**DESCRIPTION:**

**SHEET 1**

07/01/13

Dowel

**REVISION**

in new concrete shall be burned off 1" below existing concrete and grouted over.

2. Field cut Bars 5S and Dowel Bars 6D to maintain clearance within Vertical Face Retrofit Railing.

For treatment of trailing end see Roadway Plans. If vertical face retrofit extends beyond bridge the railing, the 2'-6" minimum dimension shall apply to both the front and back face of the railing.

If limiting station of Roadway Guardrail Transition is along the Wing Wall, see Schemes 2, 3, 4 or 5, Transition is on the bridge, attach Thrie-Beam Terminal Connector to railing as shown above.

NOTES:

1. On approach end provide a Roadway Guardrail Transition, Index 536-002 (as shown) or other site specific treatment. See Roadway Plans for limiting station of Roadway Guardrail Transition or other site specific treatment. If limiting station of Roadway Guardrail Transition is on the bridge, attach Thrie-Beam Terminal Connector to railing as shown above. If limiting station of Roadway Guardrail Transition is along the Wing Wall, see Schemes 2, 3, 4 or 5. Sheets 3 and 4. On skewed bridges, if the skew along the deck joint extends across the width of the railing, the 2'-6" minimum dimension shall apply to both the front and back face of the railing. For treatment of trailing end see Roadway Plans. If vertical face retrofit extends beyond bridge and approach slab ends, see Index 531-484 for treatment and Details.

3. Where existing structure has been removed and not encased in new concrete; match adjoining areas and approach slab ends, see Index 521-484 for treatment and Details.

**CROSS REFERENCE:**

For General Notes, Estimated Quantities, Dowel Details, Expansion Dowel Detail, Reinforcing Steel Notes & Bending Diagrams see Index 521-480.

**TYPICAL TREATMENT OF RAILING ALONG BRIDGE**

**TYPICAL SECTION THRU EXISTING APPROACH SLAB AND END BENT WING WALL (SCHEMES 4 AND 5 ONLY)**

**TYPICAL SECTION THRU RAILING ON BRIDGE DECK**

**TYPICAL SECTION THRU RAILING ALONG APPROACH SLAB (SCHEMES 2 AND 3 ONLY)**

**PARTIAL PLAN OF RAILING**

**PARTIAL ELEVATION OF INSIDE FACE OF RAILING**

(Existing Traffic Railing, Expansion Dowel Assemblies & Bars 4C not shown for clarity)
Existing Approach Slab

Match Existing Curb Height on Bridge
Roadway Guardrail Transition (See Note 1 Below & Note 1, Sheet 1)

Begin Flared Portion of Vertical Face Retrofit Railing

Final Riding Surface
Asphalt Overlay when present (Varies)

Limiting Station of Transition

Asphalt Overlay when present (Varies)

Final Riding Surface

Partial Plan of Railing

Partial Elevation of Inside Face of Railing

Railing End Treatment for Flared Curbs

Scheme 3
Railing Reinforcing and Expansion Dowel Assemblies not shown for clarity

Scheme 4
Railing Reinforcing and Expansion Dowel Assemblies not shown for clarity

Scheme 3 Note:
1. See Roadway Plans for limiting station of Roadway Guardian Transition or other site specific treatment. If limiting station of Roadway Guardian Transition is along the Wing Wall, attach Thrrie-Beam Terminal Connector to railing as shown above. If limiting station of Roadway Guardian Transition is on the bridge, see Sheet 1.
2. Dowel Bars 6D may be installed on a maximum angle of 45° to the cut edge of the Approach Slab as shown above. If limiting station of Roadway Guardian Transition is on the bridge, see Sheet 1.
3. At the Contractor's option, along the length of the Approach Slab curb that is to be replaced, Dowel Bars 6D may be cast in with the new section of curb as shown or they may be installed in drilled holes in the new section of curb using an Adhesive Bonding Material System with a 1'-0" minimum embedment.

Traffic Railing - (Vertical Face Retrofit) Wide Curb

FY 2018-19

Standard Plans

521-482

3 of 4

Revision

Description:

REV

INDEX

STANDARD PLANS

Sheet

LAST

REVISED

01/01/16

TRAFFIC RAILING - (VERTICAL FACE RETROFIT) WIDE CURB

Revision

FAIR

INDEX

STANDARD PLANS

Sheet

LAST

REVISED

01/01/16

TRAFFIC RAILING - (VERTICAL FACE RETROFIT) WIDE CURB

Revision

FAIR

INDEX

STANDARD PLANS

Sheet

LAST

REVISED

01/01/16

TRAFFIC RAILING - (VERTICAL FACE RETROFIT) WIDE CURB

Revision

FAIR

INDEX

STANDARD PLANS

Sheet

LAST

REVISED

01/01/16

TRAFFIC RAILING - (VERTICAL FACE RETROFIT) WIDE CURB

Revision

FAIR

INDEX

STANDARD PLANS

Sheet

LAST

REVISED

01/01/16

TRAFFIC RAILING - (VERTICAL FACE RETROFIT) WIDE CURB

Revision

FAIR

INDEX

STANDARD PLANS

Sheet
SCHEME 5
RAILING END TREATMENT FOR PARALLEL CURBS

PARTIAL ELEVATION OF INSIDE FACE OF RAILING
(Existing Wing Post, Railing Reinforcing and Expansion Dowel Assemblies not shown for clarity)

PARTIAL PLAN OF RAILING

Dowel Bars 4N @ 1'-3" (Typ.) Expansion Dowel Sleeve Assembly
Bars 60 cut to clear Backwall (Typ. each end)

*** Curb heights vary from 5" Min. to 10" Max. Match height and shape of existing curb on bridge.

SCHEME 5 NOTES:
1. See Roadway Plans for limiting station of Roadway Guardrail Transition or other site specific treatment. If limiting station of Roadway Guardrail Transition is along the Wing Wall, attach Thrie-Beam Terminal Connector to railing as shown above. If limiting station of Roadway Guardrail Transition is on the bridge, see Sheet 1.
2. Dowel Bars 4N may be installed on a maximum angle of 45° to the cut edge of the Approach Slab as shown to facilitate drilling of holes and installation of bars.
3. Provide Transition Block (as shown) or Curb if existing Approach Slab Curb does not extend beyond end of existing End Bent Wing Wall, see Roadway Plans. Shape and height of Transition Block or Curb shall match existing bridge curb. Railing End Transition and Transition Block may be omitted on trailing ends with no opposing traffic.
4. Field bend Dowel Bars 4M within Transition Block as required to maintain 2" top and side clearance and 3" bottom clearance.
5. At the Contractor's option, along the length of the Approach Slab curb that is to be replaced, Dowel Bars 6D may be cast in with the new section of curb as shown or they may be installed in drilled holes in the new section of curb using an Adhesive Bonding Material System with a 1'-0" minimum embedment.