

JUNCTION AND PULL BOXES:

1. USE GALVANIZED PULL AND JUNCTION BOXES THAT COMPLY WITH NEC AS TO SIZE AND CONSTRUCTION.
2. FOR JUNCTION AND PULL BOXES, USE BOXES NOT LESS THAN 4" SQUARE AND 1-1/2" DEEP WITH REMOVABLE COVERS.
3. IN WET AREAS OR OUTDOORS, USE CAST ALUMINUM OR CAST IRON BOXES WITH THREADED HUBS AND GASKETED COVERS.
4. INSTALL JUNCTION AND PULL BOXES IN ACCESSIBLE LOCATIONS. POSITION BOXES SO COVERS CAN BE REMOVED.
5. INSTALL BOXES ON CONCEALED CONDUITS WITH COVERS FLUSH WITH FINISHED SURFACES.

WORK IN EXISTING FACILITY:

1. EXISTING FACILITY SHALL BE KEPT IN OPERATION DURING THE PERIOD OF CONSTRUCTION AND INSTALLATION. SUB-CONTRACTOR SHALL PERFORM THE NECESSARY PRELIMINARY WORK HEREIN SPECIFIED IN ORDER TO CLEAR THE AREA FOR CONSTRUCTION OF THE BUILDING ADDITION AND/OR RENOVATION. THE WORK SHALL BE TIMED TO CREATE MINIMAL POWER OUTAGE. THE OWNER SHALL BE NOTIFIED OF ALL OUTAGES REQUIRED AND GIVEN 24 HOUR NOTICE OF INTENTION TO DISCONNECT AND THE DURATION OF DOWNTIME. WRITTEN PERMISSION SHALL BE OBTAINED BEFORE PROCEEDING WITH THE DISCONNECT.
2. LOCATIONS OF THE VARIOUS EXISTING ELECTRICAL SYSTEMS AND EQUIPMENT TO BE ALTERED, REMOVED, RECONNECTED, OR OTHERWISE WORKED ON HAVE BEEN TAKEN FROM PLANS OF THE EXISTING FACILITY AND OTHER SUBSTANTIALLY RELIABLE SOURCES AND ARE OFFERED AS A GENERAL GUIDE ONLY, WITHOUT GUARANTEE AS TO COMPLETE ACCURACY. THE DETAILED CONSIDERATIONS INVOLVED IN THE WORK REQUIRED ON THE EXISTING BUILDING, INCLUDING CUTTING, INTERFERENCES, ETC., SHALL BE THOROUGHLY INVESTIGATED.
3. EXAMINE THE EXISTING FACILITY AND DRAWINGS FOR NEW WORK AND NOTE THE SIZES OF OPENINGS AVAILABLE FOR GETTING EQUIPMENT INTO THE BUILDING. THE CONTRACTOR SHALL PAY FOR AND BE RESPONSIBLE FOR ANY CUTTING, PATCHING, AND ALTERATIONS REQUIRED TO PLACE NEW EQUIPMENT.

WIRING DEVICES:

1. DUPLEX RECEPTACLES: PROVIDE UL LISTED, 20 AMPERE, 125 VOLT, SPECIFICATION GRADE DUPLEX RECEPTACLES; GFI WITH TAYMAC OR EQUAL WEATHER-PROOF COVER.
2. LIGHT SWITCHES: PROVIDE UL LISTED, 20 AMPERE, 125 VOLT, SPECIFICATION GRADE AC QUIET SWITCHES (LEVITON OR EQUAL).

PAINTING:

PAINT ALL EXPOSED CONDUIT TO MATCH EXTERIOR OF PREFABRICATED EQUIPMENT ENCLOSURE.

GROUNDING NOTES:

SITE TESTING:

1. CONTRACTOR SHALL BOND TO A NEW CHEMICAL GROUND SYSTEM (XIT GROUND).
2. CONTRACTOR SHALL PROVIDE INDEPENDENT GROUND RESISTANCE TEST AFTER INSTALLATION IS COMPLETE. GROUND RESISTANCE TEST SHALL BE ACCOMPLISHED BY A REGISTERED ENGINEER AND THE RESULTS SHALL BE FORWARDED TO OWNER. RESISTANCE SHALL BE 5 OHMS OR LESS.

CONTRACTOR IS RESPONSIBLE FOR TIMELY PERFORMANCE OF GROUND TEST. GROUND TEST SHALL BE ACCOMPLISHED AFTER THE GROUND SYSTEM IS IN BUT BEFORE THE SITE IS ACTIVATED. CONTRACTOR SHALL BE PRESENT AT THE TEST TO DISCONNECT ANY BOLTED CONNECTIONS REQUIRED FOR THE TEST, OPEN LOCKED GATES AND DOORS, ETC.

ENGINEER SELECTED FOR THE TEST MUST HAVE PRIOR APPROVAL BY THE OWNER.

CONDUCTORS:

4. GROUND CONDUCTORS BELOW GRADE SHALL BE #2 AWG, SOLID, BARE, TINNED, COPPER WIRE UNLESS OTHERWISE NOTED. ROOF TOP AND ABOVE GRADE GROUND CONDUCTORS SHALL BE #2 THWN STRANDED COPPER WITH GREEN INSULATOR RATED FOR EXTERIOR APPLICATIONS.
5. BENDS IN THE GROUNDING CONDUCTORS SHALL NOT BE LESS THAN TWELVE INCHES (12") IN RADIUS FOR WIRE SIZES #6 AWG AND GREATER AND NOT LESS THAN EIGHT INCHES (8") RADIUS FOR WIRE SIZES SMALLER THAN #6.
6. THE SUBCONTRACTOR SHALL PROVIDE A SCHEDULE 40 PVC CONDUIT WITH A TWELVE INCH (12") RADIUS BEND TO PROTECT THE GROUNDING CONDUCTOR IN ALL LOCATIONS WHERE THEY MAY BE SUBJECT TO FUTURE DAMAGE OR DEFORMATION.
7. PROVIDE STRAIGHT SECTIONS OF PVC CONDUIT FOR PROTECTION OF STRAIGHT UPWARD RUNS OF GROUND RING CONDUCTORS.
8. ALL CONNECTIONS, CONDUCTOR TO CONDUCTOR OR CONDUCTOR TO STEEL, SHALL BE BURNDY HYGROUND.™
9. ALL LUGS SHALL BE TWO-HOLE, LONG BARREL, TINNED, SOLID COPPER BY BURNDY SERIES YA-2N OR YA-2TC OR APPROVED EQUAL. LUGS MAY BE CONNECTED TO CONDUCTORS WITH A CRIMPED CONNECTION.
10. LUGS SHALL BE CONNECTED TO GROUND BARS WITH TWO (2) STAINLESS STEEL BOLTS AND NUTS AND TWO (2) STAINLESS STEEL LOCK WASHERS AT EACH BOLT/NUT. WHERE GROUND BONDS ARE MADE TO STEEL INCLUDE A DRAGON TOOTH WASHER BETWEEN THE LUG AND STEEL, COAT ALL CONTACTING SURFACES WITH BURNDY PENETROX-E®
11. ALL GROUND CONDUCTOR CONNECTIONS TO GROUND BARS WILL BE LUG CONNECTIONS. NO CADWELDS. CAD WELDED CONNECTIONS AT GROUND BARS ARE DIFFICULT TO DISCONNECT AND RECONNECT WHEN MAKING FUTURE TESTS.
12. CONNECTORS ARE TO BE COLOR CODED OR HAVE COLORED TAPE VISIBLE AT BOTH ENDS. POWER SHALL SHOW HOT AS BLACK AND RED, NEUTRAL AS WHITE OR GRAY AND GROUND AS GREEN. COAXIAL CABLE AND JUMPERS SHALL BE CODED MULTIPLE COLORS AS REQUIRED.
13. ALL INSULATED CONDUCTORS SHALL BE THWN OR THHN UNLESS OTHERWISE SPECIFIED.
14. ALL CONDUCTORS INSTALLED TO THE MASTER GROUND BAR ARE TO BE LABELED AND THE LABEL COVERED WITH CLEAR HEAT SHRINK AT BOTH ENDS. LABEL TELLS WHERE OPPOSITE ENDS ARE TERMINATED.

GROUND BARS:

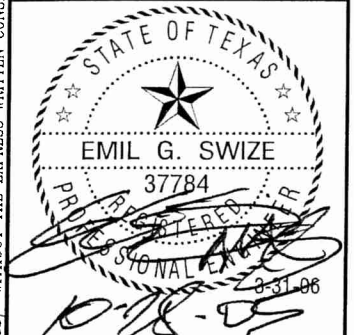
15. ALL EXPOSED GROUND BARS SHALL BE TINNED COPPER.
16. ALL LUG TO GROUND BAR CONNECTIONS AS DESCRIBED IN ITEM #11 ABOVE SHALL BE MADE WITH BURNDY PENETROX-E®

GENERAL GROUNDING NOTES:

17. CARE SHOULD BE TAKEN TO PROTECT THE SITE AND ALL SURROUNDING AREAS FROM FIRE HAZARD DURING "HOT" OPERATIONS. ADEQUATE EQUIPMENT, PERSONNEL AND EMERGENCY COMMUNICATIONS SHALL BE PROVIDED TO PROTECT LIFE AND PROPERTY IN AND SURROUNDING THE CONSTRUCTION SITE.
18. SUBCONTRACTORS MUST LOCATE ALL EXISTING UNDERGROUND OBSTRUCTIONS, UTILITIES, AND/OR EASEMENTS BEFORE DIGGING OR DRILLING ON THE SITE. CONTACT ALL LOCAL AUTHORITIES, OFFICIALS, CO-TENANTS, AND NEIGHBORS REGARDING BELOW GRADE HAZARDS AND OBSTRUCTIONS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
19. ALL EXCAVATIONS SHALL BE BARRICADED FOR PERSONNEL PROTECTION.
20. CADWELD SHALL BE AN APPROVED EQUAL TO THE BURNDY COMPRESSION SYSTEM.



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SHEET TITLE  
**SPECIFICATIONS**

SHEET HISTORY

DATE: 10/28/05

- 1.
- 2.
- 3.
- 4.

**E9**

SA055068

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