**ELECTRICAL GENERAL NOTES:**

1. VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT.
3. ALL NEW CONDUITS, DIRECT BURIAL CABLES, JUNCTION BOXES, LUMINAIRES, AND INCIDENTALS ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF WISDOT AND THE ENGINEER.
4. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE LATEST WISDOT STANDARD SPECIFICATIONS AND LATEST EDITION OF THE NEC CODE.
5. FURNISH AND INSTALL LUMINAIRES, LAMPS, LED DRIVERS, SURGE PROTECTION, FUSES, AND OTHER SPECIFIED OPTIONS AND ACCESSORIES IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. INCLUDE THE COST OF THIS WORK AND MATERIAL IN THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
6. PERFORM ALL WORK FROM METER PEDESTAL TO THE MAIN ELECTRICAL PANEL "EP". INCLUDE FURNISHING AND INSTALLING THE SAFETY DISCONNECT SWITCH (IF REQUIRED) AND ALL ELECTRICAL PANELS, INCLUDING REMOTE PANELS (SUB-PANELS), IN THE SERVICE INSTALLATION PAY ITEM, AS NOTED ON SHEET 87.
7. DON'T WELD TO ANY STEEL ELEMENTS OF THE BOX GIRDER SYSTEMS FOR ATTACHMENT OR SUPPORT OF ELECTRICAL ITEMS.
8. REFER TO STRUCTURAL PLANS (FROM SEPARATE FABRICATION CONTRACT INCLUDED IN THIS CONTRACT SET OF PLANS) FOR PROVISIONS MADE DURING FABRICATION FOR ACCOMMODATION OF ELECTRICAL ITEMS.
9. INSTALL ELECTRICAL EQUIPMENT ON PIER FACE CLOSEST TO ELECTRICAL ACCESS HOLES IN BOX GIRDER, UNLESS OTHERWISE SHOWN. VERIFY WITH STRUCTURAL PLANS. ALSO SEE SHEET 87 FOR DETAILS.
10. LOCATION OF ELECTRIC SERVICE TRANSFORMER WILL BE DETERMINED BY THE ELECTRIC UTILITY, AND IS NOT KNOWN AT TIME OF CONTRACT LETTING. COORDINATE WITH ELECTRIC UTILITY TO PROVIDE A 1-PHASE, 3-WIRE, 120/240V ELECTRIC SERVICE. FURNISH AND INSTALL ALL ADDITIONAL EQUIPMENT AND MATERIALS NEEDED THAT IS NOT INSTALLED BY THE UTILITY TO COMPLETE THE INSTALLATION IN AN ACCEPTABLE MANNER.
11. FURNISH AND INSTALL GALVANIZED STEEL OR 304 STAINLESS STEEL SUPPORTS, HANGERS, HARDWARE, NUTS, BOLTS, AND WASHERS FOR CONDUITS, JUNCTIONS BOXES, AND RECEPTACLES. ALL THREADED HARDWARE SHALL BE STAINLESS STEEL.

LEGEND

- MAIN ELECTRICAL PANEL "EP"
- METER PEDESTAL
- ELECTRIC UTILITY TRANSFORMER
VERIFY LOCATION WITH UTILITY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-671			
DRAWN BY MAE		PLANS CK'D. DAD	
ELECTRICAL SITE PLAN B-5-671		SHEET 73 OF 96 583	

STEEL ERECTION & SITE CONSTRUCTION CONTRACT

JUNCTION BOXES, STAINLESS STEEL
NEMA 4X RATED, 27X24X12-INCH
INSIDE BOX GIRDER
TYPICAL

4" LIQUIDTIGHT FLEXIBLE
METAL CONDUIT ENTERING
EACH BOX GIRDER
(TYP.), SEE NOTE 7

EXTERNAL
ELECTRICAL
ACCESS POINT,
SEE NOTE 4
TYPICAL

ATTACH TO TOP
OF PIER

INSTALL CONDUIT ATTACHED TO
TOP OF PIER TO OPPOSITE SIDE
TO ACCESS ELECTRICAL CONDUIT
ENTRANCE HOLES IN GIRDER

CONDUIT RIGID METALLIC 4"
(GALVANIZED STEEL) PVC COATED
ATTACHED TO PIER FROM JUNCTION
BOX TO EACH BOX GIRDER
(TYP.)

29- 1/C #8, 2/C #8 GROUND,
LIGHTING AND RECEPTACLES
12-1/C #2, 4-1/C #2 GROUND
REMOTE PANEL (SUB-PANEL) FEEDERS IN
2-4" PVC CONDUITS
EMBEDDED IN STRUCTURE
SEE NOTES 7, 10

EXIT WALL WITH CONDUITS
INTO BACK, BOTTOM, OR
SIDE OF ELECTRICAL PANEL

FINISHED GROUND LINE
OPPOSITE SIDE OF PIER

FINISHED GROUND LINE
THIS SIDE OF PIER

CONDUITS OUT OF
WALL TO PANEL
SEE NOTE 8

GROUND ROD
COPPER CLAD
STEEL OR
STAINLESS STEEL
3/4" X 10'

1" RGS WITH #2 COPPER
GROUND WIRE, SEE NOTE 2

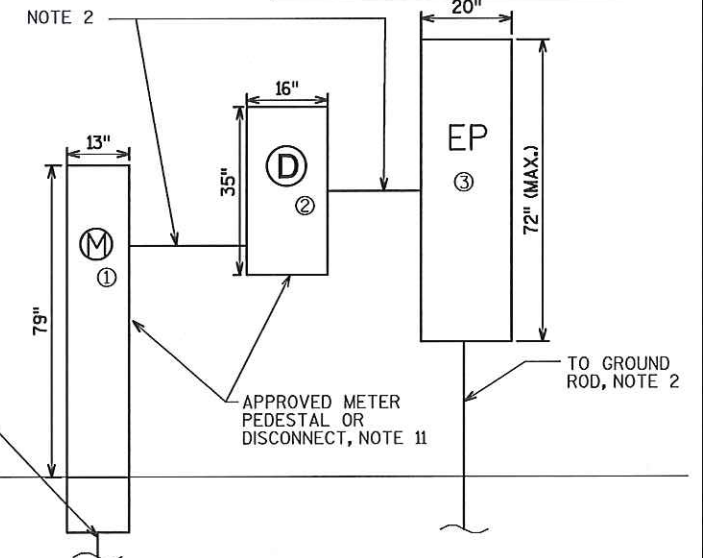
4" PVC CONDUIT TO
PVC COATED RIGID
GALVANIZED STEEL
CONDUIT ADAPTER
OR FITTING, NOTE 8

LEGEND:

- ① METER PEDESTAL, 200A, NEMA 3R, WITH MAIN BREAKER, NOTE 11
- ② SAFETY DISCONNECT SWITCH, 200A, NON-FUSIBLE, NOTE 11
- ③ MAIN ELECTRICAL PANEL, 200A, 240V/120, 1-PH, 3-W

STATE PROJECT NUMBER

1133-11-74



ELECTRICAL SERVICE EQUIPMENT DETAILS

* DIMENSIONS ARE APPROXIMATE AND VARY BY MANUFACTURER.
NOT TO SCALE

NOTES:

- FURNISH AND INSTALL NEMA 4X RATED STAINLESS STEEL OUTDOOR CABINETS AND ENCLOSURES, WHEN AVAILABLE. ALL CABINETS MUST HAVE PAD-LOCKING PROVISIONS.
- FURNISH AND INSTALL ALL MATERIALS, EQUIPMENT, AND INCIDENTALS NEEDED TO CONNECT THE SERVICE FROM THE METER PEDESTAL TO THE MAIN ELECTRICAL PANEL "EP" AND TO REMOTE PANELS (SUB-PANEL) AS PART OF PAY ITEM FOR "ELECTRICAL SERVICE INSTALLATION B-5-671". THAT PAYMENT INCLUDES THE APPROVED METER PEDESTAL, ALL ELECTRICAL PANELS INCLUDING REMOTE PANELS (SUB-PANELS), SAFETY DISCONNECT SWITCH (WHEN REQUIRED), CABLES, CONDUITS, GROUNDING, AND TRENCHING FOR CONDUITS SHOWN ON THE PLANS. ALL CONNECTIONS, SPLICING, AND WIRING TO THE NEW ELECTRICAL PANELS AND METER PEDESTAL IS ALSO INCLUDED UNDER THE SAME PAY ITEM. FURNISH, INSTALL, AND PAY FOR ELECTRICAL EQUIPMENT GROUNDING MATERIALS, EQUIPMENT AND LABOR UNDER THIS PAY ITEM. CABLE AND CONDUIT FROM PANEL "EP" TO BOX GIRDERS AND JUNCTION BOXES SHOWN ARE PAID FOR SEPARATELY.
- EXTEND THE SERVICE UP THE PIER TO THE DISTRIBUTION JUNCTION BOXES. FROM THERE, ROUTE THE BRANCH CIRCUIT WIRING AND REMOTE PANEL (SUB-PANEL) FEEDERS THROUGH ACCESS HOLES TO EACH BOX GIRDER.
- SEE EXTERNAL ELECTRICAL ACCESS DETAIL ON SHEET 85. ALSO SEE INTERMEDIATE PIER DIAPHRAGMS XD1 AND D1 FOR EXACT LOCATION OF ELECTRICAL ACCESS HOLES.
- COORDINATE WITH THE UTILITY TO PROVIDE ELECTRIC SERVICE TO PIER MOUNTED EQUIPMENT.
- FURNISH AND INSTALL 2-4" CONDUIT RIGID NONMETALLIC SCHEDULE 40 (PVC) CAST INTO THE PIER (EMBEDDED) AS SHOWN. INSTALL CONDUITS ENTERING EACH BOX GIRDER THAT WILL HAVE THE CONDUCTORS FOR THE LIGHTING CIRCUITS, GFCI RECEPTACLE CIRCUITS, AND POWER FEEDS TO EACH OF THE ELECTRICAL REMOTE PANELS (SUB-PANELS).
- FURNISH AND INSTALL 4" LIQUIDTIGHT FLEXIBLE METAL CONDUITS (LTFMC) WHEN ENTERING THE BOX GIRDERS THROUGH THE ELECTRICAL ACCESS HOLES. INSTALL THE LTFMC BETWEEN THE RIGID GALVANIZED STEEL CONDUITS. SEAL THE AREA AROUND THE FLEXIBLE CONDUITS ENTERING THE BOX GIRDERS AT THE ACCESS HOLE TO PROVIDE A TIGHT, WEATHER-PROOF SEAL. PAYMENT FOR ALL 4" AND LARGER FLEXIBLE METAL CONDUITS, ADAPTERS AND FITTINGS ARE INCLUDED IN THE "CONDUIT RIGID METALLIC PVC COATED" PAY ITEM, SEPARATE PAYMENT WILL NOT BE MADE.
- STUB CONDUITS EMBEDDED IN STRUCTURE OUT OF WALL UNDER (OR SIDE OF) THE ELECTRICAL PANEL "EP". FURNISH AND INSTALL CONDUIT RIGID METALLIC 4" (GALVANIZED STEEL) PVC COATED FOR ALL EXPOSED LOCATIONS AND BETWEEN THE PVC CONDUIT EMBEDDED IN THE PIER AND THE ELECTRICAL PANEL "EP". FURNISH AND INSTALL ALL NECESSARY ELBOWS, FITTINGS, AND PVC TO RGS CONDUIT ADAPTERS TO COMPLETE THE INSTALLATION. INCLUDE COST FOR THE MATERIALS AND LABOR NEEDED, AND DESCRIBED HERE, IN THE COST OF THE ELECTRICAL PANEL.
- FURNISH AND INSTALL GALVANIZED STEEL OR 304 STAINLESS STEEL SUPPORTS, HARDWARE, CLAMPS, BRACKETS, HANGER RODS, NUTS, BOLTS, AND WASHERS FOR CONDUITS, JUNCTIONS BOXES, AND RECEPTACLES. ALL THREADED HARDWARE SHALL BE STAINLESS STEEL.
- FURNISH AND INSTALL GROUND CONDUCTORS IN ALL CONDUITS. GROUND CONDUCTORS SHALL BE BONDED TO METAL CONDUITS, BOXES, AND OTHER PARTS TO ENSURE GROUND CONTINUITY THROUGHOUT ELECTRICAL SYSTEM. GROUNDING AND BONDING SHALL BE ACCORDING TO NEC STANDARDS.

ELEVATION - PIER 5
(LOOKING DOWNSTATION)
NOT TO SCALE

END VIEW

(LOW SIDE SHOWN, HIGH SIDE SIMILAR)
NOT TO SCALE

- FURNISH AND INSTALL A NEMA 3R RATED, 200A METER PEDESTAL WITH A MAIN CIRCUIT BREAKER IN PLACE OF A DISCONNECT SWITCH. FURNISH PEDESTAL ENCLOSURE WITH PAD-LOCKING PROVISIONS. INCLUDE METER PEDESTAL EXTENSIONS IF REQUIRED BY UTILITY AT NO ADDITIONAL COST. FURNISH A 200A, MOLDED CASE, THERMAL MAGNETIC MAIN CIRCUIT BREAKER IN THE PEDESTAL RATED AT 25K AIC MINIMUM. FURNISH AND INSTALL A HEAVY DUTY, OUTDOOR RATED, NON-FUSIBLE DISCONNECT SWITCH IN A NEMA 4X RATED ENCLOSURE THAT IS PAD-LOCKABLE ONLY IF AN APPROVED METER PEDESTAL CANNOT BE PROVIDED.

STEEL ERECTION & SITE CONSTRUCTION CONTRACT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-5-671			
DRAWN BY MAE		PLANS CK'D, DAD	
ELECTRICAL CROSS SECTION AT PIER		SHEET 87 OF 96 — 597 —	

DATE: 5/1/2013
I.D.