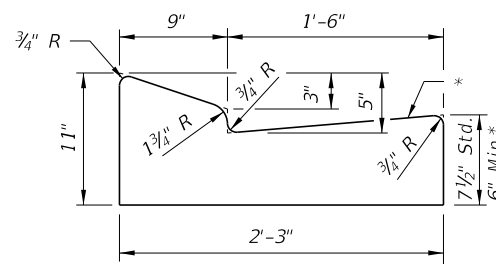


VALLEY GUTTER

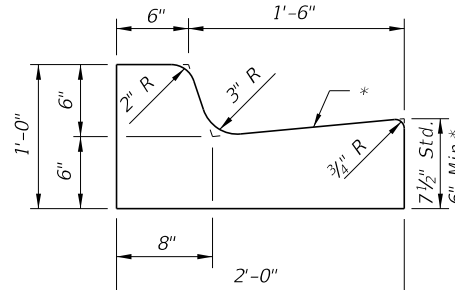
* When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement. The thickness of the lip shall be 6", unless otherwise shown on plans.

▣ Rotate entire section so that gutter cross slope matches slope of adjacent circulating roadway pavement.

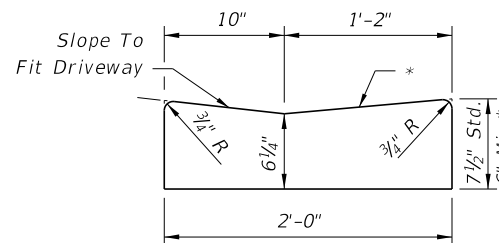
For use adjacent to concrete or flexible pavement. For details depicting usage adjacent to flexible pavement, see Sheet 2. Expansion joint, preformed joint filler and joint seal are required between curb & gutter and concrete pavement only, see Sheet 2.



TYPE E

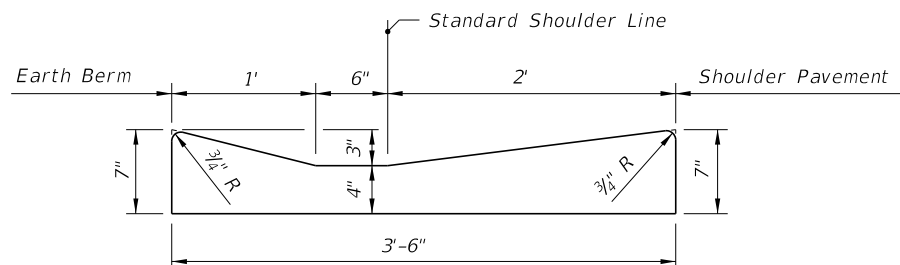


TYPE F

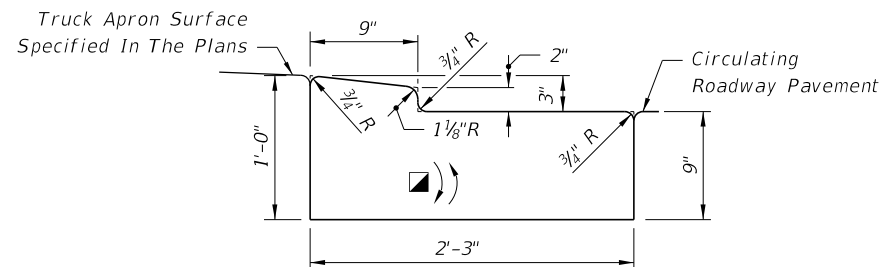


Note: To be paid for as parent curb.

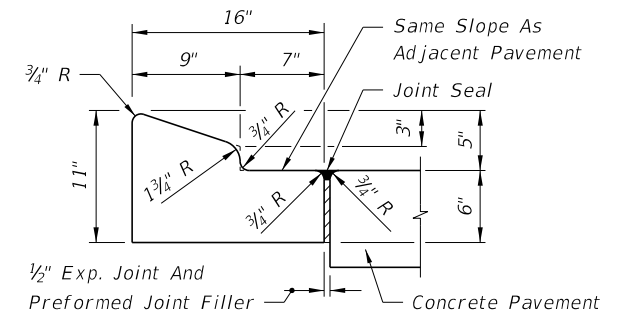
DROP CURB



SHOULDER GUTTER

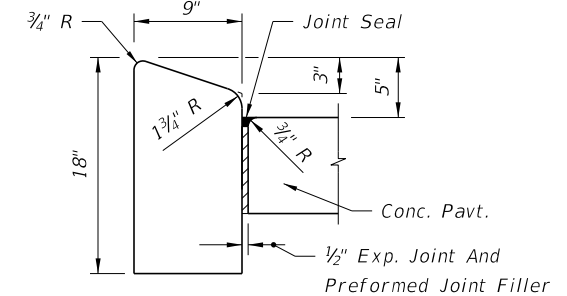


TRAFFIC BEARING SECTION FOR USE IN ROUNDABOUT CENTRAL ISLAND CONSTRUCTION TYPE RA

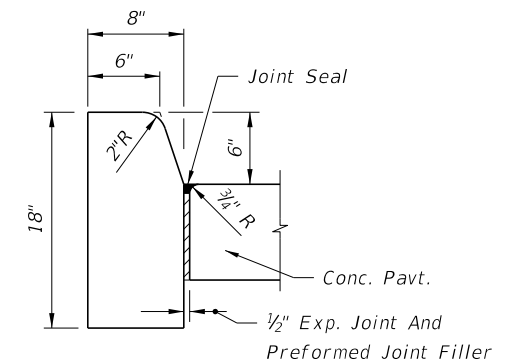


TYPE A

For details depicting usage adjacent to flexible pavement, see diagram right.



TYPE B



TYPE D

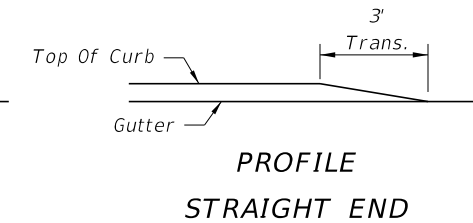
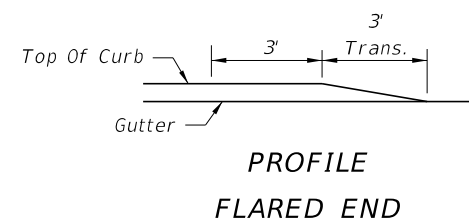
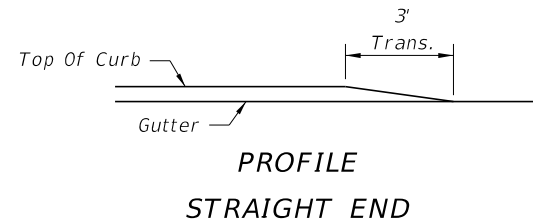
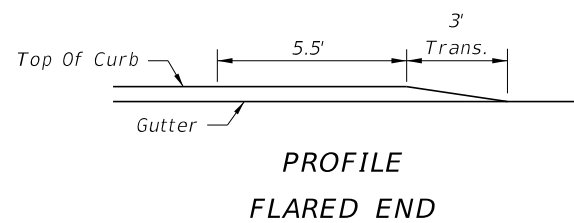
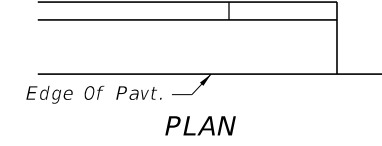
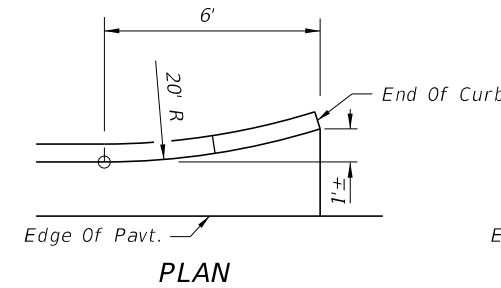
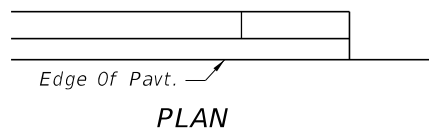
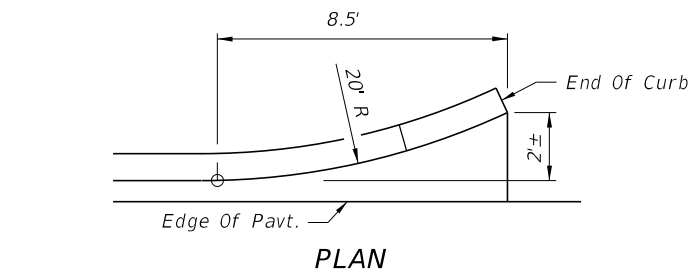
Note: For use adjacent to concrete or flexible pavement, concrete shown. Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 2.

CONCRETE CURB

CONCRETE CURB AND GUTTER

10/12/2016 9:30:14 AM

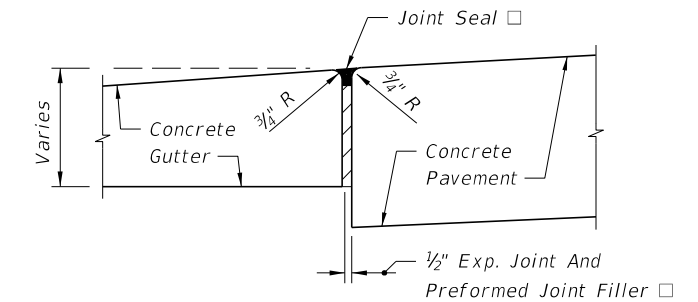
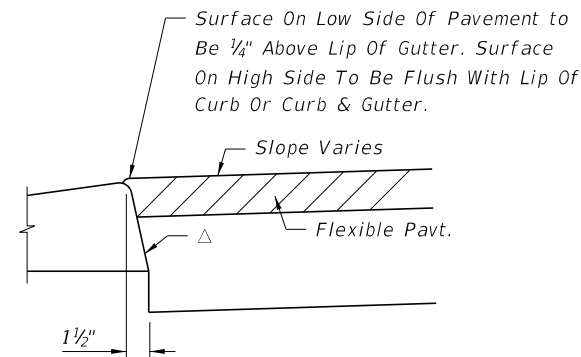
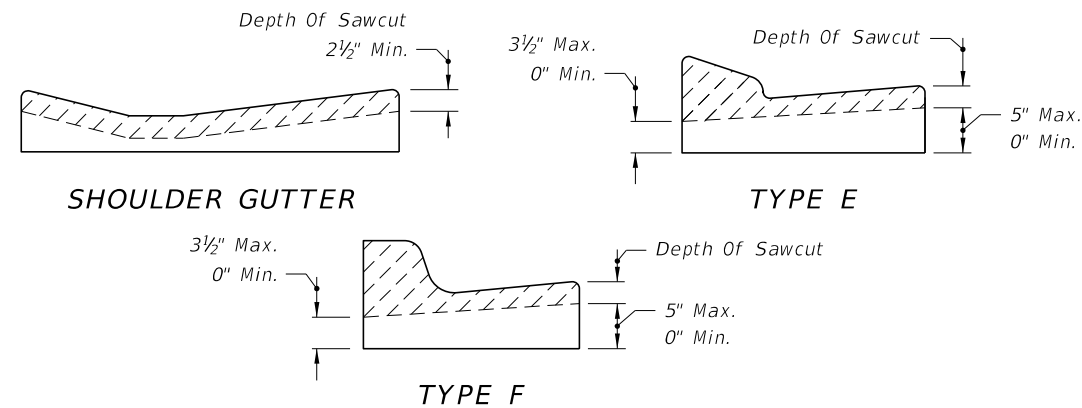
LAST REVISION 07/01/00	DESCRIPTION:
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CURB TYPE A

CURB AND GUTTER ENDINGS

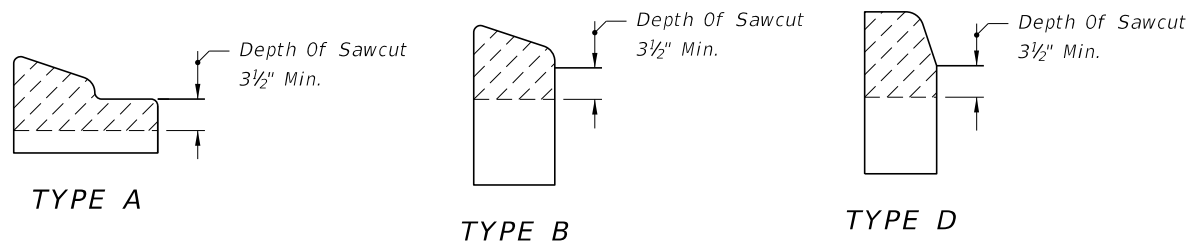
CURB AND GUTTER TYPES E & F



□ Applies to both high and low sides of pavement, low side shown.

EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT

CONTRACTION JOINT IN CURB AND GUTTER



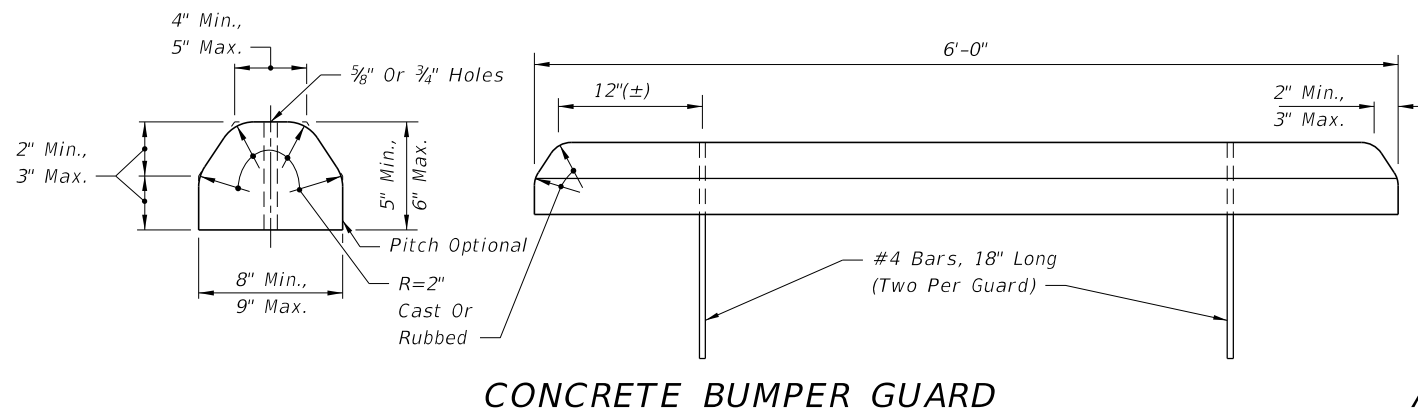
CONTRACTION JOINT IN CURB

CURB AND GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT

△ Applies to both high and low sides of pavement, low side shown.
Applies to shoulder gutter only where adjoining traffic lanes.

GENERAL NOTES

1. For curb, gutter and curb & gutter provide 1/8" - 1/4" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers. Curb, gutter and curb & gutter expansion joints shall be located in accordance with Section 520 of the Standard Specifications.
2. Ends of Curbs Types B and D shall transition from full to zero heights in 3'.



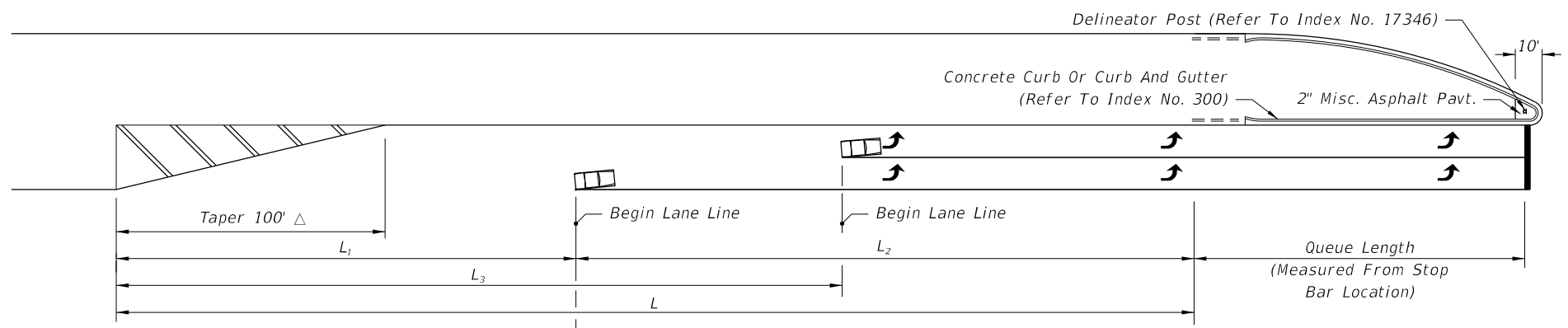
CONCRETE BUMPER GUARD

ASPHALTIC CONCRETE CURB

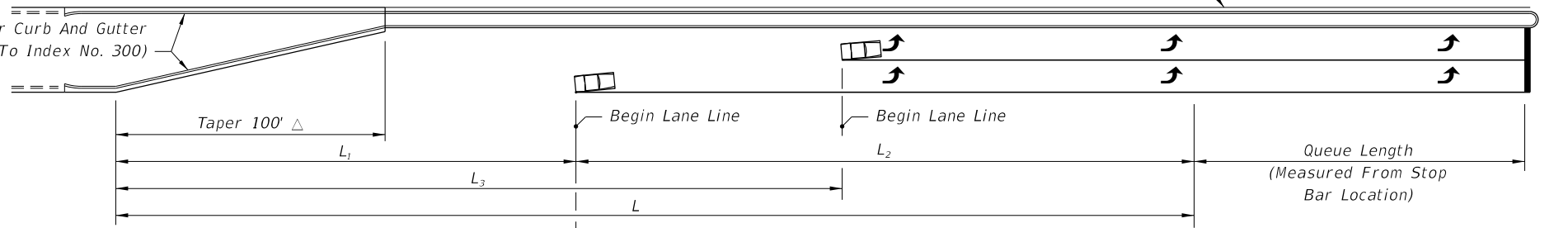
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LAST REVISION 07/01/00	REVISION	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	CURB & CURB AND GUTTER	INDEX NO. 300	SHEET NO. 2 of 2
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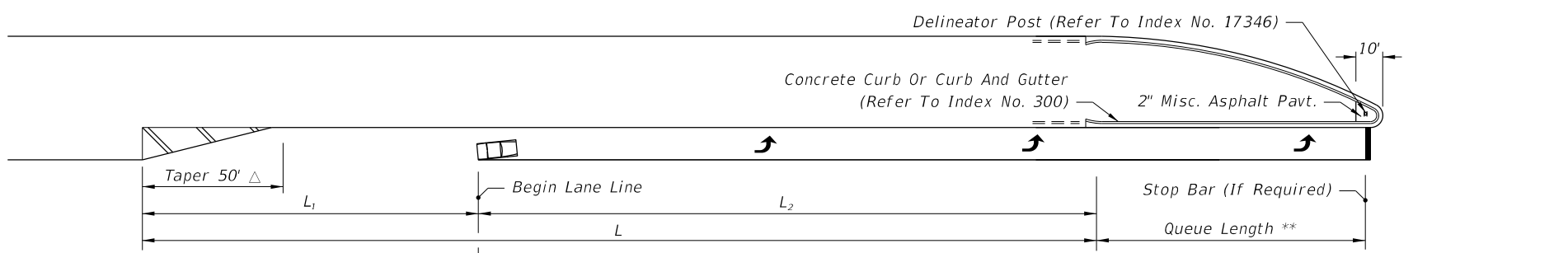
TURN LANES • CURBED AND UNCURBED MEDIANS								
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L_1	URBAN CONDITIONS			RURAL CONDITIONS		
			Brake To Stop Distance L_2	Total Decel. Distance L	Clearance Distance L_3	Brake To Stop Distance L_2	Total Decel. Distance L	Clearance Distance L_3
35	25	70'	75'	145'	110'	—	—	—
40	30	80'	75'	155'	120'	—	—	—
45	35	85'	100'	185'	135'	—	—	—
50	40/44	105'	135'	240'	160'	185'	290'	160'
55	48	125'	—	—	—	225'	350'	195'
60	52	145'	—	—	—	260'	405'	230'
65	55	170'	—	—	—	290'	460'	270'



FLUSH AND/OR CURBED SEPARATION
 Brakes Applied After Turning Vehicle Clears Through Lane; Entry Speed:
 10 mph Below Design Speed For Urban Condition
 Average Running Speed For Rural Condition

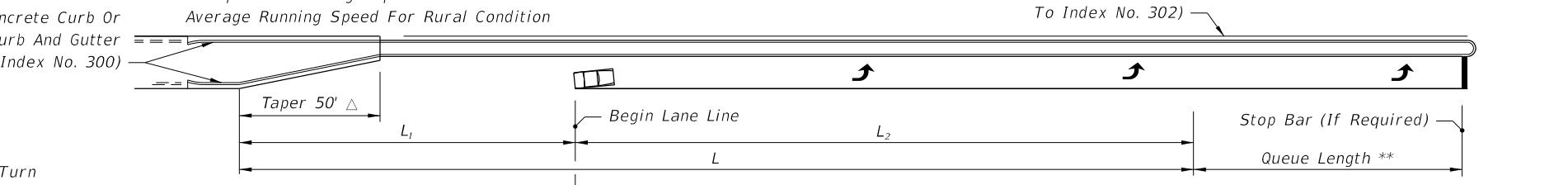


RAISED SEPARATION
 Brakes Applied After Turning Vehicle Clears Through Lane; Entry Speed:
 10 mph Below Design Speed For Urban Condition
 Average Running Speed For Rural Condition



FLUSH AND/OR CURBED SEPARATION
 Brakes Applied After Turning Vehicle Clears Through Lane; Entry Speed:
 10 mph Below Design Speed For Urban Condition
 Average Running Speed For Rural Condition

** Queue Length Is Measured From The Median Nose Radial Point Or, When A Stop Bar Is Required, From The Stop Bar.



RAISED SEPARATION
 Brakes Applied After Turning Vehicle Clears Through Lane; Entry Speed:
 10 mph Below Design Speed For Urban Condition
 Average Running Speed For Rural Condition

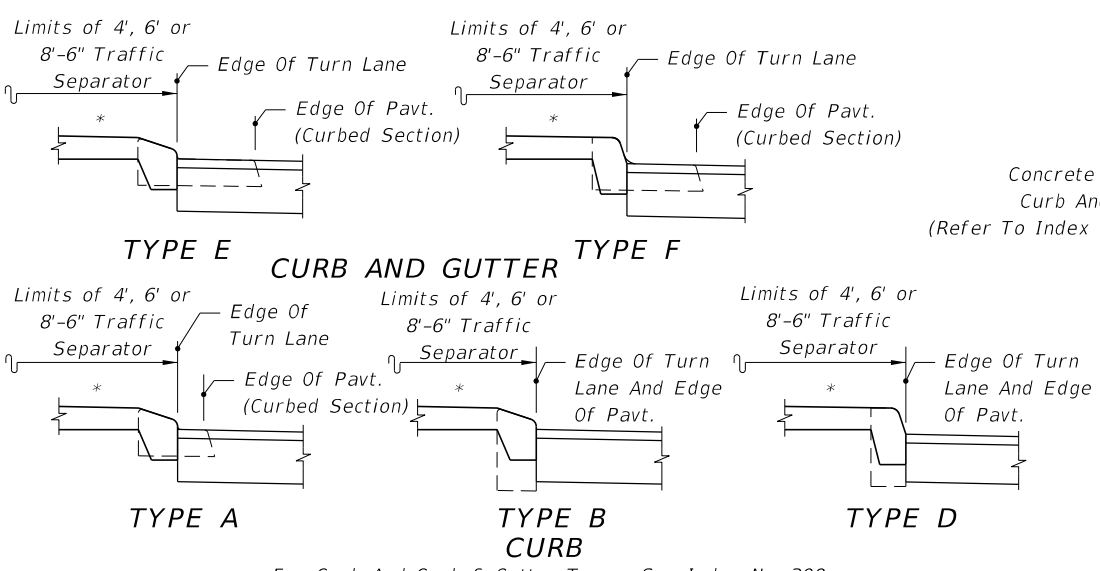
Δ The length of taper may be increased to L_1 for single left turns and L_3 for double left turns when:
 a. Left turn queue vehicles are adequately provided for within the design queue length.
 b. Through vehicle queues will not block access to left turn lane.
 c. Approved by District Design Engineer.

DESIGN NOTES

- Basis for turn lane configurations:
 - Informed Driver.
 - Stop condition (With Or Without Stop Control).
 - Wet Pavement.
 - Reaction preceding entry point.
 - Minimum braking distance for urban conditions.
 - 75' min. for L_2 .
 - Comfortable deceleration rates for rural conditions (AASHTO 2001 threshold rate of 11.2 ft./s²).

GENERAL NOTES

- The plan views shown are for turn lane taper shapes and dimensional purposes only, they do not prescribe the use of curb, curb and gutter, shoulders nor separators specifically to either rural or urban conditions.
- Total deceleration distances must not be reduced except where lesser values are imposed by unrelocatable control points.
- Right turn lane tapers and distances identical to left turn lanes under stop control conditions. Right turn lane tapers and/or distances are site specific under free flow or yield conditions.
- These left turn configurations apply to continuous left turn lanes only where specifically called for in the plans.
- For pavement markings see Index No. 17346.

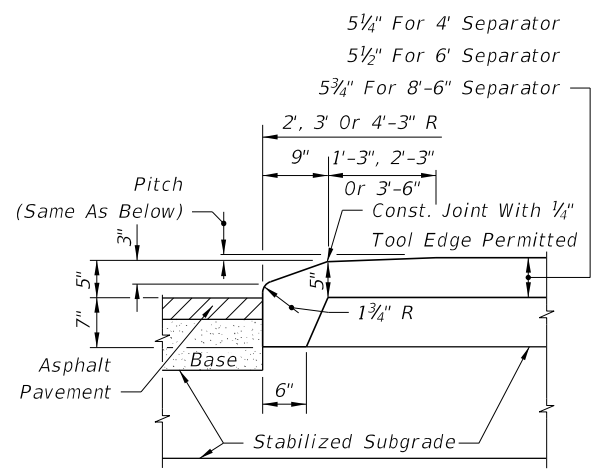


For Curb And Curb & Gutter Types, See Index No. 300
 * Option I Separators Shown (Refer To Index No. 302)

MEDIAN CURB AND TRAFFIC SEPARATOR JUNCTURE DETAILS

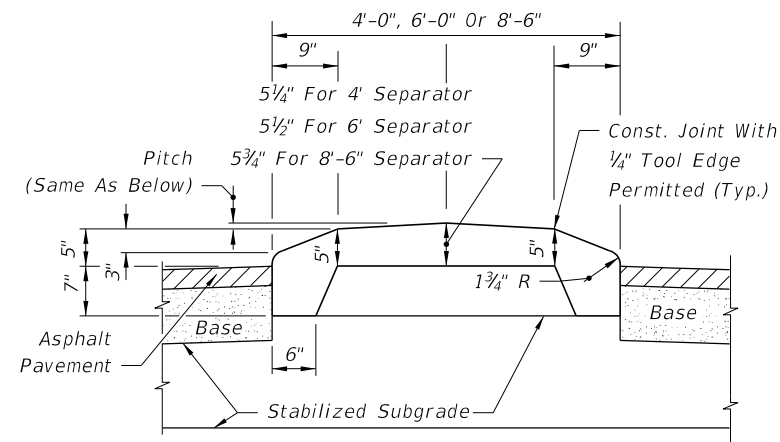
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LAST REVISION 07/01/05	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	TURN LANES	INDEX NO. 301	SHEET NO. 1 of 1
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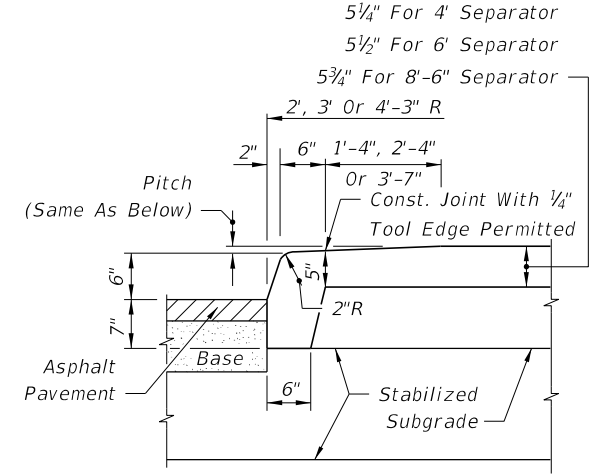


LONGITUDINAL SECTION (NOSE)

OPTION I

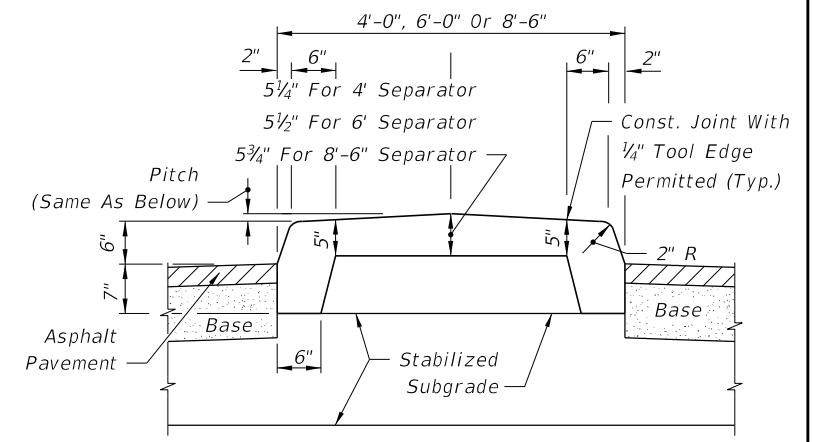


TRANSVERSE SECTION

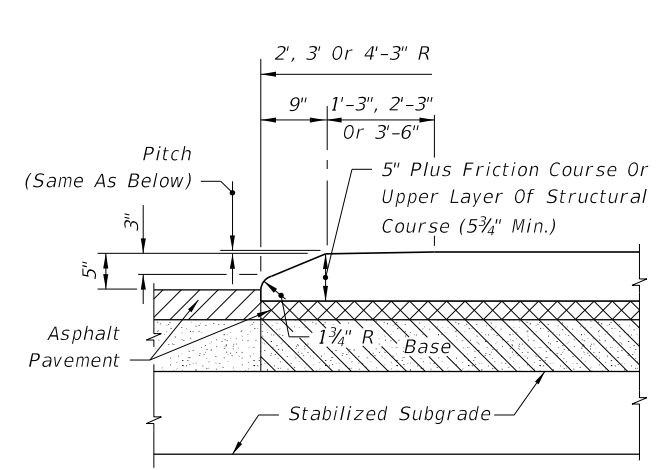


LONGITUDINAL SECTION (NOSE)

OPTION I

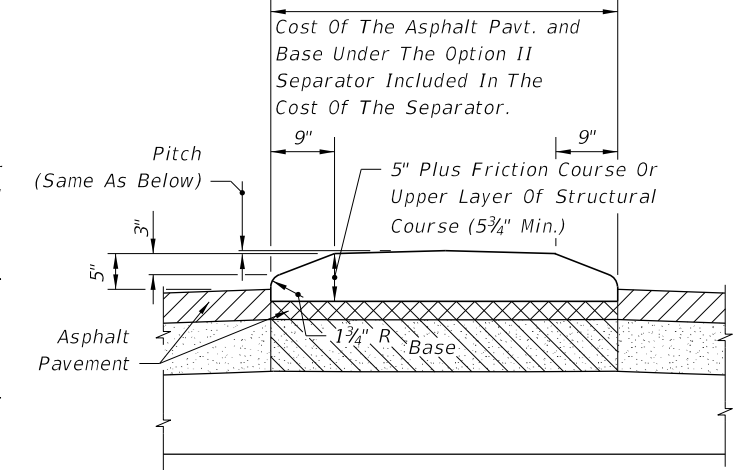


TRANSVERSE SECTION



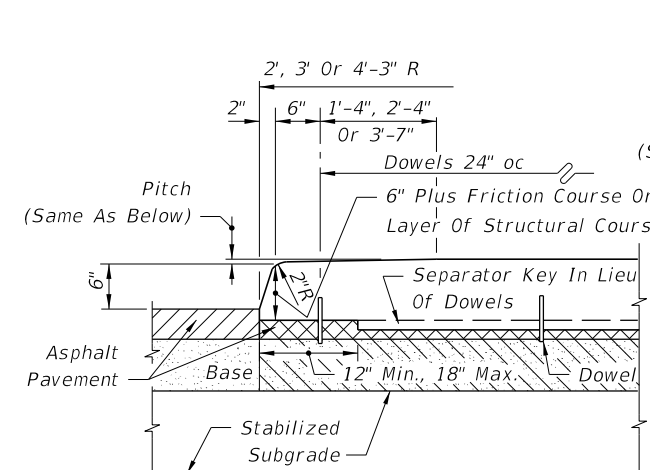
LONGITUDINAL SECTION (NOSE)

OPTION II



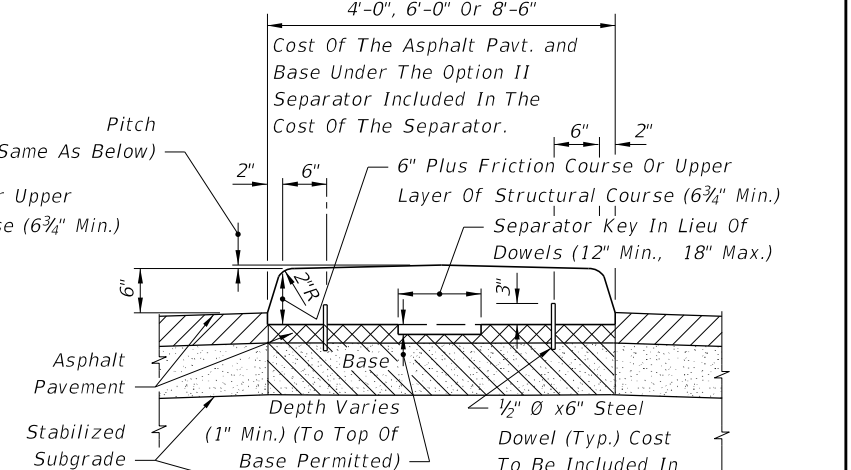
TRANSVERSE SECTION

TYPE I CONCRETE TRAFFIC SEPARATOR



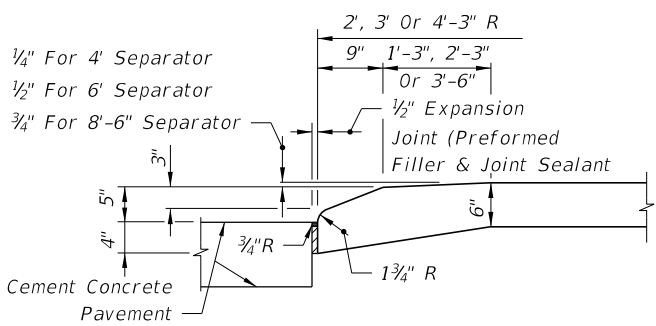
LONGITUDINAL SECTION (NOSE)

OPTION II

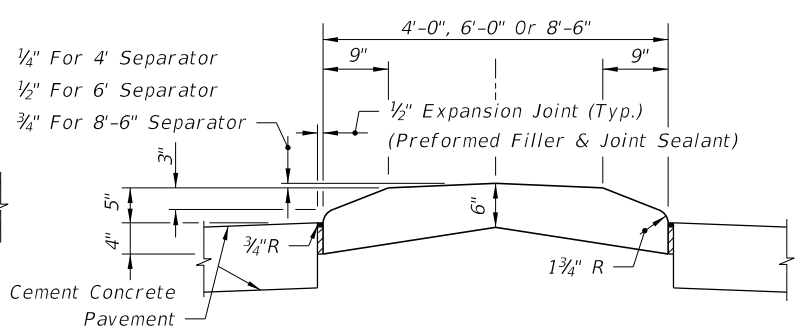


TRANSVERSE SECTION

TYPE IV CONCRETE TRAFFIC SEPARATOR

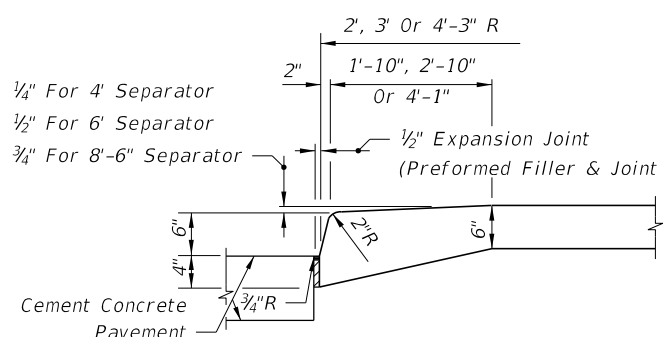


LONGITUDINAL SECTION (NOSE)

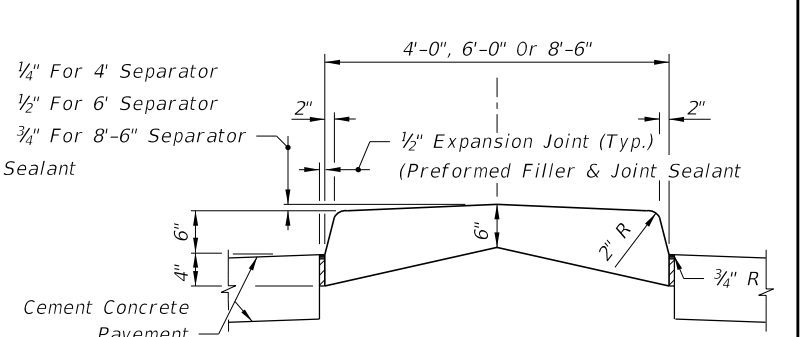


TRANSVERSE SECTION

TYPE II CONCRETE TRAFFIC SEPARATOR



LONGITUDINAL SECTION (NOSE)



TRANSVERSE SECTION

TYPE V CONCRETE TRAFFIC SEPARATOR

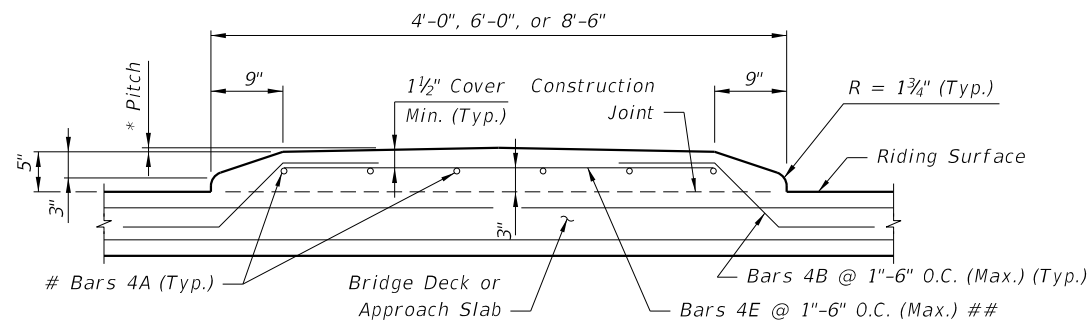
NOTES

- Separators Type I and IV are to be used with flexible pavement. Separators Types II and V are to be used with rigid pavement.
- Either Option I or Option II may be used for Types I and IV separators except when a specific option is called for in the plans.
- For all separators provide 1/8"- 1/4" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers.
- Separators having widths of 4', 6' or 8'-6" shall be paid for under the contract unit price for Concrete Traffic Separator (Type_) (_' Wide) LF. Separators having widths other than 4', 6' or 8'-6" shall be detailed in the plans as special separators and paid for under the contract unit price for Concrete Traffic Separator (Special) SY.

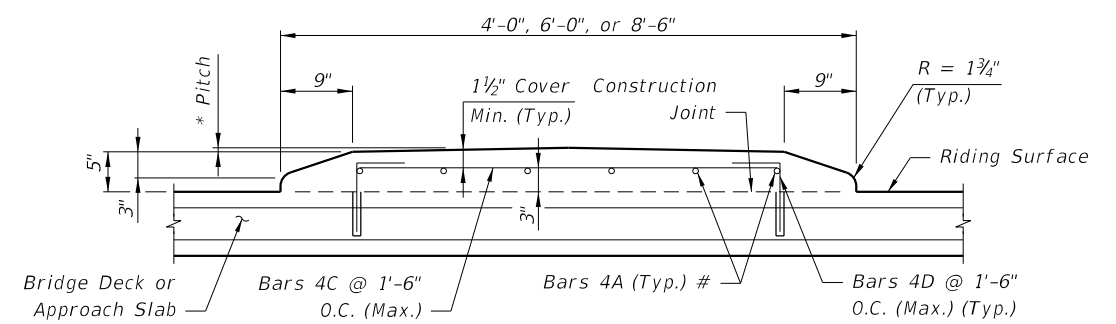
ROADWAY INSTALLATIONS

10/12/2016 9:31:09 AM

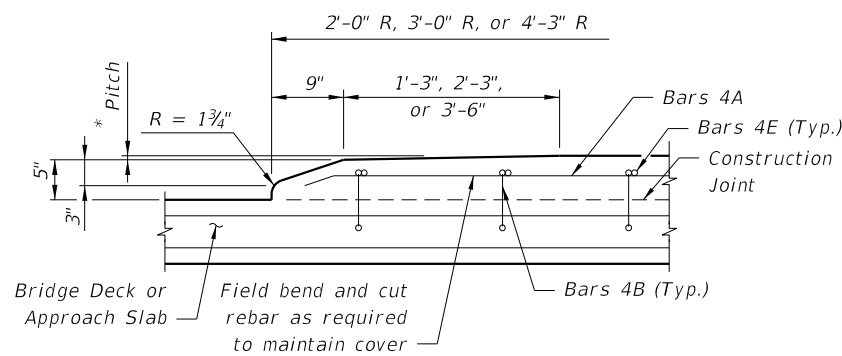
LAST REVISION 07/01/14	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	TRAFFIC SEPARATORS	INDEX NO. 302	SHEET NO. 1 of 4
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TYPICAL SECTION THRU TRAFFIC SEPARATOR
(Bridge Deck Shown, Approach Slab Similar)

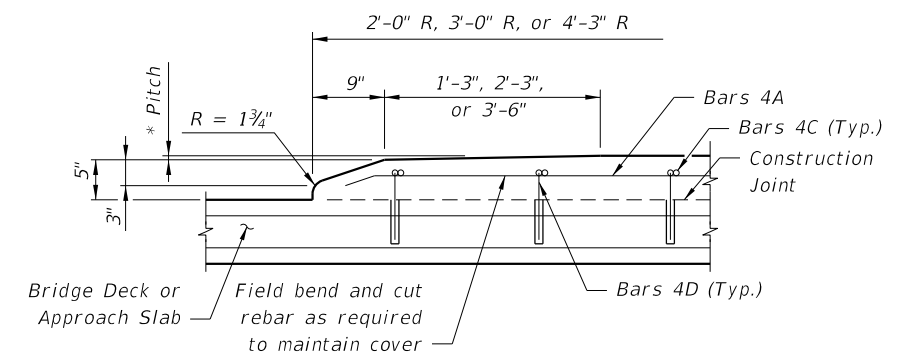


TYPICAL SECTION THRU TRAFFIC SEPARATOR
(Bridge Deck Shown, Approach Slab Similar)



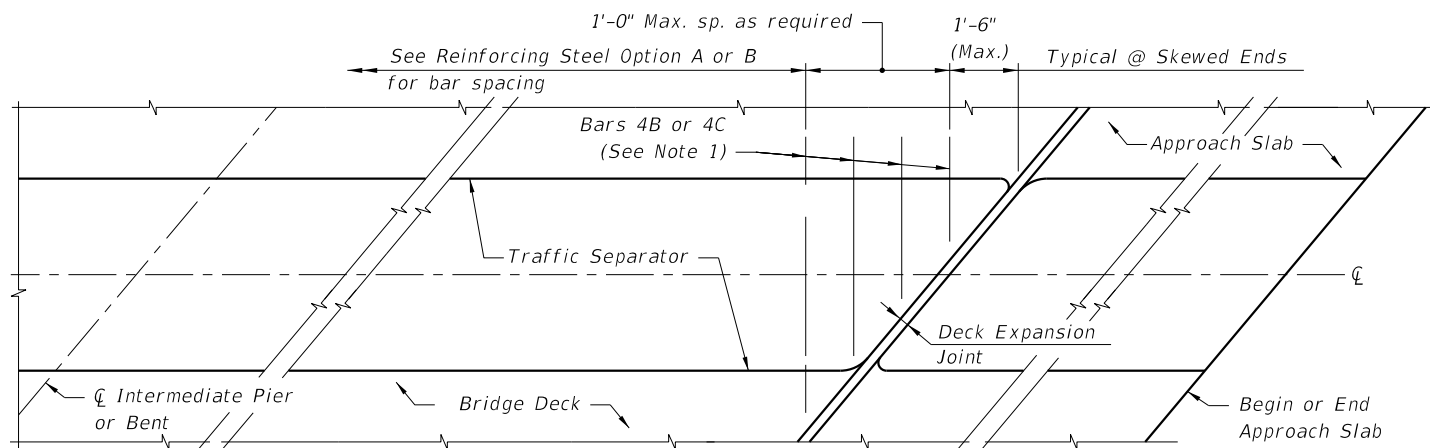
LONGITUDINAL SECTION THRU TRAFFIC SEPARATOR AT NOSE
(Bridge Deck Shown, Approach Slab Similar)

For 4'-0" width: Bars 4A @ 3 equal spaces (continuous).
 For 6'-0" width: Bars 4A @ 5 equal spaces (continuous).
 For 8'-6" width: Bars 4A @ 7 equal spaces (continuous).
 ## At the Contractor's option a one piece bar may be substituted for Bars 4B and 4E.
 * Pitch: 1/4" For 4'-0" Separator
 1/2" For 6'-0" Separator
 3/4" For 8'-6" Separator



LONGITUDINAL SECTION THRU TRAFFIC SEPARATOR AT NOSE
(Bridge Deck Shown, Approach Slab Similar)

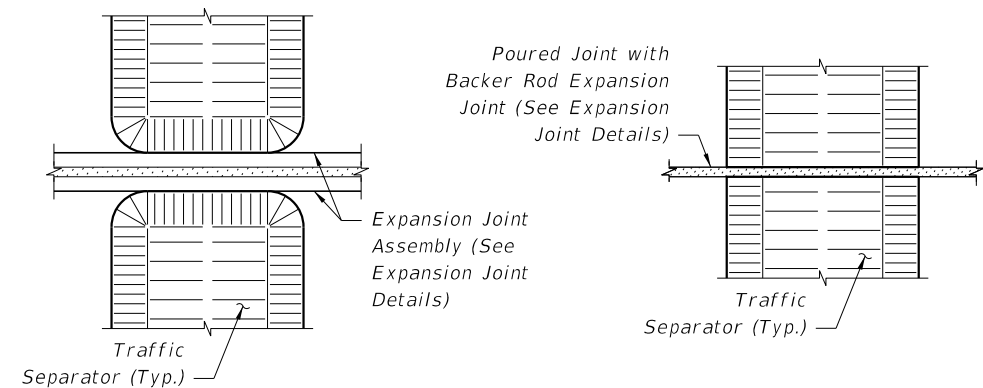
REINFORCING STEEL OPTION A



PARTIAL PLAN VIEW OF SKEWED BRIDGE DECK AND APPROACH SLAB WITH TRAFFIC SEPARATOR
(Deck Expansion Joint at Begin or End Bridge Shown, Expansion Joint at CL Pier or Intermediate Bents Similar)

- Notes:
1. Traffic Separator transverse reinforcement adjacent to deck expansion joints shall be field adjusted to maintain clearance and spacing. Bars shall be field cut as shown, bars may be rotated to maintain clearance.
 2. Traffic Separator ends at deck expansion joints shall follow the deck joint limits. Drainage joints and 1/2" V-Grooves shall be placed perpendicular or radial to the CL of the Traffic Separator. See Structures Plans, Superstructure and Approach Slab Sheets for details.
 3. See Structures Plans, Superstructure Sheets for actual dimensions and joint orientation.

REINFORCING STEEL OPTION B (NOT PERMITTED ON BRIDGE DECKS WITH PRESTRESSING STEEL)



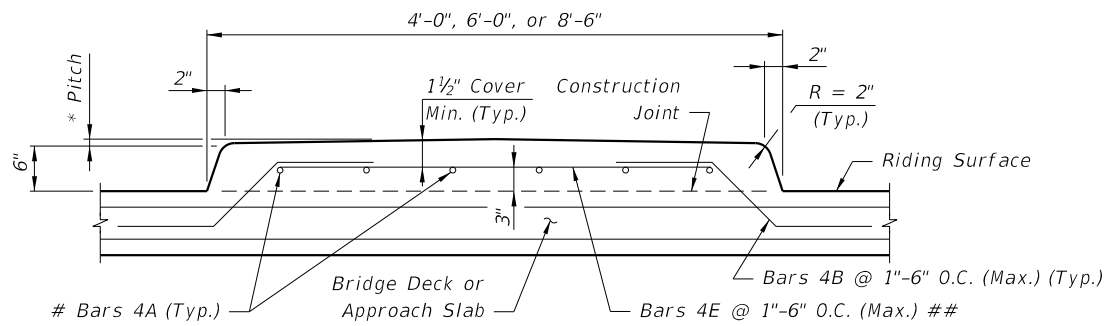
DETAIL AT EXPANSION JOINTS
(Strip Seal Shown, Other Armored Joint Types Similar)

DETAIL AT Poured JOINT WITH BACKER ROD EXPANSION JOINTS

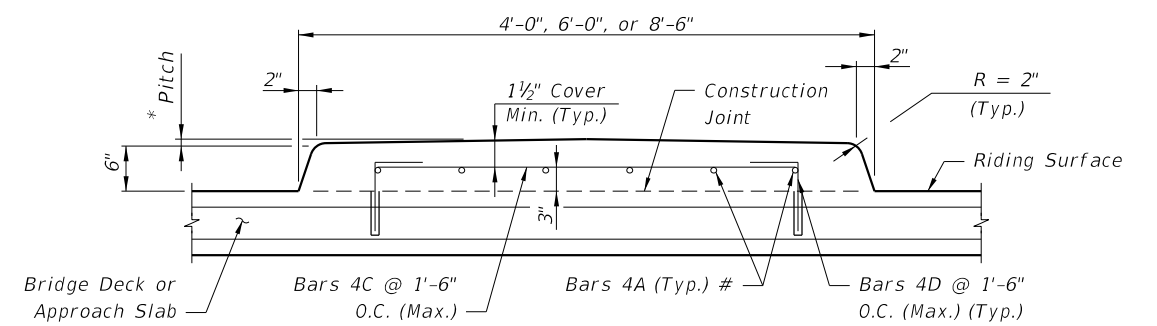
BRIDGE INSTALLATIONS - TYPE "E" CURB

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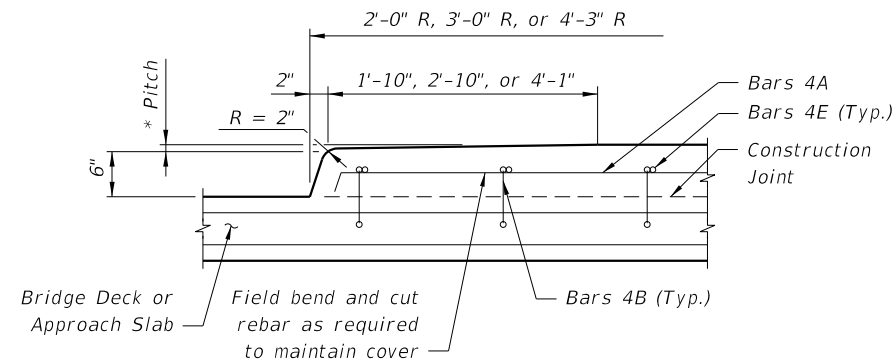
LAST REVISION 01/01/11	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TRAFFIC SEPARATORS	INDEX NO. 302	SHEET NO. 2 of 4
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TYPICAL SECTION THRU TRAFFIC SEPARATOR
(Bridge Deck Shown, Approach Slab Similar)



TYPICAL SECTION THRU TRAFFIC SEPARATOR
(Bridge Deck Shown, Approach Slab Similar)

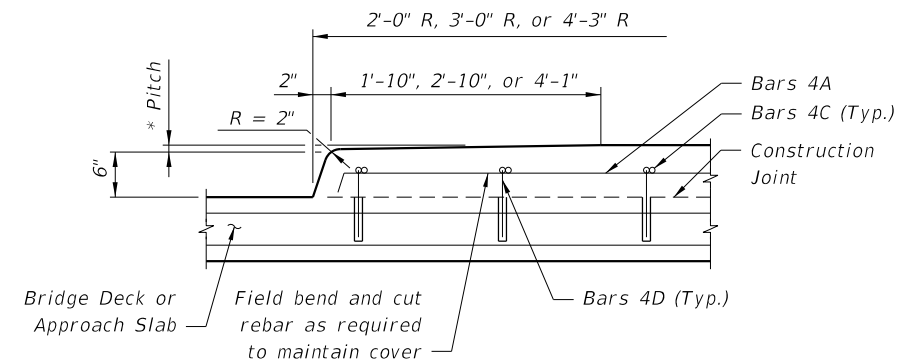


LONGITUDINAL SECTION THRU TRAFFIC SEPARATOR AT NOSE
(Bridge Deck Shown, Approach Slab Similar)

For 4'-0" width: Bars 4A @ 3 equal spaces (continuous).
For 6'-0" width: Bars 4A @ 5 equal spaces (continuous).
For 8'-6" width: Bars 4A @ 7 equal spaces (continuous).

At the Contractor's option a one piece bar may be substituted for Bars 4B and 4E.

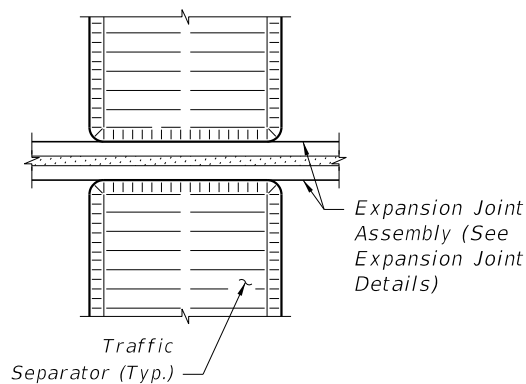
* Pitch: 1/4" For 4'-0" Separator
1/2" For 6'-0" Separator
3/4" For 8'-6" Separator



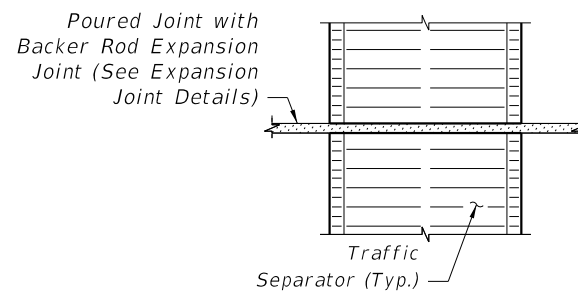
LONGITUDINAL SECTION THRU TRAFFIC SEPARATOR AT NOSE
(Bridge Deck Shown, Approach Slab Similar)

REINFORCING STEEL OPTION A

REINFORCING STEEL OPTION B (NOT PERMITTED ON BRIDGE DECKS WITH PRESTRESSING STEEL)



DETAIL AT EXPANSION JOINTS
(Strip Seal Shown,
Other Armored Joint Types Similar)




DETAIL AT POURED JOINT WITH
BACKER ROD EXPANSION JOINTS

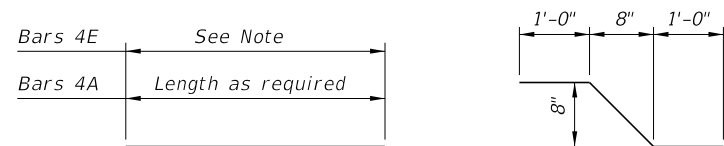
Note: Treatment of separators on straight bridges shown. For additional notes and treatment of separators on skewed bridges, see Sheet 2.

BRIDGE INSTALLATIONS - TYPE "F" CURB

10/12/2016 9:31:17 AM

LAST REVISION 01/01/11	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	TRAFFIC SEPARATORS	INDEX NO. 302	SHEET NO. 3 of 4
REVISION					

**CONVENTIONAL REINFORCING
STEEL BENDING DIAGRAMS**

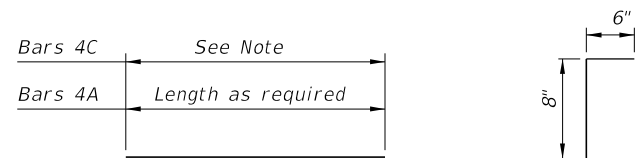


Bars 4A & 4E

Bar 4B

Note:
Length of Bars 4E is 2'-5" for 4'-0" Separator.
Length of Bars 4E is 4'-5" for 6'-0" Separator.
Length of Bars 4E is 6'-11" for 8'-6" Separator.

REINFORCING STEEL OPTION A



Bars 4A & 4C

Bar 4D

Note:
Length of Bars 4C is 2'-4½" for 4'-0" Separator.
Length of Bars 4C is 4'-4½" for 6'-0" Separator.
Length of Bars 4C is 6'-10½" for 8'-6" Separator.

REINFORCING STEEL OPTION B

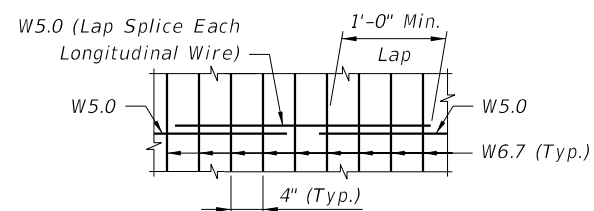
REINFORCING STEEL NOTES:

1. All dimensions are out to out.
2. The 8" vertical dimension shown for Bars 4B and 4D are based on a slab 8½" thick or greater without a wearing surface. If slab thickness is less than 8½", decrease this dimension by an amount equal to the difference in thickness. If a wearing surface is to be provided, increase this dimension by an amount equal to the wearing surface thickness.

**ALTERNATE REINFORCING STEEL
DETAILS (WELDED WIRE REINFORCEMENT)**

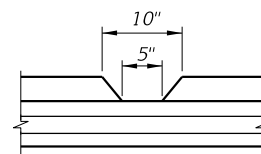
OPTION A: Use Welded Wire Reinforcement 3 x 4 - W5.0 x W6.7 as required by plans in place of Bars 4A, 4B and 4E. Bend the Welded Wire Reinforcement to the dimensions of Bar 4B shown in the Bending Diagram for Reinforcing Steel Option A.
OPTION B: Use Welded Wire Reinforcement 3 x 4 - W5.0 x W6.7 as required by plans in place of Bars 4A and 4C shown in Reinforcing Steel Option B.

Note: Welded Wire Reinforcement to consist of smooth wire meeting the requirements of Specification Section 931.



SPLICE DETAIL

(Between WWR 3 x 4 - W5.0 x W6.7 Sections)



**DRAINAGE JOINT DETAIL
FOR 5" OPENING OR LESS**

See Structures Plans, Superstructure Sheets for location(s) of drainage joints. Locations for drainage joints shall be limited to the constant width section of separator.

NOTES:
CONCRETE: See General Notes in Structures Plans.
REINFORCING STEEL: Reinforcing Steel shall be ASTM A615 Grade 60.
PAYMENT: Separators having widths of 4'-0", 6'-0", and 8'-6" shall be paid under the contract unit price for Traffic Separator Concrete (Type II or V) ('__' Wide), LF. Separators having widths other than 4'-0", 6'-0", or 8'-6" shall be detailed in the plans as special separators and paid under the contract unit price for Traffic Separator Concrete (Special), S.Y.
TRAFFIC SEPARATOR CONSTRUCTION: The Contractor may construct the separator by the use of stationary removable forms or by the use of slip forms without altering the separator dimensions shown.
½" V-GROOVES: For all separators provide ½" V-Grooves at 30'-0" centers (max.) equally spaced between expansion joints, and/or drainage joints.

ESTIMATED TRAFFIC SEPARATOR QUANTITIES

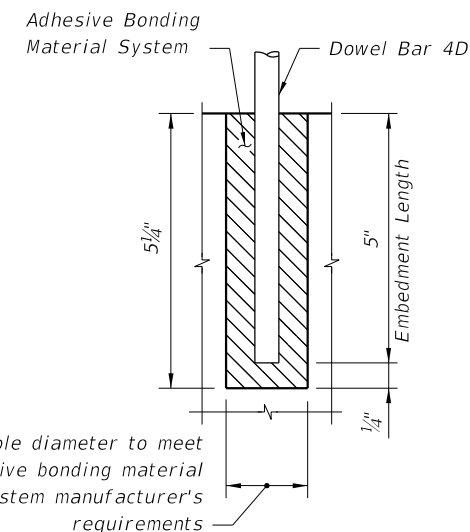
CONCRETE:
CONSTANT WIDTH OF SEPARATOR:
TYPE "E" TYPE "F"
4'-0" Width = 0.056 CY per Ft. - 0.072 CY per Ft.
6'-0" Width = 0.089 CY per Ft. - 0.112 CY per Ft.
8'-6" Width = 0.132 CY per Ft. - 0.164 CY per Ft.

NOSE:
TYPE "E" TYPE "F"
4'-0" Width = 0.080 CY - 0.109 CY
6'-0" Width = 0.193 CY - 0.257 CY
8'-6" Width = 0.403 CY - 0.536 CY

REINFORCING STEEL:
(All quantities are based on an 8½" slab.)

OPTION A:
4'-0" Width - 6.37 Lbs. per Ft.
6'-0" Width - 8.60 Lbs. per Ft.
8'-6" Width - 11.05 Lbs. per Ft.

OPTION B:
4'-0" Width - 4.77 Lbs. per Ft.
6'-0" Width - 7.00 Lbs. per Ft.
8'-6" Width - 9.45 Lbs. per Ft.



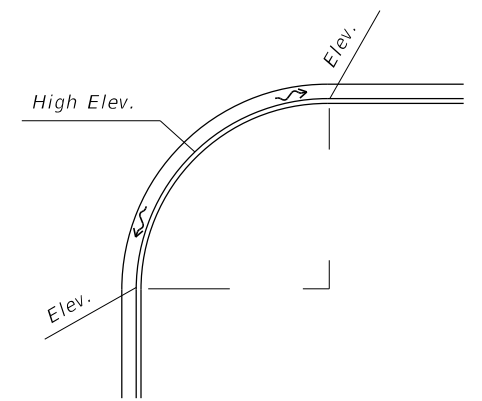
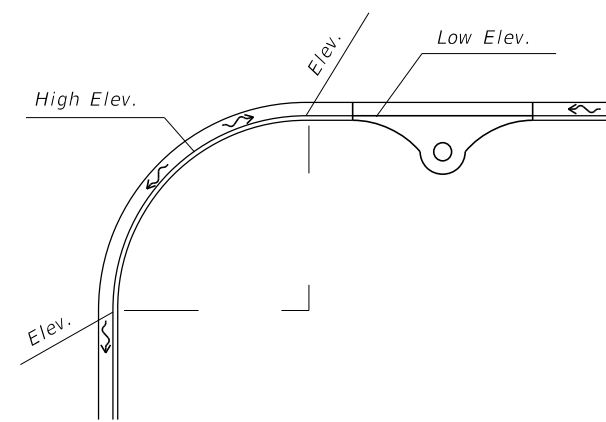
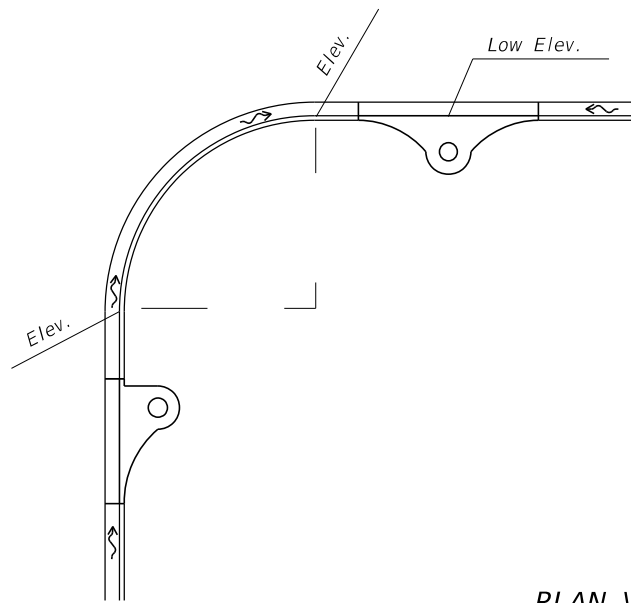
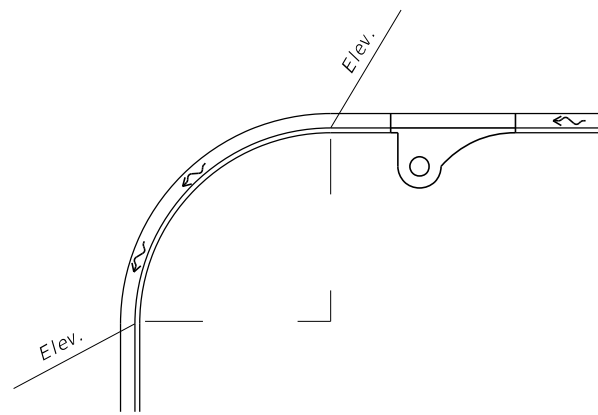
DOWEL DETAIL

Dowel Notes:
1. Shift Dowel Holes to clear if existing reinforcement is encountered.
2. Provide and install an adhesive bonding material system in accordance with Sections 416 and 937 of the Specifications.

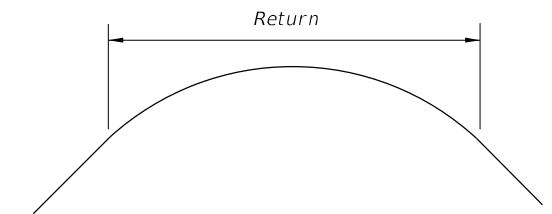
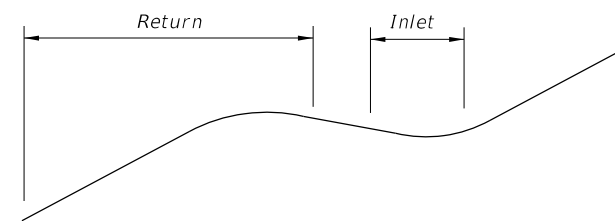
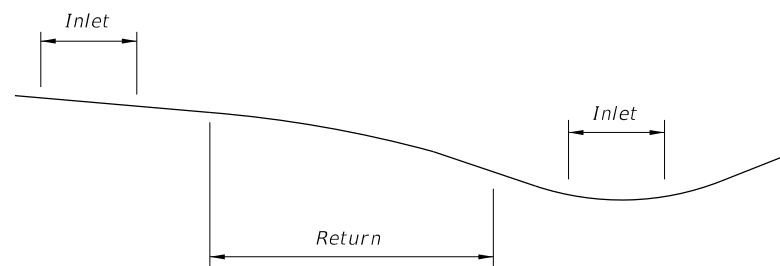
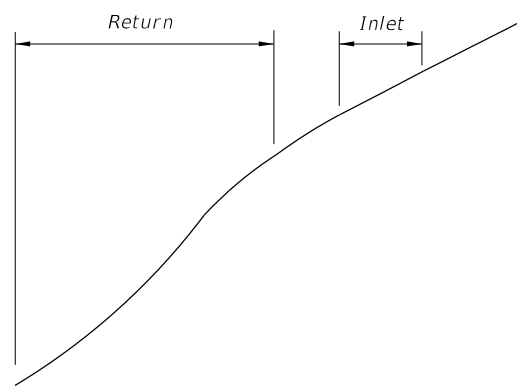
BRIDGE INSTALLATIONS - TYPE "E" AND "F" CURBS

10/12/2016 9:31:21 AM

LAST REVISION 07/01/07	DESCRIPTION:
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PLAN VIEW




PROFILE VIEW

Note:
 Profile grades should be established that will allow inlets to be located outside the return whenever practical. Inlets should be located to avoid conflict with pedestrian movement. Special care must be exercised to prevent conflict with public sidewalk curb ramps for the disabled. For information on public sidewalk curb ramps refer to Index No. 304.

SHOWING LOCATION OF INLETS AT RETURNS

TYPICAL RETURN PROFILES

10/12/2016 9:31:46 AM

LAST REVISION 01/01/12	REVISION DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	CURB RETURN PROFILES	INDEX NO. 303	SHEET NO. 1 of 1
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GENERAL NOTES

1. Cross Slopes and Grades:

- A. Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this index are maximums. Steeper slopes are not permitted unless otherwise detailed in the Plans.
- B. Landings must have slopes less than or equal to 0.02 in any direction.
- C. Install ramp slopes along a single linear plane (i.e. no warps or varying slope)

2. Grade Breaks:

Grade breaks at the top and bottom of ramps must be parallel to each other and perpendicular to the direction of the ramp slope.

3. Existing Curb, Curb and Gutter and/or Sidewalk:

- A. Remove any existing curb or curb and gutter to the nearest joint beyond the curb transition or to the extent that no remaining section of curb or curb and gutter is less than 5 feet long. Remove any existing sidewalk to the nearest joint beyond the transition slope or to the extent that no remaining section of sidewalk is less than 5 feet long.
- B. Refer to Index 310 for Concrete Sidewalk details.

4. Curb Ramp Alpha-Identification:

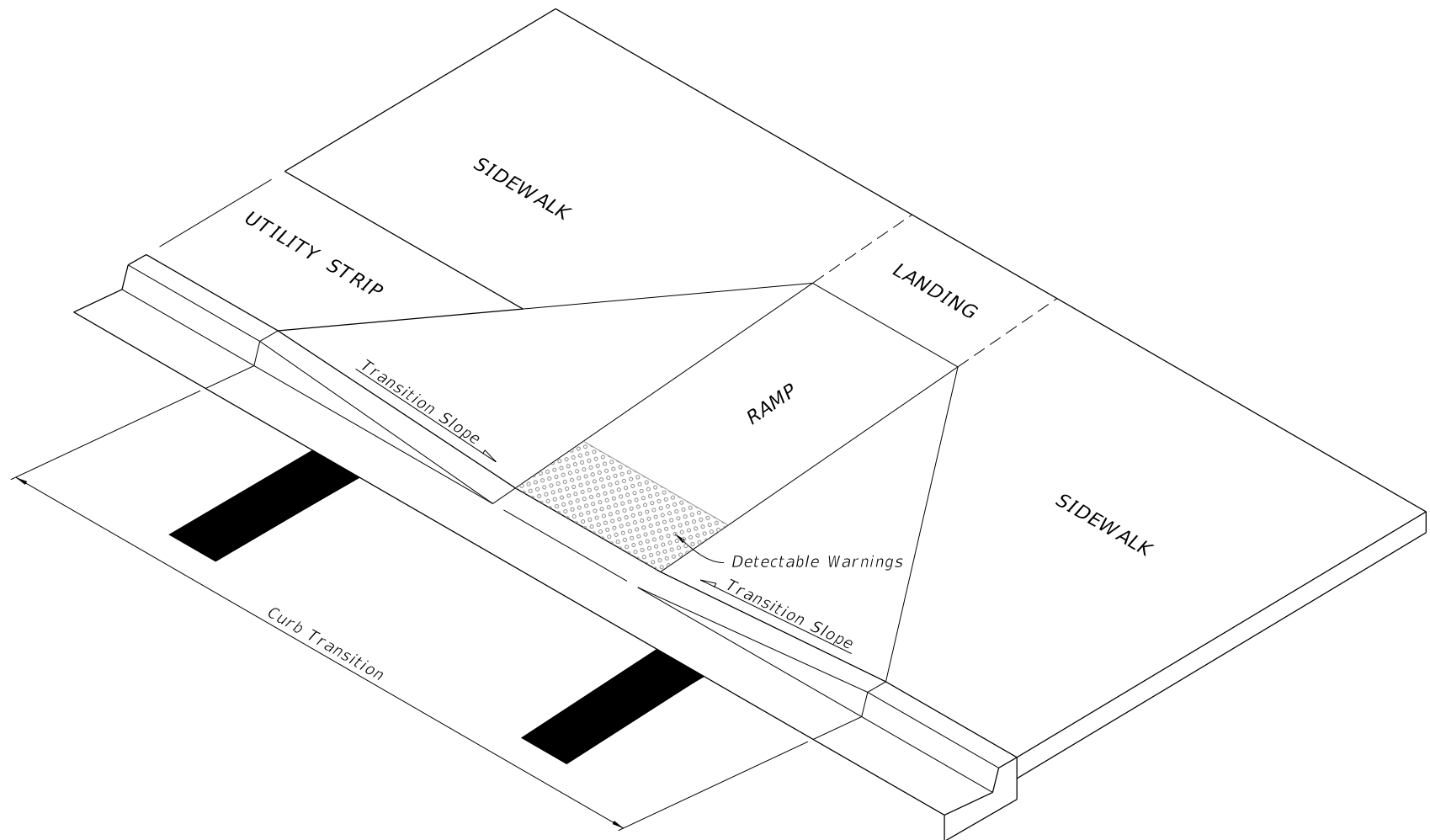
- A. Sidewalk curb ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans.
- B. Alpha-identifications CR-I and CR-J are intentionally omitted.

5. Detectable Warnings:

- A. Install detectable warnings in accordance with Specification Section 527.
- B. Place detectable warnings across the full width of the ramp or landing, to a depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.
- C. If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.

6. Detectable Warnings - Acceptance Criteria:

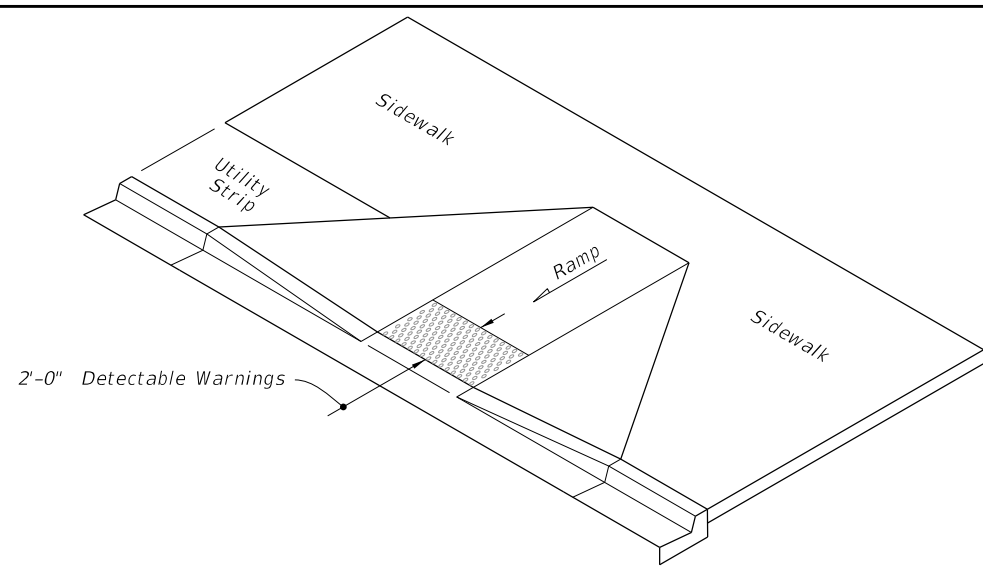
- A. Color and texture shall be complete and uniform.
- B. 90% of individual truncated domes shall be in accordance with the Americans with Disabilities Act Standards for Transportation Facilities, Section 705.
- C. There shall be no more than 4 non-compliant domes in any one square foot.
- D. Non-compliant domes shall not be adjacent to other non-compliant domes.
- E. Surfaces shall not deviate more than 0.10" from a true plane.



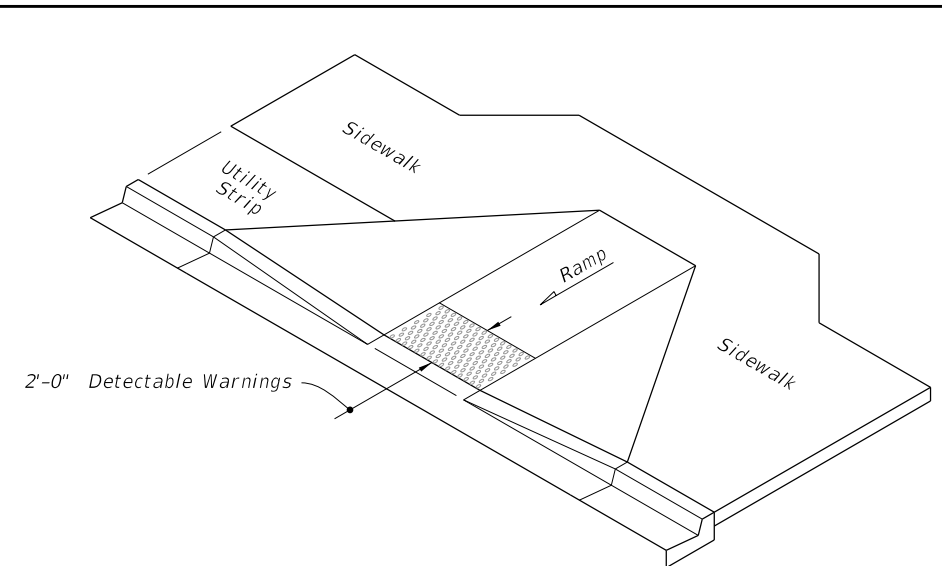
==== CURB RAMP NOMENCLATURE ====

10/27/2016 10:53:34 AM

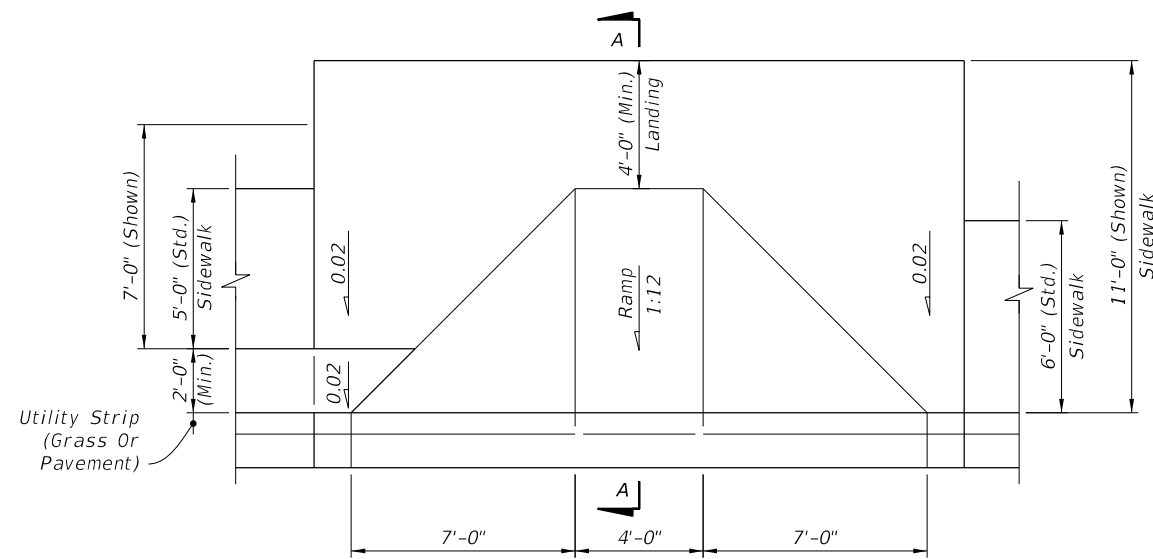
LAST REVISION 11/01/16	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX NO. 304	SHEET NO. 1 of 8
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ISOMETRIC VIEW

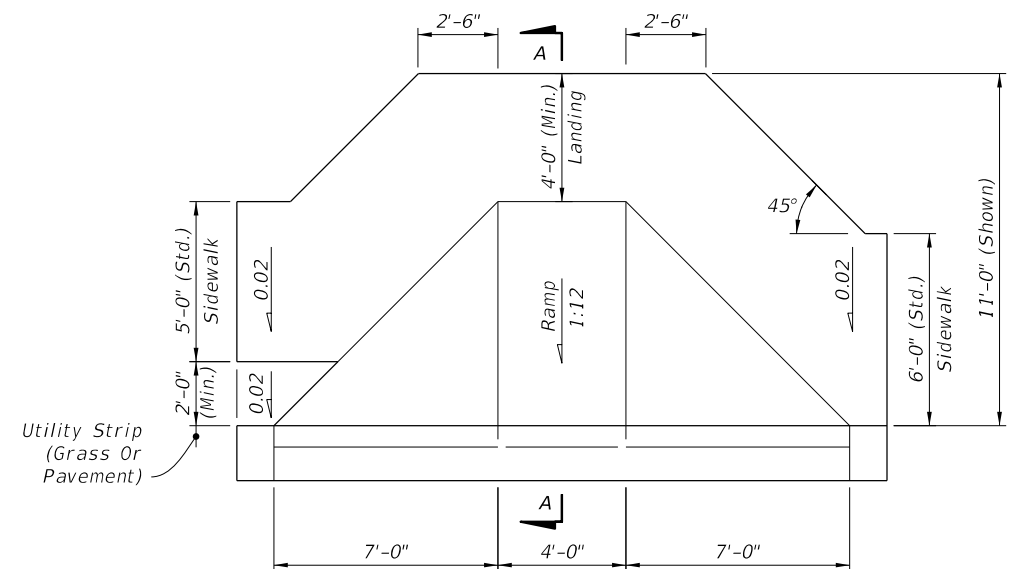


ISOMETRIC VIEW



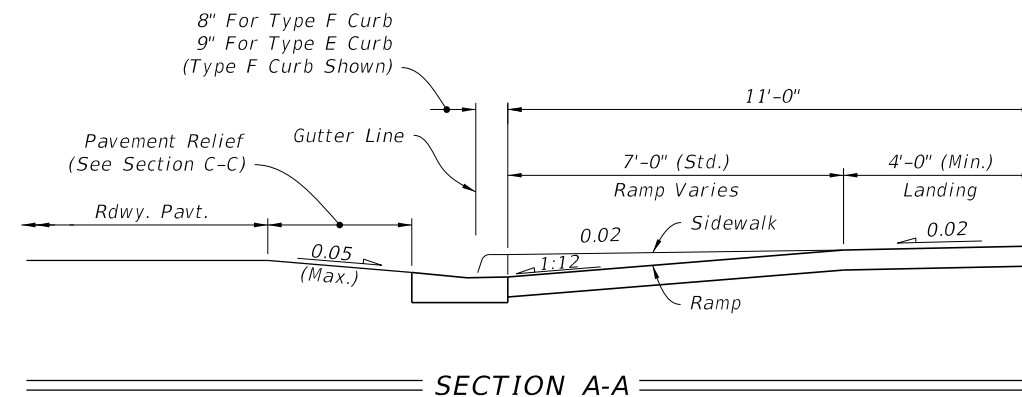
PLAN VIEW

CR-A



PLAN VIEW

CR-B



SECTION A-A

SIDEWALK CURB RAMPS CR-A AND CR-B

10/27/2016 10:53:36 AM

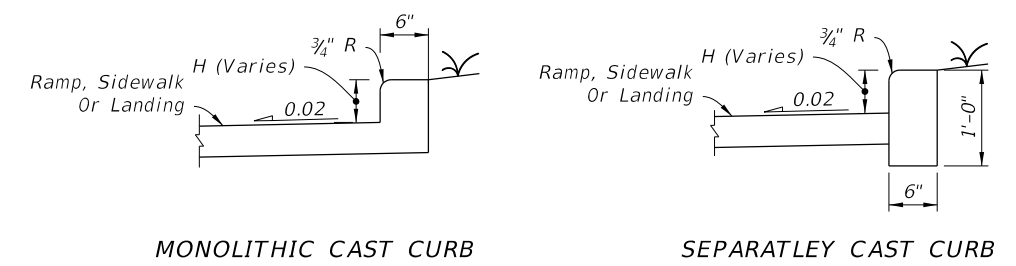
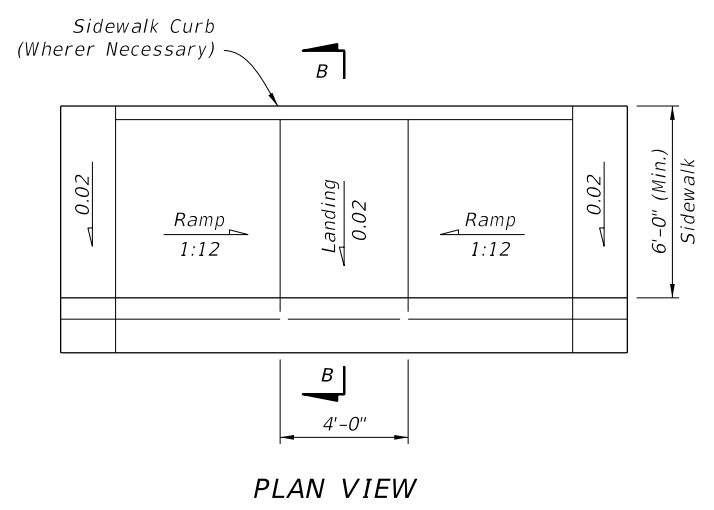
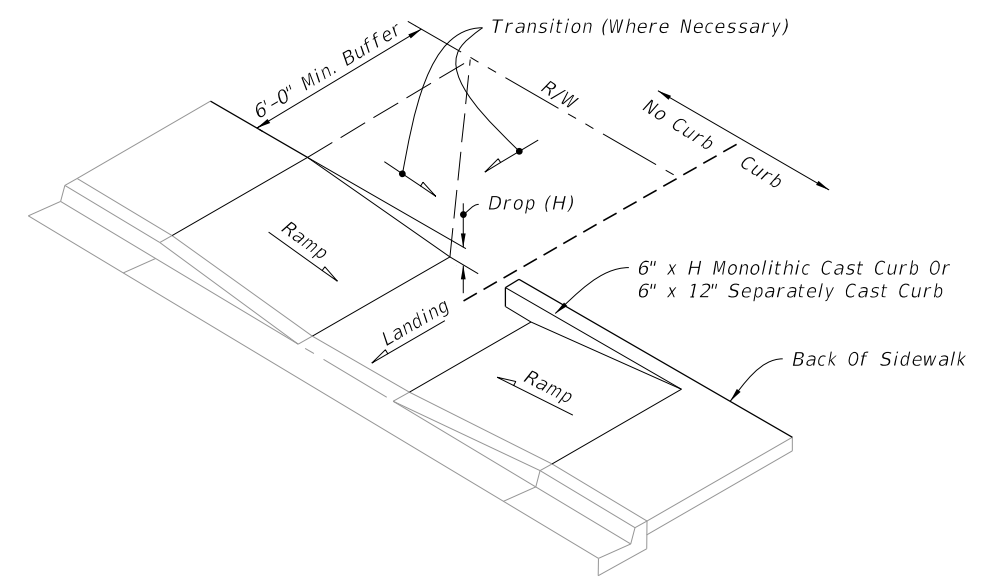
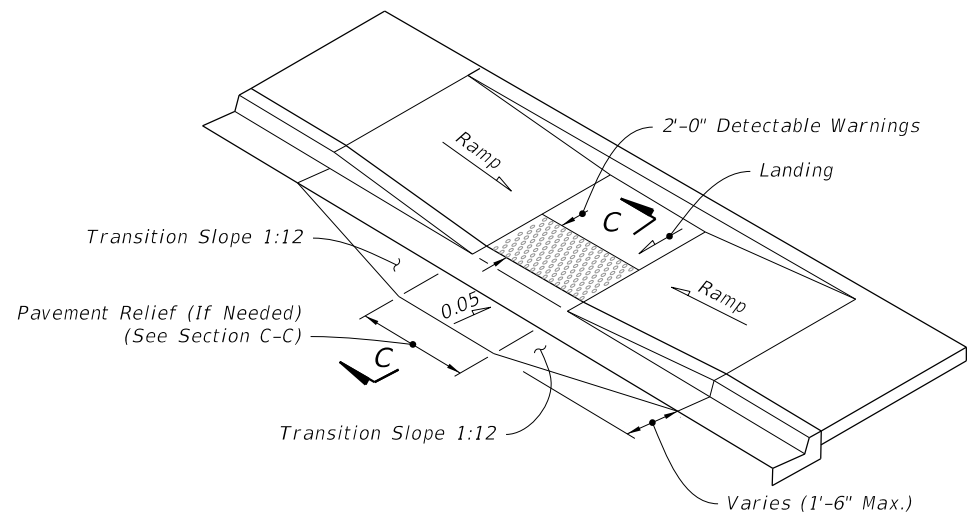
LAST REVISION 11/01/16	DESCRIPTION:
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FDOT FY 2017-18 DESIGN STANDARDS

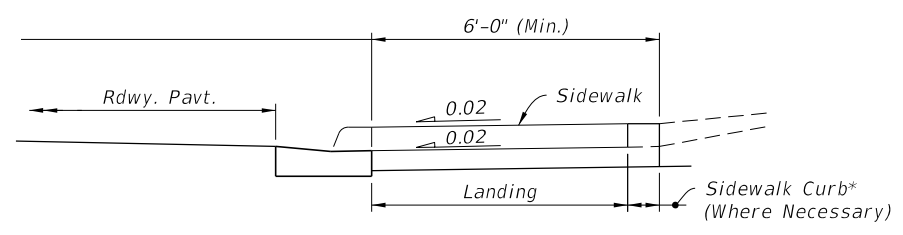
DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS

INDEX NO.
304

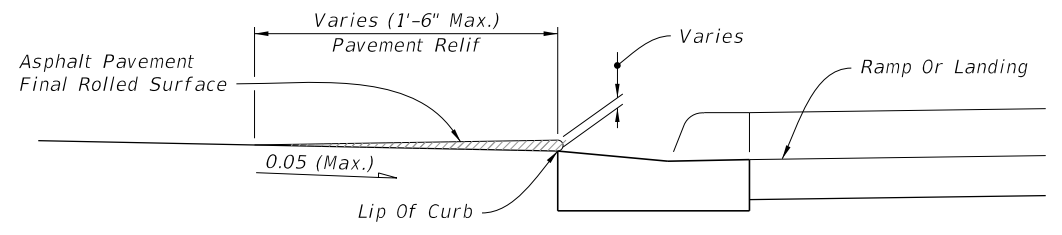
SHEET NO.
2 of 8



SIDEWALK CURB OPTIONS



* Note: For Additional Information On Sidewalk Curb Construction, See SIDEWALK CURB OPTIONS details.

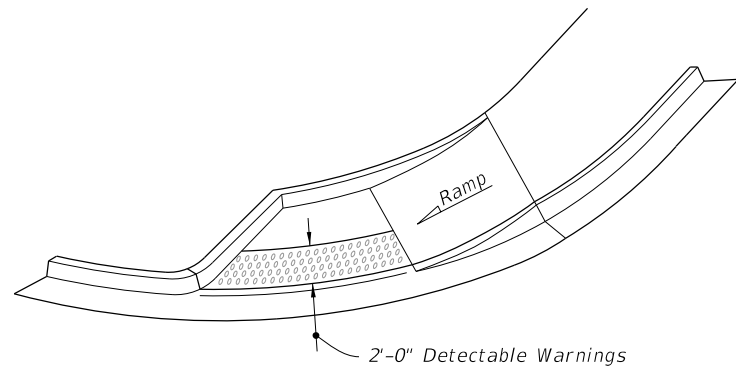


Note: Remove Elevated Pavement By Spading And Rolling, Smooth Milling or Grinding.

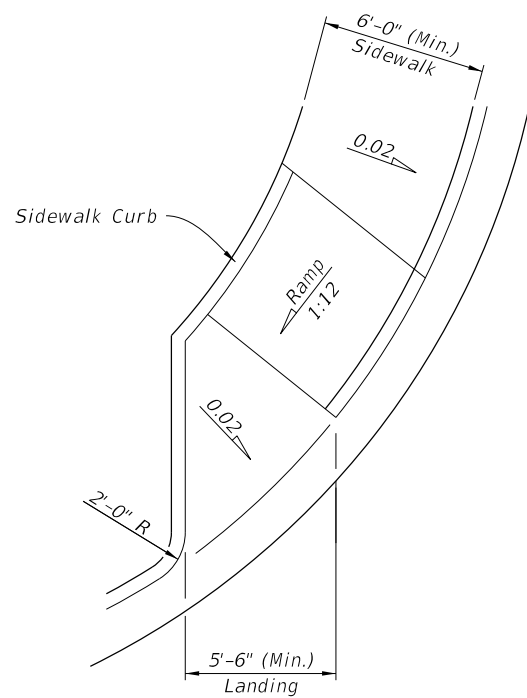
SIDEWALK CURB RAMPS CR-C AND SIDEWALK CURB

10/27/2016 10:53:38 AM

LAST REVISION 11/01/16	DESCRIPTION:		FY 2017-18 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX NO. 304	SHEET NO. 3 of 8

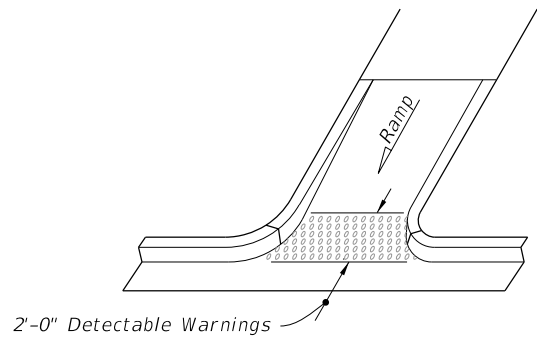


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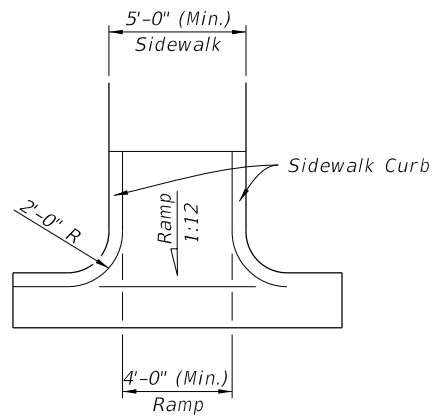


PLAN VIEW

CR-D

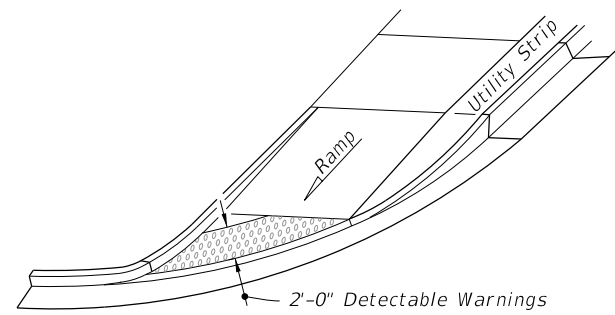


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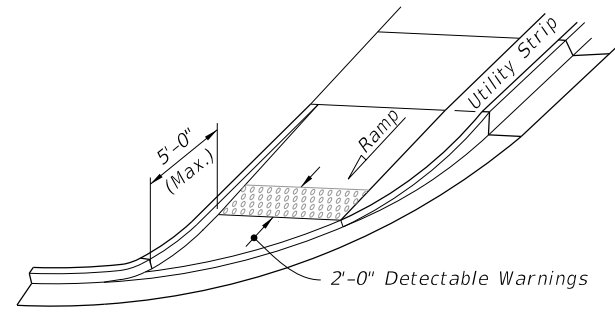


PLAN VIEW

CR-E

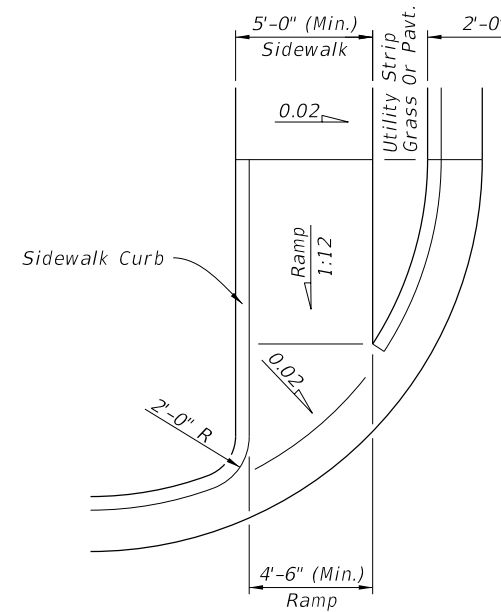


OPTION A



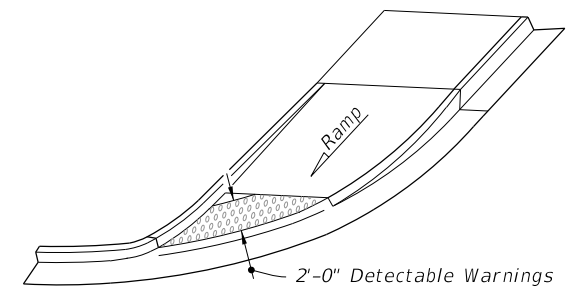
OPTION B

ISOMETRIC VIEW

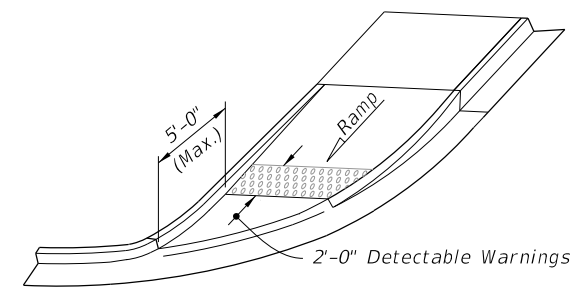


PLAN VIEW

CR-F

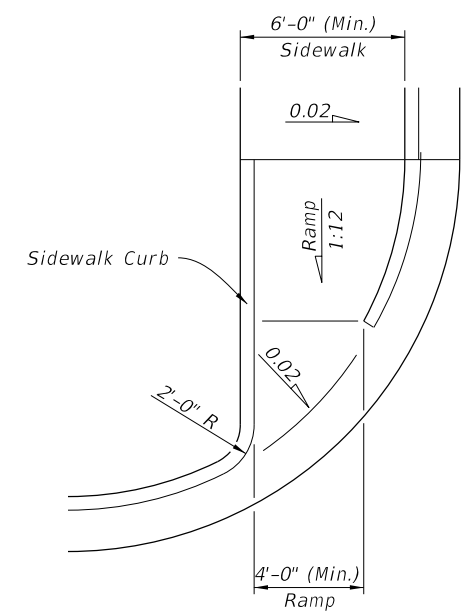


OPTION A



OPTION B

ISOMETRIC VIEW



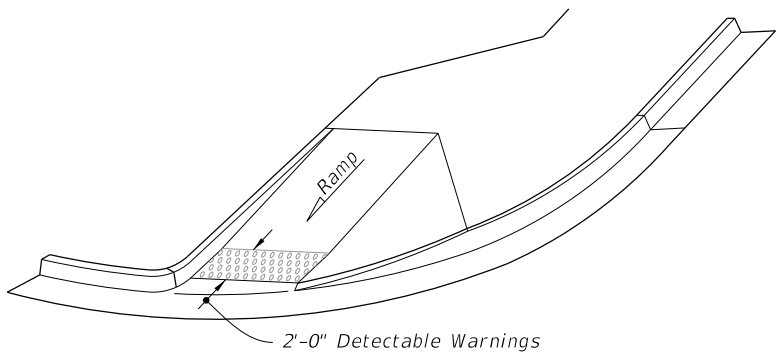
PLAN VIEW

CR-G

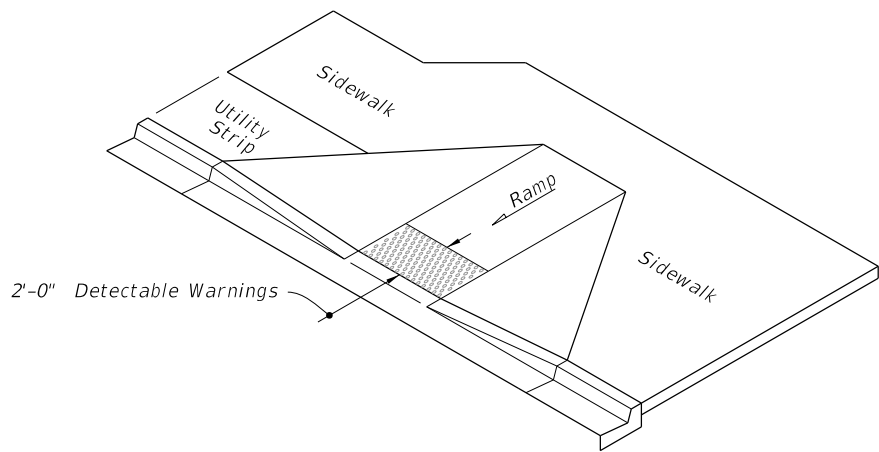
SIDEWALK CURB RAMPS CR-D, CR-E, CR-F & CR-G

11/9/2016 8:58:21 AM

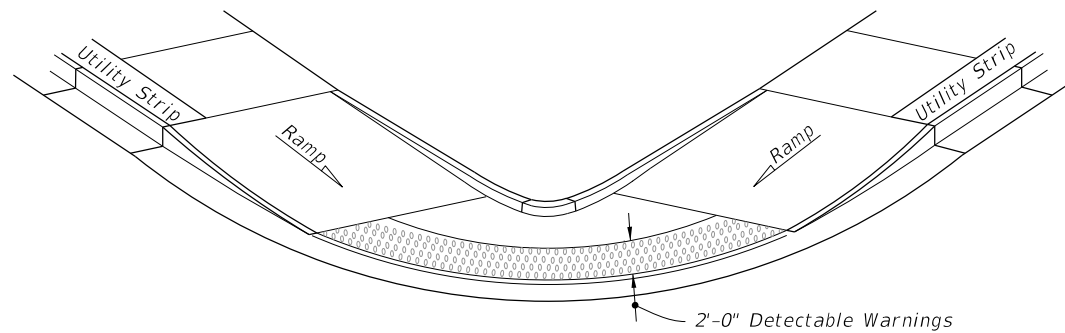
LAST REVISION 11/01/16	DESCRIPTION:
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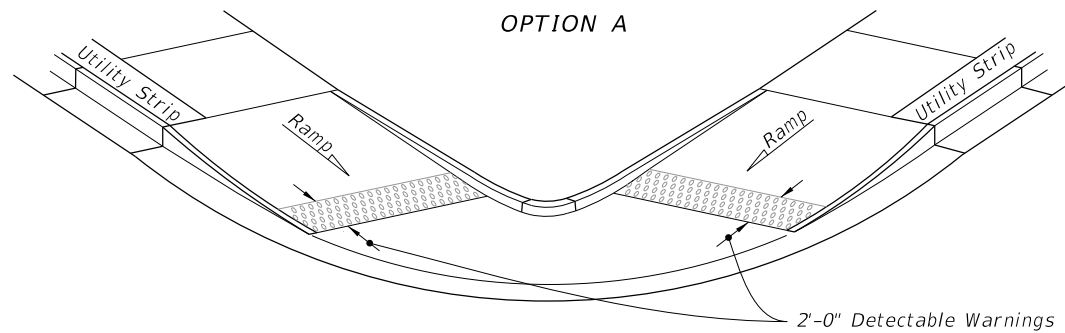
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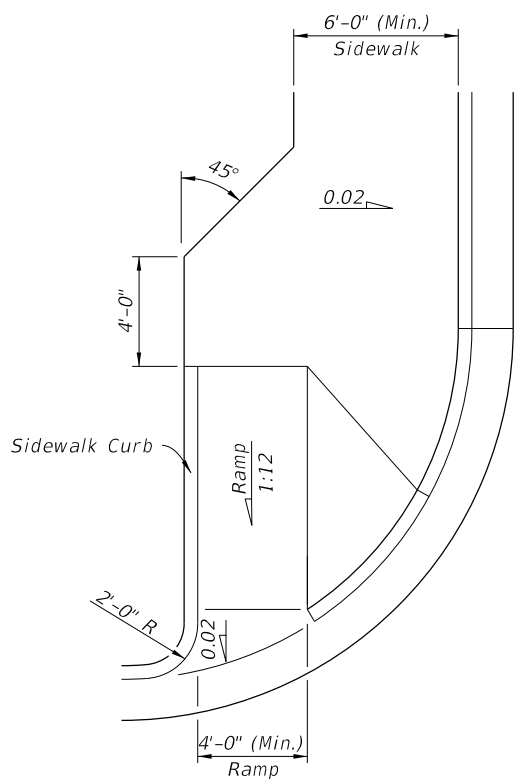
ISOMETRIC VIEW



OPTION A

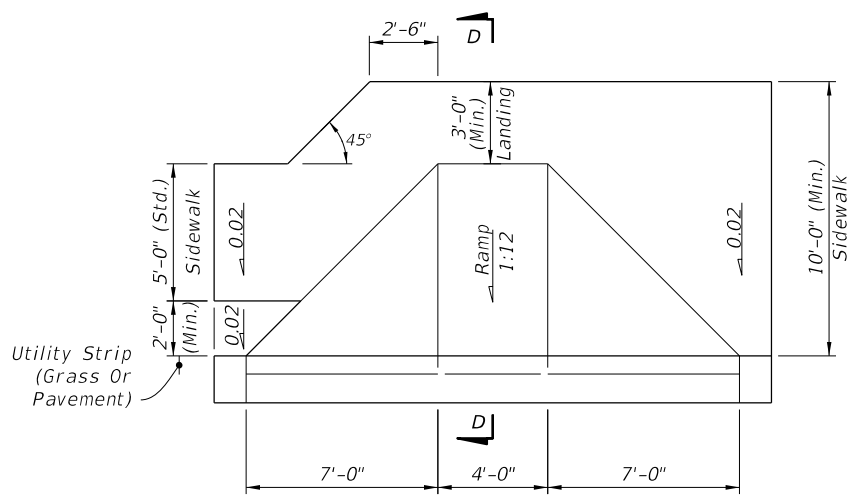


OPTION B



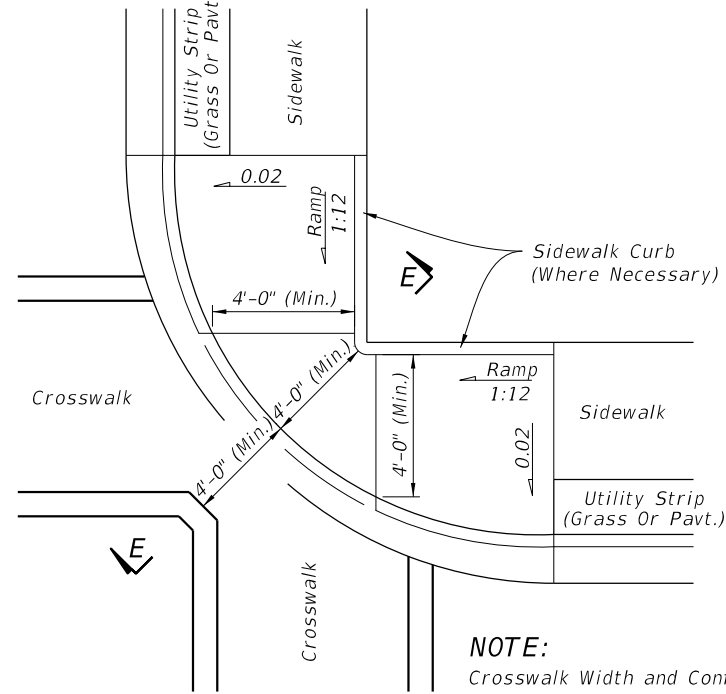
PLAN VIEW

CR-H



PLAN VIEW

CR-K

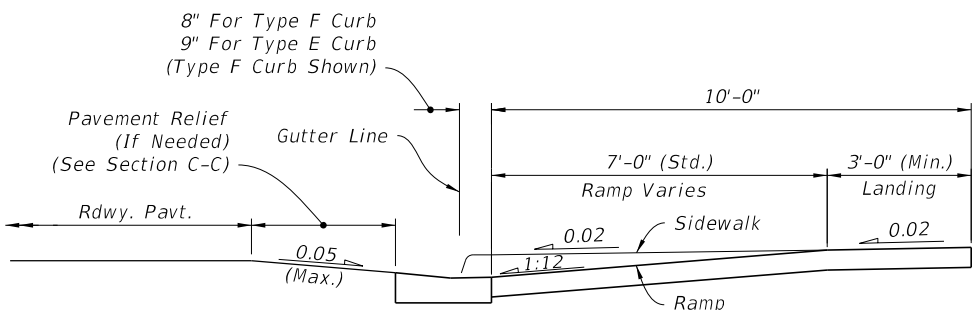


PLAN VIEW

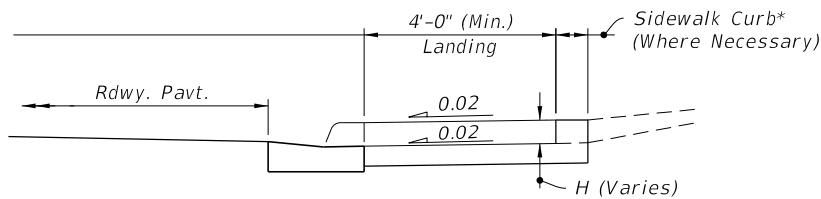
CR-L

NOTE:
Crosswalk Width and Configuration Vary; Must Conform to Index 17344 and 17346.

15' Radius Curve Shown for CR-L.



SECTION D-D




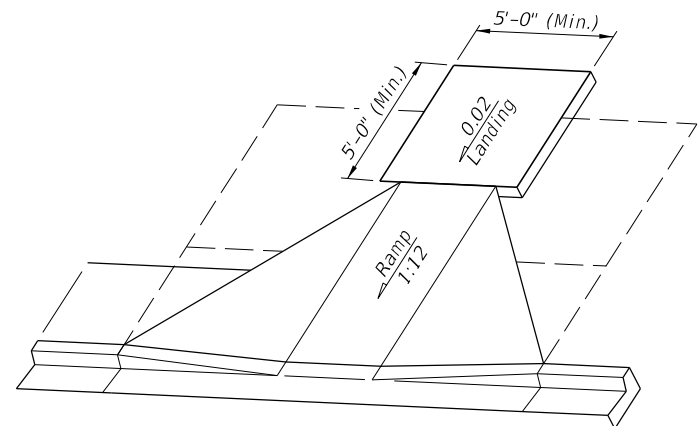
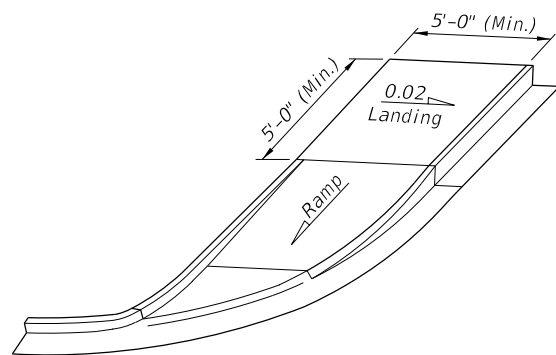
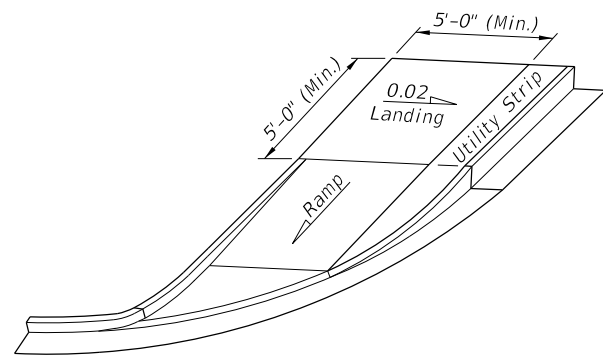
SECTION E-E

* Note: For Additional Information On Sidewalk Curb Construction, See SIDEWALK CURB OPTIONS details.

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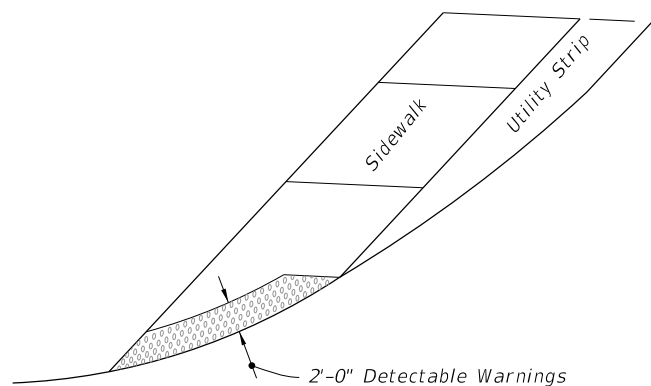
SIDEWALK CURB RAMPS CR-H, CR-K & CR-L

LAST REVISION 11/01/16	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX NO. 304	SHEET NO. 5 of 8
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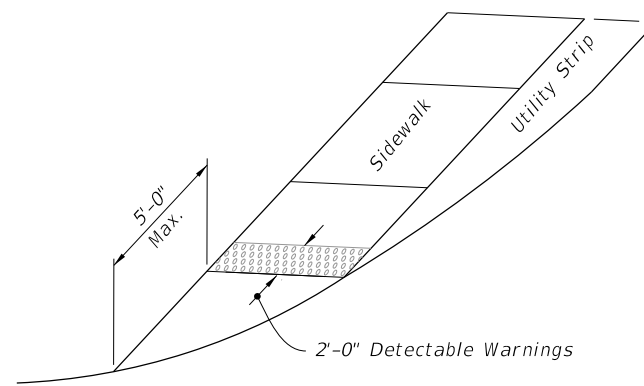


LANDINGS FOR CURB RAMPS WITHOUT SIDEWALKS

(See CR-F, CR-G & CR-K Respectively For Detectable Warning Details/Options)



OPTION A




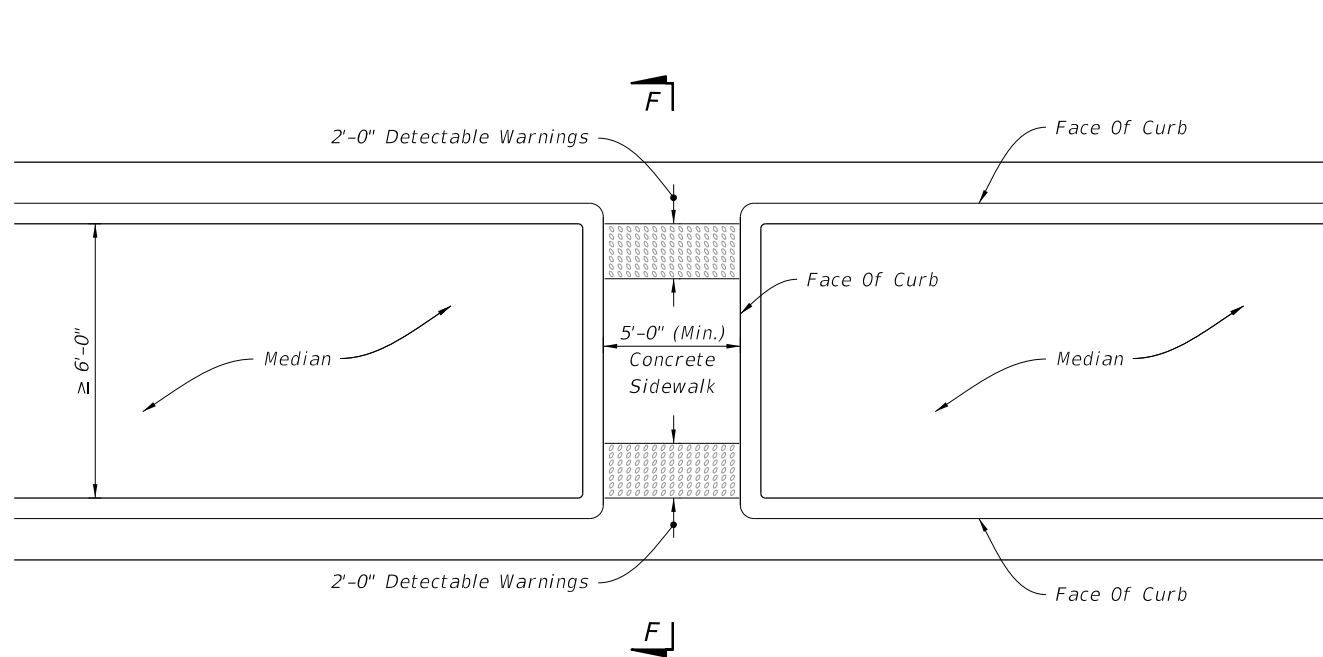
OPTION B

DETECTABLE WARNING ON FLUSH SHOULDER SIDEWALKS

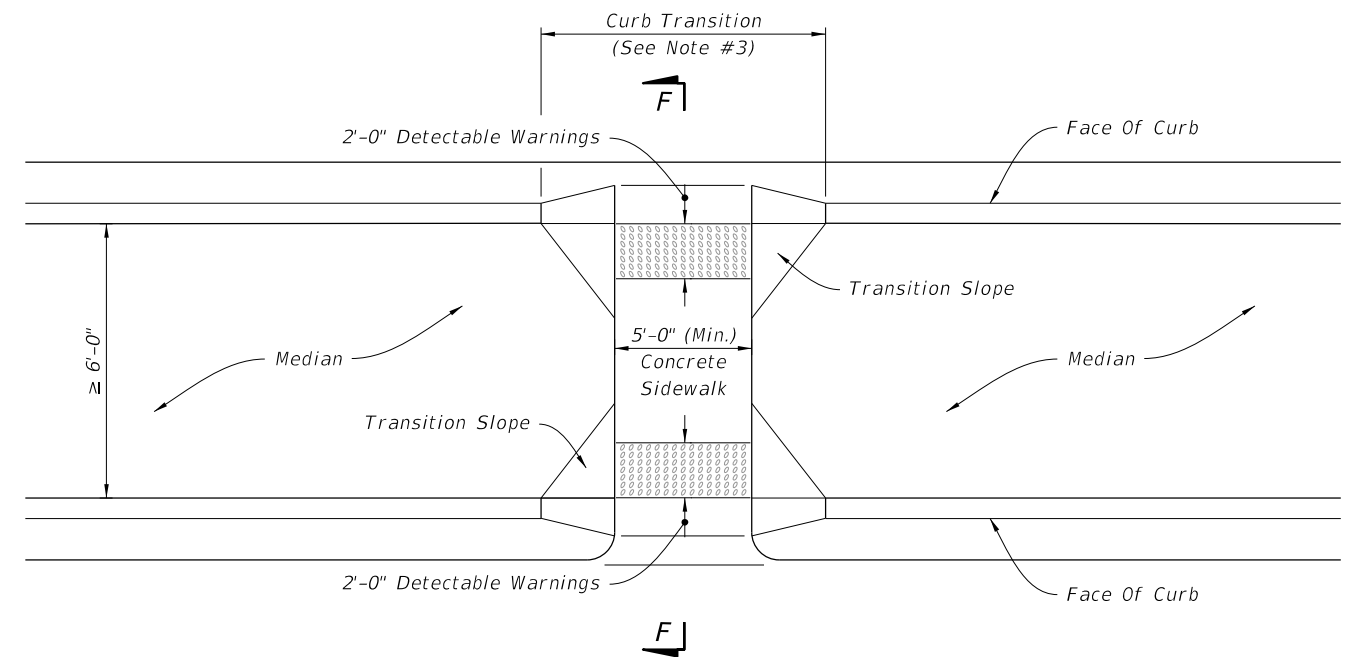
CURB RAMPS WITHOUT SIDEWALKS AND FLUSH SHOULDER SIDEWALKS

10/27/2016 10:53:45 AM

LAST REVISION 11/01/16	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX NO. 304	SHEET NO. 6 of 8
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DEPRESSED SIDEWALK

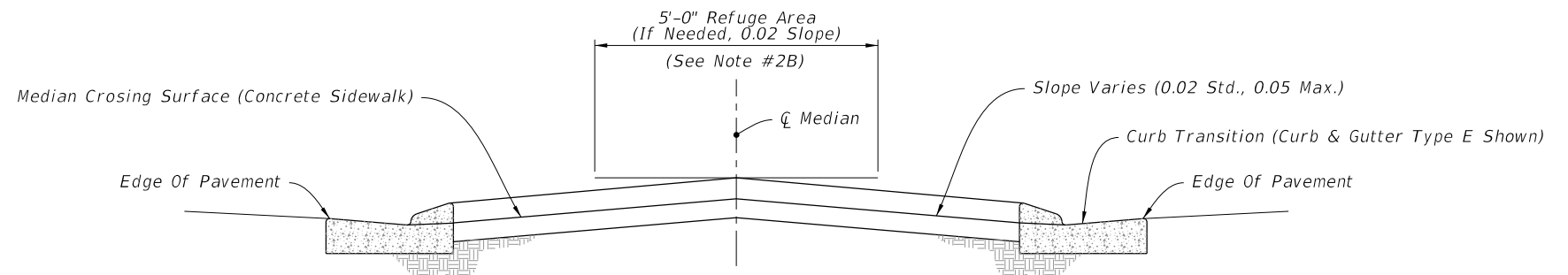


RAISED SIDEWALK

MEDIAN CROSSINGS

NOTES:

1. Cross Slope of the median crossing not to exceed 0.02.
2. Running Slopes:
 - A. Slopes ≤ 0.05 : For roadway cross sections where the Edge of Pavement elevation is the same for both directions of traffic, the median crossing running slopes (0.02 Typ.) should meet at the centerline of the median. For roadway cross sections with variable Edge of Pavement elevations, or to accommodate other construction in the median, the slopes may intersect off the centerline of the median.
 - B. Slopes > 0.05 : Provide a median refuge area (landing, 0.02 slope) for crossings with running slopes > 0.05 . The refuge area must extend the full width of the crossing and have a minimum length of 5 feet.
3. On existing facilities, remove and reconstruct curb transition for raised sidewalk with ramp.



SECTION F-F

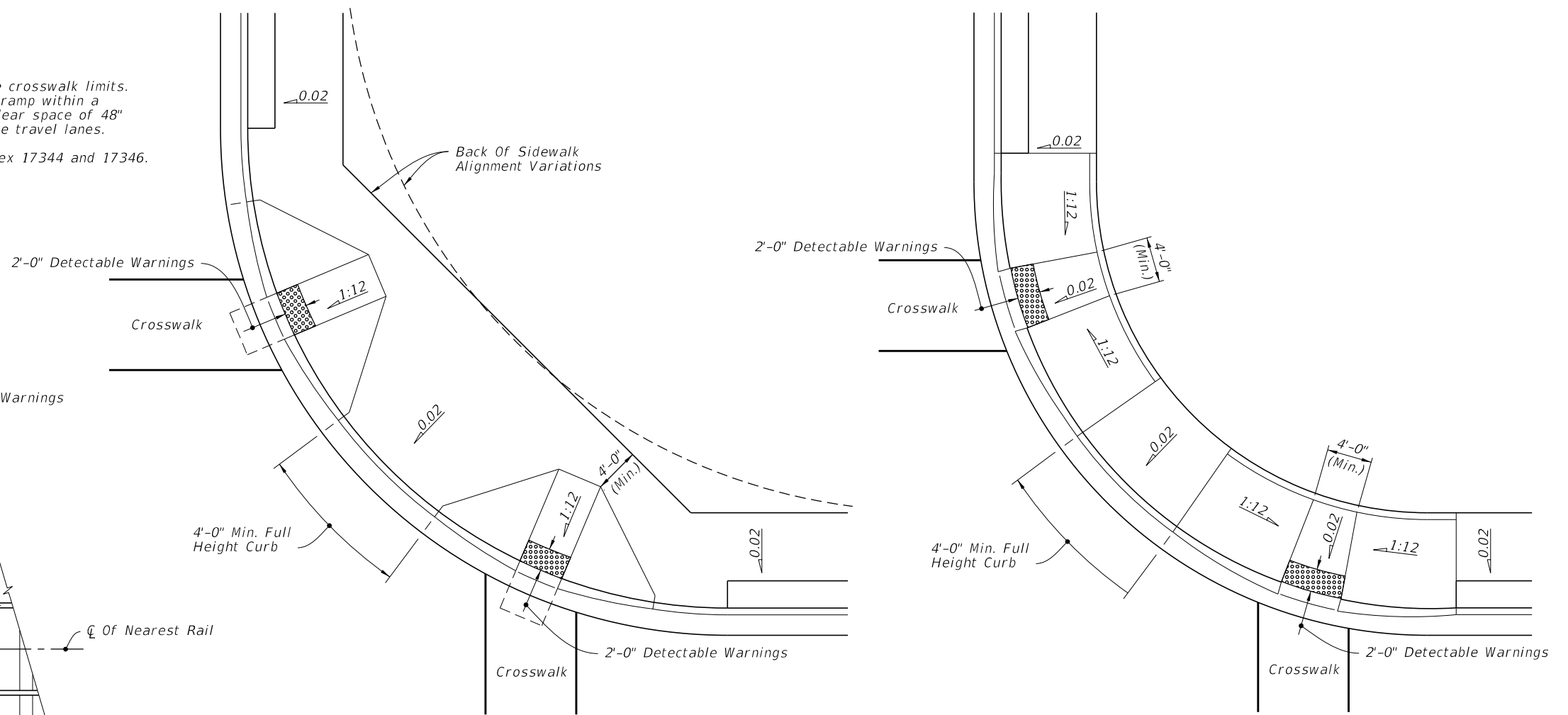
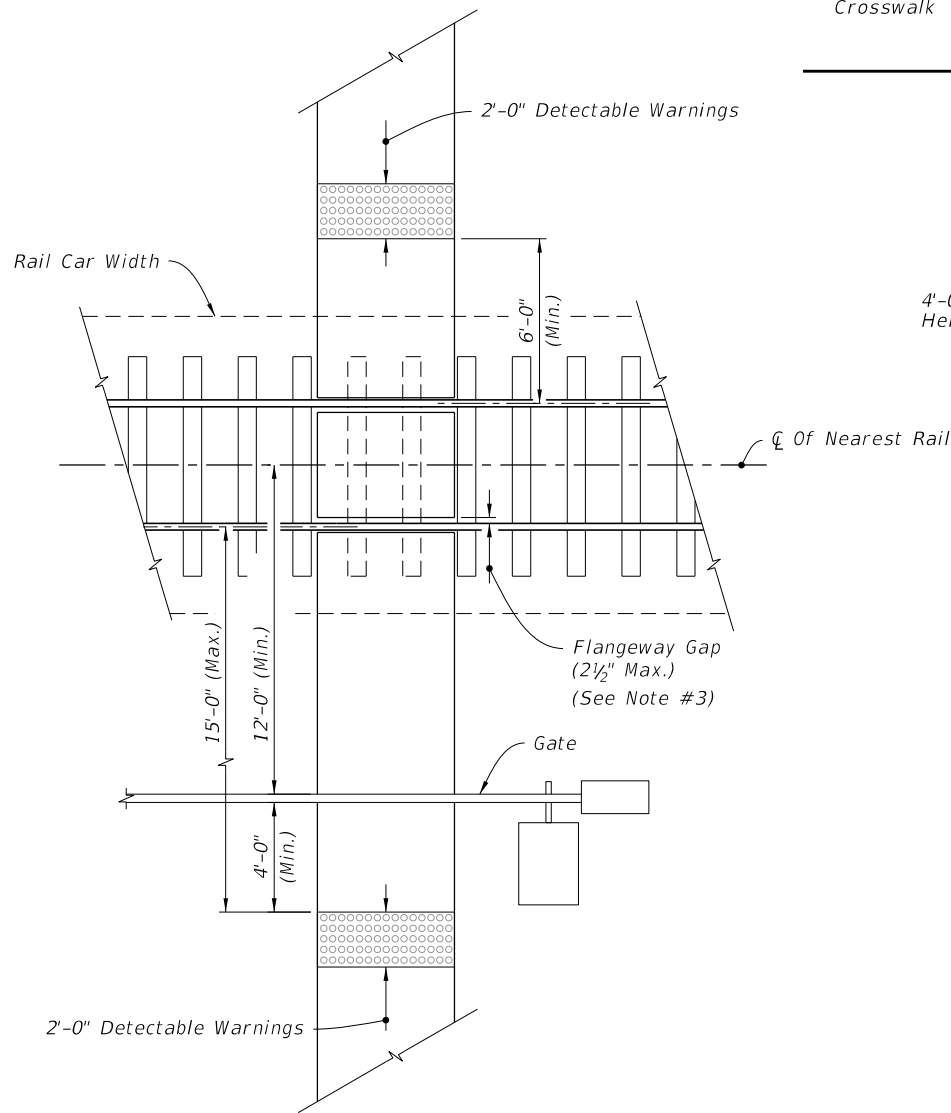
MEDIAN CROSSING

10/27/2016 10:53:48 AM

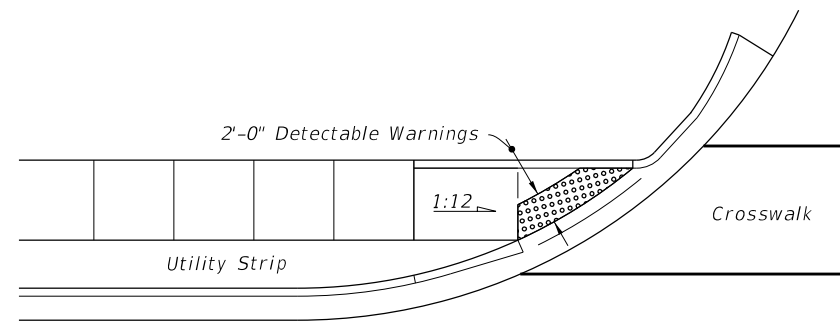
LAST REVISION 11/01/16	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX NO. 304	SHEET NO. 7 of 8
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NOTES:

1. Where crosswalk markings are used, ramps must fall within the crosswalk limits. A clear space of 48" minimum is required at the bottom of the ramp within a marked crosswalk. If crosswalk markings are not present, a clear space of 48" minimum is required at the bottom of the ramp outside of active travel lanes.
2. Crosswalk widths and configurations vary; must conform to Index 17344 and 17346.
3. Flangeway Gap may be up to 3" for Freight-only Railways.



RADIAL SIDEWALK RAMPS




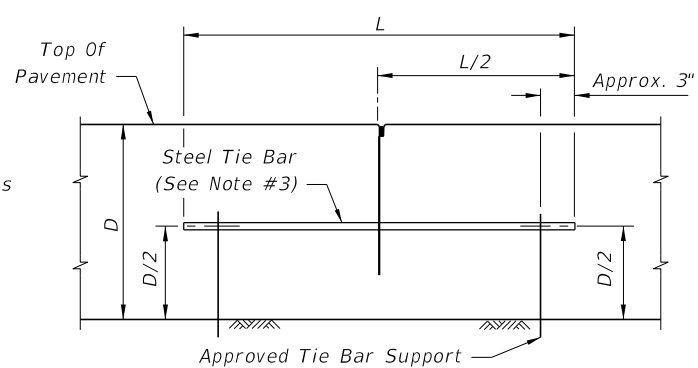
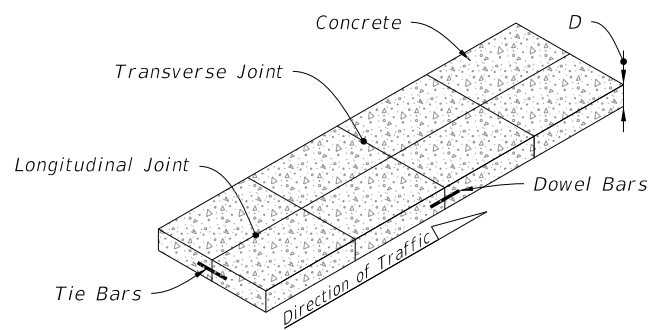
LINEAR SIDEWALK RAMPS

RAILROAD CROSSING PLACEMENT OF SIDEWALK CURB RAMPS AT CURBED RETURNS (TYP.)

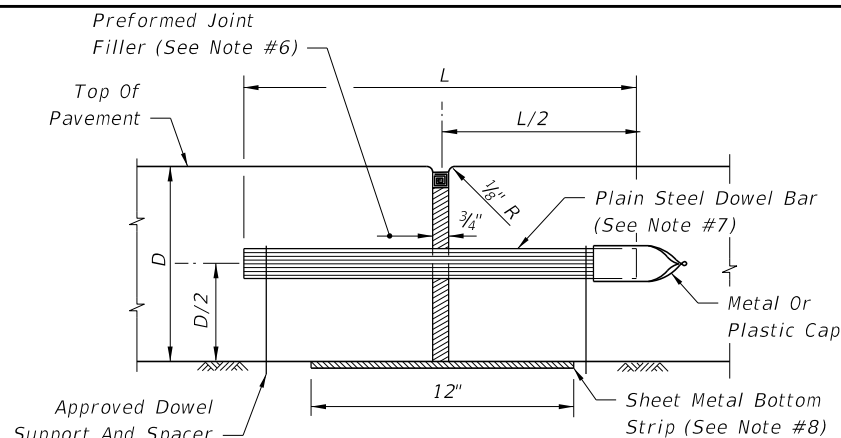
RAILROAD CROSSING AND CURB RAMPS AT CURBED RETURNS

10/27/2016 10:53:50 AM

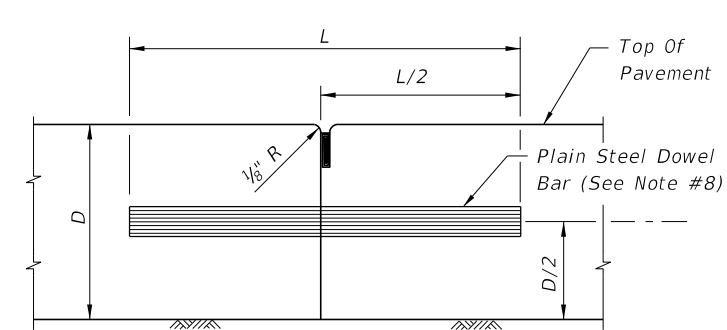
LAST REVISION 11/01/16	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS	INDEX NO. 304	SHEET NO. 8 of 8
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BUTT CONSTRUCTION JOINT



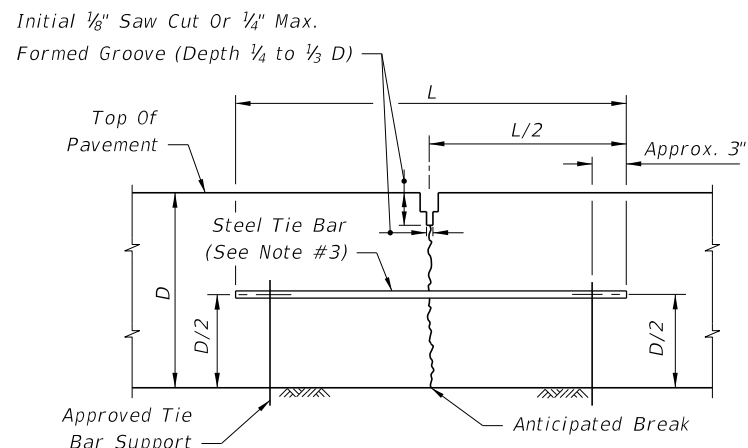
EXPANSION JOINT
(See Note #6)



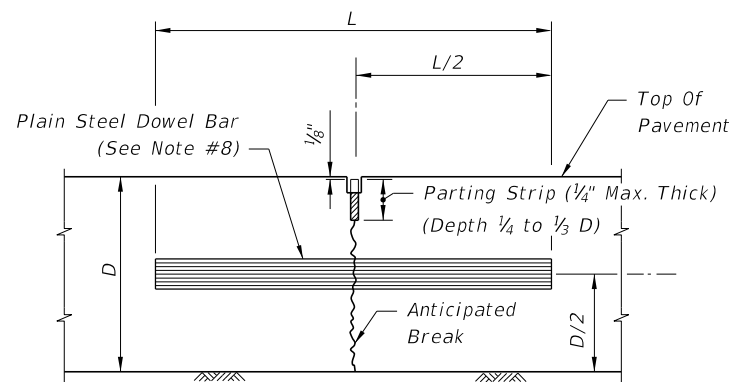
BUTT CONSTRUCTION JOINT
(Used At Discountuance Of Work)

NOTES:

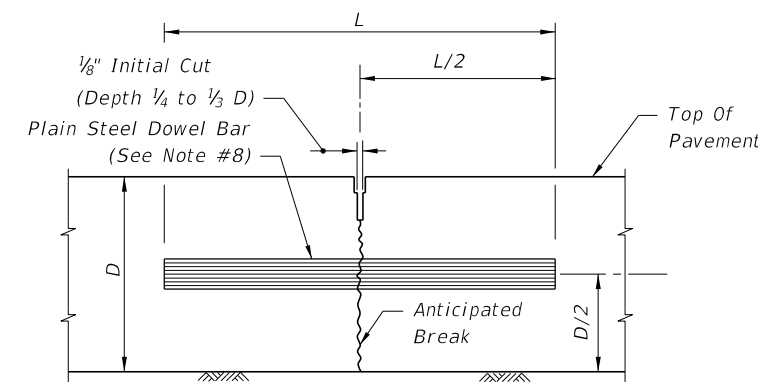
1. For joint seal dimensions see Sheet 2.
2. For slabs poured simultaneously, tie bars may be inserted in the plastic concrete by means approved by the Engineer.
3. For Longitudinal Joints:
 - A. Tie bars are deformed #4 or #5 reinforcing steel bars meeting the requirements of Specifications, Section 931.
 - B. Provide a standard load transfer tied joint with #4 bars 25" in length at 24" spacing or #5 bars 30" in length at 38" spacing.
4. Transverse joints are to be spaced at a maximum of 15'. Dowels are required at all transverse joints unless otherwise noted in the plans.
5. Expansion joints to be placed on approaches to bridges, at street intersections and other locations indicated in the plans.
6. Punch clean holes in preformed joint filler greater than bar diameter.
7. Coat and lubricate plain steel dowel bars in accordance with Specifications, Section 350.
8. Sheet metal bottom strips in accordance with Specifications, Section 931.



LANE-TIE JOINT
(See Note #2)



CONTRACTION JOINT
(Vibro Case Method)

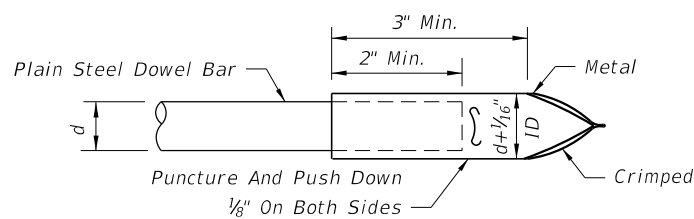


CONTRACTION JOINT
(Sawed Method)

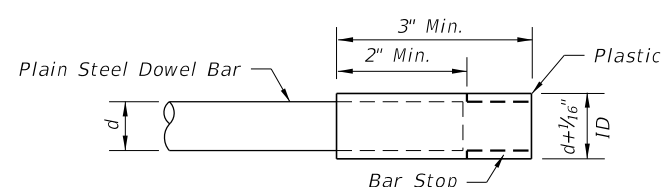
LONGITUDINAL JOINTS

TRANSVERSE JOINTS

DOWELS (LENGTH 18")	
Pavement Thickness "D"	Diameter
6"-6 1/2"	3/4"
7"-8 1/2"	1"
9"-10 1/2"	1 1/4"
≥11"	1 1/2"

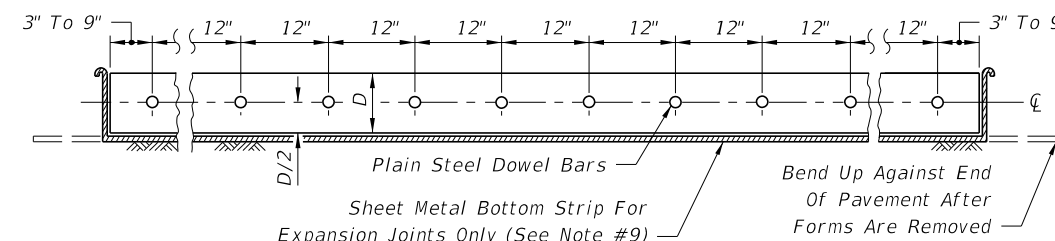


METAL



PLASTIC

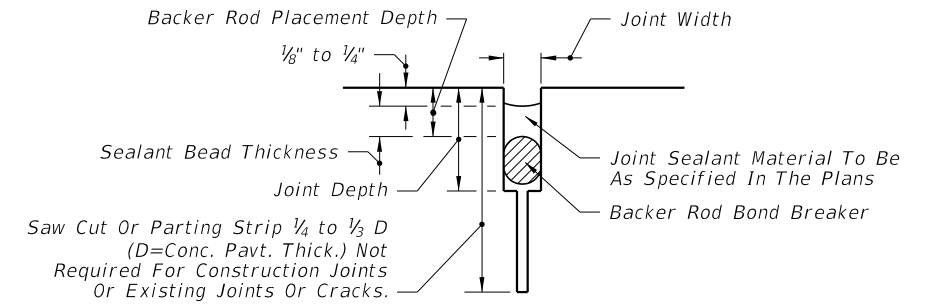
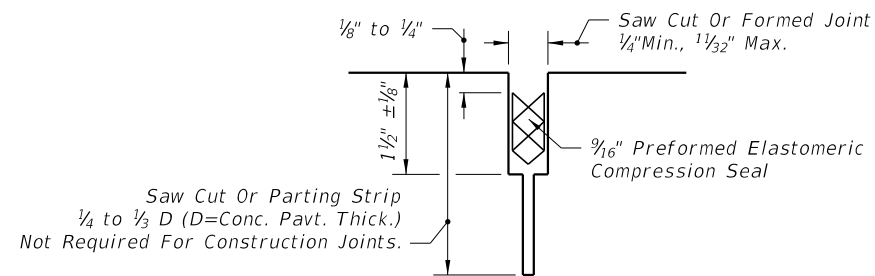
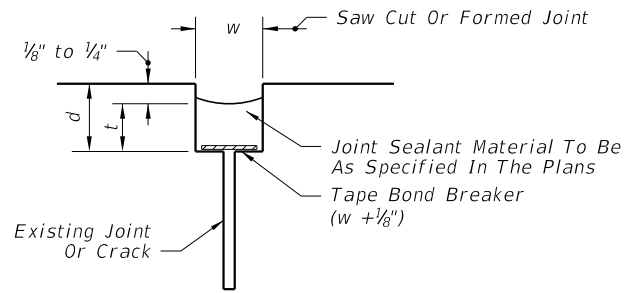
DOWEL BARS CAPS



DOWEL BAR LAYOUT

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LAST REVISION 01/01/16	DESCRIPTION:
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Note: Dimension w will be shown in the plans or established by the Engineer based on field conditions. Dimension d will be constructed so that the shape factor w/t has a maximum value of 2.0 and a minimum value of 1.0.

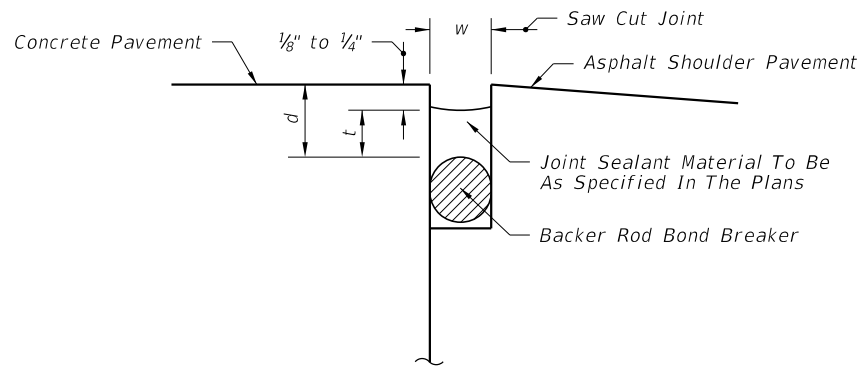
FOR NEW PROJECTS
PREFORMED ELASTOMERIC COMPRESSION SEAL

FOR NEW AND REHABILITATION PROJECTS
BACKER ROD BOND BREAKER

FOR REHABILITATION PROJECTS
TAPE BOND BREAKER

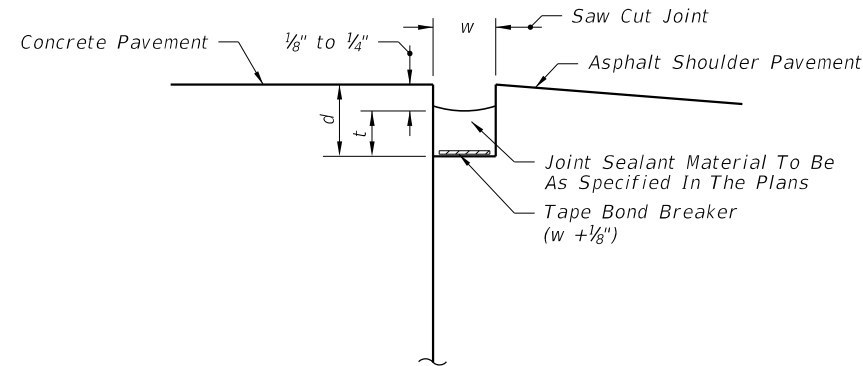
CONCRETE-CONCRETE JOINTS

$d = w = 3/4"$ Unless Specified Otherwise In The Plans



BACKER ROD BOND BREAKER

$d = w = 3/4"$ Unless Specified Otherwise In The Plans



TAPE BOND BREAKER

FOR NEW AND REHABILITATION PROJECTS;
 EITHER TAPE OR BACKER ROD BOND BREAKER REQUIRED;
 SHOULDER MUST BE REPAIRED IF PROPER JOINT SHAPE
 CAN NOT BE ATTAINED

CONCRETE-ASPHALT SHOULDER JOINTS

JOINT SEAL DIMENSIONS

**BACKER ROD BOND BREAKER
 (CONCRETE-CONCRETE JOINTS)**

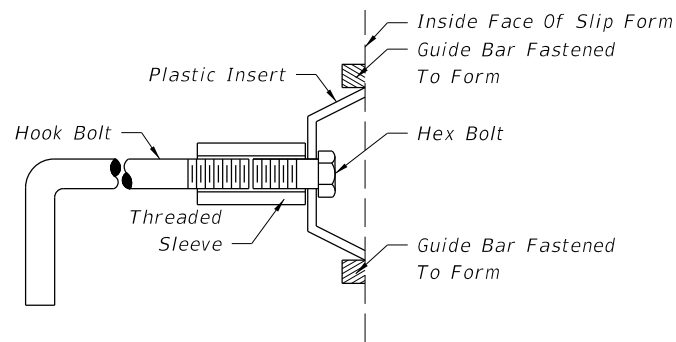
JOINT DIMENSIONS (INCHES)

JOINT WIDTH	SEALANT BEAD THICKNESS	BACKER ROD DIA.	MINIMUM JOINT DEPTH	BACKER ROD PLACEMENT DEPTH
1/4	1/4	3/8	1	1/2
3/8	1/4	1/2	1 1/4	1/2
1/2	1/4	5/8	1 1/4	1/2
5/8	5/16	3/4	1 1/2	9/16
3/4	3/8	1	1 3/4	5/8
7/8	7/16	1 1/8	1 3/4	1 1/16
1	1/2	1 1/4	2	3/4
>1	1/2	1 1/4+	2+	3/4

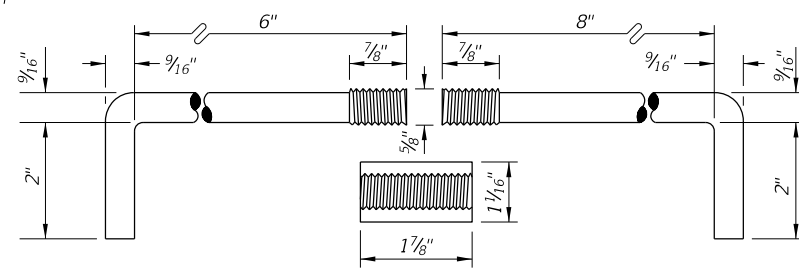
Unless otherwise indicated on the plans the joint width for new construction will be 1/4" for construction joints, 3/8" for all other joints.

For rehabilitation projects the joint width will be shown on the plans or established by the Engineer based on field conditions.

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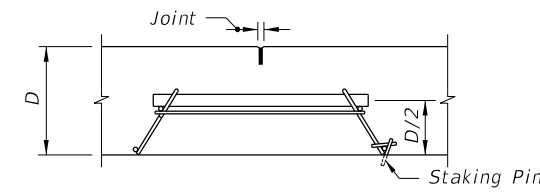


Note: After the concrete has set to the extent that the keyway will retain its shape, the hex bolt and plastic insert shall be removed. The remaining portion of the hook bolt assembly shall be installed immediately prior to placing of concrete in the adjacent lane.

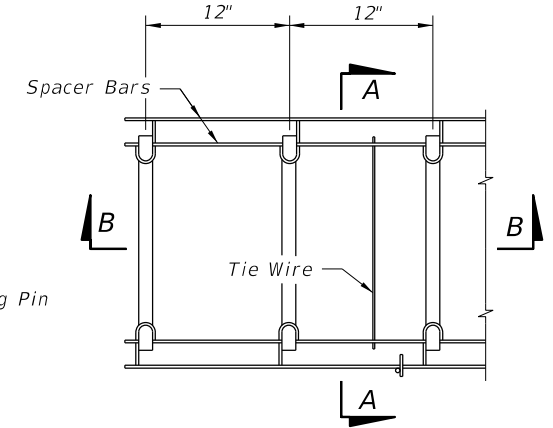


Anchor bolts shall be Grade C in accordance with ASTM A 307.

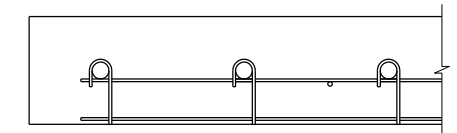
Threaded sleeves shall develop the full strength of the bolt and meet the material and thread requirements of ASTM A 563.



SECTION AA

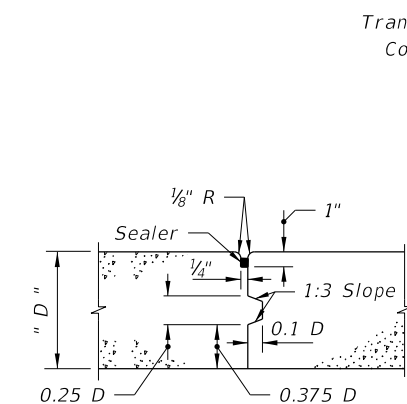


TOP VIEW

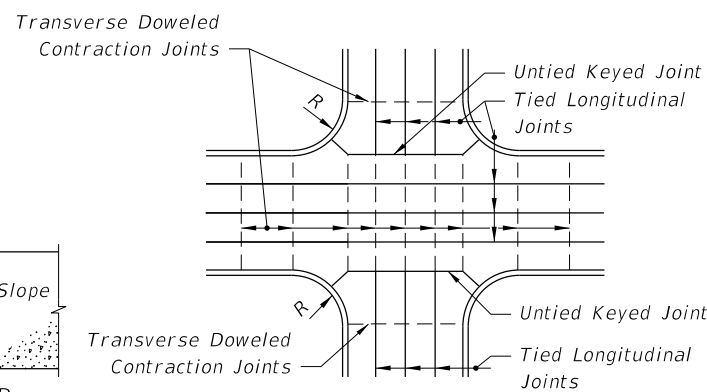


SECTION BB

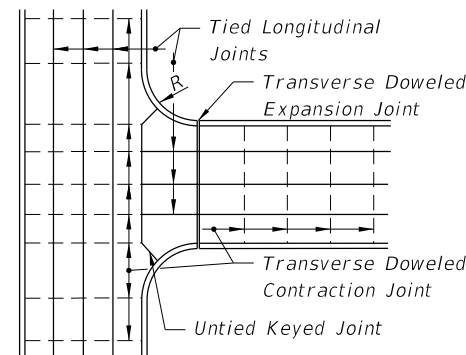
CONTRACTION ASSEMBLY



KEYED JOINT

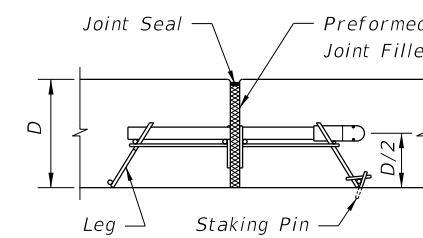


JOINT LAYOUT AT THRU INTERSECTIONS

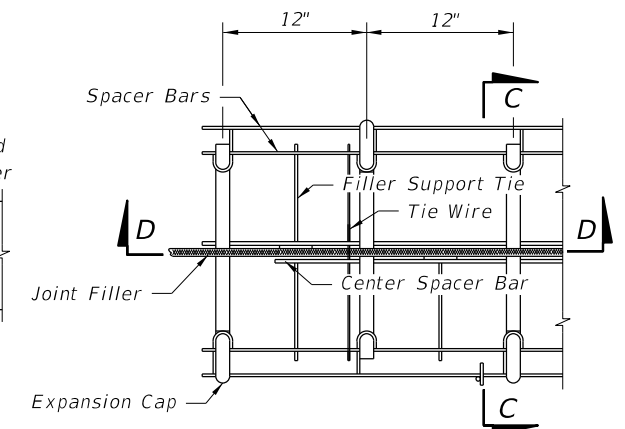


JOINT LAYOUT AT 'T' INTERSECTIONS

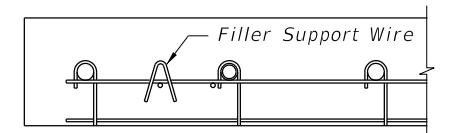
JOINT ARRANGEMENT



SECTION CC



TOP VIEW



SECTION DD


EXPANSION ASSEMBLY

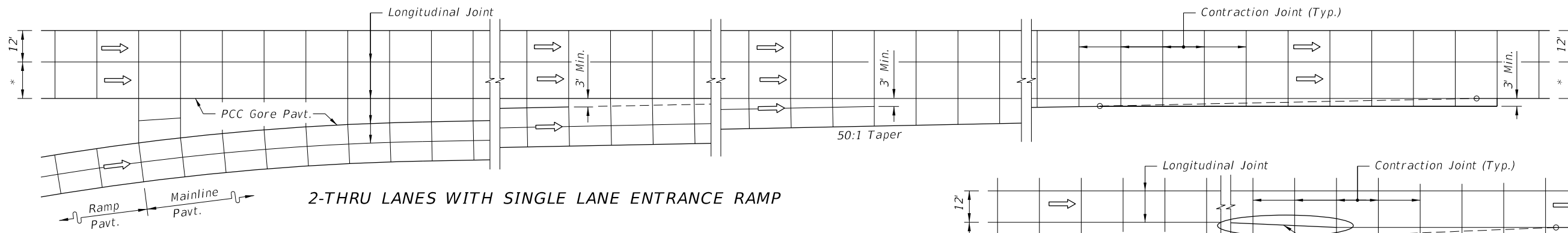
NOTES

1. Longitudinal joints will not be required for single lane pavement 14' or less in width. For entrance and exit ramp joint details, see Sheet 4.
2. Arrangement of longitudinal joints are to be as directed by the Engineer.
3. All manholes, meter boxes and other projections into the pavement shall be boxed-in with 1/2" preformed expansion joint material.

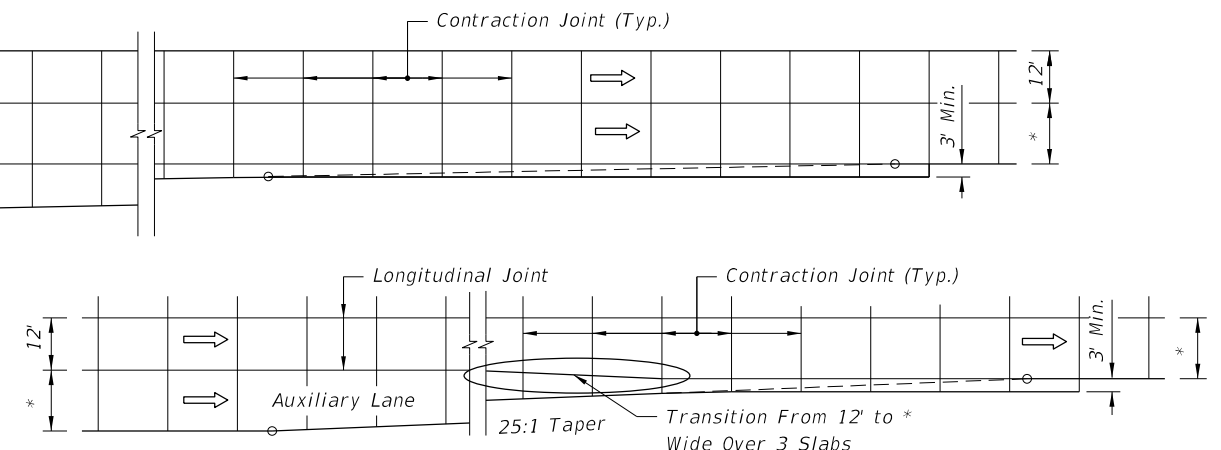
Note: Proprietary contraction and expansion assemblies may be used. Products shall be introduced to the State Construction Office in accordance with section (C) of the Product Evaluation Procedure.

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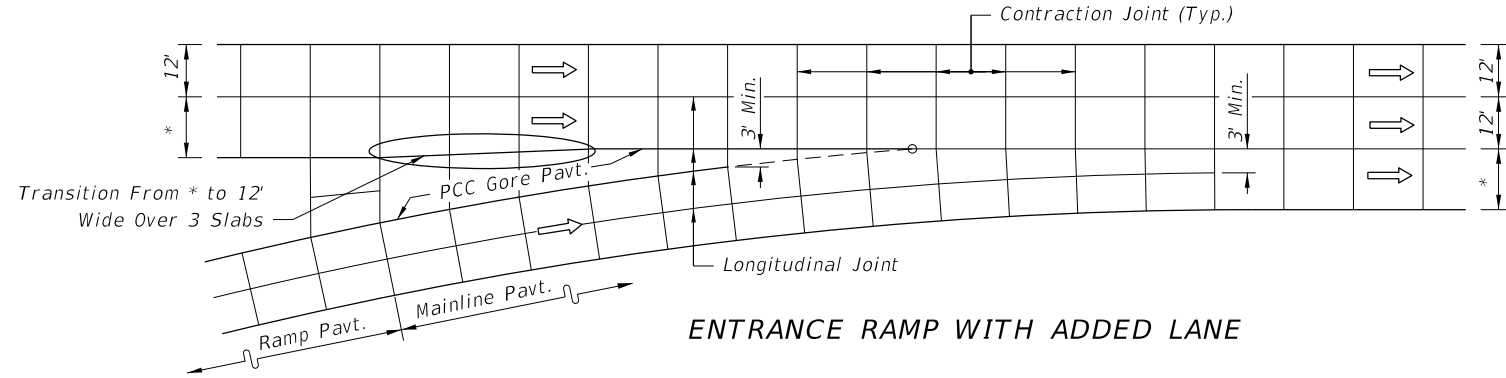
LAST REVISION 07/01/00	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	CONCRETE PAVEMENT JOINTS	INDEX NO. 305	SHEET NO. 3 of 4
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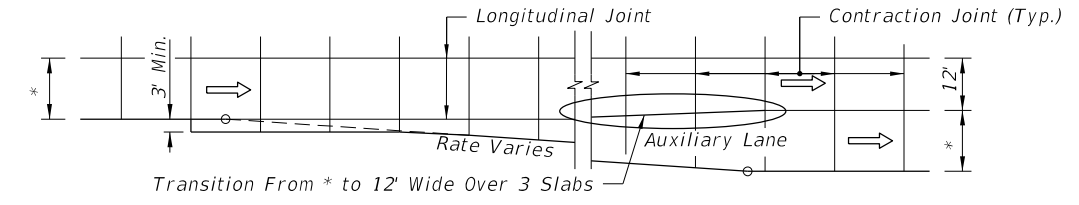
2-THRU LANES WITH SINGLE LANE ENTRANCE RAMP



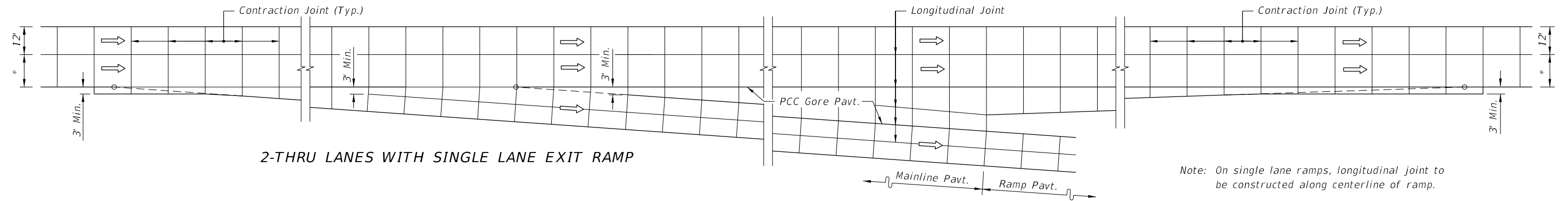
ENTRANCE TAPER WITH AUXILIARY LANE



ENTRANCE RAMP WITH ADDED LANE

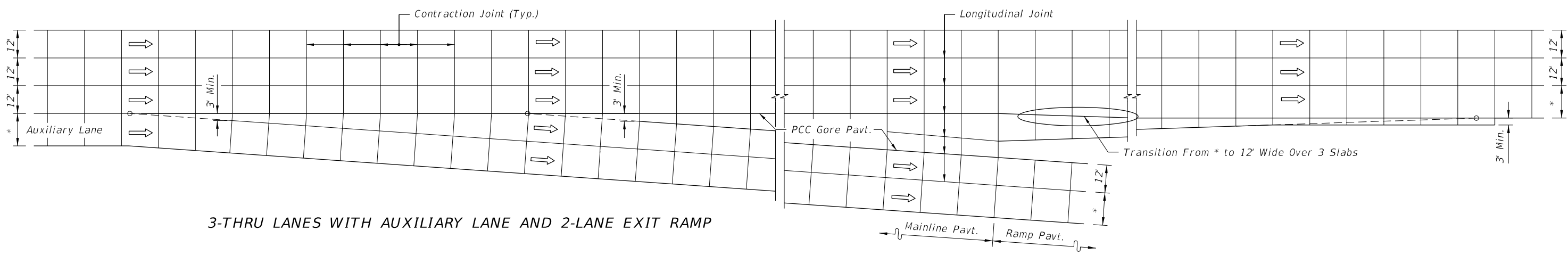


EXIT TAPER WITH AUXILIARY LANE



2-THRU LANES WITH SINGLE LANE EXIT RAMP

Note: On single lane ramps, longitudinal joint to be constructed along centerline of ramp.



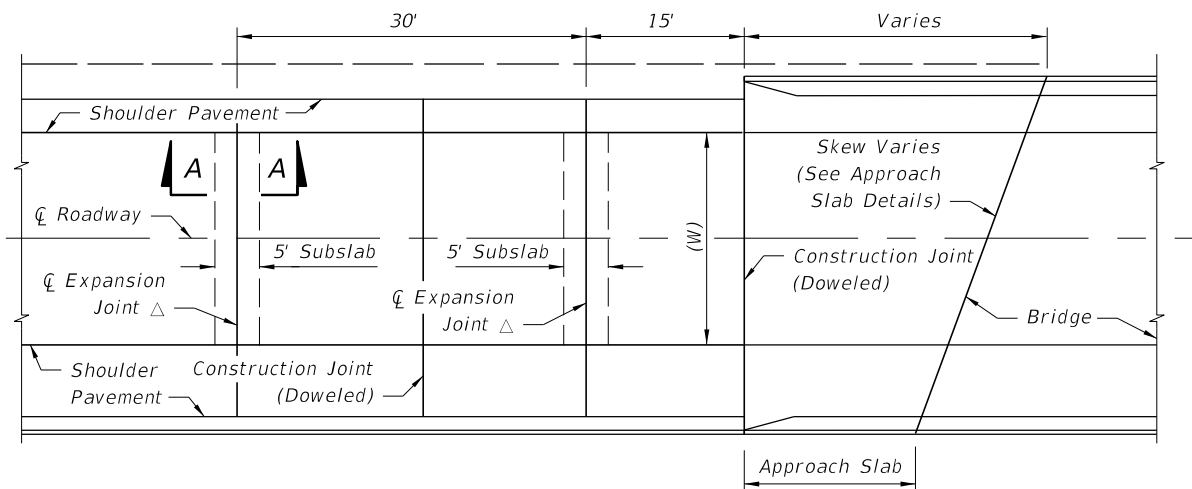
3-THRU LANES WITH AUXILIARY LANE AND 2-LANE EXIT RAMP

JOINT LAYOUT AT ENTRANCE AND EXIT RAMP TERMINALS

* 13' with tied Concrete Shoulders or 14' with Asphalt Shoulders.

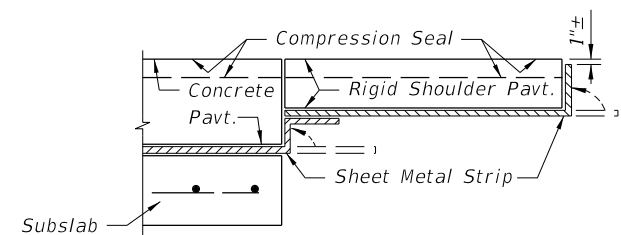
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LAST REVISION 07/01/09	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	CONCRETE PAVEMENT JOINTS	INDEX NO. 305	SHEET NO. 4 of 4
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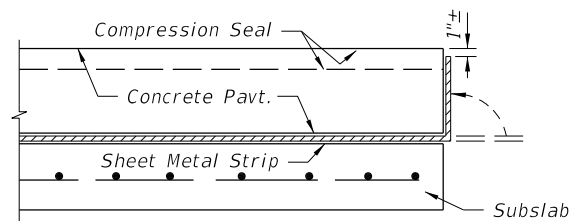


△ Expansion Joints Shall Be Constructed Parallel To The Existing Transverse Pavement Joints On Rehabilitation Projects, And Parallel To The Standard Transverse Pavement Joints Shown In The Plans For New Construction.

PLAN



WITH RIGID SHOULDER PAVEMENT

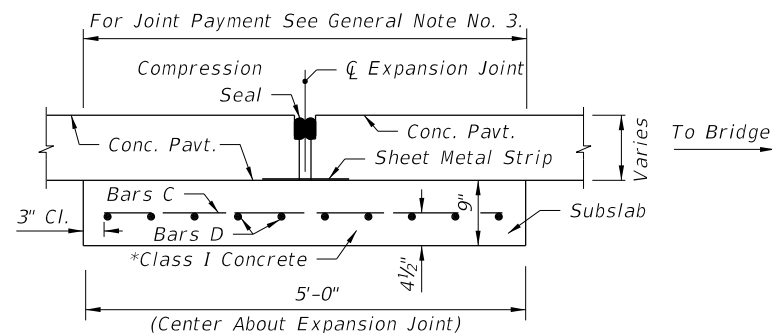


WITH GRASSED SHOULDER OR FLEXIBLE SHOULDER PAVEMENT

Note:
Immediately prior to placing the seal, the joint shall be thoroughly cleaned of all foreign material. Immediately after the seal is placed, sheet metal strip shall be bent up against the pavement edge.

The sheet metal strip shall be a minimum 16 gage steel, 12" wide and shall be galvanized in accordance with ASTM A-526, Coating Designation G90.

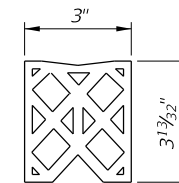
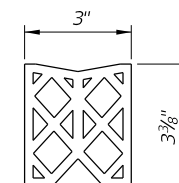
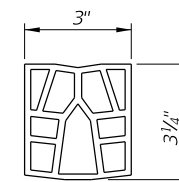
DETAIL SHOWING SHEET METAL STRIP



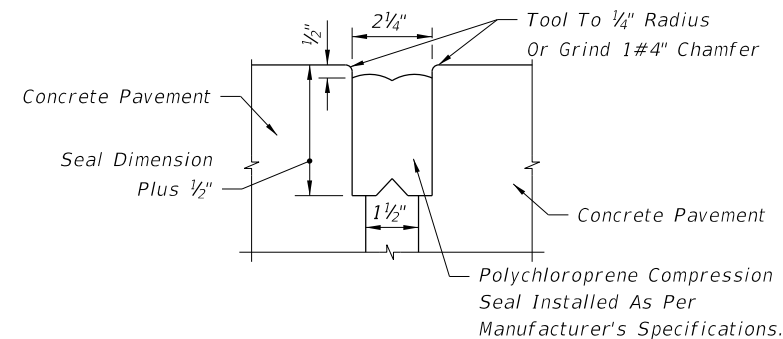
**SECTION AA
EXPANSION JOINT**

REINFORCING STEEL				
Mark	Size	Spac.	No. Req.	Length
C	5	6"	Varies	4'-6"
D	5	6"	10	W Minus 6"

* Finish surface smooth. Cure with heavy coating of wax base white pigmented curing compound. Apply second application immediately prior to placing pavement.



OPTIONAL SEALS



Note: All contacting surfaces between the compression seal and concrete shall be thoroughly coated with a lubricant-adhesive.

**JOINT DIMENSIONS
COMPRESSION SEAL DETAIL**

DESIGN NOTES

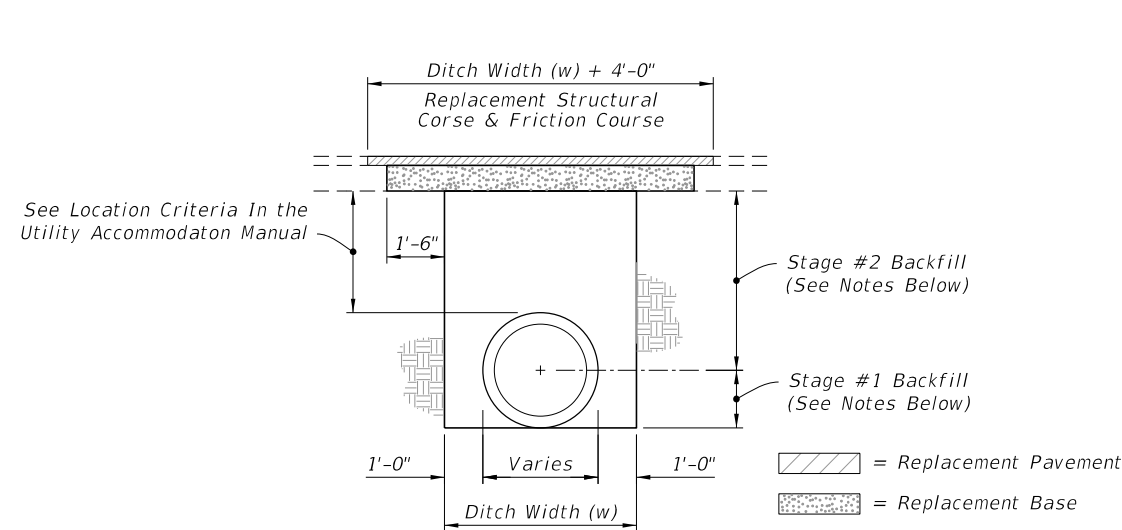
1. For rehabilitation projects, the designer must indicate in the plans the number of slabs to be removed, the number of subslabs to be constructed/reconstructed, and the location of expansion joints.
2. Pay quantity of expansion joint to be calculated across pavement at right angles to the centerline of the roadway pavement. Shoulder pavement joint included.

GENERAL NOTES

1. The centerline of roadway and the centerline of bridge do not necessarily coincide. Prior to the placement of the expansion joint, the centerline of the roadway pavement shall be determined.
2. For information on other types of concrete pavement joints see Index No. 305.
3. Pay quantity for expansion joint is the length of joint to be constructed across the roadway and shoulder pavements, measured at right angles to the centerline of the roadway. Payment for expansion joint shall be full compensation for joint construction, including reinforced concrete subslab, sheet metal strip and compression seal, but, not including roadway pavement reconstruction associated with joint replacement or reconstruction. Expansion joint to be paid for under the contract unit price for Bridge Approach Expansion Joint, LF.

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LAST REVISION	DESCRIPTION:
07/01/04	



NOTES:
PAVEMENT REMOVAL AND REPLACEMENT

1. Pavement shall be mechanically sawed.
2. The replacement asphalt shall match the existing structural and friction courses for type and thickness in accordance with current FDOT asphalt mix specifications.
3. The new base materials shall be either of the same type and composition as the materials removed or of equal or greater structural adequacy (See Index No. 514).

BACKFILL OPTION

1. COMPACTED AND STABILIZED FILL

- A. Backfill material shall be placed in accordance with Section 125 of the Standard Specifications.
- B. In Stage #1, construct compacted fill beneath the haunches of the pipe, using mechanical tamps suitable for this purpose. This compaction applies to the material placed beneath the haunches of the pipe and above any bedding.
- C. In Stage #2, construct compacted fill along the sides of the pipe and up to the bottom of the base, with the upper 12" receiving Type B Stabilization. In lieu of Type B Stabilization, the Contractor may construct using Optional Base Group 3.

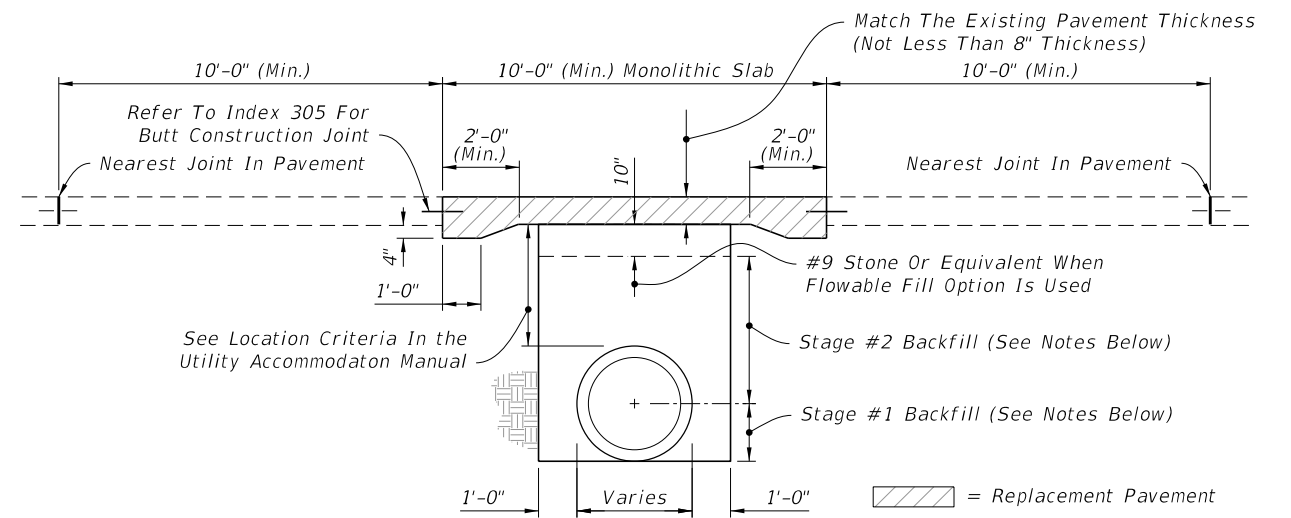
2. FLOWABLE FILL

- A. If compaction can not be achieved through normal mechanical methods then flowable fill may be used.
- B. Flowable fill is to be placed in accordance with Section 121 of the Specifications, as approved by the Engineer.
- C. Do not allow the utility being installed to float. If a method is provided to prevent flotation from occurring, Stages #1 and #2 can be combined, if approved by the Engineer.
- D. In Stage #1, place flowable fill midway up on both sides of the utility. Allow to harden before placing Stage #2.
- E. In Stage #2, place flowable fill to the bottom of the existing base course.

FLEXIBLE PAVEMENT CUT

GENERAL NOTES

1. The details provided in this standard index apply to cases in which jack and bore or directional boring methods are not required by the Engineer.
2. Flowable fill shall not be placed directly over loose, or high plastic, or muck material (see Index 505) which will cause settlement due to fill weight. Where highly compressible material exists, the amount, shape and depth of flowable fill must be engineered to prevent pavement settlement.
3. These details do not apply to utility cuts longitudinal to the centerline of the roadway which may require the additional use of geotextiles, special bedding and backfill, or other special requirements.
4. Method of construction must be approved by the Engineer.
5. Some pipe may require special granular backfill up to 6" above top of pipe. Geotextiles may be required to encapsulate the special granular material.



NOTES:
PAVEMENT REMOVAL AND REPLACEMENT

1. High early strength cement concrete (3000 psi) meeting the requirements of Standard Specification 346 shall be used for rigid pavement replacement.
2. Pavement shall be mechanically sawed and restored to conform with existing pavement joints within 12 hours. (See Index 305)

BACKFILL OPTION

1. GRANULAR BACKFILL

- A. Any edgedrain system that is removed shall be replaced with the same type materials. Any edgedrain system that is damaged shall be repaired with methods approved by the Engineer.
- B. Fill material shall be placed in accordance with the Standard Specifications. Fill material shall be special select soil in accordance with Index 505.
- C. In Stage #1, construct compacted fill beneath the haunches of the pipe, using mechanical tamps suitable for this purpose. This compaction applies to the material placed beneath the haunches of the pipe and above any bedding.
- D. In Stage #2, construct fill along the sides of the pipe and up to the bottom of replacement pavement.

2. FLOWABLE FILL


- A. If mechanical compaction can not be achieved through normal mechanical methods then flowable fill may be used.
- B. Flowable fill is to be placed in accordance with Section 121 of the Specifications, as approved by the Engineer.
- C. Do not allow the utility being installed to float. If a method is provided to prevent flotation from occurring, Stages #1 and #2 can be combined, if approved by the Engineer.
- D. In Stage #1, place flowable fill midway up on both sides of the utility. Allow to harden before placing Stage #2.
- E. In Stage #2, place flowable fill to the bottom of the stone layer.

RIGID PAVEMENT CUT

6. Where asphalt concrete overlays exist over full slab concrete pavement, the replacement pavement shall have an overlay constructed over the replacement slab. The overlay shall match the existing asphalt pavement thickness. The replacement friction course shall match the existing friction course, except structural course may be used in lieu of dense graded friction course.
7. All shoulder pavement, curb, curb and gutter, and their substructure disturbed by utility trench cut construction shall be restored in kind.
8. The use of flowable fill to reduce the time traffic is taken off a facility is acceptable but must have prior approval by the Engineer. Flowable fill use is allowed only when properly engineered for pavement crossings, whether straight or diagonal, and shall not be installed for significant depths or lengths. The maximum length shall be fifty (50) feet and a maximum depth of six (6) feet unless supported by an engineering document prepared by a registered professional engineer that specializes in soils engineering. The engineering document shall address the evaluation of local groundwater flow interruption and settlement potential.
9. Excavatable flowable fill is to be used when the flowable fill option is selected.

TRENCH CUTS AND RESTORATIONS ACROSS ROADWAYS

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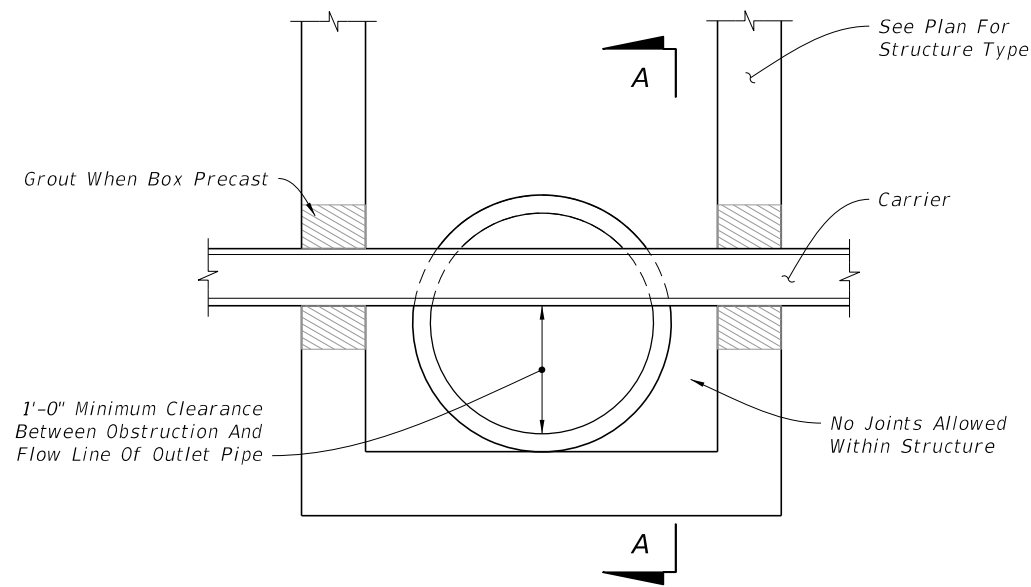
LAST REVISION 11/01/16	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	MISCELLANEOUS UTILITY DETAILS	INDEX NO. 307	SHEET NO. 1 of 3
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NOTES:

1. These details are for construction field expediency to resolve utility conflicts that cannot be remedied by relocation. For conflicts determined during design, use the construction shop drawings for structure details.
2. Concrete used in conflict structures shall be as specified in ASTM C478. 4000 psi may be used in lieu of Class I concrete.
3. Maximum opening for pipe shall be the pipe OD plus 6". Mortar used to seal the pipe into the opening will be of such mix that shrinkage will not cause leakage into or out of the structure.
4. If the conflict structure is round or there are multiple inlet or outlet pipes, then the wall section should be reviewed for strength.
5. If during construction or the plans design process it is determined that a potable water supply line must pass through a storm drain structure, it must be in compliance with Chapter 62-555.314 (3) F.A.C. and shown on the design or construction plans and submitted to the Florida Department of Environmental Protection (FDEP) Administrator For Drinking Water in the respective FDEP District for review and comment. This index and rule citation provide accepted methods for addressing conflicts when and where they cannot be reasonably avoided. To be submitted along with the plans shall be a justification describing inordinate cost and the impracticality of avoidance. If identified, properly justified, and accomplished in accordance with this index, approval is granted. Upon request, the Utility Agency Owner (UAO) must provide support data on the cost of relocation or adjustment to the FDOT for submittal to the FDEP. See the following web site for District FDEP Drinking Water Contacts: www.dep.state.fl.us/water/drinkingwater/index.htm and click on "Organization" on the menu to the right.

DESIGNER'S NOTES:

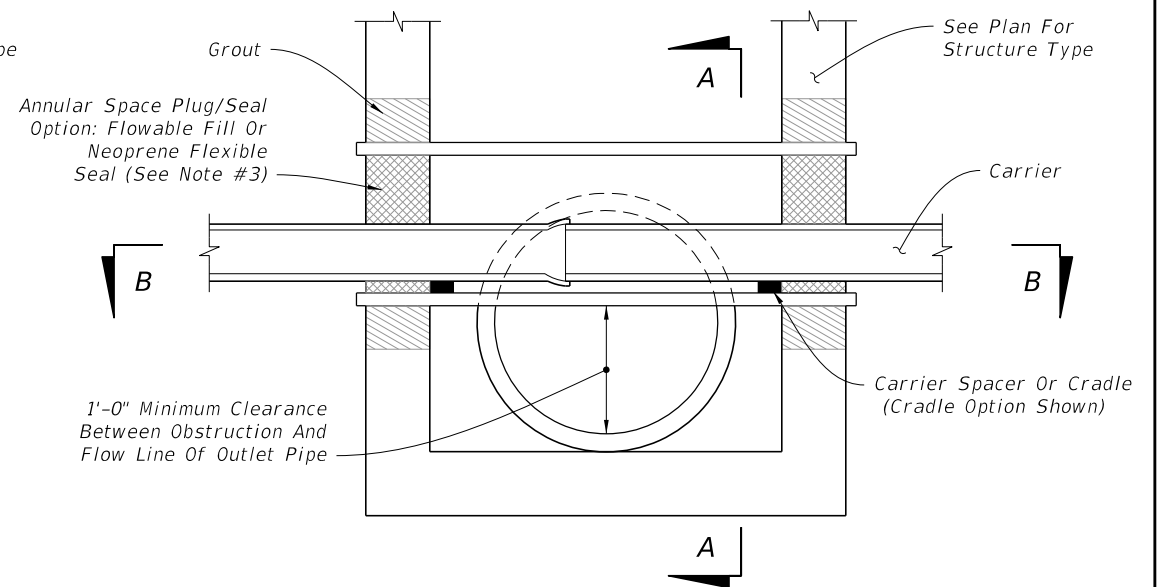
"Sumped" conflict manholes shall not be sued unless the system is hydraulically designed to account for the headloss generated if the sump is completely blocked



SECTION LONGITUDINAL TO CARRIER PIPE

UTILITY CONFLICT CONDITION I

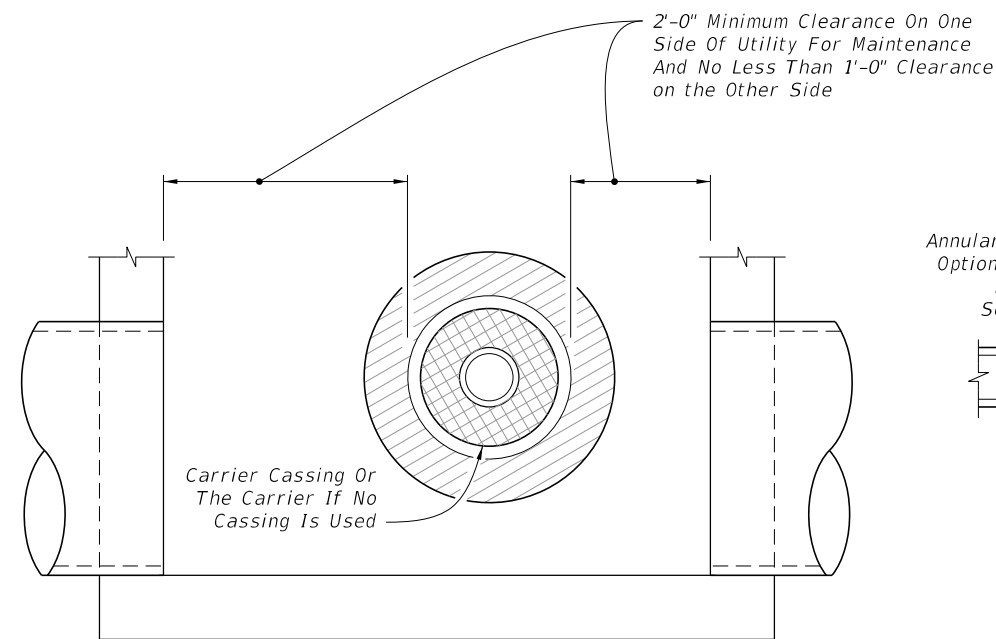
(Nonpressure Or Nonfluid Carrier Installations)



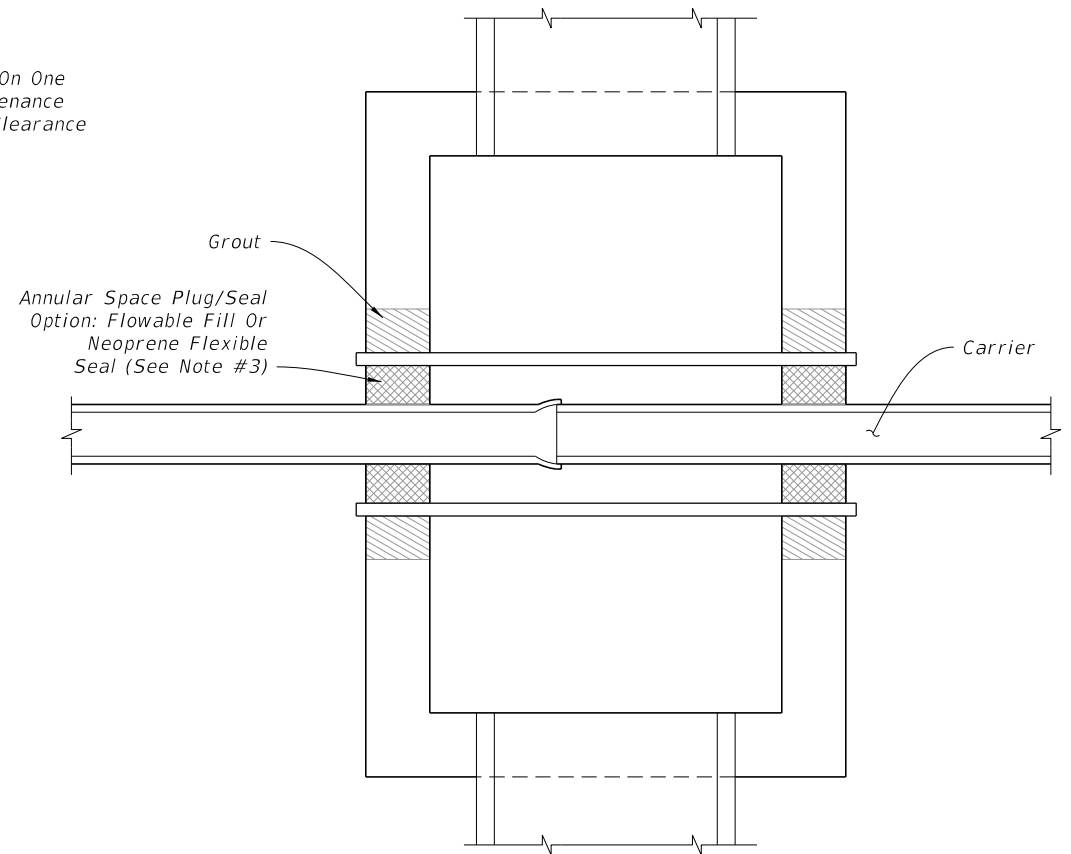
SECTION LONGITUDINAL TO CARRIER PIPE

UTILITY CONFLICT CONDITION II

(Pressure Or Fluid Carrier Installations)




SECTION A-A

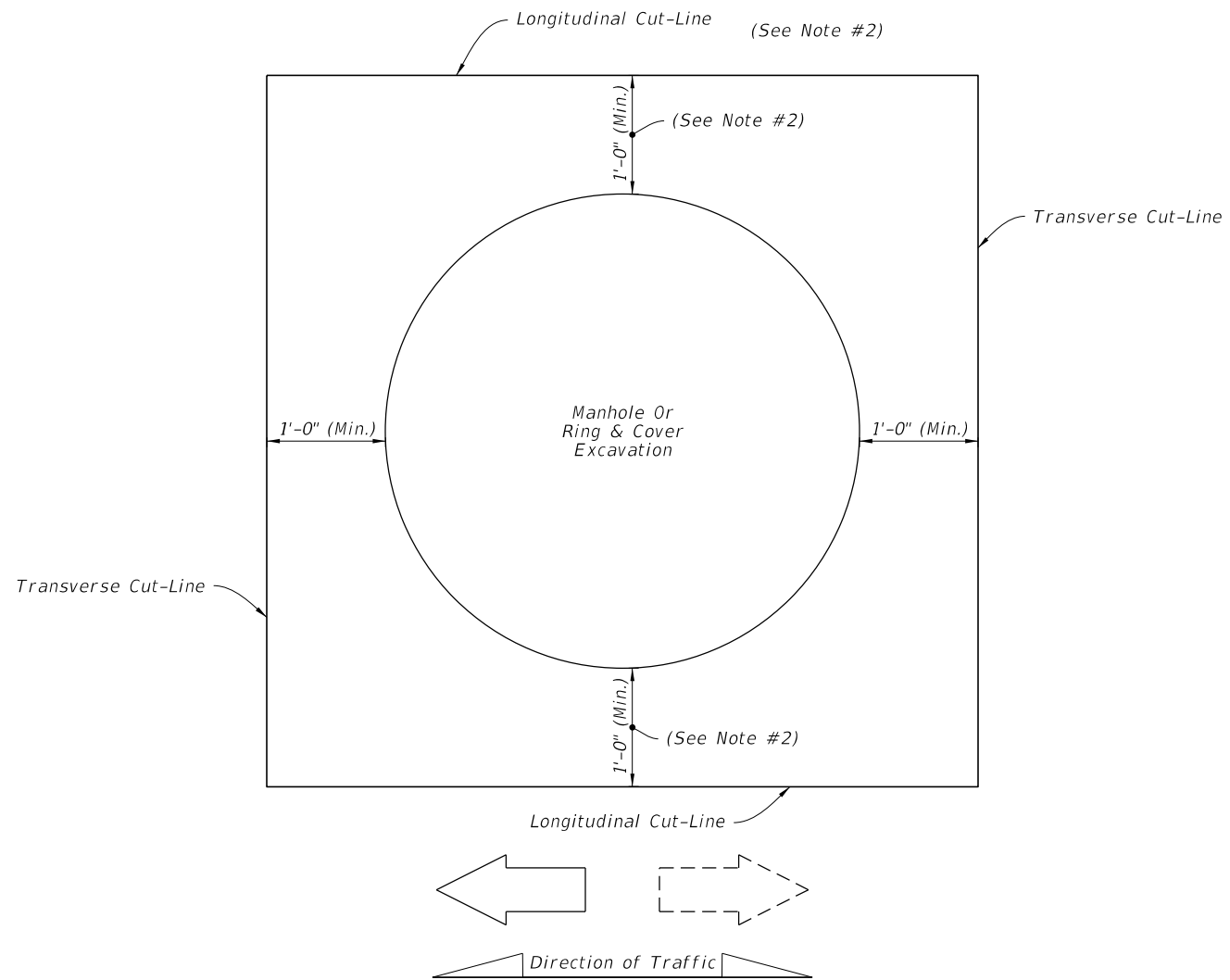


SECTION B-B

UTILITY CONFLICT PIPES THRU STORM DRAIN STRUCTURES

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LAST REVISION 11/01/16	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	MISCELLANEOUS UTILITY DETAILS	INDEX NO. 307	SHEET NO. 2 of 3
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PARTIAL CUTS FOR RING AND COVER ADJUSTMENTS

NOTES

1. Cut-Lines must be straight and cleanly sawed.
2. Longitudinal Cut-Lines are the same for both rigid and flexible pavement.
For Transverse Cut-Lines in rigid pavement, extend the Cut-Line to the nearest existing joint.
3. See Sheet 1 for replacement pavement.

NONTRENCH PAVEMENT CUTS FOR UNDERGROUND UTILITY STRUCTURES IN PAVEMENT

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LAST REVISION 11/01/16	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	MISCELLANEOUS UTILITY DETAILS	INDEX NO. 307	SHEET NO. 3 of 3
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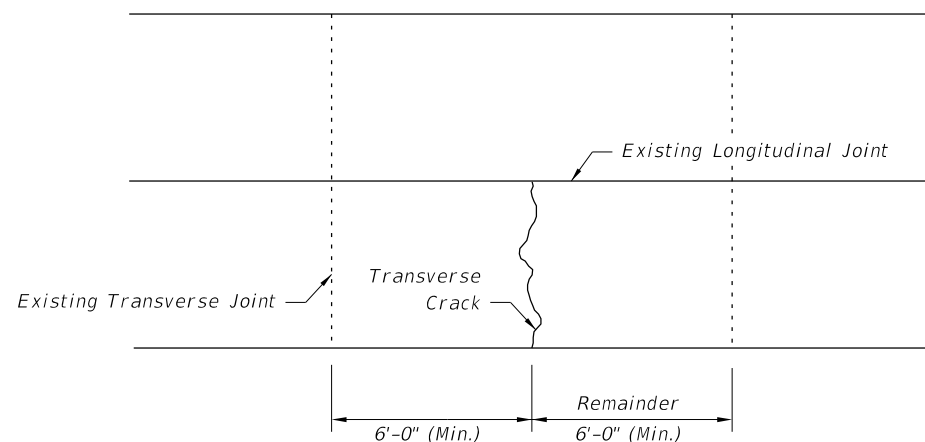


FIGURE 10.2 - REPAIR METHOD: NONE OR CLEAN AND SEAL

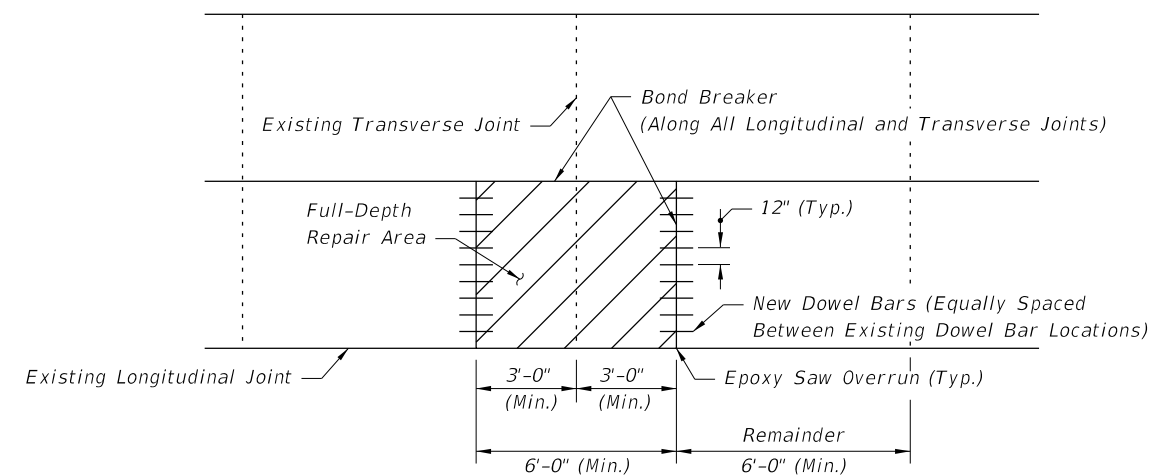


FIGURE 10.5 - FULL-DEPTH REPAIR ON BOTH SIDES OF THE JOINT

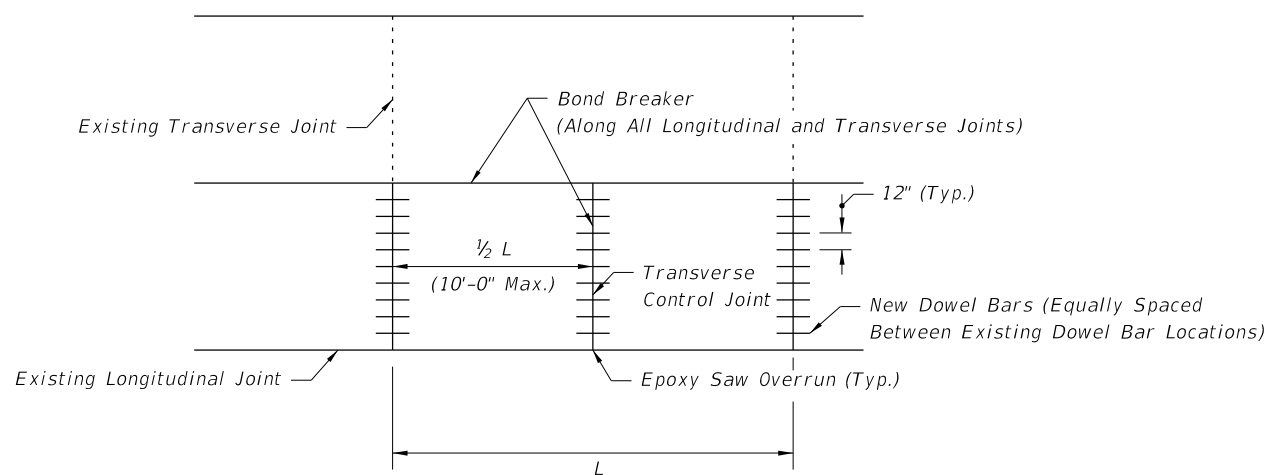


FIGURE 10.3 - FULL SLAB FULL DEPTH REPLACEMENT

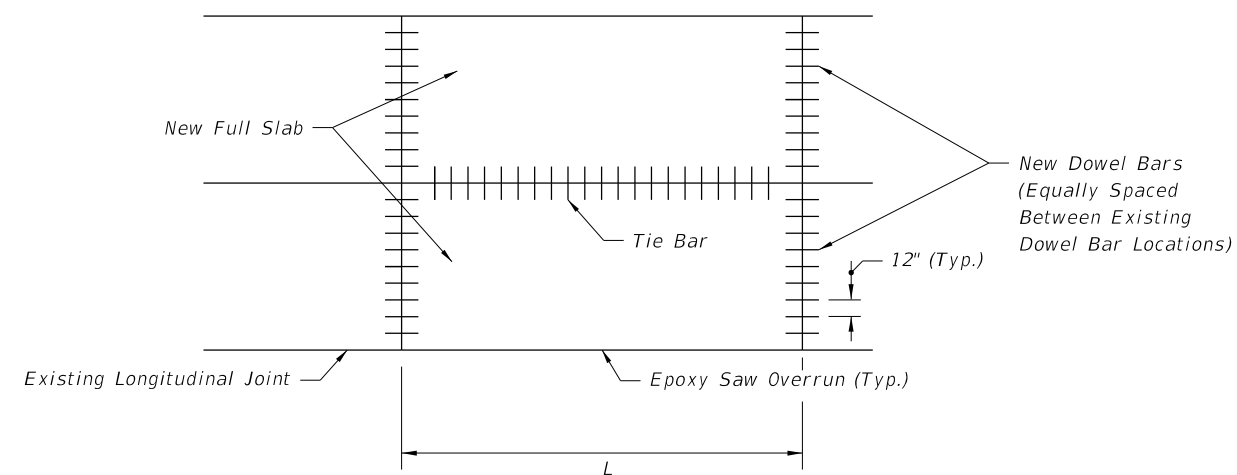


FIGURE 10.6 - MULTIPLE SLAB FULL DEPTH REPLACEMENT

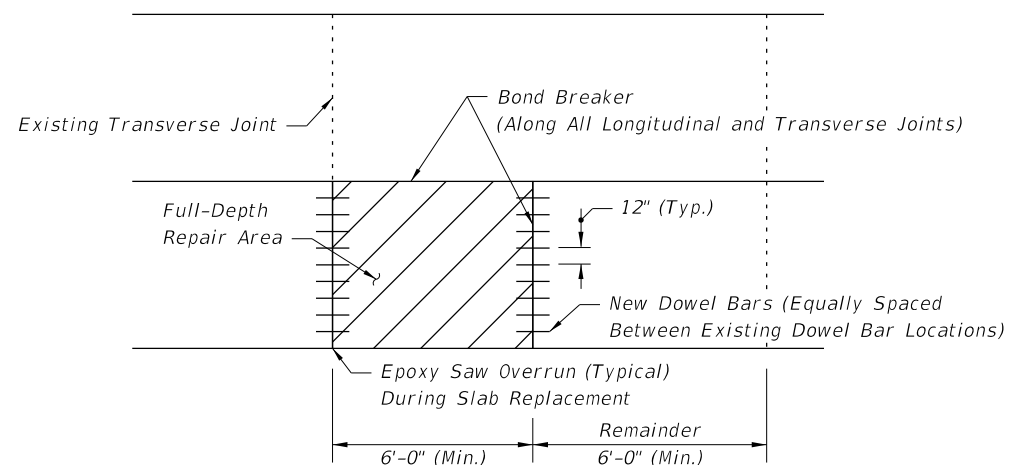



FIGURE 10.4 - PARTIAL SLAB FULL DEPTH REPLACEMENT

GENERAL NOTES

1. For Repair and Replacement Criteria see Sheet 2.
2. Full depth repairs consist of removing and replacing at least a portion of the existing slab to the bottom of the concrete.
3. Repair boundaries shall be sawed full-depth with diamond saw blades. On hot days, it may not be possible to make this cut without first making a wide, pressure relief cut within the repair boundaries. A carbide-tipped wheel saw may be used for this purpose, but the wheel saw must not intrude on the adjacent lane, unless the lane is slated for repair. The wheel saw cuts produce a ragged edge that promotes excessive spalling along joints. Hence, if wheel saw cuts are made, diamond saw cuts must be made 18 in. outside the wheel saw cuts. To prevent damage to the base, the wheel saw must not be allowed to penetrate more than 0.5 in. into the base.
4. No additional base or subgrade material shall be added and all loose base or subgrade material shall be removed prior to placement of the new concrete slab. The concrete slab shall be placed to the full depth of the material removed. No additional compensation will be allowed for additional concrete required to bring proposed concrete slab up to finished grade.
5. Removal of the damaged concrete pavement shall be by lifting. Any good concrete pavement which is damaged during removal of damaged areas shall be removed and replaced by the contractor at his expense.
6. If the roadway contract includes grinding, then the slab replacement shall be performed first.
7. During slab replacement operations, fill any saw cut over runs into adjacent slabs with epoxy.
8. Install tie bars at longitudinal joints when two full adjacent or multiple replaced slabs.

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LAST REVISION 07/01/14	REVISION	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	CONCRETE SLAB REPLACEMENT	INDEX NO. 308	SHEET NO. 1 of 2
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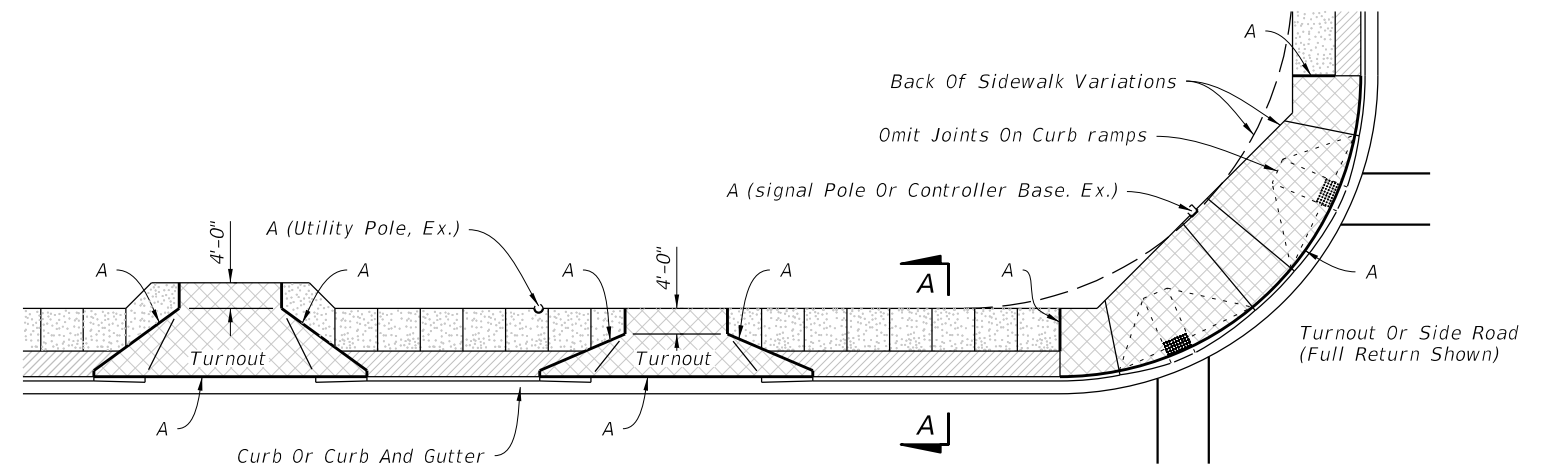
SLAB REPAIR AND REPLACEMENT CRITERIA

DISTRESS PATTERN	SEVERITY/DESCRIPTION		REPAIR METHOD	REFERENCE
CRACKING				
Longitudinal	Light	<1/8", no faulting, spalling <1/2" wide	None	Figure 10.2
	Moderate	1/8" <width <1/2", spalling <3" wide	Clean and Seal	Figure 10.2
	Severe	width >1/2", spalling >3" faulting >1/2"	Replace	Figure 10.3
Transverse	Light	<1/8", no faulting, spalling <1/2" wide	None	Figure 10.2
	Moderate	1/8" <width <1/2", spalling <3" wide	Clean and Seal	
	Severe	width >1/2", spalling >3" faulting >1/2"	Replace	Figure 10.3, 10.4 and 10.5
Corner Breaks	A corner of the slab is separated by a crack that intersects the adjacent longitudinal and transverse joint, describing an approximate 45° angle with the direction of traffic.		Full Depth	Figure 10.4 and 10.5
Intersecting Random Cracks (Shattered Slab)	Cracking patterns that divide the slab into three or more segments.		Full Depth	Figure 10.3 and 10.4
JOINT DEFICIENCIES				
Spall Nonwheel Path	Light	spall width <1 1/2", < 1/3 slab depth, <12" in length	None	Figure 10.4 and 10.5
	Moderate	1 1/2" <spall width <3", < 1/3 slab depth, <12" in length	None	Figure 10.4 and 10.5
	Severe	spall width >3" or length >12"	Full Depth	Figure 10.4 and 10.5
Spall Wheel Path	Light	spall width <1 1/2", <than 1/3 slab depth, <12" in length	None	Figure 10.4 and 10.5
	Moderate	1 1/2" <spall width <3", < 1/3 slab depth, <12" in length	Full Depth	Figure 10.4 and 10.5
	Severe	spall width >3" or length >12"	Full Depth	Figure 10.4 and 10.5
SURFACE DETERIORATION				
Pop Outs Nonwheel Path	Small pieces of surface pavement broken loose, normally ranging from 1 to 4 in. diameter and 1/2 to 2 in. in depth.			
	Light	Not deemed to be a traffic hazard	Keep under observation	
	Severe	Flying debris deemed a traffic hazard	Full Depth	Figure 10.4
Pop Outs Wheel Path	Small pieces of surface pavement broken loose, normally >3" diameter and 2" in depth.			
	Light	Deemed to be a traffic hazard	Full Depth	Figure 10.4
	Severe	Flying debris deemed a traffic hazard	Full Depth	Figure 10.4
MISCELLANEOUS DISTRESS				
Faulting	Elevation differences across joints or cracks.			
	Light	Faulting <4/32"	None	
	Moderate	4 <Faulting <16/32"	Grind	
	Severe	Faulting >16/32"	Grind	
Lane To Shoulder Drop-Off	Light	0 <drop-off <1"	None	N/A
	Moderate	1" <drop-off <3"	Build Up	
	Severe	drop-off >3 "	Build Up	
Water Bleeding Or Pumping	Seeping or ejection of water through joints or cracks.		Install appropriate drainage, edge drain, permeable subbase, reseal joints, etc.	N/A
Blowups	Upward movement at transverse joints or cracks often accompanied by shattering of the concrete.		Full Depth	Figure 10.3 and 10.4

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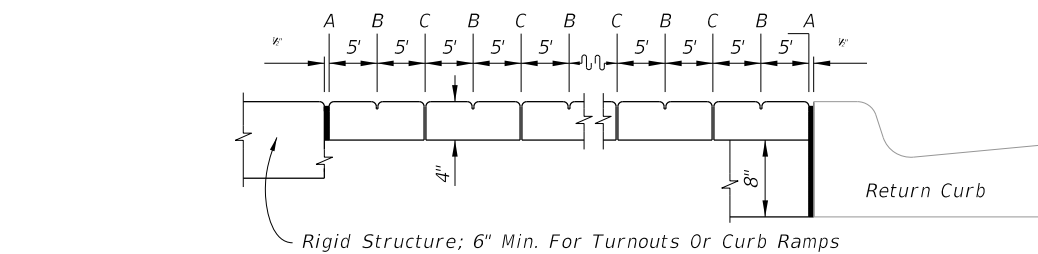
GENERAL NOTES:

1. Construct sidewalks in accordance with Specification Section 522.
2. Include detectable warnings on sidewalk curb ramps in accordance with Index 304.
3. For TURNOUTS see Index 515.
4. Bond breaker material can be any impermeable coated or sheet membrane or preformed material having a thickness of not less than 6 mils nor more than 1/2".
5. Construct sidewalks with Edge Beam through the limits of any surface mounted Pedestrian/Bicycle Railing or Pipe Guiderail shown in the plans. (See RAILING DETAIL)
6. When roadways or driveways are newly constructed, reconstructed or altered, construct the cross slopes for crosswalks and discontinuous sidewalks as follows:
 - A. Cross Slope = 0.02 for roadways or driveway controlled by "STOP" Sign or "YIELD" sign.
 - B. Cross Slope = 0.05 for roadways or driveways controlled by traffic signal.

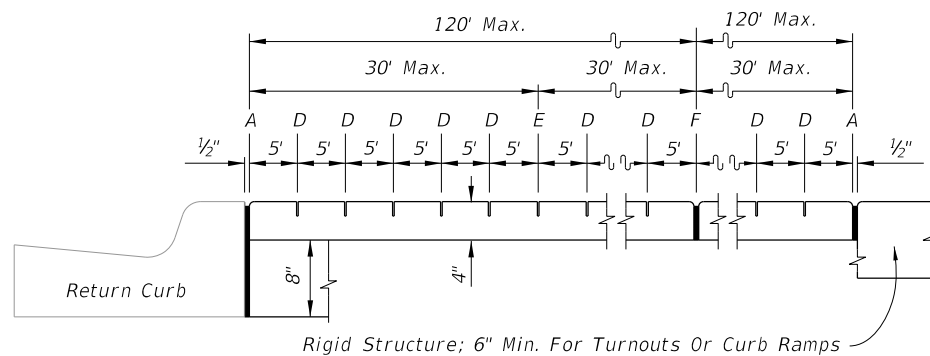


PLAN

SIDEWALK WITH UTILITY STRIP



OPEN JOINTS



SAWED JOINTS

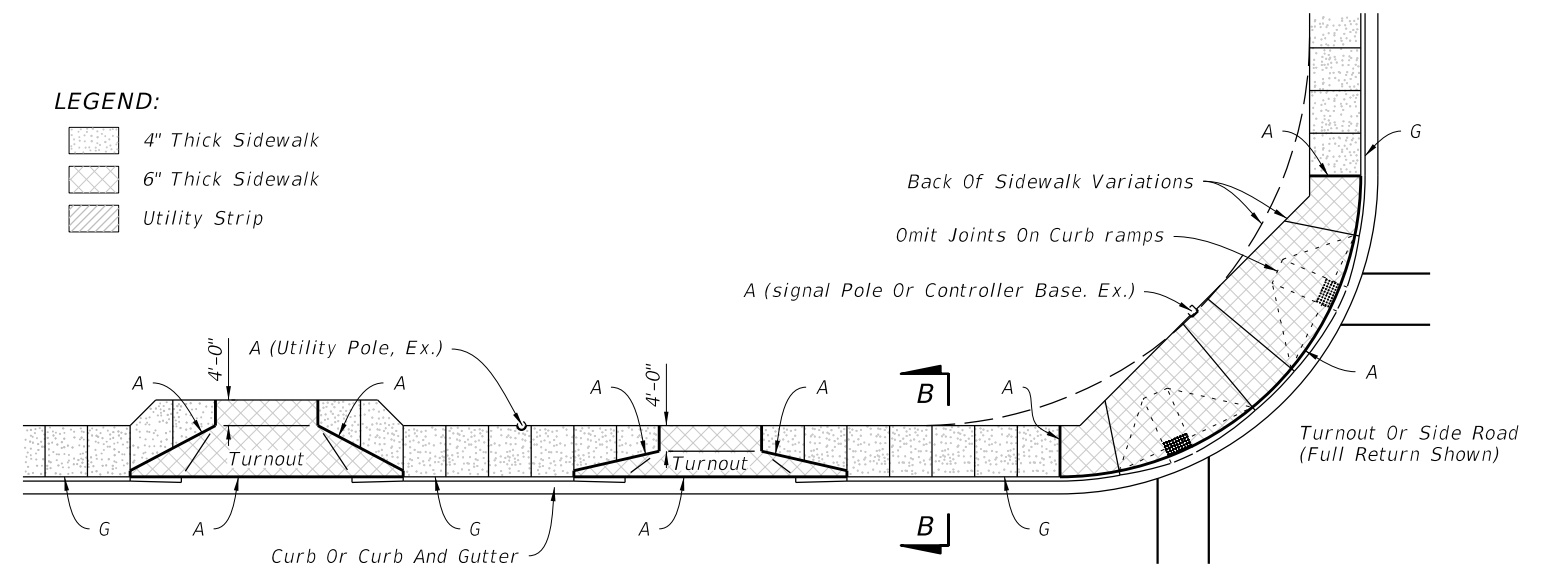
LONGITUDINAL SECTION

LEGEND:

- A- 1/2" Expansion Joints (Preformed Joint Filler)
- B- 1/8" Dummy Joints, Tooled
- C- 1/8" Formed Open Joints
- D- 3/16" Saw Cut Joints, 1 1/2" Deep (within 96 hours) Max. 5' Centers
- E- 3/16" Saw Cut Joints, 1 1/2" Deep (within 12 hours) Max. 30' Centers
Joint(s) Required When Length Exceeds 30'
- F- 1/2" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.
- G- Cold Joint With Bond Breaker, Tooled

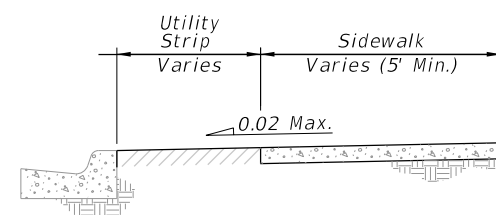
LEGEND:

- 4" Thick Sidewalk
- 6" Thick Sidewalk
- Utility Strip

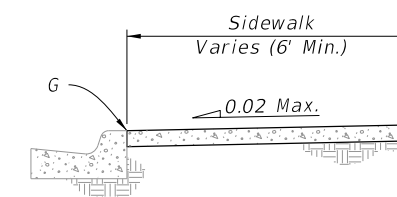


PLAN

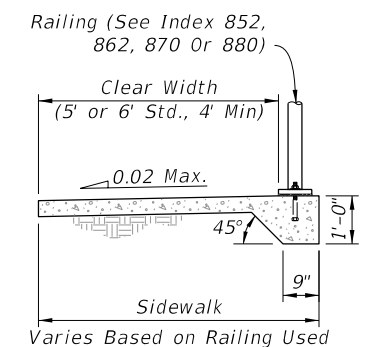
SIDEWALK WITHOUT UTILITY STRIP



SECTION A-A



SECTION B-B



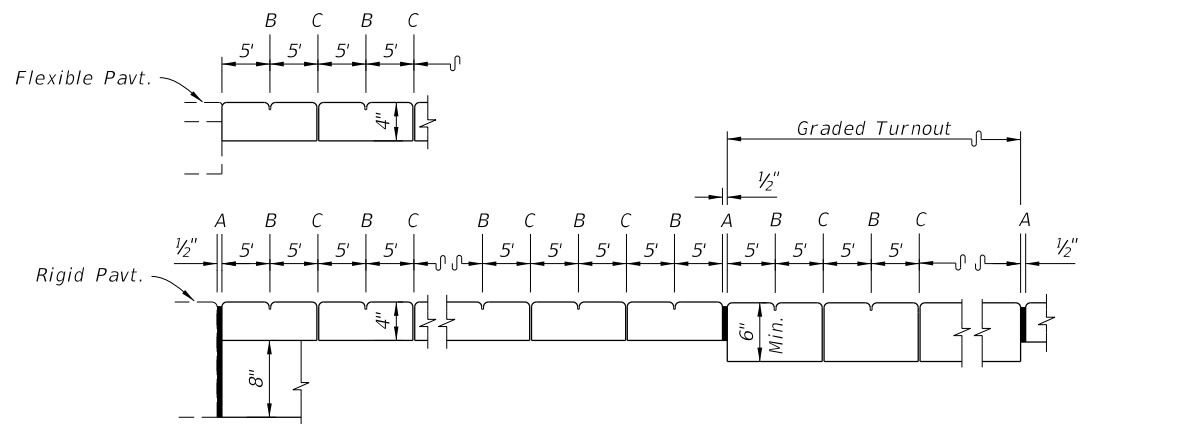
RAILING DETAIL

SIDEWALK JOINTS

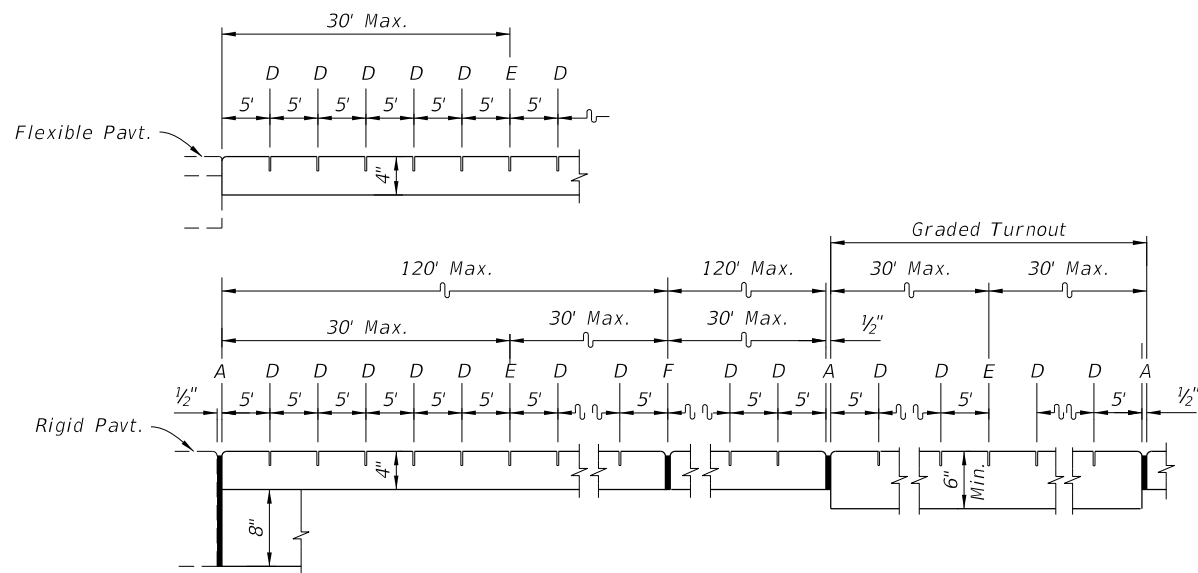
GENERAL NOTES AND CONCRETE SIDEWALK ON CURBED ROADWAYS

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LAST REVISION 11/01/16	REVISION	DESCRIPTION:	<p>FY 2017-18 DESIGN STANDARDS</p>	<p>CONCRETE SIDEWALK</p>	<p>INDEX NO. 310</p>	<p>SHEET NO. 1 of 2</p>
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OPEN JOINTS



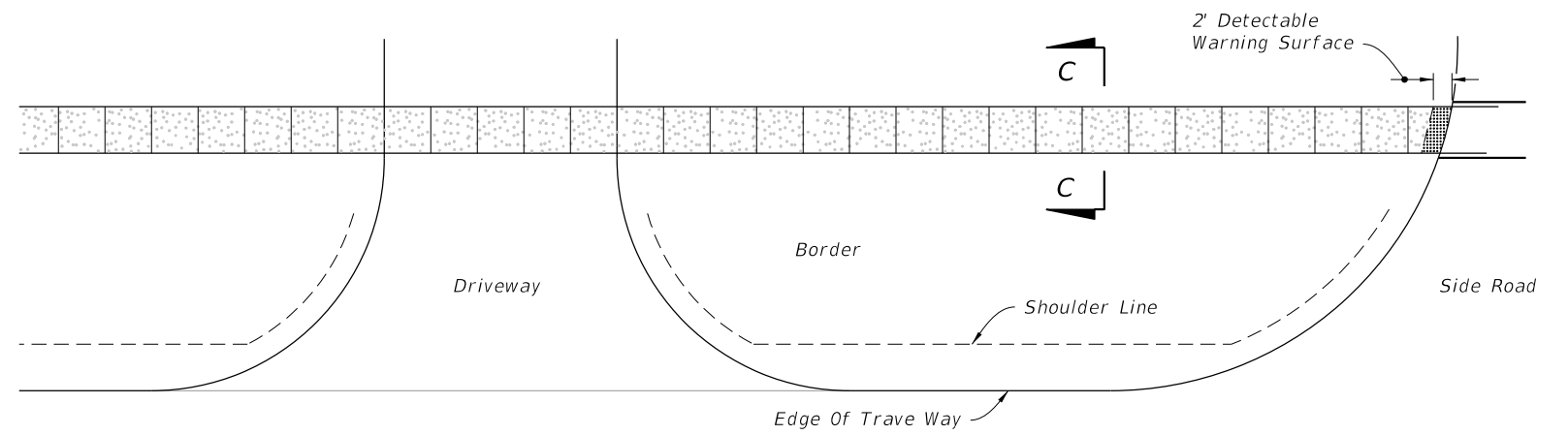
SAWED JOINTS

LONGITUDINAL SECTION

LEGEND:

- A- 1/2" Expansion Joints (Preformed Joint Filler)
- B- 1/8" Dummy Joints, Tooled
- C- 1/8" Formed Open Joints
- D- 3/16" Saw Cut Joints, 1 1/2" Deep (within 96 hours) Max. 5' Centers
- E- 3/16" Saw Cut Joints, 1 1/2" Deep (within 12 hours) Max. 30' Centers
Joint(s) Required When Length Exceeds 30'
- F- 1/2" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.

SIDEWALK JOINTS

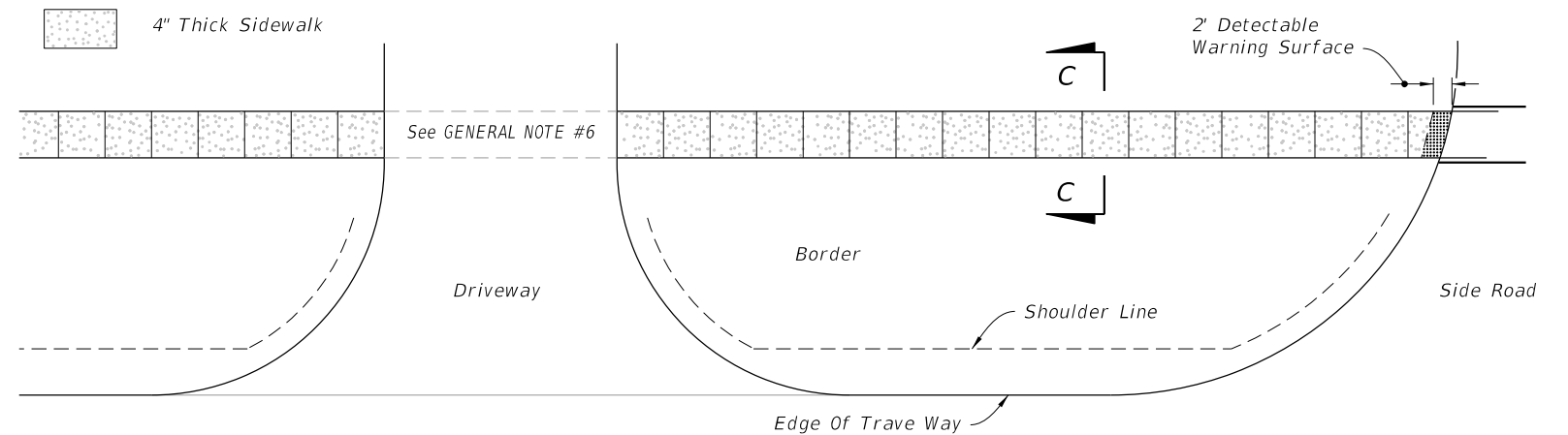


PLAN

CONTINUOUS SIDEWALK

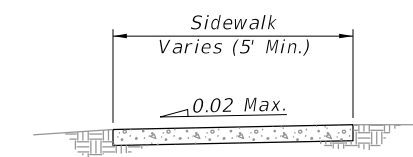
LEGEND:

4" Thick Sidewalk



PLAN

DISCONTINUOUS SIDEWALK



SECTION C-C

CONCRETE SIDEWALK ON FLUSH SHOULDER ROADWAYS

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LAST REVISION	DESCRIPTION:
11/01/16	