City of Redwood Falls

333 S. Washington Street, PO Box 526
Redwood Falls, MN 56283-0526
Phone: 507-637-5755
Fax: 507-637-2417

Sidewalk Replacement Policy

In addition to provisions listed in the City Code of Ordnances, the purpose of this policy to provide guidance to sidewalk replacement within the City of Redwood Falls and serve as a mechanism to remove walk sections that pose a threat to public safety.

1. All sidewalk and approach designs shall be in accordance with MNDOT Standard Plate 7035N and future revisions.

2. All detachable warning plate design and implementation shall be in accordance with MNDOT Standard Plate 7038 and future revisions

3. All public pedestrian ramp designs shall be in accordance with MNDOT 5-297-250 Pedestrian Curb Ramp Design Standard Plans and future revisions.

4. All concrete specifications shall be in accordance with the "Minnesota Concrete Flat Work Specifications Version 2, Updated August 2012" and future revisions.

5. Tax exempt properties are not eligible for cost participation.

6. The City shall be notified of sections of walk area that pose a threat to public safety for review by City Staff and condemnation.

7. The City shall be notified prior to the work being done to enable staff to determine needs and portions to be replaced. All work shall be approved by the Public Works Project Coordinator.

8. Upon condemnation of the sidewalk, the City will pay 60% of the replacement costs and the Owner will pay 40%. Upon a request by a property owner, and evaluation by the City, the City may pay 60% of installation costs of the sidewalk to full sections of block where gaps exist providing all affected property owners agree to pay 40%.

9. Cost sharing shall be available to residential and commercial property.

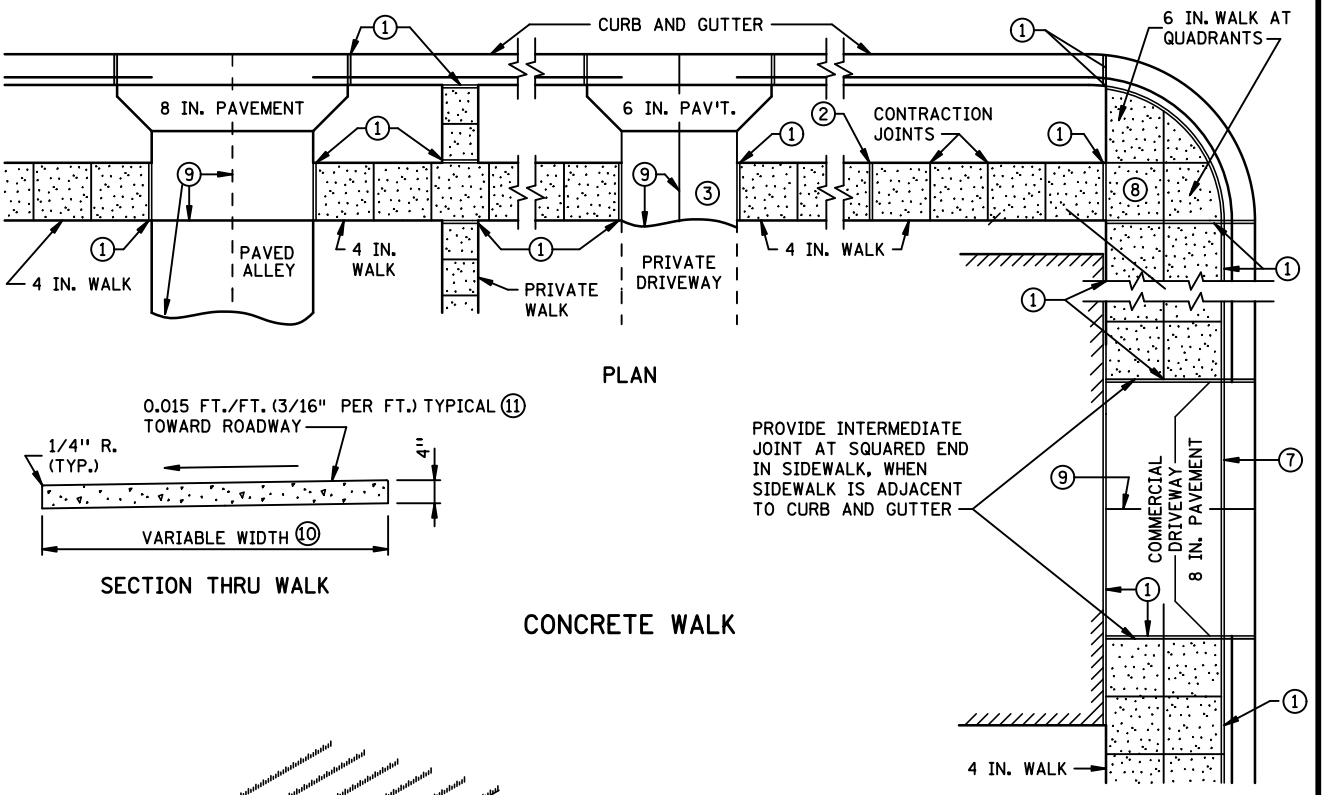
10. Condemned sidewalk damage caused by trees, the City will participate when the tree has been removed. The City will remove boulevard trees as part of our annual tree trimming program at no cost to the Owner. The Owner will be responsible for stump removal.

11. Owner shall obtain two quotes from a reputable contractor and the estimates submitted to the City for approval prior to the work being done.

12. All sidewalks to be replaced in accordance with City specs or requirements.

13. Replacement will not be covered under cost sharing due to repairs being made by Property Owners. Examples: construction and/or driveway replacement, broken sewer lines or replacement due to negligence.

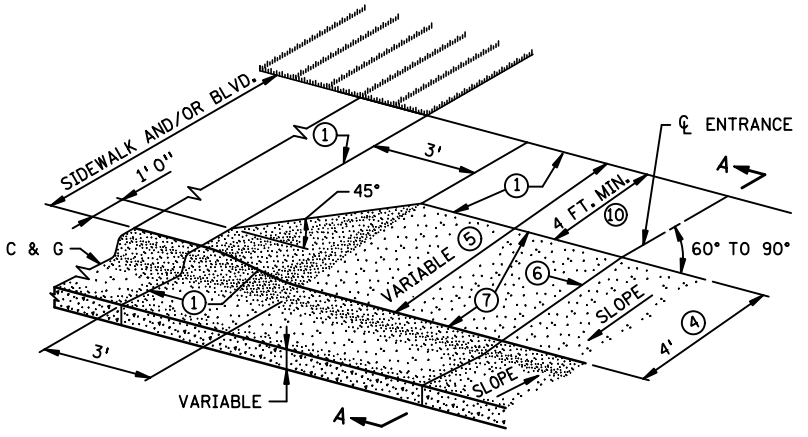
14. Modifications to existing sidewalk system shall be 100% cost to the Property Owner. Examples: placement of non-existing walk, widening of driveway, curb cut extensions or alternation of grades.



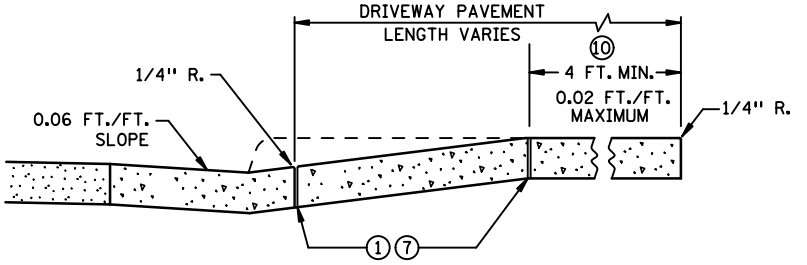
PLAN

SECTION THRU WALK

CONCRETE WALK



HALF PLAN PERSPECTIVE



SECTION A-A

CURB RETURN

NOTES:

SEE ROAD DESIGN MANUAL, CHAPTER 5, FOR GEOMETRIC DESIGN OF ENTRANCES.

WHERE THE MAX. ALLOWABLE ENTRANCE GRADIENT WOULD BE EXCEEDED, DUE TO THE POSITION OF EXISTING WALK, THE WALK SHALL BE REMOVED AND REPLACED, OR THE PAVEMENT WARPED TO PROVIDE THE REQUIRED ENTRANCE SLOPE.

SEE PLANS FOR PLACEMENT OF WALK AND DIMENSIONS FOR CONSTRUCTION OF DRIVEWAYS.

NO DEDUCTION SHALL BE MADE IN CURB & GUTTER FOR ENTRANCE.

(1) 1/2 IN. EXPANSION JOINT. 1/2 IN. PREFORMED JOINT FILLER MATERIAL, AASHTO M 213 (REQUIRED WHEN 2 CONCRETE AREAS ARE POURED SEPARATELY).

(2) 1/2 IN. EXPANSION JOINTS AT 60 FT. (APPROX.) MAXIMUM INTERVALS.

(3) MATCH INPLACE DRIVEWAY THICKNESS (6 IN. MIN.).

(4) WITHOUT SIDEWALK, PAVE ONLY TO THE END OF CURB RETURN WHEN ENTRANCE IS UNSURFACED OR CONSTRUCTION IS NOT NEEDED BEYOND THIS POINT.

(5) WITH SIDEWALK, PAVE TO THE BACK OF SIDEWALK. PAID FOR AS CONCRETE DRIVEWAY PAVEMENT.

(6) CONTRACTION JOINT (FORMED OR SAWED).

(7) EXPANSION JOINT NOT REQUIRED IF ADJACENT SECTIONS ARE POURED MONOLITHICALLY. SEE SECTION A-A.

(8) SEE PLANS FOR PLACEMENT OF PED. CURB RAMP.

(9) FORM CONTRACTION JOINT AS NEEDED TO PRODUCE APPROXIMATELY SQUARE PANELS (MAXIMUM WIDTH 15 FT. BETWEEN JOINTS).

(10) THE MINIMUM CONTINUOUS AND UNOBSTRUCTED CLEAR WIDTH OF A PEDESTRIAN ACCESS ROUTE SHALL BE 4.0 FT.

(11) SEE PLANS FOR PROPOSED CROSS SLOPE OF THE PEDESTRIAN ACCESS ROUTE, WHICH MAY NOT EXCEED 0.02 FT./FT. AS CONSTRUCTED.

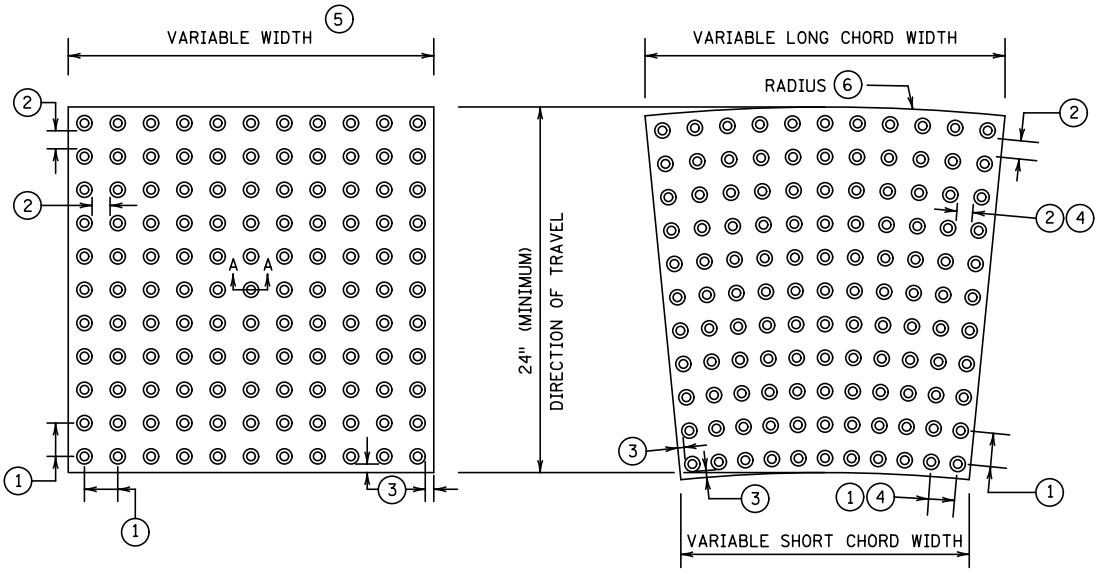
APPROVED JULY 25, 2011

STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

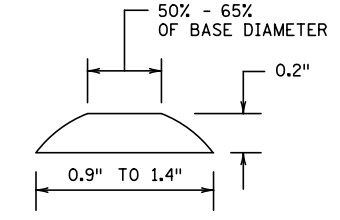
CONCRETE WALK & CURB RETURNS AT ENTRANCES

SPECIFICATION REFERENCE	STANDARD PLATE NO.
2301 2521 2531	7035N



RECTANGULAR PLATES

RADIAL PLATES



SECTION A-A
TRUNCATED DOME

TYPICAL RADIAL TRUNCATED DOME PLATES			
RADIUS (FEET) (7)	LONG CHORD WIDTH (INCHES)	SQ. FT. PER PLATE	PLATES REQUIRED FOR 90 DEGREE TURN
10	23-1/2	3.53	8
15	18-13/16	2.93	15
15	23-1/2	3.67	12
20	18-13/16	3.00	20
20	18-7/8	2.98	20
25	20-1/2	3.28	23
25	23-9/16	3.77	20
30	22-5/8	3.65	25
35	22	3.56	30

NOTES:

DETECTABLE WARNING SURFACES SHALL FOLLOW THE PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG).

DETECTABLE WARNINGS CONSIST OF TRUNCATED DOMES ALIGNED IN A SQUARE OR RADIAL GRID PATTERN.

DETECTABLE WARNINGS ARE REQUIRED:
- -WHERE RAMPS, LANDINGS, OR BLENDED TRANSITIONS PROVIDE A FLUSH PEDESTRIAN CONNECTION TO THE ROADWAY.
- -WHERE PEDESTRIAN ACCESS ROUTES CROSS COMMERCIAL DRIVEWAYS THAT ARE PROVIDED WITH TRAFFIC CONTROL DEVICES OR OTHERWISE PERMITTED TO OPERATE LIKE A PUBLIC ROADWAY.
- -AT PEDESTRIAN RAILWAY CROSSINGS.
- -ON RAIL PLATFORMS WHERE BOARDING EDGES ARE NOT PROTECTED.

DETECTABLE WARNINGS SHALL EXTEND:
- -A MINIMUM OF 24" IN THE DIRECTION OF TRAVEL.
- -THE FULL WIDTH OF THE RAMP, LANDING, OR BLENDED TRANSITION, WITHIN 3" OF FULL WIDTH ON EITHER END.
- -THE FULL LENGTH OF THE PUBLIC USE AREA OF A RAIL PLATFORM.

DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, ROADWAY, OR WALKWAY, EITHER A LIGHT-ON-DARK OR DARK-ON-LIGHT. CONTRAST MAY BE PROVIDED ON THE FULL RAMP SURFACE, EXCLUDING THE FLARED SIDES.

FOR MN/DOT PROJECTS, SEE MN/DOT'S APPROVED/QUALIFIED PRODUCT LISTS.

DETECTABLE WARNING SURFACE SHALL BE PAID FOR AS TRUNCATED DOMES BY THE SQUARE FOOT.

ALL TRUNCATED DOME SYSTEMS SHALL BE PLACED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

(1) CENTER TO CENTER DOME SPACING: 1.6" MINIMUM, 2.4" MAXIMUM.

(2) BASE TO BASE DOME SPACING: 0.65" MINIMUM.

(3) DOME BASE TO PLATE EDGE SPACING: 0.35" MINIMUM, 0.75" MAXIMUM.

(4) SPACING VARIES ON RADIAL PLATES.

(5) TYPICAL WIDTHS AVAILABLE: 12", 18", 24", 30", 36". CHECK WITH MANUFACTURERS FOR AVAILABLE WIDTHS.

(6) ON RADIAL PLATE, RADIUS DEFINED AT BACK OF CURB.

(7) TYPICAL RADII. CHECK WITH MANUFACTURERS FOR AVAILABLE RADII.

APPROVED AUGUST 23, 2010 STATE DESIGN ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION DETECTABLE WARNING SURFACE TRUNCATED DOMES	SPECIFICATION REFERENCE 2531	STANDARD PLATE NO. 7038A

MINNESOTA DEPARTMENT OF TRANSPORTATION	**TRANSMITTAL LETTER NO. (12-04)**
DEVELOPED BY: Design Standards	**MANUAL:** Standard Plans
ISSUED BY: Office of Project Management and Technical Support, Design Support Section	**DATED:** May 11, 2012
SUBJECT: Standard Plan 5-297.250	

Standard Plan 5-297.250 - Pedestrian Curb Ramp Details is a new Standard Plan. This Standard Plan replaces Standard Plate 7036 - Pedestrian Curb Ramp Perpendicular Design.

INSTRUCTIONS:

1. Record the transmittal letter number, date and subject on the transmittal record sheet located in the front of the manual. The previous Transmittal Letter No. issued for this manual was 12-03 dated April 19, 2012.

2. Remove from the manual:
   - Standard Plan Index (Sheets 1 - 5 of 5) , dated April 19, 2012.

3. Insert in the manual:
   - Standard Plan Index (Sheets 1 - 5 of 5, dated May 10, 2012)
   - 5-297.250 (Sheets 1-5 of 5, dated May 10, 2012)

4. Current Standard Plans including Transmittal Letters are available on the web at: http://standardplans.dot.state.mn.us/StdPlan.aspx

5. Any questions regarding this transmittal should be directed to Tim Brown, Design Standards Unit at (651) 366-4613.

James A Rosenow P.E.
Design Standards Engineer, Acting

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5-297.635	Retaining Wall Light Standard Anchorage	05/31/06	
5-297.636	Anchorage & Chain Link Fence for Retaining Walls	09/18/95	07/30/96
5-297.637	Concrete Retaining Wall Rustication	03/11/74	
5-297.638	Precast Retaining Wall Panels	03/05/80	10/30/00
5-297.640	Modular Block Retaining Wall General Notes and Summary of Quantities	07/12/02	11/12/02
5-297.641	Modular Block Retaining Wall Soil Reinforcement for Level Fill, Case 1	07/12/02	11/12/02
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5-297.646	Reinforced Soil Slope General Notes and Summary of Quantities	07/12/02	04/08/03
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5-297.661 (2 of 2)	Wood Planking Noise Barrier With Concrete Posts	01/04/94	04/01/99
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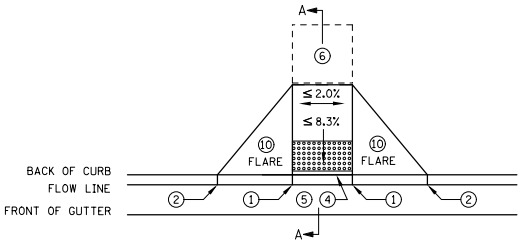
5-297.684 (2 of 2)	W-Beam Transition to Pier Columns Without Approach Curb (Steel Post)	03/23/11	



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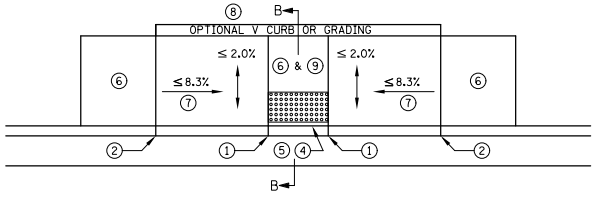

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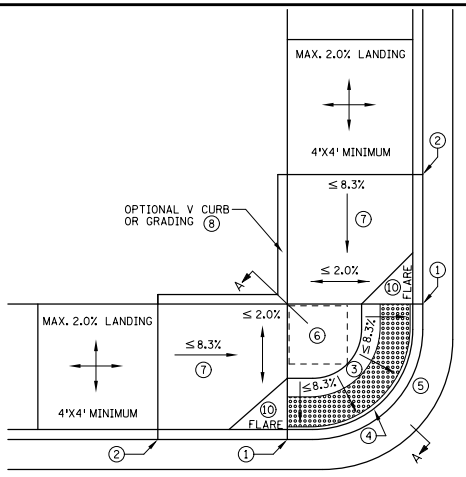
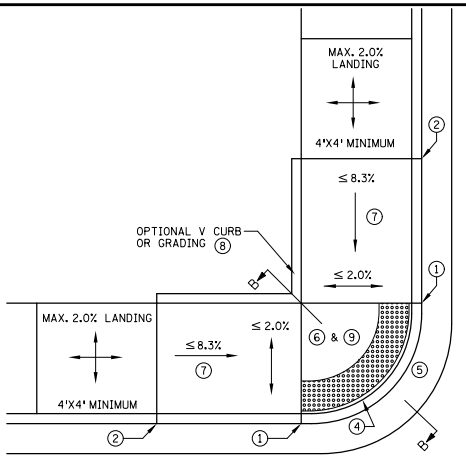
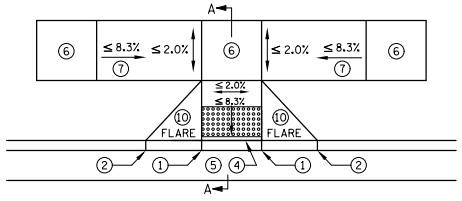


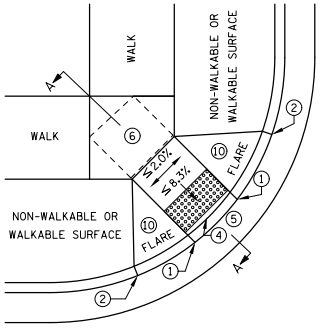
FAN



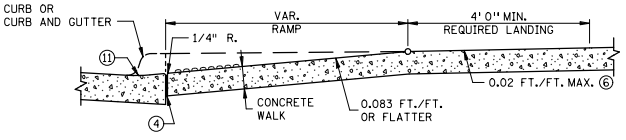
DEPRESSED CORNER



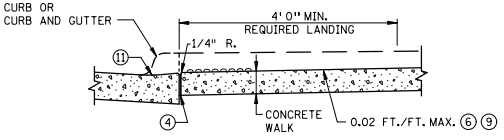
TIERED PERPENDICULAR



DIAGONAL ⑫



SECTION A-A
PERPENDICULAR/TIERED/DIAGONAL/FAN



SECTION B-B
PARALLEL/DEPRESSED CORNER

NOTES:

SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR DETAILS ON DETECTABLE WARNING.

SLOPES ARE DEFINED AS ABSOLUTE ELEVATION DIFFERENCE PER LENGTH OF RUN. (AS OPPOSED TO A RELATIVE SLOPE WITH RESPECT TO A CURB LINE OR CURB HEIGHT.)

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AND AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS 5% OR GREATER.

CONTRACTION JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

USE 6" CONCRETE FOR ALL INITIAL RAMP AND LANDING AREAS.

CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.

ALL GRADE BREAKS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL/PEDESTRIAN ACCESS ROUTE.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

① 0" CURB HEIGHT.

② FULL CURB HEIGHT.

③ LESS THAN 5% PREFERRED. 5-8.3% SHOULD ONLY BE USED AFTER ALL OTHER SLOPES HAVE BEEN CONSIDERED AND DEEMED IMPRACTICAL.

④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SET BACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SET BACK 3"-6" FROM THE BACK OF CURB.

⑤ SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.

⑥ 4' BY 4' MIN. LANDING WITH MAX. 2% SLOPE IN ALL DIRECTIONS.

⑦ IF RUNNING SLOPE IS LESS THAN 5.0% NO SECONDARY LANDING IS REQUIRED.

⑧ V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. SEE SHEET 5 OF 5.

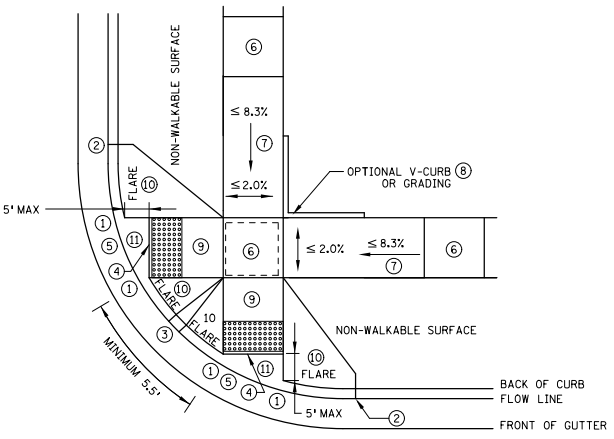
⑨ DETECTABLE WARNINGS MAY BE PART OF 4' X 4' LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.

⑩ SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.

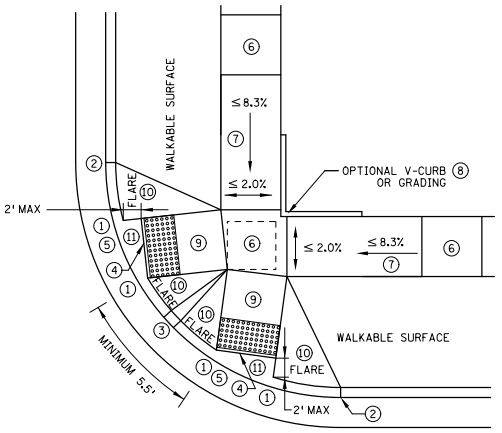
⑪ SEE SHEET 3 OF 5 FOR FURTHER DETAIL.

⑫ DIAGONAL RAMPS SHOULD ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN CONSIDERED AND DEEMED IMPRACTICAL.

STANDARD PLAN SHEET NO. 5-297.250 (1 OF 5)	PEDESTRIAN CURB RAMP DETAILS
STANDARD APPROVED: MAY 10, 2012	
STATE PROJ. NO.	(TH) SHEET NO. OF SHEETS

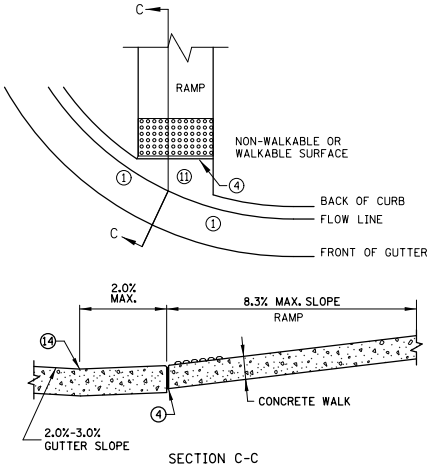


ADJACENT TO NON-WALKABLE SURFACE



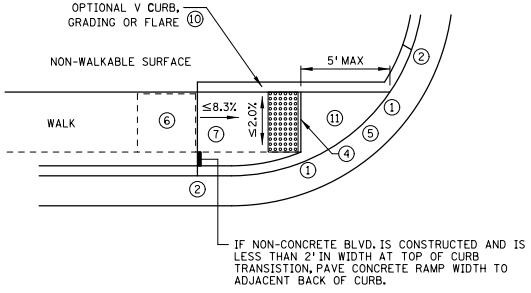
ADJACENT TO WALKABLE SURFACE

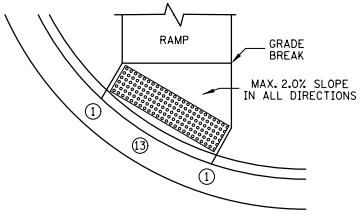
COMBINED DIRECTIONAL



SECTION C-C

CURB FOR DIRECTIONAL RAMPS ⑫





ONE-WAY DIRECTIONAL

NOTES:

SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR DETAILS ON DETECTABLE WARNING.

SLOPES ARE DEFINED AS ABSOLUTE ELEVATION DIFFERENCE PER LENGTH OF RUN. (AS OPPOSED TO A RELATIVE SLOPE WITH RESPECT TO A CURB LINE OR CURB HEIGHT.)

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AND AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS 5% OR GREATER.

CONTRACTION JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

USE 6" CONCRETE WALK FOR ALL INITIAL RAMP AND LANDING AREAS.

CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.

ALL GRADE BREAKS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL/PEDESTRIAN ACCESS ROUTE.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

① 0" CURB HEIGHT.
② FULL CURB HEIGHT.
③ 3" MINIMUM CURB HEIGHT.
④ 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SET BACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SET BACK 3"-6" FROM THE BACK OF CURB.
⑤ SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
⑥ 4' BY 4' MIN. LANDING WITH MAX. 2% SLOPE IN ALL DIRECTIONS.
⑦ IF RAMP SLOPE IS LESS THAN 5% NO SECONDARY LANDING IS REQUIRED.
⑧ V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
⑨ RUNNING SLOPE LESS THAN OR EQUAL TO 8.3% & CROSS SLOPE LESS THAN OR EQUAL TO 2%.
⑩ SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
⑪ MAX. 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
⑫ TO BE USED FOR ALL DIRECTIONAL RAMPS.
⑬ DOMES PLACED AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
⑭ ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.

STANDARD PLAN SHEET NO. 5-297.250 (2 OF 5)	PEDESTRIAN CURB RAMP DETAILS
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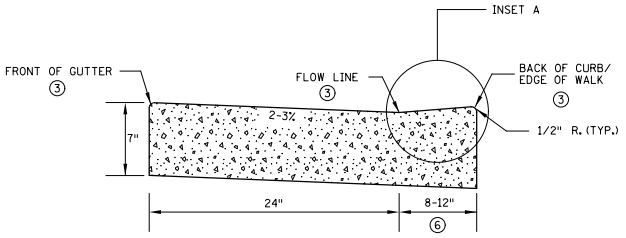
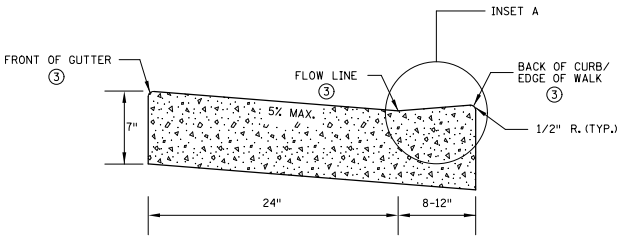
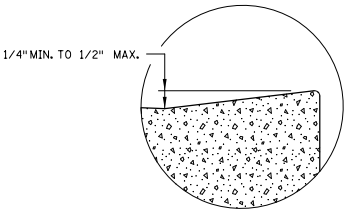


NON PERPENDICULAR ①

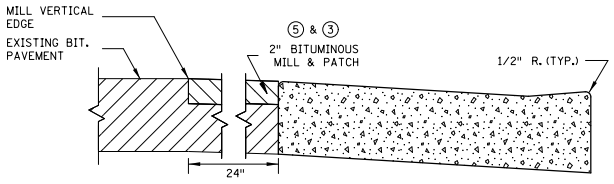


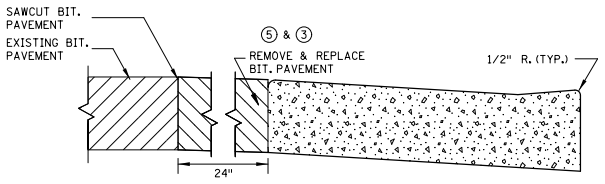
PERPENDICULAR ②

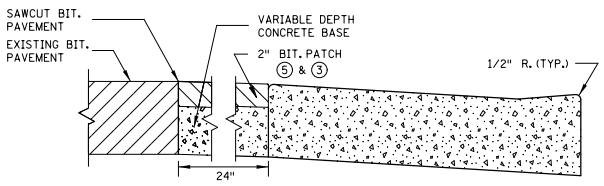


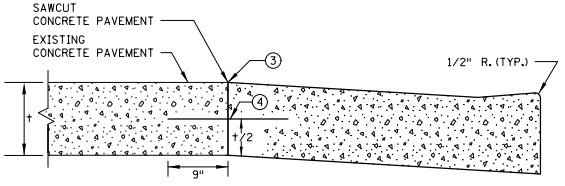
INSET A

PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL









PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER

FOR USE ON CURB RAMP RETROFITS

NOTES:

ADEQUATE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% ABSOLUTE MAXIMUM.

NO PONDING SHALL BE PRESENT IN THE PAR.

ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.

① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS, DEPRESSED CORNERS, & ONE WAY AND COMBINED DIRECTIONALS.

② FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.

③ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".

④ DRILL AND GROUT NO.13 EPOXY-COATED 18" LONG BARS AT 2' CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT.

⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.

⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS.

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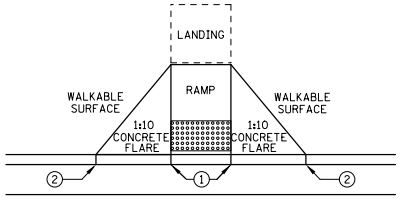
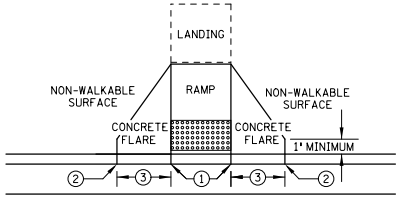
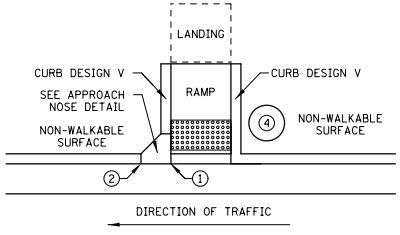


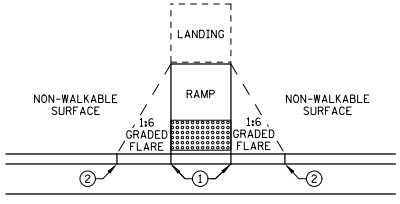
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

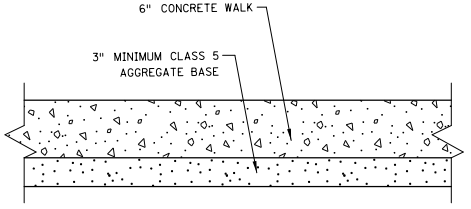


RETURNED CURB

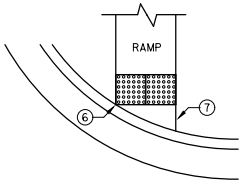


GRADED FLARES

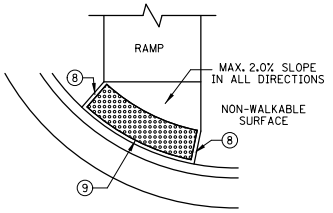
TYPICAL SIDE TREATMENT OPTIONS ⑤



TYPICAL SIDEWALK SECTION
WITHIN INTERSECTION CORNER

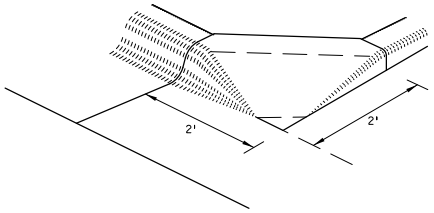


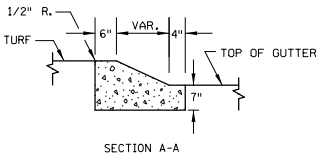
DETECTABLE WARNING
SETBACK CRITERIA



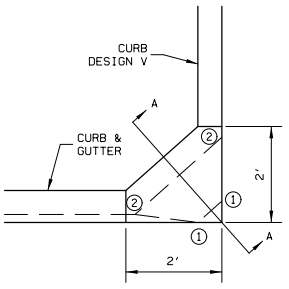
RADIAL DETECTABLE
WARNING AT RADIUS

DETECTABLE WARNING PLACEMENT





SECTION A-A



APPROACH NOSE DETAIL
FOR DOWNSTREAM SIDE OF TRAFFIC

NOTES:

SEE STANDARD PLATE 7038 AND THIS SHEET FOR DETAILS ON DETECTABLE WARNING.

USE 6" CONCRETE WALK UP TO EXISTING SIDEWALK GRADES FOR ALL RAMP AND LANDING AREAS.

WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER.

FLARE LENGTHS SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

① 0" CURB HEIGHT.
② FULL CURB HEIGHT.
③ 2' - 3' CONCRETE FLARE.
④ IMMOVABLE OBJECT OR OBSTRUCTION.
⑤ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED ON ALL RAMPS AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
⑥ DETECTABLE WARNING SHALL HAVE ONE CORNER 3" FROM THE BACK OF CURB.
⑦ SHALL BE 2' MAXIMUM OFFSET WHEN ADJACENT TO WALKABLE SURFACE AND 5' MAXIMUM OFFSET WHEN ADJACENT TO NON-WALKABLE SURFACE.
⑧ WHEN NO FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
⑨ DETECTABLE WARNING TO BE PLACED AT A UNIFORM OFFSET DISTANCE FROM 3" TO 6" FROM THE BACK OF CURB. IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNING SHALL BE PLACED 1' FROM THE EDGE OF ROADWAY TO PROVIDE CONCRETE BORDER.

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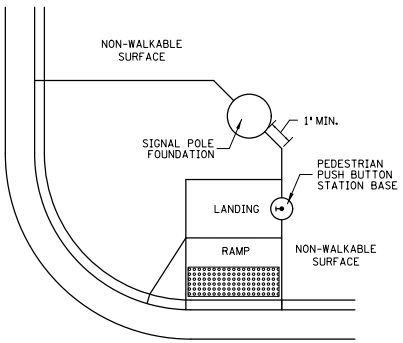
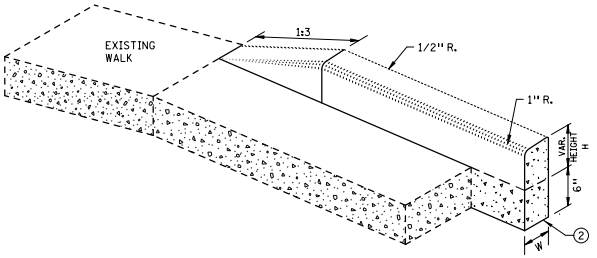
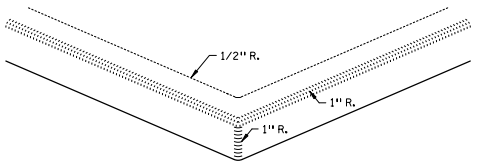


CONCRETE WALK EDGES ADJACENT TO CONCRETE STRUCTURES

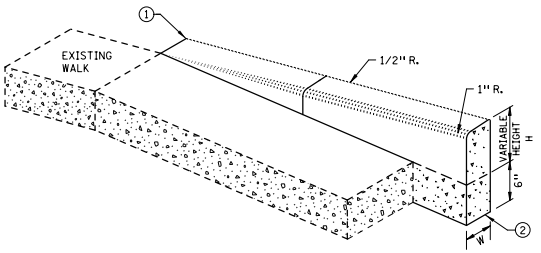


V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS

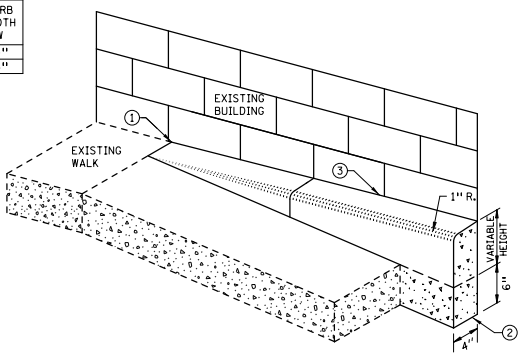


V CURB INTERSECTION

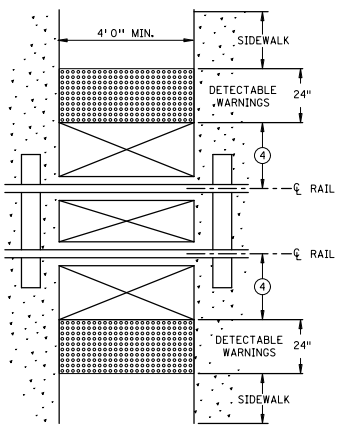
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



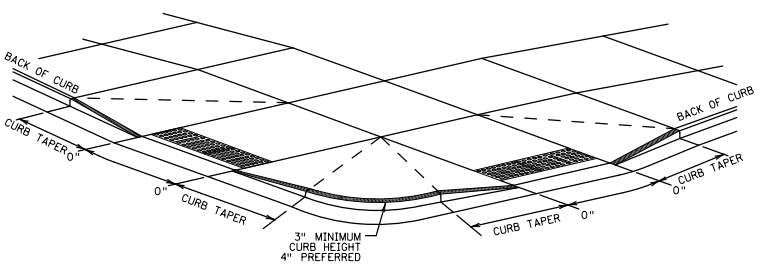
V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS



V CURB ADJACENT TO BUILDING



RAILROAD CROSSING
PLAN VIEW



DETECTABLE EDGE AT QUADRANT ⑤

NOTES:

ALL V-CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.

V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.

V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.

(1) END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.

(2) ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.

(3) EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V-CURB.

(4) EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 6' MINIMUM TO 15' MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL.

(5) ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES TRUNCATED DOMES WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TRANSITIONS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS IMMEDIATELY AT THE EDGE OF THE TRUNCATED DOMES AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TRANSITION AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILTY GUIDELINES.

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