

## Chapter 03 - Superstructure

### SECTION 02

# TRAFFIC BARRIERS (PARAPETS) (SUP-TB)

## Chapter 03 - Superstructure

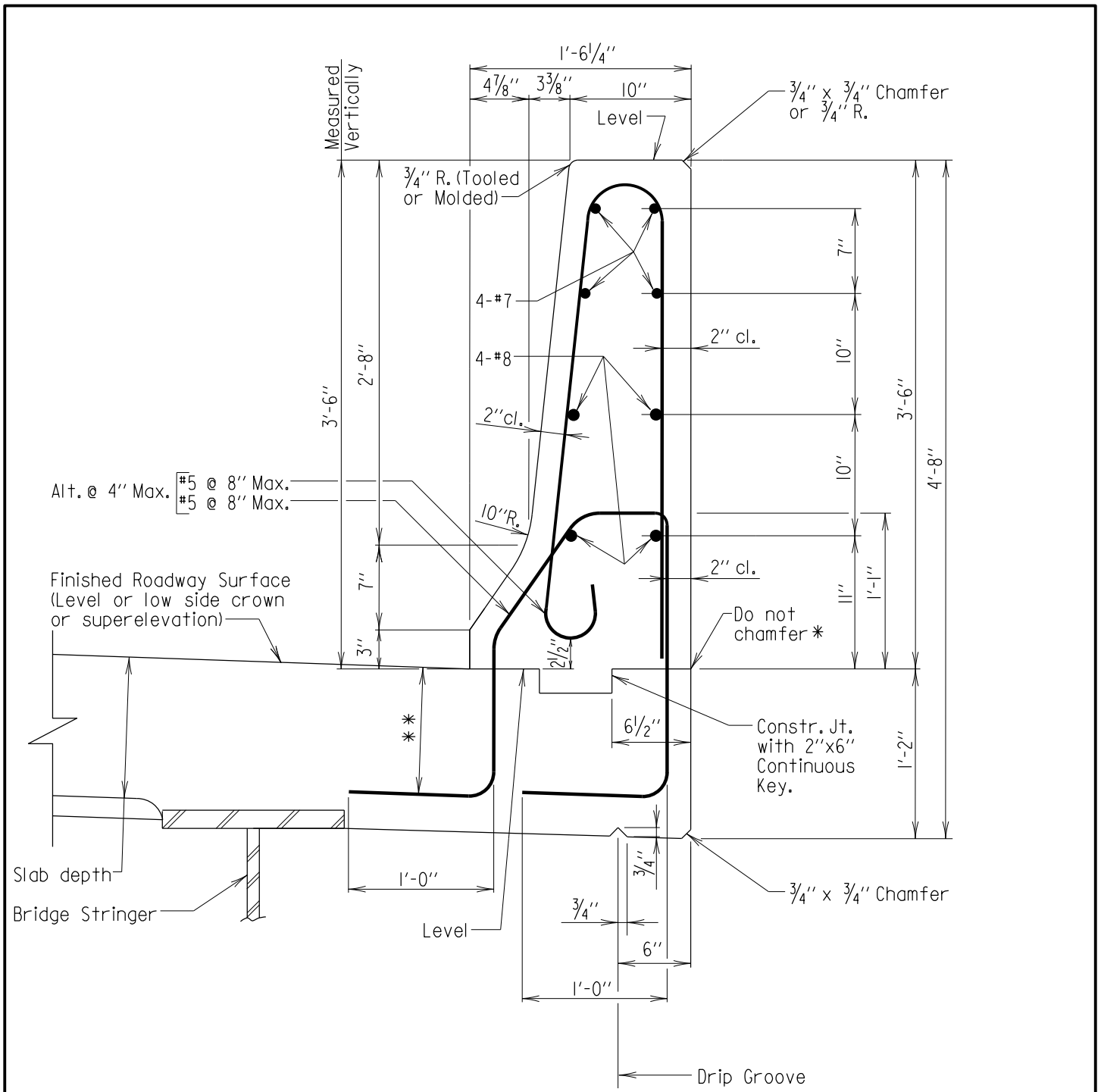
### Section 02 – Traffic Barriers

#### SUB-SECTION 01

42" F-SHAPE PARAPET  
(SUP-TB(42F))

and

42" SINGLE SLOPE  
PARAPET  
(SUP-TB(42SS))



**SECTION**

Scale: 1" = 1'-0"

\* In order to insure a smooth and acceptable surface, 420.03.11 (Construction joints) will be strictly adhered to.

\*\* Slab depth minus 1".

**Notes:**

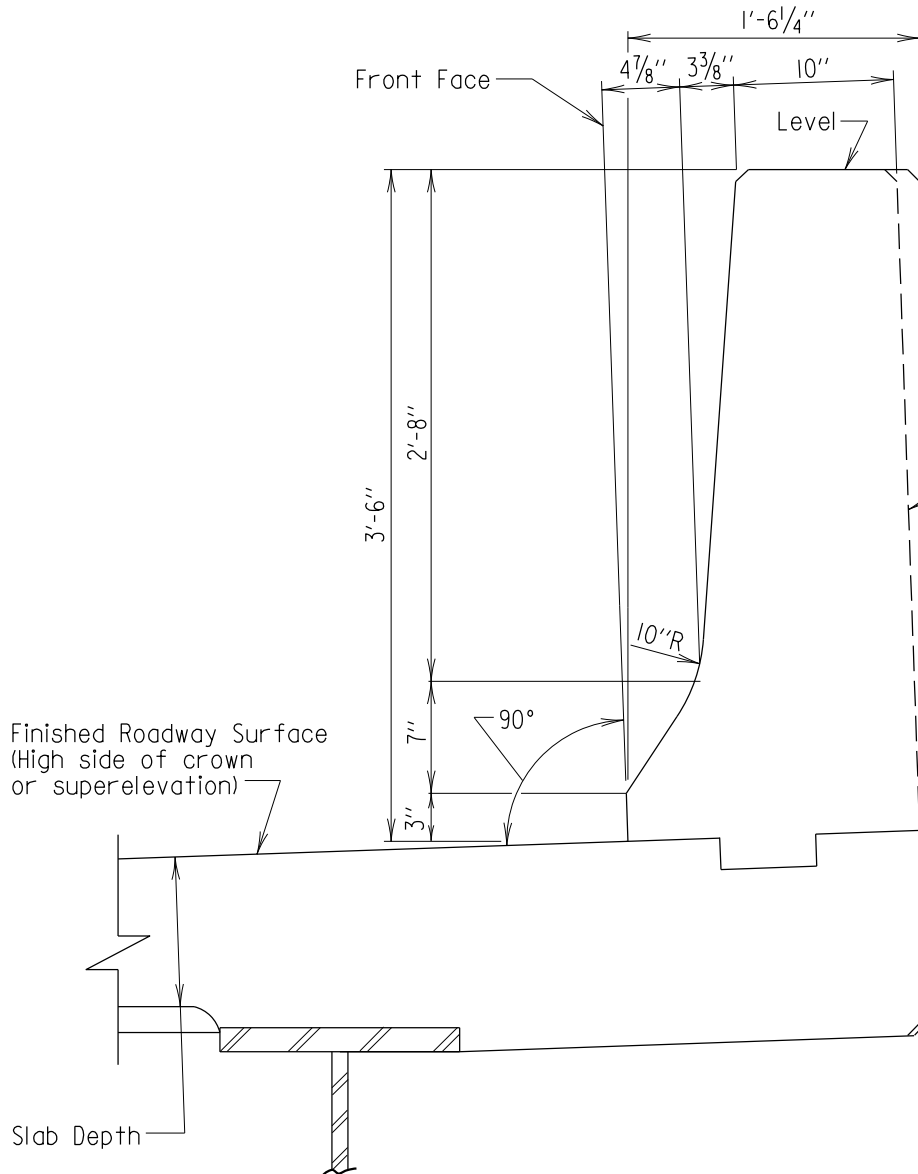
1. All #7 and #8 longitudinal bars shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
2. Key is nominal size.
3. Front face of parapet to be dimensioned from a plumb line.
4. All reinforcing steel to be epoxy coated.
5. Concrete deck reinforcing steel not shown.

**42" STRAIGHT BACK TL-5 BRIDGE RAILING**

APPROVAL
<i>E.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11/26/2007
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
LEVEL OR LOW SIDE OF CROWN (OR SUPERELEVATED) SECTION OF 42" F-SHAPE PARAPET WITH STRAIGHT BACK	
DETAIL NO. SUP-TB(42F)-101	SHEET <u>1</u> OF <u>2</u>

SUPER - TRAFFIC BARRIERS



Front face configuration of parapet shall be constructed perpendicular to roadway surface.

Plumb

Contractor has the option of either constructing rear face plumb or on a slope perpendicular to roadway surface. However, whatever option is chosen must be used throughout all structure(s) at a particular crossing. No additional compensation will be provided to the contractor for whatever option is chosen.

Finished Roadway Surface (High side of crown or superelevation)

Slab Depth

SECTION  
Scale: 1" = 1'-0"

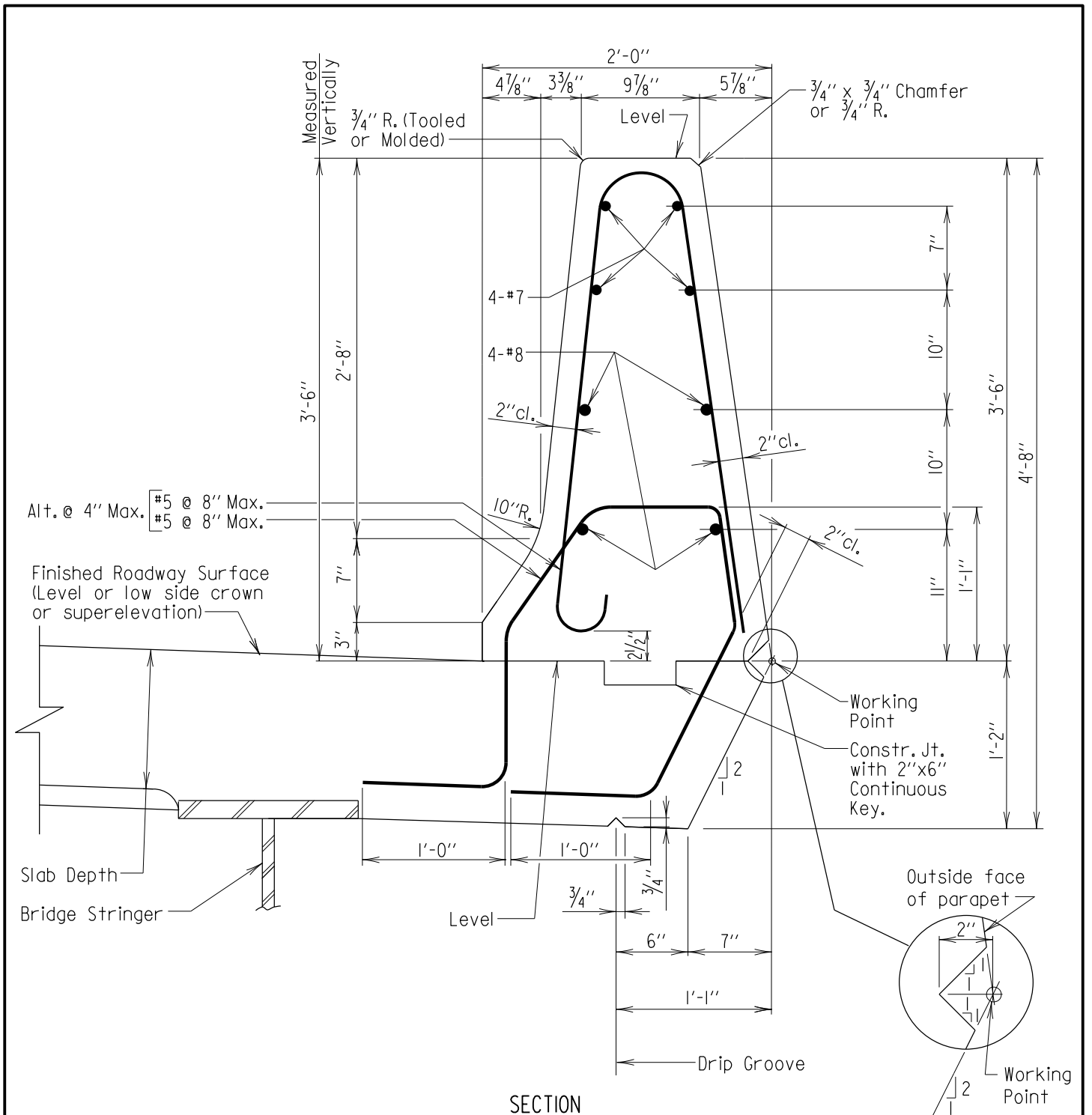
42" STRAIGHT BACK TL-5 BRIDGE RAILING

Note:  
For all details not shown see sheet 1 of 2.

APPROVAL
<i>E.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11/26/2007
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION OF 42" F-SHAPE PARAPET WITH STRAIGHT BACK
DETAIL NO. SUP-TB(42F)-101
SHEET 2 OF 2

SUPER - TRAFFIC BARRIER



**SECTION**  
Scale: 1" = 1'-0"

- Notes:
1. All #7 and #8 longitudinal bars shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
  2. Key is nominal size.
  3. Front face of parapet to be dimensioned from a plumb line.
  4. All reinforcing steel to be epoxy coated.
  5. Concrete deck reinforcing steel not shown.

**42" DIAMOND BACK TL-5 BRIDGE RAILING**

APPROVAL
<i>E.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11/26/2007
VERSION
1.0

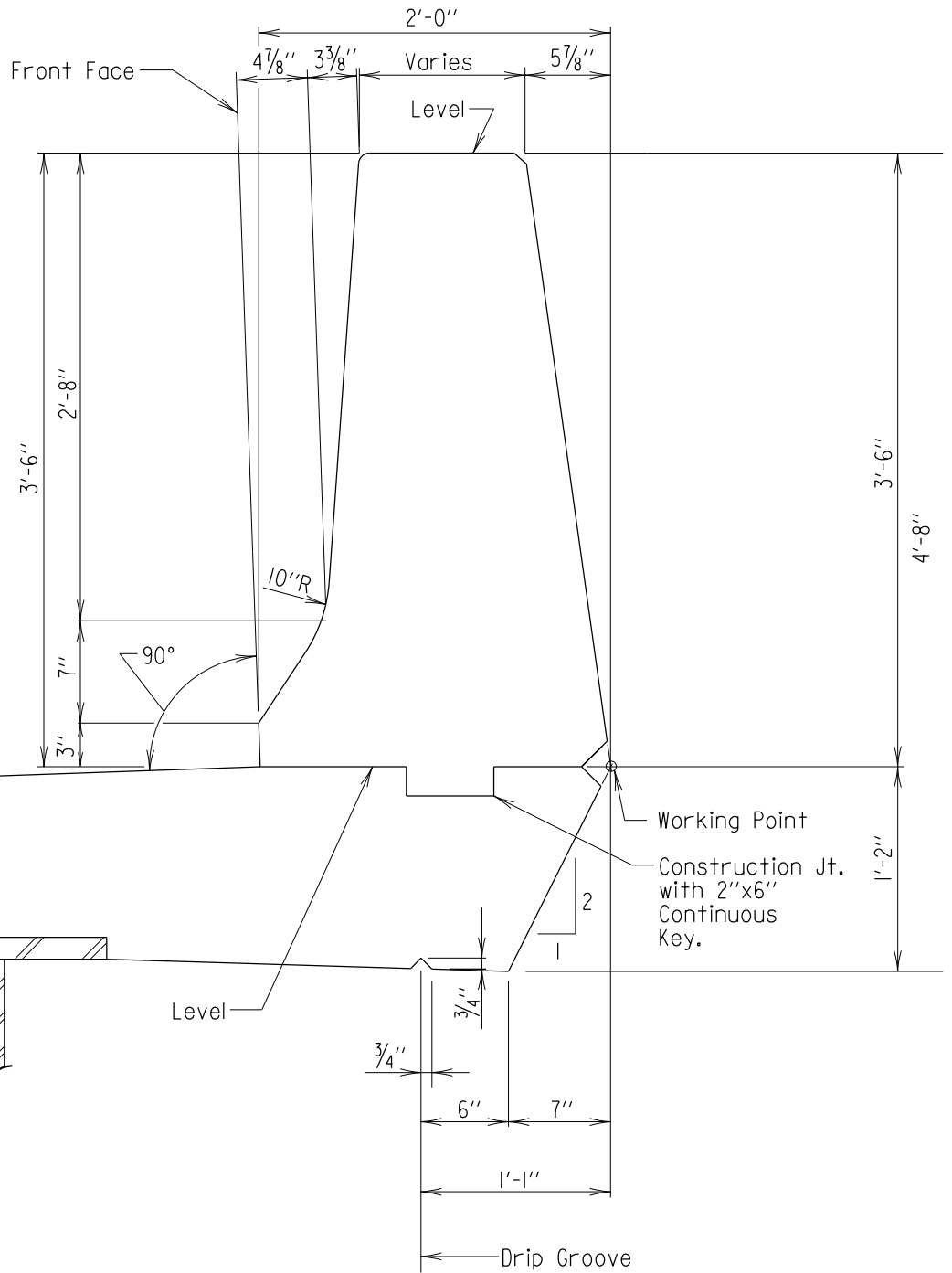
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
<b>LEVEL OR LOW SIDE OF CROWN (OR          SUPERELEVATED) SECTION OF 42" F-SHAPE          PARAPET WITH DIAMOND BACK</b>
DETAIL NO. SUP-TB(42F)-102
SHEET <u>1</u> OF <u>2</u>

SUPER - TRAFFIC BARRIER

Front face configuration of parapet shall be constructed perpendicular to roadway surface.

Finished Roadway Surface (High side of crown or superelevation)

Slab Depth



SECTION

Scale: 1" = 1'-0"

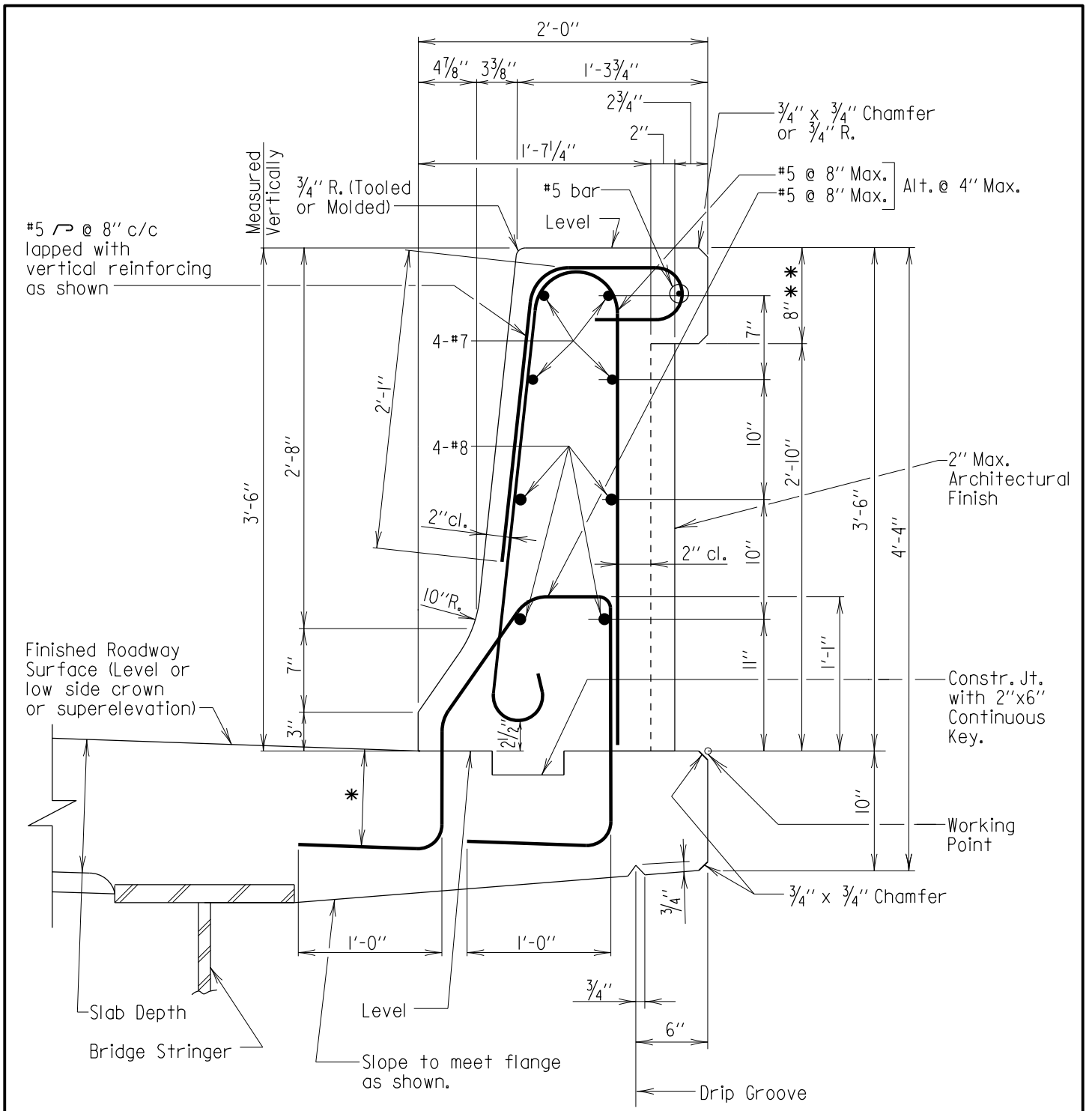
42" DIAMOND BACK TL-5 BRIDGE RAILING

Note:  
For all details not shown see sheet 1 of 2.

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11/26/2007
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1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION OF 42" F-SHAPE PARAPET WITH DIAMOND BACK	
DETAIL NO. SUP-TB(42F)-102	SHEET 2 OF 2

SUPER - TRAFFIC BARRIER



**SECTION**  
Scale: 1" = 1'-0"

\* Slab Depth - 1"  
 \*\* This dimension can vary (1/2" ± max.) according to the form liner chosen. The Contractor must contact SHA Project Engineer to verify form liner and this dimension.

- Notes:
- All #5, #7 and #8 longitudinal bars shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
  - Key is nominal size.
  - Front face of parapet to be dimensioned to a plumb line.
  - All reinforcing steel to be epoxy coated.
  - Concrete deck reinforcing steel not shown.

**42" RECESSED BACK TL-5 BRIDGE RAILING**

APPROVAL
<i>E.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11/26/2007
VERSION
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STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF STRUCTURES

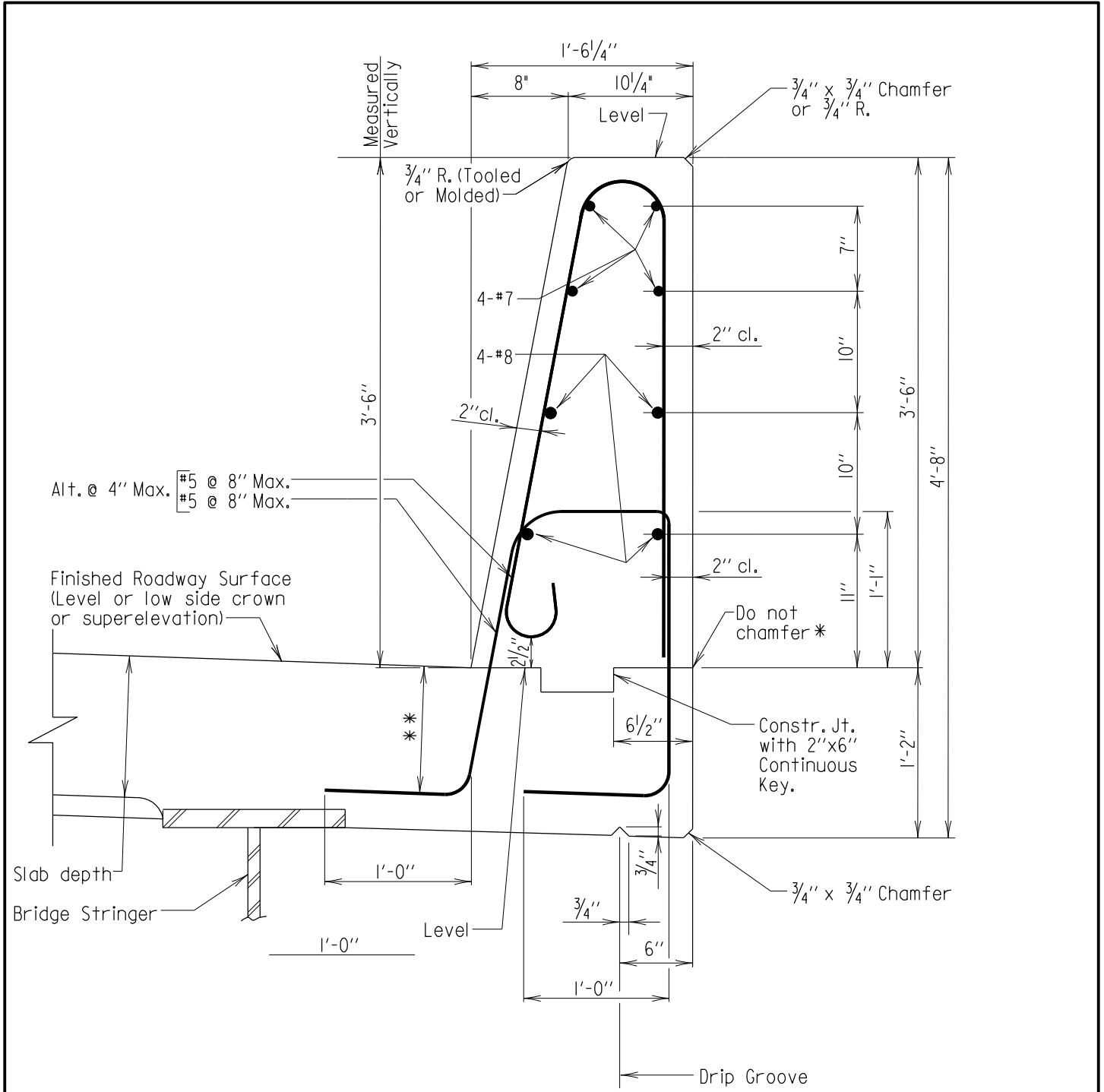
**LEVEL OR LOW SIDE OF CROWN  
 (OR SUPERELEVATED) SECTION OF 42" F-SHAPE  
 PARAPET WITH ARCHITECTURAL FINISH**

DETAIL NO. SUP-TB(42F)-103      SHEET 1 OF 2

SUPER - TRAFFIC BARRIER







**SECTION**  
Scale: 1" = 1'-0"

\* In order to insure a smooth and acceptable surface, 420.03.11 (Construction joints) will be strictly adhered to.

\*\* Slab depth minus 1".

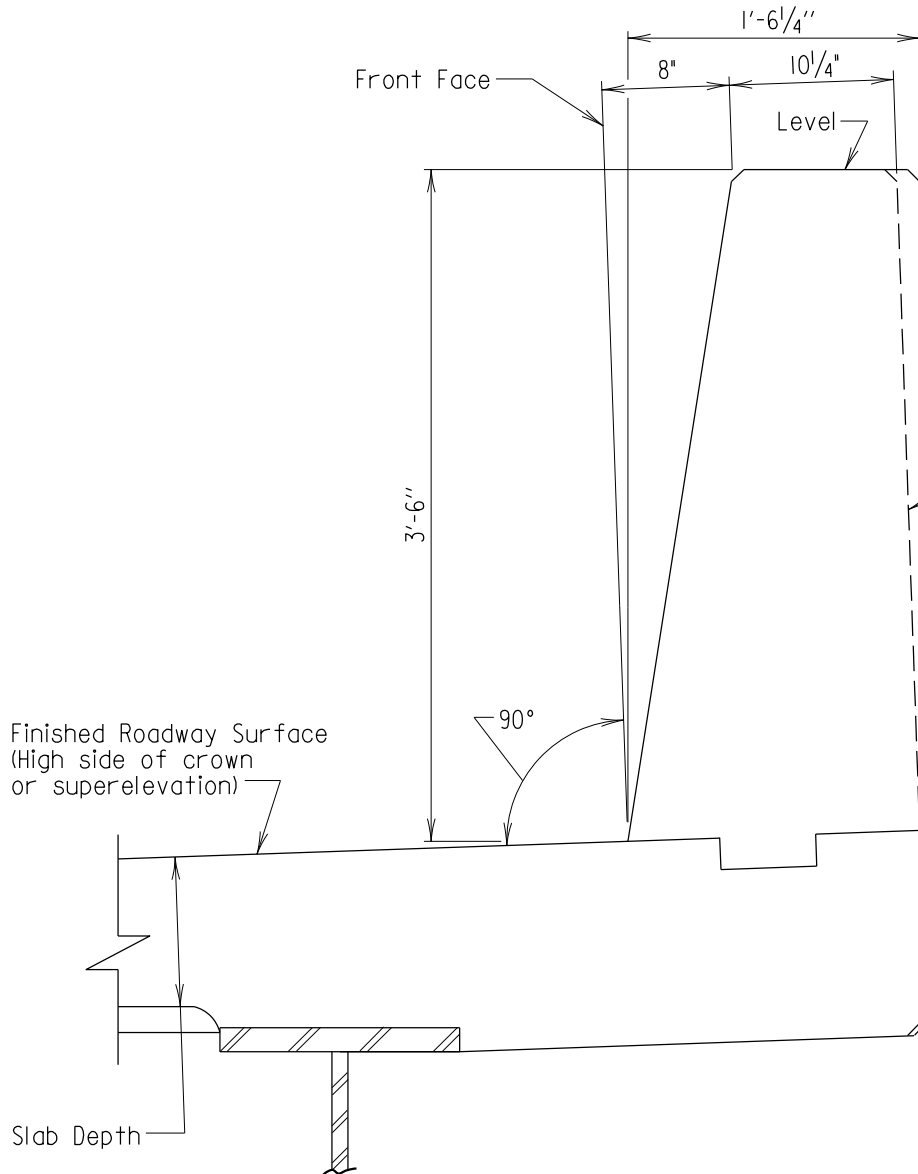
**Notes:**

1. All #7 and #8 longitudinal bars shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
2. Key is nominal size.
3. Front face of parapet to be dimensioned from a plumb line.
4. All reinforcing steel to be epoxy coated.
5. Concrete deck reinforcing steel not shown.

APPROVAL
<i>R. C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 05/29/2019
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
<b>MASH TL-5 - 42" SINGLE SLOPE PARAPET LEVEL OR LOW SIDE OF CROWN (OR SUPERELEVATED) SECTION - STRAIGHT BACK</b>	
DETAIL NO. SUP-TB(42SS)-101	SHEET <u>1</u> OF <u>2</u>

SUPER - TRAFFIC BARRIERS



Front face configuration of parapet shall be constructed perpendicular to roadway surface.

Plumb

Contractor has the option of either constructing rear face plumb or on a slope perpendicular to roadway surface; however, whatever option is chosen must be used throughout all structure(s) at a particular crossing. No additional compensation will be provided to the contractor for whatever option is chosen.

Finished Roadway Surface (High side of crown or superelevation)

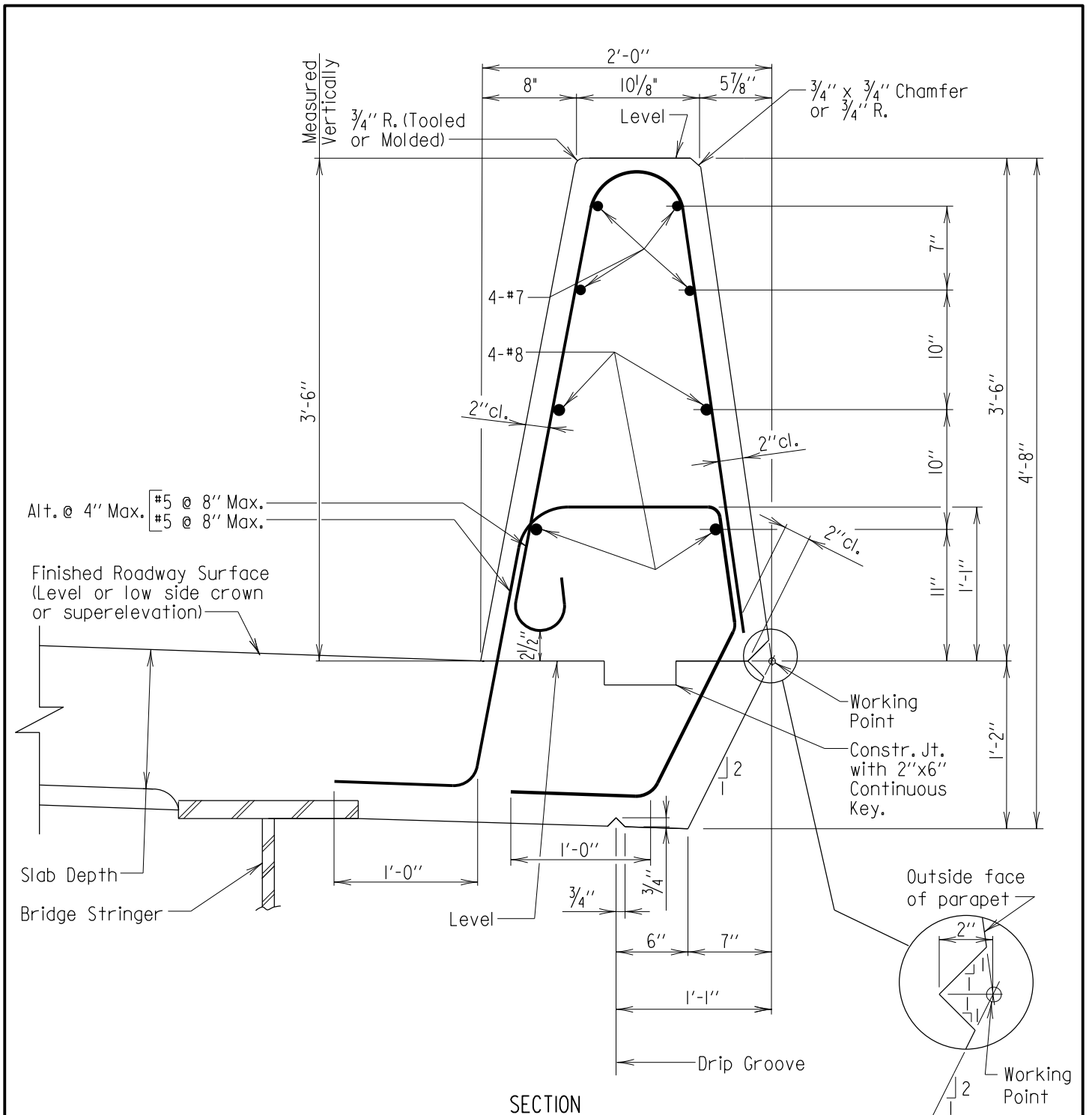
Slab Depth

SECTION  
Scale: 1" = 1'-0"

Note:  
For all details not shown see sheet 1 of 2.

APPROVAL
<i>Ben C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 05/29/2019
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
MASH TL-5 - 42" SINGLE SLOPE PARAPET HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION - STRAIGHT BACK	
DETAIL NO. SUP-TB(42SS)-101	SHEET 2 OF 2



**SECTION**  
Scale: 1" = 1'-0"

- Notes:
1. All #7 and #8 longitudinal bars shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
  2. Key is nominal size.
  3. Front face of parapet to be dimensioned from a plumb line.
  4. All reinforcing steel to be epoxy coated.
  5. Concrete deck reinforcing steel not shown.

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VERSION
1.0

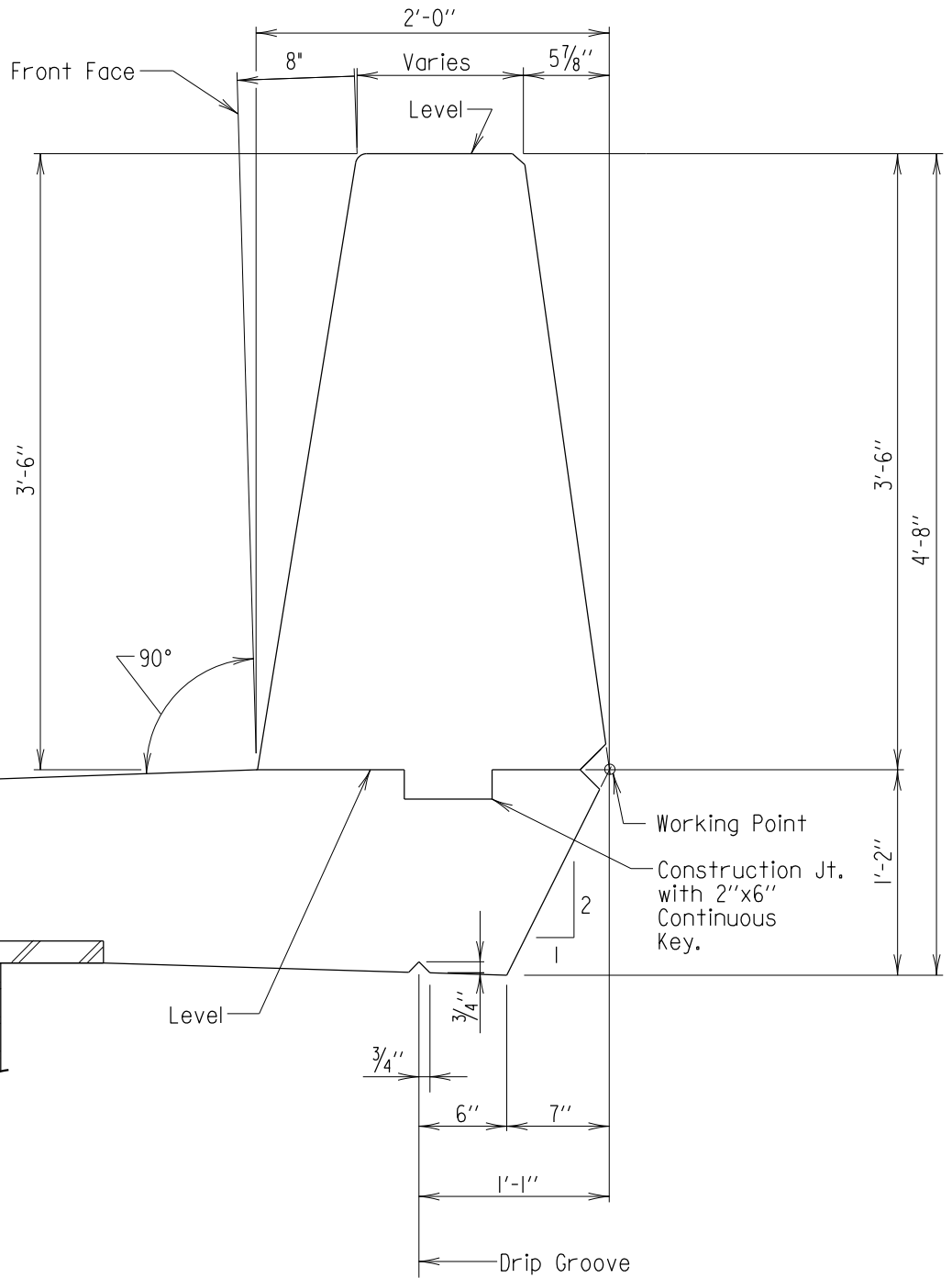
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
<b>MASH TL-5 - 42" SINGLE SLOPE PARAPET          LEVEL OR LOW SIDE OF CROWN          (OR SUPERELEVATED) SECTION - DIAMOND BACK</b>	
DETAIL NO. SUP-TB(42SS)-102	SHEET <u>1</u> OF <u>2</u>

SUPER - TRAFFIC BARRIER

Front face configuration of parapet shall be constructed perpendicular to roadway surface.

Finished Roadway Surface (High side of crown or superelevation)

Slab Depth



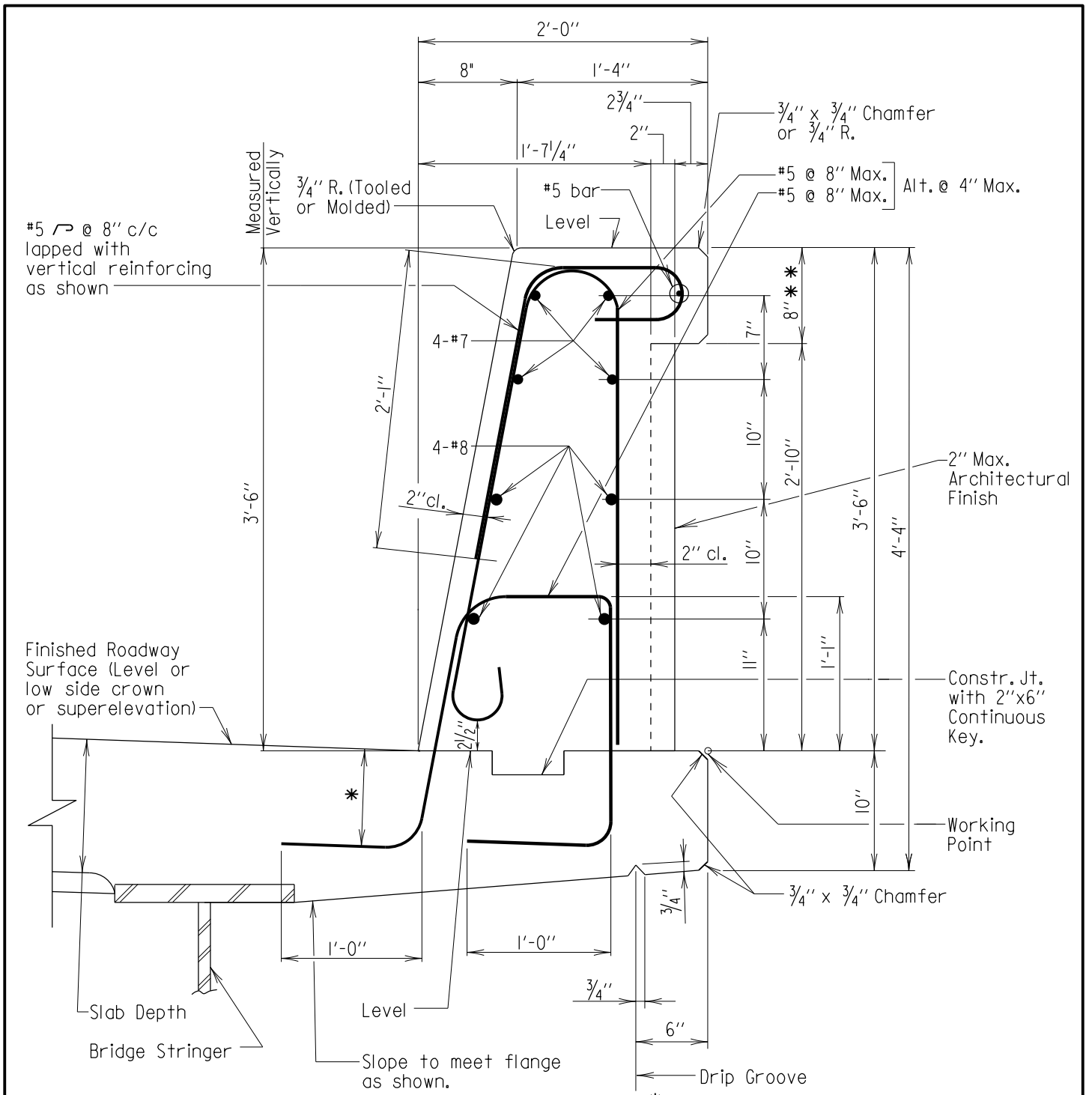
**SECTION**  
Scale: 1" = 1'-0"

Note:  
For all details not shown see sheet 1 of 2.

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DATE: 05/29/2019
VERSION
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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
MASH TL-5 - 42" SINGLE SLOPE PARAPET HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION - DIAMOND BACK	
DETAIL NO. SUP-TB(42SS)-102	SHEET 2 OF 2

SUPER - TRAFFIC BARRIER



**SECTION**  
Scale: 1" = 1'-0"

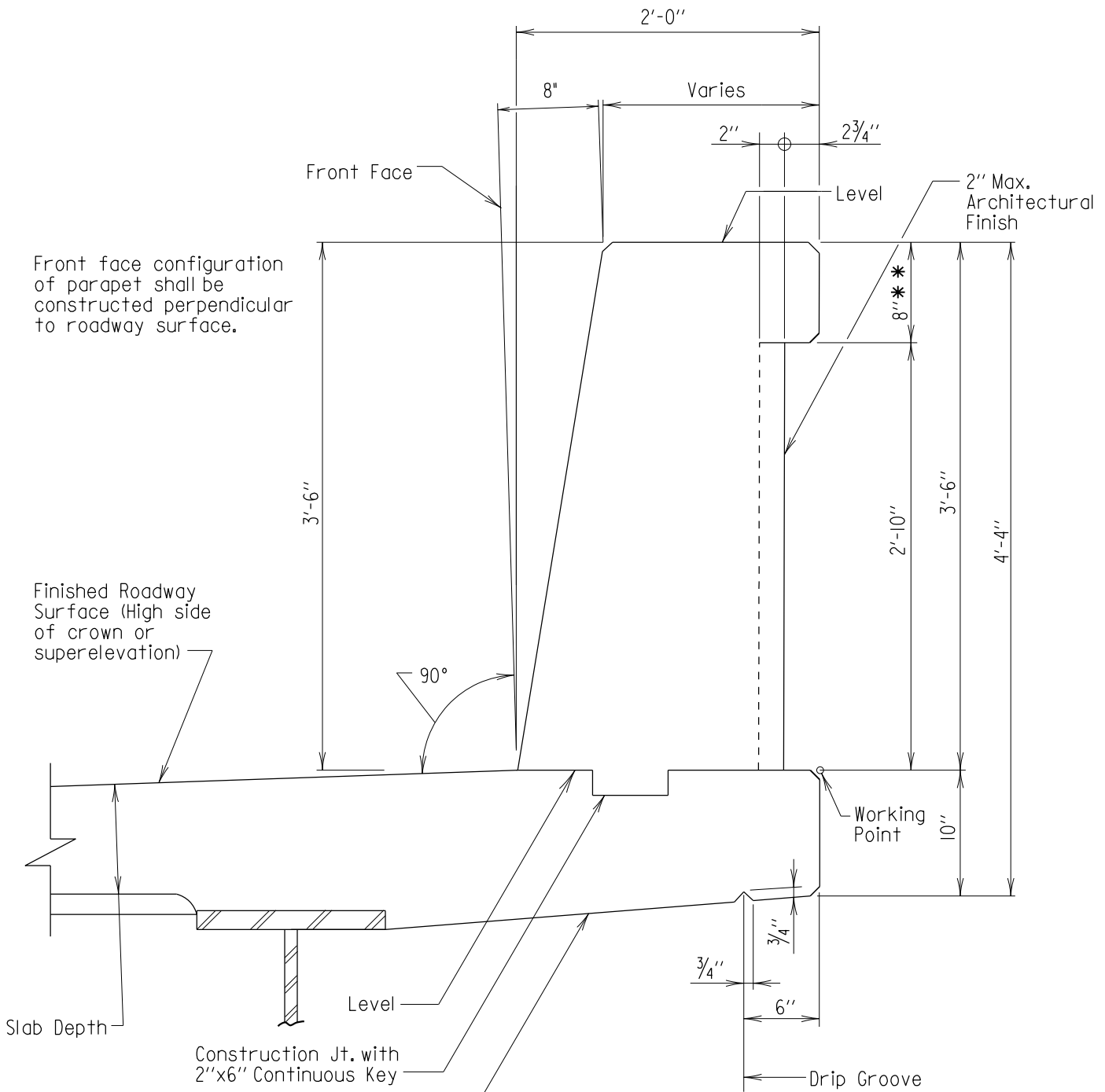
\* Slab Depth - 1"  
 \*\* This dimension can vary (1/2" ± max.) according to the form liner chosen. The Contractor must contact SHA Project Engineer to verify form liner and this dimension.

- Notes:
- All #5, #7 and #8 longitudinal bars shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
  - Key is nominal size.
  - Front face of parapet to be dimensioned to a plumb line.
  - All reinforcing steel to be epoxy coated.
  - Concrete deck reinforcing steel not shown.

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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
MASH TL-5 - 42" SINGLE SLOPE PARAPET LEVEL OR LOW SIDE OF CROWN (OR SUPERELEVATED) SECTION - ARCHITECTURAL FINISH	
DETAIL NO. SUP-TB(42SS)-103	SHEET 1 OF 2

SUPER - TRAFFIC BARRIER



Front face configuration of parapet shall be constructed perpendicular to roadway surface.

Finished Roadway Surface (High side of crown or superelevation)

Slab Depth

Construction Jt. with 2"x6" Continuous Key

Slope to meet flange as shown.

**SECTION A**  
Scale: 1" = 1'-0"

\*\* This dimension can vary (1/2" ± max.) according to the form liner chosen. The Contractor must contact SHA Project Engineer to verify form liner and this dimension.

Note:  
For all details not shown see sheet 1 of 2.

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DATE: 05/29/2019
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STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
MASH TL-5 - 42" SINGLE SLOPE PARAPET HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION - ARCHITECTURAL FINISH
DETAIL NO. SUP-TB(42SS)-103
SHEET 2 OF 2

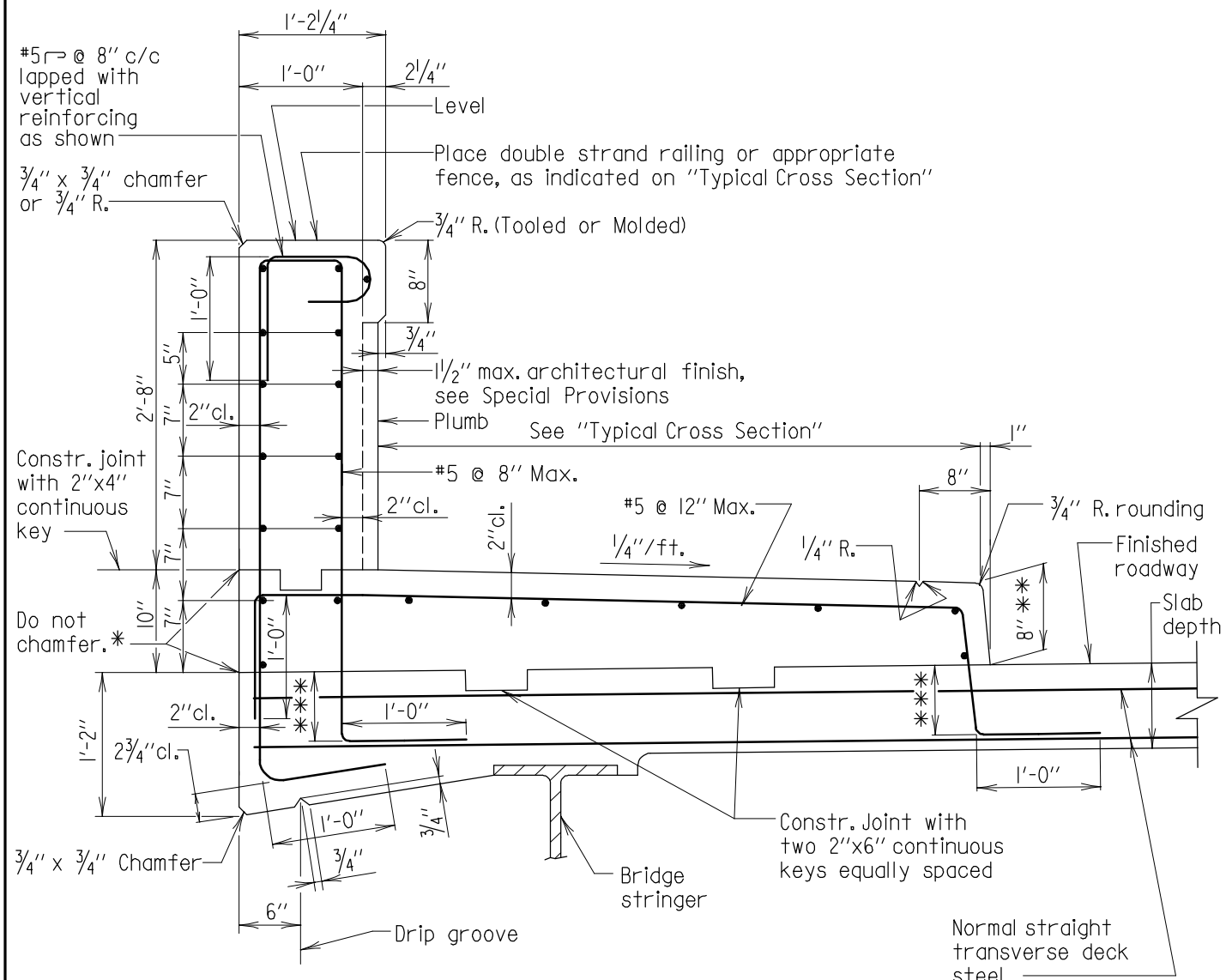
SUPER - TRAFFIC BARRIER

## Chapter 03 - Superstructure

### Section 02 – Traffic Barriers

#### SUB-SECTION 02

# PARAPET WITH SIDEWALK (SUP-TB(SW))



SECTION  
Scale: 3/4"=1'-0"

\* In order to insure a smooth and acceptable surface, 420.03.11 (Constr. joints) shall be strictly adhered to.  
 \*\* Unless otherwise indicated on "Typical Cross Section".  
 \*\*\* Slab Depth - 1"

- Notes:
1. All longitudinal bars are #5 spaced as shown and shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
  2. All keys are nominal size.
  3. Portions of normal longitudinal deck steel and truss bars are not shown.
  4. All reinforcing steel to be epoxy coated.

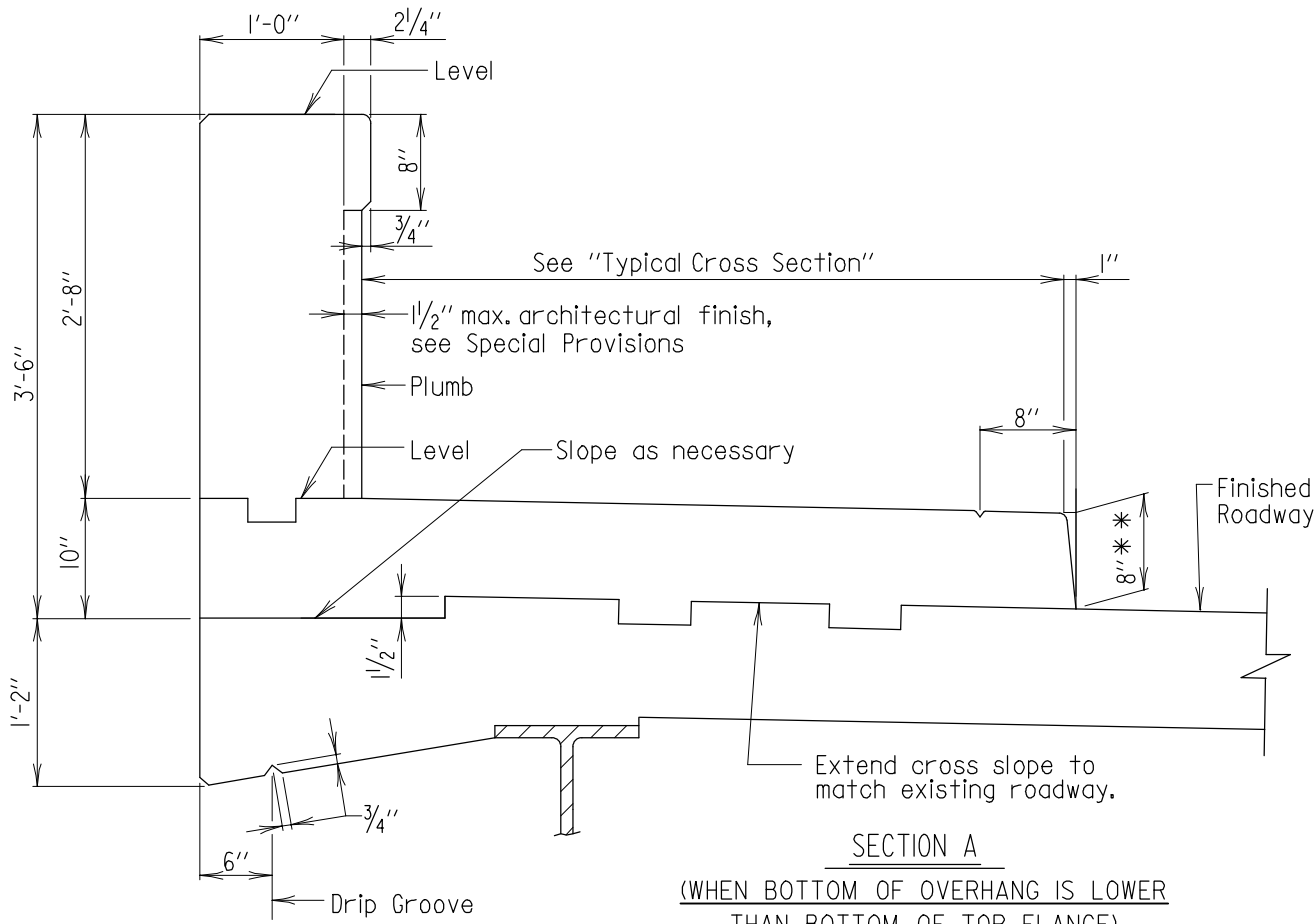
## SIDEWALK WITH STRAIGHT BACK

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 08/18/2014
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
LEVEL OR LOW SIDE OF CROWN (OR SUPERELEVATED) SECTION OF SIDEWALK AND PARAPET WITH STRAIGHT BACK
DETAIL NO. SUP-TB(SW)-101
SHEET <u>1</u> OF <u>2</u>

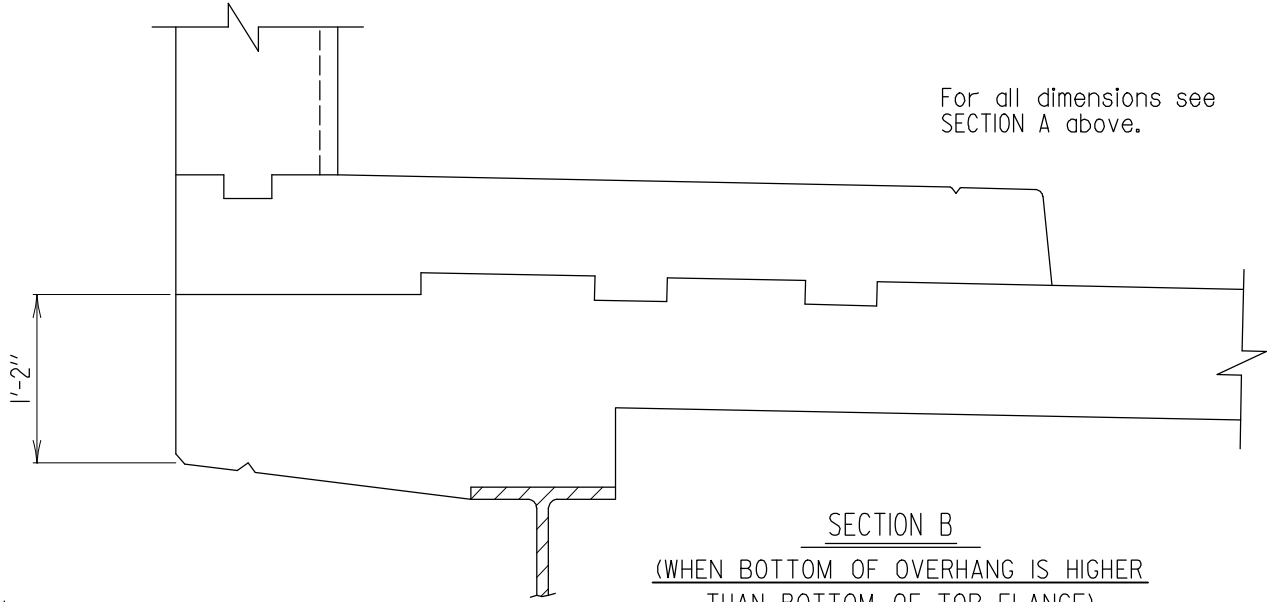
SUPER - TRAFFIC BARRIER





**SECTION A**  
 (WHEN BOTTOM OF OVERHANG IS LOWER  
 THAN BOTTOM OF TOP FLANGE)  
 Scale:  $\frac{3}{4}'' = 1'-0''$

For all dimensions see  
 SECTION A above.



**SECTION B**  
 (WHEN BOTTOM OF OVERHANG IS HIGHER  
 THAN BOTTOM OF TOP FLANGE)  
 Scale:  $\frac{3}{4}'' = 1'-0''$

\* \* Unless otherwise indicated on  
 "Typical Cross Section".

Note:  
 For all details not shown see  
 sheet 1 of 2.

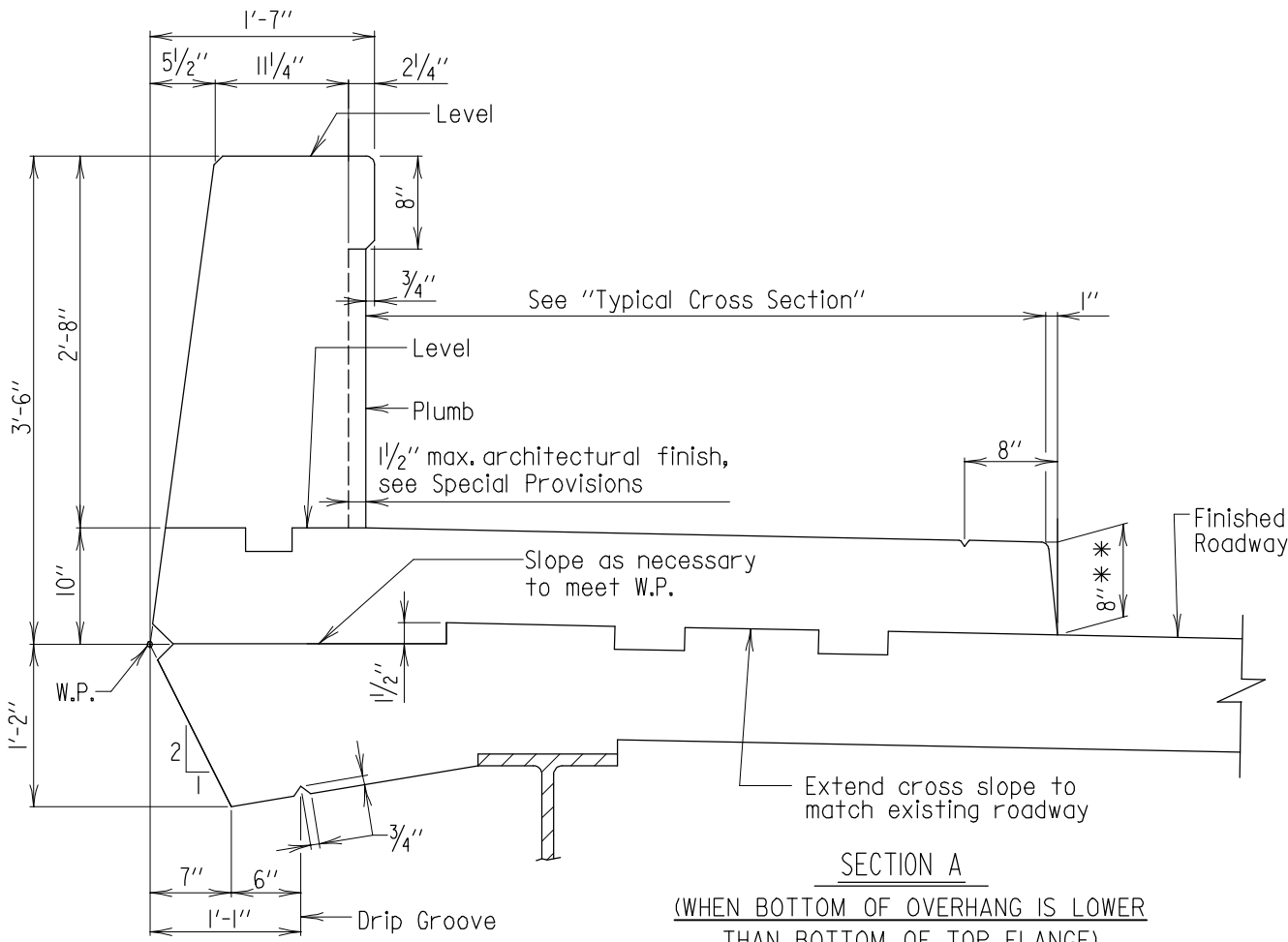
## SIDEWALK WITH STRAIGHT BACK

<b>APPROVAL</b>
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 08/18/2014
<b>VERSION</b>
1.0

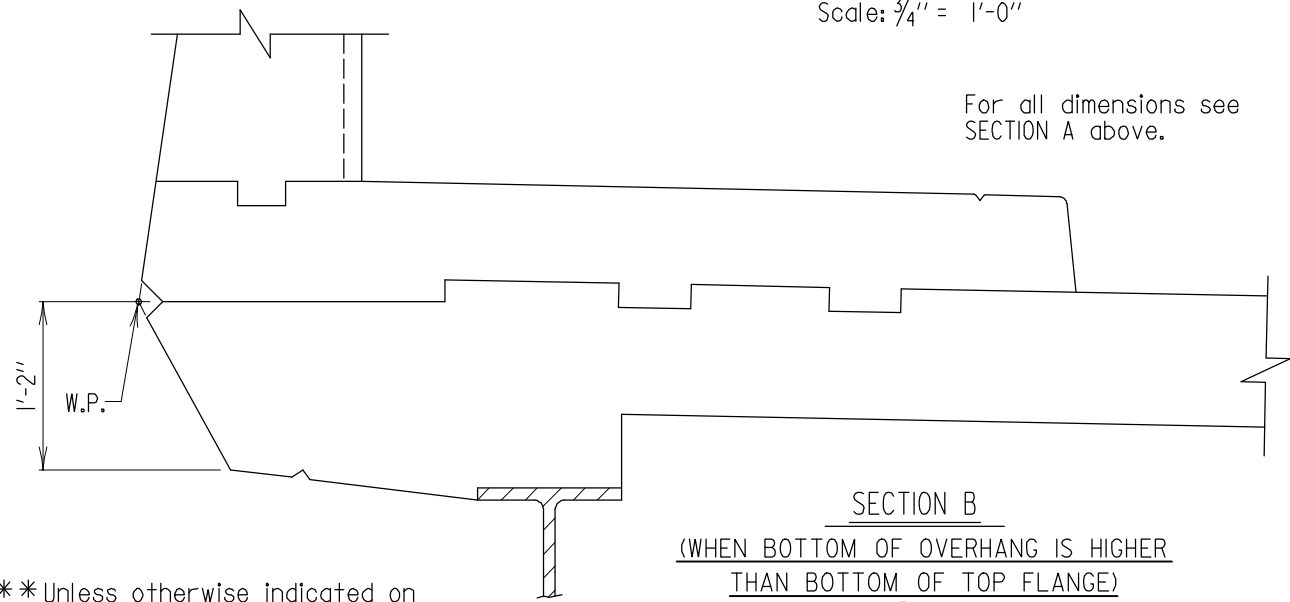
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION OF SIDEWALK AND PARAPET WITH STRAIGHT BACK
DETAIL NO. SUP-TB(SW)-101
SHEET <u>2</u> OF <u>2</u>

SUPER - TRAFFIC BARRIER





**SECTION A**  
 (WHEN BOTTOM OF OVERHANG IS LOWER THAN BOTTOM OF TOP FLANGE)  
 Scale: 3/4" = 1'-0"



**SECTION B**  
 (WHEN BOTTOM OF OVERHANG IS HIGHER THAN BOTTOM OF TOP FLANGE)  
 Scale: 3/4" = 1'-0"

For all dimensions see SECTION A above.

\*\* Unless otherwise indicated on "Typical Cross Section".

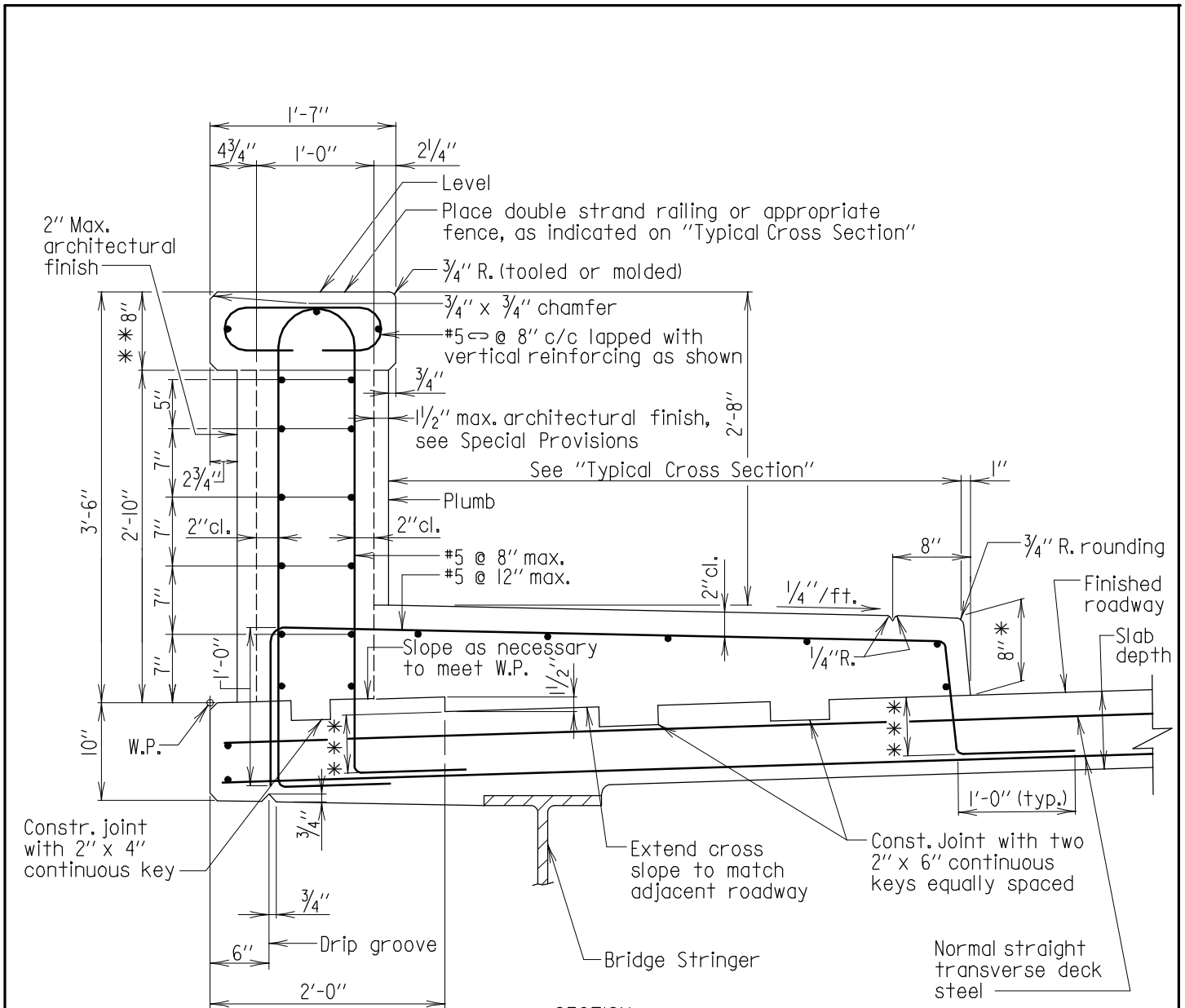
Note:  
 For all details not shown see sheet 1 of 2.

**SIDEWALK WITH DIAMOND BACK**

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 08/18/2014
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION OF SIDEWALK AND PARAPET WITH DIAMOND BACK
DETAIL NO. SUP-TB(SW)-102
SHEET 2 OF 2

SUPER - TRAFFIC BARRIER



SECTION

Scale: 3/4" = 1'-0"

Notes:

1. All longitudinal bars are #5 spaced as shown and shall be placed continuously in the parapet from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
2. All keys are nominal size.
3. Portions of normal longitudinal deck steel and truss bars are not shown.
4. W.P. = Working Point.
5. All reinforcing steel to be epoxy coated.

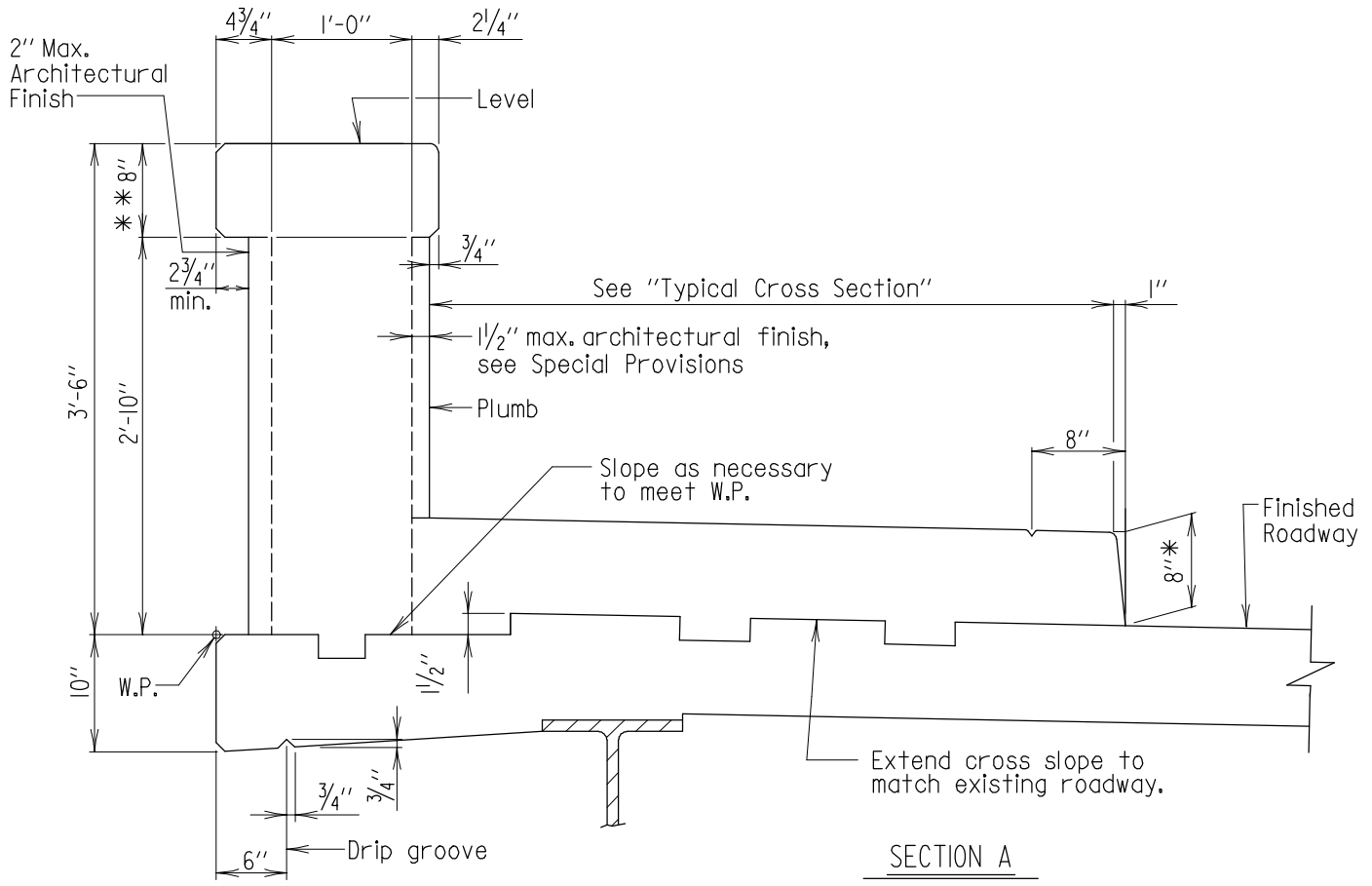
- \* Unless otherwise indicated on "Typical Cross Section".
- \*\* This dimension can vary (1/2" ± max.) according to the form liner chosen. The Contractor must contact SHA Project Engineer to verify form liner and this dimension.
- \*\*\* Slab Depth - 1"

SIDEWALK WITH RECESSED BACK

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 08/18/2014
VERSION
1.0

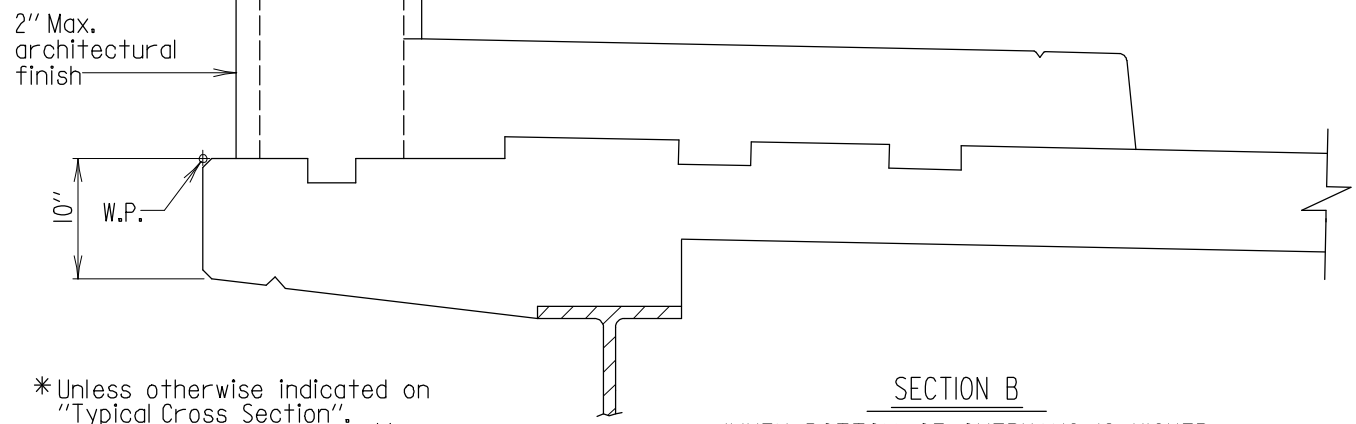
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
LEVEL OR LOW SIDE OF CROWN (OR SUPERELEVATED) SECTION OF SIDEWALK AND PARAPET WITH ARCHITECTURAL FINISH
DETAIL NO. SUP-TB(SW)-103
SHEET <u>1</u> OF <u>2</u>

SUPER TRAFFIC BARRIER



**SECTION A**  
 (WHEN BOTTOM OF OVERHANG IS LOWER THAN BOTTOM OF TOP FLANGE)  
 Scale:  $\frac{3}{4}'' = 1'-0''$

For all dimensions see SECTION A above.



**SECTION B**  
 (WHEN BOTTOM OF OVERHANG IS HIGHER THAN BOTTOM OF TOP FLANGE)  
 Scale:  $\frac{3}{4}'' = 1'-0''$

\* Unless otherwise indicated on "Typical Cross Section".  
 \*\* This dimension can vary ( $\frac{1}{2}'' \pm$  max.) according to the form liner chosen. The Contractor must contact SHA Project Engineer to verify form liner and this dimension.

Note:  
 For all details not shown see sheet 1 of 2.

**SIDEWALK WITH RECESSED BACK**

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 08/18/2014
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
HIGH SIDE OF CROWN (OR SUPERELEVATED) SECTION OF SIDEWALK AND PARAPET WITH ARCHITECTURAL FINISH
DETAIL NO. SUP-TB(SW)-103
SHEET 2 OF 2

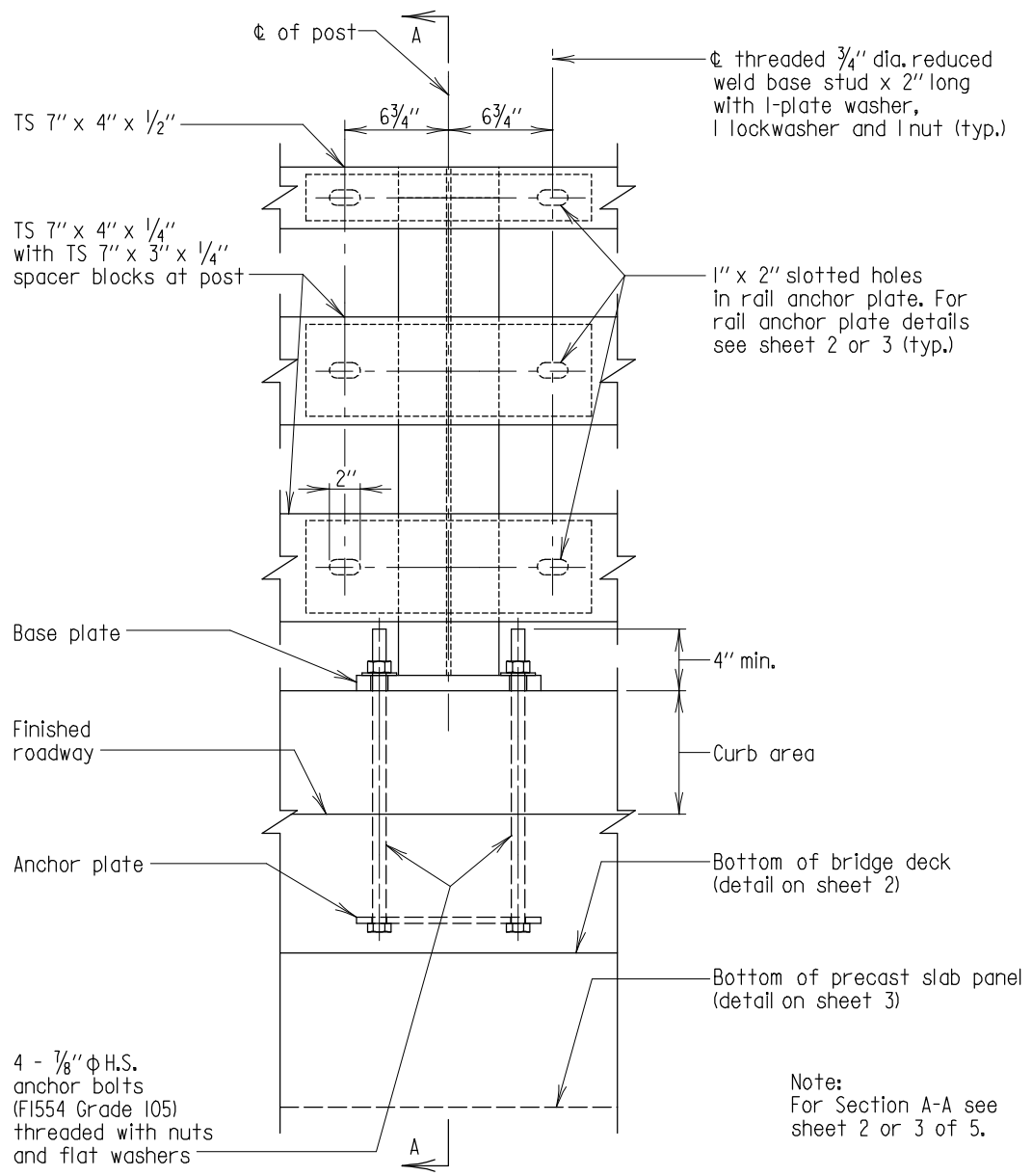
SUPER TRAFFIC BARRIER

## Chapter 03 - Superstructure

### Section 02 – Traffic Barriers

#### SUB-SECTION 03

# TUBE RAIL PARAPET (SUP-TB(TR))



ELEVATION

Scale: 1" = 1'-0"

**GENERAL NOTES:**

1. All railings shall be fabricated and erected as indicated on the Plans.
2. Rails shall be parallel to the grade of the roadway. Rail sections shall be attached to as many posts as possible, but not less than two.
3. The center line of any splice and/or expansion joint shall be located at least 2'-0" away from center line of a post except where indicated otherwise on Plans. Expansion and/or splice joints for each strand of three strand railing shall be placed in the same location and in the same panel.
4. Rail elements shall be structural tubing in accordance with ASTM A500 Grade B, A618 or A501.
5. Steel posts and plates shall conform to ASTM A36 unless otherwise noted.
6. Posts shall be set perpendicular to top of curb. For post spacing see Plans (Maximum 10'-0" Spacing).
7. All structural steel including fasteners shall be hot-dip galvanized as per ASTM A-123 after fabrication, except as noted. All anchor plates shall be attached before galvanizing.
8. In setting anchor bolts be sure enough threads are exposed so that nuts can be completely attached (4" min.).

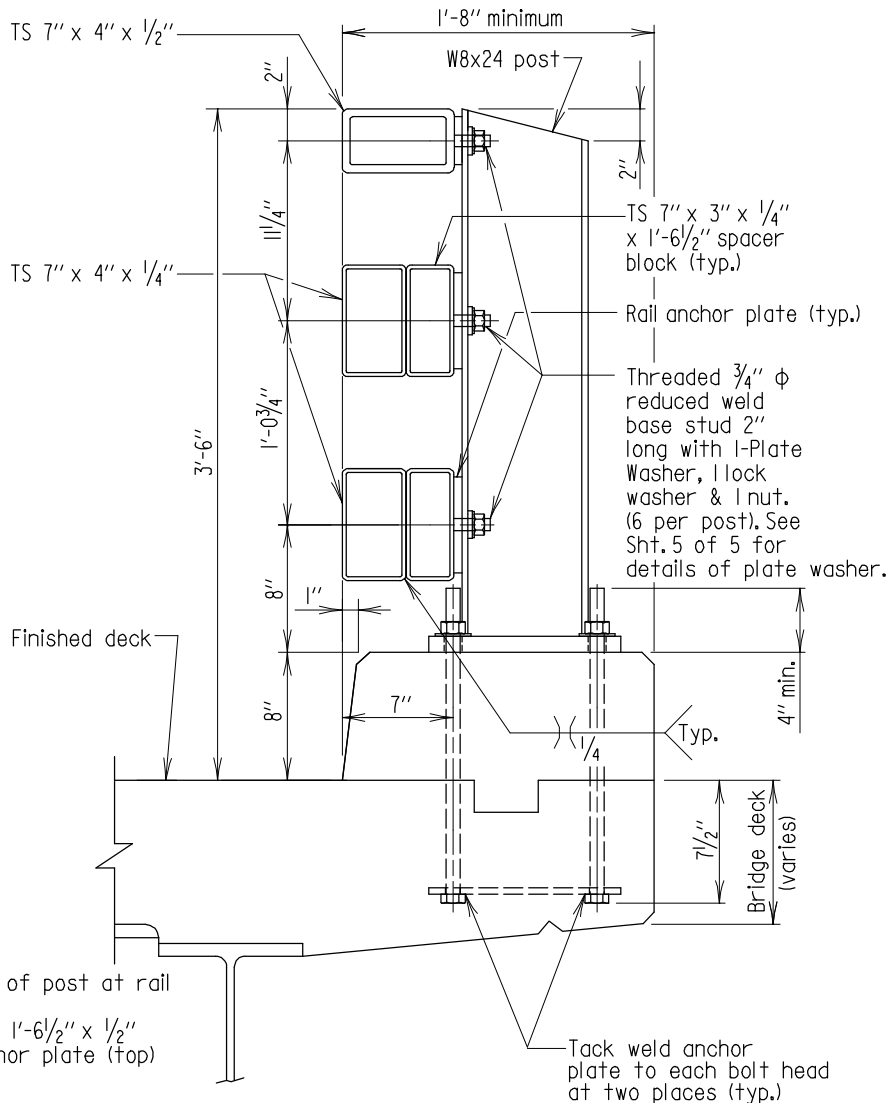
Note:  
For Section A-A see  
sheet 2 or 3 of 5.

Note:  
For anchor bolt length and curb reinforcing  
details see Detail No. SUP-TB(TR)-201  
for bridge decks or SUP-TB(TR)-301 for  
precast slab panels.

**TL-4 BRIDGE RAILING**

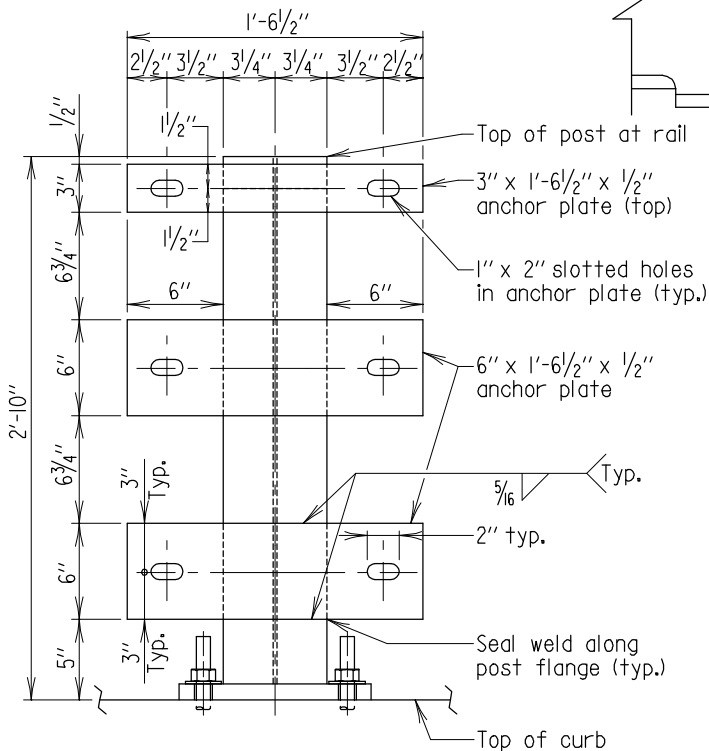
<p style="text-align: center;"><b>APPROVAL</b></p> <p style="text-align: center;"><i>Glenn C. W...</i> DIRECTOR OFFICE OF STRUCTURES</p> <p style="text-align: center;">DATE: 04/03/2018</p> <hr/> <p style="text-align: center;"><b>VERSION</b></p> <p style="text-align: center;">1.01</p>	<p>STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES</p> <p>THREE STRAND STRUCTURAL TUBE RAIL CURB MOUNTED - ELEVATION</p> <p>DETAIL NO. SUP-TB(TR)-101</p>
<p>SHEET <u>1</u> OF <u>5</u></p>	

SUPER TRAFFIC BARRIER



SECTION A-A (BRIDGE DECK)

Scale: 1" = 1'-0"



ELEVATION - RAIL ANCHOR PLATE DETAIL

Scale: 1" = 1'-0"

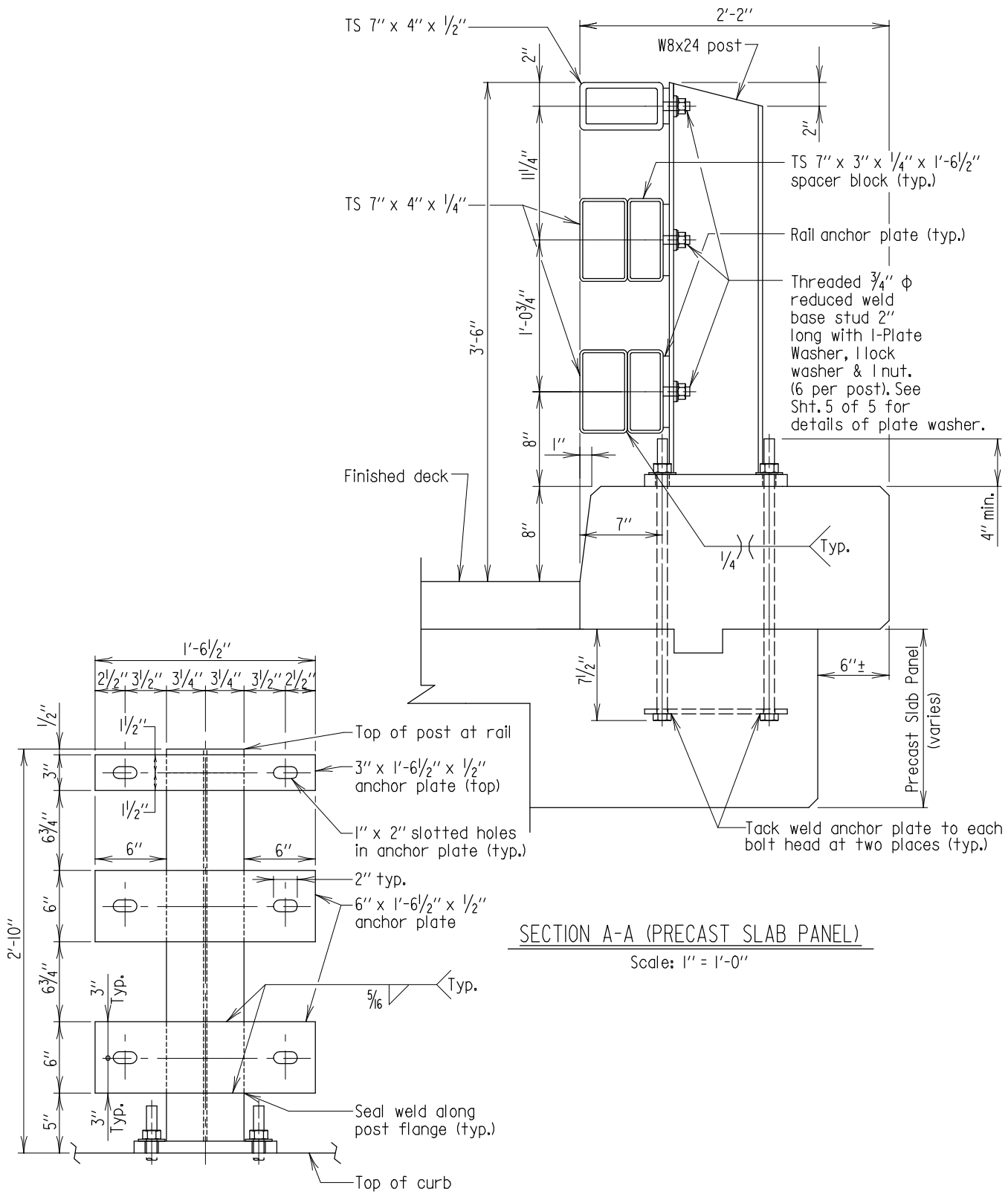
TL-4 BRIDGE RAILING

APPROVAL	
<i>Gene C. [Signature]</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 04/03/2018	
VERSION	
1.01	

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
THREE STRAND STRUCTURAL TUBE RAIL CURB MOUNTED - DETAILS CONCRETE BRIDGE DECK MOUNTED	
DETAIL NO. SUP-TB(TR)-101	SHEET 2 OF 5

SUPER TRAFFIC BARRIER





SECTION A-A (PRECAST SLAB PANEL)  
Scale: 1" = 1'-0"

ELEVATION - RAIL ANCHOR PLATE DETAIL  
Scale: 1" = 1'-0"

**TL-4 BRIDGE RAILING**

APPROVAL	
<i>Gene C. [Signature]</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 04/03/2018	
VERSION	
1.01	

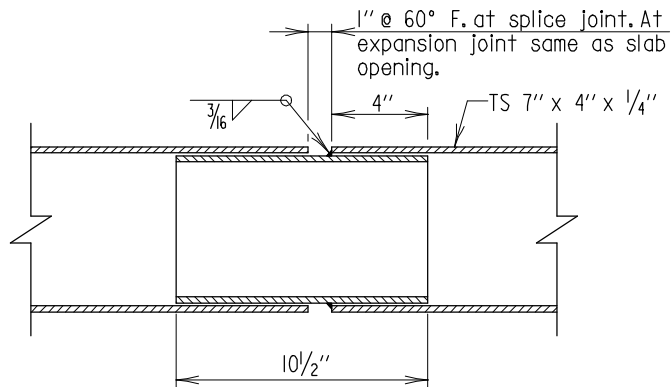
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

THREE STRAND STRUCTURAL TUBE RAIL  
CURB MOUNTED - DETAILS  
PRECAST SLAB PANEL MOUNTED

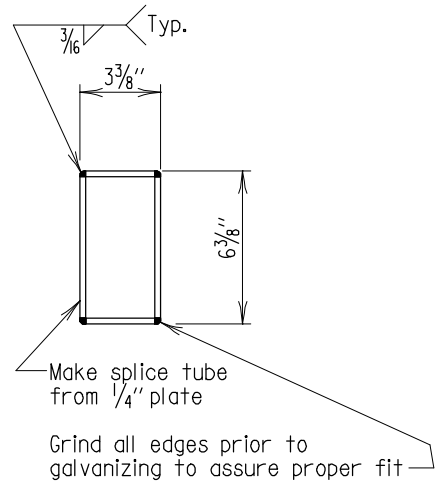
DETAIL NO. SUP-TB(TR)-101

SHEET 3 OF 5

SUPER TRAFFIC BARRIER



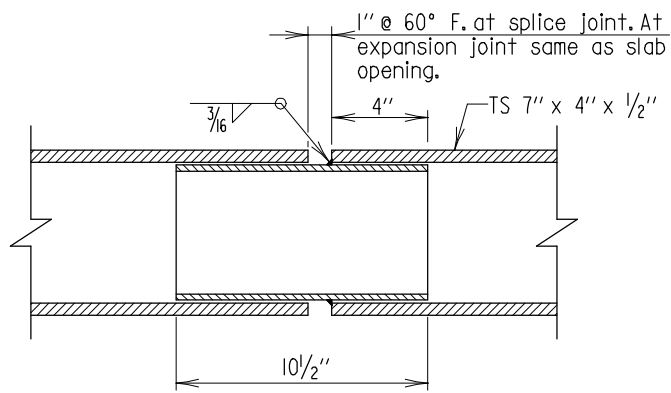
PLAN



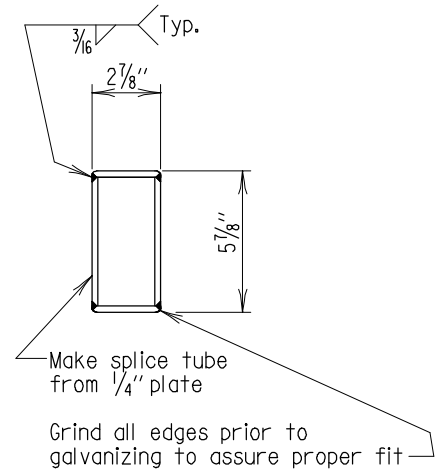
SECTION - SPLICE TUBE

RAIL SPLICE DETAILS (TS 7'' x 4'' x 1/4'')

Scale: 1/2'' = 1'-0''



PLAN



SECTION - SPLICE TUBE

RAIL SPLICE DETAILS (TS 7'' x 4'' x 1/2'')

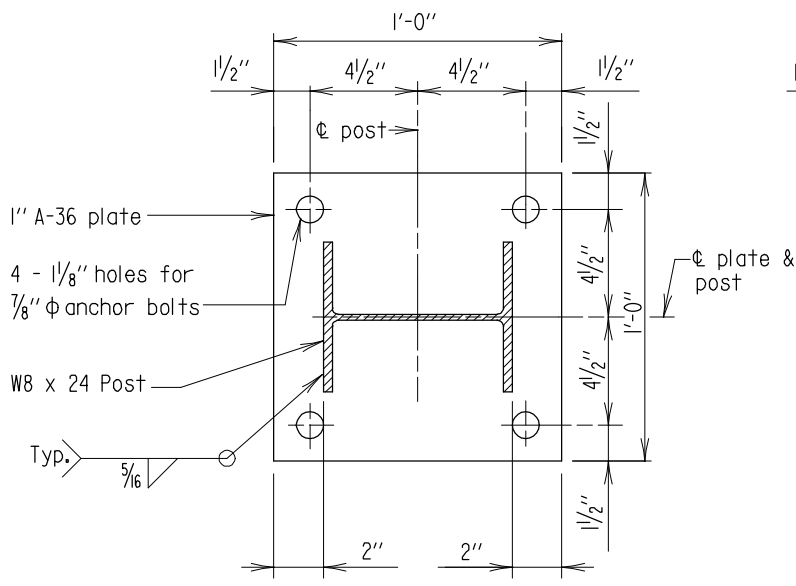
Scale: 1/2'' = 1'-0''

**TL-4 BRIDGE RAILING**

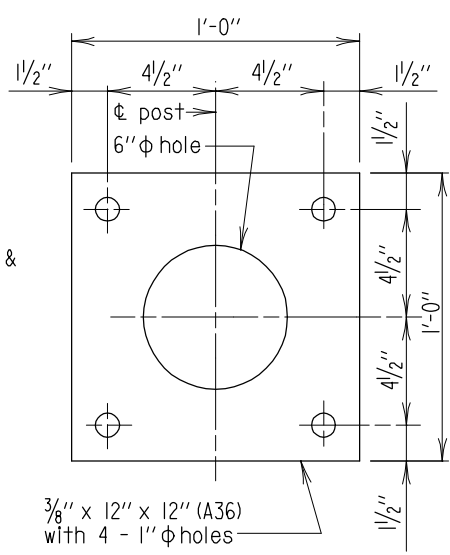
APPROVAL
<i>Gene C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 04/03/2018
VERSION
1.01

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
THREE STRAND STRUCTURAL TUBE RAIL CURB MOUNTED - DETAILS
DETAIL NO. SUP-TB(TR)-101
SHEET 4 OF 5

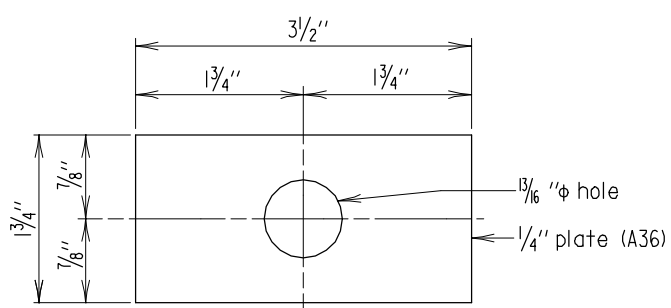
SUPER TRAFFIC BARRIER



PLAN  
**BASE PLATE DETAIL**  
 Scale: 1/2" = 1'-0"



PLAN  
**ANCHOR PLATE DETAIL**  
 Scale: 1/2" = 1'-0"



PLAN  
**PLATE WASHER**  
 Scale: 6" = 1'-0"

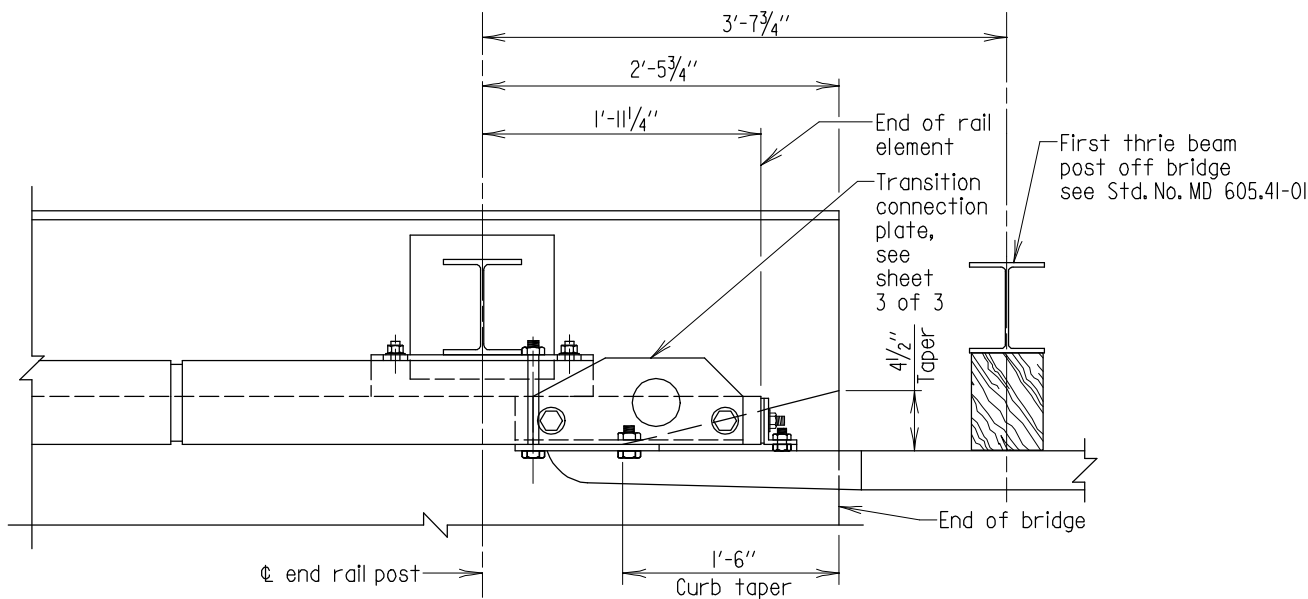
Note:  
 Position washers to completely cover  
 slotted hole.

APPROVAL
 DIRECTOR OFFICE OF STRUCTURES DATE: 04/03/2018
VERSION
1.01

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
THREE STRAND STRUCTURAL TUBE RAIL CURB MOUNTED - DETAILS
DETAIL NO. SUP-TB(TR)-101
SHEET <u>5</u> OF <u>5</u>

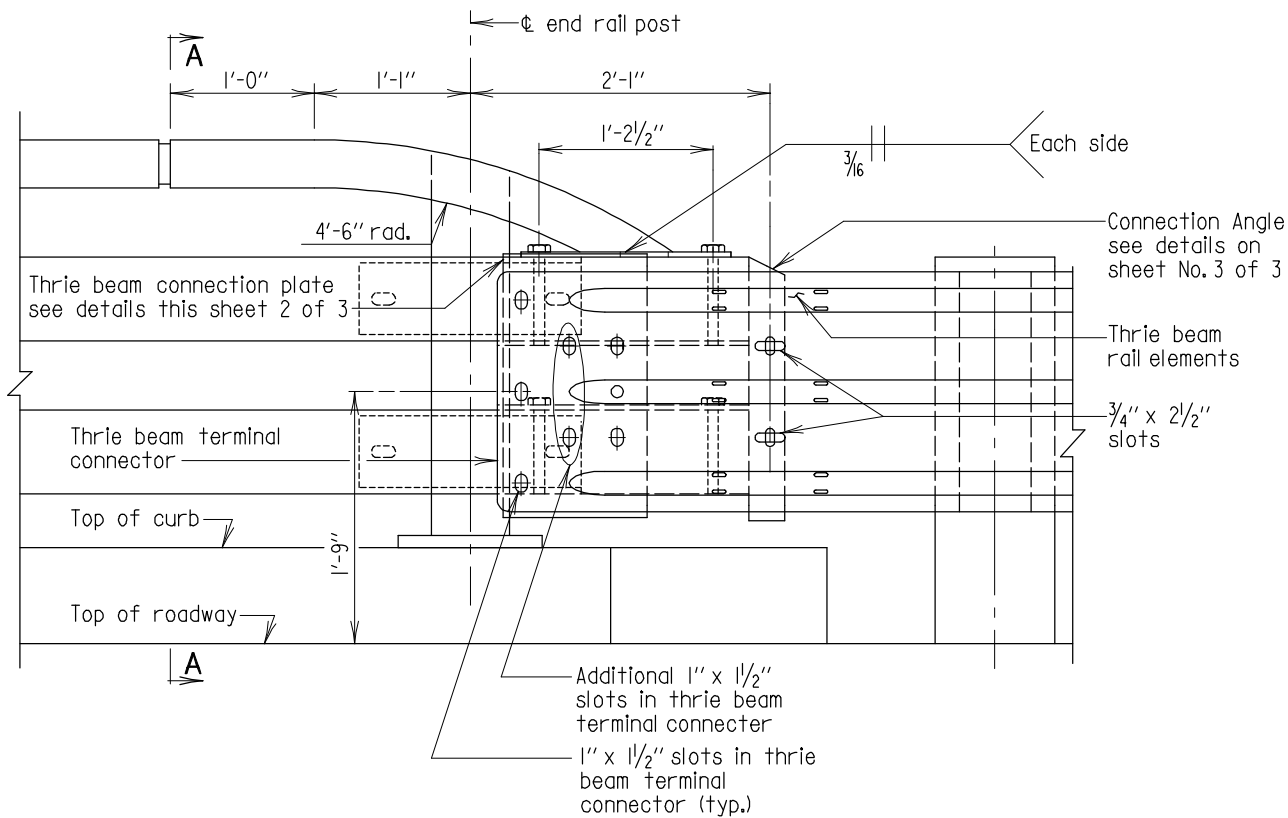
SUPER TRAFFIC BARRIER

## TL-4 BRIDGE RAILING



PLAN

Scale: 3/4" = 1'-0"



TRANSITION CONNECTION ELEVATION

Scale: 3/4" = 1'-0"

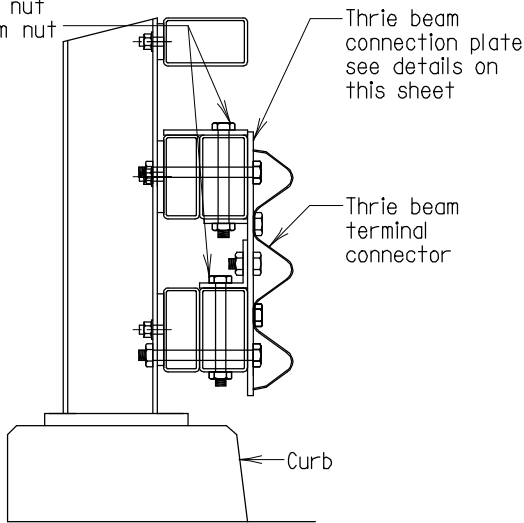
Note:  
See Std. No. MD 605.41-01 for additional details on Thrie Beam Anchorage Post Spacing.

<b>APPROVAL</b>
<i>Gene C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 02-13-2017
<b>VERSION</b>
1.0

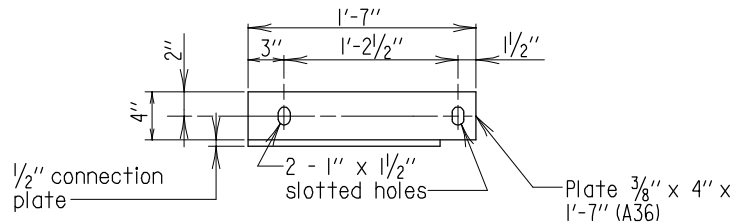
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
THREE STRAND STRUCTURAL TUBE RAIL THRIE BEAM CONNECTION PLATE
DETAIL NO. SUP-TB(TR)-102
SHEET <u>1</u> OF <u>3</u>

SUPER TRAFFIC BARRIER

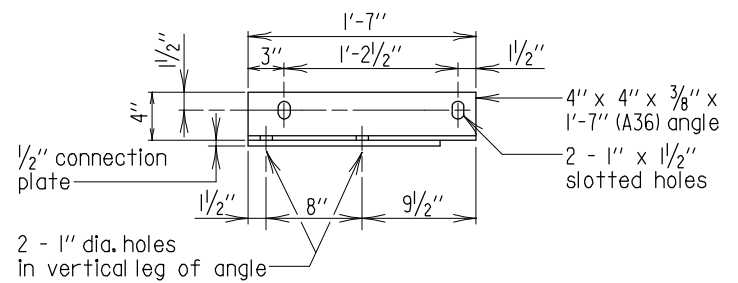
7/8" dia. bolts (A307) with washers and self locking nut or nut and jam nut



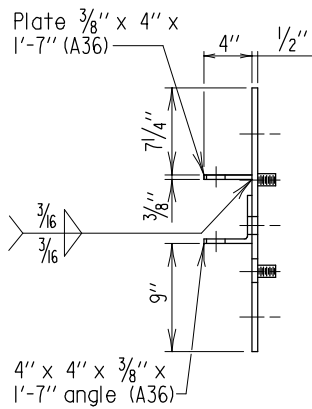
SECTION A-A  
Scale: 3/4" = 1'-0"



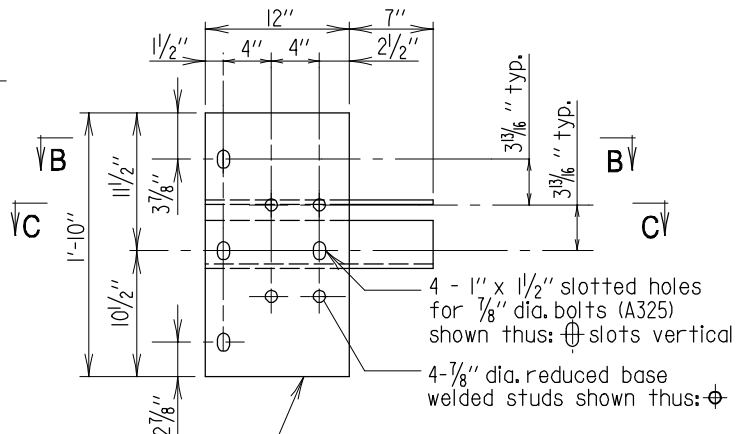
SECTION B-B



SECTION C-C



SECTION



ELEVATION

CONNECTION PLATE DETAILS

Scale: 3/4" = 1'-0"

APPROVAL
<i>Gene C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 02-10-2017
VERSION
1.0

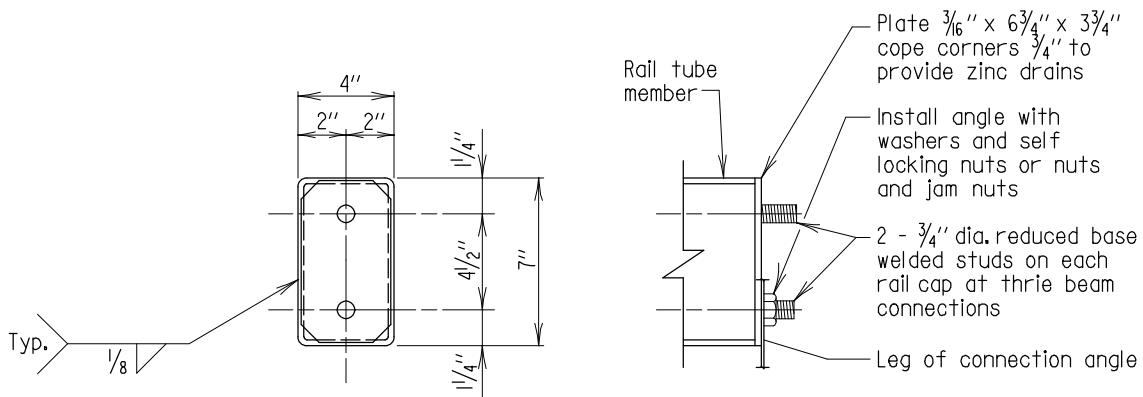
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

THREE STRAND STRUCTURAL TUBE RAIL  
THRIE BEAM CONNECTION PLATE

DETAIL NO. SUP-TB(TR)-102

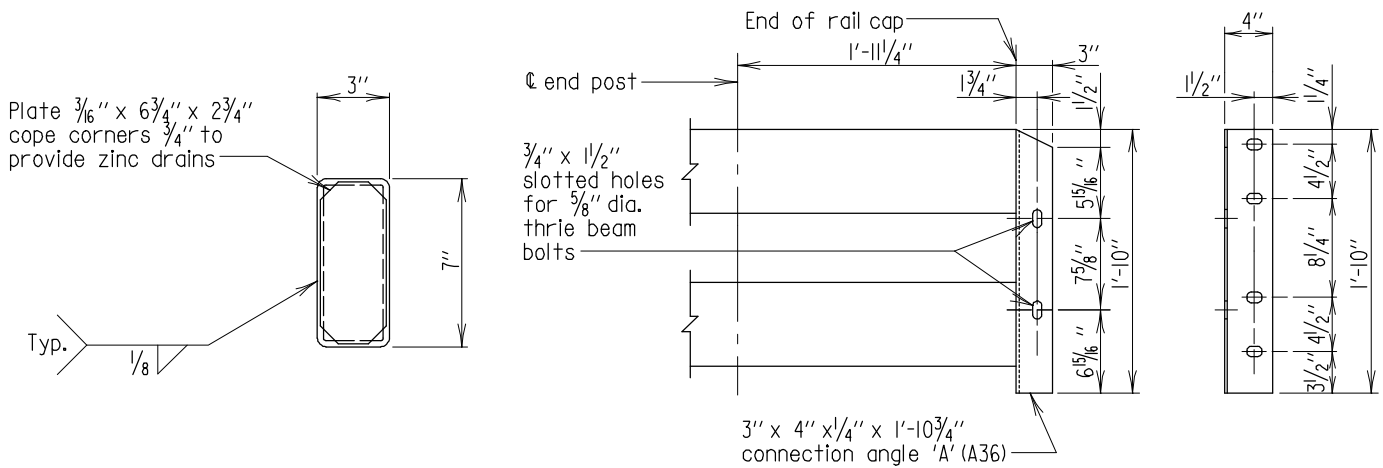
SHEET 2 OF 3

SUPER TRAFFIC BARRIER



**RAIL CAP DETAIL**

Scale: 1/2" = 1'-0"

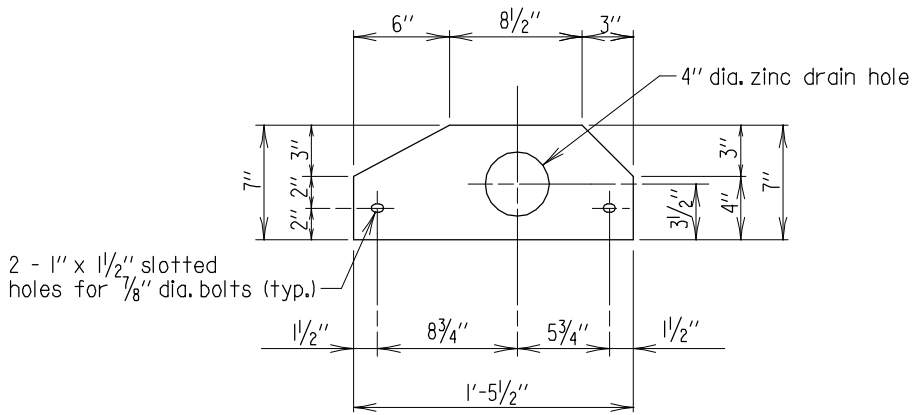


**RAIL CAP FOR SPACER BLOCK**

Scale: 1/2" = 1'-0"

**CONNECTION ANGLE**

Scale: 3/4" = 1'-0"



**TOP RAIL TRANSITION CONNECTION PLATE**

Scale: 1/2" = 1'-0"

<b>APPROVAL</b>
<i>Gene C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 02-10-2017
<b>VERSION</b>
1.0

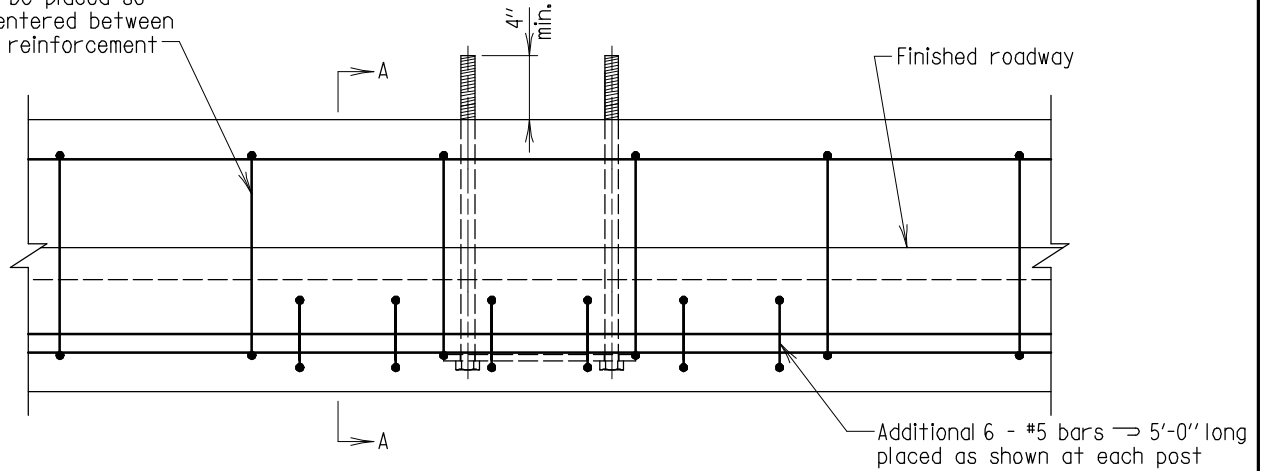
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

THREE STRAND STRUCTURAL TUBE RAIL  
THRIE BEAM CONNECTION PLATE

DETAIL NO. SUP-TB(TR)-I02 SHEET 3 OF 3

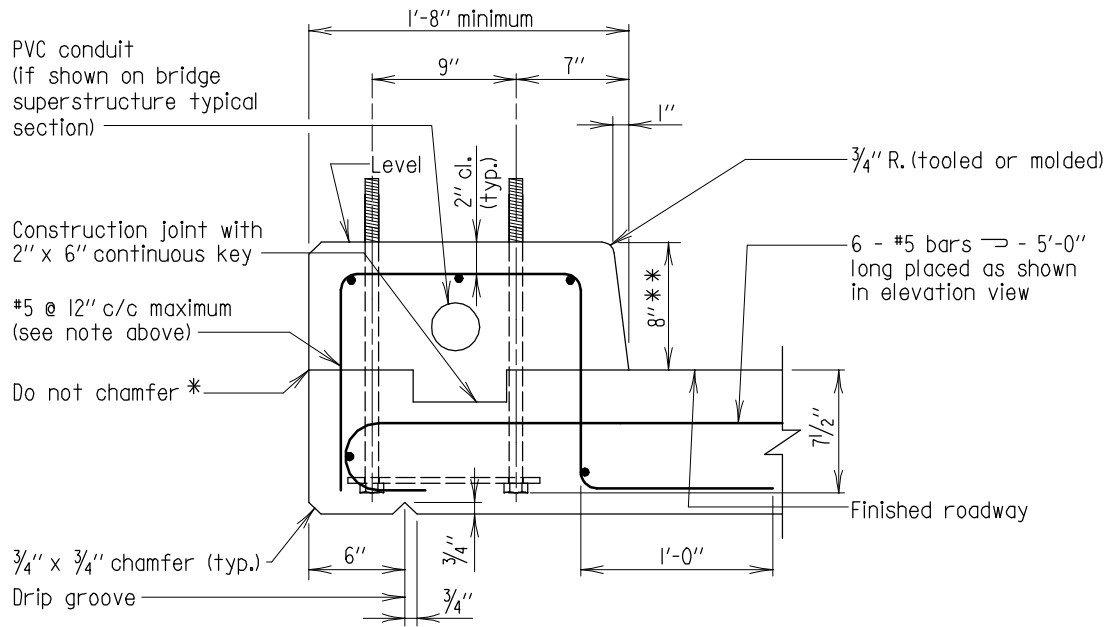
SUPER TRAFFIC BARRIER

#5 @ 12" c/c maximum  
(normal curb reinforcing).  
Bars should be placed so  
they are centered between  
normal deck reinforcement



ELEVATION

Scale: 1" = 1'-0"



SECTION A-A

Scale: 1" = 1'-0"

\* In order to insure a smooth and acceptable surface, Section 420.03.11 (Construction joints) will be strictly adhered to.

\*\* May vary with application.

(USE WITH DETAIL NO. SUP-TB(TR)-101)

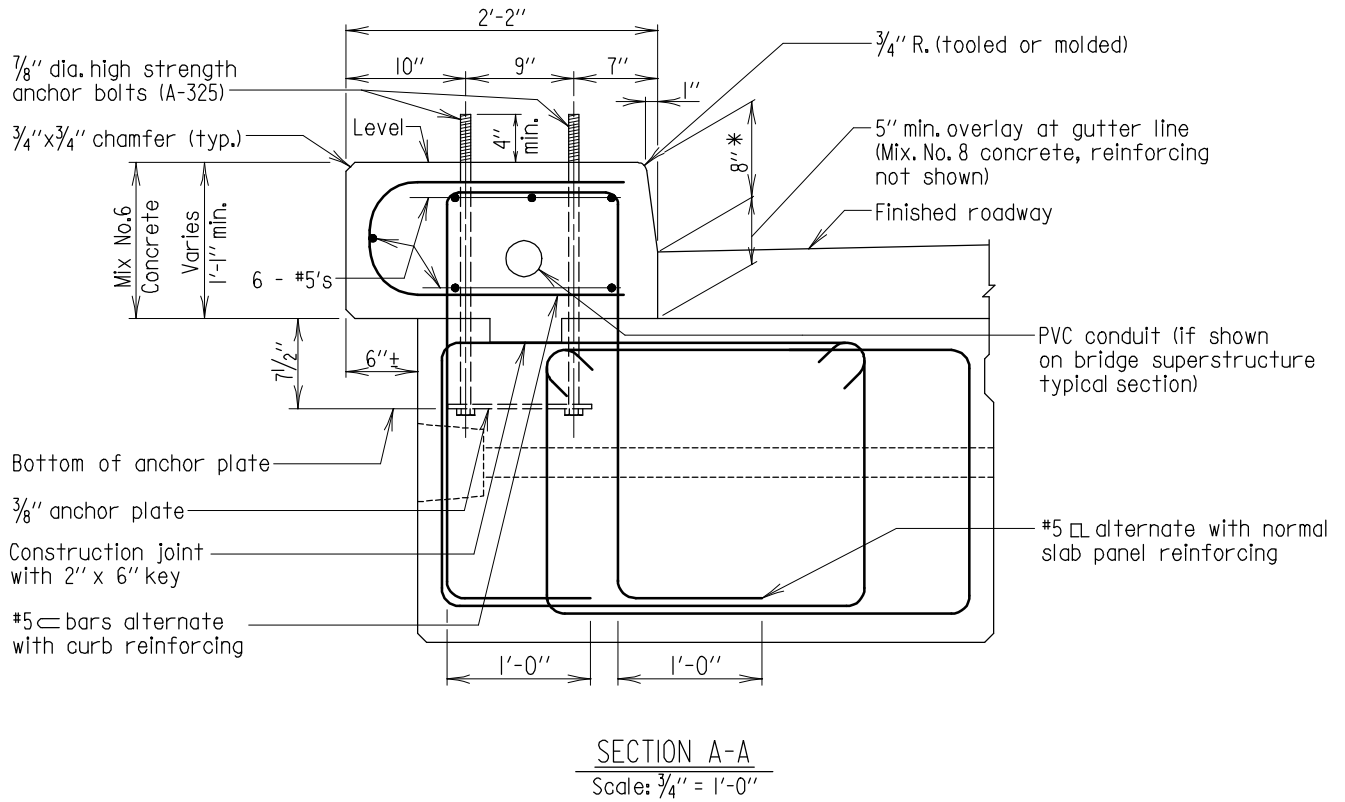
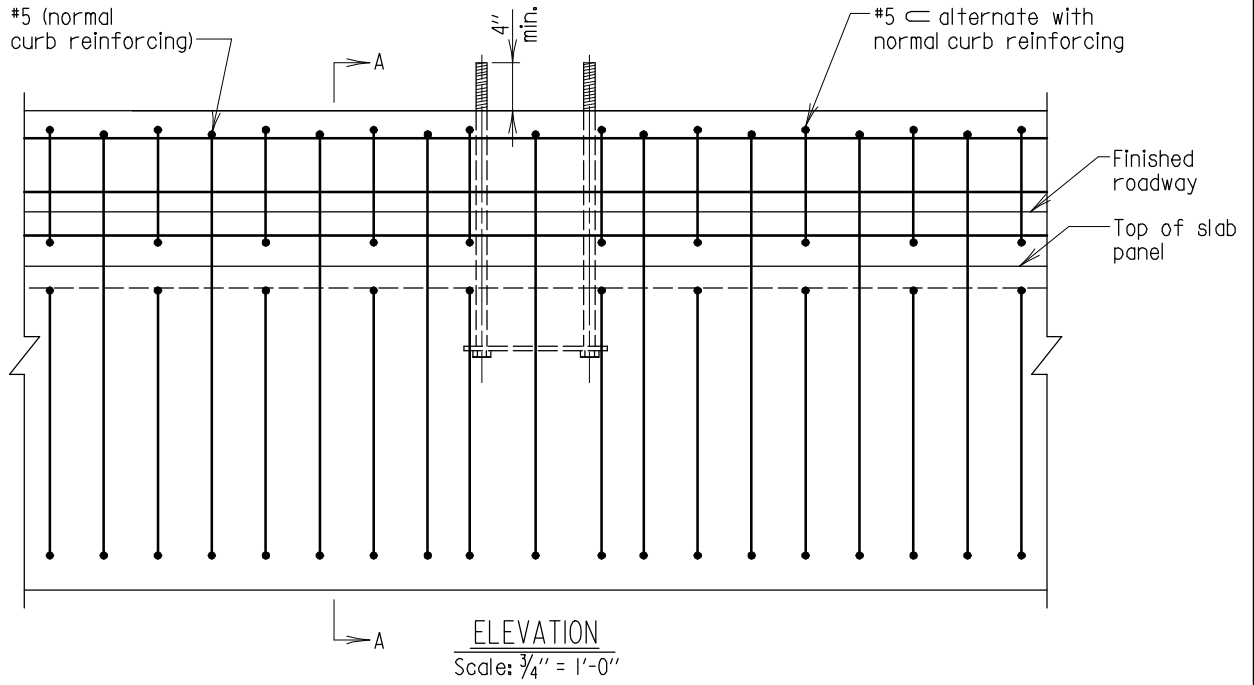
Notes:

1. All longitudinal bars are #5 spaced as shown.
2. Normal concrete steel reinforcing not shown.
3. All reinforcing steel shall be epoxy coated.

APPROVAL
<i>Ben C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 02-10-2017
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
BRIDGE DECK CURB DETAIL FOR THREE STRAND STRUCTURAL TUBE RAIL
DETAIL NO. SUP-TB(TR)-201
SHEET <u>  </u> OF <u>  </u>

SUPER TRAFFIC BARRIER



Notes:

1. The cost of curb including reinforcing, PVC conduit will be included in Superstructure Concrete item.
2. The cost of anchor bolts and plates will be included in the Railing item.
3. All reinforcing steel shall be epoxy coated.
4. Longitudinal reinforcing steel in the precast slab panel not shown.
5. Prestressing strands in the precast slab panel not shown.
6. For size and spacing of precast slab panel stirrups see precast slab panel details.

\* May vary with application.

APPROVAL
<i>Gene C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 04/30/2018
VERSION
1.01

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PRECAST CONCRETE SLAB PANEL CURB DETAIL FOR THREE STRAND STRUCTURAL TUBE RAIL
DETAIL NO. SUP-TB(TR)-301
SHEET <u>  1  </u> OF <u>  1  </u>

SUPER TRAFFIC BARRIER



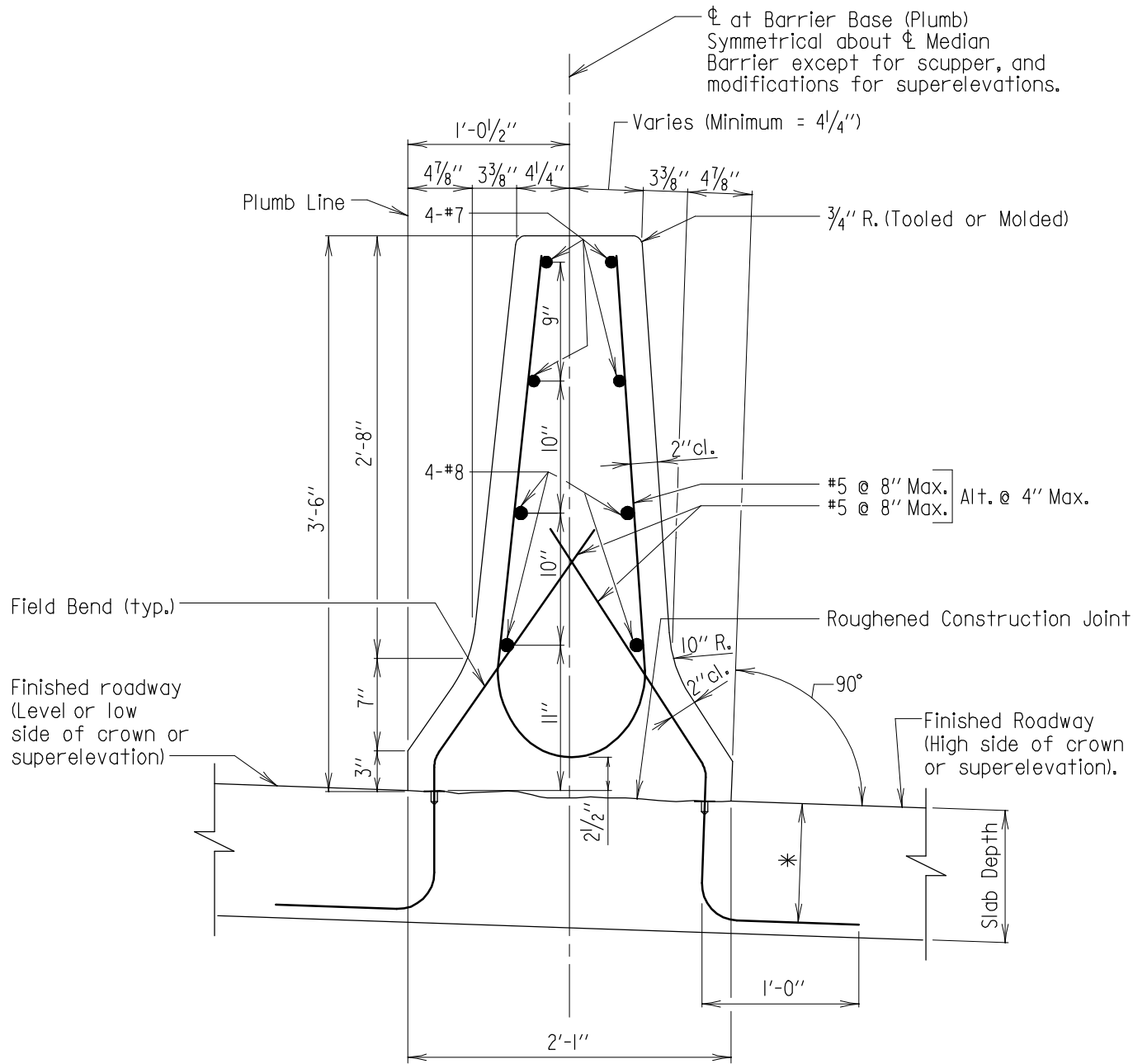
Chapter 03 - Superstructure

Section 02 – Traffic Barriers

SUB-SECTION 04

**MEDIAN BARRIER**  
**(SUP-TB(MB))**





SECTION  
Scale: 1" = 1'-0"

Notes:

1. All #7 and #8 longitudinal bars shall be placed continuously in the barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
2. All reinforcement bars shall be epoxy coated.
3. The Contractor has the option of substituting cast-in-place epoxy coated open coil inserts with threaded holes for the bars shown. The inserts in the back face of the parapet shall have a minimum working load tension strength of 6000 lb. and a minimum length of 4 1/2". The inserts in the front face shall have a minimum working load tension strength of 8000 lb. and a minimum length of 5 1/2". The cost of epoxy coated inserts shall be included in the pertinent Superstructure Concrete item.
4. Concrete deck reinforcing steel not shown.
5. Place 1/2" saw cut joints to match joint spacing of outside parapet.
6. No increase in any prices bid will be allowed for barrier modifications due to roadway slope or maintenance of traffic.

\* Slab depth minus 1".

42" MEDIAN

APPROVAL	
<i>L.S. Friedman</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 06/01/2005	
VERSION	
1.0	

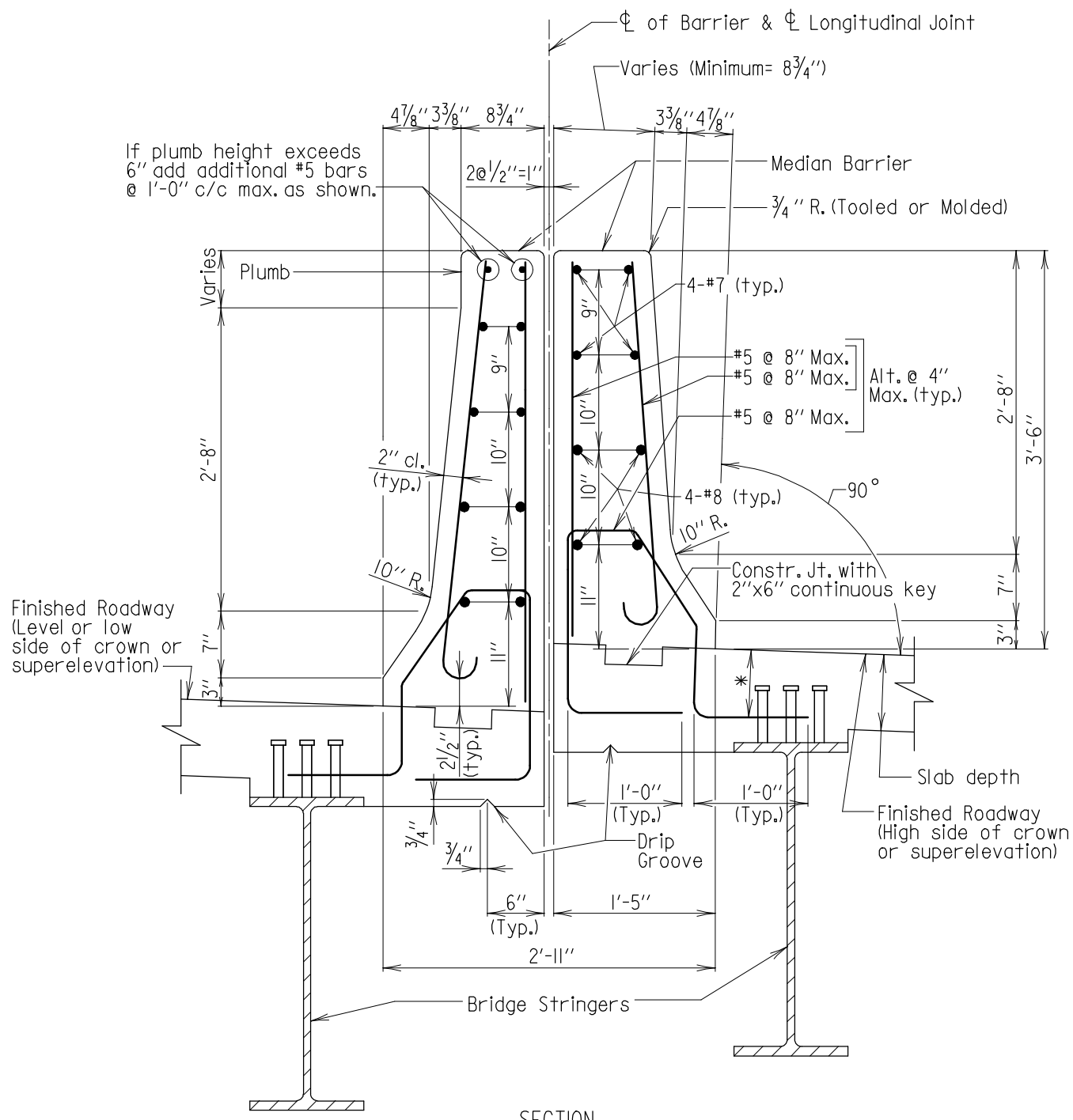
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

42" F-SHAPE MEDIAN BARRIER FOR BRIDGE  
WITHOUT LONGITUDINAL JOINT WHERE TRAFFIC WILL  
USE AREA PRIOR TO PLACING BARRIER

DETAIL NO. SUP-TB(MB)-102

SHEET    OF   

SUPER TRAFFIC BARRIER



- Notes:
1. All #7 and #8 longitudinal bars shall be placed continuously in the barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi-span bridge.
  2. All reinforcing steel epoxy coated.
  3. Concrete deck reinforcing steel not shown.
  4. Place 1/2" saw cut joints to match joint spacing of outside parapet.
  5. All keys are nominal size.
  6. No increase in any prices bid will be allowed for barrier modifications due to roadway slope.

### 42" MEDIAN TL-5 BRIDGE RAILING

APPROVAL	
<i>L.S. Friedman</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 11/26/2007	
VERSION	
1.0	

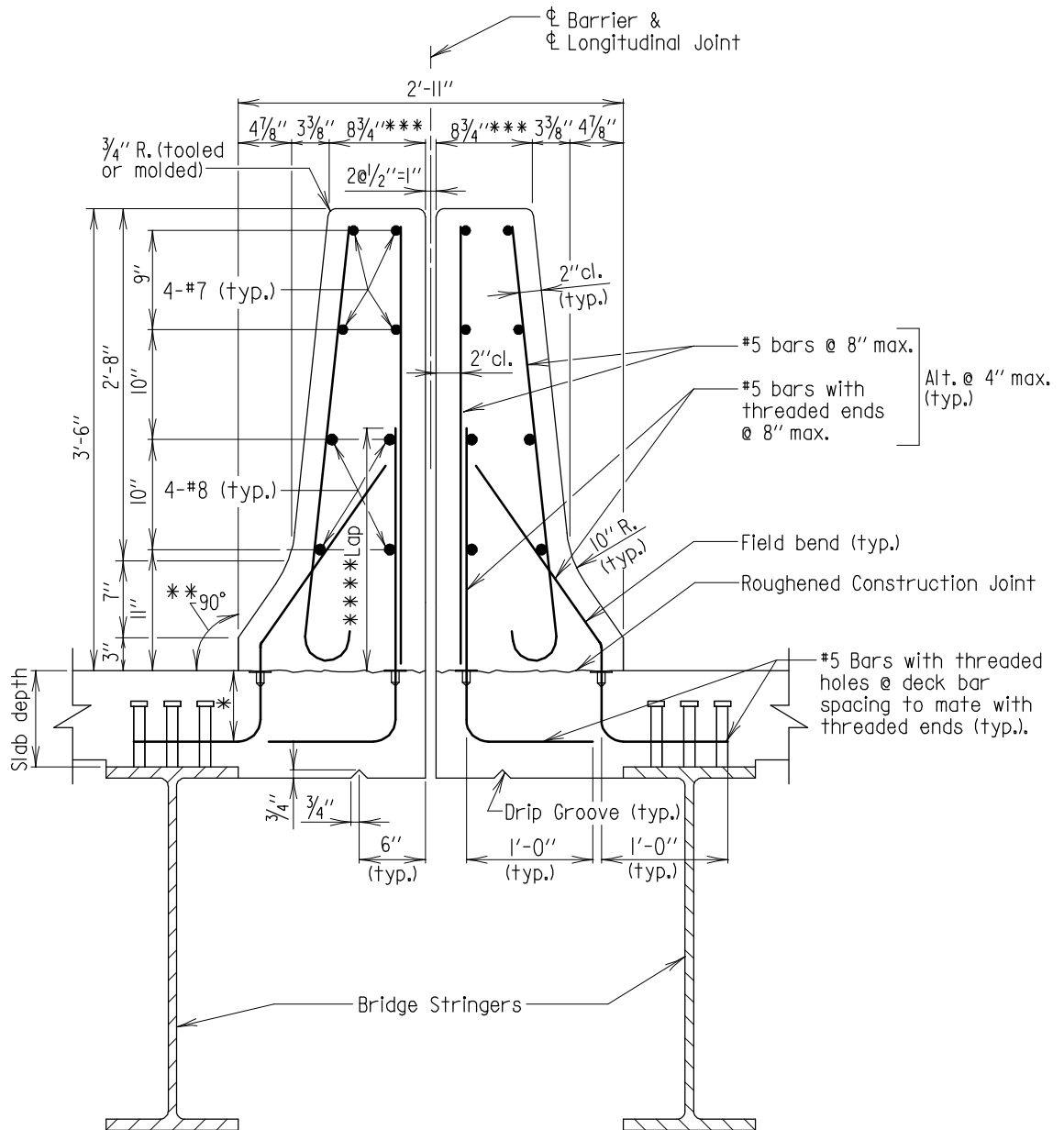
STATE OF MARYLAND  
 DEPARTMENT OF TRANSPORTATION  
 STATE HIGHWAY ADMINISTRATION  
 OFFICE OF STRUCTURES

42" F-SHAPE MEDIAN BARRIER  
 FOR BRIDGE WITH OPEN LONGITUDINAL JOINT

DETAIL NO. SUP-TB(MB)-201

SHEET 1 OF 1

SUPER TRAFFIC BARRIER



SECTION

Scale: 3/4" : 1'-0"

Notes:

1. All #7 and #8 longitudinal bars shall be placed continuously in the barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi-span bridge.
2. All reinforcement bars shall be epoxy coated.
3. The Contractor has the option of substituting cast-in-place epoxy coated open coil inserts with threaded holes for the bars shown. The inserts in the back face of the parapet shall have a minimum working load tension strength of 6000 lb. and a minimum length of 4 1/2". The inserts in the front face shall have a minimum working load tension strength of 8000 lb. and a minimum length of 5 1/2". The cost of epoxy coated inserts shall be included in the pertinent Superstructure Concrete item.
4. Concrete deck reinforcing steel not shown.
5. Place 1/2" saw cut joints to match joint spacing of outside parapet.
6. No increase in any prices bid will be allowed for barrier modifications due to roadway slope or maintenance of traffic.

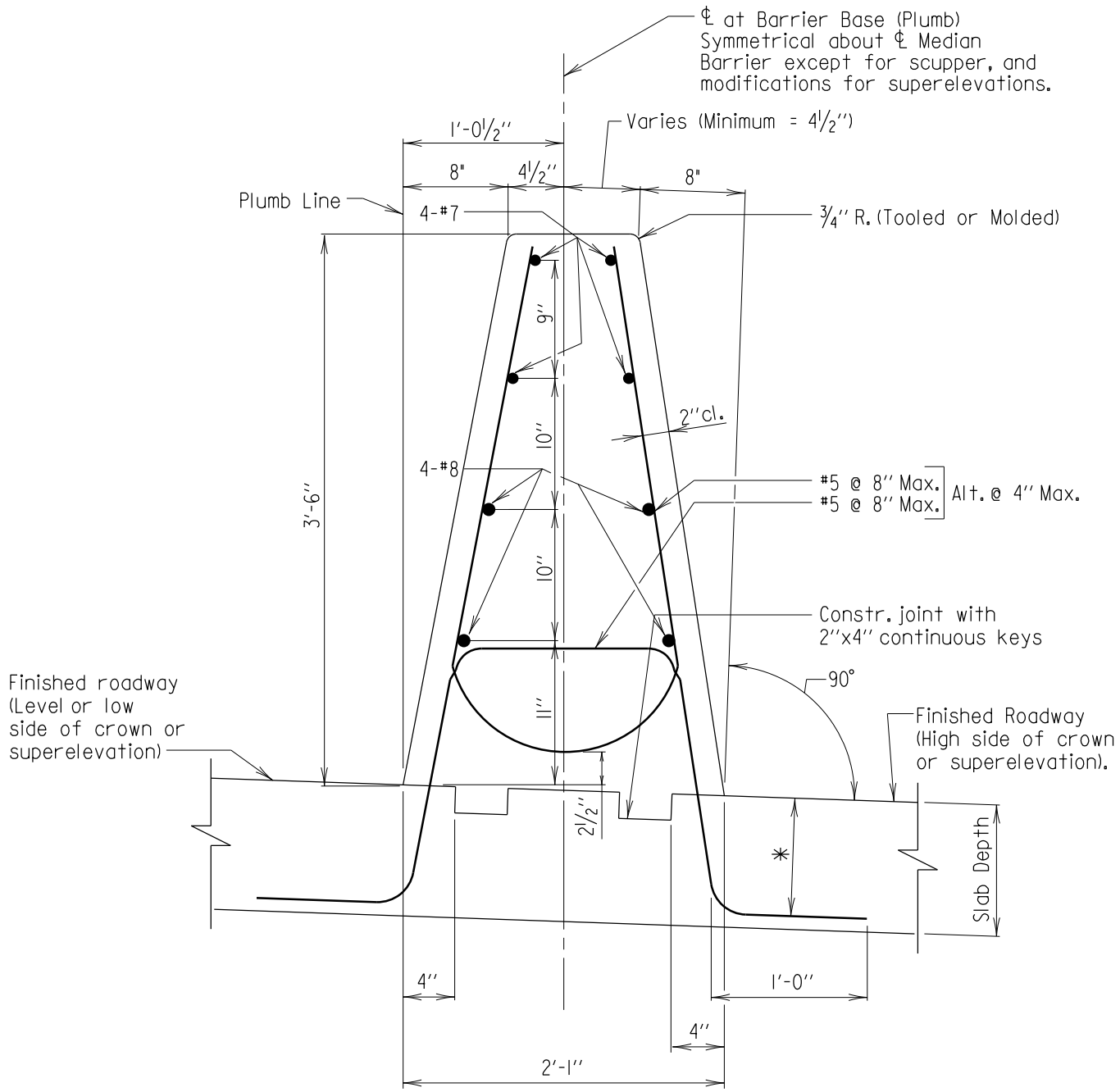
- \* Slab depth minus 1".
- \*\* For high side of crown or superelevation, otherwise this is a vertical line that all dimensions are measured from.
- \*\*\* These dimensions can change if superelevation affects barrier face alignment.
- \*\*\*\* Dowel may replace vertical by being extended full height.

42" MEDIAN

APPROVAL
<i>C. S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11/22/2003
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
42" F-SHAPE MEDIAN BARRIER FOR BRIDGE WITH LONGITUDINAL JOINT WHERE TRAFFIC WILL USE AREA PRIOR TO PLACING BARRIER
DETAIL NO. SUP-TB(MB)-202
SHEET <u>  </u> OF <u>  </u>

SUPER TRAFFIC BARRIER



SECTION  
Scale: 1" = 1'-0"

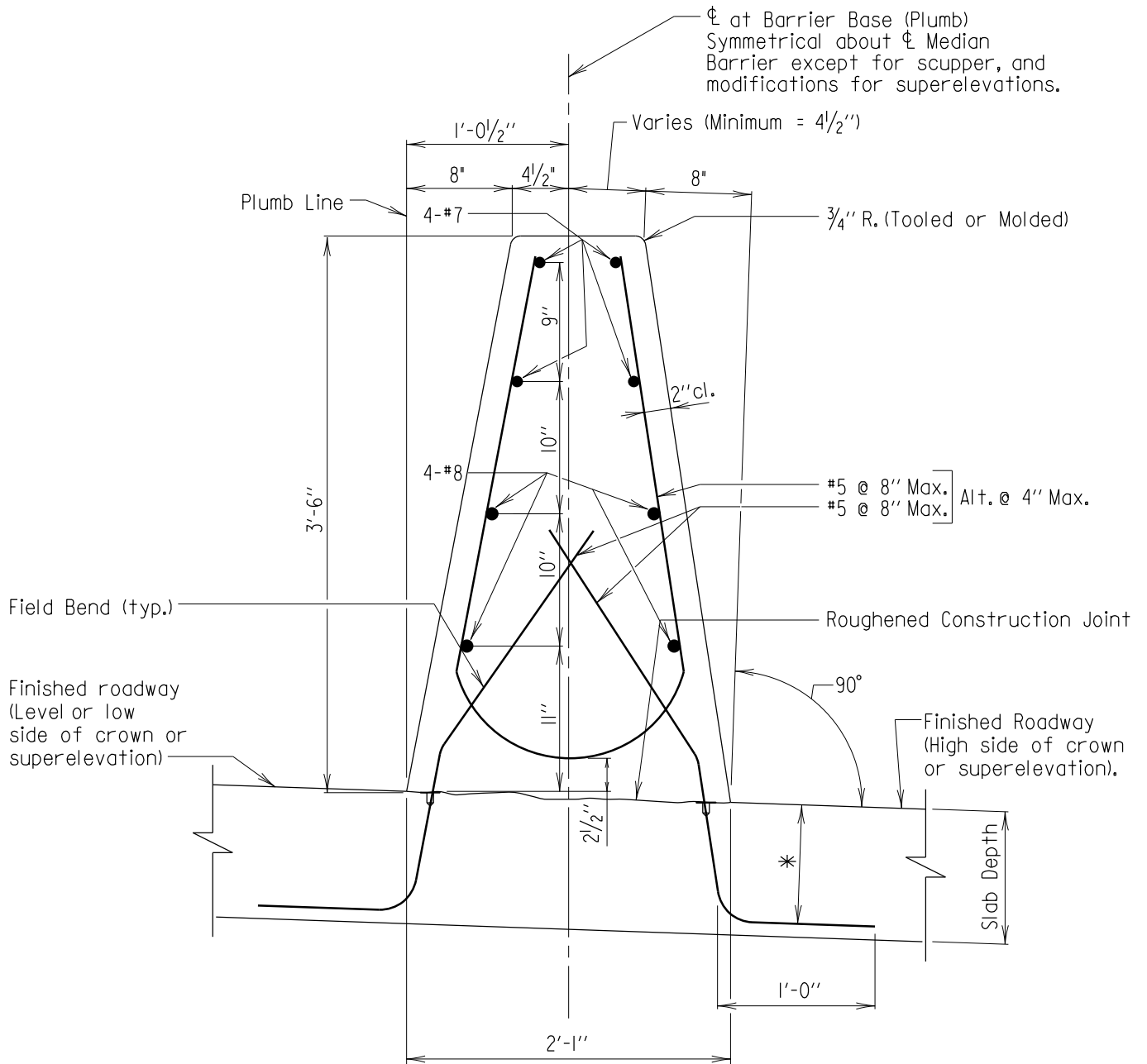
\* Slab depth minus 1".

- Notes:
1. Place 1/2" saw cut joints to match joint spacing of outside parapet.
  2. Concrete deck reinforcing steel not shown.
  3. All #7 and #8 longitudinal bars shall be placed continuously in the barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
  4. All keys are nominal size.
  5. No increase in any prices bid will be allowed for barrier modifications due to roadway slope.

APPROVAL
<i>Ben C. ...</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 05/29/2019
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
MASH TL-5 - 42" SINGLE SLOPE MEDIAN BARRIER FOR BRIDGE WITHOUT LOGITUDINAL JOINT
DETAIL NO. SUP-TB(MB)-301
SHEET <u>1</u> OF <u>1</u>

SUPER TRAFFIC BARRIER



SECTION  
Scale: 1" = 1'-0"

Notes:

1. All #7 and #8 longitudinal bars shall be placed continuously in the barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
2. All reinforcement bars shall be epoxy coated.
3. The Contractor has the option of substituting cast-in-place epoxy coated open coil inserts with threaded holes for the bars shown. The inserts in the back face of the parapet shall have a minimum working load tension strength of 6000 lb. and a minimum length of 4 1/2". The inserts in the front face shall have a minimum working load tension strength of 8000 lb. and a minimum length of 5 1/2". The cost of epoxy coated inserts shall be included in the pertinent Superstructure Concrete item.
4. Concrete deck reinforcing steel not shown.
5. Place 1/2" saw cut joints to match joint spacing of outside parapet.
6. No increase in any prices bid will be allowed for barrier modifications due to roadway slope or maintenance of traffic.

\* Slab depth minus 1".

APPROVAL
<i>Ben C. ...</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 05/29/2019
VERSION
1.0

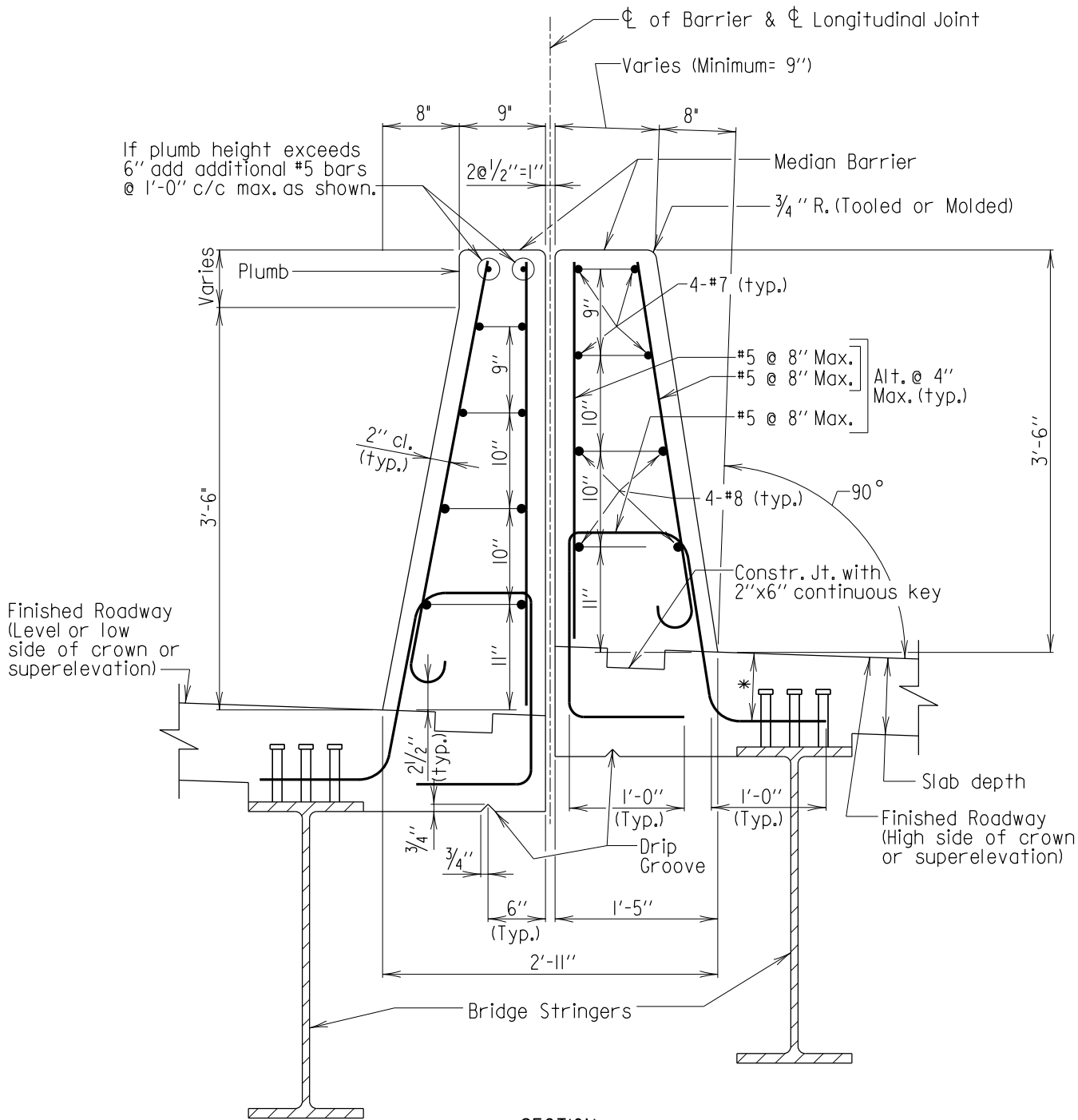
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

**MASH TL-5 - 42" SINGLE SLOPE MEDIAN BARRIER  
FOR BRIDGE WITHOUT LONGITUDINAL JOINT  
WHERE TRAFFIC WILL USE AREA PRIOR TO PLACEMENT**

DETAIL NO. SUP-TB(MB)-302

SHEET 1 OF 1

SUPER TRAFFIC BARRIER



If plumb height exceeds 6" add additional #5 bars @ 1'-0" c/c max. as shown.

**SECTION**

Scale :  $\frac{3}{4}'' = 1'-0''$

\* Slab depth minus 1".

**Notes:**

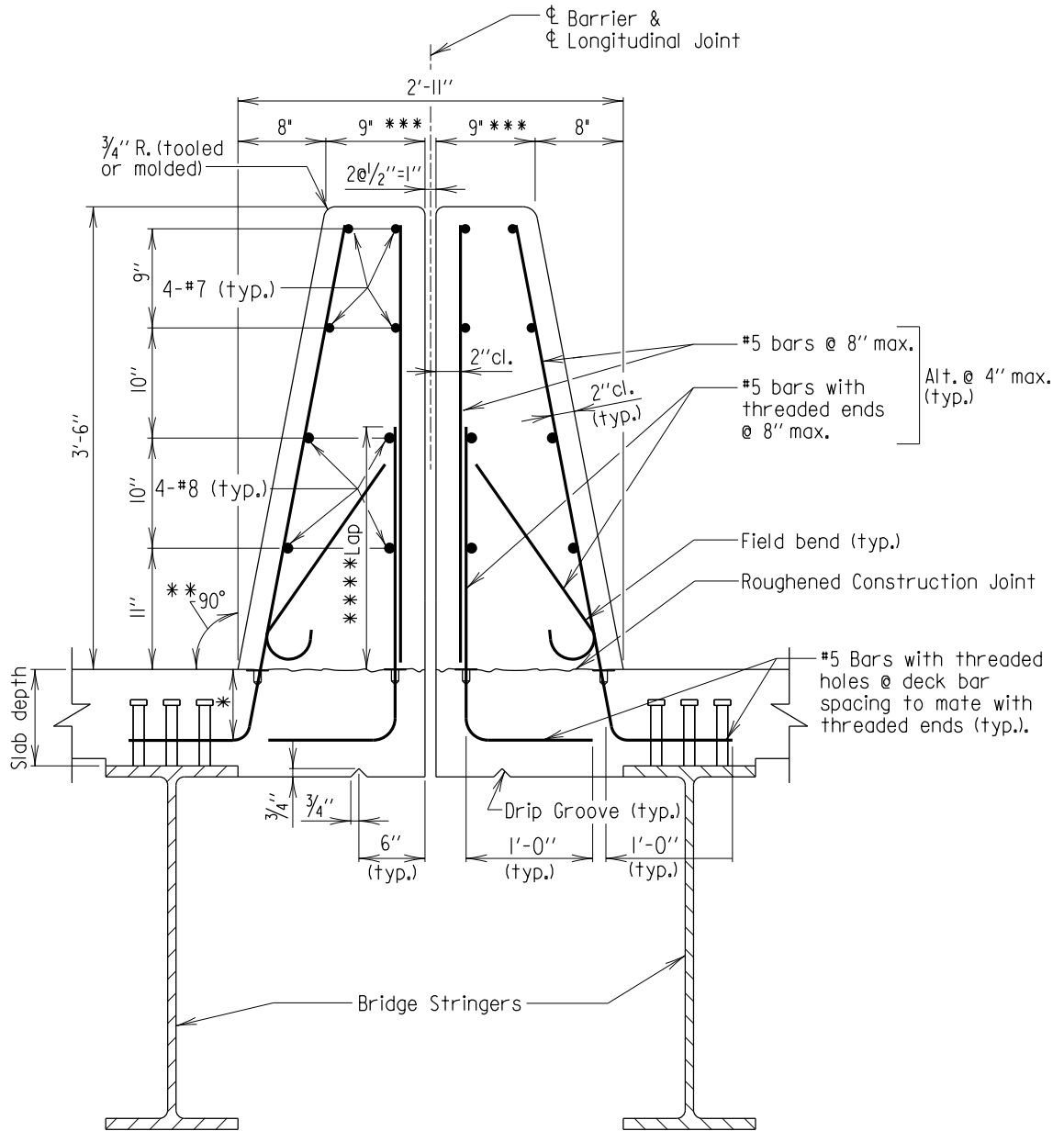
1. All #7 and #8 longitudinal bars shall be placed continuously in the barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
2. All reinforcing steel epoxy coated.
3. Concrete deck reinforcing steel not shown.
4. Place  $\frac{1}{2}''$  saw cut joints to match joint spacing of outside parapet.
5. All keys are nominal size.
6. No increase in any prices bid will be allowed for barrier modifications due to roadway slope.

APPROVAL
DIRECTOR OFFICE OF STRUCTURES
DATE: 05/29/2019
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
<b>MASH TL-5 - 42" SINGLE SLOPE MEDIAN BARRIER          FOR BRIDGE WITH OPEN LOGITUDINAL JOINT</b>
DETAIL NO. SUP-TB(MB)-401
SHEET <u>  1  </u> OF <u>  1  </u>

SUPER TRAFFIC BARRIER





**SECTION**

Scale: 3/4" : 1'-0"

**Notes:**

1. All #7 and #8 longitudinal bars shall be placed continuously in the barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.
2. All reinforcement bars shall be epoxy coated.
3. The Contractor has the option of substituting cast-in-place epoxy coated open coil inserts with threaded holes for the bars shown. The inserts in the back face of the parapet shall have a minimum working load tension strength of 6000 lb. and a minimum length of 4 1/2". The inserts in the front face shall have a minimum working load tension strength of 8000 lb. and a minimum length of 5 1/2". The cost of epoxy coated inserts shall be included in the pertinent Superstructure Concrete item.
4. Concrete deck reinforcing steel not shown.
5. Place 1/2" saw cut joints to match joint spacing of outside parapet.
6. No increase in any prices bid will be allowed for barrier modifications due to roadway slope or maintenance of traffic.

- \* Slab depth minus 1".
- \*\* For high side of crown or superelevation, otherwise this is a vertical line that all dimensions are measured from.
- \*\*\* These dimensions can change if superelevation affects barrier face alignment.
- \*\*\*\* Dowel may replace vertical by being extended full height.

APPROVAL
<i>Ben C. Duda</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 05/29/2019
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
<b>MASH TL-5 - 42" SINGLE SLOPE MEDIAN BARRIER FOR BRIDGE WITH LONGITUNDINAL JOINT WHERE TRAFFIC WILL USE AREA PRIOR TO PLACEMENT</b>
DETAIL NO. SUP-TB(MB)-402
SHEET <u>1</u> OF <u>1</u>

SUPER TRAFFIC BARRIER

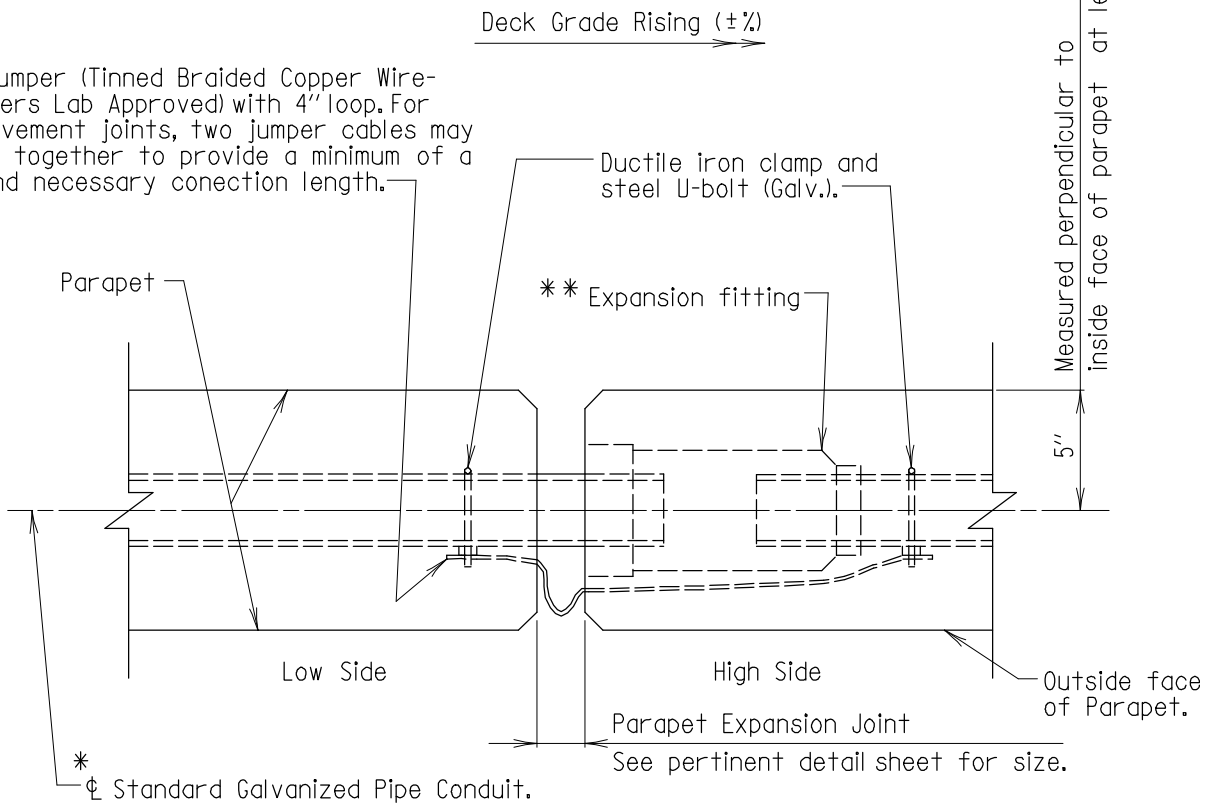
## Chapter 03 - Superstructure

### Section 02 – Traffic Barriers

#### SUB-SECTION 05

# CONDUIT PLACEMENT (SUP-TB(CP))

Bonding Jumper (Tinned Braided Copper Wire-Underwriters Lab Approved) with 4" loop. For larger movement joints, two jumper cables may be bolted together to provide a minimum of a 6" loop and necessary connection length.



SECTION  
Scale: 1/2" = 1'-0"

\* For conduit size see Superstructure "Typical Section" sheet. Vertical location of  $\phi$  of this conduit shall be at least 4" below bottom of railing or fencing anchorage systems.

\*\* Expansion fittings for use with rigid galvanized steel conduit shall consist of a malleable iron head and steel sleeve which shall be hot-dipped galvanized and assembled with a watertight packing gland, an insulated bushing, pressure ring and gasket and a tinned-copper bond to assure continuity of ground. The fitting shall provide, unless otherwise noted on the plans: 4" of movement for all compression seal roadway joints and 8" of movement for all other roadway joints, such as steel finger joints.

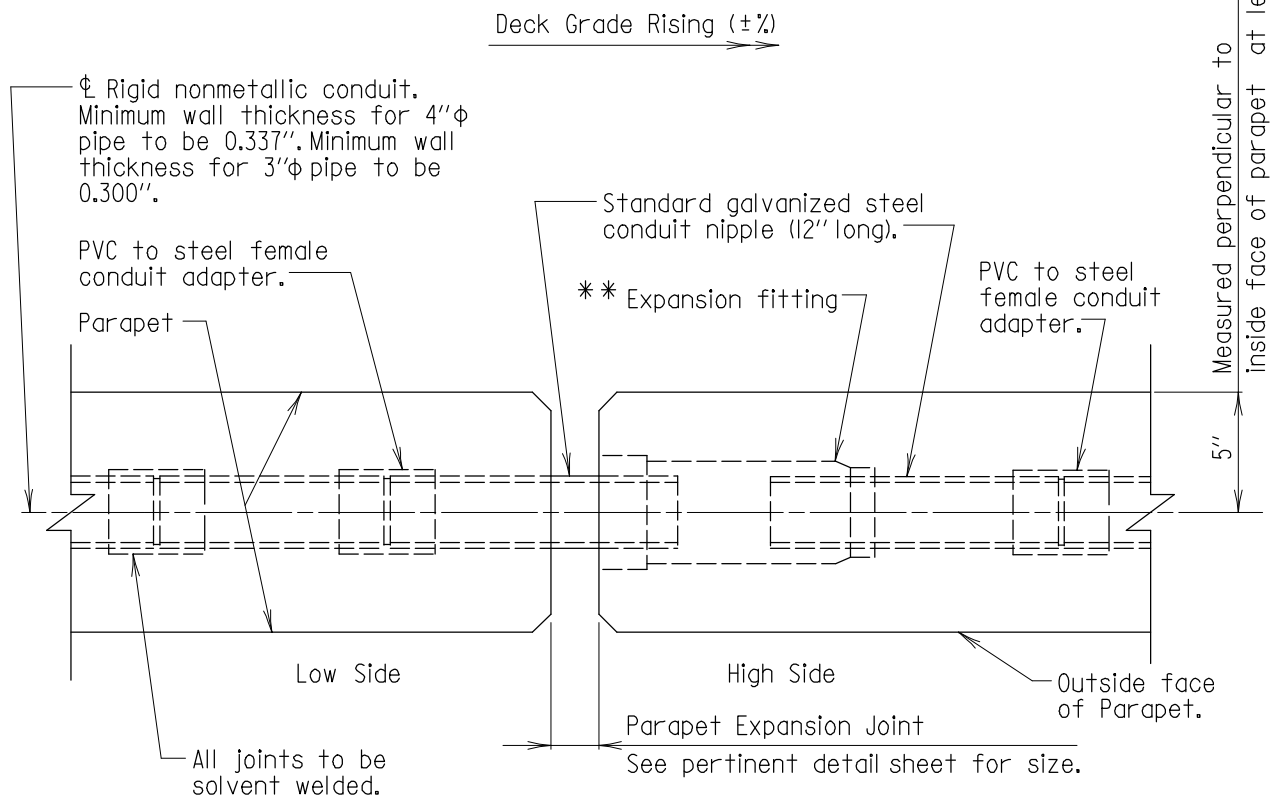
Notes:

1. Place expansion joint in pipe conduit and parapet at every expansion joint at supports in bridge deck.
2. #10 galvanized pull wire to be provided for full length of conduit and left in place.
3. Contractor may furnish either PVC conduit as shown on sheet 2 of 2 or material shown on this detail. However only one type can be used throughout a structure.

APPROVAL
<i>L.S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 01/22/2001
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
EXPANSION JOINT FOR CONDUIT IN PARAPET
DETAIL NO. SUP-TB(CP)-101 <span style="float: right;">SHEET <u>1</u> OF <u>2</u></span>

SUPER TRAFFIC BARRIER



SECTION  
Scale: 1/2" = 1'-0"

Note: No bonding jumper cable is required.

\* For conduit size see Superstructure "Typical Section" sheet. Vertical location of ϕ of this conduit shall be at least 4" below bottom of railing or fencing anchorage systems.

\*\* Expansion fittings for use with rigid galvanized steel conduit shall consist of a malleable iron head and steel sleeve which shall be hot-dipped galvanized and assembled with a watertight packing gland, an insulated bushing, pressure ring and gasket and a tinned-copper bond to assure continuity of ground. The fitting shall provide, unless otherwise noted on the plans: 4" of movement for all compression seal roadway joints and 8" of movement for all other roadway joints, such as steel finger joints.

Notes:

1. Place expansion joint in pipe conduit and parapet at every expansion joint at supports in bridge deck.
2. #10 galvanized pull wire to be provided for full length of conduit and left in place.
3. All pipe and expansion joint must be U.L. approved for encasement in concrete.
4. Fittings to be PVC, except for expansion joint.
5. Nonmetallic conduit shall conform to 92I.07.02.

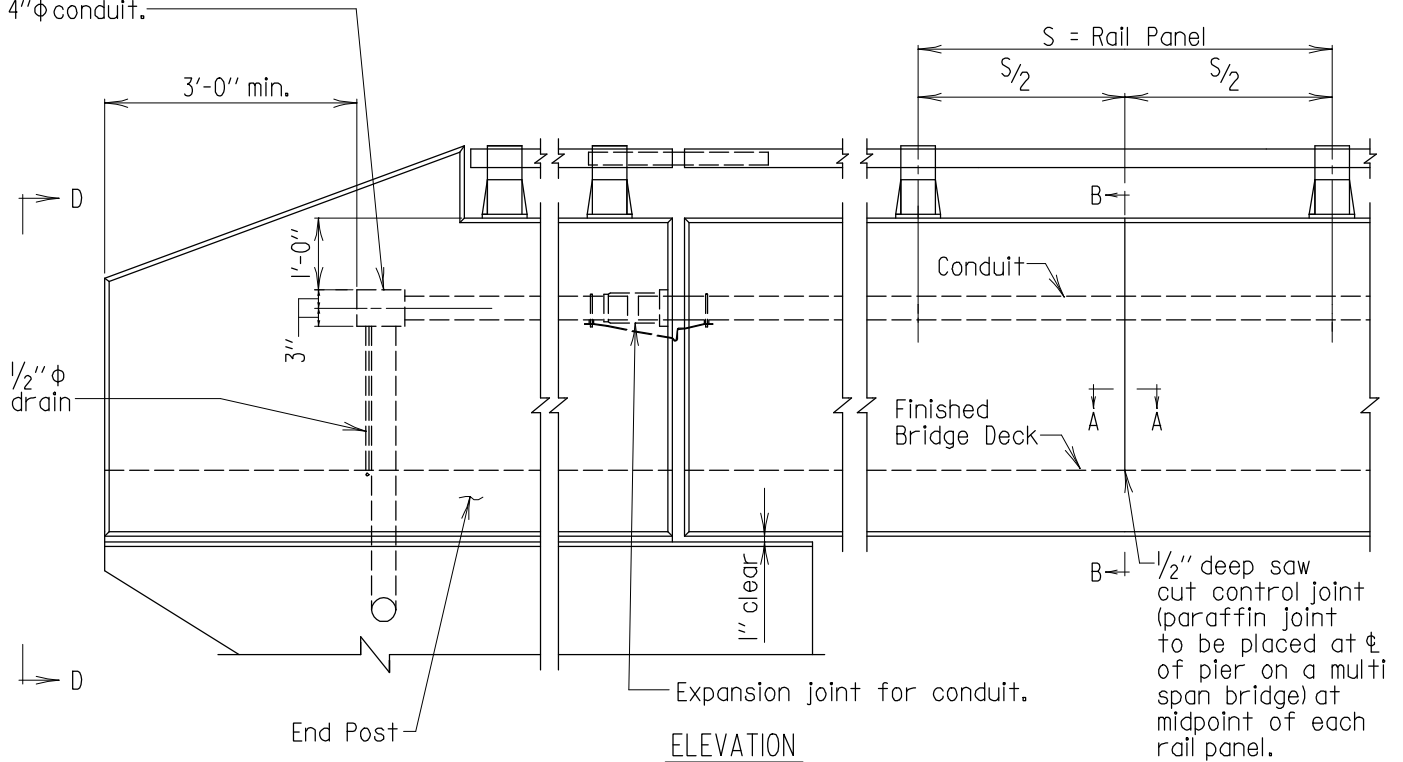
APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 01/22/2001
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
EXPANSION JOINT FOR CONDUIT IN PARAPET
DETAIL NO. SUP-TB(CP)-101
SHEET 2 OF 2

SUPER TRAFFIC BARRIER

8"H x 6"V x 8" galvanized cast iron, galvanized steel or fiberglass U.L. listed junction box with cover. Provide holes in box for 4"φ conduit.

Note: Details shown are for single rail; double rail and fencing details are similar. On bridges with no fencing or railing see General Plan and Elevation for parapet control joint spacing.



ELEVATION  
Scale:  $\frac{3}{8}'' = 1'-0''$

Note: For Section A-A and B-B see sheets 2 & 3 of 3. For View D-D see sheet 2 of 3.

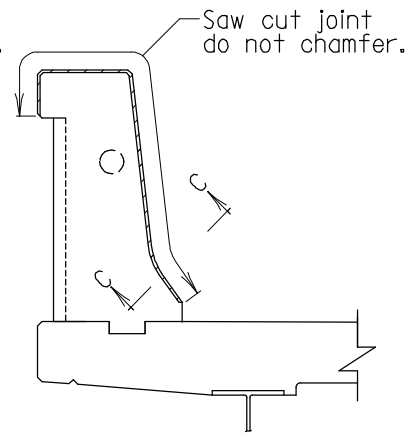
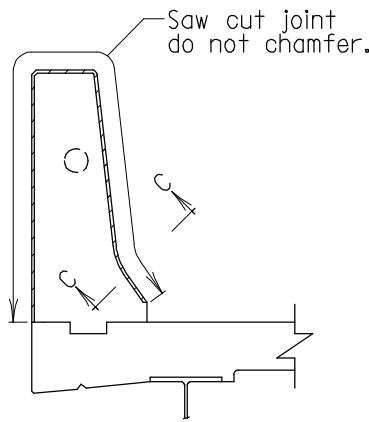
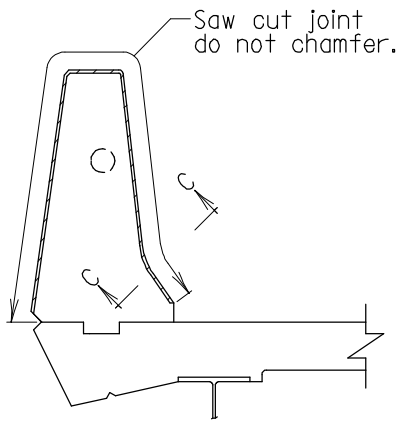
Notes:

- The conduit and junction box are to be placed only when indicated in the Superstructure "Typical Section." If  $\phi$  to  $\phi$  of end junction boxes exceed 200', then additional junction boxes shall be placed in parapet, between control joints, so that the maximum distance between boxes is 200'. Junction boxes for light standards, may be utilized. All junction boxes to have  $\frac{1}{2}''\phi$  drain at drain at low point of box.
- Conduit may be either PVC or galvanized pipe.

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1.0

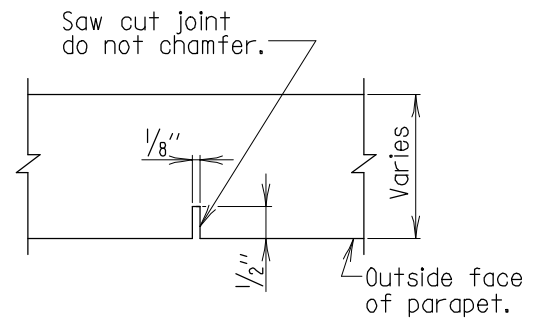
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND SINGLE CONDUIT PLACEMENT WITH 42" F-SHAPE PARAPET
DETAIL NO. SUP-TB(CP)-201
SHEET <u>1</u> OF <u>3</u>

SUPER TRAFFIC BARRIER



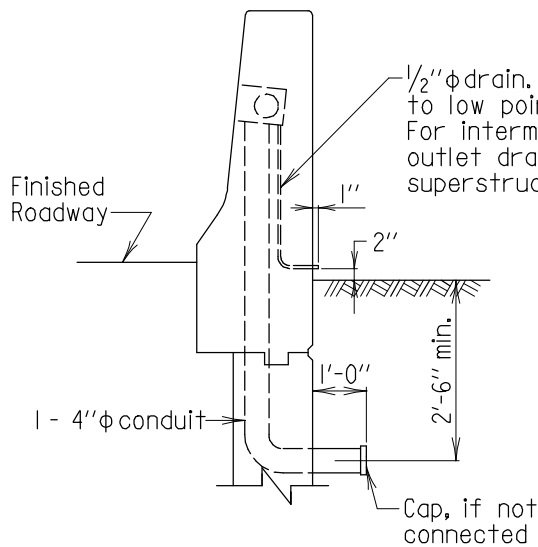
SECTION B-B

Scale:  $\frac{3}{8}'' = 1'-0''$



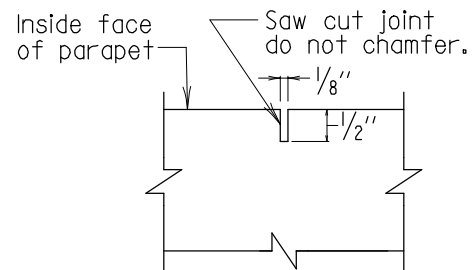
SECTION A-A

Scale: None



VIEW D-D

Scale:  $\frac{3}{8}'' = 1'-0''$



SECTION C-C

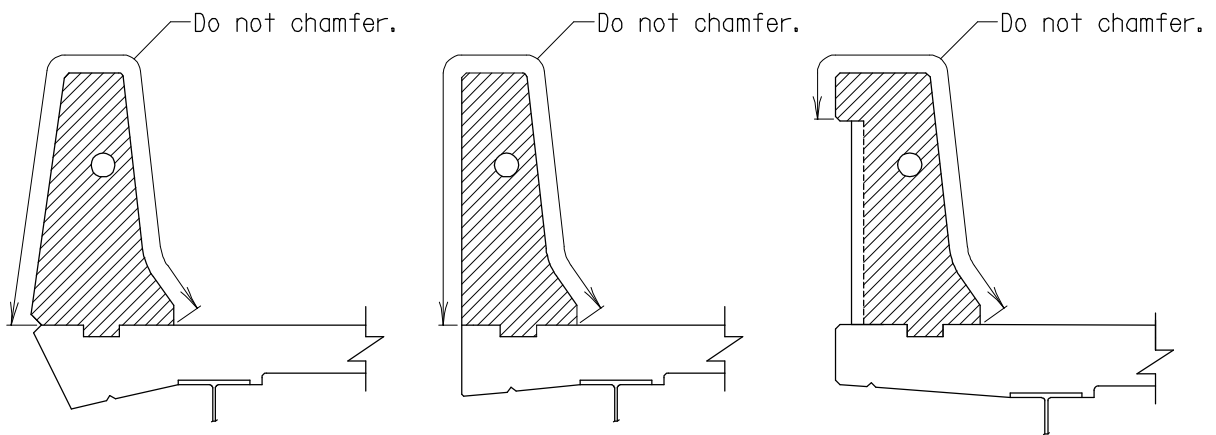
Scale: None

Notes:

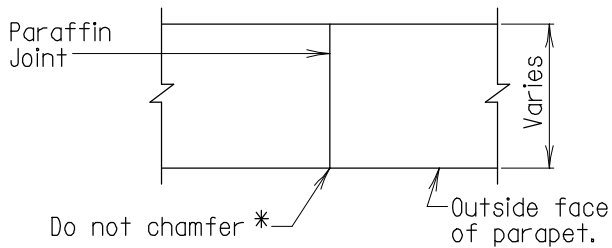
1. Place saw cut joint at center of every rail panel.
2. Parapet is placed continuously.
3. Saw cut control joint to be sawed same day as concrete is poured.
4. Fencing and railing not shown.

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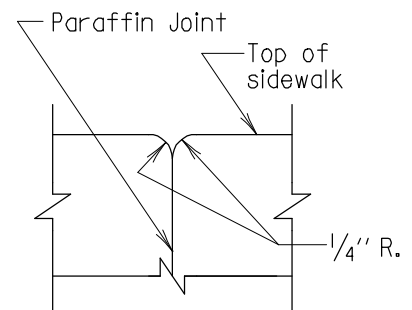
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND SINGLE CONDUIT PLACEMENT WITH 42" F-SHAPE PARAPET
DETAIL NO. SUP-TB(CP)-201
SHEET <u>2</u> OF <u>3</u>



SECTION B-B  
Scale:  $\frac{3}{8}'' = 1'-0''$



SECTION A-A  
Scale: None



SECTION C-C  
Scale: Full

\*In order to insure a smooth and acceptable surface, 420.03.11 (Construction Joints) will be strictly adhered to.

Notes:

1. Place vertical paraffin joint, shown hatched, at centerline of pier on multi span bridges.
2. Joints shall be formed by placing alternate sections.
3. The placement of adjacent sections shall have a 40 hour delay between placements.
4. Railing and fencing not shown.

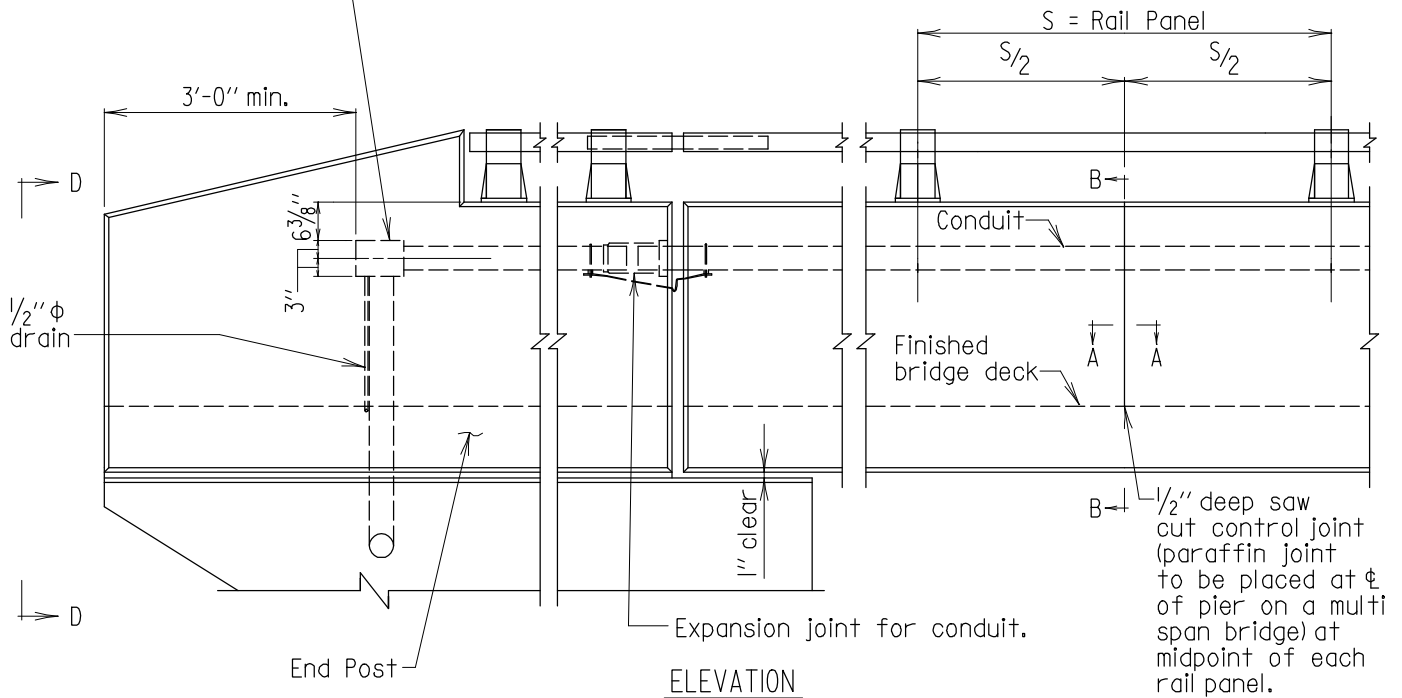
APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 03/05/2014
REVISIONS
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND SINGLE CONDUIT PLACEMENT WITH 42" F-SHAPE PARAPET
DETAIL NO. SUP-TB(CP)-201
SHEET <u>3</u> OF <u>3</u>

SUPER TRAFFIC BARRIER

8"H x 6"V x 8" galvanized cast iron, galvanized steel or fiberglass U.L. listed junction box with cover. Provide holes in box for 4"φ conduit.

Note: Details shown are for single rail; fencing details are similar. On bridges with no fencing or railing see General Plan and Elevation for parapet control joint spacing.



ELEVATION  
Scale: 3/8" = 1'-0"

Note: For Section A-A & B-B see sheets 2, 3 & 4 of 4. For View D-D see sheets 2 & 3 of 4.

- Notes:
- The conduit and junction box are to be placed only when indicated in the Superstructure "Typical Section." If φ to φ of end junction boxes exceed 200', then additional junction boxes shall be placed in parapet, between control joints, so that the maximum distance between boxes is 200'. Junction boxes for light standards, may be utilized. All junction boxes to have 1/2"φ drain at drain at low point of box.
  - Conduit may be either PVC or galvanized pipe.

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<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 01/06/2016
VERSION
1.0

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

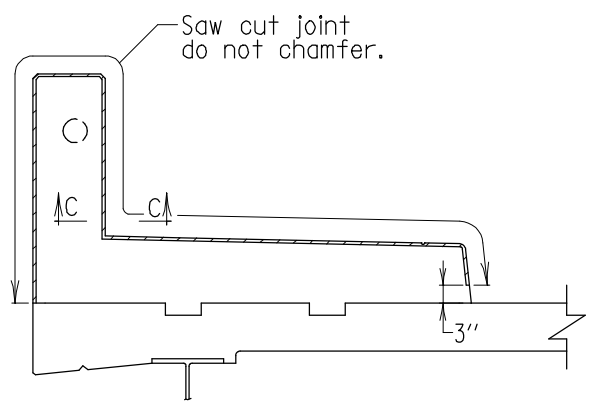
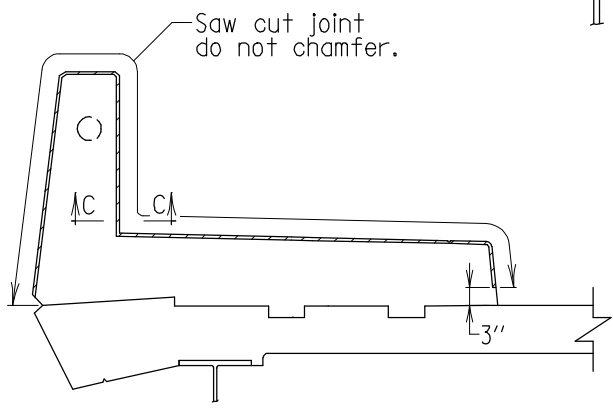
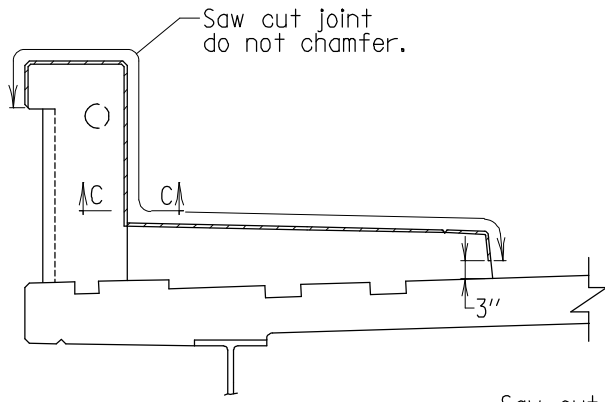
PARAPET CONTROL JOINT AND SINGLE CONDUIT  
PLACEMENT ON  
PARAPET WITH SIDEWALK

DETAIL NO. SUP-TB(CP)-202

SHEET 1 OF 3

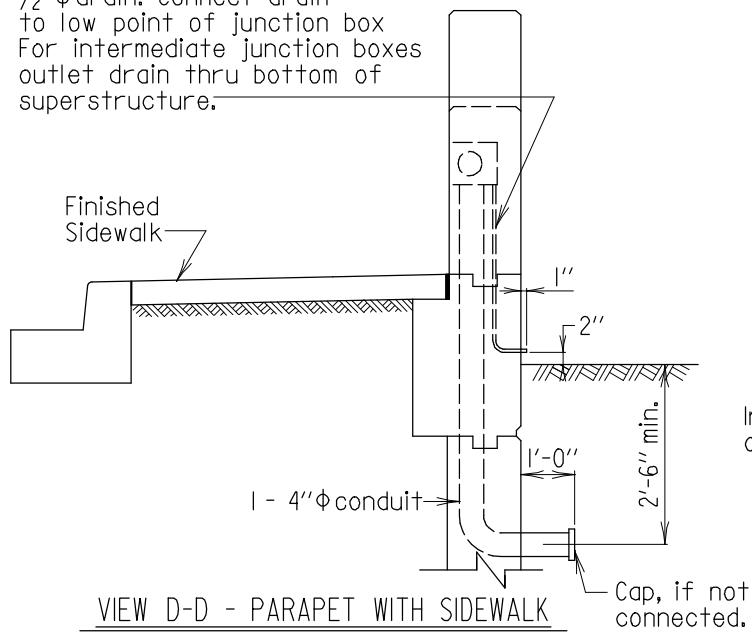
SUPER-TRAFFIC BARRIER



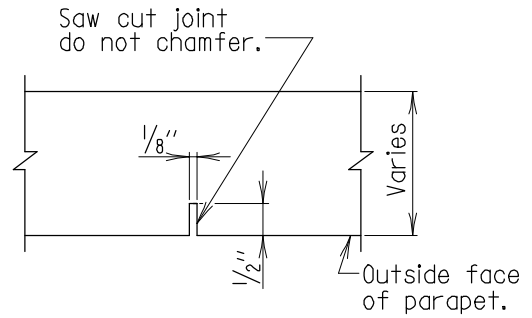


SECTION B-B  
Scale:  $\frac{3}{8}'' = 1'-0''$

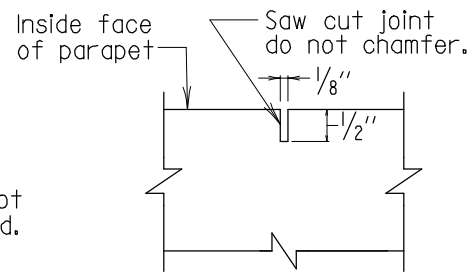
$\frac{1}{2}'' \phi$  drain. Connect drain to low point of junction box. For intermediate junction boxes outlet drain thru bottom of superstructure.



VIEW D-D - PARAPET WITH SIDEWALK  
Scale:  $\frac{3}{8}'' = 1'-0''$



SECTION A-A  
Scale: None



SECTION C-C  
Scale: None

- Notes:
1. Place saw cut joint at center of every rail panel.
  2. Parapet is placed continuously.
  3. Saw cut joint to be sawed same day as concrete is poured.
  4. Fencing and railing not shown.

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DATE: 01/06/2016	
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1.0	

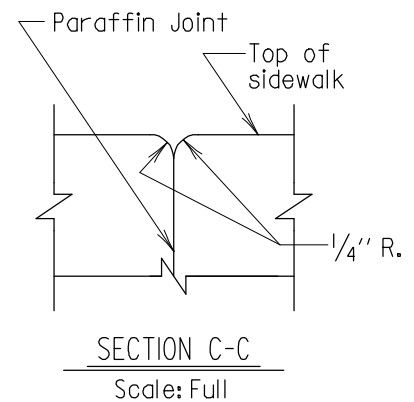
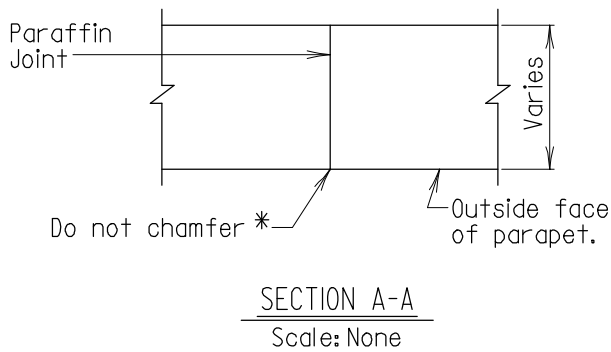
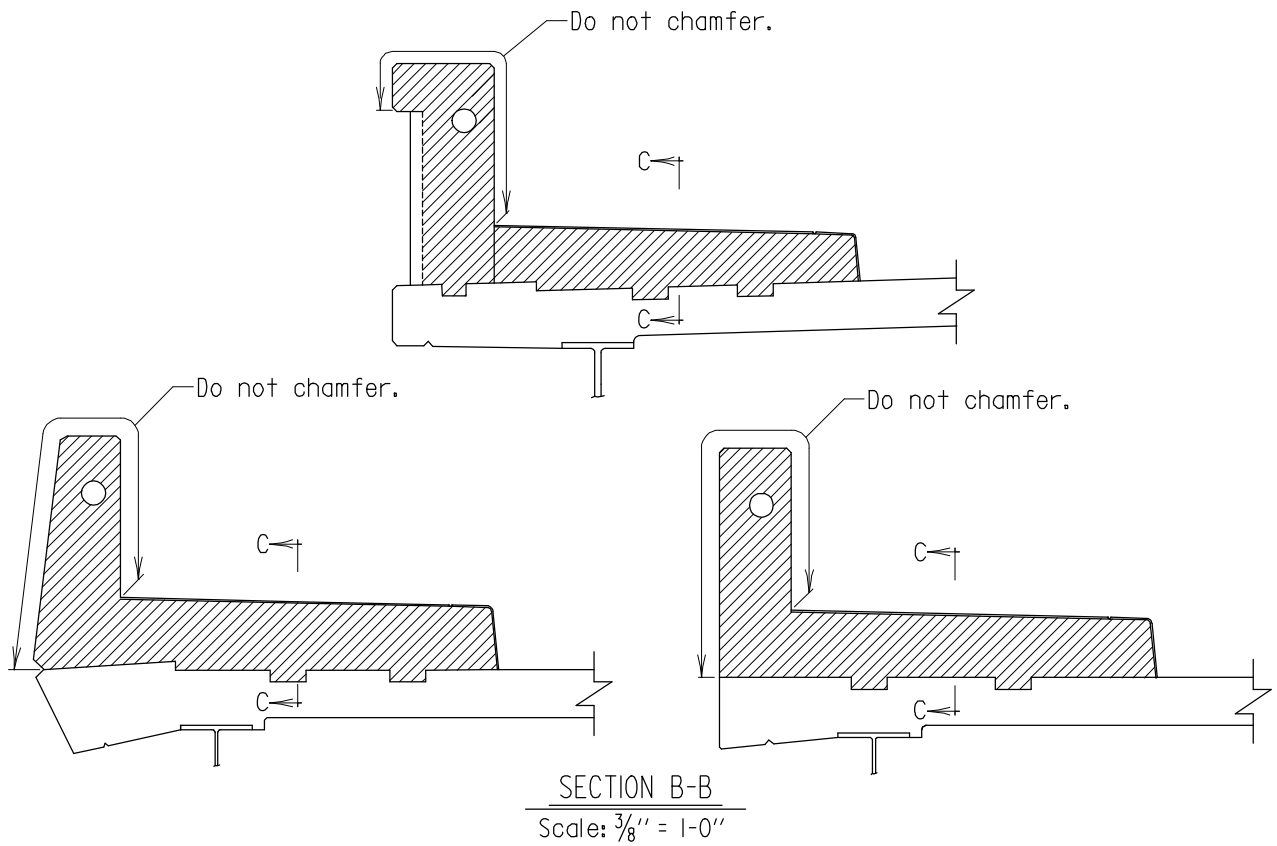
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

PARAPET CONTROL JOINT AND SINGLE CONDUIT  
PLACEMENT ON  
PARAPET WITH SIDEWALK

DETAIL NO. SUP-TB(CP)-202

SHEET 2 OF 3

SUPER-TRAFFIC BARRIER



\*In order to insure a smooth and acceptable surface, 420.03.11 (Construction Joints) will be strictly adhered to.

Notes:

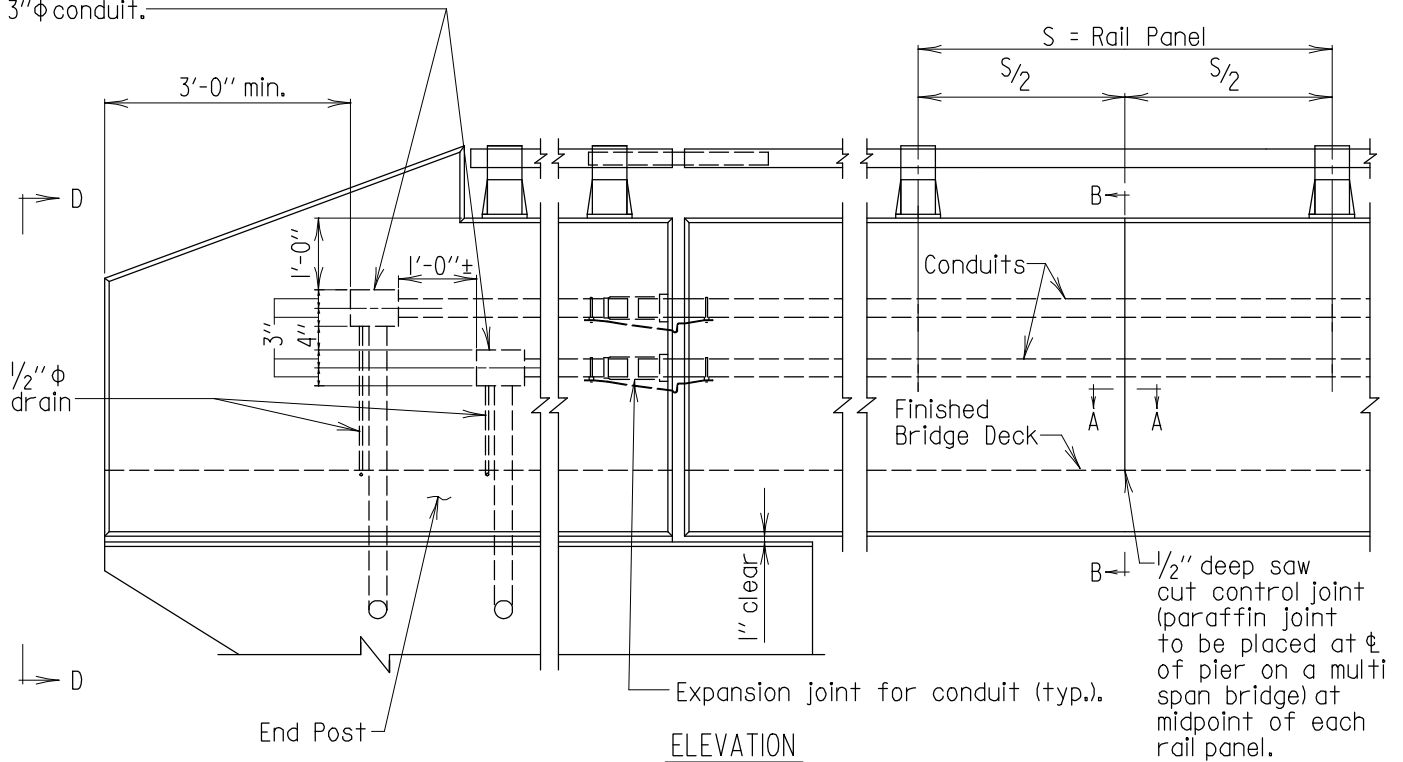
1. Place vertical paraffin joint, shown hatched, at centerline of pier on multi span bridges.
2. Joints shall be formed by placing alternate sections.
3. The placement of adjacent sections shall have a 40 hour delay between placements.
4. Railing and fencing not shown.

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DATE: 01/06/2016
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND SINGLE CONDUIT PLACEMENT ON PARAPET WITH SIDEWALK
DETAIL NO. SUP-TB(CP)-202
SHEET <u>3</u> OF <u>3</u>

8"H x 6"V x 8" galvanized cast iron, galvanized steel or fiberglass U.L. listed junction boxes with covers. Provide holes in box for 3"φ conduit.

Note: Details shown are for single rail; double rail and fencing details are similar. On bridges with no fencing or railing see General Plan and Elevation for parapet control joint spacing.



ELEVATION  
Scale: 3/8" = 1'-0"

Note: For Section A-A & B-B see sheet 2 of 3.  
For View D-D see sheet 2 of 3.  
For Sections A-A and B-B at centerline of pier on multi-span continuous bridges, see sheet 3 of 3.

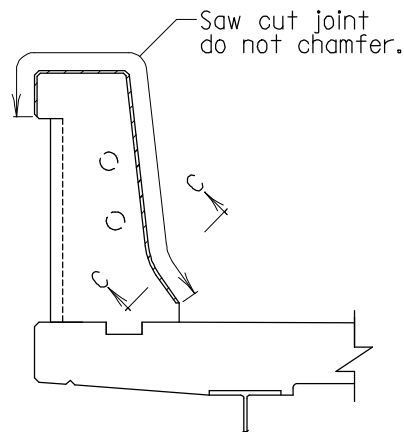
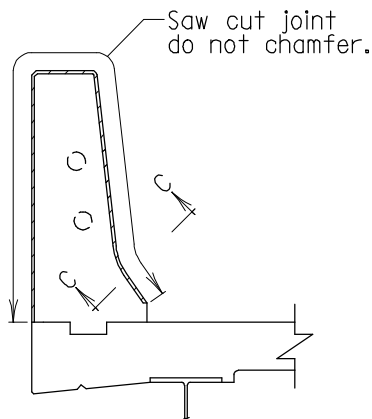
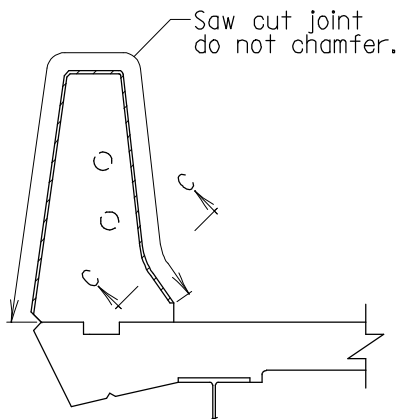
Notes:

- The conduits and junction boxes are to be placed only when indicated in the Superstructure "Typical Section." If center-to-center of end junction boxes exceed 200', then additional junction boxes shall be placed in parapet, between control joints, so that the maximum distance between boxes is 200'. Junction boxes for light standards, may be utilized. All junction boxes to have 1/2"φ drain at low point of box.
- Conduit may be either PVC or galvanized pipe.

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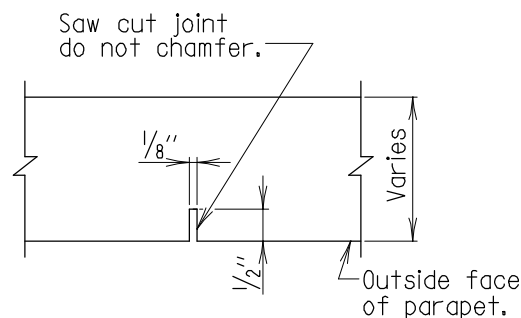
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND DUAL CONDUIT PLACEMENT WITH 42" F-SHAPE PARAPET
DETAIL NO. SUP-TB(CP)-301
SHEET <u>1</u> OF <u>3</u>

SUPER TRAFFIC BARRIER



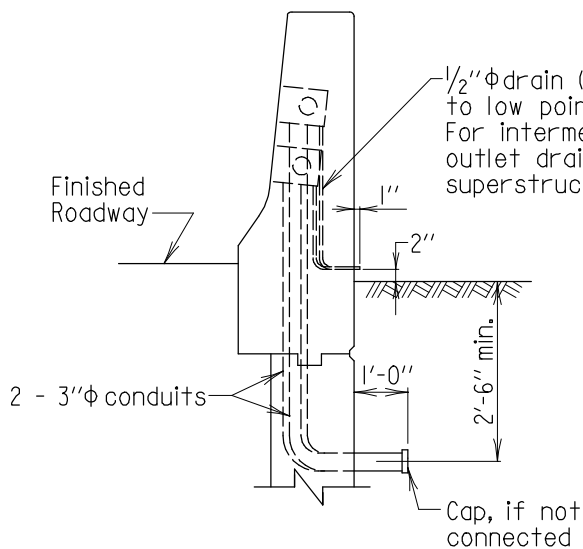
SECTION B-B

Scale:  $\frac{3}{8}'' = 1'-0''$



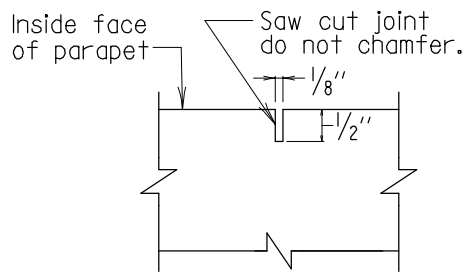
SECTION A-A

Scale: None



VIEW D-D

Scale:  $\frac{3}{8}'' = 1'-0''$



SECTION C-C

Scale: None

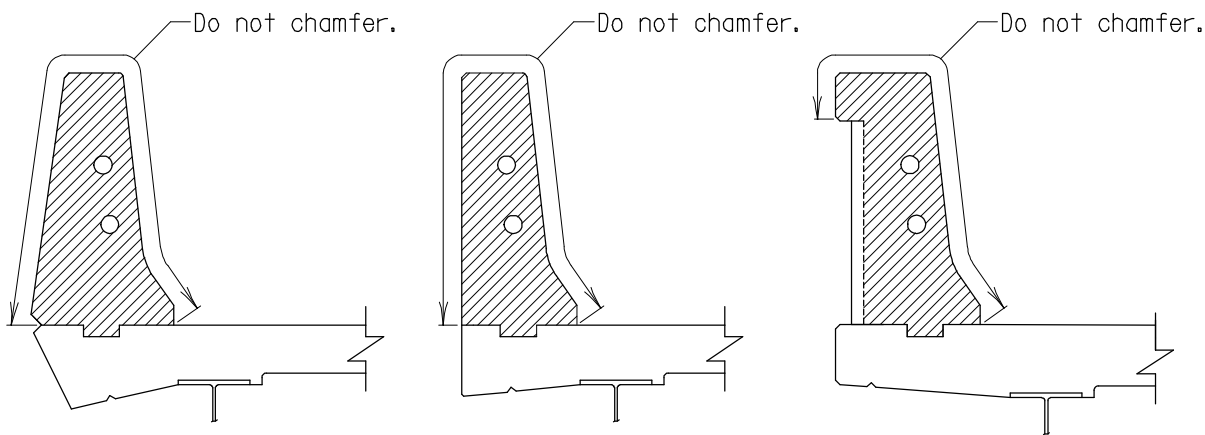
Notes:

1. Place saw cut joint at center of every rail panel.
2. Parapet is placed continuously.
3. Saw cut joint to be sawed same day as concrete is poured.
4. Fencing and railing not shown.

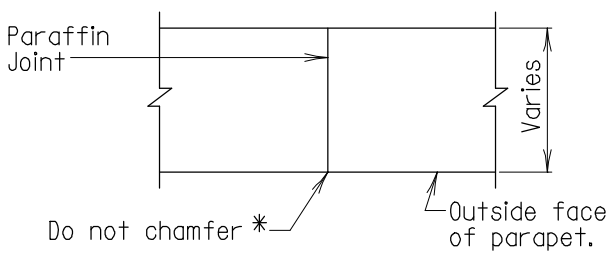
APPROVAL
<i>L.S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 03/05/2014
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND DUAL CONDUIT PLACEMENT WITH 42" F-SHAPE PARAPET
DETAIL NO. SUP-TB(CP)-301
SHEET <u>2</u> OF <u>3</u>

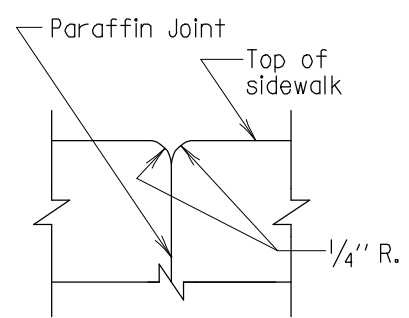
SUPER TRAFFIC BARRIER



SECTION B-B  
Scale: 3/8" = 1'-0"



SECTION A-A  
Scale: None



SECTION C-C  
Scale: Full

\*In order to insure a smooth and acceptable surface, 420.03.11 (Construction Joints) will be strictly adhered to.

Notes:

1. Place vertical paraffin joint, shown hatched, at centerline of pier on multi-span continuous bridges.
2. The placement of adjacent sections shall have a 40 hour delay between placements.
3. Railing and fencing not shown.

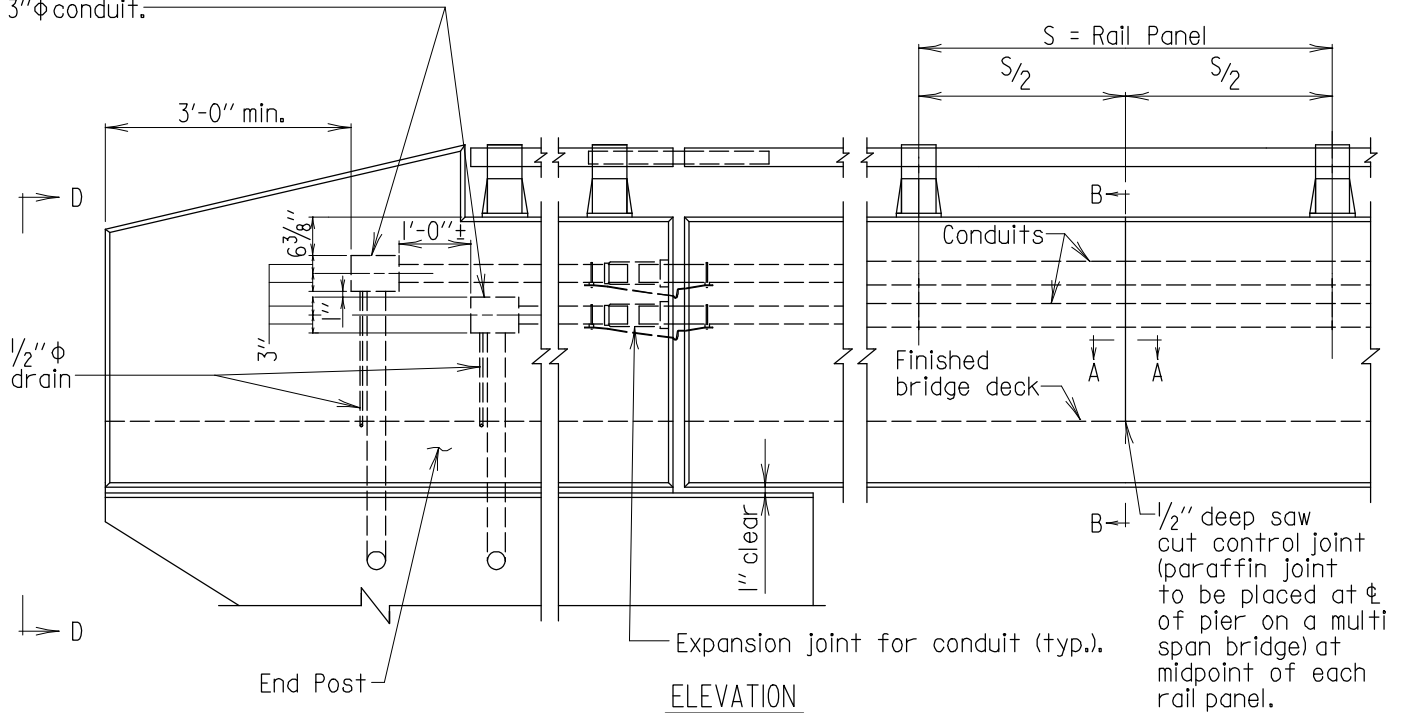
APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 03/05/2014
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND DUAL CONDUIT PLACEMENT WITH 42" F-SHAPE PARAPET
DETAIL NO. SUP-TB(CP)-301
SHEET <u>3</u> OF <u>3</u>

SUPER TRAFFIC BARRIER

8"H x 6"V x 8" galvanized cast iron, galvanized steel or fiberglass U.L. listed junction boxes with covers. Provide holes in box for 3"φ conduit.

Note: Details shown are for single rail; fencing details are similar. On bridges with no fencing or railing see General Plan and Elevation for parapet control joint spacing.



ELEVATION  
Scale: 3/8" = 1'-0"

Note: For Section A-A and B-B see sheets 2 & 3 of 4. For View D-D see sheet 2 and 3 of 4. For Sections A-A and B-B at centerline of pier on multi-span continuous bridges, see sheet 4 of 4.

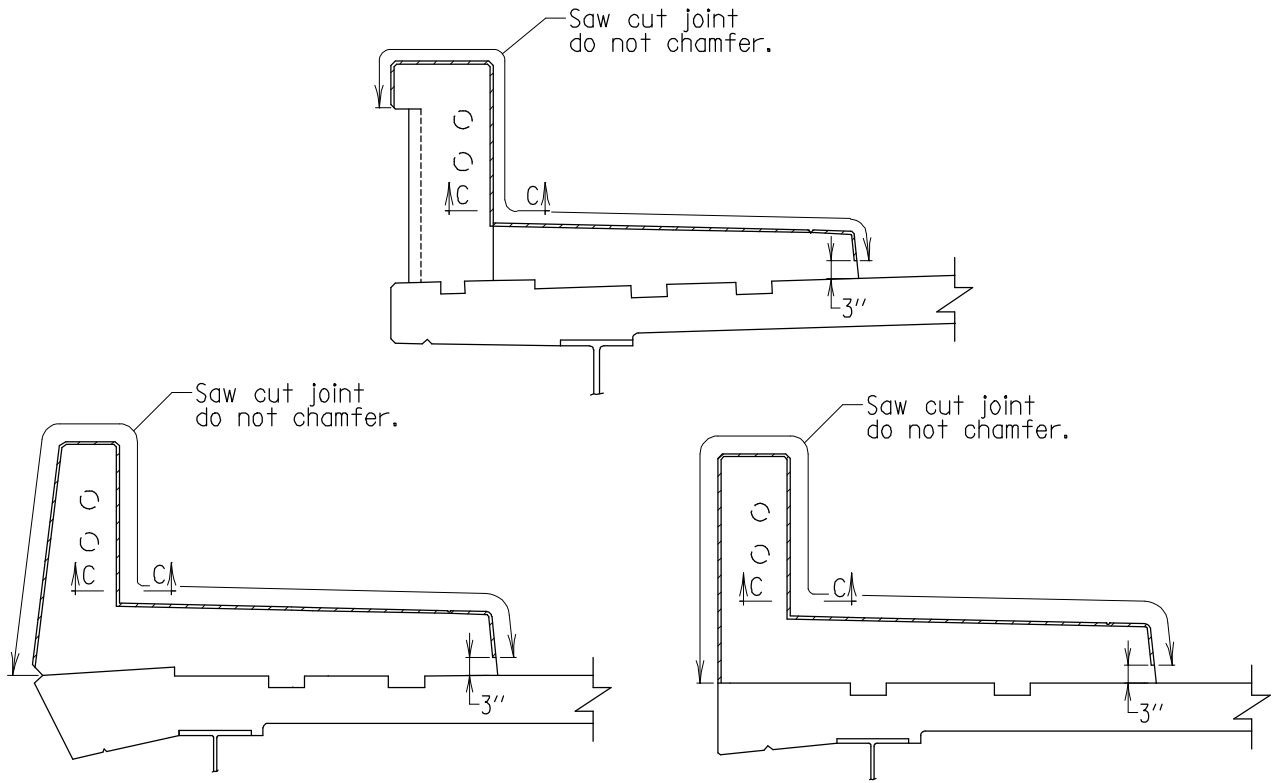
Notes:

- The conduits and junction boxes are to be placed only when indicated in the Superstructure "Typical Section." If  $\phi$  to  $\phi$  of end junction boxes exceed 200', then additional junction boxes shall be placed in parapet, between control joints, so that the maximum distance between boxes is 200'. Junction boxes for light standards, may be utilized. All junction boxes to have 1/2"φ drain at drain at low point of box.
- Conduit may be either PVC or galvanized pipe.

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<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 01/06/2016
VERSION
1.0

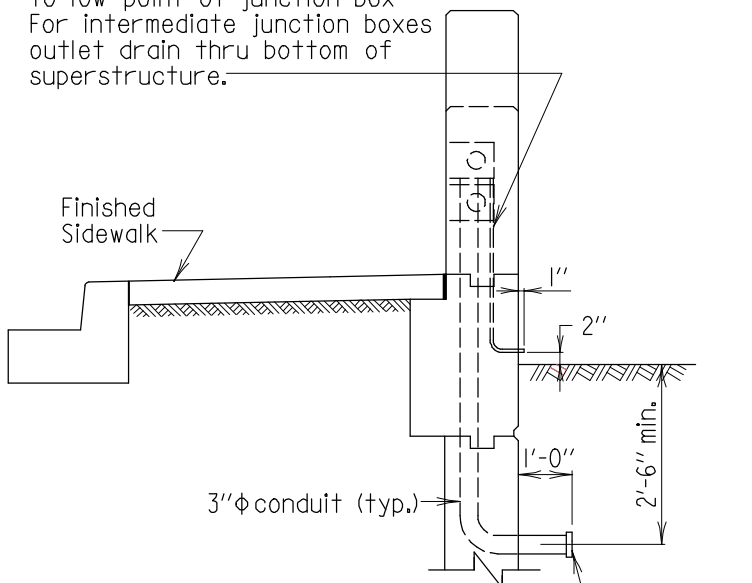
STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND DUAL CONDUIT PLACEMENT ON PARAPET WITH SIDEWALK
DETAIL NO. SUP-TB(CP)-302
SHEET 1 OF 3

SUPER-TRAFFIC BARRIER

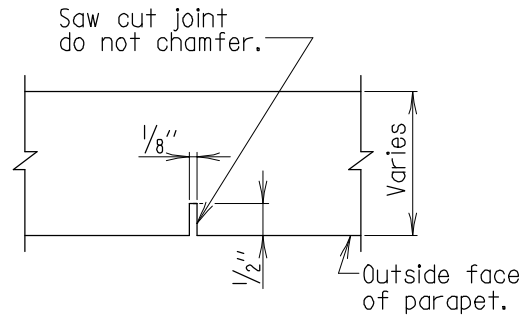


SECTION B-B  
Scale:  $\frac{3}{8}'' = 1'-0''$

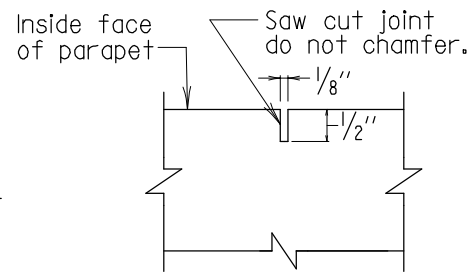
$\frac{1}{2}''\phi$  drain (typ.). Connect drain to low point of junction box. For intermediate junction boxes outlet drain thru bottom of superstructure.



VIEW D-D - PARAPET WITH SIDEWALK  
Scale:  $\frac{3}{8}'' = 1'-0''$



SECTION A-A  
Scale: None



SECTION C-C  
Scale: None

- Notes:
1. Place saw cut joint at center of every rail panel.
  2. Parapet is placed continuously.
  3. Saw cut joint to be sawed same day as concrete is poured.
  4. Fencing and railing not shown.

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<i>L.S. Fisher</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 01/06/2016	
VERSION	
1.0	

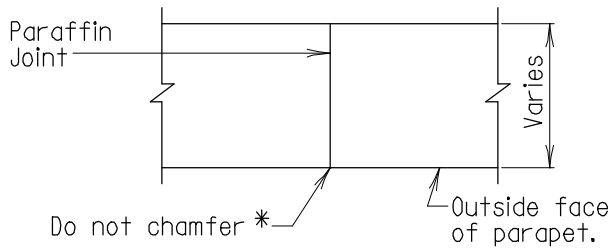
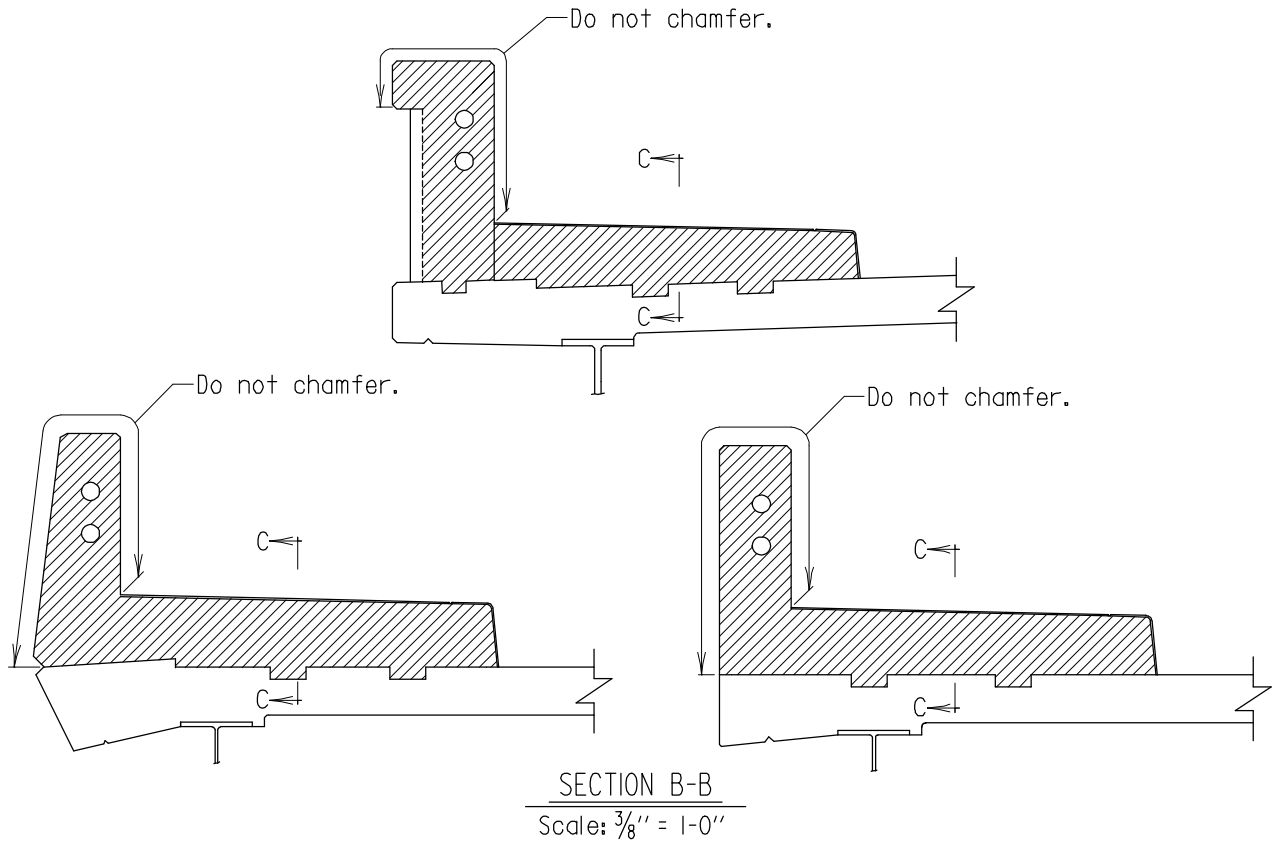
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

PARAPET CONTROL JOINT AND DUAL CONDUIT  
PLACEMENT ON  
PARAPET WITH SIDEWALK

DETAIL NO. SUP-TB(CP)-302

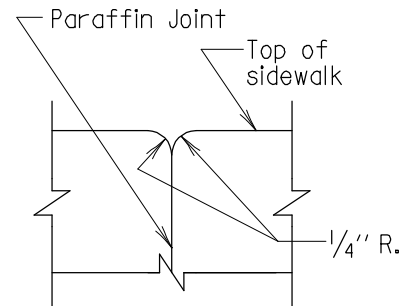
SHEET 2 OF 3

SUPER-TRAFFIC BARRIER



SECTION A-A

Scale: None



SECTION C-C

Scale: Full

\*In order to insure a smooth and acceptable surface, 420.03.11 (Construction Joints) will be strictly adhered to.

Notes:

1. Place vertical paraffin joint, shown hatched, at centerline of pier on multi-span continuous bridges.
2. The placement of adjacent sections shall have a 40 hour delay between placements.
3. Railing and fencing not shown.

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 01/06/2016
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET CONTROL JOINT AND DUAL CONDUIT PLACEMENT ON PARAPET WITH SIDEWALK
DETAIL NO. SUP-TB(CP)-302
SHEET <u>3</u> OF <u>3</u>

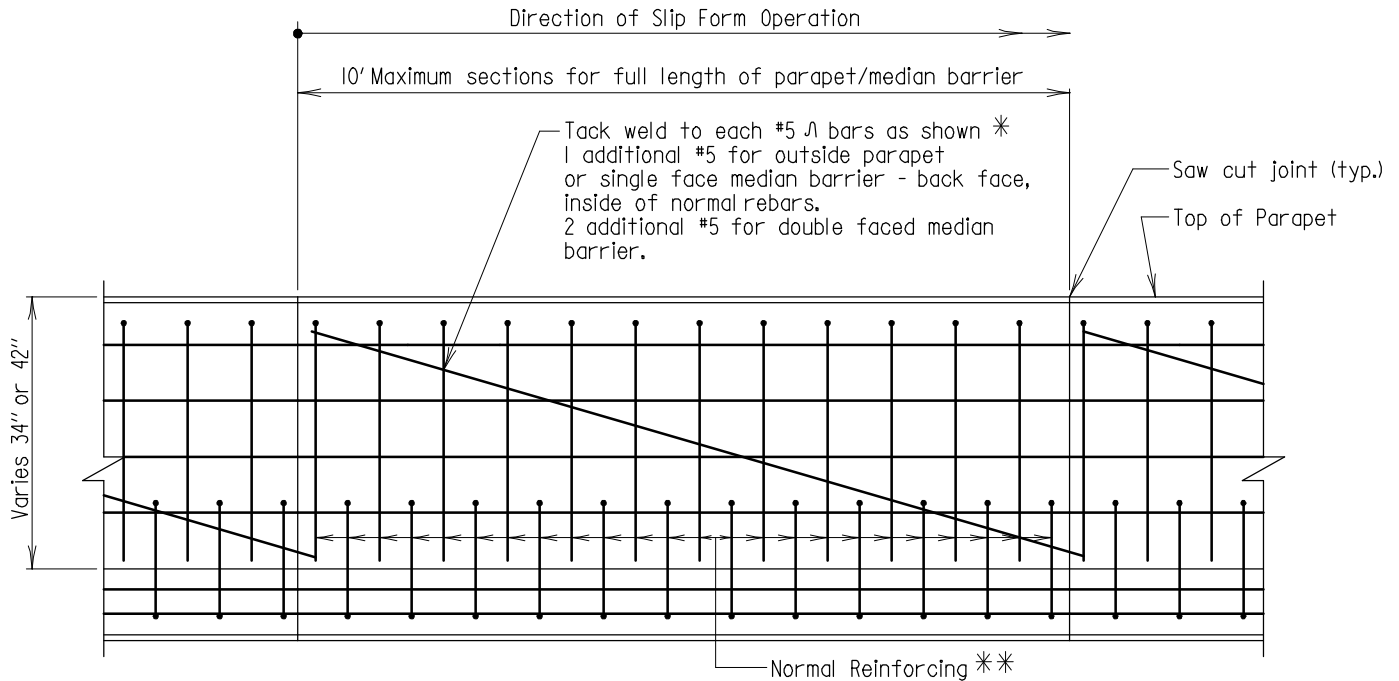


Chapter 03 - Superstructure

Section 02 – Traffic Barriers

SUB-SECTION 06

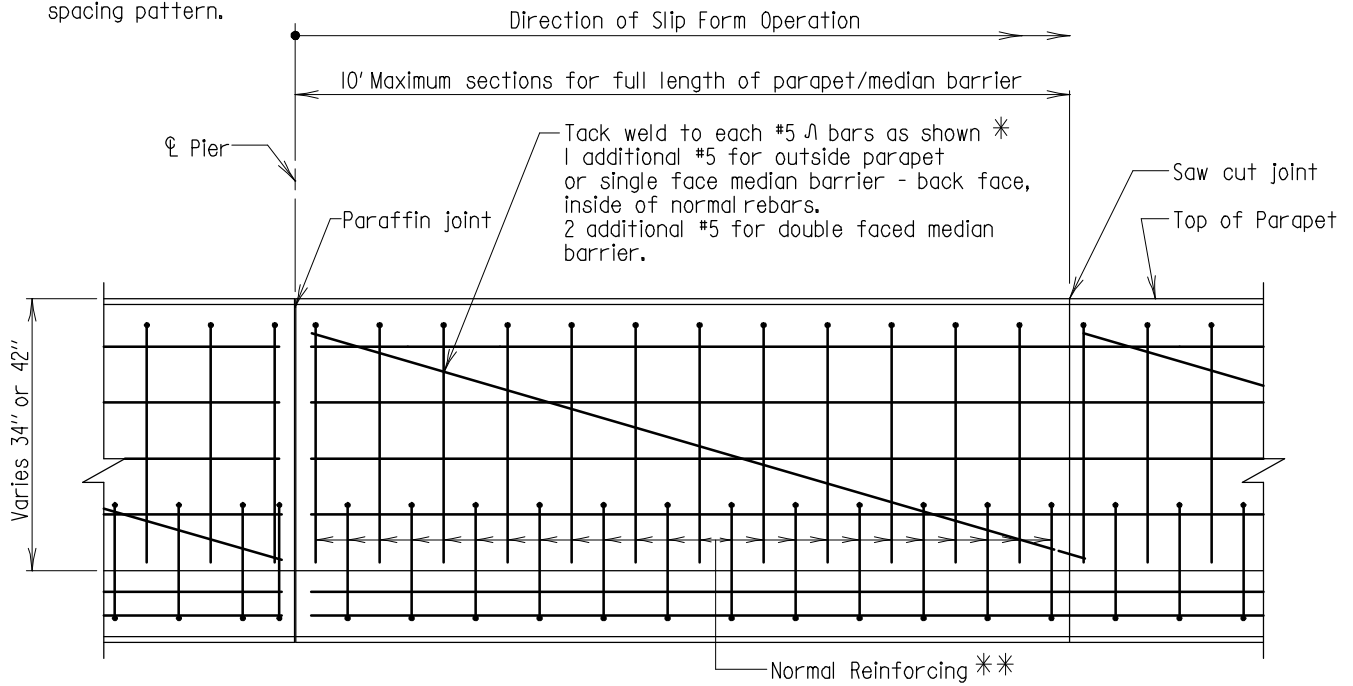
**MISCELLANEOUS  
DETAILS  
(SUP-TB(MISC))**



**ELEVATION**

Scale: 1/2" = 1'-0"

- \* Coat weld with epoxy touch up.
- \*\* See appropriate standard for rebar types and spacing pattern.




**ELEVATION-MULTISPAN AT PIER**

Scale: 1/2" = 1'-0"

Note:

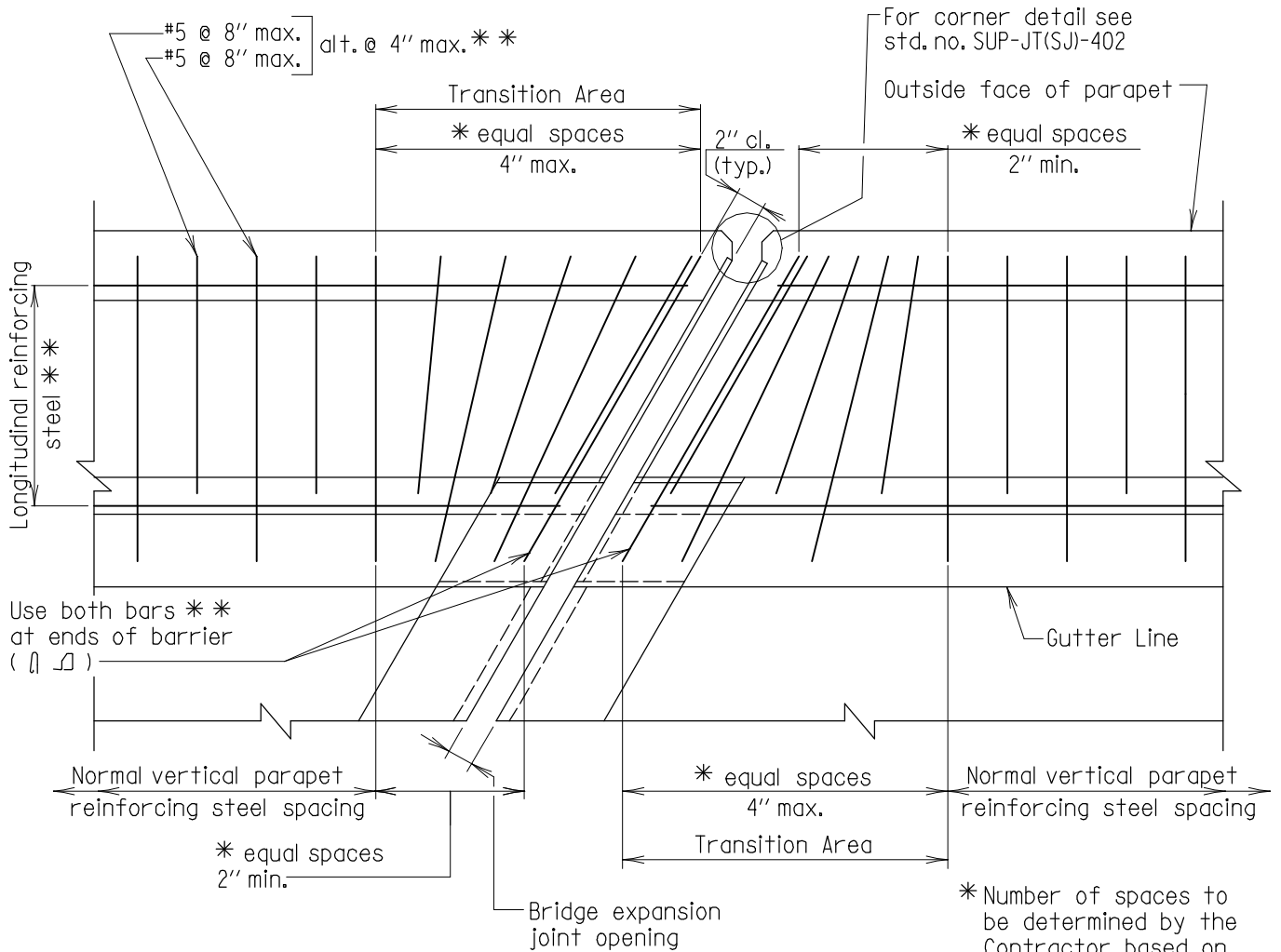
1. All longitudinal bars shall be placed continuously in the parapet/median barrier from expansion opening to expansion opening in a simple span bridge and expansion opening to centerline of pier in a multi span bridge.

**42" PARAPET OR MEDIAN**

<b>APPROVAL</b>  DIRECTOR OFFICE OF STRUCTURES DATE: 11/22/2003
<b>VERSION</b>  1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
ADDITIONAL REINFORCING FOR SLIP FORMING PARAPETS AND MEDIAN BARRIERS
DETAIL NO. SUP-TB(MISC)-101
SHEET <u>  1  </u> OF <u>  1  </u>

SUPER TRAFFIC BARRIER

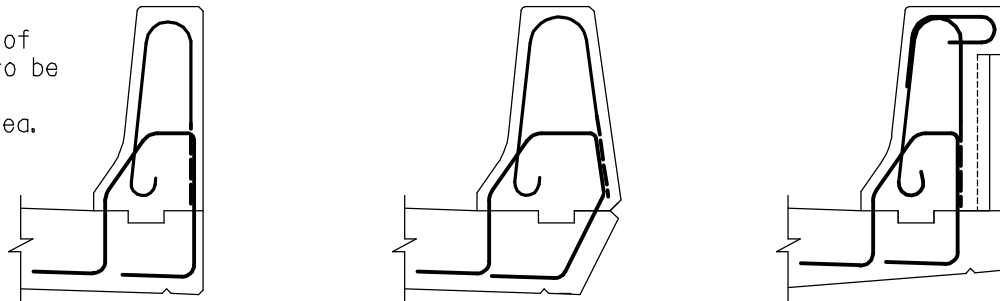


\*\* Number, shape and size of bars is contingent upon the height and style of parapet that is chosen. See Typical Section for details.

\* Number of spaces to be determined by the Contractor based on the skew angle as part of the Shop Drawing Process.

PLAN  
Scale: 1" = 1'-0"

Note:  
Dashed area of reinforcing to be eliminated in transition area.



REINFORCING PATTERN FOR TRANSITION AREA ONLY

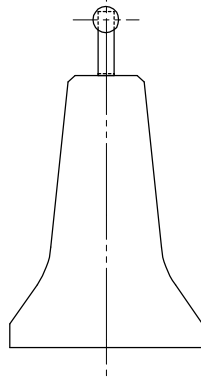
Notes:  
1. All reinforcing steel to be epoxy coated.  
2. Compression seal not shown.

APPROVAL
<i>L.S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 01/18/2005
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
PARAPET REINFORCING STEEL PLACEMENT AT EXPANSION JOINT
DETAIL NO. SUP-TB(MISC)-201
SHEET <u>1</u> OF <u>1</u>

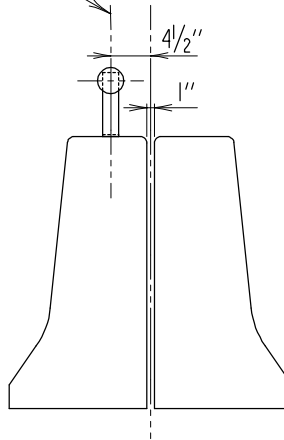
SUPER TRAFFIC BARRIER

ϕ Yellow Delineator and  
ϕ Barrier



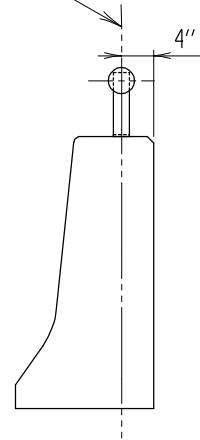
SOLID MEDIAN BARRIER

ϕ Yellow Delineator



SPLIT MEDIAN BARRIER

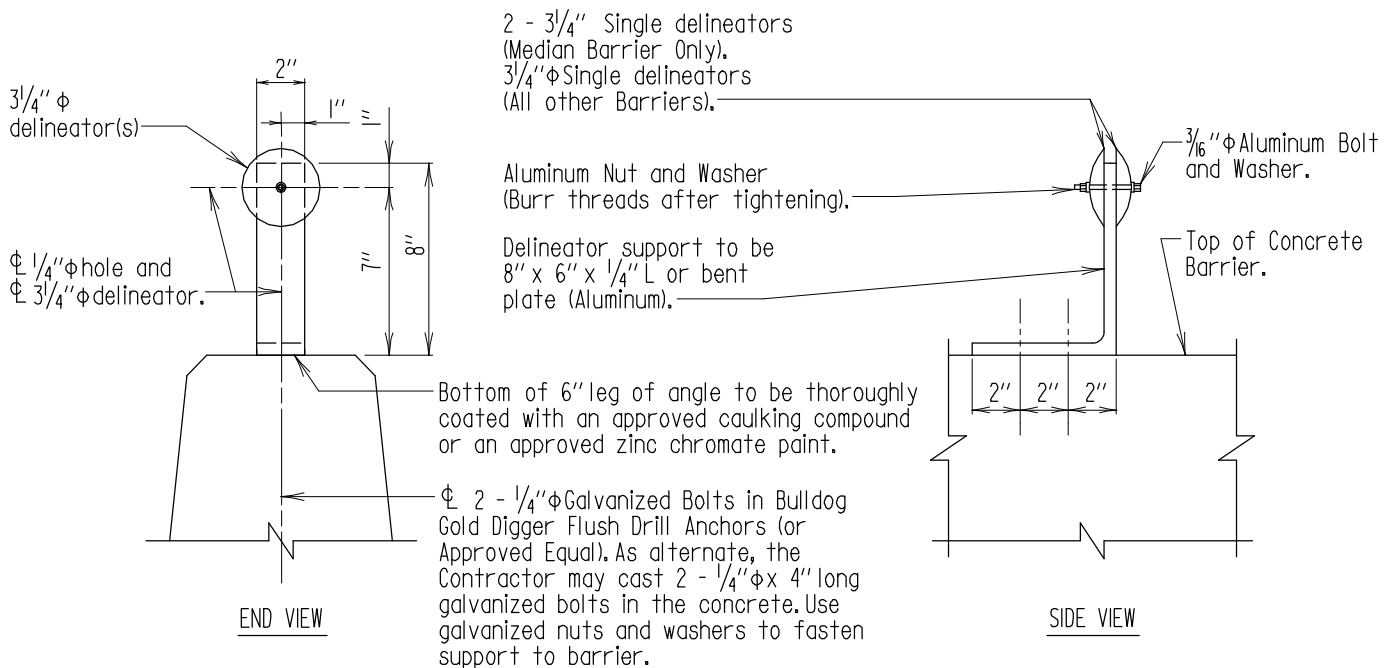
ϕ White Delineator



SINGLE FACE BARRIER

TRANSVERSE LOCATION OF DELINEATORS

Scale: 1/2" = 1'-0"



CONCRETE BARRIER DELINEATOR

Scale: 1/2" = 1'-0"

* SPACING OF DELINEATORS	
Radius of Horizontal Curve	C/C Distance Between Delineators
Less than 2000'	115'
2000' to 3000'	130'
3000' to 5000'	160'
Over 5000'	200'
Tangent Area	200'

\* Place one delineator at each end of each wall, even if wall is shorter than lengths indicated below.

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11/22/2003
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
CONCRETE BARRIER DELINEATOR
DETAIL NO. SUP-TB(MISC)-301
SHEET <u>1</u> OF <u>1</u>

SUPER TRAFFIC BARRIER