

Survey Report

TIP Number: 17BP.7.R.75

Project Number: 67-0077

Bridge 77, Division 7, Orange County

October 31, 2013

Submitted by:



1025 Wade Ave. Raleigh, NC 27605



Michael R. Jackson
10/31/2013

Job Description

The purpose of this project was to provide survey data for Bridge #77 on SR 1113 (Arthur Minnis Rd.) in Orange County. The limits for this project extend 300 ft. from each end of the bridge along SR 1113, and 200 ft. upstream and downstream from centerline SR 1113 along New Hope Creek. All data was collected and processed electronically following guidelines set forth by Location and Surveys unit.

This project was prepared in English units.

Dates of survey: October 25, 2013

Control

Horizontal:

Control was established on this project utilizing GPS points (670077-1 and 670077-2) provided by SEPI Engineering & Construction. The localized coordinate system developed for this project is based on the State Plane Coordinates established by SEPI Engineering & Construction for monument "670077-2" with NAD 83 (2011) State Plane Grid Coordinates of Northing: 818392.67 (ft) Easting: 1963990.50 (ft). The average combined grid factor used on this project (ground to grid) is: (0.99993758). All linear dimensions are localized horizontal distances. A control traverse was run through the project resulting in a raw, unadjusted closure of 1/1411092.

Vertical:

The vertical datum is based on SEPI monument "670077-2" (ELEV. 515.30') NAVD 88, Geoid G12NC.

All baseline control elevations were established and verified using differential leveling.

Baseline Descriptions

Baselines were established along the project corridor by Sepi Engineering & Construction. Baseline points set on this project were BL-1, 670077-2, BL-2, and BL-3. These points are numbered BL1, GPS2, BL2, and BL3 in the submitted GPK file.

Existing Alignments

Line -EL-

- Follows the centerline of SR 1113 (Arthur Minnis Rd.).
- This is a geometric best-fit representation of the existing roadway.
- No centerline points were set.

Utilities

Sepi Engineering personnel collected the underground utility data using NC 811 utility markings as provided by ticket #A132550930, dated 09/12/2013. The following utility owners were notified:

Utility

Phone
Power

Owner

ATT
Piedmont Electrical Membership Corp.

- An unknown cable was found attached to the southwest wing walls at time of survey. This cable runs from the northwest side of bridge to the southeast side, following the underside of the bridge.
- Orange ATT paint markings were found on site at time of survey.

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 Owner Contacts

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

DTM SETTINGS

Curve stroke tolerance: 0.15

Minimum linear distance: 30

Dissolve option: SIDE

Side length: 100

Deliverables

Below is a list of files submitted for this project.

67-0077_LS_FS_131031.DGN

67-0077_LS_DTL_131031.DGN

67-0077_LS_GPK_131031.GPK

67-0077_LS_TNL_131031.TIN

67-0077_LS_PDF_131031.TXT

67-0077_LS_POC_131031.MDB

67-0077_LS_SR_131031.PDF

67-0077_LS_SURVEYCERT_131031.PDF

67-0077_LS_DEEDBOOK_131031.PDF

67-0077_LS_PLATBOOK_131031.PDF



Southwest End of Bridge (Facing Northeast)



Northeast End of Bridge (Facing Southwest)



New Hope Creek (on bridge, facing Southeast)



New Hope Creek (on bridge, facing Northwest)



Side View (in creek, facing Southeast)



Side View (in creek, facing Northwest)