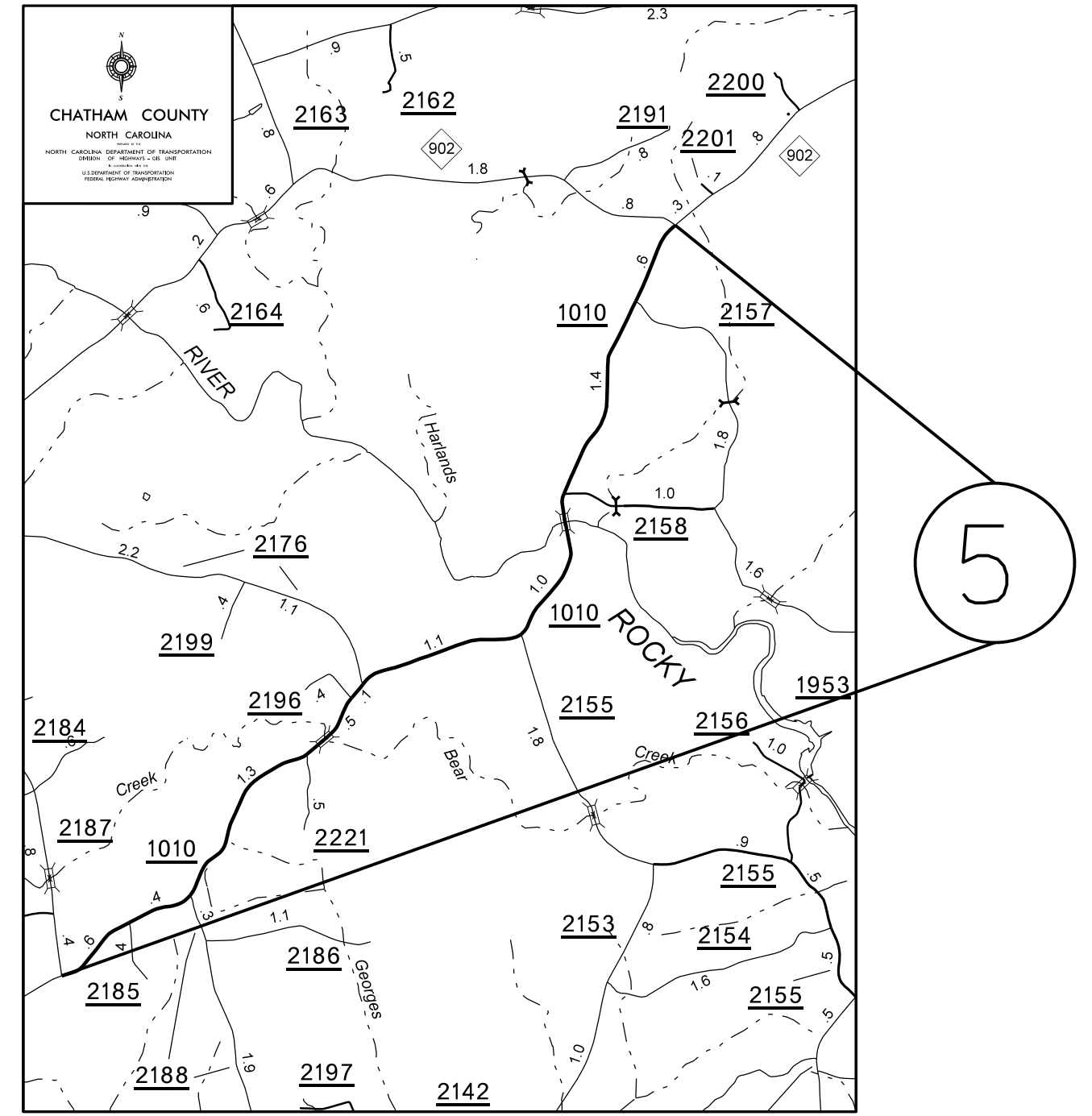
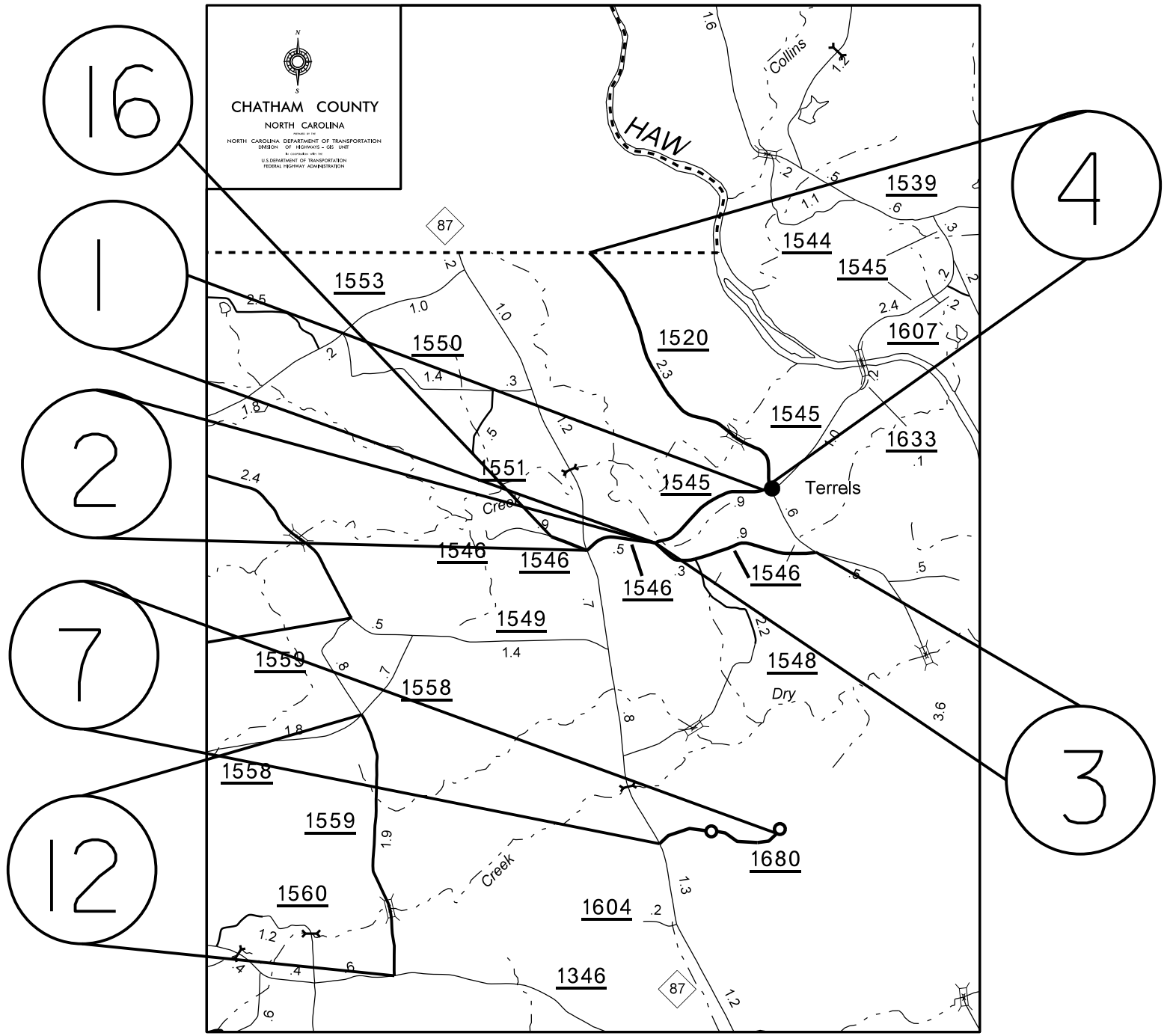


CHATHAM COUNTY
SECONDARY RESURFACING MAP

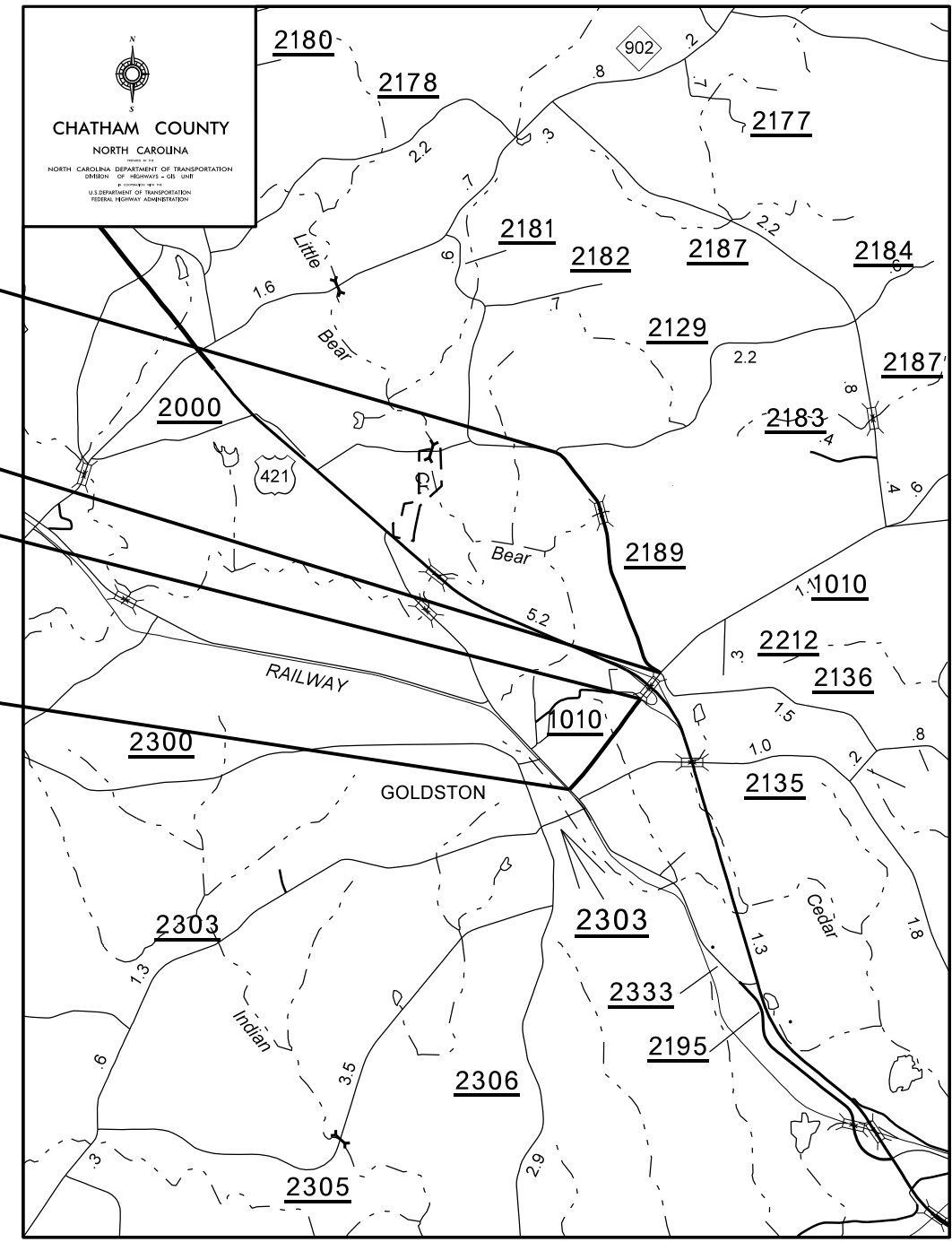
15-JAN-2021 10:28 AM
 ref: 2021\Chatham-Submittal\Chatham-Project\Revised\Chatham_Map_Typ_1.dgn
 20210118 10:55:51

MAPS 1,2,3,4,7,12,16

MAP 5



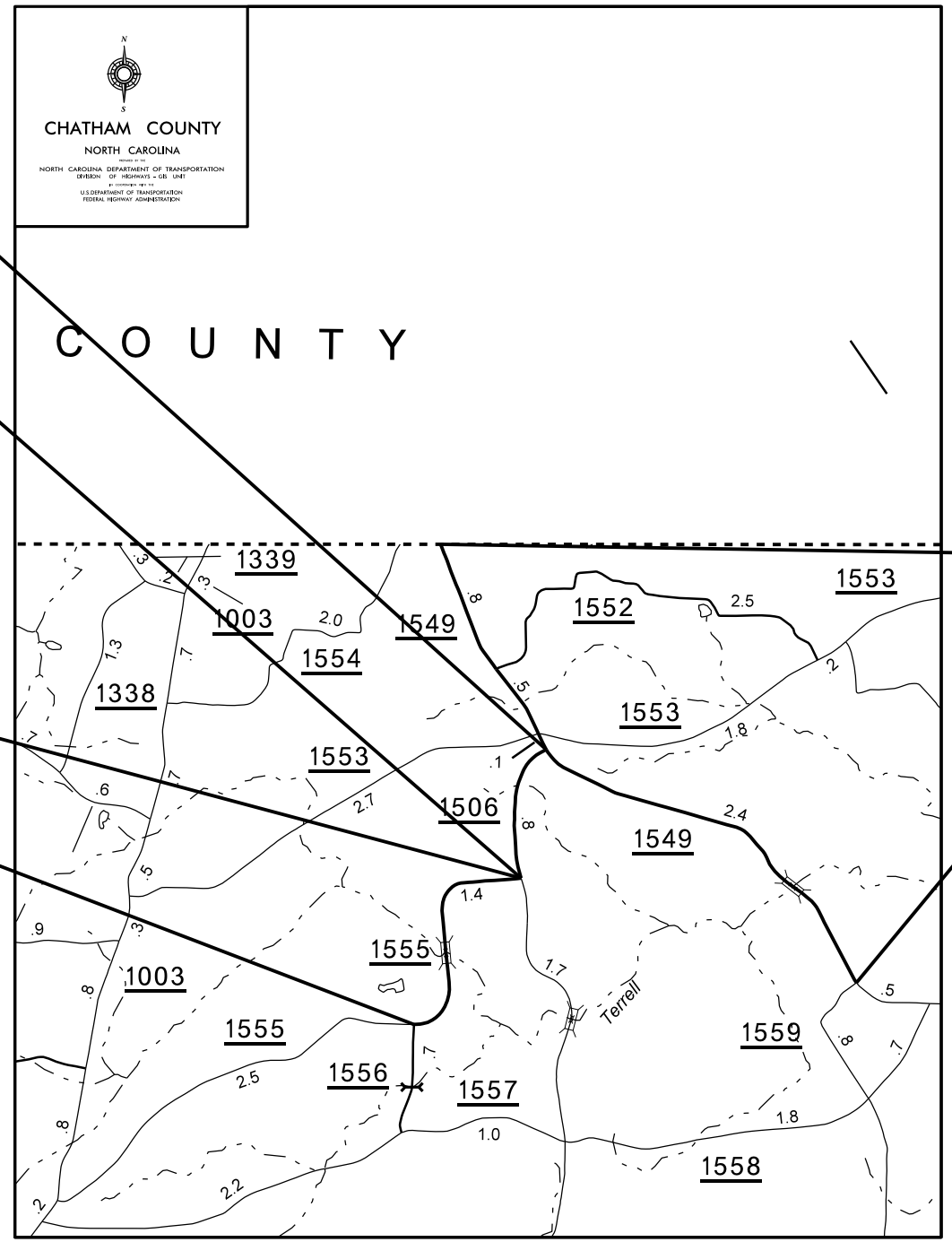
MAPS 6,9



9

6

MAPS 10,13,14



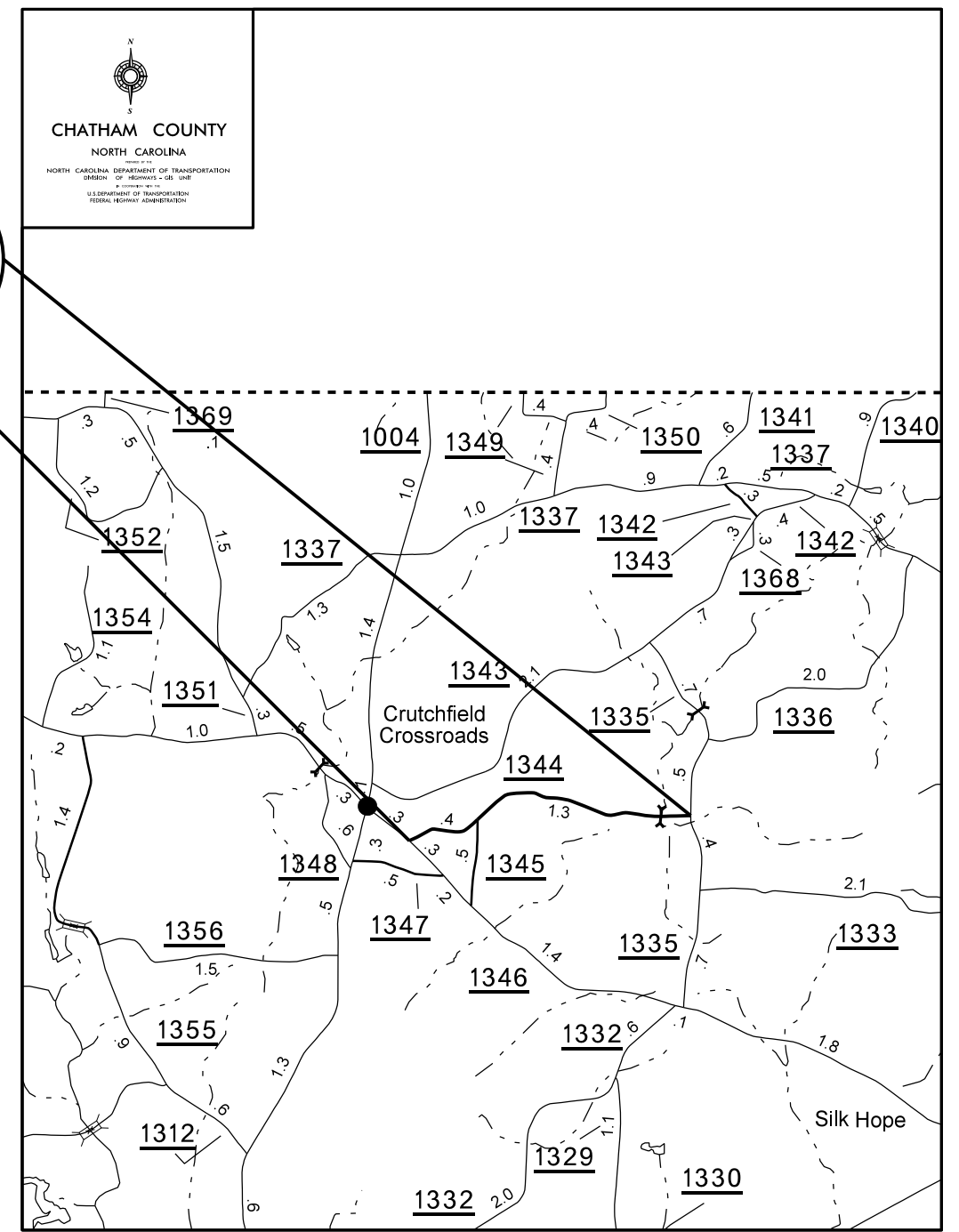
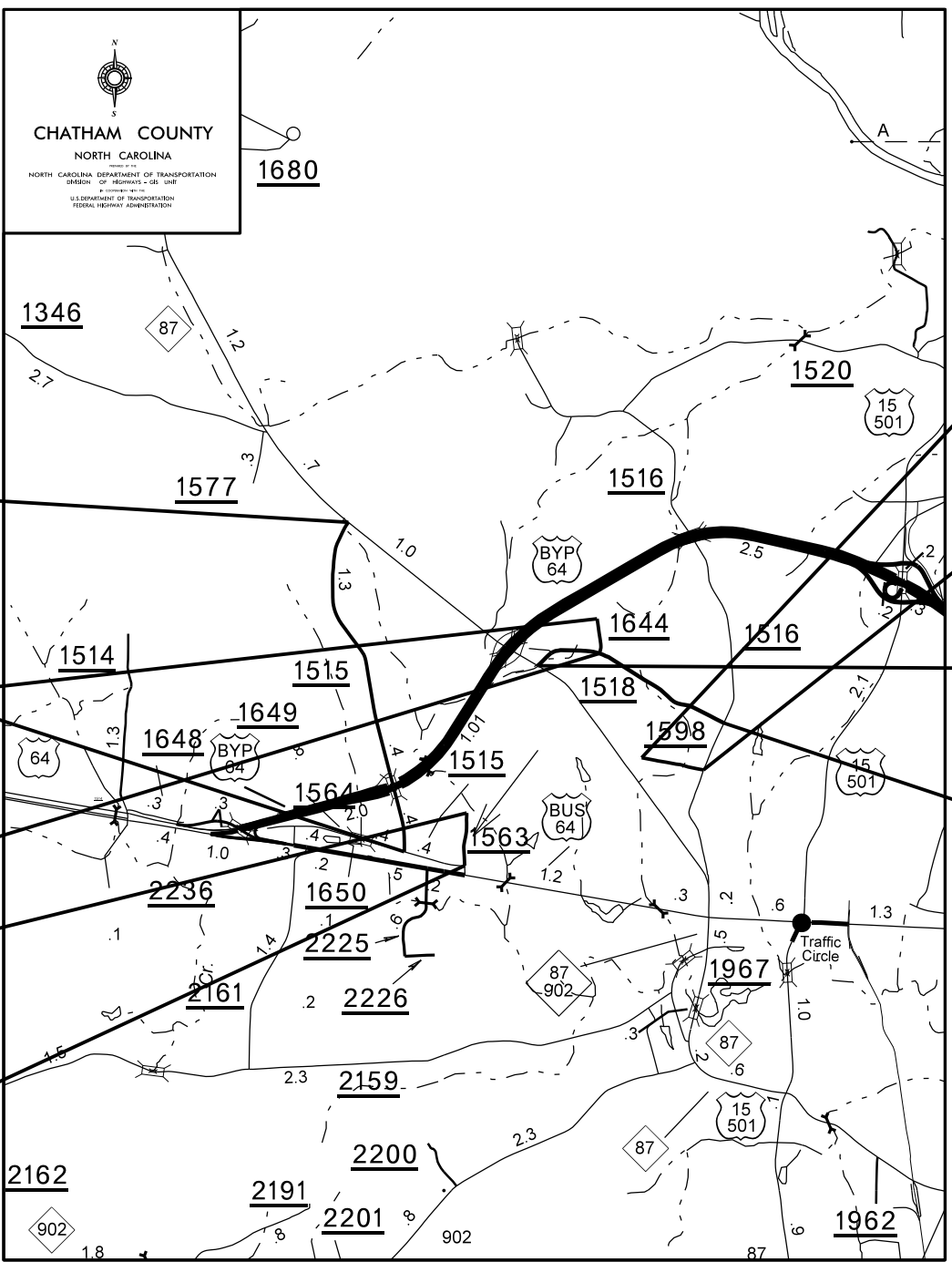
14

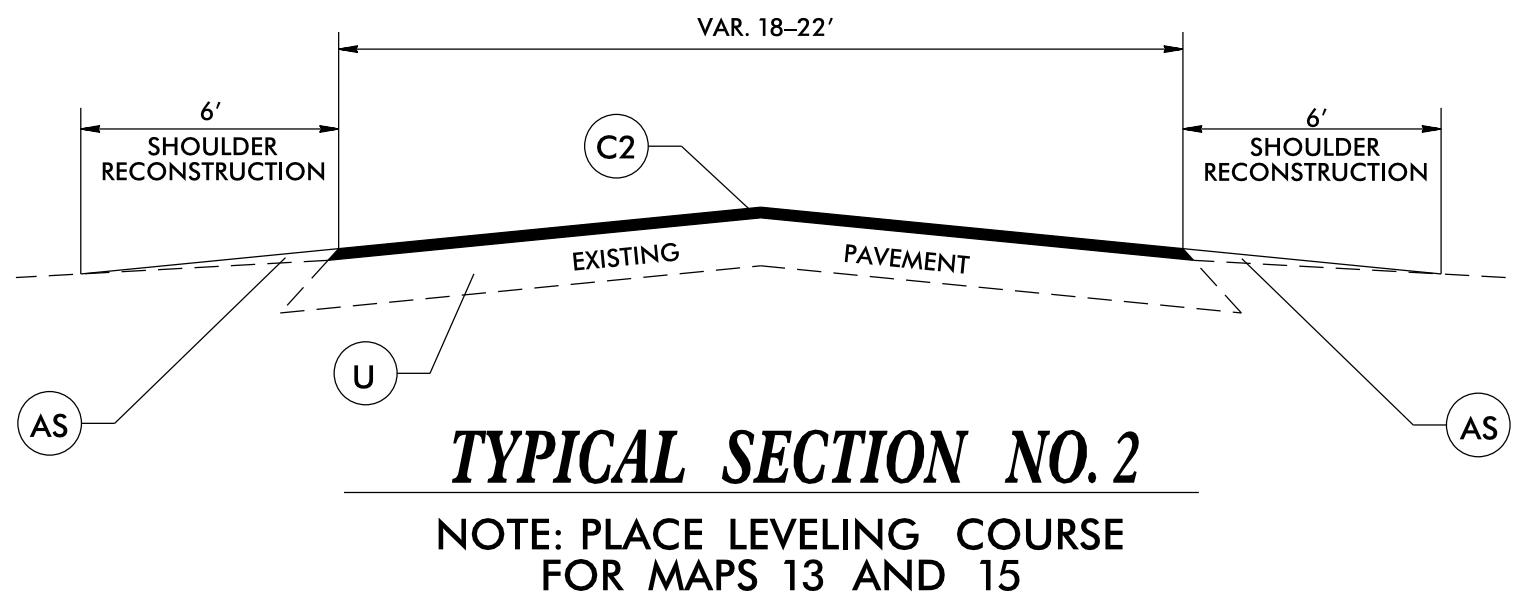
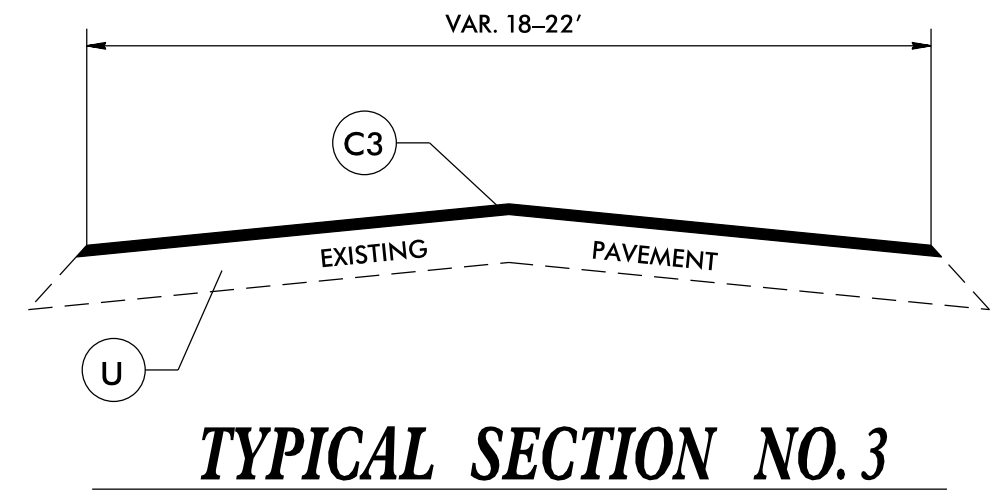
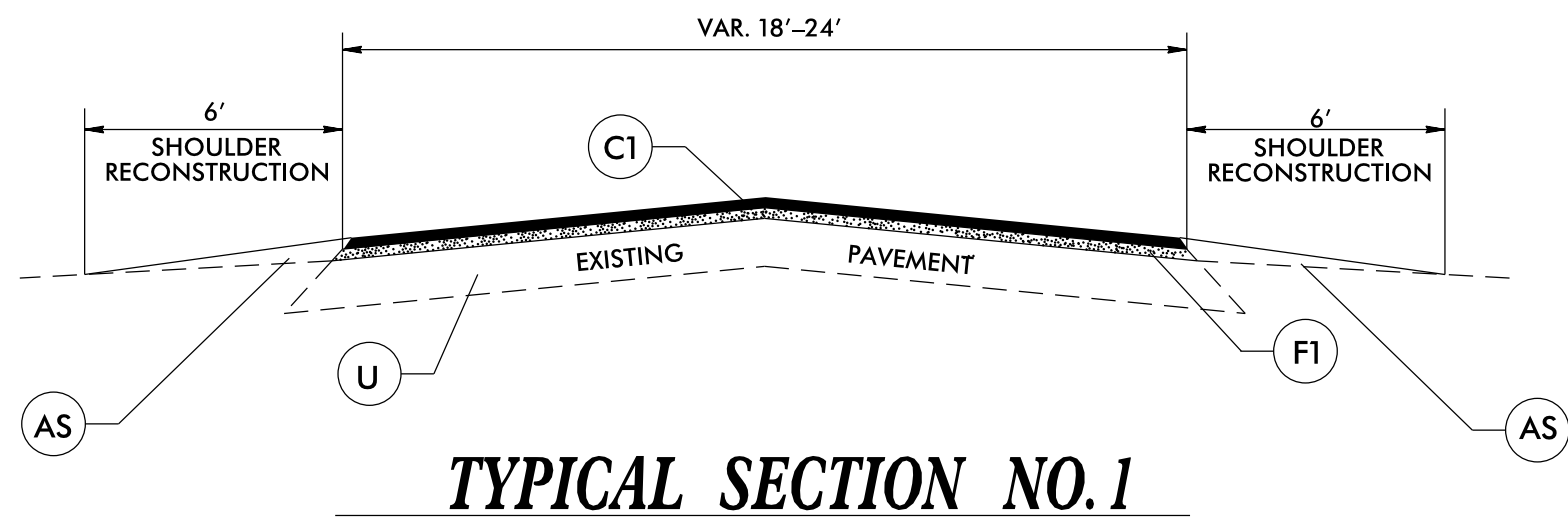
13

10

MAPS 8,11,17,18,19

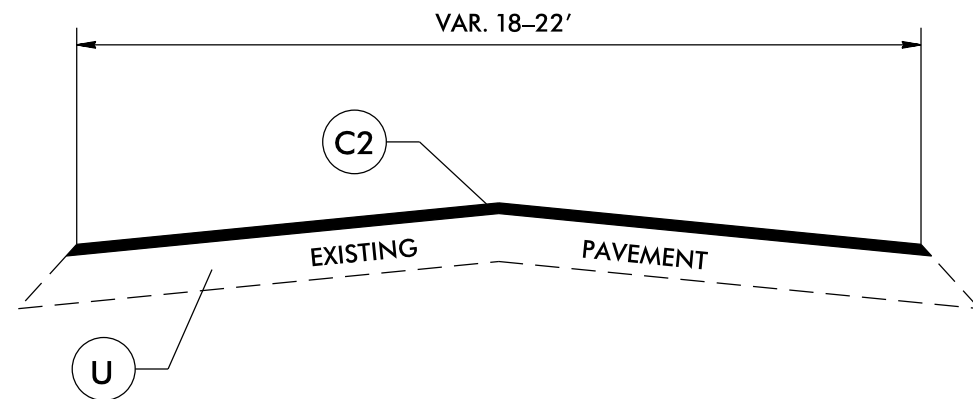
MAP 15



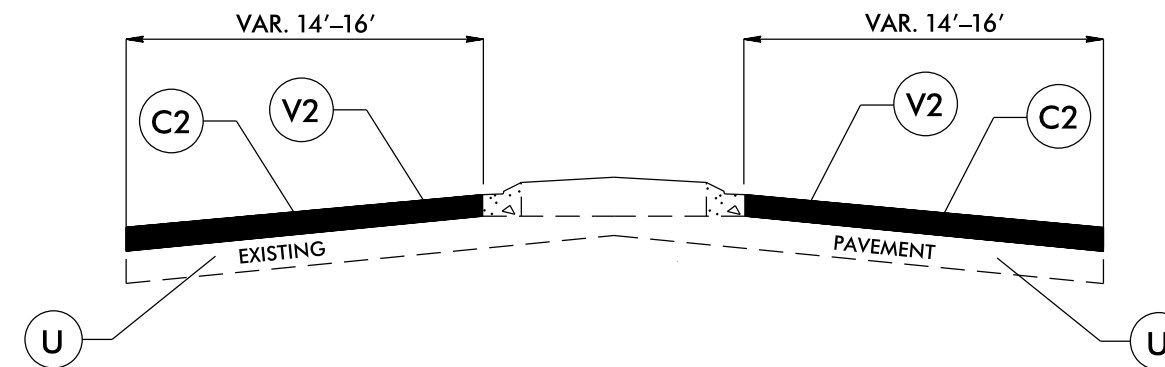


PAVEMENT SCHEDULE	
AS	AGGREGATE SHOULDER BORROW
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C3	PROP. APPROX. 0.75" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 82.5 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #67 STONE
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH
V2	MILLING 1.25" IN DEPTH

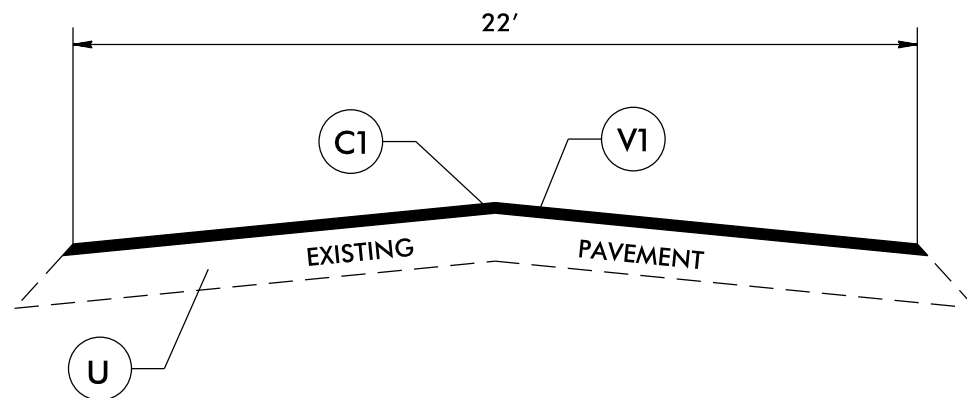
040397
03-FEB-2021 09:50
C:\Users\jgallagher\OneDrive\Documents\2021\Chatham-Submittal\Chatham-Project\Revised\Chatham_Map_Typ_1.dgn



TYPICAL SECTION NO. 4



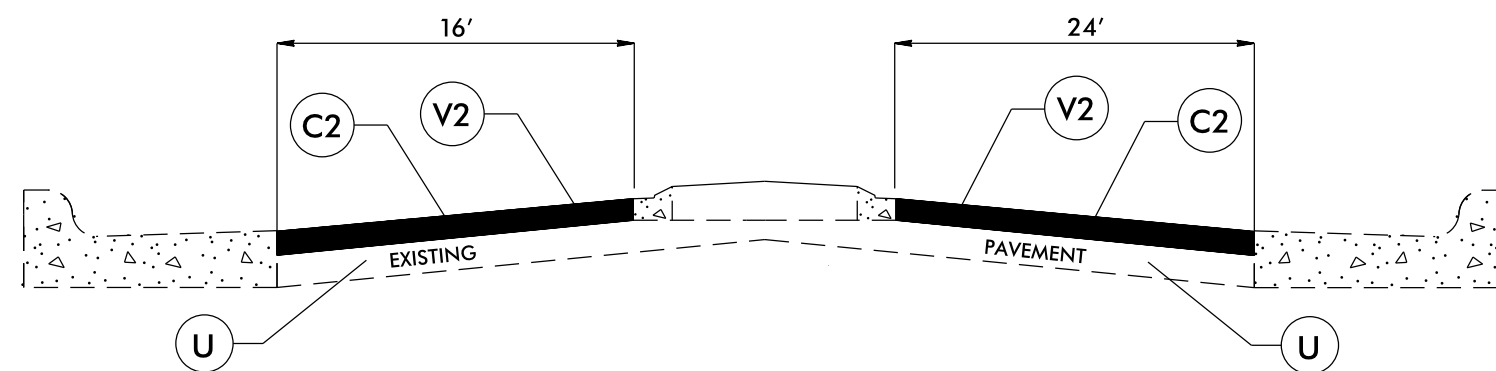
TYPICAL SECTION NO. 6



TYPICAL SECTION NO. 5

PAVEMENT SCHEDULE

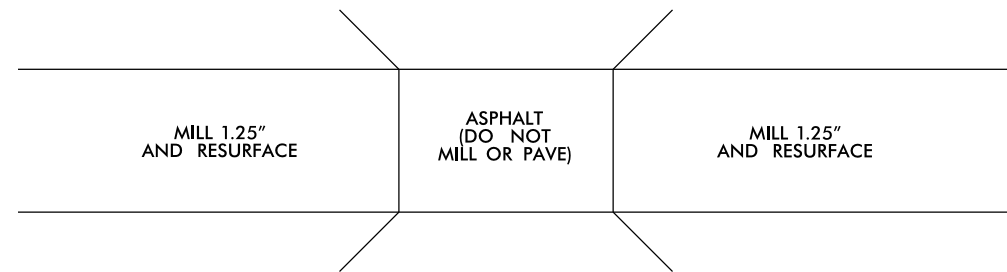
AS	AGGREGATE SHOULDER BORROW
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C3	PROP. APPROX. 0.75" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 82.5 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #67 STONE
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH
V2	MILLING 1.25" IN DEPTH



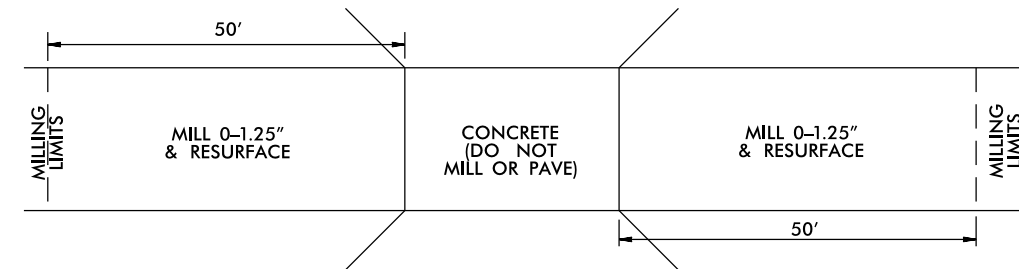
TYPICAL SECTION NO. 7

PAVEMENT SCHEDULE	
AS	AGGREGATE SHOULDER BORROW
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C3	PROP. APPROX. 0.75" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 82.5 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #67 STONE
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH
V2	MILLING 1.25" IN DEPTH

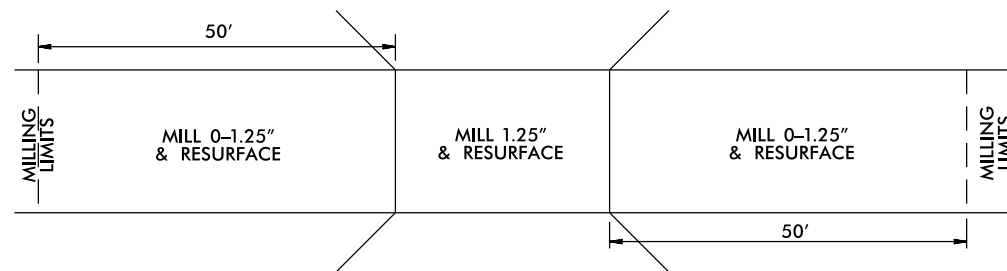
PAVEMENT TIE-IN AND PATCHING DETAILS



BRIDGE DRAWING FOR SR 1010
USE FOR MAP 5

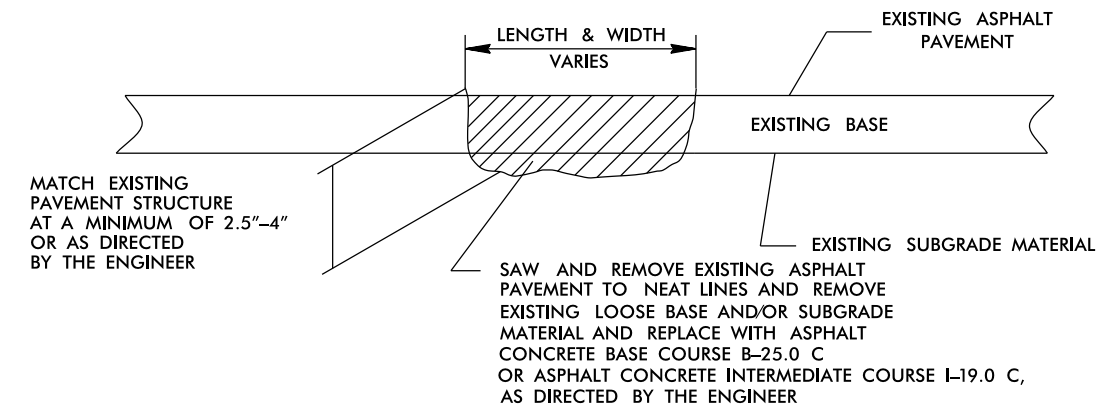


BRIDGE DRAWING FOR SR 1549,1515
USE FOR MAP 10*,11
*TIE TO NEW CONSTRUCTION JOINTS AT BRIDGE #59



BRIDGE DRAWING FOR SR 1520,2189,1559,1555
USE FOR MAP 4,9,12,13

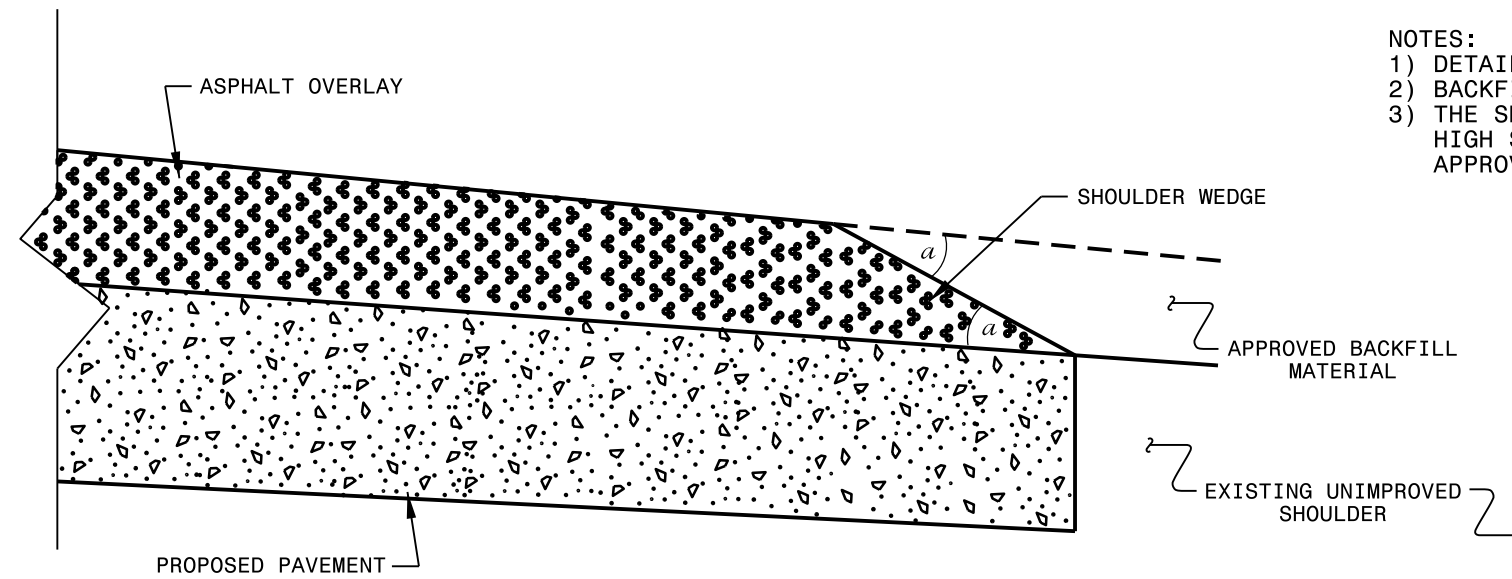
DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING



NOTE: MAPS WITH MILLING SHALL BE PATCHED AFTER MILLING IS COMPLETE

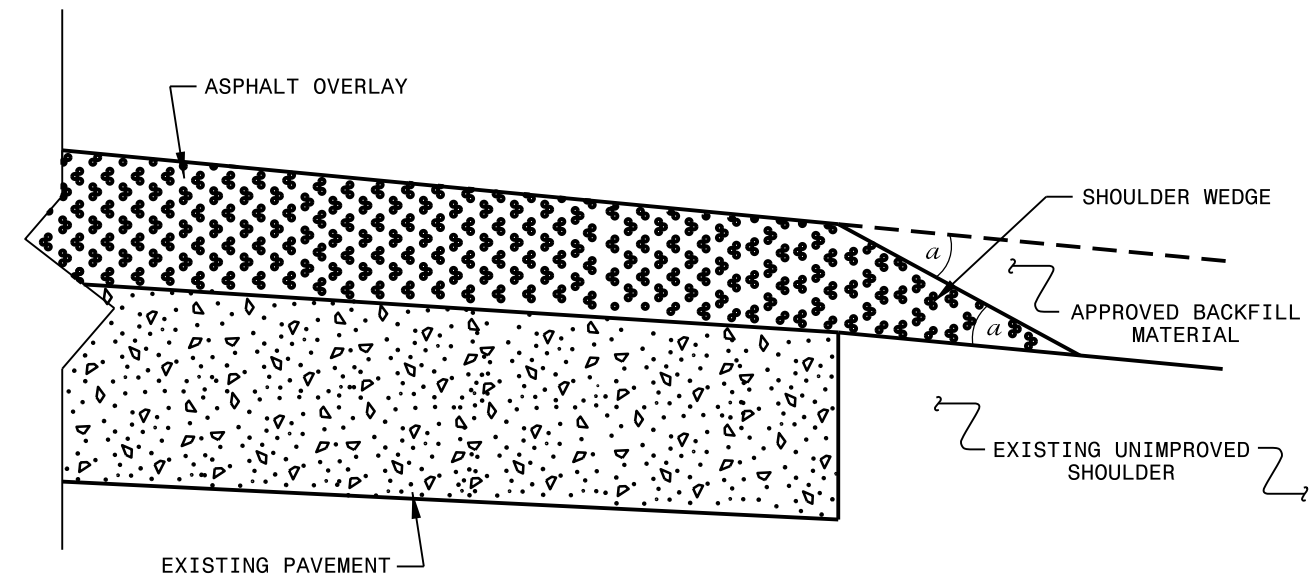
NOTES:

- 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, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



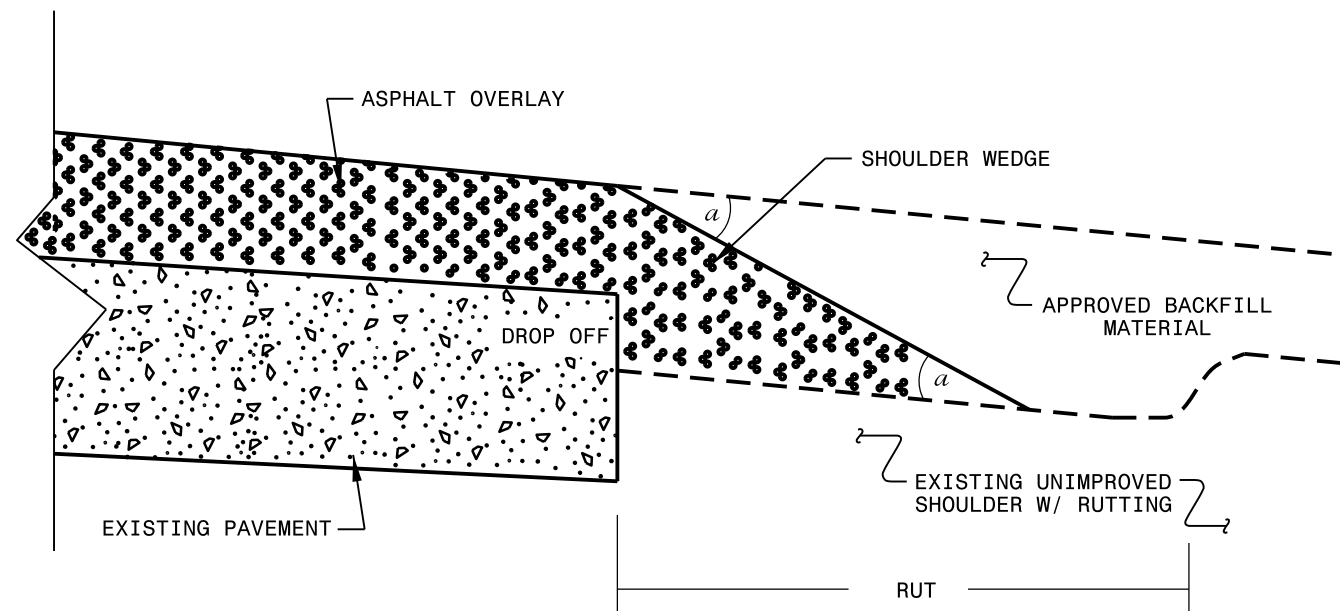
SHOULDER WEDGE DETAIL

(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: 2/2/16	
CHECKED BY:	DATE:	
FILE SPEC.: szusr/details/stand/shoulderwedgedetail.dgn		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANS	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGT		INC. STONE BASE	SH. RECONSTRUCTION	ASB	1.5" MILLING	1.25" MILLING	INC. MILLING	SURFACE COURSE, S9.5B	LEVELING COURSE, S9.5B	SURFACE COURSE, S4.75A	ASPHALT BINDER FOR PLANT MIX	PATCHING EXI. PAVEMENT	AST, MAT-COAT, #67 STONE	EMULSION FOR AST	VACUUM TRUCK																
									MI	FT															TONS	SMI	TON	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	TONS	SY	GAL	WK
		1	SR 1545 (CHICKEN BRIDGE RD)	FROM SR 1546 (MARSHALL RD) TO PVT. JT. 160LF S OF SR 1520 (OLD GRAHAM RD)	2	2	NO	NO	0.09	20		0.18	19.80			167	80		5	100																				
		2	SR 1546 (CHICKEN BRIDGE)	FROM SR 1545 MARSHALL RD TO NC 87	2	2	NO	NO	0.51	20		1.02	112.20			111	455		30	100																				
		3	SR 1546 (MARSHALL RD)	FROM SR 1520 (OLD GRAHAM RD) TO SR 1545 (CHICKEN BRIDGE RD)	2	2	NO	NO	1.2	20		2.40	264.00			167	1,070		72	150																				
		4	SR 1520 (MT OLIVE CH RD)	FROM SR 1546 (CHICKEN BRIDGE RD) TO ALAMANCE CO	2	2	NO	NO	2.22	20		4.44	488.40			444	1,980		133	120																				
		5	SR 1010 (PITTSBORO GOLDSTON RD)	FROM PVT JT S OF NC 902 TO PVT JT 440FT N OF SR 2187 (MERONIES CH RD)	5	2	NO	NO	6.82	22	20			87,907		489	8,034		538	200																				
		6	SR 1010 (PITTSBORO GOLDSTON RD)	FROM W JOINT OF US 421 S BRIDGE #16 JOINT TO SR 2333 (MAIN ST)	5	2	NO	NO	0.721	22	10			9,411			849		57	50																				
		7	SR 1680 (PARK MEADOW DR)	FROM NC 87 TO/INCLUDING SECOND TRAFFIC CIRCLE	2,6,7	2	NO	NO	1.077	25-48		2.15	236.94		6,500		1,981		133																					
		8	SR 1518 (X CAMPBELL RD)	FROM SR 1516 (OLD GRAHAM RD) TO NC 87	2	2	NO	NO	1.202	18		2.40	264.44			150	965		65	125																				
		9	SR 2189 (VERNIE PHILLIPS RD)	FROM SR 1010 (PITTSB GOLDSTON RD) TO SR 2129 (CAMPBELL RD)	2	2	NO	NO	1.47	20		2.94	323.40			111	1,311		88	100																				
		10	SR 1549 (CASTLE ROCK FARM RD)	FROM ALAMANCE CO TO SR 1559 (EMERSON COOK RD)	1	2	NO	NO	3.74	18		7.48	822.80			250	3,653		245	100	39,500	15,800	2																	
		11	SR 1515 (MITCHELLS CHP RD)	FROM NC 87 TO SR 1564 (OLD SILER CITY RD)	2	2	NO	NO	1.99	19		3.98	437.80			158	1,709		114	50																				
		12	SR 1559 (EMERSON COOK RD)	FROM SR 1558 (HENDERSON TANYARD RD) TO SR 1346 (SILK HOPE GUM SPR)	2	2	NO	NO	1.88	20		3.76	413.60			111	1,677		112	250																				
		13	SR 1555 (WOODY STORE RD)	FROM SR 1556 (IRVING LINDLEY RD) TO SR 1506 (WHITE SMITH RD)	2	2	NO	NO	1.35	20		2.70	297.00			111	1,204	125	89	75																				
		14	SR 1506 (WHITE SMITH RD)	FROM SR 1555 (WOODY STORE RD) TO SR 1549 (CASTLE ROCK FARM RD)	2	2	NO	NO	0.83	20		1.66	182.60			111	762		51	20																				
		15	SR 1344 (CLYDE UNDERWOOD RD)	FROM SR 1346 (SILK HOPE GUM SPR) TO SR 1335 (PLAINFIELD CH RD)	2	2	NO	NO	1.77	20		3.54	389.40			111	1,579	150	116	75																				
		16	SR 1546 (E PERRY RD)	FROM NC 87 TO PVMT JOINT 0.1 MI W FROM SR 1546	2	2	NO	NO	0.1	22		0.20	22.00			61	98		7	20																				
		17	SR 1598 (DOGWOOD LN)	FROM SR 1516 (OLD GRAHAM RD) TO END MAINT	3	2	NO	NO	0.36	18						50		178	12	10																				
		18	SR 1644 (CEDAR RUN)	FROM SR 1518 (X CAMPBELL RD) TO CUL DE SAC	3	2	NO	NO	0.2	20						56		97	7	10																				
		19	SR 1563 (KINSTON SCURLOCK RD)	FROM SR 1515 (OLD SILER CITY RD) TO END MAINT	4	2	NO	NO	0.24	18						50	193		13																					
GRAND TOTAL FOR PROJ NO. 2021CPT.08.02.20191									27.77		30	38.85	4,274.38	97,318	6,500	2,708	27,600	275	275	1,887	1,555	39,500	15,800	2																

2021CPT.08.02.20191

Chatham

THERMOPLASTIC AND PAINT QUANTITIES

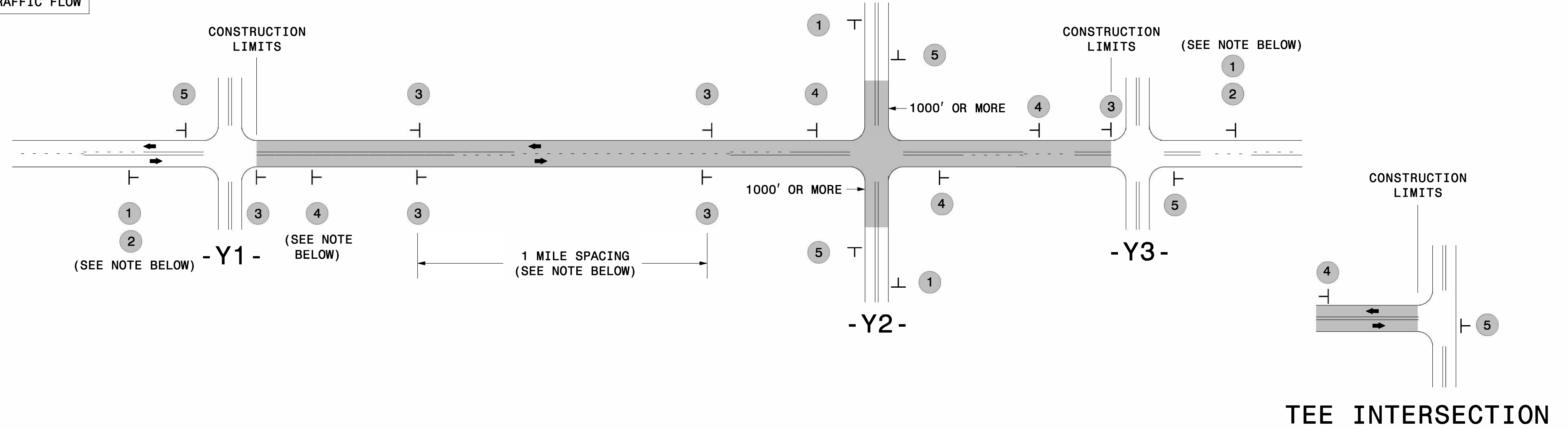
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH	WIDTH	441300000	44570000	468500000-E	47200000	481000000-E	4835000	4840000	4850000	48910000	490500000-N		
							MI	FT	WZ ADV/ GEN. WARN. SIGNING	TEMP. TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	THERMO MSG SCHOOL 90 M	4" WHITE PAINT	4" YELLOW PAINT	24" WHITE PAINT	PAINT MSG SCHOOL	4" LINE REMOV AL	24" X 90 M WHITE THERMO	SNOW PLOWABLE MARKERS Y & Y MARKERS
									SF	LS	LF	LF	EA	LF	LF	LF	EA	LF	LF	EA
		1	SR 1545 (CHICKEN BRIDGE RD)	FROM SR 1546 (MARSHALL RD) TO PVT. JT. 160LF S OF SR 1520 (OLD GRAHAM RD)	2	2	0.09	20	110											
		2	SR 1546 (CHICKEN BRIDGE)	FROM SR 1545 MARSHALL RD TO NC 87	2	2	0.51	20	60											
		3	SR 1546 (MARSHALL RD)	FROM SR 1520 (OLD GRAHAM RD) TO SR 1545 (CHICKEN BRIDGE RD)	2	2	1.2	20	140											
		4	SR 1520 (MT OLIVE CH RD)	FROM SR 1546 (CHICKEN BRIDGE RD) TO ALAMANCE CO	2	2	2.22	20	250											
		5	SR 1010 (PITTSBORO GOLDSTON RD)	FROM PVT JT S OF NC 902 TO PVT JT 440FT N OF SR 2187 (MERONIES CH RD)	5	2	6.82	22	770			73,383	73,383	75,283	75,283		1,900	450		
		6	SR 1010 (PITTSBORO GOLDSTON RD)	FROM W JOINT OF US 421 S BRIDGE #16 JOINT TO SR 2333 (MAIN ST)	5	2	0.721	22	90			7,758	7,758	6	7,758	7,758	50	6	50	48
		7	SR 1680 (PARK MEADOW DR)	FROM NC 87 TO/INCLUDING SECOND TRAFFIC CIRCLE	2,6,7	2	1.077	25 - 48	130											
		8	SR 1518 (X CAMPBELL RD)	FROM SR 1516 (OLD GRAHAM RD) TO NC 87	2	2	1.202	18	140											
		9	SR 2189 (VERNIE PHILLIPS RD)	FROM SR 1010 (PITTSB GOLDSTON RD) TO SR 2129 (CAMPBELL RD)	2	2	1.47	20	170											
		10	SR 1549 (CASTLE ROCK FARM RD)	FROM ALAMANCE CO TO SR 1559 (EMERSON COOK RD)	1	2	3.74	18	420	*										
		11	SR 1515 (MITCHELLS CHP RD)	FROM NC 87 TO SR 1564 (OLD SILER CITY RD)	2	2	1.99	19	230											
		12	SR 1559 (EMERSON COOK RD)	FROM SR 1558 (HENDERSON TANYARD RD) TO SR 1346 (SILK HOPE GUM SPR)	2	2	1.88	20	215											
		13	SR 1555 (WOODY STORE RD)	FROM SR 1556 (IRVING LINDLEY RD) TO SR 1506 (WHITE SMITH RD)	2	2	1.35	20	155											
		14	SR 1506 (WHITE SMITH RD)	FROM SR 1555 (WOODY STORE RD) TO SR 1549 (CASTLE ROCK FARM RD)	2	2	0.83	20	95											
		15	SR 1344 (CLYDE UNDERWOOD RD)	FROM SR 1346 (SILK HOPE GUM SPR) TO SR 1335 (PLAINFIELD CH RD)	2	2	1.77	20	200											
		16	SR 1546 (E PERRY RD)	FROM NC 87 TO PVMT JOINT 0.1 MI W FROM SR 1546	2	2	0.1	22	15											
		17	SR 1598 (DOGWOOD LN)	FROM SR 1516 (OLD GRAHAM RD) TO END MAINT	3	2	0.36	18	45											
		18	SR 1644 (CEDAR RUN)	FROM SR 1518 (X CAMPBELL RD) TO CUL DE SAC	3	2	0.2	20	25											
		19	SR 1563 (KINSTON SCURLOCK RD)	FROM SR 1515 (OLD SILER CITY RD) TO END MAINT	4	2	0.24	18	30											
TOTAL FOR PROJ NO. 2021CPT.08.02.20191							27.77		3,290	1	81,141	81,141	6	83,041	83,041	50	6	1,900	50	498
											162,282	166,082								

2021CPT.08.02.20191

Chatham

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

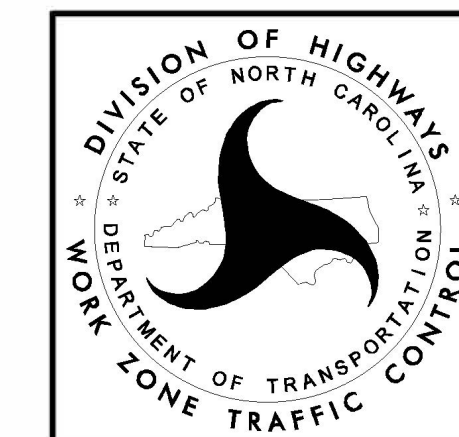
-Y- LINE SIGNING

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"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <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.

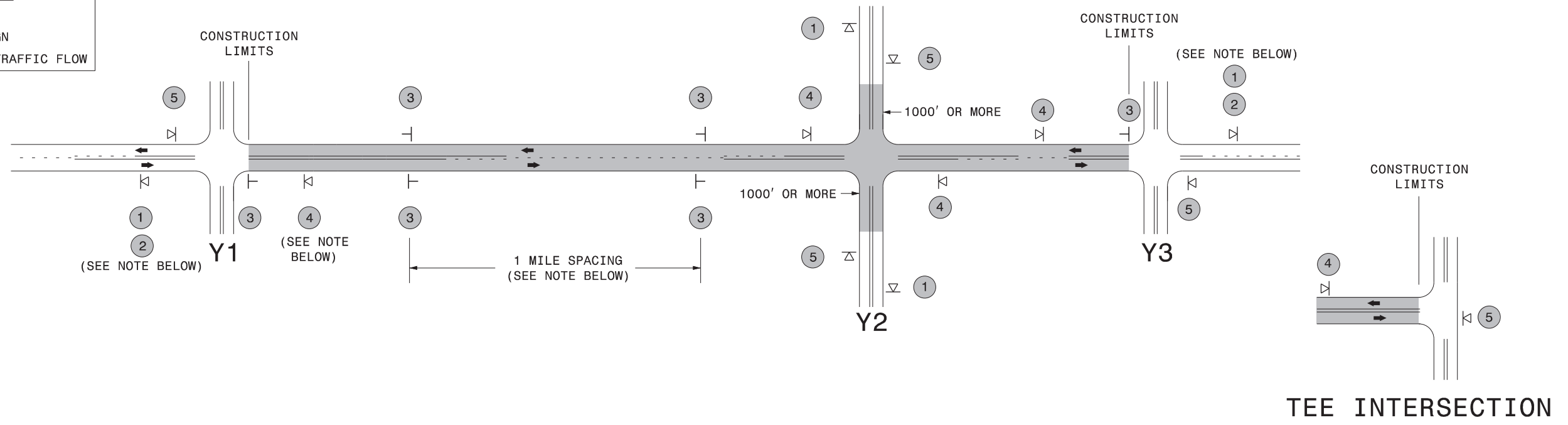


ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

SIGNING FOR ASPHALT SURFACE TREATMENT

LEGEND

- ▷ PORTABLE SIGN
- └ STATIONARY SIGN
- ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

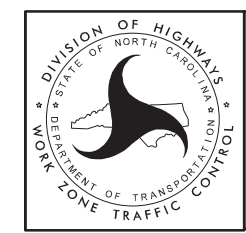
-Y- LINE SIGNING

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>STATIONARY SIGNING NOT REQUIRED FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <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		- SIGN #2 ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL NUMBERS.	
	3	 	- ALTERNATE THE FOLLOWING TWO SIGNS: - STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT". - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 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.	
	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 AST RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, USE A STATIONARY "LOOSE GRAVEL" SIGN AT THE BEGINNING CONSTRUCTION LIMIT FOLLOWED BY AN "UNMARKED PAVEMENT" SIGN MIDWAY THROUGH AND AN "END ROAD WORK" SIGN AT THE END CONSTRUCTION LIMIT.



ADVANCE WARNING SIGNS FOR 2-LANE ROADWAY ASPHALT SURFACE TREATMENT