

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

Letting Date: March 5, 2025

REVISED FEBRUARY 26, 2025

CONTRACT ID: DF00502

TIP NO.: HS-2406HA

FEDERAL AID NO.: HSIP-5097818

WBS ELEMENT NO.: 50978.3.19 & 2025CPT.06.13.10091.1

ROUTE NO.: NC 87

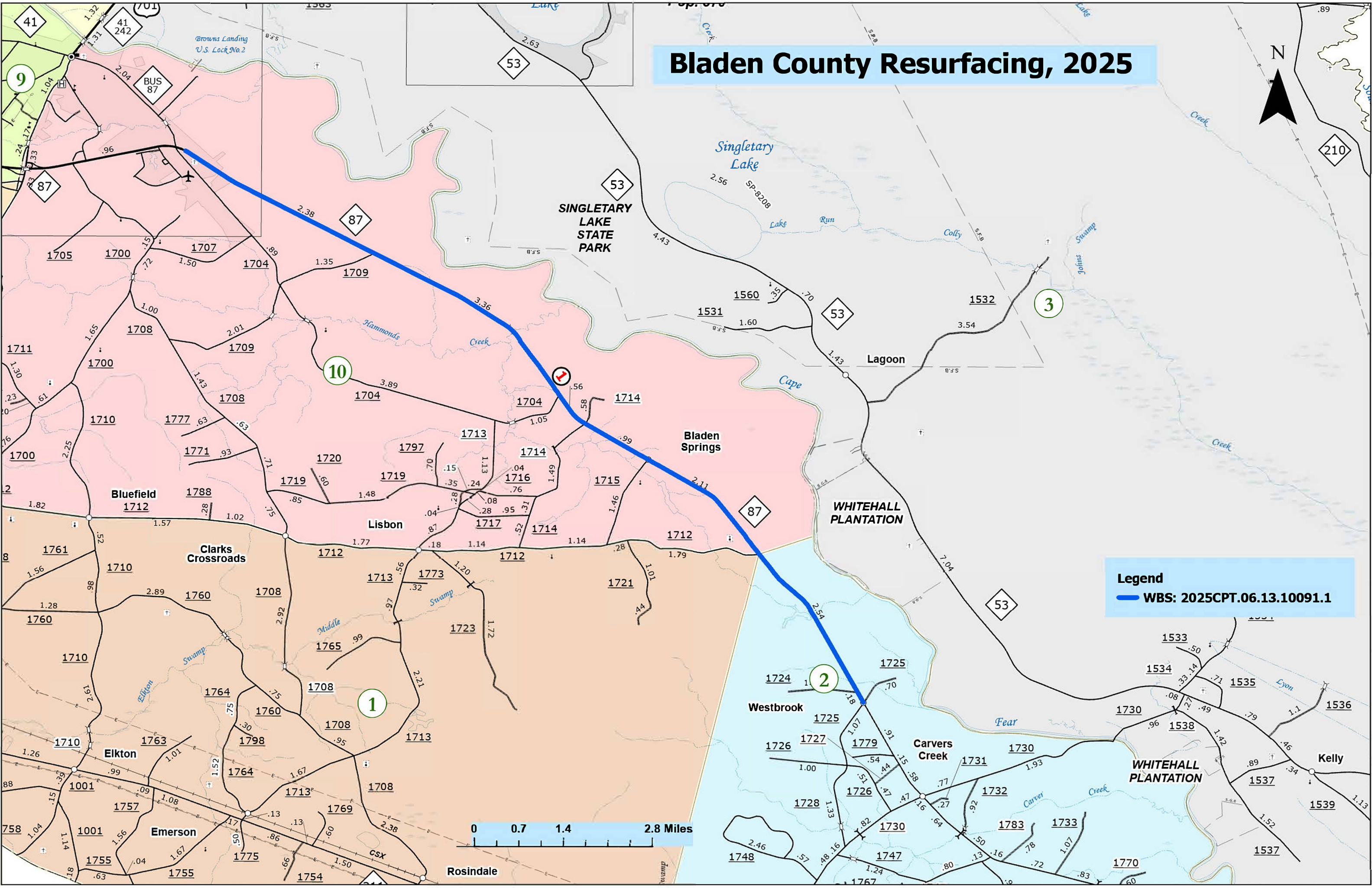
LOCATION: FROM SR 1725 to DIVIDED HIGHWAY (MP 10.43 to MP 23.00)

COUNTY: BLADEN

LENGTH OF PROJECT: 12.57 MILES

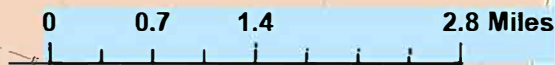
**TYPE OF WORK: RESURFACING, MILLING, SINUSOIDAL MILLED RUMBLE STRIPES & STRIPS,
& PAVEMENT MARKINGS**

Bladen County Resurfacing, 2025



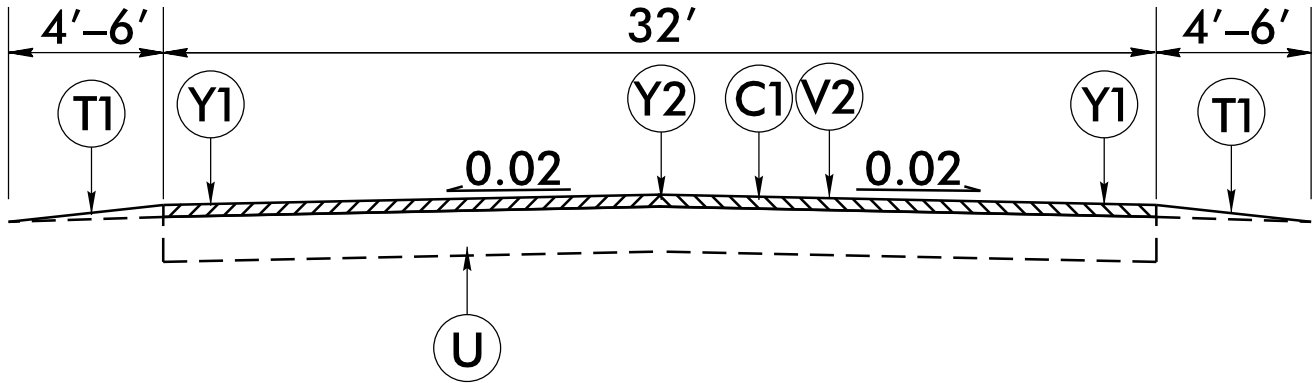
Legend

— WBS: 2025CPT.06.13.10091.1



6/2/99
12-FEB-2025 07:16
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I:\2025\Resurfacing\District 3\2025\Resurfacing\DF00502.HS-2406HA-2025CPT.06.13.10091.1.etc..NC 87.Spring 2025.Bladen\Plans\typ2.dgn

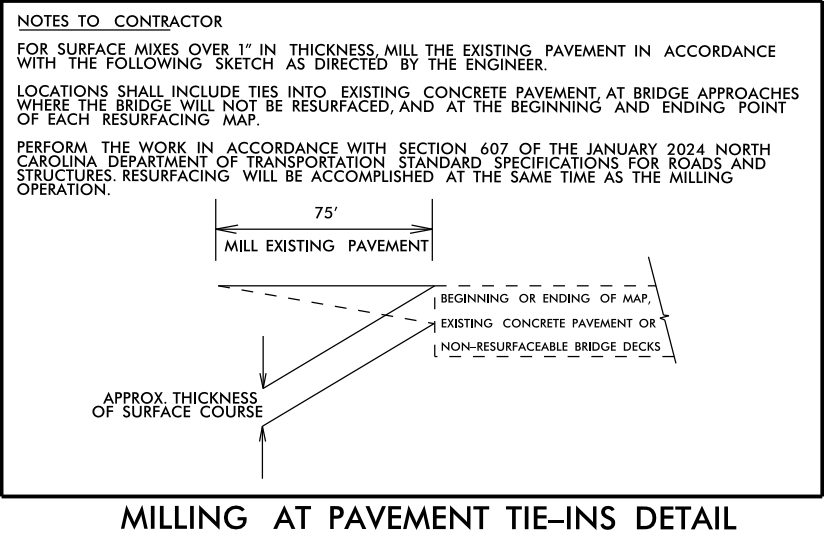
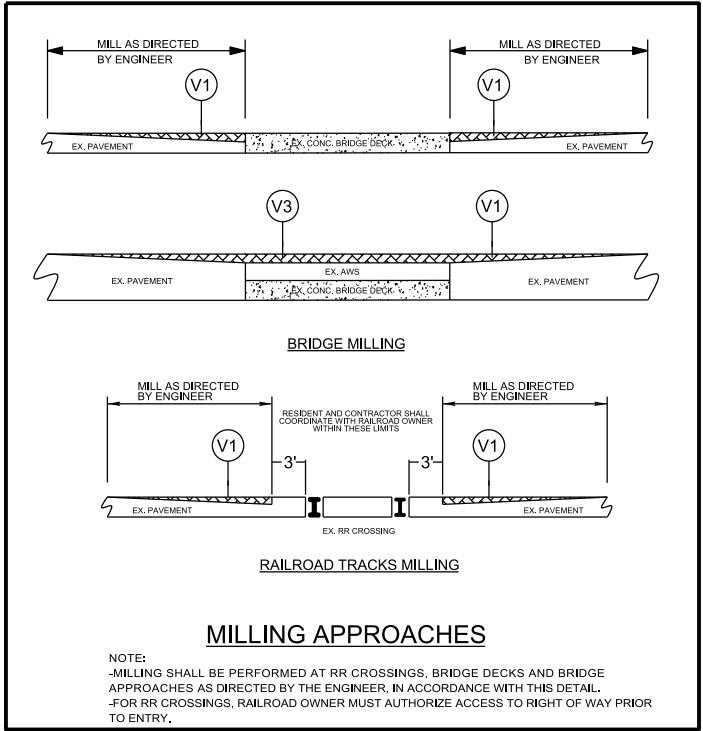
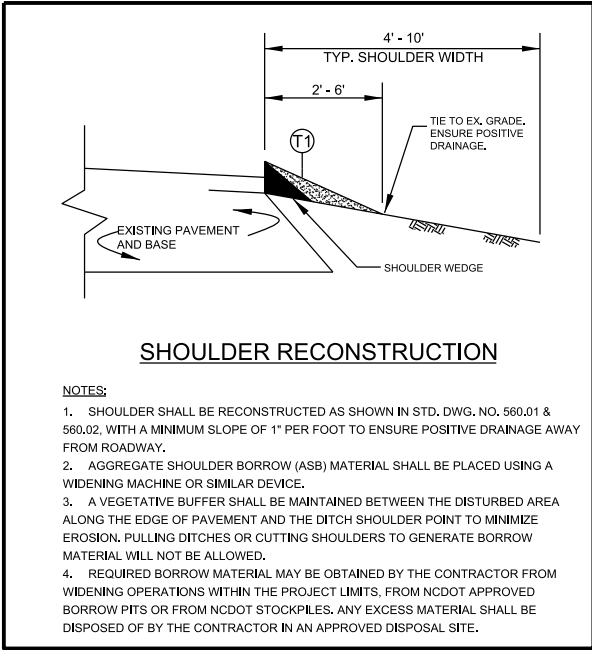
PAVEMENT SCHEDULE	
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	0" - 1½" MILLING
V2	0" - 3½" MILLING
V3	1½" MILLING
Y1	SINUSOIDAL MILLED RUMBLE STRIPS
Y2	SINUSOIDAL MILLED RUMBLE STRIPES

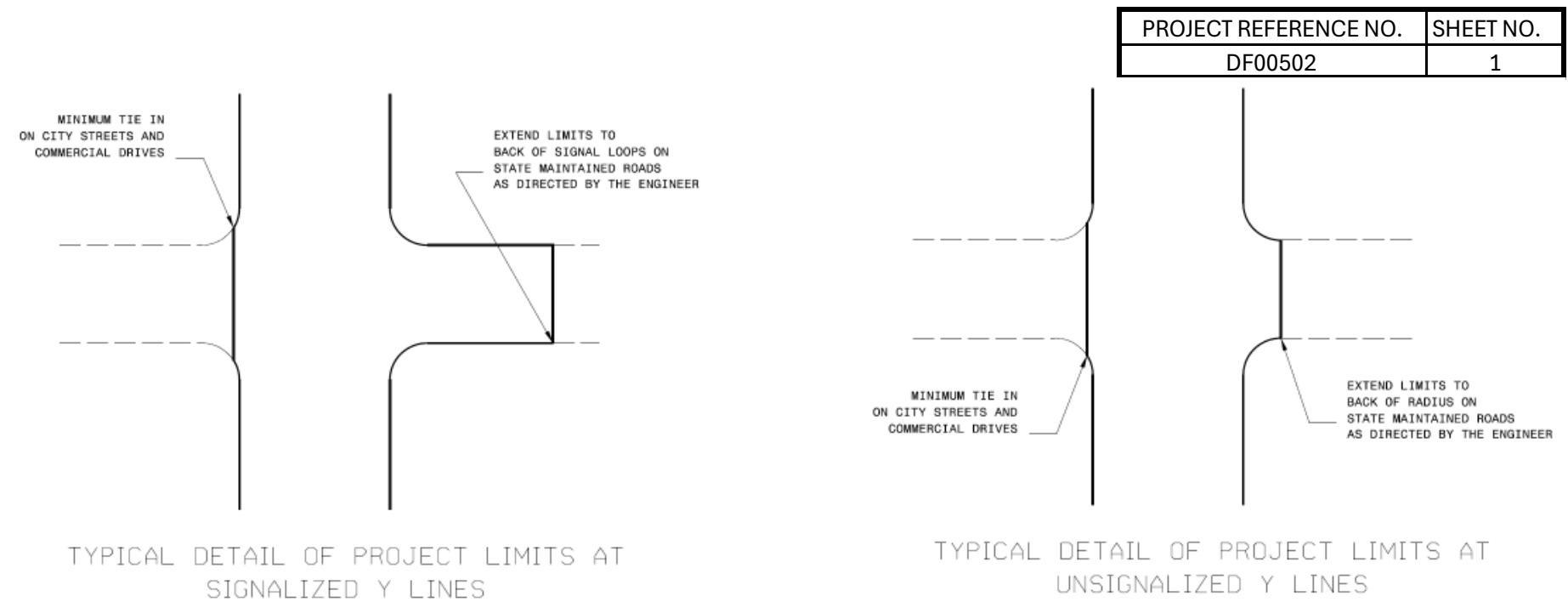


TYPICAL SECTION NO. 1

-MATERIAL TRANSFER VEHICLE SHALL BE USED

-USE LEVELING COURSE (S9.5C) IN PAVED SHOULDER AS DIRECTED BY ENGINEER

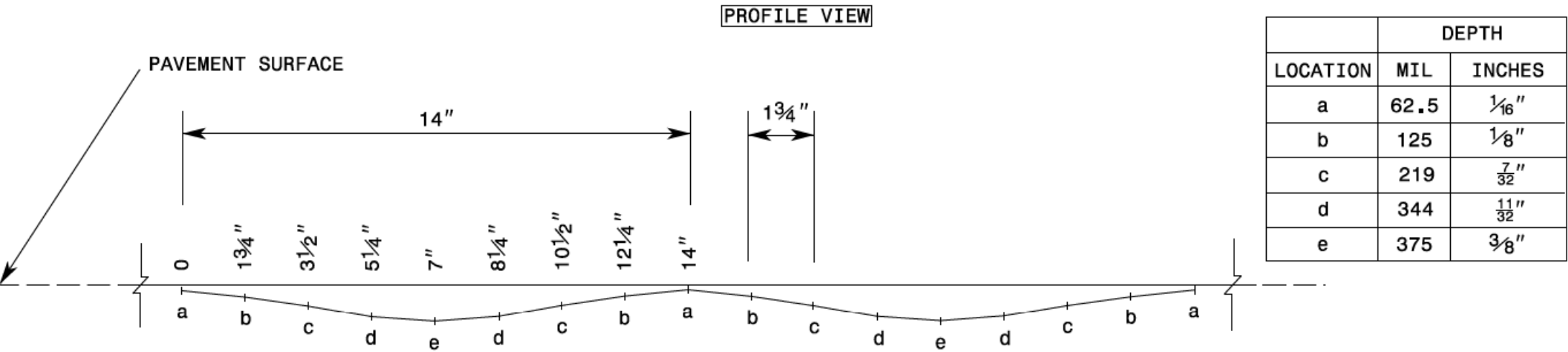
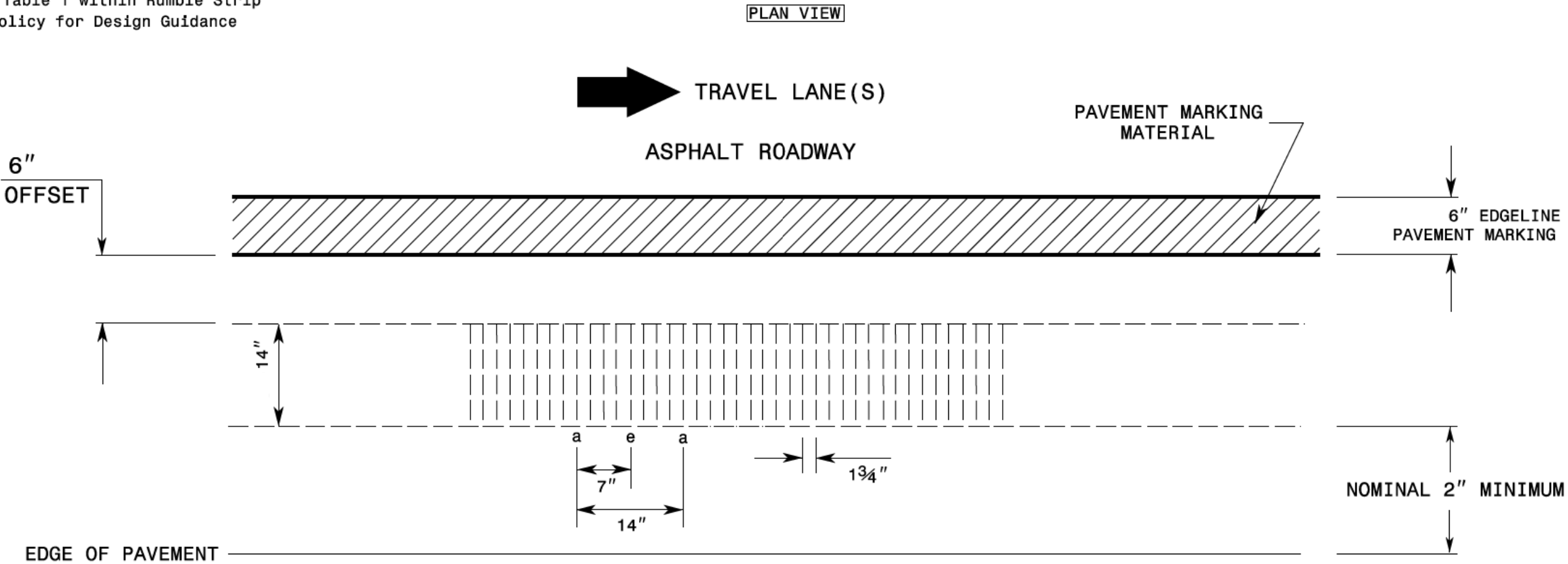




ADDITIONAL INTERSECTIONS (NON-TYPICAL)				
Extend paving limits to back of radius or loop on the following intersections				
Map #	Street Name	Comments	Total	Unit
1	SR 1709	126 FT FROM EP of L-line (PAVE/MILL)	732	SY
1	SR 1704	130 FT from EP of L-line (PAVE/MILL)	825	SY
1	SR 1714 AP	68 FT from EP of L-line (PAVE/MILL)	354	SY
1	SR 1714 MUNROE	30 FT from EP of L-line (PAVE/MILL)	136	SY
1	SR 1715	110 FT from EP of L-line (PAVE/MILL)	738	SY
1	SR 1712	104 FT from EP of L-line (PAVE/MILL)	839	SY
1	SR 1724	50 FT from EP of L-line (PAVE/MILL)	330	SY
1	DEWITT STREET	5 FT FROM EP of L-Line (PAVE ONLY)	27	SY
1	WALKER STREET	23 FT from EP of L-line (PAVE ONLY)	86	SY

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

See Table 1 within Rumble Strip
Policy for Design Guidance



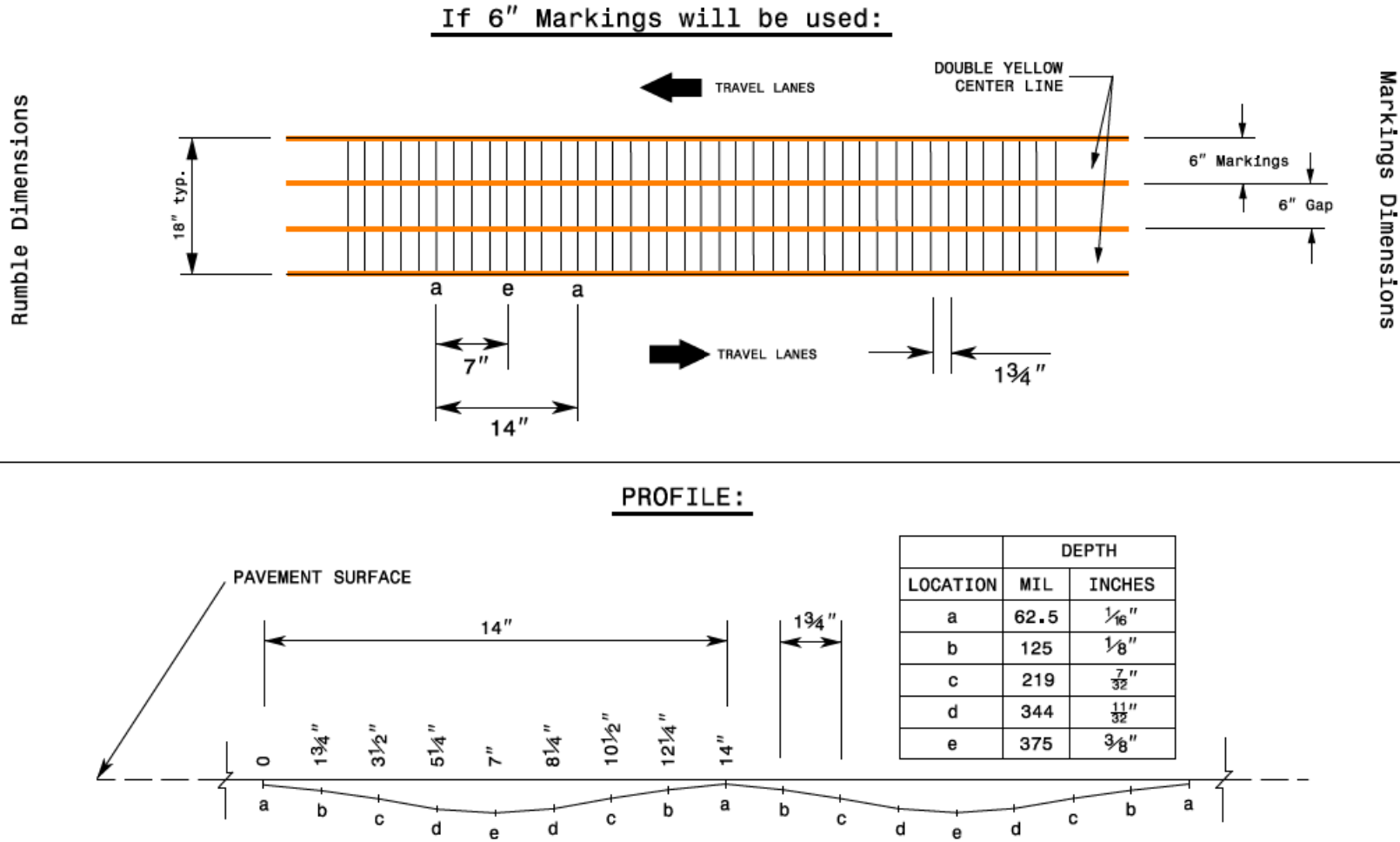
LOCATION	DEPTH	
	MIL	INCHES
a	62.5	1/16"
b	125	1/8"
c	219	7/32"
d	344	11/32"
e	375	3/8"

REFERENCE DRAWING ID: Sin.Strip

NOTES:

1) Specification in table taken from MNDOT Research Project Final Report 2016-23: *Sinusoidal Rumble Strip Design Optimization Study By Terhaar et. al, June 2016*

See Table 2 within Rumble Strip
Policy for Design Guidance



REFERENCE DRAWING ID: Sin.CL

NOTES:

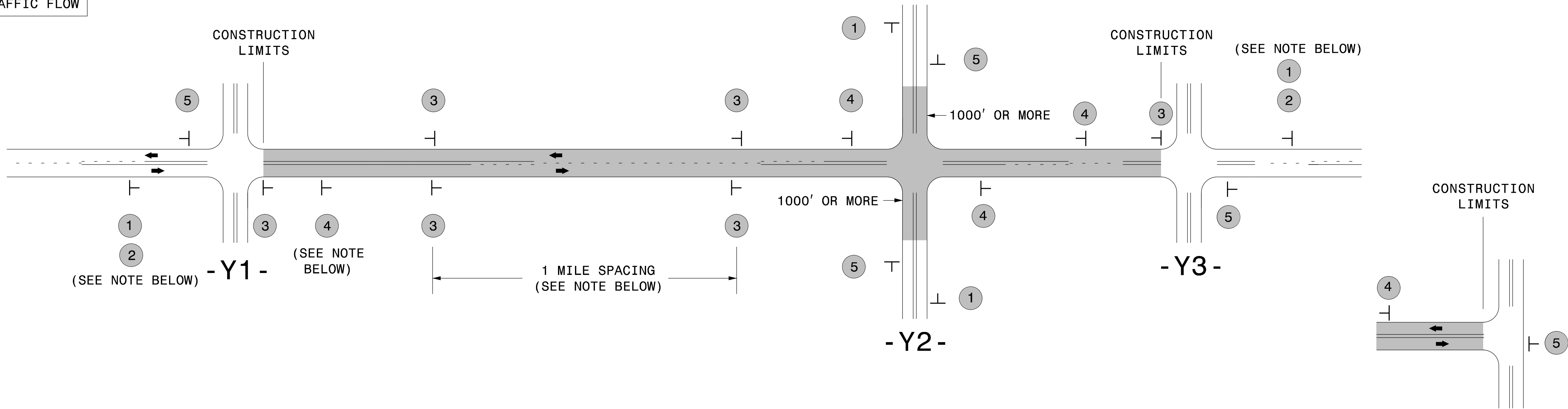
- 1) Specification in table taken from MNDOT Research Project Final Report 2016-23: *Sinusoidal Rumble Strip Design Optimization Study By: Terhaar et. al, June 2016*
- 2) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
- 3) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW



TEE INTERSECTION

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	<div>1</div> <div>2</div> <div><div>ROAD WORK AHEAD</div><div>W20-1 48" X 48"</div><div>NEXT XX MILES</div><div>W7-3aP 24" X 18"</div></div> <div>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</div> <div>#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)</div>	NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS: 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS 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.
	<div>3</div> <div><div>LOW/SOFT SHOULDER</div><div>SP 13107 48" X 48"</div></div> <div>- 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.</div>	
	<div>4</div> <div><div>ROAD UNDER CONST</div><div>SP 13106 48" X 48"</div></div> <div>- 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.</div>	
	<div>5</div> <div><div>END ROAD WORK</div><div>G20-2 A 48" X 24"</div></div> <div>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.</div>	
	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.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
WORK ZONE TRAFFIC CONTROL

ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2-LANE ROADWAY
RESURFACING

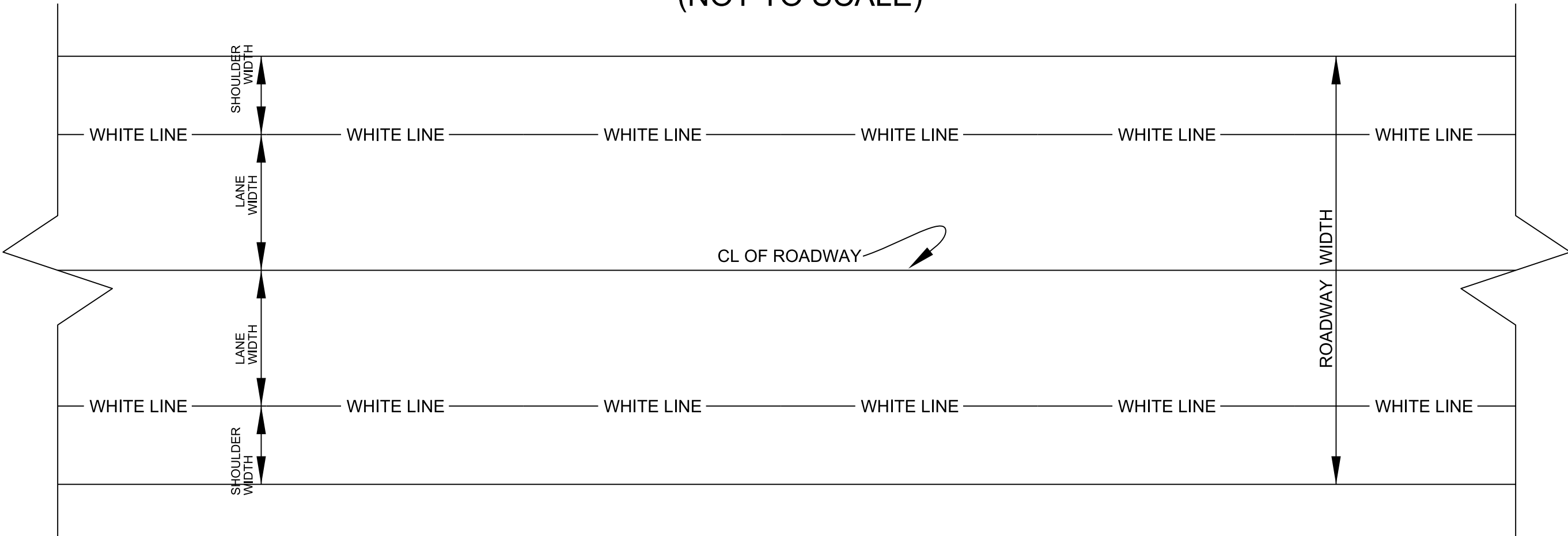
GUIDELINES FOR LANE WIDTHS ON RESURFACING PROJECTS

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.
CPT.06.13.10091.1, 50978.3.19		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	1220000000-E	1231000000-E	1245000000-E	1260000000-E	1308000000-E	1330000000-E	1523000000-E	1524000000-E	1575000000-E	1880000000-E	1881000000-E		2738000000-E	6084000000-E
												INCIDENTAL STONE BASE	SHOULDER BORROW	SHOULDER RECONSTRUCTI ON	AGGREGATE SHOULDER BORROW	0" TO 3.5" MILLING	INCIDENTAL MILLING	SURFACE COURSE, \$9.5C	LEVELING COURSE, \$9.5C	ASPHALT BINDER FOR PLANT MIX	PAVE EXISTING ASPHALT DRIVEWAYS	SINUSOID AL RUMBLE STRIPES	SINUSOIDA L RUMBLE STRIPS	6" CONCRETE DRIVEWAY	SEED & MULCHING
												TONS	CY	SMI	TON	SY	SY	TONS	TONS	TONS	TON	LF	LF	SY	AC
2025CPT.06.13.10091.1	Bladen	1	NC-87	FROM SR 1725 TO BEGIN DIVIDED 4 LANE	1	2	2WU	12.57	32	10.43	23	40	24	25.14	6,285	237,202	3,954	22,253	950	1,371	50			313	0.10
TOTAL FOR PROJ NO. 2025CPT.06.13.10091.1								12.57				40	24	25.14	6,285	237,202	3,954	22,253	950	1,371	50			313	0.10
50978.3.19	Bladen	1	NC-87	FROM SR 1725 TO BEGIN DIVIDED 4 LANE	1	2		12.57	32	10.43	23											66,370	132,739		
TOTAL FOR PROJ NO. 50978.3.19								12.57														66,370	132,739		
GRAND TOTAL								25.14				40	24	25.14	6,285	237,202	3,954	22,253	950	1,371	50	66,370	132,739	313	0.10

	PROJECT NO.	SHEET NO.	TOTAL NO.
2025	CPT.06.13.10091.1, 50978.3.19		

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	4688000000-E		4700000000-E	4709000000-E	4720000000-E	4725000000-E		4810000000-E		4825000000-E	4835000000-E	4840000000-N	4845000000-N		4900000000-N	
								MI	FT			WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	6" X 90 M YELLOW THERMO	6" X 90 M WHITE THERMO	12" X 90 M YELLOW THERMO	24" X 90 M WHITE THERMO	THERMO MSG SCHOOL 90 M	THERMO RT ARROW 90 M	THERMO LT ARROW 90 M	4" YELLOW PAINT	4" WHITE PAINT	12" YELLOW PAINT	PAINT PAVEMENT MARKING LINES (24")	PAINT MSG SCHOOL	PAINT RT ARROW	PAINT LT ARROW	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS
												SF	LS	LF	LF	LF	LF	EA	EA	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA
2025	CPT.06.13.10091.1	Bladen	1	NC-87	FROM SR 1725 TO BEGIN DIVIDED 4 LANE	1	2	2WU	12.57	32	10.43	23	598	0.90							50,340	134,359	180	128	12	3	4		
TOTAL FOR PROJ NO. 2025					CPT.06.13.10091.1				12.57			598	0.90								50,340	134,359	180	128	12	3	4		
																					184,699					7			
50978.3.19	Bladen	1	NC-87	FROM SR 1725 TO BEGIN DIVIDED 4 LANE	1	2		12.57	32	10.43	23		0.10	50,340	134,359	180	128	12	3	4	50,340							840	42
TOTAL FOR PROJ NO. 50978.3.19								12.57					0.100	50,340	134,359	180	128	12	3	4	50,340							840	42
														184,699					7		50,340							882	
GRAND TOTAL								25.14				598	1.000	50,340	134,359	180	128	12	3	4	100,680	134,359	180	128	12	3	4	840	42
														184,699					7		235,039					7		882	