

## Project Report Appendices

The following section contains the appendices as listed in the Pike and Scott Counties, IL 2015 Project Report.

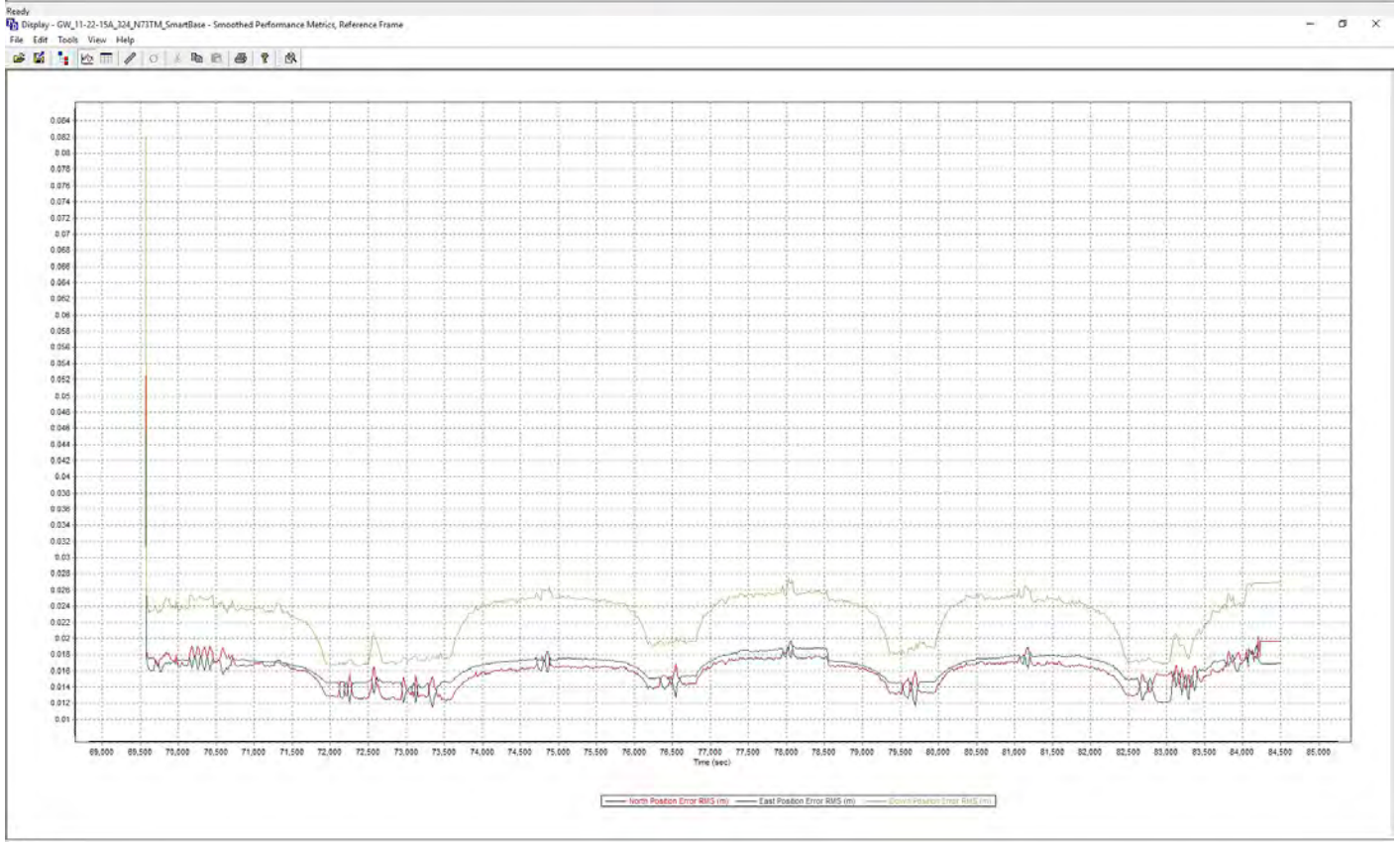
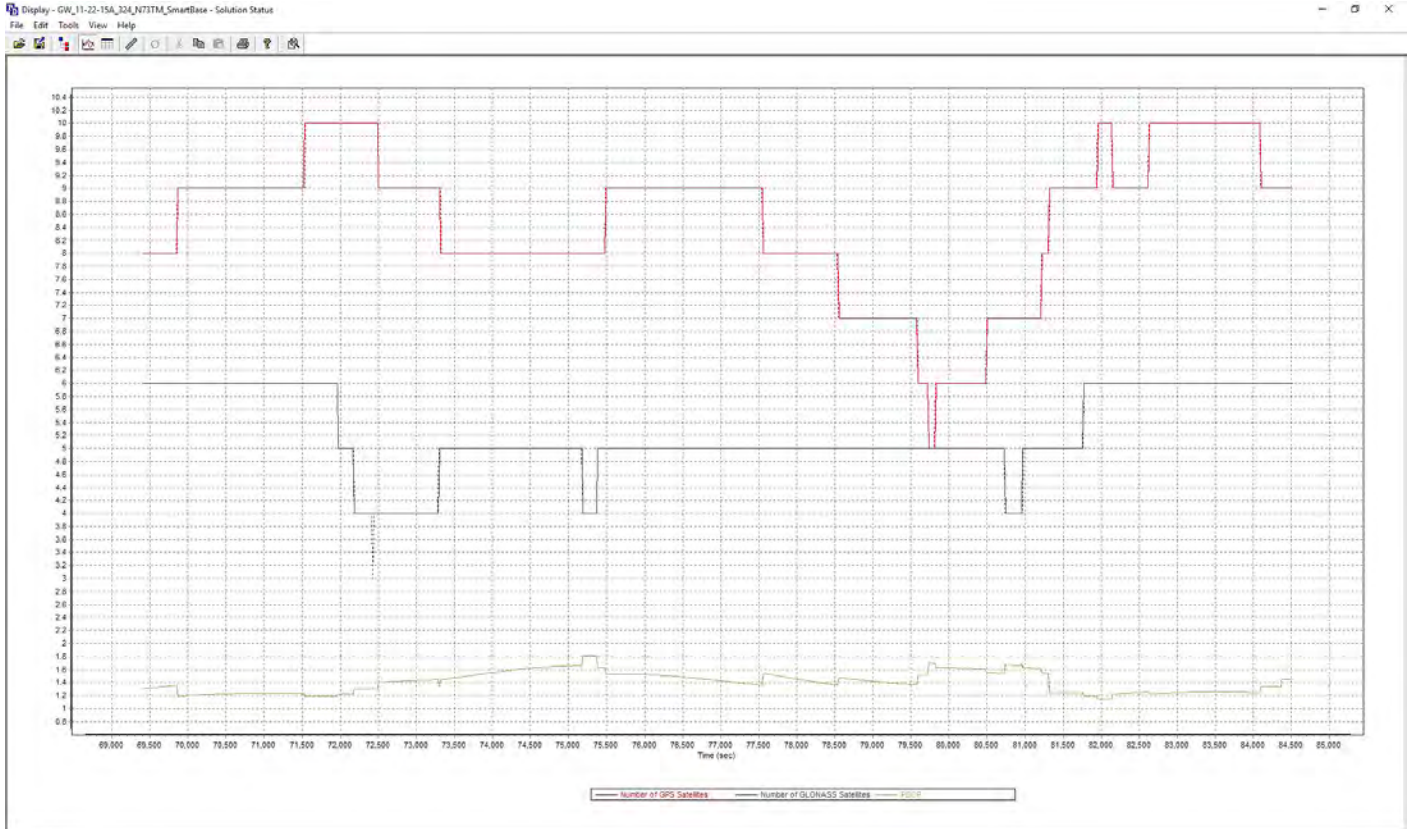
## Appendix A

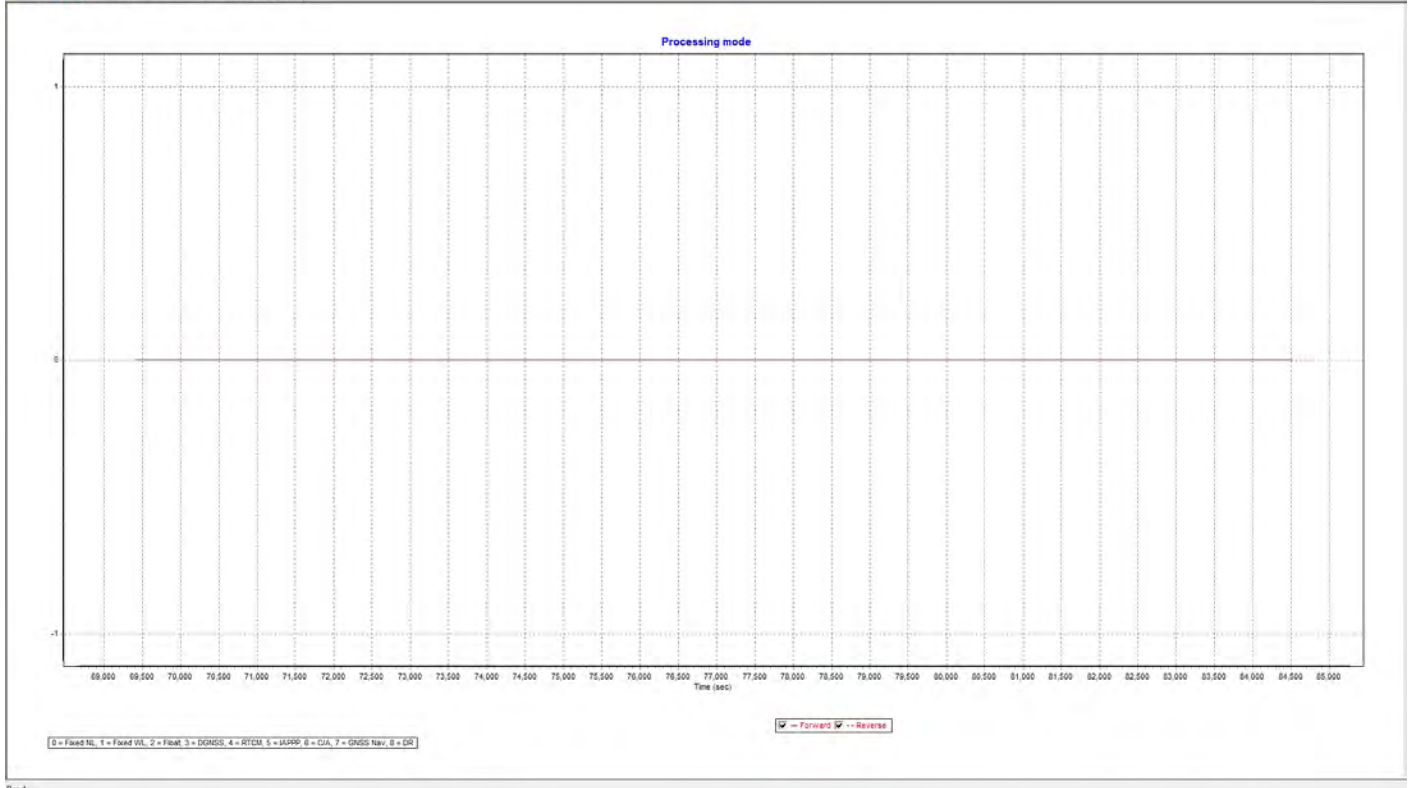
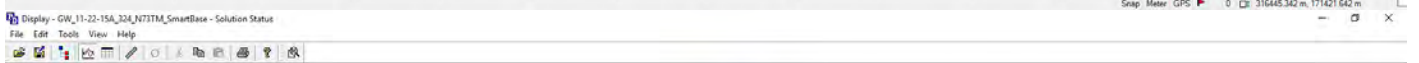
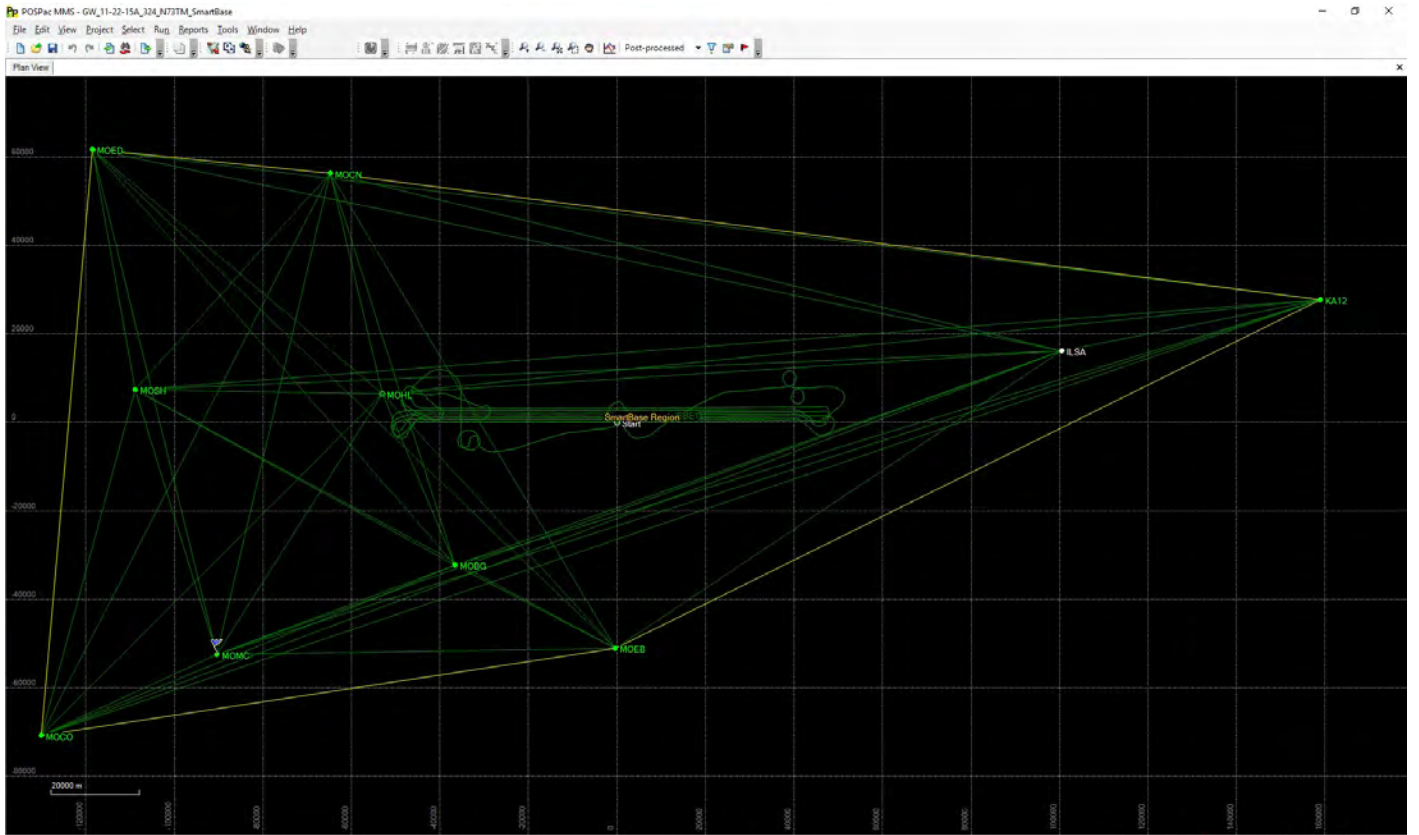
# GPS/IMU Processing Statistics Flight Logs Base Station Logs

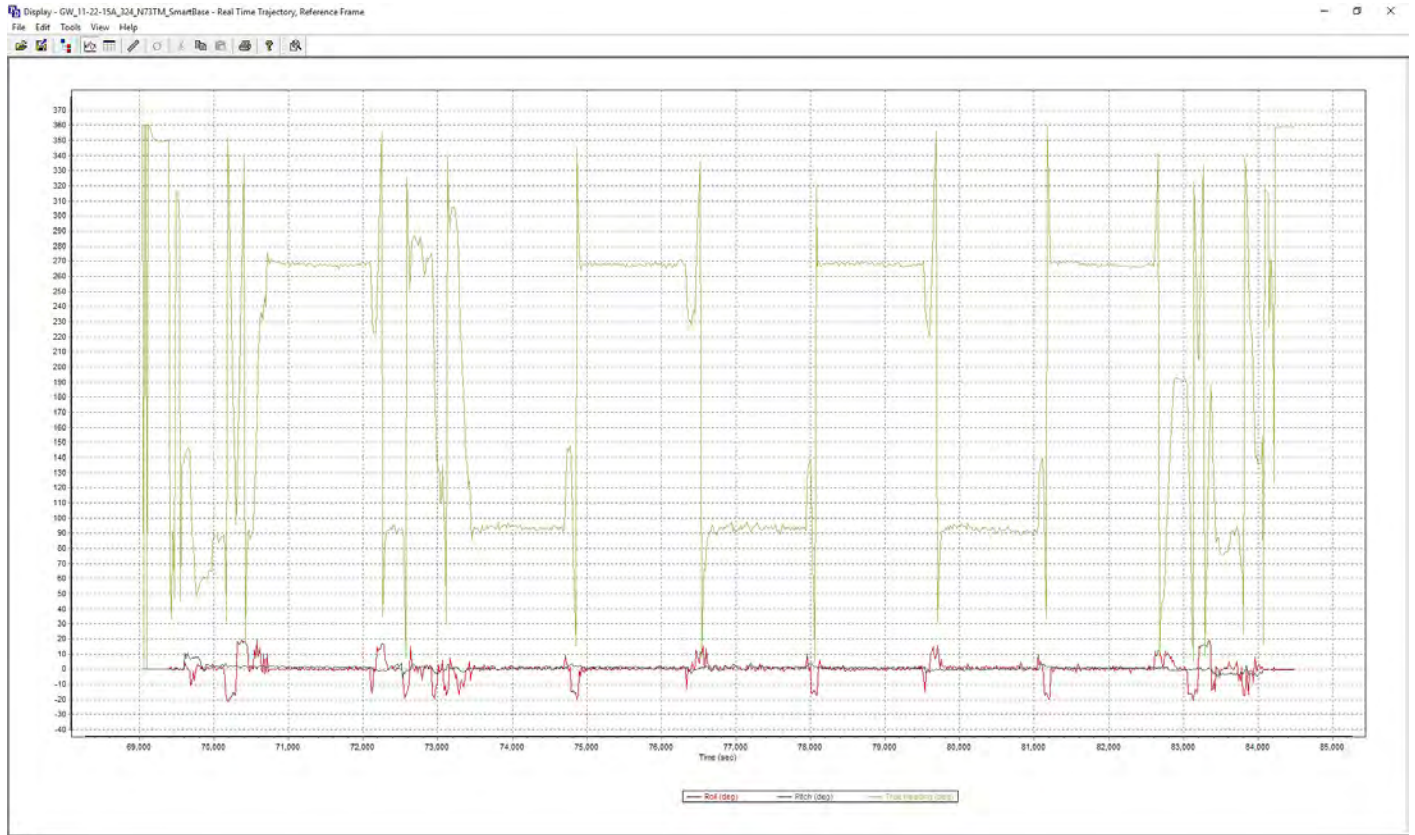
There were ten total lifts. Graph reports generated from processing software, flight logs, and base station logs are found on the following pages.

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# Nov 22, 2015-A (N73TM, SN324)







Coordinate Manager

Station Information

Station ID: MOMC

Coordinates

Latitude: N 39 9 42.50085000

Longitude: W 91 49 45.93338000

Altitude: 217.9880 m

Decimal Degrees

Antenna Reference Point (ARP) coordinates Apply Changes

Antenna Frame

Height: 0.000 m

Method: Bottom of antenna mount

Manufacturer: Trimble

Type: Zephyr Geodetic 2 RoHS

Offset from Measured Point to APC: 0.085 m

Station Database

Station ID: MOMC Station Fullname: MOMC

Primary Service ID:  Edit

Coordinate Accuracy: UNKNOWN\_ACC

Secondary Service ID:  Edit Add Delete Update

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc

Import Coordinates Export Coordinates

Close

# Base Station Log

## GPS OBSERVATION LOG

Station ID	PID KC0700	Date	11/22/2015
Project Number	26869	Julian Date	326
Project Name	NRCS Pike/Scott Co	Start Time	16:58:00 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	23:55:00 UTC
Revr. S/N	5106K20884	Revr. File Name	08843260.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes No	
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

Height Readings:  
 (Top of Monument to Bottom of Ground Plane)

Start	2	M.	Fl.
Stop	2	M.	Fl.
Mean	2	M.	Fl.

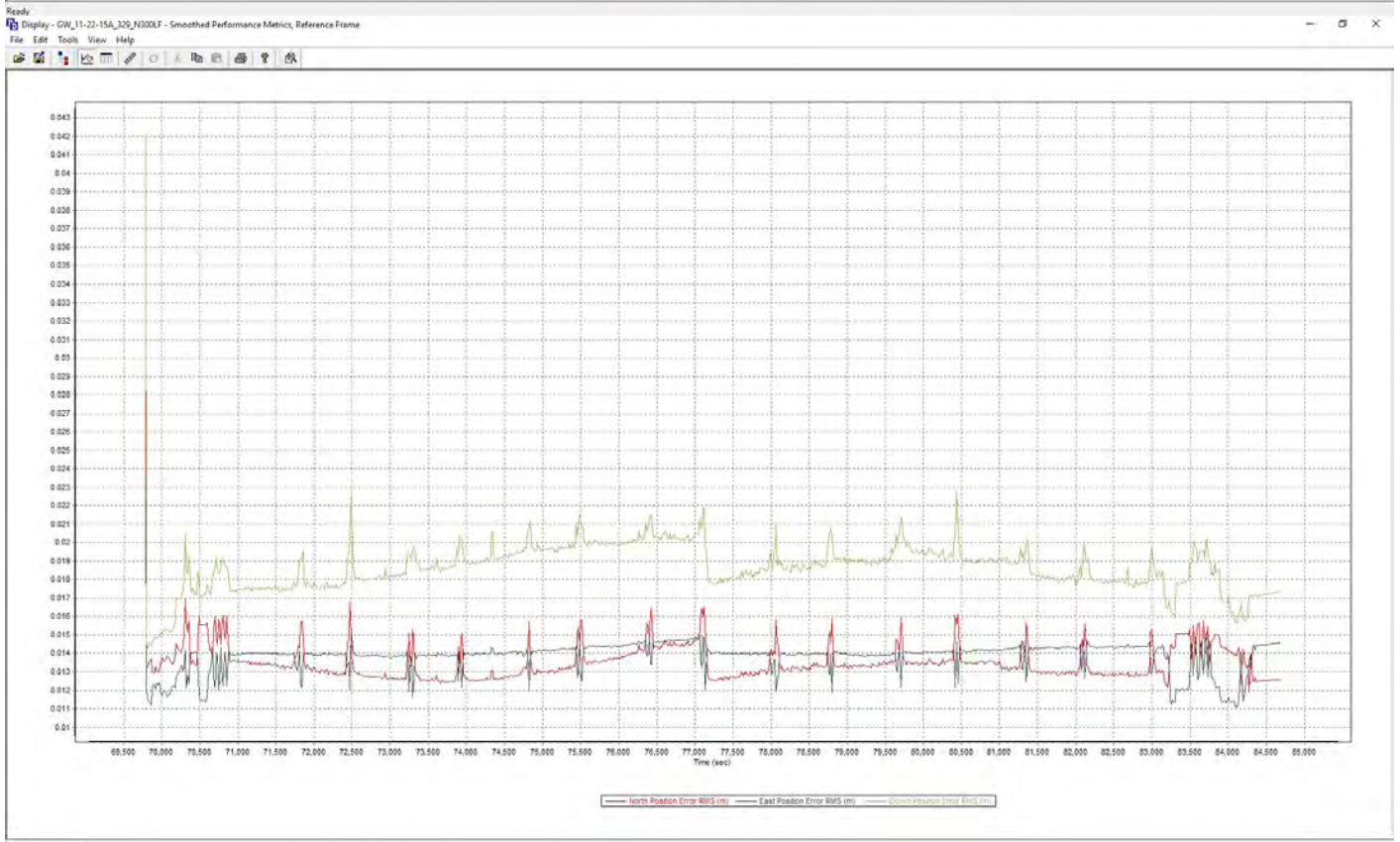
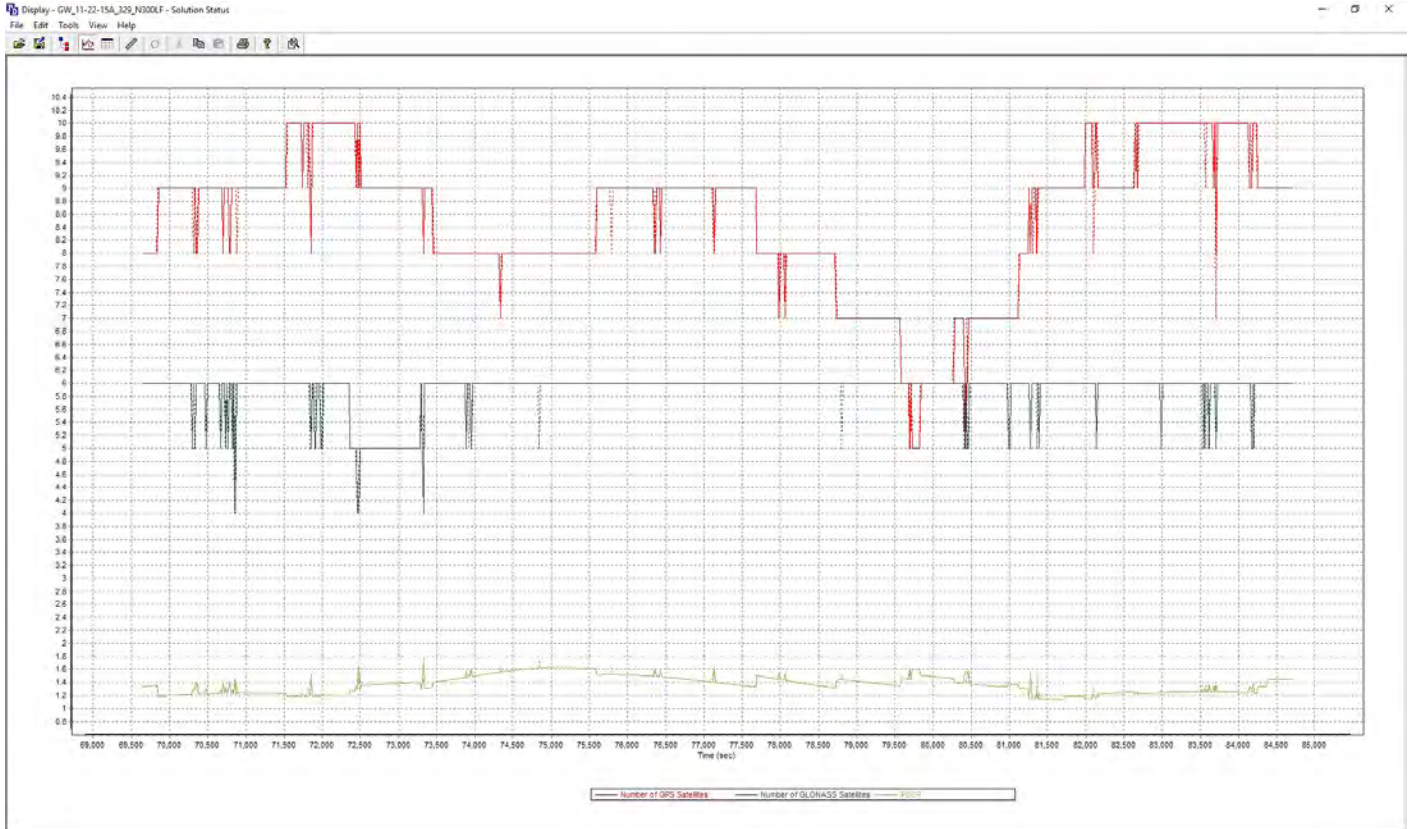


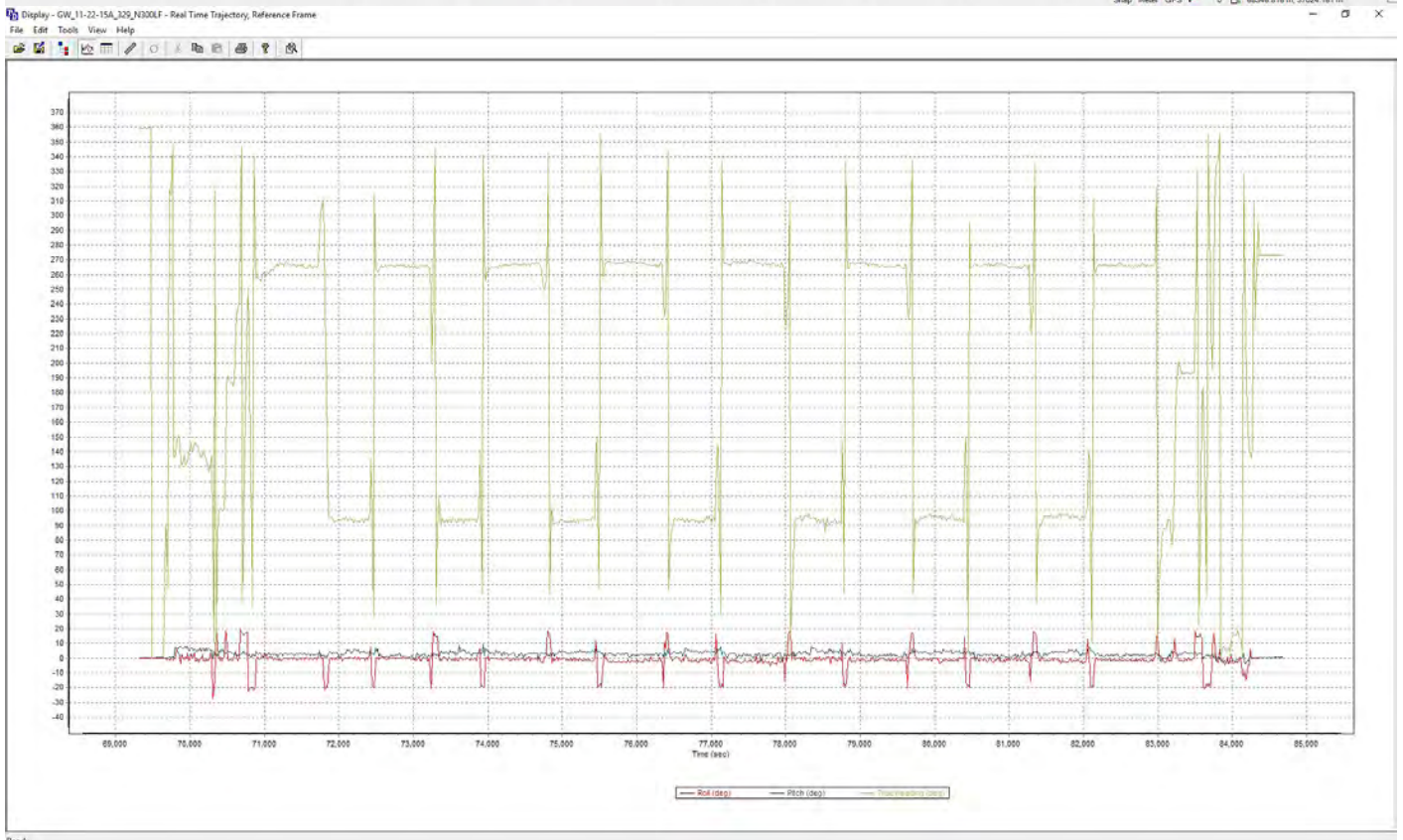
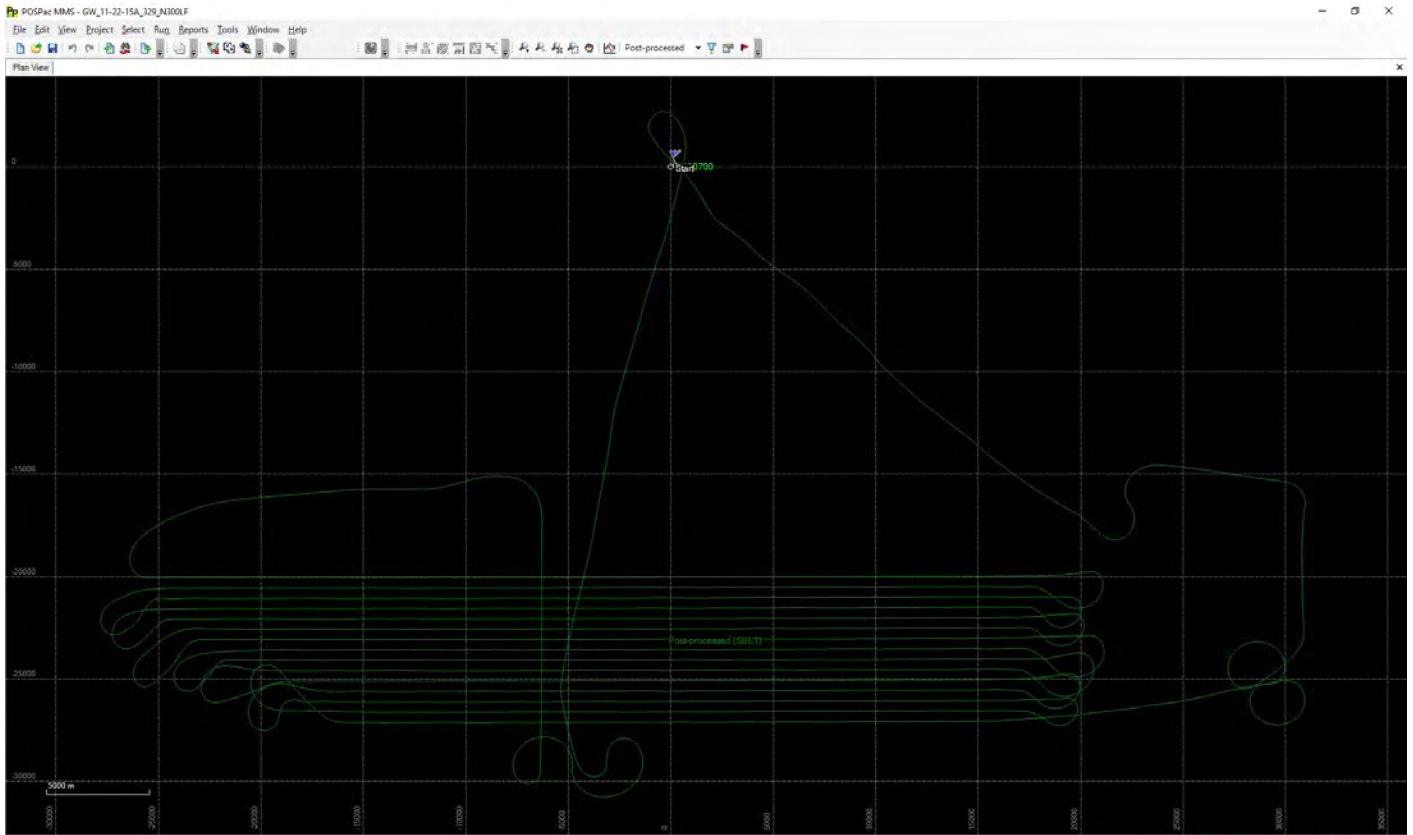
## GPS OBSERVATION LOG

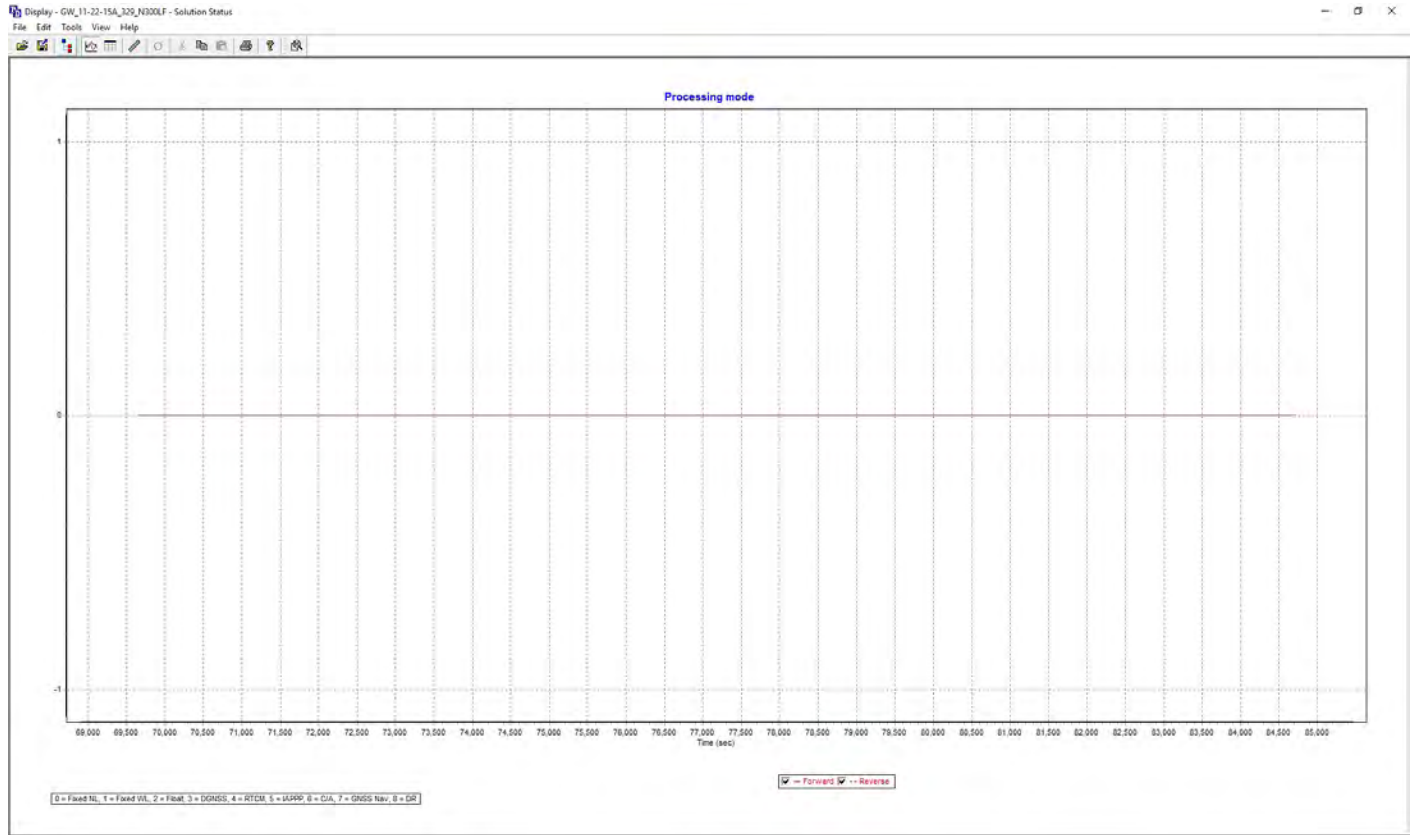
Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control



# Nov 22, 2015-A (N300LF, SN329)







Coordinate Manager

Station Information

Station ID:

Coordinates

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

Antenna Frame

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

Ground Reference Point (GRP) coordinates

Station Database

Station ID:  Station Fullname:

Primary Service ID:   Coordinate Accuracy:

Secondary Service ID:

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc

# Flight Log

OPERATORS FLIGHT LOG													
YYYYMMDD_TIME(GPS)					OPERATOR: <i>CrossTIP</i>								
MISSION: 20151122_A			DATE: 11/22/2015		ORION H SN: 329			SENSOR: Orion H					
PILOT: Spencer Napier (Aspen)					AIRCRAFT: N200LF								
PROJECT NUMBER AND NAME	LINE No.	Lbl	Hdg	GND SPEED (KTS)	FREQ Hz	SCAN ANGLE	PRF KHZ	FIXED GAIN	Flying Ht. (m)	TIME START	TIME STOP	MM70 DRIVE	REMARKS
<i>Pike Scott Co</i>	1	W		110	68	29°	275		1400m	19:57	19:42		<i>Fig 8.2</i>
	2	E		127	68	29°	275		1450m	19:58	20:06	3	
	3	W		85	68	29°	275		1400	20:07	20:20		
	4	E		126	68	29°	275		1400	20:23	20:31		<i>abt highest start</i>
	5	W		95	68	29°	275		1400	20:33	20:46		<i>Alt is low n 300 @ start</i>
	6	E		124	68	29°	275		1400m	20:46	20:57		
	7	W		97						20:59	21:13		
	8	E		130						21:14	21:24		<i>many fields flooded</i>
	9	W		99						21:26	21:39		
	10	E		130						21:42	21:53		
	11	W		113						21:56	22:07		
	12	E		124						22:09	22:20		
	13	W		111						22:23	22:34		
	14	E		130						22:36	22:48		
	15	W		107						22:50	23:01		
	X	E	S	86						23:07	23:12		<i>CrossTIP</i>
										23:12	23:16		<i>Fig 8 closeout</i>
										23:12	23:16		<i>240 gallon landing</i>
STATUS	TOTAL LINES	FLOWN	LEFT	SITE	AIRCRAFT FERRY	STATIC	START	STOP	NOTES				
Q	2689	15	99	3.6	.5				18:58 on - 23:35				
O						Wx Clear			19:25 up - 23:25 down				
O									10629 13670				

Quantum Spatial N.6216 Resource Drive Sheboygan Falls, WI. 53085 E-Mail: flight-log-distribution-list@quantumspatial.com

# Base Station Log

## GPS OBSERVATION LOG

Station ID	PID KC0700	Date	11/22/2015
Project Number	26869	Julian Date	326
Project Name	NRCS Pike/Scott Co	Start Time	16:58:00 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	23:55:00 UTC
Revr. S/N	5106K20884	Revr. File Name	08843260.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes No	
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

Height Readings:  
 (Top of Monument to Bottom of Ground Plane)

Start	2	M.	Fl.
Stop	2	M.	Fl.
Mean	2	M.	Fl.

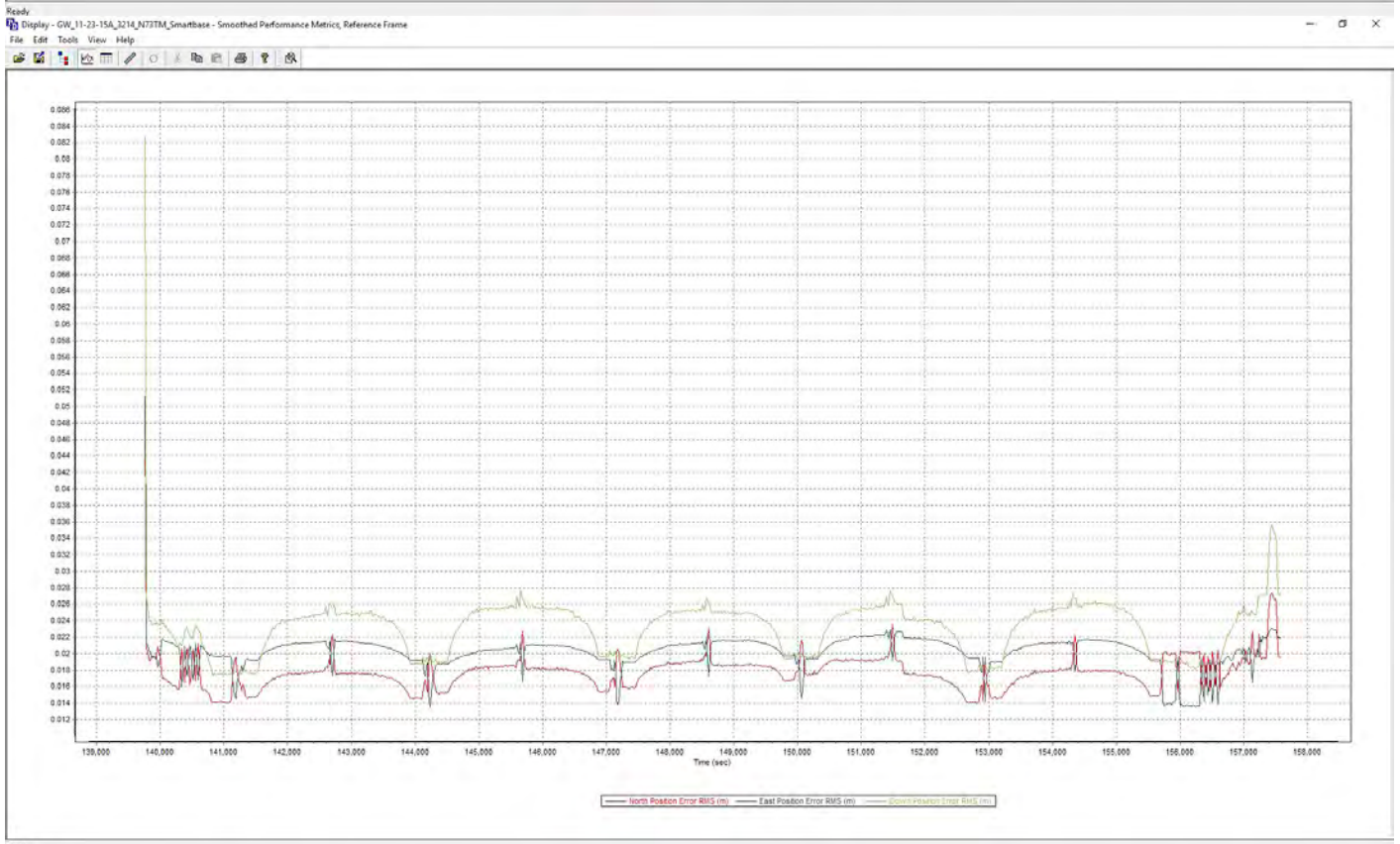
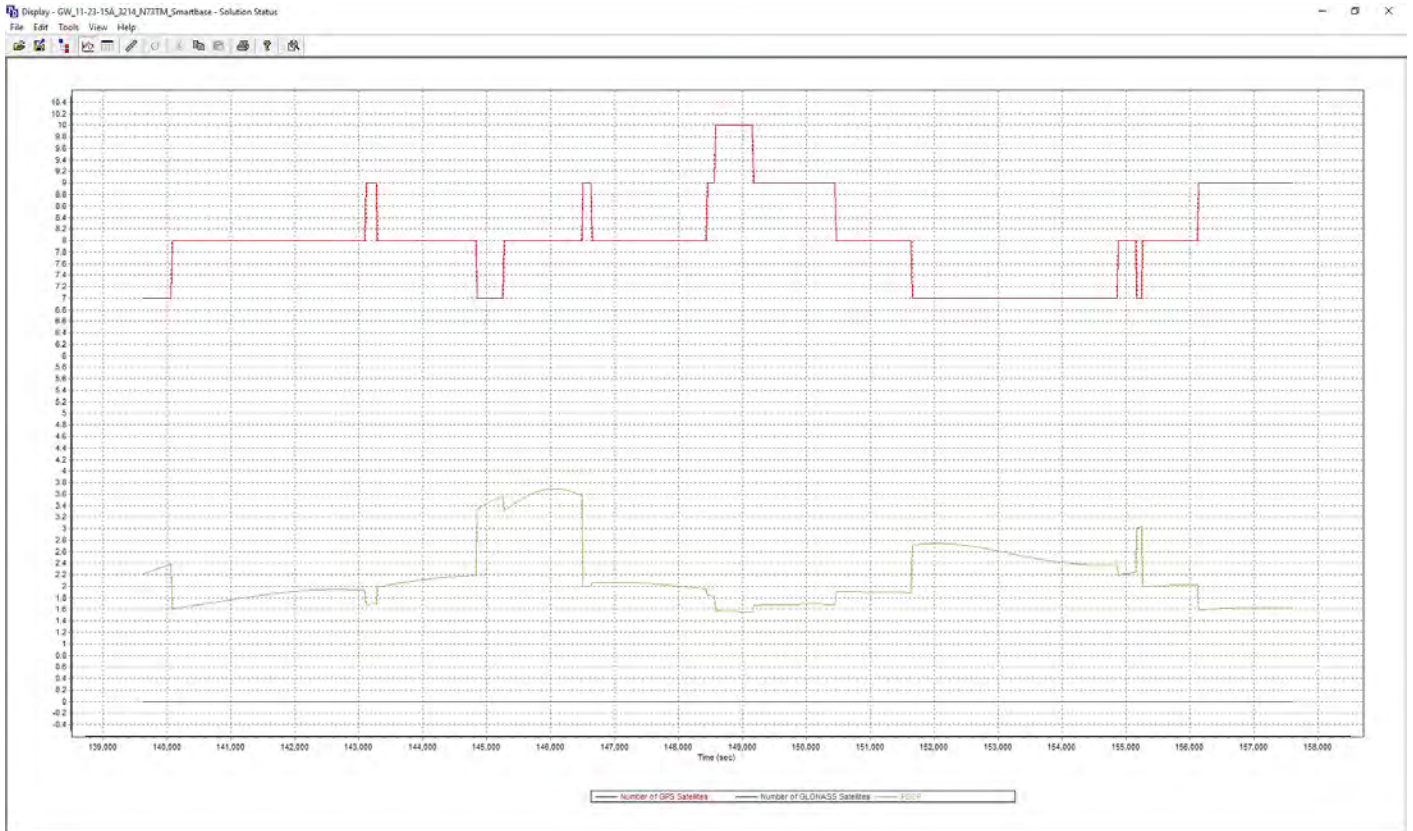
## GPS OBSERVATION LOG

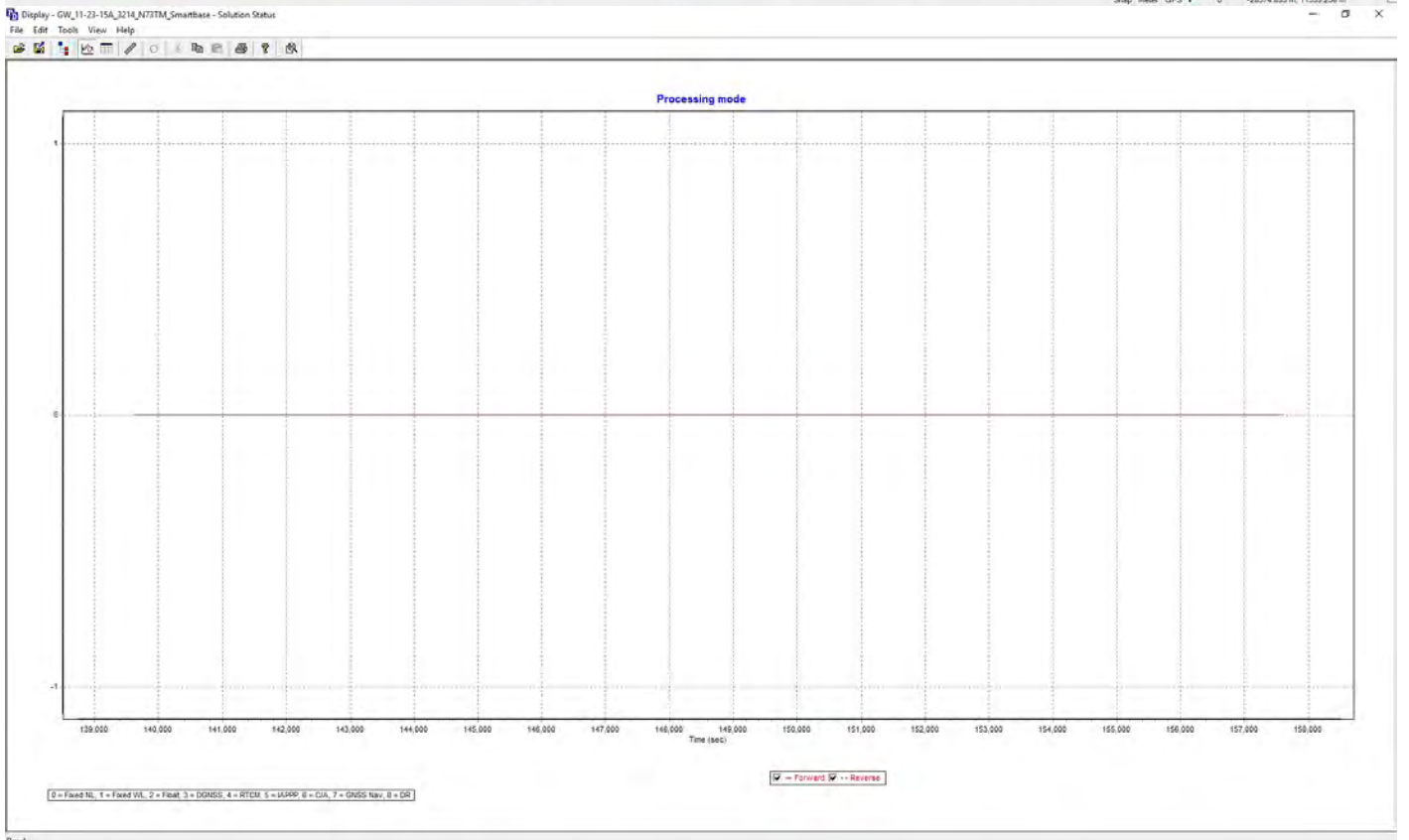
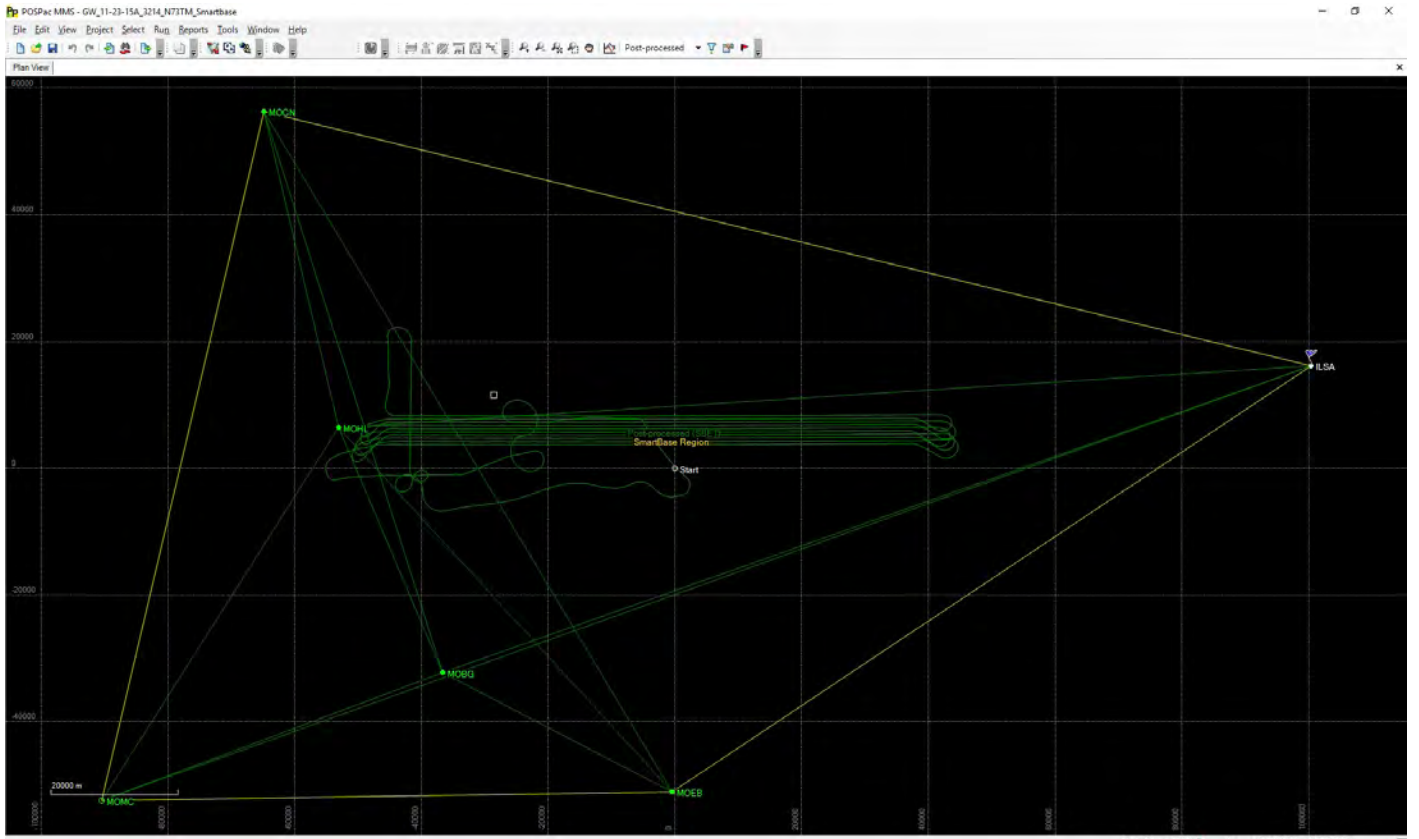
Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control

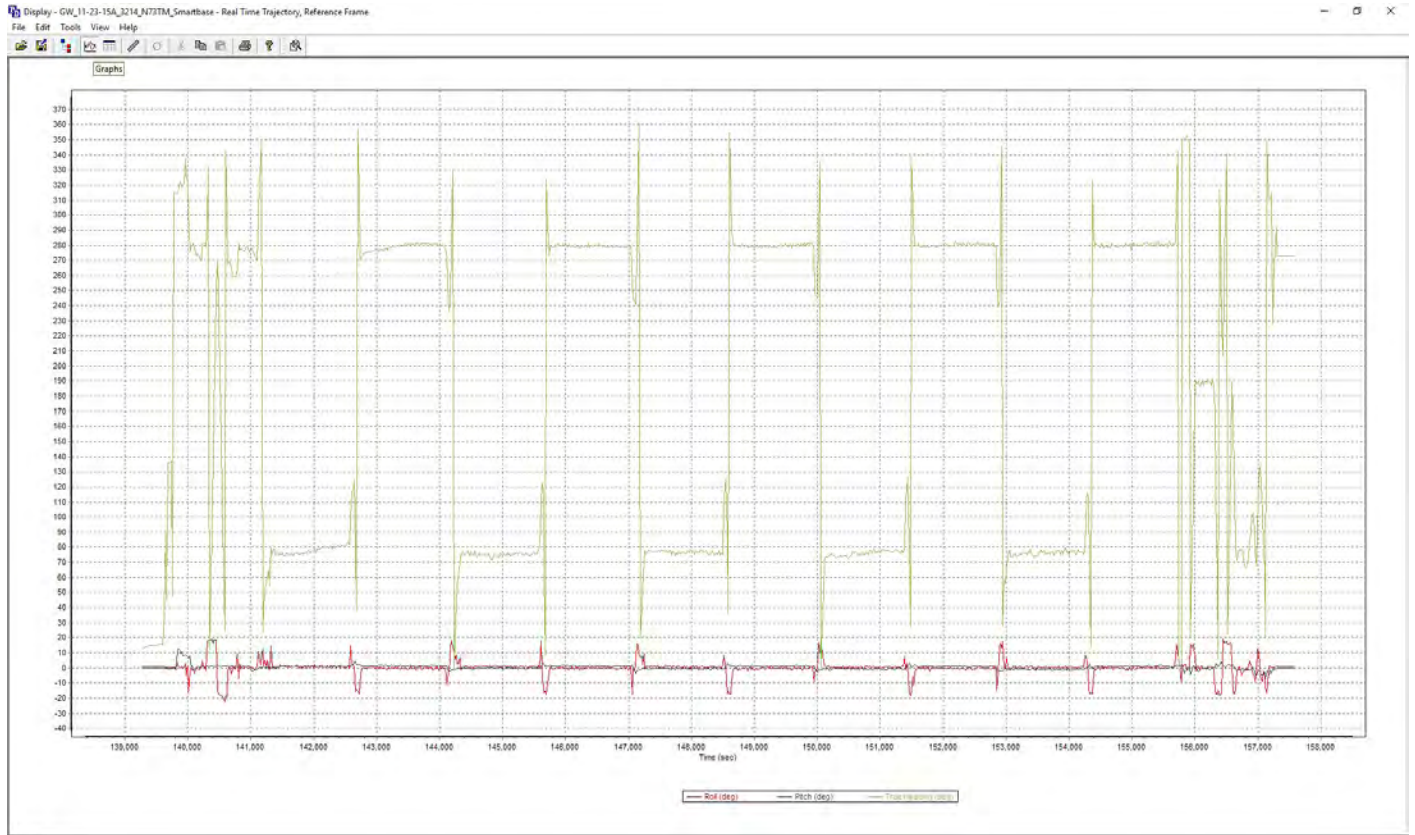




# Nov 23, 2015-A (N73TM, SN324)







View Graphs

Coordinate Manager

Station Information

Station ID:

Coordinates

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

Antenna Reference Point (ARP) coordinates Apply Changes

Antenna Frame

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

Station Database

Station ID:  Station Fullname:

Primary Service ID:  Edit Coordinate Accuracy:

Secondary Service ID:  Edit Add Delete Update

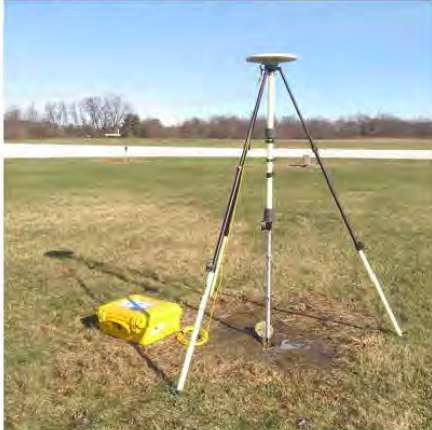
Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc
[Empty Table]								

Import Coordinates Export Coordinates Close

# Base Station Log

## GPS OBSERVATION LOG

Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control



## GPS OBSERVATION LOG

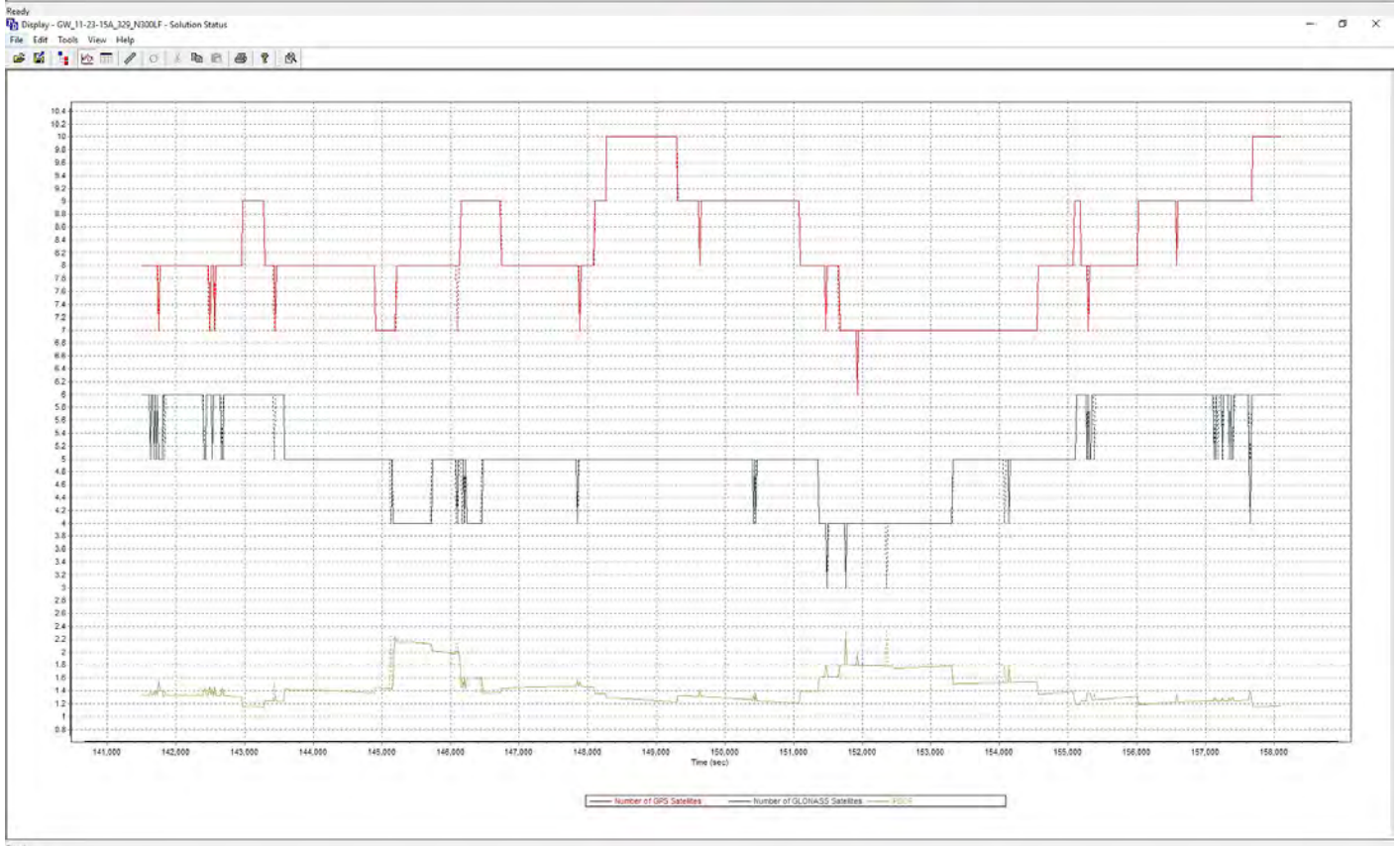
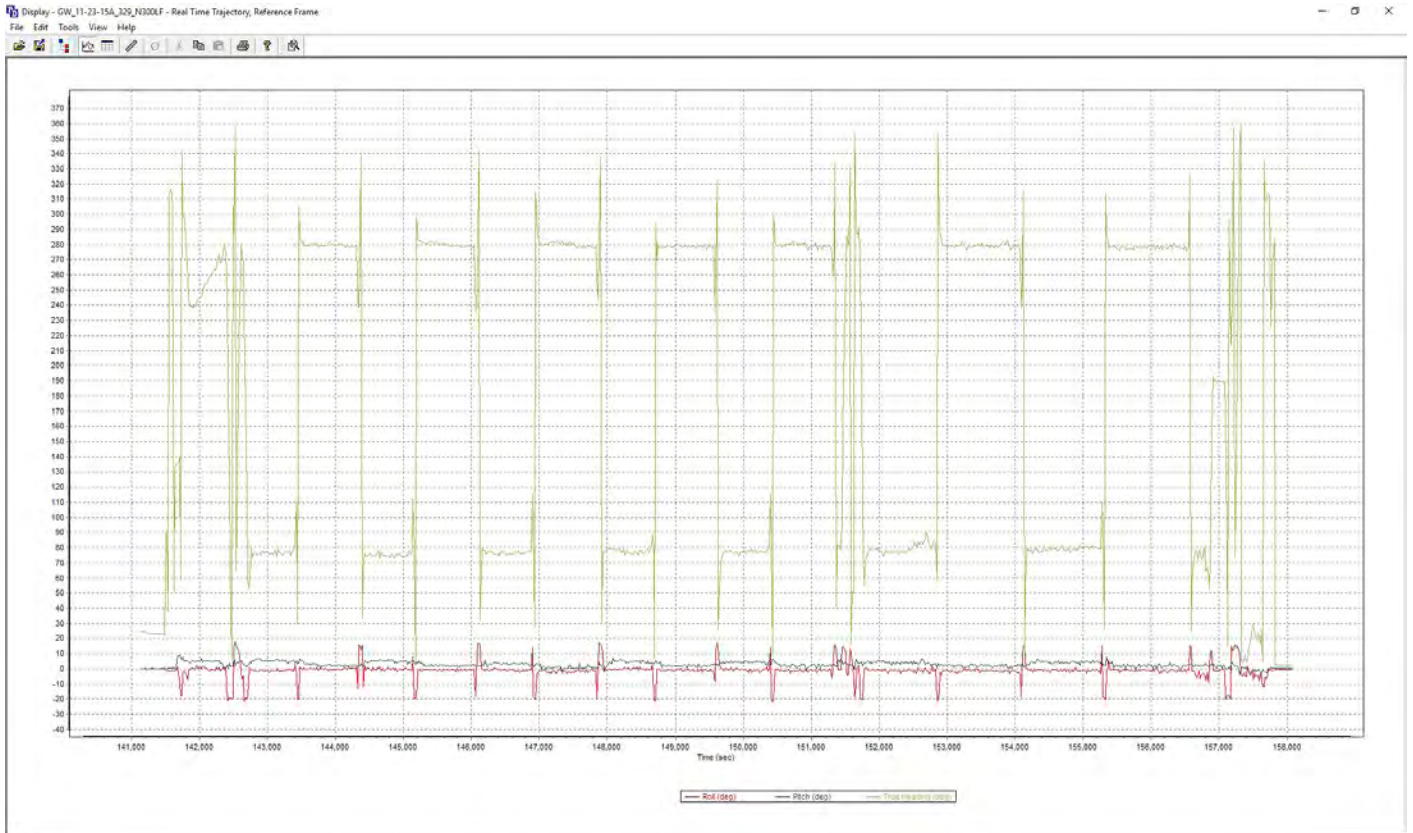
Station ID	PID KC0700	Date	11/23/2015
Project Number	26869	Julian Date	327
Project Name	NRCS Pike/Scott Co	Start Time	13:58:00 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	01:53:00 UTC-1
Revr. S/N	5106K20884	Revr. File Name	08843270.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes No	
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

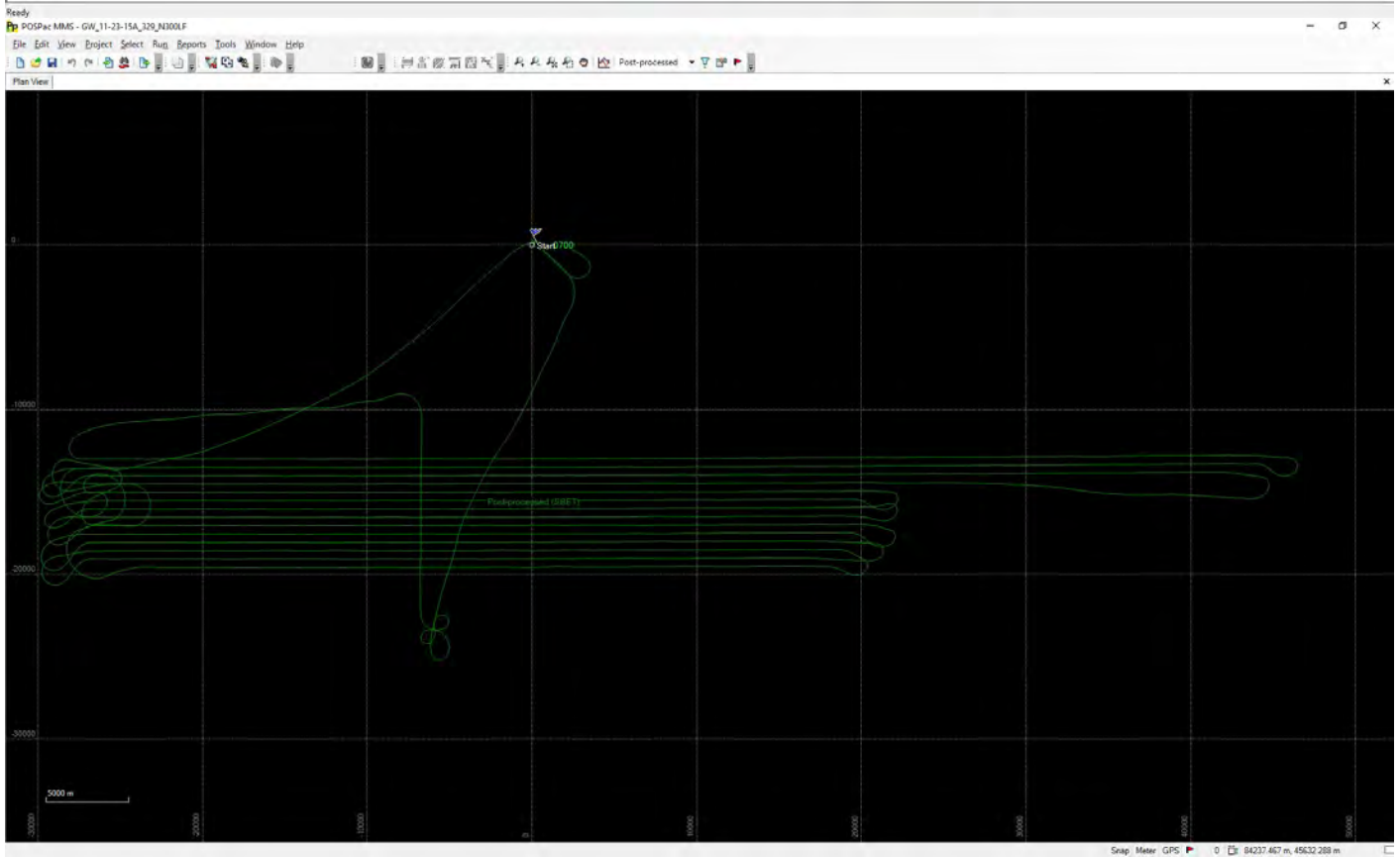
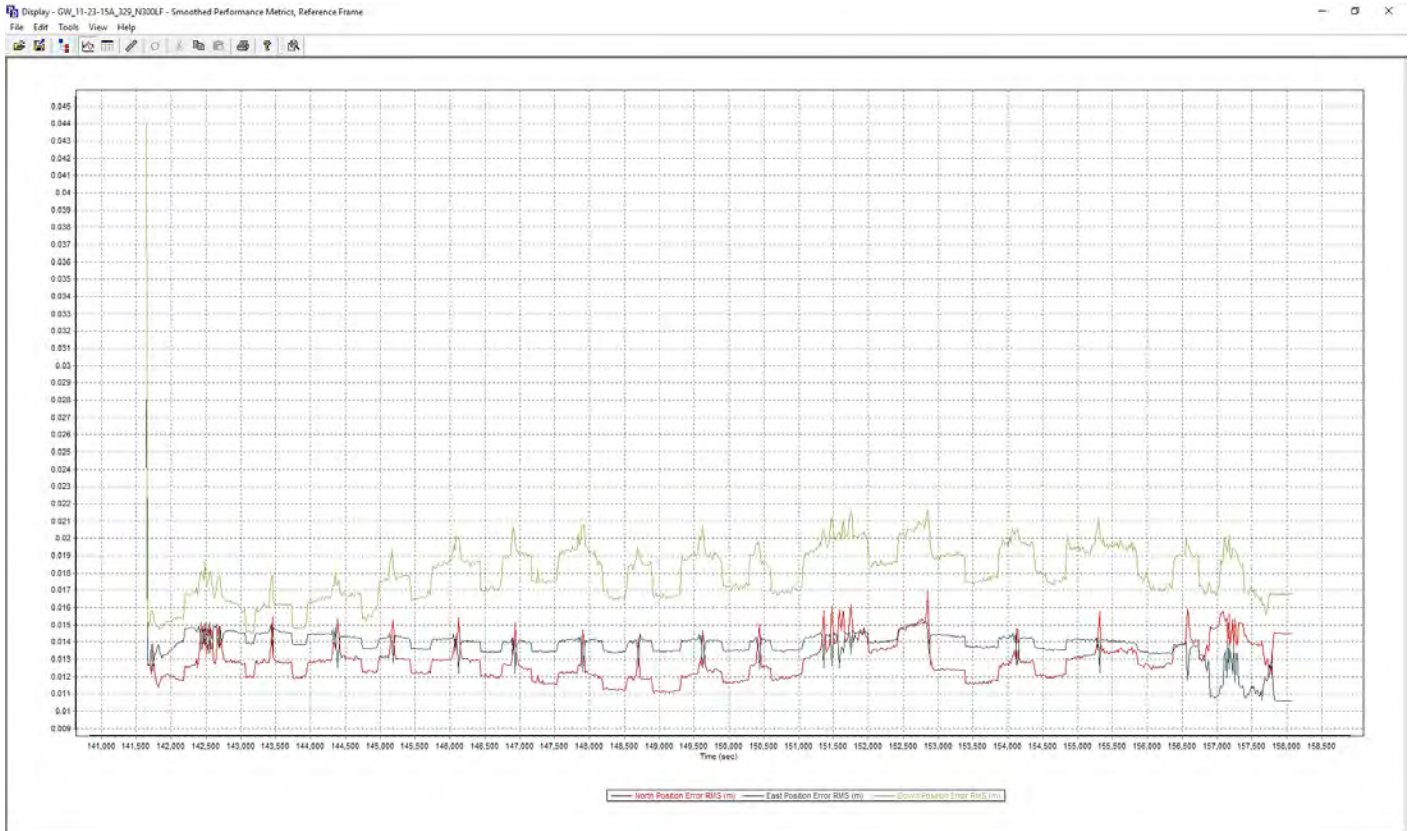
**Height Readings:**  
 (Top of Monument to Bottom of Ground Plane)

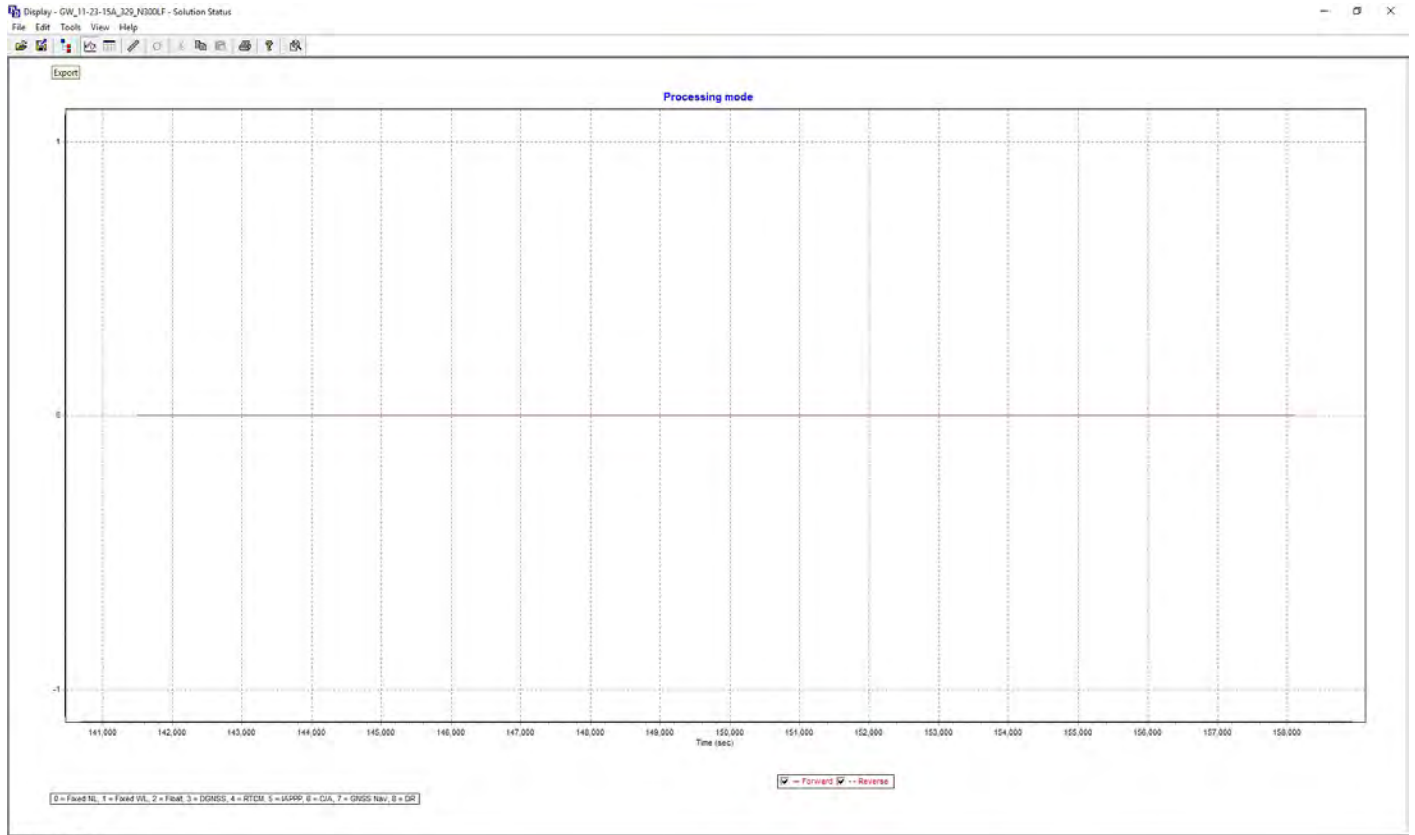
Start	2	M.	Fl.
Stop	2	M.	Ft.
Mean	2	M.	Ft.

# Nov 23, 2015-A (N300LF, SN329)









Export Graph or Table

**Coordinate Manager**

---

**Station Information**

Station ID: KC0700

Coordinates

Latitude: N 39 38 22.59808000

Longitude: W 90 46 47.95911000

Altitude: 180.7120 m

Decimal Degrees

Antenna Frame

Height: 2.000 m

Method: Bottom of notch

Manufacturer: Trimble

Type: Zephyr Geodetic 2

Offset from Measured Point to APC: 0.034 m

Ground Reference Point (GRP) coordinates Apply Changes

---

**Station Database**

Station ID: KC0700 Station Fullname: KC0700

Primary Service ID:  Edit Coordinate Accuracy: UNKNOWN\_ACC

Secondary Service ID:  Edit Add Delete Update

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc

Import Coordinates Export Coordinates

Close

# Flight Log

**OPERATORS FLIGHT LOG**

MISSION: 205 1123 A      DATE: 11/23/2015      ORION H

PILOT: Spencer, No. 1      OPERATOR: Scott, Joe      AIRCRAFT: N300LF      SENSOR: 329

PROJECT NUMBER AND NAME	LINE No.	Lbj	Hdg	OPERATOR:		GND SPEED	FREQ HZ	SCAN ANGLE	PRF kHz	FIXED GAIN	Flying HL (m)	TIME		MOTO DRIVE	REMARKS	
				FLOWN	LEFT							START	STOP			
Pike Scott Co, IL	16	E	124	18	79°	275				1440	15:33	15:37	2	Figure 8		
	17	W	84							1400	15:39	15:50		130 crab flight entry		
	18	E	130							1450	15:51	16:05				
	19	W	105							1430	16:07	16:19				
	20	E	125							1400	16:20	16:34				
	21	W	105							1400	16:36	16:48				
	22	E	130							140	16:50	17:04				
	23	W	109							1420	17:06	17:17				
	24	E	124							1400	17:19	17:32				
	25	W	101							1400	17:35	17:46				
	26	E	126							1400	17:48	18:02				
	27	W	113							1422	18:10	18:22				
	28	E	120							1400	18:28	18:48				
	29	W	105							1400	18:49	19:08				
	XTIG 3	S		126		44	✓			1450	19:09	19:19		CROSSFE		
										1413	19:35	19:38		Fig 8 close out		
	<b>STATUS</b>	<b>TOTAL LINES</b>	<b>FLOWN</b>	<b>LEFT</b>	<b>SITE</b>	<b>AIRCRAFT</b>	<b>FERRY</b>	<b>STATIC START</b>	<b>STOP</b>	<b>NOTES:</b>						
	20869	121	144 (3)	74	3-7	8		15:12	15:17	15:02 on	PDKC0700 Base used & HFDG					
				includo lines (Flumby 73TM)				19:50	19:55	15:21 up	19:58 off					
										1067.0	- 1071.5					

Quantum Spatial    N.6216 Resource Drive Sheboygan Falls, WI. 53085    PHONE: 920-467-2655    FAX: 888-253-6695    E-Mail: amepphoto@quantumspatial.com

# Base Station Log

## GPS OBSERVATION LOG

Station ID	PID KC0700	Date	11/23/2015
Project Number	26869	Julian Date	327
Project Name	NRCS Pike/Scott Co	Start Time	13:58:00 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	01:53:00 UTC-1
Revr. S/N	5106K20884	Revr. File Name	08843270.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes	No
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

Height Readings:  
 (Top of Monument to Bottom of Ground Plane)

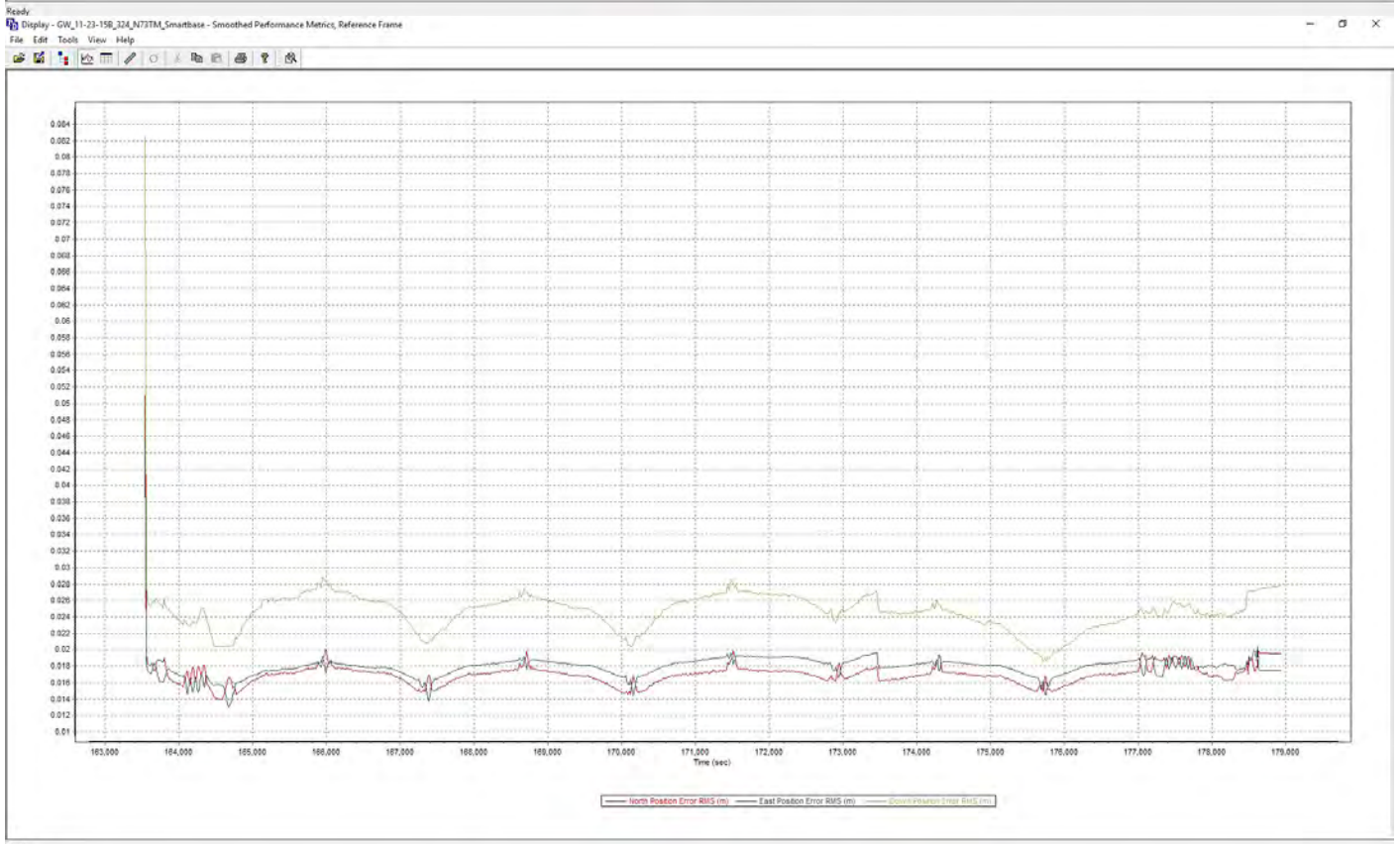
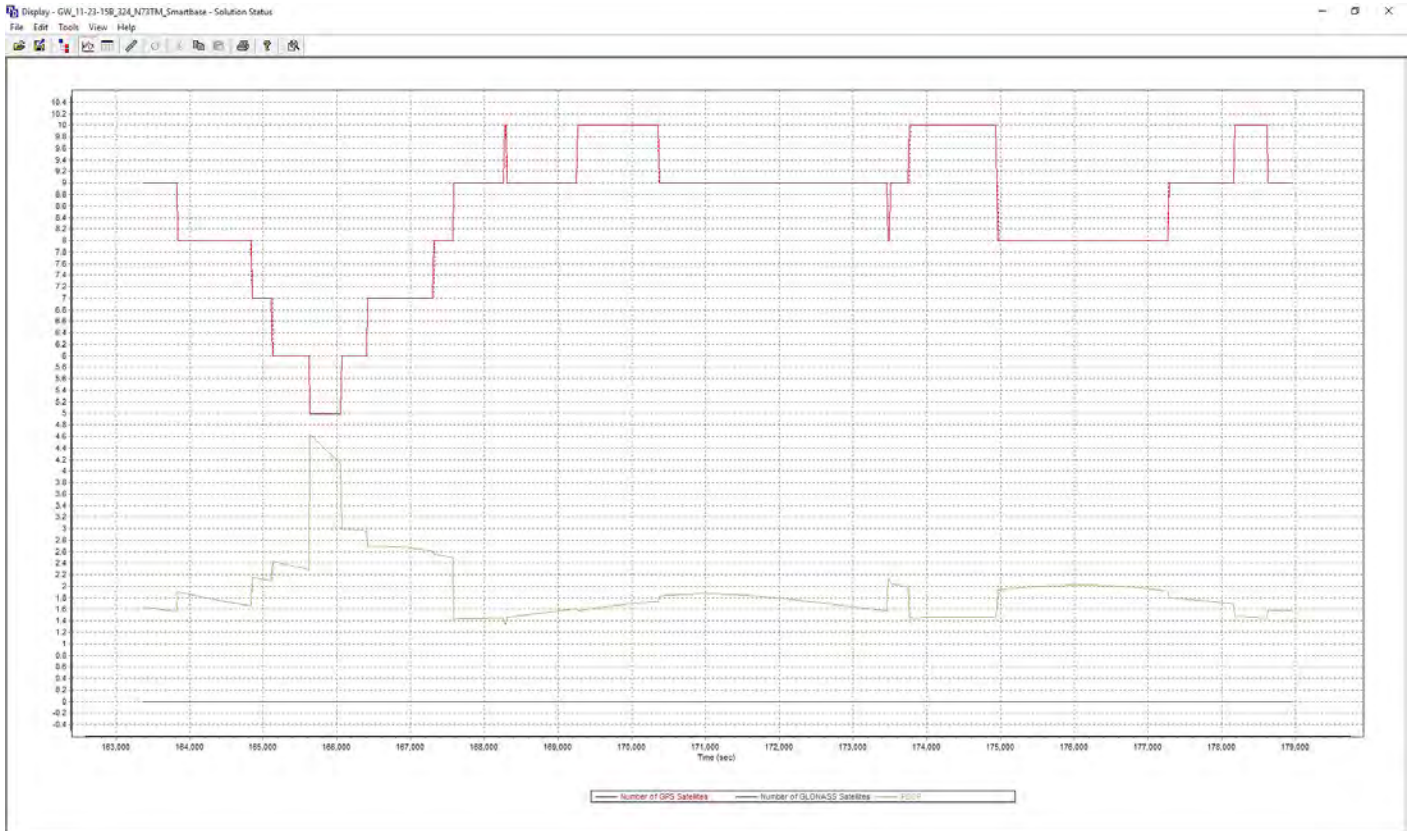
Start	2	M.	Fl.
Stop	2	M.	Fl.
Mean	2	M.	Fl.

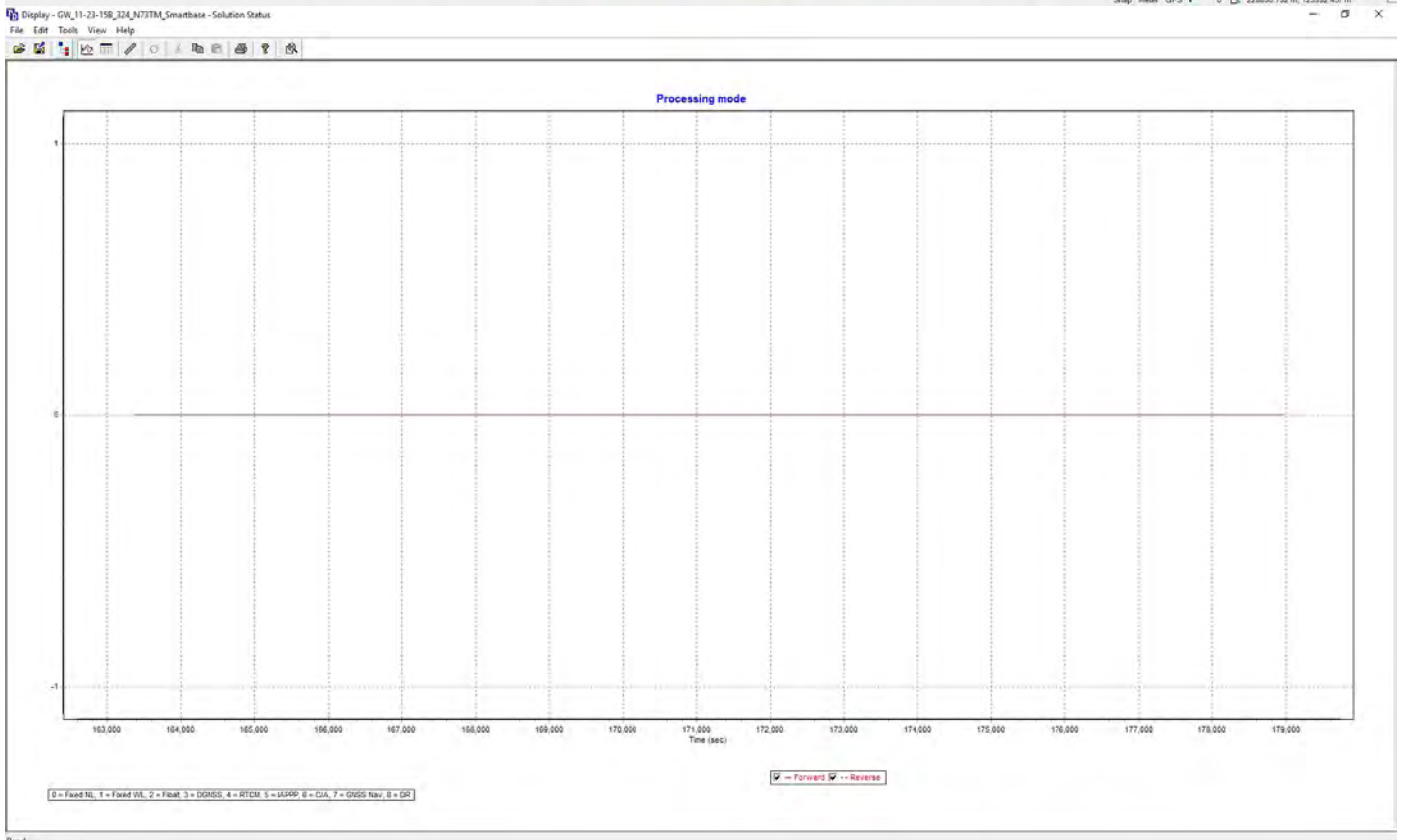
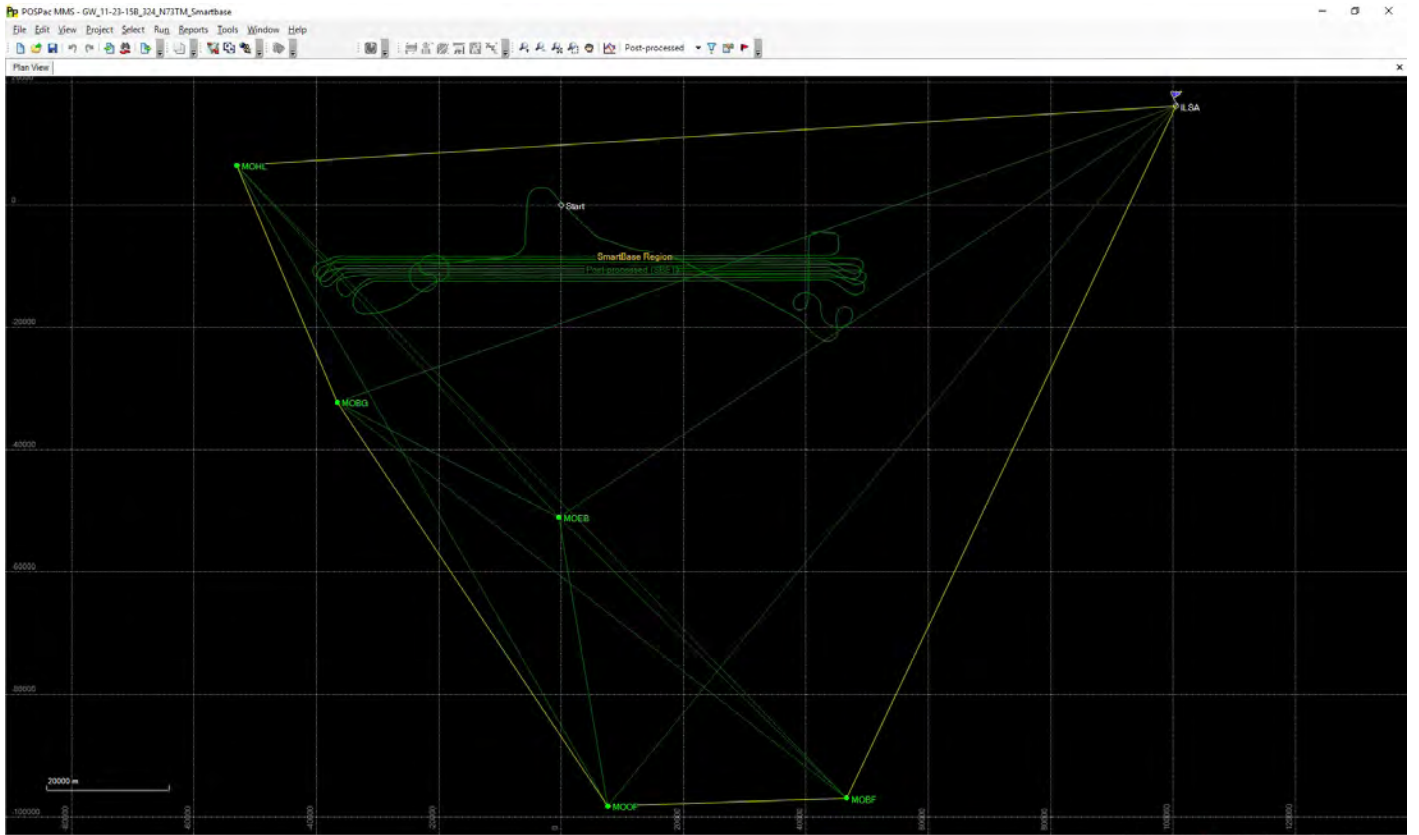
## GPS OBSERVATION LOG

Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control

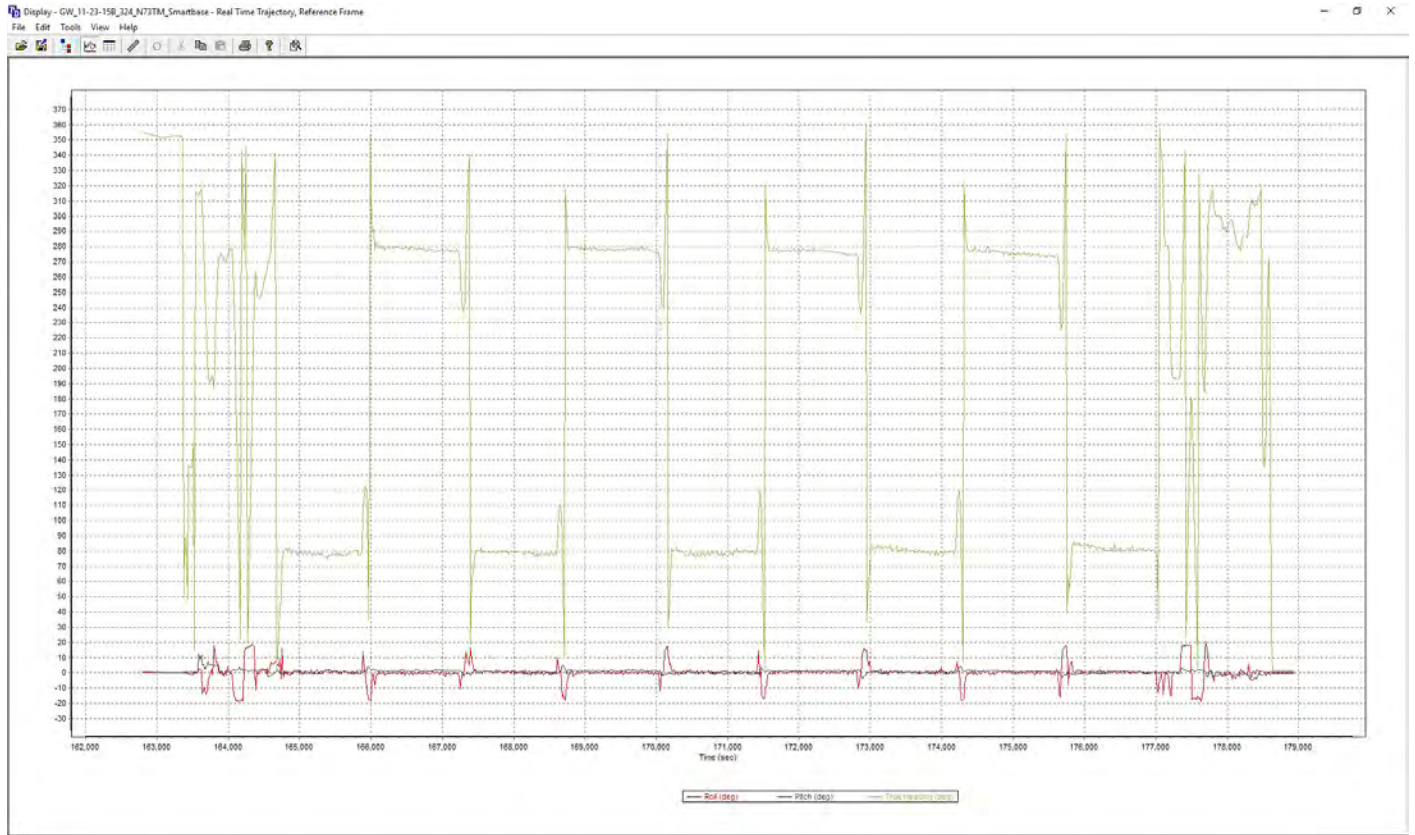


# Nov 23, 2015-B (N73TM, SN329)









Coordinate Manager

Station Information

Station ID:

Coordinates

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

Antenna Reference Point (ARP) coordinates Apply Changes

Antenna Frame

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

Station Database

Station ID:  Station Fullname:

Primary Service ID:  Edit Coordinate Accuracy:

Secondary Service ID:  Edit Add Delete Update

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc
[Empty Table]								

Import Coordinates Export Coordinates Close

# Base Station Log

## GPS OBSERVATION LOG

Station ID	PID KC0700	Date	11/23/2015
Project Number	26869	Julian Date	327
Project Name	NRCS Pike/Scott Co	Start Time	13:58:00 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	01:53:00 UTC-1
Revr. S/N	5106K20884	Revr. File Name	08843270.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes	No
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

Height Readings:  
 (Top of Monument to Bottom of Ground Plane)

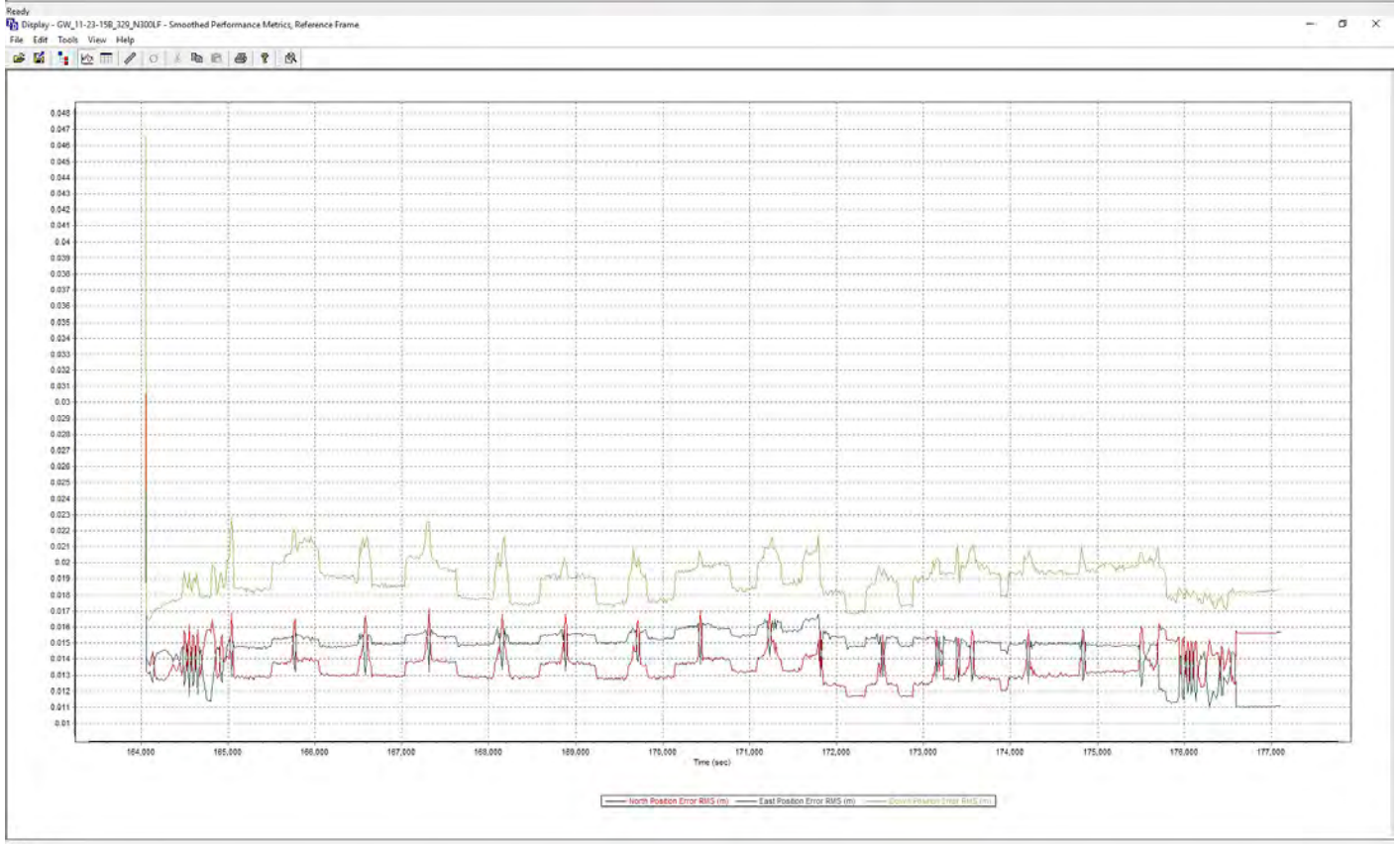
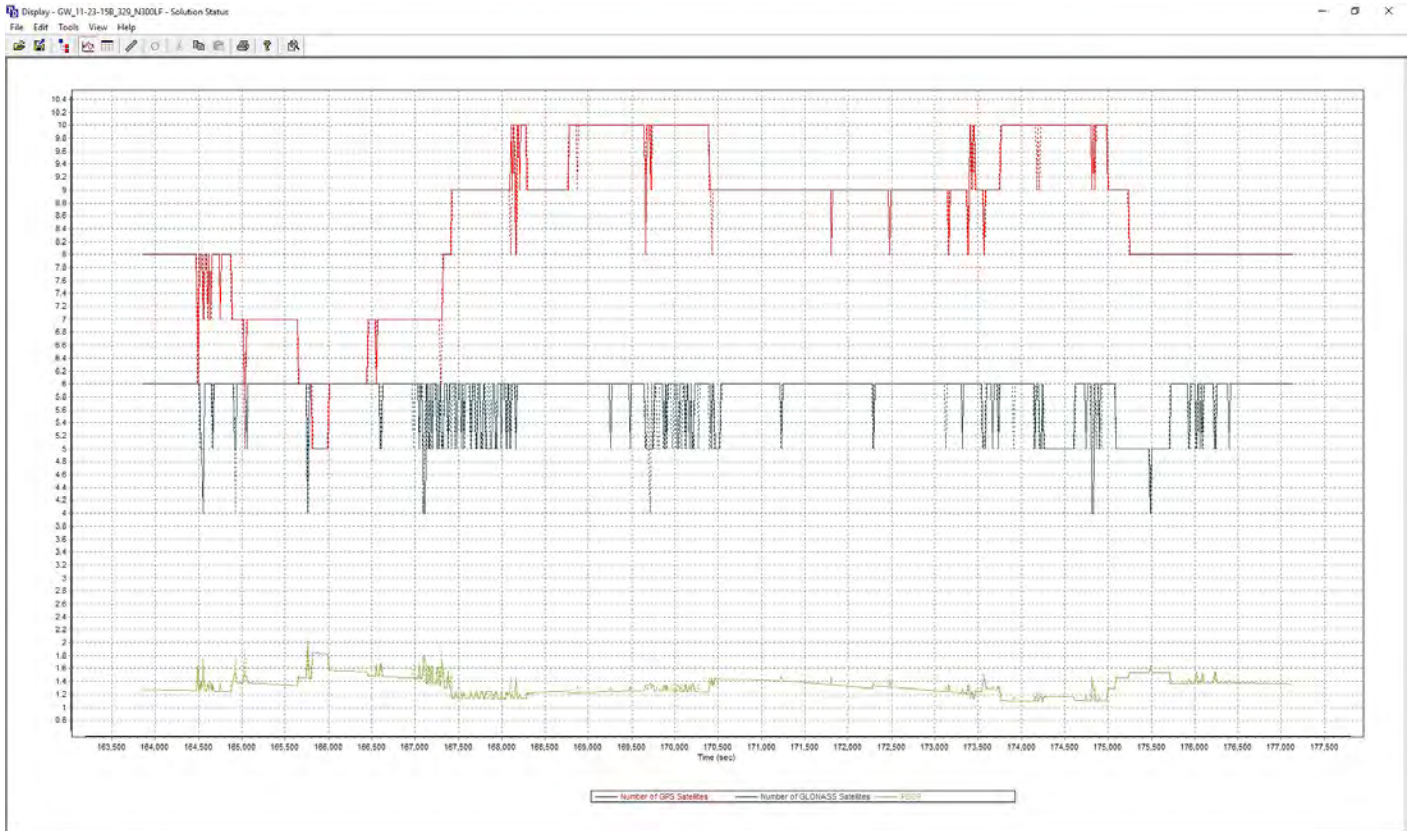
Start	2	M.	Fl.
Stop	2	M.	Fl.
Mean	2	M.	Fl.

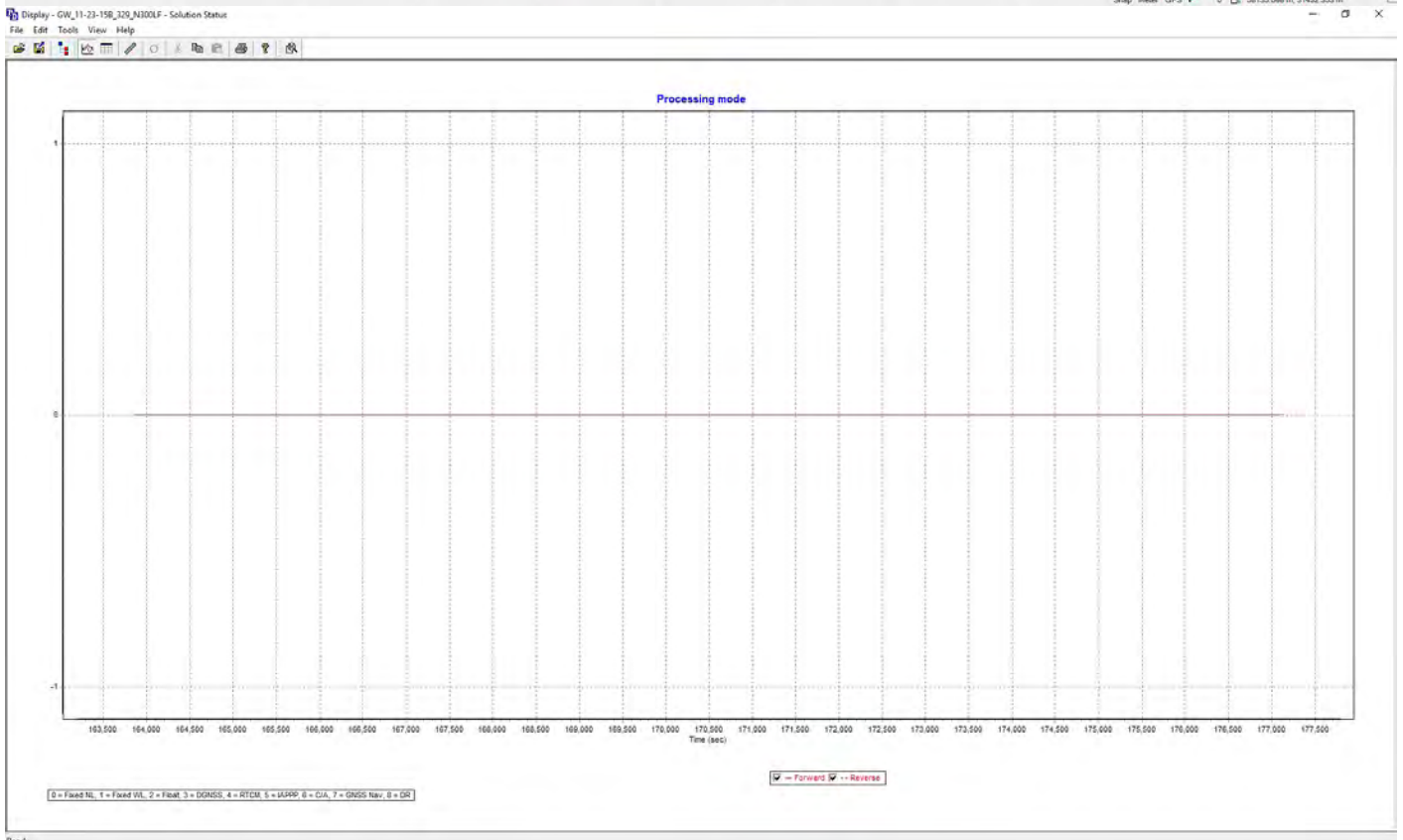
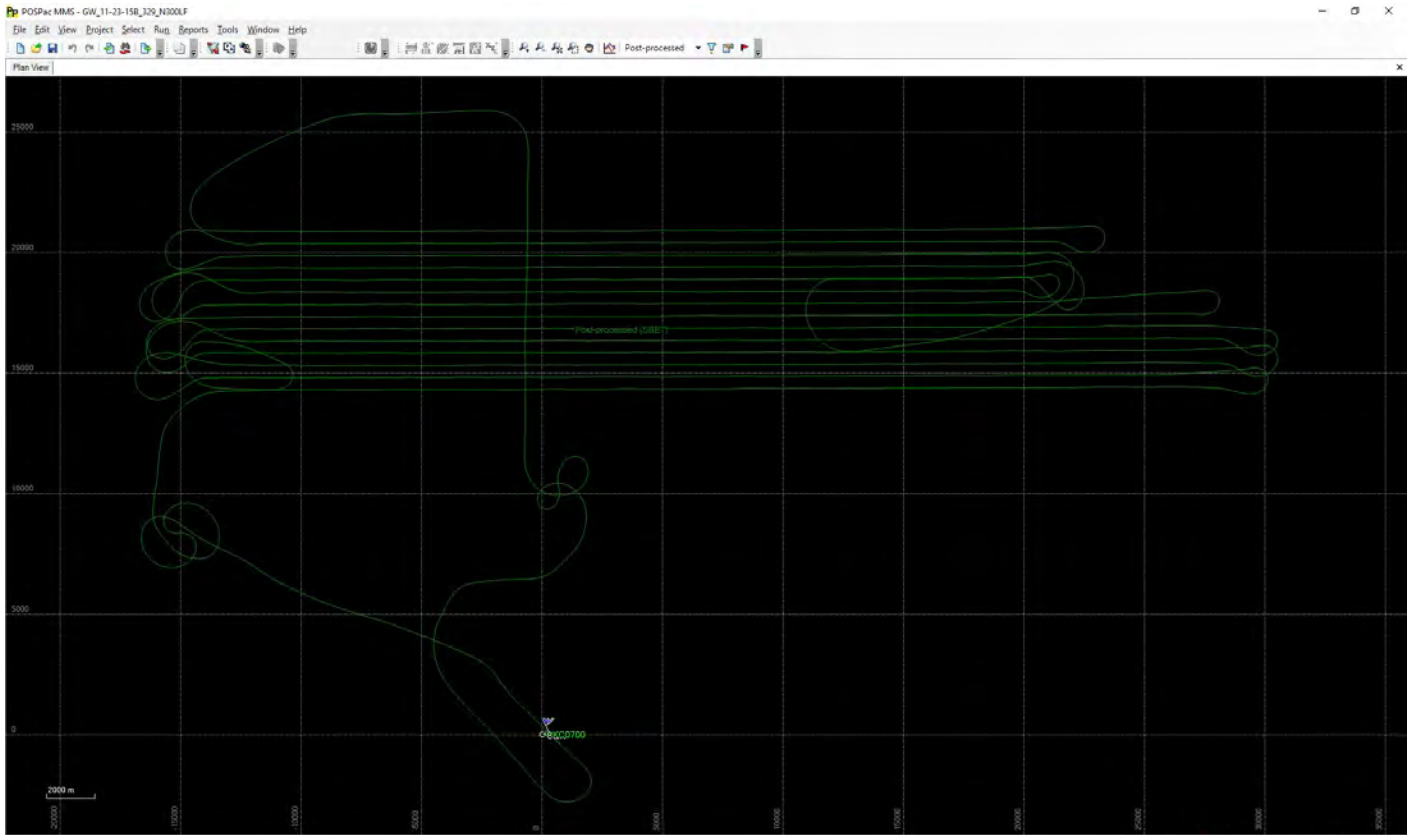
## GPS OBSERVATION LOG

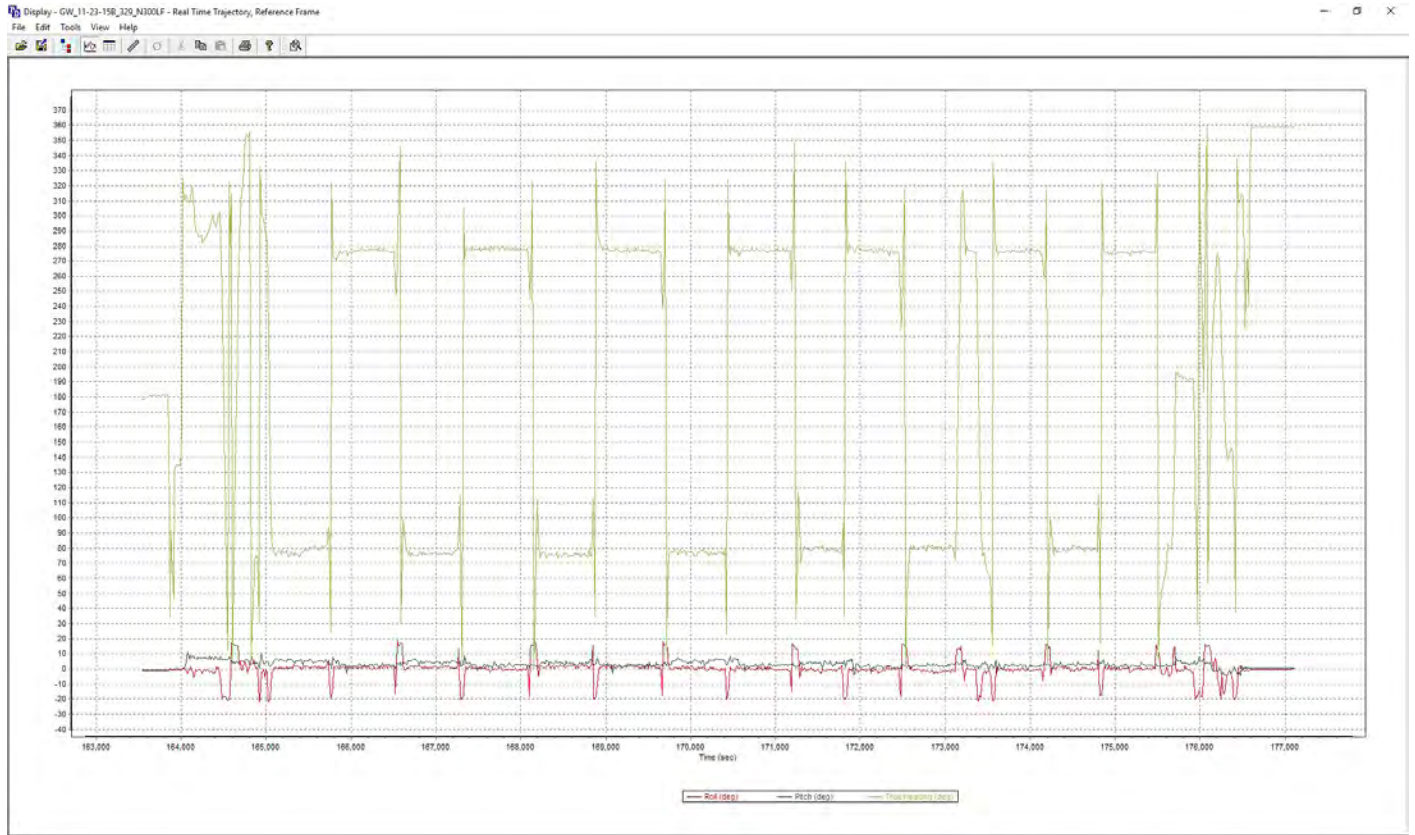
Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control



# Nov 23, 2015-B (N300LF, SN329)







Coordinate Manager

Station Information

Station ID:

Coordinates

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

Antenna Frame

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

Ground Reference Point (GRP) coordinates

Station Database

Station ID:  Station Fullname:

Primary Service ID:   Coordinate Accuracy:

Secondary Service ID:

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc





# Base Station Log

## GPS OBSERVATION LOG

Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control



## GPS OBSERVATION LOG

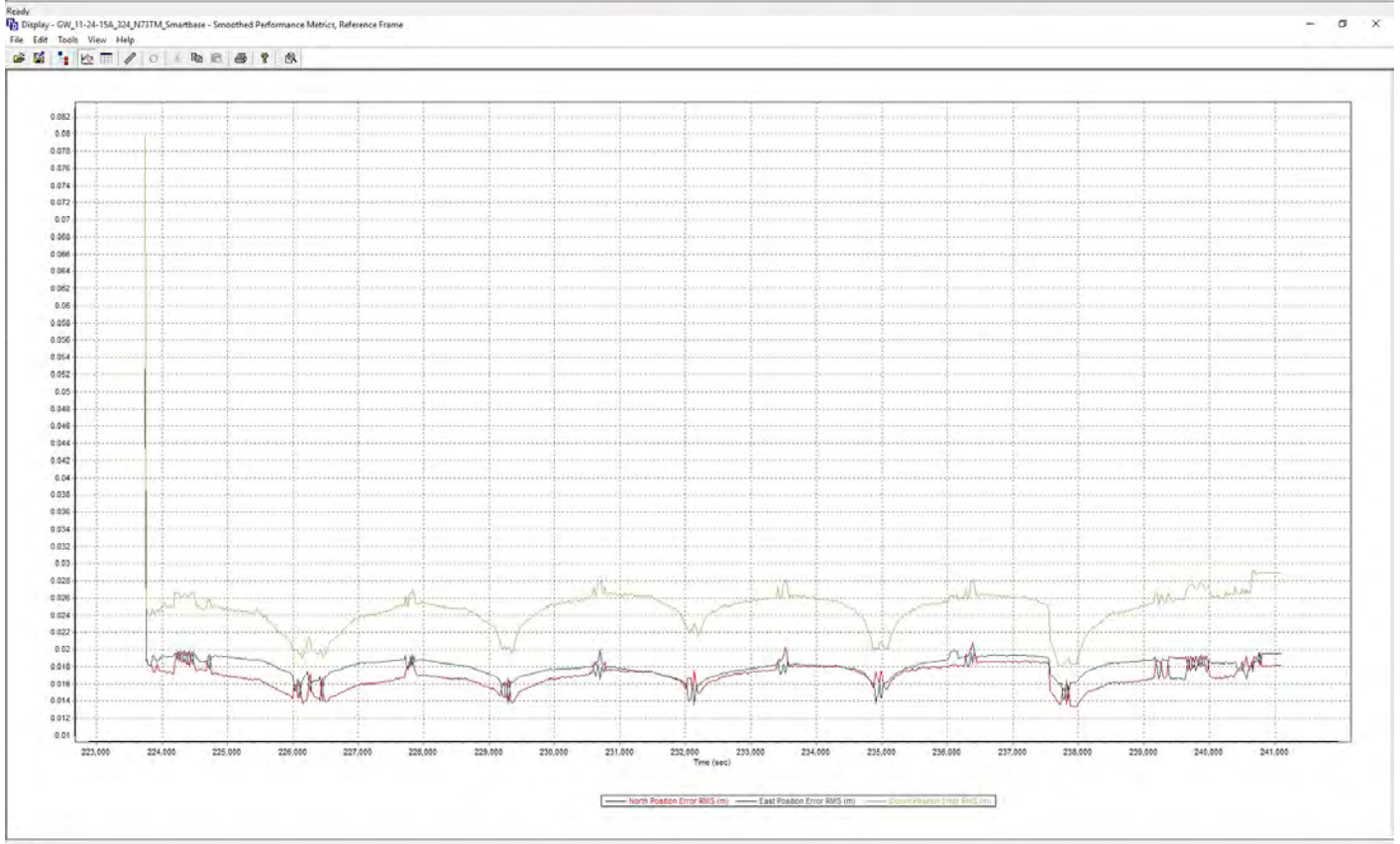
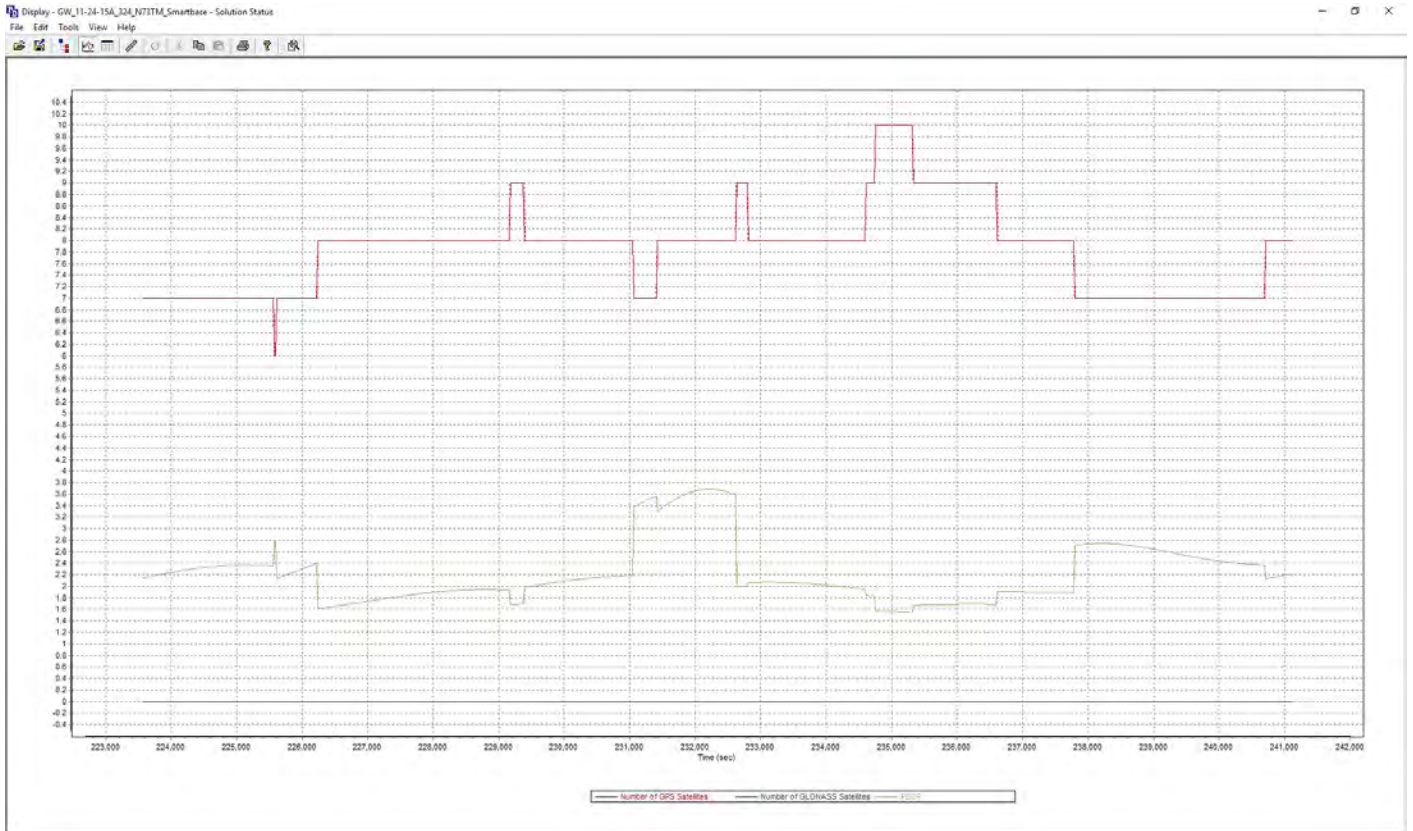
Station ID	PID KC0700	Date	11/23/2015
Project Number	26869	Julian Date	327
Project Name	NRCS Pike/Scott Co	Start Time	13:58:00 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	01:53:00 UTC-1
Revr. S/N	5106K20884	Revr. File Name	08843270.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

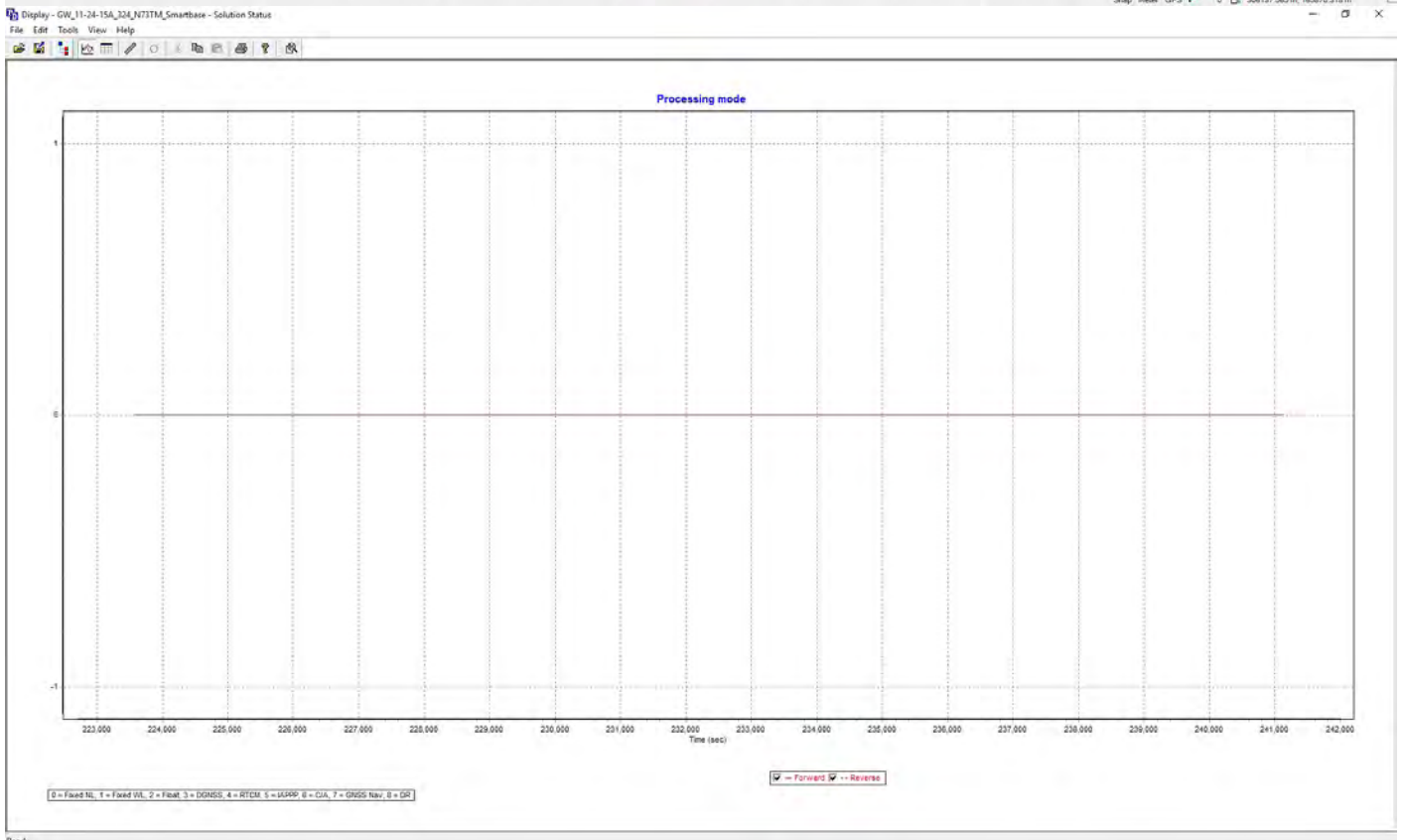
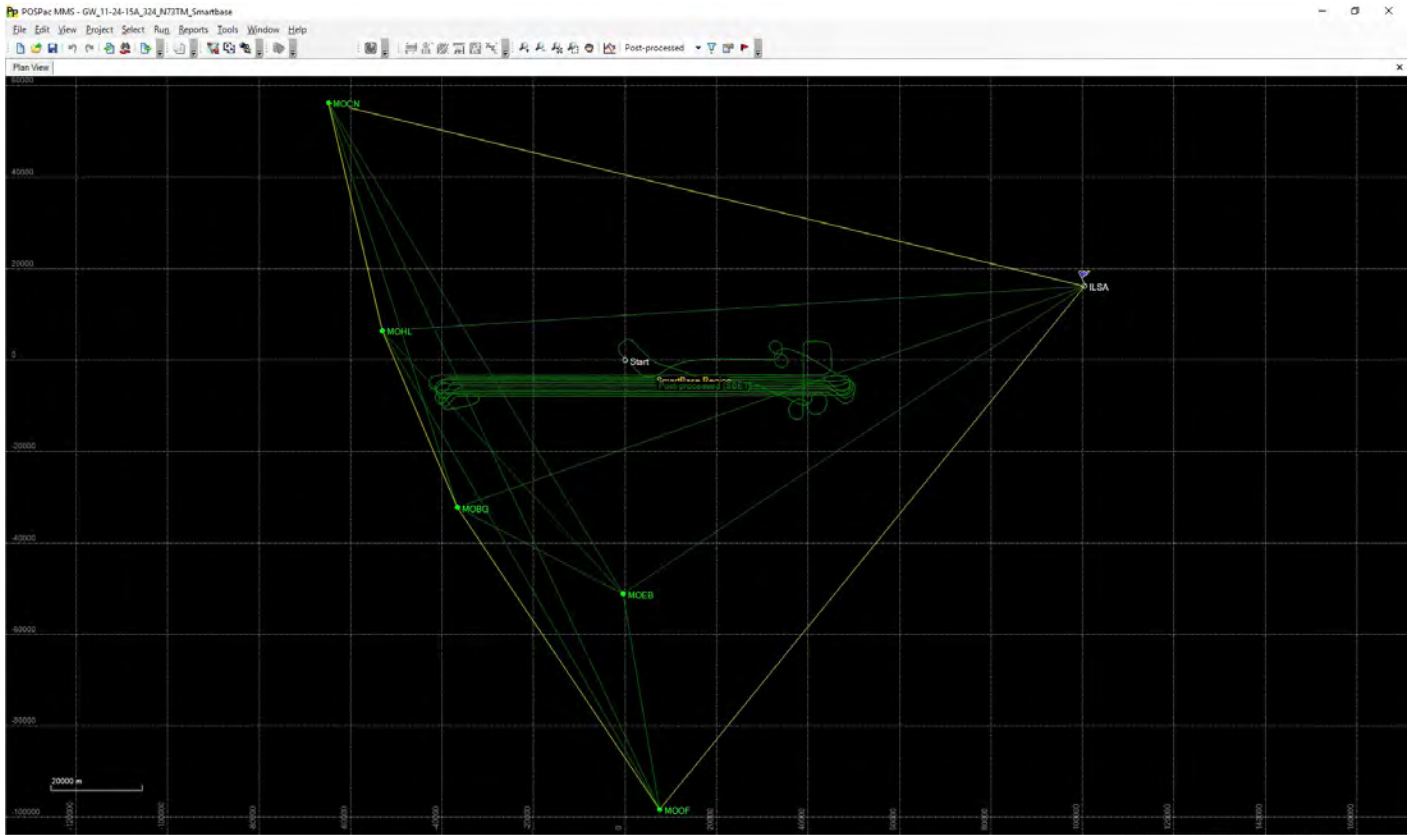
New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes No	
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

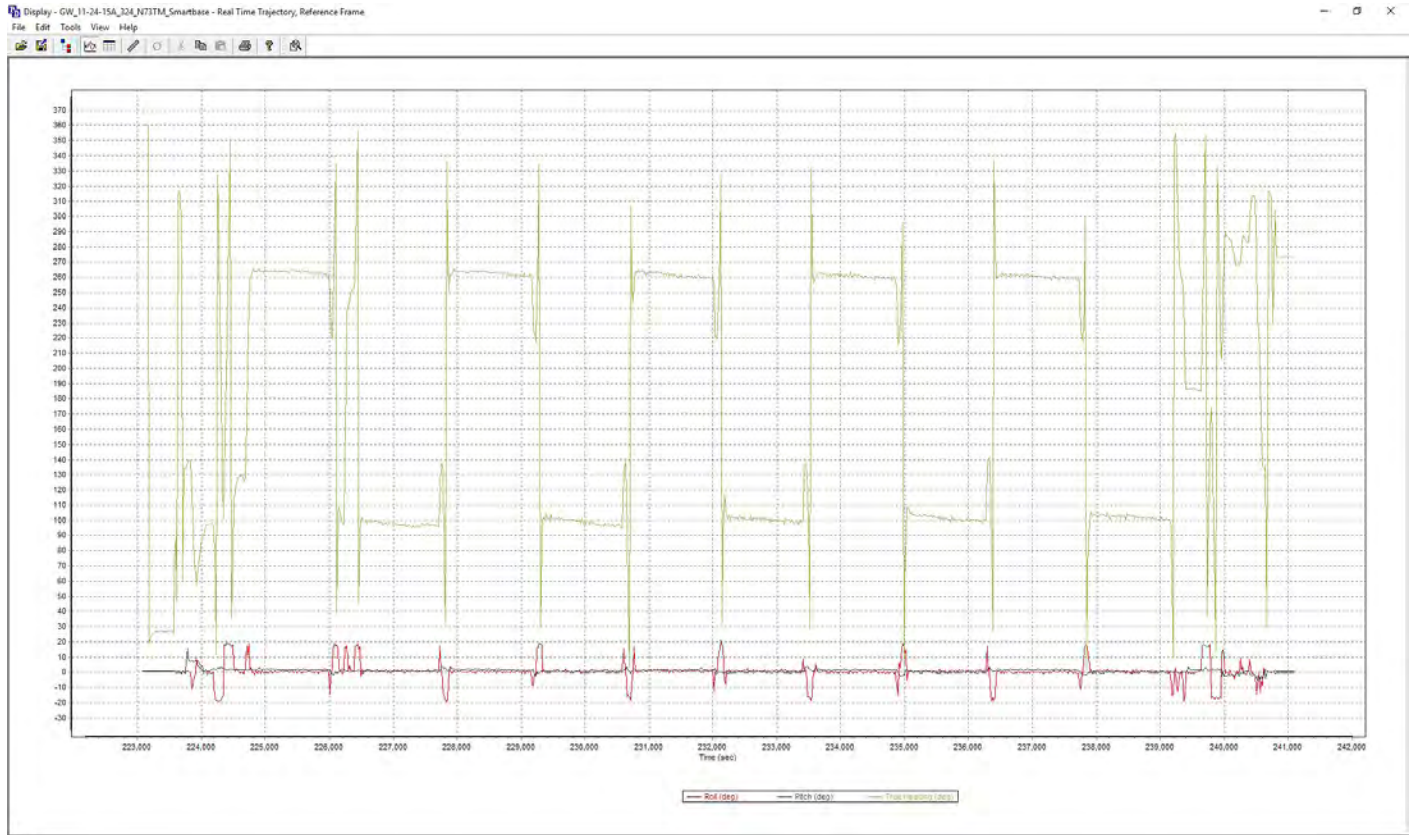
**Height Readings:**  
 (Top of Monument to Bottom of Ground Plane)

Start	2	M.	Fl.
Stop	2	M.	Ft.
Mean	2	M.	Ft.

# Nov 24, 2015-A (N73TM, SN324)







**Coordinate Manager**

**Station Information**

Station ID:

**Coordinates**

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

**Antenna Reference Point (ARP) coordinates**

**Antenna Frame**

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

**Station Database**

Station ID:  Station Fullname:

Primary Service ID:   Coordinate Accuracy:

Secondary Service ID:

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc
[Empty Table]								

# Base Station Log

## GPS OBSERVATION LOG

Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control



## GPS OBSERVATION LOG

Station ID	PID KC0700	Date	11/24/2015
Project Number	26869	Julian Date	328
Project Name	NRCS Pike/Scott Co	Start Time	13:01 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	00:47 UTC+1
Revr. S/N	5106K20884	Revr. File Name	08843280.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

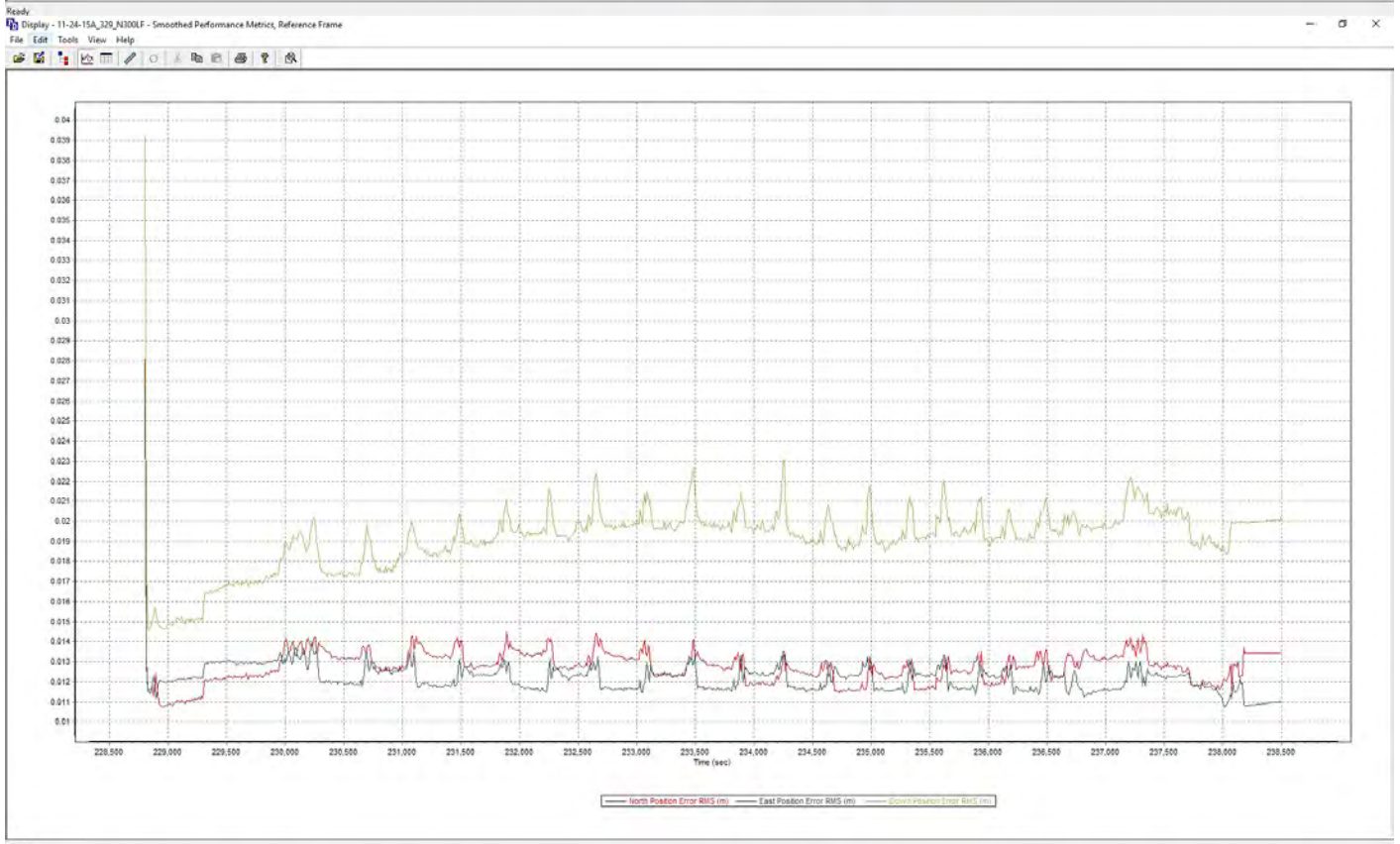
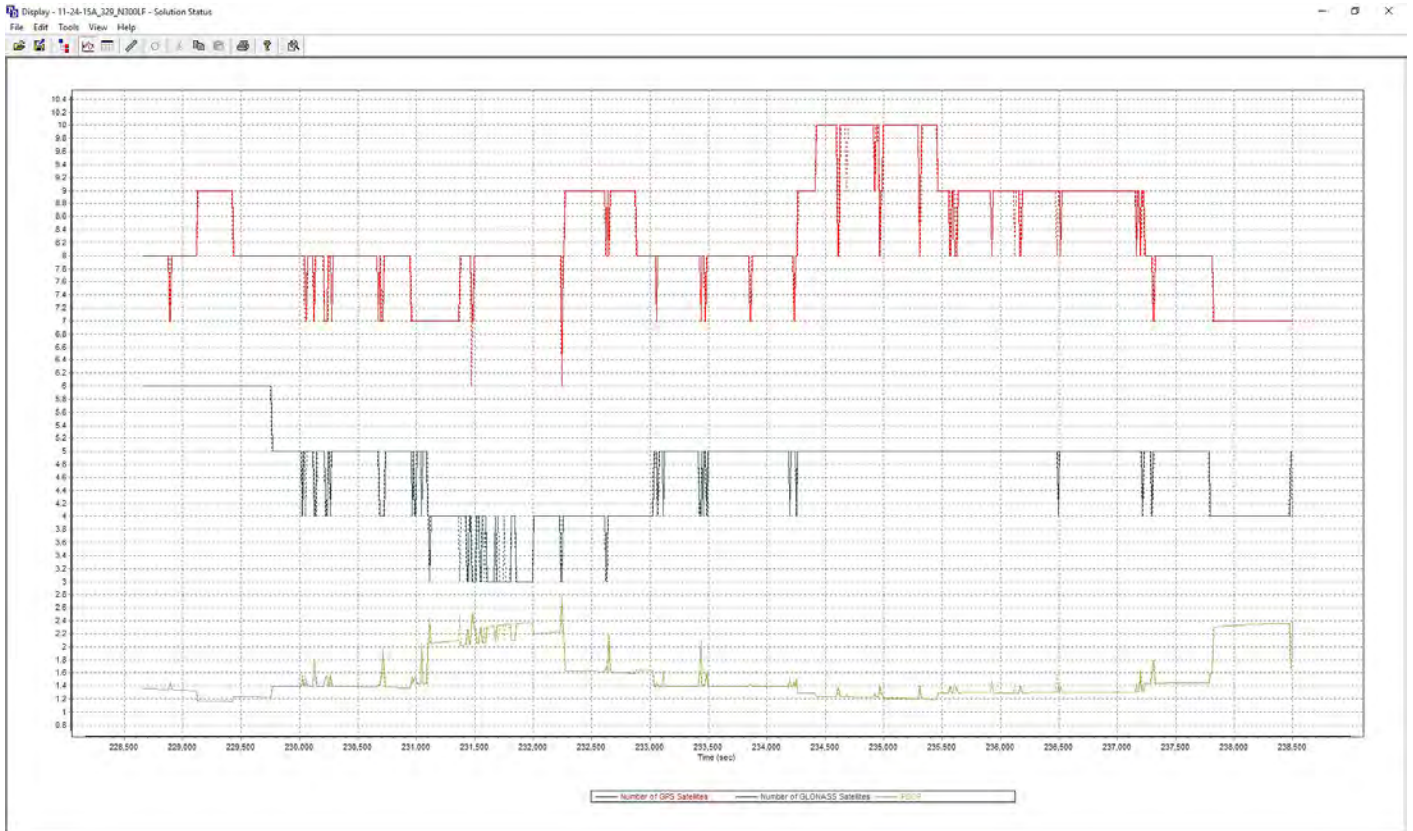
New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes No	
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

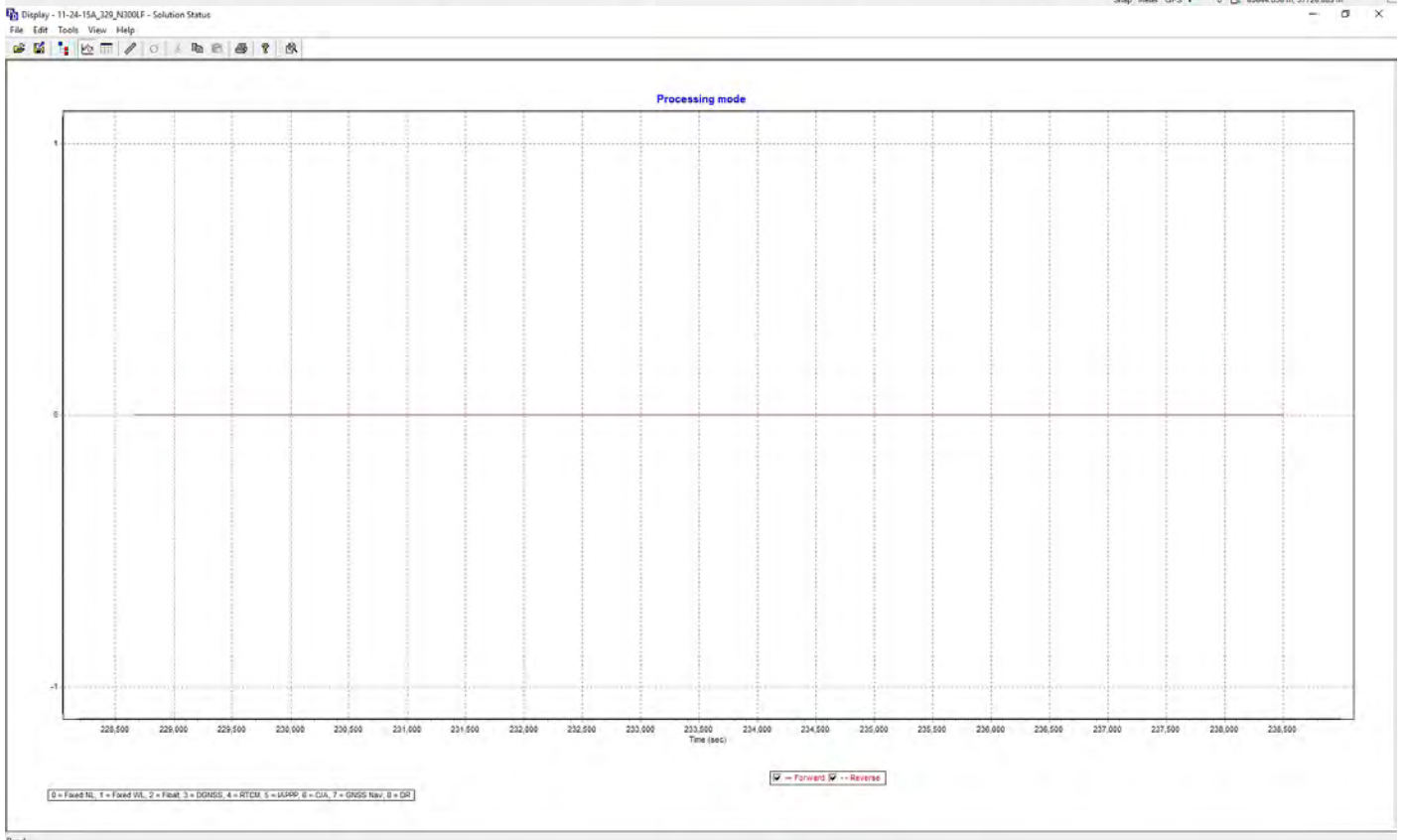
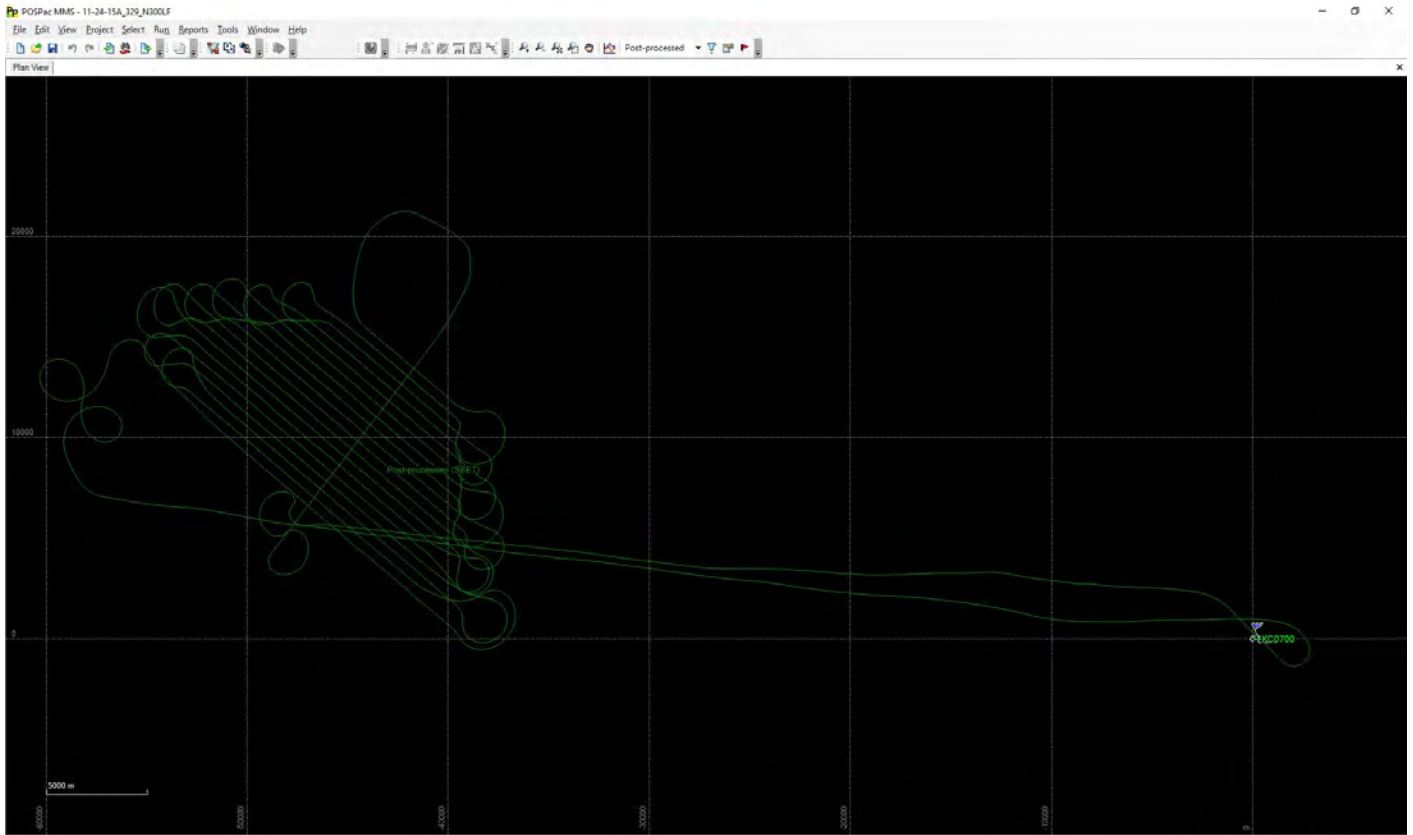
**Height Readings:**  
 (Top of Monument to Bottom of Ground Plane)

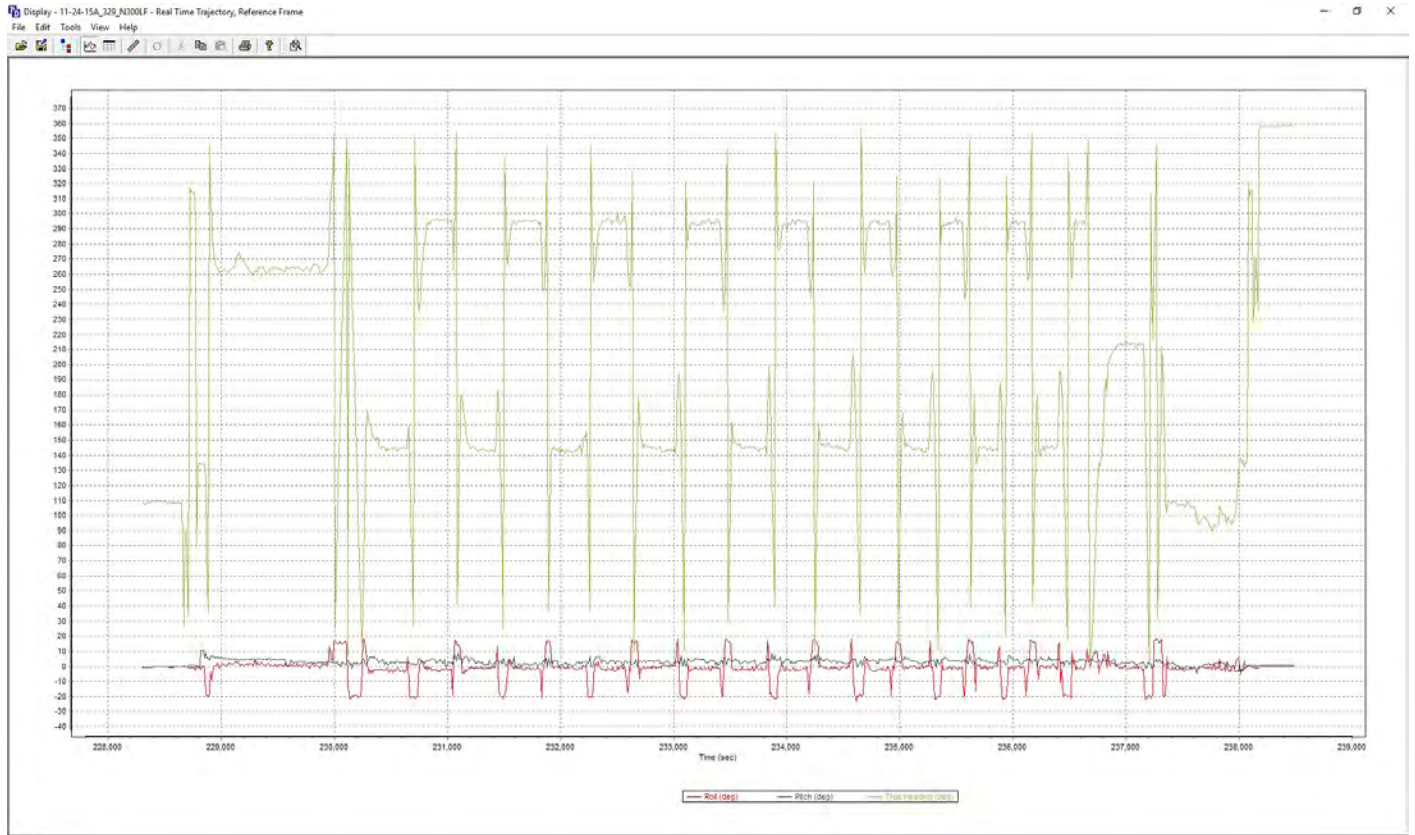
Start	2	M.	Fl.
Stop	2	M.	Ft.
Mean	2	M.	Ft.



# Nov 24, 2015-A (N300LF, SN329)







Coordinate Manager

Station Information

Station ID:

Coordinates

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

Antenna Frame

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

Ground Reference Point (GRP) coordinates

Station Database

Station ID:  Station Fullname:

Primary Service ID:   Coordinate Accuracy:

Secondary Service ID:

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc
[Empty Table]								

# Flight Log

OPERATORS FLIGHT LOG													
MISSION: 20151124 A			DATE: 11/24/2015			ORION H.B.NI: 329			SENSOR: 329				
PILOT: Spencer Naper			OPERATOR: Gary Tao			AIRCRAFT: N300 LF			REMARKS				
PROJECT NUMBER AND NAME	LINE No.	LINE Lbl	Hdg	GRD SPEED (KIAS)	FREQ Hz	SCAN ANGLE	PRF kHz	FIXED GAIN	FLYING Ht. (m) (AGL)	TIME START	TIME STOP	MM70 DRIVE	REMARKS
26869										15:40	15:53	1	Test Fire
BIKE/SCOTT										15:50	15:58		overflight of M&HL CORRS
CO-IL										16:01	16:04		Fig 8
	121	121	30°	119	63	29	275		1400				
	120	120	310°	124					1400m				
	119	119	130°	122					1400m				
	118	118	310°	125					1400m				
	117	117	130°	117					1400m				
	116	116	310°	122					1400m				
	115	115	130°	105					1400m				
	114	114	310°	109					1400m				
	113	113	130°	119					1400m				
	112	112	20°	115					1400m				
	111	111	130°	110					1400m				
	110	110	310°	117					1400m				
	109	109	130°	104					1400m				
	108	108	310°	111					1400m				
	107	107	130°	93					1400m				22° Roll on Turn
	106	106	310°	117					1400m				
	105	105	130°	97					1400m				
	104	104	310°	109					1400m				
	101	101	217°	109					1400m				close out trap; RTB
										17:52	17:56		
STATUS	TOTAL LINES	FLOWN	LEFT	SITE	AIRCRAFT	FERRY	STATIC	START	STOP	NOTES			
26869	121	19	11	20		1.6	15:25 (KAPP)	15:53	16:30	15:09 on - 18:18 off			
		(21 Lines by 10/14)					High Overcast			15:33 up - 18:07 down			
										Altib: 1075.0 - 1077.6			

Quantum Spatial N.6216 Resource Drive Sheboygan Falls, WI. 53085 E-Mail: flight-log-distribution-list@quantumspatial.com

# Base Station Log

## GPS OBSERVATION LOG

Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control



## GPS OBSERVATION LOG

Station ID	PID KC0700	Date	11/24/2015
Project Number	26869	Julian Date	328
Project Name	NRCS Pike/Scott Co	Start Time	13:01 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	00:47 UTC+1
Revr. S/N	5106K20884	Revr. File Name	08843280.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

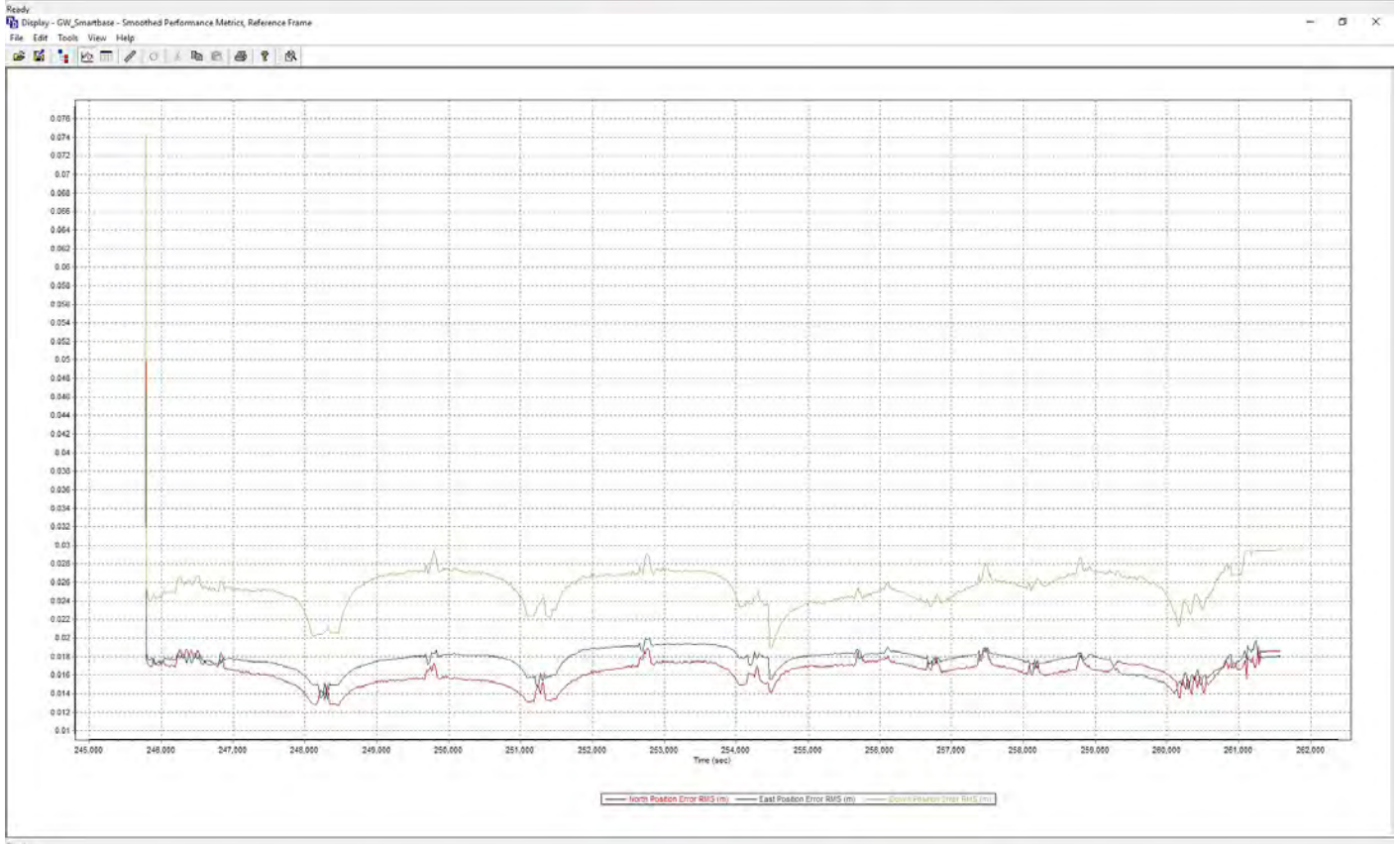
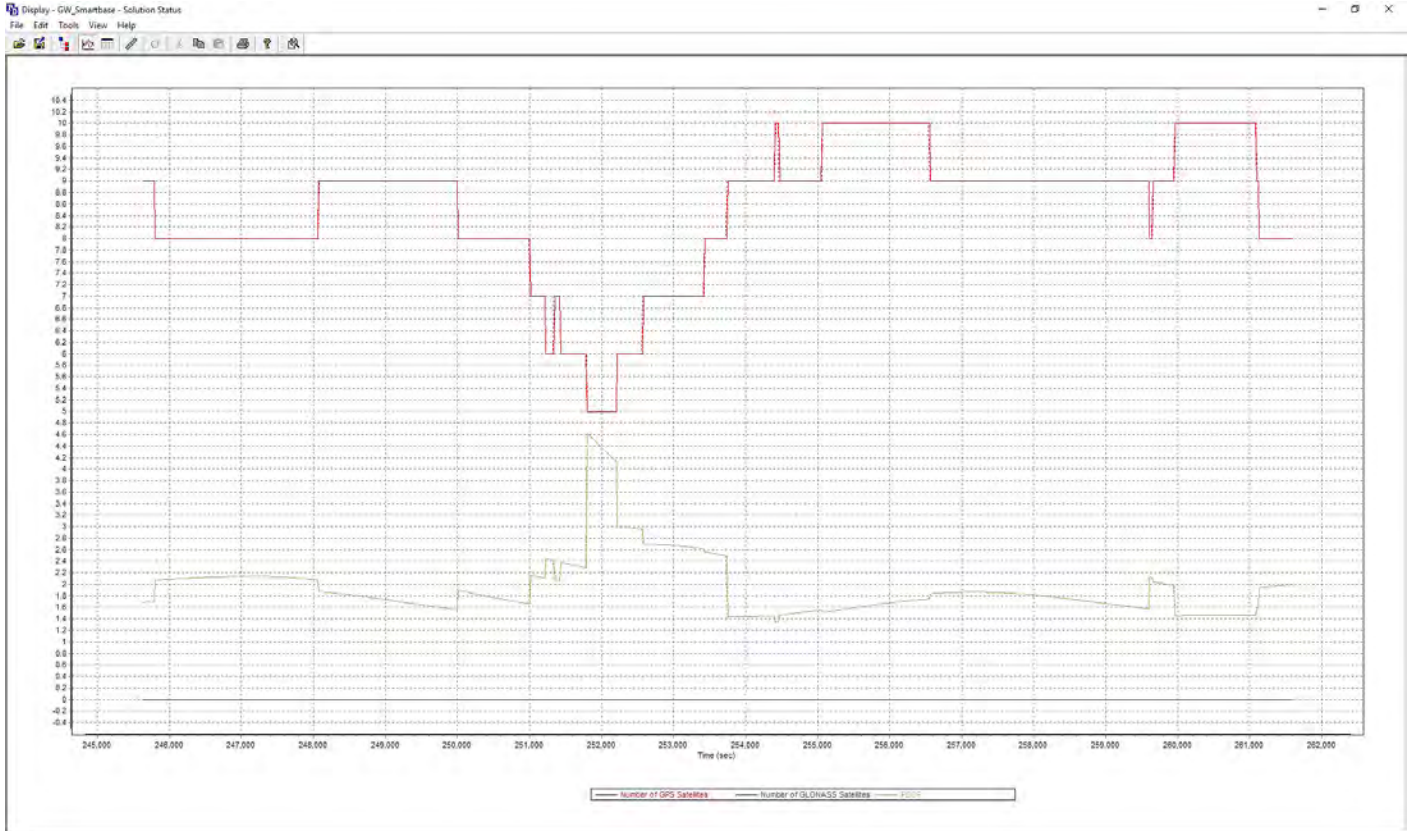
New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes No	
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

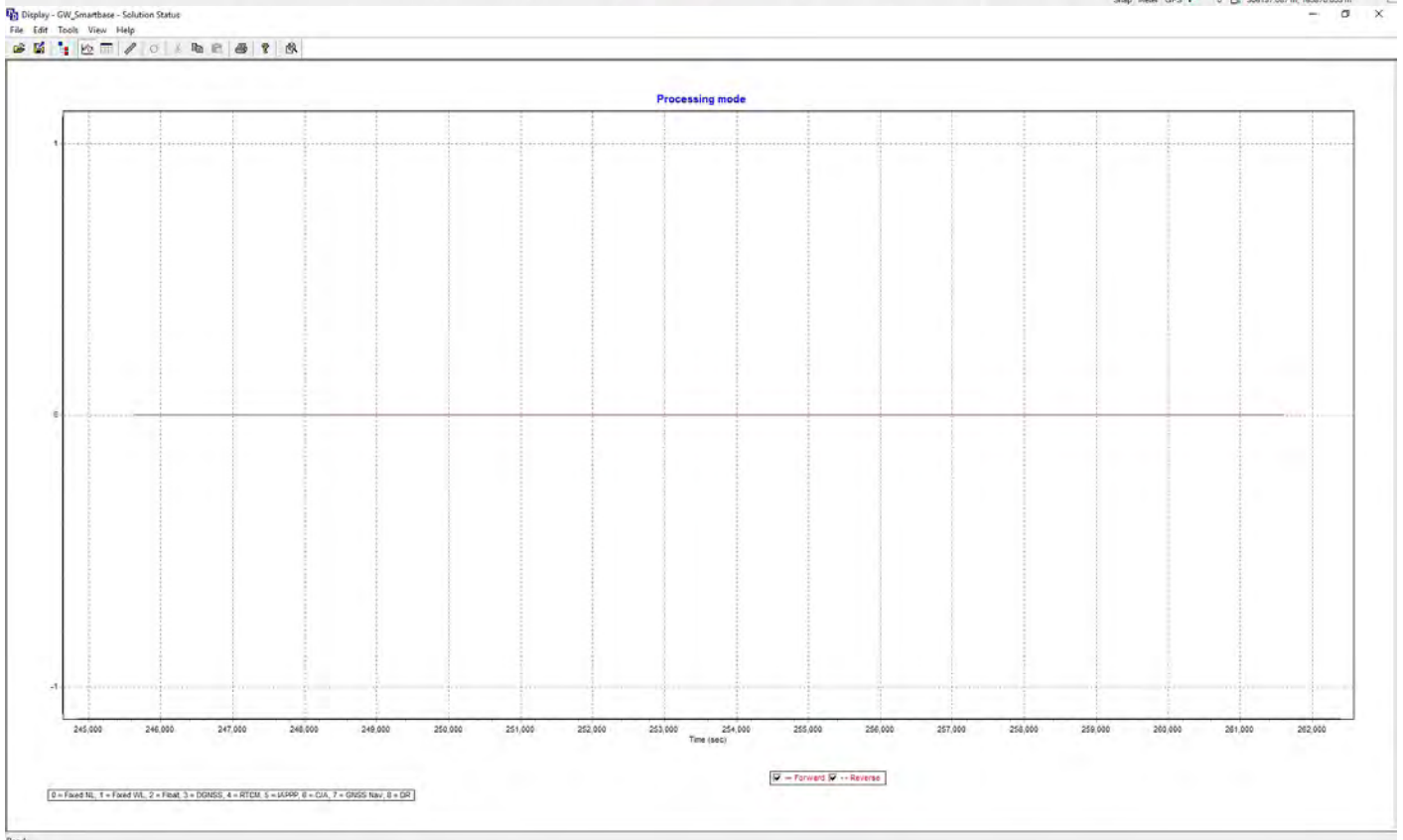
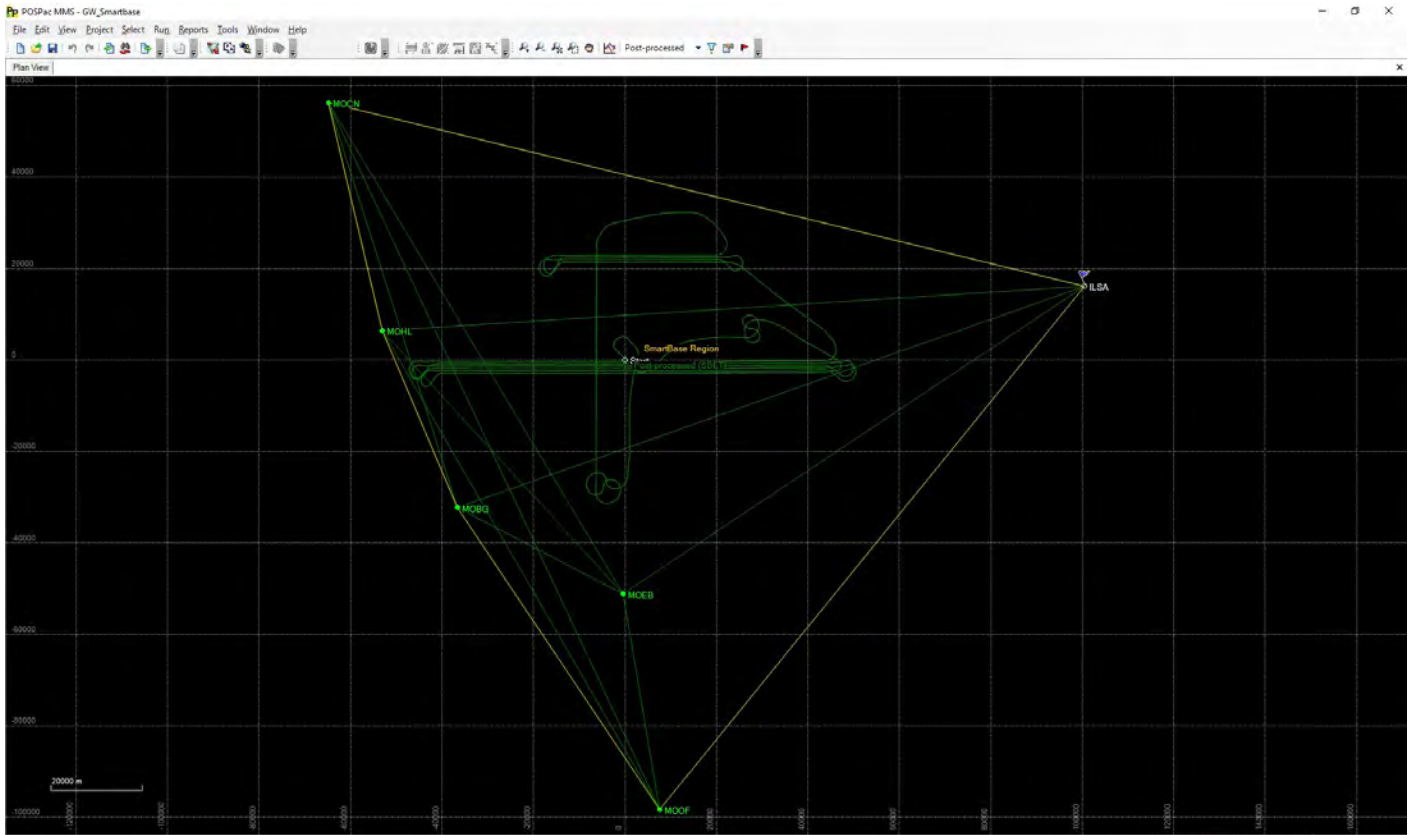
**Height Readings:**  
 (Top of Monument to Bottom of Ground Plane)

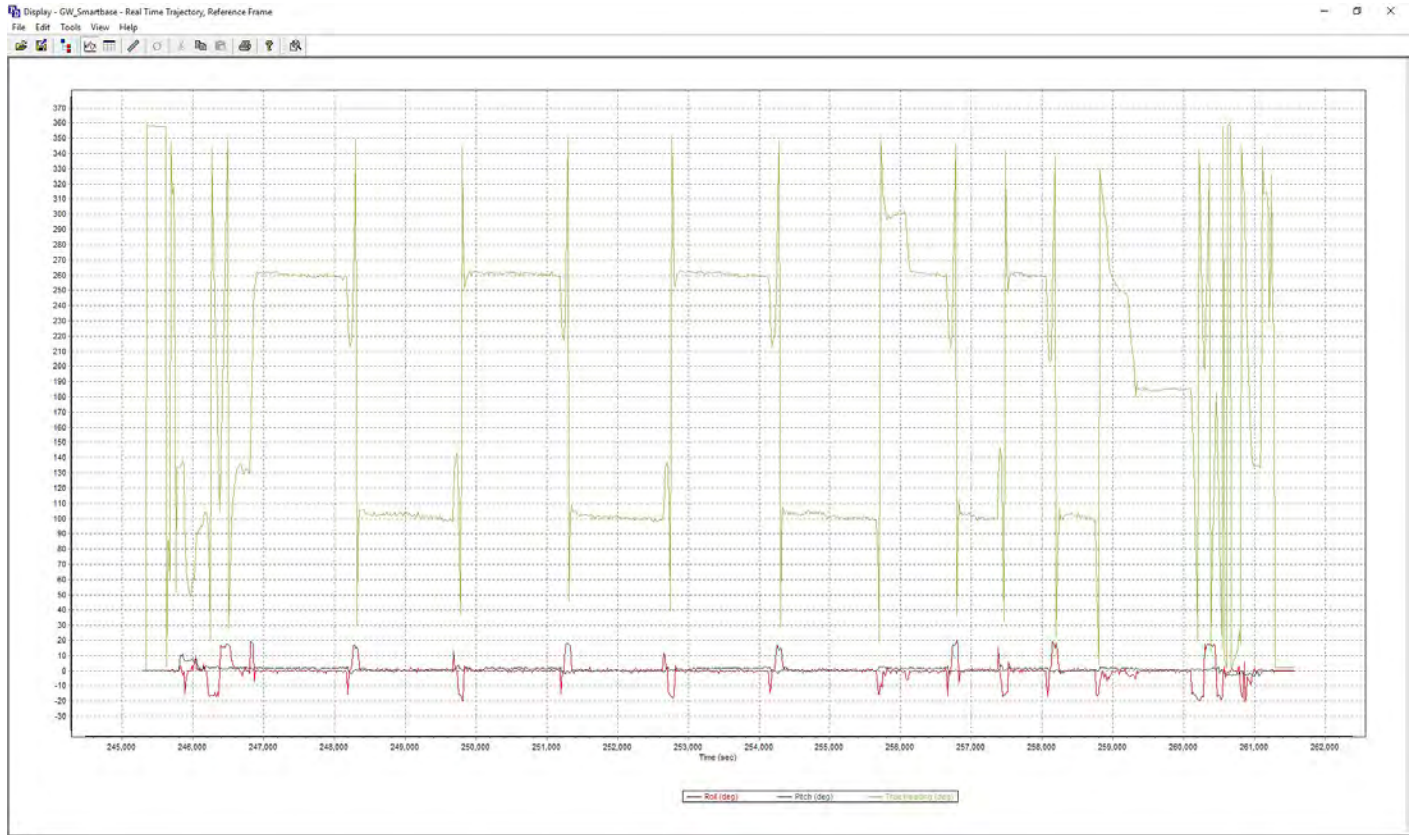
Start	2	M.	Fl.
Stop	2	M.	Ft.
Mean	2	M.	Ft.

# Nov 24, 2015-B (N73TM, SN324)









**Coordinate Manager**

Station Information

Station ID:

Coordinates

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

Antenna Reference Point (ARP) coordinates Apply Changes

Antenna Frame

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

Station Database

Station ID:  Station Fullname:

Primary Service ID:  Edit Coordinate Accuracy:

Secondary Service ID:  Edit Add Delete Update

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc

Import Coordinates Export Coordinates Close

# Base Station Log

## GPS OBSERVATION LOG

Monument Sketch and Notes: Refer PID KC0700 NGS Datasheet, Pittsfield Penstone Mun Airport (PPQ) Primary Survey Control



## GPS OBSERVATION LOG

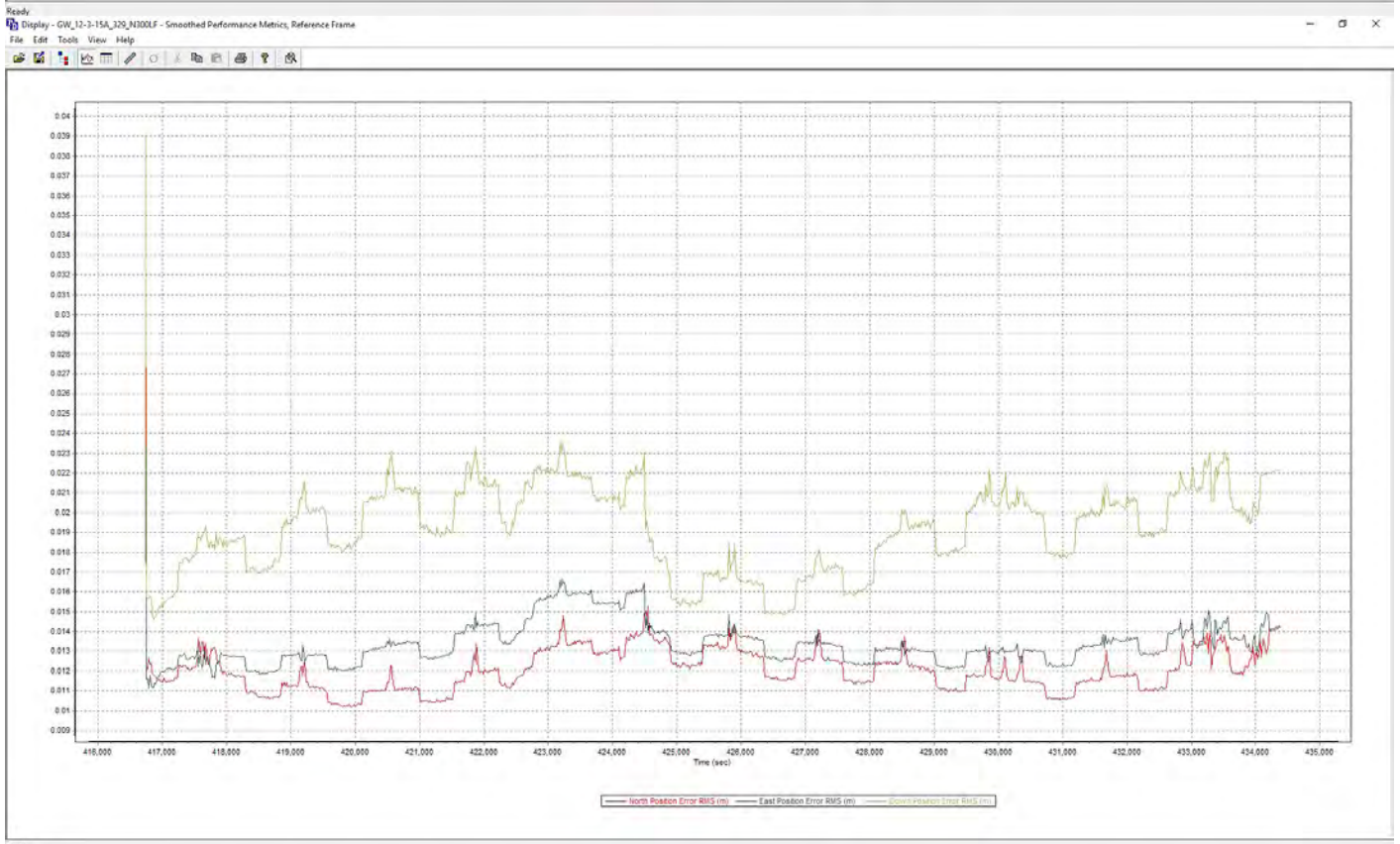
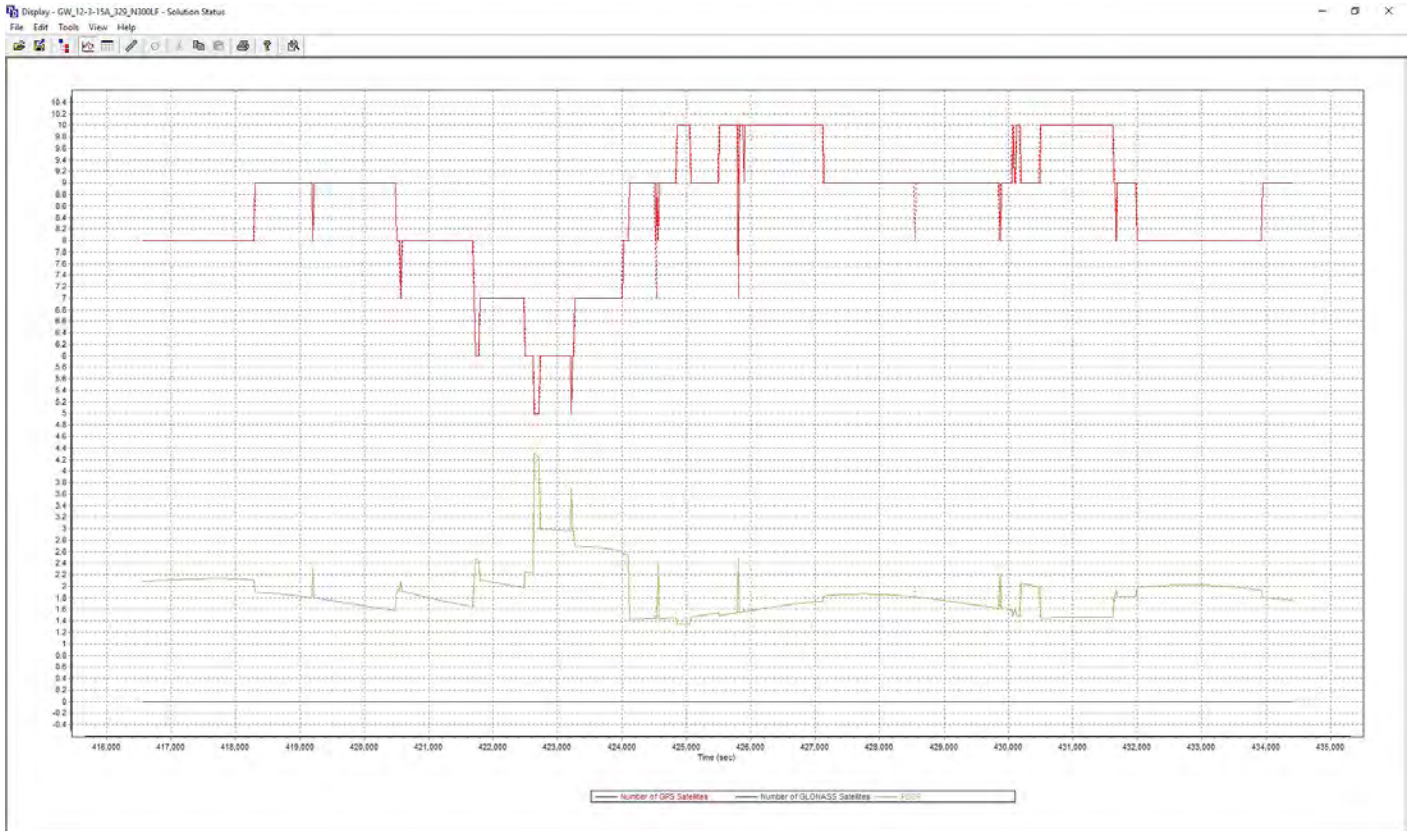
Station ID	PID KC0700	Date	11/24/2015
Project Number	26869	Julian Date	328
Project Name	NRCS Pike/Scott Co	Start Time	13:01 UTC
Revr. Type	Trimble R7 GNSS	Stop Time	00:47 UTC+1
Revr. S/N	5106K20884	Revr. File Name	08843280.T01
Antenna Type	Zephyr Geodetic Model 2	Observer	Daniel Rolfes/Gary Tao
Antenna S/N	<u>1441101268</u>		

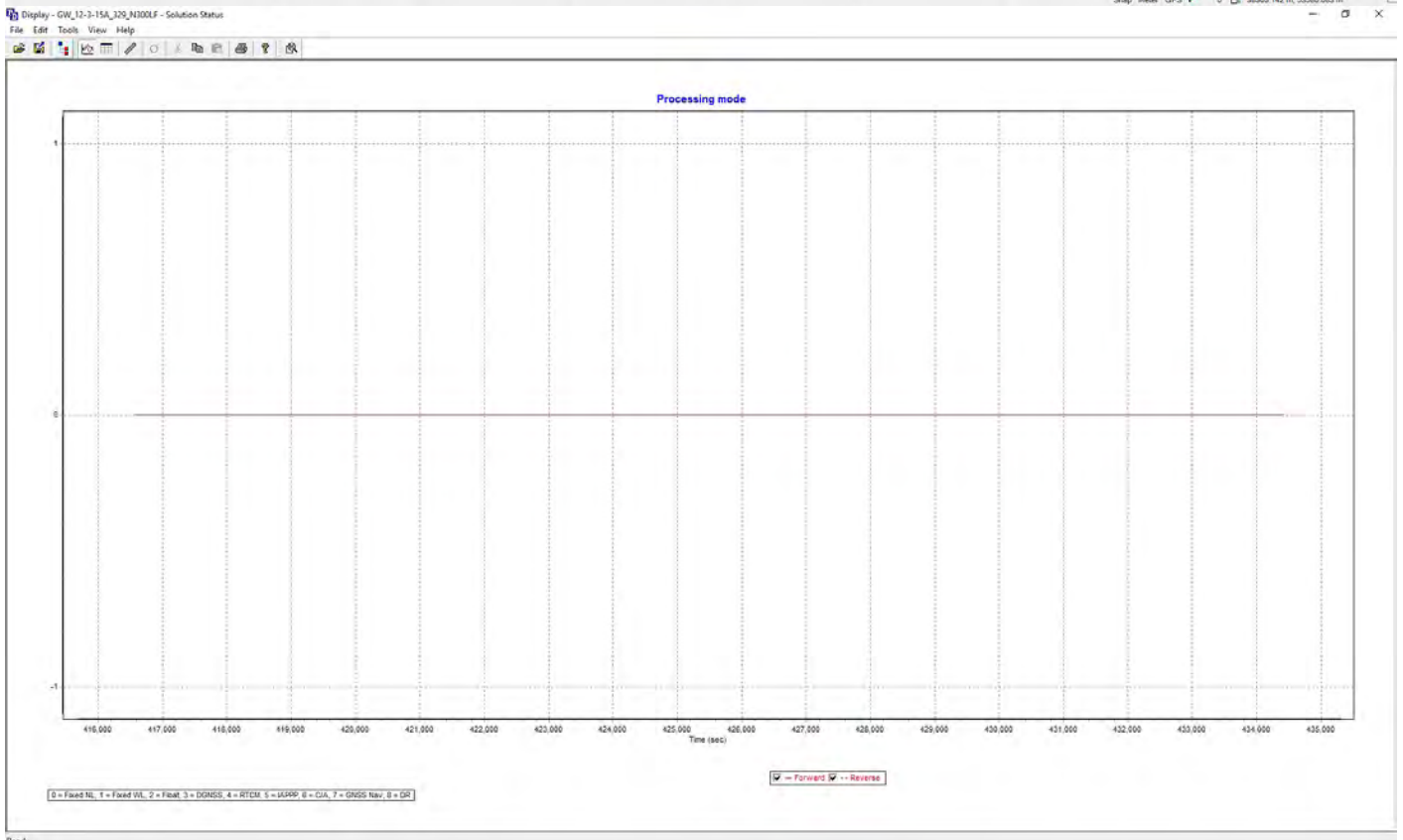
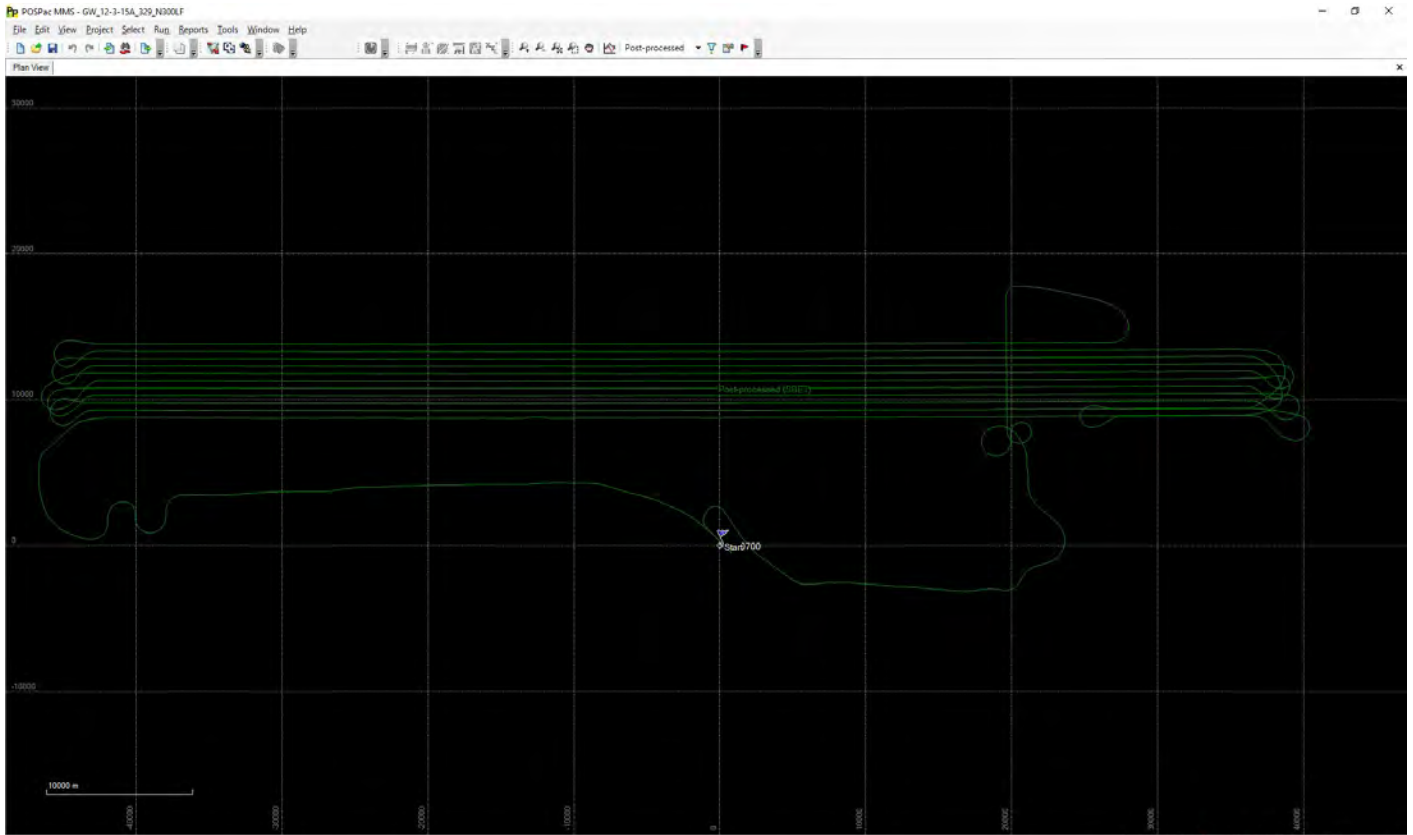
New or Existing	Existing
Mon. New	
Existing	
Photo Taken:	Yes
Yes No	
Monument Type:	NGS Surveyed Control
Spike PK Nail	
AM Washer	
Other	FlangeEncasedRod

**Height Readings:**  
 (Top of Monument to Bottom of Ground Plane)

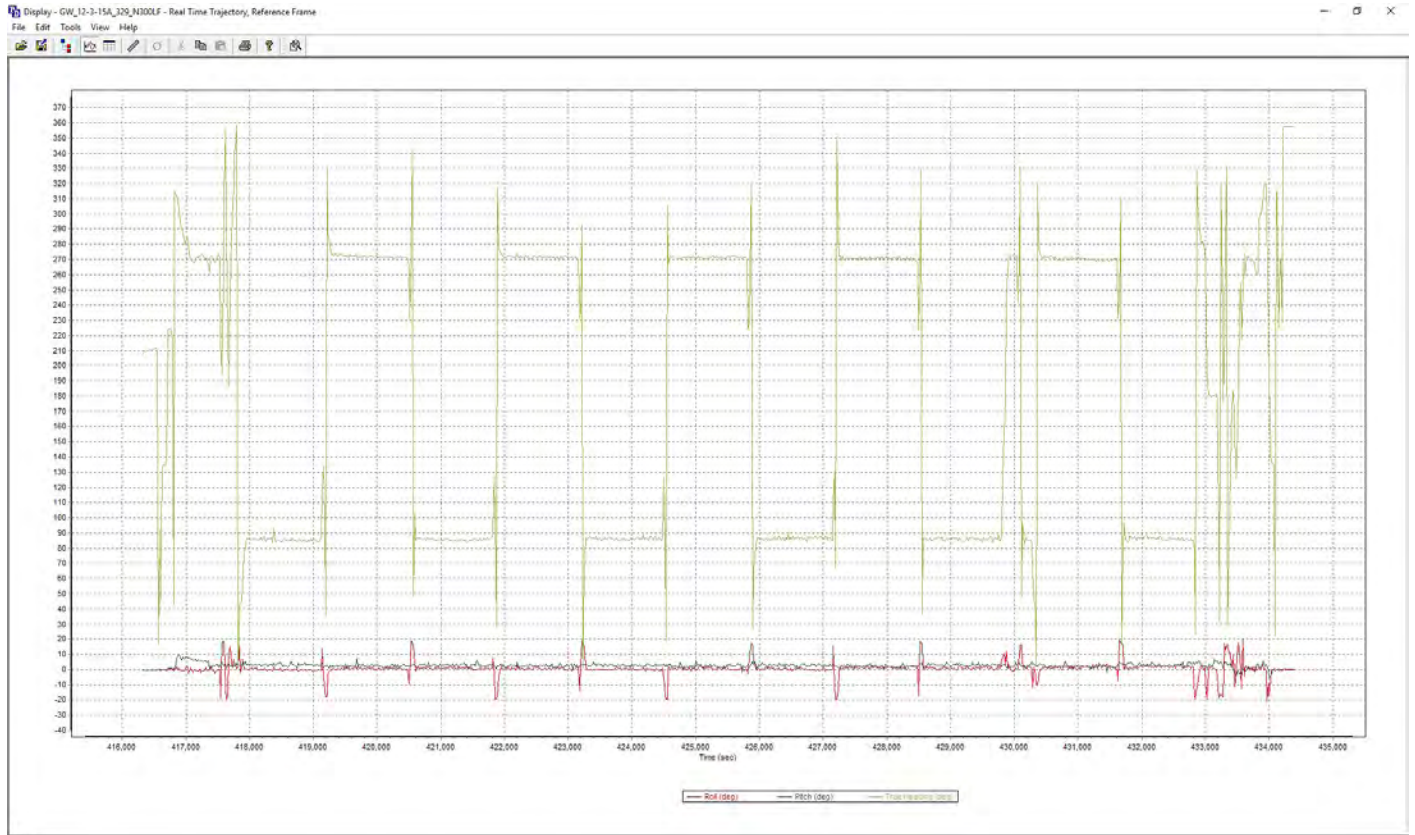
Start	2	M.	Fl.
Stop	2	M.	Fl.
Mean	2	M.	Fl.

# Dec 3, 2015-A (N300LF, SN329)









Coordinate Manager

Station Information

Station ID:

Coordinates

Latitude:

Longitude:

Altitude:  m

Decimal Degrees

Antenna Frame

Height:  m

Method:

Manufacturer:

Type:

Offset from Measured Point to APC:  m

Ground Reference Point (GRP) coordinates

Station Database

Station ID:  Station Fullname:

Primary Service ID:   Coordinate Accuracy:

Secondary Service ID:

Station ID	Station Full...	Frame	Epoch	Ellipsoid	Latitude	Longitude	Altitude	Coord Acc
[Empty Table]								

# Flight Log

OPERATORS FLIGHT LOG													
MISSION: 20151203 - Pike & Scott Counties, IL 2015 QL2 LiDAR Project		OPERATOR: Charlie Overman		DATE: 12/3/15		OFFICE HSN: 309		SENSOR: SNEB9		AIRCRAFT: OLF		REMARKS: 2008/sets refly clouds @ end 1.0/16 refly patch clouds @ end (below)	
PROJECT NUMBER AND NAME	PILOT: Spencer Naper	GND SPEED (KTS)		SCAN ANGLE	PRF KHZ	FIXED GAIN	FLYING HT. (m)	TIME		MM70 DRIVE	STOP	START	STOP
		LN	HDG					LN	HDG				
72	Pike-Scott	72	090	27	275		1400	1405	1424	#3		1424	1440
73	260809	73	270					1450	1510			1510	1532
74		74	90					1512	1532			1532	1554
75		75	270					1534	1554			1554	1616
76		76	90					1536	1616			1616	1638
77		77	270					1539	1638			1638	1651
78		78	90					1541	1651			1651	1703
79		79	270					1603	1703			1703	1753
80		80	90					1623	1753			1753	1815
81		81	270					1625	1815			1815	1819
82		82	90					1629	1819			1819	1827
								1629	1821			1821	1848
								1645	1848			1848	1848

STATUS	TOTAL LINES	FLOWN	LEFT	AIRCRAFT		STATIC	START	STOP	NOTES:
				FERRY	SITE				
Complete	121	11	0	0.5	4.5	YES	1340	1344	"Scanner end points error"
						W/ Clear, few clouds caused reflex at the beginning	1845	1848	after starting laser every time, doesn't seem to affect data, Hobbes 1079.7 1084.5

Quantum Spatial N 6216 Resource Drive Sheboygan Falls, WI 53085 E-Mail: flight-log-distributor-list@quantumspatial.com

# Base Station Log

**GPS OBSERVATION LOG**

<p>Station ID <u>KC0700</u></p> <p>Project Number <u>26869</u></p> <p>Project Name <u>Pike Scott</u></p> <p>Revr. Type <u>Novatel</u></p> <p>Revr. S/N <u>7-0141149</u></p> <p>Antenna Type <u>Novatel</u></p> <p>Antenna S/N <u>01017577</u></p>	<p>Date <u>12, 13, 2015</u></p> <p>Julian Date <u>337</u></p> <p>Start Time <u>12:08:00 PM</u></p> <p>Stop Time <u>19:11:00 PM</u></p> <p>Revr. File Name <u>00073370</u></p> <p>Observer <u>Charles Quinn</u></p>
---	--

New or Existing  
 Existing  
 New

Photo Taken:  
 No forgot it  
 Yes

Monument Type:  
 Spike  
 PK Nail  
 AM Washer  
 Other  
Steel rod, round tip

Height Readings:  
 (Top of Monument to Bottom of Ground Plane)

Start	M. 2.0	Ft.
Stop	M. 2.0	Ft.
Mean	M. 2.0	Ft.

Monument Sketch and Notes:

**Scanned by CamScanner**

## Appendix B

# Survey Report



April 26<sup>th</sup>, 2016

**Survey Report** of  
LiDAR Calibration & Quality Control Points

Pike & Scott Counties, IL  
USGS Contract: G10PC00026  
USGS Task Order: G15PD01036

Presented to:



Presented By:





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<b><i>VVA – FORESTED.....</i></b>	<b>125</b>
<b><i>VVA – TALL WEEDS.....</i></b>	<b>141</b>
<b><i>HORIZONTAL CHECK POINTS.....</i></b>	<b>174</b>

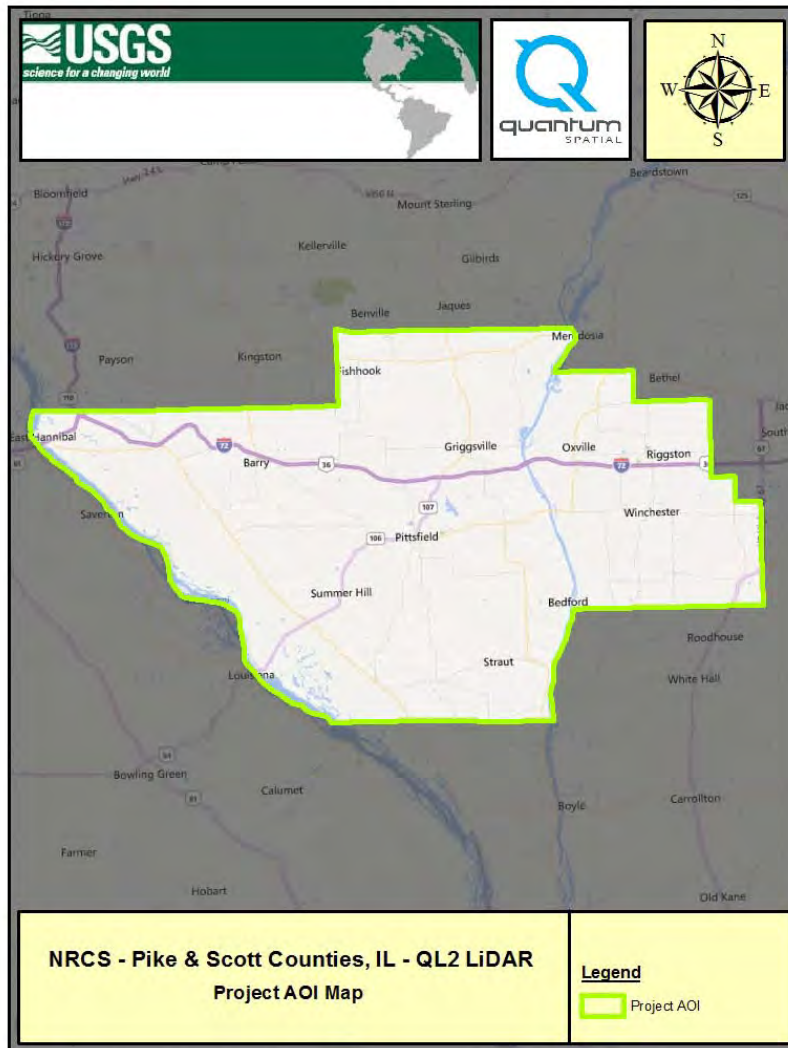


## Introduction

Quantum Spatial, Inc. was contracted by USGS under task order G15PD01036 to Survey LiDAR calibration and quality control points in support of NRCS-Pike & Scott Counties. This is the report of the technical approach used and detail of each point surveyed.

## Project Area

The Project Area, shown in the figure below, consists of approximately 2,783 square kilometers.







### Technical Approach to Land Cover Validation Point Selection

---

Referencing ASPRS Positional Accuracy Standards for Digital Geospatial Data (Edition 1, Version 1.0, - November, 2014) table C.1 Recommended Number of Checkpoints based on Area, Quantum Spatial calculated that 58 Non-Vegetated Vertical Assessment (NVA) and 47 Vegetated Vertical Assessment (VVA) points are required for this project area.

To ensure that checkpoints were distributed generally proportionate among the various vegetated land cover types, Quantum Spatial used existing USGS Land Cover data to divide both the NVA and VVA categories among the various types, calculating the approximate number of required points in each representative type proportionate to the total project area. The resulting point classes are detailed below:

<u>NVA Class</u>	<u># of Points</u>	<u>VVA Class</u>	<u># of Points</u>
Bare Earth	6	Forested	15
Urban Area	52	Tall Weeds/Crops	32

Given that approximately 1/2 of the NVA check points should also be used for horizontal accuracy testing, but that it is commonly understood that good vertical check points do not generally make for good horizontal check points, Quantum Spatial has required that 24 horizontal check points shall be used for this project, whether they are used for NVA validation, or are entirely separate. These locations have been reported under their own chapter in this report.

Quantum Spatial has adopted the philosophy that each vegetative class must be well distributed throughout the project area. While points in varying classes may be near to one another, points of a single vegetative class may not. Proposed point locations are selected with this distribution methodology in mind.



## Survey Accuracy Requirements

---

Given that the survey accuracy of calibration and quality control check points should be 3 times more accurate than the required accuracy of the data set, Quantum Spatial requires that calibration and NVA points be better than 3 centimeters (0.10ft), both horizontally and vertically, and that VVA points be better than 5 centimeters (0.16ft), both horizontally and vertically. The surveyed accuracy of each point must be determined through redundant measurements and/or network adjustment using procedures and methodologies that reliably and consistently result in the aforementioned accuracies.

Due to variances in reference control accuracy and adjustment, Quantum Spatial requires that the survey methodology used be explained, so that it can be repeated if necessary.

---

## Field Survey Methodology

---

Date Range: November 14, 2015 – January 13, 2016

Equipment Used:

Leica GS15 dual frequency GNSS receivers and a Trimble M3 DR 2" Total Station

GNSS Methodology:

Points were occupied with a static base station broadcasting real time kinematic (RTK) corrections to a rover with which multiple measurements on other points were observed. The static base station data was post processed referencing NGS continuously operating reference stations and a weighted adjustment was performed to obtain base station coordinates. The adjustment was performed using Leica Geo Office. For forested points, a secondary control point with line of sight to another point was established so that the resulting pair can be occupied with a total station>

Variations from the stated GNSS methodology:

When radio RTK signals were unobtainable, points were observed with rapid static GNSS and were post processed as part of the network adjustment. The points located using this methodology were CP16, CP33, and TW32.

Total Station Methodology:

Angles and distances to forested points were doubled and the final point accuracy was determined through network adjustment using Leica Geo Office.



---

### Overall Project Accuracy Statement

---

All point coordinates have been reported in the North American Datum of 1983 (NAD83 /2011), SPCS IL West, US Survey Feet. Elevations are relative to the North American Vertical Datum of 1988 (NAVD 88) which were derived using the Geoid 12B model and are reported in US Survey Feet.

#### Calibration Points

Average Horizontal RMSE is 0.023 ft.

Average Elevation RMSE is 0.039 ft.

#### NVA Points

Average Horizontal RMSE is 0.023 ft.

Average Elevation RMSE is 0.039 ft.

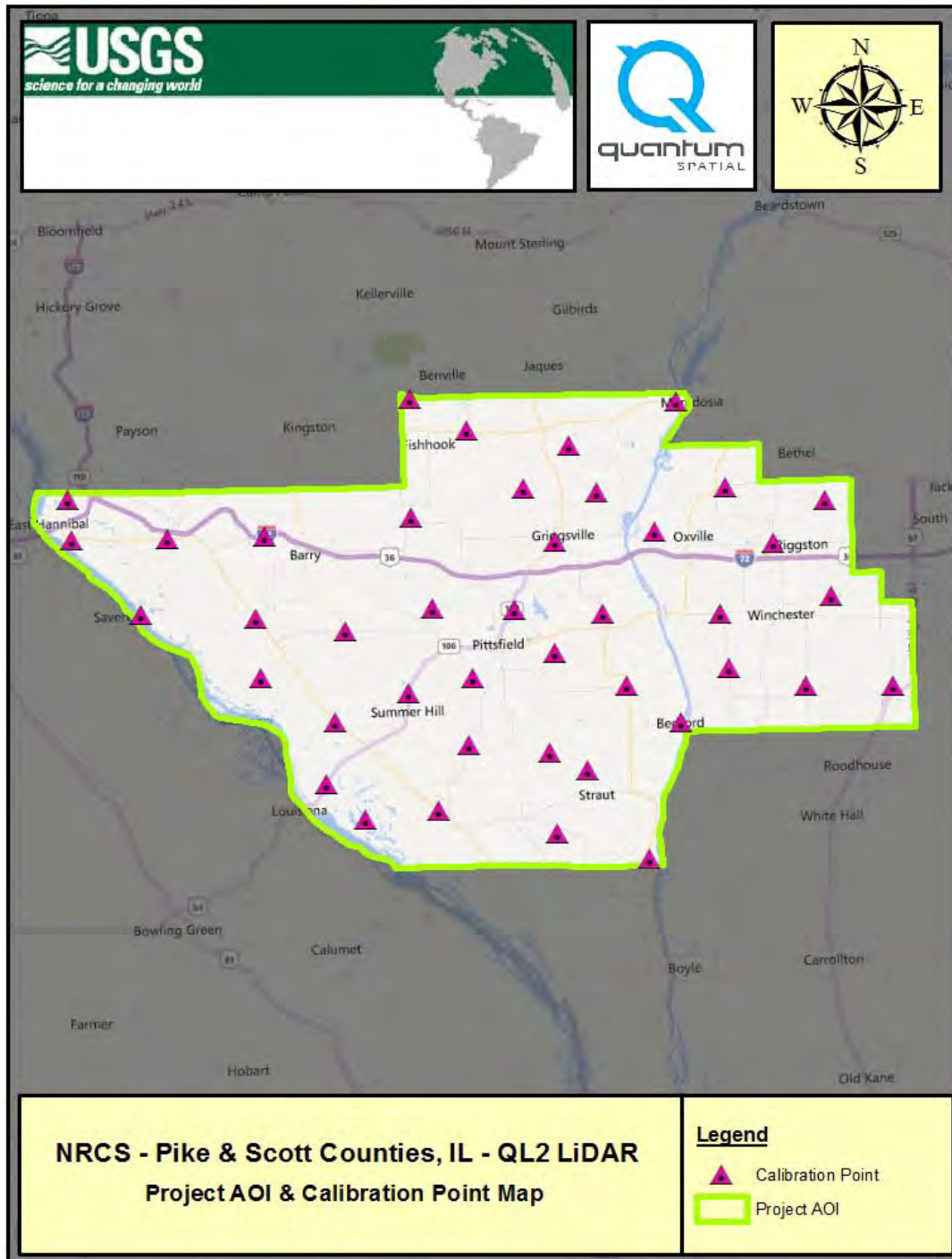
#### VVA Points

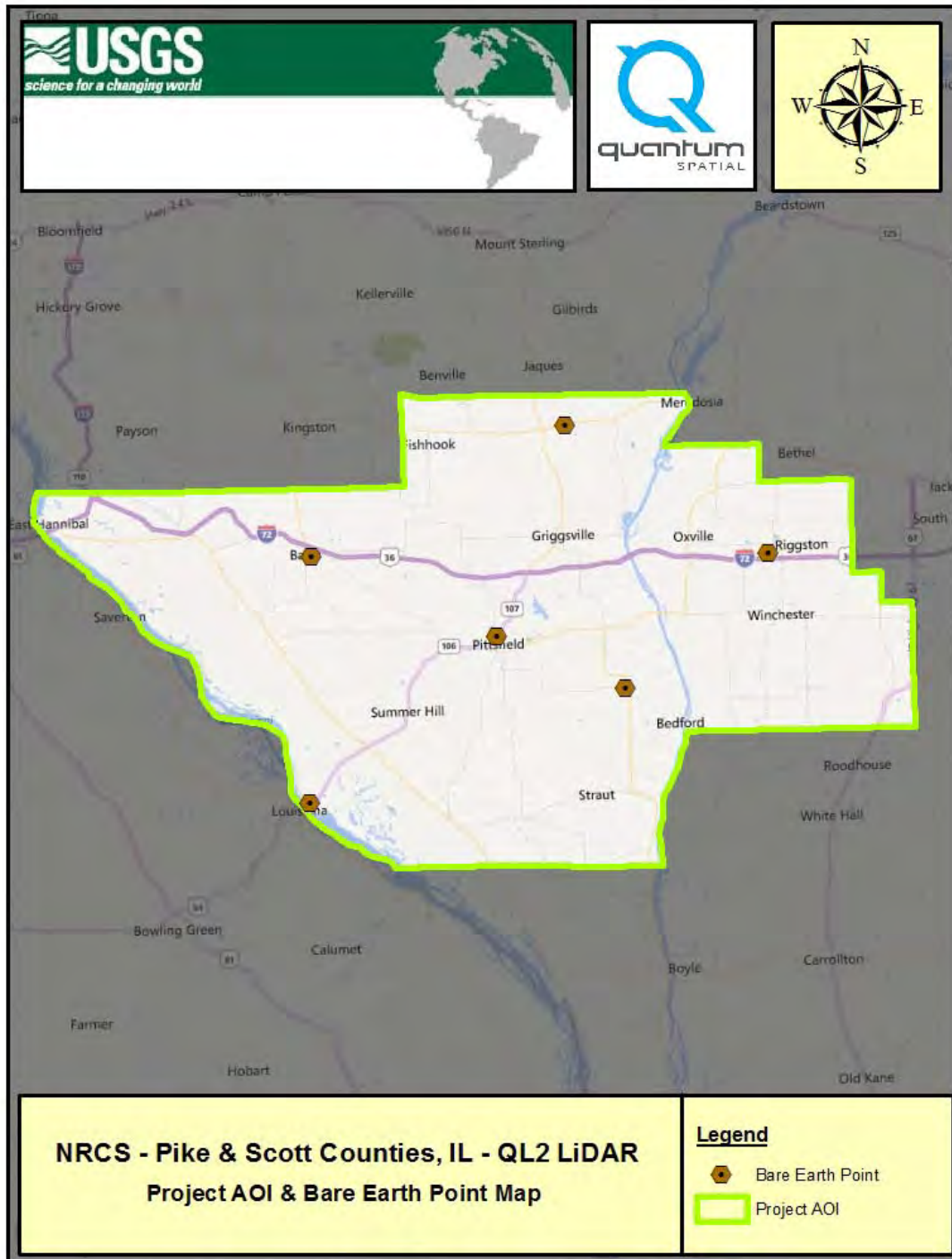
Average Horizontal RMSE is 0.029 ft.

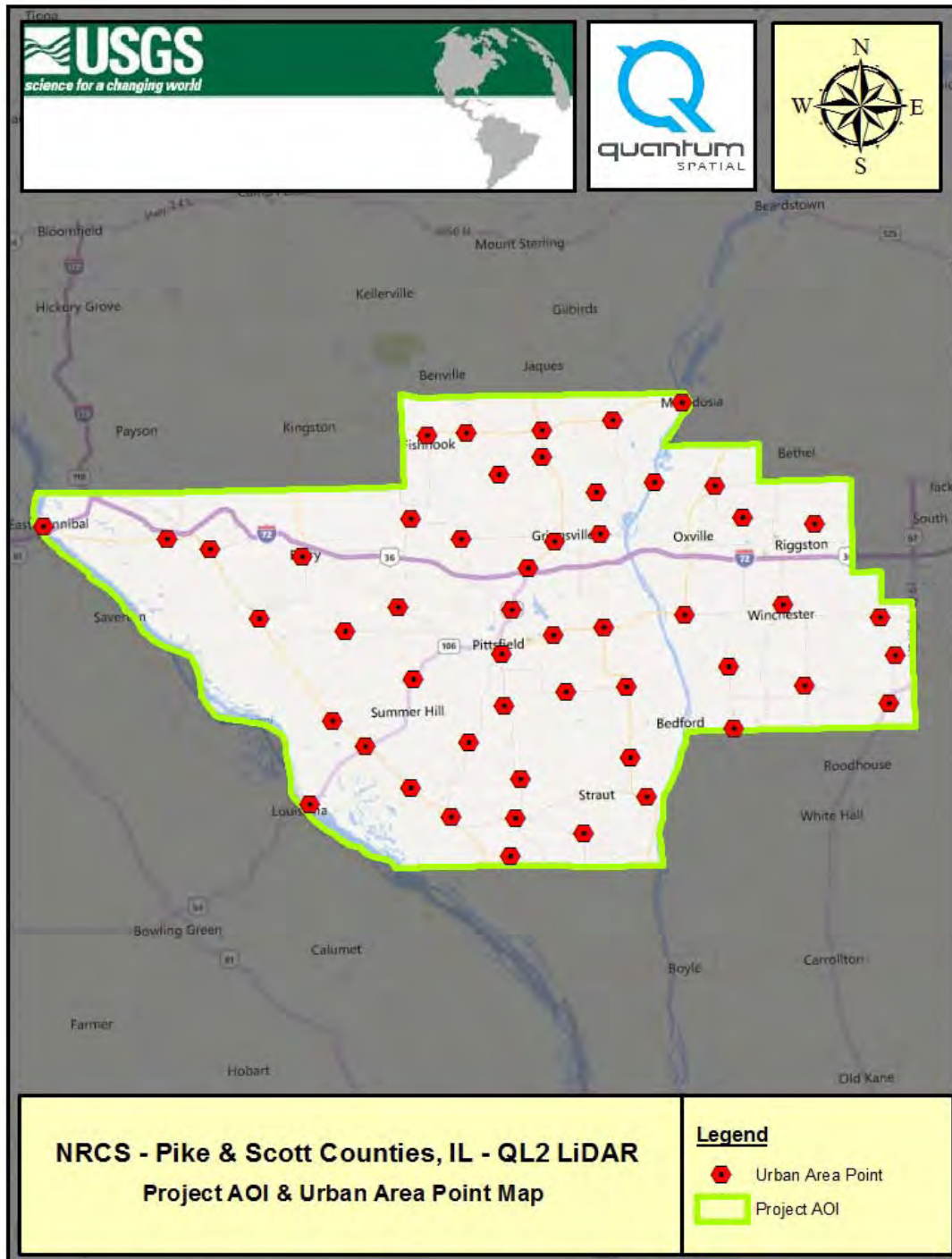
Average Elevation RMSE is 0.049 ft.

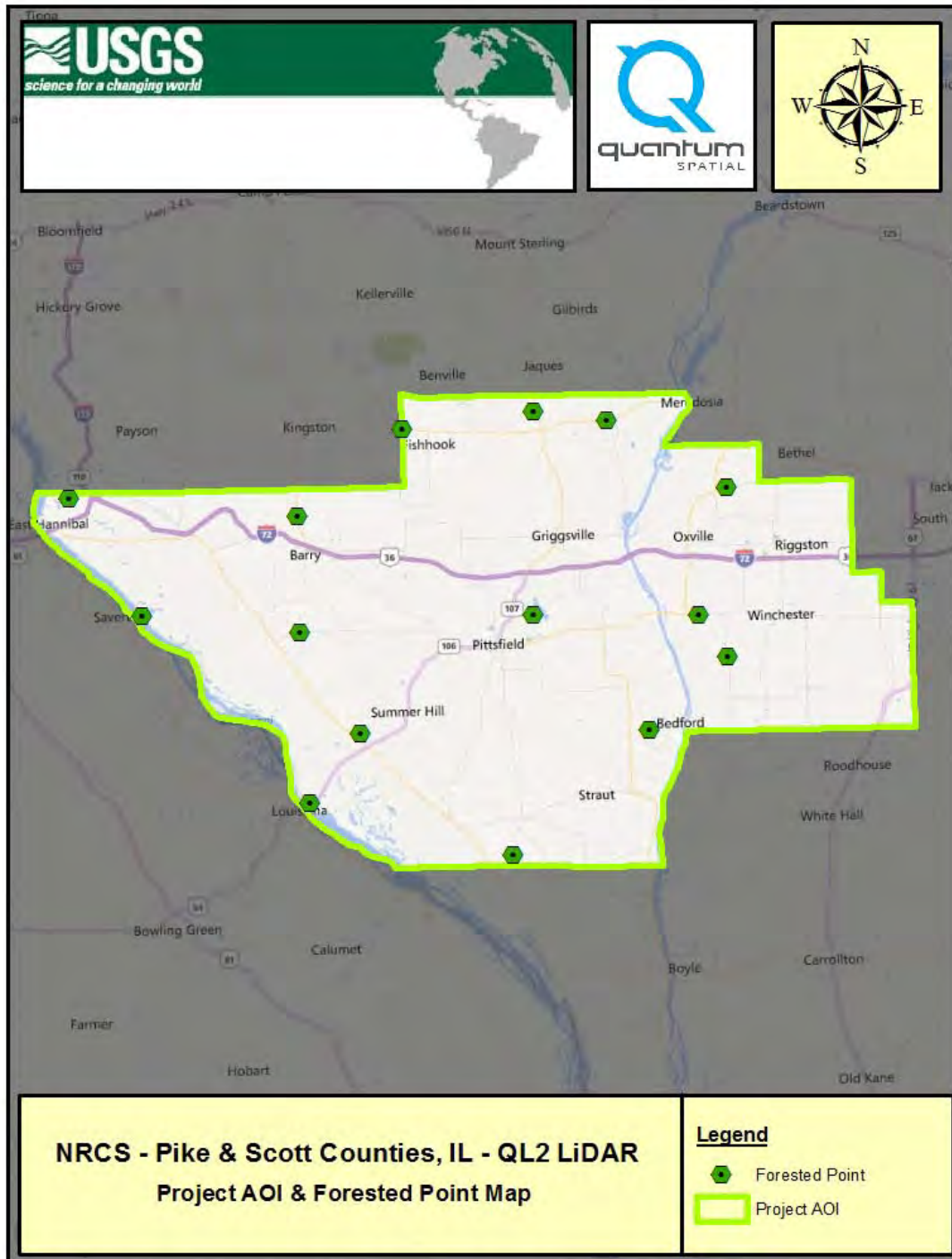


## Project AOI & Point Location Maps

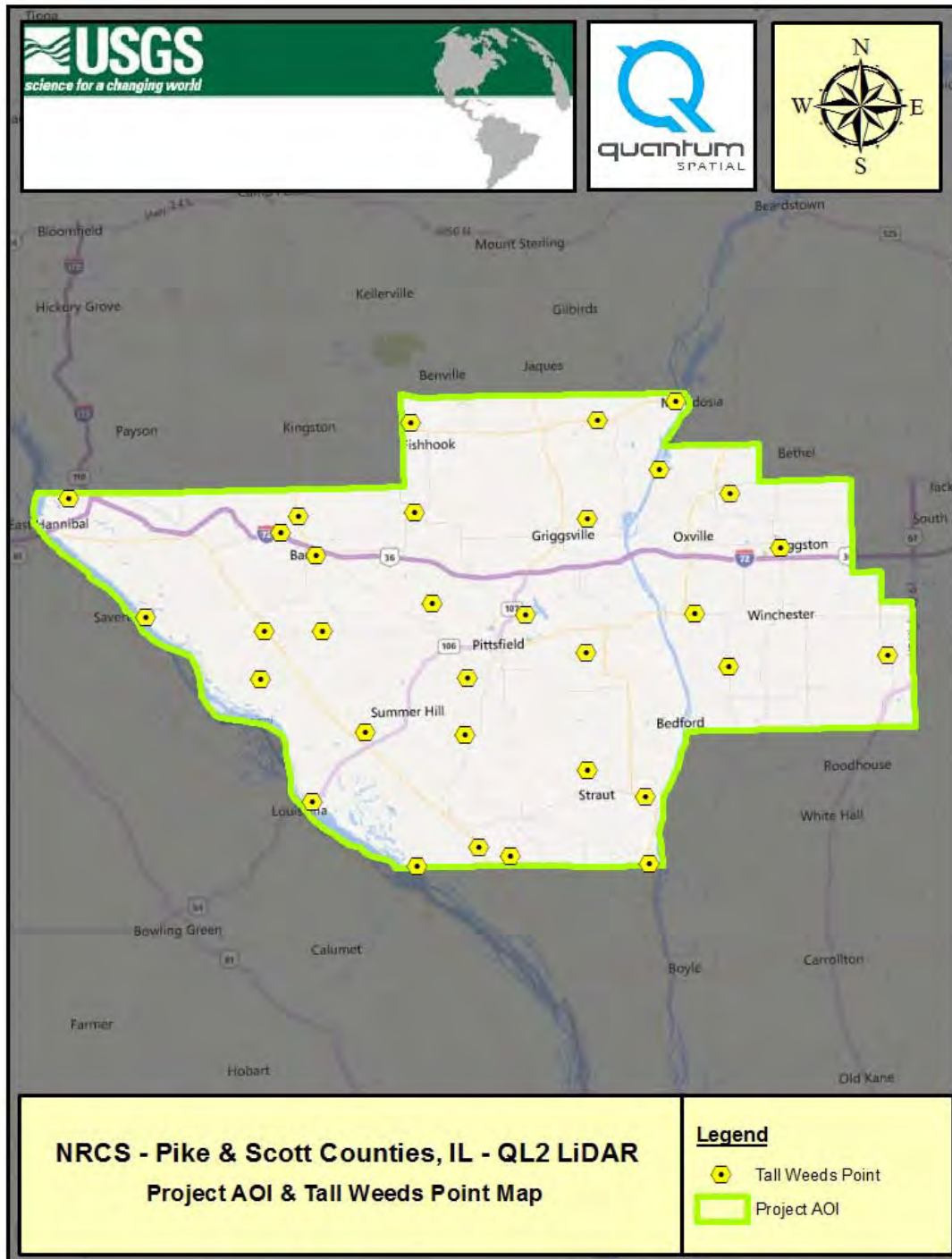


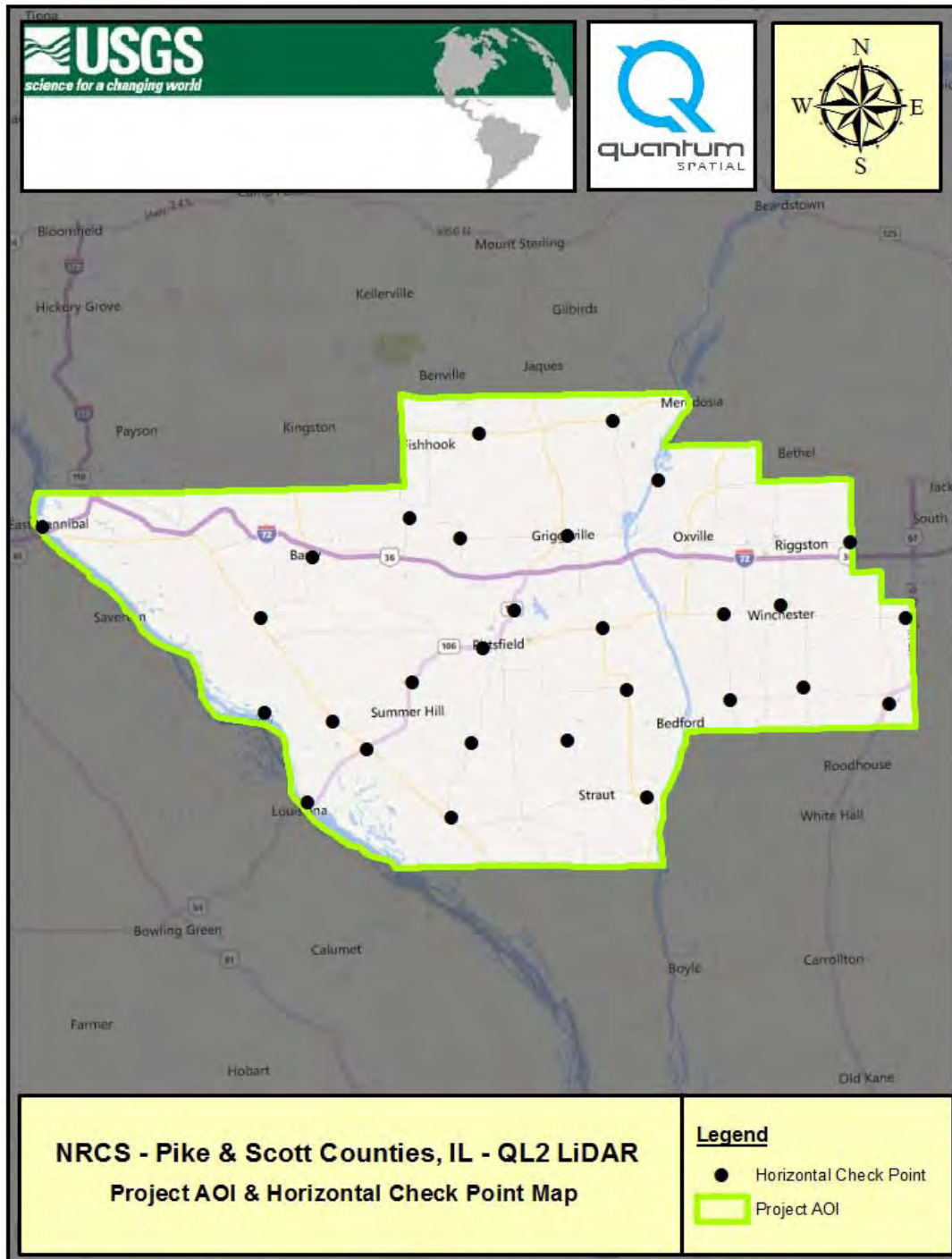














## Final Point Coordinates



### Calibration Point Coordinates

Horizontal Datum - NAD83(2011)  
SPCS – IL West  
Vertical Datum - NAVD 88  
Geoid - GEOID12B  
Units – US Survey Feet

Point ID	Northing (usft)	Easting (usft)	Elev. (usft)
CP1	1125871.25	1970094.82	462.54
CP2	1111069.62	2037660.67	560.17
CP3	1115684.10	2088092.15	870.95
CP4	1145113.27	2108204.62	646.31
CP5	1139056.31	2143268.99	471.75
CP6	1106150.08	2137186.78	683.30
CP7	1108586.08	2171841.77	429.91
CP8	1122980.16	2196532.46	492.35
CP9	1103084.98	2212343.59	577.09
CP10	1117507.10	2230648.37	566.86
CP11	1084463.94	2231842.02	584.93
CP12	1079438.41	2193430.45	449.18
CP13	1080942.77	2153167.35	634.49
CP14	1083253.94	2122706.96	704.15
CP15	1084483.79	2094239.66	805.14
CP16	995995.72	2166189.27	438.61
CP17	1077446.32	2064137.51	737.02
CP18	1082730.97	2033647.85	468.12
CP19	1085253.13	1994302.07	463.52
CP20	1062214.63	2034578.55	454.39
CP21	1046435.75	2059576.81	482.21
CP22	1055729.59	2085117.32	797.97
CP23	1059906.85	2107365.52	769.27
CP24	1067868.64	2136124.91	666.10
CP25	1055672.31	2160602.84	670.20
CP26	1060943.25	2195872.72	495.44
CP27	1053644.12	2222009.56	632.98
CP28	1052984.23	2251923.01	690.41
CP29	1025032.58	2055941.54	447.51
CP30	1037234.05	2105642.30	711.59



CP31	1033631.66	2133274.68	712.34
CP32	1027182.52	2146020.54	533.91
CP33	1042471.48	2178889.14	431.77
CP34	1012836.27	2069126.93	446.89
CP35	1014976.17	2094372.80	455.77
CP36	1005958.52	2135079.91	555.29
CP37	1122469.68	2151919.51	586.36
CP38	1110972.66	2004006.25	468.23
CP39	1152913.89	2180335.65	431.10
CP40	1124495.98	2127024.71	594.57
CP41	1156628.06	2088720.84	753.49
CP42	1111941.28	1971200.38	460.24



## Bare Earth Point Coordinates

Horizontal Datum - NAD83(2011)  
SPCS – IL West  
Vertical Datum - NAVD 88  
Geoid - GEOID12B  
Units – US Survey Feet

<b>Point ID</b>	<b>Northing (usft)</b>	<b>Easting (usft)</b>	<b>Elev. (usft)</b>
BE1	1103622.71	2053231.53	746.62
BE2	1145792.59	2142068.02	569.19
BE3	1099812.75	2210351.61	561.79
BE4	1073965.91	2116148.23	703.22
BE5	1018721.78	2050194.79	462.04
BE6	1055000.78	2160123.17	651.05



### Urban Area Point Coordinates

Horizontal Datum - NAD83(2011)  
SPCS – IL West  
Vertical Datum - NAVD 88  
Geoid - GEOID12B  
Units – US Survey Feet

Point ID	Northing (usft)	Easting (usft)	Elev. (usft)
UA1	1116716.93	1961430.31	475.83
UA2	1111011.11	2003967.19	468.28
UA3	1103765.89	2050415.66	728.41
UA4	1115587.98	2088189.03	872.39
UA5	1144515.54	2134013.88	497.12
UA6	1105909.28	2137330.56	685.45
UA7	1147183.02	2158561.36	483.53
UA8	1123215.95	2192848.32	469.95
UA9	1109465.26	2226692.08	595.14
UA10	1112462.93	2202049.09	494.87
UA11	1125565.57	2172304.60	436.61
UA12	1082036.18	2215045.85	552.47
UA13	1079645.13	2181221.95	432.92
UA14	1075842.54	2153113.98	639.31
UA15	1082934.61	2121930.13	676.21
UA16	1077490.14	2064169.93	737.78
UA17	1082789.12	2034846.62	475.77
UA18	1144427.19	2108245.66	634.66
UA19	1108093.37	2105225.90	785.62
UA20	1152536.97	2182473.24	429.51
UA21	1097112.46	2127720.97	686.83
UA22	1106969.16	2018772.73	481.99
UA23	1047037.93	2059048.52	488.06
UA24	1060333.64	2087042.67	787.02
UA25	1073889.22	2135722.12	623.58
UA26	1135386.03	2133884.86	592.35
UA27	1143837.45	2094761.01	754.96
UA28	1107967.73	2152963.94	639.40
UA29	1122427.01	2151972.43	587.04
UA30	1084961.66	2082746.03	681.60



UA31	1076290.16	2248210.56	615.34
UA32	1055172.48	2160554.18	653.33
UA33	1060977.19	2195837.47	495.11
UA34	1053933.27	2221455.66	629.64
UA35	1063095.09	2253196.17	655.01
UA36	1018422.40	2050182.11	461.89
UA37	1038189.65	2105593.86	719.25
UA38	1054420.36	2139544.00	692.48
UA39	1024816.65	2122887.80	516.51
UA40	1068127.29	2117991.54	724.15
UA41	1046944.94	2250465.76	681.95
UA42	1030960.15	2160936.00	652.51
UA43	1037631.71	2070145.70	485.91
UA44	1012689.86	2098528.41	544.73
UA45	1011450.74	2120928.36	482.73
UA46	1005466.75	2144225.35	682.58
UA47	1050039.90	2118012.62	669.73
UA48	998580.52	2118646.19	738.76
UA49	1017447.25	2166386.54	441.07
UA50	1039998.87	2196901.72	463.09
UA51	1023032.61	2085280.58	505.07
UA52	1129848.48	2118683.03	620.25





### Forested Point Coordinates

Horizontal Datum - NAD83(2011)  
SPCS – IL West  
Vertical Datum - NAVD 88  
Geoid - GEOID12B  
Units – US Survey Feet

Point ID	Northing (usft)	Easting (usft)	Elev. (usft)
FO1	1126201.43	1970515.03	455.14
FO2	1117610.62	2049174.06	567.69
FO3	1146313.36	2086059.74	645.03
FO4	1122889.99	2196723.97	479.81
FO5	1147161.94	2156374.86	575.07
FO6	1079407.50	2185721.74	433.20
FO7	1081264.85	2129167.35	620.55
FO8	1084970.59	1994411.33	463.38
FO9	1077559.29	2048397.60	716.64
FO10	1042087.15	2068386.44	503.67
FO11	1064530.84	2195268.20	461.50
FO12	1018752.66	2050361.86	455.18
FO13	1040389.74	2167607.29	691.10
FO14	998662.58	2119435.77	742.86
FO15	1150996.11	2131299.88	531.06



### Tall Weeds Point Coordinates

Horizontal Datum - NAD83(2011)  
SPCS – IL West  
Vertical Datum - NAVD 88  
Geoid - GEOID12B  
Units – US Survey Feet

Point ID	Northing (usft)	Easting (usft)	Elev. (usft)
TW1	1126190.70	1970460.35	458.49
TW2	1112122.01	2043009.90	551.41
TW3	1117667.37	2049346.99	569.55
TW4	1103789.09	2055243.71	725.16
TW5	1117370.93	2089280.07	827.00
TW6	1148212.40	2089276.70	755.56
TW7	1120461.68	2198094.79	502.25
TW8	1129507.41	2174259.74	438.77
TW9	1147178.58	2153396.08	587.56
TW10	1101306.90	2215077.87	558.88
TW11	1079595.65	2184777.19	429.38
TW12	1067622.15	2146815.18	681.49
TW13	1113431.98	2148953.32	617.04
TW14	1081338.83	2126477.41	674.09
TW15	1085998.14	2094517.53	795.26
TW16	1077648.60	2056211.31	759.54
TW17	1084337.24	1995786.96	458.25
TW18	1078416.46	2036579.99	474.80
TW19	1152742.40	2180561.13	426.40
TW20	1062137.34	2034788.23	458.02
TW21	1059965.03	2105822.10	741.47
TW22	1061030.44	2195780.33	490.78
TW23	1063165.57	2250630.14	651.76
TW24	1019201.79	2051233.77	450.03
TW25	1040576.29	2104337.88	697.60
TW26	1042523.08	2069883.63	514.55
TW27	998659.42	2118551.19	744.43
TW28	1001730.66	2108003.53	480.20
TW29	996190.91	2086433.10	445.17
TW30	1027008.49	2146051.04	533.92
TW31	1017388.43	2165950.56	440.55
TW32	994149.90	2166213.35	448.61



### Horizontal Point Coordinates

Horizontal Datum - NAD83(2011)  
SPCS – IL West  
Vertical Datum - NAVD 88  
Geoid - GEOID12B  
Units – US Survey Feet

Point ID	Northing (usft)	Easting (usft)	Elev. (usft)
Hz1	1144145.49	2112259.79	649.72
Hz2	1147111.26	2158612.60	484.00
Hz3	1116735.01	1961397.31	475.80
Hz4	1103680.36	2053655.42	724.91
Hz5	1115824.50	2087780.52	871.50
Hz6	1108167.41	2104915.37	788.89
Hz7	1108178.84	2141794.00	662.06
Hz8	1126015.80	2173433.61	438.61
Hz9	1079290.07	2194705.18	454.08
Hz10	1075909.53	2153024.61	639.96
Hz11	1083194.84	2122704.50	705.18
Hz12	1083089.05	2035463.25	477.29
Hz13	1047027.59	2058844.21	477.55
Hz14	1070375.01	2111385.60	759.99
Hz15	1050487.32	2035427.41	455.70
Hz16	1037090.80	2070515.46	487.78
Hz17	1059516.68	2086535.84	783.87
Hz18	1037896.85	2106236.32	709.55
Hz19	1102783.77	2238657.01	626.37
Hz20	1053296.46	2221106.31	618.33
Hz21	1076270.06	2257036.06	633.78
Hz22	1046842.85	2250460.00	681.81
Hz23	1081689.59	2214147.44	543.17
Hz24	1037576.34	2139293.34	671.50
Hz25	1019160.35	2049541.76	460.42
Hz26	1049837.70	2195862.82	449.10
Hz27	1054313.23	2160505.37	648.20
Hz28	1017226.63	2166156.30	438.93
Hz29	1012616.42	2098502.74	543.61



## Point data and accuracy Log Sheets



## Calibration Point Log Sheets



Point ID	CP1
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Marblehead

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1125871.25	1970094.82	462.54

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.035
RMSE Z (ft)	0.053
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP2
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1111069.62	2037660.67	560.17

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP3
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Baylis

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1115684.10	2088092.15	870.95

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-29-2015
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	CP4
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry West

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1145113.27	2108204.62	646.31

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-31-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP5
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry East

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1139056.31	2143268.99	471.75

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-30-2015
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.030
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP6
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1106150.08	2137186.78	683.30

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-22-2015
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP7
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1108586.08	2171841.77	429.91

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.033
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP8
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Meredosia

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1122980.16	2196532.46	492.35

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP9
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1103084.98	2212343.59	577.09

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-08-2016
RMSE Hz (ft)	0.017
RMSE Z (ft)	0.025
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP10
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1117507.10	2230648.37	566.86

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-08-2016
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.025
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP11
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1084463.94	2231842.02	584.93

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-11-2016
RMSE Hz (ft)	0.017
RMSE Z (ft)	0.025
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	CP12
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1079438.41	2193430.45	449.18

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.030
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP13
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1080942.77	2153167.35	634.49

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP14
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1083253.94	2122706.96	704.15

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.045
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP15
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Baylis

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1084483.79	2094239.66	805.14

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.027
RMSE Z (ft)	0.047
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP16
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
995995.72	2166189.27	438.61

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-19-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.044
GPS Method	Static using Base at DK8058

PHOTOS:





Point ID	CP17
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1077446.32	2064137.51	737.02

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.044
RMSE Z (ft)	0.074
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP18
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1082730.97	2033647.85	468.12

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-30-2015
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.049
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP19
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hull

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1085253.13	1994302.07	463.52

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-15-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.051
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	CP20
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Rockport

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1062214.63	2034578.55	454.39

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-02-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.054
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP21
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Rockport

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1046435.75	2059576.81	482.21

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-04-2015
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.047
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP22
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1055729.59	2085117.32	797.97

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.045
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP23
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills South

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1059906.85	2107365.52	769.27

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP24
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1067868.64	2136124.91	666.10

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP25
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1055672.31	2160602.84	670.20

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.038
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP26
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Bedford

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1060943.25	2195872.72	495.44

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-12-2016
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.037
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP27
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Alsey

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1053644.12	2222009.56	632.98

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-13-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.034
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	CP28
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Manchester

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1052984.23	2251923.01	690.41

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-13-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP29
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Louisiana

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1025032.58	2055941.54	447.51

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-03-2015
RMSE Hz (ft)	0.025
RMSE Z (ft)	0.038
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP30
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pittsfield

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1037234.05	2105642.30	711.59

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.031
RMSE Z (ft)	0.052
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP31
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1033631.66	2133274.68	712.34

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP32
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1027182.52	2146020.54	533.91

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.032
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP33
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Bedford

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1042471.48	2178889.14	431.77

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-19-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.026
GPS Method	Static using Base at DK8058

PHOTOS:





Point ID	CP34
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hill West

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1012836.27	2069126.93	446.89

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-04-2015
RMSE Hz (ft)	0.026
RMSE Z (ft)	0.040
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP35
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hill West

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1014976.17	2094372.80	455.77

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-05-2015
RMSE Hz (ft)	0.031
RMSE Z (ft)	0.054
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	CP36
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1005958.52	2135079.91	555.29

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP37
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1122469.68	2151919.51	586.36

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-29-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP38
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hull

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1110972.66	2004006.25	468.23

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.042
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP39
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Meredosia

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1152913.89	2180335.65	431.10

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP40
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry West

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1124495.98	2127024.71	594.57

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-30-2015
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.037
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP41
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Fishhook

Aerial Target	
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
	NAD83(2011)
	SPCS - IL West (FIPS 1202)
	NAVD88
	GEOID12B
	US Survey Feet

Northing	Easting	Elevation
1156628.06	2088720.84	753.49

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-02-2016
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	CP42
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hannibal East

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1111941.28	1971200.38	460.24

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.050
GPS Method	Real Time Kinematic

PHOTOS:





## Bare Earth Point Log Sheets





Point ID	BE1
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1103622.71	2053231.53	746.62

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	BE2
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry East

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1145792.59	2142068.02	569.19

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-30-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.032
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	BE3
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1099812.75	2210351.61	561.79

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-08-2016
RMSE Hz (ft)	0.017
RMSE Z (ft)	0.026
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	BE4
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills South

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1073965.91	2116148.23	703.22

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.015
RMSE Z (ft)	0.027
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	BE5
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Louisiana

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1018721.78	2050194.79	462.04

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-03-2015
RMSE Hz (ft)	0.025
RMSE Z (ft)	0.047
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	BE6
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1055000.78	2160123.17	651.05

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.053
GPS Method	Real Time Kinematic

PHOTOS:





## Urban Area Point Log Sheets



Point ID	UA1
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hannibal East

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
X	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1116716.93	1961430.31	475.83

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.039
RMSE Z (ft)	0.056
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	UA2
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hull

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1111011.11	2003967.19	468.28

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.047
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA3
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1103765.89	2050415.66	728.41

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.032
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA4
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Baylis

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1115587.98	2088189.03	872.39

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-29-2015
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA5
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry East

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1144515.54	2134013.88	497.12

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-30-2015
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.023
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA6
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1105909.28	2137330.56	685.45

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-22-2015
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA7
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Meredosia

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1147183.02	2158561.36	483.53

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA8
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Meredosia

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1123215.95	2192848.32	469.95

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA9
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1109465.26	2226692.08	595.14

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-08-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.026
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	UA10
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1112462.93	2202049.09	494.87

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.015
RMSE Z (ft)	0.025
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA11
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Meredosia

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1125565.57	2172304.60	436.61

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.030
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA12
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1082036.18	2215045.85	552.47

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-08-2016
RMSE Hz (ft)	0.017
RMSE Z (ft)	0.026
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA13
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1079645.13	2181221.95	432.92

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA14
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1075842.54	2153113.98	639.31

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA15
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1082934.61	2121930.13	676.21

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.032
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA16
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1077490.14	2064169.93	737.78

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.053
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA17
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1082789.12	2034846.62	475.77

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-30-2015
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.050
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	UA18
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1144427.19	2108245.66	634.66

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-31-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.027
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA19
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1108093.37	2105225.90	785.62

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-22-2015
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.026
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA20
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Meredosia

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1152536.97	2182473.24	429.51

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA21
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1097112.46	2127720.97	686.83

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-22-2015
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.028
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA22
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hull

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1106969.16	2018772.73	481.99

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.041
RMSE Z (ft)	0.067
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA23
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Rockport

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1047037.93	2059048.52	488.06

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-04-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.048
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA24
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1060333.64	2087042.67	787.02

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.031
RMSE Z (ft)	0.045
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA25
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1073889.22	2135722.12	623.58

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-22-2015
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	UA26
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1135386.03	2133884.86	592.35

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-30-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.032
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA27
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Fishhook

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1143837.45	2094761.01	754.96

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-31-2015
RMSE Hz (ft)	0.027
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA28
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1107967.73	2152963.94	639.40

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-29-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.039
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA29
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1122427.01	2151972.43	587.04

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-29-2015
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.037
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA30
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Baylis

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1084961.66	2082746.03	681.60

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.047
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA31
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1076290.16	2248210.56	615.34

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-11-2016
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.027
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA32
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1055172.48	2160554.18	653.33

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.043
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA33
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Bedford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1060977.19	2195837.47	495.11

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-12-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.033
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	UA34
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Alsey

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1053933.27	2221455.66	629.64

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-12-2016
RMSE Hz (ft)	0.015
RMSE Z (ft)	0.027
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA35
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Manchester

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1063095.09	2253196.17	655.01

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-13-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA36
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Louisiana

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1018422.40	2050182.11	461.89

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-04-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.038
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA37
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pittsfield

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1038189.65	2105593.86	719.25

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.035
RMSE Z (ft)	0.059
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA38
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1054420.36	2139544.00	692.48

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.041
RMSE Z (ft)	0.061
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA39
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1024816.65	2122887.80	516.51

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-10-2015
RMSE Hz (ft)	0.035
RMSE Z (ft)	0.055
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA40
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills South

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1068127.29	2117991.54	724.15

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA41
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Manchester

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1046944.94	2250465.76	681.95

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-13-2016
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.027
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	UA42
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1030960.15	2160936.00	652.51

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.041
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA43
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1037631.71	2070145.70	485.91

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-05-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.044
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA44
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hill East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1012689.86	2098528.41	544.73

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-07-2015
RMSE Hz (ft)	0.056
RMSE Z (ft)	0.092
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA45
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1011450.74	2120928.36	482.73

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-10-2015
RMSE Hz (ft)	0.035
RMSE Z (ft)	0.058
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA46
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1005466.75	2144225.35	682.58

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.041
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA47
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pittsfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1050039.90	2118012.62	669.73

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.037
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA48
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
998580.52	2118646.19	738.76

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-12-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.054
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA49
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1017447.25	2166386.54	441.07

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-19-2015
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.030
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	UA50
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Bedford

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1039998.87	2196901.72	463.09

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-12-2016
RMSE Hz (ft)	0.025
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA51
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hill West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1023032.61	2085280.58	505.07

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-05-2015
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.050
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	UA52
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1129848.48	2118683.03	620.25

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-30-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





## Forested Point Log Sheets



Point ID	FO1
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Marblehead

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1126201.43	1970515.03	455.14

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.041
RMSE Z (ft)	0.068
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO2
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1117610.62	2049174.06	567.69

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.041
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO3
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Fishhook

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1146313.36	2086059.74	645.03

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-02-2016
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.050
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO4
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Meredosia

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1122889.99	2196723.97	479.81

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.025
RMSE Z (ft)	0.043
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	FO5
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry East

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1147161.94	2156374.86	575.07

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.049
GPS Method	Real Time Kinematic

**PHOTOS:**





Point ID	FO6
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1079407.50	2185721.74	433.20

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-11-2016
RMSE Hz (ft)	0.031
RMSE Z (ft)	0.042
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO7
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1081264.85	2129167.35	620.55

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.031
RMSE Z (ft)	0.057
GPS Method	Real Time Kinematic

**PHOTOS:**





Point ID	FO8
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hull

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1084970.59	1994411.33	463.38

Operator	Bill Neville
Instrument Model	Trimble M3 2"
Date (MM-DD-YYYY)	11-15-2015
Occupy PT	FO8TP
Back Sight PT	CP19
RMSE Hz (ft)	0.042
RMSE Z (ft)	0.088

PHOTOS:





Point ID	FO9
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Rockport

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1077559.29	2048397.60	716.64

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-30-2015
RMSE Hz (ft)	0.046
RMSE Z (ft)	0.086
GPS Method	Real Time Kinematic

## PHOTOS:





Point ID	FO10
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1042087.15	2068386.44	503.67

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-05-2015
RMSE Hz (ft)	0.037
RMSE Z (ft)	0.062
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO11
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Bedford

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1064530.84	2195268.20	461.50

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-12-2016
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.054
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO12
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Louisiana

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1018752.66	2050361.86	455.18

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-03-2015
RMSE Hz (ft)	0.038
RMSE Z (ft)	0.069
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	FO13
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Bedford

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1040389.74	2167607.29	691.10

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.035
RMSE Z (ft)	0.044
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO14
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
998662.58	2119435.77	742.86

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	12-12-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.070
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	FO15
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1150996.11	2131299.88	531.06

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-31-2015
RMSE Hz (ft)	0.033
RMSE Z (ft)	0.052
GPS Method	Real Time Kinematic

PHOTOS:





## Tall Weeds Point Log Sheets



Point ID	TW1
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Marblehead

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1126190.70	1970460.35	458.49

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.037
RMSE Z (ft)	0.056
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW2
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1112122.01	2043009.90	551.41

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW3
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1117667.37	2049346.99	569.55

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW4
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1103789.09	2055243.71	725.16

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.026
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	TW5
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Baylis

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1117370.93	2089280.07	827.00

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-02-2016
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.048
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW6
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Fishhook

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1148212.40	2089276.70	755.56

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-02-2016
RMSE Hz (ft)	0.036
RMSE Z (ft)	0.052
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW7
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

Aerial Target	
LiDAR Ground Control	
X LiDAR QC Point	
New Control	
Photo ID	
Published Control	

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1120461.68	2198094.79	502.25

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-06-2016
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW8
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Meredosia

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1129507.41	2174259.74	438.77

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.025
RMSE Z (ft)	0.041
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW9
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1147178.58	2153396.08	587.56

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-31-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW10
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1101306.90	2215077.87	558.88

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-11-2016
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.025
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW11
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1079595.65	2184777.19	429.38

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-11-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW12
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1067622.15	2146815.18	681.49

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	TW13
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1113431.98	2148953.32	617.04

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-29-2015
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.042
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW14
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1081338.83	2126477.41	674.09

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.028
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW15
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Baylis

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1085998.14	2094517.53	795.26

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.053
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW16
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1077648.60	2056211.31	759.54

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.037
RMSE Z (ft)	0.060
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW17
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hull

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1084337.24	1995786.96	458.25

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-15-2015
RMSE Hz (ft)	0.036
RMSE Z (ft)	0.054
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW18
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1078416.46	2036579.99	474.80

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-30-2015
RMSE Hz (ft)	0.033
RMSE Z (ft)	0.057
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW19
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Meredosia

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1152742.40	2180561.13	426.40

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.027
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW20
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Rockport

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1062137.34	2034788.23	458.02

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-02-2015
RMSE Hz (ft)	0.032
RMSE Z (ft)	0.060
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	TW21
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills South

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS 1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1059965.03	2105822.10	741.47

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.035
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW22
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Bedford

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1061030.44	2195780.33	490.78

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-12-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.033
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW23
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Manchester

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1063165.57	2250630.14	651.76

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-13-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW24
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Louisiana

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1019201.79	2051233.77	450.03

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-03-2015
RMSE Hz (ft)	0.026
RMSE Z (ft)	0.050
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW25
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pittsfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1040576.29	2104337.88	697.60

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.049
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW26
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1042523.08	2069883.63	514.55

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-05-2015
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.048
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW27
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
998659.42	2118551.19	744.43

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-12-2015
RMSE Hz (ft)	0.034
RMSE Z (ft)	0.060
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW28
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hill East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1001730.66	2108003.53	480.20

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-07-2015
RMSE Hz (ft)	0.057
RMSE Z (ft)	0.094
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	TW29
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hill West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
996190.91	2086433.10	445.17

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-07-2015
RMSE Hz (ft)	0.056
RMSE Z (ft)	0.096
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW30
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1027008.49	2146051.04	533.92

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW31
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1017388.43	2165950.56	440.55

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-19-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.039
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	TW32
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS 1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
994149.90	2166213.35	448.61

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-19-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.050
GPS Method	Static using Base at DK8058

PHOTOS:





## Horizontal Point Log Sheets



Point ID	Hz1
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry West

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1144145.49	2112259.79	649.72

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-31-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.028
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz2
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Perry East

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1147111.26	2158612.60	484.00

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.034
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz3
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Hannibal East

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1116735.01	1961397.31	475.80

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-14-2015
RMSE Hz (ft)	0.036
RMSE Z (ft)	0.052
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	Hz4
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1103680.36	2053655.42	724.91

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-04-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz5
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Baylis

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1115824.50	2087780.52	871.50

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-02-2016
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.041
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz6
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1108167.41	2104915.37	788.89

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-22-2015
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.033
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	HZ7
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Griggsville

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1108178.84	2141794.00	662.06

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-22-2015
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.040
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz8
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Meredosia

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1126015.80	2173433.61	438.61

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-05-2016
RMSE Hz (ft)	0.020
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz9
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Florence

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1079290.07	2194705.18	454.08

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-11-2016
RMSE Hz (ft)	0.019
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz10
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1075909.53	2153024.61	639.96

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.036
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz11
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	New Salem

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1083194.84	2122704.50	705.18

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.025
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	Hz12
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Barry

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1083089.05	2035463.25	477.29

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	11-30-2015
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.050
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz13
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Rockport

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1047027.59	2058844.21	477.55

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-04-2015
RMSE Hz (ft)	0.028
RMSE Z (ft)	0.042
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz14
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hills South

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1070375.01	2111385.60	759.99

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-11-2015
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.029
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz15
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Rockport

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1050487.32	2035427.41	455.70

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-02-2015
RMSE Hz (ft)	0.037
RMSE Z (ft)	0.073
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz16
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1037090.80	2070515.46	487.78

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-05-2015
RMSE Hz (ft)	0.030
RMSE Z (ft)	0.046
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz17
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Summer Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1059516.68	2086535.84	783.87

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.031
RMSE Z (ft)	0.045
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz18
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pittsfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1037896.85	2106236.32	709.55

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-09-2015
RMSE Hz (ft)	0.031
RMSE Z (ft)	0.052
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz19
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Lynnville

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1102783.77	2238657.01	626.37

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-08-2016
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.030
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	Hz20
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Alsey

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1053296.46	2221106.31	618.33

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-13-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.039
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz21
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPCS - IL West (FIPS1202)
NAVD88
GEOID12B
US Survey Feet

<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
1076270.06	2257036.06	633.78

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-11-2016
RMSE Hz (ft)	0.026
RMSE Z (ft)	0.039
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz22
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Manchester

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1046842.85	2250460.00	681.81

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-13-2016
RMSE Hz (ft)	0.021
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz23
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Winchester

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1081689.59	2214147.44	543.17

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-08-2016
RMSE Hz (ft)	0.022
RMSE Z (ft)	0.034
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz24
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1037576.34	2139293.34	671.50

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-18-2015
RMSE Hz (ft)	0.016
RMSE Z (ft)	0.030
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz25
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Louisiana

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1019160.35	2049541.76	460.42

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-03-2015
RMSE Hz (ft)	0.018
RMSE Z (ft)	0.031
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz26
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Scott
Quad	Bedford

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1049837.70	2195862.82	449.10

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	01-12-2016
RMSE Hz (ft)	0.023
RMSE Z (ft)	0.034
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz27
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Milton

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1054313.23	2160505.37	648.20

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-21-2015
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.039
GPS Method	Real Time Kinematic

PHOTOS:







Point ID	Hz28
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pearl West

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1017226.63	2166156.30	438.93

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-19-2015
RMSE Hz (ft)	0.024
RMSE Z (ft)	0.041
GPS Method	Real Time Kinematic

PHOTOS:





Point ID	Hz29
Project No.	26869
Project Name	USGS Pike and Scott Counties
State	Illinois
County	Pike
Quad	Pleasant Hill East

	Aerial Target
	LiDAR Ground Control
X	LiDAR Horizontal Point
	New Control
	Photo ID
	Published Control

Coordinate System	
NAD83(2011)	
SPCS - IL West (FIPS1202)	
NAVD88	
GEOID12B	
US Survey Feet	

Northing	Easting	Elevation
1012616.42	2098502.74	543.61

Operator	Bill Neville
Receiver Model	Leica GS15
Receiver S/N	1510893
Antenna Height	1.800 Meters

Date (MM-DD-YYYY)	12-05-2015
RMSE Hz (ft)	0.029
RMSE Z (ft)	0.051
GPS Method	Real Time Kinematic

PHOTOS:

