

MUSCO LIGHTING SUBMITTAL FOR PRODUCTION

PREPARED FOR:

Elliott Elementary School Parking

Lighting Project
Munster, IN
August 27, 2025

Project #246300

Submitted by:

Musco Sports Lighting, LLC

Attn: Lindsay Boecker
211 2nd Ave West
Oskaloosa, Iowa 52577

Toll Free: 800-825-6020





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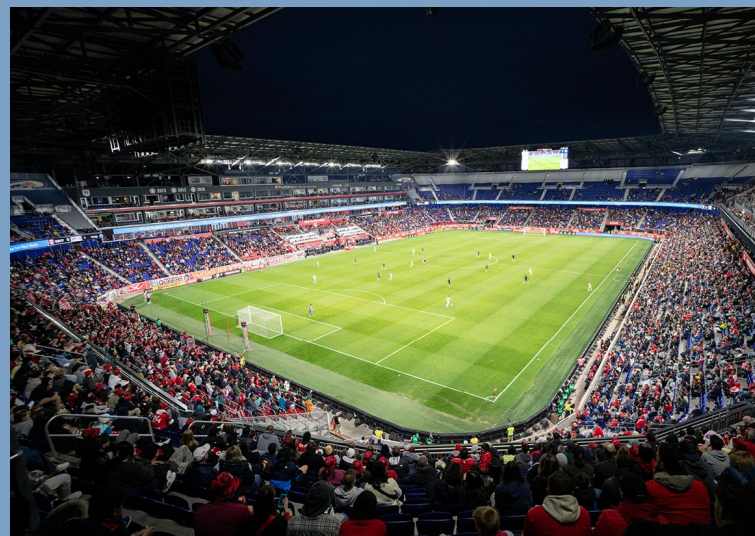
D. PRODUCT INFORMATION

A. BILL OF MATERIALS

Project Submittal: Bill of Materials

Equipment Description	
Supplemental Lighting	
42	V-LOCITY™ (VALS) luminaires
Supplemental Lighting Warranty	
✓	Musco's 10-Year warranty guarantees your lighting system to be free from defects in materials and workmanship. This includes labor and materials to replace defective parts or repair defects in workmanship.

B. LIGHTING DESIGN



Sports Illustrated Stadium, Harrison, New Jersey, USA



UBS Arena, Elmont, New York, USA



Iowa Women of Achievement Bridge, Des Moines, Iowa, USA



Tottenham Hotspur FC Training Ground, Tottenham, London, UK

Elliott Elementary School Parking

Munster,IN



Sales Representative: Brent Castle · Designed By: Jordan Padgett · Design No.: 246300A · July 01, 2025

Elliott Elementary School Parking
Munster,IN

LIGHTING SYSTEM

Structure/Fixture Summary						
Structure ID	Structure Height	Fixt. Attachment Ht.	Fixture Qty	Fixture Type	Load	Circuit
P1	25'	25'	2	LSI VALS	0.22 kW	A
P2-P5	25'	25'	3	LSI VALS	0.33 kW	A
P6-P19	25'	25'	2	LSI VALS	0.22 kW	A
19			42		4.66 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Parking	4.66 kW	42

Fixture Type Summary							
Type	Circuit	Source	Wattage	Lumens	L90	L80	Quantity
LSI VALS	A	LED 5000K - 70 CRI	111W	14,548	--	--	42

Single Fixture Amperage Draw Chart							
Driver Specifications (.90 min power factor)		Line Amperage Per Fixture (max draw)					
Single Phase Voltage		208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)
LSI VALS		-	-	-	-	-	-

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination Ave					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Parking	Horizontal Illuminance	3.19	0	10	94.83	30.14	A	42
Road Way	Horizontal Illuminance	4.89	0	8	15.98	9.92	A	42

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

Field Measurements: Individual field measurements may vary from computer-calculated predictions.

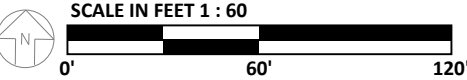
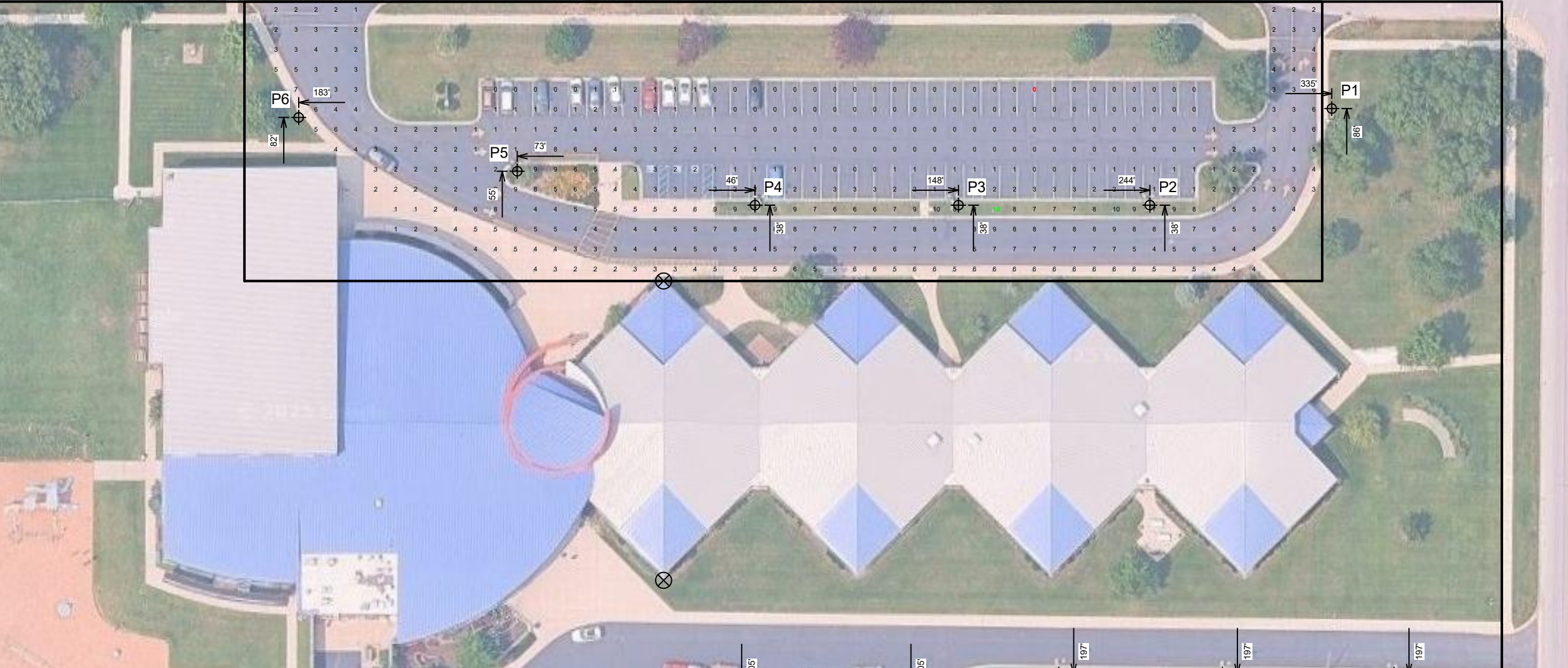
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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								
Structure					Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID	OTHER GRIDS
15	P1 P6-P19	25'	-	25'	LSI VALS	2	2	0
4	P2-P5	25'	-	25'	LSI VALS	3	3	0
19	Totals					42	42	0

Above Field Level is height of fixtures above area shown



ENGINEERED DESIGN By: Jordan Padgett • File #246300A • 01-Jul-25

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

Elliott Elementary School Parking

Munster, IN

Grid Summary

Name: Parking
Size: 540' x 140'
Spacing: 10.0' x 10.0'
Height: 3.0' above grade

Illumination Summary

MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	3.19
Maximum:	10
Minimum:	0
Avg/Min:	30.14
Max/Min:	94.83
UG (adjacent pts):	7.63
CU:	0.25
No. of Points:	482
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	42
Total Load:	4.66 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.

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

Equipment List For Areas Shown							
Structure				Fixtures			
QTY	STRUCTURE ID	SIZE	GRADE ELEVATION	ABOVE FIELD LEVEL	FIXTURE TYPE	QTY/POLE	THIS GRID
15	P1 P6-P19	25'	-	25'	LSI VALS	2	2
4	P2-P5	25'	-	25'	LSI VALS	3	3
19	Totals					42	42

Above Field Level is height of fixtures above area shown





SCALE IN FEET 1 : 100

0'

100'

200'

ENGINEERED DESIGN By: Jordan Padgett • File #246300A • 01-Jul-25

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

Elliott Elementary School Parking

Munster,IN

Grid Summary	
Name:	Road Way
Size:	820' x 410'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

Illumination Summary	
	MAINTAINED HORIZONTAL FOOTCANDLES
	Entire Grid
Scan Average:	4.89
Maximum:	8
Minimum:	0
Avg/Min:	9.92
Max/Min:	15.98
UG (adjacent pts):	2.17
CU:	0.30
No. of Points:	369
FIXTURE INFORMATION	
Applied Circuits:	A
No. of Fixtures:	42
Total Load:	4.66 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.

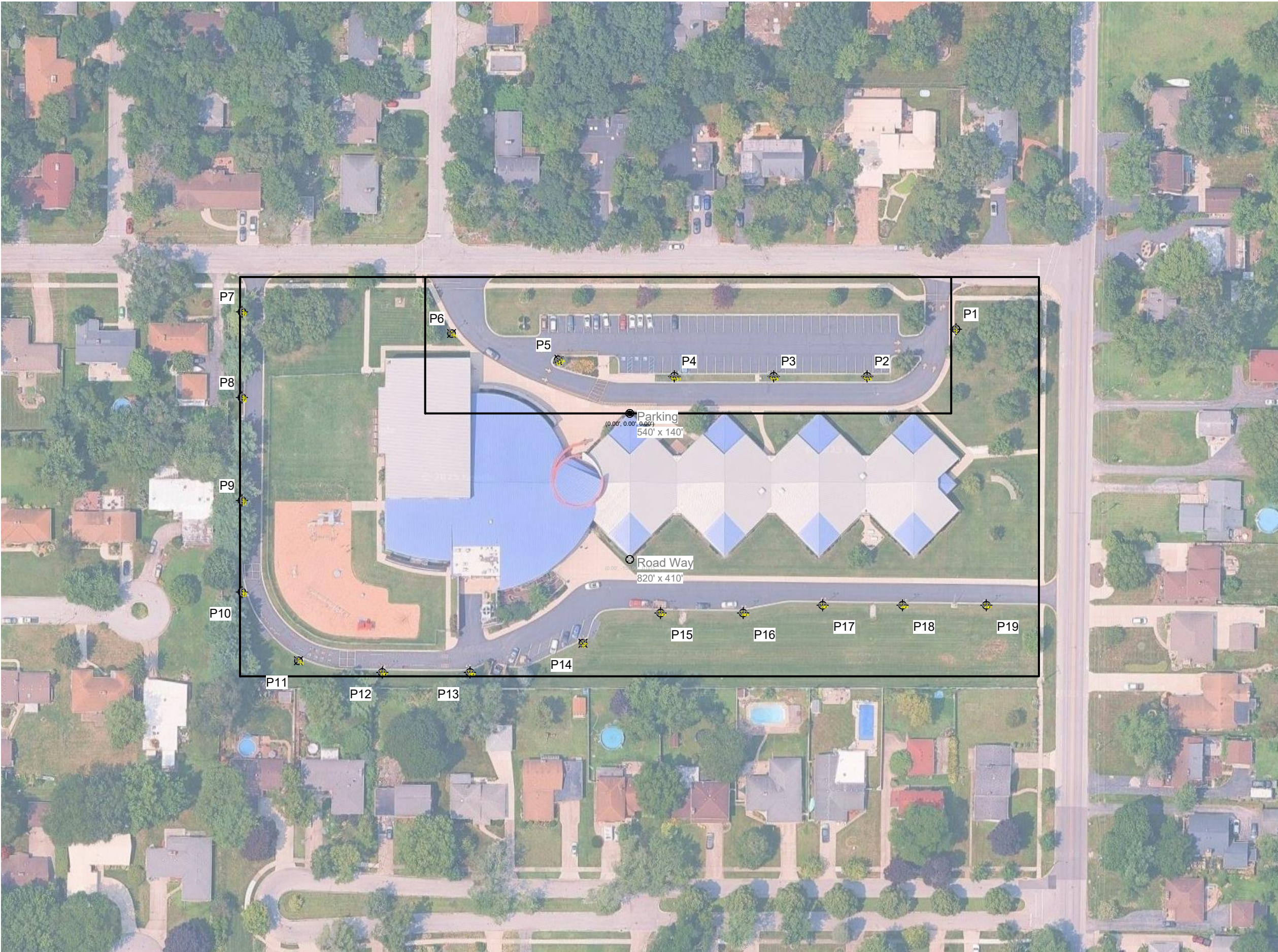
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

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) ⊗

Elliott Elementary School Parking

Munster,IN

Equipment Layout

INCLUDES:

- Parking
- Road Way

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

Structure				Fixtures		
QTY	STRUCTURE ID	SIZE	GLOBAL ELEVATION	ABOVE GLOBAL LEVEL	FIXTURE TYPE	QTY/POLE
15	P1 P6-P19	25'	-	25'	LSI VALS	2
4	P2-P5	25'	-	25'	LSI VALS	3
19	Totals					42

Above Global Level is height of fixtures above design (0,0,0)

Single Fixture Amperage Draw Chart

Driver Specifications (.90 min power factor)	Line Amperage Per Fixture (max draw)						
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
Single Phase Voltage							
LSI VALS	-	-	-	-	-	-	-



C. WARRANTY



10-Year Warranty

Project Name: Elliott Elementary School Parking Project Number: 246300
Owner: School Town of Munster City: Munster State: IN
Covered Product(s): V-LOCITY™ Area Light Small with Square Straight Steel Pole
Date Issued: Date of Shipment Expiration: Date of Shipment + 10 Years

For the next 10 years, Musco Sports Lighting, LLC ("Musco") will provide all materials and labor to maintain the operation of your lighting system.

Equipment

Musco warrants your lighting system to be free from defects in materials and workmanship for a period of 10 years starting from date of product shipment. Musco agrees to provide labor and materials to replace defective parts or repair defects in workmanship on all product provided by Musco. Individual outages that occur during the warranty period are repaired when the usage of any area is materially impacted.

Availability of Service

Musco Warranty Department is available from 8:00 AM to 5:00 PM Central time, Monday through Friday. Musco call center operators are available 24 hours a day, 7 days a week and can be contacted in the event of an emergency and to aid in troubleshooting. Musco will exercise all reasonable efforts to perform service under this contract, but will not be responsible for delays beyond its control. Customer agrees to provide reasonable access for crane or man lift equipment to service the lighting system. Musco is not responsible for damage from operating equipment on the site when the equipment is operated in the prescribed manner over a designated route.

Service Limitations

This contract does not cover weather condition events such as lightning or hail damage, improper installation, vandalism or abuse, unauthorized repairs or alterations, or product made by other manufacturers outside of the "Products Covered" listed above.

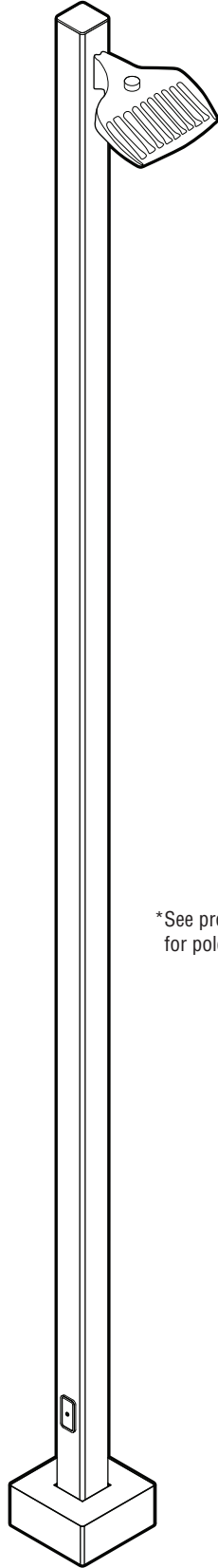
Warranty Contact Information

Musco Sports Lighting, LLC
Warranty Department
100 1st Avenue West
PO Box 808
Oskaloosa, IA USA
Phone: +1(641)673-0411
Email: lighting@musco.com

Signature: _____
CEO



D. PRODUCT INFORMATION



*See project information
for pole details

Luminaire Data

Manufacturer	LSI Lighting
Material and finish¹	Die-cast aluminum with powder-coat finish
Weight (luminaire)	20 lb (9.1 kg)

Regulatory and Voluntary Qualifications

Listing	UL 1598 and UL 8750
Environment	Suitable for wet locations
Ingress Protection	IP66
RoHS	Compliant
Dark Sky compliant	with 3000 K color temperature
Buy American Act	meets requirements

Photometric Characteristics

Lumen maintenance factor²	
25k hours³	0.94
50k hours³	0.88
75k hours³	0.83
100k hours³	0.78
Typical Lumens⁴	18,000
Available Color Temperature and CRI	
5000 K	70 CRI
4000 K	70 CRI
3000 K	80 CRI

Footnotes:

- 1) Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Standard finishes include black, dark bronze, gun metal gray, graphite, metallic silver, platinum plus, satin verde green, and white.
- 2) Lumen maintenance values at 40°C ambient temperature are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.
- 3) Values are represented as projected values within six times limit of tested hours per IES TM-21-11.
- 4) Lumens may vary based on backlight shield, beam spread, baffle, color temperature, and wattage.

Datasheet: V-Locity Area Luminaire (VALS)

Electrical Data

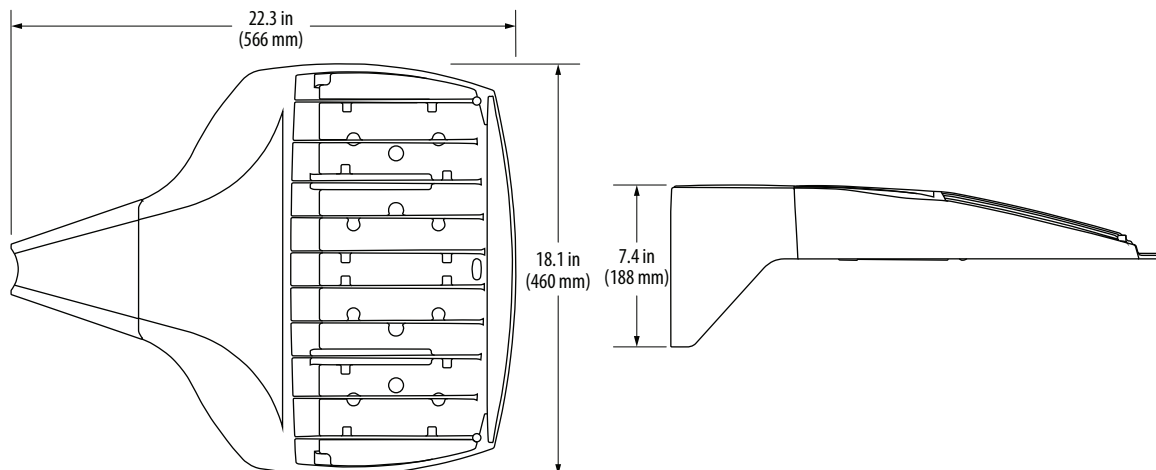
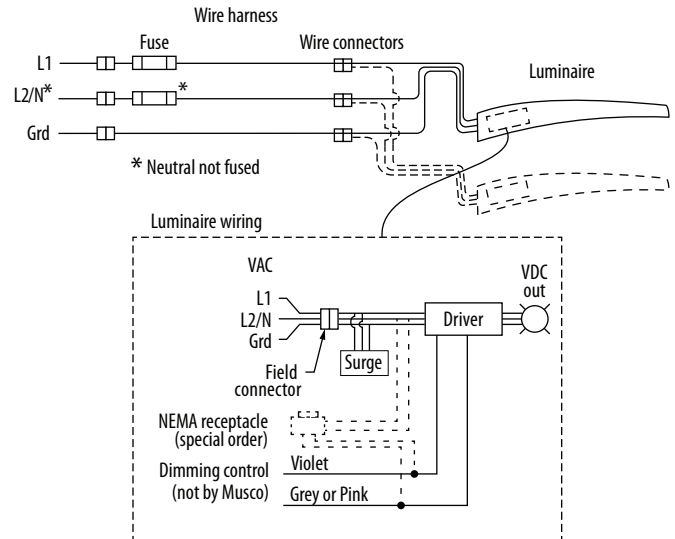
Rated wattage per luminaire 111 W
 Input voltage 120 – 277 V or 347 – 480 V, 50/60 Hz
 Power factor at full load >0.9
 Total Harmonic Distortion at full load <20%
 Operating temperature range -40°F – 122°F (-40°C – 50°C)
 Dimming mode¹ 0 – 10 V dimming to 10%
 Photocell control² optional, special order

Max operating current ³	120 Vac	208 Vac	240 Vac	277 Vac	347 Vac	480 Vac
	0.93 A	0.53 A	0.46 A	0.40 A	0.32 A	0.23 A

Footnotes:

- 1) Dimming controls available. Contact Musco representative for options.
- 2) 7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols (by others) or wireless control modules (by others).
- 3) Operating current based on 25°C ambient temperature at full load. Actual wattage may differ by +/- 10%. Contact Musco engineering for amperes if operating in different conditions.

Typical Wiring



Safety: UL Product Certification

UL Product Certification for:

Musco Sports Lighting, LLC
211 2nd Ave W
PO Box 808
Oskaloosa, IA 52577
USA



UL Category	Covers	UL Number
High-Intensity Discharge Surface-Mounted Luminaires	<ul style="list-style-type: none">Green Generation™ luminaires and remote ballast assembliesSportsCluster® and SportsCluster-2® luminaires and remote ballast assembliesLight-Structure 2™ and Light-Structure System™ luminaires and remote ballast assemblies1000 W Light-Pak™ and Light-Pak indoor luminaires with Multi-Watt™ control system1000 W Show-Light™ and Show-Light Green™ luminaires with hooded light actuator system and remote ballast assemblies2000 W Mirtran™ luminaireStadium 2K Fixture™ 2000 W luminaire and Hot Restrike Green™ 2000 W hot restrike luminaire	E33316
Management Equipment, Energy	Lighting control systems for: <ul style="list-style-type: none">Control-Link® control and monitoring systemControl-Link retrofit control system	E139944
Industrial Control Panels	Control panels and enclosures for: <ul style="list-style-type: none">Control-Link® control and monitoring systemControl-Link retrofit control systemLighting contactor cabinetsMulti-Watt™ control systems	E204954
Emergency Lighting and Power Equipment	<ul style="list-style-type: none">Auxiliary Lighting Interface Cabinet (ALIC)	E311491
Luminaire Fittings	Galvanized steel poles 12 ft (3.7 m) or less for: <ul style="list-style-type: none">Poles for Mirtran™ luminaire mountingRooftop polesSpecial applications	E132445
Luminaire Pole in Excess of 12 ft (3.7 m)	Galvanized steel poles greater than 12 ft (3.7 m) for: <ul style="list-style-type: none">Light-Structure System™ luminaire mountingSportspole™ structure or mounting system and special applications	E325078



Safety: UL Product Certification

UL Category	Covers	UL Number
Devices, Scaffolding	Service platforms for: <ul style="list-style-type: none">• Light-Structure System™ luminaires and remote ballast assemblies• SportsCluster® System luminaires and remote ballast assemblies	SA7004
Lightning Conductors, Air Terminals, and Fittings	<ul style="list-style-type: none">• Light-Structure System™ pole structure concrete base	E337467
Light-Emitting-Diode Surface-Mounted Luminaires	<ul style="list-style-type: none">• LED luminaires and driver assemblies• LED auxiliary luminaires	E338094

A copy of the UL Certificate of Compliance is available upon your request.