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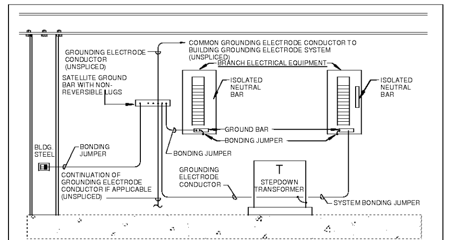
260526.00-03 - GROUND DETAIL - SATELLITE

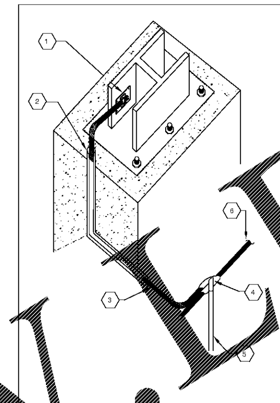


GENERAL NOTES:

A. THIS DETAIL APPLIES AT EACH SATELLITE ELECTRIC ROOM/CLOSET, OR OTHER GROUPING OF PANELS. REFER TO FLOOR PLANS FOR GROUND BAR LOCATIONS, AND IF NOT SHOWN IN PLAN VIEW INSTALL AS CLOSE AS POSSIBLE TO AFFECTED EQUIPMENT.
B. PROVIDE ALL GROUNDING ELECTRODE CONDUCTORS SIZED PER NEC TABLE 250.66 UNLESS NOTED OTHERWISE.
C. PROVIDE SATELLITE GROUND BAR EQUAL TO ERICO EQUIPMENT GROUND BAR W/INSULATERS AND BRACKET (1/4" THICK, 4" WIDE, 18" LONG, HOLE PATTERN TYPE "CC").
D. PROVIDE ALL BONDING JUMPERS SIZED PER NEC TABLE 250.122 UNLESS NOTED OTHERWISE.
E. COORDINATE WITH ELECTRICAL INSPECTOR. MODIFY SPECIFIC MEANS & METHODS IF SO DIRECTED.
F. COORDINATE WITH WORK OF DIVISION 27.
G. COORDINATE WITH WORK OF DIVISION 28.

SCALE: NONE

260526.00-02 - GROUND DETAIL - COLUMN

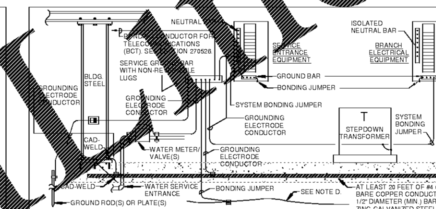


KEYED NOTES:

1. PROVIDE CAST BRO[illegible]CABLE TO STEEL WELDING PL[illegible]
2. PROVIDE AND RO[illegible] GROUND CONDUCTOR THROUGH PEDESTAL IN PVC.
3. PROVIDE NO. 4/0 AWG BARE COPPER GROUND CONDUCTOR AT 30" MINIMUM BELOW GRADE.
4. PROVIDE EXOTHERMIC WELD.
5. PROVIDE 3/4" DIAMETER X 10' LONG COPPER CLAD GROUND ROD.
6. PROVIDE NO. 4/0 AWG BARE COPPER GROUND RING/LOOP CONDUCTOR AT 30" BELOW FINISHED GRADE MINIMUM

SCALE: NONE

260526.00-01 - GROUND DETAIL - SERVICE

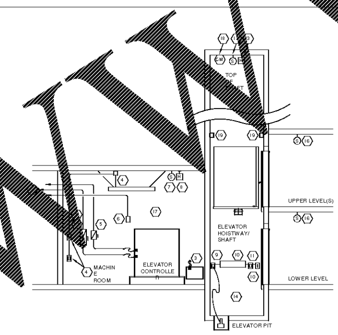


GENERAL NOTES:

A. THIS DETAIL APPLIES AT EACH SERVICE ENTRANCE. REFER TO FLOOR PLANS FOR GROUND BAR LOCATIONS, AND IF NOT SHOWN IN PLAN VIEW INSTALL AS CLOSE AS POSSIBLE TO SERVICE ENTRANCE EQUIPMENT.
B. PROVIDE ALL GROUNDING ELECTRODE CONDUCTORS PER NEC TABLE 250.66 UNLESS NOTED OTHERWISE.
C. PROVIDE SERVICE GROUND BAR EQUAL TO ERICO EQUIPMENT GROUND BAR W/INSULATERS AND BRACKET (1/4" THICK, 4" WIDE, 24" LONG WITH HOLE PATTERN TYPE "CC").
D. PROVIDE GROUND RING PER NEC OR PER LIGHTNING PROTECTION SYSTEM SPECIFICATIONS, WHICHEVER IS LARGER (#2 CU MINIMUM), WITH FULL SIZE BONDING JUMPERS.
E. SIZE GROUND CONDUCTORS BETWEEN ROOM GROUND BARS AS GROUND ELECTRODE CONDUCTORS.
F. SIZE ALL BONDING JUMPERS PER NEC TABLE 250.122 UNLESS NOTED OTHERWISE.
G. PROVIDE A CONCRETE-ENCASED ELECTRODE PER NEC 250.52. ELECTRODE SHALL CONSIST OF 20'-0" OF CONTINUOUS BARE OR ZINC GALVANIZED 1/2" DIAMETER STEEL REINFORCING BARS OR RODS (OR MULTIPLE PIECES CONNECTED BY STEEL TIE WIRES, WELDING OR EXOTHERMIC WELDING TO EFFECTIVELY CREATE 20'-0" OR GREATER LENGTH) OR 20' OF A BARE COPPER CONDUCTOR NO SMALLER THAN #4 AWG. ELECTRODE SHALL BE ENCASED BY AT LEAST 2" OF CONCRETE.
H. COORDINATE WITH ELECTRICAL INSPECTOR. MODIFY SPECIFIC MEANS & METHODS IF SO DIRECTED.
I. COORDINATE WITH WORK OF DIVISION 27.
J. COORDINATE WITH WORK OF DIVISION 28.

SCALE: NONE

260592.00-01 - HYDRAULIC ELEVATOR DETAIL



SECTION/ELEVATION VIEW

KEYED NOTES:

1. LOCKABLE FUSED DISCONNECT FOR POWER FEED, LOCATED NEAR THE DOOR TO THE ROOM. PROVIDE DUAL-ELEMENT TIME-DELAY FUSES (BUSS LO-PEAK OR EQUAL) AS REQUIRED PER ELEVATOR MANUFACTURE REQUIREMENTS AND PROVIDE 100% SPARE FUSES. PROVIDE COPPER CONDUCTORS FROM EACH MACHINE ROOM FUSED DISCONNECT TO EACH CONTROLLER. PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTOR FROM EACH CONTROLLER BACK TO ORIGINATING POWER SOURCE, EVEN IF NOT INDICATED ON DRAWINGS. INSTALL ALL POWER WIRING IN STEEL EMT, IMC OR RMC.
2. PROVIDE A SHUNT TRIP BRANCH CIRCUIT BREAKER IN THE REMOTE SOURCE PANEL THAT SERVES THE FEEDER TO EACH ELEVATOR CONTROLLER DISCONNECT SWITCH. ACTIVATION OF THE FIXED TEMPERATURE HEAT DETECTORS IN THE ELEVATOR SHAFT AND THE ELEVATOR MACHINE ROOM SHALL ACTIVATE (OPEN) THE SHUNT TRIP BREAKER SERVING THE MAIN POWER FEED TO EACH ELEVATOR.
3. PROVIDE DEDICATED 120V/20A/1P CIRCUIT HOME-RUN TO OIL COOLER. IF/WHERE APPLICABLE (FIELD VERIFY WITH ELEVATOR INSTALLER).
4. PROVIDE A GFI DUPLEX RECEPTACLE AND LUMINAIRE IN EACH ELEVATOR MACHINE ROOM. PROVIDE LUMINAIRE(S) IN EACH ELEVATOR MACHINE ROOM AS SHOWN ON DRAWINGS. PROVIDE A SINGLE DEDICATED 120V/20A/1P TO FEED THE RECEPTACLE AND LIGHT(S).
5. PROVIDE A DEDICATED 120V/20A/1P CIRCUIT FOR EACH ELEVATOR CONTROLLER TO FEED ELEVATOR CAB LIGHTS. PROVIDE A 120V FUSED LOCKABLE DISCONNECT SWITCH ON WALL FOR CAB LIGHTS LOCATED NEAR THE DOOR. PROVIDE CONDUIT AND CONDUCTORS TO EACH ELEVATOR CONTROLLER FROM CAB LIGHTS DISCONNECT SWITCH. PROVIDE DUAL-ELEMENT TIME-DELAY FUSES (BUSS LO-PEAK OR EQUAL) AS REQUIRED AND PROVIDE 100% SPARE FUSES.
6. PROVIDE A DEDICATED TELEPHONE LINE (DIALTONE) TO EACH CONTROLLER FROM THE BUILDING SERVICE ENTRANCE (TERMINATE AT EACH CONTROLLER AS DIRECTED BY ELEVATOR INSTALLER IN FIELD). ALSO PROVIDE A WALL PHONE IN EACH ELEVATOR EQUIPMENT ROOM.
7. PROVIDE A MINIMUM OF ONE SMOKE DETECTOR IN EACH ELEVATOR MACHINE ROOM.
8. PROVIDE ONE HEAT DETECTOR WITHIN 24 INCHES OF EACH SPRINKLER HEAD IN MACHINE ROOM & SHAFT.
9. PROVIDE ONE SINGLE (NOT DUPLEX) NON-GFI RECEPTACLE FOR SUMP PUMP IN EACH ELEVATOR PIT. LOCATE RECEPTACLE ON SIDE WALL, MOUNTED AT 54" ABOVE THE PIT FLOOR TO CENTER OF BOX. LOCATE THIS RECEPTACLE AS CLOSE AS POSSIBLE TO THE SUMP.
10. PROVIDE TYPE KV or KVZ VAPORPROOF LUMINAIRES AS SHOWN ON THE ELECTRICAL PLANS. MOUNT AT 54" AFF (V.I.F.), ONE ON EACH SIDE WALL, PLUS ONE PER CAB ON REAR WALL FOR SHAFTS THAT HAVE MULTIPLE ELEVATORS. PROVIDE SWITCH FOR LUMINAIRES ON THE SIDE WALL OF THE SHAFT (ACCESSIBLE FROM THE PIT ACCESS DOOR). MOUNT SWITCH AT 54" (V.I.F.) ABOVE THE PIT FLOOR TO CENTER OF BOX, WITH FLEXIBLE SEAL-TIGHT CONDUIT/WIRING CONNECTION FROM THE SWITCH TO THE LUMINAIRE.
11. PROVIDE ONE DUPLEX GFI RECEPTACLE (FOR MAINTENANCE) IN EACH ELEVATOR PIT. MOUNT RECEPTACLE ON A SIDE WALL, AT 54" ABOVE THE PIT FLOOR TO CENTER OF BOX. CONNECT HOISTWAY MAINTENANCE RECEPTACLE(S), HOISTWAY SUMP PUMP RECEPTACLE(S) AND HOISTWAY LUMINAIRES ALL TO A SINGLE 20A/120V BRANCH CIRCUIT THAT IS DEDICATED TO THE RESPECTIVE HOISTWAY.
12. PROVIDE AT LEAST ONE SMOKE DETECTOR AT THE TOP OF EACH ELEVATOR SHAFT IF THERE ARE SPRINKLERS IN THE SHAFT OR IF SMOKE RELIEF IS REQUIRED.
13. PROVIDE ONE HEAT DETECTOR AT THE TOP OF THE SHAFT FOR EACH SPRINKLER HEAD AT THE TOP OF THE SHAFT, WITHIN 24 INCHES OF THE RESPECTIVE SPRINKLER HEAD. PROVIDE FIXED-TEMPERATURE HEAT DETECTOR(S) WITH TEMPERATURE THRESHOLD FOR HEAT DETECTOR(S) THAT IS LOWER THAN THE SPRINKLER HEAD FUSE TEMPERATURE RATING.
14. COORDINATE WITH SPRINKLER SYSTEM INSTALLER TO ENSURE SPRINKLER HEAD(S) IN THE HOISTWAY PIT ARE INSTALLED LESS THAN 24 INCHES ABOVE PIT FLOOR.
15. PROVIDE AUXILIARY CONTACTS IN MAIN POWER DISCONNECT, AND (2)#12 CONDUCTORS FROM CONTACTS TO ELEV. CONTROLLER. COORDINATE TERMINATION/PROGRAMMING OF THIS STATUS POINT W/ELEV. INSTALLER.
16. PROVIDE ONE CEILING MOUNTED SMOKE DETECTOR WITHIN 15 FEET OF EACH ELEVATOR CAB DOOR, AT EACH CONDITIONED BUILDING LEVEL IN THE ELEVATOR LOBBY/DISCHARGE AREA.
PROVIDE ONE WEATHERPROOF CEILING MOUNTED ANALOG HEAT DETECTOR (OR OTHER AHJ-APPROVED APPPROPRIATELY LISTED AUTOMATIC DETECTION DEVICE) WITHIN 15 FEET OR EACH ELEVATOR CAB DOOR, AT EACH BUILDING LEVEL IN THE ELEVATOR LOBBY/DISCHARGE AREA IN LOCATIONS WHERE AMBIENT CONDITIONS PROHIBIT INSTALLATION OF AUTOMATIC SMOKE DETECTION. PROVIDE LIGHTNING ARRESTORS FOR EACH UNIT INSTALLED OUTDOORS. COORDINATE CASE-BY-CASE WITH ELEVATOR AND BUILDING INSPECTORS PRIOR TO COMMENCING WITH WORK. IN LOCATIONS THAT ARE NOT CONDITIONED, PROVIDE ANALOG HEAT DETECTORS THAT ARE INDIVIDUALLY MONITORED BY MONITOR MODULES THAT ARE LOCATED IN CONDITIONED SPACES. PROVIDE SUCH HEAT DETECTORS WITH LOWER ALARM TEMPERATURE THRESHOLDS THAN THOSE USED FOR SHUNT TRIP DISCONNECTING WHERE SPRINKLER SYSTEMS ARE PRESENT.
IF DETECTORS MUST BE WALL MOUNTED DUE TO ARCHITECTURAL OR SITE CONDITIONS, THEN INSTALL AT LOCATIONS COMPLIANT WITH DETECTOR MANUFACTURER, NFPA AND AUTHORITIES HAVING JURISDICTION.
17. PROVIDE ALL REQUIRED FIRE ALARM SYSTEM DEVICES, WIRING AND PROGRAMMING (INCLUDING CONTROL AND MONITOR MODULES) AS NECESSARY TO ACCOMMODATE ALL SPECIAL CONTROL SEQUENCES AND MONITORING INCLUDING, BUT NOT LIMITED TO, ELEVATOR RECALL FUNCTIONS, ILLUMINATION OF ELEVATOR CAB FIREMAN'S HAT, FIREMAN SERVICE, ETC. ALSO PROVIDE ALL DEVICES, WIRING, AND PROGRAMMING AS REQUIRED TO ACCOMMODATE ALL AUTHORITIES HAVING JURISDICTION.
OBTAIN DIRECTION FROM THE ARCHITECT TO DETERMINE THE FLOOR LEVEL THAT IS THE MAIN AND ALTERNATE EGRESS FLOORS.
PROVIDE HARD-WIRED SMOKE DETECTORS FOR ELEVATOR APPLICATIONS WITH AUXILIARY CONTACTS AND MONITOR MODULE(S) ONLY IF MANDATED BY AN AUTHORITY HAVING JURISDICTION. OTHERWISE, PROVIDE PROGRAMMABLE FIRE ALARM SYSTEM CONTROL/RELAY MODULES TO CONTROL THE ZONE FUNCTIONS IF PERMITTED BY ALL AUTHORITIES HAVING JURISDICTION OR MANDATED BY ANY AUTHORITY HAVING JURISDICTION.
18. PROVIDE POWER & F.A. CONTROL MODULE TO OPERATE HOISTWAY VENTILATION MOTORIZED DAMPER. CONFIGURE, WIRE & PROGRAM TO OPERATE COMPLIANT WITH PREVAILING CODES, INCLUDING IBC SECTION 3004.
19. PROVIDE LUMINAIRES AT EVERY OTHER FLOOR LEVEL, LOCATED TO PROVIDE MINIMUM OF ONE (1) FOOTCANDLE OF LIGHT ACROSS THE TOP OF THE ENTIRE ELEVATOR CAB REGARDLESS OF WHERE THE CAB IS LOCATED IN THE HOISTWAY. COORDINATE EXACT LOCATIONS WITH ELEVATOR INSTALLER. CONFIGURE AND WIRE THIS LIGHTING SO IT IS AUTOMATICALLY TURNED ON WHEN FIRE-FIGHTERS' EMERGENCY OPERATION IS ACTIVE.
20. PROVIDE PROTECTION OF ALL ELEVATOR RELATED POWER AND CONTROL WIRING AND/OR CABLES THAT ARE LOCATED OUTSIDE OF THE ELEVATOR HOISTWAY AND MACHINE ROOM/AREA COMPLIANT WITH IBC SECTION 3007 (MINIMUM 2-HOUR FIRE-RESISTANCE RATED CONSTRUCTION OR USING CIRCUIT INTEGRITY CABLE WITH FIRE-RESISTANCE RATING OF AT LEAST 2 HOURS. ALSO PROVIDE POWER WIRING AND ELEVATOR SYSTEM MONITORING COMPLIANT WITH IBC SECTION 3007.

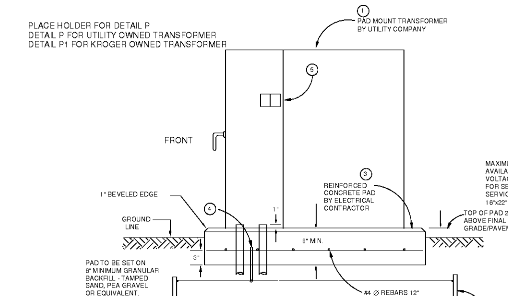
GENERAL NOTES:

A. FIELD-VERIFY ELEVATOR RELATED ELECTRICAL WORK WITH THE ELEVATOR INSTALLER AND WITH LOCAL ELEVATOR INSPECTOR PRIOR BEGINNING ELECTRICAL WORK. REQUIREMENTS VARY BETWEEN LOCALITIES AND BETWEEN ELEVATOR INSTALLERS. THE ELECTRICAL WORK DEFINED ON DRAWINGS AND HEREAFTER, ALONG WITH INFORMATION SOLICITED FROM ELEVATOR INSTALLER AND LOCAL ELEVATOR INSPECTOR, INDICATES THE MINIMUM ELECTRICAL REQUIREMENTS FOR THIS PROJECT. LOCATIONS SHOWN ON DRAWINGS FOR LUMINAIRES, DEVICES, AND EQUIPMENT WITHIN ELEVATOR MACHINE ROOMS (AKA EQUIPMENT ROOMS) AND ELEVATOR SHAFTS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. SUBMIT EXACT LOCATIONS FOR LUMINAIRES, DEVICES, AND EQUIPMENT WITHIN ELEVATOR MACHINE ROOMS (AKA EQUIPMENT ROOMS) AND ELEVATOR SHAFTS TO THE ELEVATOR INSTALLER FOR APPROVAL PRIOR TO INSTALLATION.

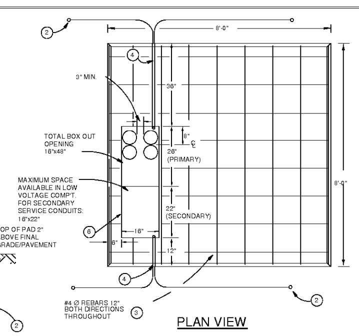
SCALE: NONE

SERVICE ENTRANCE PAD MOUNTED TRANSFORMER DETAIL

PLACE HOLDER FOR DETAIL P
DETAIL P FOR UTILITY OWNED TRANSFORMER
DETAIL P1 FOR KROGER OWNED TRANSFORMER



ELEVATION



PLAN VIEW

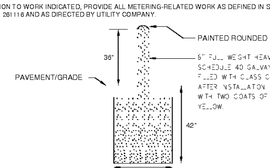
1. PAD MOUNT TRANSFORMER FURNISHED & INSTALLED BY UTILITY COMPANY. THE FOLLOWING ITEMS SHALL BE APPROVED BY UTILITY COMPANY BEFORE INSTALLATION.

LOCATION : TRANSFORMER INSTALLATION SHALL BE LOCATED SO THAT IT IS ACCESSIBLE FOR INSTALLATION, OPERATION & MAINTENANCE BY STANDARD UTILITY COMPANY EQUIPMENT AND SHALL BE APPROVED BY UTILITY COMPANY REPRESENTATIVE.

CLEARANCE: A) CLEARANCES OF TRANSFORMERS FROM BUILDINGS AND BUILDING OPENINGS SHALL BE AS REQUIRED BY LOCAL CODES OR UTILITY COMPANY SPECIFICATIONS WILL BE SPECIFIED ON UTILITY COMPANY CONSTRUCTION DRAWING.
B) PROVIDE SPACE REQUIRED FOR COMPLETE 180° SWING OF TRANSFORMER DOORS.
C) PROVIDE 4' X 10' DEEP SPACE IN FRONT OF TRANSFORMER AND/OR SWITCH UNIT FOR SWITCHING OPERATION

PROTECTION: TRANSFORMER INSTALLATION SHALL BE SUITABLY PROTECTED BY ELECTRICAL CONTRACTOR FROM VEHICULAR TRAFFIC, ETC. WHEN REQUIRED AND SUCH PHYSICAL PROTECTION SHALL BE APPROVED BY UTILITY COMPANY

2. GROUND RODS AND GROUND WIRE FURNISHED AND INSTALLED BY UTILITY CO.
3. REINFORCED CONCRETE PAD BY ELECTRICAL CONTRACTOR TO PROVIDE ADEQUATE BASE FOR PAD MOUNTED TRANSFORMER WITH CONSIDERATION GIVEN TO STRUCTURAL STRENGTH'S FROST ACTION, LOCAL SOIL CONDITIONS. PAD SHALL BE FLAT AND SMOOTH. TOP SHALL BE LEVEL TO WITHIN 2" IN BOTH DIRECTIONS. MINIMUM DESIGN: 8" MINIMUM THICKNESS USING MINIMUM 3000 P.S.I. CONCRETE AND #4 Ø REBARS SPACED 12"
4. ELECTRICAL CONTRACTOR SHALL PROVIDE 1" CONDUIT, NOT TO EXCEED A MAXIMUM DEPTH OF 12" TO OUTER EDGE OF PAD FOR INSTALLATION OF GROUND WIRE BY UTILITY CO.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE SERVICE LATERAL CONDUCTORS TO A MINIMUM HEIGHT OF 6 FT. ABOVE TOP OF PAD, FOR CONNECTION TO TRANSFORMER BY UTILITY COMPANY. THE MAXIMUM SIZE CONDUCTOR TO BE USED IS 750 kcmil (MCM).
6. IN ADDITION TO WORK INDICATED, PROVIDE ALL METERING-RELATED WORK AS DEFINED IN SPECIFICATION SECTION 261116 AND AS DIRECTED BY UTILITY COMPANY.



NOTES: 1) VERIFY ALL ALL SERVICE AND PAD RELATED REQUIREMENTS WITH UTILITY CO. PRIOR TO BEGINNING ANY WORK.
2) PROVIDE CONCRETE FILLED STEEL PIPE "BOLLARDS" PER UTILITY CO. STANDARDS ONLY IF MANDATED BY UTILITY CO.
3) ELECTRICAL SERVICE RELATED INSTALLATION METHODS SHALL BE PER APPLICABLE UTILITY CO. STANDARDS.

SERVICE ENTRANCE PAD MOUNTED TRANSFORMER DETAIL	DATE: 02-02-07 SCALE: NONE
	DETAIL 'P'

2" REFERENCE LINE

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OWNER

Kroger

DATE	ISSUE
10/23/2018	90% OWNER REVIEW
11/01/2018	100% BID/PERMIT

# DATE	REVISION

PROJECT TITLE
KROGER STORE
R543

MERCURY BLVD.
HAMPTON, VA

COMMISSION NO. 517315
ISSUE DATE 10/23/2018

SHEET TITLE
ELECTRICAL PROJECT-SPECIFIC DETAILS

SHEET NO.
E5.2.2

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