

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

LETTING DATE: MARCH 7, 2018

CONTRACT ID: DF00193

TIP NO.: R-5786DA & R-5786DB

FEDERAL AID NO.: TAP-0620(046) & TAP-0620(047)

WBS ELEMENT NO.: 44916.3.8 & 44916.3.9

ROUTE NO.: VARIOUS

LOCATION: VARIOUS

COUNTY: CUMBERLAND & HARNETT

LENGTH OF PROJECT: VARIES

TYPE OF WORK: CURB RAMP INSTALLATIONS

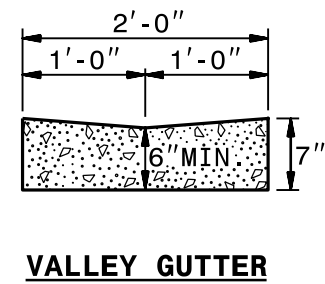
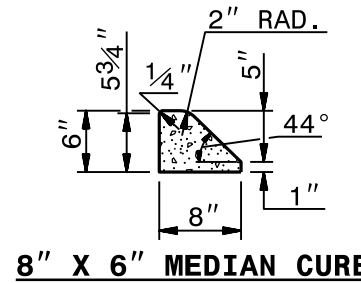
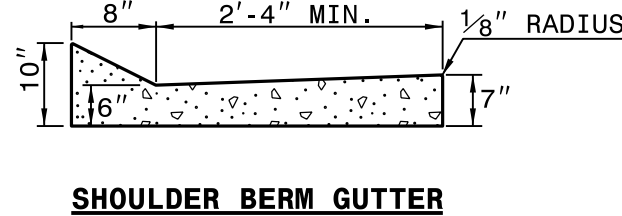
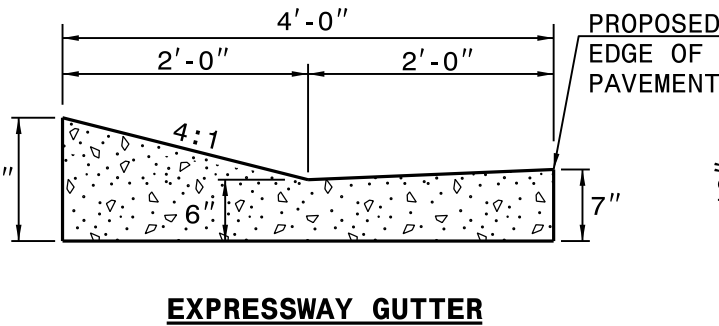
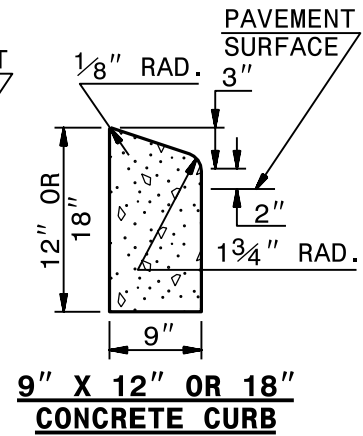
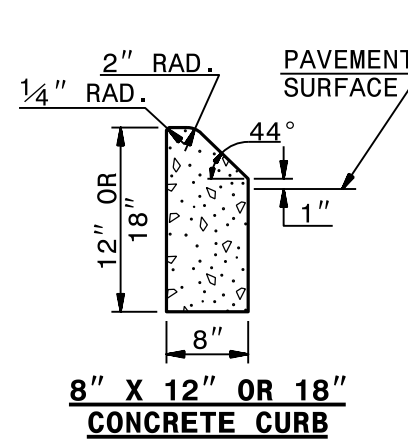
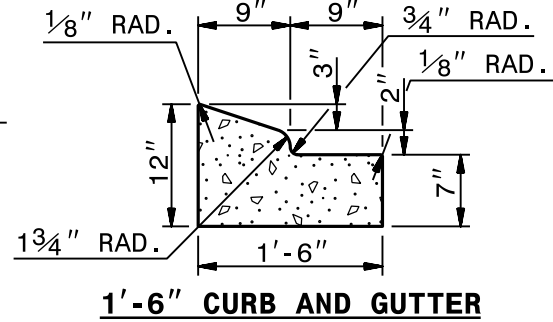
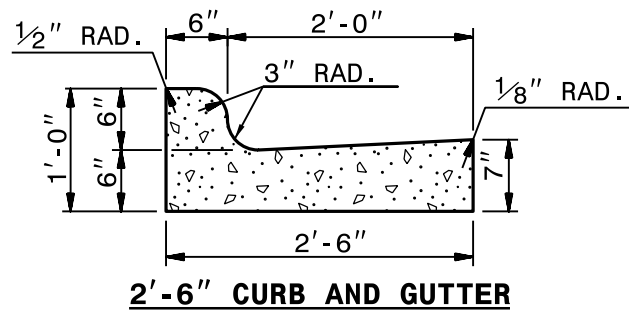
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SUMMARY OF QUANTITIES - CUMBERLAND & HARNETT CO.

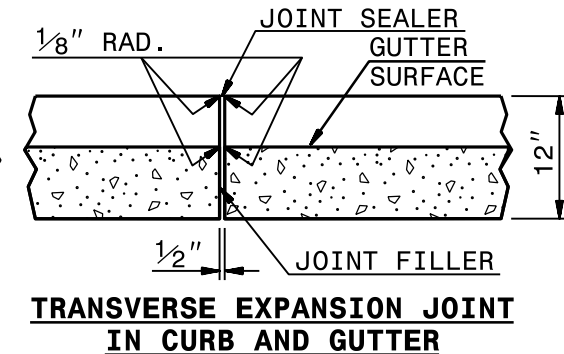
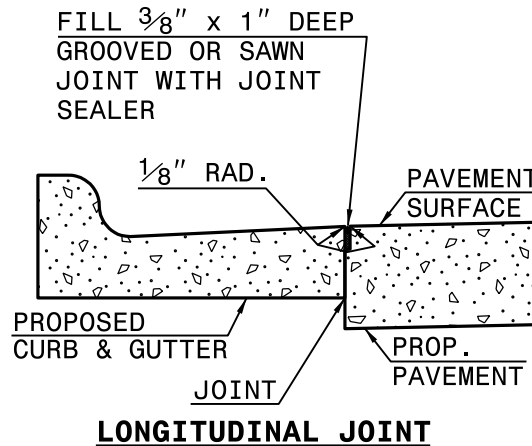
PROJECT NO	COUNTY	MUNICIPALITY	MAJOR ROUTE	MINOR ROUTE	0000100000-N	2549000000-E	2591000000-E	2600000000-N	2605000000-N	2800000000-N	2815000000-N	4697000000-E	4710000000-E
					Mobilization LS	2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Retrofit Existing Curb Ramp EA	Concrete Curb Ramp EA	Adjustments of Catch Basins EA	Adjustments of Drop Inlets EA	Thermoplastic Pavement Marking Lines (8", 120 mils) LF	Thermoplastic Pavement Marking Lines (24", 120 mils) LF
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Fayetteville Ave	0.5			2	2	2		400	80
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South King Ave				4		3			
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Layton Ave				4		1			
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South McKay Ave				2		1			
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Orange Ave				2					
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Little Ave			56	1	1				
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Washington Ave				2					
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	SR 1785 (South Elm St)				2					
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Wilson Ave				2					
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Magnolia Ave				1	1				
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Watauga Ave				1					
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Ashe Ave				1					
44916.3.8	Harnett	Dunn	US 421 (Cumberland St)	South Lucknow Sq				3					
44916.3.8	Harnett	Dunn	SR 1793 (Pope Rd)	South Wilmington Ave					2		1		
44916.3.8	Harnett	Dunn	SR 1793 (Pope Rd)	South Washington Ave					2				
44916.3.8	Harnett	Dunn	SR 1793 (Pope Rd)	SR 1785 (South Elm St)					2				
44916.3.8	Harnett	Dunn	SR 1793 (Pope Rd)	South Magnolia Ave					4				
44916.3.8	Harnett	Dunn	SR 1793 (Pope Rd)	US 301 (South Clinton Ave)				4					
TOTAL FOR WBS NO. 44916.3.8 (Pop. > 5000)					0.50	0	56	31	14	7	1	400	80
44916.3.9	Harnett	Erwin	SR 1718 (Denim Dr)	SR 1746 (Old Post Rd)	0.50		56	1	1				
44916.3.9	Harnett	Erwin	SR 1718 (Denim Dr)	SR 1703 (Masonic Rd)				2					
44916.3.9	Harnett	Erwin	SR 1718 (Denim Dr)	6th St				4					
44916.3.9	Harnett	Erwin	SR 1718 (Denim Dr)	South 7th St				2					
44916.3.9	Harnett	Erwin	SR 1718 (Denim Dr)	South 8th St				4					
44916.3.9	Harnett	Erwin	SR 1718 (Denim Dr)	South 10th St				4					
44916.3.9	Harnett	Erwin	SR 1718 (Denim Dr)	South 11th St				4					
SUBTOTAL					0.50	0	56	21	1	0	0	0	0
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Erwin St				2					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Driveway to Stewart Tire Service				1					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	South St				4					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	West Hamer St				1					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Jackson St				4					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Driveways to Coats Community Mart				4					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Washington St				4					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Lemon St				4					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Dooley St				4					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Driveway to BB&T				2					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Pope St				2					
44916.3.9	Harnett	Coats	NC 55 (McKinley St)	Lisa St				2					
SUBTOTAL					0.00	0	0	34	0	0	0	0	0
44916.3.9	Cumberland	Falcon	NC 82 (N. West St.)	Brooks St.		80	44	1	3			60	
44916.3.9	Cumberland	Falcon	NC 82 (N. West St.)	SR 1005 (Fayetteville Rd)		10	11		1	1			
SUBTOTAL					0.00	90	55	1	4	1	0	60	0
TOTAL FOR WBS NO. 44916.3.9 (Pop. < 5000)					0.50	90	111	56	5	1	0	60	0
GRAND TOTAL					1.00	90	167	87	19	8	1	460	80



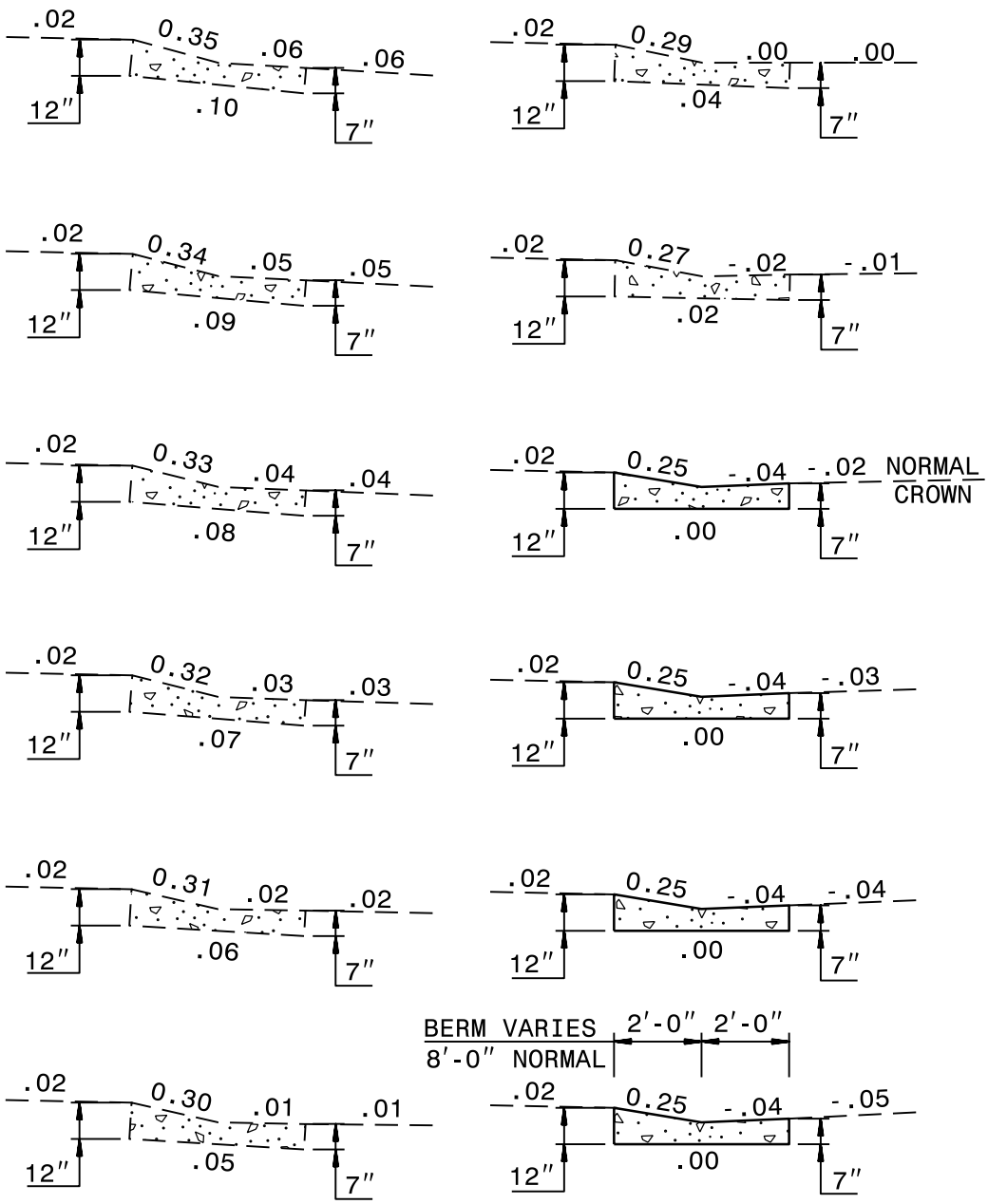
SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:

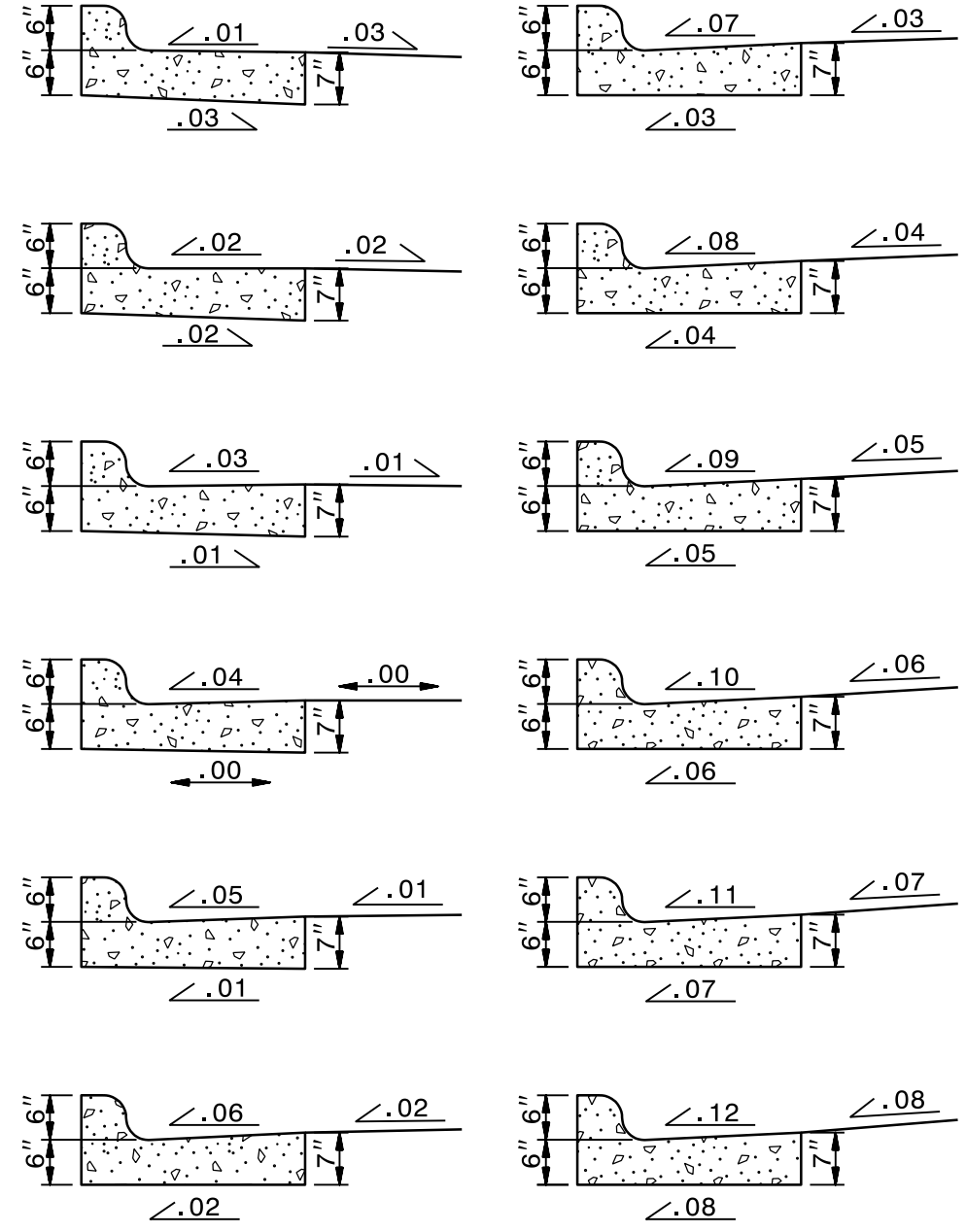
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
- JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
- CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
- CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.
- FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
- SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



SECTION VIEW OF JOINTS



SECTION VIEWS OF EXPRESSWAY GUTTER IN SUPER ELEVATION



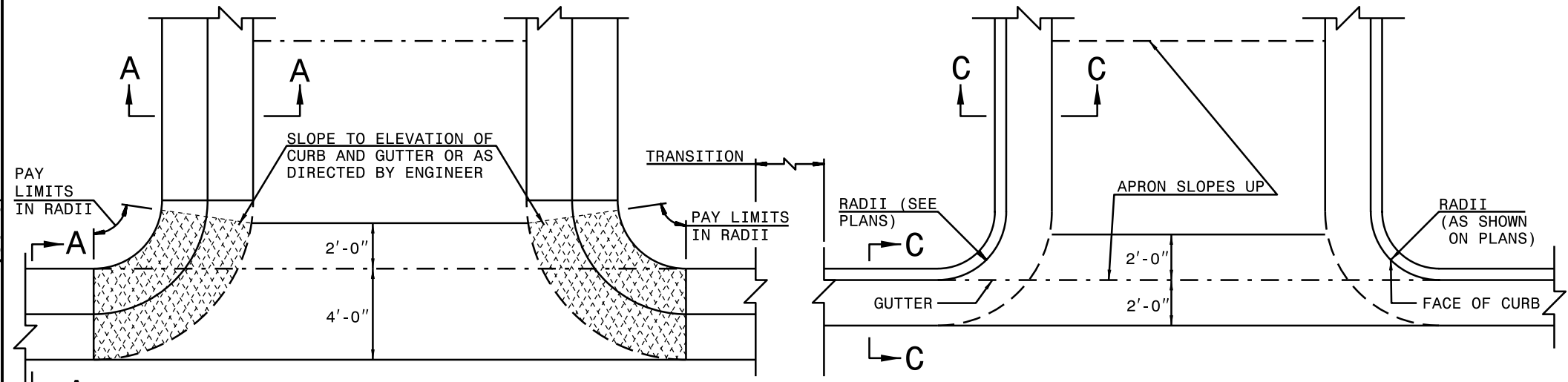
SECTION VIEWS OF 2'-6" CURB AND GUTTER SUPERELEVATION RATES

1-18

ROADWAY STANDARD DRAWING FOR

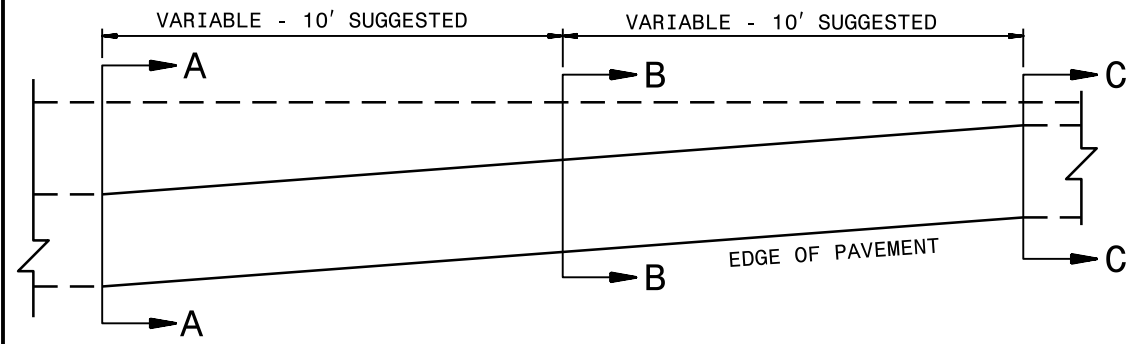
CONCRETE CURB, GUTTER AND CURB & GUTTER

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

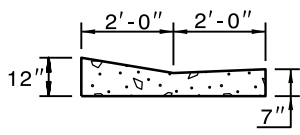


DRIVEWAY WITH EXPRESSWAY GUTTER TRANSITION DRIVEWAY WITH 2'-6" CURB AND GUTTER

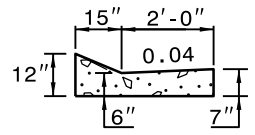
PLAN VIEW OF TYPICAL CURB AND GUTTER OCCURENCES



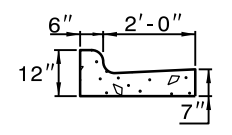
**PLAN VIEW OF TRANSITION
EXPRESSWAY GUTTER TO 2'-6" CURB AND GUTTER**



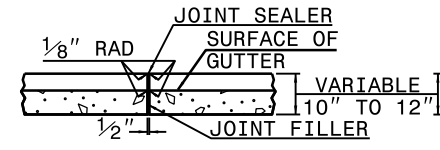
**SECTION A-A
EXPRESSWAY GUTTER**



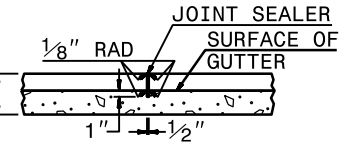
**SECTION B-B
TRANSITION GUTTER**



**SECTION C-C
2'-6" CURB & GUTTER**



EXPANSION JOINT



CONTRACTION JOINT

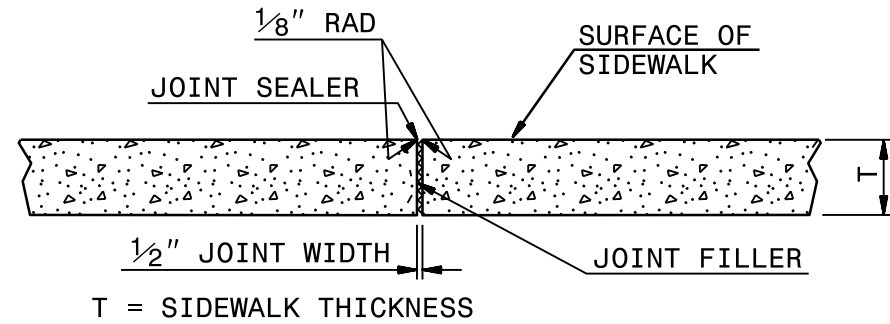
- NOTES:
- IN THE TRANSITION FROM 4'-0" CONCRETE EXPRESSWAY GUTTER TO 2'-6" CONCRETE CURB AND GUTTER, PLACE 1/2" EXPANSION JOINTS AT 25' INTERVALS.
 - PLACE GROOVE JOINTS 1" DEEP AT 12'-6" INTERVALS BETWEEN EXPANSION JOINTS.
 - FILL AND SEAL THE TOP 1/2" OF THE EXPANSION JOINTS AND 1" OF CONTRACTION JOINTS WITH APPROVED JOINT SEALING COMPOUND.

NOTES:

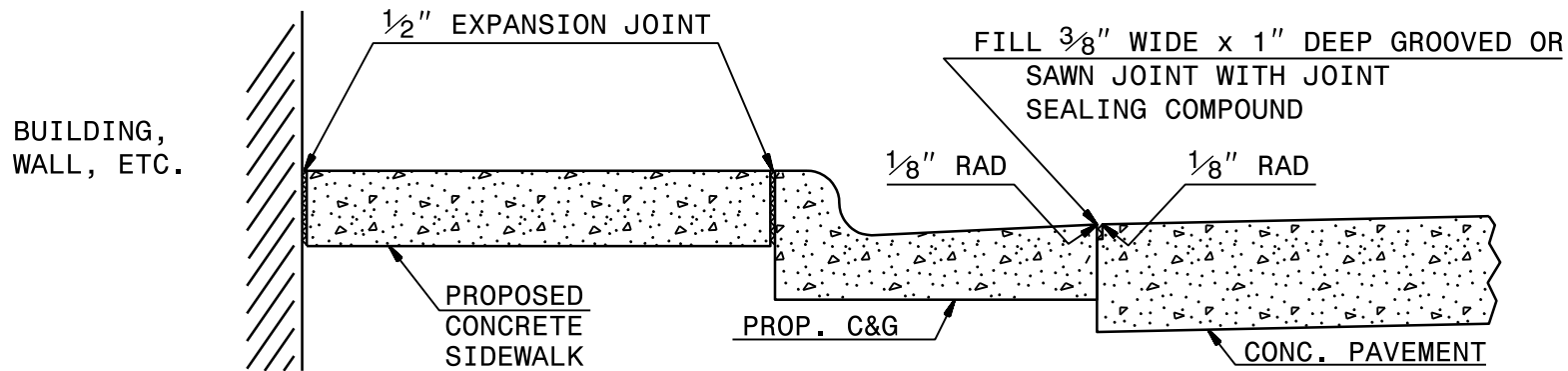
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT
IN SIDEWALK



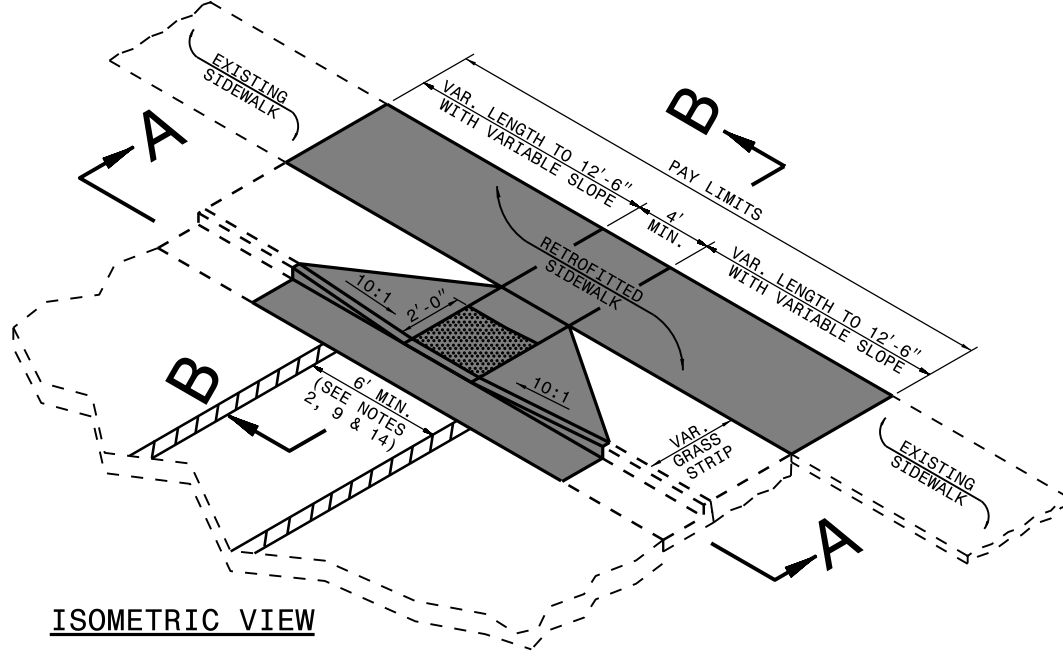
DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-18

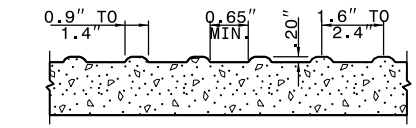
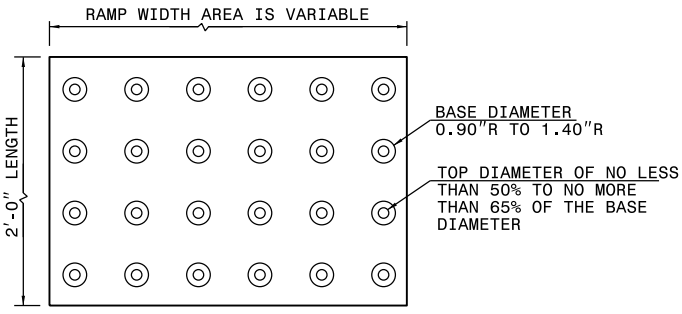
ROADWAY STANDARD DRAWING FOR
CONCRETE SIDEWALK

CURB RAMP AND EXISTING SIDEWALK WITH GRASS STRIP



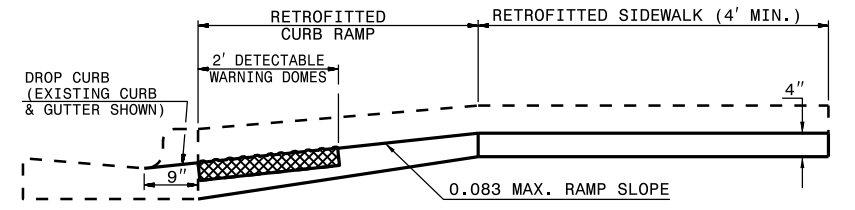
ISOMETRIC VIEW

PAY LIMITS OF CURB RAMP

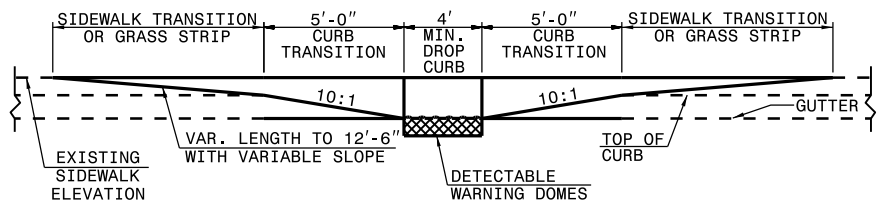


DETECTABLE WARNING DOMES

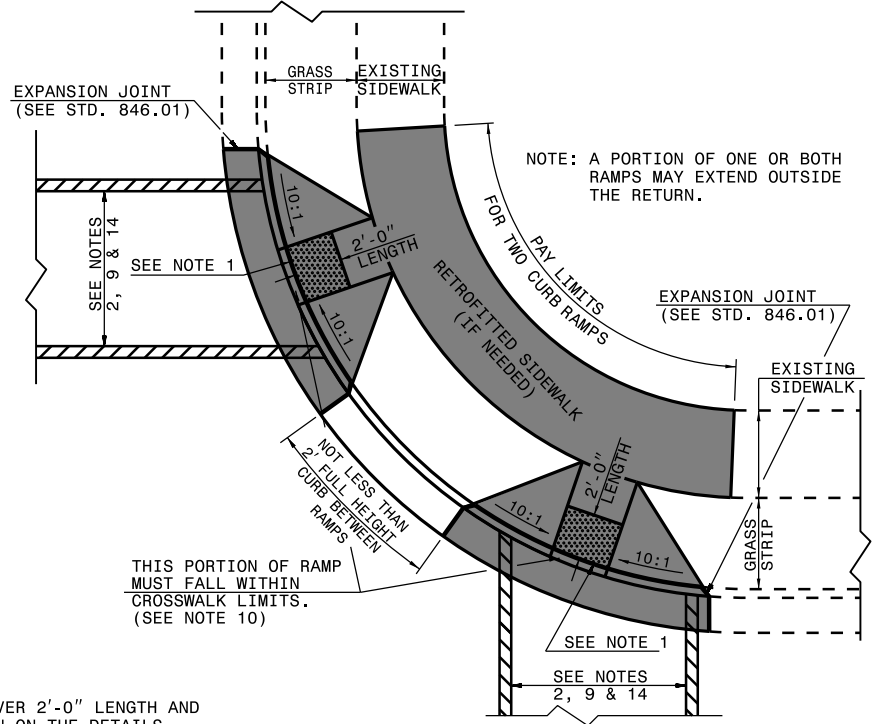
- NOTES:**
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



SECTION B-B



SECTION A-A



PLAN VIEW

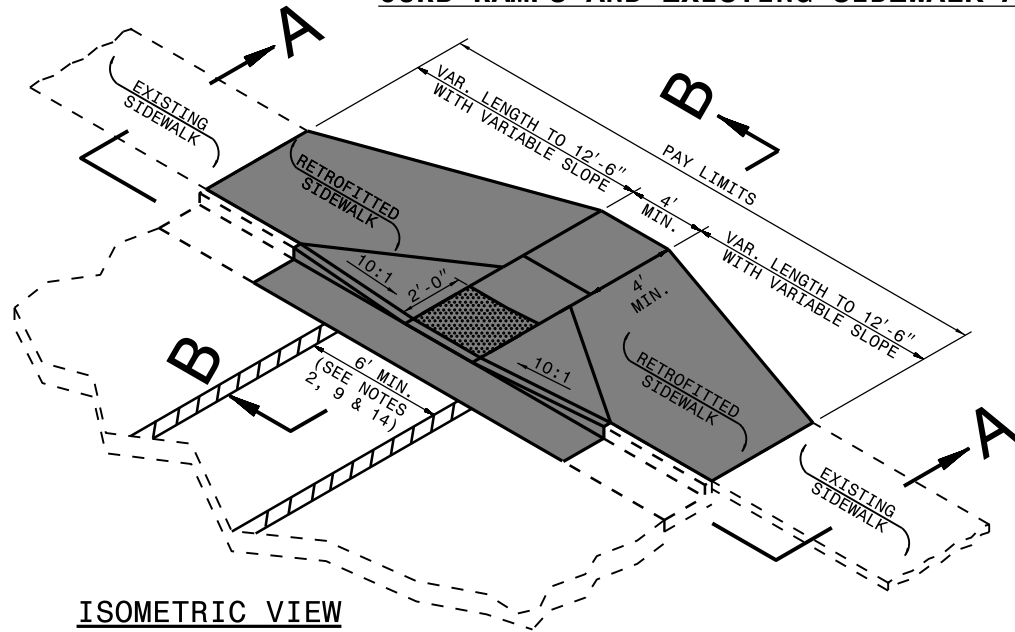
DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

1-18

ROADWAY STANDARD DRAWING FOR

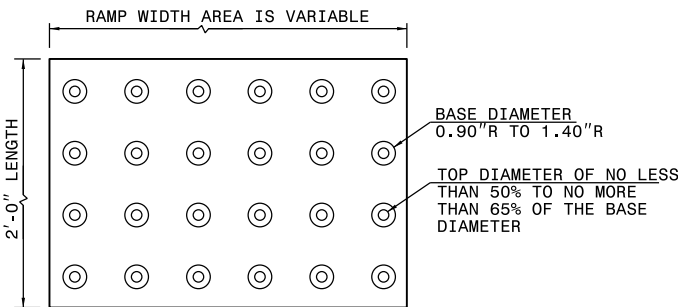
CURB RAMP
EXISTING CURB AND GUTTER

CURB RAMPS AND EXISTING SIDEWALK ADJACENT TO CURB



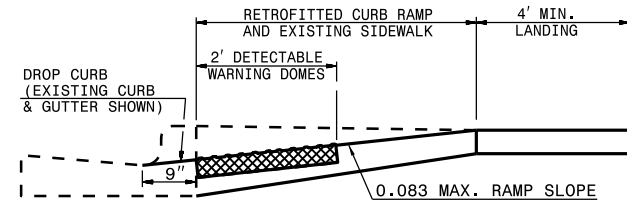
ISOMETRIC VIEW

PAY LIMITS OF CURB RAMP

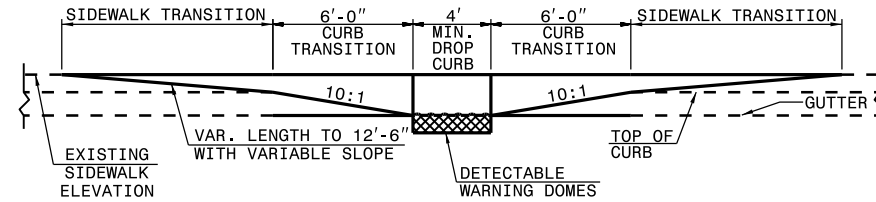


DETECTABLE WARNING DOMES

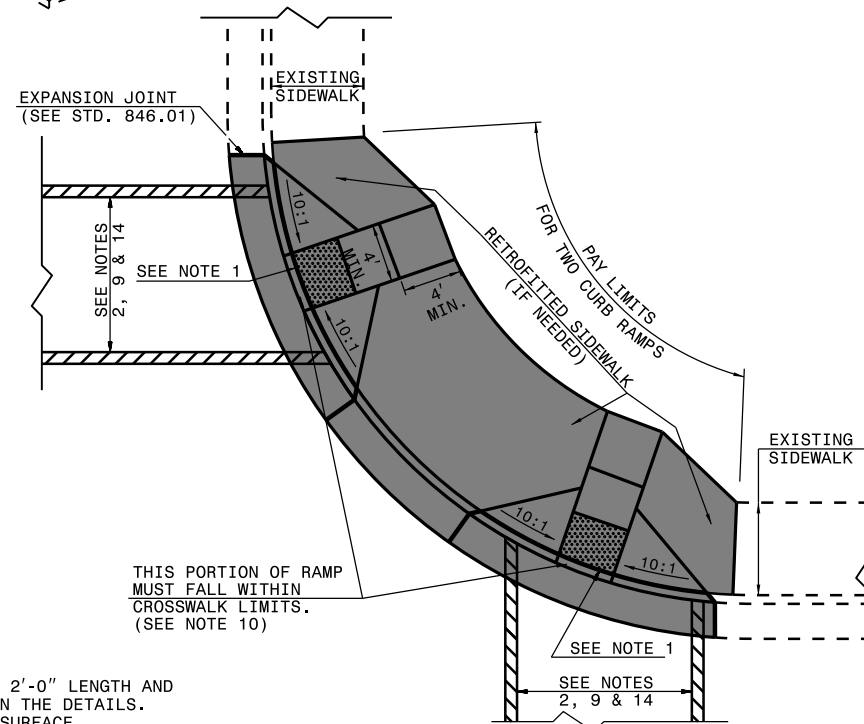
- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
 2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



SECTION B-B



SECTION A-A



PLAN VIEW

DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

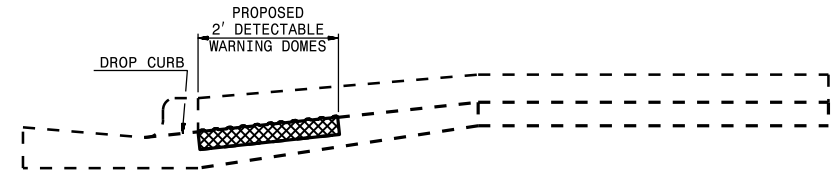
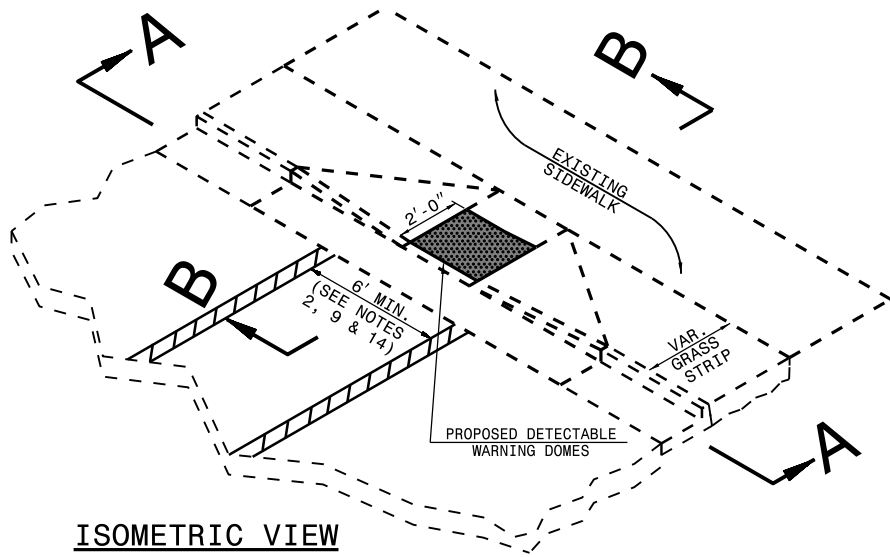
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ROADWAY STANDARD DRAWING FOR

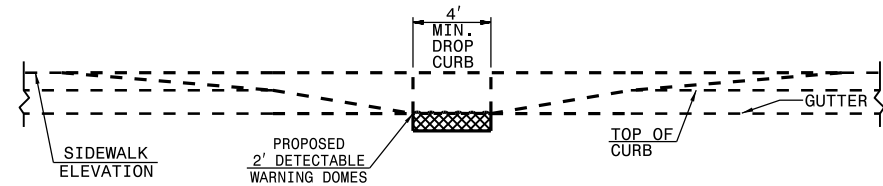
CURB RAMP

EXISTING CURB AND GUTTER

RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING CURB RAMP

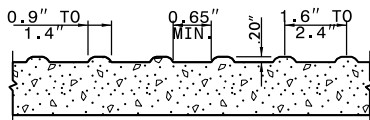
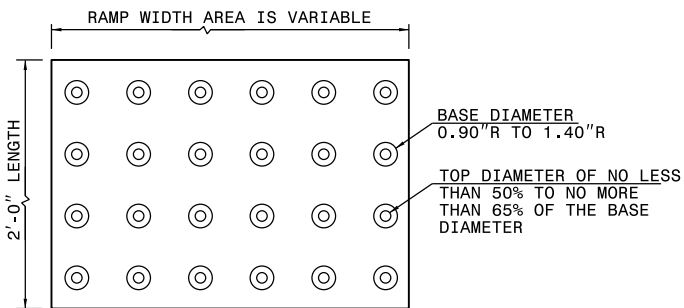


SECTION B-B

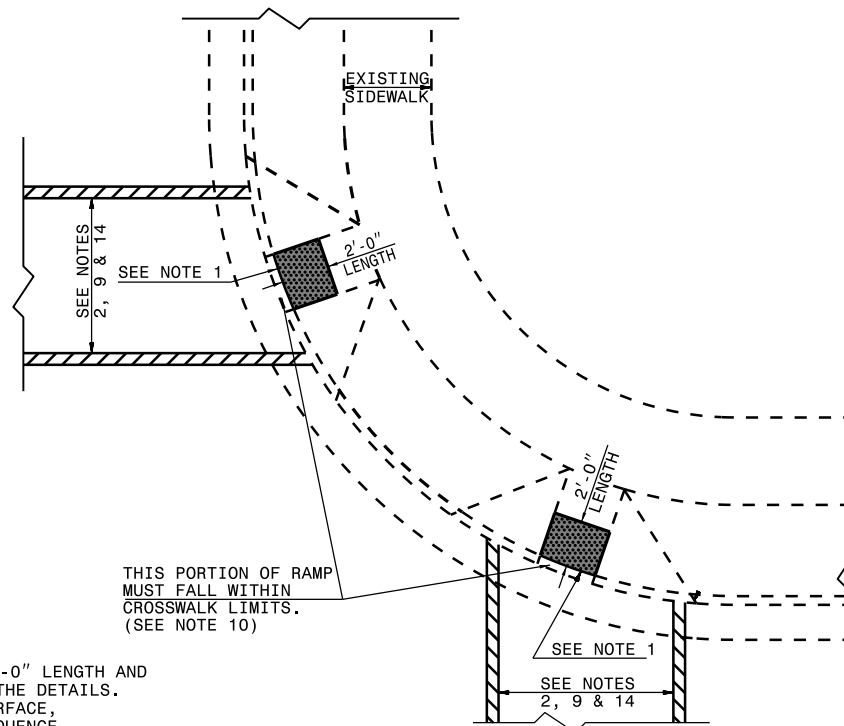


SECTION A-A

PAY LIMITS OF RETROFIT CURB RAMP



DETECTABLE WARNING DOMES



PLAN VIEW

DUAL RAMPS
ANY RADII
(40" MIN. FLOOR WIDTH)

ROADWAY STANDARD DRAWING FOR

CURB RAMP

EXISTING CURB AND GUTTER

1-18

STATE OF

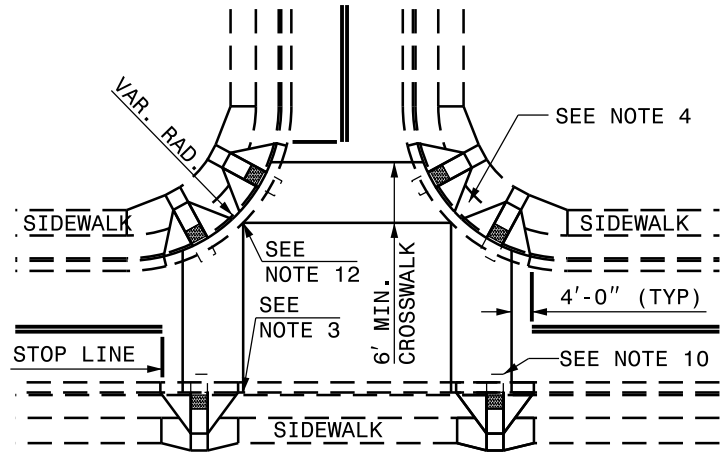
NORTH CAROLINA

DEPT. OF TRANSPORTATION

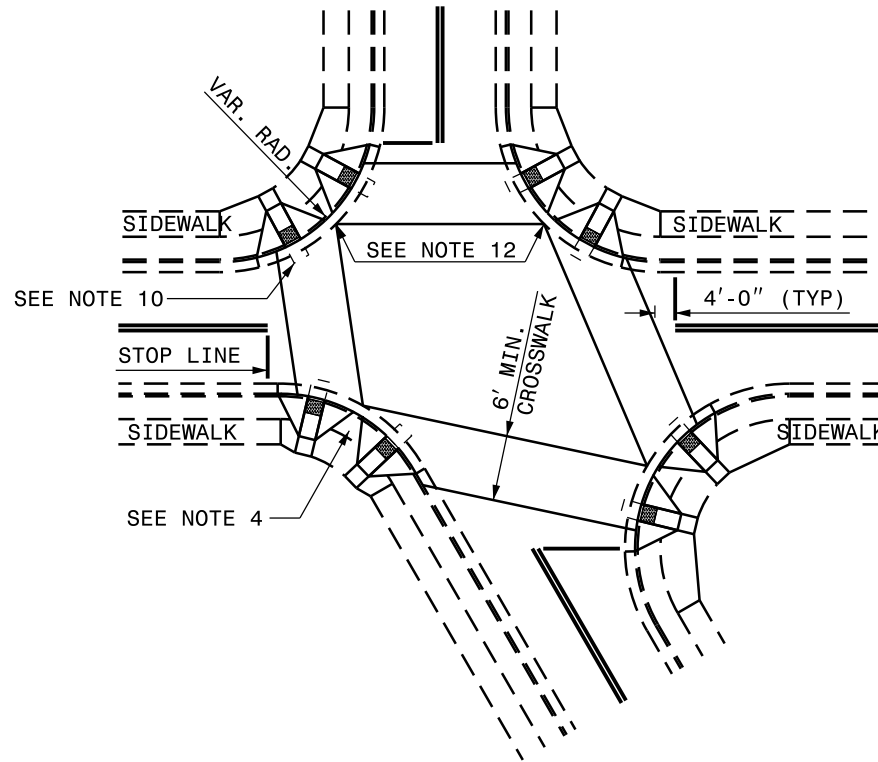
DIVISION OF HIGHWAYS

RALEIGH, N.C.

CURB RAMPS AND EXISTING SIDEWALK

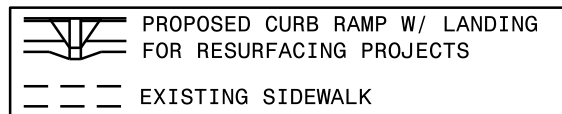


DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

RESURFACING PROJECTS



ALLOWABLE LOCATIONS
 DUAL RAMP RADII.....ANY

CURB RAMP AND EXISTING SIDEWALK

NOTES:

1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

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ROADWAY STANDARD DRAWING FOR

CURB RAMP

EXISTING CURB AND GUTTER

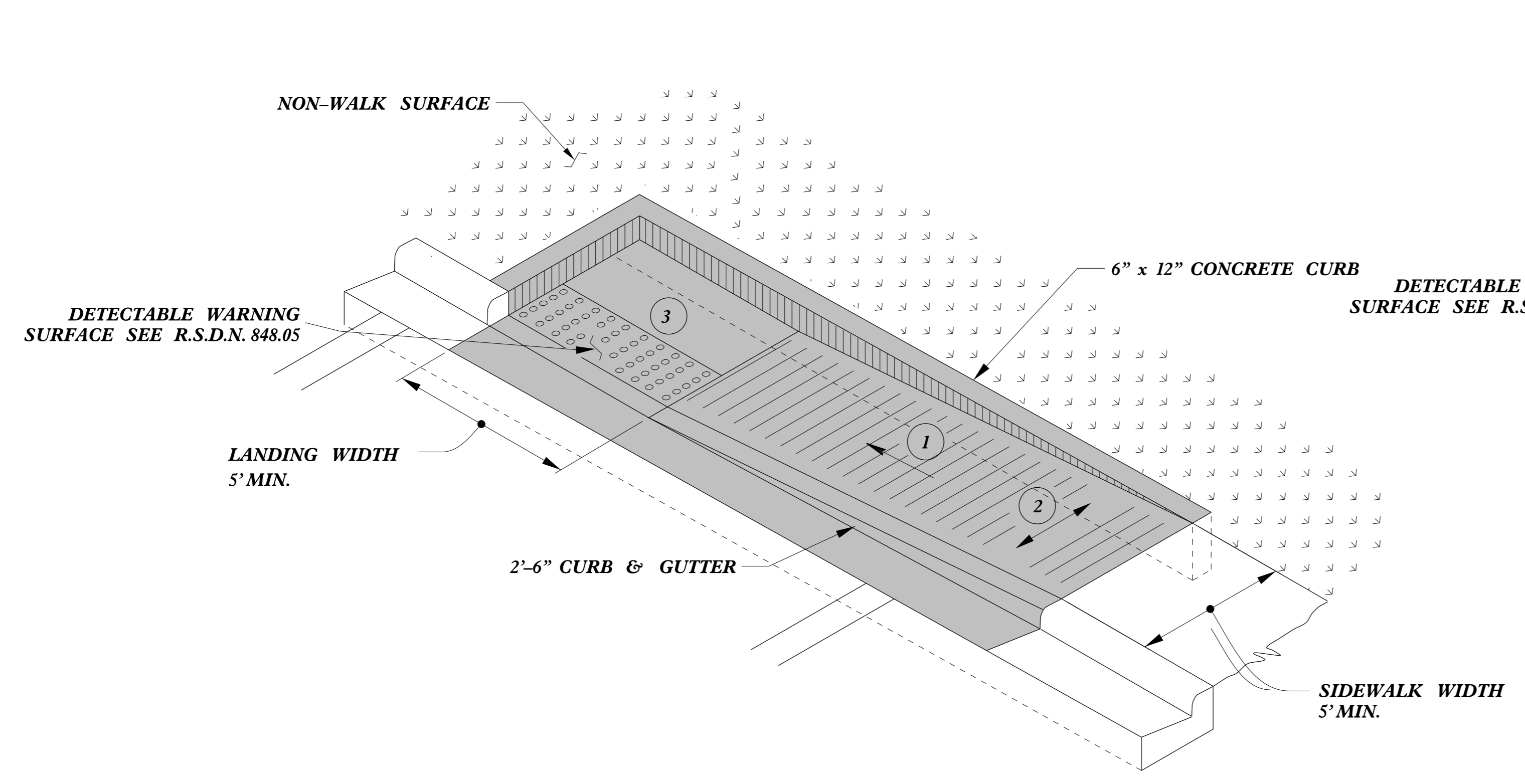
STATE OF

NORTH CAROLINA

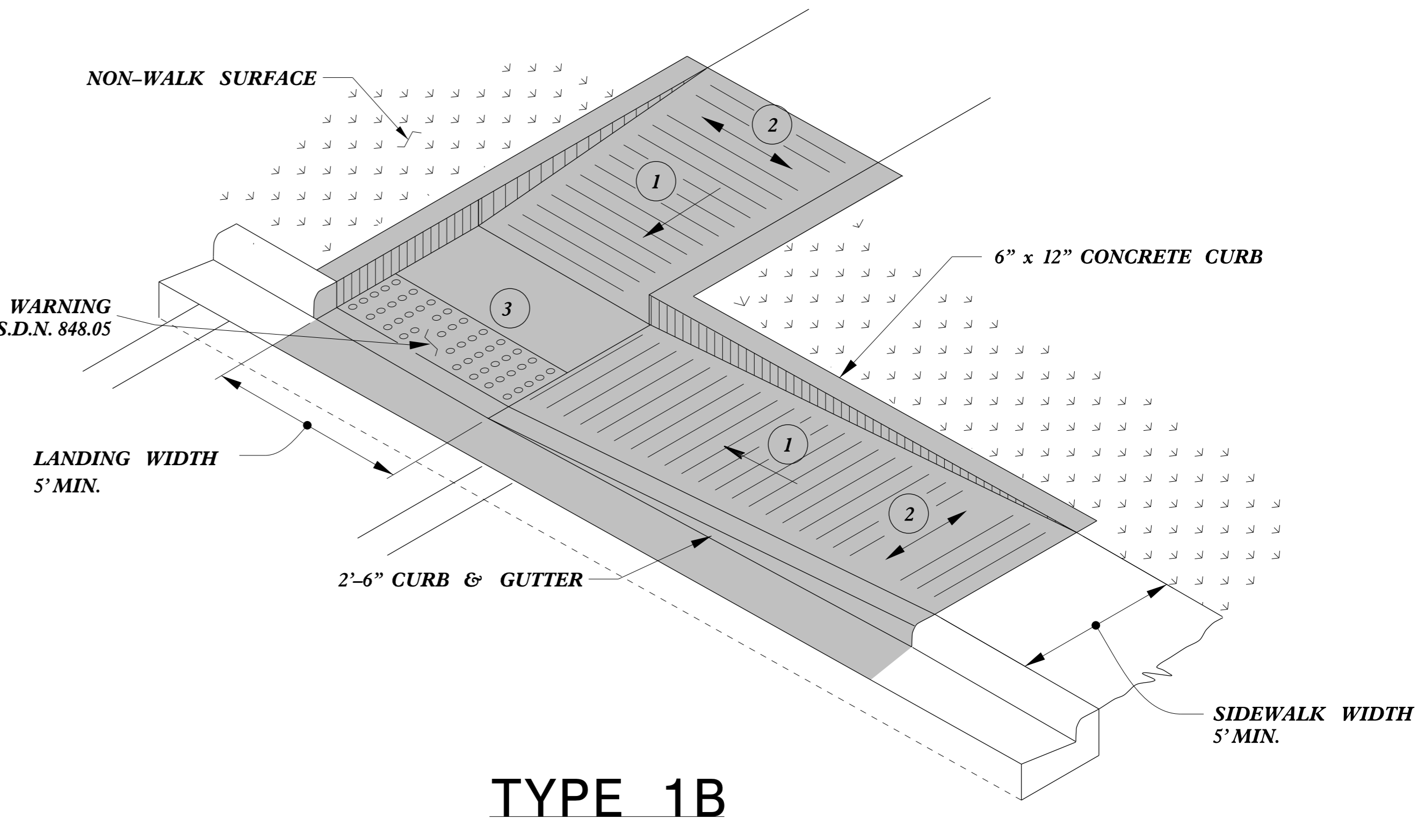
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

RALEIGH, N.C.

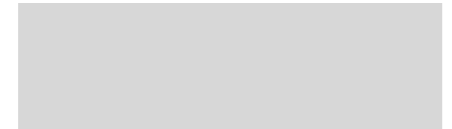
5/14/99



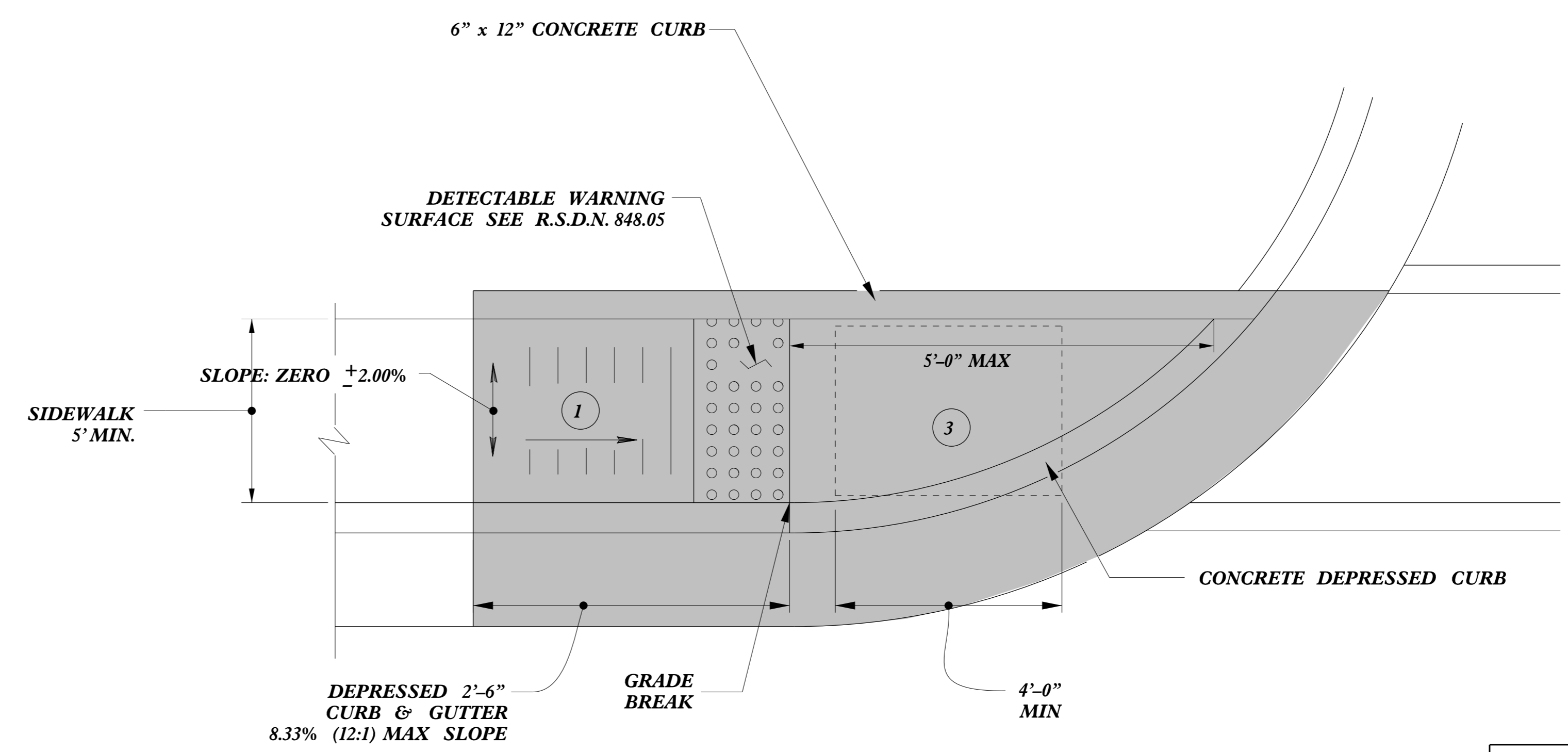
TYPE 1A



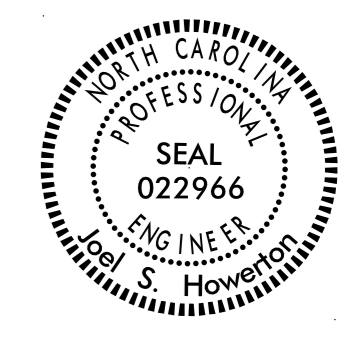
TYPE 1B

 PAY LIMITS FOR 1 CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 1



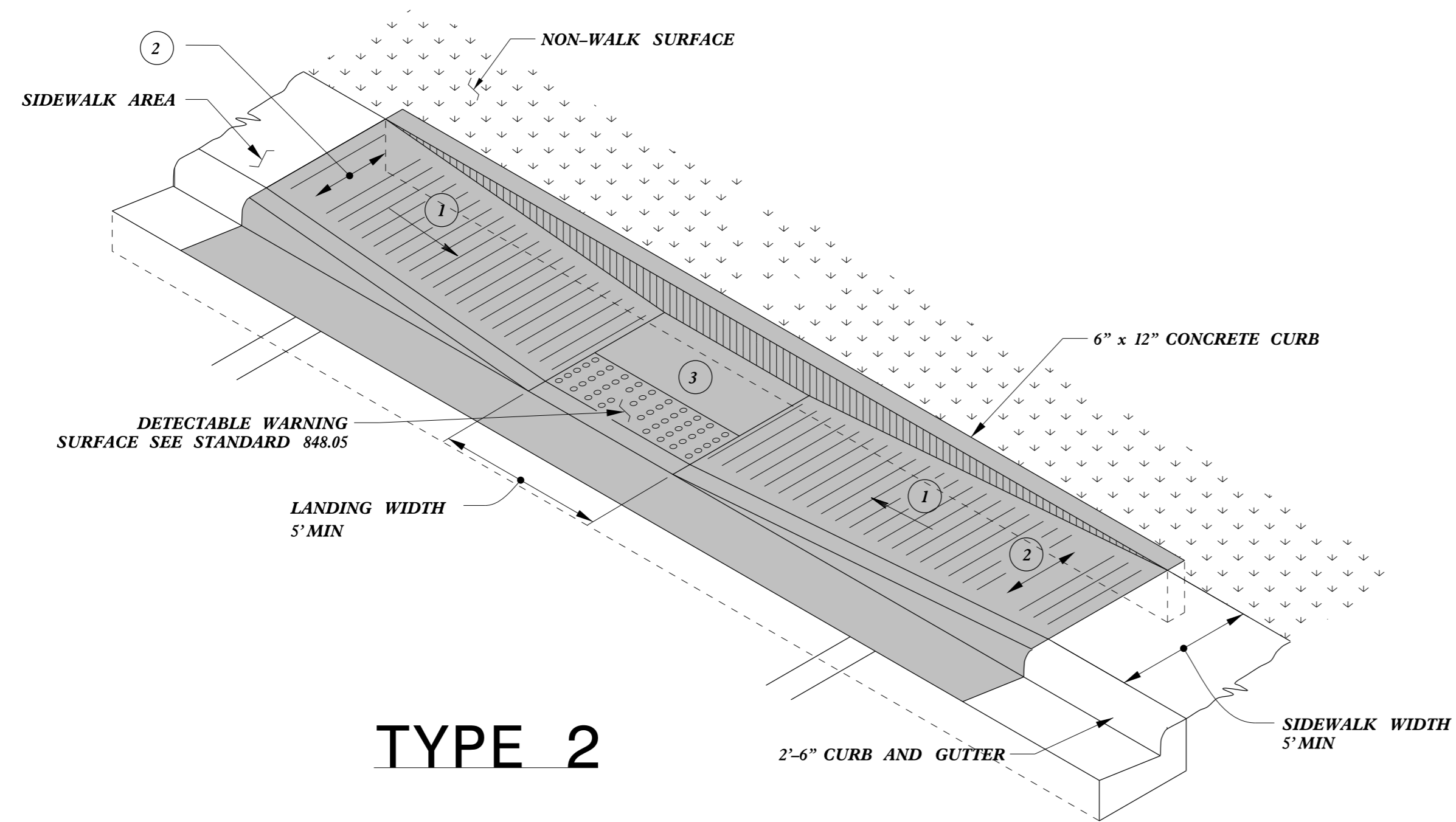
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS
Directional Ramps

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn

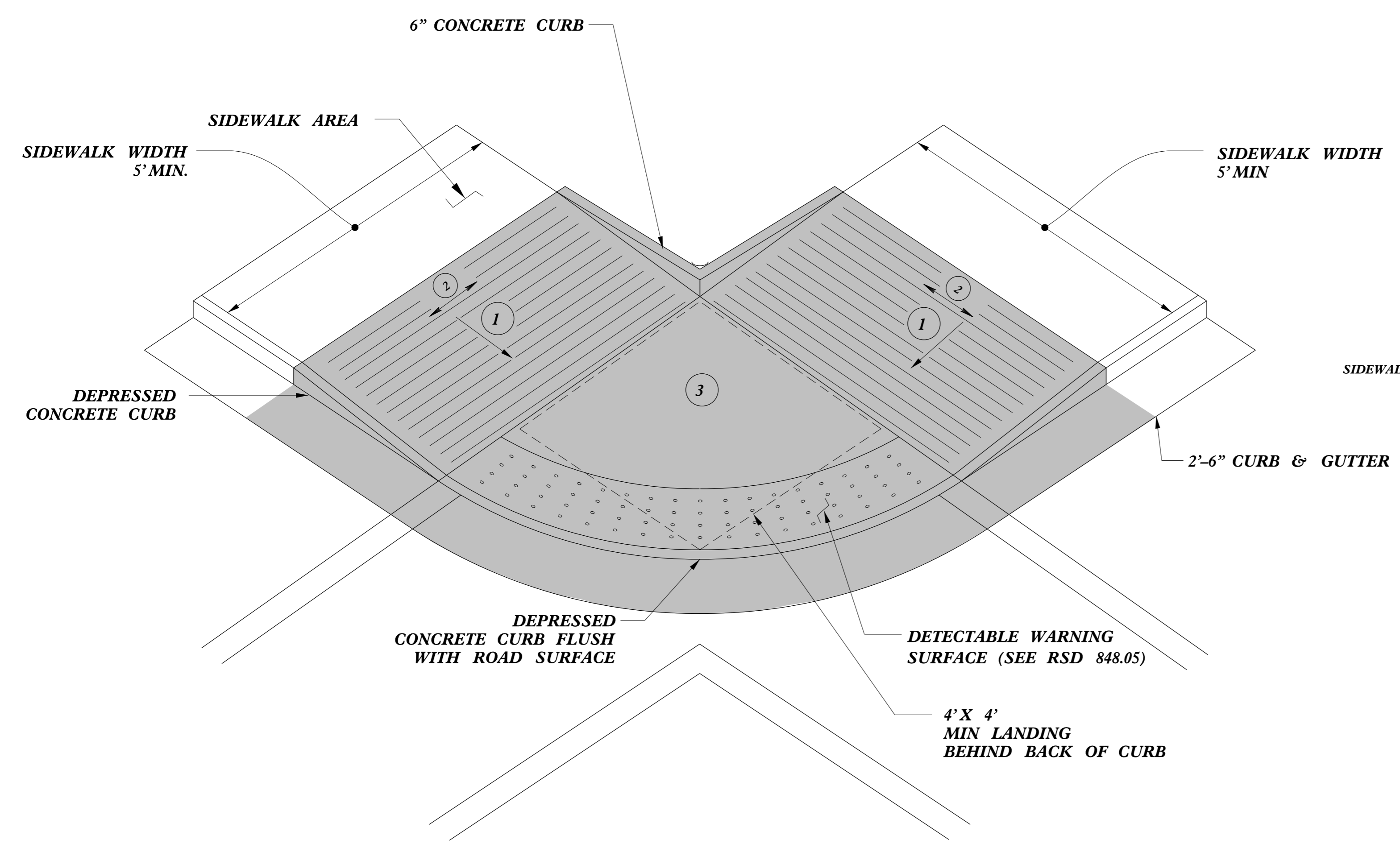
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES



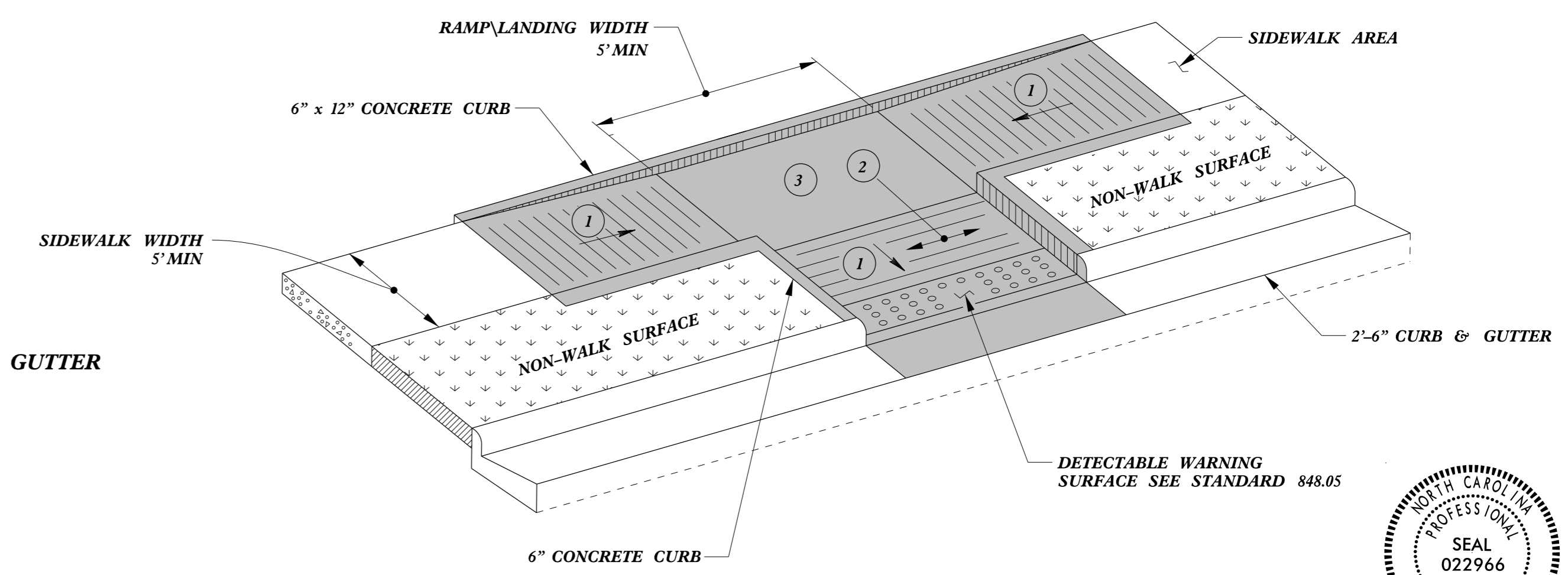
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

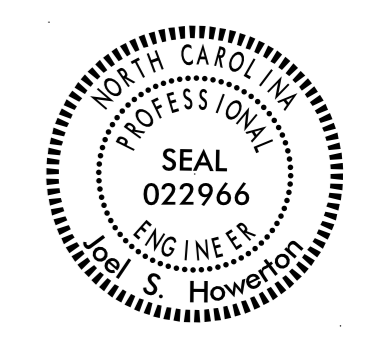
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



TYPE 2A



TYPE 3

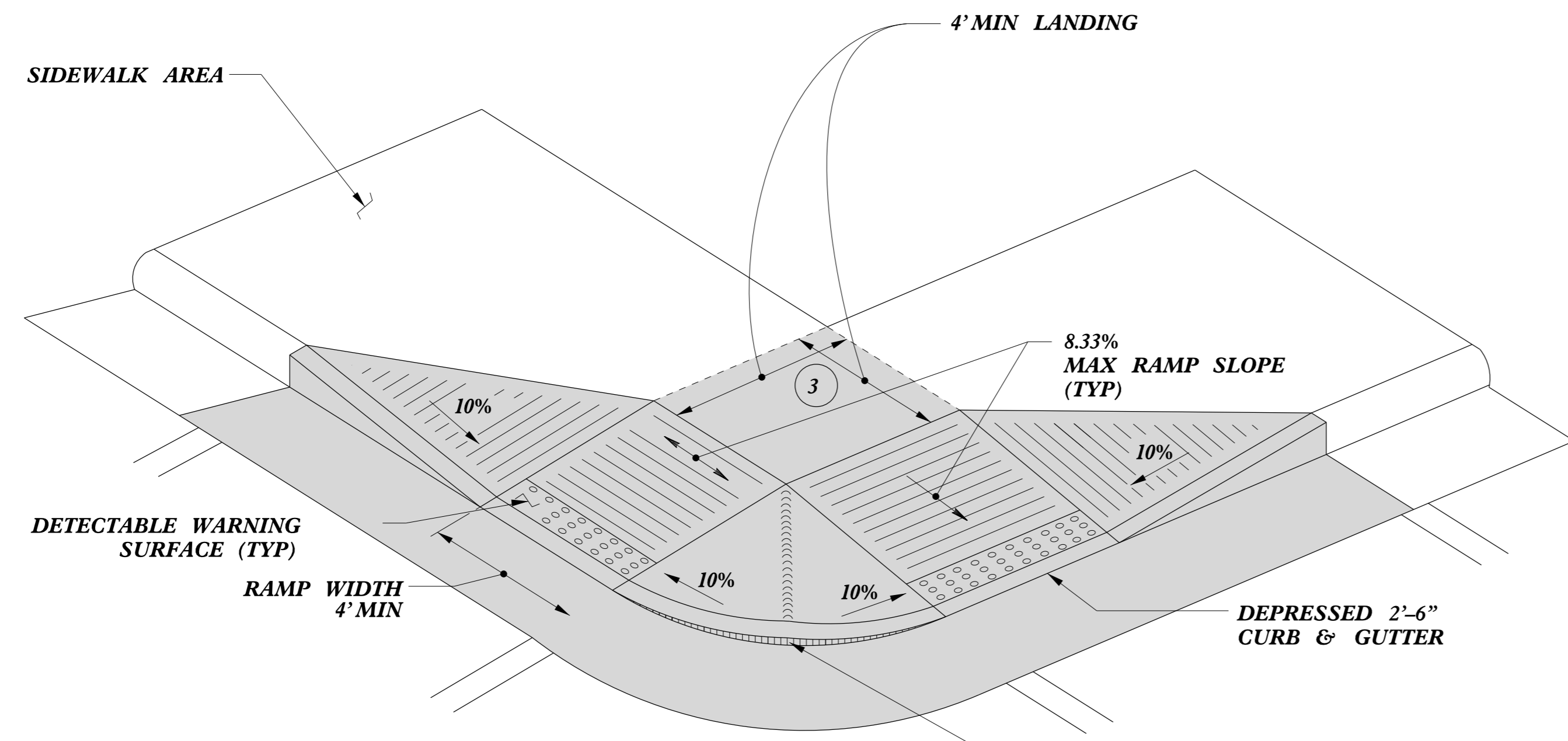


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

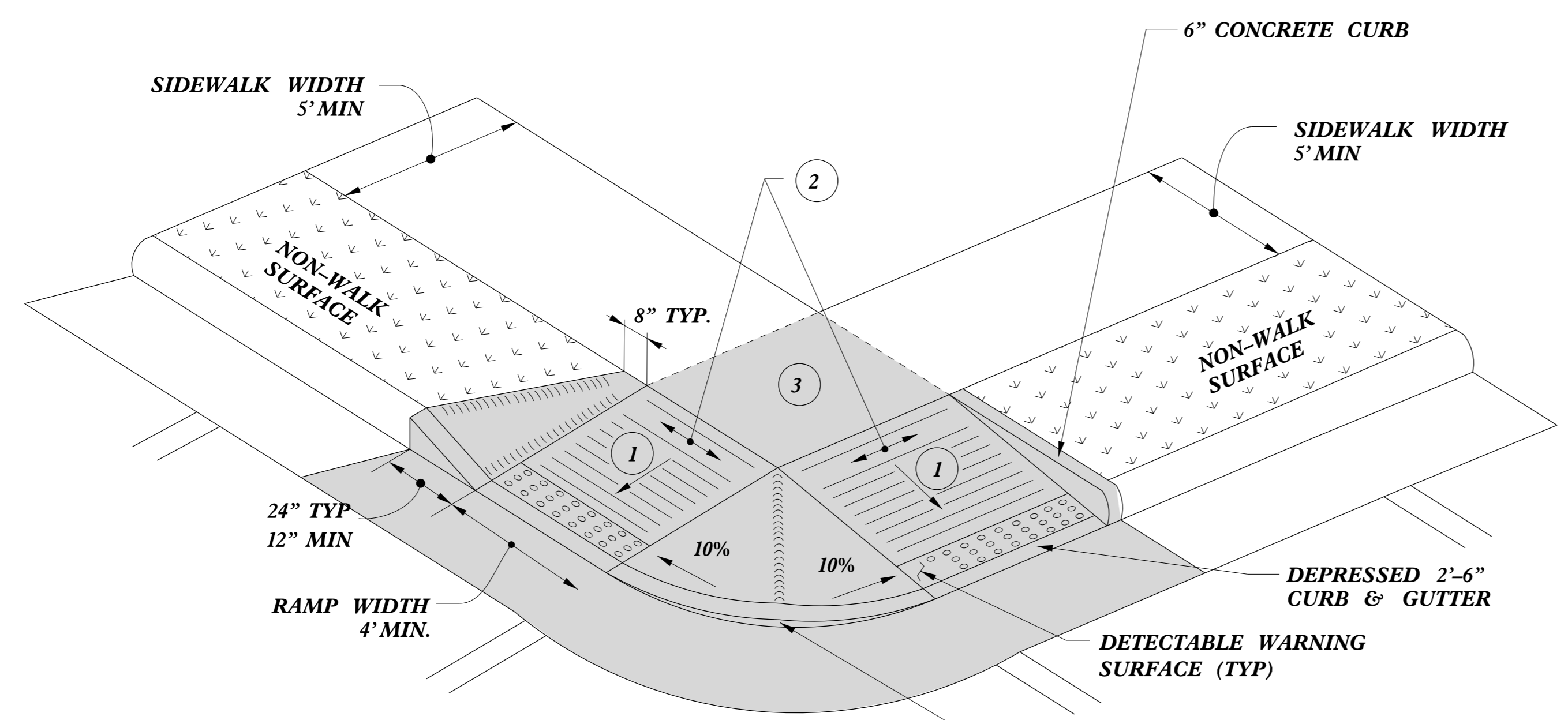
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC. :stds/2012CurbRamp/CurbRampDetails.dgn	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

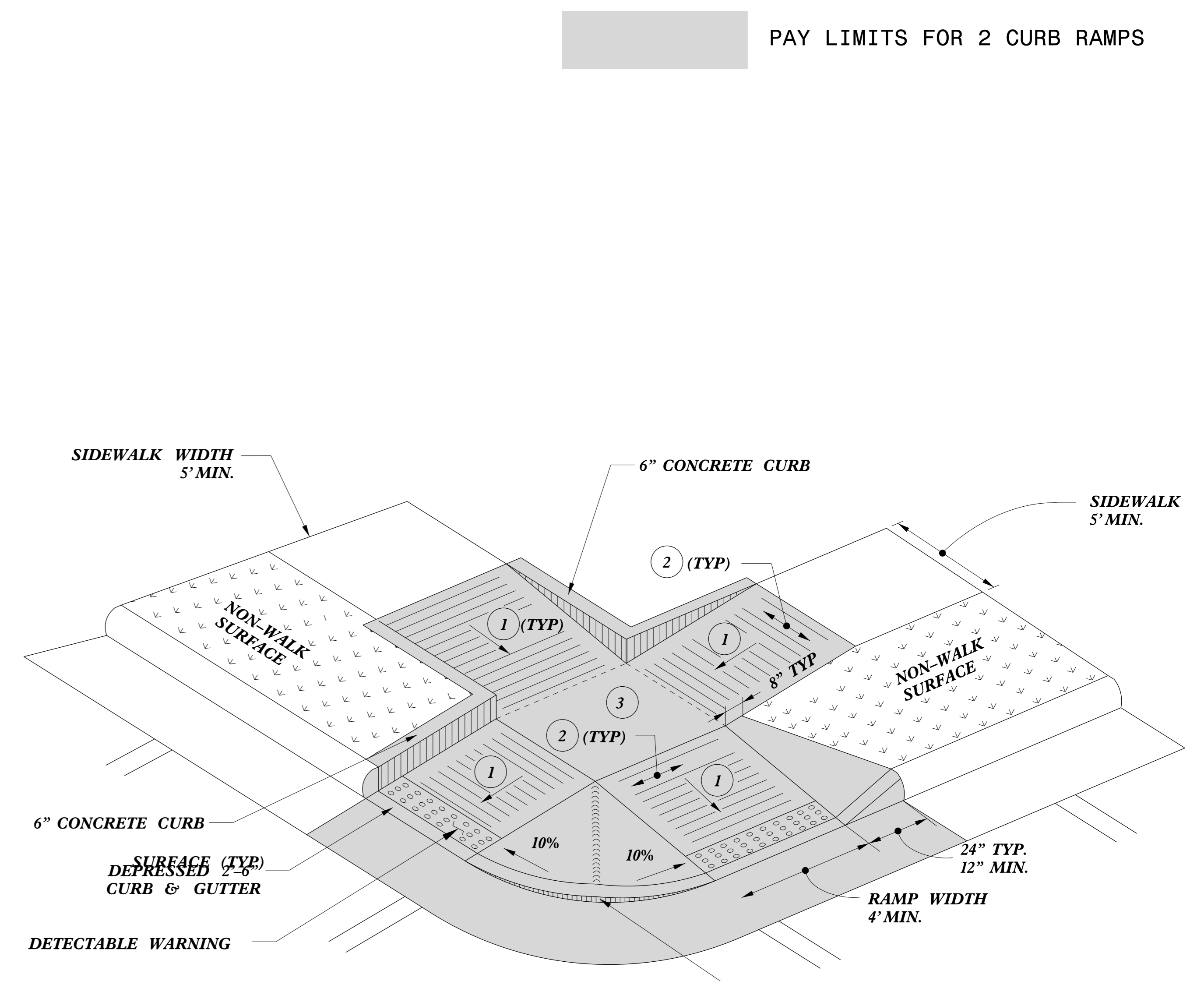
5/14/99
C:\ME\DWG\CON\CON\USER\NAME.DWG



TYPE 4



TYPE 4A



TYPE 5

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR 2 CURB RAMPS



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CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Shared Landing	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99
C:\TIME\STDS\CON\STDS\USER\NAME