

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.				
DESCRIPTION		REVISIONS		DATE	

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
 Survey Division (405)521-2621 Fax 405-522-0364

Date: February 9, 2012

To: Mr. Larry Reser, Chief of Surveys

From: Brendan L. Blansett, Professional Land Surveyor

Subject: SWO 4811(1) - J/P 27912(04) - SH 78 - Bryan County  
 Bridge over Chuckwa Creek, 0.9 mile North of US 70, in Durant

**HISTORICAL LETTER AND WRITTEN REPORT**

Method of Survey - Conventional Survey Methods  
 Units of Measurement - U.S. Survey Foot.  
 Survey Began - December 1, 2011  
 Survey Completed - February 9, 2012

**1. General**

**Previous Surveys and plans used on this project.**

Plans:  
 F.A.P. 5-A Plans U.S. 69 & 75 (Now S.H. 78)

**Surveys:**

SWO1811(1) City Street Bryan County  
 SWO2834 Access Road to Southeastern State College Bryan County  
 SWO4181(1) J/P23417(05) U.S. Highway 70 Bridge over Union Pacific R.R.

**2. Survey Assignment:**

This project was assigned to the Antlers Survey Crew, under my direct supervision by letter dated December 7, 2011, from Jeff A. King, Transportation Survey Manager.

**3. Purpose of Survey:**

The purpose of this survey is to obtain adequate information for the design and construction of a new bridge and approaches.

**4. Survey Limits:**

This survey began at POT Station 65+15.19 and extended North along existing S.H. 78 to POT Station 82+83.00. The width was 150' each side of existing S.H. 78. Flowline profiles extended along flowline 1,000 feet each side of Centerline.

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**5. Alignment:**

The alignment for this survey is along existing S.H. 78 as shown on F.A.P. 5-A US 69 & 75 plans, which were provided to me. OHD Standard Brass Monuments were shown in field books of previously-referenced surveys, but monuments on Centerline were not found, presumably due to intervening highway construction. From old plans and old survey books, we determined what I believe to be the Centerline of Survey as previously established. The position of this Centerline was supported by the physical centerline location of the present highway and bridge.

**6. Stationing:**

The beginning station for this survey is POT Station 65+15.19 on FAP-5A US 69 & 75 plans. The stationing for this survey is the same as the stationing on FAP-5A plans.

**7. Horizontal Control:**

Horizontal Control for this survey is the Oklahoma State Plane Coordinate System, South Zone, with data derived from a fully-constrained network adjustment of Static GPS observations on local control points, NGS Horizontal Control Monuments and CORS stations. NGS monument used was T 212 (Durant). CORS stations used were OKAR (Ardmore) and TXSR (Sherman, TX). Network adjustment was confirmed by OPUS solution on local control points.

**8. Vertical Control:**

Level datum for this survey is (NGS) N.A.V.D. 88 taken from SWO 3357(1) Field Notes. (Datum converted from NAVD 29 to NAVD 88 using NADCON). A double set of spirit levels were run with a Leica DNA10 Digital Level through the project benchmarks and tied to BM 3 from SWO4181(1) Bench Mark List, said BM 3 having been tied to NGS Station "Durant". The complete Benchmark List containing descriptions and amount of adjustment can be found in the project archive and as graphics in the Survey Data Sheets This survey meets the requirements of N.G.S. 3rd order standards as a minimum.

**9. Topography:**

Topographic information was obtained by field conventional methods, using Leica TCRA1203 total station with a Carlson Allegro CE data collector and Leica RTK GPS with Leica Viva data collectors. This information can be found in the project TOPO file.

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**10. Surface features:**

The surface features on this project were obtained by conventional field methods. A "Surface Feature File" (SFF), which is a Microstation V8i Design File containing breaklines and random ground points for contouring and quantity computations has been created and archived as per instructions.

**11. Land and Property Ties**

Complete land ties were made on Section 28 and Section 29, Township 6 South, Range 9 East, Bryan County, Oklahoma. Prior to beginning this project, I was provided with Oklahoma Certified Corner Records filed after 1996 by Jeff King, and also obtained Oklahoma Certified Corner Records filed prior to 1996. New Oklahoma Certified Corner Record forms have been prepared and are submitted with this survey. Of particular note on this survey is the North Quarter-Corner of Section 29. There are two monuments at this corner, situated approximately 18 feet apart. The monument that I rejected at this corner is positioned more closely to the midpoint between Section Corner monuments one-half mile East and one-half mile West. However, numerous monuments were recovered in Twinoaks Addition to Durant, Oklahoma, according to the recorded plat thereof, surveyed and signed by T.B. Matthews on March 16, 1926. The East line of this subdivision is the East line of the Northwest Quarter of Section 29. The monuments recovered in this subdivision support the position of the monument I accepted, which I believe to be more nearly the original location of the corner. For further information specific to each corner, I refer you to the Survey Data Sheets, and to the Certified Corner Record forms I have prepared for those corners. For a complete history of the PLSS Corners established on this project see the Survey Datasheets.

**12. Right-of-Way:**

Right-of-Way for this project computed using F.A.P. 5-A U.S. 69/75 Plans. Location of Present Right-of-Way as computed per plans was verified by legal descriptions contained in Easements for Project F.A.P. 5-A, which were provided to me by Jeff King.

**13. Utilities:**

811 Call OKIE was contacted during this project, and the location of utility lines were marked by utility owners or their representatives.

Utilities were located for this project by USIC Utility Locate Co. and representatives of the City of Durant and Chickasaw Telephone with the assistance of party personnel. This information can be found in the project TOPO file.

No depth of utility lines has been provided, nor is any shown on any dgn file.

PLS				OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION  <b>SURVEY DATA SHEET</b>  SWO 4811(1) PROJECT NO. 27912(04) SHEET NO. S002
DRAWN				
CHECKED				
APPROVED				
CREW				