

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION 6

# PLANS

**Letting Date: February 5, 2025**

**CONTRACT ID: DF00504**

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

**FEDERAL AID NO.: STATE FUNDED**

**WBS ELEMENT NO.: 2025CPT.06.11.20241.1**

**ROUTE NO.: VARIES**

**LOCATION: VARIES**

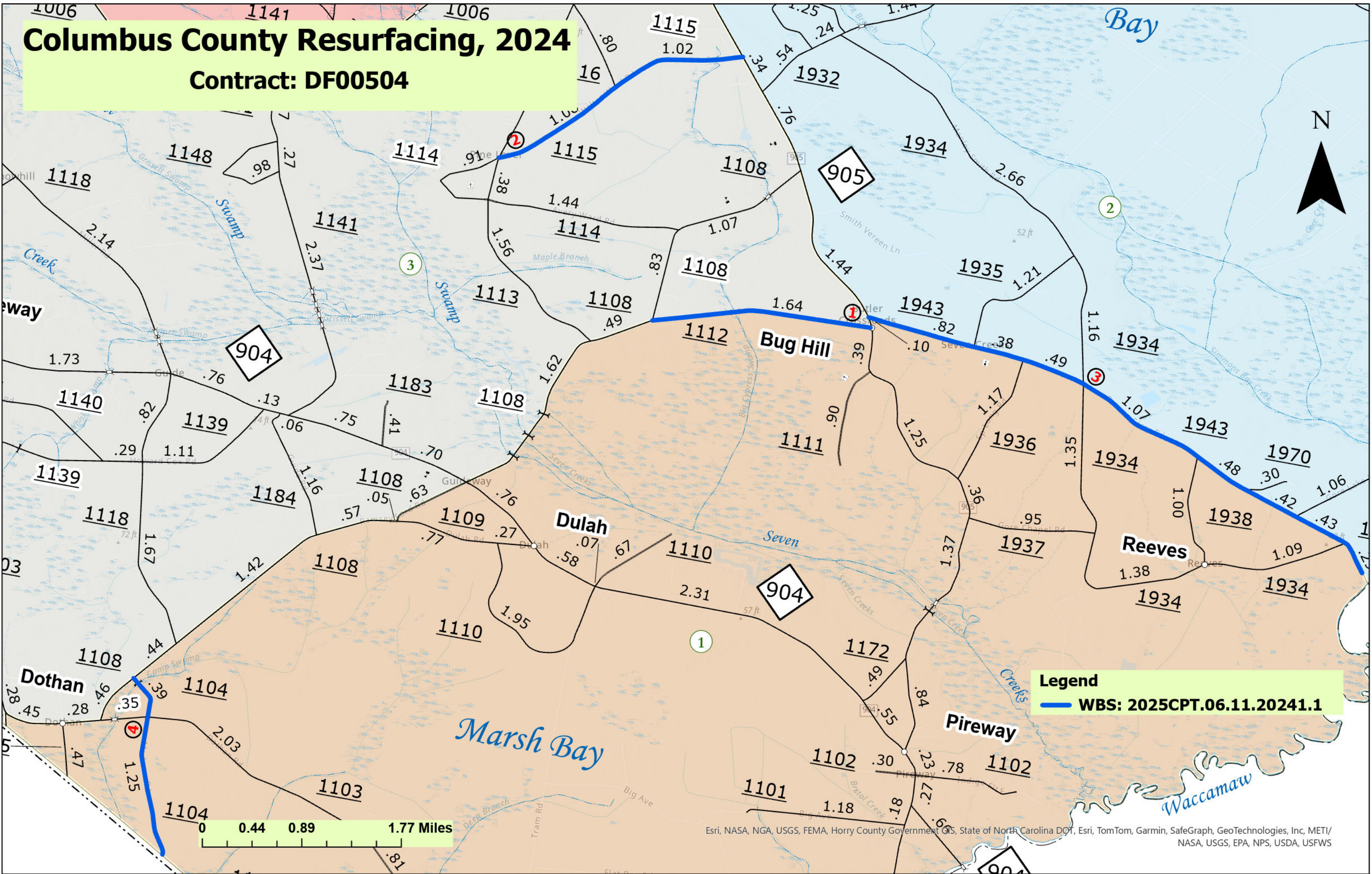
**COUNTY: COLUMBUS**

**LENGTH OF PROJECT: 9.74 MILES**

**TYPE OF WORK: WIDENING, RESURFACING, MILLING & PAVEMENT MARKINGS**

# Columbus County Resurfacing, 2024

Contract: DF00504

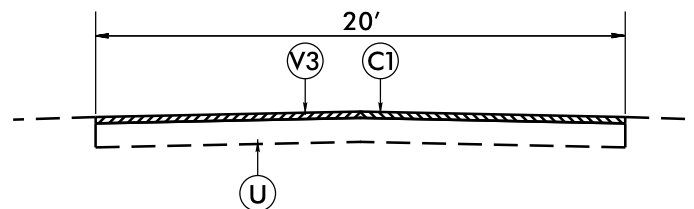


**Legend**  
— WBS: 2025CPT.06.11.20241.1

0 0.44 0.89 1.77 Miles

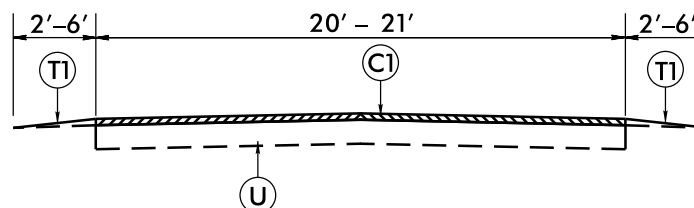
## PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	0" - 1½" MILLING
V2	¾" MILLING
V3	1½" MILLING
V4	2½" MILLING



**TYPICAL SECTION NO. 1**

-PLUS 2' INSIDE CURVE WIDENING  
(SEE DETAIL)

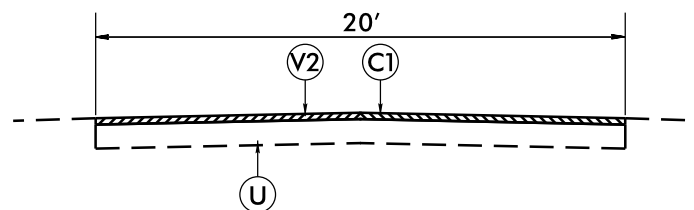


**TYPICAL SECTION NO. 2**

-PLUS 2' INSIDE CURVE WIDENING  
(SEE DETAIL)

-PLUS 2.5" MILL AND FILL  
WITH I19.0C (SEE DETAIL 1)

-PLUS S9.5B LEVELING  
COURSE AS DIRECTED  
BY ENGINEER



**TYPICAL SECTION NO. 3**

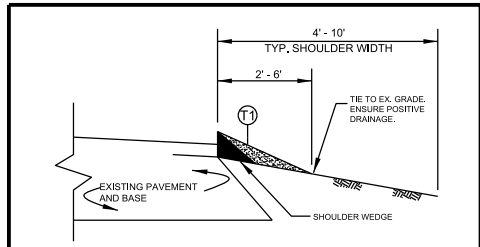
-PLUS 2' INSIDE CURVE WIDENING  
(SEE DETAIL)

**MILL & FILL PAVEMENT REPAIR DETAIL 1**

NOTES:

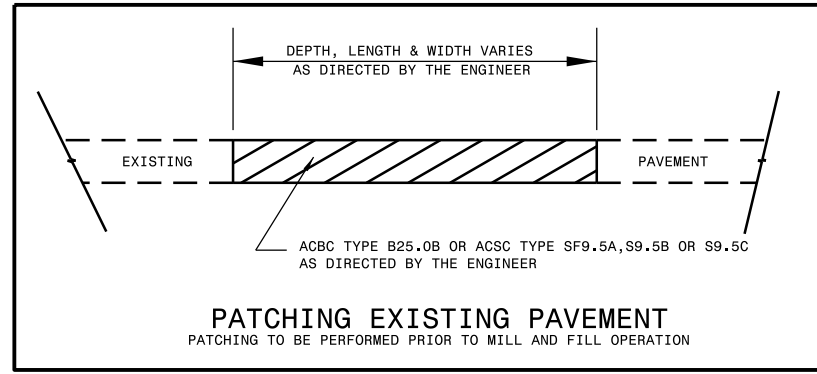
1. DISTRESSED AREAS TO BE REPAIRED BY MILL & FILL SHALL BE DESIGNATED BY THE ENGINEER.
2. FILL MILLED AREAS WITH ASPHALT INTERMEDIATE COURSE BACK FLUSH WITH THE EXISTING ASPHALT LEFT IN PLACE, PRIOR TO PLACEMENT OF PROPOSED ASPHALT SURFACE COURSE.

6/2/99  
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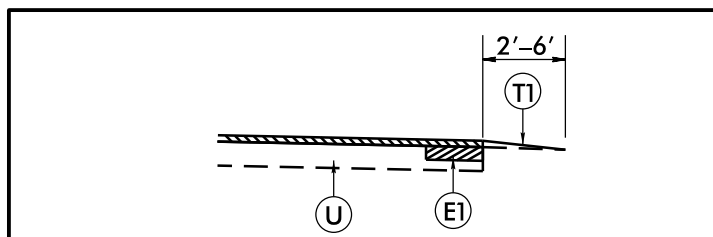


**SHOULDER RECONSTRUCTION**

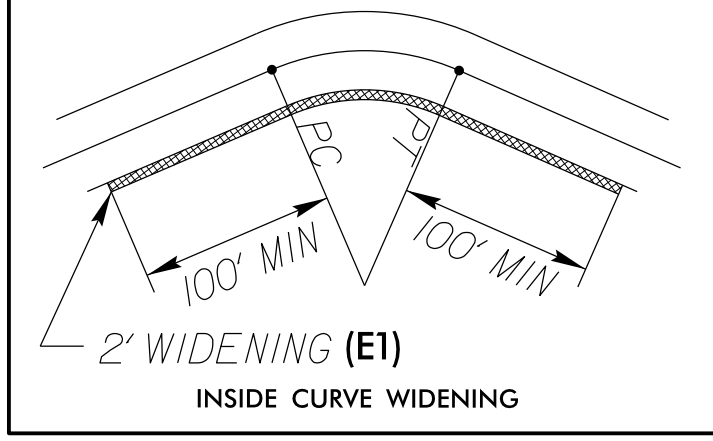
- NOTES:**
1. SHOULDER SHALL BE RECONSTRUCTED AS SHOWN IN STD. DWG. NO. 560.01 & 560.02, WITH A MINIMUM SLOPE OF 1" PER FOOT TO ENSURE POSITIVE DRAINAGE AWAY FROM ROADWAY.
  2. AGGREGATE SHOULDER BORROW (ASB) MATERIAL SHALL BE PLACED USING A WIDENING MACHINE OR SIMILAR DEVICE.
  3. A VEGETATIVE BUFFER SHALL BE MAINTAINED BETWEEN THE DISTURBED AREA ALONG THE EDGE OF PAVEMENT AND THE DITCH SHOULDER POINT TO MINIMIZE EROSION, PULLING DITCHES OR CUTTING SHOULDERS TO GENERATE BORROW MATERIAL WILL NOT BE ALLOWED.
  4. REQUIRED BORROW MATERIAL MAY BE OBTAINED BY THE CONTRACTOR FROM WIDENING OPERATIONS WITHIN THE PROJECT LIMITS, FROM NCDOT APPROVED BORROW PITS OR FROM NCDOT STOCKPILES. ANY EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR IN AN APPROVED DISPOSAL SITE.



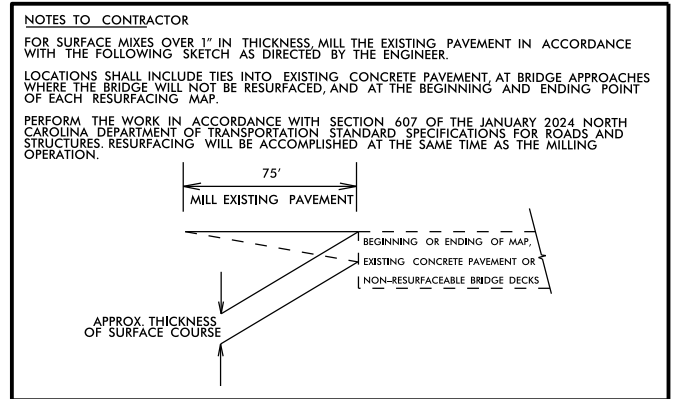
**PATCHING EXISTING PAVEMENT**  
PATCHING TO BE PERFORMED PRIOR TO MILL AND FILL OPERATION



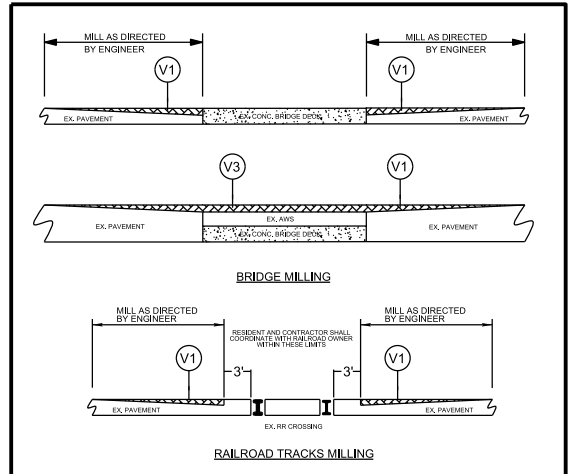
**SHOULDER RECONSTRUCTION WITH ASB AT ALL AREAS WITH INSIDE SHOULDER WIDENING AS SHOWN**



**INSIDE CURVE WIDENING**



**MILLING AT PAVEMENT TIE-INS DETAIL**

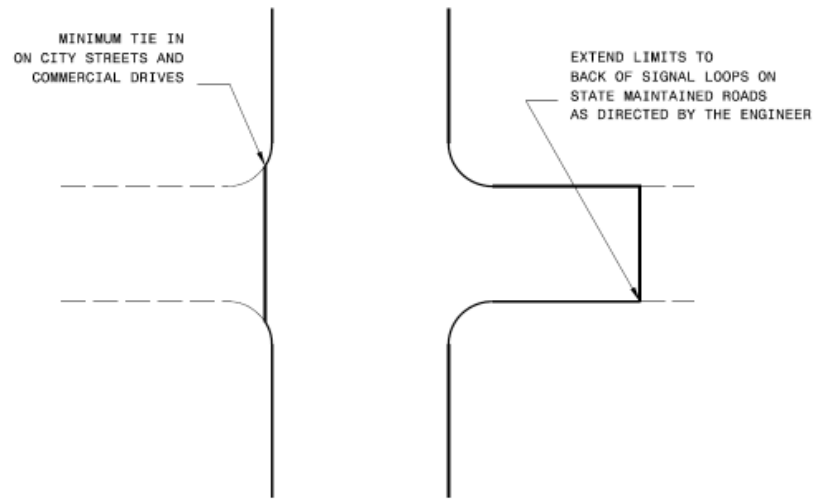


**MILLING APPROACHES**

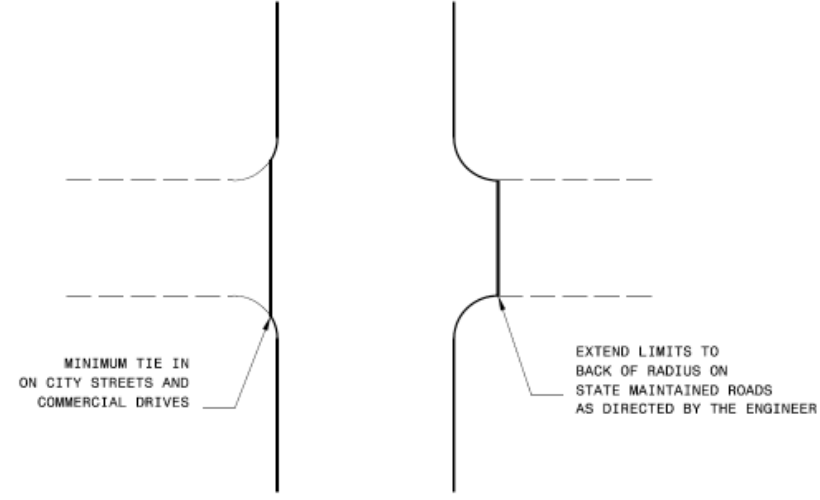
- NOTE:**
- MILLING SHALL BE PERFORMED AT RR CROSSINGS, BRIDGE DECKS AND BRIDGE APPROACHES AS DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH THIS DETAIL.
  - FOR RR CROSSINGS, RAILROAD OWNER MUST AUTHORIZE ACCESS TO RIGHT OF WAY PRIOR TO ENTRY.

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 3/2025/Resurfacing/DF00504\_2025\CPT\_06.11.2024\11\_Spring\_2025\Columbus\Plans\Map2.dgn

PROJECT REFERENCE NO.	SHEET NO.
DF00504	



TYPICAL DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

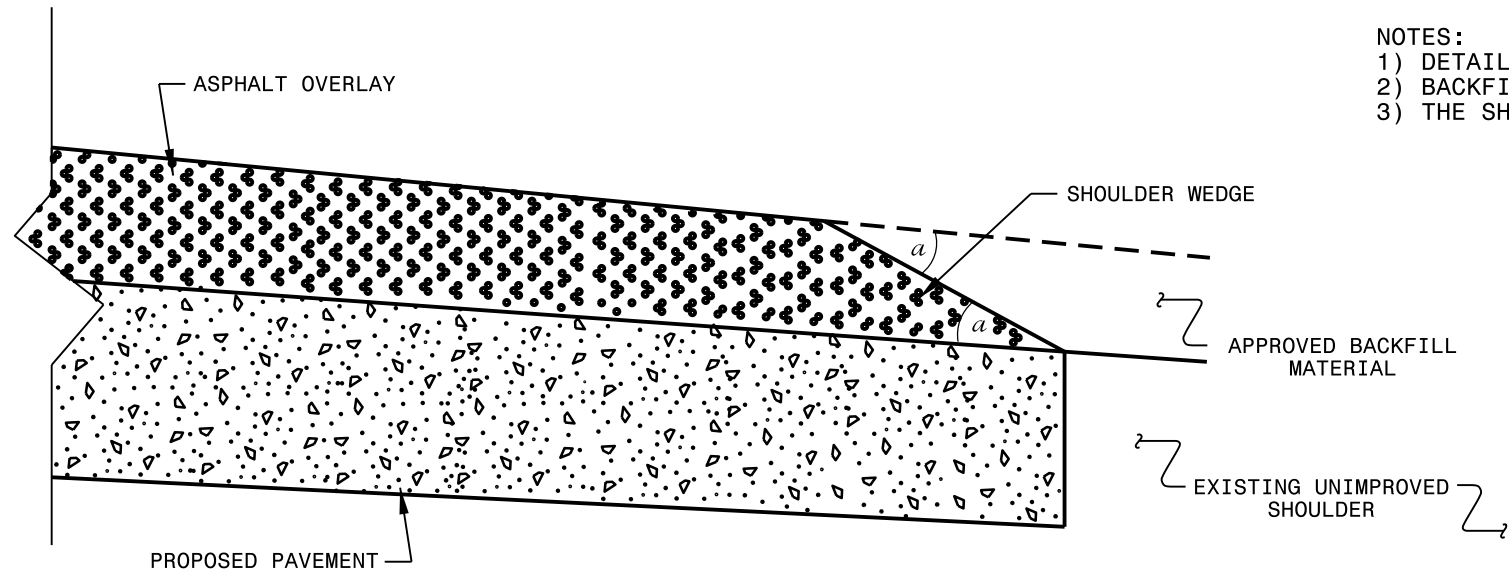


TYPICAL DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

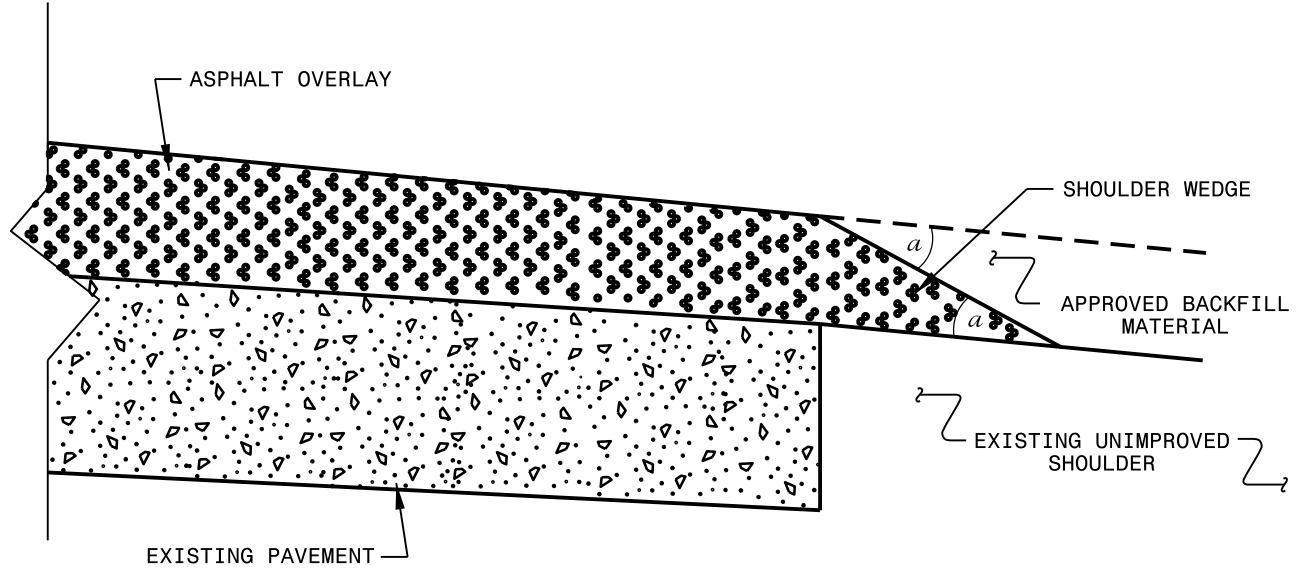
ADDITIONAL INTERSECTIONS (NON-TYPICAL)				
Extend paving limits to back of radius or loop on the following intersections				
Map #	Street Name	Comments	Total	Unit
2	SR 1116	61 FT FROM EP of L-line (PAVE ONLY)	286	SY
3	SR 1936	73 FT from EP of L-line (PAVE ONLY)	354	SY
3	SR 1934 RT	51 FT from EP of L-line (PAVE ONLY)	276	SY
3	SR 1934 LT	95 FT from EP of L-line (PAVE ONLY)	540	SY
3	SR 1938	73 FT from EP of L-line (PAVE ONLY)	346	SY
3	SR 1970	42 FT from EP of L-line (PAVE ONLY)	142	SY
3	SR 1939	102 FT from EP of L-line (PAVE ONLY)	495	SY
3	SR 1935	63 FT from EP of L-line (PAVE ONLY)	200	SY
3	SR 1934	50 FT from EP of L-line (PAVE ONLY)	256	SY

NOTE: Quantities are for estimate purpose only. ACTUAL FIELD QUANTITY MAY VARY

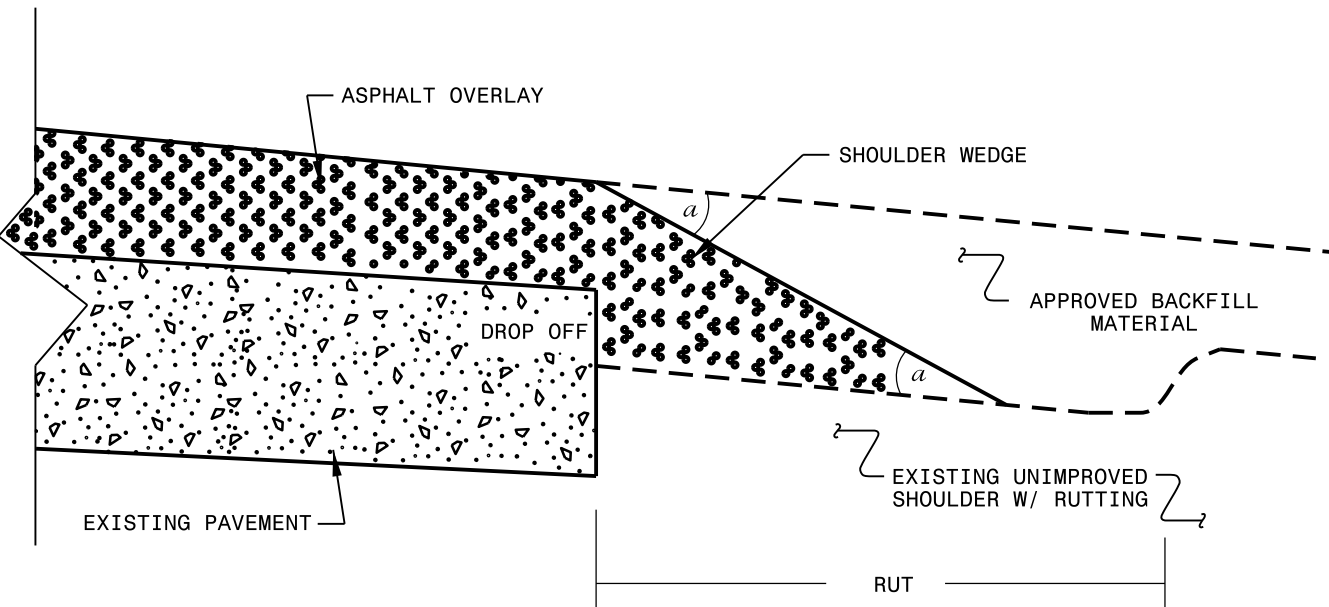
- NOTES:  
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.  
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.  
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**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	

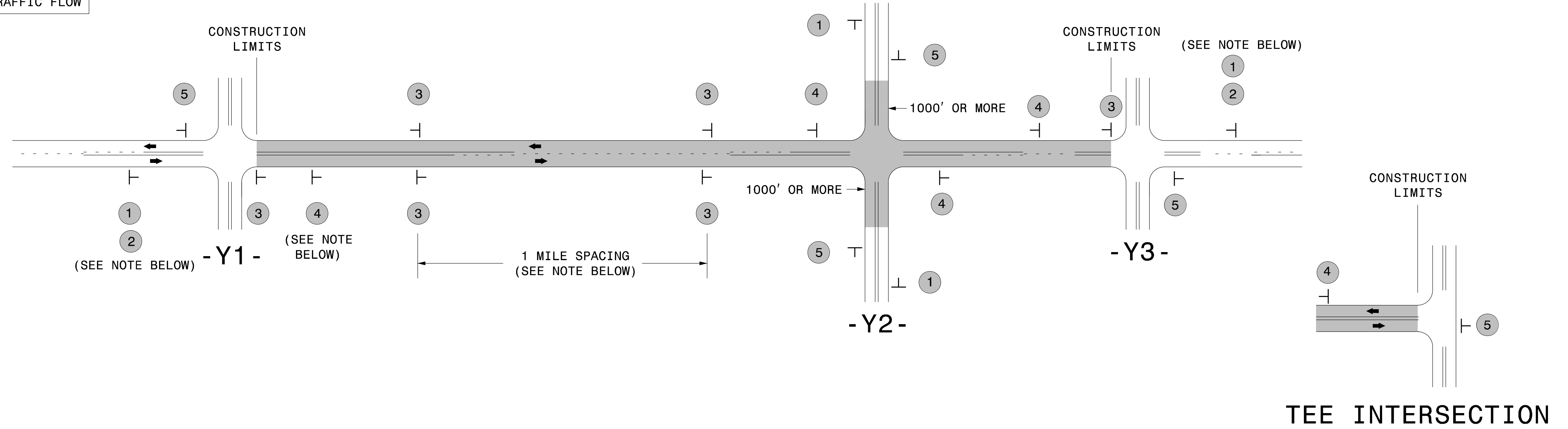
SYSTEMS DESIGN  
 USER NAME

# SIGNING FOR RESURFACING PROJECTS

**LEGEND**

┃ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

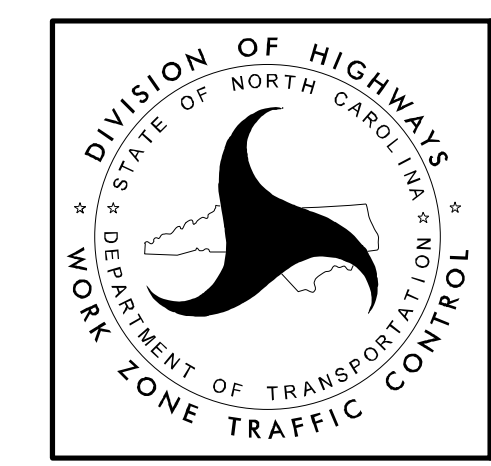
## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		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>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">               W20-1 48" X 48"              PLACED 500' IN ADVANCE OF FLAGGER.         </div> <div style="text-align: center;">               W20-7 A 48" X 48"              PLACED 250' IN ADVANCE OF FLAGGER.         </div> </div>
	2		#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		- 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		- 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		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.

<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'

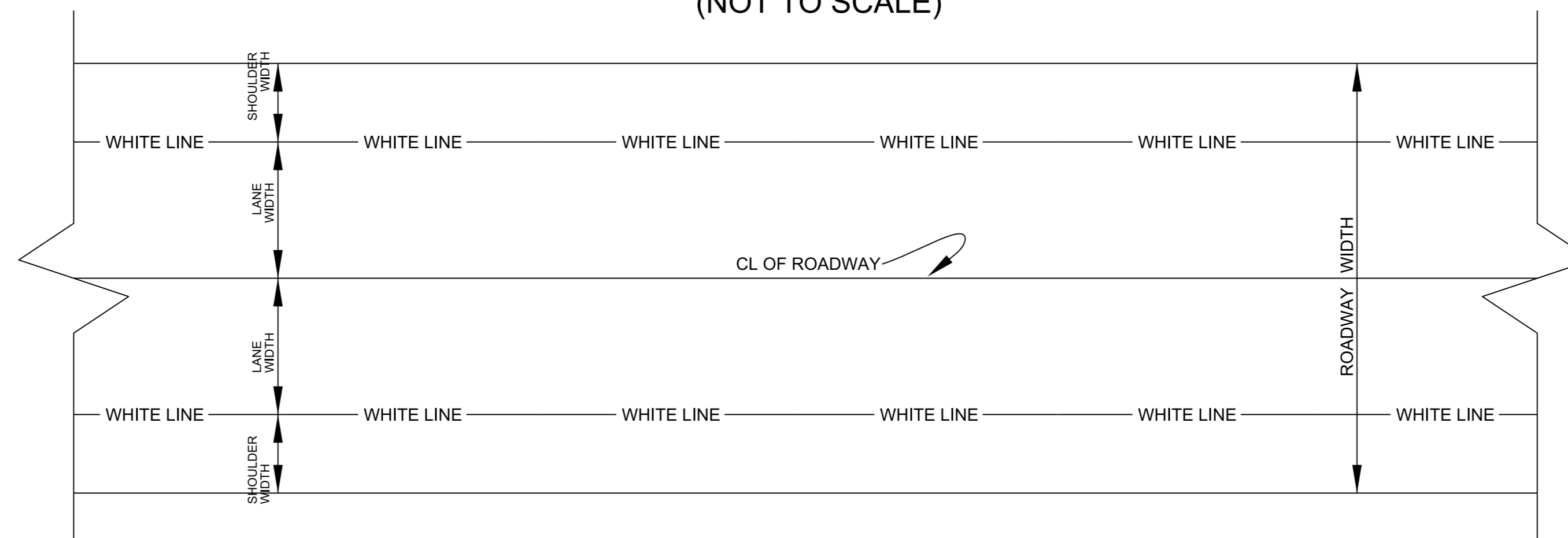
\* May vary due to pavement width

<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)







PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.06.11.20241.1		

## 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		4900000000-N	
								MI	FT				WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	YELLOW & YELLOW MARKERS	
								SF	LS				LF	LF	EA			
2025CPT.06.11.20241.1	Columbus	1	SR-1112 / BIG CYPRESS RD	FROM SR 1108 TO NC 905	1	2		1.63	20		0	1.63	128	0.20	5,336	17,213	110	
<b>TOTAL FOR MAP NO. 1</b>								<b>1.63</b>					<b>128</b>	<b>0.20</b>	<b>5,336</b>	<b>17,213</b>	<b>110</b>	
2025CPT.06.11.20241.1	Columbus	2	SR-1115 / WALTER WARD RD	FROM SR 1113 TO NC 905	2	2		2.1	21		0	2.1	176	0.23	13,984	22,321	142	
<b>TOTAL FOR MAP NO. 2</b>								<b>2.1</b>					<b>176</b>	<b>0.23</b>	<b>13,984</b>	<b>22,321</b>	<b>142</b>	
2025CPT.06.11.20241.1	Columbus	3	SR-1943 / REAVES FERRY RD	FROM NC 905 TO DEAD END	2	2		4.38	20		0	4.38	182	0.40	27,651	47,493	306	
<b>TOTAL FOR MAP NO. 3</b>								<b>4.38</b>					<b>182</b>	<b>0.40</b>	<b>27,651</b>	<b>47,493</b>	<b>306</b>	
2025CPT.06.11.20241.1	Columbus	4	SR-1104 / MARLOWE RD	FROM SR 1108 TO SC LINE	3	2		1.63	20		0	1.63	96	0.17	10,850	17,690	115	
<b>TOTAL FOR MAP NO. 4</b>								<b>1.63</b>					<b>96</b>	<b>0.170</b>	<b>10,850</b>	<b>17,690</b>	<b>115</b>	
<b>TOTAL FOR PROJ NO. 2025CPT.06.11.20241.1</b>								<b>9.74</b>						<b>582</b>	<b>1.000</b>	<b>57,821</b>	<b>104,717</b>	<b>673</b>
															<b>162,538</b>			
<b>GRAND TOTAL</b>								<b>9.74</b>						<b>582</b>	<b>1.000</b>	<b>57,821</b>	<b>104,717</b>	<b>673</b>
															<b>162,538</b>			