

802-T-230 OVERHEAD SIGN STRUCTURES

(Adopted 07-15-21)

The Standard Specifications are revised as follows:

SECTION 802, BEGIN LINE 118, DELETE AND INSERT AS FOLLOWS:

~~The base plate~~ Anchor bolt hardware tightening shall be by the turn of the nut method and as follows:

- ~~a. Lower nuts and washers shall be in full contact with the base plate,~~
- ~~b. The top nuts shall be tightened to 1/6 turn beyond snug fit,~~
- ~~c. The lower nuts shall be retightened to assure that full contact with the base plate has been maintained.~~
- a. Anchor bolts shall be clean and not be damaged or out of plumb.
- b. The threaded portion of the anchor bolts shall be lubricated within 24 h prior to tightening.
- c. The distance from the bottom of the levelling nuts to the top of the foundation shall be less than the diameter of the bolt, unless specified otherwise.
- d. The tightening procedure shall be as follows:
 1. All tightening shall be in the star pattern order as shown on the plans, or in accordance with the FHWA "Guidelines for the Installation, Inspection, Maintenance and Repair of Structural Supports for Highway signs, Luminaires, and Traffic Signals".
 2. All leveling nuts shall be brought into contact with the base plate. While holding the levelling nut with a wrench, the top nut shall be brought to a snug tight condition in full contact with the base plate. The levelling nut shall be brought to a snug tight condition. This process shall be repeated for the remaining top and levelling nuts.
 3. After all top and levelling nuts are made snug tight, the top nuts and base plate shall then be marked, and the nuts further tightened, pretensioned, by a minimum 1/6 turn for bolt diameters that are 1 3/4 in. or greater or a minimum 1/3 turn for bolts less than 1 3/4 in. in diameter.
 4. For span structures, the top nuts shall be inspected for proper fit no sooner than 10 minutes after the installation of the truss or span on the end bents or columns. Nuts found not to be in a snug tight condition or nuts that have loosened, based on a visual inspection of

the relative position marks, shall be tightened by repeating the steps above.

SECTION 910, BEGIN LINE 1187, DELETE AND INSERT AS FOLLOWS:

910.19 Overhead Sign Structures

The complete structure with signs in place shall be able to withstand ~~wind pressure loads~~ in accordance with AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. The structure shall be designed to resist fatigue of the material in accordance with the AASHTO specifications.

All prefabricated structural units shall be packed so that there is no injury or defacement during transportation to the point of destination.

All bolts, nuts, and washers for bridge bracket assemblies shall be stainless steel in accordance with ASTM ~~F738M~~ *MF593*.

SECTION 910, BEGIN LINE 1287, DELETE AND INSERT AS FOLLOWS:

~~Bolts~~ *Other bolts*, U-bolts, nuts, screws, and flat washers shall be passivated type 304 stainless steel. Bolts and screws shall be in accordance with ASTM A193, grade B8. Hexagon nuts and washers shall be in accordance with ASTM A194, grade 8.

Bridge attached structures shall be fabricated from constant cross-section tubular steel in accordance with ASTM A53, type E or S, grade B with a minimum yield strength of 35,000 psi. Constant-cross section tubular steel with greater yield strength may be used, with written approval. However, structural dimensions shall remain as shown on the plans. Structures shall be galvanized after fabrication in accordance with ASTM A123.

Tri-chord truss structures shall be made of constant cross-section tubular members in accordance with ASTM A53, type E or S, grade B minimum yield strength of 35,000 psi. Monotube structures shall be made of tapered tubular members in accordance with either ASTM A595, grade A or B, or ASTM ~~A573~~ *A572*, grade 50. Structures shall be galvanized after fabrication in accordance with ASTM A123.

SECTION 910, BEGIN LINE 1339, DELETE AND INSERT AS FOLLOWS:

Gusset, flange, and base plates shall be in accordance with ASTM A36 and shall be galvanized after fabrication in accordance with ASTM A123. Base plates for upright poles shall develop the full strength of the poles. Castings for the vertical pole top and horizontal arm and cap shall be in accordance with ASTM A126 and shall be galvanized with a minimum coating of 2 oz/sq ft. High strength heavy hex bolts and nuts, except anchor bolts, shall be in accordance with ASTM F3125, grade A325, Type 1, and ASTM A563. Two nuts for use in plumbing upright poles shall be furnished with each anchor bolt. ~~Anchor bolts for overhead steel structures shall be in accordance with 910.19(a).~~ Bolts, nuts, washers, and the top ends of anchor bolts shall be either hot dip galvanized in accordance with ASTM F2329 or mechanically galvanized in accordance with ASTM B695, Class 55. Welding shall be in accordance with 711.32