

**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**

9/18/19

See Sheet 1A For Index of Sheets
See Sheet 1-B For Conventional Symbols

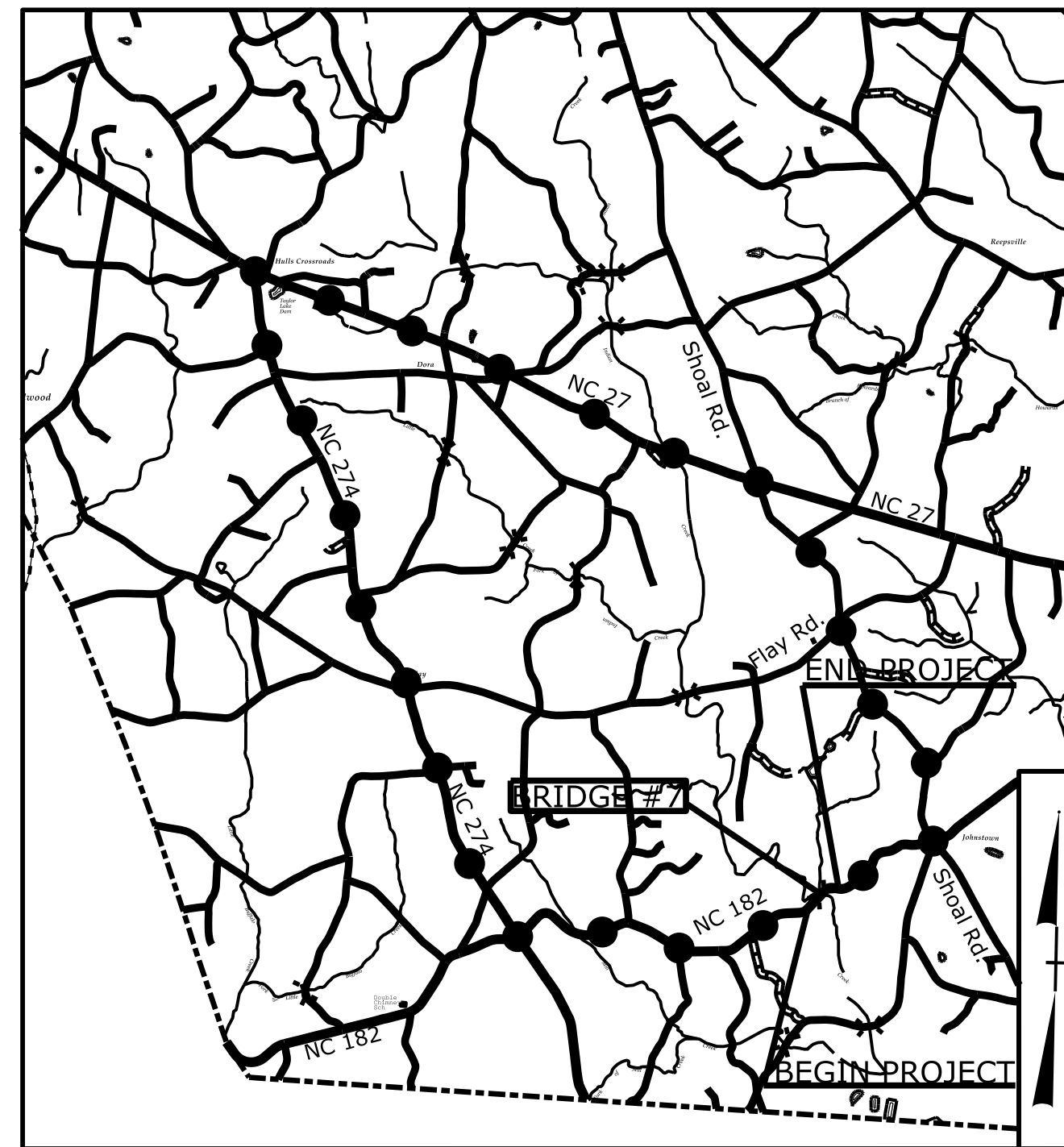
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4571	RW01	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

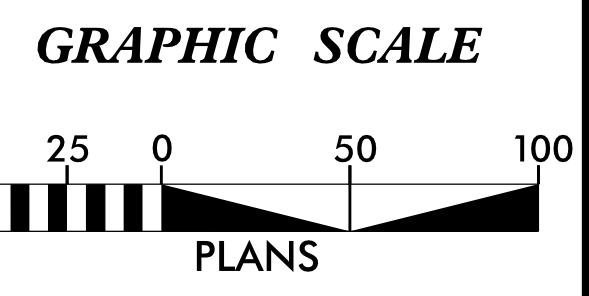
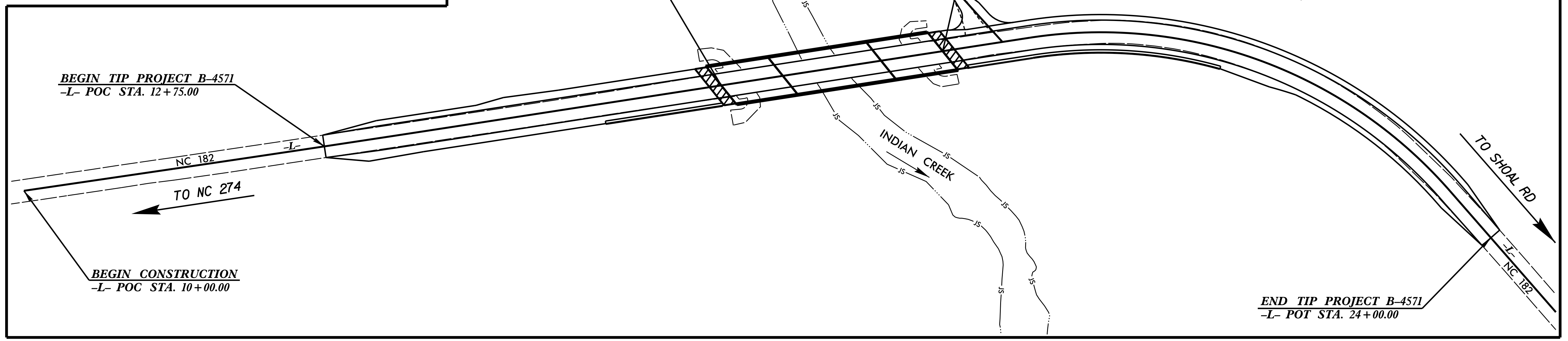
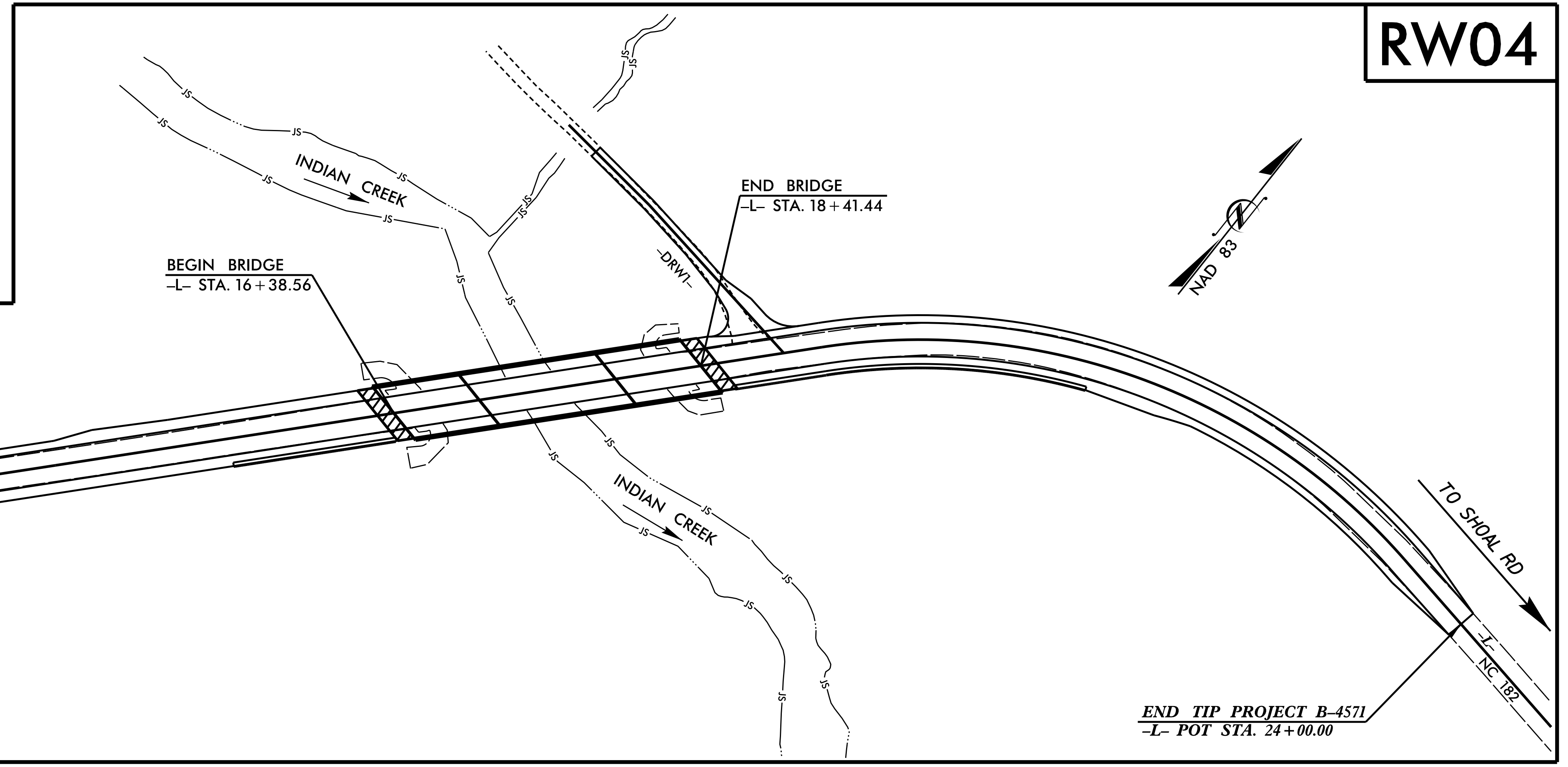
SURVEY CONTROL, EXISTING CENTERLINES,
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

LINCOLN COUNTY

TIP PROJECT: B-4571



OFF SITE DETOUR
VICINITY MAP
NOT TO SCALE



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4571-1" WITH NAD 83/CORS96 STATE PLANE GRID COORDINATES OF NORTHING: 623,431.702(ft) EASTING: 1,290,872.963(ft) ELEVATION: 857.71(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999842
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4571-1" TO -L- STATION 10+00.00 IS N 49°42'36.0" E 286.13(ft)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

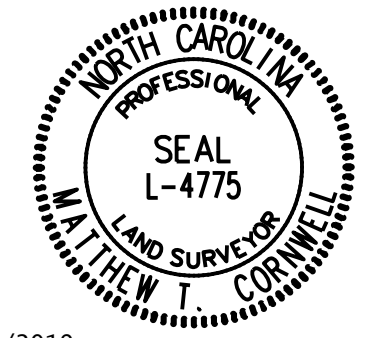
TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

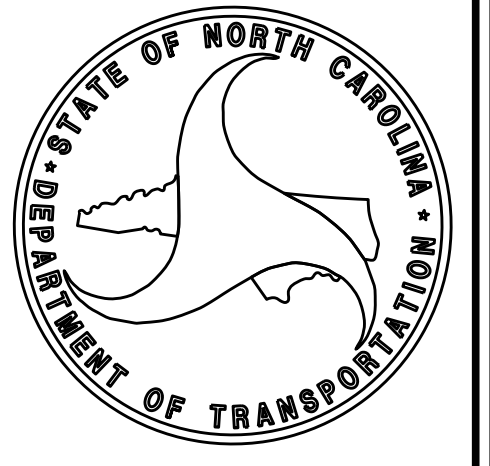
RIGHT OF WAY DATE:
1/4/2019

LETTING DATE:
10/15/2019

PROFESSIONAL LAND SURVEYOR



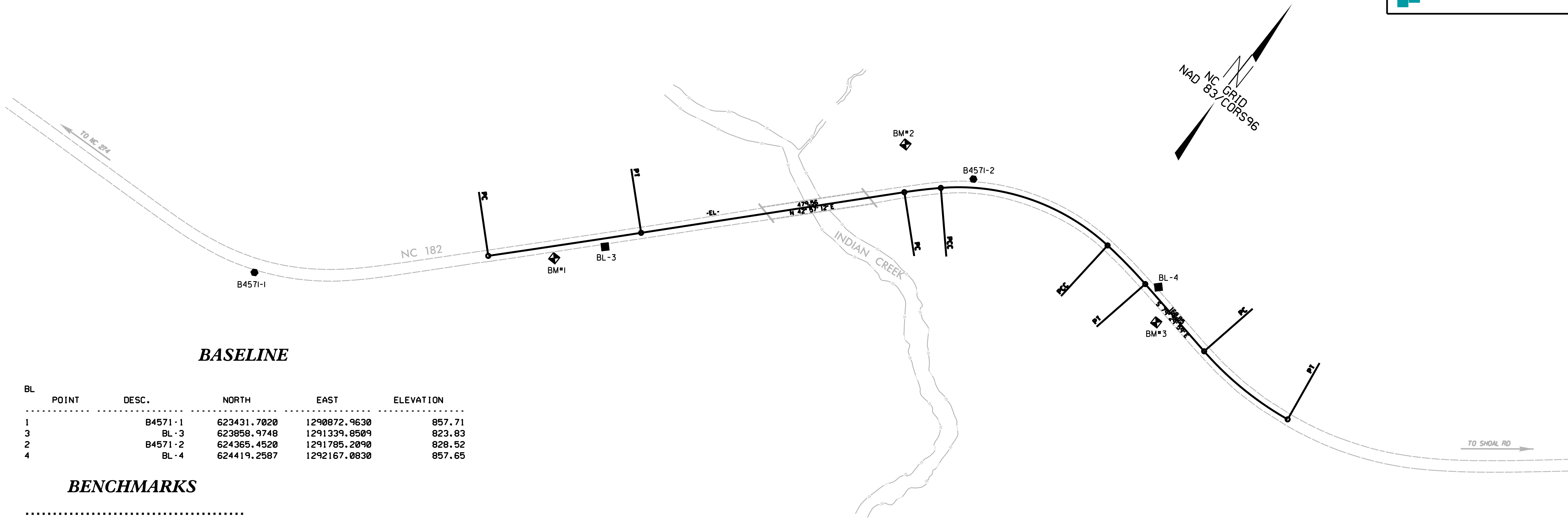
DocuSigned by:
Matthew J. Cornwall
9/19/2019
SIGNATURE: _____ Date: _____



\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$
\$\$\$\$\$ DGN\$\$\$\$\$
\$\$\$\$\$ USERNAME\$\$\$\$\$

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



BASELINE

BL POINT	DESC.	NORTH	EAST	ELEVATION
1	B4571-1	623431.7020	1290872.9630	857.71
3	BL-3	623858.9748	1291339.8509	823.83
2	B4571-2	624365.4520	1291785.2090	828.52
4	BL-4	624419.2587	1292167.0830	857.65

BENCHMARKS

.....
 BM1 ELEVATION = 828.17
 N 623786 E 1291281
 RR SPIKE IN 14" SWEET GUM

BM2 ELEVATION = 814.74
 N 624339 E 1291651
 RR SPIKE IN 24" OAK

BM3 ELEVATION = 861.08
 N 624367 E 1292203
 RR SPIKE IN 16" CHERRY

EXISTING ALIGNMENT

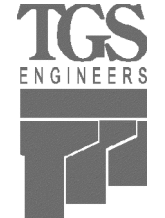
EL POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	623715.909	1291184.955							
CURVE			N 43°10'07.7" E	278.41	00°25'52.0"(L.T)	00°09'17.5"	278.41	139.20	37000.00
PT	623918.962	1291375.426							
LINE			N 42°57'11.6" E	479.56					
PC	624269.955	1291702.198							
CURVE			N 45°03'32.4" E	66.14	04°12'41.5"(RT)	06°21'58.3"	66.15	33.09	900.00
PCC	624316.675	1291749.014							
CURVE			N 70°44'21.1" E	317.55	47°08'55.8"(RT)	14°25'55.9"	326.69	173.23	397.00
PCC	624421.426	1292048.792							
CURVE			S 82°35'34.9" E	97.13	06°11'12.1"(RT)	06°21'58.3"	97.18	48.64	900.00
PT	624408.904	1292145.114							
LINE			S 79°29'58.9" E	160.85					
PC	624379.591	1292303.267							
CURVE			S 89°07'27.6" E	193.94	19°14'57.5"(L.T)	09°52'42.9"	194.86	98.36	580.00
PT	624376.627	1292497.188							

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

6/25/19
 REVISIONS
 25-JUN-2019 07:44
 C:\Users\mccornwell\OneDrive\Desktop\B4571\B4571-1\B4571-1.rw02c-1.dgn
 mccornwell AT MICORNWELL L L P

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-4571	RW02D-1
Location and Surveys	
 TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO. C-0275	

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	623616.7290	1291091.2164
PC	11+36.47	623715.9087	1291184.9548
PT	14+14.87	623918.9615	1291375.4261
PC	19+21.46	624289.7376	1291720.6150
PT	23+43.50	624416.4801	1292104.7501
POT	25+45.41	624379.5908	1292303.2668

Y

TYPE	STATION	NORTH	EAST
POT	10+00.00	624292.8980	1291575.0936
PC	10+50.00	624284.5773	1291624.3964
PT	10+73.52	624277.9852	1291646.9151
POT	11+22.37	624258.8553	1291691.8639

DRW1

TYPE	STATION	NORTH	EAST
POT	10+00.00	624292.8980	1291575.0936
POT	11+30.12	624271.2443	1291703.3979

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

6/25/19

P5 JUN-2019 07:26
 C:\Users\jmc\OneDrive\Documents\B4571\B4571-1\B4571-1\B4571-1\B4571-1.dgn
 PROJECT: B4571-1\B4571-1\B4571-1.dgn

RIGHT OF WAY & PERMANENT EASEMENT CONTROL SHEET

PROJECT REFERENCE NO. B-4571	SHEET NO. RW03E-1
Location and Surveys	
<div style="font-size: 8px; margin-top: 5px;"> TGS ENGINEERS 804-C N. LAFAYETTE ST SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275 </div>	
PROJECT SURVEYOR	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+68.00	-30.00	623832.1907	1291253.2566
L	12+75.00	30.00	623796.2416	1291301.8021
L	12+93.00	-72.00	623879.1316	1291239.6984
L	13+73.00	-42.00	623916.9830	1291316.1677
L	14+40.00	-41.00	623965.2887	1291362.5384
L	14+50.00	63.00	623901.7421	1291445.4711
L	16+10.00	-70.00	624109.4740	1291457.1512
L	19+21.46	-70.00	624337.4357	1291669.3813
L	19+21.46	75.00	624238.6325	1291775.5083
L	20+00.00	-50.00	624382.1769	1291749.5554
L	20+50.00	60.00	624316.8409	1291850.6808
L	21+50.00	50.00	624359.4467	1291926.8396
L	23+43.50	50.00	624367.3217	1292095.6153
L	23+43.50	-50.00	624465.6386	1292113.8850
L	24+00.00	-29.93	624435.5861	1292165.7694
L	24+00.00	30.07	624376.5960	1292154.8076

PERMANENT EASEMENT MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	10+00.00	-64.11	623660.7661	1291044.6230
L	10+00.00	-30.00	623637.3371	1291069.4154
L	17+90.66	71.67	624145.1638	1291683.9409
L	18+10.00	90.00	624146.8319	1291710.5371
L	18+50.00	73.18	624187.5687	1291725.4832
L	19+81.03	-96.47	624405.3771	1291703.5510
L	19+82.56	-103.80	624412.2679	1291700.4304
L	19+96.92	-91.80	624413.6153	1291721.7755
L	19+98.24	-99.20	624420.5187	1291718.6492
L	20+51.58	-50.00	624413.4372	1291798.0353

NOT SET - FALLS IN CREEK
NOT SET - FALLS IN CREEK

I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this day 9/19/2019

DocuSigned by:
Matthew J. Cornwell

Professional Land Surveyor

L-4775
PLS #

Seal

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
2. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

REVISIONS

9/19/2019

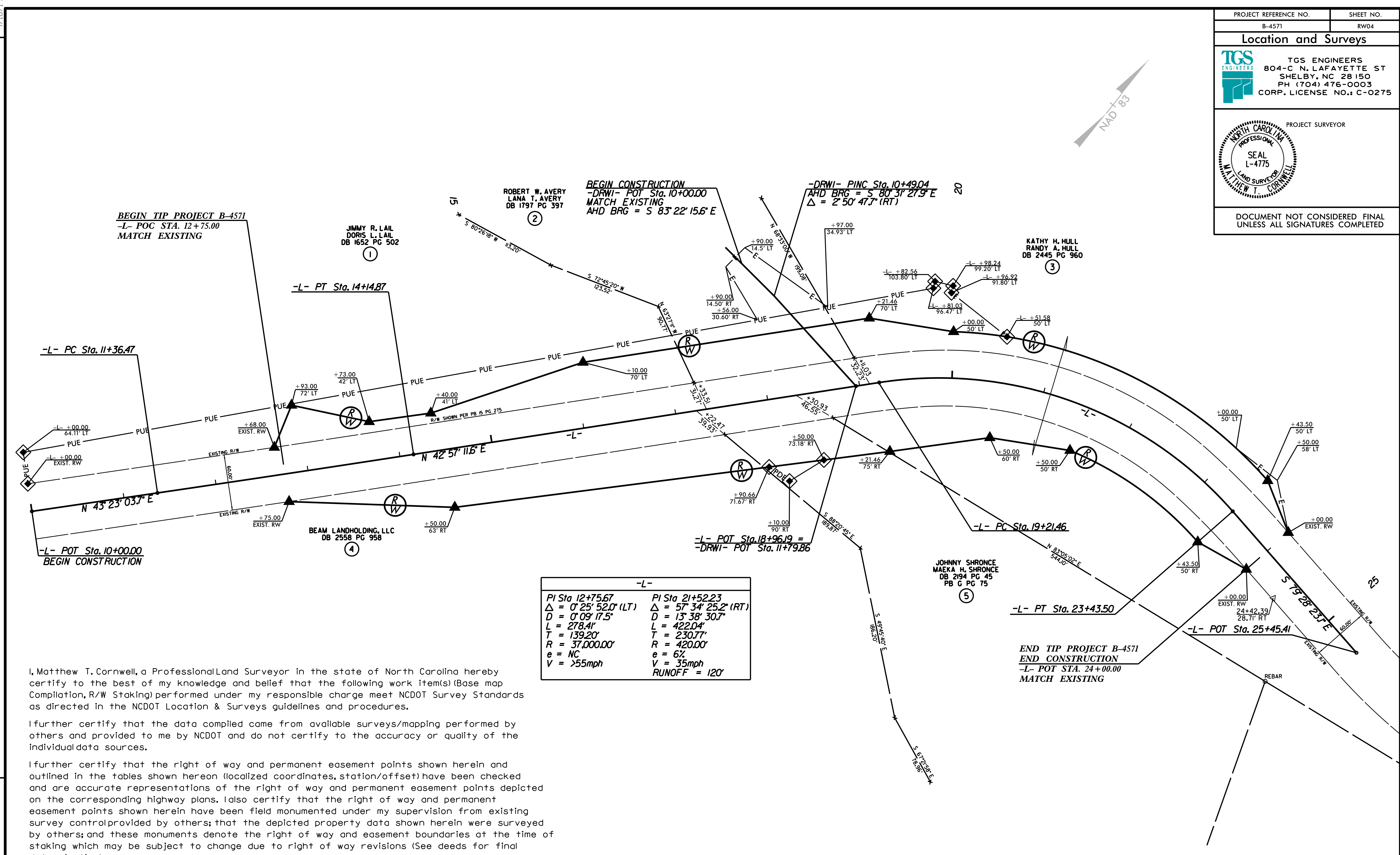
I:\SEP-2019\44372
 C:\PE\Projects\54571\1\S12-19-032.RW.Staking\PEF...
 C:\PE\Projects\54571\1\S12-19-032.RW.Staking\PEF...
 C:\PE\Projects\54571\1\S12-19-032.RW.Staking\PEF...

Location and Surveys

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

PROJECT SURVEYOR
NORTH CAROLINA PROFESSIONAL LAND SURVEYOR
SEAL L-4775
MATTHEW T. CORNWELL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



-L-	
PI Sta 12+75.67	PI Sta 21+52.23
$\Delta = 0^\circ 25' 52.0''$ (LT)	$\Delta = 57^\circ 34' 25.2''$ (RT)
D = 0' 09' 17.5"	D = 13' 38' 30.7"
L = 278.4'	L = 422.04'
T = 139.20'	T = 230.77'
R = 37,000.00'	R = 420.00'
e = NC	e = 6%
V = >55mph	V = 35mph
	RUNOFF = 120'

I, Matthew T. Cornwell, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this day 9/19/2019

DocuSigned by:
Matthew T. Cornwell
Professional Land Surveyor L-4775
Seal PLS #

- NOTES:
- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
 - PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

REVISIONS

9/18/2019
19-SEP-2019 14:20
C:\Users\mcorne\OneDrive\Documents\Projects\B-4571\19-032-RW-Staking\PEF..._B-4571_CONL_TGS3\Check_PEF_files\B-4571_Ls_rw04.dgn
User: mcorne