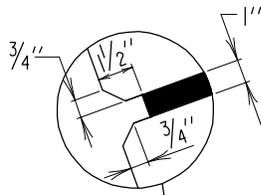


Chapter 02 - Substructure

SECTION 03

WING WALLS (SUB-WW)



Exposed face to have chamfer unless otherwise specified on the Plans.

1" Sponge type expansion joint filler material full height of key (top of footing to top of parapet). Fasten to one face with copper nails.

Reinforcing steel shall not pass through expansion joint.

PLAN
(WITHOUT SIDEWALK)
Scale: 1/2" = 1'-0"

Note:

1. For details not shown see sheet 2 of 3.
2. This joint is required when distance from joint to end of wall is 25' or greater.
3. Material in end post area shall be cut to fit shape of end post.
4. *Slanted lettering indicates notes "For Office Use Only".*
5. *Wing wall expansion joint locations shall be located within a striated panel, or edge of architectural treatment where abutment has this requirement.*

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 03-22-2006
VERSION
1.0

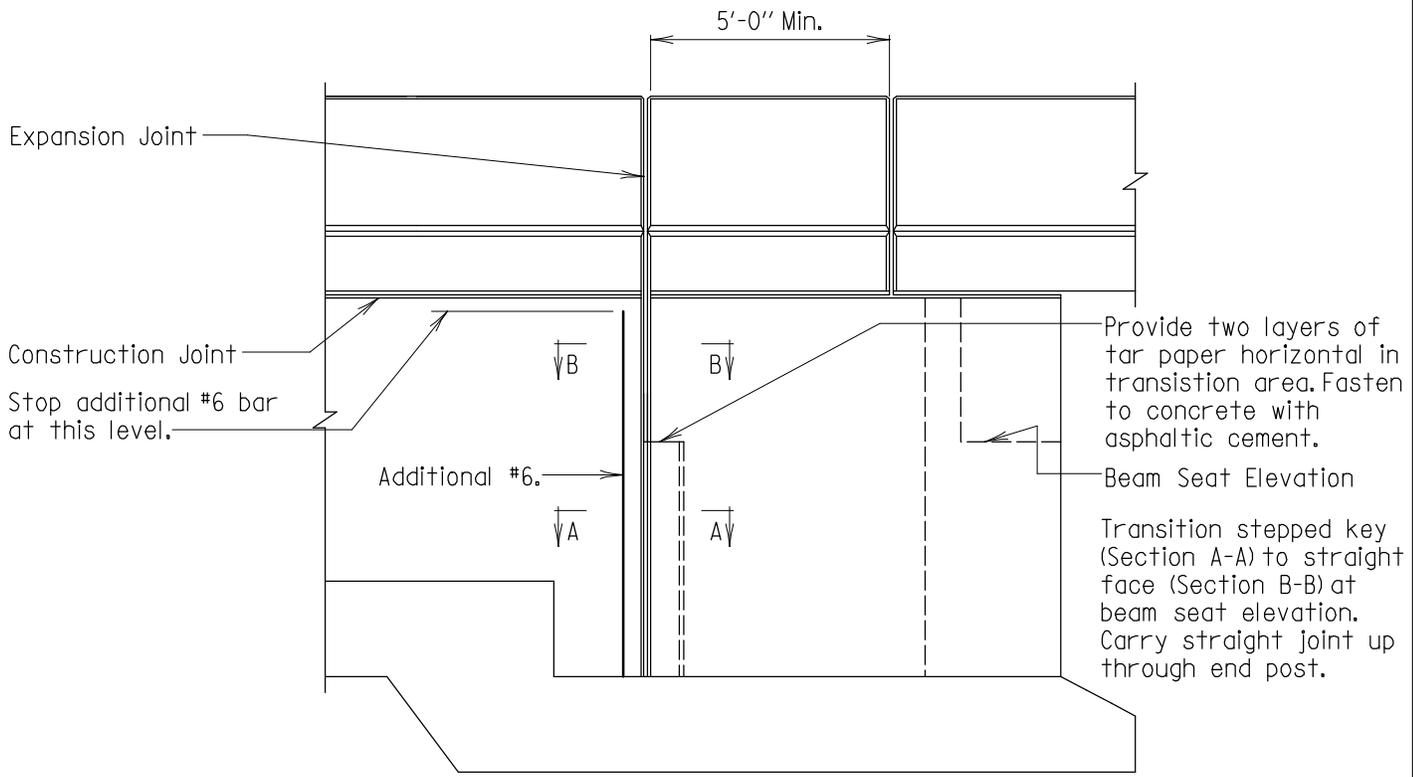
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF STRUCTURES

STEPPED EXPANSION JOINT FOR
WING WALLS AT ABUTMENTS

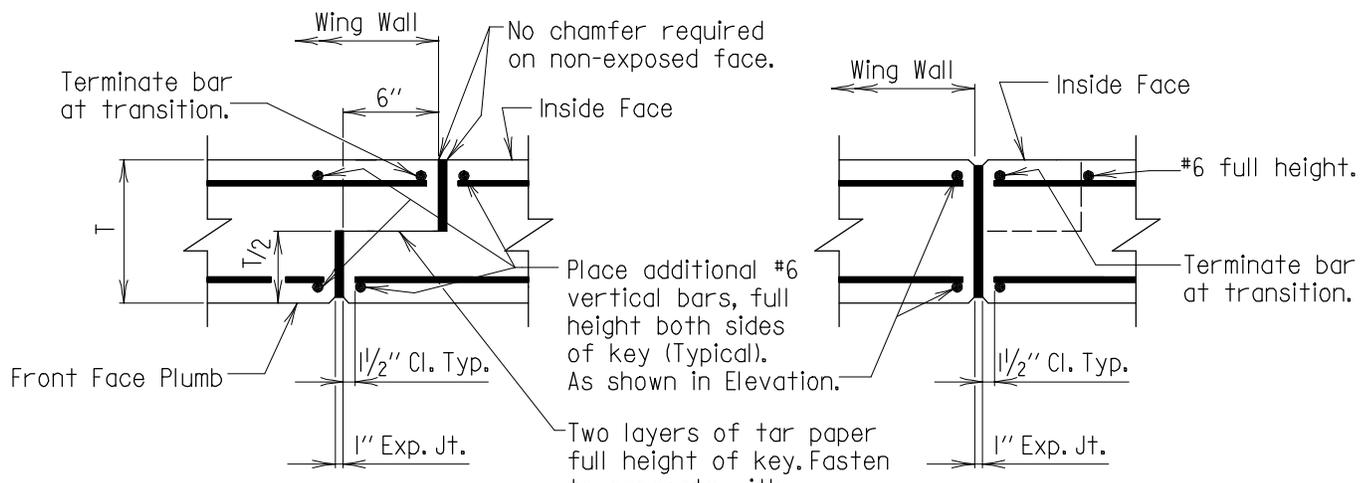
DETAIL NO. SUB-WW-101

SHEET 1 OF 3

SUBSTRUCTURE - ABUT.



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



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

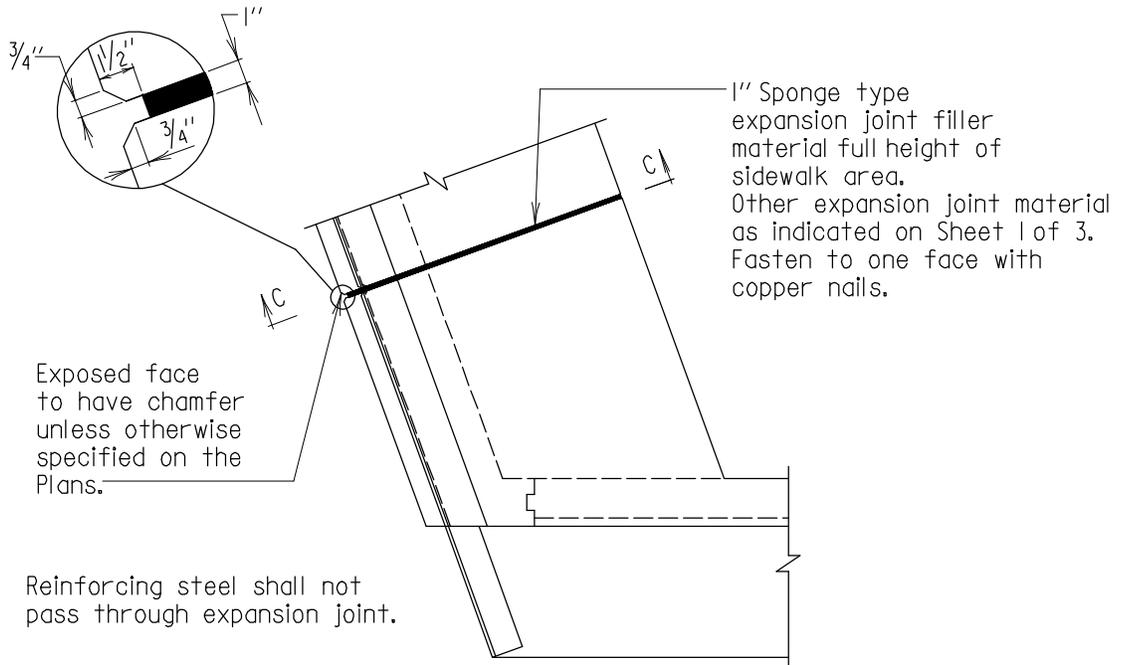
SECTION B-B
Scale: 1/2" = 1'-0"

Normal vertical steel not shown.

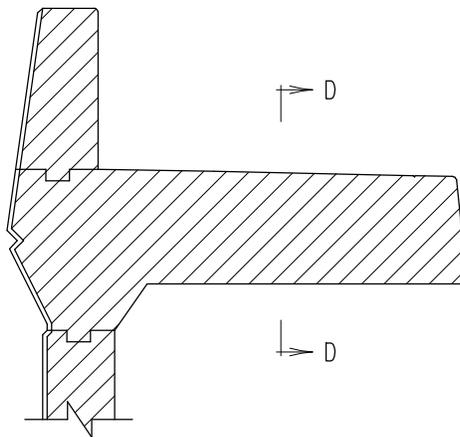
APPROVAL
<i>L.S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 09-03-2013
VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
STEPPED EXPANSION JOINT FOR WING WALLS AT ABUTMENTS
DETAIL NO. SUB-WW-101
SHEET 2 OF 3

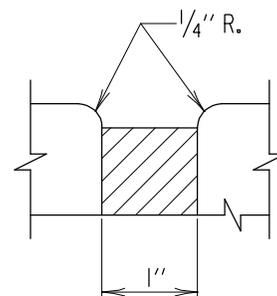
SUBSTRUCTURE - ABUT.



PLAN
(WITH SIDEWALK)
Scale: $\frac{1}{4}'' = 1'-0''$



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



SECTION D-D
Scale: $\frac{1}{2}'' = 1''$

See notes on Sheet 1 of 3.

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 03-22-2006
VERSION
1.0

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

STEPPED EXPANSION JOINT FOR
WING WALLS AT ABUTMENTS

DETAIL NO. SUB-WW-101

SHEET 3 OF 3

SUBSTRUCTURE - ABUT.

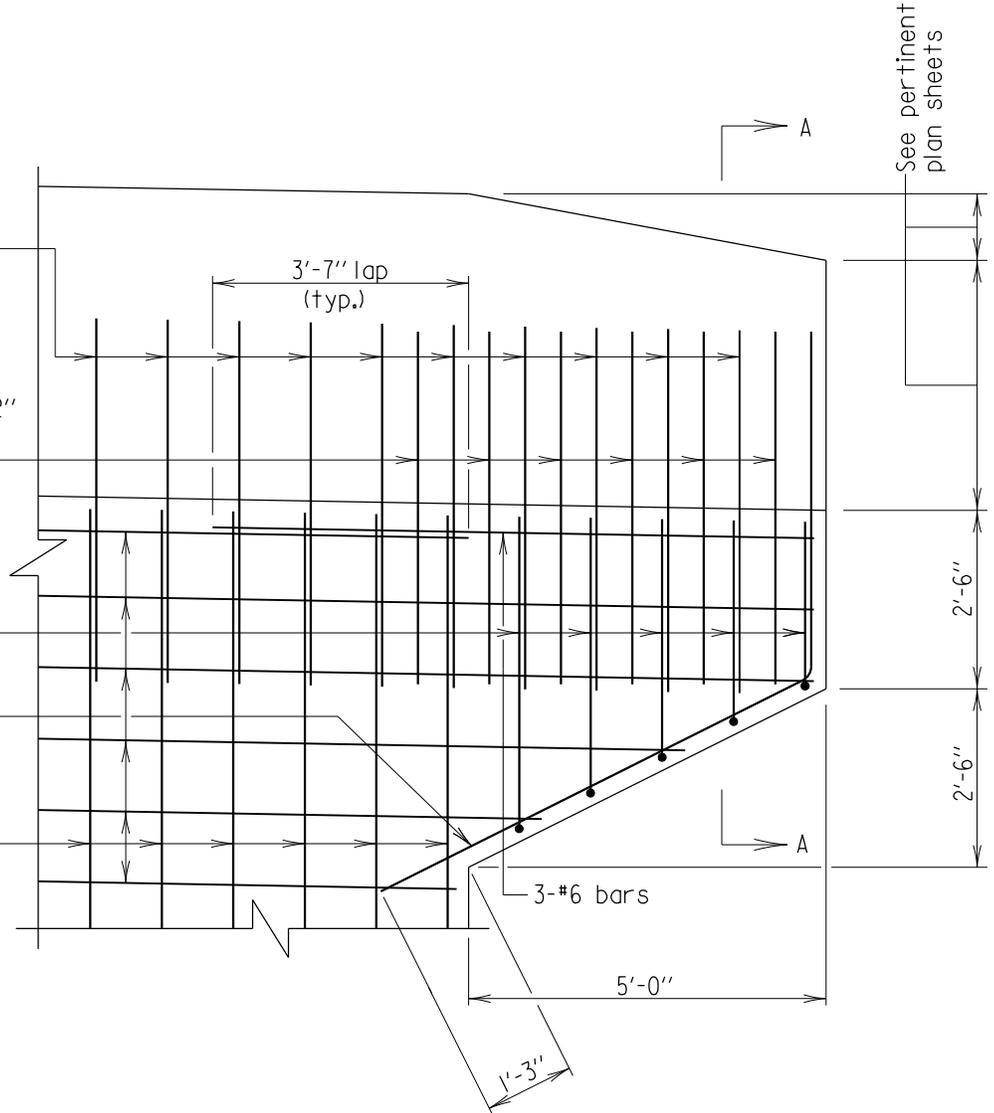
Normal #6 dowels for end posts (epoxy coated)

Additional #6 dowels only in approach end of end posts (epoxy coated). These additional #6 dowels should extend in area 6'-2" from end of endpost, see endpost details

5-#5 \sqcup bars @ 1'-0" c/c

3-#6's \swarrow to follow slope of overhang

Normal wing wall reinforcement



ELEVATION

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

Note:
For endpost configuration, refer to wing wall and endpost plans.

Note:
For Section A-A see sheet nos. 2 & 3 of 3.

Notes to Designer:

1. For bridges without a median barrier, use the approach end detail on all 4 end posts.
2. Use cantilever section when utilizing an existing foundation (i.e. deck replacement or superstructure replacements only.)

APPROVAL
<i>Gen. C. D. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 08/11/2017
VERSION
2.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
TYPICAL WING WALL CANTILEVER AT END OF END POSTS REINFORCEMENT DETAILS
DETAIL NO. SUB-WW-201
SHEET <u>1</u> OF <u>3</u>

SUBSTRUCTURE - ABUT.

For exact configuration of parapet and conduits, see the typical bridge section

Normal #6 dowels 5'-0" long for end post include additional #6 dowels 5'-0" long in 6'-2" approach end of end posts (epoxy coated)

Finished roadway

2 - ply waterproofing membrane

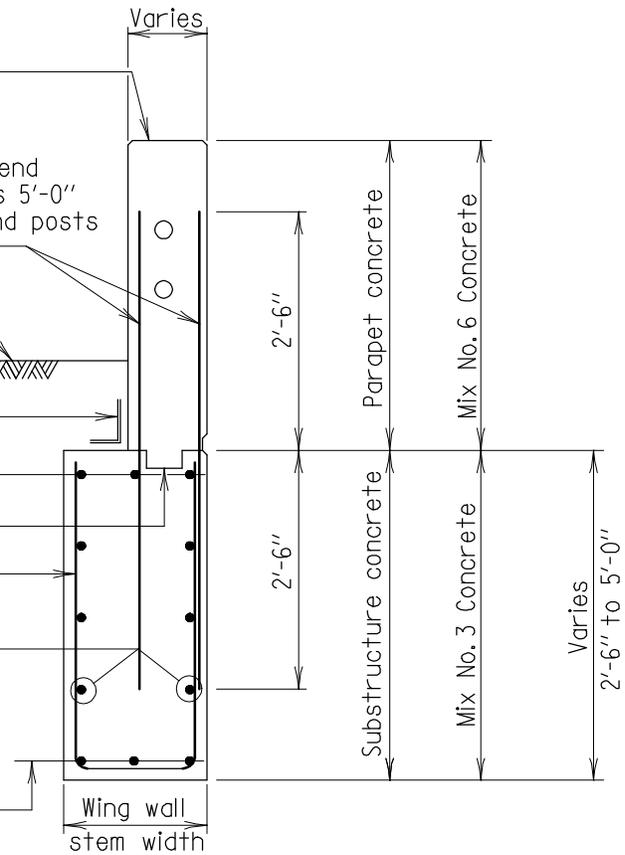
3-#6 bars

2" x 4" construction key

#5 \square bars @ 1'-0" c/c

Normal wing wall reinforcement (typ.)

3-#6's @ 1'-0" max. c/c to follow slope of overhang



SECTION A-A - APPROACH END

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

Note:
For endpost configuration, refer to wing wall and endpost plans.

APPROVAL
<i>Gene C. [Signature]</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 08/11/2017
VERSION
2.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES TYPICAL WING WALL CANTILEVER AT END OF END POST REINFORCEMENT DETAILS
DETAIL NO. SUB-WW-201
SHEET <u>2</u> OF <u>3</u>

SUBSTRUCTURE - ABUT.

For exact configuration of parapet and conduits, see the typical bridge section

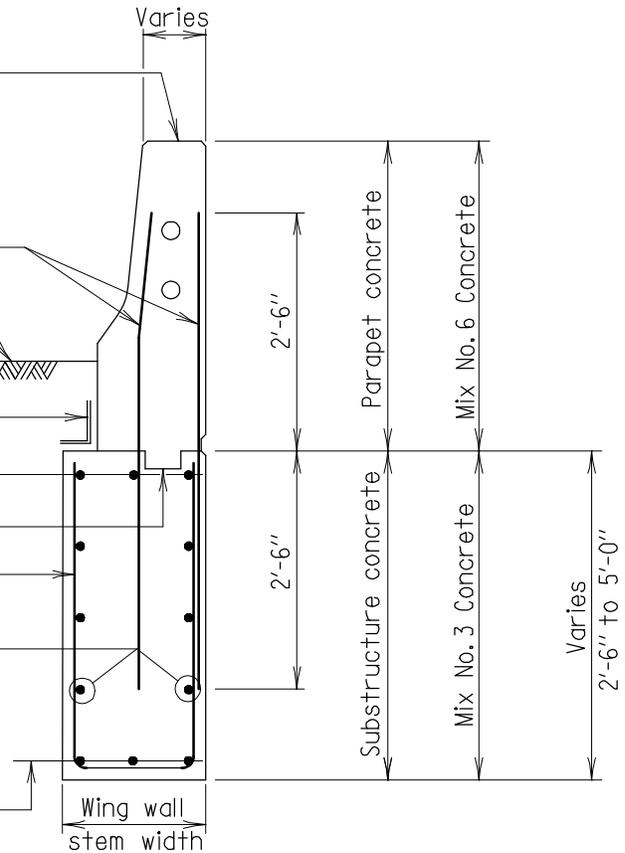
Normal #6 dowels 5'-0" long for end post (epoxy coated)

Finished roadway
2 - ply waterproofing membrane

3-#6 bars
2" x 4" construction key
#5 \square bars @ 1'-0" c/c

Normal wing wall reinforcement (typ.)

3-#6's @ 1'-0" max. c/c to follow slope of overhang



SECTION A-A - TRAIL END

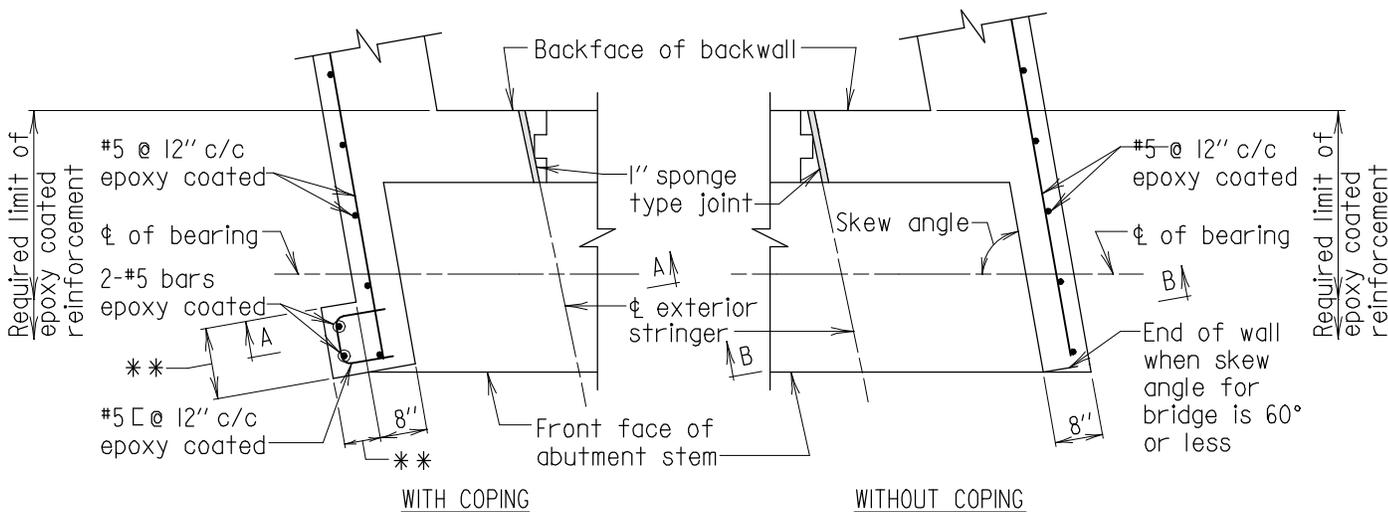
Scale: 1/2" = 1'-0"

Note:
For endpost configuration, refer to wing wall and endpost plans.

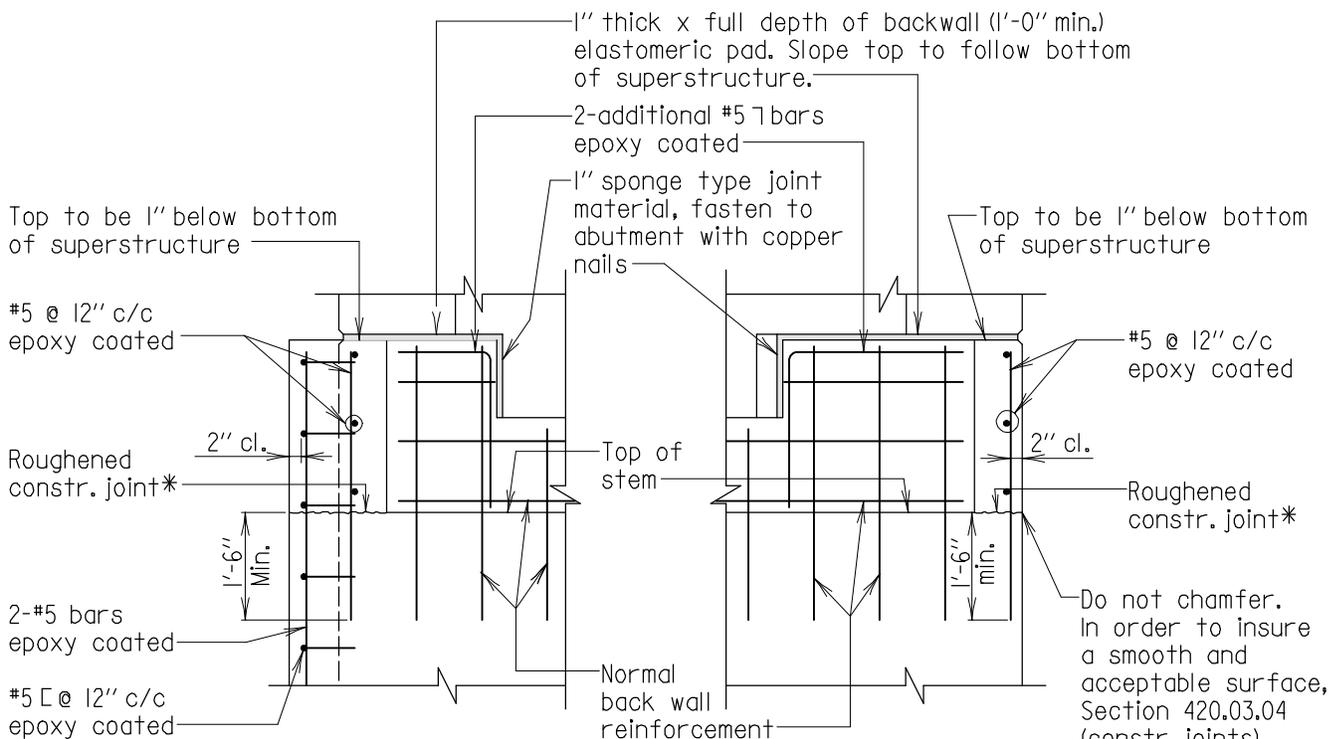
APPROVAL	
<i>Ben C. Dwyer</i>	DIRECTOR OFFICE OF STRUCTURES
DATE: 08/11/2017	
VERSION	
2.0	

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
TYPICAL WING WALL CANTILEVER AT END OF END POST REINFORCEMENT DETAILS	
DETAIL NO. SUB-WW-201	SHEET <u>3</u> OF <u>3</u>

SUBSTRUCTURE - ABUT.



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



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

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

Note:

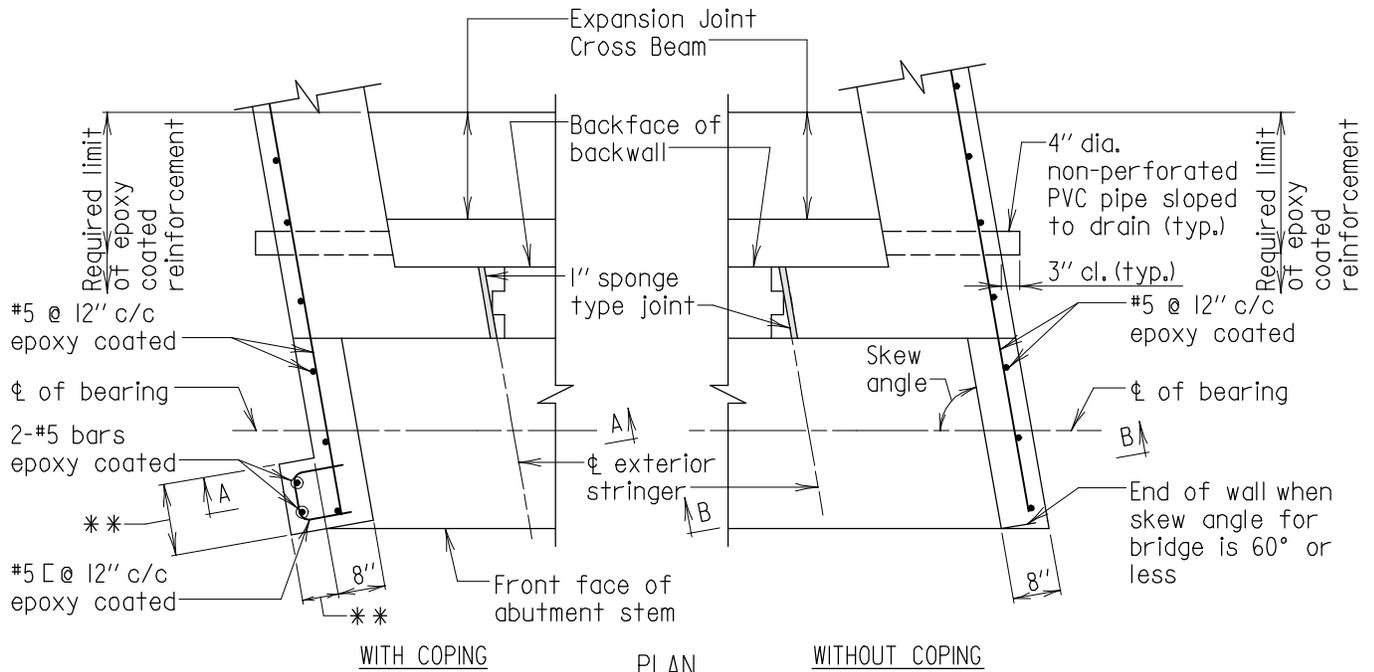
* If form liners or other aesthetic treatment is used on the outside face of the cheekwall, the cheekwall shall be cast monolithically with the abutment stem.

** For location and size of coping and size of cheekwall see Plans.

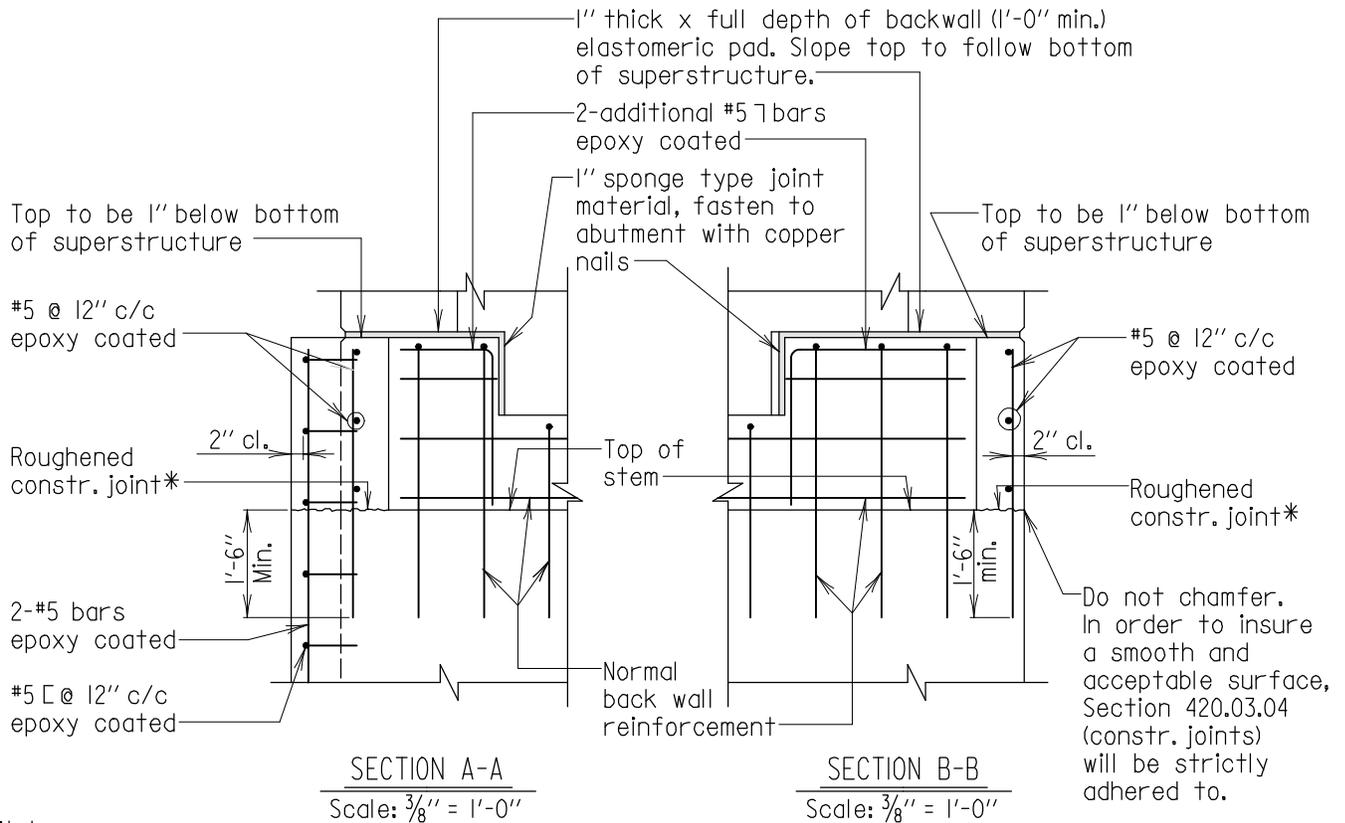
APPROVAL	
<i>L.S. Friedman</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 03-29-2012	
VERSION	
1.0	

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES	
CHEEK WALL AT BRIDGE ABUTMENT WITH FIXED BEARINGS OR EXPANSION BEARINGS WITH LENGTH CONTRIBUTING TO EXPANSION ≤ 70 FT.	
DETAIL NO. SUB-WW-301	SHEET <u> </u> OF <u> </u>

SUBSTRUCTURE - ABUT.



WITH COPING
 PLAN
 WITHOUT COPING
 Scale: $\frac{3}{8}'' = 1'-0''$



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

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

Note:

* If form liners or other aesthetic treatment is used on the outside face of the cheekwall, the cheekwall shall be cast monolithically with the abutment stem.

** For location and size of coping and size of cheekwall see Plans.

APPROVAL	
<i>L.S. Friedman</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 11-15-2013	
VERSION	
1.0	

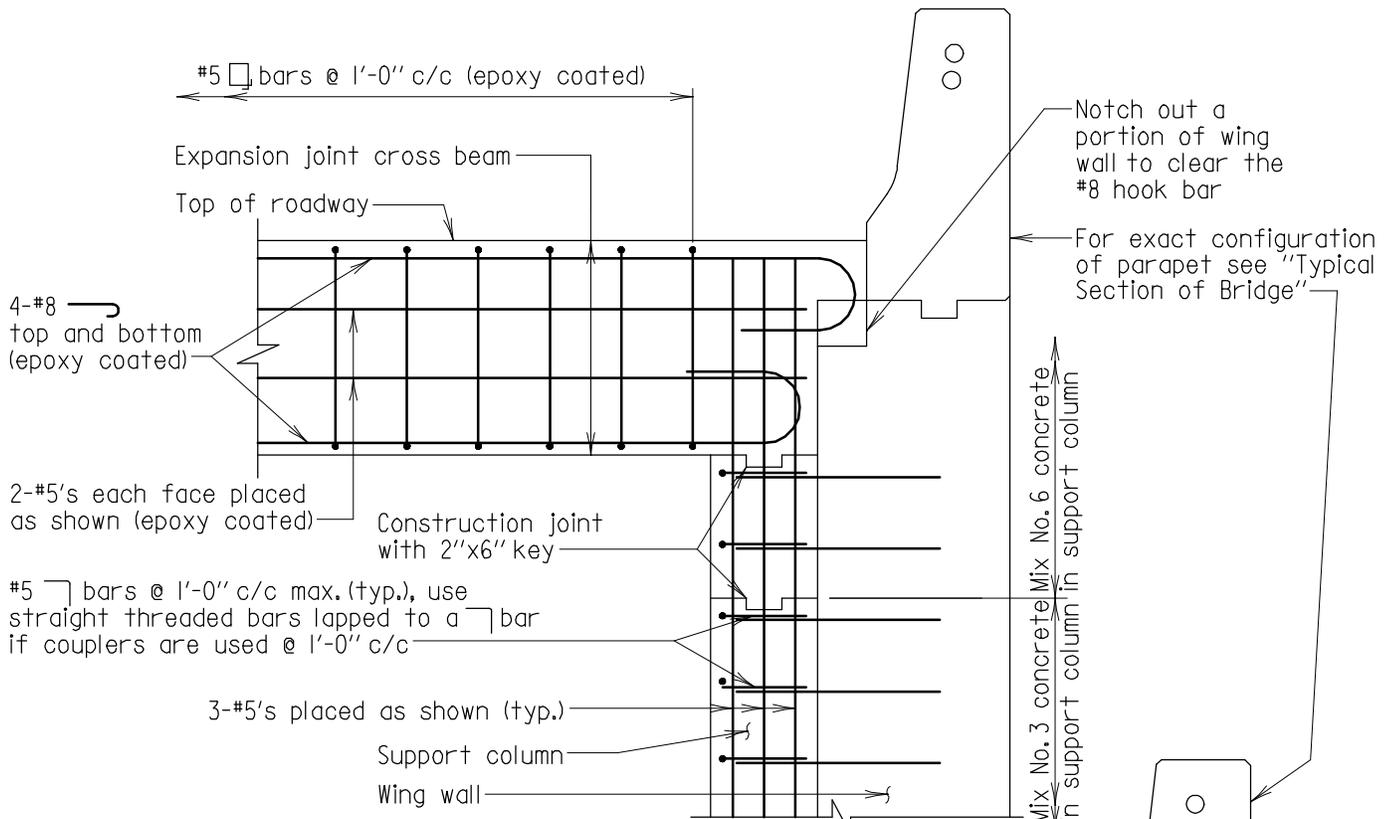
STATE OF MARYLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 OFFICE OF STRUCTURES

CHEEK WALL AT BRIDGE ABUTMENT WITH
 EXPANSION BEARINGS WITH LENGTH CONTRIBUTING
 TO EXPANSION > 70 FT.

DETAIL NO. SUB-WW-401

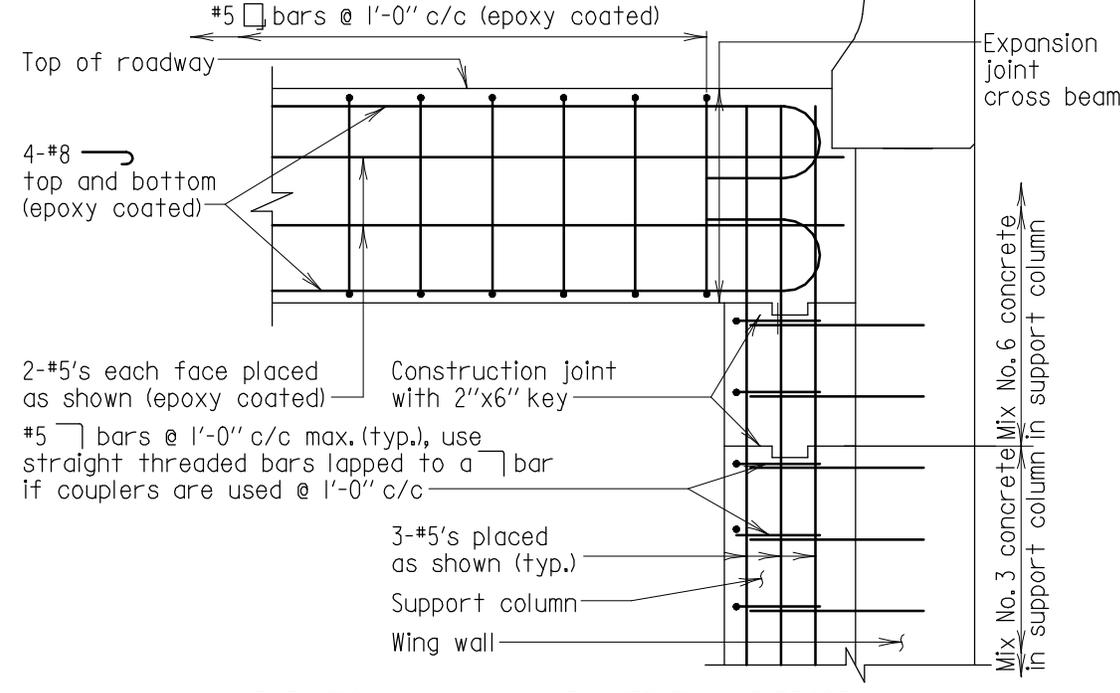
SHEET OF

SUBSTRUCTURE - ABUT.



ELEVATION - WING WALL THICKER THAN ENDPOST

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



ELEVATION - WING WALL THINNER THAN ENDPOST

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

Note:
Reinforcing bars in wing wall and parapet are not shown for clarity.

APPROVAL
<i>L.S. Friedman</i> DIRECTOR OFFICE OF STRUCTURES
DATE: 11-15-2013

VERSION
1.0

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF STRUCTURES
EXPANSION JOINT CROSS BEAM CONNECTION AT WING WALLS PARALLEL TO CENTER LINE OF ROADWAY
DETAIL NO. SUB-WW-402
SHEET <u> </u> OF <u> </u>

SUBSTRUCTURE - ABUT.