

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

Letting Date: March 6, 2024

CONTRACT ID: DF00471

TIP NO.: -----

FEDERAL AID NO.: STATE FUNDED

WBS ELEMENT NO.: 2024CPT.06.16.10781.1 & 2024CPT.06.16.20781.1

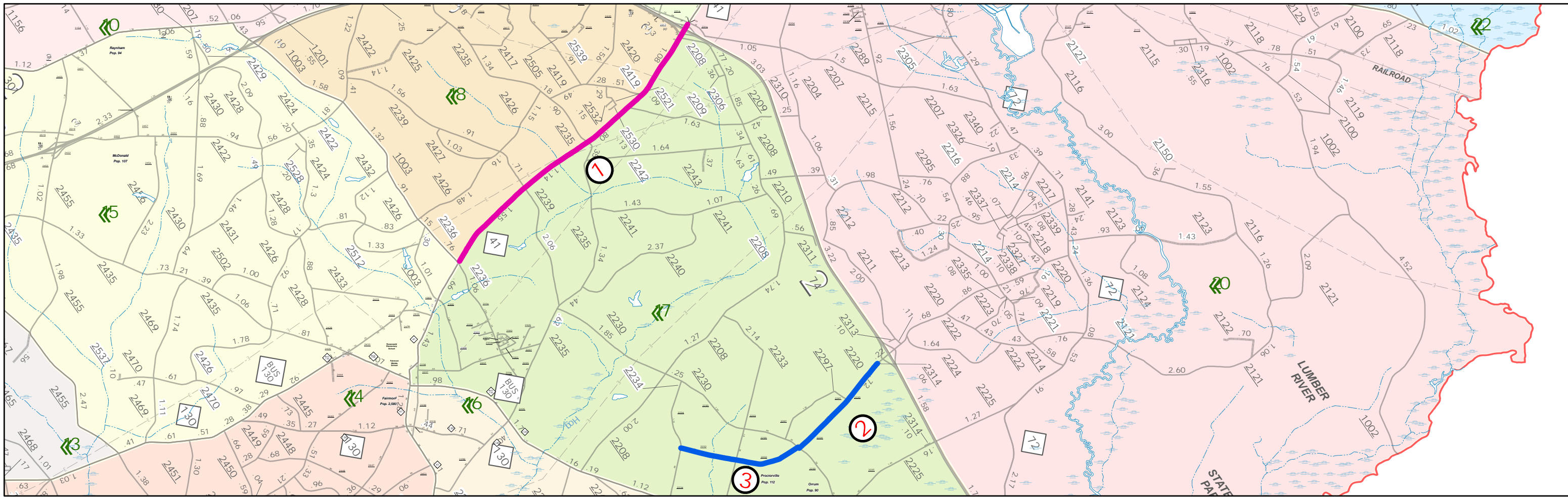
ROUTE NO.: VARIES

LOCATION: VARIES

COUNTY: ROBESON

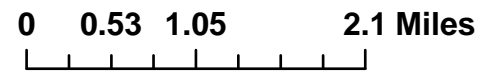
LENGTH OF PROJECT: 12.81 MILES

TYPE OF WORK: RESURFACING, MILLING & PAVEMENT MARKINGS

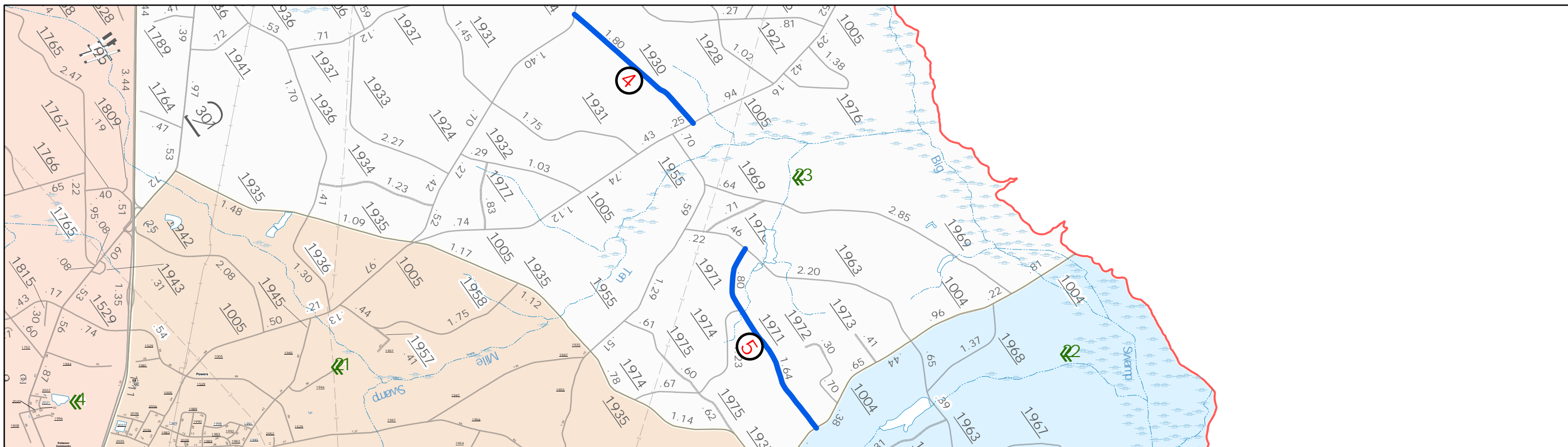


Robeson County Resurfacing
Contract : DF00471

Legend

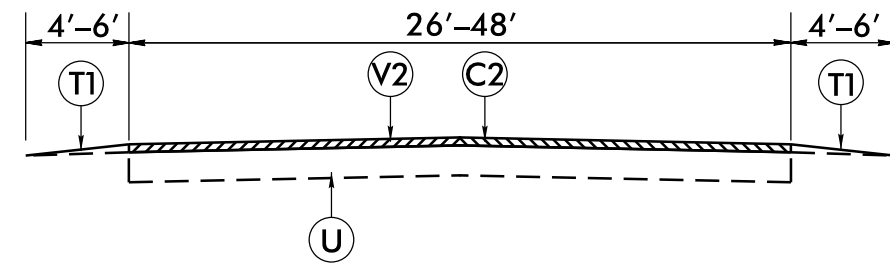


- WBS: 2024CPT.06.16.10781.1
- WBS: 2024CPT.06.16.20781.1

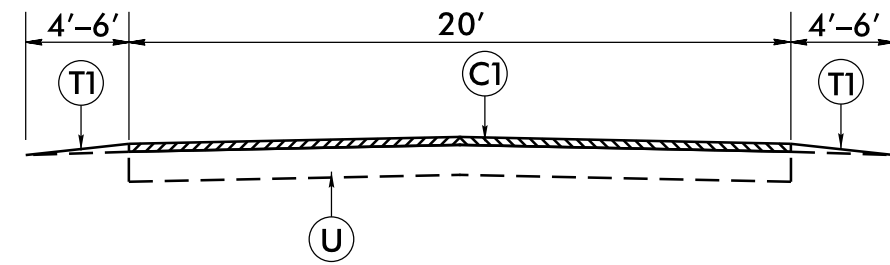


PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E1	5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
R1	EXISTING CURB AND GUTTER
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING ASPHALT PAVEMENT
V1	0"-1½" MILLING
V2	¾" MILLING
V3	1½" MILLING
V4	2½" MILLING

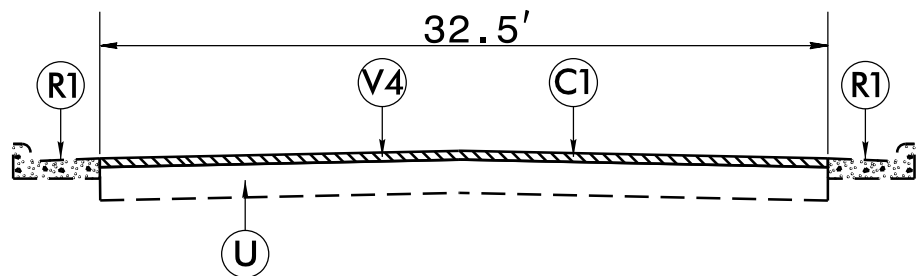


TYPICAL SECTION NO. 1



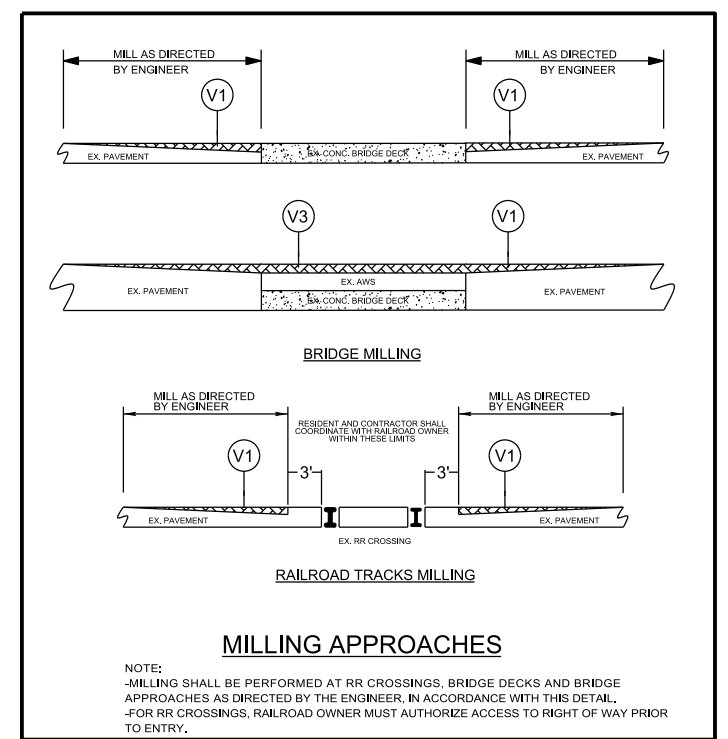
TYPICAL SECTION NO. 2

*PLUS 2' INSIDE CURVE WIDENING ON MAP #4 (SEE DETAIL)

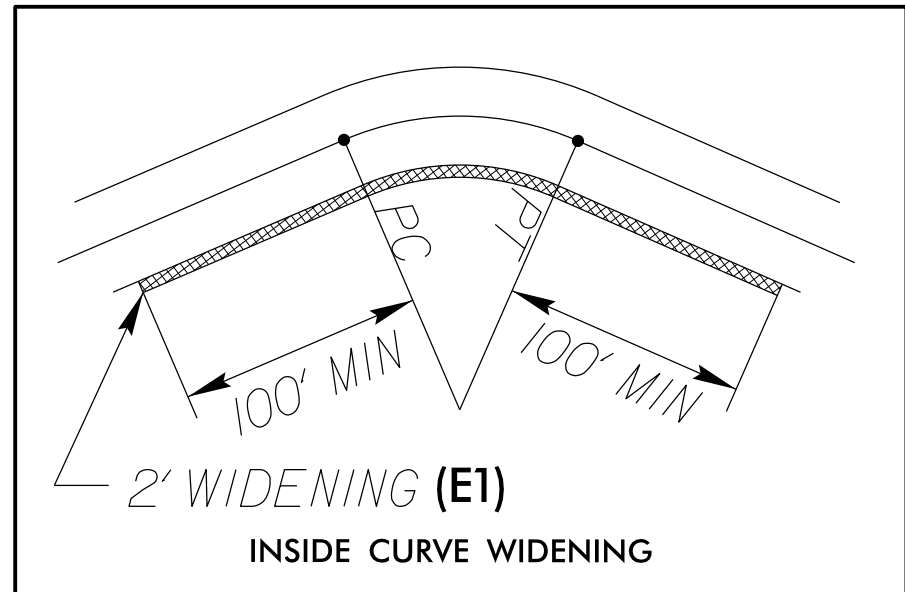


TYPICAL SECTION NO. 3

*EXISTING ASPHALT IS APPROXIMATELY 1 INCH ABOVE CURB EDGE



MILLING APPROACHES



INSIDE CURVE WIDENING

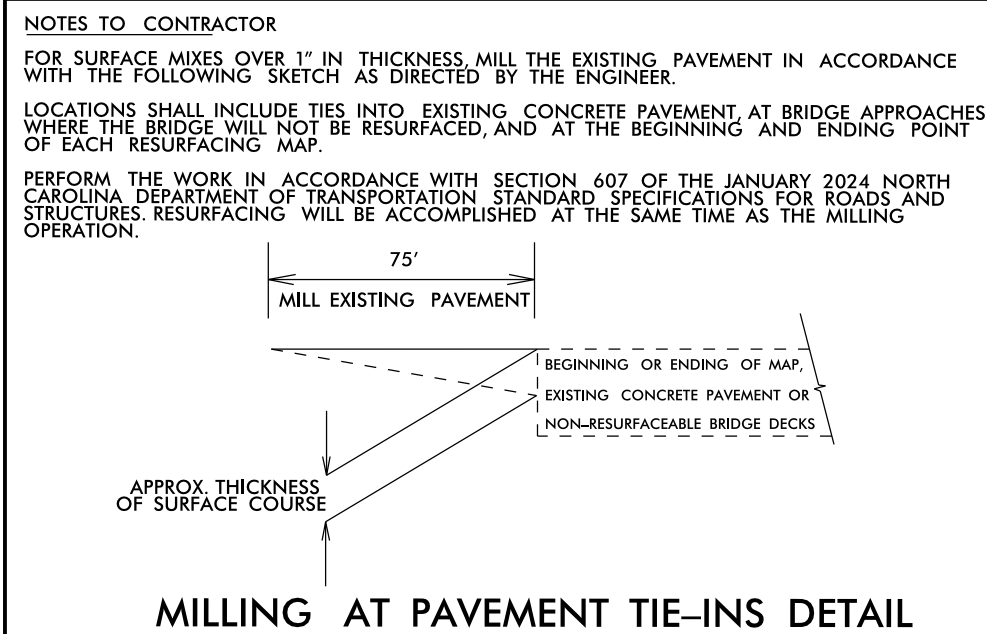
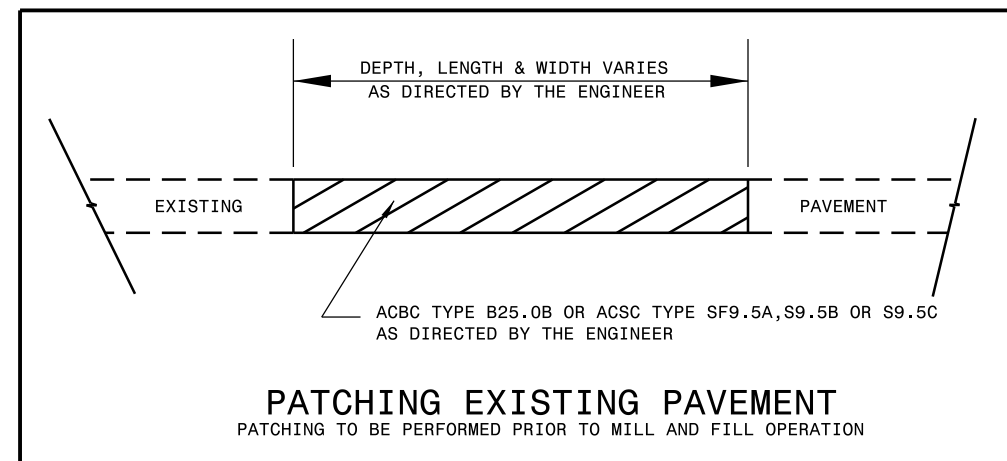
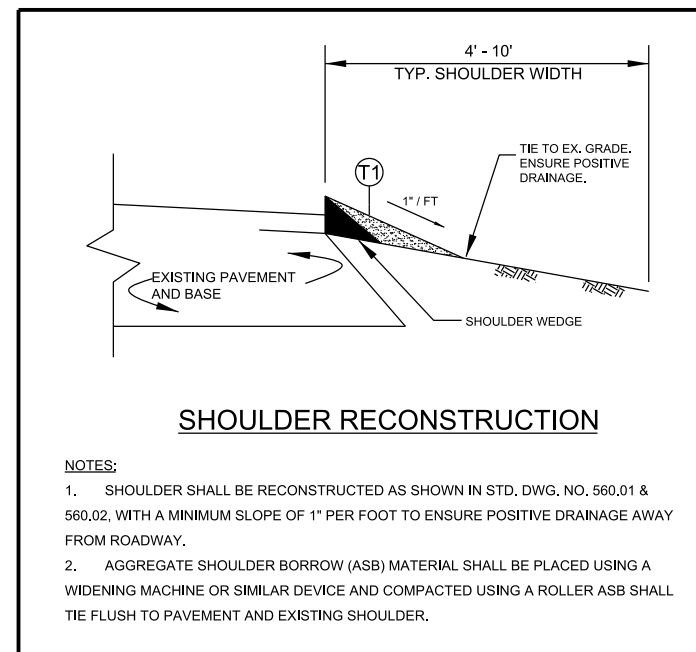
MAP #4

6/2/99

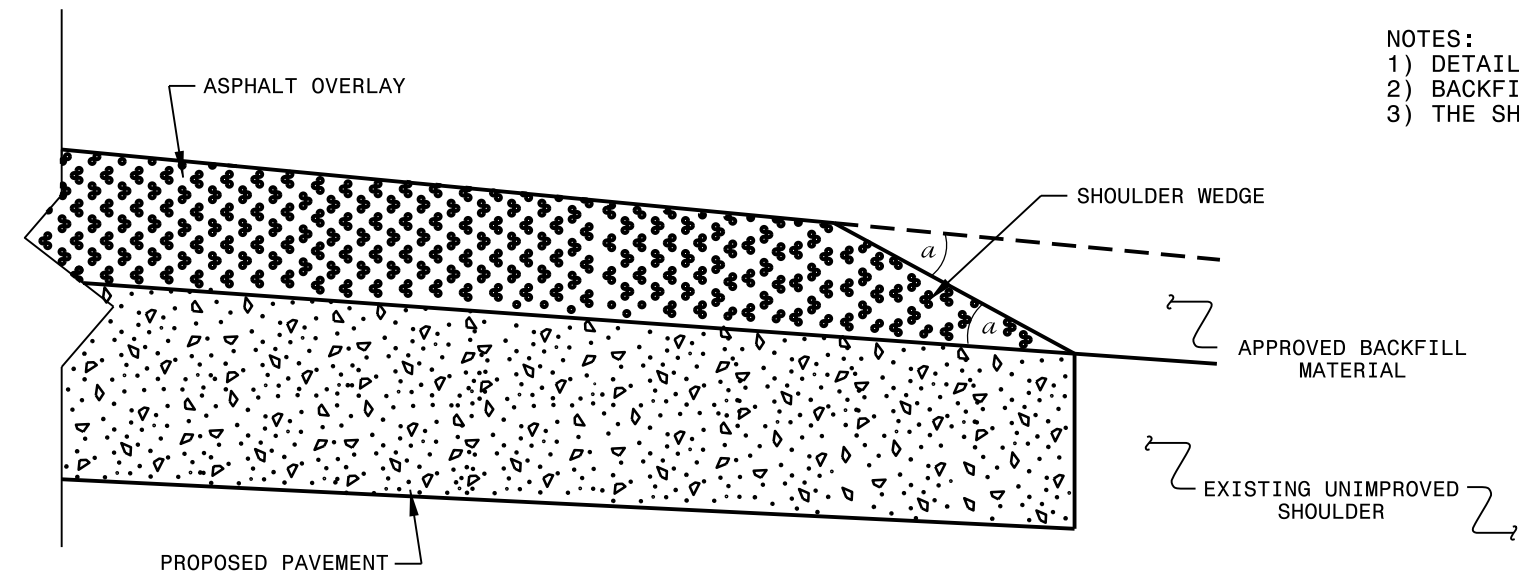
Q:\FEB-2024\06-30\cork Files\Projects\Resurfacing\2024 Spring\01\typ.dgn

PAVEMENT SCHEDULE

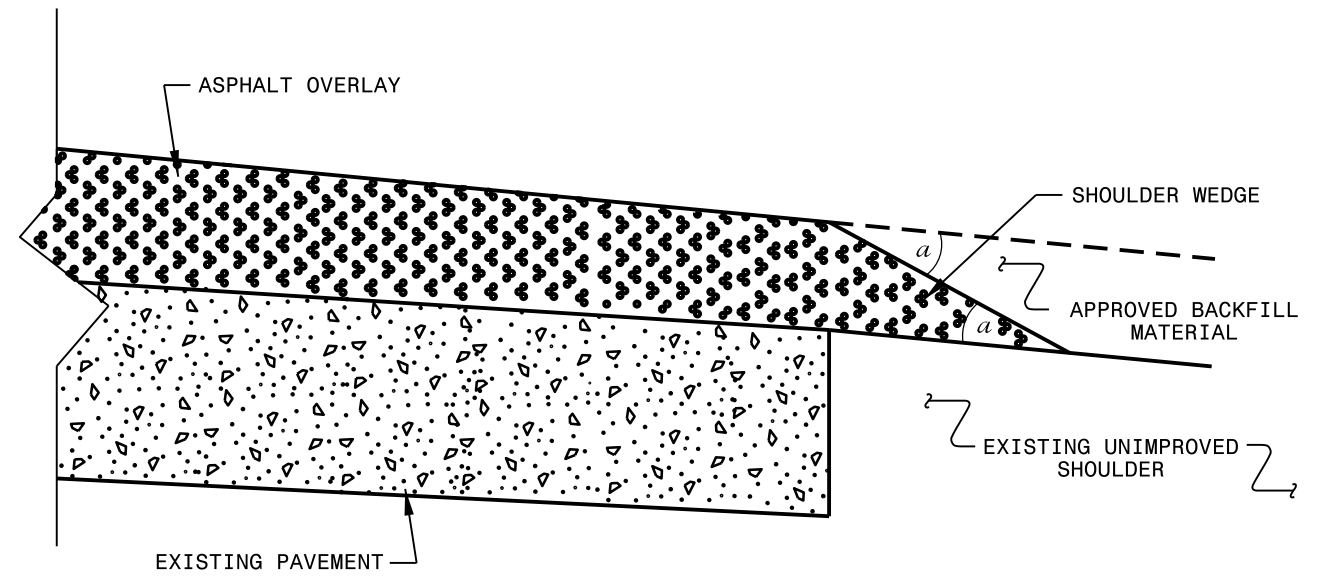
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E1	5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
R1	EXISTING CURB AND GUTTER
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING ASPHALT PAVEMENT
V1	0"-1½" MILLING
V2	¾" MILLING
V3	1½" MILLING
V4	2½" MILLING



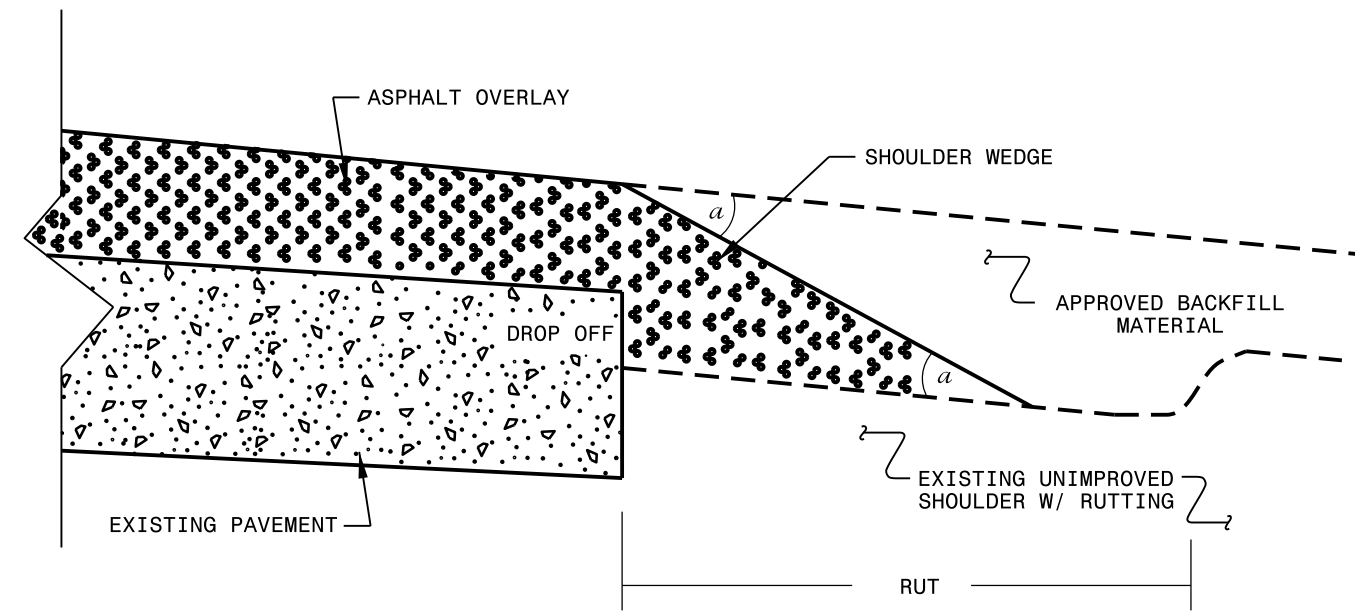
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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)

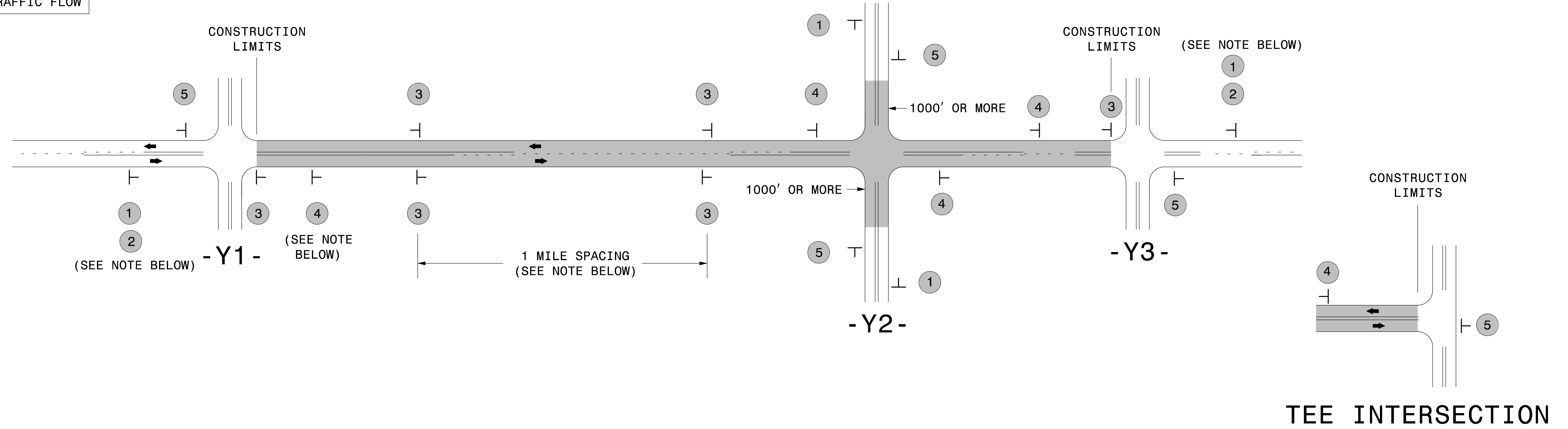
- SHOULDER WEDGE ANGLE = 30°

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.: susr/details/stand/shoulderwedgedetail.dgn			

SYSTEMS DESIGN
 USER NAME

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

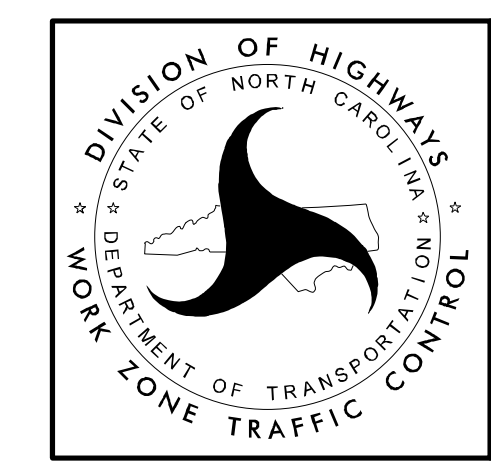
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	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"> 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" </div> <div style="text-align: center;"> W20-7 A 48" X 48" </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER.</p> <p>PLACED 250' IN ADVANCE OF FLAGGER.</p>
	2	 W7-3aP 24" X 18"	#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)	
	3	 SP 13107 48" X 48"	<ul style="list-style-type: none"> - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER. 	
	4	 SP 13106 48" X 48"	<ul style="list-style-type: none"> - 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. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE. 	
	5	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

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

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.

TWO LANE - TWO WAY ROADWAY - 55 MPH		
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'

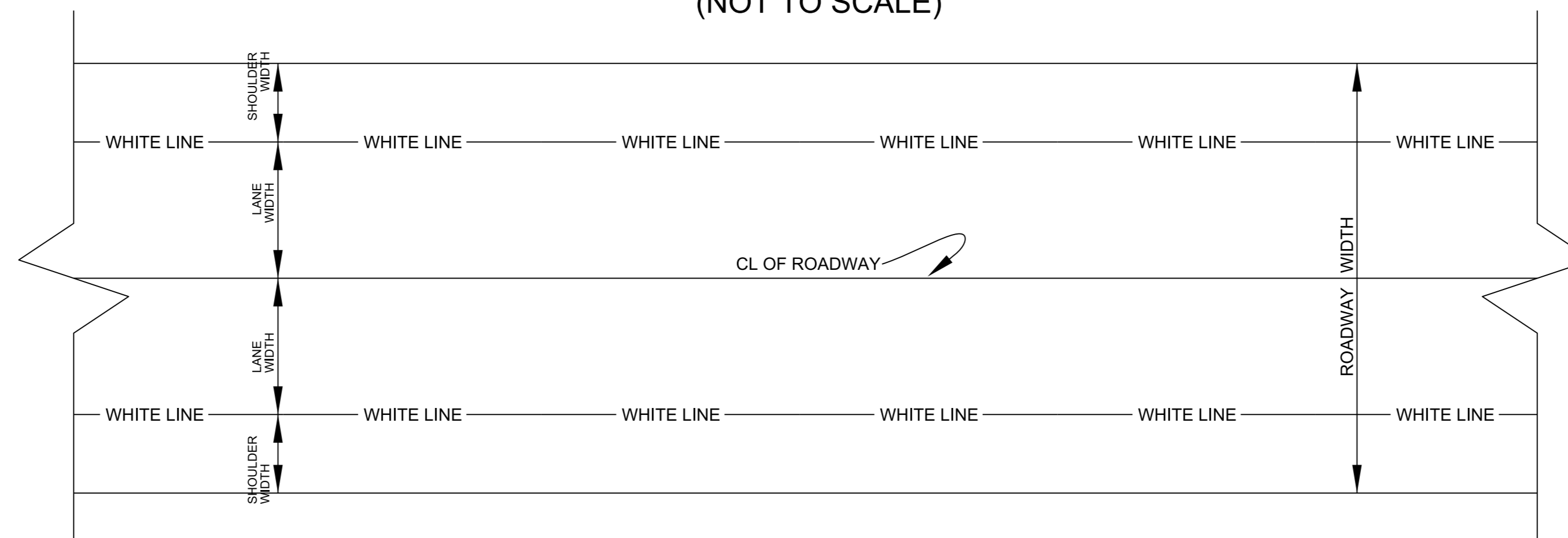
* May vary due to pavement width

TWO LANE - TWO WAY ROADWAY		50
MPH OR LESS		
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)



PROJECT NO.	SHEET NO.	TOTAL NO.
PT.06.16.10781.1, 2024CPT.06.16.2		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	BEGIN MP	END MP	1220000000-E	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1491000000-E	1519000000-E	1520000000-E	1523000000-E	1575000000-E	1704000000-E	2830000000-N																										
														INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	0.75" MILLING	2 1/2" MILLING	INCIDENTAL MILLING	BASE COURSE, B25.0C	SURFACE COURSE, S9.5B	LEVELING COURSE, S9.5B	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ADJ. OF MANHOLES																									
														MI	FT													TONS	SMI	TON	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	EA												
2024CPT.06.16.10781.1	Robeson	1	NC-41	FROM PVMT JT 200' N OF SR 2236 TO PVMT JT 170' S OF SR 2316	1	2	2WU	NO	NO	5.08	26	11.95	17.03	152	10.16	1,643	81,910		3,333			7,178	432	5																											
TOTAL FOR MAP NO. 1														5.08													7,178	432	5																						
TOTAL FOR PROJ NO. 2024CPT.06.16.10781.1														5.08																	7,178	432	5																		
														81,910																																					
2024CPT.06.16.20781.1	Robeson	2	SR-2220 / S BROADRIDGE RD	FROM SR 2230 TO PVMT JT 95' N OF SR 2314	2	2	2WU	NO	NO	1.77	20	0	1.77	43	3.54	572			1,111		1,812	10		123	1																										
TOTAL FOR MAP NO. 2														1.77																1,812	10		123	1																	
2024CPT.06.16.20781.1	Robeson	3	SR-2232 / E MAIN ST	FROM SR 2234 TO SR 2230	2 & 3	2	2WU	NO	NO	1.72	26.75	0	1.72	52	3.00	485		4,195	1,111		1,970	10		134	5																										
TOTAL FOR MAP NO. 3														1.72																		1,970	10		134	5															
2024CPT.06.16.20781.1	Robeson	4	SR-1930 / BUTLER FARMS RD	FROM SR 1005 TO SR 1924	2	2	2WU	NO	NO	1.8	20	0	1.8	13	3.60	582			556	40	1,803	10		130	118																										
TOTAL FOR MAP NO. 4														1.8																				1,803	10		130	118													
2024CPT.06.16.20781.1	Robeson	5	SR-1971 / DENMARK RD	FROM SR 1004 TO SR 1963	2	2	2WU	NO	NO	2.44	19	0	2.44	53	4.88	789			833		2,318	10		157	1																										
TOTAL FOR MAP NO. 5														2.44																						2,318	10		157	1											
TOTAL FOR PROJ NO. 2024CPT.06.16.20781.1														7.73																									4,195			3,611	40		7,903	40		544	125	1	
GRAND TOTAL														12.81													313	25.18	4,071	81,910	4,195	6,944	40												7,903	40		7,178	976	130	1
														86,105																																					

PROJECT NO.	SHEET NO.	TOTAL NO.
.06.16.10781.1, 2024CPT.06.16		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	4413000000-E	4457000000-N	4685000000-E	4700000000-E	4709000000-E	4725000000-E			4810000000-E		4825000000-E			4845000000-N			4891000000-E	4900000000-N		
												WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	12" X 90 M YELLOW THERMO	24" X 90 M WHITE THERMO	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR & RT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	12" YELLOW PAINT	PAINT LT ARROW	PAINT RT ARROW	PAINT STR & RT ARROW	GENERIC MARKING, 4" X 90 M WHITE THERMO (SKIP & MINI SKIP)	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS		
												SF	LS	LF	LF	LF	LF	EA	EA	EA	LF	LF	LF	EA	EA	EA	LF	EA	EA		
2024CPT.06.16.10781.1	Robeson	1	NC-41	FROM PVMT JT 200' N OF SR 2236 TO PVMT JT 170' S OF SR 2316	1	2	2WU	5.08	26	11.95	17.03	569	1.00	45,646	43,599	1,021	142	14	3	1	46,412	43,599	1,021	12	1	1	766	307	40		
TOTAL FOR MAP NO. 1								5.08				569	1.000	45,646	43,599	1,021	142	14	3	1	46,412	43,599	1,021	12	1	1	766	307	40		
TOTAL FOR PROJ NO. 2024CPT.06.16.10781.1								5.08				569	1.000	45,646	43,599	1,021	142	14	3	1	46,412	43,599	1,021	12	1	1	766	307	40		
												89,245			18			90,011		14			347								
2024CPT.06.16.20781.1	Robeson	2	SR-2220 / S BROADRIDGE RD	FROM SR 2230 TO PVMT JT 95' N OF SR 2314	2	2	2WU	1.77	20	0	1.77	198		18,692	15,889														120		
TOTAL FOR MAP NO. 2								1.77				198		18,692	15,889														120		
2024CPT.06.16.20781.1	Robeson	3	SR-2232 / E MAIN ST	FROM SR 2234 TO SR 2230	2 & 3	2	2WU	1.72	26.75	0	1.72	218		18,164	15,440														120		
TOTAL FOR MAP NO. 3								1.72				218		18,164	15,440															120	
2024CPT.06.16.20781.1	Robeson	4	SR-1930 / BUTLER FARMS RD	FROM SR 1005 TO SR 1924	2	2	2WU	1.8	20	0	1.8	202		19,008	16,157														120		
TOTAL FOR MAP NO. 4								1.8				202		19,008	16,157															120	
2024CPT.06.16.20781.1	Robeson	5	SR-1971 / DENMARK RD	FROM SR 1004 TO SR 1963	2	2	2WU	2.44	19	0	2.44	273		25,767	21,903														162		
TOTAL FOR MAP NO. 5								2.44				273		25,767	21,903															162	
TOTAL FOR PROJ NO. 2024CPT.06.16.20781.1								7.73				891		81,631	69,389															522	
												151,020													522						
GRAND TOTAL								12.81				1,460	1,000	127,277	112,988	1,021	142	14	3	1	46,412	43,599	1,021	12	1	1	766	829	40		
												240,265			18			90,011		14			869								