2026CPT.12.21.20181, Etc.

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DL00385

Lincoln and Catawba Counties

WBS# 2026CPT.12.21.20181
2026CPT.12.21.20551

Map # 1
SR 1003
Buffalo Shoals Rd

Map # 2
SR 1003
Buffalo Shoals Rd

Map # 3
SR 1003
Buffalo Shoals Rd

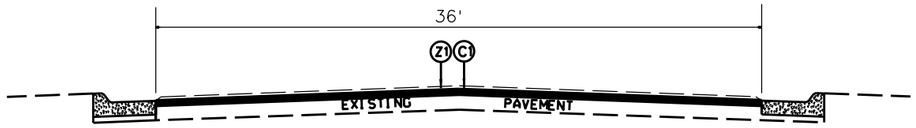
NCDOT GIS Unit

N

STATE	PROJECT WBS	SHEET NUMBER
NC	2026CPT.12.21.20181	3
	2026CPT.12.21.20551	

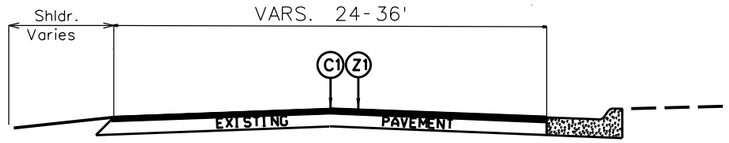
Drawn by: G. Brittain

Checked by:



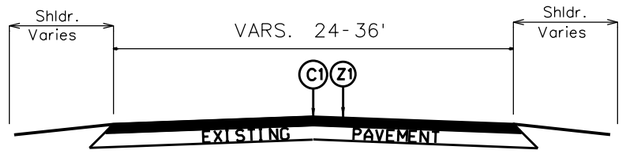
TYPICAL SECTION NO. 1

MAP # 1 - 0+00 to 2+20



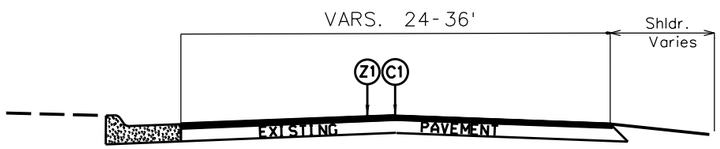
TYPICAL SECTION NO. 2

MAP # 1 - 25+70 to 28+00



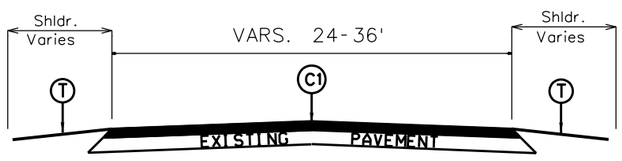
TYPICAL SECTION NO. 3

MAP # 1 - 28+00 to 29+90



TYPICAL SECTION NO. 4

MAP 1 - 29+90 to 37+50



TYPICAL SECTION NO. 5

MAP 1 - 2+20 to 25+70
MAP 1 - 37+50 to 175+30
MAP 2 - ENTIRE MAP
MAP 3 - 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. 1 1/2" IN DEPTH
T	AGGREGATE SHOULDER BORROW (SHOULDER RECONSTRUCTION, WIDTH VARIES 2'-6')
Y1	INCIDENTAL MILLING

2026-2027

Catawba & Lincoln County Resurfacing

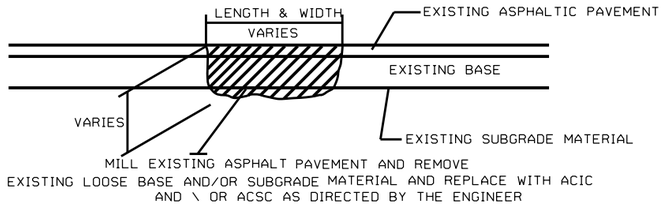
Drawn by: G. Brittain

Checked by:

STATE	PROJECT WBS	SHEET NUMBER
NC	2026CPT.12.21.20181	4
	2026CPT.12.21.20551	

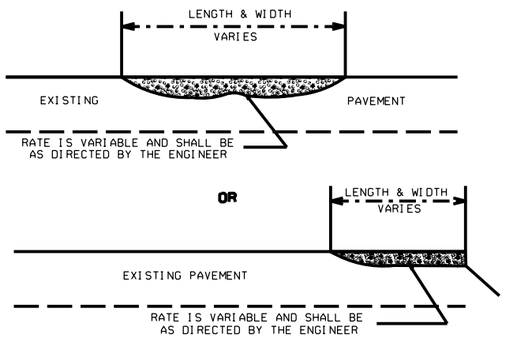
DETAIL A

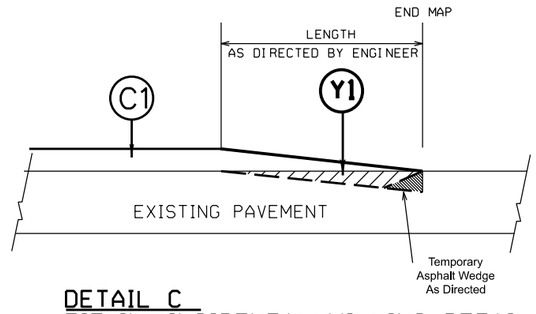
PATCHING EXISTING PAVEMENT



DETAIL B

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





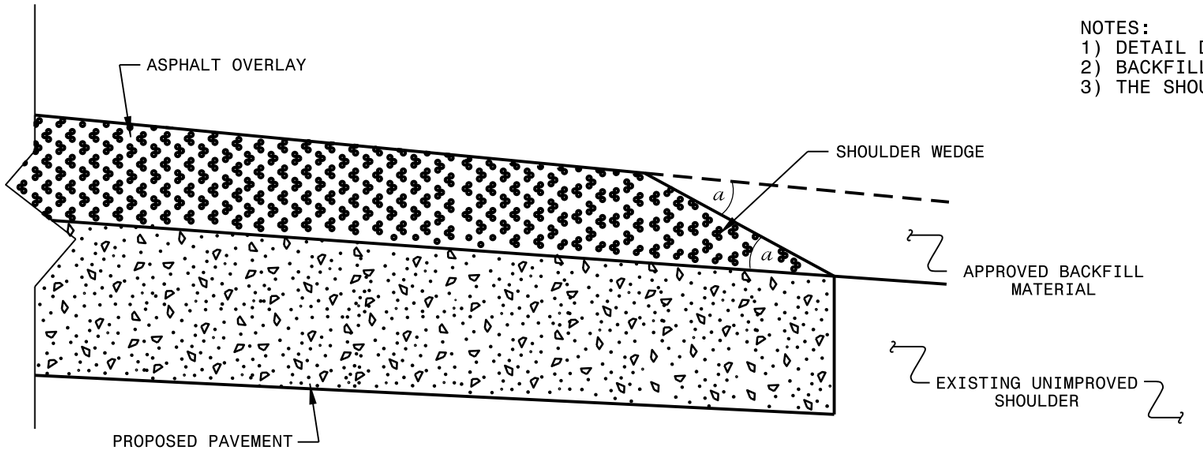
DETAIL C
TIE-IN (INCIDENTAL) MILLING DETAIL

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. 1 1/2" IN DEPTH
T	AGGREGATE SHOULDER BORROW (SHOULDER RECONSTRUCTION, WIDTH VARIES 2'-6')
Y1	INCIDENTAL MILLING

2026-2027

Catawba & Lincoln County Resurfacing

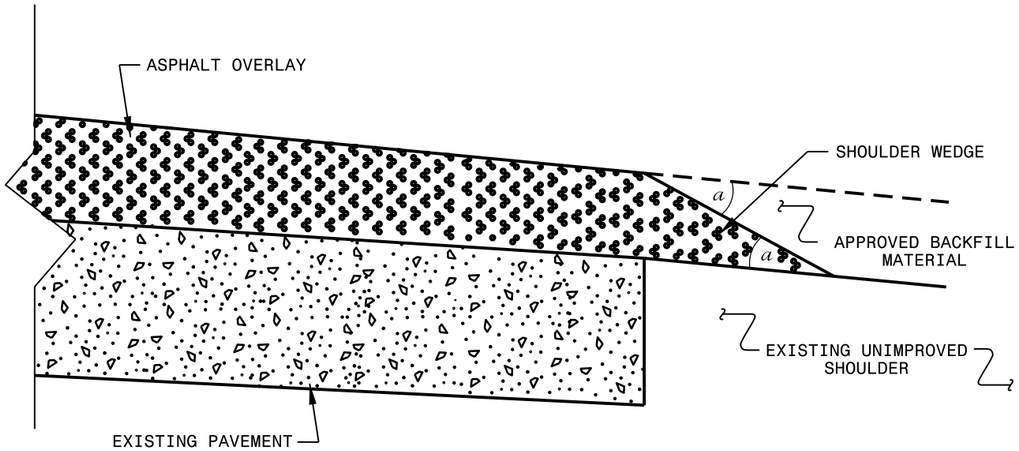
PROJECT REFERENCE NO.	SHEET NO.
2026CPT.12.21.20181	5



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.

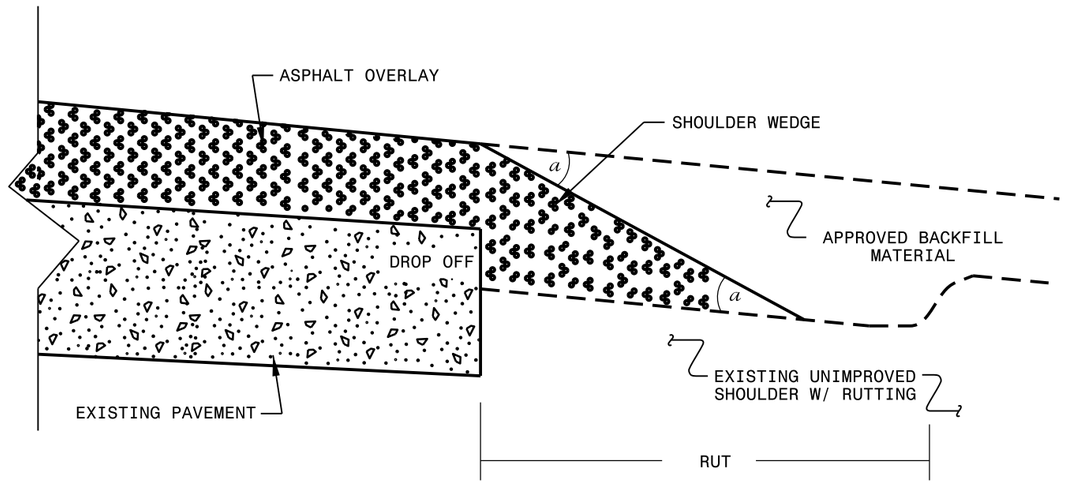
SHOULDER WEDGE DETAIL

(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°

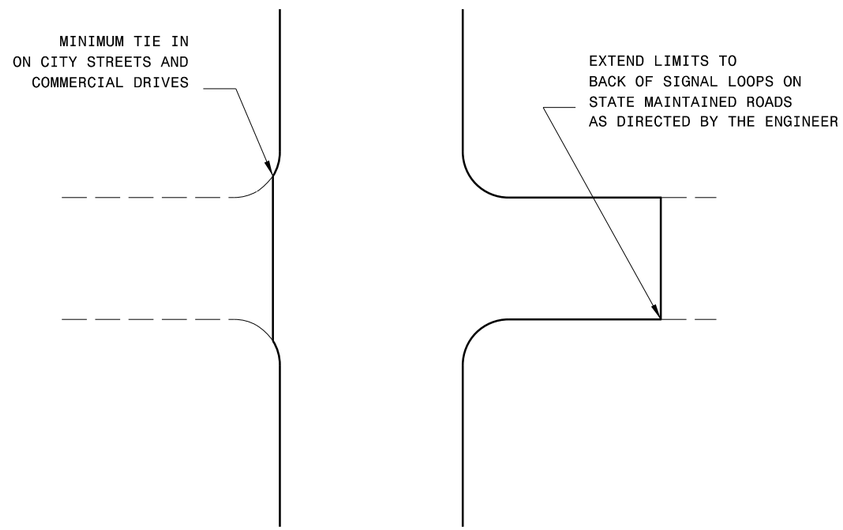
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

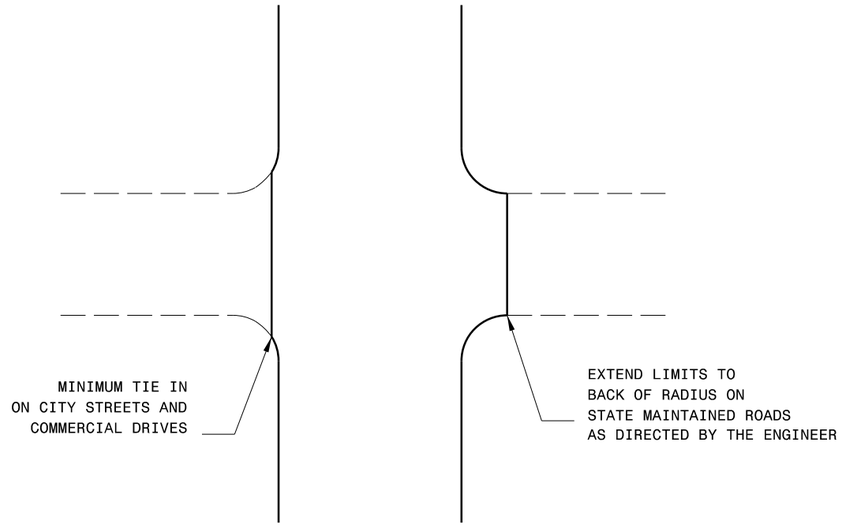
ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: _____ DATE: 10/16/12
CHECKED BY: _____ DATE: _____
FILE SPEC.: $:usr/details/stand/shoulderwedgedetail.dgn

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

PROJECT REFERENCE NO.	SHEET NO.
2026CPT.12.21.20181	6



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.
2026CPT.12.21.20181	7	10
2026CPT.12.21.20551		

SUMMARY OF QUANTITIES

												1220000000-E	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1523000000-E	1525000000-E	1575000000-E	1704000000-E	2845000000-N	5225000000-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**	**INCIDENTAL MILLING**	**ASPHALT CONC SURFACE COURSE, TYPE S9.5C**	**LEVELING COURSE, S9.5C**	**ASPHALT BINDER FOR PLANT MIX**	**PATCHING EXISTING PAVEMENT**	**METER OR VALVE BOX**	**PORTABLE LIGHTING**	**JUNCTION BOX (STANDARD SIZE)**	**INDUCTIVE LOOP**	**LEAD-IN CABLE (14-2)**
								MI	**FT**			**TONS**	**SMI**	**TON**	**SY**	**SY**	**TON**	**TON**	**TONS**	**TONS**	**EA**	**LS**	**EA**	**LF**	**LF**
2026CPT.12.21.20551	Lincoln	1	SR-1003 / BUFFALO SHOALS RD	FROM NC 27 TO SR 1341 (POARCH RD)	1,2,3,4,5	2	2WD	3.320	Vars. 24-36	0.000	3.320	20	6.38	664	4,200	150	4,302	100	263	200	5	*	1	265	100
2026CPT.12.21.20551	Lincoln	2	SR-1003 / BUFFALO SHOALS RD	FROM SR 1341 TO CATAWBA CO	5	2	2WD	2.870	24	3.320	6.190	20	5.74	574		100	3,583	100	226	300					
TOTAL FOR PROJ NO. 12.55								**6.190**				**40**	**12.12**	**1,238**	**4,200**	**250**	**7,885**	**200**	**489**	**500**	**5**	*****	**1**	**265**	**100**
2026CPT.12.21.20181	Catawba	3	SR-1003 / BUFFALO SHOALS RD	FROM LINCOLN COUNTY TO PVMT JOINT APPROXIMATLY 600' SOUTH OF NC 16	5	2	2WU	4.700	24	0.000	4.700	20	9.40	940		100	5,867	100	356	200					
TOTAL FOR PROJ NO. 12.18								**4.700**				**20**	**9.40**	**940**		**100**	**5,867**	**100**	**356**	**200**			**0**		
GRAND TOTAL								**10.890**				**60**	**21.52**	**2,178**	**4,200**	**350**	**13,752**	**300**	**845**	**700**	**5**	**1**	**1**	**265**	**100**

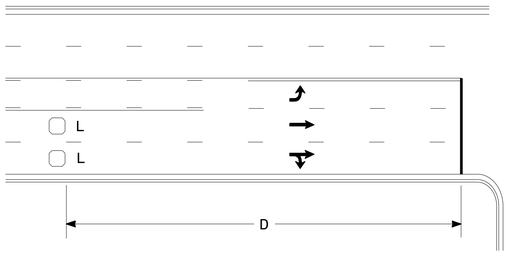
PROJECT NO.	SHEET NO.	TOTAL NO.
2026CPT.12.21.20181	8	10
2026CPT.12.21.20551		

THERMOPLASTIC AND PAINT QUANTITIES

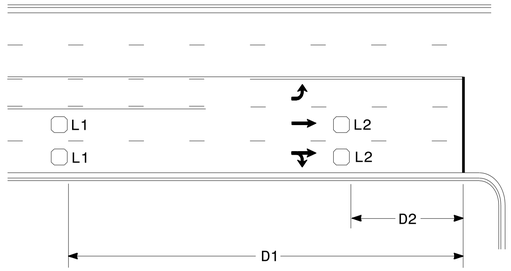
												4413000000-E	4457000000-N	4510000000-N	4685000000-E		4695000000-E	4709000000-E	4725000000-E			4870000000-E	4905100000-N
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	WORK ZONE ADVANCE GENERAL WARNING	TEMP TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	8" X 90M YELLOW THERMO	24" X 90 MILS WHITE THERMO	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR & LT ARROW 90 M	24" LINE REMOVAL	POLYCARBONATE H-SHAPED PAVEMENT MARKERS
								MI	FT			SF	LS	HR	LF	LF	LF	LF	EA	EA	EA	LF	EA
2026CPT.12.21.20551	Lincoln	1	SR-1003 / BUFFALO SHOALS RD	FROM NC 27 TO SR 1341 (POARCH RD)	1,2,3,4,5	2	2WD	3.32	24	0	3.32	224		150	36,084	35,059	194	84	4	3	1	48	235
2026CPT.12.21.20551	Lincoln	2	SR-1003 / BUFFALO SHOALS RD	FROM SR 1341 TO CATAWBA CO	5	2	2WD	2.87	24	3.32	6.19	160			30,310	30,310							200
TOTAL FOR PROJ NO. 12.55								**6.19**				**384**		**150**	**66,394**	**65,369**	**194**	**84**	**4**	**3**	**1**	**48**	**435**
													*		**131,763**					**8**			
2026CPT.12.21.20181	Catawba	3	SR-1003 / BUFFALO SHOALS RD	FROM LINCOLN COUNTY TO PVMT JOINT APPROXIMATLY 600' SOUTH OF NC 16	5	2	2WU	4.7	24	0	4.7	272			49,650	49,650		160					325
TOTAL FOR PROJ NO. 12.18								**4.7**				**272**			**49,650**	**49,650**		**160**					**325**
													*		**99,300**								
GRAND TOTAL								**10.89**				**656**	**1**	**150**	**116,044**	**115,019**	**194**	**244**	**4**	**3**	**1**	**48**	**760**
															231,063					**8**			

PROJECT REFERENCE NO.	SHEET NO.
2026CPT.12.21.20181	9

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

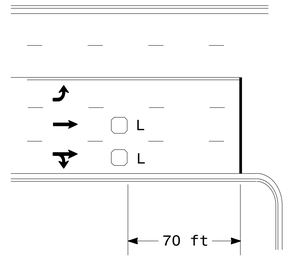
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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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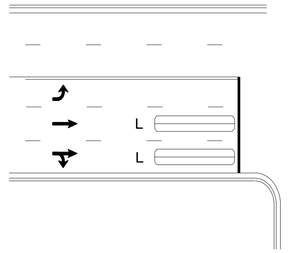
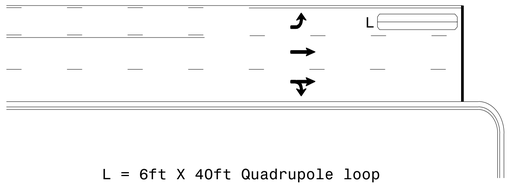


L = 6ft X 6ft
Wired in series

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

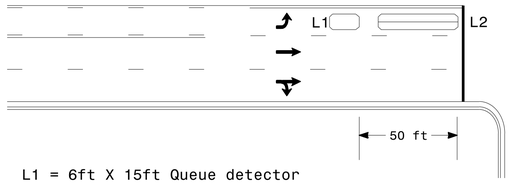
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

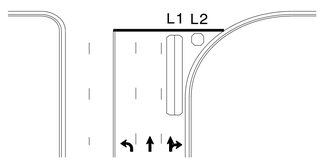
OR



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

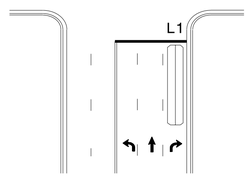
Queue Loop Detection

Right Turn Lane Detection

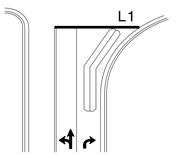


Shared Lane/
Wide Radius Turn

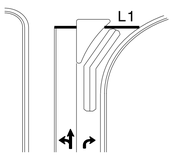
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

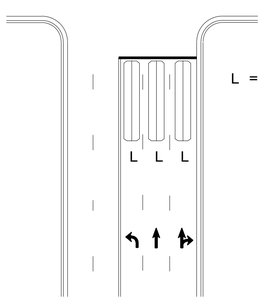


Wide Radius Turn



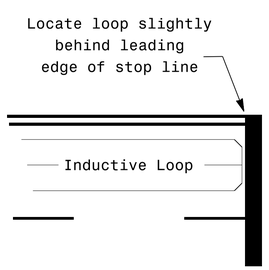
Channelized Turn

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
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
B4756E00CE4E46D...
1/30/2015
DATE

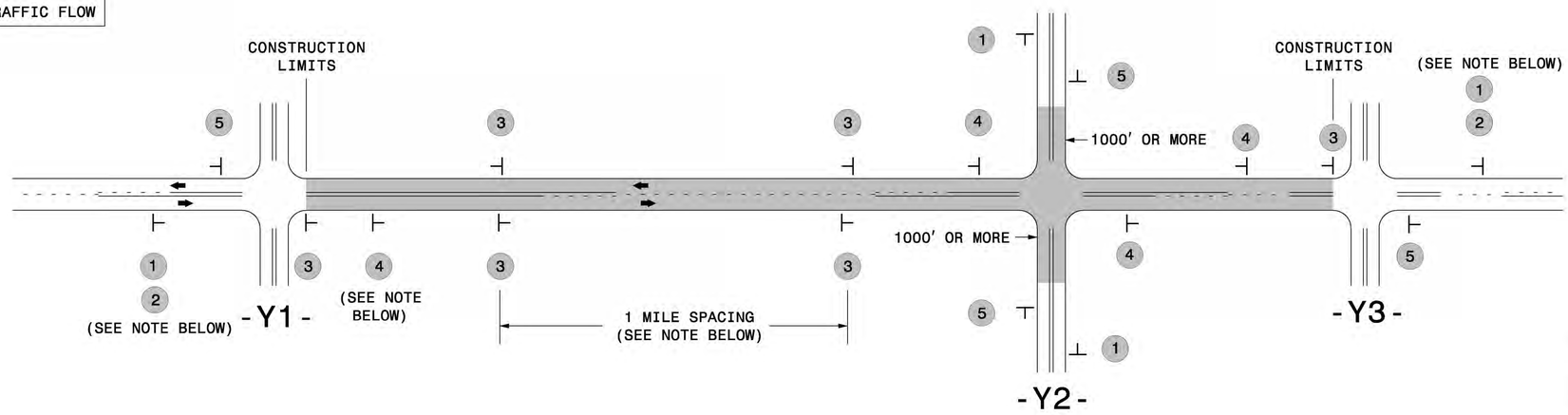
SIG. INVENTORY NO.

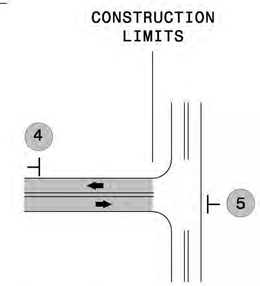
30-JAN-2015 12:39
S:\NCDOT\Traffic Signal\Signal Design Section\Eastern Region\loop typical 2015.dgn
palexander

PROJ. REFERENCE NO.	SHEET NO.
2026CPT.12.21.10181	10

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
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