



Control System Summary

Project Specific Notes:

Project Information

Project #: 196995
 Project Name: Ashley Park Baseball Practice
 Date: 05/13/19
 Project Engineer: JMcCrea
 Sales Representative: Jeremy Lemons
 Control System Type: Lighting Contactor Cabinets
 Scan: 196995A
 Document ID: 196995P1V1-0513111222
 Distribution Panel Location or ID: Ball Fields
 Total # of Distribution Panel Locations for Project: 1
 Design Voltage/Hertz/Phase: 480/60/3
 Control Voltage: 120

Equipment Listing

DESCRIPTION	APPROXIMATE SIZE	
1.Lighting Contactor Cabinet	24 X 72	
	QTY	SIZE
Total Contactors	12	30 AMP
Total Off/On/Auto Switches:	3	

Preliminary Plans
 Confirm all Details - voltage,
 # of distribution panels, etc.

Materials Checklist

Contractor/Customer Supplied:

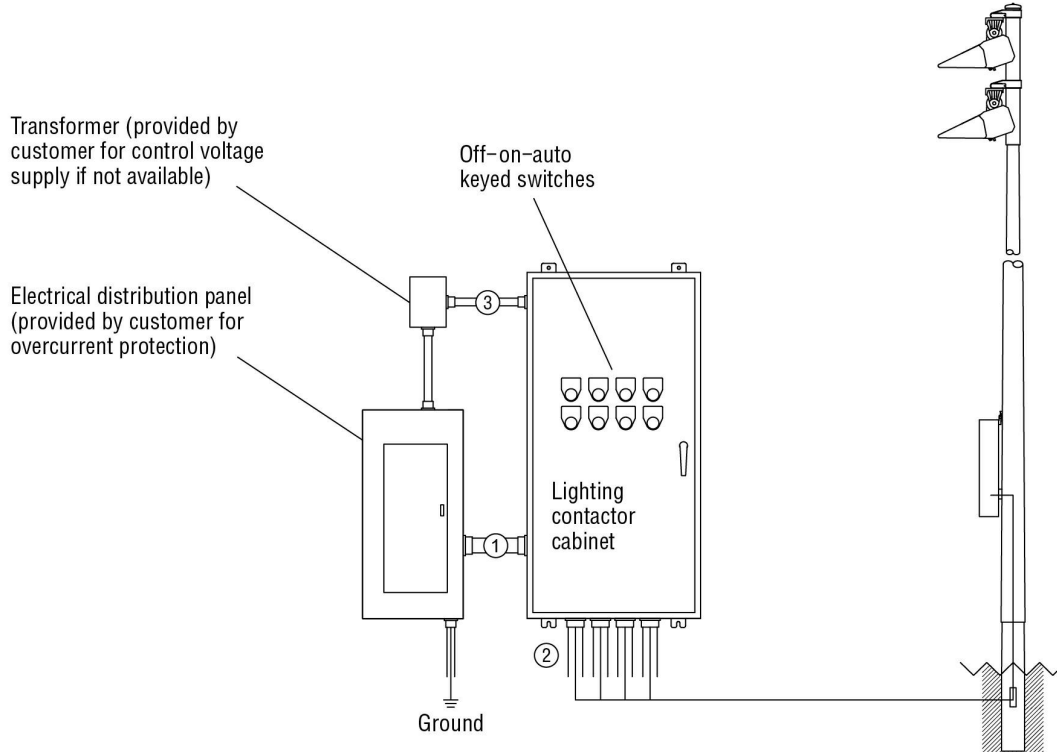
- A dedicated control circuit must be supplied per distribution panel location.
 - If the control voltage is NOT available, a control transformer is required.
- Electrical distribution panel to provide overcurrent protection for circuits
 - HID rated or D-curve circuit breaker sized per full load amps 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
- Anti-corrosion compound to apply to ends of wire, if necessary

IMPORTANT NOTES

1. 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.
2. 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.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are UL 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. 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

Lighting Contactor Cabinet



Wire	Description	# of Wires	Typ. Wire Size (AWG)	Max. Wire Length (FT)	Wire from Musco	Notes
1	Line power to contactors, and equipment grounding conductor	Note A	Note B	27	No	A – E
2	Load power to lighting circuits, and equipment grounding conductor	Note A	Note B	N/A	No	A – D
3	Control power (dedicated, 20A)	3	12	N/A	No	C, D

R60-28-00_D

- 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.
 - D. Refer to lighting contactor cabinets installation instructions for more details on equipment information and the installation requirements.
 - E. Contact Musco if maximum wire length from circuit breaker to contactor exceeds value in chart.

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



Control System Summary

Ashley Park Baseball Practice / 196995 - 196995A
Ball Fields - Page 3 of 4

SWITCHING SCHEDULE

Field/Zone Description	Zones
Baseball	1
Softball	2
Tee Ball	3

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 2940.0
	SEALED: 312.0

BALLAST SPECIFICATIONS .90 Minimum Power Factor	VOLTAGE: 480v THREE PHASE						
	208	220	240	277	347	380	480
BALLAST OPERATING VOLTAGE							
1500 Watt Metal Halide Lamp Operating line amperage per fixture- maximum	8.6	8.3	7.5	6.5	5.1	4.7	3.7
1000 Watt Metal Halide Lamp Operating line amperage per fixture- maximum	6.5	6.4	5.8	4.9	4.0	3.6	2.9

CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
A1	Baseball	3	7.4	30	C1	1
A2	Baseball	3	7.4	30	C2	1
B1	Baseball	4	11.1	30	C3	1
B2	Baseball	4	11.1	30	C4	1
C1	Baseball	3	7.4	30	C5	1
C2	Baseball	3	7.4	30	C6	1
A1	Softball	2	7.4	30	C7	2
A3	Softball	2	7.4	30	C8	2
B3	Softball	3	7.4	30	C9	2
B4	Softball	3	7.4	30	C10	2
A4	Tee Ball	4	11.1	30	C11	3
A5	Tee Ball	4	11.1	30	C12	3



Control System Summary

Ashley Park Baseball Practice / 196995 - 196995A
Ball Fields - 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	---	C1	Pole A1	7.40		
1	---	C2	Pole A2	7.40		
1	---	C3	Pole B1	11.10		
1	---	C4	Pole B2	11.10		
1	---	C5	Pole C1	7.40		
1	---	C6	Pole C2	7.40		
1	---	C7	Pole A1	7.40		
1	---	C8	Pole A3	7.40		
1	---	C9	Pole B3	7.40		
1	---	C10	Pole B4	7.40		
1	---	C11	Pole A4	11.10		
1	---	C12	Pole A5	11.10		

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	Baseball	A1	C1
			A2	C2
			B1	C3
			B2	C4
			C1	C5
			C2	C6
Zone 2	2	Softball	A1	C7
			A3	C8
			B3	C9
			B4	C10
Zone 3	3	Tee Ball	A4	C11
			A5	C12