

REFERENCE: A-0009C

PROJECT: 32572

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	A-0009C	1	68

**ROADWAY  
SUBSURFACE INVESTIGATION**

COUNTY GRAHAM  
PROJECT DESCRIPTION WIDEN US 129, NC 143, AND NC 28 (CLIMBING/PASSING LANE) FROM ROBBINSVILLE TO STECOAH  
**PAVEMENT AND SUBGRADE INVESTIGATION**

**CONTENTS**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2, 2A	LEGEND (SOIL & ROCK), ABBREVIATIONS
3, 3A, 3B	ROADWAY TITLE SHEETS
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38-41	PAVEMENT INVESTIGATION DATA SHEETS
42-55	DUAL MASS DCP DATA SHEETS
56-58	PAVEMENT CORE PHOTOS
59-68	LABORATORY TEST RESULTS

**CAUTION NOTICE**

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
  - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

FIELD PERSONNEL

M. BREWER  
R. KRAL  
L. ARD

INVESTIGATED BY CG2  
DRAWN BY M. BREWER, P.E.  
CHECKED BY R. KRAL, P.E.  
SUBMITTED BY CG2  
DATE MAY 2022

Prepared in the Office of:  

**CAROLINAS  
GEOTECHNICAL  
GROUP**  
 2400 CROWNPOINT EXECUTIVE DRIVE  
 SUITE 800  
 CHARLOTTE, NC 28227  
 (980) 339-8684



DocuSigned by:  
D. Matthew Brewer 5/4/2022  
386129C0A4C1462...  
SIGNATURE DATE

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



## Tip No. A-0009C | WBS No. 32572.1.FS10 | Graham County

### ABBREVIATIONS

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RT LN = Right Lane

LT LN = Left Lane

OSL = Outside Lane

ISL = Inside Lane

OSML = Outside Mid-Lane

ISML = Inside Mid-Lane

PS = Paved Shoulder

LTL = Left Turn Lane

RTL = Right Turn Lane

MID = Middle Lane

CTL = Center Turn Lane

ISWP = Inside Wheel Path

OSWP = Outside Wheel Path

PS = Paved Shoulder

FW = From White Line

FY = From Yellow Line

RT = Right

LT = Left

(I) = Inside

(O) = Outside

BOC = Back of Curb

C&G = Curb and Gutter

EOP = Edge of Pavement

CR = Crown

S = Super

C = Cut

F = Fill

DCP = Dynamic Cone Penetrometer

M = Moist

W = Wet

N/A = Not Observed

NSR = No Sample Recovered

S- = Soil Grab Sample

Ref- = Soil Reference Sample

SS- = Split Spoon Sample

RE = Roadway Embankment

F. = Fine

Cse. = Coarse

ABC = Aggregate Base Course

STBC = Soil Type Base Course

CSS = Cement Stabilized Soil

SG = Subgrade

Sa. = Sand/Sandy

Si. = Silt/Silty

Cl. = Clay/Clayey

WR = Weathered Rock

See Sheet 1A For Index of Sheets

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

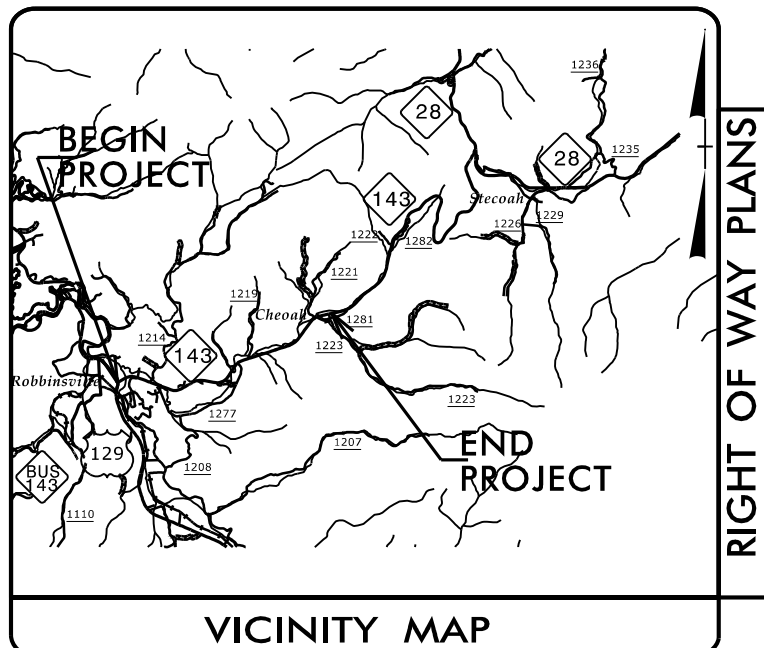
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	A-0009CA	3	68
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
32572.1.13	APD-0074(178)	PE	
32572.2.13	APD-0074(178)	ROW,UTIL.	
32572.3.13	APD-0074(178)	CONST.	

**GRAHAM COUNTY**

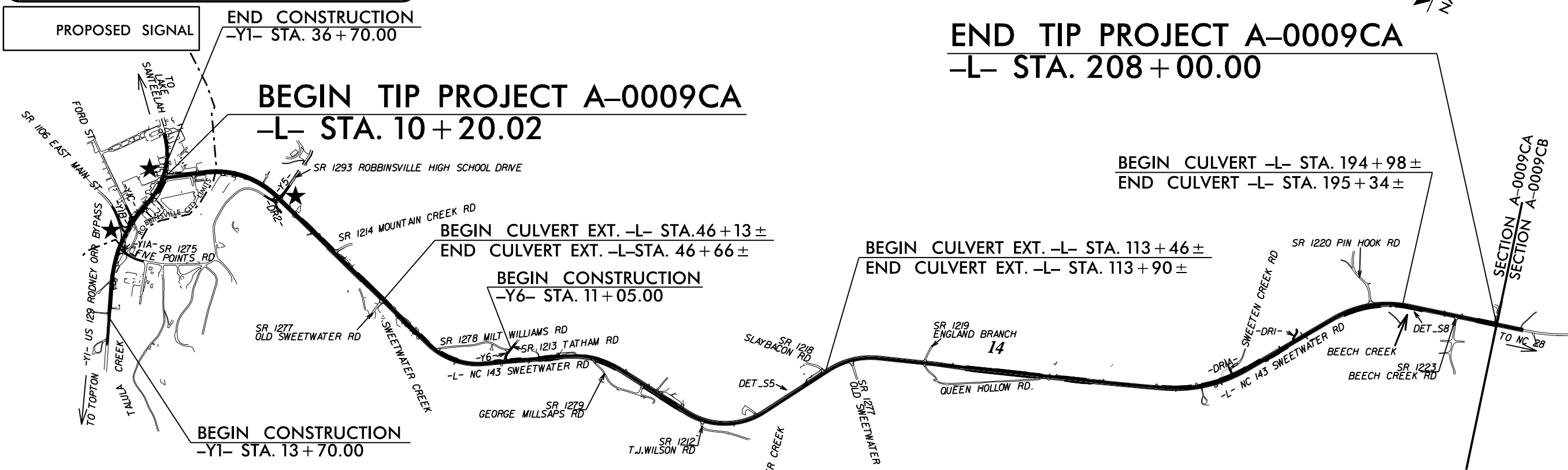
LOCATION: UPGRADE US 129 FROM SOUTH OF SR 1275 (FIVE POINTS ROAD) TO NC 143 AND UPGRADE NC 143 FROM US 129 TO SR 1223 (BEECH CREEK ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, CULVERTS, RETAINING WALLS, AND SIGNALS

**TIP PROJECT: A-0009CA**



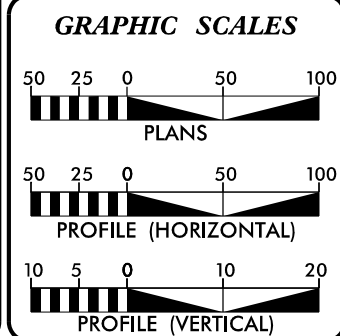
RIGHT OF WAY PLANS



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II. A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF TOWN OF ROBBINSVILLE.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**DESIGN DATA**

ADT 2019 =	6300
ADT 2045 =	8800
K =	11 %
D =	57.5 %
T =	7 % *

50MPH - BEGIN PROJECT TO FIVE POINTS RD  
60MPH - FIVE POINTS RD TO END OF PROJECT  
\* TTST = 2% DUAL = 5%  
FUNC CLASS = RURAL ARTERIAL REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT A-0009CA =	3.746 MILES
LENGTH STRUCTURE TIP PROJECT A-0009CA =	0.027 MILES
TOTAL LENGTH TIP PROJECT A-0009CA =	3.746 MILES

**NC DOT CONTACT: WANDA H. AUSTIN, PE**

PLANS PREPARED BY: <b>TGS ENGINEERS</b> 201 W. MARION ST SHELBY, NC 28150 PH 17041 476-0003 CORP. LICENSE NO. C-0275	PLANS PREPARED FOR: <b>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION</b> DIVISION 14 252 Webster Rd Sylva, NC 28779
RIGHT OF WAY DATE: JULY 16, 2021	JIMMY L. TERRY, PE PROJECT ENGINEER
LETTING DATE: AUGUST 16, 2022	AUSTIN TURNER, PE PROJECT DESIGN ENGINEER

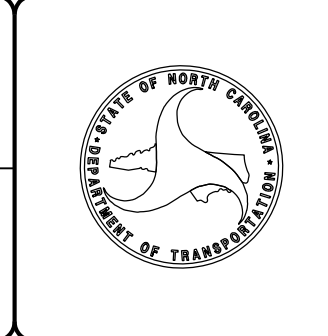
2018 STANDARD SPECIFICATIONS

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



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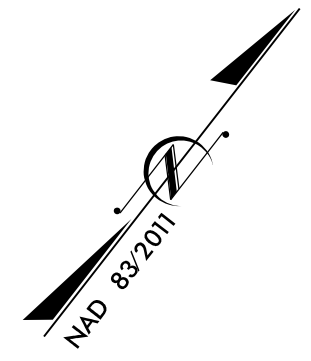
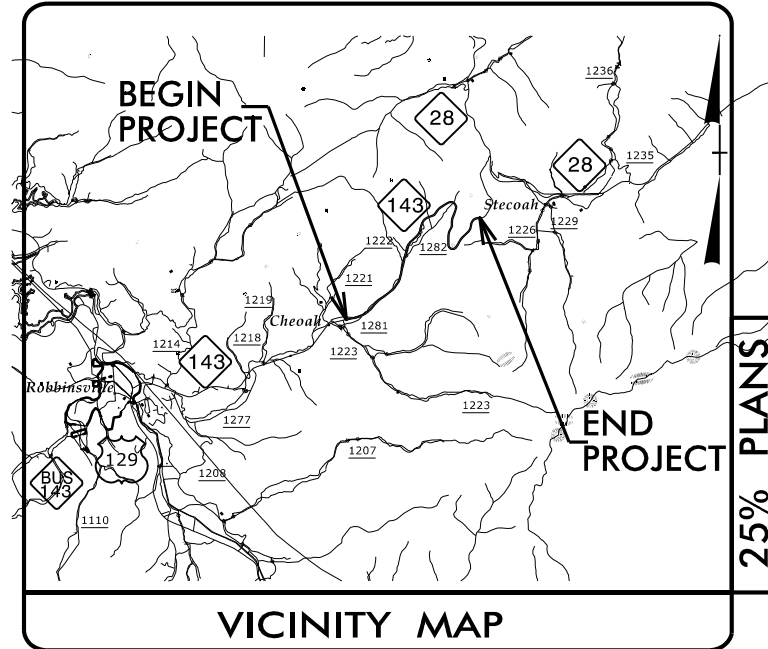
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	A-0009CB	3A	68
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
32572.1.FS10	APD-0074(178)	PE	
32572.2.13	APD-0074(178)	ROW,UTIL.	
32572.3.13	APD-0074(178)	CONST.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GRAHAM COUNTY**

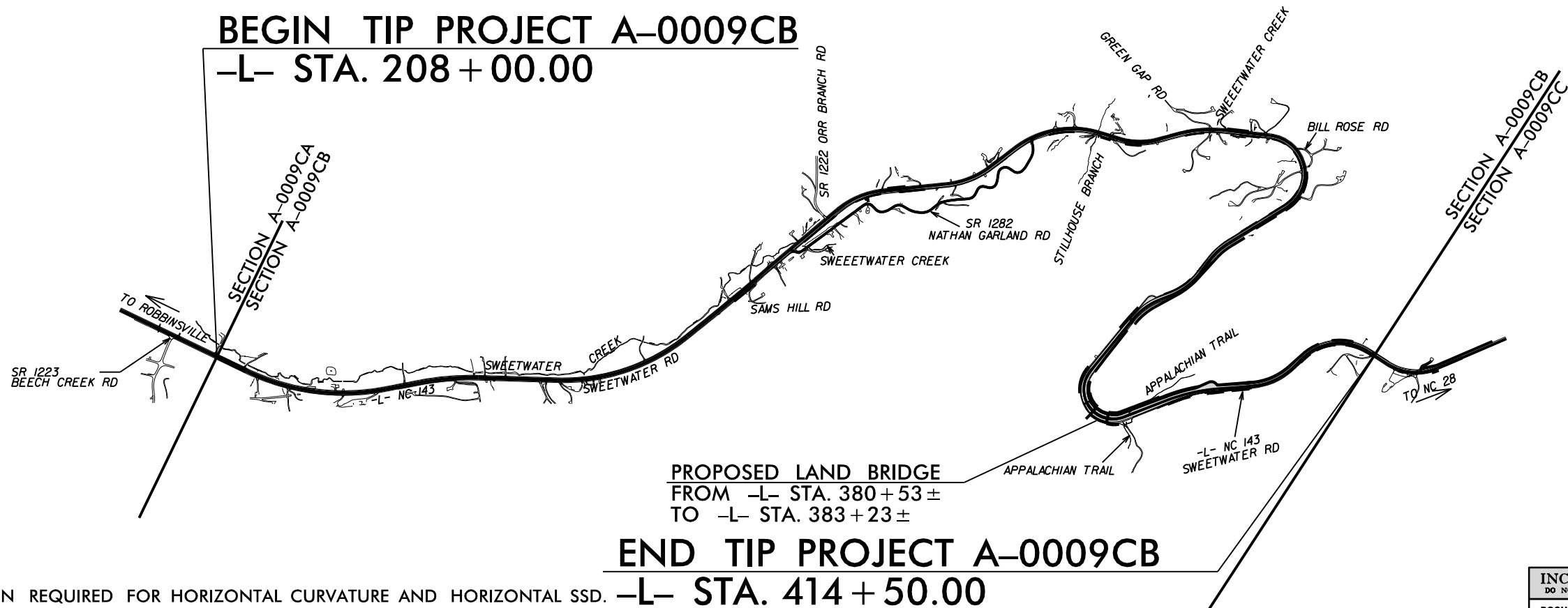
LOCATION: UPGRADE NC 143 FROM SR 1223 (BEECH CREEK RD) TO 0.5 MILES NORTH OF APPALACHIAN TRAIL

TYPE OF WORK: GRADING, PAVING, DRAINAGE, CULVERTS, RETAINING WALLS, AND LAND BRIDGE



**TIP PROJECT: A-0009CB**

**BEGIN TIP PROJECT A-0009CB**  
-L- STA. 208 + 00.00

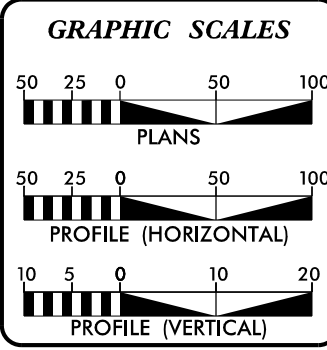


**END TIP PROJECT A-0009CB**  
-L- STA. 414 + 50.00

DESIGN EXCEPTION REQUIRED FOR HORIZONTAL CURVATURE AND HORIZONTAL SSD. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD \_\_\_\_ THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**DESIGN DATA**

ADT 2019 =	6300
ADT 2045 =	8800
K =	11 %
D =	57.5 %
T =	7 % *
V =	60 MPH
* TTST =	2% DUAL = 5%
FUNC CLASS =	RURAL ARTERIAL
REGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT A-0009CB =	3.911 MILES
TOTAL LENGTH TIP PROJECT A-0009CB =	3.911 MILES

NCDOT CONTACT: WANDA H. AUSTIN, PE

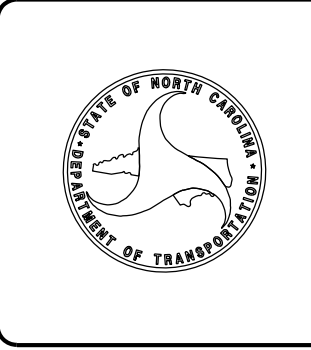
PLANS PREPARED BY: <b>TGS ENGINEERS</b> 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO. C-0275	PLANS PREPARED FOR: <b>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION</b> DIVISION 14 252 Webster Rd Sylva, NC 28779
RIGHT OF WAY DATE: SEPTEMBER 2021	JIMMY L. TERRY, PE PROJECT ENGINEER
LETTING DATE: SEPTEMBER 20, 2022	AUSTIN TURNER, PE PROJECT DESIGN ENGINEER
2018 STANDARD SPECIFICATIONS	

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



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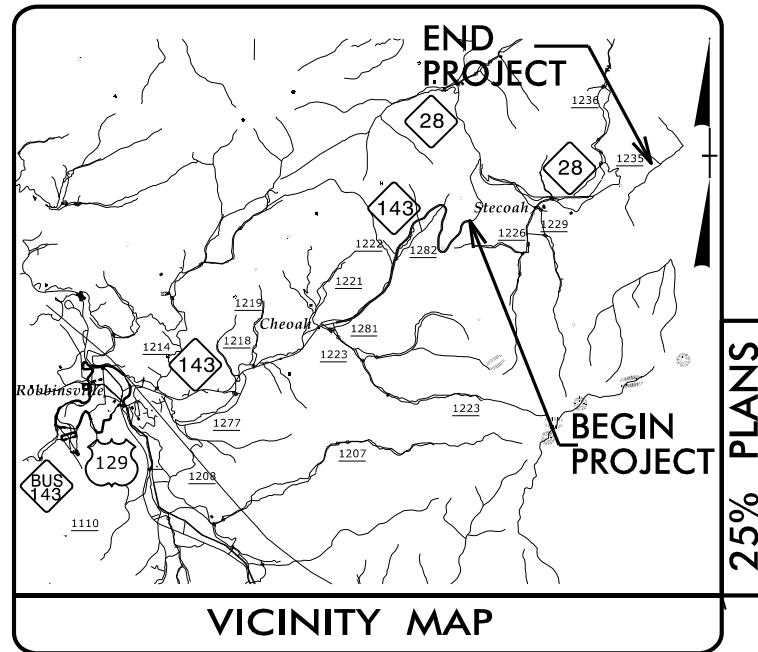
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	A-0009CC	3B	68
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
32572.1.15	APD-0074(178)	PE	
32572.2.15	APD-0074(178)	ROW,UTIL.	
32572.3.15	APD-0074(178)	CONST.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GRAHAM COUNTY**

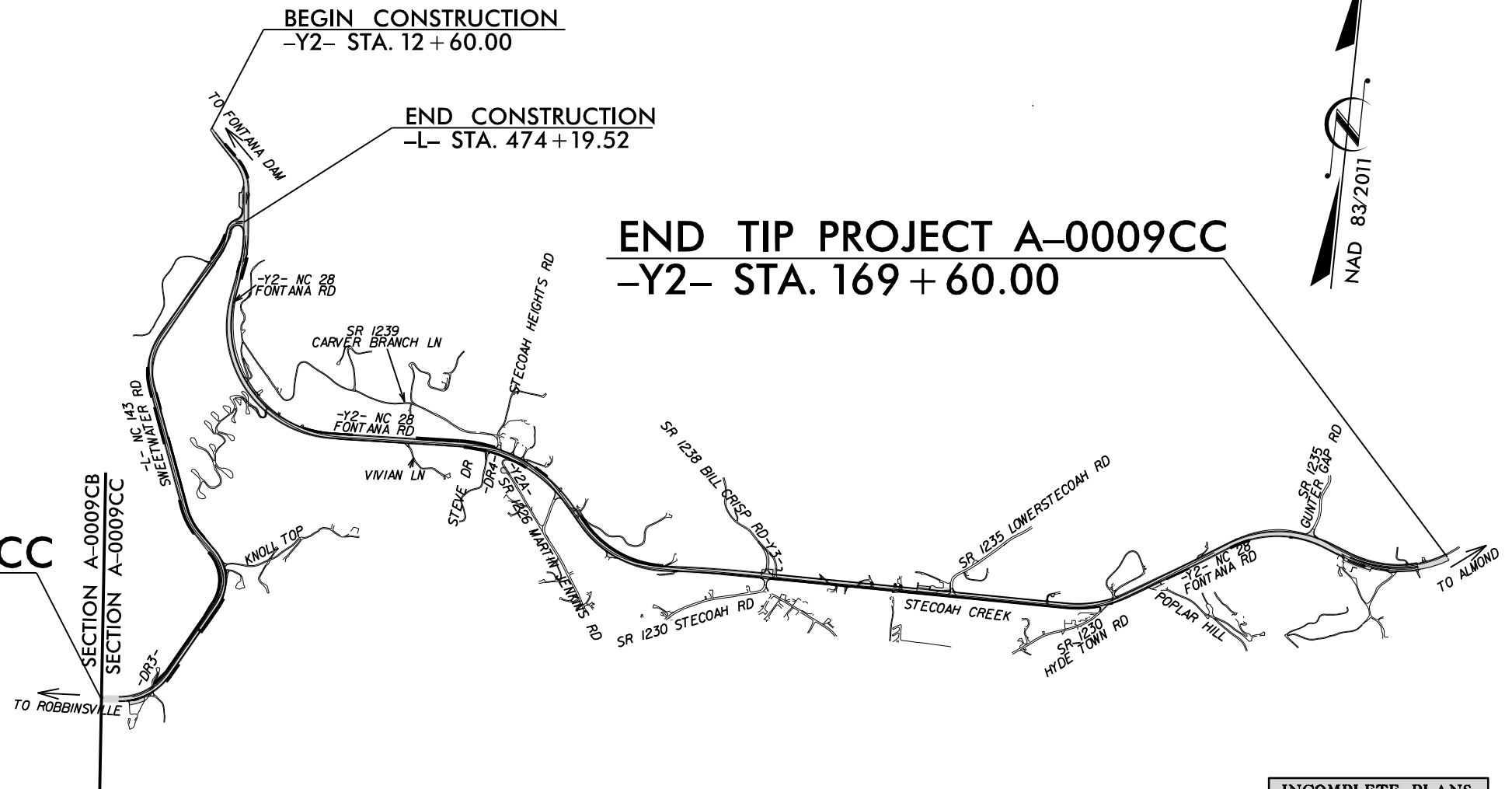
**LOCATION:** UPGRADE NC 143 FROM 0.5 MILES NORTH OF APPALACHIAN TRAIL TO NC 28  
UPGRADE NC 28 FROM 0.2 MILES WEST OF NC 143 TO 0.3 MILES EAST  
OF SR 1235 (GUNTERS GAP RD)

**TYPE OF WORK:** GRADING, PAVING, DRAINAGE, CULVERTS, CURB AND GUTTER, & RETAINING WALLS



3R GUIDELINES WERE USED FROM  
-L- 414+50 TO -L- STA 474+20  
AND FROM -Y2- 12+60± TO 23+00±  
TO MINIMIZE IMPACTS TO USFD PROPERTY  
AND NATURAL RESOURCES.

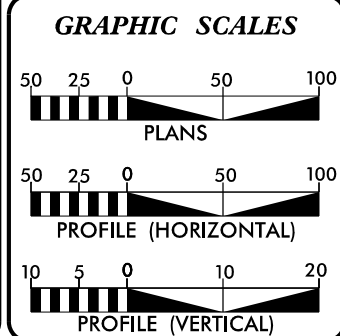
**BEGIN TIP PROJECT A-0009CC**  
-L- STA. 414 + 50.00



DESIGN EXCEPTION REQUIRED FOR HORIZONTAL CURVATURE AND HORIZONTAL SSD.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD \_\_\_\_.  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**-L- DESIGN DATA**

ADT 2022 = 6590
ADT 2045 = 8800
K = 11 %
D = 57.5 %
T = 7 % *
V = 60 MPH
* TTST = 2% DUAL = 5%
FUNC CLASS =
RURAL ARTERIAL
REGIONAL TIER

**-Y2- DESIGN DATA**

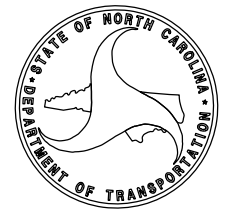
ADT 2022 = 3800
ADT 2045 = 5200
K = 11 %
D = 67.5 %
T = 7 % *
V = 50 MPH
* TTST = 2% DUAL = 5%
FUNC CLASS =
RURAL ARTERIAL
REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP	
PROJECT A-0009CC	
-L-	= 1.131 MILES
-Y2-	= 2.973 MILES
TOTAL LENGTH TIP	
PROJECT A-0009CC	= 4.104 MILES

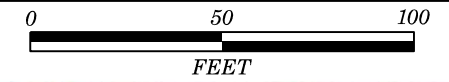
NCDOT CONTACT: WANDA H. AUSTIN, PE	
PLANS PREPARED BY: <b>TGS ENGINEERS</b> 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH 17041 476-0003 CORP. LICENSE NO. C-0275	PLANS PREPARED FOR: <b>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION</b> DIVISION 14 252 Webster Rd Sylva, NC 28779
RIGHT OF WAY DATE: SEPTEMBER 2021	JIMMY L. TERRY, PE PROJECT ENGINEER
LETTING DATE: OCTOBER 18, 2022	AUSTIN TURNER, PE PROJECT DESIGN ENGINEER
2018 STANDARD SPECIFICATIONS	

HYDRAULICS ENGINEER	
SIGNATURE: _____ P.E.	
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____ P.E.	



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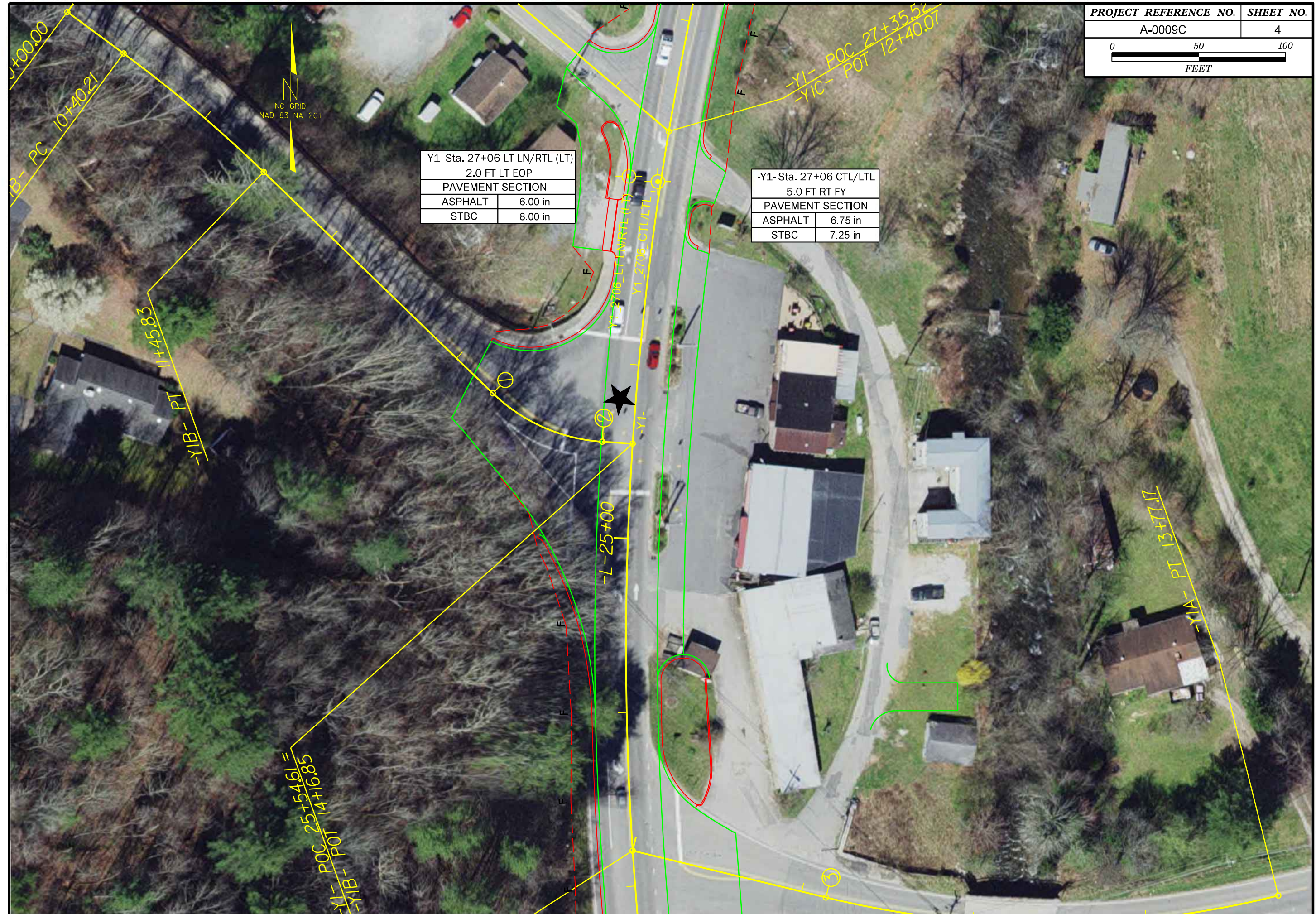




NC GRID  
NAD 83 NA 2011

-Y1- Sta. 27+06 LT LN/RTL (LT)	
2.0 FT LT EOP	
PAVEMENT SECTION	
ASPHALT	6.00 in
STBC	8.00 in

-Y1- Sta. 27+06 CTL/LTL	
5.0 FT RT FY	
PAVEMENT SECTION	
ASPHALT	6.75 in
STBC	7.25 in





NC GRID  
NAD 83 NA 2011

-Y1- Sta. 35+96 LT LN		-Y1- Sta. 35+96 LTL (LT)	
8.0 FT RT FW		4.5 FT RT FY	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	4.75 in	ASPHALT	5.50 in
STBC	12.25 in	STBC	12.50 in

-L- Sta. 11+25 RTL (LT)		-L- Sta. 11+25 CTL	
1.5 FT LT C&G EOP		5.7 FT RT FY	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	3.50 in	ASPHALT	4.75 in
ABC	12.50 in	STBC	10.25 in

-L- Sta. 11+25 LT LN/LTL (LT)	
3.0 FT RT FY	
PAVEMENT SECTION	
ASPHALT	4.75 in
ABC	10.25 in

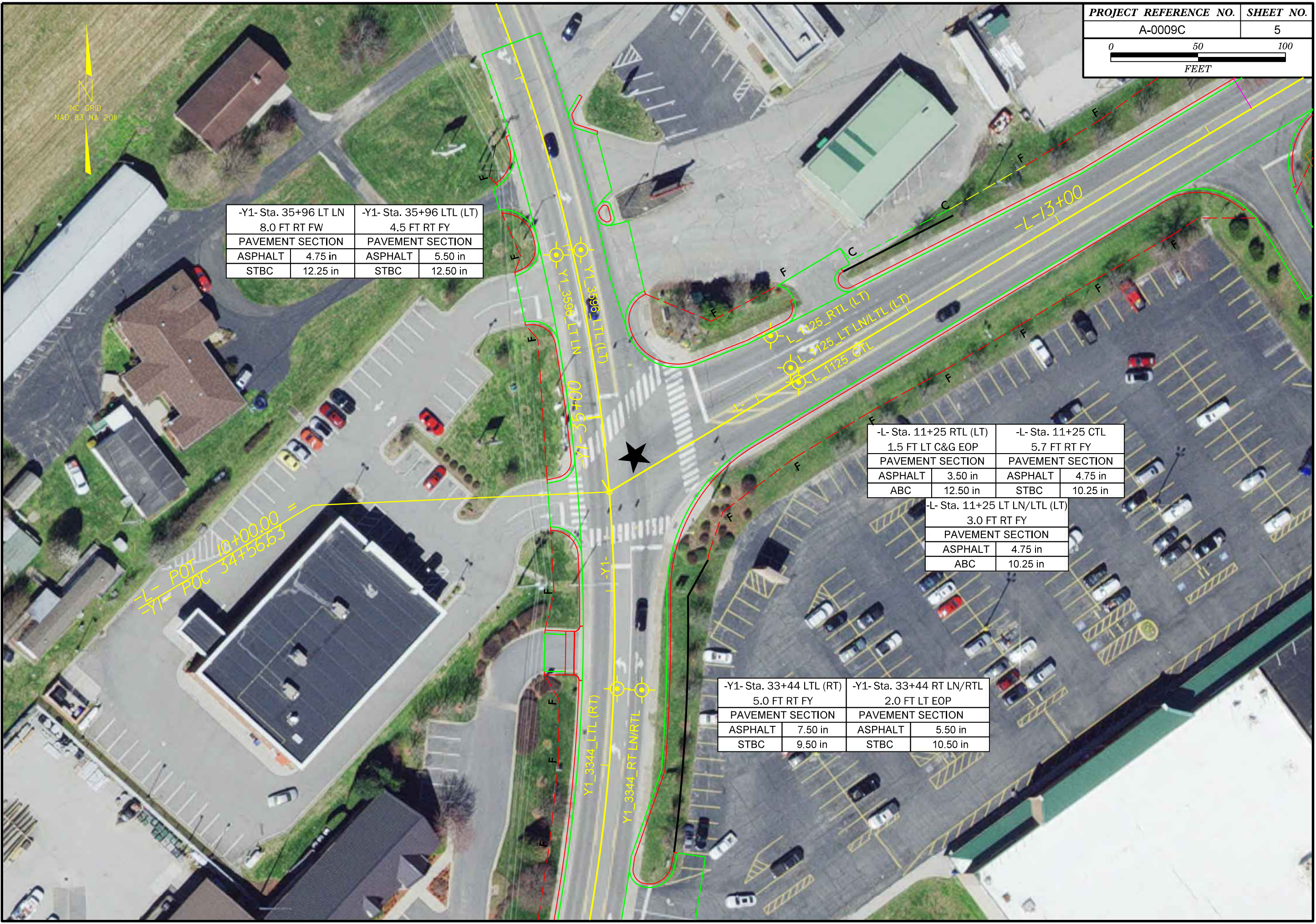
-Y1- Sta. 33+44 LTL (RT)		-Y1- Sta. 33+44 RT LN/RTL	
5.0 FT RT FY		2.0 FT LT EOP	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	7.50 in	ASPHALT	5.50 in
STBC	9.50 in	STBC	10.50 in

POT  
POC  
-Y1- 10+00.00 =  
34+56.63

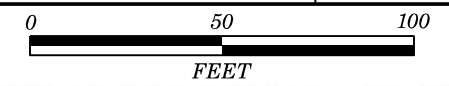
Y1\_3596\_LTL (LT)  
Y1\_3596\_LN (LT)

L\_1125\_RTL (LT)  
L\_1125\_LTL (LT)  
L\_1125\_CTL

Y1\_3344\_LTL (RT)  
Y1\_3344\_RT\_LN/RTL



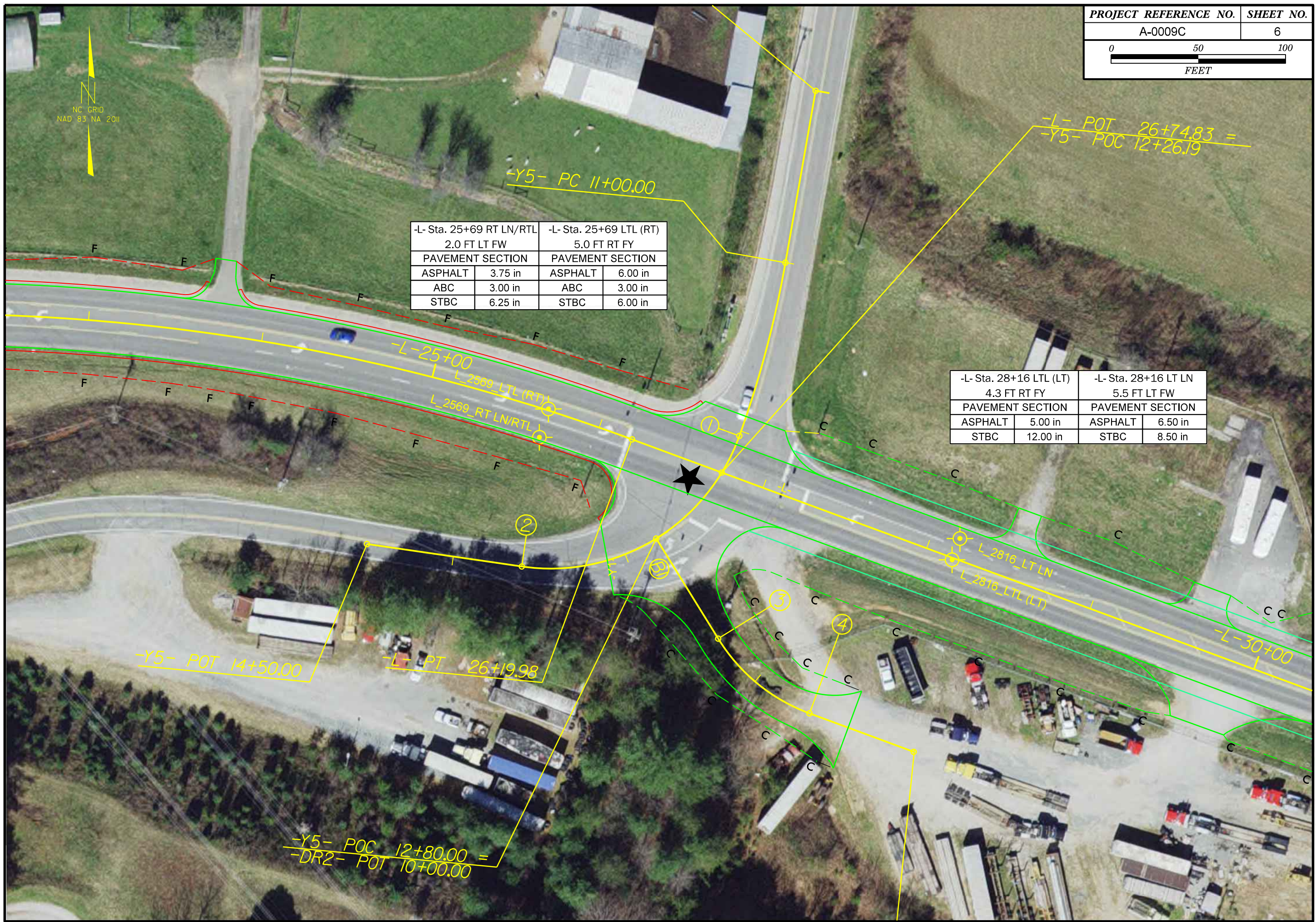




NC GRID  
NAD 83 NA 2011

-L- Sta. 25+69 RT LN/RTL		-L- Sta. 25+69 LTL (RT)	
2.0 FT LT FW		5.0 FT RT FY	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	3.75 in	ASPHALT	6.00 in
ABC	3.00 in	ABC	3.00 in
STBC	6.25 in	STBC	6.00 in

-L- Sta. 28+16 LTL (LT)		-L- Sta. 28+16 LT LN	
4.3 FT RT FY		5.5 FT LT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	5.00 in	ASPHALT	6.50 in
STBC	12.00 in	STBC	8.50 in





NC GRID  
NAD 83 NA 2011



-L- Sta. 45+24 RT LN/RTL		-L- Sta. 45+24 RT PS	
2.0 FT LT FW		0.2 FT RT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	8.00 in	ASPHALT	8.25 in
STBC	8.00 in	STBC	8.75 in





-L- PT 63+18.65

-L- Sta. 64+87 LT LN	
6.3 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.50 in
STBC	8.50 in

-L-65+00  
L\_6487\_LT LN

-L- POT 66+11.28 =  
-Y6-POT 13+03.70

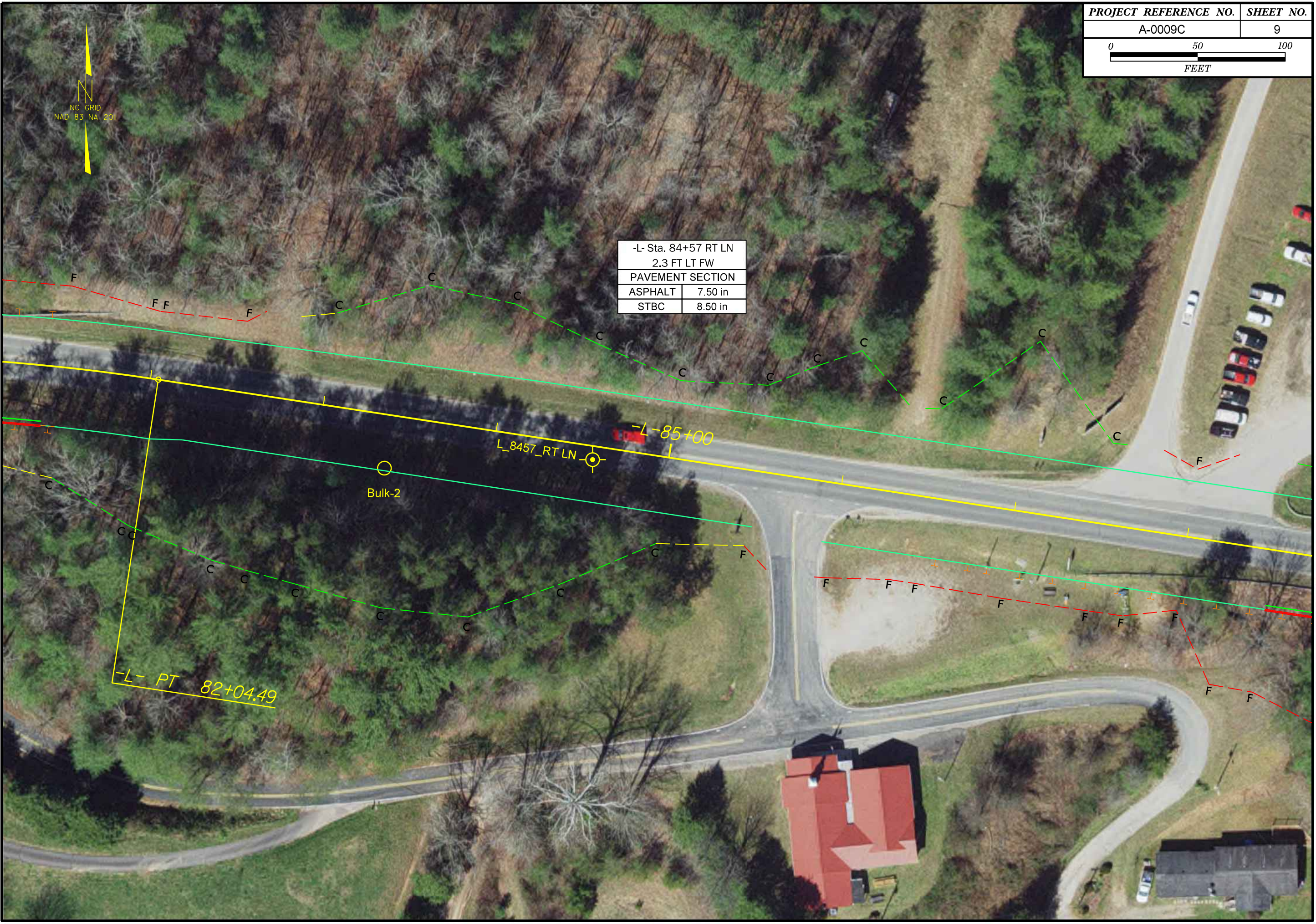
Bulk-1







-L- Sta. 84+57 RT LN	
2.3 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.50 in
STBC	8.50 in



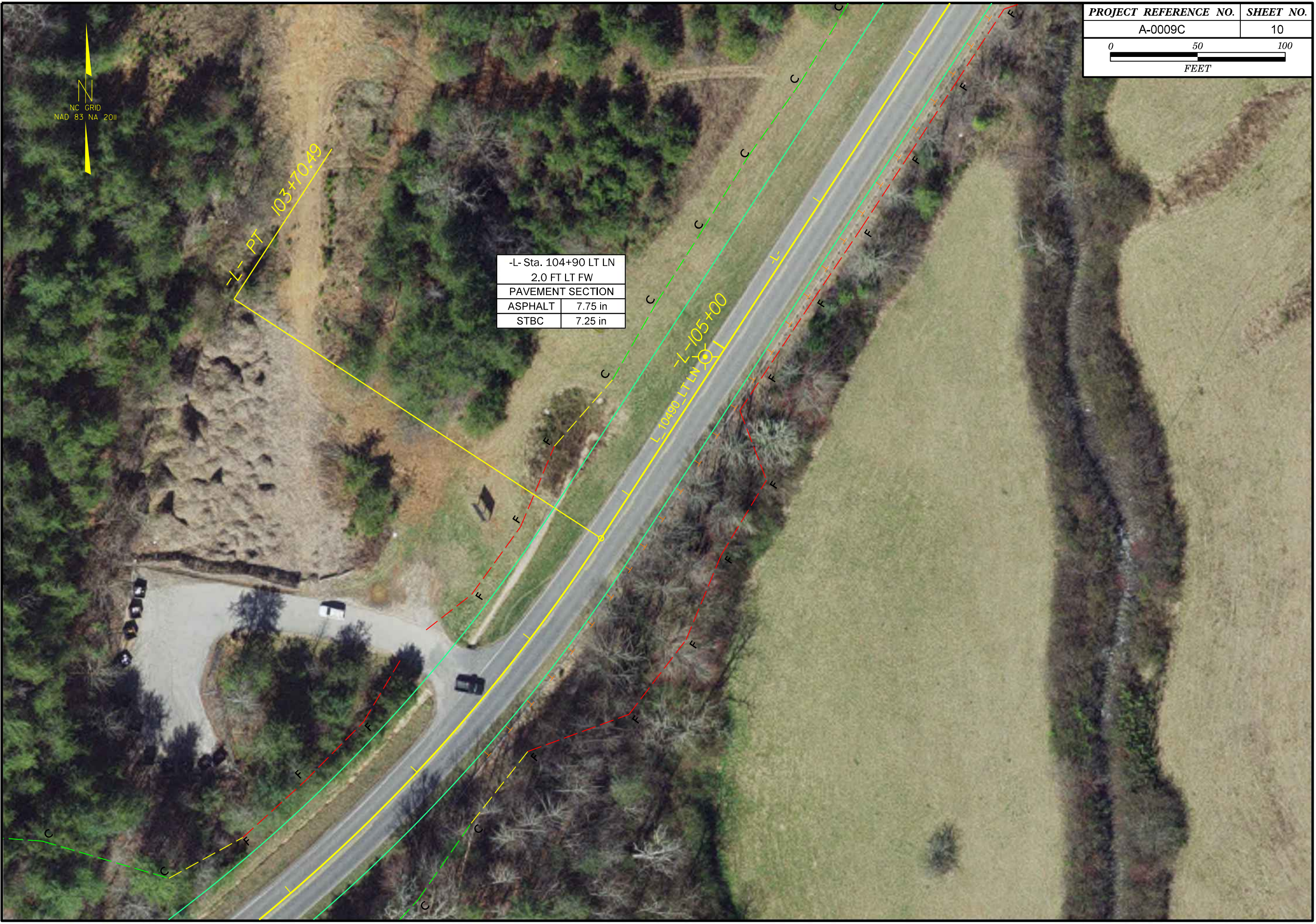




-L- Sta. 104+90 LT LN	
2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.75 in
STBC	7.25 in

-L- PT 103+70.49

-L- 104+90 LT LN





NC GRID  
NAD 83 NA 2011

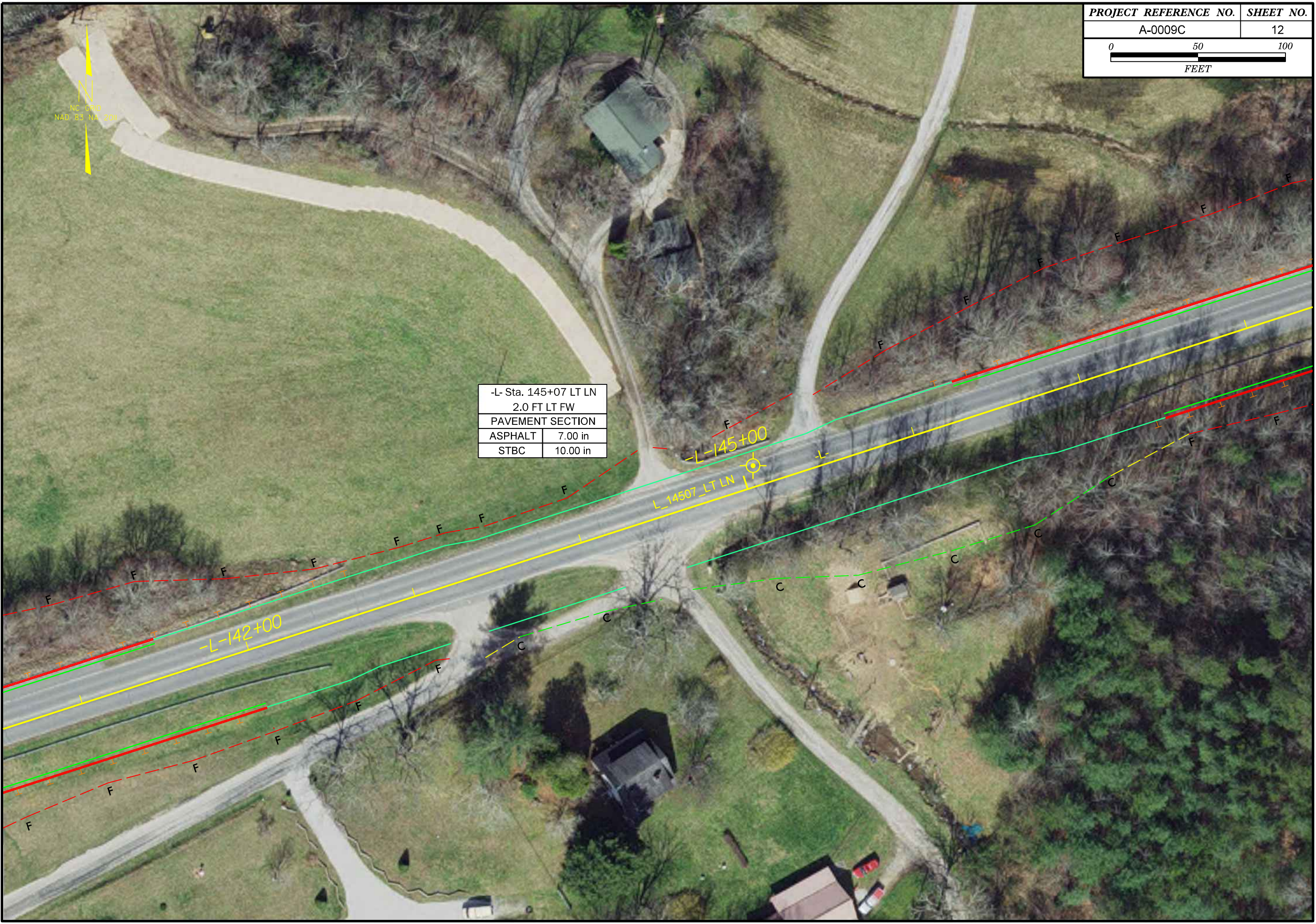
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2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	8.00 in
STBC	9.00 in



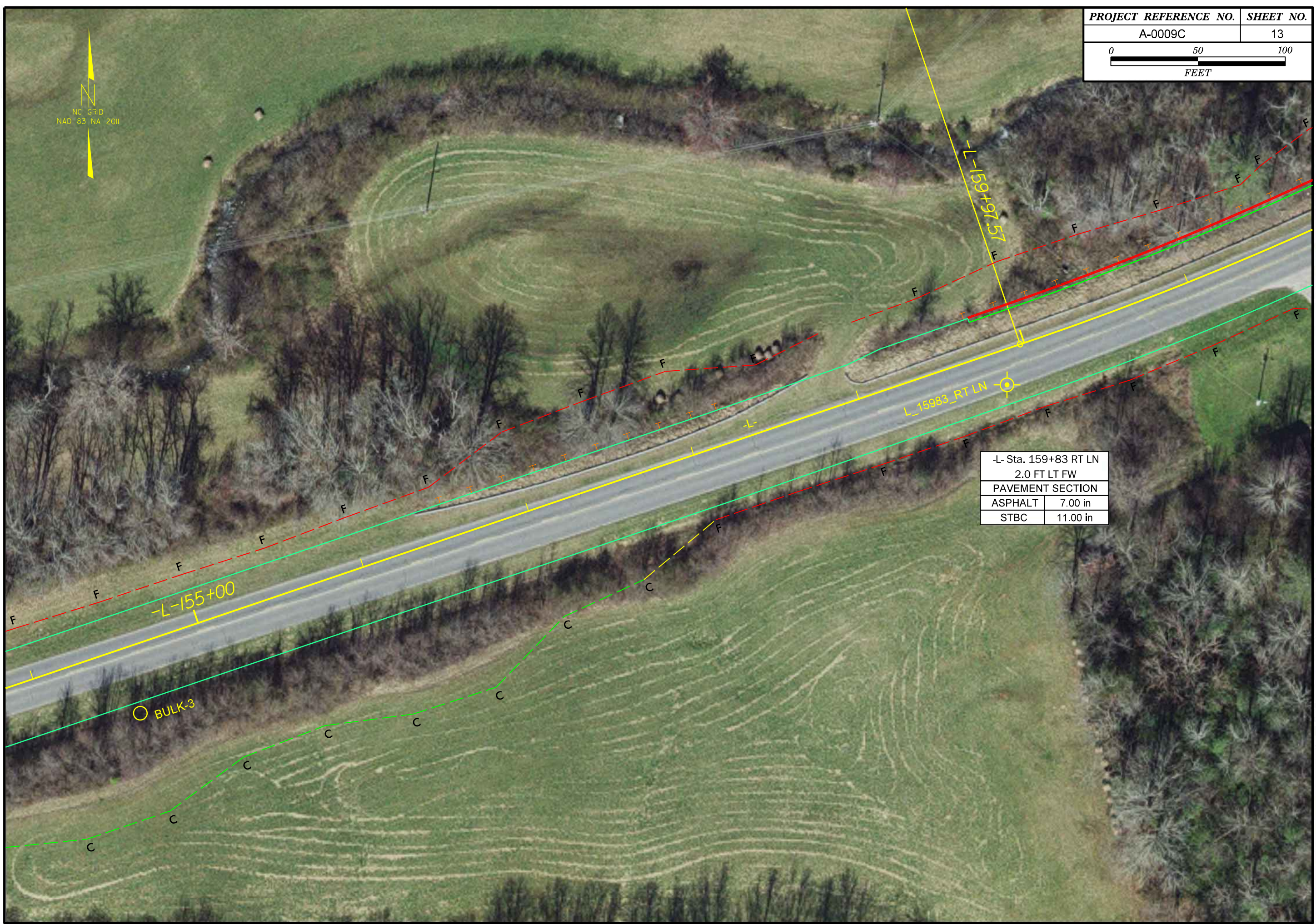
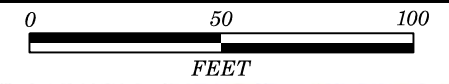


NC GRID  
NAD 83 NA 2011

-L- Sta. 145+07 LT LN	
2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.00 in
STBC	10.00 in







-L- Sta. 159+83 RT LN	
2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.00 in
STBC	11.00 in





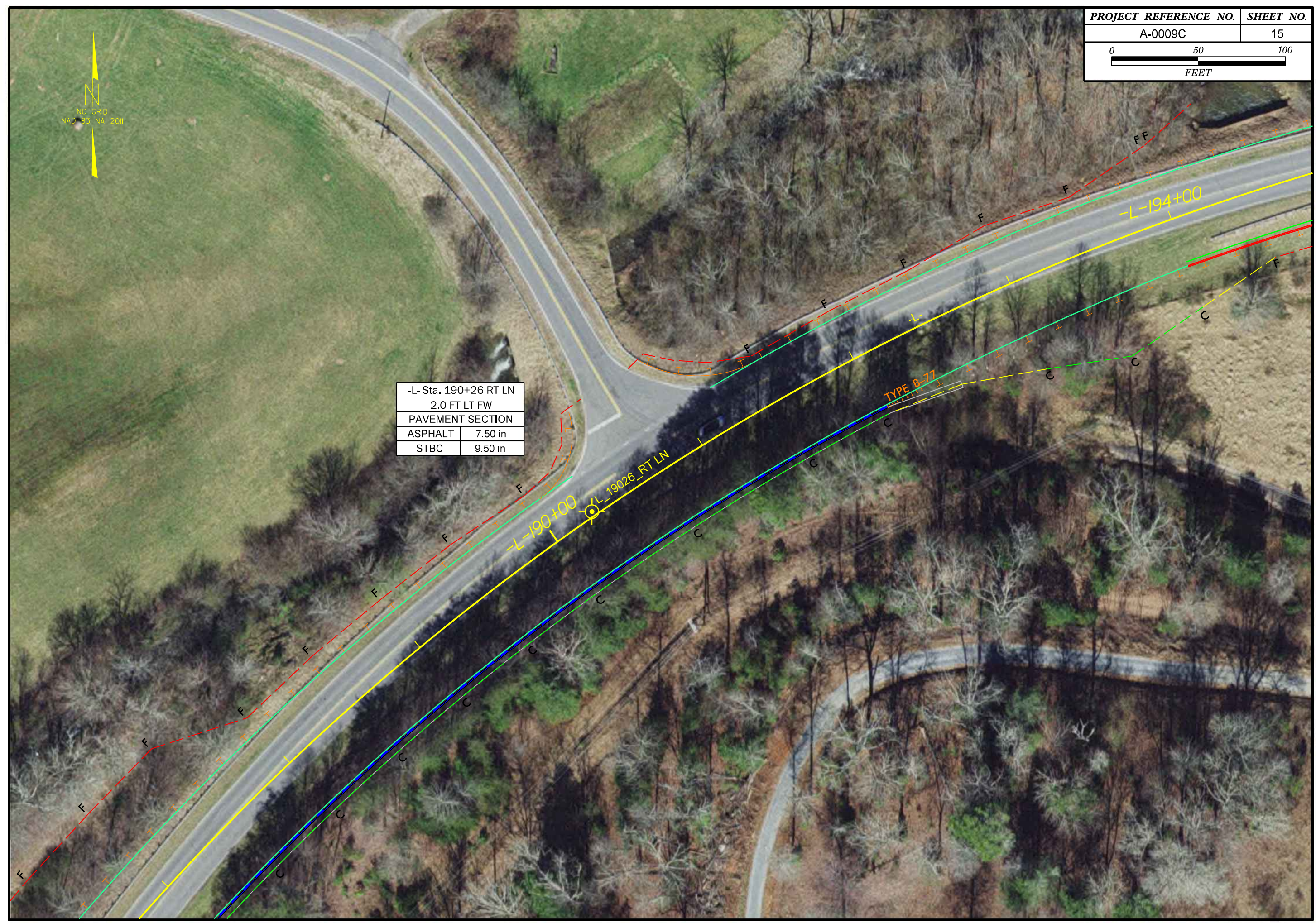
-L- Sta. 173+11 LT PS		-L- Sta. 173+11 LT LN	
1.7 FT RT FW		2.3 FT LT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	4.50 in	ASPHALT	7.50 in
STBC	12.00 in	STBC	9.50 in







-L- Sta. 190+26 RT LN	
2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.50 in
STBC	9.50 in



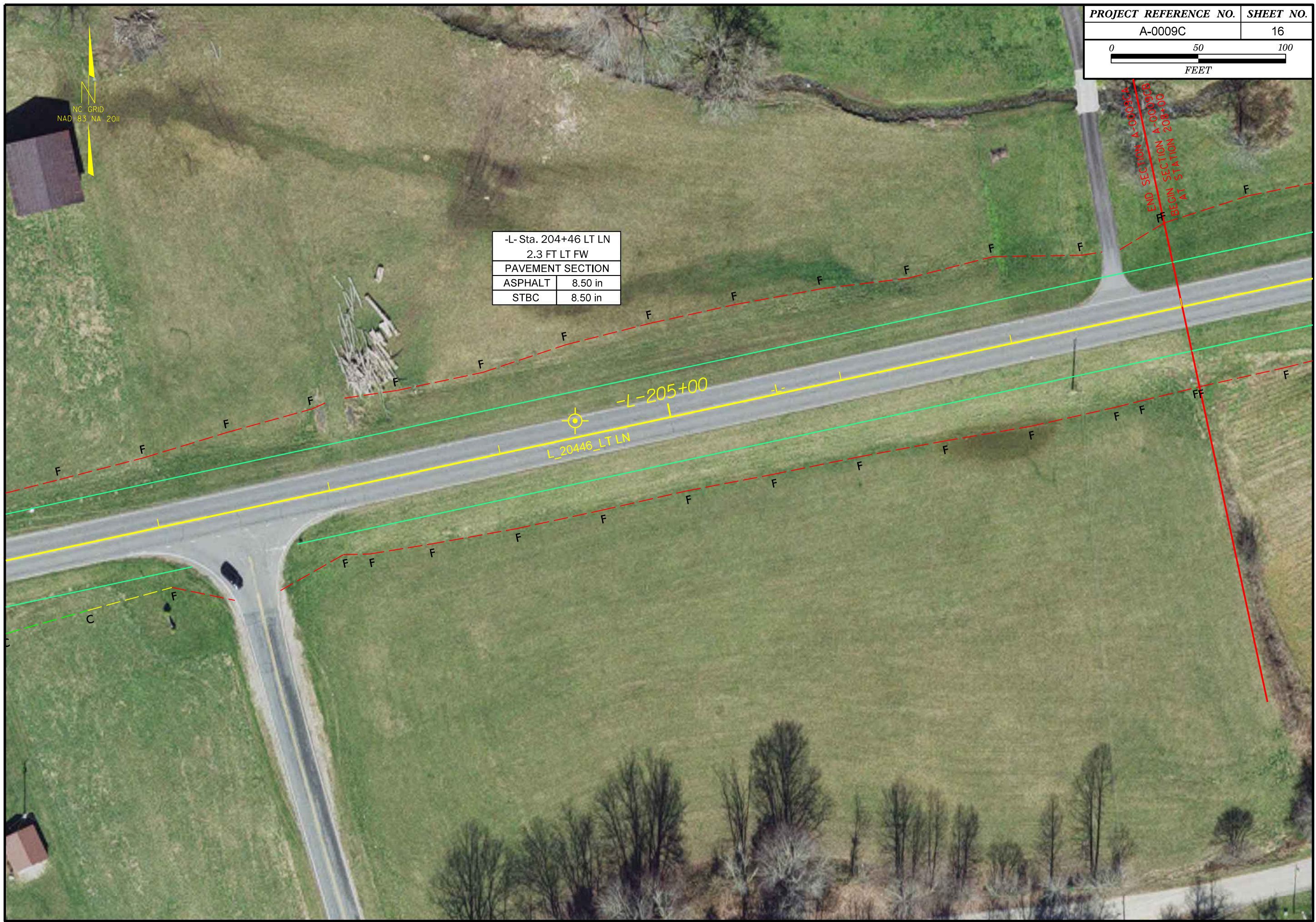




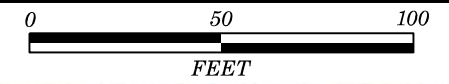
NC GRID  
NAD 83 NA 2011

-L- Sta. 204+46 LT LN	
2.3 FT LT FW	
PAVEMENT SECTION	
ASPHALT	8.50 in
STBC	8.50 in

END SECTION A-0009C  
BEGIN SECTION A-0009C  
AT STATION 208+00







NC GRID  
NAD 83 NA 2011



-L- Sta. 225+17 RT LN	
2.3 FT LT FW	
PAVEMENT SECTION	
ASPHALT	8.75 in
STBC	10.25 in

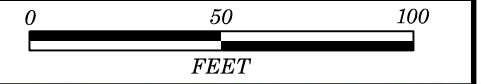


NC GRID  
NAD 83 NA 2011

-L- Sta. 245+17 LT LN	
2.4 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.75 in
STBC	10.25 in







-L- PC 266+64.11

-L- Sta. 264+94 RT LN	
1.5 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.50 in
STBC	9.50 in

-L- 265+00

L 264+94 RT LN

-L- 268+00

7.47



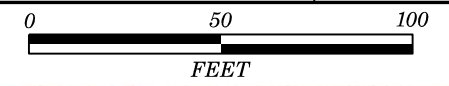




-L- Sta. 284+98 LT LN	
1.8 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.25 in
STBC	9.75 in







NC GRID  
NAD 83 NA 2011

-L- PT 302+92.61

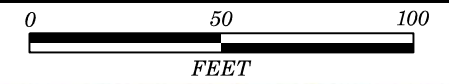
-L- 305+00

-L- PC 306+20.9

-L- Sta. 304+62 RT PS	
2.4 FT RT FW	
PAVEMENT SECTION	
ASPHALT	7.75 in
STBC	10.25 in







NC 8304  
NAD 83 NAV 2011

-L- Sta. 324+92 LT LN	
2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.50 in
STBC	9.50 in

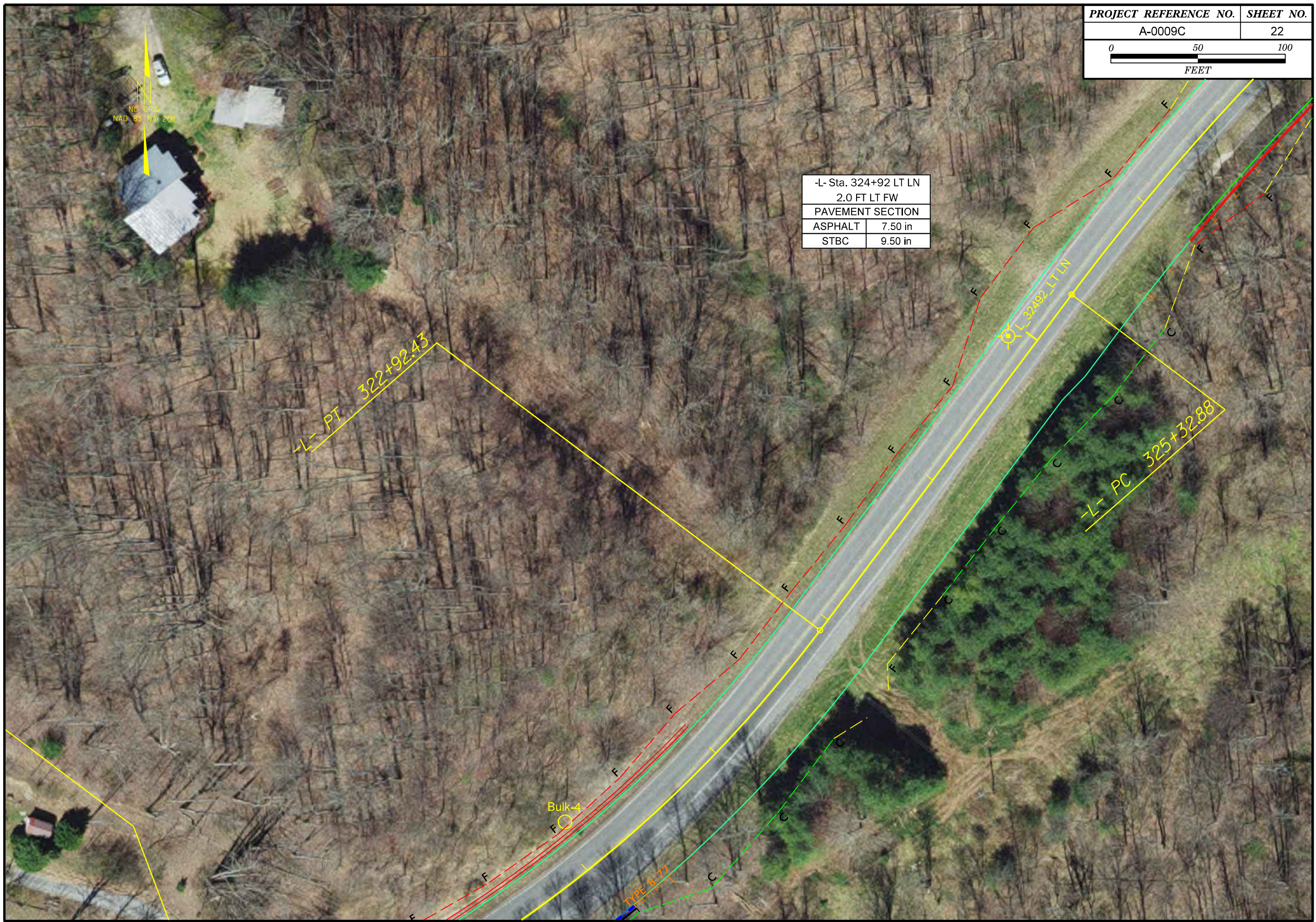
L- PT 322+92.43

L- 324+92 LT LN

L- PC 325+32.88

Bulk-4

TYPE 4-77







NC GRID  
NAD 83 NA 2011

Bulk-5

-L-340+00

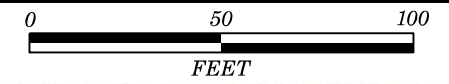
-L- PC 335+70.20

-L- Sta. 344+21 RT LN	
2.2 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.25 in
STBC	9.75 in

L 34421 RT LN

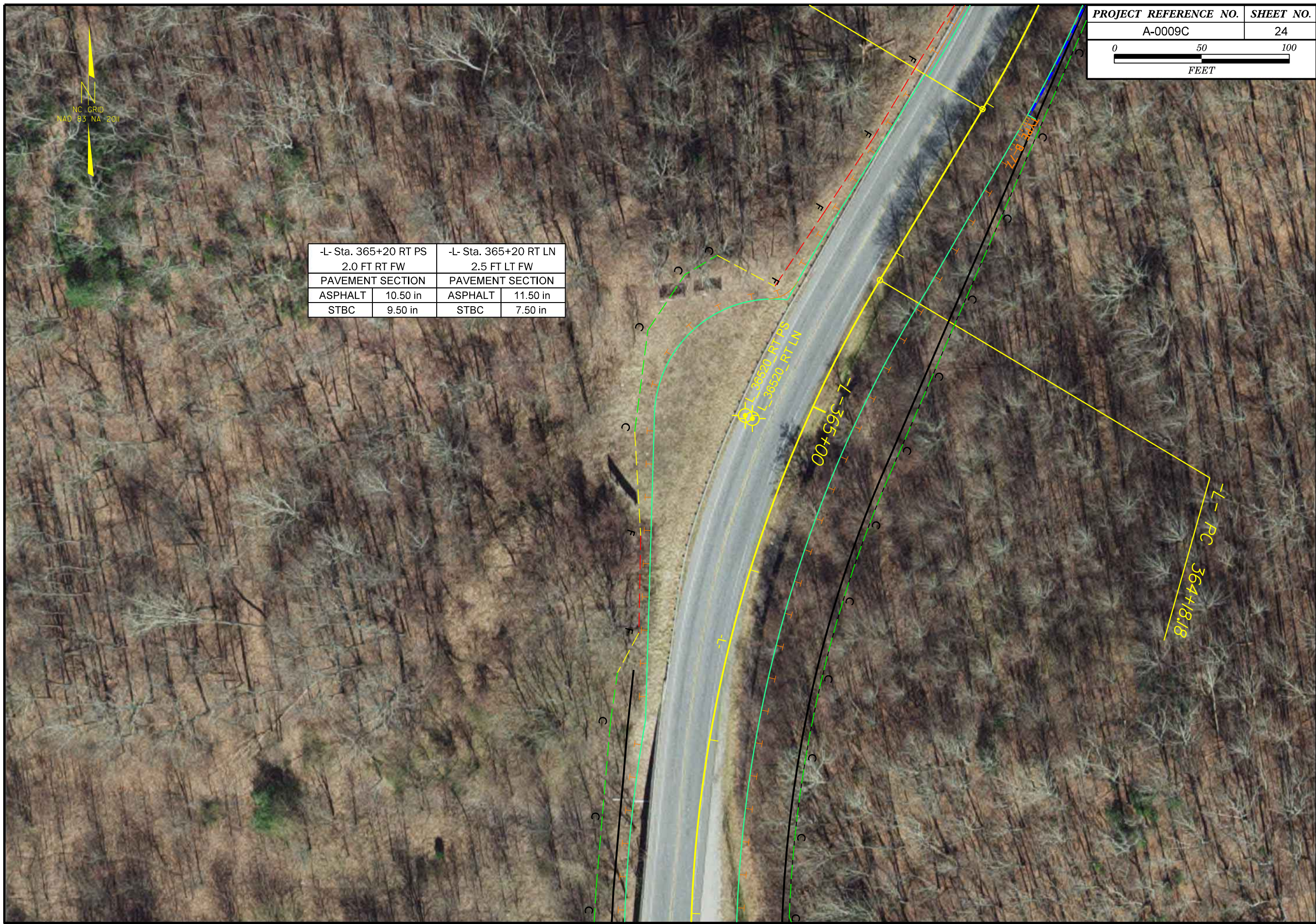




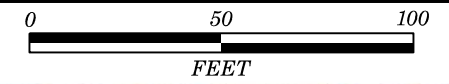


NC GRID  
NAD 83 NA 2011

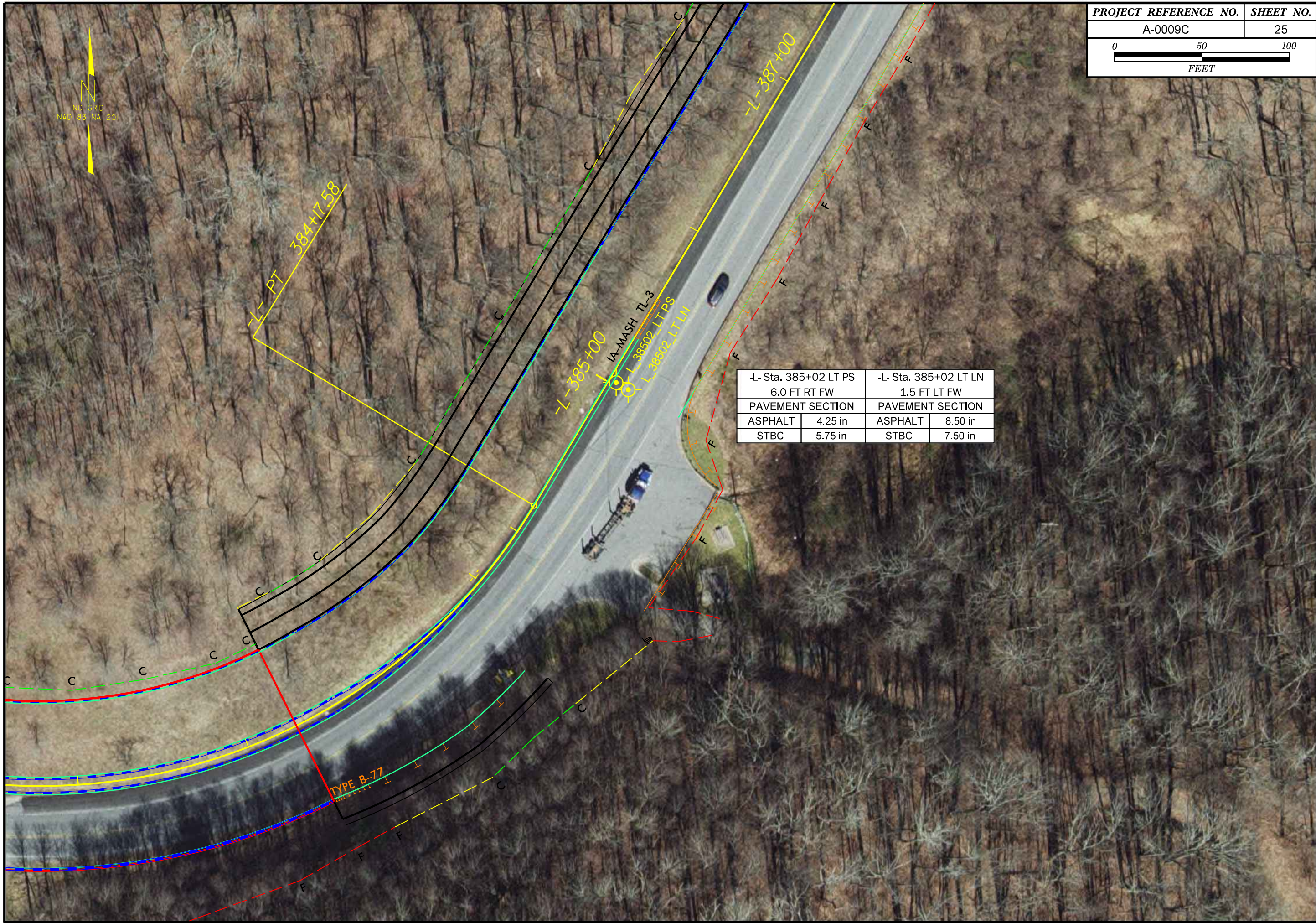
-L- Sta. 365+20 RT PS 2.0 FT RT FW		-L- Sta. 365+20 RT LN 2.5 FT LT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	10.50 in	ASPHALT	11.50 in
STBC	9.50 in	STBC	7.50 in







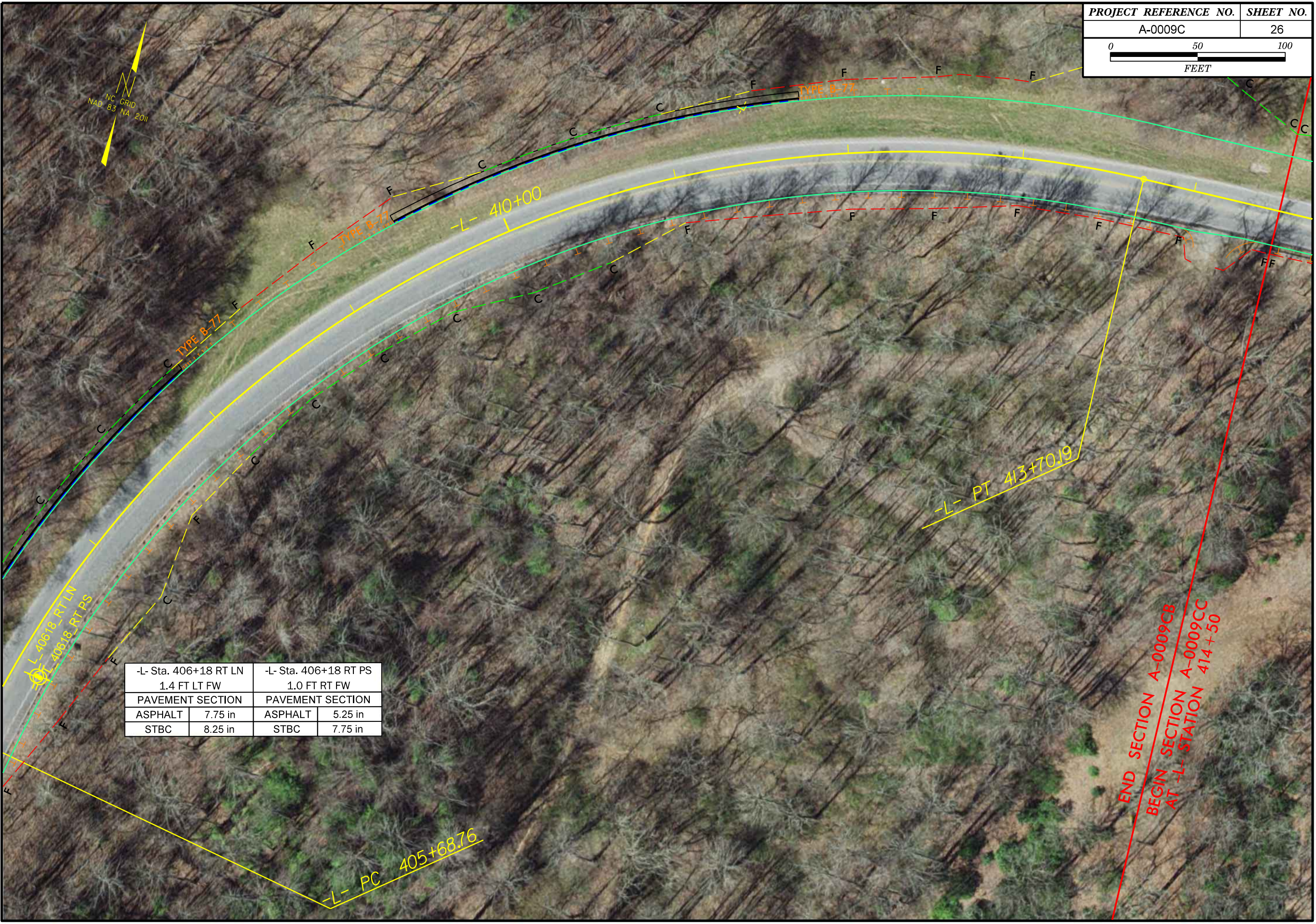
NC GRID  
NAD 83 NA 2011



-L- Sta. 385+02 LT PS		-L- Sta. 385+02 LT LN	
6.0 FT RT FW		1.5 FT LT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	4.25 in	ASPHALT	8.50 in
STBC	5.75 in	STBC	7.50 in



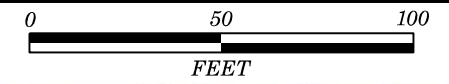
NC GRID  
NAD 83 NA 2011



-L- Sta. 406+18 RT LN		-L- Sta. 406+18 RT PS	
1.4 FT LT FW		1.0 FT RT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	7.75 in	ASPHALT	5.25 in
STBC	8.25 in	STBC	7.75 in

END SECTION A-0009CB  
 BEGIN SECTION A-0009CC  
 AT -L- STATION 414+50





DS

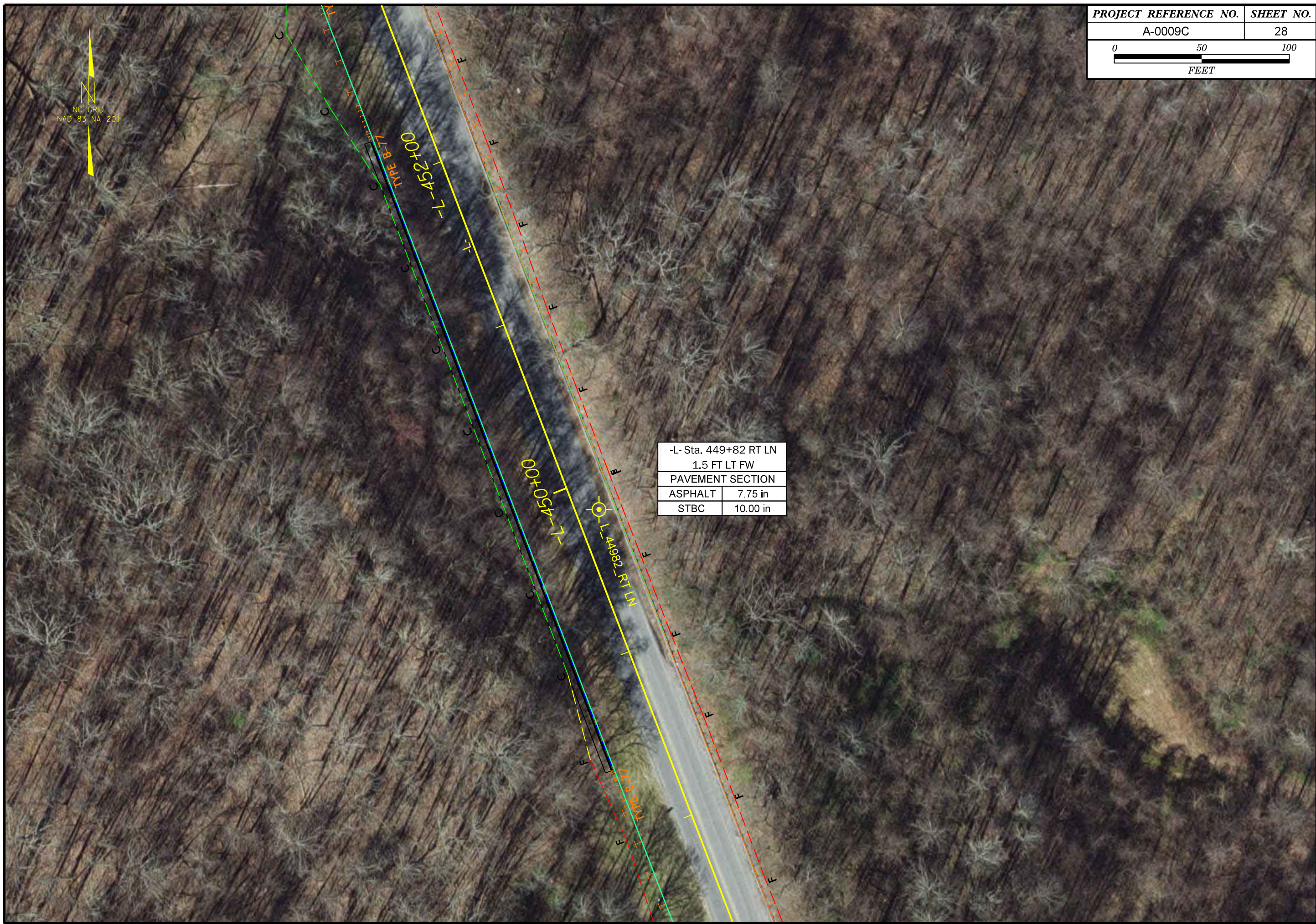
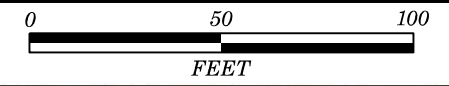


DR3- POT 10+00.00  
L- PT 422+13.30

-L- Sta. 425+03 LT LN	
1.5 FT LT FW	
PAVEMENT SECTION	
ASPHALT	10.00 in
STBC	10.00 in

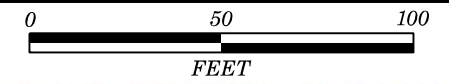






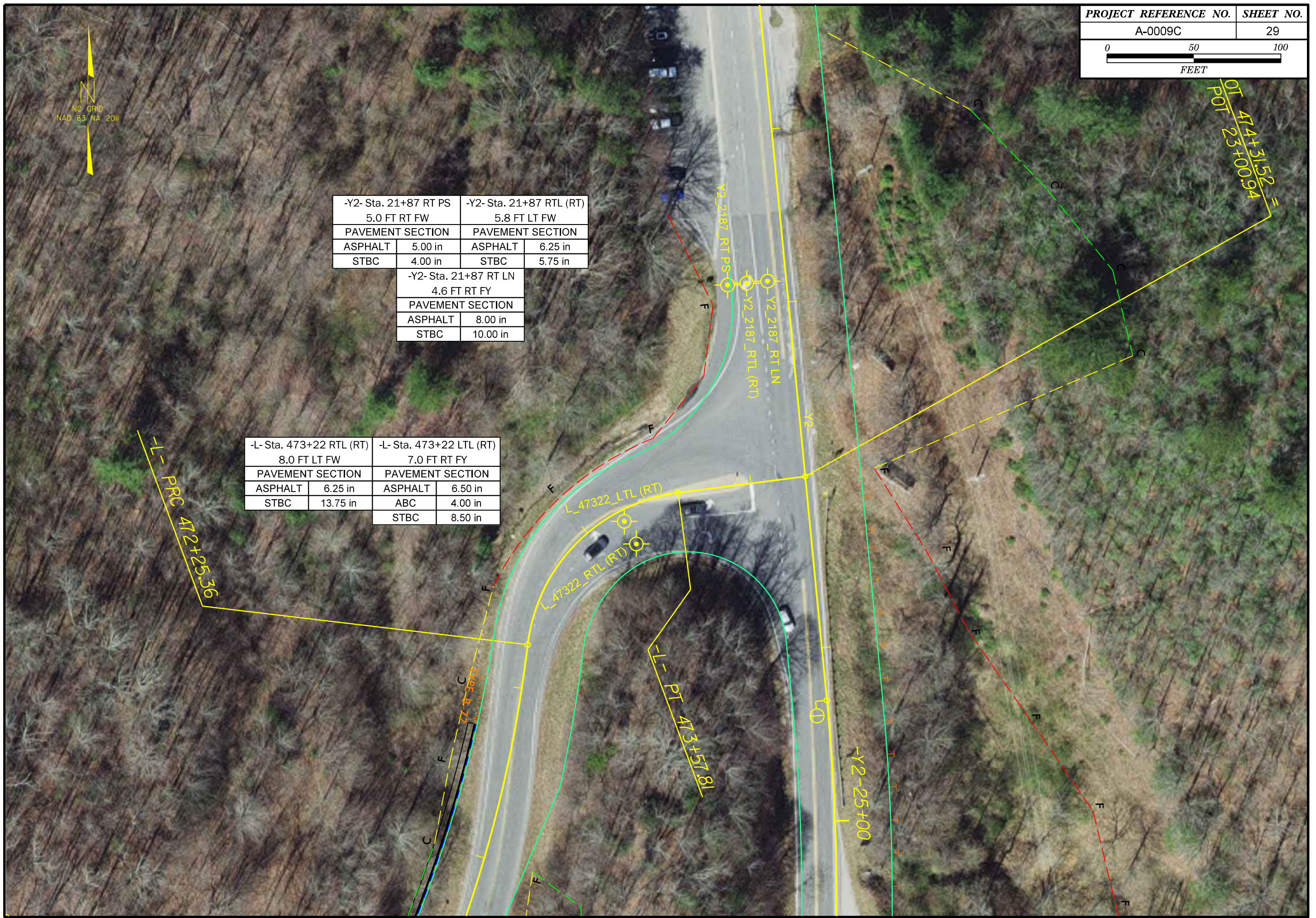
-L- Sta. 449+82 RT LN	
1.5 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.75 in
STBC	10.00 in



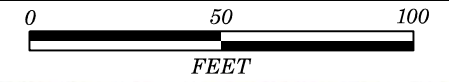


-Y2- Sta. 21+87 RT PS		-Y2- Sta. 21+87 RTL (RT)	
5.0 FT RT FW		5.8 FT LT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	5.00 in	ASPHALT	6.25 in
STBC	4.00 in	STBC	5.75 in
-Y2- Sta. 21+87 RT LN			
4.6 FT RT FY			
PAVEMENT SECTION			
ASPHALT	8.00 in		
STBC	10.00 in		

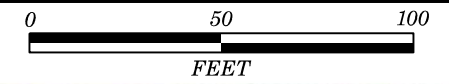
-L- Sta. 473+22 RTL (RT)		-L- Sta. 473+22 LTL (RT)	
8.0 FT LT FW		7.0 FT RT FY	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	6.25 in	ASPHALT	6.50 in
STBC	13.75 in	ABC	4.00 in
		STBC	8.50 in



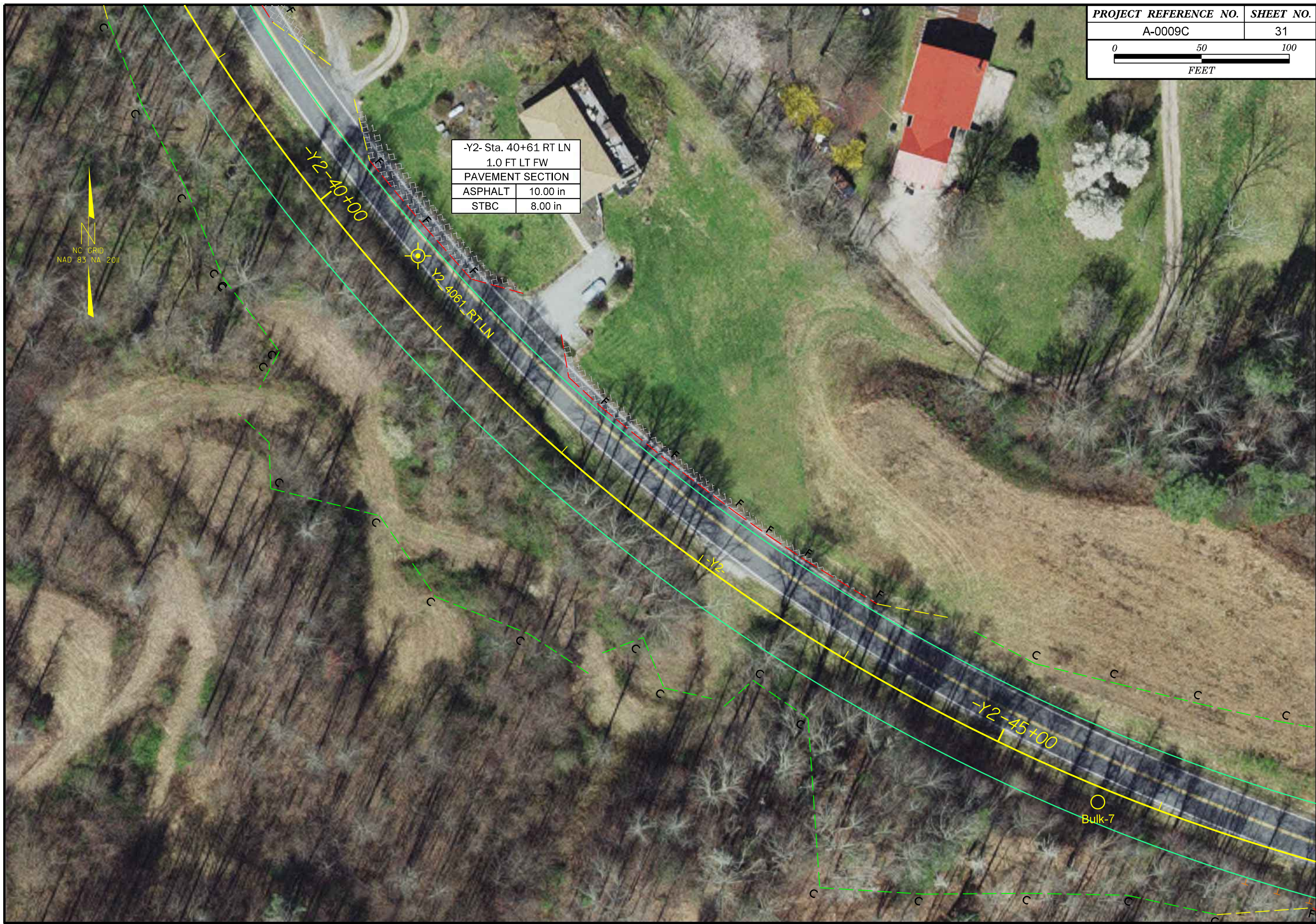




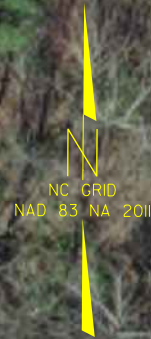
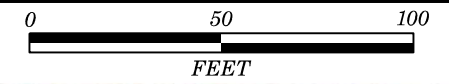




-Y2- Sta. 40+61 RT LN	
1.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	10.00 in
STBC	8.00 in







-Y2- Sta. 60+51 LT LN	
1.4 FT LT FW	
PAVEMENT SECTION	
ASPHALT	10.50 in
STBC	9.00 in



-Y2-  
-D



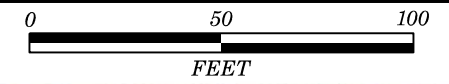
NC GRID  
 NAD 83 NA 2011

PT 76+34.95

-Y2- Sta. 79+85 RT LN	
0.6 FT LT FW	
PAVEMENT SECTION	
ASPHALT	7.75 in
STBC	8.25 in







NC GRID  
NAD 83 NA 2011

-Y2- PT 96+97.32

-Y2- POT 98+65.27 =  
-Y3- POT 14+20.24 =  
-Y3A- POT 10+00.00

-Y2- Sta. 100+31 LT LN	
1.4 FT LT FW	
PAVEMENT SECTION	
ASPHALT	9.50 in
STBC	8.50 in

-Y2- 100+00

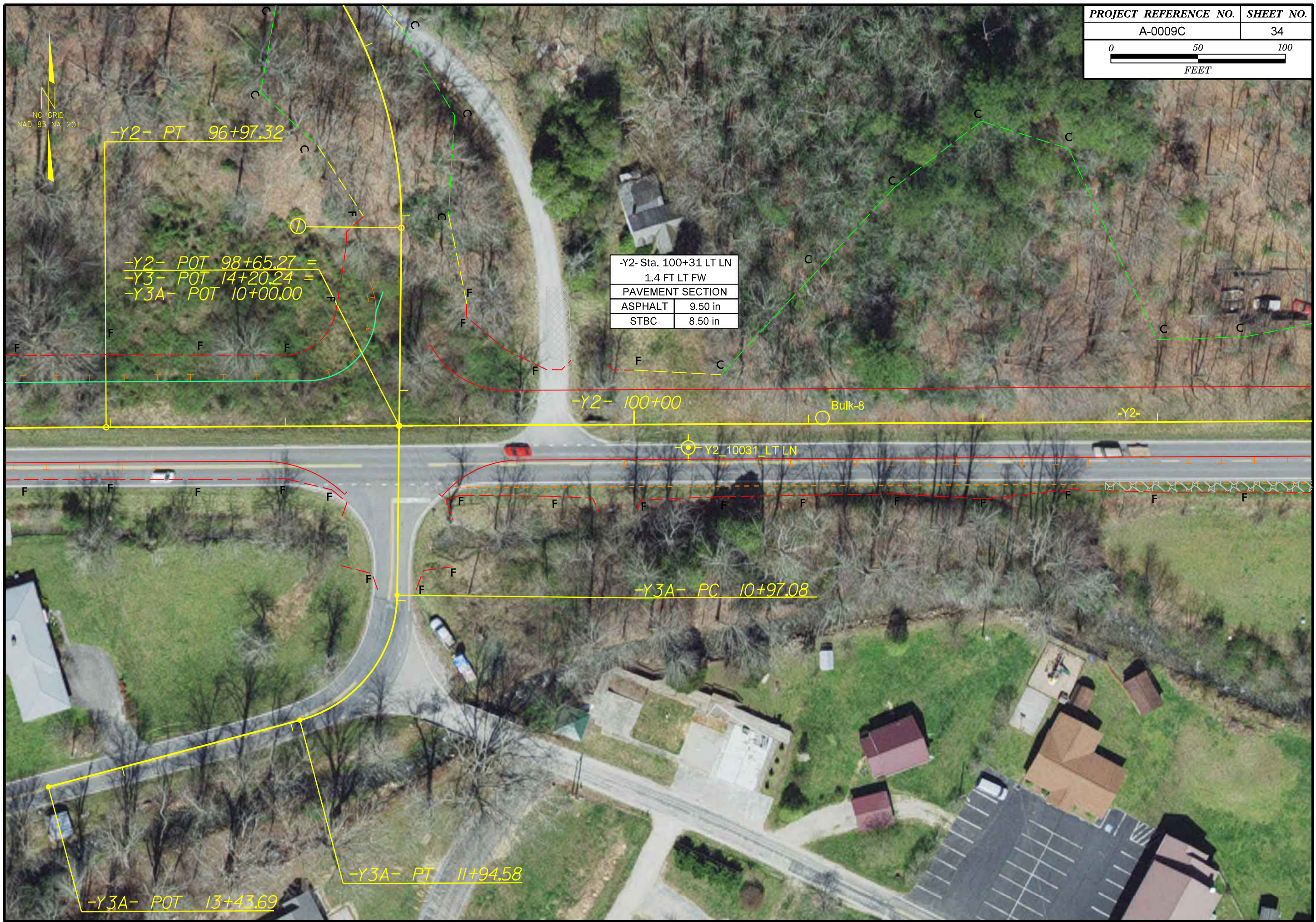
Bulk-8

-Y2\_10031\_LT LN

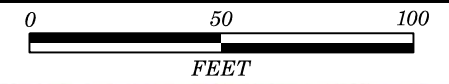
-Y3A- PC 10+97.08

-Y3A- PT 11+94.58

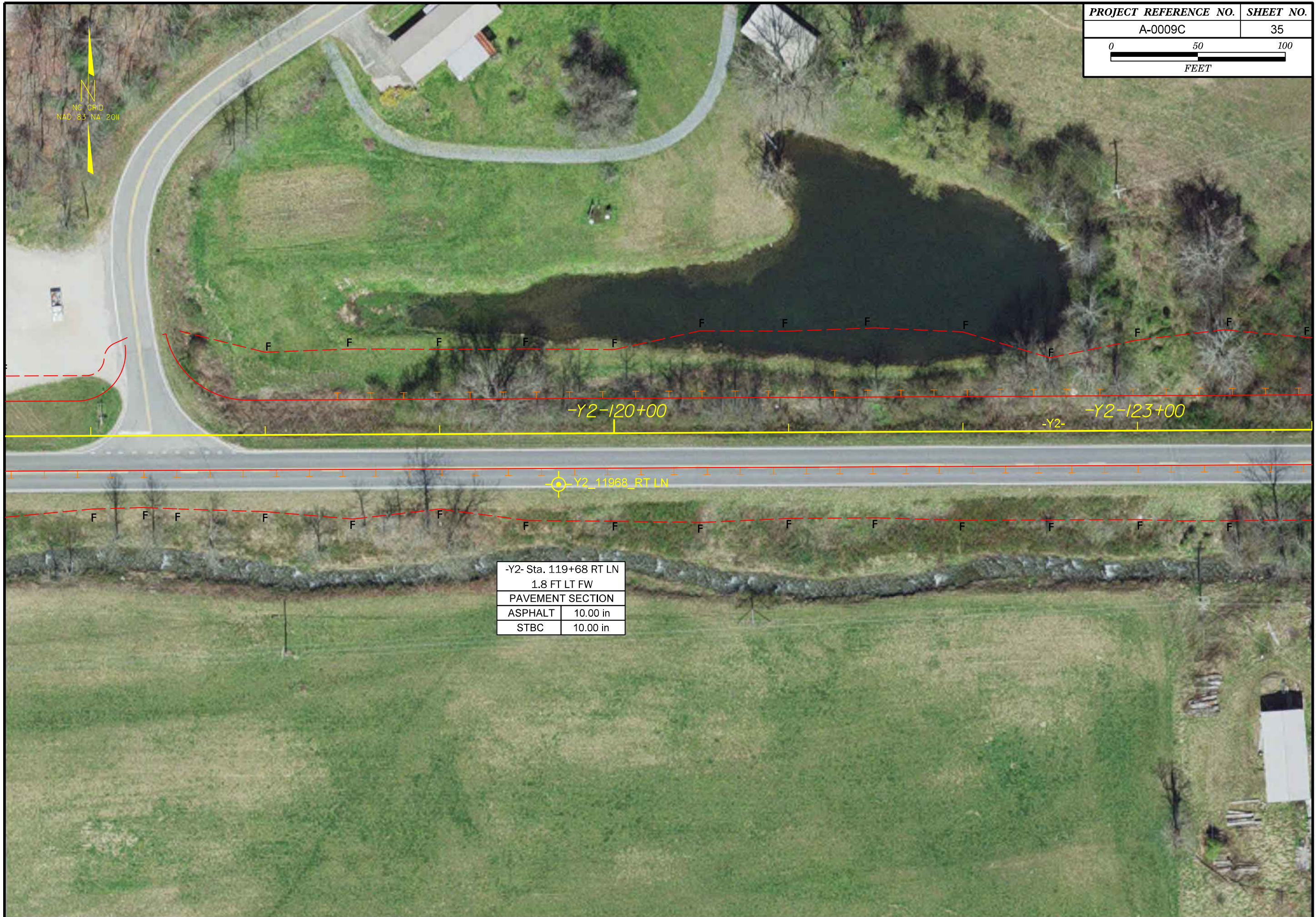
-Y3A- POT 13+43.69







NC GRID  
NAD 83 NA 2011



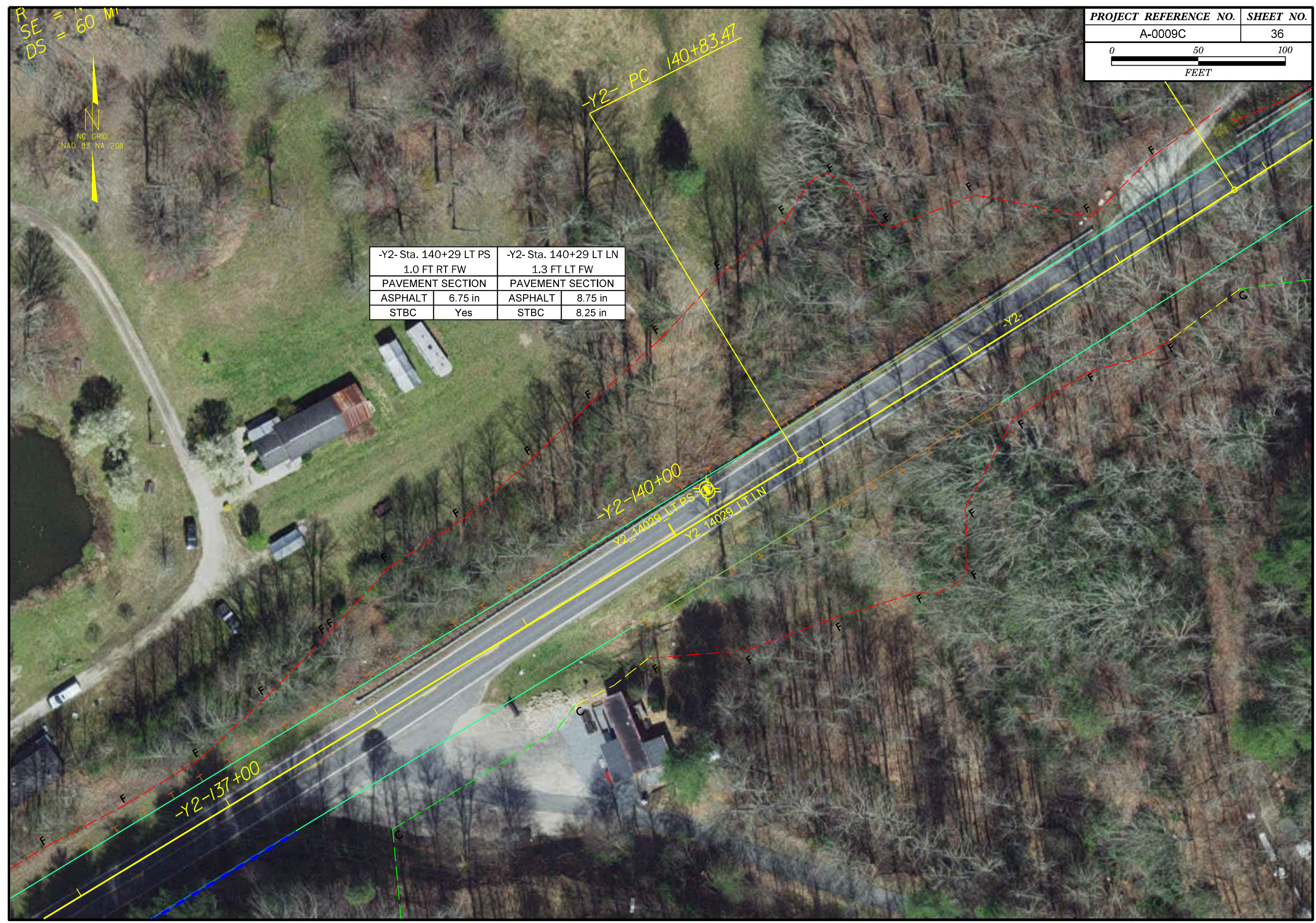
-Y2- Sta. 119+68 RT LN	
1.8 FT LT FW	
PAVEMENT SECTION	
ASPHALT	10.00 in
STBC	10.00 in



R  
SE = 11  
DS = 60 MI

NC GRID  
NAD 83 NA 2011

-Y2- Sta. 140+29 LT PS		-Y2- Sta. 140+29 LT LN	
1.0 FT RT FW		1.3 FT LT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	6.75 in	ASPHALT	8.75 in
STBC	Yes	STBC	8.25 in

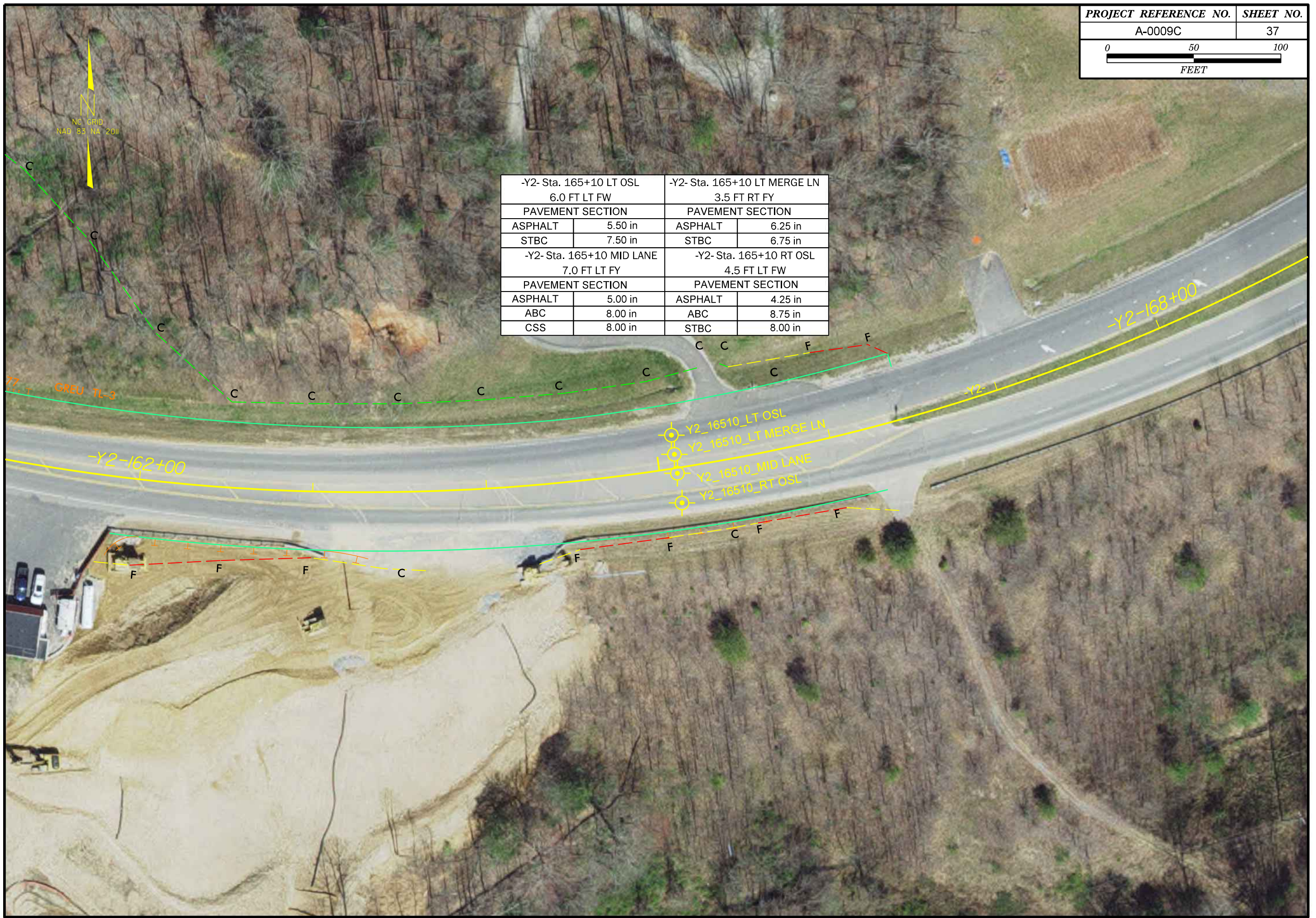






NC GRID  
NAD 83 NA 2011

-Y2- Sta. 165+10 LT OSL 6.0 FT LT FW		-Y2- Sta. 165+10 LT MERGE LN 3.5 FT RT FY	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	5.50 in	ASPHALT	6.25 in
STBC	7.50 in	STBC	6.75 in
-Y2- Sta. 165+10 MID LANE 7.0 FT LT FY		-Y2- Sta. 165+10 RT OSL 4.5 FT LT FW	
PAVEMENT SECTION		PAVEMENT SECTION	
ASPHALT	5.00 in	ASPHALT	4.25 in
ABC	8.00 in	ABC	8.75 in
CSS	8.00 in	STBC	8.00 in





PAVEMENT INVESTIGATION DATA SHEET

Project:	32572.1.FS10
TIP:	A-0009C

Route:	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
County:	Graham

Date Performed:	12/27/21, 12/28/21, 1/04/22, 1/13/22
Field Personnel:	M. Brewer, R. Kral, L. Ard

Test Location	Cut/Fill (Est. of Amount) (ft)	Width (ft)		Offset Distance (See Notes)	Crown "C" or Super "S"	Gross to Top of Soil	Thickness (in)				Chemical Stabilized Subgrade (CSS)	Pavement Layering	Subgrade					Asphalt Notes	GPS Coordinates	
		Lane	Shoulder				Asphalt	ABC	STBC	Description (Depth - ft)			Soil Sample Number	AASHTO Classification	Soil Moisture	Boring Depth (ft)	Northing		Easting	
Y1_2706_LT LN/RTL (LT) -Y1- 27+06 LT LN/RTL (LT)	At Grade	11.0	Concrete Curb & Gutter	2.0 LT EOP	Cr.	14.00	6.00		8.00		Asphalt STBC SG	1.2-5.0: RE - Gray-Brown, Fine to Coarse Sandy SILT	Ref-59	A-4	M	5	Moderate Severity Fatigue Cracking (OSWP), High Severity Longitudinal and Transverse Cracking 0.5-inch rutting, <b>2-Inch Top-Down Crack in Core</b>	606,771	567,949	
Y1_2706_CTL/LTL -Y1- 27+06 CTL/LTL	At Grade	11.0	-	5.0 RT FY	Cr.	14.00	6.75		7.25		Asphalt STBC SG	1.2-5.0: RE - Gray-Brown, Fine to Coarse Sandy SILT	Ref-59	A-4	M	5	Moderate Severity Fatigue Cracking (OSWP), 0.5-inch rutting	606,767	567,965	
Y1_3344_RT LN/RTL -Y1- 33+44 RT LN/RTL	At Grade	11.0	-	2.0 LT EOP	Cr.	16.00	5.50		10.50		Asphalt STBC SG	1.4-5.0: RE - Gray-Brown, Fine to Coarse Sandy SILT	Ref-59	A-4	M	5	Moderate Severity Fatigue Cracking (OSWP), 0.5-inch rutting	607,389	568,119	
Y1_3344_LTL (RT) -Y1- 33+44 LTL (RT)	At Grade	10.0	-	5.0 RT FY	Cr.	17.00	7.50		9.50		Asphalt STBC SG	1.4-5.0: RE - Gray-Brown, Fine to Coarse Sandy SILT	Ref-59	A-4	M	5	Moderate Severity Fatigue Cracking (OSWP), 0.5-inch rutting	607,389	568,105	
Y1_3596_LT LN -Y1- 35+96 LT LT LN	Fill 5.0	11.0	Concrete Curb & Gutter	8.0 RT FW	Cr.	17.00	4.75	12.25			Asphalt ABC SG	1.4-5.0: RE - Brown, Fine to Coarse Sandy SILT	S-59	A-4(0)	M	5	Low to Moderate Severity Transverse and Longitudinal Cracking	607,637	568,070	
Y1_3596_LTL (LT) -Y1- 35+96 LTL (LT)	Fill 5.0	11.0	-	4.5 RT FY	Cr.	18.00	5.50		12.50		Asphalt STBC SG	1.5-5.0: RE - Brown, Fine to Coarse Sandy SILT	Ref-59	A-4	M	5	Low to Moderate Severity Transverse and Longitudinal Cracking	607,640	568,084	
L_1125_CTL -L- 11+25 CTL	Fill 5.0	12.0	-	5.7 RT FY	Cr.	15.00	4.75		10.25		Asphalt STBC SG	1.3-5.0: RE - Brown, Fine to Coarse Sandy SILT, trace gravel	S-8	A-4(0)	M	5	0.5-inch rutting (OSWP/ISWP), Low to Moderate Transverse and Block Cracking, Low Severity Longitudinal Cracking (ISWP), <b>Full-Depth Top-Down Crack in Core</b>	607,565	568,209	
L_1125_LT LN/LTL (LT) -L- 11+25 LT LN/LTL (LT)	Fill 5.0	12.5	-	3.0 RT FY	Cr.	15.00	4.75		10.25		Asphalt STBC SG	1.3-5.0: RE - Brown-Orange, Fine to Coarse Sandy SILT	Ref-8	A-4	M	5	0.5-inch rutting (OSWP/ISWP), Low to Moderate Transverse and Block Cracking, Low Severity Longitudinal Cracking (ISWP)	607,573	568,204	
L_1125_RTL (LT) -L- 11+25 RTL (LT)	Fill 5.0	12.5	Concrete Curb & Gutter	1.5 LT C&G EOP	Cr.	16.00	3.50	12.50			Asphalt ABC SG	1.3-5.0: RE - Red, Silty, Fine to Coarse Sandy CLAY	S-10	A-6(7)	M	5	0.5-inch rutting (OSWP/ISWP), Low to Moderate Transverse and Block Cracking, Low Severity Longitudinal Cracking (ISWP)	607,591	568,192	
L_2569_LTL (RT) -L- 25+69 LTL (RT)	At Grade	12.0	-	5.0 RT FY	Cr.	15.00	6.00	3.00	6.00		Asphalt ABC/STBC SG	1.3-5.0: RE - Brown, Fine to Coarse Sandy SILT, trace gravel	S-11	A-4(0)	M	5	Low to Moderate Severity Longitudinal, Transverse, and Fatigue Cracking (ISWP/OSWP)	607,913	569,551	
L_2569_RT LN/RTL -L- 25+69 RT LN/RTL	At Grade	11.0	1.0 PS	2.0 LT FW	Cr.	13.00	3.75	3.00	6.25		Asphalt ABC/STBC SG	1.1-5.0: RE - Red-Orange, Silty, Fine to Coarse Sandy CLAY	Ref-13	A-6	M	5	High Severity Longitudinal, Transverse, and Fatigue Cracking (OSWP), 0.5 to 1.0-inch rutting	607,897	569,545	
L_2816_LT LN -L- 28+16 LT LN	At Grade	11.5	1.5 PS	5.5 LT FW	Cr.	15.00	6.50		8.50		Asphalt STBC SG	1.3-5.0: RE - Red, Silty, Fine to Coarse Sandy CLAY	S-13	A-6(6)	M	5	High Severity Longitudinal and Fatigue Cracking (OSWP/ISWP), High Severity Transverse Cracking, Raveling, Very High Distress Area, <b>Full-Depth Bottom-Up Crack in Core</b>	607,839	569,787	
L_2816_LTL (LT) -L- 28+16 LTL (LT)	At Grade	11.0	-	4.3 RT FY	Cr.	17.00	5.00		12.00		Asphalt STBC SG	1.4-5.0: RE - Gray-Brown-Orange, Silty, Fine to Coarse Sandy CLAY	Ref-13	A-6	M	5	Moderate to High Severity Longitudinal Cracking (ISWP/OSWP), Low Severity Transverse Cracking, Moderate Severity Fatigue Cracking	607,827	569,782	
L_4524_RT LN/RTL -L- 45+24 RT LN/RTL	Fill 10.0	11.0	1.0 PS	2.0 LT FW	Cr.	16.00	8.00		8.00		Asphalt STBC SG	1.3-5.0: RE - Brown, Fine to Coarse Sandy SILT	S-15	A-4(0)	M	5	Low to Moderate Severity Longitudinal and Transverse Cracking (ISWP)	607,231	571,383	
L_4524_RT PS -L- 45+24 RT PS	Fill 10.0	11.0	1.0 PS	0.2 RT FW	Cr.	17.00	8.25		8.75		Asphalt STBC SG	1.4-5.0: RE - Brown, Fine to Coarse Sandy SILT	Ref-15	A-4	M	5	Low to Moderate Severity Longitudinal and Transverse Cracking (ISWP)	607,229	571,382	

Notes:  
Offset Distance: Left and Right Relative to the Direction of Travel

Prepared by: CTW  
Reviewed by: REK



PAVEMENT INVESTIGATION DATA SHEET

Project:	32572.1.FS10
TIP:	A-0009C

Route:	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
County:	Graham

Date Performed:	12/27/21, 12/28/21, 1/04/22, 1/13/22
Field Personnel:	M. Brewer, R. Kral, L. Ard

Test Location	Cut/Fill (Est. of Amount) (ft)	Width (ft)		(ft)	Offset Distance (See Notes)	Crown "C" or Super "S"	Gross to Top of Soil	Thickness (in)				Chemical Stabilized Subgrade (CSS)	Pavement Layering	Subgrade					Asphalt Notes	GPS Coordinates	
		Lane	Shoulder					Asphalt	ABC	STBC	Description (Depth - ft)			Soil Sample Number	AASHTO Classification	Soil Moisture	Boring Depth (ft)	Northing		Easting	
L_6487_LT LN -L 64+87 LT LN	Fill 20.0	11.5	0.5 PS	6.3 LT FW	Cr.	16.00	7.50		8.50		Asphalt STBC SG	1.3-5.0: RE - Brown-Gray, Fine to Coarse Sandy SILT, trace gravel	S-17	A-4(0)	M	5	Low Severity Transverse and Longitudinal Cracking (ISWP)	607,057	573,237		
L_8457_RT LN -L 84+57 RT LN	Cut 20.0	12.0	0.5 PS	2.3 LT FW	Cr.	16.00	7.50		8.50		Asphalt STBC SG	1.3-5.0: RES - Brown-Red, Fine to Coarse Sandy SILT	Ref-21	A-4	M	5	Low to Moderate Transverse and Longitudinal Cracking (OSWP/ISWP), Edge Cracking at Shoulder	607,600	575,059		
L_10490_LT LN -L 104+90 LT LN	Fill 25.0	11.0	0.3 PS	2.0 LT FW	Cr.	15.00	7.75		7.25		Asphalt STBC SG	1.3-5.0: RE - Brown-Gray, Fine to Coarse Sandy SILT	S-19	A-4(0)	M	5	Moderate to High Severity Longitudinal Cracking (ISWP/OSWP), Moderate Severity Transverse and Fatigue Cracking	608,015	576,874		
L_12506_RT LN -L 125+06 RT LN	Fill 3.0	12.0	0.5 PS	2.0 LT FW	Cr.	17.00	8.00		9.00		Asphalt STBC SG	1.4-3.0: RE - Red, Clayey, Fine to Coarse Sandy SILT 3.0-5.0: RES - Brown, Fine to Coarse Sandy SILT	S-20 Ref-21	A-4(3) A-4	M M	5	Low Severity Longitudinal (OSWP/ISWP), Low to Moderate Transverse Cracking	609,321	578,301		
L_14507_LT LN -L 145+07 LT LN	Fill 5.0	11.0	1.0 PS	2.0 LT FW	Cr.	17.00	7.00		10.00		Asphalt STBC SG	1.4-5.0: RE - Brown, Fine to Coarse Sandy SILT	S-21	A-4(0)	M	5	Moderate to High Severity Longitudinal (ISWP), Low to Moderate Transverse Cracking, Low Severity Longitudinal Cracking (OSWP)	609,956	580,198		
L_15983_RT LN -L 159+83 RT LN	Fill 7.0	12.0	0.5 PS	2.0 LT FW	Cr.	18.00	7.00		11.00		Asphalt STBC SG	1.5-5.0: RE - Brown, Fine to Coarse Sandy SILT, trace gravel	Ref-21	A-4	M	5	Moderate to High Severity Longitudinal (ISWP), Low to Moderate Transverse Cracking, Low Severity Longitudinal Cracking (OSWP), <b>1-Inch Top-Down Crack in Core</b>	610,395	581,608		
L_17311_LT PS -L 173+11 LT PS	Fill 20.0	11.5	7.0 PS Concrete Gutter	1.7 RT FW	Cr.	16.50	4.50		12.00		Asphalt STBC SG	1.4-5.0: RE, Brown-Tan-Orange, Fine to Coarse Sandy SILT	Ref-25	A-4	M	5	No Observed Distress	611,226	582,615		
L_17311_LT LN -L 173+11 LT LN	Fill 20.0	11.5	7.0 PS Concrete Gutter	2.3 LT FW	Cr.	17.00	7.50		9.50		Asphalt STBC SG	1.4-5.0: RE - Tan-Orange, Fine to Coarse Sandy SILT	S-25	A-4(0)	M	5	Moderate to High Severity Longitudinal Cracking (ISWP/OSWP), Moderate Severity Transverse Cracking, patch observed	611,224	582,618		
L_19026_RT LN -L 190+26 RT LN	Cut 20.0	12.0	0.5 PS	2.0 LT FW	Cr.	17.00	7.50		9.50		Asphalt STBC SG	1.4-5.0: RES - Brown, Fine to Coarse Sandy SILT	S-26	A-4(0)	M	5	Moderate Severity Longitudinal Cracking (OSWP), Low Severity Transverse Cracking	612,560	583,683		
L_20446_LT LN -L 204+46 LT LN	Fill 7.0	10.5	1.0 PS	2.3 LT FW	Cr.	17.00	8.50		8.50		Asphalt STBC SG	1.4-3.0: RE - Brown, Fine to Coarse Sandy SILT 3.0: RE - Boulder Fill, Auger Refusal	S-27	A-4(0)	M	3 AR	High Severity Longitudinal Cracking (ISWP/OSWP), Moderate Severity Block and Transverse Cracking, <b>1-Inch Top-Down Crack in Core</b>	612,972	585,033		
L_22517_RT LN -L 225+17 RT LN	At Grade	10.5	1.0 PS	2.3 LT FW	Cr.	19.00	8.75		10.25		Asphalt STBC SG	1.6-5.0: RES - Tan, Fine to Coarse Sandy SILT	Ref-31	A-4	M	5	Moderate Severity Longitudinal Cracking (ISWP/OSWP), Moderate Severity Transverse Cracking Cracking Patched, <b>1.25-Inch Bottom-Up Crack in Core</b>	613,726	586,930		
L_24517_LT LN -L 245+17 LT LN	Fill 4.0	11.0	1.0 PS	2.4 LT FW	Cr.	18.00	7.75		10.25		Asphalt STBC SG	1.5-4.0: RE - Tan-Brown, Fine to Coarse Sandy SILT 4.0-5.0: RES - Tan, Fine to Coarse Sandy SILT	S-29 Ref-31	A-4(0) A-4	M M	5	Moderate Severity Longitudinal Cracking (ISWP/OSWP), Moderate Severity Transverse Cracking, Cracking Sealed	615,076	588,395		
L_26494_RT LN -L 264+94 RT LN	Fill 6.0	11.5	1.0 PS	1.5 LT FW	Cr.	17.00	7.50		9.50		Asphalt STBC SG	1.4-5.0: RE - Tan-Gray-Orange, Fine to Coarse Sandy SILT	Ref-29	A-4	M	5	Low (OSWP) to Moderate (ISWP) Severity Longitudinal Cracking, Low Severity Transverse Cracking	616,677	589,445		
L_28498_LT LN -L 284+98 LT LN	Cut 30.0	11.5	0.5 PS	1.8 LT FW	Cr.	17.00	7.25		9.75		Asphalt STBC SG	1.4-5.0: RES - Tan-Orange, Fine to Coarse Sandy SILT	S-31	A-4(0)	M	5	High Severity Longitudinal Cracking (OSWP), Low Severity Longitudinal Cracking (ISWP) Low Severity Transverse Cracking	618,635	589,871		
L_30462_RT PS -L 304+62 RT PS	Fill 4.0	12.0	5.5 PS Concrete Curb	2.4 RT FW	Cr.	18.00	7.75		10.25		Asphalt STBC SG	1.5-4.0: RE - Tan-Brown, Fine to Coarse Sandy SILT 4.0-5.0: RES - Tan-Orange, Fine to Coarse Sandy SILT	Ref-29 Ref-31	A-4 A-4	M M	5	Moderate Severity Longitudinal Cracking (ISWP/OSWP), Moderate Severity Transverse Cracking, patched	620,213	590,974		

Notes:

Offset Distance: Left and Right Relative to the Direction of Travel

Prepared by: CTW  
Reviewed by: REK



**PAVEMENT INVESTIGATION DATA SHEET**

Project:	32572.1.FS10
TIP:	A-0009C

Route:	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
County:	Graham

Date Performed:	12/27/21, 12/28/21, 1/04/22, 1/13/22
Field Personnel:	M. Brewer, R. Kral, L. Ard

Test Location	Cut/Fill (Est. of Amount) (ft)	Width (ft)		Offset Distance (See Notes)	Crown "C" or Super "S"	Gross to Top of Soil	Thickness (in)				Chemical Stabilized Subgrade (CSS)	Pavement Layering	Subgrade					Asphalt Notes	GPS Coordinates	
		Lane	Shoulder				Asphalt	ABC	STBC	Description (Depth - ft)			Soil Sample Number	AASHTO Classification	Soil Moisture	Boring Depth (ft)	Northing		Easting	
L_32492_LT LN -L- 324+92 LT LN	Fill 6.0	11.5	1.0 PS	2.0 LT FW	Cr.	17.00	7.50		9.50		Asphalt STBC SG	1.4-5.0: RE - Tan-Gray-Orange, Fine to Coarse Sandy SILT	S-33	A-4(0)	M	5	Moderate Severity Longitudinal Cracking (ISWP/OSWP), Low Severity Transverse Cracking	621,605	592,299	
L_34421_RT LN -L- 344+21 RT LN	Fill 10.0	12.5	3.5 PS	2.2 LT FW	S	17.00	7.25		9.75		Asphalt STBC SG	1.4-3.5: RE - Brown, Fine to Coarse Sandy SILT 3.5: RE - Boulder Fill, Auger Refusal	Ref-33	A-4	M	3.5 AR	High Severity Fatigue Cracking (ISWP), <b>1.25-inch Bottom-Up Crack in Core</b>	621,944	593,778	
L_36520_RT LN -L- 365+20 RT LN	Cut 10.0	11.5	4.5 PS	2.5 LT FW	S	19.00	11.50		7.50		Asphalt STBC SG	1.6-5.0: RES - Tan, Fine Sandy SILT	S-35	A-4(2)	M	5	Moderate to High Severity Fatigue Cracking (ISWP/OSWP), Moderate Severity Longitudinal Cracking	619,967	593,243	
L_36520_RT PS -L- 365+20 RT PS	Cut 10.0	11.5	4.5 PS	2.0 RT FW	S	20.00	10.50		9.50		Asphalt STBC SG	1.7-5.0: RES - Tan, Fine Sandy SILT	Ref-35	A-4	M	5	Moderate to High Severity Fatigue Cracking (ISWP/OSWP), Moderate Severity Longitudinal Cracking	619,969	593,239	
L_38502_LT PS -L- 385+02 LT PS	Cut 40.0	-	10.5 PS	6.0 RT FW	Cr.	10.00	4.25		5.75		Asphalt STBC SG	0.8-5.0: RES - Tan, Fine to Coarse Sandy SILT, trace gravel	Ref-38	A-4	M	5	Moderate Severity Block Cracking, Low Severity Longitudinal Cracking	618,825	593,850	
L_38502_LT LN -L- 385+02 LT LN	Cut 40.0	12.0	-	1.5 LT FW	Cr.	16.00	8.50		7.50		Asphalt STBC SG	1.3-4.0: RES - Brown, Fine to Coarse Sandy SILT, trace gravel 4.0-5.0: WR - (Meta-Sandstone)	S-38	A-4(0) WR	M	5	Moderate to High Severity Fatigue Cracking (OSWP/ISWP), Moderate Severity Transverse Cracking	618,821	593,857	
L_40618_RT LN -L- 406+18 RT LN	Fill 20.0	12.5	4.5 PS Concrete Curb	1.4 LT FW	S	16.00	7.75		8.25		Asphalt STBC SG	1.3-5.0: RE - Brown, Fine to Coarse Sandy SILT, trave gravel	Ref-40	A-4	M	5	High Severity Edge Cracking (OSWP), Low Severity Longitudinal Cracking (ISWP) Moderate to High Severity Longitudinal Cracking (OSWP), Low Severity Transverse Cracking	620,549	594,998	
L_40618_RT PS -L- 406+18 RT PS	Fill 20.0	12.5	4.5 PS Concrete Curb	1.0 RT FW	S	13.00	5.25		7.75		Asphalt STBC SG	1.1-5.0: RE - Brown, Fine to Coarse Sandy SILT, trace gravel	S-40	A-4(0)	M	5	High Severity Edge Cracking (OSWP), Low Severity Longitudinal Cracking (ISWP) Moderate to High Severity Longitudinal Cracking (OSWP), Low Severity Transverse Cracking	620,548	595,000	
L_42503_LT LN -L- 425+03 LT LN	Cut 60.0	11.5	1.0 PS	1.5 LT FW	Cr.	20.00	10.00		10.00		Asphalt STBC SG	1.7-3.0: RES - Brown, Fine to Coarse Sandy SILT 3.0-5.0: WR - (Meta-Sandstone)	S-41 NSR	A-4(0) WR	M	5	No Observed Distress, Recent Overlay (Landslide)	621,607	596,368	
L_44982_RT LN -L- 449+82 RT LN	Cut 30.0	12.0	1.0 PS	1.5 LT FW	Cr.	17.75	7.75		10.00		Asphalt STBC SG	1.5-5.0: RES - Brown, Fine to Coarse Sandy SILT	Ref-41	A-4	M	5	High Severity Fatigue Cracking (OSWP), Moderate Severity Edge Cracking, Low Severity Longitudinal Cracking (ISWP)	623,791	595,946	
L_47322_RTL (RT) -L- 473+22 RTL(RT)	Cut 20.0	14.0	-	7.0 RT FY	S	20.00	6.25		13.75		Asphalt STBC SG	1.7-5.0: RES - Tan, Fine to Coarse Sandy SILT, trace gravel	S-43	A-4(0)	M	5	Low to Moderate Severity Transverse and Longitudinal Cracking (ISWP)	625,922	596,429	
L_47322_LTL (RT) -L- 473+22 LTL(RT)	Cut 20.0	15.5	1.0 PS	8.0 LT FW	S	19.00	6.50	4.00	8.50		Asphalt ABC/STBC SG	1.6-5.0: RES - Tan, Fine to Coarse Sandy SILT	Ref-43	A-4	M	5	Moderate Severity Transverse and Longitudinal Cracking (ISWP)	625,908	596,434	
Y2_2187_RT LN -Y2- 21+87 RT LN	Fill 4.0	11.0	-	4.6 RT FY	Cr.	18.00	8.00		10.00		Asphalt STBC SG	1.5-4.0 : RE - Tan, Fine to Coarse Sandy SILT 4.0-5.0: RES - Tan, Fine to Coarse Sandy SILT	Ref-46 Ref-47	A-4 A-4	M M	5	No Observed Distress (RTL/N), Low Severity Longitudinal Cracking (ISWP/OSWP/LTLN)	626,059	596,509	
Y2_2187_RTL (RT) -Y2- 21+87 RTL(RT)	Fill 3.0	12.0	-	5.8 LT FW	Cr.	12.00	6.25		5.75		Asphalt STBC SG	1.0-3.0: RE - Tan, Fine to Coarse Sandy SILT 3.0-5.0: RES - Tan, Fine to Coarse Sandy SILT	S-46 Ref-47	A-4(0) A-4	M M	5	Low Severity Longitudinal Cracking (ISWP)	626,058	596,497	
Y2_2187_RT PS -Y2- 21+87 RT PS	Cut 20.0	-	11.5 PS	5.0 RT FW	Cr.	9.00	5.00		4.00		Asphalt STBC SG	0.8-5.0: RES - Tan, Fine to Coarse Sandy SILT	S-47	A-4(1)	M	5	Moderate Severity Edge Cracking at RT LN/PS, Low Severity Tranverse Cracking	626,057	596,486	

Notes:  
Offset Distance: Left and Right Relative to the Direction of Travel

Prepared by: CTW  
Reviewed by: REK



**PAVEMENT INVESTIGATION DATA SHEET**

Project:	32572.1.FS10
TIP:	A-0009C

Route:	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
County:	Graham

Date Performed:	12/27/21, 12/28/21, 1/04/22, 1/13/22
Field Personnel:	M. Brewer, R. Kral, L. Ard

Test Location	Cut/Fill (Est. of Amount) (ft)	Width (ft)		Offset Distance (See Notes)	Crown "C" or Super "S"	Gross to Top of Soil	Thickness (in)				Pavement Layering	Subgrade					Asphalt Notes	GPS Coordinates		
		Lane	Shoulder				Asphalt	ABC	STBC	Chemical Stabilized Subgrade (CSS)		Description (Depth - ft)	Soil Sample Number	AASHTO Classification	Soil Moisture	Boring Depth (ft)		Northing	Easting	
Y2_4061_RT LN -Y2- 40+61 RT LN	Cut 15.0	10.5	1.0 PS	1.0 LT FW		18.00	10.00		8.00		Asphalt STBC SG	1.5-5.0: RES - Tan, Fine to Coarse Sandy SILT	S-48	A-4(1)	M	5	No Observed Distress, <b>1.0-inch Bottom-Up Crack in Core</b>	624,278	596,760	
Y2_6051_LT LN -Y2- 60+51 LT LN	Fill 30.0	11.0	1.0 PS	1.4 LT FW	Cr.	19.50	10.50		9.00		Asphalt Concrete STBC/SG	1.6-5.0: RE - Brown-Tan-Red, Fine to Coarse Sandy SILT, trace gravel	Ref-50	A-4	M	5	No Observed Distress	623,931	598,626	
Y2_7985_RT LN -Y2- 79+85 RT LN	Fill 15.0	10.5	0.5 PS	0.6 LT FW	S	16.00	7.75		8.25		Asphalt STBC SG	1.3-5.0: RE - Brown-Tan, Fine to Coarse Sandy SILT	S-50	A-4(0)	M	5	No Observed Distress	623,173	600,284	
Y2_10031_LT LN -Y2- 100+31 LT LN	Fill 5.0	10.0	0.5 PS	1.4 LT FW	Cr.	18.00	9.50		8.50		Asphalt STBC SG	1.5-5.0: RE - Red-Brown, Fine to Coarse Sandy SILT	S-51	A-4(0)	M	5	Low Severity Longitudinal Cracking (ISWP)	622,944	602,278	
Y2_11968_RT LN -Y2- 119+68 RT LN	Fill 15.0	11.0	1.0 PS	1.8 LT FW	Cr.	20.00	10.00		10.00		Asphalt STBC SG	1.7-5.0: RE - Tan-Brown, Fine to Coarse Sandy SILT, trace gravel	Ref-50	A-4	M	5	Low Severity Longitudinal Cracking (OSWP), Low Severity Transverse Cracking	622,940	604,216	
Y2_14029_LT PS -Y2- 140+29 LT PS	Fill 30.0	10.0	2.0 PS	1.0 RT FW	Cr.	6.75	6.75		Yes		Asphalt STBC SG	Utility Present, Auger not performed	-	-	-	-	No Observed Distress	623,423	606,163	
Y2_14029_LT LN -Y2- 140+29 LT LN	Fill 30.0	10.0	2.0 PS	1.3 LT FW	Cr.	17.00	8.75		8.25		Asphalt STBC SG	1.4-5.0: RE - Tan-Brown, Fine to Coarse Sandy SILT	S-54	A-4(0)	M	5	No Observed Distress	623,421	606,164	
Y2_16510_LT OSL -Y2- 165+10 LT OSL	At Grade	11.5	1.5 PS	6.0 LT FW	S	13.00	5.50		7.50		Asphalt STBC SG	1.1-5.0: RES - Brown-Tan, Fine to Coarse Sandy SILT, trace gravel	S-55	A-4(0)	M	5	Moderate Severity Longitudinal Cracking (ISWP)	623,721	608,482	
Y2_16510_LT MERGE LN -Y2- 165+10 LT MERGE LN	Fill 5.0	9.0	-	3.5 RT FY	S	13.00	6.25		6.75		Asphalt STBC SG	1.1-5.0: RE - Red-Brown, Fine to Coarse Sandy SILT, trace gravel	Ref-57	A-4	M	5	No Observed Distress	623,710	608,484	
Y2_16510_MID LANE -Y2- 165+10 MID LANE	Fill 10.0	17.5	-	7.0 LT FY	S	21.00	5.00	8.00	8.00		Asphalt ABC CSS/SG	1.8-5.0: RE - Red, Fine to Coarse Sandy SILT, trace gravel	S-57	A-4(0)	M	5	No Observed Distress	623,699	608,485	
Y2_16510_RT OSL -Y2- 165+10 RT OSL	Fill 10.0	12.0	1.0 PS	4.5 LT FW	S	21.00	4.25	8.75	8.00		Asphalt ABC CSS/SG	1.8-5.0: RE - Red, Fine to Coarse Sandy SILT, trace gravel	Ref-57	A-4	M	5	Low Severity Longitudinal Cracking (OSWP)	623,682	608,488	

Notes:  
Offset Distance: Left and Right Relative to the Direction of Travel

Prepared by: CTW  
Reviewed by: REK







DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET												WBS NO.	PROJECT TIP I.D.	ROUTE
												32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
Test Location												DATE RUN	TEST LOCATION	DATE RUN
-Y1- Sta. 35+96 LT LN 8.0 FT RT FW												12/27/21 to 1/13/22	-Y1- Sta. 35+96 LTL (LT) 4.5 FT RT FY	12/27/21 to 1/13/22
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill			
DCP	Cumulative cm per blow			ABC	5.0 ft. Fill	DCP	Cumulative cm per blow			STBC	5.0 ft. Fill			
0.50	19.82	45.30	86.18	123.20		1.00	18.70	32.60	61.20	79.80	116.50			
0.90	20.10	45.50	86.42	123.80		1.50	18.80	33.10	61.60	79.90	117.50			
1.40	20.38	45.60	86.66	124.50		1.90	19.00	33.60	61.90	80.00	118.60			
1.60	20.66	46.40	86.90	125.00		2.10	19.30	33.70	62.30	80.50	119.40			
1.70	20.94	46.50	87.54	125.10		2.50	19.40	34.10	62.40	81.00	119.50			
2.40	21.22	46.90	88.18	126.00		2.90	19.60	34.50	63.20	81.50	120.30			
2.50	21.50	47.50	88.82	126.30		3.30	19.90	34.80	63.30	82.00	120.60			
2.90	21.72	47.90	89.46	127.00		3.60	20.10	35.10	64.40	82.30	121.50			
3.40	21.94	48.10	90.10	127.10		4.00	20.40	35.60	64.90	82.50	121.90			
3.50	22.16	48.50	90.38	127.90		4.50	20.50	36.30	65.30	82.90	122.30			
3.60	22.38	49.00	90.66	128.90		4.90	20.60	36.50	65.70	83.40	123.20			
3.90	22.60	49.50	90.94	129.10		5.10	20.67	37.20	66.00	83.50	124.40			
4.10	22.78	49.80	91.22	129.60		5.60	20.73	37.60	66.30	84.10	125.40			
4.50	22.96	50.10	91.50	130.10		5.90	20.80	38.10	66.60	84.60	126.30			
5.60	23.14	50.40	92.00	130.70		6.20	20.87	38.30	66.70	85.00	127.50			
6.40	23.32	51.10	92.30	130.80		6.40	20.93	38.70	66.80	85.30	128.30			
7.00	23.50	51.40	92.60	131.10		6.56	21.00	39.50	67.00	85.90	128.90			
7.50	23.68	51.90	93.40	131.50		6.72	21.12	39.60	67.10	86.20	129.50			
8.10	23.86	52.50	93.90			6.88	21.24	39.70	67.30	86.90	130.20			
9.00	24.04	52.90	94.50			7.04	21.36	40.00	67.50	87.50	130.90			
10.10	24.22	53.90	95.60			7.20	21.48	40.30	67.65	87.80				
10.40	24.40	54.50	96.50			7.40	21.60	40.80	67.80	88.10				
10.70	24.82	55.00	97.90			7.60	22.10	41.10	67.95	88.40				
11.00	25.24	55.90	98.00			7.80	22.36	41.50	68.10	88.70				
11.10	25.66	56.10	99.50			8.00	22.62	41.90	68.25	89.00				
11.50	26.08	57.00	100.10			8.20	22.88	42.30	68.40	89.40				
11.60	26.50	57.50	101.00			8.46	23.14	42.40	68.64	89.90				
11.90	26.90	58.00	101.10			8.72	23.40	42.90	68.88	90.50				
12.10	27.10	58.50	102.00			8.98	23.55	43.60	69.12	91.00				
12.40	27.50	58.90	102.50			9.24	23.70	44.20	69.36	91.50				
12.60	28.00	59.00	103.60			9.50	23.85	44.90	69.60	91.90				
12.90	28.50	59.50	103.70			9.78	24.00	45.50	69.77	92.40				
13.10	28.90	60.00	104.50			10.06	24.15	45.70	69.94	93.00				
13.50	29.30	61.00	104.60			10.34	24.30	46.30	70.11	93.90				
13.70	29.70	62.10	105.90			10.62	24.36	46.60	70.28	94.20				
13.90	30.10	63.40	106.40			10.90	24.42	46.70	70.45	94.70				
14.00	30.60	63.50	107.20			11.20	24.48	47.20	70.62	95.10				
14.10	31.00	64.00	107.80			11.50	24.54	47.60	70.79	95.60				
14.30	31.40	64.50	107.90			11.80	24.60	48.00	70.96	95.90				
14.40	31.90	65.50	108.90			12.10	24.75	48.40	71.13	96.80				
14.60	32.50	66.70	109.10			12.40	24.90	48.90	71.30	97.40				
14.90	33.40	67.80	109.90			12.70	25.05	49.60	71.60	97.90				
15.04	34.40	68.80	110.50			13.00	25.20	50.10	71.90	98.30				
15.18	34.50	69.20	111.00			13.30	25.35	50.60	72.20	98.90				
15.32	35.40	69.90	111.30			13.60	25.50	51.20	72.50	99.50				
15.46	35.90	70.50	111.60			13.90	25.92	51.90	72.80	100.10				
15.60	36.40	71.40	112.00			14.22	26.34	52.30	73.10	100.90				
15.86	36.90	72.50	112.70			14.54	26.76	52.90	73.40	101.50				
16.12	37.50	73.10	113.00			14.86	27.18	53.40	73.70	102.30				
16.38	38.10	74.00	114.00			15.18	27.60	53.60	74.00	102.90				
16.64	38.40	75.00	114.60			15.50	27.73	54.10	74.30	103.50				
16.90	38.60	75.60	115.30			15.80	27.87	54.30	74.90	104.30				
17.10	39.40	76.30	115.70			16.10	28.00	54.80	75.50	105.10				
17.30	39.70	77.10	116.50			16.30	28.13	54.90	75.70	106.00				
17.50	40.10	78.00	117.10			16.70	28.27	55.60	76.10	106.80				
17.70	40.50	79.00	117.50			17.30	28.40	56.20	76.20	107.80				
17.90	41.50	80.00	118.00			17.50	28.78	57.00	76.50	108.40				
18.06	41.60	81.20	118.60			17.60	29.16	57.50	76.60	109.50				
18.22	42.50	82.20	119.40			17.90	29.54	58.00	77.00	110.50				
18.38	42.90	83.20	119.60			18.00	29.92	58.40	77.10	111.40				
18.54	43.50	84.20	120.20			18.12	30.30	59.20	77.50	112.40				
18.70	43.60	84.90	120.40			18.24	30.76	59.60	77.90	113.40				
18.98	44.00	85.20	121.60			18.36	31.22	59.90	78.50	114.30				
19.26	44.50	85.70	122.40			18.48	31.68	60.60	78.60	115.00				
19.54	44.70	85.94	122.90			18.60	32.14	60.70	79.30	115.50				

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET												WBS NO.	PROJECT TIP I.D.	ROUTE
												32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
Test Location												DATE RUN	TEST LOCATION	DATE RUN
-L- Sta. 11+25 CTL 5.7 FT RT FY												12/27/21 to 1/13/22	-L- Sta. 11+25 LT LN/LTL (LT) 3.0 FT RT FY	12/27/21 to 1/13/22
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill			
DCP	Cumulative cm per blow			STBC	5.0 ft. Fill	DCP	Cumulative cm per blow			STBC	5.0 ft. Fill			
1.50	47.90	64.50	112.90			1.20	24.10	62.50	106.50					
2.10	48.40	65.00	113.10			2.00	24.80	63.00	107.00					
2.50	48.50	65.80	114.60			3.00	25.90	63.40	108.00					
3.10	48.90	66.40	115.70			3.40	27.40	64.20	108.50					
3.60	49.00	67.20	116.50			3.62	28.90	64.80	109.20					
4.00	49.10	67.60	117.40			3.84	30.50	65.50	110.00					
4.50	49.20	68.20	118.10			4.06	31.90	66.10	110.50					
5.10	49.30	68.70	119.00			4.28	33.10	67.00	111.20					
5.60	49.40	69.40	120.00			4.50	34.50	67.50	111.50					
6.00	49.58	69.90	121.00			4.72	35.50	68.10	112.30					
6.30	49.76	70.50	121.90			4.94	36.50	68.90	113.30					
6.70	49.94	71.00	122.60			5.16	37.50	69.40	114.00					
7.00	50.12	71.60				5.38	38.40	70.30	114.60					
7.80	50.30	72.50				5.60	39.40	70.40	115.40					
7.90	50.48	73.20				5.78	40.20	71.10	115.90					
8.40	50.66	73.50				5.96	40.50	71.40	116.60					
8.60	50.84	74.50				6.14	41.10	73.30	117.20					
9.10	51.02	74.73				6.32	41.50	74.40	118.30					
9.30	51.20	74.97				6.50	42.40	75.00	118.60					
9.70	51.36	75.20				6.72	42.60	75.60	119.70					
10.00	51.52	76.50				6.94	43.20	76.50	120.10					
10.40	51.68	77.70				7.16	43.30	76.70	121.20					
10.60	51.84	78.10				7.38	43.50	77.70						
11.30	52.00	79.40				7.60	44.40	78.00						
11.40	52.17	80.40				7.90	44.58	78.60						
11.60	52.33	85.10				8.20	44.76	79.10						
12.10	52.50	85.90				8.50	44.94	80.00						
12.40	52.67	86.10				8.80	45.12	80.60						
12.90	52.83	86.50				9.10	45.30	81.50						
13.50	53.00	87.50				9.40	45.82	82.10						
13.60	53.18	88.40				9.70	46.34	83.10						
14.40	53.37	89.10				10.00	46.86	83.60						
15.00	53.55	90.00				10.30	47.38	84.50						
16.00	53.73	90.60				10.60	47.90	85.40						
17.00	53.92	91.60				10.82	48.30	86.40						
18.00	54.10	92.50				11.03	49.50	87.20						
19.10	54.28	93.20				11.25	50.00	88.30						
21.20	54.47	94.40				11.47	50.30	89.00						
22.60	54.65	94.60				11.68	51.00	89.60						
24.10	54.83	95.40				11.90	51.80	90.90						
25.20	55.02	96.00				12.12	52.00	91.90						
26.30	55.20	96.40				12.34	52.80	92.90						
26.90	55.46	97.50				12.56	53.20	93.10						
27.60	55.72	98.00												





DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.		PROJECT TIP I.D.		ROUTE			
				32573.1.FS10		A-0009C		Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
				COUNTY		FIELD PROFESSIONAL		FIELD CREW			
Graham		M. Brewer		L. Ard/R. Kral							
Test Location				Date Run		Test Location				Date Run	
-L- Sta. 11+25 RTL (LT) 1.5 FT LT C&G EOP				12/27/21 to 1/13/22		-L- Sta. 25+69 LTL (RT) 5.0 FT RT FY				12/27/21 to 1/13/22	
Type	Test Interval			Datum		Type	Test Interval			Datum	
DCP	Cumulative cm per blow			ABC		DCP	Cumulative cm per blow			ABC/STBC	
	5.0 ft. Fill			At Grade			At Grade			At Grade	
1.90	13.30	50.60	104.40			0.50	49.60	69.10			
3.00	13.35	51.40	106.00			1.00	50.50	69.18			
4.20	13.40	52.60	108.00			1.40	51.00	69.27			
4.30	13.45	53.60	108.40			1.60	51.50	69.35			
4.70	13.50	54.60	109.60			2.00	52.50	69.43			
5.30	13.55	55.60				2.50	53.00	69.52			
5.40	13.60	57.00				2.90	54.00	69.60			
5.60	13.64	57.70				3.30	54.30	69.70			
5.90	13.68	58.40				3.50	54.80	69.80			
6.30	13.72	59.50				3.90	55.10	69.90			
6.50	13.76	61.00				4.10	55.50	70.00			
6.70	13.80	62.50				4.50	56.00	70.10			
7.00	13.84	63.40				5.10	56.50	70.14			
7.10	13.88	64.20				5.60	56.90	70.18			
7.50	13.92	65.10				5.90	57.80	70.22			
7.60	13.96	66.10				6.50	58.20	70.26			
7.90	14.00	67.10				7.10	58.60	70.30			
8.00	<b>DCP REF</b>	68.20				7.90	59.40	70.35			
8.30	<b>AUGER 7.9 to 21.9 cm</b>	68.50				8.90	59.50	70.40			
8.40		70.60				9.50	60.50	70.45			
8.50	0.60	72.00				10.90	60.90	70.50			
8.60	1.20	73.20				12.50	61.00	70.55			
8.70	1.50	74.40				13.90	61.20	70.60			
9.10	1.70	75.60				15.40	61.50	70.65			
9.20	1.90	76.20				16.50	61.60	70.70			
9.50	2.00	77.20				17.30	62.10	70.75			
9.60	2.30	77.70				18.30	62.20	70.80			
9.70	2.70	78.20				19.30	62.30	70.85			
9.80	3.60	78.50				20.40	62.60	70.90			
9.90	4.60	78.70				21.40	62.90	70.95			
10.00	5.50	79.10				22.40	63.40	71.00			
10.10	6.20	79.50				23.50	63.50	71.05			
10.20	7.10	79.80				24.60	63.90	71.10			
10.30	8.10	80.00				25.40	64.00	71.15			
10.40	8.20	80.20				26.10	64.10	71.20			
10.50	8.40	80.60				26.80	64.20	71.25			
10.60	8.70	80.80				27.37	64.30	71.30			
10.70	9.00	81.10				27.93	64.40	71.32			
10.80	9.30	81.60				28.50	64.52	71.34			
10.90	9.60	82.00				29.00	64.64	71.36			
11.00	9.90	82.60				30.10	64.76	71.38			
11.10	10.50	83.10				31.50	64.88	71.40			
11.20	10.60	83.50				32.38	65.00	71.42			
11.30	11.10	83.70				33.25	65.17	71.44			
11.40	11.40	84.10				34.13	65.33	71.46			
11.50	12.00	84.60				35.00	65.50	71.48			
11.68	12.70	85.60				36.00	65.67	71.50			
11.86	13.90	85.70				37.50	65.83	<b>DCP REF</b>			
12.04	15.50	87.00				38.00	66.00	<b>50/1.2"</b>			
12.22	17.00	87.20				38.30	66.17				
12.40	19.10	88.40				39.00	66.33				
12.44	21.50	89.40				39.50	66.50				
12.48	23.10	90.20				40.60	66.67				
12.52	26.40	91.10				41.50	66.83				
12.56	29.30	92.00				42.20	67.00				
12.60	31.70	93.10				43.30	67.17				
12.68	34.40	94.10				44.00	67.33				
12.77	37.00	95.40				44.50	67.50				
12.85	39.30	96.40				45.10	67.67				
12.93	42.10	97.40				46.00	67.83				
13.02	44.40	98.20				46.50	68.00				
13.10	46.30	99.20				47.00	68.22				
13.15	48.20	100.20				47.50	68.44				
13.20	49.10	101.70				48.50	68.66				
13.25	50.00	103.10				49.50	68.88				

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.		PROJECT TIP I.D.		ROUTE			
				32573.1.FS10		A-0009C		Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
				COUNTY		FIELD PROFESSIONAL		FIELD CREW			
Graham		M. Brewer		L. Ard/R. Kral							
Test Location				Date Run		Test Location				Date Run	
-L- Sta. 25+69 RT LN/RTL 2.0 FT LT FW				12/27/21 to 1/13/22		-L- Sta. 28+16 LT LN 5.5 FT LT FW				12/27/21 to 1/13/22	
Type	Test Interval			Datum		Type	Test Interval			Datum	
DCP	Cumulative cm per blow			ABC/STBC		DCP	Cumulative cm per blow			STBC	
	At Grade			At Grade			At Grade			At Grade	
0.80	52.60	100.50				0.90	29.90	95.40			
1.20	53.70	101.30				1.20	30.60	96.50			
1.80	54.50	101.50				1.70	31.10	97.50			
2.10	56.10	101.90				2.10	31.90	98.20			
2.40	57.10	102.50				3.00	32.60	99.30			
2.60	58.60	103.00				3.30	33.50	100.20			
3.00	60.00	103.50				4.00	34.10	101.00			
3.40	61.00	104.00				4.50	35.20	101.20			
3.60	62.20	104.30				4.70	36.00	102.50			
3.90	63.40	104.90				5.00	37.10	103.50			
4.30	64.60	105.30				5.30	38.60	104.40			
4.70	65.60	105.50				5.50	39.90	105.20			
5.00	66.50	106.10				5.90	40.10	106.30			
5.50	67.40	106.50				6.10	41.50	107.00			
5.60	68.10	107.00				6.40	42.60	107.60			
6.00	68.40	107.50				6.60	43.40	108.40			
6.90	69.60	107.90				7.00	44.20	109.50			
7.00	70.40	108.40				7.10	44.50	110.20			
7.30	71.40	109.00				7.50	45.40	111.20			
7.50	72.40	109.30				7.80	46.40	112.00			
7.90	73.50	110.00				7.90	47.60	112.60			
8.10	73.70	110.40				8.10	48.50	113.00			
8.60	74.60	110.90				8.40	49.50	114.40			
8.90	74.80	111.10				8.60	50.90	115.40			
9.30	75.50	111.50				8.90	52.10	115.90			
9.90	76.60	112.00				9.30	53.20	116.00			
10.30	77.10	112.30				9.80	54.30	117.50			
10.40	77.80	112.80				10.00	55.00	118.50			
10.60	78.60	113.40				10.40	56.00	119.00			
11.00	79.50	113.60				10.80	57.20	119.50			
11.50	80.50	114.10				11.10	58.40	120.30			
11.90	80.60	114.50				11.50	59.50	121.30			
12.30	81.10	114.90				12.00	60.40	122.00			
12.50	81.80	115.30				12.40	61.40	122.50			
13.00	82.50	115.90				12.80	62.30	123.20			
13.30	83.00	116.00				13.00	62.90	123.90			
13.90	83.40	116.50				13.10	63.90	124.70			
14.10	83.90	117.50				13.80	64.90	125.50			
14.40	84.90	117.90				13.90	65.10	126.00			
14.80	85.60	118.10				14.80	66.50	127.00			
15.00	86.60					15.00	67.70	127.50			
15.40	87.10					15.50	68.90	128.20			
15.90	87.60					15.90	69.90	128.80			
16.50	88.60					16.00	70.10	129.50			
17.10	89.10					16.60	71.20	130.40			
17.50	89.80					16.90	72.40	131.10			
18.50	90.10					17.50	73.50				
19.40	90.90					18.50	74.60				
20.10	91.40					19.10	75.90				
21.30	92.10					19.50	76.40				
22.90	92.50					20.10	77.90				
24.00	93.10					20.50	79.50				
25.50	93.80					21.50	80.90				
27.80	94.30					22.00	82.30				
30.40	95.00					22.50	83.40				
33.40	95.50					23.10	84.90				
34.50	96.20					23.50	85.10				
36.40	97.00					24.50	86.50				
37.90	97.50					25.00	87.40				
40.40	97.90					25.60	88.60				
42.40	98.30					26.40	89.90				
45.50	98.90					27.00</					





DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE					
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah					
Test Location				COUNTY	FIELD PROFESSIONAL	FIELD CREW					
				Graham	M. Brewer	L. Ard/R. Kral					
-L- Sta. 28+16 LTL (LT) 4.3 FT RT FY				Date Run	Test Location				Date Run		
12/27/21 to 1/13/22				12/27/21 to 1/13/22	-L- Sta. 45+24 RT LN/RTL 2.0 FT LT FW				12/27/21 to 1/13/22		
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill
DCP	Cumulative cm per blow			STBC	At Grade	DCP	Cumulative cm per blow			STBC	10.0 ft. Fill
0.50	22.60	66.10	116.40			0.80	11.64	23.90	44.50	75.60	111.70
0.60	22.90	66.90	116.90			1.50	11.76	24.20	44.90	76.40	112.10
1.00	23.10	68.30	117.40			1.90	11.88	24.60	45.00	77.00	112.30
1.40	23.20	69.30	118.00			2.20	12.00	25.20	45.30	77.50	113.00
1.80	23.40	70.10	118.50			2.28	12.18	25.50	45.50	77.90	113.10
2.10	23.60	71.90	118.60			2.36	12.36	25.60	45.90	78.50	113.60
2.40	24.00	73.20	119.10			2.44	12.54	26.20	46.30	79.90	114.00
2.60	24.10	74.40	119.80			2.52	12.72	26.60	47.40	80.20	115.00
3.00	24.50	75.60	120.70			2.60	12.90	27.20	48.20	80.50	116.10
3.40	24.60	76.70	121.50			2.78	13.04	27.60	48.60	80.90	116.90
3.50	24.70	77.90	121.60			2.96	13.18	28.30	48.90	81.30	117.30
3.60	25.00	78.90	122.40			3.14	13.32	29.00	49.50	81.90	117.60
4.10	25.20	79.90	122.60			3.32	13.46	29.30	50.00	82.10	118.50
4.20	25.60	80.70	123.10			3.50	13.60	30.00	50.50	82.60	118.70
4.60	26.00	81.50	124.00			3.78	13.68	31.00	50.90	82.70	119.40
4.70	26.40	82.50	124.30			4.06	13.76	31.60	51.50	83.10	119.60
5.00	26.70	83.60	124.80			4.34	13.84	32.10	52.00	83.50	120.60
5.10	27.00	84.50	125.80			4.62	13.92	32.60	52.50	83.90	121.10
5.40	27.40	85.40	126.30			4.90	14.00	33.40	53.00	84.20	122.00
5.60	27.60	86.10	126.40			5.00	14.20	34.10	53.60	84.50	122.40
5.70	28.10	86.90	127.00			5.10	14.40	35.00	53.70	85.00	122.50
6.00	28.50	87.70	127.60			5.20	14.60	35.80	54.20	85.40	
6.10	29.00	88.50	127.90			5.30	14.80	36.10	54.80	85.90	
6.20	29.40	89.10	128.50			5.40	15.00	36.60	55.00	86.40	
6.40	30.00	90.40	128.90			5.60	15.06	37.20	55.60	86.90	
6.60	30.50	91.10	129.10			5.80	15.12	37.30	56.20	87.30	
6.70	31.10	92.10	129.80			6.00	15.18	37.80	56.30	88.00	
6.80	31.20	92.60	130.00			6.20	15.24	38.50	56.90	88.50	
6.90	31.90	93.50	130.60			6.40	15.30	38.60	57.40	88.60	
7.10	32.30	94.10				6.60	15.36	38.90	57.60	89.00	
7.20	33.00	95.10				6.80	15.42	39.00	58.10	89.50	
7.50	34.20	95.70				7.00	15.48	39.60	58.50	89.90	
7.60	35.00	96.10				7.20	15.54	40.20	59.00	90.00	
7.70	36.20	97.00				7.40	15.60	40.70	59.60	90.10	
7.80	37.80	97.50				7.46	15.62	41.00	60.00	90.60	
8.40	39.20	98.10				7.52	15.64	41.30	60.10	91.10	
8.60	40.90	98.80				7.58	15.66	41.50	61.00	91.60	
8.90	41.90	99.70				7.64	15.68	41.57	61.30	92.50	
9.50	43.00	100.50				7.70	15.70	41.64	61.60	93.30	
9.90	43.80	101.00				7.86	16.00	41.70	62.30	94.00	
10.40	44.00	101.50				8.02	16.10	41.77	62.70	95.30	
11.00	44.80	101.70				8.18	16.40	41.84	63.00	95.90	
11.50	45.60	102.30				8.34	16.60	41.91	63.60	96.40	
12.00	46.30	102.90				8.50	16.90	41.98	64.10	96.50	
12.50	47.30	103.50				8.60	17.00	42.04	64.50	97.40	
13.50	48.40	104.10				8.70	17.50	42.11	65.00	97.60	
14.20	49.50	104.70				8.80	17.60	42.18	65.30	98.50	
14.90	50.60	105.10				8.90	18.20	42.25	66.10	99.40	
15.20	51.70	105.70				9.00	18.40	42.32	66.60	100.10	
15.50	52.80	106.50				9.14	18.60	42.38	67.20	100.60	
16.50	54.00	107.00				9.28	18.90	42.45	67.60	100.80	
16.70	55.00	107.50				9.42	19.40	42.52	68.10	101.10	
17.00	56.00	108.00				9.56	19.50	42.59	69.00	101.60	
17.10	57.50	108.90				9.70	19.70	42.66	69.10	102.30	
17.80	58.60	109.90				9.86	20.00	42.72	69.90	103.00	
17.90	60.00	110.50				10.02	20.10	42.79	70.10	103.90	
18.30	60.30	110.90				10.18	20.50	42.86	70.80	104.60	
18.60	61.50	111.50				10.34	20.60	42.93	71.30	105.40	
19.00	62.20	112.00				10.50	21.20	43.00	71.90	106.20	
19.50	62.40	112.50				10.68	21.50	43.06	72.60	106.60	
20.10	62.60	113.40				10.86	22.00	43.13	73.50	107.10	
20.60	63.20	113.80				11.04	22.50	43.20	74.00	107.60	
21.10	63.90	114.90				11.22	22.70	43.30	74.50	108.30	
21.50	64.50	115.40				11.40	23.00	44.10	75.00	109.50	
22.50	65.10	115.90				11.52	23.40	44.20	75.50	110.60	

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE					
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah					
Test Location				COUNTY	FIELD PROFESSIONAL	FIELD CREW					
				Graham	M. Brewer	L. Ard/R. Kral					
-L- Sta. 45+24 RT PS 0.2 FT RT FW				Date Run	Test Location				Date Run		
12/27/21 to 1/13/22				12/27/21 to 1/13/22	-L- Sta. 64+87 LT LN 6.3 FT LT FW				12/27/21 to 1/13/22		
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill
DCP	Cumulative cm per blow			STBC	10.0 ft. Fill	DCP	Cumulative cm per blow			STBC	20.0 ft. Fill
0.90	31.70	72.90	120.00			0.10	15.10	50.31			
1.30	32.00	73.30	121.20			0.40	15.60	50.34			
1.60	32.60	74.20				0.60	16.90	50.36			
2.00	33.60	74.50				1.00	17.00	50.38			
2.50	34.90	75.00				1.30	17.10	50.41			
2.90	35.10	75.50				1.90	18.50	50.43			
3.10	36.10	76.00				2.00	18.60	50.46			
3.40	37.50	76.50				2.30	19.00	50.48			
3.90	38.70	76.90				2.50	19.40	50.50			
4.40	40.70	77.30				2.60	19.50	50.53			
4.90	41.20	77.70				2.90	19.90	50.55			
5.20	41.90	77.90				3.30	20.50	50.58			
5.60	42.30	78.20				4.00	21.00	50.60			
5.90	42.90	78.50				4.30	21.50	50.62			
6.30	43.20	78.60				4.50	22.00	50.63			
6.70	43.60	79.00				4.90	22.60	50.65			
7.00	44.20	80.00				5.00	23.20	50.66			
7.40	44.50	80.60				5.40	24.20	50.68			
7.60	44.60	81.00				5.60	24.70	50.70			
8.00	45.40	81.70				5.90	25.40	50.71			
8.20	46.00	82.30				6.00	25.90	50.73			
8.40	46.40	82.60				6.10	26.00	50.74			
9.00	47.00	83.10				6.20	26.50	50.76			
9.60	47.40	83.70				6.30	27.00	50.78			
10.30	47.90	84.40				6.50	27.30	50.79			
10.60	48.40	85.00				6.60	28.00	50.81			
11.30	48.90	85.50				6.80	29.70	50.82			
11.60	49.40	86.10				6.90	30.50	50.84			
12.50	49.60	86.90				7.20	31.20	50.86			
13.00	50.00	87.70				7.34	32.00	50.87			
13.60	50.50	88.60				7.48	33.00	50.89			
14.30	51.00	89.20				7.62	33.50	50.90			
15.00	51.50	90.20				7.76	34.40	50.92			
15.30	52.00	90.80				7.90	35.60	50.94			
15.90	52.60	91.40				8.02	36.20	50.95			
16.00	53.00	92.10				8.14	37.30	50.97			
16.60	53.50	93.00				8.26	38.20	50.98			
17.60	54.00	93.60				8.38	38.50	51.00			
18.20	54.60	94.90				8.50	39.80	51.02			
18.60	55.00	95.90				8.70	41.00	51.03			
19.10	56.00	96.90				8.90	41.50	51.05			
19.60	56.10	97.90				9.10	42.60	51.06			
20.20	56.90	98.10				9.30	43.50	51.08			
20.60	57.50	99.30				9.50	44.60	51.10			
21.10	57.90	100.50				9.72	45.70	51.11			
21.50	58.60	101.50				9.94	46.60	51.13			
22.00	59.20	103.20				10.16	47.30	51.14			
22.50	59.50	104.13				10.38	48.00</				





DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.	PROJECT TIP I.D.	ROUTE
										32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
										COUNTY	FIELD PROFESSIONAL	FIELD CREW
										Graham	M. Brewer	L. Ard/R. Kral
Test Location					Date Run	Test Location					Date Run	
-L- Sta. 84+57 RT LN 2.3 FT LT FW					12/27/21 to 1/13/22	-L- Sta. 104+90 LT LN 2.0 FT LT FW					12/27/21 to 1/13/22	
Type	Test Interval		Datum		Cut/Fill	Type	Test Interval		Datum		Cut/Fill	
DCP	Cumulative cm per blow		STBC		20.0 ft. Cut	DCP	Cumulative cm per blow		STBC		25.0 ft. Fill	
0.60	23.50	101.00				0.90	25.50	70.60				
0.90	24.20	101.40				1.40	27.00	70.70				
1.10	25.10	102.00				1.60	28.30	71.10				
1.40	26.60	102.60				2.00	29.50	71.20				
1.70	28.00	103.50				2.40	30.50	71.30				
1.90	29.20	103.70				2.60	31.00	72.00				
2.30	30.40	104.60				3.00	31.20	72.12				
3.00	31.40	105.40				3.10	32.50	72.24				
3.20	32.70	106.00				3.50	32.70	72.36				
3.60	34.00	106.40				3.60	33.00	72.48				
3.90	35.40	107.20				4.00	33.50	72.60				
4.00	37.00	107.80				4.30	34.00	72.76				
4.20	38.00	108.30				4.60	34.30	72.92				
4.60	39.20	109.00				4.90	35.00	73.08				
4.70	40.80	109.50				5.10	35.60	73.24				
5.00	42.00	110.20				5.40	35.70	73.40				
5.20	43.50	110.60				5.50	36.30	73.46				
5.70	45.00	111.30				5.90	36.90	73.51				
6.50	46.00	111.60				6.00	37.50	73.57				
6.70	47.60	112.10				6.20	38.50	73.62				
7.20	48.60	112.50				6.50	39.00	73.68				
7.50	50.10	113.10				6.60	39.90	73.73				
7.60	51.10	113.60				7.00	40.60	73.79				
7.90	52.40	114.30				7.40	41.50	73.84				
8.40	53.40	115.20				7.60	42.30	73.90				
8.50	54.60	115.50				7.90	43.30	74.01				
8.60	55.60	116.00				8.00	44.40	74.12				
9.00	57.30	116.50				8.30	45.50	74.23				
9.10	58.50	116.90				8.40	46.60	74.34				
9.40	59.20	117.40				8.50	47.50	74.45				
9.50	60.40	118.00				8.60	48.50	74.56				
9.90	61.10	119.00				8.90	50.00	74.67				
10.10	62.40	119.50				9.20	50.40	74.78				
10.30	63.60	120.00				9.60	51.00	74.89				
10.50	65.00	120.60				9.70	51.50	75.00				
10.60	66.00	121.40				10.00	52.20	75.07				
10.70	67.20					10.20	53.00	75.14				
10.90	68.50					10.50	54.00	75.21				
11.40	69.80					10.60	55.50	75.28				
11.60	71.00					10.90	56.30	75.35				
12.00	72.00					11.30	57.20	75.42				
12.20	73.20					11.60	58.00	75.49				
12.40	74.20					11.90	58.50	75.56				
13.00	75.50					12.00	59.30	75.63				
13.40	76.90					12.50	59.40	75.70				
13.50	77.50					12.90	60.00	75.73				
13.90	78.50					13.00	60.50	75.76				
14.10	79.60					13.40	60.60	75.79				
14.50	80.60					13.60	61.10	75.82				
14.90	82.00					14.00	61.50	75.85				
15.00	83.40					14.30	61.60	75.88				
15.50	85.10					14.60	62.30	75.91				
16.10	86.00					15.00	62.50	75.94				
16.30	87.60					15.50	63.00	75.97				
16.60	89.90					15.60	65.00	76.00				
17.00	90.20					16.00	65.10	DCP REF				
17.60	91.40					16.50	65.30	50/1.5"				
18.00	92.50					16.90	66.30					
18.60	93.90					17.50	67.00					
19.20	95.50					18.00	67.20					
19.60	96.50					18.50	67.50					
20.30	97.50					19.50	68.10					
21.00	98.60					20.60	69.80					
21.90	99.50					22.40	70.10					
22.40	100.10					24.00	70.20					

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.	PROJECT TIP I.D.	ROUTE
										32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
										COUNTY	FIELD PROFESSIONAL	FIELD CREW
										Graham	M. Brewer	L. Ard/R. Kral
Test Location					Date Run	Test Location					Date Run	
-L- Sta. 125+06 RT LN 2.0 FT LT FW					12/27/21 to 1/13/22	-L- Sta. 145+07 LT LN 2.0 FT LT FW					12/27/21 to 1/13/22	
Type	Test Interval		Datum		Cut/Fill	Type	Test Interval		Datum		Cut/Fill	
DCP	Cumulative cm per blow		STBC		3.0 ft. Fill	DCP	Cumulative cm per blow		STBC		5.0 ft. Fill	
0.80	33.00	114.90				1.00	DCP REF	54.60	96.10			
1.50	34.10	116.30				1.50	AUGER TO	55.10	96.40			
2.30	35.00	117.50				2.00	23.4 cm	55.50	96.70			
2.70	36.00	118.70				3.00	0.60	55.70	97.00			
3.10	37.00					3.50	1.50	56.20	97.30			
3.80	37.90					3.55	2.10	56.70	97.60			
4.20	38.90					3.60	2.70	58.50	97.90			
4.60	40.20					3.65	3.60	58.70	98.20			
4.90	41.70					3.70	4.10	59.50	98.50			
5.50	43.50					3.75	4.50	60.50	98.80			
5.90	44.00					3.80	4.60	62.10	99.10			
6.50	46.20					3.85	5.90	63.20	99.46			
6.60	47.50					3.90	6.70	64.30	99.82			
7.00	49.00					3.95	6.80	64.90	100.18			
7.40	49.90					4.00	7.70	65.30	100.54			
7.70	51.60					4.05	7.80	65.70	100.90			
8.00	53.00					4.10	8.20	66.10				
8.40	55.00					4.15	8.80	66.50				
8.50	56.30					4.20	9.90	66.90				
8.60	57.60					4.25	10.60	67.34				
8.90	59.20					4.30	12.50	67.78				
9.30	60.70					4.35	13.30	68.22				
9.70	61.70					4.40	14.20	68.66				
10.40	62.60					4.45	14.60	69.10				
10.50	64.30					4.50	15.60	69.66				
11.00	66.60					4.51	17.70	70.22				
11.20	68.00					4.52	18.80	70.78				
11.60	69.90					4.53	19.90	71.34				
11.70	70.70					4.54	20.70	71.90				
12.30	72.50					4.55	22.20	73.10				
12.90	73.90					4.56	22.70	74.10				
13.10	75.00					4.57	23.60	75.10				
13.50	76.60					4.58	24.20	76.10				
14.40	77.40					4.59	24.80	77.90				
14.60	79.00					4.60	25.60	79.10				
15.00	79.50					4.68	27.50	81.60				
15.30	80.00					4.76	28.10	82.60				
15.90	81.40					4.84	28.70	83.50				
16.30	82.50					4.92	30.70	84.20				
16.70	83.60					5.00	31.10	84.50				
17.20	84.70					5.08	32.00	85.20				
17.60	87.70					5.16	33.50	86.10				
18.20	88.20					5.24	35.10	86.70				
18.70	89.60					5.32	36.00	88.10				
18.90	91.00					5.40	37.10	89.11				
19.20	92.50					5.51	38.70	89.60				
19.50	94.00					5.62	39.50	90.10				
20.10	95.00					5.73	40.90	90.60				
20.50	96.00					5.84	42.10	91.10				
20.60	97.30					5.95	42.80	91.60				
21.40	97.60					6.06	43.80	92.10				
22.00	100.00					6.17	45.70	92.20				
22.30	101.00					6.28	46.70	92.30				
22.70	101.60					6.39	47.70	92.40				
23.50	102.90					6.50	48.20	92.50				
24.40	103.40					6.64	48.70	92.60				
24.90	104.00					6.78	49.10	93.00				
25.60	104.60					6.92	49.70	93.40				
26.40	106.00					7.06	51.20	93.80				
27.40	107.00					7.20	51.70	94.20				
28.40	108.70					7.34	52.60	94.60				
29.20	109.90					7.48	53.10	94.90				
30.00	110.60					7.62	53.50	95.20				
31.00	112.00					7.76	54.00	95.50				
32.00	113.00					7.90	54.50	95.80				



DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET								WBS NO.	PROJECT TIP I.D.	ROUTE
								32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
								COUNTY	FIELD PROFESSIONAL	FIELD CREW
								Graham	M. Brewer	L. Ard/R. Kral
Test Location				Date Run	Test Location				Date Run	
-L Sta. 159+83 RT LN 2.0 FT LT FW				12/27/21 to 1/13/22	-L Sta. 173+11 LT PS 1.7 FT RT FW				12/27/21 to 1/13/22	
Type	Test Interval		Datum	Cut/Fill	Type	Test Interval		Datum	Cut/Fill	
DCP	Cumulative cm per blow		STBC	7.0 ft. Fill	DCP	Cumulative cm per blow		STBC	20.0 ft. Fill	
1.20	18.10	70.20			0.10	62.40	109.10			
2.00	18.50	71.50			0.80	63.70	110.00			
2.50	18.90	72.90			1.90	64.70	110.50			
3.00	19.00	73.50			2.50	65.50	110.90			
3.30	19.50	74.10			3.20	66.10	111.20			
3.50	19.90	75.10			4.00	66.70	111.50			
3.90	20.50	76.60			4.50	67.60	111.80			
4.10	20.90	78.20			5.00	68.40	112.10			
4.50	21.10	80.10			5.70	69.10	112.60			
4.60	21.30	81.40			6.30	69.60	113.20			
4.86	21.60	83.60			6.90	70.00	113.70			
5.12	21.70	86.10			7.10	71.70	114.30			
5.38	22.00	88.40			7.70	72.00	114.60			
5.64	22.30	90.10			8.20	72.60	115.10			
5.90	22.90	91.10			8.70	73.30	115.50			
6.02	23.50	93.00			9.30	73.90	115.90			
6.14	23.80	94.30			9.90	74.60	116.40			
6.26	24.50	95.40			10.10	75.10	116.90			
6.38	25.50	96.60			10.60	75.60	117.50			
6.50	27.50	97.90			11.10	76.60	118.00			
6.66	28.00	99.10			11.60	77.10	118.70			
6.82	28.60	100.40			12.10	78.00	119.20			
6.98	29.00	101.20			12.70	79.00	119.60			
7.14	30.00	101.50			13.10	79.90	120.20			
7.30	31.00	102.50			13.50	80.90	120.60			
7.54	31.50	104.00			14.70	81.70	121.20			
7.78	32.50	104.50			15.40	82.20	121.90			
8.02	33.00	105.90			16.00	83.10	122.50			
8.26	33.20	107.00			16.50	83.40	123.30			
8.50	33.90	108.30			17.40	83.60	123.90			
8.70	34.10	109.50			17.90	84.10	124.90			
8.90	35.00	111.00			18.60	85.00	125.80			
9.10	36.00	112.00			19.10	85.40	126.40			
9.30	37.00	113.00			19.70	85.70	127.30			
9.50	38.00	114.50			20.50	86.30	128.30			
9.70	39.90	115.50			21.40	86.80	129.00			
9.90	41.50	116.90			22.10	87.40				
10.10	43.50	118.10			23.00	87.70				
10.30	45.70	119.30			24.10	88.20				
10.50	48.00	120.50			25.20	88.80				
10.72	49.30	121.60			26.10	89.50				
10.94	50.60	123.50			26.70	90.10				
11.16	51.60	124.50			27.70	90.50				
11.38	52.90	125.60			28.40	91.00				
11.60	54.20	127.00			29.40	91.90				
11.86	55.00	128.90			31.60	92.40				
12.12	56.00	130.40			33.00	92.90				
12.38	57.00				35.00	93.60				
12.64	58.50				37.10	94.30				
12.90	59.30				38.60	95.00				
13.14	60.10				39.90	95.90				
13.38	60.90				41.60	96.80				
13.62	61.90				43.10	97.50				
13.86	62.40				44.50	98.40				
14.10	63.50				45.90	99.30				
14.50	64.00				47.40	100.30				
14.90	64.50				48.70	101.20				
15.10	65.00				50.30	102.10				
15.50	65.40				51.20	102.80				
15.90	65.90				52.90	103.90				
16.10	66.30				54.70	104.70				
16.50	67.90				56.20	105.50				
17.00	68.10				57.90	106.30				
17.30	69.50				59.30	107.90				
17.90	70.10				60.80	109.00				

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET								WBS NO.	PROJECT TIP I.D.	ROUTE
								32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
								COUNTY	FIELD PROFESSIONAL	FIELD CREW
								Graham	M. Brewer	L. Ard/R. Kral
Test Location				Date Run	Test Location				Date Run	
-L Sta. 173+11 LT LN 2.3 FT LT FW				12/27/21 to 1/13/22	-L Sta. 190+26 RT LN 2.0 FT LT FW				12/27/21 to 1/13/22	
Type	Test Interval		Datum	Cut/Fill	Type	Test Interval		Datum	Cut/Fill	
DCP	Cumulative cm per blow		STBC	20.0 ft. Fill	DCP	Cumulative cm per blow		STBC	20.0 ft. Cut	
1.10	18.60	72.40	98.60	127.20	2.50	29.50	75.19	102.40		
1.50	19.00	72.60	99.00	127.60	3.60	30.00	75.30	102.70		
1.70	19.50	72.80	99.50	127.90	4.60	30.80	75.58	103.00		
2.00	19.80	72.90	99.90	128.40	4.90	31.40	75.86	103.10		
2.20	20.20	73.40	100.50	129.00	5.20	31.80	76.14	103.30		
2.60	20.60	73.70	101.20		5.60	32.50	76.42	103.40		
2.80	21.10	74.20	102.00		6.20	33.00	76.70	103.47		
3.10	21.50	74.30	102.40		6.70	33.50	76.98	103.54		
3.50	22.10	74.50	103.10		7.00	34.50	77.26	103.61		
3.80	22.40	75.30	103.60		7.20	35.30	77.54	103.68		
4.20	23.10	75.70	104.40		7.60	36.20	77.82	103.75		
4.50	23.70	76.20	105.10		8.10	37.20	78.10	103.82		
4.64	24.40	76.60	105.30		8.50	38.20	78.80	103.89		
4.78	25.40	77.30	105.80		8.68	39.20	79.40	103.96		
4.92	26.00	77.70	106.30		8.86	40.50	80.10	104.03		
5.06	26.60	78.30	106.80		9.04	41.60	80.90	104.10		
5.20	27.30	78.80	107.00		9.22	43.00	81.40	104.23		
5.30	27.80	79.20	107.70		9.40	44.20	81.90	104.36		
5.56	28.70	79.90	108.10		9.66	44.90	82.20	104.49		
5.82	29.70	80.20	108.60		9.92	46.40	82.60	104.62		
6.08	30.60	80.90	109.00		10.18	48.10	83.20	104.75		
6.34	31.90	81.30	109.40		10.44	50.30	84.00	104.88		
6.60	32.70	82.00	109.80		10.70	51.90	84.20	105.01		
6.84	33.30	82.50	110.10		10.98	54.00	85.00	105.14		
7.08	34.10	82.80	110.30		11.26	56.00	85.60	105.27		
7.32	35.10	83.40	110.80		11.54	57.50	86.00	105.40		
7.56	36.30	83.90	111.30		11.82	59.20	86.60	105.45		
7.80	37.80	84.60	111.80		12.10	60.90	87.00	105.50		
8.04	39.10	84.90	112.40		12.32	62.60	87.40	105.55		
8.28	40.10	85.50	112.70		12.54	64.10	87.90	105.60		
8.52	41.30	86.00	112.90		12.76	65.80	88.30	105.65		
8.76	42.50	86.40	113.20		12.98	66.90	88.60	105.70		
9.00	44.00	86.90	113.70		13.20	68.30	89.00	105.75		
9.18	45.50	87.10	114.00		13.50	69.30	89.40	105.80		
9.36	46.40	87.60	114.40		13.80	69.90	89.60	105.85		
9.54	47.60	88.00	114.60		14.10	70.70	89.70	105.90		
9.72	48.90	88.60	114.70		14.40	71.00	89.90	105.97		
9.90	49.90	88.90	114.90		14.70	71.13	90.10	106.04		
10.12	51.20	89.00	115.10		15.06	71.26	90.50	106.11		
10.34	52.30	89.30	115.40		15.42	71.39	91.10	106.18		
10.56	53.60	89.60	115.70		15.78	71.52	91.70	106.25		
10.78	54.80	89.90	116.10		16.14	71.65	92.50	106.32		
11.00	56.20	90.30	116.70		16.50	71.78	93.10	106.39		
11.30	58.00	90.60	117.20		16.90	71.91	93.70	106.46		
11.60	59.10	91.00	117.80		17.30	72.04	94.30	106.53		
11.90	60.30	91.40	118.20		17.70	72.17	94.80	106.60		
12.20	61.60	91.80	118.70		18.10	72.30	95.20			
12.50	63.00	92.20	119.10		18.50	72.49	95.60			
12.80	64.60	92.50	119.60		19.10	72.68	96.30			
13.10	65.00	92.90	120.20		19.70	72.87	96.80			
13.40	65.60	93.12	120.80		20.10	73.06	97.00			
13.70	65.80	93.34	121.00		20.50	73.25	97.50			
14.00	66.30	93.56	121.40		21.20	73.44	98.00			
14.36	66.90	93.78	121.90		22.00	73.63	98.50			
14.72	67.60	94.00	122.20		22.40	73.82	98.80			
15.08	68.20	94.28	122.90		23.00	74.01	99.40			
15.44	68.80	94.56	123.10		23.70	74.20	99.60			
15.80	69.40	94.84	123.80		24.30	74.31	100.10			
16.00	69.90	95.12	124.10		24.90	74.42	100.50			
16.30	70.40	95.40	124.40		25.50	74.53	100.70			
16.90	70.90	95.70	125.00		26.20	74.64	101.10			
17.10	71.40	96.10	125.30		26.70	74.75	101.60			
17.70	71.60	96.70	125.80		27.30	74.86	101.80			
18.00	71.90	97.40	126.20		28.10	74.97	101.90			
18.20	72.00	97.90	126.70		28.90	75.08	102.00			



DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
				COUNTY	FIELD PROFESSIONAL	FIELD CREW			
				Graham	M. Brewer	L. Ard/R. Kral			
Test Location				Date Run	Test Location				Date Run
-L- Sta. 204+46 LT LN 2.3 FT LT FW				12/27/21 to 1/13/22	-L- Sta. 225+17 RT LN 2.3 FT LT FW				12/27/21 to 1/13/22
Type	Test Interval	Datum		Cut/Fill	Type	Test Interval	Datum		Cut/Fill
DCP	Cumulative cm per blow	STBC		7.0 ft. Fill	DCP	Cumulative cm per blow	STBC		At Grade
1.00	15.78	55.10			1.60	0.80	37.10	60.60	95.80
2.30	16.00	56.00			1.80	1.00	37.50	60.90	96.00
3.20	16.32	56.40			2.30	1.40	37.90	61.20	96.30
3.80	16.64	56.70			2.60	1.60	38.50	61.40	96.50
4.20	16.96	57.10			2.80	2.00	38.90	61.60	96.60
4.60	17.28	57.60			3.20	2.40	39.30	61.80	96.90
5.00	17.60	58.20			3.50	2.80	39.60	62.00	97.30
5.10	18.00	58.70			3.60	3.40	39.80	62.60	97.70
5.20	18.40	59.00			3.70	3.60	40.10	63.20	97.90
5.30	19.30	59.30			4.00	3.80	40.50	63.50	98.20
5.60	19.60	59.70			4.20	4.10	40.70	63.80	98.70
5.90	19.90	60.00			4.34	4.80	40.80	64.30	99.20
6.10	20.30	60.10			4.48	5.10	41.00	64.50	99.60
6.50	20.70	60.20			4.62	5.40	41.40	65.00	100.00
6.70	21.40	61.40			4.76	5.80	41.70	65.60	100.40
6.90	21.90	DCP REF			4.90	6.10	42.00	66.00	100.70
7.10	22.50	50/0.0*			5.00	6.30	42.20	66.30	101.30
7.20	23.00				5.10	6.60	42.40	66.70	101.60
7.30	23.70				5.20	7.00	42.70	67.10	101.90
7.40	24.00				5.30	7.30	42.90	67.50	102.40
7.50	24.70				5.40	8.20	43.10	67.70	102.80
7.60	25.30				5.54	8.30	43.30	67.90	103.30
7.72	26.00				5.68	8.90	43.70	68.00	103.40
7.84	26.50				5.82	9.50	44.30	68.40	103.50
7.96	27.20				5.96	10.30	44.70	68.60	103.60
8.08	27.80				6.10	11.10	44.90	69.00	103.70
8.20	28.30				6.16	11.90	45.30	69.20	103.80
8.40	28.80				6.22	13.00	46.00	69.40	103.83
8.60	29.10				6.28	13.70	46.40	70.10	103.86
8.80	29.80				6.34	14.60	47.00	70.50	103.89
9.00	29.90				6.40	15.50	47.50	71.00	103.92
9.20	30.10				6.44	16.70	48.10	71.30	103.95
9.38	30.60				6.48	17.50	48.70	71.60	103.98
9.56	31.10				6.52	18.60	48.80	72.20	104.01
9.74	31.50				6.56	19.60	49.00	72.80	104.04
9.92	32.10				6.60	20.70	49.30	73.00	104.07
10.10	32.60				6.64	22.60	49.60	73.90	104.10
10.28	33.10				6.68	23.40	50.00	74.40	
10.46	33.60				6.72	25.00	50.20	74.70	
10.64	34.10				6.76	26.40	50.40	75.40	
10.82	34.80				6.80	27.90	50.70	76.10	
11.00	35.20				6.82	29.40	50.90	76.70	
11.16	35.80				6.84	31.00	51.10	77.30	
11.32	36.50				6.86	32.20	51.70	77.90	
11.48	37.50				6.88	32.40	52.20	78.50	
11.64	38.30				6.90	32.60	52.70	79.50	
11.80	39.10				6.92	32.90	52.90	80.20	
11.96	40.80				6.94	33.10	53.50	81.10	
12.12	41.50				6.96	33.30	54.00	82.20	
12.28	42.40				6.98	33.40	54.40	83.20	
12.44	43.10				7.00	33.50	54.90	84.40	
12.60	44.10				7.05	33.72	55.40	85.40	
12.82	45.00				7.10	33.94	56.10	86.60	
13.04	45.80				7.15	34.16	56.30	87.60	
13.26	46.60				7.20	34.38	57.00	88.80	
13.48	47.50				7.25	34.60	57.10	89.80	
13.70	48.80				7.30	34.94	57.30	90.80	
13.94	49.50				7.35	35.28	57.50	92.20	
14.18	50.10				7.40	35.62	58.00	92.90	
14.42	50.80				7.45	35.96	58.50	93.40	
14.66	51.20				7.50	36.30	58.90	93.70	
14.90	51.80				DCP REF	36.46	59.60	94.10	
15.12	52.80				AUGER 13.1	36.62	59.90	94.50	
15.34	53.30				TO 20.6 cm	36.78	60.30	95.10	
15.56	54.00				0.60	36.94	60.50	95.60	

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
				COUNTY	FIELD PROFESSIONAL	FIELD CREW			
				Graham	M. Brewer	L. Ard/R. Kral			
Test Location				Date Run	Test Location				Date Run
-L- Sta. 245+17 LT LN 2.4 FT LT FW				12/27/21 to 1/13/22	-L- Sta. 264+94 RT LN 1.5 FT LT FW				12/27/21 to 1/13/22
Type	Test Interval	Datum		Cut/Fill	Type	Test Interval	Datum		Cut/Fill
DCP	Cumulative cm per blow	STBC		4.0 ft. Fill	DCP	Cumulative cm per blow	STBC		6.0 ft. Fill
0.80	21.50	53.10	93.50		0.60	52.20			
1.20	22.10	53.40	94.80		1.00	53.00			
1.80	23.20	53.60	96.00		1.20	53.50			
2.20	24.20	54.00	97.20		1.40	54.50			
2.40	24.90	54.40	98.30		1.90	55.50			
2.70	25.90	54.60	99.90		2.10	56.50			
2.80	27.30	55.00	101.30		2.60	57.20			
3.10	28.30	55.30	102.70		2.90	57.80			
3.50	28.90	55.60	103.90		3.10	58.60			
3.70	29.20	55.90	104.80		3.40	59.00			
3.90	29.70	56.30	105.80		3.50	60.10			
4.00	30.00	56.90	106.80		4.50	61.10			
4.26	30.40	57.20	107.60		5.30	62.00			
4.52	31.00	57.70	108.50		5.90	63.00			
4.78	31.24	58.10	109.50		6.40	63.50			
5.04	31.48	58.70	110.60		6.90	64.10			
5.30	31.72	59.10	111.30		7.90	64.70			
5.58	31.96	59.80	112.40		8.60	64.90			
5.86	32.20	60.60	113.30		9.40	66.90			
6.14	32.48	61.30	114.00		10.10	67.50			
6.42	32.76	62.10	115.00		10.50	68.00			
6.70	33.04	63.00	116.00		11.40	68.90			
7.04	33.32	63.50	116.80		12.10	69.70			
7.38	33.60	64.70	117.40		13.10	70.60			
7.72	34.50	65.30	118.20		14.00	71.60			
8.06	35.00	66.10	118.90		15.10	72.60			
8.40	35.70	66.90	119.60		16.50	73.28			
8.56	36.50	67.40	120.40		17.00	73.96			
8.72	37.00	68.00	121.30		17.90	74.64			
8.88	37.60	68.60	122.50		19.90	75.32			
9.04	38.30	69.00	123.90		20.50	76.00			
9.20	38.90	69.60	125.20		22.50	78.00			
9.40	39.70	70.00	126.40		24.50	79.00			
9.60	40.10	70.70	127.30		26.50	80.90			
9.80	40.60	71.60	127.90		28.60	81.10			
10.00	41.00	72.20			29.10	83.00			
10.20	41.20	72.60			29.90	84.80			
10.40	42.00	73.10			30.10	86.00			
10.60	42.30	73.60			31.10	88.10			
10.80	42.60	74.20			31.60	90.10			
11.00	43.00	74.70			32.50	92.10			
11.20	43.40	75.40			33.30	94.50			
11.45	43.70	75.90			33.60	97.00			
11.70	44.30	76.80			34.10	99.40			
11.95	44.70	77.50			34.60	102.30			
12.20	45.10	78.30			35.50	105.00			
12.45	45.60	78.80			36.40	108.00			
12.70	46.10	79.50			36.90	111.60			
13.08	46.30	80.20			37.80	114.00			
13.46	46.70	80.90			38.50	117.40			
13.84	47.20	81.50			39.50	120.40			
14.22	47.30	82.10			40.50	121.90			
14.60	47.50	82.70			41.50	124.30			
15.00	48.00	83.40			42.90	125.60			
15.60	48.50	84.00			43.00				
16.00	48.80	84.60			43.10				
16.50	49.30	85.40			45.10				
16.90	49.80	86.30			46.10				
17.50	50.40	87.10			47.10				
18.10	50.80	87.70			48.10				
19.00	51.20	88.80			49.20				
19.10	51.50	89.60			49.50				
19.50	51.90	90.20			50.10				
20.20	52.40	91.40			50.70				
20.90	52.80	92.40			51.50				





DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET												
WBS NO.			PROJECT TIP I.D.			ROUTE						
32573.1.FS10			A-0009C			Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah						
COUNTY			FIELD PROFESSIONAL			FIELD CREW						
Graham			M. Brewer			L. Ard/R. Kral						
Test Location				Date Run								
-L- Sta. 284+98 LT LN 1.8 FT LT FW				12/27/21 to 1/13/22								
Type		Test Interval		Datum		Cut/Fill						
DCP		Cumulative cm per blow		STBC		30.0 ft. Cut						
0.90	15.58	59.00	109.90									
1.40	15.92	59.60	110.90									
1.80	16.26	60.10	112.40									
2.00	16.60	61.50	112.80									
2.30	17.24	62.40	115.50									
2.90	17.88	63.60	116.80									
3.10	18.52	64.70	118.40									
3.30	19.16	65.50	119.50									
3.40	19.80	66.90	121.50									
3.50	20.10	67.90	123.50									
3.60	20.40	69.90	125.50									
3.90	20.90	70.90	127.10									
4.50	21.50	72.10										
4.60	22.30	73.20										
4.70	22.90	73.90										
4.80	23.00	74.90										
4.90	23.50	75.50										
5.00	24.00	76.40										
5.08	24.50	77.40										
5.16	25.40	77.60										
5.24	26.30	78.10										
5.32	27.10	78.90										
5.40	28.40	79.20										
5.62	28.70	80.60										
5.84	29.50	80.90										
6.06	29.60	81.10										
6.28	30.90	81.40										
6.50	31.90	81.90										
6.62	32.60	82.10										
6.73	33.50	82.30										
6.85	34.40	82.50										
6.97	34.60	83.00										
7.08	35.90	83.70										
7.20	36.10	84.00										
7.32	36.50	84.10										
7.44	36.90	84.60										
7.56	37.50	85.00										
7.68	38.40	85.60										
7.80	39.20	86.10										
8.12	39.30	86.60										
8.44	39.80	86.90										
8.76	40.40	87.50										
9.08	40.80	88.10										
9.40	41.50	88.60										
9.56	42.50	89.30										
9.72	43.50	90.00										
9.88	44.00	90.70										
10.04	44.60	91.50										
10.20	45.50	92.50										
10.32	46.00	93.50										
10.44	47.50	94.40										
10.56	48.20	95.30										
10.68	49.20	96.20										
10.80	49.90	96.90										
11.16	50.40	98.00										
11.52	51.50	99.00										
11.88	51.90	100.30										
12.24	52.90	101.00										
12.60	53.50	101.70										
13.06	54.00	103.00										
13.52	54.90	104.40										
13.98	55.50	105.20										
14.44	56.30	106.50										
14.90	57.20	107.50										
15.24	58.10	108.90										

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET												
WBS NO.			PROJECT TIP I.D.			ROUTE						
32573.1.FS10			A-0009C			Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah						
COUNTY			FIELD PROFESSIONAL			FIELD CREW						
Graham			M. Brewer			L. Ard/R. Kral						
Test Location				Date Run								
-L- Sta. 324+92 LT LN 2.0 FT LT FW				12/27/21 to 1/13/22								
Type		Test Interval		Datum		Cut/Fill						
DCP		Cumulative cm per blow		STBC		6.0 ft. Fill						
1.00	14.58	47.40	87.00	114.32								
1.50	14.82	48.00	87.30	114.96								
1.90	15.06	48.40	88.00	115.60								
2.30	15.30	49.20	88.50	116.10								
2.50	15.58	49.60	89.00	117.00								
2.70	15.86	50.20	89.60	117.40								
2.90	16.14	50.90	90.20	118.30								
3.10	16.42	51.60	90.70	118.80								
3.30	16.70	52.20	91.40	119.40								
3.54	16.92	52.90	91.80	120.00								
3.78	17.14	54.30	92.10	120.50								
4.02	17.36	54.70	92.60	121.00								
4.26	17.58	56.30	92.90	121.50								
4.50	17.80	57.20	93.20	122.30								
4.60	18.28	58.00	93.60	122.40								
4.70	18.76	59.10	94.00	122.50								
4.80	19.24	60.30	94.30									
4.90	19.72	61.10	94.40									
5.00	20.20	61.80	94.86									
5.20	20.70	62.40	95.32									
5.40	21.20	62.80	95.78									
5.60	21.70	63.40	96.24									
5.80	22.30	63.90	96.70									
6.00	23.20	64.60	97.02									
6.14	23.90	65.10	97.34									
6.28	24.30	65.60	97.66									
6.42	25.00	66.30	97.98									
6.56	25.33	66.80	98.30									
6.70	25.67	67.60	98.64									
6.92	26.00	68.40	98.98									
7.14	27.20	69.00	99.32									
7.36	28.10	69.60	99.66									
7.58	28.60	70.40	100.00									
7.80	29.20	71.00	100.26									
7.94	29.90	71.50	100.52									
8.08	30.60	71.80	100.78									
8.22	31.30	72.80	101.04									
8.36	32.00	73.70	101.30									
8.50	32.60	73.80	101.52									
8.72	33.50	74.30	101.74									
8.94	34.40	75.20	101.96									
9.16	34.70	75.90	102.18									
9.38	35.50	76.60	102.40									
9.60	36.00	77.00	102.82									
9.80	36.40	77.10	103.24									
10.00	36.80	78.00	103.66									
10.20	37.40	78.50	104.08									
10.40	37.90	79.00	104.50									
10.60	38.50	79.50	104.96									
10.78	39.70	79.80	105.42									
10.96	40.10	80.20	105.88									
11.14	40.50	80.50	106.34									
11.32	40.70	80.80	106.80									
11.50	41.50	81.20	107.32									
11.74	41.70	81.60	107.84									
11.98	42.00	82.00	108.36									
12.22	42.30	82.70	108.88									
12.46	42.90	83.30	109.40									
12.70	43.60	84.10	110.00									
12.98	44.10	84.30	110.60									
13.26	44.60	84.50	111.20									
13.54	45.10	85.10	111.80									
13.82	45.70	85.50	112.40									
14.10	46.50	86.00	113.04									
14.34	46.70	86.60	113.68									



DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.	PROJECT TIP I.D.	ROUTE
										32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
										COUNTY	FIELD PROFESSIONAL	FIELD CREW
										Graham	M. Brewer	L. Ard/R. Kral
Test Location					Date Run	Test Location					Date Run	
-L- Sta. 365+20 RT LN 2.5 FT LT FW					12/27/21 to 1/13/22	-L- Sta. 365+20 RT PS 2.0 FT RT FW					12/27/21 to 1/13/22	
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill	
DCP	Cumulative cm per blow			STBC	10.0 ft. Cut	DCP	Cumulative cm per blow			STBC	10.0 ft. Cut	
0.60	29.90	74.00	103.60			0.30	26.60	67.50	88.70			
1.00	30.50	74.10	104.20			0.60	27.10	68.00	89.10			
1.20	31.50	75.00	104.80			1.00	27.50	68.40	89.50			
1.30	32.60	75.30	105.10			1.50	28.10	68.80	89.80			
1.50	33.60	75.60	105.50			1.70	28.70	68.90	90.10			
1.60	34.70	76.10	106.10			2.10	29.60	69.10	91.00			
1.90	35.90	76.50	106.40			2.50	30.60	69.20	91.10			
2.10	36.60	76.90	107.00			2.80	31.60	69.40	91.70			
2.30	37.90	77.30	107.50			3.00	32.10	69.90	92.20			
2.50	38.90	77.50	108.10			3.40	33.10	70.10	92.40			
2.60	39.90	78.00	108.40			3.60	34.30	70.40	92.80			
2.70	40.50	78.50	109.00			3.70	35.60	70.90	93.30			
3.00	41.50	78.90	109.60			4.00	36.60	71.00	94.00			
3.10	42.30	79.20	110.00			4.40	37.70	71.40	94.40			
3.40	44.00	79.50	110.40			4.60	38.30	71.70	94.90			
3.60	44.30	80.00	111.10			5.10	39.50	72.10	95.30			
4.00	45.90	80.30	111.90			5.30	40.40	72.20	95.80			
4.30	46.50	80.90	112.50			5.80	41.00	72.60	96.20			
4.60	47.30	81.00	113.00			6.10	41.30	72.90	96.60			
5.00	48.20	81.50	113.50			6.30	42.00	73.10	97.00			
5.10	49.20	82.10	113.60			6.60	42.80	73.40	97.30			
5.30	50.00	82.30				7.00	43.50	73.60	98.90			
5.60	51.00	82.90				7.50	44.30	73.70	99.20			
5.90	51.90	83.30				8.00	44.50	73.80	99.90			
6.10	52.40	83.60				8.40	45.10	74.10	100.10			
6.20	53.30	84.00				8.90	45.90	74.20	100.70			
6.30	54.20	84.40				9.00	46.50	74.60	101.30			
7.00	55.00	85.90				9.60	47.20	74.80	101.50			
7.60	56.10	86.30				10.00	47.80	75.20	101.90			
8.20	56.80	86.40				10.40	48.60	75.60	102.50			
8.60	57.50	87.10				10.70	49.50	76.00	103.00			
9.00	58.00	87.50				11.00	50.10	76.40	103.30			
9.30	58.50	87.60				11.20	51.10	76.60	103.90			
9.60	59.30	87.90				11.60	52.00	76.90	104.10			
9.70	59.50	88.60				12.10	52.80	77.20	104.60			
10.20	59.60	89.30				12.70	53.40	77.40	105.00			
10.60	60.10	89.80				12.80	54.00	77.70	105.50			
11.00	60.30	90.30				13.70	54.80	78.20	105.60			
11.30	60.60	90.90				14.30	55.80	78.40	106.20			
11.60	60.90	91.10				14.70	56.30	78.90	106.60			
12.00	61.30	91.50				15.10	56.90	79.20	107.60			
12.50	61.60	92.00				15.70	57.40	79.70	107.80			
13.00	61.70	92.60				16.30	57.80	80.00	108.50			
13.10	62.00	93.00				16.60	58.30	80.20	109.20			
13.60	63.00	93.40				17.10	58.90	80.50	109.70			
14.40	63.50	94.30				17.70	59.30	81.00	110.00			
14.70	63.90	94.90				18.40	59.50	81.20	110.60			
15.50	64.00	95.30				18.80	60.20	81.70	111.20			
15.90	64.50	96.00				19.40	61.00	81.90	111.60			
16.40	64.90	96.50				20.00	61.40	82.70	112.60			
17.00	65.10	97.10				20.60	61.70	83.20	113.20			
17.40	66.60	97.50				21.40	62.40	83.40	113.60			
18.10	67.30	98.10				21.90	62.70	83.90	114.30			
18.60	68.00	98.50				22.00	62.90	84.50	114.70			
19.90	68.30	98.80				22.40	63.20	85.10	115.30			
20.40	68.90	99.50				22.60	63.70	85.70	115.80			
21.10	69.30	99.90				23.05	64.20	85.90	116.90			
22.40	70.00	100.20				23.50	64.40	86.00	117.70			
23.60	70.60	100.60				23.95	64.70	86.40				
24.90	70.90	101.40				24.40	65.20	86.60				
25.00	71.50	101.90				24.90	65.70	87.10				
26.40	72.10	102.40				25.20	65.90	87.70				
27.60	72.60	102.60				25.40	66.10	87.80				
28.90	73.00	103.00				25.70	66.60	88.10				
29.00	73.50	103.50				26.00	67.20	88.30				

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.	PROJECT TIP I.D.	ROUTE
										32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
										COUNTY	FIELD PROFESSIONAL	FIELD CREW
										Graham	M. Brewer	L. Ard/R. Kral
Test Location					Date Run	Test Location					Date Run	
-L- Sta. 385+02 LT PS 6.0 FT RT FW					12/27/21 to 1/13/22	-L- Sta. 385+02 LT LN 1.5 FT LT FW					12/27/21 to 1/13/22	
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill	
DCP	Cumulative cm per blow			STBC	40.0 ft. Cut	DCP	Cumulative cm per blow			STBC	40.0 ft. Cut	
1.00	30.20	72.60	136.10			0.80	33.50	75.80				
1.40	30.80	73.40	137.90			1.20	34.00	75.90				
2.00	31.60	74.00	138.50			1.50	35.00	76.00				
2.40	31.70	74.50				1.90	36.00	76.10				
2.80	32.50	75.00				2.10	36.40	76.22				
3.20	32.80	75.60				2.50	36.90	76.34				
3.80	33.20	76.30				2.90	37.40	76.46				
4.10	33.40	76.70				3.00	38.00	76.58				
4.50	33.50	77.40				3.10	38.10	76.70				
5.20	34.00	77.90				3.20	39.10	76.82				
5.50	34.68	78.40				3.30	39.60	76.94				
6.50	35.36	79.00				3.50	40.00	77.06				
6.80	36.04	79.60				4.50	40.60	77.18				
7.20	36.72	80.10				5.90	40.70	77.30				
7.50	37.40	81.10				6.50	41.40	77.46				
7.80	38.60	81.70				6.80	42.30	77.62				
8.10	39.00	82.20				7.50	42.60	77.78				
8.40	39.70	82.70				8.50	43.20	77.93				
8.80	40.50	83.30				9.00	44.10	78.09				
9.20	41.20	83.90				10.10	44.60	78.25				
9.50	42.00	84.50				10.90	45.30	78.41				
10.00	42.70	85.20				11.50	45.90	78.57				
10.40	43.30	86.10				11.60	46.50	78.73				
11.40	43.80	87.90				12.10	46.90	78.88				
12.10	44.40	88.50				12.20	47.90	79.04				
12.50	44.80	89.20				12.60	48.50	79.20				
13.00	45.33	90.10				12.90	49.20	79.43				
13.60	45.87	91.00				13.10	50.00	79.66				
14.10	46.40	91.90				13.60	51.00	79.89				
14.70	46.87	92.20				13.70	52.00	80.12				
15.30	47.33	93.50				14.40	52.90	80.35				
15.80	47.80	94.70				14.90	53.60	80.58				
16.50	48.70	95.50				15.30	54.70	80.81				
17.00	49.40	96.60				15.60	55.60	81.04				
17.30	50.60	97.30				16.10	56.20	81.27				
17.70	51.30	98.30				17.50	57.00	81.50				
18.05	52.00	99.30				18.40	57.50	81.66				
18.40	52.80	100.40				19.20	58.10	81.83				
19.15	53.50	101.50				20.00	59.30	81.99				
19.90	54.30	102.60				20.90	60.30	82.15				
21.00	55.30	104.00				21.90	61.10	82.32				
21.30	56.50	105.30				22.40	62.00	82.48				
21.70	57.80	107.50				23.50	63.00	82.65				
22.20	58.80	108.10				24.00	64.40	82.81				
22.30	59.60	109.30				24.30	65.50	82.97				
22.70	60.50	110.20				24.90	66.60	83.14				
23.00	61.40	111.10				25.30	67.50	83.30				
23.50	62.20	111.60				25.60	68.10					
23.70	62.60	112.60				26.10	69.30					
24.40	63.30	113.40				26.50	70.20					
24.60	64.10	115.40				26.90	71.90					
24.90	64.60	115.60				27.10	72.30					
25.30	65.30	116.90				27.60	73.00					
25.70	66.00	118.10				28.00	73.60					
26.00	66.80	119.60				28.50	74.00					





DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.	PROJECT TIP I.D.	ROUTE
										32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
										COUNTY	FIELD PROFESSIONAL	FIELD CREW
										Graham	M. Brewer	L. Ard/R. Kral
Test Location					Date Run	Test Location					Date Run	
-L Sta. 406+18 RT LN 1.4 FT LT FW					12/27/21 to 1/13/22	-L Sta. 406+18 RT PS 1.0 FT RT FW					12/27/21 to 1/13/22	
Type	Test Interval		Datum		Cut/Fill	Type	Test Interval		Datum		Cut/Fill	
DCP	Cumulative cm per blow		STBC		20.0 ft. Fill	DCP	Cumulative cm per blow		STBC		20.0 ft. Fill	
0.50	18.10	55.48				0.70	35.40	65.90	105.00			
0.60	18.90	55.55				1.70	35.80	66.50	106.30			
0.90	19.60	55.62				2.20	36.10	67.10	107.00			
1.20	20.40	55.69				3.10	36.40	67.90	108.10			
1.70	21.00	55.76				3.80	36.70	68.30	108.90			
2.00	21.90	55.83				4.80	37.20	69.00	109.40			
2.50	22.30	55.90				5.80	37.60	69.60	110.10			
2.80	23.40	55.94				6.70	38.10	70.50	110.70			
3.10	24.60	55.98				7.50	38.60	70.90	111.50			
3.40	25.60	56.02				7.70	39.00	71.80	112.20			
3.60	26.30	56.06				8.50	39.20	72.20	113.00			
3.90	27.20	56.10				9.30	40.10	73.60	114.00			
4.10	28.00	56.14				9.70	40.70	73.90	114.80			
4.20	28.60	56.18				10.10	41.20	74.40	115.50			
4.42	29.30	56.22				10.60	41.90	74.80	116.10			
4.64	29.90	56.26				10.90	42.50	75.40	116.90			
4.86	30.10	56.30				11.30	43.00	75.80	117.80			
5.08	30.90	56.33				11.90	43.50	76.40	118.50			
5.30	31.30	56.36				12.80	43.90	76.90	119.00			
5.60	32.00	56.39				13.20	44.00	77.50	119.60			
5.90	32.60	56.42				13.30	44.50	78.20	120.20			
6.10	33.50	56.45				13.50	44.70	78.90	120.60			
6.20	34.10	56.48				13.90	45.10	79.50	120.90			
6.50	35.00	56.51				14.40	45.50	80.30	121.40			
6.70	35.60	56.54				14.70	45.80	80.70	122.00			
7.00	36.30	56.57				15.50	46.00	81.60	122.50			
7.20	37.00	56.60				16.00	46.30	83.00	122.90			
7.50	37.60	56.63				16.30	46.60	83.30	123.50			
7.70	38.20	56.66				16.60	46.80	83.90	124.00			
8.20	39.40	56.69				17.10	47.10	84.70	124.80			
8.30	39.90	56.72				17.60	47.50	85.20	125.40			
8.50	40.40	56.75				18.60	48.00	85.70	126.10			
8.80	41.00	56.78				18.70	48.50	86.00	126.80			
9.20	41.80	56.81				20.20	49.10	86.50	127.10			
9.40	42.30	56.84				21.70	49.50	86.70	127.70			
9.60	43.10	56.87				22.60	50.00	87.30	128.30			
9.80	43.40	56.90				23.30	50.50	88.00	128.90			
9.90	43.70	56.93				24.70	50.70	88.70	129.80			
10.10	44.40	56.96				25.40	51.00	89.50	130.30			
10.40	45.00	56.99				26.00	51.70	90.30	131.00			
10.50	45.50	57.02				26.30	52.10	91.00	131.30			
10.70	46.10	57.05				26.70	52.40	91.20	132.10			
10.90	46.70	57.08				27.00	52.50	91.70	132.60			
11.10	47.30	57.11				27.40	52.70	92.60	133.20			
11.30	47.90	57.14				27.80	53.10	92.70				
11.50	48.60	57.17				28.00	53.50	92.90				
11.80	49.20	57.20				28.10	54.10	93.40				
12.10	49.90	DCP REF				28.50	55.00	94.10				
12.20	50.30	50/0.8*				28.70	55.60	94.70				
12.60	50.60					28.90	56.00	94.90				
12.90	50.90					29.40	56.40	95.10				
13.30	51.40					29.60	57.00	95.50				
13.50	51.70					30.00	57.20	96.10				
13.60	52.00					30.40	58.00	96.70				
14.00	52.30					31.00	58.60	97.30				
14.20	52.60					31.60	59.60	97.90				
14.50	53.00					32.20	60.00	98.50				
14.70	53.20					32.50	60.10	99.20				
15.10	53.60					32.80	60.80	100.10				
15.20	54.10					33.40	61.40	100.60				
15.50	54.80					33.60	62.00	101.03				
16.10	55.20					33.80	62.90	102.30				
16.50	55.27					34.40	63.40	103.10				
17.10	55.34					34.80	64.10	103.50				
17.60	55.41					35.20	65.40	104.10				

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.	PROJECT TIP I.D.	ROUTE
										32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah
										COUNTY	FIELD PROFESSIONAL	FIELD CREW
										Graham	M. Brewer	L. Ard/R. Kral
Test Location					Date Run	Test Location					Date Run	
-L Sta. 425+03 LT LN 1.5 FT LT FW					12/27/21 to 1/13/22	-L Sta. 449+82 RT LN 1.5 FT LT FW					12/27/21 to 1/13/22	
Type	Test Interval		Datum		Cut/Fill	Type	Test Interval		Datum		Cut/Fill	
DCP	Cumulative cm per blow		STBC		60.0 ft. Cut	DCP	Cumulative cm per blow		STBC		30.0 ft. Cut	
0.60	49.30	71.34	91.72	111.30		1.70	33.10	56.00	81.30	106.40		
1.10	50.20	71.52	92.00	111.50		2.80	33.70	56.20	82.30	106.50		
1.60	51.10	71.70	92.60	111.70		3.10	34.10	56.70	83.00	106.60		
1.80	51.90	71.88	93.40	111.90		3.60	34.70	56.90	83.60	106.74		
2.20	53.20	72.06	93.90	112.06		4.00	35.20	57.40	84.30	106.88		
2.70	53.70	72.24	94.20	112.22		4.20	35.60	57.70	85.10	107.02		
2.90	54.50	72.42	94.70	112.38		4.50	36.20	57.90	85.80	107.16		
3.10	55.20	72.60	95.00	112.54		4.70	36.70	58.10	86.40	107.30		
3.40	56.20	72.86	95.40	112.70		4.90	36.80	58.40	86.90	107.44		
3.70	56.40	73.12	96.20	112.90		5.10	37.60	58.60	87.70	107.58		
3.80	56.90	73.38	96.70	113.10		5.30	37.90	58.90	88.30	107.72		
3.90	57.20	73.64	97.30	113.30		5.50	38.00	59.20	89.00	107.86		
4.50	57.90	73.90	98.10	113.50		5.60	38.50	59.90	89.70	108.00		
5.20	58.00	74.04	98.60	113.70		5.80	39.10	60.40	90.30	108.22		
5.90	58.10	74.18	99.00	113.96		6.00	39.60	60.60	91.00	108.44		
6.50	58.40	74.32	99.50	114.22		6.20	40.00	60.80	91.70	108.66		
7.60	58.80	74.46	99.90	114.48		6.40	40.50	61.30	92.10	108.88		
8.30	59.40	74.60	100.30	114.74		6.50	40.70	61.60	92.70	109.10		
9.20	59.50	74.82	100.80	115.00		6.80	41.30	61.80	93.10	109.24		
10.10	59.80	75.04	100.96			7.10	41.60	62.10	93.70	109.38		
10.90	60.20	75.26	101.12			7.30	42.00	62.60	94.10	109.52		
12.00	60.30	75.48	101.28			8.10	42.40	62.80	94.30	109.66		
12.70	60.80	75.70	101.44			8.50	42.70	63.00	94.70	109.80		
14.30	60.90	75.90	101.60			9.40	42.80	63.50	95.40	109.88		
15.00	61.30	76.10	101.80			9.80	43.00	63.70	95.70	109.96		
15.60	61.40	76.30	102.00			9.90	43.40	64.10	96.00	110.04		
16.20	61.80	76.50	102.20			10.20	43.70	64.40	96.30	110.12		
17.40	62.00	76.70	102.40			10.60	44.10	64.70	96.50	110.20		
18.40	62.20	76.94	102.60			10.70	44.20	65.20	97.00	110.28		
19.40	62.40	77.18	102.82			10.80	44.50	65.50	97.40	110.36		
20.60	62.80	77.42	103.04			11.00	44.80	65.80	97.60	110.44		
21.90	63.00	77.66	103.26			11.30	45.00	66.10	98.10	110.52		
23.10	63.20	77.90	103.48			11.60	45.30	66.60	98.30	110.60		
24.40	63.30	78.22	103.70			11.80	45.90	67.00	98.70	110.68		
26.40	63.60	78.54	103.90			12.10	46.40	67.30	99.10	110.76		
27.70	64.00	78.86	104.10			12.30	46.50	67.60	99.60	110.84		
29.30	64.40	79.18	104.50			12.40	46.80	67.90	100.00	110.92		
30.20	64.60	79.50	104.80			12.70	47.30	68.00	100.30	111.00		
31.10	64.88	79.82	105.30			13.00	47.60	68.20	100.50	111.03		
31.60	65.16	80.14	105.50			13.60	48.00	68.50	100.70	111.06		
31.80	65.44	80.46	105.80			13.80	48.60	68.90	101.10	111.09		
32.70	65.72	80.78	106.00			14.10	49.00	69.10	101.30	111.12		
33.90	66.00	81.10	106.40			14.60	49.20	69.50	101.50	111.15		
34.20	66.26	81.44	106.50			15.10	49.70	69.80	101.70	111.18		
34.60	66.52	81.78	106.90			15.70	50.00	70.20	102.00	111.21		
35.40	66.78	82.12	107.10			16.10	50.40	70.50	102.40	111.24		
36.10	67.04											





DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.		PROJECT TIP I.D.		ROUTE			
										32573.1.FS10		A-0009C		Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
										COUNTY		FIELD PROFESSIONAL		FIELD CREW			
										Graham		M. Brewer		L. Ard/R. Kral			
Test Location						Date Run		Test Location						Date Run			
-L- Sta. 473+22 RTL (RT) 8.0 FT LT FW						12/27/21 to 1/13/22		-L- Sta. 473+22 LTL (RT) 7.0 FT RT FY						12/27/21 to 1/13/22			
Type	Test Interval			Datum			Cut/Fill		Type	Test Interval			Datum			Cut/Fill	
DCP	Cumulative cm per blow			STBC			20.0 ft. Cut		DCP	Cumulative cm per blow			ABC/STBC			20.0 ft. Cut	
1.70	10.60	36.00	73.34	102.50					0.90	44.90	88.90						
2.00	10.70	37.00	73.72	103.20					1.90	45.00	89.10						
2.50	10.80	38.10	74.10						2.80	45.08	90.90						
2.90	10.90	39.30	74.44						3.50	45.17	92.50						
3.00	11.00	43.60	74.78						4.30	45.25	94.00						
3.20	11.10	46.80	75.12						4.50	45.33	95.50						
3.60	11.20	49.90	75.46						4.90	45.42	96.70						
3.90	DCP REF	51.20	75.80						5.10	45.50	97.90						
4.10	AUGER 8.0	52.00	76.20						5.20	45.64	98.90						
4.70	to 19.2 CM	52.60	76.60						5.50	45.78	99.50						
5.00	0.10	53.30	77.00						6.70	45.92	100.50						
5.10	0.70	54.20	77.40						7.90	46.06	100.90						
5.30	1.10	55.00	77.80						8.60	46.20	101.50						
5.50	1.20	55.80	78.16						9.90	46.50	101.90						
5.60	1.90	56.40	78.52						10.40	47.50	102.50						
5.80	2.30	57.00	78.88						11.50	48.70	103.50						
6.00	2.40	57.80	79.24						12.10	49.50	104.10						
6.14	2.70	58.30	79.60						13.50	50.50	104.90						
6.28	2.90	59.00	80.02						14.50	51.10	105.50						
6.42	3.30	59.50	80.44						15.40	52.00	106.40						
6.56	3.50	59.80	80.86						16.40	53.00	107.40						
6.70	3.70	60.40	81.28						17.50	53.20	108.10						
6.77	4.10	60.60	81.70						18.60	53.40	109.40						
6.84	4.40	60.90	82.10						19.90	53.60	110.90						
6.91	4.60	61.50	82.50						22.00	53.80	111.90						
6.98	4.80	61.70	82.90						22.50	54.00	112.90						
7.05	5.10	61.80	83.30						22.90	54.24	114.50						
7.12	5.30	62.10	83.70						23.40	54.48	115.90						
7.19	5.60	62.40	84.14						23.90	54.72	117.50						
7.26	5.80	62.60	84.58						24.40	54.96	119.10						
7.33	6.00	62.90	85.02						25.50	55.20	120.90						
7.40	6.30	63.20	85.46						25.90	55.94	122.40						
7.47	6.60	63.60	85.90						26.90	56.68	123.90						
7.54	7.00	64.00	86.40						27.50	57.42	124.90						
7.61	7.50	64.20	86.90						28.40	58.16	125.90						
7.68	7.80	64.30	87.40						28.90	58.90	127.00						
7.75	8.20	64.60	87.90						29.40	59.04							
7.82	8.70	65.00	88.40						30.90	59.18							
7.89	9.10	65.40	88.88						31.50	59.32							
7.96	9.50	65.80	89.36						32.90	59.46							
8.03	10.30	66.20	89.84						34.40	59.60							
8.10	10.90	66.60	90.32						35.50	60.13							
8.19	11.50	67.00	90.80						36.90	60.67							
8.28	12.20	67.26	91.16						37.40	61.20							
8.37	12.70	67.52	91.52						38.50	62.30							
8.46	13.20	67.78	91.88						38.90	63.30							
8.55	13.70	68.04	92.24						39.50	64.50							
8.64	14.40	68.30	92.60						40.10	65.60							
8.73	14.80	68.54	93.04						41.10	66.70							
8.82	14.90	68.78	93.48						41.60	67.90							
8.91	15.60	69.02	93.92						42.00	69.10							
9.00	16.50	69.26	94.36						42.30	70.40							
9.12	17.40	69.50	94.80						42.44	71.90							
9.24	18.00	69.70	95.50						42.58	73.40							
9.36	18.70	69.90	96.40						42.72	74.90							
9.48	19.70	70.10	96.80						42.86	75.90							
9.60	21.20	70.30	97.30						43.00	76.10							
9.72	23.90	70.50	97.60						43.30	77.30							
9.84	25.60	70.84	98.00						43.60	78.30							
9.96	27.60	71.18	98.80						43.90	80.00							
10.08	28.30	71.52	101.00						44.20	81.40							
10.20	29.60	71.86	101.50						44.50	82.60							
10.30	31.00	72.20	101.90						44.60	84.00							
10.40	32.70	72.58	102.10						44.70	85.90							
10.50	34.10	72.96	102.30						44.80	87.90							

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET										WBS NO.		PROJECT TIP I.D.		ROUTE			
										32573.1.FS10		A-0009C		Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
										COUNTY		FIELD PROFESSIONAL		FIELD CREW			
										Graham		M. Brewer		L. Ard/R. Kral			
Test Location						Date Run		Test Location						Date Run			
-Y2- Sta. 21+87 RT LN 4.6 FT RT FY						12/27/21 to 1/13/22		-Y2- Sta. 21+87 RTL (RT) 5.8 FT LT FW						12/27/21 to 1/13/22			
Type	Test Interval			Datum			Cut/Fill		Type	Test Interval			Datum			Cut/Fill	
DCP	Cumulative cm per blow			STBC			4.0 ft. Fill		DCP	Cumulative cm per blow			STBC			3.0 ft. Fill	
0.90	13.20	44.10	96.78	127.20					1.20	59.50							
1.20	13.60	45.00	96.90	127.60					2.00	61.50							
1.60	13.90	46.10	97.02	128.50					2.40	64.40							
2.00	14.10	47.10	97.14	129.50					3.90	66.50							
2.40	14.50	48.10	97.26	130.00					4.50	68.50							
2.90	14.60	49.20	97.38						5.40	70.50							
3.10	15.10	50.20	97.50						6.00	72.30							
3.40	15.40	51.90	97.65						6.50	74.60							
3.50	15.80	52.90	97.80						7.30	75.60							
3.90	16.00	54.10	97.95						8.00	76.70							
4.00	16.10	55.30	98.10						8.90	77.40							
4.10	17.00	56.10	98.25						10.10	77.60							
4.20	17.50	57.00	98.40						10.50	78.50							
4.50	17.80	58.10	98.55						11.90	79.50							
4.70	18.10	59.30	98.70						12.60	80.90							
4.90	18.50	60.90	98.85						13.40	82.60							
5.10	18.90	62.50	99.00						14.10	84.40							
5.30	19.10	64.10	99.25						15.20	85.90							
5.50	19.50	65.50	99.50						16.50	87.60							
5.60	20.00	66.50	99.75						17.40	89.10							
5.70	20.10	67.50	100.00						18.30	92.60							
5.80	20.90	68.50	100.10						19.00	92.70							
5.90	21.00	69.00	100.60						20.00	93.60							
6.00	21.50	70.00	101.00						21.00	94.30							
6.02	21.90	71.00	101.50						22.30	95.90							
6.04	22.30	71.50	101.90						23.20	96.70							
6.06	22.50	72.20	102.10						24.40	97.50							
6.08	22.90	73.30	102.50						26.00	98.50							
6.10	23.10	74.00	103.50						26.50	99.90							
6.22	23.50	74.80	104.00						28.20	100.00							
6.34	23.90	75.00	104.60						29.60	101.20							
6.46	24.40	76.60	104.90						31.00	102.00							
6.58	24.60	78.00	105.60						32.50	103.00							
6.70	25.00	79.00	106.10						34.20	104.40							





DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
				COUNTY	FIELD PROFESSIONAL	FIELD CREW			
				Graham	M. Brewer	L. Ard/R. Kral			
Test Location				Date Run	Test Location				Date Run
-Y2- Sta. 21+87 RT PS 5.0 FT RT FW				12/27/21 to 1/13/22	-Y2- Sta. 40+61 RT LN 1.0 FT LT FW				12/27/21 to 1/13/22
Type	Test Interval	Datum		Cut/Fill	Type	Test Interval	Datum		Cut/Fill
DCP	Cumulative cm per blow	STBC		20.0 ft. Cut	DCP	Cumulative cm per blow	STBC		15.0 ft. Cut
1.00	40.90	81.10	127.40		0.60	21.40	69.10		
1.50	41.50	81.60	127.90		1.00	22.10	69.90		
2.50	43.00	82.00			1.60	23.00	70.40		
3.00	44.50	83.00			1.90	24.00	71.10		
3.10	46.50	83.50			2.20	25.20	71.70		
3.90	48.00	84.00			2.40	26.40	72.50		
4.10	49.00	84.50			2.90	27.60	73.30		
4.50	50.00	85.10			3.20	28.60	74.30		
5.00	50.60	85.60			3.50	29.60	74.60		
5.30	51.40	86.50			3.80	30.60	76.20		
5.60	53.50	87.70			4.20	31.40	76.80		
6.10	55.00	87.80			4.50	32.20	77.80		
7.10	56.90	88.50			4.80	33.20	78.80		
7.90	57.90	89.40			4.90	34.10	79.40		
8.00	58.90	90.40			5.00	35.00	79.90		
8.50	60.10	91.90			5.30	35.70	80.20		
9.50	60.20	92.90			5.50	36.40	80.40		
10.40	61.20	93.50			5.90	37.40	80.70		
10.90	62.40	94.00			6.30	38.70	81.10		
11.90	63.40	94.50			6.40	40.10	81.40		
12.80	64.40	95.00			6.60	41.10	81.50		
13.50	65.40	96.00			6.90	42.10	81.80		
14.50	66.10	97.30			7.30	43.60	82.00		
15.50	67.30	98.00			7.40	44.90	82.30		
16.00	67.90	99.00			7.60	46.40	82.60		
16.50	68.90	100.00			7.90	47.80	83.00		
16.90	69.60	101.00			8.20	49.00	83.20		
17.40	70.10	101.90			8.70	50.30	83.46		
18.00	70.50	102.90			9.20	51.30	83.72		
18.50	70.90	103.50			9.30	51.90	83.98		
18.80	71.60	104.50			9.80	52.40	84.24		
19.90	71.90	105.00			10.00	52.90	84.50		
20.50	72.60	105.90			10.10	53.60	85.10		
21.30	73.00	106.50			10.20	54.00	85.60		
22.00	73.10	107.50			10.40	54.70	86.10		
22.50	73.30	108.20			10.60	55.40	86.90		
23.50	73.50	109.00			10.80	56.30	87.20		
24.50	74.00	109.80			11.00	57.30	87.80		
24.60	74.20	110.50			11.20	58.50	88.90		
25.30	74.40	111.60			11.42	59.60	89.00		
25.90	74.60	112.50			11.64	60.80	90.10		
26.40	74.80	113.00			11.86	62.00	90.50		
26.60	75.00	113.90			12.08	63.30	91.70		
27.40	75.20	114.50			12.30	63.50	92.50		
27.90	75.40	115.00			12.50	63.80	93.20		
28.00	75.60	115.60			12.60	64.20	94.10		
28.90	75.80	116.50			12.90	64.40	95.30		
29.10	76.00	116.90			13.00	64.50	97.00		
29.90	76.25	117.50			13.30	64.90	98.10		
30.10	76.50	118.50			13.80	65.14	99.60		
30.90	76.75	118.60			14.00	65.38	99.80		
31.40	77.00	119.10			14.30	65.62	100.00		
31.90	77.25	119.50			14.50	65.86	100.20		
32.50	77.50	120.30			14.70	66.10	100.40		
33.00	77.75	120.90			15.60	66.32	100.60		
34.00	78.00	121.40			16.00	66.54			
35.00	78.25	122.00			16.20	66.76			
35.50	78.50	122.50			16.70	66.98			
35.60	78.82	123.10			17.40	67.20			
36.00	79.13	123.60			17.60	67.42			
37.00	79.45	124.30			18.00	67.64			
37.40	79.77	124.80			18.60	67.86			
37.50	80.08	125.10			19.30	68.08			
38.90	80.40	125.90			20.00	68.30			
39.60	80.60	126.10			20.70	68.90			

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
				COUNTY	FIELD PROFESSIONAL	FIELD CREW			
				Graham	M. Brewer	L. Ard/R. Kral			
Test Location				Date Run	Test Location				Date Run
-Y2- Sta. 60+51 LT LN 1.4 FT LT FW				12/27/21 to 1/13/22	-Y2- Sta. 79+85 RT LN 0.6 FT LT FW				12/27/21 to 1/13/22
Type	Test Interval	Datum		Cut/Fill	Type	Test Interval	Datum		Cut/Fill
DCP	Cumulative cm per blow	STBC		30.0 ft. Fill	DCP	Cumulative cm per blow	STBC		15.0 ft. Fill
1.20	79.30	96.90			1.70	33.00			
2.10	79.90	97.30			1.80	34.20			
2.80	80.50	97.70			2.50	35.20			
3.80	80.90	98.20			2.90	36.90			
4.40	81.20	98.50			3.30	38.60			
5.30	81.80	99.00			4.00	41.00			
5.80	82.30	99.40			4.70	42.20			
6.50	82.40	99.50			4.90	43.80			
7.10	82.90	99.70			5.20	44.80			
7.80	83.30	100.20			5.40	45.50			
8.20	83.60	100.50			5.80	46.30			
8.90	84.00	101.00			6.10	47.50			
9.20	84.50	101.10			6.40	48.70			
9.30	84.90	101.28			6.70	50.40			
9.90	85.20	101.46			7.10	52.70			
10.00	85.60	101.64			7.50	55.00			
10.40	85.90	101.82			7.70	57.60			
10.80	86.30	102.00			8.20	60.70			
11.20	86.50	102.50			8.60	62.70			
11.90	87.20	102.60			9.00	64.70			
12.60	87.80	103.20			9.40	67.00			
13.00	88.10	103.60			9.80	69.60			
13.60	88.40	103.80			10.10	71.80			
14.40	88.70	104.40			10.50	73.80			
15.00	89.20	105.30			10.90	75.60			
15.60	89.40	106.10			11.40	78.00			
16.10	89.80	106.40			11.70	80.40			
17.20	90.00	106.80			12.00	82.70			
18.10	90.20	107.20			12.30	85.10			
18.60	90.70	108.00			12.60	86.60			
19.90	90.80	108.50			13.20	87.70			
22.90	90.94	109.60			13.50	89.10			
26.40	91.08	110.40			14.10	90.00			
30.00	91.22	110.90			14.40	93.80			
32.00	91.36				14.80	96.80			
34.40	91.50				15.10	99.10			
37.10	91.64				15.60	102.30			
40.60	91.78				16.10	104.60			
44.60	91.92				16.60	106.20			
47.80	92.06				17.10	107.90			
50.80	92.20				17.40	109.50			
52.70	92.36				17.90	110.60			
54.20	92.52				18.40	112.00			
56.60	92.68				19.00	113.30			
58.60	92.84				19.70	114.90			
60.90	93.00				20.10	116.60			
62.70	93.28				20.30	118.80			
64.60	93.56				20.60	120.60			
66.20	93.84				21.00	122.60			
67.50	94.12				21.80	123.90			
68.40	94.40				22.00	124.60			
69.50	94.78				22.60	125.70			
70.30	95.16				23.00	126.10			
71.00	95.54				23.30	127.00			
72.00	95.92				23.60	127.60			
72.70	96.30				24.10	128.20			
73.10	96.36				24.50	128.80			
74.20	96.42				25.10	129.40			
75.00	96.48				25.50	130.40			
75.80	96.54				26.20	131.50			
76.50	96.60				27.20				
77.40	96.66				28.60				
78.20	96.72				29.70				
78.70	96.78				30.90				
79.00	96.84				32.20				



DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
Test Location				County	Field Professional	Field Crew			
-Y2- Sta. 100+31 LT LN 1.4 FT LT FW				Graham	M. Brewer	L. Ard/R. Kral			
Type	Test Interval	Datum	Cut/Fill	Date Run	Type	Test Interval	Datum	Cut/Fill	Date Run
DCP	Cumulative cm per blow	STBC	5.0 ft. Fill	12/27/21 to 1/13/22	DCP	Cumulative cm per blow	STBC	15.0 ft. Fill	12/27/21 to 1/13/22
2.10	20.90	124.80			1.20	24.00	94.00		
2.50	21.30				1.80	24.80	95.60		
3.60	21.50				2.60	25.70	96.60		
4.20	22.20				3.30	26.30	98.90		
4.50	22.70				3.70	26.70	100.10		
4.80	23.50				4.10	27.40	101.50		
5.10	24.20				4.60	28.30	103.00		
5.50	25.20				4.80	29.80	104.60		
5.80	26.40				5.04	30.80	106.10		
6.00	27.60				5.28	32.10	107.20		
6.40	28.40				5.52	33.00	108.50		
6.60	29.80				5.76	34.00	109.40		
7.00	31.00				6.00	35.20	110.50		
7.30	31.90				6.30	36.40	111.30		
7.60	32.20				6.60	37.40	112.00		
8.10	33.30				6.90	37.80	113.40		
8.30	34.20				7.20	38.40	114.80		
8.40	34.90				7.50	39.00	116.10		
8.60	35.90				7.68	39.90	117.60		
8.80	36.40				7.86	40.80	119.10		
9.00	37.20				8.04	42.00	120.40		
9.20	38.40				8.22	43.00			
9.40	40.10				8.40	44.20			
9.60	42.00				8.52	45.70			
9.80	43.30				8.64	46.60			
10.00	44.60				8.76	48.90			
10.20	45.40				8.88	50.80			
10.42	46.20				9.00	52.90			
10.64	47.20				9.20	54.90			
10.86	48.20				9.40	56.60			
11.08	49.70				9.60	58.00			
11.30	50.80				9.80	59.20			
11.54	51.50				10.00	60.30			
11.78	52.70				10.20	61.50			
12.02	53.70				10.40	62.10			
12.26	54.90				10.60	62.70			
12.50	56.60				10.80	62.90			
12.68	58.10				11.00	63.30			
12.86	59.40				11.20	63.50			
13.04	61.30				11.40	63.90			
13.22	62.30				11.60	64.70			
13.40	63.70				11.80	64.90			
13.66	65.40				12.00	65.50			
13.92	67.30				12.26	66.20			
14.18	69.20				12.52	67.30			
14.44	71.30				12.78	68.70			
14.70	73.30				13.04	69.40			
15.04	75.30				13.30	69.80			
15.38	76.50				13.74	70.50			
15.72	78.20				14.18	71.70			
16.06	79.90				14.62	72.80			
16.40	81.70				15.06	73.70			
16.64	83.90				15.50	74.30			
16.88	85.70				15.90	74.80			
17.12	87.80				16.40	75.50			
17.36	89.40				16.80	76.40			
17.60	91.40				17.20	77.80			
17.94	94.60				17.90	79.50			
18.28	98.00				18.90	81.40			
18.62	101.20				19.70	83.00			
18.96	105.10				20.60	84.80			
19.30	109.60				21.90	86.80			
19.70	116.90				22.60	88.50			
20.10	117.40				23.00	89.40			
20.50	121.00				23.50	91.90			

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
Test Location				County	Field Professional	Field Crew			
-Y2- Sta. 140+29 LT LN 1.3 FT LT FW				Graham	M. Brewer	L. Ard/R. Kral			
Type	Test Interval	Datum	Cut/Fill	Date Run	Type	Test Interval	Datum	Cut/Fill	Date Run
DCP	Cumulative cm per blow	STBC	30.0 ft. Fill	12/27/21 to 1/13/22	DCP	Cumulative cm per blow	STBC	At Grade	12/27/21 to 1/13/22
1.00	16.30	41.90	74.70	104.80	1.10	10.30	4.34	87.10	
1.40	16.70	42.40	75.60	105.00	1.40	10.35	4.40	88.00	
1.80	17.20	42.80	76.00	105.40	1.80	10.40	<b>AUGER TO</b>	89.20	
1.90	17.60	43.10	76.50	105.70	2.90	10.51	<b>20.7cm</b>	89.70	
2.00	18.00	43.90	77.00	106.40	3.10	10.62	1.10	92.20	
2.10	18.40	44.10	77.60	106.90	3.40	10.73	1.80	93.80	
2.20	18.80	44.50	78.20	107.50	3.50	10.84	2.20	95.90	
2.30	19.20	45.10	79.00	108.30	3.90	10.95	2.90	97.40	
2.40	20.00	45.40	79.20	108.80	4.20	11.06	3.70	98.20	
2.50	20.40	45.70	79.60	109.70	4.40	11.17	4.30		
2.60	20.70	46.10	79.70	110.50	4.60	11.28	4.90		
2.92	21.30	46.30	80.00	111.20	4.80	11.39	5.70		
3.24	21.60	46.60	80.20	112.20	5.10	11.50	6.40		
3.56	21.90	46.90	80.50	113.20	5.30	<b>DCP REF</b>	7.10		
3.88	22.20	47.10	81.00	114.00	5.50	<b>AUGER 5.1</b>	7.70		
4.20	22.40	47.50	81.40	114.70	5.70	<b>TO 16.6 CM</b>	8.50		
4.46	22.70	47.90	81.50	115.10	5.90	0.90	9.20		
4.72	22.80	48.40	81.80	115.60	6.10	1.00	10.10		
4.98	23.20	48.90	82.10	116.00	6.22	1.10	10.70		
5.24	23.60	49.50	82.30	116.20	6.34	1.20	11.60		
5.50	23.90	50.00	82.50	116.50	6.46	1.30	12.60		
5.68	24.30	50.40	82.80	116.90	6.58	1.40	12.90		
5.86	24.50	50.90	83.00	117.30	6.70	1.50	13.10		
6.04	24.90	51.30	83.50	117.90	6.82	1.60	13.60		
6.22	25.10	51.70	84.00	118.30	6.94	1.70	13.70		
6.40	25.60	52.00	84.80	118.70	7.06	1.80	14.30		
6.64	26.00	52.50	85.30	119.00	7.18	1.90	15.50		
6.88	26.50	53.00	85.80	119.40	7.30	1.99	17.40		
7.12	26.70	53.40	86.00	119.70	7.36	2.08	18.10		
7.36	27.30	53.60	86.10	120.20	7.42	2.17	19.00		
7.60	27.50	54.10	86.60	120.70	7.48	2.26	21.00		
7.82	28.20	54.60	87.00	121.20	7.54	2.35	22.30		
8.04	28.80	54.80	87.60	121.90	7.60	2.44	23.60		
8.26	29.80	55.40	88.20	122.60	7.66	2.53	24.70		
8.48	30.80	55.56	88.90	123.50	7.72	2.62	25.70		
8.70	31.70	55.72	89.70	124.20	7.78	2.71	26.90		
8.92	32.50	55.88	90.60	125.20	7.84	2.80	27.50		
9.14	33.20	56.04	91.10		7.90	2.86	28.80		
9.36	33.80	56.20	91.90		8.00	2.92	30.10		
9.58	34.20	56.56	92.40		8.10	2.98	31.30		
9.80	34.60	56.92	92.90		8.20	3.04	32.50		
10.02	35.30	57.28	93.30		8.30	3.10	34.50		
10.24	35.60	57.64	93.90		8.40	3.16	36.40		
10.46	36.00	58.00	94.60		8.50	3.22	37.80		
10.68	36.40	58.44	95.30		8.60	3.28	40.40		
10.90	36.80	58.88	96.10		8.70	3.34	42.90		
11.12	37.40	59.32	96.70		8.80	3.40	45.20		
11.34	37.80	59.76	97.30		8.90	3.44	47.00		
11.56	38.30	60.20	98.00		9.00	3.48	49.00		
11.78	38.50	61.00	99.00		9.10	3.52	50.30		
12.00	38.80	61.90	99.50		9.20	3.56	52.20		
12.28	39.00	62.90	100.10		9.30	3.60	53.80		
12.56	39.10	63.70	100.80		9.40	3.64	55.70		
12.84	39.40	64.60	101.30		9.50	3.68	57.20		
13.12	39.50	65.60	101.60		9.60	3.72	58.70		
13.40	39.60	66.40	102.00		9.70	3.76	60.60		
13.64	40.00	67.70	102.20		9.80	3.80	62.40		
13.88	40.10	68.60	102.40		9.90	3.86	64.60		
14.12	40.40	69.70	102.70		9.95	3.92	67.00		
14.36	40.60	70.20	103.00		10.00	3.98	69.50		
14.60	40.70	70.70	103.40		10.05	4.04	71.50		
14.94	40.80	71.60	103.60		10.10	4.10	74.70		
15.28	40.90	72.30	103.80		10.15	4.16	78.70		
15.62	41.20	73.00	104.10		10.20	4.22	81.90		
15.96	41.50	73.70	104.40		10.25	4.28	85.10		



DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
Test Location				County	Field Professional	Field Crew			
-Y2- Sta. 165+10 LT MERGE LN 3.5 FT RT FY				Graham	M. Brewer	L. Ard/R. Kral			
Type	Test Interval	Datum	Date Run	Cut/Fill	Type	Test Interval	Datum	Date Run	Cut/Fill
DCP	Cumulative cm per blow	STBC	12/27/21 to 1/13/22	5.0 ft. Fill	DCP	Cumulative cm per blow	ABC	12/27/21 to 1/13/22	10.0 ft. Fill
2.20	44.50				0.90	2.06			
2.42	45.70				1.50	2.18			
2.64	47.30				2.00	2.30			
2.86	49.00				2.18	2.37			
3.08	50.20				2.36	2.44			
3.30	50.70				2.54	2.51			
3.60	51.60				2.72	2.58			
3.90	52.60				2.90	2.65			
4.20	54.00				3.08	2.72			
4.50	55.80				3.26	2.79			
4.80	57.30				3.44	2.86			
4.98	58.70				3.62	2.93			
5.16	60.80				3.80	3.00			
5.34	62.70				3.98	3.05			
5.52	64.40				4.16	3.10			
5.70	66.20				4.34	3.15			
5.96	68.00				4.52	3.20			
6.22	69.70				4.70	3.25			
6.48	72.40				4.85	3.30			
6.74	74.80				5.00	3.35			
7.00	77.40				5.15	3.40			
7.30	80.00				5.30	3.45			
7.60	82.30				5.45	3.50			
7.90	84.70				5.60	3.58			
8.20	86.80				5.75	3.66			
8.50	88.90				5.90	3.74			
8.70	90.60				6.05	3.82			
8.90	91.90				6.20	3.90			
9.10	93.00				6.38	3.98			
9.30	94.40				6.56	4.06			
9.50	96.20				6.74	4.14			
9.96	97.80				6.92	4.22			
10.42	99.50				7.10	4.30			
10.88	100.70				7.28	DCP REF			
11.34	100.90				7.46	50/0.0"			
11.80	103.70				7.64				
12.20	106.30				7.82				
12.50	108.70				8.00				
13.20	110.00				8.17				
13.60	112.50				8.34				
14.20	114.20				8.51				
14.90	116.10				8.68				
15.40	118.00				8.85				
16.10	119.50				9.02				
16.80	120.50				9.19				
17.50	122.30				9.36				
18.00	123.60				9.53				
18.90	124.90				9.70				
19.90	126.30				9.81				
20.90	127.70				9.92				
21.50					10.03				
22.70					10.14				
23.70					10.25				
24.20					10.36				
25.50					10.47				
26.50					10.58				
27.70					10.69				
28.90					10.80				
30.00					DCP REF				
31.50					AUGER 12.6				
33.40					TO 23.4 CM				
35.60					1.00				
38.50					1.70				
41.40					1.82				
42.90					1.94				

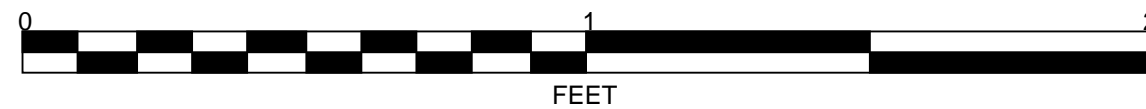
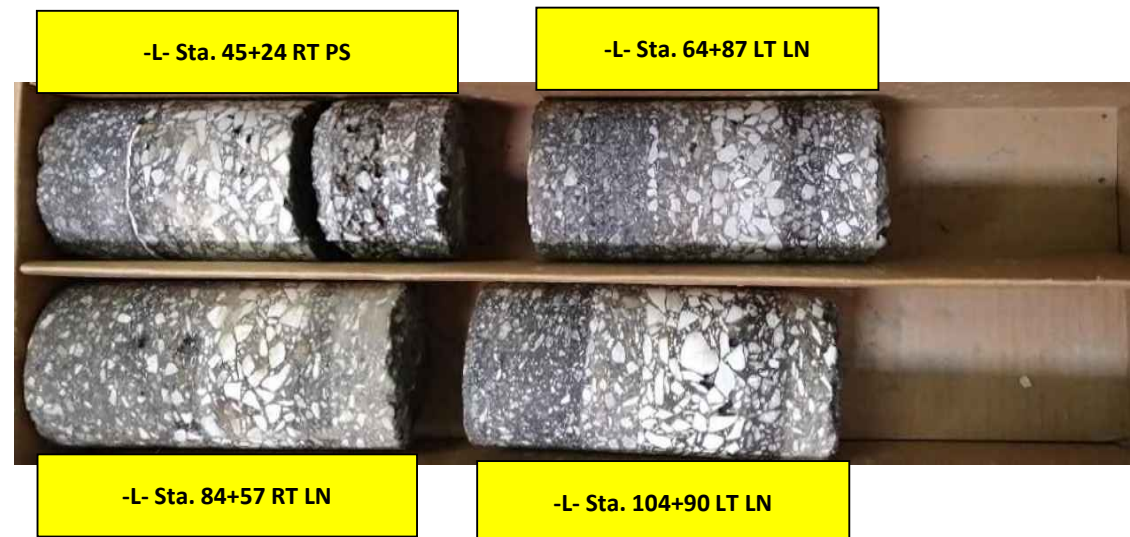
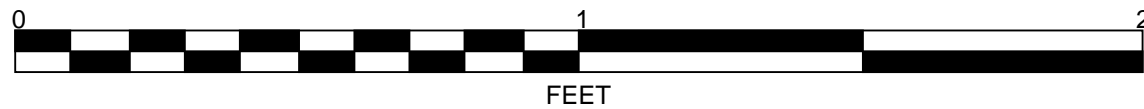
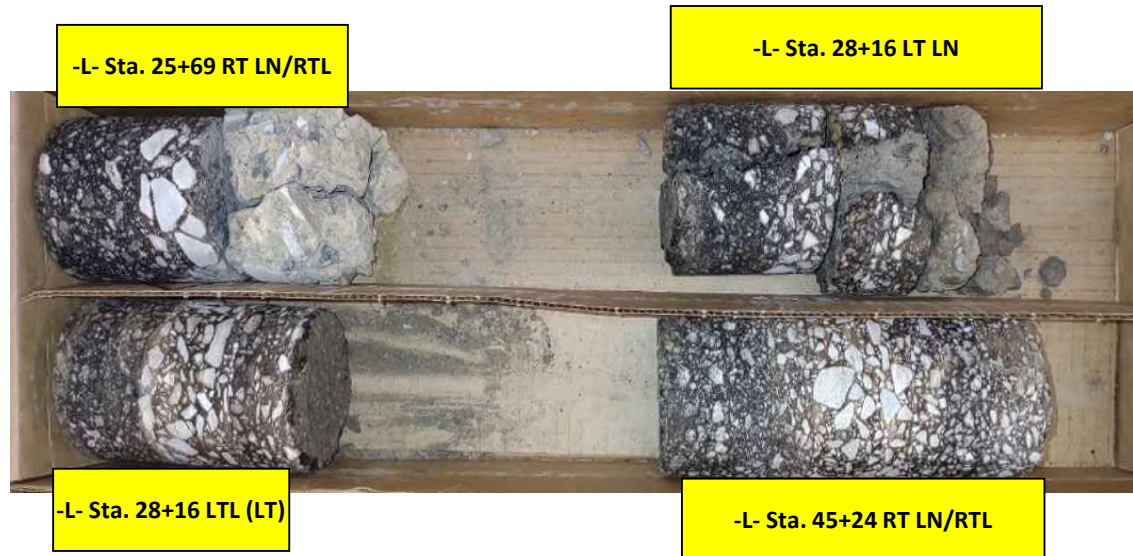
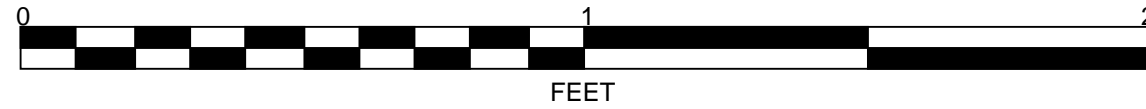
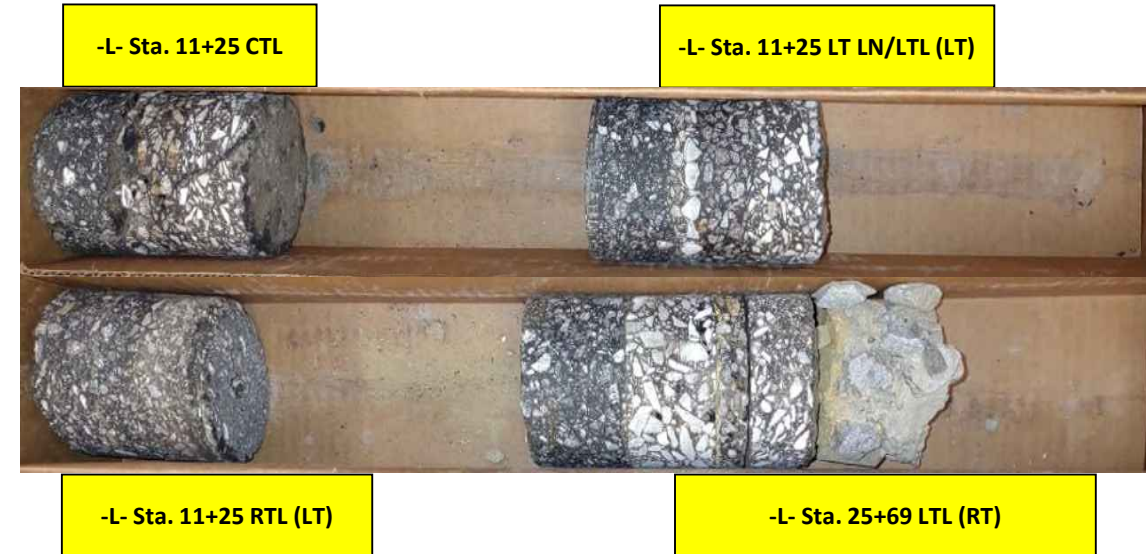
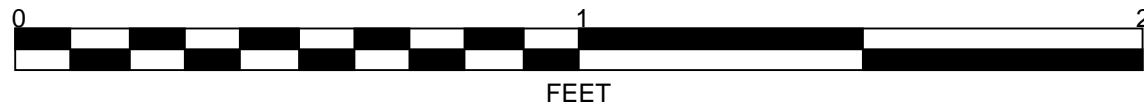
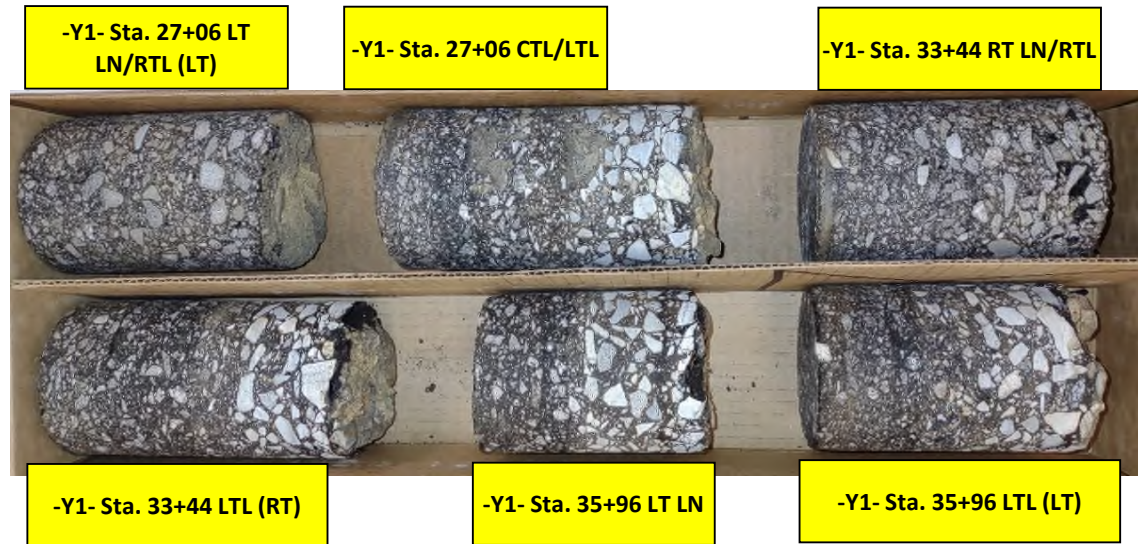
DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.	ROUTE			
				32573.1.FS10	A-0009C	Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah			
Test Location				County	Field Professional	Field Crew			
-Y2- Sta. 165+10 RT OSL 4.5 FT LT FW				Graham	M. Brewer	L. Ard/R. Kral			
Type	Test Interval	Datum	Date Run	Cut/Fill	Type	Test Interval	Datum	Date Run	Cut/Fill
DCP	Cumulative cm per blow	ABC	12/27/21 to 1/13/22	10.0 ft. Fill	DCP	Cumulative cm per blow	ABC	12/27/21 to 1/13/22	10.0 ft. Fill
1.50	12.50	18.04	27.06	74.30					
2.20	12.60	18.16	27.24	77.10					
2.50	12.70	18.28	27.42	80.00					
2.80	12.80	18.40	27.60	82.80					
3.40	12.96	18.56	27.74	86.10					
3.80	13.12	18.72	27.88	89.70					
4.20	13.28	18.88	28.02	90.70					
4.40	13.44	19.04	28.16	92.40					
4.50	13.60	19.20	28.30	95.20					
5.00	13.68	19.34	28.44	96.60					
5.10	13.76	19.48	28.58	97.50					
5.30	13.84	19.62	28.72	98.10					
5.50	13.92	19.76	28.86	98.90					
5.60	14.00	19.90	29.00	99.60					
5.70	14.12	20.04	29.18	100.30					
5.80	14.24	20.18	29.36	100.80					
6.30	14.36	20.32	29.54	101.30					
6.40	14.48	20.46	29.72	102.00					
6.50	14.60	20.60	29.90	102.60					
6.60	14.66	20.70	30.12	103.20					
6.70	14.72	20.80	30.34	103.90					
6.80	14.78	20.90	30.56	104.50					
6.90	14.84	21.00	30.78	105.20					
7.00	14.90	21.10	31.00	106.00					
7.18	15.02	21.22	31.30	106.70					
7.36	15.14	21.34	31.60	107.30					
7.54	15.26	21.46	31.90	108.00					
7.72	15.38	21.58	32.20	108.40					
7.90	15.50	21.70	32.50	108.60					
8.04	15.60	21.84	32.52	109.60					
8.18	15.70	21.98	32.54	110.10					
8.32	15.80	22.12	32.56	110.90					
8.46	15.90	22.26	32.58	111.80					
8.60	16.00	22.40	32.60	112.60					
8.72	16.04	22.58	32.70	113.30					
8.84	16.08	22.76	32.80	114.00					
8.96	16.12	22.94	32.90	115.10					
9.08	16.16	23.12	33.00	116.10					
9.20	16.20	23.30	33.10	117.40					
9.28	16.28	23.42	33.24	118.70					
9.36	16.36	23.54	33.38	120.00					
9.44	16.44	23.66	33.52	121.20					
9.52	16.52	23.78	33.66	122.60					
9.60	16.60	23.90	33.80	124.10					
9.74	16.68	24.06	34.10	125.40					
9.88	16.76	24.22	34.30	127.00					
10.02	16.84	24.38	34.50	128.50					
10.16	16.92	24.54	35.50	129.80					
10.30	17.00	24.70	36.20						
10.40	17.04	24.86	37.00						
10.50	17.08	25.02	38.80						
10.60	17.12	25.18	40.90						
10.70	17.16	25.34	42.20						
10.80	17.20	25.50	44.00						
10.98	17.26	25.62	45.80						
11.16	17.32	25.74	47.40						
11.34	17.38	25.86	49.90						
11.52	17.44	25.98	52.00						
11.70	17.50	26.10	54.00						
11.82	17.56	26.22	56.50						
11.94	17.62	26.34	58.50						
12.06	17.68	26.46	61.50						
12.18	17.74	26.58	64.90						
12.30	17.80	26.70	67.90						
12.40	17.92	26.88	70.60						





### Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah

#### Pavement Core Photographs

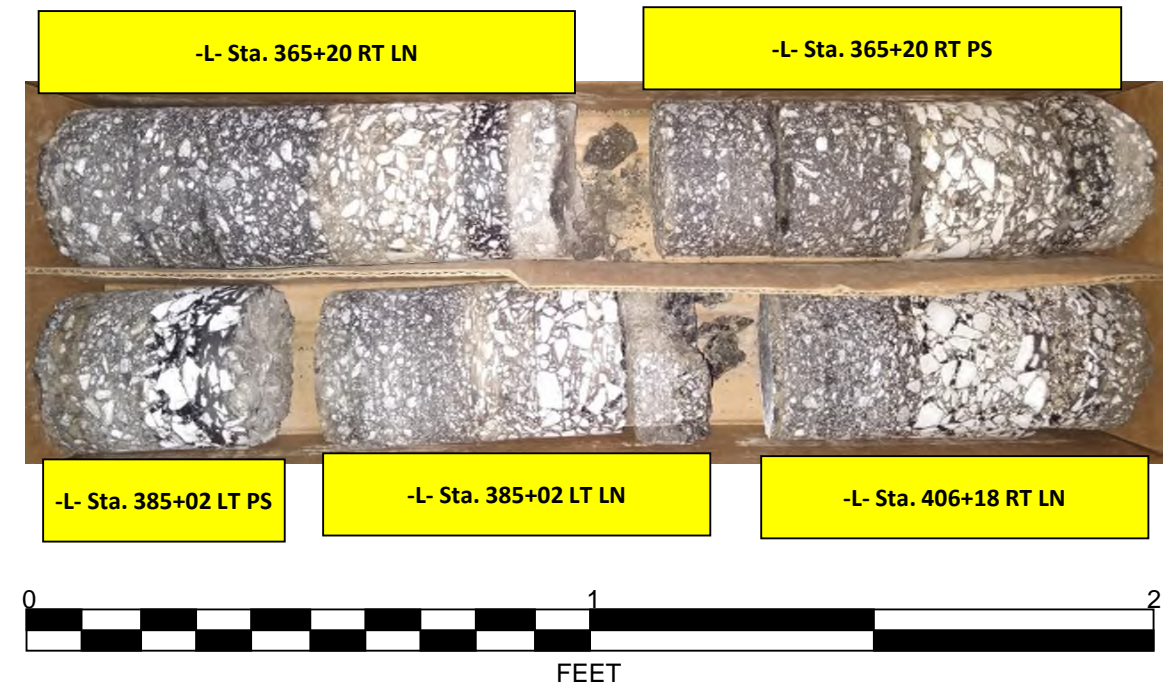
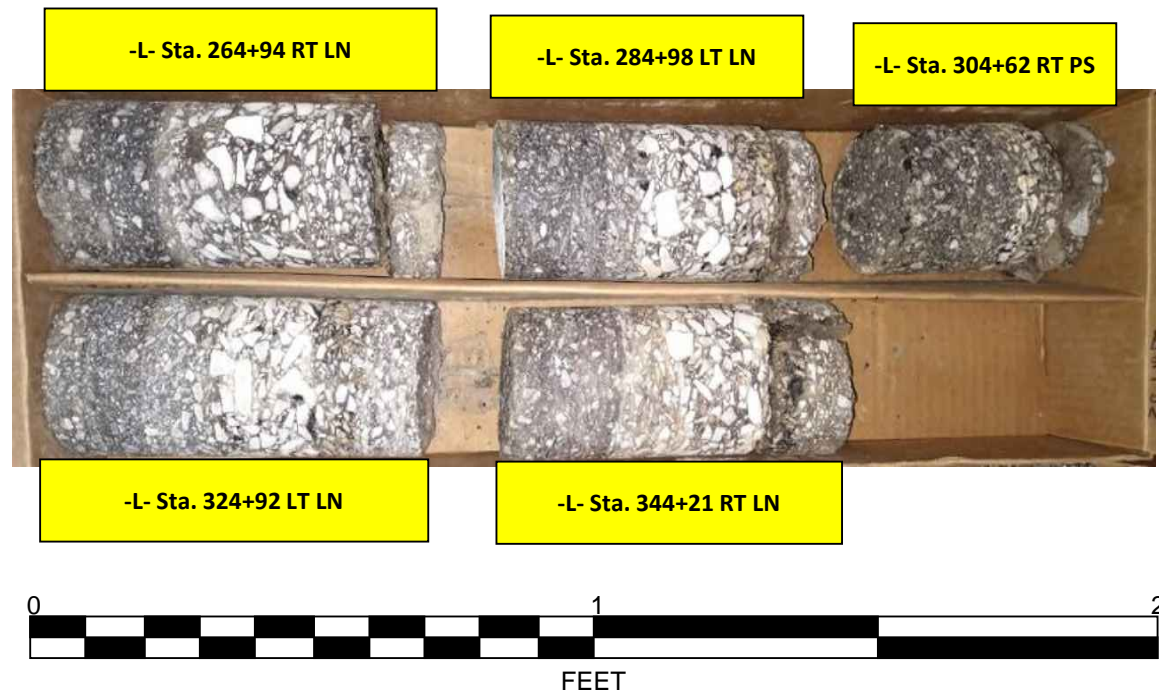
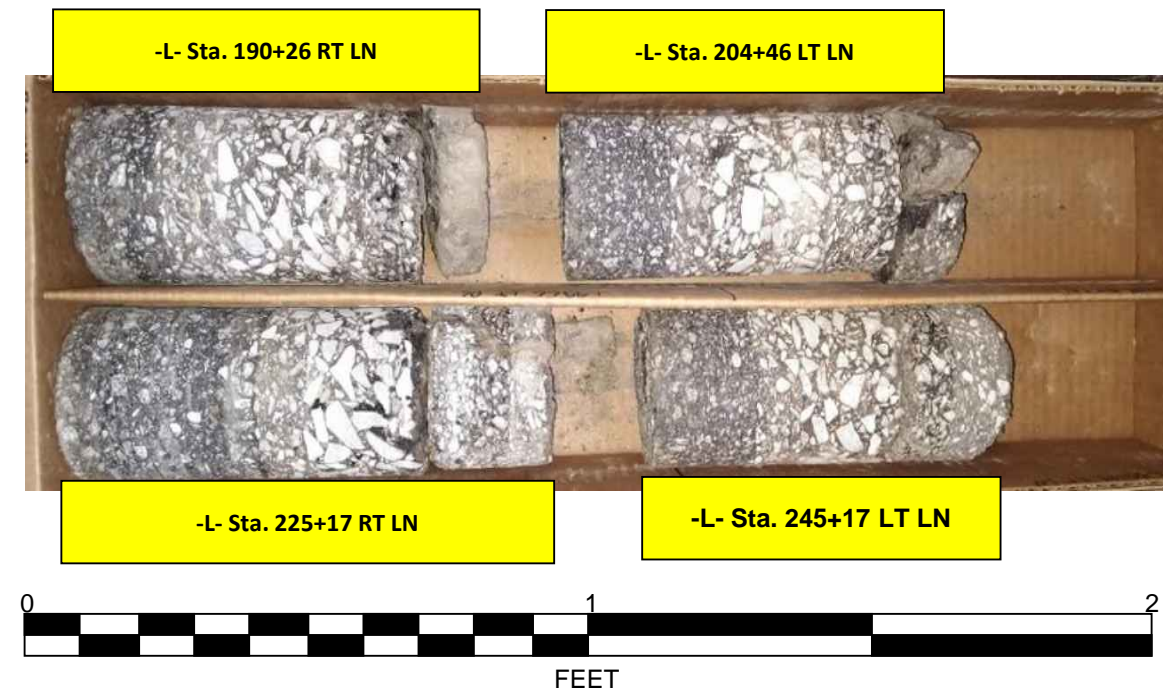
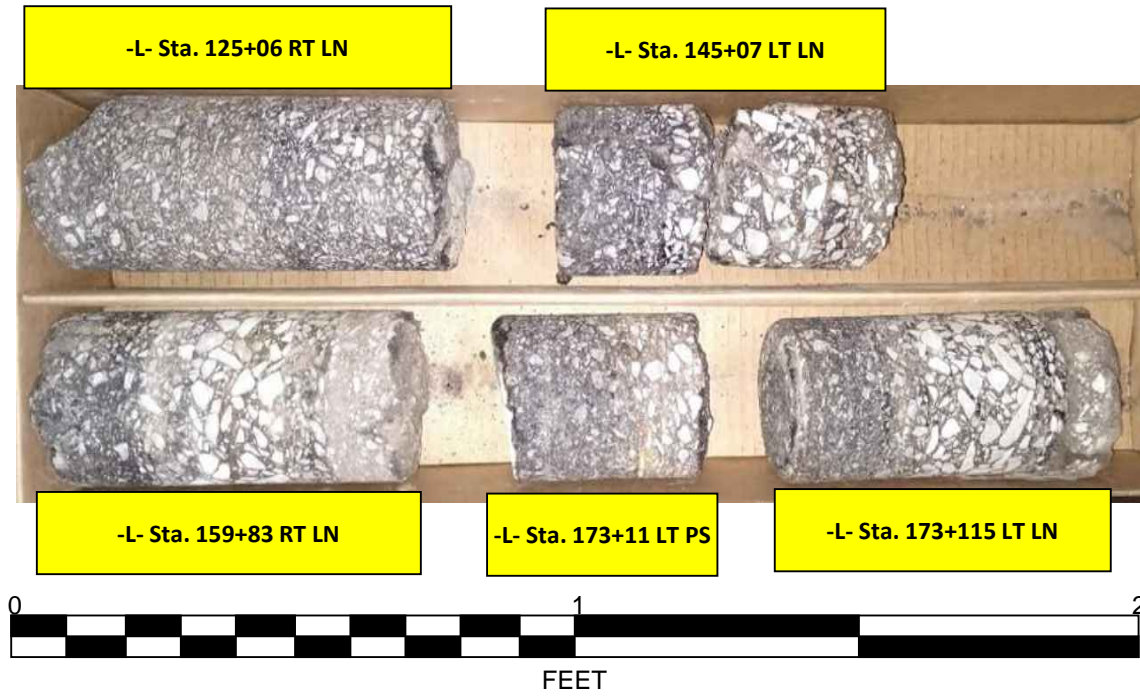






### Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah

#### Pavement Core Photographs

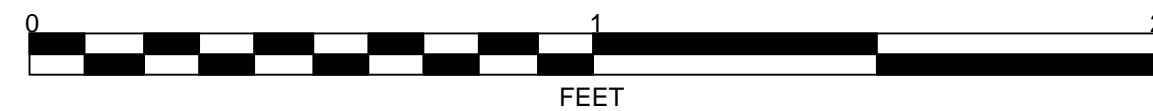
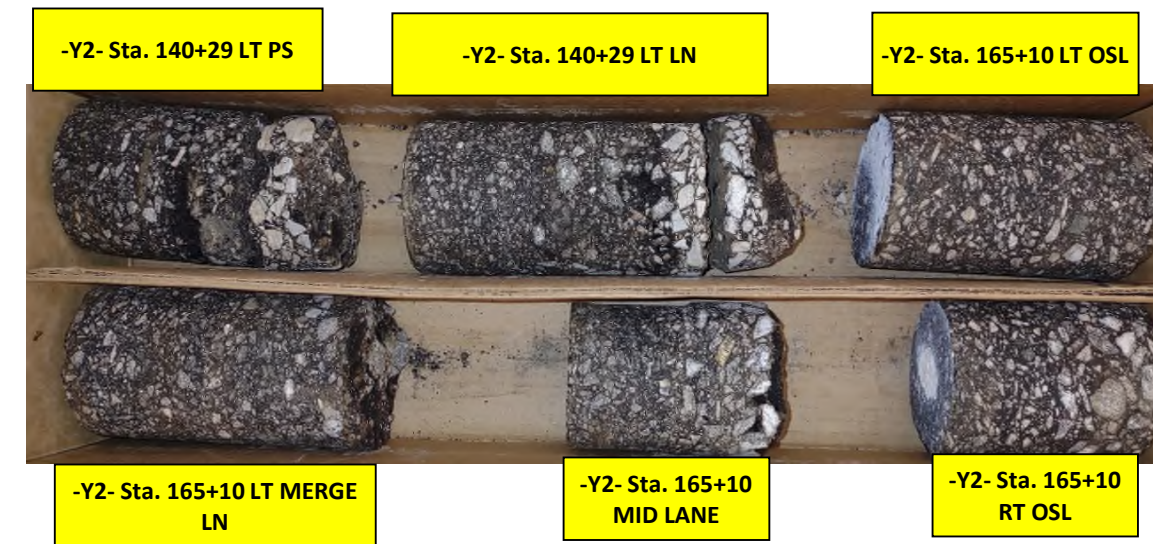
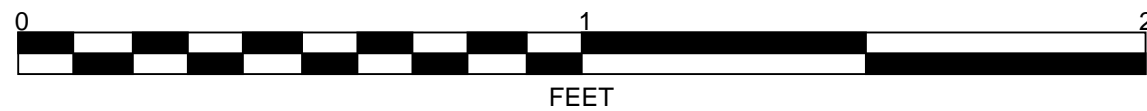
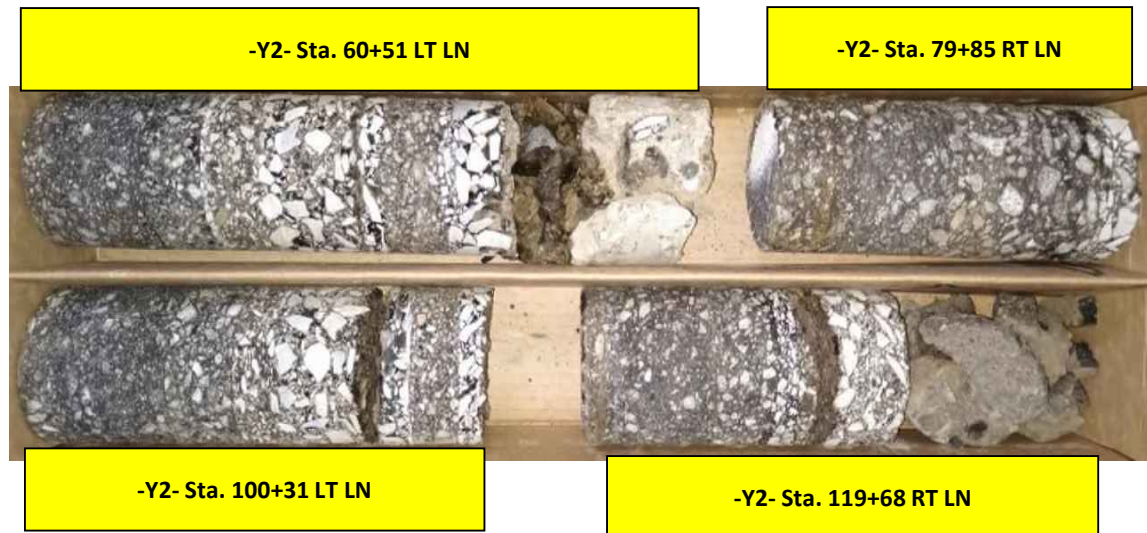
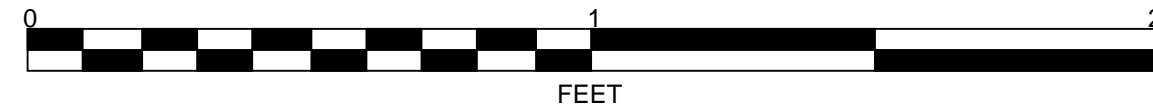
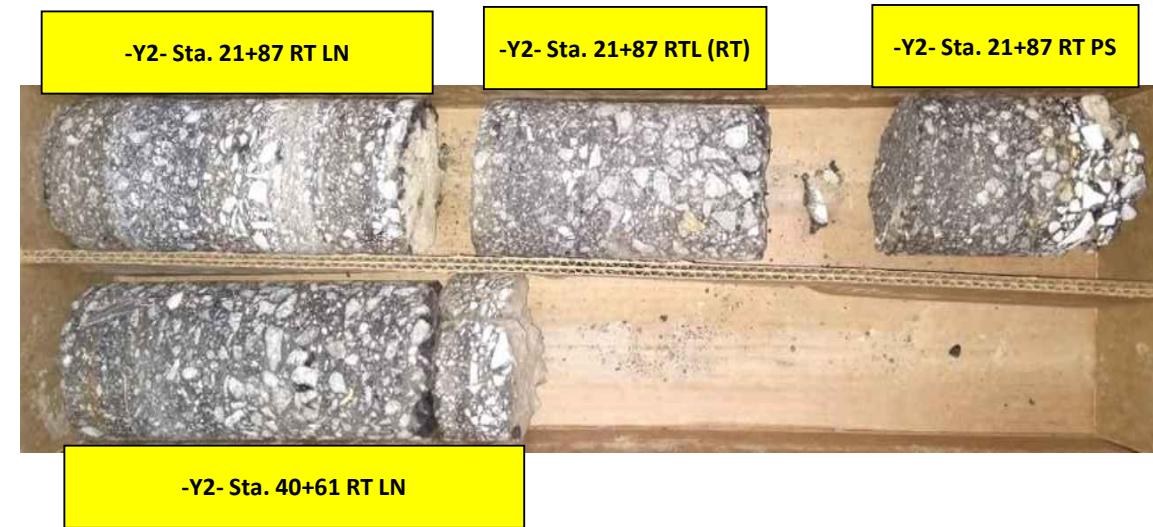
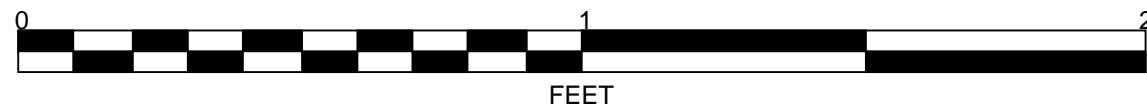
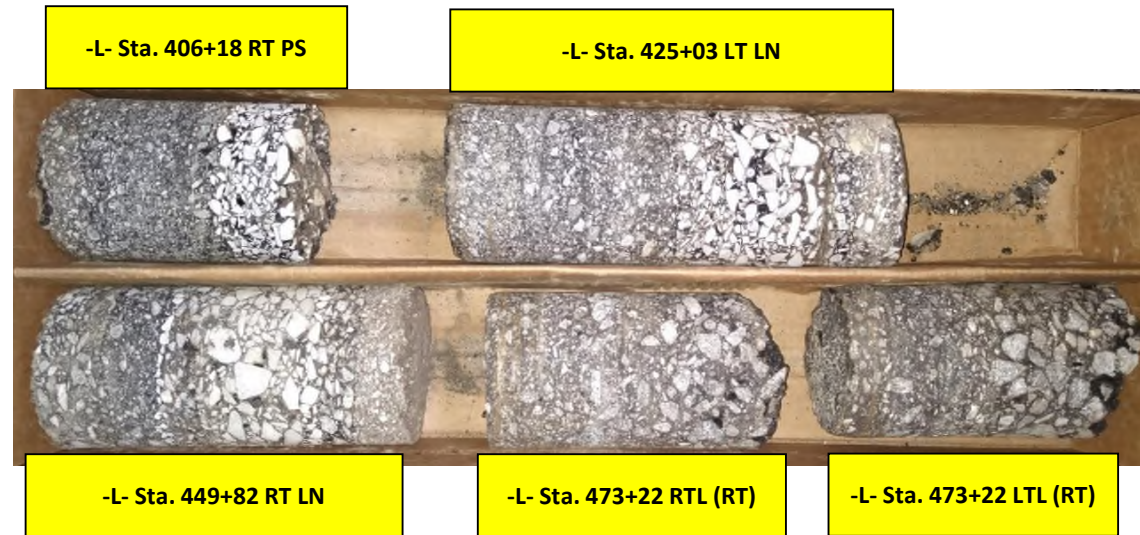






## Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah

### Pavement Core Photographs







### LABORATORY TEST RESULTS

Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah

Greenville, NC

NCDOT Project: A-0009C

Falcon Engineering Project No: G21039.00

NO.	SAMPLE LOCATION	DEPTH INTERVAL	AASHTO CLASS.	ATTERBERG LIMITS		PERCENT BY WEIGHT				PERCENT PASSING SIEVE			MOISTURE (%)	BULK DENSITY (pcf)	ORGANICS (%)
				LL	PI	C.SAND	F.SAND	SILT	CLAY	#10	#40	#200			
Bulk-1	-L-62+07	1.0-3.0	A-4(0)	34	0	21	47	16	16	100	89	43	28	102.5	N/A
Bulk-2	-L-83+40	1.0-3.0	A-4(0)	30	0	13	56	25	6	100	94	47	18	101.1	N/A
Bulk-3	-L-154+52	1.0-3.0	A-4(0)	30	0	13	57	26	4	100	93	45	20	96.6	N/A
Bulk-4	-L-321+08	1.0-3.0	A-4(0)	23	0	29	39	24	8	100	87	42	18	101.7	N/A
Bulk-5	-L-336+69	15.0-20.0	A-4(0)	30	1	15	22	46	17	99	87	71	19	101.5	N/A
Bulk-6	-Y2-29+49	1.0-3.0	A-4(1)	34	0	7	36	46	11	100	96	73	11	93.6	N/A
Bulk-7	-Y2-46+66	1.0-3.0	A-4(0)	31	2	19	33	25	23	100	89	56	30	103.1	N/A
Bulk-8	-Y2-101+08	1.0-3.0	A-4(0)	26	0	24	30	36	10	100	85	55	20	102.1	N/A
S-08	-L-11+25	1.3-5.0	A-4(0)	21	0	23	43	20	14	98	86	41	13	N/A	N/A
S-10	-L-11+25	1.3-5.0	A-6(7)	35	15	12	30	18	40	96	91	62	23	N/A	N/A
S-11	-L-25+69	1.3-5.0	A-4(0)	27	7	24	28	24	24	74	62	40	11	N/A	N/A
S-13	-L-28+16	1.3-5.0	A-6(6)	34	11	11	28	23	38	97	92	65	19	N/A	N/A
S-15	-L-45+24	1.3-5.0	A-4(0)	26	0	9	42	34	15	99	95	62	16	N/A	N/A
S-17	-L-64+87	1.3-5.0	A-4(0)	29	1	6	26	49	19	96	92	76	16	N/A	N/A
S-19	-L-104+90	1.3-5.0	A-4(0)	25	1	17	37	31	15	86	77	49	13	N/A	N/A
S-20	-L-125+06	1.4-3.0	A-4(3)	30	7	12	25	32	31	98	90	69	19	N/A	N/A
S-21	-L-145+07	1.4-5.0	A-4(0)	26	0	16	33	30	21	92	83	56	16	N/A	N/A
S-25	-L-173+11	1.4-5.0	A-4(0)	32	0	13	29	39	19	91	83	62	17	N/A	N/A
S-26	-L-190+26	1.4-5.0	A-4(0)	27	0	15	31	36	18	86	77	55	16	N/A	N/A
S-27	-L-204+46	1.4-3.0	A-4(0)	30	1	10	31	40	19	100	94	69	19	N/A	N/A
S-29	-L-245+17	1.5-4.0	A-4(0)	27	1	16	25	39	20	86	77	58	15	N/A	N/A
S-31	-L-284+98	1.4-5.0	A-4(0)	24	1	9	43	29	19	99	95	58	14	N/A	N/A
S-33	-L-324+92	1.4-5.0	A-4(0)	22	1	22	36	26	16	97	85	48	11	N/A	N/A
S-35	-L-365+20	1.6-5.0	A-4(2)	33	1	1	26	55	18	100	100	87	14	N/A	N/A
S-38	-L-385+02	1.3-4.0	A-4(0)	28	0	14	29	40	17	70	63	48	14	N/A	N/A
S-40	-L-406+18	1.1-5.0	A-4(0)	25	0	17	23	43	17	80	71	55	13	N/A	N/A
S-41	-L-425+03	1.7-3.0	A-4(0)	22	0	17	31	35	17	100	89	61	11	N/A	N/A
S-43	-L-473+22	1.7-5.0	A-4(0)	28	1	11	30	42	17	96	89	69	16	N/A	N/A
S-46	-Y2-21+87	1.0-3.0	A-4(0)	29	0	12	24	43	21	92	84	69	16	N/A	N/A
S-47	-Y2-21+87	0.8-5.0	A-4(1)	34	1	9	27	46	18	93	87	70	23	N/A	N/A

Reviewed By

Certification: 105-0803

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### LABORATORY TEST RESULTS

Widen US 129, NC 143, and NC 28 (Climbing/Passing Lane) from Robbinsville to Stecoah  
Greenville, NC

NCDOT Project: A-0009C

Falcon Engineering Project No: G21039.00

NO.	SAMPLE LOCATION	DEPTH INTERVAL	AASHTO CLASS.	ATTERBERG LIMITS		PERCENT BY WEIGHT				PERCENT PASSING SIEVE			MOISTURE (%)	BULK DENSITY (pcf)	ORGANICS (%)
				LL	PI	C.SAND	F.SAND	SILT	CLAY	#10	#40	#200			
S-48	-Y2-40+61	1.5-5.0	A-4(1)	32	1	9	24	44	23	93	87	72	17	N/A	N/A
S-50	-Y2-79+85	1.3-5.0	A-4(0)	31	0	11	22	48	19	95	87	74	18	N/A	N/A
S-51	-Y2-100+31	1.5-5.0	A-4(0)	28	0	14	26	43	17	100	91	70	18	N/A	N/A
S-54	-Y2-140+29	1.4-5.0	A-4(0)	26	0	15	23	47	15	85	76	60	18	N/A	N/A
S-55	-Y2-165+10	1.1-5.0	A-4(0)	26	0	18	25	41	16	83	73	54	15	N/A	N/A
S-57	-Y2-165+10	1.8-5.0	A-4(0)	31	0	17	27	32	24	99	88	63	17	N/A	N/A
S-59	-Y1-35+96	1.4-4.0	A-4(0)	25	0	19	46	21	14	96	86	44	11	N/A	N/A

Reviewed By

Certification: 105-0803

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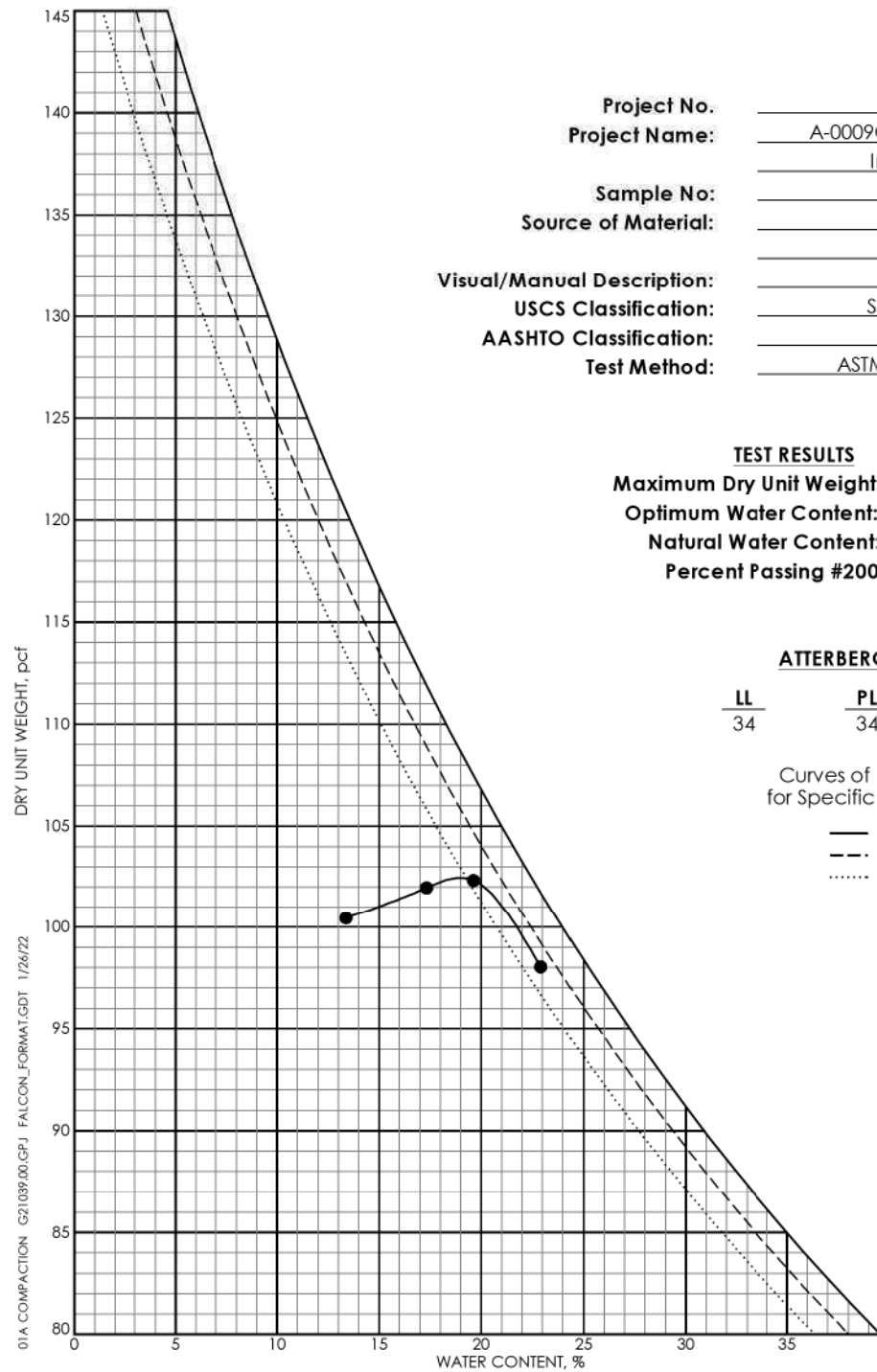


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LABORATORY COMPACTION TEST RESULTS

PAGE 1 OF 8



Project No: G21039.00  
Project Name: A-0009C Proposed Corridor Improvements  
Sample No: Bulk-1  
Source of Material: -L-62+07  
Visual/Manual Description: Dark Brown  
USCS Classification: SILTY SAND(SM)  
AASHTO Classification: A-4  
Test Method: ASTM D698 Method A

**TEST RESULTS**  
Maximum Dry Unit Weight: 102.5 PCF  
Optimum Water Content: 19.0 %  
Natural Water Content: 27.6 %  
Percent Passing #200: 43.5 %

**ATTERBERG LIMITS**  
LL / 34      PL / 34      PI / NP

Curves of 100% Saturation for Specific Gravity Equal to:

- 2.6
- - - 2.5
- ..... 2.4

FALCON ENGINEERING

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T-193 / ASTM D-1883

PROJECT #: G21039.00      TEST PERFORMED BY: JG / CS      DATE: 1/21/2022

PROJECT NAME: CG2 A-0009C

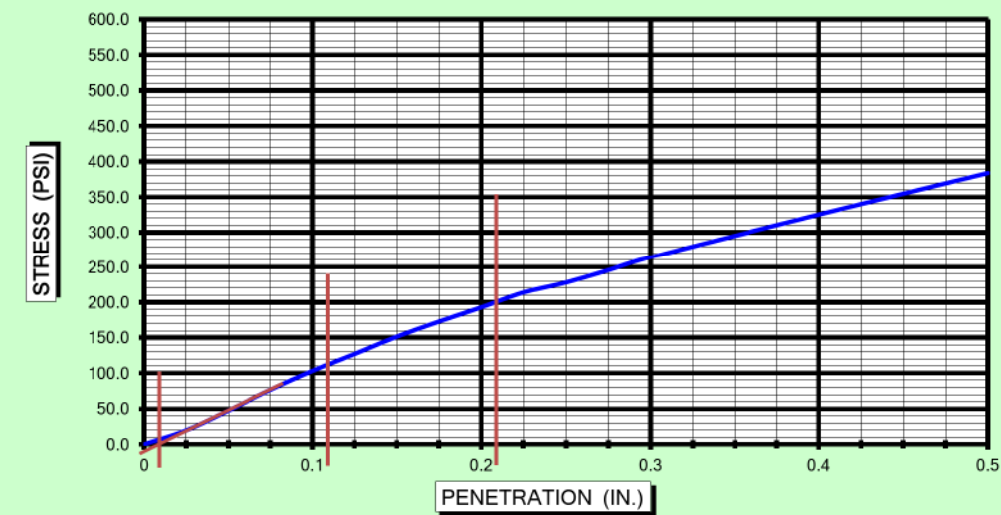
Boring #: Bulk-1      SAMPLE #: Bulk-1      DEPTH: 1.0-3.0

SOIL DESCRIPTION: Silty Sand (SM) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	102.5 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	19.0%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	100.7 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	19.1%	FINAL MOISTURE CONTENT	22.5%
PERCENT COMPACTION	98.3%	SWELL	0.15%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	10.3	11.3
CBR VALUE AT .2"	12.8	13.3

STRESS-PENETRATION CURVE

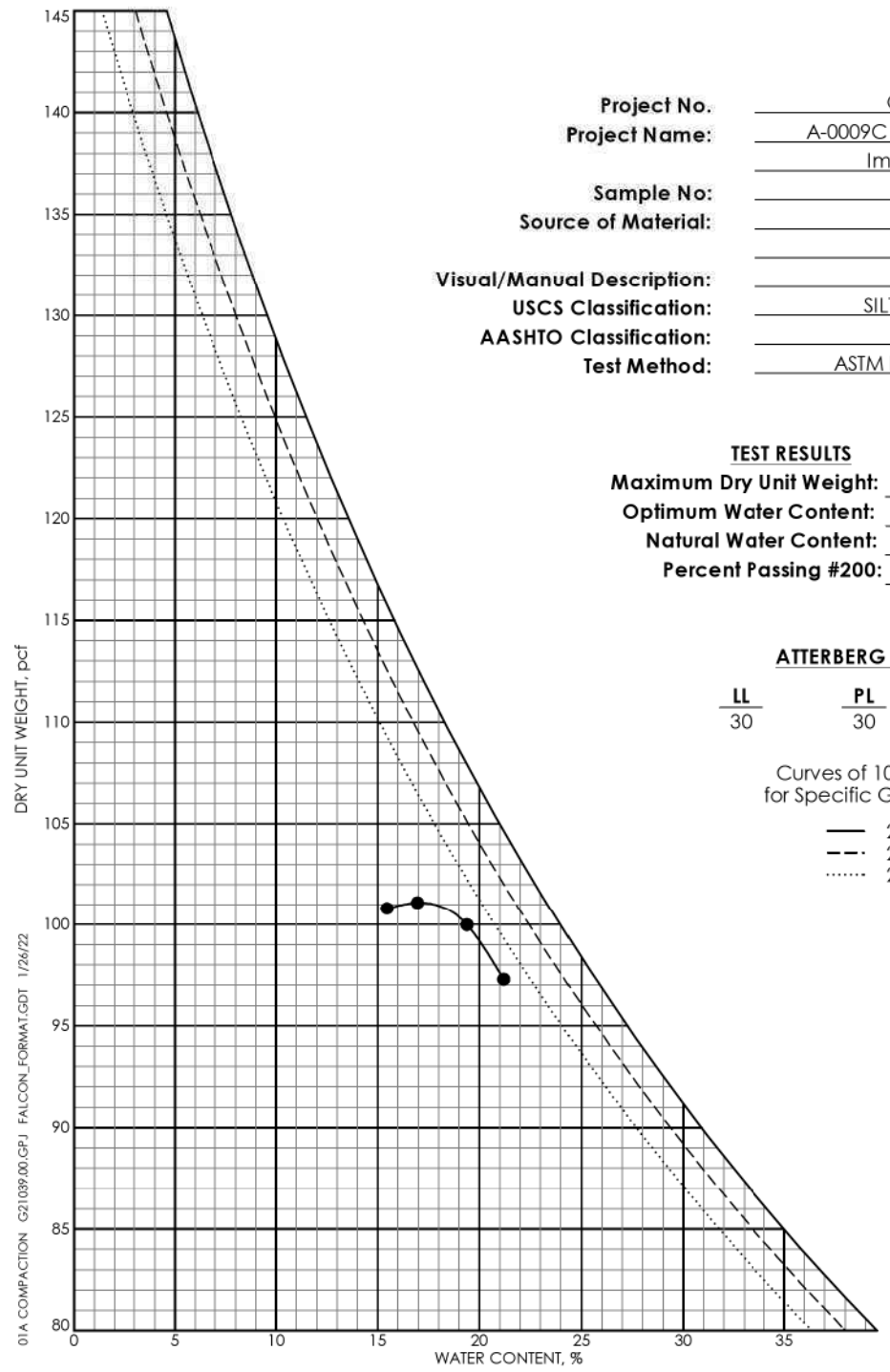


LIQUID LIMIT    34    PLASTIC LIMIT    NP    PLASTIC INDEX    NP





**LABORATORY COMPACTION TEST RESULTS**  
PAGE 2 OF 8



Project No: G21039.00  
 Project Name: A-0009C Proposed Corridor Improvements  
 Sample No: Bulk-2  
 Source of Material: -L-83+40  
 Visual/Manual Description: Brown  
 USCS Classification: SILTY SAND(SM)  
 AASHTO Classification: A-4  
 Test Method: ASTM D698 Method A

**TEST RESULTS**  
 Maximum Dry Unit Weight: 101.1 PCF  
 Optimum Water Content: 17.1 %  
 Natural Water Content: 17.7 %  
 Percent Passing #200: 46.6 %

**ATTERBERG LIMITS**  
 LL / 30    PL / 30    PI / NP  
 Curves of 100% Saturation for Specific Gravity Equal to:  
 — 2.6  
 - - 2.5  
 ..... 2.4

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**CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL**

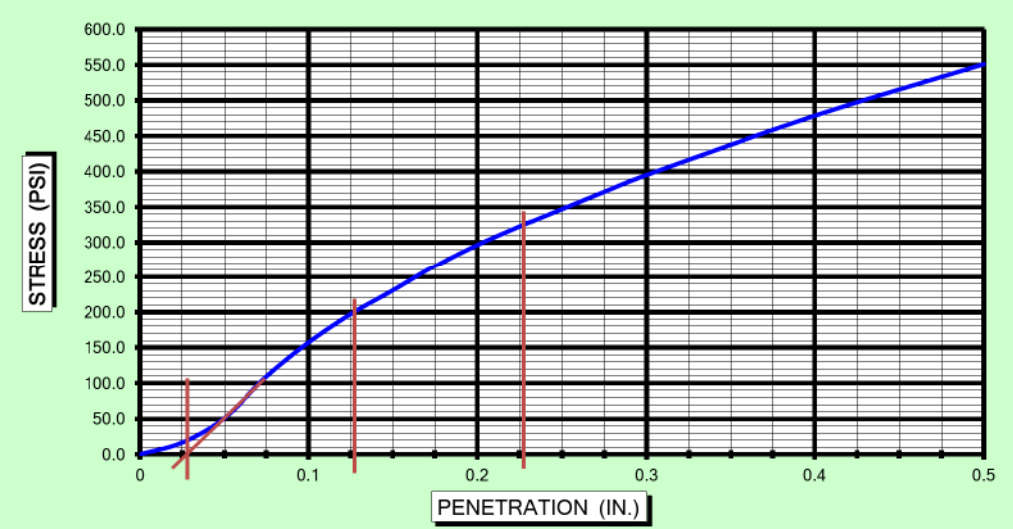
AASHTO T-193 / ASTM D-1883

PROJECT #: G21039.00 TEST PERFORMED BY: JG / CS DATE: 1/21/2022  
 PROJECT NAME: CG2 A-0009C  
 Boring #: Bulk-2 SAMPLE #: Bulk-2 DEPTH: 1.0-3.0  
 SOIL DESCRIPTION: Silty Sand (SM) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	101.1 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	17.1%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	99.4 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	17.0%	FINAL MOISTURE CONTENT	24.0%
PERCENT COMPACTION	98.4%	SWELL	0.09%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	15.7	20.0
CBR VALUE AT .2"	19.7	21.7

**STRESS-PENETRATION CURVE**



LIQUID LIMIT	30	PLASTIC LIMIT	NP	PLASTIC INDEX	NP
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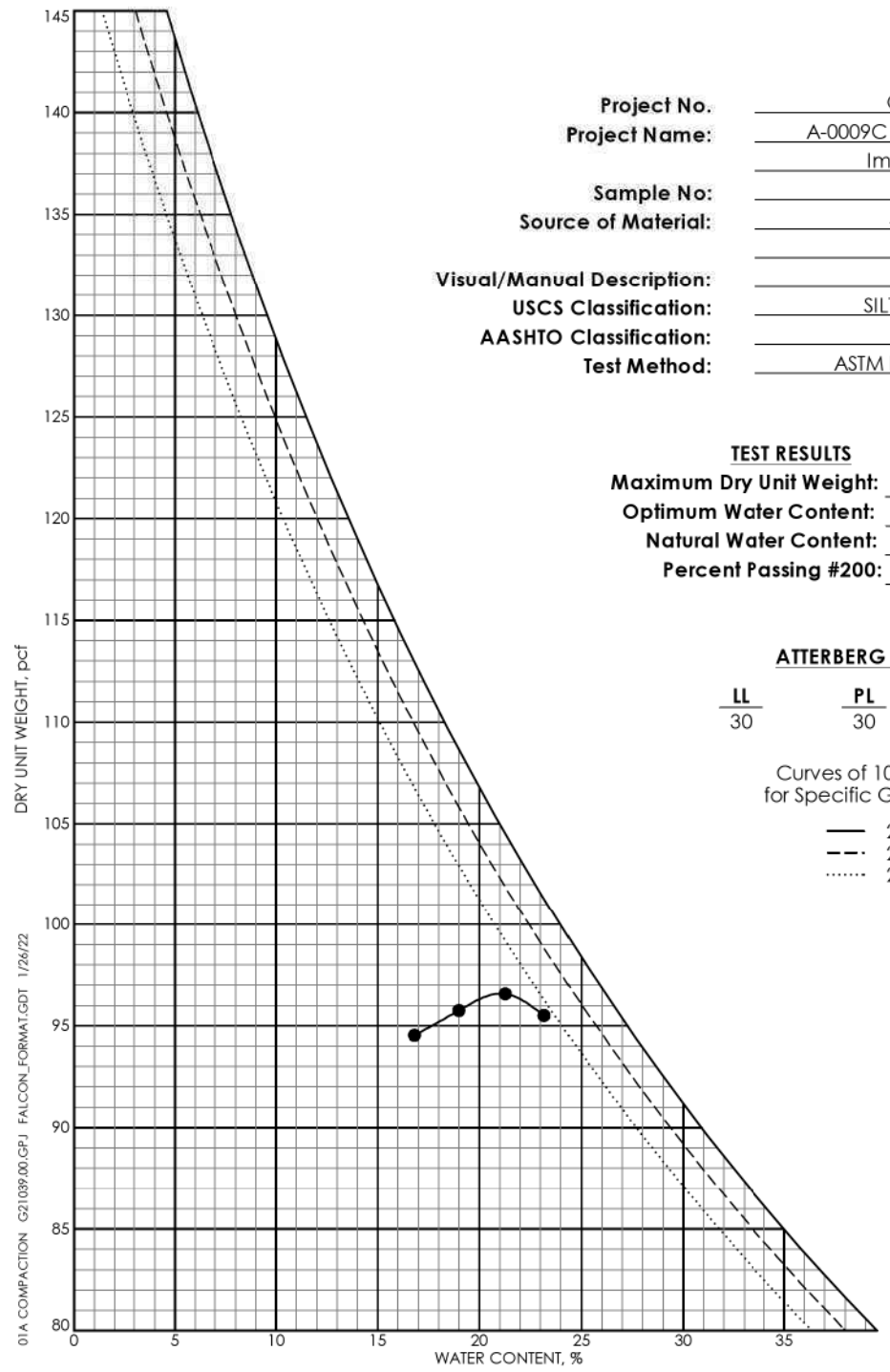


**LABORATORY COMPACTION TEST RESULTS**  
PAGE 3 OF 8

Project No: G21039.00  
 Project Name: A-0009C Proposed Corridor Improvements  
 Sample No: Bulk-3  
 Source of Material: -L-154+52  
 Visual/Manual Description: Brown  
 USCS Classification: SILTY SAND(SM)  
 AASHTO Classification: A-4  
 Test Method: ASTM D698 Method A

**TEST RESULTS**  
 Maximum Dry Unit Weight: 96.6 PCF  
 Optimum Water Content: 21.0 %  
 Natural Water Content: 19.9 %  
 Percent Passing #200: 45.0 %

**ATTERBERG LIMITS**  
 LL / 30    PL / 30    PI / NP  
 Curves of 100% Saturation for Specific Gravity Equal to:  
 — 2.6  
 - - - 2.5  
 ..... 2.4



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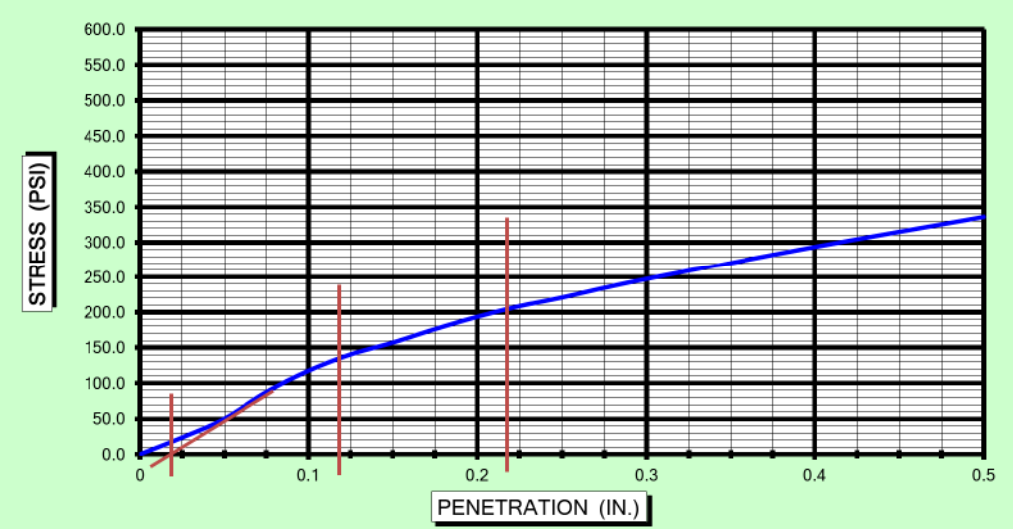
**CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL**

AASHTO T-193 / ASTM D-1883  
 PROJECT #: G21039.00 TEST PERFORMED BY: JG / CS DATE: 1/21/2022  
 PROJECT NAME: CG2 A-0009C  
 Boring #: Bulk-3 SAMPLE #: Bulk-3 DEPTH: 1.0-3.0  
 SOIL DESCRIPTION: Silty Sand (SM) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	96.6 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	21.0%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	94.8 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	21.1%	FINAL MOISTURE CONTENT	27.4%
PERCENT COMPACTION	98.2%	SWELL	0.28%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	11.7	13.5
CBR VALUE AT .2"	12.9	13.5

**STRESS-PENETRATION CURVE**



LIQUID LIMIT	30	PLASTIC LIMIT	NP	PLASTIC INDEX	NP
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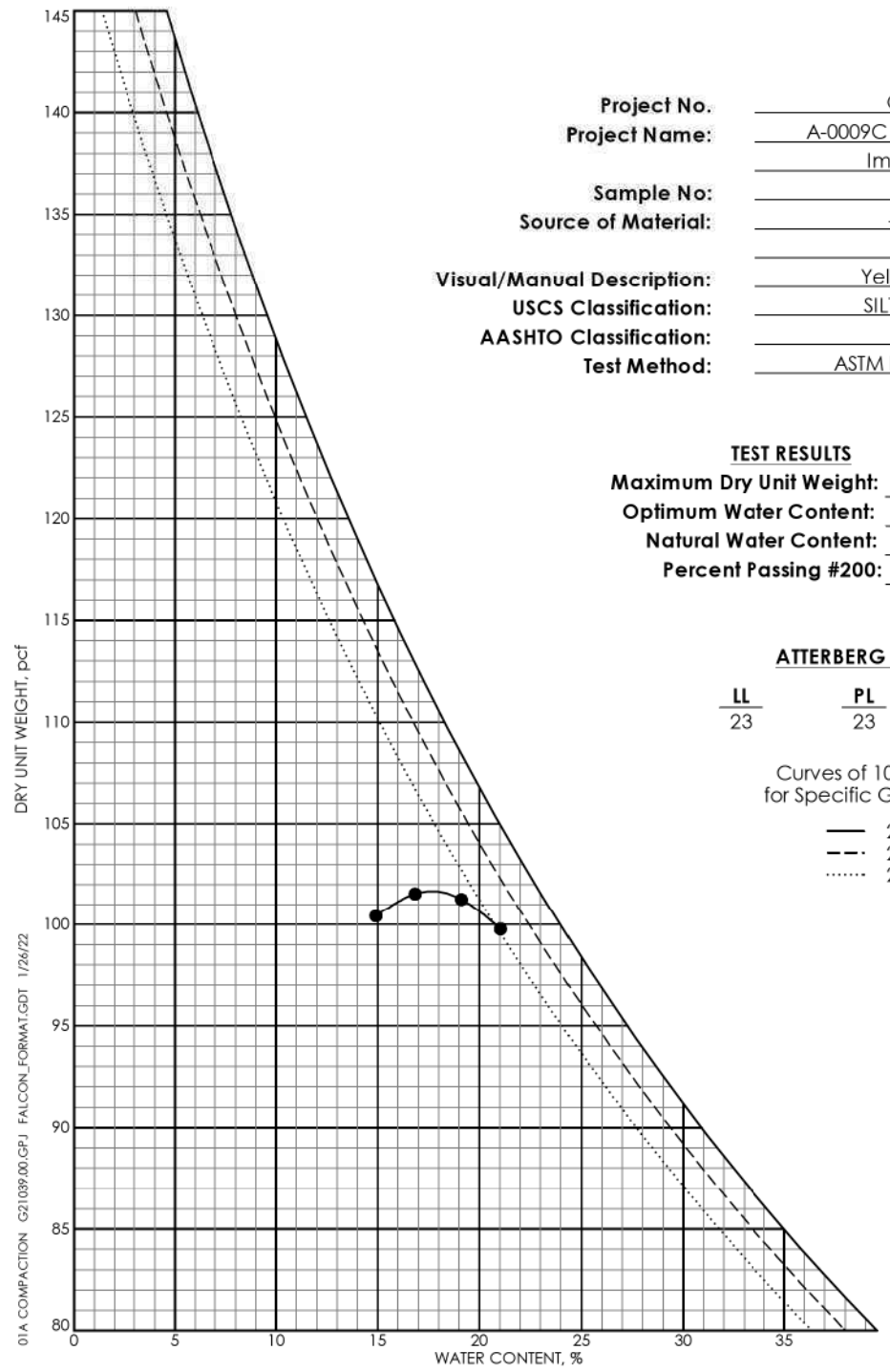


**LABORATORY COMPACTION TEST RESULTS**  
PAGE 4 OF 8

Project No: G21039.00  
 Project Name: A-0009C Proposed Corridor Improvements  
 Sample No: Bulk-4  
 Source of Material: -L-321+08  
 Visual/Manual Description: Yellowish Brown  
 USCS Classification: SILTY SAND(SM)  
 AASHTO Classification: A-4  
 Test Method: ASTM D698 Method A

**TEST RESULTS**  
 Maximum Dry Unit Weight: 101.7 PCF  
 Optimum Water Content: 17.7 %  
 Natural Water Content: 18.1 %  
 Percent Passing #200: 42.3 %

**ATTERBERG LIMITS**  
 LL / 23      PL / 23      PI / NP  
 Curves of 100% Saturation for Specific Gravity Equal to:  
 — 2.6  
 - - - 2.5  
 ..... 2.4



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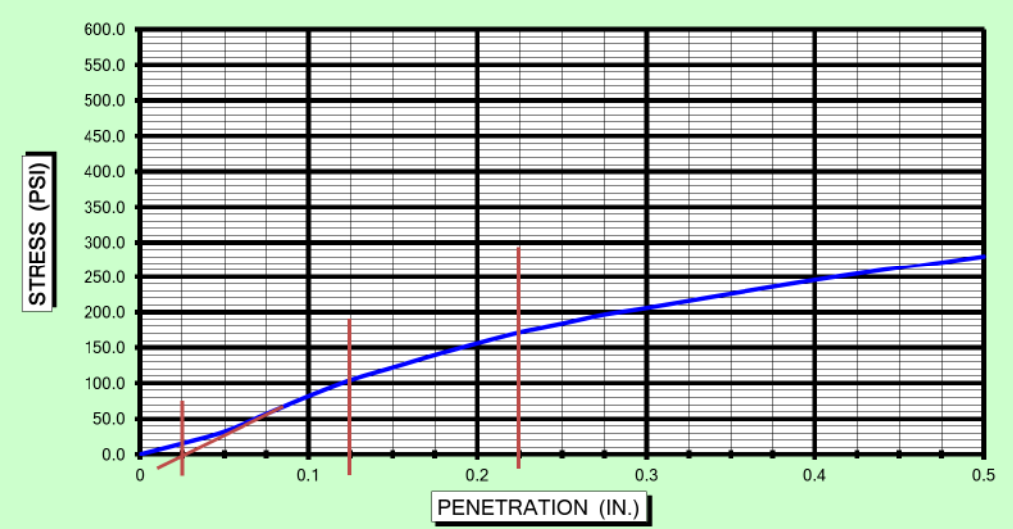
**CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL**

AASHTO T-193 / ASTM D-1883  
 PROJECT #: G21039.00 TEST PERFORMED BY: JG / CS DATE: 1/21/2022  
 PROJECT NAME: CG2 A-0009C  
 Boring #: Bulk-4 SAMPLE #: Bulk-4 DEPTH: 1.0-3.0  
 SOIL DESCRIPTION: Silty Sand (SM) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	101.7 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	17.7%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	99.9 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	17.7%	FINAL MOISTURE CONTENT	26.7%
PERCENT COMPACTION	98.2%	SWELL	0.93%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	8.2	10.4
CBR VALUE AT .2"	10.4	11.4

**STRESS-PENETRATION CURVE**



LIQUID LIMIT	23	PLASTIC LIMIT	NP	PLASTIC INDEX	NP
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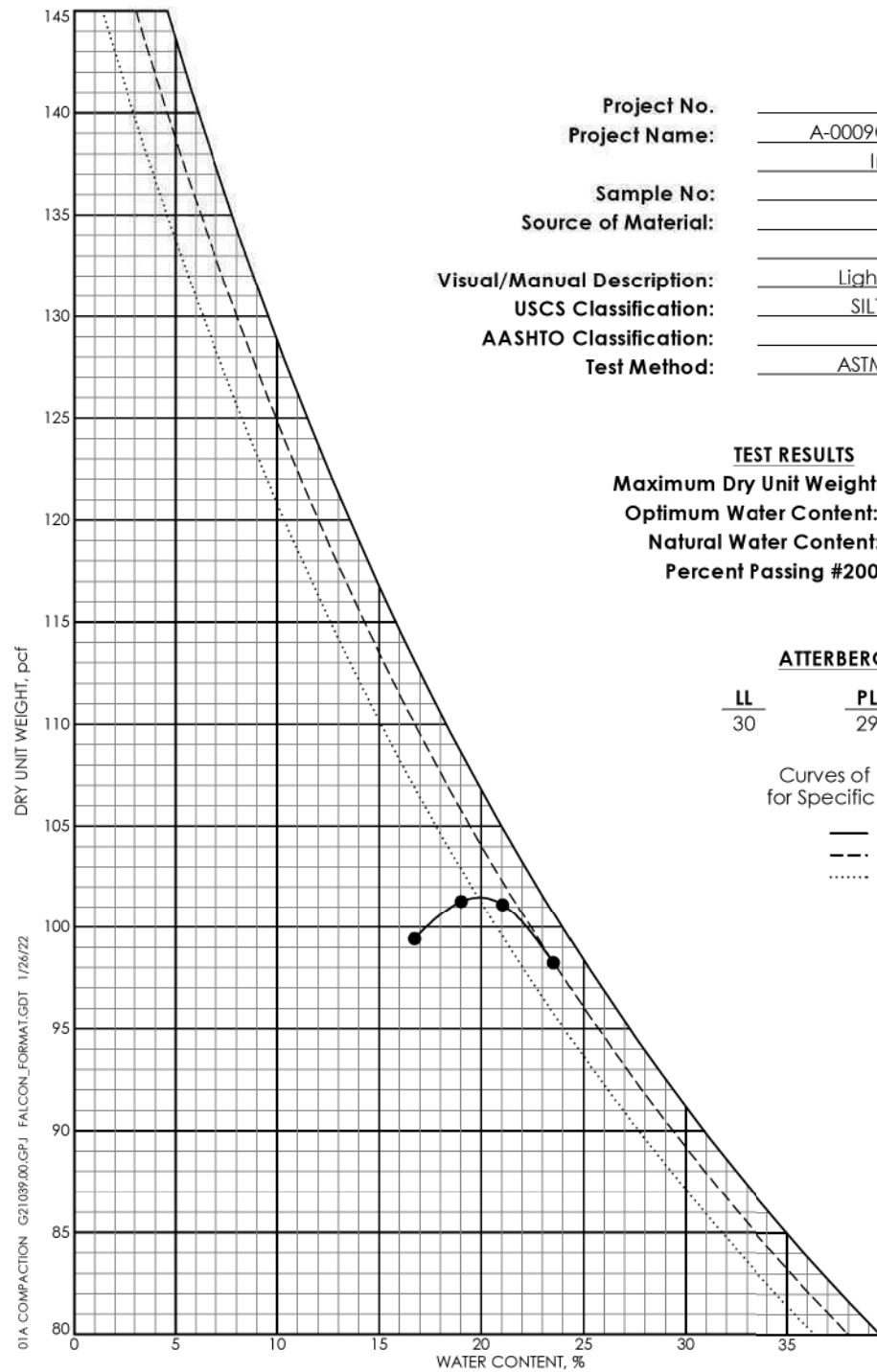


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LABORATORY COMPACTION TEST RESULTS

PAGE 5 OF 8



Project No: G21039.00  
 Project Name: A-0009C Proposed Corridor Improvements  
 Sample No: Bulk-5  
 Source of Material: -L-336+69  
 Visual/Manual Description: Light Yellowish Brown  
 USCS Classification: SILT with SAND (ML)  
 AASHTO Classification: A-4  
 Test Method: ASTM D698 Method A

**TEST RESULTS**  
 Maximum Dry Unit Weight: 101.5 PCF  
 Optimum Water Content: 19.9 %  
 Natural Water Content: 18.8 %  
 Percent Passing #200: 71.4 %

**ATTERBERG LIMITS**  
 LL / 30      PL / 29      PI / 1

Curves of 100% Saturation for Specific Gravity Equal to:

- 2.6
- - - 2.5
- ..... 2.4

FALCON ENGINEERING

1210 TRINITY RD., SUITE 110, Cary, NC 27513

CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T-193 / ASTM D-1883

PROJECT #: G21039.00      TEST PERFORMED BY: JG / CS      DATE: 1/21/2022

PROJECT NAME: CG2 A-0009C

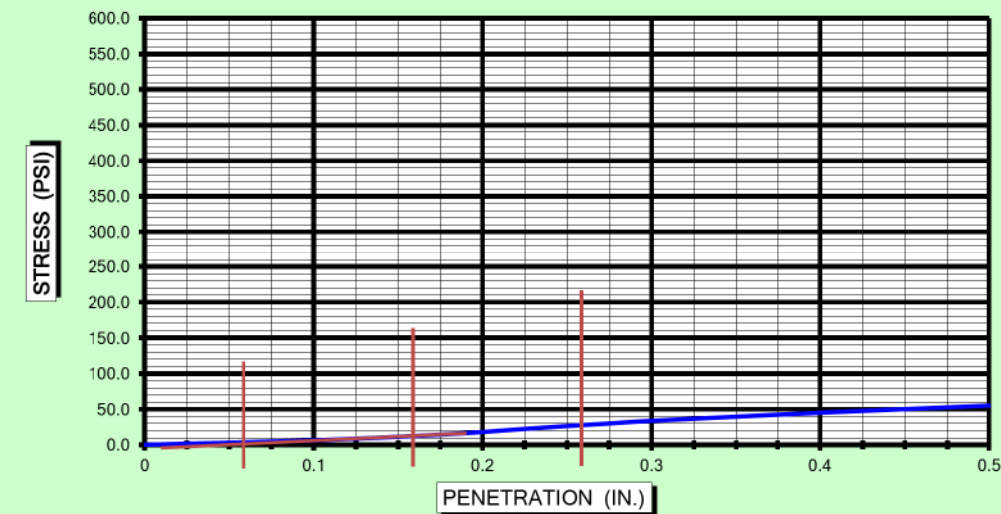
Boring #: Bulk-5      SAMPLE #: Bulk-5      DEPTH: 15.0-20.0

SOIL DESCRIPTION: Silt with Sand (ML) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	101.5 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	19.9%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	99.6 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	19.9%	FINAL MOISTURE CONTENT	32.6%
PERCENT COMPACTION	98.1%	SWELL	4.04%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	0.6	1.2
CBR VALUE AT .2"	1.2	1.9

STRESS-PENETRATION CURVE



LIQUID LIMIT 30      PLASTIC LIMIT 29      PLASTIC INDEX 1



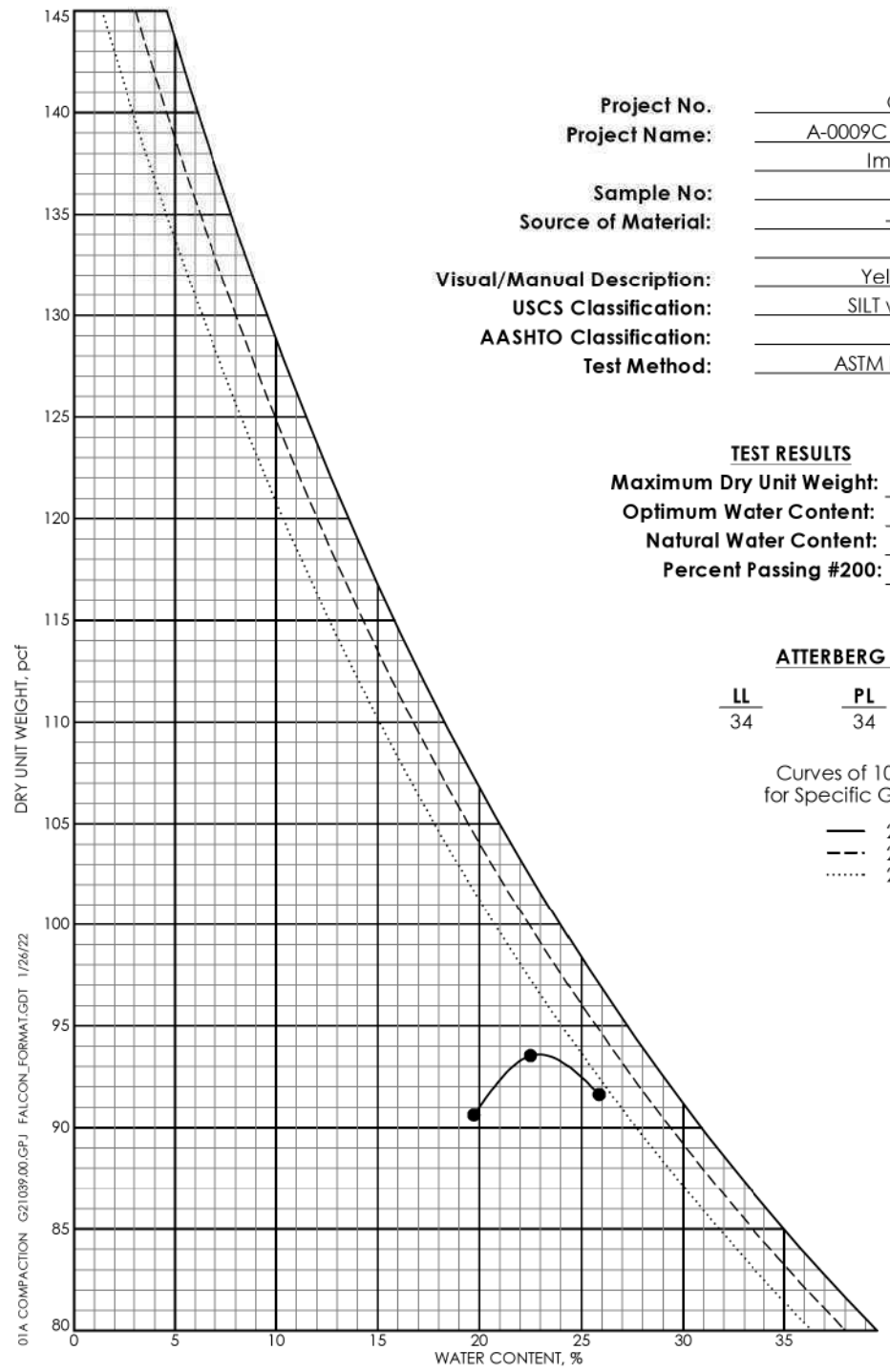


**LABORATORY COMPACTION TEST RESULTS**  
PAGE 6 OF 8

Project No: G21039.00  
 Project Name: A-0009C Proposed Corridor Improvements  
 Sample No: Bulk-6  
 Source of Material: -Y2-29+49  
 Visual/Manual Description: Yellowish Brown  
 USCS Classification: SILT with SAND (ML)  
 AASHTO Classification: A-4  
 Test Method: ASTM D698 Method A

**TEST RESULTS**  
 Maximum Dry Unit Weight: 93.6 PCF  
 Optimum Water Content: 22.9 %  
 Natural Water Content: 10.9 %  
 Percent Passing #200: 73.4 %

**ATTERBERG LIMITS**  
 LL / 34      PL / 34      PI / NP  
 Curves of 100% Saturation for Specific Gravity Equal to:  
 — 2.6  
 - - - 2.5  
 ..... 2.4



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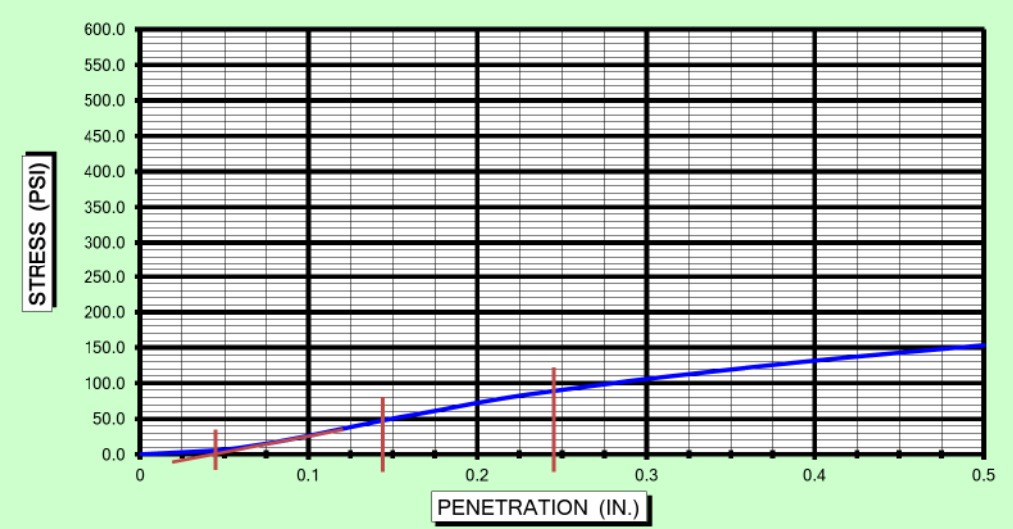
**CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL**

AASHTO T-193 / ASTM D-1883  
 PROJECT #: G21039.00 TEST PERFORMED BY: JG / CS DATE: 1/21/2022  
 PROJECT NAME: CG2 A-0009C  
 Boring #: Bulk-6 SAMPLE #: Bulk-6 DEPTH: 1.0-3.0  
 SOIL DESCRIPTION: Silt with Sand (ML) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	93.6 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	22.9%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	91.7 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	22.9%	FINAL MOISTURE CONTENT	35.6%
PERCENT COMPACTION	98.0%	SWELL	2.26%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	2.6	4.8
CBR VALUE AT .2"	4.8	5.9

**STRESS-PENETRATION CURVE**



LIQUID LIMIT	34	PLASTIC LIMIT	NP	PLASTIC INDEX	NP
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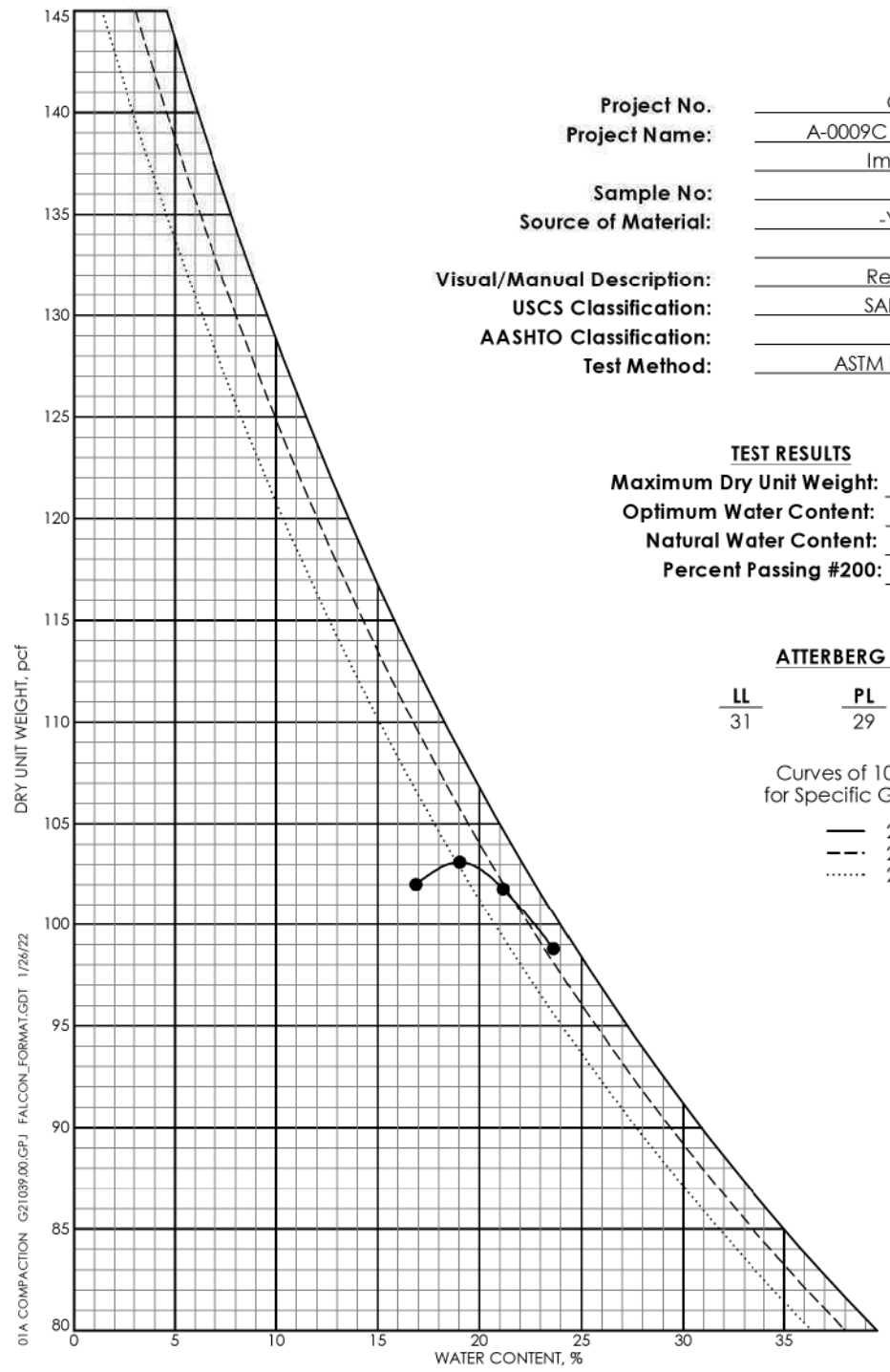


**LABORATORY COMPACTION TEST RESULTS**  
PAGE 7 OF 8

Project No: G21039.00  
 Project Name: A-0009C Proposed Corridor Improvements  
 Sample No: Bulk-7  
 Source of Material: -Y2-46+66  
 Visual/Manual Description: Reddish Brown  
 USCS Classification: SANDY SILT (ML)  
 AASHTO Classification: A-4  
 Test Method: ASTM D698 Method A

**TEST RESULTS**  
 Maximum Dry Unit Weight: 103.1 PCF  
 Optimum Water Content: 19.0 %  
 Natural Water Content: 30.4 %  
 Percent Passing #200: 56.1 %

**ATTERBERG LIMITS**  
 LL / 31    PL / 29    PI / 2  
 Curves of 100% Saturation for Specific Gravity Equal to:  
 — 2.6  
 - - - 2.5  
 ..... 2.4



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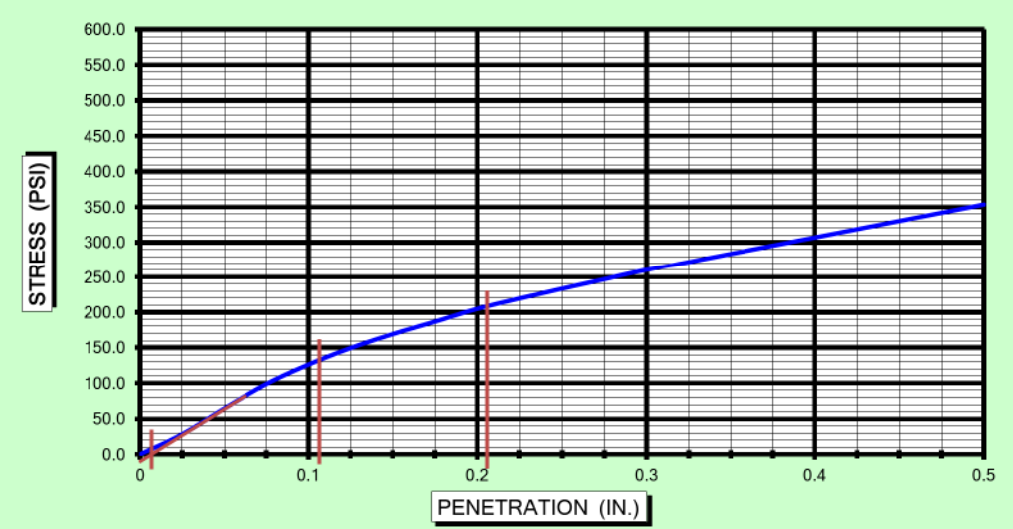
**CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL**

AASHTO T-193 / ASTM D-1883  
 PROJECT #: G21039.00 TEST PERFORMED BY: JG / CS DATE: 1/21/2022  
 PROJECT NAME: CG2 A-0009C  
 Boring #: Bulk-7 SAMPLE #: Bulk-7 DEPTH: 1.0-3.0  
 SOIL DESCRIPTION: Sandy Silt (ML) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	103.1 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	19.0%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	101.5 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	19.0%	FINAL MOISTURE CONTENT	26.7%
PERCENT COMPACTION	98.5%	SWELL	0.69%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	12.6	13.2
CBR VALUE AT .2"	13.6	13.9

**STRESS-PENETRATION CURVE**



LIQUID LIMIT	31	PLASTIC LIMIT	29	PLASTIC INDEX	2
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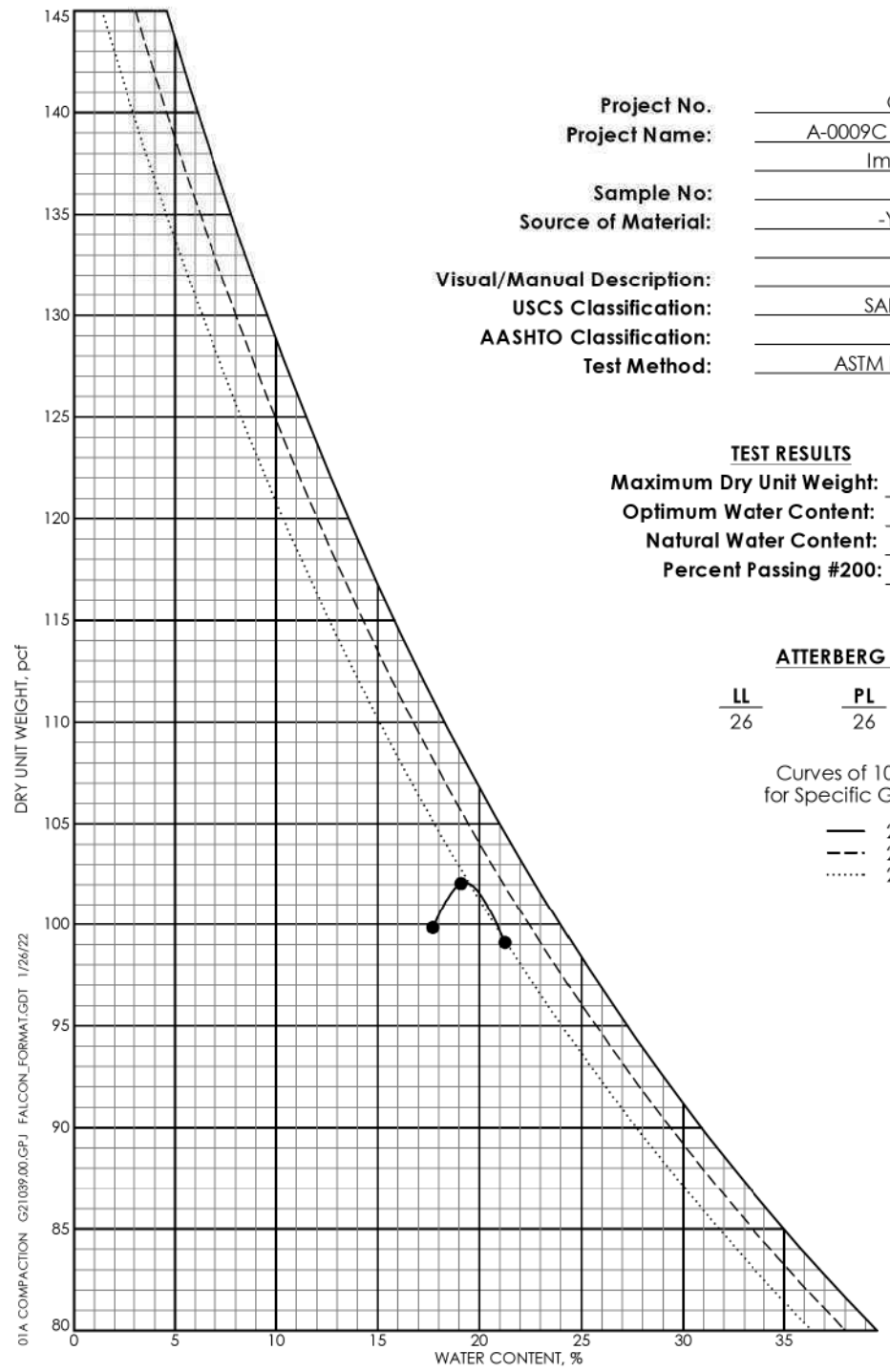


**LABORATORY COMPACTION TEST RESULTS**  
PAGE 8 OF 8

Project No: G21039.00  
 Project Name: A-0009C Proposed Corridor Improvements  
 Sample No: Bulk-8  
 Source of Material: -Y2-101+08  
 Visual/Manual Description: Brown  
 USCS Classification: SANDY SILT (ML)  
 AASHTO Classification: A-4  
 Test Method: ASTM D698 Method A

**TEST RESULTS**  
 Maximum Dry Unit Weight: 102.1 PCF  
 Optimum Water Content: 19.3 %  
 Natural Water Content: 19.6 %  
 Percent Passing #200: 54.9 %

**ATTERBERG LIMITS**  
 LL / 26      PL / 26      PI / NP  
 Curves of 100% Saturation for Specific Gravity Equal to:  
 — 2.6  
 - - - 2.5  
 ..... 2.4



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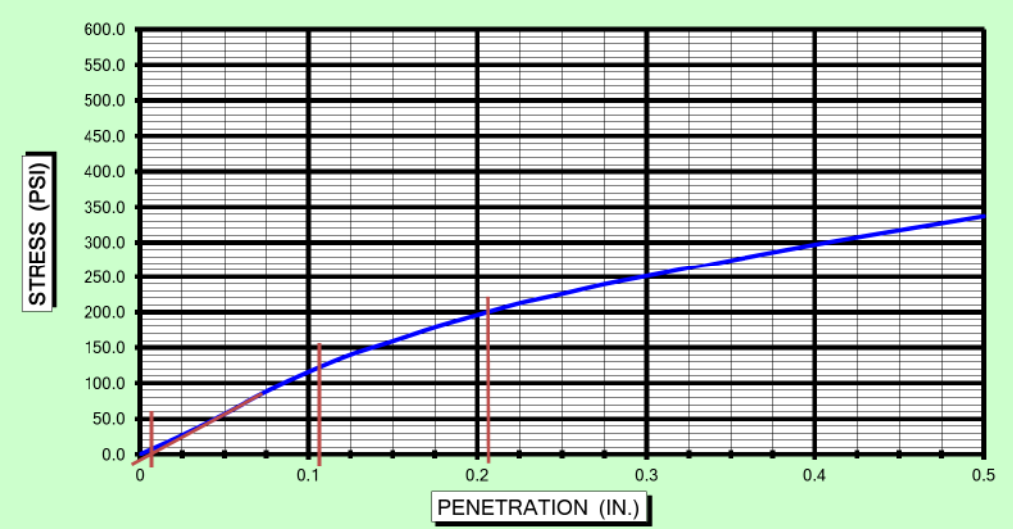
**CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL**

AASHTO T-193 / ASTM D-1883  
 PROJECT #: G21039.00 TEST PERFORMED BY: JG / CS DATE: 1/21/2022  
 PROJECT NAME: CG2 A-0009C  
 Boring #: Bulk-8 SAMPLE #: Bulk-8 DEPTH: 1.0-3.0  
 SOIL DESCRIPTION: Sandy Silt (ML) | A-4

COMPACTION METHOD	ASTM D1883	SOAK	96 HRS.
MAXIMUM DRY DENSITY	102.1 PCF	STRAIN RATE	.05 IN / MIN.
OPTIMUM MOISTURE CONTENT	19.3%	LOAD CELL	6000
TEST DATA		SURCHARGE WEIGHT	
DRY DENSITY	100.0 PCF	SURCHARGE PER SQUARE FOOT	51 lbs/sq.ft.
MOISTURE CONTENT	19.5%	FINAL MOISTURE CONTENT	25.7%
PERCENT COMPACTION	97.9%	SWELL	0.54%

	ACTUAL	CORRECTED
CBR VALUE AT .1"	11.6	12.3
CBR VALUE AT .2"	13.0	13.3

**STRESS-PENETRATION CURVE**



LIQUID LIMIT	26	PLASTIC LIMIT	NP	PLASTIC INDEX	NP
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