

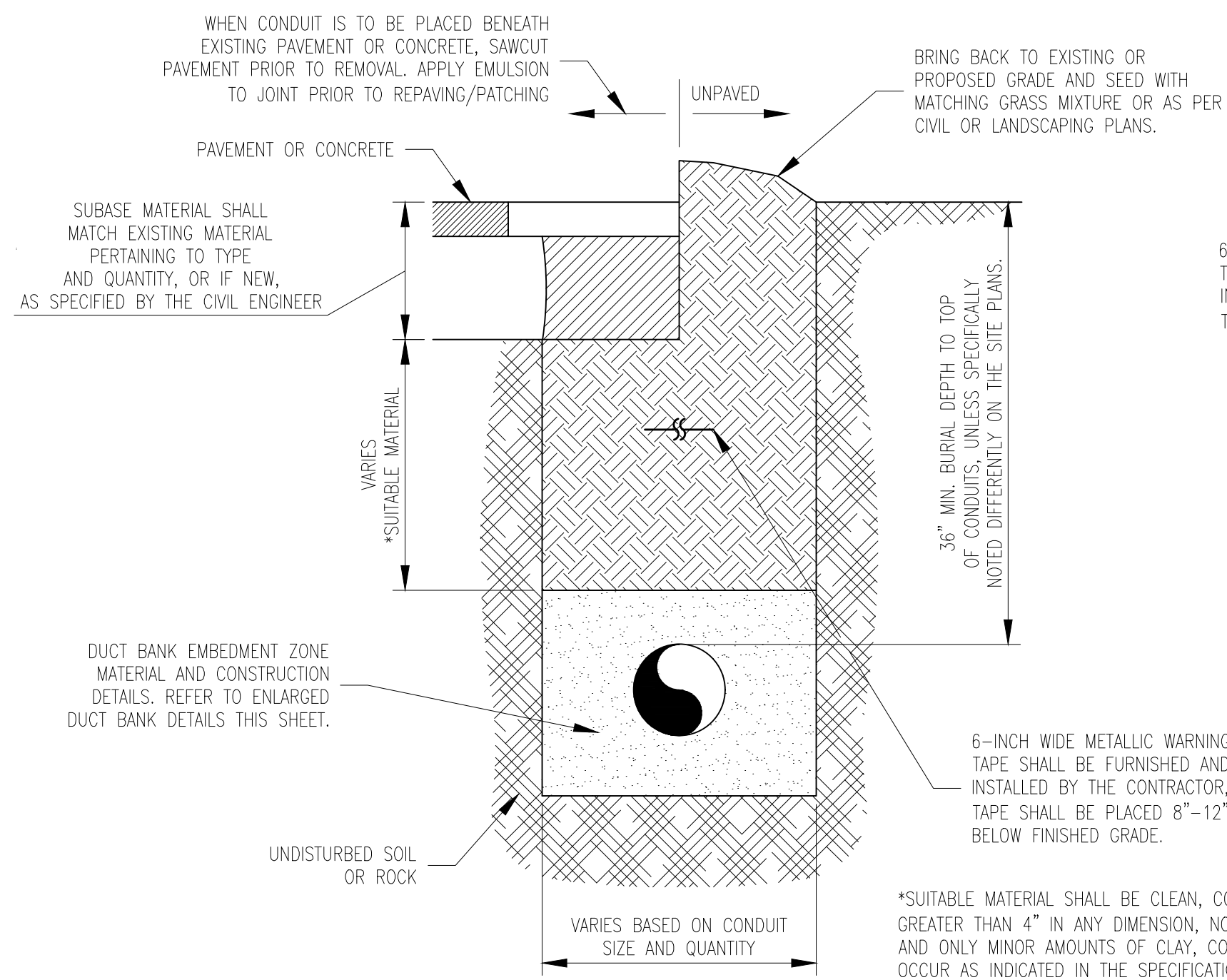
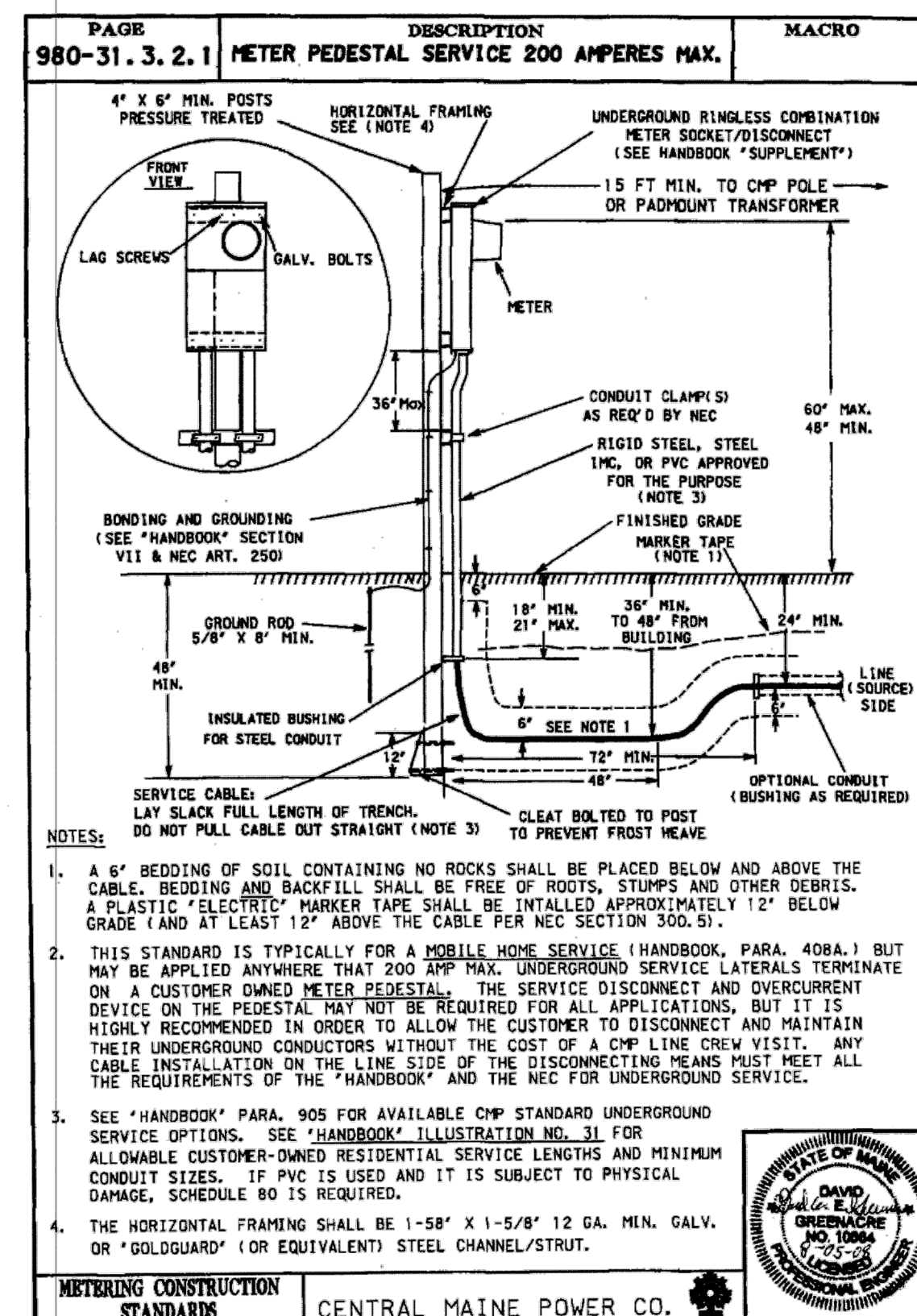
INTERIOR DAC BUILDING ELEVATION
SCALE: 1/2" = 1'-0"

GENERAL NOTES

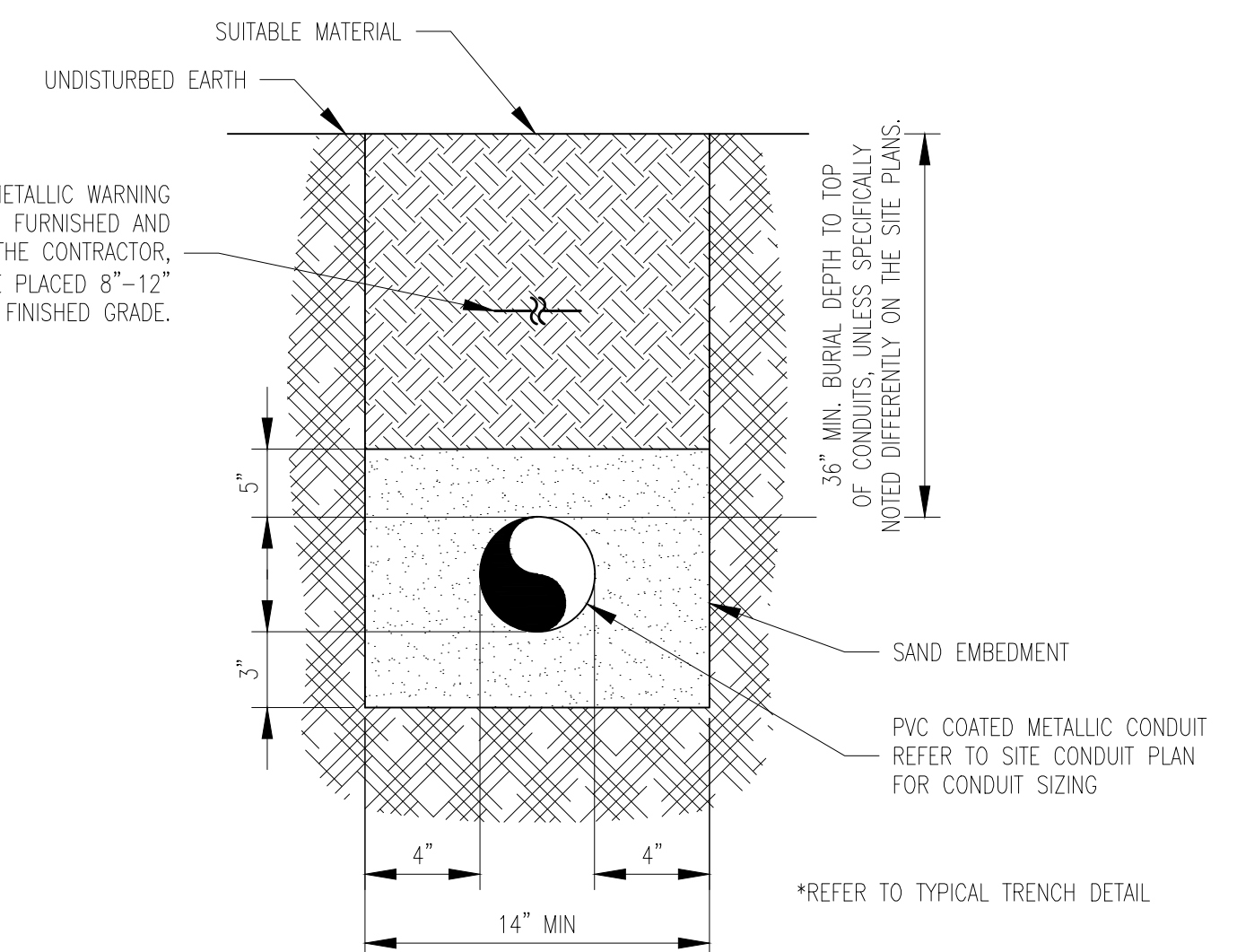
- PERFORM ALL WORK IN ACCORDANCE WITH NATIONAL AND STATE ELECTRICAL CODES, LOCAL ORDINANCES, AND REQUIREMENTS OF THE WIRING INSPECTOR. CODES INCLUDE BUT ARE NOT LIMITED TO:
 - NATIONAL BUILDING AND ELECTRICAL CODES
 - STATE CODES
 - LOCAL TOWN BY-LAWS AND AGENCY REQUIREMENTS.
 - OTHER CODES AS LISTED ON ARCHITECTS CODE REVIEW TABLE WHERE APPLICABLE.
- MATERIALS
 - ALL WIRING SHALL BE COPPER; CONDUCTORS WITH AMPACITIES OF 100 AMPS OR LESS OR CONDUCTORS MARKED AWG #14 THROUGH #1 SHALL BE 60°C. (UNLESS EQUIPMENT IS LISTED FOR HIGHER TEMPERATURES.) CONDUCTORS OF HIGHER AMPACITIES OR LARGER GAUGES SHALL BE 75°C. REFER TO 2014 NEC ART. 110.15(C)(1)(a)(3).
 - GENERAL BRANCH WIRING SHALL BE TYPE "MC" CABLE FOR INTERIOR WIRING. EXPOSED BRANCH CIRCUIT WIRING SHALL BE IN RIGID METAL CONDUIT.
 - ALL PRODUCTS AND DEVICES SHALL BE NEW AND BEAR THE UNDERWRITERS' LABORATORIES LABEL. DEVICES SHALL BE SPECIFICATION GRADE. COLOR OF DEVICES SHALL BE COORDINATED WITH THE ARCHITECT.
- PERFORM ALL WORK IN A WORKMANLIKE AND TIMELY MANNER SUBJECT TO THE APPROVAL OF THE ENGINEER.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSURANCE, PERMITS, FEES AND BACKCHARGES REQUIRED FOR THE PERFORMANCE OF HIS/HER WORK.
- ELECTRICAL CONTRACTOR SHALL COORDINATE THE ELECTRICAL WORK WITH ALL OTHER TRADES. ANY CONFLICT SHALL BE PRESENTED TO THE GENERAL CONTRACTOR AND ENGINEER PRIOR TO INSTALLATION OF WORK.
- PANEL DIRECTORIES SHALL REFLECT THE WORK PERFORMED UNDER THIS CONTRACT. PANELS SHALL BE PROVIDED WITH TYPED DIRECTORIES.
- ALL PRODUCTS SHALL BE QUARANTEED FOR ONE YEAR AFTER ACCEPTANCE BY OWNER.
- ALL WIRING AND EQUIPMENT ARE DEPICTED DIAGRAMMATICALLY. FINAL LOCATIONS SHALL BE DETERMINED IN THE FIELD AND ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- SHOP DRAWINGS SHALL BE SUBMITTED ON ALL ELECTRICAL EQUIPMENT, BEFORE PROCUREMENT OF EQUIPMENT.
- ALL NEW WIRING INDICATED ON PLANS SHALL MATCH THE AMPACITY OF THE CIRCUIT BREAKER INDICATED AT THE HOMERUN. WHERE NO BREAKER SIZE IS INDICATED, THE BREAKER SHALL BE 20A/1P WITH #12 AWG CABLE.

- WIRE AND CONDUIT SIZES INDICATED ON HOMERUNS SHALL RUN CONTINUOUS THROUGHOUT CIRCUIT.
- CONDUITS AND CIRCUITRY INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. FINAL LOCATION OF CONDUITS SHALL BE FIELD COORDINATED SO AS TO AVOID CONFLICTS WITH OTHER TRADES.
- ALL 120 VOLT BRANCH CIRCUITS WHEN 100 LINEAR FEET OR MORE FROM LAST OUTLET OR FIXTURE IN CIRCUIT TO RESPECTIVE PANELBOARDS SHALL BE A MINIMUM OF #10 AWG COPPER WIRE(S).
- ALL 277 VOLT BRANCH CIRCUITS WHEN 200 LINEAR FEET OR MORE FROM LAST OUTLET OR FIXTURE IN CIRCUIT TO RESPECTIVE PANELBOARDS SHALL BE A MINIMUM OF #10 AWG COPPER WIRE(S).
- COORDINATE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH H.V.A.C., PLUMBING AND FIRE PROTECTION CONTRACTORS.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET PROJECT CONDITIONS.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY FIXTURE MOUNTING AND EXACT LOCATIONS AGAINST ARCHITECTS REFLECTED CEILING PLANS, ELEVATIONS AND DETAIL DRAWINGS.
- EXACT LOCATIONS OF EXIT SIGNS SHALL BE VERIFIED IN FIELD. EXITS SHALL BE RELOCATED AS NECESSARY SO AS TO PROVIDE DIRECT LINES OF SIGHT AS REQUIRED BY CODE.
- ALL FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, INDEPENDENT OF HUNG CEILING.
- ELECTRICAL CONTRACTOR SHALL PROVIDE FIRE STOPPING ALL AROUND EACH CONDUIT THAT PENETRATES A RATED WALL, FLOOR AND/OR CEILING. FIRE STOP PUTTY SHALL BE UTILIZED AND COMPLETELY FILL ANY GAPS IN THE WALLS, CEILINGS AND/OR FLOORS IN ORDER TO MAINTAIN THE INTEGRITY OF THE FIRE RATED ASSEMBLY. THE FIRE CAULKING SHALL BE MANUFACTURED BY HILTI.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE SELECTIVE ARC FLASH/ COORDINATION STUDY.

XII. ILLUSTRATION No. 9



TYPICAL TRENCH DETAIL
SCALE: NTS



TYPICAL ENLARGED TRENCH DETAIL (NON ENCASED)
SCALE: NTS

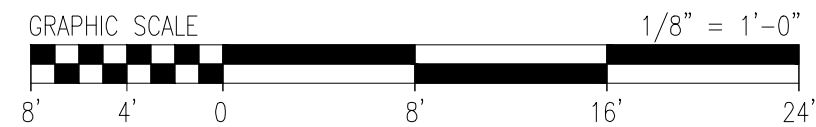
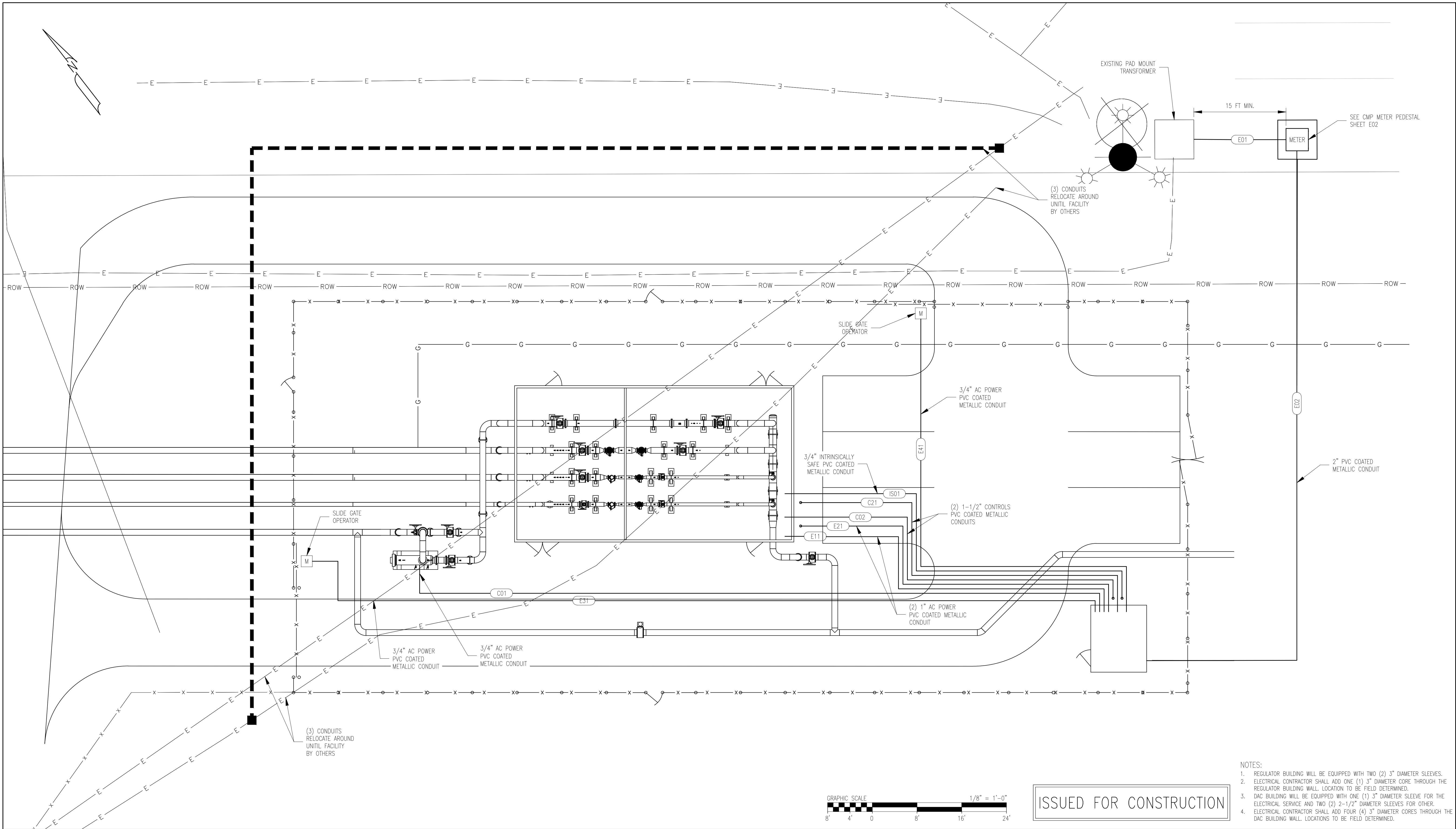
ISSUED FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	DWG NO.	REFERENCE DRAWINGS	SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD	CLIENT INFORMATION
PRJ ENGINEER: MARK D. WOOD	
PRJ NAME: WEST COMMERCIAL STREET	
PRJ NUMBER: 5183	ME GAS OPERATIONS
PRJ MILESTONE: ISSUED FOR CONSTRUCTION	DESIGNED BY: MDW 07/29/16
PRJ PHASE: ISSUED FOR CONSTRUCTION	DRAFTED BY: RPC 07/29/16
CHECKED BY: SMR 07/29/16	DESIGN MANAGER: TIM BICKFORD
APPROVED BY: MDW 07/29/16	REVIEWED BY:
	DESIGN ENGINEER: BOB SCHUMMICK
	CHECKED BY:
	APPROVED BY:

SHEET TITLE	ELECTRICAL ONE-LINE DIAGRAM & TRENCH DETAILS
PROJECT NAME	WEST COMMERCIAL STREET REGULATOR STATION
PROJECT LOCATION	PORTLAND, ME 04101

	1600 Providence Highway Walpole, MA 02081 781.829.0524 processpipelineservices.com
	FILE NAME: 5183_E00.DWG PLOT DATE: 08/03/2016 11:18 AM SCALE: N/A
SIZE	22X34
SHEET	E02
REV	G
SHEET 29 OF 39	



ISSUED FOR CONSTRUCTION

- NOTES:
1. REGULATOR BUILDING WILL BE EQUIPPED WITH TWO (2) 3" DIAMETER SLEEVES.
 2. ELECTRICAL CONTRACTOR SHALL ADD ONE (1) 3" DIAMETER CORE THROUGH THE REGULATOR BUILDING WALL. LOCATION TO BE FIELD DETERMINED.
 3. DAC BUILDING WILL BE EQUIPPED WITH ONE (1) 3" DIAMETER SLEEVE FOR THE ELECTRICAL SERVICE AND TWO (2) 2-1/2" DIAMETER SLEEVES FOR OTHER.
 4. ELECTRICAL CONTRACTOR SHALL ADD FOUR (4) 3" DIAMETER CORES THROUGH THE DAC BUILDING WALL. LOCATIONS TO BE FIELD DETERMINED.

REV	BY	DATE	DESCRIPTION	DWG NO.	REFERENCE DRAWINGS

SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD
 PRJ ENGINEER: MARK D. WOOD
 PRJ NAME: WEST COMMERCIAL STREET
 PRJ NUMBER: 5183
 PRJ MILESTONE: ISSUED FOR CONSTRUCTION
 PRJ PHASE: ISSUED FOR CONSTRUCTION

CLIENT INFORMATION

ME GAS OPERATIONS

DESIGNED BY: MDW 07/29/16	DESIGN MANAGER: TIM BICKFORD	REVIEWED BY:	
DRAFTED BY: RPC 07/29/16	DESIGN ENGINEER: BOB SCHUMMRICK	CHECKED BY:	
CHECKED BY: SMR 07/29/16	AUTH NO: 6039 167616	APPROVED BY:	
APPROVED BY: MDW 07/29/16			

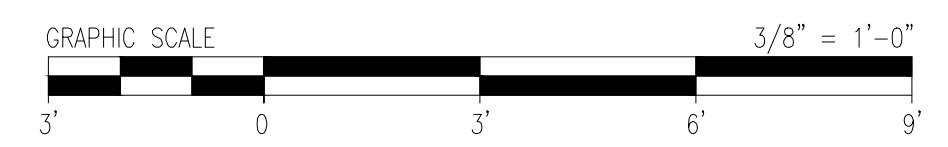
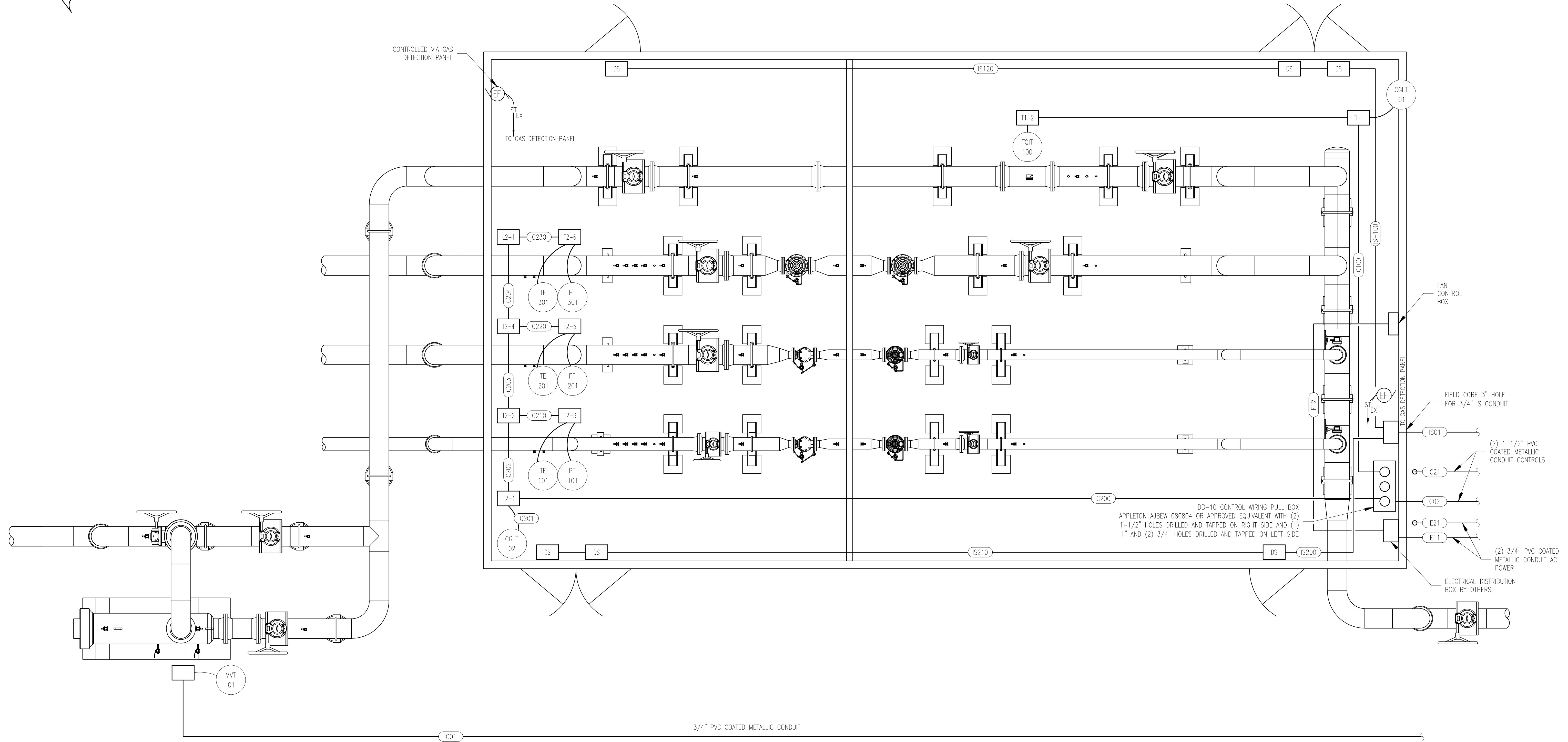
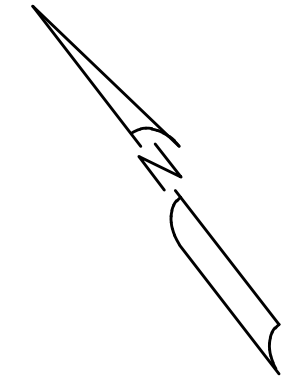
SHEET TITLE
 SITE CONDUIT PLAN

PROJECT NAME
 WEST COMMERCIAL STREET
 REGULATOR STATION

PROJECT LOCATION
 PORTLAND, ME 04101

1600 Providence Highway
 Walpole, MA 02081
 781.829.0524
 processpipelineservices.com

FILE NAME: 5183_E00.DWG	SIZE	SHEET	REV
PLOT DATE: 08/03/2016 11:18 AM	22X34	E03	G
SCALE: 1/8" = 1'-0"	SHEET 30 OF 39		



ISSUED FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	DWG NO.	REFERENCE DRAWINGS

SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD PRJ ENGINEER: MARK D. WOOD PRJ NAME: WEST COMMERCIAL STREET PRJ NUMBER: 5183 PRJ MILESTONE: ISSUED FOR CONSTRUCTION PRJ PHASE: ISSUED FOR CONSTRUCTION DESIGNED BY: MDW 07/29/16 DRAFTED BY: RPC 07/29/16 CHECKED BY: SMR 07/29/16 APPROVED BY: MDW 07/29/16	CLIENT INFORMATION ME GAS OPERATIONS DESIGN MANAGER: TIM BICKFORD DESIGN ENGINEER: BOB SCHUMMRICK AUTH NO: 6039 167616 REVIEWED BY: CHECKED BY: APPROVED BY:
---	---

SHEET TITLE CONTROLS CONDUIT PLAN	PROJECT NAME WEST COMMERCIAL STREET REGULATOR STATION
PROJECT LOCATION PORTLAND, ME 04101	

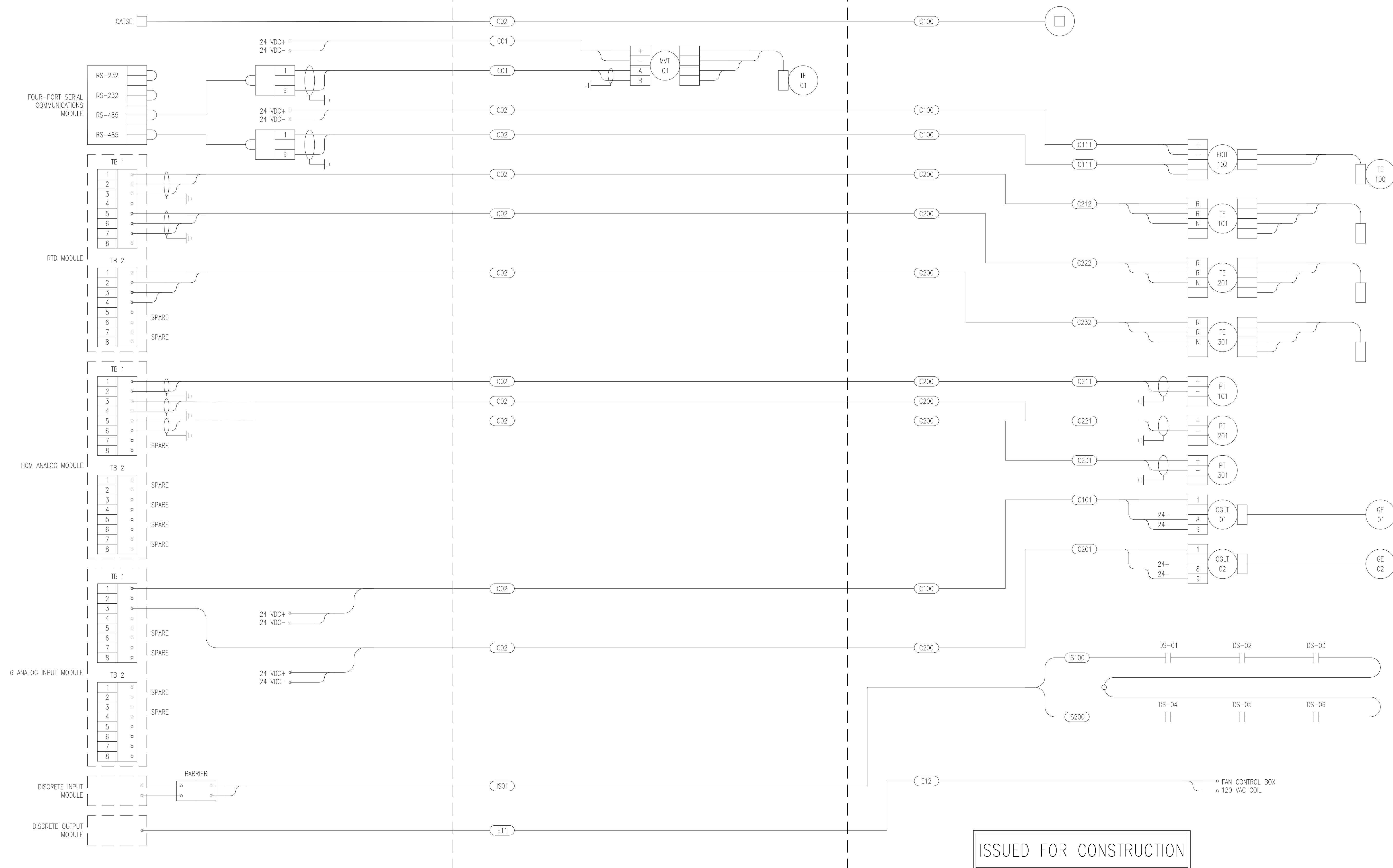
1600 Providence Highway
 Walpole, MA 02081
 781.829.0524
 processpipelineservices.com

FILE NAME: 5183_E00.DWG	SIZE	SHEET	REV
PLOT DATE: 08/03/2016 11:18 AM	22X34	E04	G
SCALE: 3/8" = 1'-0"	SHEET 31 OF 39		

DAC BUILDING/RTU



STATION YARD

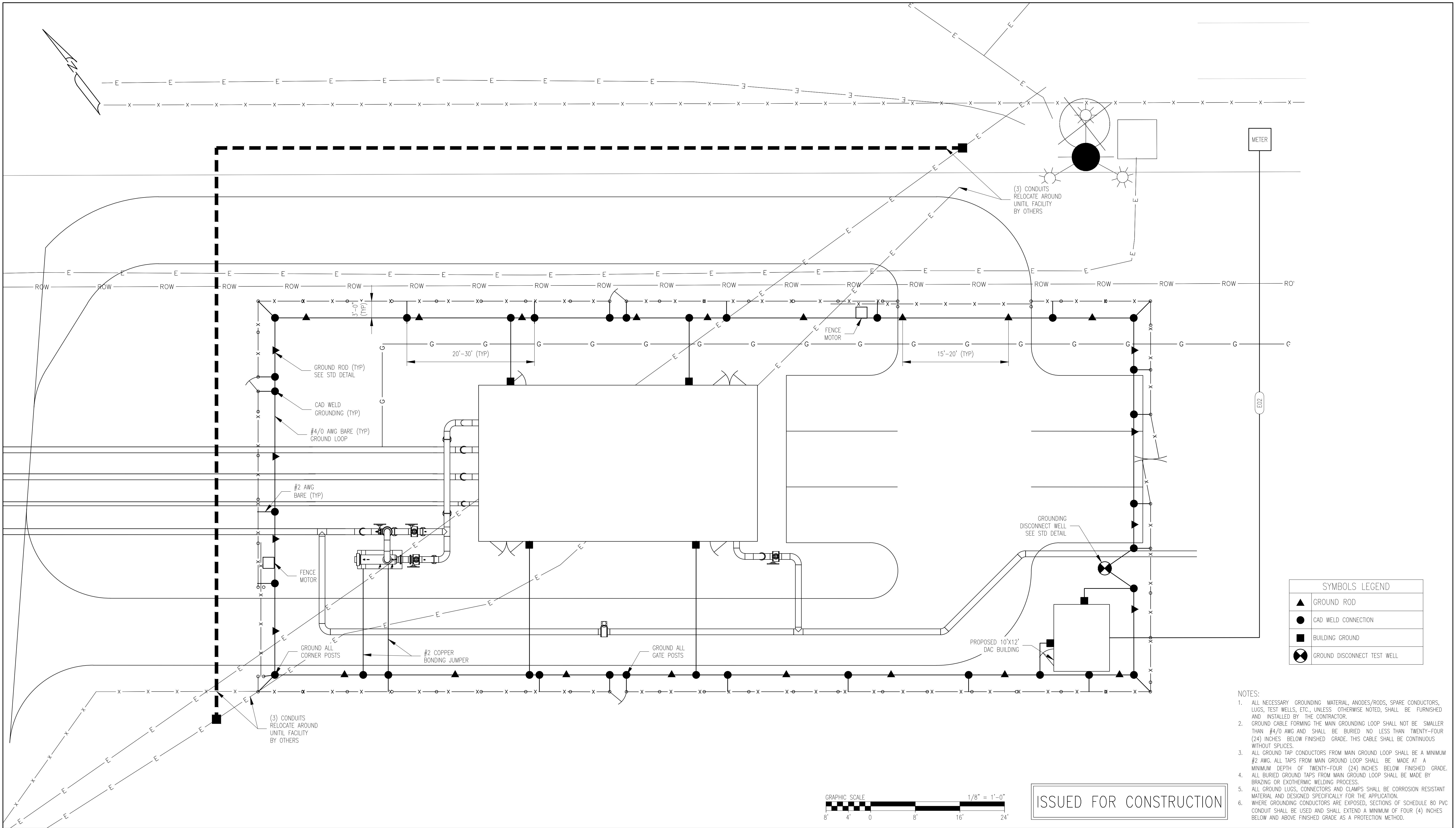
METER & REGULATOR BUILDING



ISSUED FOR CONSTRUCTION

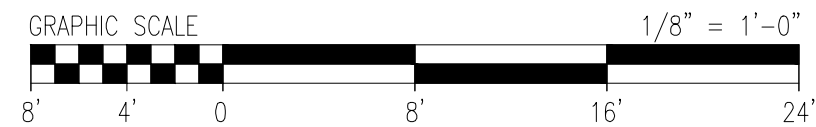
REV	BY	DATE	DESCRIPTION	DWG NO.	REFERENCE DRAWINGS	SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD PRJ ENGINEER: MARK D. WOOD PRJ NAME: WEST COMMERCIAL STREET PRJ NUMBER: 5183 PRJ MILESTONE: ISSUED FOR CONSTRUCTION PRJ PHASE: ISSUED FOR CONSTRUCTION	CLIENT INFORMATION  ME GAS OPERATIONS	SHEET TITLE LOOP SHEET
DESIGNED BY: MDW 07/29/16 DRAFTED BY: RPC 07/29/16 CHECKED BY: SMR 07/29/16 APPROVED BY: MDW 07/29/16	DESIGN MANAGER: TIM BICKFORD DESIGN ENGINEER: BOB SCHUMMRICK AUTH NO: 6039 167616	PROJECT NAME WEST COMMERCIAL STREET REGULATOR STATION
REVIEWED BY: CHECKED BY: APPROVED BY:	PROJECT LOCATION PORTLAND, ME 04101	FILE NAME: 5183_E00.DWG PLOT DATE: 08/05/2016 11:18 AM
SIZE: 22X34 SHEET: E06 REV: G	SHEET 33 OF 39	 1600 Providence Highway Walpole, MA 02081 781.829.0524 processpipelineservices.com



SYMBOLS LEGEND	
▲	GROUND ROD
●	CAD WELD CONNECTION
■	BUILDING GROUND
⊗	GROUND DISCONNECT TEST WELL

- NOTES:
1. ALL NECESSARY GROUNDING MATERIAL, ANODES/RODS, SPARE CONDUCTORS, LUGS, TEST WELLS, ETC., UNLESS OTHERWISE NOTED, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
 2. GROUND CABLE FORMING THE MAIN GROUNDING LOOP SHALL NOT BE SMALLER THAN #4/0 AWG AND SHALL BE BURIED NO LESS THAN TWENTY-FOUR (24) INCHES BELOW FINISHED GRADE. THIS CABLE SHALL BE CONTINUOUS WITHOUT SPLICES.
 3. ALL GROUND TAP CONDUCTORS FROM MAIN GROUND LOOP SHALL BE A MINIMUM #2 AWG. ALL TAPS FROM MAIN GROUND LOOP SHALL BE MADE AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES BELOW FINISHED GRADE. ALL BURIED GROUND TAPS FROM MAIN GROUND LOOP SHALL BE MADE BY BRAZING OR EXOTHERMIC WELDING PROCESS.
 4. ALL GROUND LUGS, CONNECTORS AND CLAMPS SHALL BE CORROSION RESISTANT MATERIAL AND DESIGNED SPECIFICALLY FOR THE APPLICATION.
 5. WHERE GROUNDING CONDUCTORS ARE EXPOSED, SECTIONS OF SCHEDULE 80 PVC CONDUIT SHALL BE USED AND SHALL EXTEND A MINIMUM OF FOUR (4) INCHES BELOW AND ABOVE FINISHED GRADE AS A PROTECTION METHOD.



ISSUED FOR CONSTRUCTION

REV	BY	DATE	DESCRIPTION	DWG NO.	REFERENCE DRAWINGS	SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD PRJ ENGINEER: MARK D. WOOD PRJ NAME: WEST COMMERCIAL STREET PRJ NUMBER: 5183 PRJ MILESTONE: ISSUED FOR CONSTRUCTION PRJ PHASE: ISSUED FOR CONSTRUCTION	CLIENT INFORMATION ME GAS OPERATIONS
DESIGNED BY: MDW 07/29/16 DRAFTED BY: RPC 07/29/16 CHECKED BY: SMR 07/29/16 APPROVED BY: MDW 07/29/16	DESIGN MANAGER: TIM BICKFORD DESIGN ENGINEER: BOB SCHUMMRICK AUTH NO: 6039 167616
REVIEWED BY: CHECKED BY: APPROVED BY: 	

SHEET TITLE GROUNDING PLAN
PROJECT NAME WEST COMMERCIAL STREET REGULATOR STATION
PROJECT LOCATION PORTLAND, ME 04101

1600 Providence Highway
Walpole, MA 02081
781.829.0524
processpipelineservices.com

FILE NAME: 5183_E00.DWG	SIZE: 22X34	SHEET: E07	REV: G
PLOT DATE: 08/03/2016 11:18 AM	SHEET 34 OF 39		