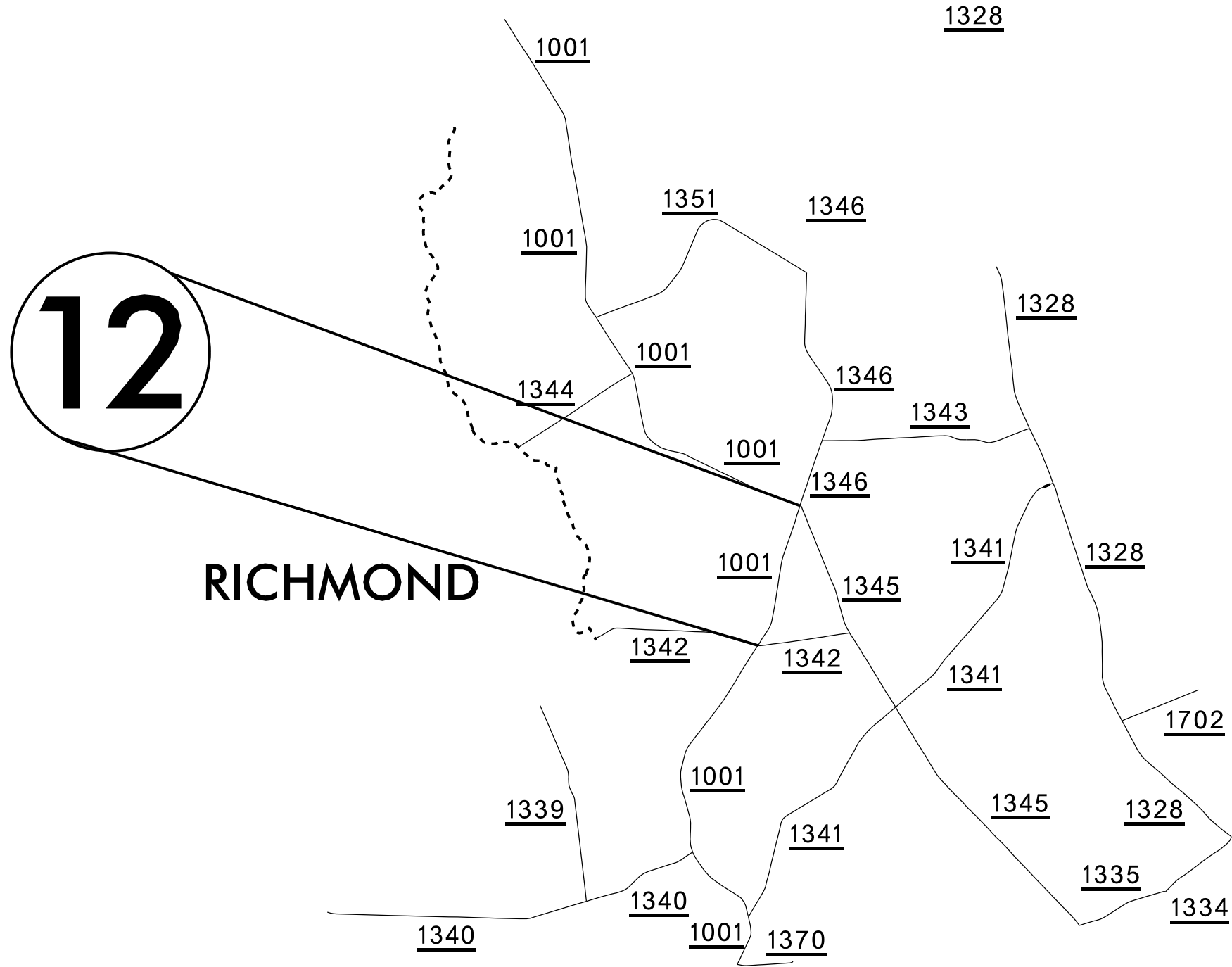
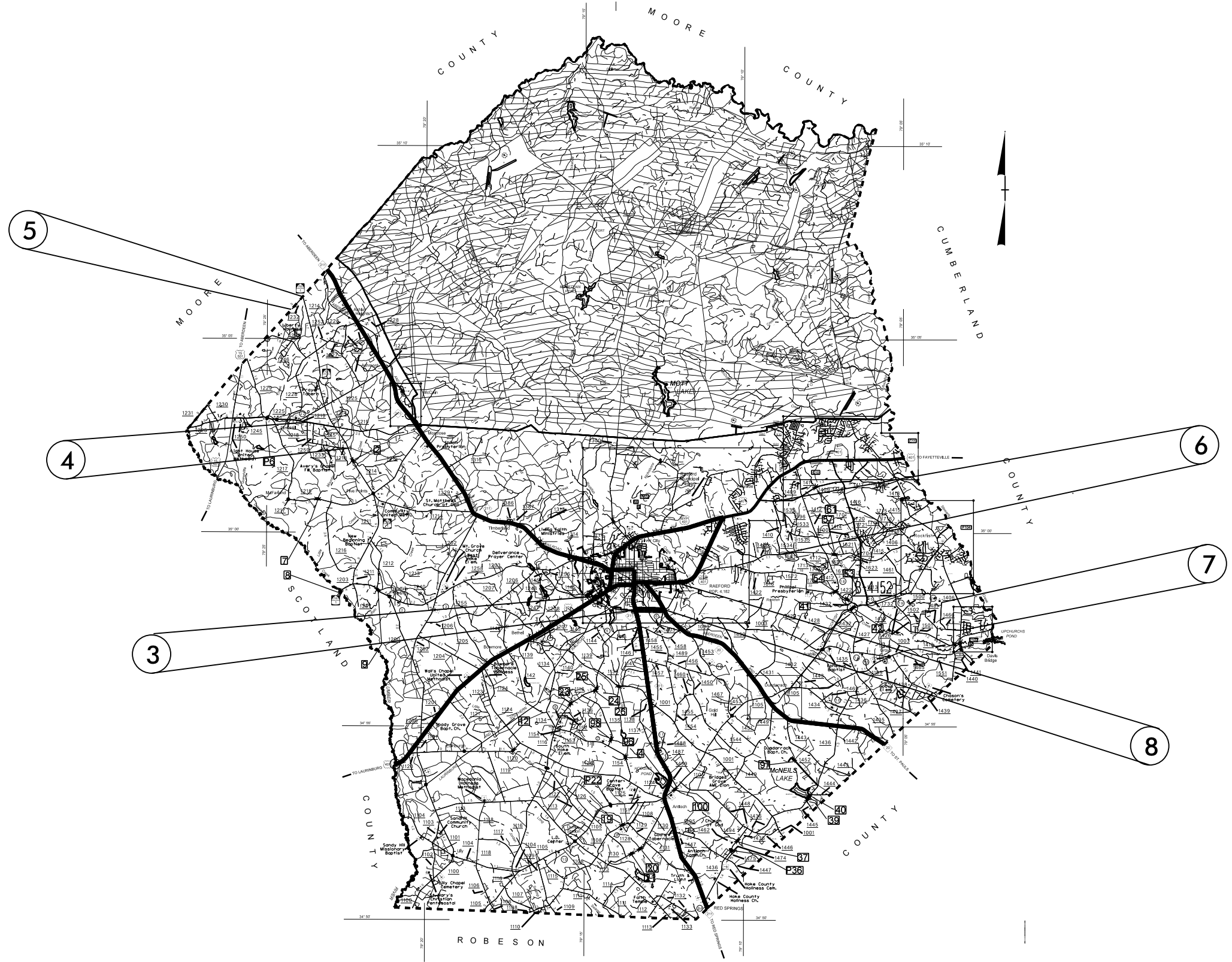


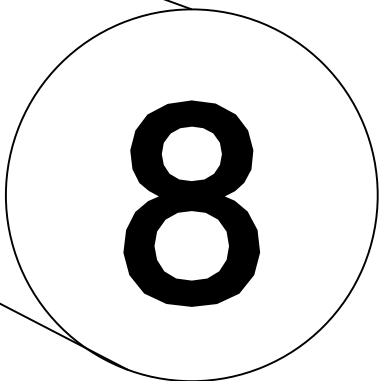
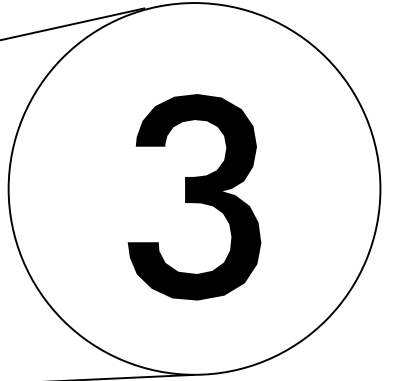
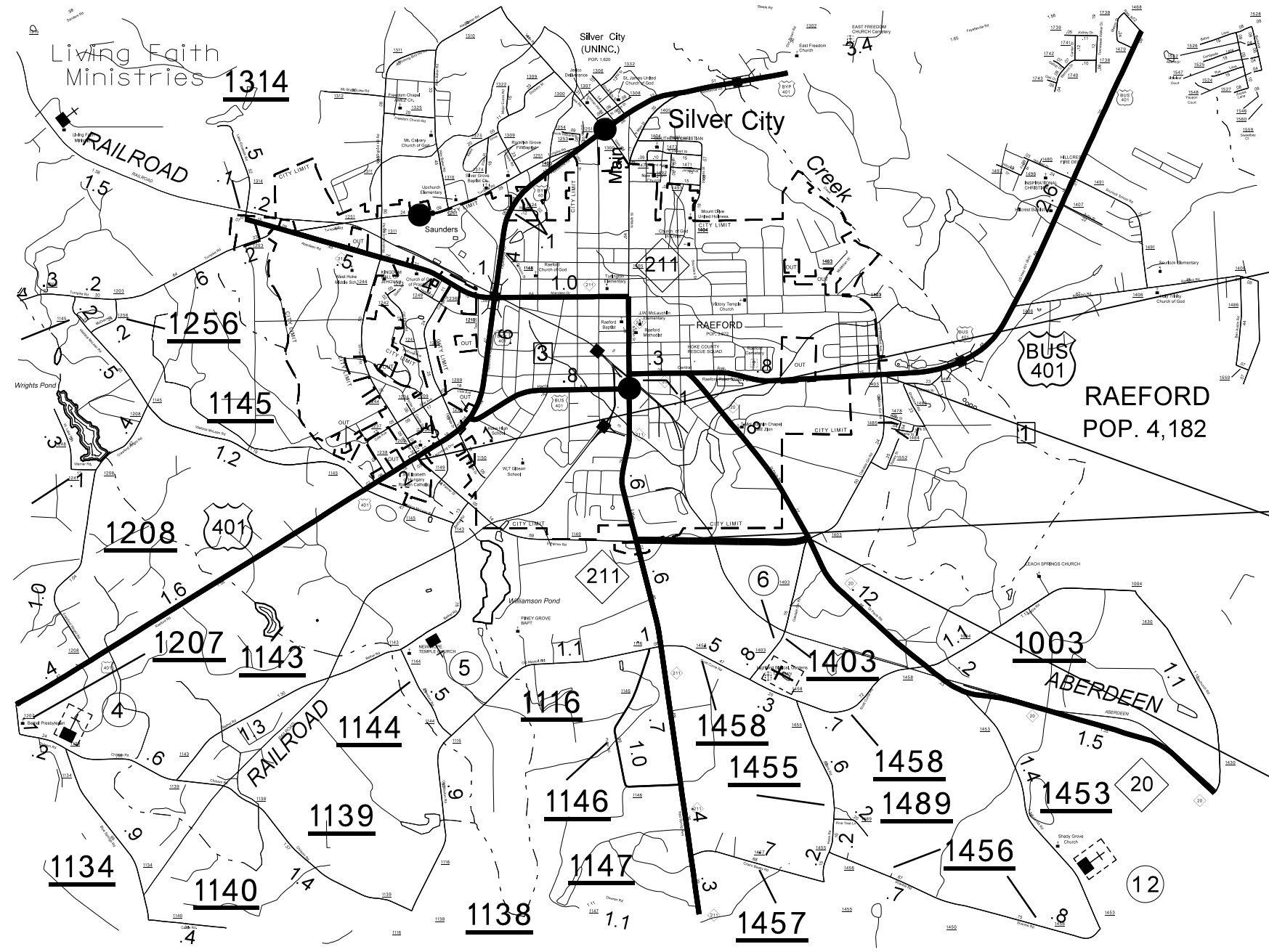
SCOTLAND COUNTY





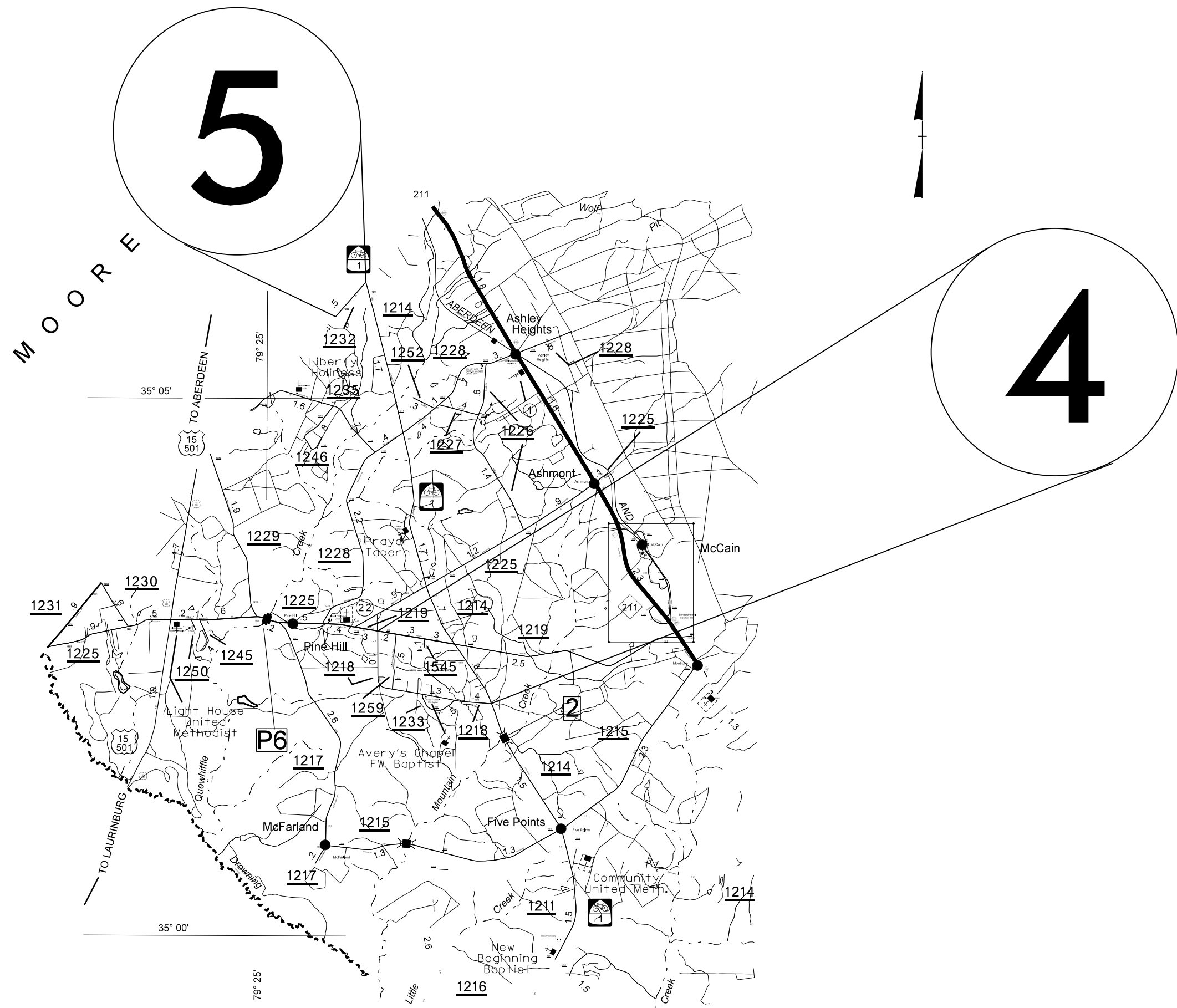
HOKE COUNTY

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 5/28/99
 At 01:18:30



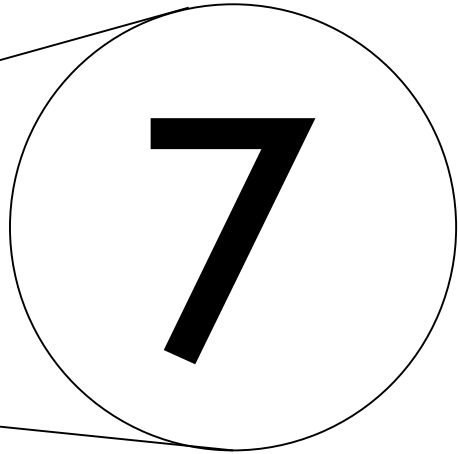
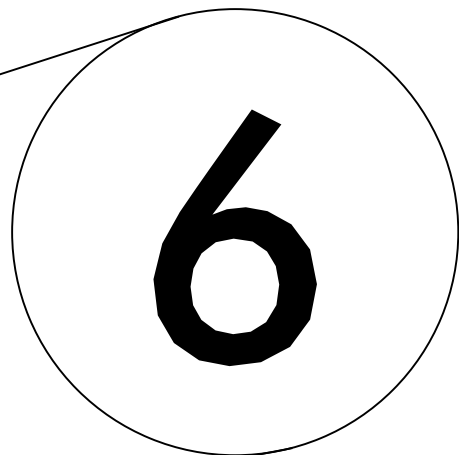
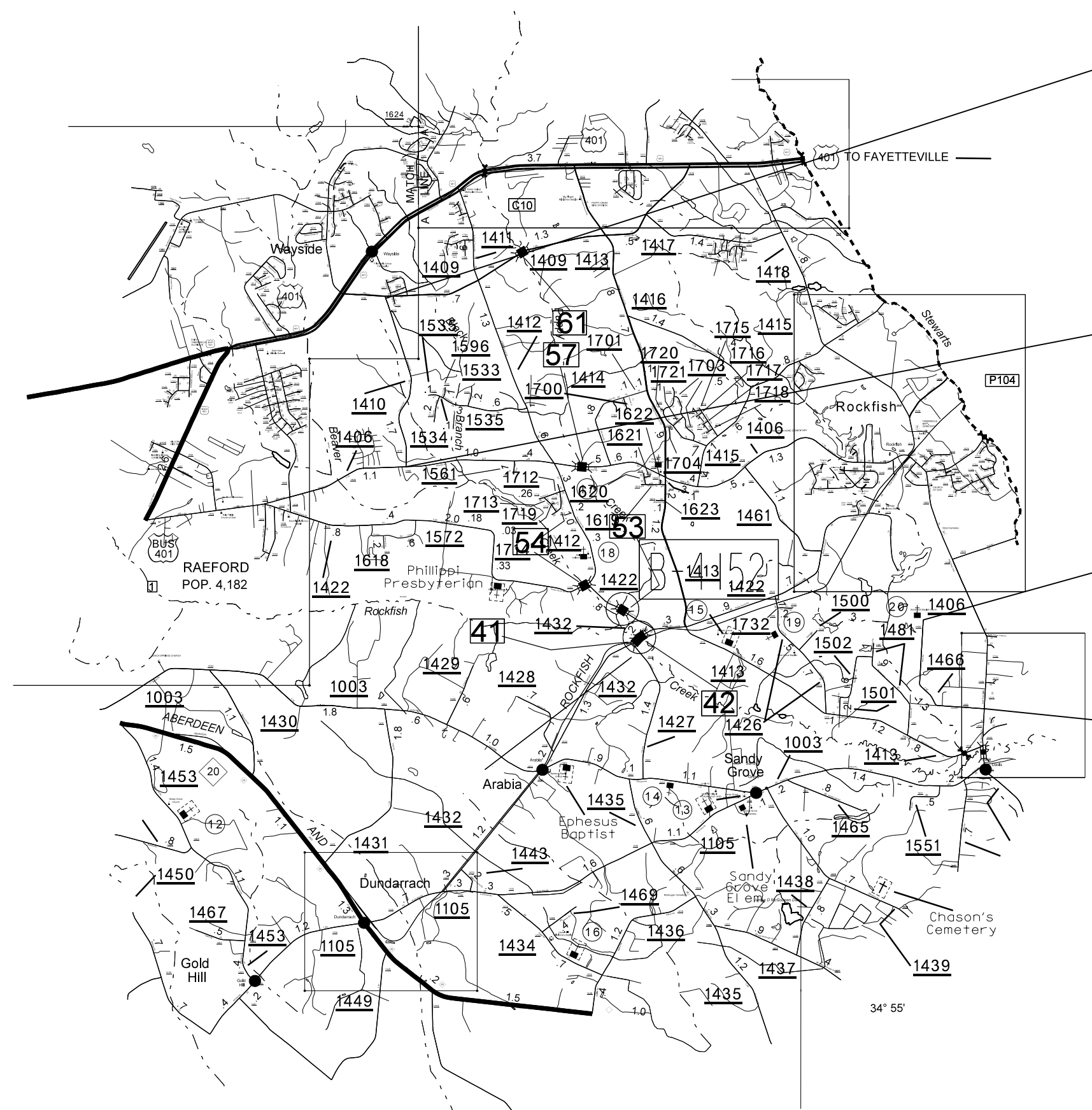
HOKE COUNTY

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HOKE COUNTY

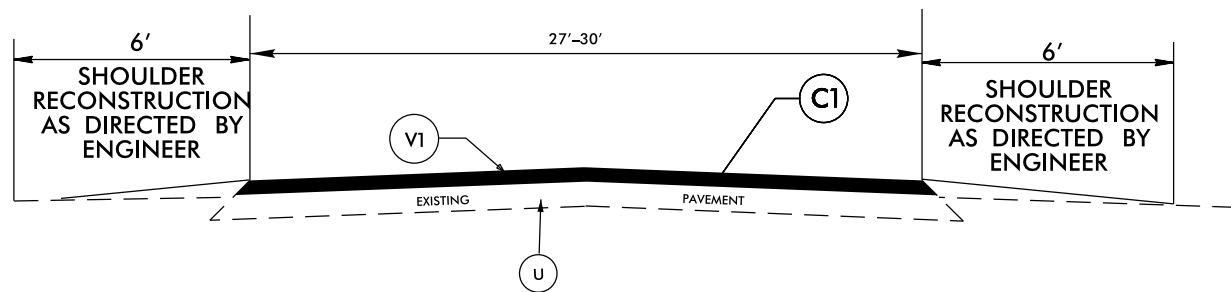
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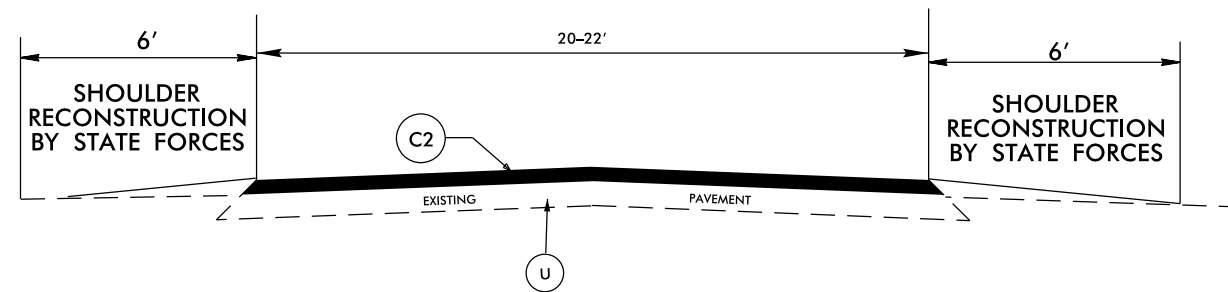
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HOKE COUNTY

18-OCT-2020 10:00
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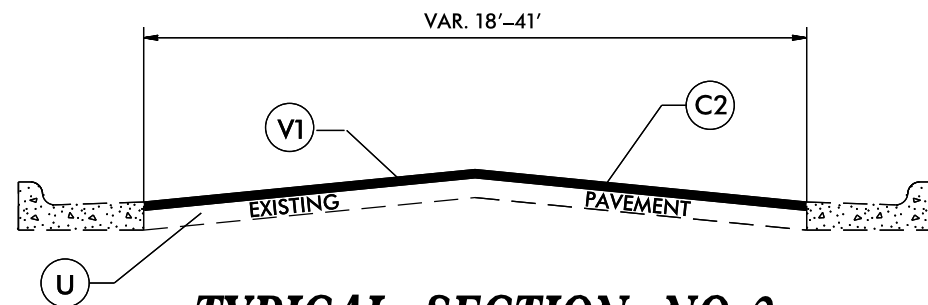


TYPICAL SECTION NO. 1

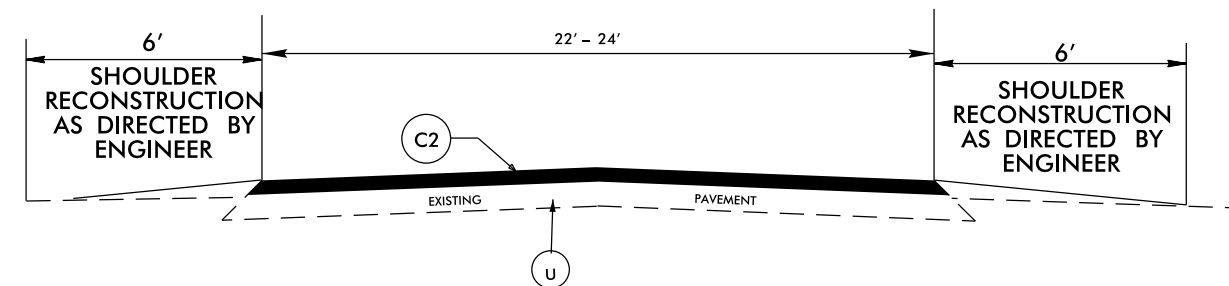


TYPICAL SECTION NO. 4

NOTE: SHOULDER RECONSTRUCTION TO BE PERFORMED BY STATE FORCES.



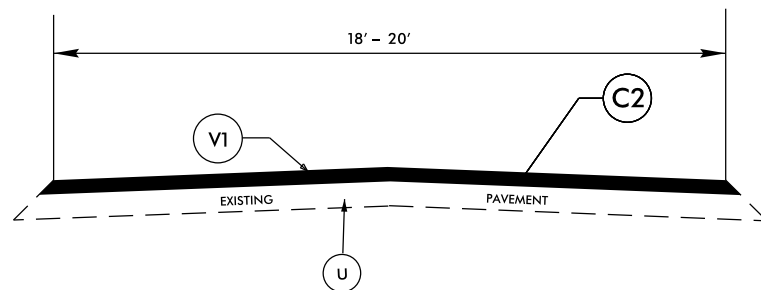
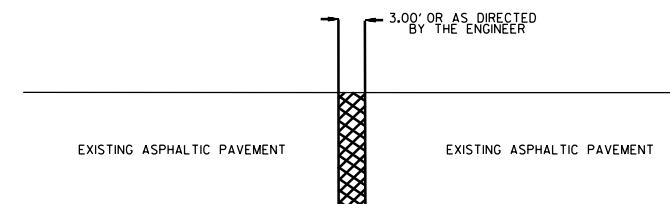
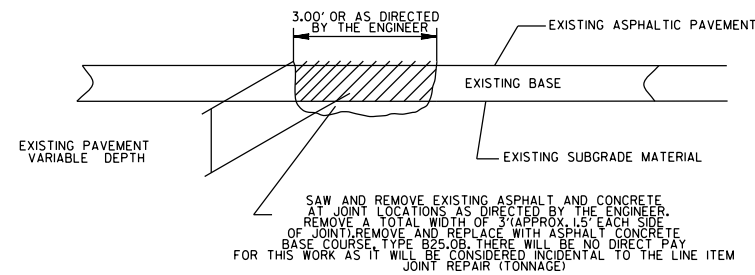
TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 5

JOINT REPAIR DETAIL

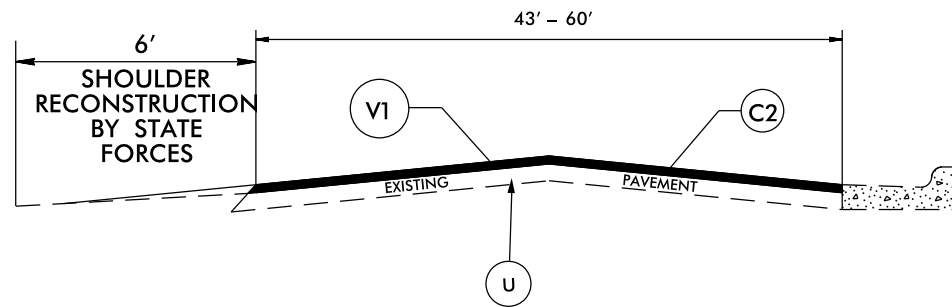
DETAILS FOR JOINT REPAIR TO EXISTING PAVEMENT PRIOR TO RESURFACING



TYPICAL SECTION NO. 3

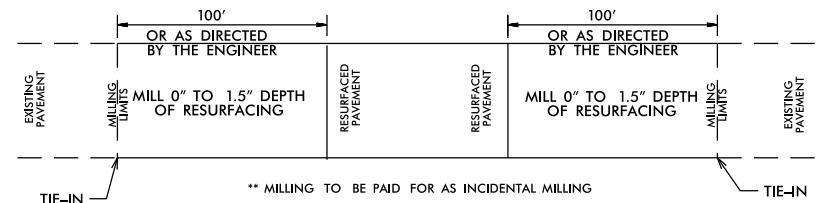
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
V1	1.5" MILLING
U	EXISTING PAVEMENT



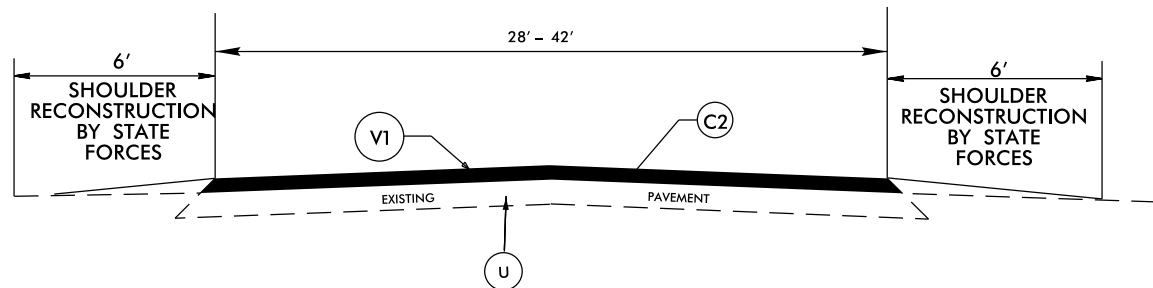
TYPICAL SECTION NO. 6

NOTE: SHOULDER RECONSTRUCTION TO BE PERFORMED BY STATE FORCES.



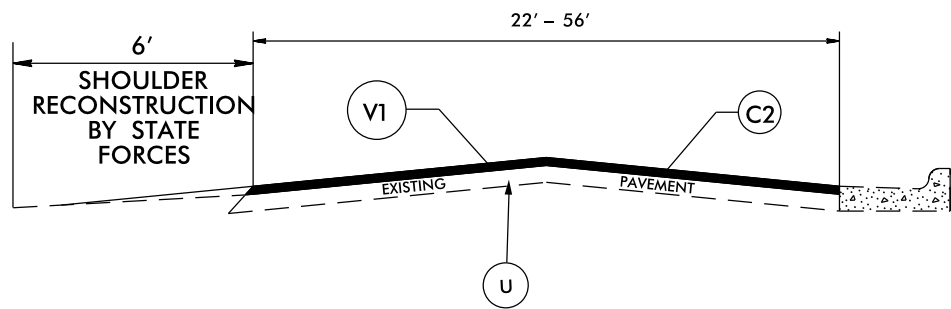
PAVEMENT TIE-IN DETAIL

** MILLING TO BE PAID FOR AS INCIDENTAL MILLING



TYPICAL SECTION NO. 7

NOTE: SHOULDER RECONSTRUCTION TO BE PERFORMED BY STATE FORCES.



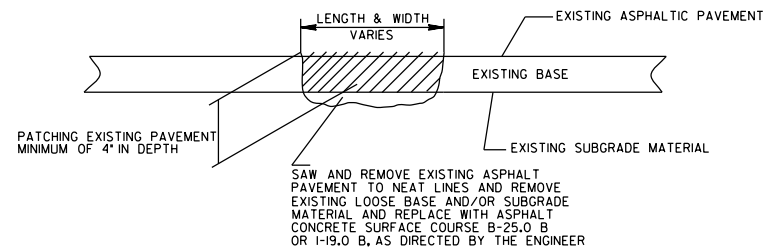
TYPICAL SECTION NO. 8

NOTE: SHOULDER RECONSTRUCTION TO BE PERFORMED BY STATE FORCES.

PAVEMENT SCHEDULE

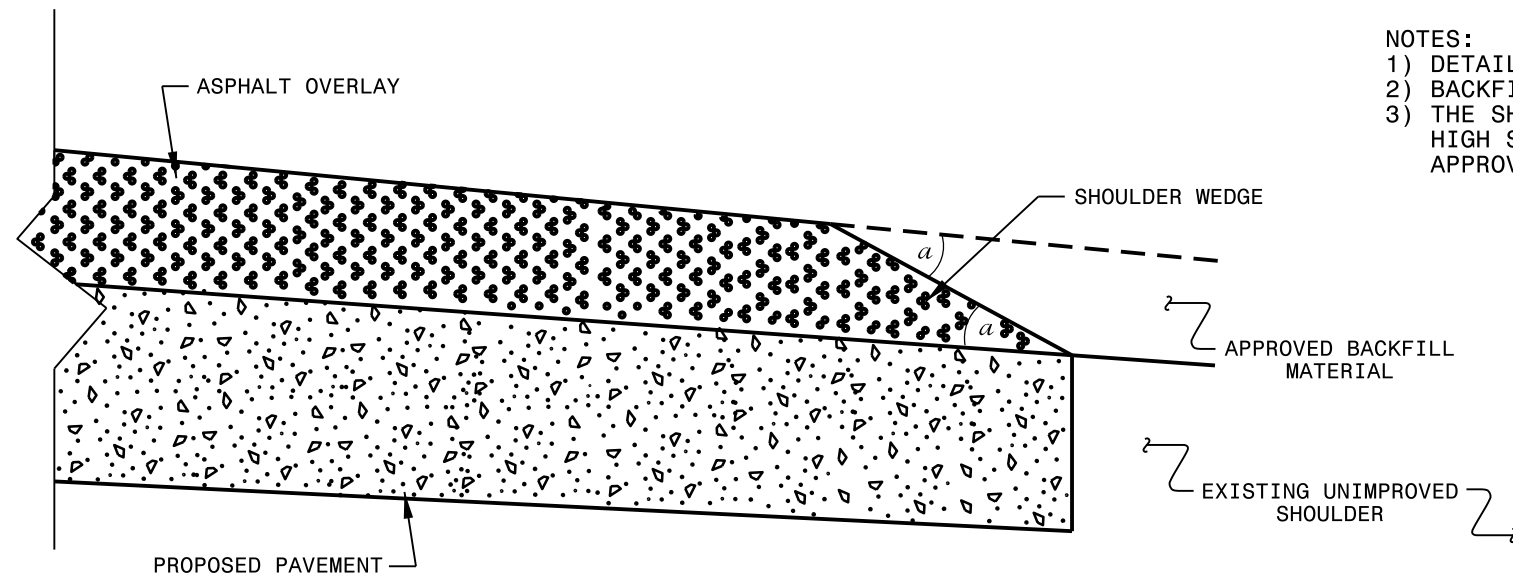
C1	PROP. APPROX. 1.5 " ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5 " ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
V1	1.5" MILLING
U	EXISTING PAVEMENT

DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING

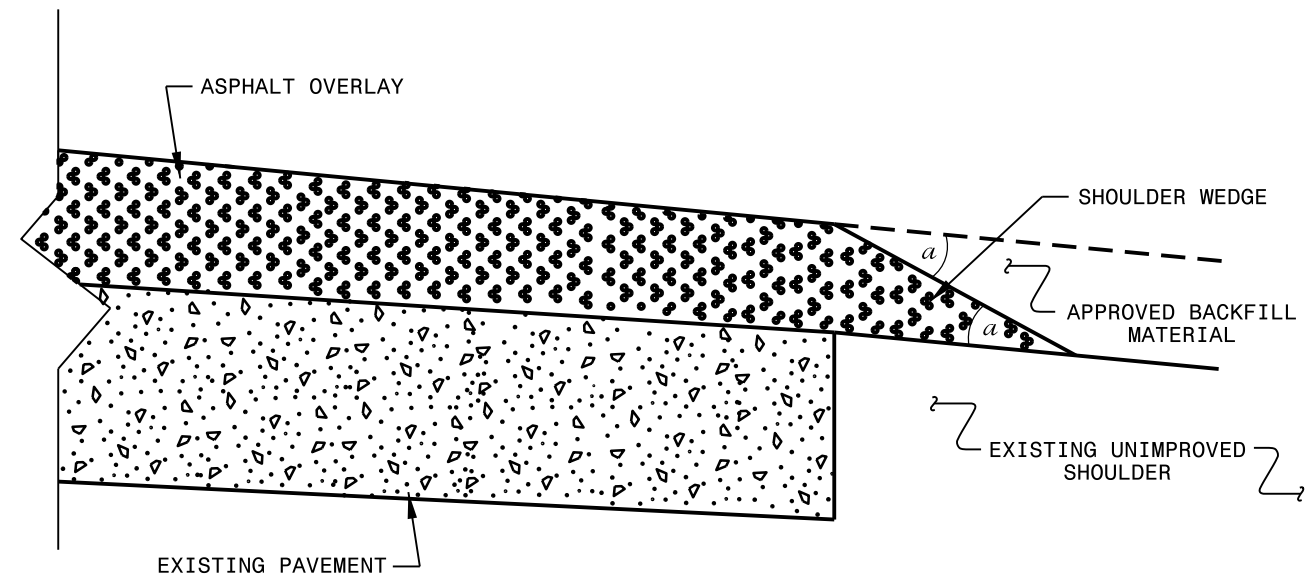


NOTES:

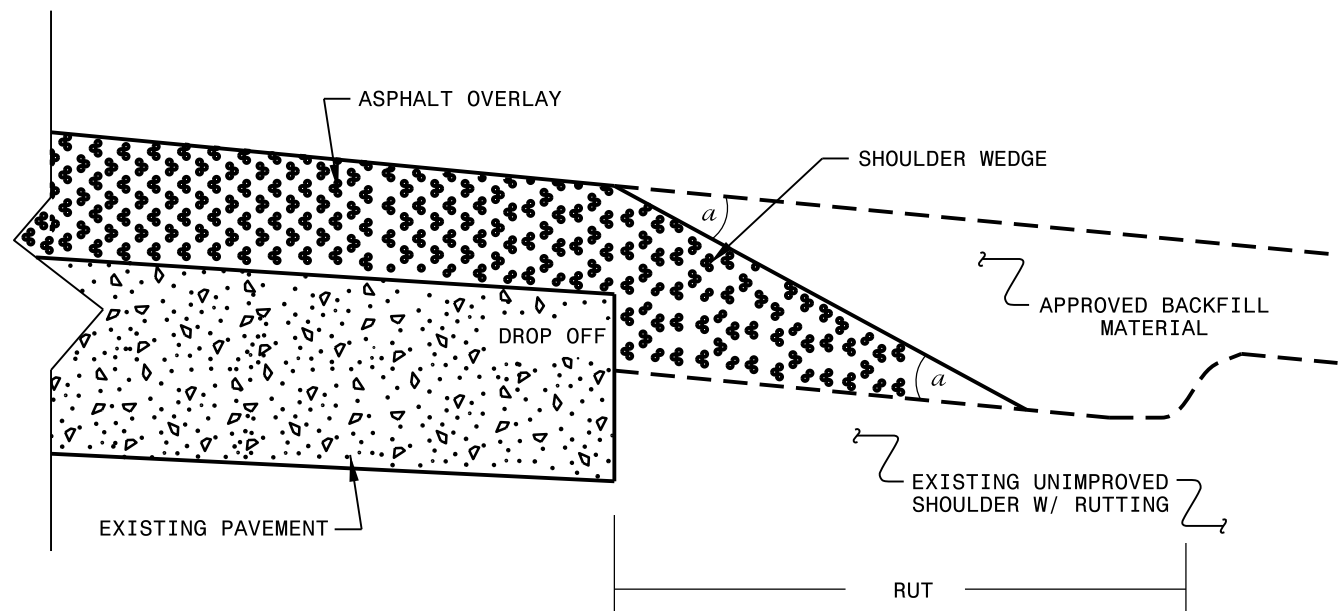
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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)

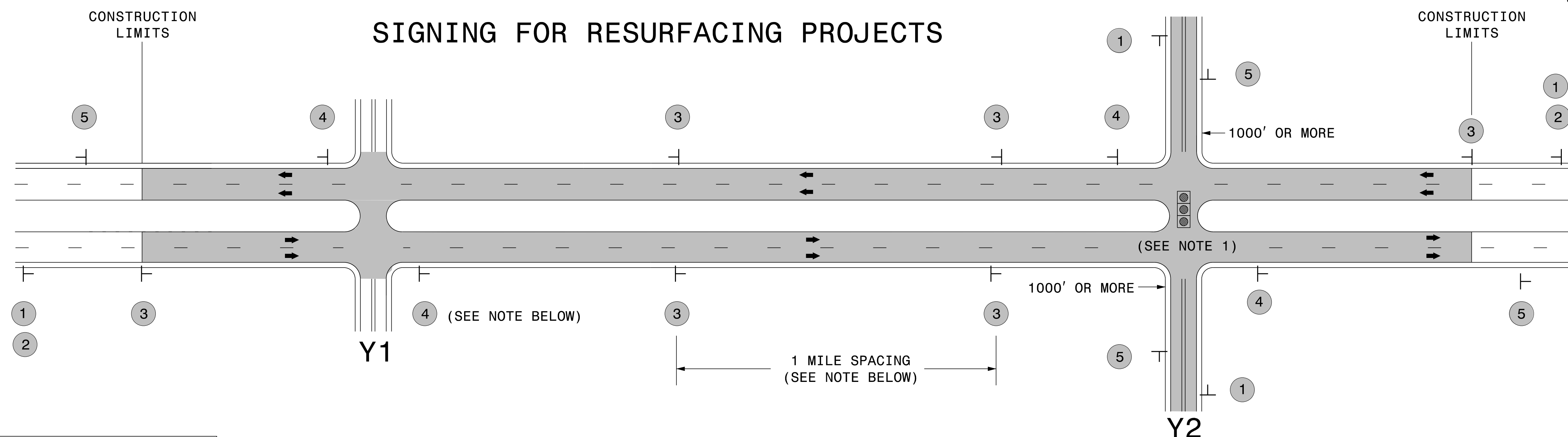
- SHOULDER WEDGE ANGLE = 30°

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		

PROJECT NO.	SHEET NO.	TOTAL NO.
2021CPT.08.03.10831, etc	13	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WID TH	SHOULDER RECONSTRUC TION	ASB	1.5" MILLING	INC. MILLIN G	S9.5B	S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCH- ING EXI. PAVEM ENT	JOINT REPAI R	ADJ. OF MAN- HOLE S	ADJ. OF METER OR VALVE	IND. LOOP SAW- CUT	
										MI	FT	SMI	TON	SY	SY	TONS	TONS	TONS	TONS	TON	EA	EA	LF	
2021CPT.08.03.10831	Scotland	1	US HWY 74 BUS(MARTIN LUTHER KING JR. HWY.)	FROM ROBESON/SCOTLAND COUNTY LINE WEST FOR 0.60 MILES	1	2	2WU	NO	NO	0.6	27	1.20	168	12,247			1,132	68		34				
		2	US HWY 15-501-401 (MCCOLL RD)	+/-0.379 MI SOUTH OF INTERSECTION OF US HWY 15-501(ABERDEEN RD)	1	2	MD	NO	NO	0.06	30	0.24	35	1,167			108	6						
TOTAL FOR PROJ NO. 2021CPT.08.03.10831										0.66		1.44	203	13,414			1,240	74		34				
2021CPT.08.03.20471	Hoke	3	SR 1149 (E. PALMER AVE.)	FROM US HWY 401(LAURINBURG RD) TO NC 211(RED SPRINGS RD)	6,7	2	2WU	NO	NO	1.16	60			25,832		2,344		157	87			5	720	
		4	SR 1218 (LOOP RD)	FROM SR1219(ARMY RD) TO SR 1214(CALLOWAY RD)	4	2	2WU	NO	NO	1.8	20				128	2,131		143	6					
		5	SR 1232 (CAROLINA RD)	FROM SR 1214(CALLOWAY RD) TO DEAD END	4	2	2WU	NO	NO	0.49	20					664		45	24					
		6	SR 1410 (TOWNSEND RD)	FROM SR 1409JOHNSON MILL RD) TO SR 1406(ROCKFISH RD)	4	2	2WU	NO	NO	1.63	20					1,740		117	20					
		7	SR 1466 (MYRA RD)	FROM SR 1406(ROCKFISH RD) TO DEAD END	4	2	2WU	NO	NO	1.31	20					1,396		94	88					
		8	SR 1403 (OAKDALE GIN DR)	FROM US 401 BUS TO C.J. AT NC 20 (ST PAULS RD)	4,8	2	2WU	NO	NO	0.897	22				2,009	511	1,477		99	91		1	2	597
TOTAL FOR PROJ NO. 2021CPT.08.03.20471										7.287				27,841	639	9,752		655	316		1	7	1,317	
2021CPT.08.03.20831	Scotland	9	SR 1420 (THIRD ST)	FROM US HWY 74(E. CHURCH ST.) TO END STATE MAINTANCE	2	2	2WU	NO	NO	0.12	41			2,870		260		17						
		10	SR 1424 (SALLEY MCNAIR RD.)	FROM US HWY 401(WAGRAM RD.) TO NC HWY 144(OLD WIRE RD.)	5	2	2WU	NO	NO	1.99	22	3.94	552.15		375	2,428		163						
		11	SR 1457 (5TH ST. SANFORD RD.)	FROM US HWY 74 BUS.(E. CHURCH ST.) TO SR 1438(OLD LUMBERTON RD.)	2,3	2	2WU	NO	NO	0.47	20				6,271	569		38	10		1	2		
		12	SR 1001 (MARSTON RD)	FROM SR 1345 (SNEADS GROVE RD) TO SR 1342 (GUM SWAMP LAKE RD)	4	2	2WU	NO	NO	1.016	20				222	1,103		74						
TOTAL FOR PROJ NO. 2021CPT.08.03.20831										3.596		3.94	552.15	9,141	597	4,360		292	10		1	2		
GRAND TOTAL										11.543		5.38	755.15	50,396	1,236	14,112	1,240	1,021	326	34	2	9	1,317	



LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

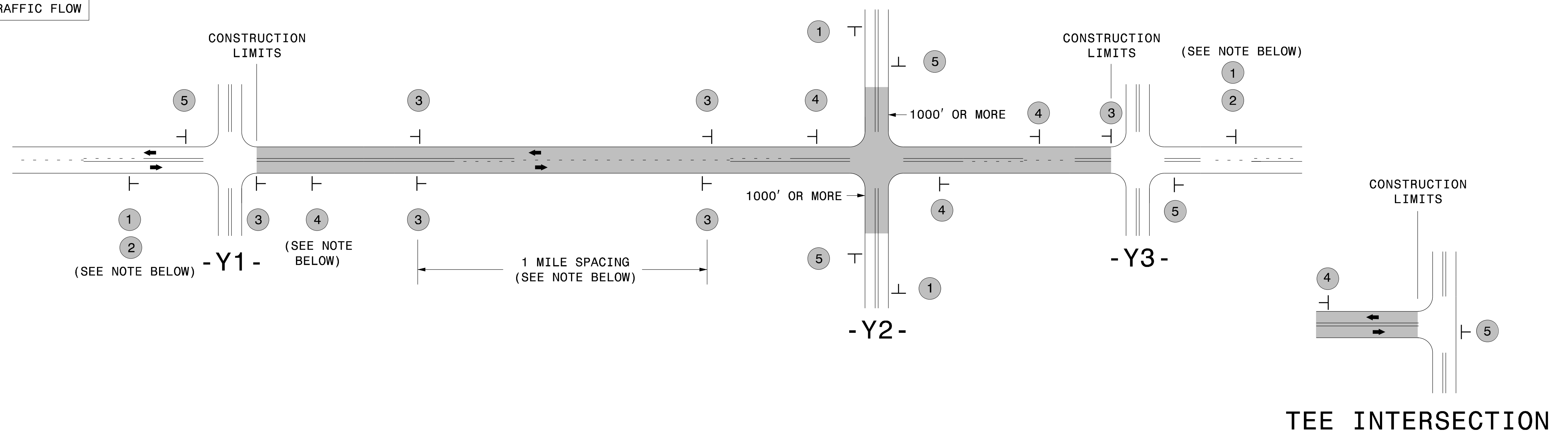
SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>	<p>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, 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>NOTES:</p> <ol style="list-style-type: none"> 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.
		<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>	

3/23/2015
 C:\Users\rmgarrrett\Downloads\Resurfacing_AdvWarn_Ltr-Su_Shldr.dgn
 User:rmgarrrett

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

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

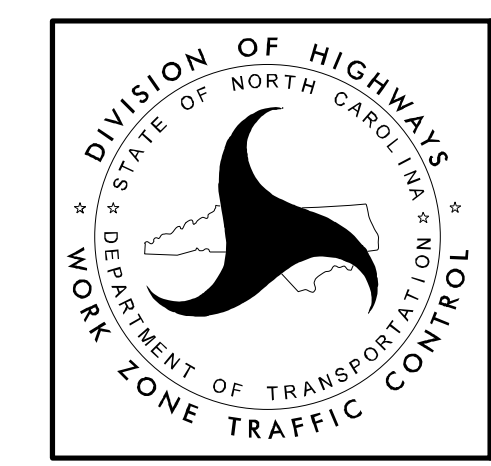
-Y- LINE SIGNING

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"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS 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

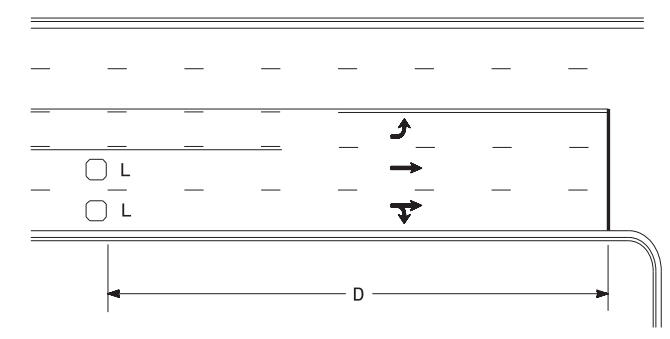
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



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

5/15/2017 S:\TUX\WZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn User:kdais

High Speed Detection (≥40 mph)

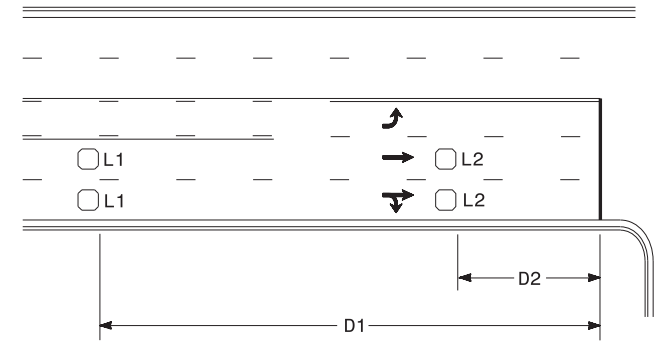


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



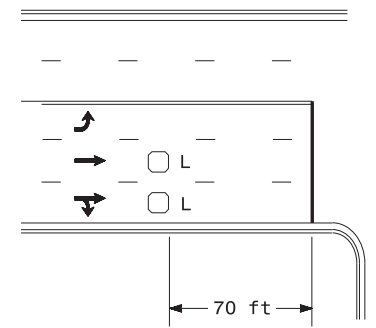
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

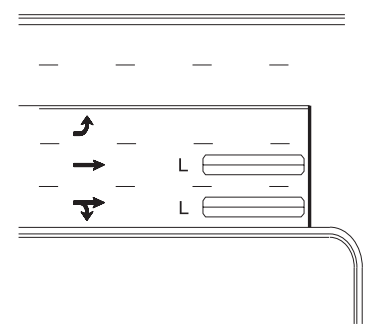
"Stretch" Operation

Low Speed Detection (≤35 mph)



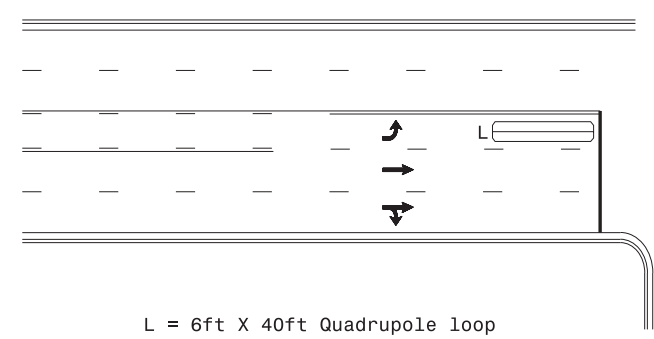
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

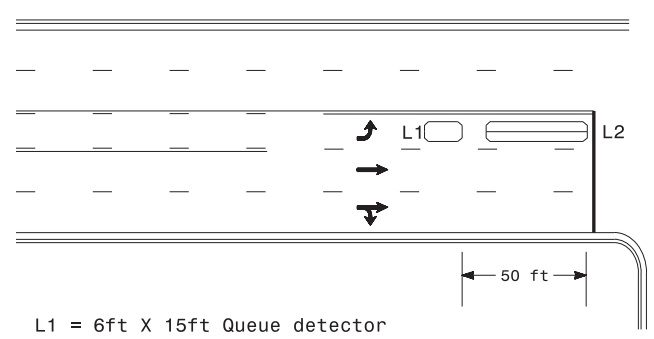
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

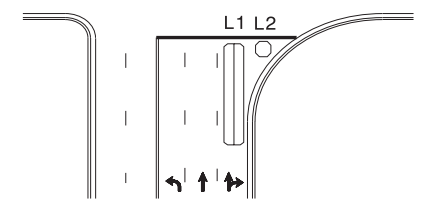
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

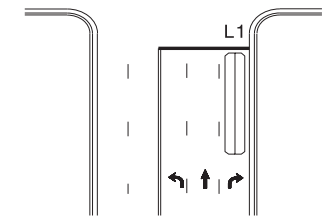
Queue Loop Detection

Right Turn Lane Detection

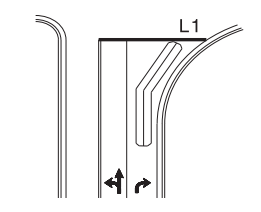


L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately

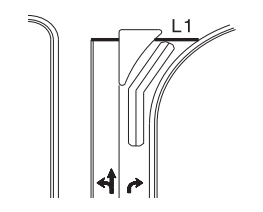
Shared Lane/
Wide Radius Turn



Standard Turn

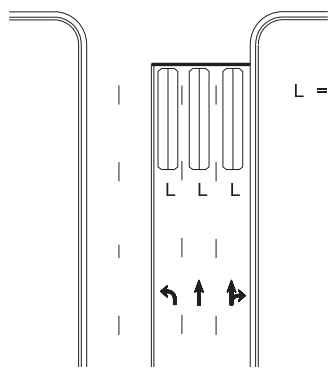


Wide Radius Turn



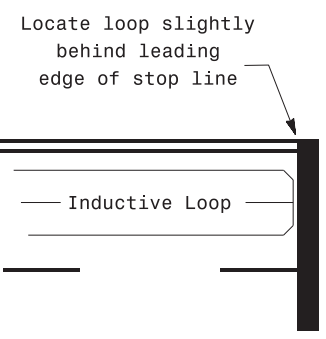
Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



Note:
Loop may be located in advance of stop line under any of the following conditions:
1) stop line is greater than 15' from edge of intersecting roadway
2) loop detects a permissive or protected/permissive left turn
3) for an exclusive right turn lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

Typical Signal Loop Locations

	PLAN DATE: September 2020 PREPARED BY: PLA	REVIEWED BY: JPG REVIEWED BY:
	SCALE: N/A	REVISIONS:

9/8/2020