

## Chapter 29

### Structural Supports for Signs, Luminaires and Traffic Signals

The following are changes, additions or deletions to the January 2007, Topic #625-000-7 Plans Preparation Manual (PPM) - English, for use on Turnpike projects only:

#### 29.1 General

*Add the following paragraph*

All miscellaneous structures shall receive a grout pad under the base plates of the uprights. The grout pad shall have a minimum 28 day compressive strength of 5 ksi and shall meet the requirements of specification section 934 using the procedures detailed within section 649-6. Means of implementation will require that a note be placed within the contract plans stating the requirement of the grout pad and that the installation shall comply with the above stated requirements.

#### 29.2 Sign Structures

*Add the following paragraph*

All overhead sign structures shall be designed to accommodate 25% extra sign area than what is called for in the plans and shall use a sign panel weight of 5 lbs/sf. In addition, all overhead signs shall be designed with a luminaire to roadway vertical clearance of 18' – 0" minimum.

Overhead signs in rural locations shall be designed according to the criteria in Section 29.1: Overhead Signs in Urban Locations and FDOT Structures Manual, Volume 9.

#### 29.2.7 Space Frame Gantry Structure

*Add this section*

The following Design Criteria should be used on all Space Frame Gantry Structures:

1. Gantry shall be designed per AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2001 Edition.
2. All gantries shall be designed for South Florida wind Loads.
3. All gantry members must be able to carry a 250 lb. concentrated load with a 100% impact.
4. On single lane roadways, the gantry shall be designed for 125% area of sign panel specified in the plans and/or for a DMS load of 1500 lbs. Weight and 5.5 ft. x 14.33 ft x 14 inch size located centrally on the structure.

5. On dual lane roadways, the gantry shall be designed to carry either 2 signs with 125% area of current signs specified, or 1 DMS and one 125% area sign panel, each centered over the lane. The DMS specifications are the same as in #4.
6. Gantry submittal shall include Maintenance/Inspection Manual or Guidelines.
7. All welds on the structure shall require a mandatory shop inspection performed by designated Turnpike Inspection personnel.

### 29.2.8 Toll Facilities

*Add this section*

In order to comply with regulations and to receive a permit from the FCC, all new toll facilities or lanes shall include the latitude and longitude callouts for the SunPass Antenna System locations. This should be done for the center of the new structure (gantry, canopy, lanes etc.). This information should be included in the 60% toll facility site plan and should include the latitude/longitude in degrees, minutes, and seconds as well as the northing and easting with the datum used callouts for verification.