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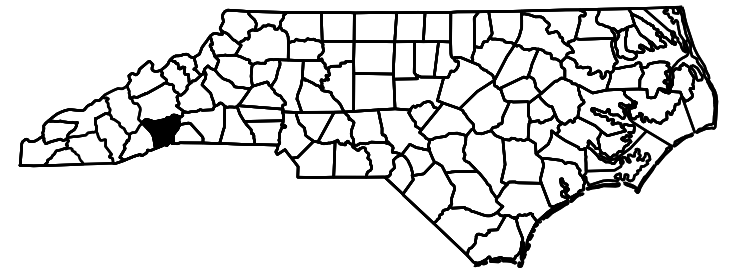
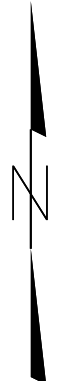
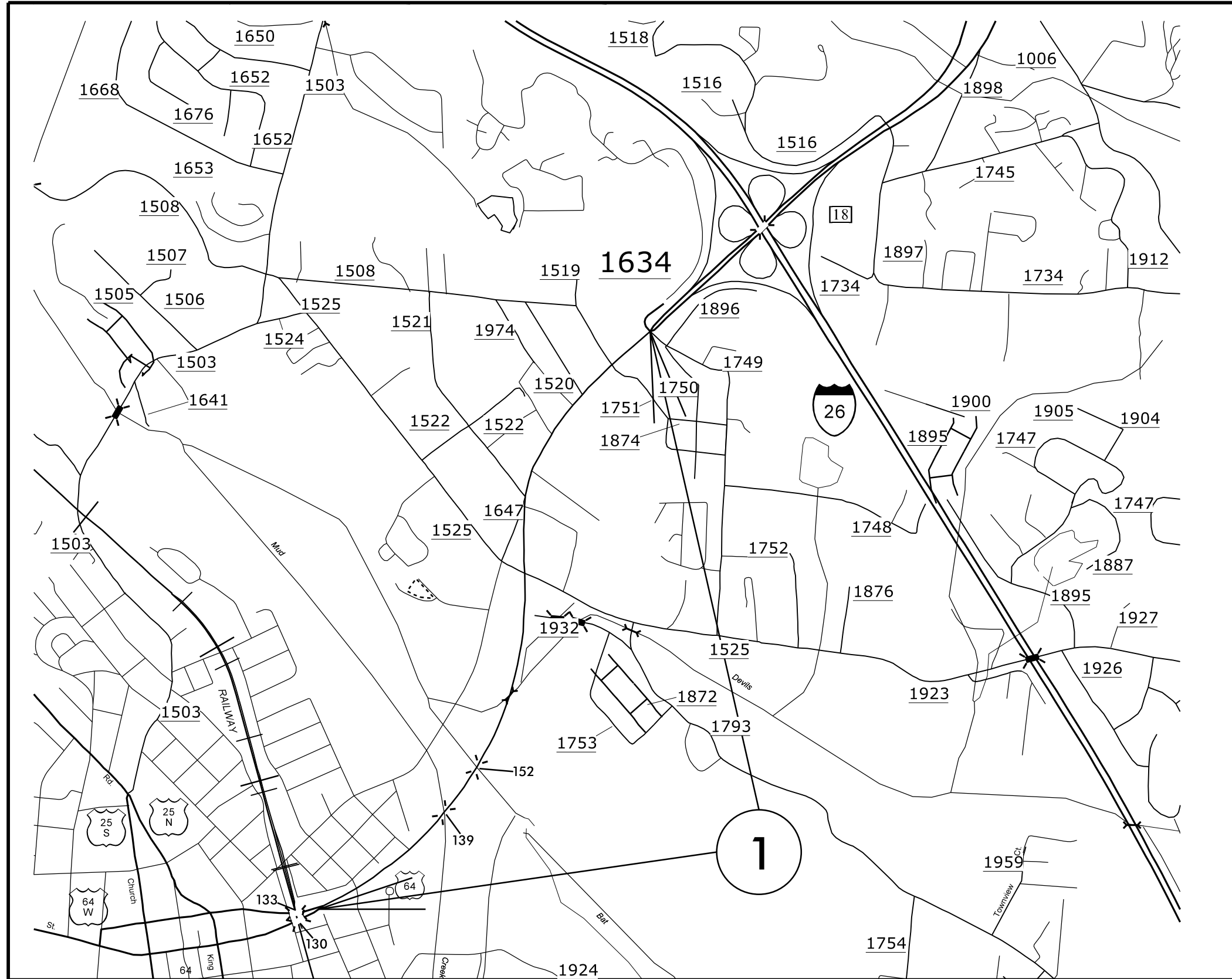
**This file or an individual page
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TIP PROJECT: N/A

CONTRACT: C203909

HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.02.10451.1		1
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.02.10451.1		

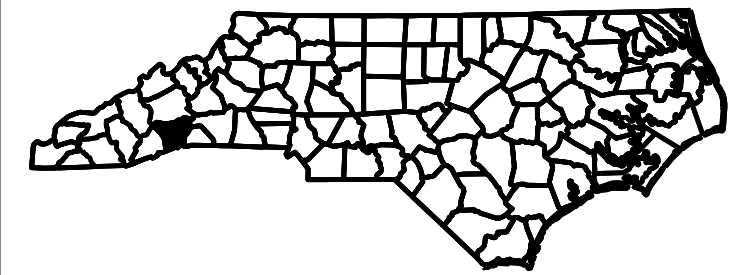
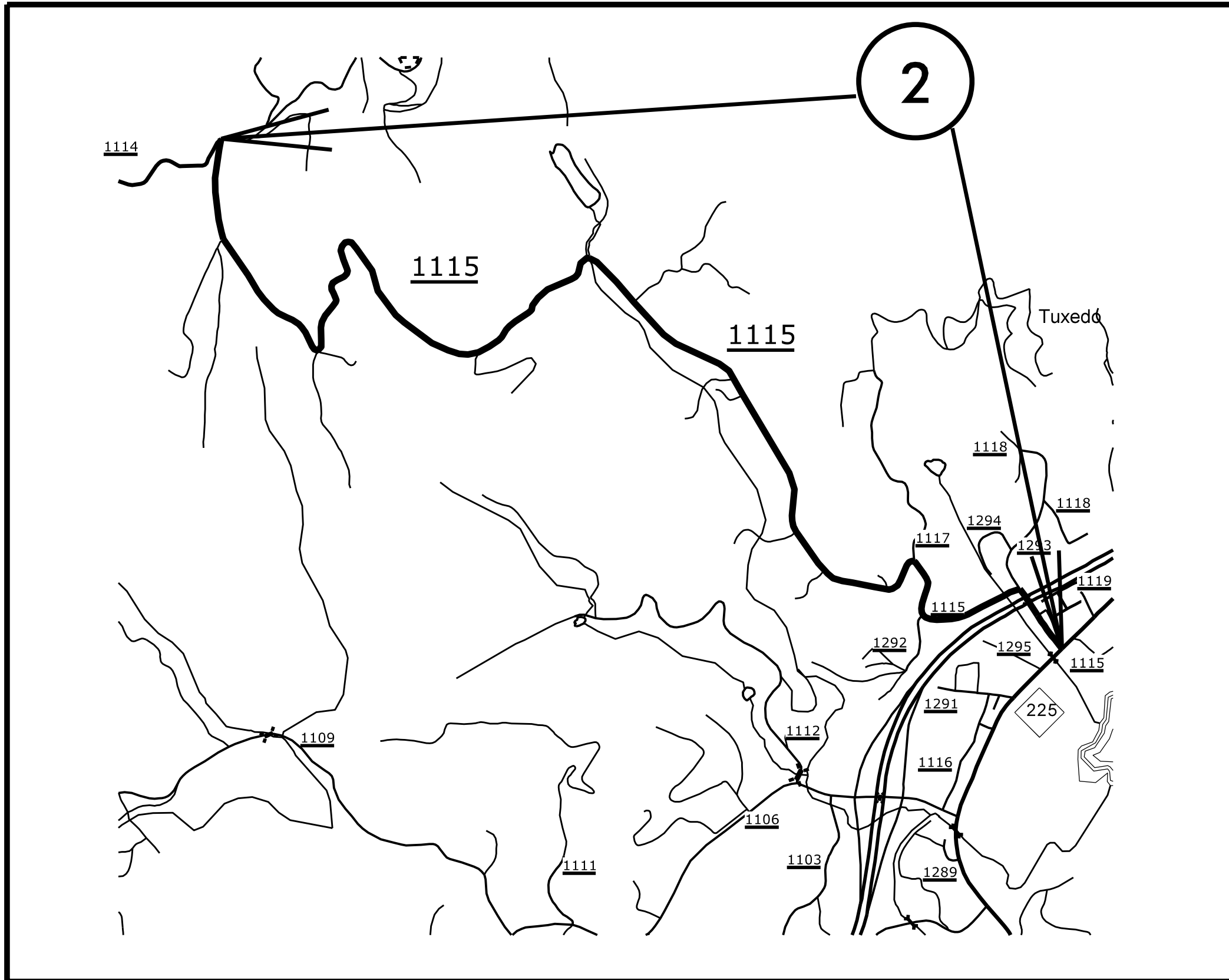


TIP PROJECT: N/A

CONTRACT:

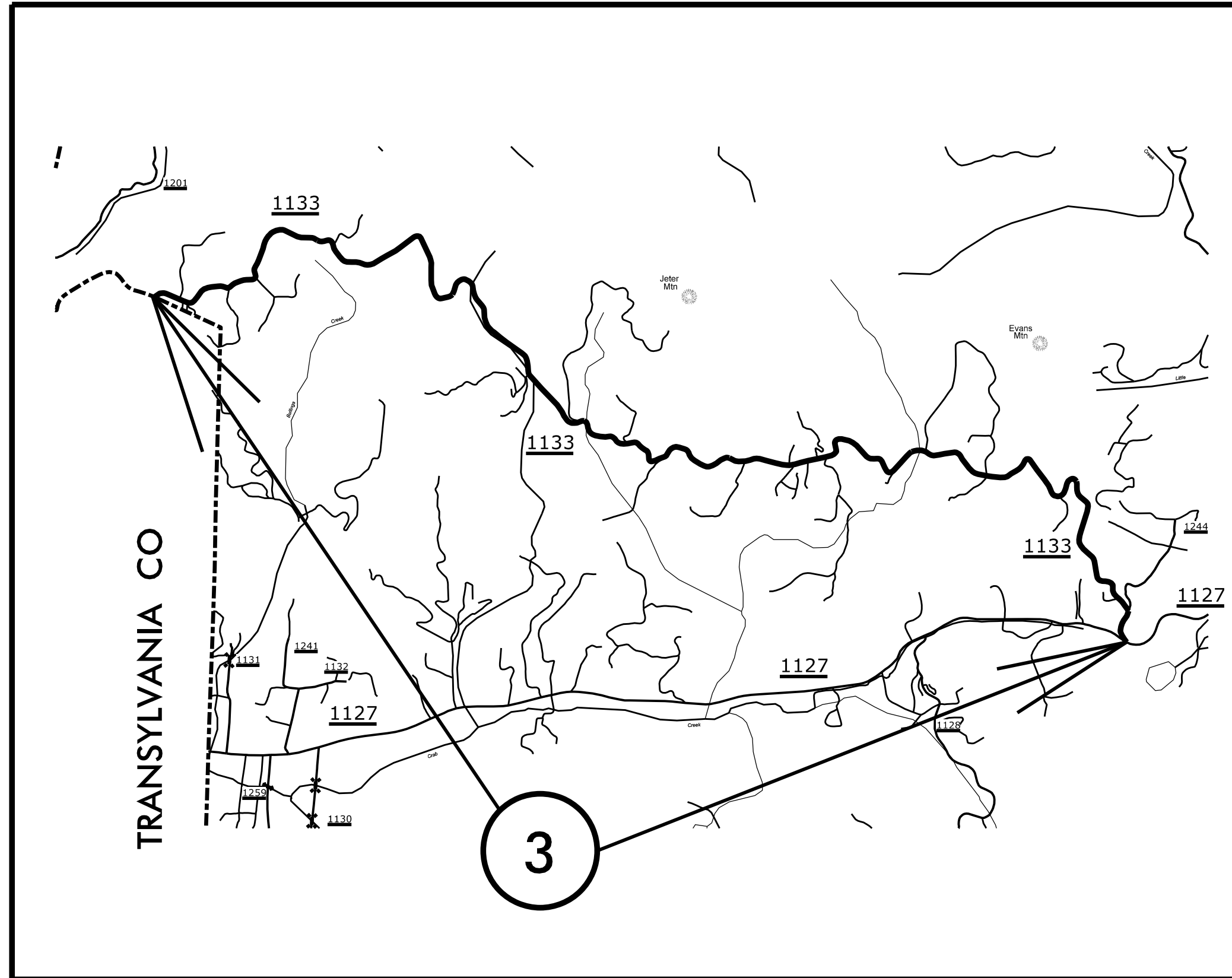
HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		2
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

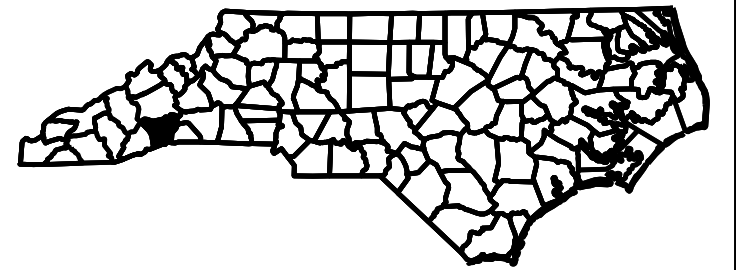


HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	3	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		



TRANSYLVANIA CO



TIP PROJECT: N/A

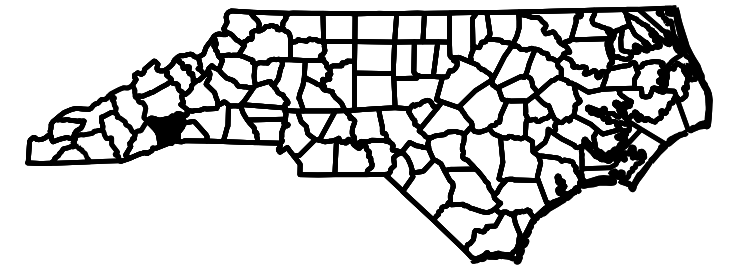
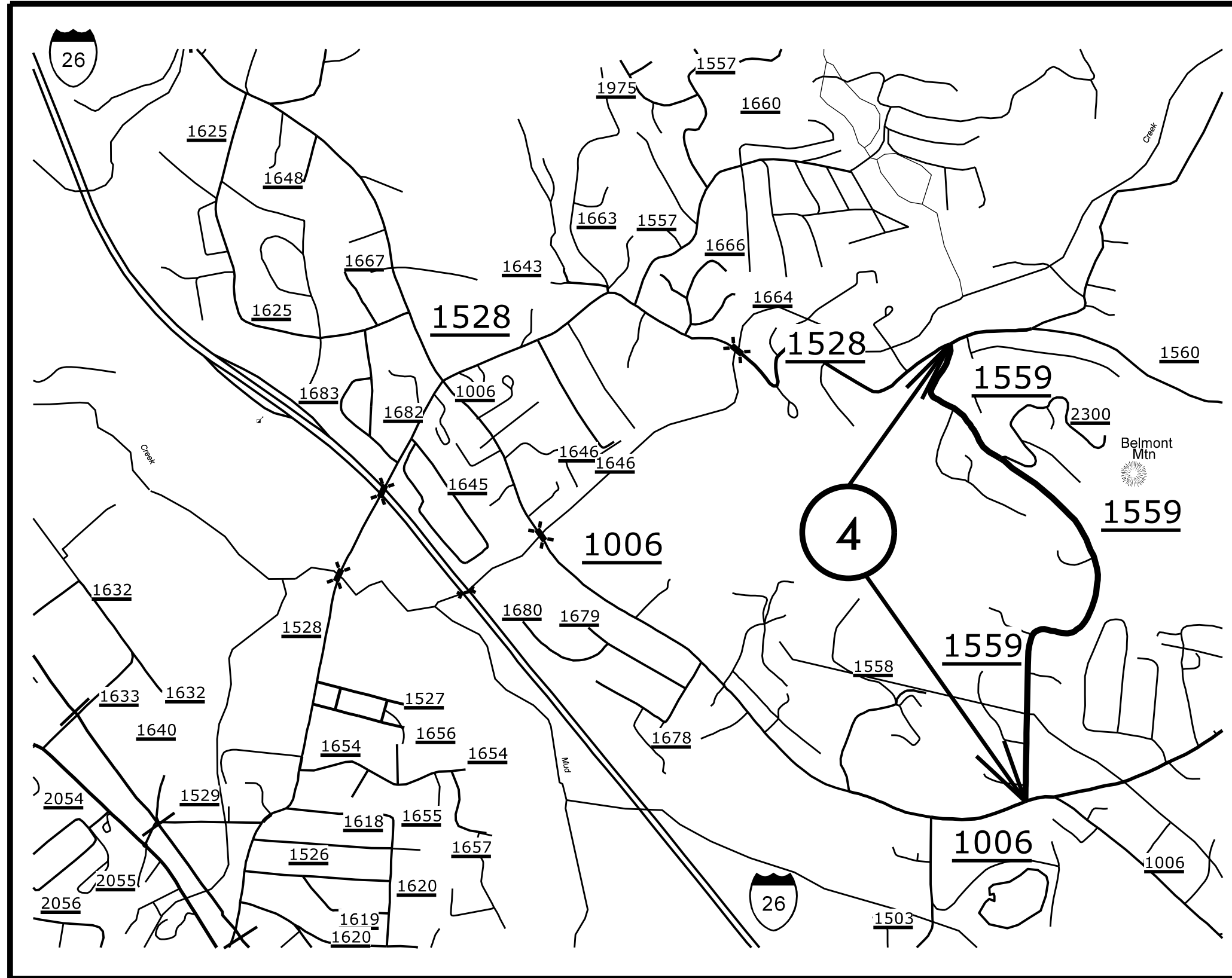
CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT14.02.20451.1		4
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

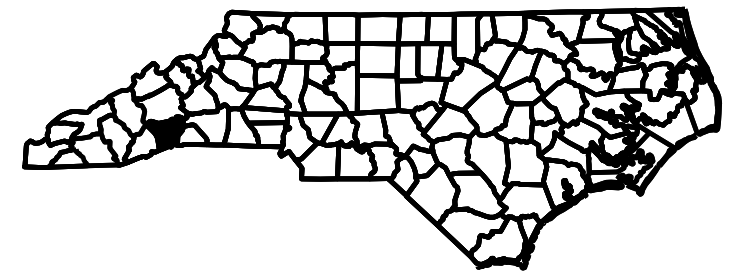
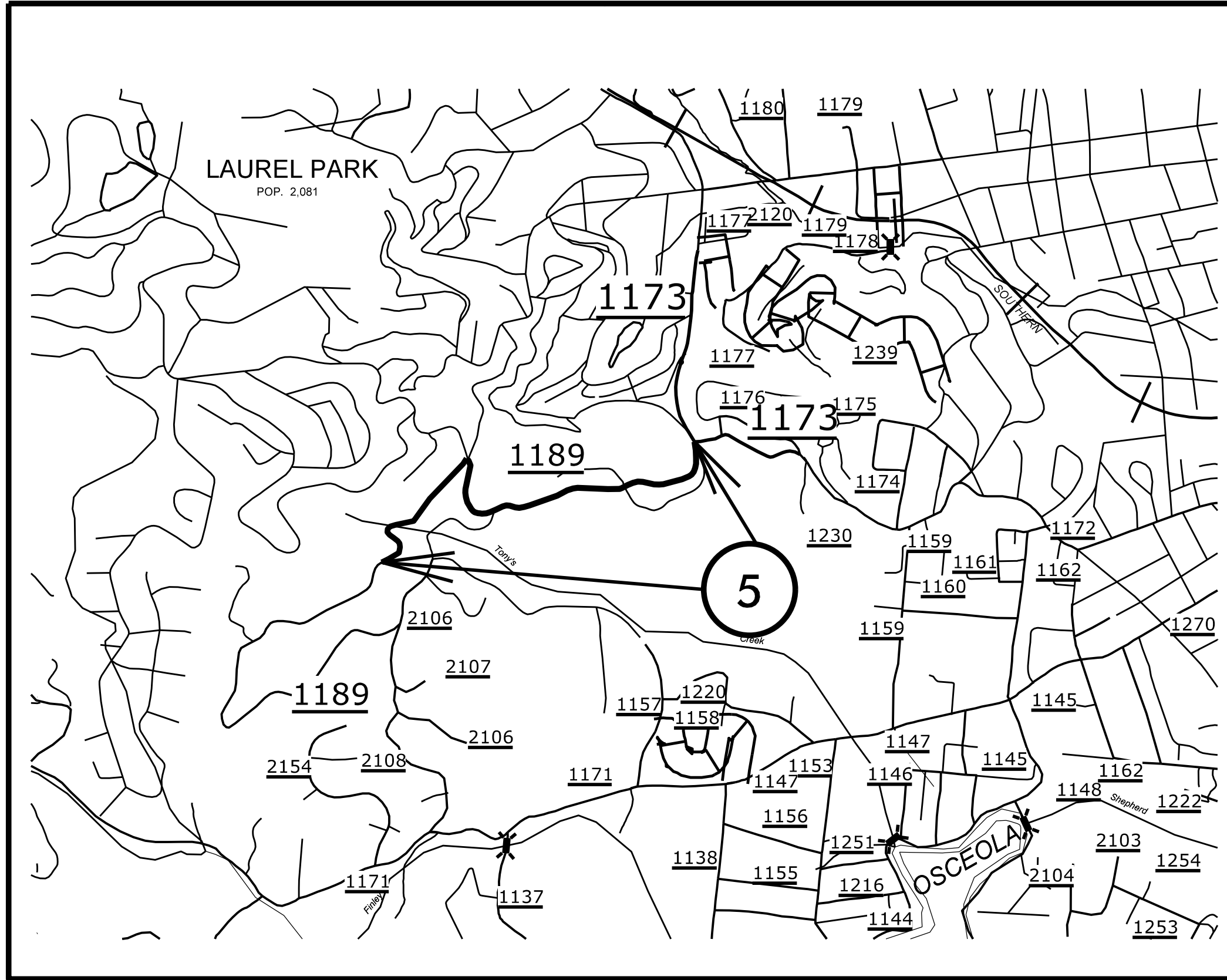


TIP PROJECT: N/A

CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	5	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

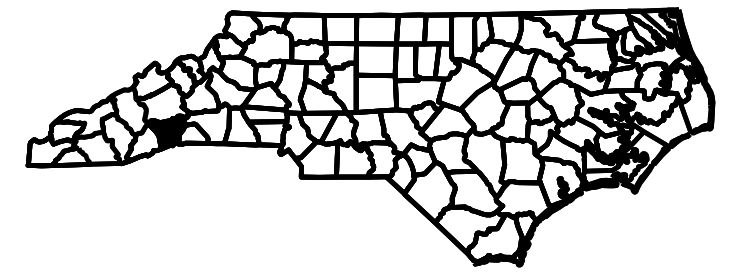
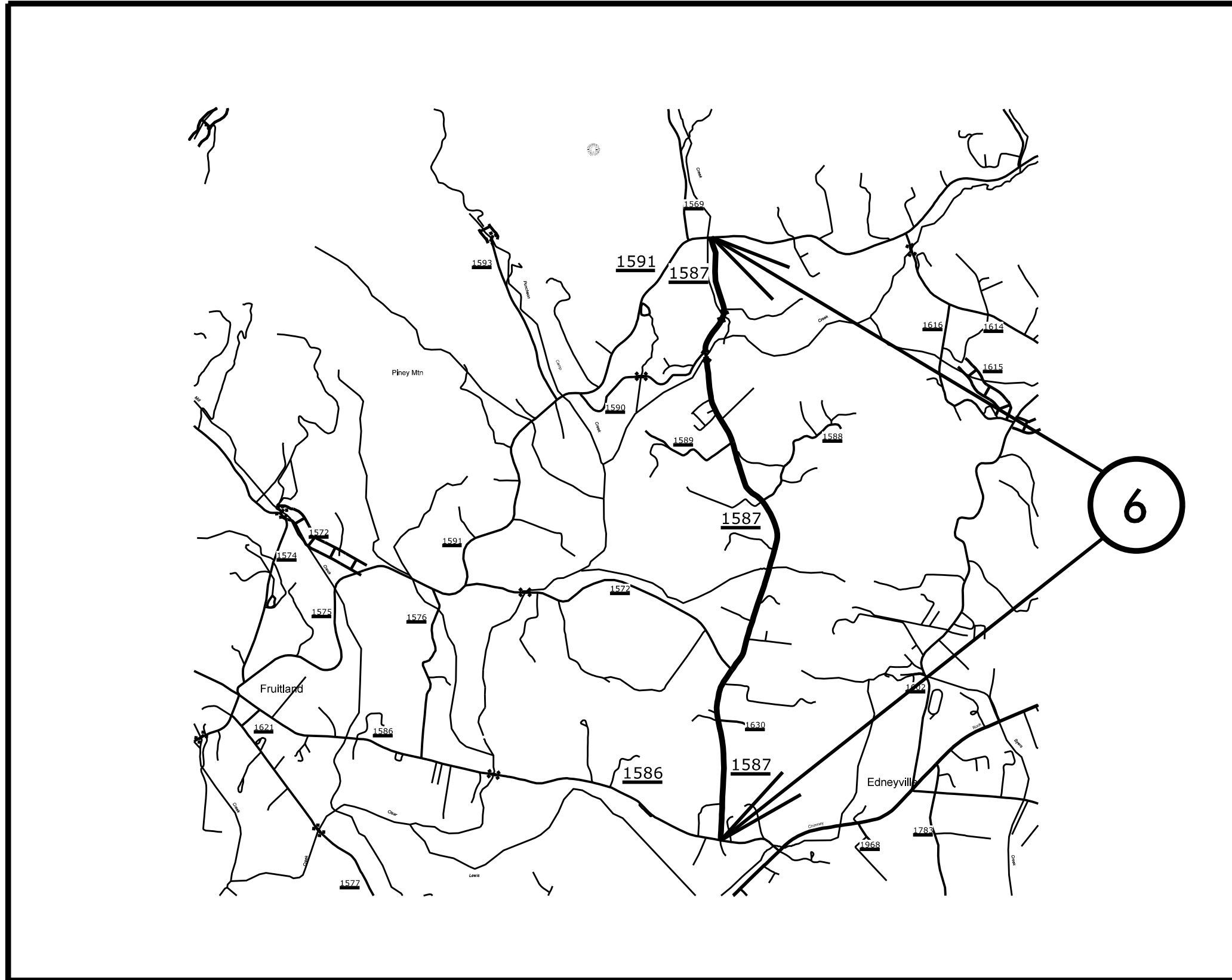


HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		6
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

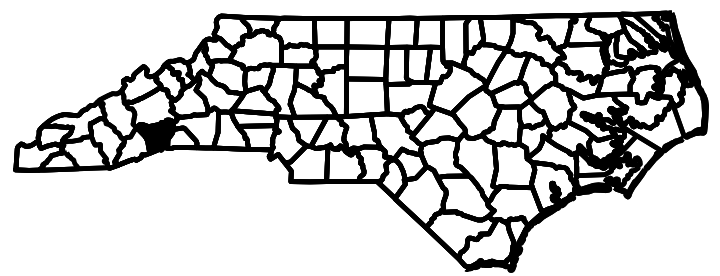
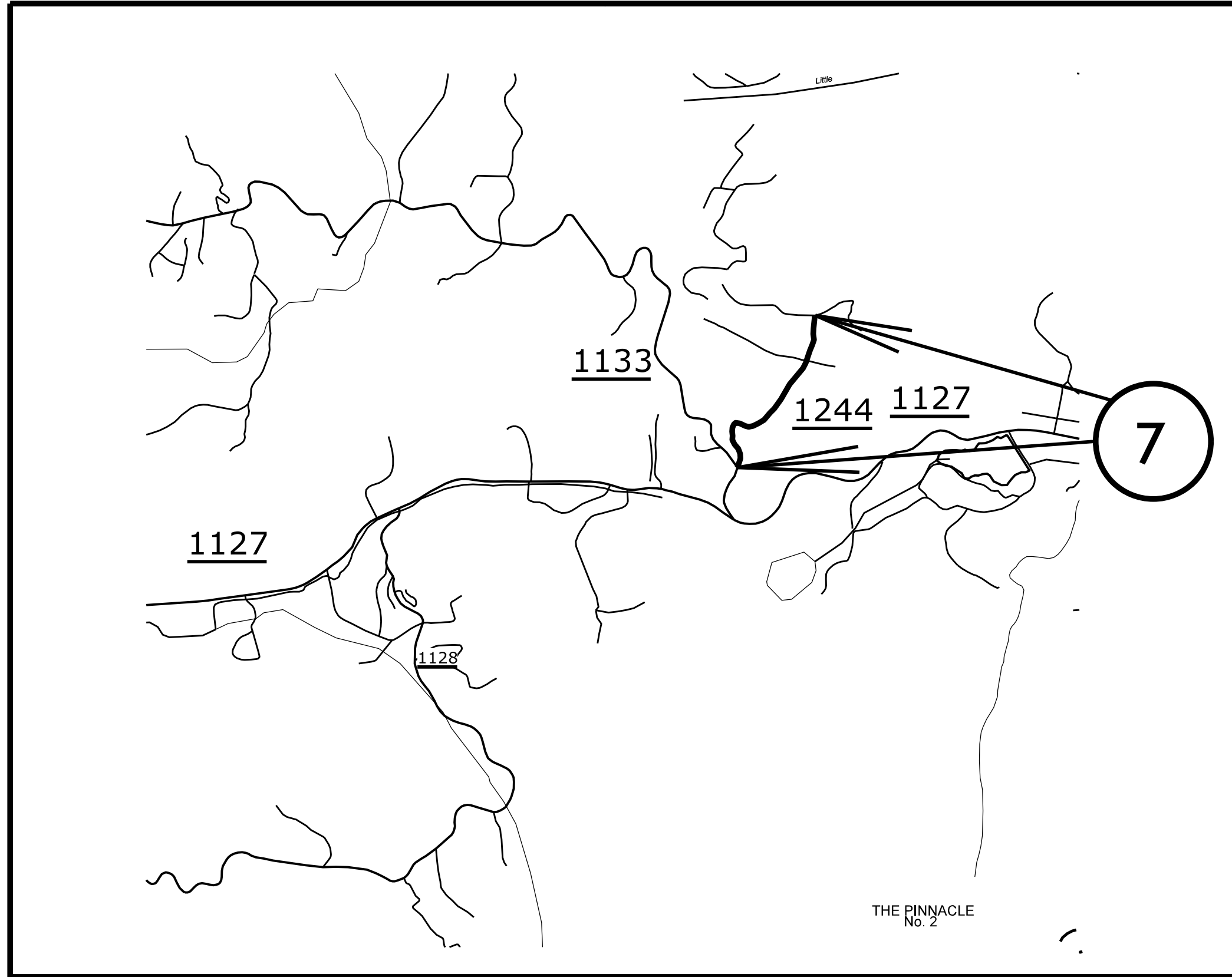
TIP PROJECT: N/A

CONTRACT:



HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		/
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.01.20451.1		



TIP PROJECT: N/A

CONTRACT:

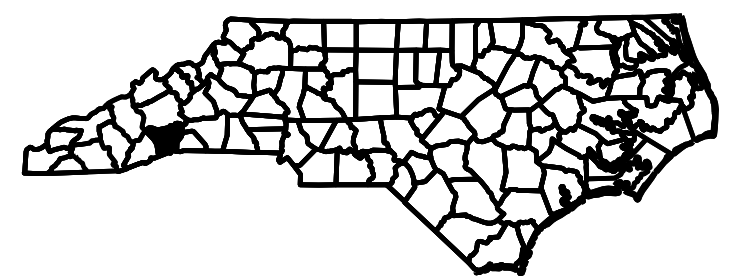
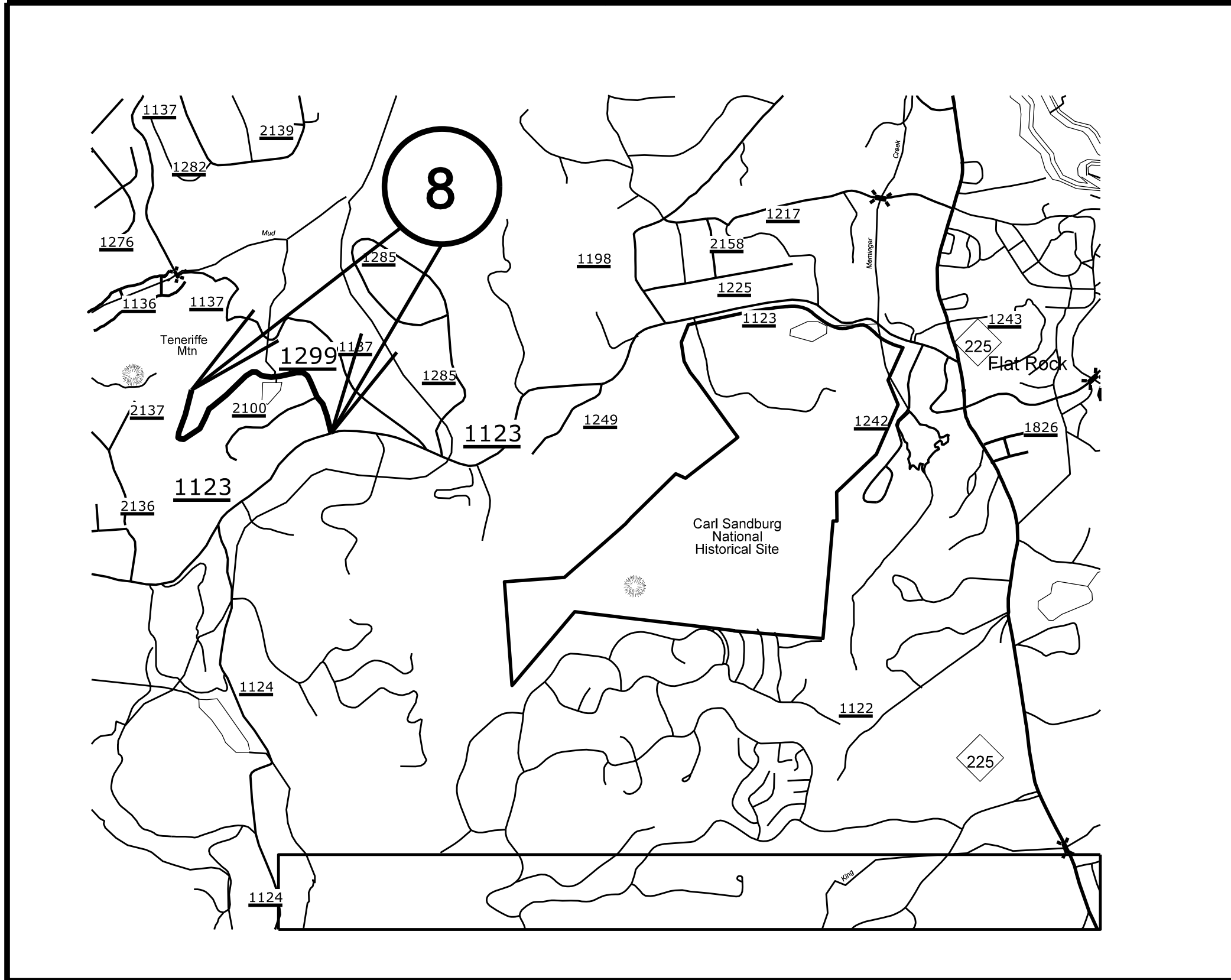
THE PINNACLE
No. 2

TIP PROJECT: N/A

CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	8	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

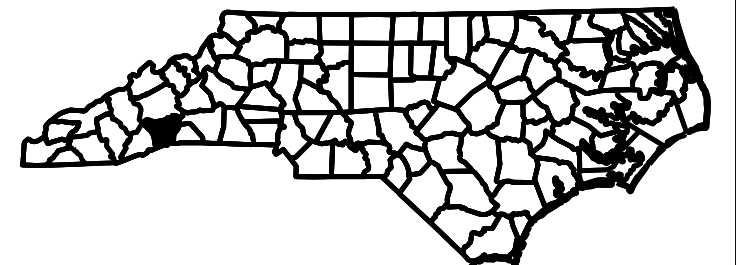
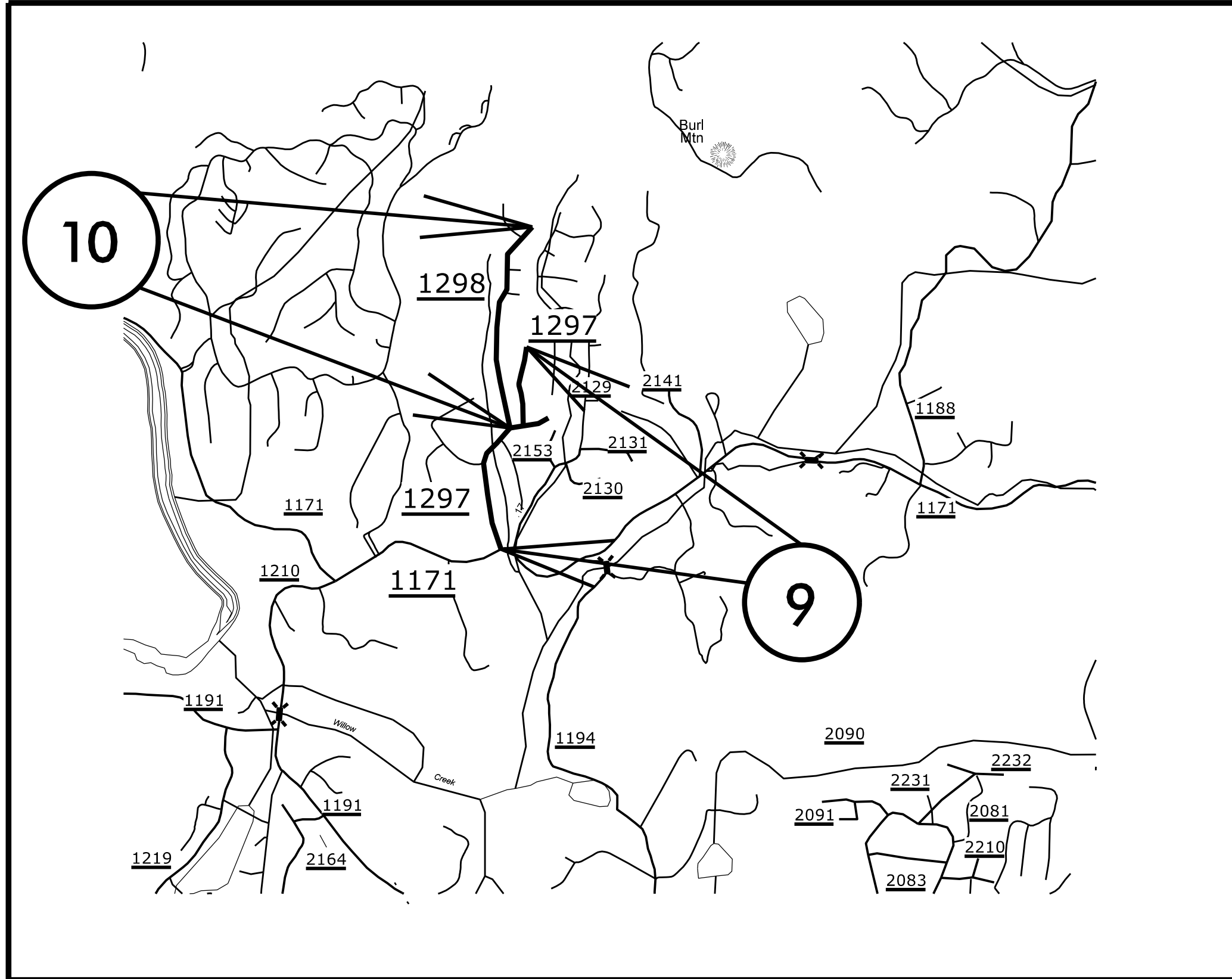


HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		9
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

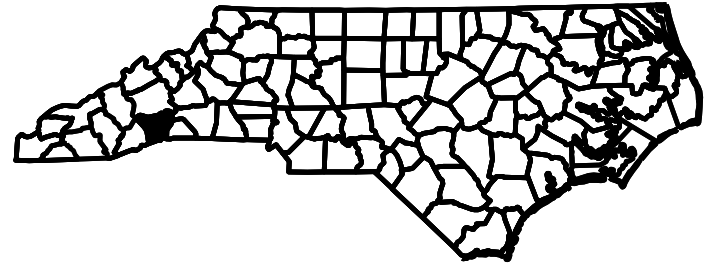
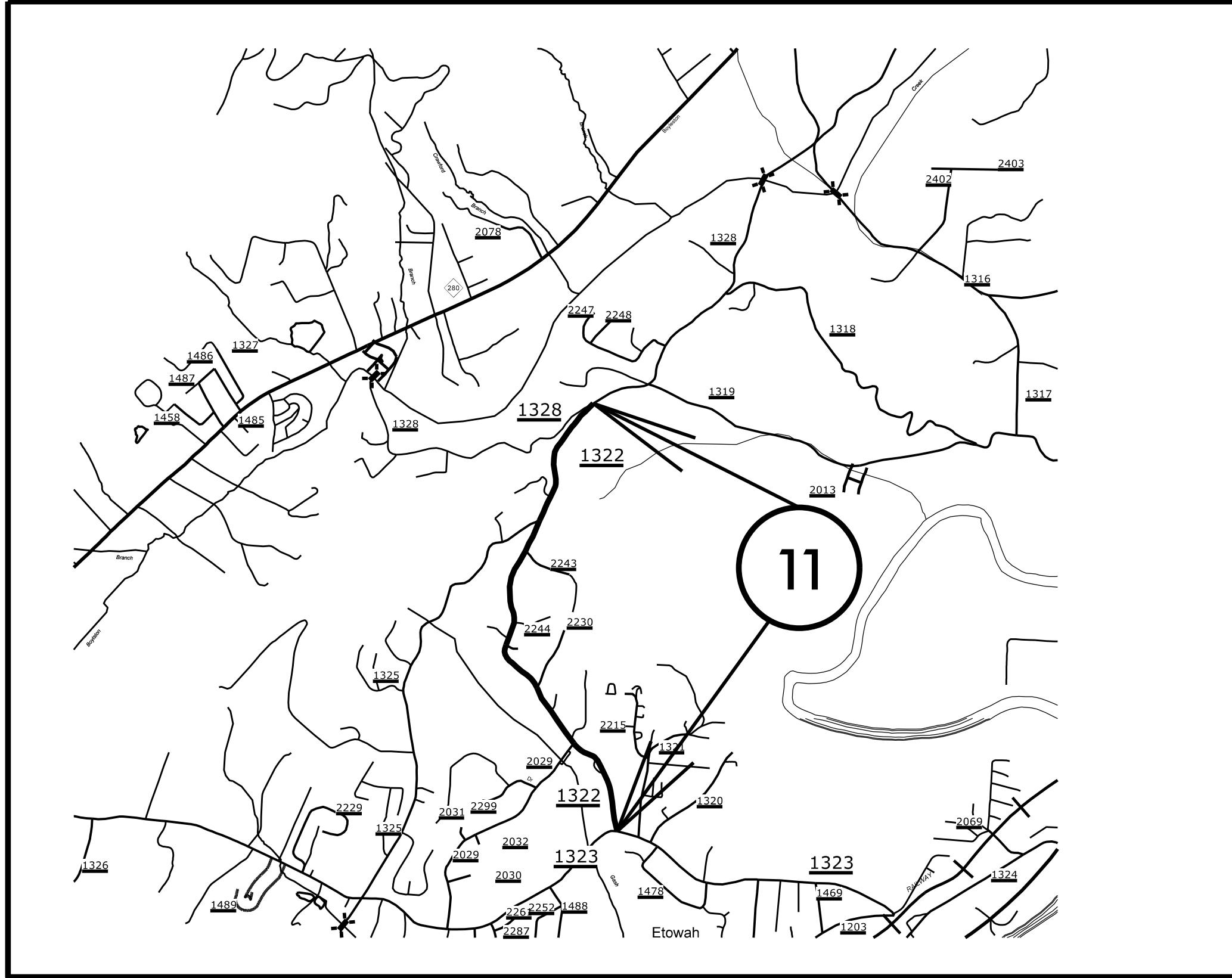


HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		10
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

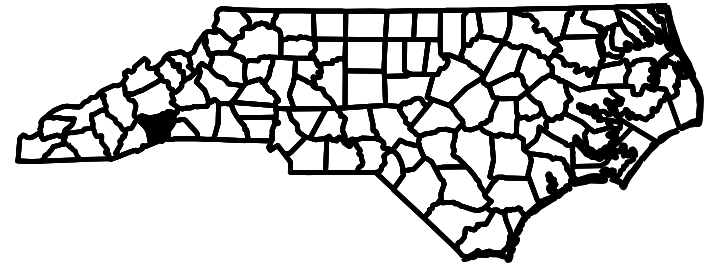
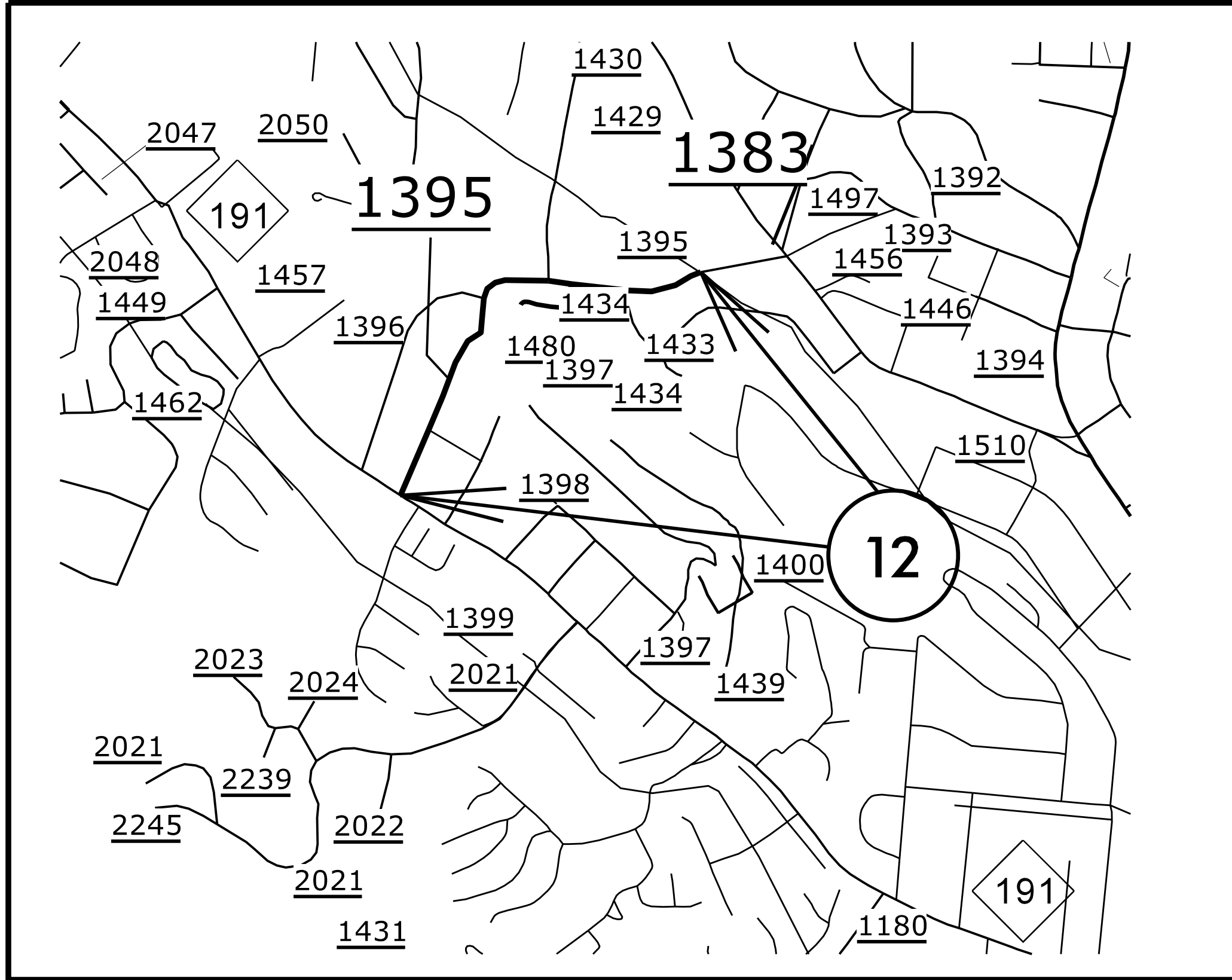


HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		1
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

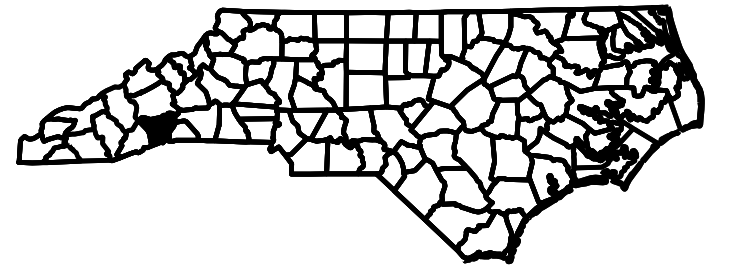
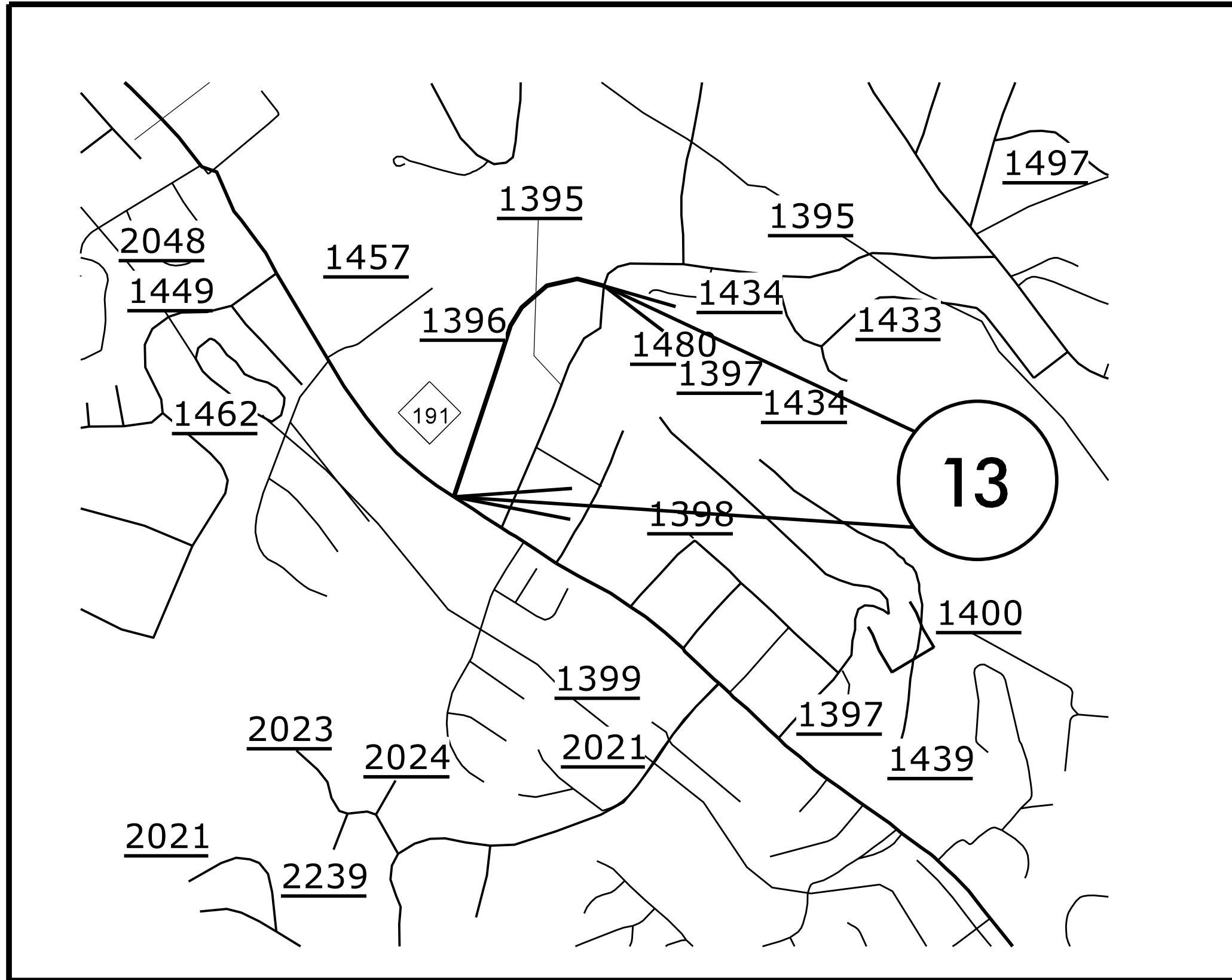


HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	12	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

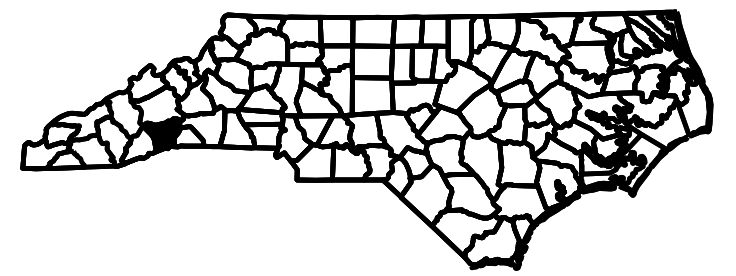
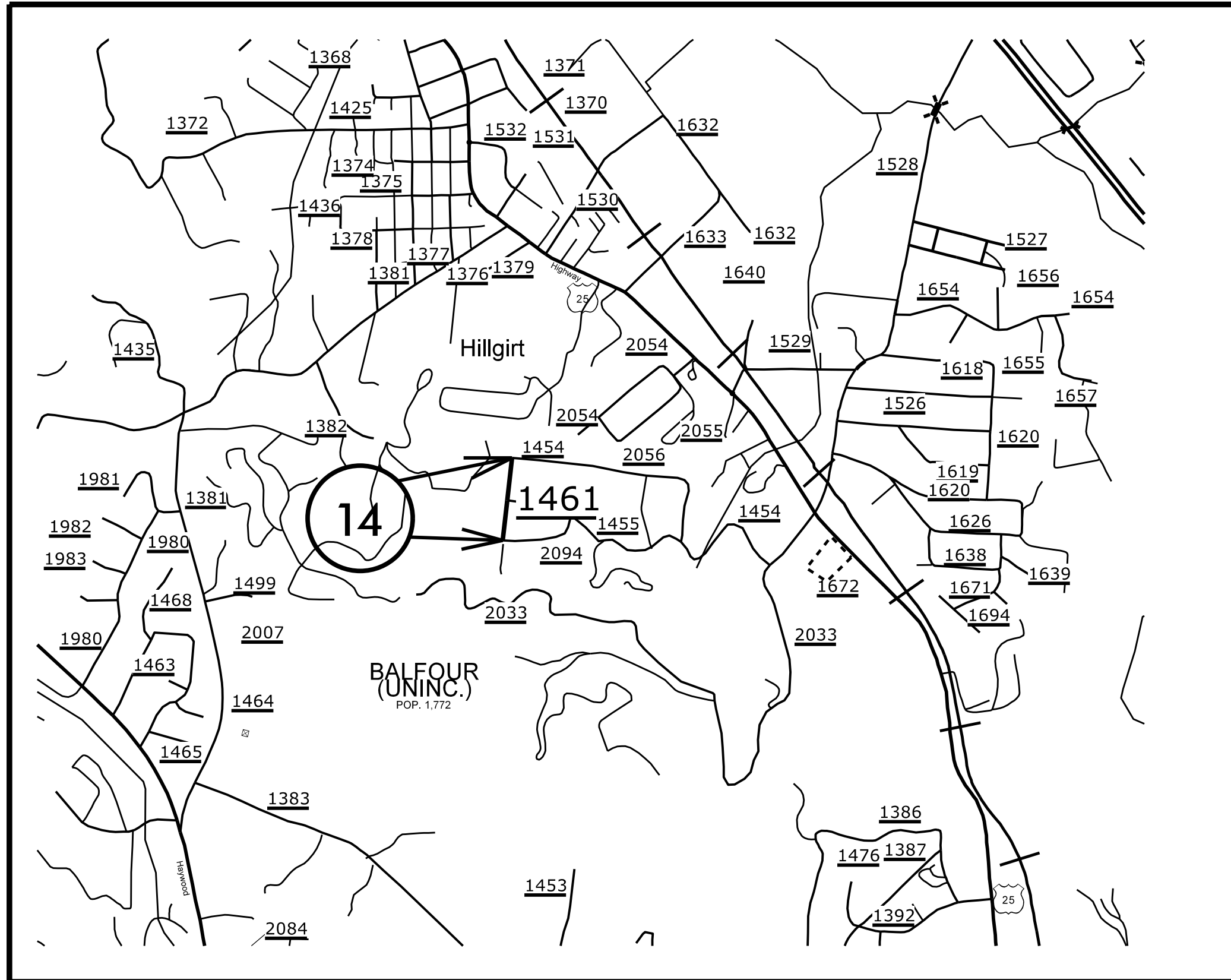


TIP PROJECT: N/A

CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.
2017CPT.14.02.20451.1	13
STATE PROJECT	F.A. PROJECT NO. DESCRIPTION
2017CPT.14.02.20451.1	

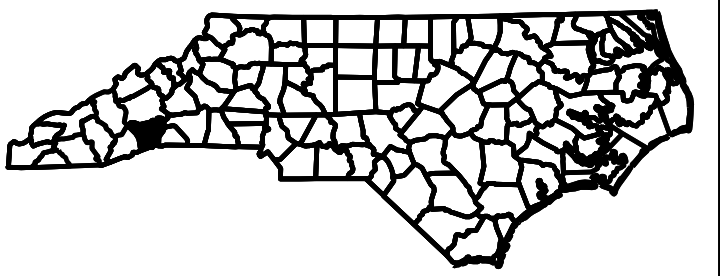
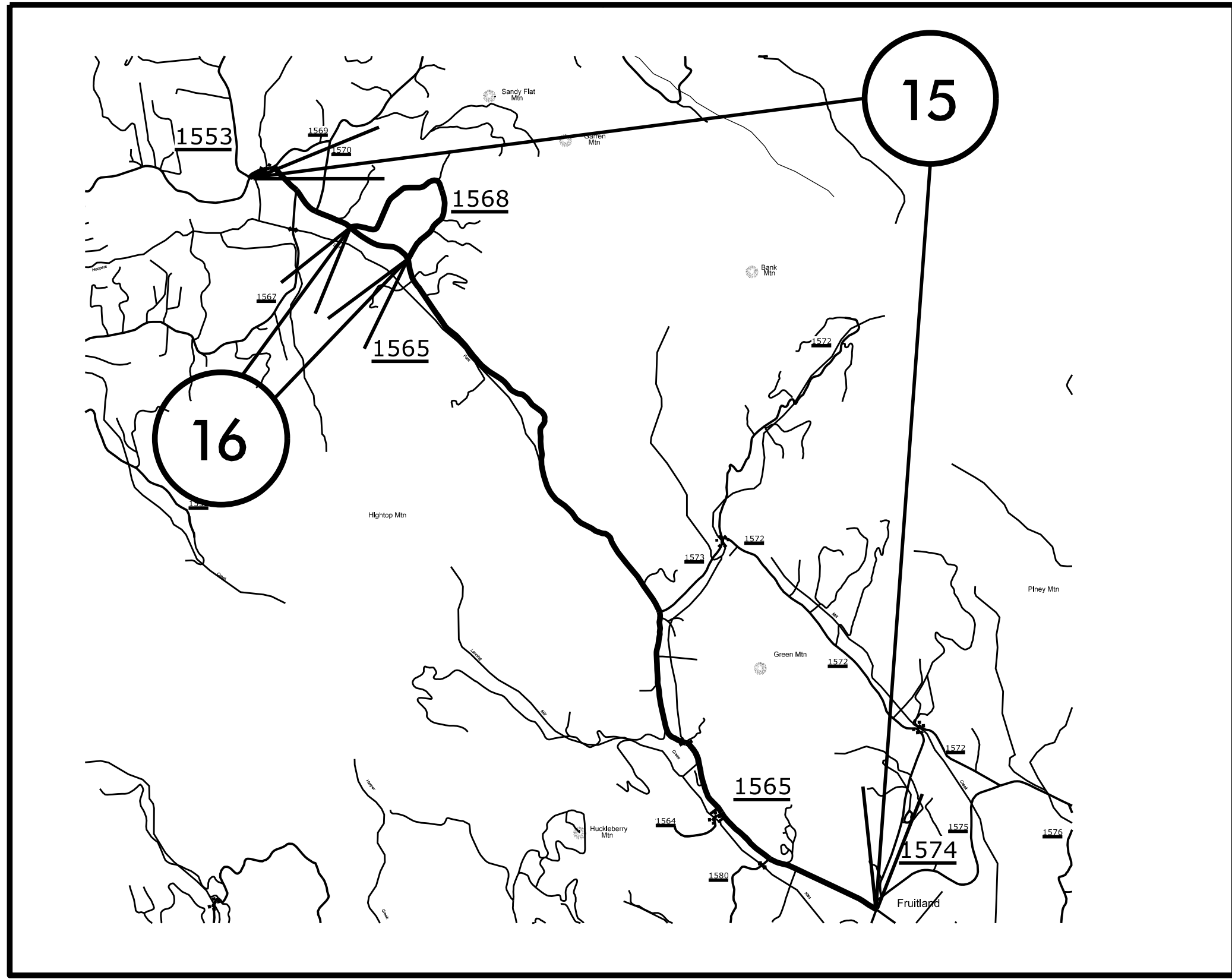


HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		4
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

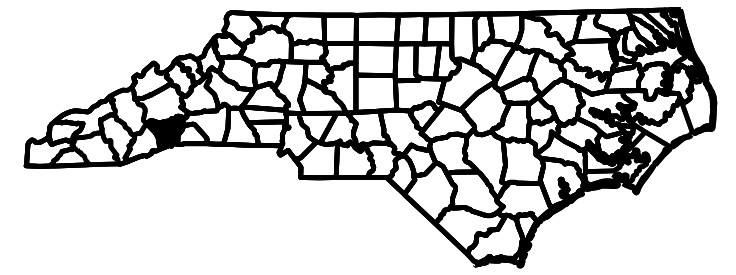
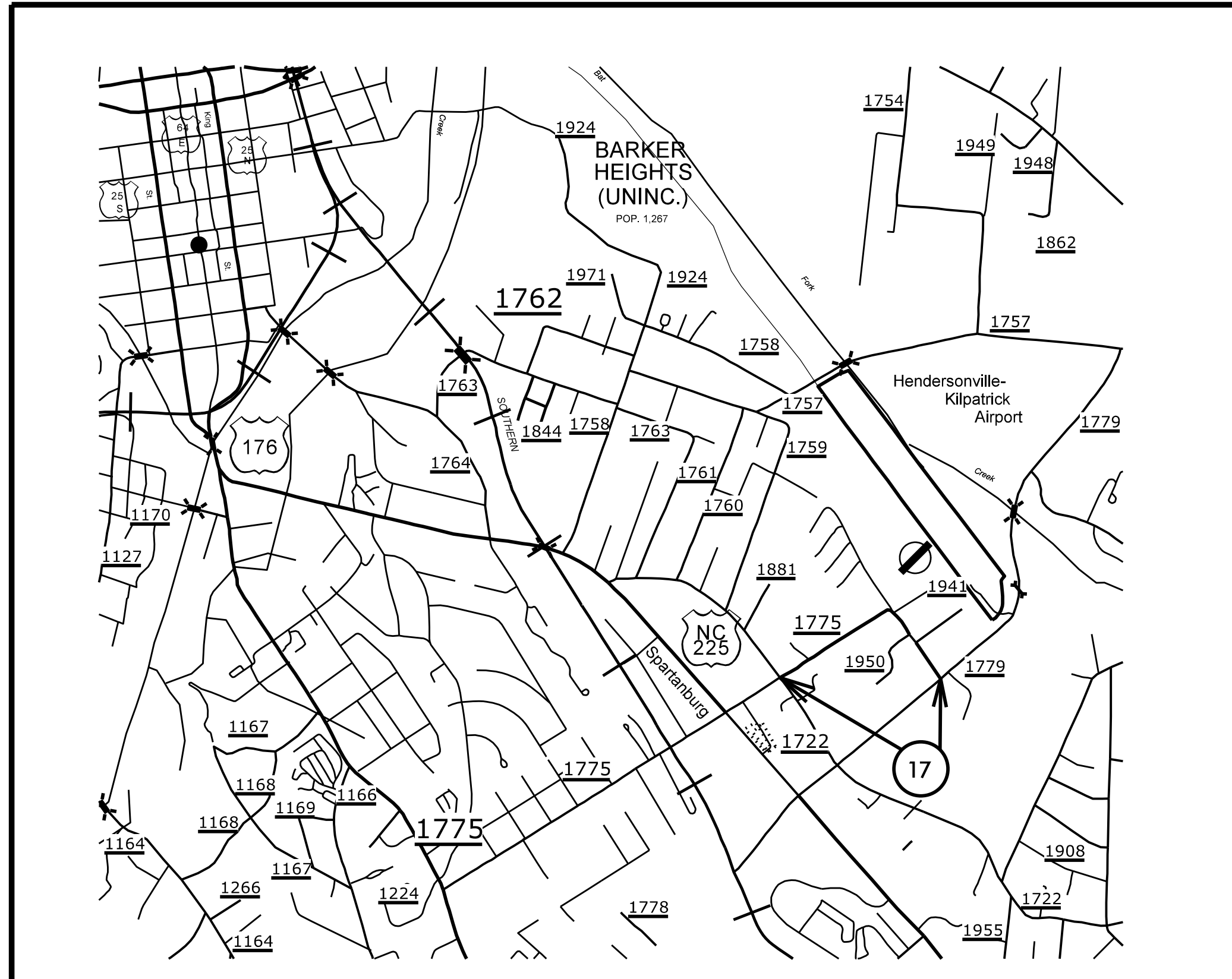
TIP PROJECT: N/A

CONTRACT:



HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		15
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		



TIP PROJECT: N/A

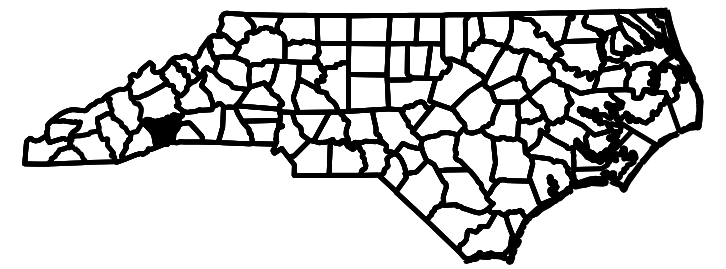
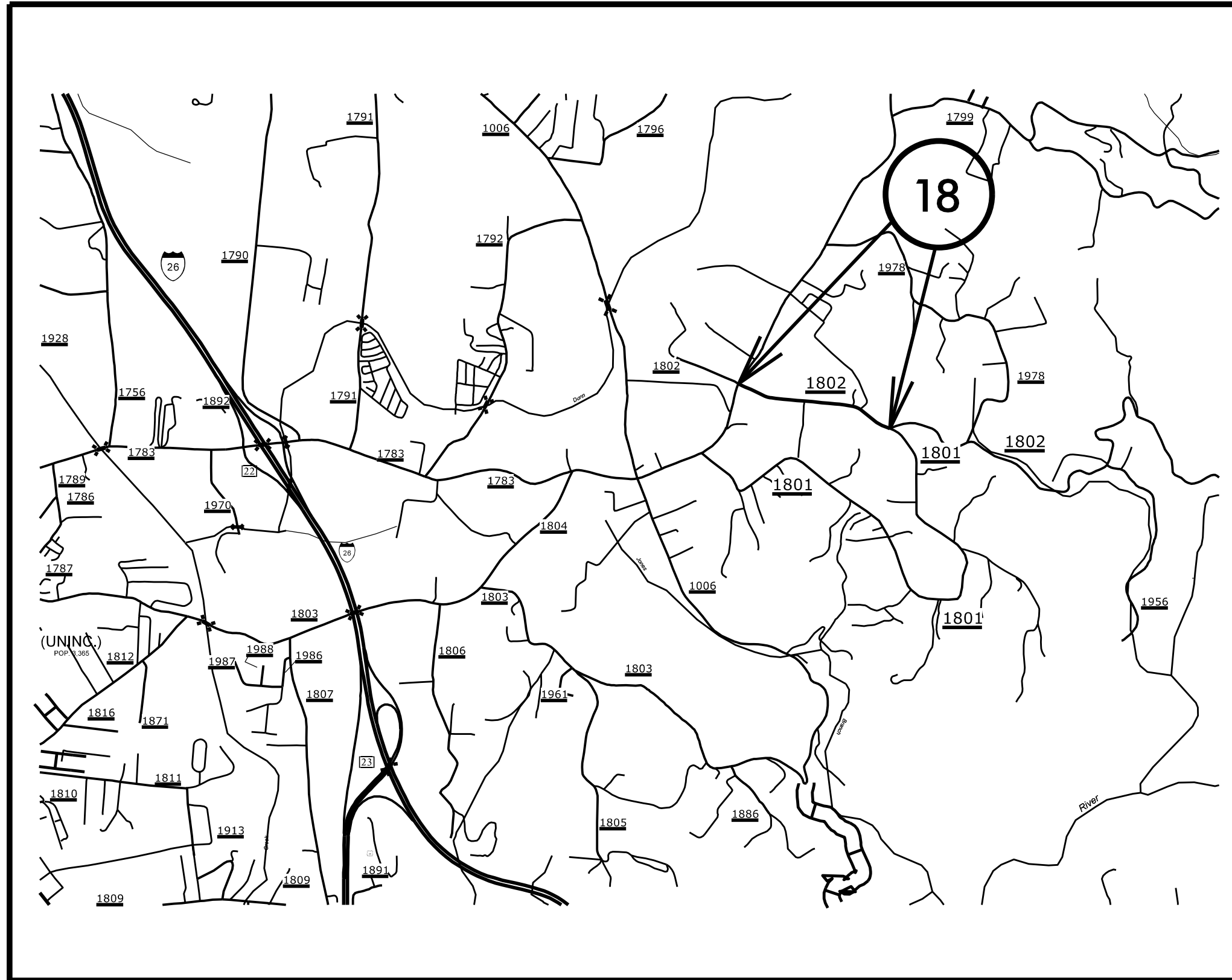
CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		6
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

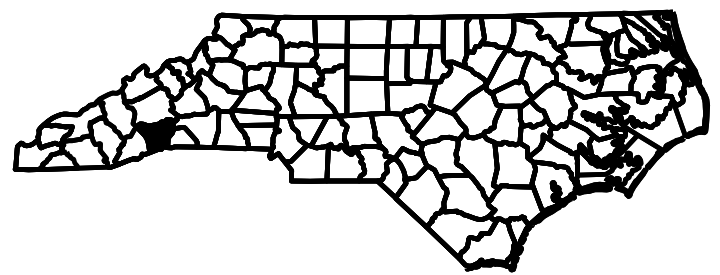
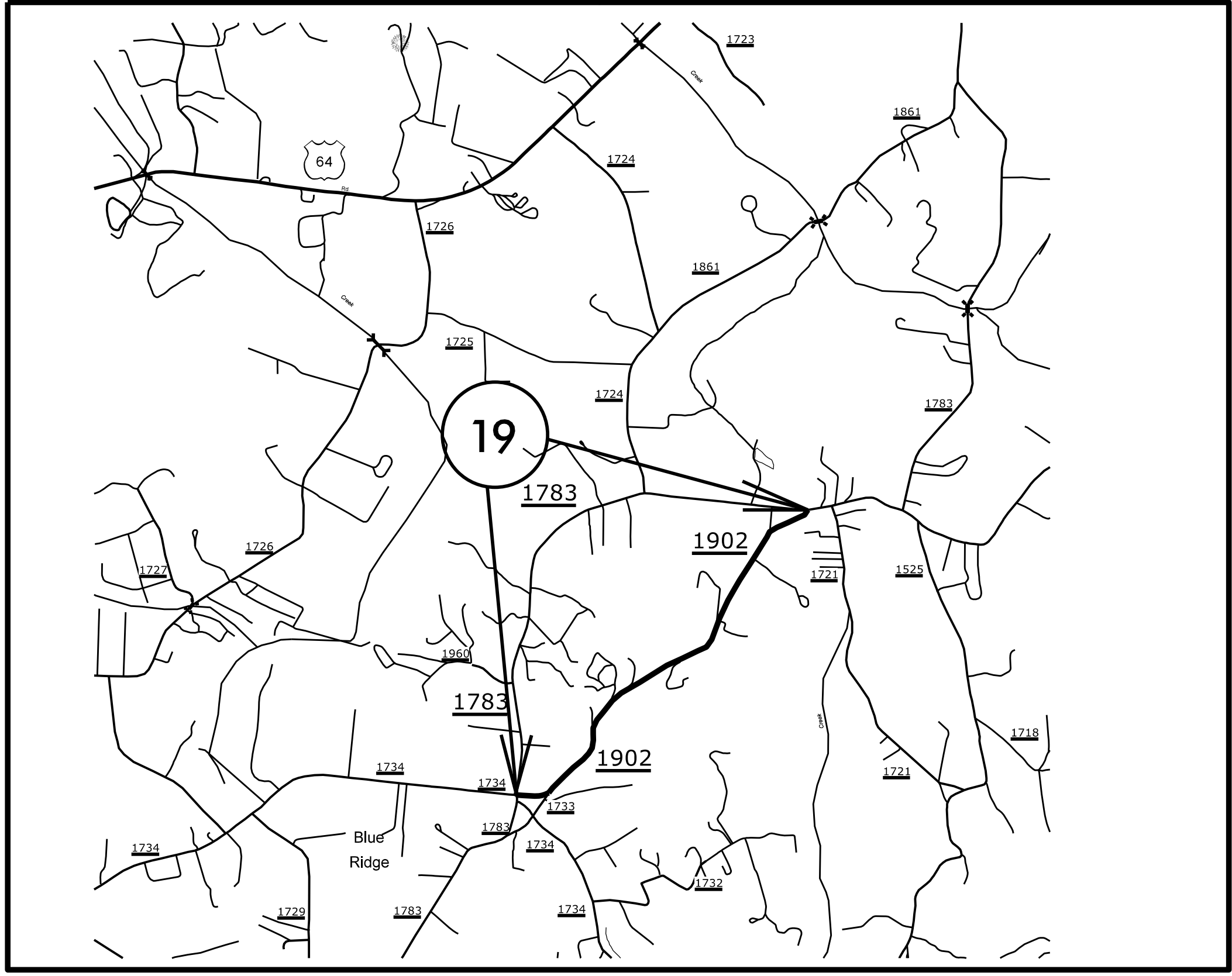


TIP PROJECT: N/A

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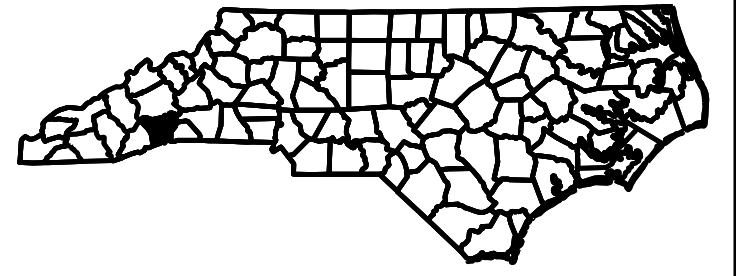
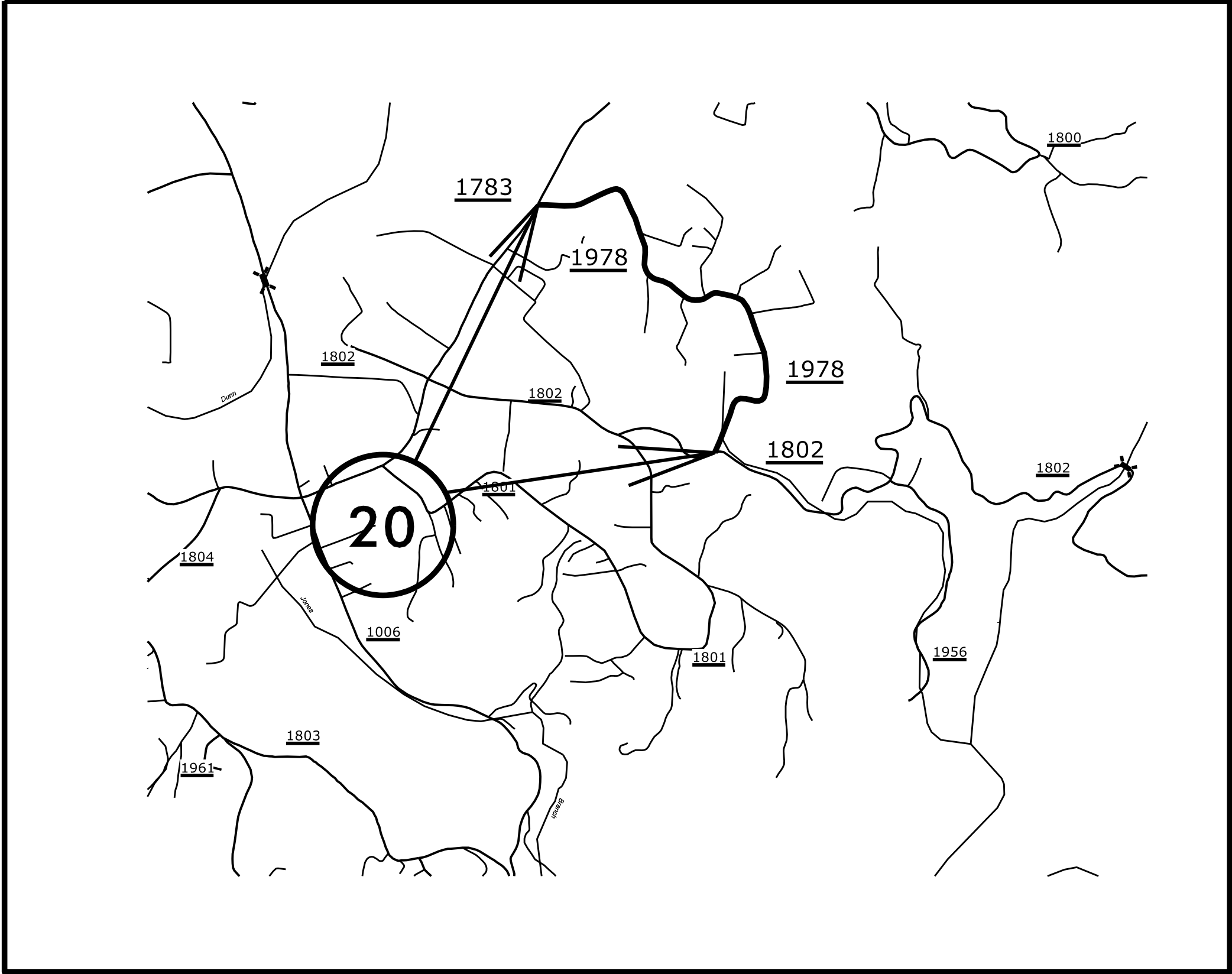
HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	17	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		



HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	18	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		



TIP PROJECT: N/A

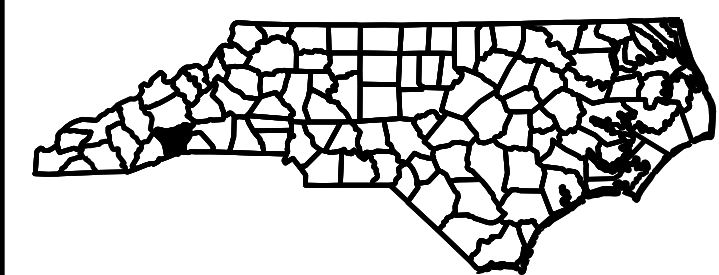
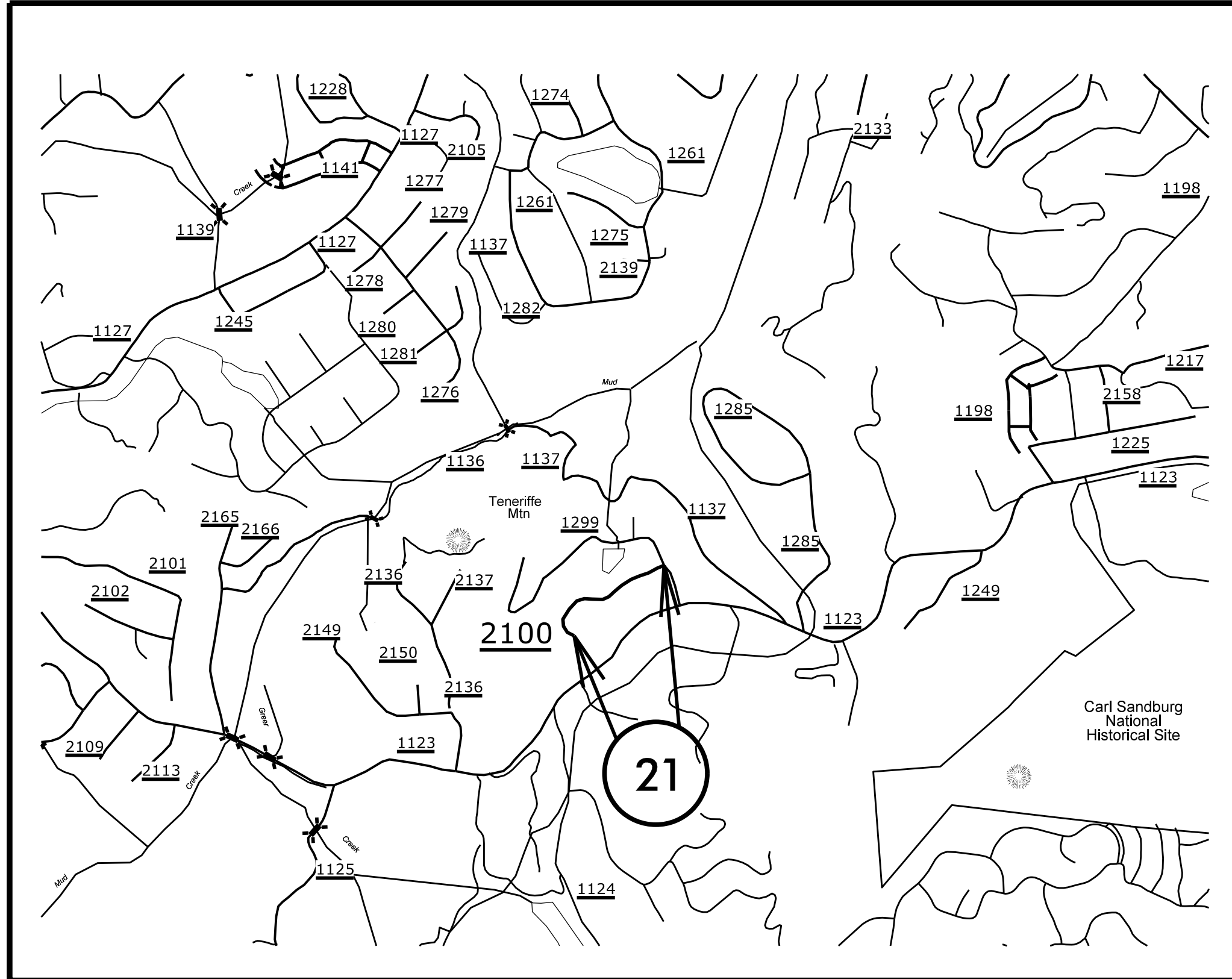
CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		19
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

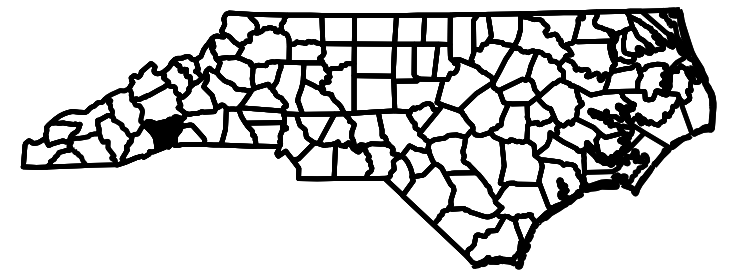
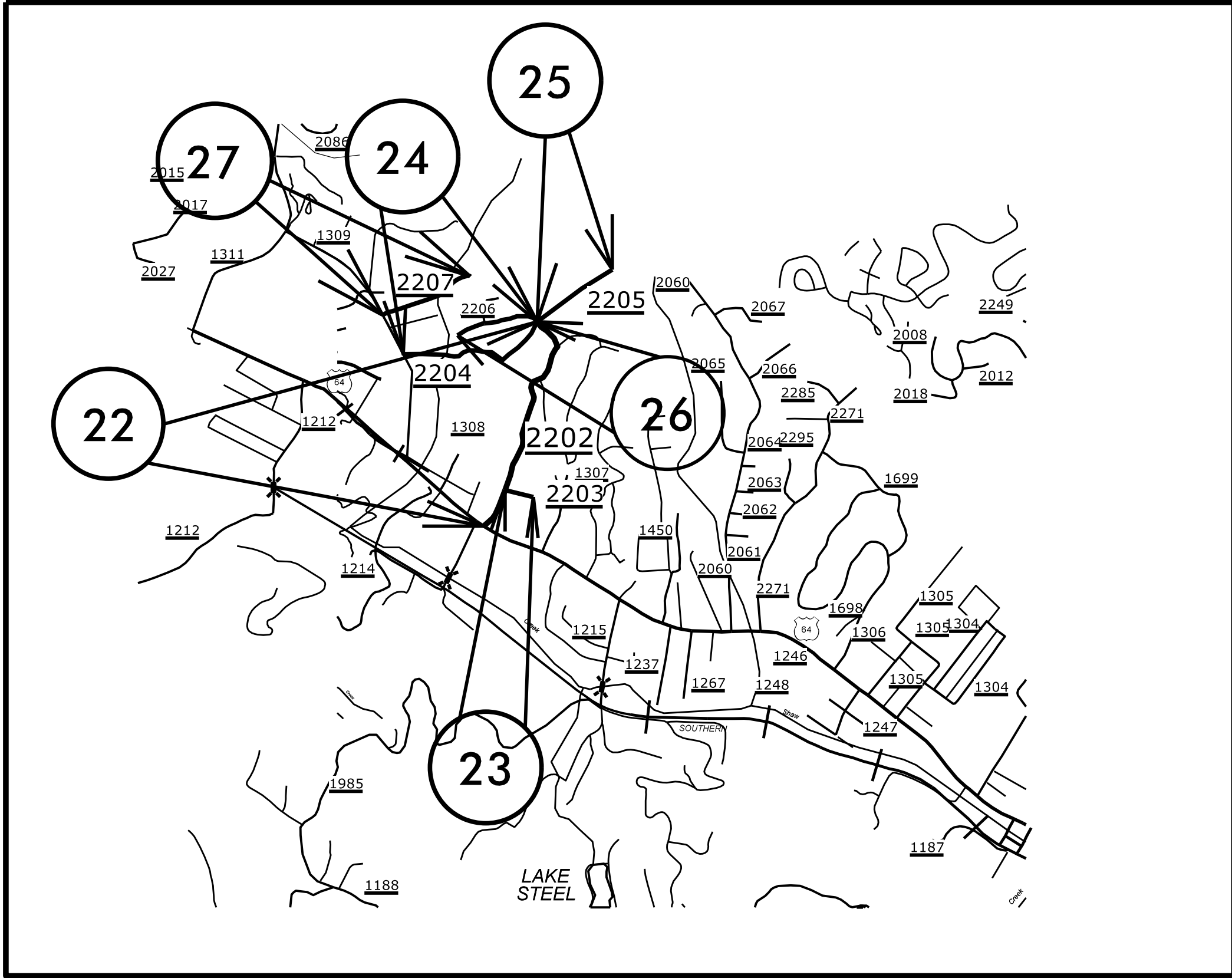


TIP PROJECT: N/A

CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	20	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

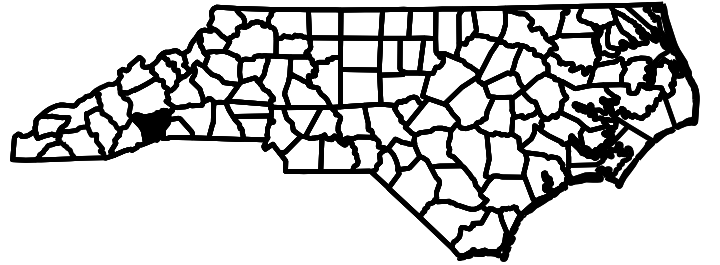
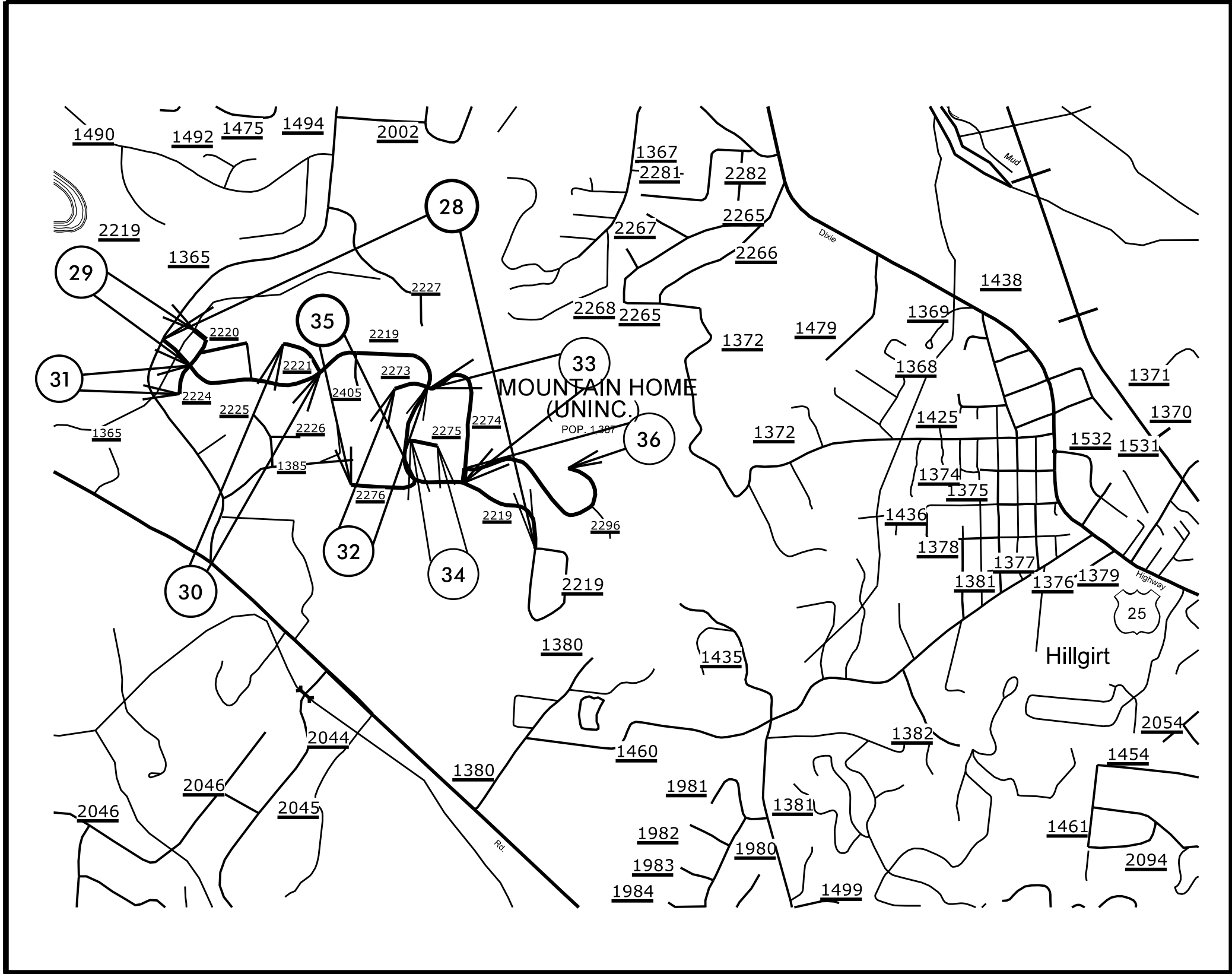


HENDERSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20451.1		21
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

TIP PROJECT: N/A

CONTRACT:

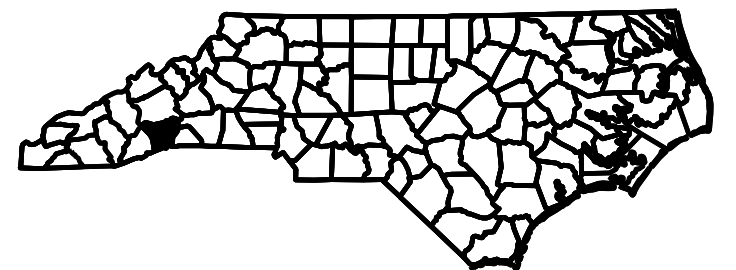
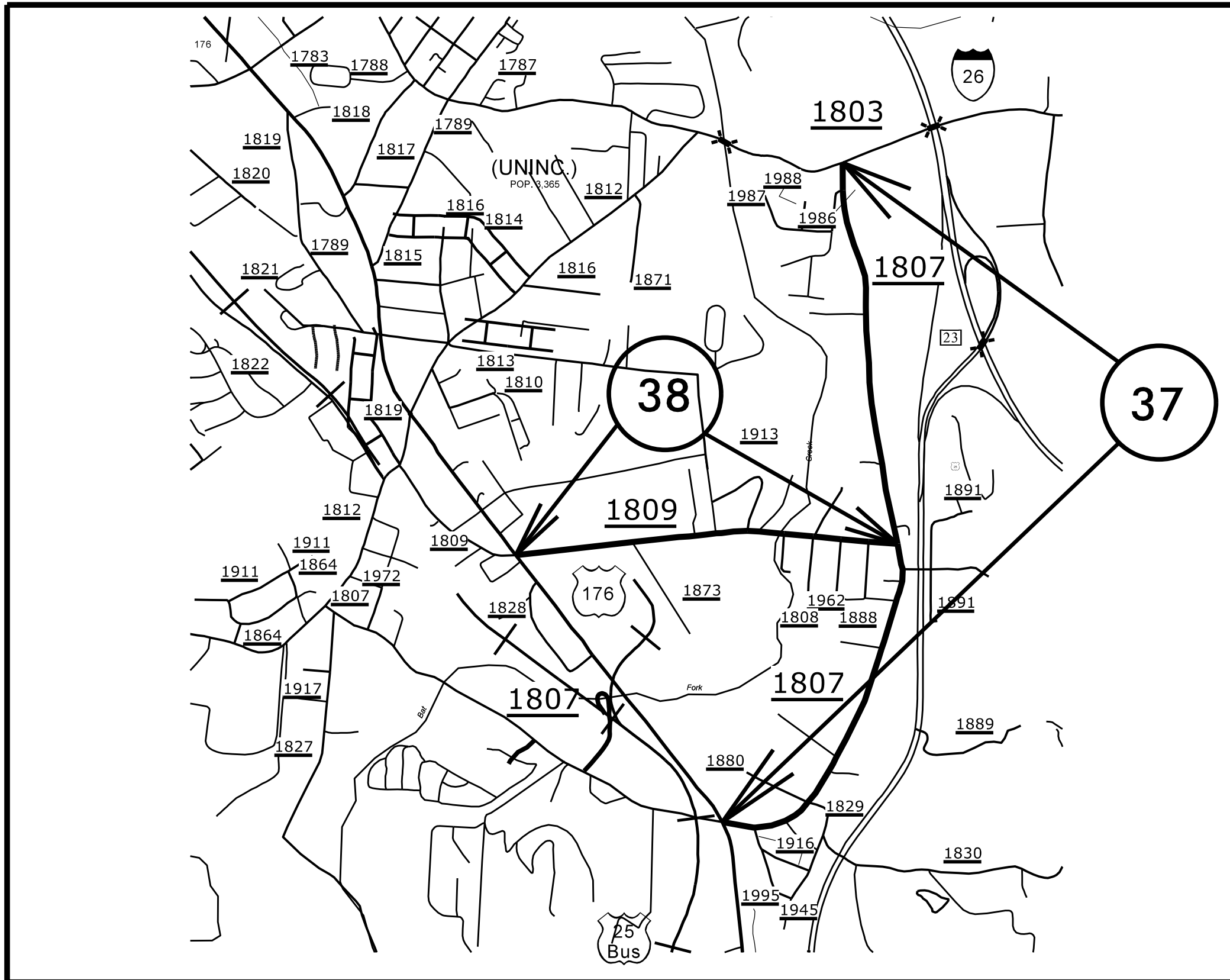


TIP PROJECT: N/A

CONTRACT:

HENDERSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20451.1	22	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		

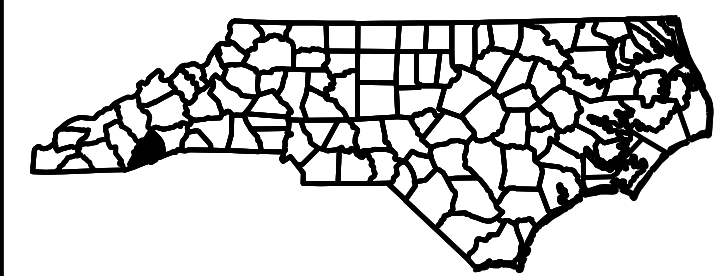
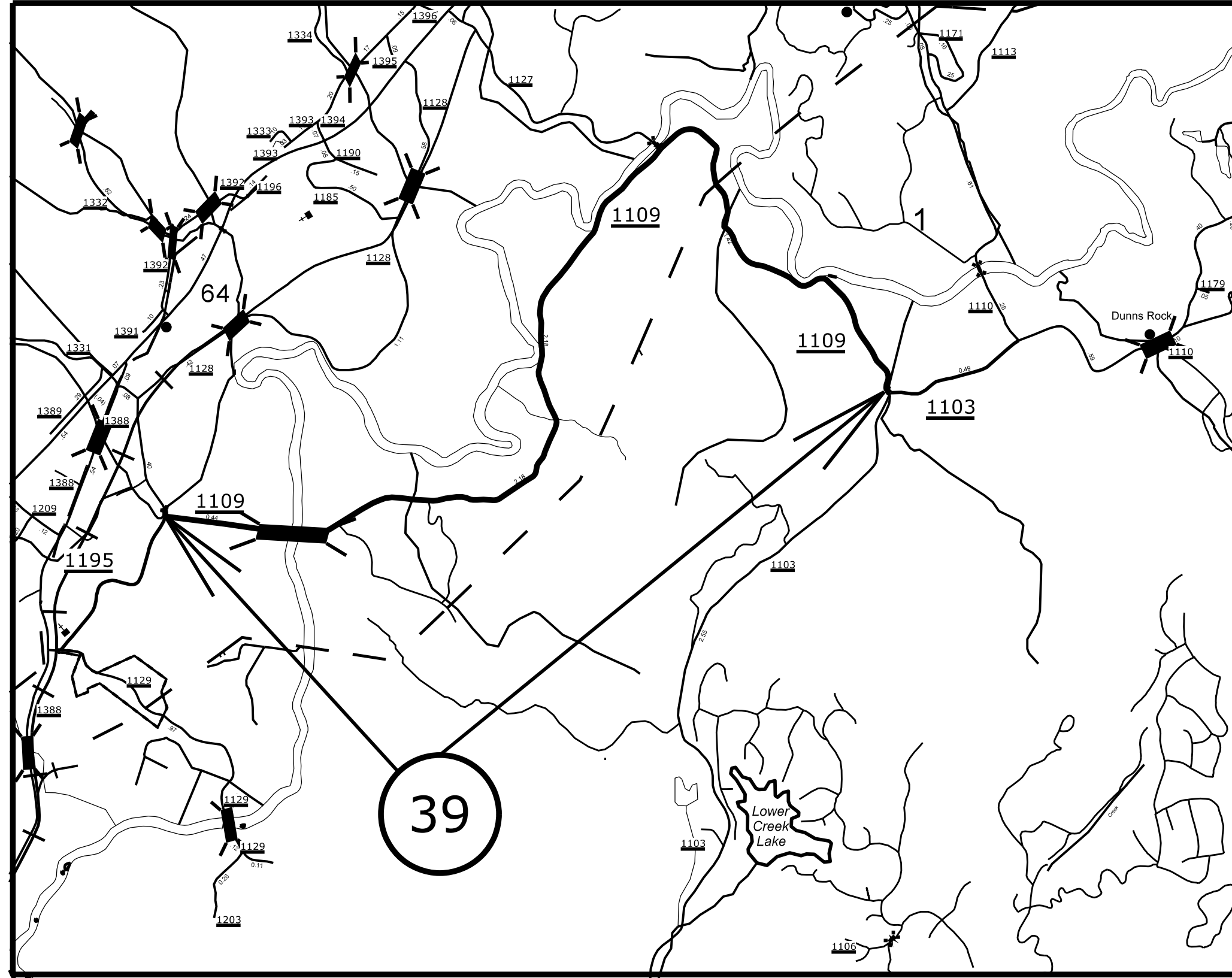


TIP PROJECT: N/A

CONTRACT:

TRANSYLVANIA COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20881.1		23
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20881		

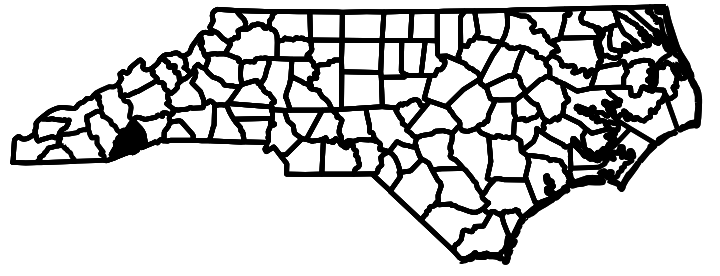
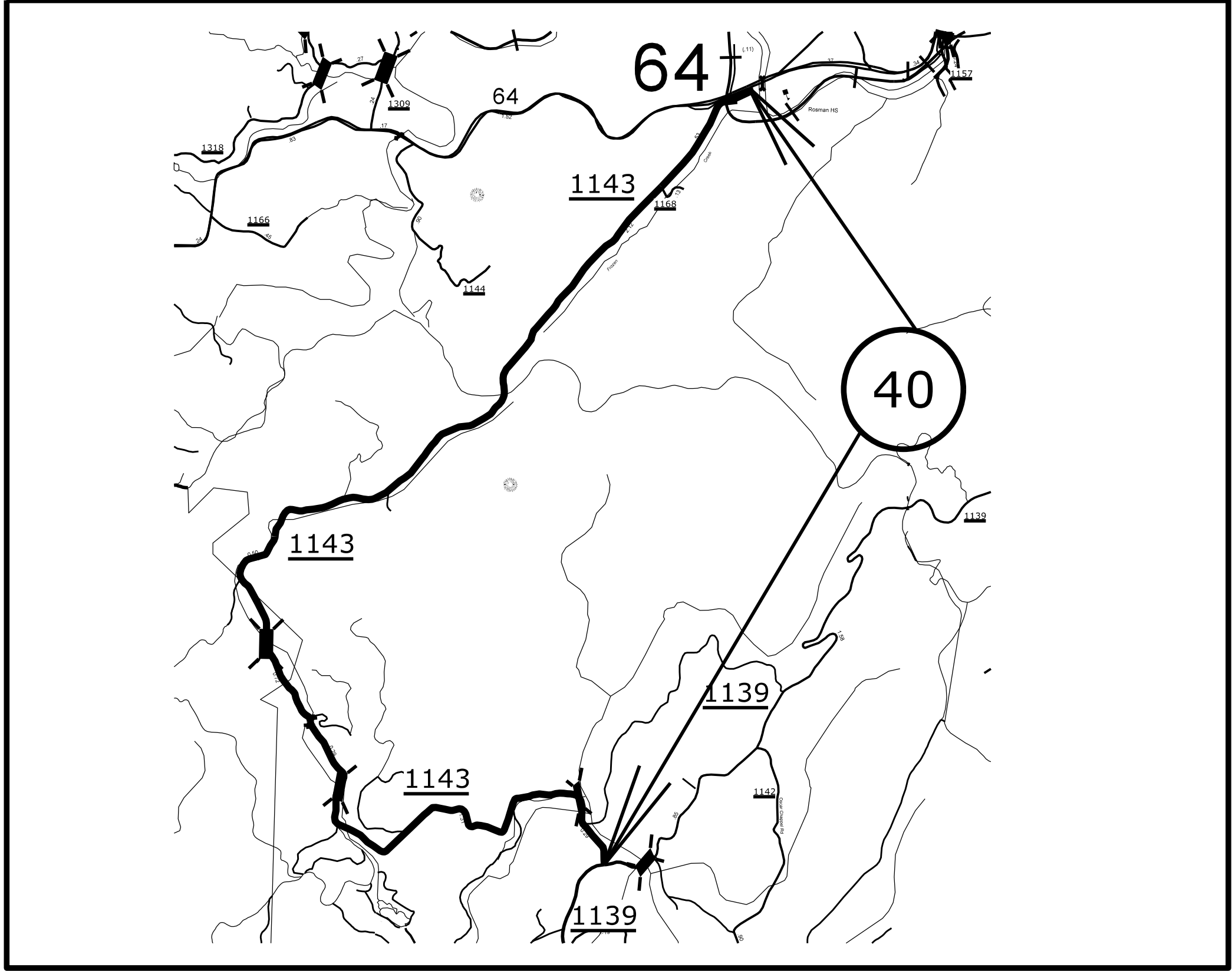


TRANSYLVANIA COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20881.1		24
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20881		

TIP PROJECT: N/A

CONTRACT:

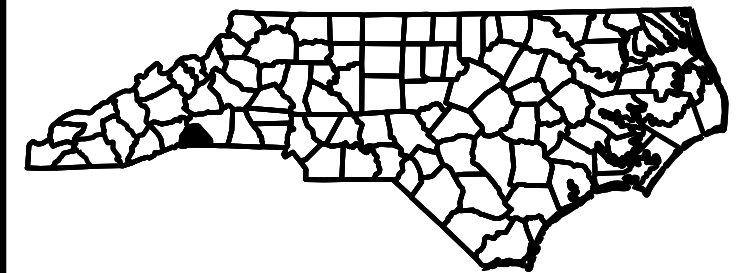
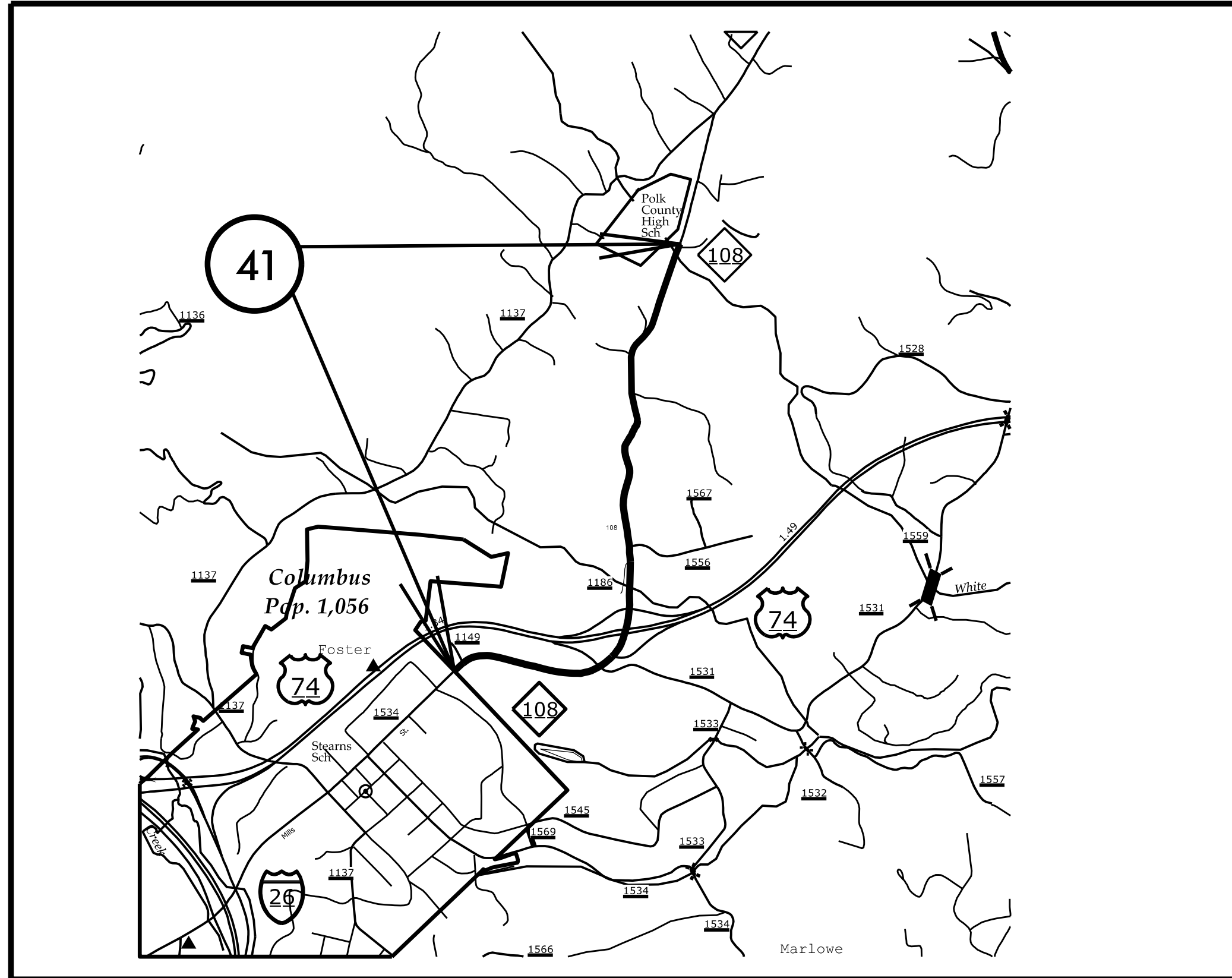


TIP PROJECT: N/A

CONTRACT:

POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10751.1		25
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.10751.		

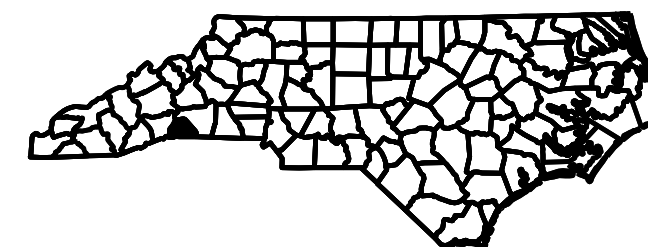
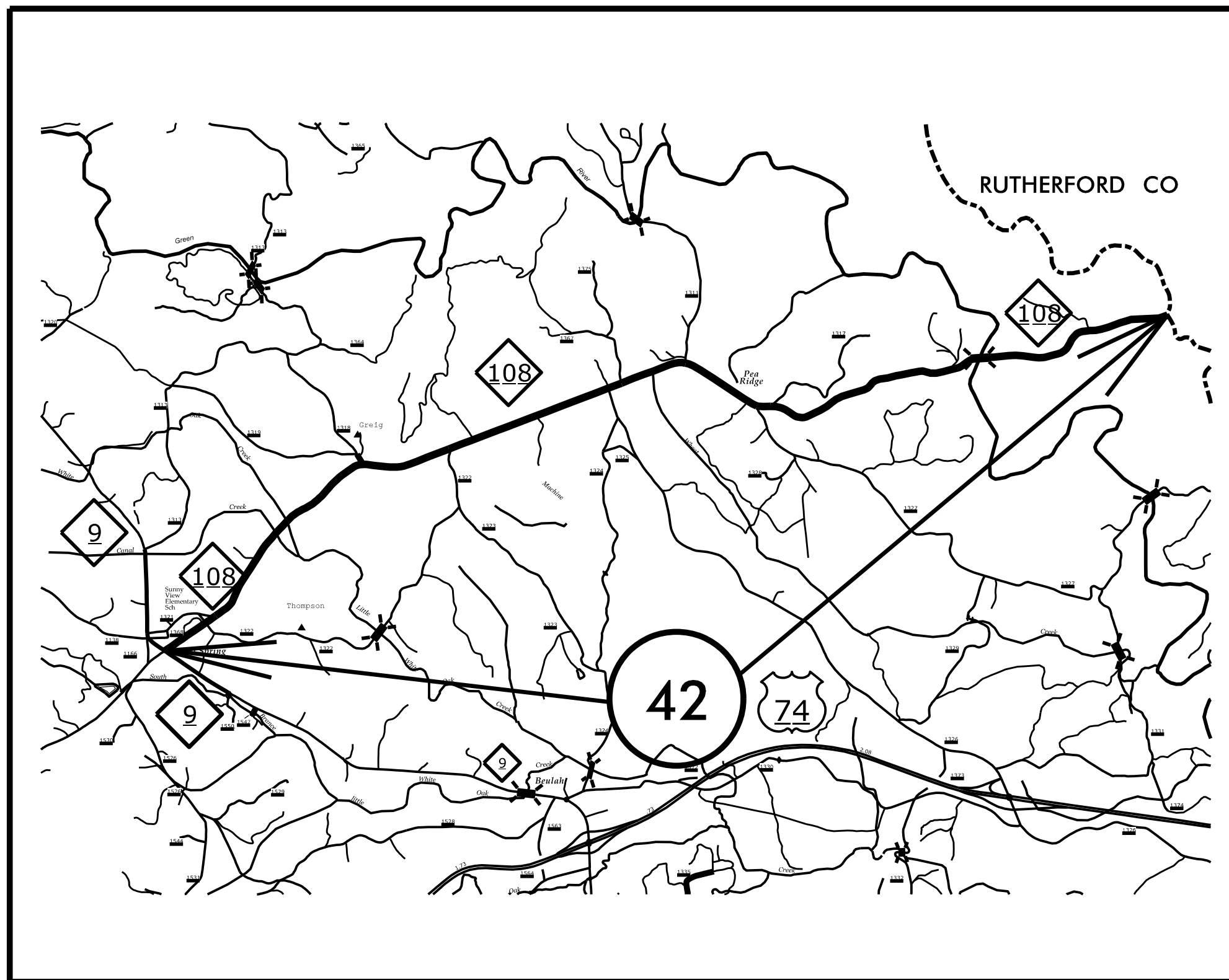


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10751		26
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.10751		

TIP PROJECT: N/A

CONTRACT:

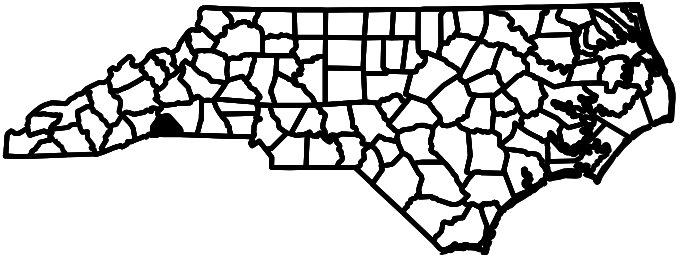
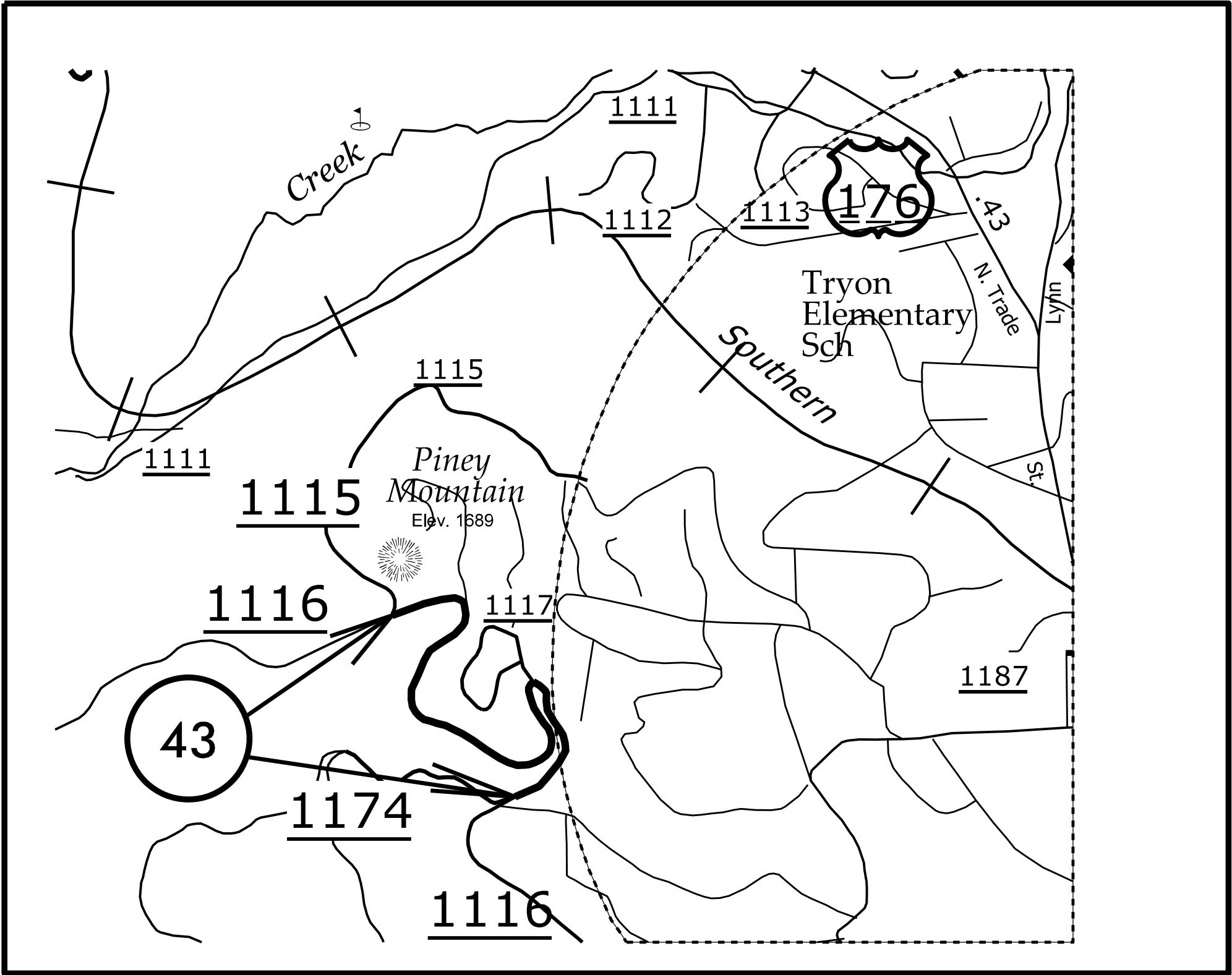


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20751.1		27
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751		

TIP PROJECT: N/A

CONTRACT:

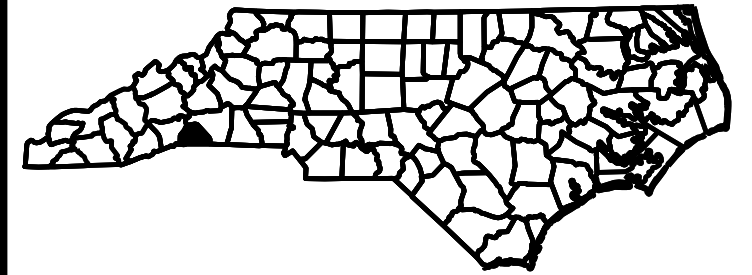
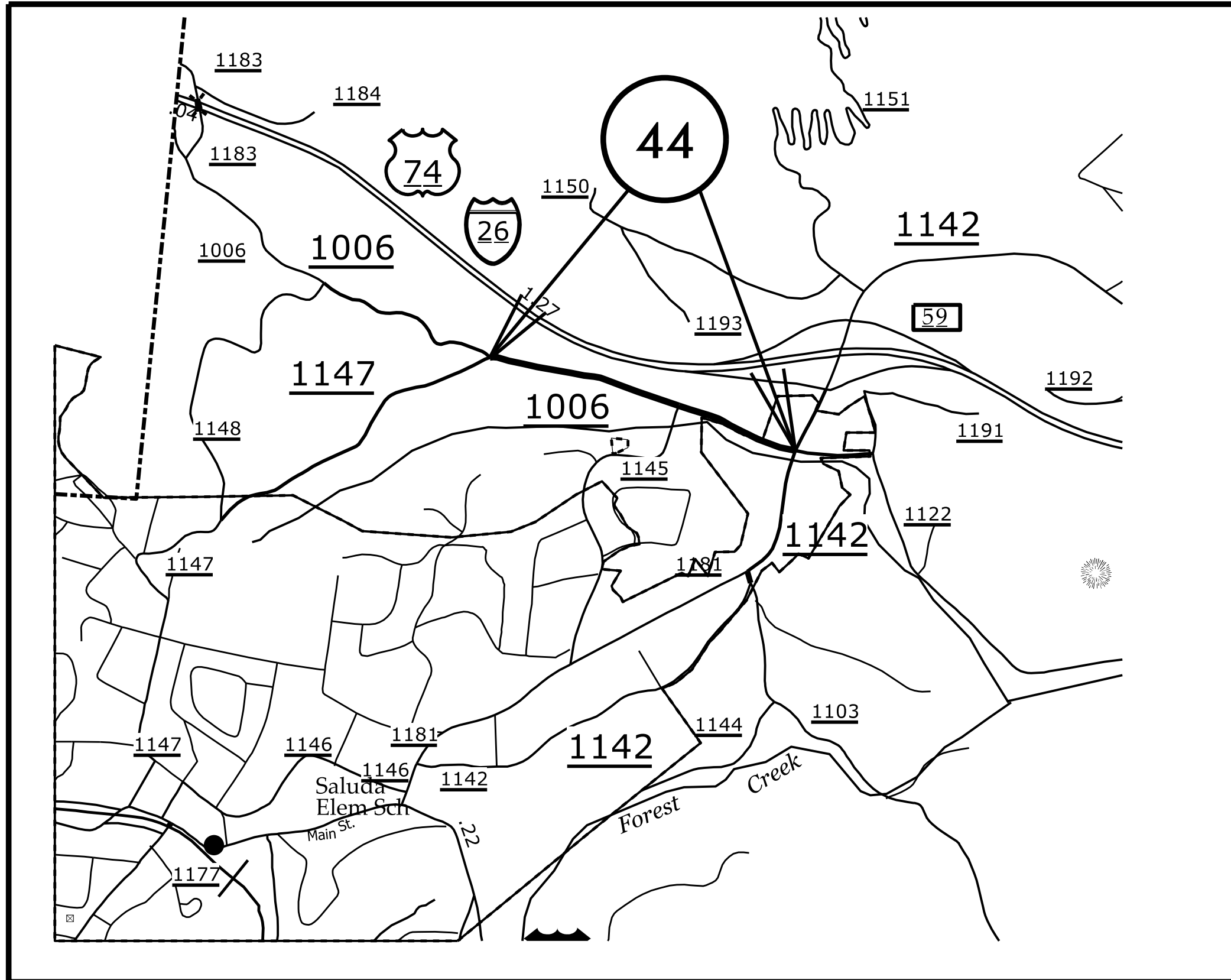


POLK COUNTY

PROJECT REFERENCE NO.	SHEET NO.	
2017CPT.14.02.20751.1	28	
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751		

TIP PROJECT: N/A

CONTRACT:

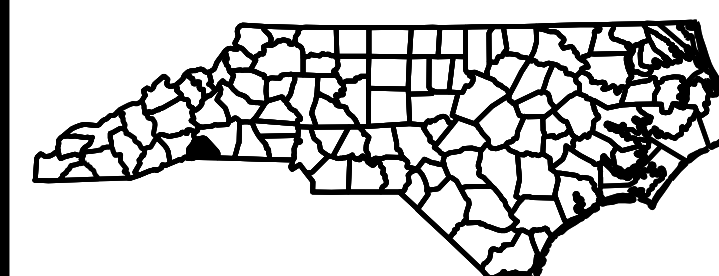
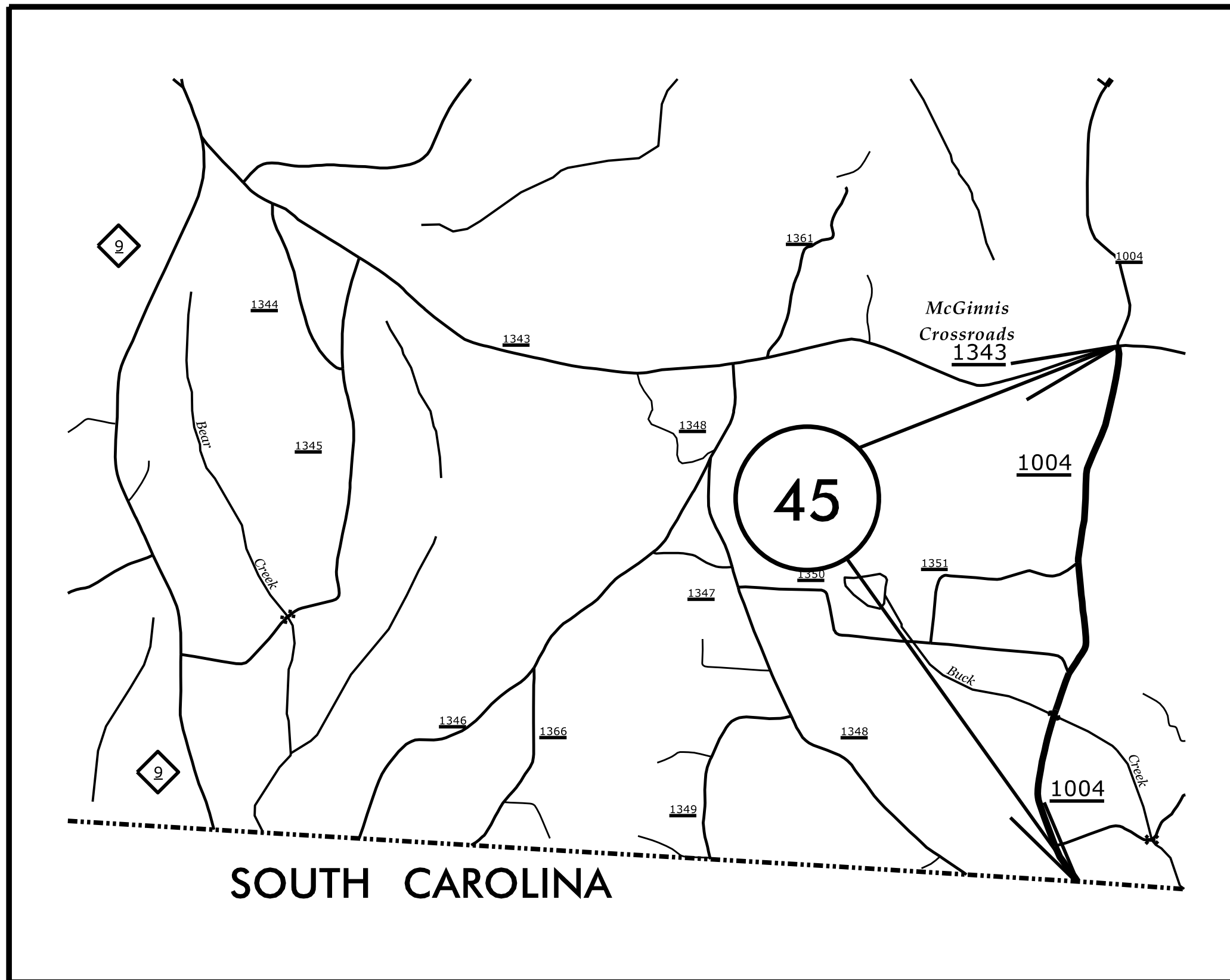


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20751.1		29
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751		

TIP PROJECT: N/A

CONTRACT:



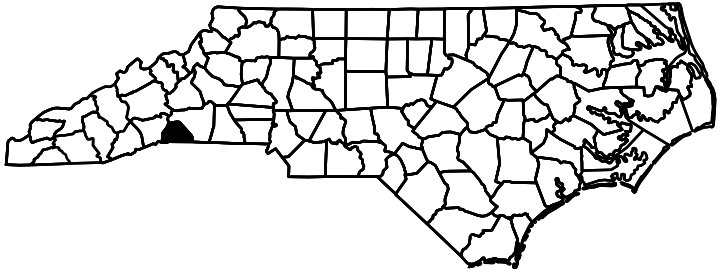
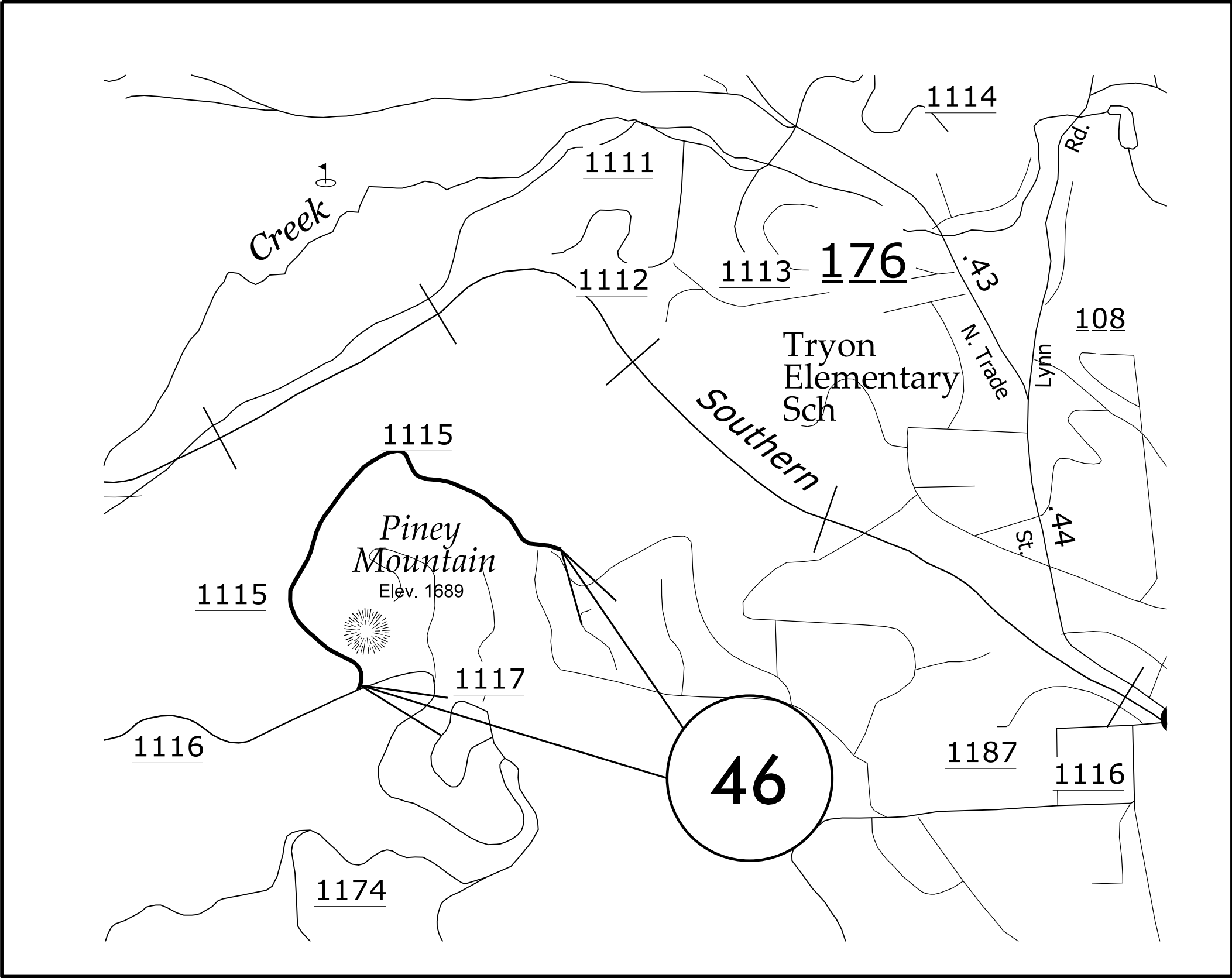
SOUTH CAROLINA

POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20751.1		30
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2016CPT.14.02.20751.1		

TIP PROJECT: N/A

CONTRACT:

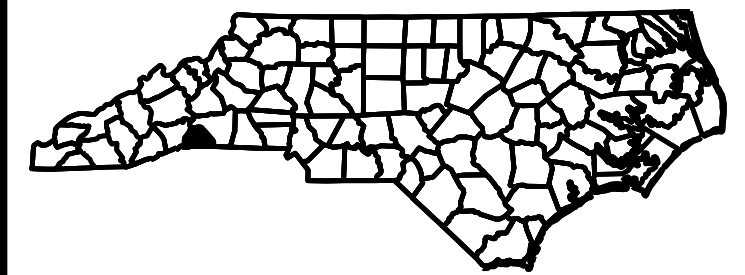
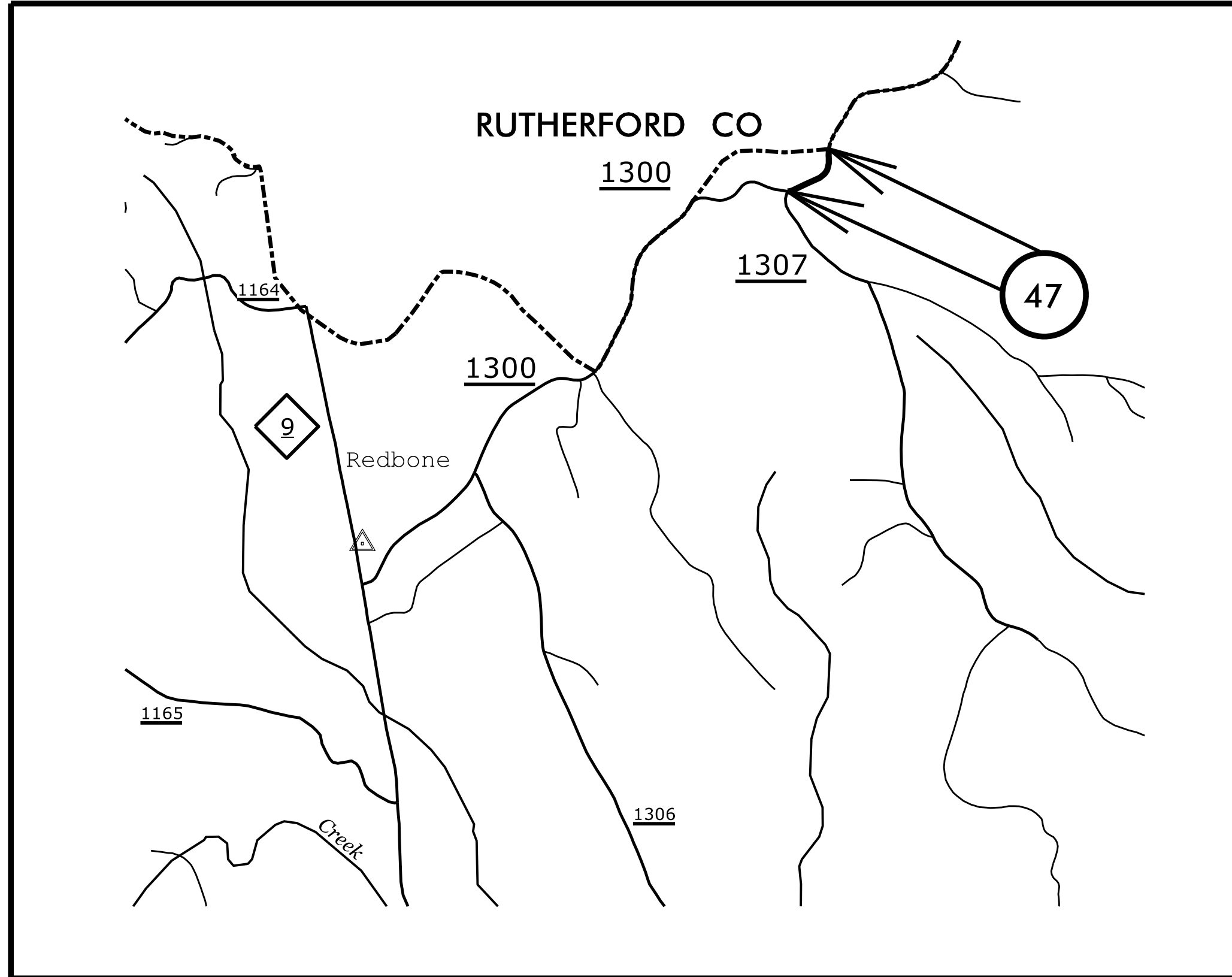


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20751.1		31
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751		

TIP PROJECT: N/A

CONTRACT:

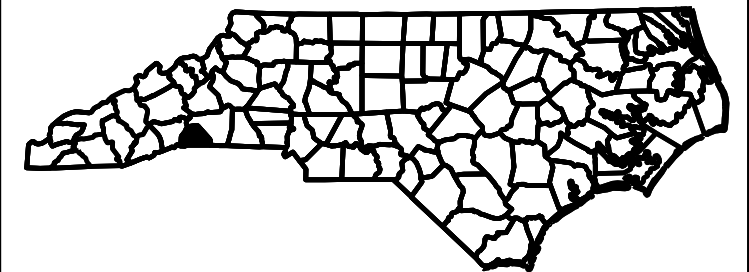
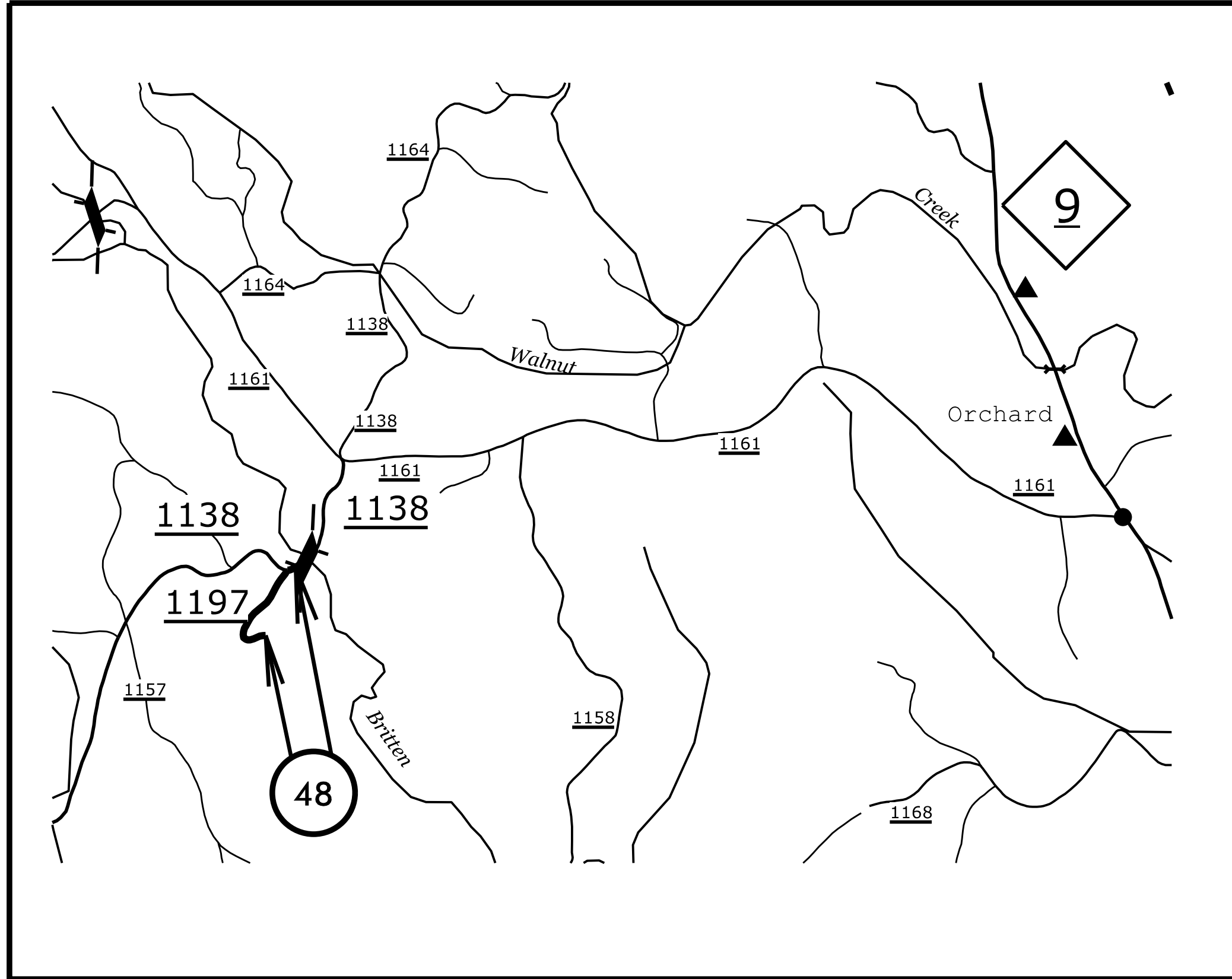


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017/CPT.14.02.20751.1		32
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017/CPT.14.02.20751.1		

TIP PROJECT: N/A

CONTRACT:

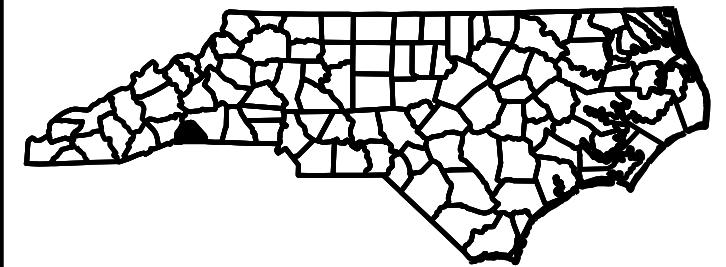
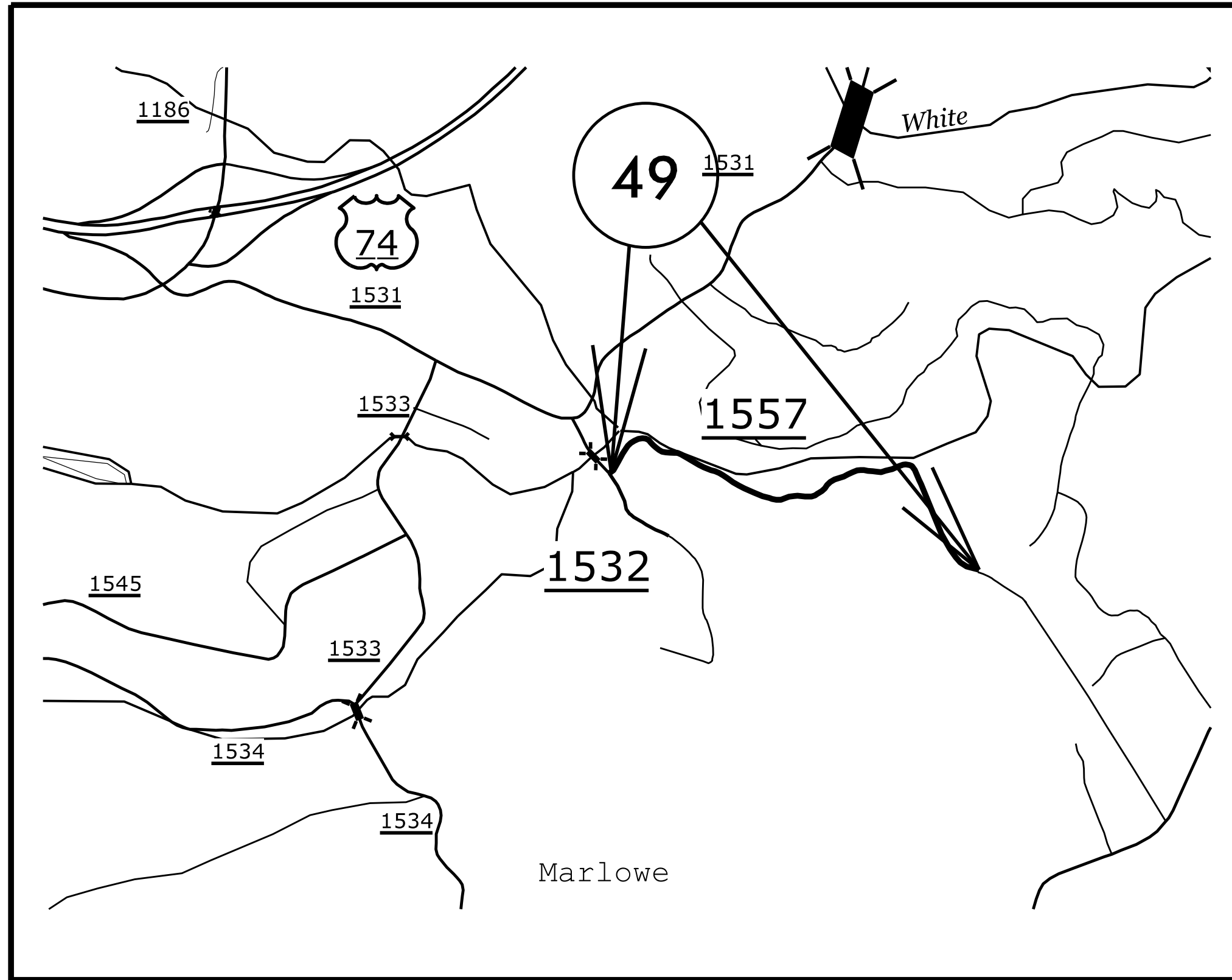


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20751.1		33
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751.		

TIP PROJECT: N/A

CONTRACT:

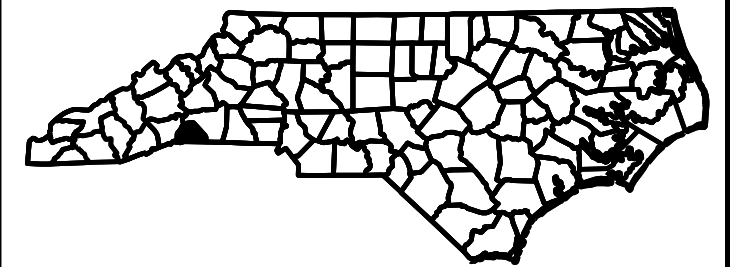
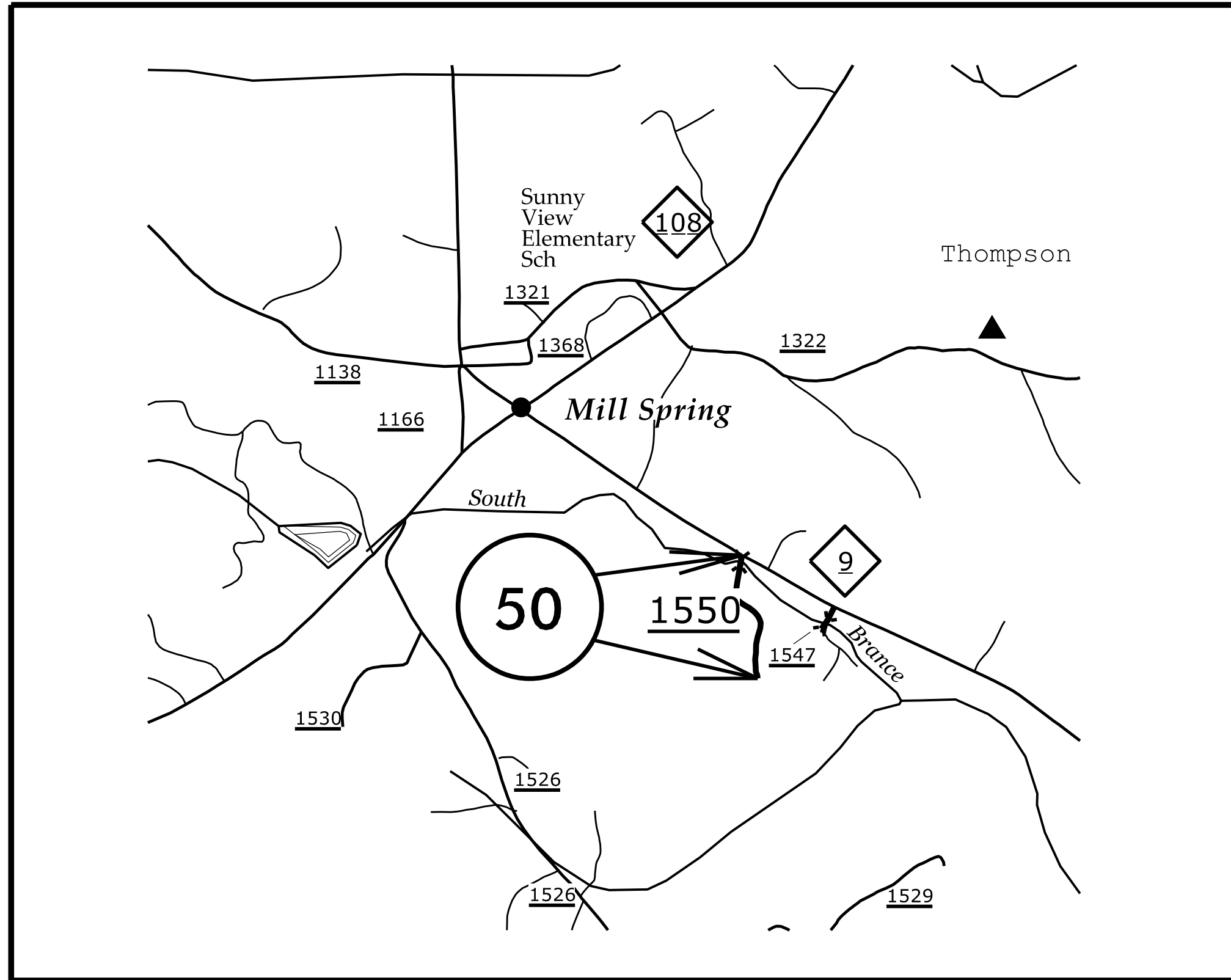


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.20751.1		34
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751		

TIP PROJECT: N/A

CONTRACT:

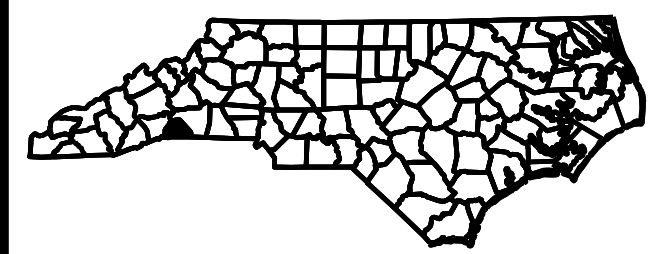
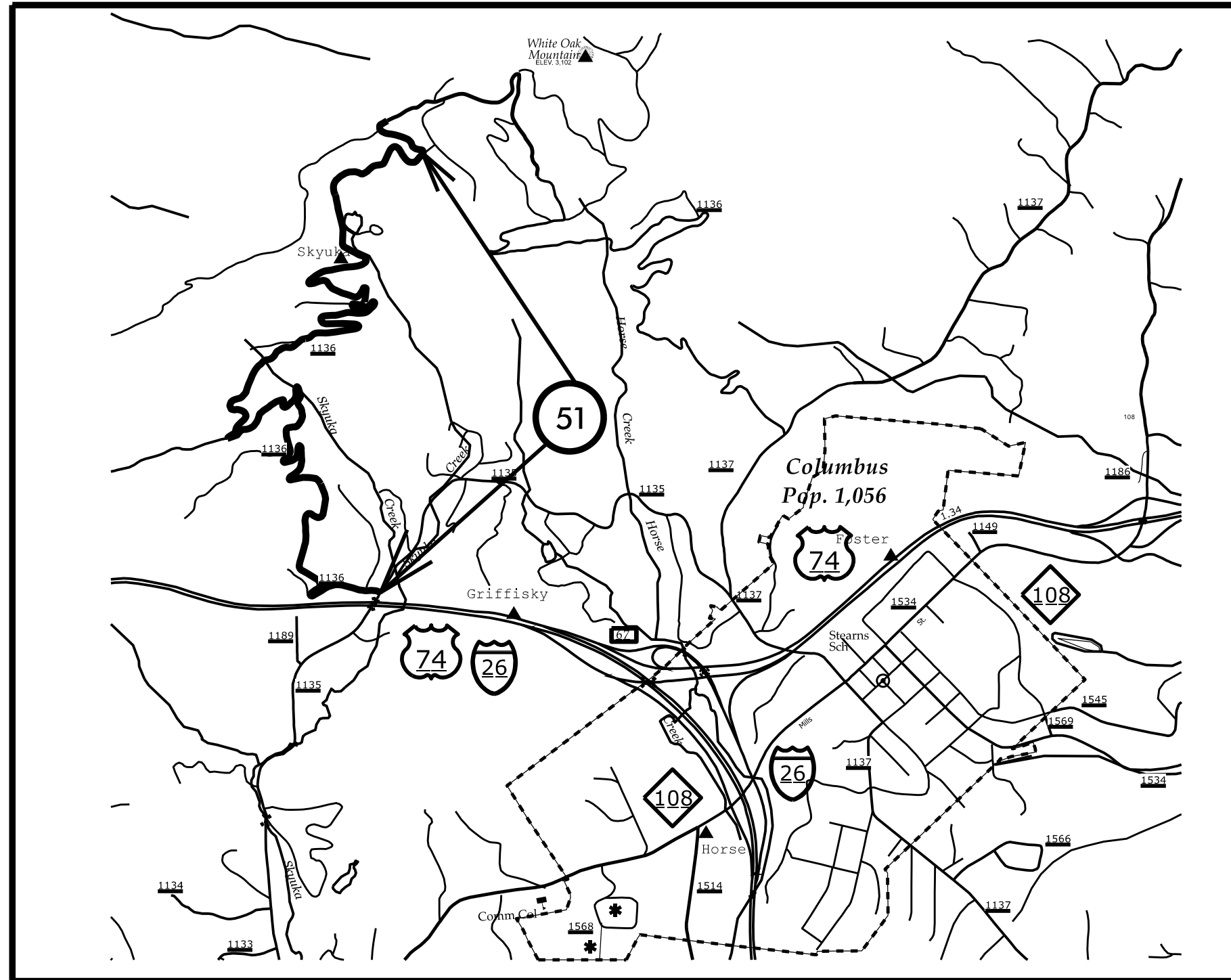


POLK COUNTY

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.207511		35
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751		

TIP PROJECT: N/A

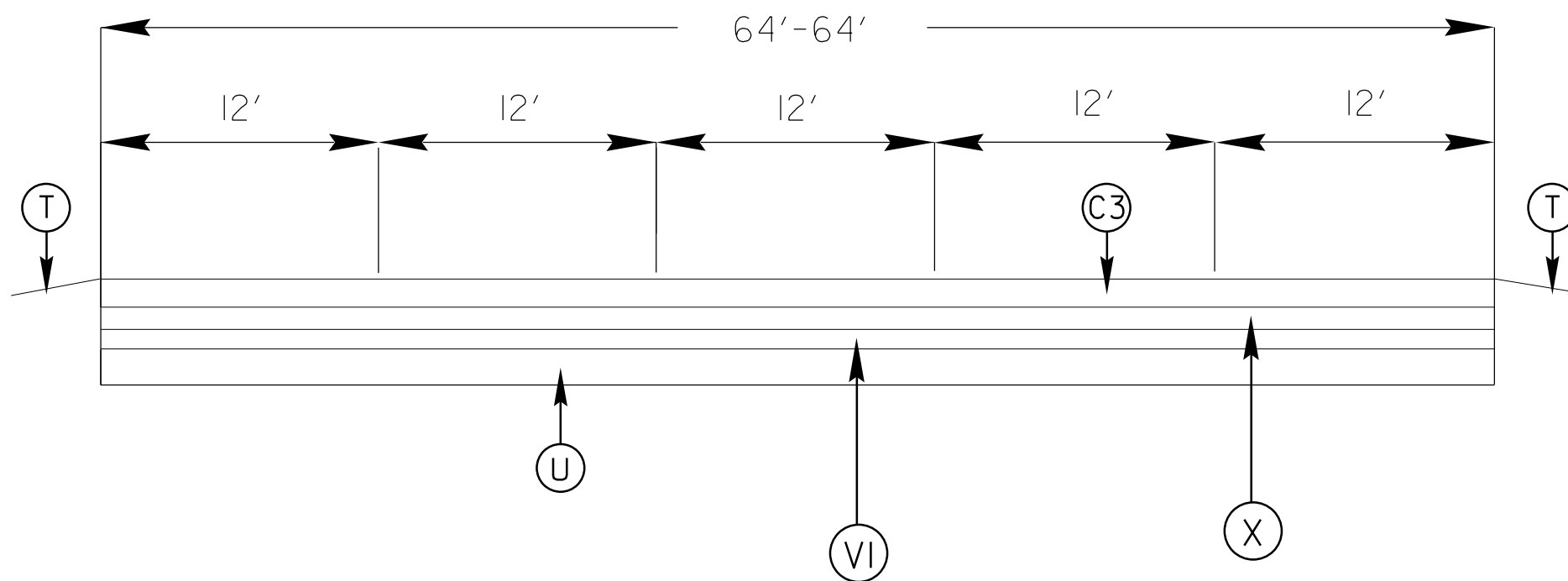
CONTRACT:



PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10451.1, ETC.		36
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.10451.1		

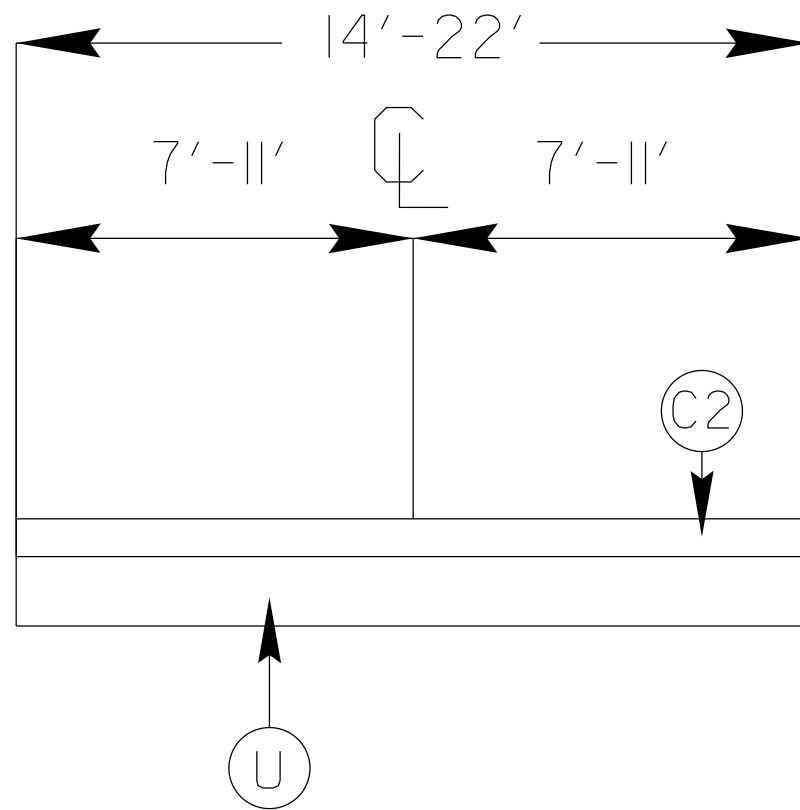
TYPICAL 1

HENDERSON CO

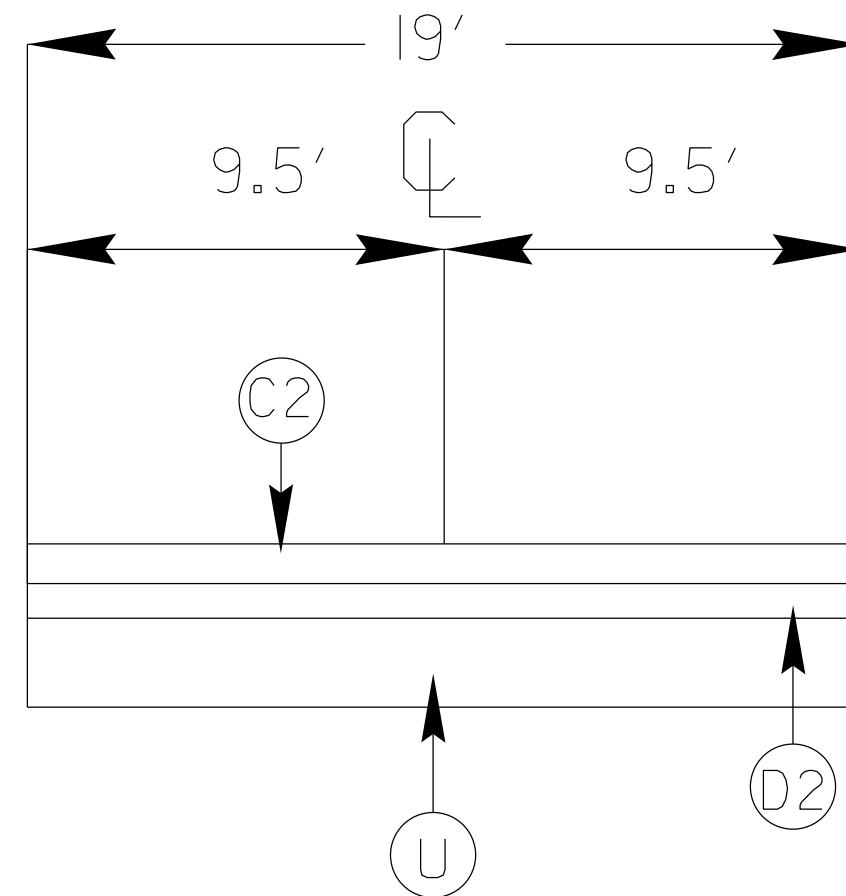


PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10451.1, ETC.		37
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		
2017CPT.14.02.20751.1		

TYPICAL 2

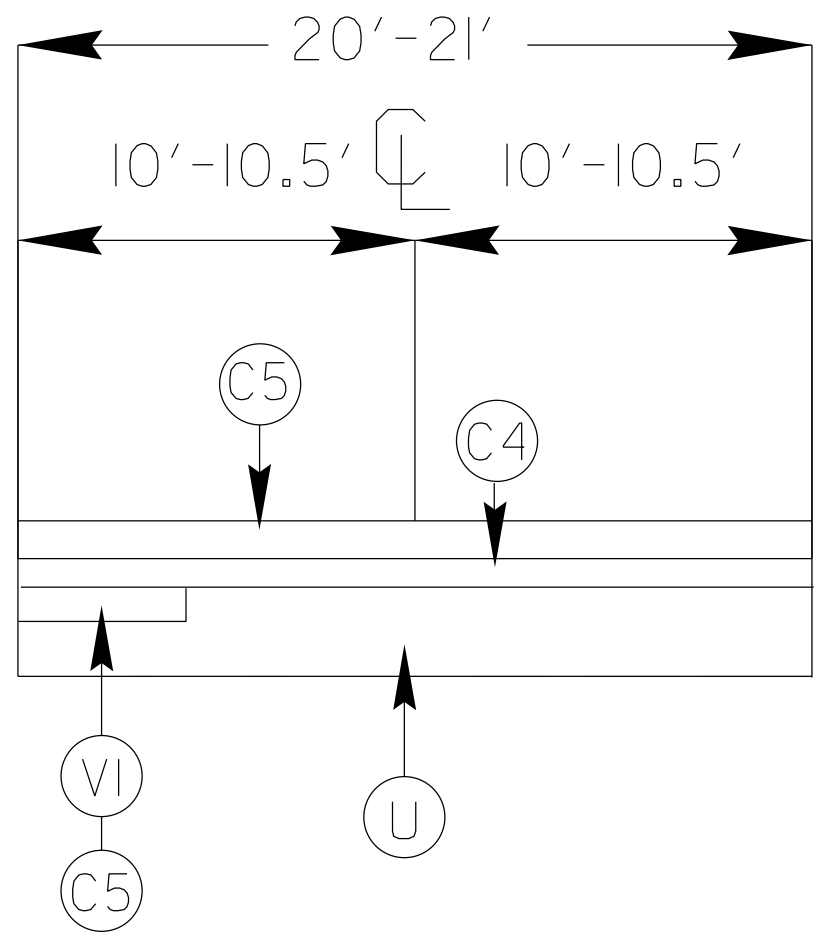


TYPICAL 3

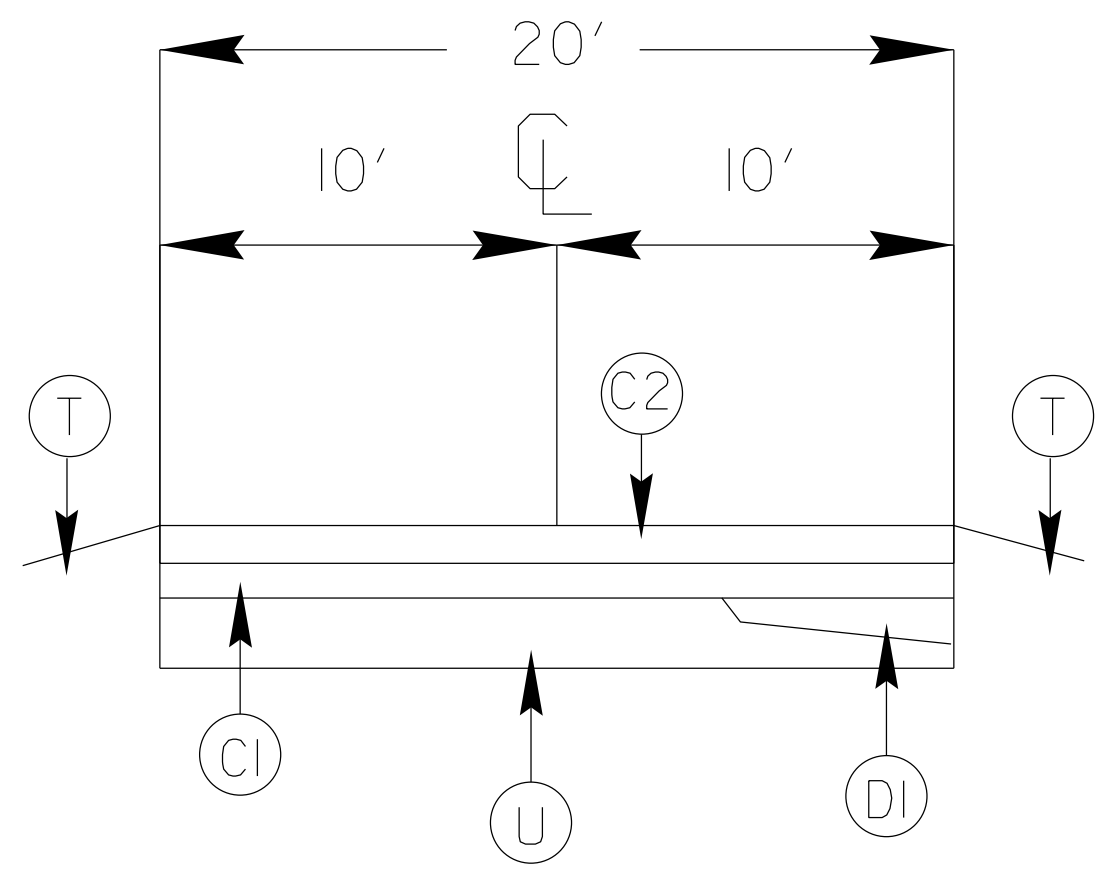


PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10451.1, ETC.		38
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451.1		
2017CPT.14.02.20881.1		

TYPICAL 4



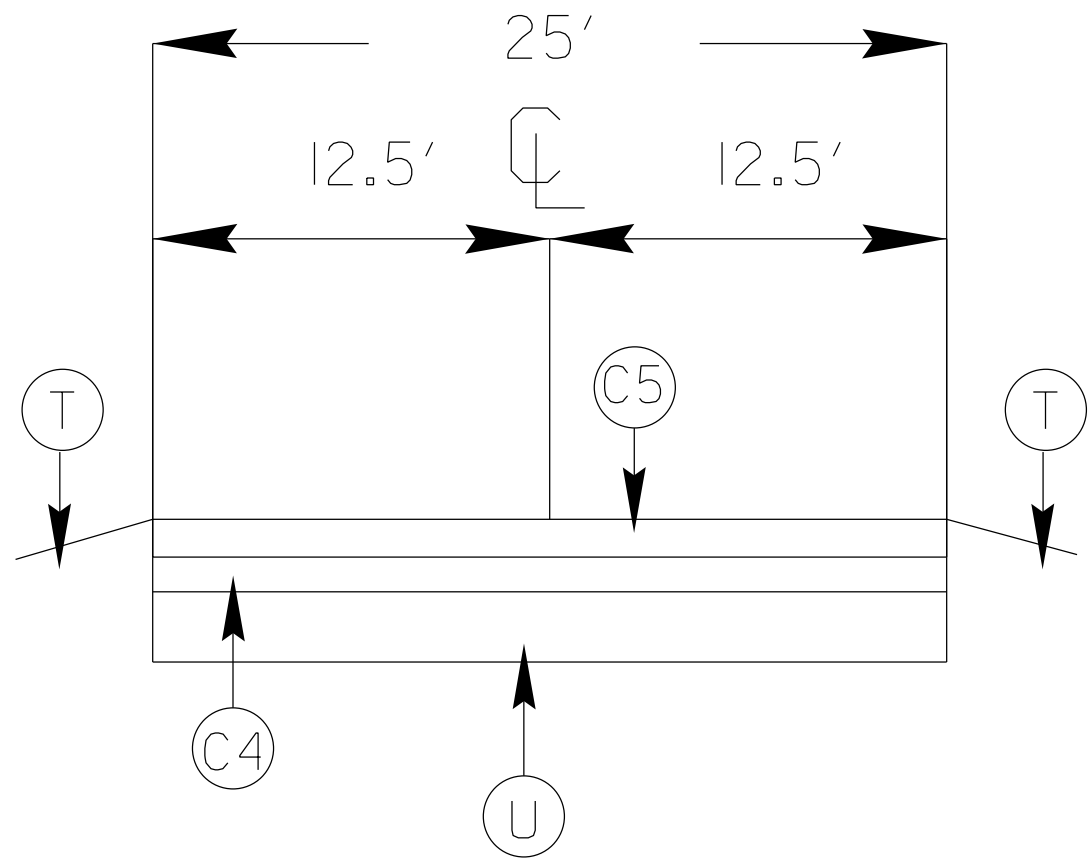
TYPICAL 5



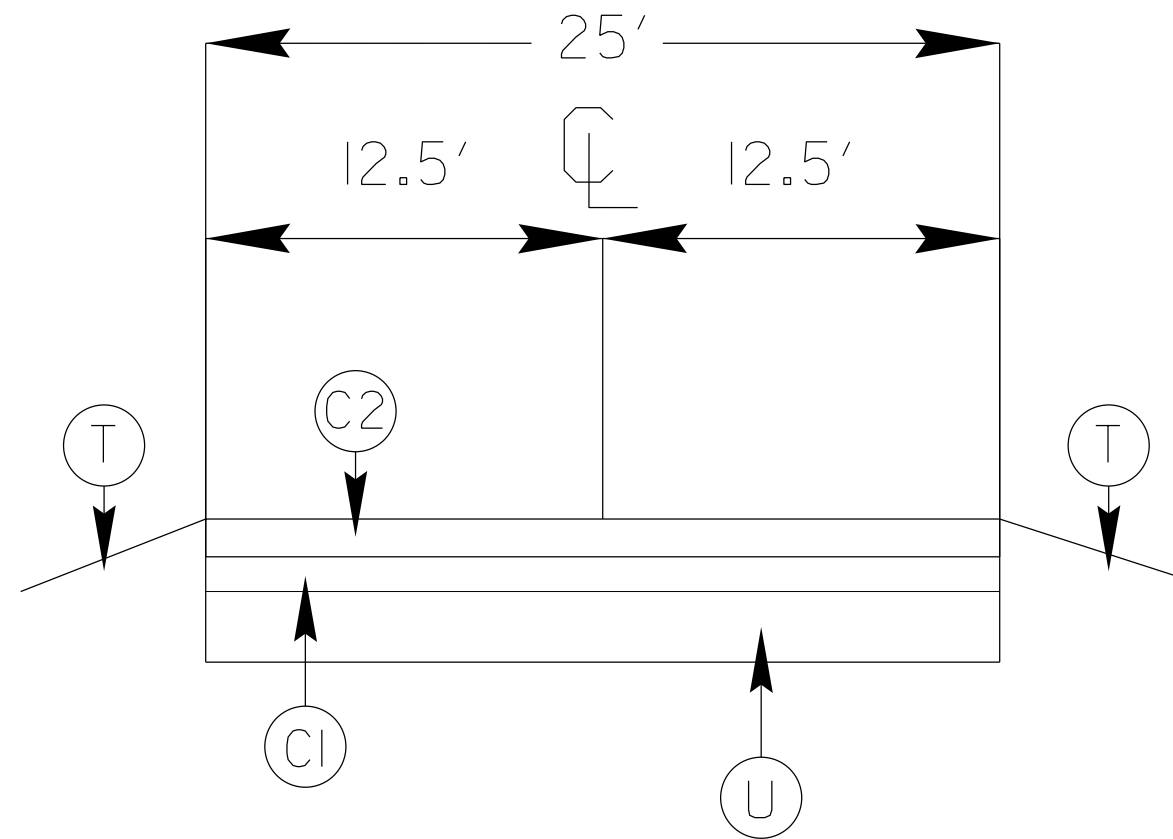
2' MILLING IS FOR BRIDGE DECK MAP 39

PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10451.1, ETC.		39
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.10751.1		
2017CPT.14.02.20751.1		

TYPICAL 6

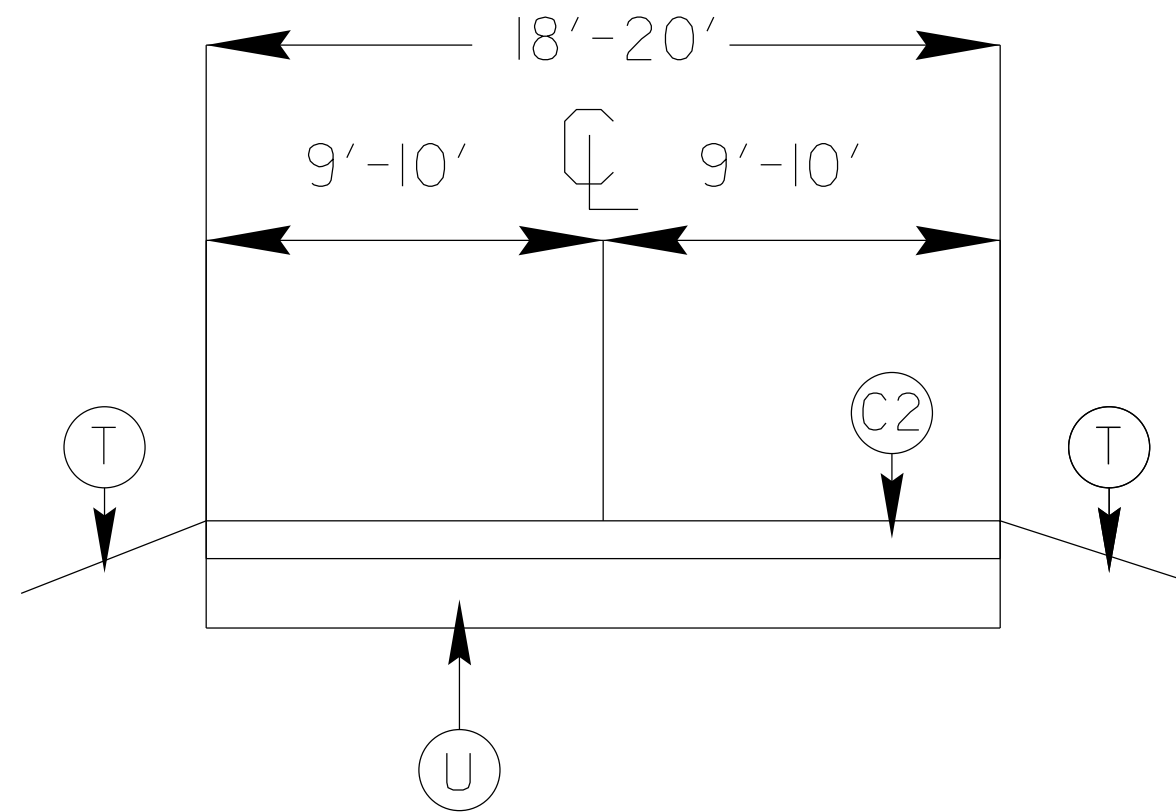


TYPICAL 7

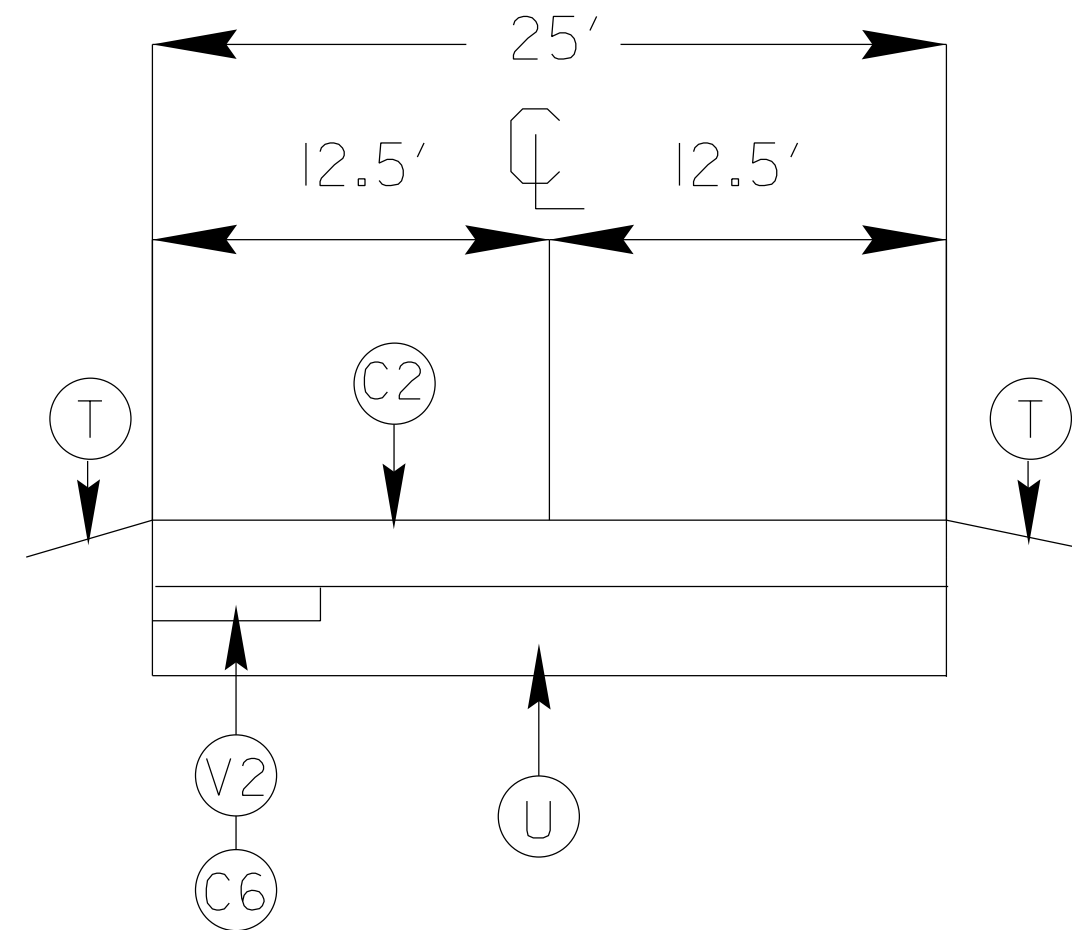


PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10451.1, ETC.		40
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20751.1		
2017CPT.14.02.10751.1		

TYPICAL 8



TYPICAL 9

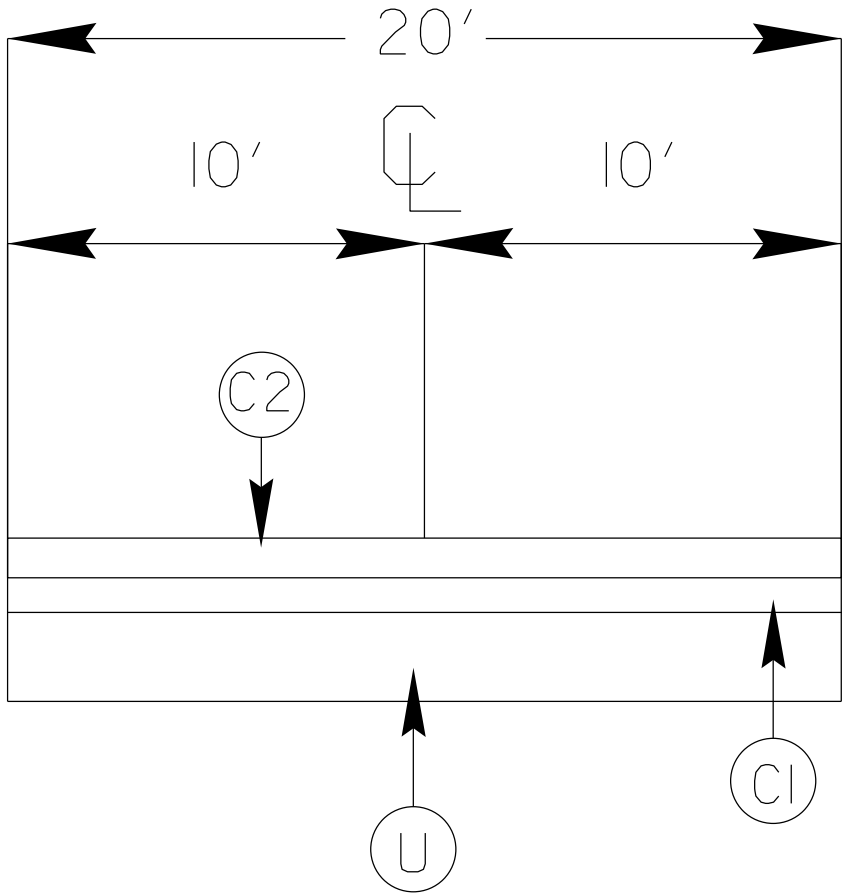


SURFACING SCHEDULE

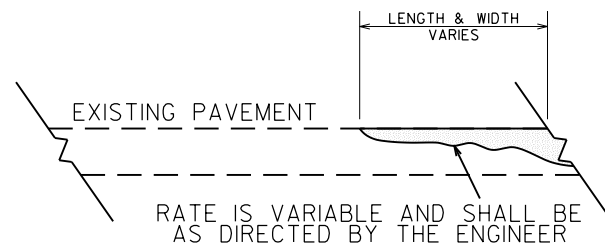
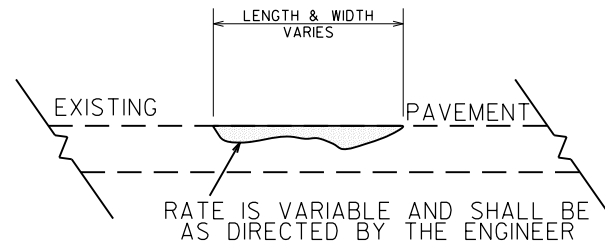
PROJECT REFERENCE NO.		SHEET NO.
2017CPT.14.02.10451.1, ETC.		41
STATE PROJECT	F.A. PROJECT NO.	DESCRIPTION
2017CPT.14.02.20451		

ITEM NO	DESCRIPTION
C1	PROP. ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A (LEVELING)
C2	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ YD
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD
C4	PROP. ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B (LEVELING)
C5	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ YD
C6	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 220 LBS. PER SQ YD
D1	PROP. VAR DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, WEDGING TYPE I19.0B, SQ.YARD. AT LOCATIONS AS DIRECTED BY PROJECT ENGINEER
D2	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B (LEVELING)
T	SHOULDER RECONSTRUCTION
U	EXISTING ASPHALT
V1	MILLED ASPHALT PAVEMENT 1 1/2" IN DEPTH IN LOCATIONS AS DIRECTED BY PROJECT ENGINEER
V2	MILLED ASPHALT PAVEMENT 2" IN DEPTH IN LOCATIONS AS DIRECTED BY PROJECT ENGINEER
X	PAVEMENT INTERLAYER-SEE PROJECT SPECIAL PROVISIONS

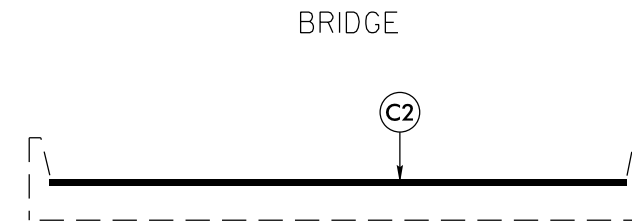
TYPICAL 10



<i>PROJECT NO.</i>	<i>SHEET NO.</i>	<i>TOTAL SHEETS</i>
<i>2017CPT.02.10451.1 ETC</i>	<i>42</i>	

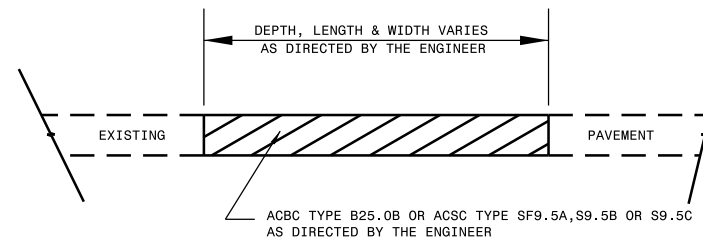


***DETAIL SHOWING
METHOD OF WEDGING
USED ON MAP 36 WITH ACIC, TYPE I19.0B***

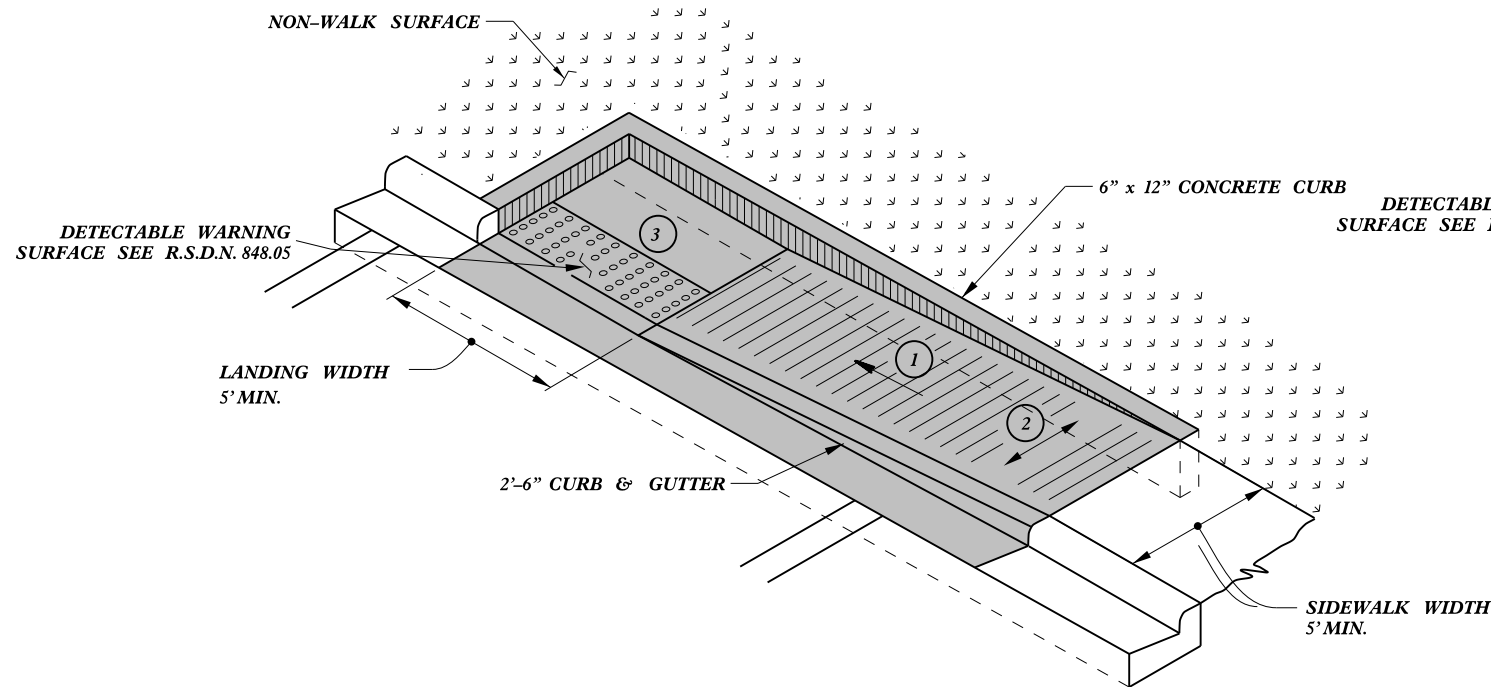


BRIDGE DETAIL

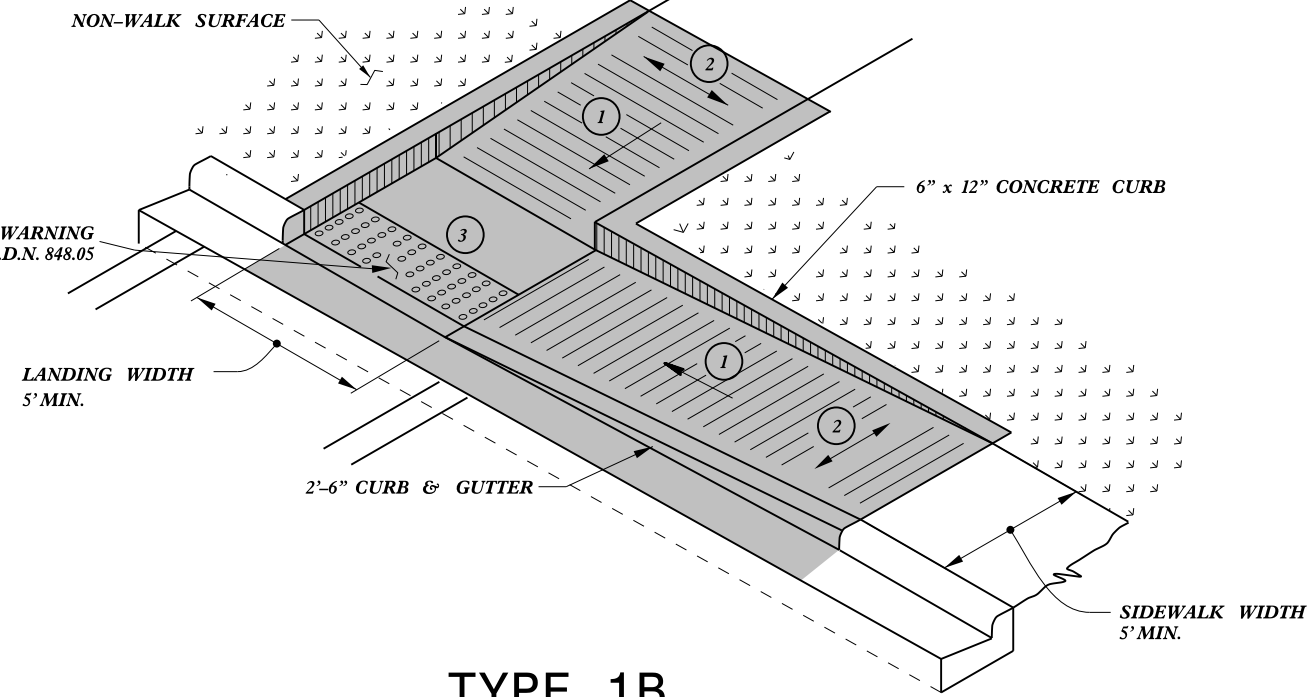
***BRIDGE NUMBER 72, MAP 39,
BRIDGE NUMBER 49, MAP 38,
BRIDGE NUMBER 212, MAP 49
SEE MAPS FOR BRIDGE LOCATION***



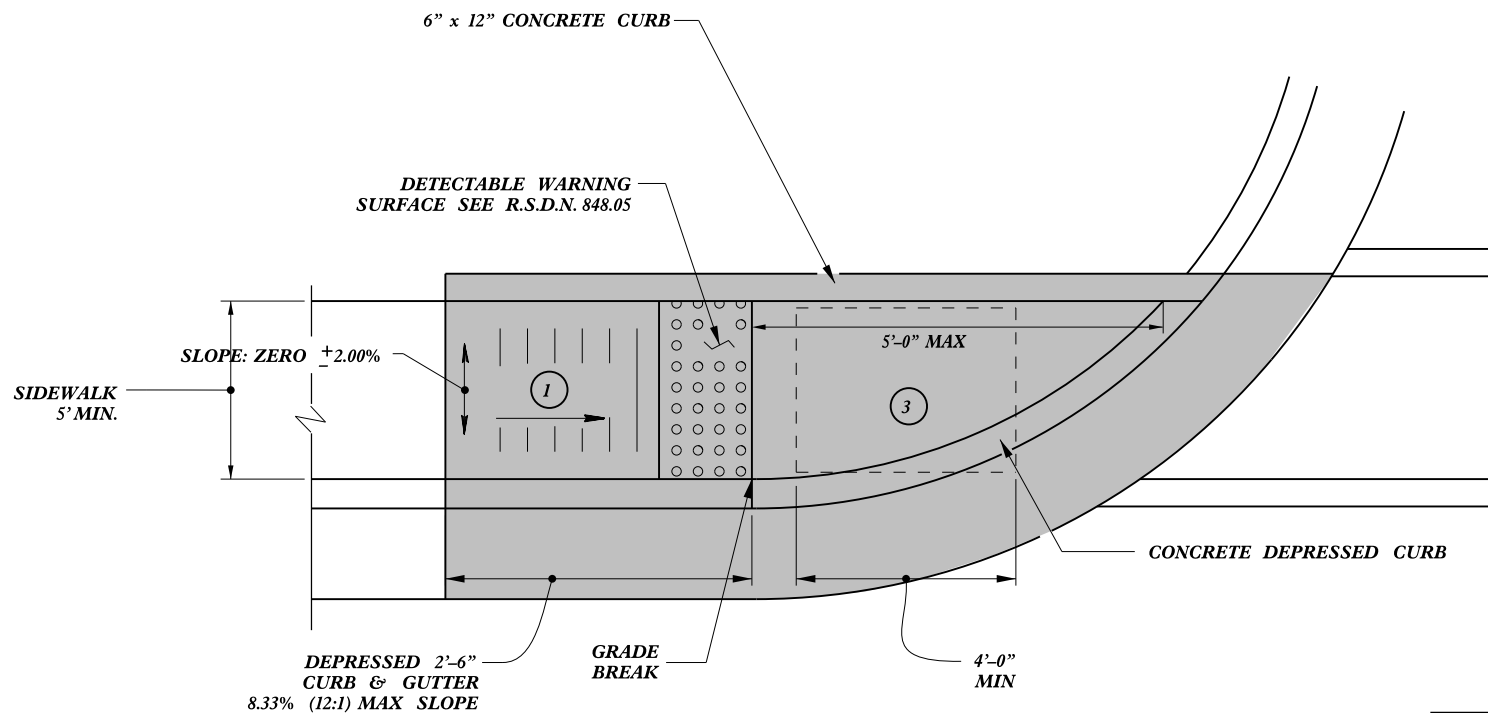
***PATCHING EXISTING PAVEMENT
PATCHING TO BE PERFORMED PRIOR TO MILL AND FILL OPERATION***



TYPE 1A



TYPE 1B

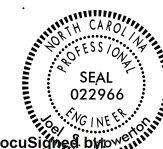


TYPE 1

PAY LIMITS FOR 1 CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES



DocuSign
Joel S. Howerton

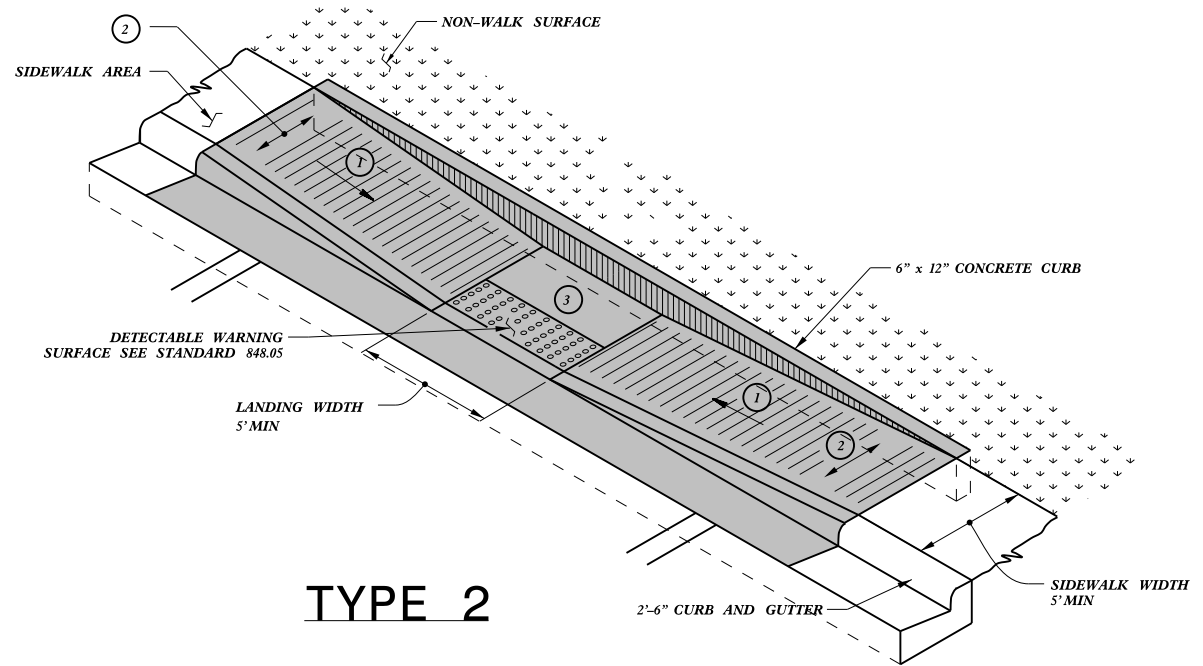
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11/18/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

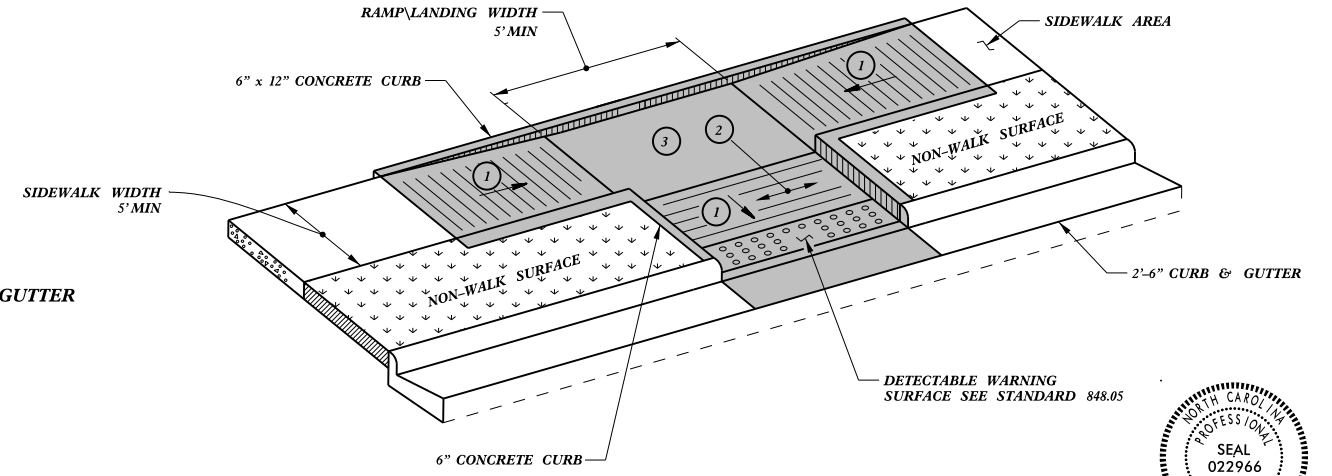
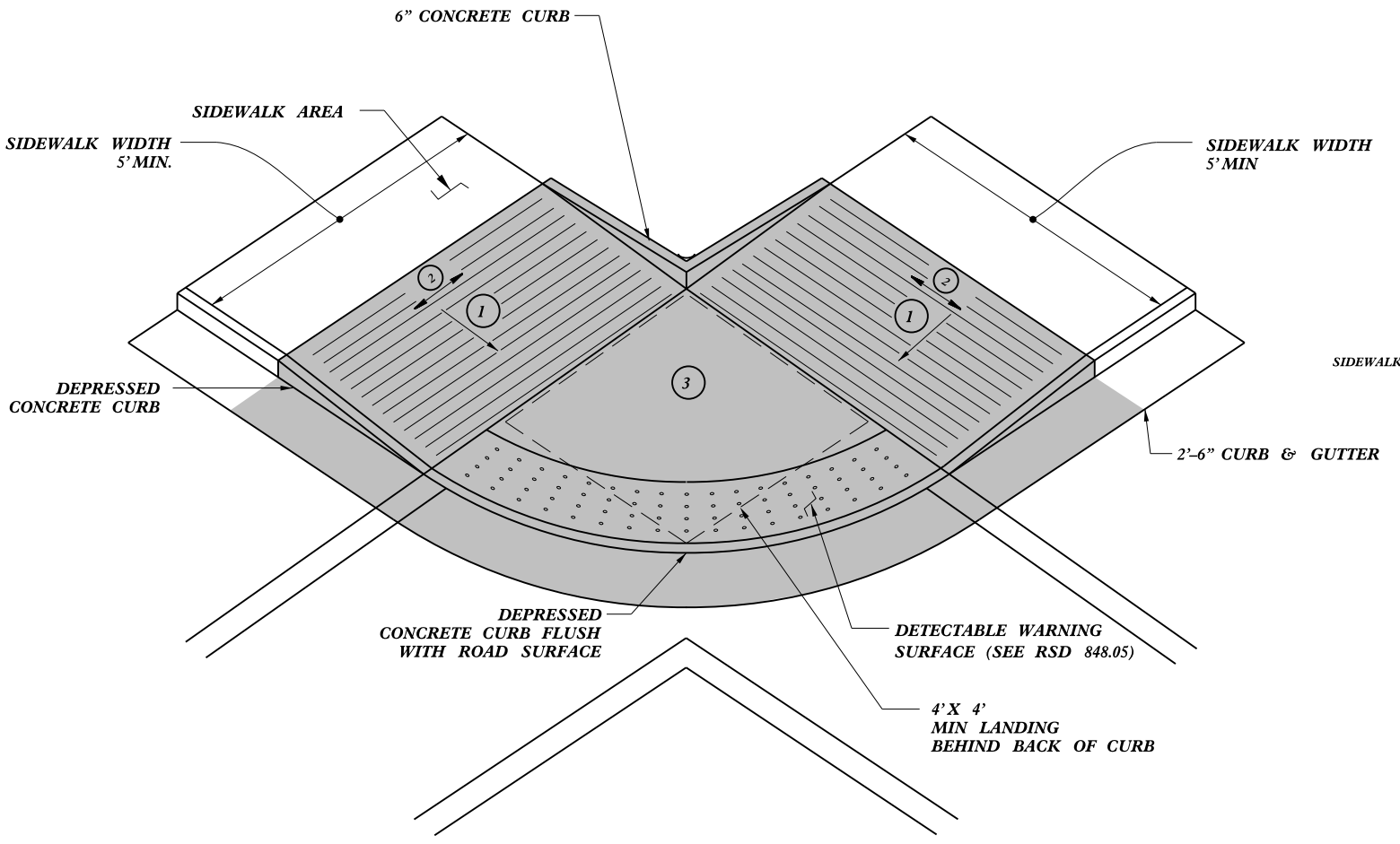
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
Directional Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg	

5/14/99
CONSTRUCTION USER NAME
DATE



PAY LIMITS FOR 1 CURB RAMP

- ① 8.33% (12:1) MAX RAMP SLOPE
- ② CROSS SLOPE: 2.00%
- ③ CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



DocuSign
Joel S. Howerton
449E8E25522144E
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

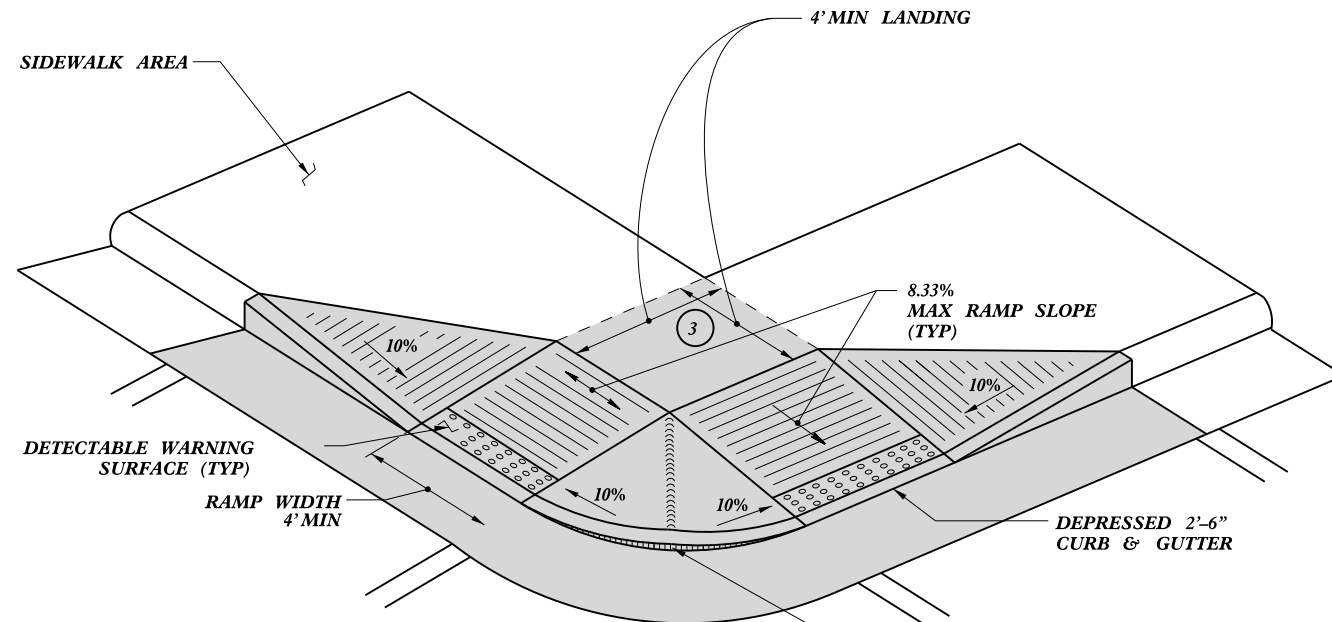
11/18/2015

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119
CURB RAMPS
Parallel Ramps

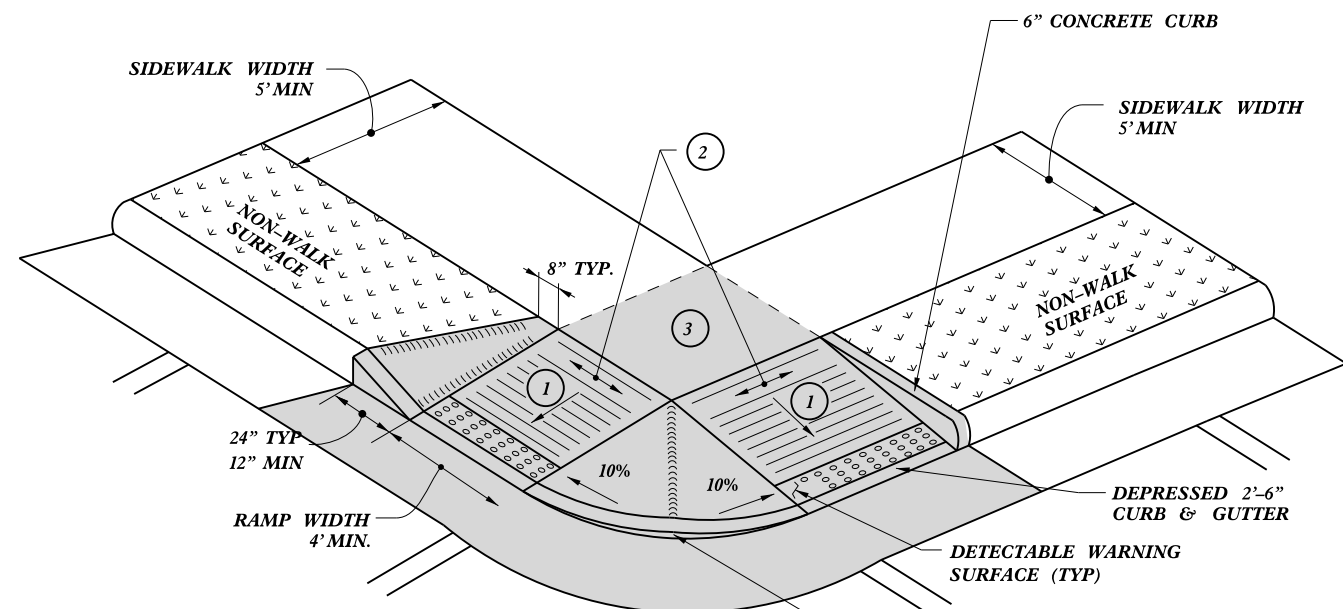
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE: _____
CHECKED BY: DATE: _____
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

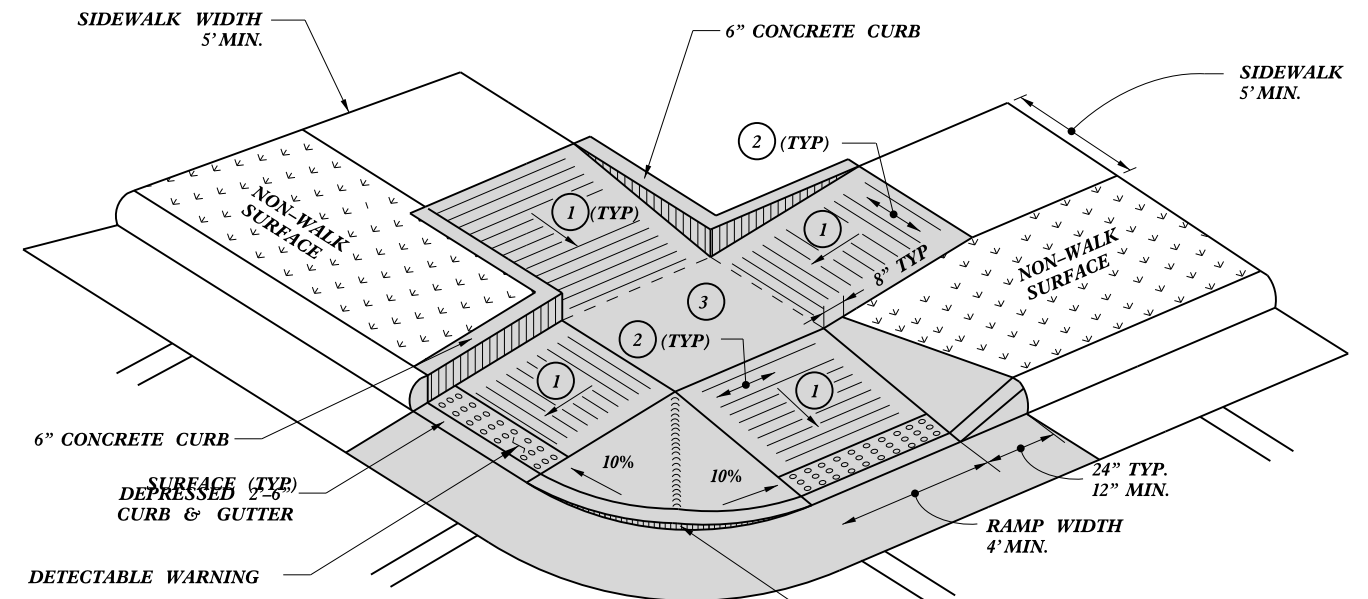
5/14/99
C:\CONTRACTS\2017CPT.14.02.10451.1\2017CPT.14.02.10451.1.dwg
PLOT: 11/18/2015 10:10:00 AM
SCALE: 1/8" = 1'-0"
JOB NO: 2017CPT.14.02.10451.1
SHEET NO: 44
PROJECT: 2017CPT.14.02.10451.1, ETC.



TYPE 4



TYPE 4A



TYPE 5

PAY LIMITS FOR 2 CURB RAMPS

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

DocuSigned by:
Joel S Howerton
449E8E25522144F...



11/18/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

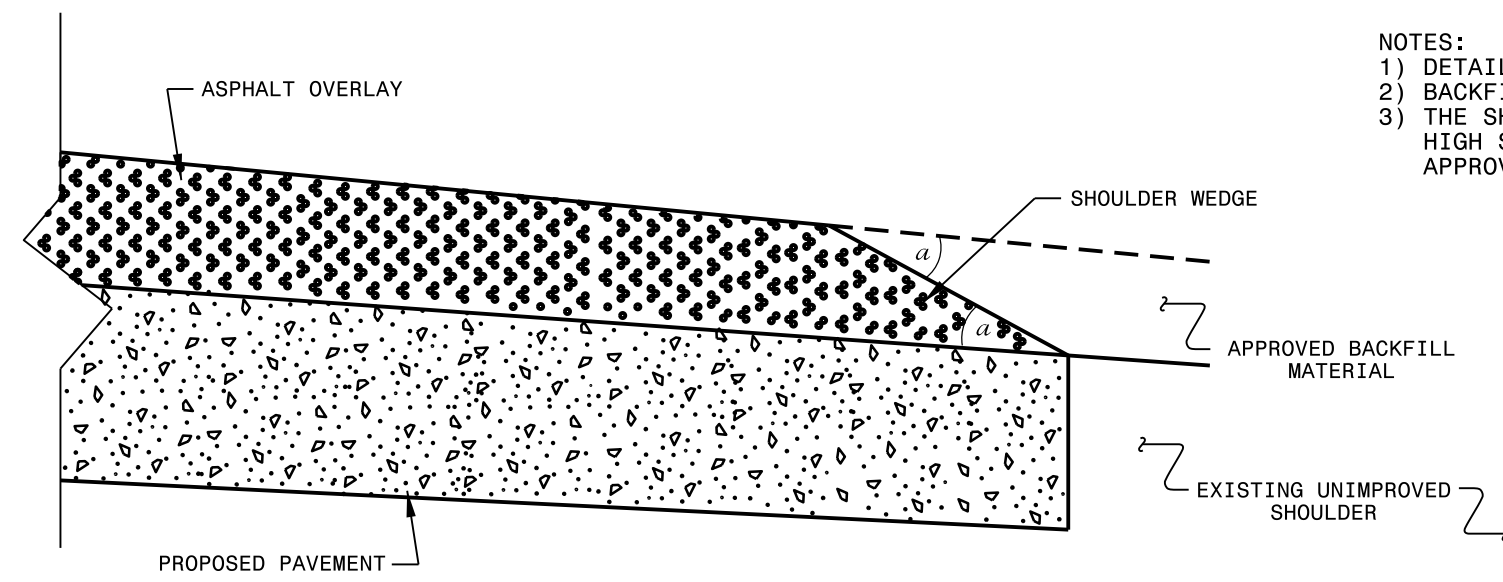
CURB RAMPS
Shared Landing

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg

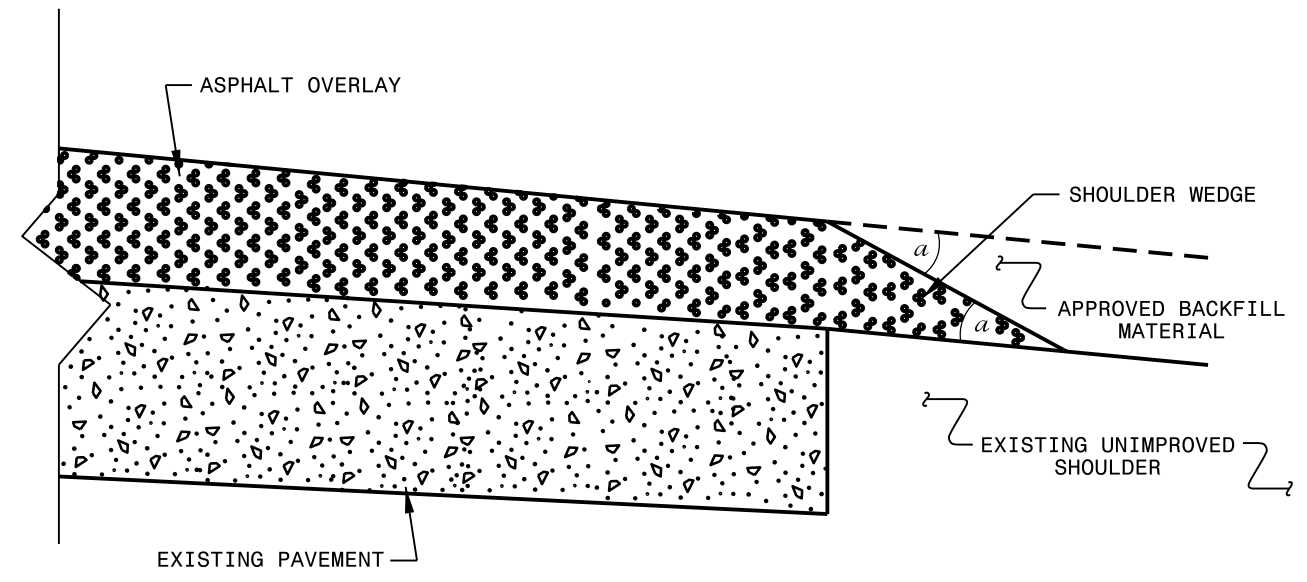
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/14/599

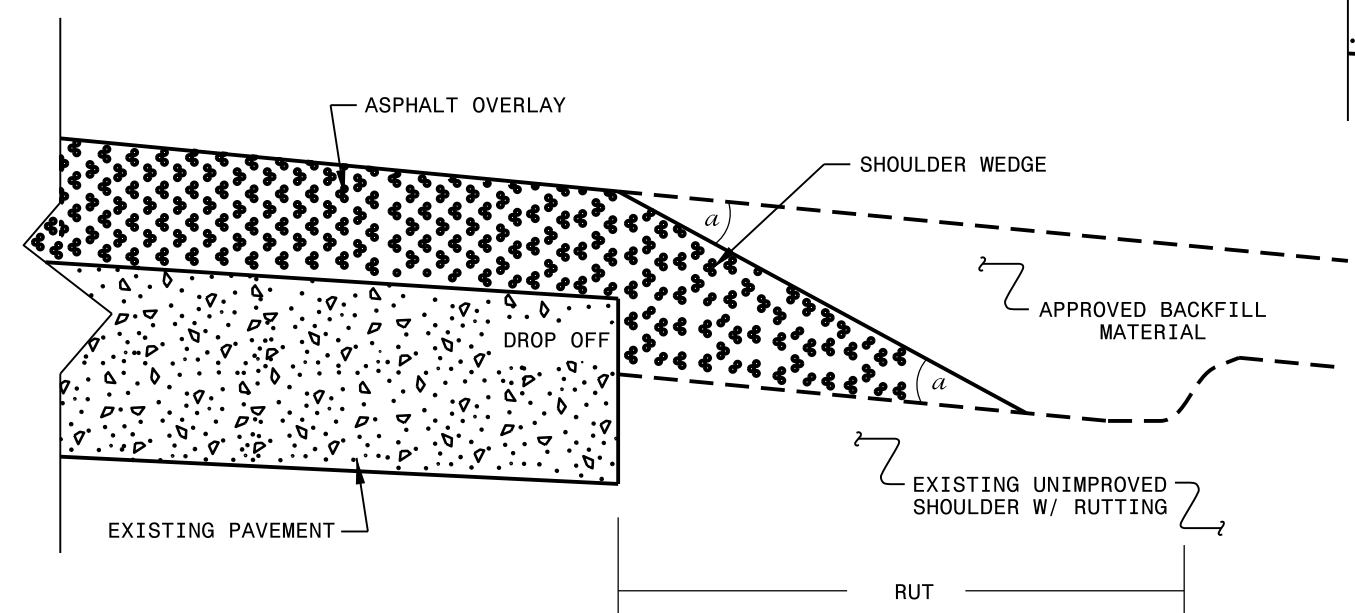
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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.: szusr/details/stand/shoulderwedgedetail.dgn			

24-MAR-2016 11:45
 S:\Contracts\Resurfacing\Projects\Shoulder\Wedge Details\Revised Shoulder Wedge Detail.dgn
 \$\$\$USERNAME\$\$\$

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.14.02.10451.1, ETC.	47	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	LEVELING COURSE, I19.08 TON	SHOULDER RECONSTRUCTION SMI	1 1/2" MILLING SY	2" MILLING SY	INTERMEDIATE COURSE, I19.08(WEDGING) TONS	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	SURFACE COURSE, SF9.5A TONS	LEVELING COURSE, SF9.5A TON	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	RETRO FIT EXISTING CURB RAMP (STD. 848.06)	CURB RAMPS (STD. 848.05) EA	PAVEMENT INTERLAYER SY	ASPHALT FOR PAVEMENT INTERLAYER TON	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	PORTABLE LIGHTING LS	INDUCTIVE LOOP LF	LEAD-IN CABLE (14-2) LF							
2017CPT.14.02.10451.1	Henderson	1	US 64	FROM SR-1634 CAROLINA VILLAGE ROAD TO BRIDGE #130 & 133	1	5	MU	NO	NO	1.55	64		2.10	58,197					5,290			312		15.00	20	58,198.00	400	6		1	500	1,000							
TOTAL FOR MAP NO. 1										1.55			2.10	58,197					5,290			312		15.00	20	58,198.00	400	6		1	500	1,000							
TOTAL FOR PROJ NO. 2017CPT.14.02.10451.1										1.55			2.10	58,197					5,290			312		15.00	20	58,198.00	400	6		1	500	1,000							
2017CPT.14.02.20451.1	Henderson	2	SR-1115	FROM NC225 TO SR-1114	2	2	2WU	NO	NO	3.64	20									3,247		218	720																
TOTAL FOR MAP NO. 2										3.64										3,247		218	720																
2017CPT.14.02.20451.1	Henderson	3	SR-1133	FROM SR-1127 TO TRANSYLVANIA COUNTY LINE	3	2	2WU	NO	NO	4.97	19	2,052.00								4,213		282	450																
TOTAL FOR MAP NO. 3										4.97										4,213		282	450																
2017CPT.14.02.20451.1	Henderson	4	SR-1559	FROM SR-1006 TO SR-1528	10	2	2WU	NO	NO	1.227	20									1,107	649	113	722																
TOTAL FOR MAP NO. 4										1.227										1,107	649	113	722																
2017CPT.14.02.20451.1	Henderson	5	SR-1189	FROM SR-1173 TO LAURLE PARK CITY LIMITS	2	2	2WU	NO	NO	0.6	19									509		34	150										3						
TOTAL FOR MAP NO. 5										0.6										509		34	150											3					
2017CPT.14.02.20451.1	Henderson	6	SR-1587	FROM SR-1586 TO SR-1591	2	2	2WU	NO	NO	2.7	20									2,460		165																	
TOTAL FOR MAP NO. 6										2.7										2,460		165																	
2017CPT.14.02.20451.1	Henderson	7	SR-1244	FROM SR-1133 TO END OF MAINT.	2	2	2WU	NO	NO	0.42	17									319		21																	
TOTAL FOR MAP NO. 7										0.42										319		21																	
2017CPT.14.02.20451.1	Henderson	8	SR-1299	FROM SR-1123 TO END OF MAINT.	2	2	2WU	NO	NO	0.68	20									607		41																	
TOTAL FOR MAP NO. 8										0.68										607		41																	
2017CPT.14.02.20451.1	Henderson	9	SR-1297	FROM SR-1171 TO END OF MAINT	2	2	2WU	NO	NO	0.36	20									321		22																	
TOTAL FOR MAP NO. 9										0.36										321		22																	
2017CPT.14.02.20451.1	Henderson	10	SR-1298	FROM SR-1297 TO END OF MAINT.	2	2	2WU	NO	NO	0.45	20									401		27																	
TOTAL FOR MAP NO. 10										0.45										401		27																	
2017CPT.14.02.20451.1	Henderson	11	SR-1322	FROM SR-1323 TO SR-1328	2	2	2WU	NO	NO	1.59	21									1,489		100	286																
TOTAL FOR MAP NO. 11										1.59										1,489		100	286																
2017CPT.14.02.20451.1	Henderson	12	SR-1395	FROM SR-1383 TO NC 191	2	2	2WU	NO	NO	0.67	18									538		36													1				
TOTAL FOR MAP NO. 12										0.67										538		36														1			
2017CPT.14.02.20451.1	Henderson	13	SR-1396	FROM NC 191 TO SR-1395	2	2	2WU	NO	NO	0.28	18									225		15	125													1			
TOTAL FOR MAP NO. 13										0.28										225		15	125																
2017CPT.14.02.20451.1	Henderson	14	SR-1461	FROM SR-1454 TO SR-2094	2	2	2WU	NO	NO	0.17	18									134		9																	
TOTAL FOR MAP NO. 14										0.17										134		9																	
2017CPT.14.02.20451.1	Henderson	15	SR-1565	FROM SR-1553 TO SR-1574	2	2	2WU	NO	NO	4.49	20									4,005		268	622																
TOTAL FOR MAP NO. 15										4.49										4,005		268	622																
2017CPT.14.02.20451.1	Henderson	16	SR-1568	FROM SR-1565 TO SR-1565	2	2	2WU	NO	NO	0.86	20									767		51																	
TOTAL FOR MAP NO. 16										0.86										767		51																	
2017CPT.14.02.20451.1	Henderson	17	SR-1775	FROM .01 MILES SOUTH OF SR-1772 TO SR-1779	2	2	2WU	NO	NO	0.443	18									363		24	85													2			
TOTAL FOR MAP NO. 17										0.443										363		24	85															2	
2017CPT.14.02.20451.1	Henderson	18	SR-1802	FROM SR-1783 TO SR-1801	2	2	2WU	NO	NO	0.5	20									438		29	95																
TOTAL FOR MAP NO. 18										0.5										438		29	95																
2017CPT.14.02.20451.1	Henderson	19	SR-1902	FROM SR-1783 TO SR-1783	2	2	2WU	NO	NO	1.31	19									1,110		74	250																
TOTAL FOR MAP NO. 19										1.31										1,110		74	250																
2017CPT.14.02.20451.1	Henderson	20	SR-1978	FROM SR-1783 TO SR-1802	2	2	2WU	NO	NO	1.15	21									979		66																	
TOTAL FOR MAP NO. 20										1.15										979		66																	
2017CPT.14.02.20451.1	Henderson	21	SR-2100	FROM SR-1299 TO END OF MAINT.	2	2	2WU	NO	NO	0.31	20									277		19																	
TOTAL FOR MAP NO. 21										0.31										277		19																	
2017CPT.14.02.20451.1	Henderson	22	SR-2202	FROM SR-2204 TO US 64	2	2	2WU	NO	NO	0.59	18									484		32																	
TOTAL FOR MAP NO. 22										0.59										484		32																	
2017CPT.14.02.20451.1	Henderson	23	SR-2203	FROM SR-2202 TO END OF MAINT	2	2	2WU	NO	NO	0.07	14									43		3																	
TOTAL FOR MAP NO. 23										0.07										43		3																	
2017CPT.14.02.20451.1	Henderson	24	SR-2204	FROM SR-1309 TO SR-2202	2	2	2WU	NO	NO	0.39	20									348		23																	
TOTAL FOR MAP NO. 24										0.39										348		23																	
2017CPT.14.02.20451.1	Henderson	25	SR-2205	FROM SR-2206 TO END OF MAINT.	2	2	2WU	NO	NO	0.23	17									165		11																	
TOTAL FOR MAP NO. 25										0.23										165		11																	
2017CPT.14.02.20451.1	Henderson	26	SR-2206	FROM SR-2204 TO DEAD END	2	2	2WU	NO	NO	0.21	16																												

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.14.02.10451.1, ETC.	48	

SUMMARY OF QUANTITIES

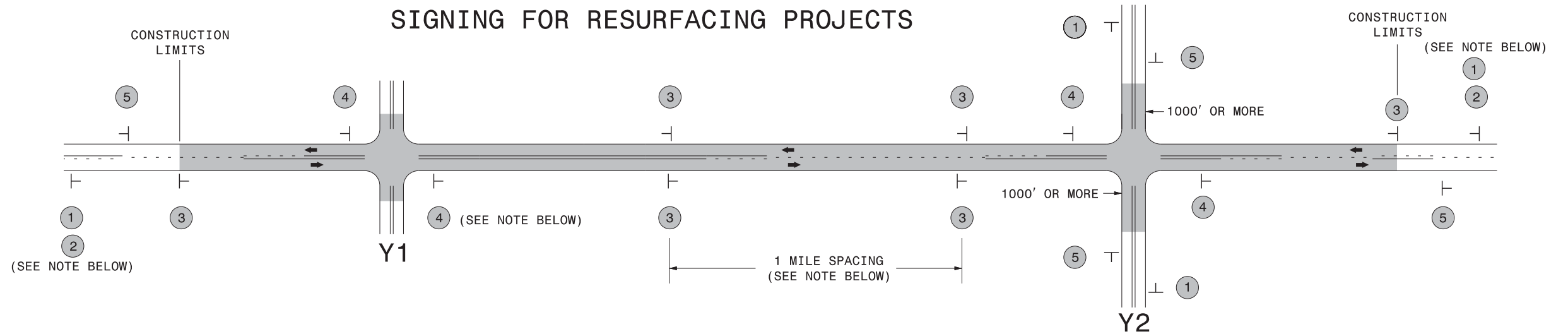
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	LEVELING COURSE, I19.0B	SHOULDER RECONSTRUCTION	1 1/2" MILLING	2" MILLING	INTERMEDIATE COURSE, I19.0B(WEDGING)	SURFACE COURSE, S9.5B	LEVELING COURSE, S9.5B	SURFACE COURSE, S9.5C	SURFACE COURSE, SF9.5A	LEVELING COURSE, SF9.5A	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	RETRO FIT EXISTING CURB RAMP (STD. 848.06)	CURB RAMPS (STD. 848.05)	PAVEMENT INTERLAYER	ASPHALT FOR PAVEMENT INTERLAYER	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	PORTABLE LIGHTING	INDUCTIVE LOOP	LEAD-IN CABLE (14-2)												
												TON	SMI	SY	SY	TONS	TONS	TONS	TONS	TONS	TON	TONS	TONS	EA	SY	TON	EA	EA	LS	LF	LF													
2017CPT.14.02.20881.1	Transylvania	39	SR-1109	FROM SR-1195 TO SR-1103	5	2	2WU	NO	NO	4.08	20		8.16		590	400				3,573	2,692	420	400																					
TOTAL FOR MAP NO. 39										4.08				590	400				8.16		3,573	2,692	420	400																				
2017CPT.14.02.20881.1	Transylvania	40	SR-1143	FROM US 64 TO SR-1139	8	2	2WU	NO	NO	5.38	20		10.76							4,606		309																						
TOTAL FOR MAP NO. 40										5.38									10.76		4,606		309																					
TOTAL FOR PROJ NO. 2017CPT.14.02.20881.1										9.46									18.92		590	400			8,179	2,692	729	400																
2017CPT.14.02.10751.1	Polk	41	NC 108	FROM COLUMBUS CITY LIMITS TO POLK HIGH SCHOOL	6	2	2WU	NO	NO	1.21	25		2.42				1,723	997				168	20								3													
TOTAL FOR MAP NO. 41										1.21							1,723	997				168	20									3												
2017CPT.14.02.10751.1	Polk	42	NC 108	FROM NC 9 TO RUTHFORD LINE	9	2	2WU	NO	NO	7.14	25		14.28		525					7,952		533	525																					
TOTAL FOR MAP NO. 42										7.14					525				7,952		533	525																						
TOTAL FOR PROJ NO. 2017CPT.14.02.10751.1										8.35					16.70				525			1,723	997		7,952		701	545							3									
2017CPT.14.02.20751.1	Polk	43	SR-1116	FROM SR-1174 TO SR-1115	7	2	2WU	NO	NO	0.72	17		1.44							501	315	52																						
TOTAL FOR MAP NO. 43										0.72												501	315	52																				
2017CPT.14.02.20751.1	Polk	44	SR-1006	FROM SR-1142 TO SR-1147	8	2	2WU	NO	NO	0.56	19		1.02							447		30	180																					
TOTAL FOR MAP NO. 44										0.56												447		30	180																			
2017CPT.14.02.20751.1	Polk	45	SR-1004	FROM SOUTH CAROLINA LINE TO SR-1343	8	2	2WU	NO	NO	1.72	19		3.44							1,374		92																						
TOTAL FOR MAP NO. 45										1.72												1,374		92																				
2017CPT.14.02.20751.1	Polk	46	SR-1115	FROM SR-1116 TO END OF MAINT.	8	2	2WU	NO	NO	0.61	18		1.20							481		32																						
TOTAL FOR MAP NO. 46										0.61												481		32																				
2017CPT.14.02.20751.1	Polk	47	SR-1300	FROM SR-1307 TO RUTHERFORD LINE	8	2	2WU	NO	NO	0.34	20		0.68							286		19	100																					
TOTAL FOR MAP NO. 47										0.34												286		19	100																			
2017CPT.14.02.20751.1	Polk	48	SR-1197	FROM SR-1138 TO END OF MAINT.	8	2	2WU	NO	NO	0.21	18		0.42							159		11	50																					
TOTAL FOR MAP NO. 48										0.21												159		11	50																			
2017CPT.14.02.20751.1	Polk	49	SR-1557	FROM SR-1532 TO END OF MAINT	7	2	2WU	NO	NO	0.76	18		1.15							594	355	61																						
TOTAL FOR MAP NO. 49										0.76												594	355	61																				
2017CPT.14.02.20751.1	Polk	50	SR-1550	FROM NC 9 TO END OF MAINT.	7	2	2WU	NO	NO	0.25	19		0.50							200	157	23																						
TOTAL FOR MAP NO. 50										0.25												200	157	23																				
2017CPT.14.02.20751.1	Polk	51	SR-1136	FROM SR-1135 TO MORNING RIDE DRIVE	7	2	2WU	NO	NO	5.3	18		10.60							4,180	1,968	398	350																					
TOTAL FOR MAP NO. 51										5.3												4,180	1,968	398	350																			
TOTAL FOR PROJ NO. 2017CPT.14.02.20751.1										10.47																	8,222	2,795	718	680														
GRAND TOTAL										64.11					2,052.00		58.17		58,947	1,115	400	3,830	1,897	5,290	51,949	6,136	4,531	5,430	15.00	20	58,198.00	400	8	11	1	500	1,000							

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.14.02.10451.1, ETC.	50	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4695000000-E	4697000000-E	4710000000-E	4721000000-E	4725000000-E	4810000000-E	4830000000-E	4835000000-E	4840000000-N	4845000000-N	4891000000-E	4905000000-N											
										WORK ZONE ADVANCE GENERAL WARNING SIGNING SF	TEMPORARY TRAFFIC CONTROL LS	8" X 90 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	8" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG ONLY 120 M EA	THERMO MSG SCHOOL 120 M EA	THERMO STR ARROW 90 MIL EA	THERMO LT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	THERMO RT ARROW 90 M EA	4" YELLOW PAINT LF	4" WHITE PAINT LF	16" WHITE PAINT LF	24" WHITE PAINT LF	PAINT MSG RXR EA	PAINT RT ARROW EA	PAINT LT ARROW EA	4" X 50 M WHITE THERMO LF	4" X 50 M YELLOW THERMO LF	SNOW PLOWABLE MARKERS EA			
2017CPT.14.02.20881.1	Transylvania	39	SR-1109	FROM SR-1195 TO SR-1103		5	2	ZWU	4.080	20	457	*										87,883	87,802		300									
				TOTAL FOR MAP NO. 39					4.080		457											87,883	87,802		300									
2017CPT.14.02.20881.1	Transylvania	40	SR-1143	FROM US 64 TO SR-1139		8	2	ZWU	5.380	20	602	*										115,885	115,778		200									
				TOTAL FOR MAP NO. 40					5.380		602											115,885	115,778		200									
				TOTAL FOR PROJ NO. 2017CPT.14.02.20881.1					9.460		1,059											203,768	203,580		500									
											1,059											407,348												
2017CPT.14.02.10751.1	Polk	41	NC 108	FROM COLUMBUS CITY LIMITS TO POLK HIGH SCHOOL		6	2	ZWU	1.210	25	136	*	315	600			12			7		3	13,150							13,450	13,150	245		
				TOTAL FOR MAP NO. 41					1.210		136		315	600			12			7		3	13,150						13,450	13,150	245			
2017CPT.14.02.10751.1	Polk	42	NC 108	FROM NC 9 TO RUTHFORD LINE		9	2	ZWU	7.140	25	800	*			70								75,400						76,400	75,860	471			
				TOTAL FOR MAP NO. 42					7.140		800			70									75,400						76,400	75,860	471			
				TOTAL FOR PROJ NO. 2017CPT.14.02.10751.1					8.350		936		315	600	70		12			7		3	88,550						89,850	89,010	716			
											936		915	600	70		12			10		3	88,550						178,860					
2017CPT.14.02.20751.1	Polk	43	SR-1116	FROM SR-1174 TO SR-1115		7	2	ZWU	0.720	17		*											15,509	15,494		60								
				TOTAL FOR MAP NO. 43					0.720														15,509	15,494		60								
2017CPT.14.02.20751.1	Polk	44	SR-1006	FROM SR-1142 TO SR-1147		8	2	ZWU	0.560	19	63	*											12,062	12,051		60								
				TOTAL FOR MAP NO. 44					0.560		63												12,062	12,051		60								
2017CPT.14.02.20751.1	Polk	45	SR-1004	FROM SOUTH CAROLINA LINE TO SR-1343		8	2	ZWU	1.720	19	193	*											37,049	37,014		80								
				TOTAL FOR MAP NO. 45					1.720		193												37,049	37,014		80								
2017CPT.14.02.20751.1	Polk	46	SR-1115	FROM SR-1116 TO END OF MAINT.		8	2	ZWU	0.610	18	68	*											8,052	13,127		60								
				TOTAL FOR MAP NO. 46					0.610		68												8,052	13,127		60								
2017CPT.14.02.20751.1	Polk	47	SR-1300	FROM SR-1307 TO RUTHERFORD LINE		8	2	ZWU	0.340	20	44	*											4,488	7,317										
				TOTAL FOR MAP NO. 47					0.340		44												4,488	7,317										
2017CPT.14.02.20751.1	Polk	48	SR-1197	FROM SR-1138 TO END OF MAINT.		8	2	ZWU	0.210	18		*																						
				TOTAL FOR MAP NO. 48					0.210																									
2017CPT.14.02.20751.1	Polk	49	SR-1557	FROM SR-1532 TO END OF MAINT.		7	2	ZWU	0.760	18		*											16,370	16,355		40								
				TOTAL FOR MAP NO. 49					0.760														16,370	16,355		40								
2017CPT.14.02.20751.1	Polk	50	SR-1550	FROM NC 9 TO END OF MAINT.		7	2	ZWU	0.250	19		*																						
				TOTAL FOR MAP NO. 50					0.250																									
2017CPT.14.02.20751.1	Polk	51	SR-1136	FROM SR-1135 TO MORNING RIDE DRIVE		7	2	ZWU	5.300	18	602	*											69,960	114,056		200								
				TOTAL FOR MAP NO. 51					5.300		602												69,960	114,056		200								
				TOTAL FOR PROJ NO. 2017CPT.14.02.20751.1					10.470		970												163,490	215,414		500								
											970												378,904											
GRAND TOTAL								64.110	5,864	1	315	600	300	595	4	12	19	36	11	3	1,072,655	1,085,715	200	3,420	8	8	2	107,438	106,598	716				
									5,864		915				16		69				2,158,370			10			214,036							

SIGNING FOR RESURFACING PROJECTS



LEGEND	
	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

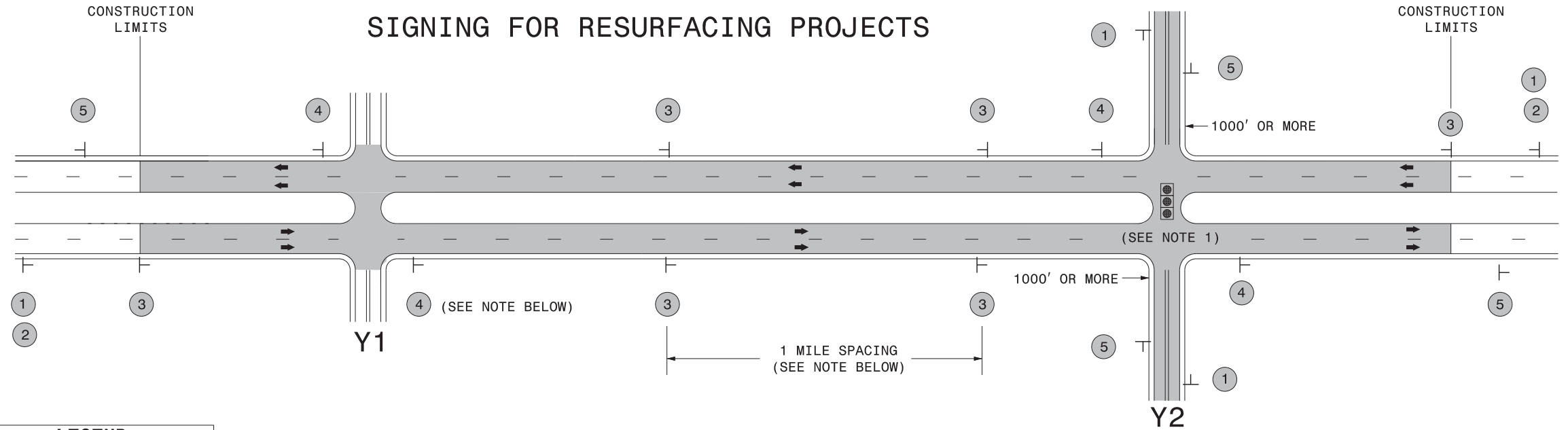
MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	MAINLINE (-L-) SIGNING		-Y- LINE SIGNING	
	1	 <small>W20-1 48" X 48"</small>	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p>	<p style="text-align: center;">NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>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.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;"> <small>W20-7 A 48" X 48"</small> </div> </div> <p style="text-align: center;">PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
	2	 <small>W7-3aP 24" X 18"</small>	<p>#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)</p>	
	3	 <small>SP 13107 48" X 48"</small>	<p>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.</p>	
	4	 <small>SP 13106 48" X 48"</small>	<p>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.</p>	
5	 <small>G20-2 A 48" X 24"</small>	<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>		

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**RESURFACING
ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2 LANE ROADWAYS**



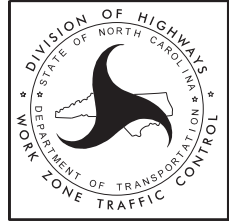
LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

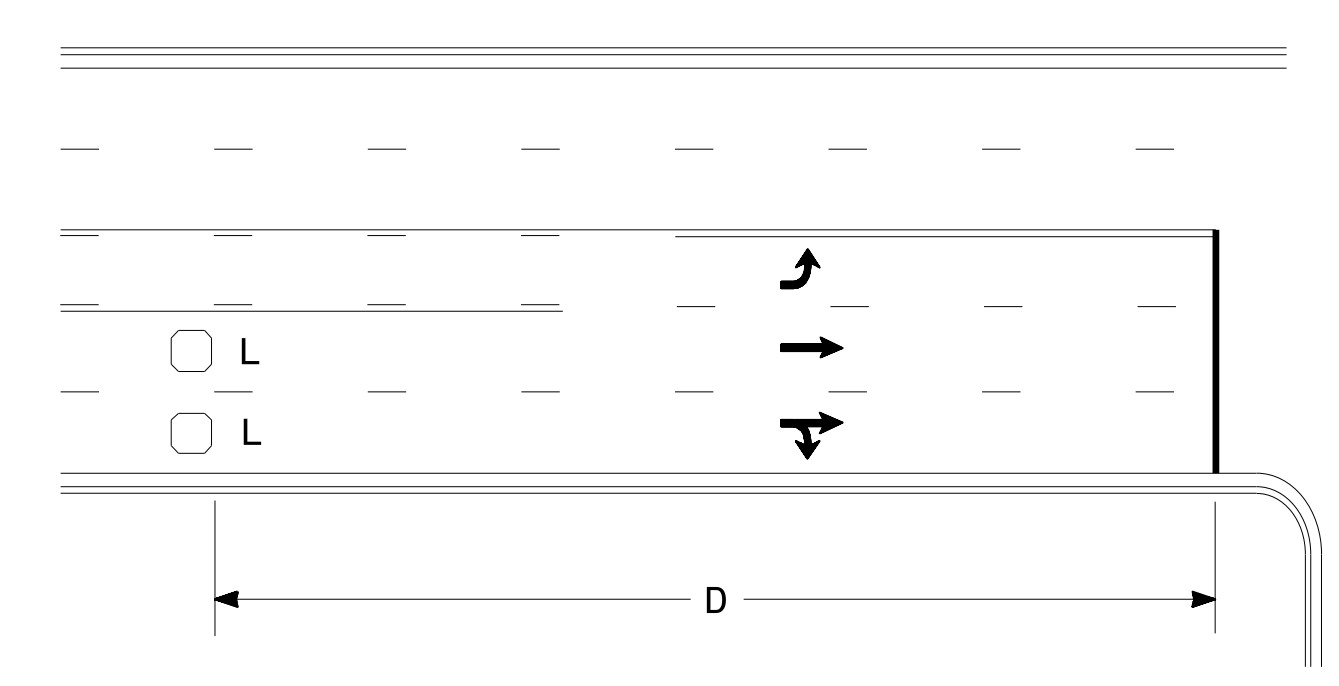
SIGNING NOTES AND PLACEMENT PER DIRECTION		<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>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.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>W20-1 48" X 48"</p> </div> <div style="text-align: center;"> <p>W20-7 A 48" X 48"</p> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p>NOTES:</p> <ol style="list-style-type: none"> 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.
		<p>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.</p>	
		<p>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.</p>	
		<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	

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

High Speed Detection (≥40 mph)

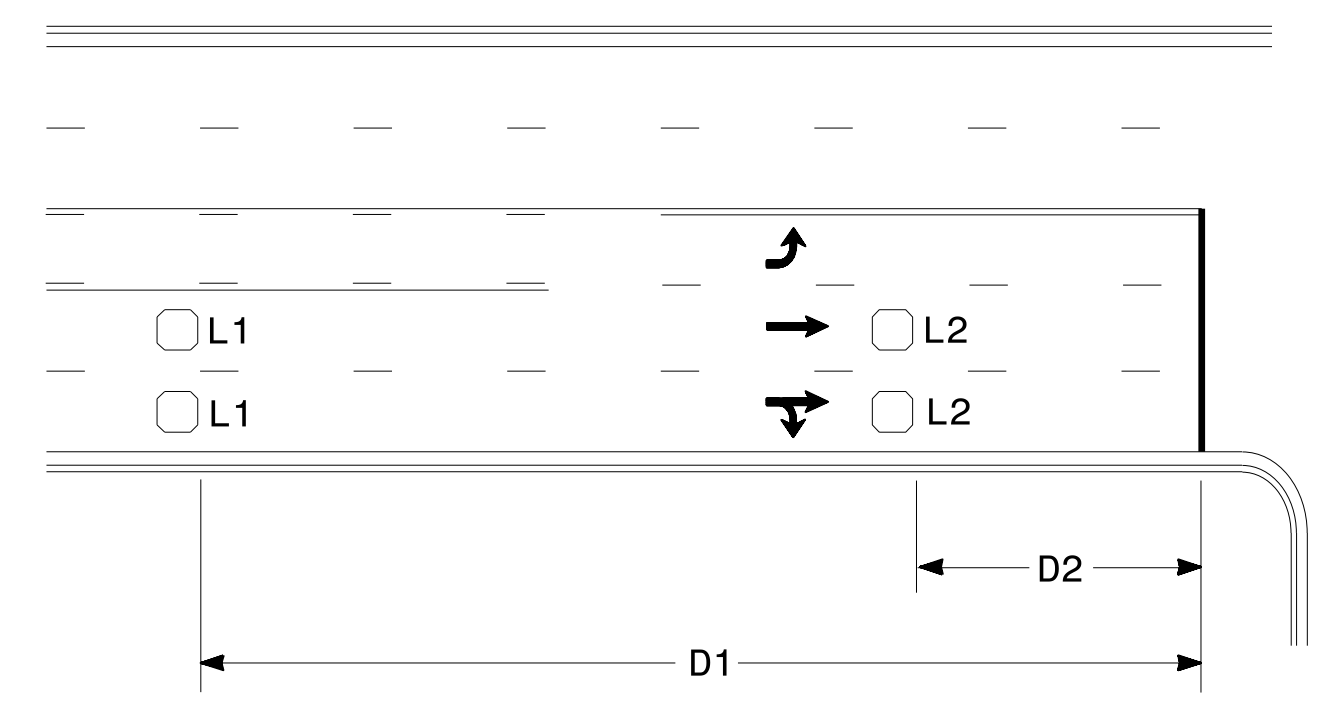


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

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

Volume Density Operation

OR

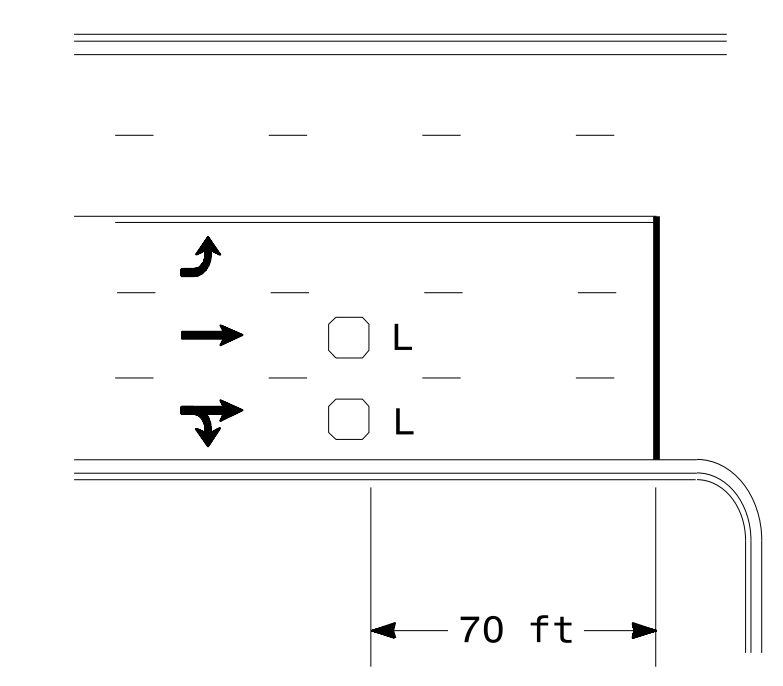


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

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

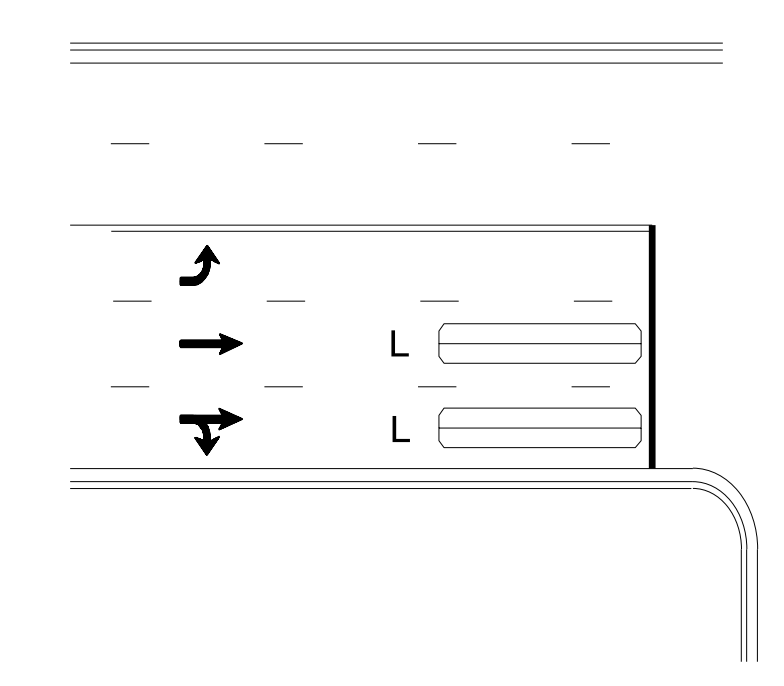
"Stretch" Operation

Low Speed Detection (≤35 mph)



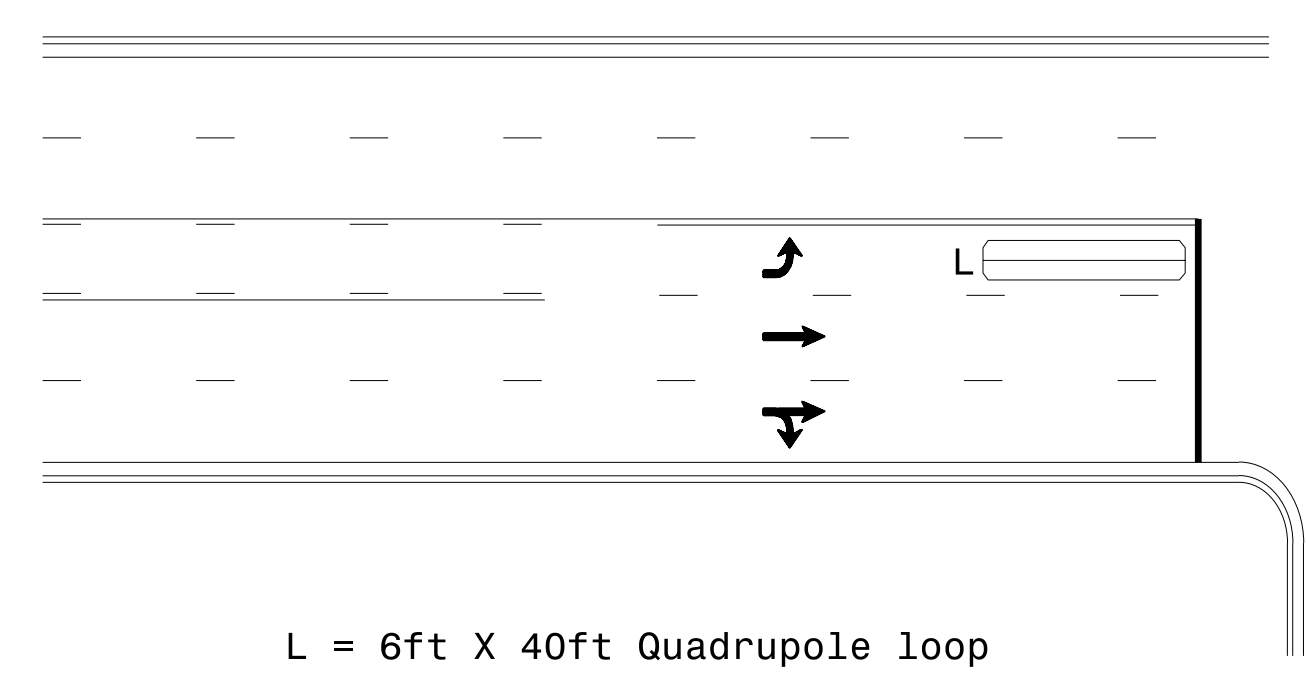
L = 6ft X 6ft
Wired in series

OR



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

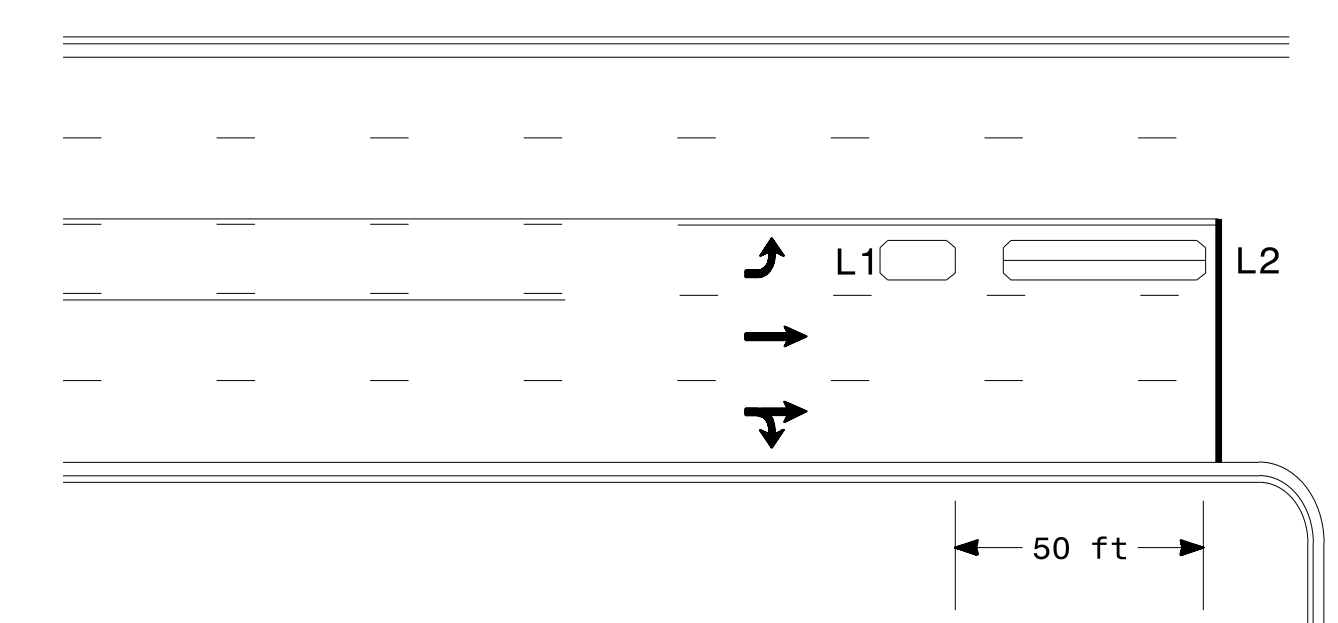
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

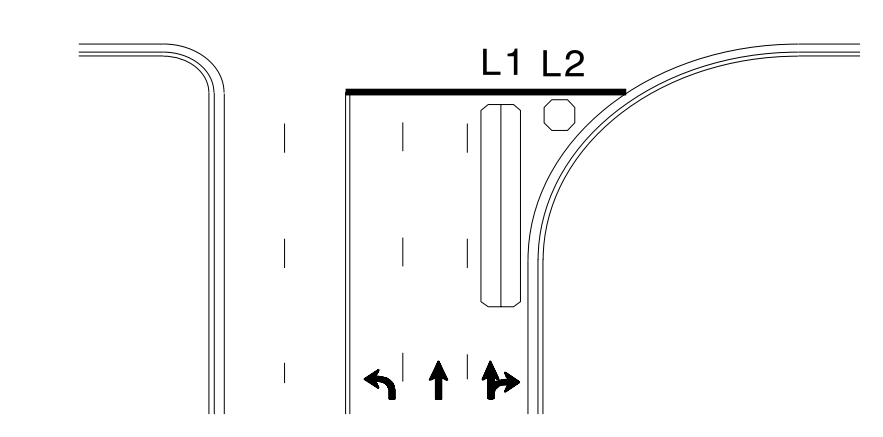
OR



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

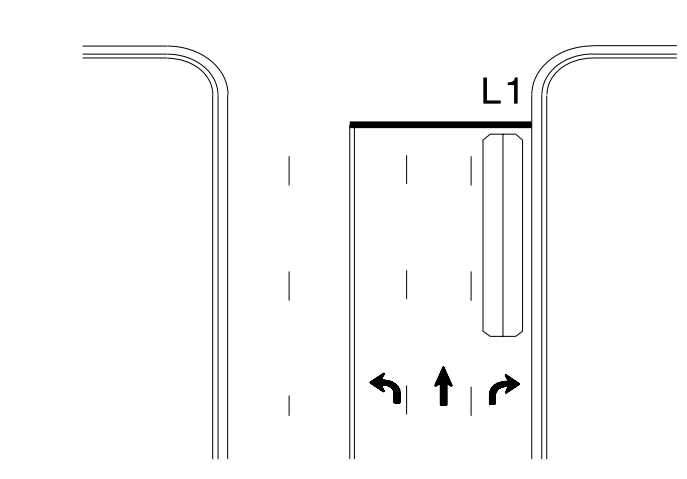
Queue Loop Detection

Right Turn Lane Detection

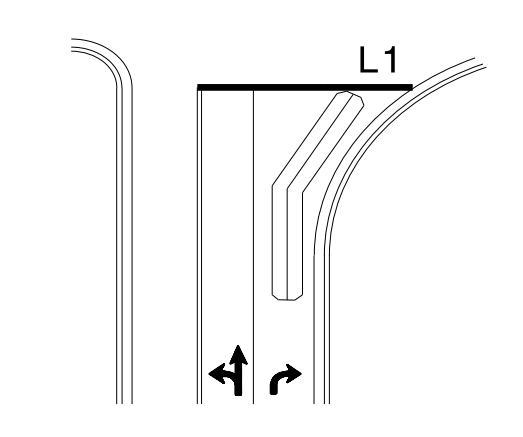


Shared Lane/
Wide Radius Turn

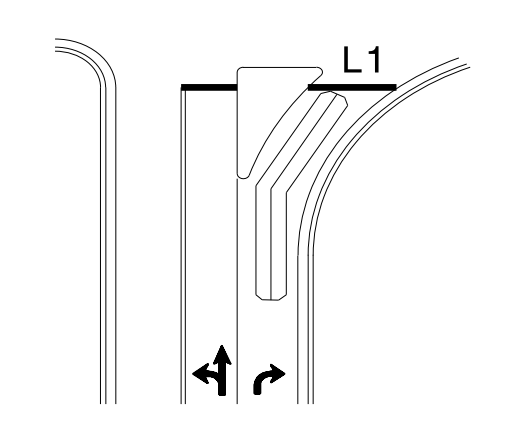
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

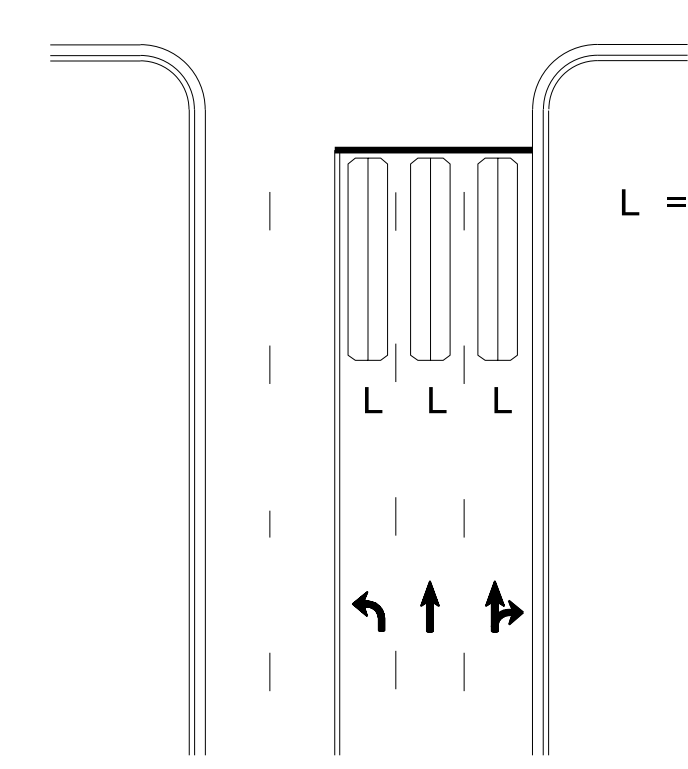


Wide Radius Turn



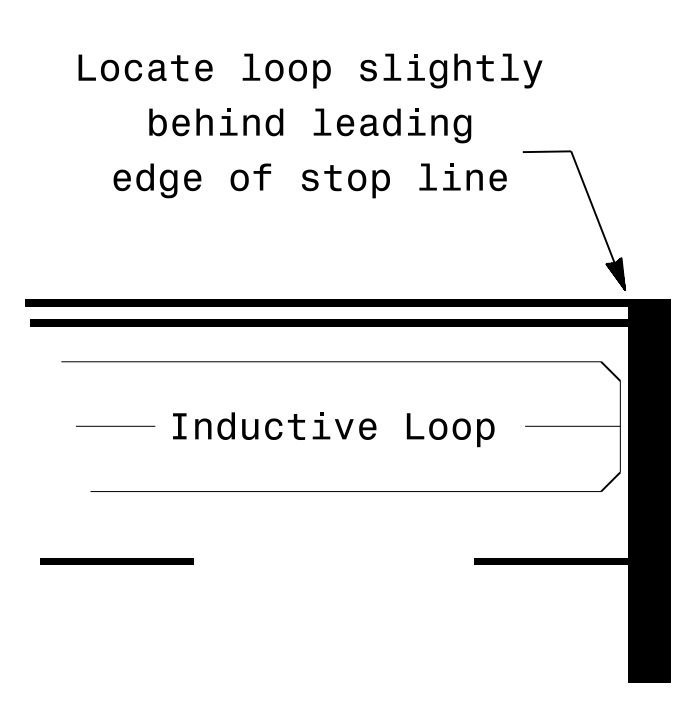
Channelized Turn

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

750 N. Greenfield Pkwy, Garner, NC 27529

Typical Signal Loop Locations

PLAN DATE: January 2015	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

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1/30/2015

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 paalexander