7	4



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	South Bleachers
Spacing:	10.0' x 10.0'
Height:	5.6' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	26.75
Maximum:	33
Minimum:	21
Avg / Min:	1.26
Max / Min:	1.55
UG (adjacent pts):	0.00
CU:	0.03
No. of Points:	6
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	7
Total Load:	6.23 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.

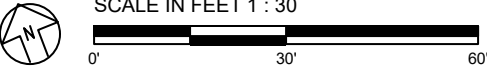
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



ENGINEERED DESIGN By: Bryce Miles · File #216273D · 05-Apr-22

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	P1	50'	10'	60'	TLC-LED-900	2	1	1
1	P2	50'	10'	60'	TLC-LED-900	3	1	2
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	1	2
4	TOTALS					11	4	7

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Egress
Size:	162' x 110'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

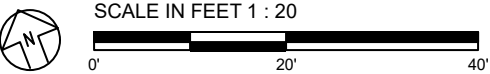
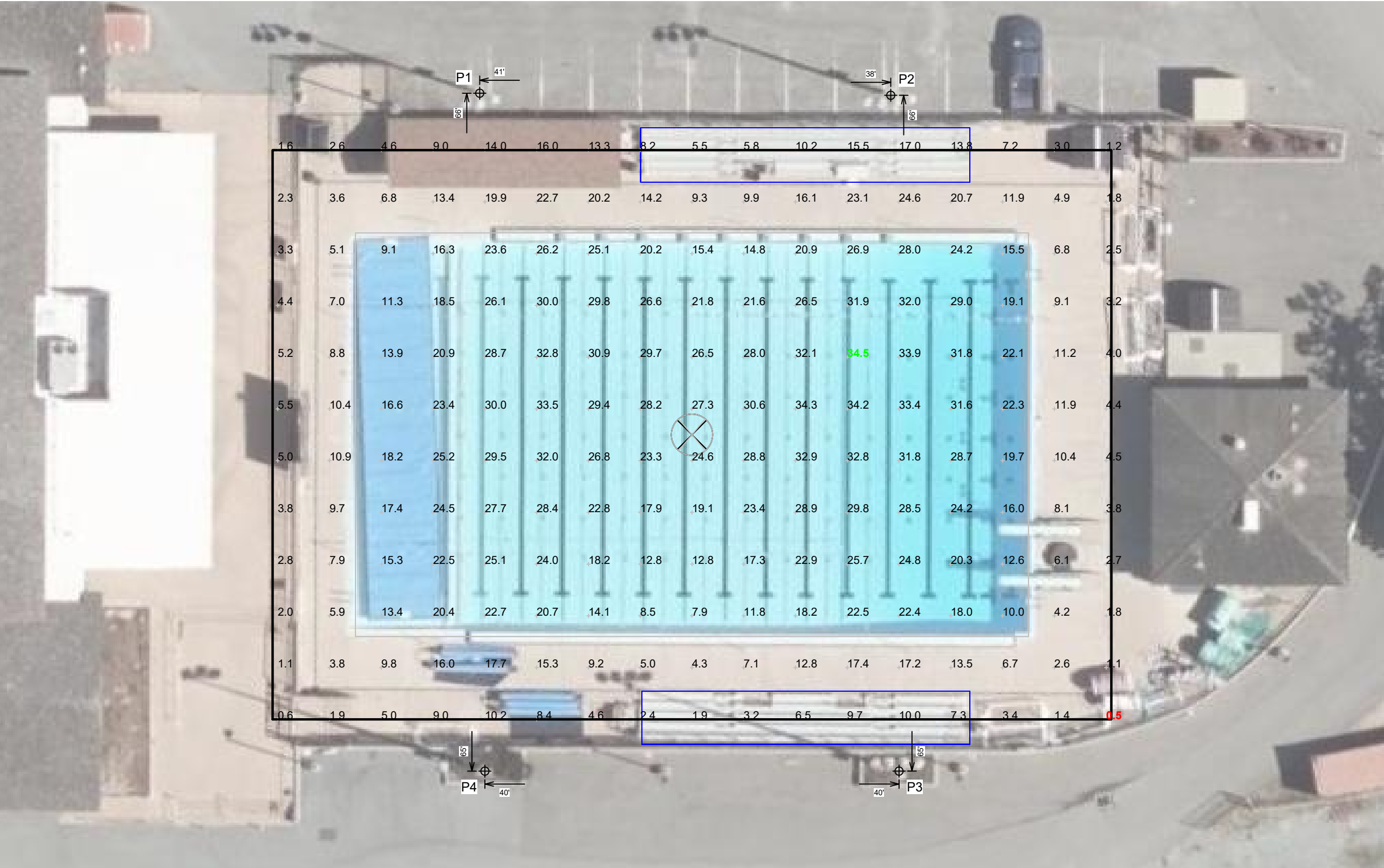
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	16.04
Maximum:	34
Minimum:	1
Avg / Min:	29.71
Max / Min:	63.82
UG (adjacent pts):	3.34
CU:	0.93
No. of Points:	204
LUMINAIRE INFORMATION	
Applied Circuits:	C
No. of Luminaires:	4
Total Load:	3.56 kW

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) ⊗

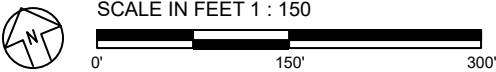
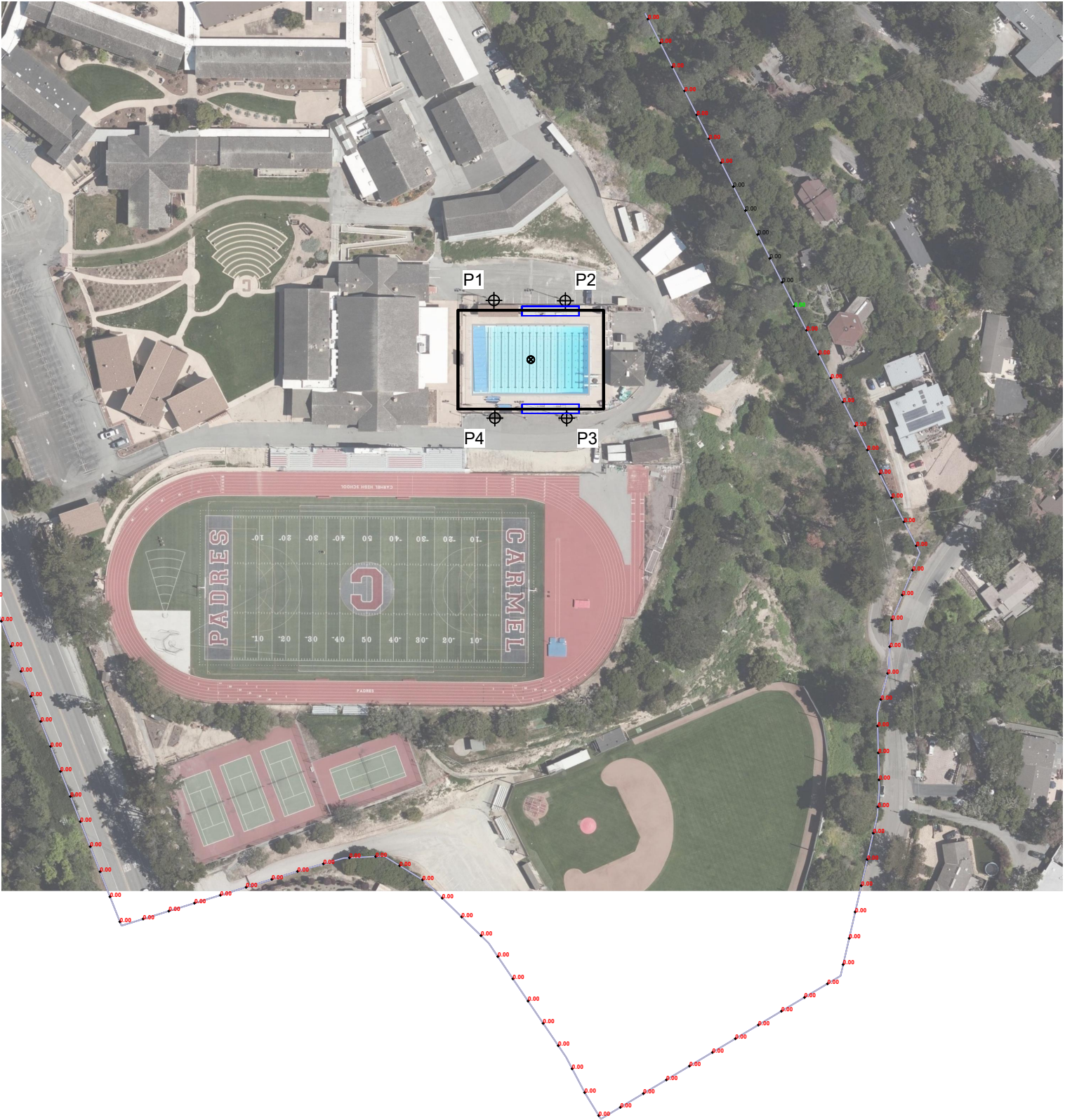


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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P1	50'	10'	60'	TLC-LED-900	2	1	1
1	P2	50'	10'	60'	TLC-LED-900	3	2	1
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	2	1
4	TOTALS					11	7	4



ENGINEERED DESIGN By: Bryce Miles · File #216273D · 05-Apr-22

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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0000
Maximum:	0.00
Minimum:	0.00
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	7
Total Load:	6.23 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.

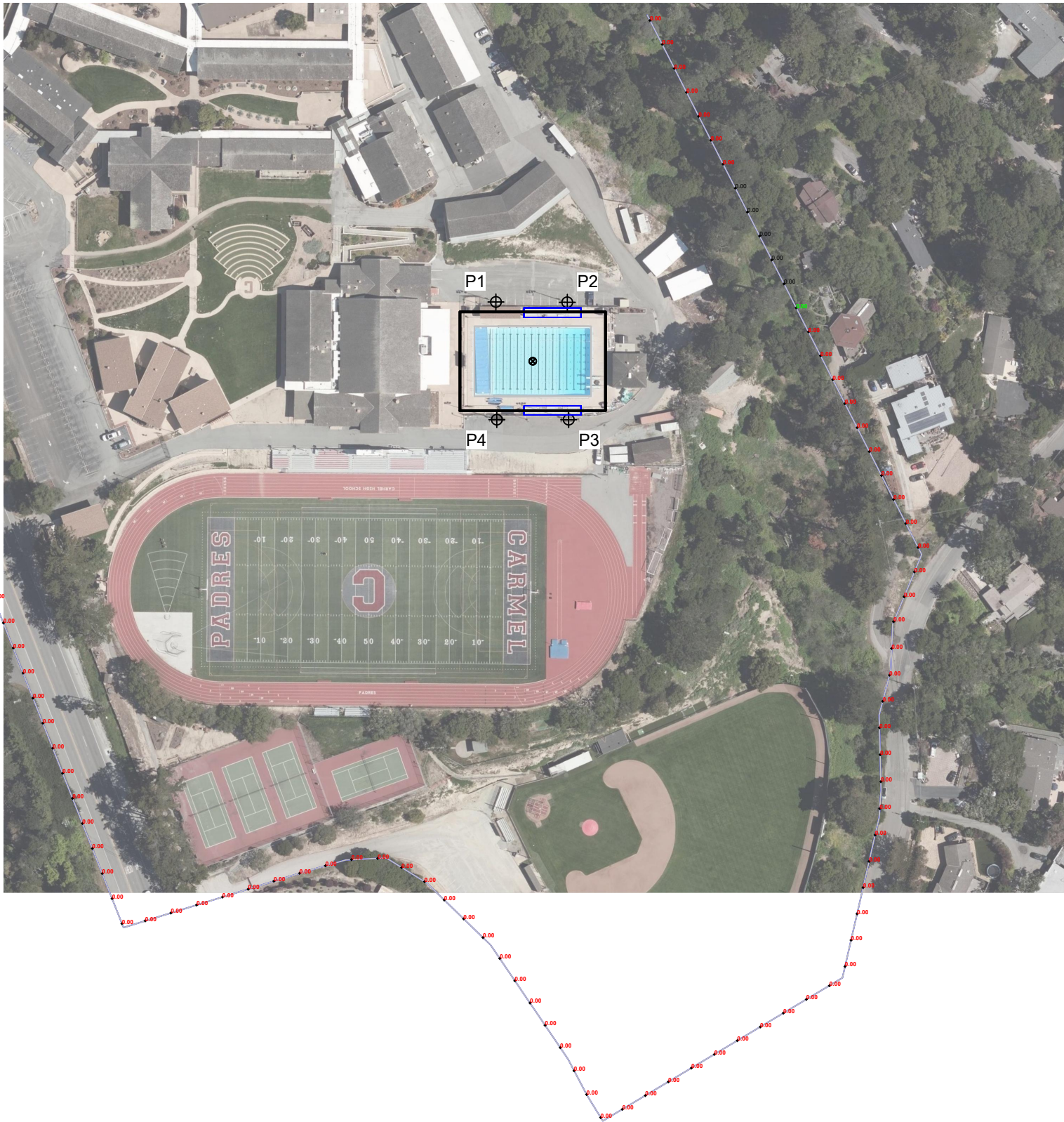


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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P1	50'	10'	60'	TLC-LED-900	2	1	1
1	P2	50'	10'	60'	TLC-LED-900	3	2	1
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	2	1
4	TOTALS					11	7	4



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

Name: Property Spill
Spacing: 30.0'
Height: 23.0' above grade

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
Scan Average: 0.0000
Maximum: 0.00
Minimum: 0.00
No. of Points: 102

LUMINAIRE INFORMATION

Applied Circuits: A, B
No. of Luminaires: 7
Total Load: 6.23 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.

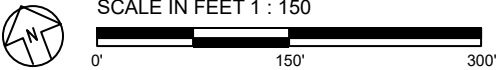
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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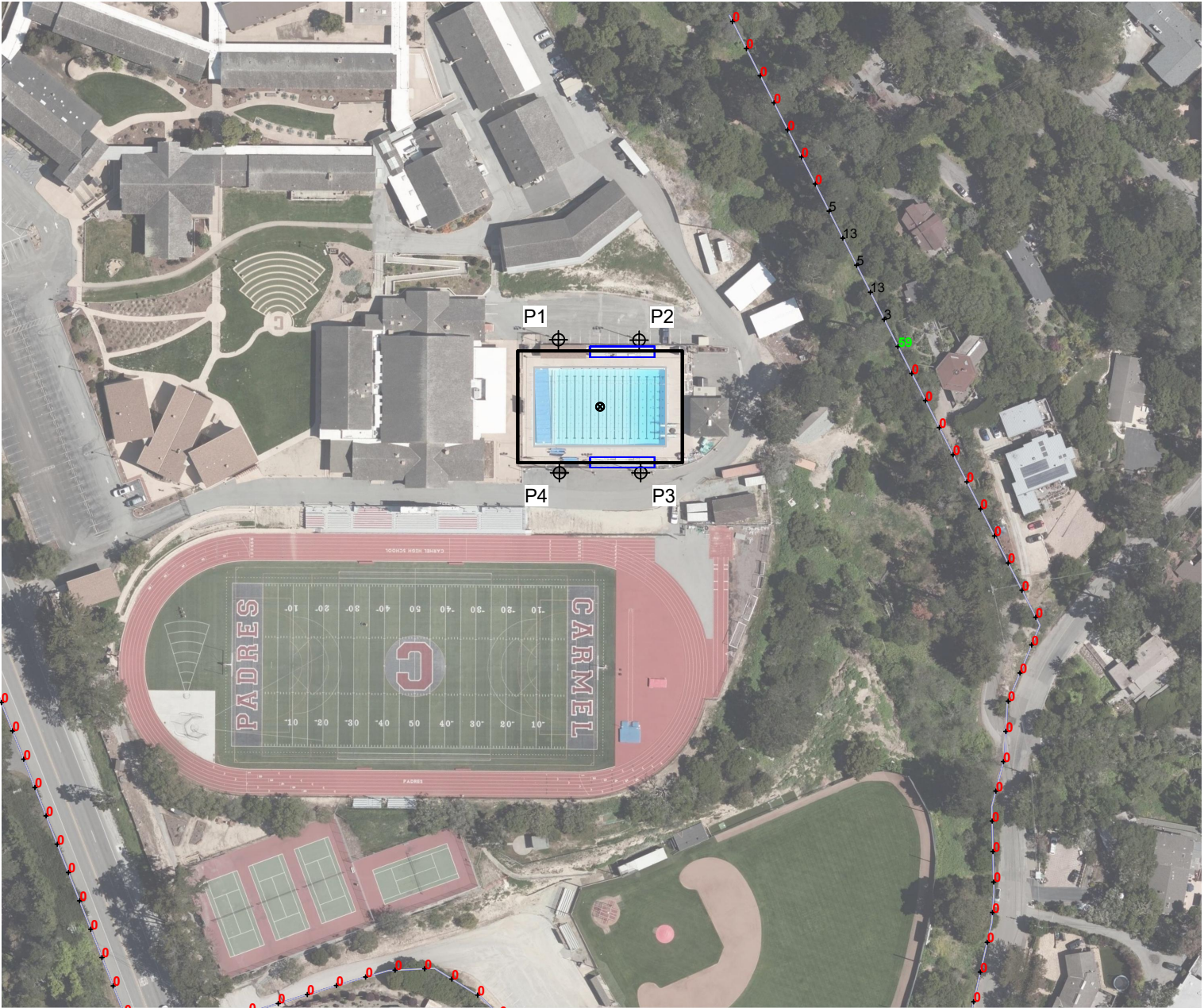
ILLUMINATION SUMMARY



ENGINEERED DESIGN By: Bryce Miles · File #216273D · 05-Apr-22

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	P1	50'	10'	60'	TLC-LED-900	2	1	1
1	P2	50'	10'	60'	TLC-LED-900	3	2	1
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	2	1
4	TOTALS					11	7	4



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

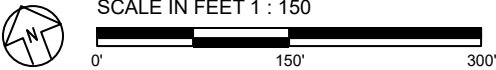
ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 0.9712
Maximum:	59.49
Minimum:	0.00
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	7
Total Load:	6.23 kW

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



ENGINEERED DESIGN By: Bryce Miles · File #216273D · 05-Apr-22

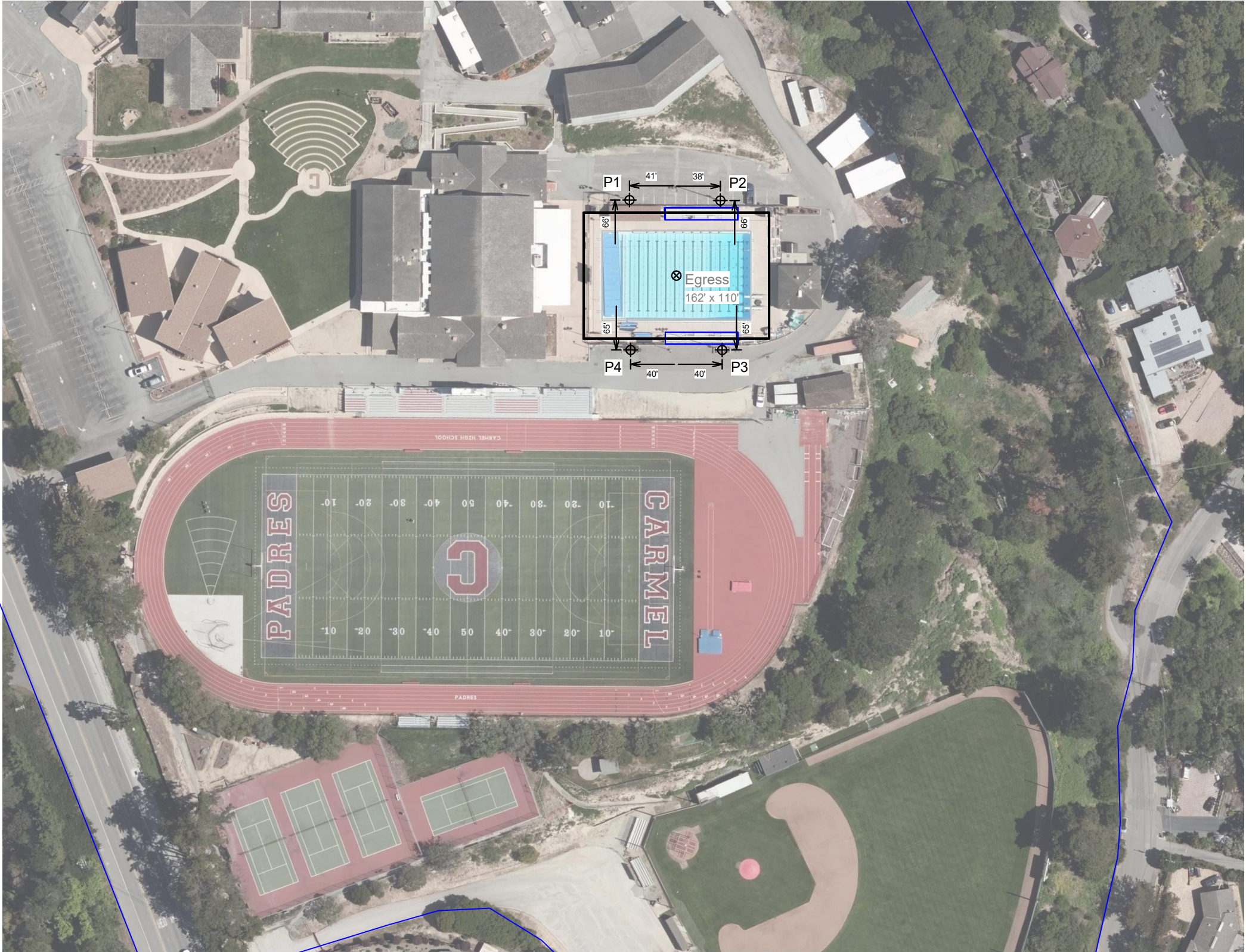
Pole location(s) ⚓ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY



Carmel Pool Retrofit

Carmel, CA

EQUIPMENT LAYOUT

INCLUDES:

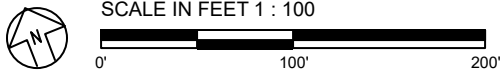
- Egress
- Pool

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
1	P1	50'	10'	60'	TLC-LED-900	2
1	P2	50'	10'	60'	TLC-LED-900	3
2	P3-P4	70'	-10'	60'	TLC-LED-900	3
4	TOTALS					11

SINGLE LUMINAIRE AMPERAGE DRAW CHART							
Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)					
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9	2.3



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



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Carmel Pool Retrofit

Carmel,CA

Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
F1-F2	70'	70'	8	TLC-LED-1500	11.44 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
		60'	1	TLC-LED-600	0.58 kW	C
F3-F4	80'	80'	8	TLC-LED-1500	11.44 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
		60'	1	TLC-LED-600	0.58 kW	C
P1, P4	50'	50'	3	SHOWLIGHT	4.80 kW	A
P2-P3	70'	70'	4	SHOWLIGHT	6.40 kW	A
8			58		75.08 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Pool	22.4 kW	14
B	Football	50.36 kW	40
C	Egress	2.32 kW	4

Fixture Type Summary								
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity	
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	32	
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	8	
TLC-LED-600	LED 5700K - 75 CRI	580W	65,600	>120,000	>120,000	>120,000	4	
SHOWLIGHT	1500W MZ	1600W	155,000	--	--	--	14	

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Away Bleachers	Horizontal	10.7	4	21	4.64	2.67	C	4
Bleachers	Horizontal	9.12	2	14	6.34	4.56	C	4
Football	Horizontal Illuminance	52.9	41	63	1.53	1.29	B	40
Pool	Horizontal Illuminance	48.6	22	70	3.15	2.21	A	14
Property Spill	Horizontal	0.01	0	0.09	568.62		A,B	54
Property Spill	Max Candela (by Fixture)	1560	286	8613	30.08	5.45	A,B	54
Property Spill	Max Vertical Illuminance Metric	0.03	0	0.20	103.49		A,B	54
Track Spill	Horizontal Illuminance	0	0	0.01	0.00		B	40
Track Spill	Max Candela Metric	468	4.79	1264	263.66	97.63	B	40
Track Spill	Max Vertical Illuminance Metric	0.01	0	0.03	0.00		B	40
Track	Horizontal Illuminance	16	0	52	125.24		B	40

From Hometown to Professional



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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	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3	0
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4	0
4	TOTALS					14	14	0

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Pool
Size:	162' x 110'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

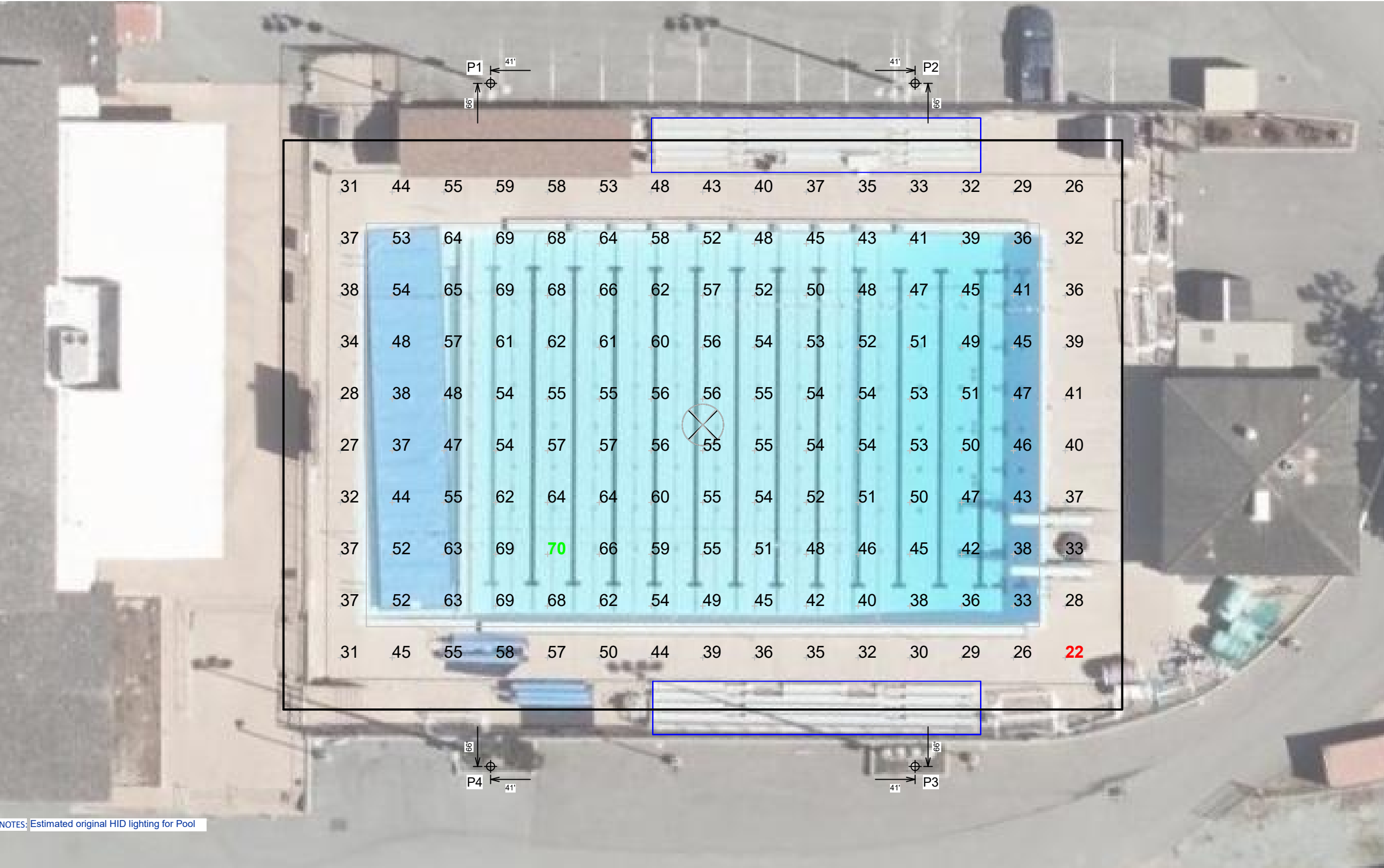
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	48.57
Maximum:	70
Minimum:	22
Avg / Min:	2.19
Max / Min:	3.15
UG (adjacent pts):	1.44
No. of Points:	150
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	14
Total Load:	22.4 kW

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

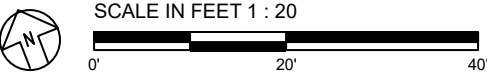
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



NOTES: Estimated original HID lighting for Pool



ENGINEERED DESIGN By: Bryce Miles · File #216273B - Pool HID with Football LED · 25-Jan-22

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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

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:	52.88
Maximum:	63
Minimum:	41
Avg / Min:	1.29
Guaranteed Max / Min:	2
Max / Min:	1.53
UG (adjacent pts):	1.32
No. of Points:	72
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	40
Total Load:	50.36 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.

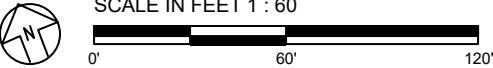
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



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

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

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:	15.99
Maximum:	52
Minimum:	0
Avg / Min:	38.25
Max / Min:	125.24
UG (adjacent pts):	0.00
No. of Points:	45
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	40
Total Load:	50.36 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.

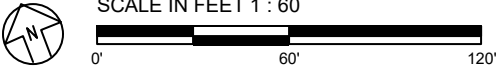
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	0	2
				70'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	0	2
				60'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
4	TOTALS					44	4	40



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY		
Name:	Bleachers	
Size:	Irregular	
Spacing:	10.0' x 10.0'	

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	9.12
Maximum:	14
Minimum:	2
Avg / Min:	4.00
Max / Min:	6.34
UG (adjacent pts):	2.17
No. of Points:	66
LUMINAIRE INFORMATION	
Applied Circuits:	C
No. of Luminaires:	4
Total Load:	2.32 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.

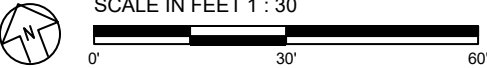
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	0	2
				70'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	0	2
				60'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
4	TOTALS					44	4	40

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Away Bleachers
Size:	Irregular
Spacing:	10.0' x 10.0'

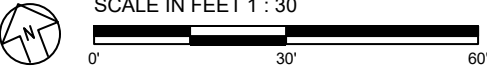
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	10.67
Maximum:	21
Minimum:	4
Avg / Min:	2.40
Max / Min:	4.64
UG (adjacent pts):	1.56
No. of Points:	12
LUMINAIRE INFORMATION	
Applied Circuits:	C
No. of Luminaires:	4
Total Load:	2.32 kW

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) ⊗



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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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2
				70'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2
				60'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
8	TOTALS					58	54
						4	



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0111
Maximum:	0.09
Minimum:	0.00
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	54
Total Load:	72.76 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.

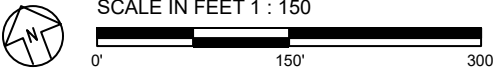
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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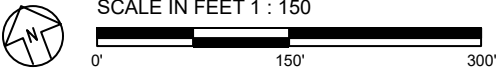
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ILLUMINATION SUMMARY



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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2
				70'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2
				60'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
8	TOTALS					58	54
						4	



ENGINEERED DESIGN By: Bryce Miles · File #216273B - Pool HID with Football LED · 25-Jan-22

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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

ILLUMINATION SUMMARY	
MAX VERTICAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0324
Maximum:	0.20
Minimum:	0.00
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	54
Total Load:	72.76 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.

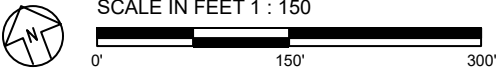
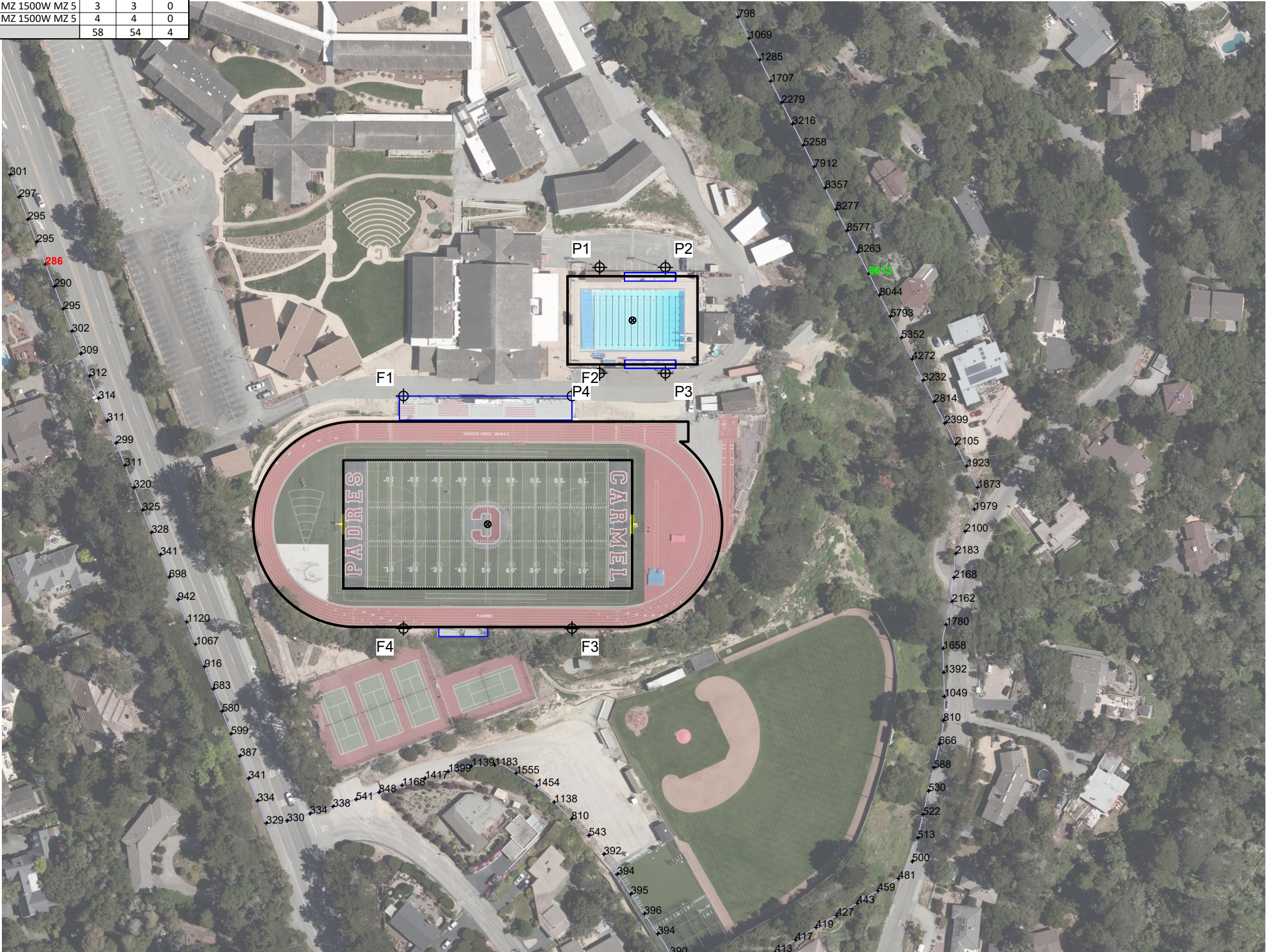


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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2
				70'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2
				60'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ 5	3	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ 5	4	4
8	TOTALS					58	54



ENGINEERED DESIGN By: Bryce Miles · File #216273B - Pool HID with Football LED · 25-Jan-22

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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 1560.4885
Maximum:	8613.19
Minimum:	286.39
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	54
Total Load:	72.76 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.

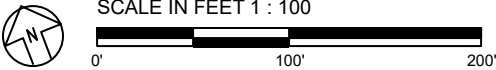


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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

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

ILLUMINATION SUMMARY

HORIZONTAL FOOTCANDLES

Entire Grid
Scan Average: 0.0036
Maximum: 0.01
Minimum: 0.00
No. of Points: 80

LUMINAIRE INFORMATION

Applied Circuits: B
No. of Luminaires: 40
Total Load: 50.36 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.



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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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

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

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0110
Maximum:	0.03
Minimum:	0.00
No. of Points:	80

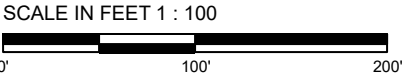
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	40
Total Load:	50.36 kW

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) ⊗



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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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

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

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 467.6515
Maximum:	1263.52
Minimum:	4.79
No. of Points:	80

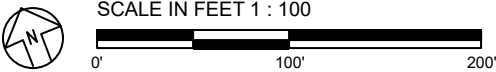
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	40
Total Load:	50.36 kW

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.

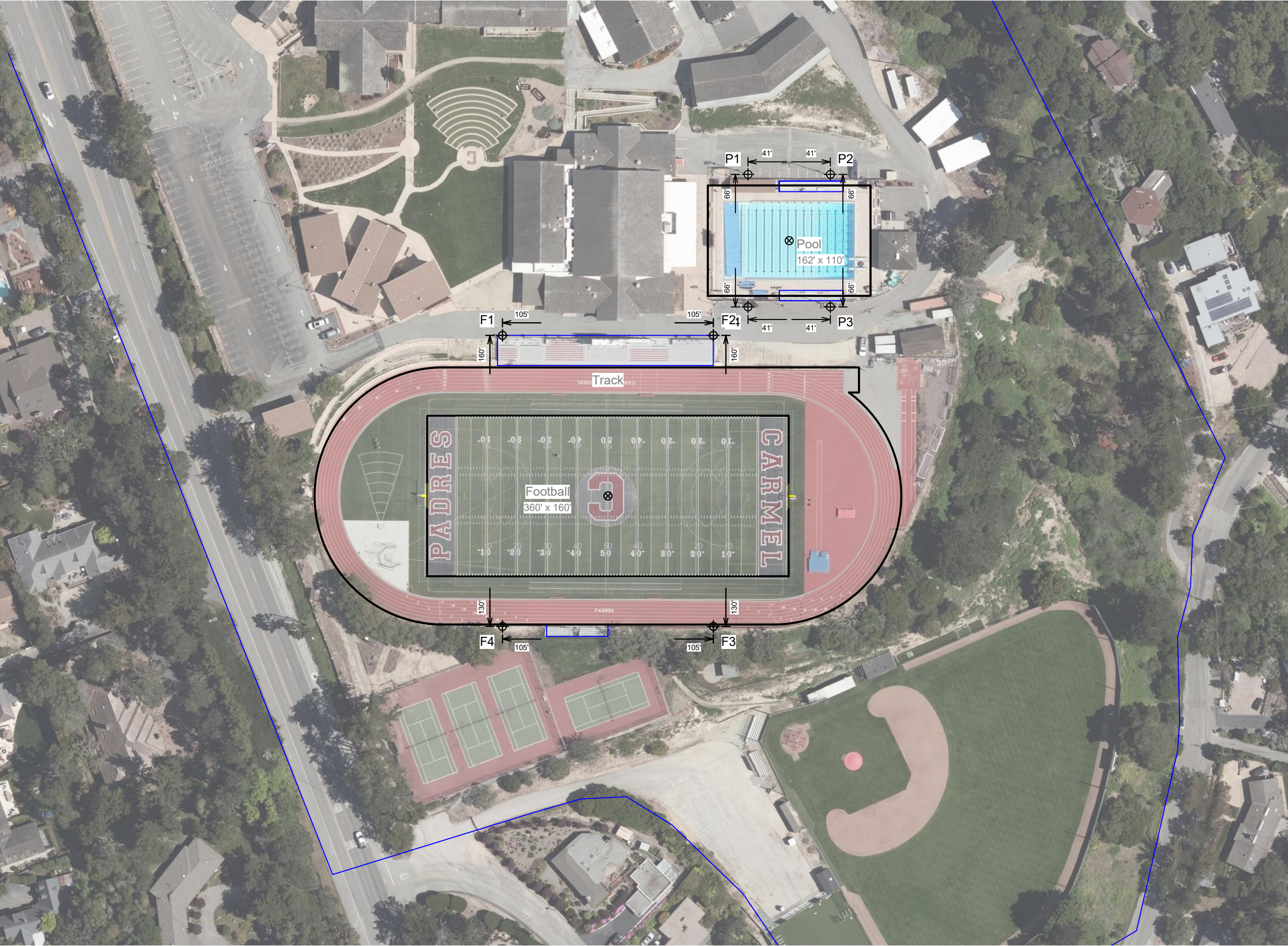


Pole location(s) ⚓ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY



Carmel Pool Retrofit

Carmel, CA

EQUIPMENT LAYOUT

INCLUDES:

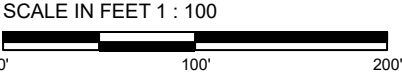
- Football
- Pool
- Track

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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2
				70'	TLC-LED-600	1
				80'	TLC-LED-1500	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2
				60'	TLC-LED-600	1
				80'	TLC-LED-1500	8
2	P1, P4	50'	10'	60'	STL MZ 1500W MZ	3
2	P2-P3	70'	10'	80'	STL MZ 1500W MZ	4
8	TOTALS					58

SINGLE LUMINAIRE AMPERAGE DRAW CHART							
Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)					
Single Phase Voltage		208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
TLC-LED-1500		8.5	8.1	7.4	6.4	5.1	4.7
TLC-BT-575		3.4	3.2	2.9	2.5	2.0	1.8
TLC-LED-600		3.4	3.2	3.0	2.6	2.0	1.9
1500 watt MZ		8.1	7.7	7.1	6.1	4.8	4.4



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



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Carmel Pool Retrofit

Carmel,CA

Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
F1-F2	70'	70'	8	TLC-LED-1500	11.44 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
		60'	1	TLC-LED-600	0.58 kW	C
F3-F4	80'	80'	8	TLC-LED-1500	11.44 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
		60'	1	TLC-LED-600	0.58 kW	C
P1	50'	50'	2	TLC-LED-900	1.78 kW	A
P2	50'	50'	3	TLC-LED-900	2.67 kW	A
P3-P4	70'	70'	3	TLC-LED-900	2.67 kW	A
8			55		62.47 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Pool	9.79 kW	11
B	Football	50.36 kW	40
C	Egress	2.32 kW	4

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	32
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	11
TLC-LED-600	LED 5700K - 75 CRI	580W	65,600	>120,000	>120,000	>120,000	4
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	8

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Away Bleachers	Horizontal	10.7	4	21	4.64	2.67	C	4
Bleachers	Horizontal	9.12	2	14	6.34	4.56	C	4
Football	Horizontal Illuminance	52.5	35	62	1.75	1.50	B	40
North Bleachers	Horizontal Illuminance	27.3	22	34	1.58	1.24	A	11
Pool	Horizontal Illuminance	41.1	26	52	1.97	1.58	A	11
Property Spill	Horizontal	0	0	0.02	0.00		A,B	51
Property Spill	Max Candela (by Fixture)	490	0	1837	0.00		A,B	51
Property Spill	Max Vertical Illuminance Metric	0.01	0	0.04	0.00		A,B	51
South Bleachers	Horizontal Illuminance	34.6	33	36	1.07	1.05	A	11
Track Spill	Horizontal Illuminance	0	0	0.01	0.00		B	40
Track Spill	Max Candela Metric	492	14.4	1264	87.67	34.11	B	40
Track Spill	Max Vertical Illuminance Metric	0.01	0	0.03	304.20		B	40
Track	Horizontal Illuminance	16.3	0	55	162.22		B	40

From Hometown to Professional



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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
1	P1	50'	10'	60'	TLC-LED-900	2	2	0
1	P2	50'	10'	60'	TLC-LED-900	3	3	0
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	3	0
4	TOTALS					11	11	0

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Pool
Size:	162' x 110'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

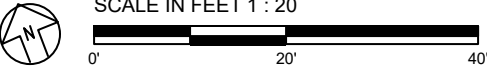
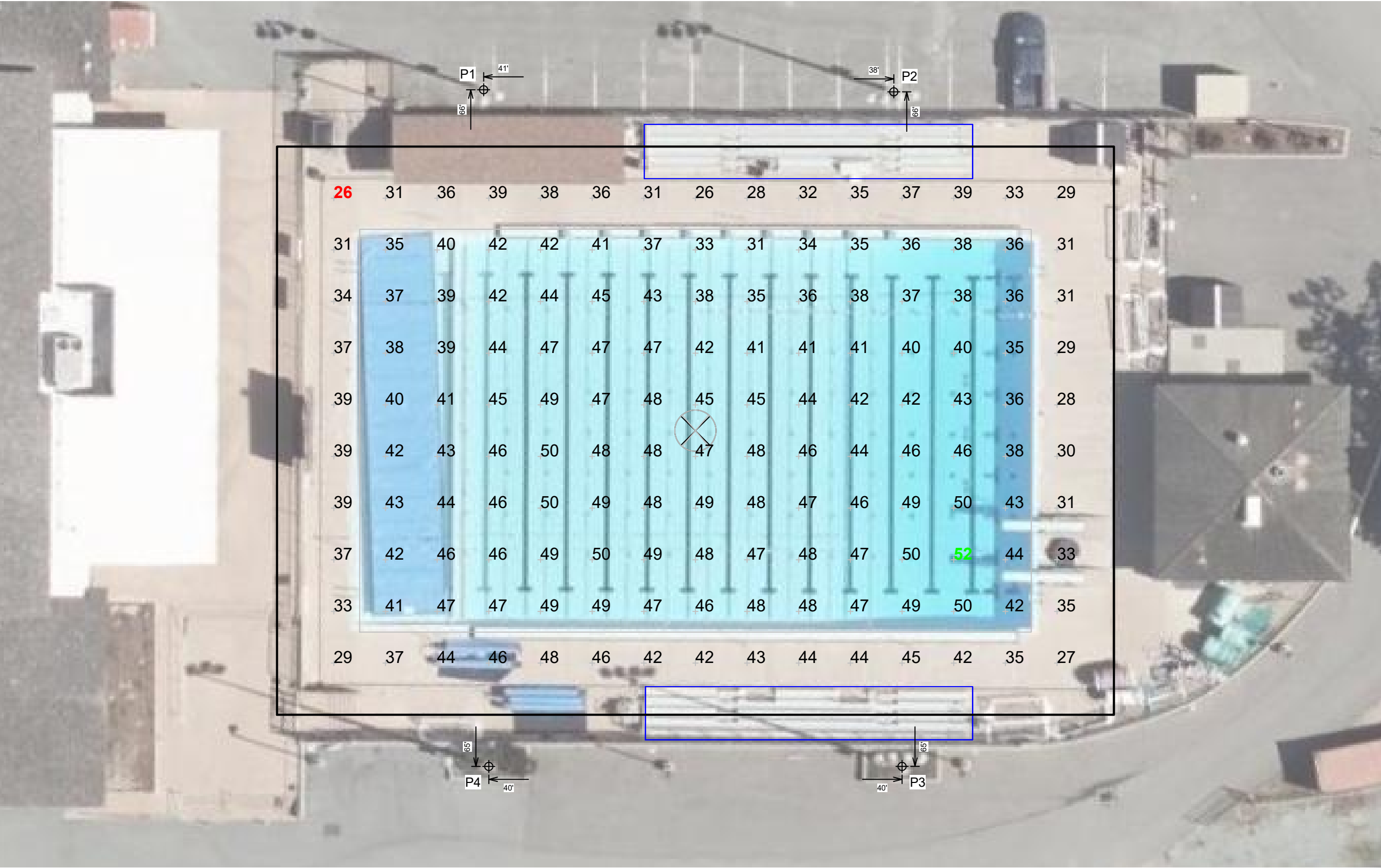
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average:	40
Scan Average:	41.13
Maximum:	52
Minimum:	26
Avg / Min:	1.57
Guaranteed Max / Min:	2
Max / Min:	1.97
UG (adjacent pts):	1.38
No. of Points:	150
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	11
Total Load:	9.79 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) ⊗



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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	50'	10'	60'	TLC-LED-900	2	2	0
1	P2	50'	10'	60'	TLC-LED-900	3	3	0
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	3	0
4	TOTALS					11	11	0

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	North Bleachers
Size:	162' x 110'
Spacing:	10.0' x 10.0'
Height:	6.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	27.34
Maximum:	34
Minimum:	22
Avg / Min:	1.26
Max / Min:	1.58
UG (adjacent pts):	0.00
No. of Points:	6
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	11
Total Load:	9.79 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.



SCALE IN FEET 1 : 30

0' 30' 60'

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

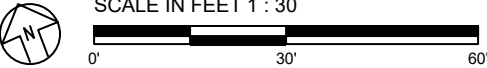


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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	P1	50'	10'	60'	TLC-LED-900	2	2	0
1	P2	50'	10'	60'	TLC-LED-900	3	3	0
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	3	0
4	TOTALS					11	11	0



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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	South Bleachers
Size:	162' x 110'
Spacing:	10.0' x 10.0'
Height:	5.6' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	34.56
Maximum:	36
Minimum:	33
Avg / Min:	1.03
Max / Min:	1.07
UG (adjacent pts):	0.00
No. of Points:	6
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	11
Total Load:	9.79 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	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

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:	52.46
Maximum:	62
Minimum:	35
Avg / Min:	1.48
Guaranteed Max / Min:	2
Max / Min:	1.75
UG (adjacent pts):	1.37
No. of Points:	72
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	40
Total Load:	50.36 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.

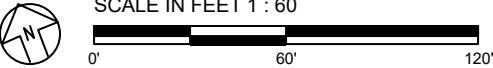
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

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: 16.29
Maximum: 55
Minimum: 0
Avg / Min: 48.46
Max / Min: 162.22
UG (adjacent pts): 0.00
No. of Points: 45

LUMINAIRE INFORMATION

Applied Circuits: B
No. of Luminaires: 40
Total Load: 50.36 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.



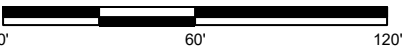
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ILLUMINATION SUMMARY



SCALE IN FEET 1 : 60



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	0	2
				70'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	0	2
				60'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
4	TOTALS					44	4	40



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

Name: Bleachers
Size: Irregular
Spacing: 10.0' x 10.0'

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	9.12
Maximum:	14
Minimum:	2
Avg / Min:	4.00
Max / Min:	6.34
UG (adjacent pts):	2.17
No. of Points:	66

LUMINAIRE INFORMATION

Applied Circuits:	C
No. of Luminaires:	4
Total Load:	2.32 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.



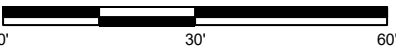
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ILLUMINATION SUMMARY



SCALE IN FEET 1 : 30



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	0	2
				70'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	0	2
				60'	TLC-LED-600	1	1	0
				80'	TLC-LED-1500	8	0	8
4	TOTALS					44	4	40



Carmel Pool Retrofit

Carmel, CA

GRID SUMMARY	
Name:	Away Bleachers
Size:	Irregular
Spacing:	10.0' x 10.0'

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	10.67
Maximum:	21
Minimum:	4
Avg / Min:	2.40
Max / Min:	4.64
UG (adjacent pts):	1.56
No. of Points:	12
LUMINAIRE INFORMATION	
Applied Circuits:	C
No. of Luminaires:	4
Total Load:	2.32 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.

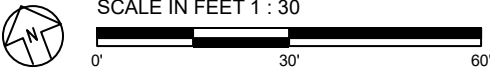
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2
				70'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2
				60'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
				60'	TLC-LED-900	2	2
1	P1	50'	10'	60'	TLC-LED-900	3	3
1	P2	50'	10'	60'	TLC-LED-900	3	3
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	3
8	TOTALS					55	51
						4	



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

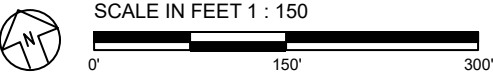
ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0022
Maximum:	0.02
Minimum:	0.00
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	51
Total Load:	60.15 kW

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.

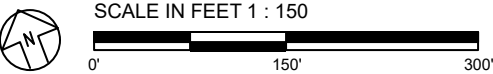


Pole location(s) ⚓ dimensions are relative to 0,0 reference point(s) ⊗



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EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2
				70'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2
				60'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
1	P1	50'	10'	60'	TLC-LED-900	2	2
1	P2	50'	10'	60'	TLC-LED-900	3	3
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	3
8	TOTALS					55	51
						4	



ENGINEERED DESIGN By: Bryce Miles · File #216273B - Pool LED and Football LED · 25-Jan-22

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

Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

ILLUMINATION SUMMARY	
MAX VERTICAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0067
Maximum:	0.04
Minimum:	0.00
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	51
Total Load:	60.15 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.



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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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2	2
				70'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
				80'	TLC-LED-1500	8	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2	2
				60'	TLC-LED-600	1	0
				80'	TLC-LED-1500	8	8
				80'	TLC-LED-1500	8	8
1	P1	50'	10'	60'	TLC-LED-900	2	2
1	P2	50'	10'	60'	TLC-LED-900	3	3
2	P3-P4	70'	-10'	60'	TLC-LED-900	3	3
8	TOTALS					55	51
						4	



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY	
Name:	Property Spill
Spacing:	30.0'
Height:	23.0' above grade

ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 490.2136
Maximum:	1837.45
Minimum:	0.00
No. of Points:	102
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	51
Total Load:	60.15 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.



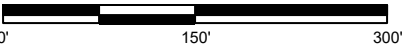
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ILLUMINATION SUMMARY



SCALE IN FEET 1 : 150



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

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

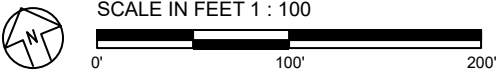
ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0037
Maximum:	0.01
Minimum:	0.00
No. of Points:	80
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	40
Total Load:	50.36 kW

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) ⊗



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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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

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

ILLUMINATION SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
Scan Average: 0.0115
Maximum: 0.03
Minimum: 0.00
No. of Points: 80

LUMINAIRE INFORMATION

Applied Circuits: B
No. of Luminaires: 40
Total Load: 50.36 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.



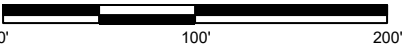
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ILLUMINATION SUMMARY



SCALE IN FEET 1 : 100



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
2	F1-F2	70'	10'	25.52'	TLC-BT-575	2	2	0
				70'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
2	F3-F4	80'	0'	15.52'	TLC-BT-575	2	2	0
				60'	TLC-LED-600	1	0	1
				80'	TLC-LED-1500	8	8	0
4	TOTALS					44	40	4



Carmel Pool Retrofit

Carmel,CA

GRID SUMMARY

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

ILLUMINATION SUMMARY

CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 491.5110
Maximum:	1263.52
Minimum:	14.41
No. of Points:	80

LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	40
Total Load:	50.36 kW

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

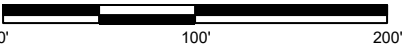
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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.



SCALE IN FEET 1 : 100



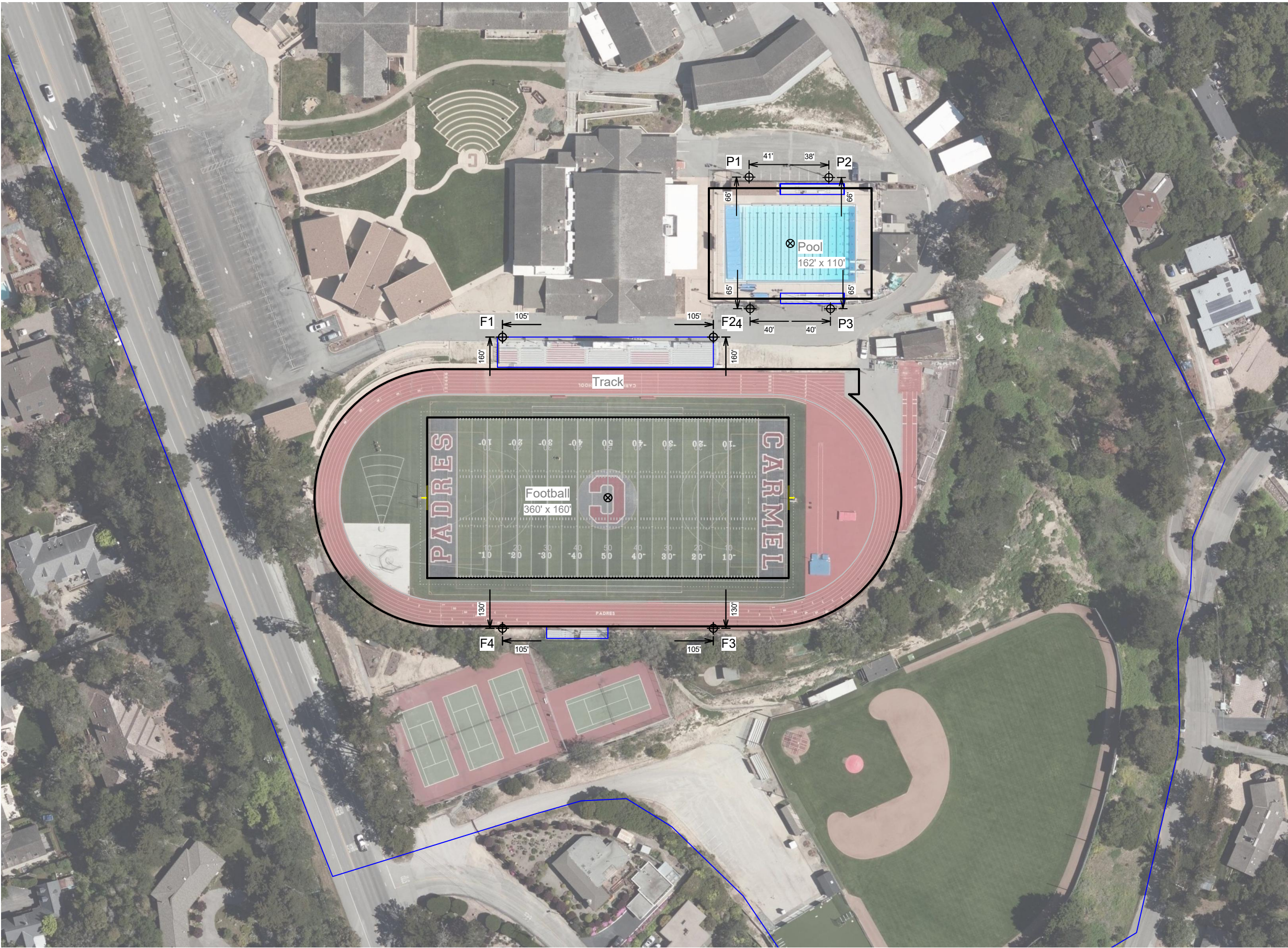
Pole location(s) ⚓ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY



Carmel Pool Retrofit

Carmel, CA

EQUIPMENT LAYOUT

INCLUDES:

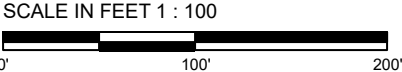
- Football
- Pool
- Track

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
2	F1-F2	70'	10'	25.5'	TLC-BT-575	2
				70'	TLC-LED-600	1
				80'	TLC-LED-1500	8
2	F3-F4	80'	-	15.5'	TLC-BT-575	2
				60'	TLC-LED-600	1
				80'	TLC-LED-1500	8
1	P1	50'	10'	60'	TLC-LED-900	2
1	P2	50'	10'	60'	TLC-LED-900	3
2	P3-P4	70'	-10'	60'	TLC-LED-900	3
8	TOTALS					55

SINGLE LUMINAIRE AMPERAGE DRAW CHART							
Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)					
Single Phase Voltage		208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)
TLC-LED-1500		8.5	8.1	7.4	6.4	5.1	4.7
TLC-LED-900		5.3	5.0	4.6	4.0	3.2	2.9
TLC-LED-600		3.4	3.2	3.0	2.6	2.0	1.9
TLC-BT-575		3.4	3.2	2.9	2.5	2.0	1.8

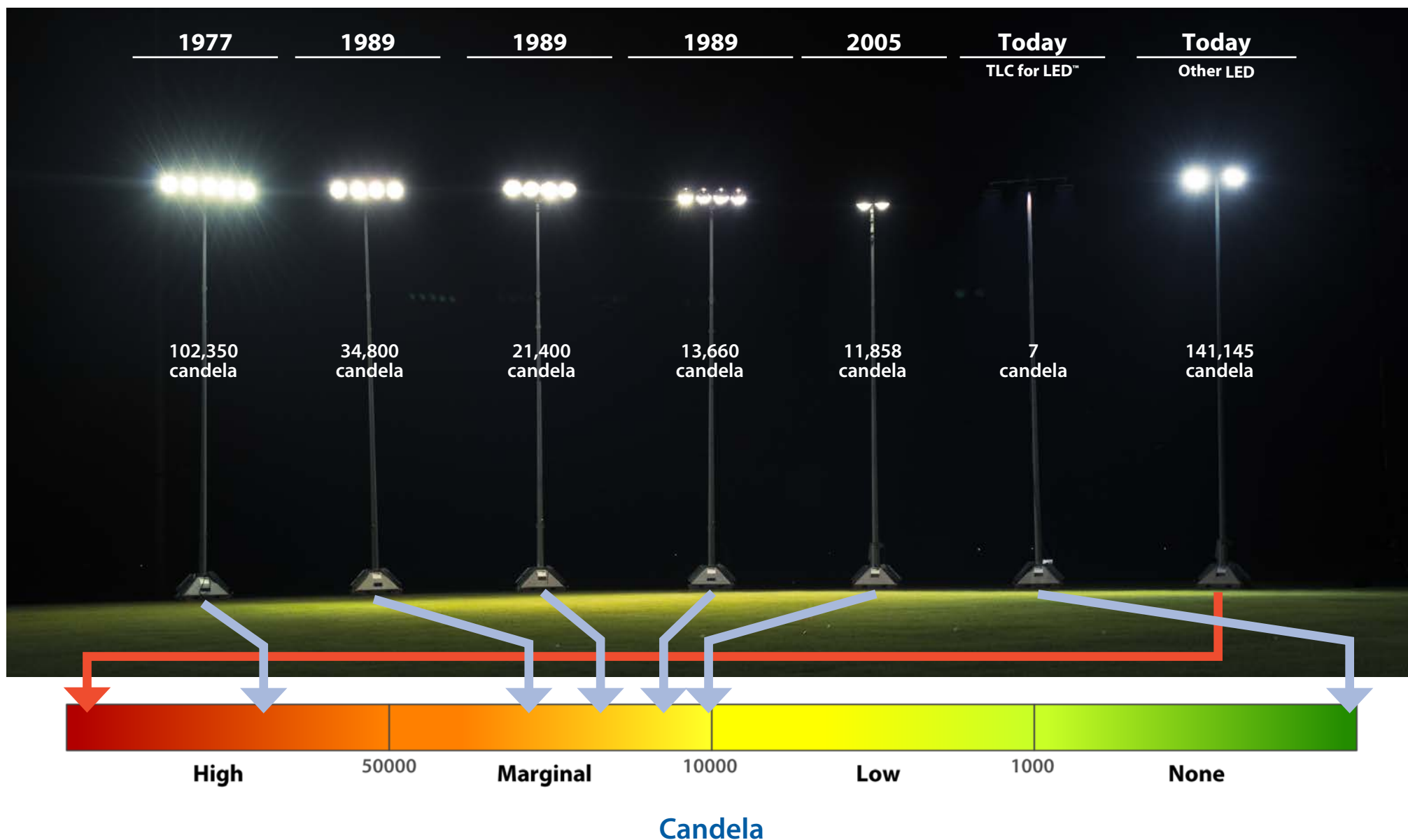


Pole location(s) ⦿ dimensions are relative to 0,0 reference point(s) ⊗



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Candela values (single fixture) reported from photometric reports at 15° above the beam center.

Photographed at 100 ft (30 m) from field edge. Used equal parameters for: On-field light level per pole, Mounting height, Luminaire aiming angles, and Pole Distance from aiming point.