121-A
ULMA (0002)

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☒ PAC ☐ SAC ☐ BM	DN6934	5/1/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	ULMA	121

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	18	:	30	Stop	23	:	00	NAVD88 Orthometric Height	Meters
Actual Start	18	:	31	Stop	00	:	35	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	10011	A

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☒	☐	NDB

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60158-00	Part Number	
Serial Number	5043452482	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒ 12V DC ☐ 110V AC ☐ Other (specify):		Vehicle is parked _____ meters_____ (direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued)		Station Designation: PAC ULMA	
Tripod		**Psychrometer (if used)**	
Brand	SECO	Brand	
Model		Model	
Part Number	5115-00-FLY	Part Number	
Serial Number Lot#	11RJA-1 Sep 11	Serial Number	
Last Adjustment Date	5-1-2013	Last calibration or check date:	
☒Fixed leg tripod		**Barometer (if used)**	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	-		-	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	01021	1831	38						
Middle	01020	2137	39						
After	01021	0035	41						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐Attached	☐ Submitted later
Photographs of station	☐Attached	☐ Submitted later
Pencil Rubbing of mark	☐Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted]

Remarks, Comments on problems, sketches, pencil rubbings etc.

121-A

E115 (0003)

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☐ SAC ☒ BM	PQ0139	5/1/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	E115	121

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	18	:	30	Stop	23	:	00	NAVD88 Orthometric Height	Meters
Actual Start	18	:	55	Stop	00	:	07	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	[redacted] 4	A

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60158-00	Part Number	
Serial Number	5043452506	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒ 12V DC ☐ 110V AC ☐ Other (specify):		Vehicle is parked _____ meters_____ (direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued)	Station Designation: BM E115

Tripod	
Brand	SECO
Model	
Part Number	5115-00-FLY
Serial Number	Lot# 10RZL Feb 10
Last Adjustment Date	
☒ Fixed leg tripod	
☐ Collapsible - leg tripod	
☐ Fixed Mount	

Psychrometer (if used)	
Brand	
Model	
Part Number	
Serial Number	
Last calibration or check date:	

Barometer (if used)
Brand
Model
Serial Number

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	-		-	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	01020	1855	38						
Middle	01020	2209	39						
After	01020	0007	41						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐ Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐ Attached	☐ Submitted later
Photographs of station	☐ Attached	☐ Submitted later
Pencil Rubbing of mark	☐ Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by	Printed Name: [redacted]	Initials: RC

Remarks, Comments on problems, sketches, pencil rubbings etc.

CBN1 121-A (0001)

5208 K - SESSION A

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☒ CBN ☐ PAC ☐ SAC ☐ BM	AC4890	5/1/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	CBN1	121

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	18	:	30	Stop	23	:	00	NAVD88 Orthometric Height	Meters
Actual Start	18	:	32	Stop	23	:	50	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULM-123655	1006	A

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8 - MODEL 3	Model	
Part Number	67250-66	Part Number	
Serial Number	5211484425	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐ Camcorder battery ☒ 12V DC ☐ 110V AC		Vehicle is parked _____ meters_____	
☐ Other (specify):		(direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

CHECK SETUP AT 5208 K

Time	PDOP	SATS	BUBBLE	BATTERY	
3:45	2.3	8	OK	70%	
4:36	2.1	9	OK	70%	RAIN/SNOW MIX
5:15	2.5	8	OK	70%	LIGHT RAIN
6:00	2.1	8	OK	70%	NO PRECIP
6:50					NO PRECIP

STOP

5208 K - SESSION A

GPS Observation Log Sheet (continued) Station Designation:

Tripod	
Brand	SECO
Model	2m Fixed HT
Part Number	5115 - 00 - FLY
Serial Number	11RJA (2)
Last Adjustment Date	5/1/13

☒ Fixed leg tripod
☐ Collapsible - leg tripod
☐ Fixed Mount

Psychrometer (if used)	
Brand	
Model	
Part Number	
Serial Number	
Last calibration or check date:	

Barometer (if used)
Brand
Model
Serial Number

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.000			
B = Additional offset to ARP if any (Tribach/spacer)	0.0			
H = Antenna Height = A + B = Datum point to ARP	2.000			

Meters = feet × 0.3048 Height entered into receiver = 2.00 meters
Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	02021	18:30	34°F						
Middle	02021	21:30	38°F						
After	01020	23:50	53°F						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐ Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐ Attached	☐ Submitted later
Photographs of station	☐ Attached	☐ Submitted later
Pencil Rubbing of mark	☐ Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted] | Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.
SNOWING, PHOTOS OF DISK & SET UP, SNOW GONE @ 2:40
All Receivers ON @ 2:20 OR 19:20
@ 2:49 Adjust Bubble slightly

121-A (0004)
BM02

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☐ SAC ☒ BM	PQ1711	5/1/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM MN	BM02	121

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	18	:	30	Stop	23	:	00	NAVD88 Orthometric Height	Meters
Actual Start	19	:	20	Stop	23	:	55	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	1005 5	A

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☒	☐	TREES NW
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R6	Model	
Part Number	60275-10	Part Number	
Serial Number	4738139036	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☒ Camcorder battery ☐ 12V DC ☐ 110V AC ☐ Other (specify):		Vehicle is parked _____ meters_____ (direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued) Station Designation: BM BM02

Tripod		Psychrometer (if used)	
Brand	SECO	Brand	
Model		Model	
Part Number	5115-00-FLY	Part Number	
Serial Number	Lot# 10RF6 Jan 10	Serial Number	
Last Adjustment Date	5-1-13	Last calibration or check date:	
☒Fixed leg tripod		Barometer (if used)	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	–		–	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	01020	1920	38						
Middle	01020	2224	39						
After	01020	2355	41						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐Attached	☐ Submitted later
Photographs of station	☐Attached	☐ Submitted later
Pencil Rubbing of mark	☐Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted] | Initials: NDC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122 A
ULMA (0002)

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☒ PAC ☐ SAC ☐ BM	DN6934	5/2/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	ULMA	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)							
Scheduled Start	11	:	30	Stop	16	:	00
Actual Start	11	:	00	Stop	16	:	43

Epoch Interval = 15 Seconds
Elevation Mask = 15 Degrees

NAD83 Ellipsoid Height Meters

NAVD88 Orthometric Height Meters

GEOID _____ GEOID Height Meters

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	1001 1	B

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☒	☐	NDB

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60138-00	Part Number	
Serial Number	3043452482	Serial Number	
Firmware Version	4.43	Cable Length (meters)	

☐ Camcorder battery ☒ 12V DC ☐ 110V AC
☐ Other (specify):

Vehicle is parked _____ meters_____ (direction) from antenna

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued)	Station Designation: PAC ULMA

Tripod	
Brand	SECO
Model	
Part Number	S115-00-FLY
Serial Number Lot#	11RJA-1 Sep 11
Last Adjustment Date	5-1-2013
☒Fixed leg tripod	
☐ Collapsible - leg tripod	
☐ Fixed Mount	

Psychrometer (if used)	
Brand	
Model	
Part Number	
Serial Number	
Last calibration or check date:	

Barometer (if used)
Brand
Model
Serial Number

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	-		-	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00021	1100	36						
Middle	00022	1350	36						
After	01022	1643	41						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐Attached	☐ Submitted later
Photographs of station	☐Attached	☐ Submitted later
Pencil Rubbing of mark	☐Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted] | Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122 A
E115 (0003)

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☐ SAC ☒ BM	PQ0139	5/2/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	E115	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	11	:	30	Stop	16	:	00	NAVD88 Orthometric Height	Meters
Actual Start	11	:	25	Stop	16	:	25	GEOID _____ GEOID Height	Meters
Epoch Interval = Seconds									
Elevation Mask = Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	1004 4	B

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60158-00	Part Number	
Serial Number	5043452506	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒ 12V DC ☐ 110V AC		Vehicle is parked _____ meters_____	
☐ Other (specify):		(direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued)	Station Designation: BM EII5

Tripod		Psychrometer (if used)	
Brand	SECO	Brand	
Model		Model	
Part Number	5115-00-FLY	Part Number	
Serial Number	Lot# 10RZL Feb 10	Serial Number	
Last Adjustment Date	5-1-2013	Last calibration or check date:	
☒ Fixed leg tripod		Barometer (if used)	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins		After Session Ends	
	Meters	Feet	Meters	Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	-		-	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00021	1125	36						
Middle	01021	1410	36						
After	01021	1625	41						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐ Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐ Attached	☐ Submitted later
Photographs of station	☐ Attached	☐ Submitted later
Pencil Rubbing of mark	☐ Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by	Printed Name: [redacted]	Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122 A
(0001)

5208 K Session B

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☒ CBN ☐ PAC ☐ SAC ☐ BM	ACY890	5/2/2013

General Location	Station 4 Character ID	Day of Year
New Ulm, MN	CBN1	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	11	:	30	Stop	16	:	00	NAVD88 Orthometric Height	Meters
Actual Start	11	:	22	Stop	16	:	10	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULM-123655	1006 6	B

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-MODEL 3	Model	
Part Number	67250-66	Part Number	
Serial Number	5211484425	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒12V DC ☐ 110V AC		Vehicle is parked _____ meters_____	
☐ Other (specify):		(direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

TIME	BUBBLE CHECK	BASE SURVEY	PDOP	SATS	TEMP	WEATHER	BAT
6:30	✓	✓	1.6	9	36°F	COOL WINDY	
7:15	✓	✓	2.1	8	35°F	"	90%
8:00	✓	✓	2.1	9	36°F	"	80%
8:45	✓	✓	2.4	6	36°F	"	80%
9:30	✓	✓	1.9	6	36°F	"	70%
10:15	✓	✓	1.8	9	38°F	"	70%
11:00	✓	✓	2.4	8	39°F	"	70%

WILL ALL ON @ 6:40
Adjust END TIME to 11:10

5208 K - SESSION 15

GPS Observation Log Sheet (continued)	Station Designation: 5208 K

Tripod	
Brand	SECO
Model	2m Fixed HT
Part Number	5115-00-FLY
Serial Number	11RJA (2)
Last Adjustment Date	5/1/13

☒ Fixed leg tripod

☐ Collapsible - leg tripod

☐ Fixed Mount

Psychrometer (if used)	
Brand	
Model	
Part Number	
Serial Number	
Last calibration or check date:	

Barometer (if used)
Brand
Model
Serial Number

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.00			
B = Additional offset to ARP if any (Tribach/spacer)	0.00			
H = Antenna Height = A + B = Datum point to ARP	2.00			

Meters = feet × 0.3048 Height entered into receiver = 2.00 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00021	11:22	35° F						
Middle	01071	13:45	36° F						
After	01021	16:10	39° F						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐Attached	☐ Submitted later
Photographs of station	☐Attached	☐ Submitted later
Pencil Rubbing of mark	☐Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted] | Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☐ SAC ☒ BM	PQ1711	5/2/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	BM02	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)							
Scheduled Start	11	:	30	Stop	16	:	00
Actual Start	11	:	40	Stop	16	:	11

Epoch Interval = Seconds
Elevation Mask = Degrees

NAD83 Ellipsoid Height Meters

NAVD88 Orthometric Height Meters

GEOID _____ GEOID Height Meters

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	1005 5	B

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☒	☐	TREES NW
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R6	Model	
Part Number	60275-10	Part Number	
Serial Number	4738139036	Serial Number	
Firmware Version	4.43	Cable Length (meters)	

☒Camcorder battery ☐ 12V DC ☐ 110V AC
☐ Other (specify):

Vehicle is parked _____ meters_____
(direction) from antenna

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued)	Station Designation: BM BM02

Tripod		Psychrometer (if used)	
Brand	SECO	Brand	
Model		Model	
Part Number	5115-00-FLY	Part Number	
Serial Number	Lot# 10RF6 Jan 10	Serial Number	
Last Adjustment Date	3-1-13	Last calibration or check date:	
☒ Fixed leg tripod		Barometer (if used)	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins		After Session Ends	
	Meters	Feet	Meters	Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	-		-	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00021	1140	36						
Middle	01021	1425	37						
After	01021	1610	39						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐ Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐ Attached	☐ Submitted later
Photographs of station	☐ Attached	☐ Submitted later
Pencil Rubbing of mark	☐ Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by	Printed Name: [redacted]	Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122-13
(0002)

ULMA

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☒ PAC ☐ SAC ☐ BM	DN6934	5/2/2013

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	ULMA	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	18	:	00	Stop	20	:	30	NAVD88 Orthometric Height	Meters
Actual Start	18	:	01	Stop	20	:	45	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	1001	C

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☒	☐	NDB

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60158-00	Part Number	
Serial Number	5043452482	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒ 12V DC ☐ 110V AC ☐ Other (specify):		Vehicle is parked _____ meters_____ (direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued)	Station Designation: PAC VLM4

Tripod		Psychrometer (if used)	
Brand	SECO	Brand	
Model		Model	
Part Number	5115-00-FLY	Part Number	
Serial Number	11RJA-1 Sep11	Serial Number	
Last Adjustment Date	5-1-2013	Last calibration or check date:	
☒Fixed leg tripod		Barometer (if used)	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins		After Session Ends	
	Meters	Feet	Meters	Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	-		-	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00012	1801	41						
Middle	00012	1915	48						
After	00012	2045	48						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐Attached	☐ Submitted later
Photographs of station	☐Attached	☐ Submitted later
Pencil Rubbing of mark	☐Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by	Printed Name: [redacted]	Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122-B
(0012)
ULM B

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☒ SAC ☐ BM	DN6935	5/2/2013

General Location	Station 4 Character ID	Day of Year
	ULMB	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	18	:	00	Stop	20	:	30	NAVD88 Orthometric Height	Meters
Actual Start	18	:	13	Stop	20	:	55	GEOID _____ GEOID Height	Meters
Epoch Interval = Seconds									
Elevation Mask = Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	1002 2	C

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60158-00	Part Number	
Serial Number	5043452506	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒ 12V DC ☐ 110V AC ☐ Other (specify):		Vehicle is parked _____ meters_____ (direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued) Station Designation: SAC ULMB

Tripod	
Brand	SECO
Model	
Part Number	5115-00-FLY
Serial Number	Lot# 10R2L Feb 10
Last Adjustment Date	5-1-2013

☒ Fixed leg tripod
☐ Collapsible - leg tripod
☐ Fixed Mount

Psychrometer (if used)	
Brand	
Model	
Part Number	
Serial Number	
Last calibration or check date:	

Barometer (if used)
Brand
Model
Serial Number

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	—		—	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters
Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00012	1813	41						
Middle	00012	1925	48						
After	00012	2055	48						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐ Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐ Attached	☐ Submitted later
Photographs of station	☐ Attached	☐ Submitted later
Pencil Rubbing of mark	☐ Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted] | Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122-13
(0013)

ULM C SESSION C

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☒ SAC ☐ BM		5/2/13

General Location	Station 4 Character ID	Day of Year
NEW ULM, MN	ULMC	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' ''	GPS -	ULM
Longitude: W ° ' ''		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	18	:	00	Stop	20	:	30	NAVD88 Orthometric Height	Meters
Actual Start	18	:	07	Stop	20	:	45	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULM-123655	1803	C

Agency/Company	Operator Name	Telephone Number	Email address

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☐	☒	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8 - MODEL 3	Model	
Part Number	67250-66	Part Number	
Serial Number	5211484425	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒12V DC ☐ 110V AC ☐ Other (specify):		Vehicle is parked _____ meters_____ (direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

Tme	Bubble	Survey	PDOP	SATS	Temp	Bat
1:15	✓	✓	3.5	5	46°F	70%
3:45	✓	✓	2.3	8	56°	70%

1:13 Start Session
3:45 END Tim

ULMC SESSION C

GPS Observation Log Sheet (continued)	Station Designation: ULM C

Tripod		Psychrometer (if used)	
Brand	SEC	Brand	
Model	2m Fixed HT	Model	
Part Number	5115-00-FLY	Part Number	
Serial Number	11RJA(2)	Serial Number	
Last Adjustment Date	5/1/13	Last calibration or check date:	
☒ Fixed leg tripod		Barometer (if used)	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins		After Session Ends	
	Meters	Feet	Meters	Feet
A = Datum point to top of tripod (Tripod Height)	2.00			
B = Additional offset to ARP if any (Tribach/spacer)	0.00			
H = Antenna Height = A + B = Datum point to ARP	2.00			

Meters = feet × 0.3048 Height entered into receiver = 2.00 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00012	18:07	46°						
Middle	00012	19:45	52°						
After	00012	20:45	56°						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐Attached	☐ Submitted later
Photographs of station	☐Attached	☐ Submitted later
Pencil Rubbing of mark	☐Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by	Printed Name: [redacted]	Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122-G
(0002)
ULM A

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☒ PAC ☐ SAC ☐ BM	DN 6934	5/2/2013

General Location	Station 4 Character ID	Day of Year
	ULMA	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	21	:	00	Stop	23	:	30	NAVD88 Orthometric Height	Meters
Actual Start	20	:	53	Stop	23	:	35	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPAC5	100 1	D

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☒	☐	VOB

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60158-00	Part Number	
Serial Number	5043452492	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒ 12V DC ☐ 110V AC		Vehicle is parked _____ meters_____	
☐ Other (specify):		(direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued) Station Designation: PAC ULMA

Tripod	
Brand	SECO
Model	
Part Number	5115-00-FLY
Serial Number	11RJA-1 Sep 11
Last Adjustment Date	5-1-13
☒ Fixed leg tripod	
☐ Collapsible - leg tripod	
☐ Fixed Mount	

Psychrometer (if used)	
Brand	
Model	
Part Number	
Serial Number	
Last calibration or check date:	

Barometer (if used)
Brand
Model
Serial Number

Antenna Height	Before Session Begins Meters	Before Session Begins Feet	After Session Ends Meters	After Session Ends Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	-		-	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00012	2053	48						
Middle	00012	2225	48						
After	00012	2335	48						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐ Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐ Attached	☐ Submitted later
Photographs of station	☐ Attached	☐ Submitted later
Pencil Rubbing of mark	☐ Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted] | Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

122-C
(0012)

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☒ SAC ☐ BM	DN6935	5/2/2013

General Location	Station 4 Character ID	Day of Year
	ULMB	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	21	:	00	Stop	23	:	30	NAVD88 Orthometric Height	Meters
Actual Start	21	:	03	Stop	23	:	40	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULMPACS	1007 2	D

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-3	Model	
Part Number	60158-00	Part Number	
Serial Number	5043452506	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒ 12V DC ☐ 110V AC		Vehicle is parked _____ meters_____	
☐ Other (specify):		(direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

GPS Observation Log Sheet (continued)		Station Designation: SAC UCMB	
Tripod		Psychrometer (if used)	
Brand	SECO	Brand	
Model		Model	
Part Number	5115-00-FLY	Part Number	
Serial Number	Lot 10RZL Feb10	Serial Number	
Last Adjustment Date	5-1-2013	Last calibration or check date:	
☒ Fixed leg tripod		Barometer (if used)	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins		After Session Ends	
	Meters	Feet	Meters	Feet
A = Datum point to top of tripod (Tripod Height)	2.000		2.000	
B = Additional offset to ARP if any (Tribach/spacer)	—		—	
H = Antenna Height = A + B = Datum point to ARP	2.000		2.000	

Meters = feet × 0.3048 Height entered into receiver = 2.000 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00012	2103	48						
Middle	00012	2205	48						
After	00012	2340	48						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐ Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐ Attached	☐ Submitted later
Photographs of station	☐ Attached	☐ Submitted later
Pencil Rubbing of mark	☐ Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by	Printed Name: [redacted]	Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.

RECEIVER STOPPED BY POWER DOWN

122-C
(0013

ULMC SESSION D

OMB Approved 2120-0557
Expires 3/31/2010

Federal Aviation Administration

Airport Surveying-GIS Program

GPS Observation Log Sheet

Station Designation	Station PID	Date (UTC)
☐ FBN ☐ CBN ☐ PAC ☒ SAC ☐ BM		5/2/13

General Location	Station 4 Character ID	Day of Year
NEAR ULM, MN	ULMC	122

Geographic Coordinates (NAD83)	Project Number	Airport ID
Latitude: N ° ' "	GPS -	ULM
Longitude: W ° ' "		

Observation Session Times (UTC)								NAD83 Ellipsoid Height	Meters
Scheduled Start	20	:	30	Stop	23	:	00	NAVD88 Orthometric Height	Meters
Actual Start	20	:	49	Stop	23	:	33	GEOID _____ GEOID Height	Meters
Epoch Interval = 15 Seconds									
Elevation Mask = 15 Degrees									

Project Name	Station Serial Number (SSN)	Session ID
ULM-123655	1003	D

Agency/Company	Operator Name	Telephone Number	Email address
[redacted]			

Answer Yes or No to each question, if No explain	Yes	No	Explanation
Antenna plumb before session?	☒	☐	
Antenna plumb after session?	☒	☐	
Antenna oriented to true north?	☒	☐	
Weather observed at antenna height?	☐	☒	
Antenna ground plane used	☐	☒	
Antenna radome used?	☐	☒	
Eccentric observation (> 0.5 mm)?	☐	☒	
Any obstructions above 10°?	☐	☒	
Radio interference source nearby?	☐	☒	

Receiver		Antenna	
Brand	TRIMBLE	Brand	
Model	R8-MODEL 3	Model	
Part Number	67250-66	Part Number	
Serial Number	5211484425	Serial Number	
Firmware Version	4.43	Cable Length (meters)	
☐Camcorder battery ☒12V DC ☐ 110V AC ☐ Other (specify):		Vehicle is parked _____ meters_____ (direction) from antenna	

Paperwork Reduction Act Statement: This form is used to document source information about an airport or aeronautical facility which is part of the National Airspace System (NAS). This information is used to document airport data relating to the safety, security, or capacity of the national air transportation system. It is estimated that it will take approximately 5-80 hours to fill out the all of the necessary forms for a project depending on the complexity. No assurance of confidentiality is necessary or provided. It should be noted that an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection of information is 2120-0569. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC, 20591, Attn: Information Collections Clearance Officer, AIO-20.

	Bubble	Survey	PPOP	Sats	Bat
4:55	✓	✓	2.3	9	70%
6:15	✓	✓	1.9	8	60%

ULM C SESSION D.

GPS Observation Log Sheet (continued) Station Designation:

Tripod		Psychrometer (if used)	
Brand	SECO	Brand	
Model	2m Fixed Ht	Model	
Part Number	5115-00-FLY	Part Number	
Serial Number	11RJA(2)	Serial Number	
Last Adjustment Date	5/1/13	Last calibration or check date:	
☒ Fixed leg tripod		Barometer (if used)	
☐ Collapsible - leg tripod		Brand	
☐ Fixed Mount		Model	
		Serial Number	

Antenna Height	Before Session Begins		After Session Ends	
	Meters	Feet	Meters	Feet
A = Datum point to top of tripod (Tripod Height)	2.00			
B = Additional offset to ARP if any (Tribach/spacer)	0.00			
H = Antenna Height = A + B = Datum point to ARP	2.00			

Meters = feet × 0.3048 Height entered into receiver = 2.00 meters

Note or sketch any unusual circumstances. Be very clear as to where and how you measured.

Weather Data

	Weather Codes	Time (UTC)	Dry-Bulb Temp Fahrenheit	Dry-Bulb Temp Celsius	Wet Bulb Temp Fahrenheit	Wet Bulb Temp Celsius	Rel % Humidity	Atm Press. In Hg	Atm Press. mB
Before	00011	20:50	48°F						
Middle	00011	21:55	48°F						
After	00011	23:33	48°F						

Weather Codes

Code	Problem	Visibility	Temperature	Cloud Cover	Wind
0	Did not occur	Good over 15 miles	Normal 32 - 80° F	Clear, below 20%	Calm, under 5 mph
1	Did occur	Fair 7-15 miles	Hot over 80° F	Cloudy 20 – 70%	Moderate 5 – 15 mph
2	Not Used	Poor under 7 miles	Cold below 32° F	Overcast more than 70%	Strong over 15 mph

Example: 00000 = No problem, good visibility, normal temp, clear, clam wind
12121 = Problems, poor visibility, hot, overcast, moderate wind

Updated Station description	☐Attached	☐ Submitted later
Station Location Sketch and Visibility Diagram	☐Attached	☐ Submitted later
Photographs of station	☐Attached	☐ Submitted later
Pencil Rubbing of mark	☐Attached	☐ Submitted later

Data File names (standard NGS format = aaaaddds.xxx
Where aaaa = 4 character ID, ddd= day of year, s=session ID, xxx=file dependant extension

Log Checked by | Printed Name: [redacted] | Initials: DRC

Remarks, Comments on problems, sketches, pencil rubbings etc.