PART 1 - GENERAL

1.1 RELATED SECTIONS

.1 Section 26 05 00 - Common Work Results - Electrical.

1.2 REFERENCES

.1 American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE).

.1 ANSI/IEEE 837, Qualifying Permanent Connections Used in Substation Grounding.

.2 Canadian Standards Association (CSA International).

PART 2 - PRODUCTS

2.1 EQUIPMENT

.1 Clamps for grounding of conductor: Size as required to electrically conductive underground water pipe.

.2 Insulated Grounding Conductors: Green, type RW90.

.3 Busbars Earth: Copper, size as indicated in drawing, with insulators, fasteners, and connectors.

.4 Accessories necessary corrosion system grounding, including:

.1 Bits of grounding and bonding.

.2 Brides protection.

.3 Bolted connectors.

.4 Connectors soldering electrical connections.

.5 Cavaliers, braids, and barrettes to bond.

.6 Connectors wire clamp.

PART 3 - EXECUTION

3.1 INSTALLATION GENERAL

.1 Existing grounding shall be verified for the condition and grounding resistance before any new connection take place.

.2 Install complete permanent, continuous grounding system including, conductors, connectors, accessories. Where EMT is used, run green ground wire in each conduit.

.3 Install connectors in accordance with manufacturer's instructions.

.4 Protect against damage conductors grounded posed uncovered.

.5 Use mechanical connectors for grounding connections to equipment provided with lugs.

.6 The welded joints are prohibited.

.7 Install a jumper on the flexible conduits, laid carefully on the outside of the conduit and connected at each end to a tip grounded, a seamless terminal, a wire clamp or screw with Belleville washer.

.8 Arrange grounding conductors in radial form and route all the connections directly to a single point of common ground. Avoid loopbacks.

.9 Connect one end of the metal armor of single core box at the source and install a non-metallic inlet plate to the other end.

.10 Ground secondary service pedestals.

3.2 SYSTEM AND CIRCUIT GROUNDING

.1 Install system and circuit grounding connections.

3.3 EQUIPMENT GROUNDING

.1 Install grounding connections to typical equipment included in, but not necessarily limited to following list : Service equipment, transformers, switchgear, pipes, frames of motors, motor control centers, starters, control panels, frame steel, and distribution panels.

3.4 BUS GROUNDING

.1 Install the copper bus bars on isolated supports fixed to the wall of electrical room.

.2 Connect the equipment of the electrical room to the ground bus bar, using individual conductors of bare copper, stranded, size 2/0 AWG.

3.5 SYSTEMS COMMUNICATION

.1 Perform connections grounded telephone systems, public address, fire alarm, and intercom, as follows:

.1 Phone: Install the ground as required by the telephone company and/or the Departmental Representative.

.2 Sound, intercom and fire alarm: As required by the manufacturer.

3.6 FIELD QUALITY CONTROL

.1 Perform tests in accordance with Section 26 05 00 - Common Work Results - Electrical.

.2 Perform ground continuity and resistance tests using method appropriate to site conditions and approved by the Departmental Representative and the competent local authorities.

.3 Perform tests before energizing electrical system.

.4 During the tests, disconnect indicator earth leakage.

END OF SECTION