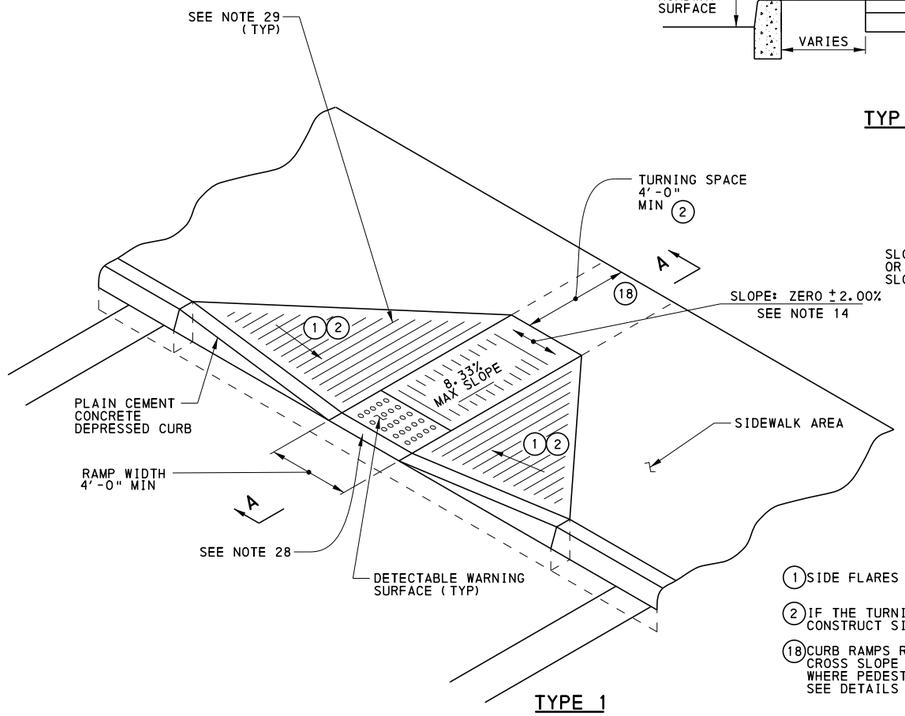
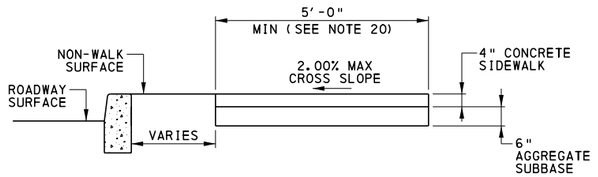
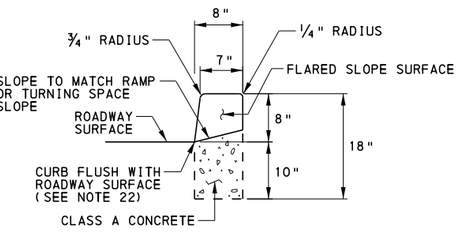



TYPE 1
CURB RAMP




SIDEWALK
TYPICAL SECTION

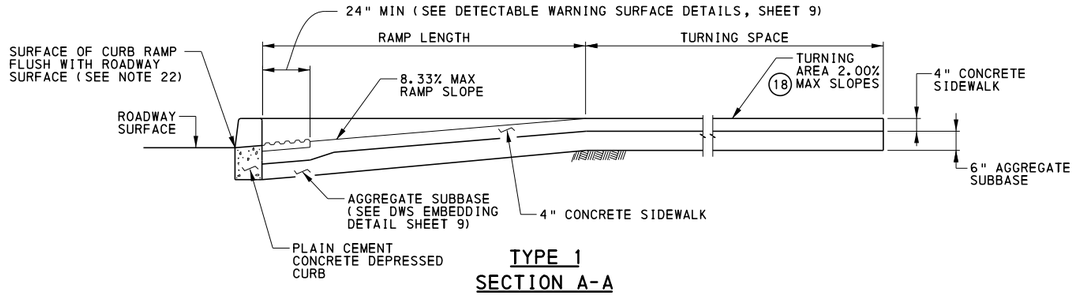



DEPRESSED CURB
FOR CURB RAMPS

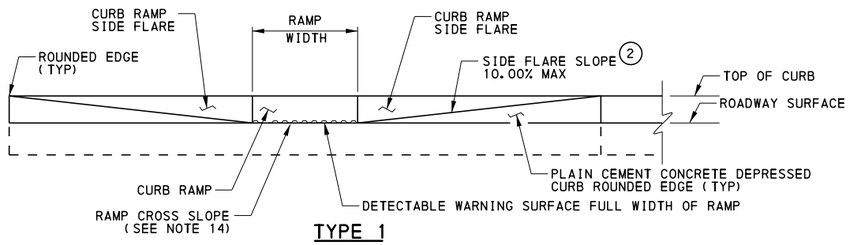
(1) SIDE FLARES 10.00% MAX SLOPE

(2) IF THE TURNING SPACE IS INDICATED TO BE LESS THAN 4'-0", CONSTRUCT SIDE FLARES 8.33% MAX SLOPE.

(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.




TYPE 1
SECTION A-A




TYPE 1
ELEVATION

| PERCENT SLOPE | EQUIVALENT SLOPE |
|---|---|
| 10.00% | 10:1 |
| 8.33% | 12:1 |
| 7.14% | 14:1 |
| 5.00% | 20:1 |
| 2.00% | 50:1 |
| 1.00% | 100:1 |

EQUIVALENT SLOPES

## NOTES

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 350, 409, 630, 676, 694, AND 695.
2. PROVIDE EXPANSION JOINT MATERIAL ½" THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
3. CONSTRUCT CURB RAMPS WITH A MINIMUM 4'-0" X 4'-0" CLEAR SPACE BEYOND THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. SEE SHEET 7 FOR CROSSWALK DETAILS.
4. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
5. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING SIDE FLARES.
6. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 8" HEIGHT.
7. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
8. TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB, RAMP LENGTH NOT TO EXCEED 15'-0". ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
9. NON-WALK AREA IS AN OBSTRUCTED OR GRASS/NON-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.
10. THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.
11. SEE TC-8803 FOR ADDITIONAL PEDESTRIAN PUSHBUTTON DETAILS NOT SHOWN.
12. ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB. SEE SHEET 9 FOR INSTALLATIONS ALONG CURVED SURFACES.
13. PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
14. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESS ROUTE.
15. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWABLE. SLOPES THAT EXCEED THOSE INDICATED IN THE DETAILS, OR CONTRACT DOCUMENTS AS APPLICABLE, WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.
16. CONSTRUCT SIDEWALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 5.00%. FOR ROADWAY PROFILE SLOPES THAT EXCEED 5.00%, CONSTRUCT PARALLEL SIDEWALKS ADJACENT TO ROADWAY AT A LONGITUDINAL SLOPE NOT TO EXCEED ROADWAY PROFILE SLOPE.
17. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 13.33%. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A CURB RAMP, TURNING SPACE OR BLENDED TRANSITION IS NOT TO EXCEED 5.00%. SEE SHEET 8 FOR DETAILS.
18. THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
19. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6'-0" FOR A 12:1 SLOPE.
20. SIDEWALK WIDTH MAY BE REDUCED TO 4'-0", WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.
21. THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
22. CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE. AT THE JOINT BETWEEN DEPRESSED CURB AND ROADWAYS, REMOVE EXCESS JOINT SEALER AND COVER THE SEALED AREA WITH A LIGHT APPLICATION OF DRY SAND.
23. CHEEK WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 OR FLATTER. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN PATH.
24. CONSTRUCT TOP OF PLAIN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).
25. FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES. SEE SHEET 7 FOR DETAILS.
26. A 4'-0" MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMPS AND SIDEWALKS.
27. INSTALL DUMMY JOINTS WHERE RAMPS, TURNING SPACES, FLARES, AND SIDEWALKS ABUT.
28. CONSTRUCT DEPRESSED CURB SLOPE TO MATCH ROADWAY PROFILE AND HAVE A FLUSH CONNECTION. TRANSITION CURB RAMP CROSS SLOPE TO MATCH ROADWAY PROFILE AS GRADUALLY AS POSSIBLE. DO NOT EXCEED 3.00% PER 1'-0" CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
29. DO NOT SCORE OR MAKE GROOVES ON SLOPED SURFACES. LINES SHOWN ON DETAILS ARE FOR ILLUSTRATION ONLY. SEE NOTE 5.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
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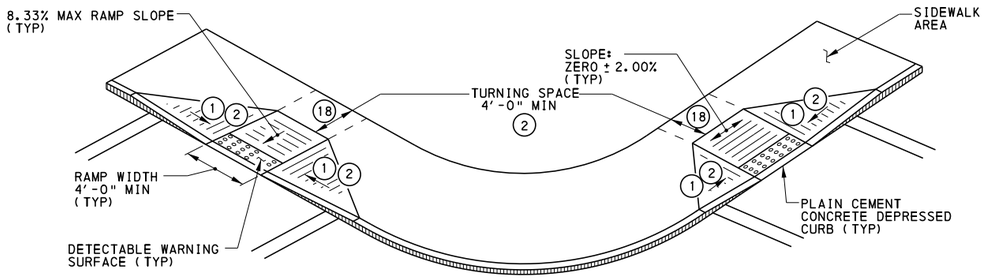
# CURB RAMPS AND SIDEWALKS NEW CONSTRUCTION OR ALTERATION DETAILS TYPE 1 CURB RAMPS AND TYPICAL SECTIONS

RECOMMENDED JUN. 10, 2013
CHIEF, HWY. DELIVERY DIVISION

RECOMMENDED JUN. 10, 2013
ACTING DIR. BUREAU OF PROJECT DELIVERY

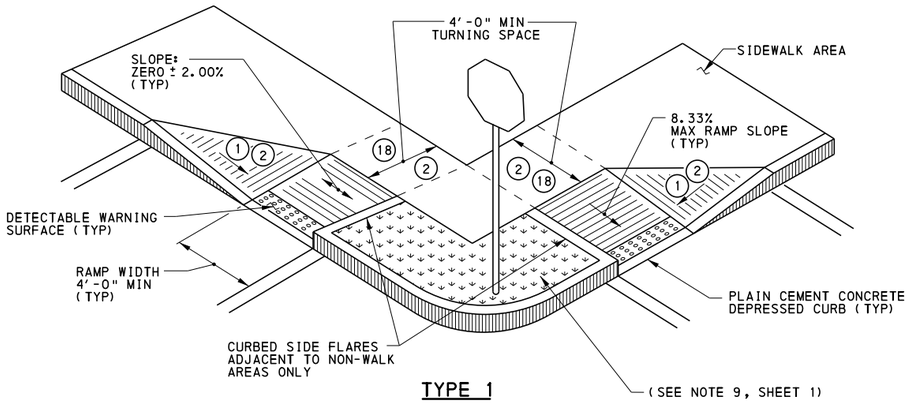
SHT 1 OF 14

RC-67M

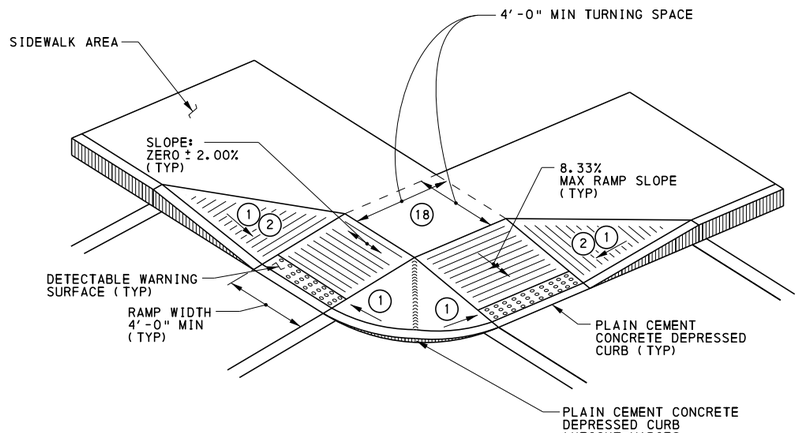



NOTE: IF SPACE IS LIMITED, IT MAY BE NECESSARY TO CURB THE SIDE FLARES OF THE TYPE 1 CURB RAMPS (SEE ALTERNATE INSTALLATION DETAIL BELOW). PEDESTRIAN TRAFFIC SHOULD NOT BE DIRECTED TO CROSS THE VERTICAL DROP.

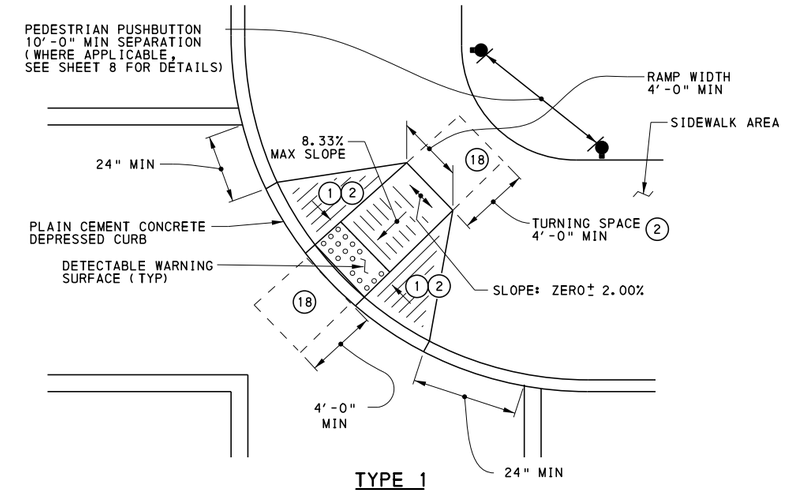
## TYPE 1
## DOUBLE CURB RAMPS
## (PREFERRED INSTALLATION)



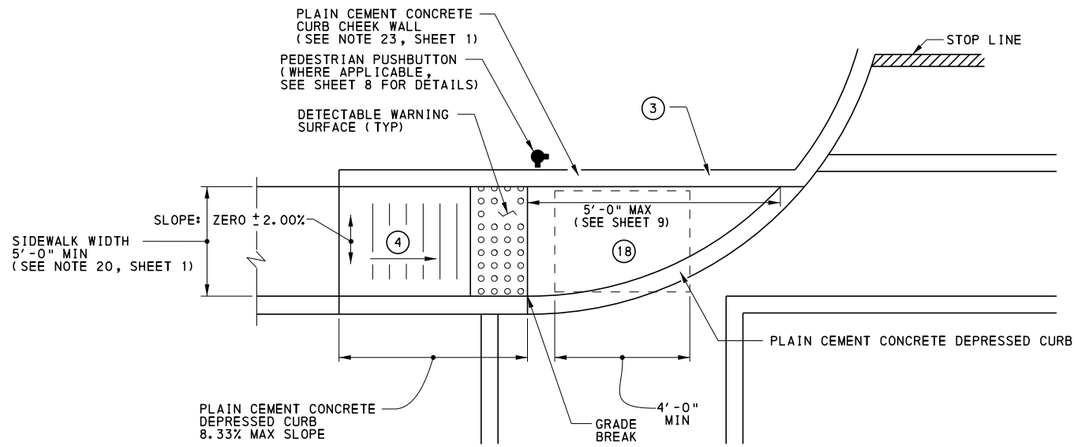

## TYPE 1
## DOUBLE CURB RAMPS
## (ALTERNATE INSTALLATION)




## TYPE 1 CURB RAMPS
## WITH SHARED TURNING SPACE




## TYPE 1
## CURB RAMP
## (DIAGONAL - REQUIRES ASSISTANT DISTRICT EXECUTIVE APPROVAL)




## TYPE 1A
## CURB RAMP
## ASSISTANT DISTRICT EXECUTIVE APPROVAL REQUIRED IF TURNING SPACE IS NOT ENTIRELY ON SIDEWALK

(1) SIDE FLARES 10.00% MAX SLOPE.

(2) IF THE TURNING SPACE IS INDICATED TO BE LESS THAN 4'-0", CONSTRUCT SIDE FLARES 8.33% MAX SLOPE.

(3) OPTIONAL ROLLED CONCRETE SURFACE OR REGRADE SLOPE CAN BE USED TO MEET THE ADJACENT SURFACES IN LIEU OF A RETURN CURB CHEEK WALL.

(4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1.

(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

# CURB RAMPS AND SIDEWALKS

## NEW CONSTRUCTION OR ALTERATION DETAILS
## TYPE 1 AND TYPE 1A CURB RAMPS

RECOMMENDED JUN. 10, 2013
CHIEF, HWY. DELIVERY DIVISION

RECOMMENDED JUN. 10, 2013
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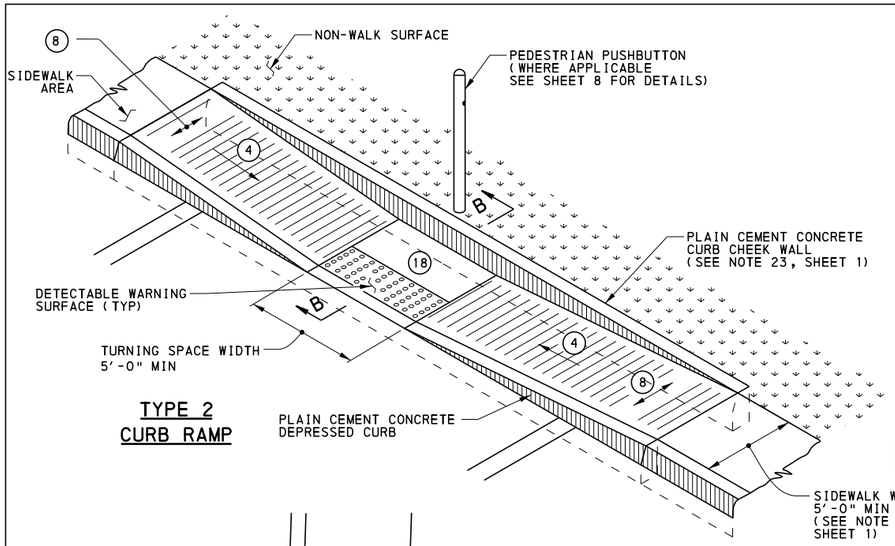
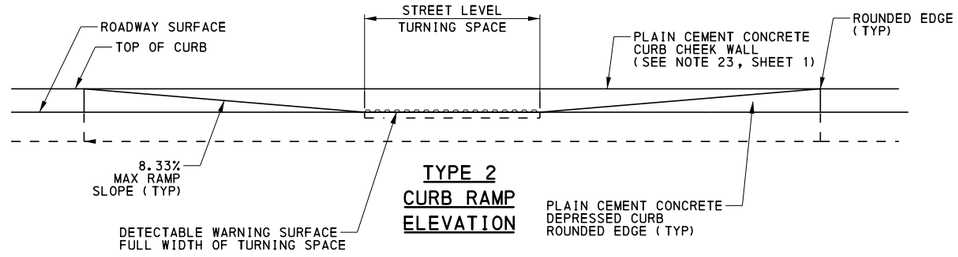
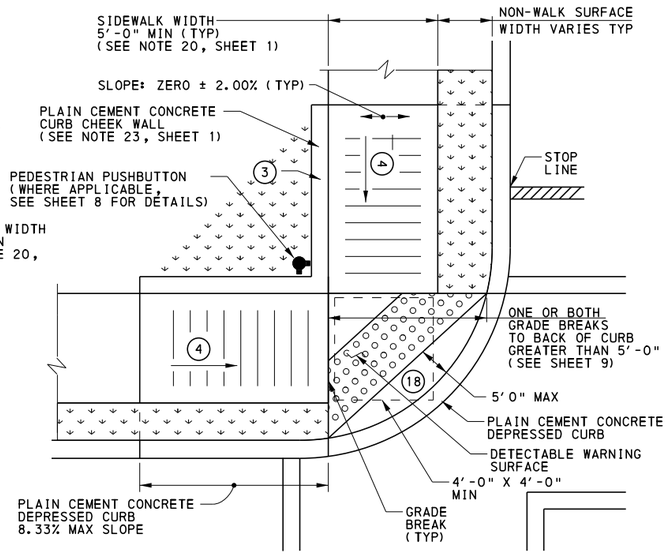
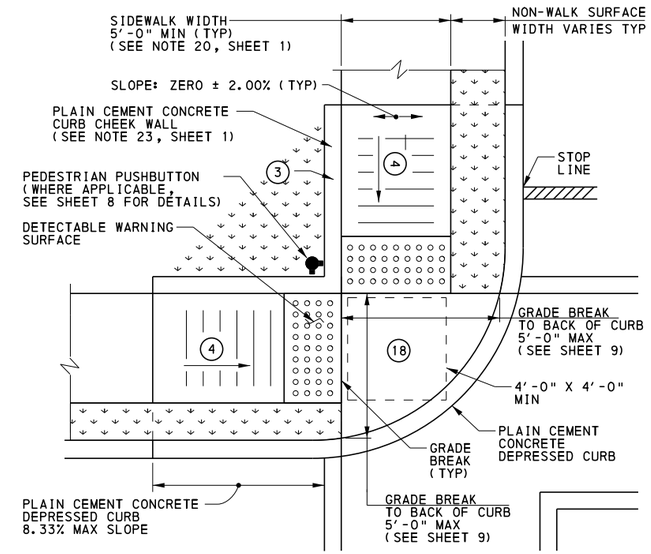



TYPE 2
CURB RAMP

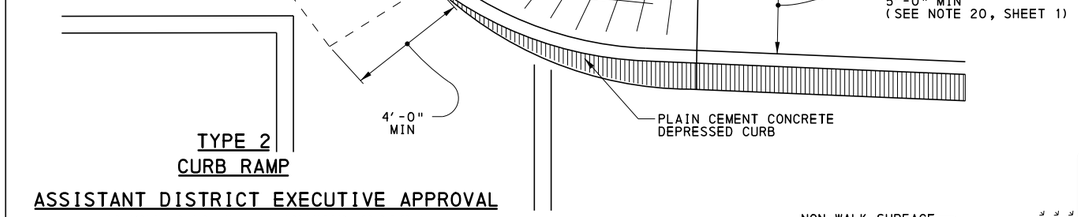



TYPE 2
CURB RAMP
ELEVATION

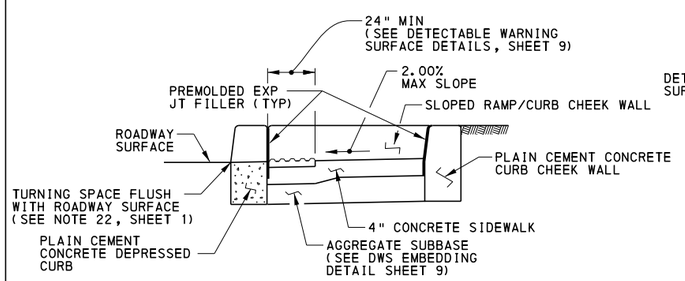


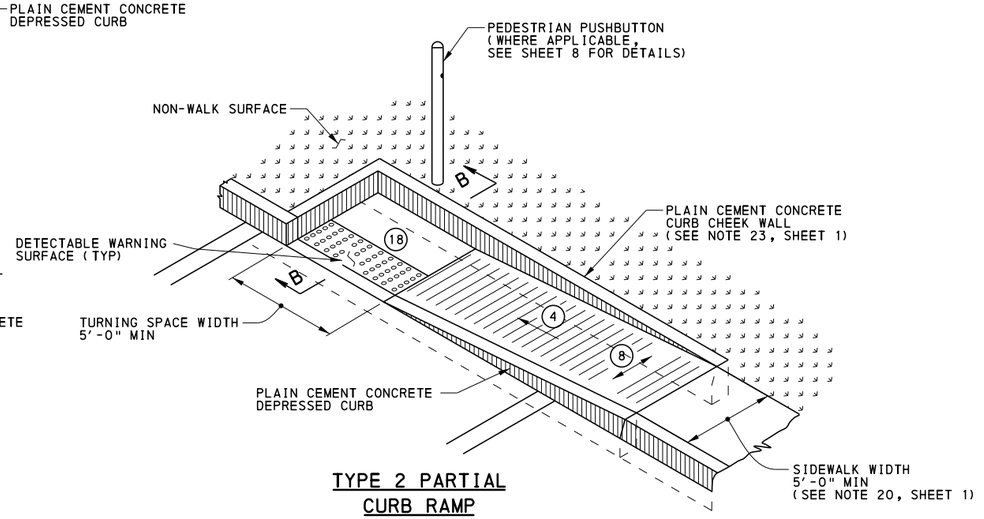

TYPE 1A
CURB RAMPS
ASSISTANT DISTRICT EXECUTIVE APPROVAL
REQUIRED IF TURNING SPACE
IS NOT ENTIRELY ON SIDEWALK




TYPE 2
CURB RAMP
ASSISTANT DISTRICT EXECUTIVE APPROVAL
REQUIRED IF TURNING SPACE
IS NOT ENTIRELY ON SIDEWALK




TYPE 2
CURB RAMP
SECTION B-B




TYPE 2 PARTIAL
CURB RAMP

(3) OPTIONAL CONCRETE ROLLED FLARE OR REGRADE SLOPE CAN BE USED TO MEET THE ADJACENT SURFACES IN LIEU OF PLAIN CEMENT CONCRETE CURB CHEEK WALL. SEE SHEET 4.

(4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1

(8) SLOPE: ZERO ±2.00%

(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

# CURB RAMPS AND SIDEWALKS

## NEW CONSTRUCTION OR ALTERATION DETAILS TYPE 1A AND TYPE 2 CURB RAMPS

RECOMMENDED JUN. 10, 2013
CHIEF, HWY. DELIVERY DIVISION

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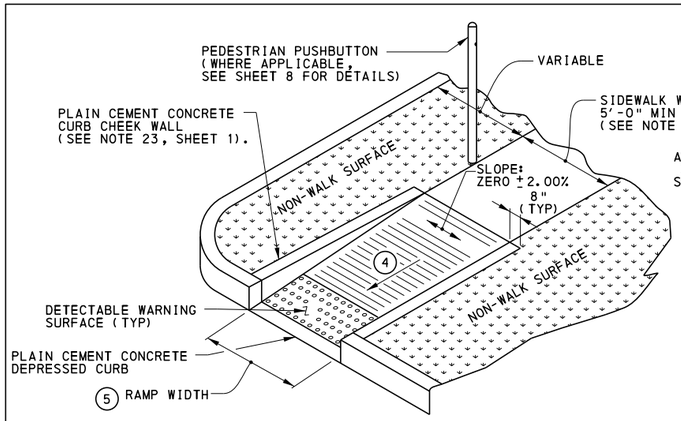
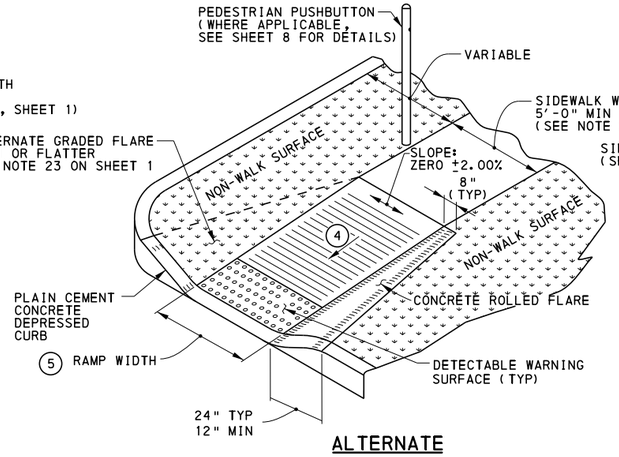
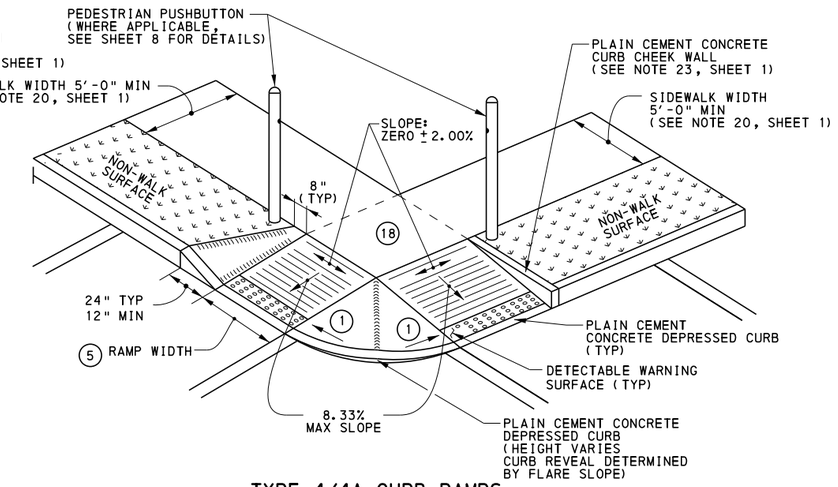


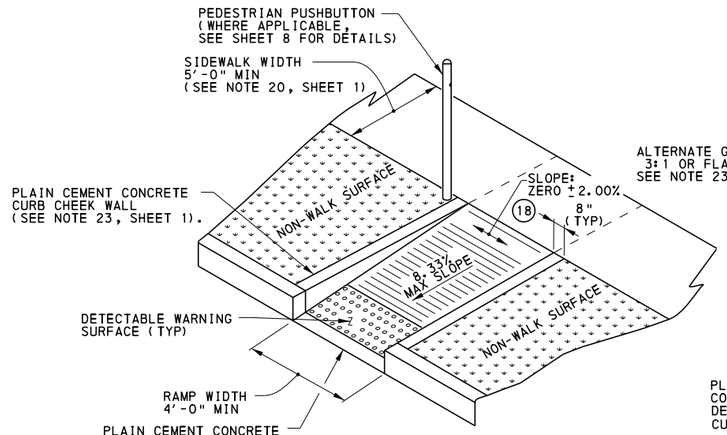

TYPE 4
CURB RAMP
(PARALLEL)



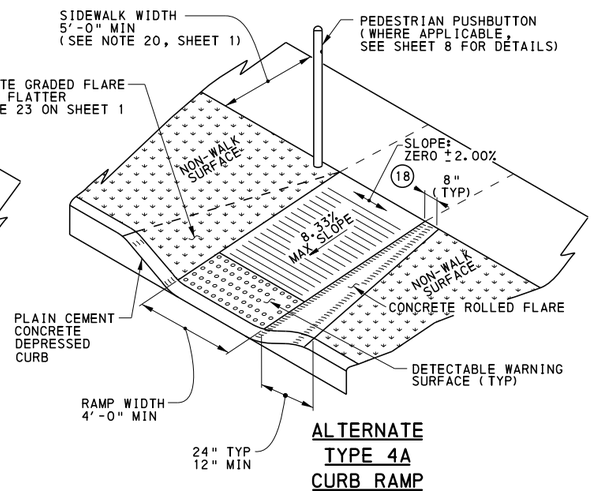

ALTERNATE
TYPE 4A
CURB RAMP
(PARALLEL)



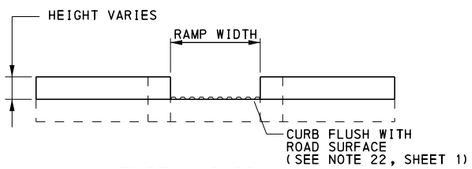

TYPE 4/4A CURB RAMPS
WITH SHARED TURNING SPACE



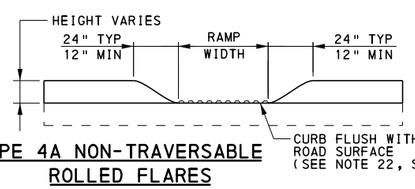

TYPE 4
CURB RAMP
(PERPENDICULAR)



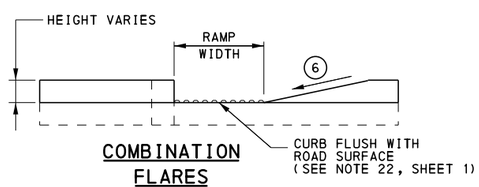

ALTERNATE
TYPE 4A
CURB RAMP
(PERPENDICULAR)




TYPE 4 CURB
CHEEK WALL FLARES




TYPE 4A NON-TRAVERSABLE
ROLLED FLARES




COMBINATION
FLARES

TYPICAL ELEVATIONS
FOR DEPRESSED CURBS

(1) SIDE FLARES 10.00% MAX SLOPE.

(4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1.

(5) CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO THE MINIMUM 4'-0".

(6) SLOPE VARIES SEE RAMP DETAILS.

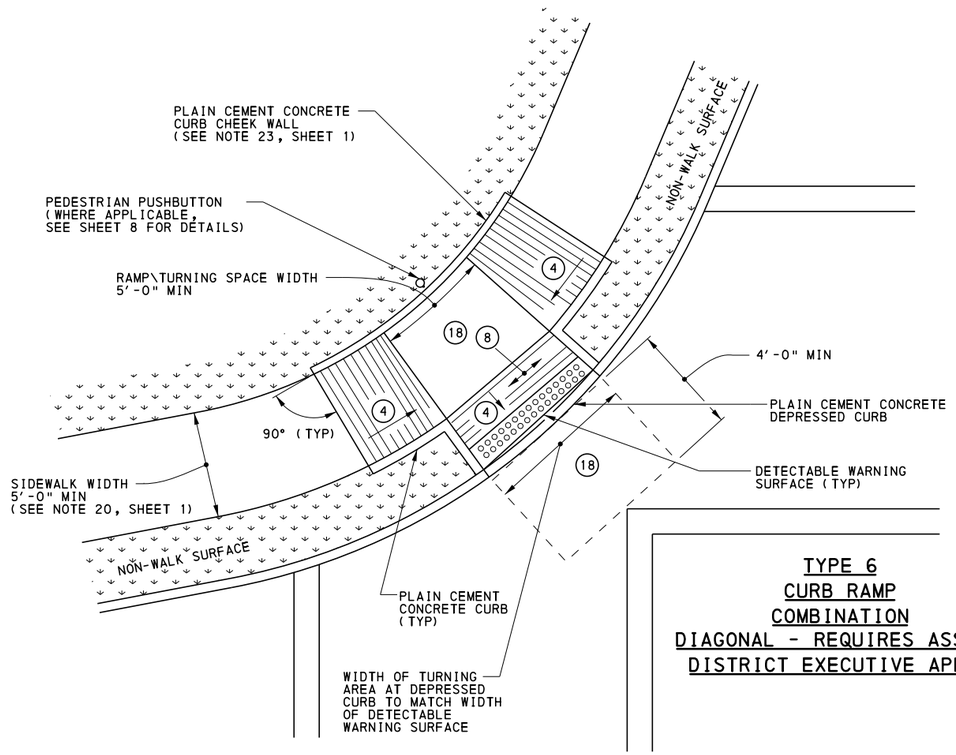
(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

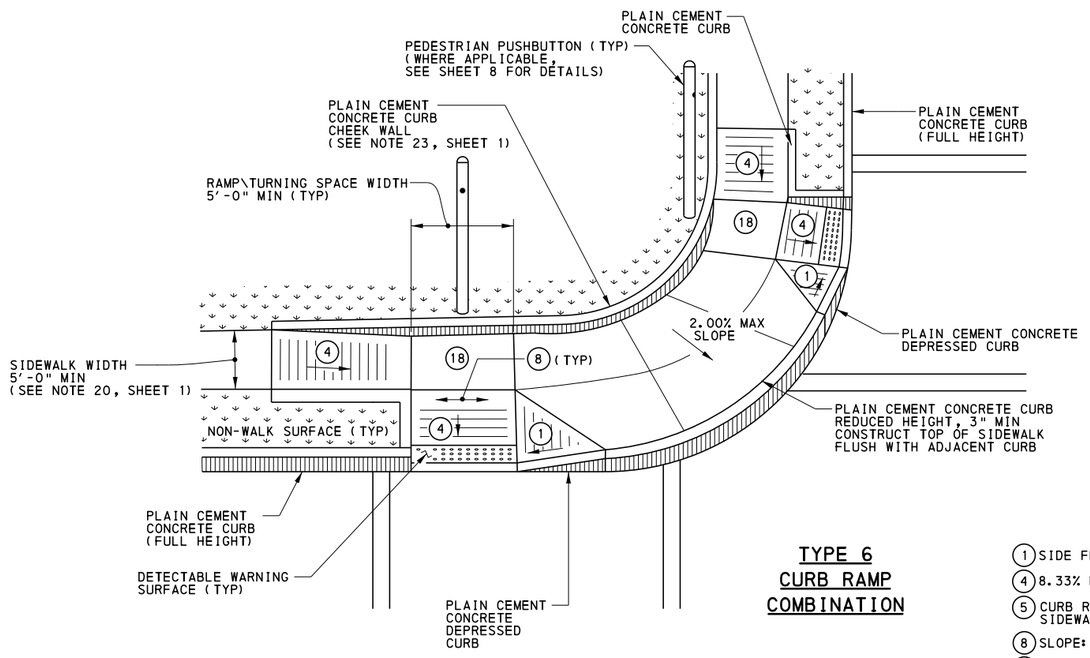
# CURB RAMPS AND SIDEWALKS NEW CONSTRUCTION OR ALTERATION DETAILS TYPE 4 CURB RAMPS AND TYPICAL ELEVATIONS

RECOMMENDED JUN. 10, 2013
CHIEF, HWY. DELIVERY DIVISION

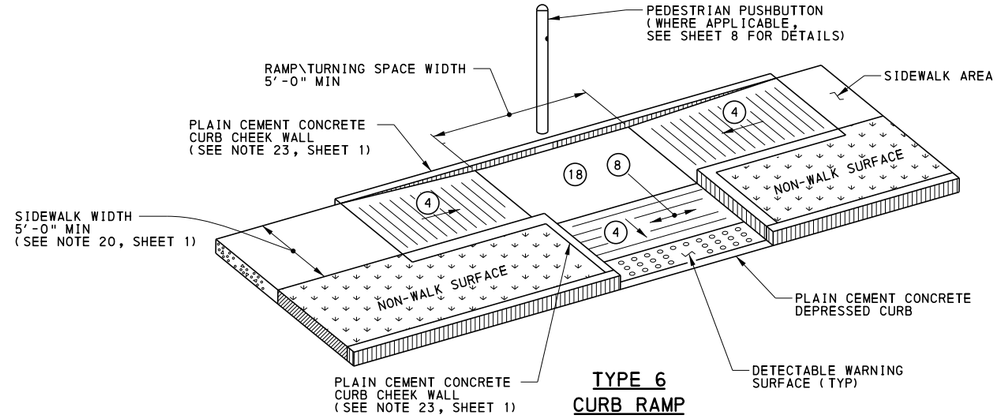
RECOMMENDED JUN. 10, 2013
ACTING DIR. BUREAU OF PROJECT DELIVERY



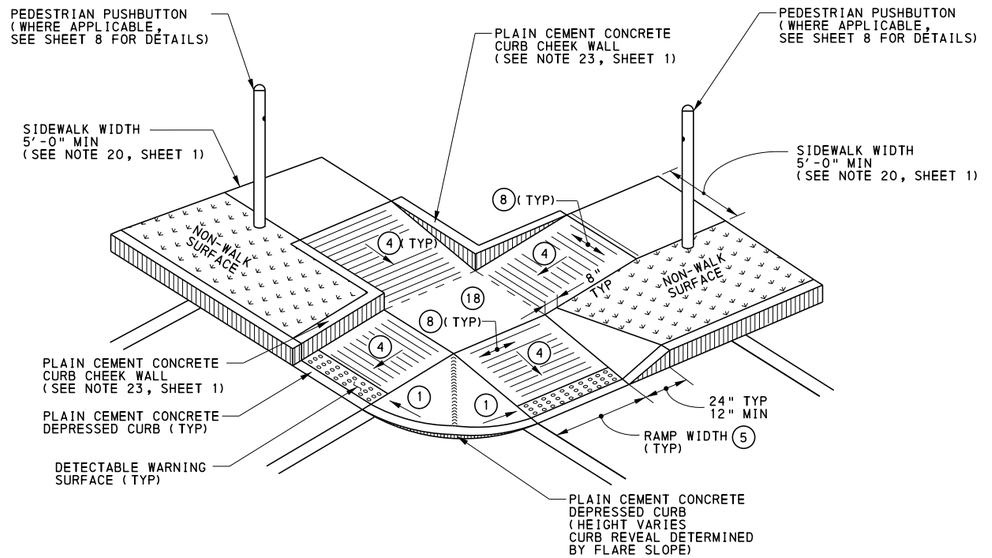

## TYPE 6 CURB RAMP COMBINATION DIAGONAL - REQUIRES ASSISTANT DISTRICT EXECUTIVE APPROVAL




## TYPE 6 CURB RAMP COMBINATION




## TYPE 6 CURB RAMP COMBINATION




## TYPE 6 CURB RAMPS WITH SHARED TURNING SPACE

(1) SIDE FLARES 10.00% MAX SLOPE.

(4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1.

(5) CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO 4'-0".

(8) SLOPE: ZERO ± 2.00%.

(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

# CURB RAMPS AND SIDEWALKS

## NEW CONSTRUCTION OR ALTERATION DETAILS TYPE 6 CURB RAMPS

RECOMMENDED JUN. 10, 2013
CHIEF, HWY. DELIVERY DIVISION

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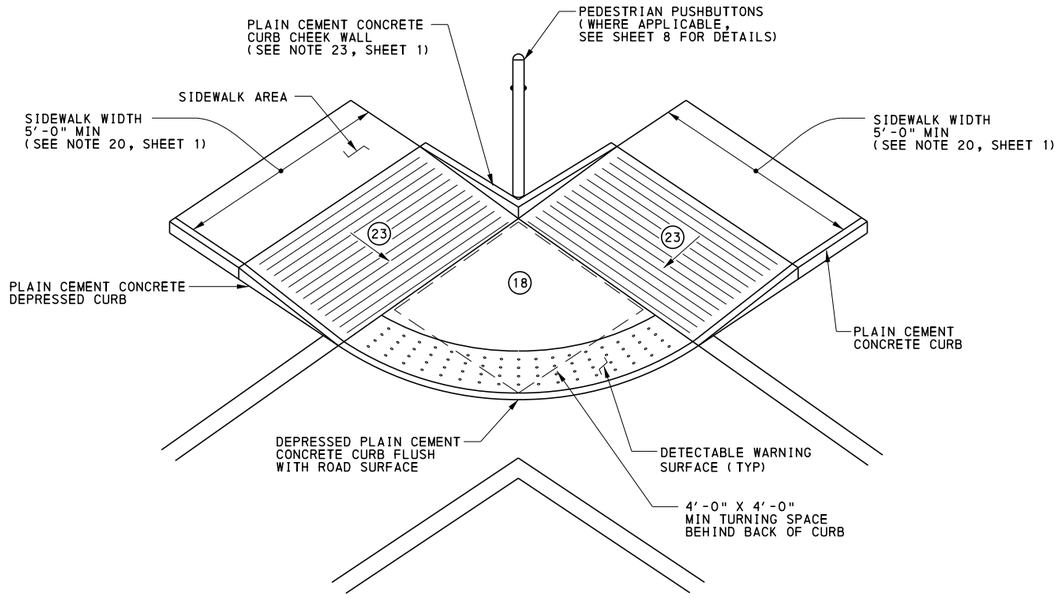
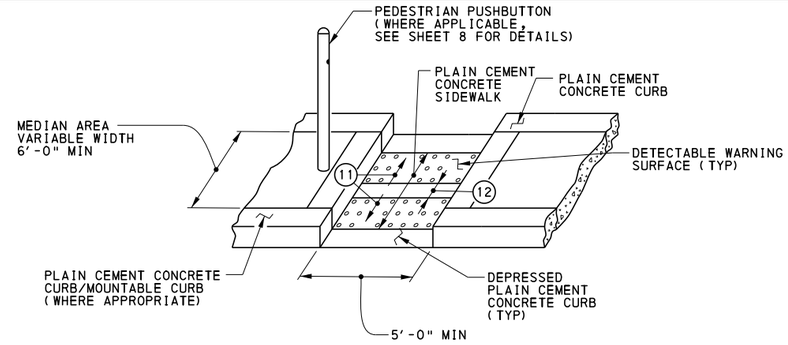
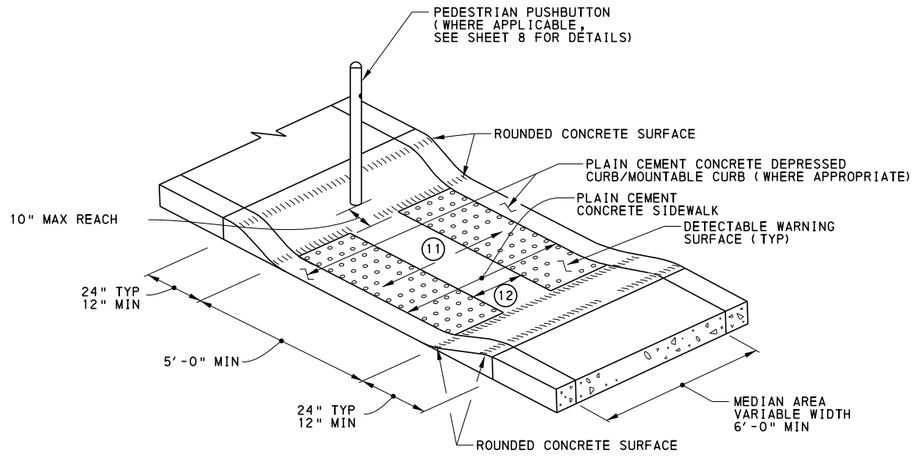



NOTE: DO NOT INSTALL GRATINGS, ACCESS COVERS AND OTHER APPURTENANCES ON THE BLENDED TRANSITION SURFACE WITHIN THE PEDESTRIAN ACCESS ROUTE.
EXISTING UTILITY COVERS IN THE PATH OF TRAVEL ARE ACCEPTABLE IF THE TOP SURFACE IS FLUSH [LESS THAN 1/4" IN ELEVATION DIFFERENCE], FIRM, STABLE AND SLIP RESISTANT. INLET GRATES MUST HAVE OPENINGS NO GREATER THAN 1/2" IN DIRECTION OF TRAVEL.

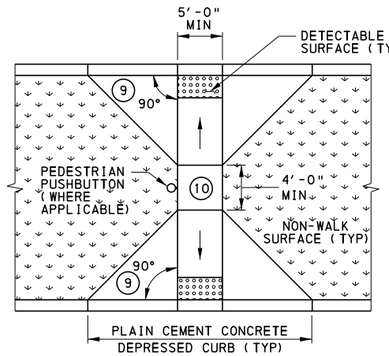
## BLENDED TRANSITION



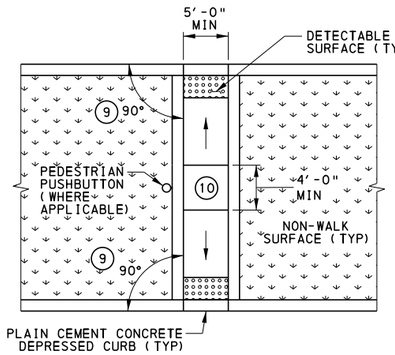

## TYPE A
## TYPICAL MEDIAN OR ISLAND ACCESS OPENING WITH CURB SIDES
(NARROW MEDIANS)




## TYPE B
## TYPICAL MEDIAN OR ISLAND ACCESS OPENING WITH FLARED SIDES
(NARROW MEDIANS)




## RAMPED MEDIAN OR ISLAND ACCESS OPENING (TYPE 1 DOUBLE CURB RAMPS)




## RAMPED MEDIAN OR ISLAND ACCESS OPENING (TYPE A DOUBLE CURB RAMPS)

(9) 90° DESIRABLE.

(10) TURNING SPACES ARE NOT REQUIRED FOR LONGITUDINAL SLOPES 5.00% OR LESS.

(11) PROVIDE ADEQUATE SLOPE FOR DRAINAGE (5.00% MAX).

(12) 2'-0" MIN SEPARATION. DO NOT INSTALL DETECTABLE WARNING SURFACES IF SEPARATION IS LESS THAN 2'-0". REFER TO DM-2 CHAPTER 6 FOR ADDITIONAL DETAILS.

(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

(23) 5.00% MAX RUNNING SLOPE FOR BLENDED TRANSITION. FOR SLOPES GREATER THAN 5.00% SEE TYPE 2 CURB RAMPS ON SHEET 3 FOR ADDITIONAL DETAILS.

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# CURB RAMPS AND SIDEWALKS

## NEW CONSTRUCTION OR ALTERATION DETAILS
## BLENDED TRANSITION / MEDIANS

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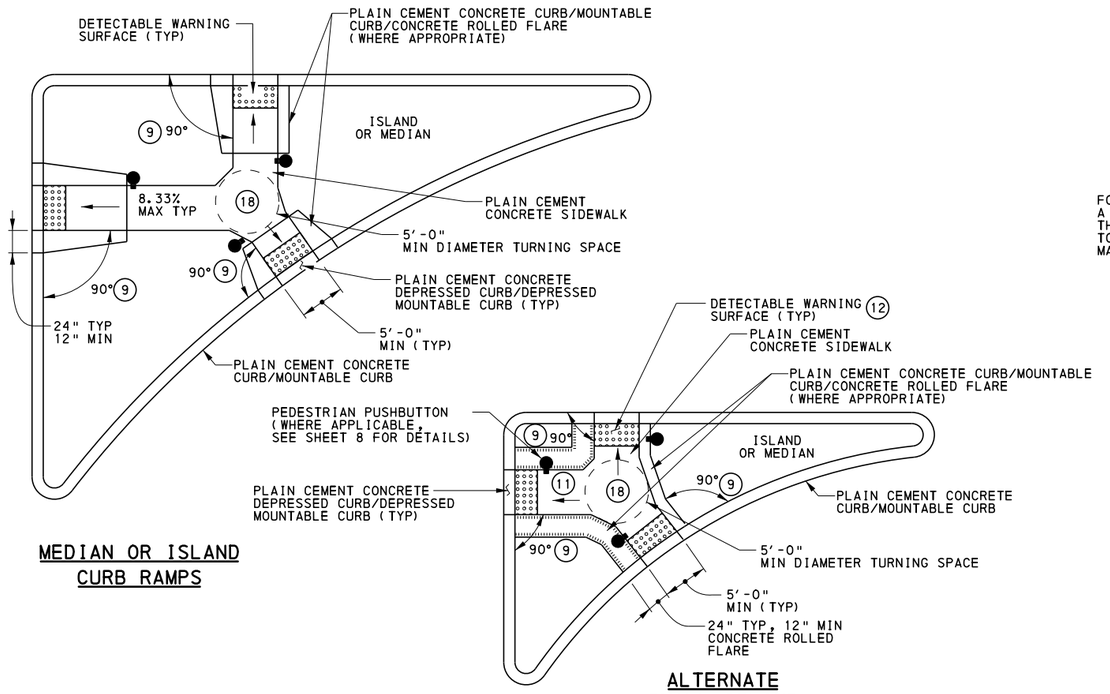



MEDIAN OR ISLAND CURB RAMPS

ALTERNATE SMALL ISLAND WITH CUT THROUGH

(9) 90° DESIRABLE.

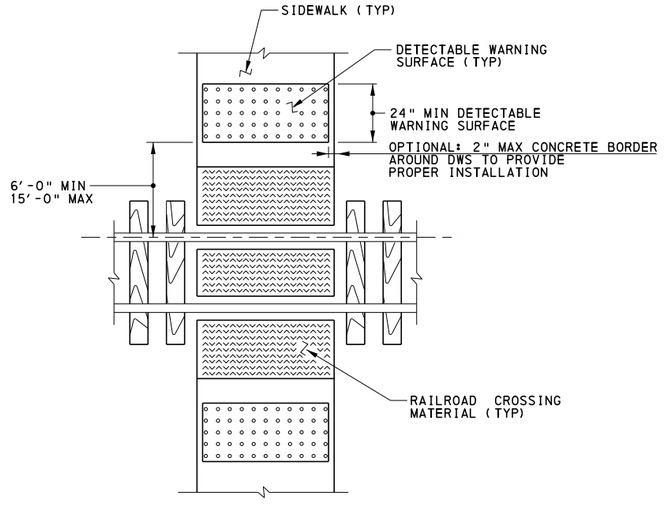
(11) PROVIDE ADEQUATE SLOPE FOR DRAINAGE ( 5.00% MAX).

(12) 2'-0" MIN SEPARATION. DO NOT INSTALL DETECTABLE WARNING SURFACES IF SEPARATION IS LESS THAN 2'-0".

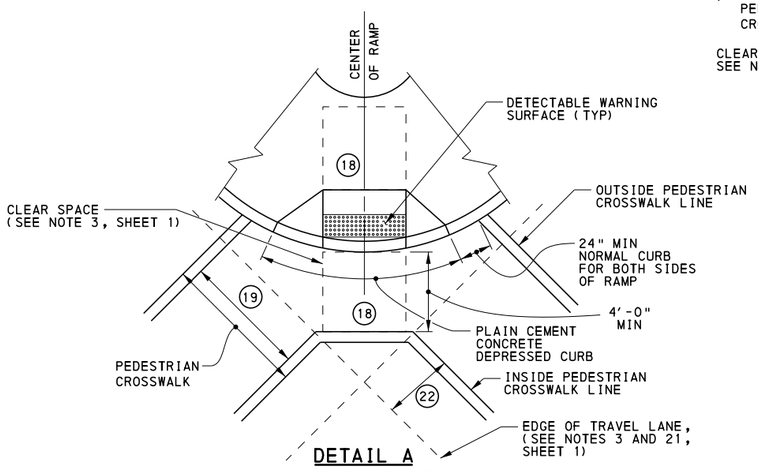
(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

(19) 6'-0" MIN MEASURED FROM INSIDE OF PAINTED EDGE TO INSIDE OF PAINTED EDGE.

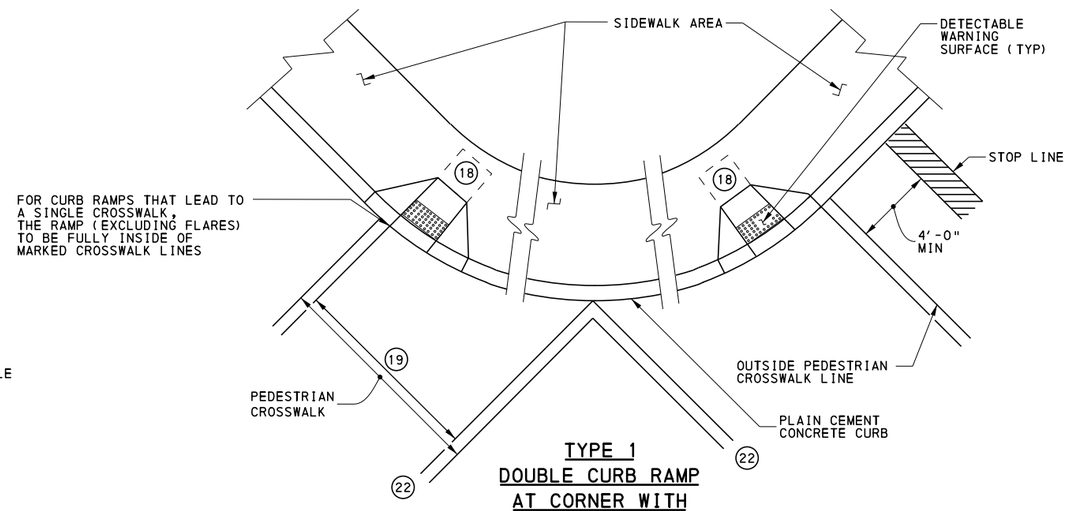
(22) THE INSIDE PEDESTRIAN CROSSWALK LINES MUST BE OUTSIDE OF THE PARALLEL VEHICLE TRAVEL LANE.



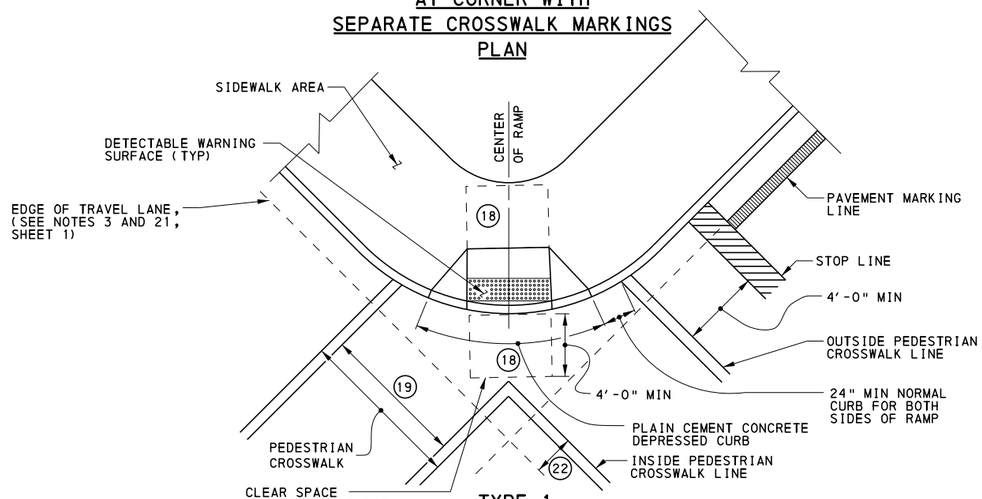

TYPICAL DETECTABLE WARNING SURFACE AT RAILROAD CROSSING




DETAIL A
CLEAR SPACE AT CROSSWALK MARKINGS PLAN
( DIAGONAL - REQUIRES ASSISTANT DISTRICT EXECUTIVE APPROVAL)




TYPE 1
DOUBLE CURB RAMP AT CORNER WITH SEPARATE CROSSWALK MARKINGS PLAN




TYPE 1
SINGLE CURB RAMP AT CORNER WITH CROSSWALK MARKINGS PLAN
( DIAGONAL- REQUIRES ASSISTANT DISTRICT EXECUTIVE APPROVAL)

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# CURB RAMPS AND SIDEWALKS
## NEW CONSTRUCTION OR ALTERATION DETAILS
## CROSSWALKS, MEDIANS, RAILROAD CROSSING DETECTABLE WARNING SURFACE

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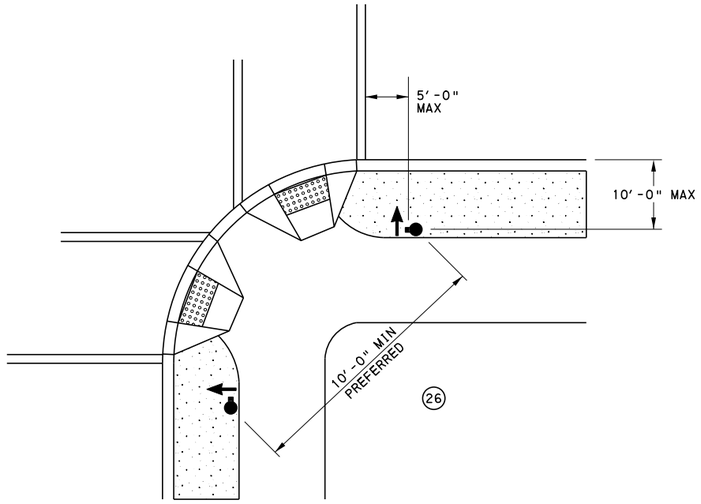
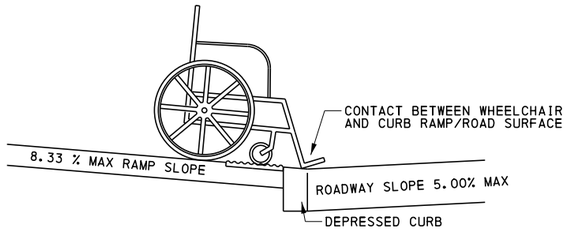
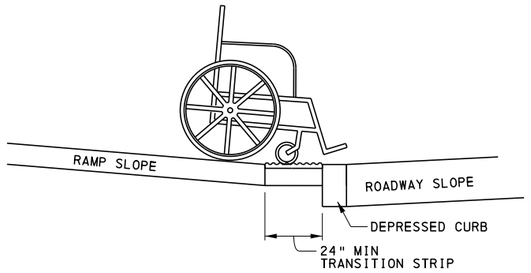



RECOMMENDED PUSHBUTTON LOCATIONS



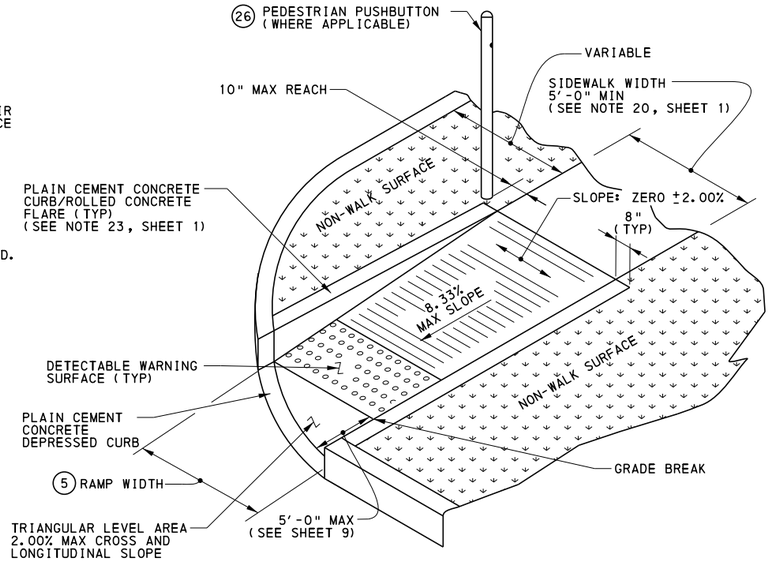

ALGEBRAIC DIFFERENCES BETWEEN ROADWAY SLOPE AND CURB RAMP SLOPE GREATER THAN 13.33% NOT PERMITTED.




PROVIDE A 24" MIN TRANSITION STRIP IF ALGEBRAIC DIFFERENCES BETWEEN ROADWAY SLOPE AND CURB RAMP SLOPE ARE GREATER THAN 13.33%.

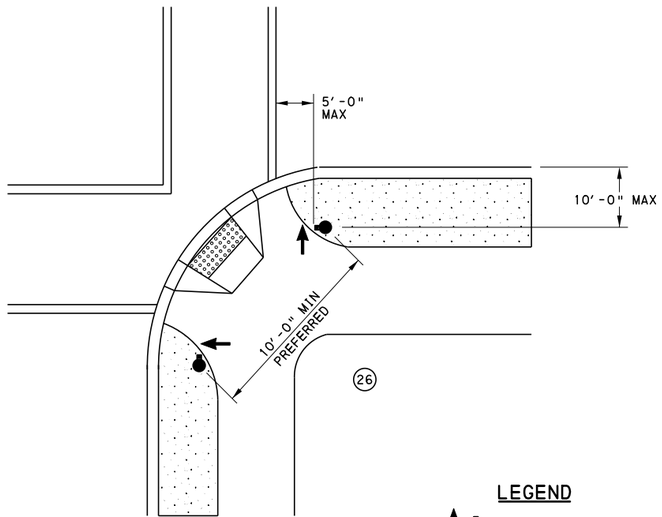
TRANSITION STRIP SLOPE NOT TO EXCEED 5.00%

CHANGE OF GRADE LIMITATIONS




TRIANGULAR LEVEL AREA FOR DIRECTIONAL RAMPS ON CURB RETURNS

PROVIDE A LEVEL TRIANGULAR AREA WHEN DIRECTIONAL RAMPS ARE INSTALLED ON A CURB RETURN TO TRANSITION THE GRADE BREAK.




LEGEND

PEDESTRIAN PUSHBUTTON

RECOMMENDED PUSHBUTTON LOCATIONS


RAMP CROSS SLOPE TRANSITION TO MATCH ROADWAY PROFILE SLOPE

* SLOPES SHOWN ARE FOR ILLUSTRATION ONLY.

TRANSITION CURB RAMP CROSS SLOPE TO MATCH ROADWAY PROFILE AS GRADUALLY AS POSSIBLE. DO NOT EXCEED 3.00 % PER 1'-0" CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.

COMPLETE TRANSITION TO ROADWAY PROFILE BEHIND DETECTABLE WARNING SURFACE OR USE 1'-0" DETECTABLE WARNING SURFACE TILES.

CONSTRUCT DEPRESSED CURB SLOPE TO MATCH ROADWAY PROFILE.

(5) CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO 4'-0".

(26) NEW CONSTRUCTION MUST COMPLY WITH RECOMMENDED LOCATIONS. FOR ALTERATION PROJECTS LOCATE PEDESTRIAN PUSHBUTTONS, TO THE MAXIMUM EXTENT FEASIBLE, AS FOLLOWS:

- ADJACENT TO A LEVEL NON-SLIP SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS A NON-SLIP WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
- WITHIN 5'-0" OF THE CROSSWALK EXTENDED.
- BETWEEN 1'-6" AND 10'-0" OF THE EDGE OF CURB, SHOULDER OR PAVEMENT.
- PARALLEL TO THE CROSSWALK TO BE USED.

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# CURB RAMPS AND SIDEWALKS NEW CONSTRUCTION OR ALTERATION DETAILS PUSHBUTTONS, TRIANGULAR LEVEL AREA, CHANGE OF GRADE AND CROSS SLOPE TRANSITIONS

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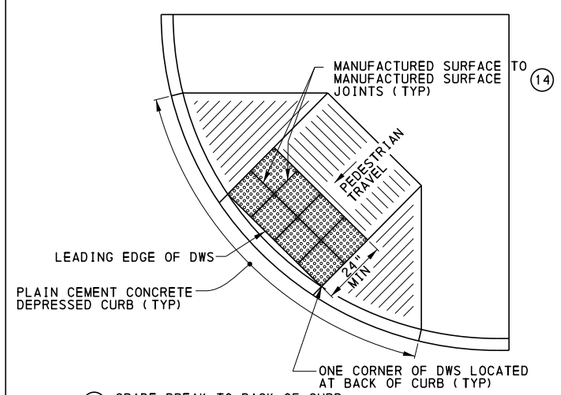
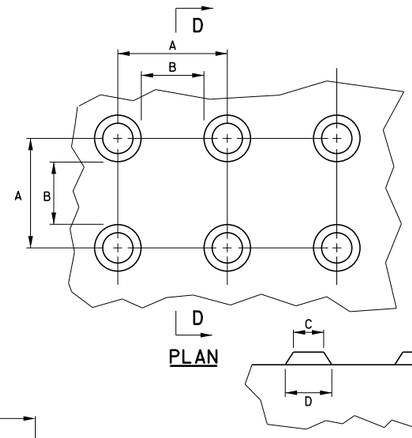
SEE NOTE 3 ON SHEET 1 CONCERNING DIAGONAL RAMPS



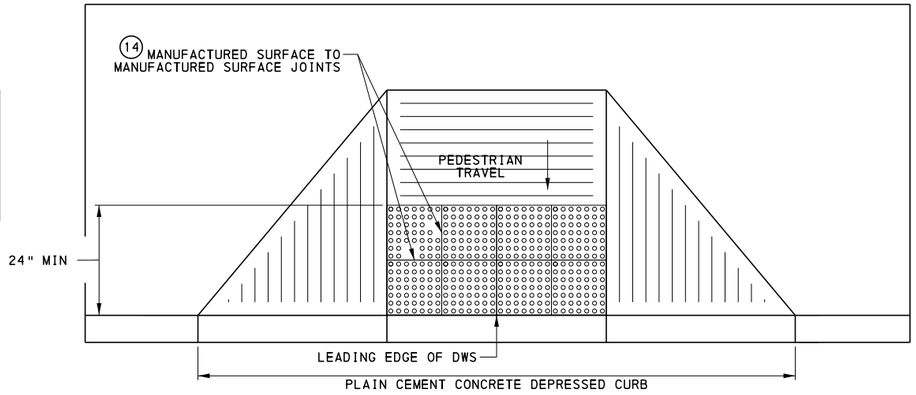




PLAN

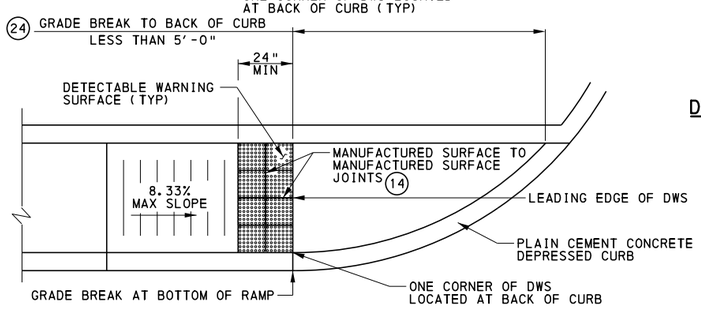
SECTION D-D

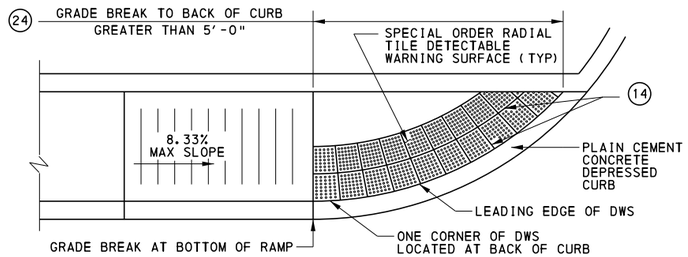
| TRUNCATED DOME DIMENSIONS | | |
|---|---|---|
| DIM | MIN mm ( inch) | MAX mm ( inch) |
| A | 1.6" | 2.4" |
| B | 0.65" | 1.5" |
| C | (13) | (13) |
| D | 0.9" | 1.4" |

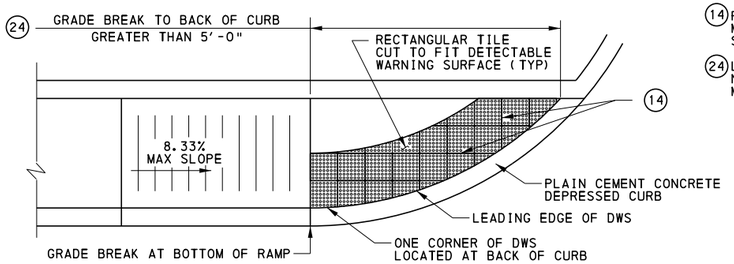
DETECTABLE WARNING SURFACE ( DWS)
TRUNCATED DOME DETAILS

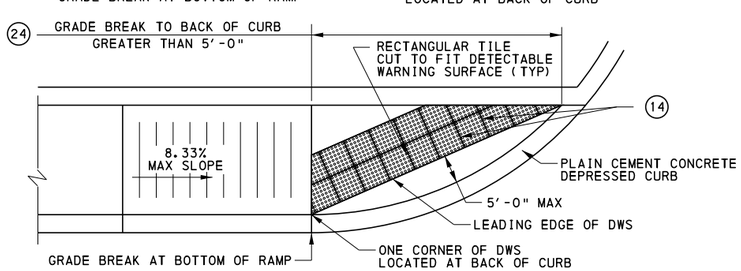



DETECTABLE WARNING SURFACE ( DWS)
ON TYPE 1 CURB RAMP



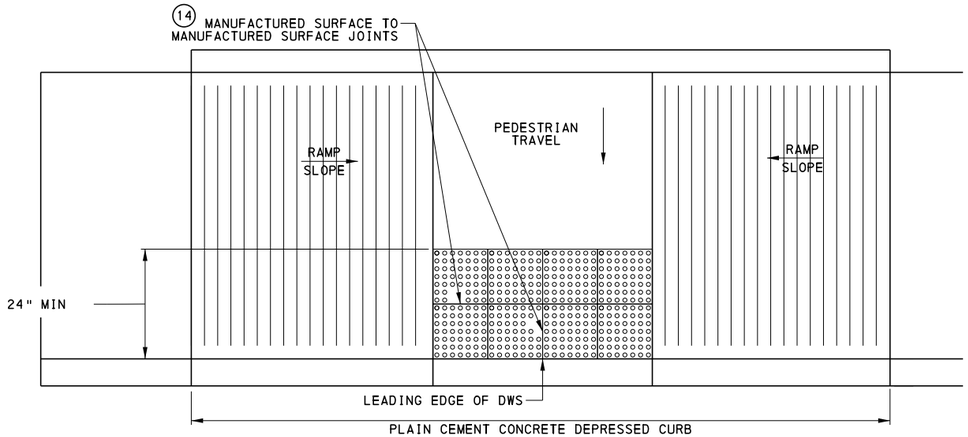




DETECTABLE WARNING SURFACE ( DWS)
ON CURVED SURFACES

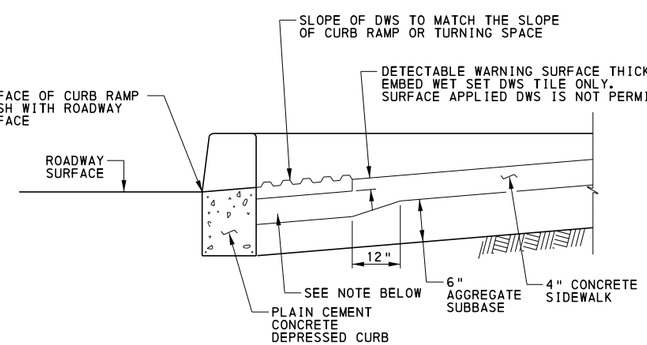
(13) THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

(14) PLACE ADJACENT DWS TILES WITH MANUFACTURED SURFACE TO MANUFACTURED SURFACE. CUT TILES ALONG THE PERIMETER ONLY.

(24) LOCATE ONE CORNER OF THE DWS AT THE BACK OF CURB. NO OTHER POINT ON THE LEADING EDGE OF THE DWS MAY BE MORE THAN 5'-0" AWAY FROM THE BACK OF CURB.




DETECTABLE WARNING SURFACE ( DWS)
ON TYPE 2 CURB RAMP




NOTES:
CONSTRUCT NOTCH AS SHOWN TO PROVIDE FULL THICKNESS SIDEWALK UNDER DETECTABLE WARNING SURFACE.

OPTIONAL: CONSTRUCT 2" MAX CONCRETE BORDER AROUND DWS TO PROVIDE PROPER INSTALLATION. SEE PEDESTRIAN PUSHBUTTON ACCESS AREAS DETAIL ON SHEET 14, FOR PLAN VIEW DETAILS.

DETECTABLE WARNING SURFACE
EMBEDDING DETAIL

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CURB RAMPS AND SIDEWALKS

NEW CONSTRUCTION OR
ALTERATION DETAILS
DETECTABLE WARNING SURFACE

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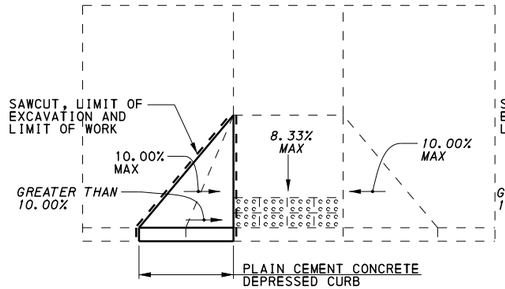
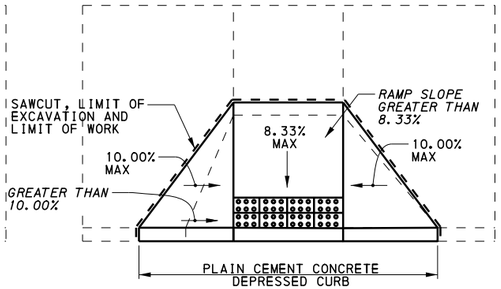


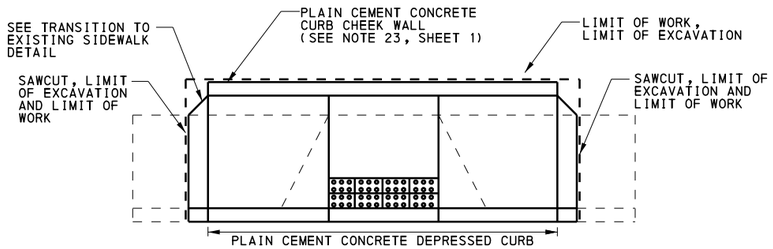

DETAIL ILLUSTRATES FLARE REMOVAL AND REPLACEMENT.

## SIDE FLARE RECONSTRUCTION



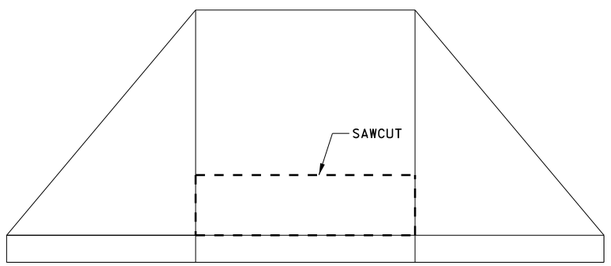

DETAIL ILLUSTRATES CURB RAMP ( INCLUDING FLARES) REPLACEMENT.

## TOTAL RAMP RECONSTRUCTION

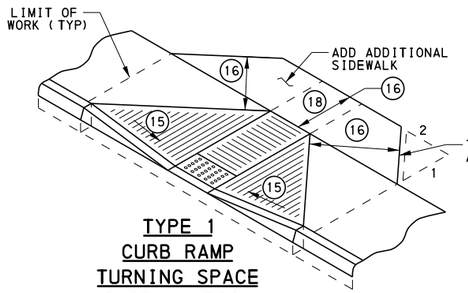



DETAIL ILLUSTRATES A TYPE 1 EXISTING RAMP REPLACED WITH A TYPE 2 RAMP. USE THIS DETAIL AS AN EXAMPLE TO REPLACE ANY RAMP WITH A DIFFERENT CURB RAMP TYPE.

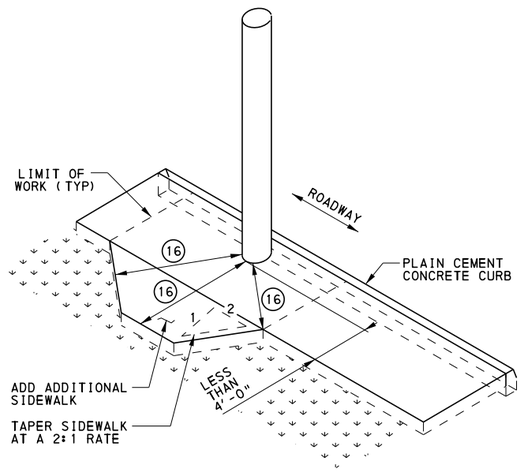
## TOTAL RAMP RECONSTRUCTION ( RAMP TYPE CHANGE)



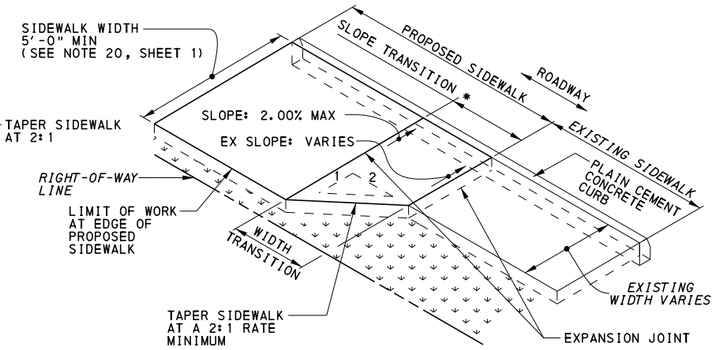

## DETECTABLE WARNING SURFACE ( DWS) INSTALLATION DETAIL




## TYPE 1 CURB RAMP TURNING SPACE INSTALLATION




## SIDEWALK ADDITION DUE TO OBSTRUCTIONS




## TRANSITION TO EXISTING SIDEWALK DETAIL

* MINIMUM SLOPE TRANSITION LENGTH BASED ON THE DIFFERENCE OF PROPOSED SIDEWALK CROSS SLOPE AND EXISTING SIDEWALK CROSS SLOPE AT THE LOCATION OF TIE IN. THIS MINIMUM LENGTH TO BE DETERMINED BY THE FOLLOWING FORMULA: DELTA % SLOPE X 0.5'.

THE MINIMUM WIDTH TRANSITION SHALL BE CALCULATED USING THE FOLLOWING FORMULA: CHANGE IN WIDTH X 2.

DEPENDING ON WHICH IS LONGEST, EITHER THE SLOPE TRANSITION OR WIDTH TRANSITION WILL CONTROL THE LENGTH OF SIDEWALK TRANSITION.

TRANSITION AREAS SERVE AS TEMPORARY CONNECTIONS OF THE PEDESTRIAN ACCESS ROUTE. FUTURE IMPROVEMENTS TO THE REMAINING PORTION OF EXISTING SIDEWALK SHALL INCLUDE REMOVING THE TRANSITION AREA AND CONSTRUCTING A FULLY COMPLIANT SIDEWALK.

## DETECTABLE WARNING SURFACE ( DWS) INSTALLATION INSTRUCTIONS

1. SAW CUT EXISTING CURB RAMP SURFACE WHERE THE DWS WILL BE PLACED.
2. REMOVE EXISTING CONCRETE FROM THIS AREA.
3. REPLACE AND COMPACT ANY DISTURBED AGGREGATE SUBBASE.
4. PLACE NEW CEMENT CONCRETE AND LEVEL TO A 4 INCH DEPTH SO THAT THE TOP OF THE CONCRETE IS LOWER THAN THE ADJOINING SIDEWALK, EQUIVALENT TO THE EMBEDDING DEPTH OF THE DWS MATERIAL.
5. LAY OUT AND PROPERLY FIT EACH UNIT PRIOR TO SETTING IN WET CONCRETE.
6. CUT UNITS AS NECESSARY ALONG PERIMETER OF DETECTABLE WARNING SURFACE.
7. PLACE UNITS ACROSS THE ENTIRE WIDTH OF THE CURB RAMP SURFACE AND/OR WHERE THE CURB IS FLUSH.
8. PRESS UNITS INTO FULL CONTACT WITH THE FRESH CONCRETE.
9. ADJUST HEIGHT OF EACH UNIT EDGE TO BE LEVEL WITH ADJACENT RAMP SURFACES.
10. ONLY TRUNCATED DOMES SHOULD BE ABOVE THE ADJACENT FINISHED CONCRETE.
11. FILL ANY SAW CUT GAPS WITH APPROVED JOINT SEALANT MATERIAL.

(15) SIDE FLARES 10.00% MAX FOR RAMPS WITH TURNING SPACES 4'-0" OR GREATER. SIDE FLARES 8.33% MAX FOR RAMPS WITH TURNING SPACES LESS THAN 4'-0".

(16) 4'-0" MIN PEDESTRIAN ACCESS ROUTE.

(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

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# CURB RAMPS AND SIDEWALKS

# ALTERATION DETAILS

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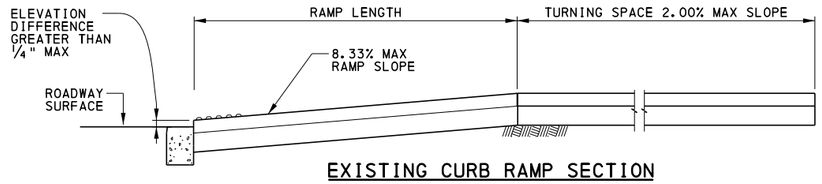
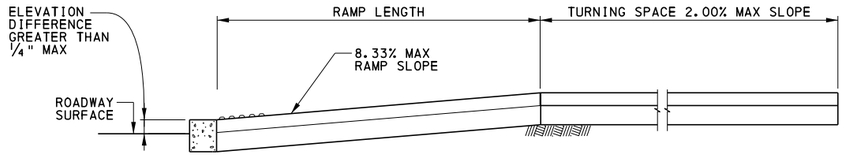



EXISTING CURB RAMP SECTION
(VERTICAL DROP AT RAMP)

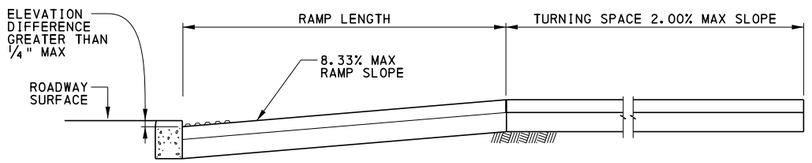
RECOMMENDED CORRECTION:
RECONSTRUCT THE ENTIRE (OR PORTIONS OF) RAMP, TURNING SPACES AND FLARES WHERE APPLICABLE (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 10).




EXISTING CURB RAMP SECTION
(VERTICAL DROP AT ROAD SURFACE)

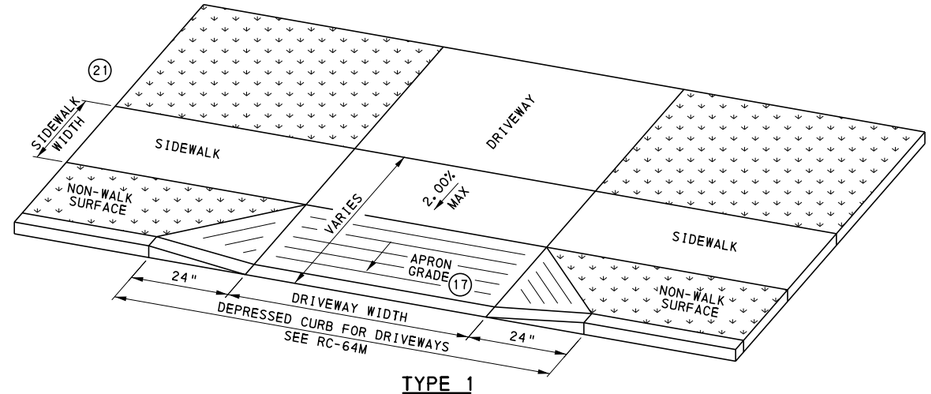
RECOMMENDED CORRECTION:
RECONSTRUCT THE ENTIRE (OR PORTIONS OF) RAMP, TURNING SPACES AND FLARES WHERE APPLICABLE (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 10).

ALTERNATE CORRECTION:
GRIND CURB TO PROVIDE A MAX SLOPE OF 8.33%, FINISHED SURFACE MUST NOT HAVE ELEVATION DIFFERENCES GREATER THAN 1/4".

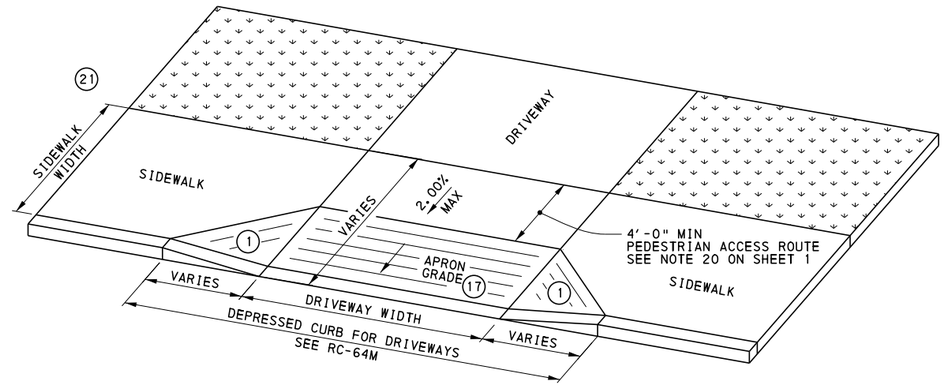



EXISTING CURB RAMP SECTION
(RAMP SETTLEMENT)

RECOMMENDED CORRECTION:
RECONSTRUCT THE ENTIRE (OR PORTIONS OF) RAMP, TURNING SPACES AND FLARES WHERE APPLICABLE (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 10).




TYPE 1
DRIVEWAY APRON




TYPE 1A
DRIVEWAY APRON

(1) SIDE FLARES 10.00% MAX SLOPE.

(17) 8.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY.

(21) MINIMUM SIDEWALK WIDTH 5'-0" (SEE NOTE 20, SHEET 1).

ALTERATION DETAILS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

CURB RAMPS AND SIDEWALKS

ALTERATION DETAILS
AND DRIVEWAY APRONS

RECOMMENDED JUN. 10, 2013
CHIEF, HWY. DELIVERY DIVISION

RECOMMENDED JUN. 10, 2013
ACTING DIR. BUREAU OF PROJECT DELIVERY

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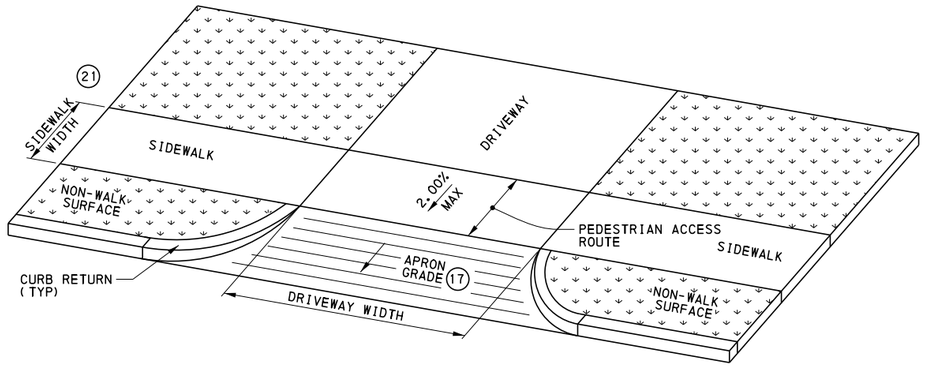
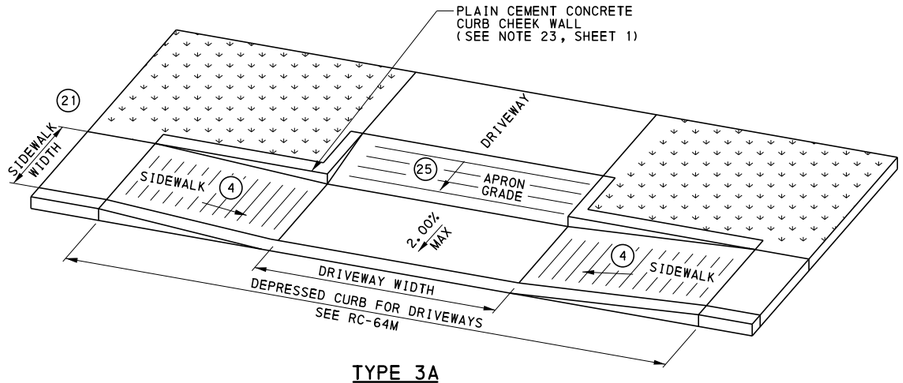
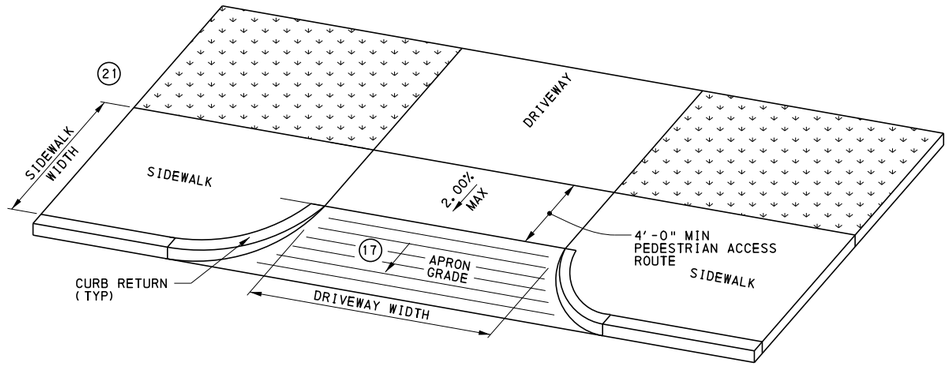


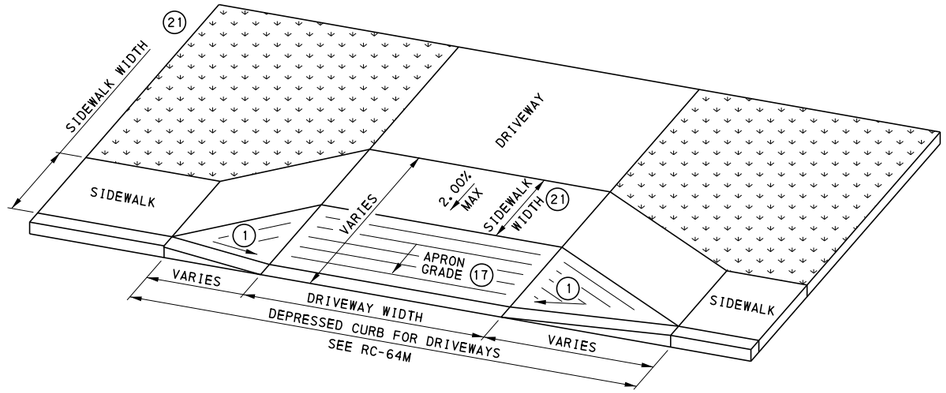

TYPE 2
DRIVEWAY APRON



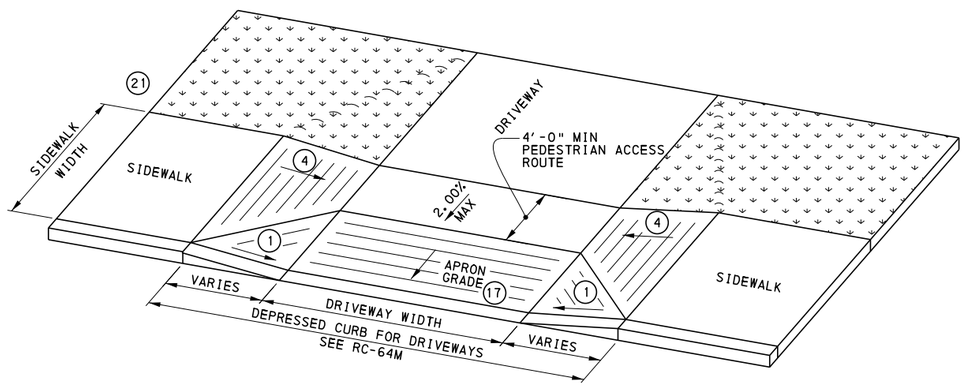

TYPE 3A
DRIVEWAY APRON




TYPE 2A
DRIVEWAY APRON




TYPE 4
DRIVEWAY APRON




TYPE 3
DRIVEWAY APRON

(1) SIDE FLARES 10.00% MAX SLOPE.

(4) 8.33% MAX RAMP SLOPE, SEE NOTE 8 SHEET 1.

(17) 8.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY.

(21) MINIMUM SIDEWALK WIDTH 5'-0" (SEE NOTE 20, SHEET 1)

(25) 8.00% MAX CHANGE IN GRADE BETWEEN DRIVEWAY SURFACE AND SIDEWALK.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

# CURB RAMPS AND SIDEWALKS

## DRIVEWAY APRONS

RECOMMENDED JUN. 10, 2013
R. Wyatt Willy
CHIEF, HWY. DELIVERY DIVISION

RECOMMENDED JUN. 10, 2013
ACTING DIR. BUREAU OF PROJECT DELIVERY

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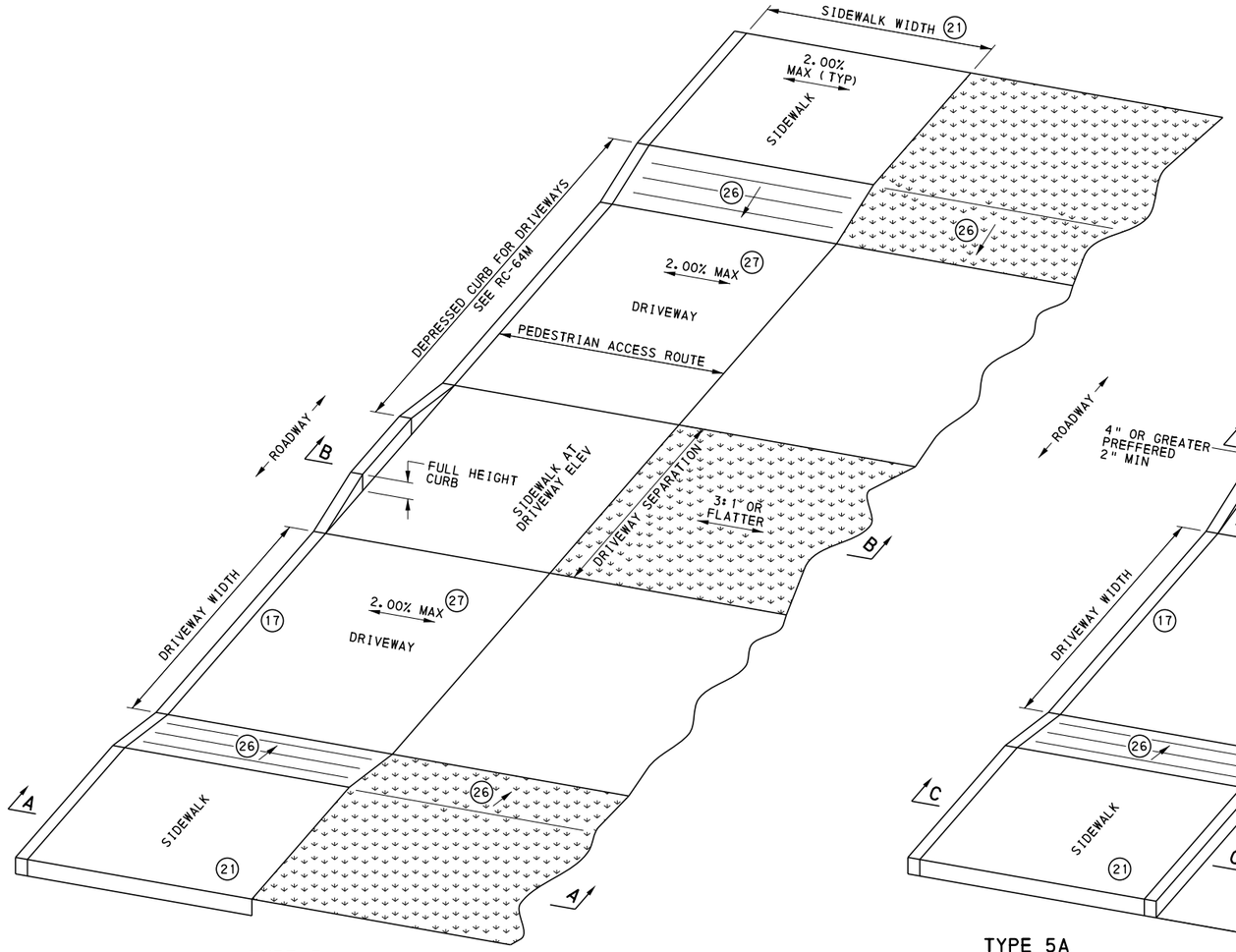
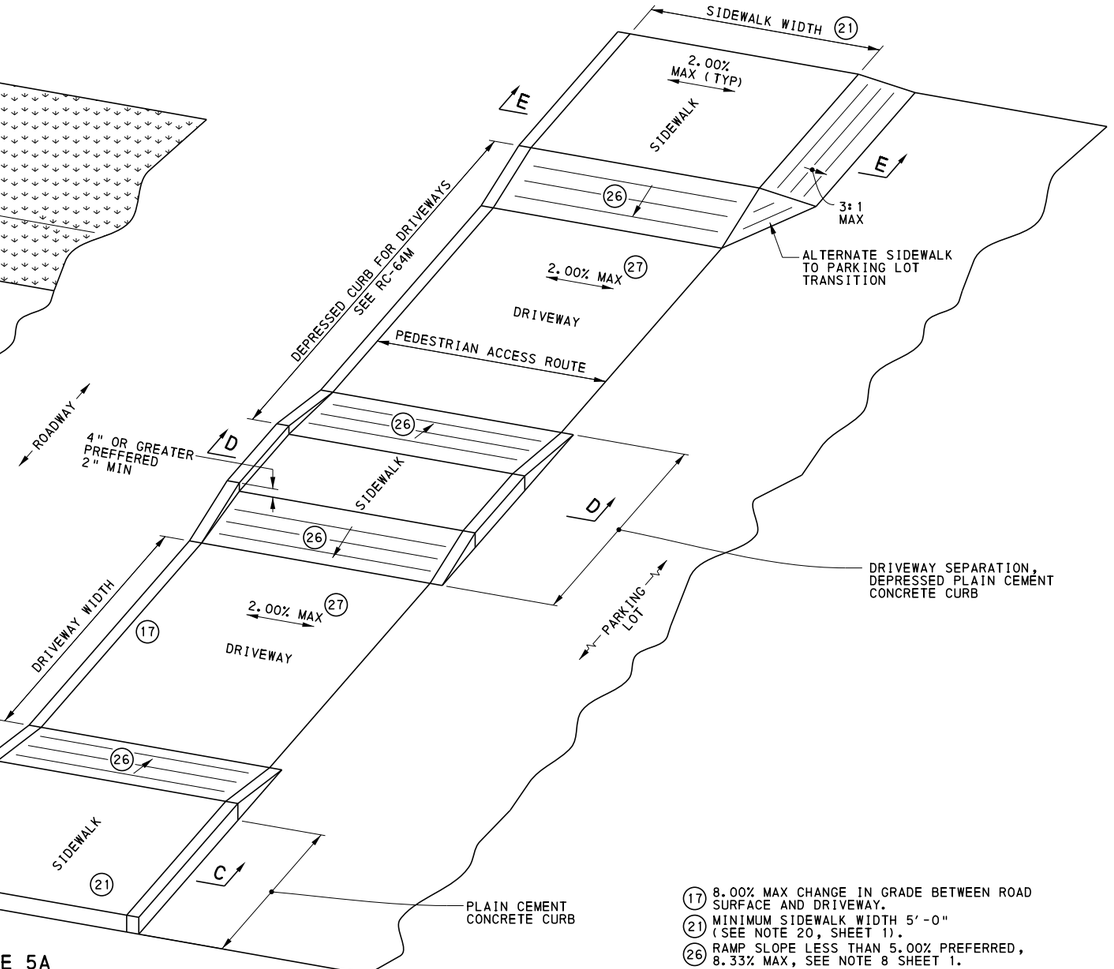
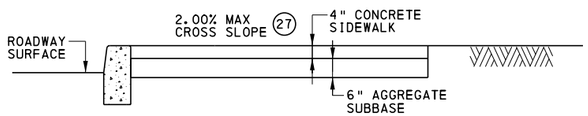



TYPE 5
MULTIPLE DRIVEWAYS

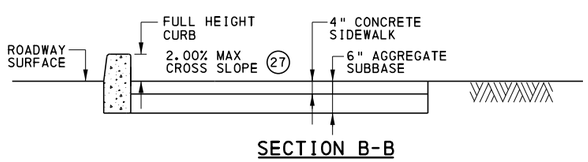



TYPE 5A
MULTIPLE DRIVEWAYS

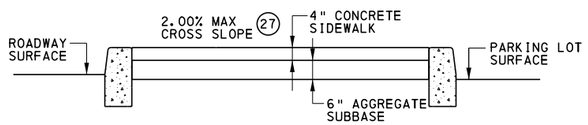
(17) 8.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY.
(21) MINIMUM SIDEWALK WIDTH 5'-0" (SEE NOTE 20, SHEET 1).
(26) RAMP SLOPE LESS THAN 5.00% PREFERRED, 8.33% MAX, SEE NOTE 8 SHEET 1.
(27) ENSURE POSITIVE DRAINAGE.



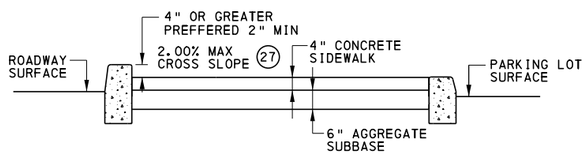

SECTION A-A



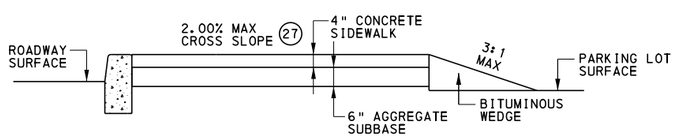

SECTION B-B




SECTION C-C




SECTION D-D




SECTION E-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

# CURB RAMPS AND SIDEWALKS

## DRIVEWAY APRONS

RECOMMENDED JUN. 10, 2013
CHIEF, HWY. DELIVERY DIVISION

RECOMMENDED JUN. 10, 2013
ACTING DIR. BUREAU OF PROJECT DELIVERY



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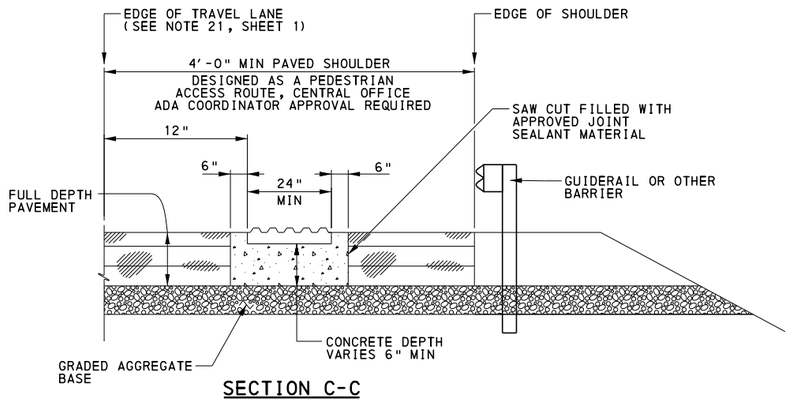
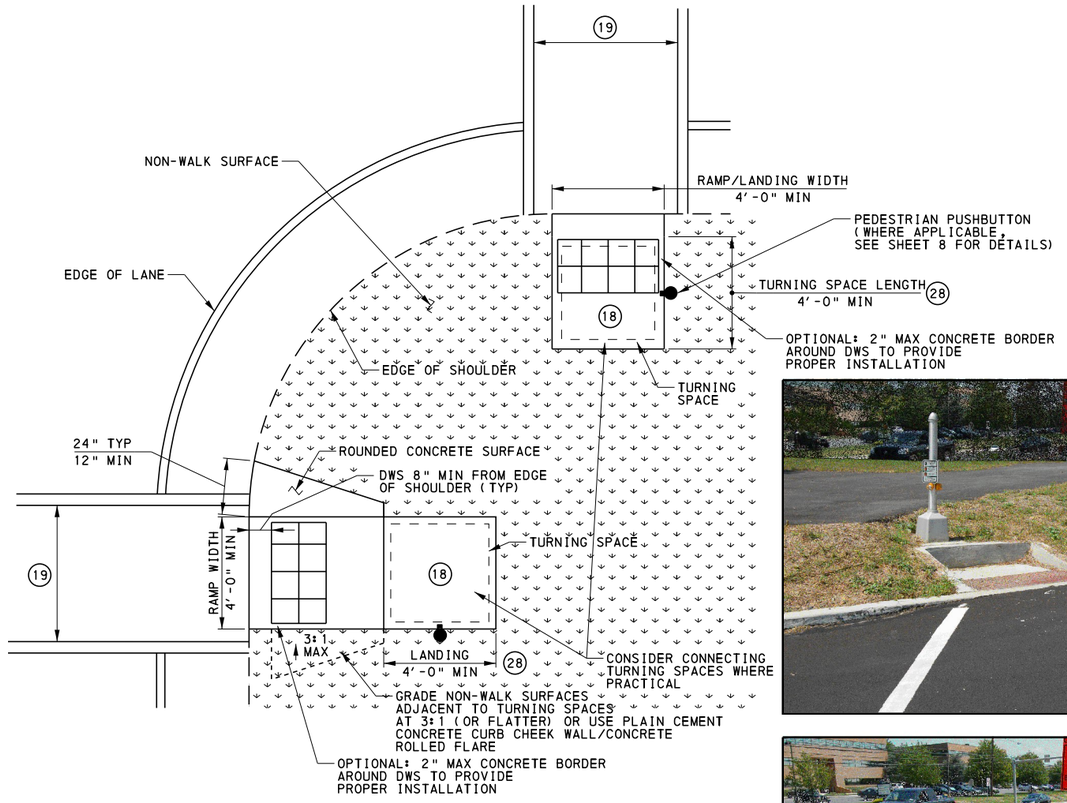



SECTION C-C




PEDESTRIAN PUSHBUTTON
ACCESS AREAS

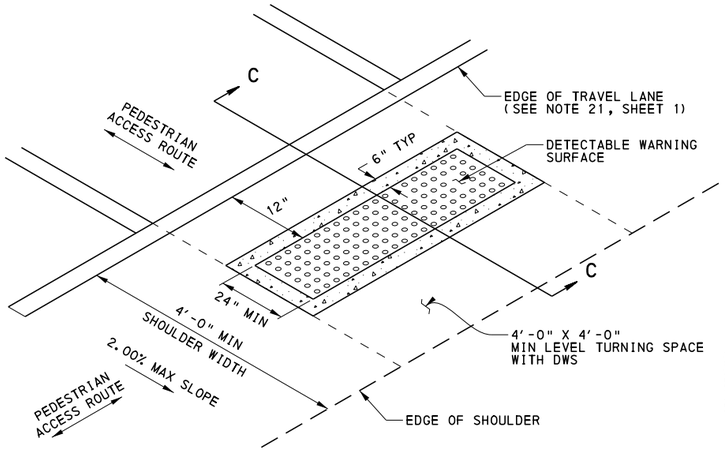
(18) CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

(19) 6'-0" MIN MEASURED FROM INSIDE OF PAINTED EDGE TO INSIDE OF PAINTED EDGE.

(28) TURNING SPACES SHOWN ARE TO PROVIDE ACCESS TO PEDESTRIAN PUSHBUTTON. TURNING SPACE MUST BE 5'-0" X 5'-0" WHEN CONFINED ON TWO OR MORE SIDES.

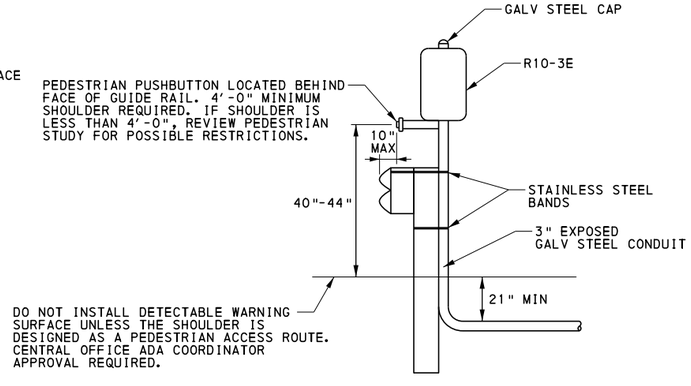







DWS PLACEMENT ON
PAVED SHOULDERS
DESIGNED AS A
PEDESTRIAN ACCESS
ROUTE (PAR)

CENTRAL OFFICE ADA COORDINATOR
APPROVAL REQUIRED




PEDESTRIAN PUSHBUTTON
BEHIND GUIDE RAIL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

# CURB RAMPS AND SIDEWALKS
# DWS PLACEMENT ON PAVED SHOULDERS AND AT PEDESTRIAN PUSHBUTTONS

| | | |
|---|---|---|
| RECOMMENDED JUN. 10, 2013<br>CHIEF, HWY. DELIVERY DIVISION | RECOMMENDED JUN. 10, 2013<br>ACTING DIR. BUREAU OF PROJECT DELIVERY | SHT 14 OF 14<br>RC-67M |