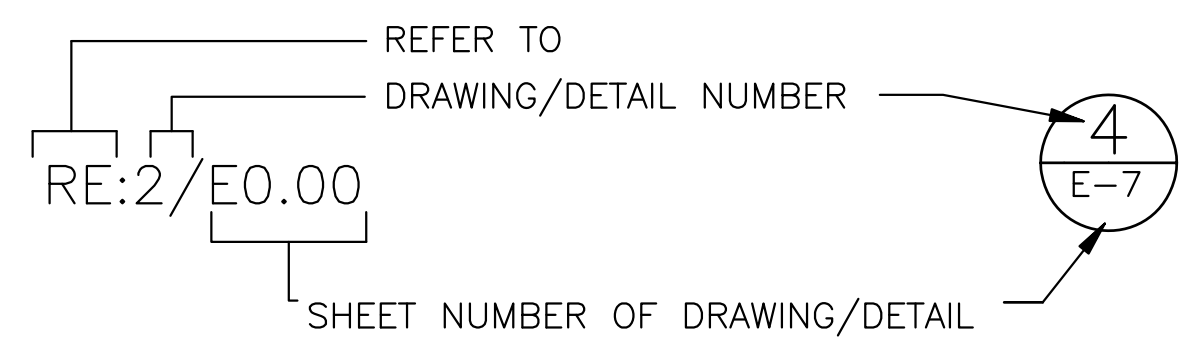


LEGEND

- Ⓝ JUNCTION BOX
- PANELBOARD (SURFACE MOUNT) AS INDICATED ON PANEL SCHEDULE
- ⊗ GROUNDING TEST WELL
- ⊗ GROUND ROD
- EXOTHERMIC WELD CONNECTION TO GROUNDING WIRE
- Ⓞ DUPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V,
- MAIN EQUIPMENT GROUNDING BAR
- SLA LIGHT FIXTURE, SEE SCHEDULE
- HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED.
- S SWITCH, SPST, 20A, 120/277V
- 9,11 → HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED.
- G GROUND WIRE
- CIRCUIT BELOW SLAB OR GRADE
- ⑥ → DRAWING NOTE REFERENCE (NOTES BY SYMBOL)

DRAWING/DETAIL REFERENCE KEY



ABBREVIATIONS

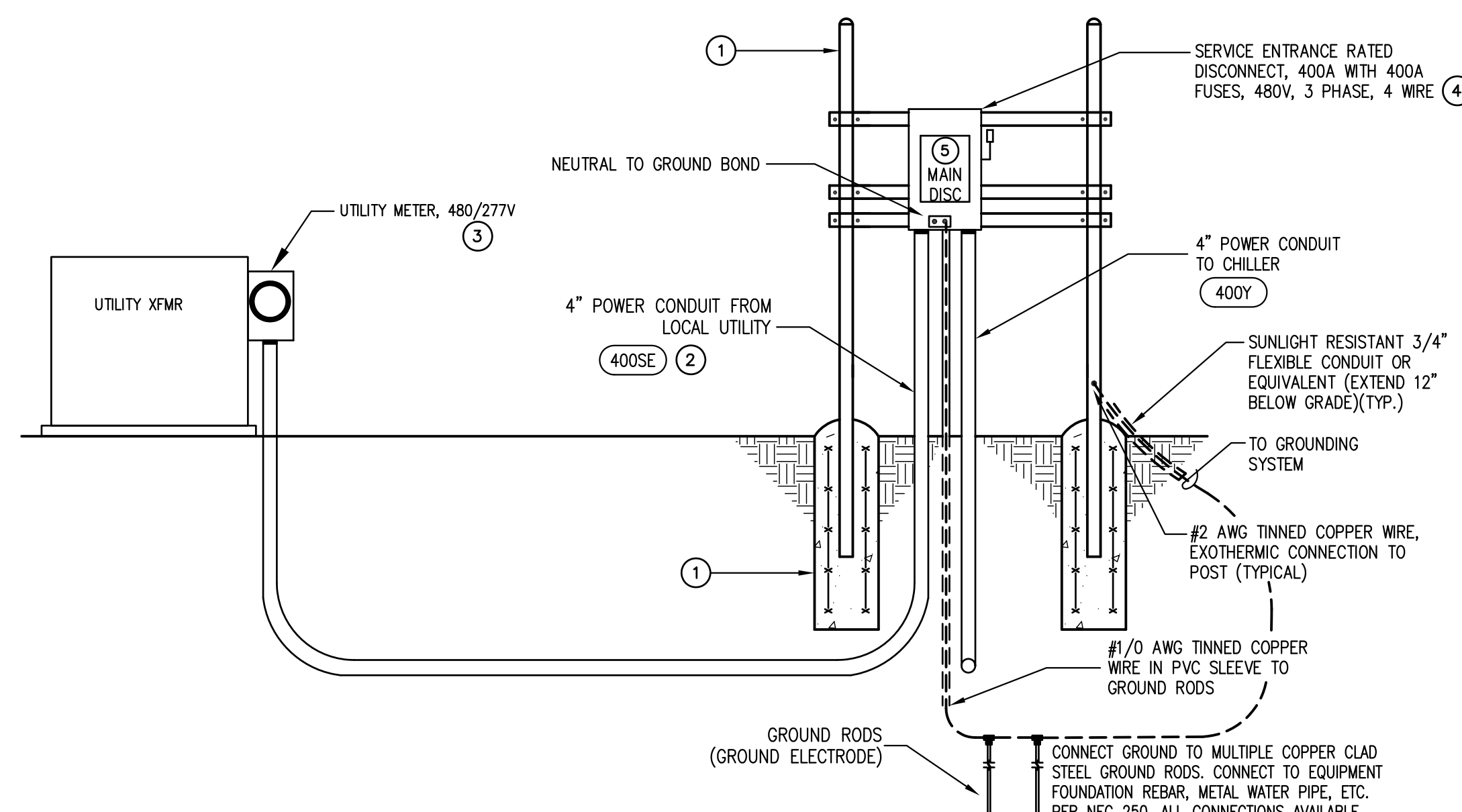
A	AMPERES	AW	IN ACCORDANCE WITH	NIC	NOT IN CONTRACT
AF	ABOVE FINISHED FLOOR	KVA	KILOVOLTAMPERES	PH.#	PHASE
AFG	ABOVE FINISHED GRADE	KW	KILOWATTS	RCPT	RECEPTACLE
AWG	AMERICAN WIRE GAUGE	LTG	LIGHTING	RE:	REFER TO
CU	COPPER	MCB	MAIN CIRCUIT BREAKER	TYP	TYPICAL
EQPT	EQUIPMENT	MLO	MAIN LUGS ONLY	UNO	UNLESS NOTED OTHERWISE
EXST	EXISTING	NEC	NATIONAL ELECTRICAL CODE	V	VOLTS
FWE	FURNISHED WITH EQUIPMENT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	W	WIRE
GFI	GROUND FAULT INTERRUPTER			WP	WEATHERPROOF

ELECTRICAL NOTES

- THE CONTRACTOR SHALL MAKE A PERSONAL INSPECTION OF THE PROJECT SITE TO BECOME FAMILIAR WITH THE SCOPE OF WORK PRIOR TO BID AND SHALL PROVIDE ALL WORK NECESSARY TO COMPLETE THE SCOPE OF WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS. NOTIFY CAVINESS LAMBERT ENGINEERING, LLC OF ANY INCONSISTENCIES FOUND BETWEEN THE CONSTRUCTION DOCUMENTS AND ACTUAL CONDITIONS.
- ALL WORK SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND REGULATORY AUTHORITIES HAVING JURISDICTION.
- BEFORE BEGINNING WORK, LAY OUT AND MARK ALL EQUIPMENT LOCATIONS FOR APPROVAL BY THE OWNER.
- AS APPROVED BY THE OWNER, PROVIDE ALL WORK REQUIRED TO ACHIEVE COMPLIANCE WITH ALL EQUIPMENT MANUFACTURER INSTRUCTIONS AND RECOMMENDATIONS.
- LOCATIONS SHOWN FOR NEW EQUIPMENT AND WIRING ARE APPROXIMATE. VERIFY LOCATIONS AND SIZES OF WORK BEFORE PURCHASING OR FABRICATING WORK. PROVIDE ADDITIONAL HORIZONTAL OR VERTICAL ELBOWS, DROPS, RISES, OFFSETS, SUPPORTS, ACCESSORIES, AND REROUTING REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE EXACT ROUTING OF WORK AND EQUIPMENT INSTALLATION WITH OTHER TRADES AND FIELD CONDITIONS.
- CLEAN AND POLISH REUSED EXISTING FIXTURES, EQUIPMENT, AND MATERIALS THOROUGHLY, AND RETURN TO "AS NEW" CONDITION. REMOVE EXCESS PAINT, MATERIAL AND DEBRIS. PLACE ELECTRICAL SYSTEMS IN COMPLETE WORKING ORDER BEFORE REQUEST FOR FINAL REVIEW.
- PENETRATIONS THROUGH FLOORS OR FIRE WALLS SHALL BE SEALED TO MAINTAIN THE FIRE RATING INTEGRITY OF THE WALLS AND FLOORS UTILIZING MATERIALS/METHODS APPROVED BY UL.
- COORDINATE FLOOR, WALL AND ROOF PENETRATIONS WITH FIELD CONDITIONS, OTHER TRADES, AND ARCHITECTURAL/STRUCTURAL WORK. LOCATE PENETRATIONS SO AS NOT TO AFFECT STRUCTURAL INTEGRITY OR WEATHER-TIGHTNESS.
- ALL CONDUCTOR TERMINATIONS OF CIRCUIT BREAKERS AND ALL PANEL ENCLOSURES SHALL BE 75°C RATED FOR USE WITH 75°C WIRE.
- WHITE/NEUTRAL, GREEN/GROUND SHALL BE MAINTAINED THROUGHOUT THE SITE ELECTRICAL SYSTEM (TAPE WILL NOT BE ACCEPTABLE ON CONDUCTOR SIZES 6 AWG AND SMALLER).
- FEEDERS AND BRANCH CIRCUITS LARGER THAN NO. 6 AWG SHALL USE COPPER, STRANDED CONDUCTOR WITH 600 VOLT INSULATION, THW, THHN/THWN, XHHW, RHW IN ACCORDANCE WITH NEMA WCS AND NEMA WC3.
- FEEDERS AND BRANCH CIRCUITS NO. 6 AWG AND SMALLER SHALL USE COPPER CONDUCTOR, 600 VOLT INSULATION, THW, THHN/THWN, SMALLER THAN NO. 8 AWG, SOLID CONDUCTOR IN ACCORDANCE WITH NEMA WCS.
- PULL ALL CONDUCTORS INTO A RACEWAY AT THE SAME TIME. USE UL LISTED WIRE-PULLING LUBRICANT. DO NOT EXCEED MANUFACTURER'S RECOMMENDED TENSION.
- COMPLETELY AND THOROUGHLY SWAB RACEWAY SYSTEM BEFORE INSTALLING CONDUCTORS.
- REMOVE AND DISCARD CONDUCTORS CUT TOO SHORT OR INSTALLED IN WRONG RACEWAY. DO NOT INSTALL CONDUCTORS WHICH HAVE BEEN REMOVED FROM A RACEWAY.
- WHERE CONDUIT AND WIRING HAS NOT BEEN SHOWN ON THE DRAWINGS, THE ARRANGEMENT AND ROUTING OF CIRCUITS WILL BE AT THE CONTRACTOR'S DISCRETION IN ACCORDANCE WITH GENERALLY ACCEPTED GOOD PRACTICE AND NEC REQUIREMENTS.
- ELECTRICAL LAYOUT DRAWINGS ARE PARTIALLY DIAGRAMMATIC. REFER TO MECHANICAL, ARCHITECTURAL, AND STRUCTURAL DRAWINGS (AS APPLICABLE) FOR GUIDANCE ON DIMENSIONS, DUCTS, PIPES, AND STEEL LOCATIONS, ETC. INSTALL ELECTRICAL SYSTEMS WITHOUT INTERFERING WITH OTHER SYSTEMS.
- PROVIDE RIGID GALVANIZED STEEL (RGS) CONDUIT ABOVE GRADE AND PVC CONDUIT BELOW GRADE. ALL ELBOWS SHALL BE RGS.

FEEDER SCHEDULE

SYMBOL	NO. OF SETS	PHASE	NEUTRAL	GROUND	CONDUIT	REMARKS
400Y	1	3#500KCMIL	#500KCMIL	#1/0	4"	
400SE	1	3#500KCMIL	#500KCMIL	--	4"	SERVICE CONDUCTORS



1 EQUIPMENT RACK DETAIL
E001 SCALE: N.T.S.

GENERAL NOTES

- DIMENSIONS (IF SHOWN) ARE APPROXIMATE. EXACT DIMENSIONS MAY BE MODIFIED SLIGHTLY BASED ON EXACT EQUIPMENT OBTAINED AND SITE CONDITIONS.
- POWER EQUIPMENT SHALL BE SQUARE D, SIEMENS, CUTLER HAMMER, OR GENERAL ELECTRIC. ALL EQUIPMENT MUST BE OF ONE MANUFACTURER.
- UNUSED CONDUITS SHALL BE SEALED TO PREVENT MOISTURE INSIDE CONDUITS. USED CONDUITS SHALL BE SEALED AFTER SERVICES HAVE BEEN RUN.
- COORDINATE EXACT LOCATION OF ALL UTILITY SERVICES WITH LOCAL UTILITY COMPANIES PRIOR TO BID. PROVIDE TRANSFORMER PRIMARY CONDUITS (IF REQUIRED) ACCORDING TO UTILITY REQUIREMENTS.
- CONTRACTOR SHALL FURNISH AND INSTALL WEATHER RESISTANT RECEPTACLE (STANDARD FOR HEAT TRACE RECEPTACLE AND GFI FOR SERVICE RECEPTACLE) AS INDICATED WITH "IN USE" WEATHERPROOF COVER. PROVIDE 2#10, #10G-3/4" CONDUIT FROM RECEPTACLE TO HAND HOLE. CIRCUIT WILL BE EXTENDED BY OWNER.
- PROVIDE 1" CONDUIT FROM CHILLER CONTROL PANEL TO HAND HOLE. CONDUIT WILL BE EXTENDED BY OWNER. CONTROL WIRING WILL BE INSTALLED BY OWNER.
- QUAZITE HULL BOWES (TWO TOTAL) SHALL BE GASKETED, 12" WIDE X 12" LONG X 8" DEEP WITH SOLID BOTTOM. SEAL ALL CONDUIT PENETRATIONS TO ENSURE BOX IS WATERPROOF.

EQUIPMENT RACK NOTES BY SYMBOL "E"

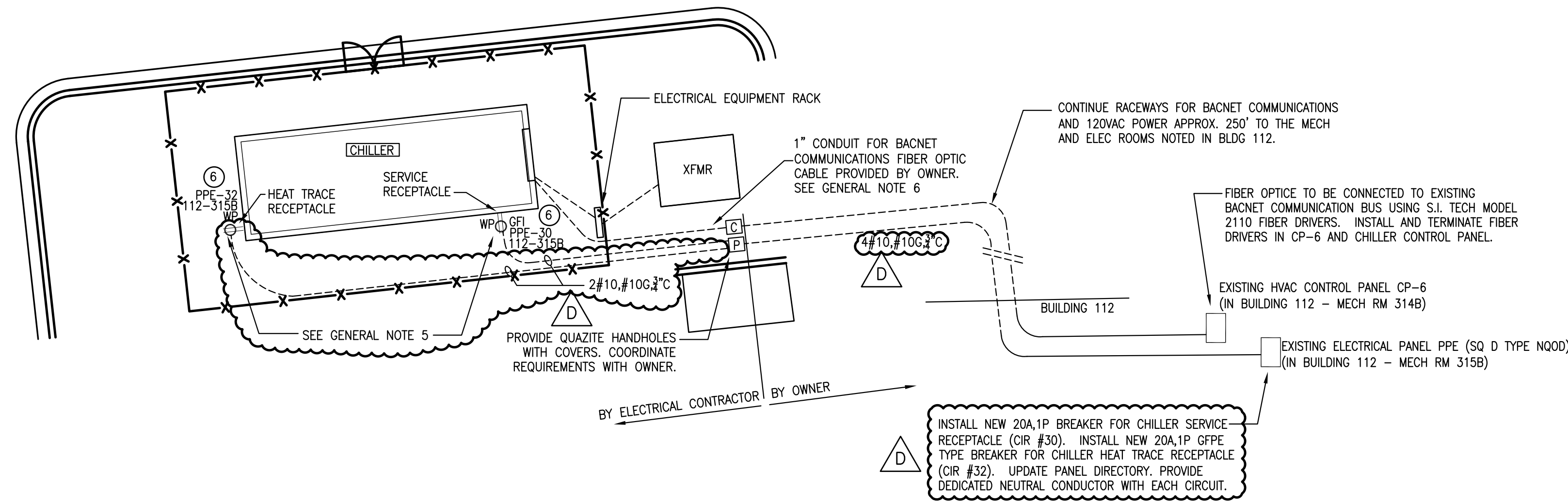
- EQUIPMENT RACK SHALL BE A MAXIMUM OF 6'-6" HIGH AND WIDTH APPROXIMATELY AS REQUIRED (DETERMINE RACK WIDTH IN FIELD BASED ON SITE CONDITIONS AND EXACT EQUIPMENT TO BE MOUNTED). POSTS SHALL BE 3" GALVANIZED STEEL PIPE WITH CAP. CONTRACTOR SHALL PROVIDE END CAPS ON HORIZONTAL UNBRIJT MEMBERS. CROSS MEMBERS SHALL BE UNBRIJT, ANCHORED TO POSTS WITH U-CRAMPS AND 3/8" STAINLESS STEEL BOLTS AND WASHERS. RACK FOUNDATION SHALL BE 1'-0" DIAMETER BY 3'-0" DEEP, CONCRETE, REINFORCED WITH 6X6-WT.4XW.4 W/F CAGE.
- CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY FOR INSTALLATION OF INCOMING SERVICE CONDUCTORS AND ROUTING OF POWER CONDUITS.
- UTILITY METER BASE WILL BE FURNISHED AND INSTALLED BY LOCAL UTILITY.
- CONTRACTOR SHALL FURNISH AND INSTALL SERVICE ENTRANCE RATED FUSED DISCONNECT SWITCH.
- CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATE ON ALL EQUIPMENT TO INDICATE EQUIPMENT NAME, NAMEPLATES SHALL BE PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND. ATTACH NAMEPLATES TO EQUIPMENT COVERS WITH SCREWS.
- PROVIDE ENGRAVED PERMANENT WARNING SIGN AT RECEPTABLES AS NOTED TO INDICATE PANEL AND CIRCUIT NUMBER. INCLUDE LETTERING TO INDICATE "WARNING - POWERED INDEPENDENT OF CHILLER".
- PROVIDE ENGRAVED PERMANENT WARNING SIGN AT SERVICE DISCONNECT WITH LETTERING AS FOLLOWS:
THIS SERVICE FEEDS CHILLER ONLY. RECEPTABLES AND HEAT TRACE ARE FED FROM BUILDING 112. A SEPARATE SERVICE IS LOCATED IN BUILDING 112.

DRAWING/DETAIL REFERENCE KEY

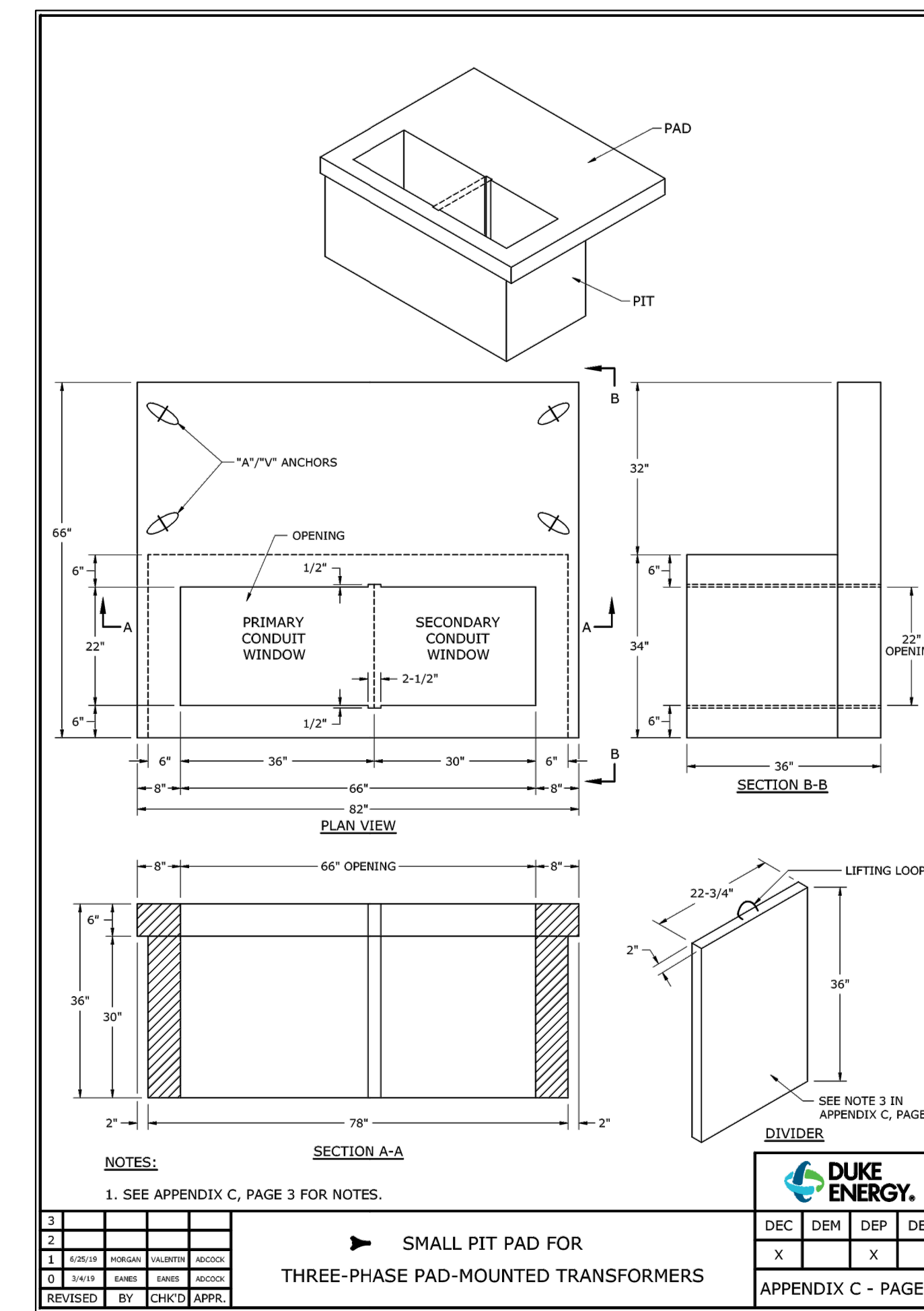


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GFI	GROUND FAULT INTERRUPTER			WP	WEATHERPROOF



2 ELECTRICAL PLAN
E001 SCALE: 1/8" = 1'-0"



3 UTILITY TRANSFORMER PAD DETAIL
E001 SCALE: NO SCALE

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CAVINESS LAMBERT ENGINEERING



Greenville Technical College

GREENVILLE - BLDG. 112 AIR COOLED CHILLER ADDITION

Project No.: H59-N054-FW

DATE	MARK	DESCRIPTION
09/21/2020	A	ISSUED FOR REVIEW
10/02/2020	B	ISSUED FOR REVIEW
01/15/2021	C	FOR CONSTRUCTION
02/26/2021	D	ADDENDUM NO. 1

ISSUE: REVIEW
DATE: 01/15/2021
PROJECT NO: 120047.015
DRAWN BY: CLE
CHECKED BY: DML

ELECTRICAL PLAN,
SCHEDULES & DETAILS

E001