

Survey Report

TIP Number:

77-0432

Project Number:

17BP.6.R.77

Bridge# 432, Division 6, Robeson County

August 12, 2016

Submitted by:



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8-12-16

PROJECT DESCRIPTION

The purpose of this project was to provide survey data for Bridge #432 over Back Swamp on SR 1157 (Henry Berry Rd.). The limits for this project are 300' North and South of centerline bridge along SR 1157 (Henry Berry Rd.), and 75' from centerline on each side of road. The hydrographic survey extended 125' upstream and downstream from edge of bridge. All data was collected and processed electronically following guidelines set forth by Location and Surveys unit.

Dates of survey: July 6, 2016 – August 10, 2016

CONTROL

Horizontal

Control was established on this project utilizing GPS point (77-0432-1 & BL-1) established by NCDOT. The localized coordinate system developed for this project is based on the State Plane Coordinates established by NCDOT for monument 77-0432-1 with NAD 83 NA 2011 State Plane Grid Coordinates of Northing: 317791.066 (ft.) Easting: 1934910.269 (ft.). Site scale factor= 1.0000695500 AVCGF= 0.9999304548. All linear dimensions are localized horizontal distances. A control traverse was run through the project resulting in a raw, unadjusted closure of 1: 113811.

Vertical

- The vertical datum is based on NCDOT monument "77-0432-1" (ELEV. 148.19') NAVD 88, Geoid G12NC (provided).
- All baseline control elevations were established using differential leveling, and found to meet Class A standards per NC General Statutes, Chapter 89C Section 21 NCAC 56.1605.

BASELINE DESCRIPTIONS

- All baselines were established by SEPI Engineering.
- Baseline points set on this project were 77-0433-1, BL-1, BL-2 and BL-3. These points are numbered 101, 1, 2 and 3 in the submitted GPK file.
- Project direction is based on GPS control provided by NCDOT.
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EXISTING ALIGNMENTS

Line -EL-

- Follows the centerline of SR 1157 (Henry Berry Rd.).
- This is a geometric best-fit representation of the existing roadway.
- No centerline points were set.

UTILITIES

- SEPI Engineering collected all utility poles within the project limits.

EXISTING RIGHT-OF-WAY

Existing Right-of-way as shown in FS file was determined by SEPI Engineering using the most current retrievable deed descriptions and survey plats.

PROPERTY

- Black swamp is commonly referred to as Back swamp per various deeds and plats.

PROPERTY OWNER CONTACTS

Property owners affected by this project were contacted via mailed letter produced using Propcon Reporter (Bridge Replacement Letter). No comments were received from any of the property owners contacted.

DTM SETTINGS & NOTES

Curve stroke tolerance: 0.15

Minimum linear distance: 30

Dissolve option: SIDE

Side length: 100

- Some connected breaklines resulted in duplicate points with the same elevation. No errors were found.

FS FILE

- For this project the edge of vegetation/scour line was used for the Jurisdictional Stream line shown in the FS file.

DELIVERABLES

77-0432_NCDOT_FS_160812.DGN
77-0432_LS_DTM_160812.DGN
77-0432_LS_GPK_160812.GPK
77-0432_LS_TNL_160812.TIN
77-0432_LS_BASELINE_160812.TXT
77-0432_LS_DEEDBOOK_160812.PDF
77-0432_LS_PLATBOOK_160812.PDF
77-0432_LS_POC_160812.MDB
77-0432_LS_PDF_160812.TXT
77-0432_LEAST SQUARES REPORT_160812.RPT
77-0432_LEVEL LOOPS_160812.PDF
77-0432_LS_SR_160812.PDF
77-0432_LS_SURVEYCERT_160812.PDF



On Bridge (Facing North)



On Bridge (Facing South)



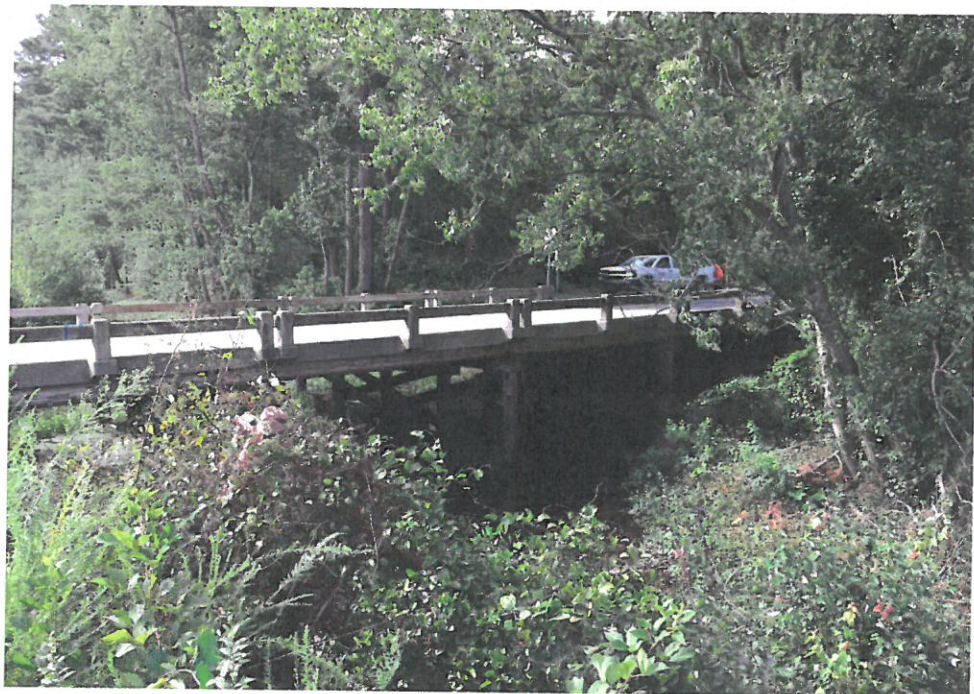
Back Swamp (on bridge, facing East)



Back Swamp (on bridge, facing West)



Underside of bridge (facing East)



Underside of bridge (facing West)