SCOPE OF WORK

- 1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, SUPPLIES, MATERIALS, TOOLS, PERMITS, ETC. AND SHALL PERFORM ALL OPERATIONS NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK ON THIS PROJECT, COMPLETE IN STRICT ACCORDANCE WITH THE SPECIFICATION AND APPLICABLE DRAWINGS, AND READY FOR USE.
- 2. ALL ITEMS OF LABOR, MATERIALS AND EQUIPMENT NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE PLANS, BUT INCIDENTAL TO OR REQUIRED FOR, THE COMPLETE INSTALLATION AND PROPER OPERATION OF THE WORK, SHALL BE FURNISHED AS IF CALLED IN DETAIL BY THE
- 3. THE WORK OF THIS SECTION IS TO INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:
 - A. POWER DISTRIBUTION SYSTEM INCLUDING METERING, PANEL BOARDS, FEEDERS, BRANCH CIRCUITS, ETC.

SPECIFICATION OR DRAWINGS. WHEREVER THE WORD "PROVIDE" IS USED HEREIN, IT SHALL BE

- B. ALL STRUCTURAL MEMBERS REQUIRED, IN ADDITION TO ANY SHOWN ON THE STRUCTURAL DRAWINGS FOR PROPER SUPPORT OF EQUIPMENT UNDER THIS SECTION.
- C. ELECTRICAL SERVICES SERVICES AS SHOWN AND AS COORDINATED WITH THE RESPECTIVE UTILITY CO. REPRESENTATIVES.

REFERENCE STANDARDS:

INTERPRETED AS "FURNISH AND INSTALL".

- 1. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO RESULT IN A COMPLETE ELECTRICAL INSTALLATION IN FULL ACCORDANCE WITH ALL REQUIREMENTS OF THE MOST CURRENT NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE, THE STANDARDS OF THE NATIONAL BUREAU OF FIRE UNDERWRITERS, THE STATE OF OHIO BUILDING CODE, AND ALL LOCAL CODES AND ORDINANCES. IN THE EVENT ANY PORTIONS OF THE INSTALLATION SHOWN OR SPECIFIED FAIL TO MEET THESE REQUIREMENTS, IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO ALTER THE LAYOUT TO MEET THE REQUIREMENTS OF THE GOVERNING CODE AND TO NOTIFY THE ARCHITECT OF SUCH CHANGES. IN THOSE PORTIONS OF THE PLANS AND SPECIFICATIONS WHERE INSTALLATION, SHOWN OR DESCRIBED, EXCEEDS THE REQUIREMENTS OF THE STATE AND LOCAL CODES, THE SPECIFICATIONS AND PLANS SHALL GOVERN.
- 2. THE ENTIRE INSTALLATION THEREFORE SHALL COMPLY WITH ALL LAWS AND REQUIREMENTS APPLYING TO ELECTRICAL INSTALLATION IN EFFECT IN THE STATE OF OHIO. CHANGES REQUIRED BY THE INSPECTING AUTHORITIES TO MEET THESE CODES AND STANDARDS SHALL BE MADE BY THE ELECTRICAL CONTRACTOR AT HIS OWN EXPENSE.
- 3. ALL MATERIAL AND EQUIPMENT BUILT INTO THE SCOPE OF WORK SHALL BEAR UNDERWRITER'S LARFI

GENERAL REQUIREMENTS:

- 1. PROVIDE OSHA SAFETY SIGN ON EACH PANEL BOARD DESCRIBING ARC FLASH HAZARDS AND NECESSARY WORKING CLEARANCE IN FRONT OF PANEL BOARDS.
- 2. THE ELECTRICAL DRAWINGS, WHICH CONSTITUTE A PART OF THE CONTRACT, INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS AND OUTLETS, LOCATION OF SWITCHES, PANEL BOARDS, CONDUIT AND OTHER WORK. THE ELECTRICAL CONTRACTOR SHALL OBTAIN EXACT LOCATIONS FROM THE OWNER PRIOR TO INSTALLATION AND ARRANGE HIS WORK ACCORDINGLY.
- 3. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE WORK, AND THE SUBMISSION OF HIS PROPOSAL SHALL PRESUPPOSE HIS KNOWLEDGE OF ALL SUCH CONDITIONS AND PERFORMANCE OF ALL WORK REQUIRED FOR A COMPLETE AND CODE COMPLYING INSTALLATION.
- 4. ELECTRICAL CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR THE COMPLETION OF THE WORK AND SHALL FURNISH TO THE OWNER, UPON COMPLETION, A CERTIFICATE OF FINAL INSPECTION
- 5. NO WORK SHALL START UNTIL WORKING DRAWINGS AND OTHER REQUIRED DOCUMENTS HAVE BEEN SUBMITTED TO THE DEPARTMENT HAVING AUTHORITY TO ISSUE CERTIFICATES OF APPROVAL AND HAVE BEEN SIGNED AND APPROVED.
- 6. ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE. ELECTRICAL WORK SHALL BE INSTALLED BY JOURNEYMEN ELECTRICIANS UNDER THE DIRECT SUPERVISION OF A COMPETENT FOREMAN.
- 7. DEFINITIONS
 - D. "PROVIDE" IS DEFINED AS "FURNISH, INSTALL AND MAKE OPERATIONAL."
- E. "RELOCATE" IS DEFINED AS "REMOVE EXISTING, INSTALL EXISTING IN DIFFERENT LOCATION AND MAKE OPERATIONAL."
- F. "REPLACE" IS DEFINED AS "REMOVE EXISTING AND PROVIDE NEW IN SAME LOCATION."
- G. "REINSTALL" IS DEFINED AS "REMOVE EXISTING, INSTALL EXISTING IN SAME LOCATION AND MAKE OPERATIONAL."
- H. "REMOVE" IS DEFINED AS "REMOVE EXISTING INCLUDING CONDUIT AND WIRE BACK TO SOURCE".

FOR RECORD DRAWINGS:

1. THE E.C. SHALL KEEP ONE SET OF THE CONTRACT WORKING DRAWINGS ON WHICH ANY CHANGES OR DEVIATIONS FROM THE CONTRACT DRAWINGS ARE RECORDED. AFTER COMPLETION OF THE PROJECT A COMPLETE SET OF RECORD DRAWINGS SHALL BE TURNED OVER TO THE ARCHITECT IN GOOD AND LEGIBLE CONDITION. THESE DRAWINGS SHALL BECOME A PERMANENT RECORD OF THE INSTALLATION AS CONSTRUCTED.

CONDUIT: RMC (RIGID METAL CONDUIT):

1. MINIMUM SIZE SHALL BE 1/2".

- 2. RMC SHALL BE USED IN THE FOLLOWING LOCATIONS:
- A. EXPOSED (OUTDOORS)
- B. CONDUITS RISING FROM BELOW GRADE TO SURFACE MOUNTED ENCLOSURES

SCH40/SCH80 PVC (POLY VINYL CHLORIDE):

- 1. MINIMUM SIZE SHALL BE 3/4".
- 2. PVC SHALL BE USED IN THE FOLLOWING LOCATIONS:
 - A. BELOW GRADE
- 3. PVC SHALL NOT BE USED IN THE FOLLOWING LOCATIONS:
 - A. ABOVE FINISHED GRADE, UNLESS NOTED OTHERWISE

CABLE AND WIRE

- 1. EXCEPT AS SPECIFICALLY DESIGNATED, OTHERWISE, NO WIRE SMALLER THAN NO. 12 AWG COPPER, 600 VOLT INSULATION UNLESS OTHER WISE NOTED ON DRAWINGS, SHALL BE USED. IN THE EVENT THAT SIZE IS NOT INDICATED FOR A FEEDER OR MOTOR RUN WHICH, OBVIOUSLY COULD NOT BE INTERPRETED AS NO. 12, THE WIRE SIZE SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE SIZING FOR THE TYPE OR SERVICE INDICATED. BRANCH CIRCUIT HOMERUNS SHALL BE PVC AS SPECIFIED HEREIN.
- 2. EXCEPT AS SPECIFIED OTHERWISE, INTERIOR & EXTERIOR WIRE FOR GENERAL BUILDING SERVICE FEEDERS SHALL BE THHN/THWN. ALUMINUM OR COPPER AS NOTED ON THE DRAWINGS
- 3. ALL HOMERUN BRANCH CIRCUITS EXCEEDING 100' IN LENGTH SHALL BE INCREASED IN SIZE TO NO. 10 AWG. MINIMUM.
- 4. ALL CONNECTORS OF CABLE OR WIRE TO EQUIPMENT SHALL BE BY MEANS OF APPROVED SOLDER-LESS TYPE CONNECTORS. SPLICES AND TERMINATIONS FOR WIRE #6 AND LARGER SHALL BE MADE WITH MECHANICAL SPLICING DEVICES AND LUGS.
- 5. PRESSURE CONNECTORS, CONSISTING OF CONE SHAPED COILED SPRINGS WITH INSULATED COVERS, CAN BE USED FOR CONDUCTORS #8 AND SMALLER.
- 6. ALL CABLE SPLICES AND TERMINATION'S SHALL BE MADE IN ACCORDANCE WITH THE LATEST

APPROPRIATE 3M COMPANY RECOMMENDATIONS AND SPECIFICATIONS FOR TYPE, SIZE, AND VOLTAGE RATING OF THE SPECIFIED CABLES.

PANEL BOARDS:

WITH TRIM.

- 1. PANEL BOARDS SHALL BE CABINET ENCLOSED SAFETY "DEAD FRONT" TYPE, WITH SOLDER-LESS LUGS, AND WITH CIRCUIT BREAKER BRANCHES.
- 2. PLUG IN TYPE OF CIRCUIT BREAKERS WILL NOT BE ACCEPTABLE.
- 3. DOORS, COMPLETE WITH A TYPEWRITTEN DIRECTORY CARD OF THE CIRCUITS, SHALL BE FLUSH
- 4. ALL PANEL BOARDS TO HAVE ALUMINUM BUSSING.
- 5. THE MANUFACTURER USED FOR THE BASIS OF THIS DESIGN WAS SQ. D. CUTLER-HAMMER, SIEMENS, AND GE. ARE ACCEPTABLE MANUFACTURERS. HOWEVER, DUE TO SPACE RESTRICTIONS, E.C. WILL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND ENSURING PROPER CLEARANCES AS SHOWN ON DRAWINGS.
- 6. ALL CIRCUIT BREAKERS SHALL BE HACR RATED.

GROUNDING:

- 1. PROVIDE A PERMANENT AND CONTINUOUS COPPER GROUND WIRE FROM SERVICE ENTRANCE NEUTRAL TO WATER METER, WITH SUPPLEMENTAL GROUND ROD PER NATIONAL ELECTRICAL CODE,
- 2. SIZES AND TYPES OF GROUNDING CONDUCTORS, GROUNDING CLAMPS, BONDING JUMPERS, CONDUIT FITTINGS, AND METHODS OF SECURING SAME TO OBTAIN ELECTRICAL CONTINUITY AND EFFECTIVE CONTINUITY TO BE IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- 3. ALL CONDUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH THE MOST CURRENT NATIONAL ELECTRICAL CODE, TABLE 250.122.
- 4. METAL ENCLOSURES AND RACEWAYS FOR SERVICE CONDUCTORS AND EQUIPMENT SHALL BE GROUNDED PER ART. 250.80

EQUIPMENT IDENTIFICATION

- 1. PROVIDE NAMEPLATES ON ALL EQUIPMENT OF THE TYPE LISTED IN THE FOLLOWING SCHEDULE:
- A. EXISTING PANEL BOARDS

F. LIGHTING CONTACTORS

B. NEW PANEL BOARDS		PANEL "x" FED
C. DISCONNECTS		FROM "x" VIA "x"
D. TRANSFORMERS		PHASE A = x PHASE B = x
E. MOTOR STARTERS	TYPICAL NAMEPLATE -	PHASE C = x

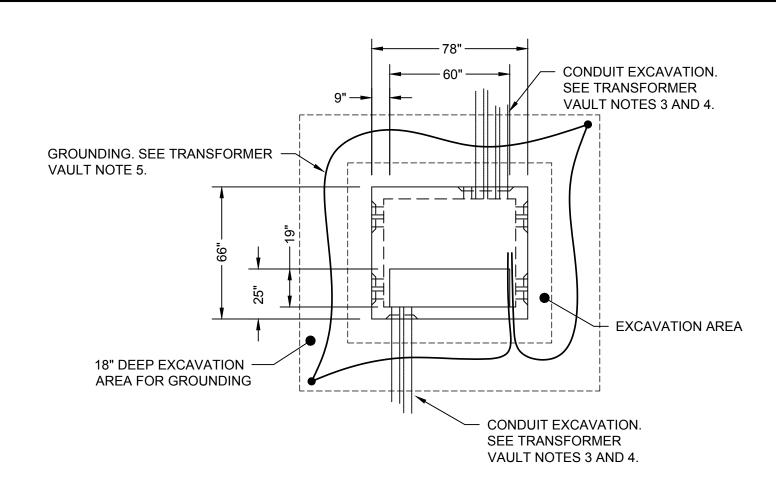
- 2. LETTERING SHALL INCLUDE EQUIPMENT NAME, THE SPECIFIC UNIT NUMBER, ANY REFERENCE TO ON-OFF OR OTHER INSTRUCTIONS THAT ARE APPLICABLE.
- 3. NAME PLATES SHALL BE LAMINATED PHENOLIC WITH A WHITE SURFACE AND BLACK CORE.

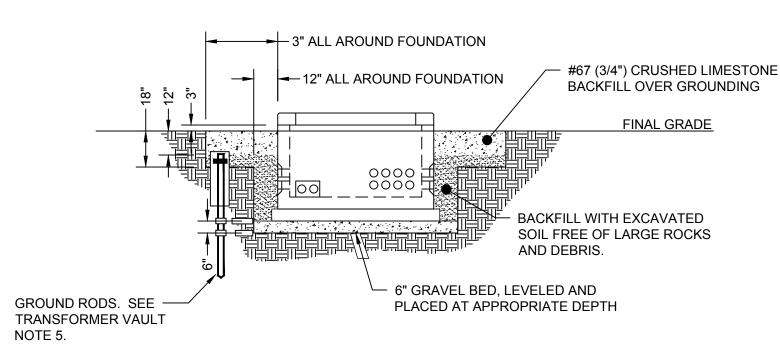
WARRANTY:

1. MATERIALS, EQUIPMENT, AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.

PRIMARY RISER POLE DETAIL

NOT TO SCALE





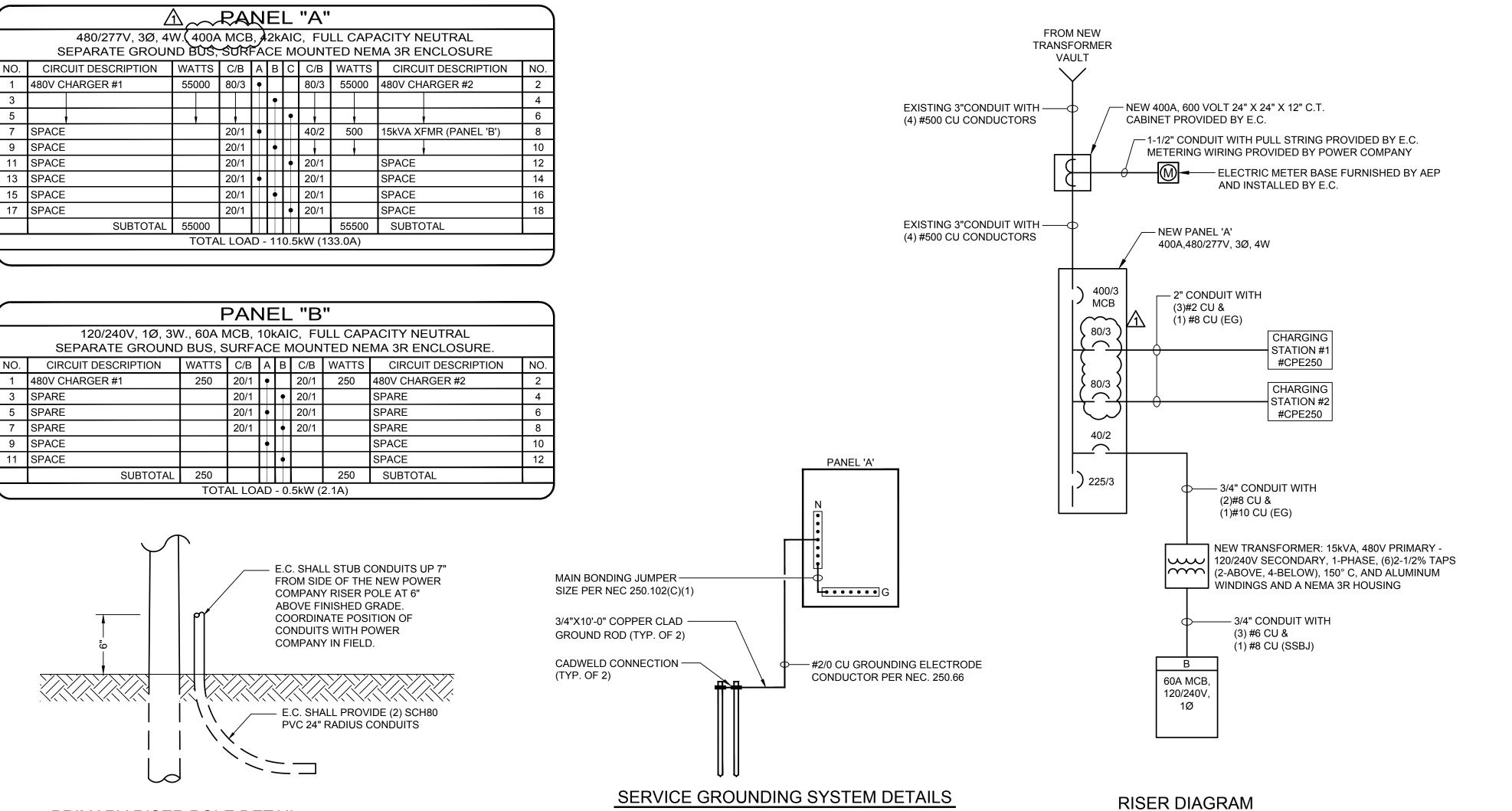
TRANSFORMER VAULT DETAIL

SCALE: 1/4"=1'-0"

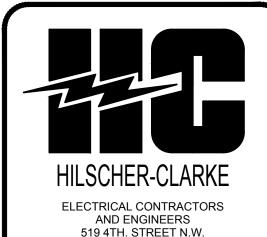
TRANSFORMER VAULT NOTES:

- 1. CUSTOMER SHALL CONTACT THE POWER COMPANY PRIOR TO BEGINNING WORK TO DISCUSS THE DETAILS OF TRANSFORMER FOUNDATION POSITION AND ORIENTATION, WORKING CLEARANCES, BARRIER PROTECTIONS, CONSTRUCTION SPECIFICATIONS, AND INSPECTION PROCEDURES. THE IS RESPONSIBLE FOR PURCHASING, OWNING, INSTALLING, AND MAINTAINING THE PRE-CAST TRANSFORMER FOUNDATION AND ASSOCIATED SECONDARY RACK EQUIPMENT. THE CONTRACTOR/DEVELOPER SHALL COORDINATE SITE PREPARATIONS WITH THE DESIRED DELIVERY DATE. THE CONTRACTOR SHALL PROVIDE A CLEAR AND FIRM APPROACH TO THE POINT OF DELIVERY AND KEEP THE AREA ABOVE THE TRANSFORMER CLEAR OF OBSTRUCTIONS THAT MAY BLOCK THE USE OF COMPANY VEHICLES (E.G. CRANE ACCESS TO THE TRANSFORMER).
- 2. THE CUSTOMER/CONTRACTOR IS RESPONSIBLE FOR THE EXCAVATION TO INSTALL THE TRANSFORMER FOUNDATION AND FOR BACKFILLING AFTERWARDS. THE EXCAVATION SHALL BE AT LEAST 2 FEET WIDER THAN THE VAULT DIMENSION AND 5 FEET 6 INCHES DEEP (ACTUAL EXCAVATION DEPTH MAY VARY DEPENDING UPON RELATION BETWEEN EXISTING AND FINAL GRADE). SIX (6) TO EIGHT (8) INCHES OF 2B CRUSHED STONE BED SHALL BE SPREAD (TAMPED AND LEVELED AT APPROPRIATE DEPTH) IN THE BOTTOM OF THE EXCAVATION.
- 3. CONTRACTOR SHALL PROVIDE, INSTALL, AND SEAL A MINIMUM FIVE (5) FOOT SECTION OF PVC CONDUIT THROUGH THE WALL OF THE FOUNDATION BASE (SLOPING AWAY FROM THE FOUNDATION) FOR COMPANY PRIMARY CABLE AT COMPANY DESIGNATED LOCATION.
- 4. EXCAVATION FOR CUSTOMER CONDUITS MAY BE DONE AT THE SAME TIME AS FOR FOUNDATION.
- 5. THE CUSTOMER SHALL INSTALL A CONTINUOUS LOOP OF #2 BAR, SEVEN STRAND, SOFT DRAWN COPPER GROUND WIRE CONNECTED TO TWO 5/8-INCH DIAMETER x 8-FOOT GROUND RODS INSTALLED IN OPPOSITE CORNERS OF THE VAULT IN UNDISTURBED EARTH. BOTH ENDS OF THE GROUND WIRE SHALL ENTER THE FOUNDATION THROUGH A ONE-INCH DIAMETER HOLE TO BE DRILLED OR CHISELED IN THE UPPER RIGHT-HAND CORNER OF THE KNOCKOUT PANE. EACH GROUND WIRE TAIL SHALL EXTEND 15 FEET INSIDE VAULT BEYOND KNOCKOUT POINT.
- 6. THE DECISION TO PEN THE SUMP FOR DRAINAGE OR LEAVE IT CLOSED WILL BE MADE BY THE POWER COMPANY BASED ON FIELD CONDITIONS. THE CUSTOMER IS RESPONSIBLE FOR TAKING CORRECTIVE ACTION (IMPROVE DRAINAGE, SUMP PUMP, ETC.) FOR A FOUNDATION THAT FILLS WITH WATER AND WATER IS LEAKING THROUGH SERVICE CONDUITS INTO THE CUSTOMER'S BUILDING. THE AREA SURROUNDING THE FOUNDATION SHALL BE GRADED SO THE GROUND WATER WILL NOT COLLECT.

SCALE: NONE



SCALE: NONE

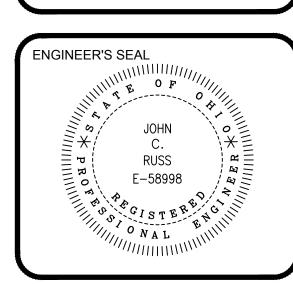


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JLTON ROAD NW (PARCEL #1000853 CANTON, OH. 44708

PROJECT

EV CHARGING STATIONS

DRAWING ISSUES/REVISIONS			
DESCRIPTION		DATE	
ORIGINAL ISSUE		03/24/20	
PANEL REVISION		04/27/20	
DRAWN BY: RWL	CHECKED BY: JCR		
JOB NO. 121453	SCALE: AS NOTED		

POWER RISER,
PANEL SCHEDULES
AND SPECIFICATIONS

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