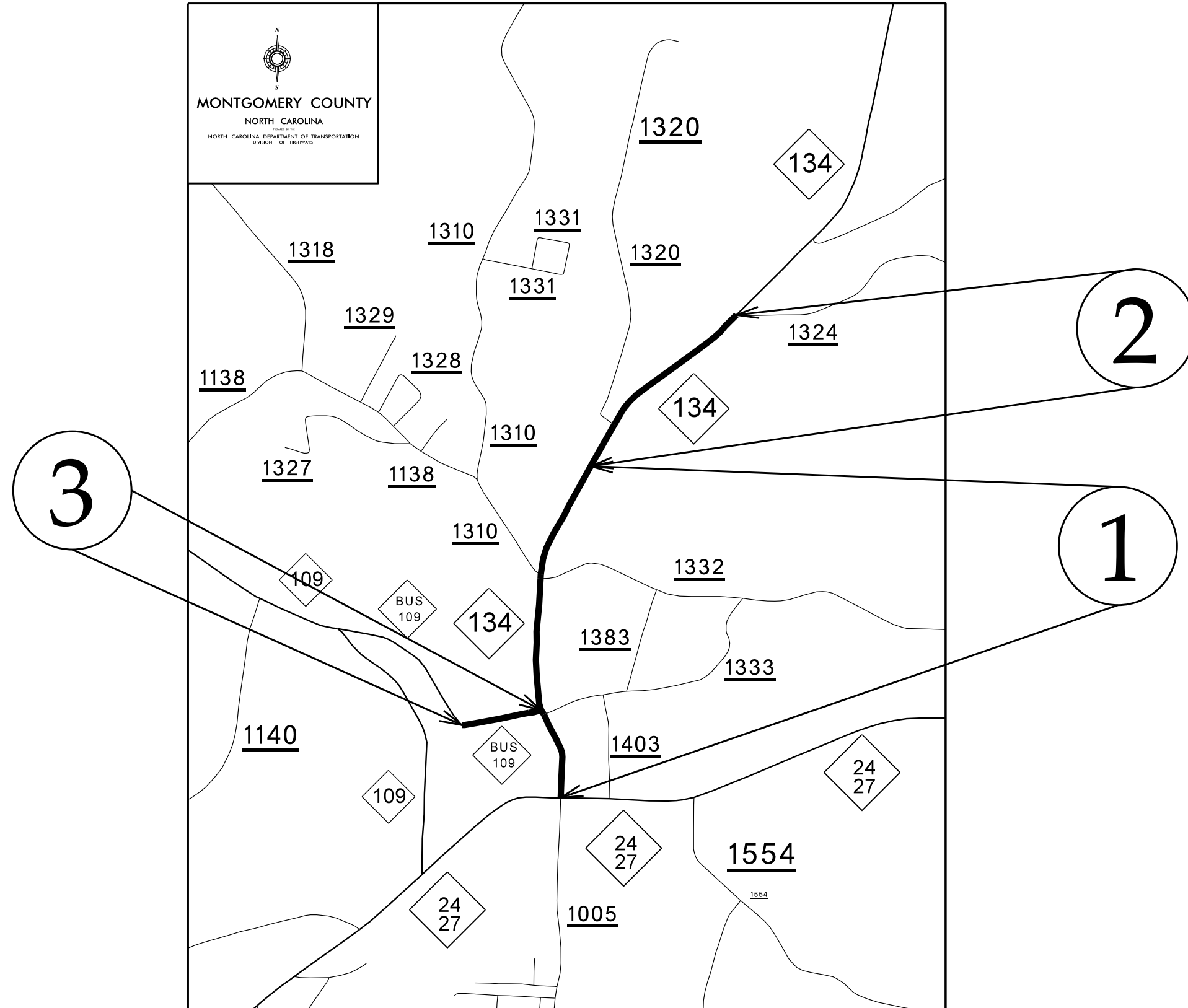
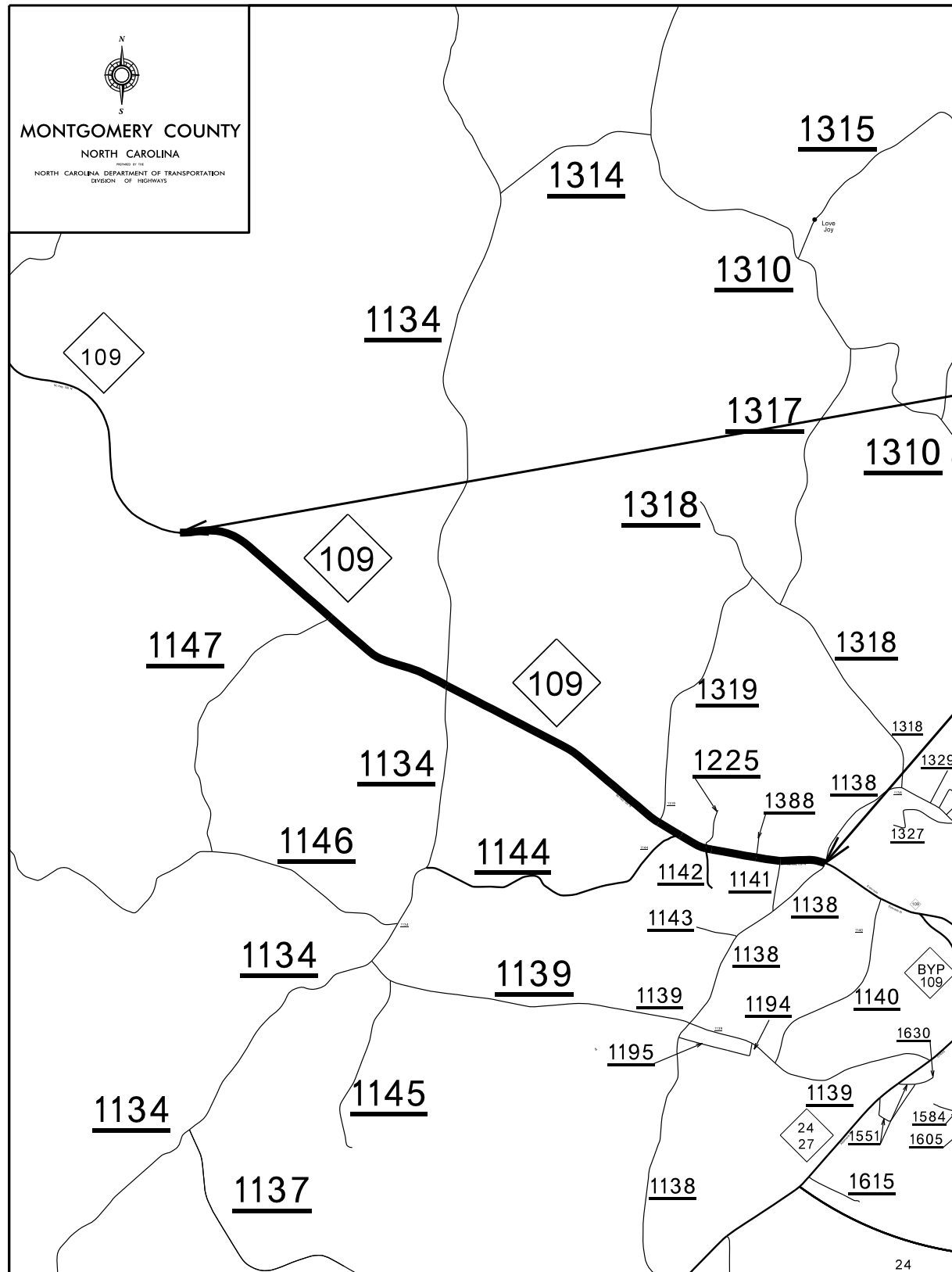


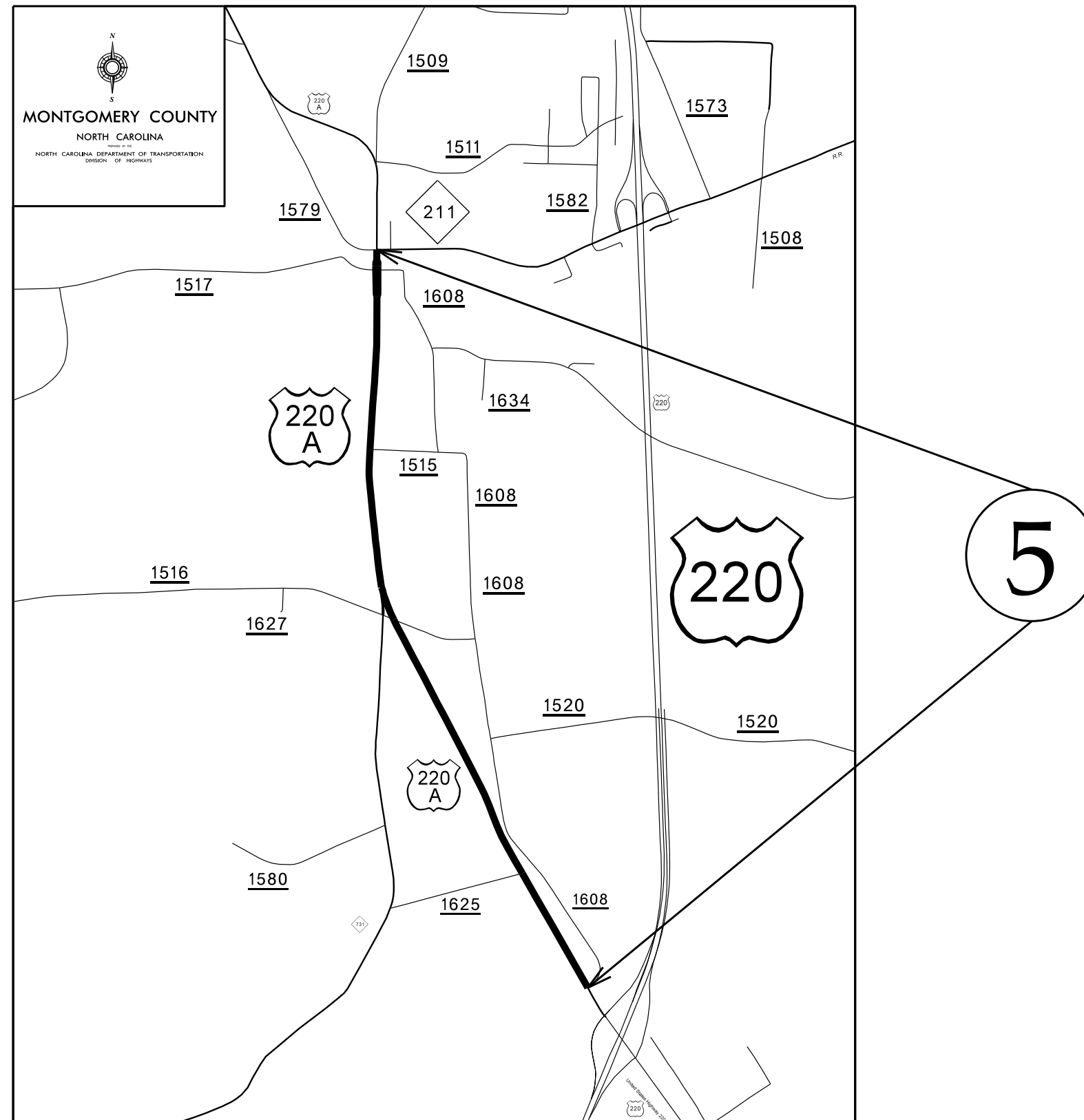
Maps 1, 2, and 3



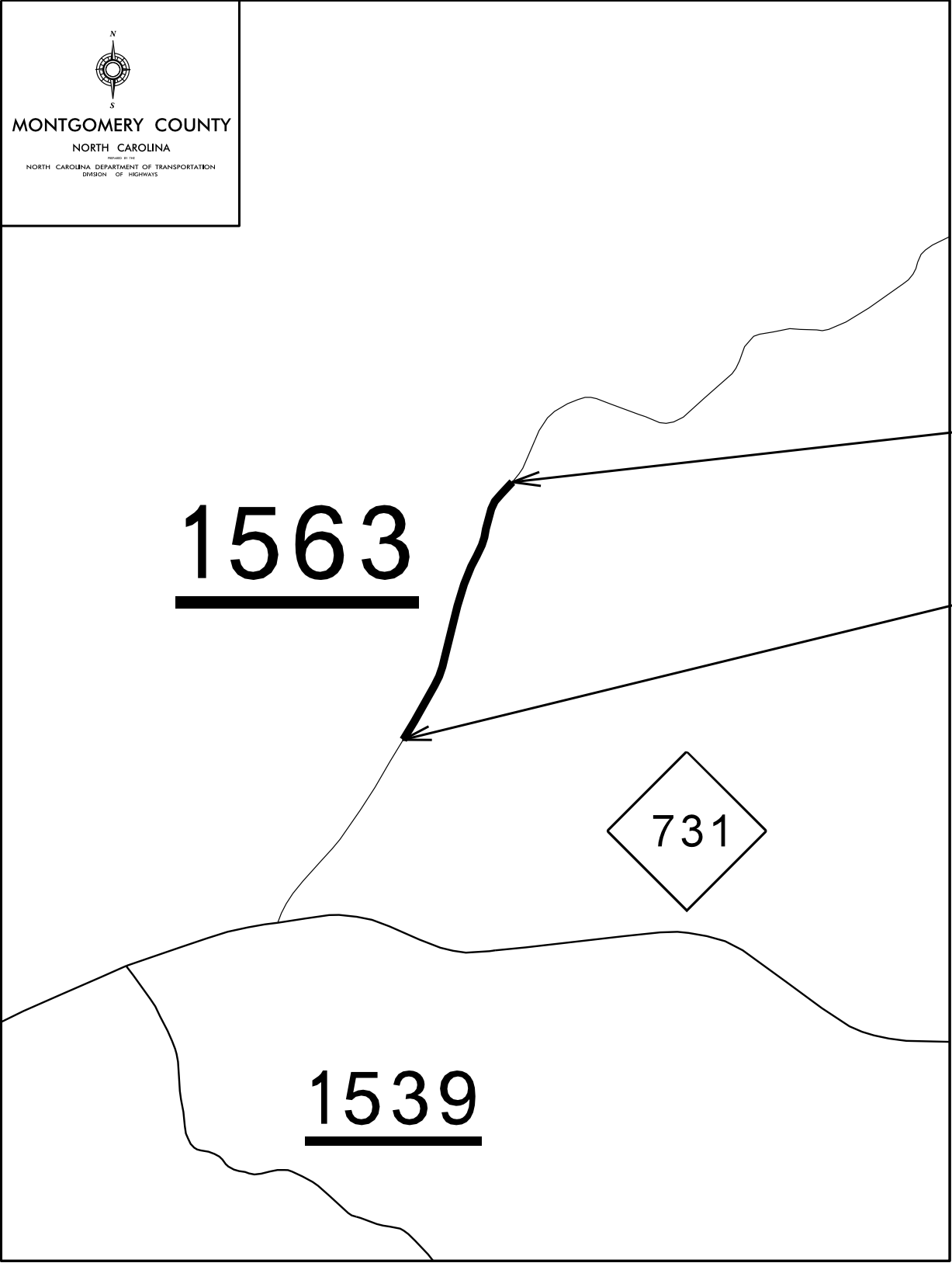
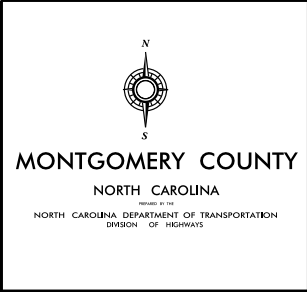
Map 4



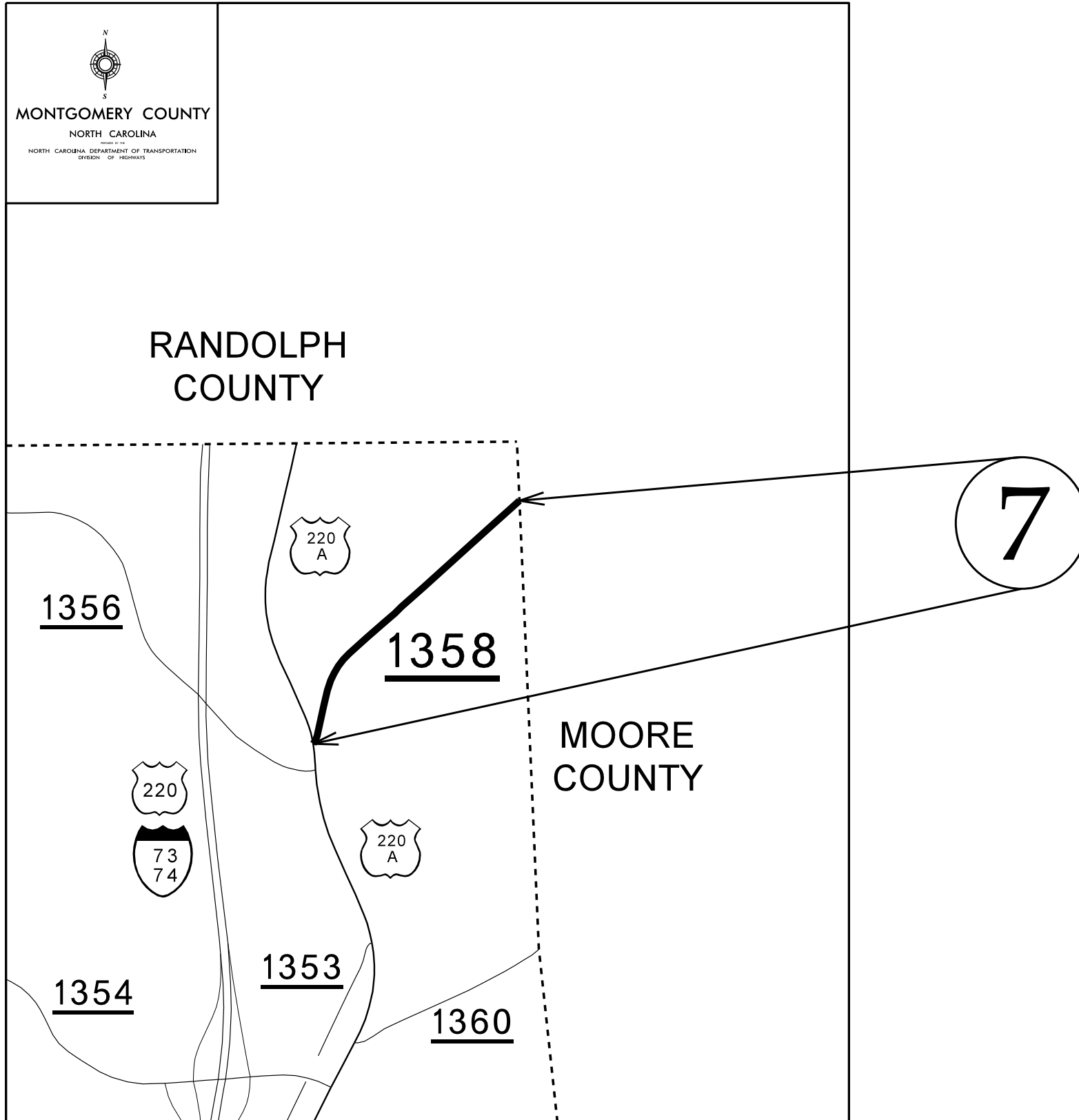
Map 5



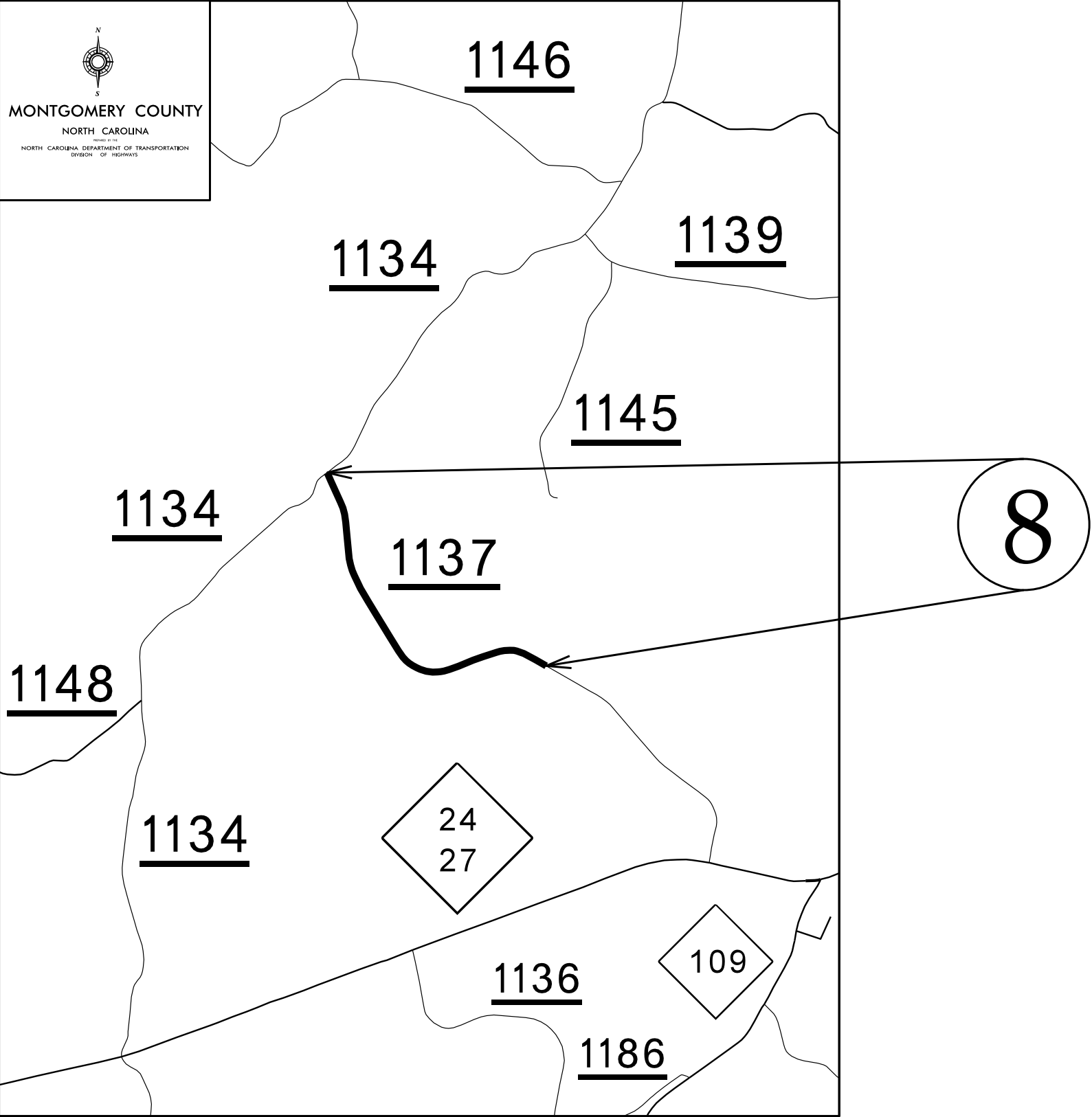
Map 6



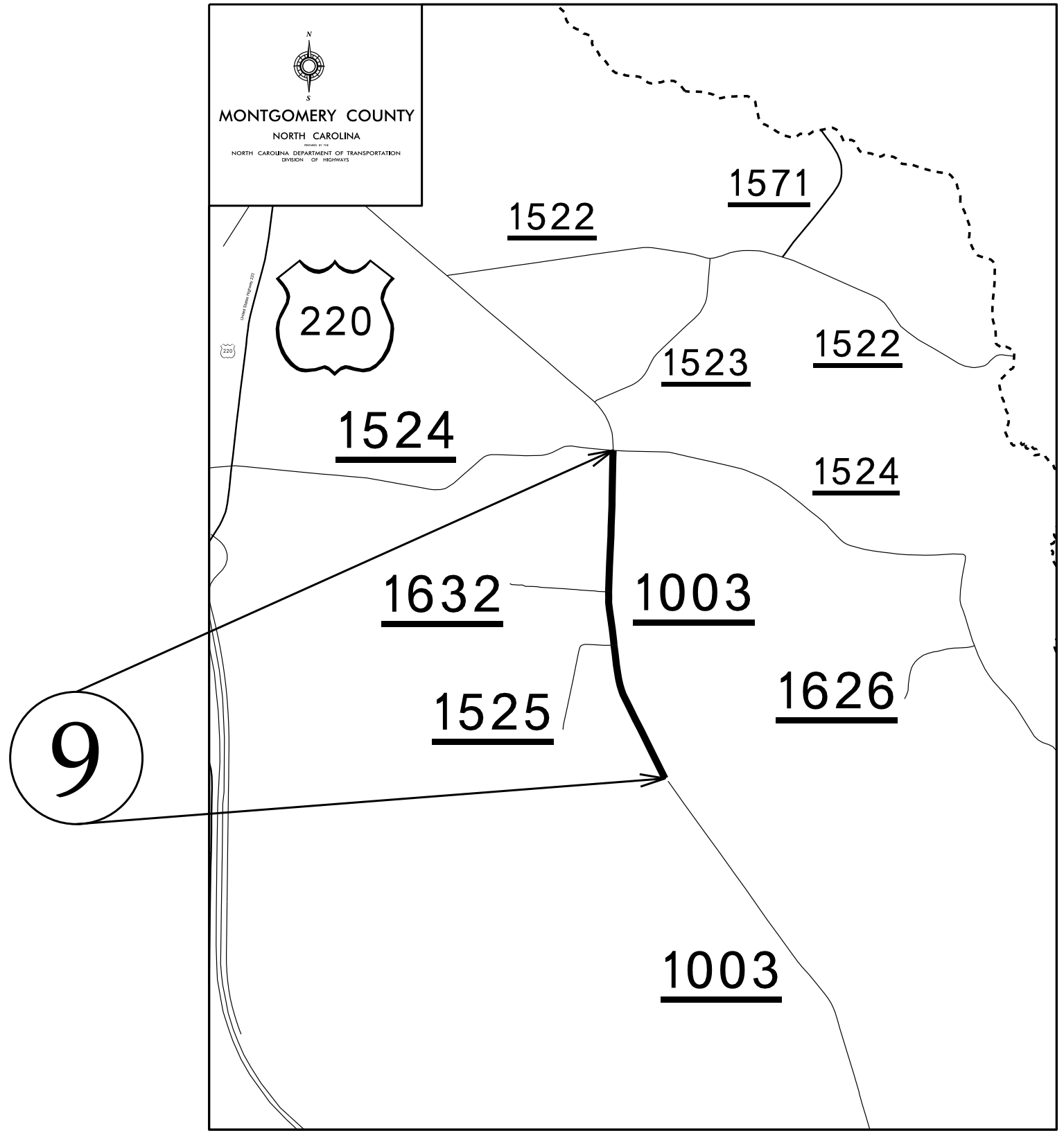
Map 7

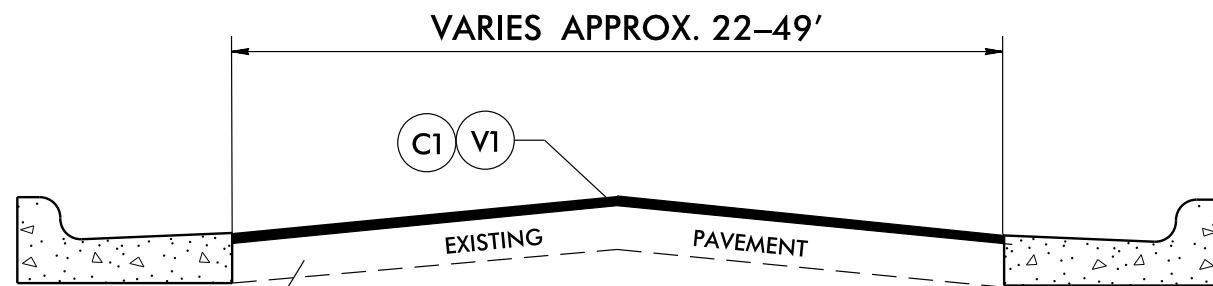


Map 8



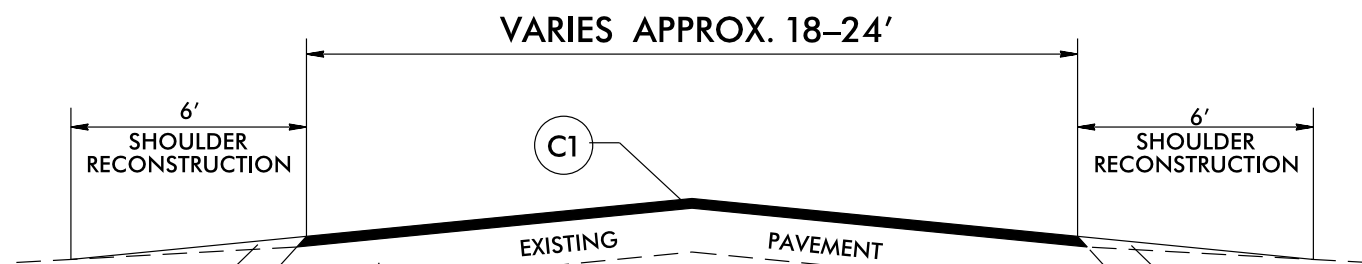
Map 9





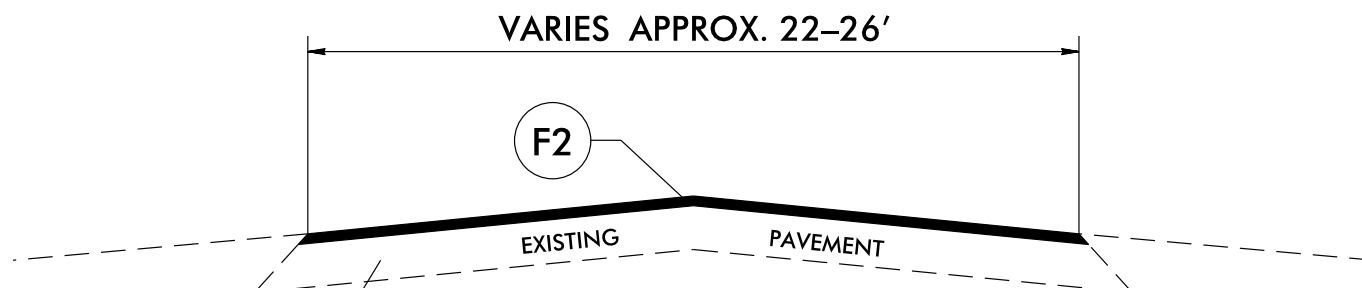
TYPICAL SECTION NO. 1

USE FOR MAPS 1 AND 3



TYPICAL SECTION NO. 2

USE FOR MAPS 2,6,7

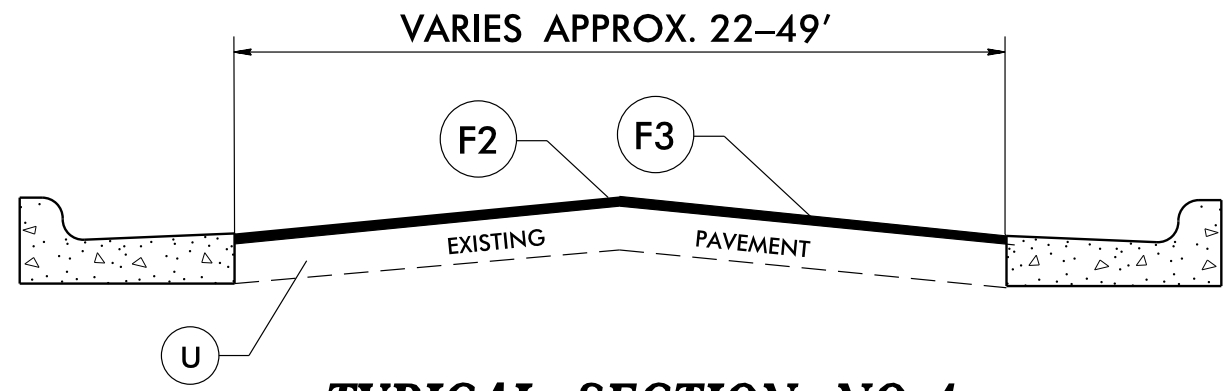


TYPICAL SECTION NO. 3

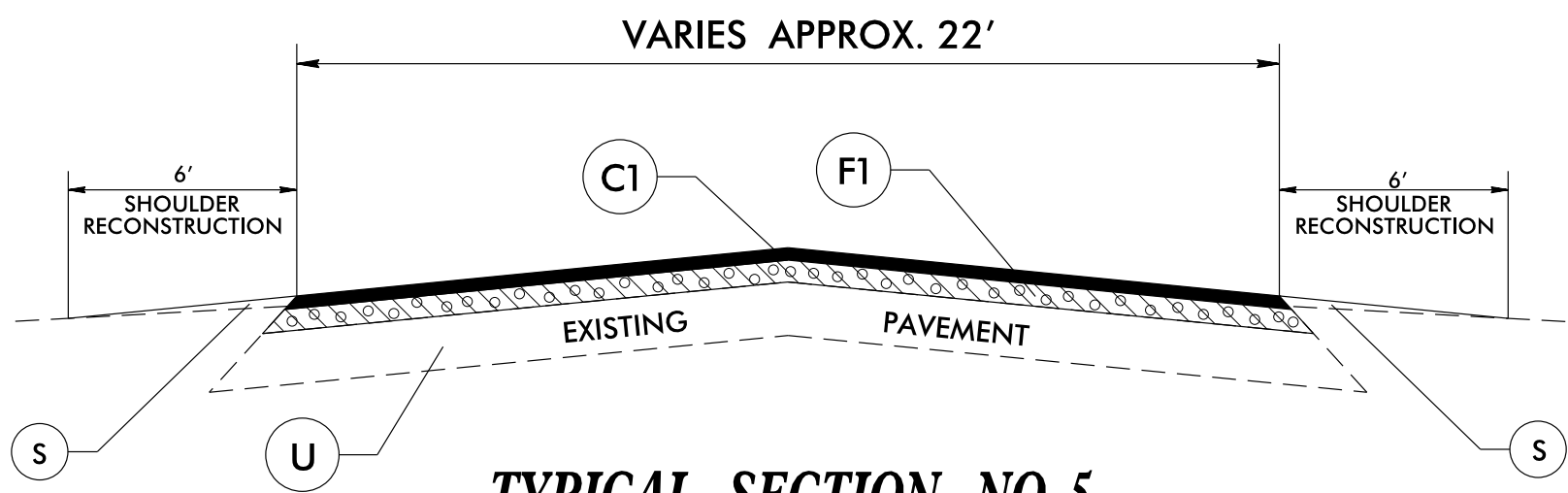
USE FOR MAP 4

PAVEMENT SCHEDULE

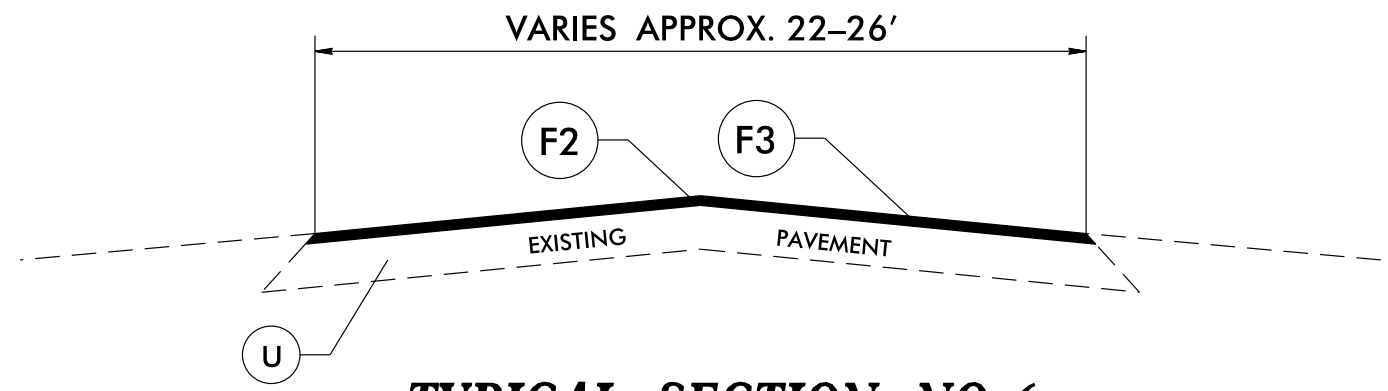
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #67 STONE
F2	PROP. LATEX MODIFIED MICROSURFACING, TYPE II, AT A RATE OF 18 TO 22 LBS. PER SQ. YD.
F3	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #78M STONE
S	AGGREGATE SHOULDER BORROW
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH



TYPICAL SECTION NO. 4
USE FOR MAP 5



TYPICAL SECTION NO. 5
USE FOR MAPS 8 AND 9

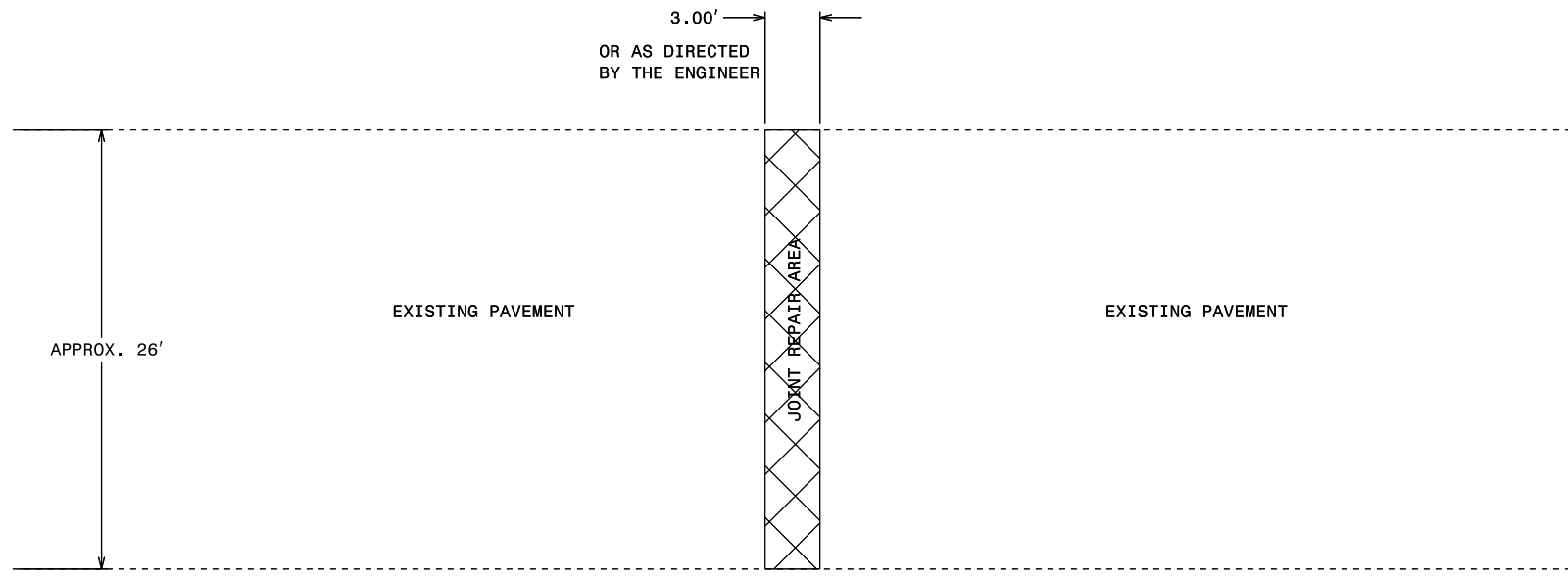


TYPICAL SECTION NO. 6
USE FOR MAP 5

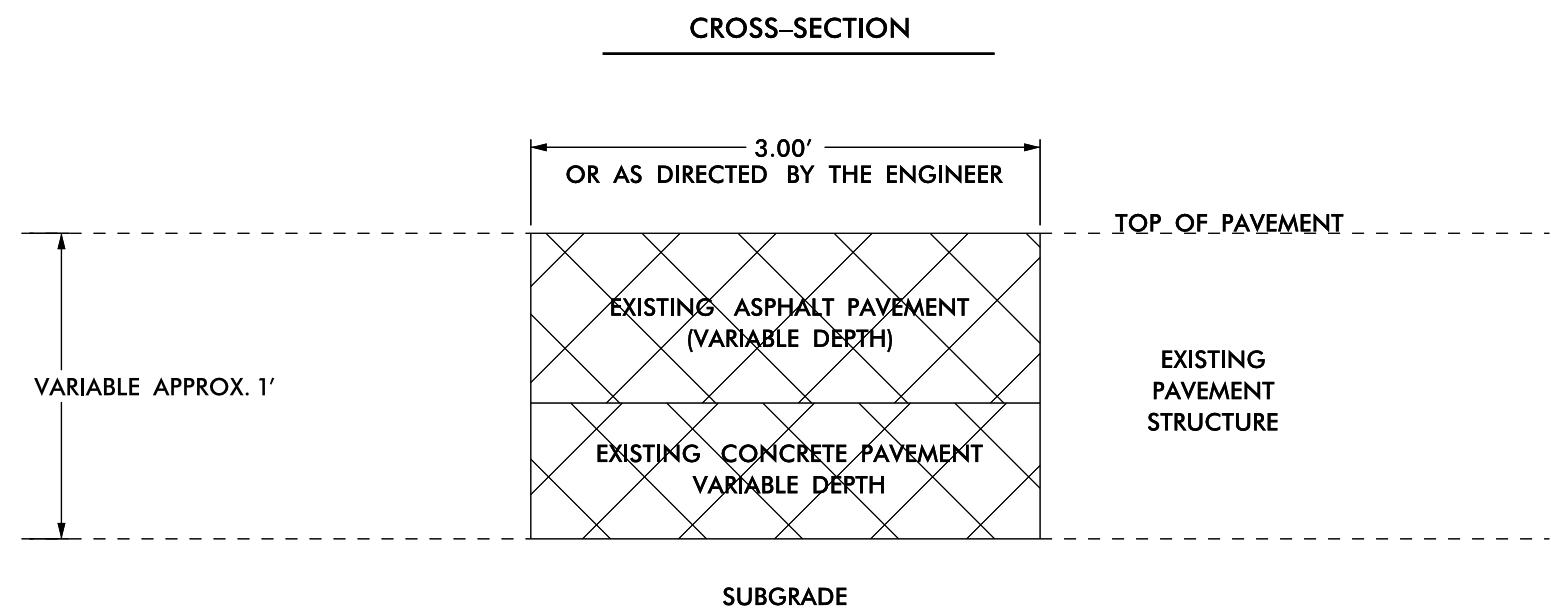
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
F1	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #67 STONE
F2	PROP. LATEX MODIFIED MICROSURFACING, TYPE II, AT A RATE OF 18 TO 22 LBS. PER SQ. YD.
F3	PROPOSED ASPHALT SURFACE TREATMENT, MAT COAT WITH #78M STONE
S	AGGREGATE SHOULDER BORROW
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING 1.5" IN DEPTH

JOINT REPAIR DETAIL

JOINT SCHEDULE	
MAP	# JOINTS
#7 SR 1358 GAP RD	6



CONTRACTOR SHALL COORDINATE WITH RESIDENT ENGINEER'S OFFICE FOR LOCATION OF JOINTS TO BE REPAIRED.

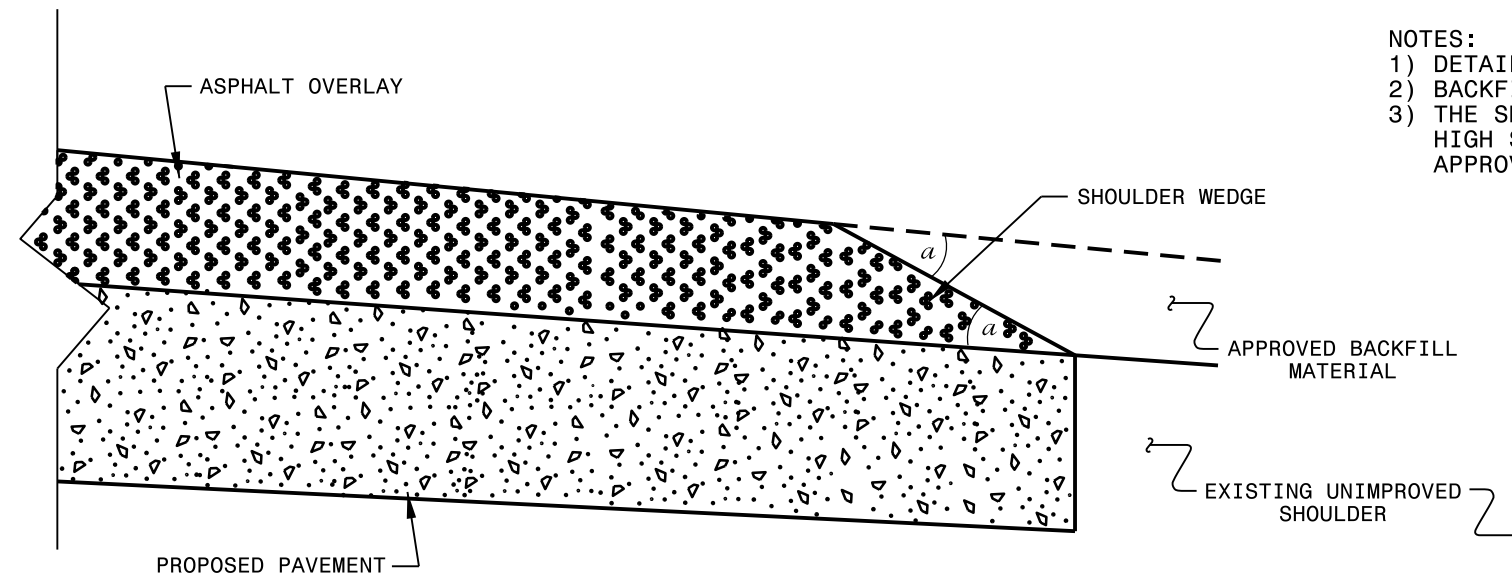


NOTE:
 REMOVE ASPHALT AND CONCRETE AT JOINT LOCATIONS AS DIRECTED BY THE ENGINEER (BY SAWING CLEAN JOINTS).
 REMOVE A TOTAL WIDTH OF 3' (APPROX. 1.5' EACH SIDE OF JOINT).
 REMOVE AND REPLACE WITH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AND/OR ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C.
 THERE WILL BE NO DIRECT PAY FOR THIS WORK AS IT WILL BE CONSIDERED INCIDENTAL TO TO THE LINE ITEM, JOINT REPAIR (TONNAGE)

I:\4-DEC-2023 17:00
 Profiling\Montgomery\2024_Submittal\Montgomery_February2024_Maps_Typ.dgn

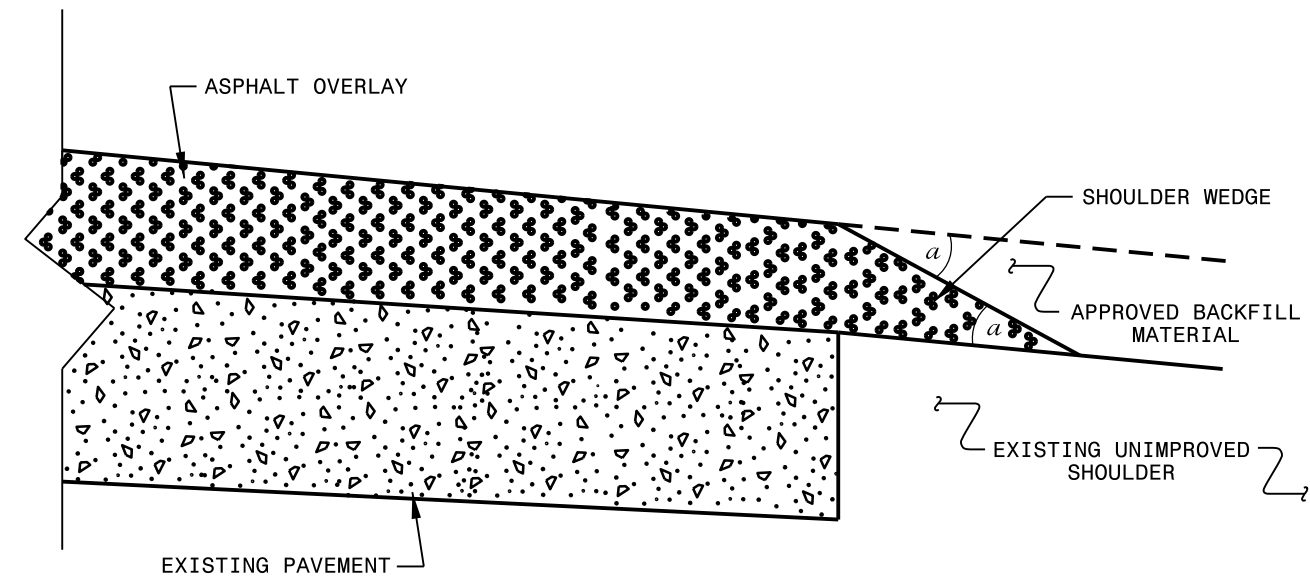
NOTES:

- 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.



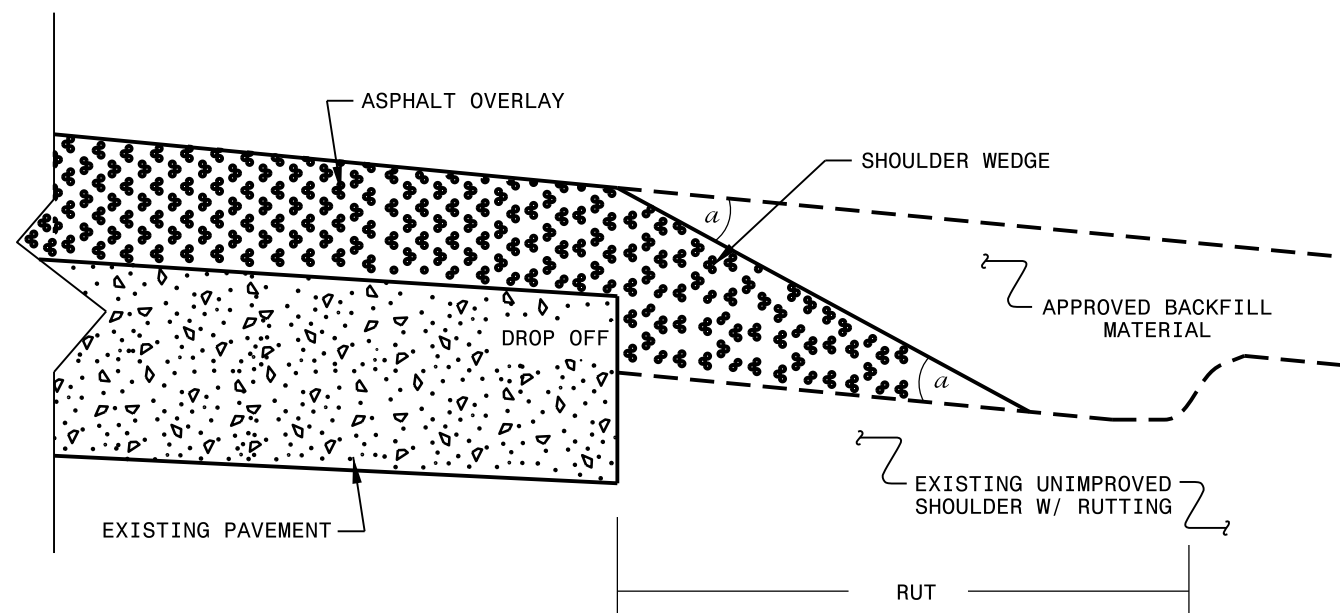
SHOULDER WEDGE DETAIL

(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. 2024CPT.08.09.10621, 2024CPT.08.09.20621	SHEET NO. 14
--	-----------------

SUMMARY OF QUANTITIES

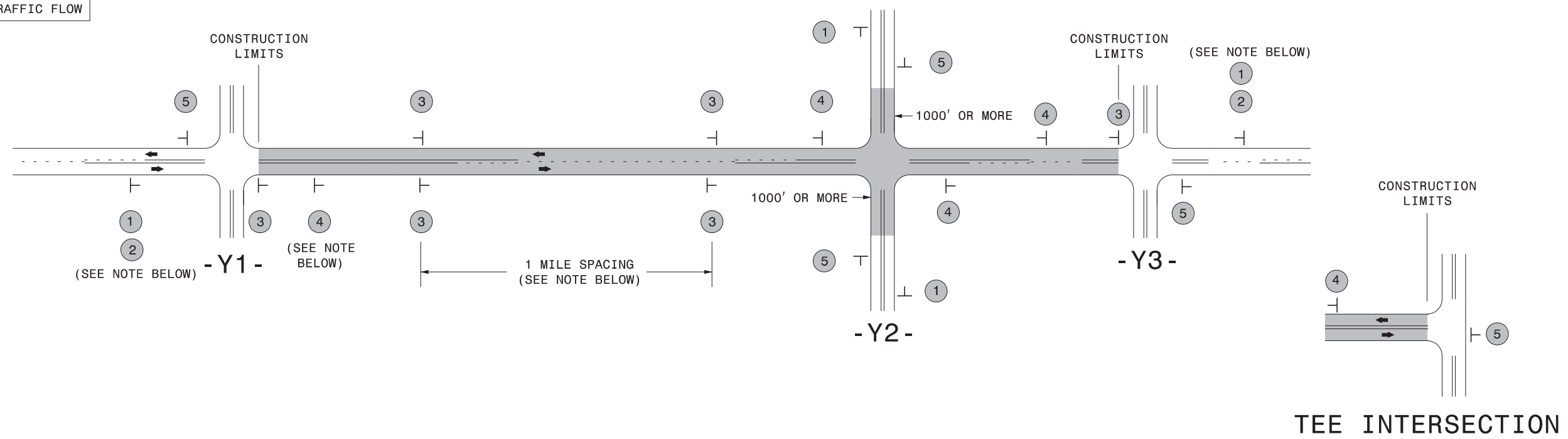
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	BEGIN MP	END MP	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1519000000-E	1575000000-E	1704000000-E	1775000000-E	1775000000-E	1838000000-E	1838500000-N	1880000000-E	1891000000-E	2143000000-E	2830000000-N	2845000000-N	5255000000-N	7444000000-E																
														SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1.5" MILLING	INCIDENTAL MILLING	SURFACE COURSE, S9.5B	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ASPHALT SURFACE TREATMENT, MATCOAT, #78 STONE	ASPHALT SURFACE TREATMENT, MATCOAT, #67 STONE	EMULSION FOR ASPHALT SURFACE TREATMENT	VACUUM TRUCK	GENERIC PAVING ITEM - JOINT REPAIR	GENERIC PAVING ITEM - LATEX MODIFIED MICRO-SURFACING, TYPE II	BLOTTING SAND	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	PORTABLE LIGHTING	INDUCTIVE LOOP SAWCUT																
														MI	FT			TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	EA	EA	LS	LF														
2024CPT.08.09.10621	Montgomery	1	NC-134	FROM NC 24/27 TO END C&G 760LF N OF LESLIE ST (NON-SYSTEM)	1	2	2WU	NO	NO	1.04	36	0	1.04			25,000	500	2,275	148	10									16	5		7,425															
TOTAL FOR MAP NO. 1														1.04				25,000	500	2,275	148	10								16	5	*	7,425														
2024CPT.08.09.10621	Montgomery	2	NC-134	FROM END C&G 760LF N OF LESLIE ST (NON-SYSTEM) TO SR 1324 (GLEN RD)	2	2	2WU	NO	NO	0.64	24	1.04	1.68	1.28	179.00		667	822	54	10								3	2																		
TOTAL FOR MAP NO. 2														0.64				1.28	179.00		667	822	54	10						3	2																
2024CPT.08.09.10621	Montgomery	3	NC-109 BUS	FROM NC 134 TO NC 109 BUS (ELDORADO ST) NON-SYSTEM	1	2	2WU	NO	NO	0.24	24	12.81	13.05			3,379	500	280	19	10												180															
TOTAL FOR MAP NO. 3														0.24								3,379	500	280	19	10															180						
2024CPT.08.09.10621	Montgomery	4	NC-109	FROM SR 1138 (DAIRY RD) TO 1.12 MILES NW OF SR 1147 (CORRELL RD)	3	2	2WU	NO	NO	4.4	24	18.5	22.9																																		
TOTAL FOR MAP NO. 4														4.4												10																					
2024CPT.08.09.10621	Montgomery	5	US-220 ALT	FROM SR 1608 (WHISKEY RD) TO NC 211	4,6	2	2WU	NO	NO	2.9	27	0.2	3.1																																		
TOTAL FOR MAP NO. 5														2.9												10	45,936		16,078	2			45,936	5													
TOTAL FOR PROJ NO. 2024CPT.08.09.10621														9.22								1.28	179	28,379	1,667	3,377	221	50	45,936		16,078	2			109,588	5	19	7	1			7,605					
2024CPT.08.09.20621	Montgomery	6	SR-1563 / LOVIN HILL RD	FROM PVMT JOINT 2291' FROM NC-731 TO END PVMT	2	2	2WU	NO	NO	0.63	21	0.43	1.06	1.26	176.40		200	709	48	40																											
TOTAL FOR MAP NO. 6														0.63								1.26	176.40		200	709	48	40																			
2024CPT.08.09.20621	Montgomery	7	SR-1358 / GAP RD	FROM MOORE CO. LINE TO US 220 ALT	2	2	2WU	NO	NO	0.79	18	0	0.79	1.58	221.20		450	762	51	40																											
TOTAL FOR MAP NO. 7														0.79								1.58	221.20		450	762	51	40																			
2024CPT.08.09.20621	Montgomery	8	SR-1137 / LANDFILL RD	FROM 1.24 MILES NORTH OF NC 24/27 TO SR 1134 (MT CARMEL CH RD)	5	2	2WU	NO	NO	1.47	22	1.24	2.71	2.94	411.60		722	1,575	103	20																											
TOTAL FOR MAP NO. 8														1.47								2.94	411.60		722	1,575	103	20																			
2024CPT.08.09.20621	Montgomery	9	SR-1003 / WINDBLOW RD	FROM LONG LEAF LN TO SR 1524 (BELFORD CH RD)	5	2	2WU	NO	NO	1.36	22	4.72	6.08	2.72	380.80		672	1,602	105	20																											
TOTAL FOR MAP NO. 9														1.36								2.72	380.80		672	1,602	105	20																			
TOTAL FOR PROJ NO. 2024CPT.08.09.20621														4.25								8.50	1,190.00		2,044	4,648	307	120																			
GRAND TOTAL														13.47								9.78	1,369	28,379	3,711	8,025	528	170	45,936		35,200	14,080	2	90				10	19	7	1		7,605				

SIGNING FOR RESURFACING PROJECTS

LEGEND

┆ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 <small>W20-1 48" X 48"</small>	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	
	2	 <small>W7-3aP 24" X 18"</small>	#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	 <small>SP 13107 48" X 48"</small>	- 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	 <small>SP 13106 48" X 48"</small>	- 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	 <small>G20-2 A 48" X 24"</small>	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

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

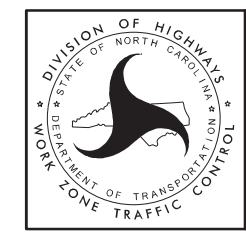
WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

 <small>W20-1 48" X 48"</small> PLACED 500' IN ADVANCE OF FLAGGER.	 <small>W20-7 A 48" X 48"</small> PLACED 250' IN ADVANCE OF FLAGGER.
--	--

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.

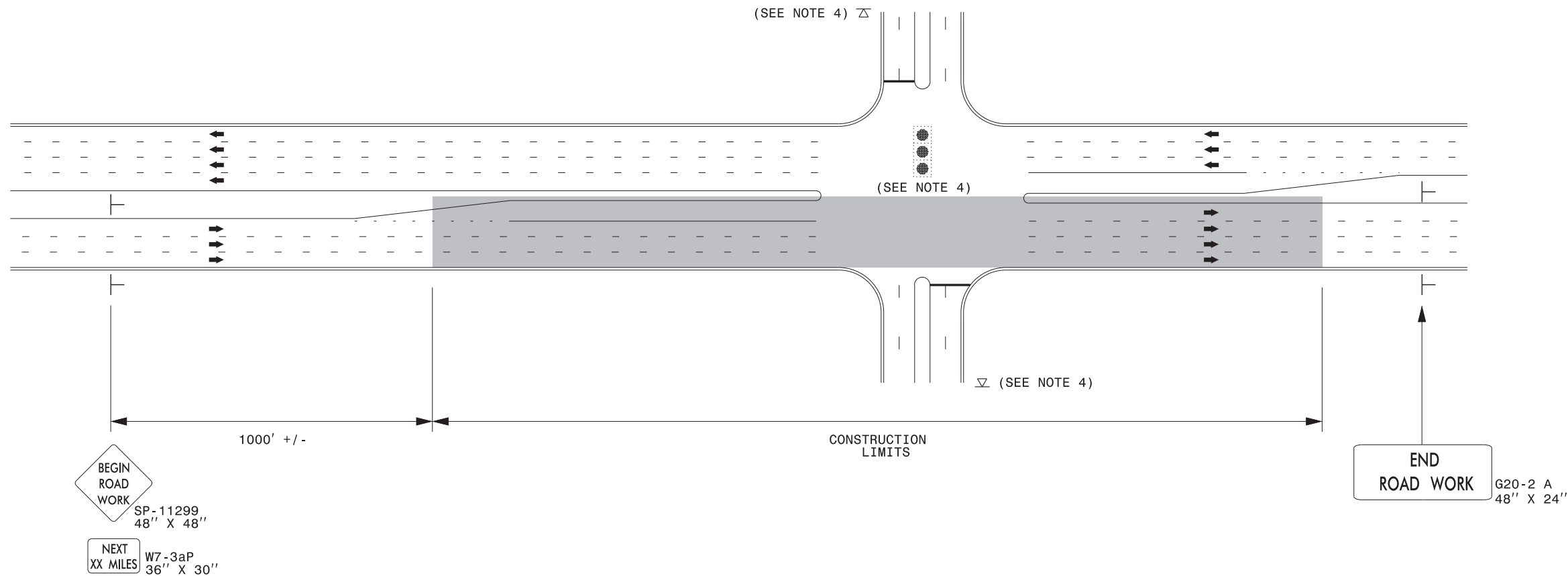
MAPS LESS THAN 2 MILES

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

URBAN / SUBURBAN WORKZONES

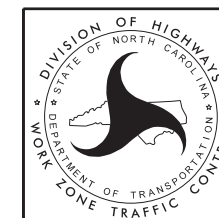


NOTES:

- 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.

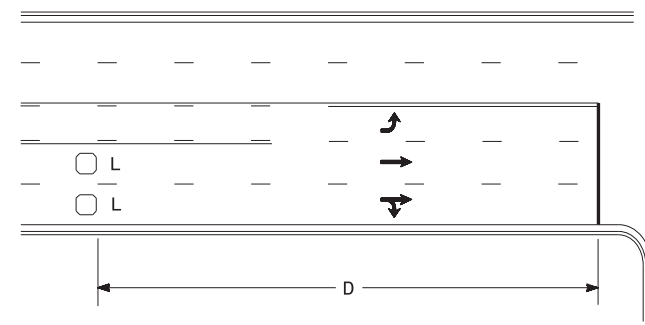
LEGEND

- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW



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

High Speed Detection (≥40 mph)

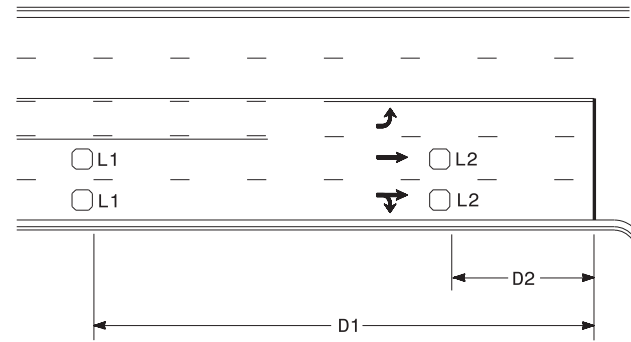


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR

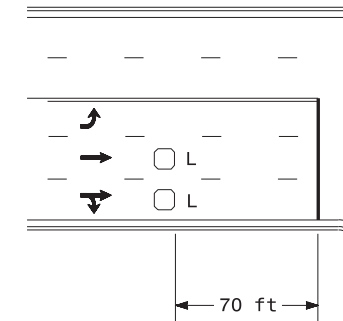


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series
L2 = 6ft X 6ft
Wired in series

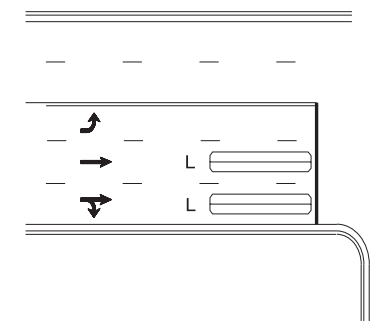
"Stretch" Operation

Low Speed Detection (≤35 mph)



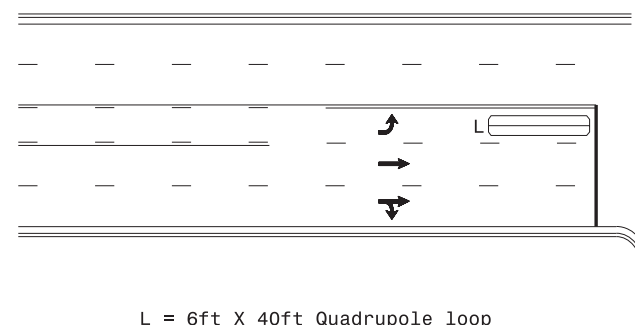
L = 6ft X 6ft
Wired in series

OR



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

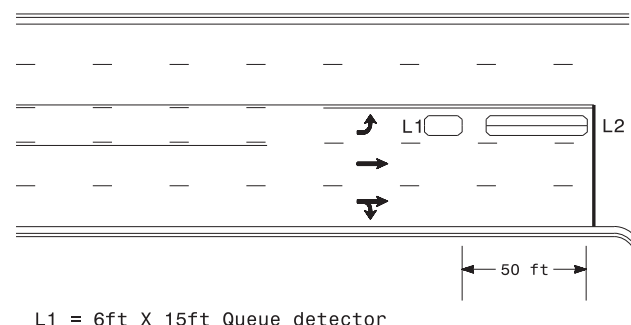
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

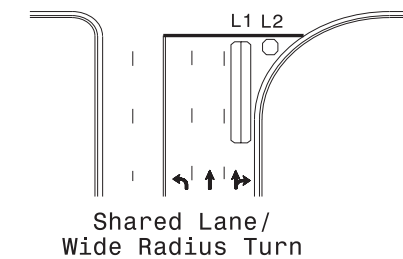
OR



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

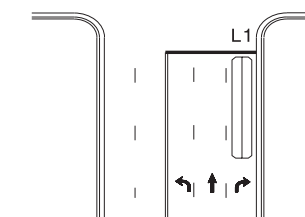
Queue Loop Detection

Right Turn Lane Detection

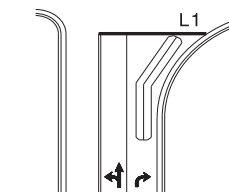


L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately

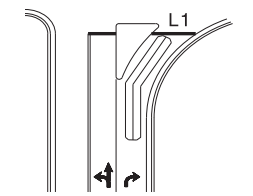
Shared Lane/
Wide Radius Turn



Standard Turn

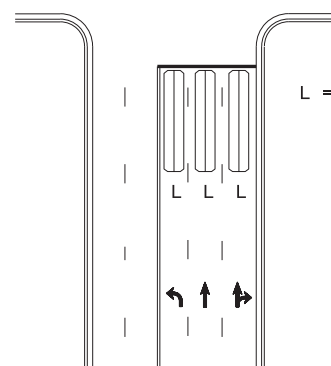


Wide Radius Turn



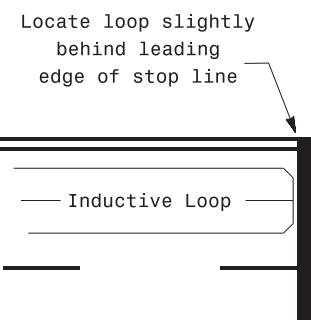
Channelized Turn

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

750 N. Greenfield Pkwy, Garner, NC 27529

Prepared in the Offices of:

Typical Signal Loop Locations	
PLAN DATE: September 2020	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
SCALE: N/A	REVISIONS: INIT. DATE
DATE: 9/8/2020	

SIG. INVENTORY NO.