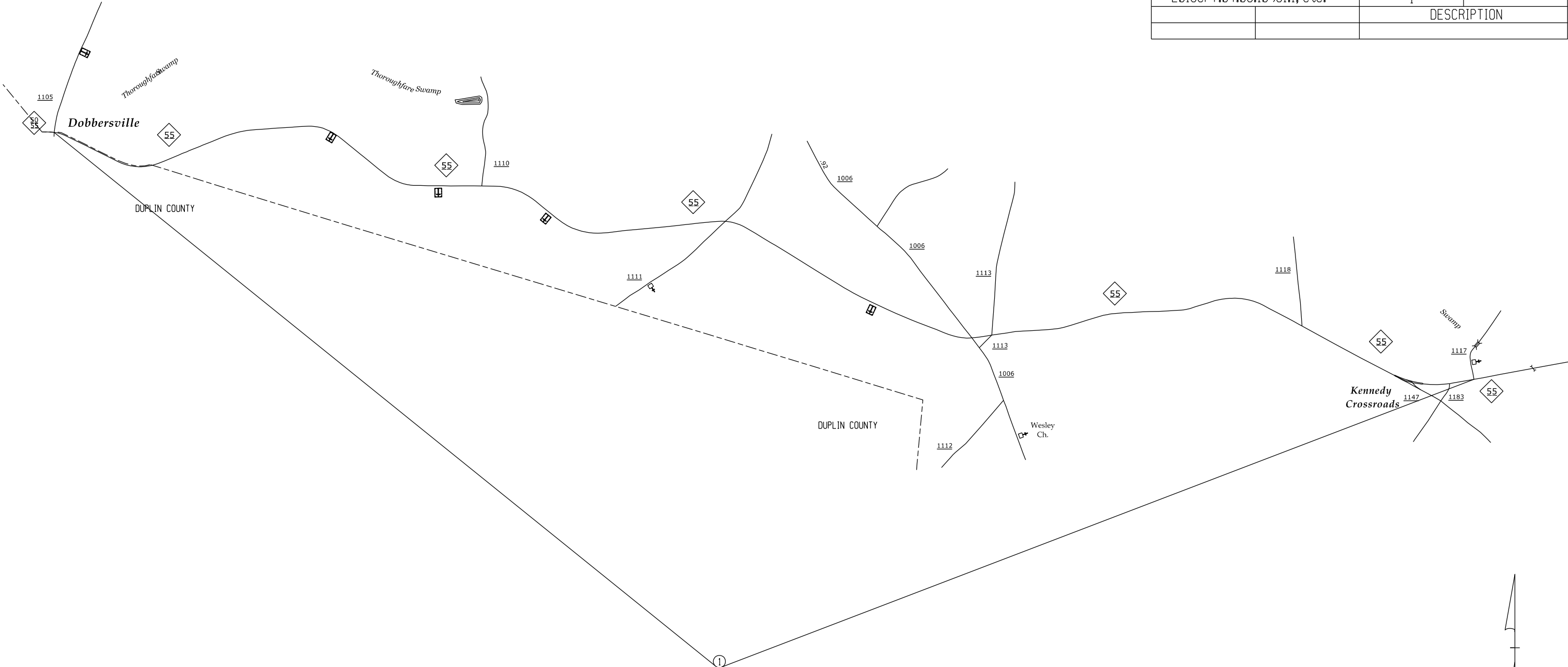


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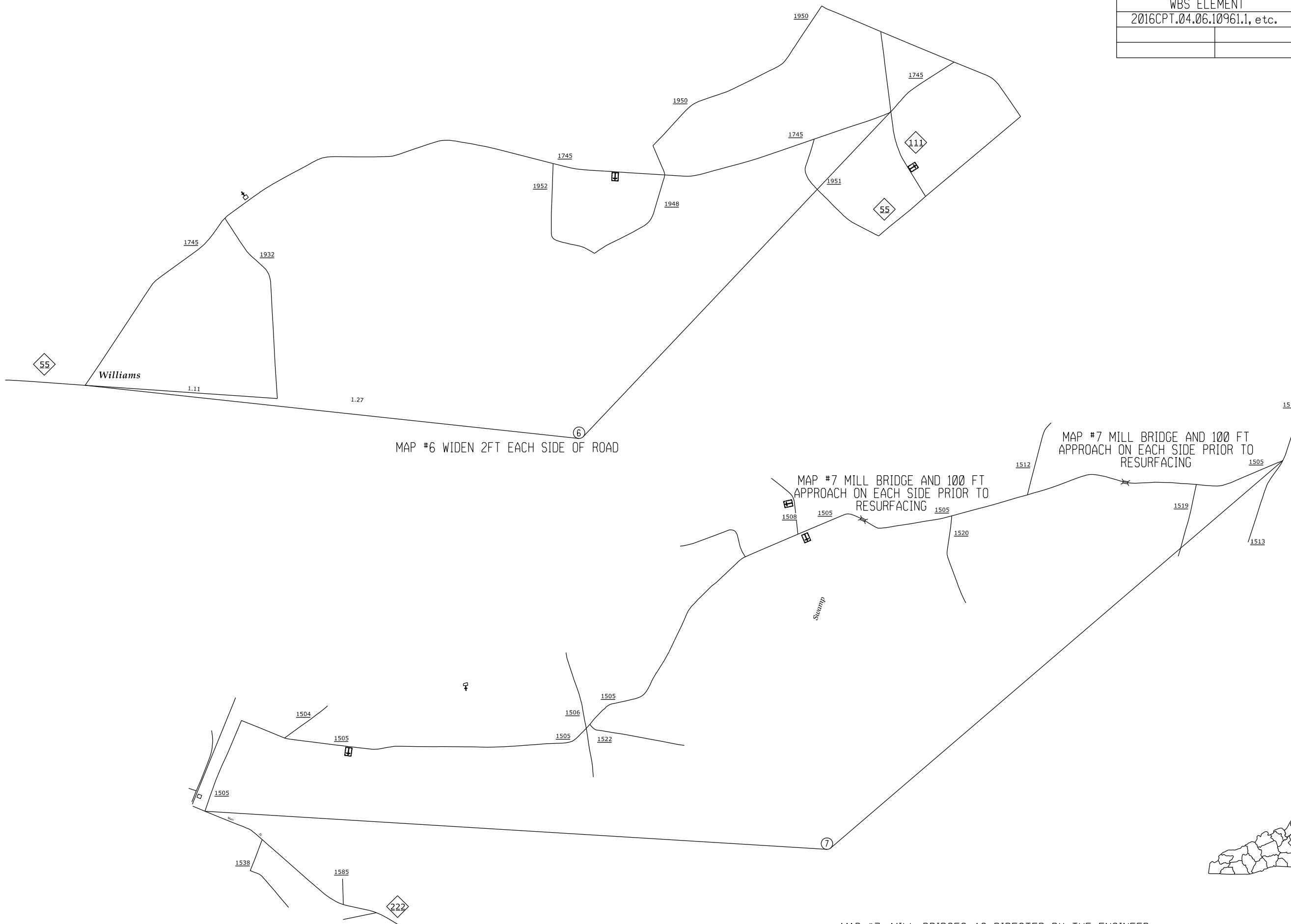
WBS ELEMENT	SHEET NO.	TOTAL SHEETS
2016CPT.04.06.10961.1, etc.	1	
DESCRIPTION		



SHEET 1 OF 5
WAYNE COUNTY
 NORTH CAROLINA



WBS ELEMENT	SHEET NO.	TOTAL SHEETS
2016CPT.04.06.10961.1, etc.	3	
	DESCRIPTION	



Williams

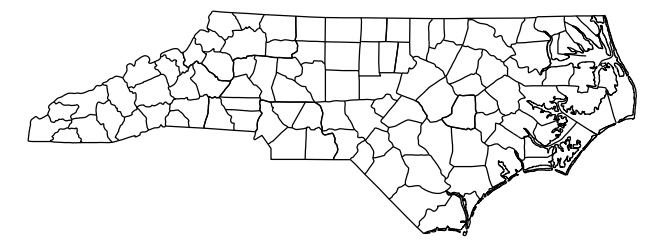
MAP #6 WIDEN 2FT EACH SIDE OF ROAD

MAP #7 MILL BRIDGE AND 100 FT APPROACH ON EACH SIDE PRIOR TO RESURFACING

MAP #7 MILL BRIDGE AND 100 FT APPROACH ON EACH SIDE PRIOR TO RESURFACING

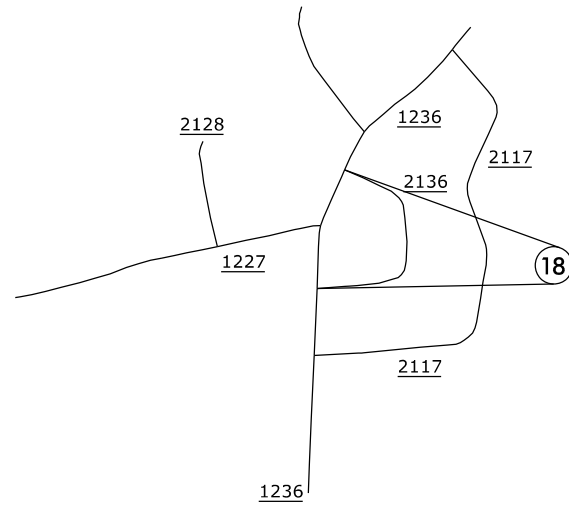
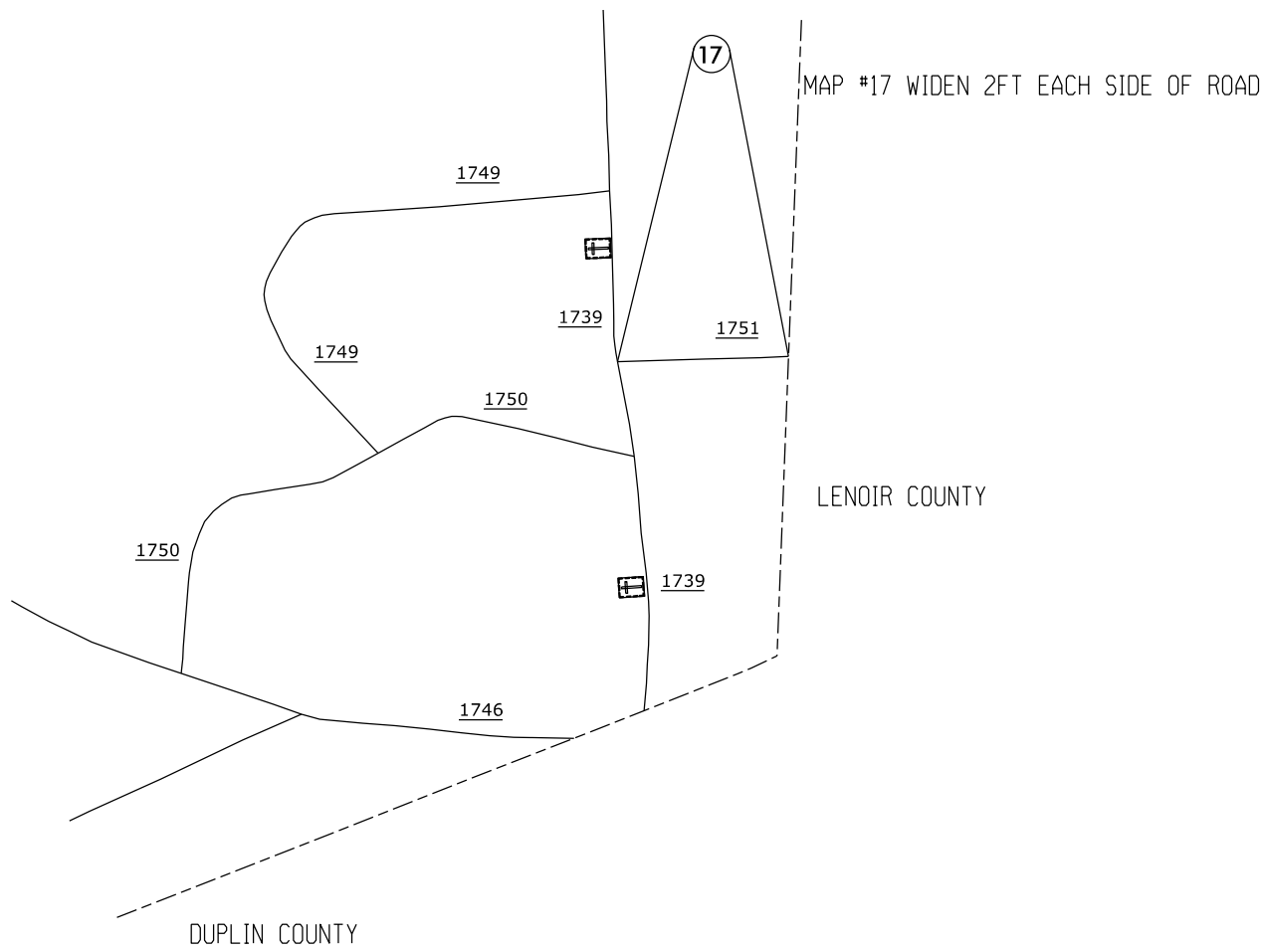
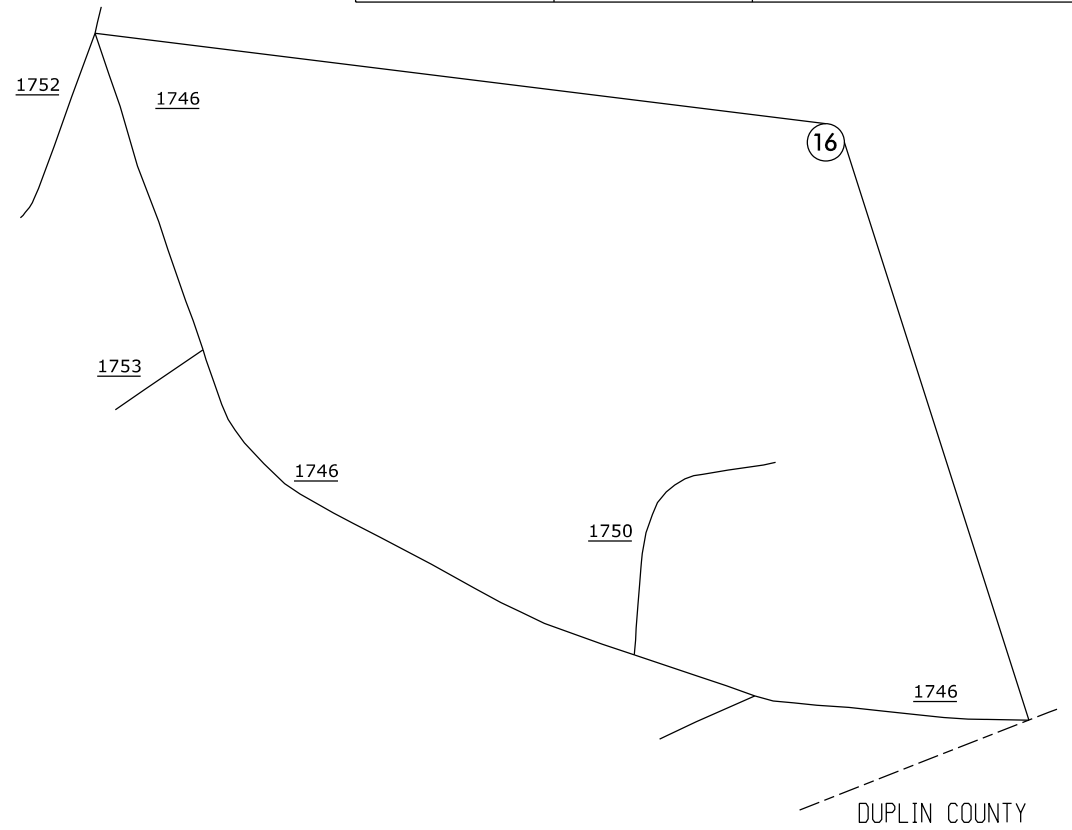
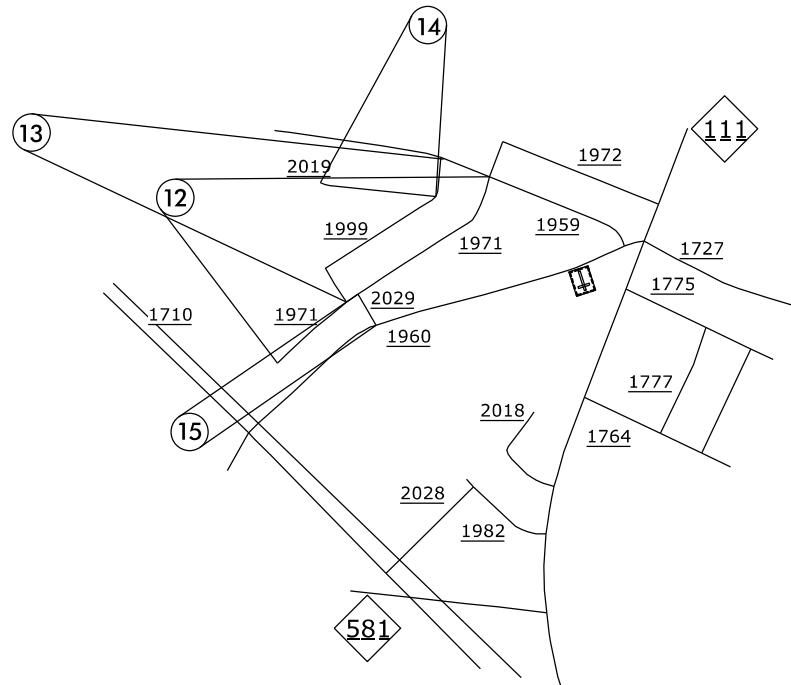
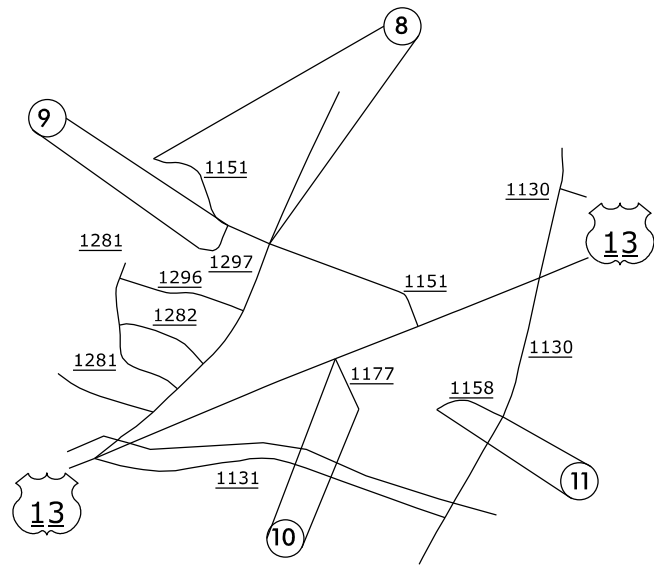
Swamp

SHEET 3 OF 5
WAYNE COUNTY
 NORTH CAROLINA

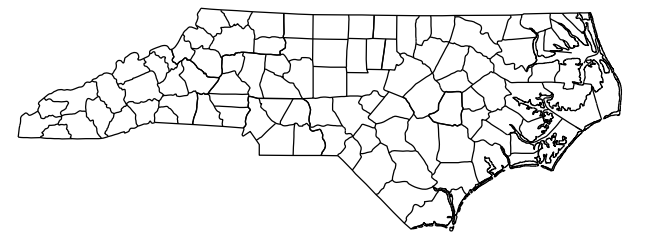


MAP #7: MILL BRIDGES AS DIRECTED BY THE ENGINEER

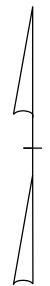
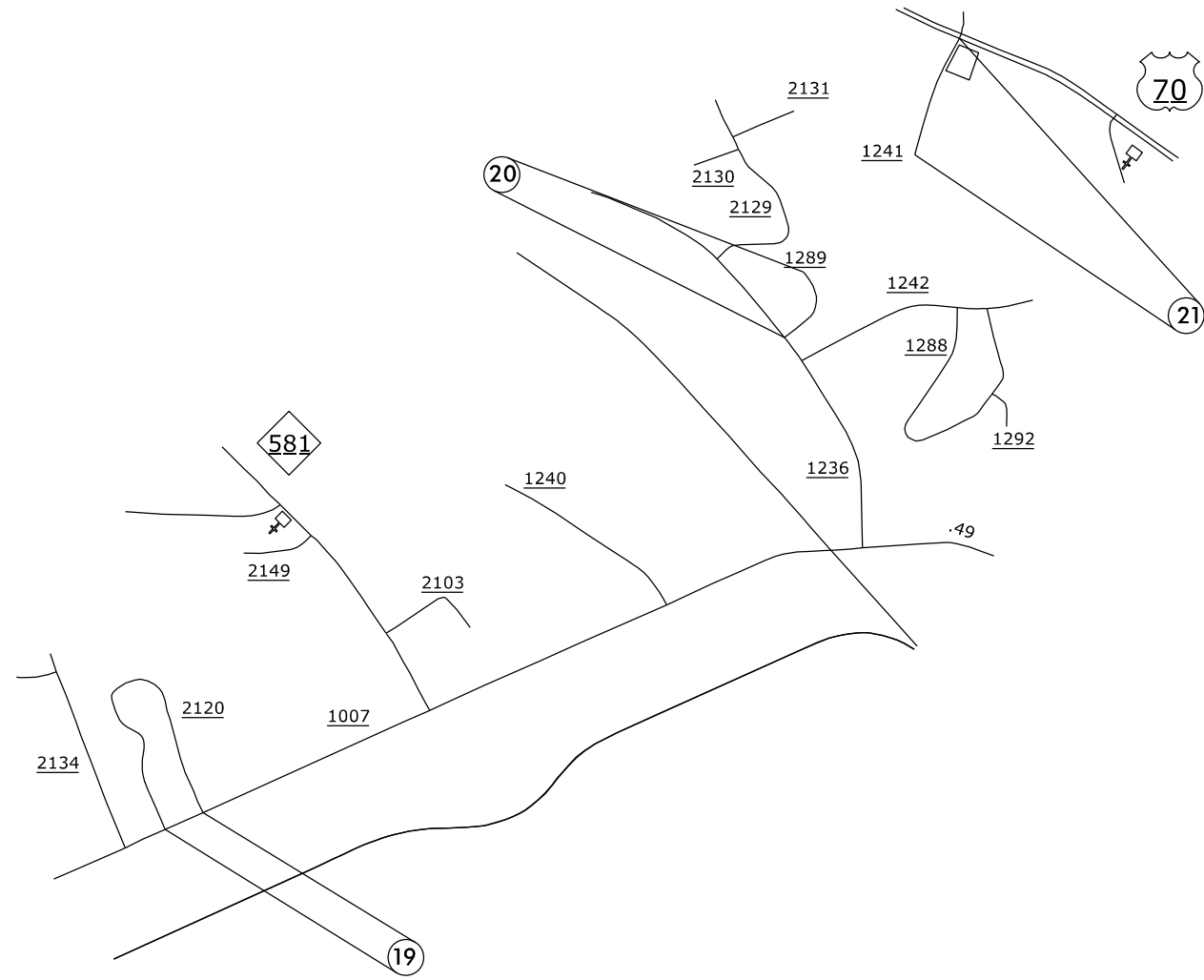
WBS ELEMENT	SHEET NO.	TOTAL SHEETS
2016CPT.04.06.10961.1, etc.	4	
DESCRIPTION		



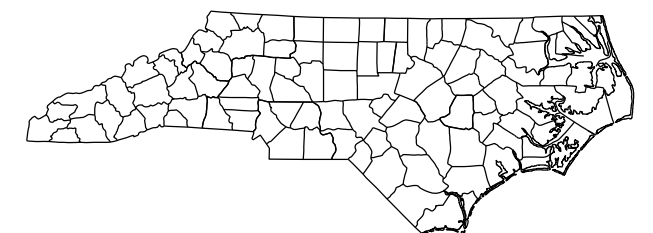
SHEET 4 OF 5
WAYNE COUNTY
 NORTH CAROLINA



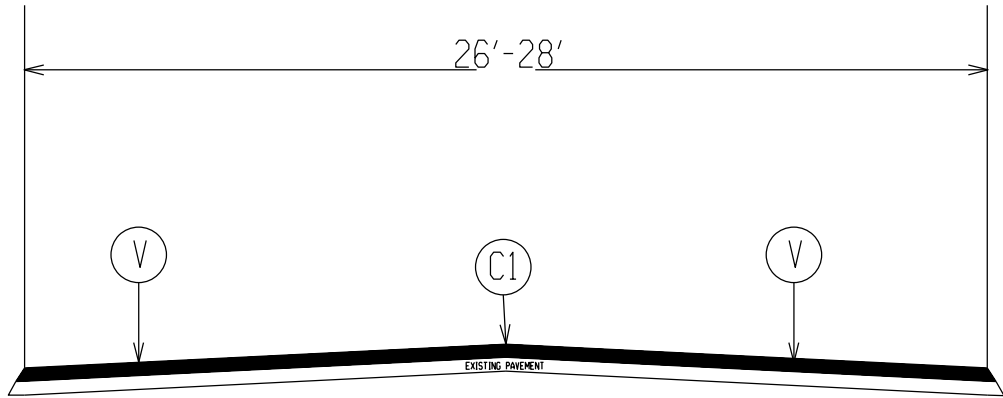
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2016CPT.04.06.10961.1, etc.	5	
	DESCRIPTION	



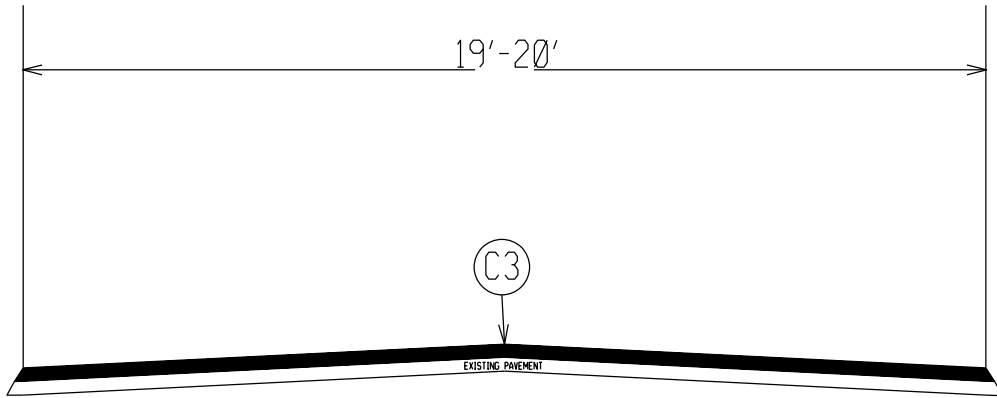
SHEET 5 OF 5
WAYNE COUNTY
 NORTH CAROLINA



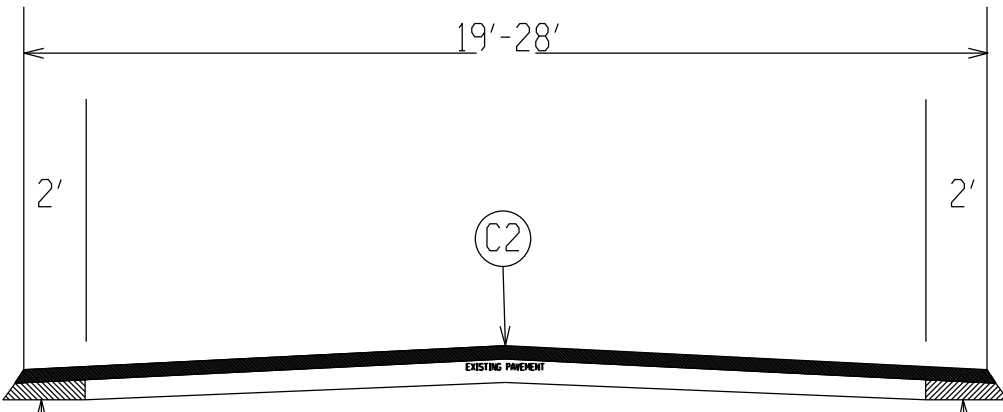
WBS ELEMENT	SHEET NO.	TOTAL SHEETS
2016CPT.04.06.10961.1, ETC.	6	



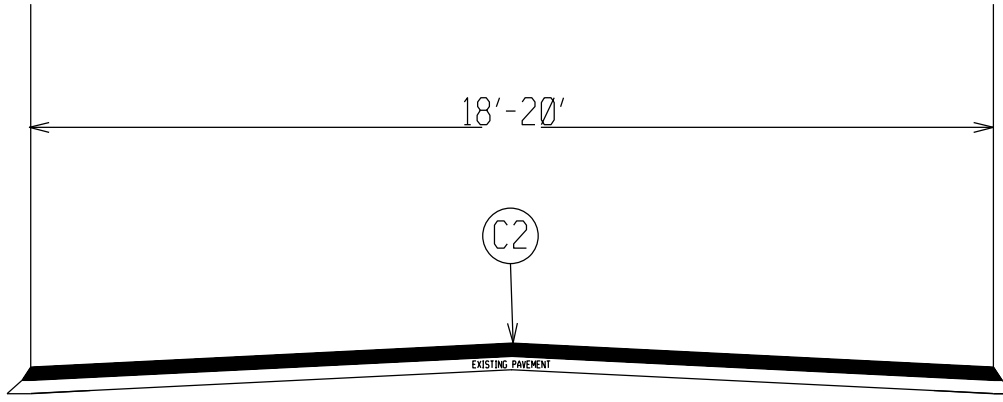
TYPICAL SECTION 1



TYPICAL SECTION 4



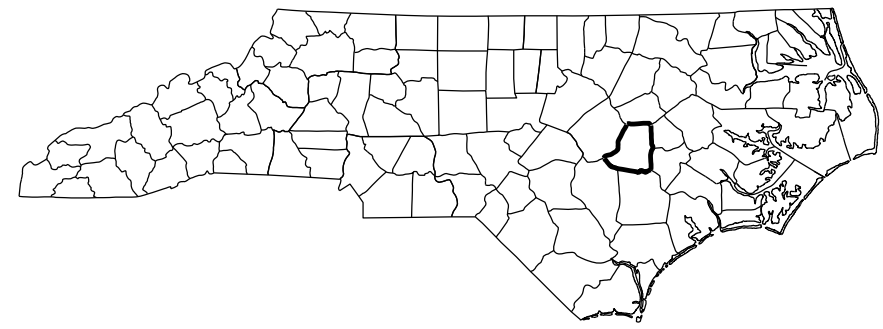
TYPICAL SECTION 2



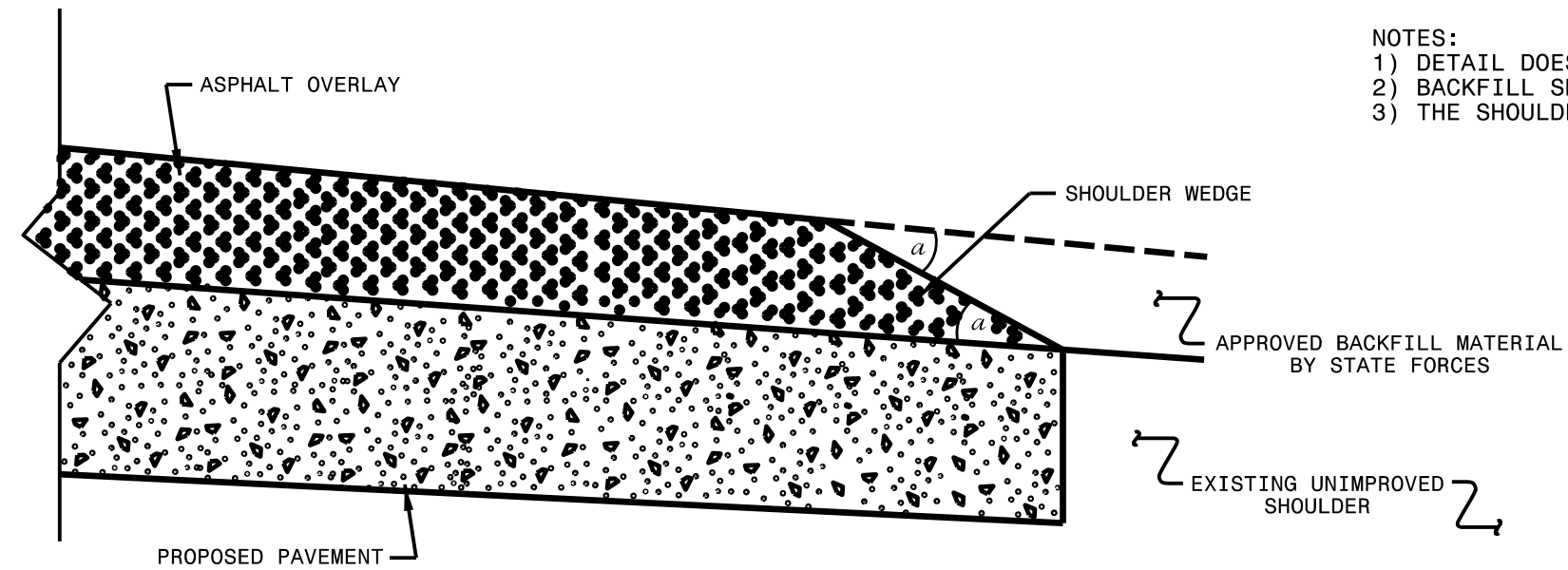
TYPICAL SECTION 3

- (C1) APPROX 1.5" OF S9.5B AT AN AVERAGE RATE OF 168 LB/SY
- (C2) APPROX 1.5" OF SF9.5A AT AN AVERAGE RATE OF 165 LB/SY
- (C3) APPROX .75" OF S4.75A AT AN AVERAGE RATE OF 75 LB/SY
- (E1) APPROX 5" OF B25.0B AT AN AVERAGE RATE OF 570 LB/SY
- (V) MILL ENTIRE ROADWAY 1.5" PRIOR TO RESURFACING

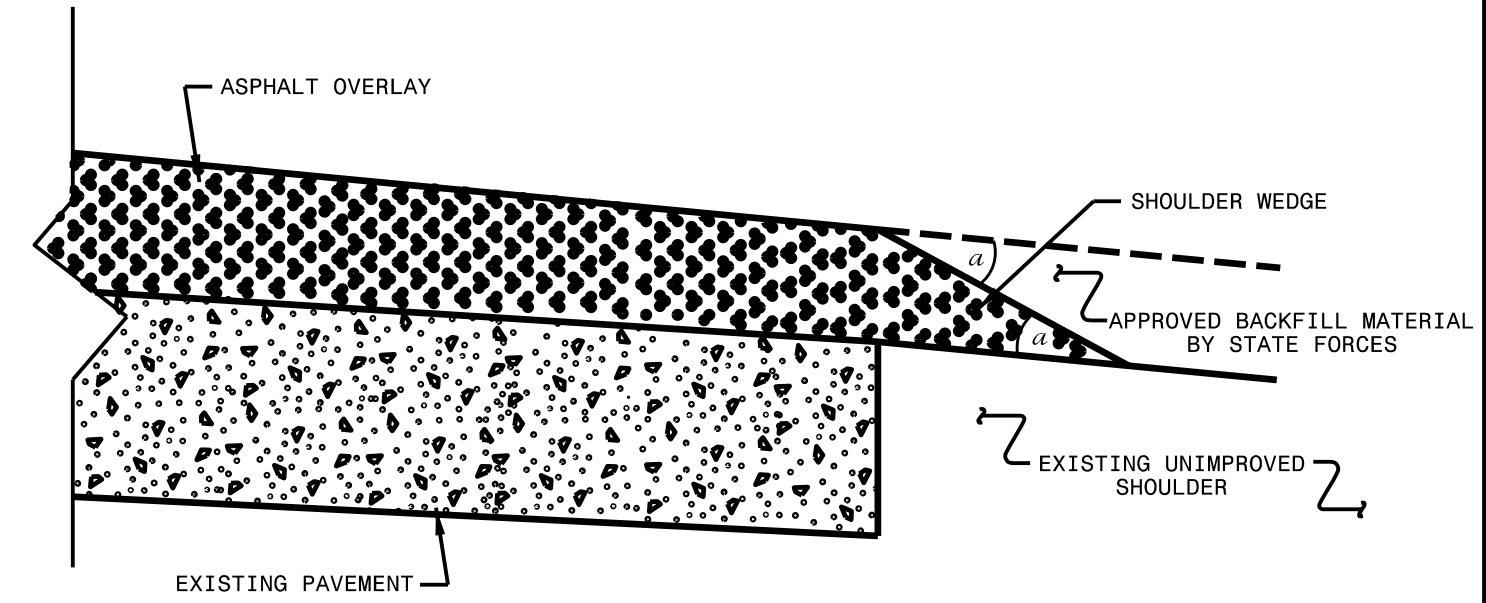
**WAYNE COUNTY
NORTH CAROLINA**



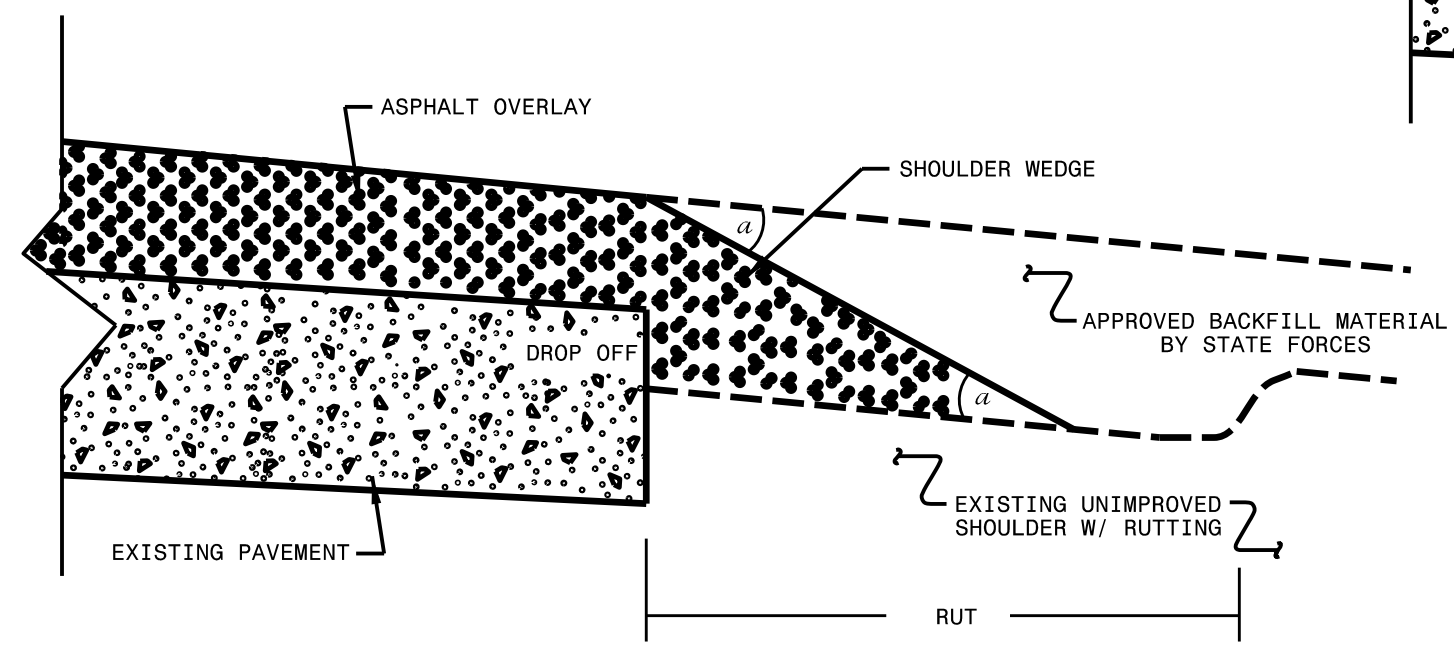
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)

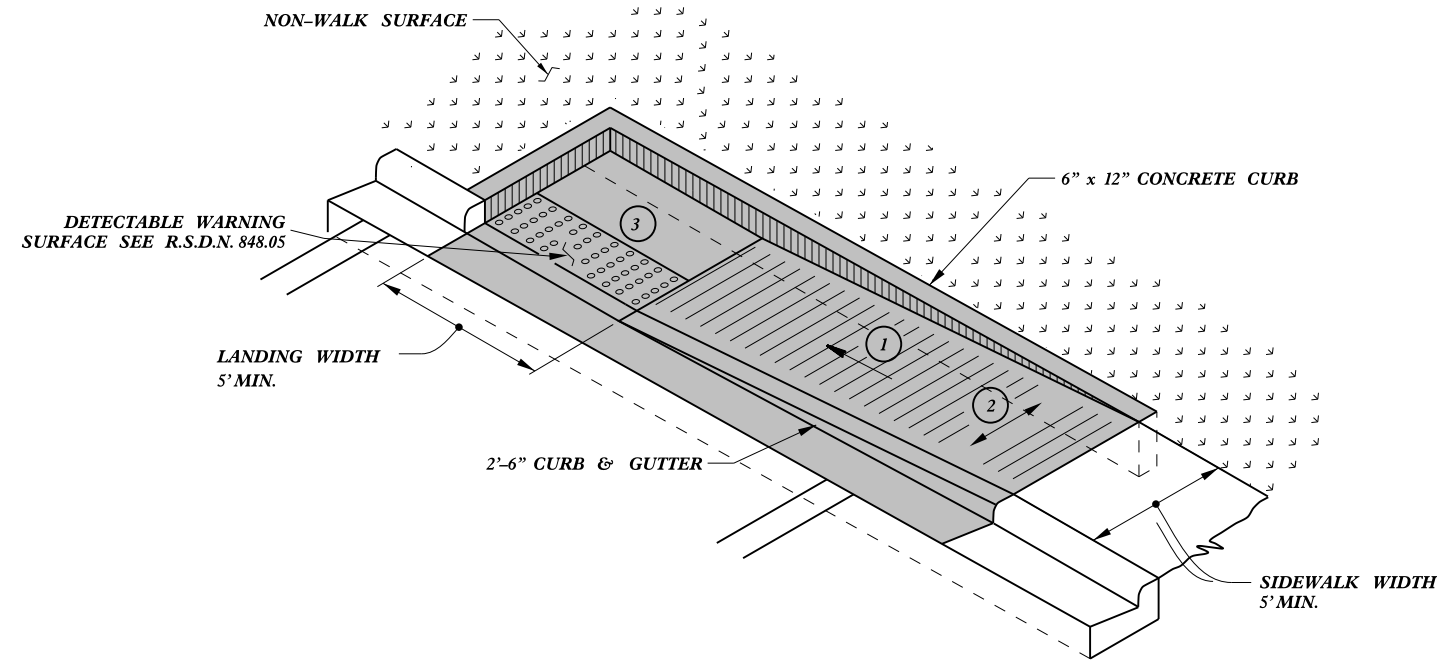


SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to Rutted Shoulder)

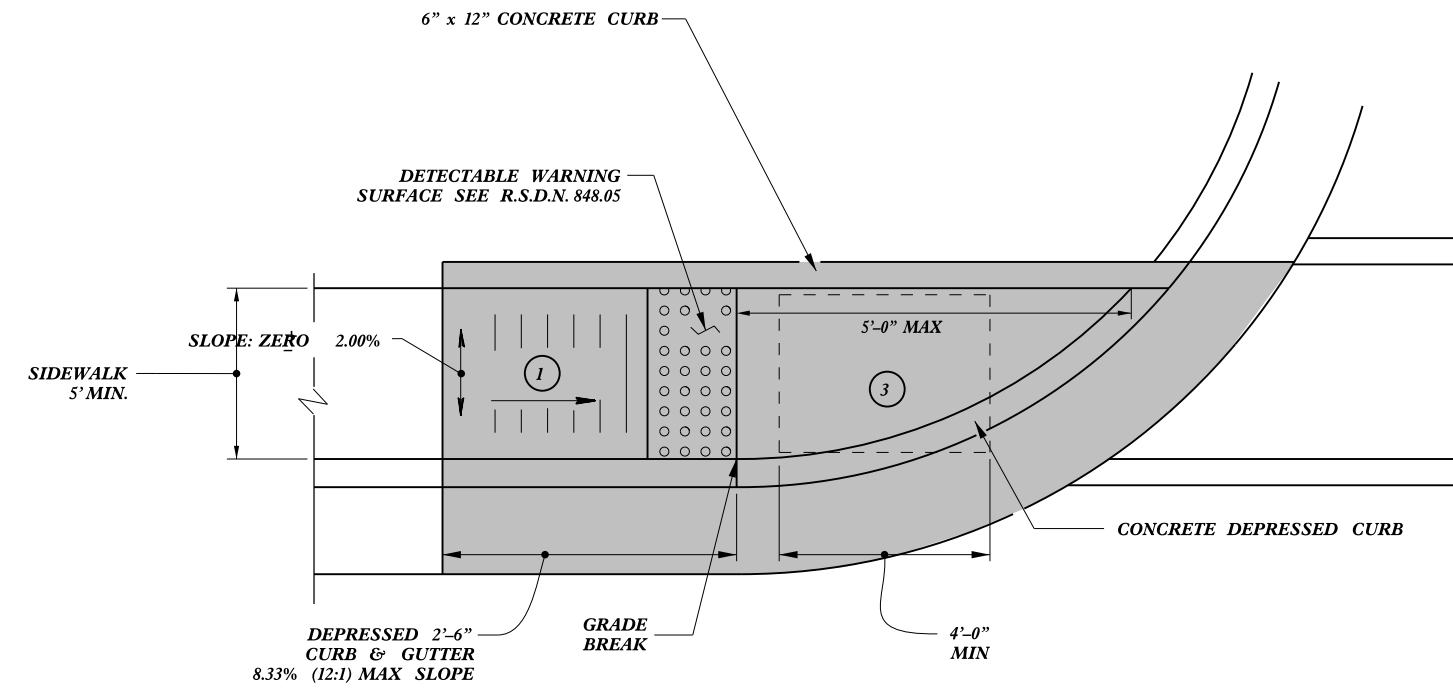
- SHOULDER WEDGE ANGLE = 30°

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: 10/16/12
CHECKED BY:	DATE:
FILE SPEC: s:\usr\details\stand\shoulderwedgedetail.dgn	

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



TYPE 1A



TYPE 1

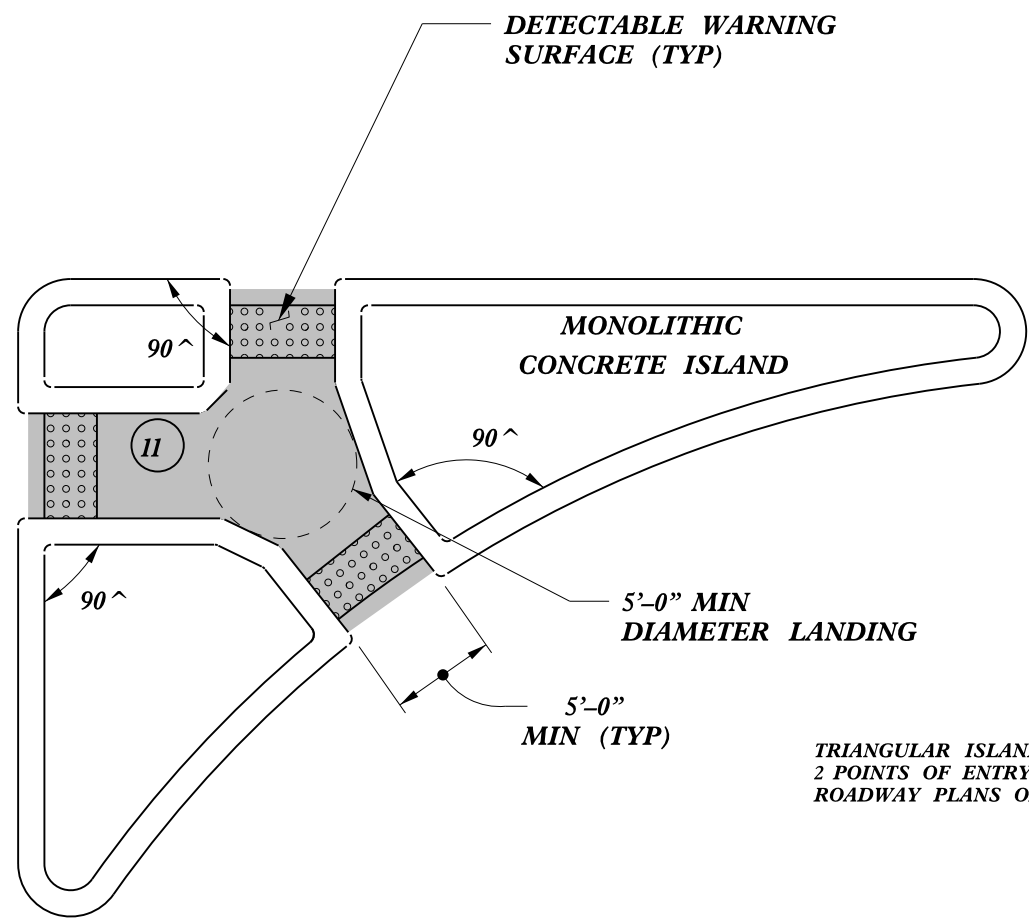
- ① 8.33% (12:1) MAX RAMP SLOPE
- ② CROSS SLOPE: 2.00%
- ③ CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR CURB RAMP

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: sstds/2012CurbRamp/CurbRampDetails.dwg	

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

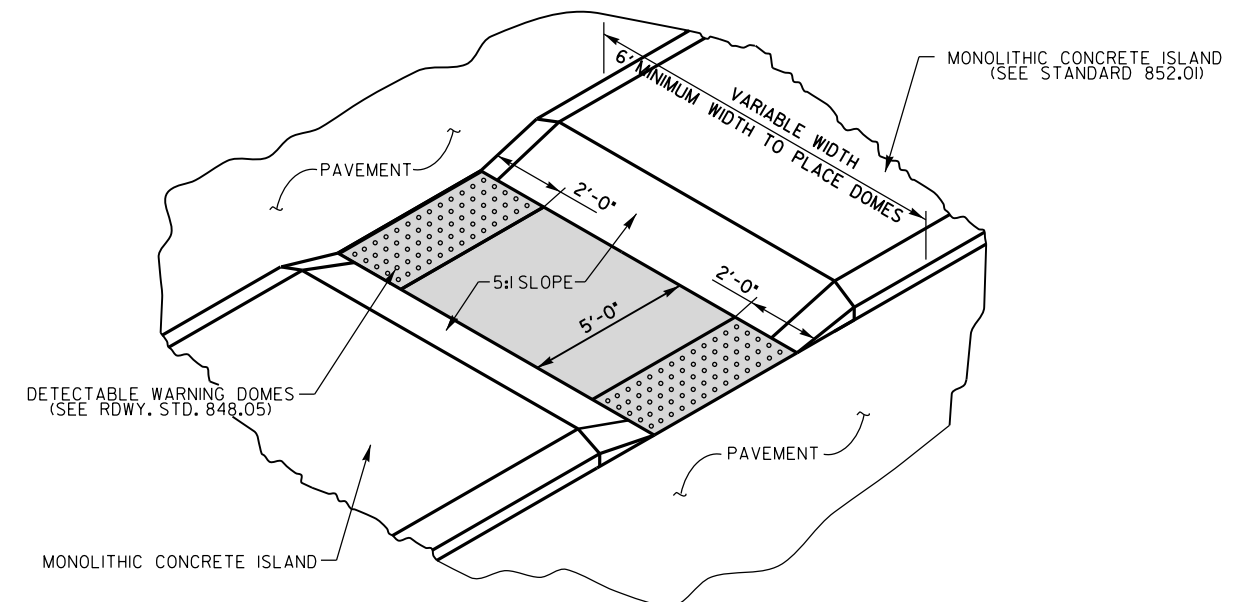
23-MAR-2012 15:05
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 J.Howerton AT 15023750



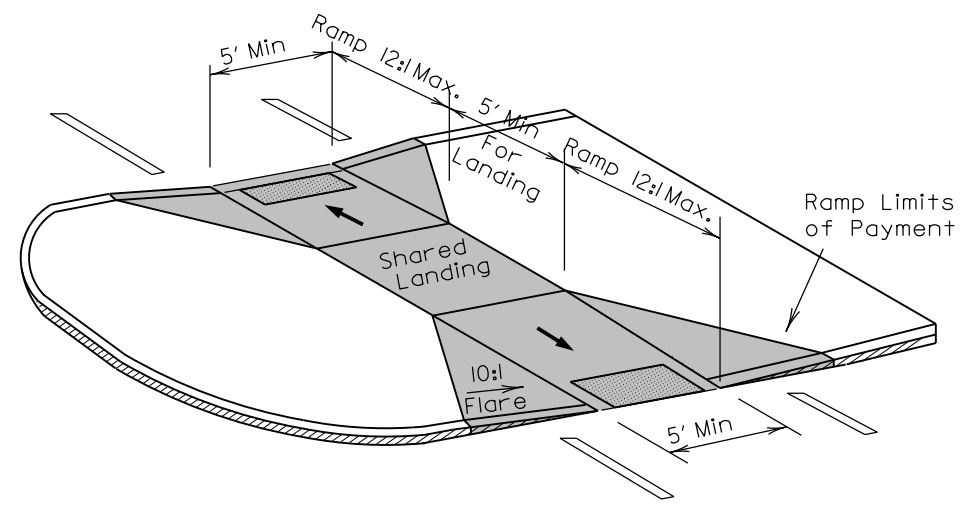
 PAY LIMITS FOR 1 CURB RAMP

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



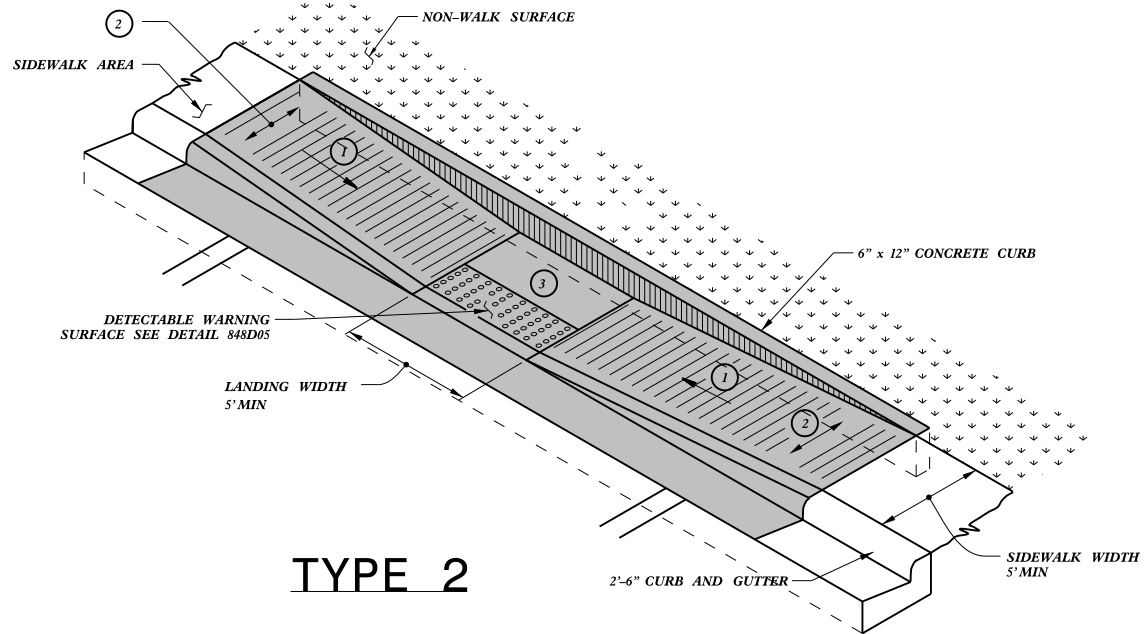
MEDIAN ISLAND WITH CUT THROUGH



MEDIAN ISLAND CURB RAMPS

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: sstds/2012CurbRamp/CurbRampDetails.dwg	

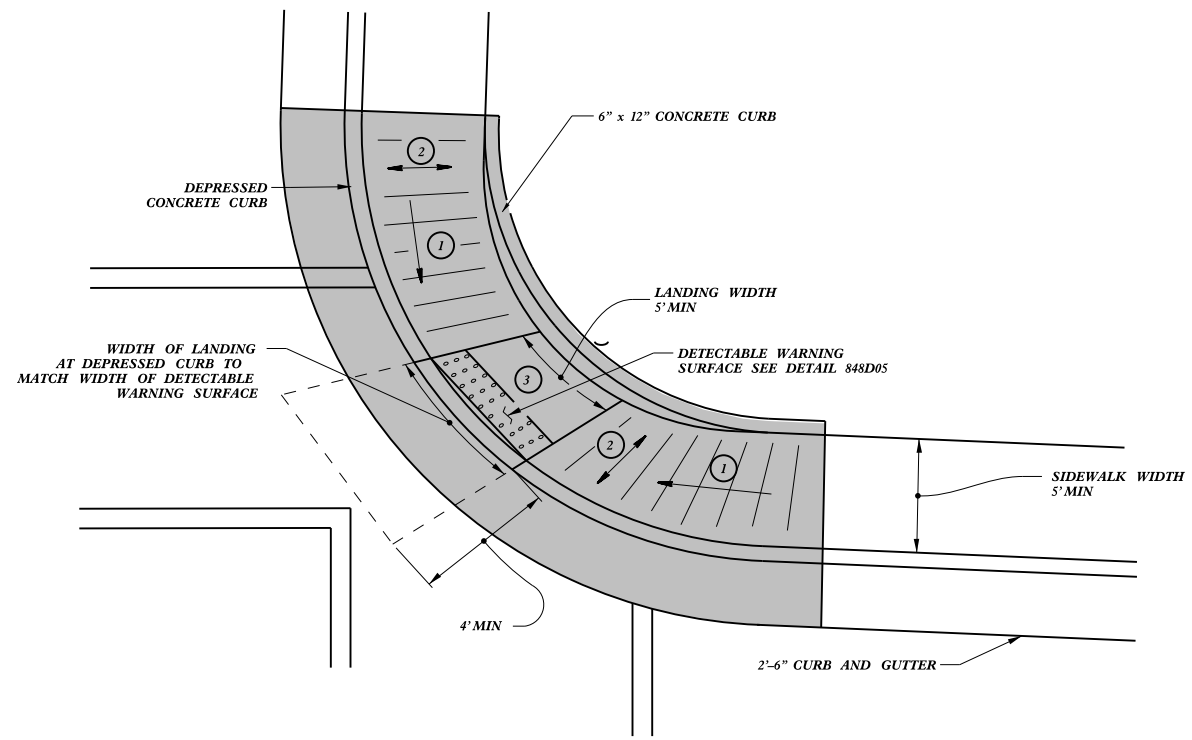
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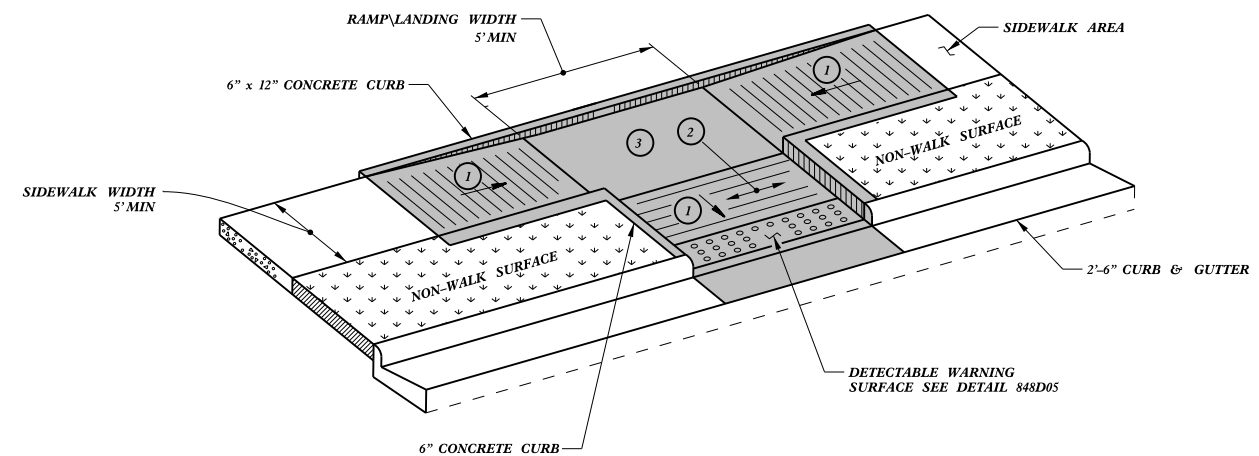
TYPE 2

PAY LIMITS FOR 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

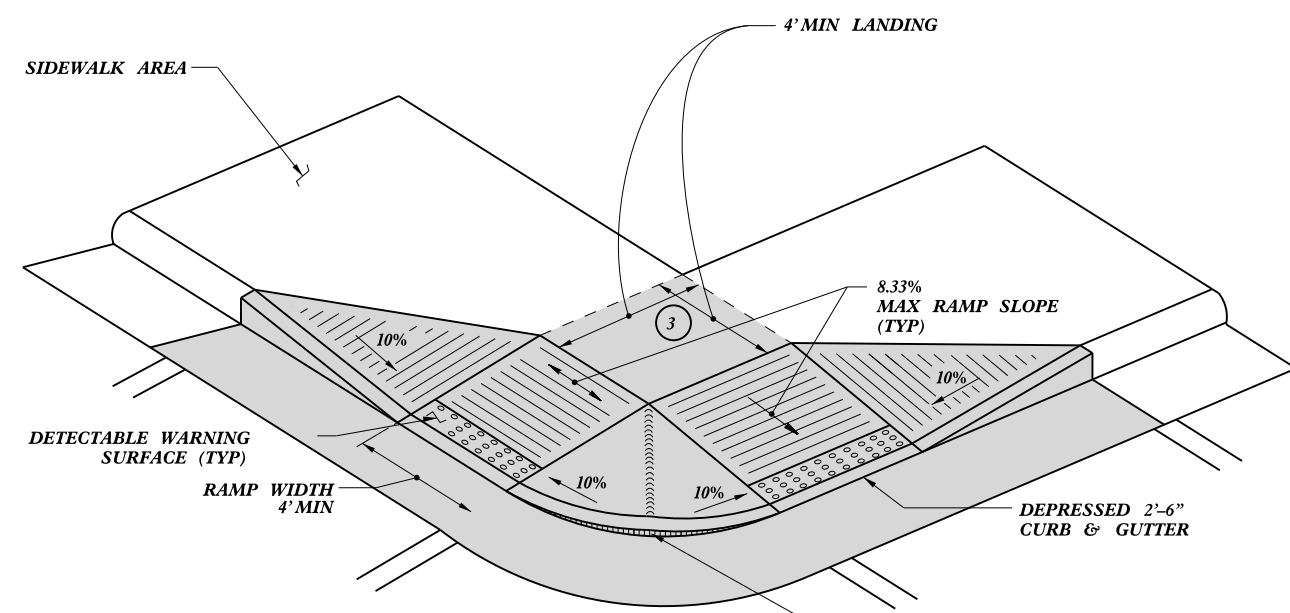


TYPE 3

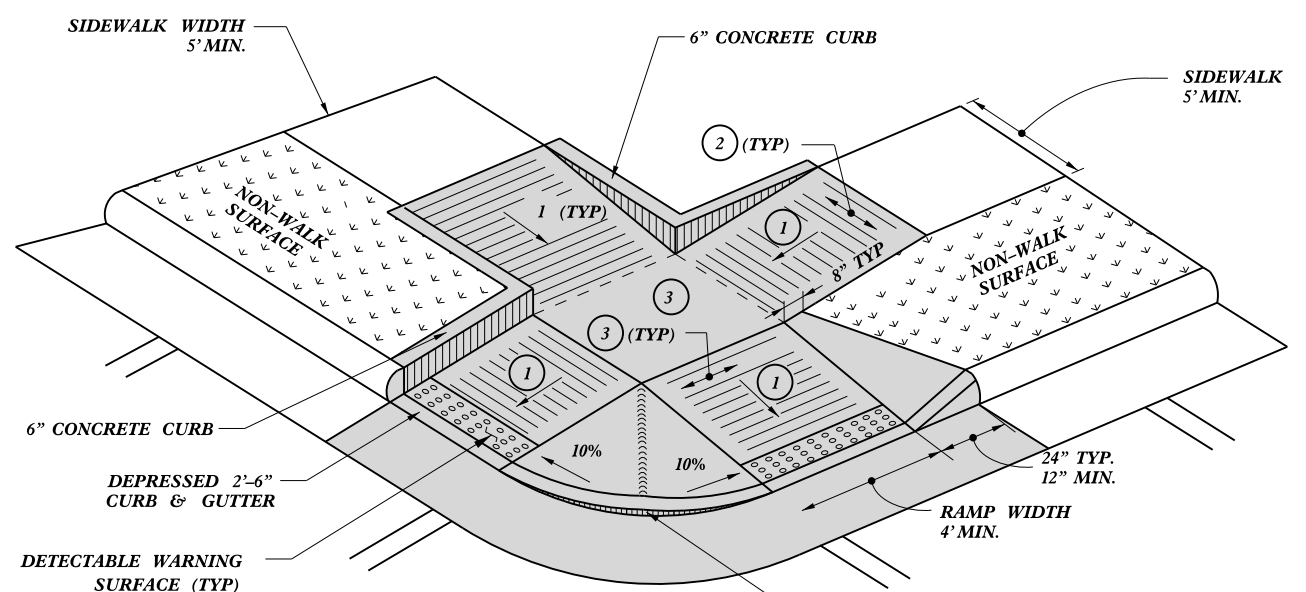
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg	

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

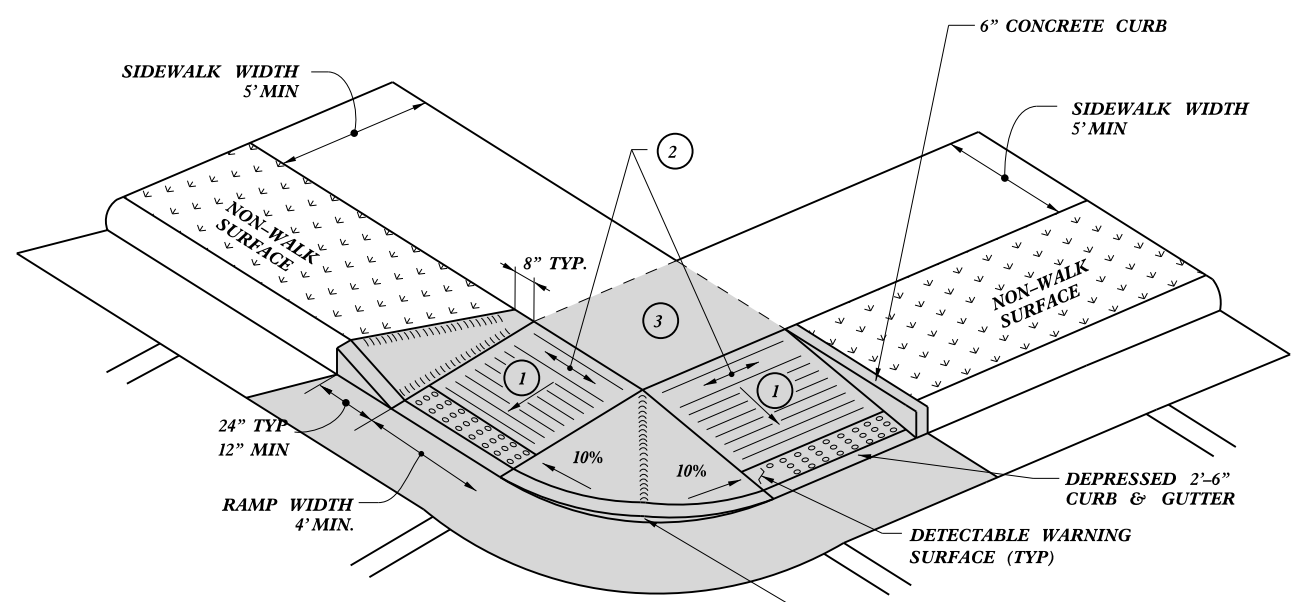
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TYPE 4



TYPE 5



TYPE 4A

PAY LIMITS FOR 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.

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: sstds/2012CurbRamp/CurbRampDetails.dwg	

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

23-MAR-2012 15:08 J:\Contracts\2012\Standard Drawings\2012 Standard Drawings\Curb Ramp Special Details\Curb Ramp Details.dwg J.Howerton AT 05023750

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.04.06.10961.1, ETC	12	

SUMMARY OF QUANTITIES

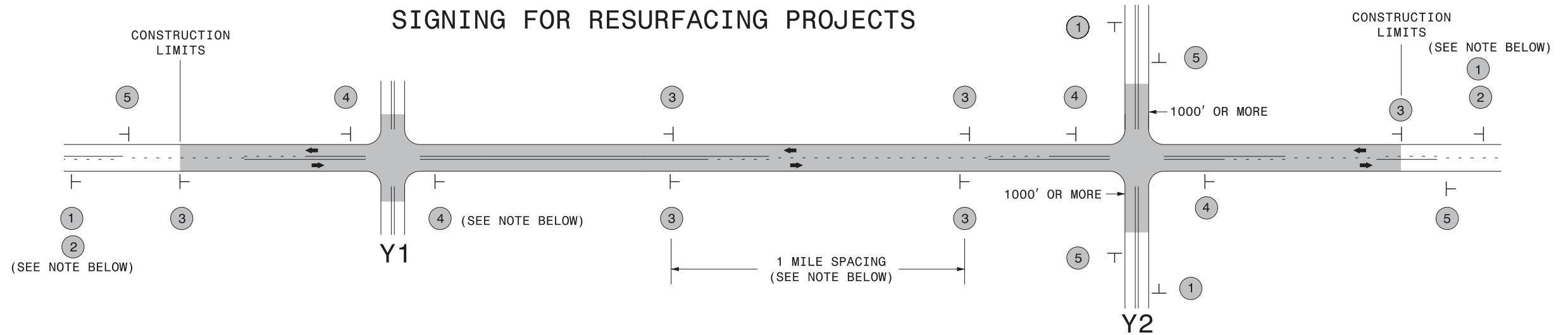
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	SURFACE COURSE, S4.75A TONS	ASPHALT BINDER FOR PLANT MIX TONS	CURB RAMPS 848.05 EA	ADJ. OF DROP INLETS EA	ADJ. OF MAN-HOLES EA	ADJ. OF METER OR VALVE BOXES EA	INDUCTIVE LOOP LF
TOTAL FOR PROJ NO. 2016CPT.04.06.10961.1	Wayne	1	NC 55 HWY W	SR 1105 TO SR 1117	1	2	2WU	NO	NO	8.38	28	140,962	320		12,194			732					
2016CPT.04.06.20961.1	Wayne	2	SR 1630	FROM SR 1565 TO END MAINT.	3	2	2WU	NO	NO	0.38	20					509		34					
2016CPT.04.06.20961.1	Wayne	3	SR 1958 (2 FT. WIDEN. EA. SIDE)	FROM SR 1754 TO DUPLIN CO. LINE	2	2	2WU	NO	NO	1.35	24		245	1,219		1,569		149					
2016CPT.04.06.20961.1	Wayne	4	SR 1715 (2 FT. WIDEN. EA. SIDE)	FROM SR 1719 TO SR 1714	2	2	2WU	NO	NO	2.44	22			2,001		2,599		262					
2016CPT.04.06.20961.1	Wayne	5	SR 1138	FROM SR 1117 TO DEAD END	3	2	2WU	NO	NO	2.44	18					2,153		144					
2016CPT.04.06.20961.1	Wayne	6	SR 1745 (2 FT. WIDEN. EA. SIDE)	FROM NC 55 TO NC 111 S.	2	2	2WU	NO	NO	5.29	24			4,060		6,145		584					
2016CPT.04.06.20961.1	Wayne	7	SR 1505	FROM NC 222 TO SR 1513	3	2	2WU	NO	NO	7.19	20		1,200			6,960		466	10	1	8	5	180
2016CPT.04.06.20961.1	Wayne	8	SR 1151 (SUBDIVISION)	FROM SR 1131 TO DEAD END	4	2	2WU	NO	NO	0.33	20						153	10					
2016CPT.04.06.20961.1	Wayne	9	SR 1297	FROM SR 1151 TO DEAD END	4	2	2WU	NO	NO	0.09	20						42	3					
2016CPT.04.06.20961.1	Wayne	10	SR 1177	FROM US 13 TO DEAD END	4	2	2WU	NO	NO	0.12	20						56	4					
2016CPT.04.06.20961.1	Wayne	11	SR 1158	FROM SR 1130 TO END MAINT.	4	2	2WU	NO	NO	0.14	20						65	4					
2016CPT.04.06.20961.1	Wayne	12	SR 1971 (SUBDIVISION)	FROM SR 1959 TO DEAD END	4	2	2WU	NO	NO	0.55	19						242	16					
2016CPT.04.06.20961.1	Wayne	13	SR 1999	FROM SR 1959 TO SR 1971	4	2	2WU	NO	NO	0.39	19						172	12					
2016CPT.04.06.20961.1	Wayne	14	SR 2019	FROM SR 1999 TO DEAD END	4	2	2WU	NO	NO	0.2	19						88	6					
2016CPT.04.06.20961.1	Wayne	15	SR 2029	FROM SR 1971 TO SR 1960	4	2	2WU	NO	NO	0.06	19						26	2					
2016CPT.04.06.20961.1	Wayne	16	SR 1746	FROM SR 1752 TO DUPLIN CO. LINE	3	2	2WU	NO	NO	2.45	20					2,372		159					
2016CPT.04.06.20961.1	Wayne	17	SR 1751 (2 FT. WIDEN. EA. SIDE)	FROM SR 1739 TO LENOIR COUNTY LINE	2	2	2WU	NO	NO	0.33	22			275		352		34					
2016CPT.04.06.20961.1	Wayne	18	SR 2136 (SUBDIVISION)	FROM SR 1236 TO SR 1236	3	2	2WU	NO	NO	0.42	20					407		27					
2016CPT.04.06.20961.1	Wayne	19	SR 2120	SR 1007 TO SR 1007	4	2		NO	NO	0.67	20						414	28					
2016CPT.04.06.20961.1	Wayne	20	SR 1289	FROM SR 1236 TO CUL-DE-SAC	4	2	2WU	NO	NO	0.19	20						118	8					
2016CPT.04.06.20961.1	Wayne	21	SR 1241	FROM US 70 TO END MAINT.	3	2	2WU	NO	NO	0.23	20					253		17					
TOTAL FOR PROJ NO. 2016CPT.04.06.20961.1										25.26			1,445	7,555		23,319	1,376	1,969	10	1	8	5	180
GRAND TOTAL										33.64		140,962	1,765	7,555	12,194	23,319	1,376	2,701	10	1	8	5	180

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.04.06.10961.1, ETC	13	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNT Y	MAP NO	ROUTE	DESCRIPTION	TYP	LANE S	LANE TYPE	LENGTH	WIDTH	4413000000	44570000	4810000000-E		4815000000-E		48200000	48350000	4845000000-N						
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING SF	TEMP. TRAFFIC CONTROL LS	4" WHITE PAINT LF	4" YELLOW PAINT LF	6" WHITE PAINT LF	6" YELLOW PAINT LF	8" YELLOW PAINT LF	24" WHITE PAINT LF	PAINT STR ARROW EA	PAINT LT ARROW EA	PAINT LT STR RT ARROW EA				
2016CPT.04.06.10961.1	Wayne	1	NC 55 HWY W	SR 1105 TO SR 1117	1	2	2WU	8.38	28	1,000	*			180,338	110,616	200		2	2					
TOTAL FOR PROJ NO. 2016CPT.04.06.10961.1												290,954				4								
2016CPT.04.06.20961.1	Wayne	2	SR 1630	FROM SR 1565 TO END MAINT.	3	2	2WU	0.38	20	100	*	8,178	5,016				10			3				
2016CPT.04.06.20961.1	Wayne	3	SR 1958 (2 FT. WIDEN. EA. SIDE)	FROM SR 1754 TO DUPLIN CO. LINE	2	2	2WU	1.35	24	200		29,052	17,820											
2016CPT.04.06.20961.1	Wayne	4	SR 1715 (2 FT. WIDEN. EA. SIDE)	FROM SR 1719 TO SR 1714	2	2	2WU	2.44	22	200		52,509	32,208											
2016CPT.04.06.20961.1	Wayne	5	SR 1138	FROM SR 1117 TO DEAD END	3	2	2WU	2.44	18	200		52,509	32,208											
2016CPT.04.06.20961.1	Wayne	6	SR 1745 (2 FT. WIDEN. EA. SIDE)	FROM NC 55 TO NC 111 S.	2	2	2WU	5.29	24	300		113,841	69,828											
2016CPT.04.06.20961.1	Wayne	7	SR 1505	FROM NC 222 TO SR 1513	3	2	2WU	7.19	20	300		154,729	94,908											
2016CPT.04.06.20961.1	Wayne	8	SR 1151 (SUBDIVISION)	FROM SR 1131 TO DEAD END	4	2	2WU	0.33	20	100														
2016CPT.04.06.20961.1	Wayne	9	SR 1297	FROM SR 1151 TO DEAD END	4	2	2WU	0.09	20	85														
2016CPT.04.06.20961.1	Wayne	10	SR 1177	FROM US 13 TO DEAD END	4	2	2WU	0.12	20	100														
2016CPT.04.06.20961.1	Wayne	11	SR 1158	FROM SR 1130 TO END MAINT.	4	2	2WU	0.14	20	100														
2016CPT.04.06.20961.1	Wayne	12	SR 1971 (SUBDIVISION)	FROM SR 1959 TO DEAD END	4	2	2WU	0.55	19	100														
2016CPT.04.06.20961.1	Wayne	13	SR 1999	FROM SR 1959 TO SR 1971	4	2	2WU	0.39	19	100														
2016CPT.04.06.20961.1	Wayne	14	SR 2019	FROM SR 1999 TO DEAD END	4	2	2WU	0.2	19	100														
2016CPT.04.06.20961.1	Wayne	15	SR 2029	FROM SR 1971 TO SR 1960	4	2	2WU	0.06	19	84														
2016CPT.04.06.20961.1	Wayne	16	SR 1746	FROM SR 1752 TO DUPLIN CO. LINE	3	2	2WU	2.45	20	200		52,724	32,340											
2016CPT.04.06.20961.1	Wayne	17	SR 1751 (2 FT. WIDEN. EA. SIDE)	FROM SR 1739 TO LENOIR COUNTY LINE	2	2	2WU	0.33	22	100		7,102	4,356											
2016CPT.04.06.20961.1	Wayne	18	SR 2136 (SUBDIVISION)	FROM SR 1236 TO SR 1236	3	2	2WU	0.42	20	100														
2016CPT.04.06.20961.1	Wayne	19	SR 2120	SR 1007 TO SR 1007	4	2		0.67	20	100														
2016CPT.04.06.20961.1	Wayne	20	SR 1289	FROM SR 1236 TO CUL-DE-SAC	4	2	2WU	0.19	20	100														
2016CPT.04.06.20961.1	Wayne	21	SR 1241	FROM US 70 TO END MAINT.	3	2	2WU	0.23	20	100														
TOTAL FOR PROJ NO. 2016CPT.04.06.20961.1													25.26		2,769		470,644	288,684			10		3	
														759,328						3				
GRAND TOTAL												33.64		3,769	1	470,644	288,684	180,338	110,616	200	10	2	2	3
														759,328		290,954					7			

SIGNING FOR RESURFACING PROJECTS

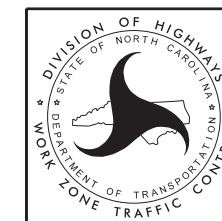


LEGEND	
	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

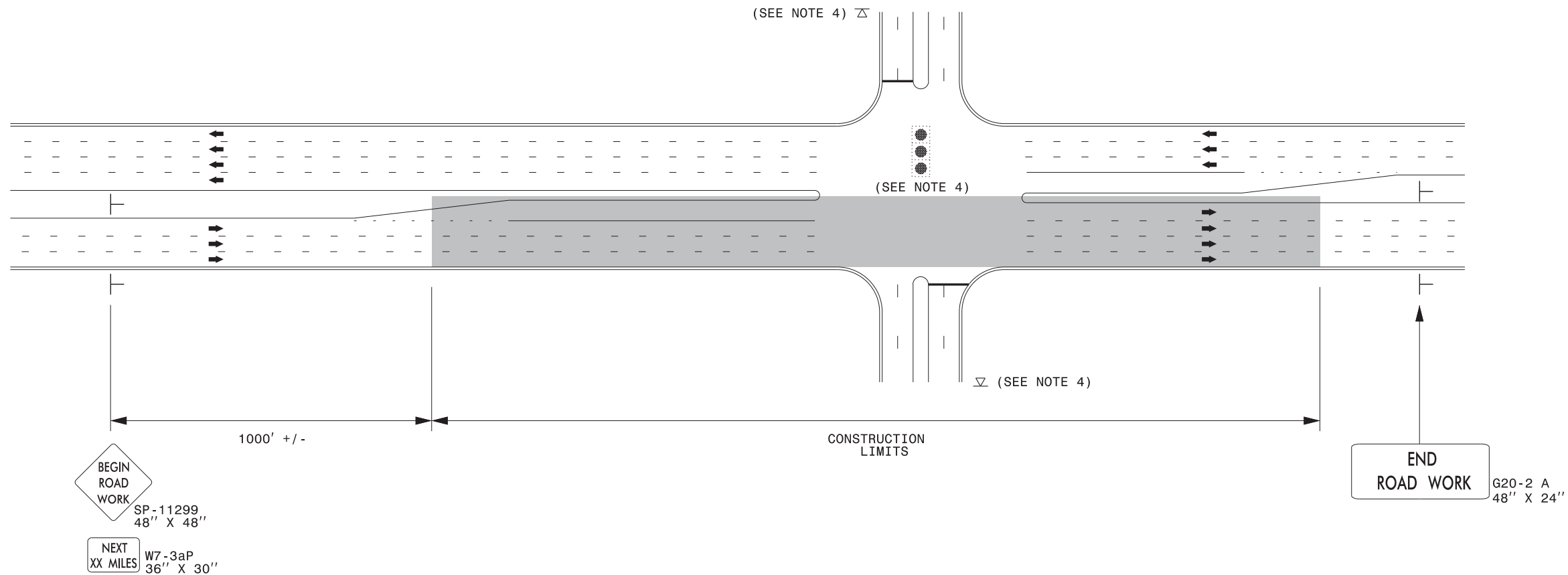
MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	MAINLINE (-L-) SIGNING	-Y- LINE SIGNING
1 2	<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 RESURFACING 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"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS DEAD END ROADS
3	<p>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.</p>	<p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p>
4	<p>THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. 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. 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>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
5	<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	



URBAN / SUBURBAN WORKZONES

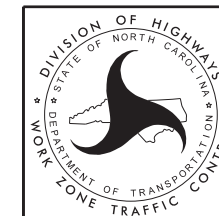


NOTES:

- 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.

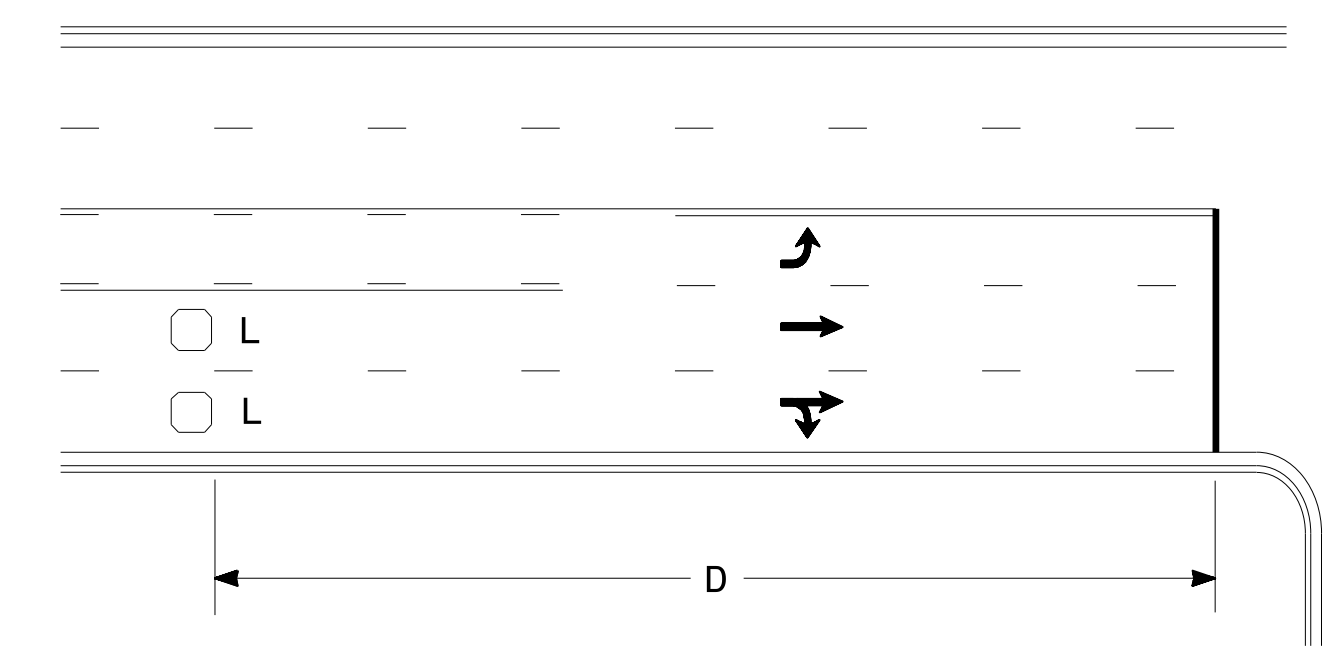
LEGEND

- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



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

High Speed Detection (≥40 mph)

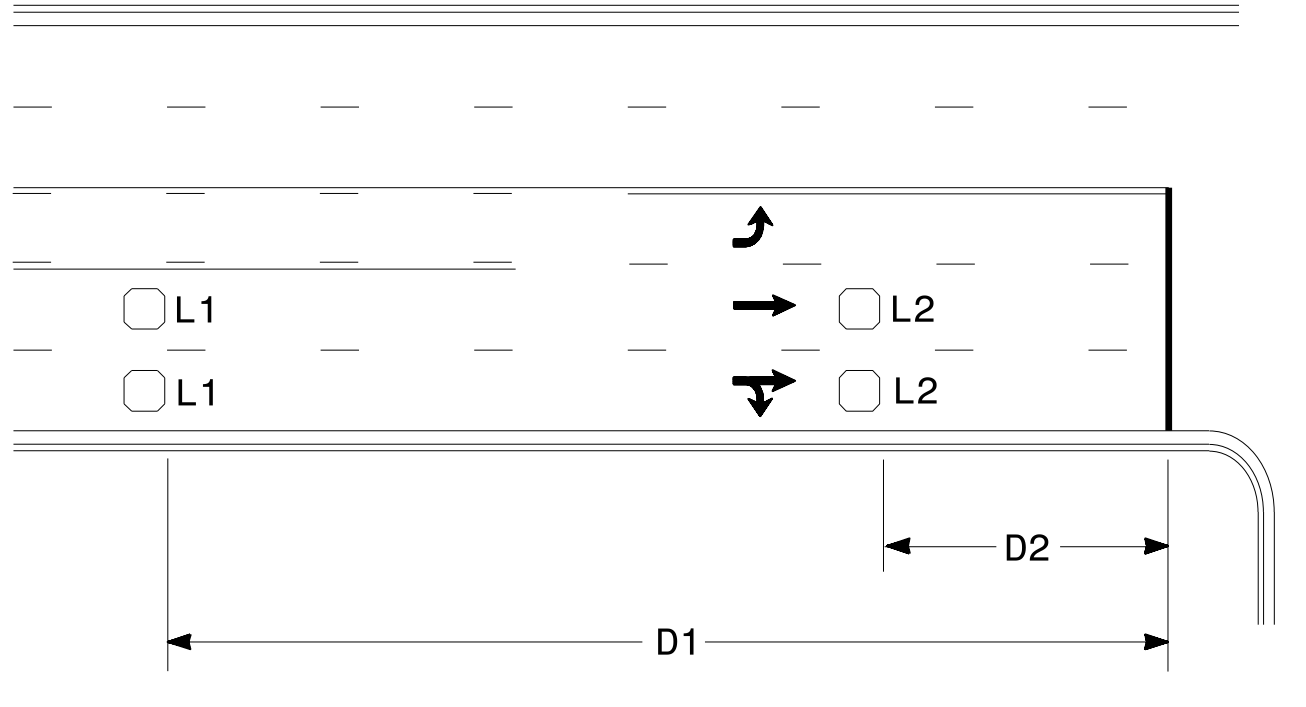


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

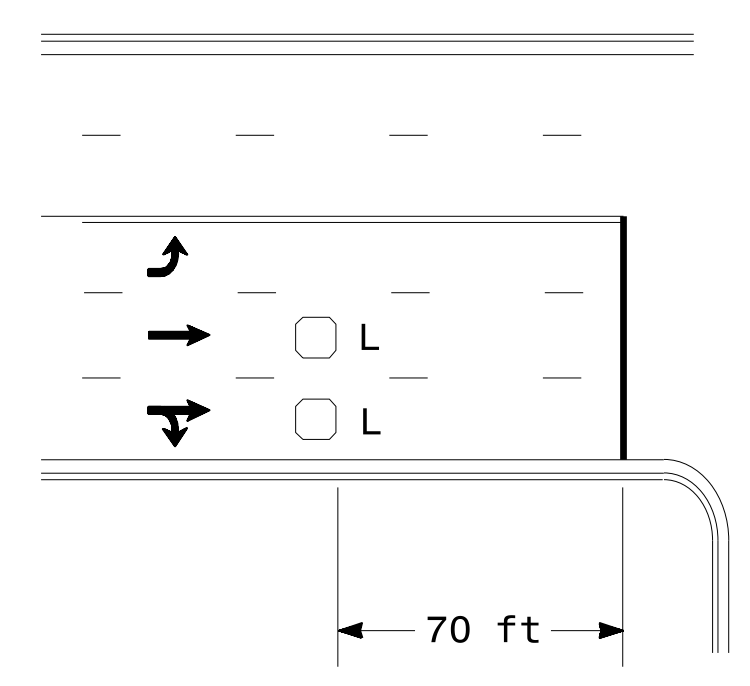


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series
L2 = 6ft X 6ft
Wired in series

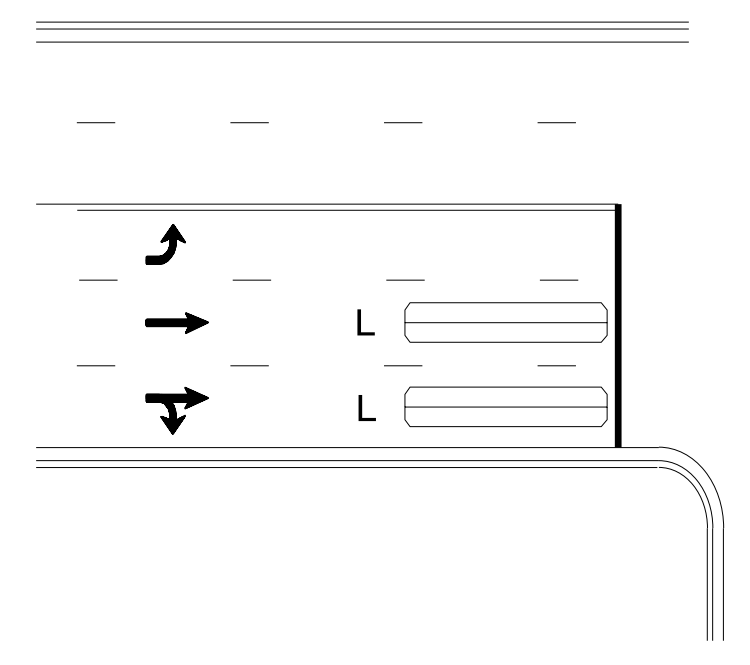
"Stretch" Operation

Low Speed Detection (≤35 mph)



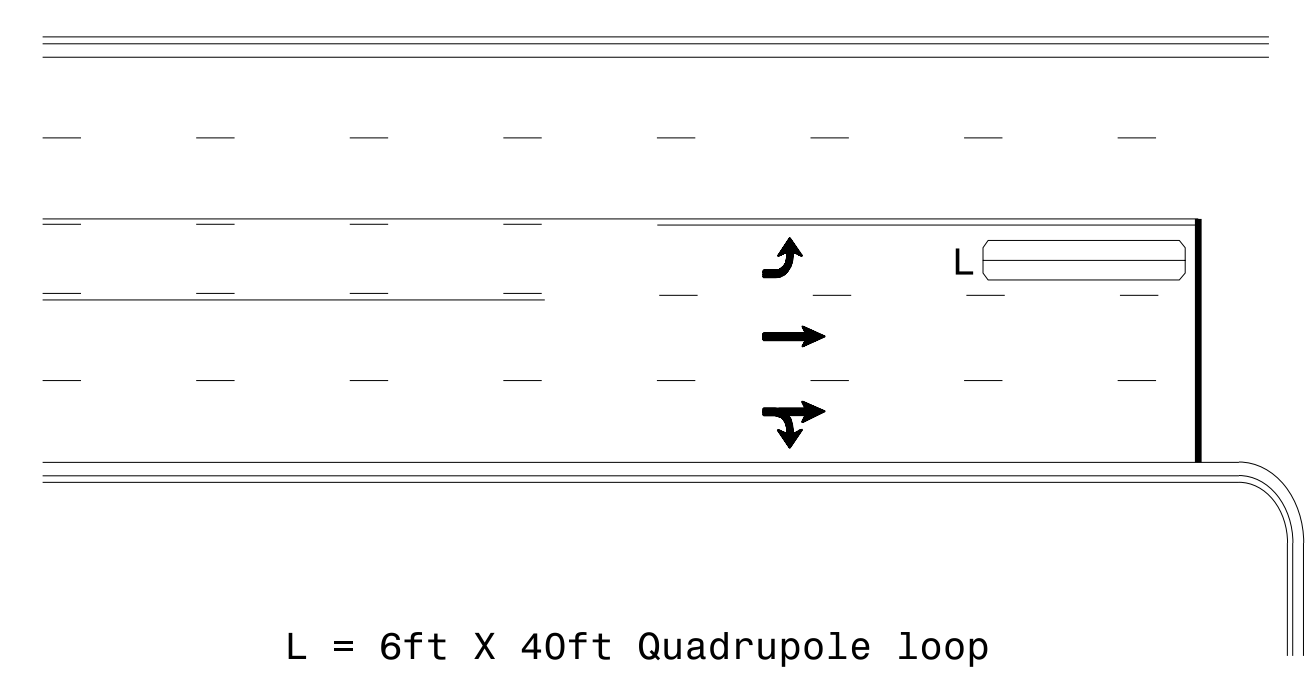
L = 6ft X 6ft
Wired in series

OR



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

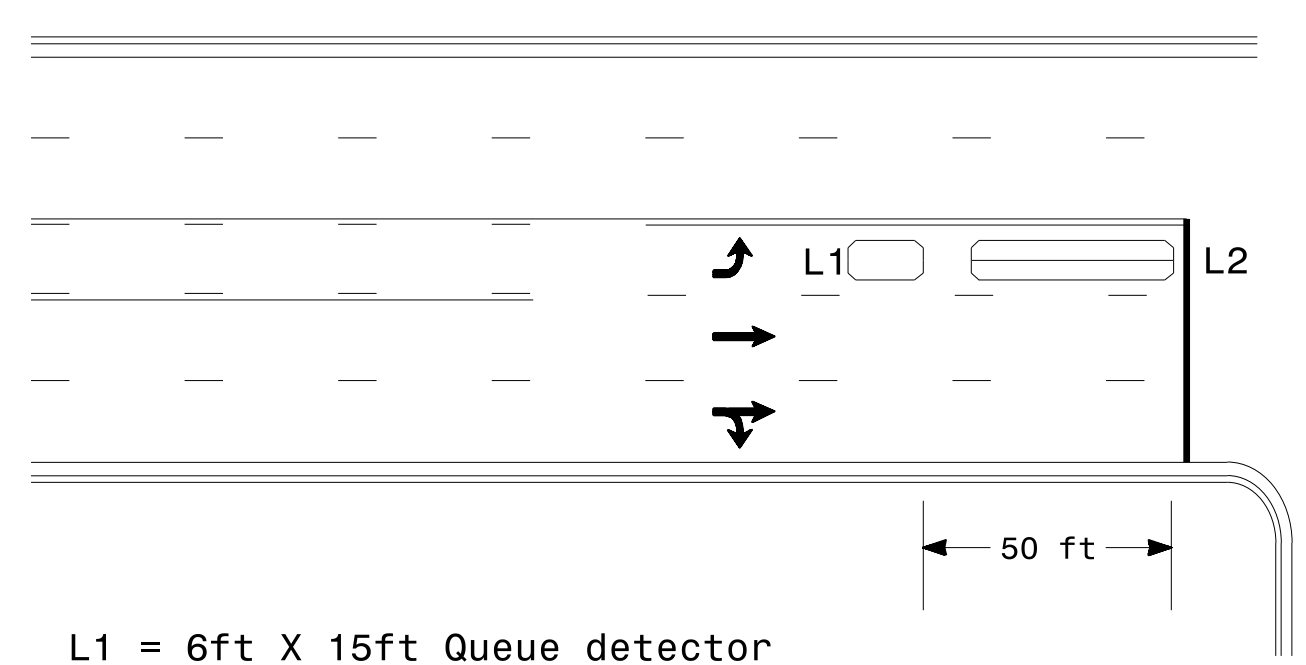
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

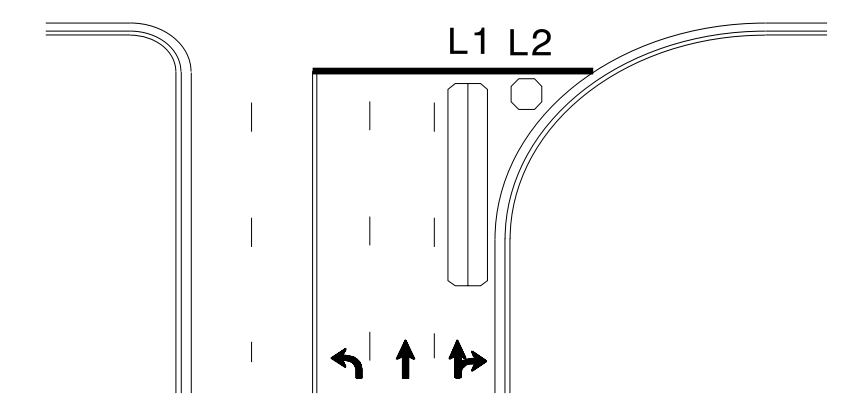
OR



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

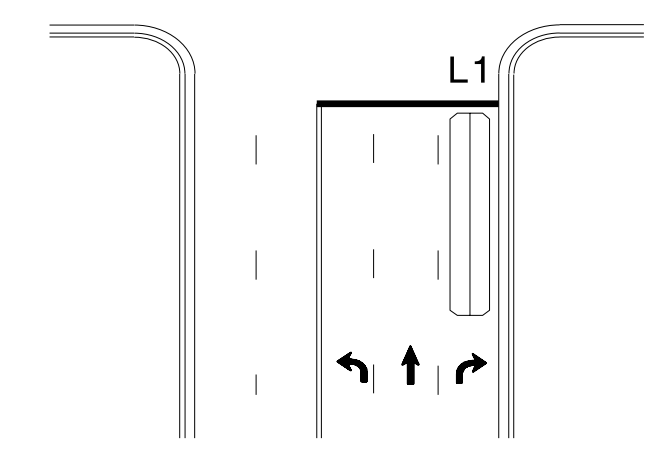
Queue Loop Detection

Right Turn Lane Detection

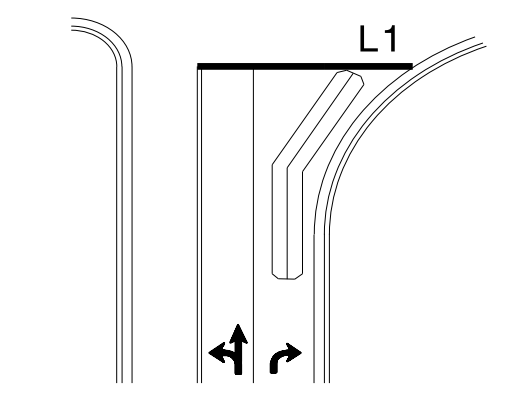


Shared Lane/
Wide Radius Turn

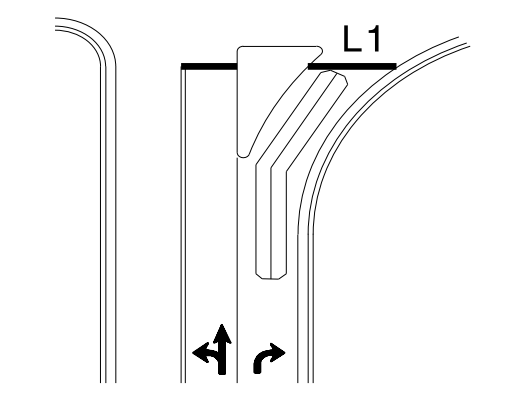
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

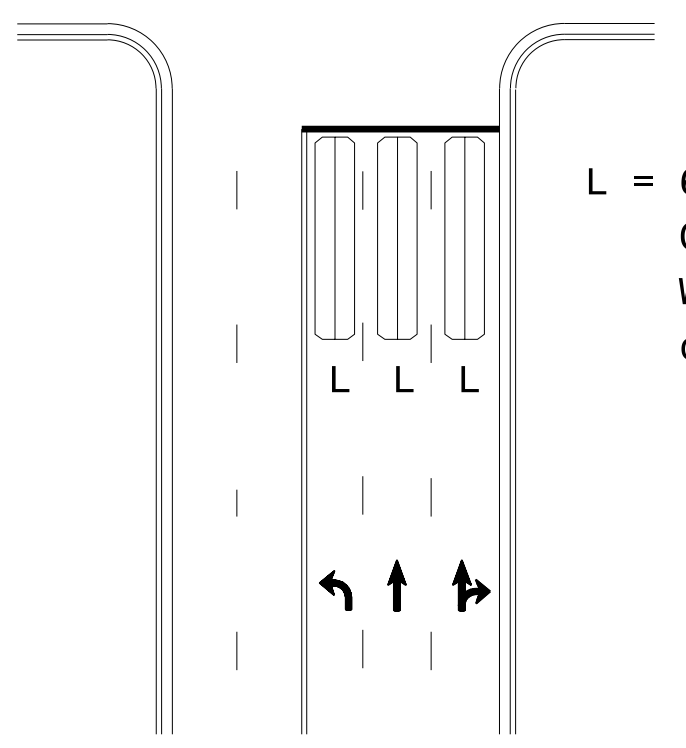


Wide Radius Turn



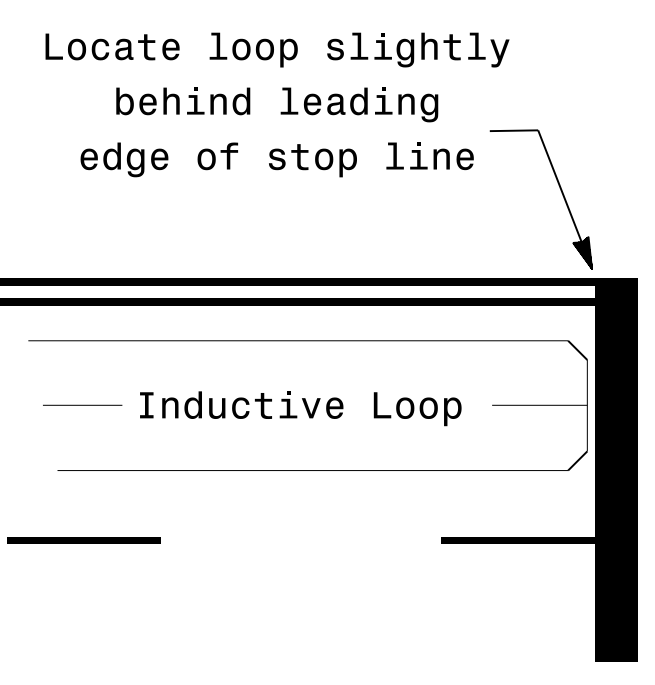
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



Locate loop slightly
behind leading
edge of stop line

- 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

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE
N/A

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
PAMELA L. ALEXANDER
23489

DocuSigned by:
P. Alexander
1/30/2015 10:44:46 AM
SIG. INVENTORY NO.

3D:\116-2015-12-29-SIGNAL\Signal Design\Section\Eastern\Region\loop\yp\ca\2015.dgn
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