

1621 - STEEL SIGN POSTS

SECTION 1621

STEEL SIGN POSTS

1621.1 DESCRIPTION

This specification governs steel posts intended for sign support and other various applications.

1621.2 REQUIREMENTS

a. General. Provide posts that have the symmetrical cross section profile of a channel with flared and extended flanges as displayed in AASHTO M 281 for the channel or 'U' type post cross section with a cross section that is uniform throughout the post length. The post length(s), weight per unit length, and specific fabrication requirements are as specified in the Contract Documents.

Perforate the web center of the post with 3/8 inch diameter holes on one-inch centers initiating at one inch from one end of the post relative to the first hole center. Perforate the post not less than 36% of the post length for posts up to 11 feet in length and not less than 50% of the length for posts of 11 feet or greater in length. Perforating the total length of the post is permitted. The method of perforation is at the discretion of the post manufacturer; however, the holes must be uniform in diameter, de-burred, and smooth sided. Perform all perforating and machining operations prior to application of the corrosion protection coating.

Provide posts with steel weight per unit length for posts of either 2.0 lb/ft or 3.0 lb/ft, as specified in the Contract Documents. The tolerance on this requirement is -3, +10%. It is preferable that the weight per unit length be determined on non-perforated, non-coated posts. If this is not possible or practical, the unit length mass may be near the lower end of the tolerance band. Compensate for any coating that is present during determination of the unit length weight.

b. Material Specifications. The selection of the steel for production of the posts is at the discretion of the post manufacturer. However, the finished product must comply with **TABLE 1621-1** when center point loaded as a simple beam. The test post beam is to span 48 inches and have the channel web placed upward.

TABLE 1621-1: LOAD DEFLECTION REQUIREMENTS			
Post Weight per Unit Length (lbs/ft)	Applied Load (lbf)	Center Deflection Acceptable Range at Applied Load (inches)	Maximum Retained (plastic) Deflection after Test (inches)
2.0	700	0.30 ↔ 0.60	0.01
3.0	1200	0.27 ↔ 0.60	0.01

After all fabricating operations have been performed, protect posts from corrosion by application of a zinc coating by the hot dip galvanizing (HDG) process in accordance with ASTM A 123, Thickness Grade 85 minimum.

1621.3 TEST METHODS

Conduct all tests required through **subsection 1621.2** and by the applicable ASTM specifications of **subsection 1621.2**. Coating thickness may be measured by any one of the methods specified in ASTM B 633 and by eddy current methods, ASTM B 244, provided that appropriate calibration procedures and standards have been applied. The magnetic induction and eddy current methods are nondestructive in nature and are preferred. Destructive techniques, i.e., coating removal, may be utilized as referee methods.

1621.4 PREQUALIFICATION

Not applicable.

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1621.5 BASIS OF ACCEPTANCE

Submit for approval to the project Engineer and MRC a Type A certification (certified mill test report), as specified in **DIVISION 2600**, that comply with **subsection 1621.2**. Submit the samples to the Engineer of Tests for evaluation and testing.

Inspection of posts by field personnel for compliance with dimensional requirements and for the quality of the corrosion protection coating.

The final disposition of all posts will be completed at the final destination as the result of inspection for the quality of workmanship and the delivery condition.