

Special Specification 6118

Camera Pole Structure



1. DESCRIPTION

Design, fabricate, deliver, and install the camera pole structures as shown on the plans. Design to conform to the AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals," with interim specifications and with additional interpretations as applied by the Department.

2. MATERIALS

2.1. **General.** This specification, instructions on the plans, and the drawings constitute the only acceptable design for the assemblies.

Fabricate and weld in accordance with Item 441, "Steel Structures." All welded joints must develop the full required strength of the member.

Before fabrication submit 6 prints of the shop drawings showing the fabrication and erection details for each support to the Engineer. Ensure the submitted shop drawing is signed, sealed, and dated by a Texas Registered/Licensed Professional Engineer.

Fabricate the camera pole to a design wind speed of 80 mph plus a 1.3 gust factor. Identify this wind speed permanently on a surface visible after erection of the pole base plate.

Provide new materials, corrosion resistance, and in strict accordance with the details shown on the plans and in the specifications.

2.2. **Anchor Bolts.** Ensure the anchor bolts meet the requirements of Item 449, "Anchor Bolts."

2.3. **Poles.** Provide a tapered pole shaft that is round or octagonal. Circumferential welds, other than at the ends of the shafts, are not permitted. Ground or otherwise smooth the exterior of longitudinal seam welds to the same appearance as other shaft surfaces. Ensure the longitudinal seam welds for pole sections to be 60% minimum penetration except longitudinal seam welds must be complete penetration when within 6 in. of circumferential base welds. A maximum of two longitudinal seam welds may be made in pole sections. Low hydrogen electrodes, or the equivalent in wire and flux for automatic welding, will be required for all welds. Preheating will be required for welding pole to the base plate in accordance with ANSI/AWS D1.1 structural welding code.

Ensure material for pole shafts conform to the requirements in the standard drawings and comply with the requirements of ASTM A570 Grade 50, or A572 Grade 50, or A607 Grade 50, or A595 Grade A, or if designated A36M50 with the requirements of Item 442, "Metal for Structures". Material supplied under the A570 Grade 50 or A595 Grade A specifications must meet their associated chemical and bend test requirements with the further stipulation that the materials must meet a minimum yield of 50 ksi and a minimum elongation of 18% in 8 in. or 23% in 2 in. prior to brake or tube forming operations. A570 Grade 50 material in thicknesses up to 5/16 in. is also acceptable providing it meets the above stated chemical, bend test, yield, and elongation requirements. A595 Grade A material which can be shown by tests to have a minimum of 50 ksi yield adjacent to base welds after fabrication will also be acceptable.

Provide mill test reports and/or laboratory test certifications to show that the materials conform to these requirements.

Secure a galvanized metal cap at the top of all poles using galvanized or stainless steel set screws.

- 2.4. **Finish.** Galvanize the camera pole. Ensure all sheared or cut edges and all other exposed edges to be painted or galvanized are rounded or chamfered to approximately 1/16 in.
- 2.4.1. **Hot-Dip Galvanizing.** Provide camera poles that are hot-dip galvanized and provide for proper filling, venting, and draining during the cleaning and galvanizing operations. Galvanize in accordance with Item 445, "Galvanizing."
- 2.5. **Delivery.** The use of the detailed drawings does not relieve the supplier of the responsibility for providing proper fit of camera pole assembly components.
- Furnish two copies of mill certificates reflecting the physical and chemical properties of the base metal of the pole, base plate, and anchor bolts. Also, provide four certified copies of the galvanizing test report.
- Identify all items of a shipment with a weatherproof tag, as a minimum, identify the manufacturer, contract number, date, and destination of shipment.

3. MEASUREMENT

This Item will be measured as each unit complete in place.

4. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided for under "Measurement" will be paid for at the unit price bid for "Camera Pole Structure" of the various sizes specified. This price is full compensation for furnishing, fabricating, and erecting the camera pole structure; for furnishing and placing anchor bolts, nuts and washers, for furnishing and placing electrical conduit in the foundation; and for all the other details and incidentals necessary to provide a camera pole structure in accordance with the specifications, plans and approved working drawings, complete in place and ready for the attachment of the camera.

Foundations will be paid for under Item 416, "Drilled Shaft Foundations."