NOTES:

1. There shall be a minimum of six electrodes, except on single span structures, for which there shall be a minimum of four electrodes.

2. Wet locations shall be used rather than dry locations for electrodes.

3. No point on the structure shall be more than two spans from an electrode.

4. Provide two electrodes at each abutment.

5. Provide a grounding electrode conductor within each outside column at pier.

6. Provide grounding plates for each grounding electrode conductor.

7. Do not use surface-mounted ground conductors for new construction.

8. Alternate method at abutments: Route grounding conductors through one or more 1" metal conduits to an electrode located in a pull box. Arrange all metal conduit enclosing grounding conductors are bonded at each end. Conduit and pull boxes are incident. Alternate method by permission of the Engineer only, or by Plan Note.

9. Install Grounding Plate at each end as shown in Detail A to assure vandal fence (typically installed after parapet is complete) has an adequate bonding point.

10. See page 3 for exothermic weld details.

11. Provide to the Engineer a report (including photographic images) showing all completed exothermic welds before they are encased in concrete. Include a card in each image showing all completed exothermic welds before they are encased in concrete.
NOTES:

1. All connections and bare copper strands of the 1/0 AWG cable exposed to concrete shall be covered with mastic to prevent contact with the concrete.

2. Installation of plane-type and plate-type electrodes in dry areas and under pavements requires the use of Soil Ground Enhancement Material, incidental to the Structure Grounding Item.

3. Use UL-listed exothermic weld devices for all structure grounding connections, except for grounding plate, where a UL-listed device is optional.
NOTES:

1. All connections and bare copper strands of the 1/0 AWG cable exposed to concrete shall be covered with mastic to prevent contact with the concrete.

2. Use UL-listed exothermic weld devices for all structure grounding connections, except for grounding plate, where a UL-listed device is optional.

NOTES:
1. All connections and bare copper strands of the 60 AWG cable exposed to concrete shall be covered with mastic to prevent contact with the concrete.
2. Use UL-listed exothermic weld devices for all structure grounding connections, except for grounding plates, which may be UL-listed commercial products or the fabricated design shown below.

**PLANT VIEW**

*Conduit Grounding*

**ELEV. VIEW**

*Grounding Plate Details (Typ.)*

(See Note 2)