

Date: November 13th, 2014

To: Mr. Larry Reser, Chief of Surveys
Oklahoma Department of Transportation
Survey Division

From: Mr. Kenny A. Isaacs
Oklahoma Professional Land Surveyor #1213

RE: SWO 5076(1), J/P 29068(04) S.H. 10, Bridge over Big Cabin Creek.

HISTORICAL LETTER AND WRITTEN REPORT OF SURVEY

1. GENERAL

- A. Survey began October 24, 2014
Survey completed November 18, 2014
- B. The measurement unit for this project will be the U.S. Survey Foot

2. ASSIGNMENT

Said survey was assigned to me by Mr. Larry Reser, Chief of Surveys, Oklahoma Department of Transportation.

3. PURPOSE

The purpose of this survey is to furnish sufficient data to develop plans to construct a new bridge over Big Cabin Creek on S.H.10, 3.6 miles West of U.S. 59.

4. LIMITS

-S.H.10: This survey will begin at P.O.T. Sta. 1417+66.20 (NS-439.5 ¼ Section Line) and will extend East to P.O.T. Sta. 1460+00.00 as established under SWO 2040(1) survey and shown on FAS NO. S-14(2)S plans (approximate centerline length = 0.80 mile).

5. ALIGNMENT

-S.H.10: The Centerline of Survey for this project will be along and identical to the centerline of present S.H. 10 as established under SWO 2040(1) survey and shown on FAS No. S-14(2)S plans.

6. STATIONING

-S.H.10: Stationing for this survey will be taken from SWO 2040(1) survey and GFAS No. S-14(2)S plans.

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7. HORIZONTAL CONTROL

- A. This survey is on the NGS Oklahoma State Plane Coordinate System, NAD 83 (HPGN), Lambert Projection, South Zone, derived by O.P.U.S. Solution and utilizing NGS Monument: HARVEY along with C.O.R.S. ID: MOA2, MOCA, MOMO.
- B. Primary Horizontal Control on this project was established on two monuments, both being ¾"X36" rebar with 2" aluminum caps stamped C-18-461 (Located near the Beginning of Project, North side of S.H. 10) & C-18-462 (near the East end of the project, South side of S.H. 10).
- C. Secondary Horizontal Control was established along the Centerline of Survey, points were set at the Beginning and at the End of the Centerline of Survey and at 1000' intervals, points are referenced as shown on Survey Data sheets.
- D. The positional error for any point in the Primary Control Network, Secondary Control Network and all Section Boundaries does not exceed 0.10 foot (Local Accuracy at 95% Confidence). This accuracy will meet or exceed the superseded NGS Second Order, Class II Accuracy Standard (1:20,000).

8. VERTICAL CONTROL

- A. Level datum for this project is NGS, NAVD88, taken from Primary Control point C-18-461 and C-18-462. Check levels were run throughout and Benchmarks were established as shown using a Leica Digital Level and utilizing direct differential leveling techniques.
- B. Adjusted levels and vertical differences between benchmarks set are shown.
- C. As a minimum, Benchmarks established are within the closure requirements of NGS Third-Order standards.

9. PHOTO CONTROLS

No Photo Controls will be performed on this project

10. TOPOGRAPHY

Topographic and/or Surface Features data extends 150' right and left of the Centerline of Survey. Equipment used to gather this data included Trimble GPS, Trimble Total Station & Trimble Controller.

11. DTM

Cross Section data for this survey was collected in the form of a Digital Terrain Model utilizing an S6 Trimble Robotic Total Station system.

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12. LAND TIES

Land ties included establishing/re-establishing all section corners and ¼ section corners of the following sections:
T-28-N, R-20-E, I.M.; Sections 27, 28, 33 and 34.

13. EXISTING RIGHT OF WAY

Existing right of way, easements and property ownerships for this survey were obtained from deeds on file with the Marshall County Assessor.

14. UTILITIES

- A. All utility companies servicing the project area were contacted through "CALL OKIE" and the locations were obtained by conventional field methods.
- B. The information was placed in the submitted Microstation Design File and a hardcopy of ODOT form SD-7, List of Public/Private Owned Utilities, was submitted with the completed survey.

15. HAZARDOUS WASTE

No areas that could have been used or that are currently being used to store or dispose of possible contaminants were found.

15. DRAINAGE INFORMATION

Drainage areas for all drains crossing the Survey Centerline were taken from quad maps and have been scanned into a Microstation Design File.

16. PERSONNEL

K.A. Isaacs	Oklahoma Professional Land Surveyor
R.D. Lambillotte	Oklahoma Professional Land Surveyor
J.D. Laughter	Survey Crew Chief
J.D. Isaacs	Survey/Drafting Technician
J.C. Arnett	Survey Technician

17. SURVEY DATA SHEETS

Survey Data Sheets were submitted in the form of a Microstation Design per ODOT Survey Division Standards, to be incorporated into the set of drawings.

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PLS	KAI		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION SURVEY DATA SHEET (2) :SWO 5076 (1) PROJECT NO. 29068(04) SHEET NO. 22
DRAWN	JDI		
CHECKED	KAI		
APPROVED	KAI		
CREW	ISAACS		