GENERAL NOTES
1. This index provides guardrail transition details for approach and trailing end guardrail connections to existing bridges, including details for connecting to traffic railing retrofits and safety shape barriers on existing bridges. Sheets 1 through 26 apply to bridges with retrofitted traffic railings (Sheet 26 shows the trailing and guardrail connections). Sheets 27 and 28 apply to bridges with safety shape traffic railing, and they provide approach and trailing end transition connection details for guardrail. Construct these guardrail transitions and connections where called for in the plans.

2. For miscellaneous guardrail components and construction details that are not provided in this index, refer to Index 536-001.

NOTES FOR GUARDRAIL TRANSITIONS CONNECTING TO TRAFFIC RAILING RETROFITS ON EXISTING BRIDGES
1. The transition detail shown on this sheet shows (a) the standard post spacings within the typical thrie-beam approach transitions connecting to existing bridges with retrofit traffic railings, and (b) depict the typical alignments of the approach transitions.

2. The curb and gutter flare shown on this sheet is typical of flares that are to be constructed when approach slab curbs extend to the beginning of the slab, and where other treatment to curb blunt ends are not in place.

3. The special steel post for roadway thrie-beam transitions detailed on this sheet is specific to all transition applications on this index that require one or more steel posts. The special steel post and base plate assembly shall be fabricated in accordance with Specification 967.

4. Anchor studs shall be fully threaded rods in accordance with ASTM F1554 Grade 36 or ASTM A193 Grade B7. All nuts shall be heavy hex in accordance with ASTM A563 or ASTM A19.

5. Anchor studs and nuts shall be hot-dip zinc coated in accordance with the Specifications. After the nuts have been snug tightened, the anchor stud threads shall be single punch distorted immediately above the top nuts to prevent loosening of the nuts. Distorted threads shall be coated with a galvanizing compound in accordance with the Specifications.

6. Payment for connections to traffic railing vertical face retrofits are to be made under the contract unit price for Bridge Anchorage Assembly, EA., and shall be full compensation for bolt hole construction, terminal connector, terminal connector plate and bolts, nuts and washers.

GUARDRAIL TRANSITION ALIGNMENTS FOR BRIDGE THRIE-BEAM AND VERTICAL FACE TRAFFIC RAILING RETROFIT

LONGITUDINAL LOCATION OF TRANSITION BLOCKS AND CURB END FLARES WILL VARY WITH SCHEME TYPE

PARTIAL PLAN VIEWS
### GUARDRAIL LENGTHS

**Design Speed**,  **Projected ADT**,  **CZ (Ft.)**,  **Min. Median Width (Ft.)**,  **Guardrail Length (Ft.)**,  **Min. Median Width (Ft.)**,  **Guardrail Length (Ft.)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>40-50</td>
<td>36</td>
<td>50</td>
<td>36.25</td>
<td>31.25</td>
<td>64</td>
<td>54</td>
</tr>
<tr>
<td>60-65</td>
<td>36</td>
<td>64</td>
<td>28.75</td>
<td>23.75</td>
<td>88</td>
<td>74</td>
</tr>
<tr>
<td>75</td>
<td>30</td>
<td>50</td>
<td>28.75</td>
<td>23.75</td>
<td>88</td>
<td>74</td>
</tr>
<tr>
<td>75</td>
<td>24</td>
<td>38</td>
<td>21.25</td>
<td>16.25</td>
<td>92</td>
<td>78</td>
</tr>
<tr>
<td>85-90</td>
<td>24</td>
<td>38</td>
<td>21.25</td>
<td>16.25</td>
<td>92</td>
<td>78</td>
</tr>
<tr>
<td>45-50</td>
<td>20</td>
<td>34</td>
<td>18.75</td>
<td>13.75</td>
<td>108</td>
<td>94</td>
</tr>
<tr>
<td>45-50</td>
<td>24</td>
<td>38</td>
<td>21.25</td>
<td>16.25</td>
<td>100</td>
<td>86</td>
</tr>
<tr>
<td>35-40</td>
<td>18</td>
<td>32</td>
<td>16.25</td>
<td>11.25</td>
<td>112</td>
<td>98</td>
</tr>
</tbody>
</table>

**Notes:**
- Lengths are based on minimum median widths and on standard clear zone widths for travel lanes on tangent roadways, and the lengths of advancement needed for flared end anchorage assemblies to shield normal transverse underslope and bridge end hazards.
- Lengths may need to be adjusted for connection location on wing post or bridge traffic railing barrier, auxiliary lanes, curved roadways, parallel end anchorage assemblies, skewed crossings and other hazards present.
- When end terminal is outside of opposing roadway clear zone, lengths vary based on shoulder treatment.
- Flared end sections shall be used when extending less than full approach slab length in wide medians with flush shoulders.

** WHEN END TERMINAL CANNOT BE LOCATED OUTSIDE OF OPPOSING ROADWAY CLEAR ZONE**

**Approach Guadrail Treatments for Bridges with Concrete Traffic Railing Extending Less Than Full Approach Slab Length in Wide Medians with Flush Shoulders**

### GUARDRAIL LENGTHS

**Approach Slab**

- **1/10 For Design Speeds ≤ 45 mph**
- **1/15 For Design Speeds > 45 mph**
- **1/20 When Shoulder Gutter Present**

**For Guardrail Lengths See Table Below**

**125 R: 1/10 Taper Rate**

**187 R: 1/15 Taper Rate**

**Approach Terminal**

**(See Index 536-001)**

**Slope Varies**

**Approach Slab**

- **6' or 10' Shoulder (Std.)**
- **Flared End Section**

**Approach Slab**

- **6' or 10' Shoulder (Std.)**
- **Flared End Section**

**Approach Slab**

- **125 R: 1/10 Taper Rate**
- **187 R: 1/15 Taper Rate**

**Approach Slab**

- **10' or Flatter**

**Approach Slab**

- **15° or Flatter**

**Approach Slab**

- **9° or Less**

**Approach Slab**

- **1:15 For Design Speeds ≥ 50 mph**
- **1:10 For Design Speeds ≥ 45 mph**
- **1:25 When Shoulder Gutter Present**

**Approach Slab**

- **10' Min.**

**Approach Slab**

- **9.5° or Less**

**Approach Slab**

- **8° or Less**

**Approach Slab**

- **6° or Less**

**Approach Slab**

- **4.5° or Less**

**Approach Slab**

- **3° or Less**

**Approach Slab**

- **1.5° or Less**

**Approach Slab**

- **0.75° or Less**

**Approach Slab**

- **0° or Flatter**
REV ISIO N
DESCRIPTION:

REVISION
LAST
STANDARD PLANS
FY 2020-21
SHEET
INDEX
CONNECTIONS FOR EXISTING BRIDGES

MEDIAN S WITH 10' BRIDGE SHOUL DERS

MEDIAN S WITH 6' BRIDGE SHOUL DERS

GUARDRAIL LENGTHS

<table>
<thead>
<tr>
<th>MEDIAN WIDTH (FT.)</th>
<th>6' BRIDGE SHOUL DERS</th>
<th>10' BRIDGE SHOUL DERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANELS (No.)</td>
<td>LENGTH (FT.)</td>
<td>PANELS (No.)</td>
</tr>
<tr>
<td>1:10 TAPER RATE</td>
<td>11.5</td>
<td>12.5</td>
</tr>
<tr>
<td>1:15 TAPER RATE</td>
<td>11.5</td>
<td>12.5</td>
</tr>
</tbody>
</table>

The lengths shown in this table are based on standard widths for roadway and bridge median shoulders. Length requirements for both standard width and narrow bridge shoulders and end anchorage or end shielding requirements shall be determined on a site specific basis.

The number of panels may be reduced when installing a crash cushion more than 2.5' in width; see * below.

Note: The guardrail configurations shown apply only to parallel or near parallel bridges with open medians.

APPROACH GUARDRAIL TREATMENTS FOR BRIDGES WITH CONCRETE TRAFFIC RAILING
EXTENDING LESS THAN FULL APPROACH SLAB LENGTH IN NARROW MEDIAN S WITH FLUSH SHOUL DERS

The number shown is the minimum number of panels plus a W-Thrie beam transition panel; single faced guardrail must have a length of five (5) or more panels.
See Index 460-471 - Scheme 1

See Index 460-471 - Scheme 2

See Index 460-471 - Scheme 3

Partial Plan Views of Guardrail Approach Transitions and Connections

For Bridge Traffic Railing (Thrie-Beam Retrofit)

Front Face of Existing Backwall & Begin or End Existing Bridge
Existing Railing Removed
Existing Curb To Remain
See Indexes For Face of Rail Offset
Traffic Railing (Thrie-Beam Retrofit)
Roadway Guardrail Transition

Front Face of Existing Backwall & Begin or End Existing Bridge
Existing Railing Removed
Existing Curb To Remain
Transition Block In Absence Of Curb
Traffic Railing (Thrie-Beam Retrofit)
Roadway Guardrail Transition

Front Face of Existing Backwall & Begin or End Existing Bridge
Existing Railing Removed
Existing Curb To Remain
Gutter Line
Key Post
Existing Approach Slab
Traffic Railing (Thrie-Beam Retrofit)
Roadway Guardrail Transition

Existing Parallel Wing Post Removed
Front Face of Existing Backwall & Begin or End Existing Bridge
Existing Railing Removed
Existing Curb To Remain
See Indexes For Face of Rail Offset
Traffic Railing (Thrie-Beam Retrofit)
Roadway Guardrail Transition

Existing Perpendicular Or Angled Wing Post Removed
Transition Block In Absence Of Curb
Existing Flared Wing Post Removed
Curb & Transition Block
Gutter Line
Key Post (F Post Bolts)
Existing Approach Slab
Traffic Railing (Thrie-Beam Retrofit)
Roadway Guardrail Transition

Existing Flared Wing Post Removed
Curb & Transition Block
Gutter Line
Key Post (F Post Bolts)
Existing Approach Slab
Traffic Railing (Thrie-Beam Retrofit)
Roadway Guardrail Transition

SEE INDEX 460-471 - SCHEME 1

SEE INDEX 460-471 - SCHEME 2

SEE INDEX 460-471 - SCHEME 3
PARTIAL PLAN VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS
FOR BRIDGE TRAFFIC RAILING (THRIE-BEAM RETROFIT)
PARTIAL PLAN VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING (THRIE-BEAM RETROFIT)

SEE INDEXES 460-472 & 460-475 - SCHEMES 3 & 4

SEE INDEXES 460-472 & 460-475 - SCHEMES 5 & 6

SEE INDEXES 460-472 & 460-475 - SCHEMES 3 & 4

SEE INDEXES 460-472 & 460-475 - SCHEMES 5 & 6

INTERMEDIATE POSTS MAY BE REQUIRED.
SEE INDEX 460-472 OR 460-475 FOR ALTERNATE SPACINGS.
PARTIAL PLAN VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING (THRIE-BEAM RETROFIT)
PARTIAL PLAN VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS
FOR BRIDGE TRAFFIC RAILING (THRIE-BEAM RETROFIT)

SEE INDEXES 460-473 & 460-476 - SCHEMES 5 & 6
PARTIAL PLAN VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING (THRIE-BEAM RETROFIT)

SEE INDEX 460-474 - SCHEME 1

SEE INDEX 460-474 - SCHEME 2

SEE INDEX 460-474 - SCHEME 3
PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING (THRIE-BEAM RETROFIT)
PARTIAL PLAN VIEWS OF TRAFFIC RAILING (VERTICAL FACE RETROFIT)

- **Note:**
  - "21" x 12" x 5/8" Thrie-Beam Terminal Connector Plate (Back-Up Plate), And 9/16" x 12" Long HS Hex Bolts And Nuts (5 Req'd.) With 3/4" OD Plain Round Washers Under Heads And Nuts

**SEE INDEX 460-481 - SCHEME 1**

**SEE INDEX 521-481 - SCHEME 2**

**SEE INDEX 521-481 - SCHEME 3**

**GUARDRAIL TRANSITIONS AND CONNECTIONS FOR EXISTING BRIDGES**

**STANDARD PLANS**

**FY 2020-21**

**INDEX**

536-002 15 of 28
PARTIAL PLAN VIEWS OF TRAFFIC RAILING (VERTICAL FACE RETROFIT)
(INDEX 521-482 SHOWN, INDEX 521-405 SIMILAR)

Note:
* 2½" x 12" x 16' Thrie-Beam Terminal Connector Plate (Back-Up Plate). And 3/8" x 12" Long
* 5/8 Hex Bolts And Nuts (5 Req'd.) With 2½" OD Plain Round Washers Under Heads And Nuts

SEE INDEX 521-405 OR 521-482 - SCHEME 2
SEE INDEX 521-405 OR 521-482 - SCHEME 3

Front Face Of Existing Backwall & Begin Or End Existing Bridge
Existing Curb (See Indexes For Face Of Railing Offset)
Traffic Railing (Vertical Face Retrofit)
Existing Approach Slab
Roadway Guardrail Transition

Traffic Railing (Vertical Face Retrofit)
Front Face Of Existing Backwall & Begin Or End Existing Bridge
Existing Curb (See Indexes For Face Of Railing Offset)
Traffic Railing (Vertical Face Retrofit)
Existing Flared Wing Post
End Of Existing Approach Slab
Transition Block In Absence Of Curb
Traffic Railing (Vertical Face Retrofit)
Existing Approach Slab
Roadway Guardrail Transition

Traffic Railing (Vertical Face Retrofit)
Front Face Of Existing Backwall & Begin Or End Existing Bridge
Existing Curb (See Indexes For Face Of Railing Offset)
Traffic Railing (Vertical Face Retrofit)
Existing Flared Wing Post
End Of Existing Approach Slab
Transition Block In Absence Of Curb
Traffic Railing (Vertical Face Retrofit)
Existing Approach Slab
Roadway Guardrail Transition

Traffic Railing (Vertical Face Retrofit)
Front Face Of Existing Backwall & Begin Or End Existing Bridge
Existing Curb (See Indexes For Face Of Railing Offset)
Traffic Railing (Vertical Face Retrofit)
Existing Flared Wing Post
End Of Existing Approach Slab
Transition Block In Absence Of Curb
Traffic Railing (Vertical Face Retrofit)
Existing Approach Slab
Roadway Guardrail Transition

Traffic Railing (Vertical Face Retrofit)
Front Face Of Existing Backwall & Begin Or End Existing Bridge
Existing Curb (See Indexes For Face Of Railing Offset)
Traffic Railing (Vertical Face Retrofit)
Existing Flared Wing Post
End Of Existing Approach Slab
Transition Block In Absence Of Curb
Traffic Railing (Vertical Face Retrofit)
Existing Approach Slab
Roadway Guardrail Transition

SEE INDEX 521-405 OR 521-482 - SCHEME 2
SEE INDEX 521-405 OR 521-482 - SCHEME 3
PARTIAL PLAN VIEWS OF TRAFFIC RAILING (VERTICAL FACE RETROFIT) (INDEX 521-482 SHOWN, INDEX 521-405 SIMILAR)

Note:
* 2½" x 12" x ½" Thrie-Beam Terminal Connector Plate (Back-Up Plate), And ¾" x 12" Long NS Hex Bolts And Nuts (5 Reqs.) With 2½" OD Plain Round Washers Under Heads And Nuts

SEE INDEX 521-405 OR 521-482 - SCHEME 1

SEE INDEX 521-405 OR 521-482 - SCHEME 4

SEE INDEX 521-405 OR 521-482 - SCHEME 5
DESCRIPTION:

REVISION

LAST

OF

STANDARD PLANS

FY 2020-21

GUARDRAIL TRANSITIONS AND
CONNECTIONS FOR EXISTING BRIDGES

PARTIAL PLAN VIEWS OF TRAFFIC RAILING (VERTICAL FACE RETROFIT)

Note:

"21" x 12" x 5/8" Thrie-Beam Terminal Connector Plate (Back-Up Plate), And 5/8" HS Hex Bolts And Nuts (12" Long For Scheme 1 And Length To Fit For Schemes 2 And 3/15 Req'd) With 21¢ 50 Plain Round Washers Under Heads And Nuts.

SEE INDEX 521-483 - SCHEME 1

SEE INDEX 521-483 - SCHEME 2

SEE INDEX 521-483 - SCHEME 3
Instructions (SPI 536-002)

Prescribed in the Standard Plans

Wing Post 5' or More in Length That Meets The Design Criteria For Structural Adequacy Prescribed In The Standard Plans (SPI 536-002)

Traffic Railing (Vertical Face Retrofit)

Existing Railing And Parallel Wing Post

Wing Post 5' or More in Length That Meets The Design Criteria For Structural Adequacy Prescribed In The Standard Plans (SPI 536-002)

Traffic Railing (Vertical Face Retrofit)

Existing Railing And Flared Wing Post

Wing Post 5' or More in Length That Meets The Design Criteria For Structural Adequacy Prescribed In The Standard Plans (SPI 536-002)

Traffic Railing (Vertical Face Retrofit)

PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS

FOR BRIDGE TRAFFIC RAILING (VERTICAL FACE RETROFIT)

(INDEX 521-482 SHOWN, INDEX 521-405 SIMILAR)

* Post Bolts At First Standard (3'-1") Post Hole Location On Bridge

(7" Min. From End Of Bridge). Use 3/8" HS Hex Bolts And Nuts

With 2½" OD Plain Round Washers Under Heads And Nuts
PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING (VERTICAL FACE RETROFIT)

(INDEX 521-482 SHOWN, INDEX 521-405 SIMILAR)

SEE INDEX 521-405 OR 521-482 - SCHEMES 3 & 4

PICTORIAL VIEW

* Post Bolts At First Standard (7'-1½") Post Hole Location On Bridge (7' Min. From End Of Bridge). Use ¾" HS Hex Bolts And Nuts With 2½" OD Plain Round Washers Under Heads And Nuts.

FOR BRIDGE TRAFFIC RAILING (VERTICAL FACE RETROFIT)
PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND
CONNECTIONS FOR BRIDGE TRAFFIC RAILING (VERTICAL FACE RETROFIT)
(INDEX 521-482 SHOWN, INDEX 521-405 SIMILAR)
PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS
AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING
(VERTICAL FACE RETROFIT)

* Post Bolts At First Standard (7'-15") Post Hole Location On Bridge
(7" Min. From End Of Bridge). Use 1/2" x 7 HS Hex Bolts And Nuts
With 2 1/4" OD Plain Round Washers Under Heads And Nuts.
PICTORIAL VIEWS OF GUARDRAIL APPROACH TRANSITIONS AND CONNECTIONS FOR BRIDGE TRAFFIC RAILING (VERTICAL FACE RETROFIT)

* Post Bolts At First Standard (3-1/2”) Post Hole Location On Bridge (7” Min. From End Of Bridge). Use #10 MS Hex Bolts And Nuts With 2x 0D Plain Round Washers Under Heads And Nuts.
GUARDRAIL TRAILING END ANCHORAGE IN ABSENCE OF OTHER HAZARDS

GUARDRAIL TRAILING END ANCHORAGE WHEN OTHER HAZARDS PRESENT

TRAILING END GUARDRAIL AND ANCHORAGE FOR BRIDGE TRAFFIC RAILING (THRIE BEAM RETROFITS)
Approach Slab

DESCRIPTION:

CONNECTIONS FOR EXISTING BRIDGES

Recess

Misc. Asphalt Pavt.

Beam Panel

Or Girder Bridge Wing Post

11/01/19

Adjustment Exceeds

REVISION

6'-3" Add Single

Varies (3'-1"

Varies (2'-6"

2'-6" Typ)

**Splice Locations:** Thrie-Beam - 12 Guardrail Splice Bolts And Recessed Nuts

W-Beam - 8 Guardrail Splice Bolts And Recessed Nuts

Use Of Schemes II And III Shall Be Determined In Accordance With The Standard Plans Instructions (SPI 536-002).

**NOTES FOR GUARDRAIL TRANSITIONS TO SAFETY SHAPE TRAFFIC RAILINGS ON EXISTING BRIDGES**

1. When the guardrail attachment overlays the Bridge Number, Bridge Name or Date on the traffic railing, provide an aluminum sign panel with the obscured information. Attach the sign panel to the Face of the traffic railing adjacent to the Three-Beam Terminal Connector with 3/8" x 1" long concrete screws or expansion anchors at each corner, as approved by the Engineer. The sign panel shall be a minimum 1/2" thick and meet the requirements of Specification 700 with a white background and 3" tall black letters and sized appropriately to contain the information required. The cost of the sign panel shall be included in the cost of the Guardrail Bridge Anchorage Assembly.

2. When retrofitting three-beam guardrail to existing wing posts or existing bridge safety shape traffic railing, attachment construction to be paid for under the contract unit price for Guardrail Bridge Anchorage Assembly, EA., and shall be full compensation for bolt hole construction, terminal connector, terminal connector plate(s) and nuts, bolts and washers.

Approach Slab

Transition

12'-6" Thrie-Beam Panel (Nested)

12'-6" Thrie-Beam Panel (Nest+Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)

12'-6" Thrie-Beam Panel (Hole)
GUARDRAIL TRANSITION TO EXISTING FLAT SLAB BRIDGES

SCHEME I

Use Of Scheme I Shall Be Determined In Accordance With The Standard Plans Instructions (SPI 536-002).

GUARDRAIL TRANSITIONS TO EXISTING PRESTRESSED BEAM OR GIRDER BRIDGES

SCHEME II

Use Of Schemes II And III Shall Be Determined In Accordance With The Standard Plans Instructions (SPI 536-002).

GUARDRAIL TRANSITIONS TO EXISTING PRESTRESSED BEAM OR GIRDER BRIDGES

SCHEME III

TRAILING END POSTS AND SPECIAL OFFSET BLOCKS

Block assemblies for special offsets can be made up of one special block plus one standard size block or of three standard size blocks full dressed to approximately equal size, with the pieces secured for relative position by 16d galvanized nails, see '16d NAIL FOR PREVENTION OF OFFSET BLOCK' NOTATION - Index 536-001. The nested rails shall not be bolted to the blocks and posts at posts (a), (c) and (e). The details shown are for approach slabs with internal edge dikes extending beyond parapet type traffic railing termini.

NOTES FOR GUARDRAIL TRANSITIONS TO SAFETY SHAPE TRAFFIC RAILINGS ON EXISTING BRIDGES

1. When the guardrail attachment overlays the Bridge Number, Bridge Name or Date on the traffic railing, provide an aluminum sign panel with the obscured information. Attach the sign panel to the Face of the traffic railing adjacent to the Thrie-Beam Terminal Connector with 1/8 x 1" long concrete screws or expansion anchors at each corner, as approved by the Engineer. The sign panel shall be a minimum 1/2" thick and meet the requirements of Specification 700 with a white background and 3" tall black letters and sized appropriately to contain the information required. The cost of the sign panel shall be included in the cost of the Guardrail Bridge Anchorage Assembly.

2. When retrofitting thrie-beam guardrail to existing wing posts or existing bridge safety shape traffic railing, attachment construction to be paid for under the contract unit price for Guardrail Bridge Anchorage Assembly, EA., and shall be full compensation for bolt hole construction, terminal connector, terminal connector plate(s) and bolts, nuts and washers.