

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-630-15

CODE: (SP)

DATE: 04/26/2016

SUBJECT: Sign Supports

Section 630, Traffic Signs and Delineators, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-630.01--Description.** Delete the last three paragraphs of Subsection 630.01 on page 454 and substitute the following.

**907-630.01.1--Contractor Designed Supports.** When specified as Contractor Designed Metal Overhead Sign Supports, the Contractor will be responsible for the design of the metal overhead sign support(s) and overhead sign supports on bridges(s). The design shall meet the latest requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals.

The Contractor shall submit to the Director of Structures, State Bridge Engineer, a design using steel. The design shall be a rectangular box truss connected at both the top and bottom to the vertical support posts. With the exception of cantilever mounts, overhead support structures shall have two vertical support posts at each end of the truss. Design drawings, calculations and other necessary supporting data shall be submitted as soon as possible after the Pre-Construction Conference. The controlling sign configuration and total area of design sign shall be labeled on the design drawings. The design shall be prepared by a Professional Engineer registered in the State of Mississippi proficient in the design of overhead sign structures.

The Contractor shall provide a detailed cross section at the location of each new sign truss. At the locations where the truss will span existing roadways, the Contractor shall obtain a surveyed cross section extending beyond the limits of the truss. The cross section will show the horizontal dimensions and elevations of ditches, edge of travel lanes, shoulder lines, pavement crown lines, barriers and retaining walls, etc. The truss and signs shall be located on the cross section and shall include both vertical and horizontal dimensions to the finished roadway surface. The overhead sign truss details provided in the contract plans or documents will not be acceptable as the Contractor's detailed cross section. The cross section information shall be of sufficient accuracy to verify the sign truss dimensions required for each specific location. This information shall be submitted for review with the sign truss shop drawings and calculations.

The Contractor is responsible for designing and constructing modifications to barriers and retaining walls as necessary to carry sign truss loads for sign truss assemblies attached to such structures. Barrier faces must smoothly transition back to the existing barrier section as specified in the plans. All designs and proposed modifications must be stamped by the Contractor's engineer and submitted to the Engineer for review.

Bridge information plans are provided to assist the Contractor's Engineer in designing attachments to bridges. All bridge attachments must be submitted to the Director of Structures, State Bridge

Engineer through the Project Engineer for review. Use of chemical adhesive anchors is prohibited. Mechanical anchors are permissible as approved by the Director of Structures, State Bridge Engineer. Mounting holes for sign assemblies attached to prestressed concrete girders shall be placed at locations where the prestressing strands are not damaged by drilling. Mounting sign assemblies to steel girders by welding is prohibited. A limited number of mounting holes may be drilled only in the steel girder webs at locations which do not interfere with existing members such as bolts, stiffeners, and splice plates. Attachments which cause concentrated loads on girder webs will be spread out along the web both vertically and horizontally by use of steel plates so as to not cause distortion in the web. Drilling in steel girder bottom flanges is prohibited.

The design wind speed shall be as shown in the design specifications with a minimum of 90 mph. In addition to the loads required in the design specifications, overhead sign supports shall be designed to support a uniform load of 40 pounds per linear foot applied vertically to the truss to which the signs are attached, extending along the truss across the roadway below from points four feet outside each outer edge of exterior travel lane, unless otherwise specified. Appropriate damping or energy absorbing devices shall be installed in the event that an overhead structure is erected without installation of the permanent sign panels or if the area of permanent sign panels installed is not sufficient to prevent detrimental wind-induced vibration.

The larger of the following sign configurations shall be used in the design of overhead sign support structures:

- 1) The sign dimensions and configuration shown in the contract plans
- 2) Sign Height: 20 feet; Sign Width: Outer Edge of Exterior Travel Lane to Outer Edge of Exterior Travel Lane plus six (6) feet
- 3) Sign Height: 20 feet; Sign Width: Post to Post Clear Spacing minus 60 feet

The sign widths in configurations 2) and 3) should be located symmetrically about the center of the truss.

**907-630.02--Materials.** Delete the last three paragraphs of Subsection 630.02 on page 455, and substitute the following.

**Structural Steel.** Material for posts, chords and bracing members shall meet the requirements of ASTM Designation: A 501 or ASTM Designation: A 53, Grade B. Material for structural shapes, plates, posts and chord caps shall meet the requirements of ASTM Designation: A 36. Material for round tapered monotube shall meet the requirements of ASTM Designation: A 595, Grade A.

Delete Subsection 630.02.5 on page 456, and substitute the following.

**907-630.02.5--U-Section Posts.** Ground mounted U-section posts shown in the plans or referenced in the contract documents may be steel U-section posts or Tubular Type posts meeting the requirements of Subsection 907-721.02.2. Regardless of whether U-section posts or Tubular Type posts are used, measurement and payment will be under pay item 907-630-C, Steel U-Section Posts.

**907-630.05--Basis of Payment.** Add the "907" prefix to pay item nos. 630-C, 630-I and 630-J on page 463.