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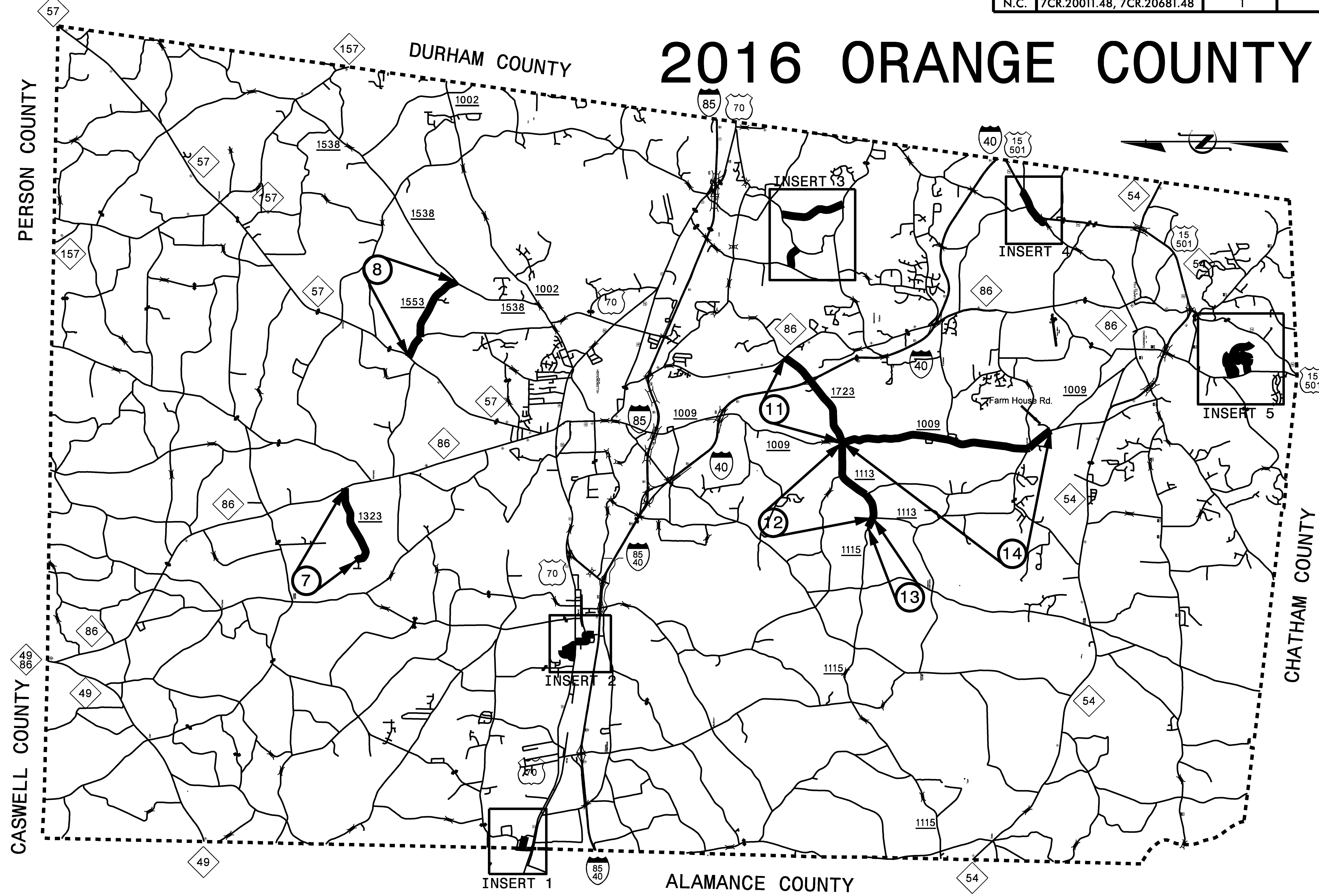
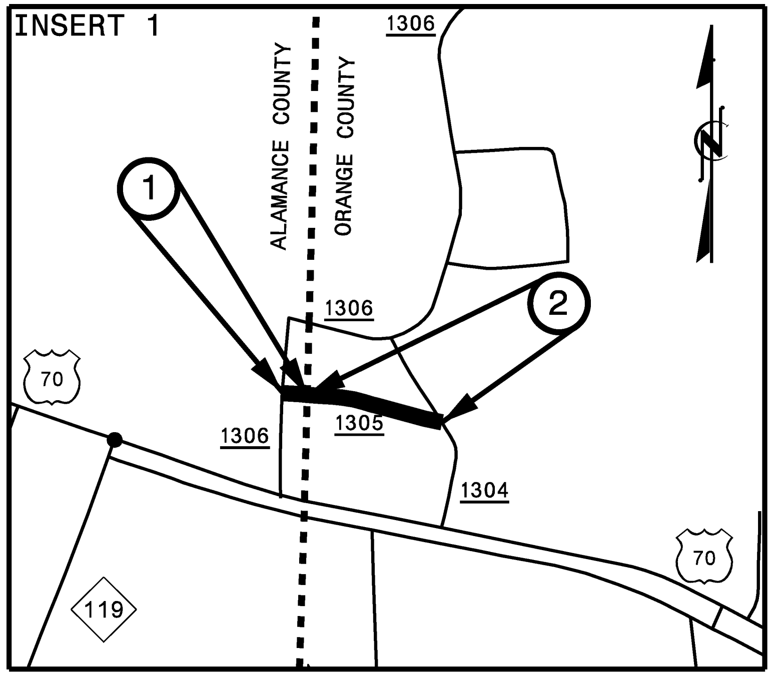
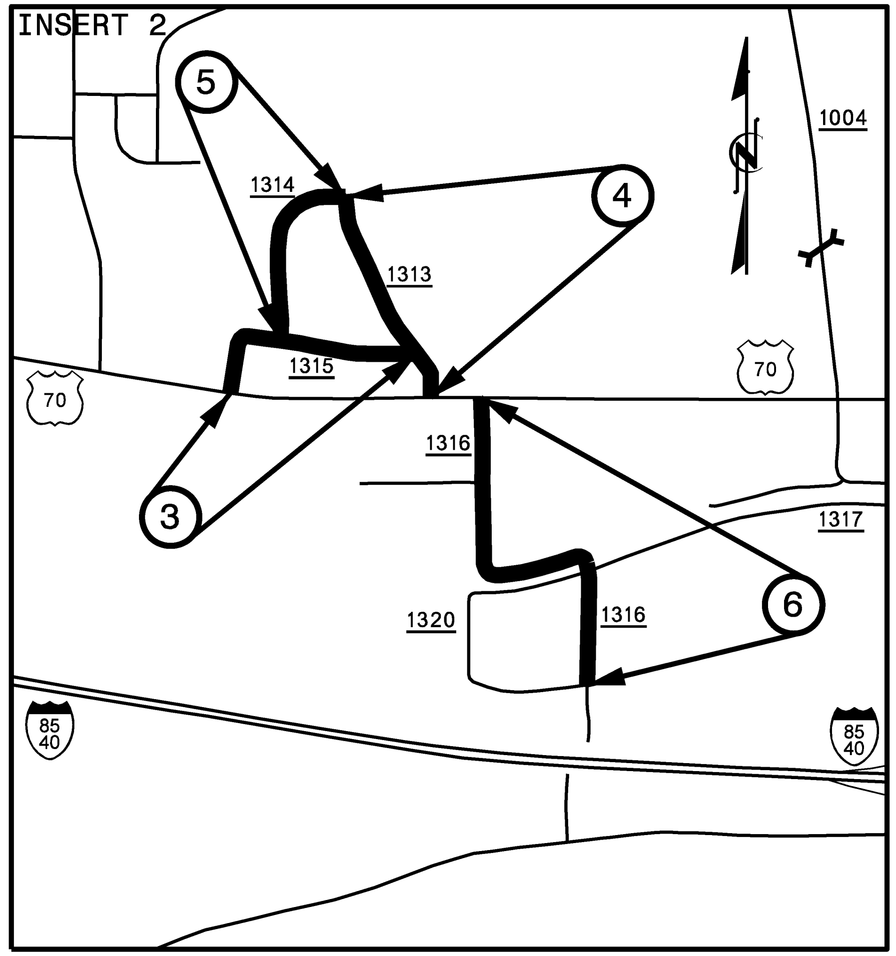
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.20011.48, 7CR.20681.48	1	

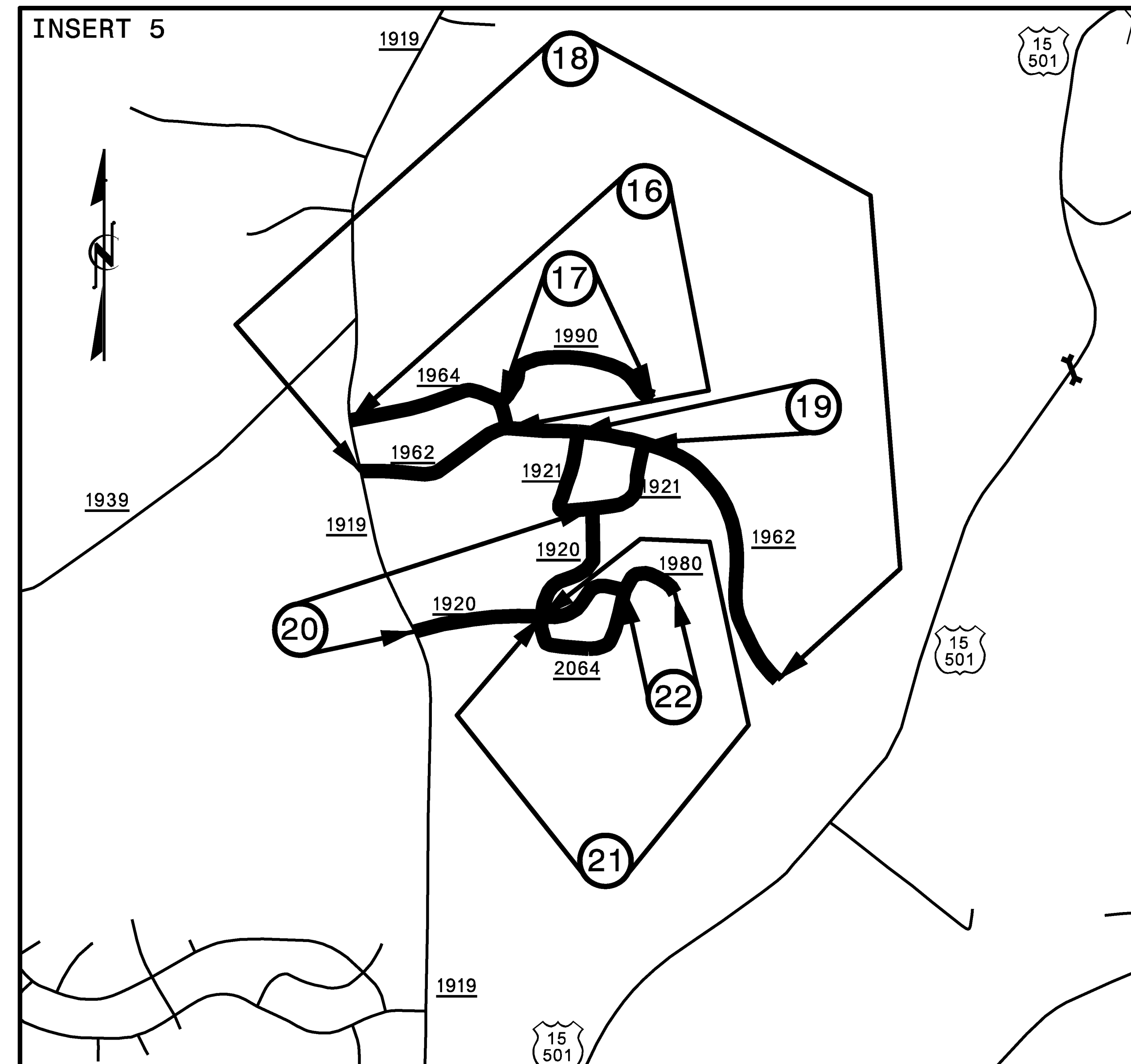
2016 ORANGE COUNTY

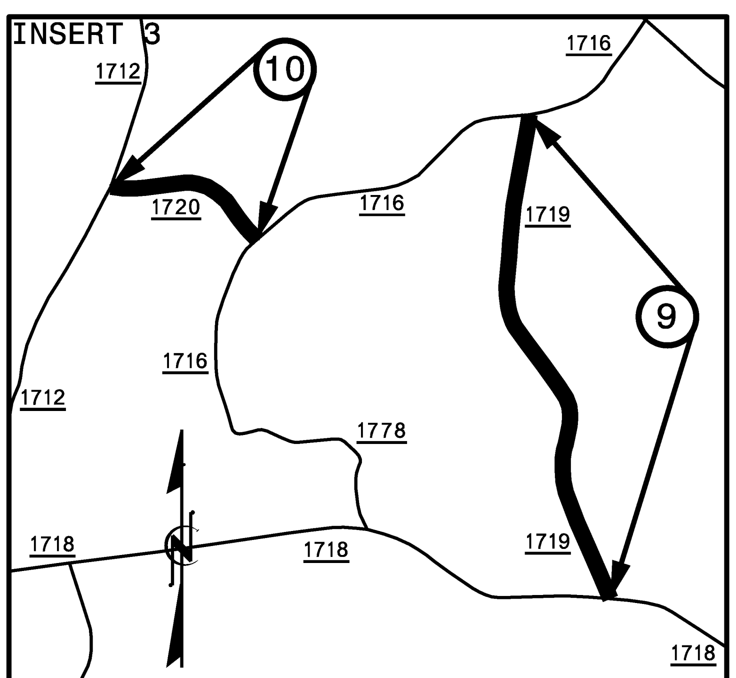


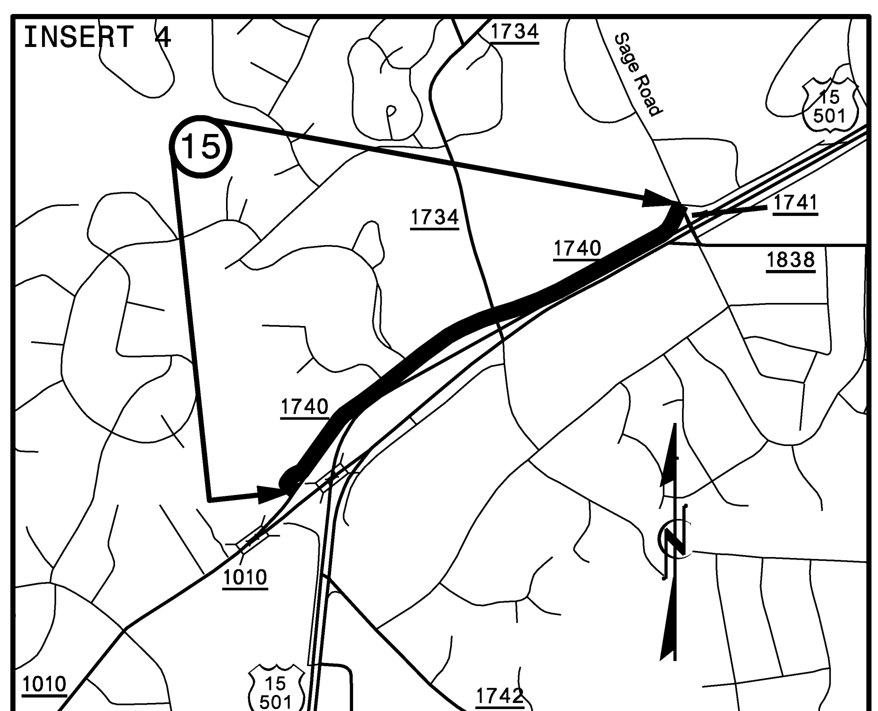
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.20011.48, 7CR.20681.48	2	





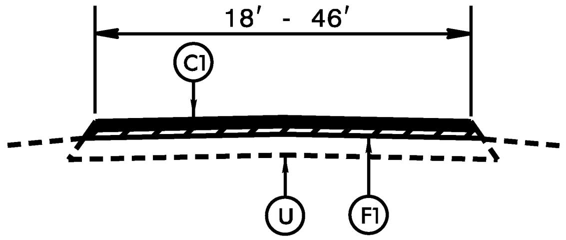






$$$$$SYSTIME$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.20011.48, 7CR.20681.48	3	

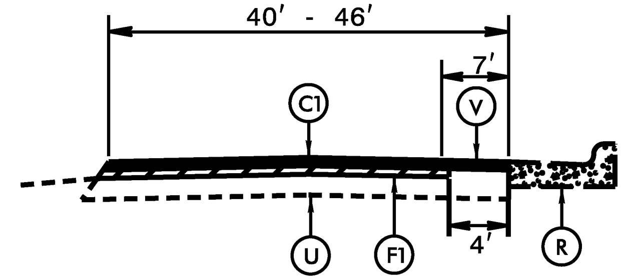


*NOTE: NO PAVEMENT ON SECTIONS:
MAP 6: STA. 19+25 TO STA. 19+70
MAP 14: STA. 122+40 TO STA. 130+80

**NOTE: NO PAVEMENT ON BRIDGES:
MAP 11: BRIDGE #99 STA. 45+00 TO STA. 46+10
BRIDGE #260 STA. 78+55 TO STA. 80+65

TYPICAL SECTION NO. 1

TO BE USED ON MAPS 1, 2, 6, 11, 14, 15, AND 18
MAP 14: STA. 2+55 TO STA. 243+70
MAP 15: STA. 10+05 TO STA. 13+05
STA. 25+50 TO STA. 29+50



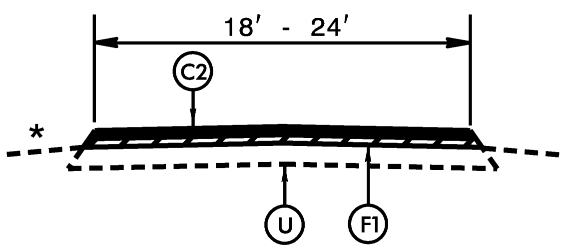
TYPICAL SECTION NO. 4

TO BE USED ON MAP 14
STA. 0+00 TO STA. 2+55

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

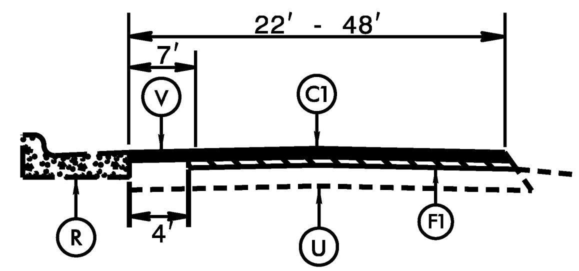
STD.NO.	TITLE
DIVISION 8 - INCIDENTALS	
848.06	Curb Ramp - Existing Curb & Gutter



*NOTE: CURB AND GUTTER SECTION ON:
MAP 3: STA. 2+50 TO STA. 4+50

TYPICAL SECTION NO. 2

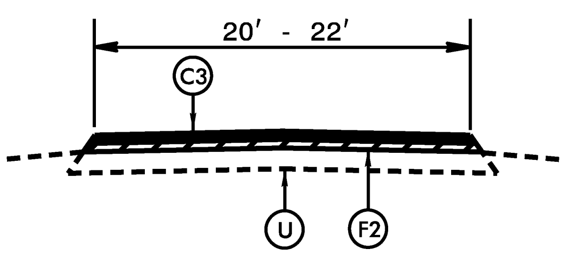
TO BE USED ON MAPS 3, 4, 5, 16, 17, 19, 20, 21 AND 22



*NOTE: NO PAVEMENT ON SECTION:
STA. 24+25 TO STA. 25+50

TYPICAL SECTION NO. 5

TO BE USED ON MAP 15
STA. 0+00 TO STA. 10+05
STA. 13+05 TO STA. 25+50
STA. 29+50 TO STA. 43+80



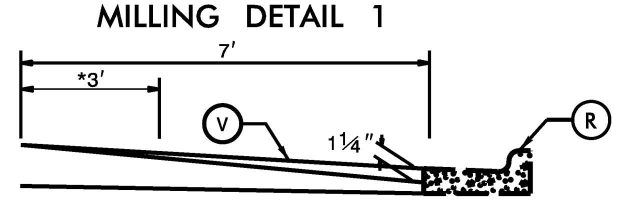
*NOTE: NO PAVEMENT ON SECTIONS:
MAP 12: STA. 19+85 TO STA. 23+40

**NOTE: NO PAVEMENT ON BRIDGES:
MAP 12: BRIDGE #77 STA. 41+95 TO STA. 42+30

TYPICAL SECTION NO. 3

TO BE USED ON MAPS 7, 8, 9, 10, 12 AND 13

MILLING DETAIL 1



*IF #67 STONE OR 78M SEAL IS INVOLVED OVERLAP 3′.
PROFILE MILLING 0 - 1¼″

PROFILE MILL EXISTING ASPHALT PAVEMENT 1¼″ AT LOCATIONS AS DIRECTED BY THE ENGINEER.

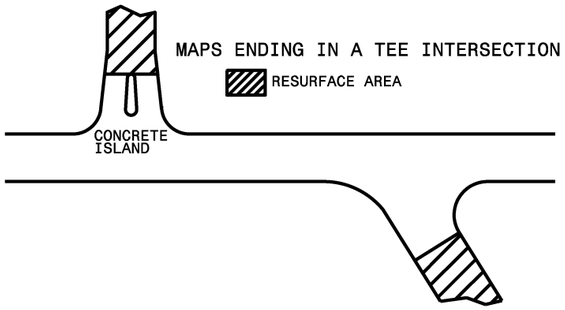
NOTE: TO BE USED IN CONJUNCTION WITH:
TS. NO. 4 ON MAP 14 STA. 0+00 TO STA. 2+55 RT
TS. NO. 5 ON MAP 15 STA. 0+00 TO STA. 10+05 LT
TS. NO. 5 ON MAP 15 STA. 13+05 TO STA. 25+50 LT
TS. NO. 5 ON MAP 15 STA. 29+50 TO STA. 43+80 LT

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1¼″ ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1″ ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
C3	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
F1	AST MAT COAT, #78M STONE
F2	AST MAT COAT #67 STONE
R	CONCRETE STRUCTURE
U	EXISTING PAVEMENT.
V	0 - 1¼″ MILLING

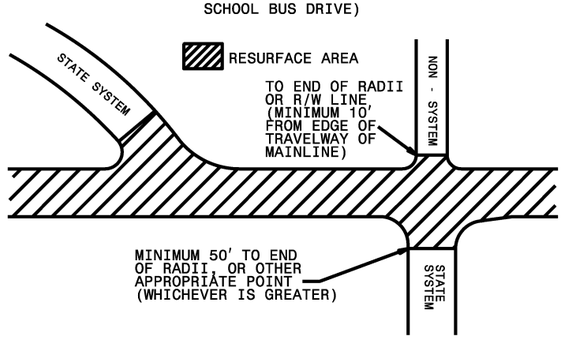
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.20011.48, 7CR.20681.48	4	

PAVING DETAIL 1
MAIN LINE IS NOT BEING RESURFACED

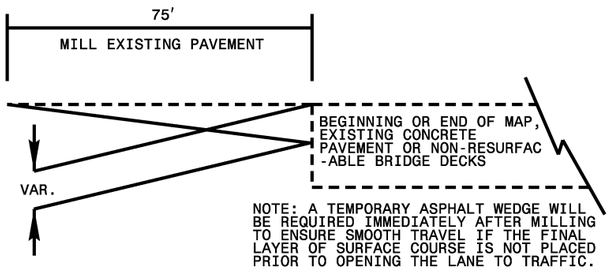


PAVING DETAIL 2
MAIN LINE IS BEING RESURFACED

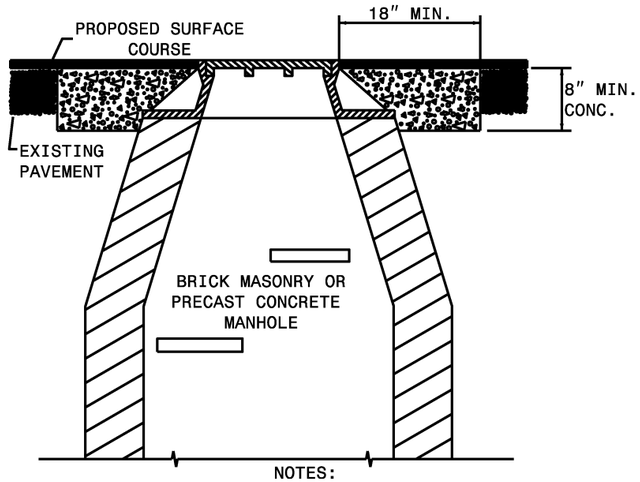
NOTE: NON-SYSTEM (CITY STREET, PRIVATE DRIVE, SCHOOL BUS DRIVE)



INCIDENTAL MILLING DETAIL

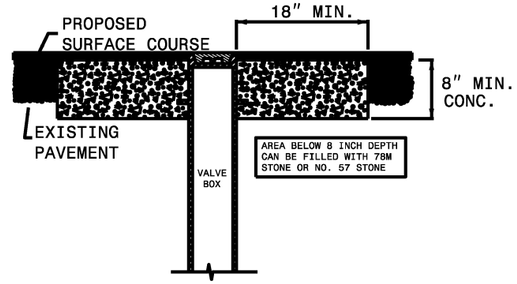


NOTE: A TEMPORARY ASPHALT WEDGE WILL BE REQUIRED IMMEDIATELY AFTER MILLING TO ENSURE SMOOTH TRAVEL IF THE FINAL LAYER OF SURFACE COURSE IS NOT PLACED PRIOR TO OPENING THE LANE TO TRAFFIC.



NOTES:
1. MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
2. ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
3. EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
4. USE RAPID SET GROUT, MORTAR OR CONCRETE AS NOTED IN PROJECT SPECIAL PROVISIONS. CLASS B CONCRETE MAY BE USED WHEN THE ADJUSTMENTS ARE NOT IN THE TRAVEL LANE.

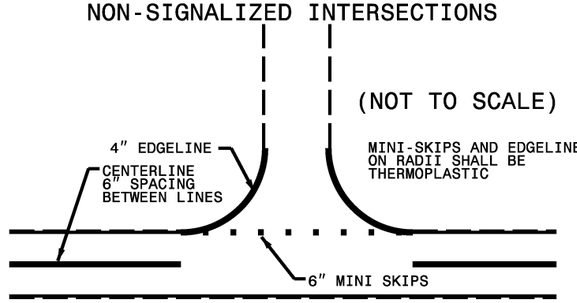
STANDARD CONCRETE ENCASEMENT FOR VALVE CASTINGS IN PAVEMENT



USE RAPID SET GROUT, MORTAR, OR CONCRETE CLASS B CONCRETE MAY BE USED WHEN ADJUSTMENTS ARE NOT IN THE TRAVEL LANE.

TO BE USED AT ALL NON-SIGNALIZED INTERSECTIONS

(NOT TO SCALE)



NOTE: MINI SKIPS SHALL BE PLACED ON A 8' CYCLE, CONTAINING A 6' AND 2' SKIP, THE WIDTH OF THE SKIP SHALL BE 6".

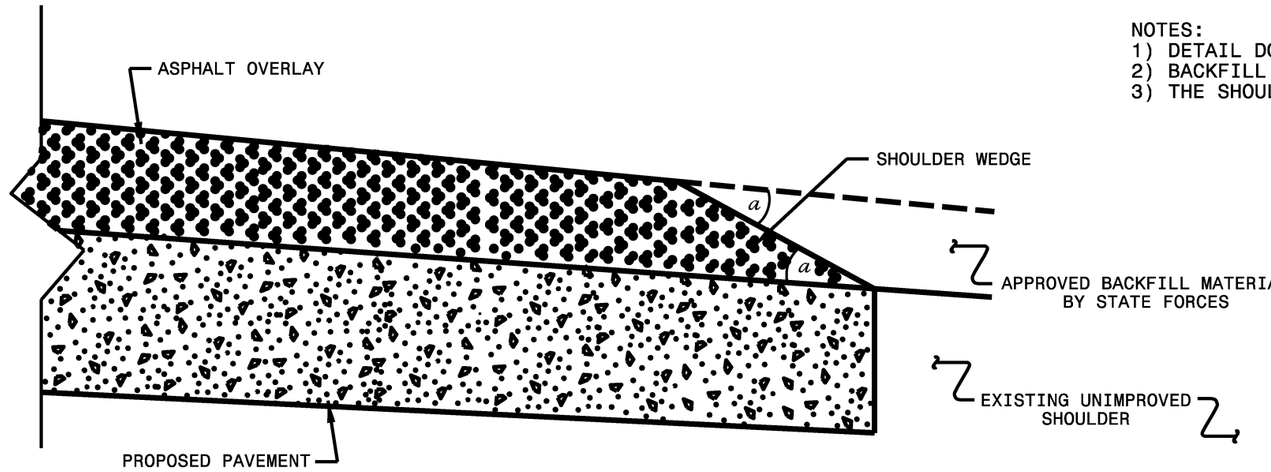
PAVEMENT SCHEDULE

C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
C3	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
F1	AST MAT COAT, #78M SEAL
F2	AST MAT COAT #67 STONE
R	CONCRETE STRUCTURE
U	EXISTING PAVEMENT.
V	0 - 1¼" MILLING

$$$$SYSTIME$$$$DGN$$$$ISERNAME$$$$

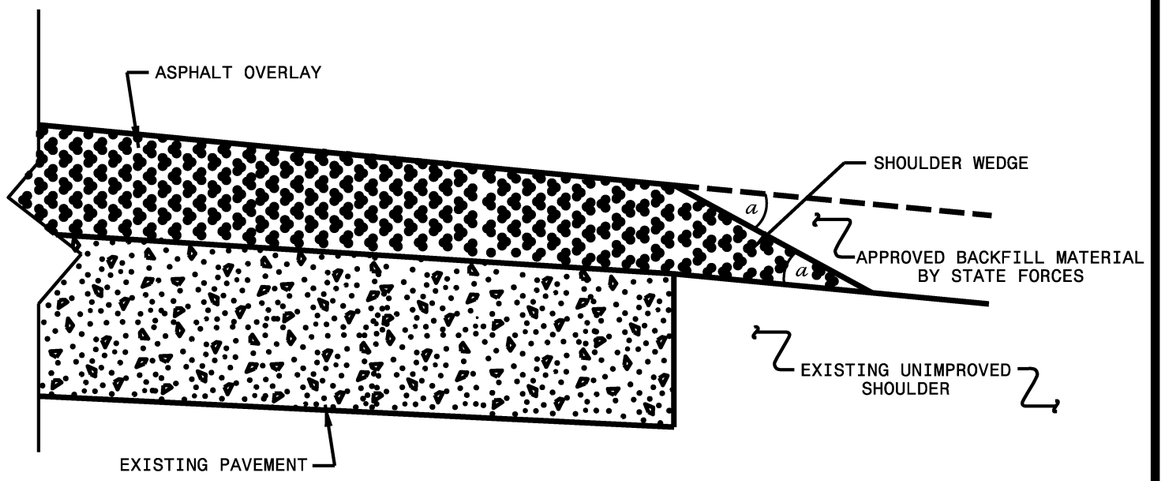
PROJECT REFERENCE NO.	SHEET NO.
7CR.20011.48, Etc.	5

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



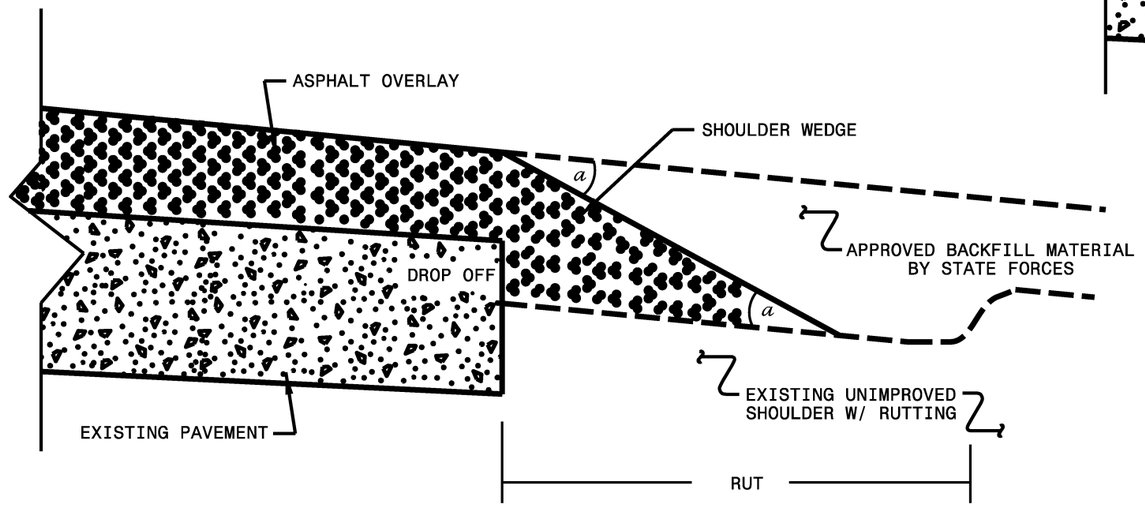
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

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:	10/16/12
CHECKED BY:		DATE:	
FILE SPEC. :	s:usr/details/stand/shoulderwedgedetail.dgn		

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USERNAME$$$$$$$$DGN$$$$$$$$$$$$$$$$$$

PROJECT NO.	SHEET NO.	TOTAL NO.
7CR.20011.48, 7CR.20681.48	6	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TONS	MILLING ASPHALT PAVEMENT, 0 - 1 1/4" DEPTH SY	INCIDENTAL MILLING SY	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A TONS	ASPHALT BINDER FOR PLANT MIX TONS	ASPHALT SURFACE TREATMENT, MATCOAT, #78M STONE SY	ASPHALT SURFACE TREATMENT, MATCOAT, #67 STONE SY	EMULSION FOR ASPHALT SURFACE TREATMENT GAL	RETROFITTING EXISTING WHEELCHAIR RAMPS EA	ADJ. OF MANHOLES EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES EA	TRENCHING (PAVED) (1)(2") LF	TRENCHING (UNPAVED) (1)(2") LF	JUNCTION BOX (STANDARD SIZE) EA	2" RISER W/ WEATHERHEAD EA	INDUCTIVE LOOP SAW CUT LF	LEAD-IN CABLE (14-2) LF
7CR.20011.48	Alamance	1	SR 1305 (GRAHAM STREET)	FROM SR 1306 (NORTH 9TH STREET) - 0.00 TO ORANGE COUNTY LINE - 0.03	1	2	2WU	NO	NO	0.034	18	13			25	2	359		118.47										
TOTAL FOR MAP NO. 1										**0.034**		**13**			**25**	**2**	**359**		**118.47**										
TOTAL FOR PROJ NO. 7CR.20011.48										**0.034**		**13**			**25**	**2**	**359**		**118.47**										
		2	SR 1305 (GRAHAM STREET)	FROM ALAMANCE COUNTY LINE - 0.00 TO SR 1304 (SUPPER CLUB ROAD) - 0.20	1	2	2WU	NO	NO	0.203	18	33			168	11	2,144		707.52		2								
TOTAL FOR MAP NO. 2										**0.203**		**33**			**168**	**11**	**2,144**		**707.52**		**2**								
		3	SR 1315 (FULLER ROAD)	FROM US 70 - 0.30 TO SR 1313 (TINNIN ROAD) - 0.00	2	2	2WU	NO	NO	0.047	20	33			30	2	551		181.83										
					2	2	2WU	NO	NO	0.017	20				11	1	199		65.67										
					2	2	2WU	NO	NO	0.021	24				16	1	296		97.68			1							
					2	2	2WU	NO	NO	0.216	20				160	11	2,534		836.22			1							
TOTAL FOR MAP NO. 3										**0.301**		**33**			**217**	**15**	**3,580**		**1,181.40**			**2**							
		4	SR 1313 (TINNIN ROAD)	FROM US 70 - 0.00 TO NEW JOINT AT SR 1314 (SCHOOL HOUSE ROAD) - 0.29	2	2	2WU	NO	NO	0.285	18	25			176	12	3,010		993.30		6								
TOTAL FOR MAP NO. 4										**0.285**		**25**			**176**	**12**	**3,010**		**993.30**		**6**								
		5	SR 1314 (SCHOOL HOUSE ROAD)	FROM SR 1315 (FULLER ROAD) - 0.00 TO SR 1313 (TINNIN ROAD) - 0.24	2	2	2WU	NO	NO	0.238	18	28			139	9	2,513		829.29		1								
TOTAL FOR MAP NO. 5										**0.238**		**28**			**139**	**9**	**2,513**		**829.29**		**1**								
		6	SR 1316 (GAINES CHAPEL ROAD)	FROM US 70 - 0.00 TO END OF MAINTENANCE - 0.54	1	2	2WU	NO	NO	0.365	20	75		167	316	21	4,283		1,413.39			2							
				RXR - SKIP	1	2	2WU	NO	NO	0.009	20																			
					1	2	2WU	NO	NO	0.17	20			167	198	13	1,995		658.35										
TOTAL FOR MAP NO. 6										**0.544**		**75**		**334**	**514**	**34**	**6,278**		**2,071.74**			**2**							
		7	SR 1323 (LAKE ORANGE ROAD)	FROM NC 86 - 0.00 TO END OF MAINTENANCE - 1.71	3	2	2WU	NO	NO	1.713	20	100			1,689	113		20,099	7,637.62										
TOTAL FOR MAP NO. 7										**1.713**		**100**			**1,689**	**113**		**20,099**	**7,637.62**										
		8	SR 1553 (WALKER ROAD)	FROM NC 57 - 0.00 TO SR 1538 (NEW SHARON CHURCH ROAD) - 1.95	3	2	2WU	NO	NO	1.949	21	158			2,033	136		24,012	9,124.56										
TOTAL FOR MAP NO. 8										**1.949**		**158**			**2,033**	**136**		**24,012**	**9,124.56**										
		9	SR 1719 (FRIENDS SCHOOL ROAD)	FROM SR 1718 (MT. SINAI ROAD) - 1.35 TO SR 1716 (MURPHY SCHOOL ROAD) - 0.00	3	2	2WU	NO	NO	1.352	22	63			1,448	97		17,450	6,631.00										
TOTAL FOR MAP NO. 9										**1.352**		**63**			**1,448**	**97**		**17,450**	**6,631.00**										
		10	SR 1720 (BROCKWELL ROAD)	FROM SR 1716 (MURPHY SCHOOL ROAD) - 0.00 TO SR 1712 (UNIVERSITY STATION ROAD) - 0.44	3	2	2WU	NO	NO	0.436	20	45			425	28		5,116	1,944.08										
TOTAL FOR MAP NO. 10										**0.436**		**45**			**425**	**28**		**5,116**	**1,944.08**										
		11	SR 1723 (NEW HOPE CHURCH ROAD)	FROM SR 1009 (OLD NC 86) - 0.00 TO NC 86 - 2.22	1	2	2WU	NO	NO	0.852	22	100		183	820	55	10,996		3,628.68										
				BRIDGE #99 - SKIP	1	2	2WU	NO	NO	0.021	22																			
					1	2	2WU	NO	NO	0.367	22			183	347	23	4,737		1,563.21										
					1	2	2WU	NO	NO	0.228	24				322	22	3,210		1,059.30										
					1	2	2WU	NO	NO	0.019	24-40			267	25	2	357		117.81										
				BRIDGE #260 - SKIP	1	2	2WU	NO	NO	0.04	40																			
					1	2	2WU	NO	NO	0.017	24-40			267	22	1	319		105.27										
					1	2	2WU	NO	NO	0.455	24				562	38	6,406		2,113.98										
					1	2	2WU	NO	NO	0.22	23				205	14	2,969		979.77					500	1	1	200	600
TOTAL FOR MAP NO. 11										**2.219**		**100**		**900**	**2,303**	**155**	**28,994**		**9,568.02**					**500**	**1**	**1**	**200**	**600**
		12	SR 1113 (ARTHUR MINNIS ROAD)	FROM SR 1009 (OLD NC 86) - 0.00 TO SR 1113 (ROCKY RIDGE ROAD)	3	2	2WU	NO	NO	0.376	20	55		167	366	25		4,412	1,676.56										
				SKIP - NEW PAVEMENT	3	2	2WU	NO	NO	0.067	20																			
					3	2	2WU	NO	NO	0.351	20			333	362	24		4,118	1,564.84										
				BRIDGE #77 - SKIP	3	2	2WU	NO	NO	0.007	20																			
					3	2	2WU	NO	NO	1.083	20			167	1,105	74		12,707	4,828.66										
TOTAL FOR MAP NO. 12										**1.884**		**55**		**667**	**1,833**	**123**		**21,237**	**8,070.06**										
		13	SR 1115 (ARTHUR MINNIS ROAD)	FROM SR 1113 (ROCKY RIDGE ROAD) - 0.00 TO END OF PAVEMENT - 0.19	3	2	2WU	NO	NO	0.194	20				219	15		2,276	864.88										
TOTAL FOR MAP NO. 13										**0.194**					**219**	**15**		**2,276**	**864.88**										
7CR.20681.48	Orange	14	SR 1009 (OLD NC 86)	FROM JOINT JUST SOUTH OF NON-SYSTEM (FARM HOUSE DRIVE) - 0.54 TO NORTH RADIUS OF SR 1723 (NEW HOPE CHURCH ROAD)/SR 1113 (ARTHUR MINNIS ROAD) - 5.16	4	2	2WU	NO	NO	0.048	40-46	288	197		103	7	1,105		364.65			3							
					1	2	2WU	NO	NO	0.137	22-35				161	11	2,331		769.23										
					1	2	2WU	NO	NO	0.24	22				234	16	3,098		1,022.34										
					1	2	2WU	NO	NO	0.108	22-38				131	9	1,901		627.33										
					1	2	2WU	NO	NO	0.095	38				286	19	2,118		698.94			4	100	250	2		1,260	1,200
					1	2	2WU	NO	NO	0.084	22-38				102	7	1,478		487.74										
					1	2	2WU	NO	NO	0.639	22				570	38	8,247		2,721.51										
					1	2	2WU	NO	NO	0.041	22-46				56	4	818		269.94			1							
					1	2	2WU	NO	NO	0.03	46				76	5	810		267.30		1	4							
					1	2	2WU	NO	NO	0.018	36				26	2	380		125.40										
					1	2	2WU	NO	NO	0.099	22-36				136	9	1,684		555.72										
				SKIP - NEW PAVEMENT	1	2	2WU	NO	NO	0.778	22			183	714	48	10,041		3,313.53										
					1	2	2WU	NO	NO	0.159	22																			
					1	2	2WU	NO	NO	2.138	22			183	1,986	133	27,594		9,106.02										
TOTAL FOR MAP NO. 14										**4.614**		**288**	**197**	**366**	**4,581**	**308**	**61,605**		**20,329.65**		**1**	**12**	**100**	**250**	**2**		**1,260**	**1,200**
		15	SR 1740 (DOBBINS DRIVE)	FROM SR 1010 (FRANKLIN STREET) - 0.83 TO SR 1741 (SAGE ROAD) - 0.00	5	2	2WU	NO	NO	0.028	22-48		115		50	3	517		170.61										
					5	2	2WU	NO	NO	0.162	22		665		144	10	1,710		564.30		3								
					1	2	2WU	NO	NO	0.024	22				21	1	310		102.30										
					1	2	2WU	NO	NO	0.033	30				50	3	581		191.73			2							
					5	2	2WU	NO	NO	0.155	22		637		148	10	1,640		660.33	3									
					5	2	2WU	NO	NO	0.026	22-25		107		25	2	293		96.69										
					5	2	2WU	NO	NO	0.018	25-38		74		23	2	290		95.70										
					5	2	2WU	NO	NO	0.007	38		29		11	1	132		43.56										
					5	2	2WU	NO	NO	0.007	31-38		29	292	10	1	119		39.27										
				SKIP - INTERSECTION (ERWIN ROAD)	5	2	2WU	NO	NO	0.024	31-33																			
					1	2	2WU	NO	NO	0.076	31-33			267	98	7	1,427		470.91		1								
					5	2	2WU	NO	NO	0.116	29		476		146	10	1,694		559.02		2								
					5	2	2WU	NO	NO	0.039	22-24		160		36	2	433		142.89		1								
					5	2	2WU	NO	NO	0.116	22		476		123	8	1,230		405.90	5	2								
TOTAL FOR MAP NO. 15										**0.831**			**2,768**	**559**	**885**	**60**	**10,376**		**3,543.21**	**8**	**9**	**2**							
		16	SR 1964 (NORTHSIDE DRIVE)	FROM SR 1919 (SMITH LEVEL ROAD) - 0.00 TO SR 1962 (DOGWOOD ACRES DRIVE) - 0.29	2	2	2WU	NO	NO	0.294	18	30			182	12	3,105		1,024.65			2							
TOTAL FOR MAP NO. 16										**0.294**		**30**			**182**	**12**	**3,105**		**1,024.65**			**2**							
		17	SR 1990 (CARLTON DRIVE)	FROM SR 1964 (NORTHSIDE DRIVE) - 0.00 TO END OF PAVEMENT - 0.33	2	2	2WU	NO	NO	0.331	19	70			204	14	3,690		1,217.70										
TOTAL FOR MAP NO. 17										**0.331**		**70**			**204**	**14**	**3,690**		**1,217.70**										
		18	SR 1962 (DOGWOOD ACRES DRIVE)	FROM SR 1919 (SMITH LEVEL ROAD) - 0.00 TO END OF MAINTENANCE - 1.00	1	2	2WU	NO	NO	0.998	18	140			759	51	10,539		3,477.87			5							
TOTAL FOR MAP NO. 18										**0.998**		**140**			**759**	**51**	**10,539**		**3,477.87**			**5**							
		19	SR 1921 (NORTH CIRCLE DRIVE)	FROM SR 1962 (DOGWOOD ACRES DRIVE) - 0.00 TO SR 1962 (DOGWOOD ACRES DRIVE) - 0.35	2	2	2WU	NO	NO	0.35	19	48			226	15	3,901		1,287.33			3							
TOTAL FOR MAP NO. 19										**0.35**		**48**			**226**	**15**	**3,901**		**1,287.33**			**3**							
		20	SR 1920 (WOODWARD WAY)	FROM SR 1919 (SMITH LEVEL ROAD) - 0.43 TO SR 1921 (NORTH CIRCLE ROAD) - 0.00	2	2	2WU	NO	NO	0.425	19	38			282	19	4,737		1,563.21			4							
TOTAL FOR MAP NO. 20										**0.425**		**38**			**282**	**19**	**4,737**		**1,563.21**			**4**							
		21	SR 2064 (SOUTH CIRCLE DRIVE)	FROM SR 1920 (WOODWARD WAY) - 0.40 TO SR 1920 (WOODWARD WAY) - 0.00	2	2	2WU	NO	NO	0.403	20	70			271	18	4,729		1,560.57										
TOTAL FOR MAP NO. 21										**0.403**		**70**			**271**	**18**	**4,729**		**1,560.57**										
		22	SR 1980 (EAST DRIVE)	FROM SR 2064 (SOUTH CIRCLE DRIVE) - 0.00 TO END OF CUL-DE-SAC - 0.11	2	2	2WU	NO	NO	0.111	20	23			87	6	1,302		429.66										
TOTAL FOR MAP NO. 22										**0.111**		**23**			**87**	**6**	**1,302**		**429.66**										
TOTAL FOR PROJ NO. 7CR.20681.48										**19.675**		**1,422**	**2,965**	**2,826**	**18,641**	**1,251**	**150,503**	**90,190**	**84,057.32**	**8**	**19**	**32**	**100**	**750**	**3**	**1**	**1,460**	**1,800**
GRAND TOTAL										**19.709**		**1,435**	**2,965**	**2,826**	**18,666**	**1,253**	**150,862**	**90,190**	**84,175.79**	**8**	**19**	**32**	**100**	**750**	**3**	**1**	**1,460**	**1,800**

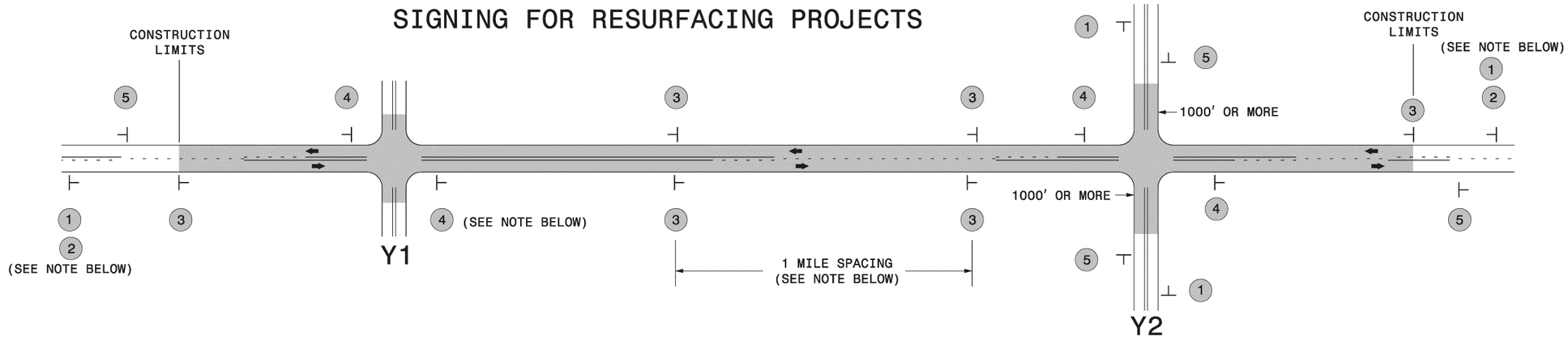
PROJECT NO.	SHEET NO.	TOTAL NO.
7CR.20011.48, 7CR.20681.48	7	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4399000000-N	4413000000-E	4685000000-E	4686000000-E		4690000000-E	4695000000-E		4697000000-E	4705000000-E	4710000000-E	4721000000-E							4725000000-E					4810000000-E	
										TEMPORARY TRAFFIC CONTROL	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	4" X 90 M WHITE THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	6" X 120 M WHITE THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 120 M WHITE THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG RXR 120 M	THERMO MSG SCHOOL 120 M	THERMO MSG STOP 120 M	THERMO MSG AHEAD 120 M	THERMO MSG BUS 120 M	THERMO MSG LANE 120 M	THERMO STR & RT ARROW 90 M	THERMO STR & LT ARROW 90 M	THERMO LT ARROW 90 M	THERMO STR ARROW 90 M	THERMO RT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT
NO		NO			NO					LS	SF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF
7CR.20011.48	Alamance	1	SR 1305 (GRAHAM STREET)	FROM SR 1306 (NORTH 9TH STREET) - 0.00 TO ORANGE COUNTY LINE - 0.03	1	2	2WU	0.034	18		4																					720	720
			TOTAL FOR MAP NO. 1					0.034			4																					720	720
			TOTAL FOR PROJ NO. 7CR.20011.48					0.034			4																					720	720
																																1,440	
		2	SR 1305 (GRAHAM STREET)	FROM ALAMANCE COUNTY LINE - 0.00 TO SR 1304 (SUPPER CLUB ROAD) - 0.20	1	2	2WU	0.203	18	1	23	75			12																		4,130	4,280
			TOTAL FOR MAP NO. 2					0.203		1	23	75			12																	4,130	4,280
		3	SR 1315 (FULLER ROAD)	FROM US 70 - 0.30 TO SR 1313 (TINNIN ROAD) - 0.00	2	2	2WU	0.301	20-24		34																						
			TOTAL FOR MAP NO. 3					0.301			34																						
		4	SR 1313 (TINNIN ROAD)	FROM US 70 - 0.00 TO NEW JOINT AT SR 1314 (SCHOOL HOUSE ROAD) - 0.29	2	2	2WU	0.285	18		33																						
			TOTAL FOR MAP NO. 4					0.285			33																						
		5	SR 1314 (SCHOOL HOUSE ROAD)	FROM SR 1315 (FULLER ROAD) - 0.00 TO SR 1313 (TINNIN ROAD) - 0.24	2	2	2WU	0.238	18		27																						
			TOTAL FOR MAP NO. 5					0.238			27																						
		6	SR 1316 (GAINES CHAPEL ROAD)	FROM US 70 - 0.00 TO END OF MAINTENANCE - 0.54	1	2	2WU	0.544	20		61	375			86					100	72	4											10,730	11,480
			TOTAL FOR MAP NO. 6					0.544			61	375			86					100	72	4											10,730	11,480
		7	SR 1323 (LAKE ORANGE ROAD)	FROM NC 86 - 0.00 TO END OF MAINTENANCE - 1.71	3	2	2WU	1.713	20		192	75																				36,030	31,540
			TOTAL FOR MAP NO. 7					1.713			192	75																				36,030	31,540
		8	SR 1553 (WALKER ROAD)	FROM NC 57 - 0.00 TO SR 1538 (NEW SHARON CHURCH ROAD) - 1.95	3	2	2WU	1.949	21		219	150			44																	40,860	37,635
			TOTAL FOR MAP NO. 8					1.949			219	150			44																	40,860	37,635
		9	SR 1719 (FRIENDS SCHOOL ROAD)	FROM SR 1718 (MT. SINAI ROAD) - 1.35 TO SR 1716 (MURPHY SCHOOL ROAD) - 0.00	3	2	2WU	1.352	22		152										100		12									28,560	25,013
			TOTAL FOR MAP NO. 9					1.352			152									100		12									28,560	25,013
		10	SR 1720 (BROCKWELL ROAD)	FROM SR 1716 (MURPHY SCHOOL ROAD) - 0.00 TO SR 1712 (UNIVERSITY STATION ROAD) - 0.44	3	2	2WU	0.436	20		50																					9,200	9,200
			TOTAL FOR MAP NO. 10					0.436			50																					9,200	9,200
		11	SR 1723 (NEW HOPE CHURCH ROAD)	FROM SR 1009 (OLD NC 86) - 0.00 TO NC 86 - 2.22	1	2	2WU	2.22	22-40		249	23,440	21,686		298						98				8	5			2	2				
			TOTAL FOR MAP NO. 11					2.219			249	23,440	21,686		298						98				8	5			2	2				
7CR.20681.48	Orange	12	SR 1113 (ARTHUR MINNIS ROAD)	FROM SR 1009 (OLD NC 86) - 0.00 TO SR 1113 (ROCKY RIDGE ROAD)	3	2	2WU	1.884	20		211	225			68										8	5							39,350	35,873
			TOTAL FOR MAP NO. 12					1.884			211	225			68										8	5							39,350	35,873
		13	SR 1115 (ARTHUR MINNIS ROAD)	FROM SR 1113 (ROCKY RIDGE ROAD) - 0.00 TO END OF PAVEMENT - 0.19	3	2	2WU	0.194	20		22	75			16																	3,950	4,100
			TOTAL FOR MAP NO. 13					0.194			22	75			16																	3,950	4,100
		14	SR 1009 (OLD NC 86)	FROM JOINT JUST SOUTH OF NON-SYSTEM (FARM HOUSE DRIVE) - 0.54 TO NORTH RADIUS OF SR 1723 (NEW HOPE CHURCH ROAD)/SR 1113 (ARTHUR MINNIS ROAD) - 5.16	1,4	2	2WU	4.616	22-46		518	48,440	47,329	604	80	400	729				214					16	5			9		14	1	3		
			TOTAL FOR MAP NO. 14					4.614			518	48,440	47,329	604	80	400	729				214				16	5			9		14	1	3		
		15	SR 1740 (DOBBINS DRIVE)	FROM SR 1010 (FRANKLIN STREET) - 0.83 TO SR 1741 (SAGE ROAD) - 0.00	1,5	2	2WU	0.83	22-48		93	5,020	8,760	69	28	50		160		30							3	4							
			TOTAL FOR MAP NO. 15					0.831			93	5,020	8,760	69	28	50		160		30							3	4							
		16	SR 1964 (NORTHSIDE DRIVE)	FROM SR 1919 (SMITH LEVEL ROAD) - 0.00 TO SR 1962 (DOGWOOD ACRES DRIVE) - 0.29	2	2	2WU	0.294	18		33																						
			TOTAL FOR MAP NO. 16					0.294			33																						
		17	SR 1990 (CARLTON DRIVE)	FROM SR 1964 (NORTHSIDE DRIVE) - 0.00 TO END OF PAVEMENT - 0.33	2	2	2WU	0.331	19		37																						
			TOTAL FOR MAP NO. 17					0.331			37																						
		18	SR 1962 (DOGWOOD ACRES DRIVE)	FROM SR 1919 (SMITH LEVEL ROAD) - 0.00 TO END OF MAINTENANCE - 1.00	2	2	2WU	0.998	18		112	225			46																	20,630	21,080
			TOTAL FOR MAP NO. 18					0.998			112	225			46																	20,630	21,080
		19	SR 1921 (NORTH CIRCLE DRIVE)	FROM SR 1962 (DOGWOOD ACRES DRIVE) - 0.00 TO SR 1962 (DOGWOOD ACRES DRIVE) - 0.35	2	2	2WU	0.35	19		40																						
			TOTAL FOR MAP NO. 19					0.35			40																						
		20	SR 1920 (WOODWARD WAY)	FROM SR 1919 (SMITH LEVEL ROAD) - 0.43 TO SR 1921 (NORTH CIRCLE ROAD) - 0.00	2	2	2WU	0.425	19		49																					4,200	4,200
			TOTAL FOR MAP NO. 20					0.425			49																					4,200	4,200
		21	SR 2064 (SOUTH CIRCLE DRIVE)	FROM SR 1920 (WOODWARD WAY) - 0.40 TO SR 1920 (WOODWARD WAY) - 0.00	2	2	2WU	0.403	20		45																						
			TOTAL FOR MAP NO. 21					0.403			45																						
		22	SR 1980 (EAST DRIVE)	FROM SR 2064 (SOUTH CIRCLE DRIVE) - 0.00 TO END OF CUL-DE-SAC - 0.11	2	2	2WU	0.111	20		13																						
			TOTAL FOR MAP NO. 22					0.111			13																						
			TOTAL FOR PROJ NO. 7CR.20681.48					19.675		1	2,213	78,100	77,775	673	678	450	729	160	100	514	4	12	32	15	3	4	11	2	14	1	3	197,640	184,401
													78,448			1,179					70				31					382,041	
			GRAND TOTAL					19.709		1	2,217	78,100	77,775	673	678	450	729	160	100	514	4	12	32	15	3	4	11	2	14	1	3	198,360	185,121
													78,448			1,179					70				31					383,481	

PROJ. REFERENCE NO.	SHEET NO.
7CR.20011.48, Etc.	TMP-1

SIGNING FOR RESURFACING PROJECTS



LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1 — ROAD WORK AHEAD, 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.

2 — NEXT XX MILES, 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 — LOW/SOFT SHOULDER, 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 ½ MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.

4 — ROAD UNDER CONST, 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 — END ROAD WORK, G20-2 A, 48″ X 24″

PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS.

-Y- LINE SIGNING

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, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

ROAD WORK AHEAD, W20-1, 48″ X 48″ — PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A, 48″ X 48″ — PLACED 250′ IN ADVANCE OF FLAGGER.

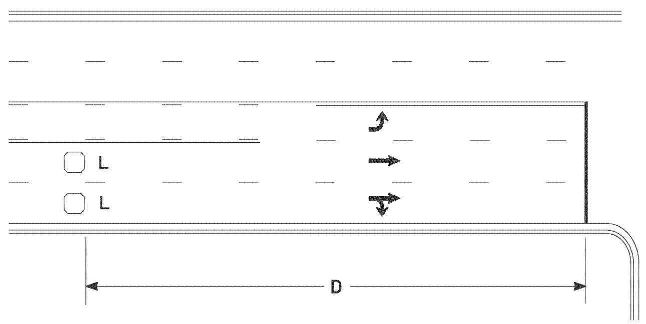
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

RESURFACING ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2 LANE ROADWAYS

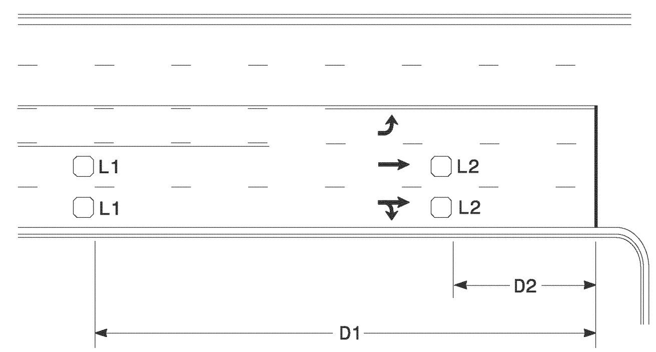
3/19/2015
C:\Users\rmgarrett\Downloads\Resurfacing_AdvWarn_2Ln (2).dgn
User:rmgarrett

PROJECT REFERENCE NO.	SHEET NO.
7CR.20011.48, ETC.	SIG-1

High Speed Detection
(≥40 mph)



OR



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

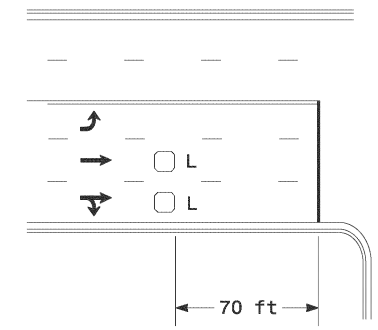
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

"Stretch" Operation

Low Speed Detection
(≤35 mph)



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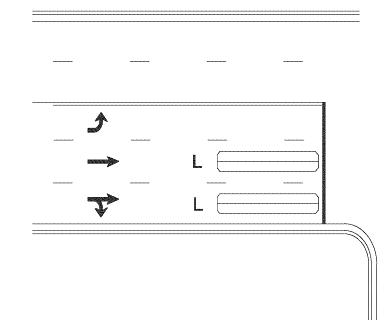
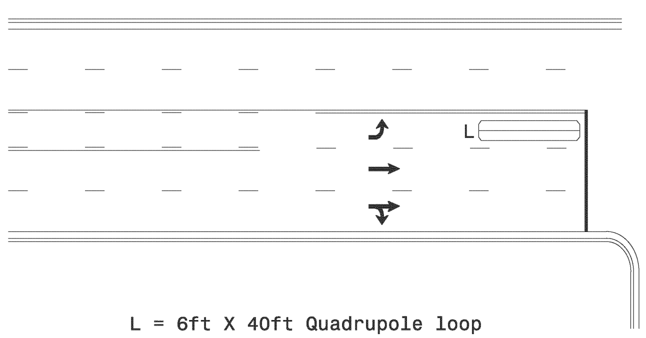


L = 6ft X 6ft
Wired in series

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

Left Turn Lane Detection



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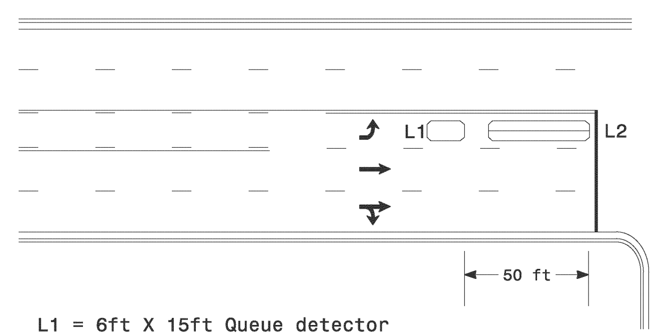


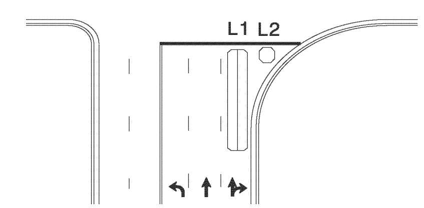
L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

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

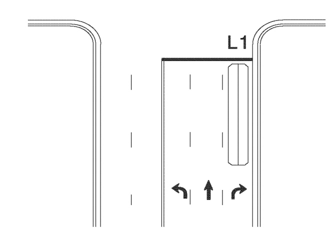
Queue Loop Detection

Right Turn Lane Detection

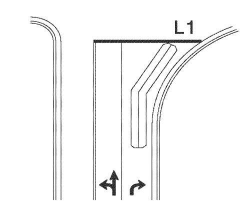


Shared Lane/
Wide Radius Turn

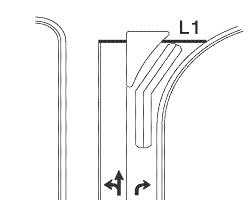
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

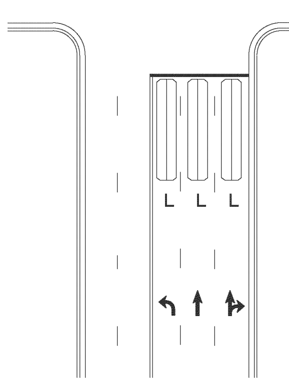


Wide Radius Turn



Channelized Turn

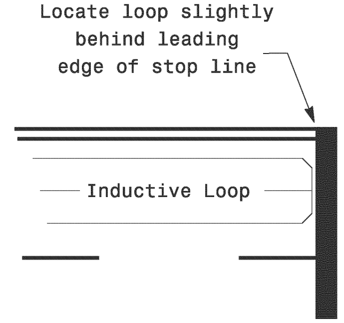
Side Street Detection



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 Division
State of North Carolina Department of Transportation
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:	

SCALE
N/A

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 23489 ENGINEER PAMELA L. ALEXANDER

DocuSigned by: P.L. Alexander
1/30/2015
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