

New Jersey Department of Transportation
Guidance for Americans with Disabilities Act (ADA)
Project Design

General

Generally, curb ramps are needed wherever a sidewalk or other pedestrian walkway crosses a curb. Curb ramps must be located to ensure a person with a mobility disability can travel from a sidewalk on one side of the street, over or through any curbs or traffic islands, to the sidewalk on the other side of the street. However, the ADA does not require installation of curb ramps in the absence of a pedestrian walkway with a prepared surface for pedestrian use. Nor are curb ramps required in the absence of a curb, elevation, or other barrier between the street and the walkway. There is an exception to this requirement outlined in Item **#4** below.

Specific Guidance

- 1) Identify the original project type to determine the extent of ADA improvements required.
- 2) For project types identified as Limited Scope, if sidewalks cross a curb at a street or driveway, reconstruction of the street or driveway to improve slopes is not required. For project types identified as Full Scope, evaluation of sidewalk cross slopes is required at 50' intervals and at the midpoint of all driveways.
- 3) If crosswalks encounter dividers or islands, walkway openings or curb ramps should be provided or the island should be moved back so that the nose is out of the crosswalk.
- 4) Curb ramps with a landing area shall allow mobility device users to access existing or proposed pedestrian pushbuttons. Where pedestrian pushbuttons have been provided at intersections with no sidewalk, curb ramps with landing areas shall be provided at both ends of the crosswalk associated with the pedestrian pushbuttons.
- 5) Sidewalk crossings of residential driveways and most commercial driveways should not generally be provided with detectable warning surfaces, since the pedestrian right-of-way continues across most driveway aprons and the overuse of detectable warning surfaces diminishes message clarity. However, where commercial driveways are provided with traffic control devices or otherwise are permitted to

operate like public streets, detectable warnings should be provided at the junction between the pedestrian route and the street.

- 6) Crosswalks can be marked or unmarked, but where crosswalks are marked, curb ramps (exclusive of flares) should be wholly contained within marked pedestrian crosswalks to enable ramp use to be incorporated as part of the established pedestrian control at the intersection.
- 7) In alterations to existing facilities where full compliance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) is technically infeasible, the alteration shall comply with these standards to the extent practicable. Designers shall document the basis for their determination using Form TIF-1 (ADA Technically Infeasibility Form). This form shall be submitted for each non-compliant ramp.
- 8) When project limits are established, continuity of pedestrian travel should be a consideration relating to the ends of the project including addressing arrival and departure curb ramps at pedestrian street crossings. For example: Where resurfacing only the northbound side of a divided highway, and the intersection(s) have sidewalk on both bounds, then curb ramps will be addressed on the entire intersection.
- 9) Detectable warning surfaces shall follow the direction of travel on the ramp, which is not necessarily the expected direction of pedestrian travel across the roadway.
- 10) The preferred treatment for existing manholes, junction boxes, and valve boxes is to locate them outside of the limits of the curb ramp. However, as an alternate treatment, for Limited Scope projects, these items may remain in the curb ramp area and be reset to the slope of the curb ramp. If they are within the area of the detectable warning surface, provide more detectable warning surface to compensate for the loss of area.

ADA Compliance Curb Ramp Design Checklist

		(Y/N or N/A)	Comments
1	Does intersection curb ramp layout comply with diagram in RDM section 5.7.4 "Curb Ramps at Intersections"?	-	
2	Is turning space - 4' x4' min.?	-	
3	Is turning space cross slope - 2% max.?	-	
4	Is ramp width – 4' minimum?	-	
5	Is ramp running slope – 8.33% max.?	-	
6	Are concrete flares slopes – 10% max.?	-	
7	Is clear space 4' x 4' min.?	-	
8	Is clear space contained entirely within crosswalk?	-	
9	Is detectable warning surface (DWS) present?	-	
10	Is DWS oriented correctly?	-	
11	Is DWS in contrast "light on dark" or "dark on light"?	-	
12	Is clear width of sidewalk 36' min.?	-	
13	Is crosswalk striped?	-	
14	Is curb ramp located entirely within the crosswalk where a painted crosswalk exists (exclusive of flares)?	-	
15	Is curb ramp or turning space clear of any utilities?	-	
16	Are curb ramps with a turning space provided where pedestrian pushbuttons are present?	-	
17	Is a sidewalk provided to access pedestrian pushbutton?	-	
18	Is distance to pushbuttons within 6ft maximum of the curblines as per MUTCD standards?	-	
19	Is pushbutton located 3.5' maximum above sidewalk?	-	
20	Is pushbutton within 10" from edge of sidewalk?	-	
21	Is pushbutton type ADA compliant?	-	
22	Are walk/don't walk" indicators present?	-	
23	Is the signal pole foundation exposed no more than the maximum 1" on sidewalk, 2" on grass?	-	
24	Is bottom edge of curb ramp flush with road?	-	
25	Is a walkway opening or curb ramps needed in the median?	-	

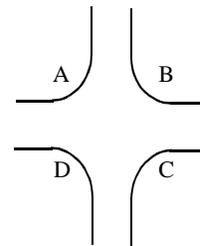
This document is for assistance in answering question 1 on ADA Compliance Curb Ramp Checklist.

Curb Ramps at Intersections

The clear width of a curb ramp should be a minimum of 4 feet, excluding flares.

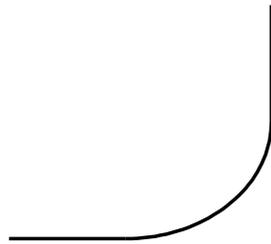
The following criteria shall apply to providing curb ramps at intersections:

1. Where all the corners of an intersection have existing or proposed sidewalk, curb ramps shall be provided at each corner.
2. Where all the corners of an intersection do not have existing or proposed sidewalk, the following provisions shall apply:
 - a. Where sidewalk exists or is proposed at only one corner, A only, B only, C only or D only; no curb ramp is required. If the curb at the corner with sidewalk is to be constructed or reconstructed, it is optional to provide depressed curb for future curb ramps for compatibility with other corners.
 - b. Where there is existing or proposed sidewalk at two adjacent corners only, such as A and B, curb ramps shall be constructed at corners A and B only.
 - c. Where there is existing or proposed sidewalk at two diagonally opposite corners only, such as A and C, curb ramps shall be constructed at corners A and C together with a curb ramp at one of the other corners (B or D).
 - d. Where sidewalk exists or is proposed at three corners, curb ramps shall be constructed at each corner where existing sidewalk is to remain or where new sidewalk is proposed.

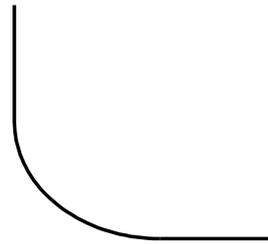


Where a corner at an intersection is without existing or proposed sidewalk, but with curb to be constructed or replaced or with existing curb to remain as is; it is optional to provide depressed curb for future curb ramps.

ADA CURB RAMPS REQUIREMENT CONDITIONS

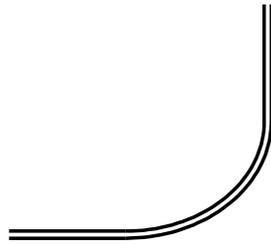


**NO CURB
NO SIDEWALK**

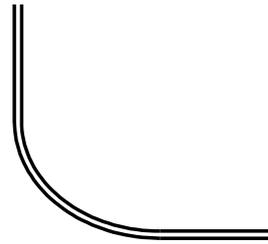


NO CURB RAMPS REQUIRED

CONDITION A

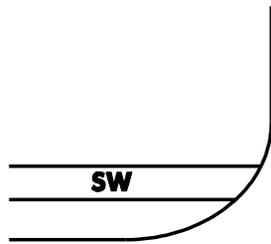


**CURB
NO SIDEWALK**

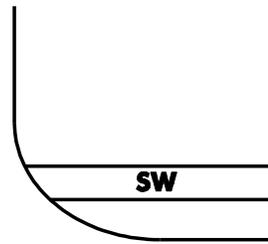


NO CURB RAMPS REQUIRED

CONDITION B



**SIDEWALK
NO CURB
BERM SECTION**



BUILD CURB RAMP

CONDITION C

NOTE:

CURB RAMPS WITH A LANDING AREA SHALL ALLOW MOBILITY DEVICE USERS TO ACCESS EXISTING OR PROPOSED PEDESTRIAN PUSHBUTTONS. WHERE PEDESTRIAN PUSHBUTTONS HAVE BEEN PROVIDED AT INTERSECTIONS WITH NO SIDEWALK, CURB RAMPS WITH LANDING AREAS SHALL BE PROVIDED AT BOTH ENDS OF THE CROSSING ASSOCIATED WITH THE PEDESTRIAN PUSHBUTTONS.

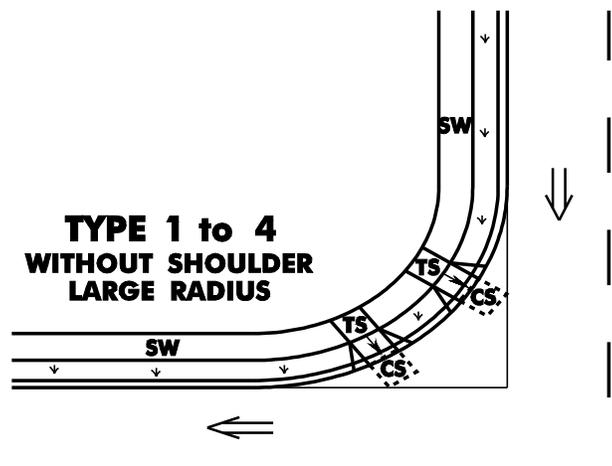
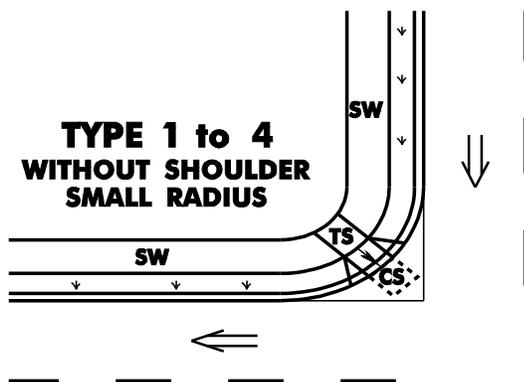
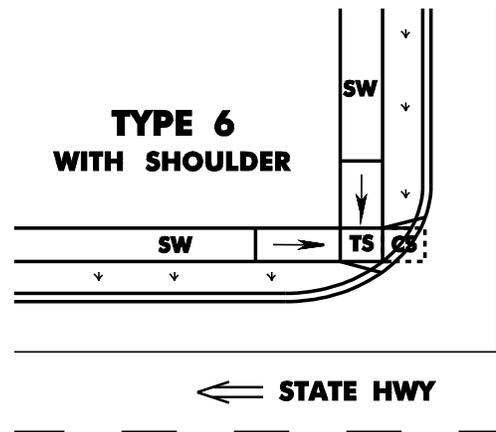
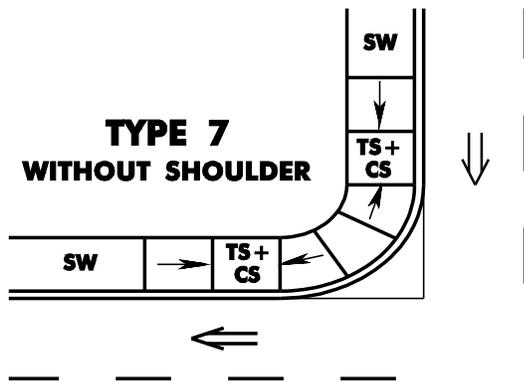
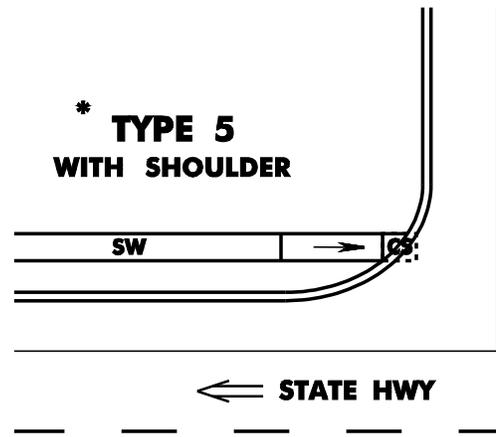
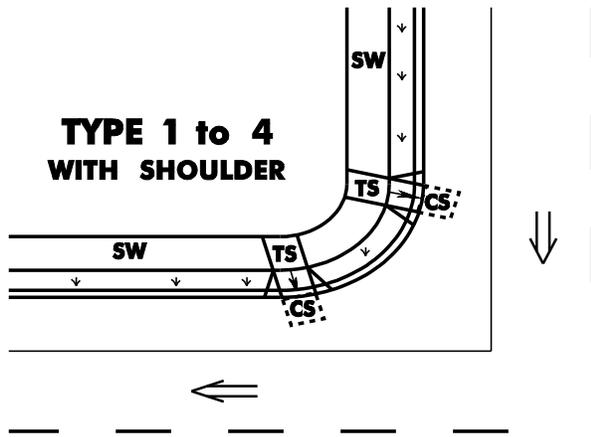
CLEAR SPACE & TURNING SPACE EXAMPLES

FIGURE: 5-Q

BDC13MR-01

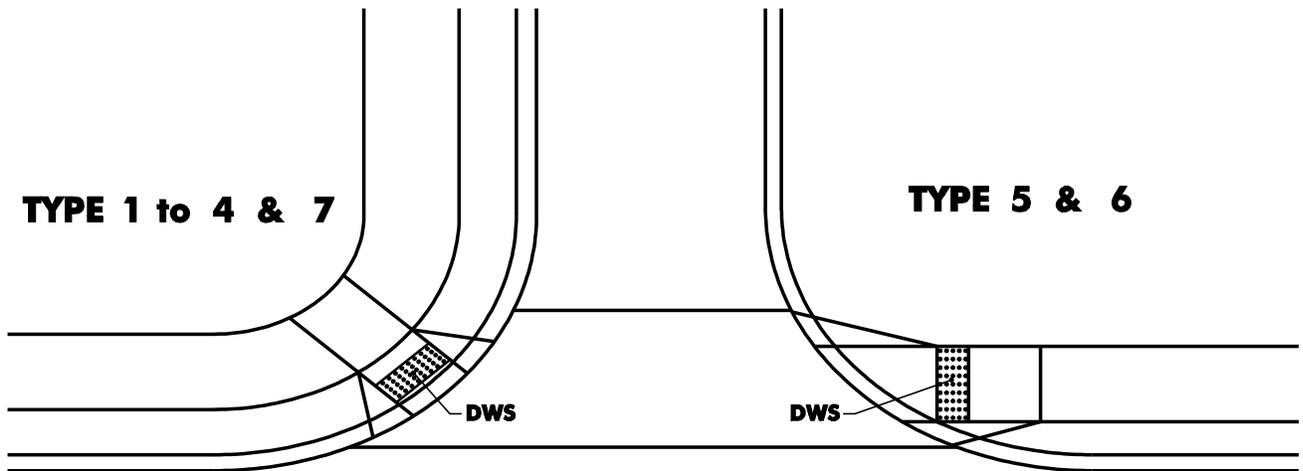
12:1 MAX
PARALLEL VEHICLE
TRAVEL LANE

TS = TURNING SPACE
CS = CLEAR SPACE
SW = SIDEWALK



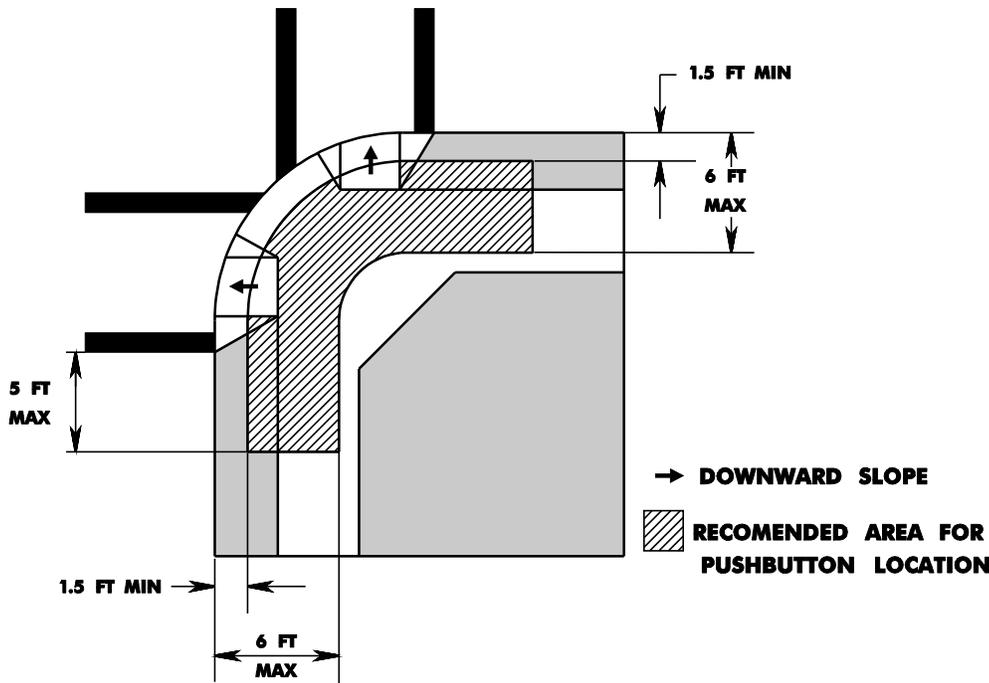
* NOTE: A TURNING SPACE IS NOT REQUIRED SINCE A TURNING MANEUVER ONTO THE RAMP FROM A PERPEDICULAR PEDESTRIAN ACCESS ROUTE DOES NOT EXIST.

ADA DWS AND PUSHBUTTON LOCATION

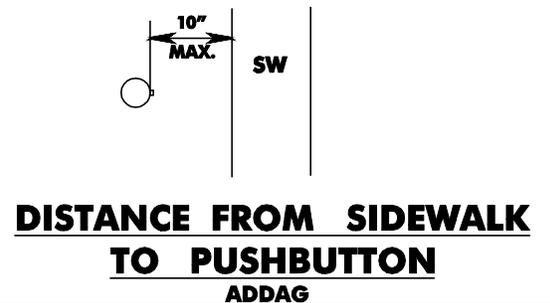
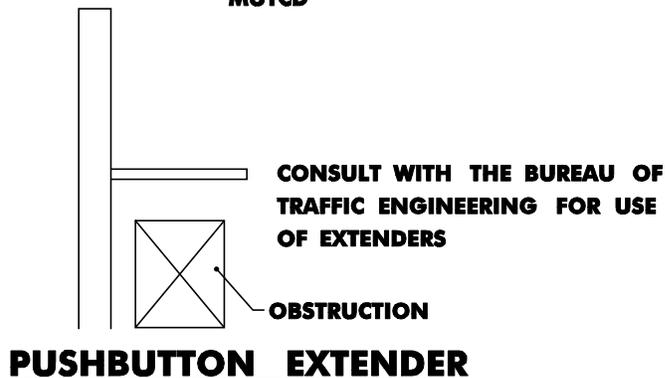
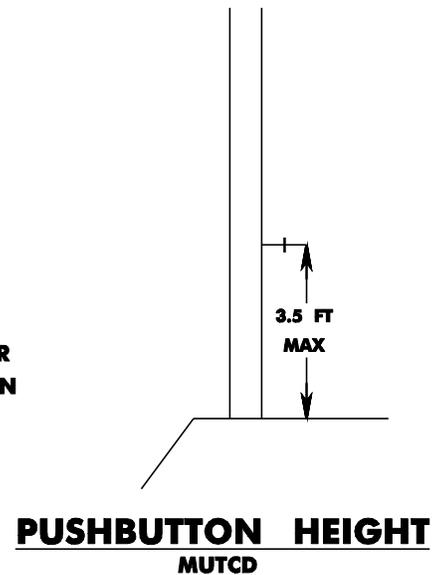


Detectable Warning Surface(DWS) is in the direction of travel of the curb ramp

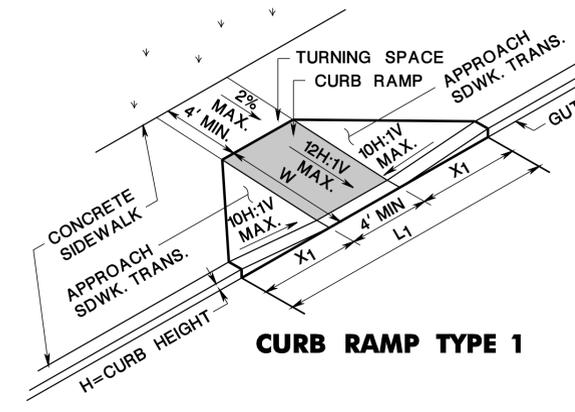
DWS LOCATION



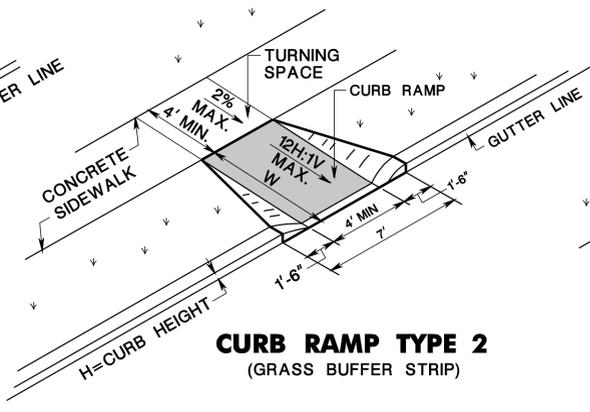
PUSHBUTTON LOCATION
MUTCD



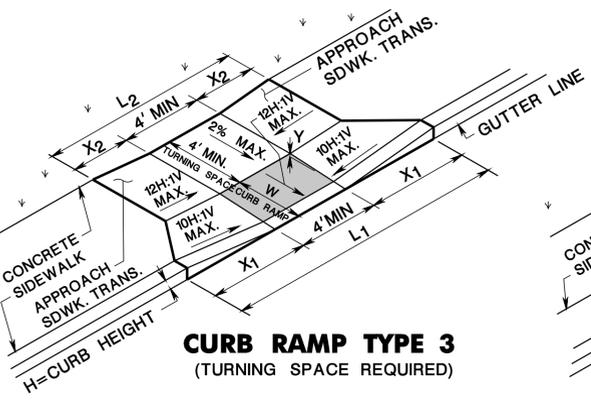
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 BDC12D-05-MODIFICATION TO CURB RAMP DETAIL
 BDC07D-01-ORIGINAL SHEET



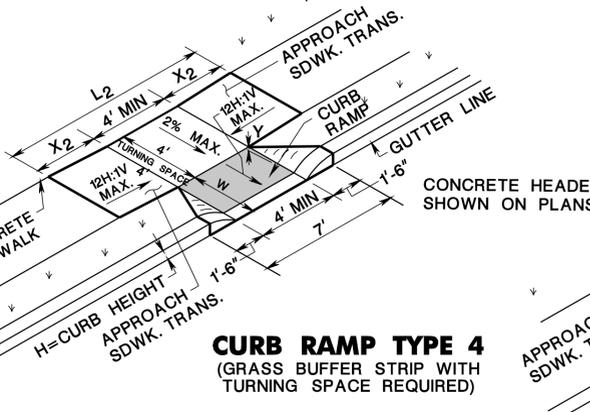
CURB RAMP TYPE 1



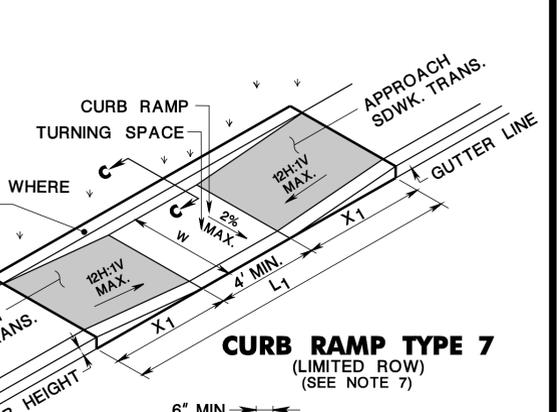
**CURB RAMP TYPE 2
(GRASS BUFFER STRIP)**



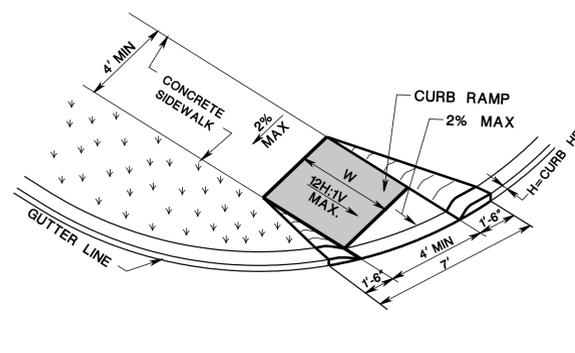
**CURB RAMP TYPE 3
(TURNING SPACE REQUIRED)**



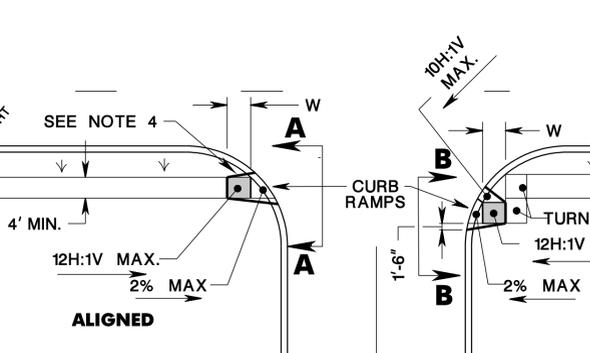
**CURB RAMP TYPE 4
(GRASS BUFFER STRIP WITH
TURNING SPACE REQUIRED)**



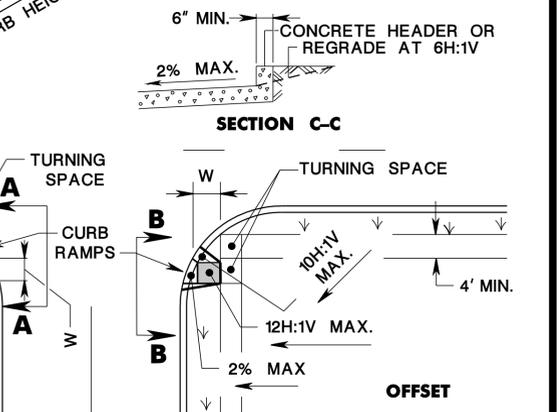
**CURB RAMP TYPE 7
(LIMITED ROW)
(SEE NOTE 7)**



CURB RAMP TYPE 5



CURB RAMP TYPE 6



SECTION C-C

CURB RAMP TABLES

WARNING: DIMENSIONS SHOWN IN CURB RAMP TABLES ARE BASED ON A ZERO PERCENT GUTTER PROFILE. THEREFORE, DIMENSIONS SHOWN MAY INCREASE OR DECREASE BASED ON DIRECTION AND PERCENT OF GUTTER PROFILE.

CURB RAMP TYPE 1				
H INCHES	X1 FEET	L1 FEET	W FEET	Y FEET
3	2.5	9.0	3	3
4	3.3	10.6	4	4
5	4.2	12.4	5	5
6	5.0	14.0	6	6
7	5.8	15.6	7	7
8	6.7	17.4	8	8
9	7.5	19.0	9	9

CURB RAMP TYPE 2, 5 OR 6		
H INCHES	W FEET	Y FEET
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

CURB RAMP TYPE 7			
W FEET	H INCHES	X1 FEET	L1 FEET
4 MIN.	3	3	10
MIN 5'	4	4	12
WITH	5	5	14
HEADER	6	6	16
	7	7	18
	8	8	20
	9	9	22

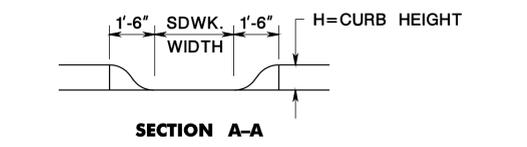
CURB RAMP TYPE 3						
W FEET	H INCHES	X1 FEET	L1 FEET	Y INCHES	X2 FEET	L2 FEET
2.5	3	2.5	9	2.5	0.5	5
	4	3.3	10.6	2.5	1.5	7
	5	4.2	12.4	2.5	2.5	9
	6	5.0	14.0	2.5	3.5	11
	7	5.8	15.6	2.5	4.5	13
	8	6.7	17.4	2.5	5.5	15
	9	7.5	19.0	2.5	6.5	17
3.0	3	*	*	*	*	*
	4	3.3	10.6	3.0	1	6
	5	4.2	12.4	3.0	2	8
	6	5.0	14.0	3.0	3	10
	7	5.8	15.6	3.0	4	12
	8	6.7	17.4	3.0	5	14
	9	7.5	19.0	3.0	6	16
3.5	3	*	*	*	*	*
	4	3.3	10.6	3.5	0.5	5
	5	4.2	12.4	3.5	1.5	7
	6	5.0	14.0	3.5	2.5	9
	7	5.8	15.6	3.5	3.5	11
	8	6.7	17.4	3.5	4.5	13
	9	7.5	19.0	3.5	5.5	15
4.0	3	*	*	*	*	*
	4	*	*	*	*	*
	5	4.2	12.4	4.0	1	6
	6	5.0	14.0	4.0	2	8
	7	5.8	15.6	4.0	3	10
	8	6.7	17.4	4.0	4	12
	9	7.5	19.0	4.0	5	14

CURB RAMP TYPE 4				
W FEET	H INCHES	Y INCHES	X2 FEET	L2 FEET
2.5	3	2.5	0.5	5
	4	2.5	1.5	7
	5	2.5	2.5	9
	6	2.5	3.5	11
	7	2.5	4.5	13
	8	2.5	5.5	15
	9	2.5	6.5	17
3.0	3	**	**	**
	4	3.0	1	6
	5	3.0	2	8
	6	3.0	3	10
	7	3.0	4	12
	8	3.0	5	14
	9	3.0	6	16
3.5	3	**	**	**
	4	3.5	0.5	5
	5	3.5	1.5	7
	6	3.5	2.5	9
	7	3.5	3.5	11
	8	3.5	4.5	13
	9	3.5	5.5	15
4.0	3	**	**	**
	4	**	**	**
	5	4.0	1	6
	6	4.0	2	8
	7	4.0	3	10
	8	4.0	4	12
	9	4.0	5	14

* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1. ** TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2.

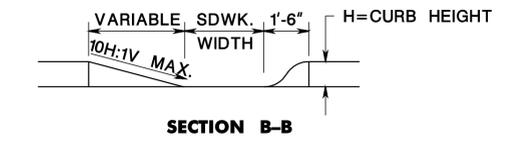
NOTES:

- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SIDEWALK.
- DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRASTICALLY IN AREA OF PROPOSED CURB RAMP.
- CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS.
- FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
- SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
- CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
- WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
- CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
- DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.
- THE 12H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 12H:1V SLOPE MEASURED AS X₂ IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.

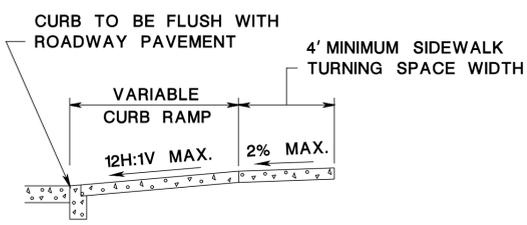


SECTION A-A

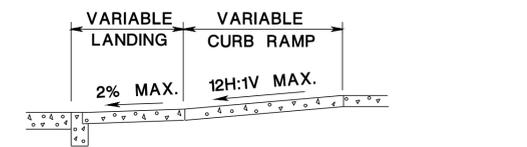
NOTE: CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).



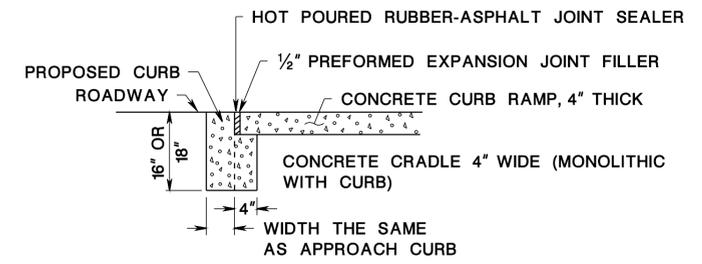
SECTION B-B



SECTION THROUGH CURB RAMPS 1 THROUGH 4



SECTION THROUGH CURB RAMPS 5 AND 6



CURB RAMPS

**CONCRETE SIDEWALK
(PUBLIC SIDEWALK CURB RAMP)**
N.T.S.

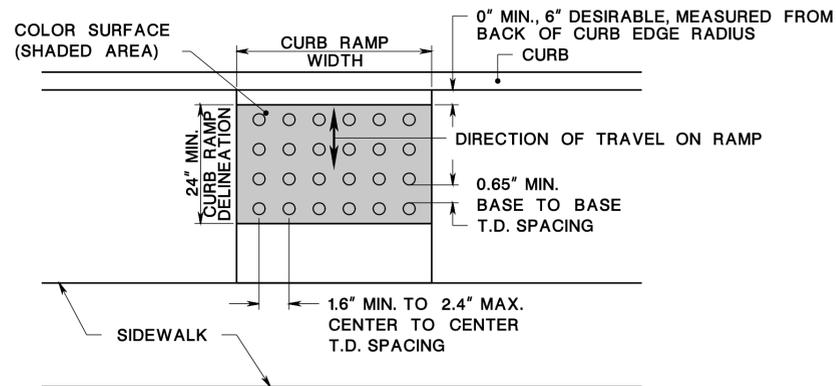
NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

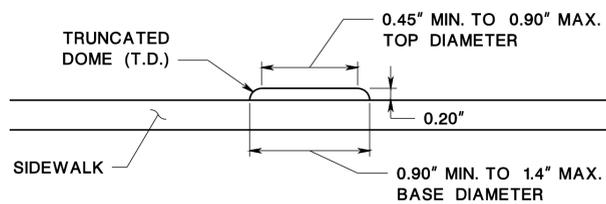
PENDING 5-20-14

CD-606-1

CD-606-1

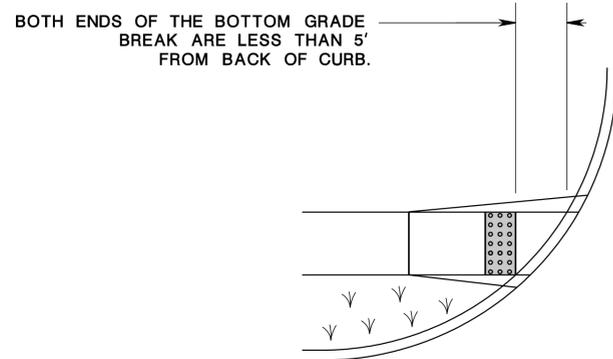


PLAN VIEW

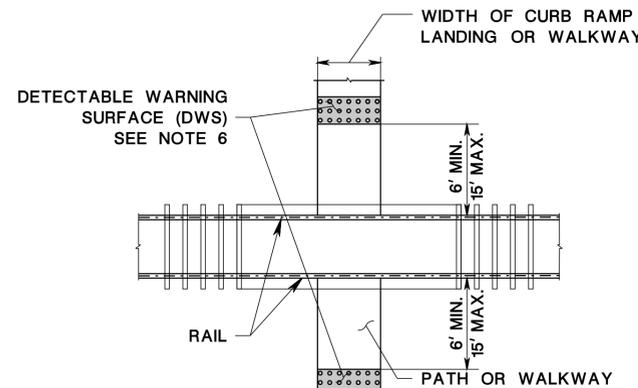


ELEVATION

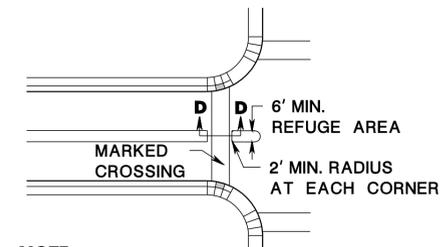
DETECTABLE WARNING SURFACE



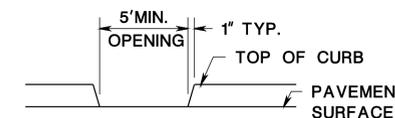
BOTH ENDS OF THE BOTTOM GRADE BREAK ARE LESS THAN 5' FROM BACK OF CURB.



PEDESTRIAN RAILROAD CROSSING



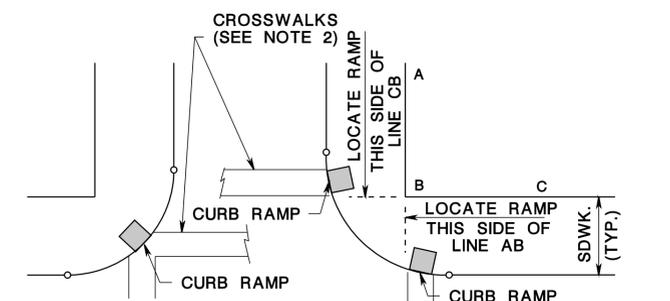
NOTE:
WHERE PRACTICAL, END LEFT TURN ISLAND OR DIVISIONAL ISLAND BEFORE CROSSWALK TO ELIMINATE CUT-THROUGH



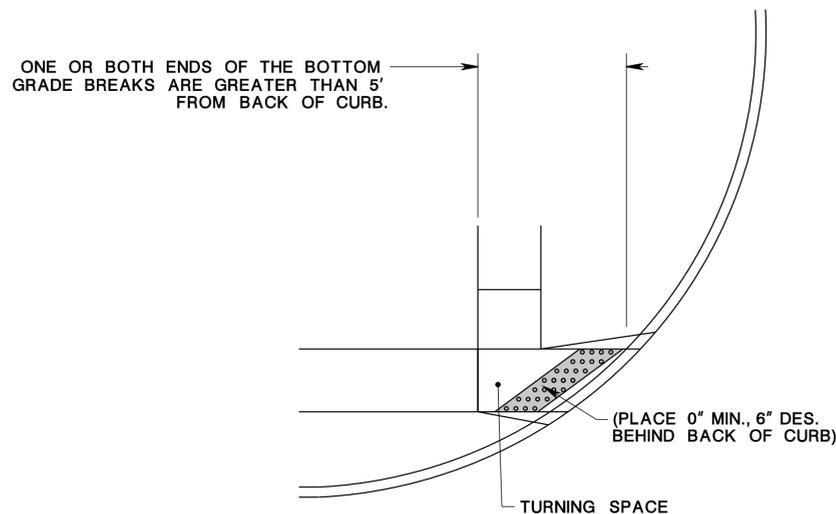
SECTION D-D

NOTE:
5' MIN. WIDE OPENING TO BE FLUSH WITH ROADWAY PAVEMENT

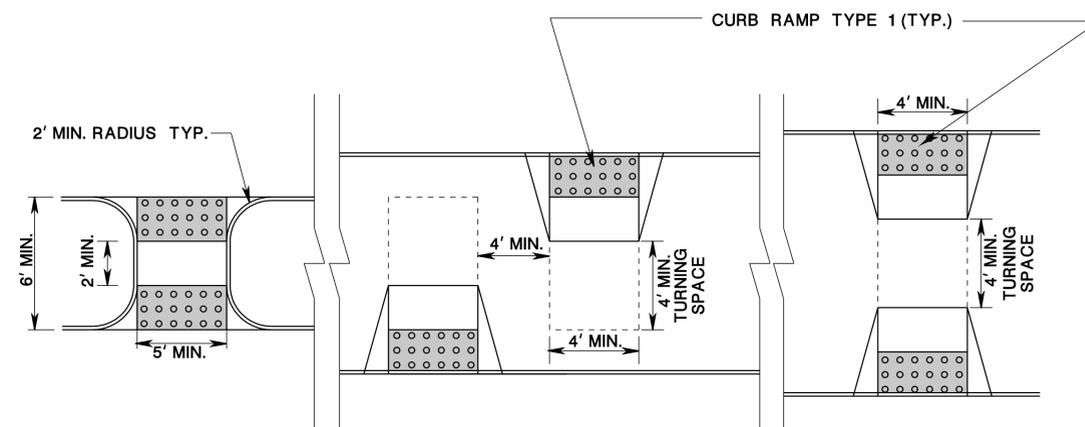
PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS



LOCATION OF CURB RAMP TYPES 1, 2, 3, 4 & 7 FOR CROSSING PARALLEL AND PERPENDICULAR TO HIGHWAY



PLACEMENT OF DETECTABLE WARNING SURFACE FOR CURB RAMP TYPE 5 AND 6



NARROW ISLAND WIDTH (SEE NOTE 3)

MEDIUM ISLAND WIDTH (SEE NOTE 4)

LARGE ISLAND WIDTH (SEE NOTE 4)

PEDESTRIAN REFUGE ISLAND

DETECTABLE WARNING SURFACE N.T.S.

NOTES:

- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SIDEWALK.
- CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
- FOR NARROW ISLAND WIDTH, SEE PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS DETAIL.
- FOR MEDIUM AND LARGE ISLAND WIDTH, SEE CURB RAMP TYPE 1 ON CD-606-1.
- CONSTRUCT CURB RAMP TYPES 1, 2, 3, 4 & 7 PERPENDICULAR TO CURBLINE, AS SHOWN.
- IF A CURB RAMP IS REQUIRED, THE LOCATION OF THE DETECTABLE WARNING SURFACE MUST BE AT THE BOTTOM OF THE RAMP AND WITHIN THE REQUIRED DISTANCE FROM THE RAIL.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

PENDING 5-20-14

CD-606-2.1

CD-606-2