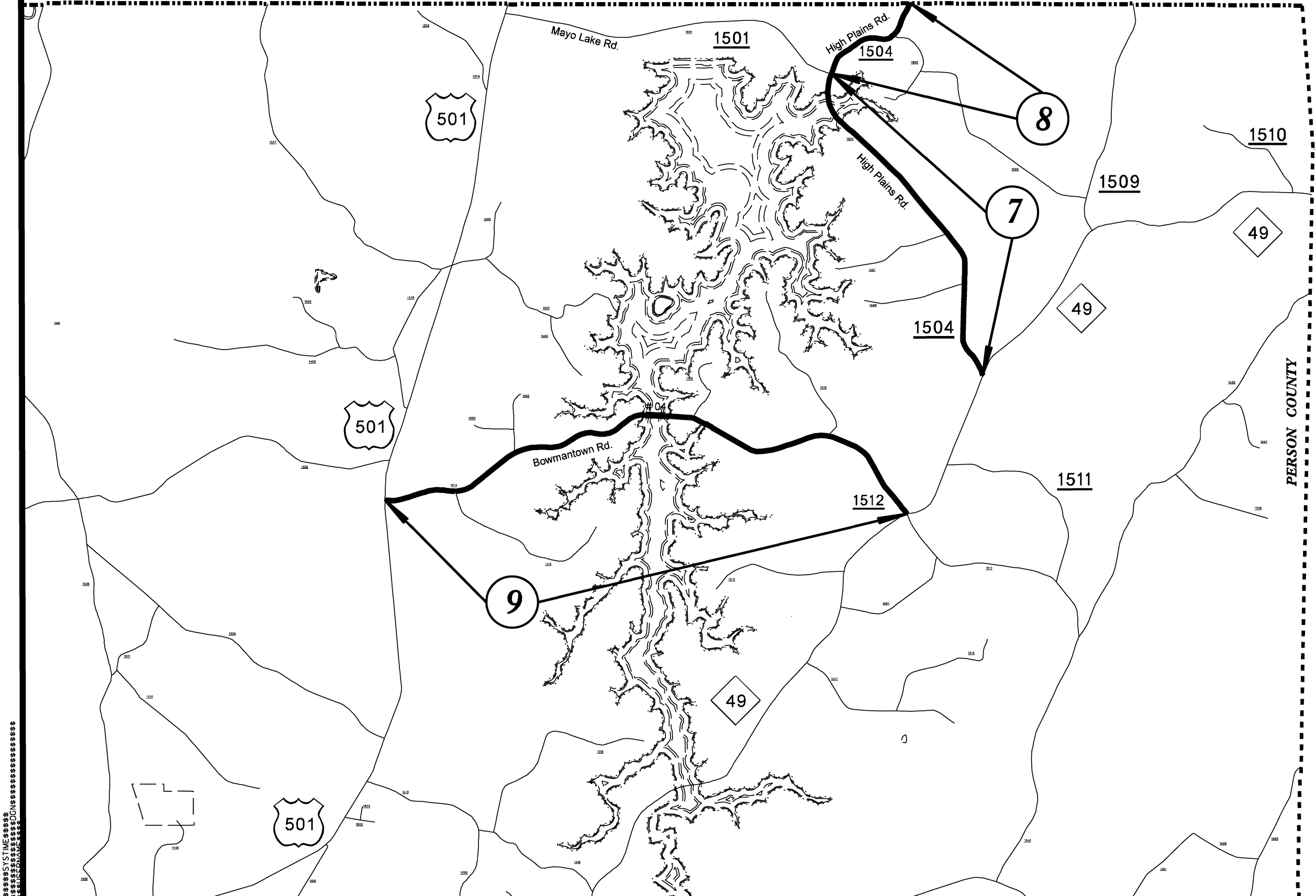


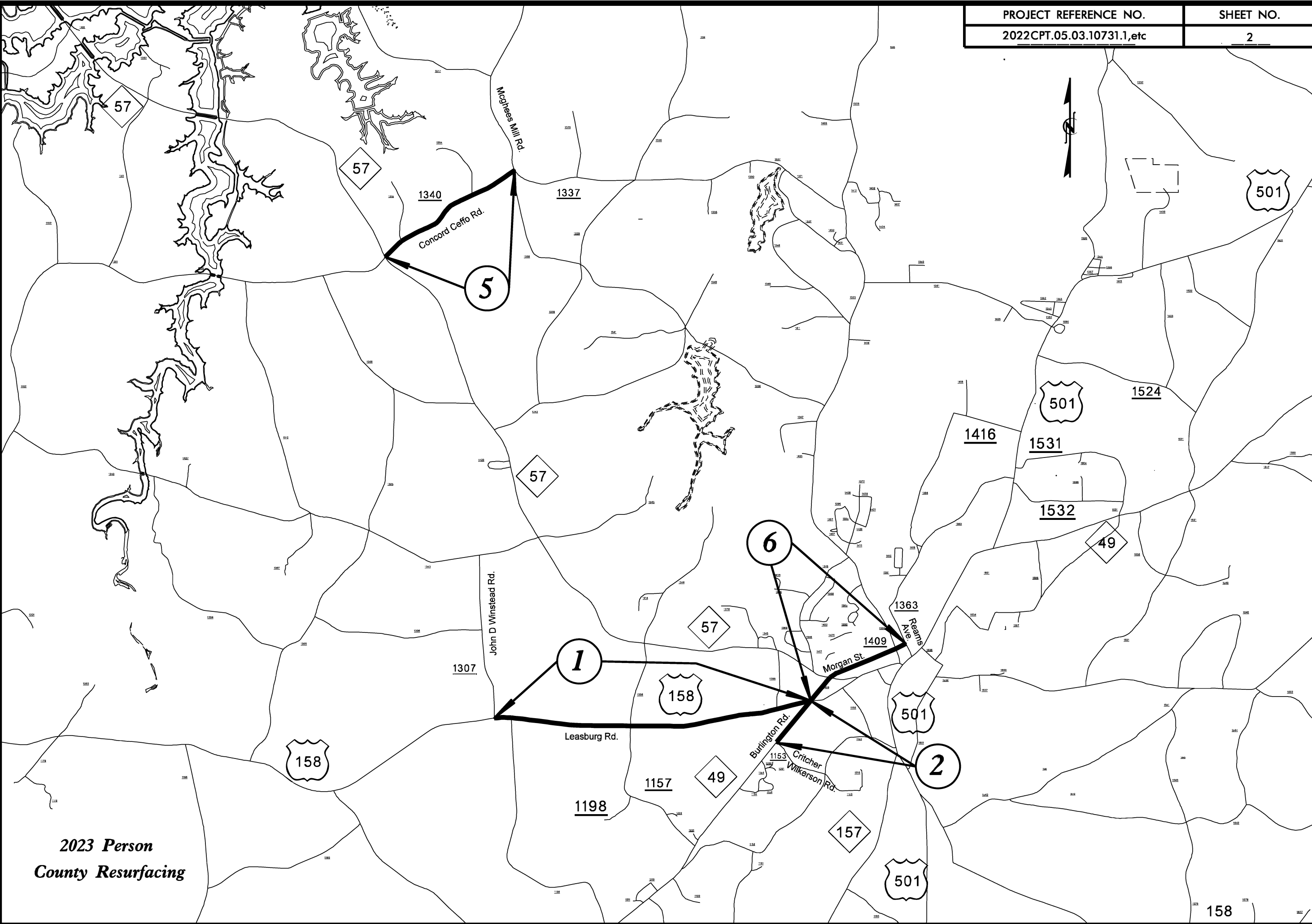
5/14/99

VIRGINIA



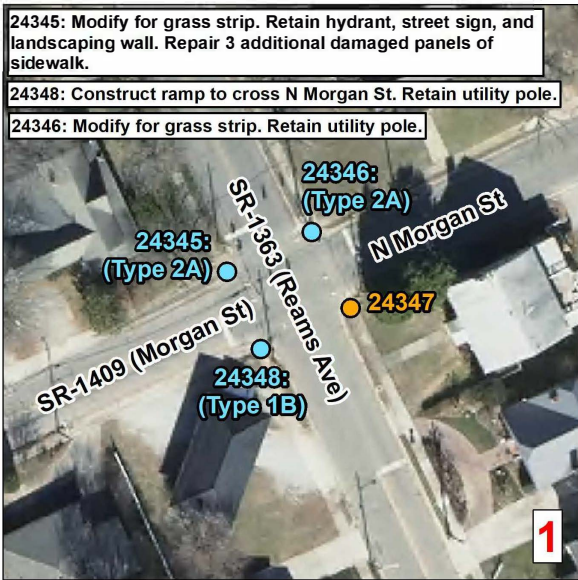
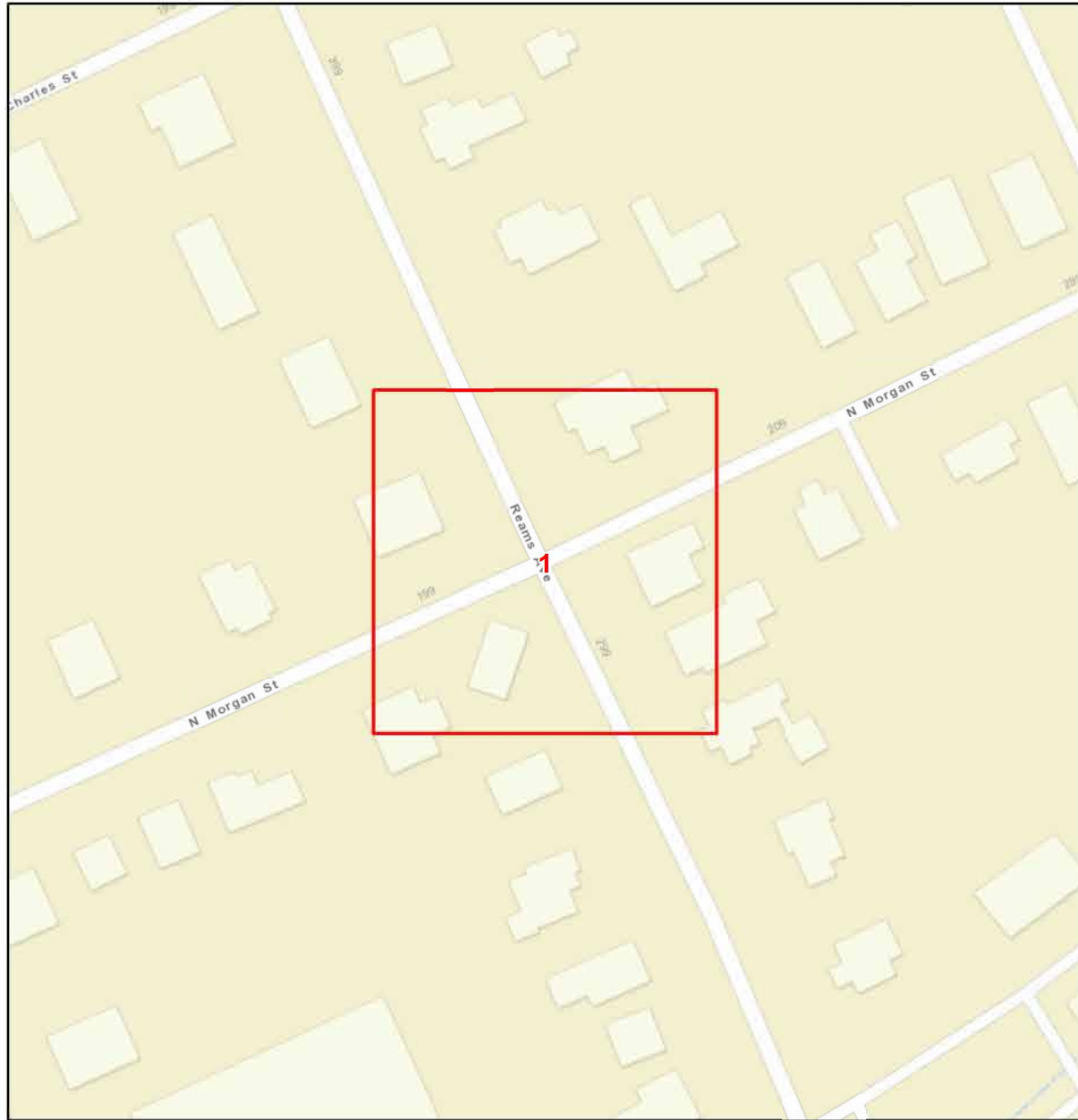
*****SYSTEMS*****
*****SUNBELT*****
*****SUNBELT*****

**2023 Person
County Resurfacing**



2023 Person
County Resurfacing

5/14/23
SYSTEMATICALLY
DRAWN
BY
DANIEL
WILKINSON



24345: Modify for grass strip. Retain hydrant, street sign, and landscaping wall. Repair 3 additional damaged panels of sidewalk.


24348: Construct ramp to cross N Morgan St. Retain utility pole.

24346: Modify for grass strip. Retain utility pole.

Curb Ramps To Be Repaired


- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary
 NCHPO Historic Boundary (NR and LHD)



2023 Person
WBS: 2022CPT.05.03.20731.1

Morgan St
From US 158 To SR 1363

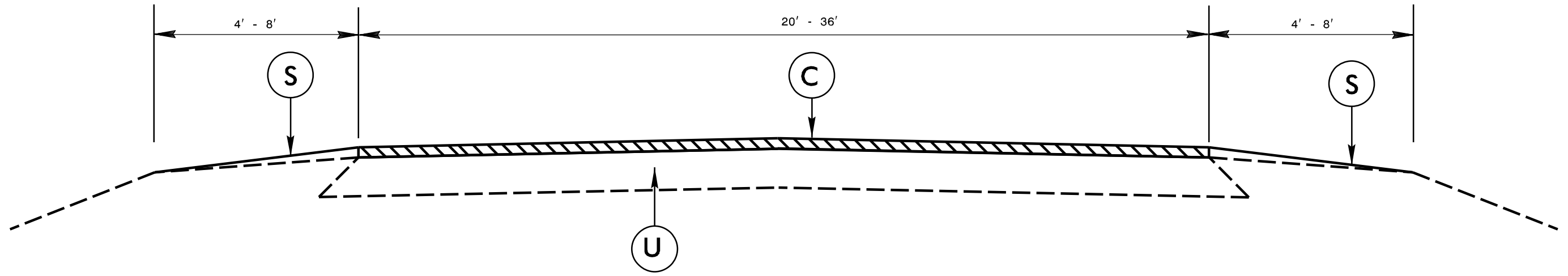


NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

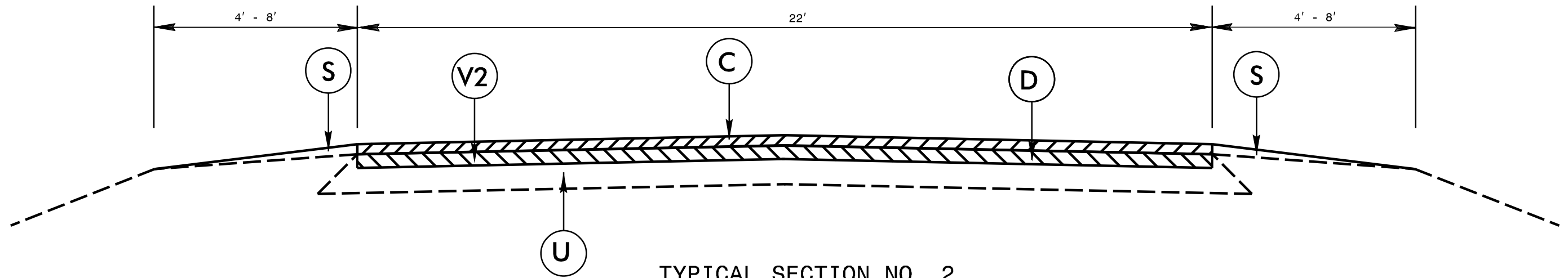
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO

PAVEMENT SCHEDULE

		U	EXISTING PAVEMENT
C	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	V1	1½" MILLING
D	2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	V2	2½" MILLING
S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)		



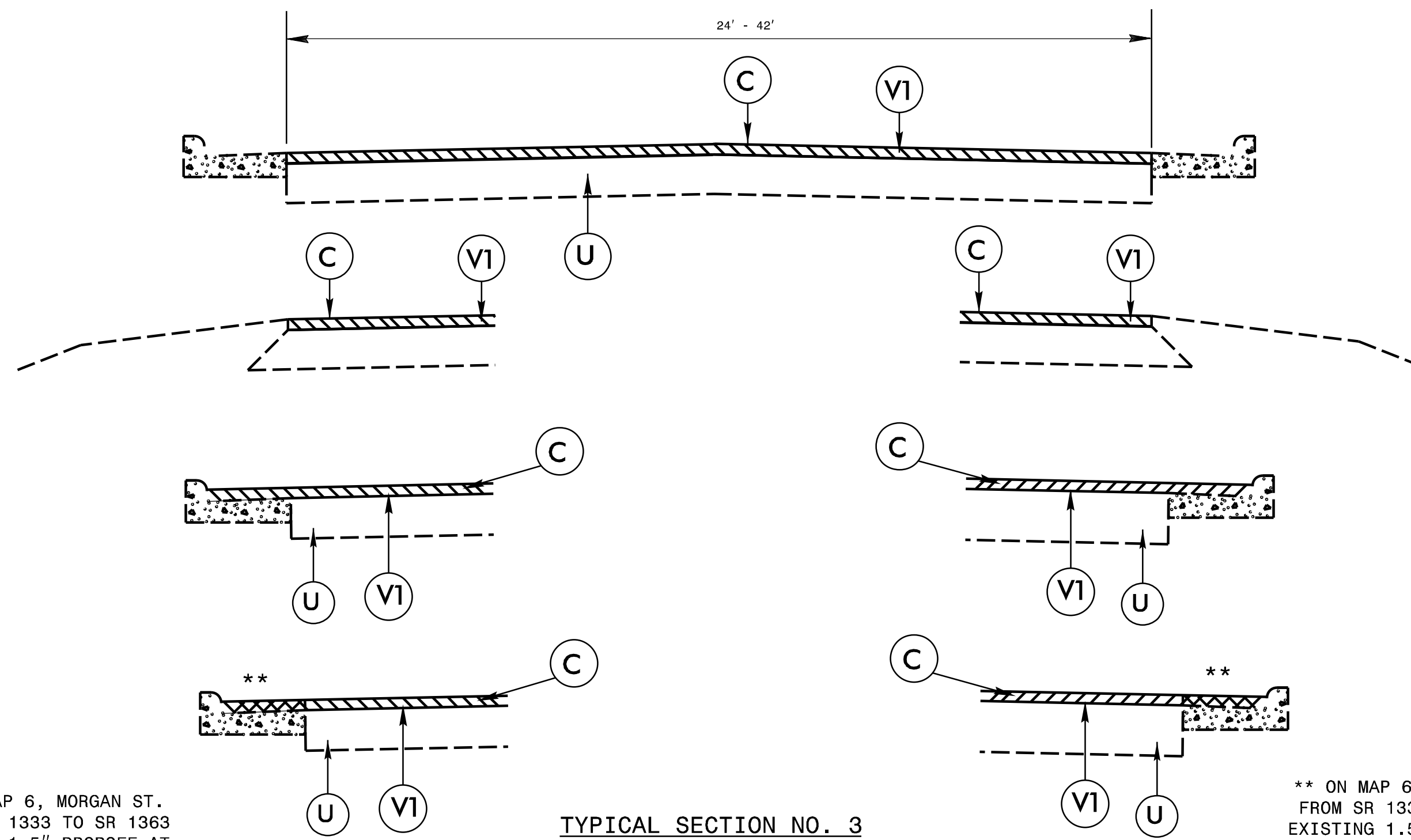
TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2

PAVEMENT SCHEDULE

	U	EXISTING PAVEMENT
C	V1	1½" MILLING
D	V2	2½" MILLING
S		SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)



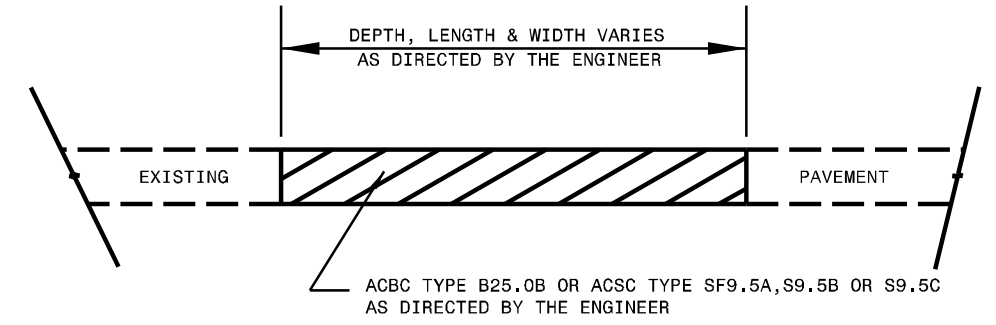
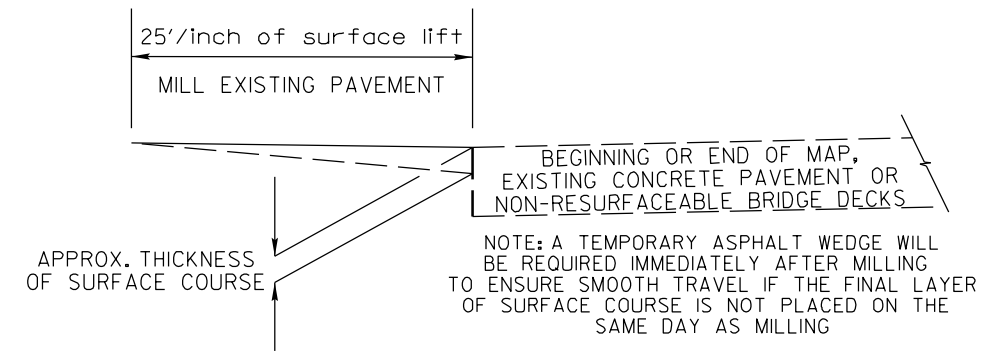
TYPICAL SECTION NO. 3

** ON MAP 6, MORGAN ST.
FROM SR 1333 TO SR 1363
EXISTING 1.5" DROPOFF AT
THE EDGE OF GUTTER. MILL
AND PAVE INTO GUTTER TO
REMOVE DROP OFF.

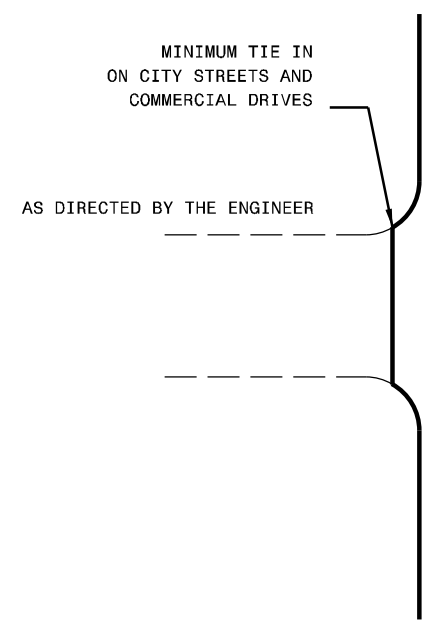
** ON MAP 6, MORGAN ST.
FROM SR 1333 TO SR 1363
EXISTING 1.5" DROPOFF AT
THE EDGE OF GUTTER. MILL
AND PAVE INTO GUTTER TO
REMOVE DROP OFF.

NOTES

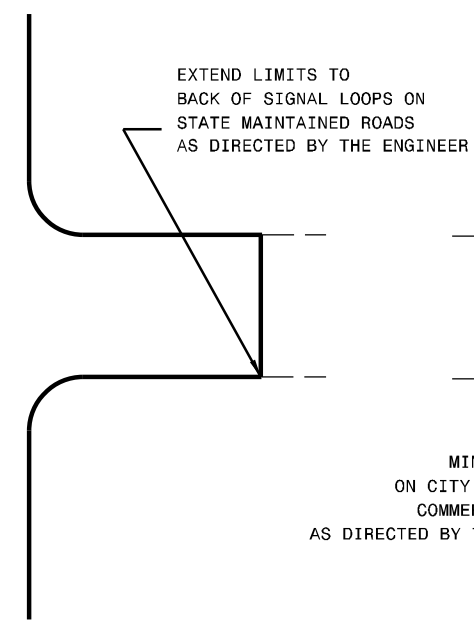
ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT
 ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
 EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
 BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.



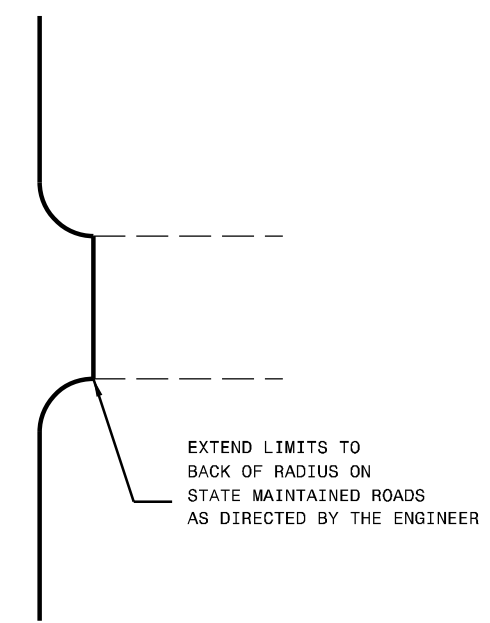
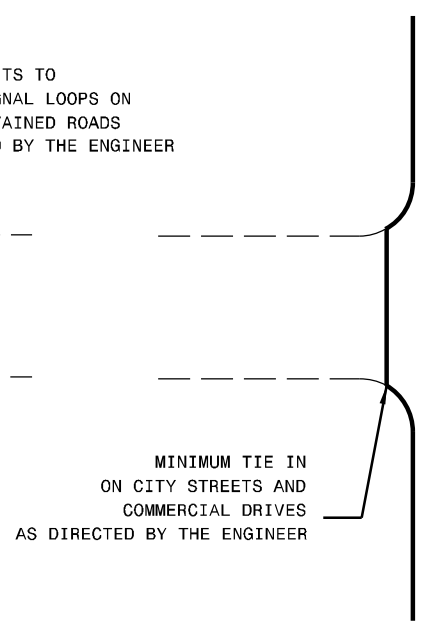
PATCHING EXISTING PAVEMENT
 PATCHING TO BE PERFORMED PRIOR TO MILL AND FILL OPERATION



DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

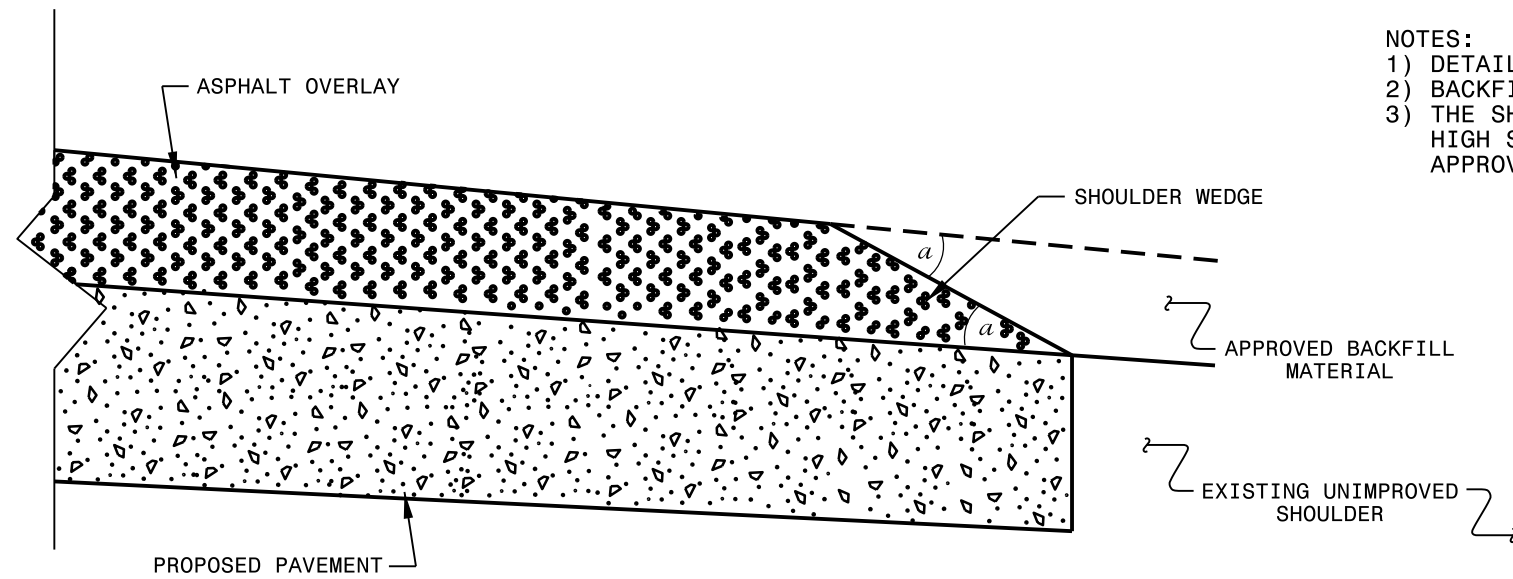


DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES



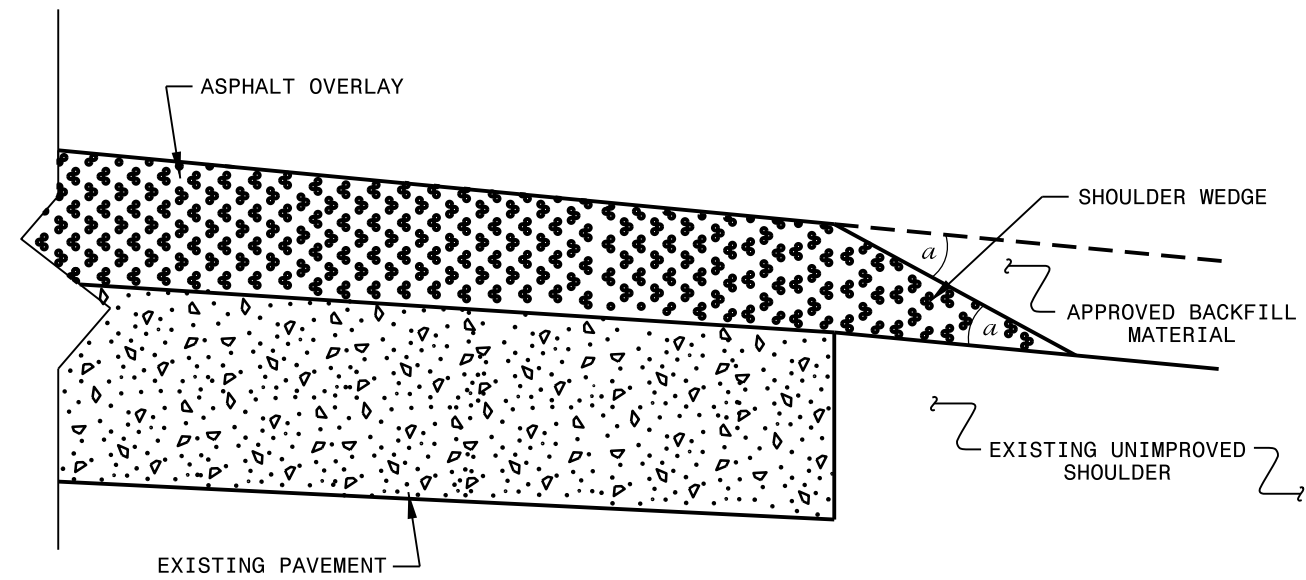
NOTES:

- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



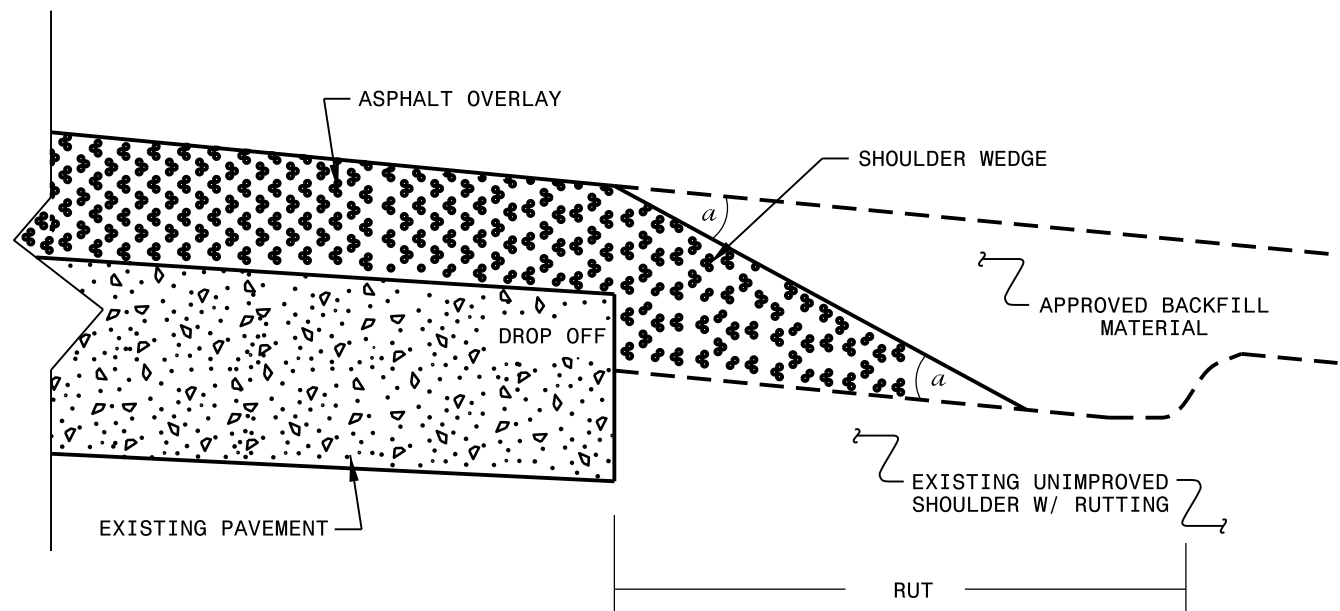
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)

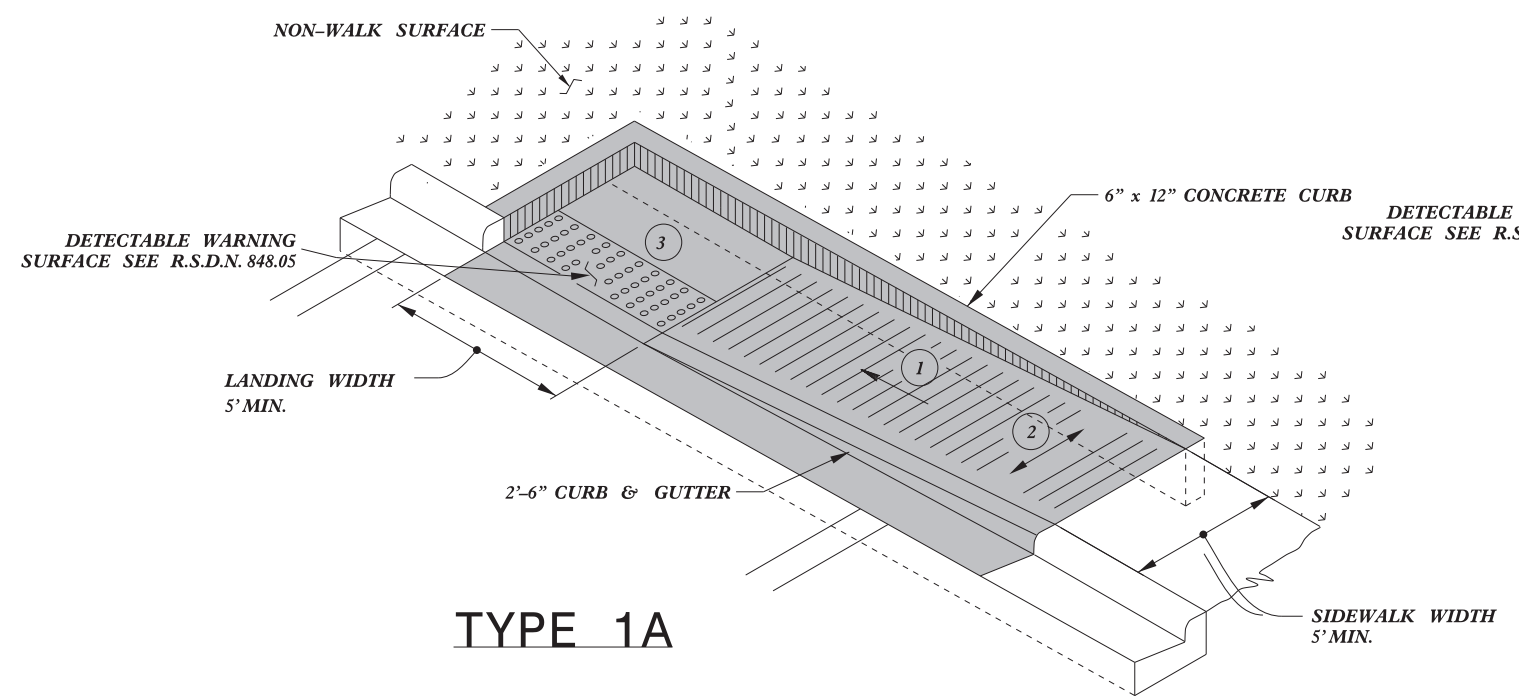


SHOULDER WEDGE DETAIL

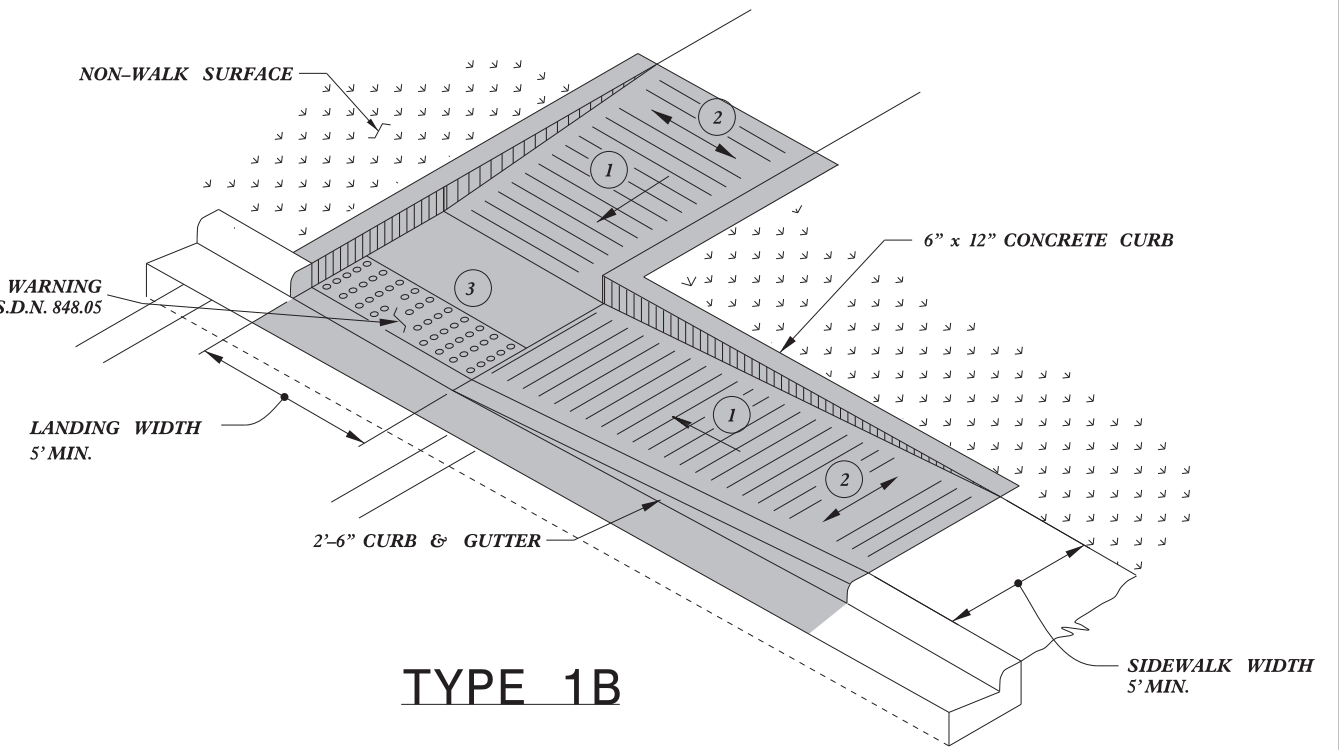
(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

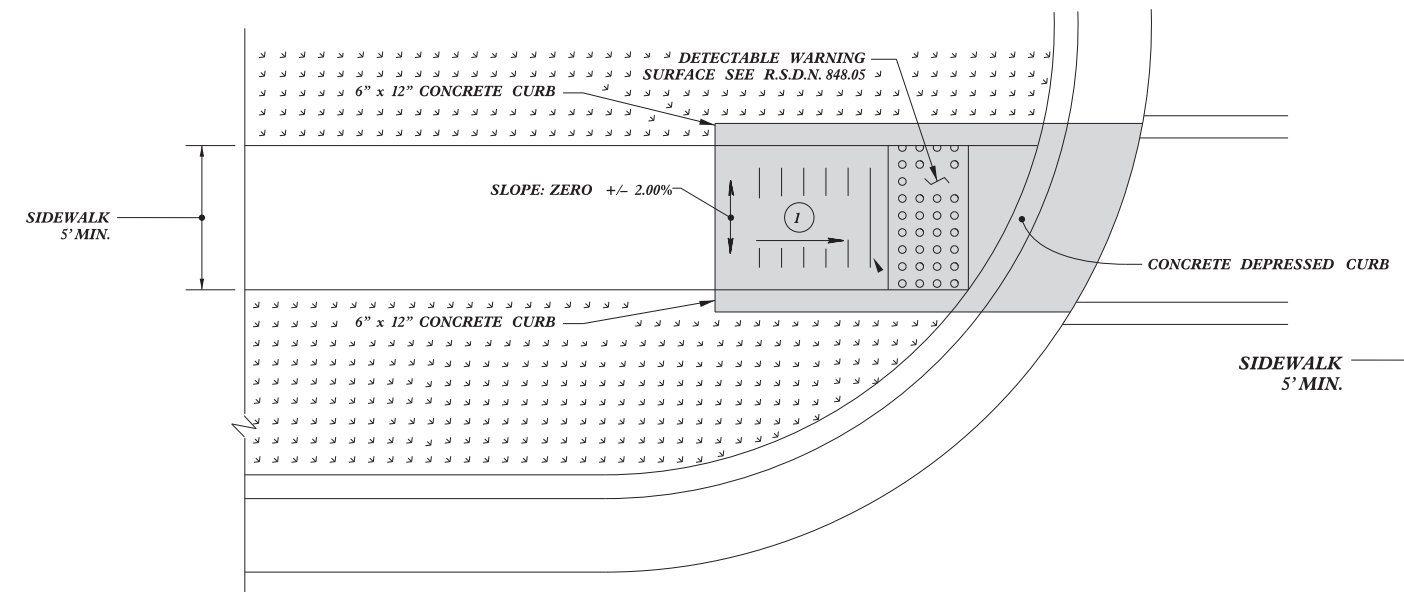
CONTRACT STANDARDS AND DEVELOPMENT UNIT		
Office 919-707-6950 FAX 919-250-4119		
SHOULDER WEDGE DETAILS		
ORIGINAL BY: T.SPELL	DATE: 7-19-11	
MODIFIED BY:	DATE: 2/2/16	
CHECKED BY:	DATE:	
FILE SPEC.: szusr/details/stand/shoulderwedgedetail.dgn		



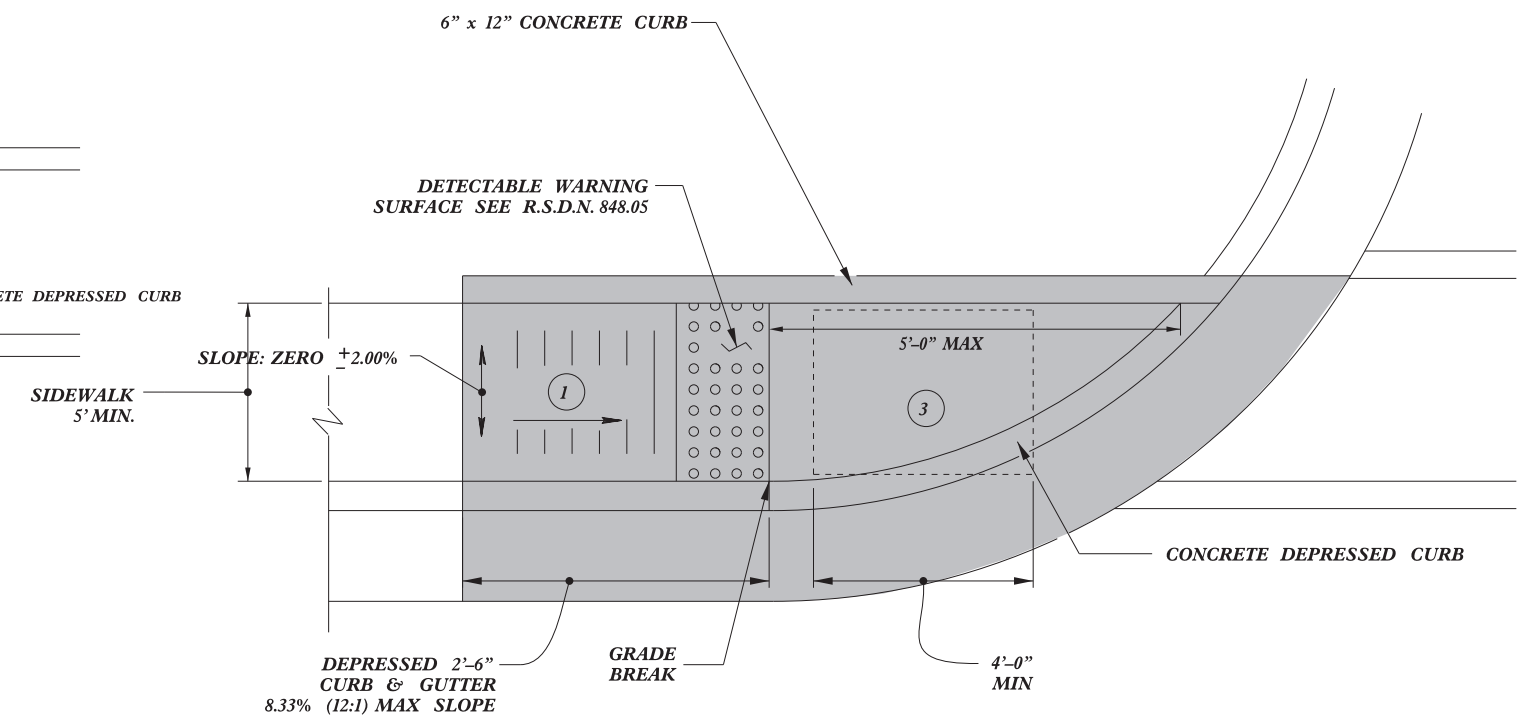
TYPE 1A



TYPE 1B



TYPE 1 Modified



TYPE 1

- 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 1 CURB RAMP

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

1/8/2020
 Signed by: *J.S. Howerton*
 J.S. HOWERTON
 PROFESSIONAL ENGINEER
 SEAL 022966
 NORTH CAROLINA

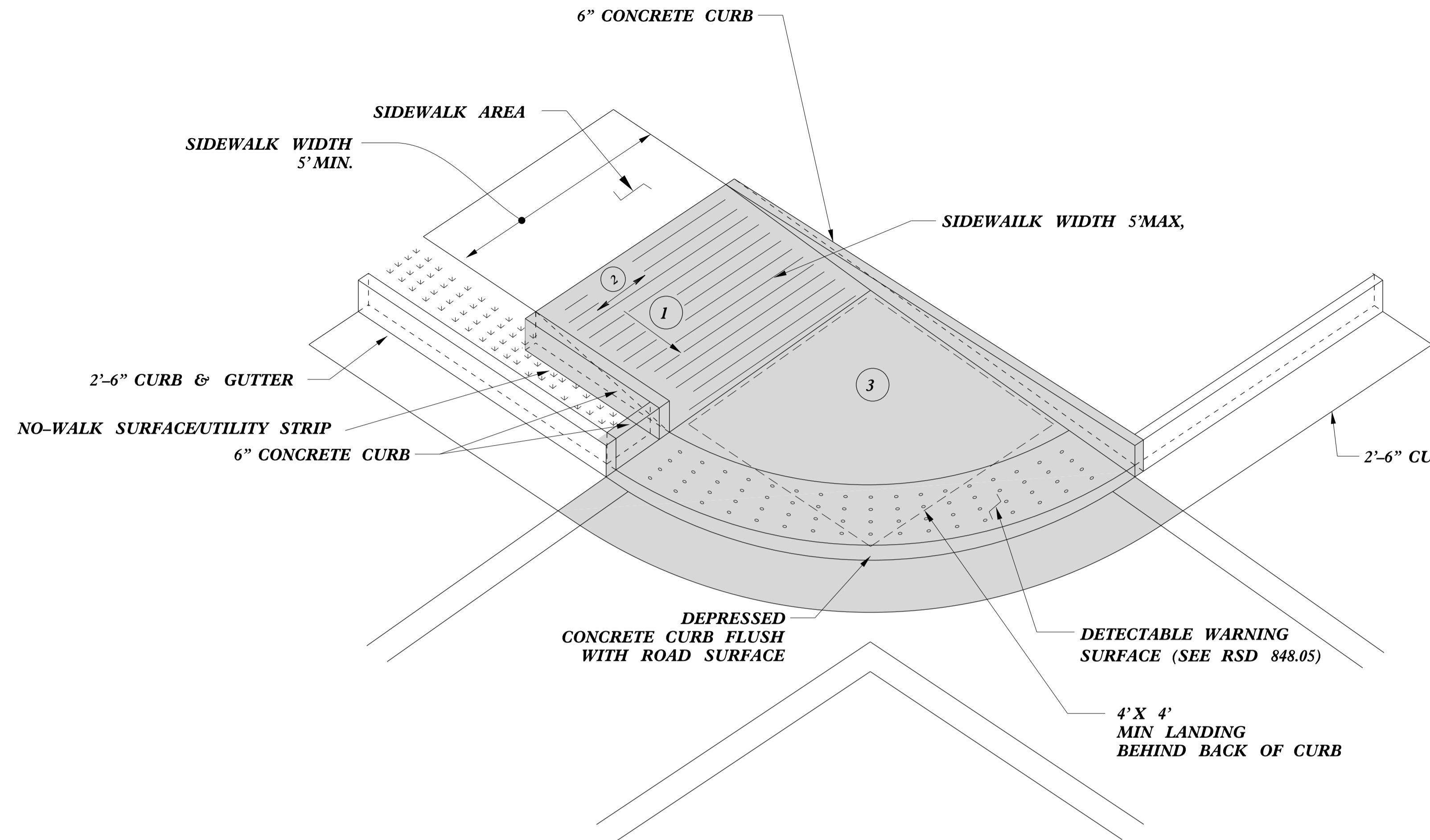
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

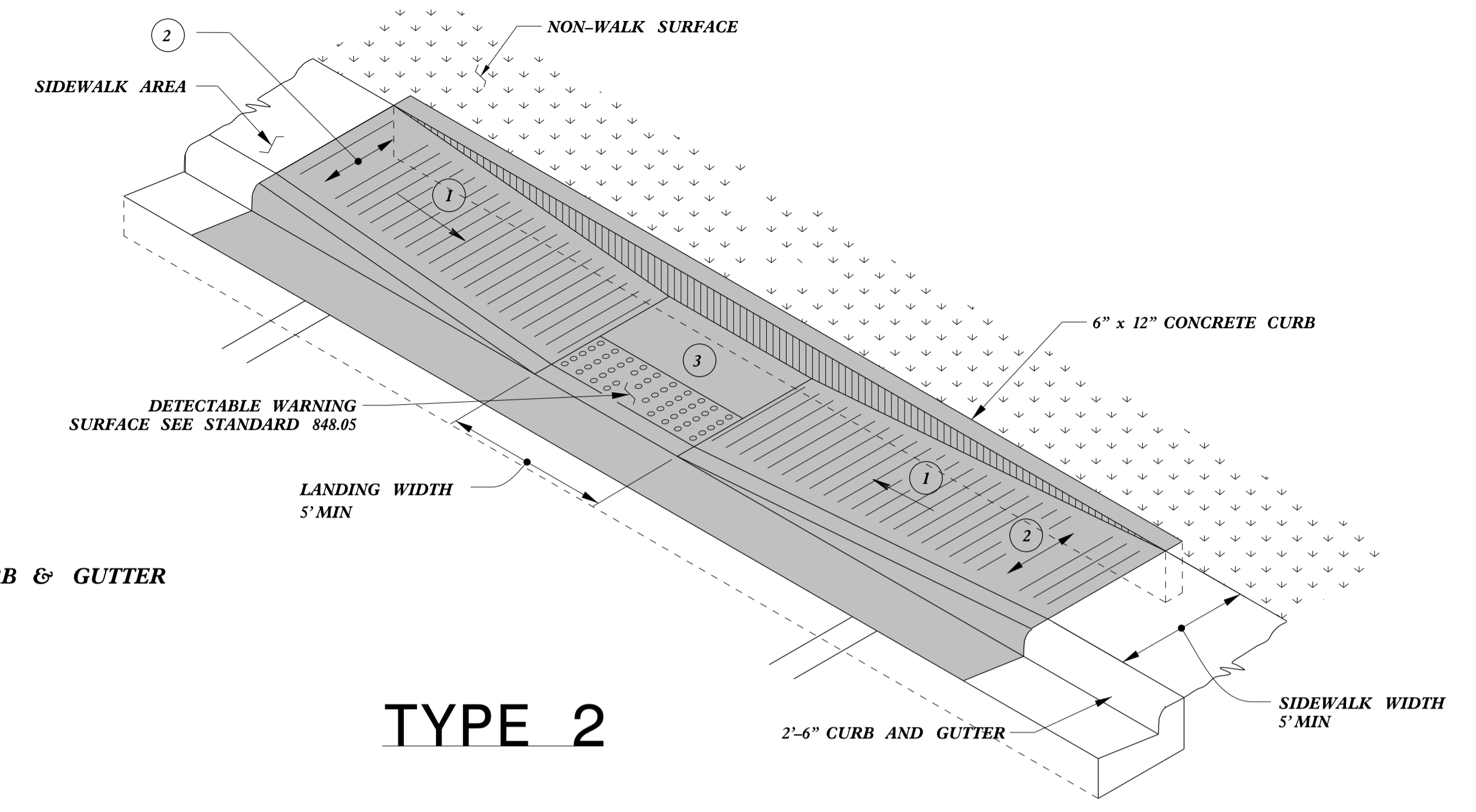
CURB RAMPS
 Directional Ramps

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

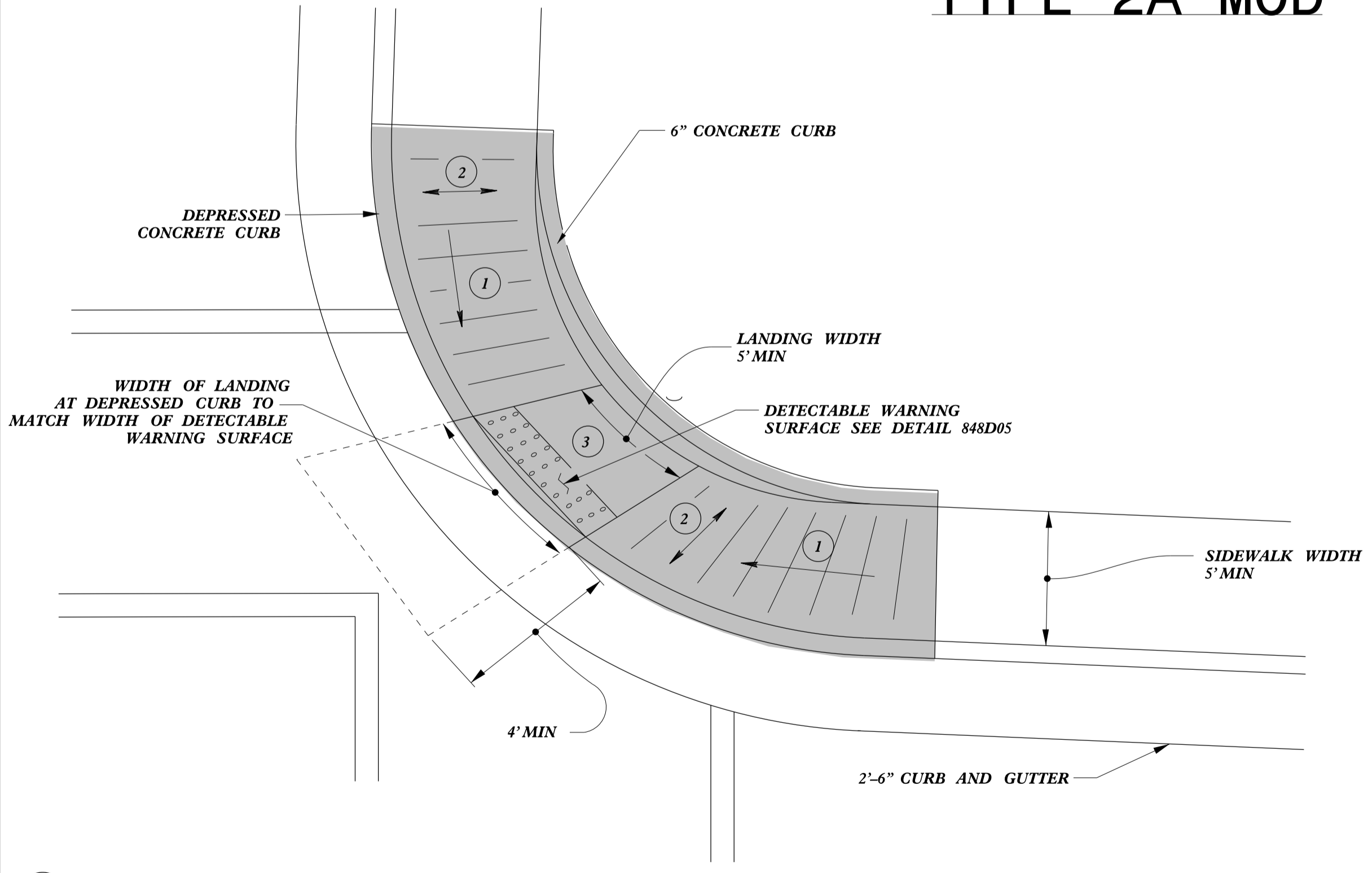
5/14/99
 \$\$\$\$SYTIME\$\$\$\$
 \$\$\$\$CADDUSER\$\$\$\$
 \$\$\$\$CADDUSER\$\$\$\$



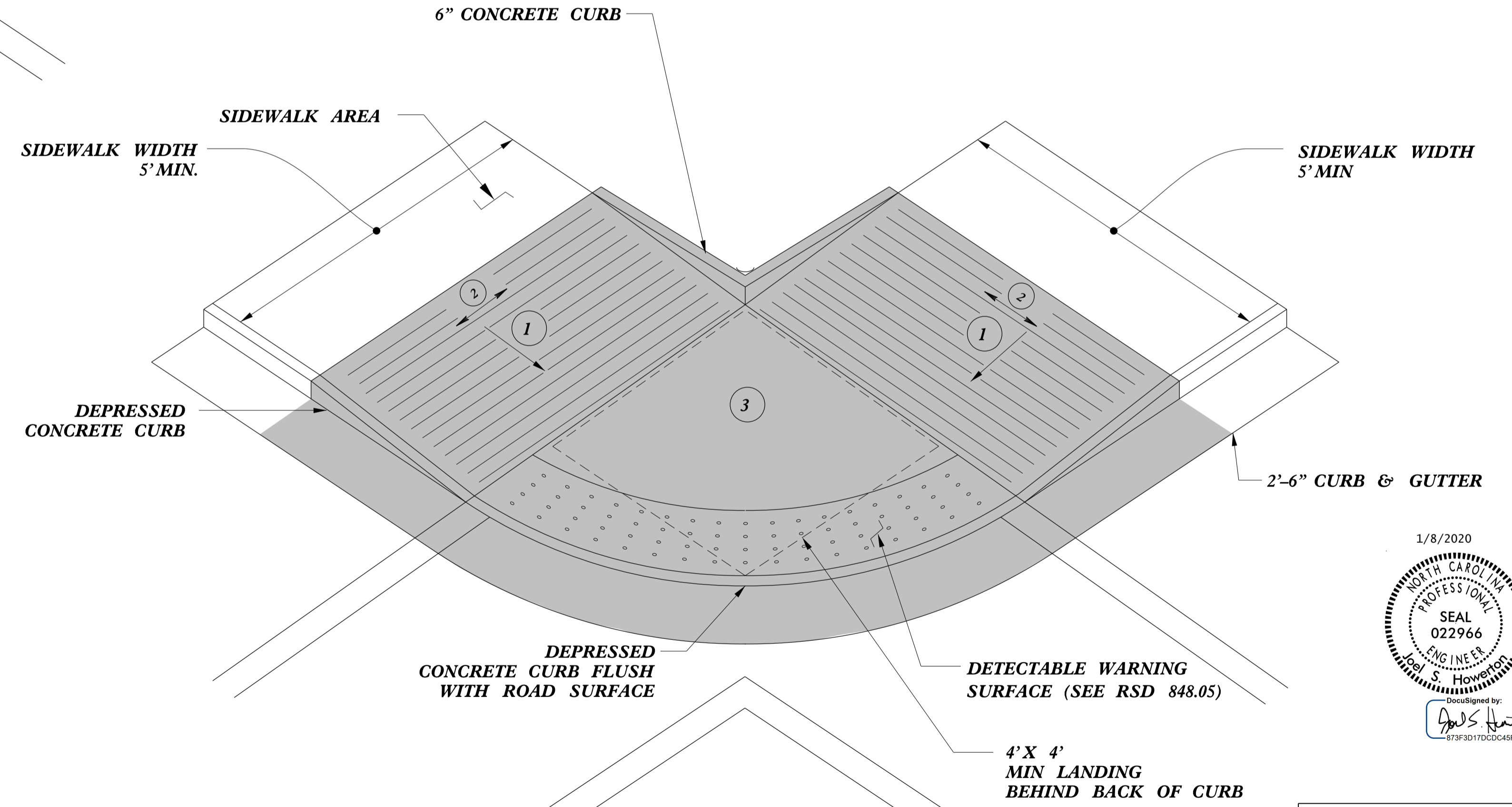
TYPE 2A MOD



TYPE 2



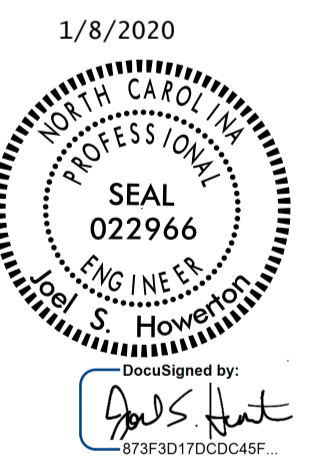
TYPE 2B



TYPE 2A

- 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 1 CURB RAMP



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

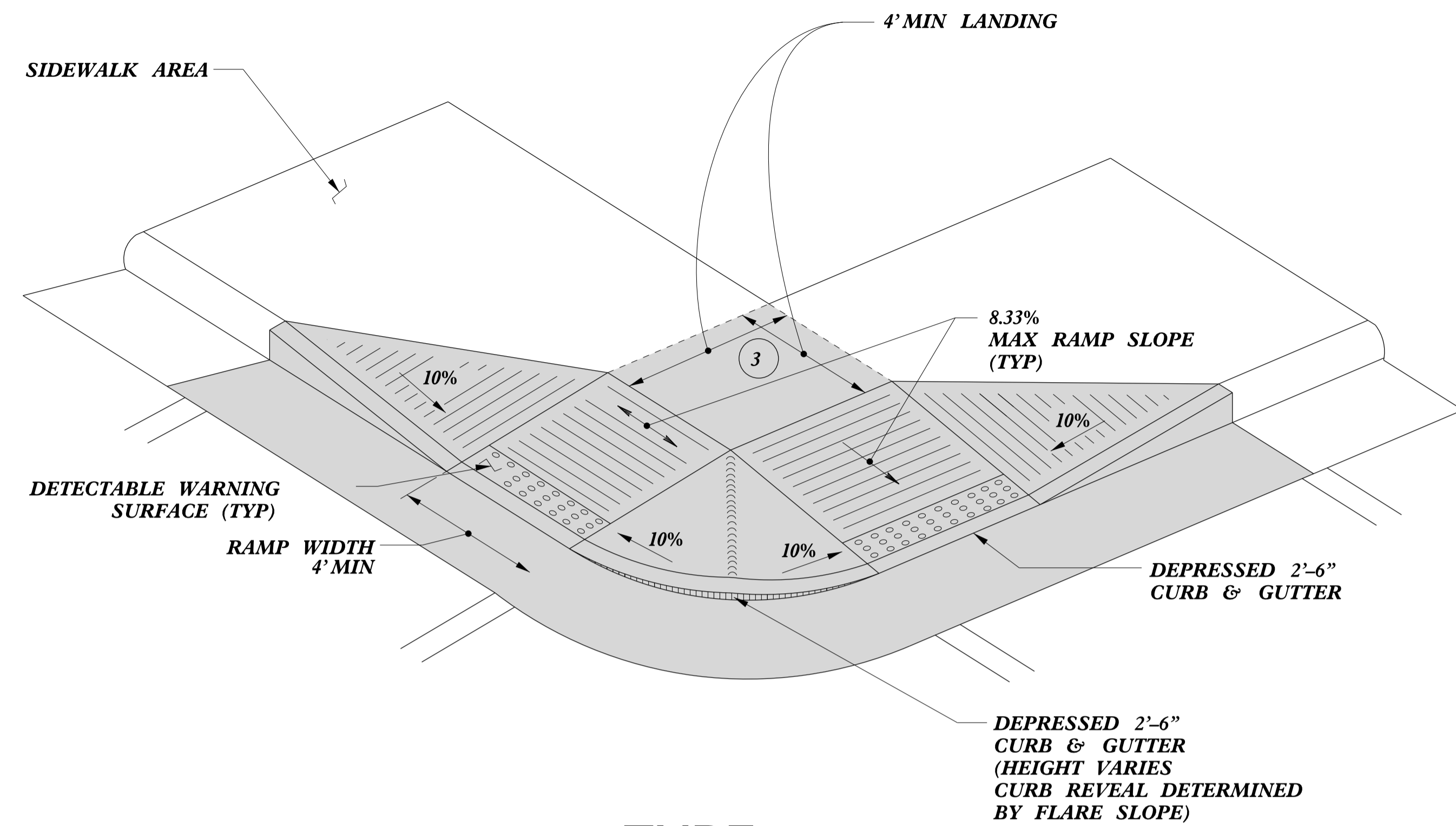
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

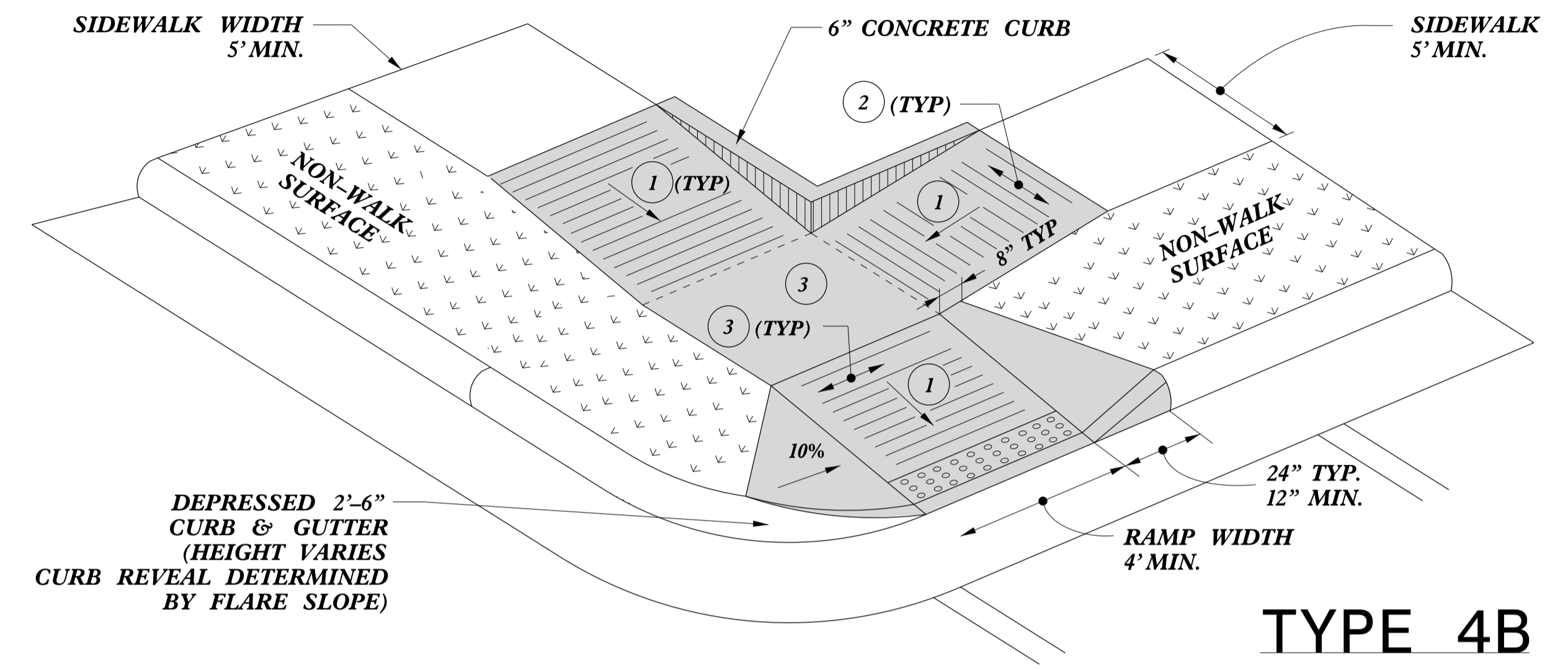
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99
C:\P\2022\2022CPT.05.03.10731.1\2022CPT.05.03.10731.1.dgn

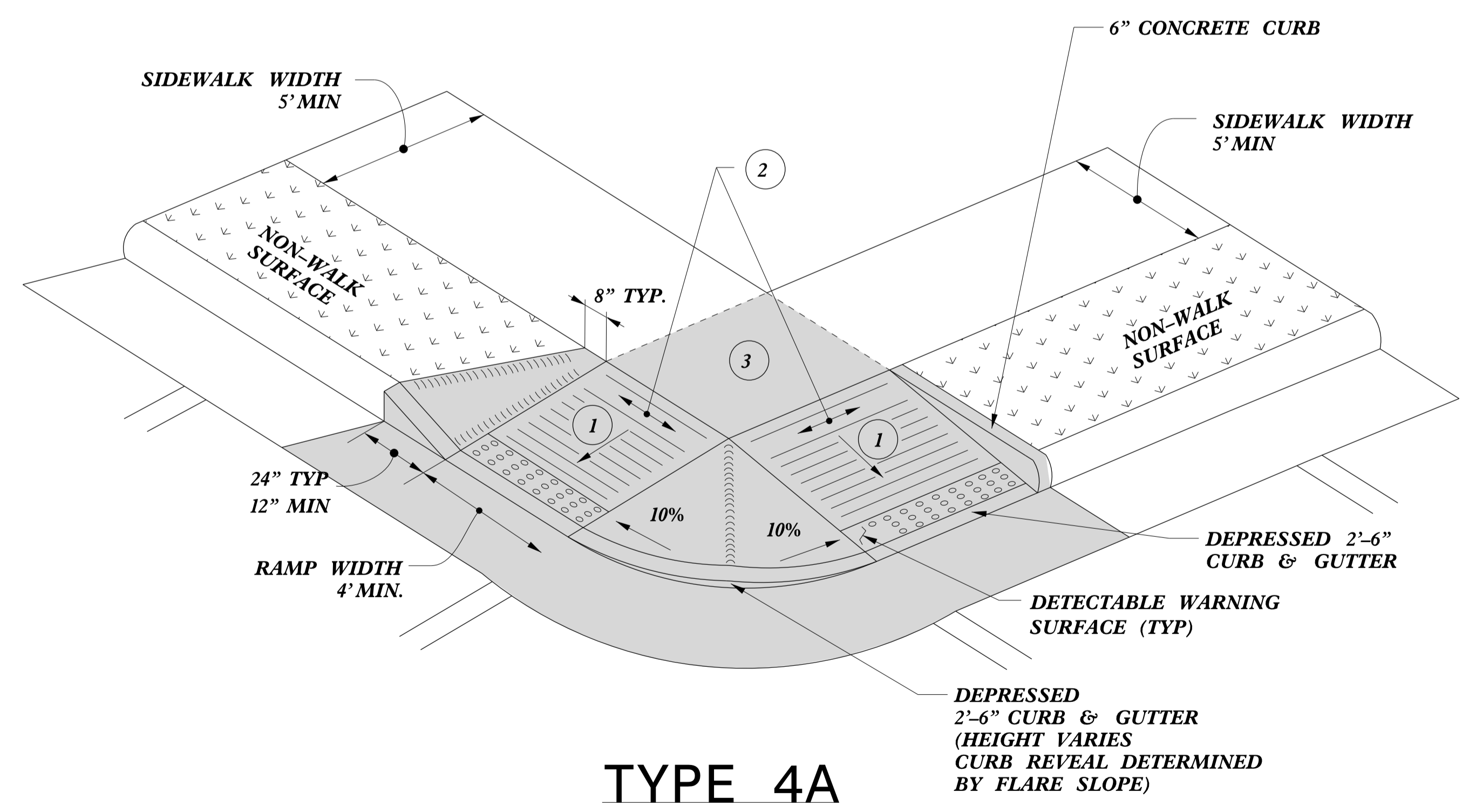
PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS
OF TRUNCATED DOMES)



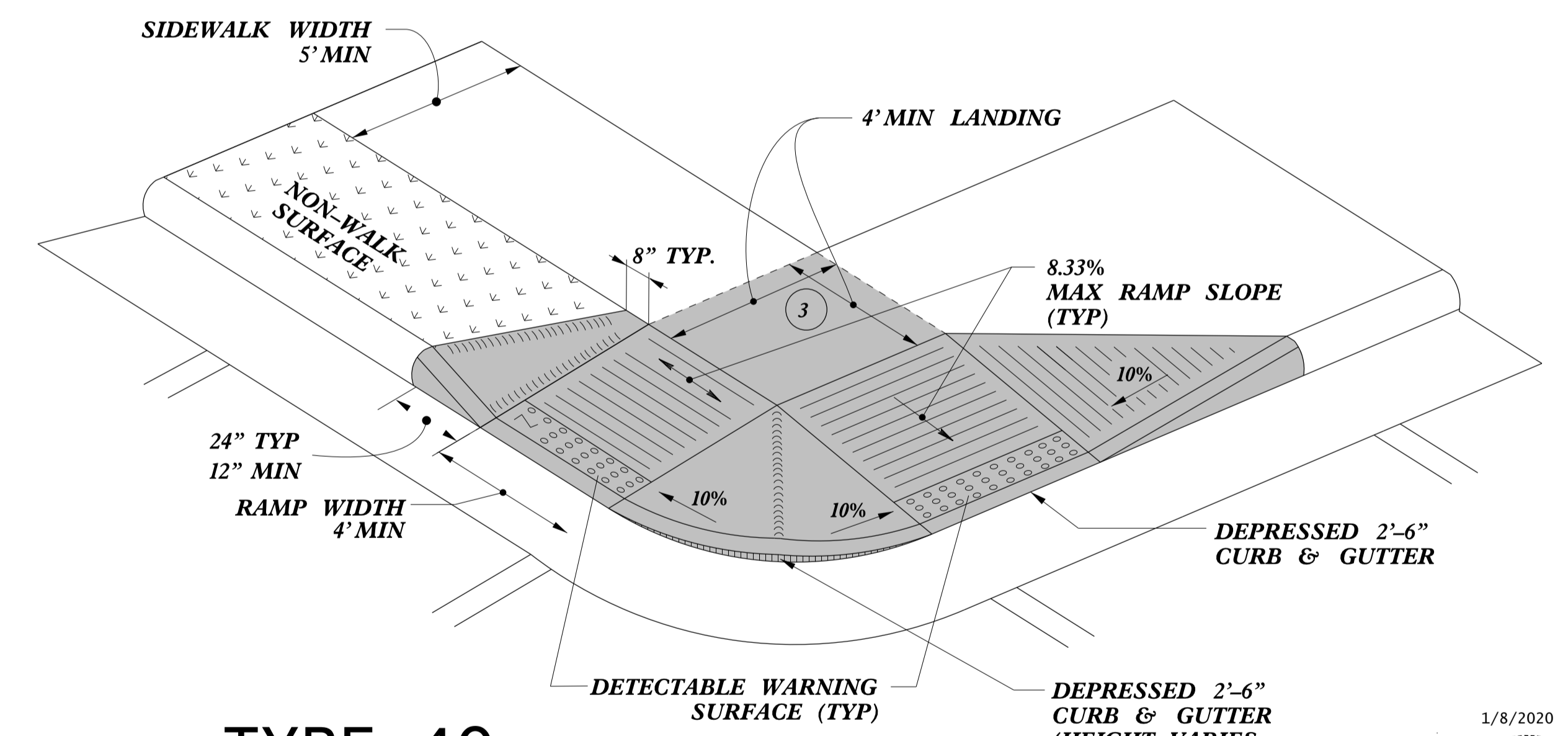
TYPE 4



TYPE 4B

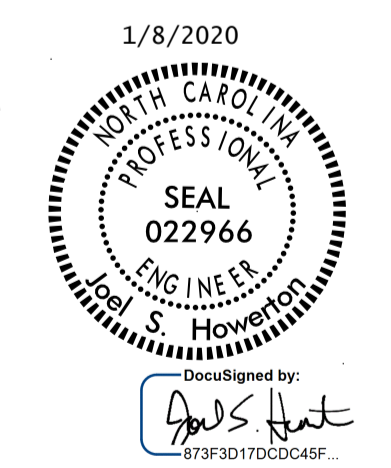


TYPE 4A



TYPE 4C

- 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.



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

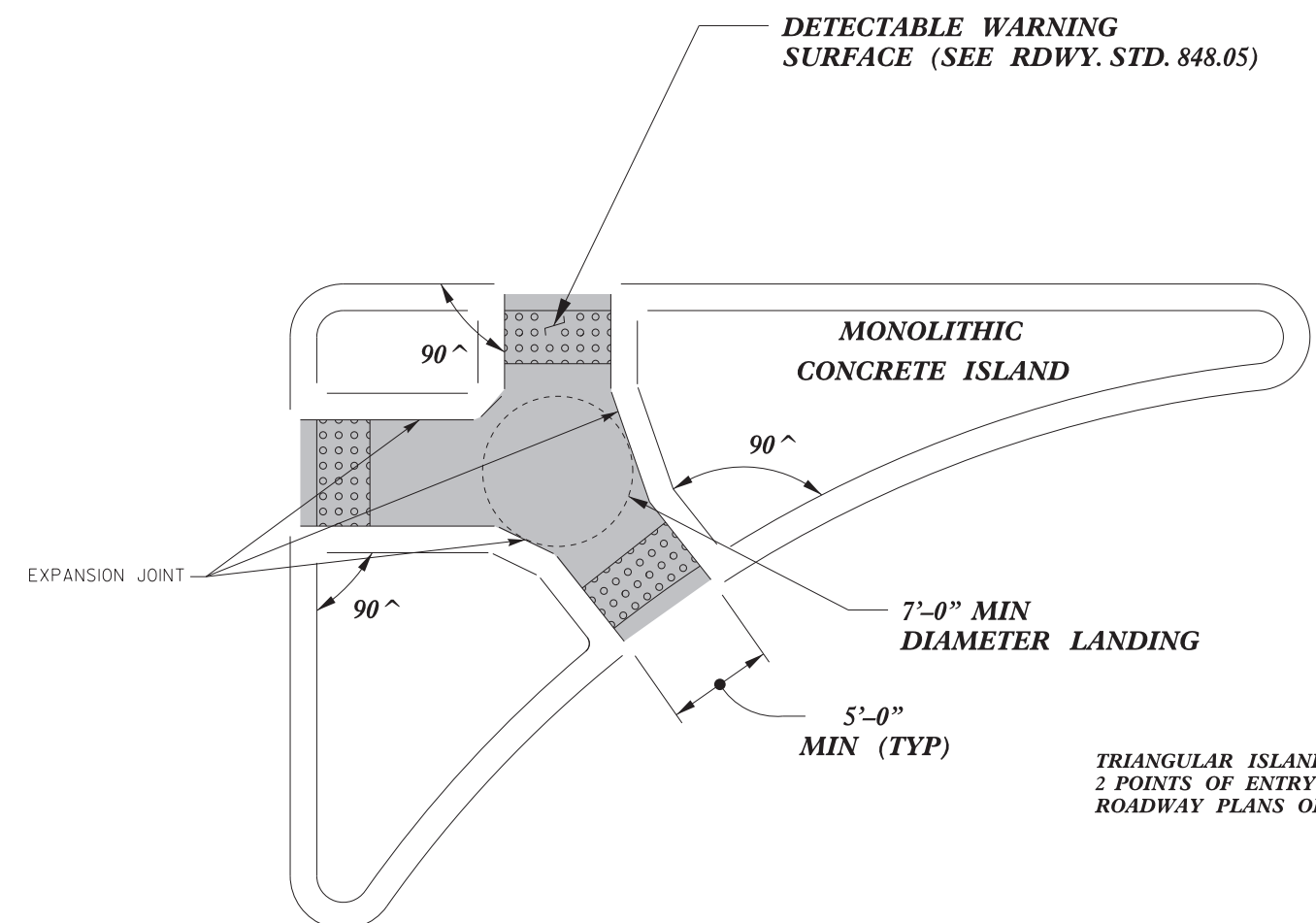
CURB RAMPS

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

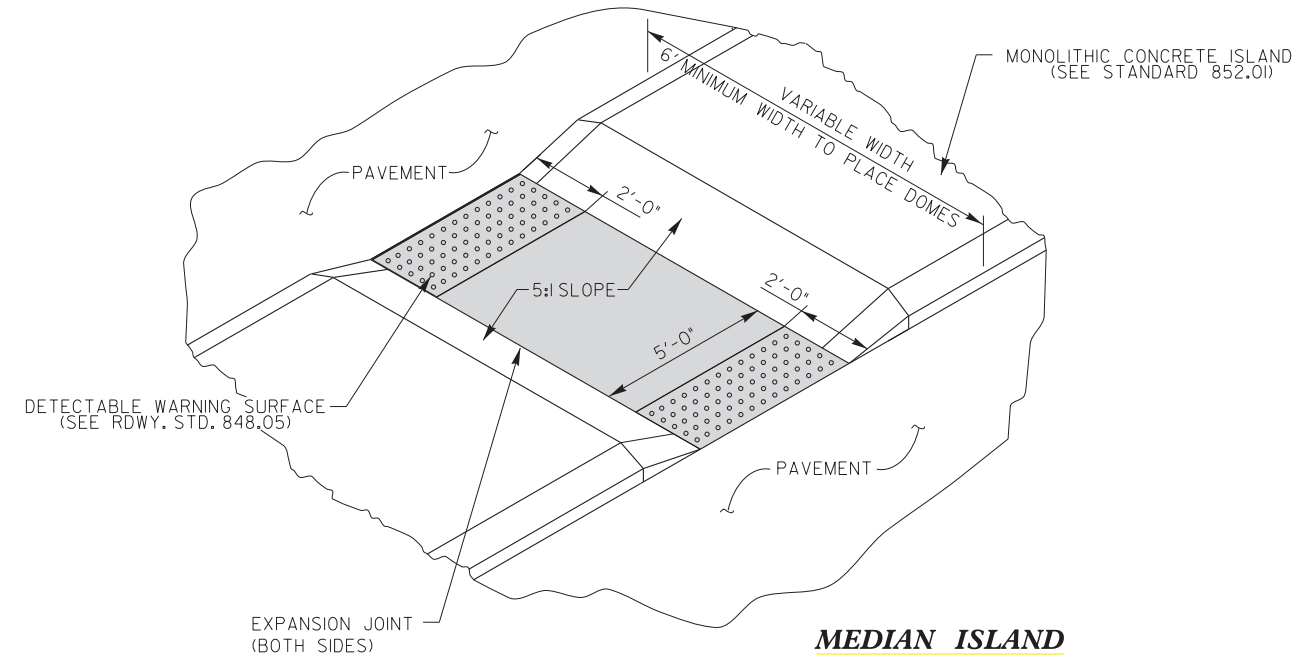
5/14/99
 TIME
 CURB
 USER
 NAME

PAY LIMITS FOR 2 OR 3 CURB RAMPS
(CALCULATE BASED ON NUMBER OF
SETS OF TRUNCATED DOMES)

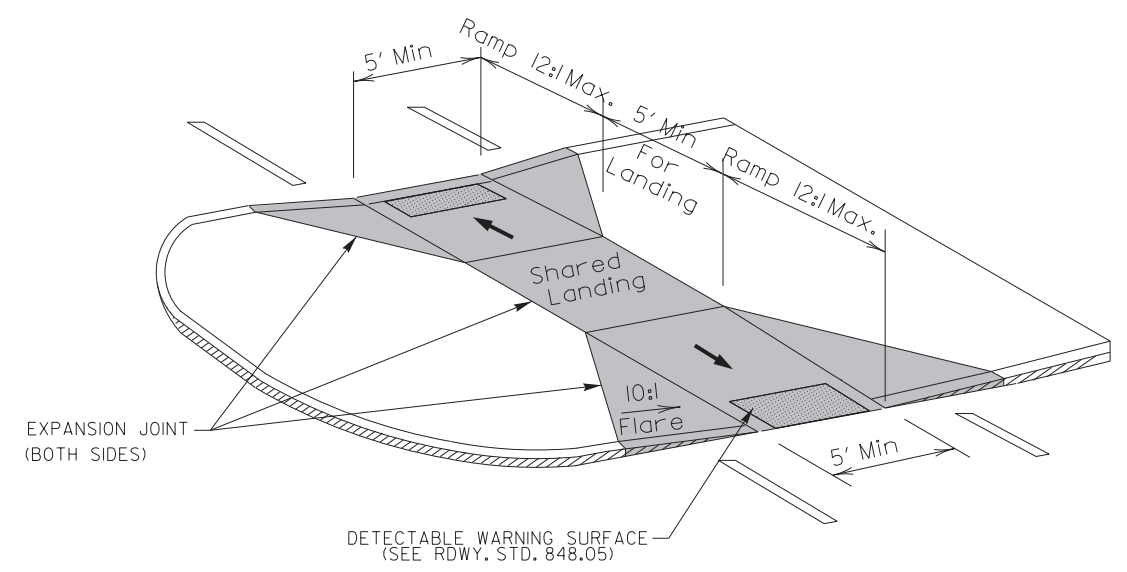


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY
2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE
ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

**TRIANGULAR ISLAND
WITH CUT THROUGH
TYPE 6**



**MEDIAN ISLAND
WITH CUT THROUGH
TYPE 7**



**MEDIAN ISLAND
CURB RAMPS
TYPE 8**

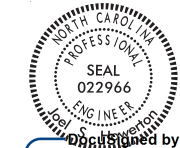
1/8/2020

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

CURB RAMPS
Median or Turn Lane Islands

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



Prepared by:
J.S. Howerton
873F3D17DCDC45F...

5/14/99
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$CON\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

SUMMARY OF QUANTITIES - MORGAN ST FROM US 158 TO SR 1363

Municipality:	Roxboro
Project Number:	2023 Person
WBS Number:	2022CPT.05.03.20731.1
County:	Person

Ramp ID	Inset Map Number	Route 1	Route 2	2591000000-E	2600000000-N	2613000000-N	Improvement Type
				4" Concrete Sidewalk SY	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	
24345	1	SR-1409 (Morgan St)	SR-1363 (Reams Ave)	9		1	Type2A
24346	1	SR-1409 (Morgan St)	SR-1363 (Reams Ave)			1	Type2A
24347	1	SR-1409 (Morgan St)	SR-1363 (Reams Ave)		1		RetrofitWarnings
24348	1	SR-1409 (Morgan St)	SR-1363 (Reams Ave)			1	Type1B
Sub-Total for Morgan St From US 158 To SR 1363				9	1	3	

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.05.08.10731.1, etc.	17	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	0106000000-E	0264000000-E	1220000000-E	1260000000-E	1297000000-E	1330000000-E	1503000000-E	1519000000-E	1575000000-E	1704000000-E	2591000000-E	2600000000-N	2613000000-N	2830000000-N	2845000000-N	6000000000-E	6071010000-E	6084000000-E	6117000000-N	7444000000-E			
											BORROW EXCAVATION	SHOULDER GRADING	INCIDENTAL STONE BASE	AGGREGATE SHOULDER BORROW	1 1/2" MILLING	2 1/2" MILLING	INCIDENTAL MILLING	INTERMEDIATE COURSE, 119.0C	SURFACE COURSE, S9.5B	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	4" Concrete Sidewalk	Retrofit Existing Curb Ramps	Remove and Replace Curb Ramps	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	TEMPORARY SILT FENCE	WATTLE	SEED & MULCHING	RESPONSE FOR EROSION CONTROL	INDUCTIVE LOOP SAWCUT		
											MI	FT	CY	SMI	TONS	TON	SY	SY	SY	TONS	TONS	TON	TONS	SY	EA	EA	EA	EA	LF	LF	AC	EA	LF
2022CPT.05.03.10731.1	Person	1	NC 158 - LEASBURG RD	SR 1307 - JOHN D WINSTEAD RD TO NC 49 - BURLINGTON RD	3	2	NO	NO	2.76	26-36			182																				
		2	NC 49 - BURLINGTON RD	SR 1153 - CHRITCHER WILKERSON RD TO N SIDE OF US 158 - LEASBURG RD	3	2	NO	NO	0.48	40																							408
TOTAL FOR PROJ NO. 2022CPT.05.03.10731.1								3.24					182																			408	
2022CPT.05.03.20731.1	Person	3	SR 1131 - CATES MILL RD	SR 1129 - FRANK TIMBERLAKE RD. TO US 501 - DURHAM RD.	1	2	NO	NO	1.36	26-36	7	2.72	68	238			375			2,056	138	300							10	30	0.10		
		4	SR 1134 - SATTERFIELD RD	NC 157 - HURDLE MILLS RD TO SR 1123 - DICK HOLEMAN RD	1	2	NO	NO	3.85	22	80	7.70	193	569			1,440			8,886	595	1,000							112	280	1.12		
		5	SR 1340 - CONCORD CEFFO RD	SR 1337 - MEGHEES MILL RD TO NC 57 - SEMORA RD	3	2	NO	NO	1.37	24			67				19,290			1,744	117	20											
		6	SR 1409 - MORGAN ST	US 158 - LEASBURG RD TO SR 1363 - REAMS AVE	3	2	NO	NO	0.978	24-42							21,261			1,848	124		9	1	3	3	2						2,214
		7	SR 1504 - HIGH PLAINS RD	NC 49 - VIRGILINA RD TO SR 1501 - MAYO LAKE RD	2	2	NO	NO	2.65	22	40	5.30	133	417			34,203	254	4,943	2,994	438	100							58	150	0.58		
		8	SR 1504 - HIGH PLAINS RD	SR 1501 - MAYO LAKE RD TO VIRGINIA LINE	1	2	NO	NO	0.86	20	43	1.72	43	80			300			913	61	50							63	160	0.63	1	
		9	SR 1512 - BOWMANTOWN RD	NC 49 - VIRGILINA RD TO US 501 - BOSTON RD	1	2	NO	NO	4.38	24	110	8.76	218	607						5,509	369	1,000							160	400	1.59		
		10	SR 1568 - THOMAS STORE RD	SR 1567 - PRIXLEY PRICHARD RD TO US 158 - OXFORD RD	1	2	NO	NO	1.63	20	33	3.26	82	241						1,687	113	350							47	120	0.47	1	
		TOTAL FOR PROJ NO. 2022CPT.05.03.20731.1								17.078			313	29.46	804	2,152	40,551	34,203	8,298	4,943	25,637	1,955	2,820	9	1	3	3	2	450	1,140	4.49	2	2,214
		GRAND TOTAL								20.318			313	29.46	986	2,152	94,164	34,203	10,048	4,943	30,512	2,282	2,890	9	1	3	3	2	450	1,140	4.49	2	2,622

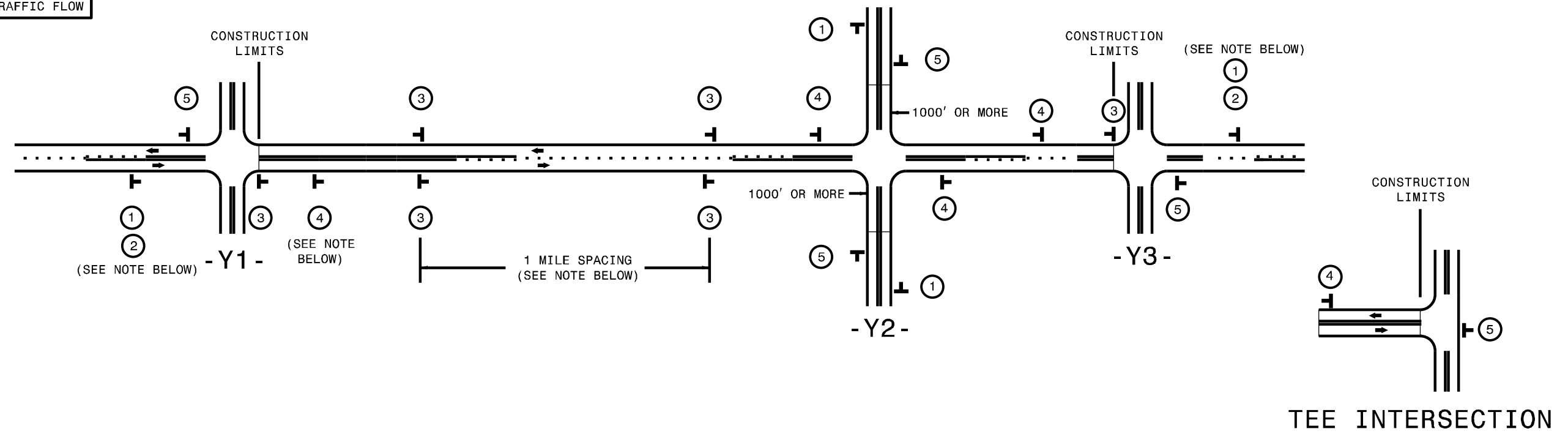
PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.05.08.10731.1, etc.	18	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH	WIDTH	441300000-E	444700000-E	445700000-N	468500000-E		469500000-E		700000000	472000000-E		472500000-E					489000000-E		481000000-E		482000000-E		483500000-E		484000000-N					485000000-E	489000000-E	489500000-N				
									WORK ZONE ADVANCE/GENERAL WARNING SIGNING	PEDESTRIAN CHANNELIZING DEVICES	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	8" X 90 M YELLOW THERMO	8" X 90 M WHITE THERMO	12" X 90 M YELLOW THERMO	THERMO MSG ONLY 90 M	THERMO MSG SCHOOL 90 M	THERMO STR & LT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO YIELD TRIANGLE 90M	THERMO ROUNDABOUT 90 M	4" HOT SPRAY THERMO 50 M	4" WHITE PAINT	4" YELLOW PAINT	8" YELLOW PAINT	8" WHITE PAINT	24" WHITE PAINT	PAINT MSG ONLY	PAINT MSG SCHOOL	PAINT RT ARROW	PAINT STR & LT ARROW	PAINT STR & RT ARROW	PAINT LT ARROW	PAINT YIELD TRIANGLE	PAINT ROUND ABOUT	4" LINE REMOVAL	GENERIC MARKING, 24" X 90 M WHITE THERMO	NON-CAST IRON SNOW PLOWABLE MARKER	
MI	FT	SF	LF	LS	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA							
2022CPT.05.03.10731.1	Person	1	NC 158 - LEASBURG RD	SR 1307 - JOHN D WINSTEAD RD TO NC 49 - BURLINGTON RD	3	2	2.76	26-36	407				29,698	23,568	32																							190					
		2	NC 49 - BURLINGTON RD	SR 1153 - CHRITCHER WILKERSON RD TO N SIDE OF US 158 - LEASBURG RD	3	2	0.48	40	54				1,195	4,780					2	2	1	1	1														78	92					
		TOTAL FOR PROJ NO. 2022CPT.05.03.10731.1				3.24		461		1.00		30,893	28,348	32				2	2	1	1	1												78	282								
												59,241		32		7																											
2022CPT.05.03.20731.1	Person	3	SR 1131 - CATES MILL RD	SR 1129 - FRANK TIMBERLAKE RD. TO US 501 - DURHAM RD.	1	2	1.36	26-36	126				14,734	17,110			200																										
		4	SR 1134 - SATTERFIELD RD	NC 157 - HURDLE MILLS RD TO SR 1123 - DICK HOLEMAN RD	1	2	3.85	22	431				41,426	36,936																													
		5	SR 1340 - CONCORD CEFFO RD	SR 1337 - MEGHEES MILL RD TO NC 57 - SEMORA RD	3	2	1.37	24	150				14,468	14,468																								18					
		6	SR 1409 - MORGAN ST	US 158 - LEASBURG RD TO SR 1363 - REAMS AVE	3	2	0.978	24-42	110	64				3,920	18,793	800	1,200		8	12	4	7		19	4	16	4		3,920	18,793	800	1,200	1,038	8	12	4	4	7	19	16	4	1,038	
		7	SR 1504 - HIGH PLAINS RD	NC 49 - VIRGINIA RD TO SR 1501 - MAYO LAKE RD	2	2	2.65	22	298				28,514	23,760															28,514	23,760													
		8	SR 1504 - HIGH PLAINS RD	SR 1501 - MAYO LAKE RD TO VIRGINIA LINE	1	2	0.86	20	97				9,082	9,082																													
		9	SR 1512 - BOWMANTOWN RD	NC 49 - VIRGINIA RD TO US 501 - BOSTON RD	1	2	4.38	24	491				47,129	39,885																													
		10	SR 1568 - THOMAS STORE RD	SR 1567 - PRILEY PRICHARD RD TO US 158 - OXFORD RD	1	2	1.63	20	183				17,539	14,886																													
				TOTAL FOR PROJ NO. 2022CPT.05.03.20731.1				17.078		1,886	64	1.00		176,812	174,920	800	1,200	200	8	12	4	7		21	4	16	4	2,764	32,434	42,553	800	1,200	1,038	8	12	4	4	7	19	16	4	2,764	1,056
														351,732		2,000		20					56					2,764		74,987		2,000		20					54				
GRAND TOTAL							20.318	2,347	64	1.00	207,705	203,268	832	1,200	200	8	12	6	9	1	22	5	16	4	2,764	32,434	42,553	800	1,200	1,038	8	12	4	4	7	19	16	4	2,764	1,134	282		
												410,973		2,032		20					63					2,764		74,987		2,000		20					54						







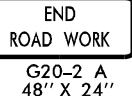
SIGNING FOR RESURFACING PROJECTS

LEGEND
 STATIONARY SIGN
 DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

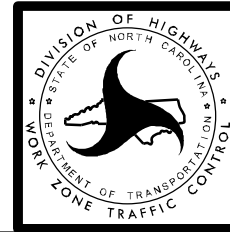
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;">  W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
		<p>- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.</p> <p>- AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.</p>	
		<p>- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS.</p> <p>- DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS.</p> <p>- INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.</p> <p>- FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH.</p> <p>- A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</p> <p>- FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.</p>	
		<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.</p>	

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

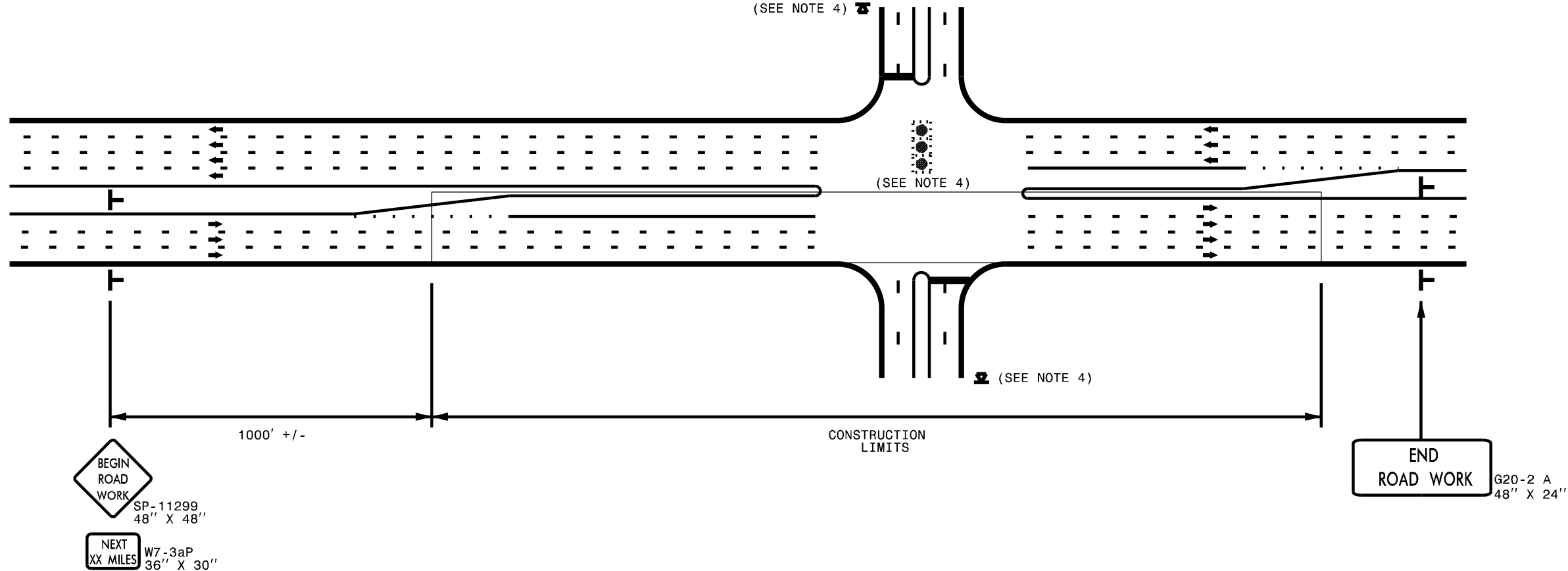
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$DCON\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

URBAN / SUBURBAN WORKZONES



NOTES:

- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND	
T	STATIONARY SIGN
➔	DIRECTION OF TRAFFIC FLOW



**RESURFACING ADVANCE
WARNING SIGNS FOR
URBAN / SUBURBAN
FACILITIES**

\$\$\$SYTIME\$\$\$\$\$
 \$\$\$DCON\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

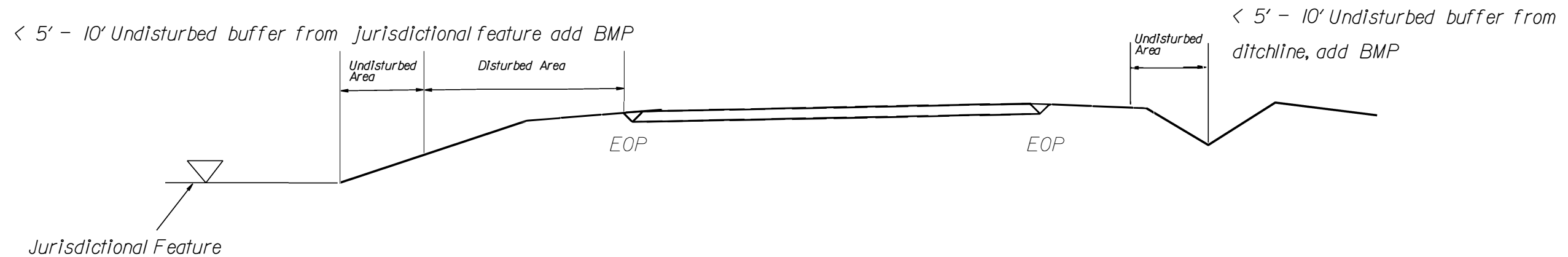
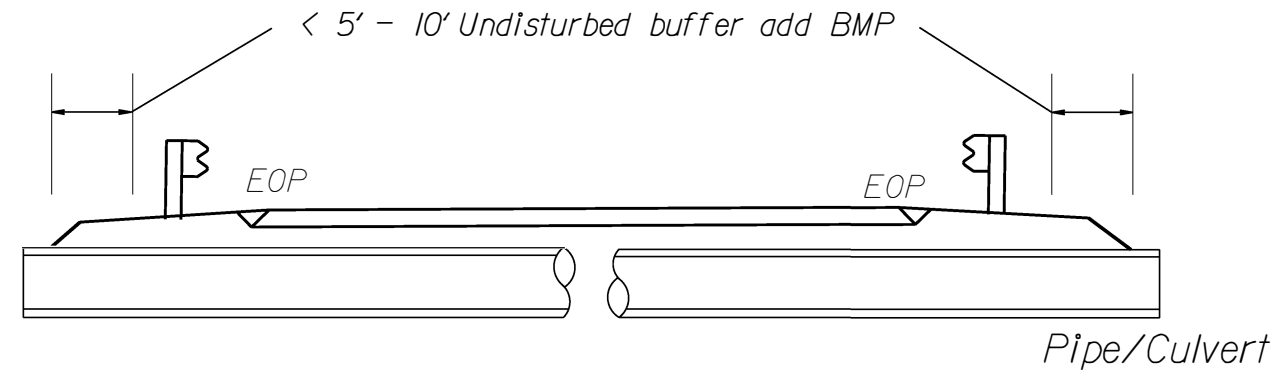
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

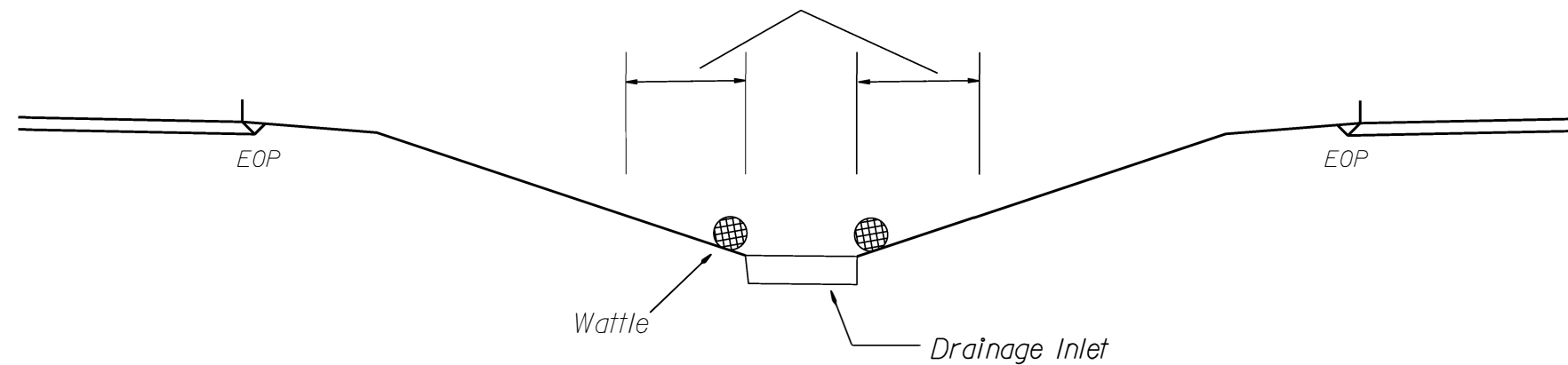
EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

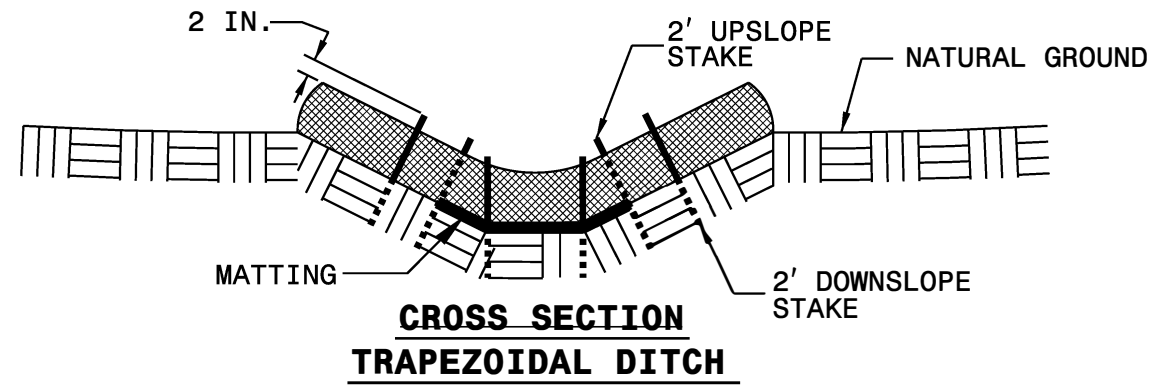
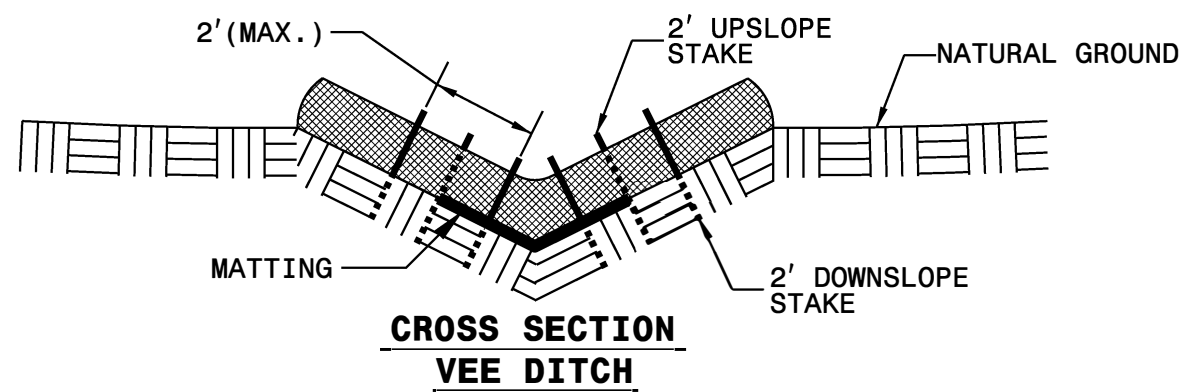
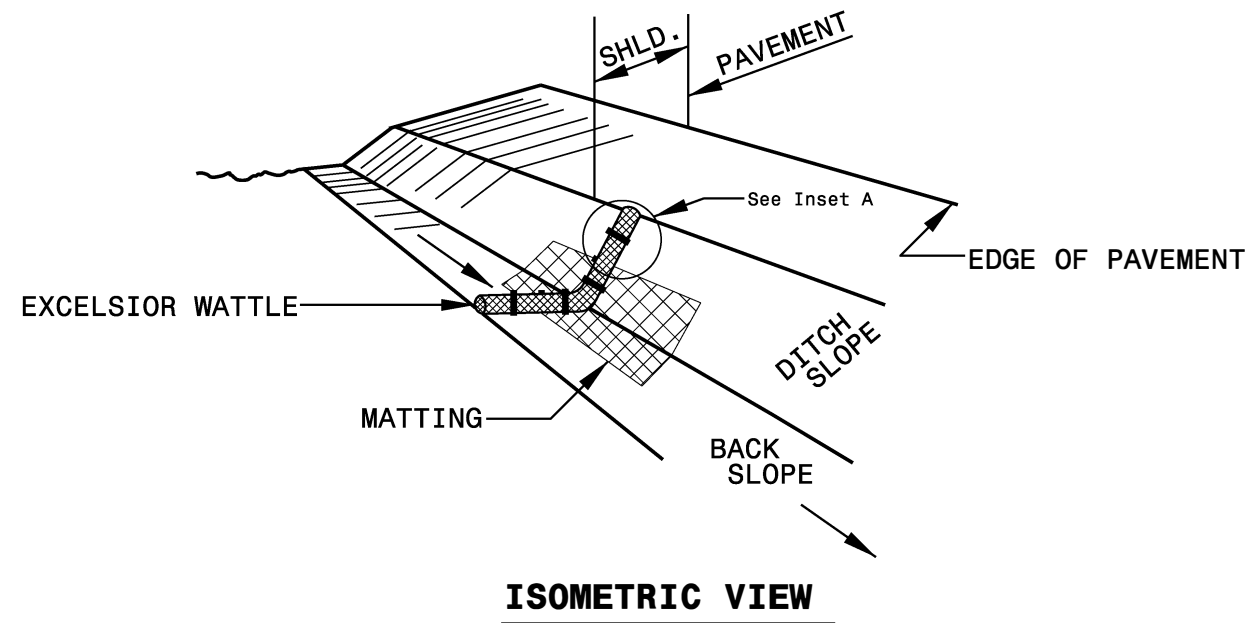


< 5' - 10' Undisturbed buffer from inlet, add wattle

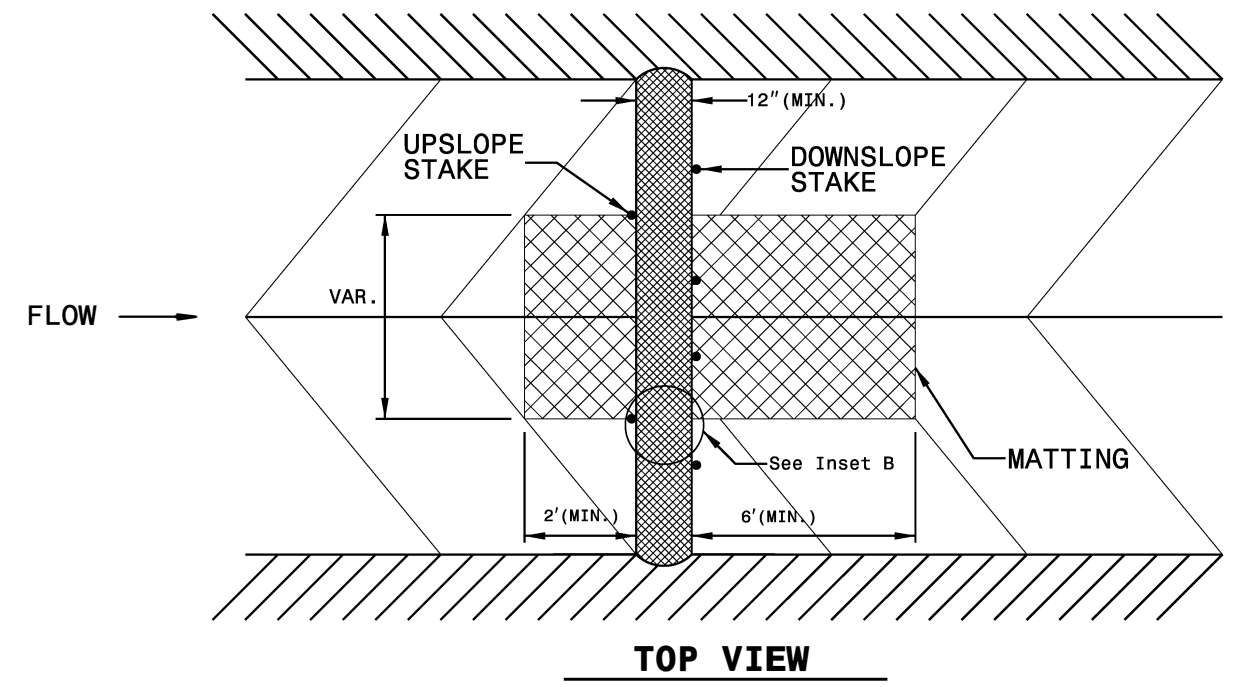
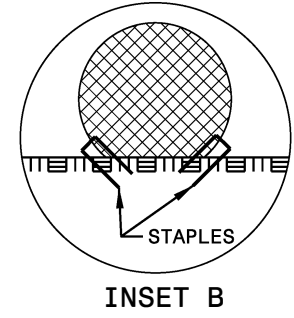
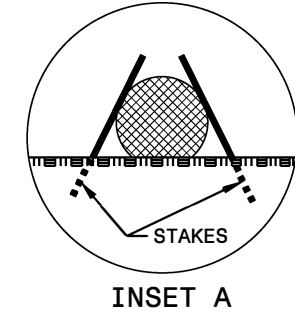


NOT TO SCALE

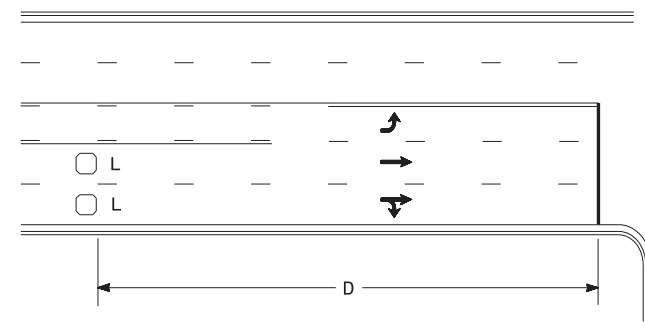
WATTLE DETAIL



- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
 - PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
 - INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 - INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



High Speed Detection (≥40 mph)

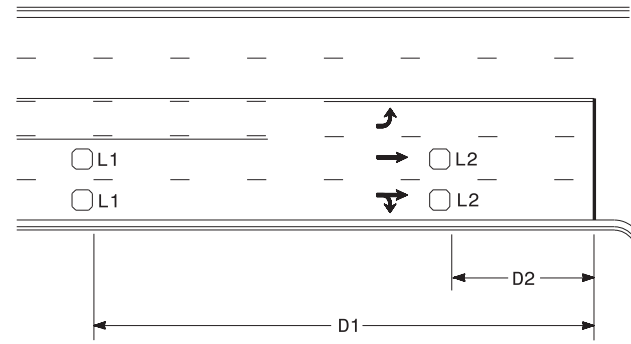


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



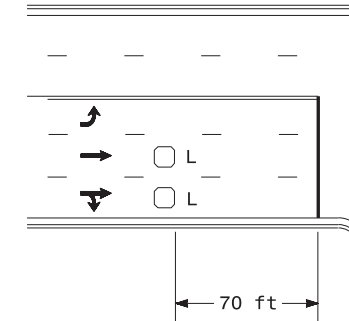
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

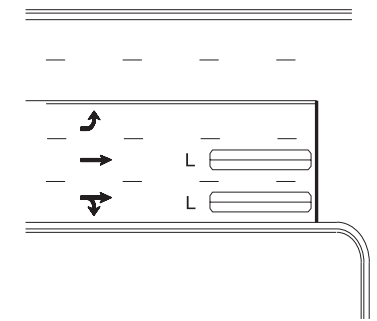
"Stretch" Operation

Low Speed Detection (≤35 mph)



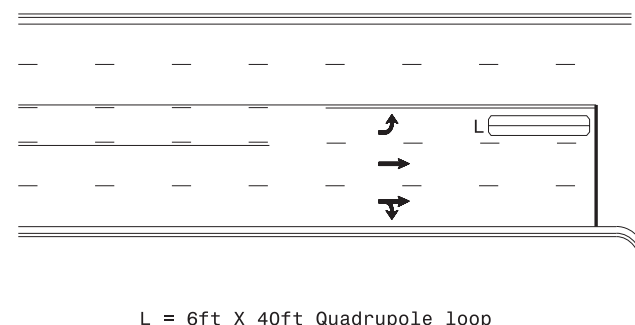
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

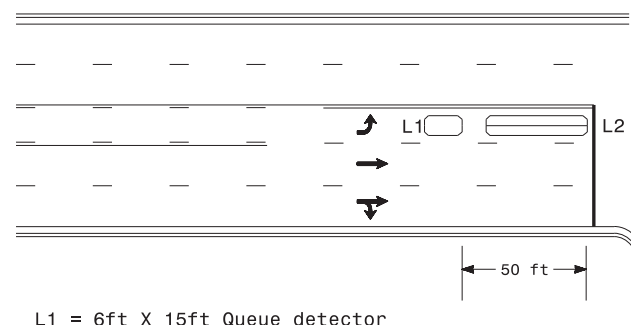
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

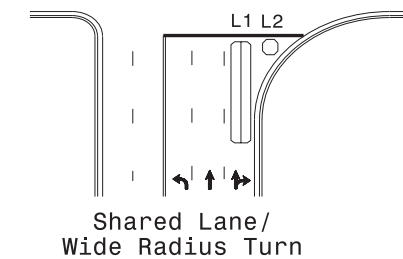
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

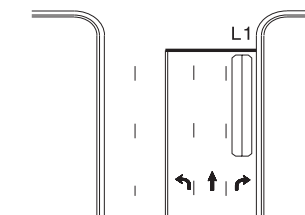
Queue Loop Detection

Right Turn Lane Detection

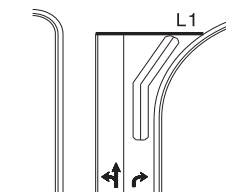


L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately

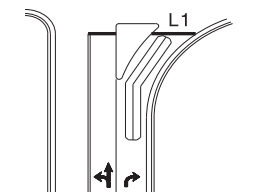
Shared Lane/
Wide Radius Turn



Standard Turn

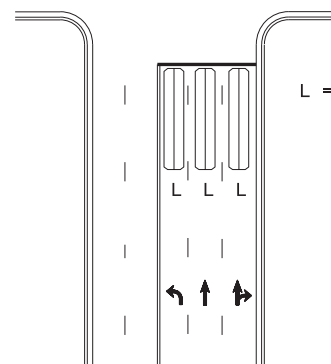


Wide Radius Turn



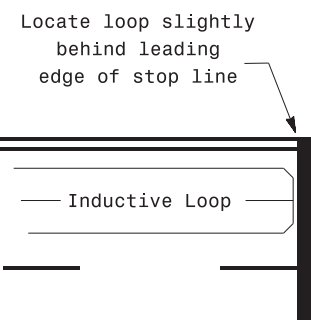
Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



Note:
Loop may be located in advance
of stop line under any of the
following conditions:
1) stop line is greater than 15'
from edge of intersecting
roadway
2) loop detects a permissive or
protected/permissive left turn
3) for an exclusive right turn
lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

	<p>Typical Signal Loop Locations</p>		
	<p>PLAN DATE: September 2020</p>	<p>REVIEWED BY: JPG</p>	
<p>SCALE: N/A</p>	<p>PREPARED BY: PLA</p>	<p>REVIEWED BY:</p>	<p>DATE:</p>
<p>REVISIONS:</p>	<p>INIT.</p>	<p>DATE</p>	<p>SIG. INVENTORY NO.</p>