



Agenda Item # 03A

VILLAGE OF ROYAL PALM BEACH

Agenda Item
Summary

AGENDA ITEM:

Approval and authorization for the Village Manager to execute Change Order #1 for Lighting at Royal Palm Beach Commons Park with Davco Electrical Contractors Corp. The cost for said services shall not exceed \$121,356.66 and funds will come from project PR1903 Commons Park Lighting.

ISSUE:

Permanent lighting of the dog park and overflow parking lots on both sides of the sporting center is needed to increase safety for residents at night and will reduce temporary lighting costs for special events. This contract will be for the installation of Musco Sports Lighting system; including the steel poles and energy-saving LED light fixtures.

Currently Davco Electrical Contractors Corp (Davco) is the contractor for a similar Lighting Project at Bob Marcello Park; PR1806 Baseball and PR1720 Tennis Courts. After receiving a quote for the installation by the Manufacturer, Davco was less expensive.

The sports lighting equipment installation was competitively bid by the Village of Royal Palm Beach and The Village intends to provide a change order to the said contract (attached as exhibit A). The proposed change order is to coordinate the delivery to Commons Park with the manufacturer and fully install the lighting system per the plans and specifications, including restoration of areas disturbed by construction.

Purchase and delivery of sports lighting and a 25 year maintenance / warranty plan for the Commons Park parking lot expansion project will be under a separate agreement.

Funds to come from Project: PR1903, Account No. 301-7200-572.63-90.

RECOMMENDED ACTION:

Staff recommends a motion to approve.

Initiator:	Village Manager	Agenda Date:	Village Council
	Approval:		Action:
Village Engineer		7/16/2020	

CHANGE ORDER

Date of Issuance 05/29/20

Effective Date 5/29/2020

No. 1

Owner	<u>Village of Royal Palm Beach</u>	
Contractor	<u>Davco Electrical Contractors</u>	
Contract		
Project	<u>Bob Marcello Baseball & Tennis Lighting</u>	
Owner's Contract No.		Engineer's Contract No. <u>PR1806 & PR1720</u>
Engineer	<u>Christopher Marsh, P.E.</u>	

You are directed to make the following changes in the Contract Documents:

DESCRIPTION:

1) Add 60 contract days and \$121,356.66 to install a complete Musco Lighting System at Commons Park. The Village will purchase the Musco components directly from the manufacturer. The contractor shall coordinate the delivery to the site with the manufacturer. The contractor shall secure the Musco components on site. Any components stolen or vandalized shall be replaced at the contractor's expense. The contractor shall fully install the lighting system per the plans and specifications, including restoration of areas disturbed by construction.

REASON FOR CHANGE ORDER:

1) This change order will provide permanent lighting for the future expansion of the parking lots in front of the dog park and the northeast of the Sporting Center to meet the growing demand of Commons Park. The future parking improvements will increase access to existing facilities and paved drive isles to allow for convenient grass overflow parking during events.

ATTACHMENTS: (List Documents)

Cost Tabulation Sheet and Release of Claims, Plans and Specs

CHANGE IN CONTRACT PRICE	
Original Contract Price	<u>\$212,762.00</u>
Net Increase (decrease) from previous CO	<u>0</u> to <u>0</u> \$0.00
Contract Price prior to this Change Order	<u>\$212,762.00</u>
Net increase (decrease) of this Change Order	<u>\$121,356.66</u>
Contract Price with all approved CO	<u>\$334,118.66</u>

CHANGE IN CONTRACT TIMES	
Original Contract Times	
Substantial Completion	<u>10/30/20</u>
Ready for final payment	<u>11/29/20</u>
Net changes from previous Change Orders	<u>0</u> to <u>0</u>
Substantial Completion	<u>0</u>
Ready for final payment	<u>0</u>
Contract Times prior to Change Order	
Substantial Completion	<u>10/30/20</u>
Ready for final payment	<u>11/29/20</u>
Net increase (decrease) this Change Order	
Substantial Completion	<u>60</u>
Ready for final Payment	<u>60</u>
Contract times with all approved Change Orders	
Substantial Completion	<u>12/29/20</u>
Ready for final payment	<u>01/28/21</u>

RECOMMENDED	APPROVED
By: _____	By: _____
Date _____	Date _____

ACCEPTED (Contractor)
 By: Mark Komar
 Date: June 4, 2020

Village of Royal Palm Beach, FL
 Engineering Department
 Bob Marcello Baseball & Tennis Lighting-
 5/29/2020

Change Order 1 - Cost Tabulation

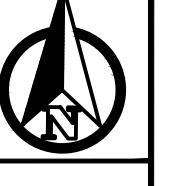
Item No.	Description	Unit	Quantity	Unit Price	Total Value	Days
CO1-101-1a	Mobilization	LS	1	\$6,963.12	\$6,963.12	
CO1-102-1	MOT (Pedestrian only)	LS	1	\$1,227.02	\$1,227.02	
CO1-110-1-1	Clearing & Grubbing	LS	1	\$1,227.02	\$1,227.02	
CO-1-715-RPB-2	Coordinate Delivery, Insure Security, and Install Musco Commons Field Sports Lighting System; Complete	LS	1	\$46,282.89	\$46,282.89	
CO-1-630-RPB-2a	Commons Field Lighting Electrical; Complete - Switchgear Install	LS	1	\$3,000.00	\$3,000.00	
CO-1-630-RPB-2b	Commons Field Lighting Electrical; Complete - Branch Circuit Wiring Complete	LS	1	\$12,800.00	\$12,800.00	
CO-1-630-RPB-2c	Commons Field Lighting Electrical; Complete - 2" Directional Bore Underground Conduit	LS	1	\$24,693.36	\$24,693.36	
CO-1-630-RPB-2d	Commons Field Lighting Electrical; Complete - #6 gauge wire	LS	1	\$18,349.92	\$18,349.92	
CO-1-RPB-1j	Electrical Pull Boxes H20 rated	LS	1	\$6,813.33	\$6,813.33	
Totals					\$121,356.66	60

CONTRACTOR'S RELEASE OF CLAIMS

BE IT KNOWN THAT Davco Electrical Contractors (hereinafter referred to as "Contractor"), in exchange for good and valuable consideration, the receipt and sufficiency of which is acknowledged, hereby agrees as follows: (1) Change Order No.1 constitutes a full and final settlement of any and all claims, demands or causes of action of every kind and character, in law or equity, that Contractor now has, has had, or may hereafter have against the Village of Royal Palm Beach (hereinafter referred to as the "Village") that relate to or arise from, directly or indirectly, the work or items described in Change Order No.1, that relate to or arise from, directly or indirectly, the work or items described in Change Order Proposal No. 1 and that relate to or arise from, directly or indirectly, the Contract between Contractor and the Village and which accrued prior to the execution of Change Order No.1 (collectively referred to as the "Released Claims"); (2) the Released Claims include, but are not limited to, those claims, demands or causes of action for additional compensation relating to materials, labor, services, overhead and profit, for direct and indirect costs associated with any change order work, for adjustments to the contract price and/or contract time, and for all forms of damages, prejudgment interest, and costs and attorney's fees; and (3) Contractor does hereby remise, release, acquit, satisfy and forever discharge the Village, its officers, agents, attorneys, trustees, and employees, of and from any and all Released Claims, and does hereby waive its right to pursue such Released Claims.

Contractor Signature:  Title: Vice President

Print Name: Mark Komar Date: June 4, 2020



DESIGNED BY: SPH
 DRAWN BY: SPH
 REVIEWED BY: LMS

DATE: APRIL 2020
 SHEET: E-1 OF 6

By	Date	Revision Description

ROYAL PALM COMMONS PARK
 MUSCO PARKING LOT LIGHTING
 SITE LIGHTING PLAN

Village of Royal Palm Beach
 Planning & Engineering
 1000 Royal Palm Beach Boulevard
 Royal Palm Beach, FL 33411
 Phone: 561-616-3911 Fax: 561-616-3912

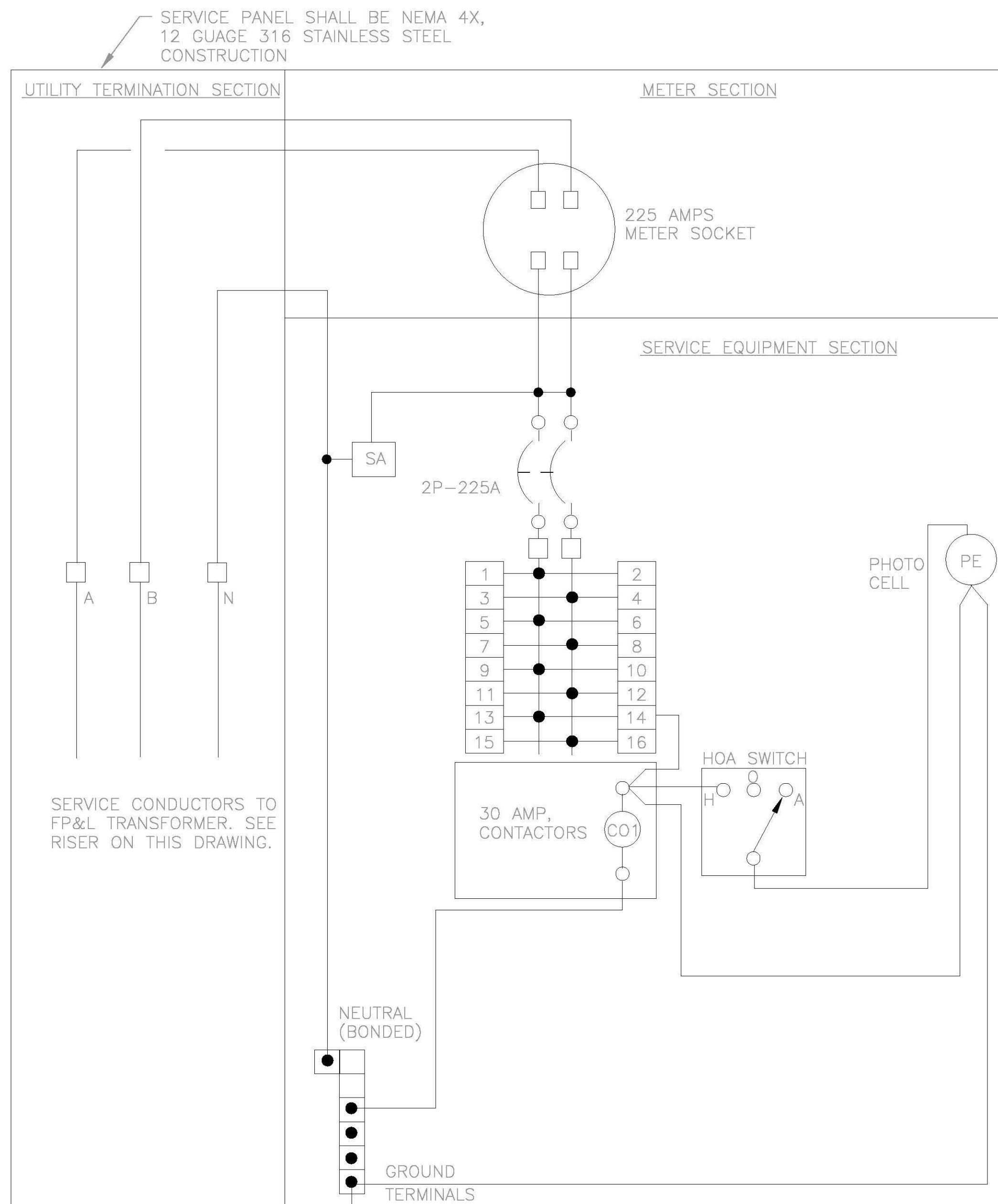
SEC 2020\200005 ROYAL PALM BEACH- COMMONS PARK PARKING LOT LIGHTING\ELECTRICAL DWGS - MUSCO\202005-E1.DWG 5/22/2020



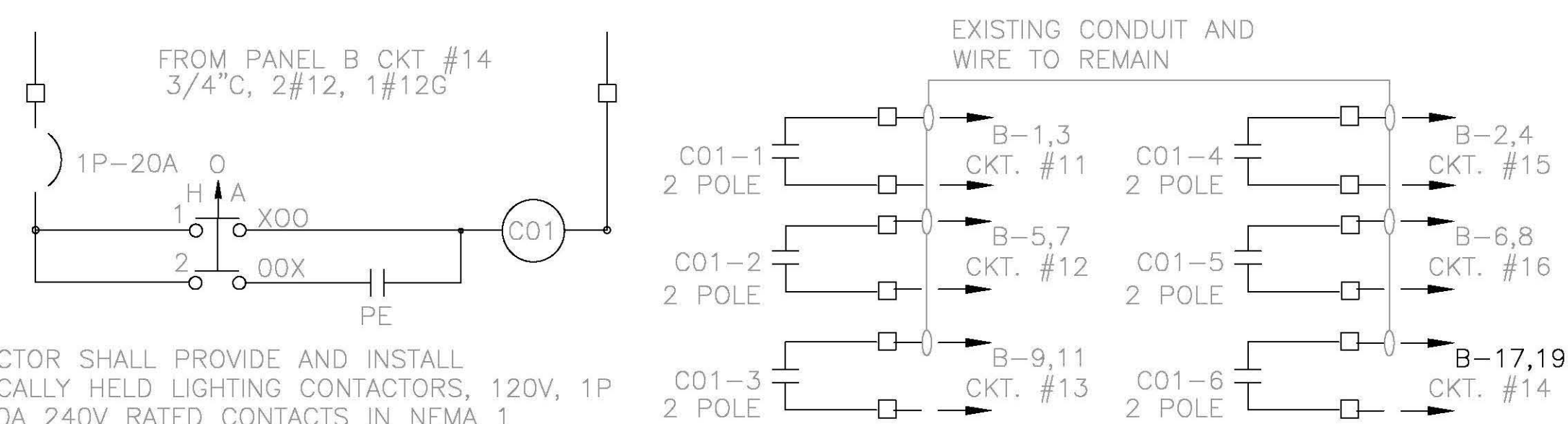
KEY NOTES

- ① 6#6, 1#6EG, 2" C
- ② 10#6, 1#6EG, 2" C
- ③ 4#6, 1#6EG, 2" C
- ④ CONTRACTOR SHALL PROVIDE AND INSTALL NEW MUSCO CONTROL PANEL MOUNTED ON CONCRETE SLAB. SEE DETAIL ON SHEET E-3.
- ⑤ CONTRACTOR SHALL CONNECT NEW CONDUIT INTO EXISTING PULL BOX FOR A COMPLETE WORKING SYSTEM IN PLACE.

SEC Smith Engineering
 Consultants, Inc.
 State Auth. #8228
 2161 Palm Beach Lakes Blvd., Suite 312
 West Palm Beach, FL 33409
 (561) 616-3911 Fax (561) 616-3912
 www.smithengineeringconsultants.com



EXISTING SERVICE POINT 'B' RISER DIAGRAM
120/240V, 1PHASE, 3 WIRE



EXISTING ROADWAY LIGHTING CONTROL SCHEMATIC
SCALE: NONE

CONTRACTOR SHALL PROVIDE AND INSTALL ELECTRICALLY HELD LIGHTING CONTACTORS, 120V, 1P COIL, 30A 240V RATED CONTACTS IN NEMA 1 ENCLOSURE. MAKE ALL NECESSARY CONNECTIONS FOR A COMPLETE WORKING SYSTEM IN PLACE.

EXISTING LOAD CENTER B SCHEDULE

BUS AMPS		LOAD	POLES	AMPS	BUS		AMPS	POLES	LOAD	BUS AMPS	
A	B				A	B				A	B
8.0	8.0	LIGHTING CIRCUIT #11	2	30	1	2	30	2	LIGHTING CIRCUIT #15	8.0	8.0
		↓							↓		
8.0	8.0	LIGHTING CIRCUIT #12	2	30	3	4	30	2	LIGHTING CIRCUIT #16	8.0	8.0
		↓							↓		
8.0	8.0	LIGHTING CIRCUIT #13	2	30	5	6	30	2	LIGHTING CIRCUIT	8.0	8.0
		↓							↓		
6.0	6.0	GFCI POLE RECEPTACLES	1	20	7	8	30	2	LIGHTING CIRCUIT	8.0	8.0
		↓							↓		
8.0	8.0	LIGHTING CIRCUIT #14	2	30	9	10	20	1	PHOTO CELL/CONTACTOR	2.0	7.5
		↓							↓		
2.0	2.0	LIGHTING	2	20	11	12	20	1	GFCI OUTDOOR RECEPTACLES	7.5	7.5
		↓							↓		
3.5	3.5	WALKWAY LIGHTING CIRCUIT (P3, P5, P6, P8)	2	30	13	14	20	1	GFCI OUTDOOR RECEPTACLES	7.5	7.5
		↓							↓		
5.9	5.9	PARKING LOT LIGHTING CIRCUIT (P3)	2	30	15	16	20	1	GFCI OUTDOOR RECEPTACLES	7.5	7.5
		↓							↓		
8.8	8.8	PARKING LOT LIGHTING CIRCUIT (P5)	2	30	17	18	20	1	GFCI OUTDOOR RECEPTACLES	7.5	7.5
		↓							↓		
		SPACE			19	20	30	2	LIGHTING CIRCUIT	8.0	8.0
		SPACE			21	22	30	2	LIGHTING CIRCUIT (P6)	8.8	8.8
		SPACE			23	24	30	2	LIGHTING CIRCUIT (P8)	5.9	5.9
		SPACE			25	26	30	2			
		SPACE			27	28	30	2			
		SPACE			29	30	30	2			
		SPACE			31	32	30	2			
		SPACE			33	34	30	2			
		SPACE			35	36	30	2			
		SPACE			37	38	30	2			
		SPACE			39	40	30	2			
		SPACE			41	42	30	2			

TOTAL AMPS: BUS A 121.9 BUS B 119.9 CONNECTED Kva 29.0

RATED VOLTAGE: 120/240 1 PHASE, 3 WIRE BRANCH POLES 16 20 30 42

RATED AMPS: 200 225 400 CABINET: SURFACE FLUSH

NEUTRAL BUS 100% 150% 200% GROUND BUS HINGED DOOR KEYPAD DOOR KEYPAD DOOR LATCH LOCATION: _____

CIRCUIT BREAKER (BOLT-IN) BRANCH DEVICES TVSS ENCLOSURE TYPE NEMA 1 NEMA 3R NEMA 4X _____

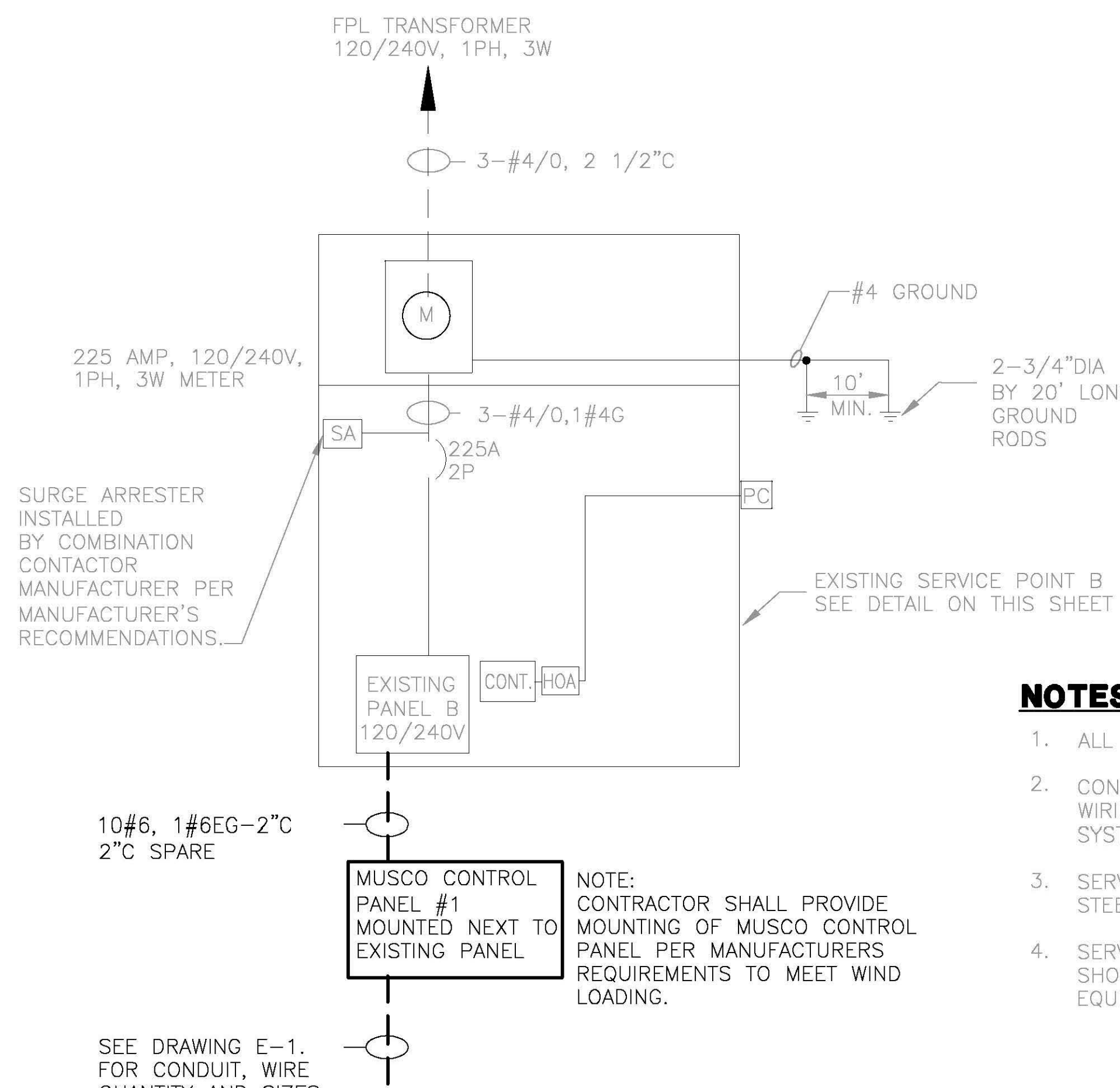
MAIN LUGS ONLY MAIN _____ AMPS BREAKER TO BE GFI BREAKERS

PANELBOARD MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF _____ 24,000 AMPS SYMMETRICAL.

APPROVED MFRS. SQUARE D, GE, CUTLER-HAMMER, COPPER BUSSES MAIN LUGS _____ SETS SIZE: _____

KEYED NOTES

- 1 CONTRACTOR SHALL PROVIDE AND INSTALL NEW 2 POLE, 30 AMP CIRCUIT BREAKER. VERIFY EXISTING PANEL AIC RATING AND MATCH.



EXISTING SERVICE POINT 'B' ONE LINE DIAGRAM
120/240V, 1 PHASE, 3 WIRE

NOTES:

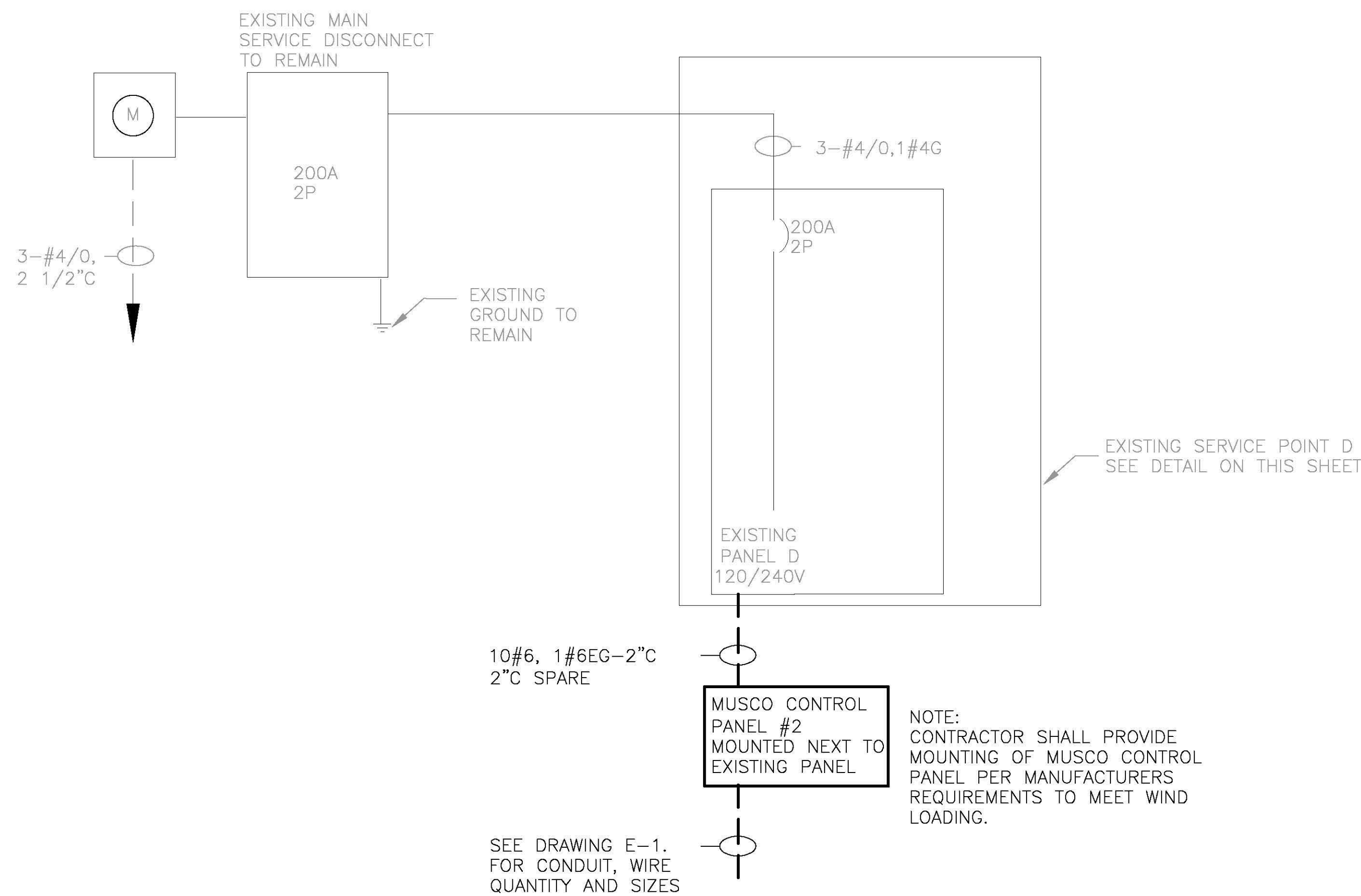
- ALL INTERIOR WIRING SHALL BE SIZE AS PER NEC CODE.
- CONTRACTOR SHALL PROVIDE ALL CIRCUIT BREAKERS, INTERIOR WIRING, GROUNDING RODS, ETC. FOR A COMPLETE WORKING SYSTEM IN PLACE.
- SERVICE POINT CABINET SHALL BE NEMA 4X, 316 STAINLESS STEEL.
- SERVICE POINT CABINET SHALL BE BUILT BY AN APPROVED UL SHOP AND CARRY A UL LABEL ON THE PANEL AND EQUIPMENT.

SERVICE POINT 'B' DATA

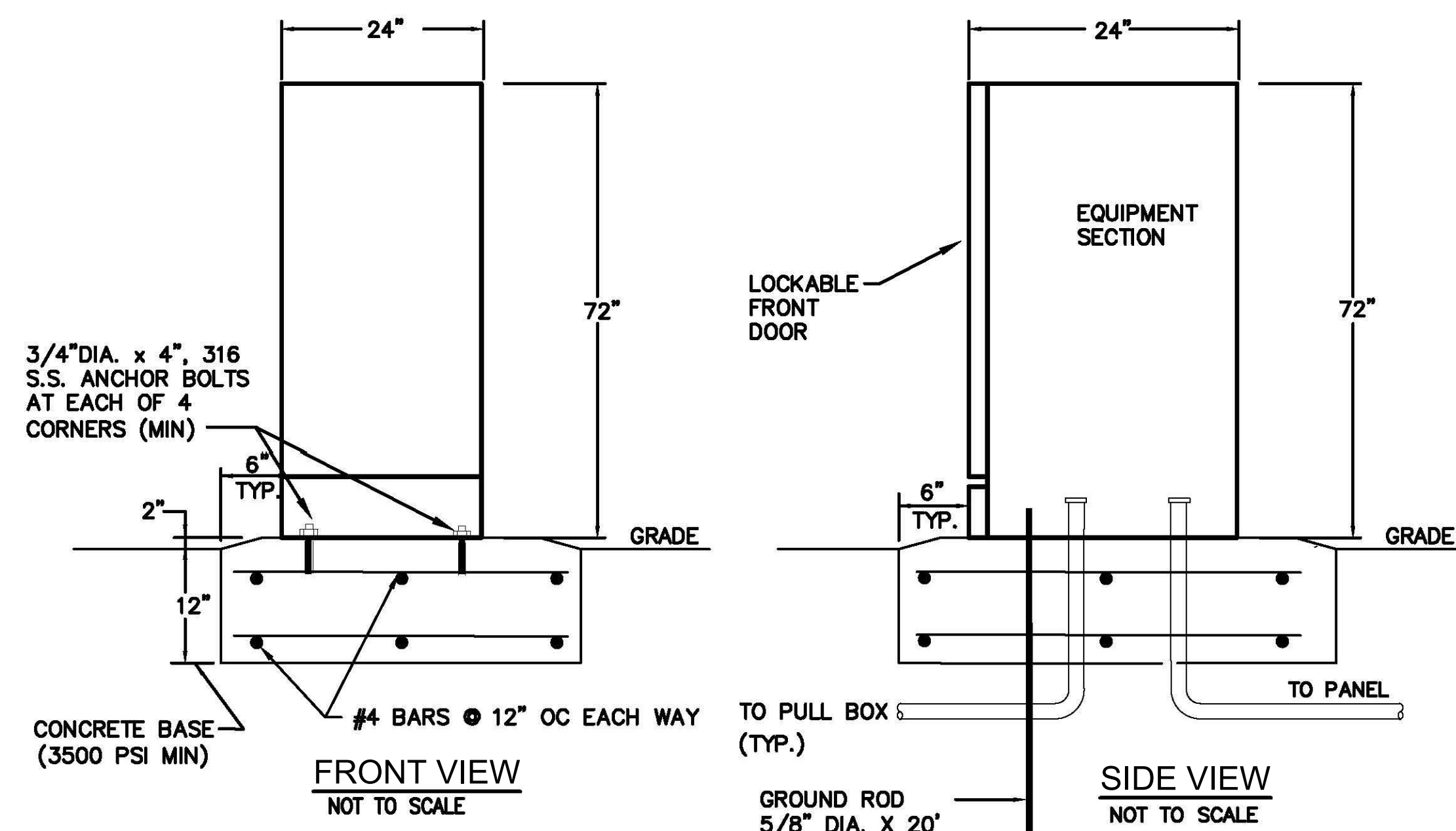
DESCRIPTION	TOTAL AMPS	TOTAL KVA
EXISTING LIGHTING LOAD	89.6	21.5
NEW LIGHTING LOAD	32.9	7.9

SERVICE CALCULATION
(122.5A X 1.25) = 153.1A
225A MAIN BREAKER

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EXISTING SERVICE POINT 'D' RISER DIAGRAM
120/240V, 1PHASE, 3 WIRE



MUSCO CONTROL PANEL DETAIL
NOT TO SCALE

NOTE: CONTRACTOR SHALL SUBMIT ALONG WITH THE MUSCO CONTROL PANEL SHOP DRAWINGS, DETAIL DRAWINGS FOR THE CONCRETE PAD SHOWING REQUIRED STEEL REBAR TO MEETING THE WIND LOADING NOTE ON THIS SHEET.

EXISTING LOAD CENTER D SCHEDULE

BUS AMPS		LOAD	POLES	AMPS	BUS		AMPS	POLES	LOAD	BUS AMPS	
A	B				A	B				A	B
5.0		LIGHTING	1	20	1	2	30	2	PARKING LOT LIGHTING CIRCUIT (P1)	5.9	
	5.0	LIGHTING	1	20	3	4	1	1	┆		5.9
5.0		LIGHTING	1	20	5	6	30	2	PARKING LOT LIGHTING CIRCUIT (P2)	5.9	
	5.0	LIGHTING	1	20	7	8	1	1	┆		5.9
3.5		GFCI POLE RECEPTACLES	1	20	9	10	30	2	DOG PARK LIGHTING CIRCUIT (P1)	5.9	
	3.5	GFCI POLE RECEPTACLES	1	20	11	12	1	1	┆		5.9
		SPACE			13	14	30	2	DOG PARK LIGHTING CIRCUIT (P2)	5.9	
		SPACE			15	16	1	1	┆		5.9
		SPACE			17	18	30	2	PATHWAY LIGHTING CIRCUIT (P1 & P2)	3.5	
		SPACE			19	20	1	1	┆		3.5
		SPACE			21	22			SPACE		
		SPACE			23	24			SPACE		
		SPACE			25	26			SPACE		
		SPACE			27	28			SPACE		
		SPACE			29	30			SPACE		
		SPACE			31	32			SPACE		
		SPACE			33	34			SPACE		
		SPACE			35	36			SPACE		
		SPACE			37	38			SPACE		
		SPACE			39	40			SPACE		
		SPACE			41	42			SPACE		

TOTAL AMPS: BUS A_40.6_ BUS B_40.6_ CONNECTED Kva_ 9.7_

RATED VOLTAGE: 120/240 1 PHASE, 3 WIRE BRANCH POLES 16 20 30 42

RATED AMPS: 200 225 400 _____ CABINET: SURFACE FLUSH

NEUTRAL BUS 100% 150% 200% _____ GROUND BUS HINGED DOOR KEYED DOOR LATCH LOCATION: _____

CIRCUIT BREAKER (BOLT-IN) BRANCH DEVICES TVSS ENCLOSURE TYPE NEMA 1 NEMA 3R NEMA 4X _____

MAIN LUGS ONLY MAIN _____ AMPS BREAKER _____ TO BE GFI BREAKERS

PANELBOARD MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF _____,000 AMPS SYMMETRICAL.

APPROVED MFR'S. SQUARE D, GE, CUTLER-HAMMER, _____ COPPER BUSSES MAIN LUGS _____ SETS SIZE: _____

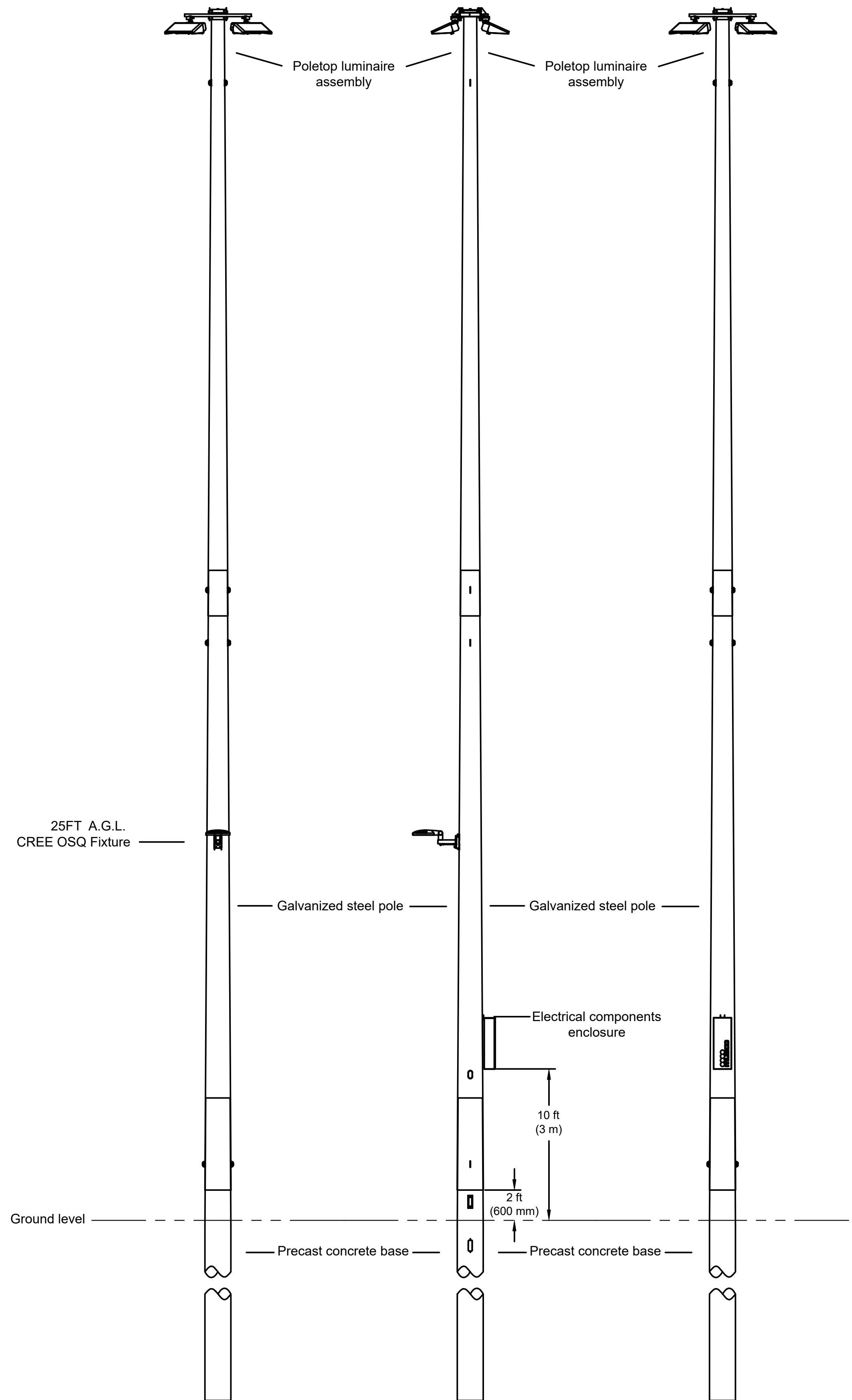
KEYED NOTES

1 CONTRACTOR SHALL PROVIDE AND INSTALL NEW 2 POLE, 30 AMP CIRCUIT BREAKER. VERIFY EXISTING PANEL AIC RATING AND MATCH.

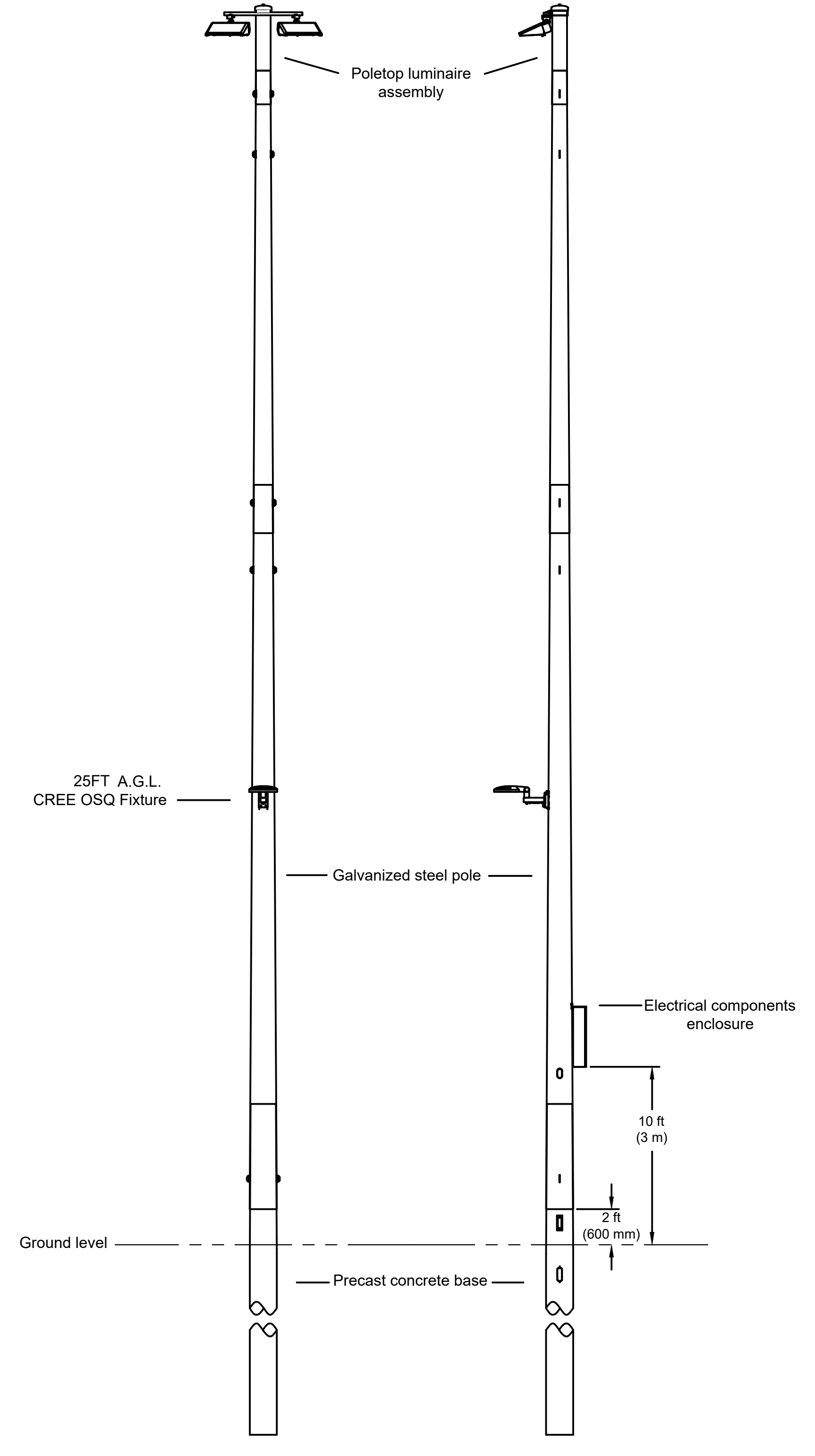
SERVICE POINT 'D' DATA

DESCRIPTION	TOTAL AMPS	TOTAL KVA
EXISTING LIGHTING LOAD	13.5	3.2
NEW LIGHTING LOAD	27.1	6.5

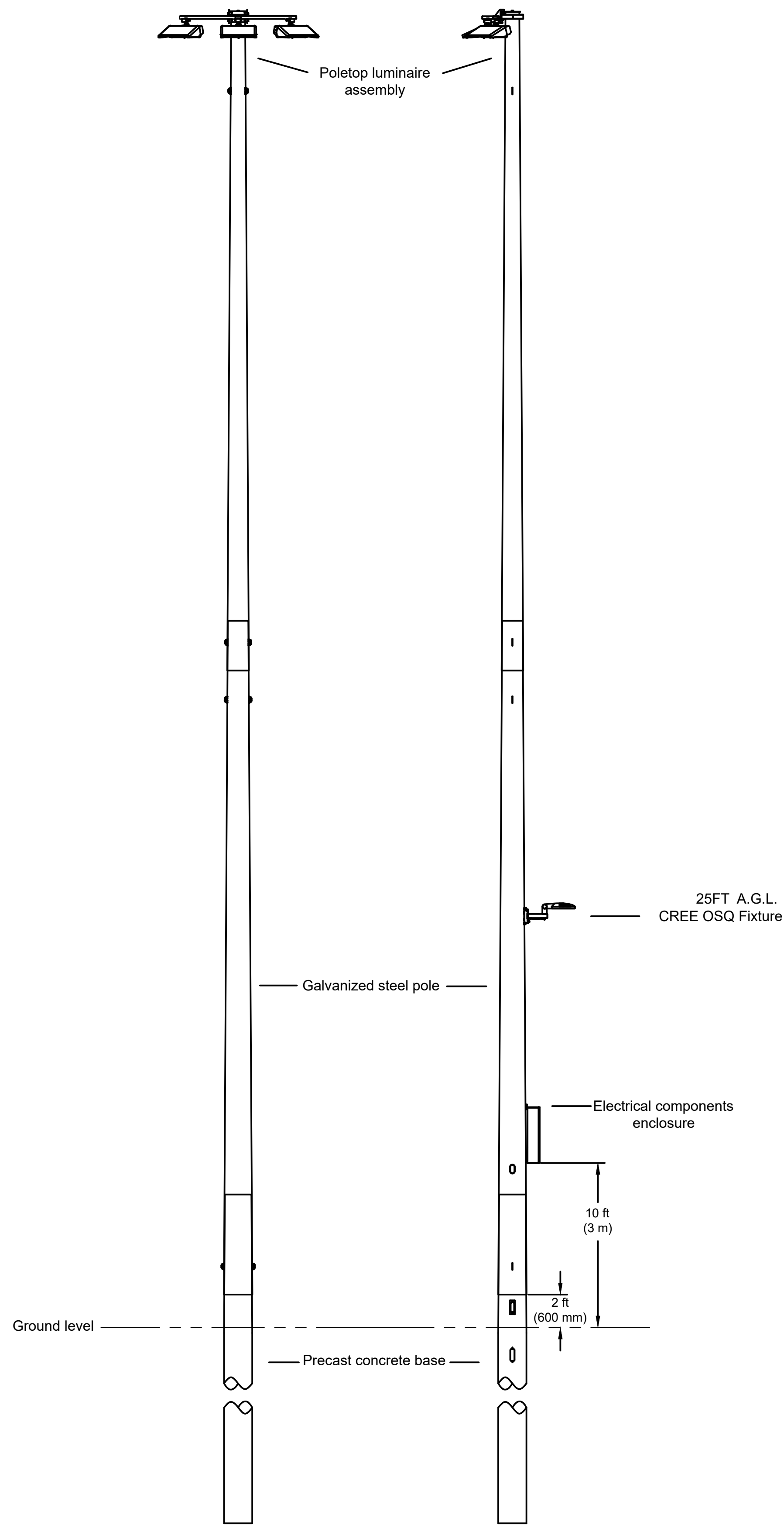
SERVICE CALCULATION
(40.6A X 1.25) = 50.75A
200A MAIN BREAKER



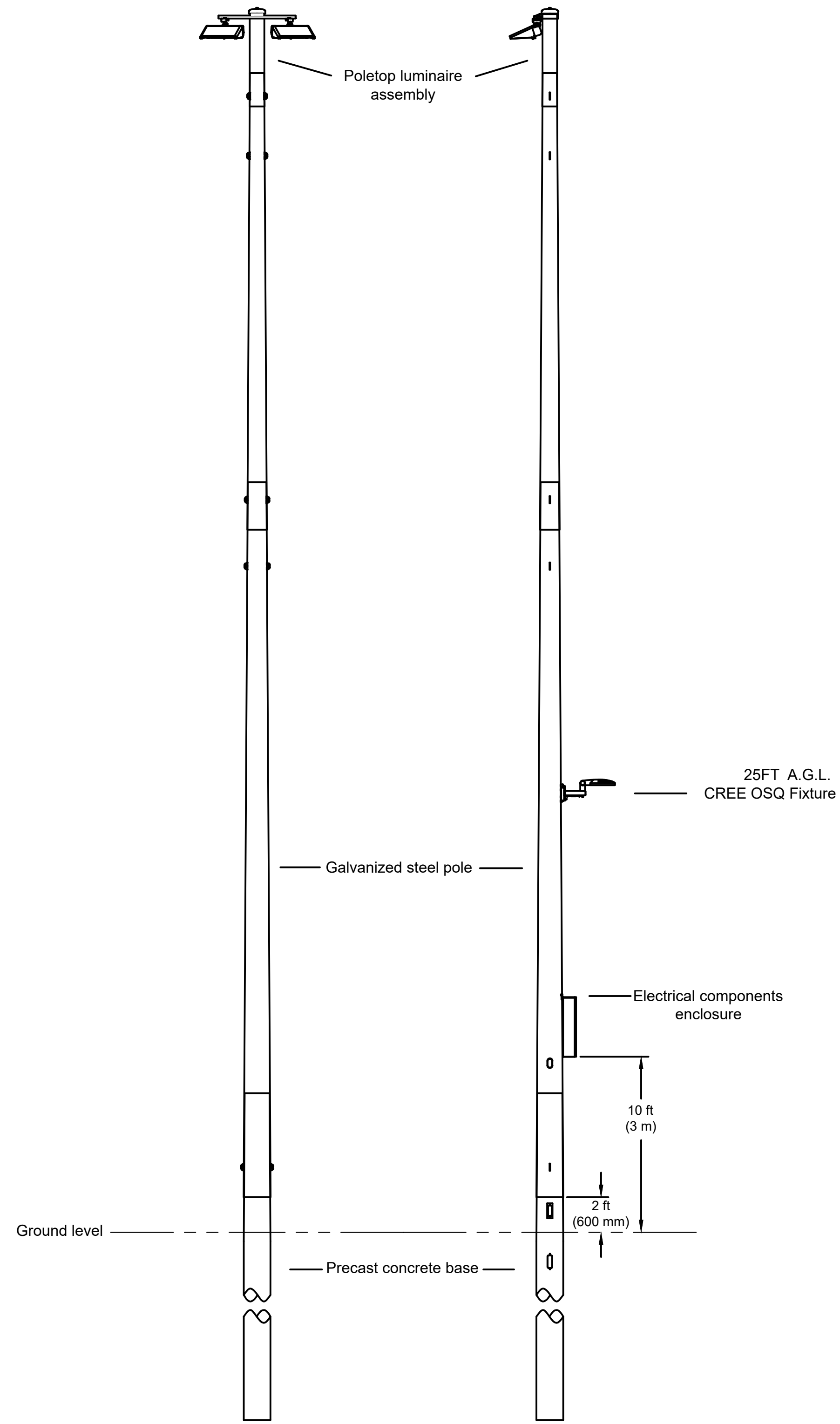
POLE(S): P1, P2
 Musco 80FT Light-Structure System™ pole
 TLC for LED™ luminaires



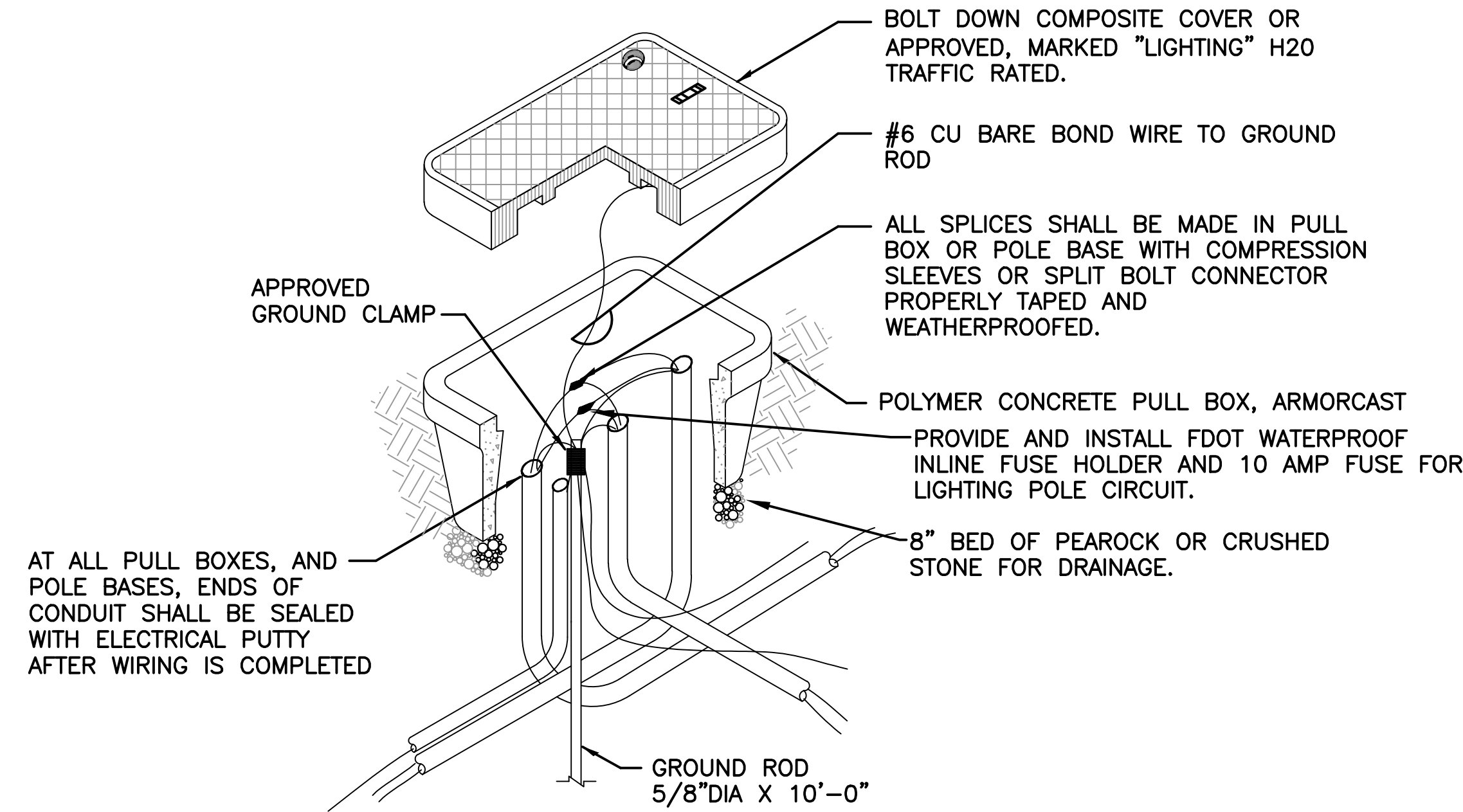
POLE(S): P3
 Musco 70FT Light-Structure System™ pole
 TLC for LED™ luminaires



POLE(S): P5, P6
 Musco 80FT Light-Structure System™ pole
 TLC for LED™ luminaires



POLE(S): P8
 Musco 70FT Light-Structure System™ pole
 TLC for LED™ luminaires


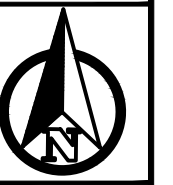
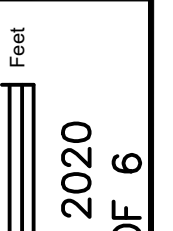


ELECTRICAL PULL BOX DETAIL
N.T.S.

NOTE: PULL BOX SHALL BE INSTALLED AT EACH LIGHT POLE, ON EACH SIDE OF ROADWAY CROSSINGS AND AS NEEDED FOR PULLING DISTANCE WHETHER SHOWN ON PLAN OR NOT.

GENERAL ELECTRICAL NOTES AND SPECIFICATIONS:

1. CONDUCTOR AND/OR CABLE SHALL BE HOUSED IN 2" SCHEDULE 40 CONDUIT AS SHOWN ON APPROVED PLAN SHEETS. PROVIDE ONE SPARE CONDUIT FOR EACH ROADWAY CROSSING. EACH SPARE CONDUIT SHALL BE SUPPLIED WITH PULL STRING.
2. CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND MARK UNDERGROUND FACILITIES PRIOR TO EXCAVATION.
3. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET THE MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN THE MANUFACTURER'S REQUIREMENTS.
4. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE ADOPTED LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE AND THE STATE OF FLORIDA BUILDING CODE. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS.
5. IN LOCATIONS WHERE UNDERGROUND UTILITIES ARE IN CLOSE PROXIMITY TO LIGHTING POLES OR CONDUIT RUNS, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL HAND DIG THE FIRST 4' OF THE HOLE FOUNDATION AND CONDUIT RUN.
6. THE WIRES AT THE POLE HAND HOLES AND PULL BOXES SHALL BE LOOPED IN THE POLE AND PULL BOXES WITH SUFFICIENT LENGTH TO COMPLETELY REMOVE CONNECTORS AND SPLICES ONE (1.00) FOOT OUTSIDE THE HAND HOLE AND PULL BOXES TO MAKE CONNECTIONS AND SPLICES ACCESSIBLE FOR CHANGING FUSES AND TROUBLESHOOTING THE SYSTEM.
7. ALL CONDUCTOR AND/OR WIRE CONNECTIONS SHALL BE BUTT SPLICED AND WATERPROOF. WIRE NUTS WILL NOT BE ACCEPTED.
8. EACH POLE SHALL BE EQUIPPED WITH AN ACCESSIBLE FUSE AND WATER PROOF FUSE HOLDER WITH PROTECTIVE BOOTS. FUSE SHALL BE SIZED ACCORDING TO THE LOAD AT THE POLE AND THE NEC.
9. EACH POLE SHALL BE EQUIPPED WITH A LIGHTNING SURGE ARRESTOR (SURRESTOR) THAT IS PROPERLY GROUNDED.
10. A PULL BOX SHALL BE INSTALLED AT EACH POLE LOCATION. PULL BOX SHOULD BE LOCATED 2' MAX FROM POLE UNLESS OTHERWISE DIRECTED BY PROJECT ENGINEER. EACH PULL BOX SHALL BE SUPPLIED WITH A GROUNDING ROD AND EACH POLE SHALL BE PROPERLY GROUNDED.
11. ALL LIGHTING PULL BOXES SHALL BE ARMORCAST PRODUCTS COMPANY #A6001946TAPXX12 POLYMER CONCRETE BOX WITH NON-METALLIC LID AND NON-SKID SURFACE. LID MUST BE STAMPED "LIGHTING". BOX DIMENSIONS ARE 13W X 24L X 12H. 20K WITH OPEN BOTTOM. LID MUST BE FASTENED TO BOX.
12. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND ALL EXISTING UTILITIES, INCLUDING OVERHEAD POWER LINES.
13. LOCATIONS OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION.
14. CONTACT SUNSHINE ONE CALL OF FLORIDA AT 811 OR SUNSHINE811.COM AT LEAST TWO (2) FULL BUSINESS DAYS BEFORE DIGGING.
15. THE LIGHTING SYSTEM WILL BE MAINTAINED BY THE CITY ONLY AFTER FINAL ACCEPTANCE.
16. ALL LIGHTING PLANS, SUBMITTAL DATA AND LIGHTING SHOP DRAWINGS SHALL BE APPROVED BY VILLAGE OF ROYAL PALM BEACH PRIOR TO THEIR USE. NO CHANGES TO THE APPROVED LIGHTING PLAN, EQUIPMENT SPECIFICATIONS OR INSTALLATION DETAILS SHALL BE MADE WITHOUT PRIOR APPROVAL BY VILLAGE OF ROYAL PALM BEACH.
17. ALL POLE INSTALLATIONS SHALL BE SUITABLE FOR WIND LOADING OF 170MPH MINIMUM OR AS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE. THE CONTRACTOR SHALL INCLUDE WITH THE SHOP DRAWING SUBMITTAL, A POLE WIND LOADING CALCULATION SEALED BY A STRUCTURAL ENGINEER REGISTERED IN FLORIDA SHOWING THAT THE PROPOSED INSTALLATION WILL MEET THE WIND LOADING REQUIREMENT.
18. MINIMUM BURIAL DEPTH OF CONDUIT SHALL BE 24 INCHES AND 36 INCHES UNDER PAVED SURFACES. 3" WIDE ELECTRICAL CAUTION TAPE SHALL BE INSTALLED 8" BELOW GRADE ABOVE ALL ELECTRICAL CONDUITS.
19. CONDUCTORS SHALL BE COPPER WITH THHN/THWN INSULATION, RATED 600V. SIZES SHOWN ARE MINIMUM. MINIMUM SIZE SHALL BE #12 AWG AND 3/4-INCH CONDUIT UNLESS OTHERWISE NOTED.
20. THE CONTRACTOR SHALL PROVIDE THE REQUIRED SUPPORT SYSTEM FOR ALL ELECTRICAL EQUIPMENT. CONTRACTOR SHALL PROVIDE A DRAWING TO SCALE SHOWING THE PROPOSED SUPPORT SYSTEM. ALL INSTALLATIONS SHALL MEET THE WIND LOAD AS PER THE BUILDING CODE.
21. PROVIDE CONDUIT DUCT SEAL AT ALL CONDUIT ENDS.
22. ALL UNDERGROUND CONDUITS SHALL SCHEDULE 40 PVC AND ALL OUTDOOR EXPOSED CONDUIT SHALL BE SCHEDULE 80 PVC.
23. LIGHT POLES SHALL BE INSTALLED MIN. 5' FROM AWAY FROM WATER OR DRAINAGE PIPES. CONTRACTOR SHALL STAKE ALL LIGHTING POLE LOCATIONS AND NOTIFY THE OWNER/ENGINEER FOR APPROVAL OF LOCATIONS PRIOR TO INSTALLATIONS.
24. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING EQUIPMENT: LIGHT FIXTURES, POLES, CIRCUIT BREAKERS, PANELS, CONDUIT AND WIRE, STAINLESS STEEL HARDWARE, GROUND RODS, EXOTHERMIC WELD MATERIAL AND STANDARD MOLDS, SUBMERSIBLE CONNECTORS, IN-LINE FUSE HOLDERS AND FUSES.
25. CONTRACTOR SHALL, WITHIN 30 DAYS AFTER THE DATE OF THE SYSTEM ACCEPTANCE, PROVIDE TO THE BUILDING OWNER RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING A SINGLE LINE DIAGRAM OF THE ELECTRICAL DISTRIBUTION SYSTEM AND RELATED FLOOR PLANS INDICATING THE LOCATION AND AREA SERVED FOR THE DISTRIBUTION.
26. CONTRACTOR SHALL PROVIDE TO THE OWNER AN OPERATING AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION C405.6.4 OF THE 2017 6TH ED. FLORIDA BUILDING CODE - ENERGY CONSERVATION, INCLUDING ANY AMENDMENTS THERETO.
27. ALL PANELBOARDS, CONTROL CABINETS, DISCONNECT SWITCHES, ETC. SHALL BE LABELED WITH RAISED LABEL WITH BLACK BACKGROUND AND WHITE LETTERING.
28. ALL ELECTRICAL/LIGHTING CONDUITS SHALL HAVE MINIMUM 5'-0" SEPARATION FROM ALL UNDERGROUND UTILITIES INCLUDING LIGHT POLES (USM 16-5).
29. THESE DRAWINGS DO NOT SHOW EVERY MINOR DETAIL OF CONSTRUCTION. PROVIDE ALL ITEMS REQUIRED FOR A COMPLETE, OPERATIONAL, AND FUNCTIONAL PROJECT.
30. CONTRACTOR SHALL PAY ALL APPLICABLE FEES FOR PERMITS, INSPECTIONS, AND TESTING.
31. CORRECTION OF ANY DEFECTS OR DAMAGE TO EXISTING SYSTEMS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY PHASE OF WORK OR EXISTING SYSTEMS WHICH MAY HAVE BEEN DAMAGED.
32. CONTRACTOR SHALL PERFORM ALL WORK IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED WORK AND ALL SYSTEMS SHALL BE FULLY OPERATIONAL FOR ACCEPTANCE BY THE ENGINEER AND THE OWNER.
33. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN TWO YEARS UNLESS NOTED LONGER FROM DATE OF FINAL COMPLETION BY SPECIFICATIONS.
34. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE NOTED AND BE U.L. LISTED WHERE AVAILABLE OR LISTED BY ANOTHER CERTIFIED TESTING AGENCY.
35. ALL MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.
36. ALL LUMINAIRES AND LIGHTING POLES SHALL BE PROVIDED IN ACCORDANCE WITH DETAILS AND FIXTURE SCHEDULE. LUMINAIRES MOUNTING HEIGHT SHALL BE ABOVE GRADE AS INDICATED.
37. DO NOT SCALE ELECTRICAL DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT. VERIFY FIELD CONDITIONS AND PROVIDE ENGINEER SCALED DRAWINGS OF PROPOSED EQUIPMENT LOCATIONS FOR APPROVAL PRIOR TO INSTALLATION. PROVIDE MARKED UP AS-BUILTS AT SUBSTANTIAL COMPLETION. PROVIDE CERTIFIED AS-BUILT DRAWINGS BY LICENSED SURVEY OF ALL POLES AND UNDERGROUND CONDUIT PROVIDED BY THIS CONTRACT. PROVIDE CERTIFIED PHOTOMETRICS AS-BUILT DRAWINGS.
38. SMITH ENGINEERING CONSULTANTS IS RESPONSIBLE FOR THE DESIGN OF THE ELECTRICAL SERVICE AND DISTRIBUTION TO THE LIGHT POLES. LIGHT POLE AND FIXTURE SELECTION, POLE LOCATIONS, AND ILLUMINATION CALCULATIONS (PHOTOMETRICS) WERE PERFORMED BY OTHERS.

			DATE: APRIL 2020 SHEET: E-6 OF 6
DESIGNED BY: SPH DRAWN BY: SPH REVIEWED BY: LMS	Revision Description Date By	ROYAL PALM COMMONS PARK MUSCO PARKING LOT LIGHTING ELECTRICAL DETAILS AND GENERAL NOTES <small>MUSCO\200005-EI.DWG 5/22/2020</small>	
Village of Royal Palm Beach Planning & Engineering <small>Royal Palm Beach, FL 33411 1050 Royal Palm Beach Boulevard West Palm Beach, FL 33411-2705</small>			
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