

STATE

OF

TENNESSEE

(Rev. 02-03-07)

January 1, 2015

SPECIAL PROVISION

REGARDING

HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS

Scope:

The design requirements of this Special Provision shall apply to Section 713-Highway Signing, Section 714-Roadway and Structure Lighting, and Section 730-Traffic Signals of the Standard Specifications for Road and Bridge Construction, January 1, 2015

Description:

The design of the supports for overhead sign bridges, cantilever and butterfly configurations, high mast lighting, luminaires and traffic signals shall be in accordance with the American Association of Highway and Transportation Officials (AASHTO) Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, current edition, with addenda.

General Conditions:

All overhead sign bridge, cantilever and butterfly sign structures, traffic signal mast arm structures and high mast light poles, as well as any luminaire poles 90-ft or greater in height, shall be designed using the Fatigue Category 1 provisions found in the subject specifications except that, design for galloping-induced fatigue, is excluded. Fatigue designs are not required for luminaire poles less than 90-ft in height, span-wire poles or roadside sign poles.

In lieu of designing for galloping-induced fatigue in mast arm pole assemblies, a 60-inch by 16-inch by 0.125 gauge aluminum or galvanized steel panel shall be installed near the end of the mast arm with the long axis of the panel collinear with the long axis of the mast. The panel shall be mounted at such a height as to provide a least a 6-inch clearance from the top of the signal assembly or sign blank located on the mast arm within the length of the anti-galloping panel. The panel and attachment hardware shall be shown on the shop drawings, and is considered an item included in the price bid for the mast arm assembly.

Additionally, all mast arm connections to the support pole shall be accomplished using a wrap-around ring stiffener assembly.

The following design coordinating instructions are as follows:

- The Basic Wind Speed shall be 90 mph.
- The Design Life/Recurrence Interval shall be 50-years.
- The speed for calculating Truck-induced gust loads shall be 65 mph.