Index 421 Traffic Railing (Median 32" F Shape)

Design Criteria

NCHRP Report 350 Test Level 4 Criteria; ***AASHTO LRFD Bridge Design Specifications***; ***Structures Design Guidelines (SDG)***

Design Assumptions and Limitations

The 32" F-Shape Median Traffic Railing is the basic default median traffic railing for use on FDOT bridges. Use this railing in accordance with the requirements of ***SDG*** 6.7.

The details as shown for installing for 2" diameter conduits and associated Embedded Junction Boxes (EJBs) in traffic railings have been determined to be crashworthy in accordance with the requirements of ***NCHRP Report 350, AASHTO Manual for Assessing Safety Hardware (MASH***) and the ***AASHTO LRFD Bridge Design Specifications***. To preserve the crashworthiness of traffic railings, no more than two 2" diameter conduits and associated EJBs, as shown on ***Design Standards*** Index 21210, may be installed within a traffic railing or traffic railing/noise wall.

Reinforcing cover for Traffic Railings is shown as 3", which accommodates slip forming tolerances. For modified designs 2" minimum cover is usually adequate for stationary form construction.

Design bridge decks supporting 32" F-Shape Median Traffic Railings in accordance with the requirements of ***SDG*** 4.2. For bridge decks up to a maximum thickness of 9", the three Bars 5S placed in the bridge deck may substitute for the longitudinal deck steel located within the limits of Bars 5W, provided that the total area of longitudinal deck steel beneath the railing, as required by calculation, is not reduced.

Plan Content Requirements

In the Structures Plans:

In the Materials Note on the General Notes Sheet, specify the concrete class in accordance with the superstructure environment classification. See ***SDG*** 1.4.

Show and label, by name or Index number, the 32" F-Shape Median Traffic Railing on the Plan and Elevation, Typical Section, Superstructure, Approach Slab and Finish Grade Elevations Cross Section sheets, and other sheets as required.

On the Superstructure section sheets, show the three Bars 5S placed in the bridge deck within the Bars 5W along with the rest of the deck steel.

All concrete and Bars 5R, 5S and 5W required to construct the traffic railing are included in the Estimated Traffic Railing Quantities. Do not include traffic railing concrete in the estimated concrete quantities, or Bars 5R, 5S and 5W in the reinforcing bar lists and estimated reinforcing steel quantities for supporting bridge decks or approach slabs.

Payment

Item number	Item description	Unit Measure
521-5-3	Concrete Traffic Railing, Bridge, 32" F-Shape, Median, Double Face	LF