Index 810 Bridge Fencing (Vertical)

Design Criteria

NCHRP Report 350 Test Level 3 Criteria; ***AASHTO LRFD Bridge Design Specifications***, 6th Edition; ***Structures Design Guidelines (SDG)***

Design Assumptions and Limitations

The Traffic Railing mounted version of this fence (back of railing mounted with tension wires) is based on a design that was successfully crash tested in accordance with the ***AASHTO Guide Specifications for Bridge Railings*** Performance Level 2 pickup test. Modifications have been made to improve the crashworthiness to ***NCHRP Report 350*** Test Level 3 Criteria. This fence can be used on Index 420, 422, 423, 424, 425 and 480 Series Traffic Railings, certain non-FDOT standard concrete traffic railings meeting the requirements of ***SDG*** 6.7 and on existing New Jersey and F-Shape Traffic Railings listed in the ***Instructions for Design Standards*** Index 402.

The Concrete Parapet mounted version of this fence (top of parapet mounted with horizontal rails) is not a crash tested design and cannot be used on traffic railings. This fence can be used on Concrete Parapets constructed in accordance with Index 820 in lieu of the bullet railing shown on Indexes 820 and 822.

Evaluate the expansion joint movements of the bridge. Expansion rails are required for concrete parapet installations at expansion joints where the total movement exceeds 1-inch. If the total movement at an individual expansion joint is 6-inches or less, the bridge fence will span the joint without using an expansion assembly. If the total movement at an individual expansion joint exceeds 6-inches, an Expansion Assembly must be installed at that location.

Use of the Concrete Parapet mounted version of this fence in lieu of Index 811 Bridge Fencing (Curved Top) or Index 812 Bridge Fencing (Enclosed) should be based on project and site specific requirements.

Plan Content Requirements

In the Structures and/or Roadway Plans:

Show and label the Bridge Fencing (Vertical) on the Plan and Elevation, Typical Section, Superstructure and Approach Slab sheets, Retaining Wall Control Drawings, and other sheets as required. Include cross references to ***Design Standards*** Index 810 as appropriate.

Show the limits of fencing in the plans if they are not from begin of approach slab at Begin Bridge to end of approach slab at End Bridge.

Show estimated quantities for bridge fencing with estimated quantities for Traffic Railing and/or concrete parapets in the superstructure details sheets.

Determine if bridge fencing requires grounding. If required, provide details in the superstructure sheets.

Provide locations for expansion joints requiring expansion rails or expansion assemblies in the superstructure layout sheets.

Designate the required finish in the General Notes, e.g., zinc or aluminum coated, or polyvinyl chloride (PVC) coated. If PVC coated fence is used, include the following notes in the General Notes:

1. A note specifying the color of the PVC coating for chain link fabric.
2. A note to paint the fence framework to match the color of the PVC chain link fabric.
3. A note for preparation of galvanized steel for painting.
4. A note to coat tension wire and fence fittings to match the color of the PVC chain link fabric.

Payment

Item number	Item description	Unit Measure
550-10-315	Fencing, Type R, 0 - 5.0', Vertical	LF
550-10-325	Fencing, Type R, 5.1 - 6.0', Vertical	LF
550-10-335	Fencing, Type R, 6.1 - 7.0', Vertical	LF