

Project Manager	
CE Designer	
Structural	
Mechanical	
Electrical	
Other	

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Designed by	
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FEMA
Engineering Services by
KBR Engineering Co., LLC

FEMA EMERGENCY RADIO NETWORK
ON WIGAN PORTLAND, MAINE

**ELECTRICAL
GROUNDING PLAN**

MICHAEL A. CARTER
No. 11379
PROFESSIONAL ENGINEER

Drawing Number:
E-102

NOTES:

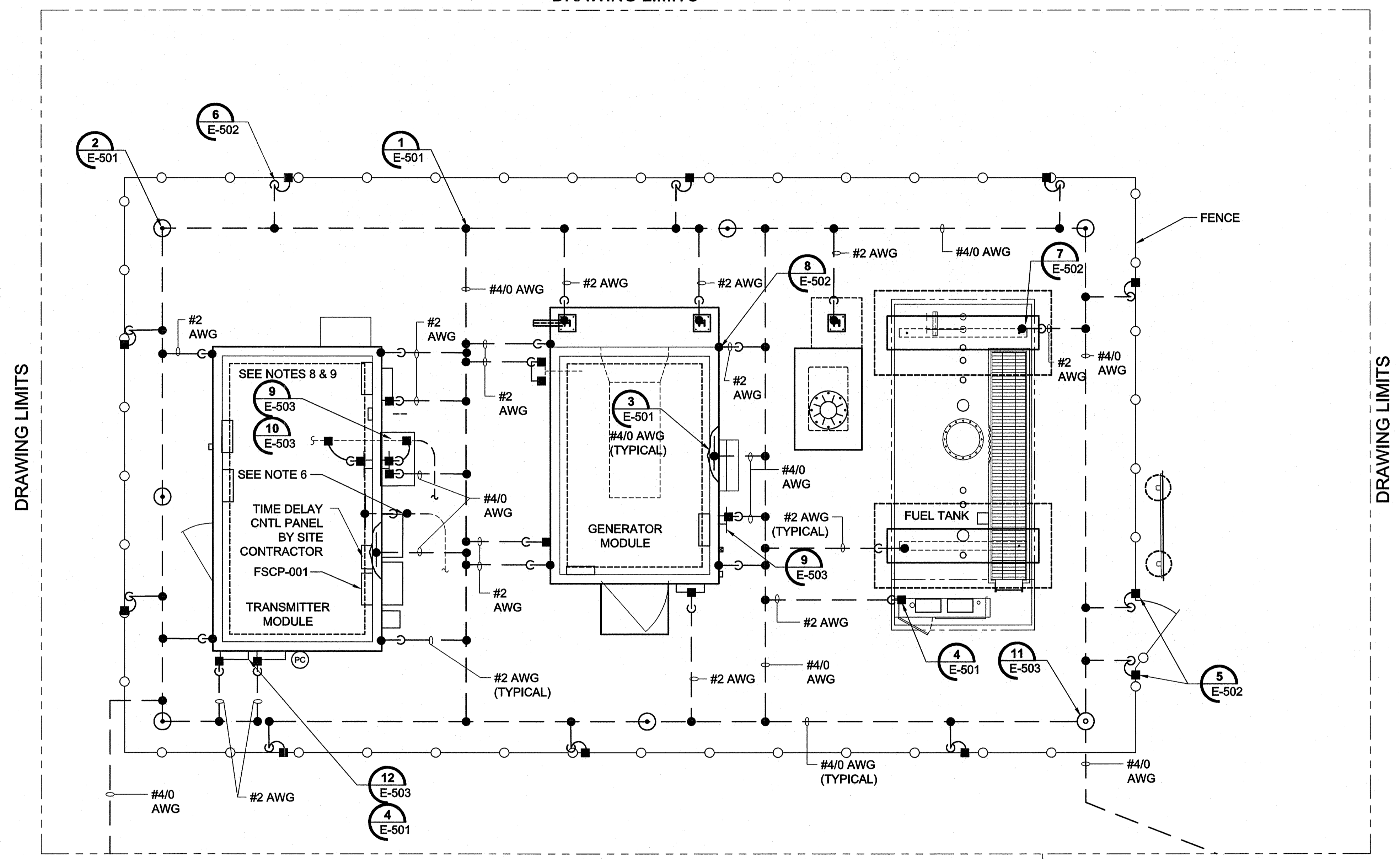
- ALL ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC NFPA 70) AND THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND PROJECT SPECIFICATIONS AND APPLICABLE CODES AND STANDARDS.
- GROUND CONDUCTORS / TOWER GROUND RADIALS DAMAGED OR CUT DURING CONSTRUCTION SHALL BE REPAIRED BEFORE CONTINUING CONSTRUCTION ACTIVITIES. REROUTING OF GROUND CONDUCTORS AROUND IMPACTED AREAS SHALL BE COMPLETED BEFORE CONTINUING.
- ALL GROUNDING CONNECTIONS SHALL BE EXOTHERMIC, NO COMPRESSION CONNECTIONS PERMITTED. MECHANICAL CONNECTIONS SHALL BE PERMITTED FOR EQUIPMENT UTILIZING BOLTED TYPE CONNECTIONS WHICH MAY REQUIRE REMOVAL FOR MAINTENANCE.
- MODULE GROUND CONNECTIONS SHALL BE LOCATED AT ALL PENETRATION AREAS IN ADDITION TO THE PROVIDED GROUNDING PADS AT THE GENERATOR MODULE CORNERS. A MECHANICAL CONNECTION SHALL BE ATTACHED TO THE CONDUIT / PIPING EXITING THE MODULE UTILIZING A BURNDY CONNECTOR TYPE GAR-BU OR APPROVED EQUAL. SIZE AS REQUIRED.
- CONTRACTOR SHALL TIE INTO EXISTING GROUND LOOP TO ENSURE CONTINUITY OF THE OVERALL GROUNDING SYSTEM.
- CONTRACTOR SHALL CONNECT THE INTERIOR RF 4" COPPER BONDING TAPE (PROVIDED BY SABRE INDUSTRIES) TO THE RF GROUND TAPE ROUTED WITH THE RF COAXIAL CABLE (PROVIDED BY SITE CONTRACTOR). SILVER SOLDER ALL RF 4" WIDE TAPE CONNECTIONS.
- WHERE THE GROUNDING ELECTRODE CONDUCTOR EXITS FROM BELOW GRADE IT SHALL BE ROUTED IN A SCHEDULE 80 PVC CONDUIT FROM 18" BELOW GRADE UP TO 8'-0" ABOVE GRADE.
- THE RF COAX CABLE SHALL BE BONDED TO THE GROUNDING BUS BARS BELOW THE BULK HEAD PENETRATION BOTH EXTERIOR AND INTERIOR. ANDREWS GROUNDING KIT(S) NO. 241088-2 OR APPROVED EQUAL
- CONTRACTOR SHALL CONNECT THE EXTERIOR RF GROUND BUS BAR TO THE GROUND LOOP UTILIZING A # 4/0 AWG INSULATED GROUNDING CONDUCTOR.
- MODULE GROUND CONNECTIONS ARE LOCATED ON THE SIDES OF THE MODULE BUILDING. SEE CELLXION DRAWINGS FOR EXACT LOCATIONS FOR GROUNDING STUB-UPS. TYPICAL BOTH MODULES

LEGEND:

- UNDERGROUND CONDUIT
- ABOVE GROUND CONDUIT
- ⊙ GROUND ROD, 3/4" X 10' SECTIONAL COPPER CLAD
- EXOTHERMIC WELD, SEE DETAIL FOR TYPE
- MECHANICAL GROUND CONNECTION, SEE DETAIL FOR TYPE
- ⊙ GROUNDING TEST WELL
- GROUNDING CONDUCTOR (BURIAL DEPTH 30")
- 4" WIDE (.016" TO .022") COPPER RF BONDING TAPE
- 3" 7/8" RF COAXIAL CABLE
- ⊔ CONDUIT / CABLE TURNED DOWN
- ⊕ CONDUIT / CABLE TURNED UP
- TT GROUNDING BUS BAR
- ⊔ GROUND CONNECTION TO FOUNDATION REBAR LOCATION AT LOWEST LEVEL (UFER GROUND)

XX
E-5XX
DETAIL/SHEET #

DRAWING LIMITS



CONTINUED ON DRAWING E-105 CONTINUED ON DRAWING E-104

A
E-101 **GROUNDING PLAN**
SCALE: 1/4"=1'-0"

