AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. Contract Number	Page of Pages	
DCHA-2010-B-0185	1	10

2. Amendment/Modification Number	3. Effective Date	4. Requisition/Purchase Request No.	5. Solicitation Caption
DCHA-2010-B-0185-001	27-Sep-10		**See Below**

6. Issued By: Code 03B
Department of Real Estate Services
Contract and Procurement Division
2000 14th Street N.W., Suite 500
Washington, D.C. 20009

7. Administered By (If other than line 6)
Department of Real Estate Services
Contract and Procurement Division
2000 14th Street N.W., Suite 500
Washington, D.C. 20009

8. Name and Address of Contractor (No. Street, city, country, state and ZIP Code)

Code | Facility

(X) 9A. Amendment of Solicitation No.
DCHA-2010-B-0185

9B. Dated (See Item 11)
3-May-10

10A. Modification of Contract/Order No.

10B. Dated (See Item 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[ ] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [ ] is extended. [x] is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copy of the amendment: (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or fax which includes a reference to the solicitation and amendment number. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or fax, provided each letter or telegram makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting and Appropriation Data (If Required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14

(X)	A. This change order is issued pursuant to: (Specify Authority) The changes set forth in Item 14 are made in the contract/order no. in item 10A.
	B. The above numbered contract/order is modified to reflect the administrative changes (such as changes in paying office, appropriation data, etc.) set forth in item 14, pursuant to the authority of 27 DCMR, Chapter 36, Section 3601.2.
	C. This supplemental agreement is entered into pursuant to authority of:
	D. Other (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [x] is required to sign this document and return 1 copy to the issuing office.

14. Description of amendment/modification (Organized by UCF Section headings, including solicitation/contract subject matter where feasible.)

Caption: DPR Installation of Sport Lighting at Trinidad Recreation Center

The subject solicitation is hereby amended as follows:

1. See the additional drawings attached.

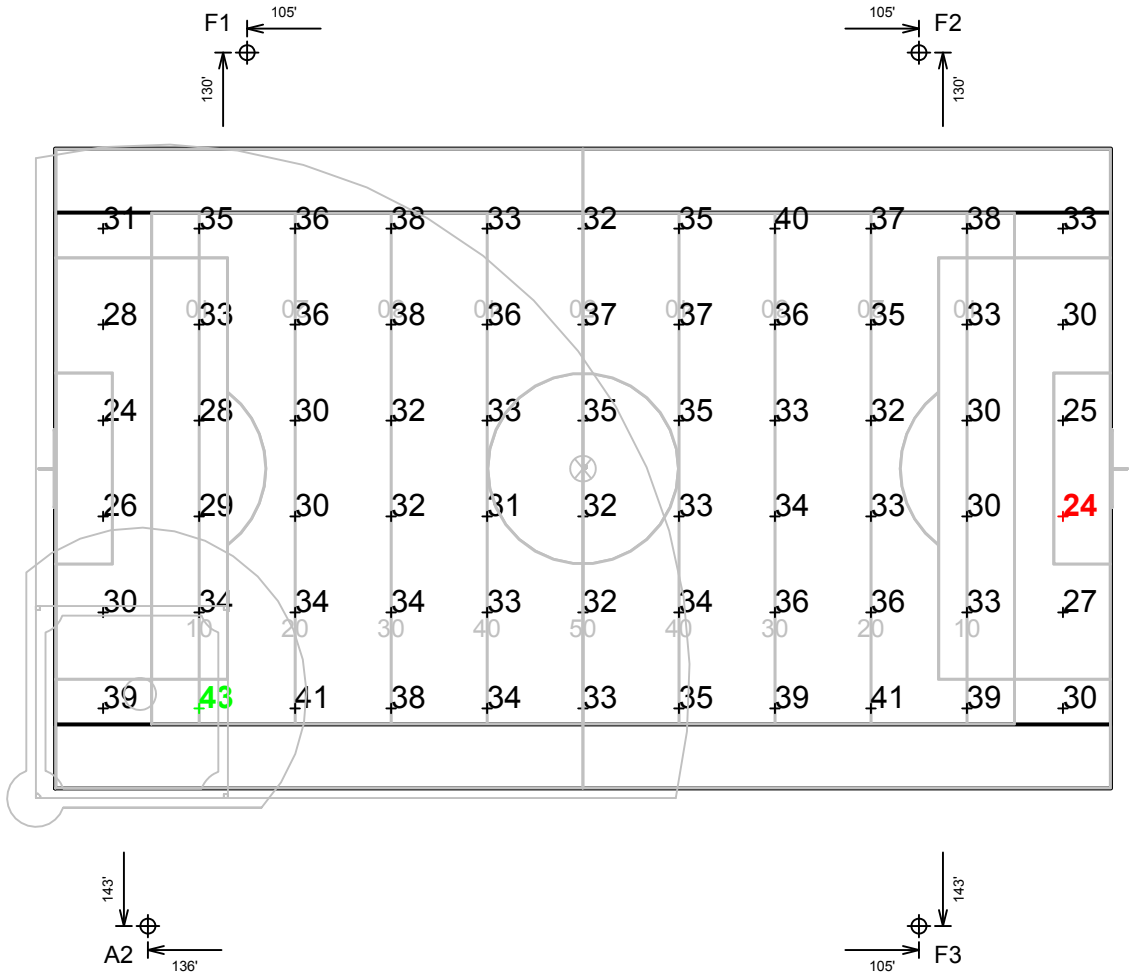
2. Musco Lighting is the required lighting for the above referenced project. Any reference to an equivilant is deleted.

The opening date for receipt of bids, time and place remains the same.

Except as provided herein, all terms and conditions of the document referenced in Item (9A or 10A) remain unchanged and in full force and effect

15A. Name and Title of Signer (Type or print)		16A. Name of Contracting Officer **Diane Wooden**	
15B. Name of Contractor (Signature of person authorized to sign)	15C. Date Signed	16B. District of Columbia Diane Wooden (Signature of Contracting Officer)	16C. Date Signed 9/30/10

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	A2, F1-F3	70'	-	70'	1500W MZ	7	7	0
4	← TOTALS →					28	28	0



SCALE IN FEET 1 : 60

0' 60' 120'

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

GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Football

DPR_Trinidad Recreation Center
Washington,DC

Football
- Size: 330' x 160'
- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	66
Average:	33.53
Maximum:	43
Minimum:	24
Avg/Min:	1.39
Max/Min:	1.77
UG (Adjacent Pts):	1.31
CV:	0.12

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	28
Avg KW over 5,000:	43.79
Max KW:	47.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

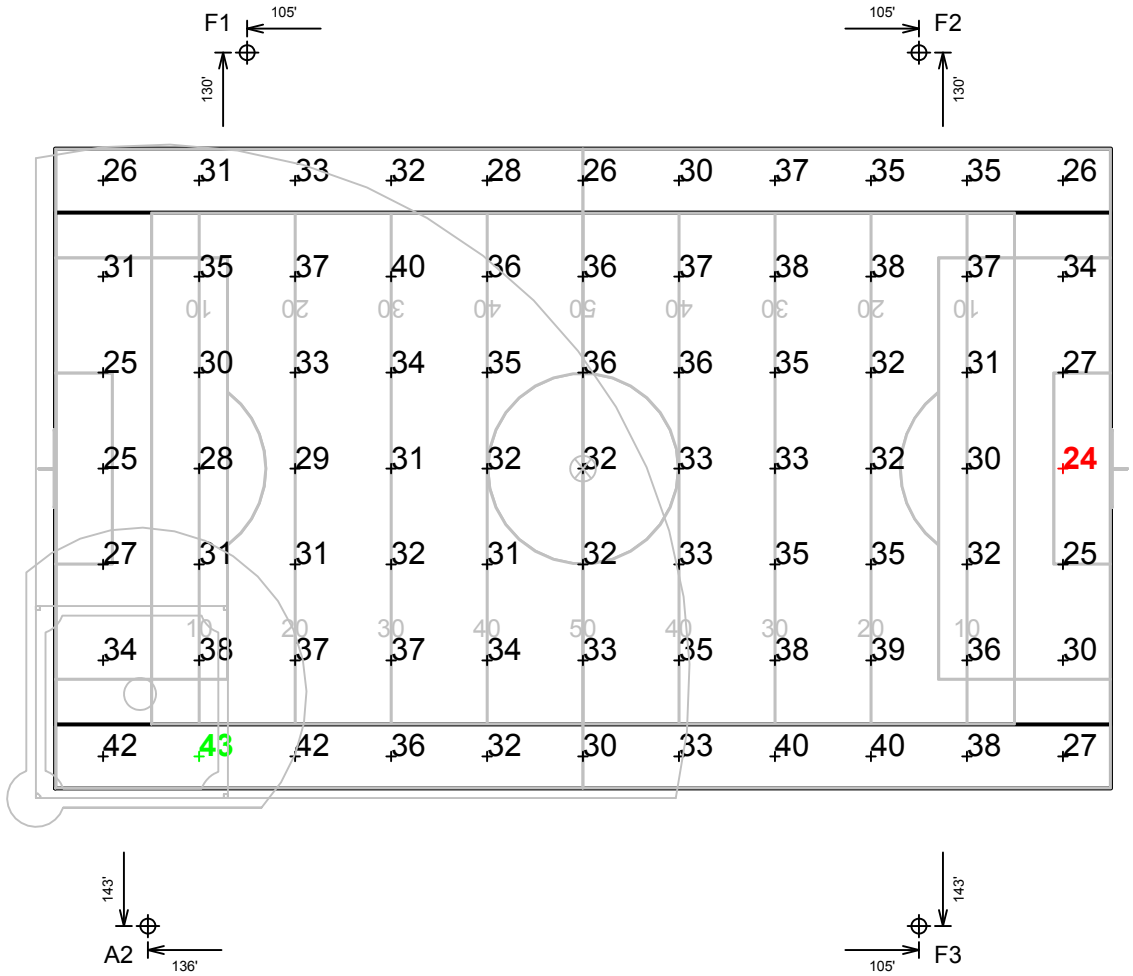
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

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

By: Nathan Chizek

File #: 137006 Date: 13-Jul-10

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	A2, F1-F3	70'	-	70'	1500W MZ	7	7	0
4	← TOTALS →					28	28	0



SCALE IN FEET 1 : 60

0' 60' 120'

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

GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Soccer

DPR_Trinidad Recreation Center
Washington,DC

Soccer
- Size: 330' x 200'
- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	77
Average:	33.23
Maximum:	43
Minimum:	24
Avg/Min:	1.38
Max/Min:	1.81
UG (Adjacent Pts):	1.41
CV:	0.13

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	28
Avg KW over 5,000:	43.79
Max KW:	47.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

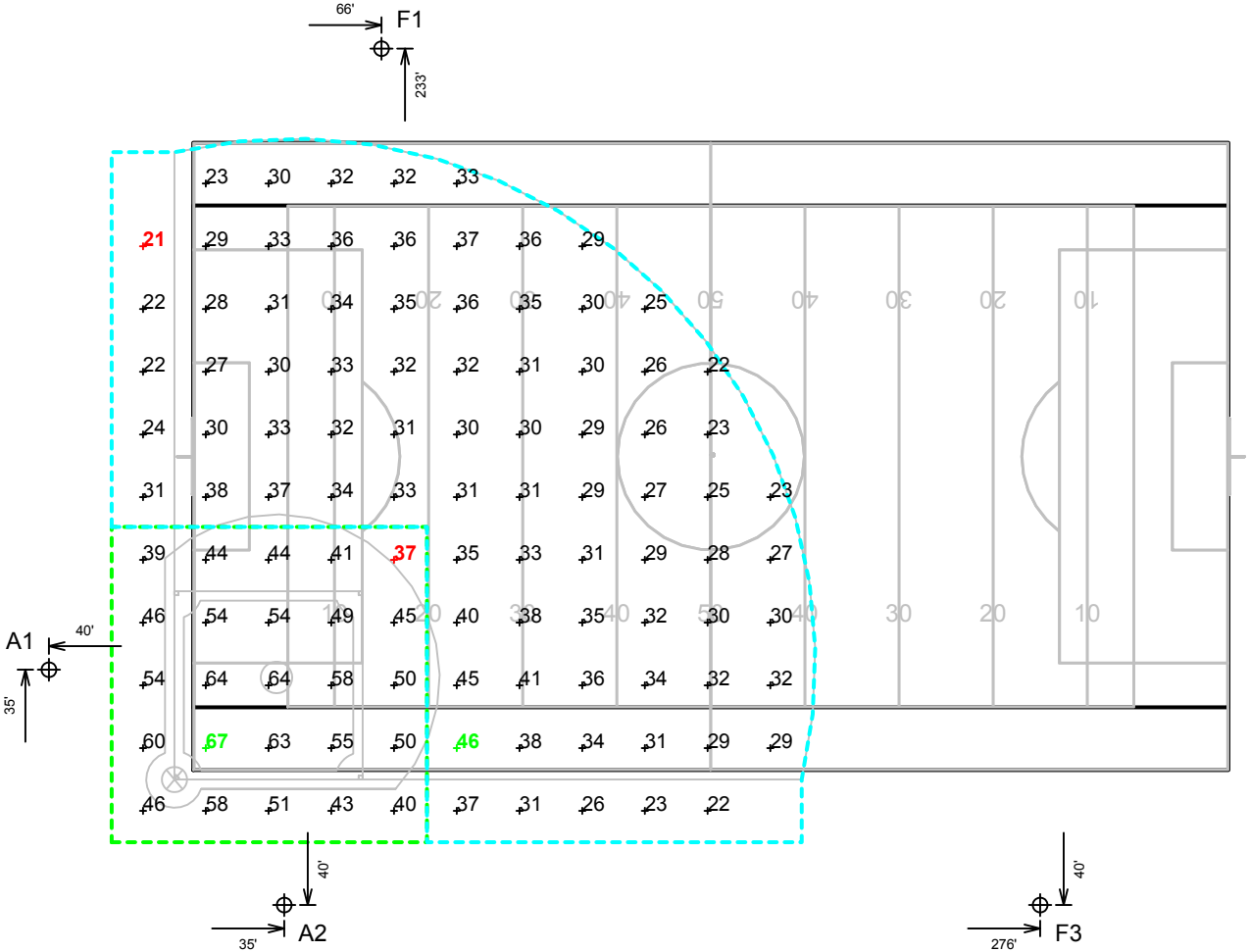
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

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

By: Nathan Chizek

File #: 137006 Date: 13-Jul-10

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	60'	-	60'	1500W MZ	3	3	0
3	A2, F1, F3	70'	-	70'	1500W MZ	7	7	0
4	← TOTALS →					24	24	0



SCALE IN FEET 1 : 60

0' 60' 120'

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

GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Little League

DPR_Trinidad Recreation Center
Washington,DC

Little League

· Size: 200'/220'/200' - basepath 60'
· Grid Spacing = 20.0' x 20.0'
· Values given at 3.0' above grade

· Luminaire Type: Green Generation
· Rated Lamp Life: 5,000 hours
· Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION
HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	82
Average:	51.02	31.11
Maximum:	67	46
Minimum:	37	21
Avg/Min:	1.37	1.50
Max/Min:	1.78	2.22
UG (Adjacent Pts):	1.29	1.38
CV:	0.17	0.16

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	24
Avg KW over 5,000:	37.54
Max KW:	40.8

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer 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 ballast and structures located within 3 feet (1m) of design locations.

By: Nathan Chizek

File #: 137006 Date: 13-Jul-10

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

DPR_Trinidad Recreation Center

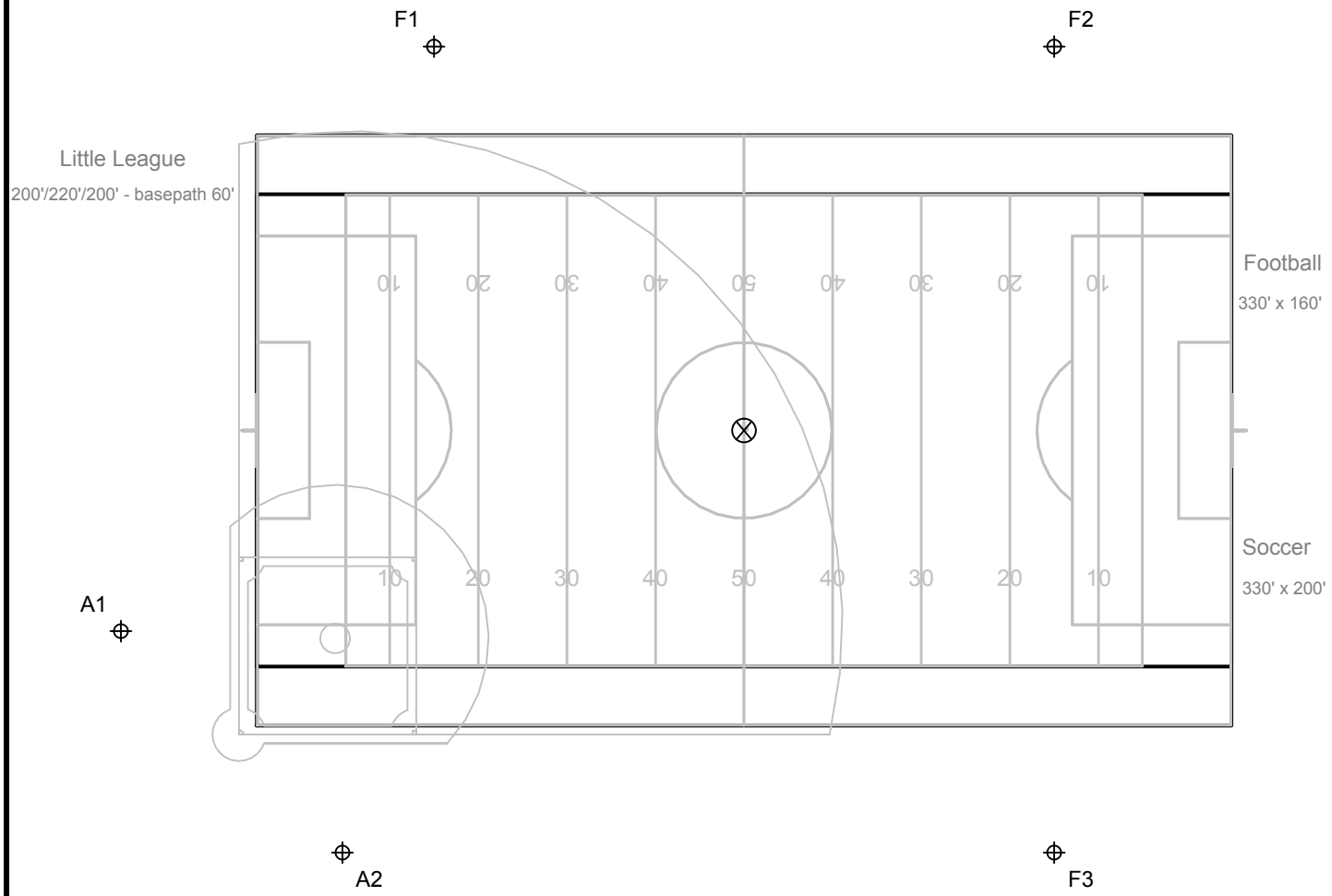
Washington,DC

INCLUDES:

· Football
· Little League
· Soccer

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 ballast and structures located within 3 feet (1m) of design locations.



EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
1	A1	60'	-	60'	1500W MZ	3
4	A2, F1-F3	70'	-	70'	1500W MZ	7
5	TOTALS					31

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)								
Single Phase Voltage	120 (60)	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	415 (60)	480 (60)
1500 watt MZ	15.0	8.6	7.7	7.5	6.5	5.1	4.7	-	3.7

SCALE IN FEET 1 : 60

0' 60' 120'

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

By: Nathan Chizek

File #: 137006 Date: 13-Jul-10

Control System Summary

Project Specific Notes:

One (1) 480V - three phase electrical distribution location for sports lighing has been assumed but not confirmed for this project.

Project Information

Project #:	137006
Project Name:	DPR_Trinidad Recreation Center
Date:	07/13/10
Project Engineer:	Nathan Chizek
Sales Representative:	Terri Paddy
Control System Type:	Control and Monitoring
Communication Type:	Digital Cellular
Scan:	137006
Distribution Panel Location or ID:	
Total # of Distribution Panel Locations for Project:	1
Design Voltage / Phase:	480 / 3
Control Voltage:	120

Equipment Listing

DESCRIPTION	APPROXIMATE SIZE
1.Control and Monitoring Cabinet	24 X 48

	QTY	SIZE
Total Contactors	5	30 AMP
Total Off/On/Auto Switches:	3	

Materials Checklist

Contractor/Customer Supplied:

- ❑ A single control circuit must be supplied per distribution panel location.
  - — If the control voltage is NOT available, a control transformer would be required.
- ❑ Electrical distribution panel to provide overcurrent protection for lighting circuits
  - — Thermal/Magnetic Circuit Breaker sized per Full Load Amps on Circuit Summary by Zone Chart
- ❑ Wiring:
  - — Dedicated Control Power Circuit
  - — Power circuit to and from lighting contactor modules
  - — Monitoring circuit from Surge Protection Device to Control and Monitoring cabinet 1
  - — Harnesses for cabinets at remote locations
  - — Means of grounding, including Lightning Ground Protection
- ❑ Electrical conduit wireway system
  - — Entrance hubs rated NEMA 4: must be die-cast zinc, PVC, or copper-free die-cast aluminum
- ❑ Hardware to mount cabinets to appropriate surfaces
- ❑ A lock-on device on control power circuit to prevent unauthorized power interruption to control power
- ❑ 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

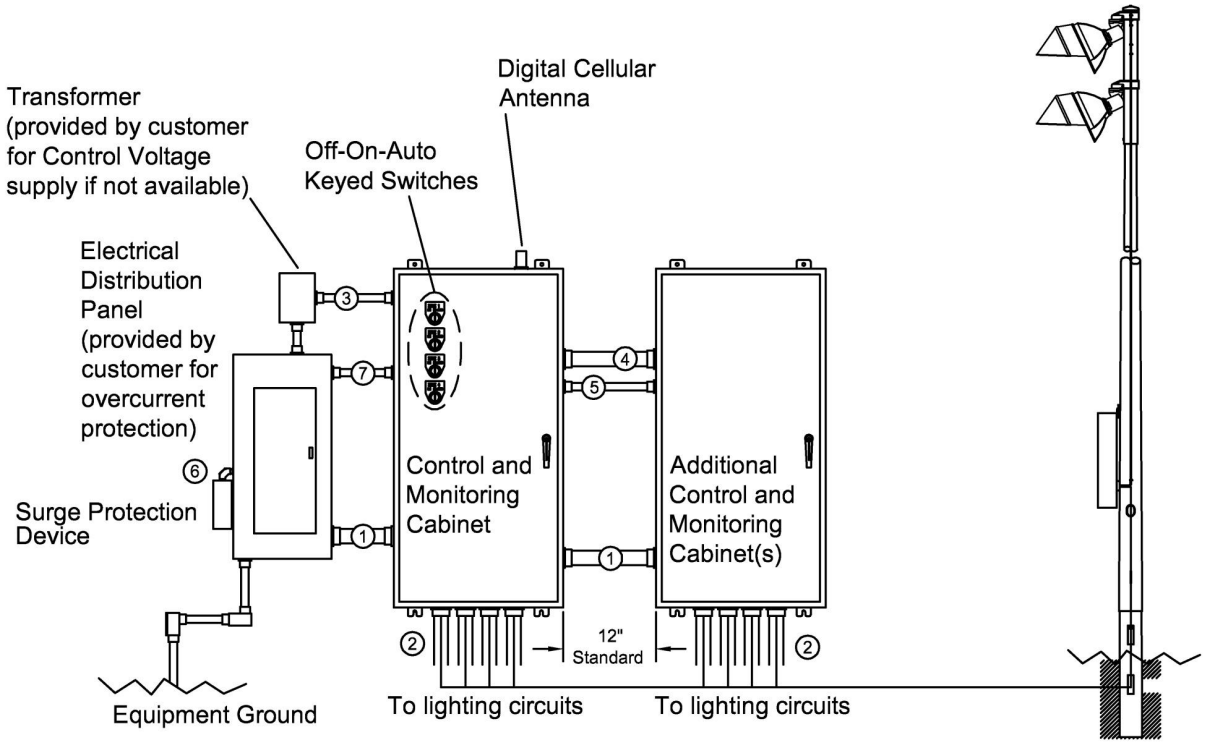
1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's ballast enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact 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 luminaries 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. Full load amps are based on an assumed power factor of 0.9.

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

Control System Summary

Control•Link.
Control and Monitoring System - Digital Cellular

(Quantity of equipment may differ from what is shown below)



WIRE	DESCRIPTION	# OF WIRES	TYP. WIRE SIZE (AWG)	MAX. WIRE LENGTH (FT)	WIRE FROM MUSCO	NOTES
1	LINE POWER & GROUND TO CONTACTORS (AS REQUIRED)	NOTE A	NOTE B	N/A	NO	A–D
2	LOAD POWER TO LIGHTING CIRCUITS (AS REQUIRED)	NOTE A	NOTE B	N/A	NO	A–D
3	CONTROL POWER (DEDICATED, 20A)	3	12	N/A	NO	C, D
4	CONTROL HARNESSES (AS REQUIRED)	--	--	8*	YES*	C, D
5	COMMUNICATION CABLE (RS–485) (AS REQUIRED)	1	--	8*	YES*	C, D
6	SURGE PROTECTION DEVICE TO DISTRIBUTION PANEL	--	--	N/A	YES	D
7	SURGE PROTECTION DEVICE MONITORING	2	14	N/A	NO	D

R60–11–00_C

Notes:
A. Voltage and phasing per the notes on cover page
B. Calculate per load and voltage drop
C. Minimum conduit diameter
   a. Wire 4 requires 2" (for connector ends to pass though)
   b. Wire 5 requires 1" (for connector ends to pass though)
   c. All other conduit diameters should be per code
D. Refer to Control and Monitoring System Installation Instructions for more details on equipment information and the installation requirements.

IMPORTANT: Communication (wire # 5) and control (wire # 4) wiring must each be in separate conduits from any AC power wiring.

*Musco supplied wire harnesses are supplied in standard 8-foot lengths. Musco can provide custom lengths agreed upon by the contractor/customer and Musco's engineers within the maximum length parameters.

Control System Summary

SWITCHING SCHEDULE

Field Type	Zones	Zone Description
Baseball-Softball	1,2	Little League
Football	1,3	Football/Soccer

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 1310.0
	SEALED: 215.0

BALLAST SPECIFICATIONS .90 Minimum Power Factor	VOLTAGE: 480v		THREE PHASE					
Single Phase Voltage (Also applicable to each single phase of a 3 phase system)	120	208	240	277	347	380	415	480
1500 Watt Metal Halide Lamp Operating line amperage per fixture, max draw	15.0	8.6	7.5	6.5	5.1	4.7	4.2	3.7
1000 Watt Metal Halide Lamp Operating line amperage per fixture, max draw	11.4	6.5	5.8	4.9	4.0	3.6	3.2	2.9

CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
A2	Little League/Football/Soccer	7	18.5	30	C1	1
F1	Little League/Football/Soccer	7	18.5	30	C2	1
F3	Little League/Football/Soccer	7	18.5	30	C3	1
A1	Little League	3	7.4	30	C4	2
F2	Football/Soccer	7	18.5	30	C5	3

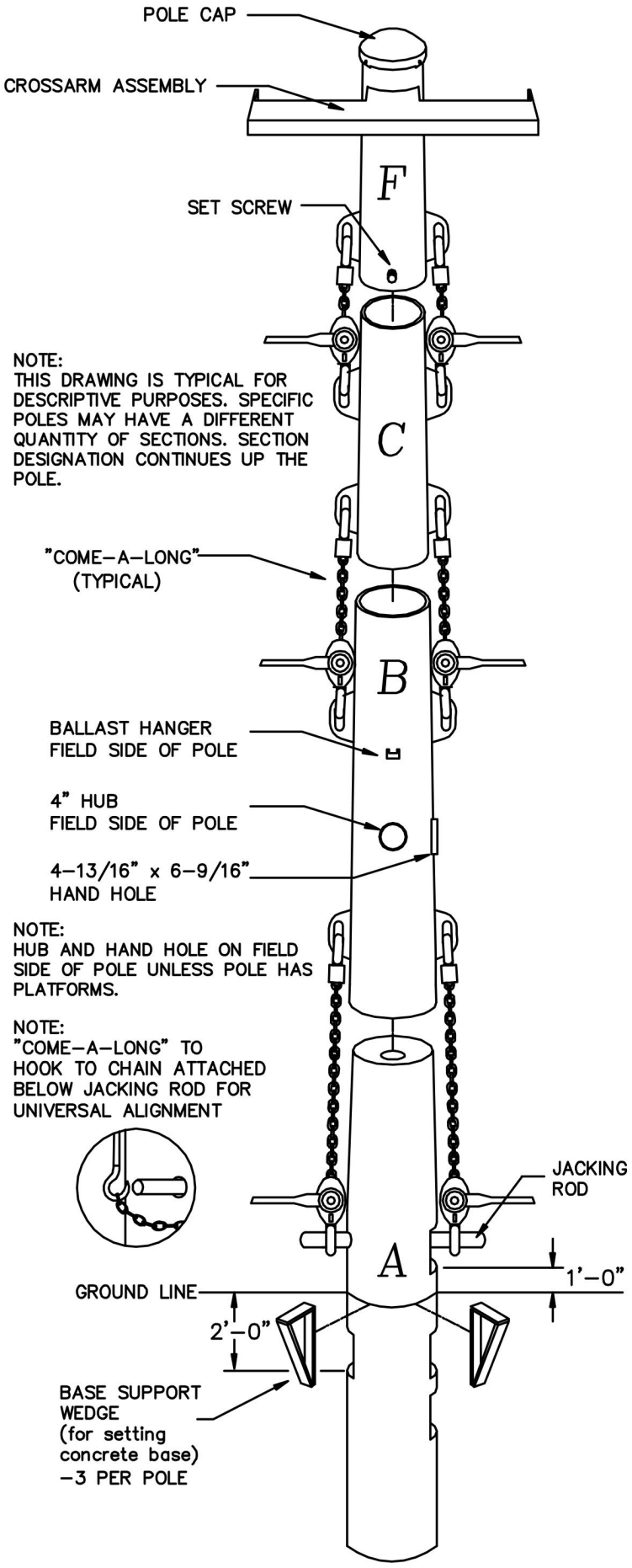
Control System Summary

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 A2	18.5		
1	1	C2	Pole F1	18.5		
1	1	C3	Pole F3	18.5		
1	1	C4	Pole A1	7.4		
1	1	C5	Pole F2	18.5		

ZONE SCHEDULE

			CIRCUIT DESCRIPTION	
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	POLE ID	CONTACTOR ID
Zone 1	1	Little League/Football/Soccer	A2 F1 F3	C1 C2 C3
Zone 2	2	Little League	A1	C4
Zone 3	3	Football/Soccer	F2	C5



			WEIGHT		BURIAL			
POLE	MTG HT. (ft)	NBR FXT	CONC BASE (lbs)	DRESSED POLE (lbs)	HOLE DIA (in)	HOLE DPTH (ft)	BUR DPTH (ft)	BACK FILL (yd^3)
A1	60	3	1870	965	30	10	10	1.5
A2	70	7	2770	1906	30	12	12	1.7
F1	70	7	2770	1906	30	12	12	1.7
F2	70	7	2770	1906	30	12	12	1.7
F3	70	7	2770	1906	30	12	12	1.7

Preliminary Information - Foundation requirements should be confirmed prior to installation.

Note: Design standard IBC wind zone 90 mph.

Backfill - concrete needed for backfill is 3000PSI minimum strength.

Foundation design based on UBC or IBC class 5 strength soils.

Refer to Structural foundation designs or jacking drawings for final installation details.

Steel shaft weight is the dressed pole weight.

NOTE:

1: Come-a-longs" not supplied by Musco unless ordered for the Project

DPR_Trinidad Recreation Center
Washington, DC USA

By:	Scale:	Date: 09/30/2010
Rep: TPaddy		Nbr: 137006
Order:		Rev:

MUSCO SPORTS-LIGHTING, INC.