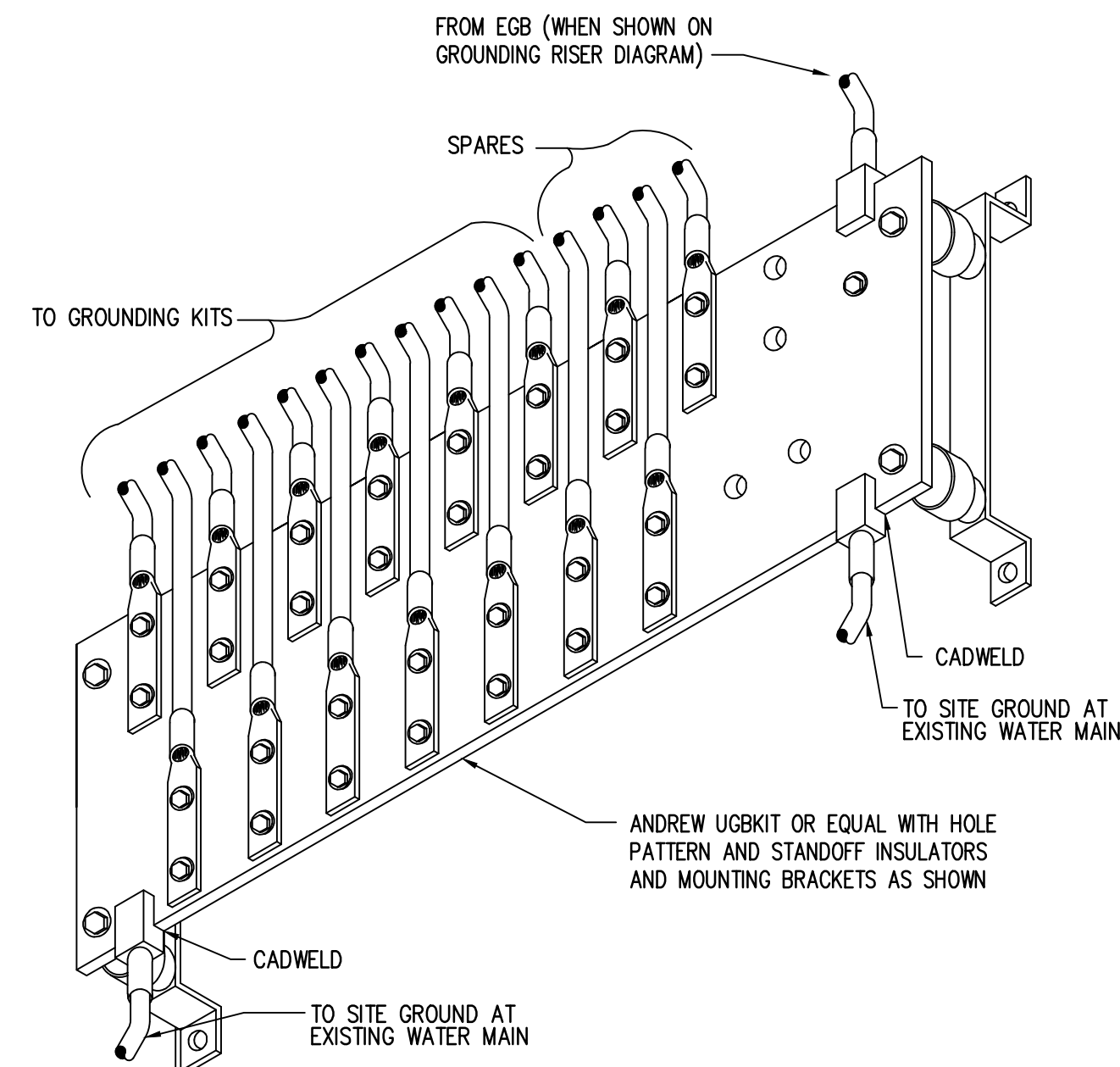


**GROUNDING RISER DIAGRAM**

SCALE: NOT TO SCALE

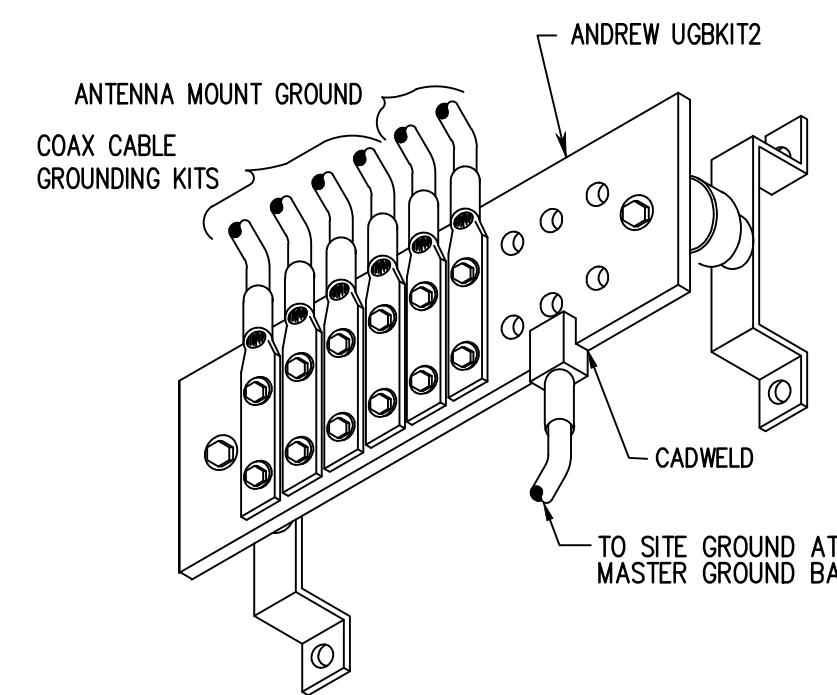
1  
E-2



**MASTER GROUND BAR (MGB)**

SCALE: NOT TO SCALE

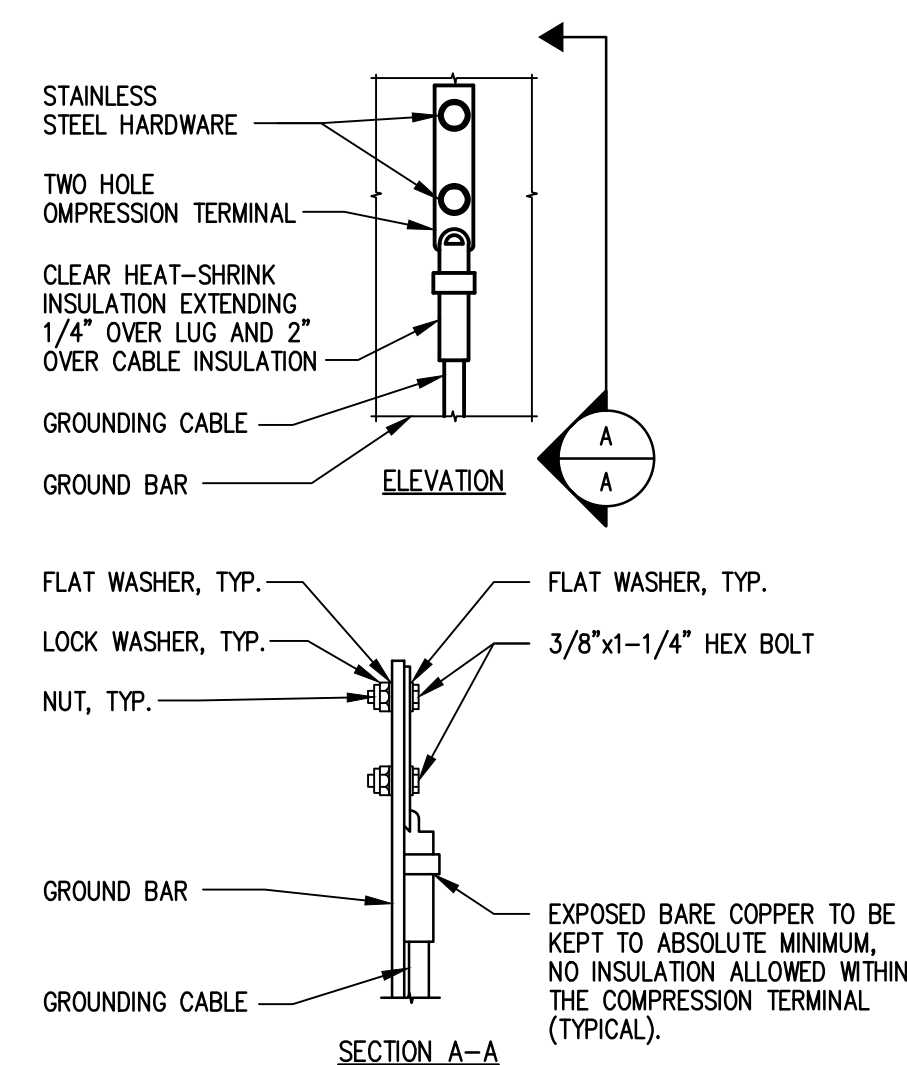
2  
E-2



**GROUND BAR (EGB)**

SCALE: NOT TO SCALE

3  
E-2



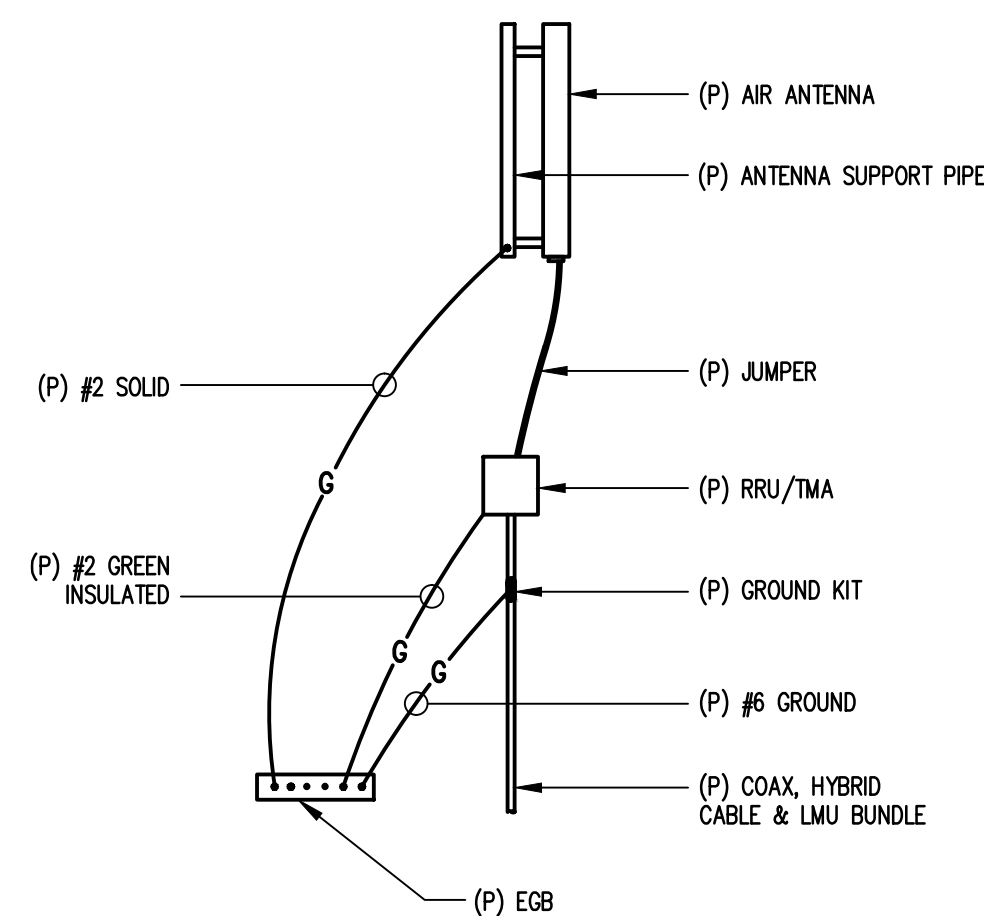
**NOTES:**

- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
- CADWELL DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

**TYPICAL GROUND BAR CONNECTIONS DETAIL**

SCALE: NOT TO SCALE

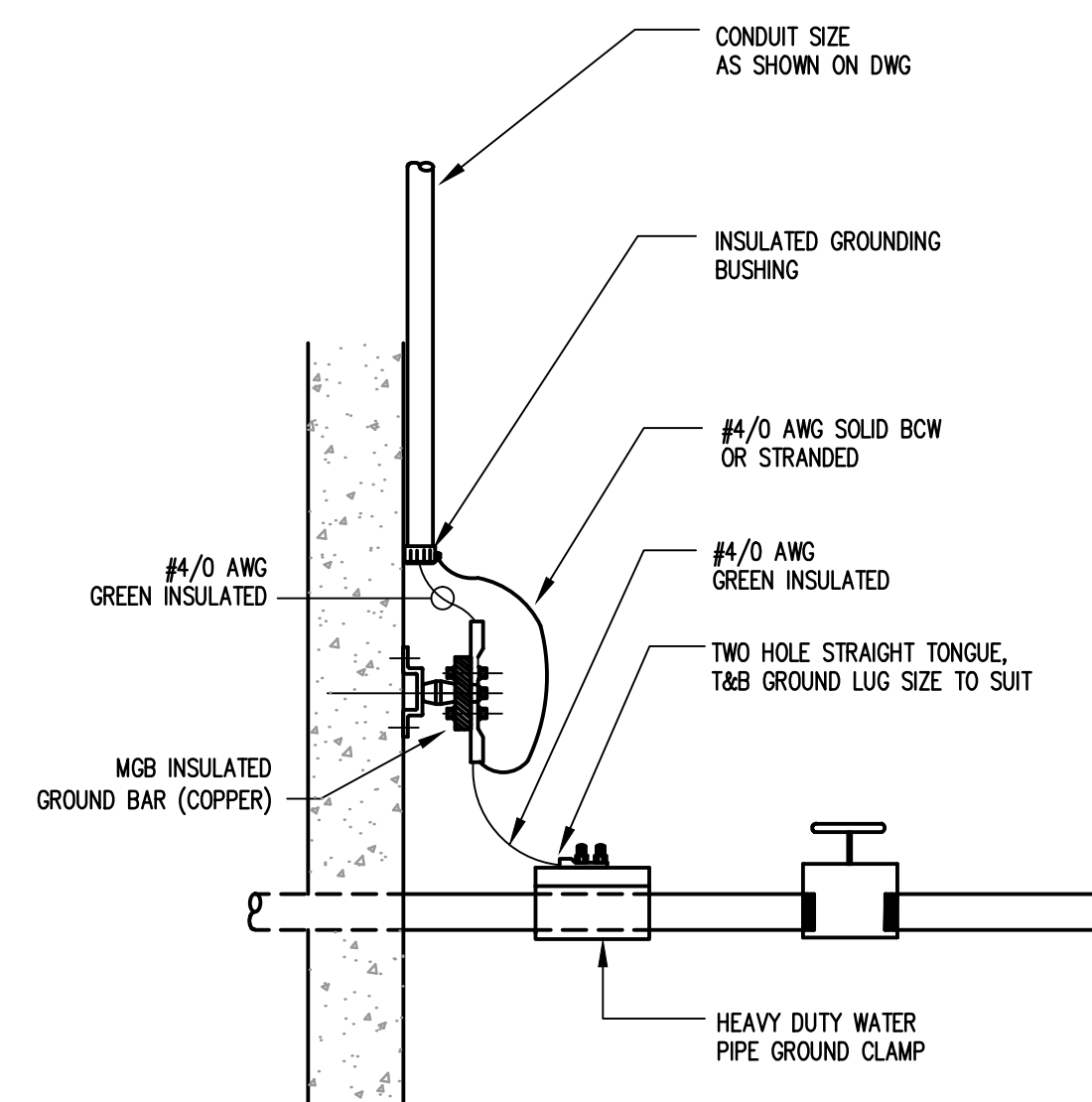
4  
E-2



**HYBRID CABLE CONNECTION AND GROUNDING DETAIL**

SCALE: NOT TO SCALE

5  
E-2



**WATER MAIN GROUNDING**

SCALE: NOT TO SCALE

6  
E-2

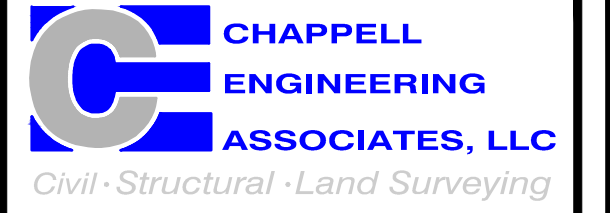
**GROUNDING LEGEND**

A.F.F.	ABOVE FINISHED FLOOR
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
GFI	GROUND FAULT INTERRUPTER
A	AMPERE
V	VOLT
KWH	KILOWATT - HOUR
C	CONDUIT
GRC	GALVANIZED RIGID CONDUIT
G	GROUND
⊥	GROUND
MGB	MASTER GROUND BAR
○	MECHANICAL CONNECTION
⊙	CADWELD CONNECTION
⊙	EQUIPMENT GROUND BAR
⊙	MECHANICAL CONNECTION
⊙	CADWELD CONNECTION
— G —	GROUND COPPER WIRE, SIZE AS NOTED
—	EXPOSED WIRING
—	COAXIAL CABLE
●	5/8"x10' COPPER CLAD STAINLESS STEEL GROUND ROD
●	5/8"x20' COPPER CLAD STAINLESS STEEL GROUND ROD
⊙	EXOTHERMIC (CADWELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION
PPC	POWER PROTECTION CABINET

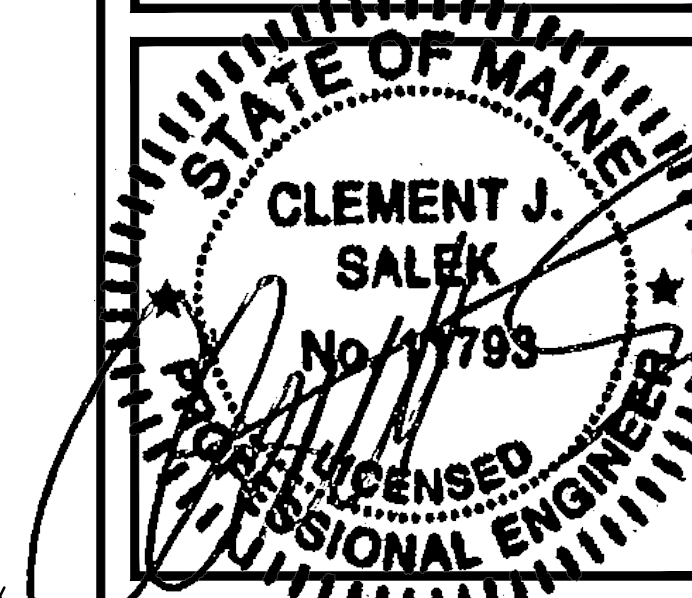
**GROUNDING NOTES**

- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
- CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE-TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE-OUT.

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**APPROVALS**

LANDLORD \_\_\_\_\_  
LEASING \_\_\_\_\_  
R.F. \_\_\_\_\_  
ZONING \_\_\_\_\_  
CONSTRUCTION \_\_\_\_\_  
A/E \_\_\_\_\_

PROJECT NO: 4PB-0360-A

DRAWN BY: CMC

CHECKED BY: JMT

**SUBMITTALS**

0 11/24/14 ISSUED FOR REVIEW

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4PB-0360-A  
HARBOR TERRACE

284 DANFORTH STREET  
PORTLAND, ME 04102

SHEET TITLE

**GROUNDING NOTES,  
DIAGRAMS & DETAILS**

SHEET NUMBER

E-2