

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	1	
F.A. PROJECT NO.			

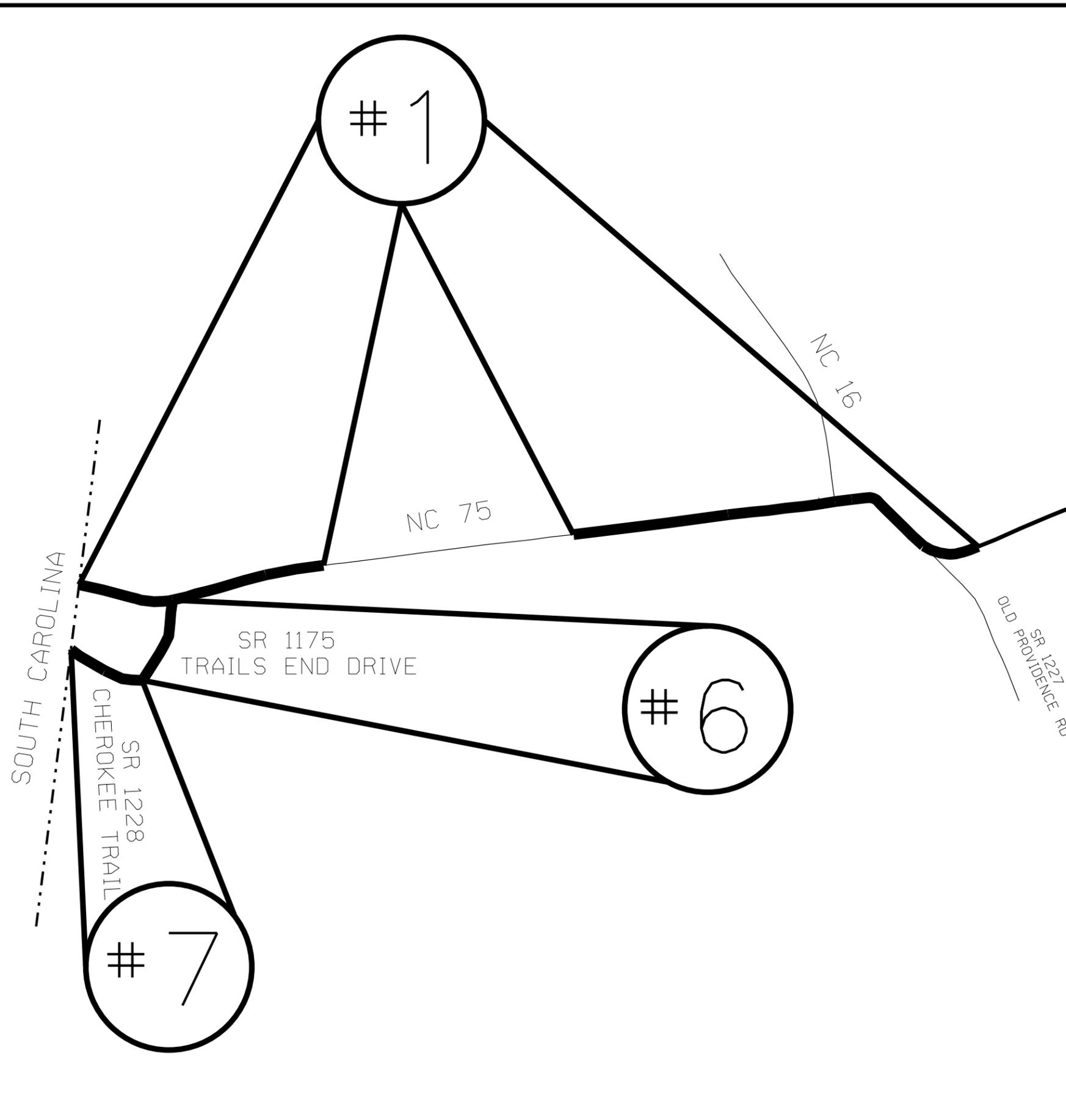


ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
 NORTH CAROLINA
PREPARED BY THE
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

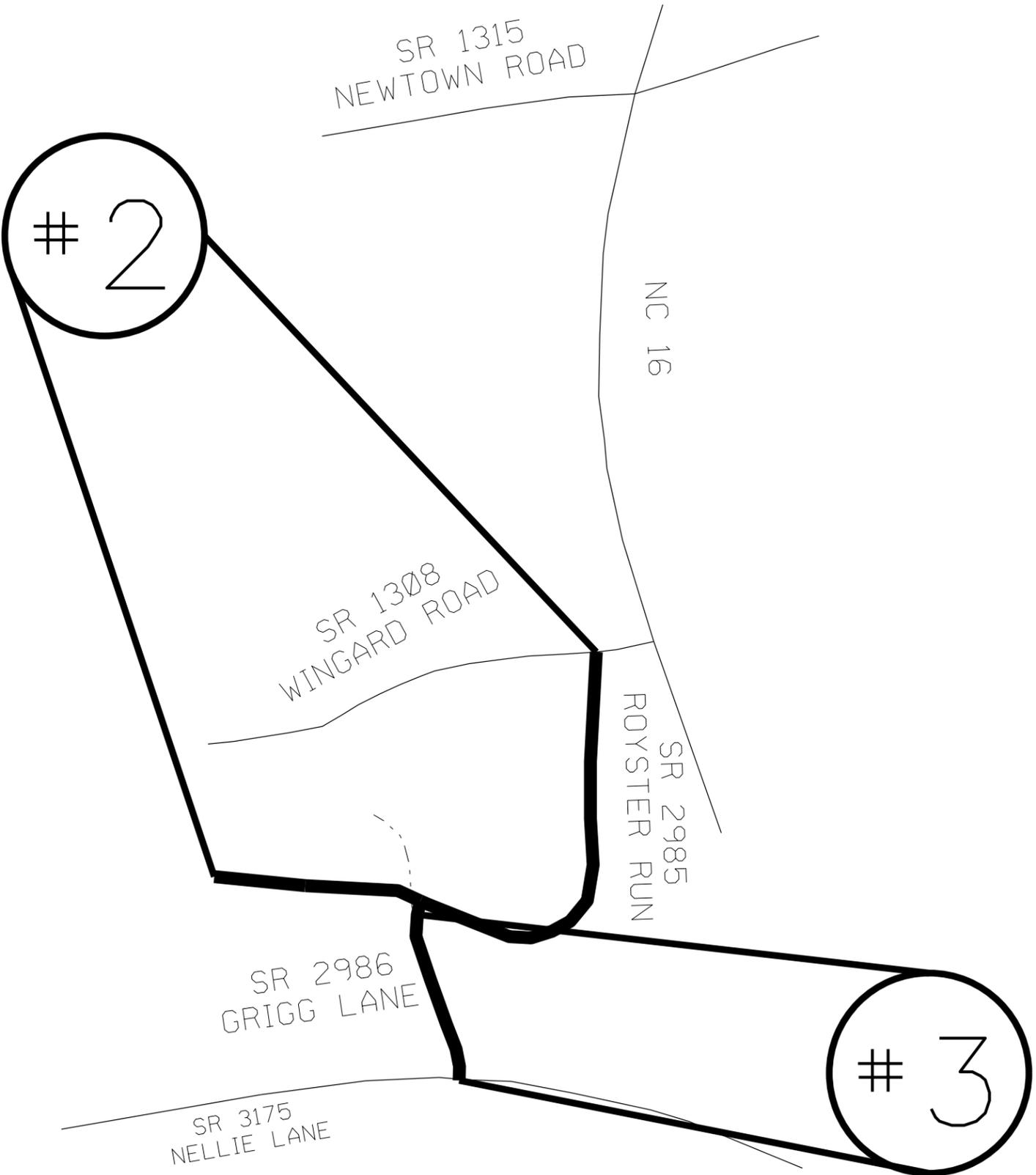
MAP #1 NC 75
 2.78 MILES
 FROM SOUTH CAROLINA STATE LINE
 TO PAVEMENT JOINT AT
 SR 1111 OLD PROVIDENCE ROAD

MAP #6 SR 1175 TRAILS END DRIVE
 0.27 MILES
 FROM NC 75 TO
 SR 1228 CHEROKEE TRAIL

MAP #7 SR 1228 CHEROKEE TRAIL
 0.19 MILES
 FROM SR 1175 TRAILS END DRIVE
 TO CUL DE SAC



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	2	
F.A. PROJECT NO.			

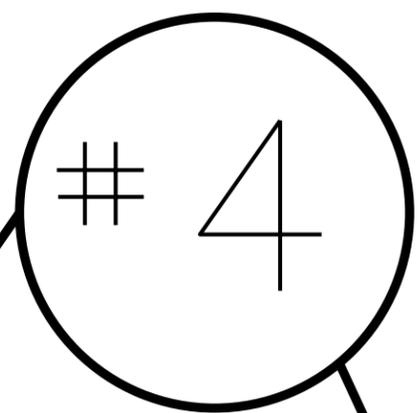


ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
 NORTH CAROLINA
PREPARED BY: EHE
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP # 2 SR 2985 ROYSTER RUN
 0.4 MILES
 FROM SR 1308 WINGARD ROAD
 TO CUL DE SAC

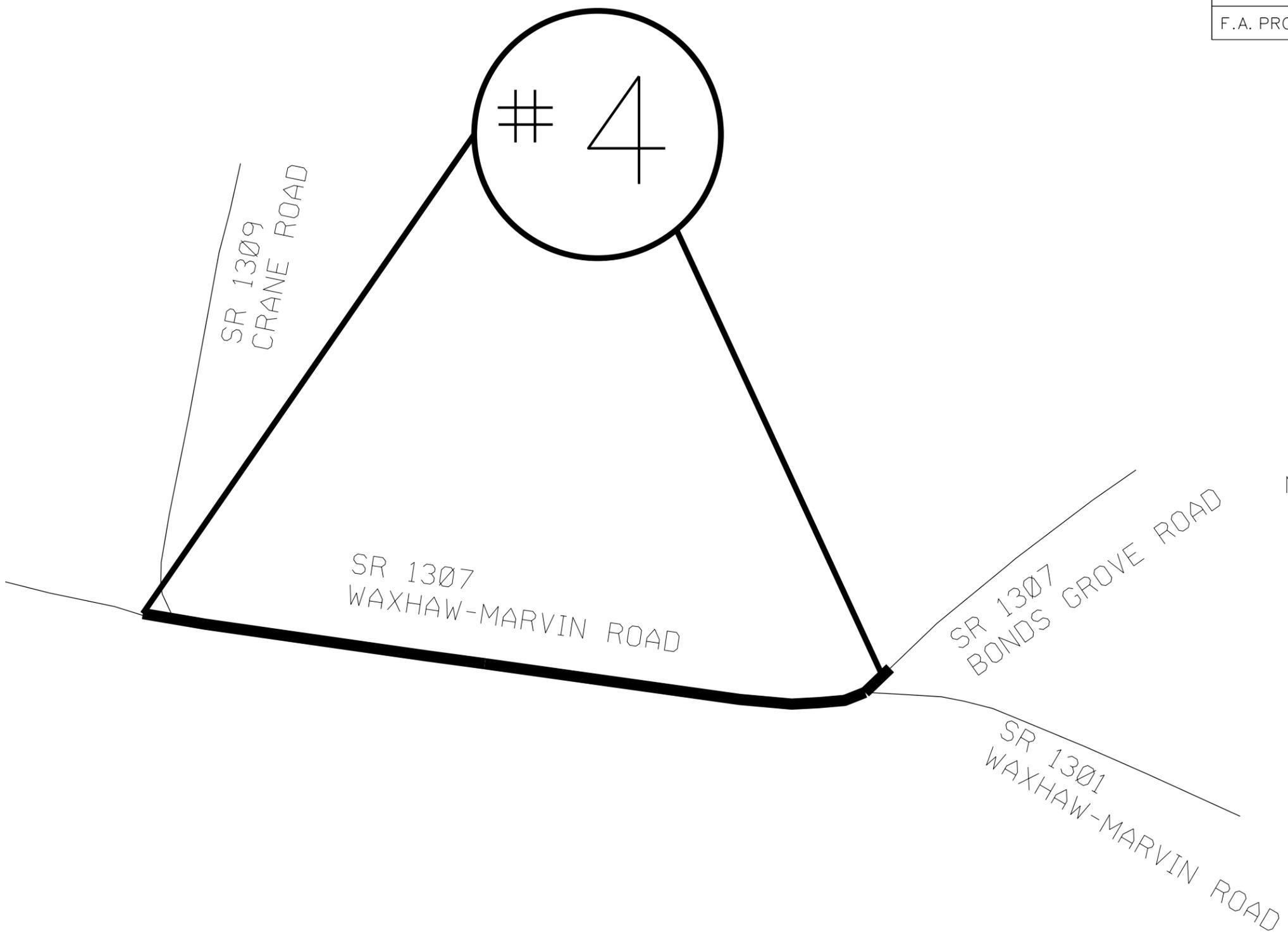
MAP # 3 SR 2986 GRIGG LANE
 0.25 MILES
 FROM SR 2985 ROYSTER RUN
 TO SR 3175 NELLIE LANE

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	3	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
 NORTH CAROLINA
PREPARED BY I/E
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #4 SR 1307 WAXHAW-MARVIN ROAD
 0.49 MILES
 FROM SR 1309 CRANE ROAD
 TO SR 1307 BONDS GROVE ROAD



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	4	
F.A. PROJECT NO.			

5



SR 1327
PLEASANT GROVE CHURCH ROAD



ENLARGED MUNICIPAL AND SUBURBAN AREAS
UNION COUNTY
NORTH CAROLINA
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

SR 1008
WAXHAW-INDIAN TRAIL ROAD

MAP #5 SR 1008 WAXHAW-INDIAN TRAIL ROAD
0.73 MILES
FROM PVMT JOINT AT BRIDGE
TO SR 1327 PLEASANT GROVE CHURCH ROAD



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	5	
F.A. PROJECT NO.			

SR 1111
OLD WAXHAW-MONROE ROAD



ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

NORTH CAROLINA

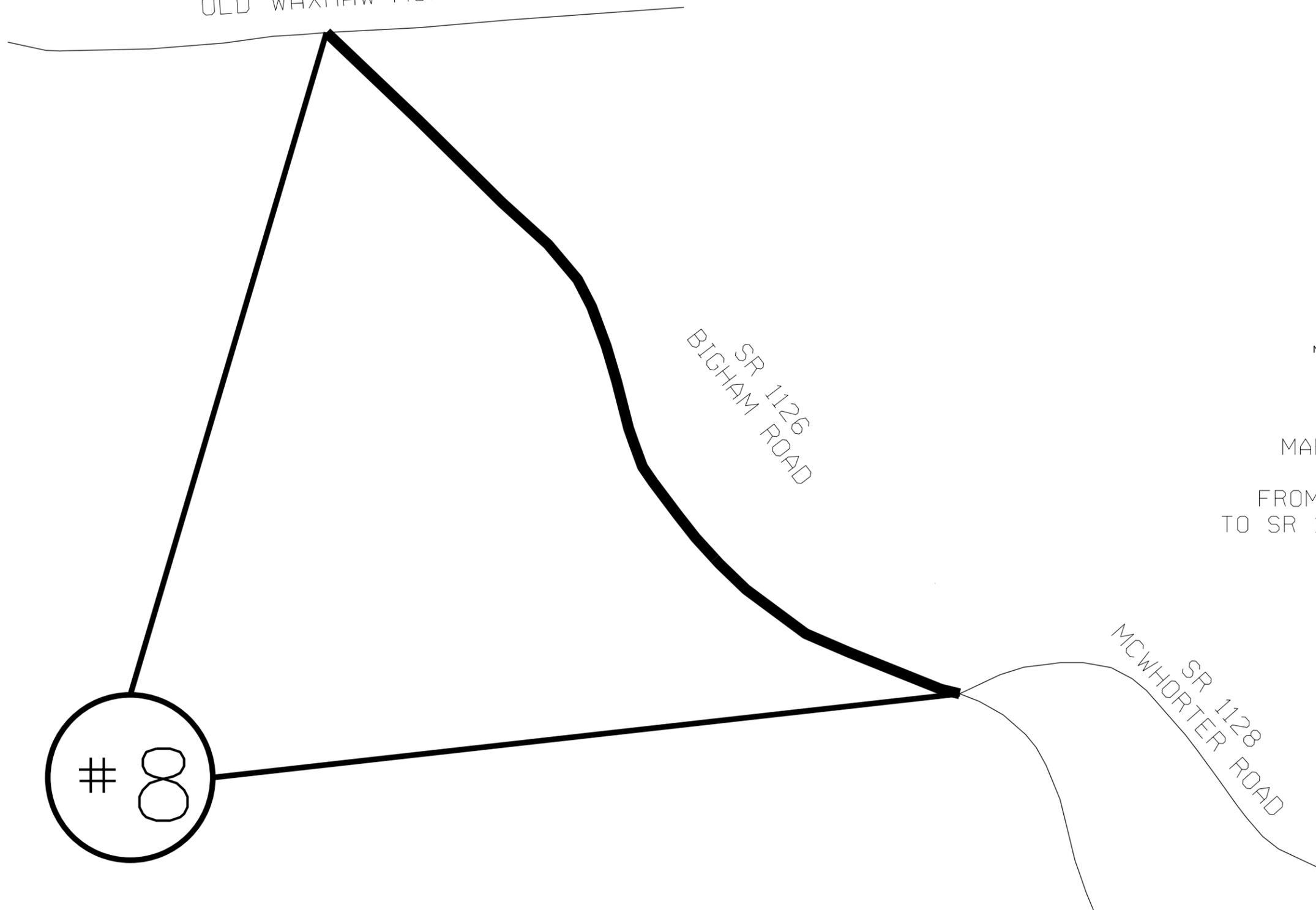
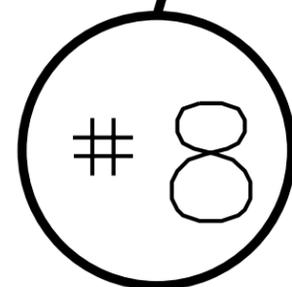
PREPARED BY: BDE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

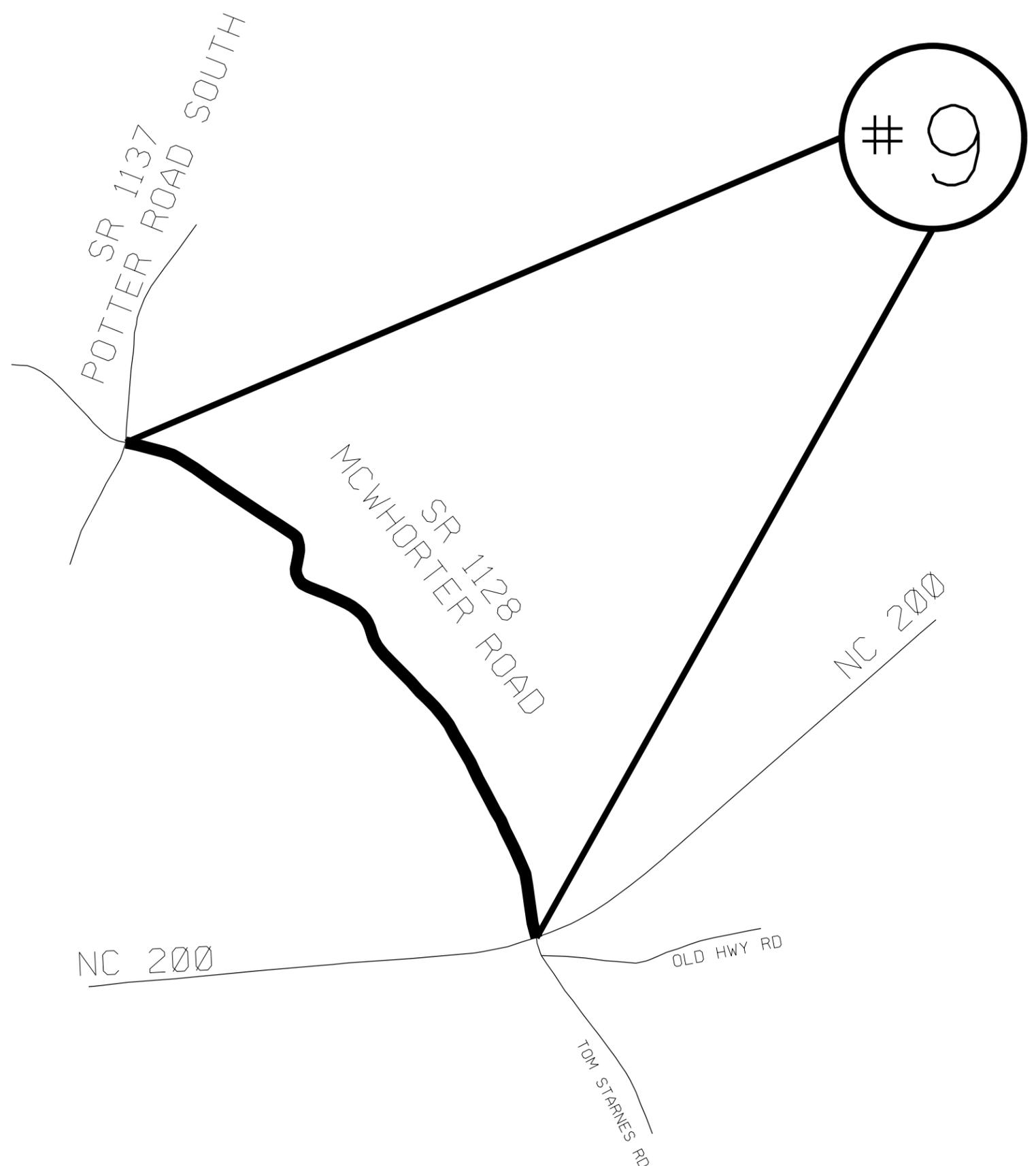
MAP #8 SR 1126 BIGHAM ROAD
0.77 MILES
FROM SR 1128 MCWHORTER ROAD
TO SR 1111 OLD WAXHAW-MONROE ROAD

SR 1126
BIGHAM ROAD

SR 1128
MCWHORTER ROAD



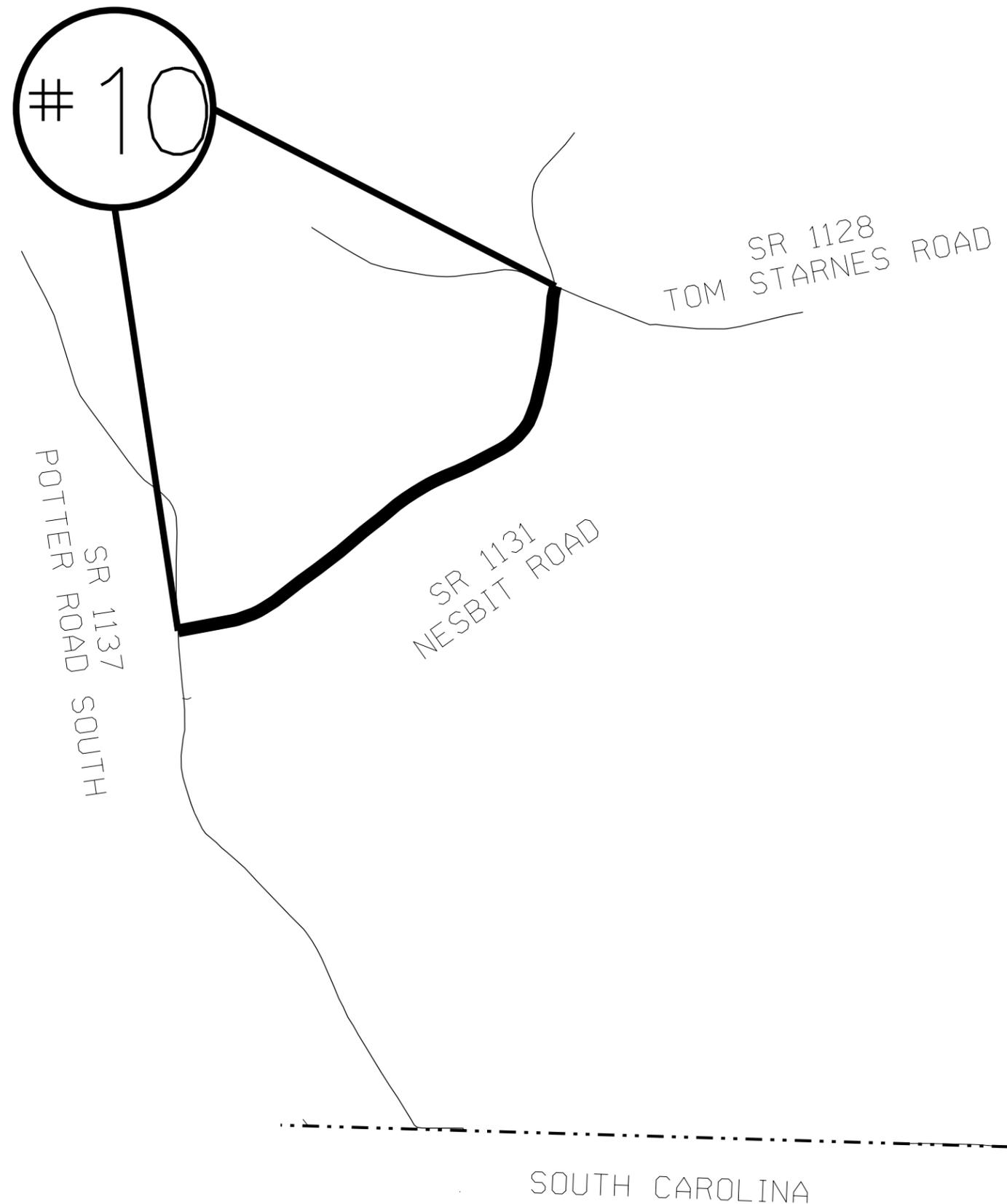
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	6	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS
 UNION COUNTY
 NORTH CAROLINA
PREPARED BY THE
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #9 SR 1128 MCWHORTER ROAD
 1.48 MILES
 FROM SR 1137 POTTER ROAD SOUTH
 TO NC 200

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	7	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS
 UNION COUNTY
 NORTH CAROLINA
PREPARED BY THE
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #10 SR 1131 NESBIT ROAD
 1.39 MILES
 FROM SR 1137 POTTER ROAD SOUTH
 TO SR 1128 TOM STARNES ROAD

11

WESLEY CHAPEL-STOUTS ROAD
SR1377
Old Charlotte Hwy

SR 1378
HAYES ROAD

SR 1009
OLD CHARLOTTE HWY

SR 1007
ROCKY RIVER ROAD

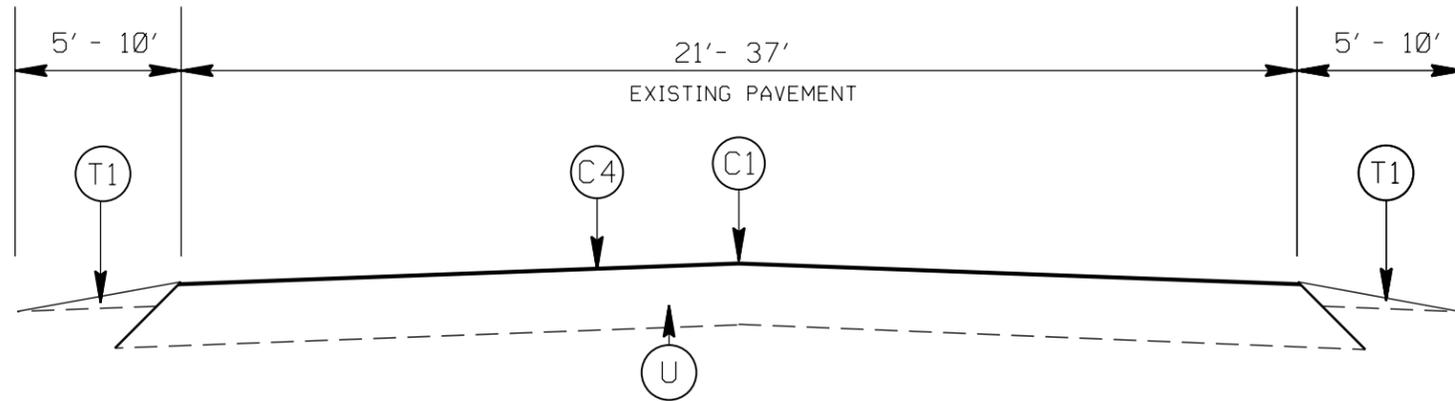
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
	2023CPT.10.12.10901 2023CPT.10.12.20901	8	
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS
 UNION COUNTY
 NORTH CAROLINA
PREPARED BY THE
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #11 SR 1009 OLD CHARLOTTE HWY
 2.32 MILES
 FROM SR 1007 ROCKY RIVER ROAD
 TO THE WEST END OF SR 1378 HAYES ROAD

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	9	
F.A. PROJECT NO.			



TYPICAL SECTION 1

NC 75 (MAP 1)

APPROX. STA: 10+00 TO 52+60

APPROX. STA: 79+60 TO 110+85

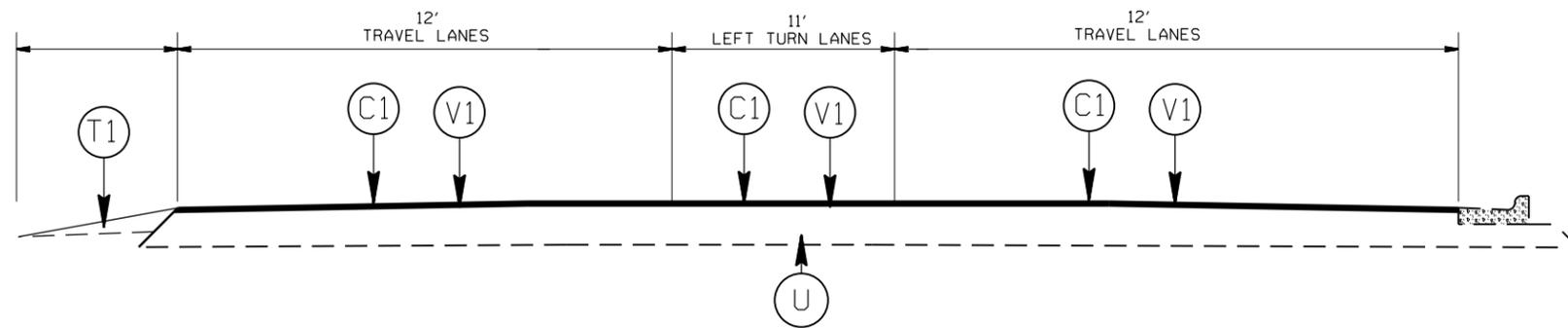
APPROX. STA: 115+30 TO 124+60

APPROX. STA: 136+20 TO END OF MAP

SR 1008 WAXHAW-INDIAN TRAIL ROAD (MAP 5)

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)



TYPICAL SECTION 2

NC 75 (MAP 1)

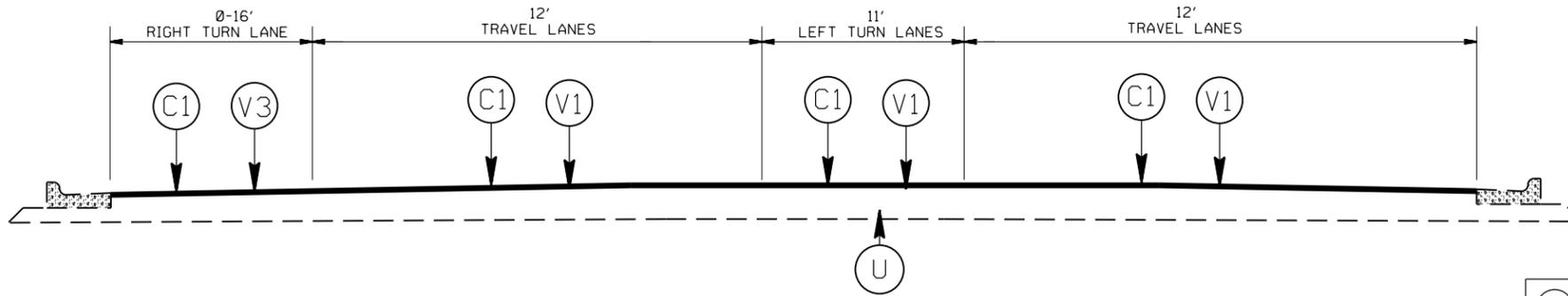
APPROX. STA: 110+85 TO 115+30

SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024
UNION COUNTY RESURFACING

SCALE	-NA-		REVISIONS
DATE	1/20		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED	CLA		

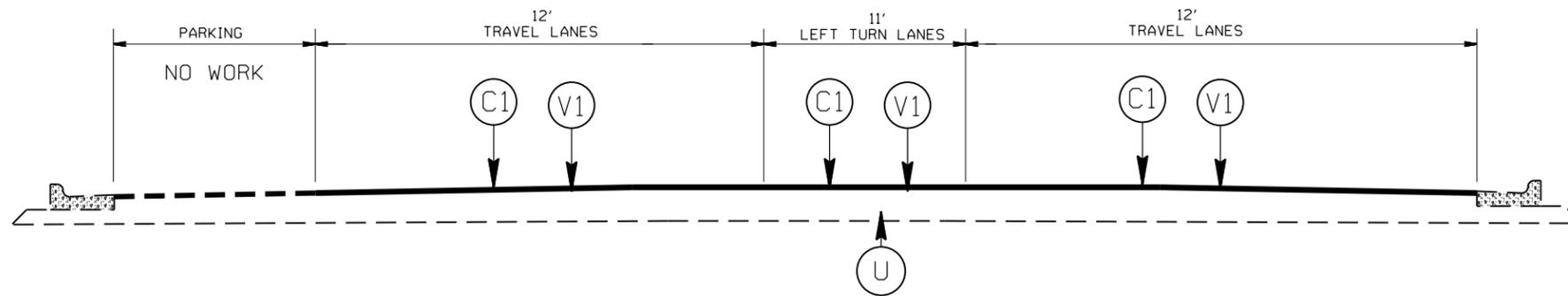
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	10	
F.A. PROJECT NO.			



TYPICAL SECTION 3
NC 75 (MAP 1)
APPROX. STA: 124+60 TO 136+20

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

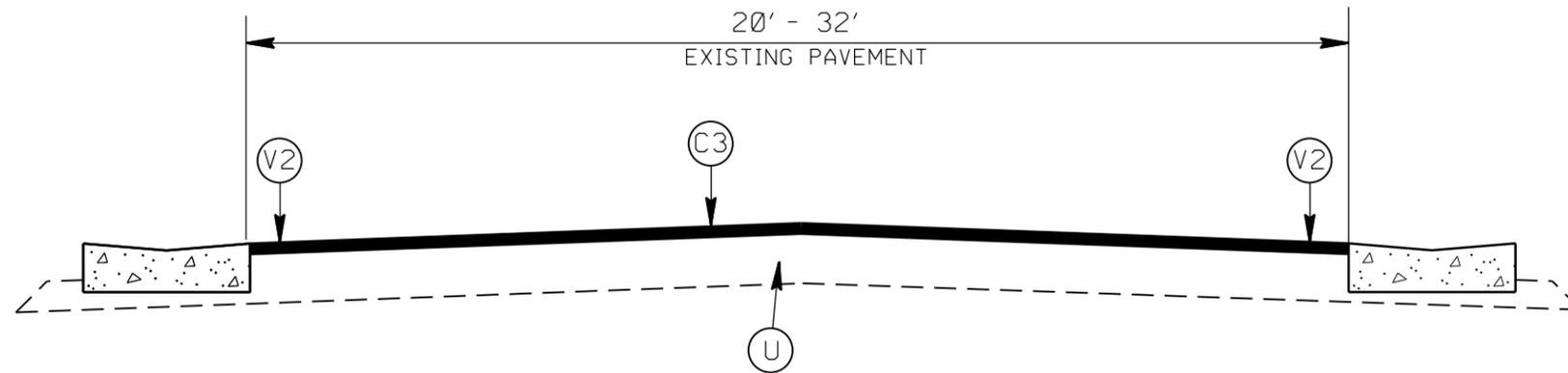


TYPICAL SECTION 4
NC 75 (MAP 1)

SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING		
SCALE	-NA-	
DATE	9/21	
DWG. BY	AMO	
DESIGN BY	AMO	
APPROVED		
REVISIONS		

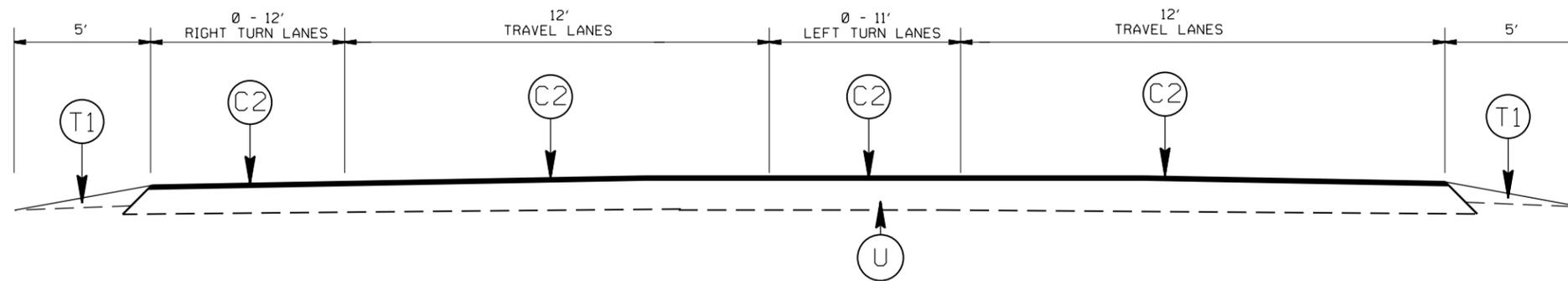
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	11	
F.A. PROJECT NO.			



TYPICAL SECTION 5
 SR 2985 ROYSTER RUN (MAP 2)
 SR 2986 GRIGG LANE (MAP 3)

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

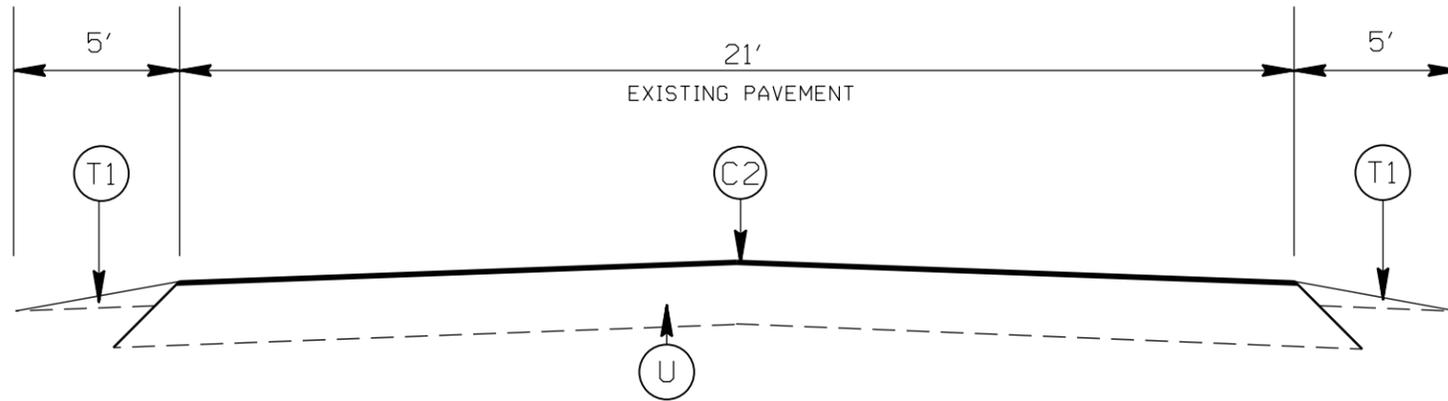


TYPICAL SECTION 6
 SR 1307 WAXHAW-MARVIN ROAD (MAP 4)
 APPROX. STA. 10+00 TO STA. 20+10

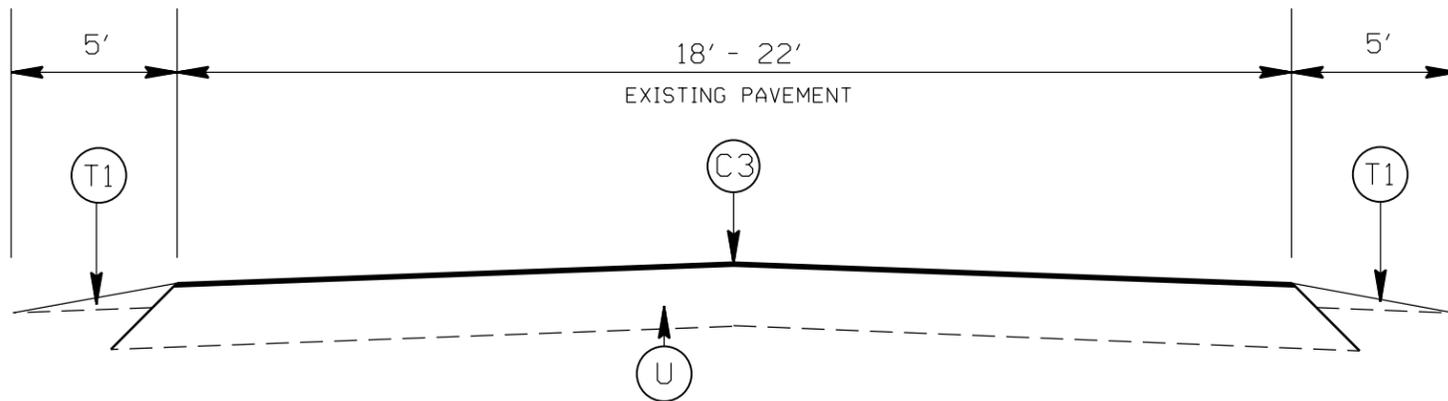
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			REVISIONS	
SCALE	-NA-			
DATE	9/21			
DWG. BY	AMO			
DESIGN BY	AMO			
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	12	
F.A. PROJECT NO.			



TYPICAL SECTION 7
SR 1307 WAXHAW-MARVIN ROAD (MAP 4)
APPROX. STA. 20+10 TO END OF MAP



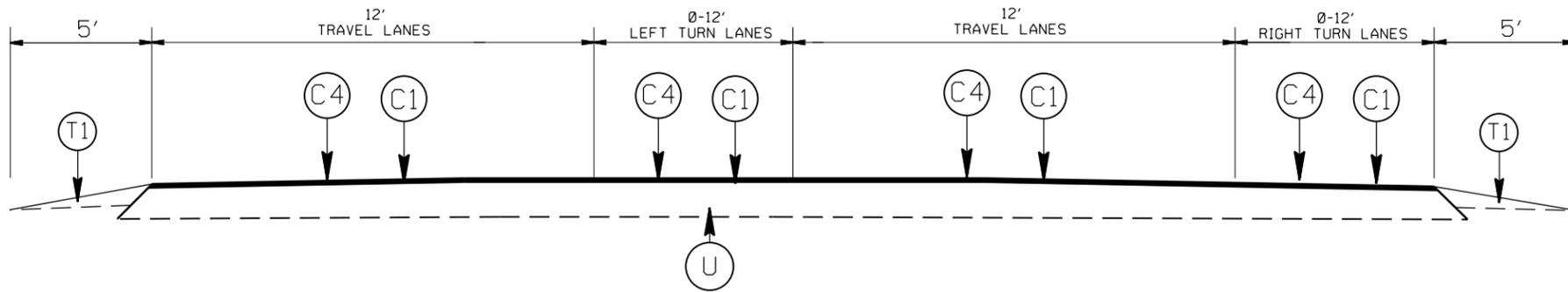
TYPICAL SECTION 8
SR 1175 TRAILS END (MAP 6)
SR 1228 CHEROKEE TRAIL (MAP 7)
SR 1126 BIGHAM ROAD (MAP 8)
SR 1128 MCWHORTER ROAD (MAP 9)
SR 1131 NESBIT ROAD (MAP 10)

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			REVISIONS	
SCALE	-NA-			
DATE	1/20			
DWG. BY	AMO			
DESIGN BY	AMO			
APPROVED	CLA			

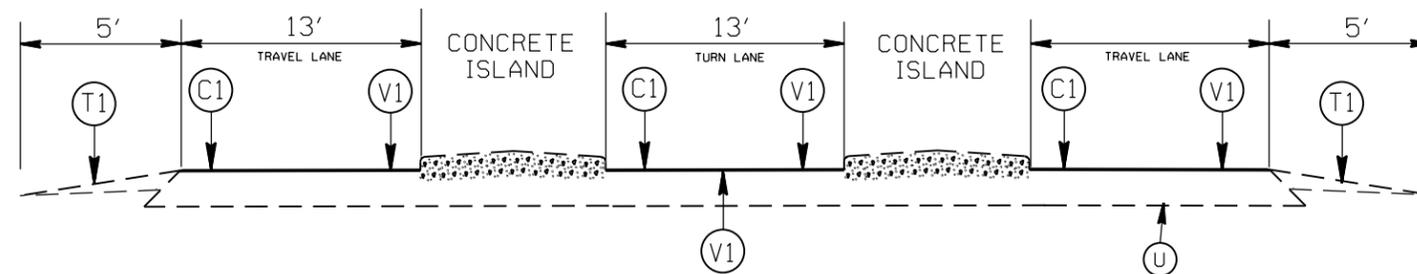


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	13	
F.A. PROJECT NO.			

TYPICAL SECTION 9
 SR 1007 OLD CHARLOTTE HWY (MAP 11)
 APPROX. STA: 10+00 TO 55+80
 APPROX. STA. 61+75 TO 141+62

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

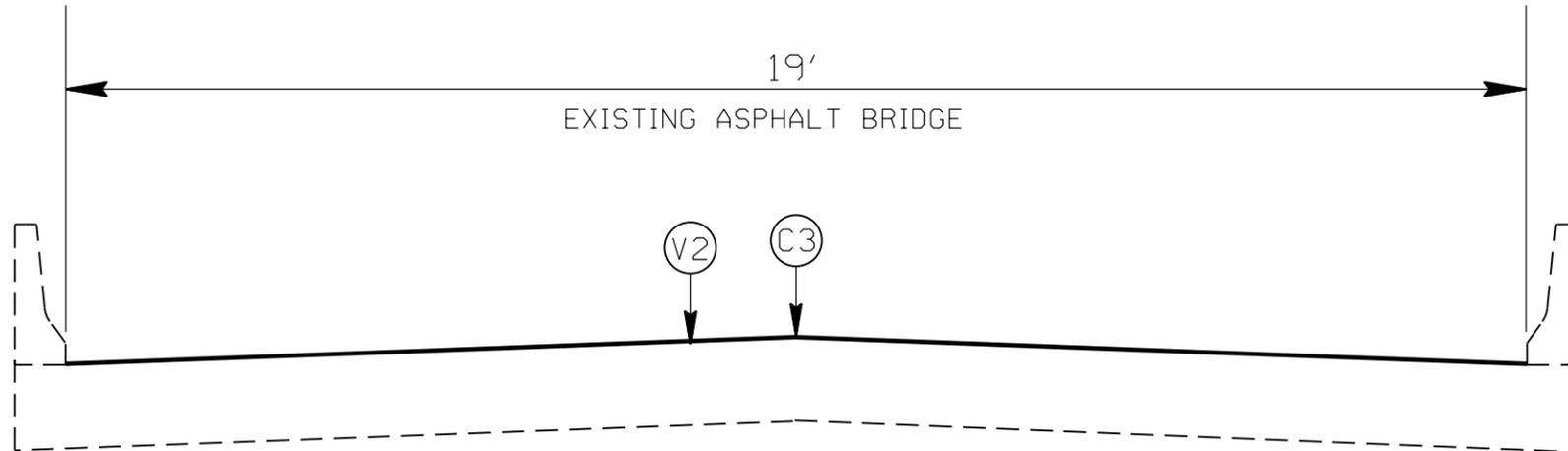


TYPICAL SECTION 10
 SR 1007 OLD CHARLOTTE HWY (MAP 11)
 APPROX. STA. 55+80 TO 61+75

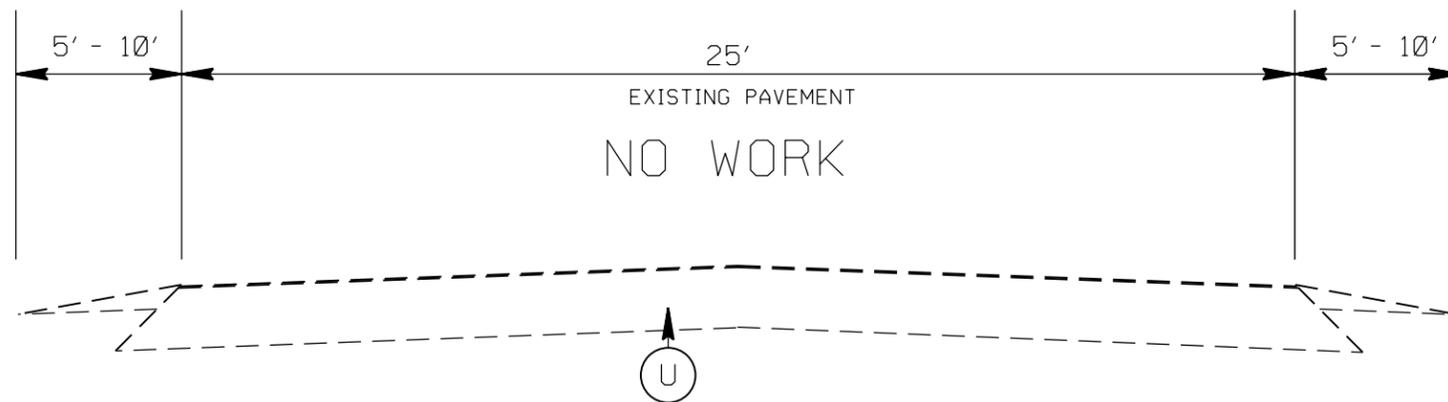
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			REVISIONS	
SCALE	-NA-			
DATE	1/20			
DWG. BY	AMO			
DESIGN BY	AMO			
APPROVED	CLA			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	14	
F.A. PROJECT NO.			



TYPICAL SECTION 11
SR 1126 BIGHAM ROAD (MAP 8)



TYPICAL SECTION 12
NC 75 (MAP 1)
APPROX. STA: 52+60 TO 79+60
NO WORK

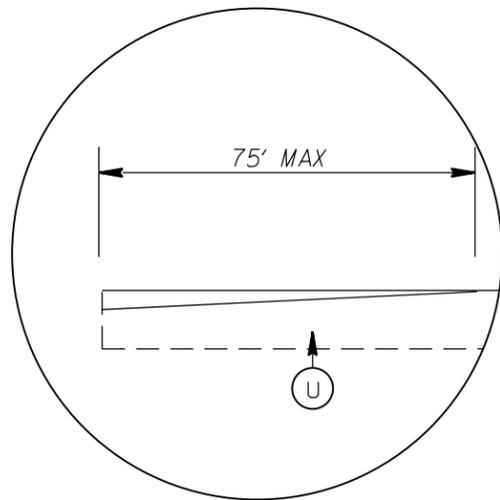
PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

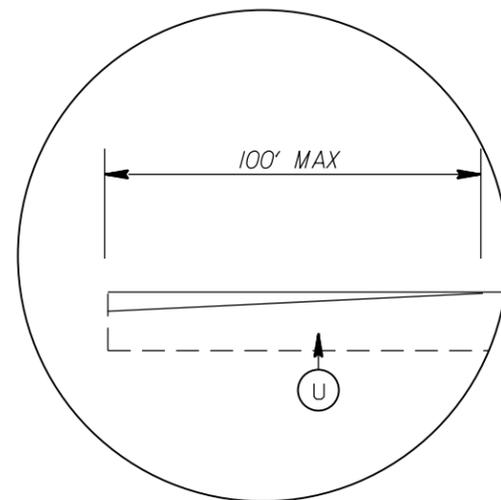
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING		
SCALE	-NA-	
DATE	1/20	
DWG. BY	AMO	
DESIGN BY	AMO	
APPROVED	CLA	
REVISIONS		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	15	
F.A. PROJECT NO.			



DETAIL FOR INCIDENTAL MILLING (0" TO 1.5")
TIE IN

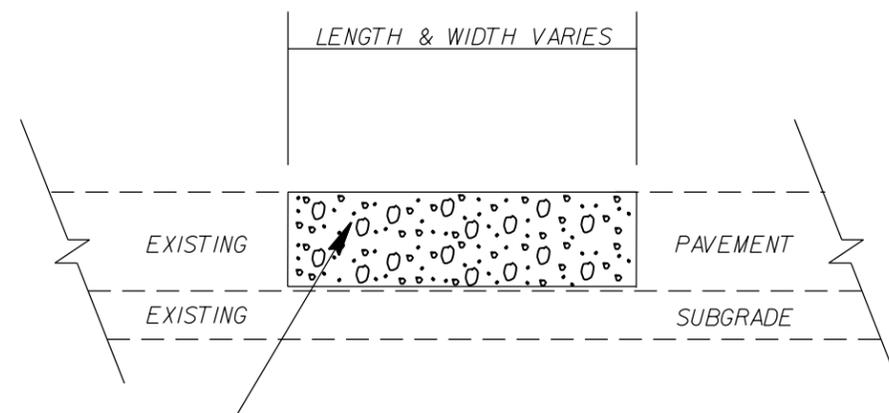


DETAIL FOR INCIDENTAL MILLING (0" TO 2.0")
TIE IN

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
(C3)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
(C4)	ASPHALT SURFACE TREATMENT, MAT COAT # 67
(T1)	SHOULDER RECONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING OF EXISTING PAVEMENT, 2.0" DEPTH.
(V2)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.
(V3)	INCIDENTAL MILLING (FULL WIDTH TURN LANES 500' OR LESS)

PATCHING DETAIL



RATE IS VARIABLE AND SHALL BE AS DIRECTED BY THE ENGINEER.
ASPHALT TYPE 119.0C SHALL BE PLACED.

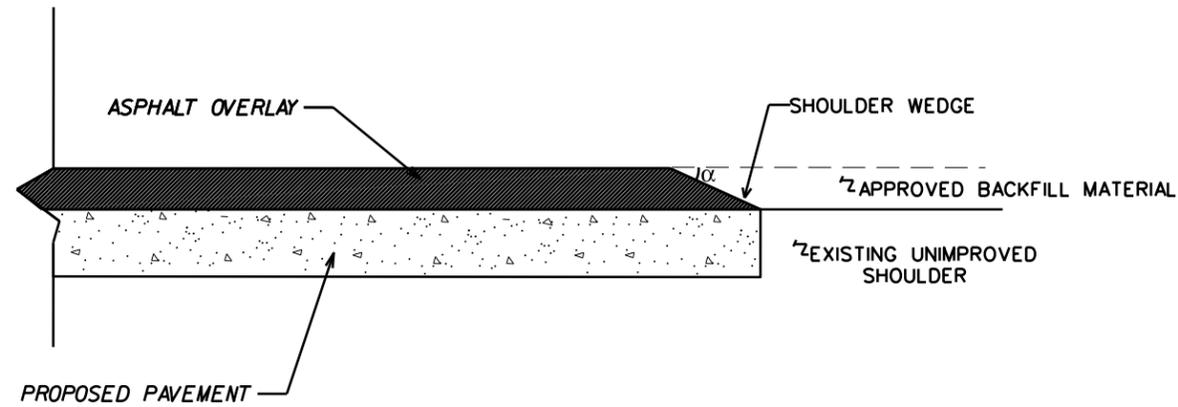
SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.

2023-2024 UNION COUNTY RESURFACING			
SCALE	-NA-		REVISIONS
DATE	9/21		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED			

NOTES:

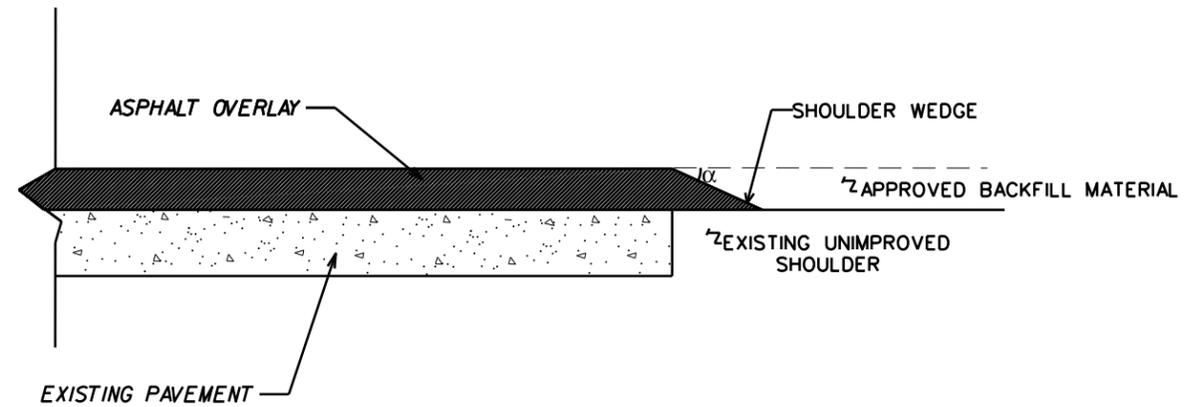
- 1) DETAIL DOES NOT APPLY TO OGAFCC AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	16	
F.A. PROJECT NO.			



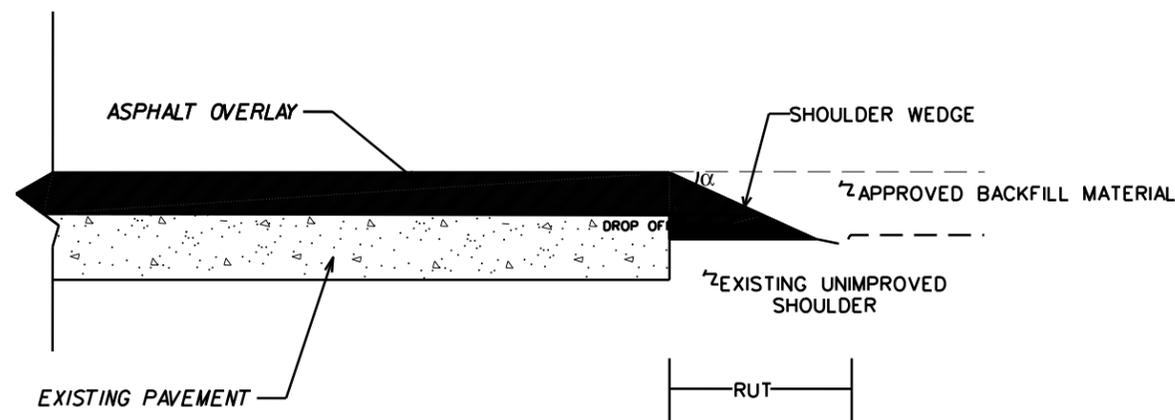
SHOULDER WEDGE DETAIL

(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)

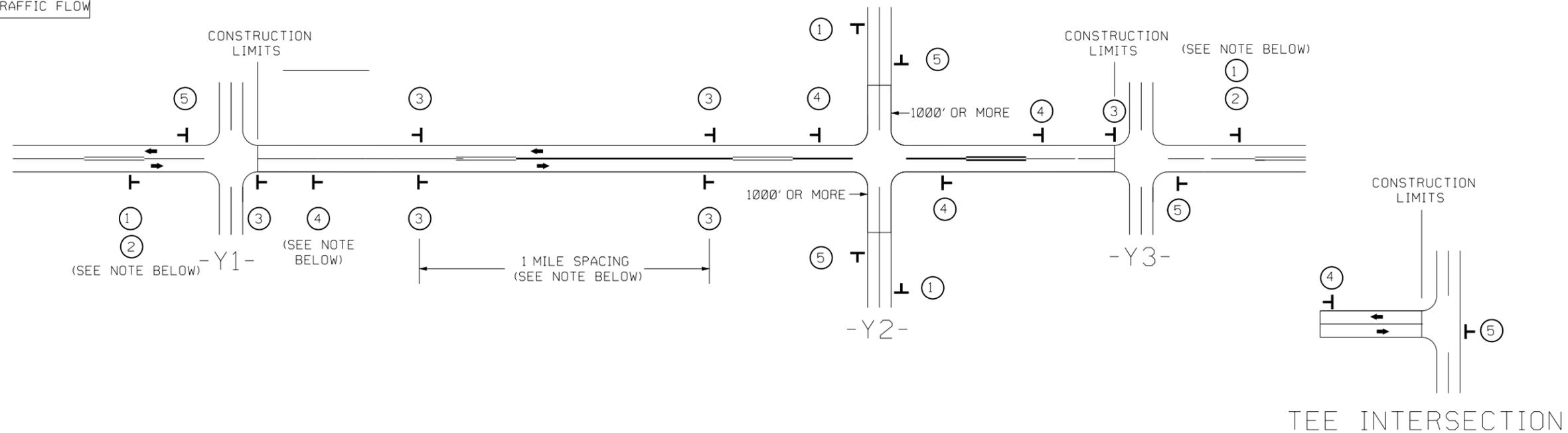
$\alpha = 30$ DEGREES

SHOULDER WEDGE DETAILS		
SCALE	-NA-	REVISIONS
DATE	11/20	
DWG. BY	AMO	
DESIGN BY	AMO	
APPROVED		



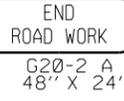
SIGNING FOR RESURFACING PROJECTS

LEGEND
 STATIONARY SIGN
 DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	①		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.
	②		#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. (NO FRACTIONAL OR DECIMAL NUMBERS)
	③		- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
	④		- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.
	⑤		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

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.


 W20-1
 48" X 48"
 PLACED 500' IN ADVANCE OF FLAGGER.


 W20-7 A
 48" X 48"
 PLACED 250' IN ADVANCE OF FLAGGER.

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



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

WATTLE WITH POLYACRYLAMIDE DETAIL

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

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

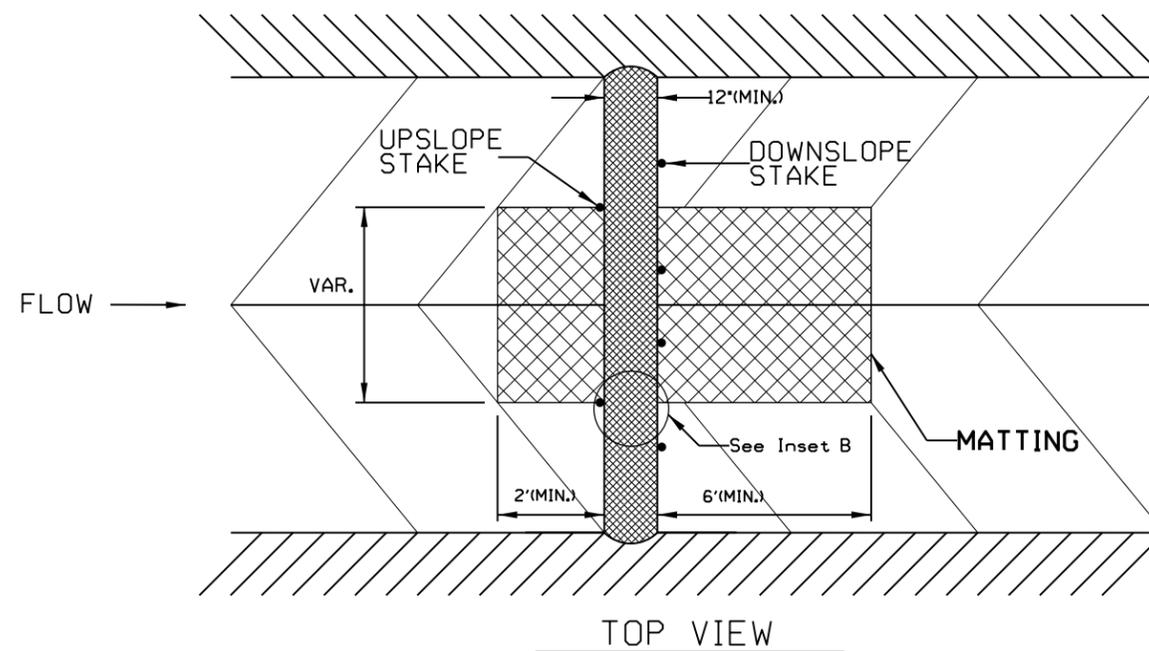
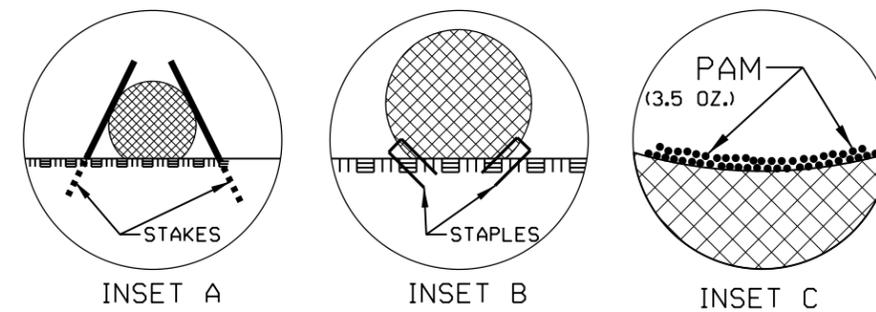
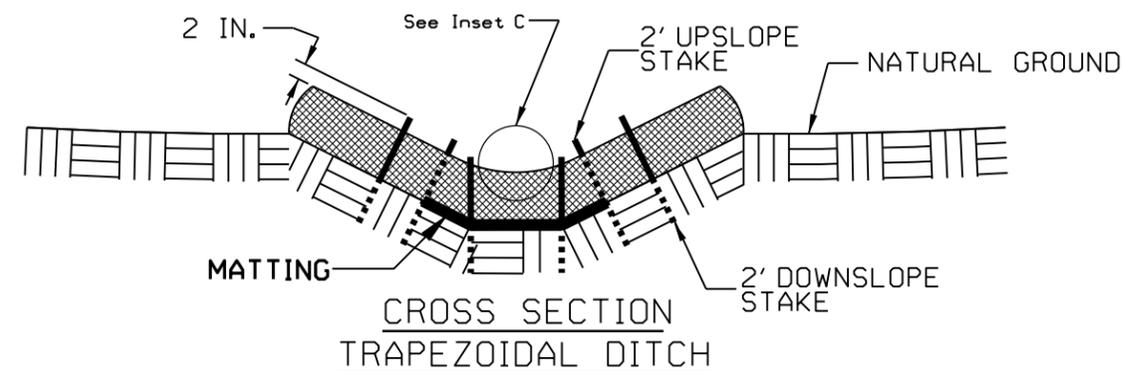
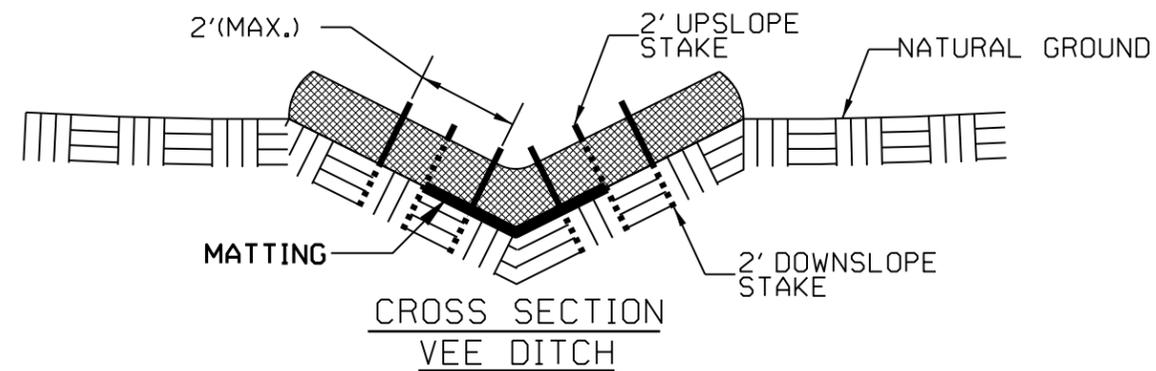
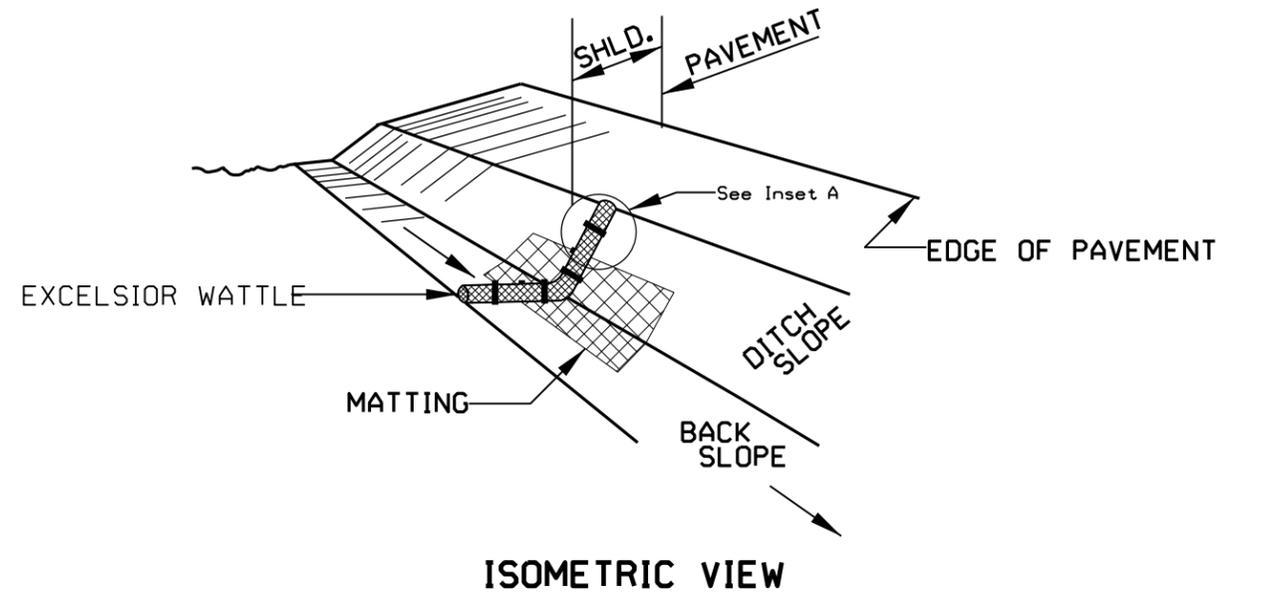
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

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

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

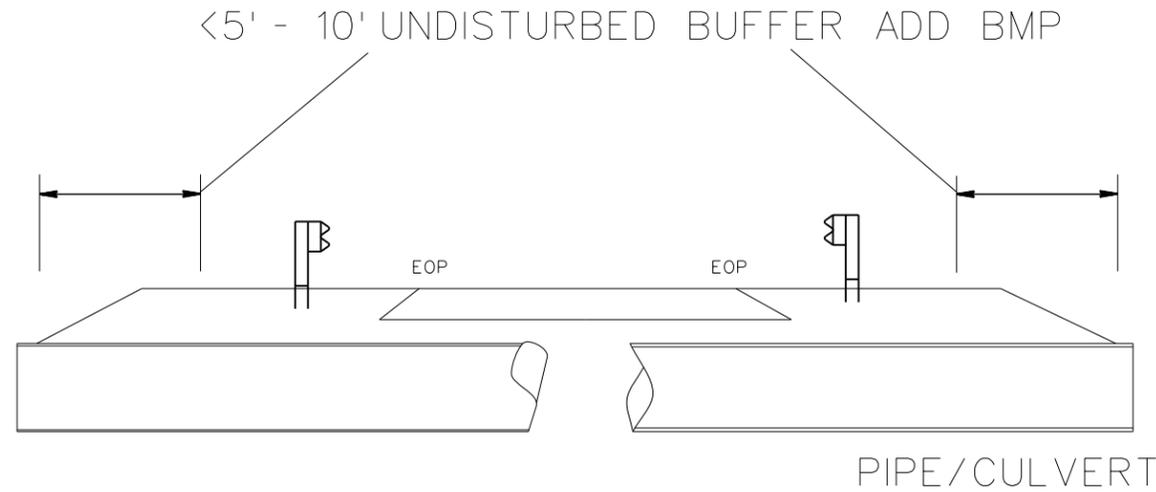
INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



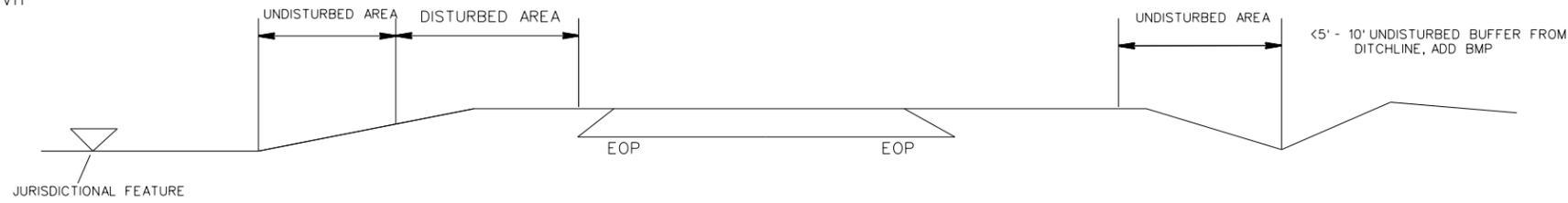
NOTES: LESS THAN 5' - 10' UNDISTURBED BUFFER FROM ROW, DITCHLINE, WATER FEATURE, OR DRAINAGE INLET, ADD BMP.

BMP OPTIONS: WATTLE OR SILT FENCE

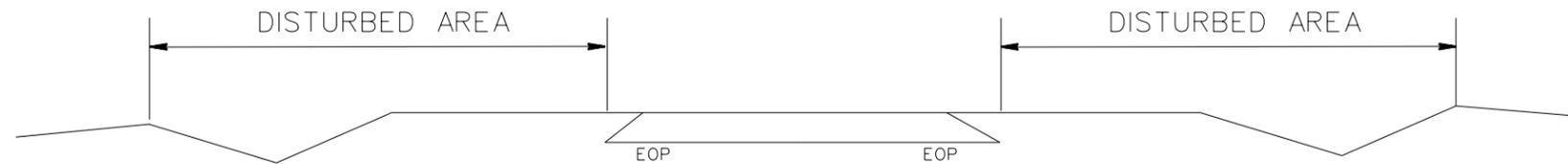
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2023CPT.10.12.10901 2023CPT.10.12.20901	EC2	
F.A. PROJECT NO.			



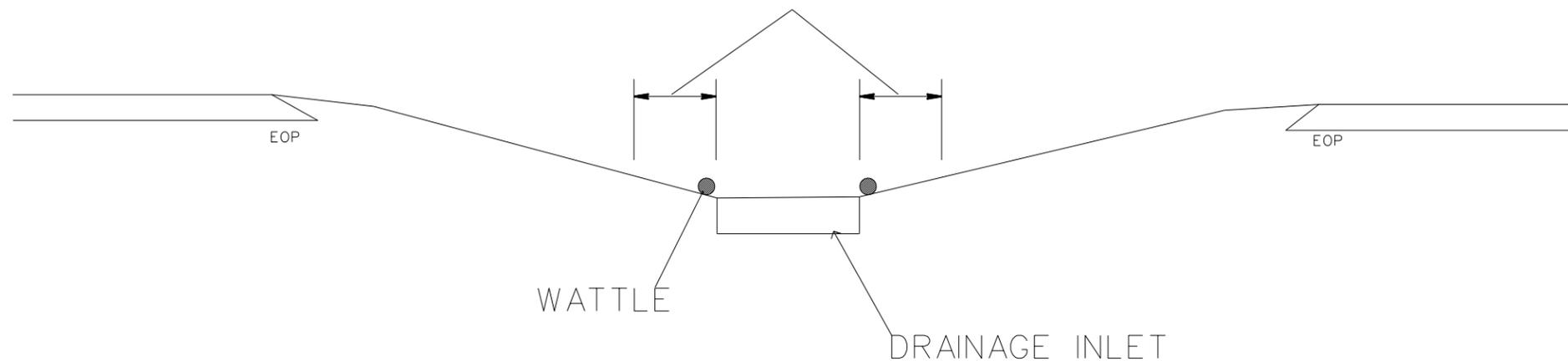
<5' - 10' UNDISTURBED BUFFER FROM JURISDICTIONAL FEATURE ADD BMP



USE BMP'S IF SHOULDERS AND/OR FRONTSLOPES AND/OR DITCHLINE AND/OR BACKSLOPES ARE DISTURBED



<5' - 10' UNDISTURBED BUFFER FROM INLET, ADD WATTLE



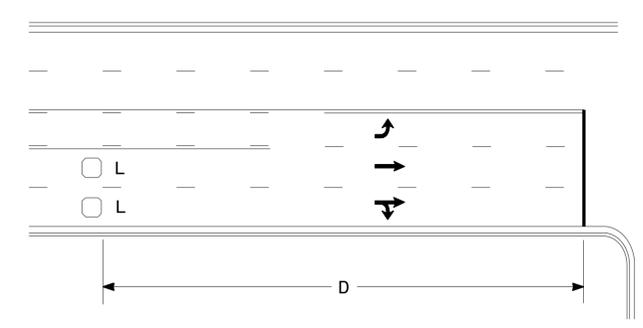
EROSION CONTROL DETAIL

SCALE -NA-
DATE 11/20
DWG. BY AMO
DESIGN BY AMO
APPROVED



REVISIONS	

High Speed Detection (≥40 mph)

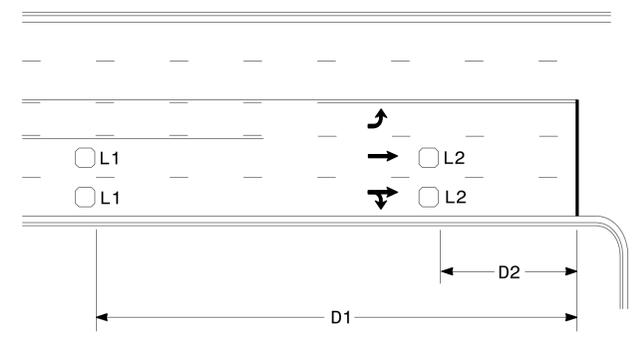


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

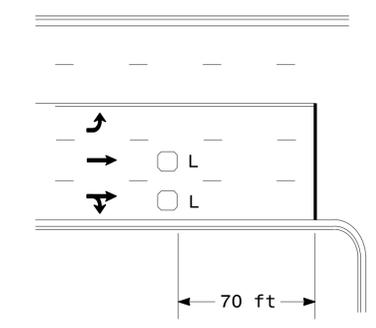


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

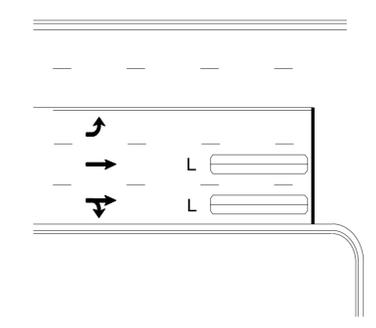
"Stretch" Operation

Low Speed Detection (≤35 mph)



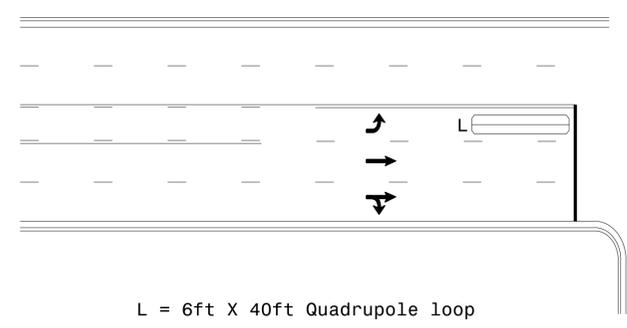
L = 6ft X 6ft
Wired in series

OR



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

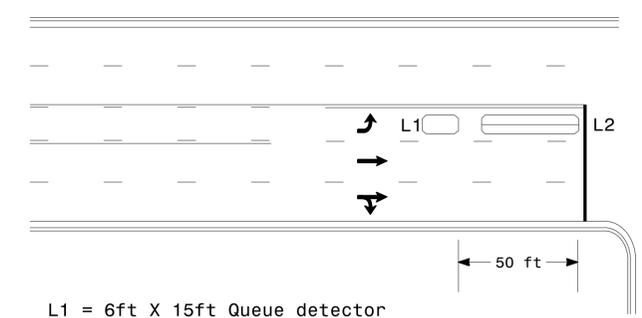
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

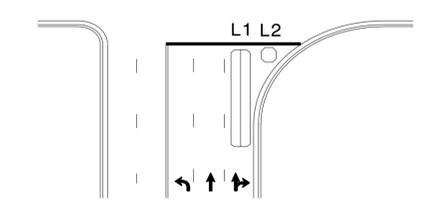
OR



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

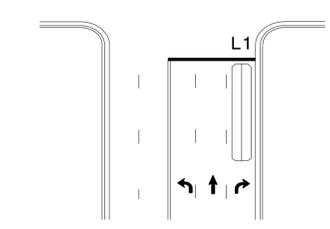
Queue Loop Detection

Right Turn Lane Detection

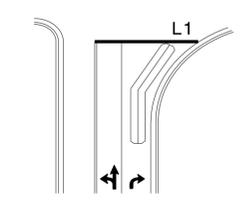


Shared Lane/
Wide Radius Turn

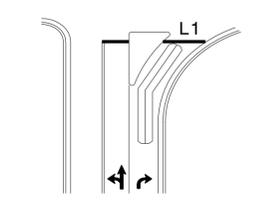
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

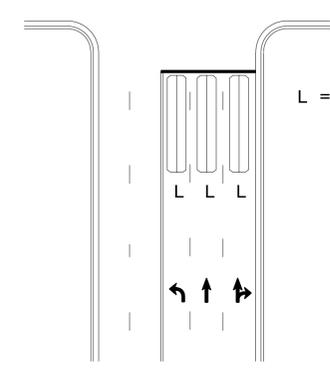


Wide Radius Turn



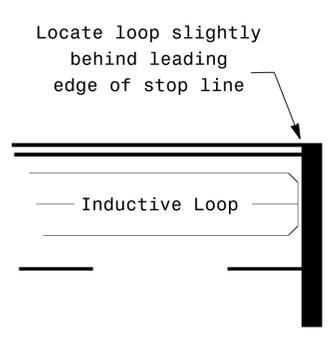
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



Locate loop slightly
behind leading
edge of stop line

Note:
Loop may be located in advance
of stop line under any of the
following conditions:
1) stop line is greater than 15'
from edge of intersecting
roadway
2) loop detects a permissive or
protected/permissive left turn
3) for an exclusive right turn
lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns
6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

<p>Prepared In the Offices of: TRANSPORTATION MOBILITY AND SAFETY SOLUTIONS, INC. SIGNAL DESIGN SECTION 750 N. Greenfield Pkwy, Garner, NC 27529</p>	<h3>Typical Signal Loop Locations</h3>		
	<p>PLAN DATE: January 2015</p>	<p>REVIEWED BY: JPG</p>	
<p>PREPARED BY: PLA</p>	<p>REVIEWED BY:</p>	<p>REVISIONS</p>	<p>INIT. DATE</p>
<p>SIG. INVENTORY NO.</p>			<p>1/30/2015</p>

3D:\AH\2015\10\23\2023CPT.10.12.10901\Signal Design\Section\Eastern\Region\loop\typical\2015.dgn
 S:\ITS\AS\1\15\Signal\loop\typical\2015.dgn
 paalexander

PROJECT NO.	SHEET NO.	TOTAL NO.
2023CPT.10.12.10901,		
2023CPT.10.12.20901		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4510000000-N	4685000000-E		4695000000-E			4700000000-E	4704000000-E	4709000000-E	4720000000-E		4725000000-E		4810000000-E		4835000000-E	4845000000-N		4905100000-N			
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	THERMO PVT MKG LINES 4",90 MILS WHITE	THERMO PVT MKG LINES 4",90 MILS YELLOW	THERMO PVT MKG LINES 8" 90 MILS WHITE	THERMO PVT MKG LINES 8" 90 MILS YELLOW	THERMO PVT MKG LINES 8", 90 MILS WHITE	THERMO PVT MKG LINES 12", 90 MILS YELLOW	THERMOPLASTIC PAVEMENT MARKING LINES (16", 90 MILS)	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	THERMO PVT MKG CHARACTER 90 MILS (SCHOOL)	THERMO PVT MKG CHARACTER 90 MILS (RXR)	THERMO PVT MKG SYMBOL 90 MILS (LEFT)	THERMO PVT MKG SYMBOL 90 MILS (RIGHT)	4" WHITE PAINT	4" YELLOW PAINT	24" WHITE PAINT	PAINT LT ARROW	PAINT RT ARROW	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER			
MI	FT	SF	LS	HR	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA												
2023CPT.10.12.10901	Union	1	NC 75 / ROUTE ID 3000075090	FROM SOUTH CAROLINA STATE LINE TO PAVEMENT JOINT AT SR 1111 OLD PROVIDENCE ROAD MILEPOST 0-2.78	1,2,3,4,12	2	2WU	2.78	30	311.4	1	20	24,384	25,783	800	240					520			13	1	1,510	28,000	250			225		
TOTAL FOR MAP NO. 1									2.78	311.4	1.0	20	24,384	25,783	800	240					520			13	1	1,510	28,000	250			225		
TOTAL FOR PROJ NO. 2023CPT.10.12.10901									2.78	311.4	1.0	20	24,384	25,783	800	240					520			13	1	1,510	28,000	250			225		
2023CPT.10.12.20901	Union	2	SR 2985 ROYSTER RUN / ROUTE ID 40002985090	FROM SR 1308 WINGARD ROAD TO CUL DE SAC MILEPOST 0 TO 0.4		5	2WU	0.4	26		*																						
TOTAL FOR MAP NO. 2																																	
2023CPT.10.12.20901	Union	3	SR 2986 GRIGG LANE / ROUTE ID 40002986090	FROM SR 2985 ROYSTER RUN TO SR 3175 NELLIE LANE MILEPOST 0 TO 0.25		5	2WU	0.25	24		*																						
TOTAL FOR MAP NO. 3																																	
2023CPT.10.12.20901	Union	4	SR 1307 WAXHAW-MARVIN ROAD ROUTE ID 40001307090	FROM SR 1309 CRANE ROAD TO PAVEMENT JOINT AT SR 1307 BONDS GROVE ROAD MILEPOST 2.36-2.85		6,7	2	0.49	34		*	5	5,802	6,244			115				177	6		3	6								
TOTAL FOR MAP NO. 4									0.49				5	5,802	6,244			115			177	6		3	6								
2023CPT.10.12.20901	Union	5	SR 1008 WAXHAW-INDIAN TRAIL ROAD ROUTE ID 40001008090	FROM PAVEMENT JOINT @ BRIDGE TO SR 1327 PLEASANT GROVE CHURCH ROAD MILEPOST 1.15 TO 1.88		1	2WU	0.73	22		*		7,648	7,648							40												
TOTAL FOR MAP NO. 5									0.73					7,648	7,648					40													
2023CPT.10.12.20901	Union	6	SR 1175 TRAILS END DRIVE ROUTE ID 40001175090	FROM NC 75 TO SR 1228 CHEROKEE TRAIL MILEPOST 0 TO 0.27		8	2WU	0.27	19		*																						
TOTAL FOR MAP NO. 6									0.27																								
2023CPT.10.12.20901	Union	7	SR 1228 CHEROKEE TRAIL / ROUTE ID 40001228090	FROM SR 1175 TRAILS END DR TO CUL DE SAC MILEPOST 0 TO 0.19		8	2WU	0.19	18		*																						
TOTAL FOR MAP NO. 7									0.19																								
2023CPT.10.12.20901	Union	8	SR 1126 BIGHAM ROAD ROUTE ID 40001126090	FROM SR 1128 MCWHORTER ROAD TO SR 1111 OLD WAXHAW MONROE ROAD MILEPOST 2.12-2.89		8,11	2WU	0.77	19		*										30					16,260	16,260						
TOTAL FOR MAP NO. 8									0.77												30					16,260	16,260						
2023CPT.10.12.20901	Union	9	SR 1128 MCWHORTER ROAD ROUTE ID 40001128090	FROM SR 1137 S. POTTER ROAD SOUTH TO NC 200 MILEPOST 1.71 TO 3.19		8	2WU	1.48	21		*										30					31,288	31,288						
TOTAL FOR MAP NO. 9									1.48													30					31,288	31,288					
2023CPT.10.12.20901	Union	10	SR 1131 NESBIT ROAD ROUTE ID 40001131090	FROM SR 1137 POTTER ROAD SOUTH TO SR 1128 TOM STARNES ROAD MILEPOST 0 TO 1.39		8	2WU	1.39	18		*										40					29,272	26,950						
TOTAL FOR MAP NO. 10									1.39													40					29,272	26,950					
2023CPT.10.12.20901	Union	11	SR 1009 OLD CHARLOTTE HWY ROUTE ID 40001009090	FROM SR 1007 ROCKY RIVER ROAD TO WEST END OF SR 1738 HAYES ROAD MILEPOST 4.40-6.72		9,10	2WU	2.32	30	259.8	*	30	27,180	30,026		580	300		100	563	12	4	17	4	1,430	10,732		4	4	377			
TOTAL FOR MAP NO. 11									2.32	259.8			30	27,180	30,026		580	300		100	563	12	4	17	4	1,430	10,732		4	4	377		
TOTAL FOR PROJ NO. 2023CPT.10.12.20901									8.29	259.8			35	40,630	43,918		580	300	115	100	880	18	4	20	10			78,250	85,230		4	4	377
GRAND TOTAL									11.07	571.2	1.0	55	65,014	69,701	800	820	300	115	100	1,400	18	4	33	11			79,760	113,230	250	4	4	602	
													84,548		880					22				30		163,480		8					
													134,715		1,920								22		44		192,990		8				