

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					

W-77-740

ALL COMPUTED COORDINATE ACCURACIES ARE LISTED AS PEAK-TO-PEAK VALUES.  
FOR ADDITIONAL INFORMATION  
HTTP://WWW.NGS.NOAA.GOV/OPUS/ABOUT.JSP#ACCURACY

USER: TWENTWORTH@COBBENGR.COM DATE: MARCH 28, 2013  
RINEX FILE: LOG2321N.120 TIME: 12:16:06 UTC

SOFTWARE: PAGE5 1209.04 MASTER73.PL 082112 START: 2012/11/16 13:22:00  
EPHEMERIS: 16S17145.EPH (PRECISE) STOP: 2012/11/16 18:41:00  
NAV FILE: BRDC3210.12N OBS USED: 12688/13691 :93%  
ANT NAME: TPSHIPPER\*11 NONE H FIXED AMB: 77/ 88 :88%  
ARP HEIGHT: 2 OVERALL RMS: 0.013(M)

REF FRAME: NAD83(2011)EPOCH: 2010.0000(1)G508 (EPOCH: 2012.8761)

X: -835316.473(M) 0.013(M) -835317.254(M) 0.013(M)  
Y: -5081202.924(M) 0.006(M) -5081201.541(M) 0.006(M)  
Z: 3751928.817(M) 0.034(M) 3751928.691(M) 0.034(M)

LAT: 36 15 39.38950 0.032(M) 36 15 39.40996 0.032(M)  
E LON: 260 39 52.01981 0.012(M) 260 39 51.97996 0.012(M)  
W LON: 99 20 7.98019 0.012(M) 99 20 8.02004 0.012(M)  
EL HGT: 594.019(M) 0.014(M) 592.947(M) 0.014(M)  
ORTHO HGT: 622.225(M) 0.024(M) [NAVD88 (COMPUTED USING GEOID12A)]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (ZONE 14)	SPC (3501 OK N)
NORTHING (Y) [METERS]	4012943.520	140730.921
EASTING (X) [METERS]	469857.562	47990.010
CONVERGENCE [DEGREES]	-0.19846715	-0.78817095
POINT SCALE	0.99961119	0.99994673
COMBINED FACTOR	0.99951801	0.99985352

US NATIONAL GRID DESIGNATOR: 14SMF6985712943INAD 83)

PID	DESIGNATION	BASE STATIONS USED	LATITUDE	LONGITUDE	DISTANCE(M)
DF4058	OKCL CLINTON CORS ARP	N352859.349	W0985817.246	92359.3	
DG9774	OKBF BUFFALO CORS ARP	N364940.881	W0993828.840	68633.0	
DM7151	TXPY PERRYTON CORS ARP	N362336.089	W1004855.888	133708.4	

GJ0245 J 33 NEAREST NGS PUBLISHED CONTROL POINT  
N361449. W0991956. 1586.5

THIS POSITION AND THE ABOVE VECTOR COMPONENTS WERE COMPUTED WITHOUT ANY KNOWLEDGE BY THE NATIONAL GEODETIC SURVEY REGARDING THE EQUIPMENT OR FIELD OPERATING PROCEDURES USED.

STATE OF OKLAHOMA S.D. FORM NO. 11  
DEPARTMENT OF HIGHWAYS REVISED 3/10/75  
SURVEY DIVISION

POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY WOODWARD STATION NUMBER W-77-740 SWO 484411 DATE 03/28/2013

TYPE OF MONUMENT 5/8" IRON PIN WITH ALUMINUM CAP MONUMENT SET FOR GPS CONTROL

METHOD ESTABLISHED: TRILATERATION, TRIANGULATION, TRAVERSE, OTHER (SPECIFY)

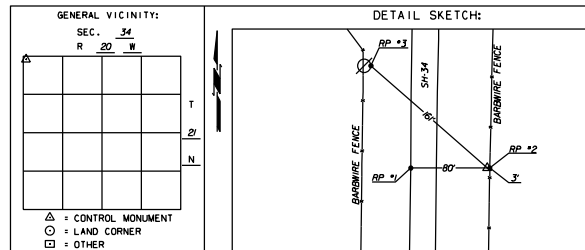
STATIC GPS OBSERVATIONS USING OPUS SOLUTIONS

HEIGHT OF INSTRUMENT ABOVE MONUMENT: \_\_\_\_\_ FEET, TYPE OF WITNESS POST \_\_\_\_\_

WRITTEN DESCRIPTION OF LOCATION: APPROXIMATELY 187' SOUTH OF EW-52 AND APPROXIMATELY 83' EAST OF NS-206.

ESTABLISHED BY: JOSEPH H. FARMER, RPLS

COORDINATE SYSTEM: <input type="checkbox"/> USC&GS, <input type="checkbox"/> OHD, <input checked="" type="checkbox"/> OTHER (SPECIFY) <u>OK STATE PLANE (NAD 83)</u>			
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE
NORTH_ZONE	X: 1574761.2245	WEST	80' RP 1 - WEST EDGE OF SH-34
ACCURACY:	Y: 467146866	EAST	77' RP 2 - FENCE LINE
3RD_ORDER		NORTHWEST	120' RP 3 - EAST FACE OF POWER POLE
GEODETIC DATA:	POSITION		ELEVATION
ANGLE OF VARIANCE (D)	LATITUDE	NORTH	
<u>00°41'14.2"</u>	<u>N3615°39'38.95"</u>	<u>2046.41'</u>	
	LONGITUDE	WEST	SOURCE: <u>NAVD88</u>
	<u>W99°20'07.9802"</u>		ACCURACY: <u>3RD</u>



STATE OF OKLAHOMA S.D. FORM NO. 11  
DEPARTMENT OF HIGHWAYS REVISED 3/10/75  
SURVEY DIVISION

POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY WOODWARD STATION NUMBER W-77-741 SWO 484411 DATE 03/28/13

TYPE OF MONUMENT 5/8" IRON PIN WITH ALUMINUM CAP MONUMENT SET FOR GPS CONTROL

METHOD ESTABLISHED: TRILATERATION, TRIANGULATION, TRAVERSE, OTHER (SPECIFY)

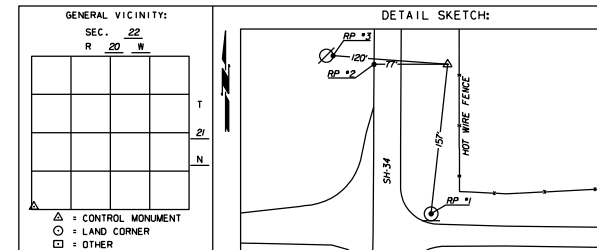
NORTHING & EASTING DERIVED BY RTK OBSERVATION AVERAGES & ELEVATION DERIVED BY DIFFERENTIAL LEVEL RUN

HEIGHT OF INSTRUMENT ABOVE MONUMENT: \_\_\_\_\_ FEET, TYPE OF WITNESS POST \_\_\_\_\_

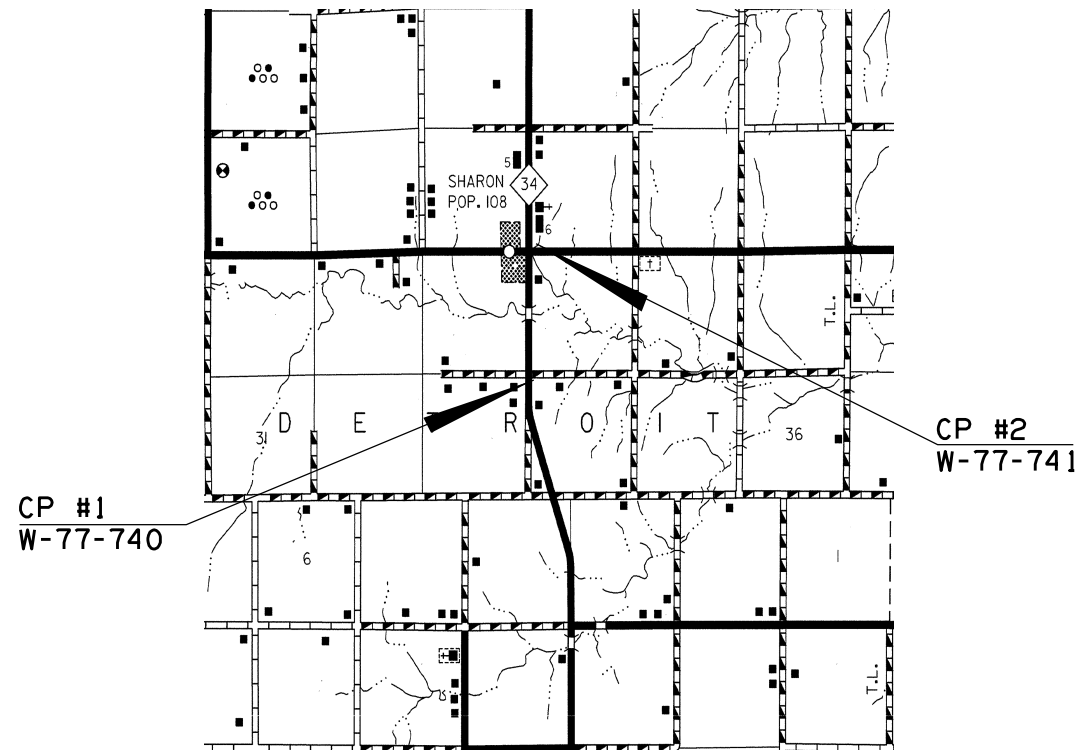
WRITTEN DESCRIPTION OF LOCATION: APPROXIMATELY 177' NORTH OF EW-52 AND APPROXIMATELY 80' EAST OF NS-206.

ESTABLISHED BY: JOSEPH H. FARMER, RPLS

COORDINATE SYSTEM: <input type="checkbox"/> USC&GS, <input type="checkbox"/> OHD, <input checked="" type="checkbox"/> OTHER (SPECIFY) <u>OK STATE PLANE (NAD 83)</u>			
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE
NORTH_ZONE	X: 1574813.7028	SOUTH-SOUTHWEST	157' RP 1 - NORTH FACE OF SIGN
ACCURACY:	Y: 4673513882	WEST	77' RP 2 - WEST EDGE OF SH-34
3RD_ORDER		WEST-NORTHWEST	120' RP 3 - EAST FACE OF POWER POLE
GEODETIC DATA:	POSITION		ELEVATION
ANGLE OF VARIANCE (D)	LATITUDE	NORTH	
<u>00°41'07.52"</u>	<u>N3616°35'35.4"</u>	<u>2038.40'</u>	
	LONGITUDE	WEST	SOURCE: <u>NAVD88</u>
	<u>W99°20'08.153"</u>		ACCURACY: <u>3RD</u>



# CONTROL MAP



P.L.S.	J.H.F.	05/29/13	S.H. 34, BRIDGE OVER N. PERSIMMON CREEK, 7.6 MILES N. OF THE DEWEY COUNTY LINE	WOODWARD COUNTY
DRAWN	J.E.M.	05/29/13		
CHECKED	T.J.W.	05/29/13	<b>CONTROL MAP &amp; INFORMATION</b>	
APPROV.	J.H.F.	05/29/13		
CREW CHIEF	T.J.W.	SWO NO. <u>484411</u>	J/P NO. <u>28827(04)</u>	SHEET NO. <u>13</u>