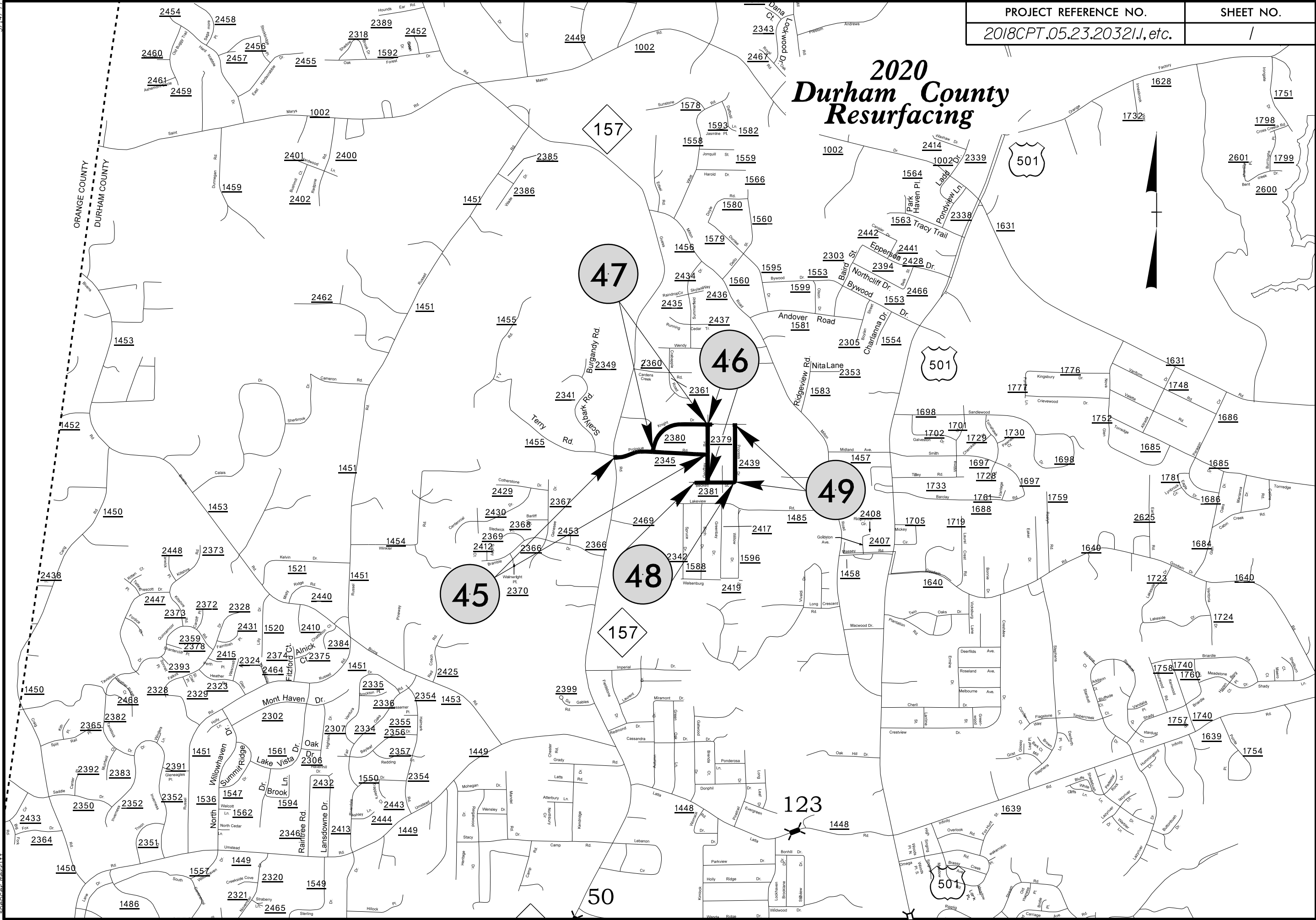


2020 Durham County Resurfacing

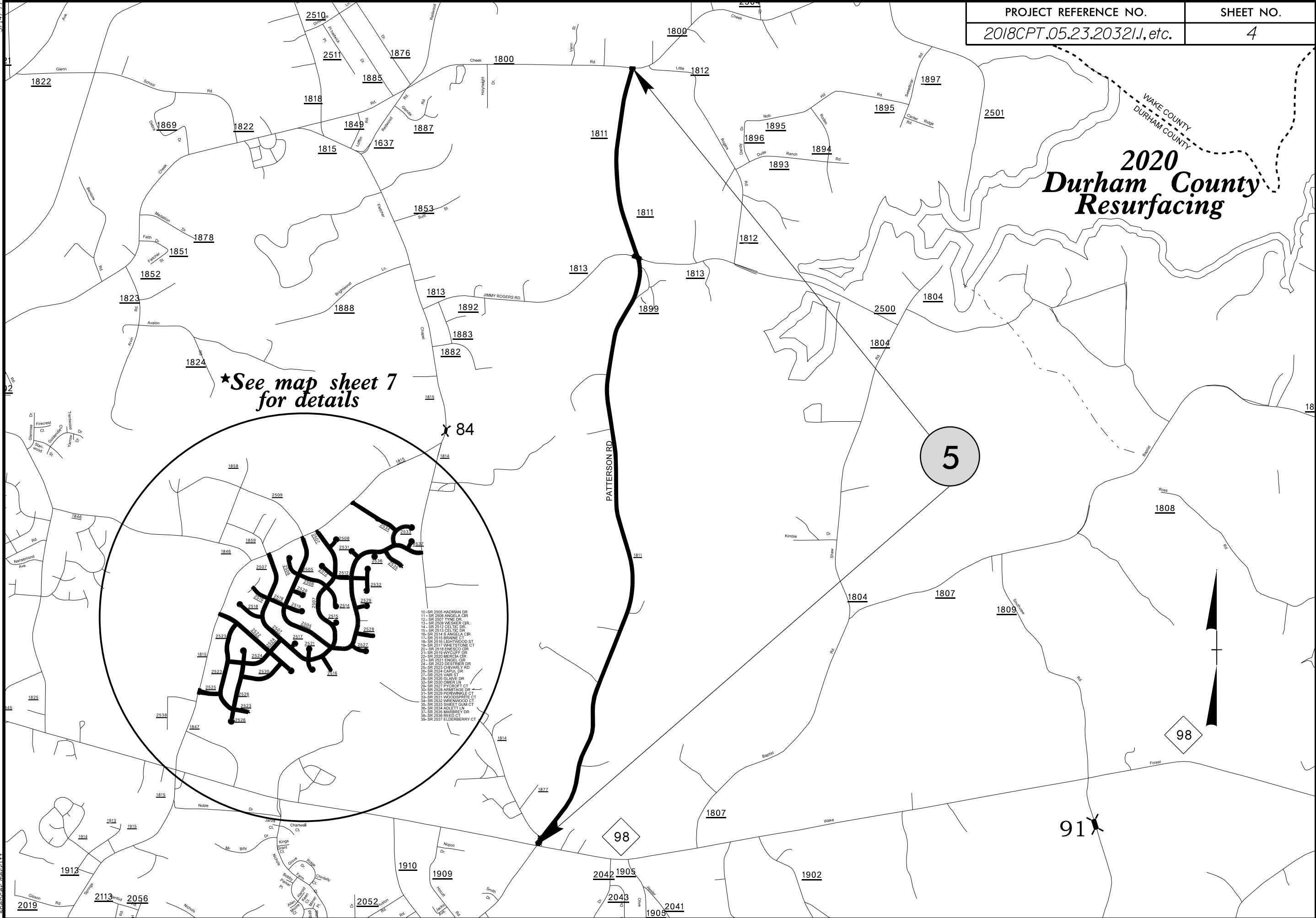


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2020 Durham County Resurfacing

**See map sheet 7
for details*

- 10-SR 2505 HADRIAN DR
- 11-SR 2509 ANGELA CIR
- 12-SR 2507 TYNE DR
- 13-SR 2508 WESKER CIR
- 14-SR 2512 CELTIC DR
- 15-SR 2513 CELTIC DR
- 16-SR 2514 S ANGELA CIR
- 17-SR 2515 BRANE CT
- 18-SR 2516 LIGHTWOOD ST
- 19-SR 2517 WHETSTONE CT
- 20-SR 2518 ENIGMA CIR
- 21-SR 2519 WYCLIFF DR
- 22-SR 2520 MERICA CIR
- 23-SR 2521 ENGEL CIR
- 24-SR 2522 DESTHER DR
- 25-SR 2523 CHURCHY RD
- 26-SR 2524 LARUE DR
- 27-SR 2525 VAR ST
- 28-SR 2526 LARUE DR
- 29-SR 2530 CAMER LN
- 30-SR 2527 WYCLIFF CT
- 31-SR 2528 ARMITAGE DR
- 32-SR 2529 WOODWAVE CT
- 33-SR 2531 WOODWAVE CT
- 34-SR 2532 WOODWAVE CT
- 35-SR 2533 WRENWOOD CT
- 36-SR 2534 WELLS GUM CT
- 37-SR 2535 MARSHY DR
- 38-SR 2536 REED CT
- 39-SR 2537 ELDERBERRY CT

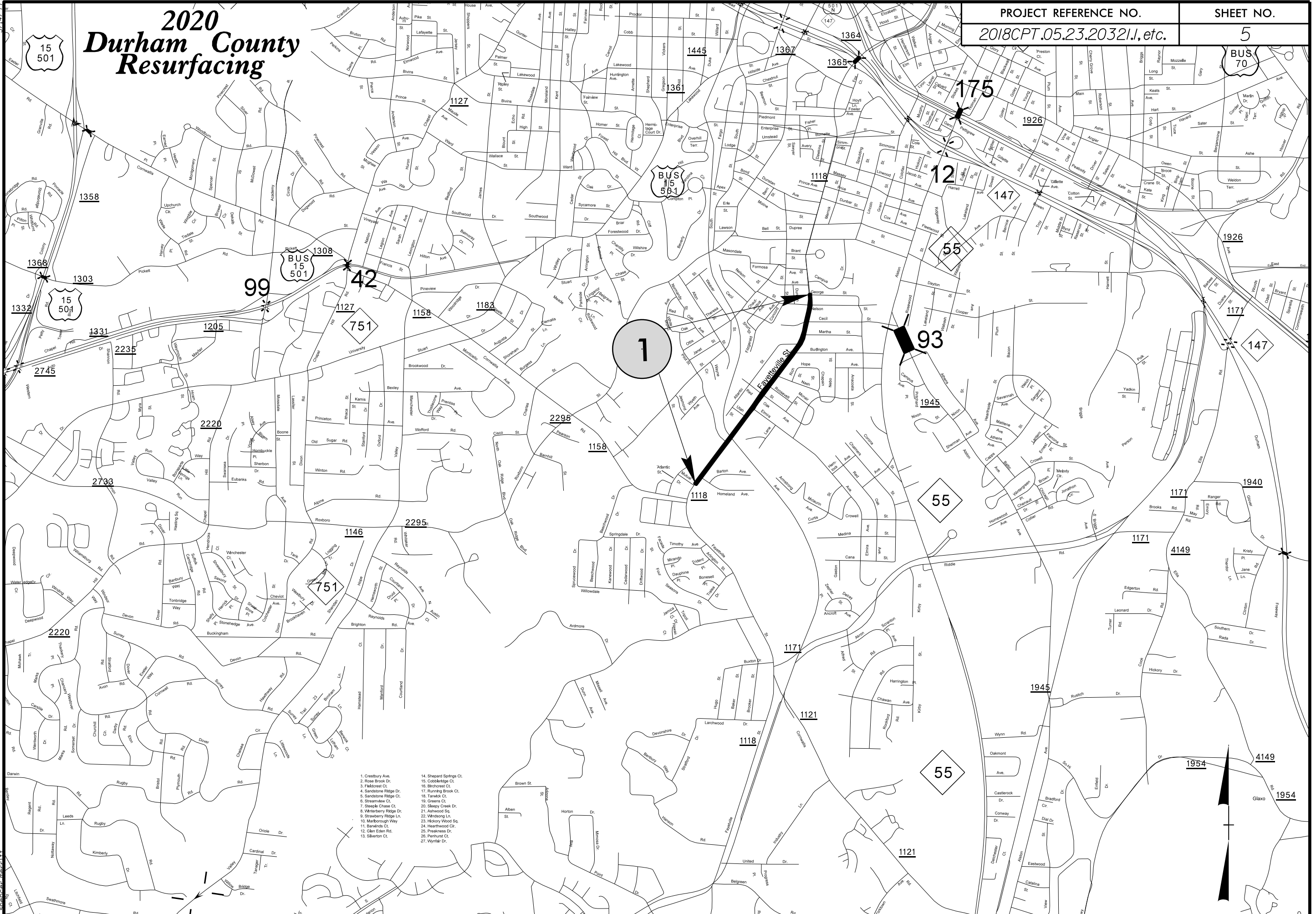


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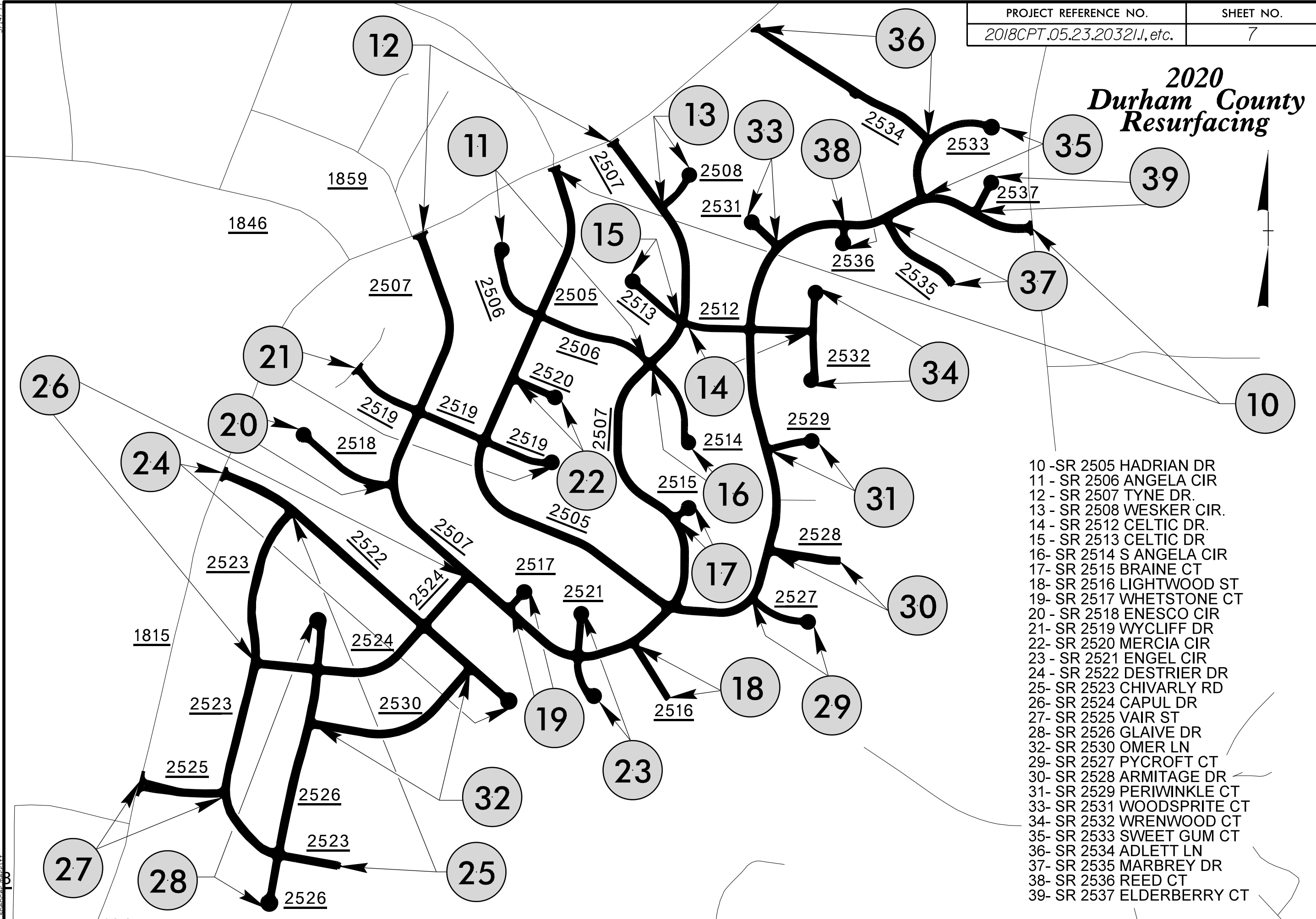
2020 Durham County Resurfacing

PROJECT REFERENCE NO. 2018CPT.05.23.20321.I, etc.	SHEET NO. 5
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- 1. Crestbury Ave.
- 2. Rose Brook Dr.
- 3. Fallcrest Ct.
- 4. Sandstone Ridge Dr.
- 5. Sandstone Ridge Ct.
- 6. Streamline Ct.
- 7. Shepley Chase Ct.
- 8. Winterberry Ridge Dr.
- 9. Strawberry Ridge Ln.
- 10. Marlborough Way
- 11. Barwinds Ct.
- 12. Glen Eden Rd.
- 13. Silvertown Ct.
- 14. Shepard Springs Ct.
- 15. Cobblestone Ct.
- 16. Birchcrest Ct.
- 17. Running Brook Ct.
- 18. Tanlock Ct.
- 19. Greens Ct.
- 20. Sleepy Creek Dr.
- 21. Ashwood Sq.
- 22. Windsor Ln.
- 23. Hickory Wood Sq.
- 24. Heathwood Ct.
- 25. Peakness Dr.
- 26. Penhurst Ct.
- 27. Wymair Dr.

2020 Durham County Resurfacing



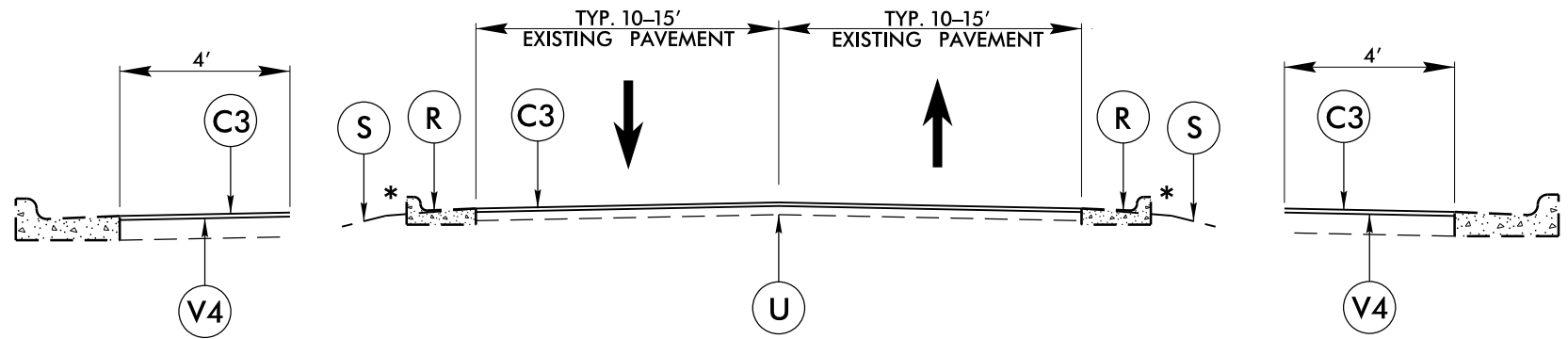
- 10 - SR 2505 HADRIAN DR
- 11 - SR 2506 ANGELA CIR
- 12 - SR 2507 TYNE DR.
- 13 - SR 2508 WESKER CIR.
- 14 - SR 2512 CELTIC DR.
- 15 - SR 2513 CELTIC DR
- 16- SR 2514 S ANGELA CIR
- 17- SR 2515 BRAINE CT
- 18- SR 2516 LIGHTWOOD ST
- 19- SR 2517 WHETSTONE CT
- 20 - SR 2518 ENESCO CIR
- 21- SR 2519 WYCLIFF DR
- 22- SR 2520 MERCIA CIR
- 23 - SR 2521 ENGEL CIR
- 24 - SR 2522 DESTRIER DR
- 25- SR 2523 CHIVARLY RD
- 26- SR 2524 CAPUL DR
- 27- SR 2525 VAIR ST
- 28- SR 2526 GLAIVE DR
- 32- SR 2530 OMER LN
- 29- SR 2527 PYCROFT CT
- 30- SR 2528 ARMITAGE DR
- 31- SR 2529 PERIWINKLE CT
- 33- SR 2531 WOODSPRITE CT
- 34- SR 2532 WRENWOOD CT
- 35- SR 2533 SWEET GUM CT
- 36- SR 2534 ADLETT LN
- 37- SR 2535 MARBREY DR
- 38- SR 2536 REED CT
- 39- SR 2537 ELDERBERRY CT

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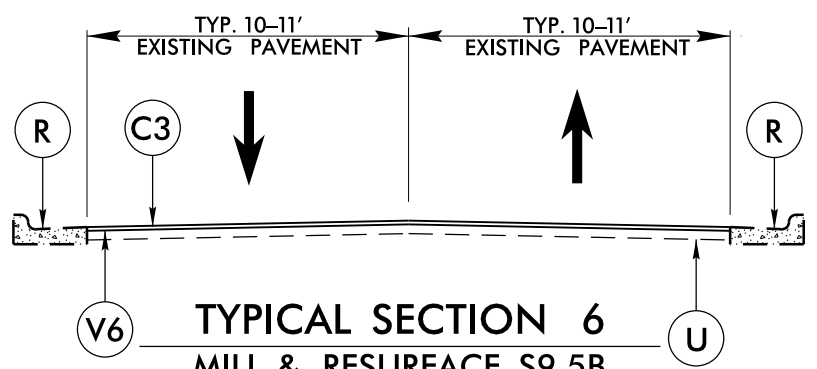
PAVEMENT SCHEDULE	
C1	1" S4.75A
C2	1" S9.5B
C3	1 1/2" S9.5B
C4	2" S9.5B
R	EX C & G
S	SHLD GRADING
U	EXIST. PAVEMENT
V1	1" MILLING
V2	1 1/2" MILLING
V3	2" MILLING
V4	0-1 1/2" MILLING
V5	0-3" MILLING
V6	0-5 1/2" MILLING
V7	3" MILLING

* VARIABLE OUTSIDE SHOULDER – PARTIAL C&G, PARTIAL EARTH SHOULDER



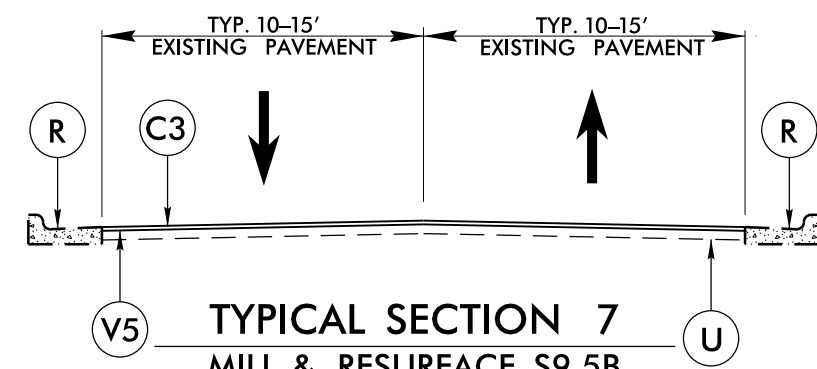
TYPICAL SECTION 5
RESURFACE S9.5B

MAP NO. 4 (TEKNIKA PKWY)
MAP NO. 5 (PATTERSON RD)



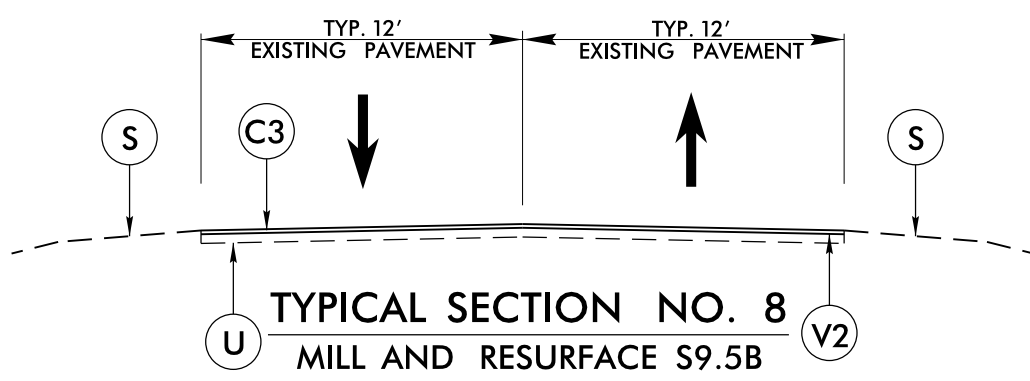
TYPICAL SECTION 6
MILL & RESURFACE S9.5B

MAP NO. 6 (LEESVILLE RD)
-From US 70 to End of C&G Section



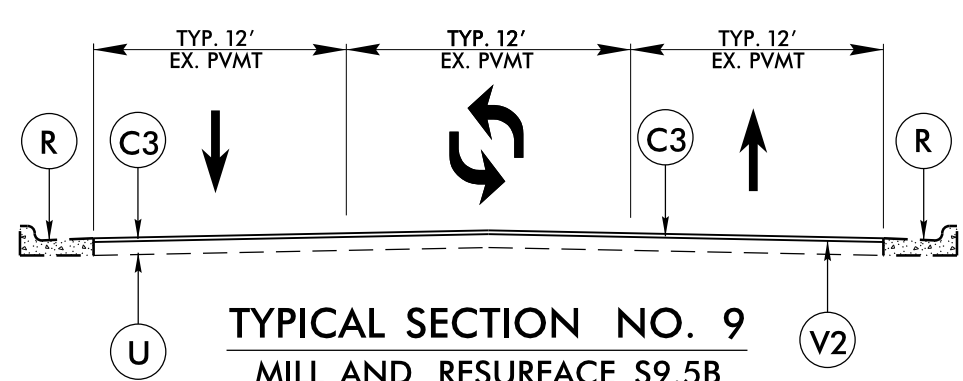
TYPICAL SECTION 7
MILL & RESURFACE S9.5B

MAP NO. 7 (LUMLEY RD)
-From Pageford Dr to Page Rd



TYPICAL SECTION NO. 8
MILL AND RESURFACE S9.5B

MAP NO. 8 (PAGE RD)
-From Page Rd Ext to Lumley Rd

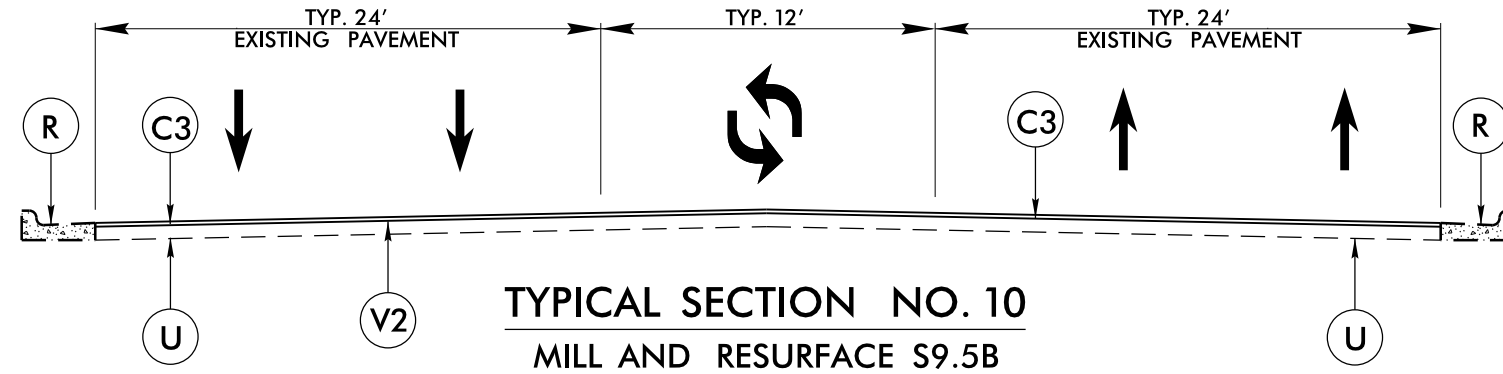


TYPICAL SECTION NO. 9
MILL AND RESURFACE S9.5B

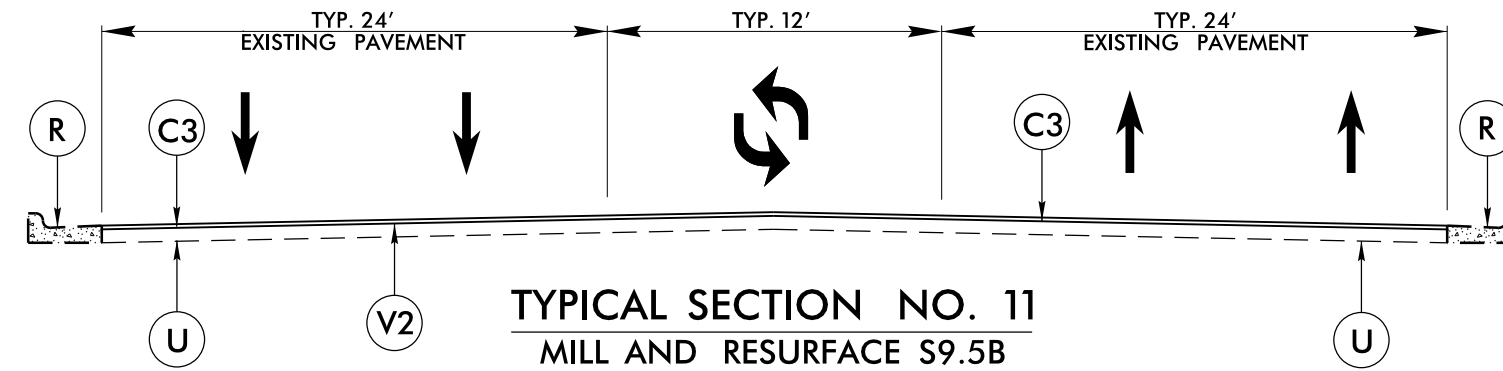
MAP NO. 8 (PAGE RD)
-From Lumley Rd to Adelaide Cir/Rathie Dr

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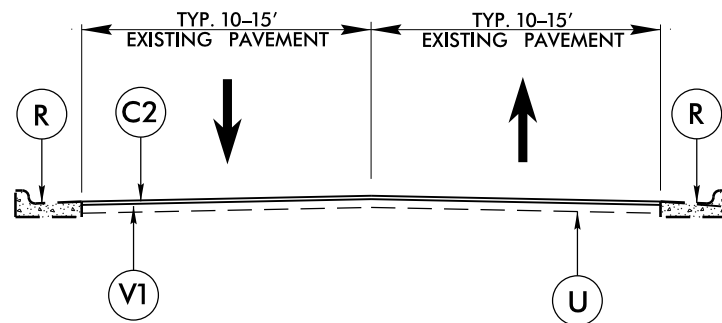
PAVEMENT SCHEDULE	
C1	1" S4.75A
C2	1" S9.5B
C3	1½" S9.5B
C4	2" S9.5B
R	EX C & G
S	SHLD GRADING
U	EXIST. PAVEMENT
V1	1" MILLING
V2	1½" MILLING
V3	2" MILLING
V4	0-1½" MILLING
V5	0-3" MILLING
V6	0-5½" MILLING
V7	3" MILLING



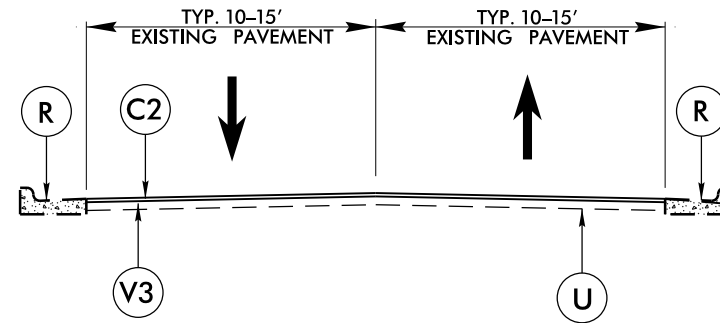
TYPICAL SECTION NO. 10
 MILL AND RESURFACE S9.5B
 MAP NO. 8 (PAGE RD)
 -From Adelaide Cir/Rathie Dr to TW Alexander Dr



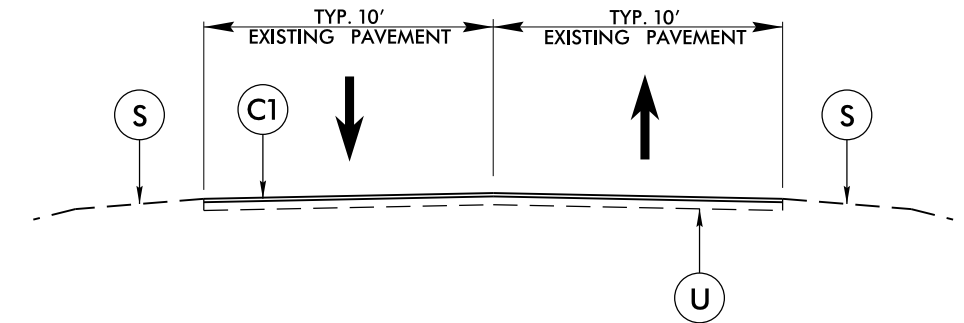
TYPICAL SECTION NO. 11
 MILL AND RESURFACE S9.5B
 MAP NO. 9 (PAGE RD EXT.)



TYPICAL SECTION NO. 12
 MILL AND RESURFACE S9.5B
 MAP NOS. 10-11, 14-39



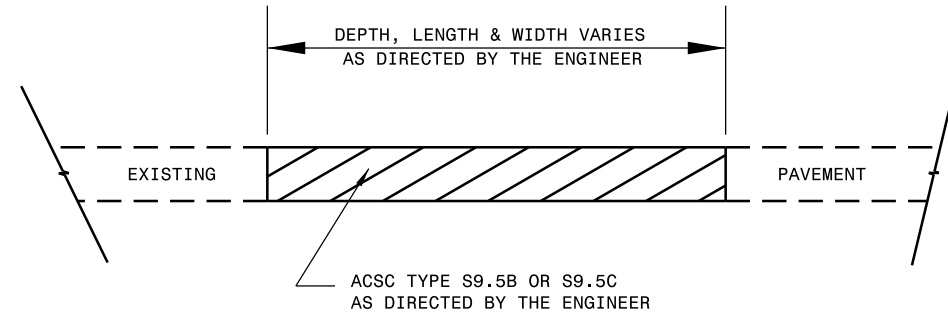
TYPICAL SECTION NO. 13
 MILL AND RESURFACE S9.5B
 MAP NO. 12 (TYNE DR)
 MAP NO. 13 (WESKER CIR)



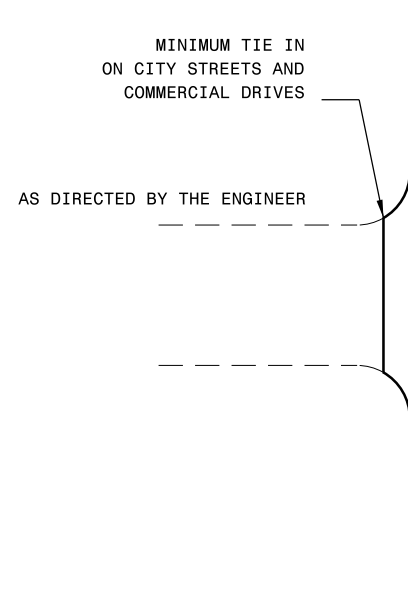
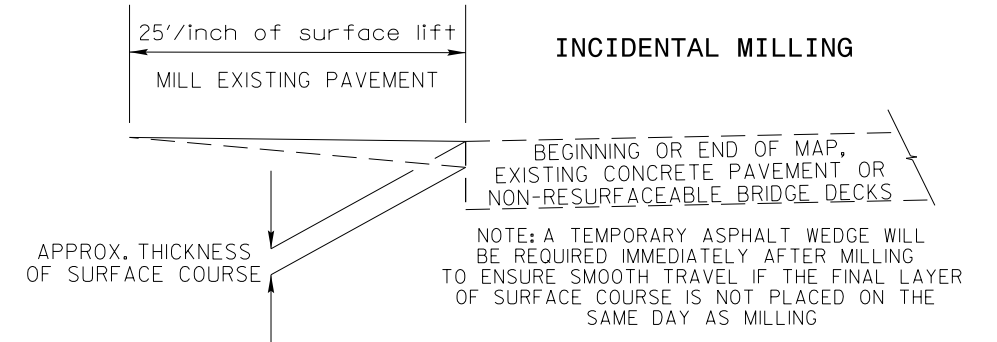
TYPICAL SECTION NO. 14
 RESURFACE S4.75A
 MAP NOS. 40-51

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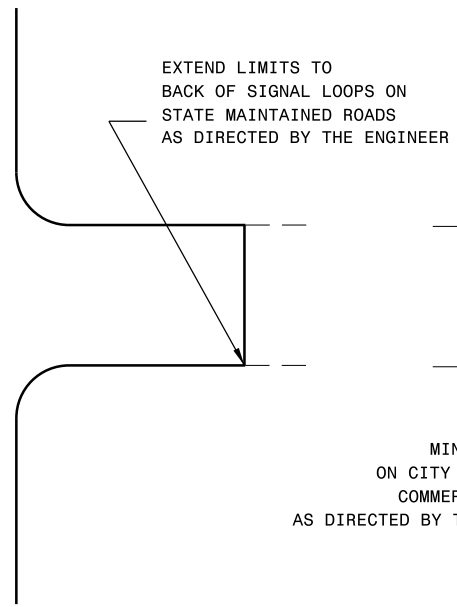
PAVEMENT SCHEDULE	
C1	1" S4.75A
C2	1" S9.5B
C3	1½" S9.5B
C4	2" S9.5B
R	EX C & G
S	SHLD GRADING
U	EXIST. PAVEMENT
V1	1" MILLING
V2	1½" MILLING
V3	2" MILLING
V4	0-1½" MILLING
V5	0-3" MILLING
V6	0-5½" MILLING
V7	3" MILLING



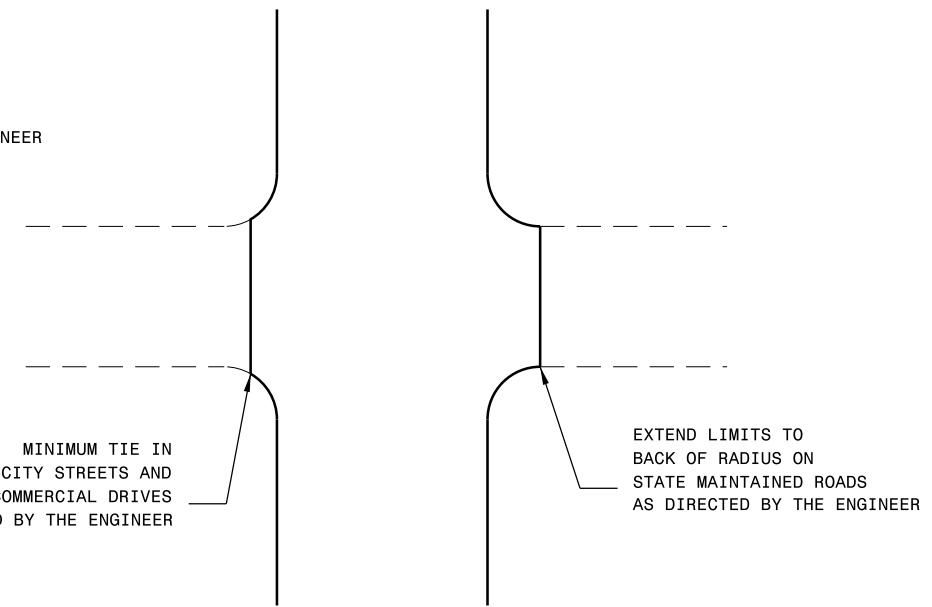
PATCHING EXISTING PAVEMENT
MILLING TO BE PERFORMED PRIOR TO PATCHING



DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES



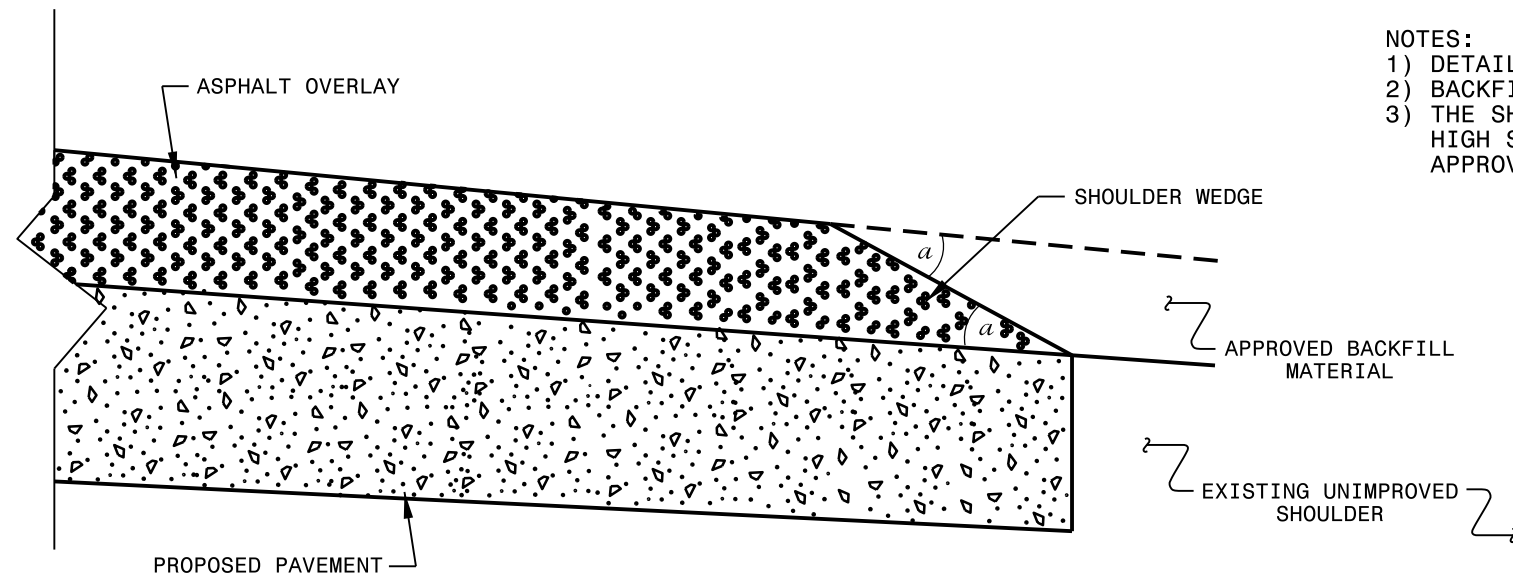
DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES



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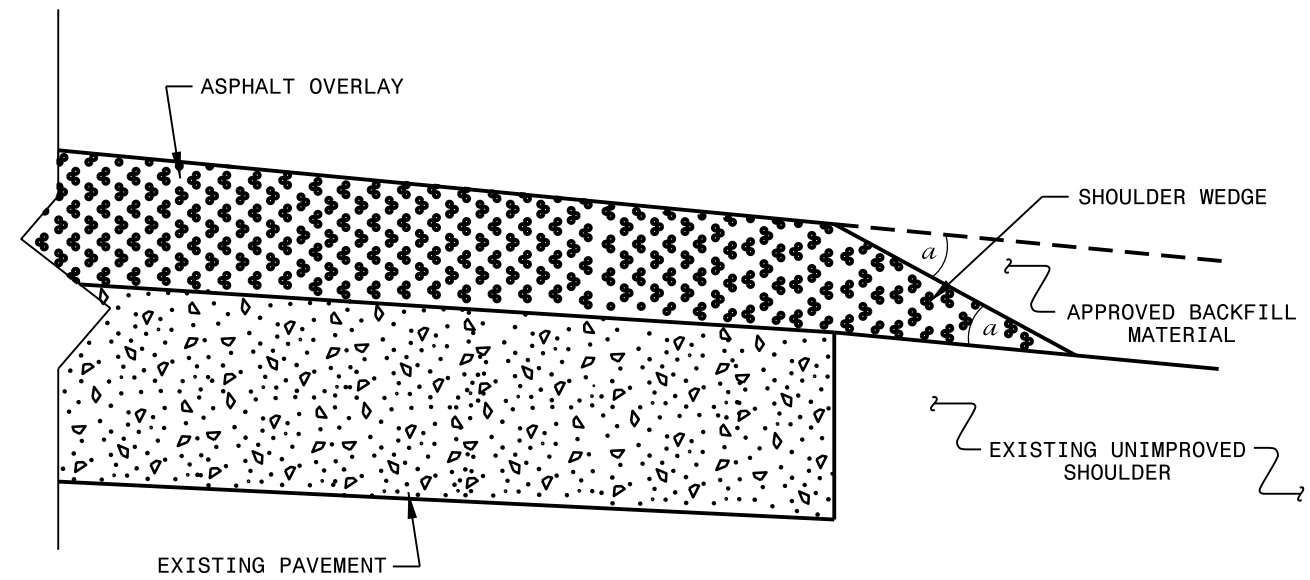
NOTES:

- 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.



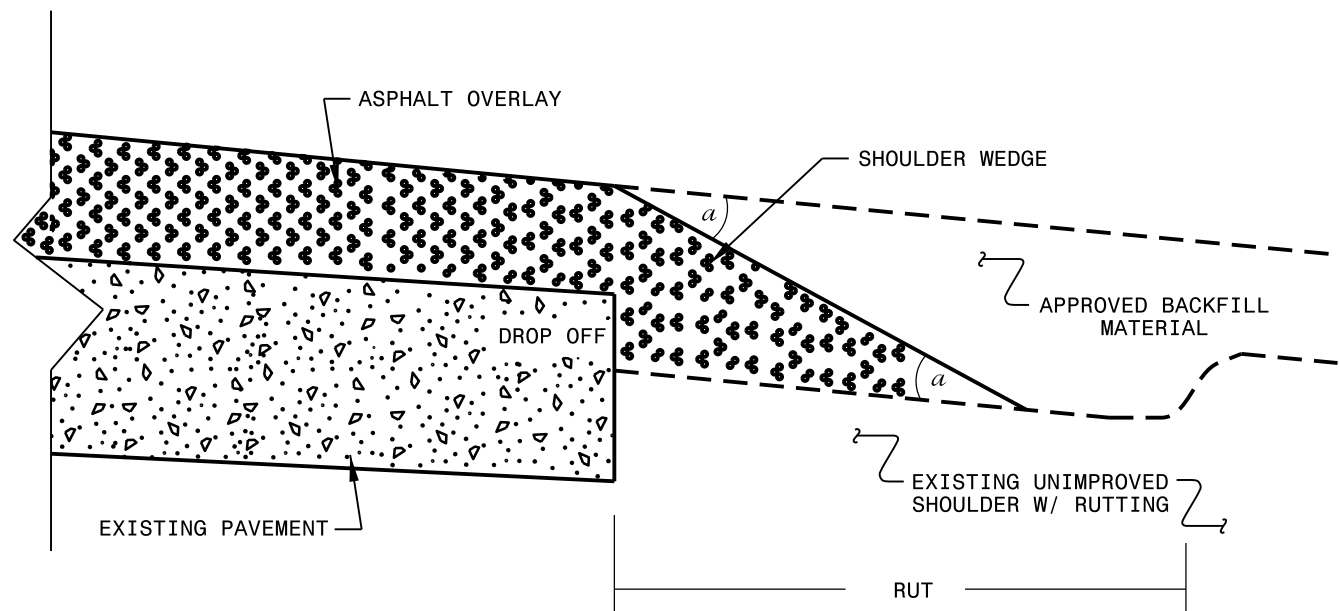
SHOULDER WEDGE DETAIL

(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

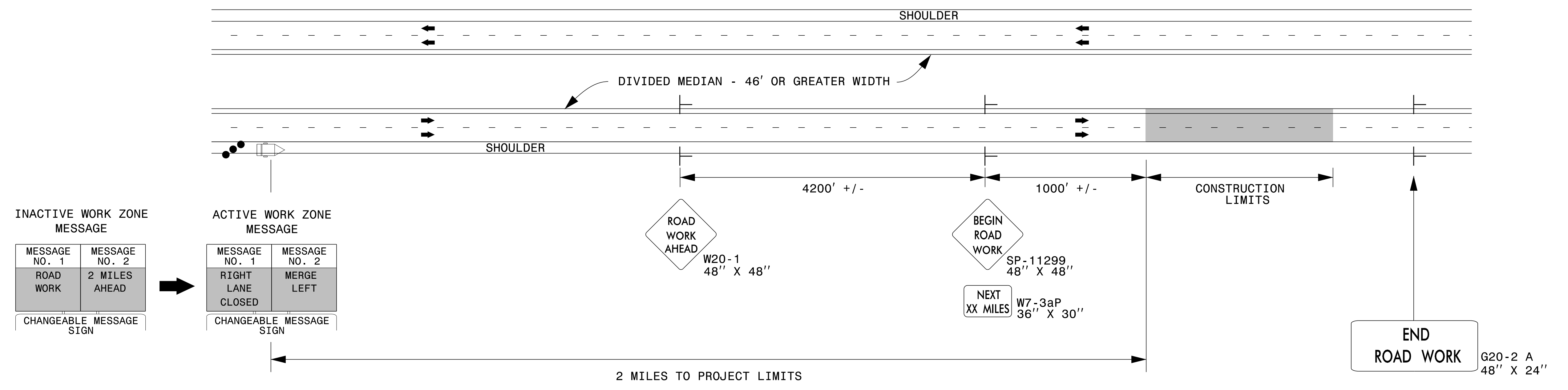
PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.05.23.20321.1, etc	13	

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANS	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGT	WID	BORROW	ASB	SHOULDER GRADING	INCIDENTAL STONE BASE	2"	1 1/2"	3"	1"	0" TO 1.5"	0" TO 5.5"	0" TO 3"	INCIDENTAL MILLING	SURFACE COURSE, \$9.5B	SURFACE COURSE, \$9.5C	SURFACE COURSE, \$4.75A	ASPH BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	ADJ. OF MAN-HOLES	ADJ. OF METER OR VALVE BOXES	TEMP. SILT FENCE	WAT TLE	SEED & MULCHING	INDUCTIVE LOOP SAW-CUT															
									MI	FT					CY	TON	SMI	TONS	SY	SY	SY													SY	SY	SY	SY	SY	TONS	TONS	TON	TONS	EA	EA	LF	LF	AC	LF
		1	SR 1118 - FAYETTEVILLE ST	FROM MUTUAL DR. TO GEORGE ST.	1	4	NO	NO	0.99	40				99	22,059							170		2,743		165	46	3	3					2,380														
		2	SR 1407 - CARVER ST.	FROM SR 1321 (HILLDALE RD) TO US 501 BUS. MILL 3" FROM DUKE ST. TO BIRMINGHAM/WINSTON RD. DUE TO ASPHALT BEING ABOVE C/G	2	3	NO	NO	2.1	34	200	200	2.10	105		40,891	1,058					1,117	3,642		244	16				210	65	5	4,640															
		3	SR 1648 - DANUBE LN	FROM SR 1656 (HEBRON RD) TO SR 1004 (OLD OXFORD RD). SKIP NEW PAVEMENT	3,4	2	NO	NO	1.42	30	40	70	1.50	71		14,014						102	2,174		146	454	2	2	80	20	10																	
		4	SR 1794 - TEKNIKA PKWY	FROM SR 1004 (OLD OXFORD RD) TO SR 2602 (RED MILL RD)	5	2	NO	NO	0.85	32	10	18	1.70	43		175			3,990			132	1,388		93	620	3		170	30	5																	
		5	SR 1811 - PATTERSON RD	FROM SR 1800 (CHEEK RD) TO NC 98	5	2	NO	NO	3.52	24	350	660	7.04	176					16,520			1,372	4,316		290	780			704	110	5																	
		6	SR 1906 - LEESVILLE RD	FROM US 70 TO WAKE COUNTY. SKIP NEW PAVEMENT.	4,6	2	NO	NO	3.37	22	630	630	6.74	169						611		105	3,789		254	601			674	110	5																	
		7	SR 1966 - LUMLEY RD	FROM SR 1959 (S. MIAMI BLVD) TO SR 1973 (PAGE RD).	3,4,7	2	NO	NO	1.78	32	40	70	0.70	89		585					1,150	384	2,906		195	483	2	1	70	20	5																	
		8	SR 1973 - PAGE RD	FROM SR 2095 (PAGE RD EXT.) TO SR 2028 (TW ALEXANDER DR)	8,9,10	4	NO	NO	0.65	60	20	30	0.22	33		22,880						317	1,986		133	31			22	10	5	2,405																
		9	SR 2095 - PAGE RD EXT.	FROM SR 1973 (PAGE RD) TO US 70	11	5	NO	NO	0.33	60				17		11,616							1,008		68	31																						
		10	SR 2505 - HADRIAN DR	FROM SR 1815 (N. MINERAL SPRINGS RD) TO SR 1814 (STALLINGS DR)	12	2	NO	NO	1.41	30				71				24,816					1,437		96																							
		11	SR 2506 - ANGELA CIR	FROM CUL-DE-SAC TO SR 2507 (TYNE DR)	12	2	NO	NO	0.23	24				12				3,238					188		13																							
		12	SR 2507 - TYNE DR	FROM SR 1815 (N. MINERAL SPRINGS RD) TO SR 1815 (N. MINERAL SPRINGS RD)	13	2	NO	NO	1.28	30				64	22,528								1,305		87																							
		13	SR 2508 - WESKER CIR	FROM CUL-DE-SAC TO SR 2507 (TYNE DR)	13	2	NO	NO	0.05	34				3	997								58		4																							
		14	SR 2512 - CELTIC DR	FROM SR 2512 (TYNE DR) TO SR 2532 (WRENWOOD CT)	12	2	NO	NO	0.15	22				8				1,849					112		8	24																						
		15	SR 2513 - CELTIC DR	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	NO	NO	0.07	32				4				1,314					76		5	26																						
		16	SR 2514 - S. ANGELA CIR	FROM CUL-DE-SAC TO SR 2507 (TYNE DR)	12	2	NO	NO	0.1	28				5				2,392					95		6																							
		17	SR 2515 - BRAINE CT	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	NO	NO	0.03	38				2				669					39		3																							
		18	SR 2516 - LIGHTWOOD ST	FROM SR 2507 (TYNE DR) TO END OF MAINTENANCE	12	2	NO	NO	0.07	24				4				986					57		4																							
		19	SR 2517 - WHETSTONE CT	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	NO	NO	0.03	42				2				739					43		3																							
		20	SR 2518 - ENESCO CIR	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	NO	NO	0.12	26				6				1,830					106		7																							
		21	SR 2519 - WYCLIFF DR	FROM END OF MAINTENANCE TO CUL-DE-SAC	12	2	NO	NO	0.24	30				12				4,224					245		16	23																						
		22	SR 2520 - MERICA CIR	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	NO	NO	0.06	32				3				1,126					65		4																							
		23	SR 2521 - ENGLS CIR	FROM CUL-DE-SAC TO CUL-DE-SAC	12	2	NO	NO	0.11	34				6				2,194					127		9																							
		24	SR 2522 - DESTRIER DR	FROM SR 1815 (N. MINERAL SPRINGS RD) TP CUL-DE-SAC	12	2	NO	NO	0.4	32				20				7,509					435		29																							
		25	SR 2523 - CHIVALRY DR	FROM SR 2522 (DESTRIER DR) TO END OF MAINTENANCE	12	2	NO	NO	0.48	30				24				8,448					489		33																							
		26	SR 2424 - CAPUL DR	FROM SR 2523 (CHIVALRY DR) TO SR 2507 (TYNE DR)	12	2	NO	NO	0.27	32				14				5,069					293		20																							
		27	SR 2525 - VAIR ST	FROM SR 1815 (N. MINERAL SPRINGS RD) TO SR 2507 (TYNE DR)	12	2	NO	NO	0.1	24				5				1,408					82		5																							
		28	SR 2526 - GLAIVE DR	FROM CUL-DE-SAC TO CUL-DE-SAC	12	2	NO	NO	0.33	38				17				7,357					426		29																							
		29	SR 2527 - PYCROFT CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	NO	NO	0.06	36				3				1,267					73		5	20																						
		30	SR 2528 - ARMITAGE DR	FROM SR 2505 (HADRIAN DR) TO END OF MAINTENANCE	12	2	NO	NO	0.08	34				4				1,596					92		6	12																						
		31	SR 2529 - PERIWINKLE CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	NO	NO	0.05	36				3				1,056					61		4																							
		32	SR 2530 - OMER LN	FROM SR 2526 (GLAIVE DR) TO SR 2522 (DESTRIER DR)	12	2	NO	NO	0.2	32				10				3,755					217		15																							
		33	SR 2531 - WOODSPRITE CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	NO	NO	0.04	42				2				986					57		4																							
		34	SR 2532 - WRENWOOD CT	FROM CUL-DE-SAC TO CUL-DE-SAC	12	2	NO	NO	0.11	32				6				2,065					120		8																							
		35	SR 2533 - SWEET GUM CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	NO	NO	0.15	30				8				2,640					153		10																							
		36	SR 2534 - ADLETT LN	FROM SR 2533 (SWEET GUM CT) TO SR 1815 (N. MINERAL SPRINGS RD)	12	2	NO	NO	0.22	30				11				3,872					224		15																							
		37	SR 2535 - MAYBREY DR	FROM SR 2505 (HADRIAN DR) TO END OF MAINTENANCE	12	2	NO	NO	0.1	32				5				1,877					109		7																							
		38	SR 2536 - REED CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	NO	NO	0.03	40				2				704					41		3																							
		39	SR 2537 - ELDERBERRY CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	NO	NO	0.04	40				2				939					54		4																							
TOTAL FOR PROJ NO. 2018CPT.05.23.20321.1									21.62		1,290	1,678	20.00	1,140	45,584	90,161	1,058	95,925	20,510	611	1,150	3,699	28,088	2,743		2,050	3,167	10	6	1,930	365	40	9,425															
		40	SR 1695 - WEST AVE	FROM SR 1656 (HEBRON RD) TO SR 1772 (MELANIE ST). INCIDENTAL MILL AT SR 1656.	14	2	NO	NO	0.37	22	40	70	0.74	19								25		264	18	63		2	74	20	5																	
		41	SR 1696 - JUSTICE ST	FROM SR 1695 (WEST AVE) TO END OF MAINTENANCE	14	2	NO	NO	0.37	16	40	40	0.74	19										192	13	64			74	20	5																	
		42	SR 1743 - SHAY DR	FROM SR 1695 (WEST AVE																																												

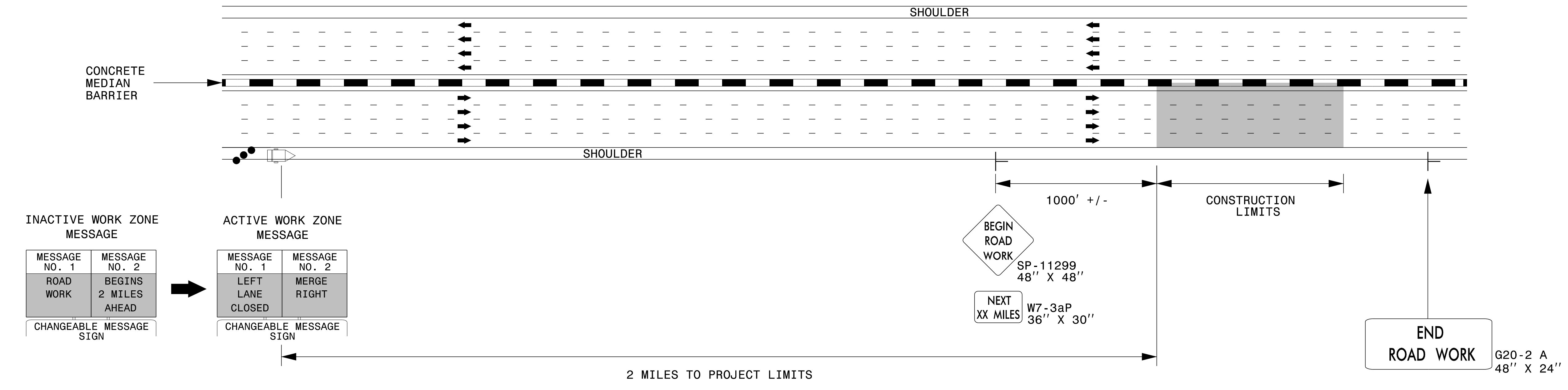
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH	WIDTH	4725000000-E				4810000000-E		4820000000-E		483500000	4840000000-N		4845000000-N					
									THERM O RT ARROW 90 M	THERM O STR ARROW 90 M	THERM O STR & RT ARROW 90 M	THERMO STR & LT ARROW 90 M	4" YELLOW PAINT	4" WHITE PAINT	8" WHITE PAINT	8" YELLOW PAINT	24" WHITE PAINT	PAINT MSG SCHOOL	PAINT MSG ONLY	PAINT LT ARROW	PAINT RT ARROW	PAINT STR ARROW	PAINT STR & RT ARROW	PAINT STR & LT ARROW	PAINT STR RT ARROW
									EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA
		1	SR 1118 - FAYETTEVILLE ST	FROM MUTUAL DR. TO GEORGE ST.	1	4	0.99	40	5	10	8	7	9,345	1,759	717		1,077	72		8	5	10	8	7	
		2	SR 1407 - CARVER ST.	FROM SR 1321 (HILLANDALE RD) TO US 501 BUS. MILL 3" FROM DUKE ST. TO BIRMINGHAM/WINSTON RD. DUE TO ASPHALT BEING ABOVE C/G	2	3	2.1	34	2	2	8		20,546	1,376			323			27	2	2			8
		3	SR 1648 - DANUBE LN	FROM SR 1656 (HEBRON RD) TO SR 1004 (OLD OXFORD RD). SKIP NEW PAVEMENT	3,4	2	1.42	30					16,093	262		31	36			8					
		4	SR 1794 - TEKNIKA PKWY	FROM SR 1004 (OLD OXFORD RD) TO SR 2602 (RED MILL RD)	5	2	0.85	32	3	7	1		1,200	700	187		61			4	3	7	1		
		5	SR 1811 - PATTERSON RD	FROM SR 1800 (CHEEK RD) TO NC 98	5	2	3.52	24		1	1		36,724	151			64			2		1	1		
		6	SR 1906 - LEESVILLE RD	FROM US 70 TO WAKE COUNTY. SKIP NEW PAVEMENT.	4,6	2	3.37	22	2				34,819	211			52			2	2			2	
		7	SR 1966 - LUMLEY RD	FROM SR 1959 (S. MIAMI BLVD) TO SR 1973 (PAGE RD).	3,4,7	2	1.78	32	2		1		21,409	2,005			63			37	2			1	
		8	SR 1973 - PAGE RD	FROM SR 2095 (PAGE RD EXT.) TO SR 2028 (TW ALEXANDER DR)	8,9,10	4	0.65	60	16	8	2		6,076	3,391			109			20	16	8	2		
		9	SR 2095 - PAGE RD EXT.	FROM SR 1973 (PAGE RD) TO US 70	11	5	0.33	60	9				4,433	941						13		9			
		10	SR 2505 - HADRIAN DR	FROM SR 1815 (N. MINERAL SPRINGS RD) TO SR 1814 (STALLINGS DR)	12	2	1.41	30																	
		11	SR 2506 - ANGELA CIR	FROM CUL-DE-SAC TO SR 2507 (TYNE DR)	12	2	0.23	24																	
		12	SR 2507 - TYNE DR	FROM SR 1815 (N. MINERAL SPRINGS RD) TO SR 1815 (N. MINERAL SPRINGS RD)	13	2	1.28	30																	
		13	SR 2508 - WESKER CIR	FROM CUL-DE-SAC TO SR 2507 (TYNE DR)	13	2	0.05	34																	
		14	SR 2512 - CELTIC DR	FROM SR 2512 (TYNE DR) TO SR 2532 (WRENWOOD CT)	12	2	0.15	22																	
		15	SR 2513 - CELTIC DR	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	0.07	32																	
		16	SR 2514 - S. ANGELA CIR	FROM CUL-DE-SAC TO SR 2507 (TYNE DR)	12	2	0.1	28																	
		17	SR 2515 - BRAINE CT	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	0.03	38																	
		18	SR 2516 - LIGHTWOOD ST	FROM SR 2507 (TYNE DR) TO END OF MAINTENANCE	12	2	0.07	24																	
		19	SR 2517 - WHETSTONE CT	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	0.03	42																	
		20	SR 2518 - ENESCO CIR	FROM SR 2507 (TYNE DR) TO CUL-DE-SAC	12	2	0.12	26																	
		21	SR 2519 - WYCLIFF DR	FROM END OF MAINTENANCE TO CUL-DE-SAC	12	2	0.24	30																	
		22	SR 2520 - MERICA CIR	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	0.06	32																	
		23	SR 2521 - ENGLS CIR	FROM CUL-DE-SAC TO CUL-DE-SAC	12	2	0.11	34																	
		24	SR 2522 - DESTRIER DR	FROM SR 1815 (N. MINERAL SPRINGS RD) TP CUL-DE-SAC	12	2	0.4	32																	
		25	SR 2523 - CHIVALRY DR	FROM SR 2522 (DESTRIER DR) TO END OF MAINTENANCE	12	2	0.48	30																	
		26	SR 2424 - CAPUL DR	FROM SR 2523 (CHIVALRY DR) TO SR 2507 (TYNE DR)	12	2	0.27	32																	
		27	SR 2525 - VAIR ST	FROM SR 1815 (N. MINERAL SPRINGS RD) TO SR 2507 (TYNE DR)	12	2	0.1	24																	
		28	SR 2526 - GLAIVE DR	FROM CUL-DE-SAC TO CUL-DE-SAC	12	2	0.33	38																	
		29	SR 2527 - PYCROFT CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	0.06	36																	
		30	SR 2528 - ARMITAGE DR	FROM SR 2505 (HADRIAN DR) TO END OF MAINTENANCE	12	2	0.08	34																	
		31	SR 2529 - PERIWINKLE CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	0.05	36																	
		32	SR 2530 - OMER LN	FROM SR 2526 (GLAIVE DR) TO SR 2522 (DESTRIER DR)	12	2	0.2	32																	
		33	SR 2531 - WOODSPRITE CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	0.04	42																	
		34	SR 2532 - WRENWOOD CT	FROM CUL-DE-SAC TO CUL-DE-SAC	12	2	0.11	32																	
		35	SR 2533 - SWEET GUM CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	0.15	30																	
		36	SR 2534 - ADLETT LN	FROM SR 2533 (SWEET GUM CT) TO SR 1815 (N. MINERAL SPRINGS RD)	12	2	0.22	30																	
		37	SR 2535 - MAYBREY DR	FROM SR 2505 (HADRIAN DR) TO END OF MAINTENANCE	12	2	0.1	32																	
		38	SR 2536 - REED CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	0.03	40																	
		39	SR 2537 - ELDERBERRY CT	FROM SR 2505 (HADRIAN DR) TO CUL-DE-SAC	12	2	0.04	40																	
TOTAL FOR PROJ NO. 2018CPT.05.23.20321.1							21.62		39	28	21	7	150,645	10,796	904	31	1,785	72	96	121	30	37	13	9	8
													161,441		935			168				218			
		40	SR 1695 - WEST AVE	FROM SR 1656 (HEBRON RD) TO SR 1772 (MELANIE ST). INCIDENTAL MILL AT SR 1656.	14	2	0.37	22																	
		41	SR 1696 - JUSTICE ST	FROM SR 1695 (WEST AVE) TO END OF MAINTENANCE	14	2	0.37	16																	
		42	SR 1743 - SHAY DR	FROM SR 1695 (WEST AVE) TO END OF MAINTENANCE	14	2	0.28	24																	
		43	SR 1744 - HANCOCK ST	FROM SR 1695 (WEST AVE) TO END OF MAINTENANCE	14	2	0.24	22																	
		44	SR 1772 - MELANIE ST	FROM SR 1695 (WEST AVE)	14	2	0.26	22																	
		45	SR 2345 - PROLOGUE RD	FROM NC 157 (GUESS RD) TO SR 2379 (GEOFFREY RD). INCIDENTAL MILL AT NC 157.	14	2	0.41	22																	
		46	SR 2379 - GEOFFREY RD	FROM SR 2380 (KNIGHT DR) TO SR 2381 (BECKETT ST)	14	2	0.25	30																	
		47	SR 2380 - KNIGHT DR	FROM SR 2345 (PROLOGUE RD) TO SR 2379 (GEOFFREY RD)	14	2	0.31	22																	
		48	SR 2381 - BECKETT ST	FROM SR 2379 (GEOFFREY RD) TO SR 2439 (PRIORESS DR)	14	2	0.12	22																	
		49	SR 2439 - PRIORESS DR	FROM SR 2381 (BECKETT ST) TO END OF MAINTENANCE	14	2	0.25	30																	
		50	SR 2632 - GRAYMONT DR	FROM SR 1772 (MELANIE ST) TO SR 2633 (FELICIA ST)	14	2	0.09	22																	
		51	SR 2633 - FELICIA ST	FROM END OF MAINTENANCE TO END OF MAINTENANCE	14	2	0.2	22																	
TOTAL FOR PROJ NO. 2018CPT.05.23.20322.1							3.15																		
GRAND TOTAL							24.77		39	28	21	7	150,645	10,796	904	31	1,785	72	96	121	30	37	13	9	8
													161,441		935			168				218			

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



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

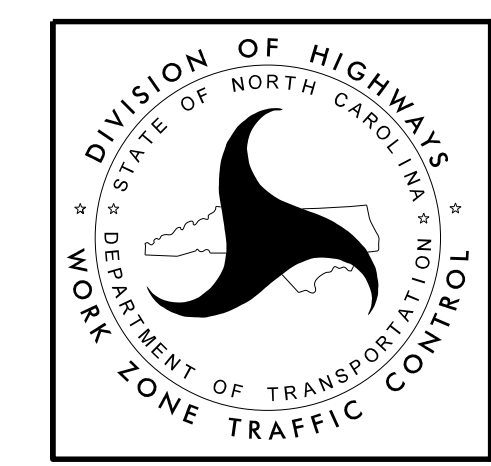


NOTES:

- 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

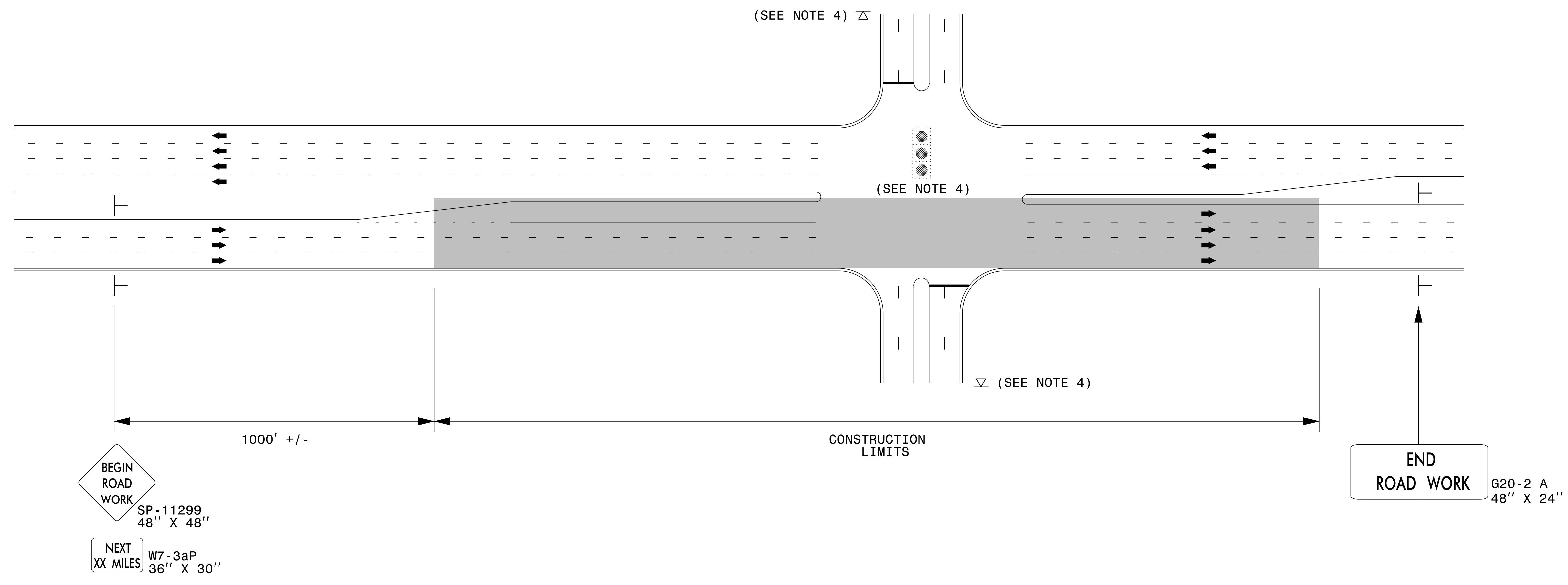
- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM



RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH

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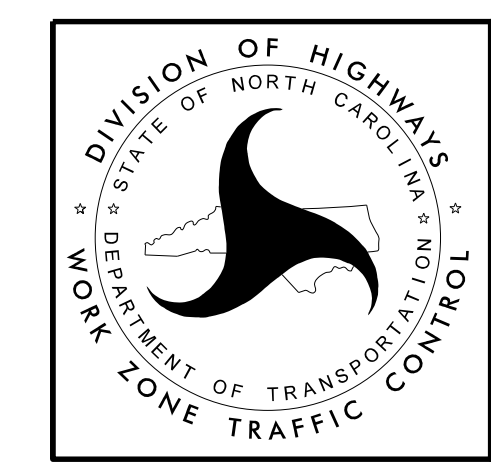
URBAN / SUBURBAN WORKZONES



NOTES:

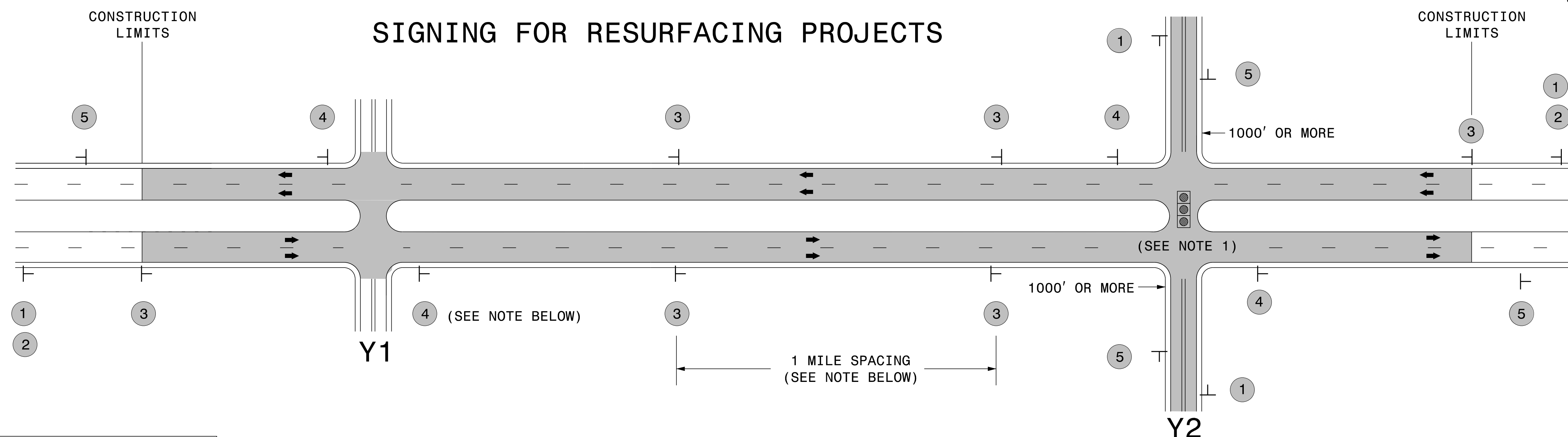
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. 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**

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LEGEND	
┆	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

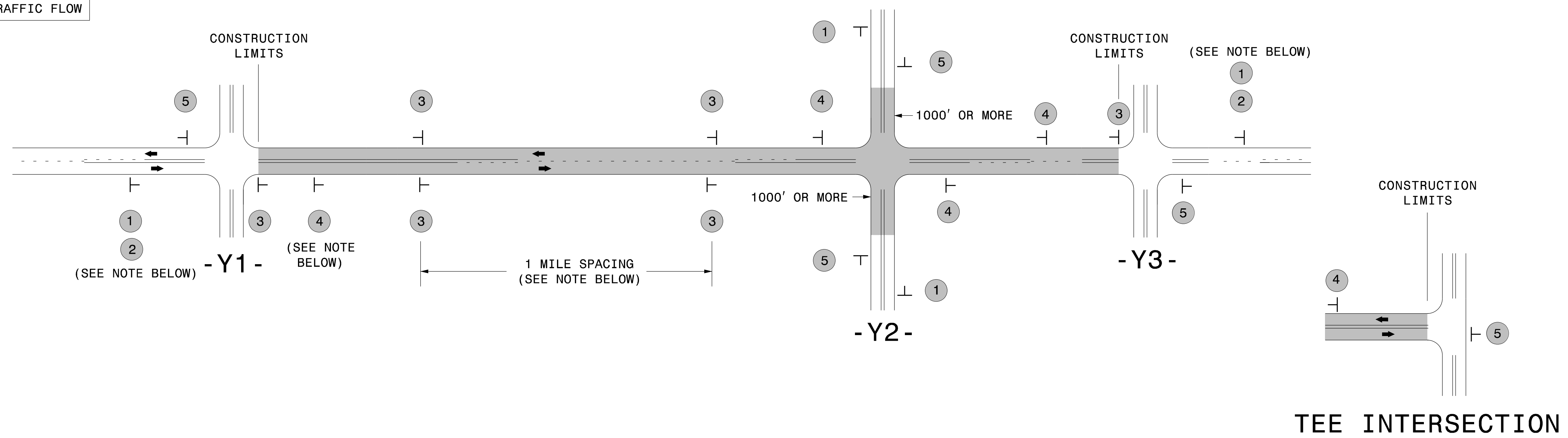
-Y- LINE SIGNING

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"> 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;"> 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.		
			<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. 	

**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

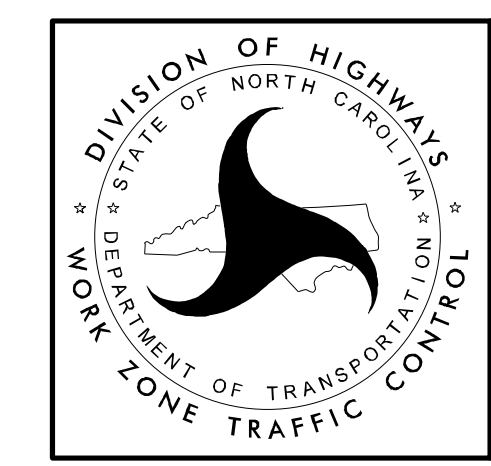
-Y- LINE SIGNING

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"> 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;"> 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.

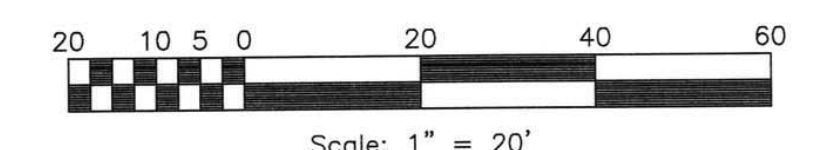
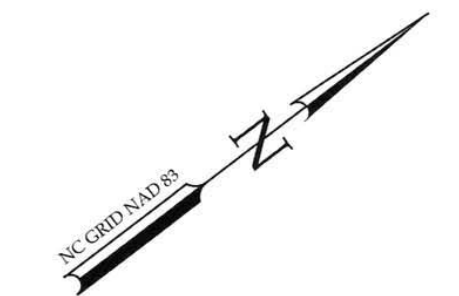
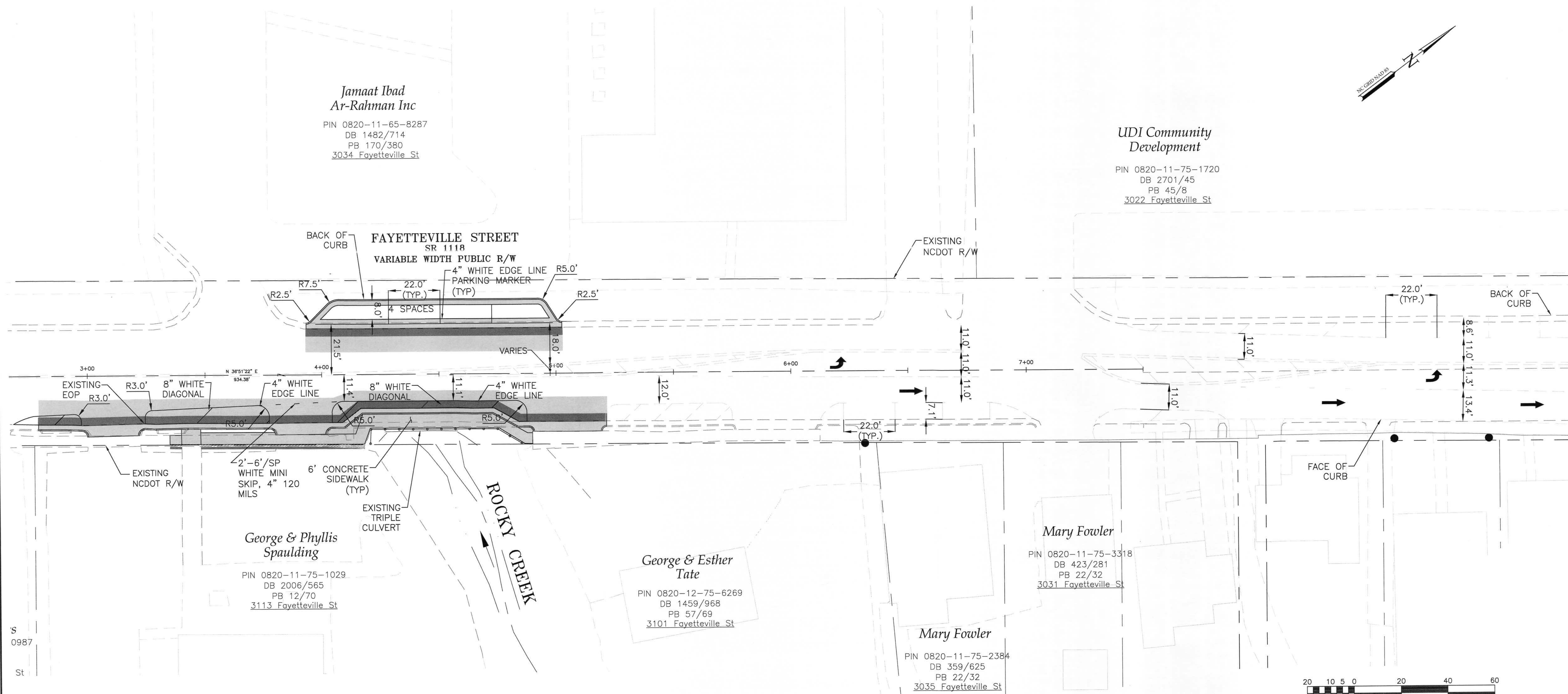


ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

Design Speed (mph)	Posted Speed (mph)	Minimum Deceleration Length (L)	Desirable Deceleration Length (L)	Bay Taper Length (L)	Approach / Departure Taper (A)
30	≤ 25	100'	150'	75'	A = WS/60 (IF S ≤ 40 MPH)
35	30	100'	150'	75'	A = WS (IF S > 40 MPH)
40	35	150'	200'	100'	S = Design Speed
45	40	150'	250'	100'	W = Width of Lateral Shift
50	45	150'	300'	100'	
55	50	200'	500'	150'	
60	55	250'	575'	200'	

* FAYETTEVILLE ROAD POSTED SPEED = 35 mph
 FAYETTEVILLE DESIGN SPEED = 40 mph
 NORTHBOUND LANE TO SHIFT 8' INWARD OVER 225'

- GENERAL NOTES:
- ALL STRIPING TO BE THERMOPLASTIC AND IN ACCORDANCE WITH NCDOT DETAIL 1205.01.
 - ALL PAVEMENT MARKINGS TO BE INSTALLED BY CONTRACTOR.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS AND SPECIFICATIONS.
 - CONTRACTOR SHALL FOLLOW ALL CONDITIONS SET FORTH BY THE ENCROACHMENT AGREEMENT AND/OR DRIVEWAY PERMIT AS ISSUED BY NCDOT.
 - TRAFFIC CONTROL SHALL FOLLOW THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - CONTRACTOR SHALL CALL "NORTH CAROLINA ONE CALL" (1-800-632-4949) AT LEAST 48 HOURS PRIOR TO DIGGING TO HAVE EXISTING UTILITIES LOCATED. REPORT ANY DISCREPANCIES TO THE ENGINEER.
 - CONTRACTOR TO COORDINATE ACTIVITIES WITH UTILITY COMPANIES INVOLVED IN ANY RELATED RELOCATION (I.E. POWER POLES, TELEPHONE PEDESTALS, WATER METERS, ETC.).
 - EXISTING UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
 - CITY OF DURHAM TO OBTAIN ALL EASEMENTS.



LEGEND	
○ MAINLINE VALVE	○ SEWER MANHOLE
□ O.C. BOX	△ FLOOR ELEVATION LEFT
○ WATER METER	▽ FLOOR ELEVATION RIGHT
○ FIRE HYDRANT	□ GROUND ELEVATION
○ BEND	○ BASEMENT ELEVATION
○ BLOW-OFF	○ CURB CUT RAMP
○ TAPPING SLEEVE & VALVE	○ UTILITY POLE
○ WELL	○ STORMWATER MANHOLE
○ SEWER CLEANOUT	
○ SURVEY/CONTROL NAIL	○ IRON PIN
○ MONUMENT	○ RIGHT-OF-WAY LINE
○ PROPERTY LINE	○ EASEMENT LINE
○ TYPE II CATCH BASIN	○ CUT SLOPE
○ FILL SLOPE	
○ DITCH LINE	○ FIBER OPTIC CABLE
○ POWER LINE	○ POWER BOX
○ TELEPHONE LINE	○ TELEPHONE BOX
○ CABLE TV LINE	○ CABLE TV BOX
○ GAS LINE	

CITY OF DURHAM
 PUBLIC WORKS DEPARTMENT
 APPROVED

ENGINEERING: [Signature] DATE: 3/30/12
 STORM WATER: DATE: _____
 TRANSPORTATION: DATE: _____

NO.	REVISIONS	DATE	SYSTEM	DESIGN BY:	DESIGN DATE:	CONSTR. DATE:
1	NCDOT COMMENTS	04/30/2012	WATER			
			SAN SEWER			
			STM. SEWER			
			STREET IMP.	ACH	01/2012	
			SOIL & EROS.			

FAYETTEVILLE STREET
 ROADWAY & SIDEWALK IMPROVEMENT
 PAVEMENT MARKING PLAN

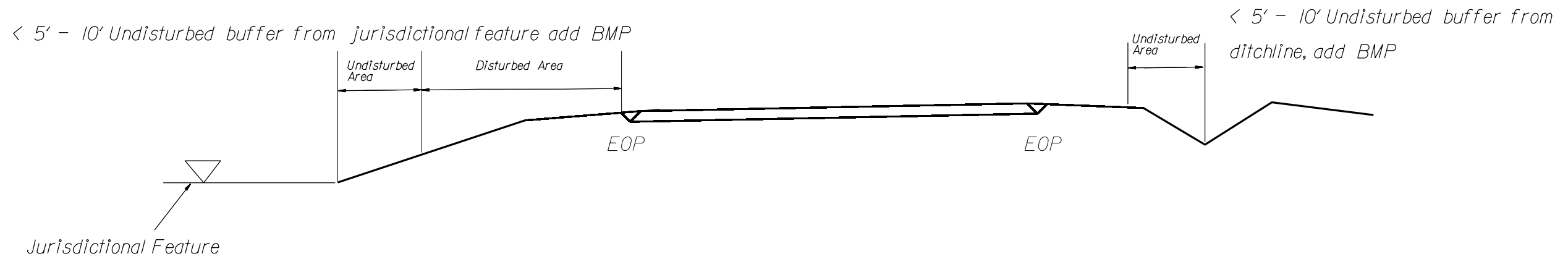
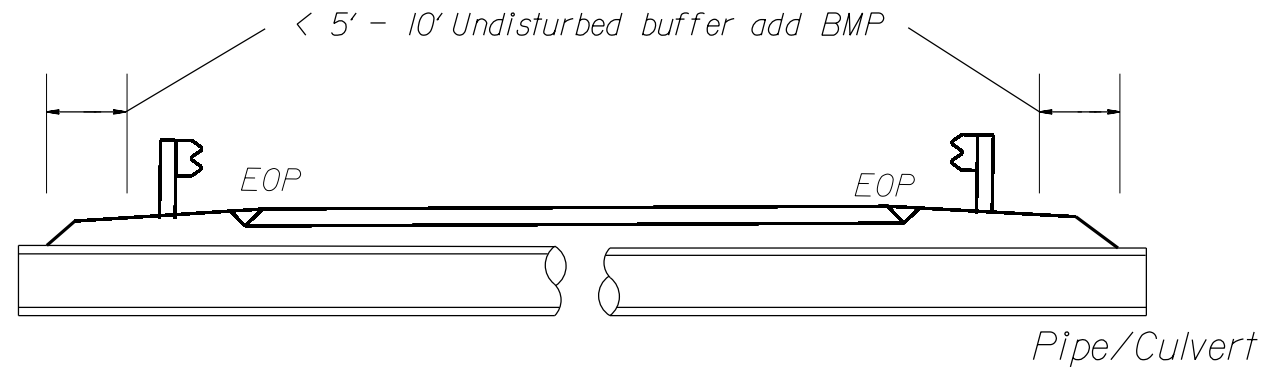
City of Durham Department of Public Works - 101 City Hall Plaza Durham, NC 27701 - (919)560-4326

Scale: 1"=20' (HORIZ.) Sheet #06 of 07 SHEET NO: **SW-27/6**

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

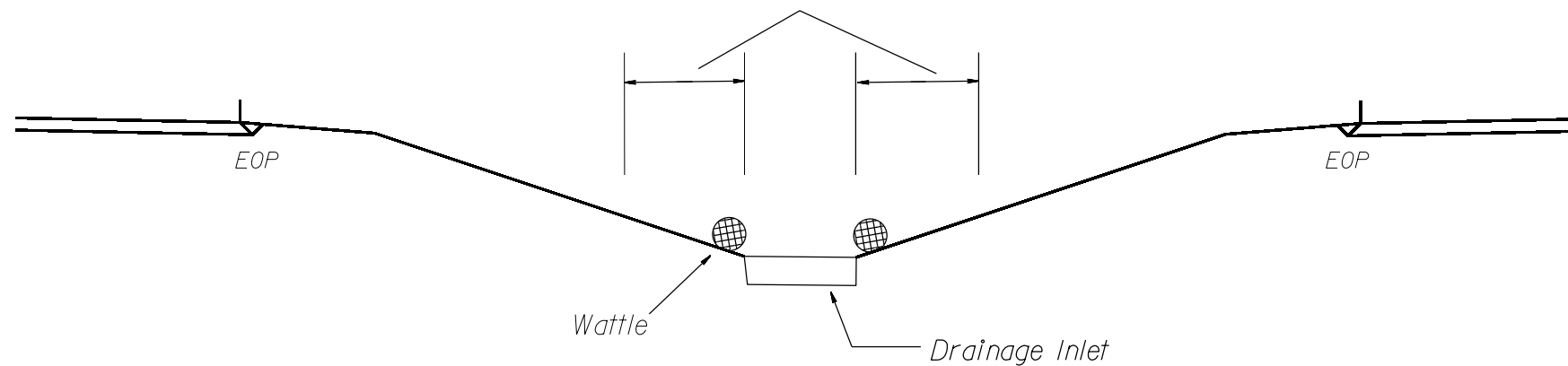
EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

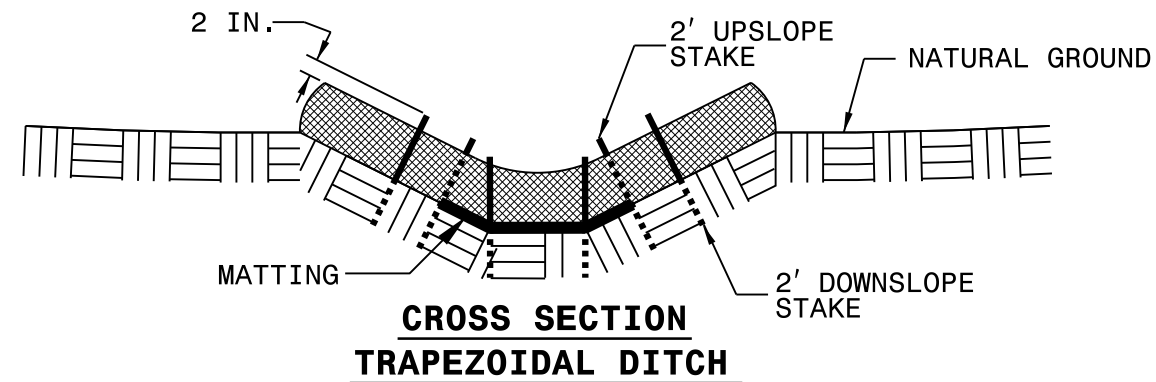
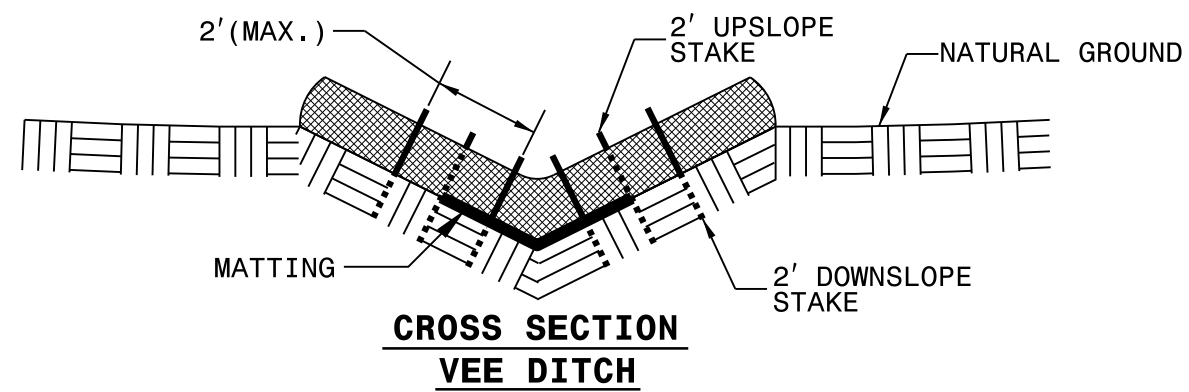
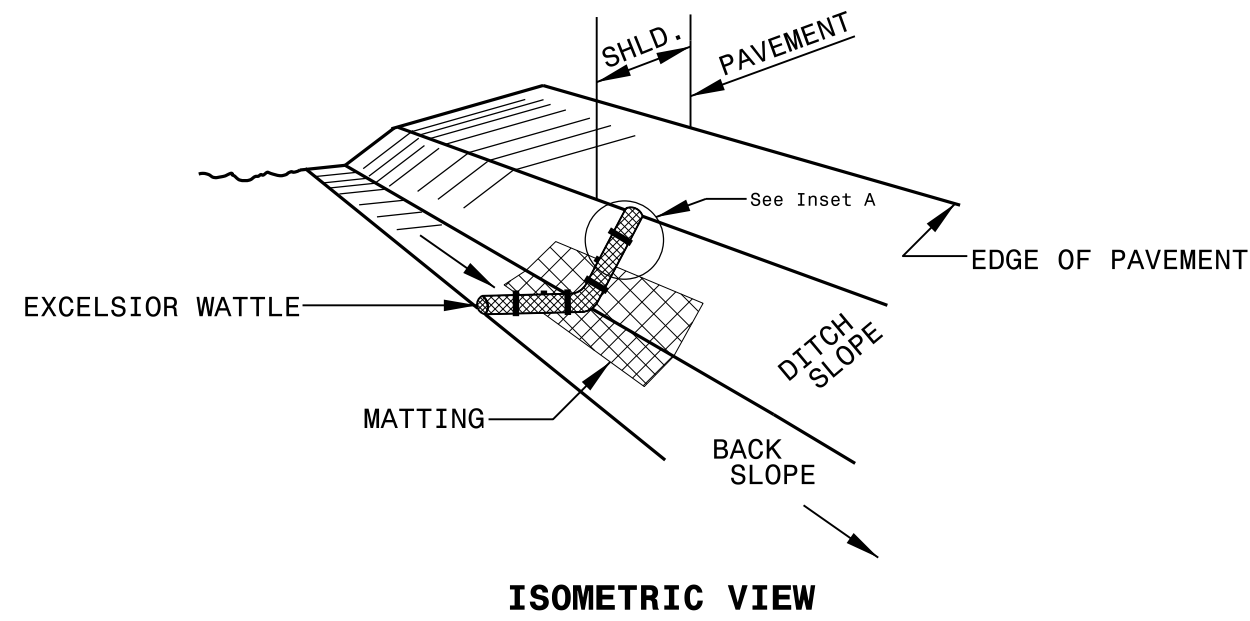


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

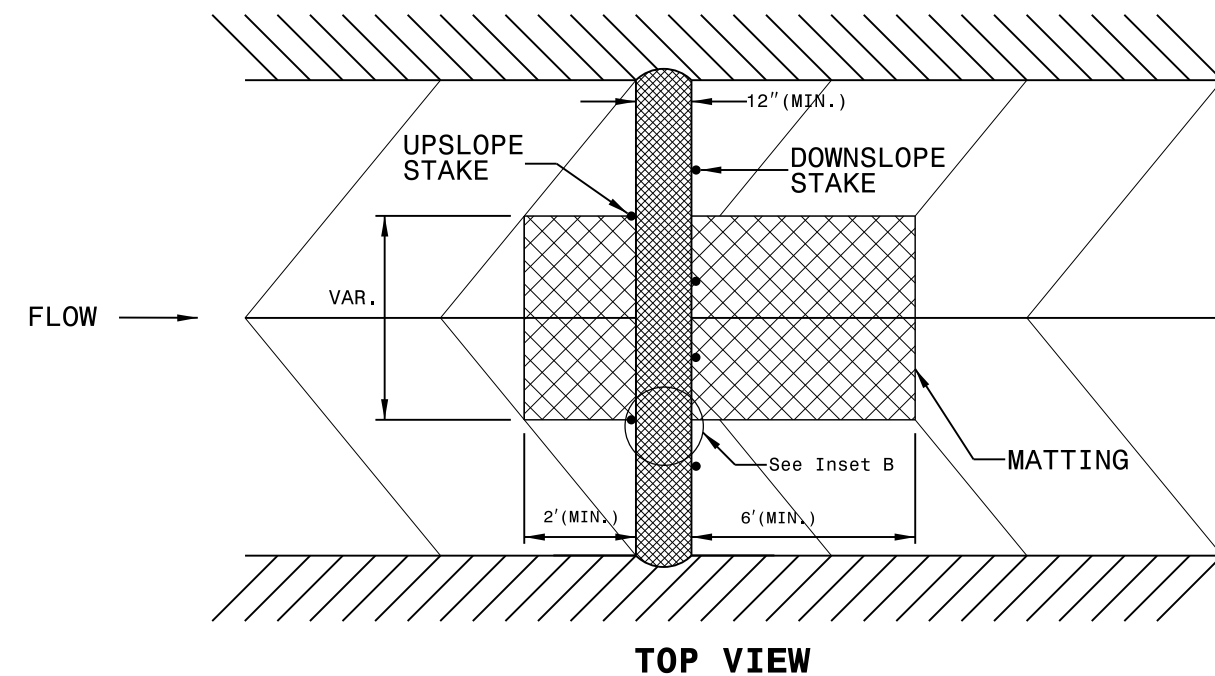
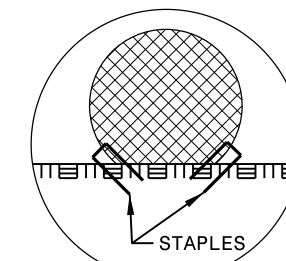
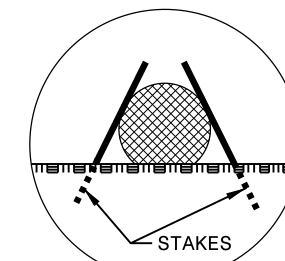
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

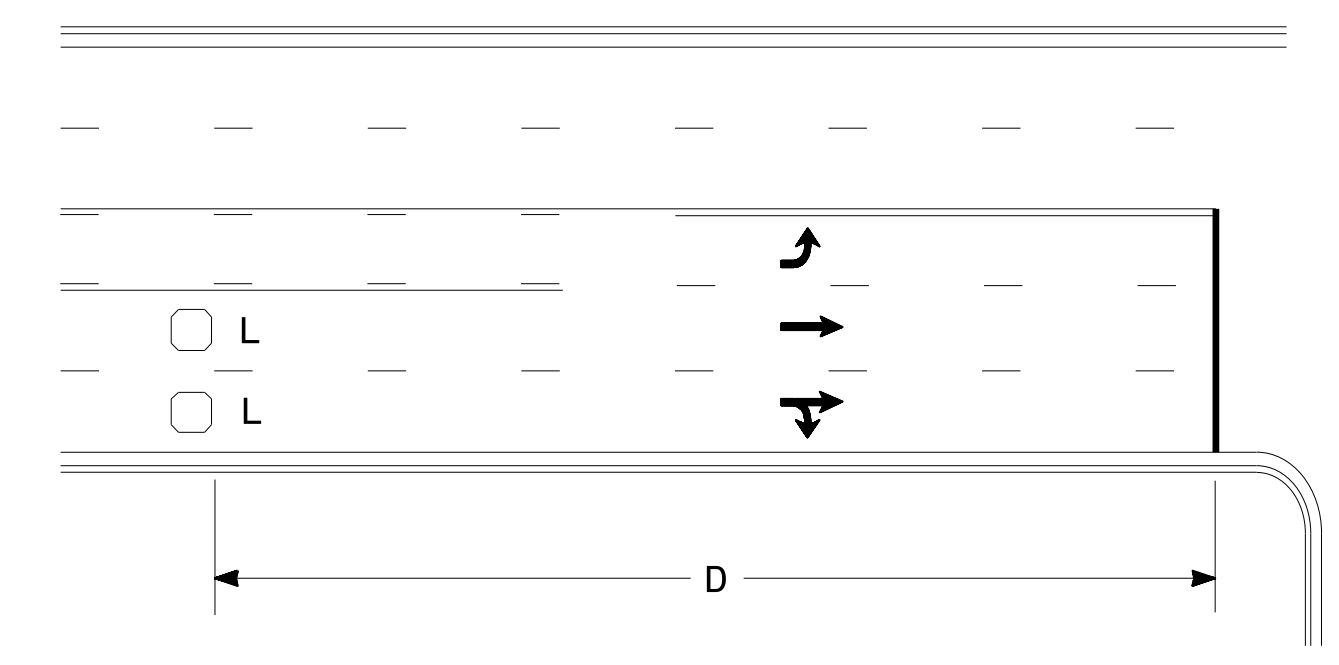
SOIL STABILIZATION TIMEFRAMES

PROJECT REFERENCE NO. 2018CPT.05.23.20321.1, etc	SHEET NO. EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

High Speed Detection (≥40 mph)

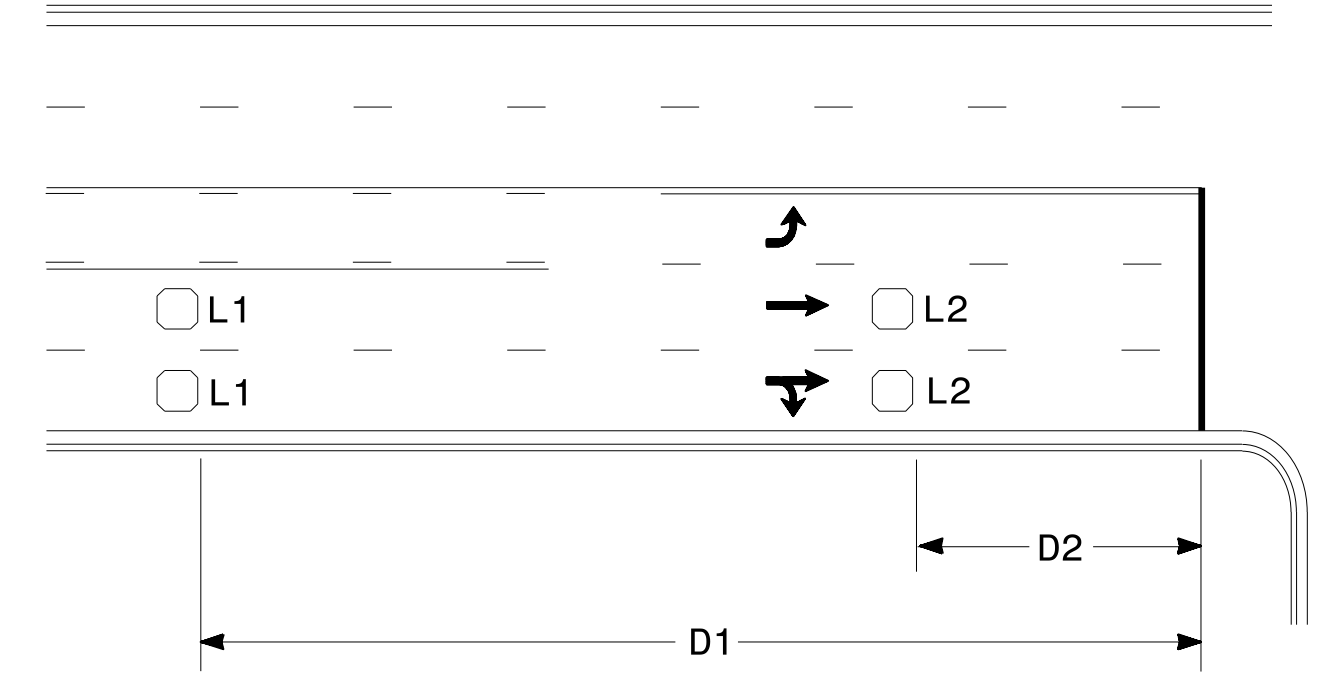


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

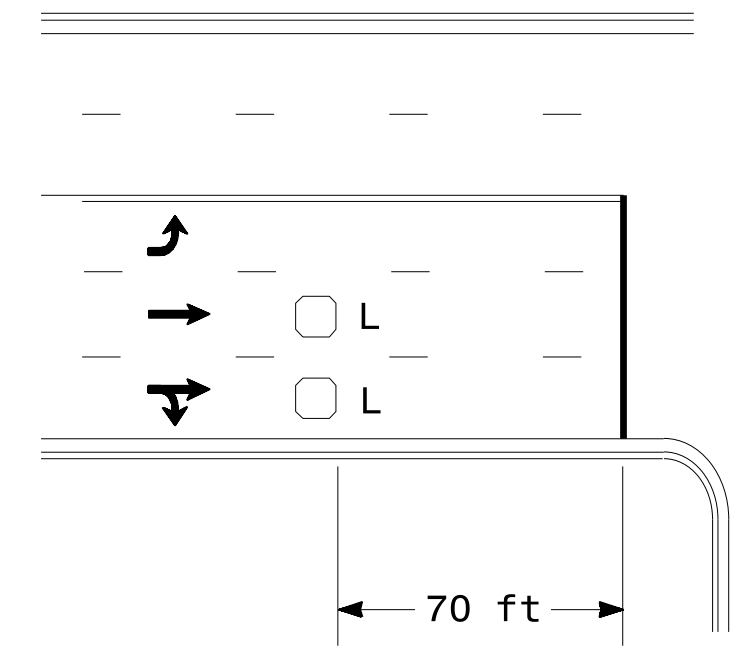


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

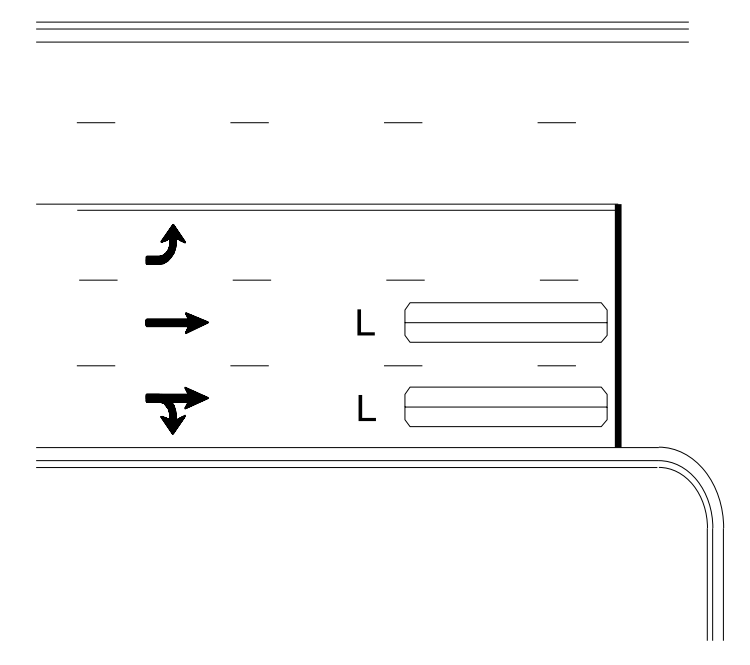
"Stretch" Operation

Low Speed Detection (≤35 mph)



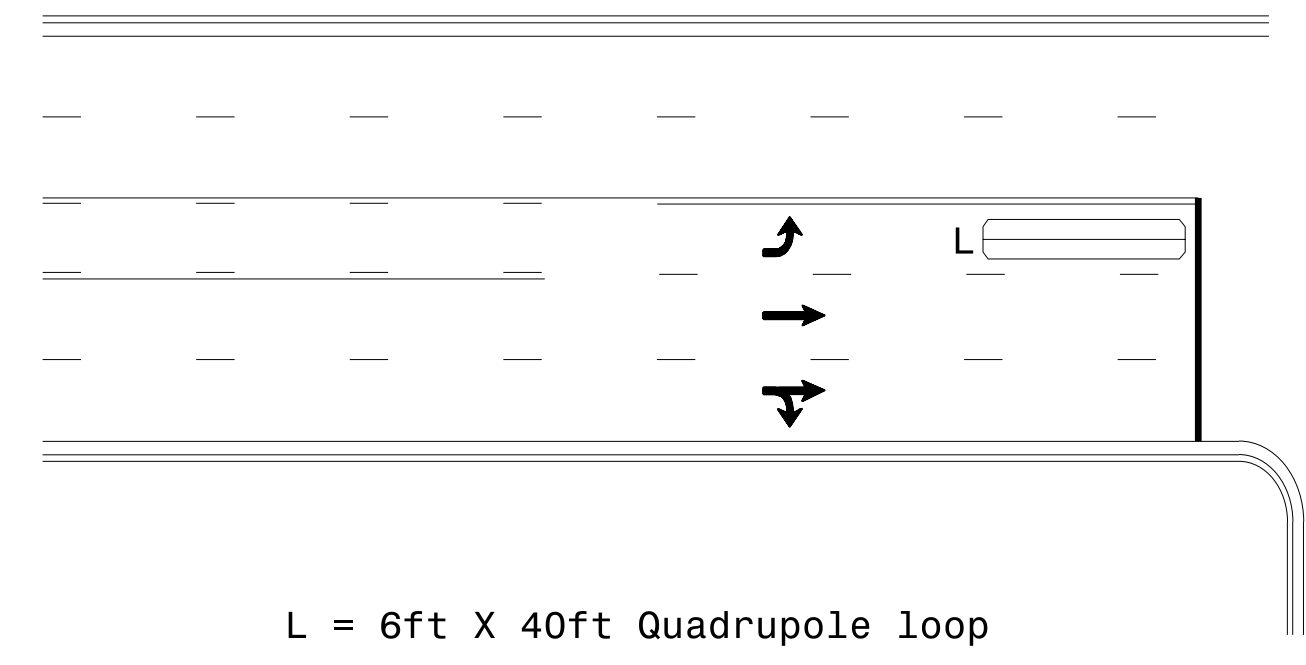
L = 6ft X 6ft
Wired in series

OR



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

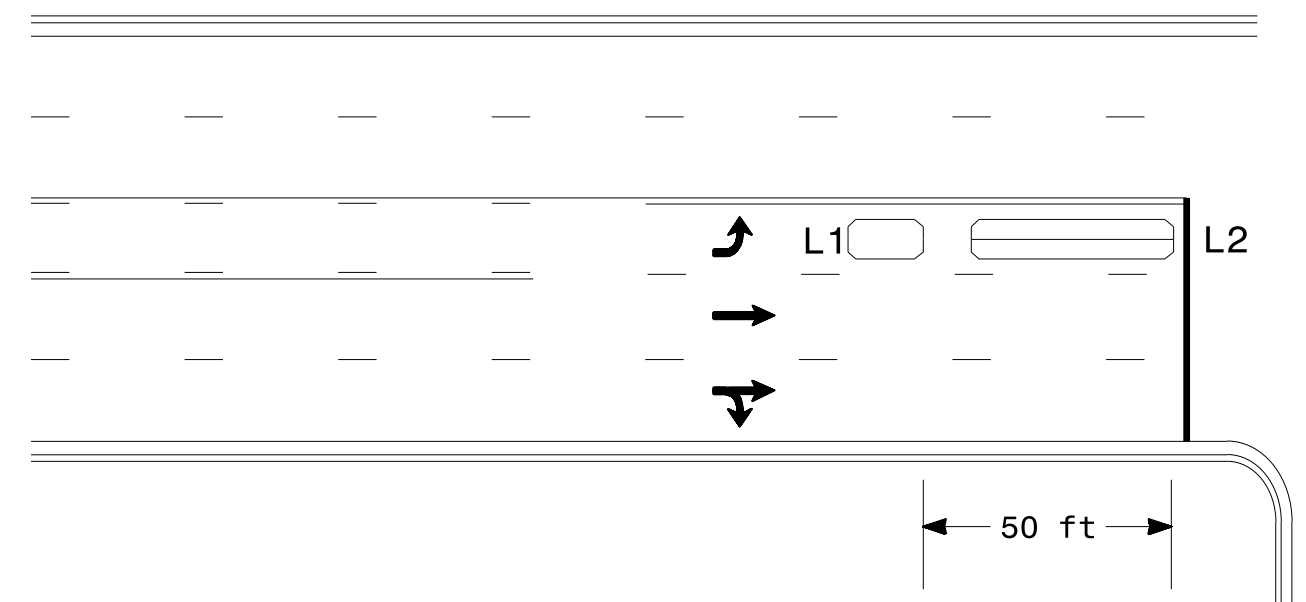
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

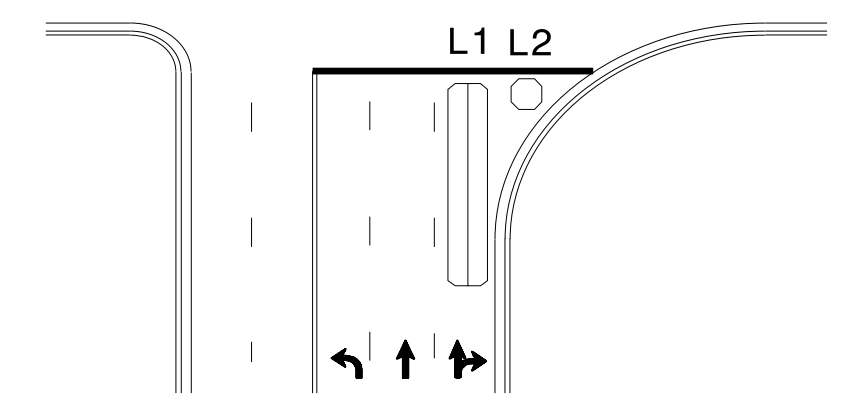
OR



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

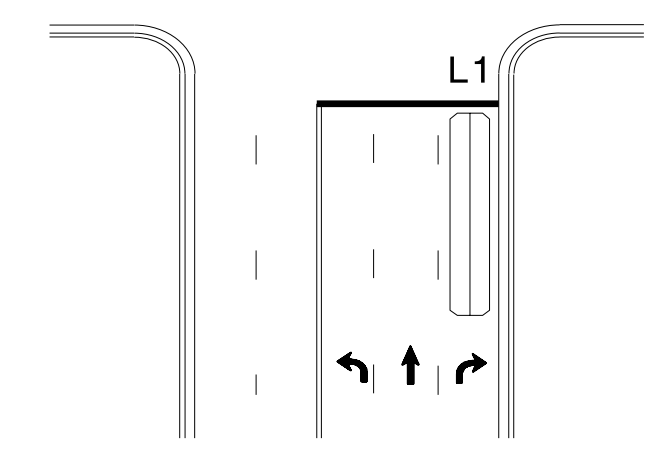
Queue Loop Detection

Right Turn Lane Detection

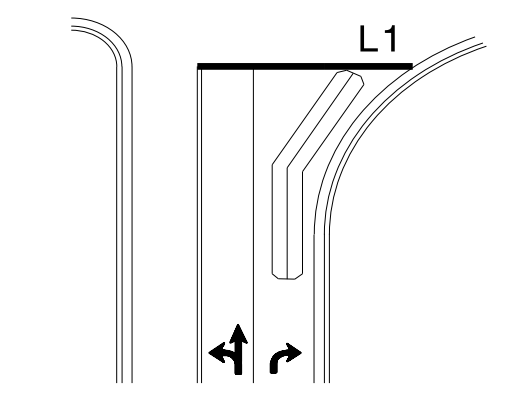


Shared Lane/
Wide Radius Turn

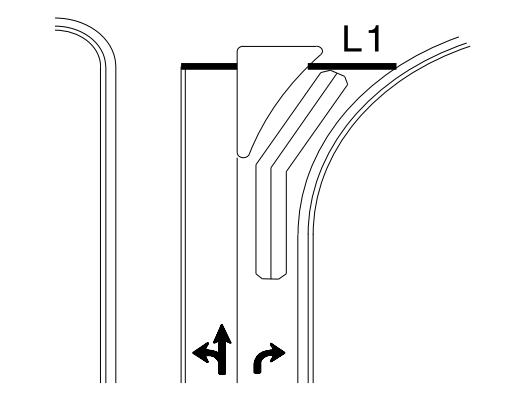
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

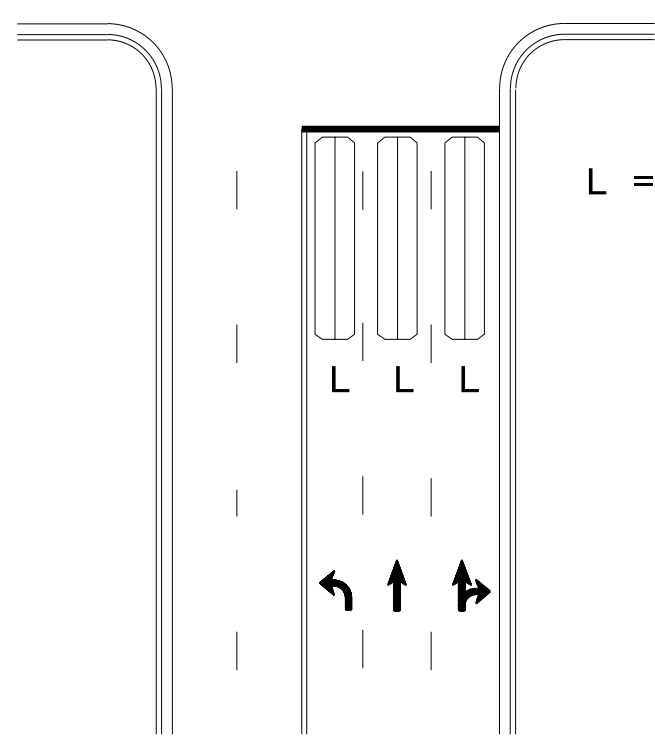


Wide Radius Turn



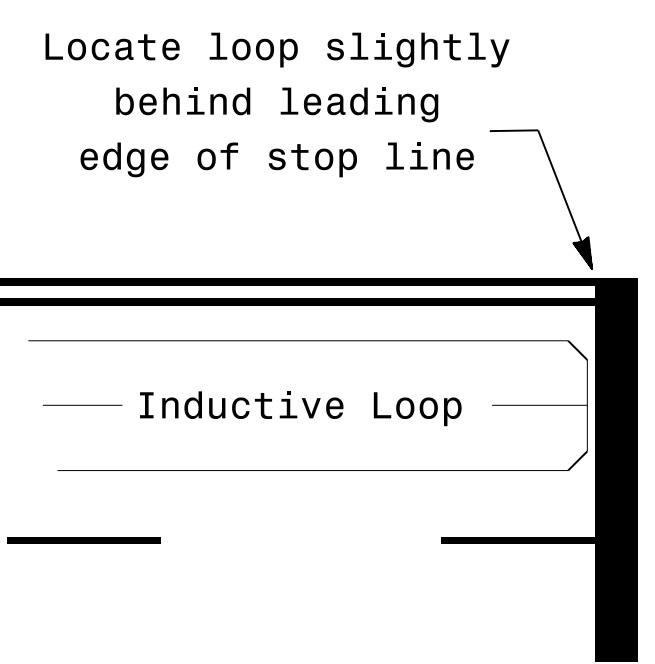
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



Locate loop slightly
behind leading
edge of stop line

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

Prepared In the Offices of:
TRANSPORTATION MOBILITY AND SAFETY SOLUTIONS, INC.
SIGNAL DESIGN SECTION
750 N. Greenfield Pkwy, Garner, NC 27529

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

SCALE: N/A

SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
PAMELA L. ALEXANDER
23489

DocuSigned by:
P. Alexander
1/30/2015 10:44:44 AM
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SIG. INVENTORY NO.

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 S:\ITS\AS\15\SIGNAL\Signal Design\Section\Eastern\Region\loop\yp\lca\2015.dgn
 paalexander