Index 403 Guardrail Transitions for Existing Bridge Traffic Railing Retrofits

Design Criteria

NCHRP Report 350 Test Level 4 Criteria; ***AASHTO LRFD Bridge Design Specifications***, 6th Edition; ***Structures Design Guidelines (SDG)***; ***PPM***

Design Assumptions and Limitations

This standard works with existing bridge traffic railing retrofits constructed in accordance with the obsolete standard entitled "Guardrail Anchorage and Continuous Barrier for Existing Bridges", Index 401, which was included in the ***Roadway and Traffic Design Standards*** from 1987 until 2000.

Schemes 1 and 19 of obsolete Index 401 entitled "Concrete Safety Barrier" are based on a design that has been crash tested as documented in ***Transportation Research Report TRP-03-19-90*** and accepted by FHWA at ***NCHRP Report 350*** Test Level 4.

Scheme 16 of obsolete Index 401 entitled "Guardrail Continuous Across Bridge" has been structurally evaluated and has been determined to be acceptable to FDOT and FHWA to leave in place on RRR projects provided the installation meets the criteria set forth in the ***PPM***, Vol. 1, Chapter 25.

See ***SDG*** 6.7.4 for more information.

Plan Content Requirements

In the Roadway Plans:

Evaluate the existing guardrail approach transitions and specify in the Plans the necessary upgrades to the transitions as follows.

For the w-beam approach transition shown as Detail J in the 1987 edition of the ***Roadway and Traffic Design Standards***, Index 400 without a continuation of curb beyond the bridge or approach slab, use the following Plan Sheet note placed adjacent to bridge ends:

> Construct Transition Block, nested W Beam Guardrail and additional Guardrail Posts and Offset Blocks as shown in ***Design Standards*** Index 403.

For the nested w-beam approach transition shown as Detail J in the 1987 edition of the ***Roadway and Traffic Design Standards***, Index 400 with a continuation of curb beyond the bridge or approach slab, use the following Plan Sheet note placed adjacent to bridge ends:

> Construct nested W Beam Guardrail and additional Guardrail Posts and Offset Blocks as shown in ***Design Standards*** Index 403.

For the nested w-beam approach transition shown as Detail J in the 1998 edition of the ***Roadway and Traffic Design Standards***, Index 400 without a continuation of curb beyond the bridge or approach slab, use the following Plan Sheet note placed adjacent to bridge ends:

Construct Transition Block as shown in ***Design Standards*** Index 403.

For all trailing end treatments, specify the necessary guardrail upgrades as appropriate.

Payment

Item number	Item description	Unit Measure
520-2-9	Curb, Special	LF
538-1	Guardrail Reset	LF