SECTION 200

CURBS, MEDIANS
&
ENTRANCE GUTTERS

STANDARD

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VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1

REVISION DATE

TITLE

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

INDEX OF SHEETS
SECTION 200-CURBS AND ENTRANCES

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT
ROAD AND BRIDGE STANDARDS

REVISION DATE	SHEET 1 OF 1
	200.01

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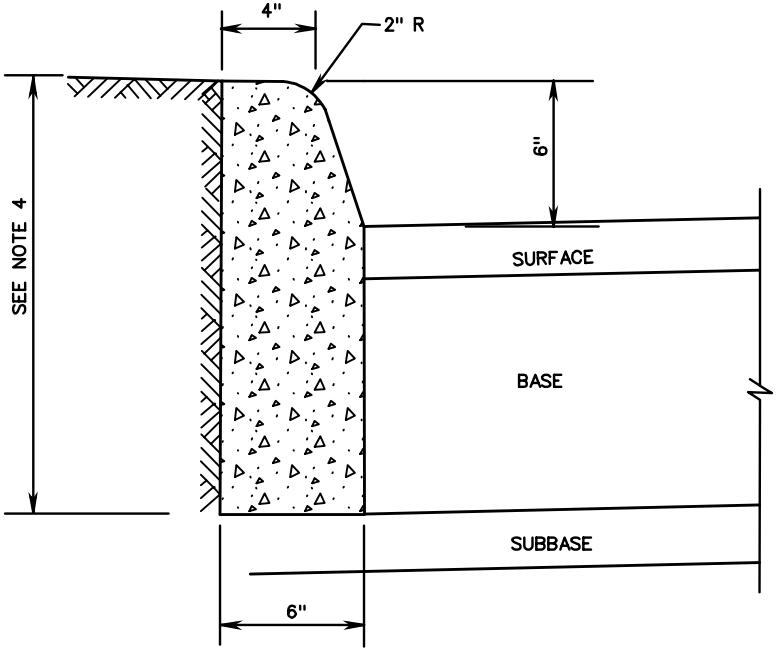
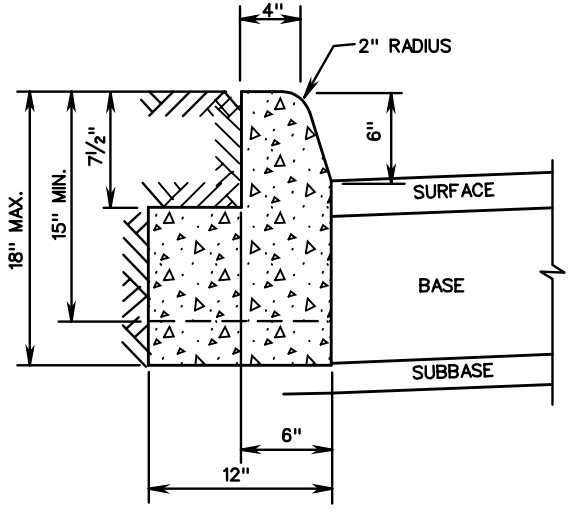
VDOT ROAD AND BRIDGE STANDARDS			SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE	VIRGINIA DEPARTMENT OF TRANSPORTATION	
200.02			

CG-2

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.
4. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.
5. CG-2 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL, IN THE SECTION ON GS URBAN STANDARDS.

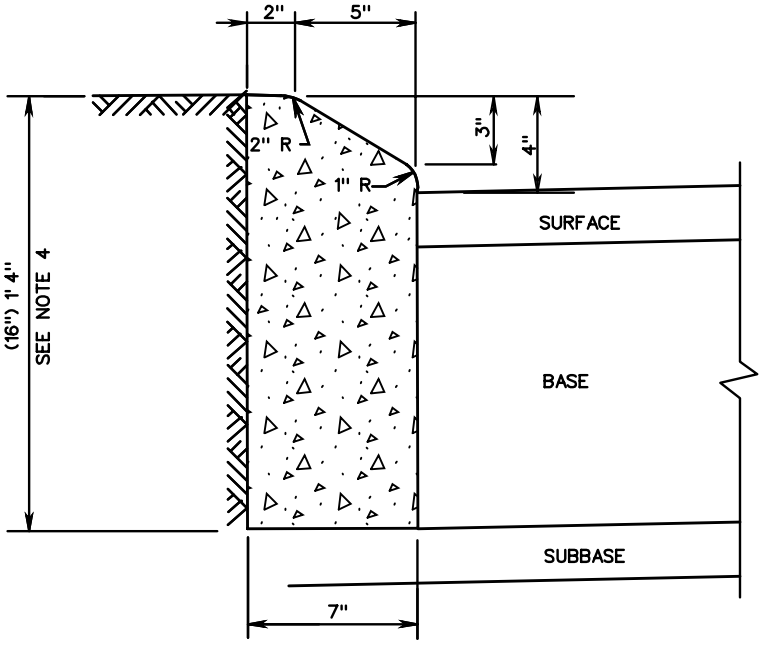




ACCEPTABLE ALTERNATIVE IF CURB IS EXTRUDED

SPECIFICATION REFERENCE	STANDARD 6" CURB	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE SHEET 1 OF 1 201.01

CG-3



NOTES:

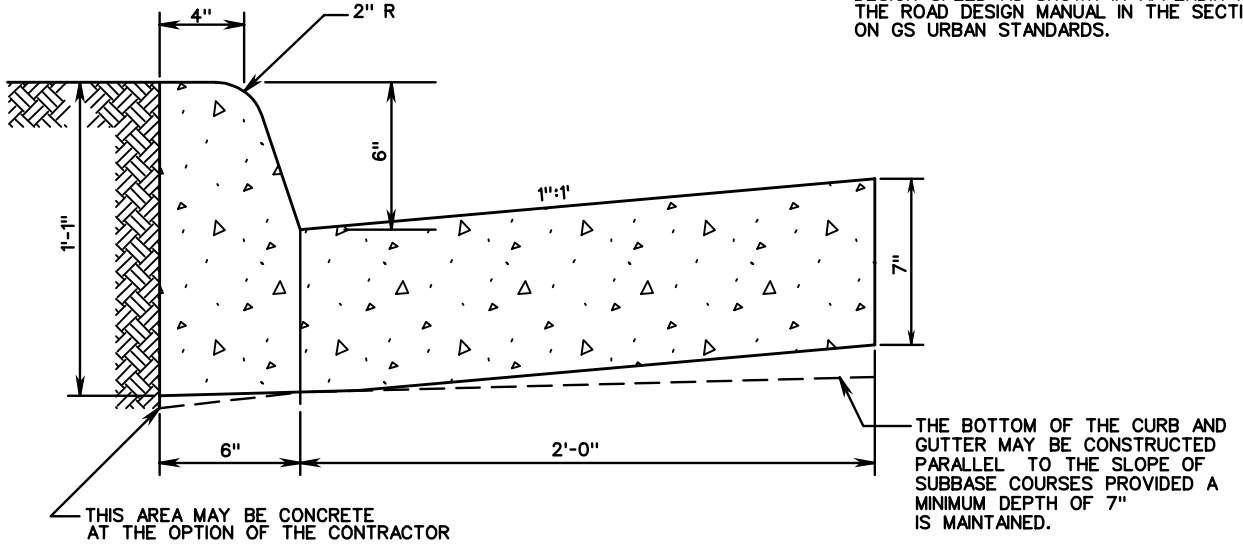
1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. CURB HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.
4. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (13" DEPTH) OR INCREASED AS MUCH AS 3" (19" DEPTH) IN ORDER THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 16" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.
5. CG-3 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-7 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.
6. WHEN THIS STANDARD IS TO BE TIED INTO EXISTING BARRIER CURB, THE TRANSITION IS TO BE MADE WITHIN 10' OR THE CHANGE IN STANDARDS CAN BE MADE AT REGULAR OPENINGS.

VDOT ROAD AND BRIDGE STANDARDS		STANDARD 4" CURB	SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE	VIRGINIA DEPARTMENT OF TRANSPORTATION	105 502
201.02			

CG-6

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.

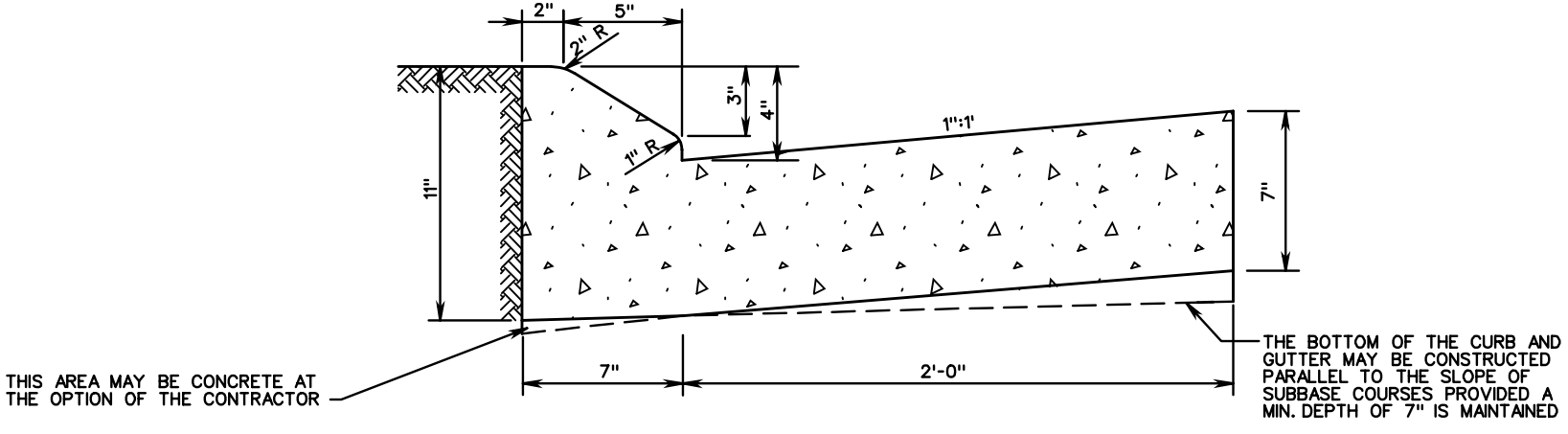


SPECIFICATION REFERENCE	COMBINATION 6" CURB AND GUTTER	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: SHEET 1 OF 1 201.03

CG-7

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB AND GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-7 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL IN THE SECTION ON URBAN GS STANDARDS.
6. WHEN THIS STANDARD IS TO BE TIED INTO EXISTING BARRIER CURB, THE TRANSITION IS TO BE MADE WITHIN 10' OR THE CHANGE IN STANDARDS CAN BE MADE AT REGULAR OPENINGS.
7. WHEN COMBINATION MOUNTABLE CURB AND GUTTER IS USED, THE STANDARD ENTRANCE GUTTERS OR STANDARD CONNECTION FOR STREET INTERSECTIONS ARE TO HAVE THE MOUNTABLE CURB CONFIGURATION INCORPORATED.



VDOT
ROAD AND BRIDGE STANDARDS

COMBINATION 4" CURB AND GUTTER

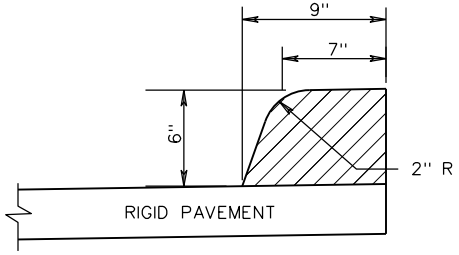
VIRGINIA DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 1	REVISION DATE
201.04	

SPECIFICATION REFERENCE

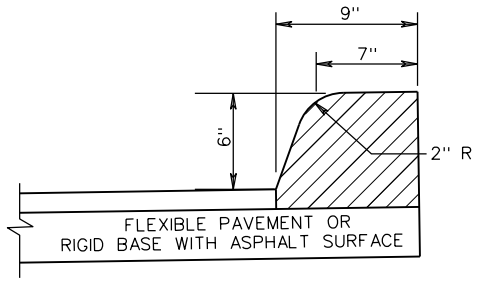
105
502

MC-3



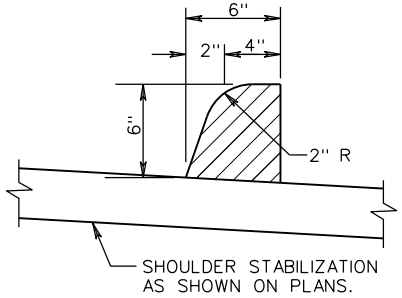
ASPHALT CURB

MC-3

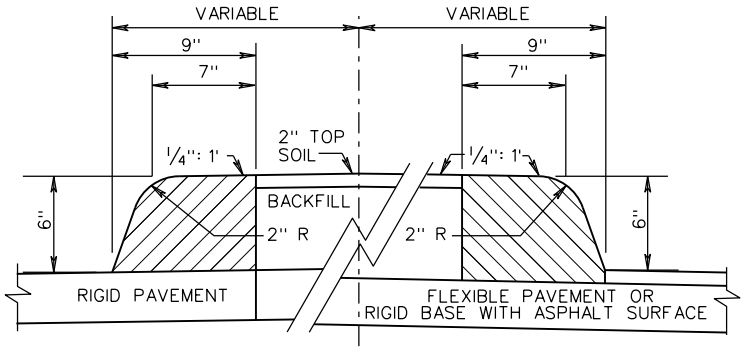


ASPHALT CURB

MC-3A

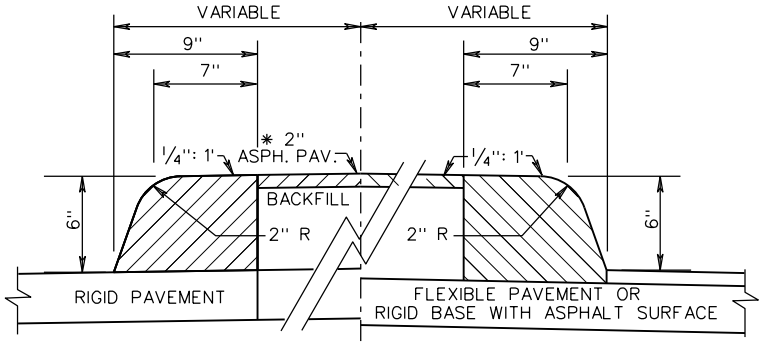


TEMPORARY ASPHALT CURB
(FOR TEMPORARY SLOPE
EROSION CONTROL ONLY)



ASPHALT MEDIAN

MC-3 AND MC-3A ARE TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.

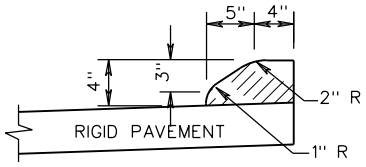


ASPHALT MEDIAN

* ASPHALT TOP FOR MEDIAN TO BE SAME MIX AS CURB.

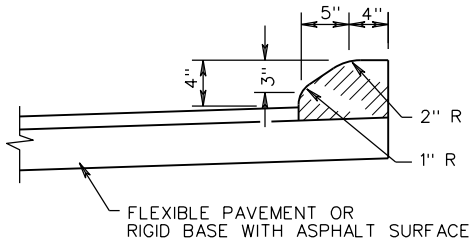
SPECIFICATION REFERENCE	ASPHALT CONCRETE CURB AND MEDIAN (FOR TEMPORARY OR PERMANENT INSTALLATION) VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS
502		REVISION DATE 07/16 / SHEET 1 OF 1 / 201.05

MC-3B



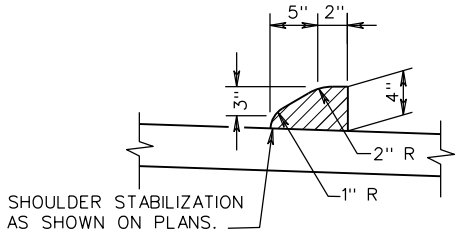
ASPHALT CURB

MC-3B



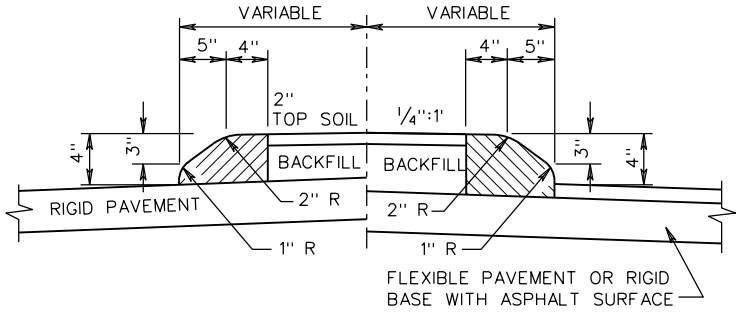
ASPHALT CURB

MC-3C



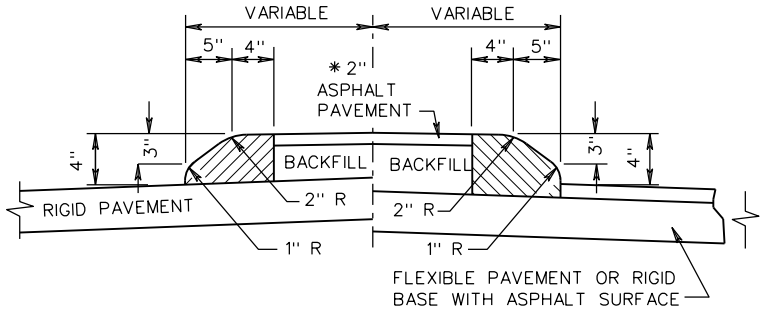
TEMPORARY ASPHALT CURB
(FOR TEMPORARY SLOPE
EROSION CONTROL ONLY)

MC-3B



ASPHALT MEDIAN

MC-3B AND MC-3C ARE TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-7 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL IN THE SECTION ON GS STANDARDS.



ASPHALT MEDIAN

* ASPHALT TOP FOR MEDIAN TO BE SAME MIX AS CURB.

VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 2

201.06

REVISION DATE
07/16

ASPHALT CONCRETE CURB AND MEDIAN

(FOR TEMPORARY OR PERMANENT INSTALLATION)

VIRGINIA DEPARTMENT OF TRANSPORTATION

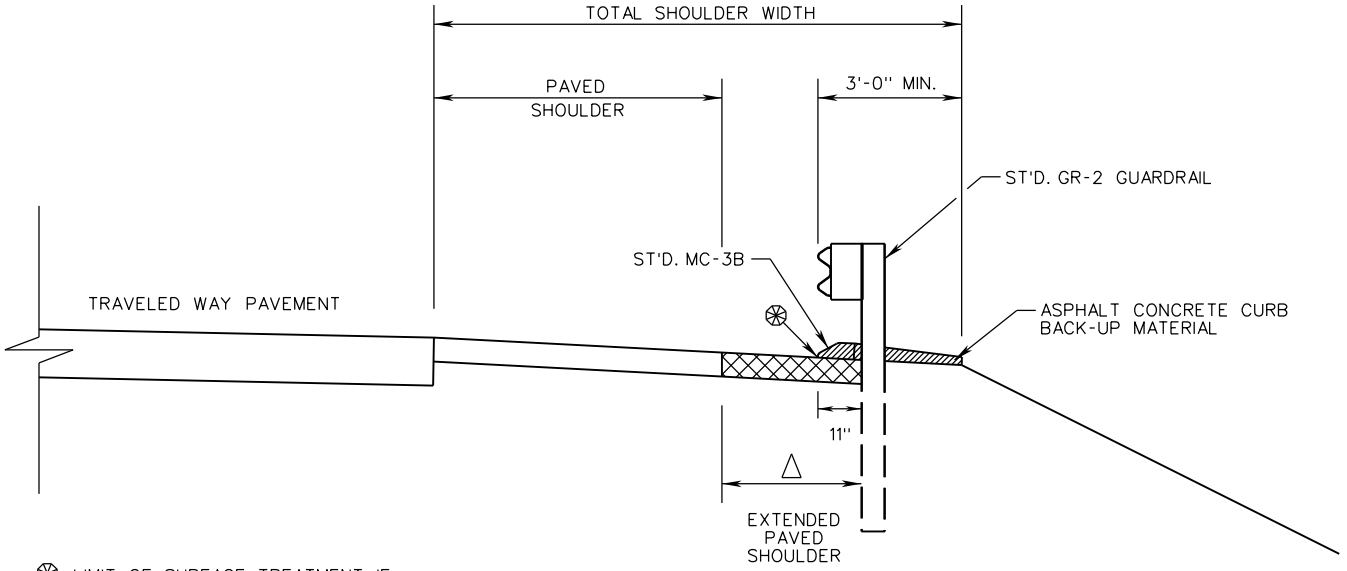
SPECIFICATION REFERENCE

502

MC-3B

NOTES

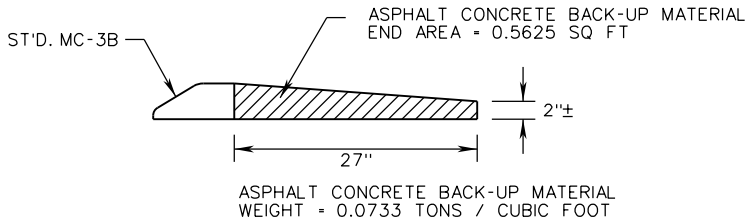
1. STANDARD MC-3B REQUIRES THE PAVED SHOULDER TO EXTEND TO THE FACE OF CURB.
2. PAVED SHOULDER WIDTHS TO BE IN ACCORDANCE WITH THE PLANS, VDOT POLICY, OR AS DIRECTED BY THE ENGINEER.
3. THE PAVED SHOULDER AND THE EXTENDED PAVED SHOULDER SHALL BE PLACED SIMULTANEOUSLY.
4. FACE OF GUARDRAIL SHALL BE ALIGNED WITH FACE OF THE CURB.



ST'D. GR-2 & MC-3B ASPHALT CURB INSTALLATION

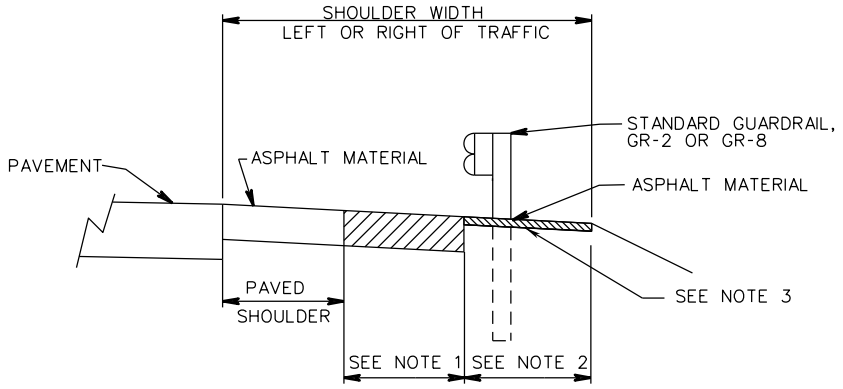
TO CALCULATE THE ASPHALT BACKUP MATERIAL

1. MULTIPLY THE LENGTH OF MC-3B BY THE END AREA WHICH RESULTS IN CUBIC FEET.
2. MULTIPLY CUBIC FEET BY 0.0733 TONS / CUBIC FOOT WHICH RESULTS IN TONS OF ASPHALT CONCRETE BACKUP MATERIAL.



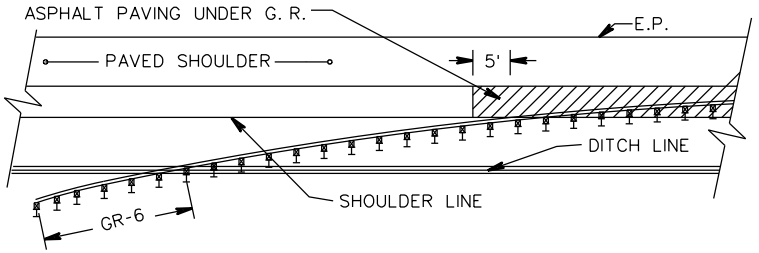
SPECIFICATION REFERENCE	ASPHALT CONCRETE CURB (ASPHALT BACKUP MATERIAL INSTALLATION)	VDOT ROAD AND BRIDGE STANDARDS
105 502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 07/16 · SHEET 2 OF 2 · 201.07

MC-4



ASPHALT PAVING UNDER GUARDRAIL

(FOR USE WHERE ASPHALT CURB IS NOT REQUIRED)



GR-6 TERMINAL

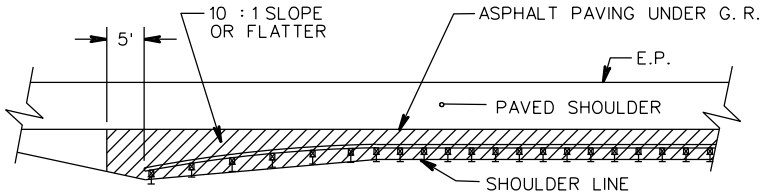
NOTES:

1. TO BE CONSTRUCTED WITH THE SAME MATERIAL AND TO THE SAME DEPTH AS THE ROADWAY PAVED SHOULDER.
2. TO BE CONSTRUCTED WITH THE SAME ASPHALT MATERIALS AS THE PAVED SHOULDER TO THE FOLLOWING DEPTHS:

   ALLOWABLE DEPTHS OF ASPHALT MATERIAL

IM-19.0A OR IM-19.0D	2" MIN
OR	
BM-25.0	3" MIN

3. MAXIMUM ALLOWABLE DEPTH FOR PAVING UNDER GUARDRAIL IS 3 INCHES.
4. ADDITIONAL 5 FEET ASPHALT PAVING BEYOND POINT WHERE GUARDRAIL CROSSES SHOULDER LINE.

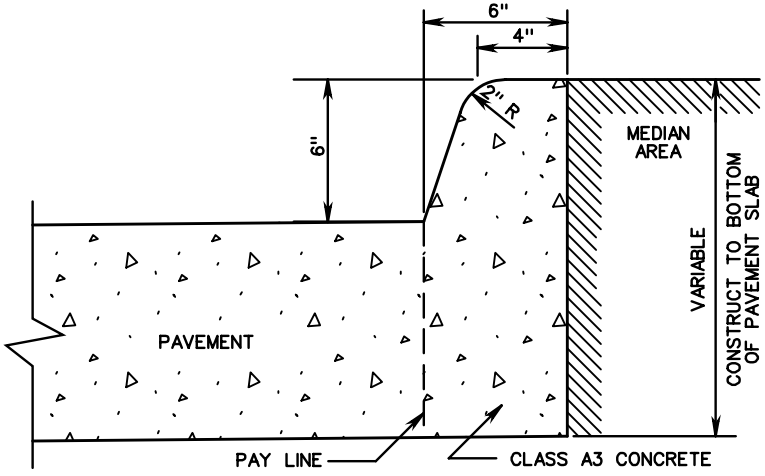


GR-7 & GR-9 TERMINALS

METHODS FOR BEGINNING & ENDING ASPHALT PAVING UNDER GUARDRAIL AND GUARDRAIL INSTALLATION SITE PREPARATION REQUIREMENTS FOR GR-7 AND GR-9 SEE STANDARD.

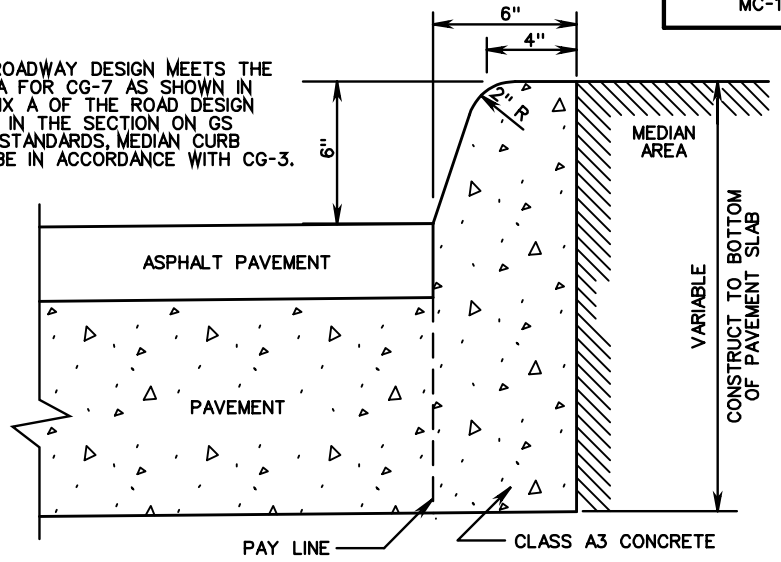
VDOT ROAD AND BRIDGE STANDARDS			SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE	ASPHALT PAVING UNDER GUARDRAIL	105 502
201.08	07/16	VIRGINIA DEPARTMENT OF TRANSPORTATION	

MC-1



FOR USE WITH CONCRETE PAVEMENT

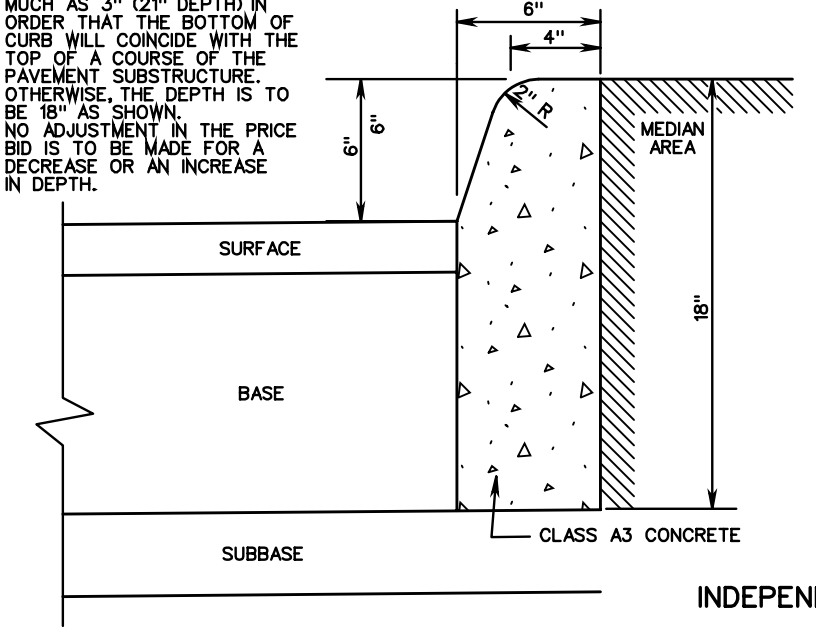
WHEN ROADWAY DESIGN MEETS THE CRITERIA FOR CG-7 AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS, MEDIAN CURB IS TO BE IN ACCORDANCE WITH CG-3.



FOR USE WITH CONCRETE WITH ASPHALT TOP COURSE

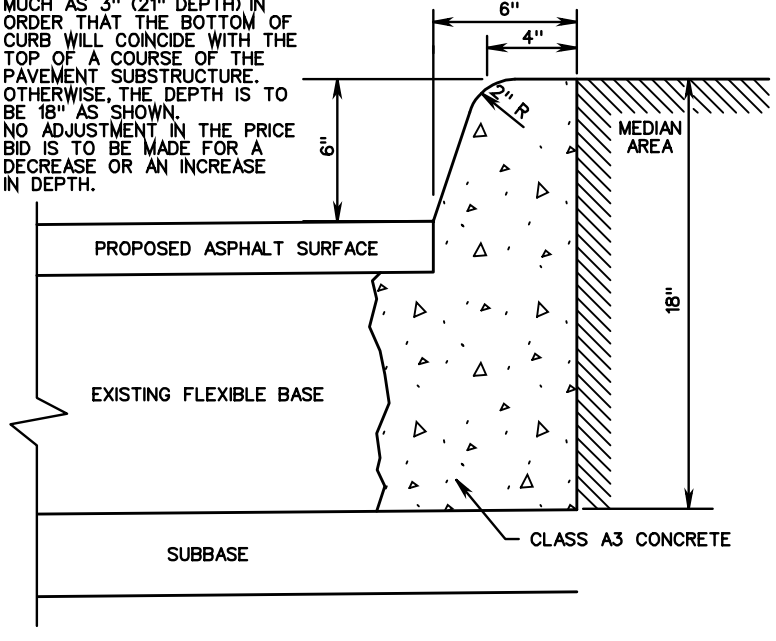
INTEGRAL

THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 18" AS SHOWN.
NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.



INDEPENDENT

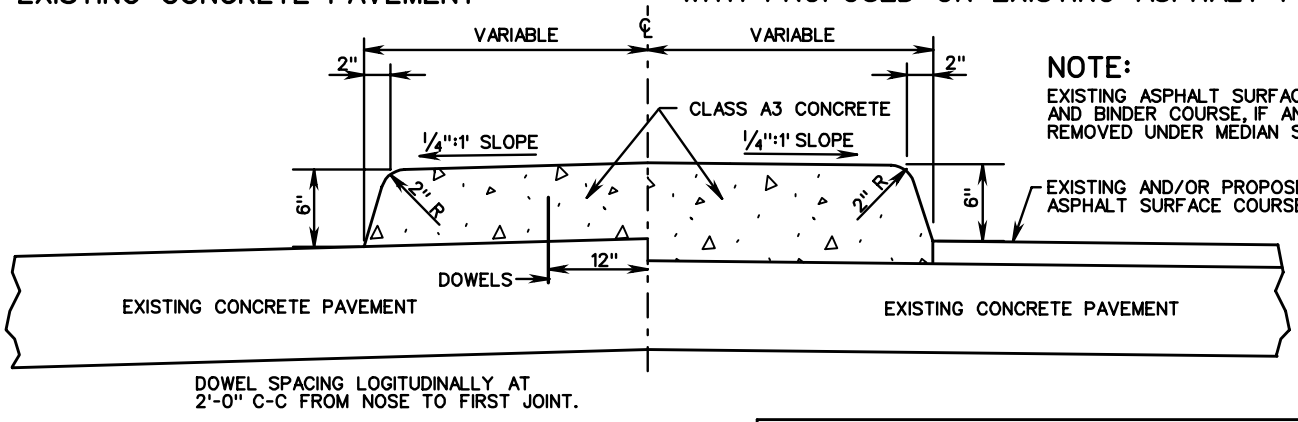
THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 18" AS SHOWN.
NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.



SPECIFICATION REFERENCE	CONCRETE MEDIAN CURB	VDOT ROAD AND BRIDGE STANDARDS
502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: SHEET 1 OF 1; 202.01

MS-1

HALF SECTION ON EXISTING CONCRETE PAVEMENT

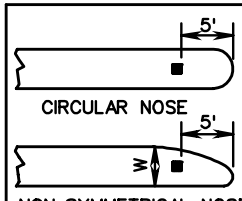


DOWEL SPACING LOGITUDINALLY AT 2'-0" C-C FROM NOSE TO FIRST JOINT.

WHEN ROADWAY DESIGN MEETS THE CRITERIA FOR CG-7 AS SHOWN IN APPENDIX A OF THE ROADWAY DESIGN MANUAL, IN THE GS STANDARDS SECTION, MEDIAN CURB IS TO BE IN ACCORDANCE WITH CG-3.

HALF SECTION ON EXISTING CONCRETE PAVEMENT WITH PROPOSED OR EXISTING ASPHALT PAVEMENT

NOTE:
EXISTING ASPHALT SURFACE COURSE AND BINDER COURSE, IF ANY, TO BE REMOVED UNDER MEDIAN STRIP.



12" SQUARE HOLE FOR SIGN POST TO BE FORMED INTO INTRODUCED MEDIAN NOSES A MINIMUM OF 5' FROM THE NOSE.

W - 4' MINIMUM

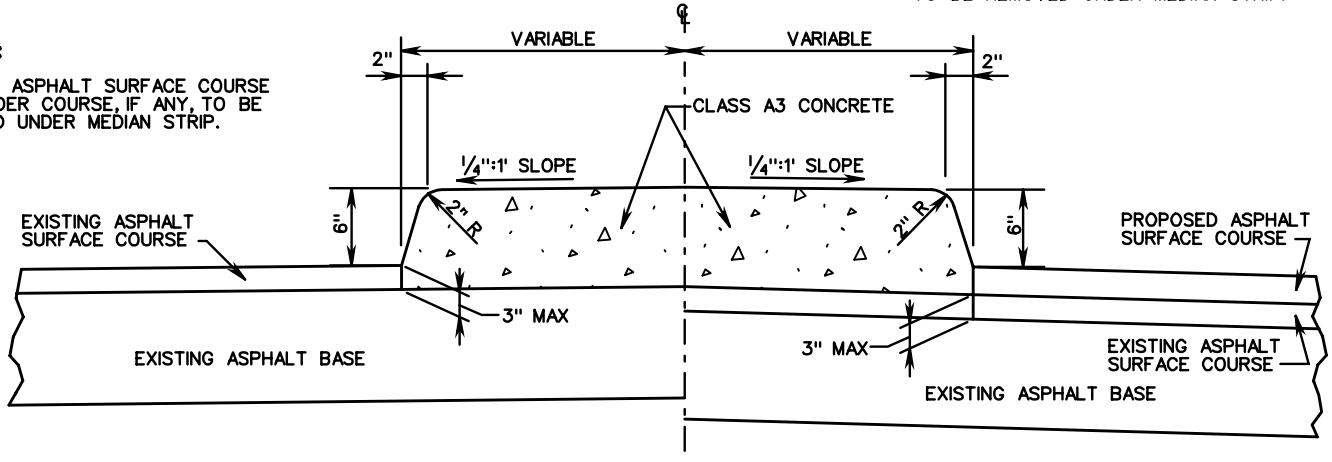
WHEN MEDIAN IS INSTALLED OVER EXISTING PAVEMENT, HOLE FOR SIGN POST IS TO EXTENDED TO THE SUBBASE.

ADDITIONAL HOLES OF ADEQUATE SIZE TO BE PROVIDED FOR SIGN POSTS, DELINEATOR POSTS, ETC. AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.

NOTE: EXISTING ASPHALT SURFACE COURSE AND BINDER COURSE, IF ANY, TO BE REMOVED UNDER MEDIAN STRIP.

HALF SECTION ON EXISTING FLEXIBLE PAVEMENT

NOTE:
EXISTING ASPHALT SURFACE COURSE AND BINDER COURSE, IF ANY, TO BE REMOVED UNDER MEDIAN STRIP.



HALF SECTION ON EXISTING FLEXIBLE PAVEMENT TO BE RESURFACED

VDOT
ROAD AND BRIDGE STANDARDS

STANDARD SOLID CONCRETE RAISED MEDIAN STRIP

SPECIFICATION REFERENCE
502

SHEET 1 OF 1
202.02

REVISION DATE

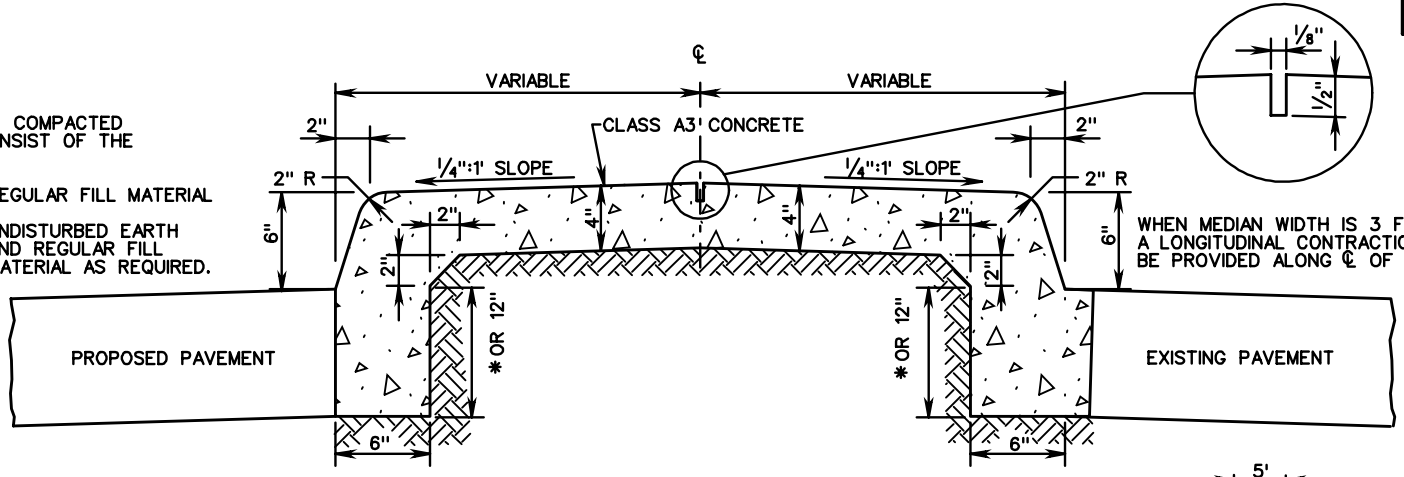
VIRGINIA DEPARTMENT OF TRANSPORTATION

MS-1A

NOTES:
(1) THOROUGHLY COMPACTED AREA TO CONSIST OF THE FOLLOWING:

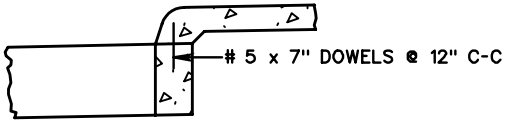
IN FILLS - REGULAR FILL MATERIAL

IN CUTS - UNDISTURBED EARTH AND REGULAR FILL MATERIAL AS REQUIRED.

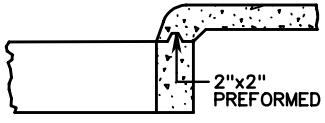


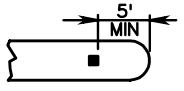
WHEN MEDIAN WIDTH IS 3 FEET OR GREATER, A LONGITUDINAL CONTRACTION JOINT SHALL BE PROVIDED ALONG ℄ OF MEDIAN STRIP.

SUGGESTED CONSTRUCTION METHOD IF TOP SLAB IS POURED SEPARATELY

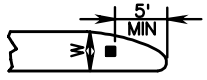


ALTERNATE CONSTRUCTION METHOD IF TOP SLAB IS POURED SEPARATELY





CIRCULAR NOSE



NON-SYMMETRICAL NOSE

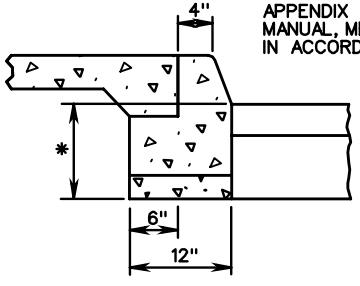
12" SQUARE HOLE FOR SIGN POST TO BE FORMED INTO INTRODUCED MEDIAN NOSES A MINIMUM OF 5' FROM THE NOSE.

W - 4' MIN

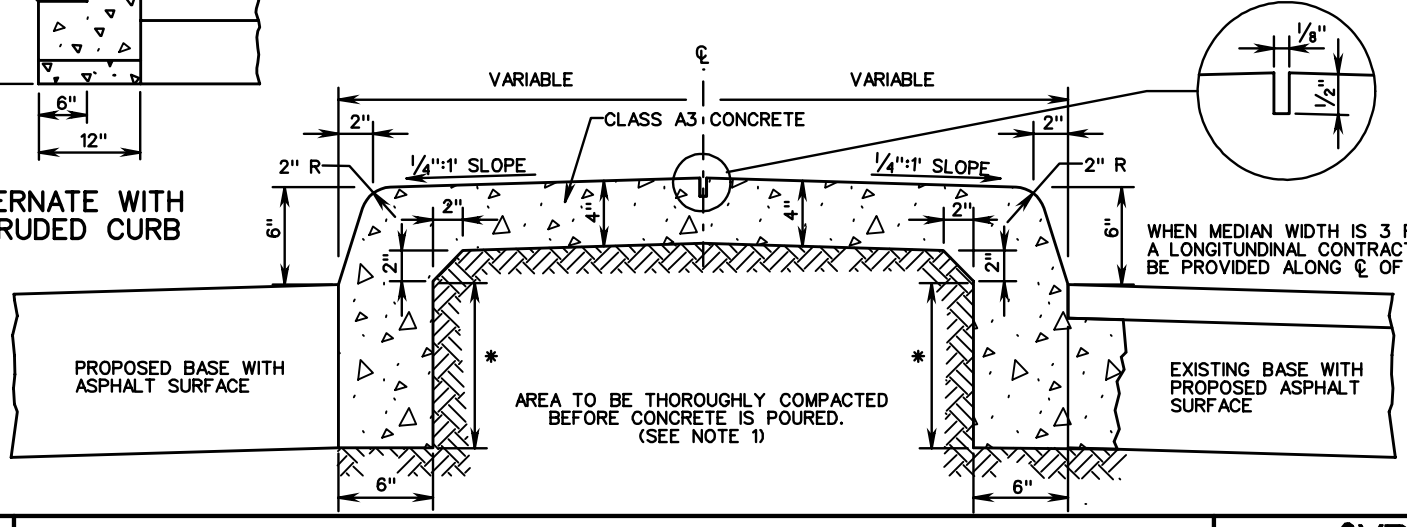
WHEN ROADWAY DESIGN MEETS THE CRITERIA FOR CG-7 AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL, MEDIAN CURB IS TO BE IN ACCORDANCE WITH STANDARD CG-3.

*THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (9" DEPTH) OR INCREASED AS MUCH AS 3" (15" DEPTH) IN ORDER THAT THE BOTTOM OF CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT STRUCTURE. OTHERWISE, THE DEPTH IS TO BE 12" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.

ADDITIONAL HOLES OF ADEQUATE SIZE TO BE PROVIDED FOR SIGN POSTS, DELINEATOR POSTS, ETC. AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.



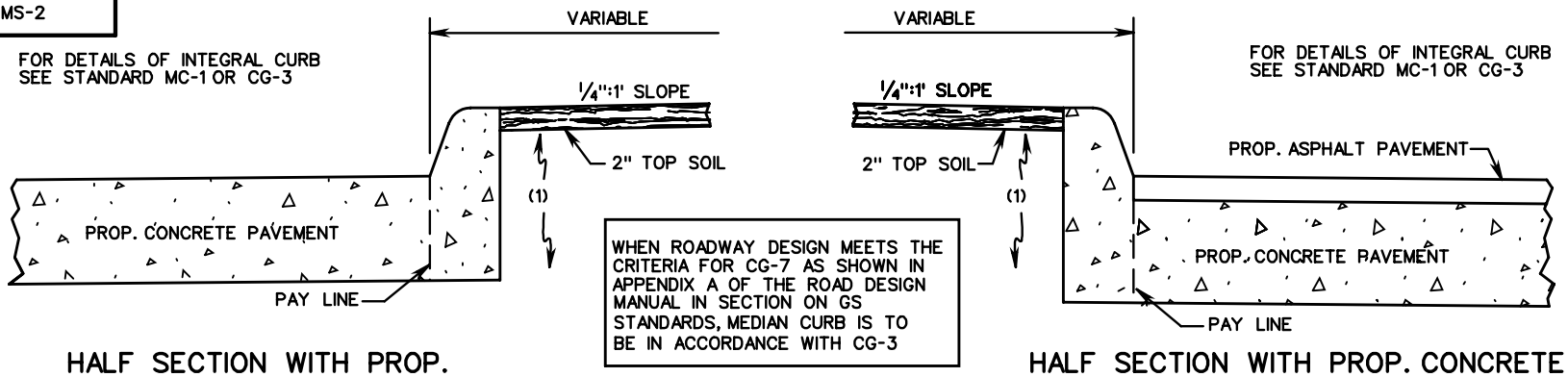
ALTERNATE WITH EXTRUDED CURB



WHEN MEDIAN WIDTH IS 3 FEET OR GREATER A LONGITUNDINAL CONTRACTION JOINT SHALL BE PROVIDED ALONG ℄ OF MEDIAN STRIP.

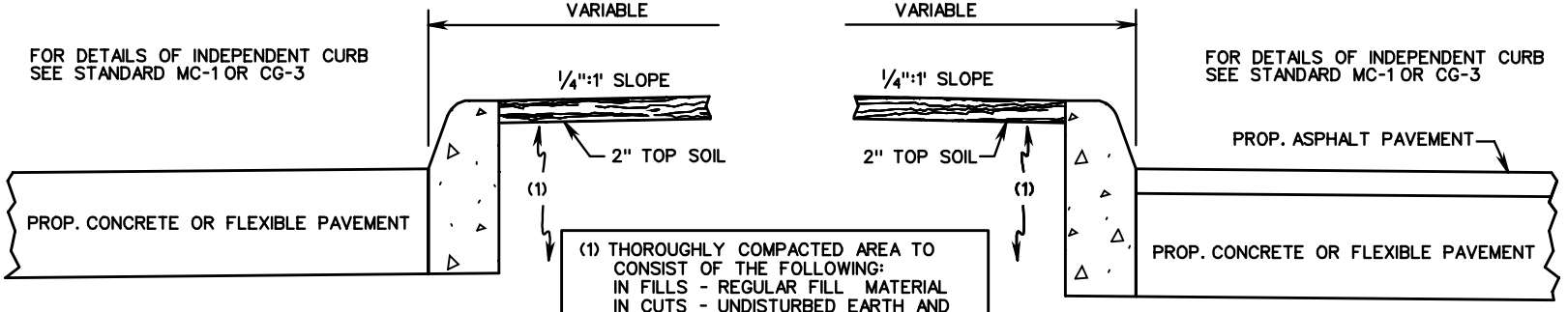
SPECIFICATION REFERENCE	STANDARD SOLID CONCRETE RAISED MEDIAN STRIP	VDOT ROAD AND BRIDGE STANDARDS
502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE / SHEET 1 OF 1 / 202.03

MS-2



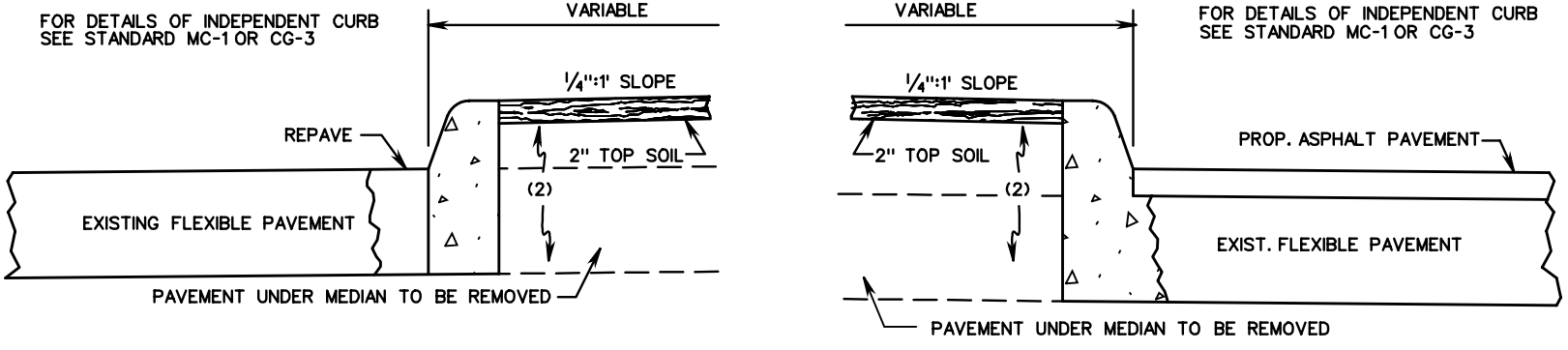
HALF SECTION WITH PROP. CONCRETE PAVEMENT

HALF SECTION WITH PROP. CONCRETE BASE WITH ASPHALT TOP



HALF SECTION WITH PROP. CONCRETE OR FLEXIBLE PAVEMENT

HALF SECTION WITH PROP. CONCRETE OR FLEXIBLE BASE WITH ASPHALT TOP



HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

HALF SECTION WITH EXIST. FLEXIBLE BASE WITH ASPHALT TOP

VDOT
ROAD AND BRIDGE STANDARDS

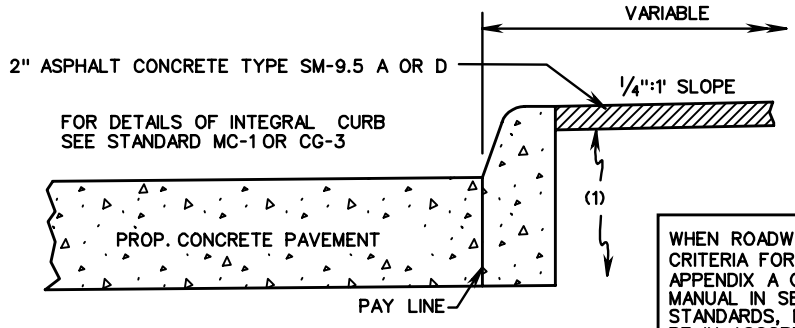
SHEET 1 OF 1 | REVISION DATE
202.04

STANDARD RAISED GRASS MEDIAN STRIPS

VIRGINIA DEPARTMENT OF TRANSPORTATION

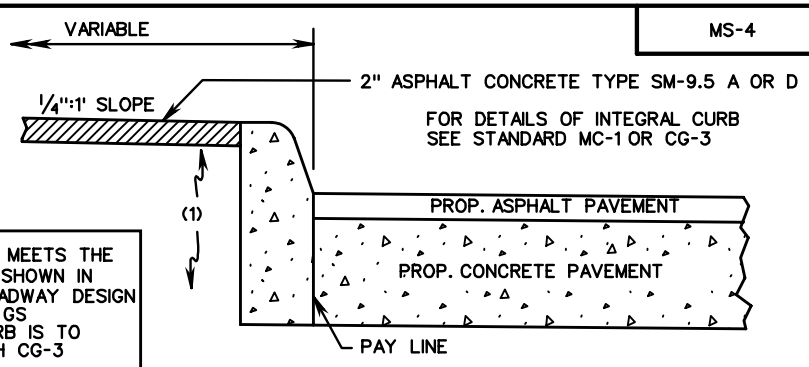
SPECIFICATION REFERENCE
502

MS-4

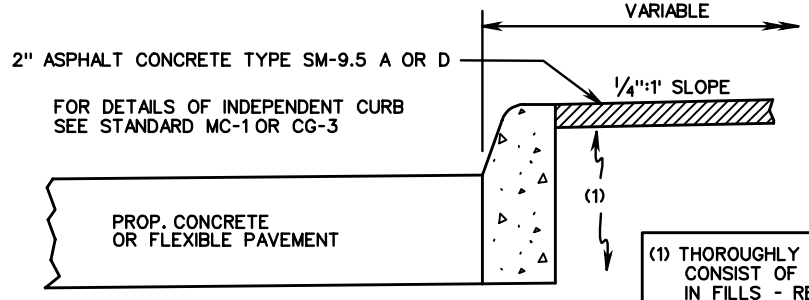


HALF SECTION WITH PROPOSED CONCRETE PAVEMENT

WHEN ROADWAY DESIGN MEETS THE CRITERIA FOR CG-7 AS SHOWN IN APPENDIX A OF THE ROADWAY DESIGN MANUAL IN SECTION ON GS STANDARDS, MEDIAN CURB IS TO BE IN ACCORDANCE WITH CG-3

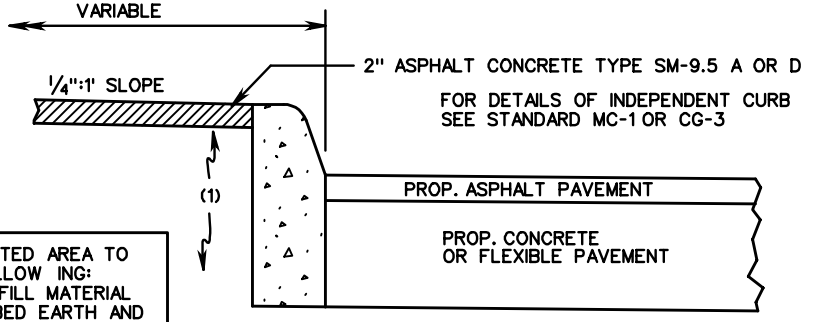


HALF SECTION WITH PROPOSED CONCRETE BASE WITH ASPHALT TOP

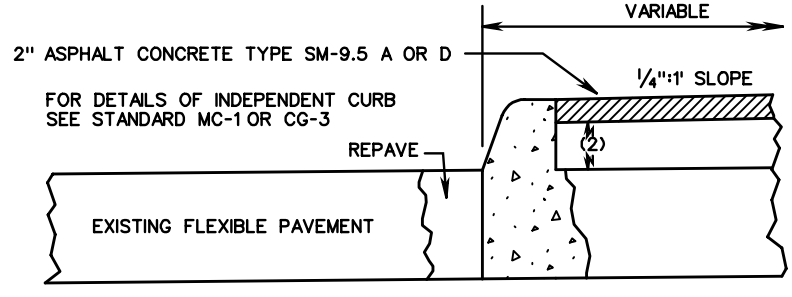


HALF SECTION WITH PROP. CONCRETE OR FLEXIBLE PAVEMENT

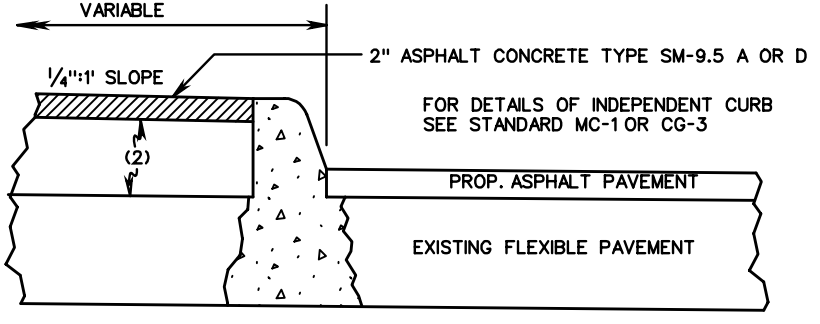
(1) THOROUGHLY COMPACTED AREA TO CONSIST OF THE FOLLOW ING:
IN FILLS - REGULAR FILL MATERIAL
IN CUTS - UNDISTURBED EARTH AND REGULAR FILL MATERIAL, AS REQUIRED.
(2) THOROUGHLY COMPACTED AREA TO CONSIST OF REGULAR FILL MATERIAL.



HALF SECTION WITH PROP. CONCRETE OR FLEXIBLE BASE WITH ASPHALT TOP



HALF SECTION WITH EXISTING FLEXIBLE PAVEMENT

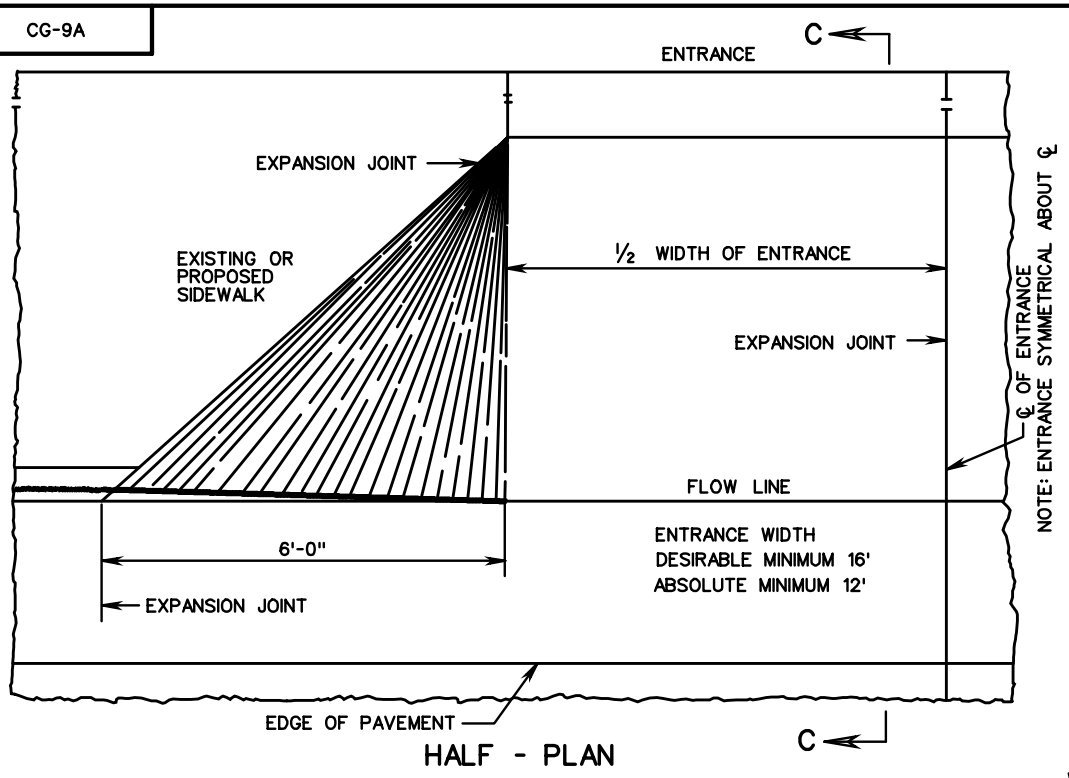


HALF SECTION WITH EXISTING FLEXIBLE BASE WITH ASPHALT TOP

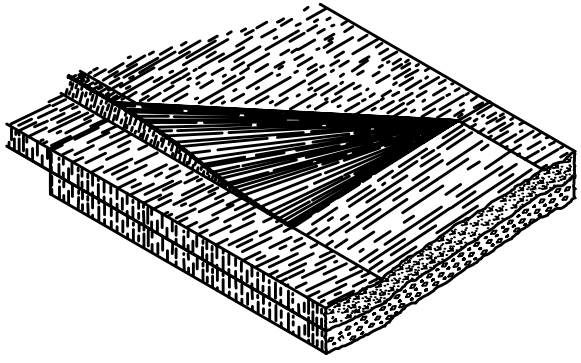
NOTE: THE ASPHALT CONCRETE SURFACE SLAB IS TO CONFORM TO THE CURRENT ROAD & BRIDGE SPECIFICATIONS FOR SM-9.5 A OR D MATERIAL EXCEPT THAT THE MINIMUM BITUMEN CONTENT IS TO BE 6.5%

SPECIFICATION REFERENCE	STANDARD RAISED ASPHALT MEDIAN (WITH P.C. CONCRETE CURB)	VDOT ROAD AND BRIDGE STANDARDS
502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE: SHEET 1 OF 1 — 202.05

CG-9A

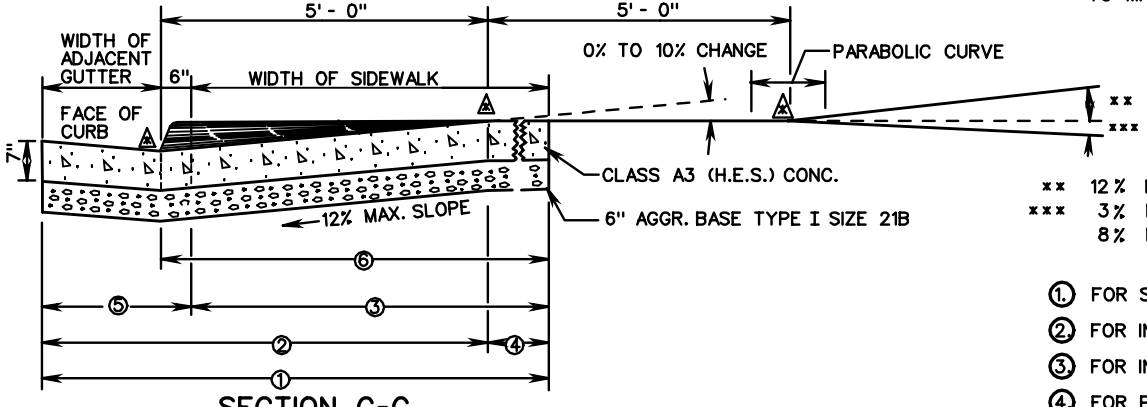


HALF - PLAN



ISOMETRIC VIEW

WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.



SECTION C-C

** 12% MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS
*** 3% MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND 8% MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

1. FOR SIDEWALK, CURB AND GUTTER - BUILT CONCURRENTLY.
2. FOR INITIAL CURB AND GUTTER ONLY.
3. FOR INITIAL SIDEWALK ONLY - 7" SIDEWALK TO BE DIPPED.
4. FOR PEDESTRIAN ACCESS ROUTE - MINIMUM 4'-0" TRAVERSABLE WIDTH IS REQUIRED WITH A MAXIMUM 2% CROSS SLOPE.
5. FOR CURB AND GUTTER ONLY - AFTER INITIAL SIDEWALK.
6. FOR CURB AND SIDEWALK ONLY - WITHOUT GUTTER.

⚠ INDICATES POINT OF GRADE CHANGE.

VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1 | REVISION DATE
203.01

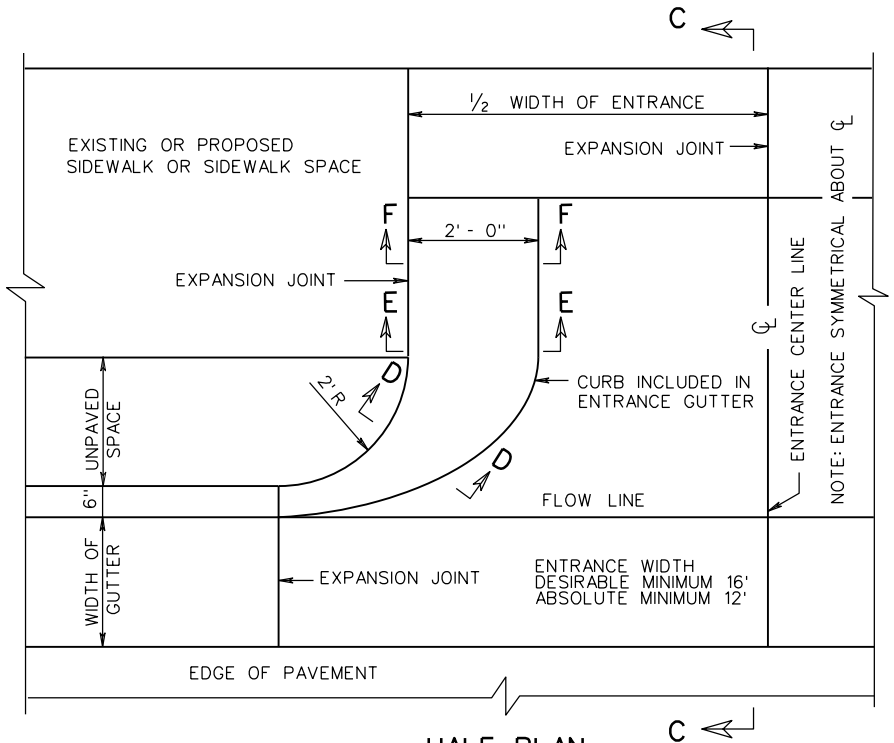
STANDARD ENTRANCE GUTTER WITH FLARED OPENING

(FOR USE ACROSS SIDEWALK)

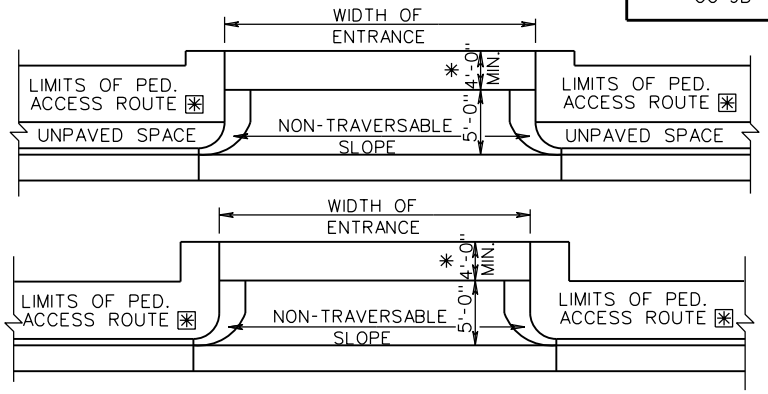
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE
502

CG-9B



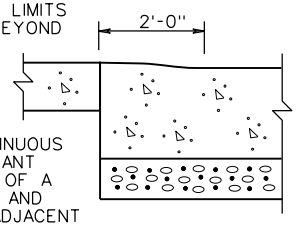
HALF PLAN



PEDESTRIAN ACCESS ROUTE DETAIL WITH & WITHOUT UNPAVED SPACE

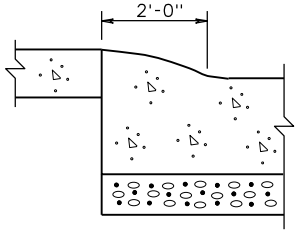
ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE ✳ EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF WAY.

✳ PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS. IF ACCESS ROUTE IS ADJACENT TO BACK OF CURB, MINIMUM WIDTH SHOULD BE 6'.



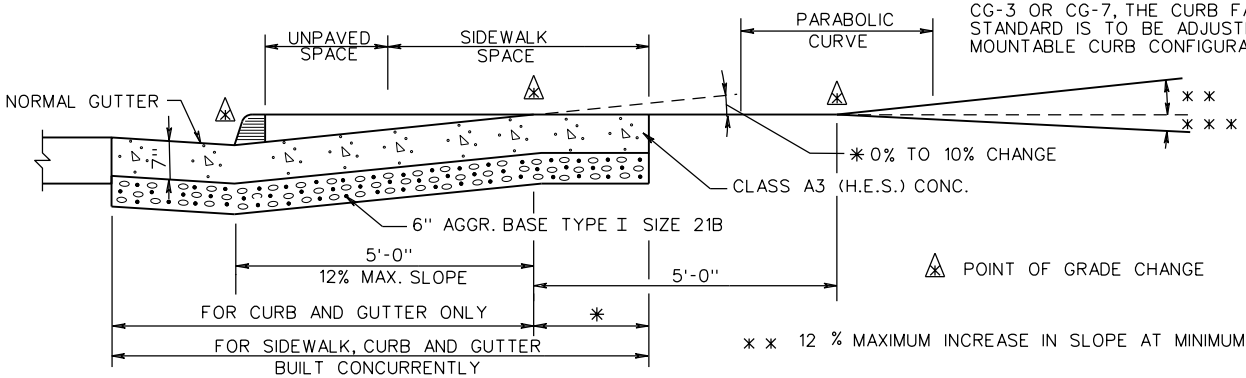
SECTION F-F

✳ IF PEDESTRIAN ACCESS ROUTES ✳ ARE BEING PROVIDED, A MINIMUM 4' TRAVERSABLE WIDTH IS REQUIRED WITH A MAX. 2% CROSS SLOPE.



SECTION E-E

WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.

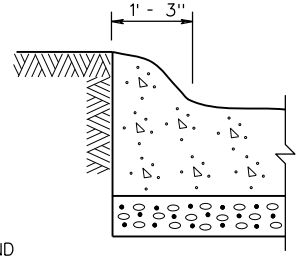


SECTION C-C

⚠ POINT OF GRADE CHANGE

✳ ✳ 12 % MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS

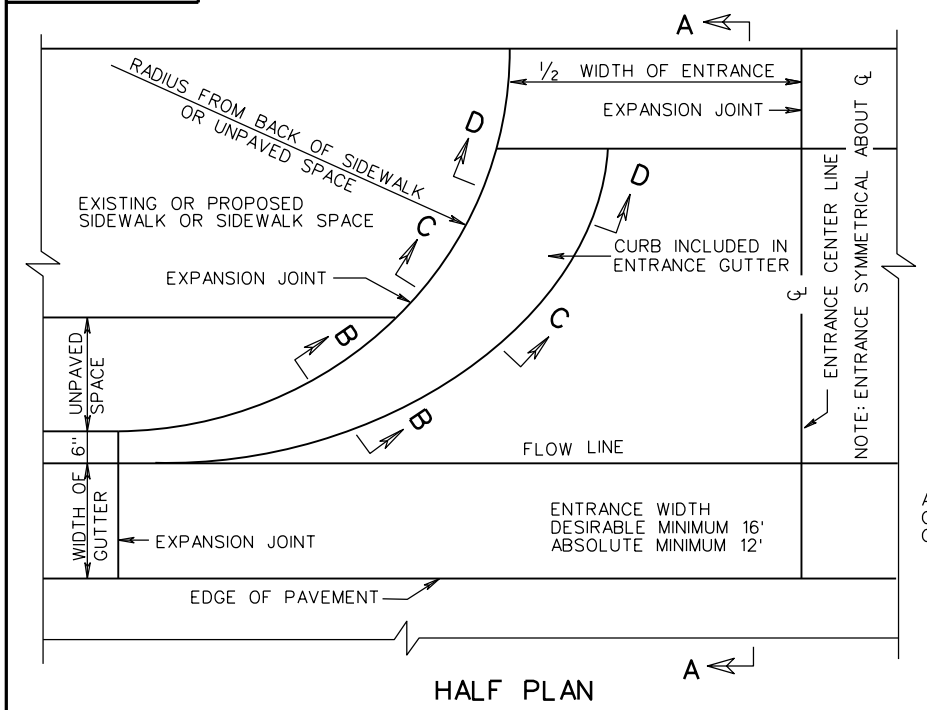
✳ ✳ ✳ 3 % MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND 8 % MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS



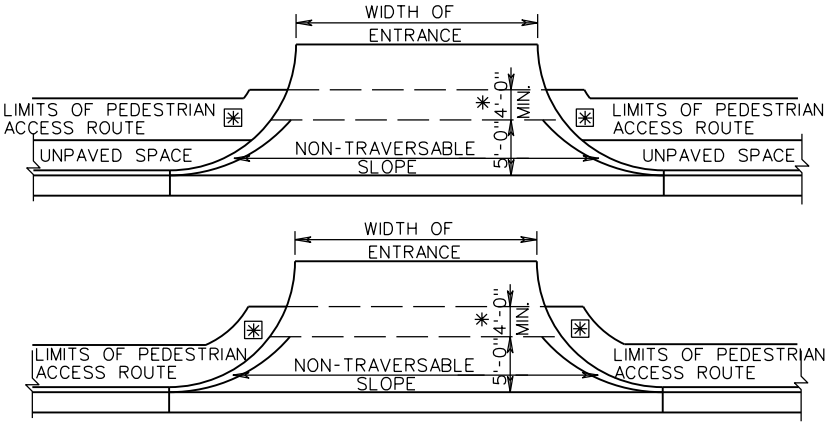
SECTION D-D

SPECIFICATION REFERENCE	STANDARD ENTRANCE GUTTER	VDOT ROAD AND BRIDGE STANDARDS
502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 07/15 · SHEET 1 OF 1 · 203.02

CG-9D



HALF PLAN



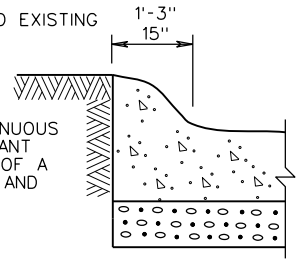
PEDESTRIAN ACCESS ROUTE DETAILS WITH & WITHOUT UPAVED SPACE

ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE ⊠ EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF WAY.

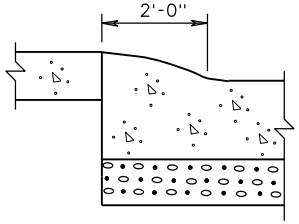
⊠ PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.

* IF PEDESTRIAN ACCESS ROUTES ⊠ ARE BEING PROVIDED, A MINIMUM 4' TRAVERSABLE WIDTH IS REQUIRED WITH A MAX. 2% CROSS SLOPE.

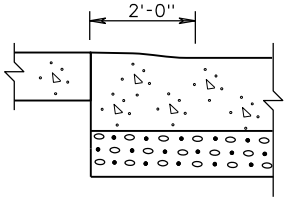
WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.



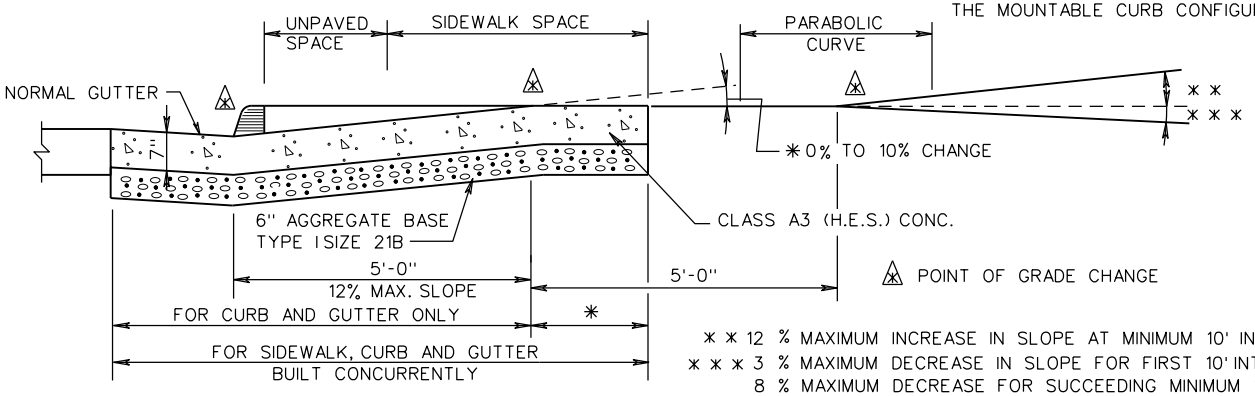
SECTION B-B



SECTION C-C



SECTION D-D



SECTION A-A

* * 12 % MAXIMUM INCREASE IN SLOPE AT MINIMUM 10' INTERVALS
* * * 3 % MAXIMUM DECREASE IN SLOPE FOR FIRST 10' INTERVAL AND 8 % MAXIMUM DECREASE FOR SUCCEEDING MINIMUM 10' INTERVALS

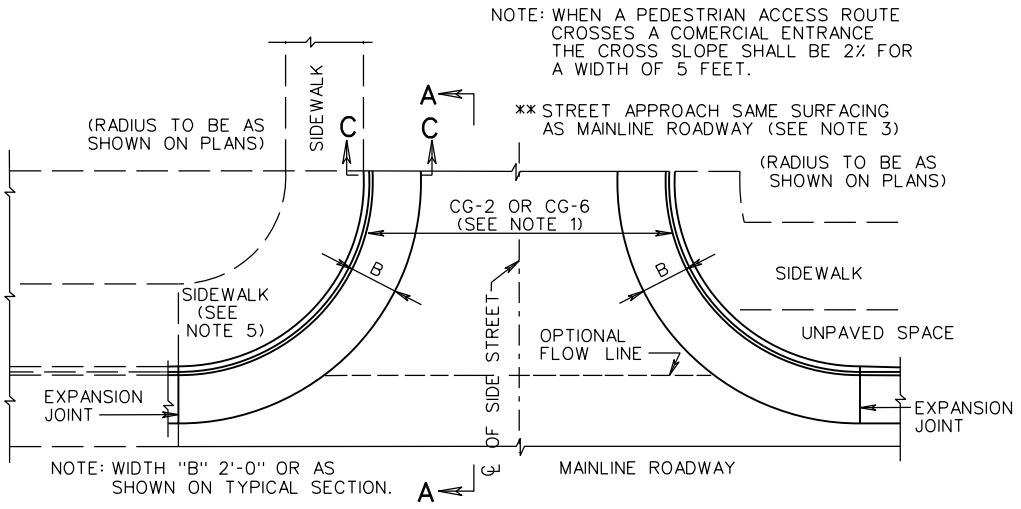
VDOT
ROAD AND BRIDGE STANDARDS

STANDARD ENTRANCE GUTTER

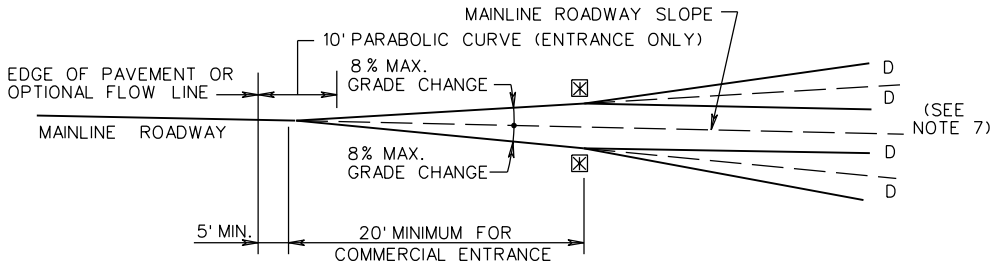
VIRGINIA DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 1	REVISION DATE
203.03	07/15

SPECIFICATION REFERENCE
502

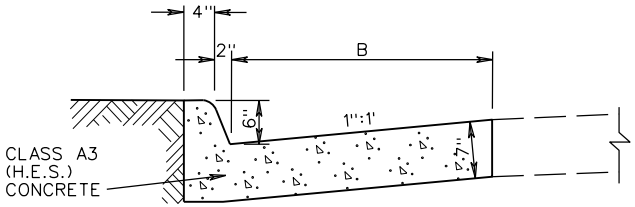


PLAN VIEW



☒ CONSTRUCT GRADE CHANGES WITH A PARABOLIC CURVE.

SECTION A - A



SECTION C-C

GENERAL NOTES

1. WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.
2. SEE STANDARD CG-12 FOR CURB RAMP DESIGN TO BE USED WITH THIS STANDARD.
3. MAINLINE PAVEMENT SHALL BE CONSTRUCTED TO THE R/W LINE (EXCEPT ANY SUBGRADE STABILIZATION REQUIRED FOR MAINLINE PAVEMENT WHICH CAN BE OMITTED IN THE ENTRANCE.)
4. RADIAL CURB OR COMBINATION CURB AND GUTTER SHALL NOT BE CONSTRUCTED BEYOND THE R/W LINE EXCEPT FOR REPLACEMENT PURPOSES.

ENTRANCE NOTES

5. WHEN THE ENTRANCE RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, THE DEPTH FOR SIDEWALK & CURB RAMPS WITHIN THE LIMITS OF THE RADII SHOULD BE INCREASED TO 7". (SEE CG-13)
6. PLANS ARE TO INDICATE WHEN CONSTRUCTION OF A FLOW LINE IS REQUIRED TO PROVIDE POSITIVE DRAINAGE ACROSS THE ENTRANCE.
7. THE DESIRABLE AND MAXIMUM ENTRANCE GRADE CHANGES "D" ARE LISTED IN THE ALLOWABLE ENTRANCE GRADE TABLE. THESE VALUES ARE NOT APPLICABLE TO STREET CONNECTIONS.

INTERSECTION NOTES

8. WHEN CG-11 IS USED FOR STREET CONNECTIONS, THE CONNECTION MUST BE DESIGNED IN ACCORDANCE WITH AASHTO POLICY AND THE APPLICABLE REQUIREMENTS OF THE VDOT ROAD DESIGN MANUAL, INCLUDING STOPPING SIGHT DISTANCE AND K VALUE REQUIREMENTS.
9. OPTIONAL FLOWLINE MAY REQUIRE WARPING OF A PORTION OF GUTTER TO PROVIDE POSITIVE DRAINAGE ACROSS THE INTERSECTION.

ALLOWABLE ENTRANCE GRADE CHANGES

ENTRANCE VOLUME		GRADE CHANGE "D"	
		DESIRABLE	MAXIMUM
HIGH	MORE THAN 1500 VPD	0 %	3 %
MEDIUM	500-1500 VPD	≤ 3 %	6 %
LOW	LESS THAN 500 VPD	≤ 6 %	8 %

NOTE: ALLOWABLE ENTRANCE GRADE TABLE IS NOT APPLICABLE TO STREET CONNECTIONS

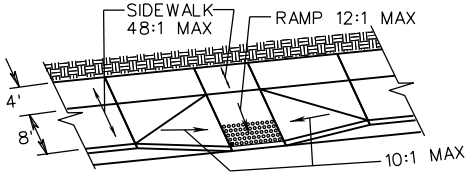
SPECIFICATION REFERENCE	METHOD OF TREATMENT	VDOT ROAD AND BRIDGE STANDARDS
502	(CONNECTION FOR STREET INTERSECTIONS AND COMMERCIAL ENTRANCES) VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 07/15 · SHEET 1 OF 1 · 203.04

CG-12

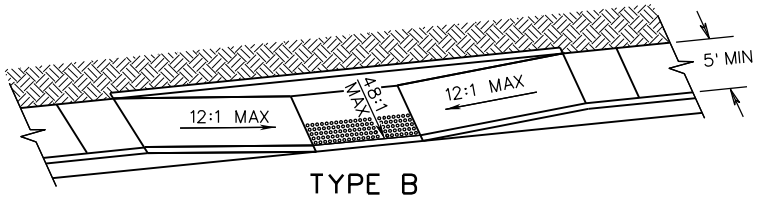
GENERAL NOTES:

1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. DETECTABLE WARNING SHALL BE FROM THE MATERIALS APPROVED LIST FOR DETECTABLE WARNING SUFACES. PRODUCTS NOT LISTED SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION FOR CG-12 DETECTABLE WARNING SURFACE AND SHALL BE SUBMITTED TO THE STANDARDS AND SPECIAL DESIGN SECTION FOR APPROVAL.
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
5. REQUIRED BARS ARE TO BE NO. 5 X 8" PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1½".
6. CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
7. CURB RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THEY ARE TO BE PROVIDED AT INTERSECTIONS WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT OF WAY OF A HIGHWAY FACILITY CROSSES A CURB REGARDLESS OF WHETHER SIDEWALK IS EXISTING, PROPOSED, OR NONEXISTENT. THEY MUST BE LOCATED WITHIN PEDESTRIAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER, AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
8. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
9. TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE ENTRANCE RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, REFER TO STANDARD CG-13, COMMERCIAL ENTRANCE (HEAVY TRUCK TRAFFIC) FOR CONCRETE DEPTH.
10. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.
11. WHEN ONLY ONE CURB RAMP IS PROVIDED FOR TWO CROSSINGS (DIAGONAL), A 4' x 4' LANDING AREA SHALL BE PROVIDED TO MANEUVER A WHEELCHAIR INTO THE CROSSWALK WITHOUT GOING INTO THE TRAVELWAY. THIS 4' x 4' LANDING AREA MAY INCLUDE THE GUTTER PAN.
12. ALL CASES WHERE CURB RAMPS INTERSECT A RADIAL SECTION OF CURB AT ENTRANCES OR STREET CONNECTIONS THE DETECTABLE WARNING SURFACE SHALL HAVE A FACTORY RADIUS OR BE FIELD -MODIFIED AS RECOMMENDED BY THE MANUFACTURER TO MATCH THE BACK OF CURB.

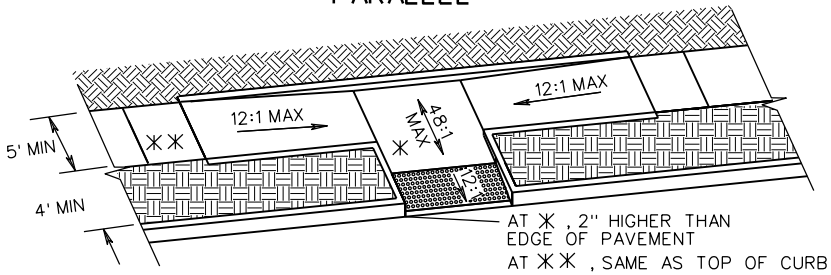
NOTE: COMPONENTS OF CURB RAMPS CONSIST OF THE FOLLOWING:
HYDRAULIC CEMENT SIDEWALK (DEPTH IN INCHES, AREA IN SQUARE YARDS)
CURB WHEN REQUIRED (CG-2 OR CG-3 IN LINEAR FEET)
DETECTABLE WARNING SURFACE (AREA IN SQUARE YARDS)
EACH OF THE ABOVE ITEMS IS A SEPARATE PAY ITEM AND SHOULD BE SUMMARIZED FOR EACH CURB CUT RAMP.



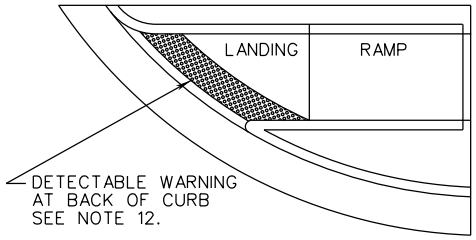
TYPE A
PERPENDICULAR



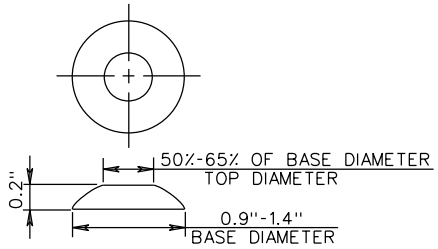
TYPE B
PARALLEL



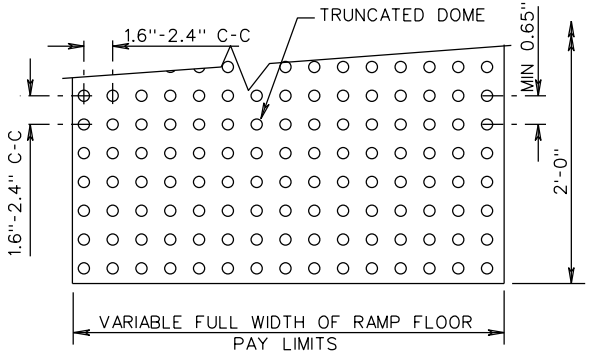
TYPE C
PARALLEL & PERPENDICULAR



DETECTABLE WARNING
INSTALLED ON A RADIUS



TRUNCATED DOME
DETAIL



DETECTABLE WARNING
DETAIL

VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 5
203.05

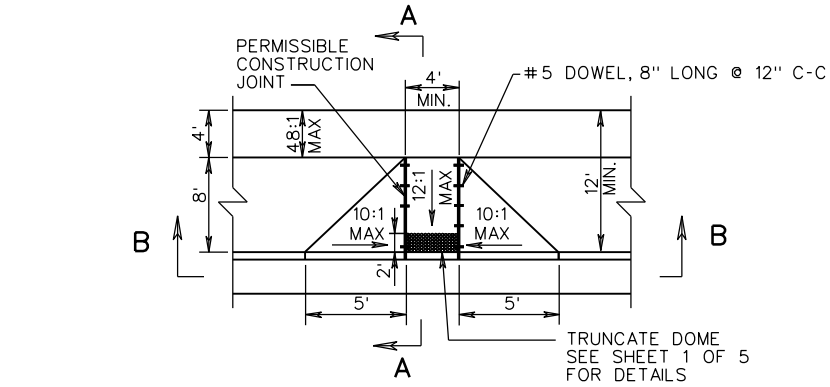
REVISION DATE
07/15

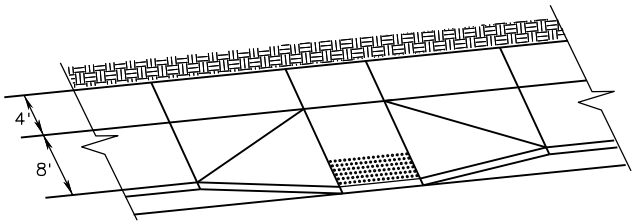
CG-12 DETECTABLE WARNING SURFACE

(GENERAL NOTES)

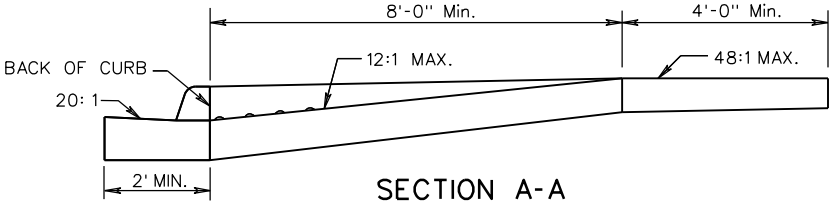
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE
105
502

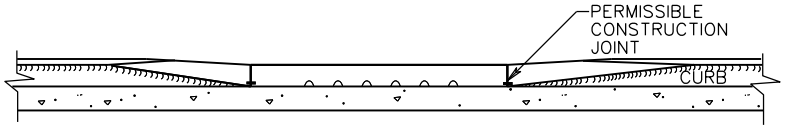




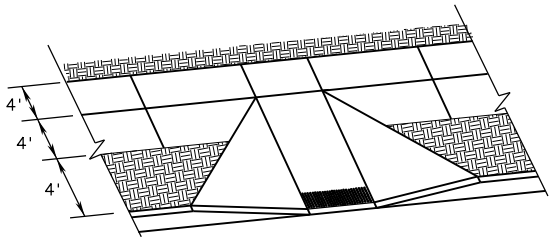
TYPICAL DESIGN



SECTION A-A



SECTION B-B

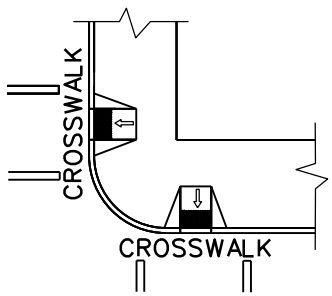


TYPE A
WITH BUFFER STRIP

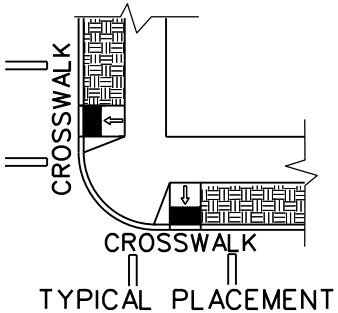
NOTES:

FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.

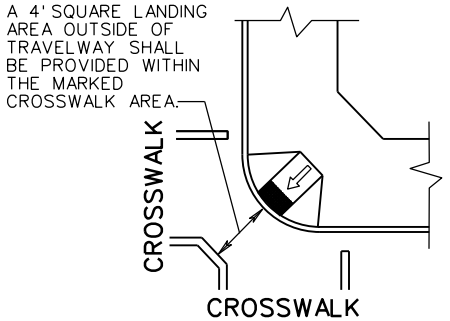
THIS DESIGN TO BE USED FOR CONSTRUCTION THAT INCORPORATES WIDER SIDEWALK. LANDING (4' WIDE) REQUIRED AT TOP OF CURB RAMP. MINIMUM CURB RAMP LENGTH 8 FEET FOR NEW CONSTRUCTION.



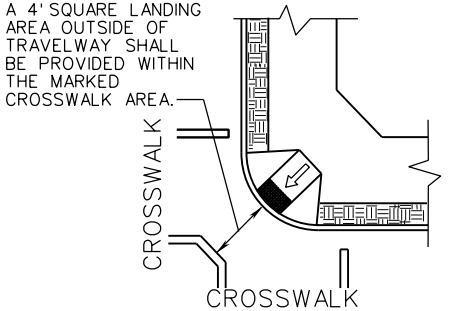
TYPICAL PLACEMENT
AT INTERSECTION
WITHIN CROSSWALK



TYPICAL PLACEMENT
AT INTERSECTION
WITHIN CROSSWALK
(WITH BUFFER STRIP)



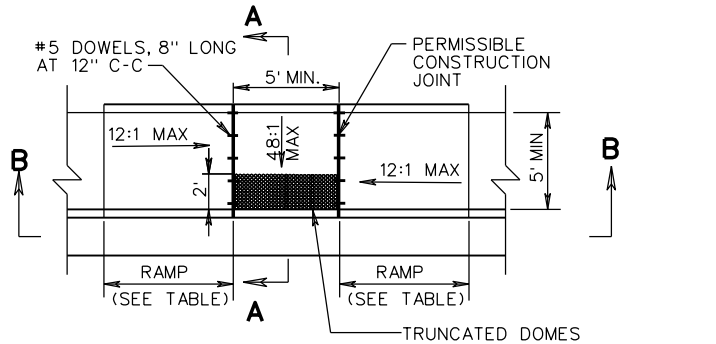
DIAGONAL PLACEMENT

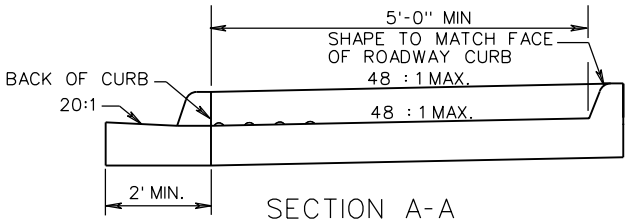


DIAGONAL PLACEMENT
WITH BUFFER STRIP

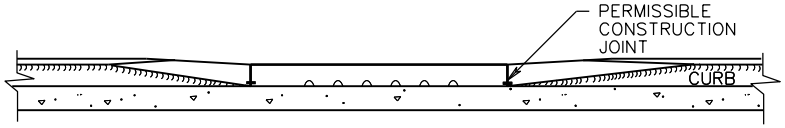
SPECIFICATION REFERENCE	CG-12 DETECTABLE WARNING SURFACE	VDOT ROAD AND BRIDGE STANDARDS
105 502	TYPE A (PERPENDICULAR) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 07/15 · SHEET 2 OF 5 · 203.06

CG-12

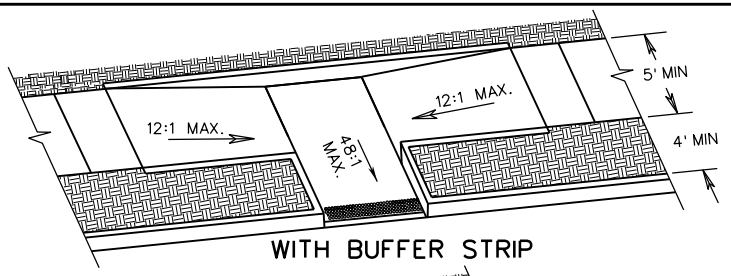




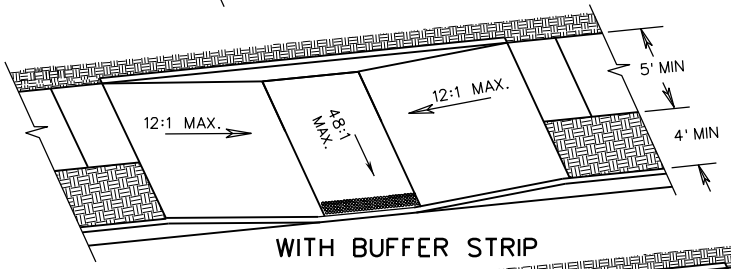
SECTION A-A



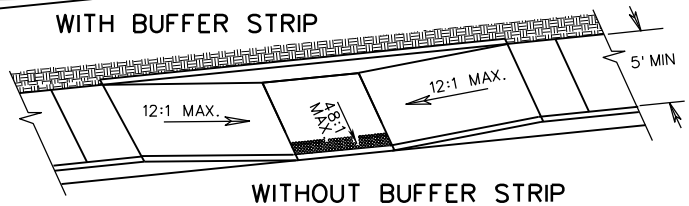
SECTION B-B



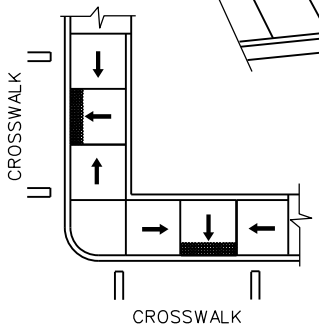
WITH BUFFER STRIP



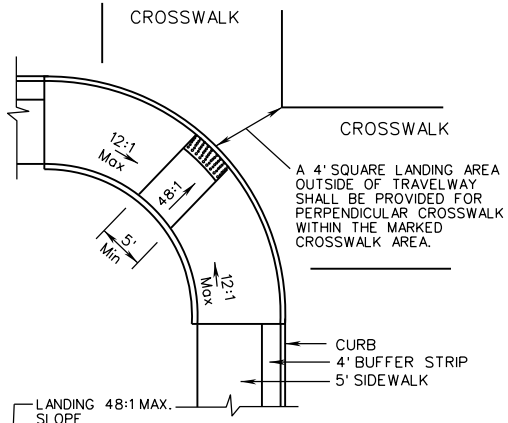
WITH BUFFER STRIP



WITHOUT BUFFER STRIP



TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK

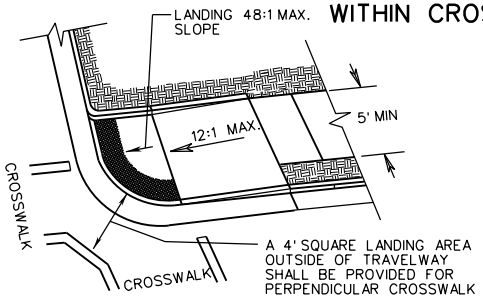


DIAGONAL PLACEMENT

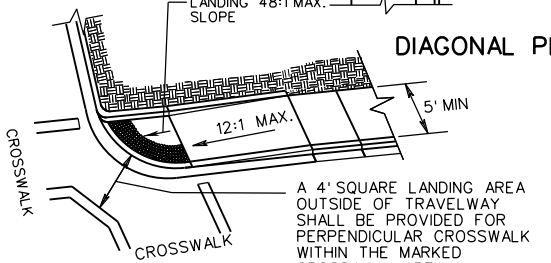
NOTES: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.

THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

TYPE B PARALLEL APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15



WITH BUFFER STRIP



VDOT
ROAD AND BRIDGE STANDARDS

CG-12 DETECTABLE WARNING SURFACE

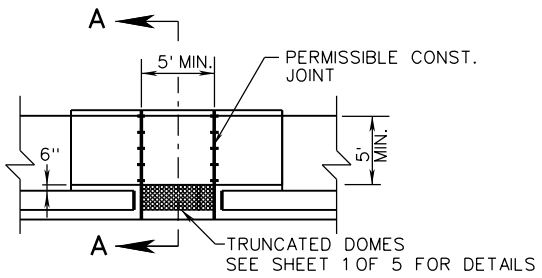
TYPE B (PARALLEL) APPLICATION

VIRGINIA DEPARTMENT OF TRANSPORTATION

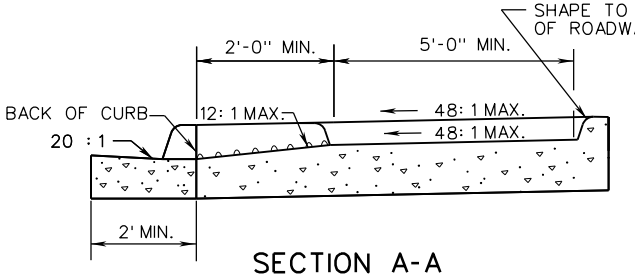
SHEET 3 OF 5
203.07

REVISION DATE
07/15

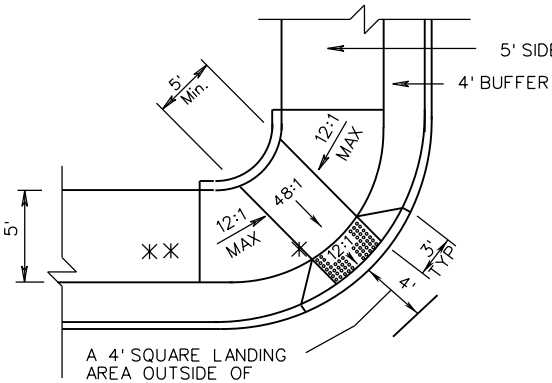
SPECIFICATION REFERENCE
105
502



TANGENT PLAN

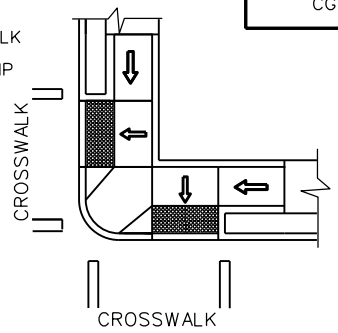


SECTION A-A

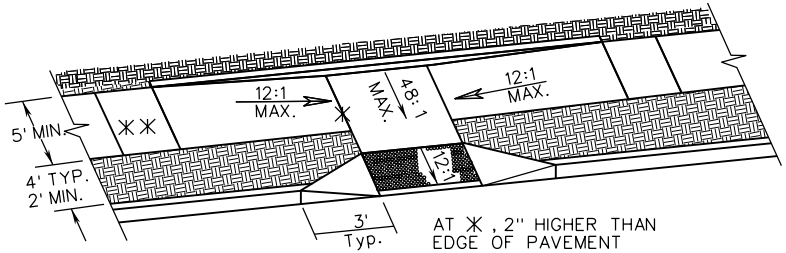


A 4' SQUARE LANDING AREA OUTSIDE OF TRAVELWAY SHALL BE PROVIDED WITHIN THE MARKED CROSSWALK AREA.

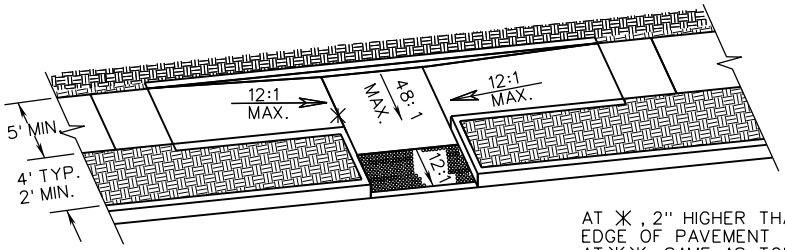
AT ✳, 2" HIGHER THAN EDGE OF PAVEMENT
AT ✳✳, SAME AS TOP OF CURB



TYPICAL PLACEMENT AT INTERSECTION WITH BUFFER STRIP



AT ✳, 2" HIGHER THAN EDGE OF PAVEMENT
AT ✳✳, SAME AS TOP OF CURB



AT ✳, 2" HIGHER THAN EDGE OF PAVEMENT
AT ✳✳, SAME AS TOP OF CURB

TYPE C PARALLEL & PERPENDICULAR APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	2	4
1	2	5
2	3	5
3	3	6
4	4	8
5	5	10
6	7	14
7	13	15
8	15	15

THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.

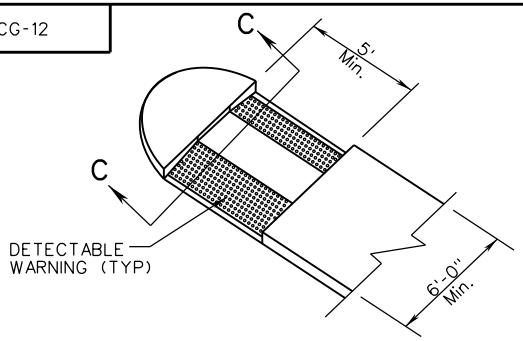
NOTES: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.

THE SELECTION OF CURB TYPE AND THE CONFIGURATION OF THE BUFFER STRIP MAY VARY TO MEET EXISTING FIELD CONDITIONS AND ROADWAY GEOMETRICS PROVIDING THE DIMENSIONS AND SLOPES ARE AS NOTED.

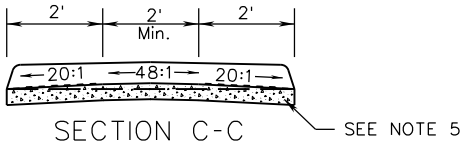
THIS COMBINED (PARALLEL & PERPENDICULAR) DESIGN CAN BE USED WITH ADJOINING BUFFER STRIP. LANDING AT BOTTOM OF TWO SLOPING SIDES WITH 5' X 5' MIN. DIMENSIONS. THE SHORT PERPENDICULAR RUN TO THE STREET CAN BE PROTECTED BY A LANDSCAPED SETBACK OR CONNECTED TO THE SIDEWALK WITH A WARPED SURFACE.

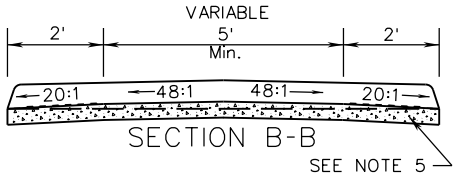
SPECIFICATION REFERENCE	CG-12 DETECTABLE WARNING SURFACE	VDOT ROAD AND BRIDGE STANDARDS
105 502	TYPE C (PARALLEL & PERPENDICULAR) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE 07/15 SHEET 4 OF 5 203.08

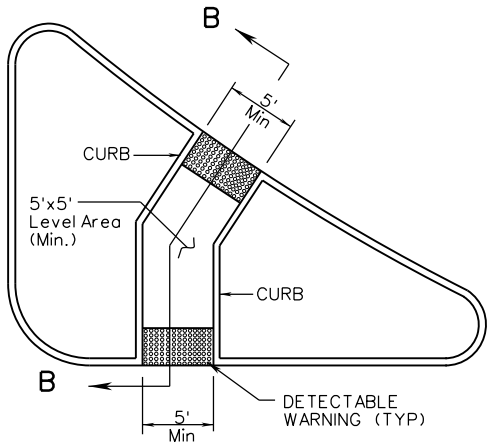
CG-12



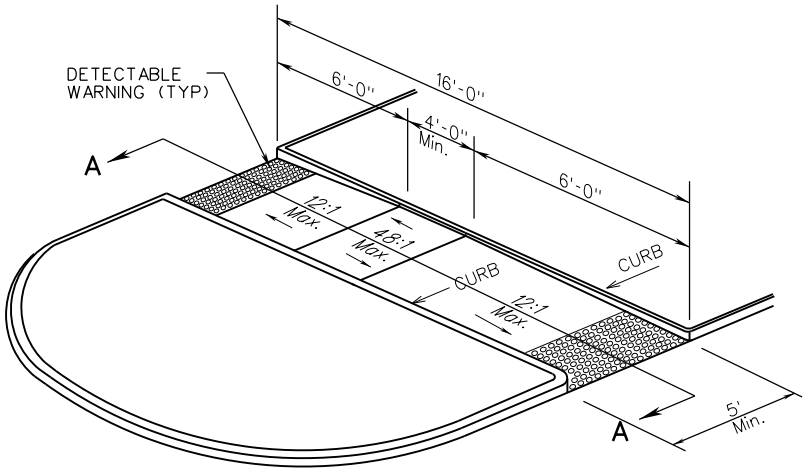
MEDIAN WITH CUT-THROUGH
TYPE M2



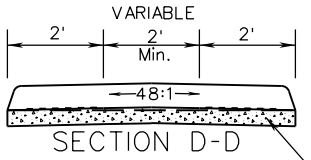


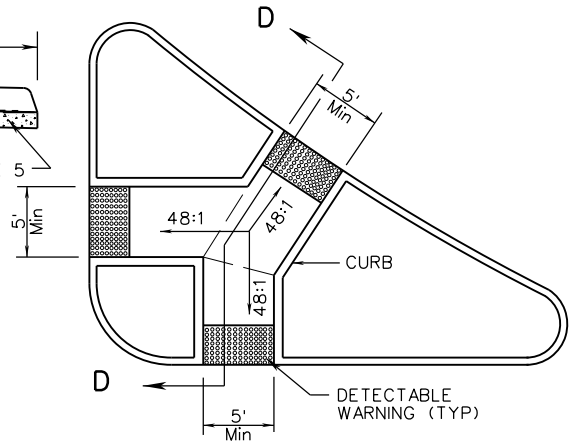


REFUGE ISLAND WITH RAMPS
TYPE RI1

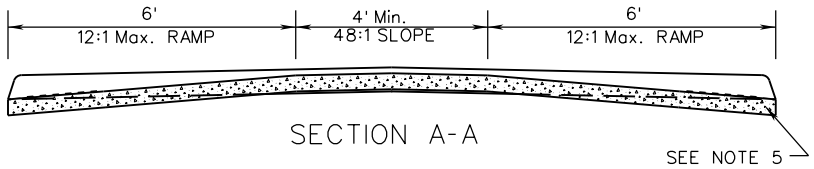


MEDIAN WITH RAMP
TYPE M1





REFUGE ISLAND CUT - THROUGH
TYPE RI2



NOTES:

1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. CURB SHALL BE SHAPED TO MATCH THE FACE OF ROADWAY CURB.
3. SEE ROADWAY PLANS FOR MEDIAN AND REFUGE ISLAND DIMENSIONS
4. RAMPS AND CUT THROUGH'S SHALL BE ALIGNED WITH CROSSWALKS.
5. THE RAMPS AND CUT THROUGH'S SHALL BE INSTALLED AND PAID FOR AS 4" HYDRAULIC CEMENT CONCRETE SIDEWALK IN ACCORDANCE WITH SECTION 504 OF THE ROAD & BRIDGE SPECIFICATIONS. EXCAVATION OF MATERIAL FOR THE INSTALLATION OF THE SIDEWALK SHALL BE INCLUDED IN THE PRICE BID FOR 4" HYDRAULIC CEMENT CONCRETE SIDEWALK.
6. CUT THROUGH'S LESS THAN 6' IN WIDTH SHALL NOT HAVE DETECTABLE WARNINGS INSTALLED.

VDOT
ROAD AND BRIDGE STANDARDS

SHEET 5 OF 5 | REVISION DATE 7/12
203.09

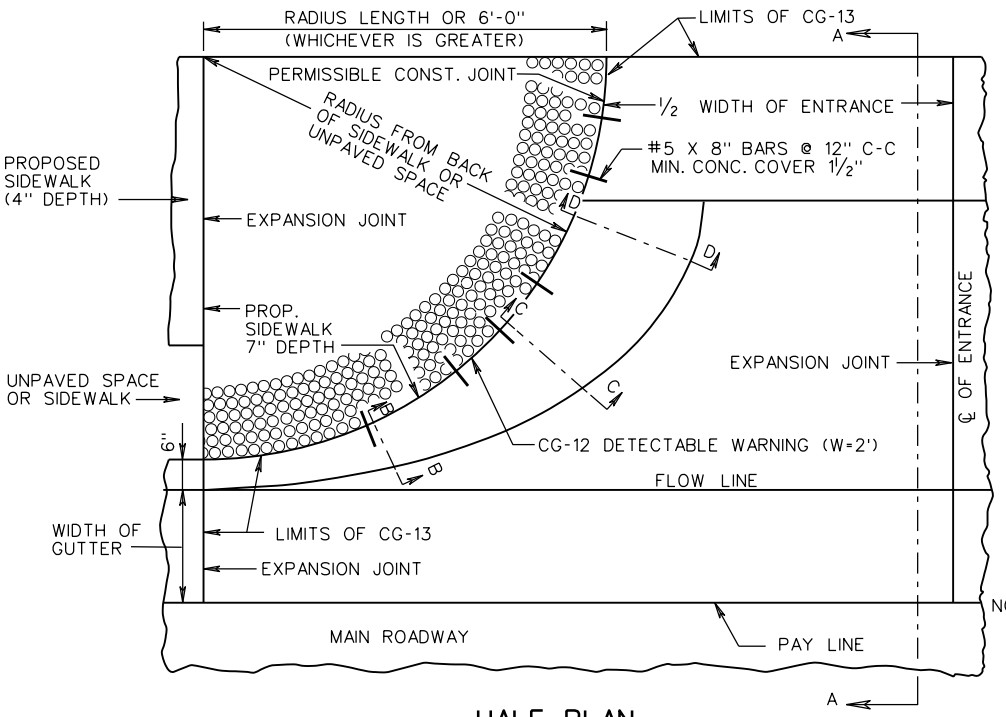
CG-12 DETECTABLE WARNING SURFACE

MEDIAN AND REFUGE ISLAND APPLICATIONS

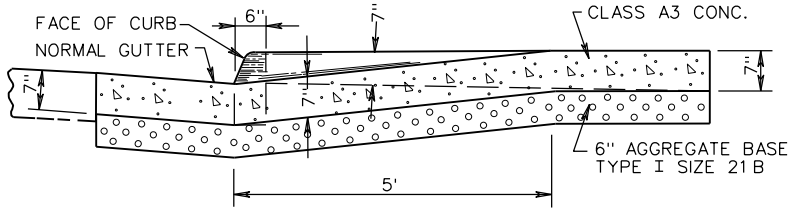
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE
105
502

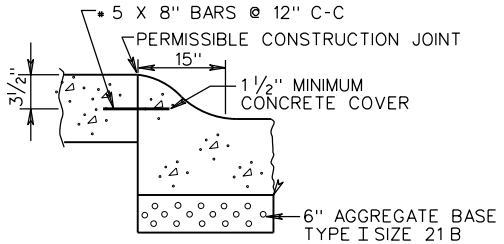
CG-13



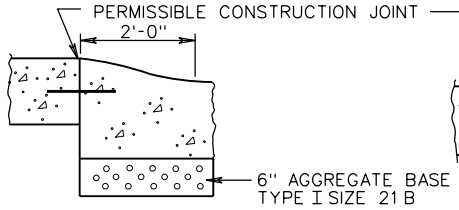
HALF PLAN



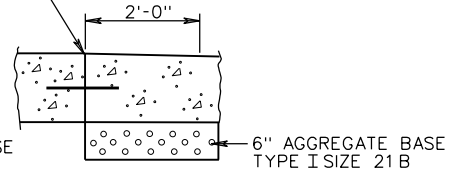
SECTION A-A



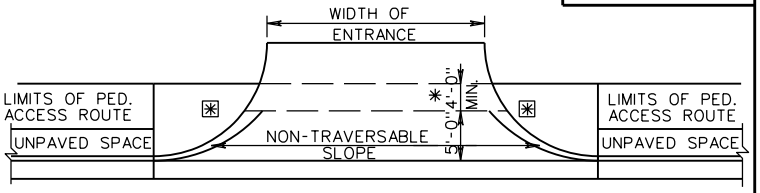
SECTION B-B



SECTION C-C



SECTION D-D



PEDESTRIAN ACCESS ROUTE DETAIL

ADDITIONAL RIGHT-OF-WAY IS REQUIRED IF THE LIMITS OF PEDESTRIAN ACCESS ROUTE ☒ EXTEND BEYOND EXISTING OR PROPOSED VDOT RIGHT-OF WAY.

☒ PEDESTRIAN ACCESS ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS. IF ACCESS ROUTE IS ADJACENT TO BACK OF CURB, MINIMUM WIDTH SHOULD BE 6'.

✳ IF PEDESTRIAN ACCESS ROUTES ☒ ARE BEING PROVIDED, A MINIMUM 4' TRAVERSABLE WIDTH IS REQUIRED WITH MAX. 2% CROSS SLOPE.

NOTES:

1. PROPOSED 7" SIDEWALK IS TO BE POURED MONOLITHICALLY WITH ENTRANCE OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
2. PROPOSED 7" SIDEWALK TO BE CLASS A-3 CONCRETE.
3. REQUIRED BARS ARE TO BE NO. 5X8" PLACED 1' CENTER TO CENTER ALONG BACK OF CURB, MID-DEPTH OF SIDEWALK. MINIMUM CONCRETE COVER 1½".
4. ALL DETAILS AND DIMENSIONS NOT SHOWN ARE THE SAME AS STANDARD CG-9D.
5. THIS DESIGN MAY ALSO BE APPLIED TO OTHER ENTRANCE STANDARDS AS THE NEED ARISES.
6. WHEN USED IN CONJUNCTION WITH STANDARD CG-3 OR CG-7, THE CURB FACE ON THIS STANDARD IS TO BE ADJUSTED TO MATCH THE MOUNTABLE CURB CONFIGURATION.
7. SEE STANDARD CG-12 FOR DETECTABLE WARNING DETAILS.

SPECIFICATION REFERENCE	COMMERCIAL ENTRANCE (HEAVY TRUCK TRAFFIC ANTICIPATED)	VDOT ROAD AND BRIDGE STANDARDS
502	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE / SHEET 1 OF 1 / 203.10

STANDARD

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VDOT
ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1

REVISION DATE

TITLE

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE