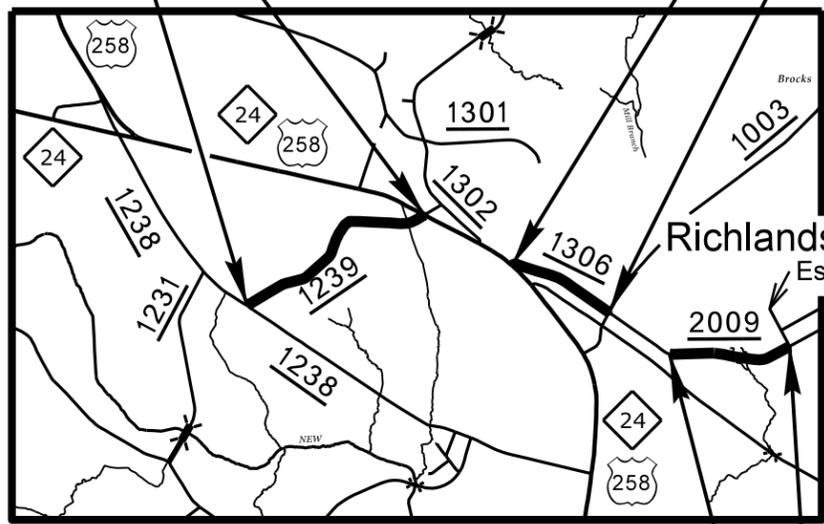


# ONSLOW COUNTY

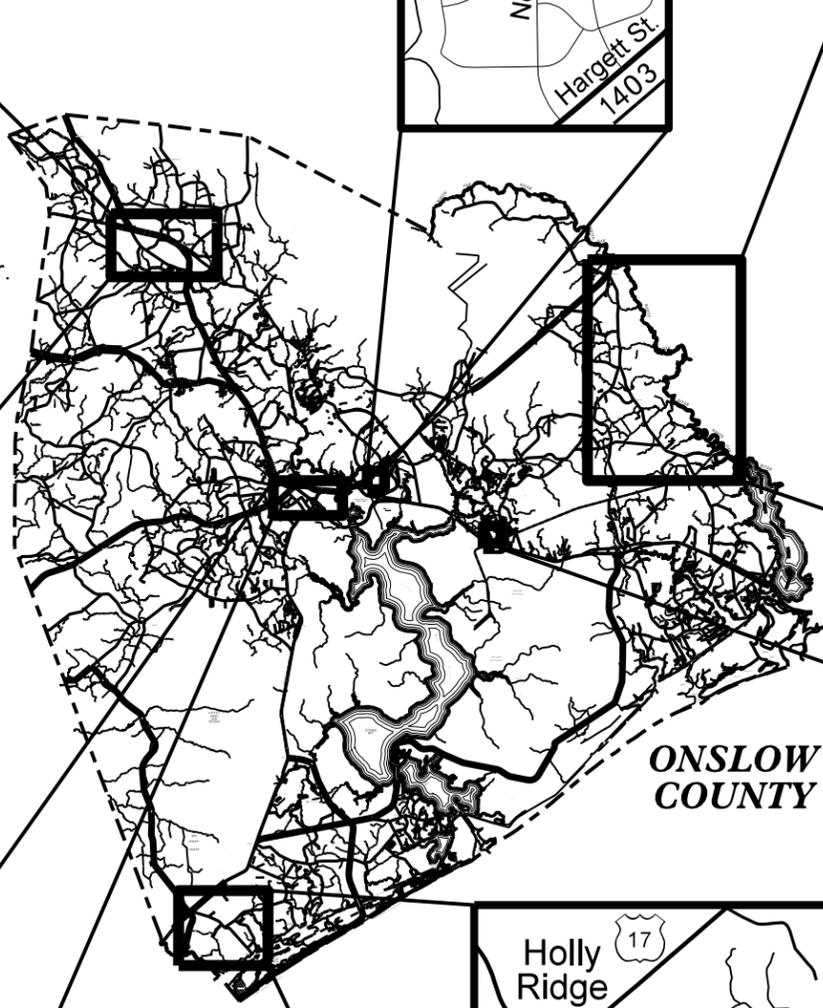
**LOCATION: 9 SECTIONS OF SECONDARY ROADS**  
**TYPE OF WORK: MAT COAT, PAVEMENT INTERLAYER & RESURFACING, ETC.**

INDEX OF SHEETS	
SHEET NO.	SHEET
1	INDEX OF SHEETS & TITLE SHEET
2 - 16	PAVEMENT SCHEDULE, TYPICAL SECTIONS & DETAIL SHEETS
17 - 19	SUMMARY OF QUANTITIES
20 & 21	TRAFFIC CONTROL DETAIL

SR 1239  
Ervintown Rd.

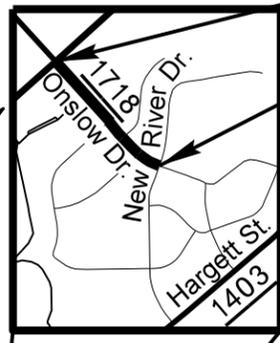


SR 1306  
W. Hargett St.

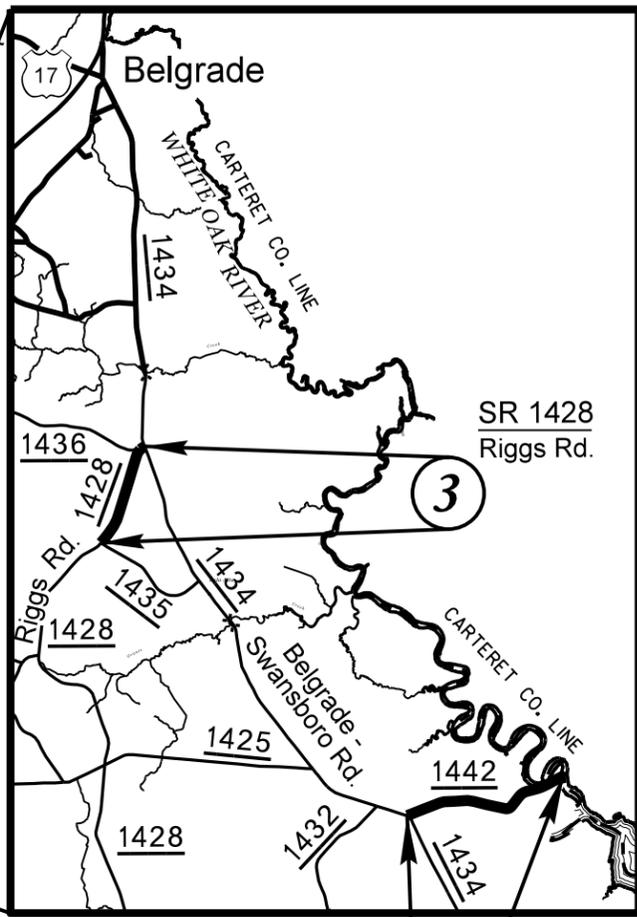


BUS 17  
N. Marine Blvd.

SR 1718  
Onslow Dr.



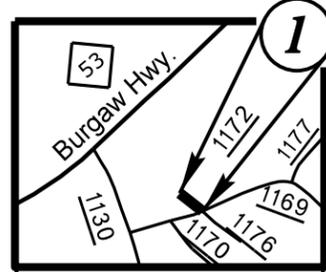
Belgrade



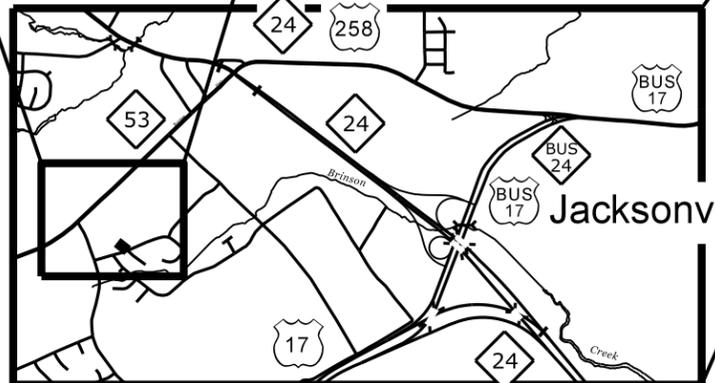
SR 1428  
Riggs Rd.

SR 1442  
Stella Rd.

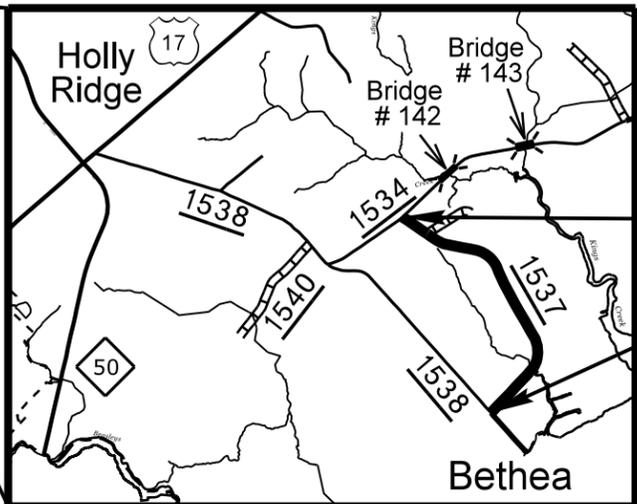
SR 1172  
Cheryll Court



SR 2009  
E. Hargett St./  
Francktown Rd.

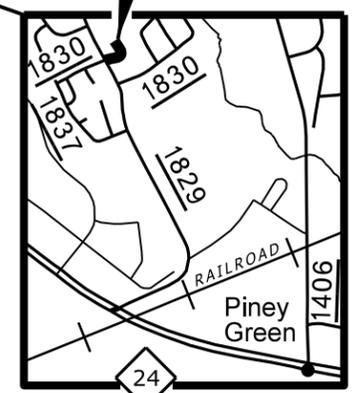


Holly Ridge



SR 1537  
Hardison Rd.

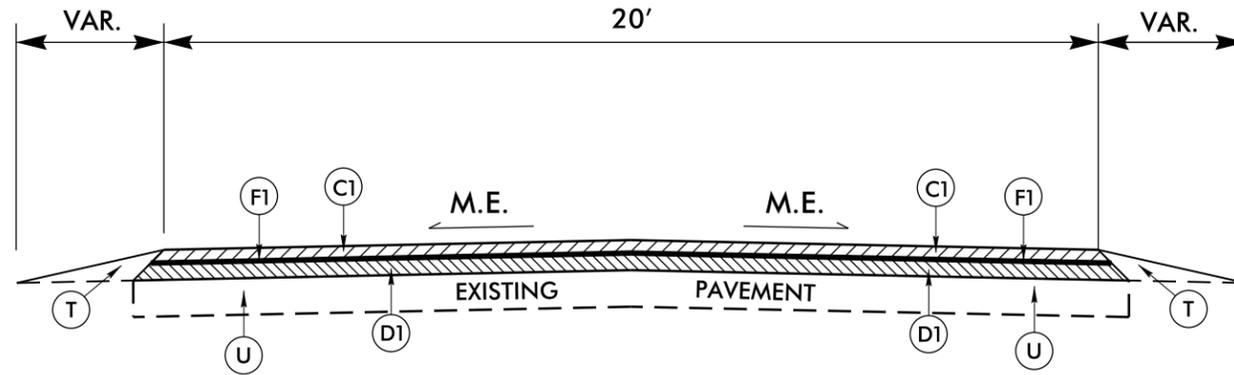
SR 1889  
Timberbrook Ln.



REVISIONS

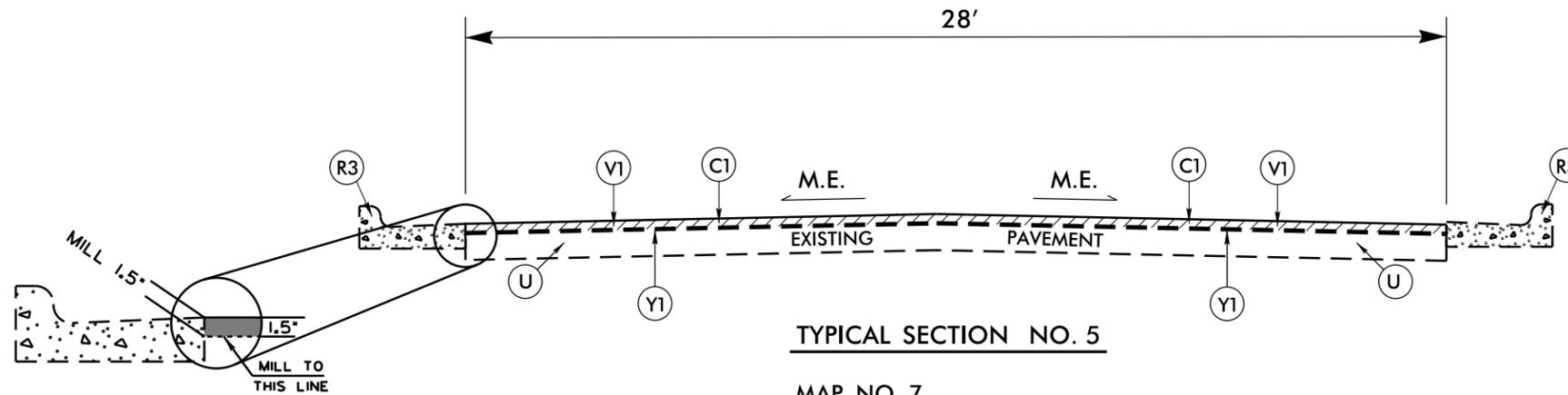
05-JUL-2016 1847 Data 2016 Resurfacing Onslow County 2016CPT.03.06.20671 Onslow Secondary 2016CPT.03.06.20671 Rdy\_tsb.dgn  
 \$\$\$SUSERRM\$\$\$





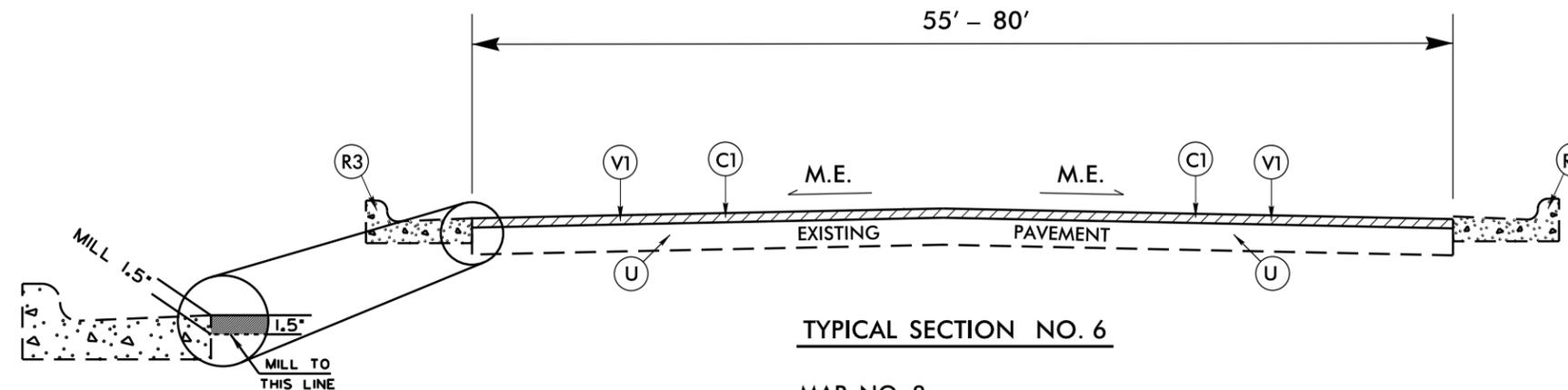
**TYPICAL SECTION NO. 4**

MAP NO. 6  
 SR 2009 (E. HARGETT ST.)  
 MP 0.80 - MP 1.03



**TYPICAL SECTION NO. 5**

MAP NO. 7  
 SR 1306 (W. HARGETT ST.)  
 MP 0.00 - MP 0.55



**TYPICAL SECTION NO. 6**

MAP NO. 8  
 SR 1718 (ONSLow DR.)  
 MP 0.00 - MP 0.31

PAVEMENT SCHEDULE	
C1	1½" S9.5B
D1	2½" I19.0B
F1	AST MAT COAT #6M STONE
R3	EXIST. 2'-6" C & G
T	SH. RECONSTR.
U	EXISTING PAVEMENT
V1	FINE MILLING 1½"
Y1	PAVEMENT INTERLAYER OPTION B

NOTE: PLACE PAVEMENT INTERLAYER PRIOR TO RESURFACING. SEE PROJECT SPECIAL PROVISIONS

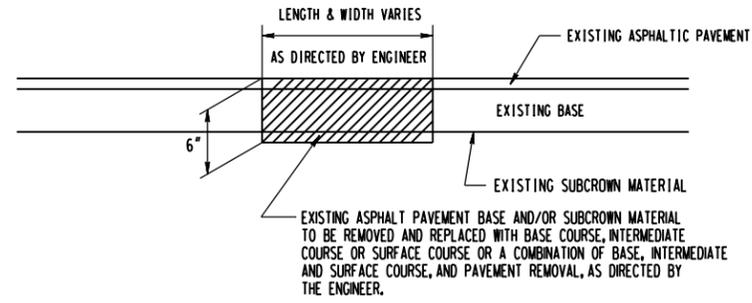
PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.

SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.

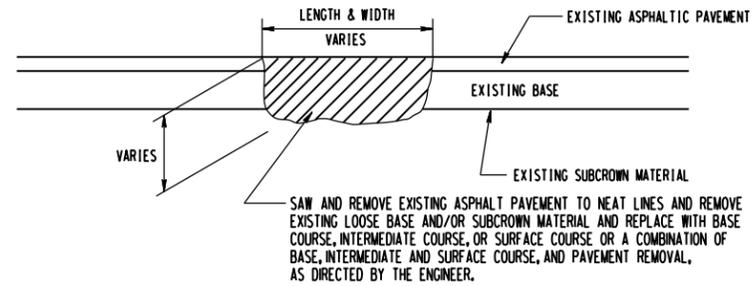
REVISIONS

20-JUN-2016 15:40  
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 \$\$\$SUSPENSE\$\$\$

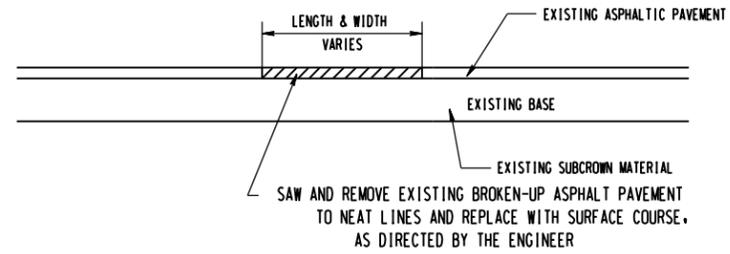
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



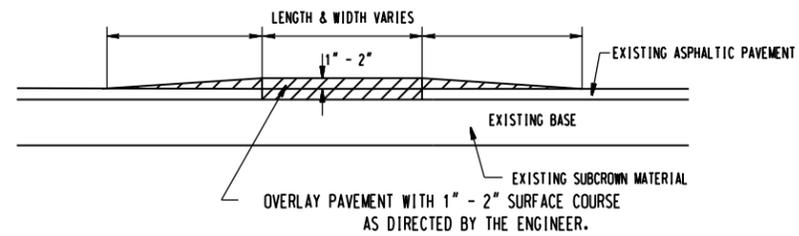
DETAIL NO. 1



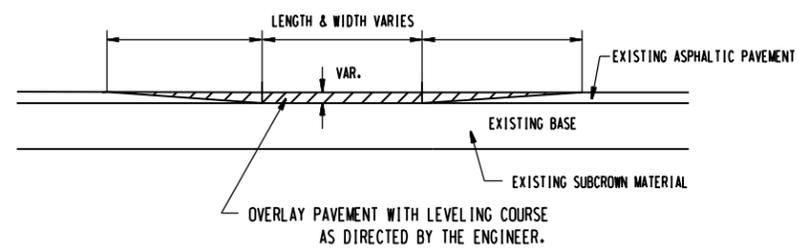
DETAIL NO. 2



DETAIL NO. 3



DETAIL NO. 4



DETAIL NO. 5

REVISIONS

20-APP-2015-1156  
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 \$\$\$SUNFERN\$\$\$

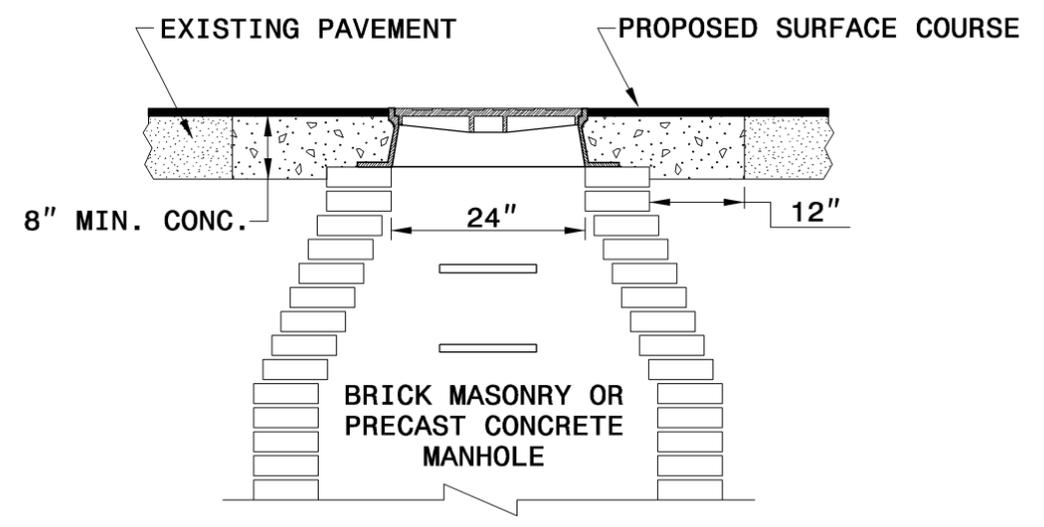
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

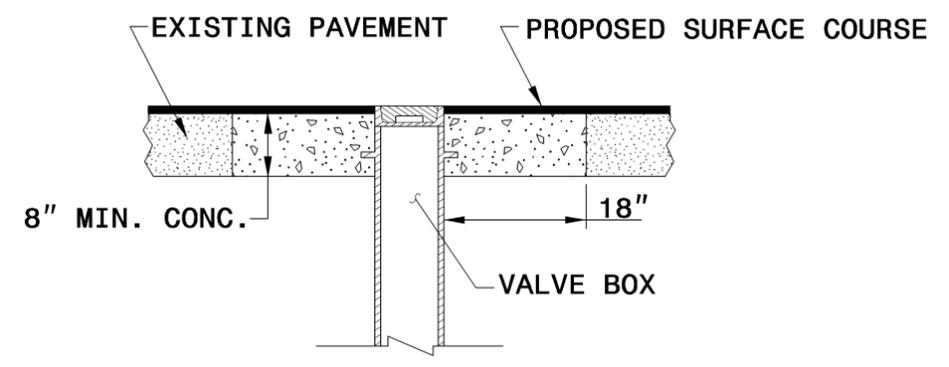
SHEET 1 OF 1  
**840D55**

**GENERAL NOTES:**

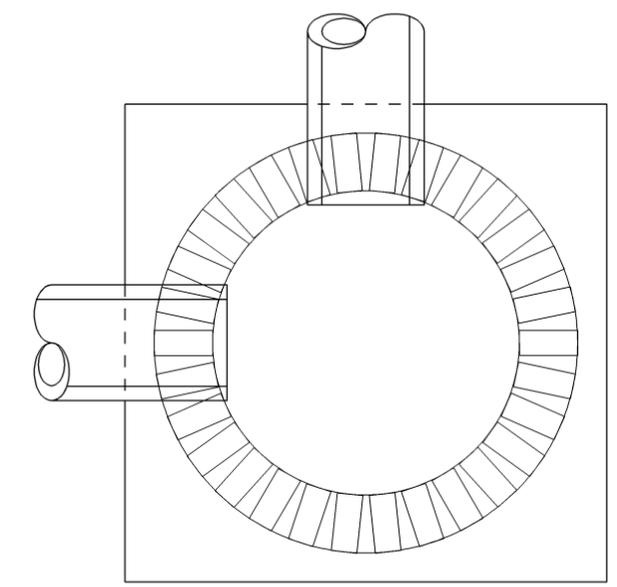
1. USE RAPID SET GROUT, MORTAR, OR CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. REMOVE ALL FAULTY EXISTING BRICKWORK AND REPLACE WITH NEW BRICK MASONRY.
3. SHEER CUT EXCAVATION FOR THE ADJUSTMENT ON ALL SIDES.
4. FILL AREA BELOW 8" DEPTH WITH 78M OR NO. 57 CLEAN STONE.
5. MIX MORTAR TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS 1/2" +/- 1/8"



**MANHOLE CONCRETE ENCASEMENT**



**VALVE BOX CONCRETE ENCASEMENT**



**ELEVATION VIEW**

PLACE BRICK ACCORDING TO ELEVATION VIEW

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

SHEET 1 OF 1  
**840D55**

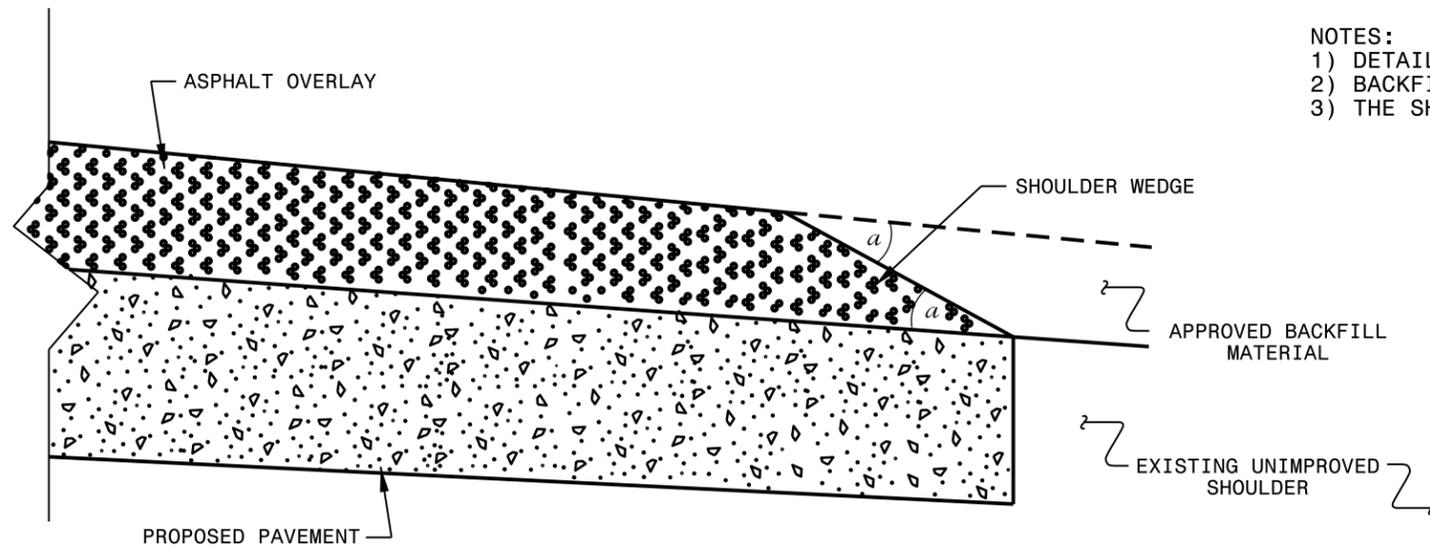
**PROJECT SERVICES UNIT  
STANDARDS AND SPECIAL DESIGN**  
Office 919-250-4128 FAX 919-250-4119

**SEE PLATE FOR TITLE**

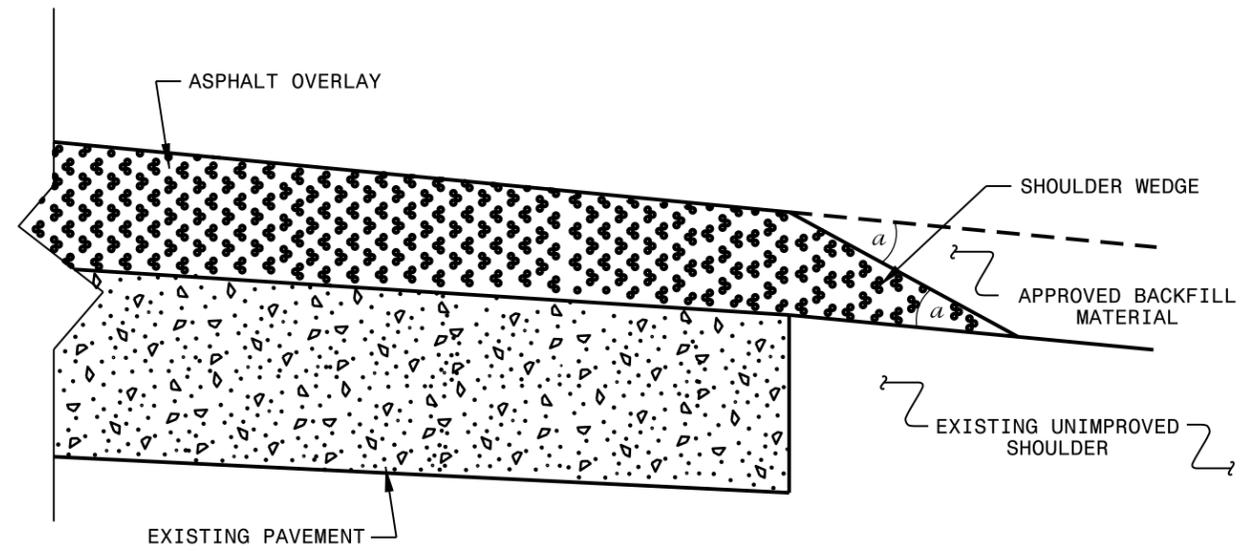
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MODIFIED BY: E.E. WARD DATE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
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07-DEC-2005 14:25 S:\Contracts\ContractStand\stand\840d55.dgn ericward AT P522293

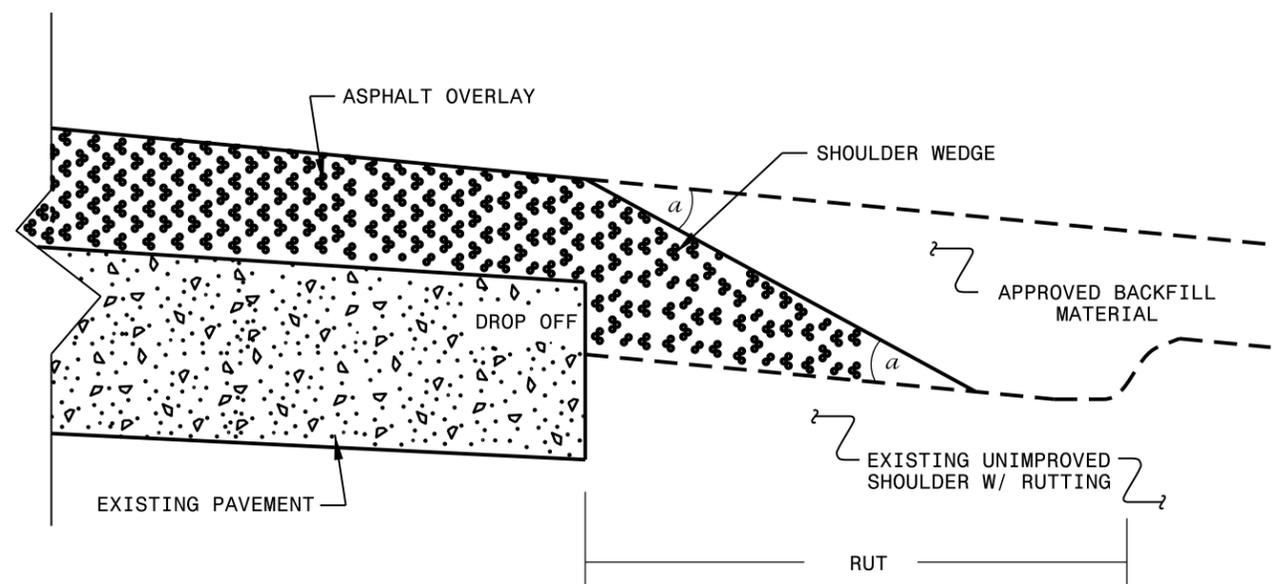
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



**SHOULDER WEDGE DETAIL**  
(Resurfacing Projects w/ NO Widening)

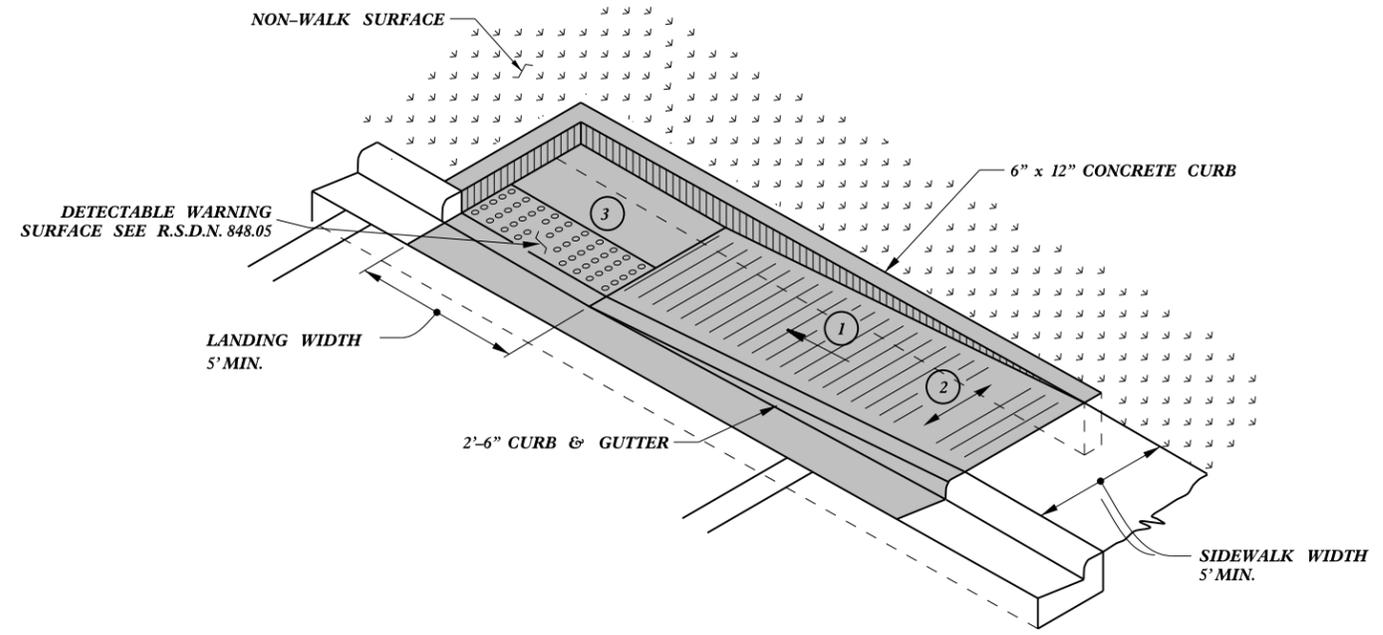


**SHOULDER WEDGE DETAIL**  
(Resurfacing Adjacent to  
Rutted Shoulder)

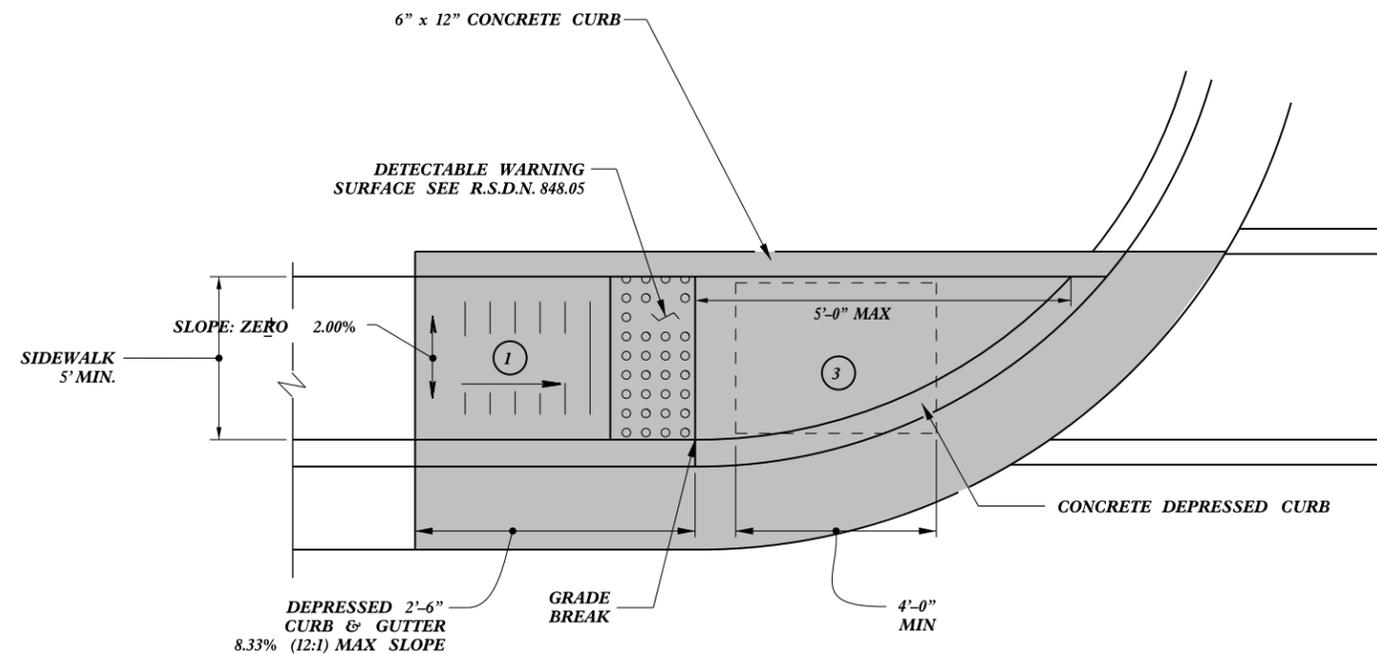
- SHOULDER WEDGE ANGLE = 30°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>			
Office 919-707-6950		FAX 919-250-4119	
<b>SHOULDER WEDGE DETAILS</b>			
ORIGINAL BY: T.SPELL	DATE: 7-19-11		
MODIFIED BY:	DATE: 10/16/12		
CHECKED BY:	DATE:		
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn			

SYSTEM: 03/06/2011 10:00 AM  
 USER: T.SPELL  
 FILE: susr/details/stand/shoulderwedgedetail.dgn



**TYPE 1A**



**TYPE 1**

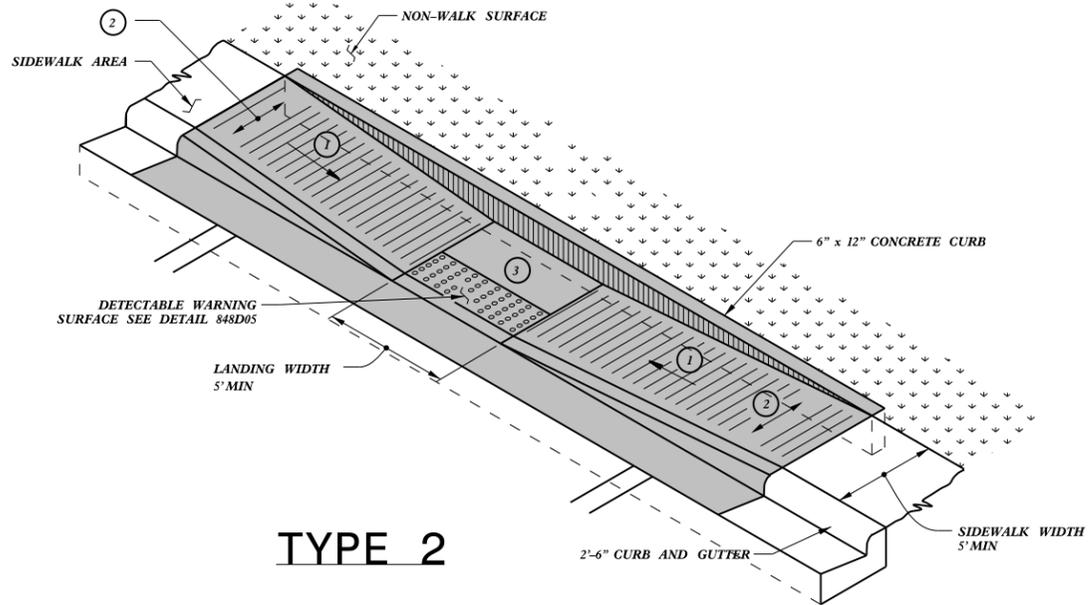
- ① 8.33% (12:1) MAX RAMP SLOPE
- ② CROSS SLOPE: 2.00%
- ③ CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

**PAY LIMITS FOR CURB RAMP**

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Directional Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

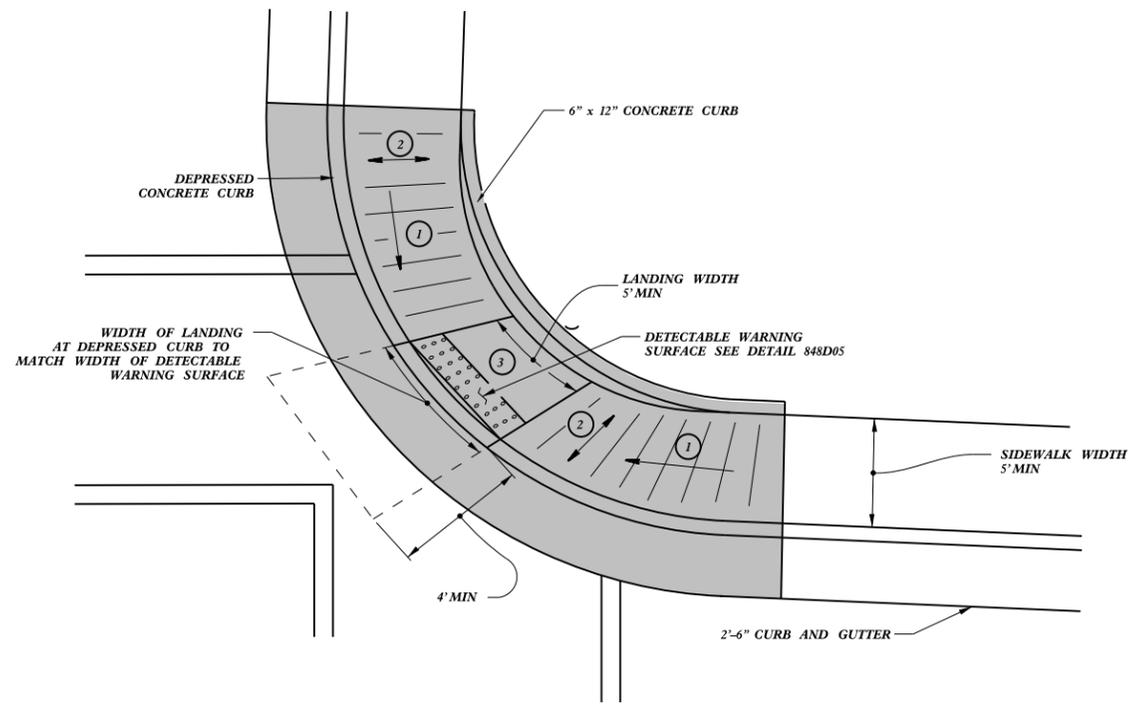
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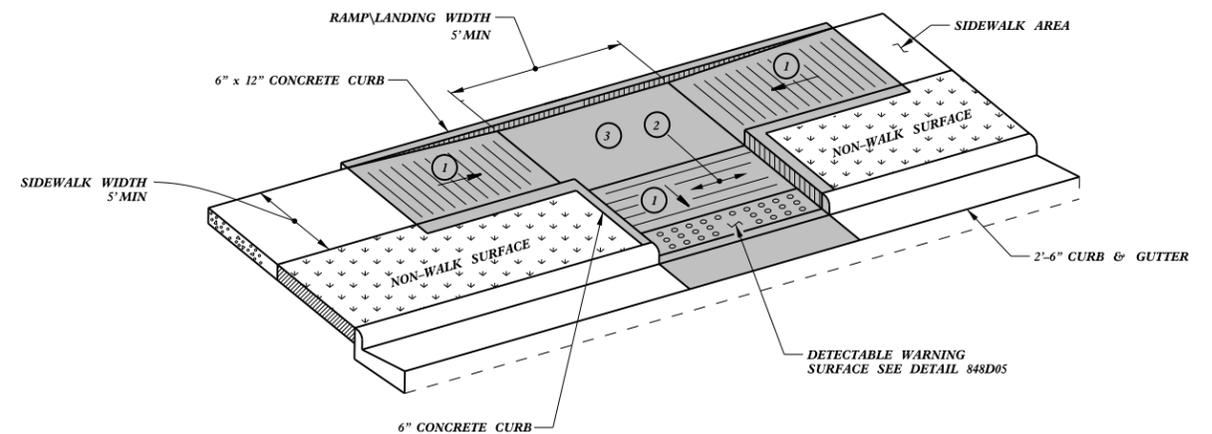
**TYPE 2**

 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**

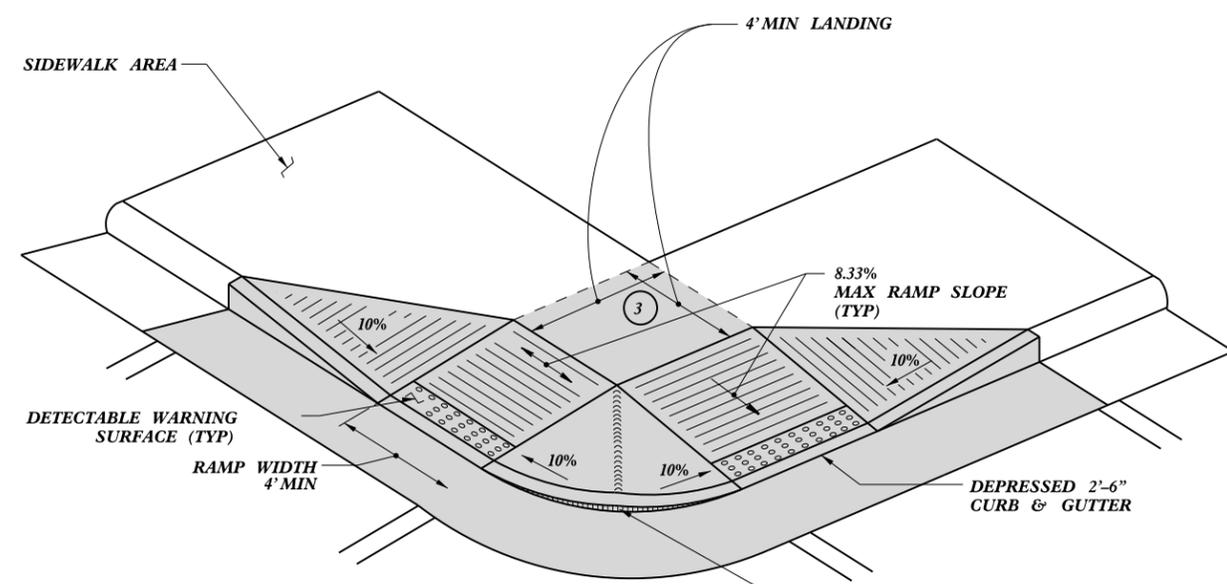


**TYPE 3**

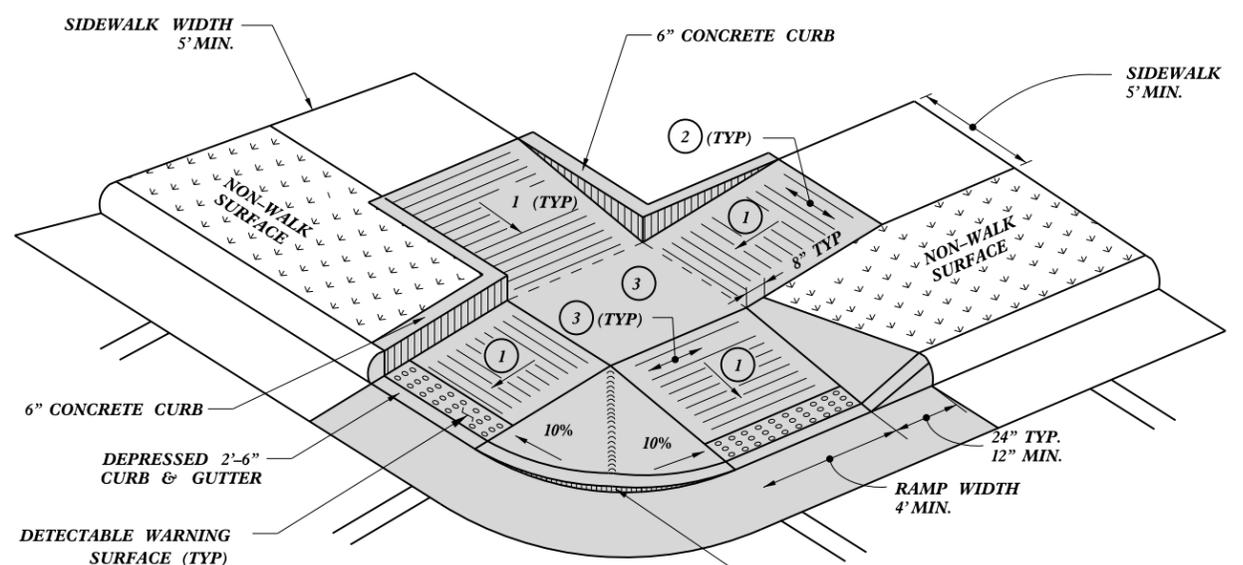
<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: sstds/2012CurbRamp/CurbRampDetails.dwg	

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

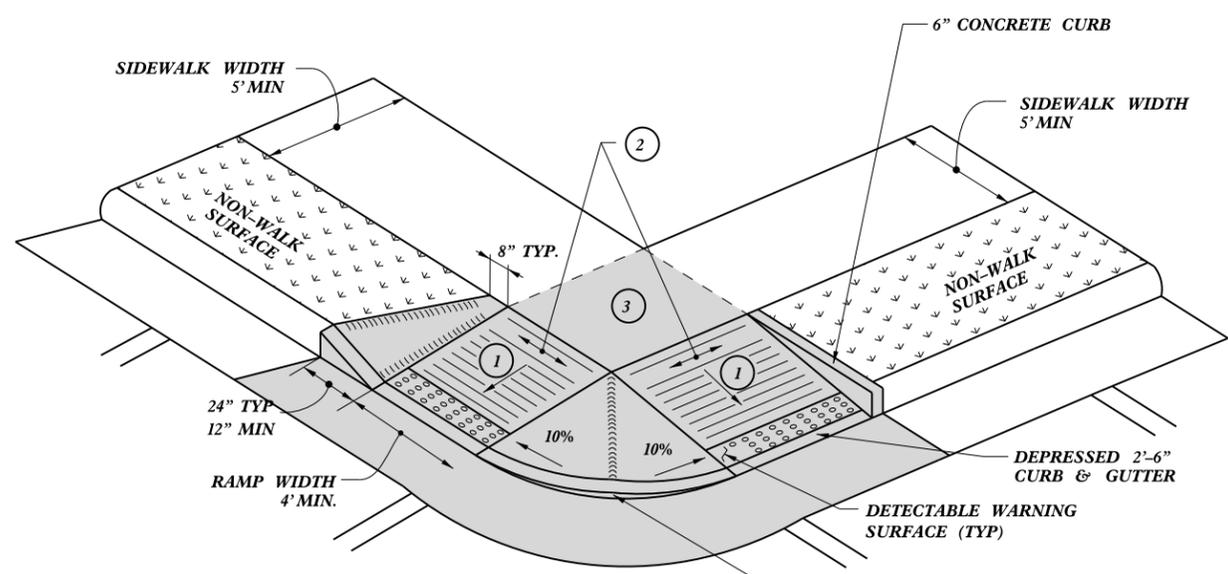
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**TYPE 4**



**TYPE 5**



**TYPE 4A**

PAY LIMITS FOR CURB RAMP

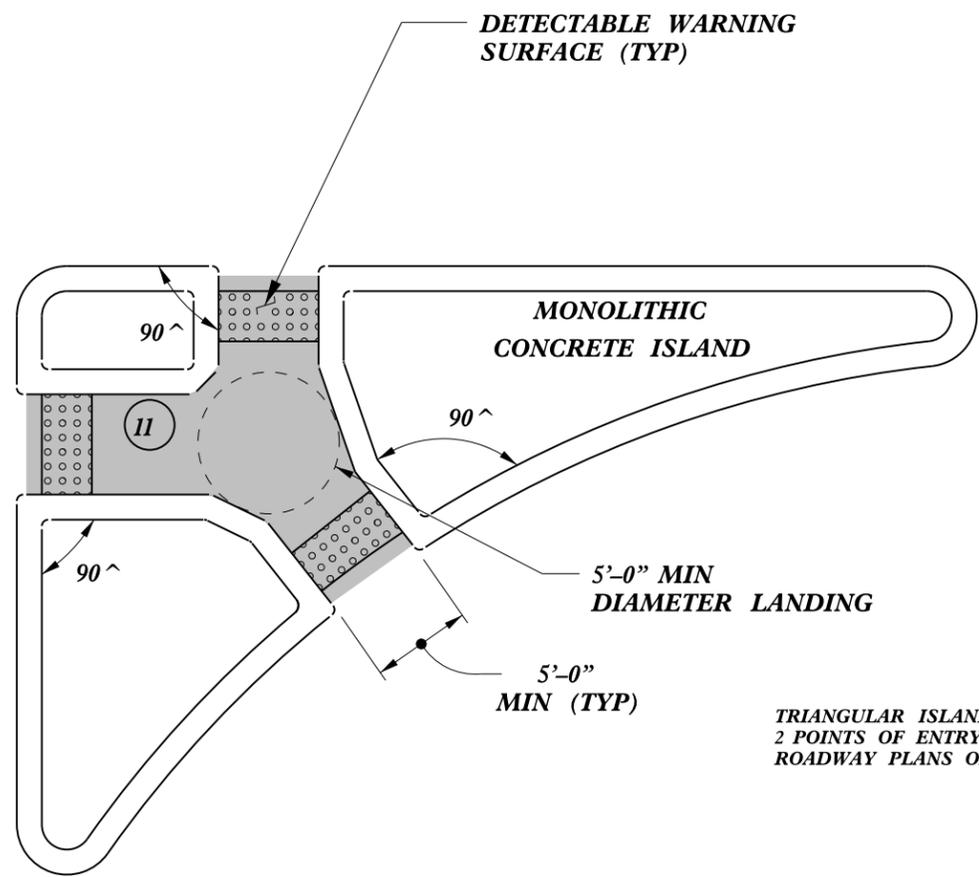
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Shared Landing	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

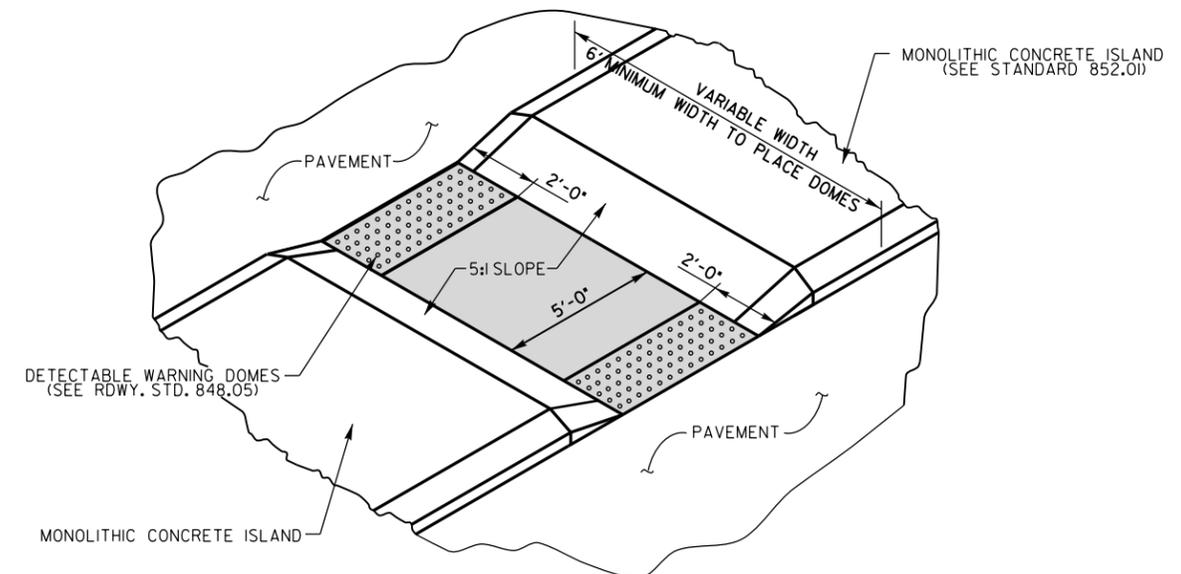
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PAY LIMITS FOR 1 CURB RAMP

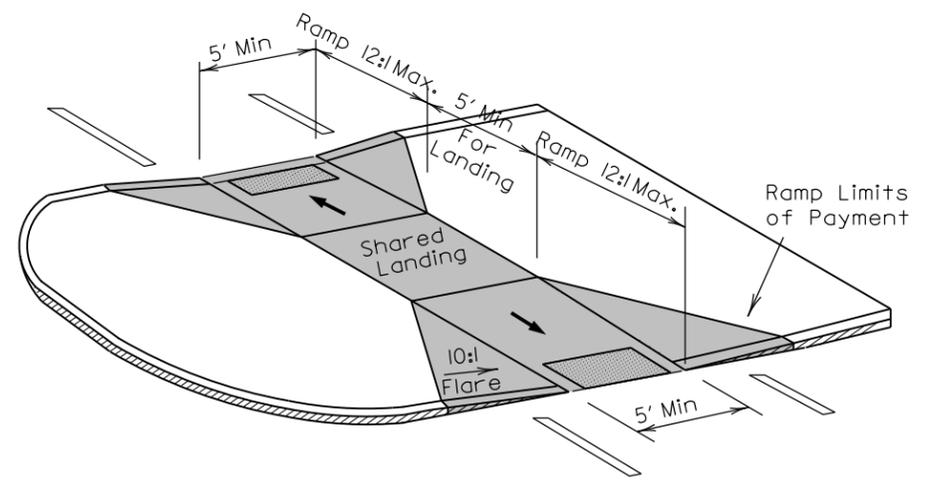


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

**TRIANGULAR ISLAND WITH CUT THROUGH**



**MEDIAN ISLAND WITH CUT THROUGH**

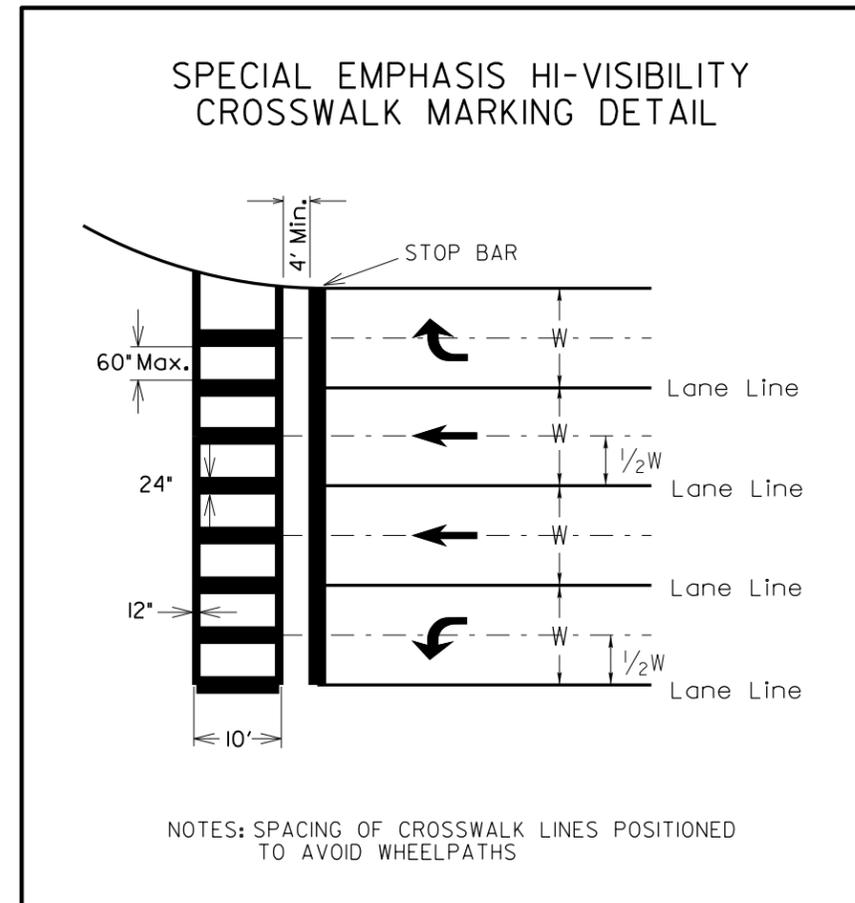
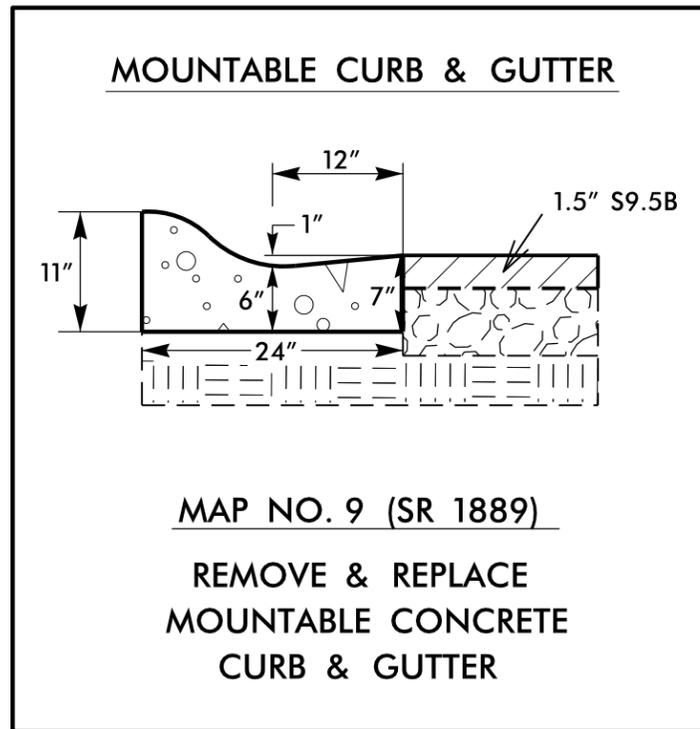


**MEDIAN ISLAND CURB RAMPS**

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
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	

5/14/99  
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# CURB & GUTTER AND PAVEMENT MARKING DETAILS



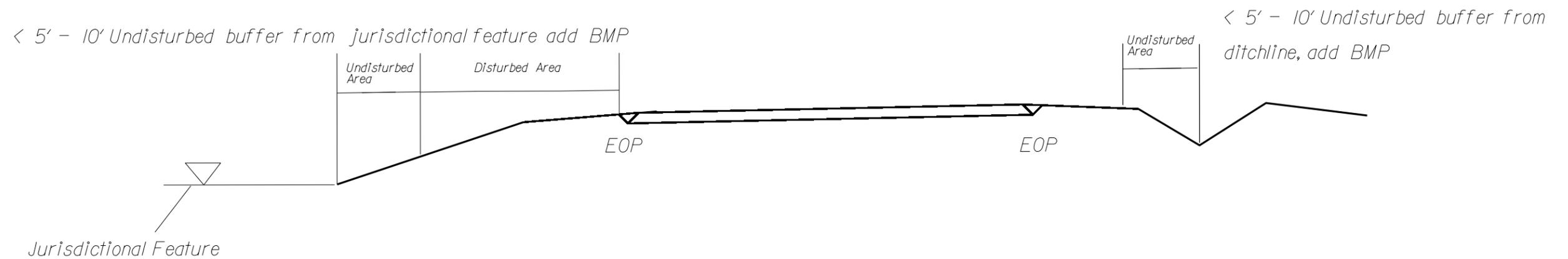
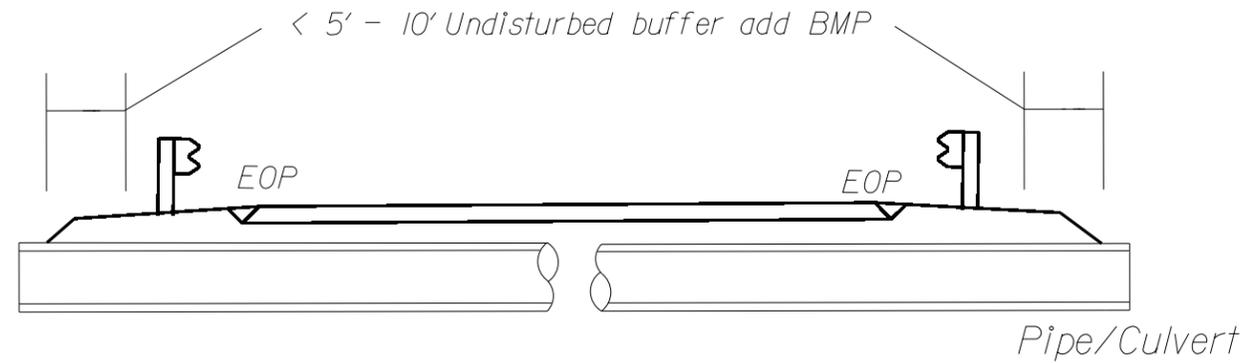
REVISIONS

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 \$\$\$SUSFERN\$\$\$

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

BMP Options: Wattle or Silt Fence

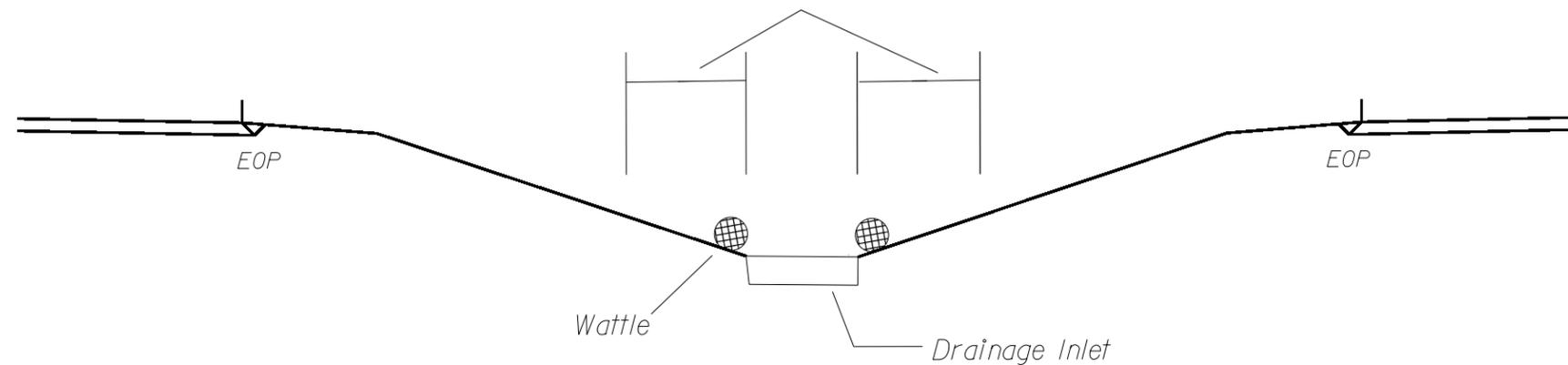
# EROSION CONTROL DETAIL



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

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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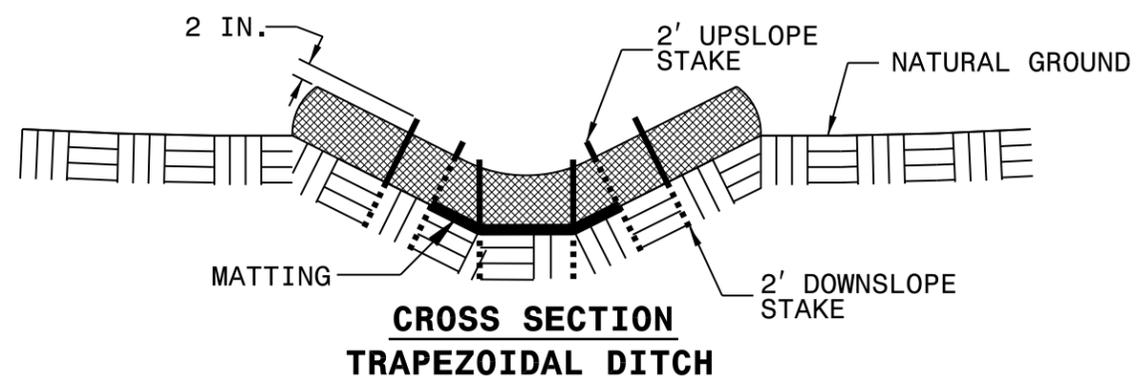
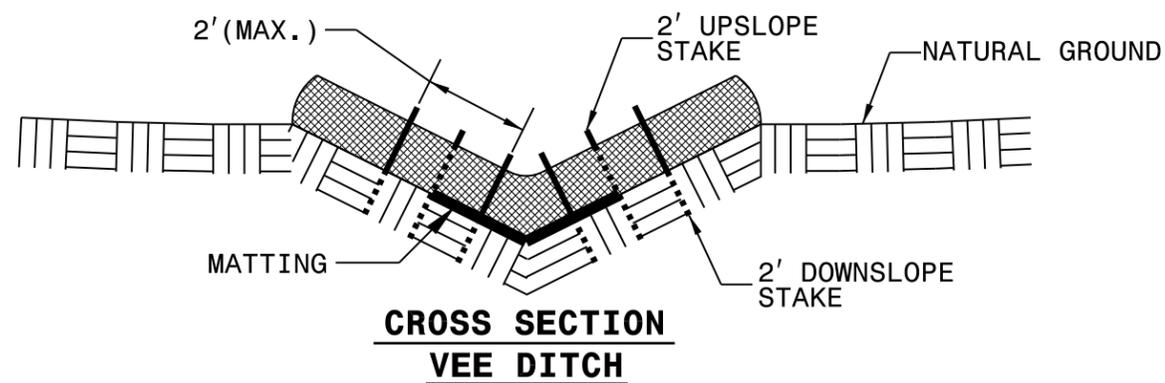
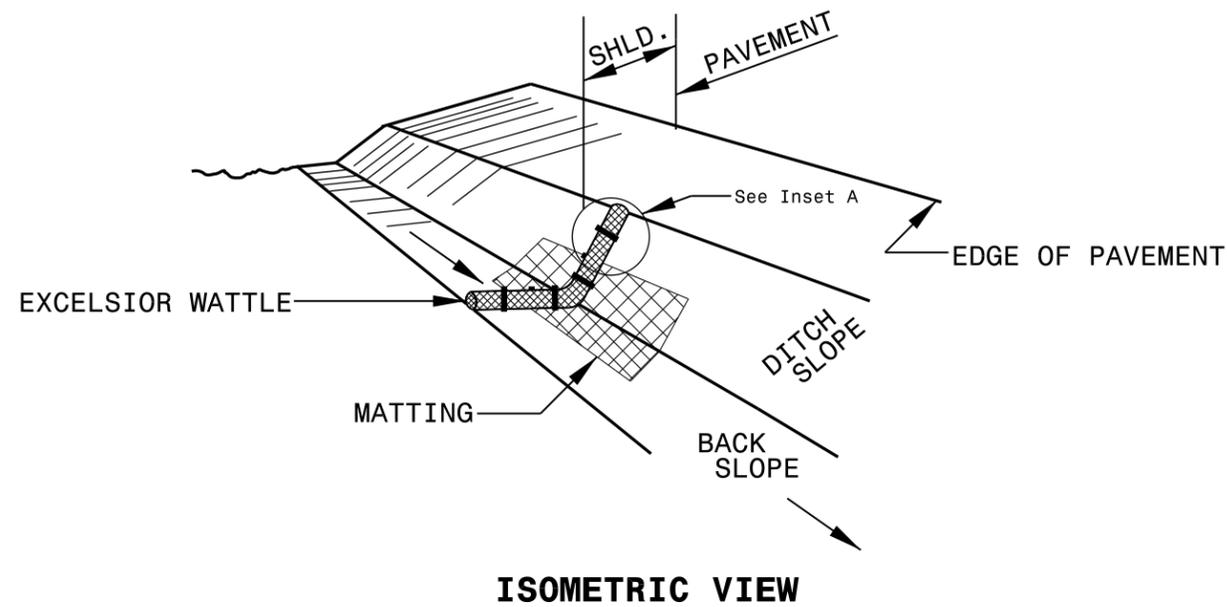


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## ***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) 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 HQW ZONES.

# 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.

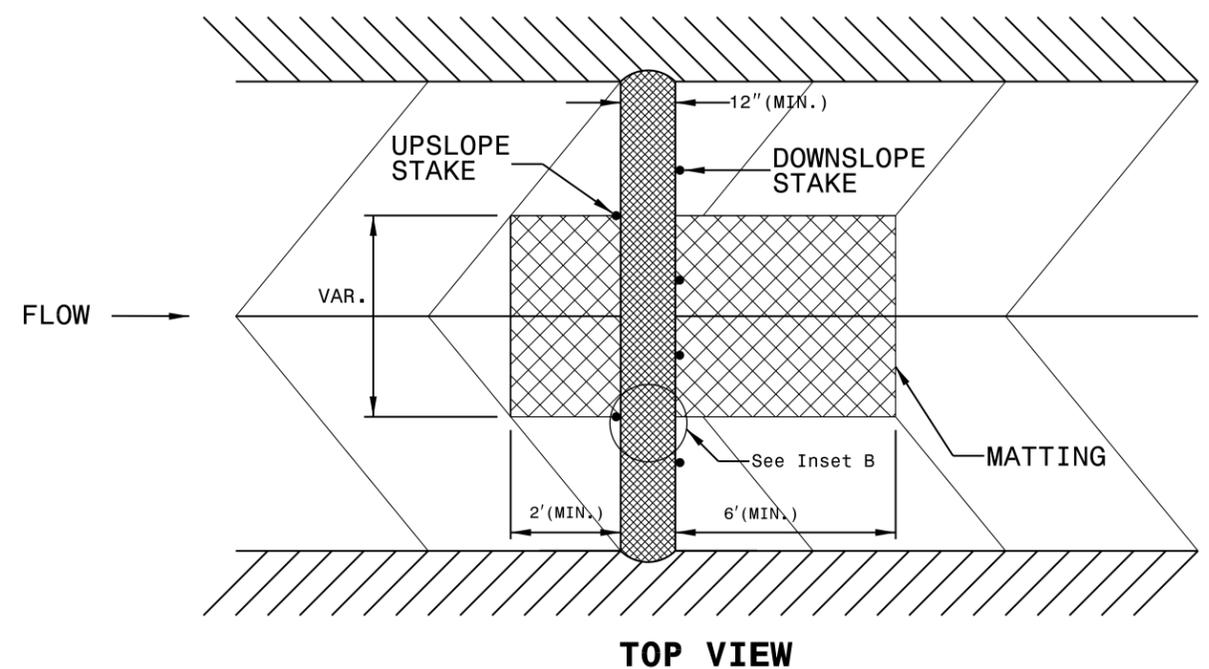
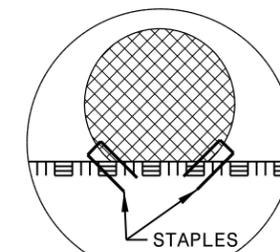
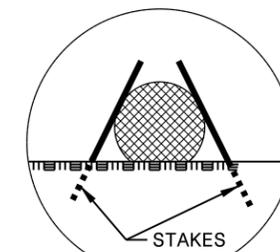
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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.

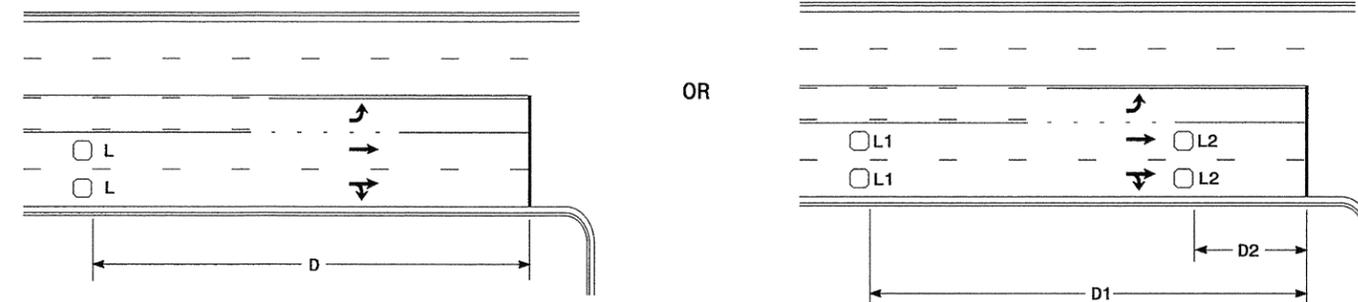
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



I:\FFB-2015\1141\01\Resurfacing\Plan\_Sheets\3CR.20711.173. EC RESURF. 2015.dgn  
 Date: 2/15/2015 10:59:44 AM  
 User: jlp

### High Speed Detection [≥40 mph (64 km/hr)]



Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)  
Wired in series for TS1  
Controllers  
Wired separately for TS2,  
170, and 2070L Controllers

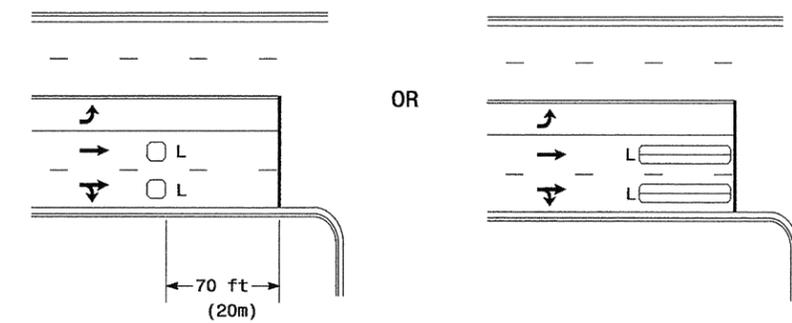
Volume Density Operation

Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft  
(1.8m X 1.8m)  
Wired in series  
L2 = 6ft X 6ft  
(1.8m X 1.8m)  
Wired in series

"Stretch" Operation

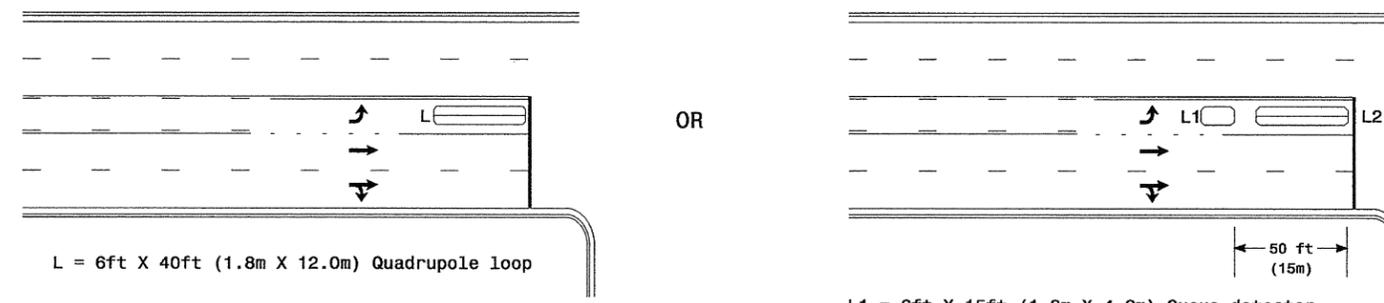
### Low Speed Detection [≤35 mph (56 km/hr)]



L = 6ft X 6ft (1.8m X 1.8m)  
Wired in series

L = 6ft X 40ft (1.8m X 12.0m)  
Quadrupole loop, wired separately

### Left Turn Lane Detection



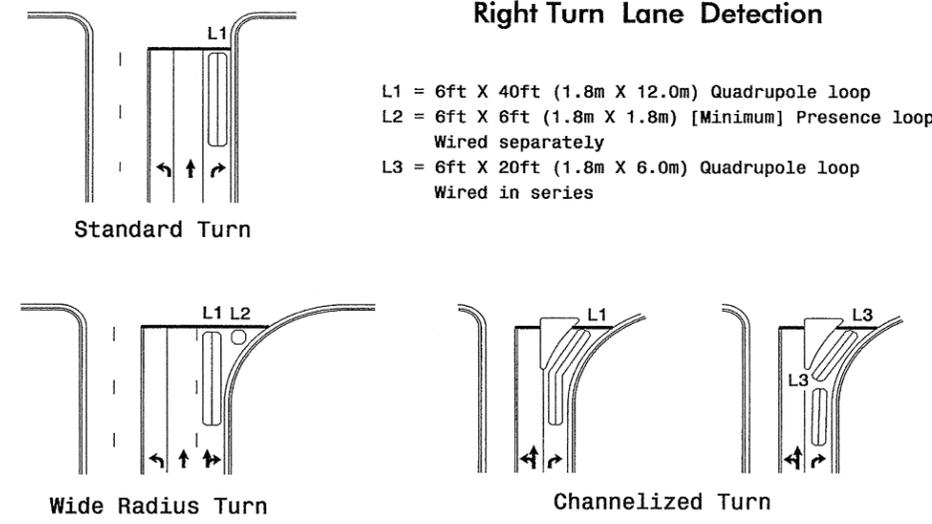
L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector  
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Queue Loop Detection

### Right Turn Lane Detection



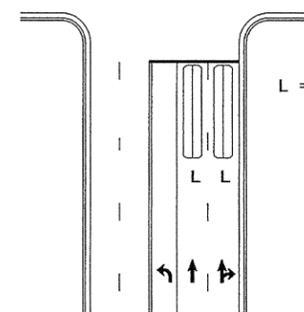
L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop  
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop  
Wired separately  
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop  
Wired in series

Standard Turn

Wide Radius Turn

Channelized Turn

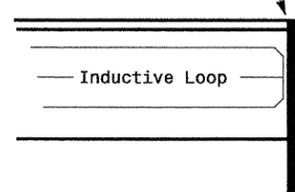
### Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)  
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 when stop line is  
greater than 15' (4.5m) from edge  
of intersecting roadway; or, when  
loop detects a permissive or  
protected/permissive left turn.

### Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)  
loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:  
Lead-in < 150' (45 m), use 2 turns  
Lead-in > 150' (45 m), use 3 turns

	<p>Typical Loop Locations</p>		
	<p>PLAN DATE: June 2006</p> <p>PREPARED BY: P. L. Alexander</p> <p>SCALE: N/A</p>	<p>REVIEWED BY:</p> <p>REVISIONS</p> <p>INIT. DATE</p>	

**NOTES**

- OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
- MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
- WIRE LOOPS CONNECTED TO THE SAME DETECTOR IN SERIES.
- LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS.
- USE A SERIES OF ONE INCH PIECES OF BACKER ROD SPACED ONE FOOT APART ALONG THE ENTIRE LENGTH OF THE FEEDER SLOT AND LOOP SAW SLOT.
- CONSULT LOOP SEALANT MANUFACTURER TO DETERMINE CURING TIME REQUIRED PRIOR TO MILLING.

**SAW SLOT DEPTH CHART**  
ASSUMING 2" MILLING DEPTH

DEPTH (IN)	NO. OF WIRE LAYERS				
	2	3	4	5	6
SAW SLOT DEPTH	4.0	4.5	5.0	5.0	5.0
MINIMUM TOTAL ASPHALT DEPTH REQUIRED	5.0	5.5	6.0	6.0	6.0

**LOOP WIRE TWISTING METHOD**

INCORRECT WAY TO TWIST WIRE

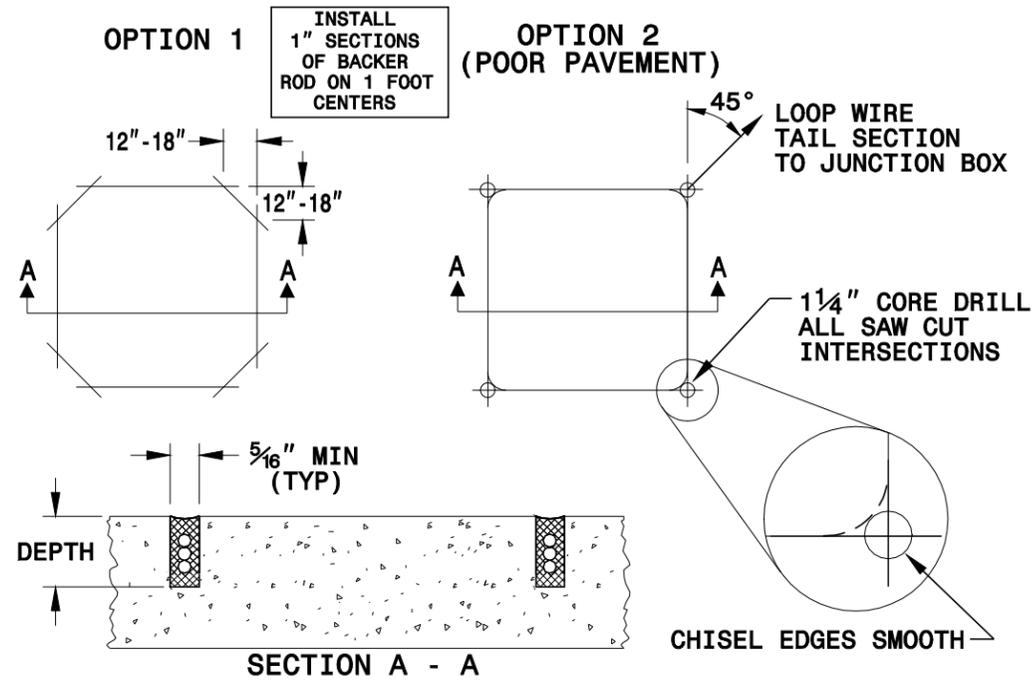


CORRECT WAY TO TWIST WIRE

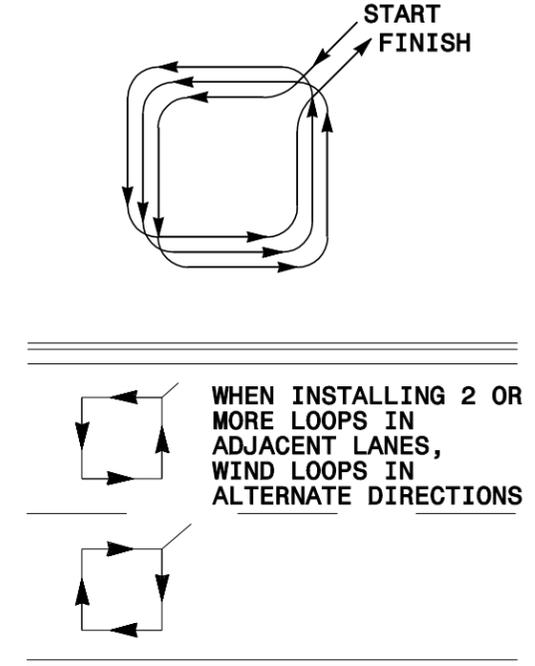


**CONVENTIONAL 4-SIDED LOOP**

**SAW CUT OPTIONS**

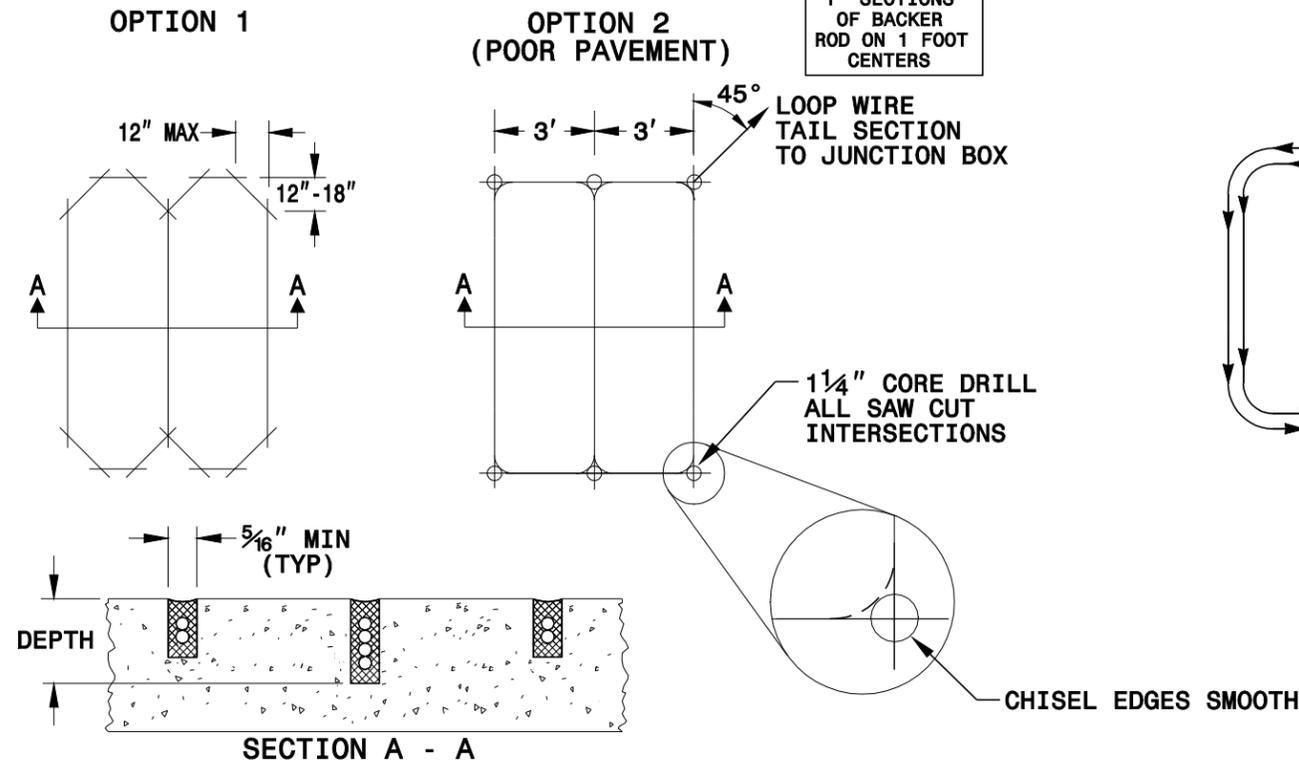


**LOOP WINDING METHOD**

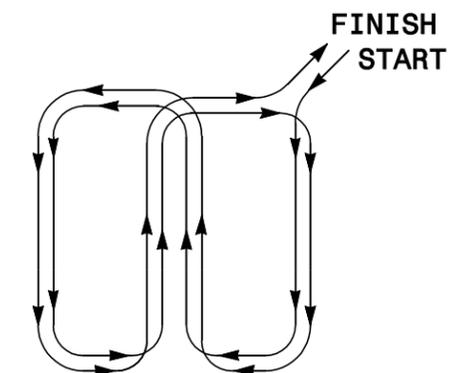


**QUADRUPOLE LOOP**

**SAW CUT OPTIONS**



**LOOP WINDING METHOD**



STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

**DEEP-CUT INDUCTIVE DETECTION LOOPS**  
(FOR INSTALLATION PRIOR TO MILLING)

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

**DEEP-CUT INDUCTIVE DETECTION LOOPS**  
(FOR INSTALLATION PRIOR TO MILLING)

REVISIONS
REMOVED TWISTING NOTES FROM TAIL SECT. TO JUNCTION BOX. 2/26/08 MWH

PROJECT NO.	SHEET NO.
2016CPT.03.06.20671	17

## 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	SHOULDER BORROW CY	INC. STONE BASE TONS	SHOULDER RECONST. SMI	INC. MILLING SY	INT. COURSE, 119.0B TONS	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	ASPHALT SURFACE TREATMENT, MATCOAT, #67 STONE SY	PATCHING EXISTING PAVEMENT (FULL DEPTH) GENERIC TON	PATCHING EXISTING PAVEMENT (MILL) GENERIC TON	FINE MILLING 1.5" (GENERIC) SY	PAVEMENT INTERLAYER OPTION B (GENERIC) SY	4" CONCRETE SIDEWALK SY	RETROFIT EXISTING CURB RAMP EA	CONCRETE CURB RAMP EA	REMOVE & REPLACE CONCRETE 2' MOUNTABLE C & G (GENERIC) LF	REMOVE & REPLACE CURB RAMP EA	ADJ. OF DROP INLET EA							
2016CPT.03.06.20671	Onslow	1	SR 1172 (CHERYLL COURT)	FROM SR 1169 (SPRINGDALE DR) TO CUL-DE-SAC	2	2	2WU	NO	NO	0.05	28				156		76	90	10																		
<b>TOTAL FOR MAP NO. 1</b>										<b>0.05</b>					<b>156</b>		<b>76</b>	<b>90</b>	<b>10</b>																		
2016CPT.03.06.20671	Onslow	2	SR 1239 (ERVINTOWN RD.)	FROM SR 1238 (KOONCE FORK RD) TO PAVEMENT JOINT AT MP 0.86	3	2	2WU	NO	NO	0.86	20	83	50	1.72	222		938		56	10,560																	
<b>TOTAL FOR MAP NO. 2</b>										<b>0.86</b>		<b>83</b>	<b>50</b>	<b>1.72</b>	<b>222</b>		<b>938</b>		<b>56</b>	<b>10,560</b>																	
2016CPT.03.06.20671	Onslow	3	SR 1428 (RIGGS ROAD)	FROM SR 1434 (BELGRADE SWANSBORO RD) TO SR 1435 (BRIGHTTOWN RD.)	2	2	2WU	NO	NO	1.11	20	98	50	2.20	333			1,211	79		105	378															
<b>TOTAL FOR MAP NO. 3</b>										<b>1.11</b>		<b>98</b>	<b>50</b>	<b>2.20</b>	<b>333</b>			<b>1,211</b>	<b>79</b>		<b>105</b>	<b>378</b>															
2016CPT.03.06.20671	Onslow	4	SR 1442 (STELLA RD.)	FROM SR 1434 (BELGRADE SWANSBORO RD) TO PAVEMENT JOINT AT MP 1.21	2	2	2WU	NO	NO	1.21	20	111	20	2.42	222		1,312	70	83		42	405															
<b>TOTAL FOR MAP NO. 4</b>										<b>1.21</b>		<b>111</b>	<b>20</b>	<b>2.42</b>	<b>222</b>		<b>1,312</b>	<b>70</b>	<b>83</b>		<b>42</b>	<b>405</b>															
2016CPT.03.06.20671	Onslow	5	SR 1537 (HARDISON RD.)	FROM SR 1534 (HOLLY RIDGE RD) TO SR 1538 (SOUND RD)	3	2	2WU	NO	NO	1.71	20	157	50	3.42	222		1,866	40	115		21,067	289	100														
<b>TOTAL FOR MAP NO. 5</b>										<b>1.71</b>		<b>157</b>	<b>50</b>	<b>3.42</b>	<b>222</b>		<b>1,866</b>	<b>40</b>	<b>115</b>		<b>21,067</b>	<b>289</b>	<b>100</b>														
2016CPT.03.06.20671	Onslow	6	SR 2009 (E. HARGETT ST.)	FROM END OF EXISTING CURB & GUTTER TO ESQUIRE DR. (NON-SYSTEM)	3 & 4	2	2WU	NO	NO	0.65	20	50	20	1.30	322	399	1,548		112	8,008	50	100															
<b>TOTAL FOR MAP NO. 6</b>										<b>0.65</b>		<b>50</b>	<b>20</b>	<b>1.30</b>	<b>322</b>	<b>399</b>	<b>1,548</b>		<b>112</b>	<b>8,008</b>	<b>50</b>	<b>100</b>															
2016CPT.03.06.20671	Onslow	7	SR 1306 (W. HARGETT ST.)	FROM US 258 TO SR 1003 (WILMINGTON ST.)	5	2	2WU	NO	NO	0.55	28						839		50				9,265	9,035.00	4	1	5		1								
<b>TOTAL FOR MAP NO. 7</b>										<b>0.55</b>							<b>839</b>		<b>50</b>			<b>9,265</b>	<b>9,035.00</b>	<b>4</b>	<b>1</b>	<b>5</b>		<b>1</b>									
2016CPT.03.06.20671	Onslow	8	SR 1718 (ONSLow DR.)	FROM US 17 BUS. TO NEW RIVER DR. (NON-SYSTEM)	6	2	M2	NO	NO	0.31	55						1,018		61		42		10,481								4						
<b>TOTAL FOR MAP NO. 8</b>										<b>0.31</b>							<b>1,018</b>		<b>61</b>		<b>42</b>		<b>10,481</b>											<b>4</b>			
2016CPT.03.06.20671	Onslow	9	SR 1889 (TIMBERBROOK LN.)	FROM SR 1829 (HUNTERS TRAIL) TO CUL-DE-SAC	2	2	2WU	NO	NO	0.09	26				483		143		9		15	50								40.00							
<b>TOTAL FOR MAP NO. 9</b>										<b>0.09</b>					<b>483</b>		<b>143</b>		<b>9</b>		<b>15</b>	<b>50</b>									<b>40.00</b>						
<b>TOTAL FOR PROJ NO. 2016CPT.03.06.20671</b>										<b>6.54</b>		<b>499</b>	<b>190</b>	<b>11.06</b>	<b>1,960</b>	<b>399</b>	<b>7,740</b>	<b>1,411</b>	<b>575</b>	<b>39,635</b>	<b>543</b>	<b>1,033</b>	<b>19,746</b>	<b>9,035.00</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>40.00</b>	<b>1</b>				<b>1</b>		<b>4</b>		
<b>GRAND TOTAL</b>										<b>6.54</b>		<b>499</b>	<b>190</b>	<b>11.06</b>	<b>1,960</b>	<b>399</b>	<b>7,740</b>	<b>1,411</b>	<b>575</b>	<b>39,635</b>	<b>543</b>	<b>1,033</b>	<b>19,746</b>	<b>9,035.00</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>40.00</b>	<b>1</b>				<b>1</b>		<b>4</b>		

PROJECT NO.	SHEET NO.
2016CPT.03.06.20671	18

## SUMMARY OF QUANTITIES

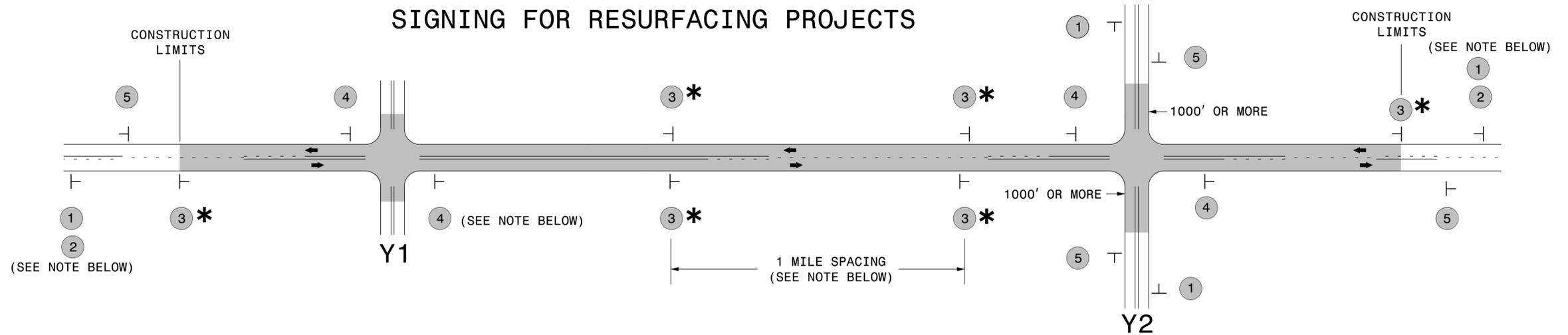
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	PORTABLE LIGHTING LS	TEMP. SILT FENCE LF	STONE FOR EC CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	MATTING FOR EROSION CONTROL SY	1/4" HARDWARE CLOTH LF	WATTLE LF	SEED & MULCHING AC	SEED FOR REPAIR SEEDING LB	FERTILIZER FOR REPAIR SEEDING TON	JUNCTION BOX (STANDARD SIZE) EA	INDUCTIVE LOOP SAWCUT (EXTRA DEPTH) LF	LEAD-IN CABLE (14-2) LF	
2016CPT.03.06.20671	Onslow	1	SR 1172 (CHERYLL COURT)	FROM SR 1169 (SPRINGDALE DR) TO CUL-DE-SAC	2	2	2WU	NO																	
<b>TOTAL FOR MAP NO. 1</b>																									
2016CPT.03.06.20671	Onslow	2	SR 1239 (ERVINTOWN RD.)	FROM SR 1238 (KOONCE FORK RD) TO PAVEMENT JOINT AT MP 0.86	3	2	2WU	NO				112	28	28	1.13	10	57	20	1.10	57	0.28				
<b>TOTAL FOR MAP NO. 2</b>																									
2016CPT.03.06.20671	Onslow	3	SR 1428 (RIGGS ROAD)	FROM SR 1434 (BELGRADE SWANSBORO RD) TO SR 1435 (BRIGHTTOWN RD.)	2	2	2WU	NO		1		110	28	28	11.00	10	55	55	1.60	55	0.28				
<b>TOTAL FOR MAP NO. 3</b>																									
2016CPT.03.06.20671	Onslow	4	SR 1442 (STELLA RD.)	FROM SR 1434 (BELGRADE SWANSBORO RD) TO PAVEMENT JOINT AT MP 1.21	2	2	2WU	NO		1		110	28	28	11.00	10	55	55	1.60	55	0.28				
<b>TOTAL FOR MAP NO. 4</b>																									
2016CPT.03.06.20671	Onslow	5	SR 1537 (HARDISON RD.)	FROM SR 1534 (HOLLY RIDGE RD) TO SR 1538 (SOUND RD)	3	2	2WU	NO		6		118	30	30	1.18	10	59	20	2.10	59	0.30				
<b>TOTAL FOR MAP NO. 5</b>																									
2016CPT.03.06.20671	Onslow	6	SR 2009 (E. HARGETT ST.)	FROM END OF EXISTING CURB & GUTTER TO ESQUIRE DR. (NON-SYSTEM)	3 & 4	2	2WU	NO		6		100	16	16	0.65	10	33	40	0.80	33	0.16				
<b>TOTAL FOR MAP NO. 6</b>																									
2016CPT.03.06.20671	Onslow	7	SR 1306 (W. HARGETT ST.)	FROM US 258 TO SR 1003 (WILMINGTON ST.)	5	2	2WU	NO	8	3															
<b>TOTAL FOR MAP NO. 7</b>																									
2016CPT.03.06.20671	Onslow	8	SR 1718 (ONSLow DR.)	FROM US 17 BUS. TO NEW RIVER DR. (NON-SYSTEM)	6	2	M2	NO	5	5	0.10											1	1,200	300	
<b>TOTAL FOR MAP NO. 8</b>																									
2016CPT.03.06.20671	Onslow	9	SR 1889 (TIMBERBROOK LN.)	FROM SR 1829 (HUNTERS TRAIL) TO CUL-DE-SAC	2	2	2WU	NO	2	3															
<b>TOTAL FOR MAP NO. 9</b>																									
<b>TOTAL FOR PROJ NO. 2016CPT.03.06.20671</b>																									
<b>GRAND TOTAL</b>																									
									15	24	0.10	440	102	102	13.96	40	204	135	5.60	204	1.02	1	1,200	300	

PROJECT NO.	SHEET NO.
2016CPT.03.06.20671	19

**THERMOPLASTIC AND PAINT QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4510000000-N	4685000000-E	4686000000-E			4702000000-E	4710000000-E	4725000000-E			4810000000-E		4825000000-E	4835000000-E	4845000000-N			4900000000-N	
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 90 M WHITE THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	12" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO STR ARROW 90 M	THERMO RT ARROW 90 M	THERMO LT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	12" WHITE PAINT	24" WHITE PAINT	PAINT STR ARROW	PAINT RT ARROW	PAINT LT ARROW	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS	
										SF	LS	HR	LF	LF	LF	LF	LF	EA	EA	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	
2016CPT.03.06.20671	Onslow	1	SR 1172 (CHERYLL COURT)	FROM SR 1169 (SPRINGDALE DR) TO CUL-DE-SAC	2	2	2WU	0.05	28	112	0.005																			
<b>TOTAL FOR MAP NO. 2</b>										112	0.005																			
2016CPT.03.06.20671	Onslow	2	SR 1239 (ERVINTOWN RD.)	FROM SR 1238 (KOONCE FORK RD) TO PAVEMENT JOINT AT MP 0.86	3	2	2WU	0.86	20	112	0.080		9,030	5,940															59	
<b>TOTAL FOR MAP NO. 3</b>										112	0.080		9,030	5,940															59	
2016CPT.03.06.20671	Onslow	3	SR 1428 (RIGGS ROAD)	FROM SR 1434 (BELGRADE SWANSBORO RD) TO SR 1435 (BRIGHTTOWN RD.)	2	2	2WU	1.11	20	128	0.110		11,836	7,260															75	
<b>TOTAL FOR MAP NO. 4</b>										128	0.110		11,836	7,260															75	
2016CPT.03.06.20671	Onslow	4	SR 1442 (STELLA RD.)	FROM SR 1434 (BELGRADE - SWANSBORO RD) TO PAVEMENT JOINT AT MP 1.21	2	2	2WU	1.21	20	208	0.180		12,778	7,987															80	
<b>TOTAL FOR MAP NO. 5</b>										208	0.180		12,778	7,987															80	
2016CPT.03.06.20671	Onslow	5	SR 1537 (HARDISON RD.)	FROM SR 1534 (HOLLY RIDGE RD) TO SR 1538 (SOUND RD)	3	2	2WU	1.71	20	208	0.170		18,400	11,286															112	
<b>TOTAL FOR MAP NO. 6</b>										208	0.170		18,400	11,286															112	
2016CPT.03.06.20671	Onslow	6	SR 2009 (E. HARGETT ST.)	FROM END OF EXISTING CURB & GUTTER TO ESQUIRE DR. (NON-SYSTEM)	3 & 4	2	2WU	0.65	20	96	0.065		6,994	5,148							2,400	1,800							43	
<b>TOTAL FOR MAP NO. 7</b>										96	0.065		6,994	5,148						2,400	1,800							43		
2016CPT.03.06.20671	Onslow	7	SR 1306 (W. HARGETT ST.)	FROM US 258 TO SR 1003 (WILMINGTON ST.)	5	2	2WU	0.55	28	112	0.060			1,414	2,210						2,210	1,414							10	
<b>TOTAL FOR MAP NO. 8</b>										112	0.060			1,414	2,210					2,210	1,414							10		
2016CPT.03.06.20671	Onslow	8	SR 1718 (ONSLow DR.)	FROM US 17 BUS. TO NEW RIVER DR. (NON-SYSTEM)	6	4 - 6	M2	0.31	55 - 80	128	0.030	2.00		2,072	2,804	172	260	8	4	20	2,804	2,072	172	260	8	4	20	85	55	
<b>TOTAL FOR MAP NO. 9</b>										128	0.030	2		2,072	2,804	172	260	8	4	20	2,804	2,072	172	260	8	4	20	85	55	
2016CPT.03.06.20671	Onslow	9	SR 1889 (TIMBERBROOK LN.)	FROM SR 1829 (HUNTERS TRAIL) TO CUL-DE-SAC	2	2	2WU	0.09	26	112	0.050																			
<b>TOTAL FOR MAP NO. 10</b>										112	0																			
<b>TOTAL FOR PROJ NO. 2016CPT.03.06.20671</b>										6.54	1,216	1	2	59,038	41,107	5,014	172	276	8	4	20	7,414	5,286	172	276	8	4	20	464	55
														46,121						32		12,700				32		519		
<b>GRAND TOTAL</b>										6.54	1,216	1	2	59,038	41,107	5,014	172	276	8	4	20	7,414	5,286	172	276	8	4	20	464	55
														46,121						32		12,700				32		519		

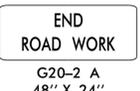
## SIGNING FOR RESURFACING PROJECTS



LEGEND	
┆	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

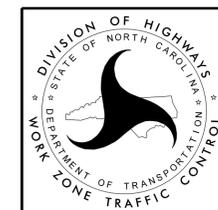
### MAINLINE (-L-) SIGNING

### -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION		
1 2	 	<p style="text-align: center;">NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <p style="text-align: center;">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> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">   <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;">   <small>W20-7 A 48" X 48"</small> </div> </div> <p style="text-align: center;">PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
3 *		
4		
5		

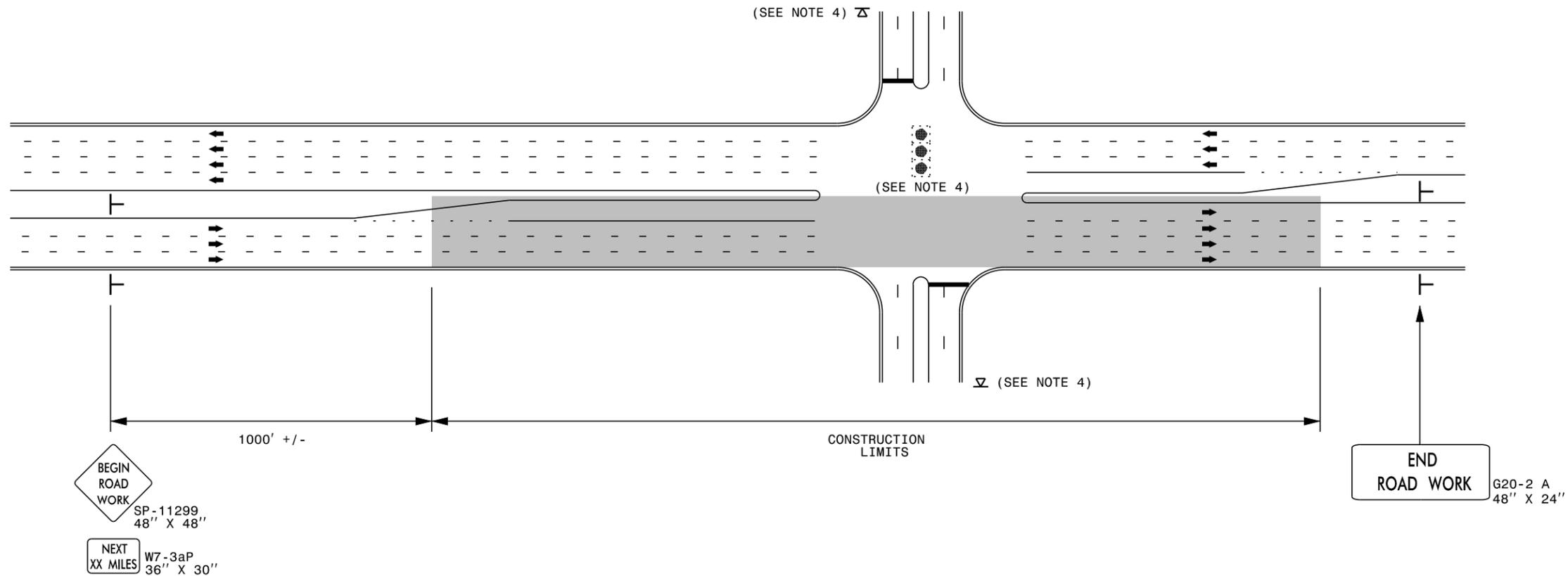
### \* SIGNING FOR ASPHALT SURFACE TREATMENTS (ONLY)

SUBSTITUTE LOW/SOFT SHOULDER SIGNS BY ALTERNATING THE FOLLOWING TWO SIGNS:  
STARTING WITH "UNMARKED PAVEMENT AHEAD" (SP 06026) FOLLOWED BY "LOOSE GRAVEL" (W8-7).



RESURFACING  
ADVANCE WARNING SIGNS  
FOR  
RURAL AND SUBURBAN  
2 LANE ROADWAYS

## 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**