

METER SOCKET AND DISCONNECT DETAIL
 (TYPICAL FOR 200 AMP AND 400 AMP SERVICES
 AT 208 VOLTS OR LESS)

SEE SHEET 4 OF 5 AND SHEET 5 OF 5 FOR EQUIPMENT LEGEND AND CHECKLIST

CITY OF MARSHALL
 MUNICIPAL ELECTRIC UTILITY
 COMMERCIAL/INDUSTRIAL FACILITY
 ELECTRIC SERVICE INSTALLATION STANDARD

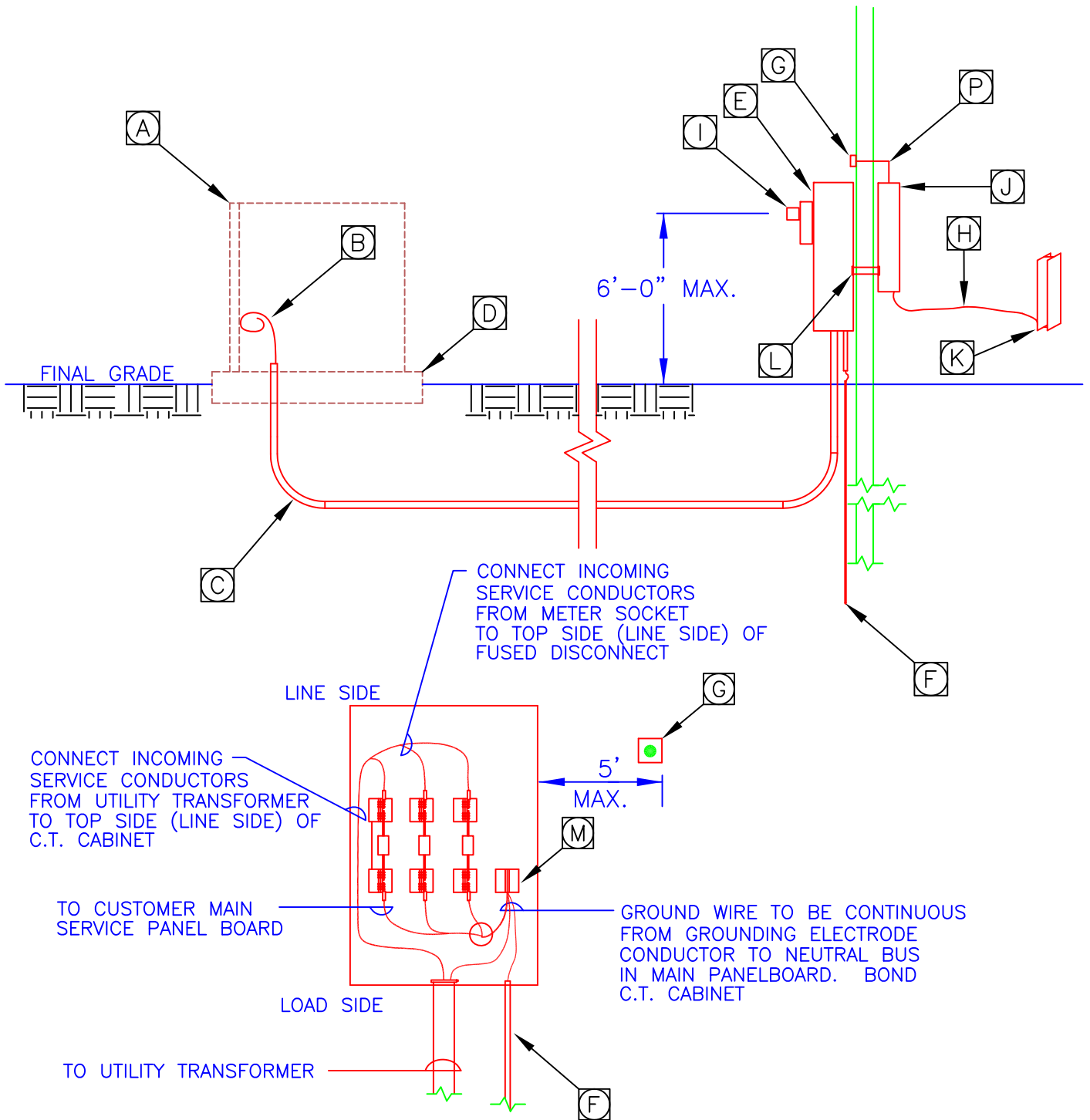
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 1207 REMINGTON, SUITE B
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SHEET 1 OF 5



PRE-WIRED METER SOCKET/CURRENT TRANSFORMER ("CT") CABINET AND SHUNT TRIP ACTUATOR SWITCH DETAIL (TYPICAL FOR SERVICES 800 AMPS AND LARGER WITH DISCONNECTING MEANS LOCATED INSIDE BUILDING)

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EQUIPMENT LEGEND AND CHECKLIST

A THREE PHASE PAD MOUNTED TRANSFORMER. PROVIDED BY ELECTRIC UTILITY

B CONDUCTORS FOR SECONDARY CONNECTION TO CUSTOMER'S SERVICE ENTRANCE EQUIPMENT. CONDUCTORS ARE TO BE SUPPLIED AND INSTALLED BY CUSTOMER'S ELECTRICAL CONTRACTOR ("CONTRACTOR"). COLOR CODE TO BE AS FOLLOWS:

120/208V RED, BLACK AND BLUE NEUTRAL AS WHITE

277/480V BROWN, ORANGE AND YELLOW, NEUTRAL AS WHITE

THE USE OF COPPER CONDUCTORS IS REQUIRED FOR ALL SERVICE ENTRANCE INSTALLATIONS.

SECONDARY CONDUCTORS ARE TO BE OF NUMBER AND SIZE CONSISTENT WITH NEC SECTION 310, INCLUDING DERATING OF CONDUCTORS TO ACCOUNT FOR SECONDARY DUCT CONFIGURATION OR FOR PRESENCE OF HEAT SOURCES.

CONTRACTOR SHALL PROVIDE SUFFICIENT SLACK CONDUCTOR TO PERMIT UTILITY CREWS TO INSTALL CONDUCTORS ON ANY OF THE TRANSFORMER'S SECONDARY BUSHINGS PLUS AN ADDITIONAL 6" OF SLACK CONDUCTOR. CUSTOMER WILL PROVIDE SECONDARY CONNECTORS PER UTILITY SPECIFICATIONS. UTILITY WILL TERMINATE ALL SECONDARY CONNECTIONS, INCLUDING NEUTRAL CONDUCTOR AT THE UTILITIES TRANSFORMER.

ON FOUR-WIRE SOLIDLY GROUNDED SERVICES, UTILITY SHALL INSTALL GROUND CONDUCTOR FROM NEUTRAL BUSHING OF TRANSFORMER TO TRANSFORMER GROUND GRID. GROUND CONDUCTOR TO BE SIZED PER NEC TABLE 250-94.

ON SERVICES LARGER THAN 800 AMPS, PULL SECONDARY CONDUCTORS ONLY AFTER UTILITY CREWS HAVE INSTALLED THE TRANSFORMER.

C SECONDARY DUCT TO BE SCHEDULE 40 PVC CONDUIT. CONDUIT TO BE INSTALLED IN A MANNER CONSISTENT WITH UTILITY'S "INSTALLATION REQUIREMENTS FOR PAD MOUNTED TRANSFORMERS ALL CONDUIT ABOVE GROUND IS TO BE INSTALLED AS RGS. ALL ELBOWS SHALL HAVE A MINIMUM BENDING RADIUS OF 36" OR LARGER. ALL RGS CONDUITS ARE TO BE TERMINATED WITH GROUNDING BUSHING.

D PADMOUNTED TRANSFORMER PAD TO BE INSTALLED BY CUSTOMER, IN A MANNER CONSISTENT WITH UTILITY'S INSTALLATION REQUIREMENTS FOR PAD MOUNTED TRANSFORMERS

E FOR 200 AMP AND 400 AMP SERVICES AT 208 VOLTS OR LESS, METER SOCKETS SHALL BE PURCHASED BY THE CUSTOMER FROM THE CITY.

METER SOCKET INSTALLATION SHALL PROVIDE FOR "HOT SEQUENCE" METERING.

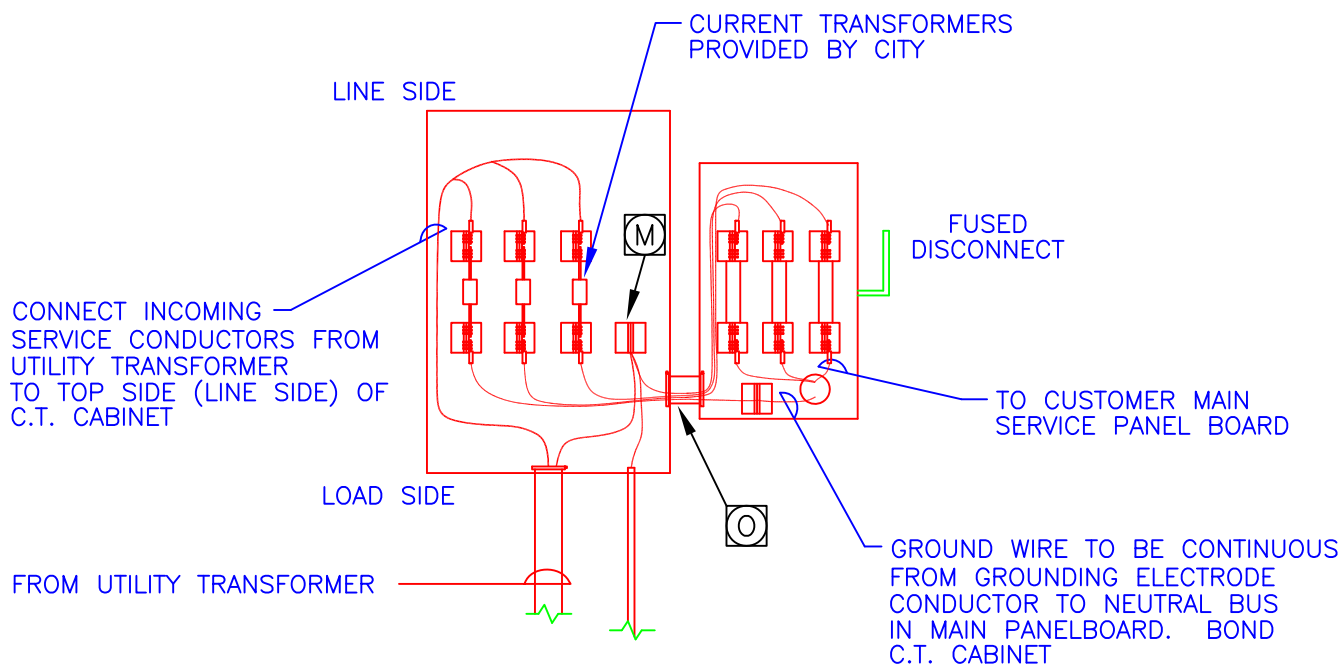
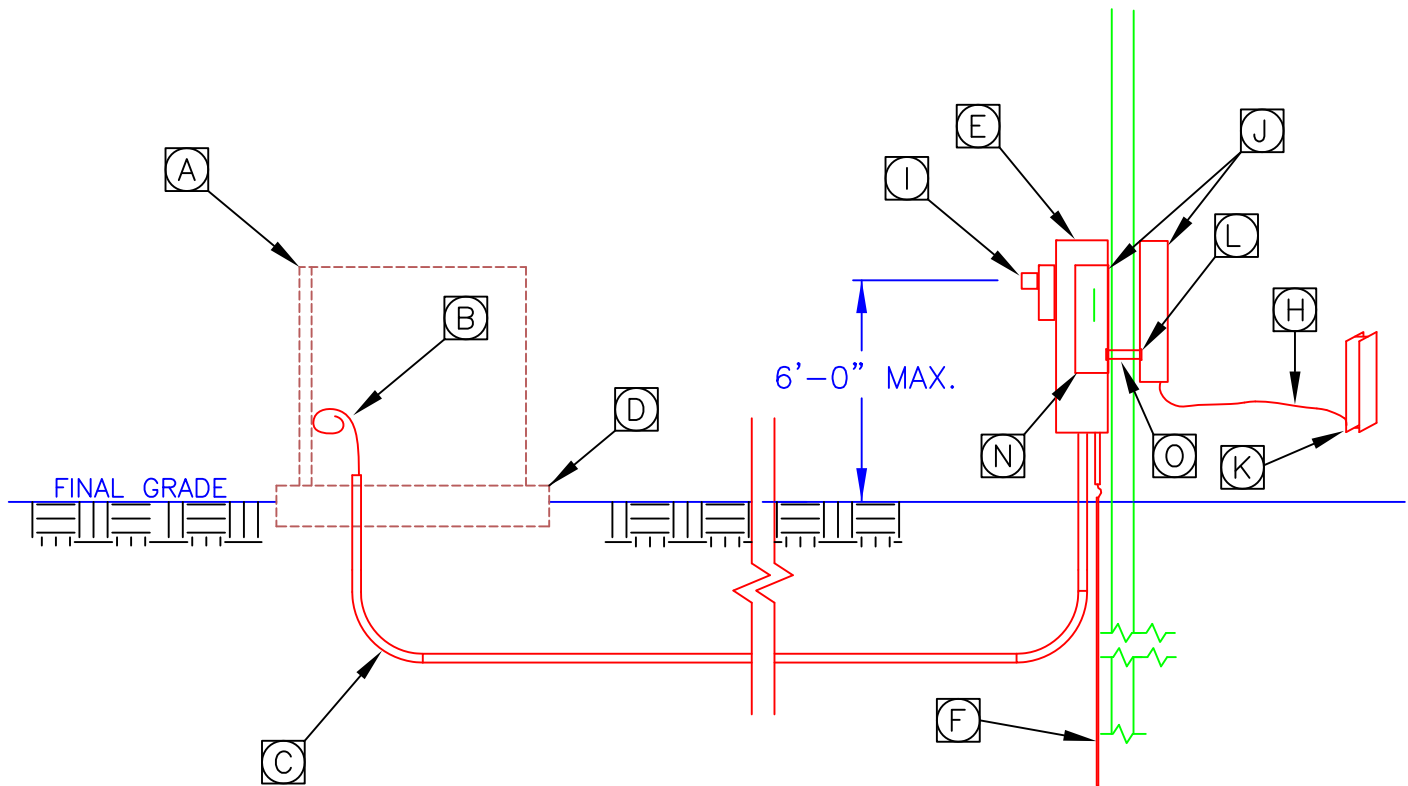
METER SOCKET SHALL BE INSTALLED SO THAT THE CENTER OF THE METER IS HIGHER THAN 4'-0" AND LESS THAN 6'-0" ABOVE FINAL GRADE.

FOR SERVICES GREATER THAN 400 AMPS OR AT VOLTAGES UP TO 480 VOLTS, THE METER SOCKET SHALL BE PART OF A UNITIZED AND PRE-WIRED METER SOCKET/CURRENT (AND POTENTIAL) TRANSFORMER CABINET. CT CABINET TO BE ERICKSON TYPE CECT-93, OR APPROVED EQUIVALENT. CT CABINET TO BE FURNISHED AND INSTALLED BY CONTRACTOR WITH APPROVED 13-TERMINAL METER SOCKET WITH TEST SWITCHES AND SHALL INCLUDE AN INTEGRAL WIRING HARNESS PRE-WIRED TO CURRENT TRANSFORMER CABINET. CABINET TO BE INSTALLED SO THAT CENTER OF METER OR METER COMBINATION IS HIGHER THAN 4'-0" AND NO HIGHER THAN 6'-0" ABOVE FINAL GRADE.

CONTRACTOR TO VERIFY WITH UTILITY BUS MOUNTING DIMENSIONS FOR CURRENT TRANSFORMERS.

NOTE: UTILITY REQUIRES METER WIRING TO CONSIST OF #14 AWG FOR POTENTIALS AND #10 AWG FOR CURRENTS. CT CABINET TO INCLUDE APPROVED TEST SWITCHES.

F GROUNDING ELECTRODE TO BE SIZED AND INSTALLED PER NEC SECTION 250-083. GROUNDING ELECTRODE CONDUCTOR SHALL BE INSTALLED TO PERMIT INSPECTION OF GROUND CONNECTION AT ALL TIMES. COPPER GROUND CONDUCTOR SHALL BE SIZED PER NEC AND PROTECTED BY USE OF RGS CONDUIT OF SUITABLE SIZE. GROUNDING ELECTRODE GROUND CONDUCTOR SHALL BE MADE CONTINUOUS TO GROUND/NEUTRAL BUS AT MAIN SWITCHBOARD BY USE OF COMPRESSION TYPE SPADE-LUG CONNECTORS. CURRENT TRANSFORMER CABINET TO BE BONDED TO GROUND CONDUCTOR. CONNECTIONS TO GROUNDING ELECTRODE TO BE MADE BY USE OF EXOTHERMIC CONNECTIONS.



PRE-WIRED METER SOCKET/CURRENT TRANSFORMER ("CT")
 CABINET AND DISCONNECT DETAIL
 (TYPICAL FOR 600 AMP OR LARGER SERVICES WITH
 MAIN DISCONNECTING MEANS INSTALLED OUTSIDE)

SEE SHEET 4 OF 5 AND SHEET 5 OF 5 FOR EQUIPMENT LEGEND AND CHECKLIST

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EQUIPMENT LEGEND AND CHECKLIST (CONT.)

- G** ON SERVICES 800 AMP OR GREATER WITH THE MAIN DISCONNECTING MEANS INSTALLED INSIDE THE BUILDING, A SHUNT TRIP FEATURE SHALL BE REQUIRED TO PERMIT REMOTE TRIPPING OF THE PANELBOARD'S MAIN CIRCUIT BREAKER OR BOLTED PRESSURE SWITCH FROM A KEYED SWITCH LOCATED OUTSIDE THE BUILDING AND WITHIN 5'-0" OF THE CURRENT TRANSFORMER/METER CABINET. THE SHUNT TRIP FEATURE WILL NOT BE REQUIRED IF THE MAIN DISCONNECTING MEANS IS INSTALLED OUTSIDE THE BUILDING.

- H** CONNECT GROUNDING ELECTRODE CONDUCTOR TO EXPOSED BUILDING STRUCTURAL STEEL MEMBER AS REQUIRED BY NEC CODE SECTION 250-80.C. GROUNDING ELECTRODE CONDUCTOR TO BE COPPER AND SIZED PER NEC TABLE 250-94. CONDUCTOR TO BE TERMINATED BY USE OF COMPRESSION-TYPE SPADE LUG CONNECTOR OR EXOTHERMIC WELD.

- I** ELECTRIC METER PROVIDED BY UTILITY.

- J** MAIN DISCONNECT OR BREAKER PANEL OR PANELBOARD ("SERVICE ENTRANCE PANELBOARD"). SERVICE ENTRANCE PANELBOARD TO BE RATED AS SERVICE ENTRANCE EQUIPMENT AND SHALL BE BRACED FOR MAXIMUM AVAILABLE SHORT CIRCUIT AVAILABILITY.

- K** EXPOSED INTERIOR BUILDING STRUCTURAL STEEL.

- L** INSULATED RIGID GALVANIZED STEEL BUSHING CONNECTOR (TYPICAL).

- M** NEUTRAL/GROUND BONDING TERMINAL.

- N** MAIN DISCONNECT SWITCH, TYPE 3R ENCLOSURE, FUSED OR BREAKER TYPE.

- O** RIGID GALVANIZED STEEL CONDUIT. SIZED PER TABLE C-8 IN APPENDIX C OF THE 1999 NEC.

- P** 3/4" RIGID GALVANIZED STEEL CONDUIT.