Chapter 02 - Substructure

SECTION 03

WING WALLS (SUB-WW)
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.

Exterior face to have chamfer unless otherwise specified on the plans.

Reinforcing steel shall not pass through expansion joint.

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.

PLAN
(WITHOUT SIDEWALK)
Scales: \( \frac{1}{2}'' = 1'-0'' \)
Expansion Joint

Construction Joint
Stop additional #6 bar at this level.

Additional #6.

Beam Seat Elevation
Transition stepped key (Section A-A) to straight face (Section B-B) at beam seat elevation. Carry straight joint up through end post.

Provide two layers of tar paper horizontal in transition area. Fasten to concrete with asphaltic cement.

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

ELEVATION

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

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

No chamfer required on non-exposed face.

Two layers of tar paper full height of key. Fasten to concrete with asphaltic cement.

Normal vertical steel not shown.

V-3.13

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
OFFICE OF STRUCTURES

STATE HIGHWAY ADMINISTRATION
OFFICE OF STRUCTURES

STEPPED EXPANSION JOINT FOR WING WALLS AT ABUTMENTS

DETAIL NO. SUB-WW-101

SHEET 2 OF 3
Expansion joint filler
Fasten to one face with copper nails.

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

Reinforcing steel shall not pass through expansion joint.

**PLAN (WITH SIDEWALK)**
Scale: 1/4" = 1'-0"

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

**SECTION D-D**
Scale: 1/2" = 1"

See notes on Sheet 1 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).

Note: For Section A-A see sheet nos. 2 & 3 of 3.
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 □ bars @ 1'-0" c/c

Normal wing wall reinforcement (typ.)

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

Wing wall stem width

Varies

Parapect concrete

Mix No. 6 Concrete

Mix No. 3 Concrete

0.5" plain - 2

Section A-A - Approach End

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

Note:
For endpost configuration, refer to wing wall and endpost plans.
Note:
For endpost configuration, refer to wing wall and endpost plans.
CHEEK WALL AT BRIDGE ABUTMENT WITH FIXED BEARINGS OR EXPANSION BEARINGS WITH LENGTH CONTRIBUTING TO EXPANSION ≤ 70 FT.

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

Note:
* If formliners 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.
Note:
* If formliners 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.
Expansion joint cross beam

Top of roadway

4-#8

top and bottom
(epoxy coated)

2-#5's each face placed as shown (epoxy coated)

#5 bars @ 1'-0" c/c max., typ., use straight threaded bars lapped to a bar if couplers are used @ 1'-0" c/c.

3-#5's placed as shown (typ.)

Support column

Wing wall

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

For exact configuration of parapet see "Typical Section of Bridge".

SUBSTRUCTURE - ABUT.

ELEVATION - WING WALL THICKER THAN ENDPOST

Scale: \( \frac{\frac{3}{8}}{} = 1'-0" \)

4-#8

top and bottom
(epoxy coated)

2-#5's each face placed as shown (epoxy coated)

#5 bars @ 1'-0" c/c max., typ., use straight threaded bars lapped to a bar if couplers are used @ 1'-0" c/c.

3-#5's placed as shown (typ.)

Support column

Wing wall

ELEVATION - WING WALL THINNER THAN ENDPOST

Scale: \( \frac{\frac{3}{8}}{} = 1'-0" \)