

Section 635 Structural Steel Sign Supports

635.1 Description

- (1) This section describes providing breakaway steel sign supports and replacing base connection bolts.

635.2 Materials

- (1) Furnish [ASTM A709](#), grade 50 for steel sign supports. Hot-dip zinc coat the sign support posts and stubs according to [ASTM A123](#) after completing cutting, drilling, punching, and welding. Furnish mill inspection and testing certifications for posts and stubs conforming to [506.3.21](#).
- (2) Furnish supplier-certified [ASTM A325](#) type 1 steel bolts, [ASTM A563](#) nuts, and [ASTM F436](#) washers all hot-dip galvanized according to [ASTM A153](#).

635.3 Construction

635.3.1 Structural Steel Sign Supports

- (1) Locate and erect the supports as specified for placement and orientation in [637.3.3.2](#). Construct concrete footings conforming to [636](#).
- (2) Lubricate base connection bolts and nuts with a wax-based lubricant. Follow the tightening procedure the plan details specify. Use a calibrated torque wrench to establish the final required torque.
- (3) Protect materials from damage to the zinc coating during transportation, storage, and erection. Paint cuts and other areas of damaged zinc coating with 2 coats of zinc dust/zinc oxide paint. Clean damaged and adjacent areas by sanding, scraping, chipping, or wire brushing before painting.
- (4) Perform shop welding for structural steel sign supports as the plans show and conforming to AWS D 1.1, Structural Welding Code - Steel. Do not weld in the field without the engineer's written approval. The engineer will only allow field welding for repairs in noncritical locations and when a department-approved individual competent to perform inspections is present during the welding. Perform field welding using personnel qualified under AWS D 1.5, Bridge Welding Code.

635.3.2 Replacing Base Connection Bolts

- (1) Install new bolts at locations the contract specifies conforming to torque requirements in the plan details. Repair or replace existing posts, base plates, and stiffener plates damaged during bolt replacement.

635.4 Measurement

- (1) The department will measure Sign Supports Structural Steel HS by the pound acceptably completed, measured using the pay weights the plan details show.
- (2) The department will measure Sign Supports Replacing Base Connection Bolts as each individual sign location acceptably completed.

635.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
635.0200	Sign Supports Structural Steel HS	LB
635.0300	Sign Supports Replacing Base Connection Bolts	EACH

- (2) Payment for Sign Supports Structural Steel HS is full compensation for providing sign supports including base connection bolts, nuts, and washers. The department will pay separately for concrete footings under [636.5](#) and for signs under [637.5](#).
- (3) Payment for Sign Supports Replacing Base Connection Bolts is full compensation for providing new bolts for each contract designated sign; and for repairing damage done during bolt replacement.