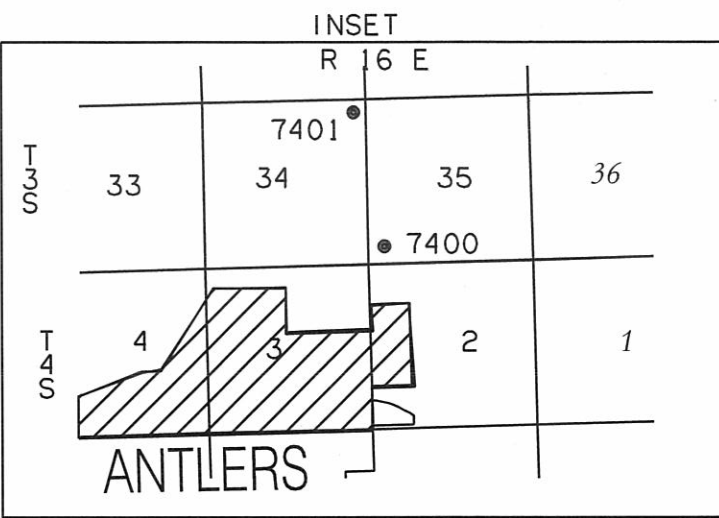
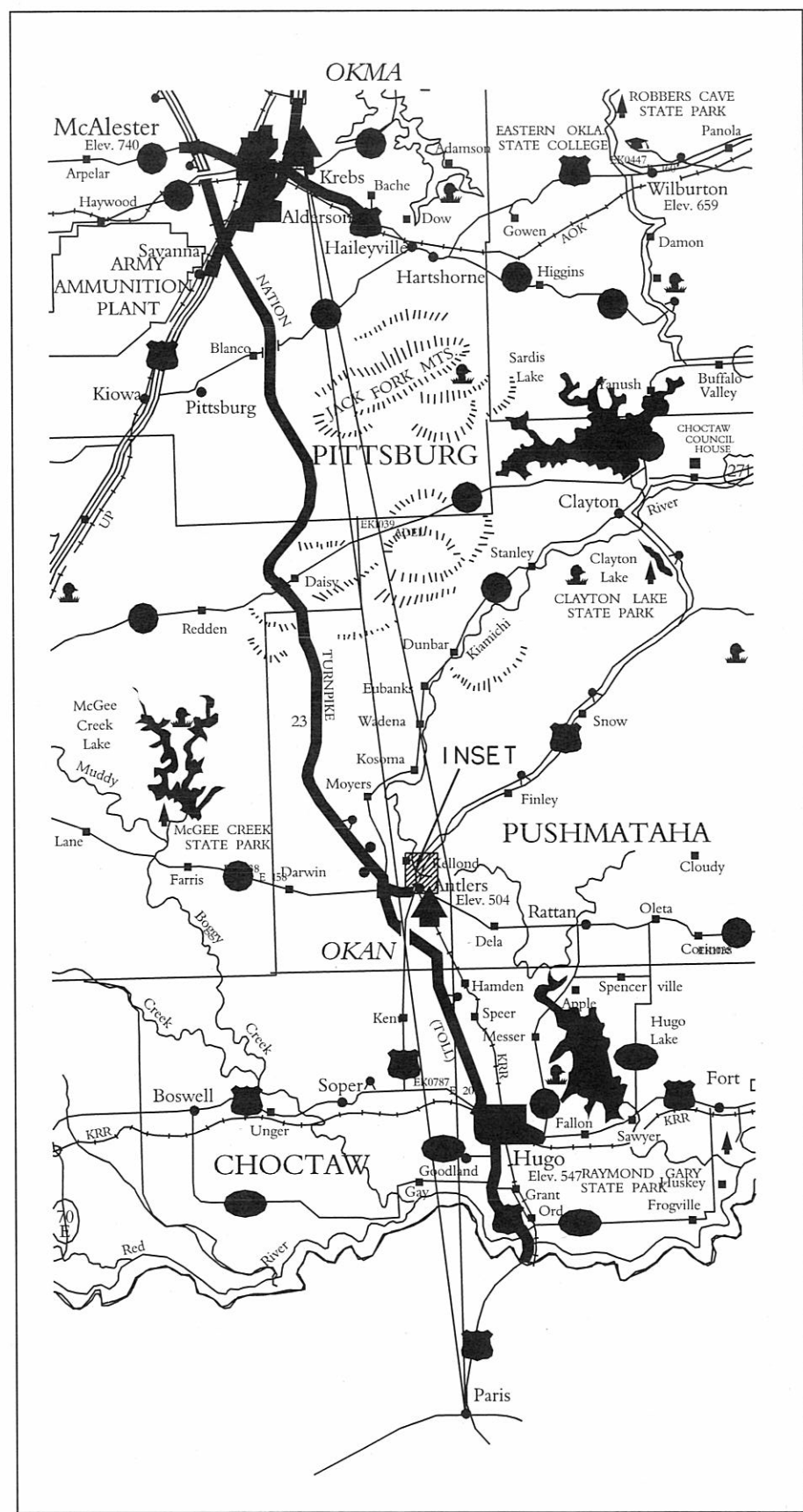


OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	



P-64-537  
FILE: 68120810.000 000080703

NGS OPUS SOLUTION REPORT

All computed coordinate accuracies are listed as peak-to-peak values.  
For additional information: <http://www.ngs.noaa.gov/OPUS/about.html#accuracy>

USER: rstele@odot.org DATE: March 23, 2010  
RINEX FILE: 6812081t.10o TIME: 22:17:25 UTC

SOFTWARE: page5 0909.08 master29.pl 081023 START: 2010/03/22 19:26:00  
EPHEMERIS: igr15761.eph [rapid] STOP: 2010/03/22 22:27:30  
NAV FILE: brdc0810.10n OBS USED: 5768 / 6374 : 90%  
ANT NAME: LEIAT502 NONE # FIXED AMB: 53 / 55 : 96%  
ARP HEIGHT: 2 OVERALL RMS: 0.017(m)

REF FRAME: NAD 83(CORS96)(EPOCH:2002.0000) ITRF00 (EPOCH:2010.2216)

X:	-515543.898(m) 0.009(m)	-515544.622(m) 0.009(m)
Y:	-5252932.267(m) 0.066(m)	-5252930.852(m) 0.066(m)
Z:	3568951.208(m) 0.036(m)	3568951.041(m) 0.036(m)

LAT:	34 14 39.31409	0.036(m)	34 14 39.33404	0.036(m)
E LON:	264 23 40.96664	0.007(m)	264 23 40.93308	0.007(m)
W LON:	95 36 19.03336	0.007(m)	95 36 19.06692	0.007(m)
EL HGT:	133.736(m)	0.067(m)	132.536(m)	0.067(m)
ORTHO HGT:	163.941(m)	0.068(m) [NAVD88 (Computed using GEOID09)]		

UTM COORDINATES		STATE PLANE COORDINATES	
UTM (Zone 15)		SPC (3502 OK S)	
Northing (Y) [meters]	3792309.798	103658.759	
Easting (X) [meters]	260067.638	820568.851	
Convergence [degrees]	-1.46675273	1.35927901	
Point Scale	1.00030967	0.99995344	
Combined Factor	1.00028867	0.99993245	

US NATIONAL GRID DESIGNATOR: 15STT6006792309INAD 83)

BASE STATIONS USED		LATITUDE		LONGITUDE		DISTANCE(m)	
PID	DESIGNATION						
DE7170	OKMA MCALESTER CORS ARP	N345540.833	W0954414.056	76812.6			
DE7168	OKAN ANTLERS CORS ARP	N341142.708	W0953716.847	5639.5			
DH3616	TXPA PARIS CORS ARP	N334027.228	W0953325.257	63386.3			

NEAREST NGS PUBLISHED CONTROL POINT			
EK0584	B 100	N341354.	W0953616.
			1403.4

P-64-538  
FILE: 66720810.000 000080697

NGS OPUS SOLUTION REPORT

All computed coordinate accuracies are listed as peak-to-peak values.  
For additional information: <http://www.ngs.noaa.gov/OPUS/about.html#accuracy>

USER: rstele@odot.org DATE: March 23, 2010  
RINEX FILE: 6672081t.10o TIME: 22:07:30 UTC

SOFTWARE: page5 0909.08 master.pl 0810233 START: 2010/03/22 19:40:00  
EPHEMERIS: igr15761.eph [rapid] STOP: 2010/03/22 22:42:00  
NAV FILE: brdc0810.10n OBS USED: 5859 / 6302 : 93%  
ANT NAME: LEIAT502 NONE # FIXED AMB: 49 / 52 : 94%  
ARP HEIGHT: 1.444 OVERALL RMS: 0.016(m)

REF FRAME: NAD 83(CORS96)(EPOCH:2002.0000) ITRF00 (EPOCH:2010.2216)

X:	-515471.052(m) 0.015(m)	-515471.776(m) 0.015(m)
Y:	-5252034.710(m) 0.018(m)	-5252033.295(m) 0.018(m)
Z:	3570234.609(m) 0.038(m)	3570234.442(m) 0.038(m)

LAT:	34 15 30.18720	0.031(m)	34 15 30.20715	0.031(m)
E LON:	264 23 40.37367	0.016(m)	264 23 40.34011	0.016(m)
W LON:	95 36 19.62633	0.016(m)	95 36 19.65989	0.016(m)
EL HGT:	111.831(m)	0.023(m)	110.632(m)	0.023(m)
ORTHO HGT:	142.091(m)	0.025(m) [NAVD88 (Computed using GEOID09)]		

UTM COORDINATES		STATE PLANE COORDINATES	
UTM (Zone 15)		SPC (3502 OK S)	
Northing (Y) [meters]	3793877.713	105225.439	
Easting (X) [meters]	260092.612	820516.502	
Convergence [degrees]	-1.46737673	1.35918552	
Point Scale	1.00030952	0.99995201	
Combined Factor	1.00029196	0.99993446	

US NATIONAL GRID DESIGNATOR: 15STT6009293877INAD 83)

BASE STATIONS USED		LATITUDE		LONGITUDE		DISTANCE(m)	
PID	DESIGNATION						
DE7170	OKMA MCALESTER CORS ARP	N345540.833	W0954414.056	75262.4			
DE7168	OKAN ANTLERS CORS ARP	N341142.708	W0953716.847	7160.9			
DH3616	TXPA PARIS CORS ARP	N334027.228	W0953325.257	64951.0			

NEAREST NGS PUBLISHED CONTROL POINT			
EK0560	476.086	N341609.	W0953746.
			2512.5

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
PLS			
DRAWN			
CHECKED			
APPROVED			
CREW			
SWO _____ ( )		PROJECT NO. 26346(04) SHEET NO. 73	