

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION 6

**PLANS**  
**Letting Date: June 6, 2018**

**CONTRACT ID: DF00218**

**TIP NO.: -----**

**FEDERAL AID NO.: STATE FUNDED**

**WBS ELEMENT NO.: 2020CPT.06.02.10091.1 & 2020CPT.06.02.20091.1**

**ROUTE NO.: NC 41 & VARIOUS SR ROUTES**

**LOCATION: VARIOUS**

**COUNTY: BLADEN**

**LENGTH OF PROJECT: 15.79 MILES**

**TYPE OF WORK: RESURFACING, WIDENING & PVT. MKGS.**

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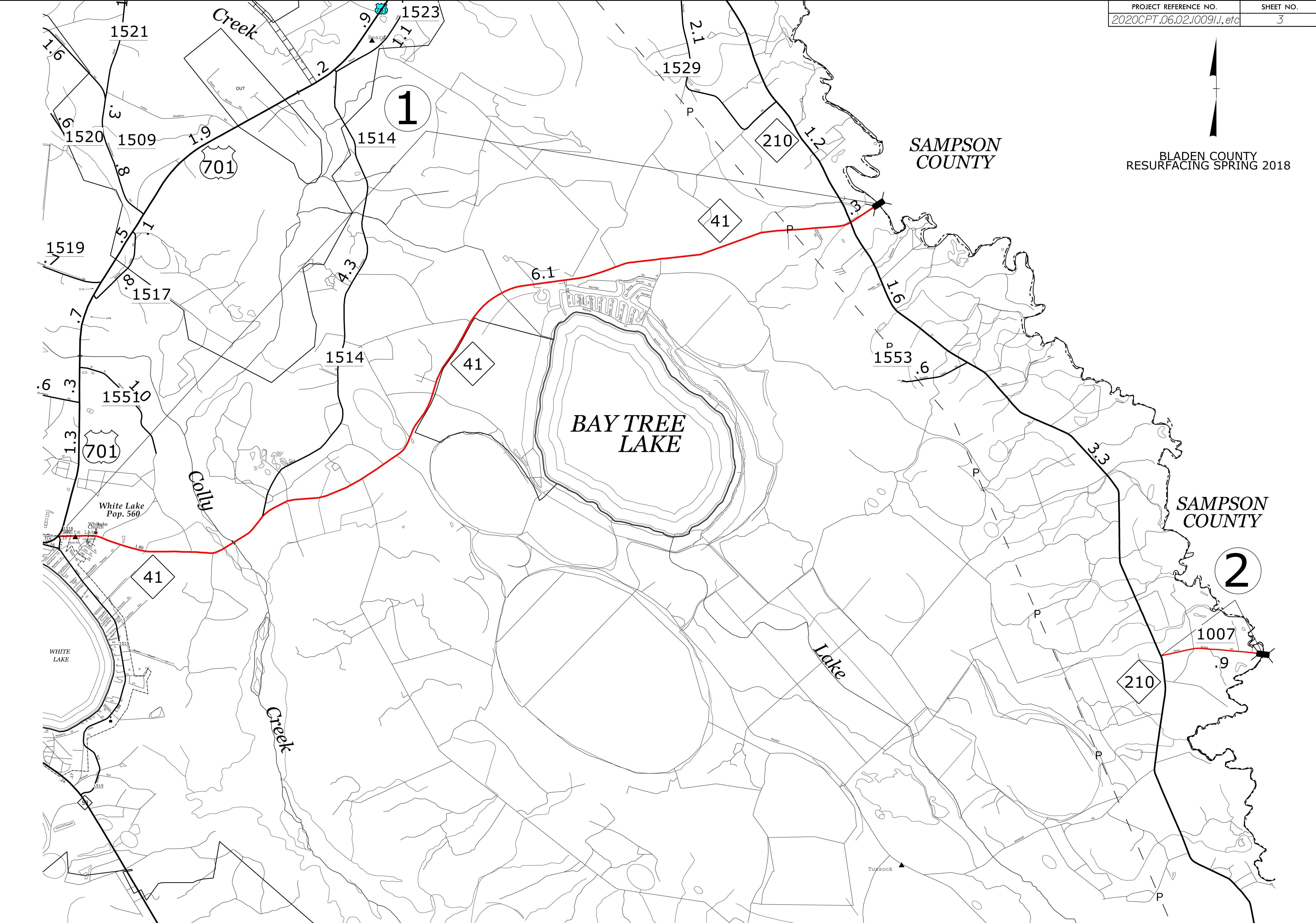




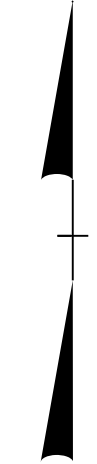
BLADEN COUNTY  
RESURFACING SPRING 2018

REVISIONS

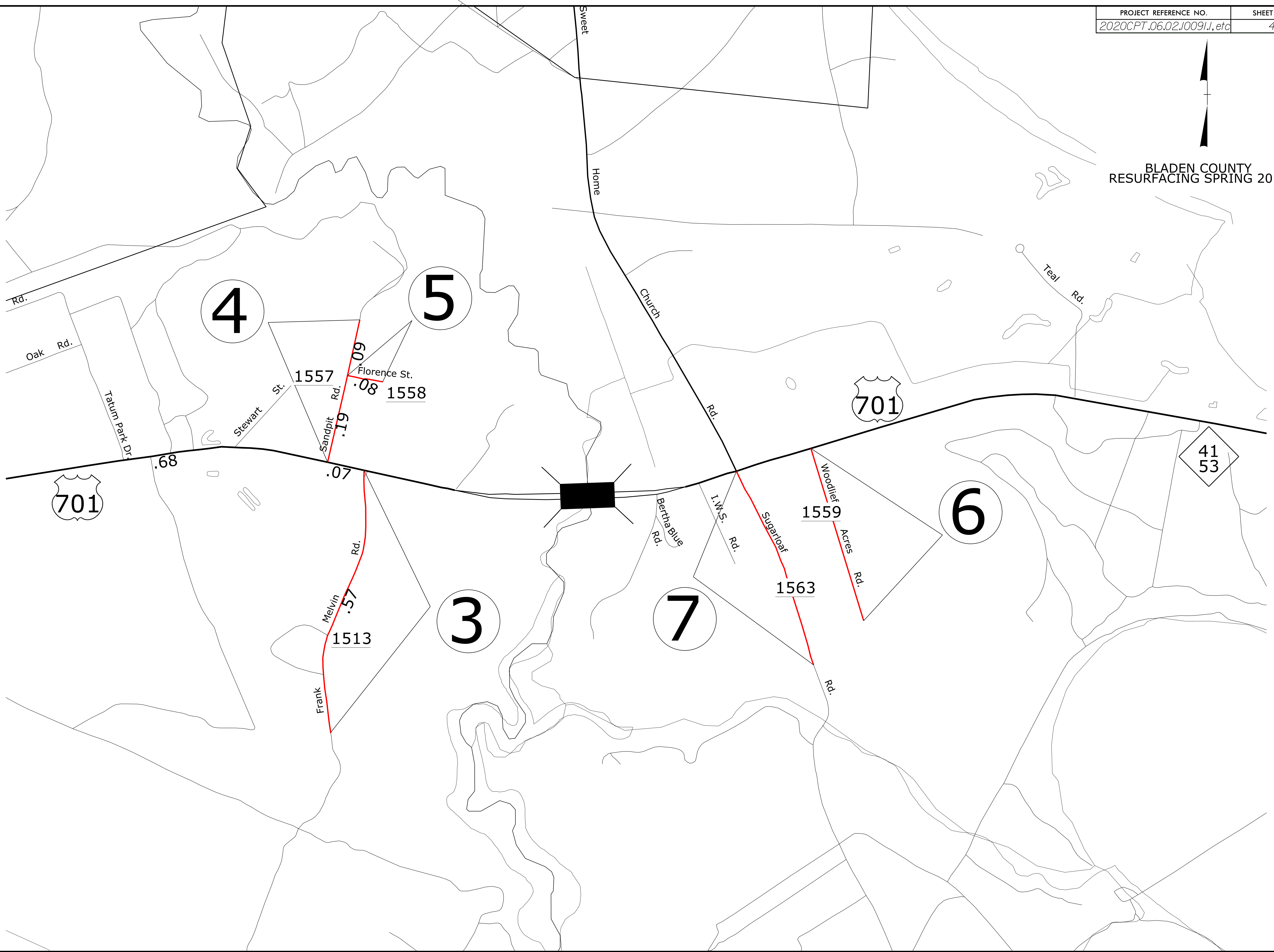
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BLADEN COUNTY  
RESURFACING SPRING 2018



REVISIONS

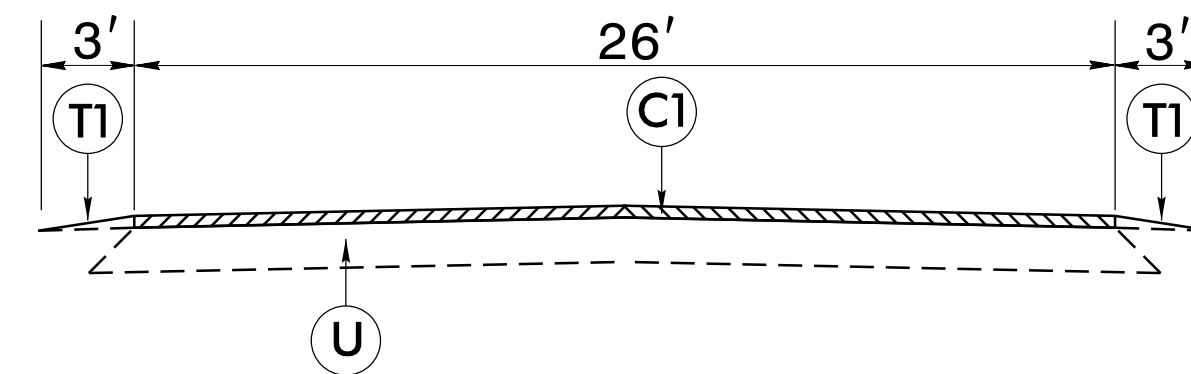
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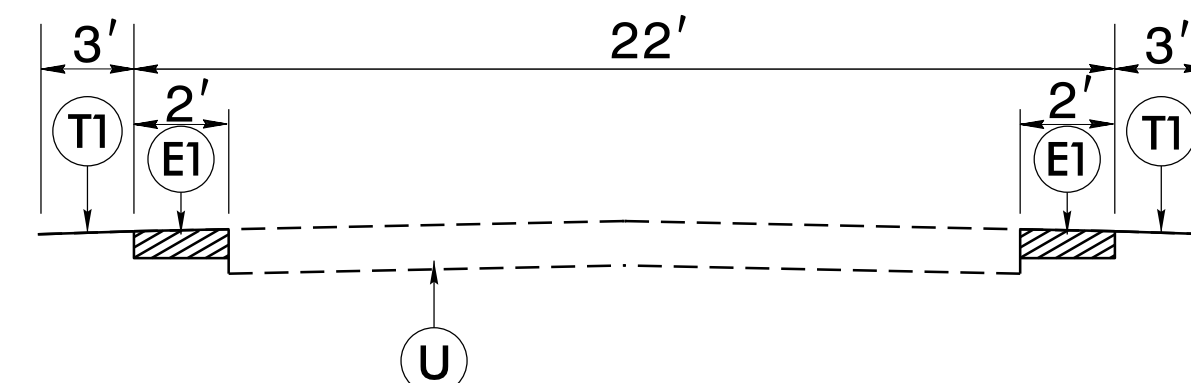
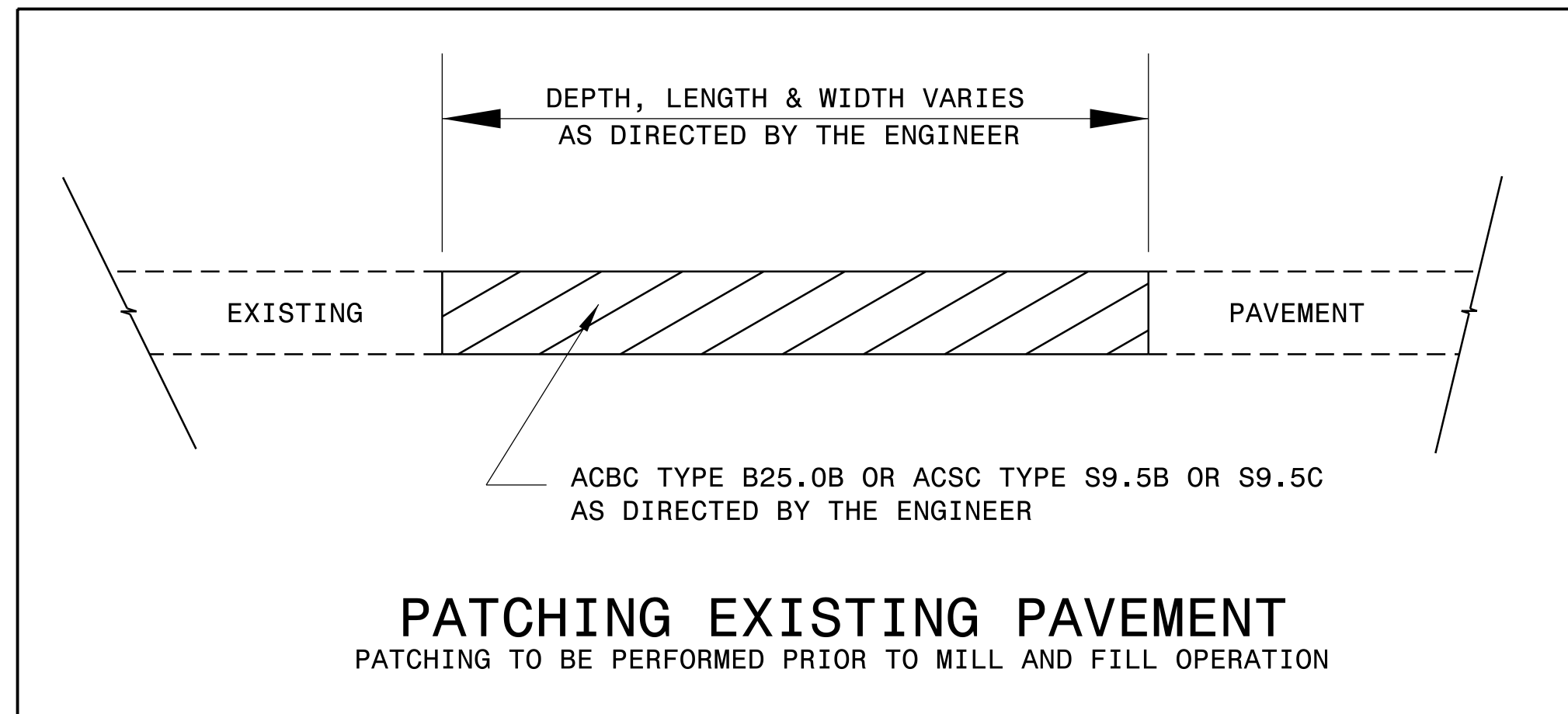
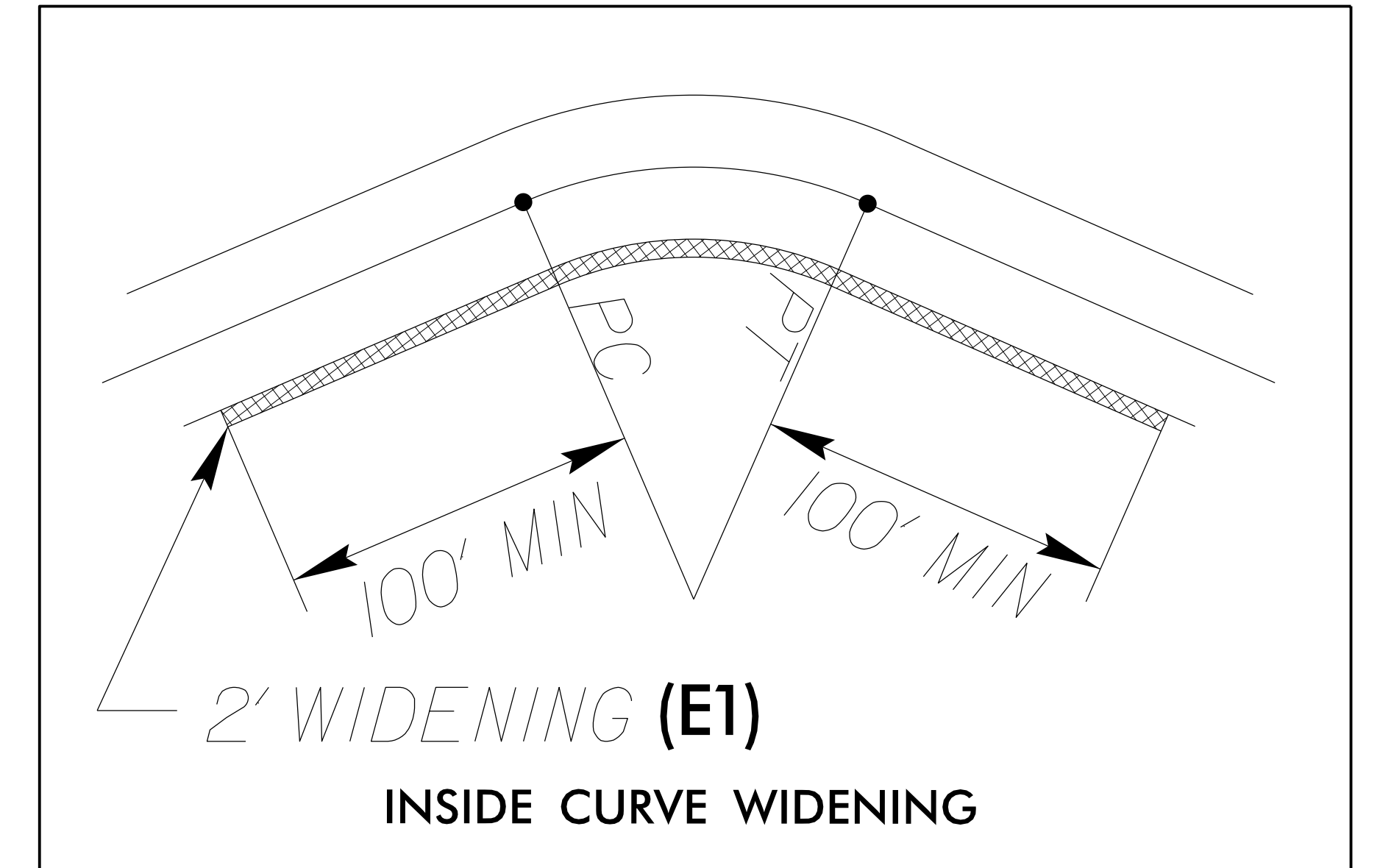


# PAVEMENT SCHEDULE

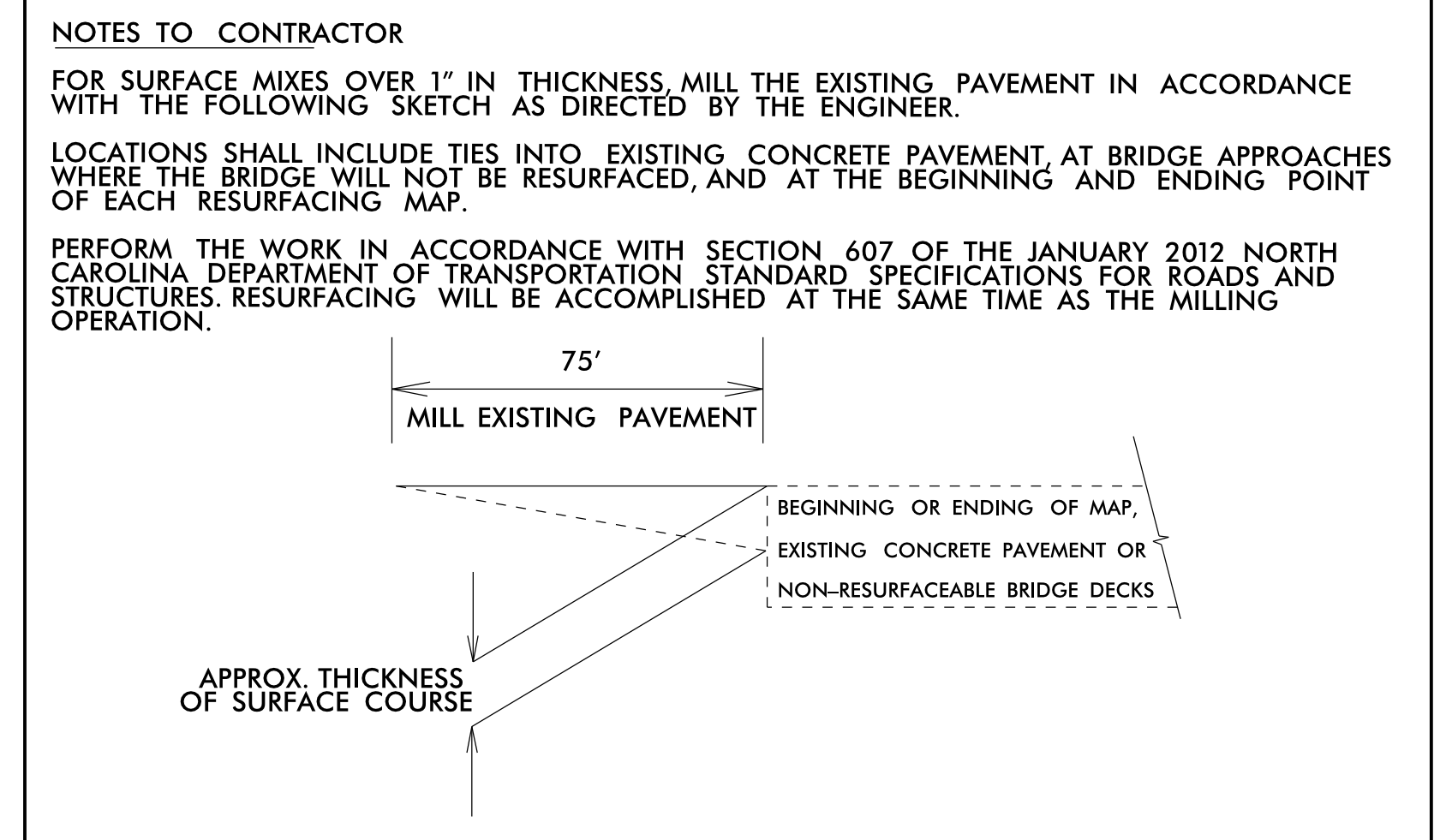
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	1" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YD.
E1	5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	0" - 1½" MILLING
V2	1½" MILLING



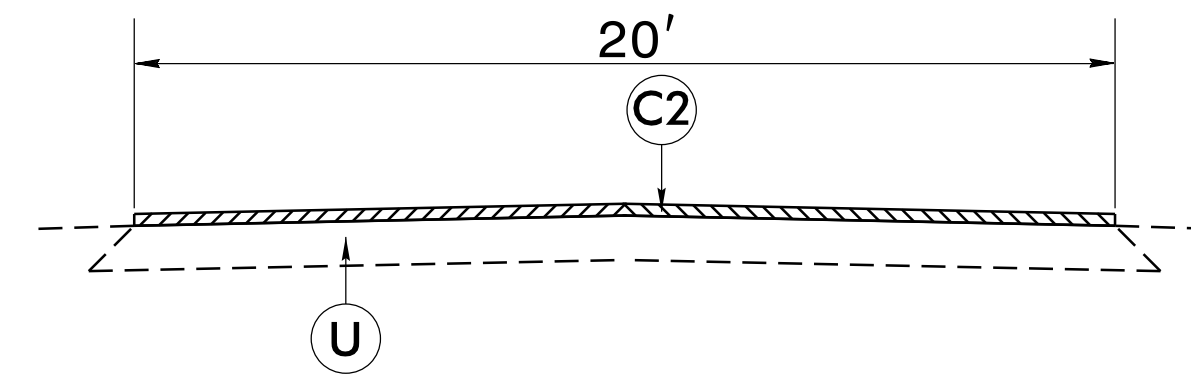
**TYPICAL SECTION NO. 1**  
\*PLUS ADDITIONAL 2' INSIDE CURVE WIDENING (SEE DETAIL)



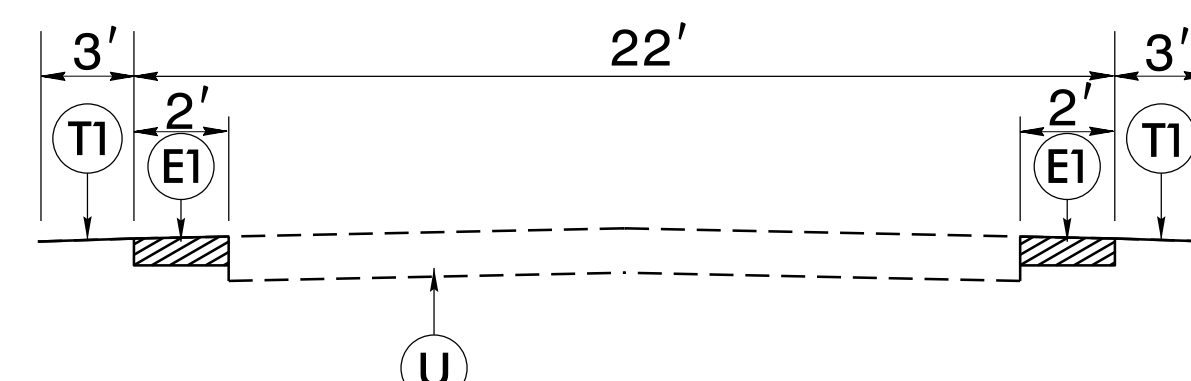
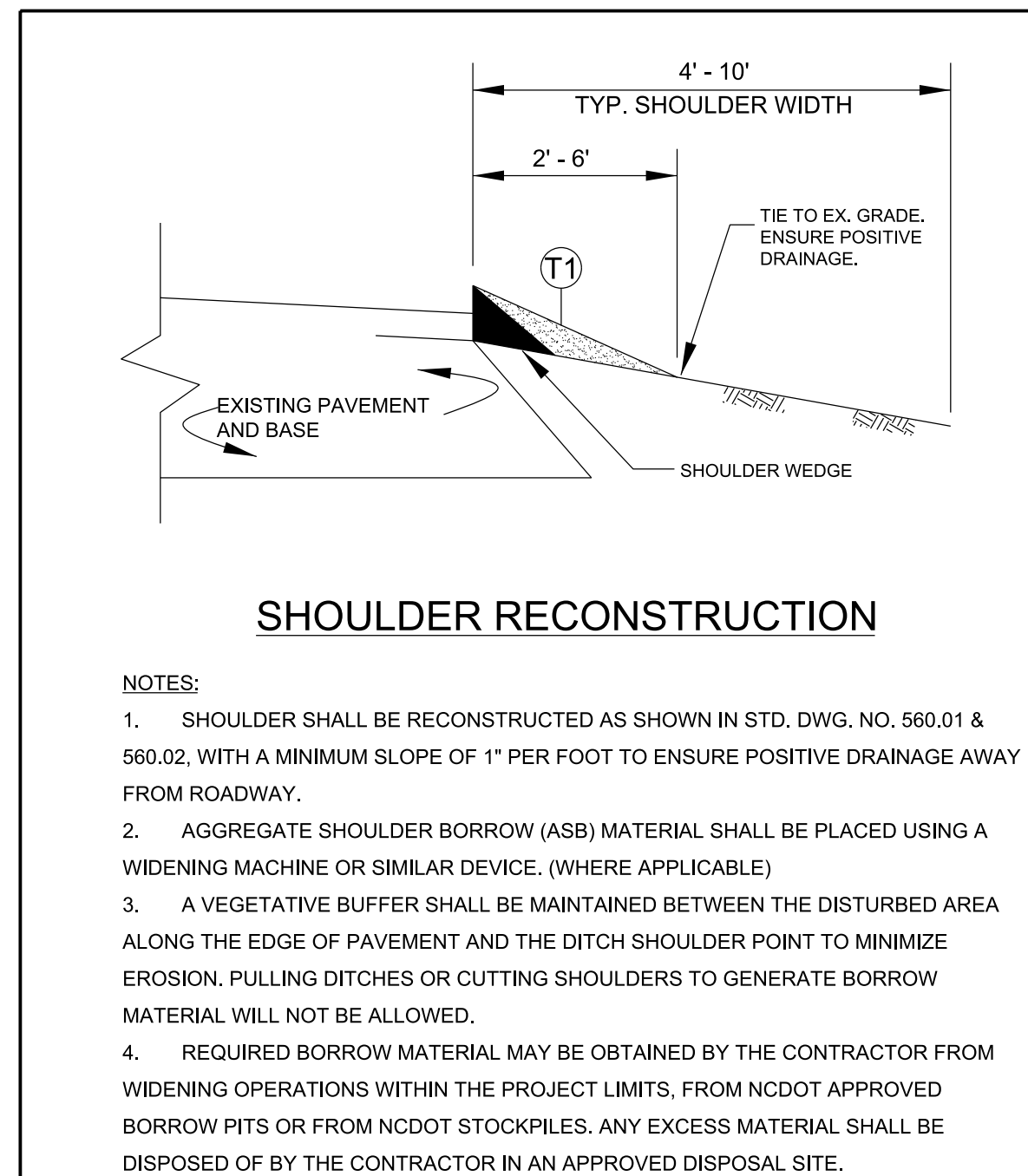
**TYPICAL SECTION NO. 2**  
\*PLUS ADDITIONAL 2' INSIDE CURVE WIDENING (SEE DETAIL)



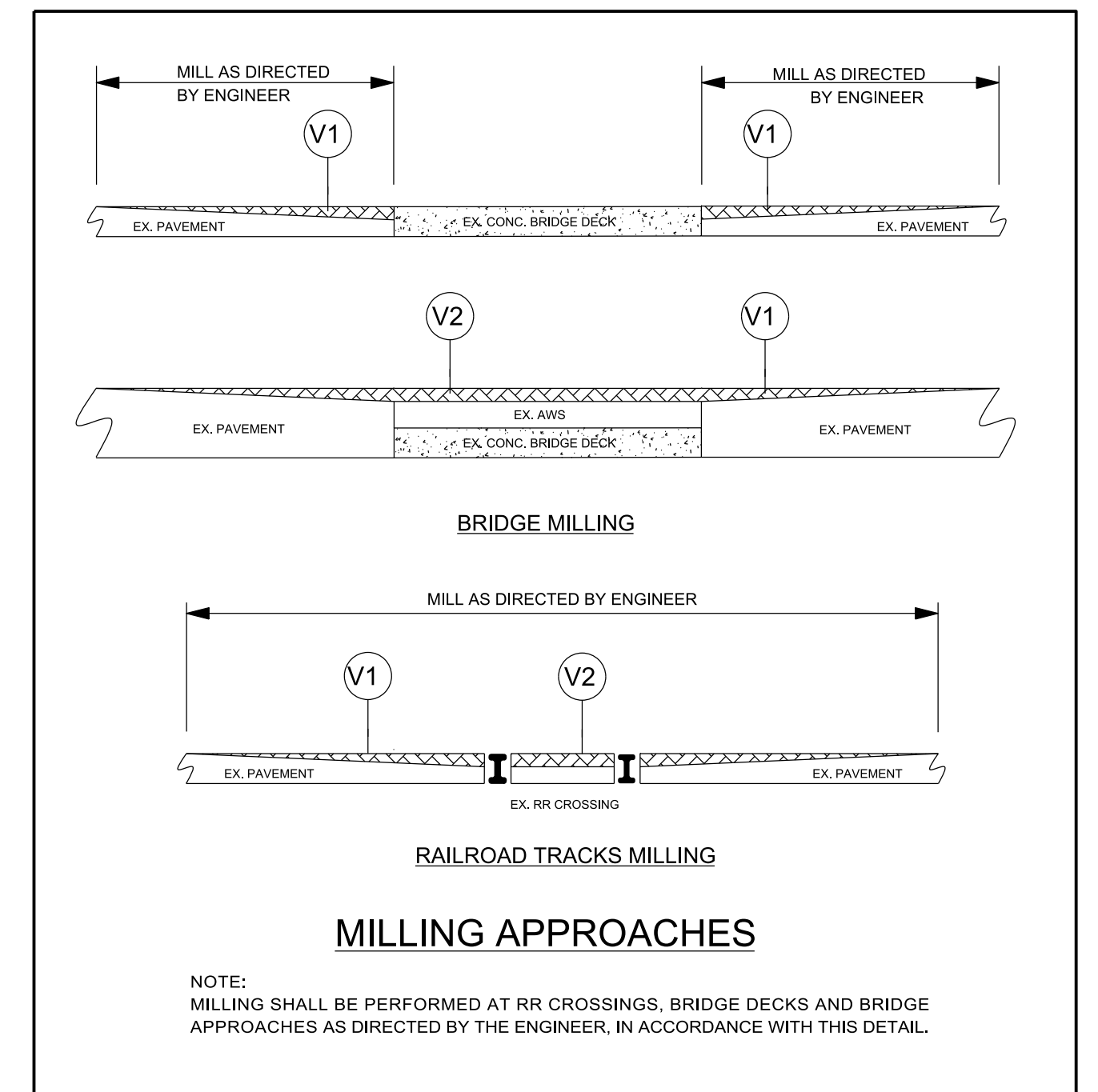
**MILLING AT PAVEMENT TIE-INS DETAIL**



**TYPICAL SECTION NO. 3**

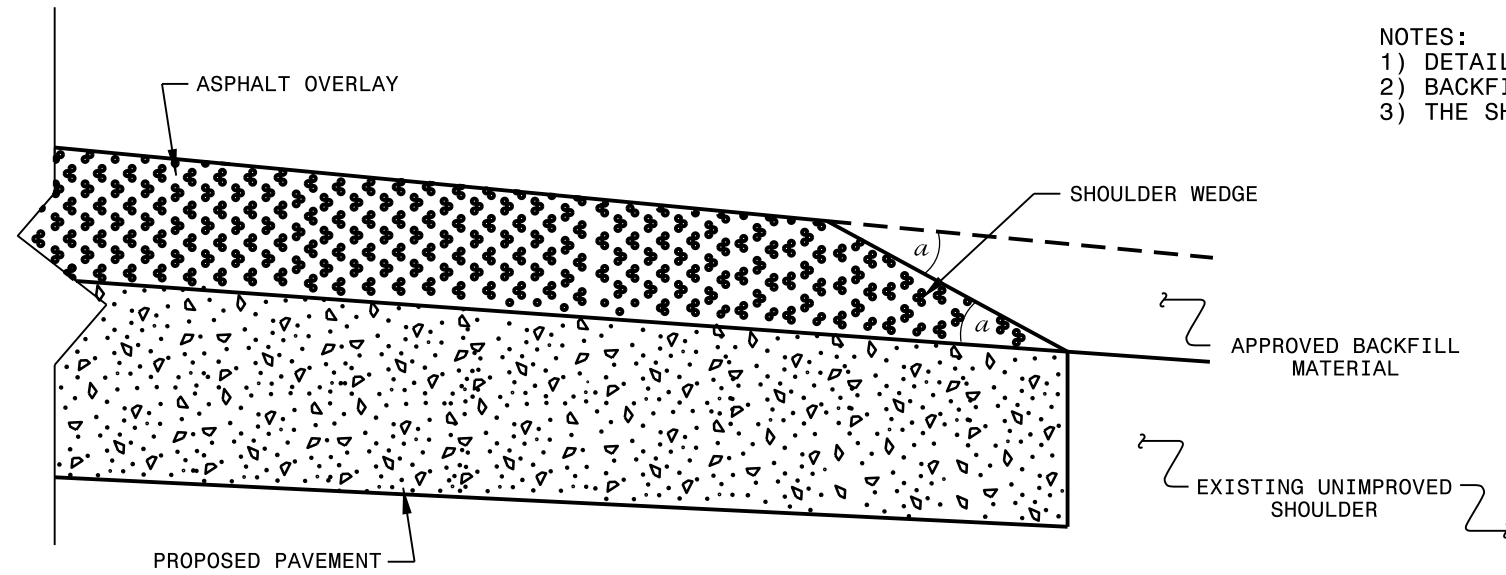


**TYPICAL SECTION NO. 4**

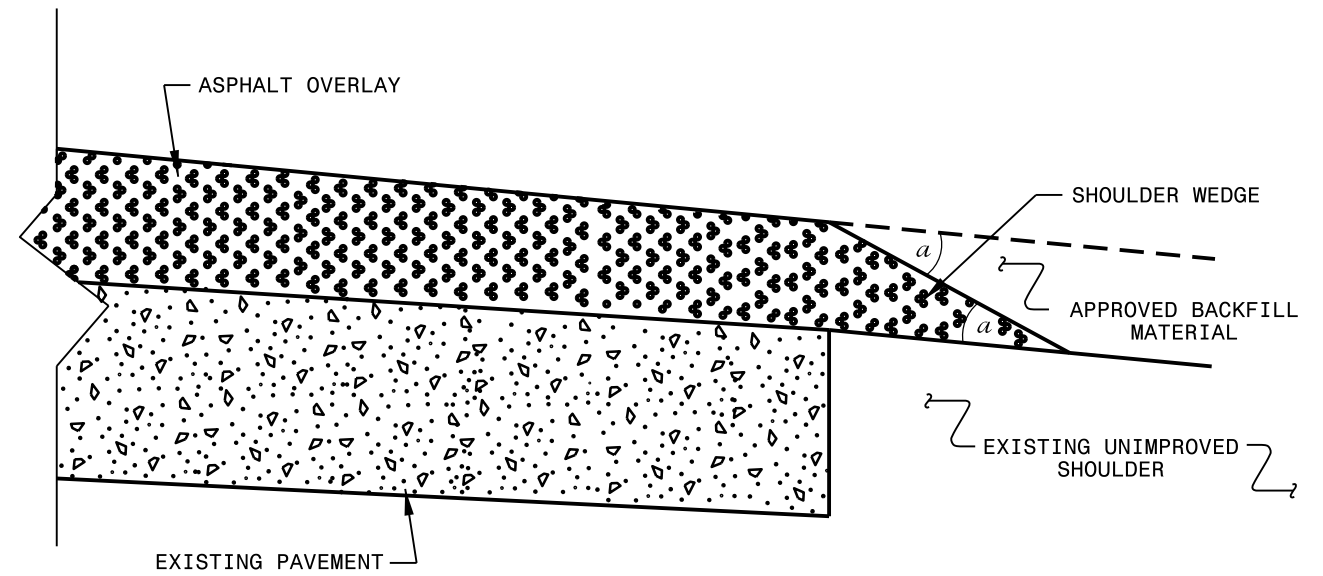


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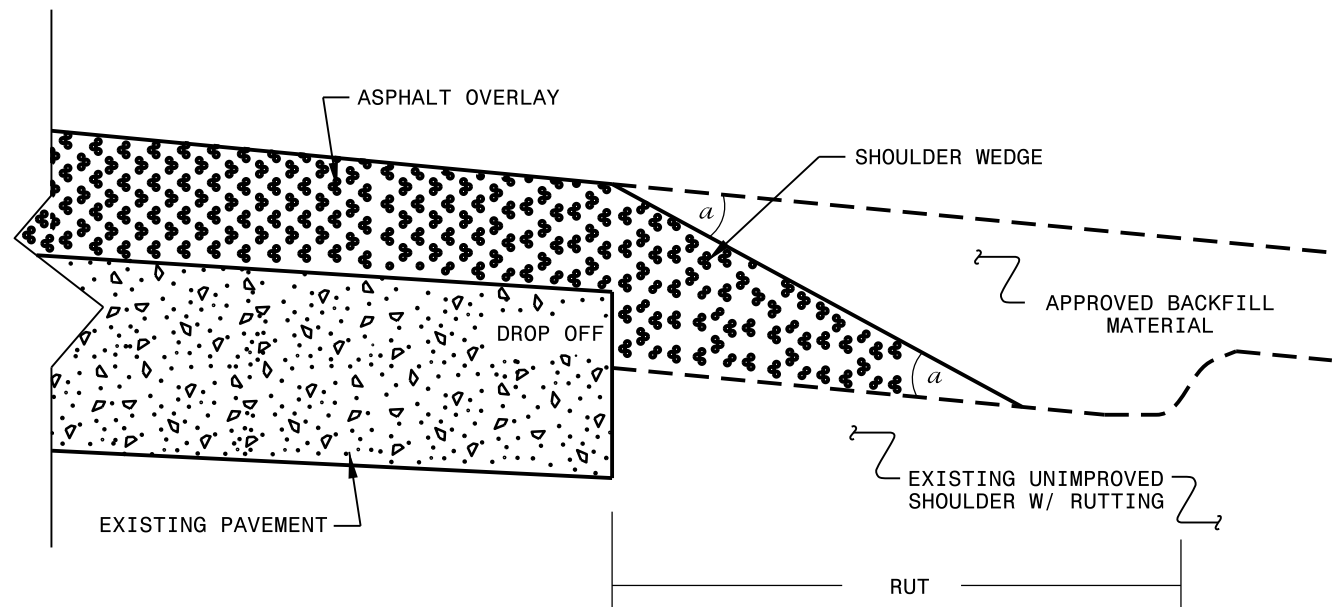
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**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)

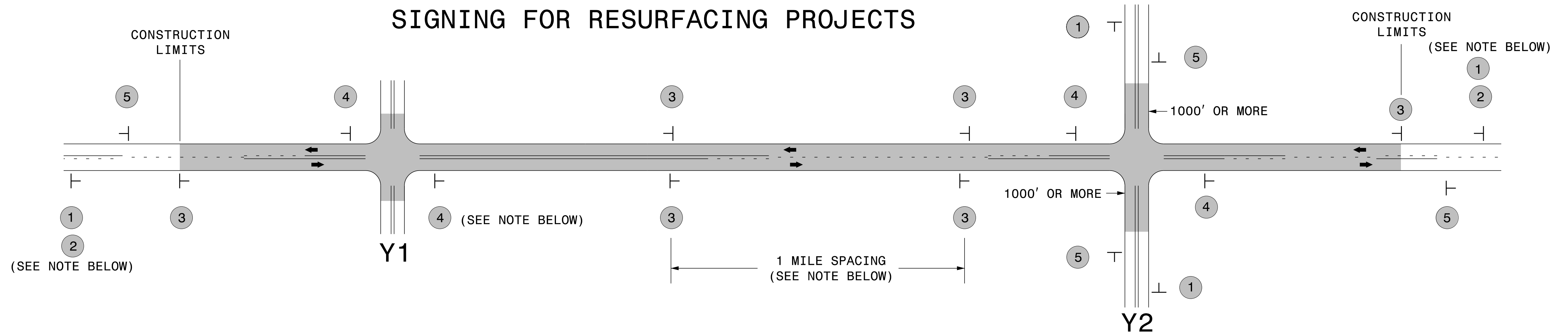
- SHOULDER WEDGE ANGLE = 30°

<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			

SYSTEMS DESIGN  
USER NAME



# SIGNING FOR RESURFACING PROJECTS

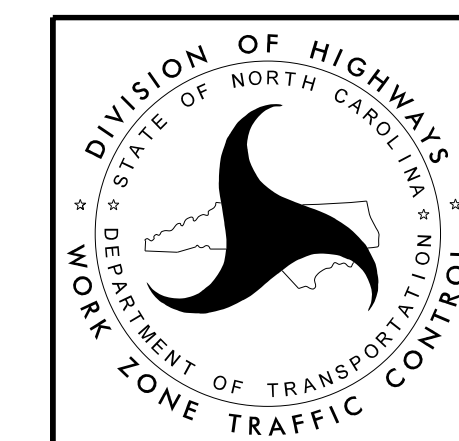


LEGEND	
┆	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	MAINLINE (-L-) SIGNING		-Y- LINE SIGNING	
	1	 W20-1 48" X 48"	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> <li>LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>SUBDIVISION ROADS</li> <li>DEAD END ROADS</li> </ol> <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> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>W20-1 48" X 48"</p> </div> <div style="text-align: center;"> <p>W20-7 A 48" X 48"</p> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
	2	 W7-3aP 24" X 18"	#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)	
	3	 SP 13107 48" X 48"	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.	
	4	 SP 13106 48" X 48"	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.	
5	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		



RESURFACING  
ADVANCE WARNING SIGNS  
FOR  
RURAL AND SUBURBAN  
2 LANE ROADWAYS



### GUIDELINES FOR LANE WIDTHS ON RESURFACING PROJECTS

Contractor shall place the new pavement markings in accordance with this table and detail unless otherwise directed by the Engineer.

<b>TWO LANE - TWO WAY ROADWAY - 55 MPH</b>		
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH
18'	9' *	0'
20'	10' *	0'
22'	10'	1'
24'	10'	2'
26'	11'	2'
28'	12'	2'
32'	12'	4'

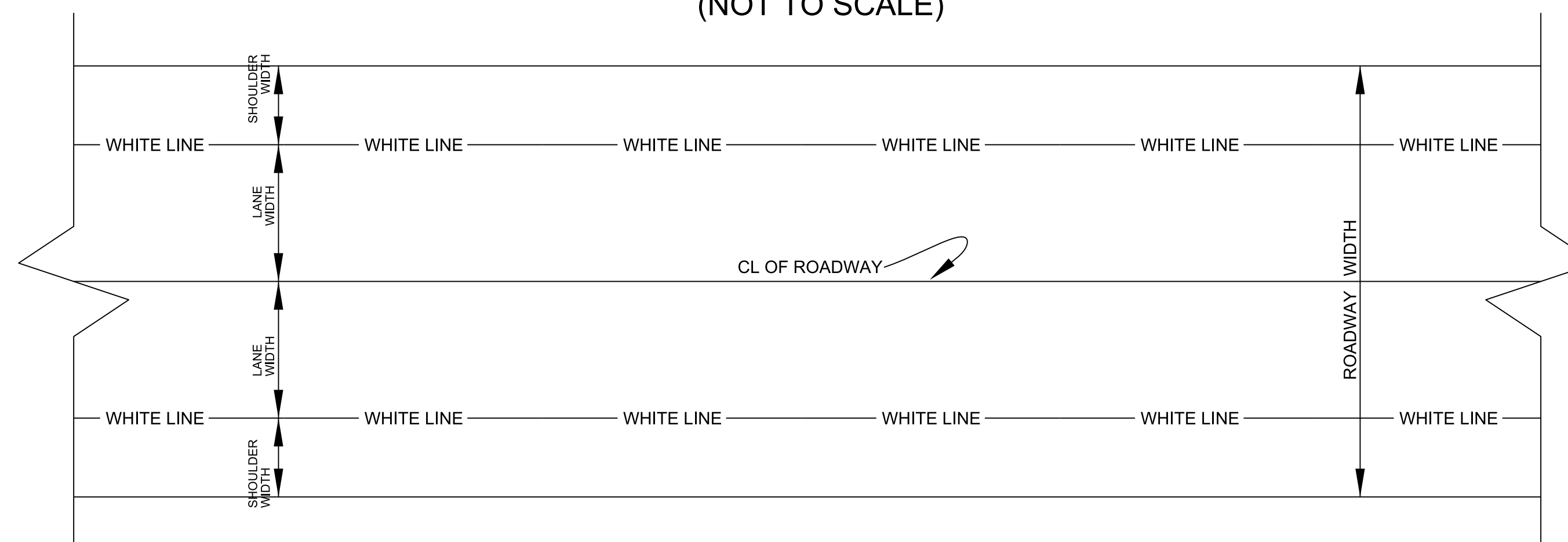
\* May vary due to pavement width

<b>TWO LANE - TWO WAY ROADWAY</b>		<b>50</b>
<b>MPH OR LESS</b>		
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH
18'	9' *	0'
20'	10' *	0'
22'	10'	1'
24'	10'	2'
26'	11'	2'
28'	11'	3'
32'	11'	5'

\* May vary due to pavement width

### SCHEMATIC OF ROADWAY

(NOT TO SCALE)



# SUMMARY OF QUANTITIES

PROJECT NO.	SHEET NO.
2020CPT.06.02.10091.1, 2020CPT.06.02.20091.1	10

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH		1245000000-E	1260000000-E	1330000000-E	1491000000-E	1523000000-E	1524000000-E	1526000000-E	1575000000-E	1704000000-E	
										MI	FT	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	INCIDENTAL MILLING	BASE COURSE, B25.0C	SURFACE COURSE, S9.5C	LEVELING COURSE, S9.5C	SURFACE COURSE, S4.75A	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	
										SMI	TON	SY	TONS	TONS	TONS	TONS	TONS				
2020CPT.06.02.10091.1	Bladen	1	NC 41	FROM US 701 TO SAMPSON CL	1	2	2WU	NO	NO	8.26	26	16.50	2,671	1,747	304	10,728	159		668	248	
<b>TOTAL FOR MAP NO. 1</b>										<b>8.26</b>		<b>16.50</b>	<b>2,671</b>	<b>1,747</b>	<b>304</b>	<b>10,728</b>	<b>159</b>		<b>668</b>	<b>248</b>	
<b>TOTAL FOR PROJ NO. 2020CPT.06.02.10091.1</b>										<b>8.26</b>		<b>16.50</b>	<b>2,671</b>	<b>1,747</b>	<b>304</b>	<b>10,728</b>	<b>159</b>		<b>668</b>	<b>248</b>	
2020CPT.06.02.20091.1	Bladen	2	SR 1007	FROM NC 210 TO SAMPSON CL	2	2	2WU	NO	NO	0.81	22	1.60	262	44	626					28	
<b>TOTAL FOR MAP NO. 2</b>										<b>0.81</b>		<b>1.60</b>	<b>262</b>	<b>44</b>	<b>626</b>					<b>28</b>	
2020CPT.06.02.20091.1	Bladen	3	SR 1513	FROM US 701 TO DEAD END	3	2	2WU	NO	NO	0.57	20			44					342	24	
<b>TOTAL FOR MAP NO. 3</b>										<b>0.57</b>				<b>44</b>					<b>342</b>	<b>24</b>	
2020CPT.06.02.20091.1	Bladen	4	SR 1557	FROM US 701 TO CUL-DE-SAC	3	2	2WU	NO	NO	0.31	20			44					189	13	
<b>TOTAL FOR MAP NO. 4</b>										<b>0.31</b>				<b>44</b>					<b>189</b>	<b>13</b>	
2020CPT.06.02.20091.1	Bladen	5	SR 1558	FROM SR 1557 TO DEAD END	3	2	2WU	NO	NO	0.08	20			44					54	4	
<b>TOTAL FOR MAP NO. 5</b>										<b>0.08</b>				<b>44</b>					<b>54</b>	<b>4</b>	
2020CPT.06.02.20091.1	Bladen	6	SR 1559	FROM US 701 TO CUL-DE-SAC	3	2	2WU	NO	NO	0.38	20			44					230	16	
<b>TOTAL FOR MAP NO. 6</b>										<b>0.38</b>				<b>44</b>					<b>230</b>	<b>16</b>	
2020CPT.06.02.20091.1	Bladen	7	SR 1563	FROM US 701 TO DEAD END	3	2	2WU	NO	NO	0.44	20			44					266	19	
<b>TOTAL FOR MAP NO. 7</b>										<b>0.44</b>				<b>44</b>					<b>266</b>	<b>19</b>	
2020CPT.06.02.20091.1	Bladen	8	SR 1704	FROM NC 87 TO SR 1709	4	2	2WU	NO	NO	4.94	22	9.90	1,598	178	3,634					164	
<b>TOTAL FOR MAP NO. 8</b>										<b>4.94</b>		<b>9.90</b>	<b>1,598</b>	<b>178</b>	<b>3,634</b>					<b>164</b>	
<b>TOTAL FOR PROJ NO. 2020CPT.06.02.20091.1</b>										<b>7.53</b>		<b>11.50</b>	<b>1,860</b>	<b>442</b>	<b>4,260</b>				<b>1,081</b>	<b>268</b>	
<b>GRAND TOTAL</b>										<b>15.79</b>		<b>28.00</b>	<b>4,531</b>	<b>2,189</b>	<b>4,564</b>	<b>10,728</b>	<b>159</b>		<b>1,081</b>	<b>936</b>	<b>248</b>

# THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO.	SHEET NO.
2020CPT.06.02.10091.1, 2020CPT.06.02.20091.1	11

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	441300000-E		445700000-N	468500000-E			468600000-E		469500000-E	471000000-E
								LENGTH	WIDTH	WORK ZONE ADVANCE/GENERA L WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	8" X 90 M WHITE THERMO	24" X 120 M WHITE THERMO	
																	MI
2020CPT.06.02.10091.1	Bladen	1	NC 41	FROM US 701 TO SAMPSON CL	1	2	2WU	8.26	26	925	1	87,230	75	69,785	500		
<b>TOTAL FOR MAP NO. 1</b>								<b>8.26</b>		<b>925</b>	<b>1</b>	<b>87,230</b>	<b>75</b>	<b>69,785</b>	<b>500</b>		
<b>TOTAL FOR PROJ NO. 2020CPT.06.02.10091.1</b>								<b>8.26</b>		<b>925</b>	<b>1</b>	<b>87,230</b>	<b>75</b>	<b>69,785</b>	<b>500</b>		
											<b>69,860</b>						
2020CPT.06.02.20091.1	Bladen	2	SR 1007	FROM NC 210 TO SAMPSON CL	2	2	2WU	0.81	22	91							
<b>TOTAL FOR MAP NO. 2</b>								<b>0.81</b>		<b>91</b>							
2020CPT.06.02.20091.1	Bladen	3	SR 1513	FROM US 701 TO DEAD END	3	2	2WU	0.57	20	64							
<b>TOTAL FOR MAP NO. 3</b>								<b>0.57</b>		<b>64</b>							
2020CPT.06.02.20091.1	Bladen	4	SR 1557	FROM US 701 TO CUL-DE-SAC	3	2	2WU	0.31	20	64							
<b>TOTAL FOR MAP NO. 4</b>								<b>0.31</b>		<b>64</b>							
2020CPT.06.02.20091.1	Bladen	5	SR 1558	FROM SR 1557 TO DEAD END	3	2	2WU	0.08	20	64							
<b>TOTAL FOR MAP NO. 5</b>								<b>0.08</b>		<b>64</b>							
2020CPT.06.02.20091.1	Bladen	6	SR 1559	FROM US 701 TO CUL-DE-SAC	3	2	2WU	0.38	20	64							
<b>TOTAL FOR MAP NO. 6</b>								<b>0.38</b>		<b>64</b>							
2020CPT.06.02.20091.1	Bladen	7	SR 1563	FROM US 701 TO DEAD END	3	2	2WU	0.44	20	64							
<b>TOTAL FOR MAP NO. 7</b>								<b>0.44</b>		<b>64</b>							
2020CPT.06.02.20091.1	Bladen	8	SR 1704	FROM NC 87 TO SR 1709	4	2	2WU	4.94	22	553		52,170	115	41,740		100	
<b>TOTAL FOR MAP NO. 8</b>								<b>4.94</b>		<b>553</b>		<b>52,170</b>	<b>115</b>	<b>41,740</b>		<b>100</b>	
<b>TOTAL FOR PROJ NO. 2020CPT.06.02.20091.1</b>								<b>7.53</b>		<b>964</b>		<b>52,170</b>	<b>115</b>	<b>41,740</b>		<b>100</b>	
											<b>41,855</b>						
<b>GRAND TOTAL</b>								<b>15.79</b>		<b>1,889</b>	<b>1</b>	<b>139,400</b>	<b>190</b>	<b>111,525</b>	<b>500</b>	<b>100</b>	
											<b>111,715</b>						

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	472500000-E		481000000-E		490000000-N			
								LENGTH	WIDTH	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	CRYSTAL & RED MARKERS	YELLOW & YELLOW MARKERS
2020CPT.06.02.10091.1	Bladen	1	NC 41	FROM US 701 TO SAMPSON CL	1	2	2WU	8.26	26	2	1			25	545
<b>TOTAL FOR MAP NO. 1</b>								<b>8.26</b>		<b>2</b>	<b>1</b>			<b>25</b>	<b>545</b>
<b>TOTAL FOR PROJ NO. 2020CPT.06.02.10091.1</b>								<b>8.26</b>		<b>2</b>	<b>1</b>			<b>25</b>	<b>545</b>
											<b>3</b>		<b>570</b>		
2020CPT.06.02.20091.1	Bladen	2	SR 1007	FROM NC 210 TO SAMPSON CL	2	2	2WU	0.81	22			10,224	8,690		
<b>TOTAL FOR MAP NO. 2</b>								<b>0.81</b>				<b>10,224</b>	<b>8,690</b>		
2020CPT.06.02.20091.1	Bladen	3	SR 1513	FROM US 701 TO DEAD END	3	2	2WU	0.57	20						
<b>TOTAL FOR MAP NO. 3</b>								<b>0.57</b>							
2020CPT.06.02.20091.1	Bladen	4	SR 1557	FROM US 701 TO CUL-DE-SAC	3	2	2WU	0.31	20						
<b>TOTAL FOR MAP NO. 4</b>								<b>0.31</b>							
2020CPT.06.02.20091.1	Bladen	5	SR 1558	FROM SR 1557 TO DEAD END	3	2	2WU	0.08	20						
<b>TOTAL FOR MAP NO. 5</b>								<b>0.08</b>							
2020CPT.06.02.20091.1	Bladen	6	SR 1559	FROM US 701 TO CUL-DE-SAC	3	2	2WU	0.38	20						
<b>TOTAL FOR MAP NO. 6</b>								<b>0.38</b>							
2020CPT.06.02.20091.1	Bladen	7	SR 1563	FROM US 701 TO DEAD END	3	2	2WU	0.44	20						
<b>TOTAL FOR MAP NO. 7</b>								<b>0.44</b>							
2020CPT.06.02.20091.1	Bladen	8	SR 1704	FROM NC 87 TO SR 1709	4	2	2WU	4.94	22						326
<b>TOTAL FOR MAP NO. 8</b>								<b>4.94</b>							<b>326</b>
<b>TOTAL FOR PROJ NO. 2020CPT.06.02.20091.1</b>								<b>7.53</b>				<b>10,224</b>	<b>8,690</b>		<b>326</b>
											<b>18,914</b>		<b>326</b>		
<b>GRAND TOTAL</b>								<b>15.79</b>		<b>2</b>	<b>1</b>	<b>10,224</b>	<b>8,690</b>	<b>25</b>	<b>871</b>
											<b>3</b>		<b>896</b>		