

PROJECT NO.	SHEET NO.	TOTAL NO.
2019CPT.11.09.10991		

**SUMMARY OF QUANTITIES**

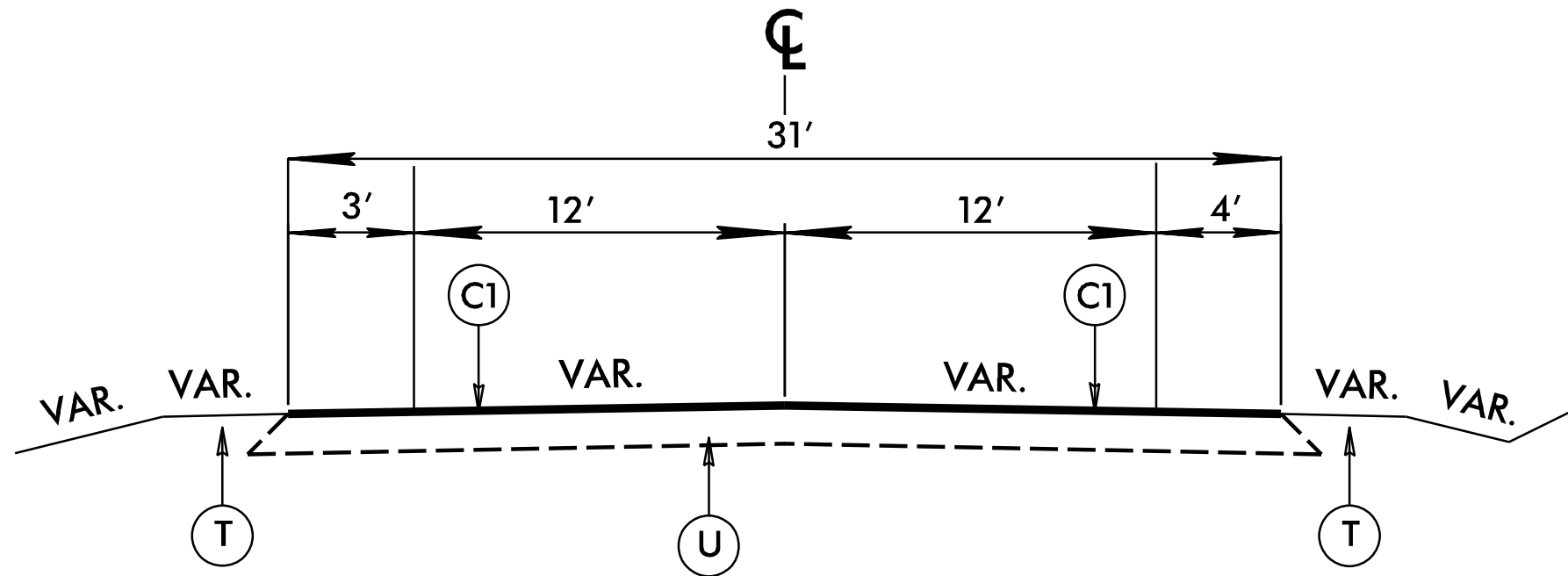
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	0106000000-E	1245000000-E	1297000000-E	1308000000-E	1330000000-E	1523000000-E	1575000000-E	1704000000-E	1840000000-E	6084000000-E	
												BORROW	SHOULDER RECONSTRUCTION	1 1/2" MILLING	0" TO 1.5" MILLING	INCIDENTAL MILLING	SURFACE COURSE, 59.SC	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONCRETE)	SEED & MULCHING	
												MI	FT	CY	SMI	SY	SY	SY	TONS	TONS	TONS	LF
2019CPT.11.09.10991	Yadkin	1	US 421 N	FROM FORSYTH COUNTY TO SR 1711	1	2	MD	NO	YES	2.29	31	449	4.58	12,527		689	5,534	332	150	24,184	1.03	
2019CPT.11.09.10991	Yadkin	2	US 421 N	FROM SR 1711 TO SR 1710	1	2	MD	NO	YES	2.5	31	490	5.00	8,711		344	4,696	282	120	26,400	1.13	
2019CPT.11.09.10991	Yadkin	3	US 421 N	FROM SR 1710 TO SR 1710 PLUS 2 MILES	1	2	MD	NO	YES	2	31		4.00	6,889		172	3,631	218	120	21,120	0.90	
2019CPT.11.09.10991	Yadkin	4	US 421 N	FROM SR 1710 PLUS 2 MILES TO US 601	1	3	MD	NO	YES	2.04	31		4.08	17,222			6,534	392	50	21,542	0.92	
2019CPT.11.09.10991	Yadkin	5	US 421 SB	FROM US 601 TO MP 14+50	2	2	MD	NO	YES	2.04	31	296	4.08		2,484	344	5,254	315	97	21,542		
2019CPT.11.09.10991	Yadkin	6	US 421 SB	FROM MP 14+50 TO SR 1710	2	2	MD	NO	YES	2	31	300	4.00		1,190	861	3,731	224	66	21,120		
2019CPT.11.09.10991	Yadkin	7	US 421 SB	FROM SR 1710 TO 1711	2	2	MD	NO	YES	2.5	31	375	5.00		758	517	4,706	282	86	26,400		
2019CPT.11.09.10991	Yadkin	8	US 421 SB	FROM SR 1711 TO FORSYTH COUNTY LINE	2	2	MD	NO	YES	2.29	31	344	4.58		1,722	689	5,284	317	98	24,182		
<b>TOTAL FOR PROJ. NO. 2019CPT.11.09.10991</b>											<b>17.66</b>		<b>2,254</b>	<b>35.32</b>	<b>45,349</b>	<b>6,154</b>	<b>3,616</b>	<b>39,370</b>	<b>2,362</b>	<b>787</b>	<b>186,490</b>	<b>3.98</b>
<b>GRAND TOTAL</b>											<b>17.66</b>		<b>2,254</b>	<b>35.32</b>	<b>45,349</b>	<b>6,154</b>	<b>3,616</b>	<b>39,370</b>	<b>2,362</b>	<b>787</b>	<b>186,490</b>	<b>3.98</b>

PROJECT NO.	SHEET NO.	TOTAL NO.
2019CPT.11.09.10991		

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH		4400000000-E		4405000000-E		4410000000-E		4415000000-N		4420000000-N		4422000000-N		4430000000-N		4445000000-E		4480000000-N		4510000000-N		4847040000-E		4847070000-E		4847080000-E		4905000000-N	
								MI	FT	SF	SF	SF	EA	EA	DAY	EA	LF	EA	HR	LF	LF	LF	EA														
2019CPT.11.09.10991	Yadkin	1	US 421 N	FROM FORSYTH COUNTY TO SR 1711	1	2	MD	2.29	31	192	250	26	2	3	8	250	64	2	80	36,274										2,720		151					
2019CPT.11.09.10991	Yadkin	2	US 421 N	FROM SR 1711 TO SR 1710	1	2	MD	2.5	31	192	250				150															1,890							
2019CPT.11.09.10991	Yadkin	3	US 421 N	FROM SR 1710 TO SR 1710 PLUS 2 MILES	1	2	MD	2	31	192	250				150															1,898		132					
2019CPT.11.09.10991	Yadkin	4	US 421 N	FROM SR 1710 PLUS 2 MILES TO US 601	1	3	MD	2.04	31	192	250				150															1,658		137					
2019CPT.11.09.10991	Yadkin	5	US 421 SB	FROM US 601 TO MP 14+50	2	2	MD	2.04	31	192	250																					143					
2019CPT.11.09.10991	Yadkin	6	US 421 SB	FROM MP 14+50 TO SR 1710	2	2	MD	2	31	192	250																					140					
2019CPT.11.09.10991	Yadkin	7	US 421 SB	FROM SR 1710 TO 1711	2	2	MD	2.5	31	192	250																					175					
2019CPT.11.09.10991	Yadkin	8	US 421 SB	FROM SR 1711 TO FORSYTH COUNTY LINE	2	2	MD	2.29	31	192	250																					160					
<b>TOTAL FOR PROJ NO. 2019CPT.11.09.10991</b>											<b>17.66</b>		<b>1,536</b>	<b>2,000</b>	<b>26</b>	<b>2</b>	<b>3</b>	<b>8</b>	<b>700</b>	<b>64</b>	<b>2</b>	<b>80</b>	<b>279,736</b>	<b>1,658</b>	<b>14,674</b>	<b>1,038</b>											
<b>GRAND TOTAL</b>											<b>17.66</b>		<b>1,536</b>	<b>2,000</b>	<b>26</b>	<b>2</b>	<b>3</b>	<b>8</b>	<b>700</b>	<b>64</b>	<b>2</b>	<b>80</b>	<b>279,736</b>	<b>1,658</b>	<b>14,674</b>	<b>1,038</b>											

**TYPICAL SECTION NO. 1**  
**REFER TO MAPS: 1, 2, 3 and 4**

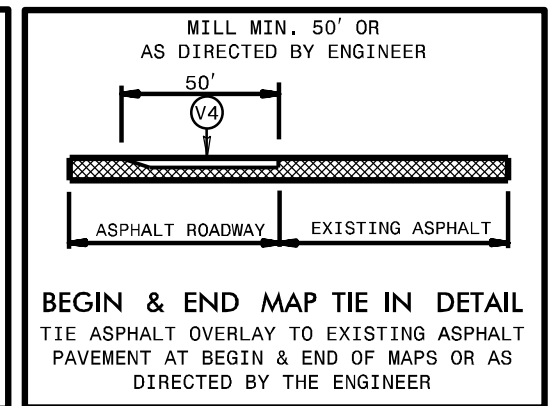
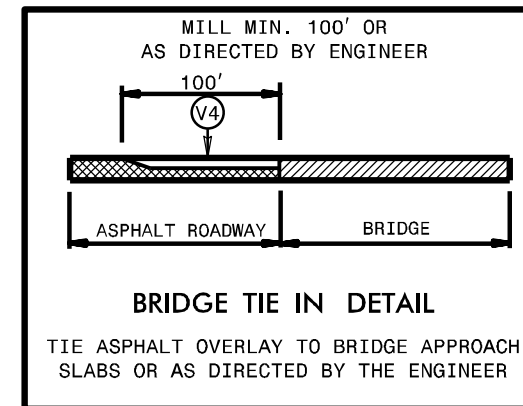


**\*\*NOTE\*\***  
 MAP 1 - Mill & Fill North Bound Off Ramp at SR 1711, (1.5")  
 Mill & Fill South Bound On Ramp at SR 1711, (1.5")

MAP 2 - Mill & Fill North Bound On Ramp at SR 1711, (1.5")  
 Mill & Fill South Bound Off Ramp at SR 1711, (1.5")

ALL OTHER RAMPS ARE INCLUDED IN OVERLAY

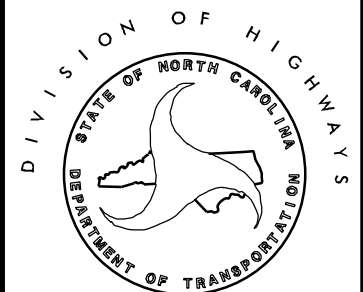
PAVEMENT SCHEDULE	
C1	PROPOSED: 1.5" Overlay, Type S 9.5 C AVERAGE ASPHALT RATE: 168 lbs. per Sq. Yd.
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1.5"
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V4	INCIDENTAL MILLING (See Tie in Detail below)



**YADKIN COUNTY  
 PRIMARY ROADS  
 ASPHALT RESURFACING**

REVISIONS	INIT.	DATE

**N.C. DEPARTMENT of TRANSPORTATION  
 DIVISION of HIGHWAYS  
 DIVISION ELEVEN**



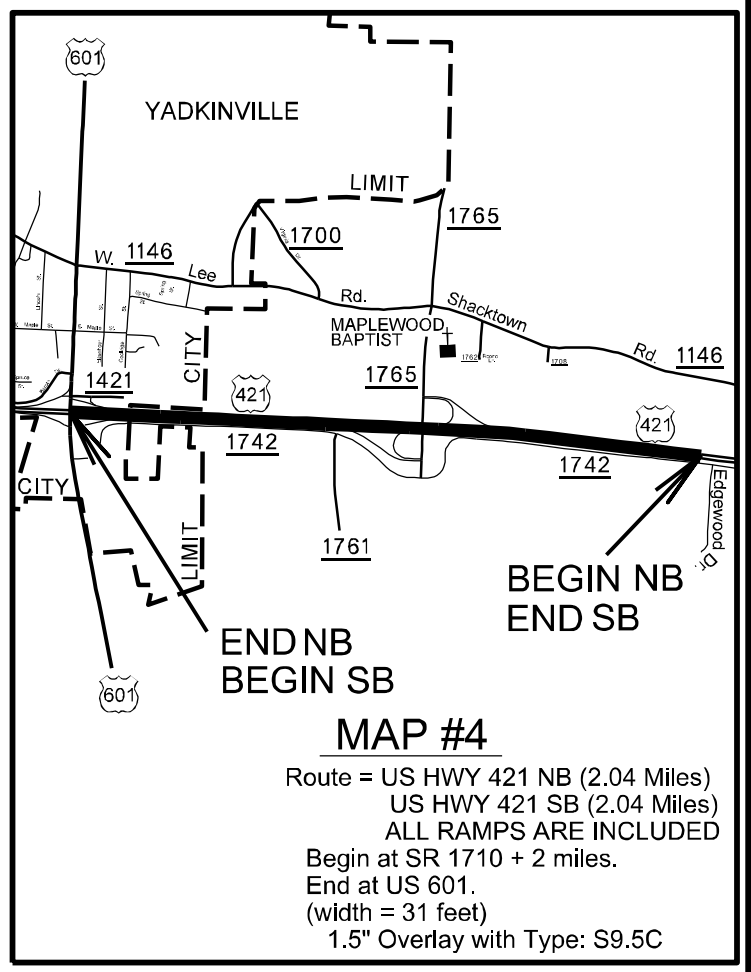
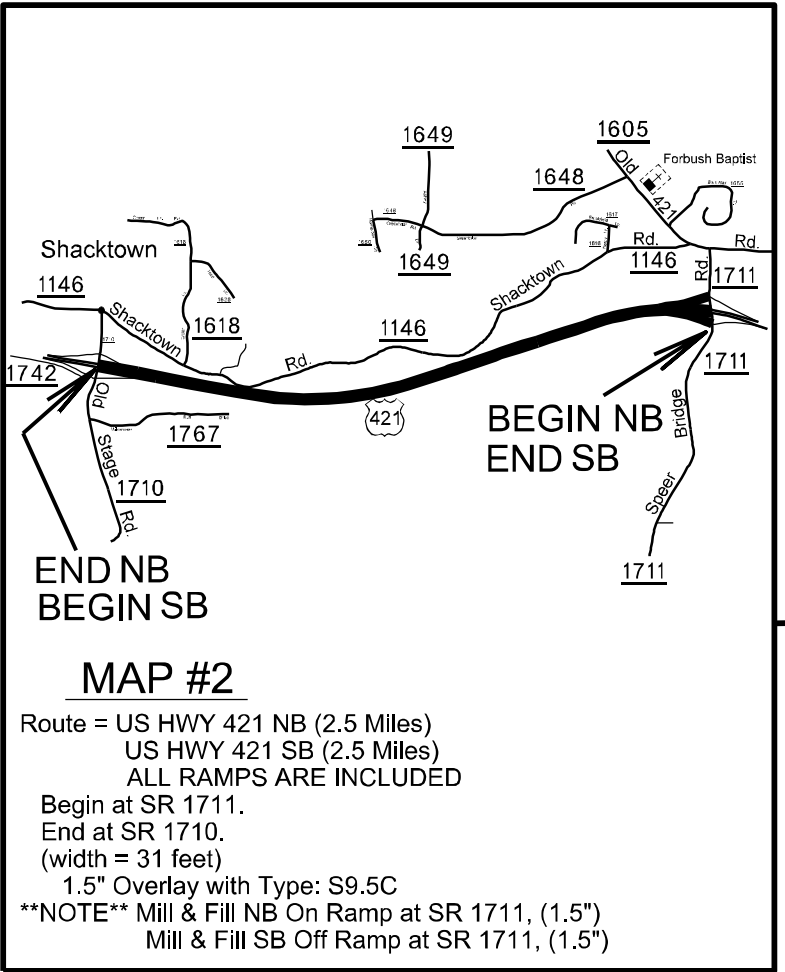
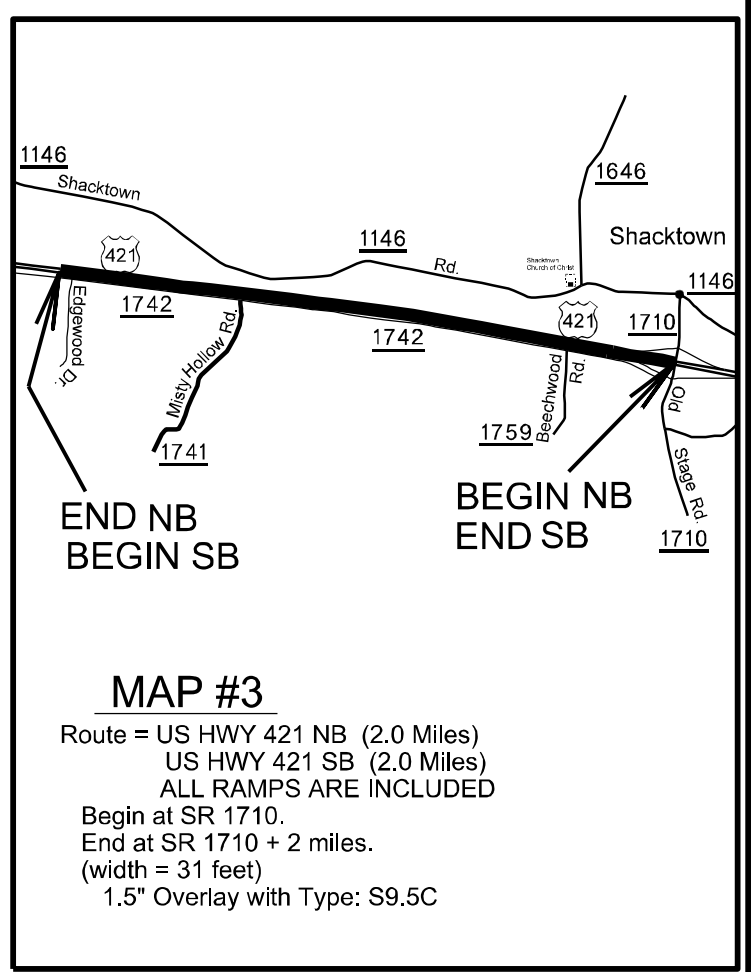
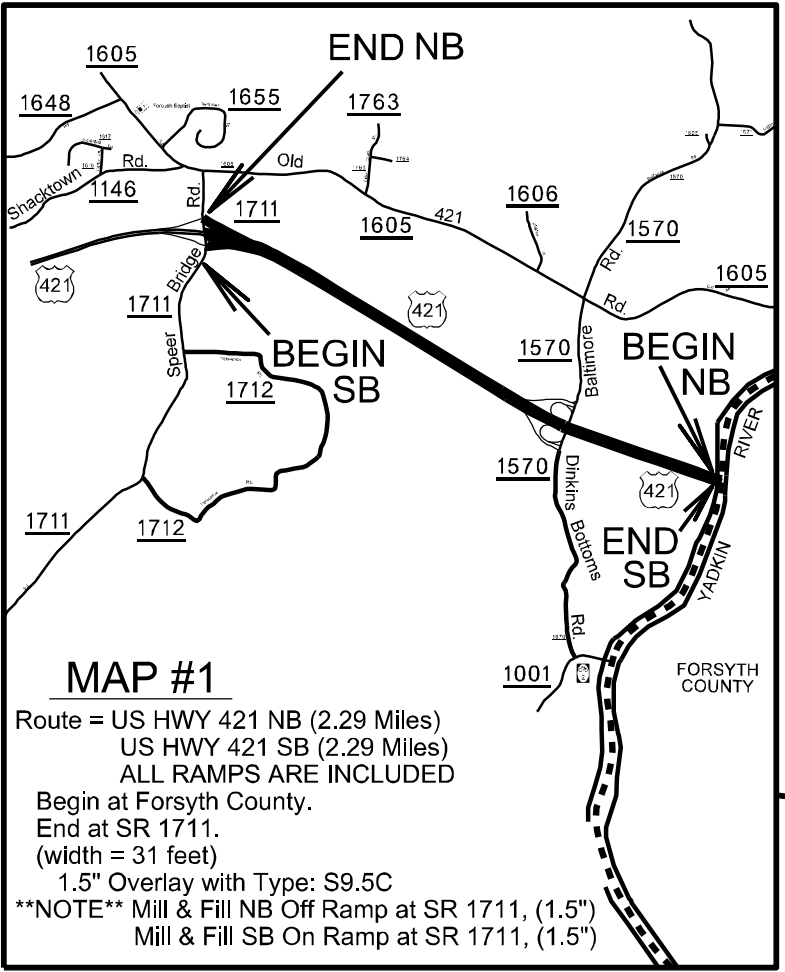
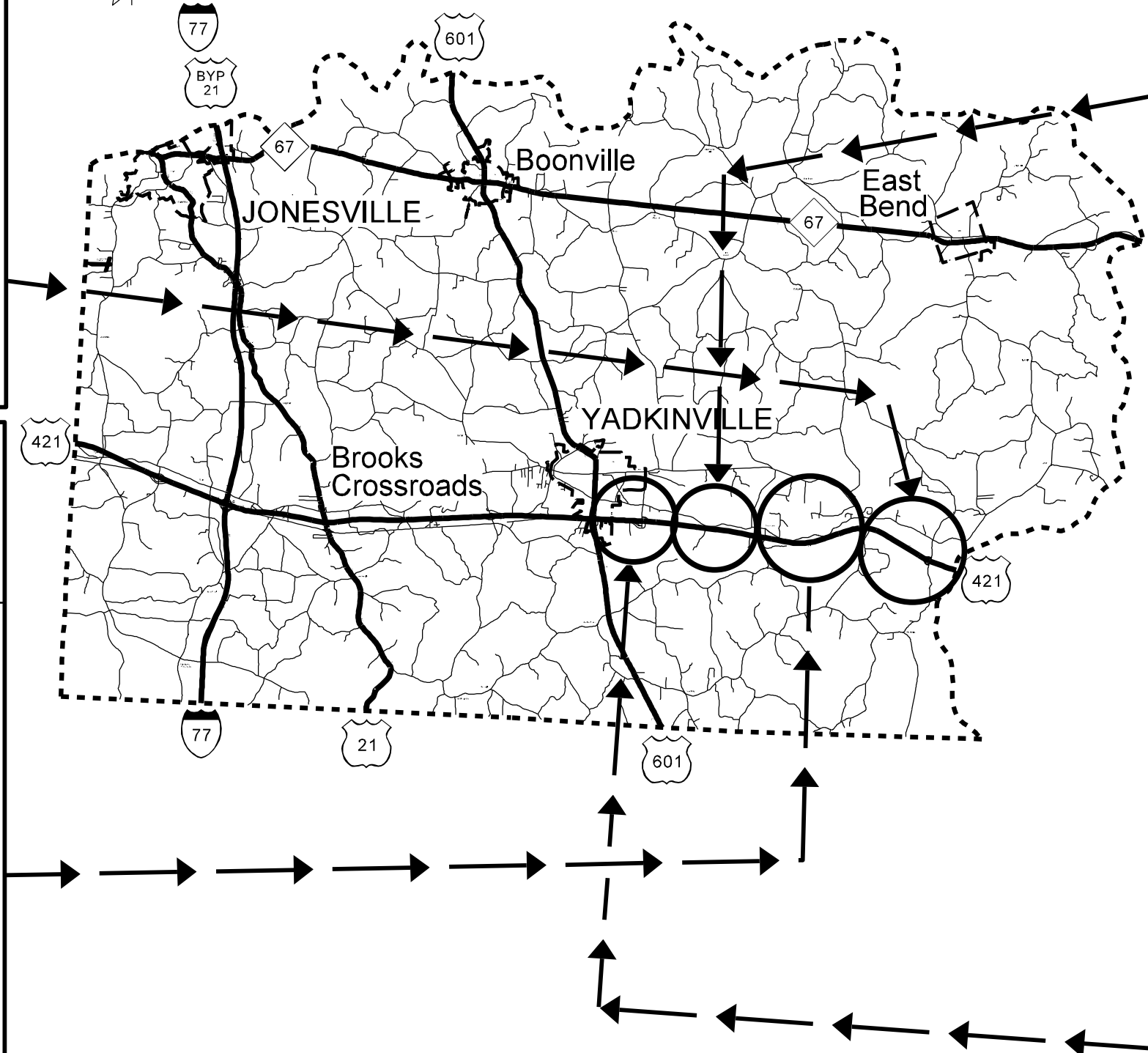
SCALE: N/A    DATE: 08/2018  
 PREPARED BY: S.B. DARNELL  
 REVIEWED BY: J.D. WOOD  
 REVIEWED BY:

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**YADKIN COUNTY**

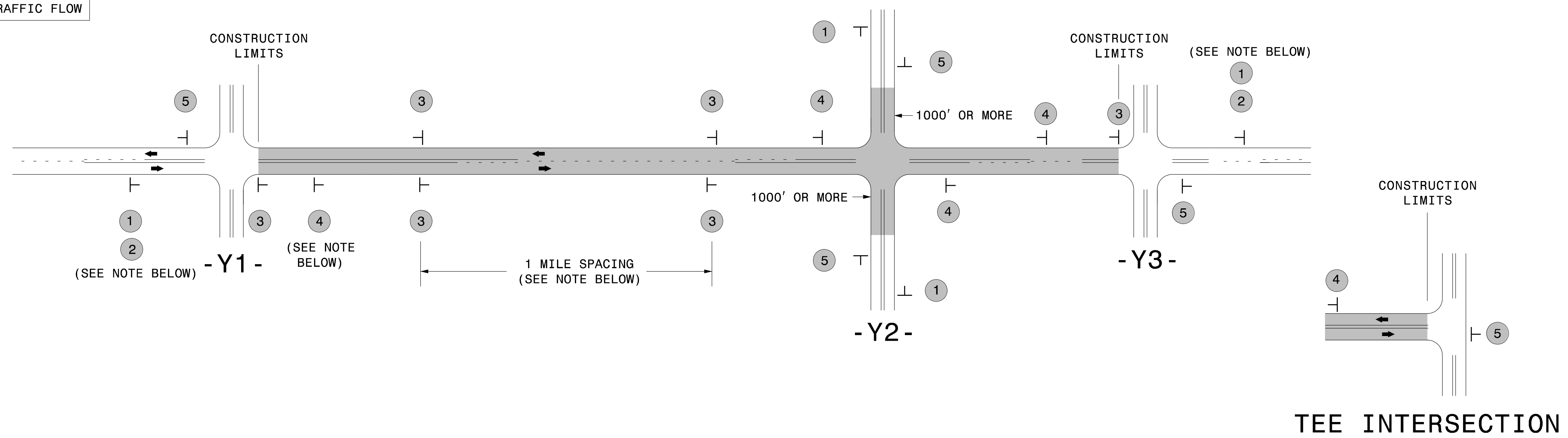
2019

TYPE OF WORK: ASPHALT RESURFACING  
PRIMARY ROUTES



# SIGNING FOR RESURFACING PROJECTS

**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

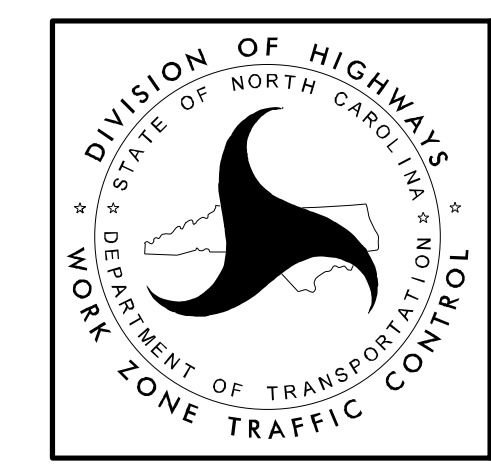
## -Y- LINE SIGNING

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>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, 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;">             PLACED 500' IN ADVANCE OF FLAGGER.         </div> <div style="text-align: center;">             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.

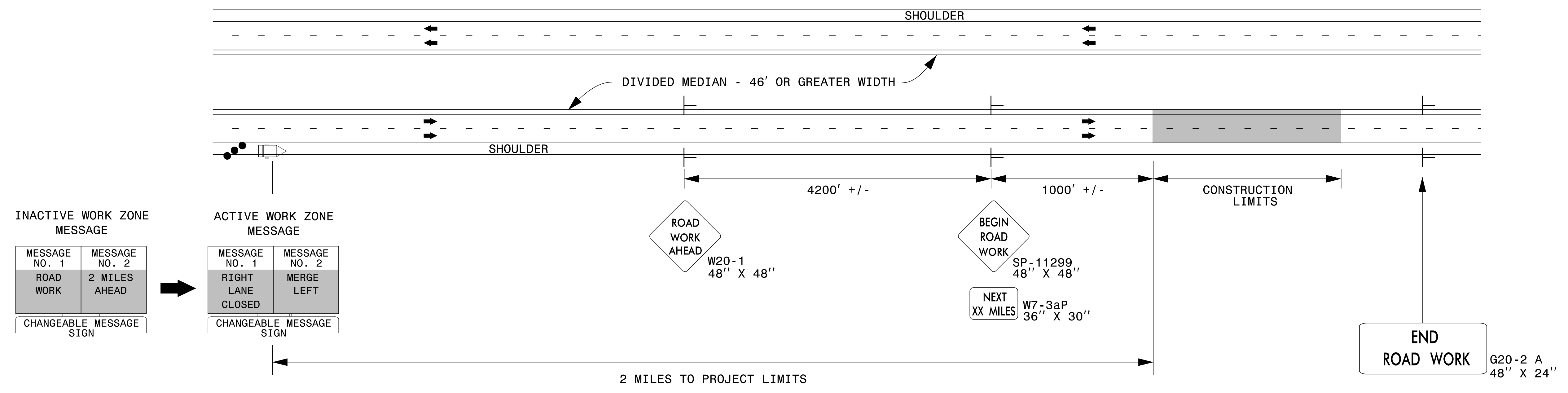
**MAPS LESS THAN 2 MILES**

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.

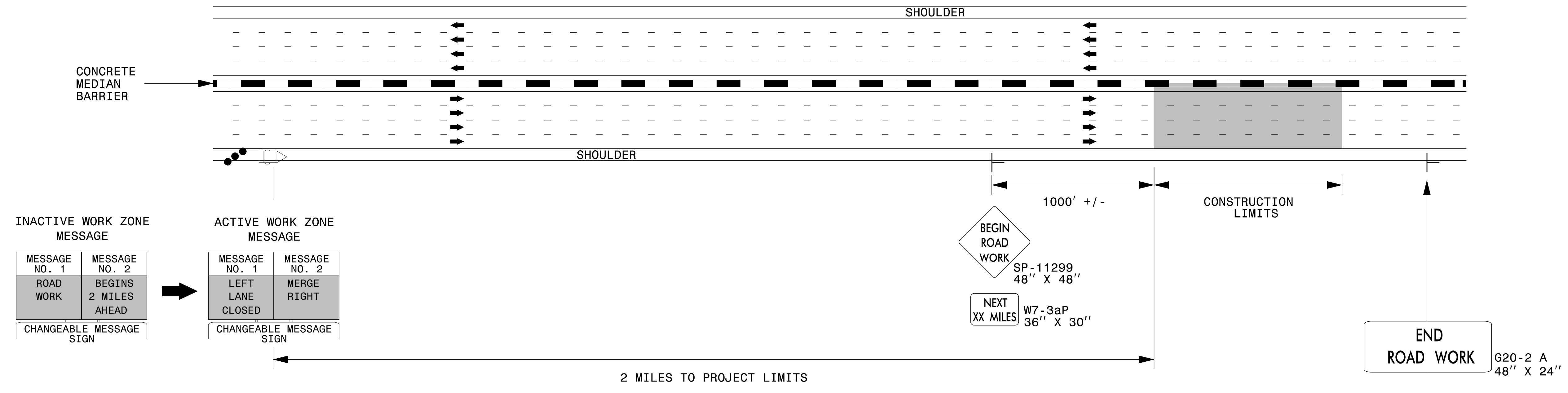


**ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING**

## DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



## DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER

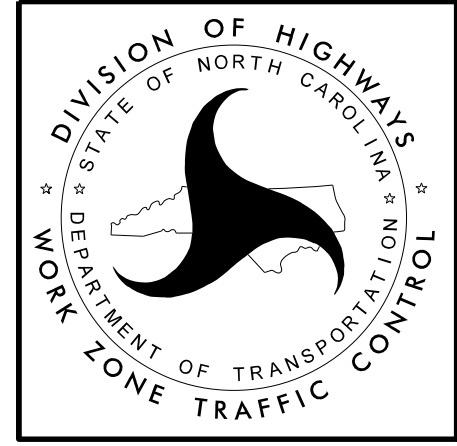


**NOTES:**

- 1) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 6' AS MEASURED FROM THE EDGE OF PAVEMENT.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) FOR MEDIAN WIDTHS LESS THAN 46' (MEASURED EDGELINE TO EDGELINE) USE THE BOTTOM DRAWING.
- 4) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 5) INSTALL "ROAD WORK AHEAD" (W20-1) ALONG ENTRANCE RAMP 500' PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMP WITHIN THE WORK ZONE.
- 6) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER AND WITH DIVIDED MEDIANS OF 46' OR GREATER. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

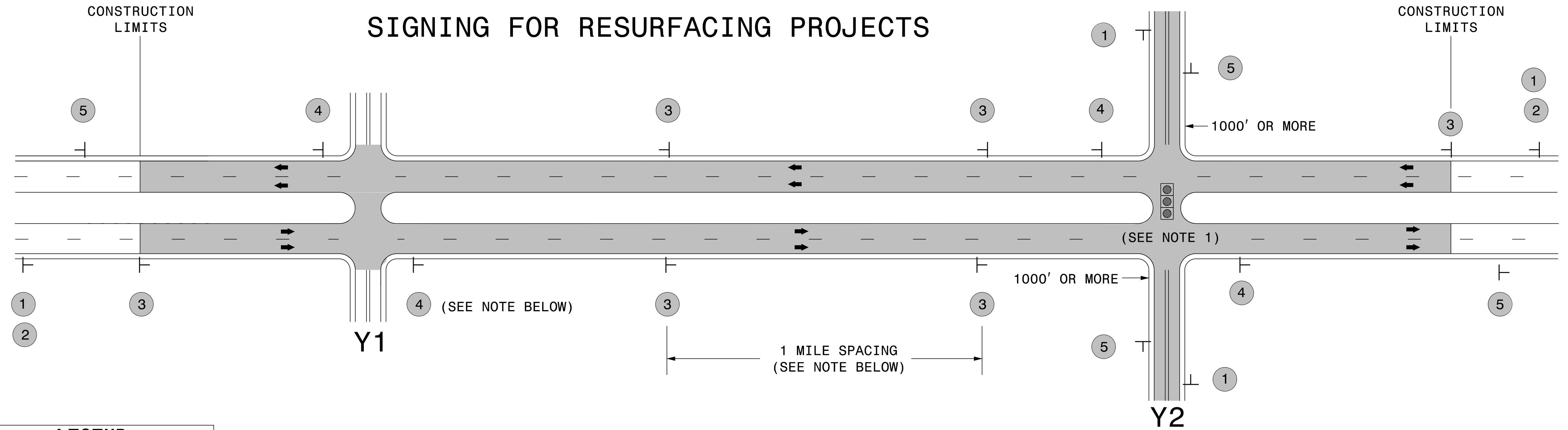
**LEGEND**

- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM



**RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH**

3/23/2015 C:\Users\rmgarrrett\Downloads\Resurfacing\_AdvWarn\_HSpd.dgn User:rmgarrrett



**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW

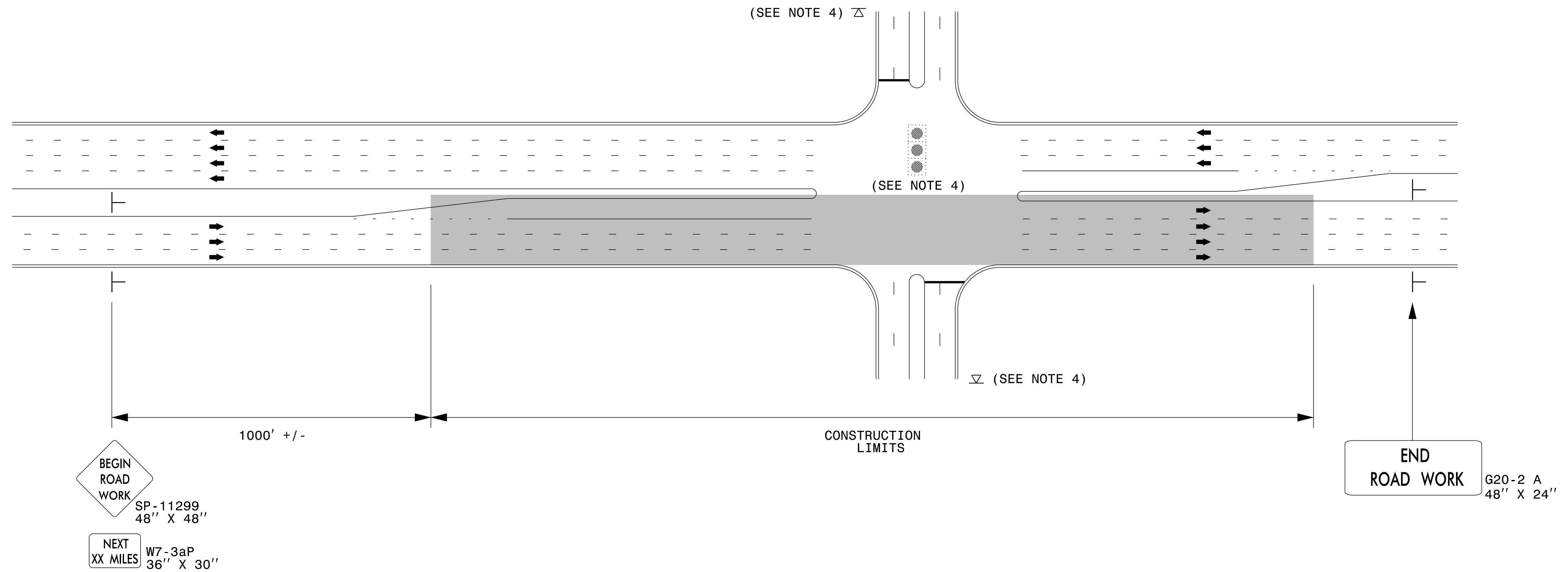
**MAINLINE (-L-) SIGNING**

**-Y- LINE SIGNING**

SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#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)</p>	<p><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></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, 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;">   <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;">   <small>W20-7 A 48" X 48"</small> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.</li> </ol>
		<p>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.</p>	
		<p>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.</p>	
		<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	

**RESURFACING  
ADVANCE WARNING SIGNS  
FOR RURAL AND SUBURBAN  
MULTI-LANE ROADWAYS  
W/ SHOULDER SECTIONS**

## URBAN / SUBURBAN WORKZONES

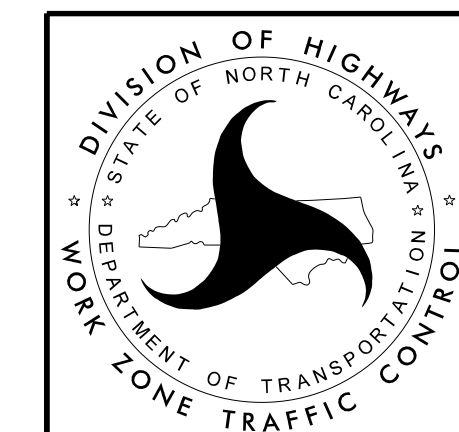


### NOTES:

- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

### LEGEND

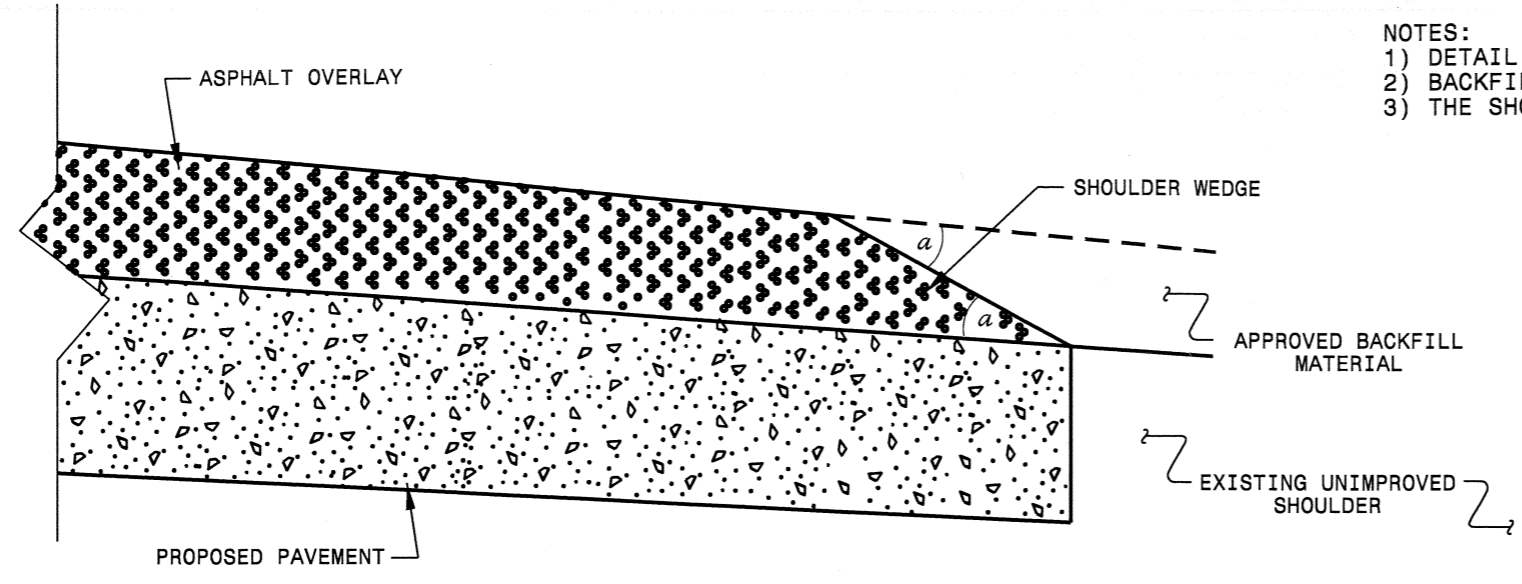
- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



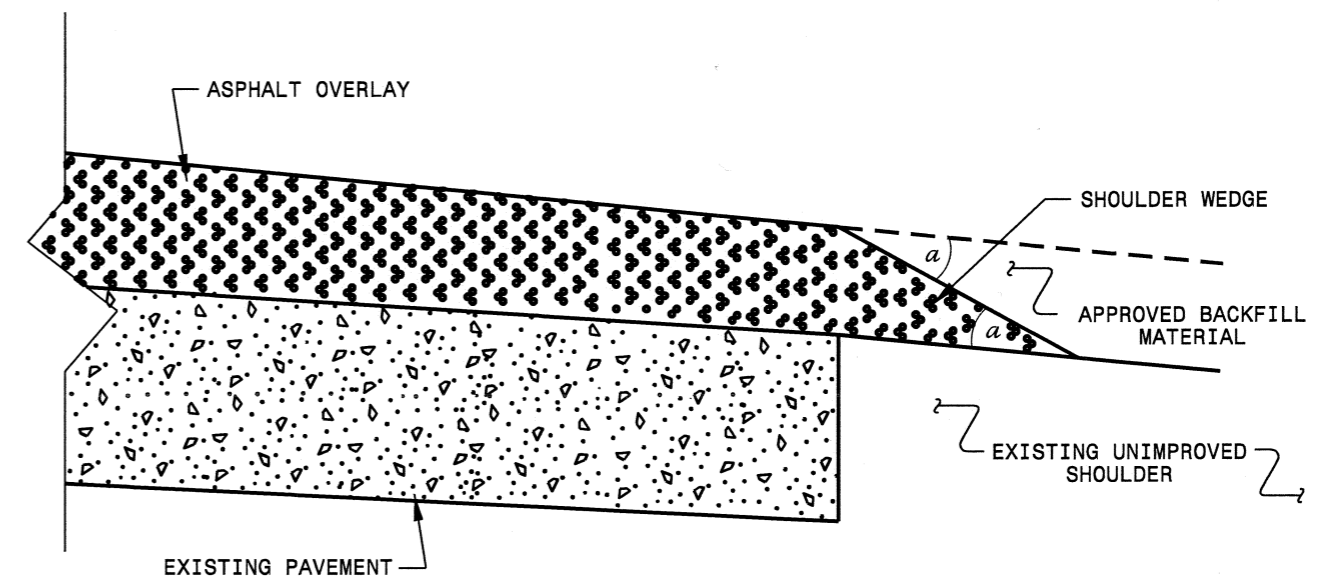
**RESURFACING ADVANCE  
WARNING SIGNS FOR  
URBAN / SUBURBAN  
FACILITIES**



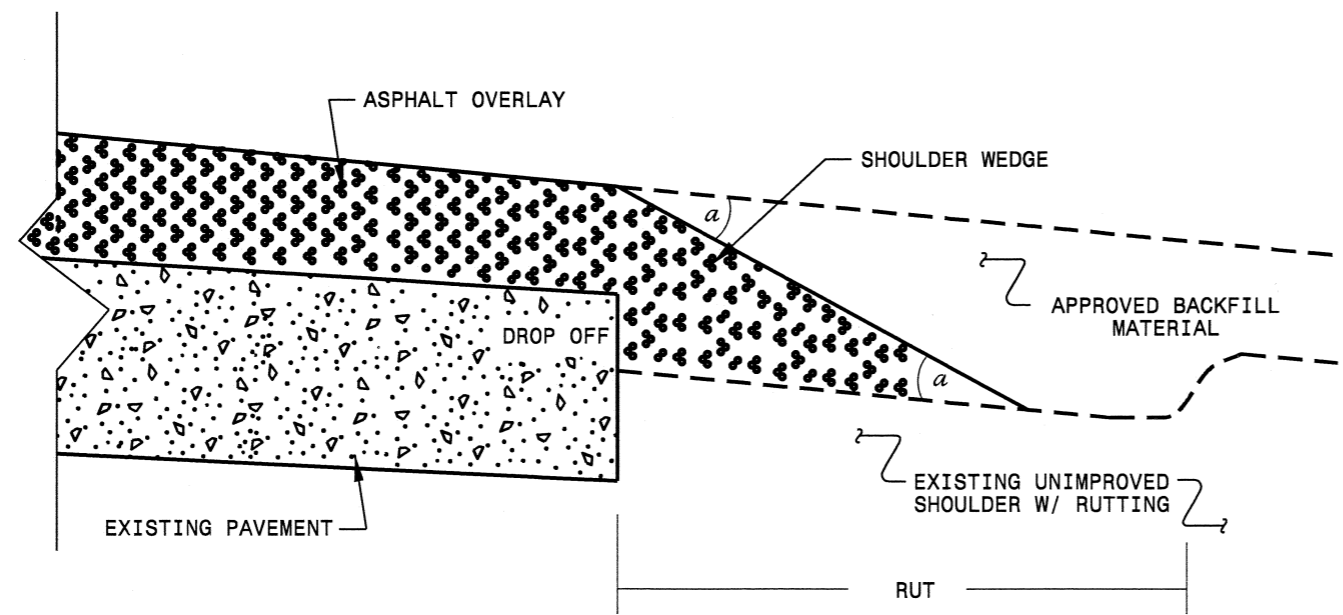
- NOTES:  
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.  
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.  
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**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°

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: 10/18/12  
 CHECKED BY: DATE:  
 FILE SPEC.: s:\user\details\stand\shoulderwedgedetail.dgn

\*\*\*\*\*  
 SYSTEMS CONSULTANTS  
 \*\*\*\*\*