



**SPECIAL PROVISIONS
FOR
PERFORATED SQUARE STEEL TUBE POSTS AND ANCHORS**

**Polk County
IM-035-4(150)94--13-77**

**Effective Date
November 15, 2011**

THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

090151.01 DESCRIPTION.

Perforated Square Steel Tube (PSST) posts and anchors shall conform to the requirements of Section 4186 of the Standard Specifications with the following modifications.

090151.02 MATERIALS.

A. PSST Posts.

1. Provide square tube posts of the dimensions and gauge required by the contract documents with 7/16 inch knockouts, 1 inch on center, on all four sides. Posts shall conform to the standard specification for Hot-Rolled Carbon Sheet Steel, structural quality ASTM designation A1011, Grade 50.
2. The cross section of the post shall be a square tube carefully rolled to size and welded in the corner.
3. Furnished members shall be straight and shall have a smooth uniform finish. It shall be possible to insert tube freely into anchor with a minimum amount of play.
4. If perforated square tube posts are cut in the field, coat cut ends with zinc rich paint as per specification.

B. Anchors.

1. **Break-away, soil installation.**
42 inch minimum length, 7 gauge heavy duty winged anchor.

2. Break-away, concrete installation.

For posts installed in a concrete island, use a 48 inch minimum length, 7 gauge heavy duty anchor. Core an 8 inch diameter hole through the pavement at least 8 inches deep. After placing anchor, fill the hole with a concrete mix approved by the Engineer and level off the top of the concrete.

3. Triangular Slip Base Assembly.

- a. Shall be designed in accordance with the *AASHTO Standards and Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*, current edition and must meet or exceed the requirements set forth in NCHRP Report 350 and be FHWA accepted.
- b. The Triangular Slip Base Assembly consists of four parts, the one-piece anchor, the top half slip base, the hardware and a concrete foundation.
 - 1) The one-piece anchor shall meet the following requirements:
 - a) The anchor shall have a triangular slip plate (must be 1 inches thick) welded directly to the anchor leg.
 - b) The anchoring portion shall be 3 inch square 7ga material and 42 inches in length.
 - c) Galvanizing is by the hot dip process, complying with ASTM A123, grade 85.
 - 2) The top-half slip base shall meet the following requirements:
 - a) Cast Unit from Ductile Iron ASTM A536 Class 65-45-12.
 - b) The top half slip base shall have a triangular dimension to match 8 inch standard triangular slip plate, and shall receive 2 1/2 inch square sign support.
 - 3) Hardware shall meet the requirements of Article 4186.09 of the Standard Specifications.
 - 4) Concrete Footings: Apply the provisions of Section 2403 of the Standard Specifications.

090151.03 CONSTRUCTION.

- A. Position PSST posts within the anchor at the furthest corner from the likely point of impact from an errant vehicle.
- B. Firmly embed post within the anchor without any play.
- C. Provide minimum insertion length as required by the manufacturer.
- D. Keep the inside of break-away and slip base anchors installed in concrete free of concrete to allow the interior to drain.
- E. Install triangular slip base assembly as required by the manufacturer.

090151.04 METHOD OF MEASUREMENT.

- A. **Perforated Square Steel Tube Posts.**
Linear feet, to the nearest foot, measured from the top of the anchor to the top of the post. Embedded length will not be measured separately but included in the price bid for Perforated Square Steel Tube Posts.
- B. **Anchors.**
By count of each type installed.

090151.05 BASIS OF PAYMENT.

A. Perforated Square Steel Tube Posts.

1. Per Linear Foot.
2. Payment is full compensation for furnishing, fabricating, and erecting the posts.

B. Anchors.

1. Each, by type.
2. Payment is full compensation for providing and installing the anchor, coring the pavement, backfilling with concrete, slip base hardware and any other details necessary to provide the anchor complete and erected in place.