

05/08/99

WBS ELEMENT: ICR.20081.74, ETC.

CONTRACT NO.: DA00227

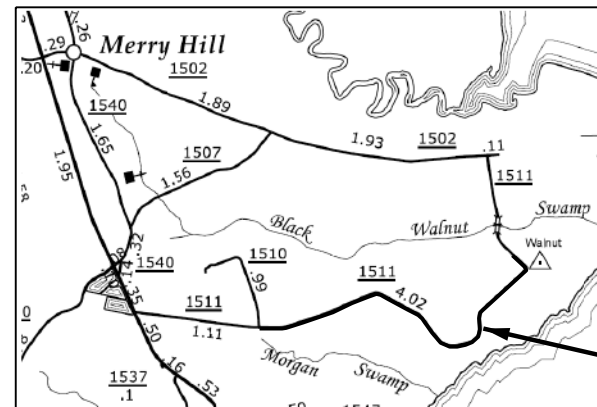
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BERTIE COUNTY**

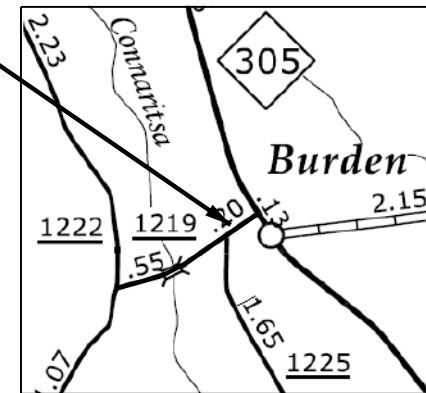
**LOCATION:** MAP 1 SR 1511 FROM SR 1510 TO EXISTING JOINT AT MP 4.2  
 MAP 2 SR 1366 FROM SR 1365 TO MP 2  
 MAP 3 SR 1219 FROM SR 1222 TO NC 305  
 MAP 4 SR 1318 FROM NC 42 TO SR 1316  
 MAP 5 SR 1108 FROM SR 1124 TO BRIDGE #85  
 MAP 6 SR 1134 FROM NC 308 TO END PAVEMENT

**TYPE OF WORK:** ASPHALT SURFACE TREATMENT, MILLING & RESURFACING

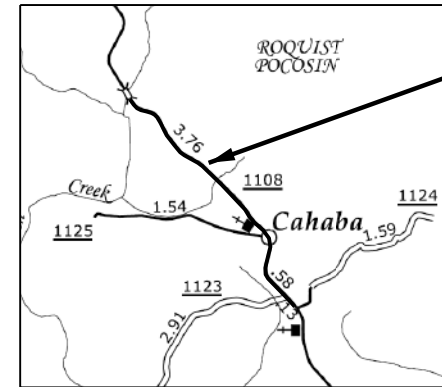
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	ICR.20081.74, ETC.	1	9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
1CR.20081.74		MAP 1	
1CR.20081.75		MAP 2	
1CR.20081.76		MAP 3	
1CR.20081.77		MAP 4	
1CR.20081.78		MAP 5	
1CR.20081.79		MAP 6	



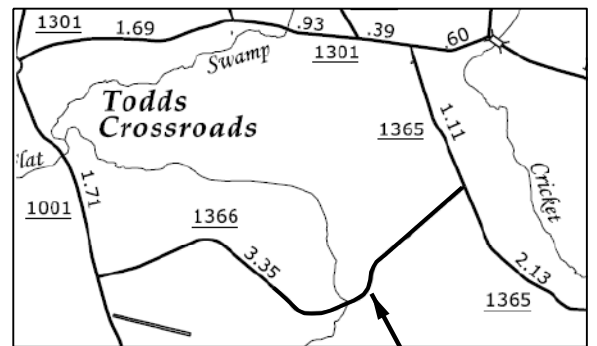
MAP 1



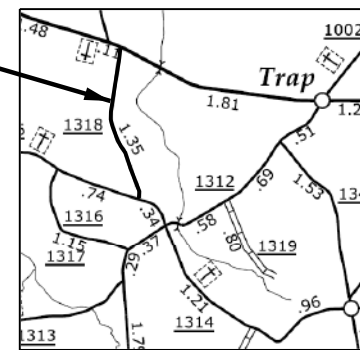
MAP 3



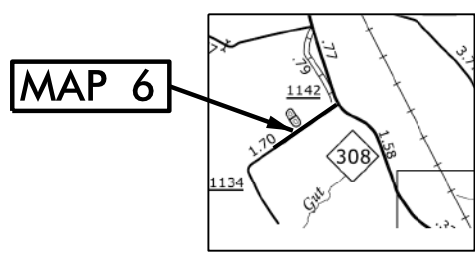
MAP 5



MAP 2



MAP 4



MAP 6

**NTS**

**PROJECT LENGTH**

LENGTH OF ROADWAY PROJECT MAP 1 =	3.12 MI.
LENGTH OF ROADWAY PROJECT MAP 2 =	2.00 MI.
LENGTH OF ROADWAY PROJECT MAP 3 =	0.82 MI.
LENGTH OF ROADWAY PROJECT MAP 4 =	1.32 MI.
LENGTH OF ROADWAY PROJECT MAP 5 =	2.42 MI.
LENGTH OF ROADWAY PROJECT MAP 6 =	0.78 MI.

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
 113 Airport Dr., Edenton NC, 27932

2012 STANDARD SPECIFICATIONS

LETTING DATE:  
 MARCH 25, 2015

W.B. HOBBS, P.E.  
 DIVISION PROJECT MANAGER

C.E. SLACHTA  
 DIVISION PROPOSALS ENGINEER

**DIVISION OF HIGHWAYS**  
 STATE OF NORTH CAROLINA

05/08/99

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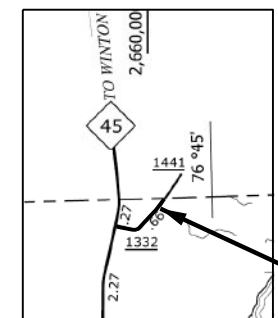
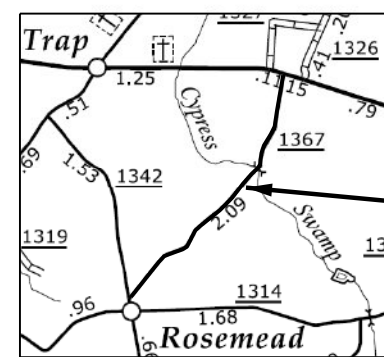
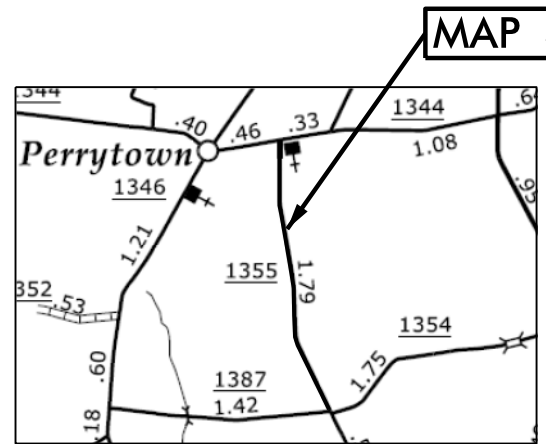
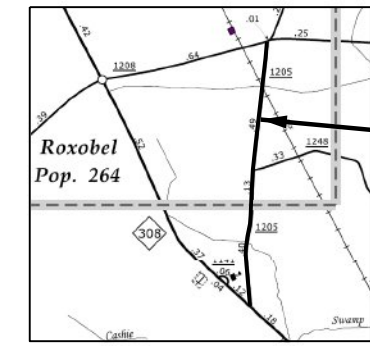
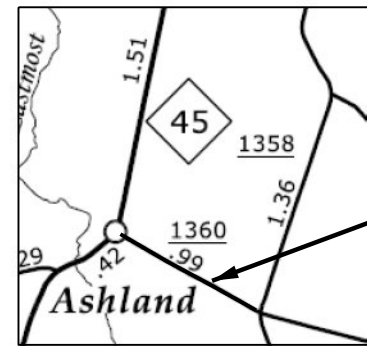
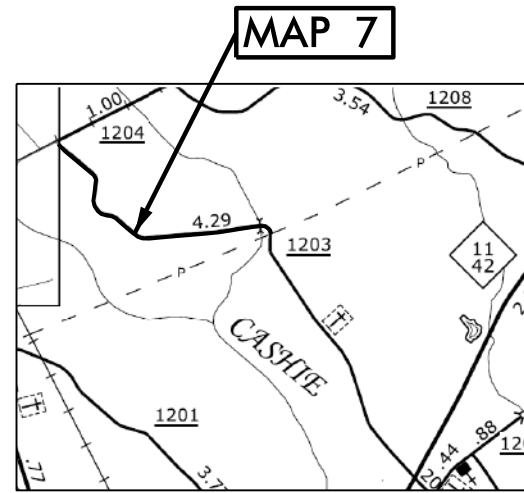
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BERTIE COUNTY**

LOCATION: MAP 7 SR 1203 FROM 2.3 MI WEST OF NC 11 TO SR 1204  
 MAP 8 SR 1355 FROM SR 1344 TO SR 1354  
 MAP 9 SR 1360 FROM NC 45 TO SR 1358  
 MAP 10 SR 1367 FROM SR 1342 TO NC 42  
 MAP 11 SR 1205 FROM SR 1208 TO NC 308  
 MAP 12 SR 1332 FROM NC 45 TO HERTFORD CL

TYPE OF WORK: ASPHALT SURFACE TREATMENT & RESURFACING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	ICR.20081.74, ETC.	2	9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
1CR.20081.80		MAP 7	
1CR.20081.81		MAP 8	
1CR.20081.82		MAP 9	
1CR.20081.83		MAP 10	
1CR.20081.84		MAP 11	
1CR.20081.85		MAP 12	



**NTS**

PROJECT LENGTH	
LENGTH OF ROADWAY PROJECT MAP 7	= 2.13 MI.
LENGTH OF ROADWAY PROJECT MAP 8	= 1.82 MI.
LENGTH OF ROADWAY PROJECT MAP 9	= 0.93 MI.
LENGTH OF ROADWAY PROJECT MAP 10	= 2.08 MI.
LENGTH OF ROADWAY PROJECT MAP 11	= 1.00 MI.
LENGTH OF ROADWAY PROJECT MAP 12	= 0.79 MI.

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
 113 Airport Dr., Edenton NC, 27932

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2012 STANDARD SPECIFICATIONS

LETTING DATE:  
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 STATE OF NORTH CAROLINA

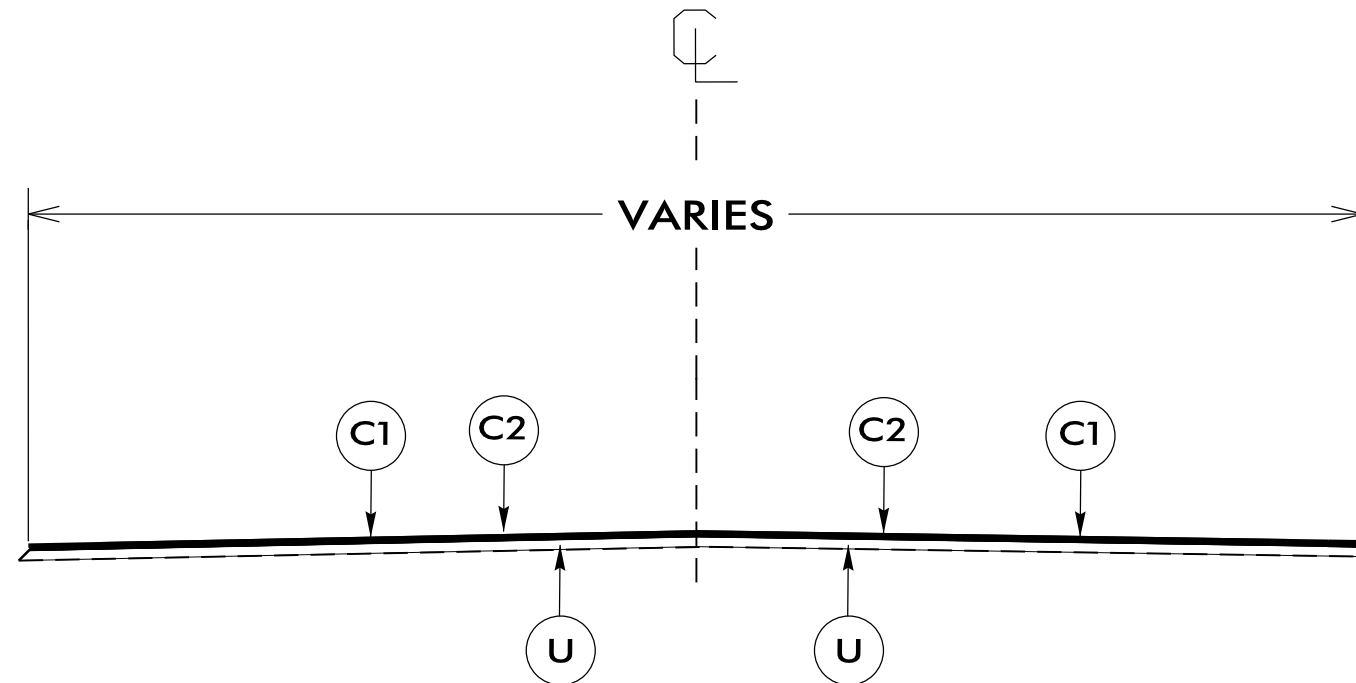
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. ASPHALT SURFACE TREATMENT, DOUBLE SEAL, AT AN APPLICATION RATE TO BE DETERMINED BY FIELD CONDITIONS IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS
U	EXISTING PAVEMENT.

PROJECT REFERENCE NO.	SHEET NO.
1CR.20081.74, ETC.	3 of 9

NOTES:

- \*ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII., OR AS DIRECTED BY THE ENGINEER
- \*EDGES, PAVEMENT WIDENING, INTERSECTIONS, AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES
- \*SHOULDER RECONSTRUCTION TO BE PERFORMED BY OTHERS
- \*PAVEMENT MARKINGS TO BE PERFORMED BY OTHERS
- \*ASPHALT SURFACE TREATMENT, DOUBLE SEAL, TO BE INSTALLED PRIOR TO RESURFACING WITH SF9.5A MIX
- \*ASPHALT SURFACE TREATMENT, DOUBLE SEAL, CONSISTS OF TWO LAYERS OF TREATMENT:  
 BOTTOM LAYER CONSISTS OF EMULSIFIED ASPHALT, GRADE CRS-2L AT A RATE OF APPROX 0.25 ± GAL/SY AND A LAYER OF 78M AGGREGATE AT A RATE OF APPROX. 16 ± LBS/SY.  
 TOP LAYER CONSISTS OF EMULSIFIED ASPHALT, GRADE CRS-2L AT A RATE OF APPROX 0.22 ± GAL/SY AND A LAYER OF BLOTTING SAND (1S) AT A RATE OF APPROX. 10 ± LBS/SY.
- \*ASPHALT SURFACE TREATMENT SHALL BE ALLOWED TO SET UP FOR A MINIMUM 10 DAYS BEFORE ANY OTHER WORK CAN BE PERFORMED
- \*ON MAP 1 (SR 1511), ASPHALT SURFACE TREATMENT TO ONLY BE INSTALLED FROM EX. JOINT AT MP 4.2 TO APPROX. 4500' SOUTHEAST
- \*ON MAP 3 (SR 1219), ASPHALT SURFACE TREATMENT TO ONLY BE INSTALLED FROM SR 1222 TO SR 1225
- \*BRIDGE NO. 9 ON MAP 3 TO BE MILLED 1.75" AND RESURFACED WITH AST & 1.25" OF MIX SF9.5A.



**TYPICAL SECTION NO. 1**

USE WITH MAPS 1, 3-5, 7, 10, & 12

NTS

25-FEB-2015 10:03 AM C:\Users\jgibson\Documents\2015-2016\1\Pre-Bid Documents\0800227 Plans (Plan Sheets 1-5).dgn

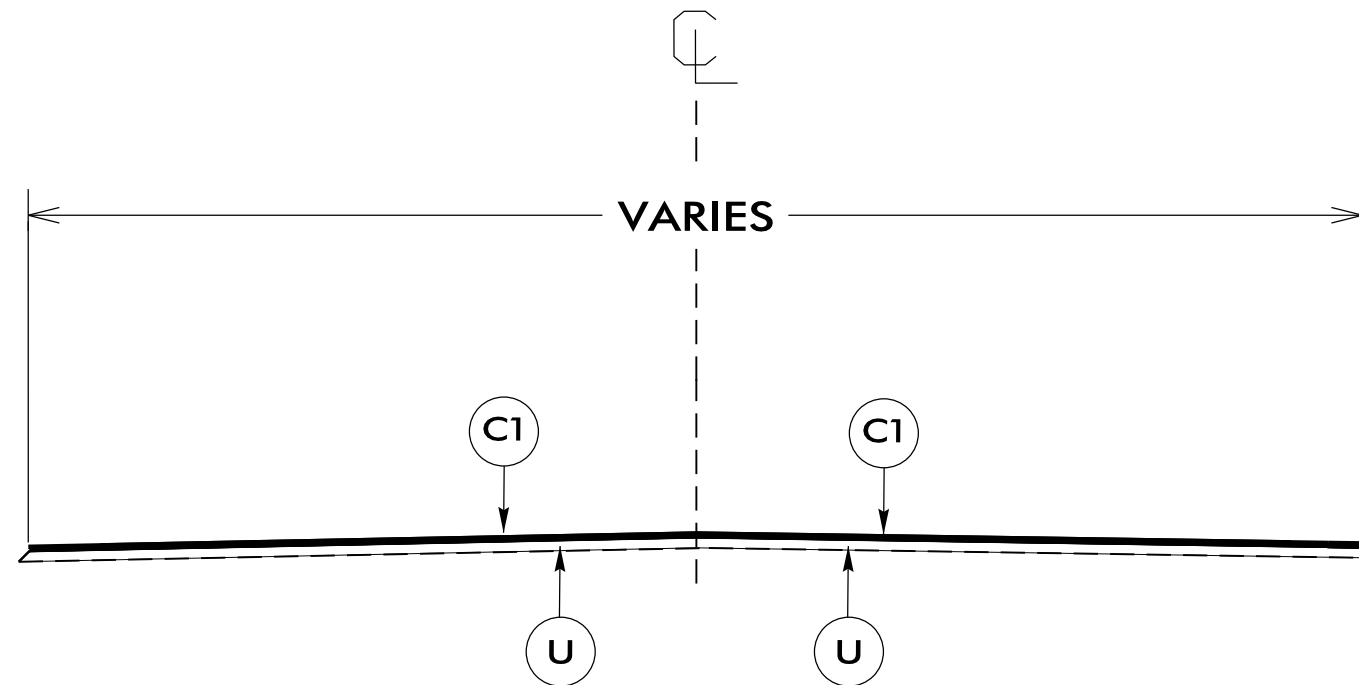
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
U	EXISTING PAVEMENT.

PROJECT REFERENCE NO.	SHEET NO.
1CR.20081.74, ETC.	4 of 9

NOTES:

- \*ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII., OR AS DIRECTED BY THE ENGINEER
- \*EDGES, PAVEMENT WIDENING, INTERSECTIONS, AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES
- \*SHOULDER RECONSTRUCTION TO BE PERFORMED BY OTHERS
- \*PAVEMENT MARKINGS TO BE PERFORMED BY OTHERS



**TYPICAL SECTION NO. 2**

**USE WITH MAPS 2, 8, 9, & 11**

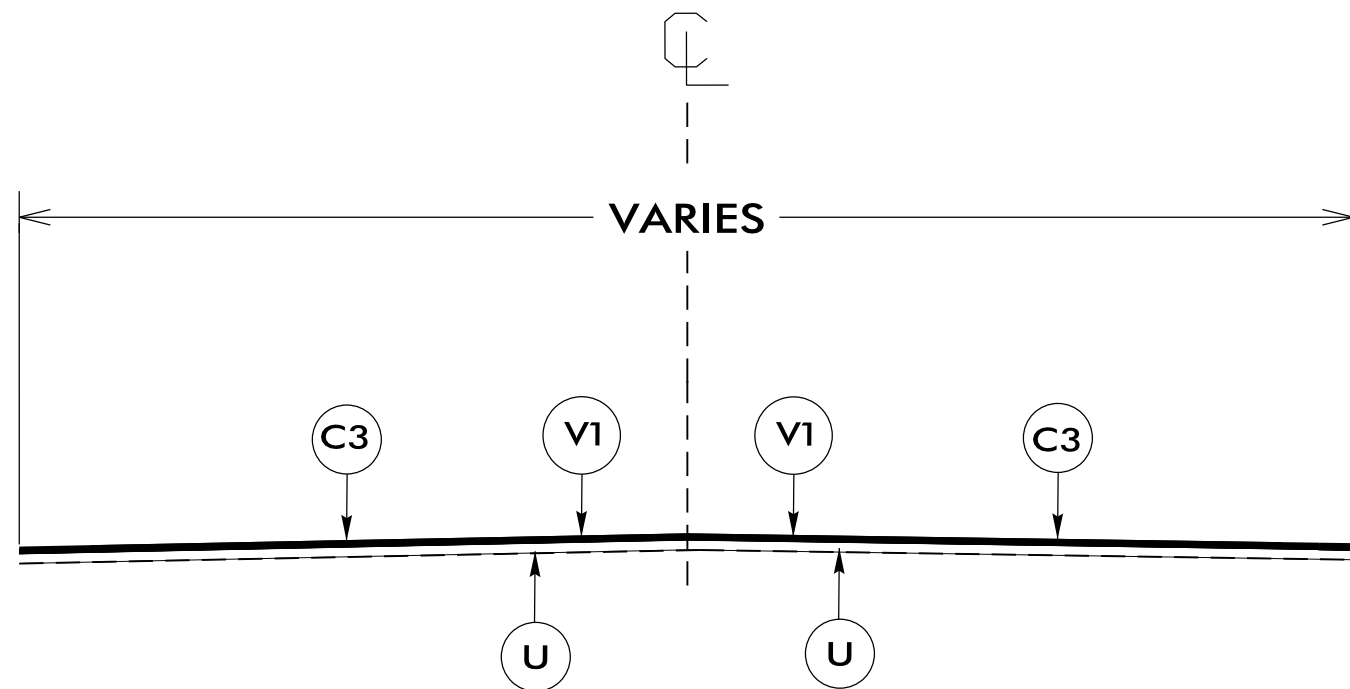
NTS

P A V E M E N T S C H E D U L E

C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	MILLING BITUMINOUS PAVEMENT. 1.5" IN DEPTH.
U	EXISTING PAVEMENT.

NOTES:

- \*ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII., OR AS DIRECTED BY THE ENGINEER
- \*EDGES, PAVEMENT WIDENING, INTERSECTIONS, AND BRIDGE FLARES ARE INCLUDED IN THE SUMMARY OF QUANTITIES
- \*SHOULDER RECONSTRUCTION TO BE PERFORMED BY OTHERS
- \*PAVEMENT MARKINGS TO BE PERFORMED BY OTHERS



**TYPICAL SECTION NO. 3**

**USE WITH MAP 6**

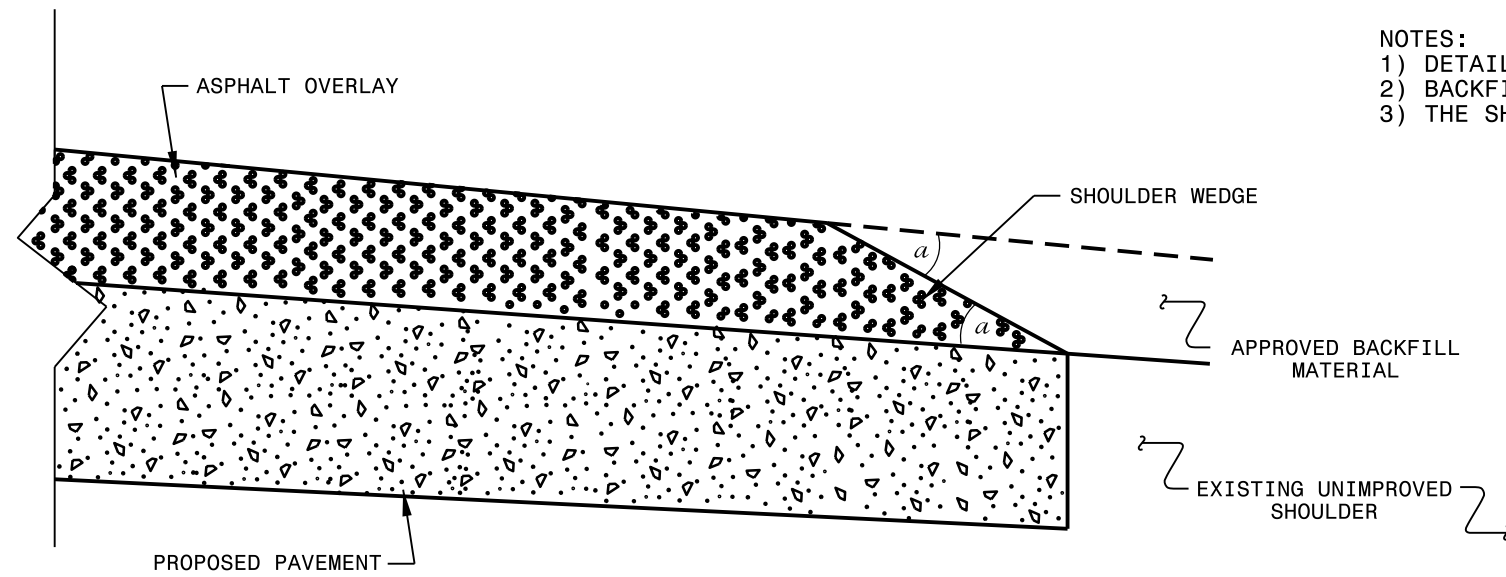
NTS

PROJECT NO.	SHEET NO.	TOTAL NO.
1CR.20081.74, etc.	6	9

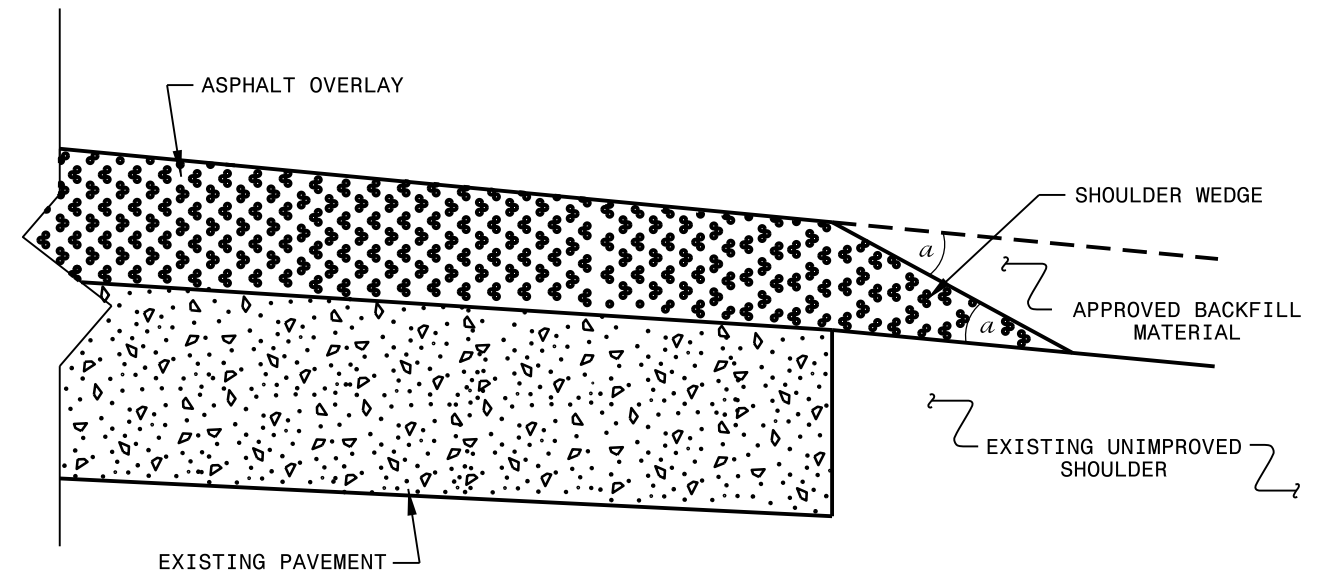
## SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	MOBILIZATION LS	1½" MILLING SY	INCIDENTAL MILLING SY	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	ASPHALT BINDER FOR PLANT MIX TONS	ASPHALT SURFACE TREATMENT DOUBLE SEAL SY	EMULSION FOR ASPHALT SURFACE TREATMENT GAL	TEMPORARY TRAFFIC CONTROL LS
1CR.20081.74	Bertie	1	SR 1511	FROM SR 1510 TO EXISTING JOINT AT MP 4.2	1	2	2WU	NO	NO	3.12	20	1		130		2,629	176	9,550	4,489	1
1CR.20081.75	Bertie	2	SR 1366	FROM SR 1365 TO MP 2	2	2	2WU	NO	NO	2.00	19	*		85		1,654	111			*
1CR.20081.76	Bertie	3	SR 1219	FROM SR 1222 TO NC 305	1	2	2WU	NO	NO	0.82	20	*		325		754	50	7,040	3,309	*
1CR.20081.77	Bertie	4	SR 1318	FROM NC 42 TO SR 1316	1	2	2WU	NO	NO	1.32	18	*		80		1,022	68	13,950	6,557	*
1CR.20081.78	Bertie	5	SR 1108	FROM SR 1124 TO BRIDGE #85	1	2	2WU	NO	NO	2.42	20	*		150		2,093	140	28,400	13,348	*
1CR.20081.79	Bertie	6	SR 1134	FROM NC 308 TO END PAVEMENT	3	2	2WU	NO	NO	0.78	24	*	11,000		1,077		65			*
1CR.20081.80	Bertie	7	SR 1203	2.3 MI WEST OF NC 11 TO SR 1204	1	2	2WU	NO	NO	2.13	18	*		80		1,680	113	22,500	10,575	*
1CR.20081.81	Bertie	8	SR 1355	FROM SR 1344 TO SR 1354	2	2	2WU	NO	NO	1.82	19	*		80		1,511	101			*
1CR.20081.82	Bertie	9	SR 1360	FROM NC 45 TO SR 1358	2	2	2WU	NO	NO	0.93	20	*		90		798	53			*
1CR.20081.83	Bertie	10	SR 1367	FROM SR 1342 TO NC 42	1	2	2WU	NO	NO	2.08	19	*		80		1,795	120	23,190	10,899	*
1CR.20081.84	Bertie	11	SR 1205	FROM SR 1208 TO NC 308	2	2	2WU	NO	NO	1.00	18	*		120		791	53			*
1CR.20081.85	Bertie	12	SR 1332	FROM NC 45 TO HERTFORD CL	1	2	2WU	NO	NO	0.79	18.5	*		70		624	42	8,550	4,019	*
<b>TOTAL</b>										<b>19.20</b>		<b>1</b>	<b>11,000</b>	<b>1,290</b>	<b>1,077</b>	<b>15,351</b>	<b>1,092</b>	<b>113,180</b>	<b>53,196</b>	<b>1</b>

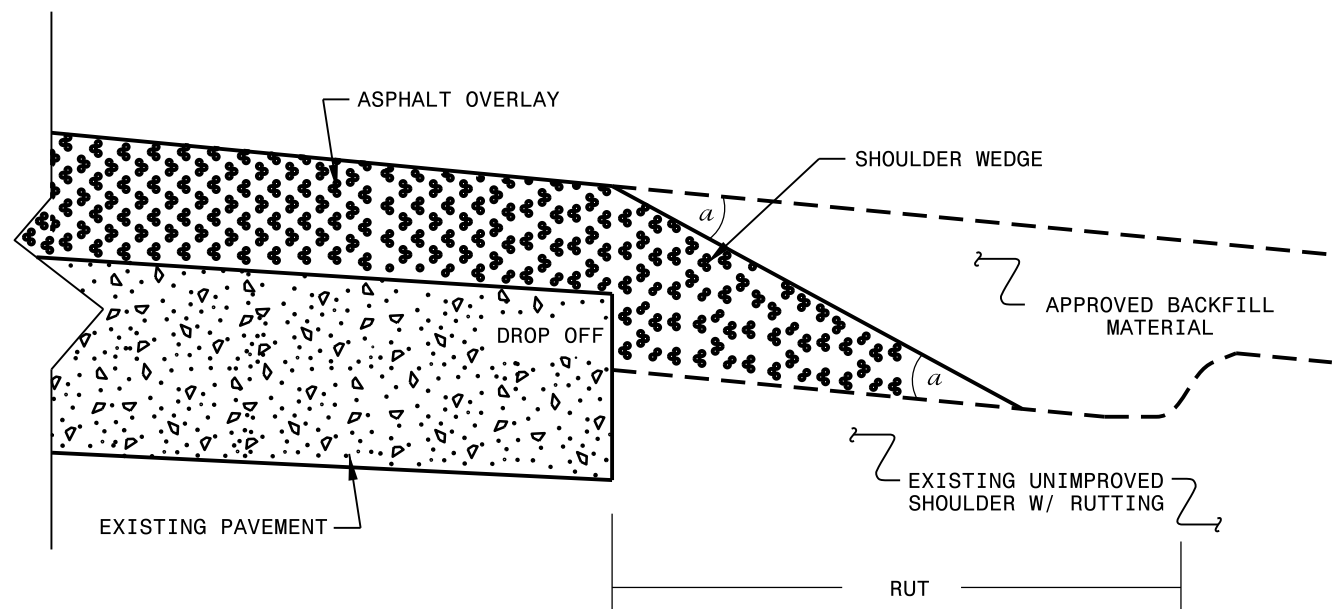
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**SHOULDER WEDGE DETAIL**  
(Resurfacing Projects w/ Widening or  
with Existing Paved Shoulder having no dropoffs)



**SHOULDER WEDGE DETAIL**  
(Resurfacing Projects w/ NO Widening)



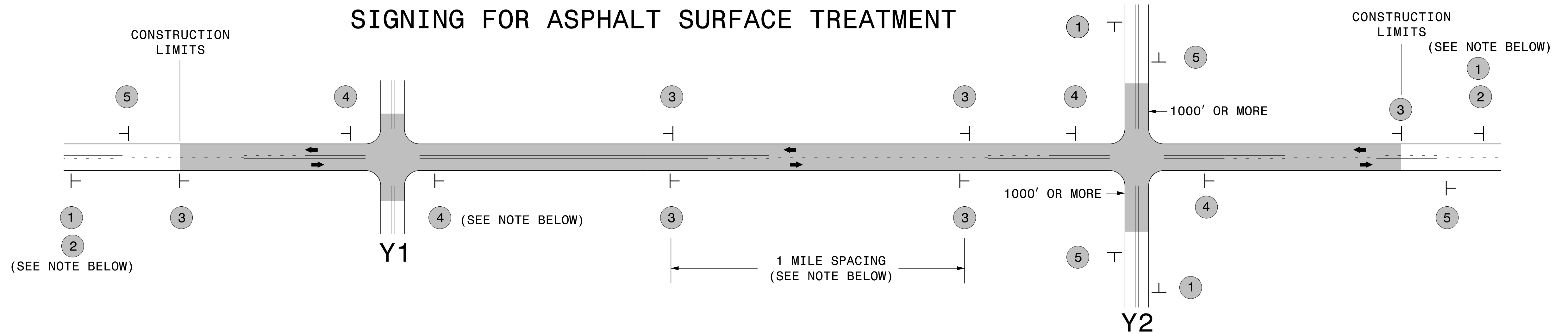
**SHOULDER WEDGE DETAIL**  
(Resurfacing Adjacent to  
Rutted Shoulder)

- 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


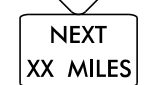


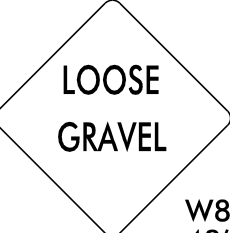

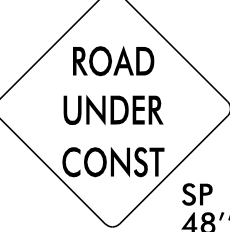
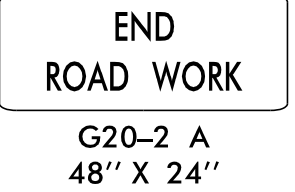
## SIGNING FOR ASPHALT SURFACE TREATMENT

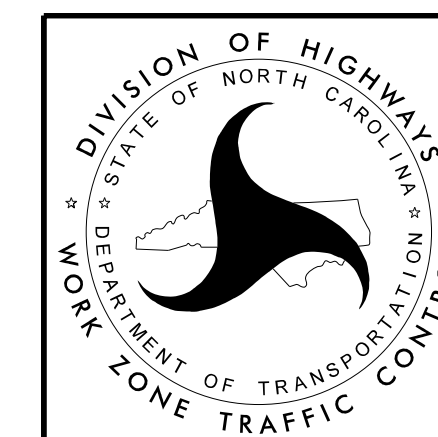


LEGEND	
	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

### MAINLINE (-L-) SIGNING

### -Y- LINE SIGNING

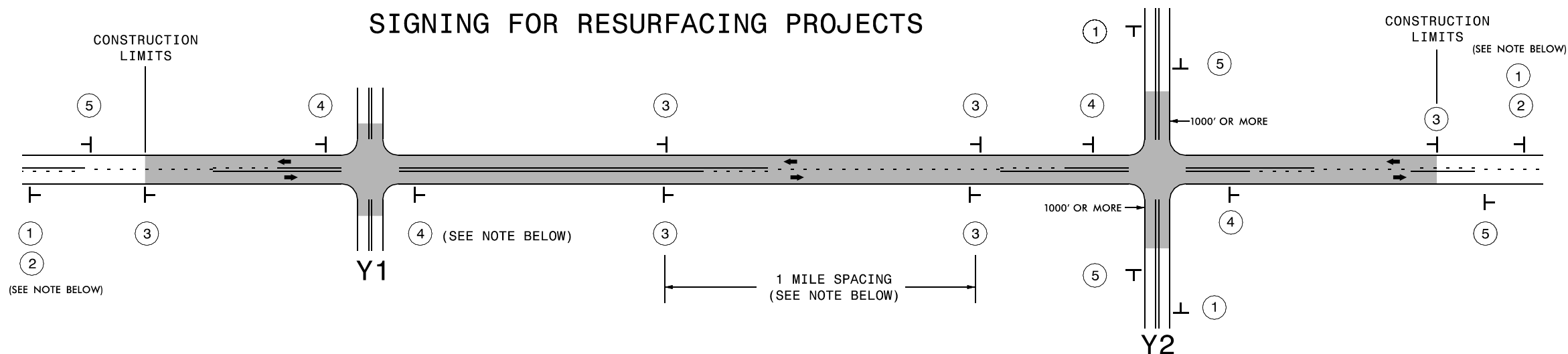
SIGNING NOTES AND PLACEMENT PER DIRECTION		
1 2	  <p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>	<p style="text-align: center;"><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; align-items: center;"> <div style="text-align: center;">  <p>W20-1 48" X 48"</p> </div> <div style="text-align: center;">  <p>W20-7 A 48" X 48"</p> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
3	  <p>ALTERNATE THE FOLLOWING TWO SIGNS: STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT".</p> <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>	
4	 <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>	
5	 <p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	



**ADVANCE WARNING SIGNS  
FOR  
ASPHALT SURFACE TREATMENTS  
2 LANE ROADWAYS**



# SIGNING FOR RESURFACING PROJECTS



LEGEND	
⊥	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	MAINLINE (-L-) SIGNING		-Y- LINE SIGNING	
	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"> <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;">             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. PLACED 250' IN ADVANCE OF FLAGGER.</p>
	②	 W7-3aP 24" X 18"	#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)	
	③	 SP 13107 48" X 48"	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.	
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.		
⑤	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		

8/8/2013  
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RESURFACING  
 ADVANCE WARNING SIGNS  
 FOR  
 RURAL AND SUBURBAN  
 2 LANE ROADWAYS