2026CPT.12.06.10551

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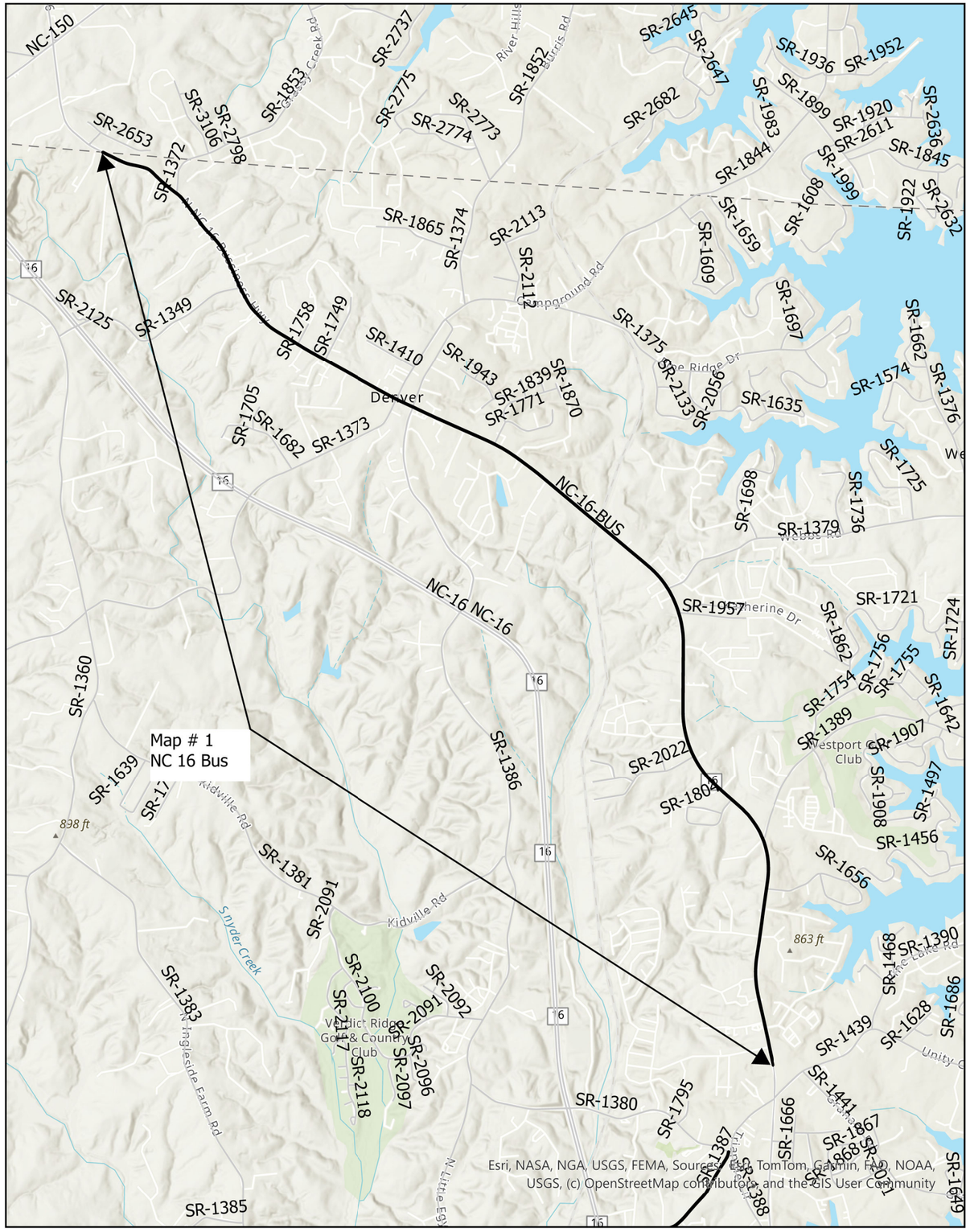
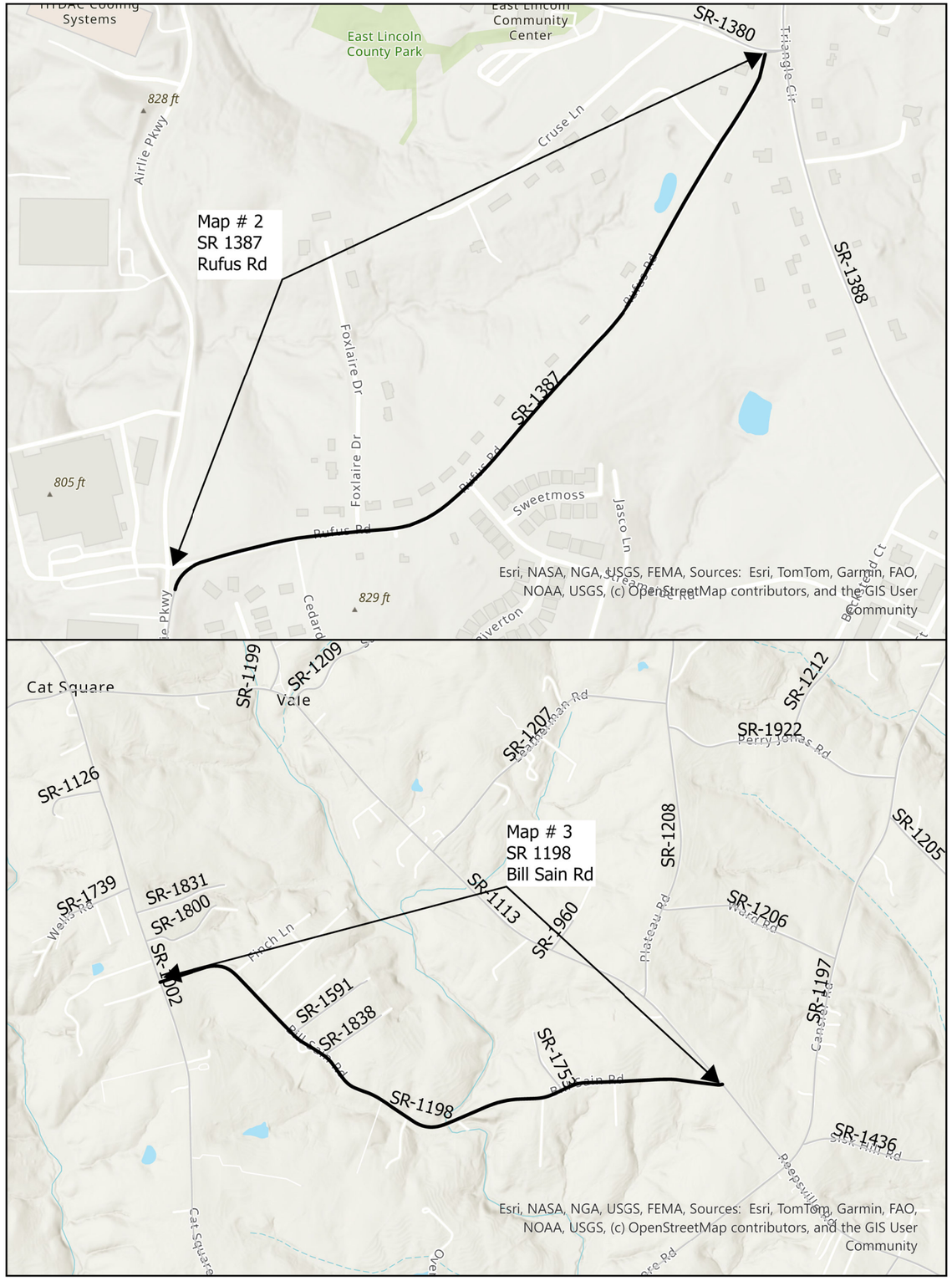


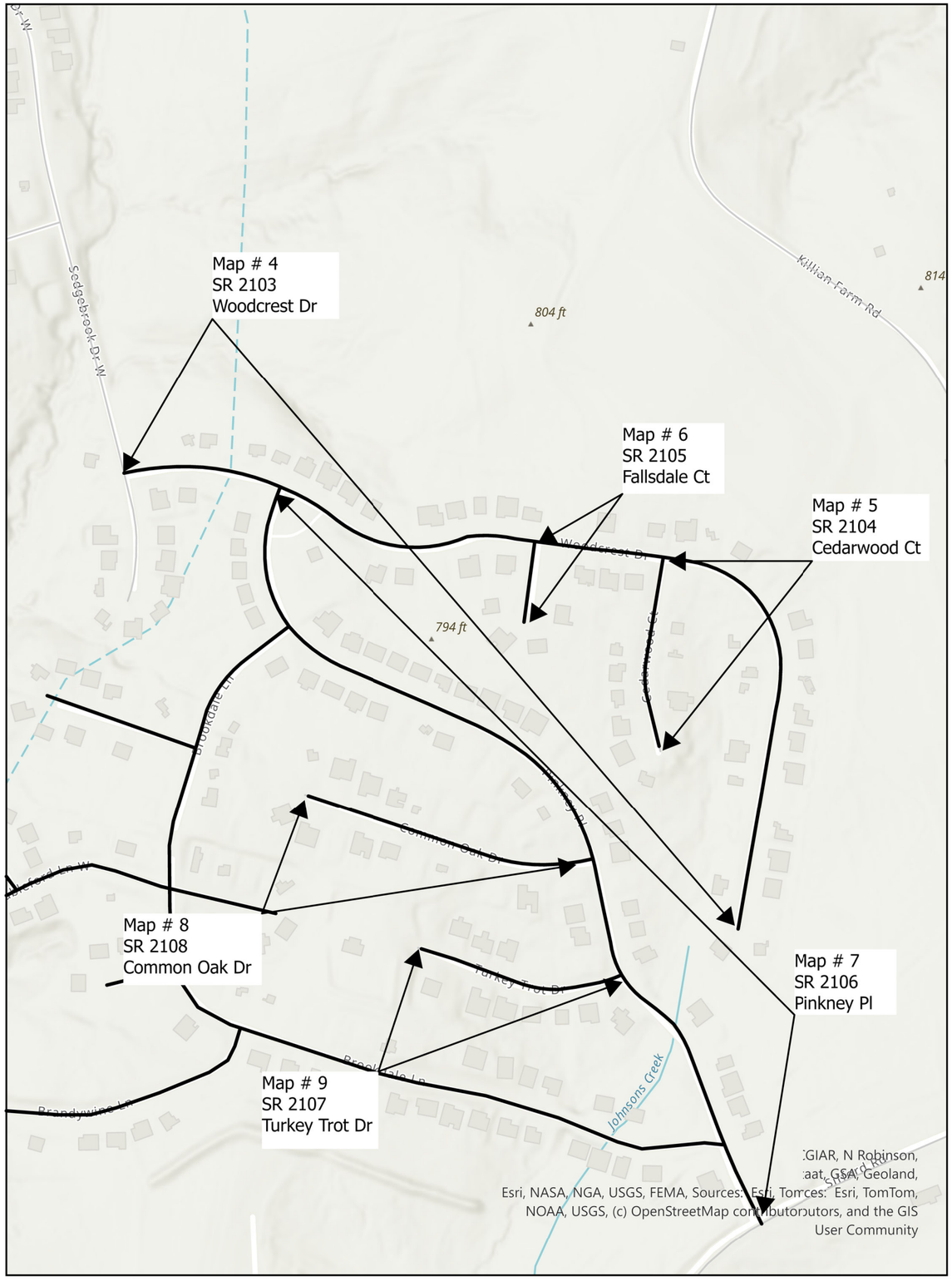
Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

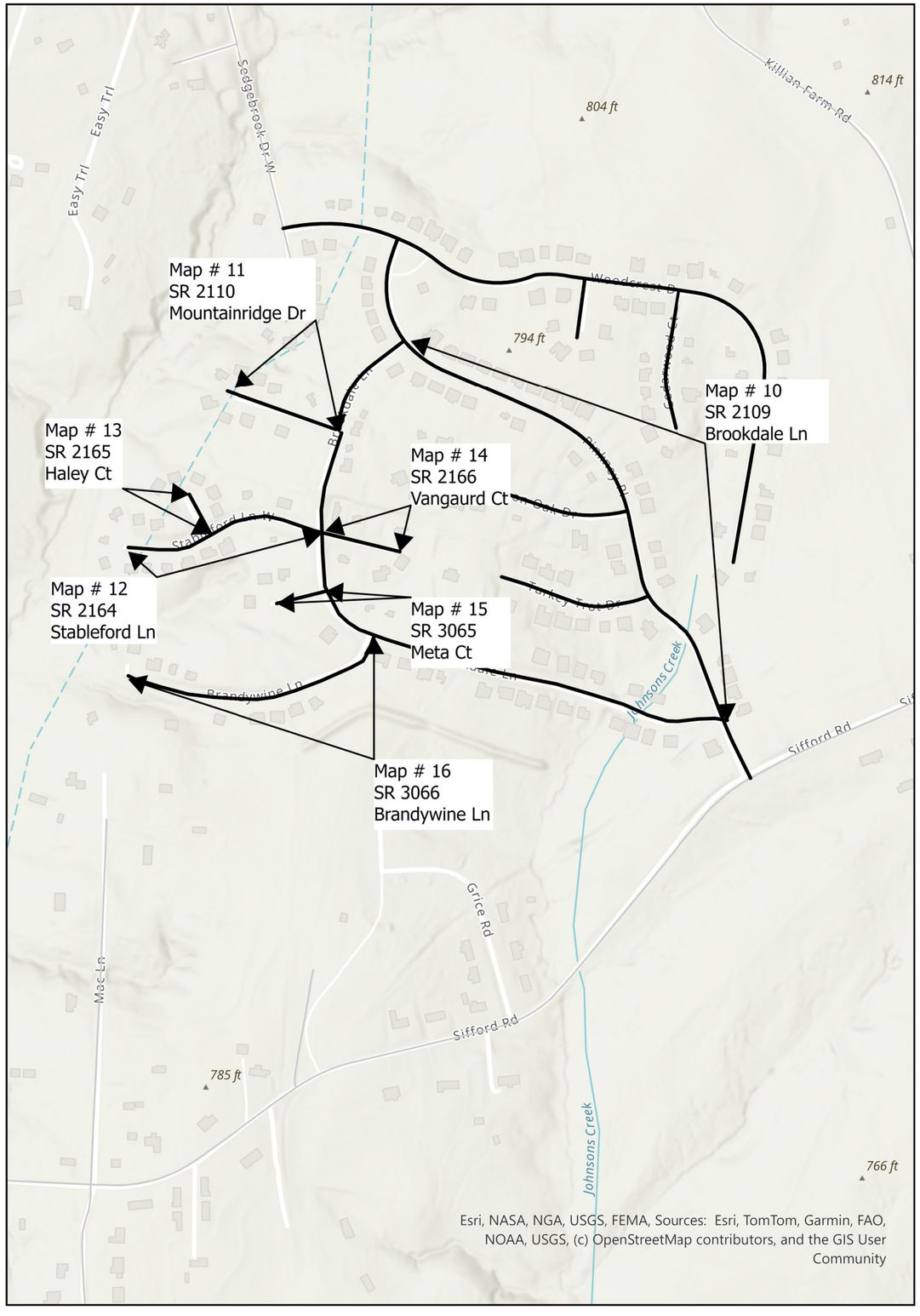


Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

N

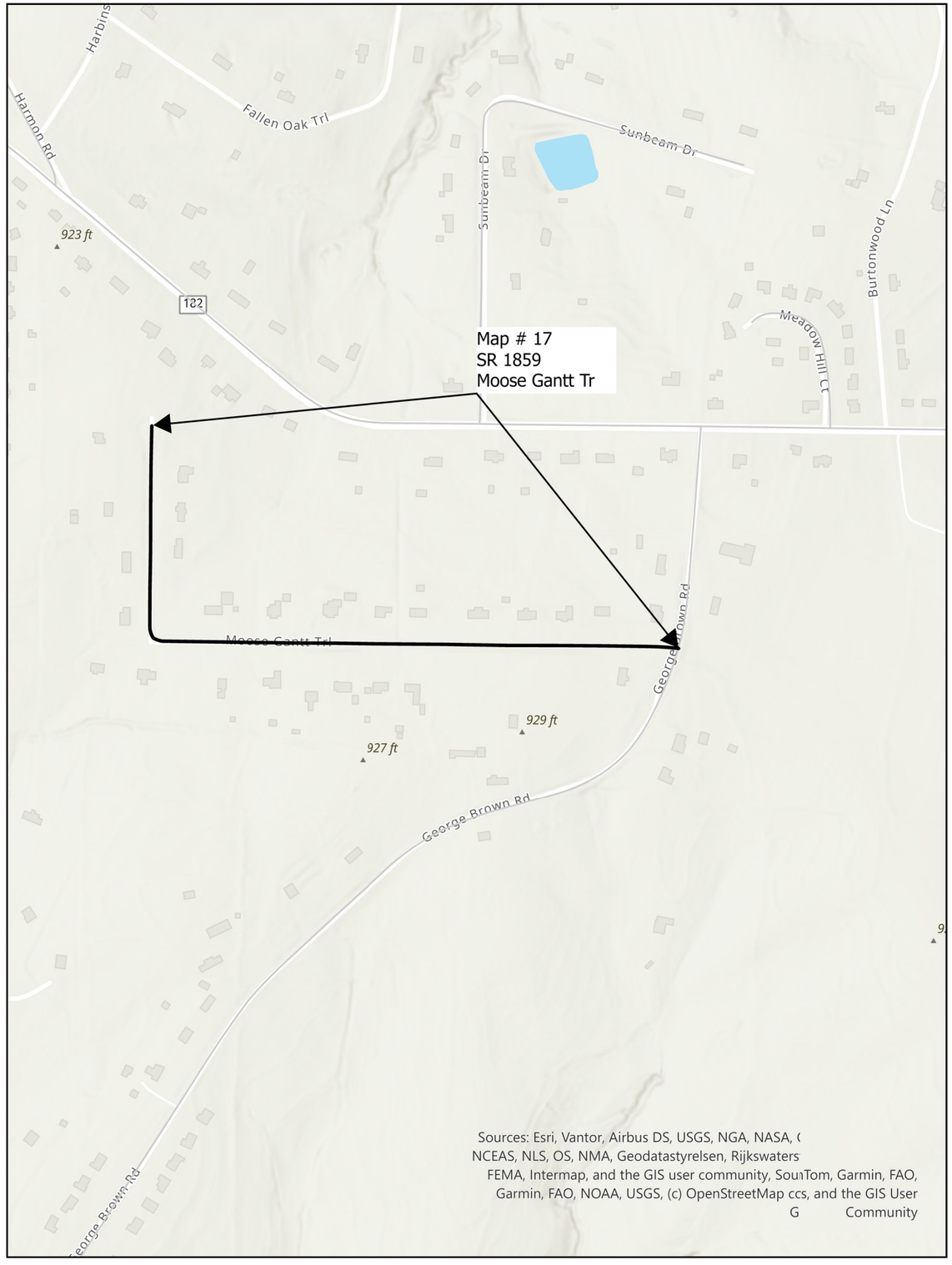
Lincoln County
2027CPT.12.06.10551,
2027CPT.12.06.20551





N

LINCOLN COUNTY
2027CPT.12.06.10551
2027CPT.12.06.20551

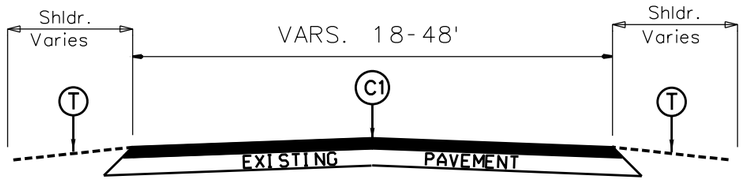


LINCOLN COUNTY
2027CPT.12.06.10551
2027CPT.12.06.20551
N

STATE	PROJECT WBS	SHEET NUMBER
NC	2027CPT.12.06.10551	5
	2027CPT.12.06.20551	

Checked by:

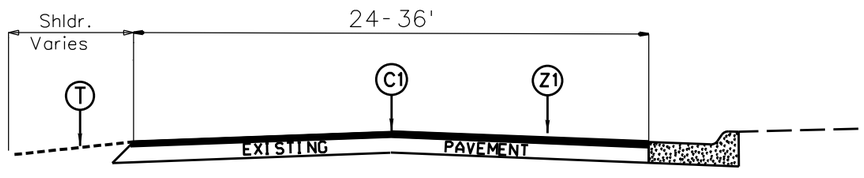
Drawn by: G. Brittain



TYPICAL SECTION NO. 1

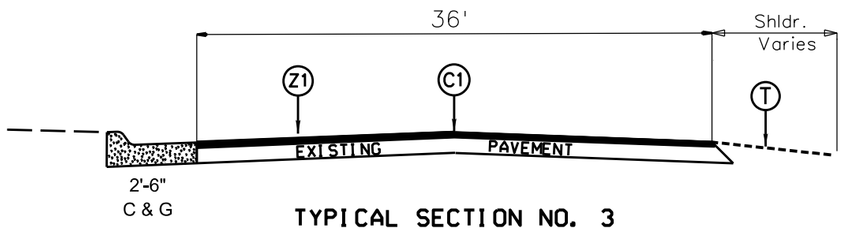
MAP 1 - 0+00 to 108+24
MAP 1 - 110+35 to 123+02
MAP 1 129+35 to 356+40
MAP 2 - ENTIRE MAP
MAP 3 - ENTIRE MAP
MAP 17 - ENTIRE MAP

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
Z1	MILL EXST. ASPHALT PAVMENT APPROX. Ø - 1 1/2" IN DEPTH
Z2	MILL EXISTING PAVEMENT APPROX. 1 1/2"
T	AGGREGATE SHOULDER BORROW (SHOULDER RECONSTRUCTION, WIDTH VARIES 2'-6')
Y1	INCIDENTAL MILLING



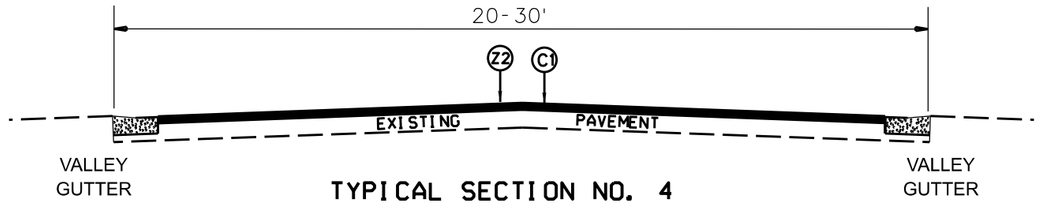
TYPICAL SECTION NO. 2

MAP 1 - 108+24 to 110+35



TYPICAL SECTION NO. 3

MAP 1 - 123+02 to 129+35



TYPICAL SECTION NO. 4

MAP 4 - Entire Map
MAP 5 - Entire Map
MAP 6 - Entire Map
MAP 7 - Entire Map
MAP 8 - Entire Map
MAP 9 - Entire Map
MAP 10 - Entire Map
MAP 11 - Entire Map
MAP 12 - Entire Map
MAP 13 - Entire Map
MAP 15 - Entire Map
MAP 16 - Entire Map

2027-2028
Lincoln County Resurfacing

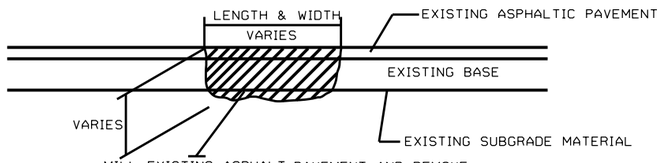
STATE	PROJECT WBS	SHEET NUMBER
NC	2027CPT.12.06.10551	6
	2027CPT.12.06.20551	

Checked by:

Drawn by: G. Brittain

DETAIL A

PATCHING EXISTING PAVEMENT



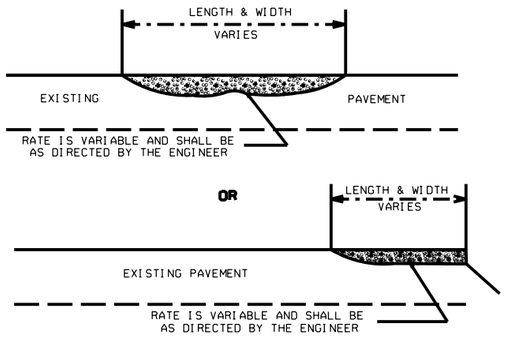
MILL EXISTING ASPHALT PAVEMENT AND REMOVE
EXISTING LOOSE BASE AND/OR SUBGRADE MATERIAL AND REPLACE WITH ACIC
AND \ OR ACSC AS DIRECTED BY THE ENGINEER

DETAIL D
MILLING BRIDGE APPROACHES

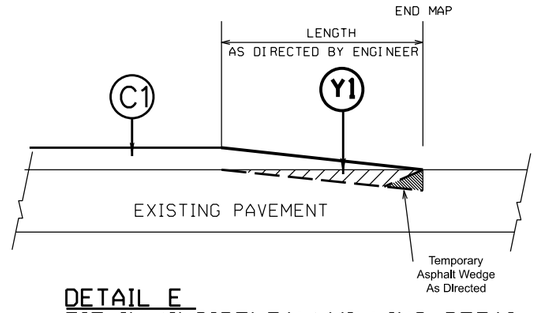


DETAIL B

ASPHALT CONCRETE SURFACE COURSE
TYPE S9.5C (LEVELING COURSE)



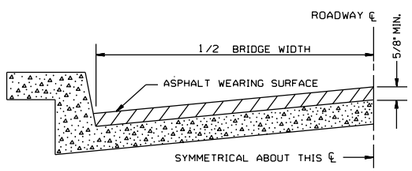
DETAIL E
TIE-IN (INCIDENTAL) MILLING DETAIL



PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
Z1	MILL EXST. ASPHALT PAVMENT APPROX. 0 - 1 1/2" IN DEPTH
Z2	MILL EXISTING PAVEMENT APPROX. 1 1/2"
T	AGGREGATE SHOULDER BORROW (SHOULDER RECONSTRUCTION, WIDTH VARIES 2'-6')
Y1	INCIDENTAL MILLING

DETAIL C

BRIDGE HALF TYPICAL SECTION

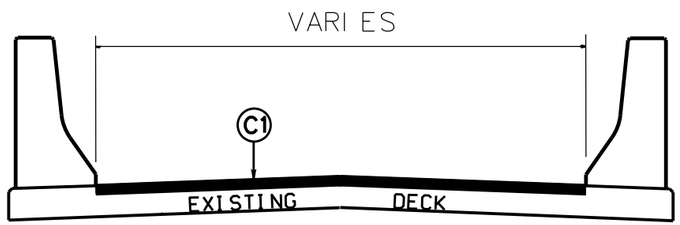


FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

NOTES

ALL UNPAVED S.R. ROADS TO BE SURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.
ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE NOTED.
BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.



ASPHALT BRIDGE SECTION

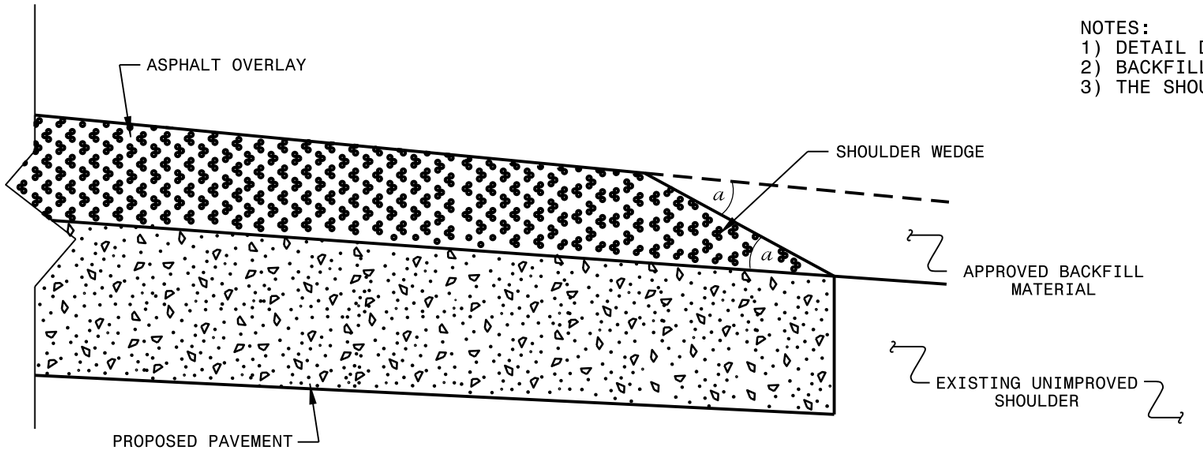
Use for all asphalt bridges

2027-2028

Lincoln County Resurfacing

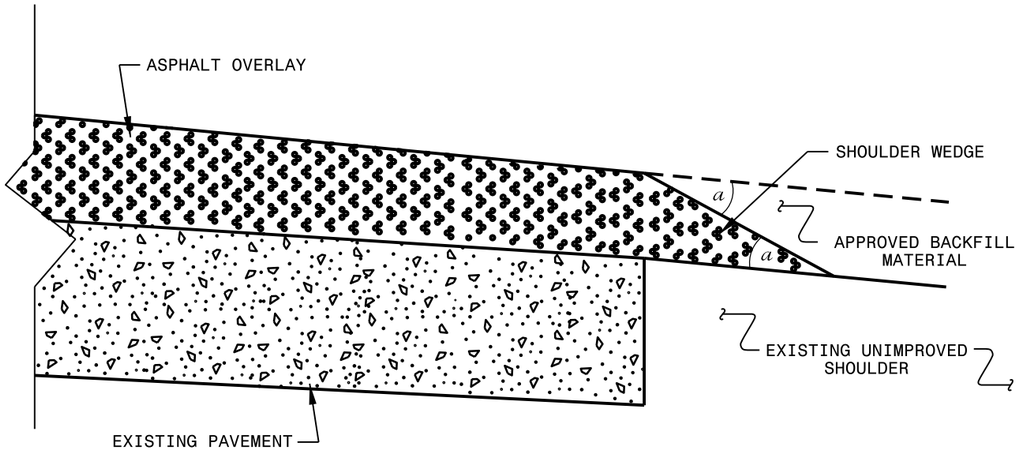
PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.06.10551	7

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.



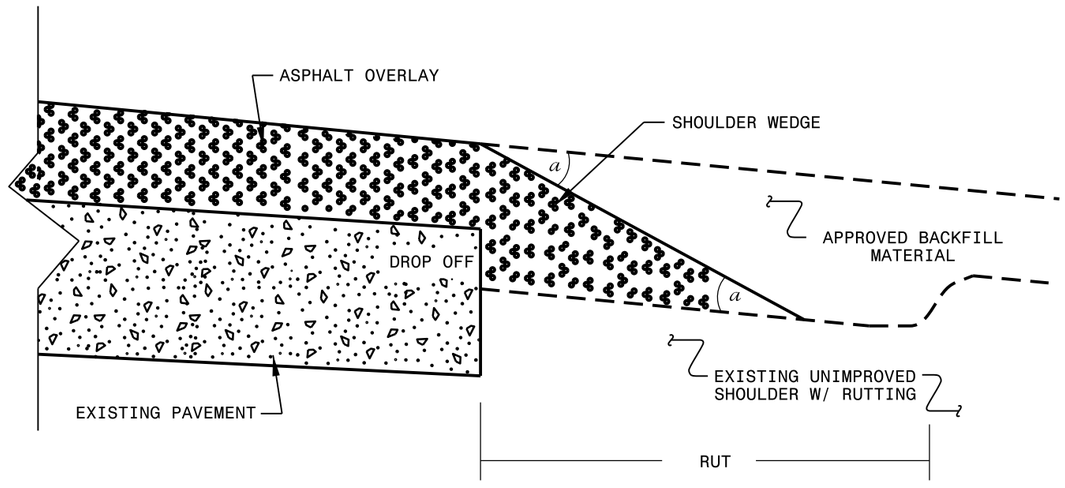
SHOULDER WEDGE DETAIL

(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°

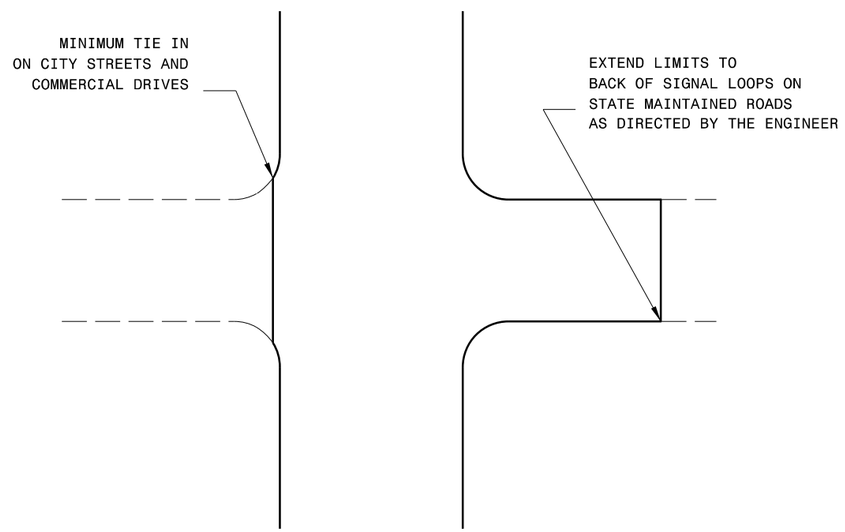
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

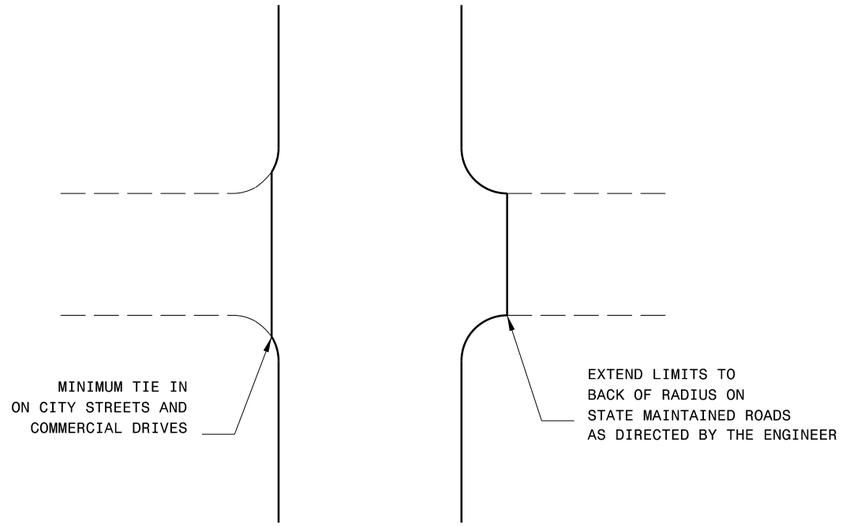
ORIGINAL BY:	T.SPELL	DATE:	7-19-11
MODIFIED BY:		DATE:	10/16/12
CHECKED BY:		DATE:	
FILE SPEC.:	$:usr/details/stand/shoulderwedgedetail.dgn		

$$$$$$SYSTIME$$$$$
$$$$$$USERNAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.06.10551	8



TYPICAL DETAIL OF PROJECT LIMITS AT
SIGNALIZED Y LINES



TYPICAL DETAIL OF PROJECT LIMITS AT
UNSIGNALIZED Y LINES

ADDITIONAL INTERSECTIONS (NON-TYPICAL)		
Extend paving limits to back of radius or loop on the following intersections:		
MAP#	STREET NAME	COMMENTS

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.12.06.10551, 2027CPT.12.06.20551		

SUMMARY OF QUANTITIES

												1220000000-E	1245000000-E	1260000000-E	1297000000-E	1308000000-E	1330000000-E	1523000000-E	1524000000-E	1575000000-E	1704000000-E	2800000000-N	2830000000-N	2845000000-N	5255000000-N	7324000000-N	7444000000-E	7456100000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1½" MILLING	0" TO 1.5" MILLING	INCIDENTAL MILLING	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	ASPHALT CONC SURFACE COURSE, TYPE S9.5C (LEVELING COURSE)	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	CATCH BASIN	MANHOLES	METER OR VALVE BOX	PORTABLE LIGHTING	JUNCTION BOX (STANDARD SIZE)	INDUCTIVE LOOP	LEAD-IN CABLE (14-2)
								MI	FT			TONS	SMI	TON	SY	SY	SY	TON	TON	TONS	TONS	EA	EA	EA	LS	EA	LF	LF
2027CPT.12.06.10551	Lincoln	1	NC-16 BUS	FROM CATAWBA CO TO APPROXIMATELY 850' NORTH OF SR 1439 (UNITY CH RD)	1, 2, 3	2	2WU	6.580	24-48	5.660	12.240		13.00	625		3,300	2,150	10,316	200	628	400	4	20	22	*	2	1,950	200
TOTAL FOR PROJ NO. 2027CPT.12.06.10551								**6.580**					**13.00**	**625**		**3,300**	**2,150**	**10,316**	**200**	**628**	**400**	**4**	**20**	**22**		**2**	**1,950**	**200**
2027CPT.12.06.20551	Lincoln	2	SR-1387 / RUFUS RD	FROM SR 1380 (OPTIMIST CLUB RD) TO SR 2192 (AIRLIE PARKWAY)	1	2	2WU	0.670	20	0.000	0.670		1.34	67			122	698	464	77	180								
2027CPT.12.06.20551	Lincoln	3	SR-1198 / BILL SAIN RD	FROM SR 1113 (REEPSVILLE RD) TO SR 1002 (CAT SQUARE RD)	1	2		2.030	18	0.000	2.030	100	4.06	203			225	1,904	1,266	206	400								
2027CPT.12.06.20551	Lincoln	4	SR-2103 / WOODCREST DR	FROM SR 2102 (SEDGEBROOK DR) TO CUL-DE-SAC	4	2	2WU	0.570	22	0.000	0.570				7,407			671		40			28					
2027CPT.12.06.20551	Lincoln	5	SR-2104 / CEDARWOOD CT	FROM SR 2103 (WOODCREST DR) TO CUL-DE-SAC	4	2		0.110	22	0.000	0.110				1,516			130		8			6					
2027CPT.12.06.20551	Lincoln	6	SR-2105 / FALLSDALE CT	FROM SR 2103 (WOODCREDST DR) TO CUL-DE-SAC	4	2	2WU	0.050	22	0.000	0.050				794			59		3			2					
2027CPT.12.06.20551	Lincoln	7	SR-2106 / PINKNEY PL	FROM SR 2103 (WOODCREST DR) TO SR 1397 (SIFFORD RD)	4	2	2WU	0.540	30	0.000	0.540				9,533			842		50			28					
2027CPT.12.06.20551	Lincoln	8	SR-2108 / COMMON OAK DR	FROM SR 2106 (PINKNEY PL) TO CUL-DE-SAC	4	2	2WU	0.170	22	0.000	0.170				2,371			195		11			6					
2027CPT.12.06.20551	Lincoln	9	SR-2107 / TURKEY TROT DR	FROM SR 2106 (PINKNEY PL) TO CUL-DE-SAC	4	2	2WU	0.120	22	0.000	0.120				1,736			141		8			2					
2027CPT.12.06.20551	Lincoln	10	SR-2109 / BROOKDALE LN	FROM SR 2106 (PINKNEY PL) TO SR 2106 (PINKNEY PL)	4	2	2WU	0.550	22	0.000	0.550				7,272			630		37			16					
2027CPT.12.06.20551	Lincoln	11	SR-2110 / MOUNTAINRIDGE DR	FROM SR 2109 BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.090	22	0.000	0.090				1,344			106		6			2					
2027CPT.12.06.20551	Lincoln	12	SR-2164 / STABLEFORD LN	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.160	22	0.000	0.160				2,237			188		11								
2027CPT.12.06.20551	Lincoln	13	SR-2165 / HALEY CT	FROM SR 2164 (STABLEFORD LN) TO CUL-DE-SAC	4	2	2WU	0.040	22	0.000	0.040				709			47		3								
2027CPT.12.06.20551	Lincoln	14	SR-2166 / VANGAURD CT	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.060	22	0.000	0.060				953			71		4								
2027CPT.12.06.20551	Lincoln	15	SR-3065 / META CT	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.040	22	0.000	0.040				709			47		3								
2027CPT.12.06.20551	Lincoln	16	SR-3066 / BRANDYWINE LN	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.220	22	0.000	0.220				3,019			259		15								
2027CPT.12.06.20551	Lincoln	17	SR-1859 / MOOSE GANTT TR	FROM SR 1180 (GEORGE BROWN RD) TO END PVMT	1	2	2WU	0.540	18	0.000	0.540	10	1.08	54			150	506		35	100							
TOTAL FOR PROJ NO. 2027CPT.12.06.20551								**5.960**				**110**	**6.48**	**324**	**39,600**		**497**	**6,494**	**1,730**	**517**	**680**		**90**					
GRAND TOTAL								**12.540**				**110**	**19.48**	**949**	**39,600**	**3,300**	**2,647**	**16,810**	**1,930**	**1,145**	**1,080**	**4**	**110**	**22**	**1**	**2**	**1950**	**200**

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.12.06.10551, 2027CPT.12.06.20551		

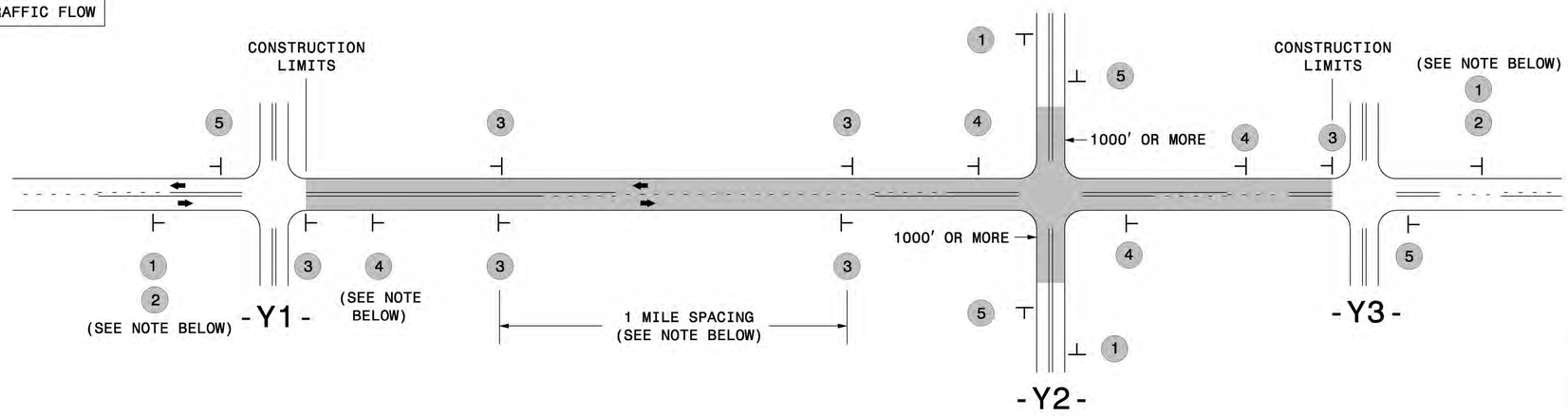
THERMOPLASTIC AND PAINT QUANTITIES

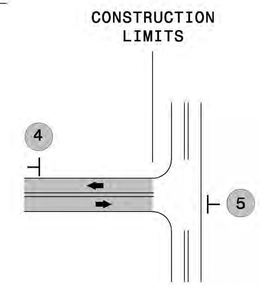
												4413000000-E	4457000000-N	4510000000-N	4685000000-E		4700000000-E	4709000000-E	4720000000-E	4725000000-E					4810000000-E		4870000000-E	4875000000-N	4905100000-N
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	WORK ZONE ADVANCE GENERAL WARNING	TEMP TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	12" X 90 M YELLOW THERMO	24" X 90 MILS WHITE THERMO	THERMO MSG SCHOOL 120 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO YIELD SYMBOL 90 M	4" YELLOW PAINT	4" WHITE PAINT	24" LINE REMOVAL	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS	POLYCARBONATE H-SHAPED PAVEMENT MARKERS
								MI	FT			SF	LS	HR	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
2027CPT.12.06.10551	Lincoln	1	NC-16 BUS	FROM CATAWBA CO TO APPROXIMATELY 850' NORTH OF SR 1439 (UNITY CH RD)	1, 2, 3	2	2WU	6.58	24-48	5.66	12.24	475	*	180	85,525	69,000	1,760	900	36	106	14	5	11	6			900	172	700
TOTAL FOR PROJ NO. 2027CPT.12.06.10551								**6.58**				**475**		**180**	**85,525**	**69,000**	**1,760**	**900**	**36**	**106**	**14**	**5**	**11**	**6**			**900**	**172**	**700**
															154,525					**142**									
2027CPT.12.06.20551	Lincoln	2	SR-1387 / RUFUS RD	FROM SR 1380 (OPTIMIST CLUB RD) TO SR 2192 (AIRLIE PARKWAY)	1	2	2WU	0.67	20	0	0.67	64						20							14,150	14,150			
2027CPT.12.06.20551	Lincoln	3	SR-1198 / BILL SAIN RD	FROM SR 1113 (REEPSVILLE RD) TO SR 1002 (CAT SQUARE RD)	1	2	2WU	2.03	18	0	2.03	165													42,900	42,900			
2027CPT.12.06.20551	Lincoln	4	SR-2103 / WOODCREST DR	FROM SR 2102 (SEDGEBROOK DR) TO CUL-DE-SAC	4	2	2WU	0.57	22	0	0.57	64																	
2027CPT.12.06.20551	Lincoln	5	SR-2104 / CEDARWOOD CT	FROM SR 2103 (WOODCREST DR) TO CUL-DE-SAC	4	2	2WU	0.11	22	0	0.11																		
2027CPT.12.06.20551	Lincoln	6	SR-2105 / FALLSDALE CT	FROM SR 2103 (WOODCREDST DR) TO CUL-DE-SAC	4	2	2WU	0.05	22	0	0.05																		
2027CPT.12.06.20551	Lincoln	7	SR-2106 / PINKNEY PL	FROM SR 2103 (WOODCREST DR) TO SR 1397 (SIFFORD RD)	4	2	2WU	0.54	30	0	0.54	128																	
2027CPT.12.06.20551	Lincoln	8	SR-2108 / COMMON OAK DR	FROM SR 2106 (PINKNEY PL) TO CUL-DE-SAC	4	2	2WU	0.17	22	0	0.17																		
2027CPT.12.06.20551	Lincoln	9	SR-2107 / TURKEY TROT DR	FROM SR 2106 (PINKNEY PL) TO CUL-DE-SAC	4	2	2WU	0.12	22	0	0.12																		
2027CPT.12.06.20551	Lincoln	10	SR-2109 / BROOKDALE LN	FROM SR 2106 (PINKNEY PL) TO SR 2106 (PINKNEY PL)	4	2	2WU	0.55	22	0	0.55	128	*																
2027CPT.12.06.20551	Lincoln	11	SR-2110 / MOUNTAINRIDGE DR	FROM SR 2109 BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.09	22	0	0.09																		
2027CPT.12.06.20551	Lincoln	12	SR-2164 / STABLEFORD LN	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.16	22	0	0.16																		
2027CPT.12.06.20551	Lincoln	13	SR-2165 / HALEY CT	FROM SR 2164 (STABLEFORD LN) TO CUL-DE-SAC	4	2	2WU	0.04	22	0	0.04																		
2027CPT.12.06.20551	Lincoln	14	SR-2166 / VANGAURD CT	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.06	22	0	0.06																		
2027CPT.12.06.20551	Lincoln	15	SR-3065 / META CT	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.04	22	0	0.04																		
2027CPT.12.06.20551	Lincoln	16	SR-3066 / BRANDYWINE LN	FROM SR 2109 (BROOKDALE LN) TO CUL-DE-SAC	4	2	2WU	0.22	22	0	0.22																		
2027CPT.12.06.20551	Lincoln	17	SR-1859 / MOOSE GANTT TR	FROM SR 1180 (GEORGE BROWN RD) TO END PVMT	1	2	2WU	0.54	18	0	0.54	128													11,425	11,425			
TOTAL FOR PROJ NO. 2027CPT.12.06.20551								**5.96**				**677**						**20**							**68,475**	**68,475**			
																									136,950				
GRAND TOTAL								**12.54**				**1,152**	**1**	**180**	**85,525**	**69,000**	**1,760**	**920**	**36**	**106**	**14**	**5**	**11**	**6**	**68,475**	**68,475**	**900**	**172**	**700**
															154,525					**142**					**136,950**				

PROJ. REFERENCE NO.	SHEET NO.
2027CPT.12.06.10551	11

SIGNING FOR RESURFACING PROJECTS

LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW





TEE INTERSECTION

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1 — ROAD WORK AHEAD W20-1 48" X 48"
2 — NEXT XX MILES W7-3aP 24" X 18"

PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS.
ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.

#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 — LOW/SOFT SHOULDER SP 13107 48" X 48"

- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.
- AT TEE INTERSECTIONS INSTALL INITIALLY ½ MILE FROM INTERSECTION AND SPACE 1 MILE APART 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.
- FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.

5 — END ROAD WORK G20-2 A 48" X 24"

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.

-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, PORTABLE ADVANCE WARNING 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.

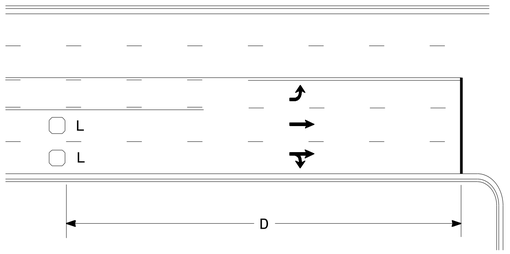
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

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

5/15/2017
J:\TMD\WZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn
User:keddis

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.06.10551	12

High Speed Detection
(≥35 mph)

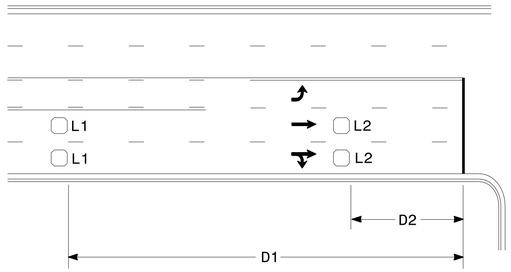


Speed Limit mph	D ft
35	200
40	250
45	300
50	355
55	420
60	475
65	550

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



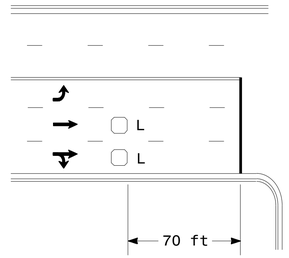
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110
60	475	120
65	550	130

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

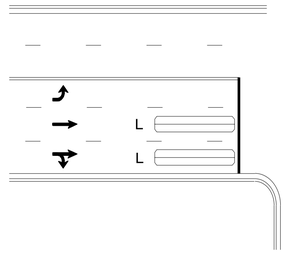
"Stretch" Operation

Low Speed Detection
(≤35 mph)



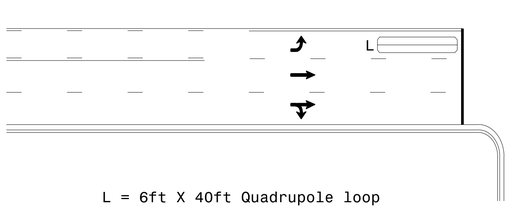
L = 6ft X 6ft
Wired in series

OR



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

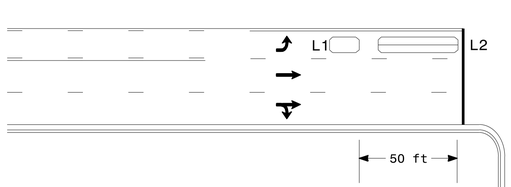
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

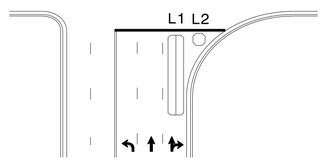
OR



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

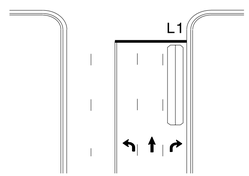
Queue Loop Detection

Right Turn Lane Detection

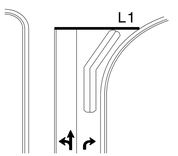


Shared Lane/
Wide Radius Turn

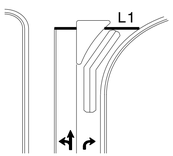
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

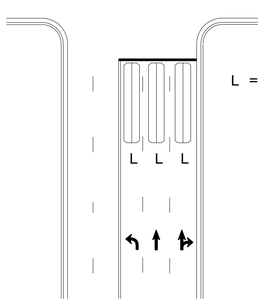


Wide Radius Turn



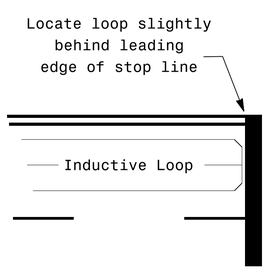
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



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
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

Typical Signal Loop Locations

PLAN DATE: September 2025 | REVIEWED BY:
PREPARED BY: J.A. Lohr | REVIEWED BY:

SCALE
N/A

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL 026486
ENGINEER
ROBERT J. ZIEMBA
DocuSigned by:
11/25/2025
DATE
SIG. INVENTORY NO.

17-NOV-2025 07:35
S:\TSG\Traffic Signals\Signal Design Section\Eastern Region\Loop Typical\Loop_Typical_2025.dgn
jalohr