

WBS NO: 2027CPT.01.05.10081, ETC.

CONTRACT: DA00686

STATE OF NORTH CAROLINA

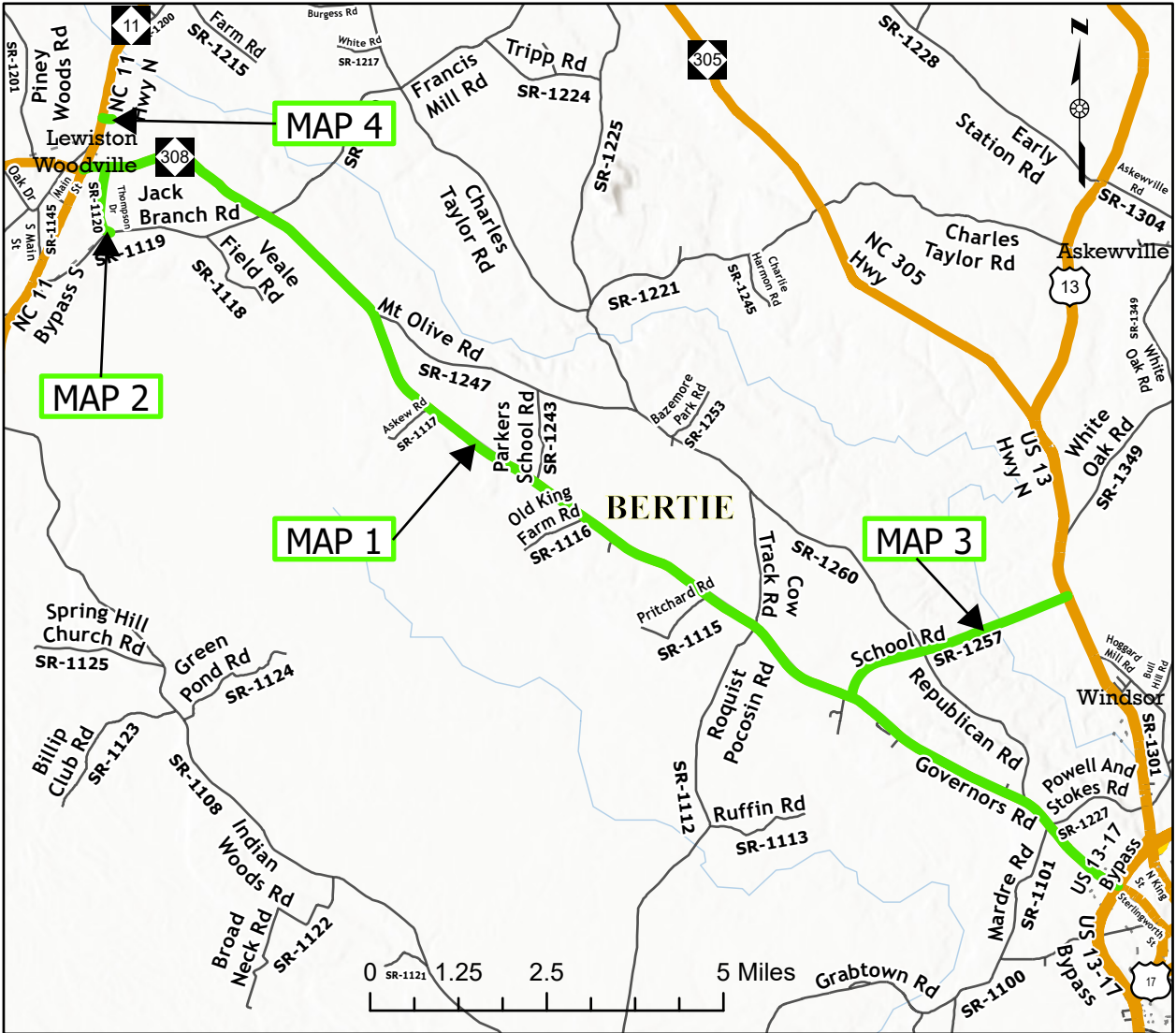
DIVISION OF HIGHWAYS

BERTIE

STATE	STATE PROJECT REFERENCE NUMBER	SHEET NO.
NC	2027CPT.01.05.10081, ETC.	1
STATE PROJECT NUMBER		DESCRIPTION
2027CPT.01.05.10081		P.E., CONST.
2027CPT.01.05.20081		P.E., CONST.
2027CPT.01.05.20082		P.E., CONST.

TYPE OF WORK: MILLING, RESURFACING, THIN-LIFT RESURFACING, & SHOULDER RECONSTRUCTION

MAP	ROUTE	FROM	TO
01	NC 308	US 17	NC 11
02	SR 1120 (Thompson Dr.)	SR 1119 (Jack Branch Rd)	NC 308
03	SR 1257 (School Rd.)	NC 308	US 13
04	SR 1254 (Saunders Rd.)	NC 11	Dead End



PROJECT LENGTH		Prepared in the Office of: DIVISION OF HIGHWAYS 113 AIRPORT DR., EDENTON, NC 27932											
<table border="1"><thead><tr><th>MAP</th><th>MILES</th></tr></thead><tbody><tr><td>01</td><td>14.99</td></tr><tr><td>02</td><td>0.81</td></tr><tr><td>03</td><td>2.844</td></tr><tr><td>04</td><td>0.11</td></tr></tbody></table>		MAP	MILES		01	14.99	02	0.81	03	2.844	04	0.11	B. N. BRASWELL, PE <i>DIV. PROJ. DEVELOPMENT ENGINEER</i> M. S. WINSLOW <i>DIVISION CONTRACT ENGINEER</i> D. J. CLODGO, PE, PMP <i>DIVISION PROJECT TEAM LEAD</i> D. H. STALLINGS <i>DIVISION DESIGN ENGINEER</i>
MAP	MILES												
01	14.99												
02	0.81												
03	2.844												
04	0.11												

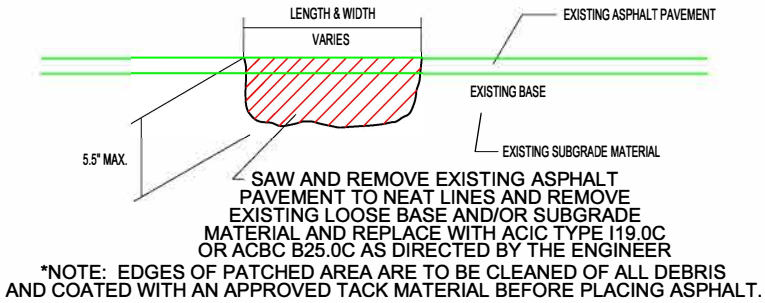
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.50" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	INCIDENTAL MILLING
V2	MILLING ASPHALT PAVEMENT, 1.5" DEPTH
U	EXISTING PAVEMENT
M1	PROP. APPROX. 18" SINUSOIDAL RUMBLE STRIPS (CENTERLINE)
M2	PROP. APPROX. 8" SINUSOIDAL RUMBLE STRIPS (EDGE LINES)

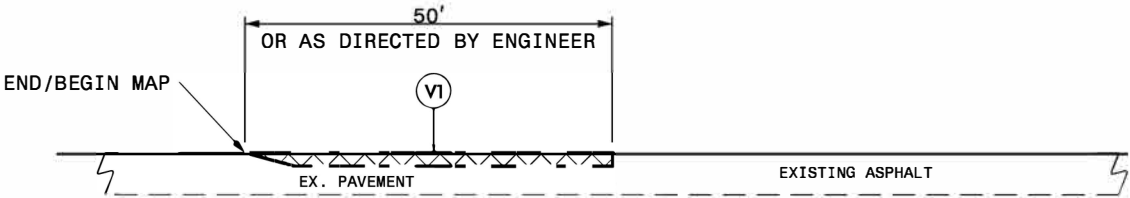
NOTES:

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.01.05.10081, ETC.	2

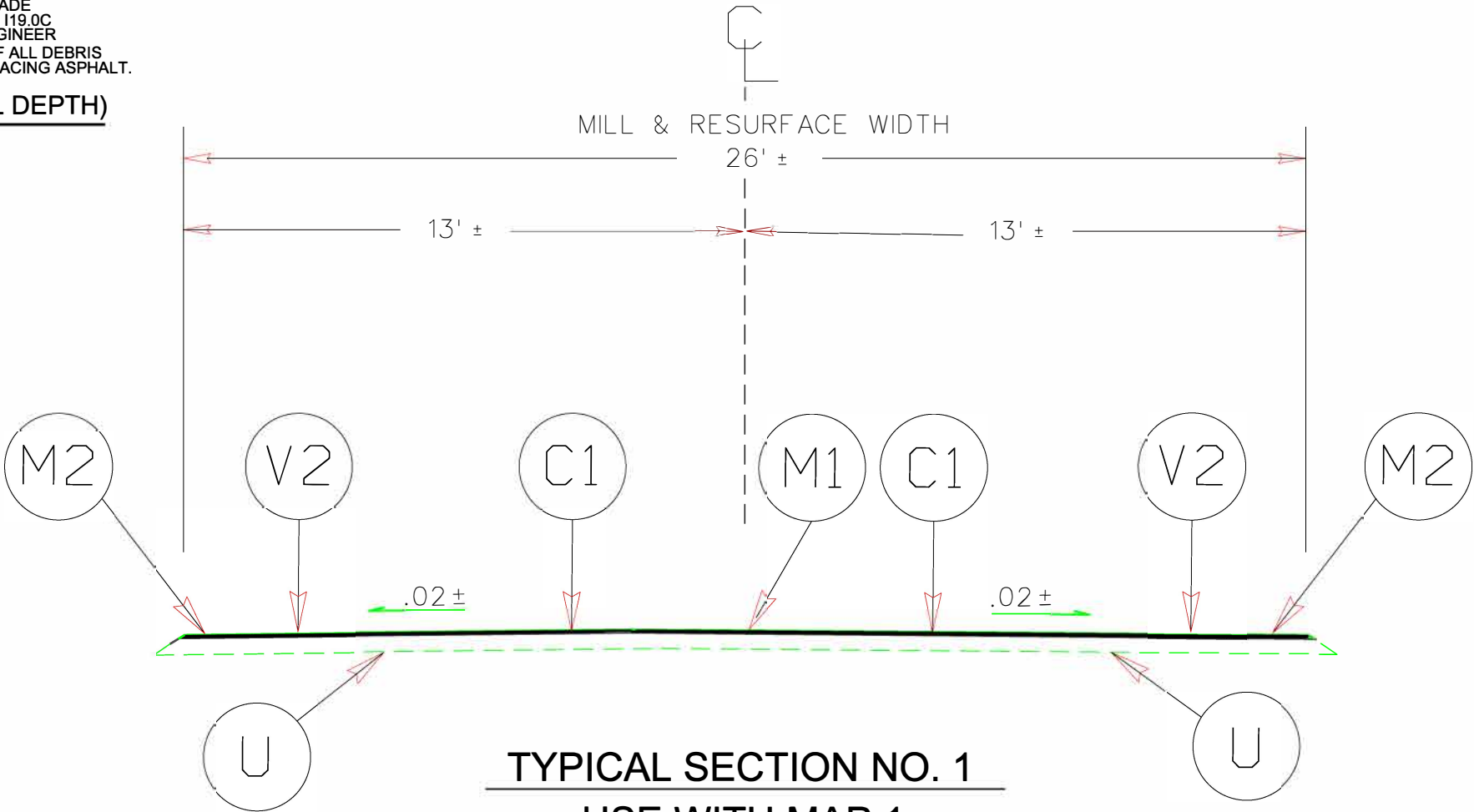
- * ALL INTERSECTING ROADS ARE TO BE RESURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.
- * EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES.
- * 1.5" OF S9.5C TO BE APPLIED THE FULL WIDTH OF THE ROADWAY
- * SHOULDER WEDGE IS TO BE USED ON ALL ROADS 22' OR WIDER, OR AS DIRECTED BY THE ENGINEER
- * INCIDENTAL MILLING IS TO BE PERFORMED ON MAP 1 AS DIRECTED BY THE ENGINEER
- * CONTRACTOR IS TO USE A MATERIAL TRANSFER VEHICLE (MTV) ON MAP 1



PATCHING EXISTING PAVEMENT (FULL DEPTH)



- NOTE:
1. INCLUDES INCIDENTAL MILLING AT THE ENDS OF MAIN LINE SECTIONS, OR AS DIRECTED BY THE ENGINEER.
 2. PAVE TO THE END OF THE MILLED SURFACE TO CREATE A SMOOTH TRANSITION.



TYPICAL SECTION NO. 1
USE WITH MAP 1

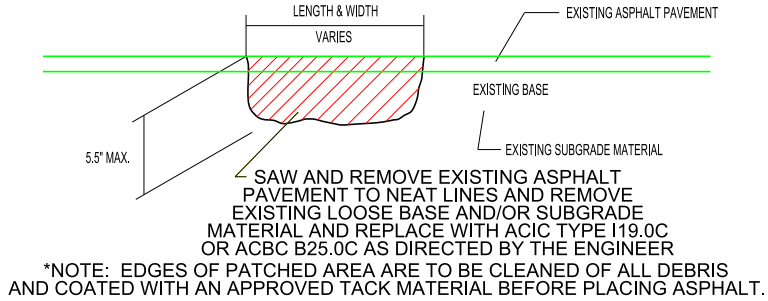
PAVEMENT SCHEDULE

C2	PROP. APPROX. 1.50" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
T	SHOULDER RECONSTRUCTION

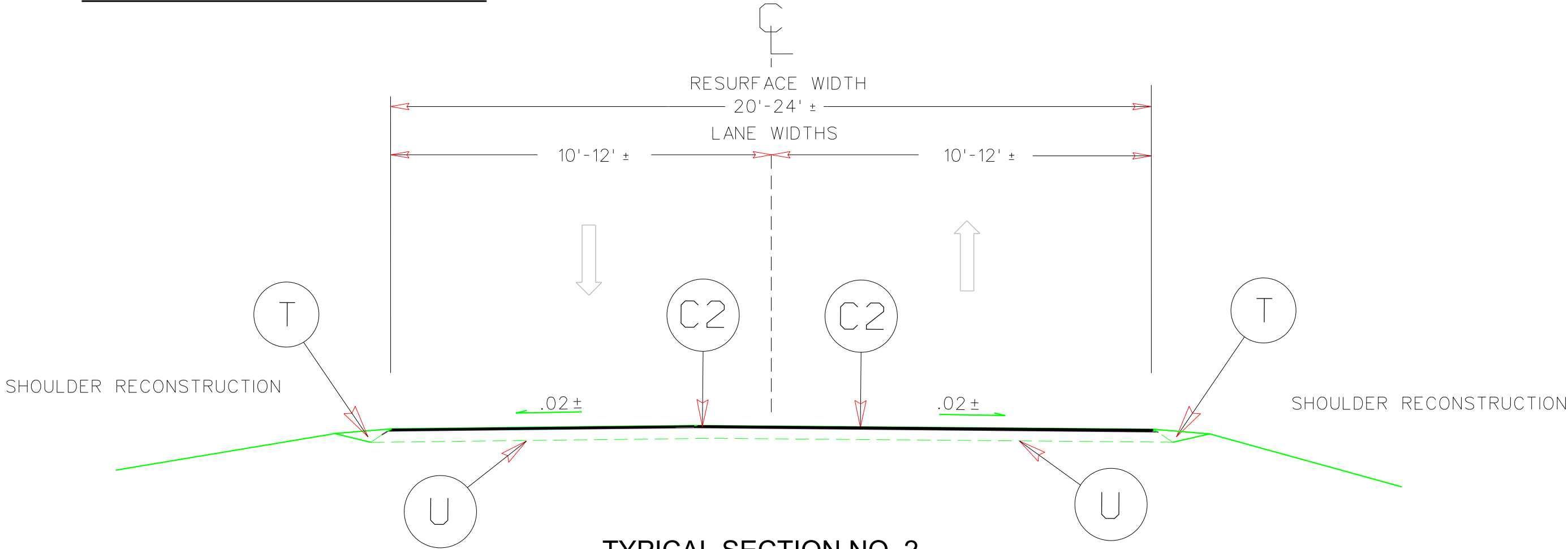
NOTES:

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.01.05.10081, ETC.	3

- * ALL INTERSECTING ROADS ARE TO BE RESURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.
- * EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES.
- * 1.5" OF S9.5B TO BE APPLIED THE FULL WIDTH OF THE ROADWAY
- * SHOULDER WEDGE SHALL BE USED ON ALL ROADS 22' OR WIDER, OR AS DIRECTED BY THE ENGINEER
- * PATCHING EXISTING PAVEMENT, FULL DEPTH IS TO BE PERFORMED ON MAPS 2 & 3 BEFORE APPLICATION OF 1.5" OF 9.5B



PATCHING EXISTING PAVEMENT (FULL DEPTH)



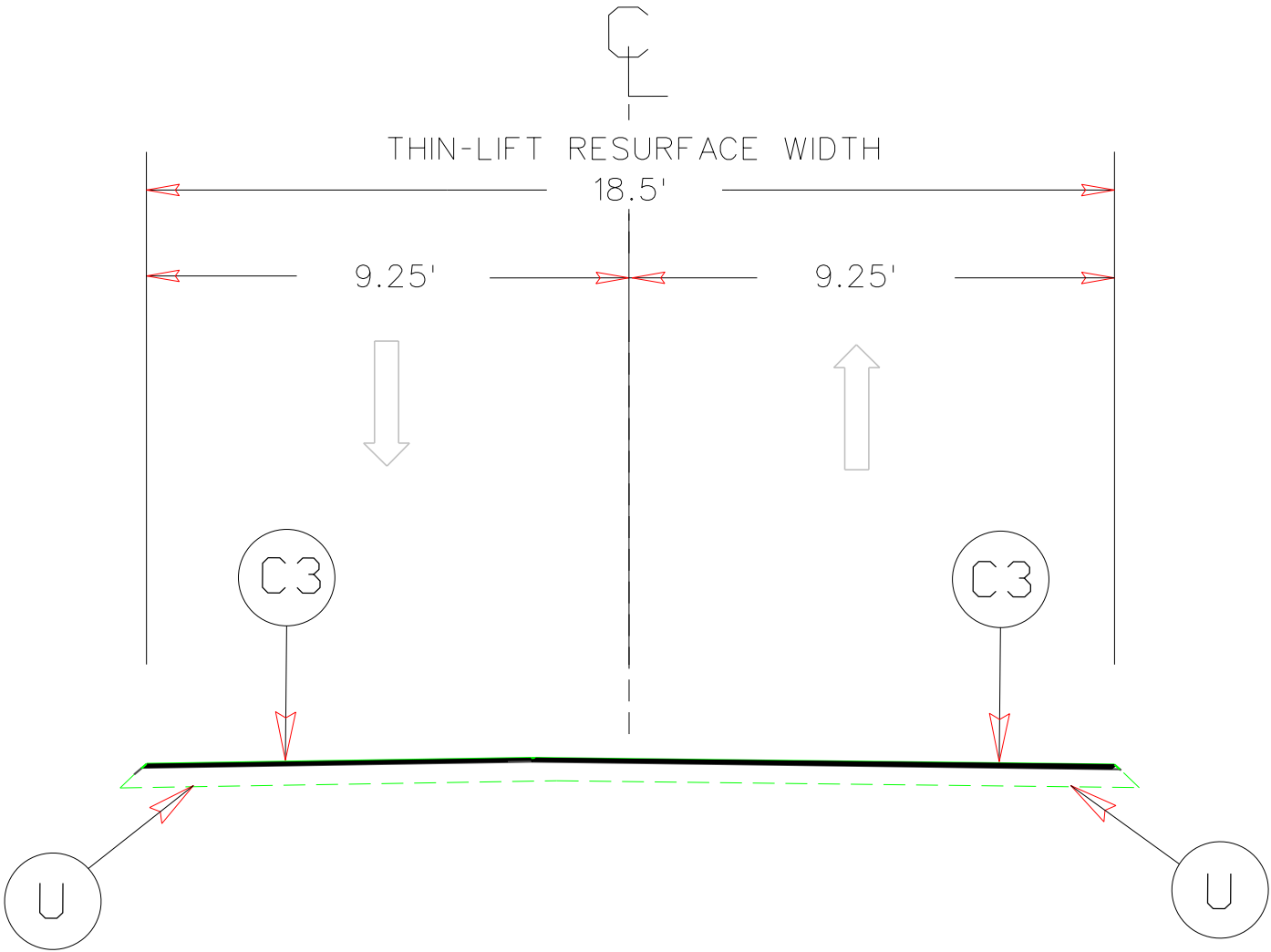
TYPICAL SECTION NO. 2
USE WITH MAPS 2 & 3

PAVEMENT SCHEDULE	
C3	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 138 LBS. PER SQ. YD.
U	EXISTING PAVEMENT

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.01.05.10081, ETC.	4

NOTES:

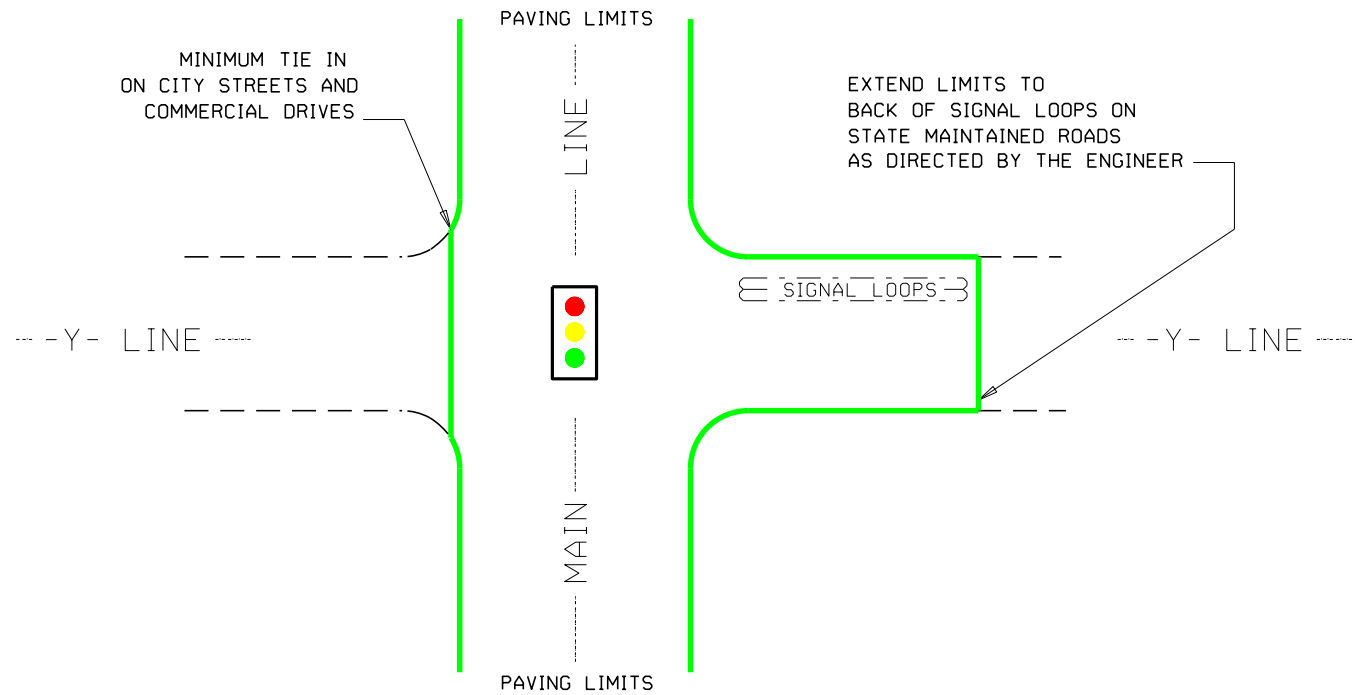
- * ALL INTERSECTING ROADS ARE TO BE RESURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.
- * EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES.
- * 1.25" OF S9.5B TO BE APPLIED THE FULL WIDTH OF THE ROADWAY



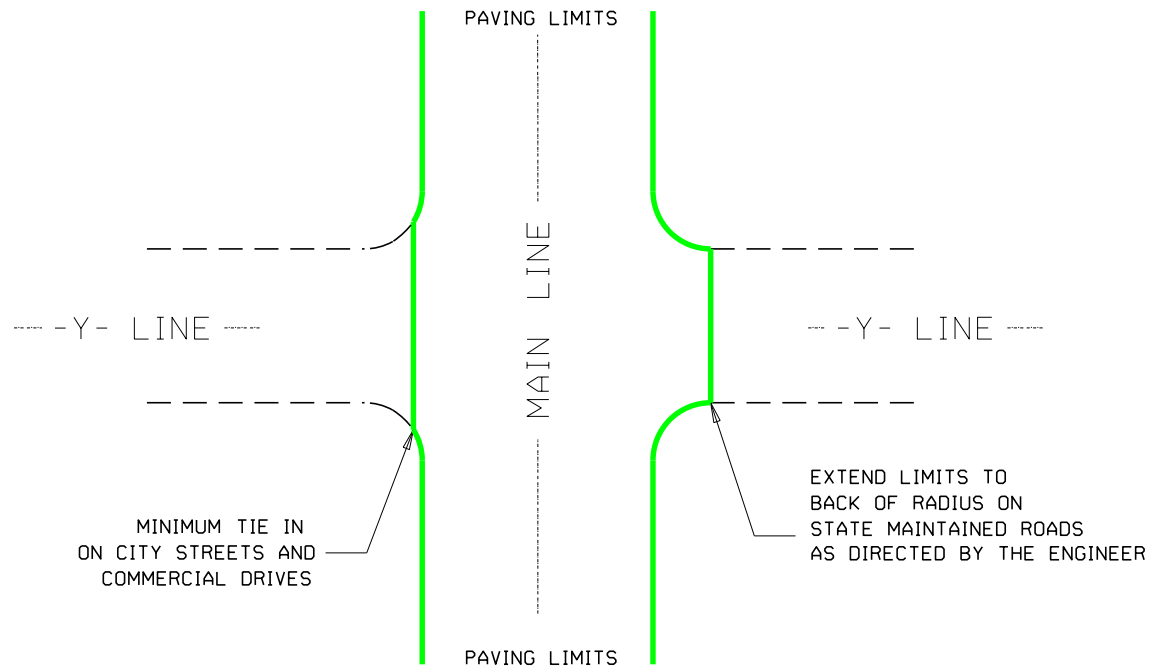
TYPICAL SECTION NO. 3

USE WITH MAP 4

NTS



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
	PAVE ALL STATE OWNED & TOWN STREETS	
	TO BACK OF RADIUS FOR THIS PROJECT	

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

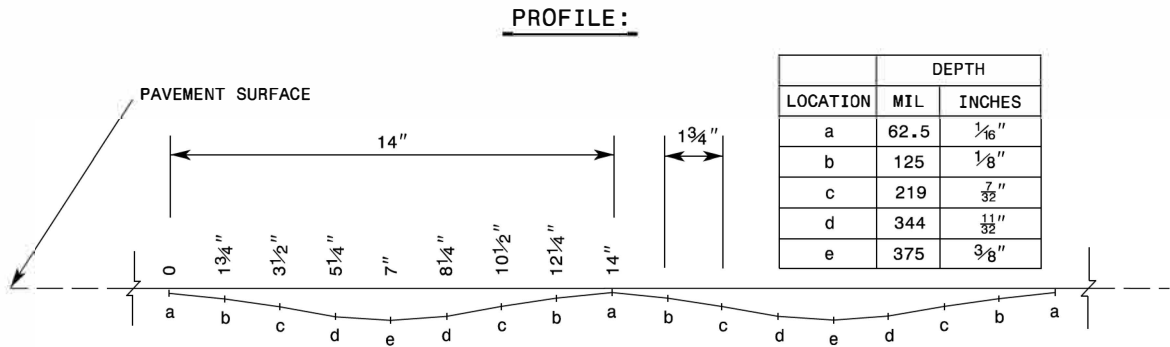
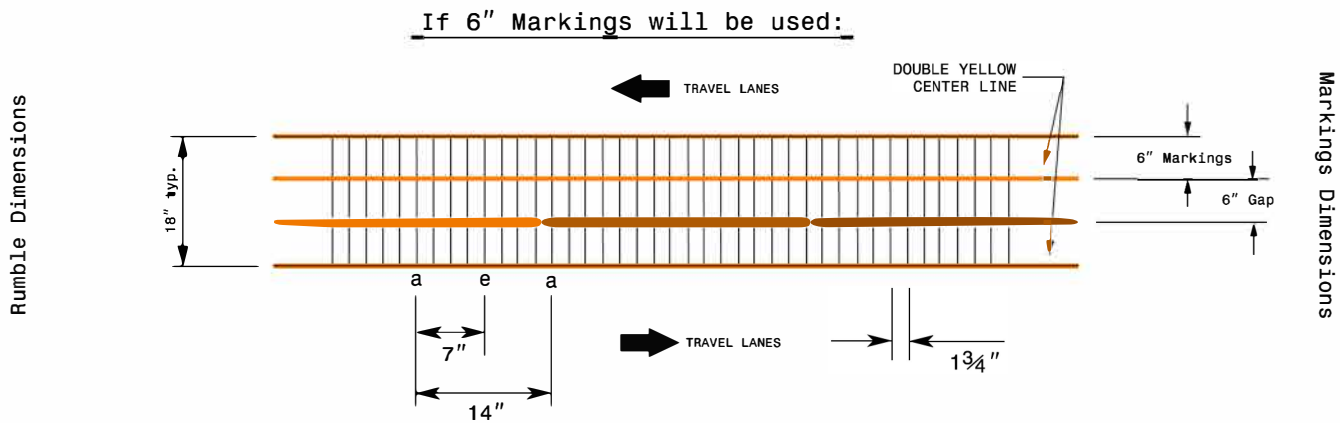
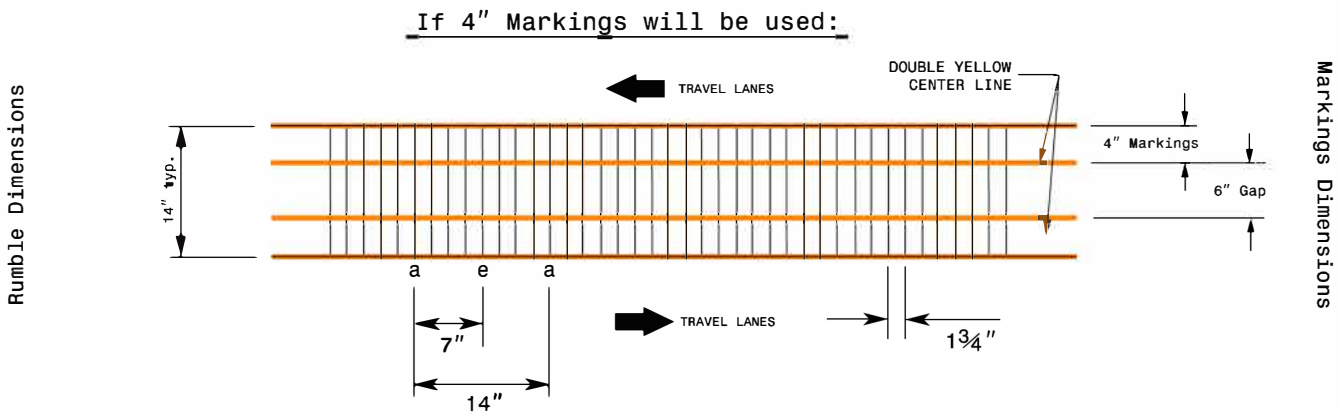
2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES

SINUSOIDAL CENTERLINE RUMBLE STRIPE

SHEET 6 OF 7

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.

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

2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES

SINUSOIDAL CENTERLINE RUMBLE STRIPE

SHEET 6 OF 7

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

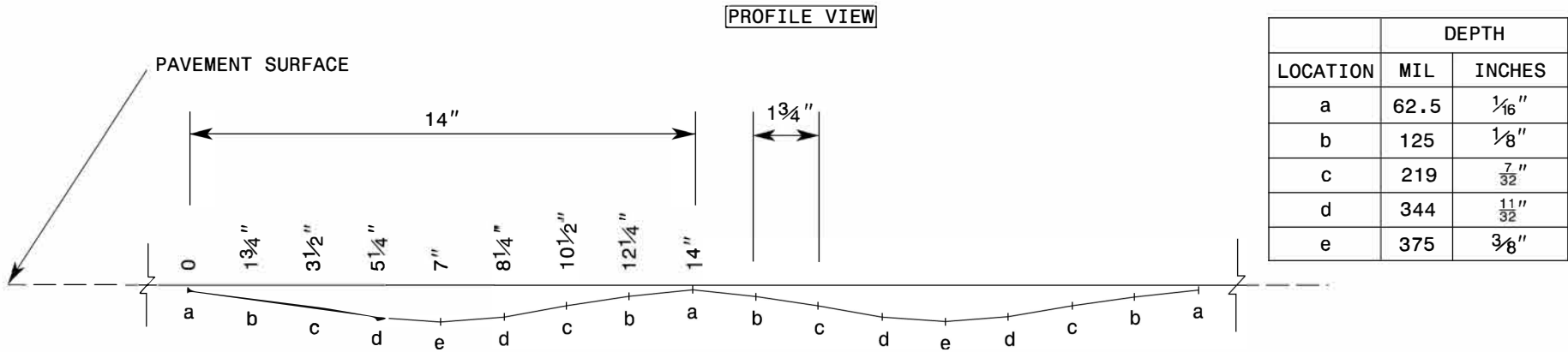
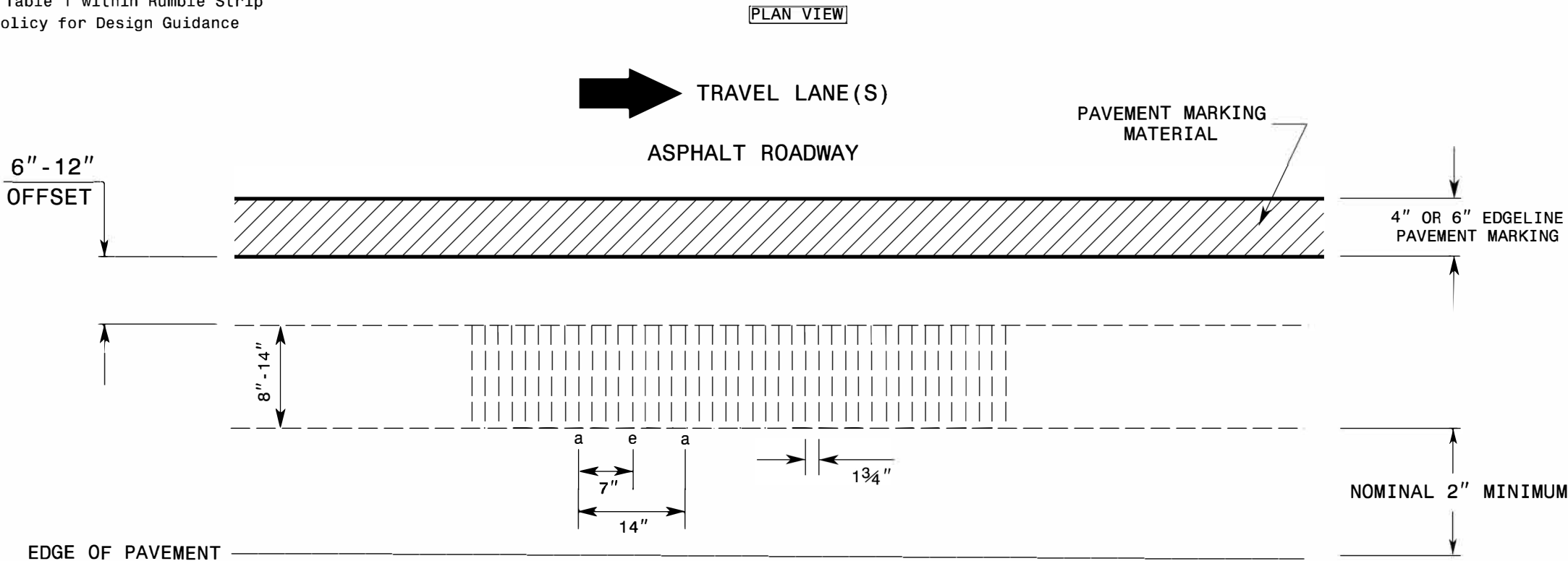
2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES

SINUSOIDAL SHOULDER RUMBLE STRIP

SHEET 2 OF 7

See Table 1 within Rumble Strip Policy for Design Guidance



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

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

2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES

SINUSOIDAL SHOULDER RUMBLE STRIP

SHEET 2 OF 7

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.01.05.10081, ETC.	8	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	MTV REQUIRED	0000100000-N MOBILIZATION	0106000000-E BORROW EXCAVATION	1220000000-E INCIDENTAL STONE BASE	1245000000-E SHOULDER RECONSTRUCTION	1297000000-E MILLING ASPHALT PAVEMENT (1 1/2")	1330000000-E INCIDENTAL MILLING	1519000000-E ASP CONC SURF CRS S9.5B
								MI	FT				LS	CY	TONS	SMI	SY	SY	TONS
2027CPT.01.05.10081	Bertie	1	NC-308 E / GOVERNORS RD/STERLINGWORTH ST/E CHURCH ST	FROM US 17 TO NC 11	1	2	2WU	14.990	26	16.470	31.460	YES	1				228,648	5,795	
TOTAL FOR PROJ NO. 2027CPT.01.05.10081								14.990					*				228,648	5,795	
2027CPT.01.05.20081	Bertie	2	SR-1120 / THOMPSON DR	FROM SR 1119 TO NC 308	2	2	2WU	0.810	20	0.000	0.810		*	146	33	1.62			828
2027CPT.01.05.20081	Bertie	3	SR-1257 / SCHOOL RD	FROM NC 308 TO US 13	2	2	2WU	2.844	24	0.000	2.844		*	512	50	5.69			3,683
TOTAL FOR PROJ NO. 2027CPT.01.05.20081								3.654					*	658	83	7.31			4,511
2027CPT.01.05.20082	Bertie	4	SR-1254 / SAUNDERS RD	FROM NC 11 TO DEAD END	3	2	2WU	0.110	18.5	0.000	0.110		*		7				123
TOTAL FOR PROJ NO. 2027CPT.01.05.20082								0.110					*		7				123
GRAND TOTAL																			
								18.754					1	658	90	7.31	228,648	5,795	4,634

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	1523000000-E ASP CONC SURF CRS S9.5C	1575000000-E ASP FOR PLANT MIX	1705000000-E PATCHING EXISTING PAVEMENT (FULL DEPTH)	1881000000-E GENERIC PAVING ITEM SINUSOIDAL MILLED RUMBLE STRIPS, (18")	GENERIC PAVING ITEM SINUSOIDAL MILLED RUMBLE STRIPS, (8")	6084000000-E SEEDING & MULCHING	6117000000-N RESPONSE FOR EROSION CONTROL
								MI	FT			TONS	TONS	TON	LF	LF	ACR	EA
2027CPT.01.05.10081	Bertie	1	NC-308 E / GOVERNORS RD/STERLINGWORTH ST/E CHURCH ST	FROM US 17 TO NC 11	1	2	2WU	14.990	26	16.470	31.460	20,751	1,226	30	79,147	158,294		
TOTAL FOR PROJ NO. 2027CPT.01.05.10081								14.990				20,751	1,226	30	79,147	158,294		
2027CPT.01.05.20081	Bertie	2	SR-1120 / THOMPSON DR	FROM SR 1119 TO NC 308	2	2	2WU	0.810	20	0.000	0.810		56	40			0.8	1
2027CPT.01.05.20081	Bertie	3	SR-1257 / SCHOOL RD	FROM NC 308 TO US 13	2	2	2WU	2.844	24	0.000	2.844		240	5			2.8	
TOTAL FOR PROJ NO. 2027CPT.01.05.20081								3.654					296	45			3.6	1
2027CPT.01.05.20082	Bertie	4	SR-1254 / SAUNDERS RD	FROM NC 11 TO DEAD END	3	2	2WU	0.110	18.5	0.000	0.110		8					
TOTAL FOR PROJ NO. 2027CPT.01.05.20082								0.110					8					
GRAND TOTAL																		
								18.754				20,751	1,530	75	79,147	158,294	3.6	1

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.01.05.10081, ETC.	9	

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	
								MI	FT			SF	LS	LF	LF	LF	LF	EA	EA	EA
2027CPT.01.05.10081	Bertie	1	NC-308 E / GOVERNORS RD/STERLINGWORTH ST/E CHURCH ST	FROM US 17 TO NC 11	1	2	2WU	14.99	26	16.47	31.46	1,174	1	158,294	98,934	52			6	1
TOTAL FOR PROJ NO. 2027CPT.01.05.10081								14.99				1,174	*	158,294	98,934	52			6	1
														257,228					7	
2027CPT.01.05.20081	Bertie	2	SR-1120 / THOMPSON DR	FROM SR 1119 TO NC 308	2	2	2WU	0.81	20	0	0.81		*							
2027CPT.01.05.20081	Bertie	3	SR-1257 / SCHOOL RD	FROM NC 308 TO US 13	2	2	2WU	2.844	24	0	2.844	194	*			156	45	6	1	
TOTAL FOR PROJ NO. 2027CPT.01.05.20081								3.654				194	*			156	45	6	1	
																			1	
2027CPT.01.05.20082	Bertie	4	SR-1254 / SAUNDERS RD	FROM NC 11 TO DEAD END	3	2	2WU	0.11	18.5	0	0.11		*							
TOTAL FOR PROJ NO. 2027CPT.01.05.20082								0.11					*							
GRAND TOTAL								18.754				1,368	1	158,294	98,934	208	45	6	7	1
														257,228					8	

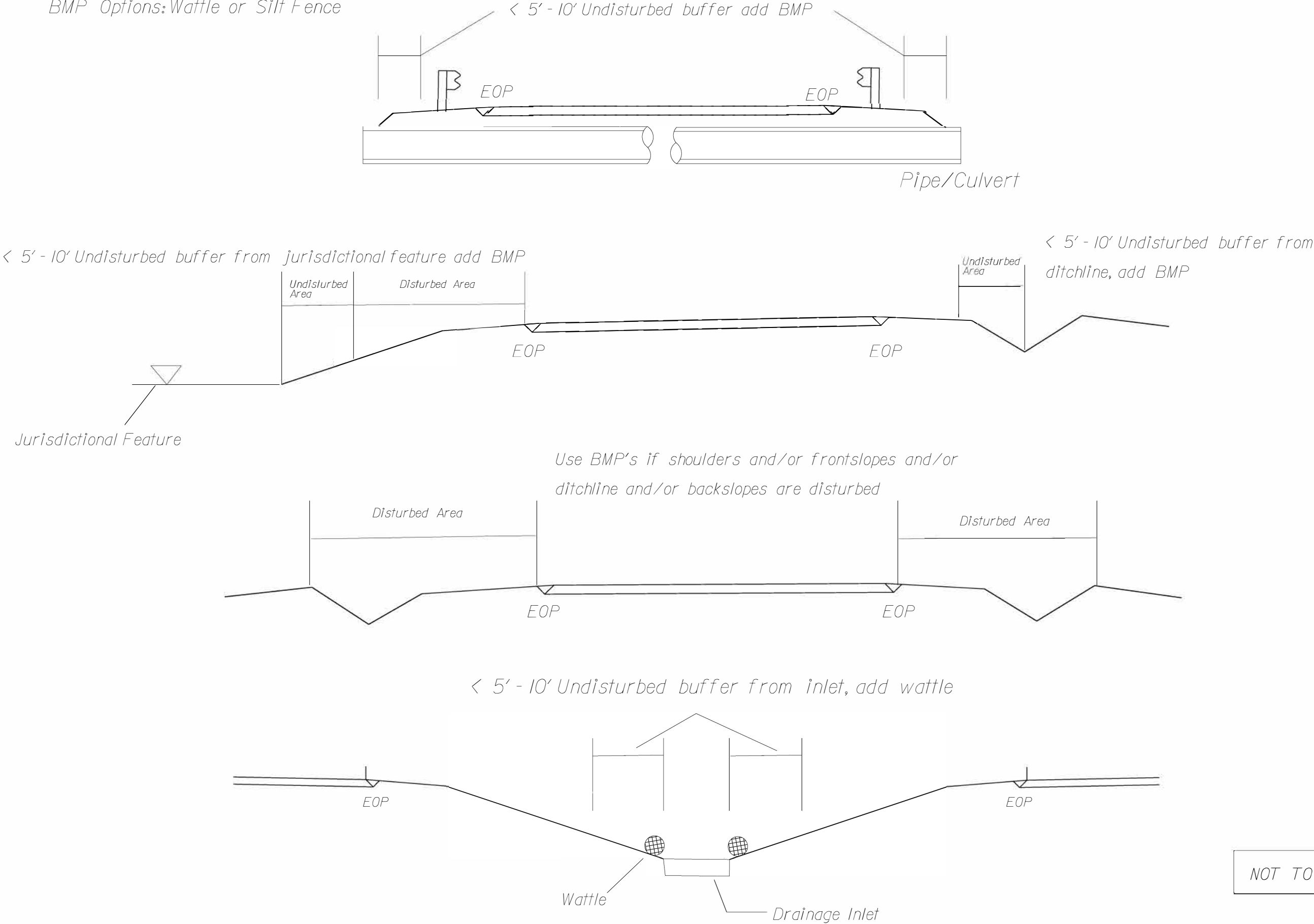
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	4810000000-E		4825000000-E	4835000000-E	4840000000-N	4845000000-N		4890000000-E		4895000000-N
								MI	FT			PAINT PAVEMENT MARKING LINES (4") WHITE	PAINT PAVEMENT MARKING LINES (4") YELLOW	PAINT PAVEMENT MARKING LINES (12")	PAINT PAVEMENT MARKING LINES (24")	PAINT PAVEMENT MARKING CHARACTER (MSG SCHOOL)	PAINT PAVEMENT MARKING SYMBOL (LT ARROW)	PAINT PAVEMENT MARKING SYMBOL (RT ARROW)	HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES, (4", 65 MILS) WHITE	HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES, (4", 65 MILS) YELLOW	GENERIC PAVEMENT MARKING ITEM POLYCARBONATE H-SHAPED MARKERS
2027CPT.01.05.10081	Bertie	1	NC-308 E / GOVERNORS RD/STERLINGWORTH ST/E CHURCH ST	FROM US 17 TO NC 11	1	2	2WU	14.99	26	16.47	31.46	158,294	98,934	52			6	1			989
TOTAL FOR PROJ NO. 2027CPT.01.05.10081								14.99				158,294	98,934	52			6	1			989
												257,228					7				
2027CPT.01.05.20081	Bertie	2	SR-1120 / THOMPSON DR	FROM SR 1119 TO NC 308	2	2	2WU	0.81	20	0	0.81	8,554	5,346						8,554	5,346	
2027CPT.01.05.20081	Bertie	3	SR-1257 / SCHOOL RD	FROM NC 308 TO US 13	2	2	2WU	2.844	24	0	2.844	30,033	18,770	156	45	6	1		30,033	18,770	
TOTAL FOR PROJ NO. 2027CPT.01.05.20081								3.654				38,587	24,116	156	45	6	1		38,587	24,116	
												62,703					1		62,703		
2027CPT.01.05.20082	Bertie	4	SR-1254 / SAUNDERS RD	FROM NC 11 TO DEAD END	3	2	2WU	0.11	18.5	0	0.11										
TOTAL FOR PROJ NO. 2027CPT.01.05.20082								0.11													
GRAND TOTAL								18.754				196,881	123,050	208	45	6	7	1	38,587	24,116	989
												319,931					8		62,703		

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



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

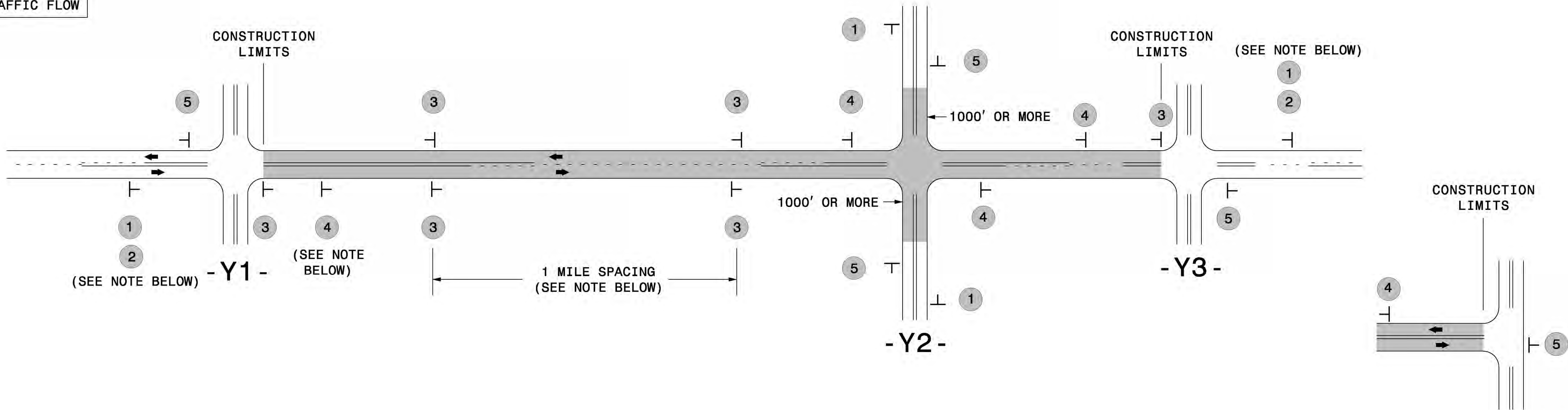
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	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.

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN

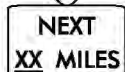
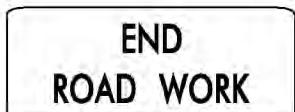
DIRECTION OF TRAFFIC FLOW



TEE INTERSECTION

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1  W20-1 48" X 48" 2  W7-3aP 24" X 18" PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. #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)	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.	
	3  SP 13107 48" X 48" - 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.		 W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER.  W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER.
	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. - 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.		
LESS 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.		



AD



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