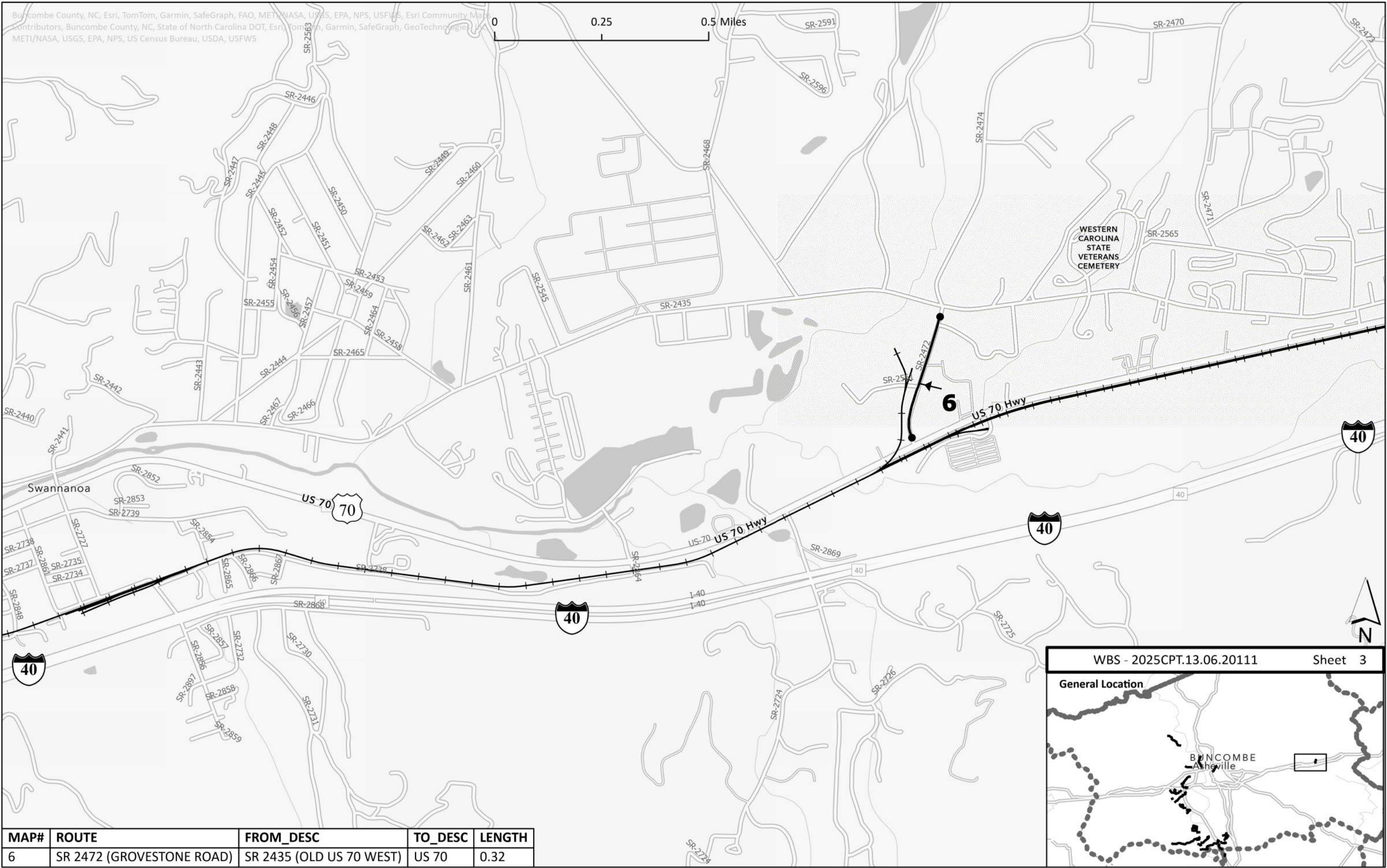
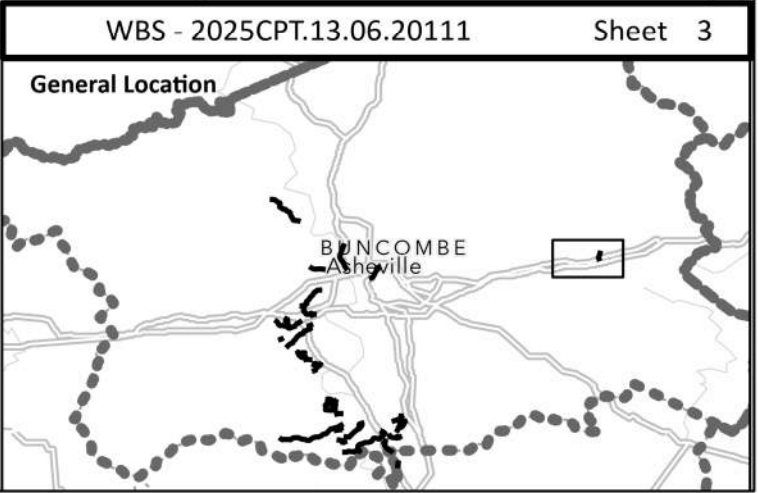


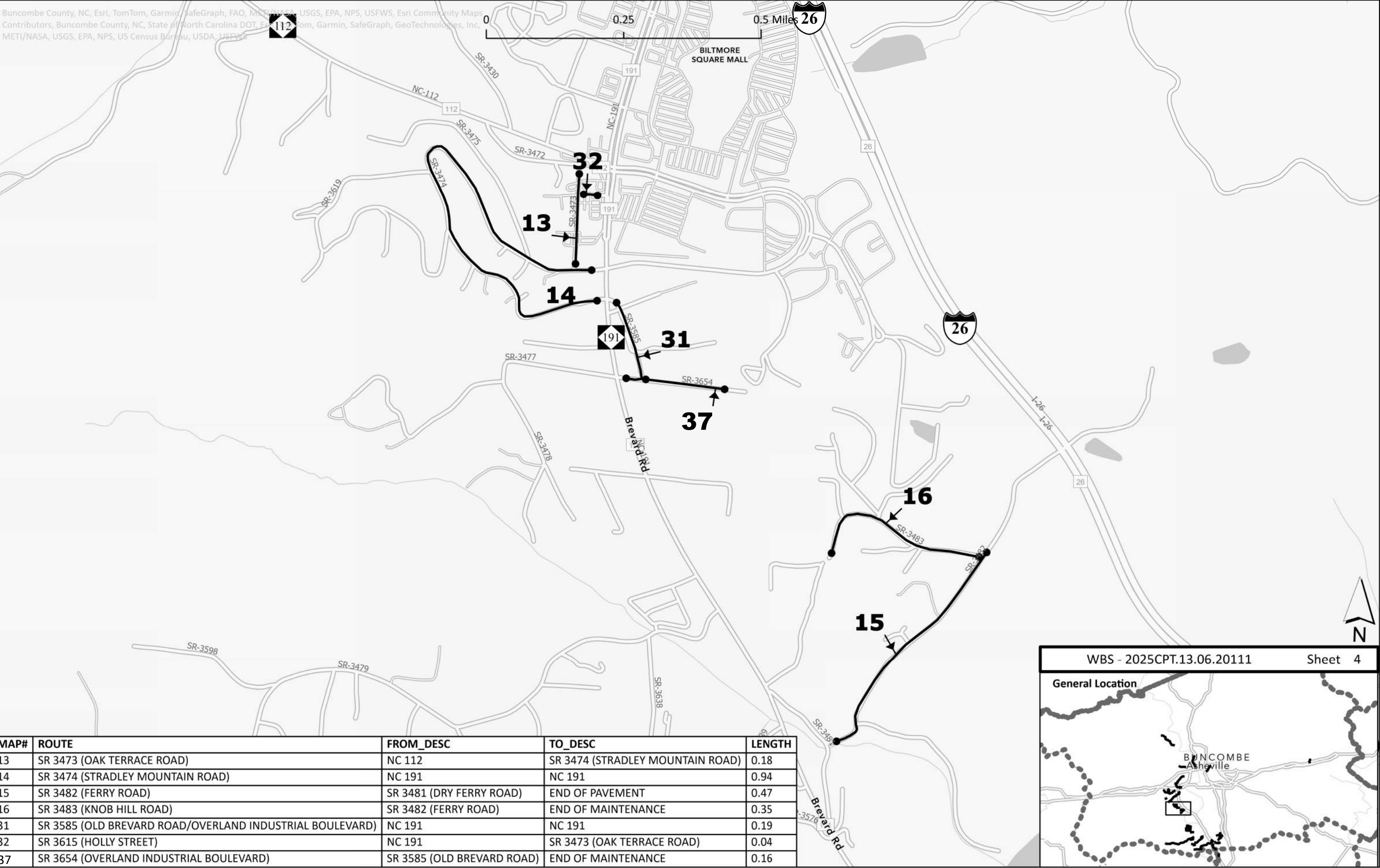
Buncombe County, NC, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS, Esri Community Map Contributors, Buncombe County, NC, State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnology, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

0 0.25 0.5 Miles

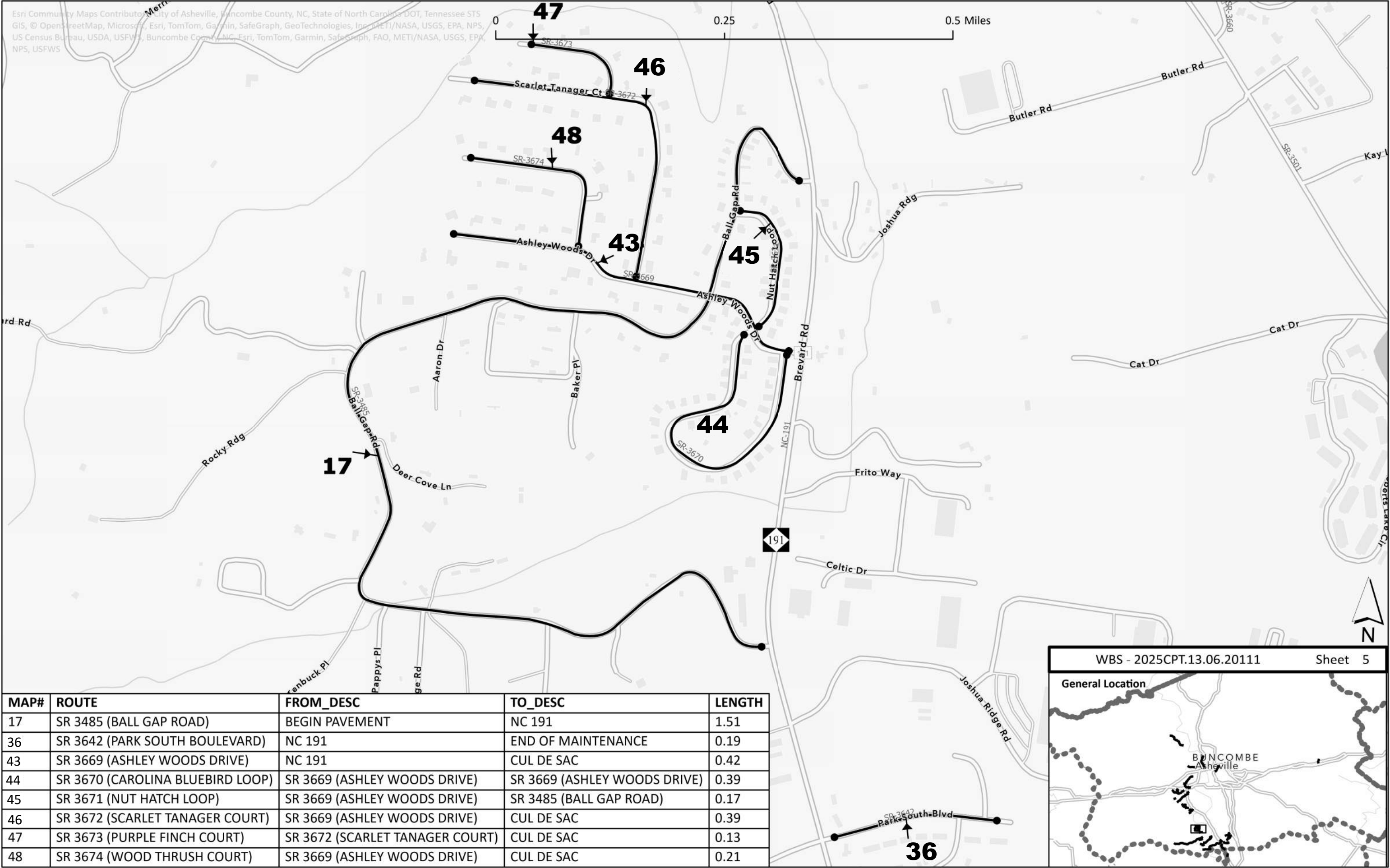


MAP#	ROUTE	FROM_DESC	TO_DESC	LENGTH
6	SR 2472 (GROVESTONE ROAD)	SR 2435 (OLD US 70 WEST)	US 70	0.32

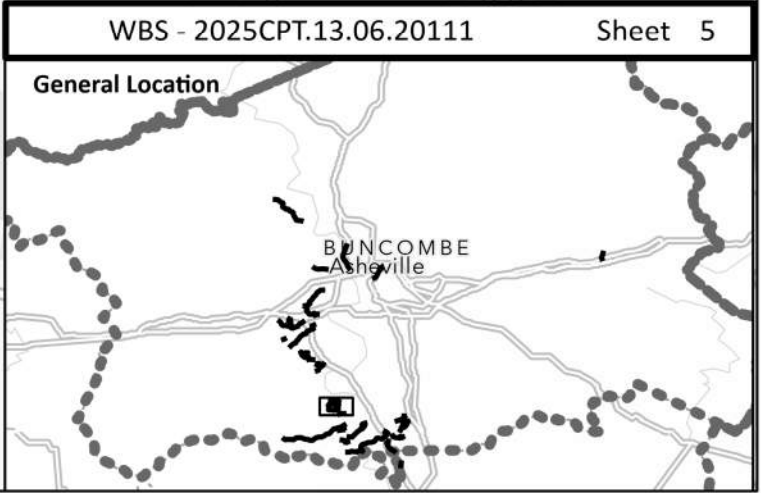




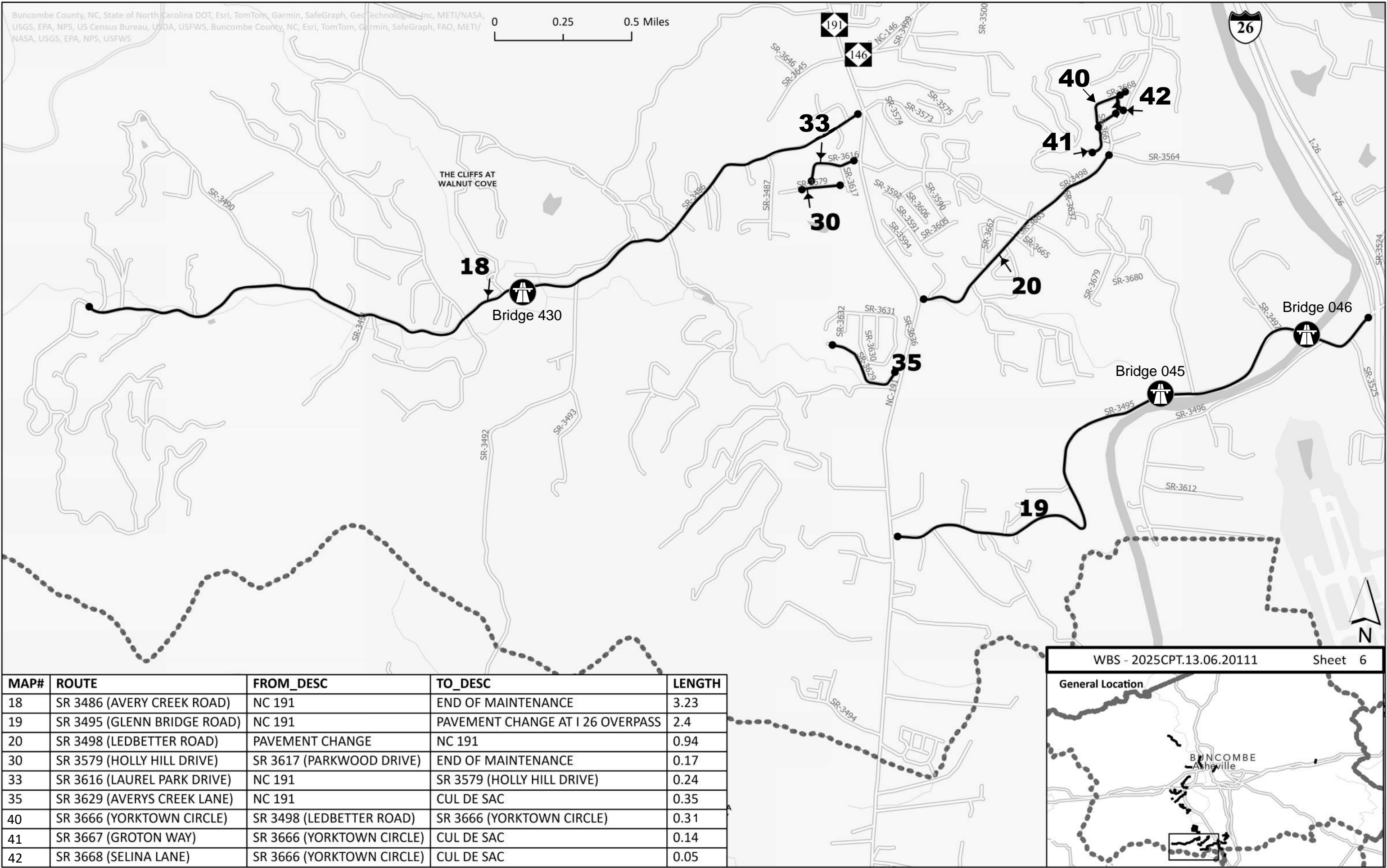
Esri Community Maps Contributor: City of Asheville, Buncombe County, NC, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Buncombe County, NC, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS



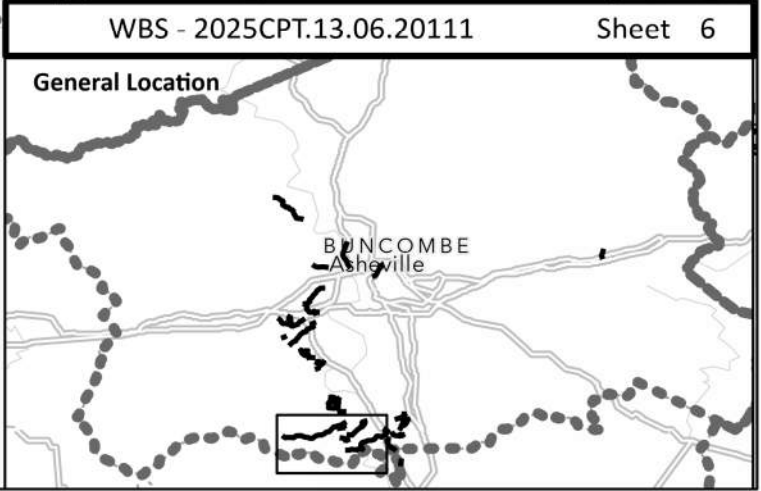
MAP#	ROUTE	FROM_DESC	TO_DESC	LENGTH
17	SR 3485 (BALL GAP ROAD)	BEGIN PAVEMENT	NC 191	1.51
36	SR 3642 (PARK SOUTH BOULEVARD)	NC 191	END OF MAINTENANCE	0.19
43	SR 3669 (ASHLEY WOODS DRIVE)	NC 191	CUL DE SAC	0.42
44	SR 3670 (CAROLINA BLUEBIRD LOOP)	SR 3669 (ASHLEY WOODS DRIVE)	SR 3669 (ASHLEY WOODS DRIVE)	0.39
45	SR 3671 (NUT HATCH LOOP)	SR 3669 (ASHLEY WOODS DRIVE)	SR 3485 (BALL GAP ROAD)	0.17
46	SR 3672 (SCARLET TANAGER COURT)	SR 3669 (ASHLEY WOODS DRIVE)	CUL DE SAC	0.39
47	SR 3673 (PURPLE FINCH COURT)	SR 3672 (SCARLET TANAGER COURT)	CUL DE SAC	0.13
48	SR 3674 (WOOD THRUSH COURT)	SR 3669 (ASHLEY WOODS DRIVE)	CUL DE SAC	0.21

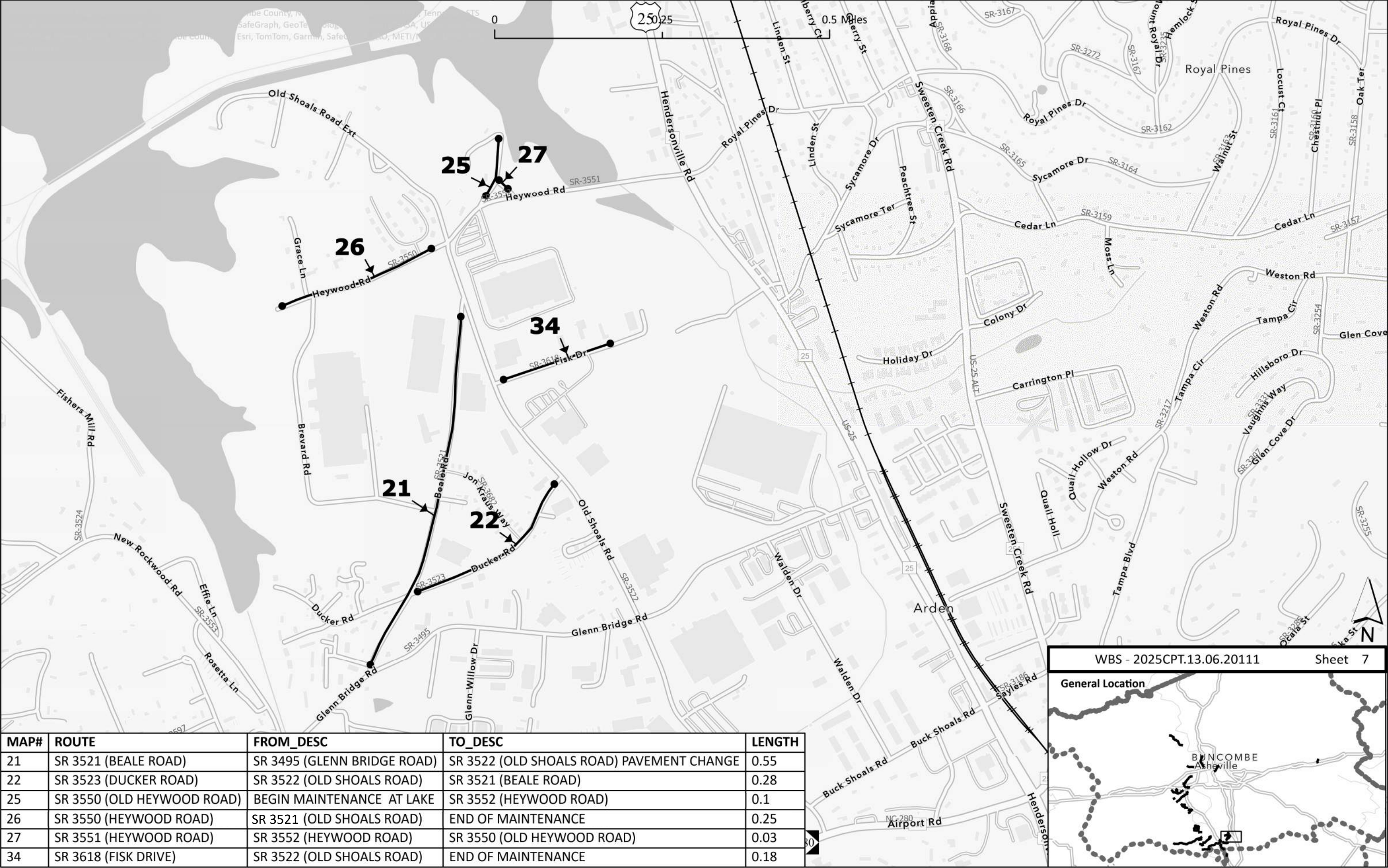


0 0.25 0.5 Miles

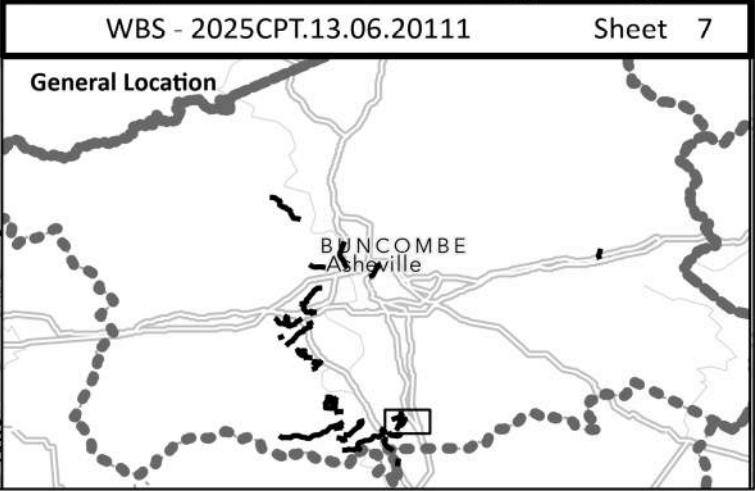


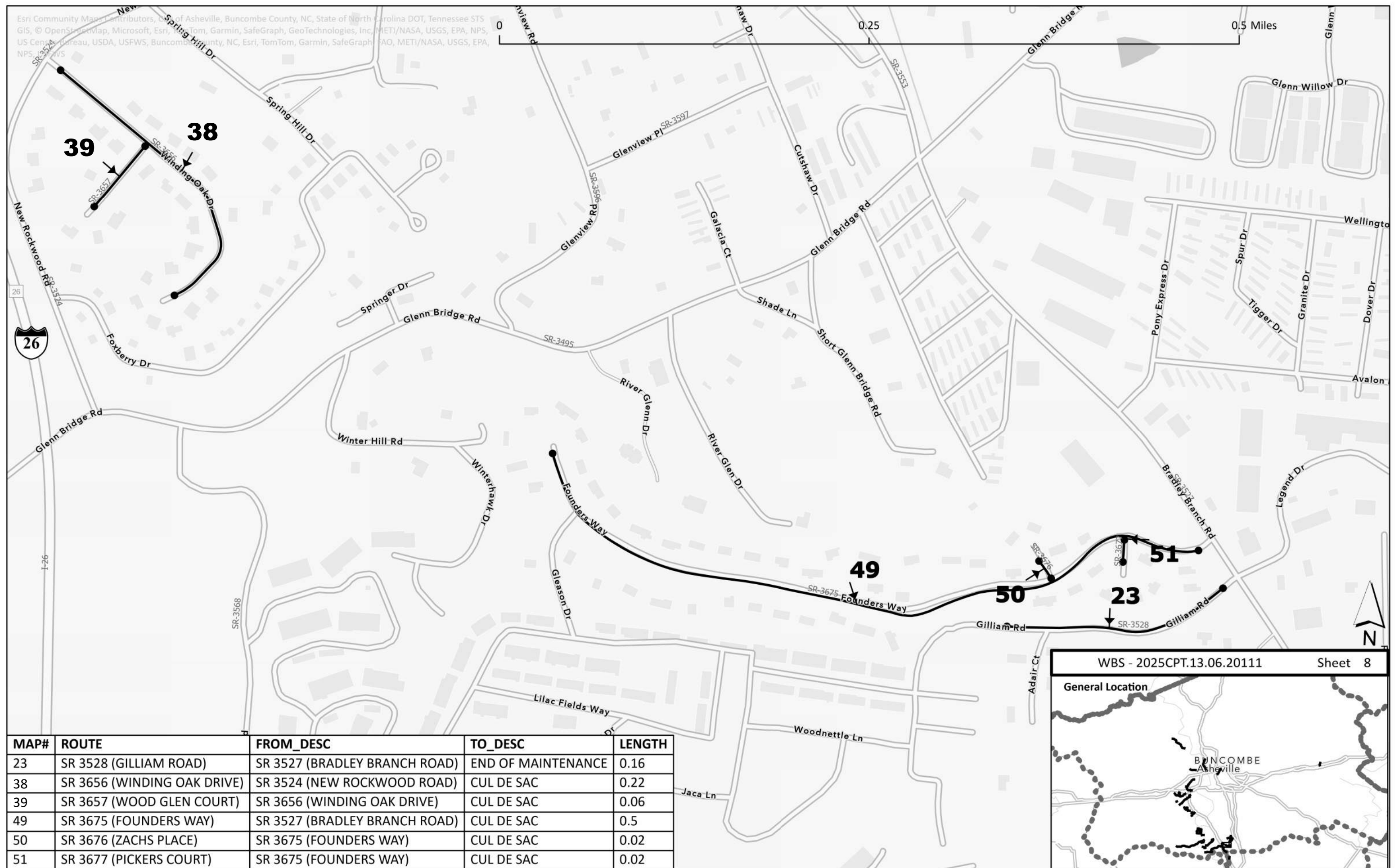
MAP#	ROUTE	FROM_DESC	TO_DESC	LENGTH
18	SR 3486 (AVERY CREEK ROAD)	NC 191	END OF MAINTENANCE	3.23
19	SR 3495 (GLENN BRIDGE ROAD)	NC 191	PAVEMENT CHANGE AT I 26 OVERPASS	2.4
20	SR 3498 (LEDBETTER ROAD)	PAVEMENT CHANGE	NC 191	0.94
30	SR 3579 (HOLLY HILL DRIVE)	SR 3617 (PARKWOOD DRIVE)	END OF MAINTENANCE	0.17
33	SR 3616 (LAUREL PARK DRIVE)	NC 191	SR 3579 (HOLLY HILL DRIVE)	0.24
35	SR 3629 (AVERYS CREEK LANE)	NC 191	CUL DE SAC	0.35
40	SR 3666 (YORKTOWN CIRCLE)	SR 3498 (LEDBETTER ROAD)	SR 3666 (YORKTOWN CIRCLE)	0.31
41	SR 3667 (GROTON WAY)	SR 3666 (YORKTOWN CIRCLE)	CUL DE SAC	0.14
42	SR 3668 (SELINA LANE)	SR 3666 (YORKTOWN CIRCLE)	CUL DE SAC	0.05

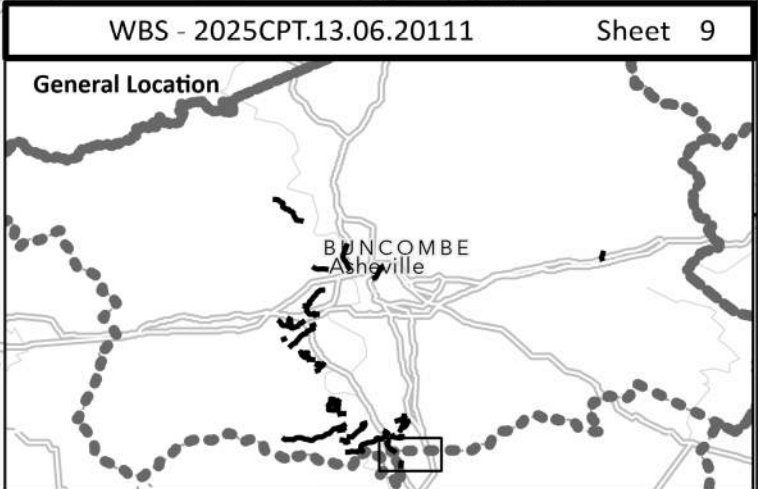




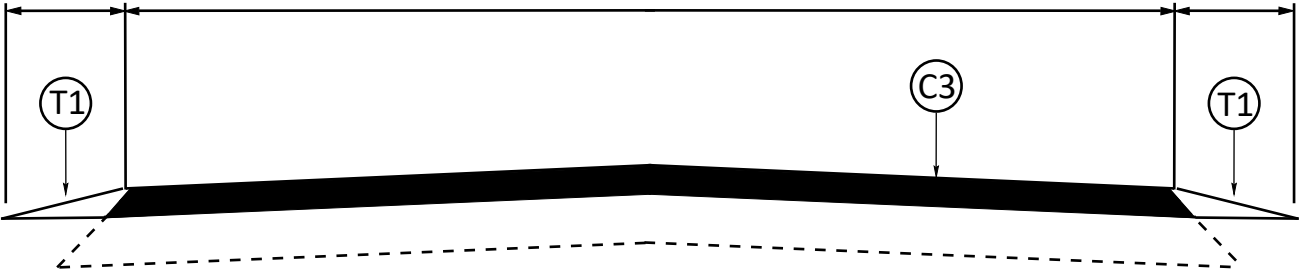
MAP#	ROUTE	FROM_DESC	TO_DESC	LENGTH
21	SR 3521 (BEALE ROAD)	SR 3495 (GLENN BRIDGE ROAD)	SR 3522 (OLD SHOALS ROAD) PAVEMENT CHANGE	0.55
22	SR 3523 (DUCKER ROAD)	SR 3522 (OLD SHOALS ROAD)	SR 3521 (BEALE ROAD)	0.28
25	SR 3550 (OLD HEYWOOD ROAD)	BEGIN MAINTENANCE AT LAKE	SR 3552 (HEYWOOD ROAD)	0.1
26	SR 3550 (HEYWOOD ROAD)	SR 3521 (OLD SHOALS ROAD)	END OF MAINTENANCE	0.25
27	SR 3551 (HEYWOOD ROAD)	SR 3552 (HEYWOOD ROAD)	SR 3550 (OLD HEYWOOD ROAD)	0.03
34	SR 3618 (FISK DRIVE)	SR 3522 (OLD SHOALS ROAD)	END OF MAINTENANCE	0.18



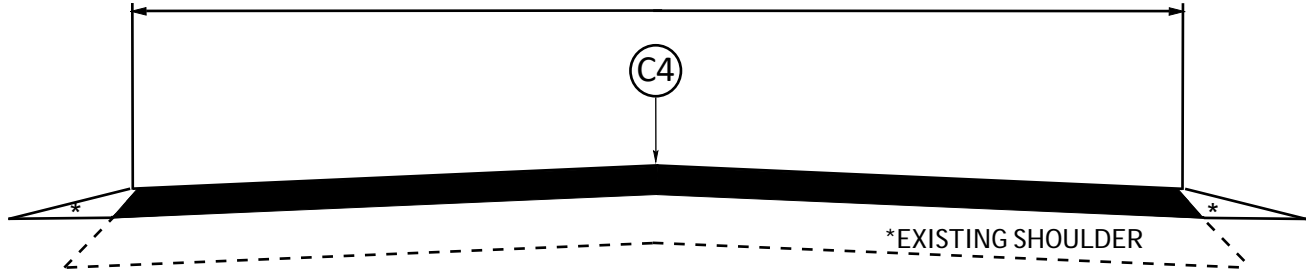




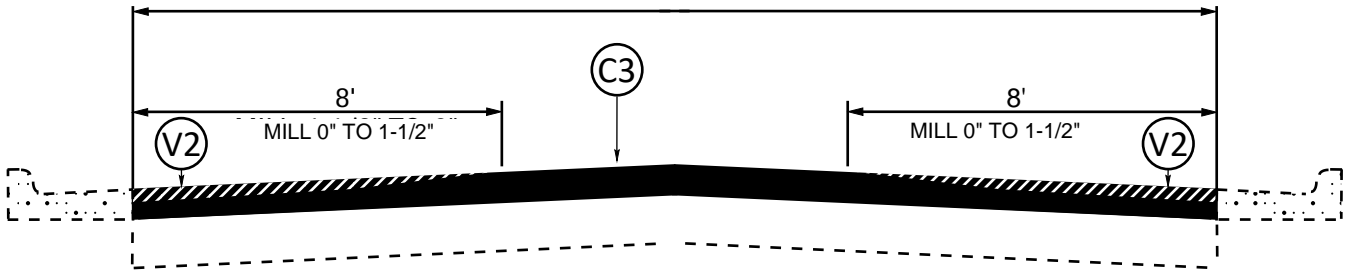
MAP#	ROUTE	FROM_DESC	TO_DESC	LENGTH
24	SR 3540 (UNDERWOOD ROAD)	PINEY DRIVE(PRIVATE) - 05 MILE	SR 3539 (FANNING BRIDGE ROAD)	0.15
29	SR 3568 (ROCKWOOD ROAD)	HENDERSON COUNTY LINE	+05 MI. FROM FLYCATCHER WAY INTERSECTION	0.76



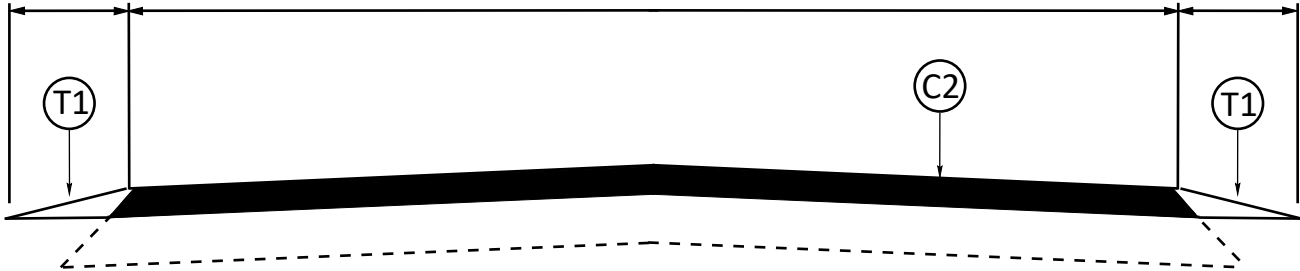
TYPICAL SECTION #1



TYPICAL SECTION #2

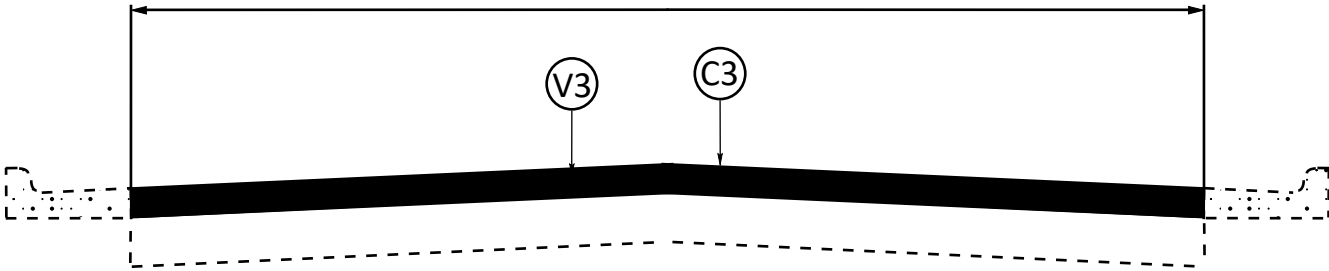


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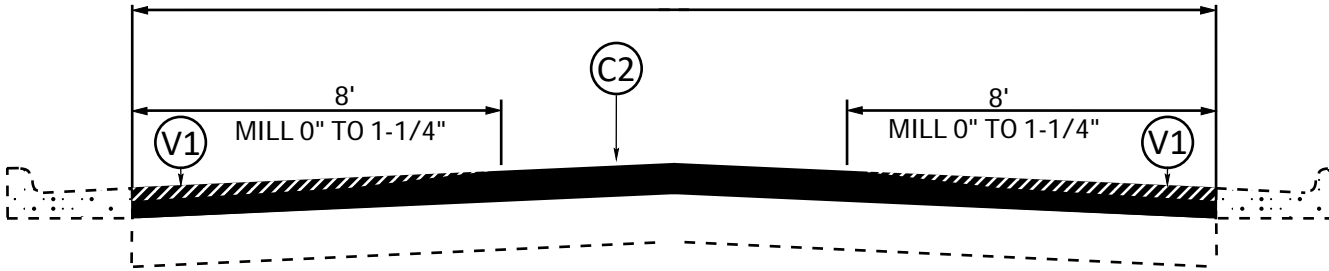


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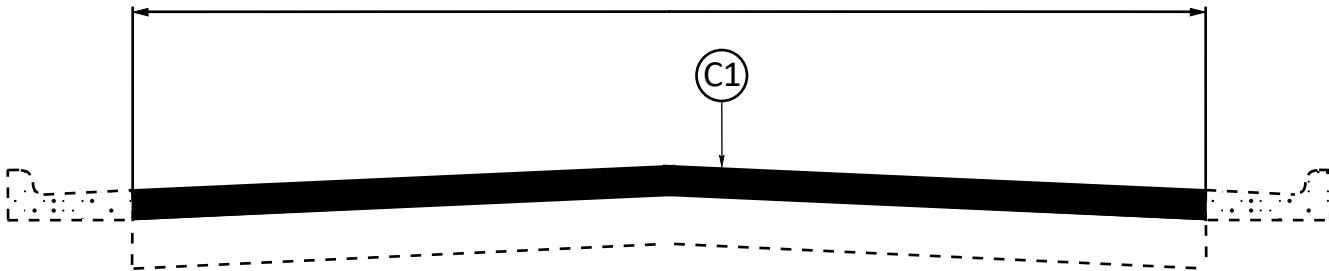
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.50 LBS. PER SQ. YARD
C3	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
C4	PATCHING ONLY
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 0 TO 1-1/4" DEPTH
V2	MILLING ASPHALT PAVEMENT, 0 TO 1-1/2" DEPTH
V3	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH
V4	INCIDENTAL MILLING



TYPICAL SECTION #5

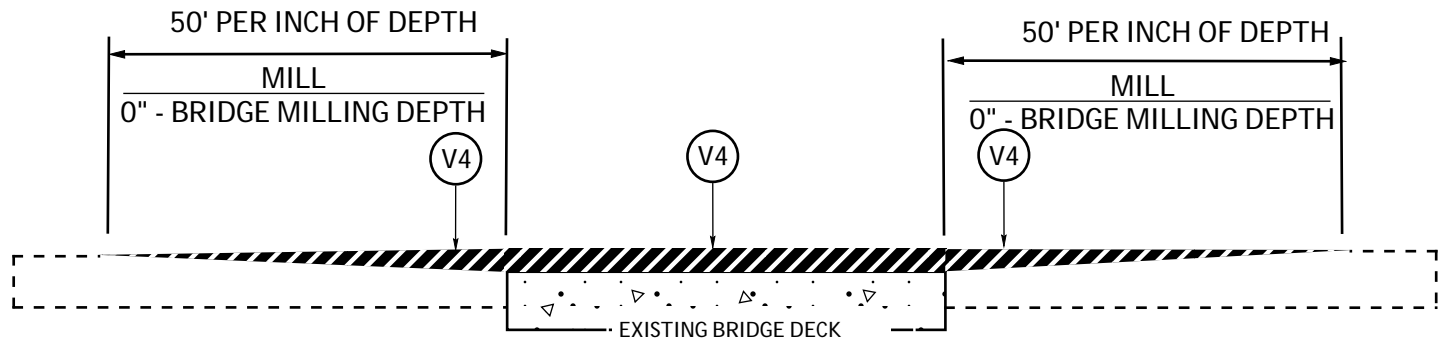


TYPICAL SECTION #6



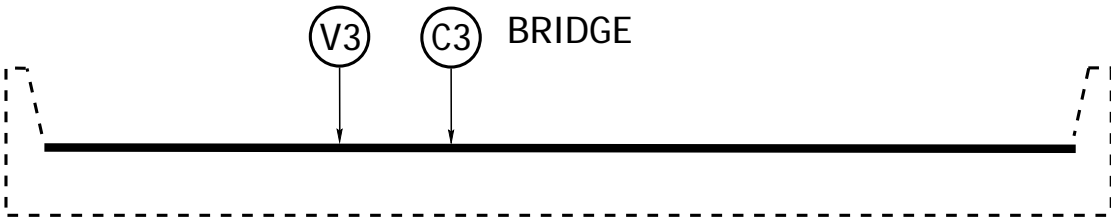
TYPICAL SECTION #7

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.50 LBS. PER SQ. YARD
C3	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
C4	PATCHING ONLY
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 0 TO 1-1/4" DEPTH
V2	MILLING ASPHALT PAVEMENT, 0 TO 1-1/2" DEPTH
V3	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH
V4	INCIDENTAL MILLING



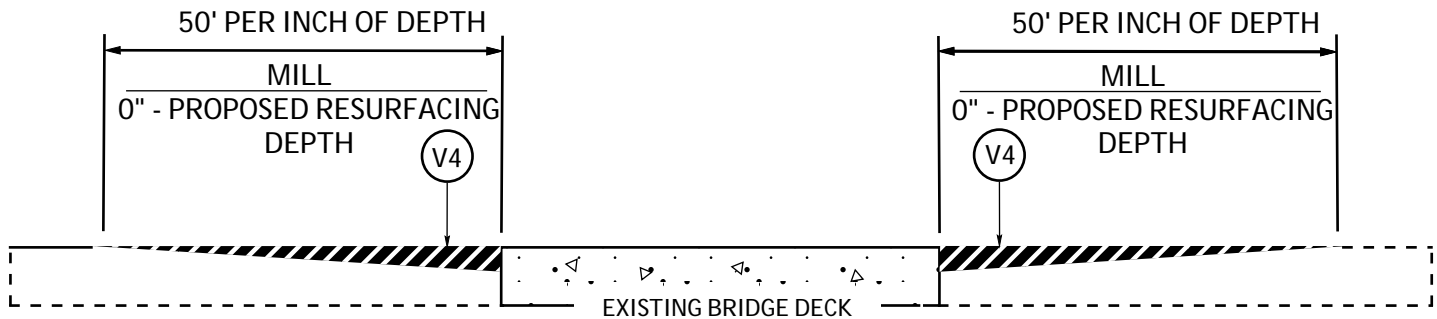
MILLING DETAIL AT BRIDGE APPROACHES

WHERE BRIDGES WILL BE MILLED THEN RESURFACED.
THIS WILL BE PAID FOR AS INCIDENTAL MILLING.
USE AT BRIDGE NUMBER: 511 MAP 9, 182 MAP 9,
364 MAP 11, 365 MAP 11, 050 MAP 11
051 MAP 11, AND 430 MAP 18.



BRIDGE DETAIL

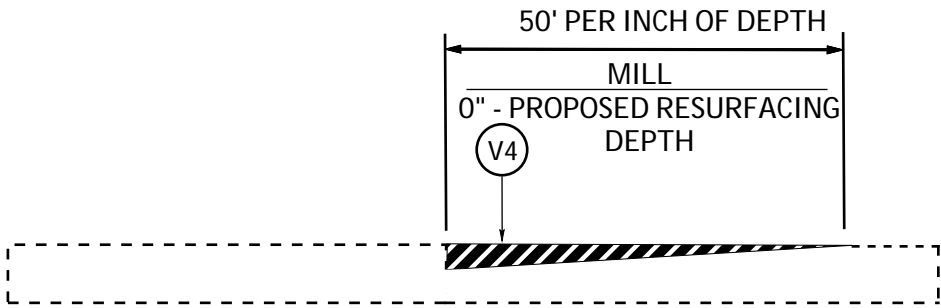
MINIMUM LIFT THICKNESS FOR S9.5C MIX IS 1.5".
MAXIMUM LIFT THICKNESS FOR S9.5C IS 2.0", ANY LIFT
THICKNESS OVER THE MAXIMUM LIFT THICKNESS SHALL BE
PLACED IN MULTIPLE LAYERS.BRIDGE NUMBER511 MAP 9,
182 MAP 9, 364 MAP 11, 365 MAP 11, 050 MAP 11
051 MAP 11, AND 430 MAP 18
SEE MAP FOR BRIDGE LOCATION.



MILLING DETAIL AT BRIDGE APPROACHES

WHERE BRIDGES WILL NOT BE RESURFACED.
THIS WILL BE PAID FOR AS INCIDENTAL MILLING.
USE AT BRIDGE NUMBER: 364 MAP 19.

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.50 LBS. PER SQ. YARD
C3	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
C4	PATCHING ONLY
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 0 TO 1-1/4" DEPTH
V2	MILLING ASPHALT PAVEMENT, 0 TO 1-1/2" DEPTH
V3	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH
V4	INCIDENTAL MILLING



MILLING DETAIL TO TIE INTO EXIST PAVEMENT

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT HE WILL BE REQUIRED TO MILL THE EXISTING ASPHALT PAVEMENT TO ENSURE A PROPER TIE-IN WITH THE EXISTING SURFACE AT THE BEGINNING, END AND Y LINES OF EACH MAP TO BE RESURFACED WITH ASPHALT CONC SURFACE COURSE, TYPE 9.5B OR S9.5C. THIS WILL BE PAID FOR AS INCIDENTAL MILLING.

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1" ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.50 LBS. PER SQ. YARD
C3	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
C4	PATCHING ONLY
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 0 TO 1-1/4" DEPTH
V2	MILLING ASPHALT PAVEMENT, 0 TO 1-1/2" DEPTH
V3	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH
V4	INCIDENTAL MILLING



THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. THE MINIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: \$4.75A 12", \$9.5B 1", \$9.5C,D 1.5" – 2". ULTRA-THIN HOT MIX ASPHALT – TYPE A 3/4". ULTRA-THIN HOT MIX ASPHALT – TYPE B 5/8". ULTRA-THIN HOT MIX ASPHALT – TYPE C 12". THE MAXIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: \$4.75A 1", \$9.5B 1.5", \$9.5C,D 2". ULTRA-THIN HOT MIX ASPHALT – TYPE A 3/4", ULTRA-THIN HOT MIX ASPHALT – TYPE B 5/8", ULTRA-THIN HOT MIX ASPHALT HOT MIX ASPHALT – TYPE C 12".

ALL UNPAVED ROADS TO BE RESURFACED 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.

SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE INDICATED.

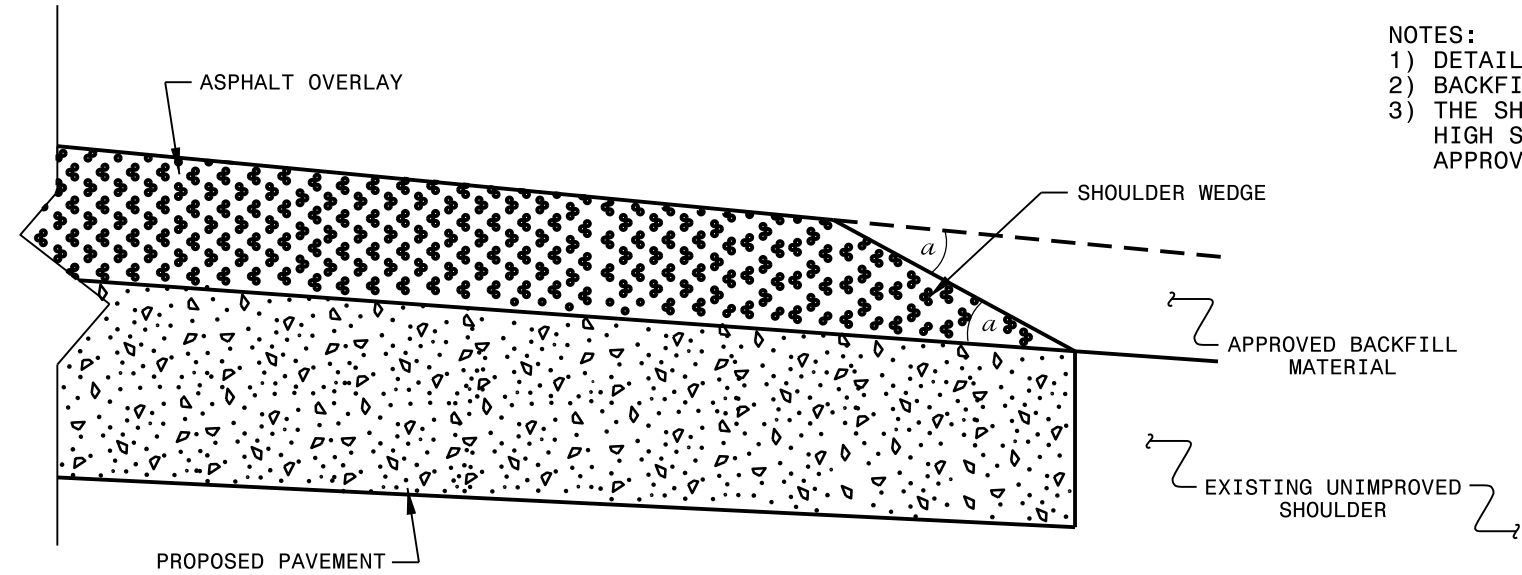
Diagram illustrating a pavement transition. The diagram shows a cross-section of a road surface. On the left, a dashed line indicates the boundary of the "EXISTING PAVEMENT". To the right of this boundary, the pavement surface is shown with a wavy, irregular profile. A horizontal dimension line above this section is labeled "LENGTH & WIDTH VARIES". Below the pavement profile, a note states: "RATE IS VARIABLE AND SHALL BE AS DIRECTED BY THE ENGINEER".

Diagram illustrating the installation of ACBC or ASCS (Asphalt Concrete Base Course or Asphalt Concrete Surface Course) as directed by the engineer. The diagram shows a cross-section of the road structure with the following components and labels:

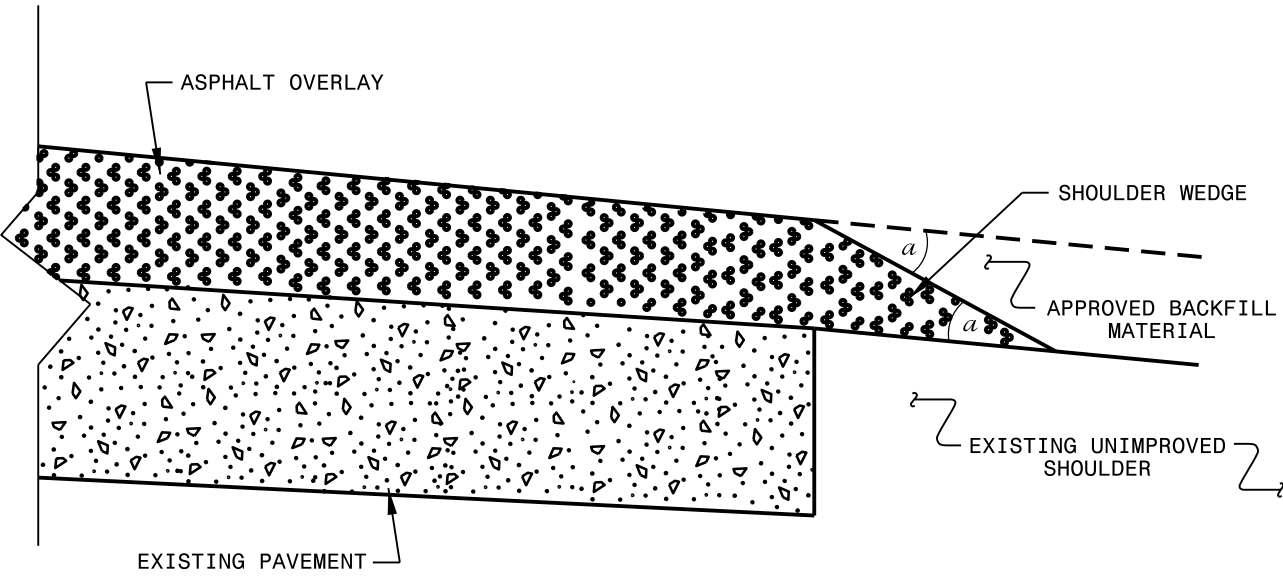
- LENGTH, WIDTH & DEPTH VARIES AS DIRECTED BY THE ENGINEER**: A rectangular area above the main installation, indicating that the dimensions of the ACBC or ASCS layer can vary based on engineering requirements.
- EXISTING**: A label on the left side, indicating the existing road structure.
- PAVEMENT**: A label on the right side, indicating the existing pavement structure.
- ACBC OR ASCS AS DIRECTED BY THE ENGINEER**: A label pointing to the central shaded area, indicating the material to be installed.

PATCHING EXISTING PAVEMENT

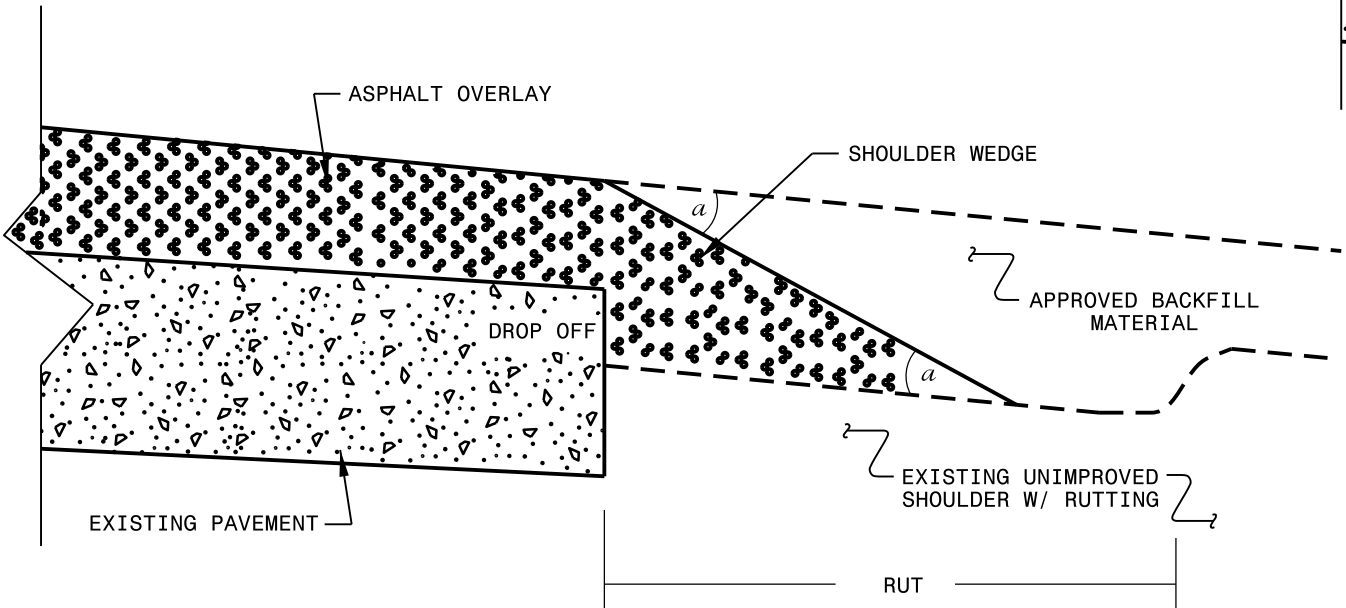
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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)

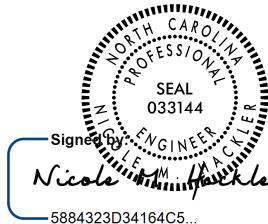
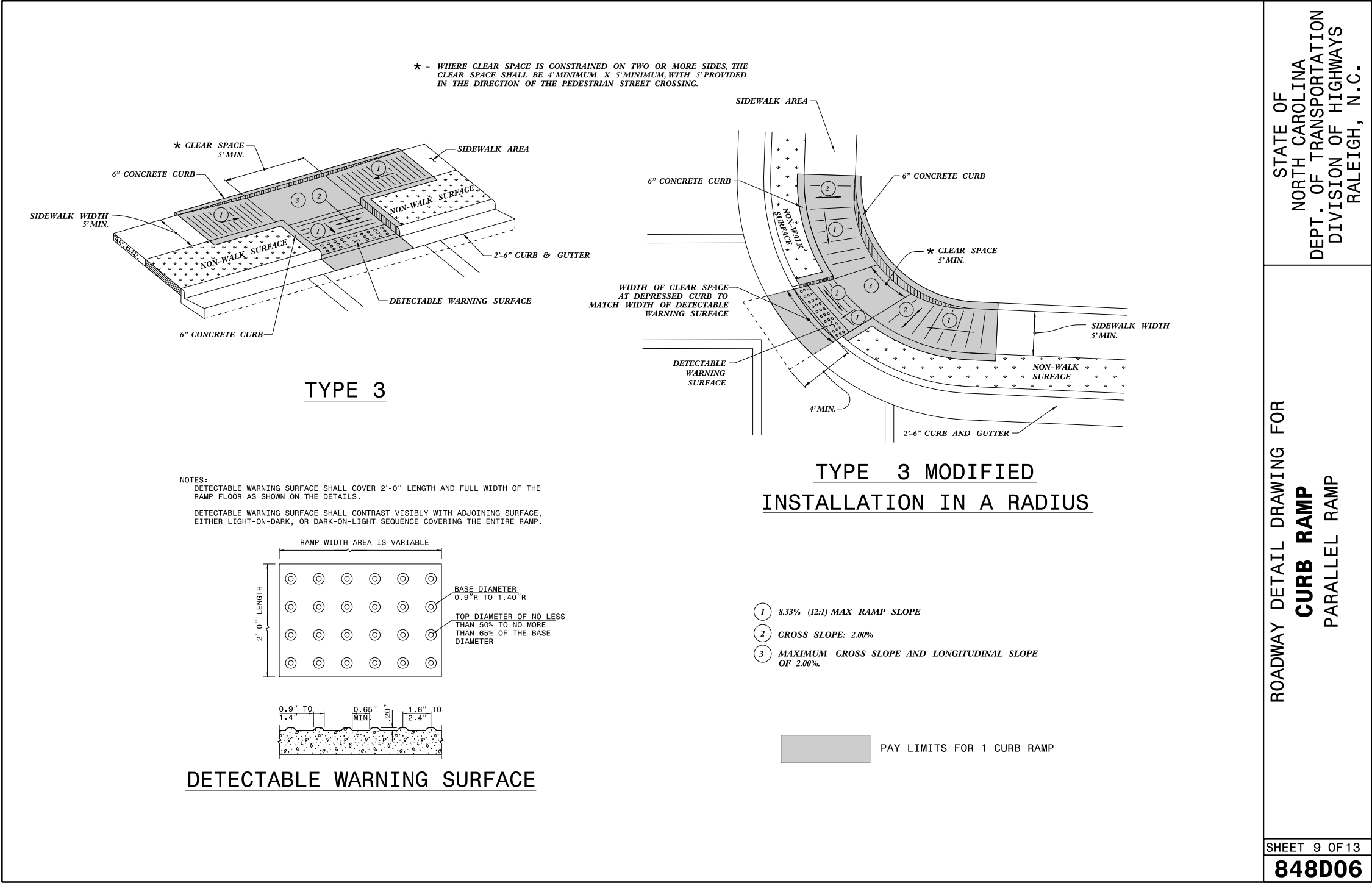
- SHOULDER WEDGE ANGLE = 30°

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.:	s:\usr\details\stand\shoulderwedgedetail.dgn		

22 JAN-2018 09:41
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P:\porter - RI\USD-2018-02-28

BRIDGE DATA

Map No.	Route No.	Route Name	Bridge No.	Posted SV	Posted TSS	Recommended Treatment, From Bridge Maintenance
9	SR 3413	SOUTH BEAR CREEK ROAD	511			MILL AND FILL
9	SR 3413	SOUTH BEAR CREEK ROAD	182			MILL AND FILL
11	SR 3431	POND ROAD	364			MILL AND FILL
11	SR 3431	POND ROAD	365			MILL AND FILL
11	SR 3431	POND ROAD	050			MILL AND FILL
11	SR 3431	POND ROAD	051			MILL AND FILL
18	SR 3486	AVERYS CREEK ROAD	430			MILL AND FILL
19	SR 3495	GLENN BRIDGE ROAD	364			DO NOT PAVE



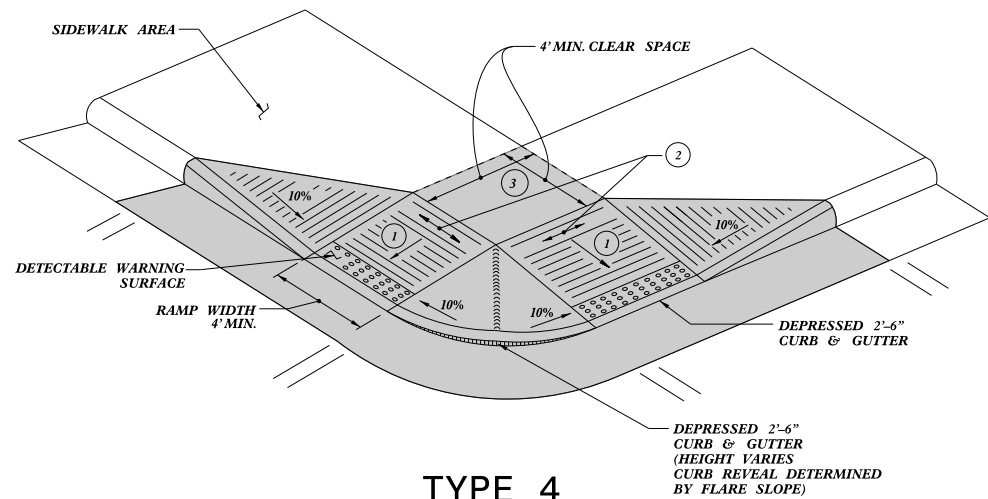
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UNLESS ALL SIGNATURES COMPLETED

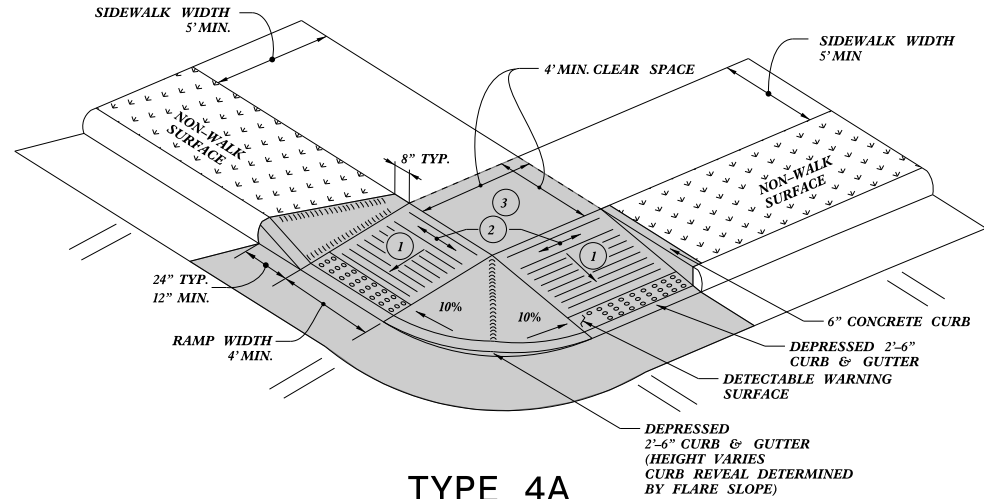
CONTRACTS STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

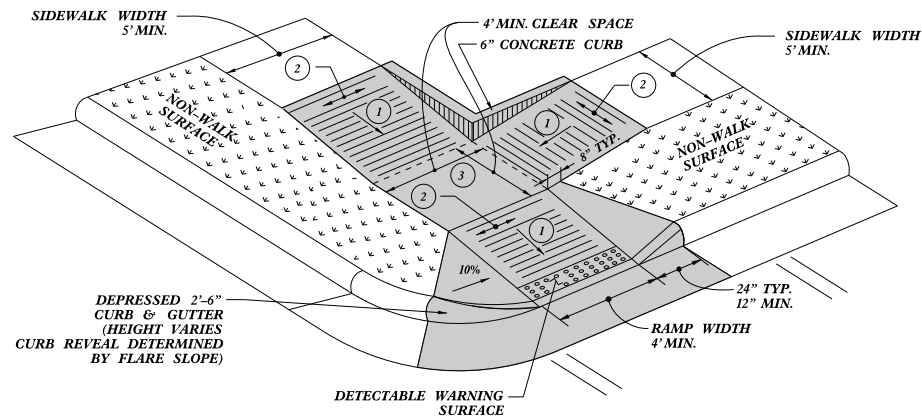
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MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: special_details\nmhackler\0609.dgn



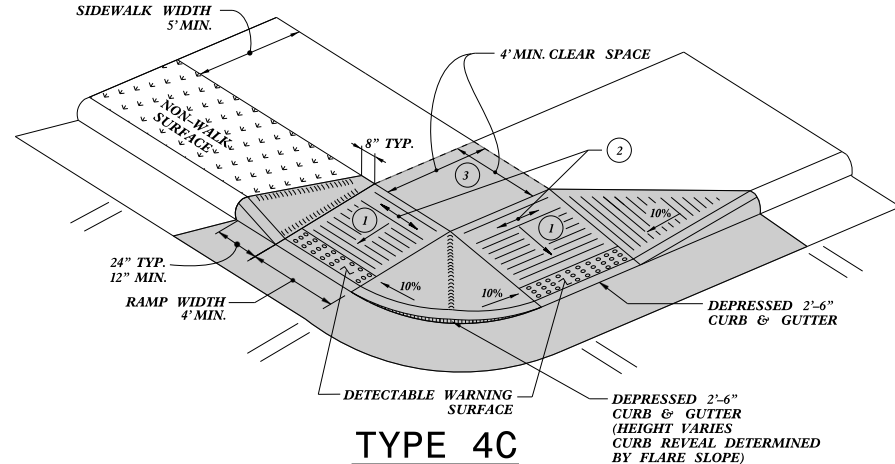
TYPE 4



TYPE 4A

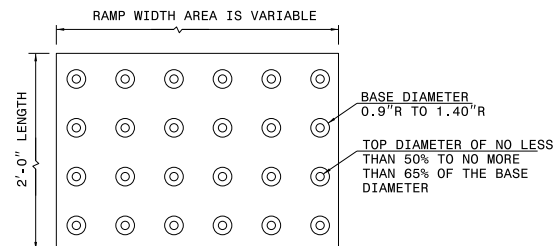


TYPE 4B

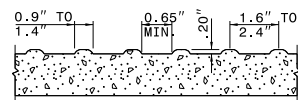


TYPE 4C

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE



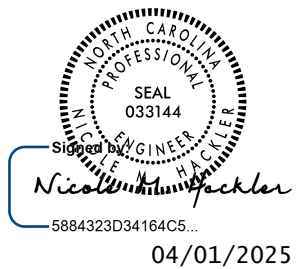
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES)

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CURB RAMP
SHARED LANDING

SHEET 10 OF 13
848D06



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: special_details\nmhackler\848D0610.dgn

PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.13.06.20111	20	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEG	END	1220000000-E	1245000000-E	1260000000-E	1297000000-E	1308000000-E	1330000000-E	1519000000-E	1520000000-E	1523000000-E	1524000000-E	1526000000-E	1575000000-E	1704000000-E	
										N	M	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTI ON	AGGREGATE SHOULDER BORROW	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH	MILLING ASPHALT PAVEMENT, 0" TO 1-1/2"	MILLING ASPHALT PAVEMENT, 0" TO 11/4" DEPTH	INCIDENTAL MILLING	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	LEVELING COURSE, TYPE S9.5B	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	LEVELING COURSE, TYPE S9.5C	ASPHALT CONC SURFACE COURSE, TYPE S4.75A	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT
								MI	FT			TON	SMI	TON	SY	SY	SY	SY	TON	TONS	TON	TONS	TON	TON	TON
2025CPT.13.06.20111	Buncombe	1	SR 1224 (WEST OAKVIEW ROAD)	FROM BEGIN MAINTENANCE TO SR 3426 (MCINTOSH ROAD)	1	2	2WD	0.4	17	0	0.4	5	0.80	104				364			372			24	40
	Buncombe	2	SR 1224 (WEST OAKVIEW ROAD)	FROM SR 3426 (MCINTOSH ROAD) TO SR 3412 (SAND HILL ROAD)	2	2	2WU	1	18	0.4	1.4	5											19	400	
	Buncombe	3	SR 1338 (EMMA ROAD)	FROM SR 1332 (NORTH LOUISIANA AVENUE) TO SR 1333 (HAZEL MILL ROAD) PAVEMENT JOINT	1	2	2WD	0.5	20	1	1.5	5	2.90	377						610			43	140	
	Buncombe	4	SR 1477 (RIVERSIDE DRIVE)	FROM SR 1517 (HILL STREET) PAVEMENT JOINT TO NC 251 (BROADWAY STREET)	1, 3	2	2WD	1.35	36	0.07	1.42	5	2.56	332		1,039		642			2,598			156	58
	Buncombe	5	SR 1645 (MACEDONIA ROAD)	FROM SR 1641 (JENKINS VALLEY ROAD) TO SR 1367 (OLIVETTE ROAD)	1	2	2WU	1.96	20.5	0.01	1.97	15	3.92	510				692			2,147			137	216
	Buncombe	6	SR 2472 (GROVESTONE ROAD)	FROM SR 2435 (OLD US 70 WEST) TO US 70	1	2	2WU	0.32	26	0.02	0.34	5	0.64	84				694			440			30	85
	Buncombe	7	SR 3284 (SOUTH CHARLOTTE STREET)	FROM US 25 TO US 70	3	2	MU	0.7	60	0.02	0.72	5				6,572		1,525			2,400			145	75
	Buncombe	8	SR 3412 (SAND HILL ROAD)	FROM US 19 TO BEAR CREEK ROAD (CITY STREET)	3	2	2WU	1.32	24	0.02	1.34	6				19,025		500			1,672			103	100
	Buncombe	9	SR 3413 (SOUTH BEAR CREEK ROAD)	FROM NC 191 TO SR 3412 (SAND HILLS ROAD)	1, 3	2	2WU	1.06	20.5	0.02	1.08	5	2.12	275	1,260	630		1,182			1,148			73	115
	Buncombe	10	SR 3416 (GREEN VALLEY ROAD)	FROM SR 3412 (SAND HILL ROAD) TO SR 3554 (GREEN VALLEY COURT)	4	2	2WU	0.18	19	0.01	0.19	5	0.36	47				175	160	10			12	30	
	Buncombe	11	SR 3431 (POND ROAD)	FROM NC 112 TO NC 191	1, 3	2	2WU	1.92	21	0.01	1.93	17	3.15	410	1,354	1,578		1,250			2,056	100		146	400
	Buncombe	12	SR 3434 (REEVES CHAPEL ROAD)	FROM NC 112 TO END OF MAINTENANCE	4	2	2WU	0.04	17	0.01	0.05	5	0.08	12					40				4	20	
	Buncombe	13	SR 3473 (OAK TERRACE ROAD)	FROM NC 112 TO SR 3474 (STRADLEY MOUNTAIN ROAD)	4	2	2WU	0.18	20	0.01	0.19	5	0.30	40				334	165				12	30	
	Buncombe	14	SR 3474 (STRADLEY MOUNTAIN ROAD)	FROM NC 191 TO NC 191	4	2	2WU	0.94	18	0.02	0.96	15	1.88	245					740				53	100	
	Buncombe	15	SR 3482 (FERRY ROAD)	FROM SR 3481 (DRY FERRY ROAD) TO END OF PAVEMENT	4	2	2WU	0.47	18	0.01	0.48	5	0.95	124				170	380				27	50	
	Buncombe	16	SR 3483 (KNOB HILL ROAD)	FROM SR 3482 (FERRY ROAD) TO END OF MAINTENANCE	4	2	2WU	0.35	19	0	0.35	15	0.72	94					300				21	30	
	Buncombe	17	SR 3485 (BALL GAP ROAD)	FROM BEGIN PAVEMENT TO NC 191	1	2	2WU	1.51	20	0.01	1.52	5	3.02	393				350			1,595	30		105	185
	Buncombe	18	SR-3486 (AVERY CREEK ROAD)	FROM NC 191 TO END OF MAINTENANCE	1	2	2WU	3.23	20	1.82	5.05	12	6.46	840				946			3,435			214	240
	Buncombe	19	SR 3495 (GLENN BRIDGE ROAD)	FROM NC 191 TO PAVEMENT CHANGE AT I 26 OVERPASS	1	2	2WU	2.4	22	0.01	2.41	40	4.80	624				1,570			2,521			175	540
	Buncombe	20	SR 3498 (LEDBETTER ROAD)	FROM PAVEMENT CHANGE TO NC 191	1	2	2WU	0.94	20	1.28	2.22	5	1.88	245				1,046			1,057	25		71	150
	Buncombe	21	SR 3521 (BEALE ROAD)	FROM SR 3495 (GLENN BRIDGE ROAD) TO SR 3522 (OLD SHOALS ROAD) PAVEMENT CHANGE	1	2	2WU	0.55	24	0.01	0.56	5	1.10	143				333			713			47	100
	Buncombe	22	SR 3523 (DUCKER ROAD)	FROM SR 3522 (OLD SHOALS ROAD) TO SR 3521 (BEALE ROAD)	4	2	2WU	0.28	19	0.01	0.29	5	0.56	73				222	245				18	50	
	Buncombe	23	SR 3528 (GILLIAM ROAD)	FROM SR 3527 (BRADLEY BRANCH ROAD) TO END OF MAINTENANCE	1	2	2WU	0.16	18	0.01	0.17	5	0.32	42				100			161			11	40
	Buncombe	24	SR 3540 (UNDERWOOD ROAD)	FROM PINEY DRIVE(PRIVATE) - 05 MILE TO SR 3539 (FANNING BRIDGE ROAD)	1	2	2WU	0.15	1	0	0.15	5	0.30	39				604			197	10		17	100
	Buncombe	25	SR 3550 (OLD HEYWOOD ROAD)	FROM BEGIN MAINTENANCE AT LAKE TO SR 3552 (HEYWOOD ROAD)	4	2	2WU	0.1	16	0	0.1	5	0.20	26				134	75				6	20	

PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.13.06.20111	21	

PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.13.06.20111	23	

SUMMARY OF QUANTITIES

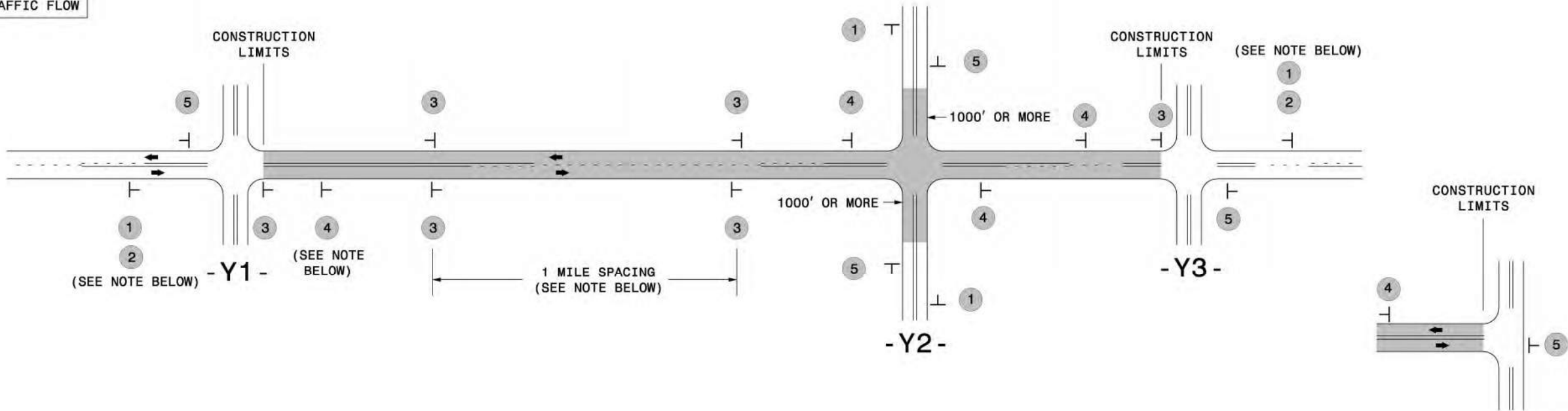
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGI	END	2549000000-E	2591000000-E	2612500000-N	2759000000-N	2800000000-N	2815000000-N	2830000000-N	2845000000-N	2846000000-N	7444000000-E	7456100000-E
										N MP	MP	2'-6" CONCRETE CURB & GUTTER	4" CONCRETE SIDEWALK	REMOVE AND REPLACE CONCRETE CURB RAMPS	REMOVE CURB RAMP	ADJUSTMENT OF CATCH BASINS	ADJUSTMENT OF DROP INLET	ADJUSTMENT OF MANHOLES	ADJUSTMENT OF METER BOXES OR VALVE BOXES	ADJUSTMENT OF OVERSIZED MANHOLES	INDUCTIVE LOOP SAWCUT	LEAD-IN CABLE (14-2)
								MI	FT			LF	SY	EA	EA	EA	EA	EA	EA	EA	LF	LF
2025CPT.13.06.20111	Buncombe	26	SR 3550 (HEYWOOD ROAD)	FROM SR 3521 (OLD SHOALS ROAD) TO END OF MAINTENANCE	1	2	2WU	0.25	24	0.2	0.45											
	Buncombe	27	SR 3551 (HEYWOOD ROAD)	FROM SR 3552 (HEYWOOD ROAD) TO SR 3550 (OLD HEYWOOD ROAD)	4	2	2WU	0.03	16	0.27	0.3											
	Buncombe	28	SR 3554 (GREEN VALLEY ROAD/GREEN VALLEY COURT)	FROM BEGINS AT CULVERT(BOTTOM OF HILL) TO MILE POST. 15	4	2	2WU	0.15	18.5	0	0.15											
	Buncombe	29	SR 3568 (ROCKWOOD ROAD)	FROM HENDERSON COUNTY LINE TO +.05 MI. FROM FLYCATCHER WAY INTERSECTION	1, 3	2	2WU	0.76	22	0	0.76						7					
	Buncombe	30	SR 3579 (HOLLY HILL DRIVE)	FROM SR 3617 (PARKWOOD DRIVE) TO END OF MAINTENANCE	4	2	2WU	0.17	1	0.01	0.18											
	Buncombe	31	SR 3585 (OLD BREVARD ROAD/OVERLAND INDUSTRIAL BOULEVARD)	FROM NC 191 TO NC 191	3, 5	2	2WU	0.19	15	0.01	0.2											
	Buncombe	32	SR 3615 (HOLLY STREET)	FROM NC 191 TO SR 3473 (OAK TERRACE ROAD)	4	2	2WU	0.04	18	0.02	0.06											
	Buncombe	33	SR 3616 (LAUREL PARK DRIVE)	FROM NC 191 TO SR 3579 (HOLLY HILL DRIVE)	4	2	2WU	0.24	21	0.01	0.25											
	Buncombe	34	SR 3618 (FISK DRIVE)	FROM SR 3522 (OLD SHOALS ROAD) TO END OF MAINTENANCE	4	2	2WU	0.18	24	0.01	0.19											
	Buncombe	35	SR 3629 (AVERYS CREEK LANE)	FROM NC 191 TO CUL DE SAC	4, 6	2	2WU	0.35	20.5	0.01	0.36											
	Buncombe	36	SR 3642 (PARK SOUTH BOULEVARD)	FROM NC 191 TO END OF MAINTENANCE	1	2	2WU	0.19	25	0.01	0.2								1		105	20
	Buncombe	37	SR 3654 (OVERLAND INDUSTRIAL BOULEVARD)	FROM SR 3585 (OLD BREVARD ROAD) TO END OF MAINTENANCE	1, 3	2	2WU	0.16	28	0	0.16							5				
	Buncombe	38	SR 3656 (WINDING OAK DRIVE)	FROM SR 3524 (NEW ROCKWOOD ROAD) TO CUL DE SAC	7	2	2WU	0.22	18	0.01	0.23											
	Buncombe	39	SR 3657 (WOOD GLEN COURT)	FROM SR 3656 (WINDING OAK DRIVE) TO CUL DE SAC	7	2	2WU	0.06	18	0	0.06											
	Buncombe	40	SR 3666 (YORKTOWN CIRCLE)	FROM SR 3498 (LEDBETTER ROAD) TO SR 3666 (YORKTOWN CIRCLE)	7	2	2WU	0.31	22	0.01	0.32											
	Buncombe	41	SR 3667 (GROTON WAY)	FROM SR 3666 (YORKTOWN CIRCLE) TO CUL DE SAC	7	2	2WU	0.14	22	0	0.14											
	Buncombe	42	SR 3668 (SELINA LANE)	FROM SR 3666 (YORKTOWN CIRCLE) TO CUL DE SAC	7	2	2WU	0.05	22	0	0.05											
	Buncombe	43	SR 3669 (ASHLEY WOODS DRIVE)	FROM NC 191 TO CUL DE SAC	4, 6	2	2WU	0.42	23	0.01	0.43							13				
	Buncombe	44	SR 3670 (CAROLINA BLUE BIRD LOOP)	FROM SR 3669 (ASHLEY WOODS DRIVE) TO SR 3669 (ASHLEY WOODS DRIVE)	6	2	2WU	0.39	1	0	0.39											
	Buncombe	45	SR 3671 (NUT HATCH LOOP)	FROM SR 3669 (ASHLEY WOODS DRIVE) TO SR 3485 (BALL GAP ROAD)	6	2	2WU	0.17	1	0	0.17							5				
	Buncombe	46	SR 3672 (SCARLET TANAGER COURT)	FROM (SR 3669 (ASHLEY WOODS DRIVE) TO CUL DE SAC	4	2	2WU	0.39	23	0	0.39							13				
	Buncombe	47	SR 3673 (PURPLE FINCH COURT)	FROM SR 3672 (SCARLET TANAGER COURT) TO CUL DE SAC	4	2	2WU	0.13	1	0	0.13							3				
	Buncombe	48	SR 3674 (WOOD THRUSH COURT)	FROM SR 3669 (ASHLEY WOODS DRIVE) TO CUL DE SAC	4	2	2WU	0.21	18	0	0.21							6				
	Buncombe	49	SR 3675 (FOUNDERS WAY)	FROM SR 3527 (BRADLEY BRANCH ROAD) TO CUL DE SAC	4	2	2WU	0.5	18	0.01	0.51							6				
	Buncombe	50	SR 3676 (ZACHS PLACE)	FROM SR 3675 (FOUNDERS WAY) TO CUL DE SAC	4	2	2WU	0.02	21	0	0.02							1	2			
	Buncombe	51	SR 3677 (PICKERS COURT)	FROM SR 3675 (FOUNDERS WAY) TO CUL DE SAC	4	2	2WU	0.02	20	0	0.02											
TOTAL FOR PROJ NO. 2025CPT.13.06.20111							27.75					105	78	24	7	8	10	118	52	9	3,060	850
GRAND TOTAL							27.75					105	78	24	7	8	10	118	52	9	3,060	850

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN





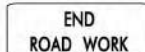
DIRECTION OF TRAFFIC FLOW




TEE INTERSECTION


MAINLINE (-L-) SIGNING

-Y- LINE SIGNING


SIGNING NOTES AND PLACEMENT PER DIRECTION	<div>1</div> <div> W20-1 48" X 48"</div> <div>2</div> <div> W7-3aP 24" X 18"</div> <div>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</div> <div>#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)</div>	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.
	<div>3</div> <div> SP 13107 48" X 48"</div> <div>- 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.</div>	
	<div>4</div> <div> SP 13106 48" X 48"</div> <div>- 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.</div>	
	<div>5</div> <div> G20-2 A 48" X 24"</div> <div>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.</div>	
	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.	
LESS 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.	


W20-1
48" X 48"

PLACED 500' IN ADVANCE
OF FLAGGER.


W20-7 A
48" X 48"

PLACED 250' IN ADVANCE
OF FLAGGER.

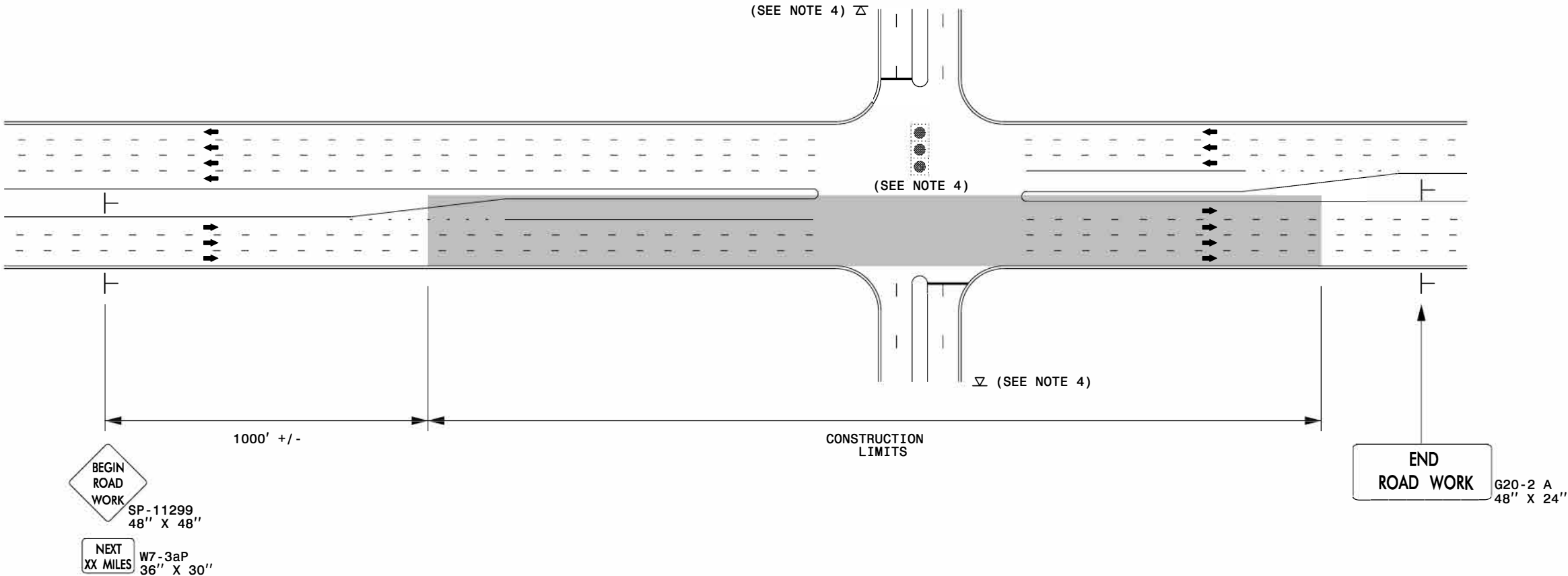


AD



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

URBAN / SUBURBAN WORKZONES



NOTES:

- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS.THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND

STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW

DIVISION OF HIGHWAYS

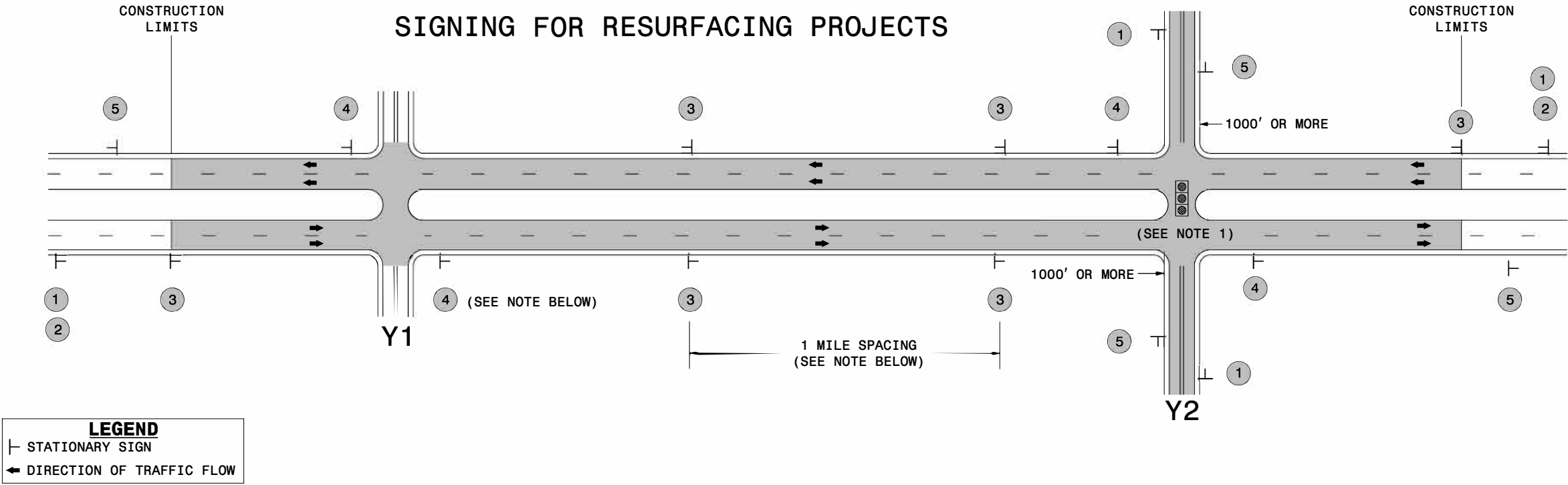
STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

WORK ZONE TRAFFIC CONTROL

RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

3/23/2015
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MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

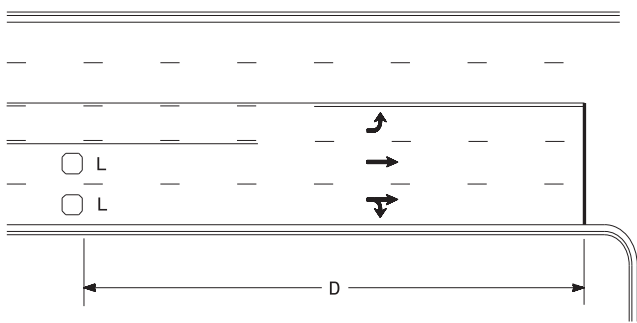
SIGNING NOTES AND PLACEMENT PER DIRECTION	<div>1</div> <div>2</div> <div><div>ROAD WORK AHEAD</div><div>W20-1 48" X 48"</div><div>NEXT XX MILES</div><div>W7-3aP 24" X 18"</div></div> <div>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</div> <div>#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)</div>	<div>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</div> <div>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</div> <div>2) SUBDIVISION ROADS</div> <div>3) DEAD END ROADS</div> <div>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.</div> <div><div>ROAD WORK AHEAD</div><div>W20-1 48" X 48"</div><div>PLACED 500' IN ADVANCE OF FLAGGER.</div><div><div>ROAD WORK AHEAD</div><div>W20-7 A 48" X 48"</div><div>PLACED 250' IN ADVANCE OF FLAGGER.</div></div><div>NOTES:</div><div>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.</div></div>
	<div>3</div> <div><div>LOW/SOFT SHOULDER</div><div>SP 13107 48" X 48"</div></div> <div>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.</div>	
	<div>4</div> <div><div>ROAD UNDER CONST</div><div>SP 13106 48" X 48"</div></div> <div>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.</div>	
	<div>5</div> <div><div>END ROAD WORK</div><div>G20-2 A 48" X 24"</div></div> <div>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</div>	



RESURFACING
ADVANCE WARNING SIGNS
FOR RURAL AND SUBURBAN
MULTI-LANE ROADWAYS
W/ SHOULDER SECTIONS

High Speed Detection

(≥40 mph)

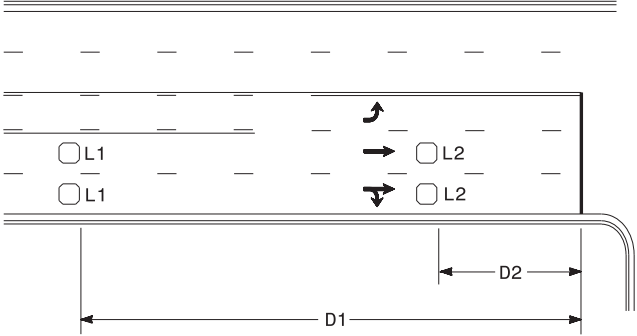


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



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

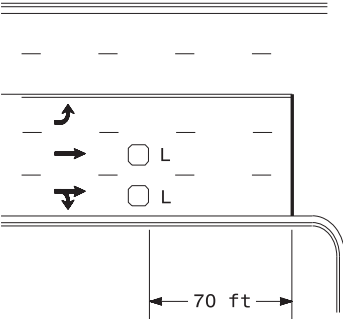
L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

"Stretch" Operation

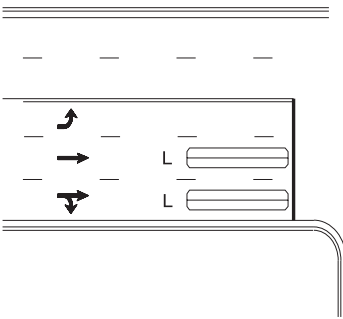
Low Speed Detection

(≤35 mph)



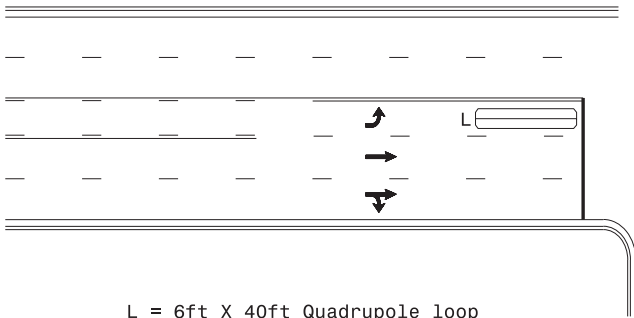
L = 6ft X 6ft
Wired in series

OR



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

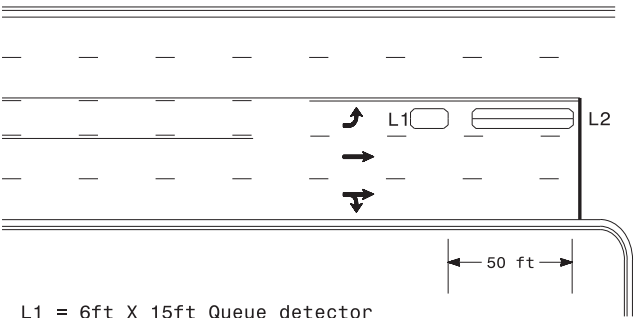
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

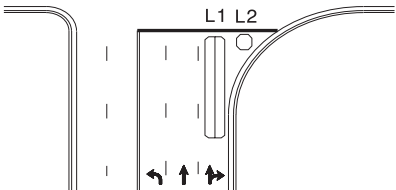
OR



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

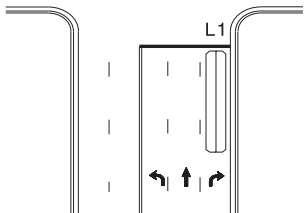
Queue Loop Detection

Right Turn Lane Detection

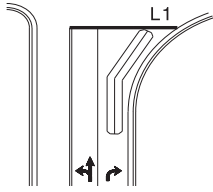


Shared Lane/
Wide Radius Turn

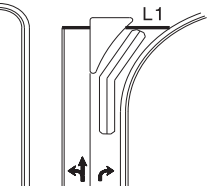
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

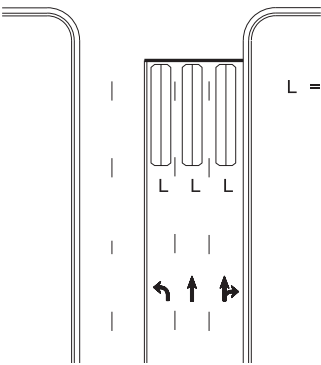


Wide Radius Turn



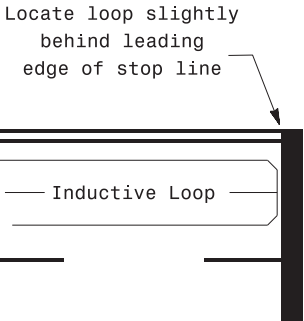
Channelized Turn

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
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N. Greenfield Pkwy, Garner, NC 27529

Typical Signal Loop Locations

PLAN DATE: September 2020
REVIEWED BY: JPG
PREPARED BY: PLA
REVIEWED BY:
SCALE: N/A
REVISIONS:
INIT.:
DATE:

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
029904
JASON P. GALLOWAY
9/8/2020
DATE
SIG. INVENTORY NO.