### Tollway Standard Drawing Revisions

#### Section C  
**Guardrail / Median Barrier**  
**Modification Summary**  
**Effective : 03/11/15**

<table>
<thead>
<tr>
<th>Standard</th>
<th>Modification Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td>Revised detail descriptions to match Tollway Coded Pay Items, Updated drawings to follow IDOT highway standard levels</td>
</tr>
<tr>
<td><strong>C3</strong> Single Face Reinforced Concrete Barrier</td>
<td>Extended preformed joint filler through base slab, added 1/2&quot; dimension to filler material, Revised dimensioning to bending diagram for bar d1(E), Added dimensioning to bending diagram for bar d(E), Added reinforcement detail around drainage opening</td>
</tr>
<tr>
<td><strong>C4</strong> Concrete Shoulder Barrier Transition, Type F</td>
<td>Extended preformed joint filler through base slab, added 1/2&quot; dimension to filler material</td>
</tr>
<tr>
<td><strong>C5</strong> Concrete Barrier Base and Concrete Barrier Double Face, 42&quot; and Variable Height</td>
<td>Revised conduits in barrier base to reference plan sheet details, revised note 6, Note 1: Changed differential dimension from 10&quot; to 9&quot;</td>
</tr>
<tr>
<td><strong>C6</strong> Shoulder Widening For TBT Type T1 (Special) Tangent</td>
<td>Defined limits for placement of aggregate shoulders material types</td>
</tr>
<tr>
<td><strong>C7</strong> TBT Type T2</td>
<td>Added 4&quot; dimension to Aggregate Shoulders Special, Type C, Defined limits for placement of aggregate shoulders material types</td>
</tr>
<tr>
<td><strong>C9</strong> TBT Type T6</td>
<td>Sheet 4: Added Plan and Elevation for Concrete Barrier, Single Face with Gutter, Type G-3, Sheet 5: Moved prior sheet 4 to sheet 5.</td>
</tr>
<tr>
<td><strong>C10</strong> TBT Type T6B</td>
<td>Added hyphen to description of &quot;block-out&quot; to match Traffic Barrier Guidelines</td>
</tr>
<tr>
<td><strong>C11</strong> TBT Type T10</td>
<td>Note 2: Revised description to match Tollway Coded Pay Items, Note 2: Revised requirement for forming contraction joints, Deleted note 3: renumbered remaining notes, Revised gutter slope in Sections B-B, C-C, E-E and F-F to 4%, Added Table for variable dimensions in median barrier details, Added concrete gutter, special adjacent to pier crash wall (per plan detail)</td>
</tr>
<tr>
<td><strong>C12</strong> Shoulder Widening for TBT Type T1-A (Special)</td>
<td>Defined limits for placement of aggregate shoulders material types</td>
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<tr>
<td><strong>C13</strong> Concrete Median Barrier Transition, Type V-F at Bridge Piers</td>
<td>New median barrier transition detail for barrier width ≤ 4', New median barrier transition detail for barrier width &gt; 4', Revised top barrier wall slope transition, Note 2: Revised requirement for forming contraction joints, Deleted note 3: renumbered remaining notes, Extended preformed joint filler through base slab, Revised gutter slope in Sections B-B, C-C, E-E and F-F to 4%, Added Table for variable dimensions in median barrier details, Added concrete gutter, special adjacent to pier crash wall (per plan detail)</td>
</tr>
<tr>
<td><strong>C14</strong> Concrete Barrier Transition, Type V at Bridge Piers</td>
<td>Revised top barrier wall slope transition, Note 3: Added requirement for forming contraction joints, Extended preformed joint filler through base slab, Added Table A for median barrier taper length</td>
</tr>
</tbody>
</table>

- **New Sheet**
- **Retired Standard**
1. OFFSET FROM EDGE OF PAVED SHOULDER TO FACE OF RAIL IS
   TYPICAL FOR ALL INSTALLATIONS EXCEPT AS OTHERWISE DETAILED IN
   THE PLAN DRAWINGS.

2. GUARDRAILS SUCH AS TYPE G-2, G-3 ARE REQUIRED IN FRONT OF
   THE GUARDRAIL, THE POSTS SHALL BE LOCATED 6" BEHIND THE GUARD,
   OR AS OTHERWISE DETAILED IN THE PLANS, THE OFFSET FROM THE
   EDGE OF SHOULDER TO THE FACE OF THE GUARDRAIL SHALL BE AS
   SHOWN ON STANDARD B29.

3. THE 24" TYPICAL RAIL HEIGHT IS MEASURED FROM EXISTING SURFACE
   1" IN FRONT OF RAIL OR FROM EDGE OF SHOULDER EDGE OF GUTTER
   WHEN EDGE IS MORE THAN 1" IN FRONT OF RAIL TO CENTER OF RAIL.

4. AGGREGATE SHOULDER SPECIAL TYPE C SHALL COMPLY WITH THE
   REQUIREMENTS OF THE TOLLWAY REGARDING SPECIAL PROVISIONS, WHERE
   GUARDRAIL IS PROPOSED WITH GUARDRAIL, A 6" MINIMUM THICKNESS
   OF AGGREGATE SHOULDERS SPECIAL TYPE C SHALL BE PLACED BEHIND
   CURB. FOR GUARDRAIL WITHOUT CURB A GUARDRAIL, AGGREGATE SHOULDER
   OF THE SAME THICKNESS SHALL BE PLACED FROM THE EDGE OF PAVED
   SHOULDER SLOWING AWAY TO 6" MIN. THICKNESS.

5. AGGREGATE SHOULDERS SPECIAL Type C SHALL EXTEND A MINIMUM OF
   1" RENDING POST OR GUARDRAIL, HINGE IS TO BE REIN, EXCEPT AS
   DETAILED ELSEWHERE IN THE PLANS.

6. PLASTIC BLOCK-OUTS SHALL NOT BE ALLOWED AS A SUBSTITUTE FOR
   WOOD BLOCK-OUTS ON NEW INSTALLATIONS.

7. WHEN SE3 AND 3'-0" MIN. AGGREGATE SHOULDER CANNOT BE USED, THE
   POST LENGTH SHALL BE 9'-0" and the MIN. AGGREGATE SHOULDER
   SHALL BE 1'-0" MEASURED DISTANCE BEHIND POST TO THE SHOULD
   OR BEHIND

8. ALL SLOPES ARE EXPRESSED AS UNITS OR VERTICAL DISPLACEMENT TO
   UNITS OF HORIZONTAL DISPLACEMENTS (VIN.

9. UNDER NO CIRCUMSTANCES SHALL AN EXISTING GUARDRAIL THAT WAS
   DESIGNED USING A PREVIOUS STANDARD, BE EXTENDED, ATTACHED TO OR
   MODIFIED IN ANYWAY FROM ITS ORIGINAL DESIGN. IF ANY MODIFICATION
   IS REQUIRED AND A PROPER BARRIER WARRANT HAS BEEN COMPLETED,
   THE ENTIRE BARRIER INSTALLATION SHALL BE COMPLETELY REMOVED
   AND REPLACED WITH A NEW SYSTEM THAT CONFORMS TO THE CURRENT
   STANDARD.

10. WHEN SE3, THE POST LENGTH SHALL BE 9'-0" AND 4'-0" AGGREGATE
    SHOULDER WITH MAINTAINED.

11. THE GUARDRAIL SYSTEM HAS BEEN PERFORMANCE-TESTED, FOR
    CRASHWORTHINESS UNDER PROCEDURES DEFINED IN THE NATIONAL
    COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350, NO
    MODIFICATION TO THIS STANDARD DRAWING SHALL BE PERMITTED.

12. GUARDRAIL POSTS SHALL NOT BE INSTALLED IN CONCRETE OR ASPHALT
    PAVEMENT, WHEN NECESSARY USE LEAVE-OUT DETAIL ON SHEET 3 OF 4
    OF SEER.

13. GUARDRAIL POSTS SHALL NOT BE ATTACHED TO ANY STRUCTURE.
**TABLE 1**

<table>
<thead>
<tr>
<th>V</th>
<th>W</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>16½&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>&gt; 16½&quot;</td>
<td>23½&quot;</td>
<td>21&quot;</td>
</tr>
<tr>
<td>&gt; 28½&quot;</td>
<td>20½&quot;</td>
<td>19&quot;</td>
</tr>
<tr>
<td>&gt; 40½&quot;</td>
<td>18½&quot;</td>
<td>18&quot;</td>
</tr>
</tbody>
</table>

*Note: V ≥ 40/6"*

**NOTES:**
- Ledge line is top of rock ledge on wood lag fill.
- Aggregate backfill (CA II)
- Wood block-out and steel post details

**FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED**
1. Cap shall be installed to match the existing cross slope.

2. The leave-out shall be defined as the area around the post that is either grated from the new construction or removed from the existing concrete or asphalt.
### Table 2

<table>
<thead>
<tr>
<th>Guardrail System</th>
<th>Post Spacing</th>
<th>Minimum Barrier Clearance Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A</td>
<td>6'-3&quot;</td>
<td>28&quot;</td>
</tr>
<tr>
<td>Type B 1/2 Post Spacing</td>
<td>3'-1 1/2&quot;</td>
<td>23&quot;</td>
</tr>
<tr>
<td>Type C 1/4 Post Spacing</td>
<td>1'-6 1/4&quot;</td>
<td>14&quot;</td>
</tr>
</tbody>
</table>

**Type A Guardrail - Drainage Structure Conflict**

- **One Post**
  - Transition to 1/2-Post Spacing
  - Transition to 1/4-Post Spacing

**Type A Guardrail - Drainage Structure Conflict**

- **Two Posts**
  - Notes:
    1. Guardrail posts shall not be eliminated; all posts must be used.
    2. Guardrail posts shall not be set back to avoid conflicts with a drainage structure.
    3. No modifications of any kind to the transition post spacing are allowed.

**Notes:**
- When length of obstacles is 1'-3" or less, the downstream transition shall be omitted.
SHOULDER WIDENING TRANSITION WITHOUT GUTTER FOR
TRAFFIC BARRIER TERMINAL, TYPE TI (SPECIAL) TANGENT

GENERAL NOTES:
1. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V/H).
2. REFERENCE STANDARD 022 FOR GUTTER TRANSITION.
3. UNDER NO CIRCUMSTANCES SHALL AN EXISTING TERMINAL, THAT WAS DESIGNED USING A PREVIOUS STANDARD, BE ATTACHED TO OR MODIFIED IN ANY WAY FROM ITS ORIGINAL DESIGN. IF ANY MODIFICATION IS REQUIRED AND A PROPER BARRIER WARRANTY HAS BEEN COMPLETED, THE EXISTING BARRIER INSTALLATION SHALL BE COMPLETELY REMOVED AND REPLACED WITH A NEW SYSTEM THAT CONFORMS TO THE CURRENT STANDARD.
4. TRAFFIC BARRIER TERMINAL SHALL BE IN ACCORDANCE WITH MANUFACTURER'S DETAILED SPECIFICATIONS.
5. NO ROADSIDE OBSTACLE OF ANY TYPE-FIXED OR REMOVABLE, EITHER TEMPORARY OR PERMANENT SHALL BE ALLOWED WITHIN THE RECOVERY AREA.
6. NO CURVED APPROACH SECTIONS ARE PERMITTED WITHIN THE TERMINAL PAY LIMITS. THE TERMINAL SHALL BE Laid OUT IN A STRAIGHT LINE.
7. TERMINAL POSTS SHALL NOT BE INSTALLED IN CONCRETE OR HMA, WHEN NECESSARY USE LEAVE-OUT DETAIL SHOWN ON STANDARD CI.
8. THE TERMINAL SYSTEM HAS BEEN PERFORMANCE-TESTED FOR CRASHWORTHINESS UNDER PROCEDURES DEFINED IN THE NATIONAL COOPERATIVE HIGHWAY RESEARCH REPORT 155. NO MODIFICATION TO THIS STANDARD DRAWING SHALL BE PERMITTED.

NOTE FOR INSTALLATION ON TANGENT ROADWAY:
The traffic barrier terminal shall be installed at a 50% taper measured from edge of traveled way.

NOTE FOR INSTALLATION ON CURVED ROADWAY:
The edge of the terminal extender head shall be offset a distance from a point on the back of the curved edge of paved shoulder as shown in Table 1.
SHOULDER WIDENING TRANSITION WITH GUTTER, TYPE G-2 FOR
TRAFFIC BARRIER TERMINAL, TYPE T1 (SPECIAL) TANGENT

SECTION A-A
IMPACT HEAD (OMITTED FOR CLARITY)

NOTES:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

STANDARD C6-07
1. See standard C1 for details of guardrail, not shown.
2. The bearing plate K shall be held in position by two 8d nails driven into the post and bent over the top of the plate.
3. The traffic barrier terminal type T2 is typically utilized for the deteriorating end section of a galvanized steel plate beam guardrail barrier system.
4. Under no circumstances shall an existing terminal that was designed using a previous standard, be attached to or modified in any way from its original design. If any modification is required and a proper barrier warrant has been completed, the entire barrier installation shall be completely removed and replaced with a new system that conforms to the current standard.
5. Traffic barrier terminal shall be in accordance with the tollway's details and specifications, no modifications shall be permitted.
6. Terminal posts shall not be installed in concrete or asphalt pavement, when necessary use leave-out detail per standard C1.
7. Where guard, type G-2 or Gutter, type G-3 are required in front of the guardrail, the posts shall be located 3 ft behind the gutter, or as otherwise detailed in the plans. The offset from the edge of shoulders to the face of the Guardrail shall be as shown on standard B82.
NOTES:
1. SEE STANDARD CI FOR DETAILS OF GUARDRAIL NOT SHOWN.
2. THREE BEAM RAIL SHALL BE BOLTED TO BLOCK-OUT AT ALL POSTS.
3. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (+).
4. THE TRAFFIC BARRIER TERMINAL, TYPE T6, IS TYPICALLY UTILIZED TO ATTACH GALVANIZED STEEL PLATE BEAM GUARDRAIL AT THE UPSTREAM END OF THE BRIDGES CONCRETE PARAPET, WHERE A ROADSIDE GUTTER IS TO BE INSTALLED.
5. SEE STANDARD BS FOR GUTTER TRANSITION AT TRAFFIC BARRIER TERMINAL TYPE T6.
6. UNDER NO CIRCUMSTANCES SHALL AN EXISTING TERMINAL THAT WAS DESIGNED USING A PREVIOUS STANDARD, BE ATTACHED TO OR MODIFIED IN ANY WAY FROM ITS ORIGINAL DESIGN. ANY MODIFICATION IS RECOMMENDED AND A PROPER WARRANT HAS BEEN COMPLETED. THE ENTRANCE BARRIER INSTALLATION SHALL BE COMPLETELY REMOVED AND REPLACED WITH A NEW SYSTEM THAT CONFORMS TO THE CURRENT STANDARD.

FOR PARAPET (SAFETY FACE)
WITH GUTTER TYPE G-3

SECTION A-A

CONCRETE PARAPET
FORMED OR DRILLED 1" HOLE-
PARAPET WOOD BLOCK-OUT
STEEL BEARING PLATE
ONE SET INSIDE THE OTHER
3/8" BOLTS (HEAD OF BOLTS TO BE ON TRAFFIC SIDE)

TOP OF RAIL
2.0' MIN

WITH GUTTERS TYPE G-3

PAVED SHOULDER
ACCEP TABLE SHOULDERS SPECIAL TYPE C
GROUND LINE

ELEVATION
6' BEAM
3/4' WIDE

8' BEAM
3/4' WIDE

43'-1/4"
6' SPACES AT 1'-1/4"
34'-6/8"
11' SPACES AT 3'-3/4"
9'-4 1/8"

PLANS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
6'-8" WEBS OR MIXED STEEL POSTS
6'-0" STEEL POSTS

43'-7/8"

IL MIN

SW MIN

DATE: 7/1/2001

TRAFFIC BARRIER TERMINAL, TYPE T6
STANDARD: C9-06

APPROVED

REVISIONS

ILLINOIS DOT
FOR CONCRETE BARRIER, SINGLE-FACE W/ GUTTER, TYPE G-3

NOTE:
SEE SHEET 1 OF THIS SERIES FOR GUTTER TRANSITION NOTES AND SECTION A-A.

SHEET 4 OF 5
NOTES:
1. SEE STANDARD CI FOR DETAILS OF GUARDRAIL NOT SHOWN.
2. THE BEAM RAIL SHALL BE BOLTED TO BLOCK-OUT AT ALL POSTS.
3. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (H/V).
4. THE TRAFFIC BARRIER TERMINAL, TYPE T68 IS TYPICALLY UTILIZED TO ATTACH GALVANIZED STEEL PLATE BEAM GUARDRAIL AT THE UPSTREAM END OF THE BRIDGE CONCRETE PARAPET, WHERE A ROADSIDE GUTTER IS NOT TO BE INSTALLED.
5. UNDER NO CIRCUMSTANCES SHALL EXISTING TERMINAL, THAT WAS DESIGNED USING A PREVIOUS STANDARD, BE ATTACHED TO OR MODIFIED IN ANY WAY FROM ITS ORIGINAL DESIGN. IF ANY MODIFICATION IS REQUIRED AND A PREVIOUS BARRIER WARRANT HAS BEEN COMPLETED, THE ENTIRE BARRIER INSTALLATION SHALL BE COMPLETELY REMOVED AND REPLACED WITH A NEW SYSTEM THAT CONFORMS TO THE CURRENT STANDARD.
6. TRAFFIC BARRIER TERMINAL SHALL BE IN ACCORDANCE WITH THE TOLLWAY’S DETAILS AND SPECIFICATIONS, NO MODIFICATIONS SHALL BE PERMITTED.
7. TERMINAL POSTS SHALL NOT BE INSTALLED IN CONCRETE OR ASPHALT PAVEMENTS, WHEN NECESSARY USE LEAVE-OUT DETAIL PER STANDARD CT, SHEET 4 OF 4.
8. TERMINAL BARRIER CLEARANCE DISTANCE SHALL CONFORM WITH TABLE 2 ON STANDARD CT.
9. LEAVE-OUT DIMENSION BEHIND POSTS 1-6 SHALL BE A MINIMUM OF 1/4.
ELEVATION

PLAN

CURVED WING

TANGENT WING

GENERAL NOTE:
* OR TO BE DETERMINED IN THE FIELD.
** HEAD OF BOLT TO BE ON TRAFFIC SIDE.
SEE DETAIL "A"

DETAIL "A"

END SHOE

NOTES:

1. SEE STANDARD CI FOR DETAILS OF GUARDRAIL NOT SHOWN.
2. THE 24½" TYPICAL RAIL HEIGHT IS MEASURED FROM EXISTING SURFACE Y IN FRONT OF RAIL OR FROM EDGE OF SINGLE/EDGE OF GUTTER WHEN EDGE IS MORE THAN ½" IN FRONT OF RAIL TO CENTER OF RAIL.
3. THE TRAFFIC BARRIER TERMINAL TYPE 110 IS TYPICALLY UTILIZED TO CONNECT GALVANIZED STEEL PLATE BEAM GUARDRAIL TO THE DEPARTING END OF AN EXISTING BRIDGE CONCRETE WING WALL OR PARAPET.
4. UNDER NO CIRCUMSTANCES SHALL AN EXISTING TERMINAL THAT WAS DESIGNED USING A PREVIOUS STANDARD BE ATTACHED TO OR MODIFIED IN ANY WAY FROM ITS ORIGINAL DESIGN, BUT ANY MODIFICATION IS REQUIRED AND A PROPER BARRIER WARRANT HAS BEEN COMPLETED, THE ENTIRE BARRIER INSTALLATION SHALL BE COMPLETELY REMOVED AND REPLACED WITH A NEW SYSTEM THAT CONFORMS TO THE CURRENT STANDARD.
5. TRAFFIC BARRIER TERMINAL SHALL BE IN ACCORDANCE WITH THE TOLLWAY'S DETAILS AND SPECIFICATIONS, NO MODIFICATIONS SHALL BE PERMITTED.
6. WHEN END SHOE IS ATTACHED TO A BRIDGE PARAPET WHICH HAS AN EXPANSION JOINT, THE BOLTS SHALL BE PROVIDED WITH A LOCKNUT OR DOUBLE NUT AND SHALL BE TIGHTENED ONLY TO A POINT THAT WILL ALLOW GUARDRAIL MOVEMENT.
7. THE ANCHOR CONE SHALL BE SET FLUSH WITH THE SURFACE OF THE CONCRETE.
8. EXTERNALLY THREADING STUDS PROTRUDING FROM THE SURFACE OF THE OUTDOOR CONCRETE WILL NOT BE PERMITTED.
9. WHEN WING WALL THICKNESS IS GREATER THAN 18" OR NOT ACCESSIBLE TO THE BACK SIDE, 4-⅜" BOLTS SHALL BE ANCHORED INTO DRILLED MILES USING A CHEMICAL ADHESIVE, MINIMUM DIAMETER SHALL BE 10" ANCHOR BOLTS WITH STANDARD WASHER SHALL BE USED. AFTER TIGHTENING OUT THE ANCHOR BOLTS FLUSH WITH THE NUTS, AND DAMAGE THE NUTS TO PREVENT THEM FROM LOOsening.
SHOULDER WIDENING TRANSITION-WITHOUT CUTTER
FOR TRAFFIC BARRIER TERMINAL, TYPE TI-A (SPECIAL)

GENERAL NOTES:
1. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V/H).
2. THE TRAFFIC BARRIER TERMINAL, TYPE TI-A (SPECIAL) IS THE UPSTREAM END SECTION OF A GALVANIZED STEEL PLATE BEAM GUARDRAIL BARRIER SYSTEM, FOR RAMP INSTALLATION WITH DESIGN SPEED LIMIT OF 40 MPH OR LESS, NCHRP 350, TEST LEVEL TI-12.
3. REFERENCE STANDARD B29 FOR CUTTER TRANSITION AT TRAFFIC BARRIER TERMINAL, TYPE TI-A (SPECIAL).
4. UNDER NO CIRCUMSTANCES SHALL AN EXISTING TERMINAL, THAT WAS DESIGNED USING A PREVIOUS STANDARD, BE ATTACHED TO OR MODIFIED IN ANY WAY FROM ITS ORIGINAL DESIGN. IF ANY MODIFICATION IS REQUIRED AND A PROPER BARRIER WARRANT HAS BEEN COMPLETED, THE ENTIRE BARRIER INSTALLATION SHALL BE COMPLETELY REMOVED AND REPLACED WITH A NEW SYSTEM THAT CONFORMS TO THE CURRENT STANDARD.
5. TRAFFIC BARRIER TERMINAL SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S DETAILS AND SPECIFICATIONS.
6. NO ROADSIDE OBSTRUCTION OF ANY TYPE-FIXED OR BREAKAWAY, EITHER TEMPORARY OR PERMANENT, SHALL BE ALLOWED WITHIN THE RECOVERY AREA.
7. NO CURVED W-Beam sections are permitted within the terminal pay limits, the traffic barrier terminal, type TI-A (SPECIAL) shall be laid out in a straight line.
8. TERMINAL POSTS SHALL NOT BE INSTALLED IN CONCRETE OR HMA, WHEN NECESSARY USE LEAVE-OUT DETAIL SHOWN ON STANDARD CI.
9. THE TERMINAL SYSTEM HAS BEEN PERFORMANCE-TESTED FOR CRASHWORTHINESS UNDER PROCEDURES DEFINED IN THE NATIONAL COOPERATIVE HIGHWAY RESEARCH REPORT NCHRP REPORT 350. NO MODIFICATION TO THIS STANDARD DRAWING SHALL BE PERMITTED.

NOTE FOR INSTALLATION ON TANGENT ROADWAY:
TRAFFIC BARRIER TERMINAL SHALL BE INSTALLED AT A 25d TAPER MEASURED FROM EDGE OF TRAVELED WAY.

NOTE FOR INSTALLATION ON CURVED ROADWAY:
SHOULDER WIDENING TRANSITION WITH CUTTER, TYPE C-2
FOR TRAFFIC BARRIER TERMINAL, TYPE T-I-A (SPECIAL)

CURVED ROADWAY
TRAFFIC BARRIER TERMINAL PLACEMENT

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>LATERAL OFFSET DIMENSION TO EDGE OF TERMINAL EXTRUDER HEAD</th>
</tr>
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<tbody>
<tr>
<td>INSIDE RADIUS OF CURVE</td>
<td>OUTSIDE RADIUS OF CURVE</td>
</tr>
<tr>
<td>NO CUTTER</td>
<td>1'-4 1/2&quot;</td>
</tr>
<tr>
<td>CUTTER TYPE C-2</td>
<td>1'-2 1/2&quot;</td>
</tr>
<tr>
<td>CUTTER TYPE C-3</td>
<td>2'-2 1/2&quot;</td>
</tr>
</tbody>
</table>

* OFFSET DISTANCE WILL VARY BASED ON RADIUS OF HORIZONTAL CURVE AND THE TERMINAL BEING INSTALLED IN A STRAIGHT LINE.
CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F
AT BRIDGE PIERS (FOR "W" ≤ 4'-0")

1. CONCRETE CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE
   CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE.
   CONSTRUCTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF
   ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.

2. THE FORMING OF CONSTRUCTION JOINTS SHALL BE DONE BY SAWING.

3. GUTTER PROFILE IN THE VICINITY OF SAC VERTICAL CURVES, ALONG
   FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING
   GUTTER SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF
   NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.

4. PROVIDE NON-STAINING GRAY ONE COMPONENT NON-SAC POLYURETHANE
   CURE GRADE POLYURETHANE SEALANT WITH BACKER ROD.

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DATE: 7-1-2000
APPROVED: 7-1-2000

CONCRETE CUTTER, SPECIAL
PER PLAN DETAIL

PLAN 1

PLAN 2

CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F
AT BRIDGE PIERS (FOR "W" > 4'-0")