

Ada

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
130	Ada	Ada		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Ada	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Norman County Highway Department.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
471824.16399	963055.76373	253.709	280.49

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5948R40108	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69043	05/20/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5030K69043	08/16/2011	05/20/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441053368	08/16/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ADA ADA ARP	NORMAN, MN	8/17/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95801.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95801.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
Q 99 A	NORMAN, MN	10/29/2015

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104893.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104893.pdf

Ada

Monument



Antenna North



Mark

Antenna East



Antenna Monument



Antenna South



Ada

Antenna West



Receiver Location



Antenna Serial Number



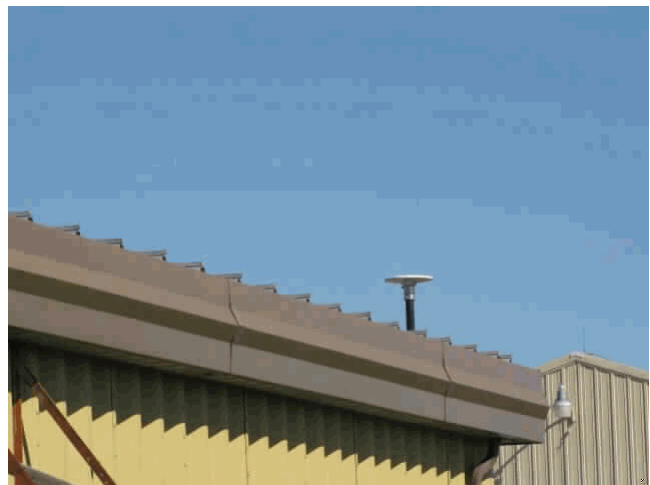
Antenna Building



Receiver Serial Number



Antenna Roof



Albert Lea

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
129	Albert Lea	AlbL	ALBERT LEA	MNAA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Albert Lea	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Albert Lea, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
434035.61229	931947.01664	372.546	401.65

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5950R40280	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5112K74458	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.62	5112K74458	10/30/2012	02/18/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5051K72723	07/27/2011	10/30/2012

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1551016815	07/01/2019	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441027943	07/27/2011	07/01/2019

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS ALBL ALBERT LEA ARP	FREEBORN, MN	7/27/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95802.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95802.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2405 B 1 RESET	FREEBORN, MN	6/30/2016

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_105853.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_105853.pdf

Albert Lea

Monument

Antenna North



Mark

Antenna East



Antenna Monument

Antenna South



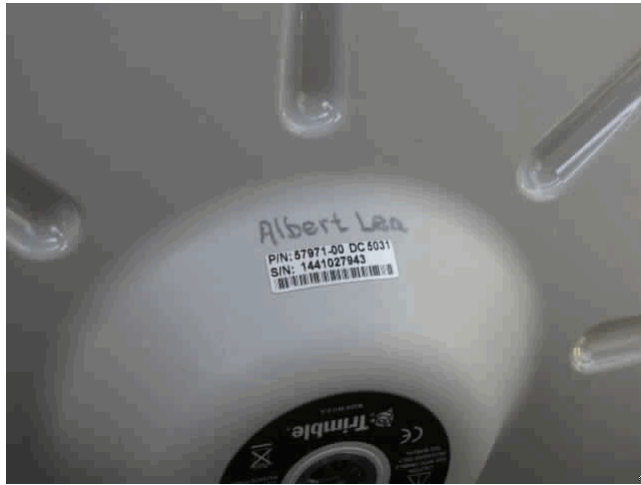
Albert Lea

Antenna West

Receiver Serial Number



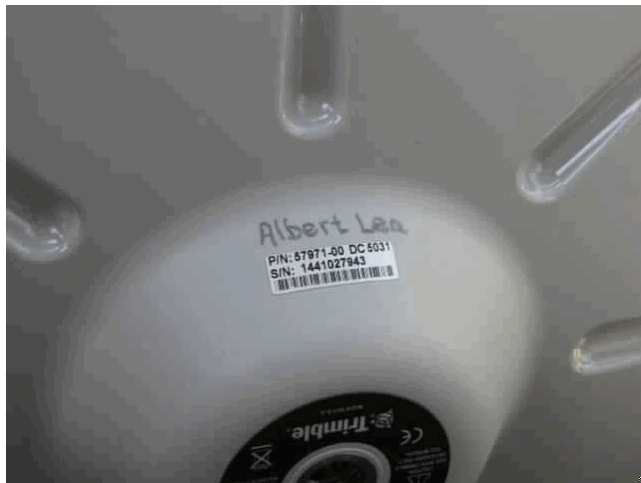
Antenna Serial Number



Receiver Location



Antenna Serial Number



Antenna Building



Albert Lea

Antenna Roof

Alexandria - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
26	Alexandria	Alex	ALEXANDRIA	MNAL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Alexandria	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Douglas County Public Works Center

Located on the roof of the Douglas County Public Works Center building in Alexandria, 509 3rd Avenue (County Road 82)

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
455332.93184	952303.84554	409.595	435.73

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R5	GPS+GLO	3.64	4828K57150	09/10/2008	06/22/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	3.60	4828K57150	09/09/2008	09/10/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241618	07/28/2008	09/09/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241618	06/30/2008	07/28/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0220289841	04/01/2004	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973344	09/09/2008	06/22/2009

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ALEX ALEXANDRIA ARP	DOUGLAS, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52103.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52103.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
ALEX	DOUGLAS, MN	4/1/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	VERTICAL CONTROL DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50741.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50741.pdf

Alexandria - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Alexandria - Decommissioned

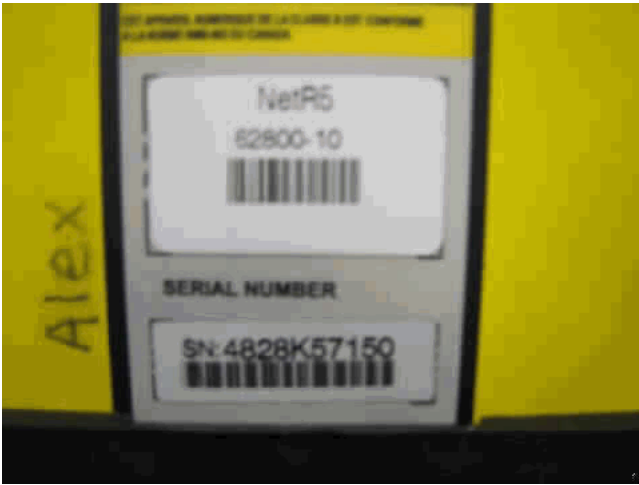
Antenna West



Antenna Roof



Receiver Serial Number



Others



Receiver Location



Alexandria 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
117	Alexandria 2	Alx2	ALEXANDRIA 2	MNAX

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Alexandria	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Douglas County Public Works Center.

Located on the roof of the Douglas County Public Works Center building in Alexandria, 526 Willow Drive.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
455315.36239	952329.36942	409.529	435.65

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5311K51784	03/01/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5311K51784	05/20/2015	03/01/2019
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4828K57150	05/20/2013	05/20/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4828K57150	12/28/2010	05/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.03	4828K57150	09/20/2010	12/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4828K57150	06/22/2009	09/20/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	30973344	06/22/2009	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ALX2 ALEXANDRIA 2 ARP	DOUGLAS, MN	6/22/2009

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87399.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87399.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
JORGENSON	DOUGLAS, MN	8/3/2009

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87288.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87288.pdf

Alexandria 2

Monument



Antenna East



Antenna Monument



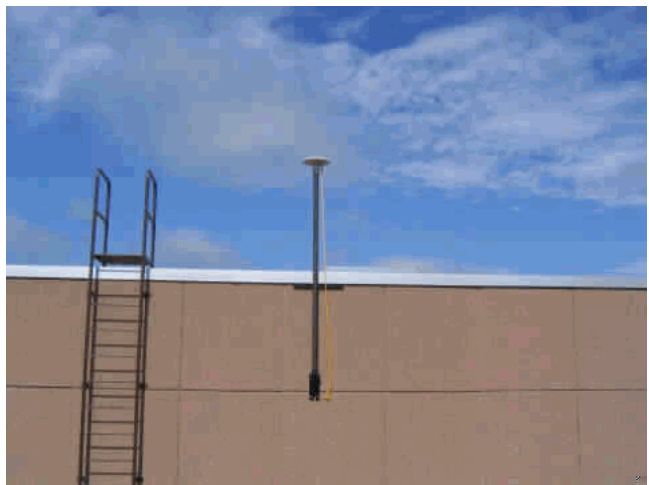
Antenna South



Antenna North



Antenna West

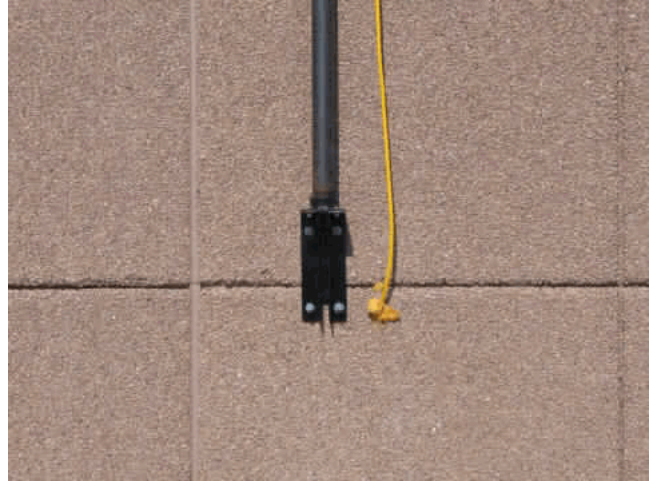


Alexandria 2

Antenna Serial Number



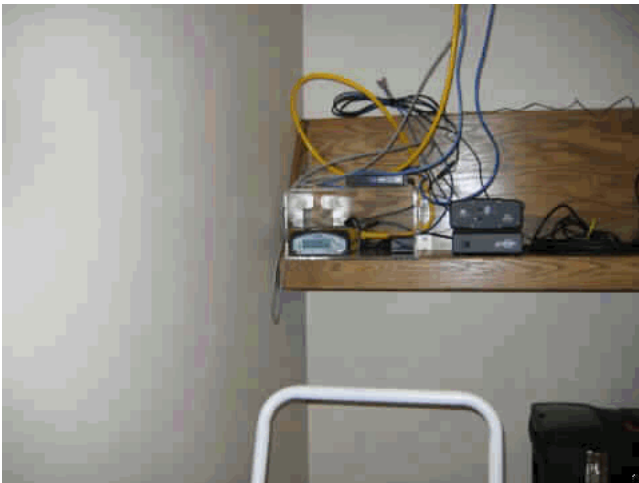
Antenna Building



Receiver Serial Number



Receiver Location



Apple Valley

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
9	Apple Valley	ApVy	APPLE VALLEY	MNAV

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Apple Valley	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Dakota County Government Center

Located on the west side of the Dakota County Government Building in Apple Valley, MN, 0.3 miles east on CSAH 42 from Cedar Avenue (TH 77).

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
444358.51358	931234.93844	280.516	308.00

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	Nav 5.43	6049R40056	12/14/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5426R48928	03/02/2019	12/14/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5426R48928	03/05/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5426R48928	01/03/2018	03/05/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5426R48928	10/30/2014	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4831K57556	02/18/2013	10/30/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4831K57556	12/28/2010	02/18/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4831K57556	10/28/2009	12/28/2010
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.71	4831K57603	10/06/2009	10/28/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4831K57556	12/03/2008	10/06/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4626K01807	08/26/2008	12/03/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4626K01807	10/11/2006	08/26/2008
Trimble Navigation Ltd	5700	GPS	UNKNOWN	0000000006	04/01/2003	10/11/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	2312107190	11/08/2018	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	31052655	10/28/2009	11/08/2018
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31052563	12/03/2008	10/28/2009
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30213905	10/11/2006	12/03/2008
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12481390	04/01/2003	10/11/2006
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS APVY APPLE VALLEY ARP	DAKOTA, MN	4/1/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52104.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52104.pdf

Apple Valley

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
APVY	DAKOTA, MN	11/20/2003

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50693.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50693.pdf

Apple Valley

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Apple Valley

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Appleton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
138	Appleton	Aplt	Appleton	MNAN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Appleton	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation truck station in Appleton, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
451143.69093	960117.71422	281.914	308.19

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5101K72934	03/02/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5101K72934	03/07/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5101K72934	01/03/2018	03/07/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5101K72934	02/18/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5101K72934	03/13/2012	02/18/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441112025	03/13/2012	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS APLT APPLETON ARP	SWIFT, MN	3/13/2012

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95804.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95804.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
7611 J	SWIFT, MN	5/2/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95829.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95829.pdf

Appleton

Monument



Antenna North



Mark

Antenna East



Antenna Monument



Antenna South



Appleton

Antenna West



Receiver Location



Antenna Serial Number



Appleton
PIN: 87971-00 DC 8116
S/N: 1441112025
83 11218 888 00001818

Receiver Serial Number



PoE PD 44 - 57 VDC --- 0.4A
KATH/APPLES TO CONNECTOR
PWR FOR INDOOR AND DRY LOCATIONS USE ONLY

67668-20
Net R9

SERIAL NUMBER
SN: 5101K72934

Appleton: MN:DOT Truck Station
IP Address: 10.224.56.28
Gateway: 10.224.56.1
Mask: 255.255.255.224

TRIMBLE NAVIGATION LTD
CONTAINS FCC ID: G231186
IC: 8854-A-0138
CANADA 512

Arcadia

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
151	Arcadia	Arcd		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Arcadia	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
441424.36350	913040.76614	209.823	240.71

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN ARCD ARCADIA ARP	TREMPEALEAU, WI	4/1/2015

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104481.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104481.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
Metric:

Arcadia

Arden Hills

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
7	Arden Hills	ArdH	ARDEN HILLS	MNAH

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Arden Hills	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Arden Hills, MN

Attached to the east side of the Arden Hills Truck Station in Ramsey County. 0.5 miles east of Interstate 35W on County Road I.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
450627.01917	931047.61657	254.112	281.36

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6107R40119	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5306K50849	06/16/2014	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4832K57695	02/18/2013	06/16/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4832K57695	12/28/2010	02/18/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.03	4832K57695	09/21/2010	12/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4832K57695	12/03/2008	09/21/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.63	4832K57695	12/02/2008	12/03/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01619	08/26/2008	12/02/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4624K01619	10/11/2006	08/26/2008
Trimble Navigation Ltd	5700	GPS		0220310328	07/08/2004	10/11/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31051283	12/02/2008	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30213922	10/11/2006	12/02/2008
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12286196	07/08/2004	10/11/2006
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ARDH ARDEN HILLS ARP	RAMSEY, MN	7/8/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52105.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52105.pdf

Arden Hills

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
ARDH	RAMSEY, MN	7/8/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50736.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50736.pdf

Arden Hills

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

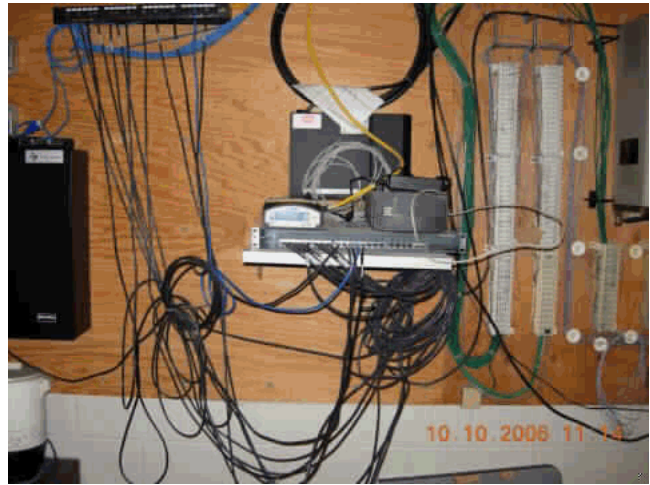


Arden Hills

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Ash Lake

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
119	Ash Lake	AshL	Ash Lake	MNAS

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Ash Lake	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 67 near Ash Lake, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
481738.54607	925813.42700	348.914	379.74

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5945R40099	04/15/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5219K84904	03/02/2019	04/15/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5219K84904	03/05/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5219K84904	01/03/2018	03/05/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5219K84904	02/18/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.60	5219K84904	07/17/2012	02/18/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.46	5219K84904	07/13/2012	07/17/2012
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4831K57603	12/28/2010	07/13/2012
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.03	4831K57603	09/21/2010	12/28/2010
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.71	4831K57603	11/24/2009	09/21/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble LMR400	1551016817	04/15/2021	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	31052668	11/24/2009	04/15/2021

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ASHL ASH LAKE ARP	ST. LOUIS, MN	11/24/2009

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_89371.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_89371.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6922 T	ST. LOUIS, MN	5/27/2010

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_90265.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_90265.pdf

Ash Lake

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Ash Lake

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Ashton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
96	Ashton	Asht	Ashton	IAAS

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Ashton	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
431820.16900	954644.57535	430.649	457.50

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN ASHT ASHTON ARP	OSCEOLA, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86011.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86011.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Ashton

Bagley - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
88	Bagley	Bgly	Bagley	MNBA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Bagley	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Antenna is attached to the NE corner of a steel sided MN/DOT Maintenance Facility.

The CORS is located in Clearwater County, east of Bagley, Minnesota along Highway 2. From the Junction of Trunk Highway 2 and Trunk Highway 92 go 2.6 miles east along Trunk Highway 2 to the MN/DOT maintenance facility on the north side of Trunk Highway 2.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4943K64139	04/08/2010	12/18/12
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237715	10/07/2008	04/08/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220315220	03/17/2008	10/07/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1440936005	04/08/2010	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12626160	03/17/2008	04/08/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS BGLY BAGLEY ARP	CLEARWATER, MN	3/17/2008

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83092.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83092.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1503 G	CLEARWATER, MN	7/21/2008

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE/BITUMINOUS SLAB	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81491.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81491.pdf

Bagley - Decommissioned

Monument



Antenna North



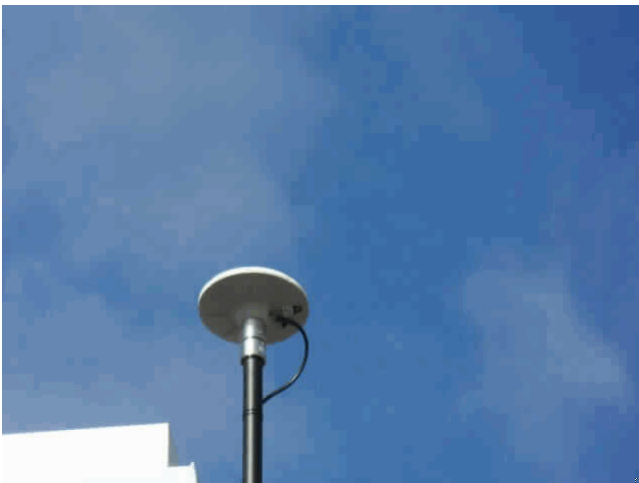
Mark



Antenna East



Antenna Monument



Antenna South



Bagley - Decommissioned

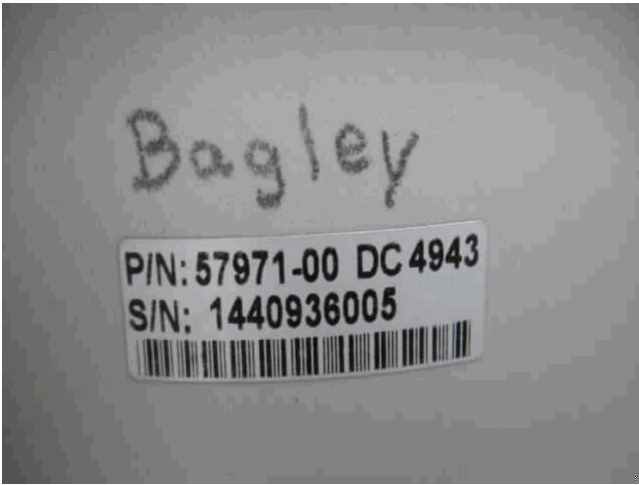
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Bagley 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
145	Bagley 2	Bgl2	MNBY	MNBY

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Bagley	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

The CORS is located in Clearwater County, east of Bagley, Minnesota along Highway 2. From the Junction of Trunk Highway 2 and Trunk Highway 92 go 2.6 miles east along Trunk Highway 2 to the MN/DOT maintenance facility on the north side of Trunk Highway 2.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
473154.96406	952051.15863	427.939	455.56

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5426R48926	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5426R48926	12/11/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5206K82037	12/18/2012	12/11/2014

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1440936005	12/18/2012	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS BGL2 BAGLEY 2 ARP	CLEARWATER, MN	12/18/2012

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_102829.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_102829.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1503 N	CLEARWATER, MN	12/18/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - LARGE	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_102850.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_102850.pdf

Bagley 2

Monument



Antenna North



Mark

Antenna East



Antenna Monument



Antenna South



Bagley 2

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Baudette

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
113	Baudette	Baud	BAUDETTE	MNBT

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Baudette	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Baudette, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
484245.02278	943526.55816	312.622	341.66

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5112K74590	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5112K74590	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5112K74590	06/14/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244228	06/30/2009	06/14/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107526	06/14/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60078758	06/30/2009	06/14/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS BAUD BAUDETTE ARP	LAKE OF THE WOODS, MN	6/1/2009

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_89408.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_89408.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3901 C 2	LAKE OF THE WOODS, MN	6/17/2009

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE/BITUMINOUS SLAB	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87099.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87099.pdf

Baudette

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Baudette

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Baxter

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
41	Baxter	Bxtr	BAXTER	MNBX

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Baxter	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation District 3 Office in Baxter, MN.

Located on the east side of Trunk Highway 371 in Crow Wing County. At Minnesota Department of Transportation Baxter District Headquarters on the south side of the maintenance garage.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
462052.59263	941428.91274	346.334	373.53

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5950R40008	07/14/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5311K42452	05/15/2014	07/14/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5311K42452	03/17/2014	05/15/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5219K85071	02/18/2013	03/17/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.60	5219K85071	07/18/2012	02/18/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4831K57607	12/28/2010	07/18/2012
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57607	10/02/2008	12/28/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220310331	04/06/2005	10/02/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	1112118525	01/23/2014	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	30975412	10/02/2008	03/17/2014
Trimble Navigation Ltd	Zephyr Geodetic 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	12635871	04/06/2005	10/02/2008

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BXTR BAXTER ARP	CROW WING, MN	4/6/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52255.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52255.pdf

Baxter

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1809 A 1	CROW WING, MN	4/6/2005

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52254.pdf

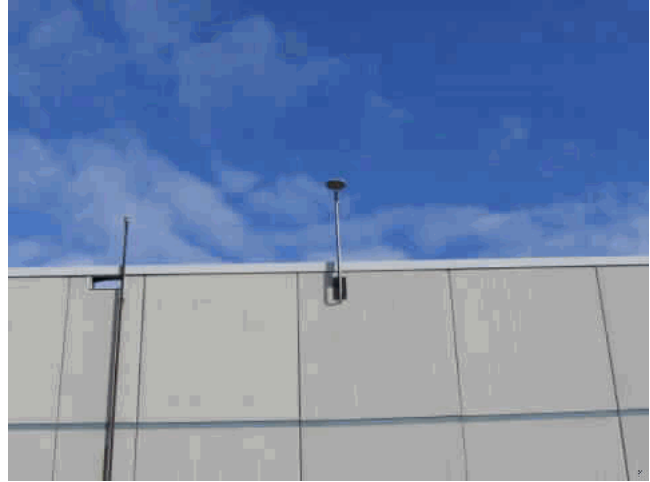
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52254.pdf

Baxter

Monument



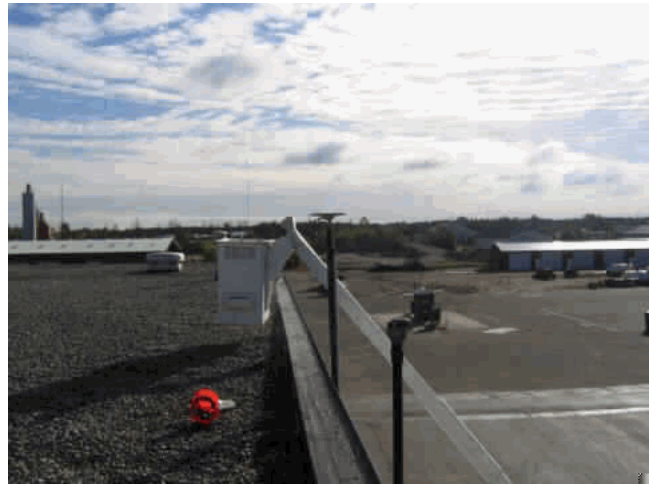
Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Baxter

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Beaver Creek

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
60	Beaver Creek	BvrC	BEAVER CREEK	MNBV

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Beaver Creek	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System(RWIS) site number 6 near Beaver Creek, MN.

Road and Weather Information System (RWIS) site number 6 on I-90 near Beaver Creek MN

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433629.88294	962241.33869	417.590	444.01

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5829R40040	03/18/2020	
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5829R40040	05/20/2019	03/18/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5112K74580	03/02/2019	05/20/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5112K74580	03/05/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5112K74580	01/03/2018	03/05/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5112K74580	02/18/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5112K74580	05/24/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241576	07/07/2009	05/24/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237724	07/29/2008	07/07/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4437237724	03/26/2008	03/29/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244254	08/25/2007	03/26/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244254	04/27/2006	08/25/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	612223935	05/20/2019	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107116	05/24/2011	05/20/2019
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60054907	03/30/2006	05/24/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BVRC BEAVER CREEK ARP	ROCK, MN	3/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62755.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62755.pdf

Beaver Creek

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
T 146 A	ROCK, MN	5/17/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62636.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62636.pdf

Beaver Creek

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Beaver Creek

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Bemidji

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
84	Bemidji	Bmij	Bemidji	MNBJ

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Bemidji	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Bemidji District Headquarters.

3920 Hwy 2 West, Bemidji MN 56601-4833

Attached to the north side of the Minnesota Department of Transportation Bemidji headquarters building on the west side of Trunk Highway 2 in Beltrami County, 1.2 miles NorthEast of the Junction of Trunk Highway 2 and Trunk Highway 71.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
473004.54498	945615.47252	402.895	430.93

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6006R44034	06/30/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5443R50011	03/02/2019	06/30/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5443R50011	03/05/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5443R50011	01/03/2018	03/05/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50011	05/04/2015	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4943K64158	05/22/2013	05/04/2015
Trimble Navigation Ltd	Net R5	GPS	NAV 4.03	4943K64158	04/07/2010	05/22/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237734	10/07/2008	04/07/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0220310327	12/20/2007	10/07/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1441030964	10/23/2017	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1440929021	04/07/2010	10/23/2017
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12286297	12/20/2007	04/07/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BMIJ BEMIDJI ARP	BELTRAMI, MN	12/4/2007

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_76753.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_76753.pdf

Bemidji

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
W 347	BELTRAMI, MN	4/1/1980

<u>Monument Type</u>	<u>Disk Type</u>
STEEL ROD (IN SLEEVE)	METAL ROD

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_1867.pdf

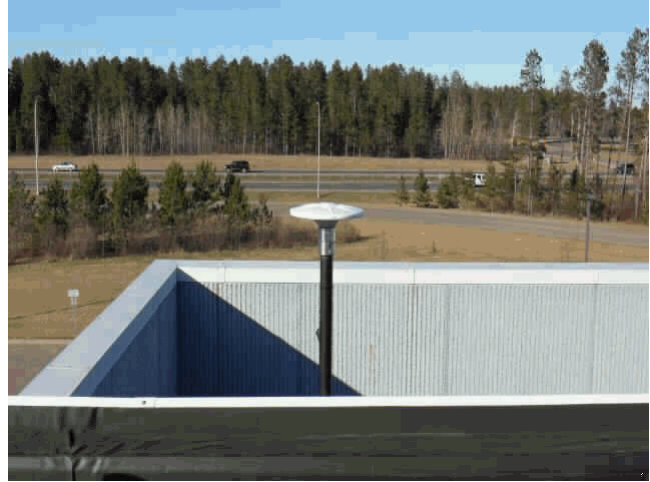
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_1867.pdf

Bemidji

Monument



Antenna North



Mark



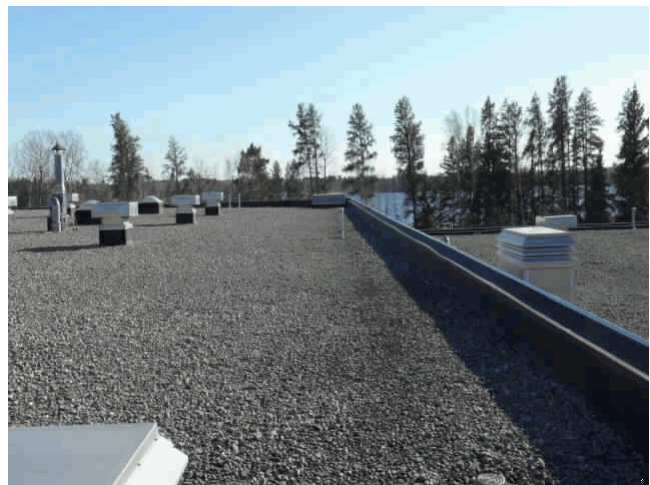
Antenna East



Antenna Monument



Antenna South



Bemidji

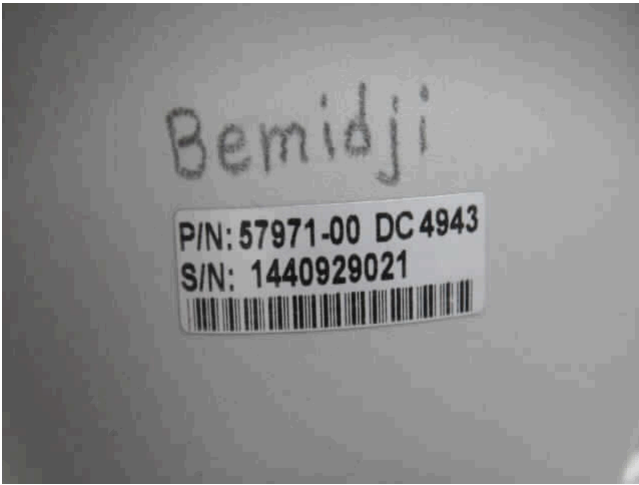
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Bigfork

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
134	Bigfork	Bfrk		MNBF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Bigfork	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Itasca County Truck Station

DHCP as of 4-3-12 - Do not change

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
474404.37909	933901.49093	387.050	416.16

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5114K74807	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74807	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74807	09/26/2011	02/18/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109502	09/26/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BFRK BIGFORK ARP	ITASCA, MN	9/26/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95803.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95803.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
LAUCHOH	ITASCA, MN	10/6/2011

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95144.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95144.pdf

Bigfork

Monument



Mark

Antenna North



Antenna East

Antenna Monument



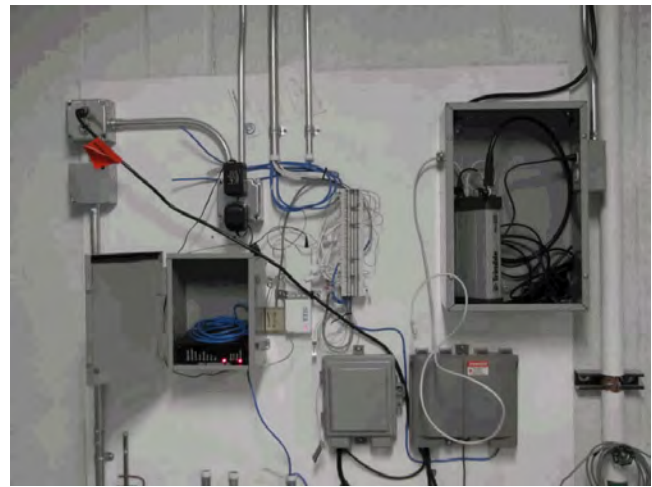
Antenna South

Bigfork

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Birchdale

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
107	Birchdale	Brcd	BIRCHDALE	MNBD

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Birchdale	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 26 near Birchdale, MN.

3.4 miles west of Manitou on Trunk Highway 11. Mark is near Birchdale County, 1.6 miles east of Birchdale on Trunk Highway 11, 2938 feet west from the the Junction of Trunk Highway 11 and county road 86. Mark should be at the side of Trunk Highway 11.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
483739.67682	940402.15782	319.757	349.26

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42256	03/02/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5310K42256	03/05/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5310K42256	01/03/2018	03/05/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42256	07/23/2013	01/03/2018
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.70	4831K57599	02/18/2013	07/23/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.17	4831K57599	01/20/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235494	12/17/2008	01/20/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441027822	01/20/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12323607	12/17/2008	01/20/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS BRCD BIRCHDALE ARP	KOOCHICHING, MN	12/17/2008

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85685.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85685.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3604 D	KOOCHICHING, MN	4/29/2009

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86222.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86222.pdf

Birchdale

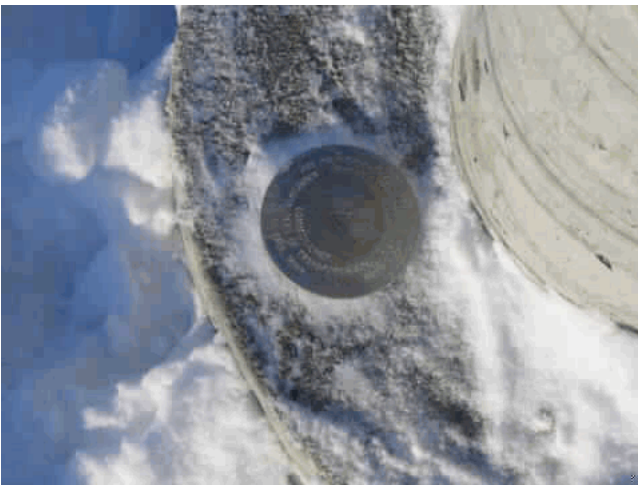
Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Birchdale

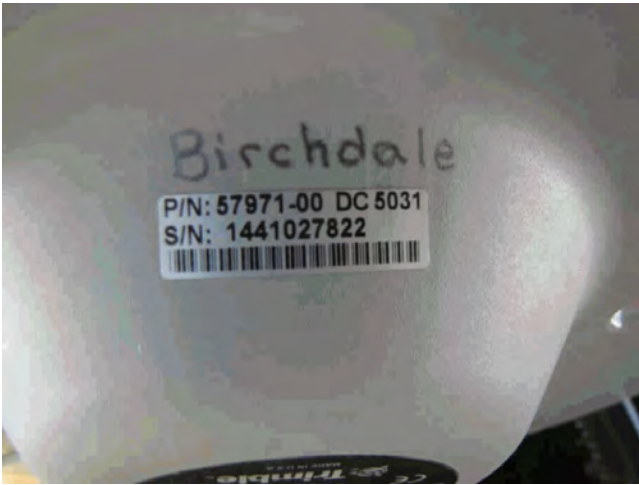
Antenna West



Receiver Location



Antenna Serial Number



Others

Receiver Serial Number



Blue Earth

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
63	Blue Earth	BluE	BLUE EARTH	MNBE

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Blue Earth	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 9 near Blue Earth, MN.

Road and Weather Information System(RWIS) site number 9 on Interstate 90 near Blue Earth MN

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433946.33792	940719.53131	303.396	331.75

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5829R40032	05/21/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5705R51314	03/02/2019	05/20/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5705R51314	03/05/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5705R51314	06/08/2017	03/05/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5051K72686	02/18/2013	06/08/2017
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5051K72686	06/07/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235497	08/24/2007	05/24/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4426235497	05/20/2007	08/24/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4531254542	04/12/2006	05/20/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1441030895	06/06/2017	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107321	06/07/2011	06/06/2017
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60088919	05/01/2006	06/07/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BLUE BLUE EARTH ARP	FARIBAULT, MN	5/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62753.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62753.pdf

Blue Earth

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2280 AH 1	FARIBAULT, MN	5/18/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62638.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62638.pdf

Blue Earth

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Blue Earth

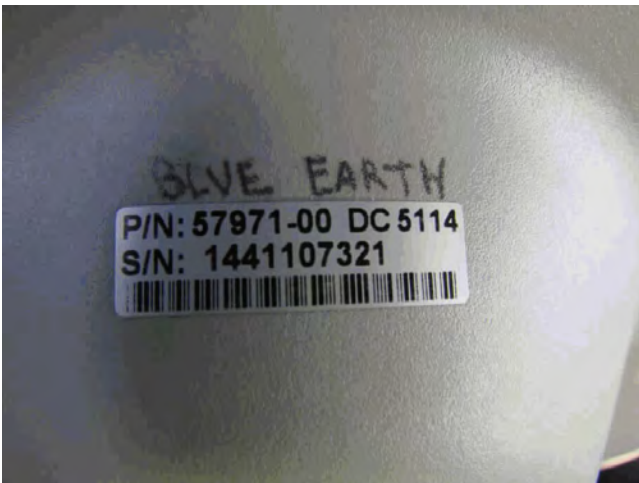
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Brimson

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
128	Brimson	Brms	BRIMSON	MNBM

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Brimson	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Brimson Public Works Garage

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
472043.31717	915044.30360	473.554	502.13

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5045K71496	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5045K71496	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5045K71496	05/10/2012	02/18/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.43	4626K01820	02/06/2012	05/10/12
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5045K71496	06/14/2011	02/06/2012

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441038021	06/14/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS BRMS BRIMSON ARP	ST. LOUIS, MN	6/14/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95783.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95783.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
D 174	ST. LOUIS, MN	4/1/1935

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	BENCH MARK DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_27989.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_27989.pdf

Brimson

Monument



Mark

Antenna Monument



Antenna North

Antenna East



Antenna South



Brimson

Antenna West



Receiver Location

Antenna Serial Number

Antenna Building

Receiver Serial Number

Antenna Roof



Brookings

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
126	Brookings	Brkg	Brookings	SDBR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Brookings	SD	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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South Dakota State University in Brookings, SD.

Antenna is mounted on the Northwest corner of the mechanical room on the roof of Cruthers Engineering Hall on the Campus of South Dakota State University.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
441853.47581	964710.60129	492.972	518.35

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5112K74600	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5112K74600	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5112K74600	08/31/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.2.0	4504244218	02/23/2011	08/31/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	LMR 400	1441100032	08/31/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	11909927	02/23/2011	08/31/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BRKG BROOKINGS ARP	BROOKINGS, SD	2/23/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95799.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95799.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:

Metric:

Brookings

Monument



Antenna North



Mark

Antenna East



Antenna Monument



Antenna South



Brookings

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Brookston

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
52	Brookston	Brks	BROOKSTON	MNBK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Brookston	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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St. Louis County Solid Waste Facility.

Located on the roof of the St. Louis County Solid Waste Facility.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
465128.98230	923518.73807	374.081	402.86

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6006R40043	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5303K41724	07/30/2013	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4811K54286	02/18/2013	07/30/13
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.43	4811K54286	05/10/2012	02/18/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.43	4624K01625	11/22/2011	05/10/12
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4811K54286	12/28/2010	11/22/2011
Trimble Navigation Ltd	Net R5	GPS	NAV 4.03	4811K54286	09/21/2010	12/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4811K54286	06/04/2009	09/21/2010
Trimble Navigation Ltd	Net R5	GPS	NAV 3.64	4848K59447	03/26/2009	06/04/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	3.64	4811K54286	08/26/2008	03/26/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	3.60	4811K54286	04/17/2008	08/26/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4531254542	08/30/2007	04/17/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4416233493	09/01/2005	08/30/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30763487	04/17/2008	
30 meters of LMR 400 cable, assembled N Male to TNC Male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12668753	09/01/2005	04/17/2008
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BRKS BROOKSTON ARP	ST. LOUIS, MN	9/1/2005

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62754.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62754.pdf

Brookston

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6907 G 1	ST. LOUIS, MN	7/3/2006

<u>Monument Type</u>	<u>Disk Type</u>
SEE DESCRIPTIVE TEXT	SURVEY DISK

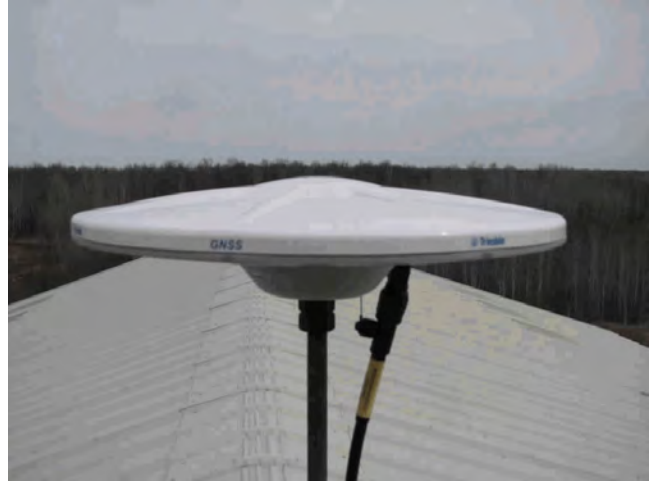
Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62896.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62896.pdf

Brookston

Monument



Antenna North



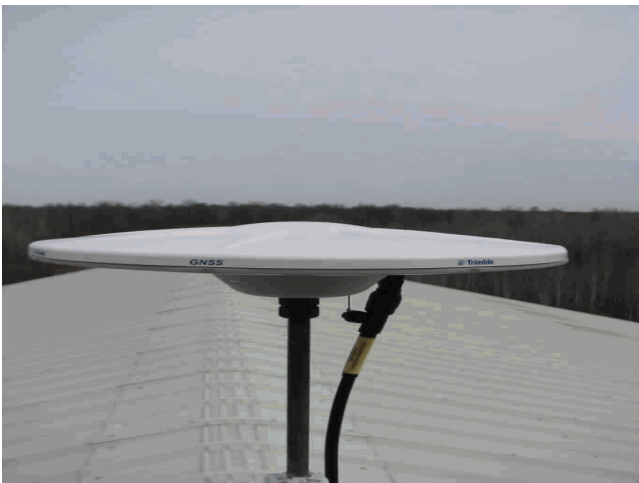
Mark



Antenna East



Antenna Monument



Antenna South



Brookston

Antenna West



Receiver Location



Antenna Serial Number



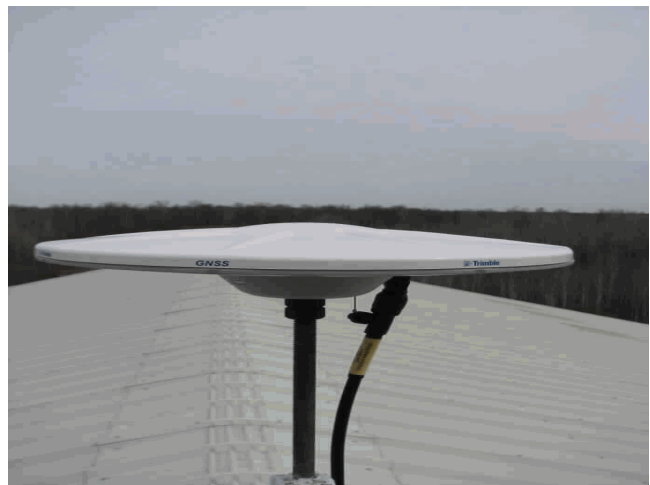
Antenna Building



Receiver Serial Number



Antenna Roof



Brownton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
29	Brownton	Brwn	BROWNTON	MNBR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Brownton	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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McLeod County Shop in Brownton, MN

Attached to the east side of a McLeod County Maintenance building on 1st Avenue in Brownton. 0.3 miles north and 0.8 miles east of the junction of Trunk Highway 212 and Trunk Highway 15.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
444349.46474	942122.33698	291.717	319.28

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5447R50021	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5447R50021	05/05/2015	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4816K55327	05/20/2013	05/05/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4816K55327	12/28/2010	05/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4816K55327	10/28/2008	12/28/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244254	07/28/2008	10/28/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244254	05/29/2008	07/28/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220315194	04/01/2004	05/29/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973309	10/28/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12518049	04/01/2004	10/28/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS BRWN BROWNTON ARP	MCLEOD, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52107.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52107.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
BRWN	MCLEOD, MN	7/19/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50793.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50793.pdf

Brownton

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Brownton

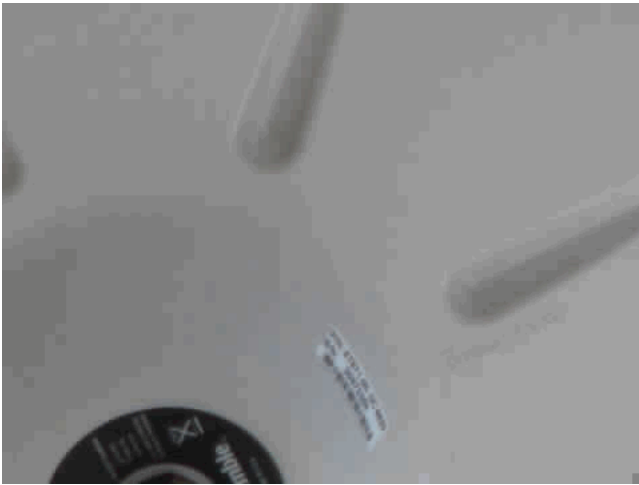
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Caledonia

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
68	Caledonia	Cldn	CALEDONIA	MNCA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Caledonia	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Houston County Courthouse in Caledonia, MN.

On the west side of the Houston County Courthouse building in Caledonia, Minnesota.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433758.61864	912946.47358	340.675	371.33

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5112K74598	03/02/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5112K74598	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5112K74598	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5112K74598	02/18/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5112K74598	08/16/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	Nav 1.20	4526253103	04/28/2009	08/16/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260753	08/26/2007	08/16/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260753	05/10/2006	08/26/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107122	08/16/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60004313	05/10/2006	08/16/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS CLDN CALEDONIA ARP	HOUSTON, MN	6/1/2006

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62756.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62756.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2803 F 10	HOUSTON, MN	8/1/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63094.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63094.pdf

Caledonia

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Caledonia

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Cambridge

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
35	Cambridge	Camb	CAMBRIDGE	MNCM

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Cambridge	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Isanti County Highway Department in Cambridge, MN

Attached to the roof of the Isanti County Highway Department Maintenance building. 0.5 miles north on Emerson Street from Trunk Highway 95 in Cambridge.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
453428.60449	931258.07519	273.641	301.99

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6107R40077	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5303K57588	07/15/2013	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4626K01822	12/28/2010	07/13/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4626K01822	08/26/2008	12/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4626K01822	06/30/2008	08/26/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4626K01822	12/20/2007	06/30/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0220310327	04/01/2004	12/20/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	30607785	12/20/2007	
Trimble Navigation Ltd	Zephyr Geodetic 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	12518221	04/01/2004	12/20/2007

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS CAMB CAMBRIDGE ARP	ISANTI, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52109.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52109.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
ICDH	ISANTI, MN	9/27/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50945.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50945.pdf

Cambridge

Monument



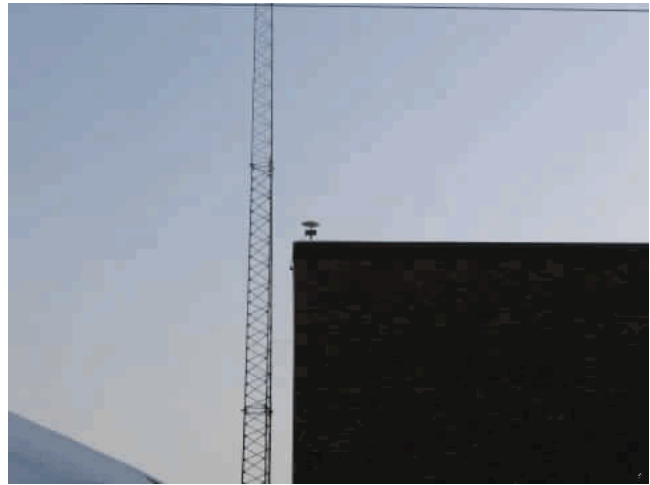
Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Cambridge

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Center City - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
3	Center City	CCty	CENTER CITY	MNCC

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Center City	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Chisago County Government Building in Center City, MN

Attached on the south side of the Chisago County Government building in Center City. 0.9 miles north on County Road 9 and two blocks on Main Street from Trunk Highway 8.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
452356.04164	924920.83558	269.989	297.51

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5303K41703	05/15/2014	05/25/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5303K41703	09/03/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4711K05199	05/22/2013	09/03/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4711K05199	12/28/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4711K05199	08/26/2008	12/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4711K05199	05/15/2007	08/26/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4625K01730	10/10/2006	05/15/2007
Trimble Navigation Ltd	5700	GPS	NAV 1.15	0440102825	04/01/2004	10/10/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	30255825	10/10/2006	
Trimble Navigation Ltd	Zephyr Geodetic 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	12626160	04/01/2004	10/10/2006

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS CCTY CENTER CITY ARP	CHISAGO, MN	4/1/2004

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52110.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52110.pdf

Center City - Decommissioned

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
CCTY	CHISAGO, MN	7/8/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50735.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50735.pdf

Center City - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

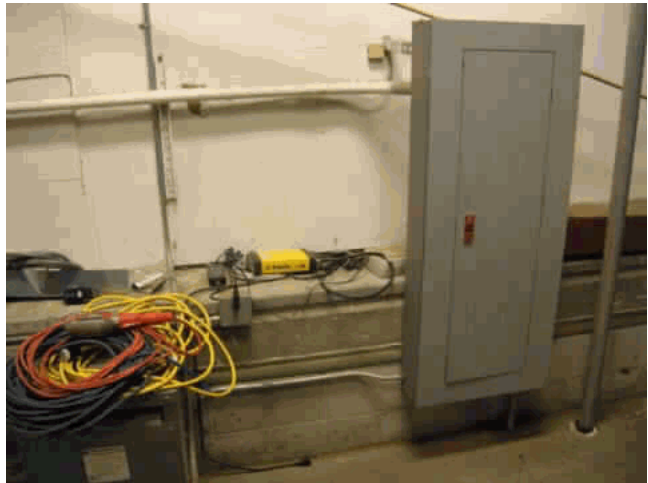


Center City - Decommissioned

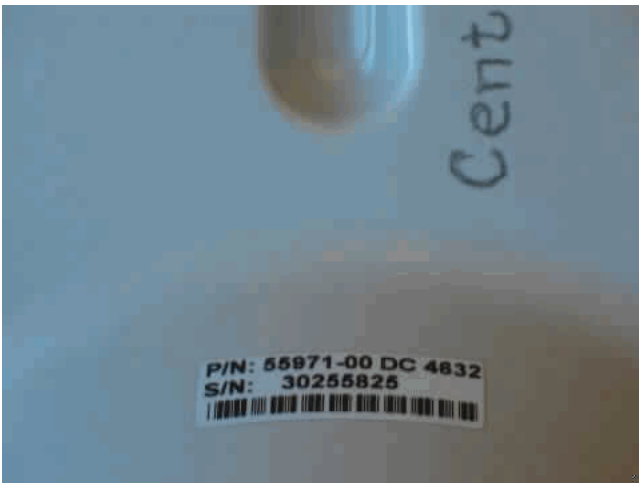
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Center City - Decommissioned

Others

Center City 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
166	Center City 2	Cct2		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Center City	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Chisago County

0.9 MILES NORTH-NORTHEAST OF CENTER CITY, 0.2 MILES NORTH ALONG ANDREWS AVENUE FROM THE JUNCTION OF ANDREWS AVENUE AND TRUNK HIGHWAY 8 IN CENTER CITY, THEN CONTINUE 0.3 MILES NORTH ON SUMMIT AVENUE, THEN 0.15 MILES EAST ON LOUISE AVENUE, THEN 0.5 MILES NORTH ON OASIS ROAD, THEN 0.25 MILES EAST ON PARK TRAIL, THEN 0.1 MILES SOUTH ON TRAIL.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5826R40060	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS CCT2 CENTER CITY 2 ARP	CHISAGO, MN	7/25/2018

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110585.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110585.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:

Metric:

Center City 2

Clara City

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
17	Clara City	ClaC	CLARA CITY	MNCL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Clara City	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) Site number 21 on T.H. 7 near Clara City, MN

Located 2.5 miles west of Clara City in Chippewa County on the north side of Trunk Highway 7

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
445657.32120	952435.12078	295.707	322.24

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5940R40015	03/11/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5235K52021	03/02/2019	03/11/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5235K52021	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5235K52021	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5235K52021	12/04/2012	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.60	5235K52021	12/04/2012	02/18/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4848K59467	12/28/2010	12/04/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4848K59467	02/24/2009	12/28/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237727	08/26/2007	02/24/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4437237727	05/11/2006	08/26/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4437237727	12/14/2005	05/11/2006
Trimble Navigation Ltd	5700	GPS	NAV 1.3	0220310328	12/01/2005	12/14/2005

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31051089	02/24/2009	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12415678	10/06/2004	02/24/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS CLAC CLARA CITY ARP	CHIPPEWA, MN	4/1/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52133.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52133.pdf

Clara City

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
CLARA CITY	CHIPPEWA, MN	4/1/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50738.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50738.pdf

Clara City

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

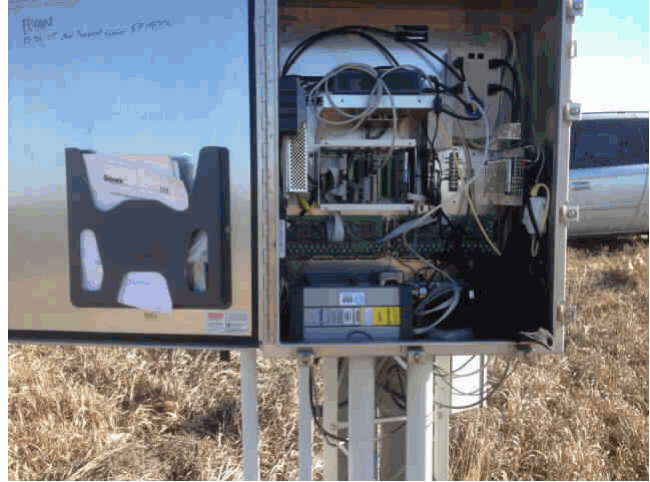


Clara City

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Clayton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
153	Clayton	Clay		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Clayton	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
451944.43077	921103.94320	343.313	373.29

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN CLAY CLAYTON ARP	WINNEBAGO, WI	4/1/2015

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104485.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104485.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
Metric:

Clayton

Cologne - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
11	Cologne	Colo	COLOGNE	MNCO

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Cologne	MN	USA	County

Contact Person Contact Phone Contact Email

Carver County Government. Center in Cologne, MN.

Located 1.5 miles west of Cologne on the north side of Trunk Highway 212, attached to the south side fo the Carver County Government Center.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
444611.44683	934847.79518	279.611	306.82

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Leica	RS500	GPS	NAV 1.40	0080340	09/01/2003	12/12/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Leica	A504 Choke Ring		1074	09/01/2003	12/12/2008

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS COLO COLOGNE ARP	CARVER, MN	4/1/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52112.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52112.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
CLGN	CARVER, MN	12/4/2003

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50946.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50946.pdf

Cologne - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

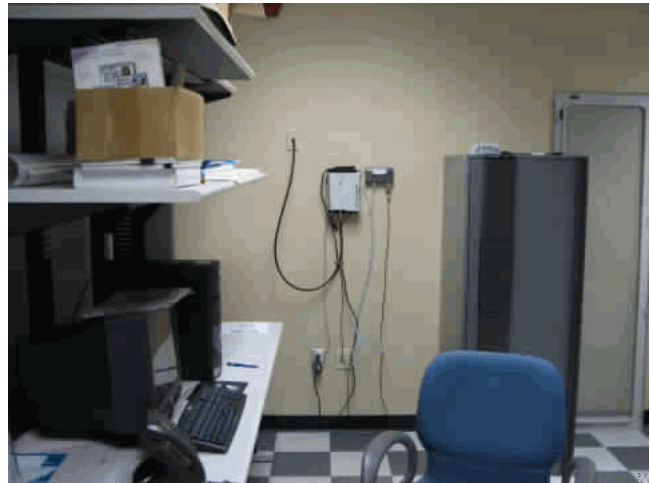


Cologne - Decommissioned

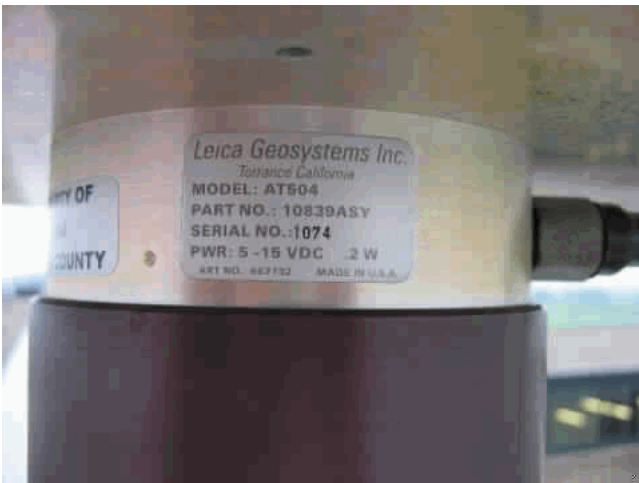
Antenna West



Receiver Location



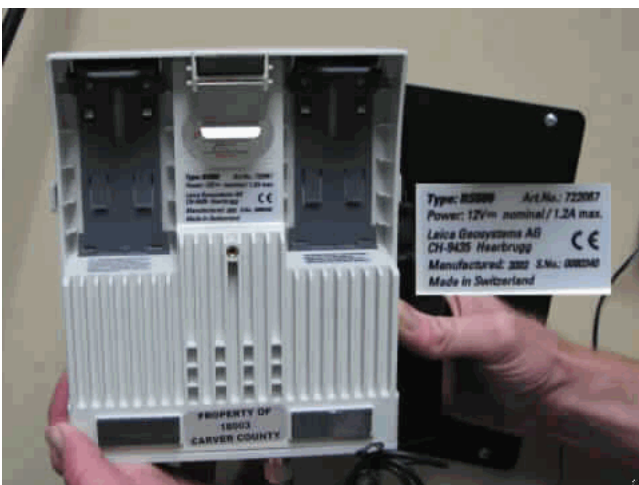
Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Cologne 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
149	Cologne 2	Col2		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Cologne	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Carver County Government. Center in Cologne, MN.

1.5 MILES WEST OF COLOGNE, 1.60 MILES WEST ALONG TRUNK HIGHWAY 212 FROM JUNCTION OF TRUNK HIGHWAY 212 AND TRUNK HIGHWAY 284 IN COLOGNE TO TRUNK HIGHWAY 212 MILEPOINT 137.05, THEN 0.10 MILE NORTH ON CARVER COUNTY PUBLIC WORKS HEADQUARTERS ROAD, THEN 0.05 MILE WEST ON FIRST STREET CENTER ENTRANCE AND PARKING ROAD, THEN 0.05 MILE NORTH TO

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
444611.44716	934847.79490	279.570	306.72

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5433R49309	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5307K51402	08/07/2014	01/01/2022

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	5000112661	08/07/2014	

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS COL2 COLOGNE 2 ARP	CARVER, MN	8/7/2014

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_102872.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_102872.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
CLGN	CARVER, MN	12/4/2003

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50946.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50946.pdf

Cologne 2

Cook - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
86	Cook	Cook	Cook	MNCK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Cook	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Building Mount attached on the East side of St.Louis County Truck Station.

Located at a St. Louis County truck station. From the Jct of TH 53 and CR 115 in St. Louis County, go 1.4 miles east along CR 115 (Ashawa Rd) to truck station.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
475140.67513	924125.55740	379.863	410.63

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5112K74593	10/03/2014	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4943K64129	05/20/2013	10/03/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4943K64129	12/28/2010	05/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.03	4943K64129	11/24/2009	12/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01626	08/25/2008	11/24/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4624K01626	03/27/2008	08/25/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30436204	03/27/2008	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS COOK COOK ARP	ST. LOUIS, MN	3/27/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83088.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83088.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
B 354 C	ST. LOUIS, MN	7/2/2008

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81186.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81186.pdf

Cook - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

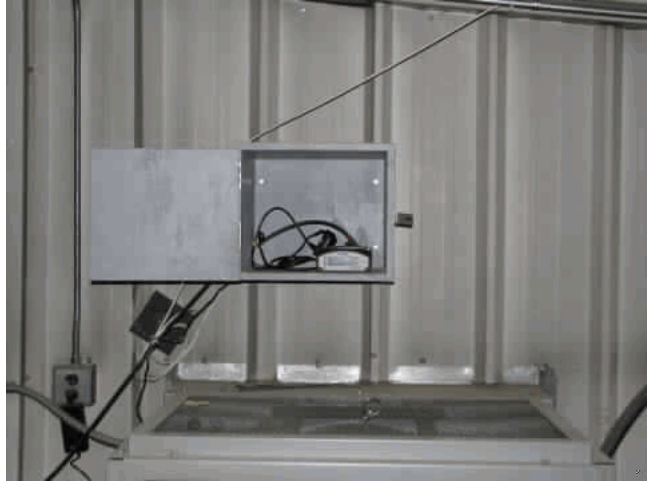


Cook - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Cook 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
174	Cook 2	Cok2		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Cook	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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St. Louis County Truck Station.

Located at a St. Louis County truck station.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5950R40043	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS COK2 COOK 2 ARP	ST. LOUIS, MN	10/22/2020

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110570.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110570.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Cook 2

Cooperstown - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
157	Cooperstown	Coop		
<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>	
Cooperstown	ND	USA	Private	
<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>		

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>			
Receivers						
<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Antennas						
<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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Data Sheets

English:
Metric:

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:
Metric:

Cooperstown - Decommissioned

Cotton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
53	Cotton	Cotn	COTTON	MNCT

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Cotton	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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St. Louis County Truck Station in Cotton, MN.

Attached to the north side of the St. Louis County Public Works building in Cotton. 0.3 miles west of Trunk Highway 53 on County Road 52 (Arkola Road).

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
471001.36900	922910.02396	386.648	416.25

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5951R40045	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42311	07/30/2013	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4811K54295	05/22/2013	07/30/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4811K54295	12/28/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4811K54295	08/26/2008	12/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4811K54295	04/17/2008	08/26/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4437237715	09/01/2005	04/17/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30767807	04/17/2008	
30 meters of LMR 400 cable, assembled N Male to TNC Male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12697010	09/01/2005	04/17/2008
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS COTN COTTON ARP	ST. LOUIS, MN	9/1/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62757.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62757.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
F 165 A	ST. LOUIS, MN	3/15/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_54020.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_54020.pdf

Cotton

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

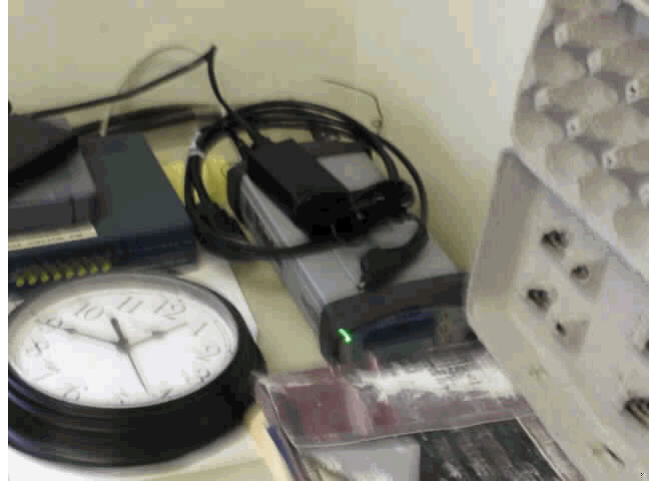


Cotton

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Crookston

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
90	Crookston	Crks	CROOKSTON	MNCR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Crookston	MN	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Antenna is on the east side of a masonry building at the Ziegler Cat facility.

The CORS is located at the Zeigler Cat Facility in Polk County, Crookston, Minnesota. From the Junction of Trunk Highway 2 and County Road 9 go 1.8 miles on County Road 9 to the Zeigler Car Facility on the north side of County Road 9.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
474554.77626	963740.56077	251.669	278.58

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5303K41703	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.93	5303K41703	01/30/2015	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4943K64134	05/20/2013	01/30/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4943K64134	12/28/2010	05/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4943K64134	04/07/2010	12/28/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253126	04/21/2008	04/07/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	1312118062	11/25/2013	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1440936042	04/07/2010	11/25/2013
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12518221	04/21/2008	04/07/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS CRKS CROOKSTON ARP	POLK, MN	4/21/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83089.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83089.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6012 AS 1	POLK, MN	7/15/2008

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - LARGE	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81497.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81497.pdf

Crookston

Monument



Antenna North



Mark



Antenna East



Antenna Monument

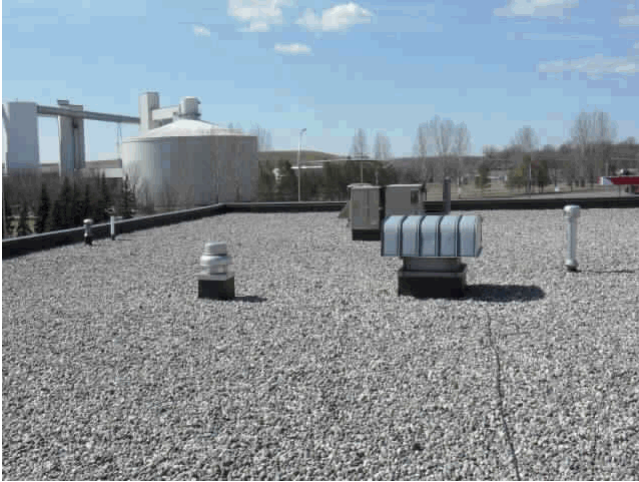


Antenna South

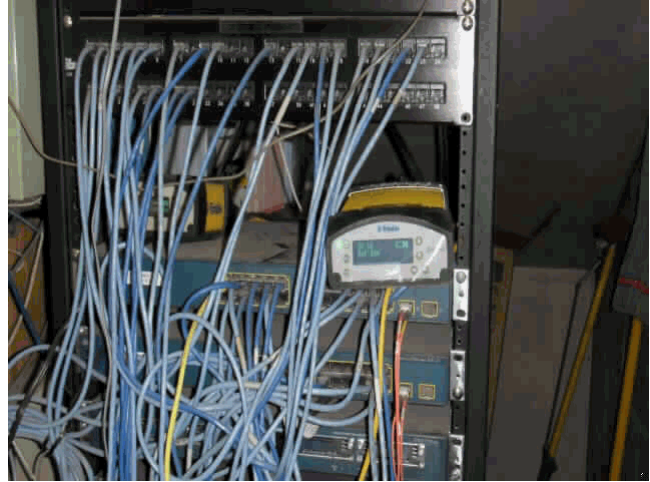


Crookston

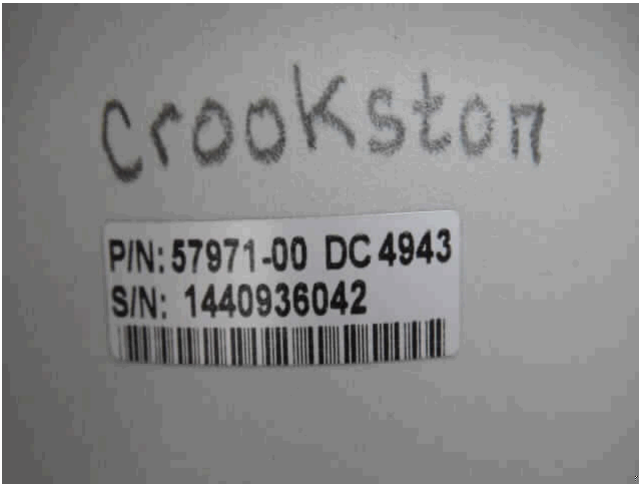
Antenna West



Receiver Location



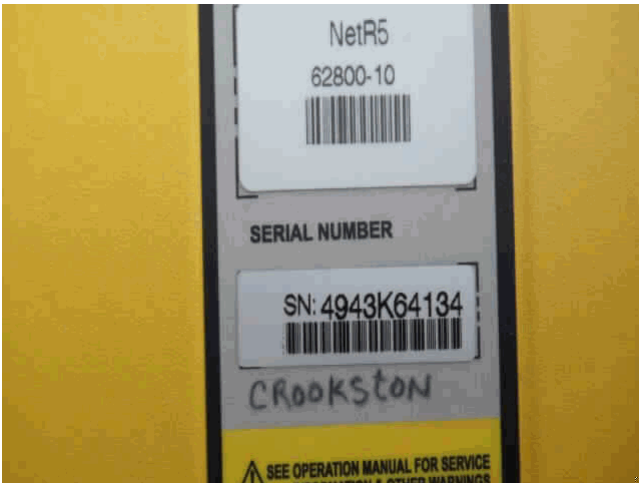
Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Crow Wing

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
144	Crow Wing	CrWg		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Brainerd	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Brainerd Welcome Center, A.K.A. Paul Bunyan Rest Area.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
461535.19844	941911.96665	337.235	364.21

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS	NAV 5.43	6006R44029	10/06/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5219K84983	03/15/2017	10/06/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5219K84983	05/15/2014	03/15/2017
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5219K84983	10/22/2012	05/15/2014

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	60403G0012	12/14/2021	
LMR400 cable, assembled TNC-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441053311	10/22/2012	12/14/2021
LMR400 cable, assembled TNC-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS CRWG CROW WING ARP	CROW WING, MN	4/1/2012

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_98333.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_98333.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1809 W	CROW WING, MN	4/1/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_98323.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_98323.pdf

Crow Wing

Dairyland

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
154	Dairyland	Dryl		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Dairyland	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
461256.10881	921056.65545	320.428	346.82

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN DRYL DAIRYLAND ARP	DOUGLAS, WI	4/1/2015

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104487.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104487.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
Metric:

Dairyland

Decorah

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
102	Decorah	Dcor	Decorah	IADE

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Decorah	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
431615.80577	914953.48359	317.589	347.67

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN DCOR DECORAH ARP	WINNESHIEK, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86017.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86017.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
Metric:

Decorah

Detroit Lakes - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
18	Detroit Lakes	DetL	DETROIT LAKES	MNDL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Detroit Lakes	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation District 4 Office in Detroit Lakes, MN

Located on the south side of trunk Highway 10 in Becker County. At Minnesota Department of Transportation District 4 headquarters. 2 block west of Trunk Highway 59 in Detroit Lakes.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
464922.69829	955135.35358	393.575	420.18

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69047	12/29/2010	09/26/2011
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69047	09/22/2010	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4828K57167	09/10/2008	09/22/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244238	07/28/2008	09/10/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244238	06/30/2008	07/28/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0220310329	04/01/2004	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	30973044	09/10/2008	09/26/2011
Trimble Navigation Ltd	Zephyr Geodetic		12532426	04/01/2004	09/09/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS DETL DETROIT LAKES ARP	BECKER, MN	4/1/2004

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52113.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52113.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
TROI	BECKER, MN	1/2/2004

<u>Monument Type</u>	<u>Disk Type</u>
UNKNOWN	SURVEY DISK

Data Sheets

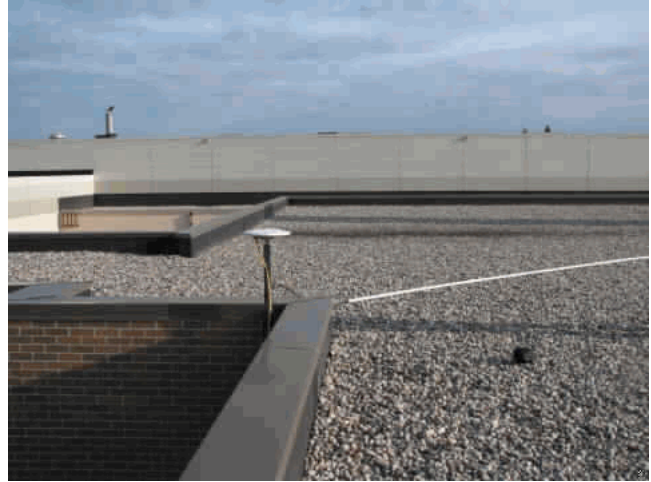
- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50675.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50675.pdf

Detroit Lakes - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Detroit Lakes - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Detroit Lakes 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
131	Detroit Lakes 2	DtL2	DETROIT LAKES 2	MNDT

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Detroit Lakes	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation District 4 Office in Detroit Lakes, MN

Located on the south side of trunk Highway 10 in Becker County. At Minnesota Department of Transportation District 4 headquarters. 2 block west of Trunk Highway 59 in Detroit Lakes.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
464922.69816	955135.35288	393.703	420.26

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69047	03/02/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5030K69047	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5030K69047	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69047	05/20/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69047	09/26/2011	05/20/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	30973044	09/26/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS DTL2 DETROIT LAKE 2 ARP	BECKER, MN	9/26/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95784.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95784.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
TROI	BECKER, MN	1/2/2004

<u>Monument Type</u>	<u>Disk Type</u>
UNKNOWN	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50675.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50675.pdf

Detroit Lakes 2

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Detroit Lakes 2

Antenna West



Antenna Building



Antenna Serial Number



Antenna Roof



Receiver Location



Dodge Center

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
67	Dodge Center	DdgC	DODGE CENTER	MNDC

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Dodge Center	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Dodge Center, MN.

Located on the north side of Trunk Highway 14 in Dodge County. On the west side of the Minnesota Department of Transportation Truck Station building on County Road 25 in Dodge Center.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440136.19867	925018.47206	376.109	405.50

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5101K72963	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5101K72963	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.42	5101K72963	03/28/2012	02/18/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5101K72963	01/11/2012	03/28/2012
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4848K59460	12/28/2010	01/11/2012
Trimble Navigation Ltd	Net R5	GPS	NAV 3.64	4848K59460	04/01/2009	12/28/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241571	01/22/2009	04/01/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260776	12/03/2008	01/22/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260762	06/01/2006	12/03/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31180175	04/01/2009	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60084979	06/01/2006	04/01/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS DDGC DODGE CENTER ARP	DODGE, MN	3/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62758.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62758.pdf

Dodge Center

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2002 M 1	DODGE, MN	8/29/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - MEDIUM	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63053.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63053.pdf

Dodge Center

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Dodge Center

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Donaldson

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
118	Donaldson	Dnld	DONALDSON	MNDN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Donaldson	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 24 near Donaldson, MN.

0.8 mile west of Donaldson along trunk highway 11.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
483420.48581	965452.72265	225.106	252.30

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV5.37	5051K72751	03/02/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5051K72751	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5051K72751	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5051K72751	02/18/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5051K72751	06/13/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237724	08/11/2009	06/13/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441112307	06/13/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	12354218	08/11/2009	06/13/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS DNLD DONALDSON ARP	KITTSOON, MN	8/11/2009

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_88224.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_88224.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3501 L	KITTSOON, MN	4/1/2009

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87328.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87328.pdf

Donaldson

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Donaldson

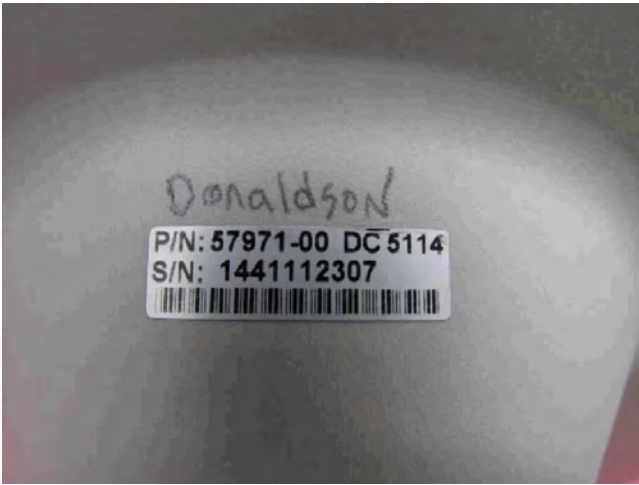
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Dovray

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
59	Dovray	Dvry	DOVRAY	MNDV

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Dovray	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 38 west of Dovray, MN.

Located on the north side of Trunk Highway 30 in Murray County, 2.5 miles west of Dovray.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440325.71916	953549.67852	451.164	477.86

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40025	06/11/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5114K74893	03/02/2019	06/11/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5114K74893	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5114K74893	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74893	02/18/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.42	5114K74893	03/29/2012	02/18/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74893	05/24/2011	03/29/2012
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241575	08/25/2007	05/24/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241575	04/27/2006	08/25/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1551016819	06/11/2019	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109510	05/24/2011	06/11/2019
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60115024	03/01/2006	05/24/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS DVRY DOVRAY ARP	MURRAY, MN	3/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62760.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62760.pdf

Dovray

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
5103 Q	MURRAY, MN	5/17/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62738.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62738.pdf

Dovray

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Dovray

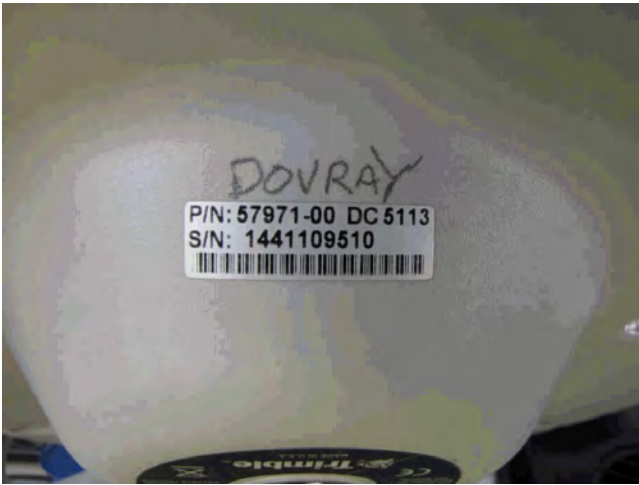
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Duluth

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
45	Duluth	Dlth	DULUTH	MNDU

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Duluth	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation District 1 Office in Duluth MN.

Located in St. Louis County on the roof on the Minnesota Department of Transportation Duluth District headquarters building on Trunk Highway 194 (Central Entrance).

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
464750.92225	920628.04499	326.701	354.86

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5051K72723	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5051K72723	01/08/2013	01/01/2022
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.70	4831K57606	02/06/2012	01/08/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4831K57606	12/29/2010	02/06/2012
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57606	09/18/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4811K54387	08/26/2008	09/18/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4811K54387	05/15/2008	08/26/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0220292724	06/22/2005	05/15/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30882547	05/15/2008	
Trimble Navigation Ltd	Zephyr Geodetic		12693922	06/22/2005	05/15/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS DLTH DULUTH ARP	ST. LOUIS, MN	6/22/2005

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62759.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62759.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6933 B RESET	ST. LOUIS, MN	1/1/1991

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	VERTICAL CONTROL DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50682.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50682.pdf

Duluth

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Duluth

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Eagan

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
109	Eagan	Egan	EAGAN	MNEG

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Eagan	MN	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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MVTA Eagan bus garage

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
444935.59245	931202.85979	222.751	250.01

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	6050R40075	12/14/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5237K52372	05/05/2015	12/14/2021
Trimble Navigation Ltd	Net R5	GPS+GLO		4831K57567	03/03/2010	05/05/2015

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	31051273	03/03/2010	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS EGAN EAGAN ARP	DAKOTA, MN	2/1/2009

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_89366.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_89366.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1901 N	DAKOTA, MN	3/10/2010

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_89579.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_89579.pdf

Eagan

Elbow Lake - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
47	Elbow Lake	ElbL	ELBOW LAKE	MNEL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Elbow Lake	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Grant County Highway Department in Elbow Lake, MN.

Attached to the east side of the Grant County Highway Department building. 224 3rd Street Southeast, Elbow Lake.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
455923.28284	955827.42329	344.965	371.4

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4831K57597	12/29/2010	11/21/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4831K57597	09/09/2008	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244227	06/30/2008	09/09/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244227	07/12/2005	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973332	09/09/2008	11/21/2011
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12668873	07/12/2005	09/09/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS ELBL ELBOW LAKE ARP	GRANT, MN	3/1/2005

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62761.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62761.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2609 AC	GRANT, MN	8/23/2005

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52775.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52775.pdf

Elbow Lake - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Elbow Lake - Decommissioned

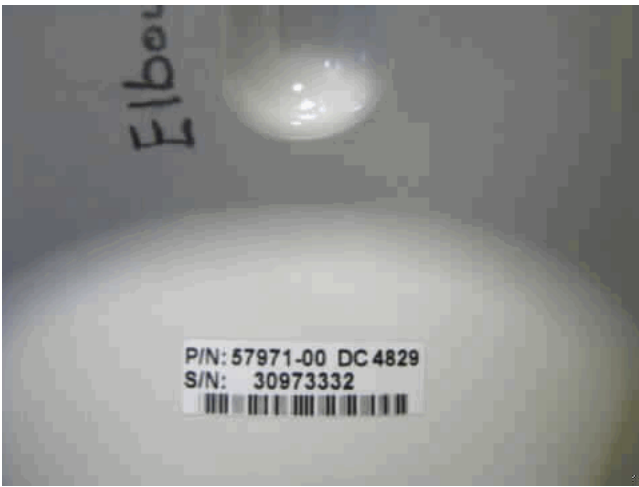
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Elbow Lake 2 - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
132	Elbow Lake 2	Elb2	ELBOW LAKE 2	MNEB

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Elbow Lake	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Grant County Highway Department in Elbow Lake, MN.

Attached to the east side of the Grant County Highway Department building. 224 3rd Street Southeast, Elbow Lake.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
455923.28279	955827.42252	345.068	371.46

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5503R50038	05/22/2015	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4831K57597	05/20/2013	05/22/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4831K57597	11/21/2011	05/20/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973332	11/21/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS ELB2 ELBOW LAKE 2 ARP	GRANT, MN	11/21/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95788.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95788.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2609 AC	GRANT, MN	8/23/2005

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52775.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52775.pdf

Elbow Lake 2 - Decommissioned

Elbow Lake 3

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
168	Elbow Lake 3	Elb3		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Elbow Lake	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Grant County Highway Department in Elbow Lake, MN.

???. 224 3rd Street Southeast, Elbow Lake.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5920R40031	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ELB3 ELBOW LAKE 3 ARP	GRANT, MN	10/8/2018

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110573.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110573.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:

Metric:

Elbow Lake 3

Elkton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
85	Elkton	Elkt	ELKTON	MNEK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Elkton	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation/Mower County communication tower facility near Elkton, MN.
 LOCATED ON SIDEWALL OF RADIO EQUIPMENT HUT AT BASE OF NEARBY RADIO TOWER (FCC REGISTRATION NUMBER 1249582) AT 210TH STREET AND 680TH AVENUE IN MOWER COUNTY, MINNESOTA.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433929.99156	924119.43339	403.791	433.42

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.45	5950R40046	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5101K72962	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.42	5101K72962	03/06/2012	02/18/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69034	12/29/2010	03/06/2012
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69034	10/20/2010	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20		02/22/2008	10/20/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1441027931	10/20/2010	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12606580	02/25/2008	10/20/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ELKT ELKTON ARP	MOWER, MN	5/1/2007

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65840.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65840.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
5080 X 3	MOWER, MN	5/15/2007

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65176.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65176.pdf

Elkton

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Elkton

Antenna West



Receiver Location



Antenna Serial Number



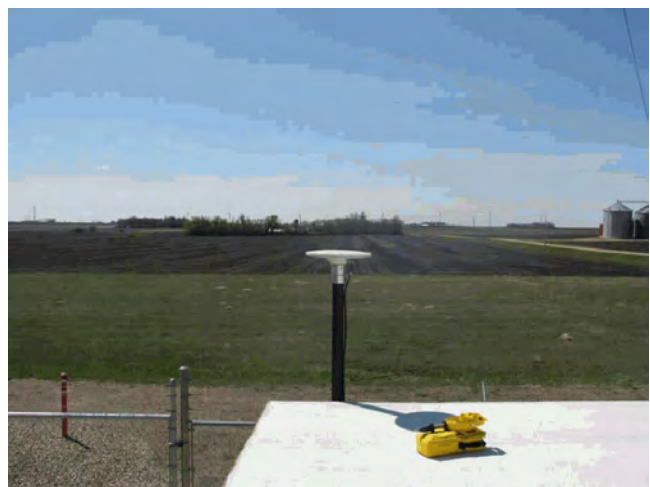
Antenna Building



Receiver Serial Number



Antenna Roof



Ely

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
87	Ely	Ely	Ely	MNEX

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Ely	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Antenna is attached to the North side of a St.Louis County Maintenance facility in St.Louis County.

CORS is located east of Ely, MN along TH169. From the Jct of TH1 and TH 169, go east 0.3 miles along TH169 to St.Louis County Maintenance facility on the south side

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
475408.14089	914956.71678	426.114	456.79

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5152K81026	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5152K81026	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5152K81026	08/14/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4625K01730	12/29/2010	08/14/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4625K01730	08/25/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4625K01730	08/20/2008	08/25/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.32	4625K01730	03/04/2008	08/20/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30492551	03/04/2008	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ELY ELY ARP	ST. LOUIS, MN	3/4/2008

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83082.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83082.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6948 C	ST. LOUIS, MN	6/17/2008

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOUNDATION	SURVEY DISK

Data Sheets

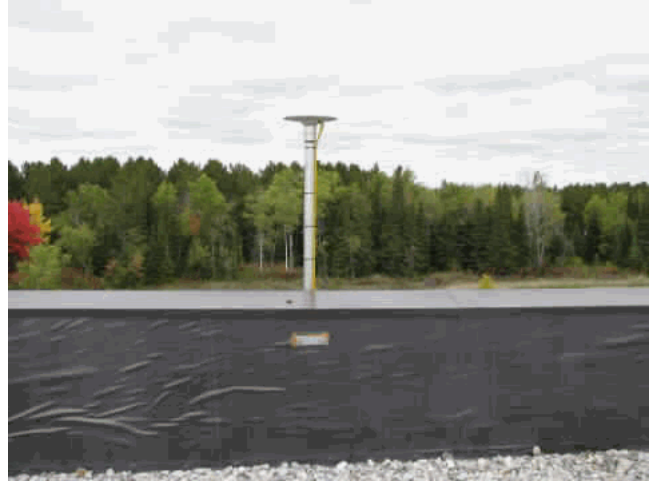
- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81166.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81166.pdf

Ely

Monument



Antenna North



Antenna North



Mark



Antenna East



Antenna Monument



Ely

Antenna South



Receiver Serial Number



Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Ely

Antenna Roof



Embarrass

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
91	Embarrass	Embr	Embarrass	MNBS

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Embarrass	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Antenna is mounted on the east side of a St.Louis County maintenance facility.

The CORS is located in Saint Louis County, in Embarrass, Minnesota on the south side of County Road 21. From the Junction of Trunk Highway 169 and County Road 21 go 11.1 miles east along County Road 21 to the Saint Louis County Maintenance facility.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
473928.50969	921201.91531	411.326	441.69

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5311K42460	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5311K42460	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5311K42460	08/14/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4747K11308	05/22/2013	08/14/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4747K11308	08/08/2012	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4624K01620	12/29/2010	08/08/2012
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01620	08/26/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4624K01620	03/27/2008	08/26/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30518929	03/27/2008	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS EMBR EMBARRASS ARP	ST. LOUIS, MN	3/27/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83086.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83086.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6904 A 17	ST. LOUIS, MN	6/17/2008

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81158.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81158.pdf

Embarrass

Mark



Mark

Antenna North



Antenna East



Antenna South



Antenna Monument



Embarrass

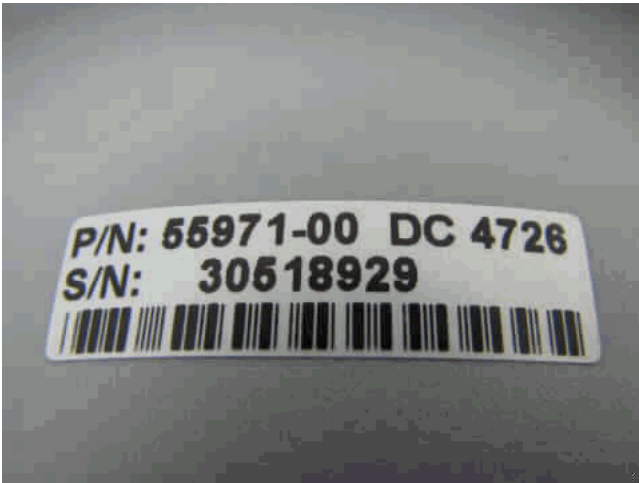
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Emily

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
37	Emily	Emly	EMILY	MNEM

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Emily	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 20 south of Emily, MN.
 Located on the west side of Trunk Highway 6 in Crow Wing County. 2 miles south of Emily.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
464116.99331	935716.19238	357.880	385.92

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5945R40155	04/04/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5443R50012	03/02/2019	04/04/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5443R50012	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5443R50012	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50012	05/04/2015	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4848K59458	02/18/2013	05/04/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.43	4848K59458	07/18/2012	02/18/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4832K57686	12/29/2010	07/18/2012
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4832K57686	10/22/2008	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244255	04/07/2008	10/22/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244238	08/24/2007	04/07/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244238	05/05/2006	08/24/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4504244238	12/01/2005	05/05/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30895560	06/16/2014	
New NGS ACRN number assigned on 06-16-2014					
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30895560	10/22/2008	06/16/2014
New NGS ACRN number assigned on 06-16-2014					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12694040	10/19/2004	10/22/2008
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS EMLY EMILY ARP	CROW WING, MN	10/19/2004

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52187.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52187.pdf

Emily

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
EMIL VRS	CROW WING, MN	10/19/2004

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOUNDATION	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52174.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52174.pdf

Emily

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Emily

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Erskine

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
89	Erskine	Ersk	Erskine	MNER

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Erskine	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Antenna is attached to the north side of a concrete Mn/DOT Maintenance facility

The CORS is located in Pennington County west of Erskine, Minnesota. From the Junction of Trunk Highway 2 and Trunk Highway 59 go 0.2 miles north along Trunk Highway 59. Maintenance facility is on the west side across from Oak Lake Golf Course.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
473947.94988	955904.79996	359.341	386.41

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5443R50022	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50022	05/04/2015	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4943K64127	05/20/2013	05/04/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4943K64127	12/29/2010	05/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4943K64127	04/08/2010	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260773	10/07/2008	04/08/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220315199	03/17/2008	10/07/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1441030946	10/19/2017	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1440936246	04/08/2010	10/19/2017
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12426141	03/17/2008	04/08/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ERSK ERSKINE ARP	POLK, MN	3/17/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83087.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83087.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6008 A 1	POLK, MN	7/15/2008

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81465.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81465.pdf

Erskine

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Erskine

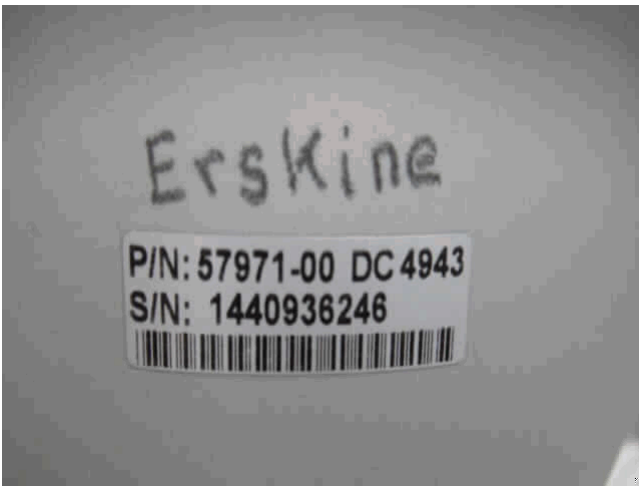
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Eyota

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
66	Eyota	Eyta	EYOTA	MNEY

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Eyota	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 11 near Eyota, MN.

Located on the north side of Interstate 90 in Olmstead County. 1.8 miles east of the junction of Trunk Highway 42 (County Road 7).

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
435720.24702	921219.40004	371.933	401.79

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5945R40103	03/10/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5426R48922	03/02/2019	03/10/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5426R48922	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5426R48922	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5426R48922	11/20/2014	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5023K67989	05/15/2014	11/20/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5023K67989	05/20/2013	05/15/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5023K67989	12/29/2010	05/20/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5023K67989	09/29/2010	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260761	01/23/2008	09/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253123	03/30/2006	01/23/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	612223967	04/16/2020	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1441028161	09/29/2010	04/16/2020
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR 400	60088950	03/30/2006	09/29/2010

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS EYTA EYOTA ARP	OLMSTED, MN	3/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62762.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62762.pdf

Eyota

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
5580 BS 1	OLMSTED, MN	3/30/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63049.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63049.pdf

Eyota

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Eyota

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Fairmont

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
74	Fairmont	Frmt	FAIRMONT	MNFR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Fairmont	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Martin County Highway Department in Fairmont, MN.

Attached on the south side of the Martin County Highway Department garage in Fairmont. 1 mile south of Interstate 90 on trunk Highway 15. 2 blocks east to Marcus Street.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433952.80210	942636.67154	337.039	365.02

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40007	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74927	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74927	06/08/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253124	10/02/2008	06/08/2011
Trimble Navigation Ltd	5700	GPS	NAV 2.23	0220284681	05/01/2006	10/02/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109511	06/08/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60061105	05/01/2006	06/08/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS FRMT FAIRMONT ARP	MARTIN, MN	5/1/2006

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62763.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62763.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
L 389 A	MARTIN, MN	7/6/2006

<u>Monument Type</u>	<u>Disk Type</u>
UNKNOWN	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62898.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62898.pdf

Fairmont

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Fairmont

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Fergus Falls

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
20	Fergus Falls	FrgF	FERGUS FALLS	MNFF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Fergus Falls	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation District 4 office in Fergus Falls, MN.

Located 0.2 miles north and 0.1 miles east of the junction of Trunk Highway 210 and County Road 82 in Ottertail County. On the roof of the Minnesota Department of Transportation Truck Station in Fergus Falls.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
461624.93622	960320.66744	351.693	378.50

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42302	03/02/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5310K42302	03/06/2018	03/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5310K42302	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5310K42302	05/15/2014	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42302	08/27/2013	05/15/2014
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4830K57421	12/29/2010	08/27/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4830K57421	09/09/2008	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244228	06/11/2008	09/09/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220310322	04/01/2004	06/11/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30975345	09/09/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12471519	04/01/2004	09/09/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS FRGF FERGUS FALLS ARP	OTTER TAIL, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52114.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52114.pdf

Fergus Falls

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
FERG	OTTER TAIL, MN	12/19/2003

<u>Monument Type</u>	<u>Disk Type</u>
UNKNOWN	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50688.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50688.pdf

Fergus Falls

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Fergus Falls

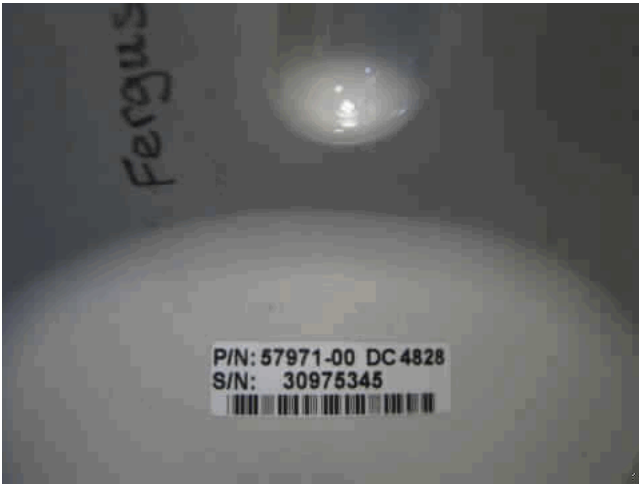
Antenna West



Receiver Location



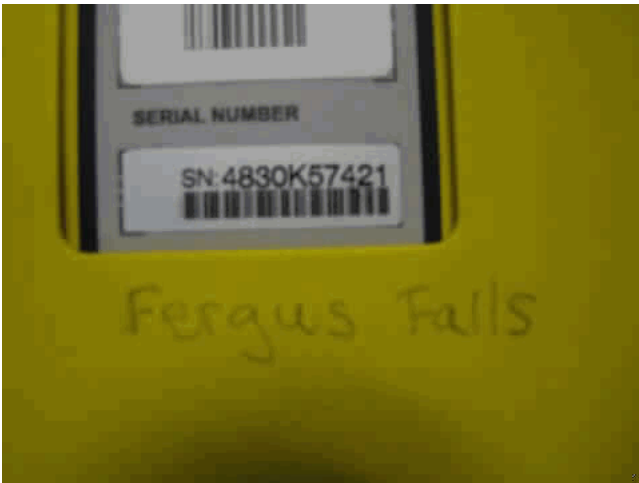
Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Fordville - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
156	Fordville	Frdv		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Fordville	ND	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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Data Sheets

English:
Metric:

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:
Metric:

Fordville - Decommissioned

Foreston

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
172	Foreston	Frst		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Foreston	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

MnDOT solar cabinet, 2.5 miles SW of Foreston, MN.

In the SW quadrant of MN 23 and 195th Ave NE, 2.5 miles SW of Foreston, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS FRST FORESTON ARP	BENTON, MN	1/9/2020

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110586.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110586.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
- Metric:**

Foreston

Garner

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
99	Garner	Grnr	Garner	IAGA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Garner	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN GRNR GARNER ARP	HANCOCK, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86014.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86014.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Garner

Garrison

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
42	Garrison	Grsn	GARRISON	MNGA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Garrison	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Garrison, MN.

Located on the west side of Trunk Highway 18 in Crow Wing County, on the north side of the Minnesota Department of Transportation Truck Station building. At the north end of Garrison.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
461752.20487	934936.96172	363.916	391.29

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5234K51567	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5234K51567	01/09/2013	01/01/2022
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.70	4831K57612	02/08/2012	01/09/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4831K57612	01/06/2011	02/08/2012
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57612	10/22/2008	01/06/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241607	06/30/2008	10/22/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241607	04/12/2005	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973207	10/22/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12652362	04/12/2005	10/22/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS GRSN GARRISON ARP	CROW WING, MN	4/12/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52236.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52236.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1803 A 1	CROW WING, MN	4/7/2005

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52218.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52218.pdf

Garrison

Monument



Antenna Monument



Mark



Antenna North



Mark



Antenna East



Garrison

Antenna South



Receiver Serial Number



Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Garrison

Antenna Roof



Golden Valley - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
6	Golden Valley	GoVy	GOLDEN VALLEY	MNGV

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Golden Valley	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation West Metro Office in Golden Valley, MN.

Located on the south side of the Golden Valley Minnesota Department of Transportation building in Hennepin County. On the west side of Trunk Highway 100 north of Duluth Street..

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
450002.48991	932105.14133	251.873	

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5433R49296	10/30/2014	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4827K57098	05/20/2013	10/30/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4827K57098	10/29/2010	05/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4827K57098	12/04/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4827K57098	12/02/2008	12/04/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01625	08/25/2008	12/02/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4624K01625	06/30/2008	08/25/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4624K01625	10/10/2006	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30607830	12/02/2008	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30255805	10/10/2006	12/02/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS GOVY GOLDEN VALLEY ARP	HENNEPIN, MN	4/1/2002

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52115.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52115.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
GOVY	HENNEPIN, MN	7/8/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50737.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50737.pdf

Golden Valley - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Golden Valley - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Golden Valley 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
161	Golden Valley 2	GVy2		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Golden Valley	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation West Metro Office in Golden Valley, MN.

Located on the south side of the Golden Valley Minnesota Department of Transportation building in Hennepin County. On the west side of Trunk Highway 100 north of Duluth Street..

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5433R49296	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30607830	01/01/2022	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS GUY2 GLDN VALLEY 2 ARP	HENNEPIN, MN	9/9/2016

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110576.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110576.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
GOVY	HENNEPIN, MN	7/8/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50737.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50737.pdf

Golden Valley 2

Graceville

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
49	Graceville	Grac	GRACEVILLE	MNGR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Graceville	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Road and Weather Information System (RWIS) site number 36 west of Graceville, MN.

Located on the northside of Trunk Highway 28 in Big Stone County. 3 miles west of Graceville.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
453329.86278	962938.57965	311.799	337.84

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5944R40053	04/20/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69051	03/04/2019	04/20/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5030K69051	03/09/2018	03/04/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5030K69051	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69051	05/20/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69051	12/29/2010	05/20/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69051	10/06/2010	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241594	11/05/2008	10/06/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253126	10/13/2005	11/05/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	1441003175	09/29/2015	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	1441027726	10/06/2010	09/29/2015
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12697117	10/13/2005	10/06/2010

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS GRAC GRACEVILLE ARP	BIG STONE, MN	10/13/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_53584.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_53584.pdf

Graceville

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
GRAC	BIG STONE, MN	9/22/2005

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_53580.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_53580.pdf

Graceville

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

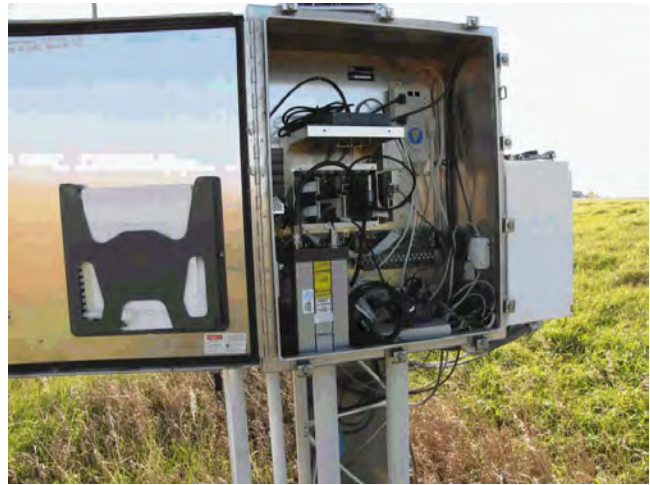


Graceville

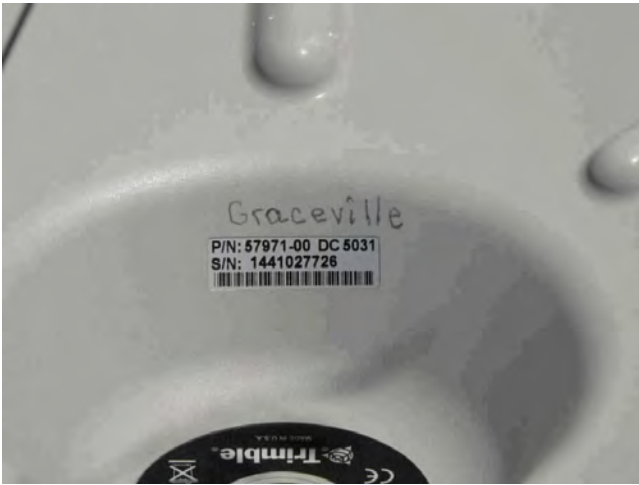
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Grafton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
158	Grafton	Grft		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grafton	ND	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
482438.61836	972528.41804	233.017	259.50

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6006R40045	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.93	5433R49261	01/30/2015	01/01/2022

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1312118107	01/30/2015	
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS GRFT GRAFTON ARP	WALSH, ND	1/30/2015

Data Sheets

- English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104474.pdf
- Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104474.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:
- Metric:

Grafton

Grand Forks

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
93	Grand Forks	GFrk	Grand Forks	NDGF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grand Forks	ND	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Antenna is on a concrete parapet wall on top of CPS Engineering and Land Surveying

The CORS is located in GrandForks, North Dakota at 308 Second Avenue North Grand Forks, North Dakota. CPS Engineering and Land Surveying. Take Trunk Highway 2 west to North 4th street, go SouthEast 0.8 mile to 2nd Avenue North, go 1 block to CPS Engineering and Land Surveying.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6109R40006	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5302K41546	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5302K41546	08/27/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4747K11290	05/23/2013	08/27/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.03	4747K11290	03/05/2010	05/23/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4747K11290	03/02/2010	03/05/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4747K11290	04/01/2009	03/02/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4747K11290	10/07/2008	04/01/2009

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30607391	10/07/2008	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS GFKS GRAND FORKS ARP	GRAND FORKS, ND	9/2/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83090.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83090.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
A 261 A	GRAND FORKS, ND	9/2/2008

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_82434.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_82434.pdf

Grand Forks

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Grand Forks

Antenna West



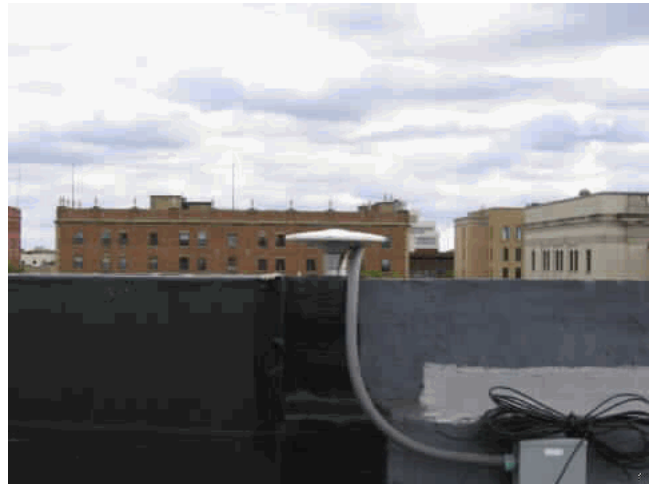
Receiver Location



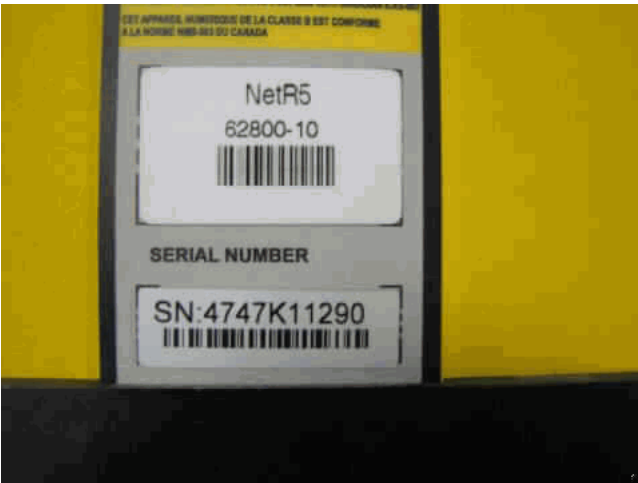
Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Grand Marais

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
162	Grand Marais	GMar		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grand Marais	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Grand Marais, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5505R50064	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS GMAR GRAND MARAIS ARP	COOK, MN	7/7/2016

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110577.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110577.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Grand Marais

Grand Marais NGS - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
120	Grand Marais NGS	GMra	Grand Marais	GDMA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grand Marais	MN	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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NGS CORS site.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
474454.75684	902028.47198	158.300	189.07

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
GRAND MARAIS CORS ARP	COOK, MN	7/1/2002

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50980.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50980.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
909 9090 ECKEL USLS	COOK, MN	4/1/1966

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOUNDATION	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_5631.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_5631.pdf

Grand Marais NGS - Decommissioned

Grand Portage

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
147	Grand Portage	GPrt	Grand Portage	MNPT

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grand Portage	MN	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Grand Portage Trust Lands and Resources Management Building in Grand Portage, MN.
27 Store Road

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
475812.29638	894127.41430	199.175	232.93

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5303K57621	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5303K57621	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5303K57621	07/11/2013	05/15/2014

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1312118646	07/11/2013	
LMR400 cable, assembled TNC-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS GPRT GRAND PORTAGE ARP	COOK, MN	

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_101058.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_101058.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:
Metric:

Grand Portage

Grand Rapids

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
76	Grand Rapids	GRpd	GRAND RAPIDS	MNGP

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grand Rapids	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Grand Rapids, MN.

Located 1.9 miles south of Grand Rapids. Attached to the southwest side of the Minnesota Department of Transportation Truck Station building in Itasca County. Located on the south side of Trunk Highway 2.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
471324.95815	932902.62190	370.137	399.43

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5426R48924	03/04/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5426R48924	03/06/2018	03/04/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5426R48924	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5426R48924	05/04/2015	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4816K55326	05/20/2013	05/04/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4816K55326	12/29/2010	05/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4816K55326	06/04/2008	12/29/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220310325	12/07/2006	06/04/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30895726	06/04/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12281654	12/07/2006	06/04/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS GRPD GRAND RAPIDS ARP	ITASCA, MN	4/1/2007

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65447.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65447.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3104 Q 1	ITASCA, MN	5/23/2007

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65883.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65883.pdf

Grand Rapids

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Grand Rapids

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Grygla

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
104	Grygla	Gryg	GRYGLA	MNGY

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grygla	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Antenna mounted on the side of the Minnesota Department of Transportation Truck Station in Grygla, MN.

The CORS is located in Marshall County near Grygla, MN. From the Jct of TH 219 and TH 89 go 6miles west on TH 89 to the Truck Station located on the west side of TH 89

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
481751.48676	953657.57155	339.956	367.3

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5709R51474	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74933	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5114K74933	06/15/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244254	08/18/2009	06/15/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109298	06/15/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	12648647	08/18/2009	06/15/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS GRYG GRYGLA ARP	MARSHALL, MN	5/8/2007

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85690.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85690.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
4508 S 1	MARSHALL, MN	6/16/2009

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87326.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87326.pdf

Grygla

Monument



Antenna East



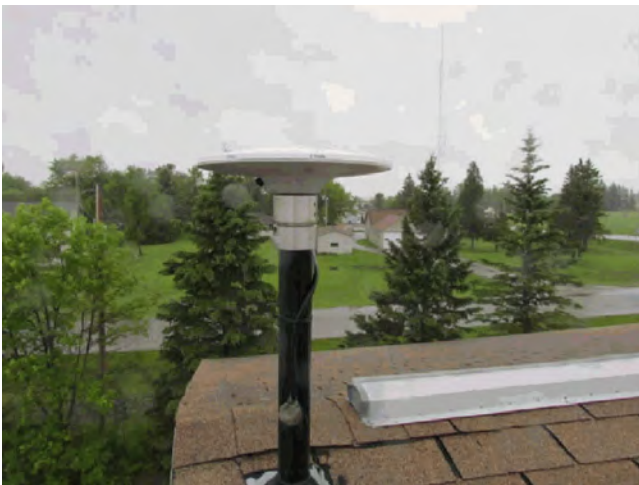
Antenna Monument



Antenna South



Antenna North



Antenna West



Grygla

Antenna Serial Number



Antenna Building



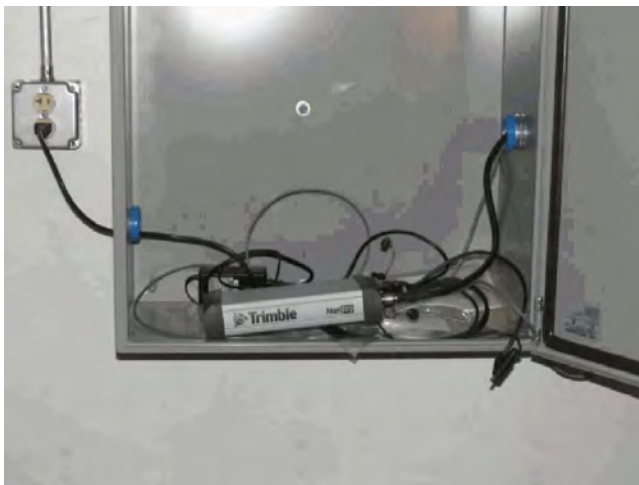
Receiver Serial Number



Antenna Roof



Receiver Location



Gunflint Trail Fire Department - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
170	Gunflint Trail Fire Department	GTFD		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Grand Marais?	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Gunflint Trail Volunteer Fire Department and Midtrail Emergency Services.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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Data Sheets

- English:
- Metric:

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:
- Metric:

Gunflint Trail Fire Department - Decommissioned

Hallock

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
105	Hallock	Hlck	HALLOCK	MNHK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hallock	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Antenna is attached to the side of the building at the Minnesota Department of Transportation Truck Station in Hallock, MN.

The CORS is located in Kittson County, in the town of Hallock, 2 blocks west of TH 75 at 309 S Columbus Ave

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
484620.52077	965657.53660	228.297	255.44

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74889	02/18/2013	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74889	06/14/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.25	4545260767	02/16/2010	06/14/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253123	08/18/2009	02/16/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109482	06/14/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	60078888	08/18/2009	06/14/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS HLCK HALLOCK ARP	KITTSO, MN	

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85688.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85688.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3515 T 2	KITTSO, MN	6/16/2009

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87299.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87299.pdf

Hallock

Monument



Antenna East



Antenna Monument



Antenna South



Antenna North



Antenna West



Hallock

Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Receiver Location



Hanlontown

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
100	Hanlontown	Hnlt	Hanlontown	IAHT

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hanlontown	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
431702.35584	932206.64358	345.545	374.37

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN HNLTL HANLONTOWN ARP	WORTH, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86015.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86015.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Hanlontown

Hawley

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
19	Hawley	Hawl	HAWLEY	MNHL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hawley	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Hawley, MN.

Located on the north side of Trunk Highway 10 in Clay County. On the west side of the Minnesota Department of Transportation Truck Station building, 1 mile east of Hawley.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
465241.23961	961800.58901	332.232	358.95

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42310	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5310K42310	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42310	08/27/2013	05/15/2014
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4831K57608	12/29/2010	08/27/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57608	09/10/2008	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237734	06/30/2008	09/10/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220313374	03/02/2005	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973205	09/10/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12422802	03/02/2005	09/10/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS HAWL HAWLEY ARP	CLAY, MN	4/1/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52117.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52117.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
HAWL	CLAY, MN	12/31/2003

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50676.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50676.pdf

Hawley

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Hawley

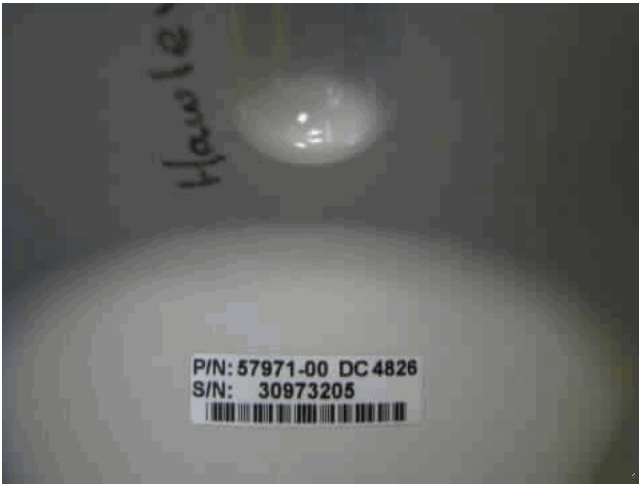
Antenna West



Receiver Location



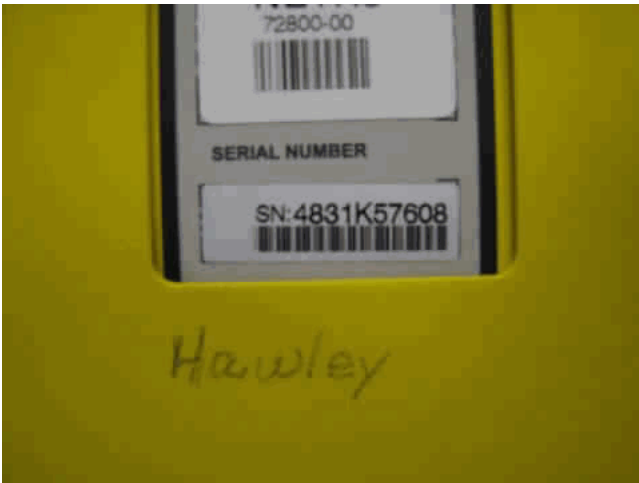
Antenna Serial Number



Antenna Building



Receiver Serial Number



Hendricks

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
82	Hendricks	Hndk	HENDRICKS	MNHD

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hendricks	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 30.

4.0 MILES SOUTH OF HENDRICKS, 0.50 MILE WEST ALONG TRUNK HIGHWAY 19 FROM THE JUNCTION OF TRUNK HIGHWAY 19 AND TRUNK HIGHWAY 271 (4.0 MILES SOUTH OF HENDRICKS), AT TRUNK HIGHWAY 19 MILEPOINT 1.80, 65 FEET NORTH OF TRUNK HIGHWAY 19, 63 FEET WEST OF WEATHER STATION TOWER, 17 FEET SOUTH OF POWER POLE

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
442731.98485	962607.76437	526.010	551.61

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5946R40038	03/11/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5114K74934	03/05/2019	03/11/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5114K74934	03/05/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5114K74934	01/03/2018	03/05/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74934	02/18/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74934	05/24/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244248	08/26/2008	05/24/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237715	10/23/2007	08/26/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1551017052	03/11/2020	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107296	05/24/2011	03/11/2020
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12534104	10/23/2007	05/24/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS HNDK HENDRICKS ARP	LINCOLN, MN	10/23/2007

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_76758.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_76758.pdf

Hendricks

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
4103 K	LINCOLN, MN	11/13/2007

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_74177.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_74177.pdf

Hendricks

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Hendricks

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Henning

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
36	Henning	Henn	HENNING	MNHG

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Henning	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Henning, MN.

Located on the south side of Trunk Highway 108 in Otter Tail County, on the east side of the Minnesota Department of Transportation Truck Station building at the northwest end of Henning.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
461931.57150	952726.51908	413.810	440.30

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5219K85086	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5219K85086	05/28/2014	01/01/2022
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.70	4831K57598	02/18/2013	07/23/2012
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5219K85086	07/23/2012	05/28/2014
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4831K57598	12/29/2010	02/18/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57598	09/09/2008	12/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235496	06/30/2008	09/09/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4426235496	03/01/2005	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30975348	09/09/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12611996	03/01/2005	09/09/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS HENN HENNING ARP	OTTER TAIL, MN	2/1/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62764.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62764.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
5624 A	OTTER TAIL, MN	8/12/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50931.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50931.pdf

Henning

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Henning

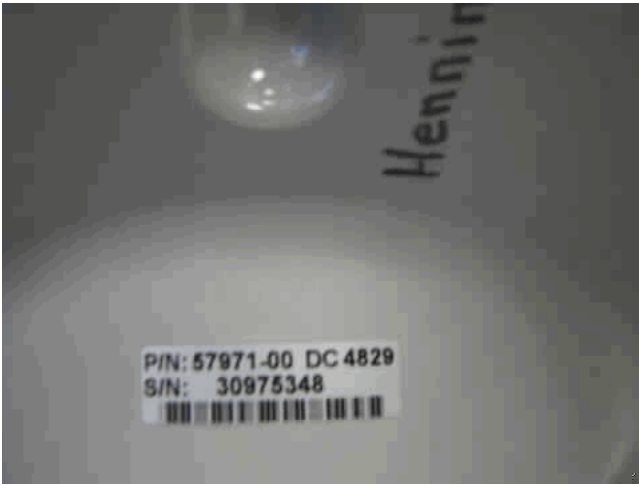
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Hibbing

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
140	Hibbing	Hibb	Hibbing	MNHB

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hibbing	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Shared St. Louis County / MnDOT Truck Station in Hibbing, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
472528.17141	925515.99979	426.514	456.55

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69055	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69055	05/20/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.60	5030K69055	06/11/2012	05/20/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109260	06/11/2012	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS HIBB HIBBING ARP	ST. LOUIS, MN	6/11/2012

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_96147.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_96147.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6934 D 1	ST. LOUIS, MN	8/13/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE/BITUMINOUS SLAB	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_97306.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_97306.pdf

Hibbing

Monument



Antenna North



Mark

Antenna East



Antenna Monument

Antenna South



Hibbing

Antenna West



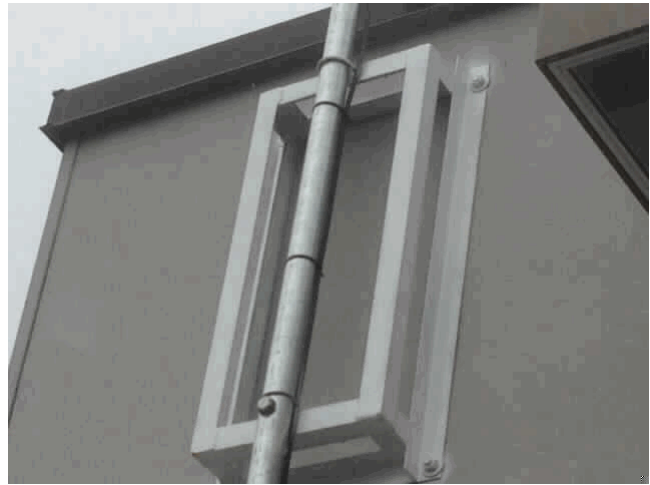
Receiver Location



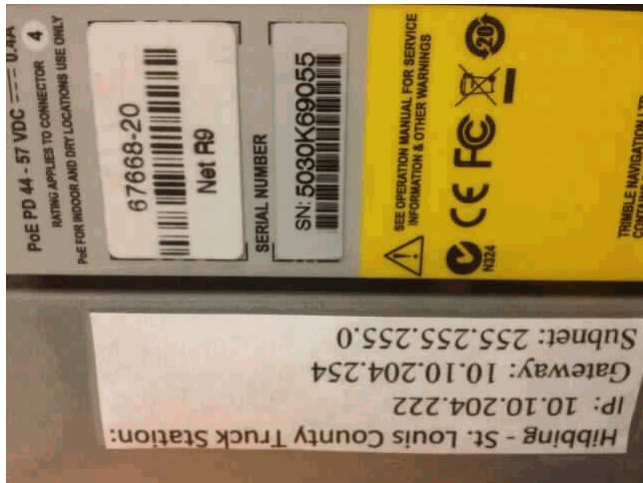
Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof

Hickory Township

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
136	Hickory Township	Hkry	Hickory Township	MNHY

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Gully	MN	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Hickory Town Hall.

On County Road 27, 188 feet south of southeast corner of the Hickory Town Hall.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
475657.07866	953733.26949	329.537	357.02

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.43	5051k72672	11/29/2011	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109045	11/29/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS HKRY HICKORY ARP	PENNINGTON, MN	11/29/2011

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95520.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95520.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
KEEGAN	PENNINGTON, MN	11/22/2011

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95099.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95099.pdf

Hickory Township

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Hickory Township

Antenna West



Receiver Location



Antenna Serial Number



Others

Receiver Serial Number



Hinckley

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
39	Hinckley	Hinc	HINCKLEY	MNHN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hinckley	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 77 on Interstate 35 near Hinckley, MN.

Located on the east side of Interstate 35 in Pine County, 1.75 miles south of T.H. 48 near Hinckley.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
455905.66038	925653.93140	288.482	315.94

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40053	06/26/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5048K72008	03/05/2019	06/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5048K72008	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5048K72008	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5048K72008	04/30/2013	01/03/2018
Trimble Navigation Ltd	Net R5	GPS	NAV 3.84	4714K05589	03/15/2012	04/30/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4723K06158	12/29/2010	03/15/2012
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4723K06158	08/26/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4723K06158	11/29/2007	08/26/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244255	02/07/2005	11/29/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1441043532	11/05/2018	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble LMR400	30473611	11/29/2007	11/05/2018
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	12668828	02/07/2005	11/29/2007

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS HINC HINCKLEY ARP	PINE, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52173.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52173.pdf

Hinckley

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
HINC VRS	PINE, MN	4/1/2004

<u>Monument Type</u>	<u>Disk Type</u>
BRIDGE PILLAR/PIER	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52175.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52175.pdf

Hinckley

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Hinckley

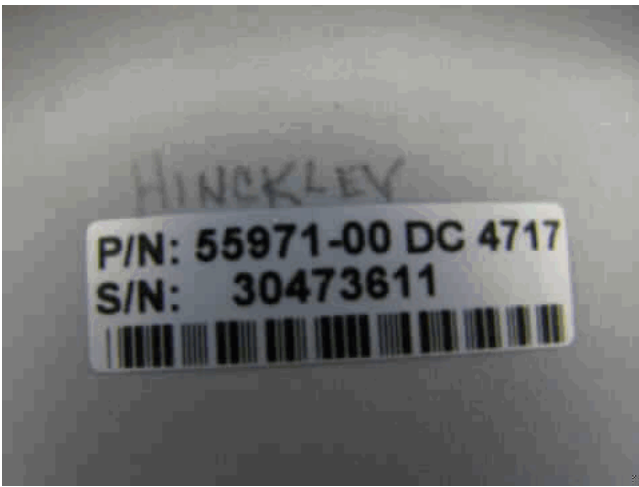
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Hollywood

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
10	Hollywood	Hywd	HOLLYWOOD	MNHW

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hollywood	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 22 near Hollywood, MN.

Located on the south side of Trunk Highway 7 in Carver County, 0.8 miles west of County Road 33.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
445421.67297	935912.09501	273.037	300.46

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5945R40021	03/09/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5236K52184	03/05/2019	03/09/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5236K52184	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5236K52184	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5236K52184	12/04/2012	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4626K01820	12/29/2010	12/04/2012
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4626K01820	08/26/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4626K01820	06/30/2008	08/26/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4626K01820	01/03/2007	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	612223970	03/09/2020	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30212693	01/03/2007	03/09/2020

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS HYWD HOLLYWOOD ARP	CARVER, MN	4/1/2002

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50491.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50491.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
HOLLYWOOD MNDT	CARVER, MN	9/25/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOUNDATION	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50490.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50490.pdf

Hollywood

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Hollywood

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Hudson

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
141	Hudson	Hdsn	Hudson	WIHU

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Hudson	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Hudson Scale and Weight Enforcement Facility (SWEF)

Located in the southeast corner of a Wisconsin Department of Transportation Weigh Station on the south side of Interstate 94, 5.5 miles east of Hudson.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
445733.41065	923638.20669	287.761	317.37

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5219K84964	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5219K84964	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.81	5219K84964	04/15/2013	05/15/2014

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1212118683		

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN HDSN HUDSON ARP	ST. CROIX, WI	7/1/2012

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_96496.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_96496.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
9A031	ST. CROIX, WI	7/1/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_98310.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_98310.pdf

Hudson

International Falls - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
112	International Falls	IFls	International Falls	MNIF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
International Falls	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in International Falls, MN.

1.33 miles southeast of International Falls, 0.2 mile north along 2nd avenue from junction of 2nd avenue and 17 street east, 0.4 mile east on 15th street, 0.1 mile north on 3rd avenue east, 1.5 miles southeast on trunk highway 332, Mark is about 290.0 feet west from trunk highway 332.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4811K54387	05/22/2013	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4811K54387	12/29/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4811K54387	04/13/2009	12/29/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973323	04/13/2009	04/10/2012

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS IFLS INTL FALLS ARP	KOOCHICHING, MN	4/1/2009

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_89406.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_89406.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3617 C	KOOCHICHING, MN	6/17/2009

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87006.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87006.pdf

International Falls - Decommissioned

Monument



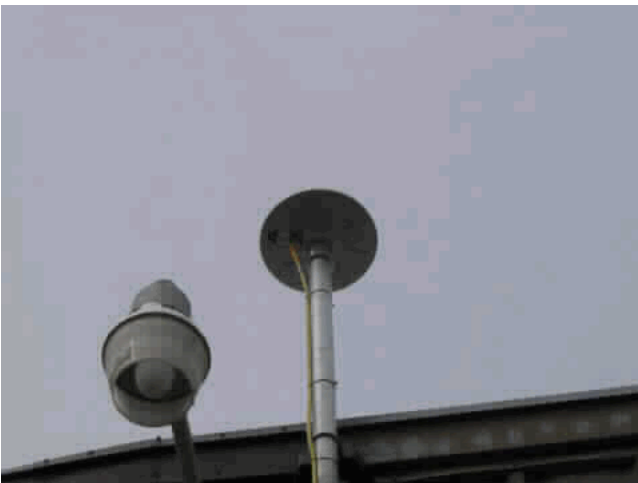
Mark

Antenna North



Antenna East

Antenna Monument



Antenna South



International Falls - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof

International Falls 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
139	International Falls 2	IF12		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
International Falls	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in International Falls, MN.

1.33 miles southeast of International Falls, 0.2 mile north along 2nd avenue from junction of 2nd avenue and 17 street east, 0.4 mile east on 15th street, 0.1 mile north on 3rd avenue east, 1.5 miles southeast on trunk highway 332, Mark is about 290.0 feet west from trunk highway 332.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
483500.25732	932233.16260	335.458	366.18

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5308K42004	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5308K42004	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5308K42004	07/23/2013	05/15/2014

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30973323	07/23/2013	
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS IFL2 INTL FALLS 2 ARP	KOOCHICHING, MN	4/10/2012

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95793.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95793.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3617 C	KOOCHICHING, MN	6/17/2009

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87006.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87006.pdf

International Falls 2

Jacobson

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
50	Jacobson	Jcbs	JACOBSON	MNJC

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Jacobson	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 51 near Jacobson, MN.

Located on the west side of Trunk Highway 65 in Aitkin County. 1.6 miles south of Trunk Highway 200 near Jacobson.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
465841.84008	931625.26905	351.859	380.87

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6102R40017	11/05/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5505R50111	03/04/2019	11/05/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5505R50111	03/06/2018	03/04/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5505R50111	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.10	5505R50111	05/14/2016	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42295	07/24/2013	05/14/2016
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4816K55311	05/22/2013	07/24/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4816K55311	12/29/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS	NAV 3.64	4816K55311	08/26/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4816K55311	06/05/2008	08/26/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244248	08/24/2007	06/05/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244248	02/26/2006	08/24/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4504244248	05/01/2005	02/16/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	60443G0089	11/05/2021	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30895721	06/04/2008	11/05/2021
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60078888	06/15/2005	06/04/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS JCBS JACOBSON ARP	AITKIN, MN	5/1/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62765.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62765.pdf

Jacobson

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
0112 X 1	AITKIN, MN	6/15/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOUNDATION	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_54022.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_54022.pdf

Jacobson

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Jacobson

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Jeffers

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
57	Jeffers	Jfrs	JEFFERS	MNJF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Jeffers	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 71 on Trunk Highway 71 near Jeffers, MN.

Located on the east side of Trunk Highway 71 in Cottonwood County. 2.3 miles north of Trunk Highway 30.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440500.80491	950711.87750	409.204	436.45

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5920R40039	05/08/2020	
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40039	06/11/2019	05/08/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5443R50005	03/05/2019	06/11/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5443R50005	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5443R50005	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.10	5443R50005	06/18/2017	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50005	08/06/2015	06/18/2017
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74941	02/18/2013	08/06/2015
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74941	05/24/2011	02/18/2013
Firmware corrected on 8-23-2011						
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235476	06/30/2008	05/24/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260763	03/30/2006	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1551016818	06/11/2019	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441053321	05/24/2011	06/11/2019
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60009368	03/30/2006	05/24/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS JFRS JEFFERS ARP	COTTONWOOD, MN	3/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62766.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62766.pdf

Jeffers

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1707 T 1	COTTONWOOD, MN	5/17/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62639.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62639.pdf

Jeffers

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Jeffers

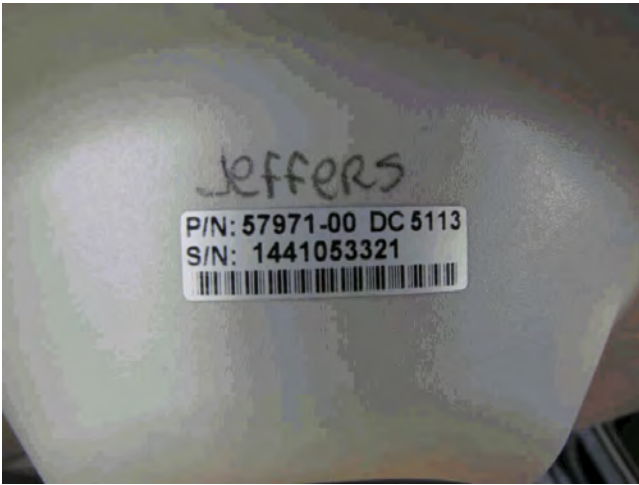
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Jordan

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
160	Jordan	Jrdn		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Jordan	MN	USA	County

Contact Person **Contact Phone** **Contact Email**

Scott County Highway Department
600 County Trail East.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5307K51402	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS JRDN JORDAN ARP	SCOTT, MN	6/2/2016

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110578.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110578.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
Metric:

Jordan

Karlstad

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
106	Karlstad	Krls	KARLSTAD	MNKD

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Karlstad	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Karlstad, MN.

0.1 mile east along County Road 9 from the junction of Trunk Highway 59 and County Road 9 in Karlstad, then 100 feet northerly on County Road 31, then 250 feet north on Harding Street. Truck station is on east side of Harding Street.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
483425.75675	963047.20788	299.185	326.69

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5051K72741	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5051K72741	02/18/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5051K72741	06/14/2011	02/18/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235517	02/16/2010	06/14/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235483	08/18/2009	02/16/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441053293	06/14/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	12668828	08/18/2009	06/14/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS KRLS KARLSTAD ARP	KITTSOON, MN	

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85686.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85686.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
RECYCLE	KITTSOON, MN	6/16/2009

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87300.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87300.pdf

Karlstad

Monument



Antenna East



Antenna Monument



Antenna South



Antenna North

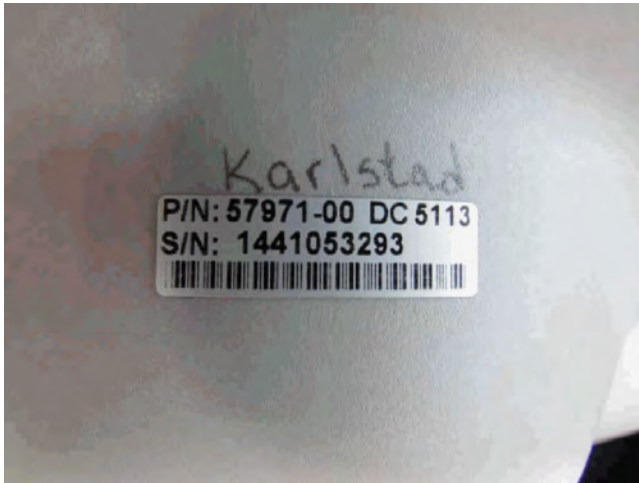


Antenna West



Karlstad

Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Receiver Location



La Crosse - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
75	La Crosse	LCrs	LA CROSSE	WILC

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
La Crosse	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Wisconsin Department of Transportation Sign Shop in La Crosse, WI

Located in Herrington, Wisconsin, attached to the north side of the Wisconsin Department of Transportation Sign Shop building.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5112K74458	08/15/2011	12/04/2012
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244238	11/20/2008	08/15/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260776	06/30/2008	11/20/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260776	01/10/2007	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109051	08/15/2011	12/04/2012
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	12471088	01/10/2007	08/15/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS LCRS LA CROSSE ARP	LA CROSSE, WI	

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65519.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65519.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
L 124 A	LA CROSSE, WI	5/15/2007

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65206.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65206.pdf

La Crosse - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



La Crosse - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



La Crosse 2 - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
142	La Crosse 2	LCr2	LA CROSSE 2	WILA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
La Crosse	WI	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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LaCrosse County Recycling Center

The antenna was relocated to a new pedestal on the Recycling Center site.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
435305.36130	910949.14236	198.612	230.57

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5218K84714	05/15/2014	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.81	5218K84714	04/15/2013	05/15/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5218K84714	12/04/2012	04/15/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107229	12/04/2012	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN LCR2 LA CROSSE 2 ARP	LA CROSSE, WI	7/1/2012

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_96497.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_96497.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
9A032	LA CROSSE, WI	4/1/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_98201.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_98201.pdf

La Crosse 2 - Decommissioned

La Crosse 3

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
163	La Crosse 3	LCr3		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
La Crosse	WI	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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LaCrosse County Recycling Center.

LCr2 was relocated to a new pedestal on the Recycling Center site.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5502R50030	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107229	01/01/2022	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS LCR3 LA CROSSE 3 ARP	LA CROSSE, WI	

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110579.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110579.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
9A032	LA CROSSE, WI	4/1/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_98201.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_98201.pdf

La Crosse 3

Lake Itasca

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
135	Lake Itasca	LkIt	Lake Itaska	MNLI

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Lake Itasca	MN	USA	DNR

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Lake Itasca State Park

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
471407.12057	951139.10918	442.491	469.88

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5050k72502	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5050k72502	02/19/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5050k72502	11/02/2011	02/19/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441053255	11/02/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS LKIT LAKE ITASCA ARP	CLEARWATER, MN	11/2/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95805.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95805.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1505 D 2	CLEARWATER, MN	10/3/2015

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104894.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104894.pdf

Lake Itasca

Monument



Mark

Antenna North



Antenna East

Antenna Monument



Antenna South



Lake Itasca

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof

Lakefield

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
65	Lakefield	Lkfd	LAKEFIELD	MNLK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Lakefield	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 8 near Lakefield, MN.

Located on the northside of Interstate 90 in Jackson County. 2.8 miles east of Trunk Highway 86.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433819.31810	950706.89135	432.881	460.30

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5829R40116	06/12/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5219K85071	03/05/2019	06/12/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5219K85071	03/09/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5219K85071	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5219K85071	07/16/2014	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5112K74593	02/19/2013	07/16/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5112K74593	06/07/2011	02/19/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260757	08/29/2007	06/07/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260757	07/23/2006	08/29/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4545260757	04/27/2006	07/23/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	612223940	06/12/2019	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107120	06/07/2011	06/12/2019
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12696868	03/01/2006	06/07/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS LKFD LAKEFIELD ARP	JACKSON, MN	3/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62767.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62767.pdf

Lakefield

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
T 388 A	JACKSON, MN	5/18/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62637.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62637.pdf

Lakefield

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Lakefield

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



LeSueur

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
4	LeSueur	LeSu	LE SUEUR	MNLS

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
LeSueur	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in LeSueur, MN

Located 1 block east of Trunk Highway 1112 in Le Sueur County. 1.75 miles south of Trunk Highway 93 on the south end of roof of the Minnesota Department of Transportation Truck Station building.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
442628.13635	935424.61964	239.928	268.04

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5309K42176	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5309K42176	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5309K42176	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5309K42176	05/15/2014	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5309K42176	08/20/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4716K05682	05/22/2013	08/20/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4716K05682	12/29/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4716K05682	08/07/2007	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.10	4624K01626	10/11/2006	08/07/2007
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220310304	09/30/2004	10/11/2006
Trimble Navigation Ltd	4000SSI	GPS	NAV 7.29	3702A18146	09/22/2003	09/30/2004

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	5000120282	08/18/2016	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30473584	11/20/2007	08/18/2016
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30255799	10/11/2006	11/20/2007
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12635780	09/30/2004	10/11/2006
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Compact L/1 L/2 w/GP	Trimble	220081366	09/22/2003	09/30/2004

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS LESU LESUEUR ARP	LE SUEUR, MN	4/1/2003

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52118.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52118.pdf

LeSueur

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
LESUE	LE SUEUR, MN	12/4/2003

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50697.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50697.pdf

LeSueur

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



LeSueur

Antenna West



Receiver Location



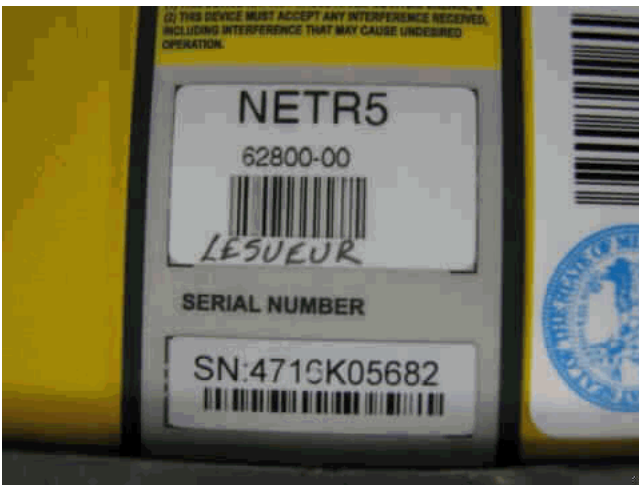
Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Lima

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
152	Lima	Lima		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Lima	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
443625.19097	915106.32968	225.416	255.94

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN LIMA LIMA ARP	SHEBOYGAN, WI	4/1/2015

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104483.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104483.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
Metric:

Lima

Litchfield

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
23	Litchfield	Ltcf	LITCHFIELD	MNME

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Litchfield	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Meeker County Facility in Litchfield, MN.

Attached on the east side of the west building (jail) on the Meeker County Couthouse in Litchfield. West side of Trunk Highway 12.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
450746.23677	943144.99161	326.331	353.23

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5302K41562	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5302K41562	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5302K41562	05/15/2014	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5302K41562	08/13/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4723K06172	05/22/2013	08/13/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4723K06172	12/30/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4723K06172	08/26/2008	12/30/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4723K06172	10/22/2007	08/26/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220315220	12/20/2003	07/25/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	3122181256	12/21/2015	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble LMR400	30473320	10/22/2007	12/21/2015
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12534104	12/20/2003	10/22/2007

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS LTCF LITCHFIELD ARP	MEEKER, MN	12/20/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52119.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52119.pdf

Litchfield

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
LTCF	MEEKER, MN	7/19/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50746.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50746.pdf

Litchfield

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Litchfield

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Little Chicago

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
16	Little Chicago	LChi	LITTLE CHICAGO	MNLC

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Little Chicago	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 3 near Little Chicago, MN.

Located on the west side of Interstate 35 in Rice County. 1 mile north of the junction of Trunk Highway 19 near Little Chicago.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
442841.88129	931732.44151	277.714	305.66

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5940R40006	03/11/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5427R49031	03/05/2019	03/10/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5427R49031	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5427R49031	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.10	5427R49031	02/08/2017	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5427R49031	10/23/2014	02/08/2017
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4846K59438	05/22/2013	10/23/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4846K59438	12/29/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4846K59438	01/22/2009	12/29/2010
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57603	10/02/2008	01/22/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4624K01612	10/10/2006	10/02/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30255809	10/10/2006	

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS LCHI LITTLE CHICAGO ARP	RICE, MN	11/19/2003

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_51033.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_51033.pdf

Little Chicago

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
LITTLE CHICAGO	RICE, MN	11/1/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOUNDATION	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50696.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50696.pdf

Little Chicago

Monument



Antenna East



Mark



Antenna South



Antenna North

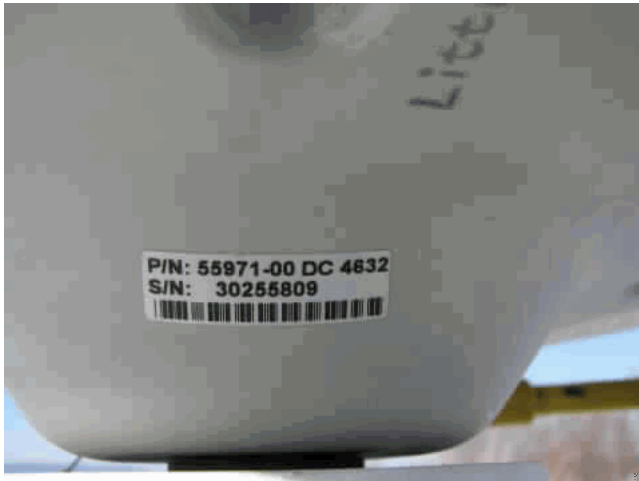


Antenna West



Little Chicago

Antenna Serial Number



Receiver Serial Number



Receiver Location



Little Falls - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
43	Little Falls	LFls	LITTLE FALLS	MNLF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Little Falls	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Little Falls, MN.

Located 2 blocks north of Trunk Highway 27 in Morrison County. On the north side of the Minnesota Department of Transportation Truck Station building. On 13th Street in Little Falls.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
455844.86312	942319.28359	328.426	354.99

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69034	05/22/2013	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4816K55301	12/29/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4816K55301	08/26/2008	12/29/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4816K55301	06/30/2008	08/26/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4816K55301	06/04/2008	06/30/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4437237734	04/12/2005	06/04/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30895790	06/04/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12626148	04/12/2005	06/04/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS LFLS LITTLE FALLS ARP	MORRISON, MN	4/7/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52217.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52217.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
4904 R 1	MORRISON, MN	4/7/2005

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52216.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52216.pdf

Little Falls - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Little Falls - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Little Falls 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
164	Little Falls 2	LF12		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Little Falls	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Little Falls, MN.

New MnDOT truck station.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5710R51512	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441027931	01/01/2022	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS LFL2 LITTLE FALLS 2 ARP	MORRISON, MN	7/19/2017

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110580.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110580.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Little Falls 2

Mahnomen

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
55	Mahnomen	Mano	MAHNOMEN	MNOM

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Mahnomen	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Mahnomen, MN.

Located 2 blocks west of Trunk Highway 59 in Mahnomen County. On the south side on the Minnesota Department of Transportation Mahnomen Truck Station building. 1 mile south of Trunk Highway 200.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
471841.42662	955756.25308	352.600	379.46

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5443R50004	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50004	05/14/2015	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4943K64153	05/22/2013	05/14/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4943K64153	12/30/2010	05/22/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4943K64153	04/08/2010	12/30/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241588	06/30/2008	04/08/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241588	02/01/2006	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1440936110	04/08/2010	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60078756	02/01/2006	04/08/2010

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MANO MAHNOMEN ARP	MAHNOMEN, MN	2/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62768.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62768.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
4403 J 1	MAHNOMEN, MN	6/15/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62727.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62727.pdf

Mahnomen

Monument



Antenna North



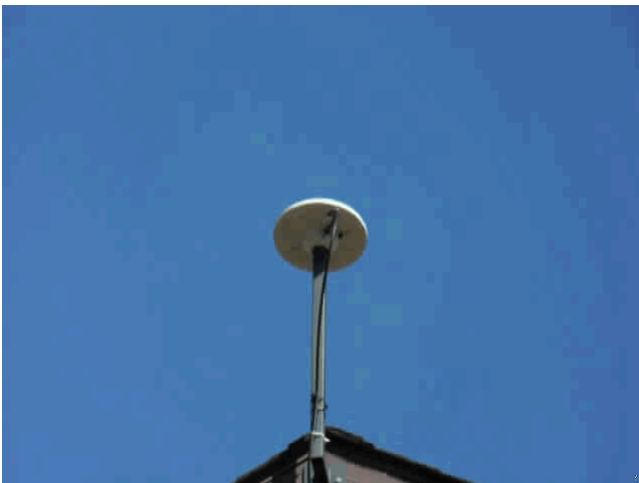
Mark



Antenna East



Antenna Monument



Antenna South



Mahnomen

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Mankato - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
24	Mankato	Mkto	MANKATO	MNHQ

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Mankato	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation District 7 Office in Mankato, MN.

Located 2 miles west of Trunk Highway 22 in Blue Earth County at the Minnesota Department of Transportation Mankato District headquarters on the south side of a wood sided addition.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440918.75273	935816.00980	281.178	309.53

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57613	10/07/2008	09/01/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.3	0220315183	12/20/2003	10/07/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30962946	10/07/2008	09/01/2010
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12534109	12/20/2003	10/07/2008

30 meters of LMR400 cable, assembled TNC-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MKTO MANKATO ARP	BLUE EARTH, MN	12/20/2003

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52120.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52120.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
0704 Q 2	BLUE EARTH, MN	7/7/2004

<u>Monument Type</u>	<u>Disk Type</u>
UNKNOWN	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50734.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50734.pdf

Mankato - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Mankato - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Mankato 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
124	Mankato 2	Mkt2	MANKATO 2	MNMK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Mankato	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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New Minnesota Department of Transportation District 7 Office in Mankato, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440943.94227	935629.84092	289.605	317.98

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40005	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5030K69039	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69039	05/22/2013	05/15/2014
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69039	09/22/2010	05/22/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441028163	09/22/2010	

30 meters of LMR400 cable, assembled TNC-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MKT2 MANKATO 2 ARP	BLUE EARTH, MN	9/1/2010

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_93653.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_93653.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
NIKOLEY	BLUE EARTH, MN	8/30/2010

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_90266.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_90266.pdf

Mankato 2

Margie

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
123	Margie	Marg	Margie	MNMG

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Margie	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 72 near Margie, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
480804.54476	935242.50830	352.350	381.53

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6049R40058	11/04/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69045	03/05/2019	11/04/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5030K69045	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5030K69045	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69045	05/22/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69045	12/30/2010	05/22/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69045	09/15/2010	12/30/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1441030955	11/04/2021	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1441027999	09/15/2010	11/04/2021

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS MARG MARGIE ARP	KOOCHICHING, MN	9/15/2010

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_90616.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_90616.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3611 W	KOOCHICHING, MN	9/23/2010

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_90613.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_90613.pdf

Margie

Monument



Antenna East



Antenna Monument



Antenna South



Antenna North



Antenna West



Margie

Antenna Serial Number



Receiver Serial Number



Receiver Location



Marietta

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
83	Marietta	Mrta	MARIETTA	MNMR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Marietta	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 59

5.0 MILES SOUTHWEST OF MARIETTA, 1.50 MILES WEST ALONG TRUNK HIGHWAY 212 FROM THE JUNCTION OF TRUNK HIGHWAY 212 AND COUNTY ROAD 7 (5.0 MILES SOUTH OF MARIETTA), AT TRUNK HIGHWAY 212 MILEPOINT 0.50, 90 FEET NORTH OF TRUNK HIGHWAY 212, 74.5 FEET WEST OF WEATHER STATION TOWER

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
445610.24635	962631.42084	332.613	358.33

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5950R40051	03/11/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69048	03/05/2019	03/11/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5030K69048	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5030K69048	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69048	06/06/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69048	12/30/2010	06/06/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69048	10/06/2010	12/30/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235490	10/22/2007	10/06/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	1441027627	10/06/2010	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR 400	12286155	10/22/2007	10/06/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MRTA MARIETTA ARP	LAC QUI PARLE, MN	10/22/2007

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_76764.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_76764.pdf

Marietta

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3705 B	LAC QUI PARLE, MN	11/14/2007

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_74173.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_74173.pdf

Marietta

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Marietta

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Marshall

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
73	Marshall	Mrsh	MARSHALL	MNMS

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Marshall	MN	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Ziegler Caterpillar Building in Marshall, MN.

Located on the east side of Trunk Highway 59 at the north end of Marshall in Lyon County, attached on the south side of the Ziegler Caterpillar building.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
442749.38275	954744.48114	333.745	360.65

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42308	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5310K42308	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5310K42308	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5310K42308	05/15/2014	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42308	08/06/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4811K54339	03/29/2011	08/06/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4416233493	05/05/2008	03/29/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260767	05/22/2006	05/05/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441027866	03/19/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60035113	05/22/2006	03/19/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS MRSH MARSHALL ARP	LYON, MN	5/22/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62770.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62770.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
4209 V	LYON, MN	10/16/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63409.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63409.pdf

Marshall

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Marshall

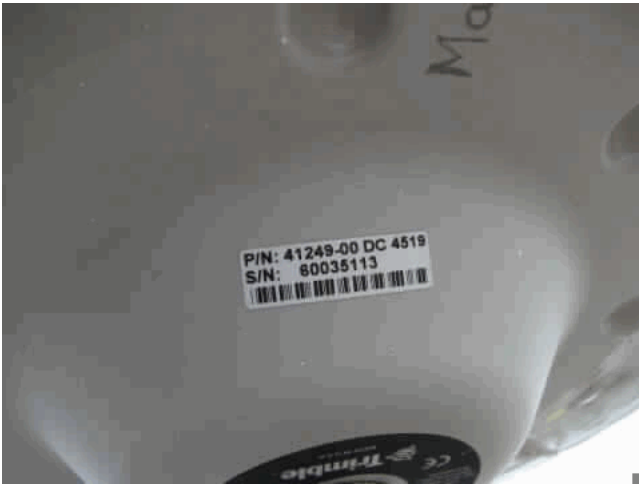
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Milaca - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
32	Milaca	Mlca	MILACA	MNMA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Milaca	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 76 near Milaca, MN.

Located on the west side of Trunk Highway 169 in Mille Lacs County. 8 miles north of Milaca.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
455232.83888	933950.73260	340.014	367.32

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5505R50043	10/10/2015	05/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5303K57527	07/24/2013	10/10/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4723K06171	06/06/2013	07/24/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4723K06171	12/30/2010	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4723K06171	08/27/2008	12/30/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4723K06171	08/31/2007	08/27/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241618	03/22/2006	08/31/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.03	4426235490	12/02/2005	03/22/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	1312118420	10/10/2015	05/02/2019
Trimble Navigation Ltd	Zephyr Geodetic Model 2 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	30473374	09/01/2007	10/10/2015
Trimble Navigation Ltd	Zephyr Geodetic 30 meters of LMR400 cable, assembled N-male to TNC-male	Trimble	12355952	08/01/2004	09/01/2007

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS MLCA MILACA ARP	MILLE LACS, MN	7/27/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_51143.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_51143.pdf

Milaca - Decommissioned

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
4812 AJ	MILLE LACS, MN	7/25/2004

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50842.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50842.pdf

Milaca - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Milaca - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Milbank

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
148	Milbank	Milbk		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Milbank	SD	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Banner Associates building in Milbank, SD

IN MILBANK, SOUTH ALONG COUNTY HIGHWAY 15 (478TH AVENUE) 0.36 MILES FROM THE INTERSECTION OF STATE TRUNK HIGHWAY 12 (4TH AVENUE WEST) AND COUNTY HIGHWAY 15, THEN 140 FEET EAST ALONG BANNER ASSOCIATES ENTRANCE DRIVE, THEN 75 FEET NORTH. ANTENNA IS MOUNTED ON A STEEL TOWER NEAR THE NORTHEAST CORNER OF BANNER ASSOCIATES OFFICE

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
451250.51965	963824.65123	327.920	353.70

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42317	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5310K42317	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42317	01/15/2014	05/15/2014

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109513	01/15/2014	

30 meters of LMR 400 cable, assembled N Male to TNC Male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS MLBK MILBANK ARP	GRANT, SD	1/15/2014

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_102875.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_102875.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:

Metric:

Milbank

Mn/ROAD

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
2	Mn/ROAD	MnRd	MNROAD	MNRD

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Otsego	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Cold Weather Testing Facility near Monticello, MN

Located on the north side of Interstate 94 in Wright County. 2 miles west of Alberville on the roof of the MNROAD research building.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
451532.00077	934206.81333	276.383	304.31

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5303K41727	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5303K41727	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5303K41727	08/12/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4626K02085	06/06/2013	08/12/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4626K02085	12/30/2010	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4626K02085	08/27/2008	12/30/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4626K02085	07/25/2007	08/27/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220315230	10/09/2006	07/25/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30212745	10/09/2006	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12606580	03/02/2004	10/09/2006

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MNRD MNROAD ARP	WRIGHT, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52121.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52121.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNROAD	WRIGHT, MN	6/17/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50713.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50713.pdf

Mn/ROAD

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Mn/ROAD

Antenna West



Receiver Location



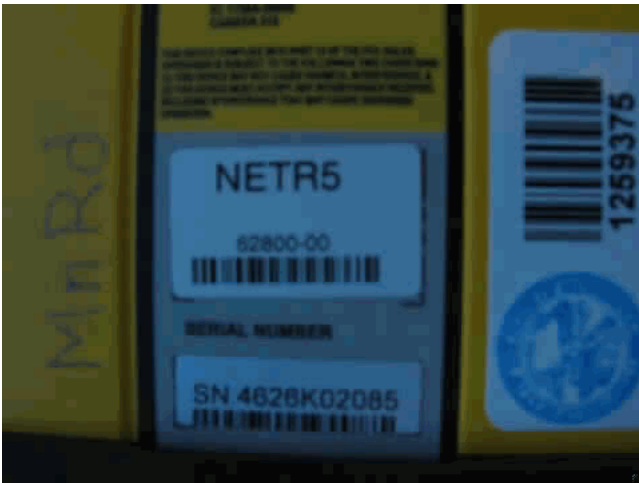
Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Moorhead

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
12	Moorhead	Morh	MOORHEAD	MORH

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Moorhead	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Clay County Government Center in Moorhead, MN.

Located 10 blocks west of Trunk Highway 75 on the Clay County Courthouse, at 11th Street North and 8th Avenue North in Moorhead.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
465303.12734	964549.58774	266.047	292.48

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42318	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5310K42318	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5310K42318	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5310K42318	05/15/2014	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42318	08/27/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4624K01626	12/30/2010	08/27/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01626	07/12/2010	12/30/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4833K57769	09/15/2008	07/12/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0220303619	05/01/2003	09/15/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1551016817	05/06/2021	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30962944	09/15/2008	03/31/2021
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12399255	05/01/2003	09/15/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS MORH MOORHEAD ARP	CLAY, MN	4/1/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52122.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52122.pdf

Moorhead

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
COURT	CLAY, MN	12/31/2003

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50673.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50673.pdf

Moorhead

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Moorhead

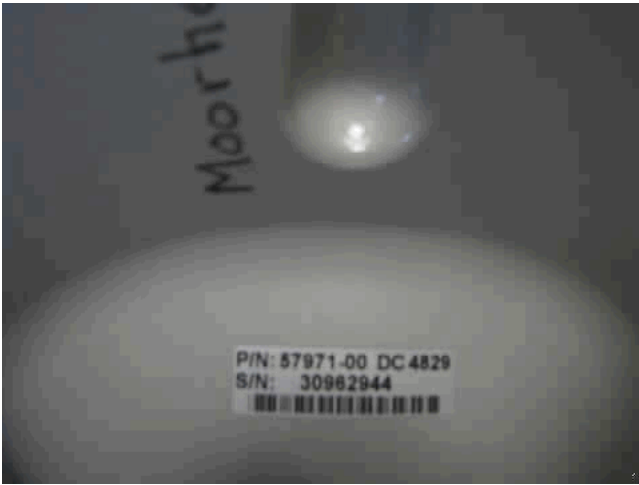
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Moose Lake - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
46	Moose Lake	MosL	MOOSE LAKE	MNML

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Moose Lake	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Moose Lake, MN.

Attached to the south side of the Moose Lake Truck Station building in Carlton County on the east side of Trunk Highway 61.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
462608.15973	924540.64874	324.578	352.45

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.93	5426R48936	01/08/2015	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4833K57769	06/06/2013	01/08/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4833K57769	12/30/2010	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.15	4833K57769	08/31/2010	12/30/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4811K54339	08/27/2008	08/31/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4811K54339	06/10/2008	08/27/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244228	06/21/2005	06/10/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30891119	06/10/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12668967	06/21/2005	06/10/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS MOSL MOOSE LAKE ARP	CARLTON, MN	6/21/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62769.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62769.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
X 157 A	CARLTON, MN	5/1/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62632.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62632.pdf

Moose Lake - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Moose Lake - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Moose Lake 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
176	Moose Lake 2	MsL2		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Moose Lake	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Minnesota Department of Transportation Truck Station in Moose Lake, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
462608.15973	924540.64874	324.578	352.45

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MOSL MOOSE LAKE ARP	CARLTON, MN	6/21/2005

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62769.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62769.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
X 157 A	CARLTON, MN	5/1/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62632.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62632.pdf

Moose Lake 2

Morris

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
171	Morris	Mors		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Morris	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Morris, MN.

East of the intersection of US 59 and MN 9.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40040	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MORS MORRIS ARP	STEVENS, MN	10/2/2019

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110565.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110565.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Morris

Morton

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
48	Morton	Mort	MORTON	MNMN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Morton	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 31 near Morton, MN.

Located on the east side of Trunk Highway 19 in Redwood County. 1 mile southwest of Morton (south of the Minnesota River).

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
443240.33126	945943.96220	231.470	259.07

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5945R40162	05/19/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.43	5113K74665	03/12/2020	03/18/2020
Trimble Navigation Ltd	Net R9	GPS	NAV 5.37	5113K74665	03/05/2019	03/12/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5113K74665	03/06/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5113K74665	01/03/2018	03/06/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5113K74665	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5113K74665	08/03/2011	02/19/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4848K59458	12/30/2010	08/03/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4848K59458	04/01/2009	12/30/2010
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57603	02/24/2009	04/01/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.25	4531254542	08/26/2008	02/24/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4531254542	08/30/2007	08/26/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253124	02/07/2006	08/30/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4526253124	07/19/2005	02/07/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	2312107181	05/19/2020	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31182737	02/24/2009	05/19/2020
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12697119	07/19/2005	02/24/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS MORT MORTON ARP	REDWOOD, MN	7/19/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52783.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52783.pdf

Morton

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MORTON	REDWOOD, MN	6/1/2005

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52778.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52778.pdf

Morton

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Morton

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



New Albin

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
69	New Albin	NAIb	NEW ALBIN	IANA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
New Albin IA	IA	USA	City

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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New Albin Police Station in New Albin, IA.

Attached to the southwest side of the Public Works building in New Albin, Iowa. 1 block west of Railroad Avenue and south of Ross Street.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
432949.45247	911726.49755	173.315	204.55

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5101K72891	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5101K72891	03/07/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5101K72891	01/03/2018	03/07/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5101K72891	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5101K72891	08/16/2011	02/19/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260764	11/27/2008	08/16/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260764	06/14/2006	11/27/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4545260764	06/01/2006	06/14/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	5000120279	03/22/2016	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107258	08/16/2011	03/22/2016
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60108739	06/01/2006	08/16/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS NALB NEW ALBIN ARP	ALLAMAKEE, IA	5/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62771.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62771.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2802 W 1	ALLAMAKEE, IA	7/24/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63089.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63089.pdf

New Albin

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

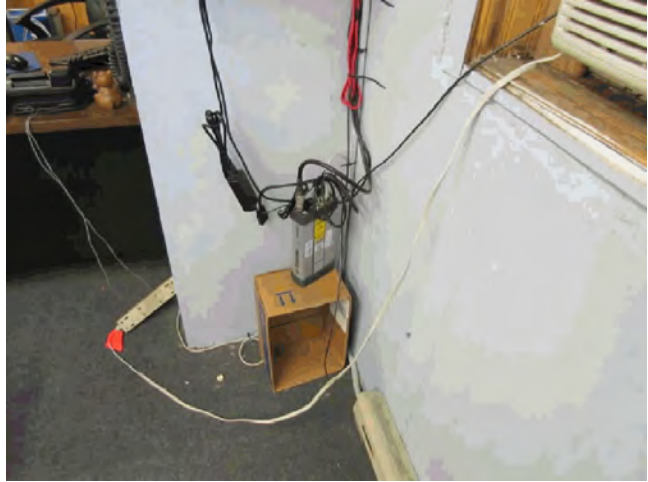


New Albin

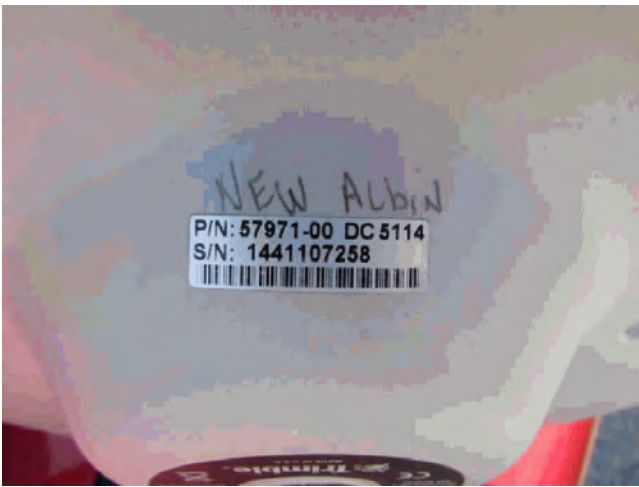
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



New Ulm

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
54	New Ulm	NUlm	NEW ULM	MNNU

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
New Ulm	MN	USA	DNR

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Natural Resources Southern Region Headquarters in New Ulm, MN.

Located on the west side of Trunk Highway 15 in Brown County, south of the Cottonwood River, at the Minnesota Department of Natural Resources Southern Regional Headquarters in New Ulm.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
441638.98347	942619.18298	269.182	297.23

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5829R40086	04/30/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5427R49040	12/08/2014	04/30/2019
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4848K59452	06/06/2013	12/08/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4848K59452	12/30/2010	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4848K59452	02/25/2009	12/30/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260773	06/18/2007	02/25/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260773	11/20/2005	06/18/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31052510	02/24/2009	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12693962	11/20/2005	02/24/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS NULM NEW ULM ARP	BROWN, MN	8/1/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62772.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62772.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
0805 P 1	BROWN, MN	11/7/2005

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_53154.pdf

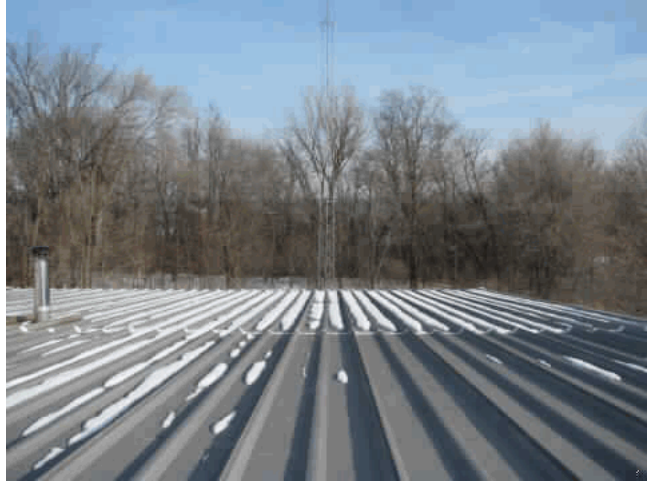
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_53154.pdf

New Ulm

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



New Ulm

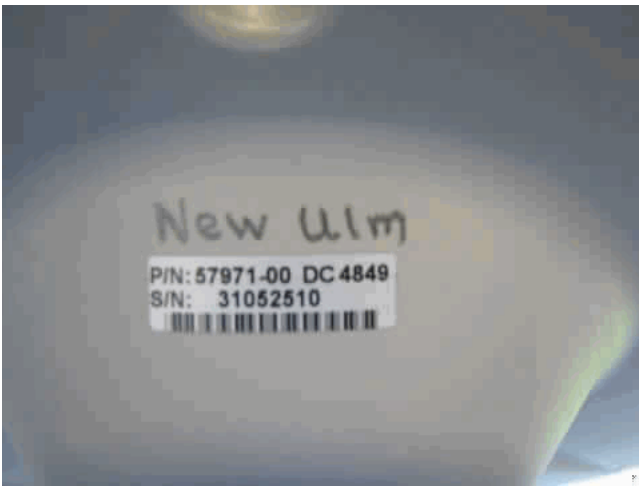
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Northome

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
94	Northome	Nohm	Northhome	MNNH

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Northome	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Antenna is on the east side of a steel sided building at the Minnesota Department of Transportation Truck Station in Northome, MN. The CORS is located in Koochiching County, northeast of Northome, Minnesota. From the Junction of Trunk Highway 46 and Trunk Highway 71 go 1.2 miles northeast along Trunk Highway 71, Then go South on Township Road 299 to the Truck Station.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
475300.81985	941605.77491	415.782	444.23

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5023K68001	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5023K68001	06/06/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5023K68001	12/30/2010	06/06/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5023K68001	11/17/2010	12/30/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241618	10/07/2008	11/17/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1441027898	11/17/2010	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60183458	10/07/2008	11/17/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS NOHM NORTHOME ARP	KOOCHICHING, MN	7/17/2008

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83079.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83079.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3611 AD 1	KOOCHICHING, MN	7/17/2008

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81466.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81466.pdf

Northome

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Northome

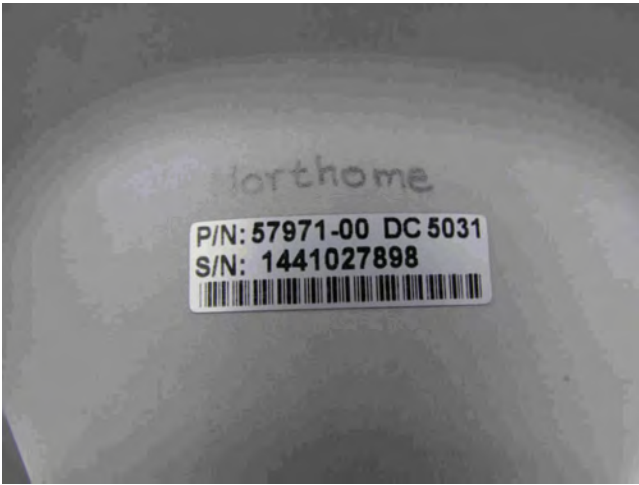
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Northwest Angle

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
165	Northwest Angle	NWAn		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Angle Township	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5505R50105	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS NWAN NW ANGLE ARP	LAKE OF THE WOODS, MN	11/6/2017

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110581.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110581.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
Metric:

Northwest Angle

Oakdale

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
5	Oakdale	Oakd	OAKDALE	MNOK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Oakdale	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Metro East Office in Oakdale, MN.

Attached to the south side of the Minnesota Department of Transportation Oakdale building in the northwest quadrant of Interstate 696 and Trunk Highway 5 in Washington County.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
445956.36893	925748.81834	292.619	320.18

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5218K84847	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5218K84847	03/07/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5218K84847	01/03/2018	03/07/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5218K84847	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.60	5218K84847	07/17/2012	02/19/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV4.42	4831K57511	09/13/2011	07/17/2012
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5048K72008	07/21/2011	09/13/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4831K57511	12/30/2010	07/21/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4831K57511	12/03/2008	12/30/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4723K06155	08/26/2008	12/03/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4723K06155	12/18/2007	08/26/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4626K01822	10/09/2006	12/18/2007
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220315199	04/01/2002	10/09/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1312118181	07/17/2012	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31050934	12/03/2008	07/17/2012
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30255526	10/09/2006	12/03/2008
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12286297	04/01/2002	10/09/2006
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS OAKD OAKDALE ARP	WASHINGTON, MN	4/1/2002

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52123.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52123.pdf

Oakdale

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
OAK SOUTH	WASHINGTON, MN	4/1/1997

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50714.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50714.pdf

Oakdale

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Oakdale

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Ogilvie

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
173	Ogilvie	Oglv		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Ogilvie	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

MnDOT solar cabinet near power substation in Ogilvie, MN.

On TH 47 in the SW quadrant of TH 47 and MN 23.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS OGLV OGILVIE ARP	KANABEC, MN	1/9/2020

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110587.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110587.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
- Metric:**

Ogilvie

Osage

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
101	Osage	Osag	Osage	IAOE

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Osage	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN OSAG OSAGE ARP	MITCHELL, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86016.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86016.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
Metric:

Osage

Park Rapids

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
80	Park Rapids	PrkR	Park Rapids	MNPK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Park Rapids	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Park Rapids, MN.

Attached to the west side of the Minnesota Department of Transportation Park Rapids Truck Station building.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
465428.80859	950404.08502	423.151	450.40

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40048	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69057	06/06/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69057	01/06/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01625	01/27/2009	01/06/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244228	10/08/2008	01/27/2009
Trimble Navigation Ltd	5700	GPS	NAV 1.30	0220315230	06/30/2008	10/08/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.15	0220315230	05/01/2007	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30255805	01/27/2009	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12286196	05/01/2007	01/27/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS PRKR PARK RAPIDS ARP	HUBBARD, MN	4/1/2007

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65430.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65430.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2904 B 1	HUBBARD, MN	5/24/2007

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_69709.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_69709.pdf

Park Rapids

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Park Rapids

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Pine River

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
61	Pine River	PinR	PINE RIVER	MNPR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Pine River	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station near Pine River, MN.

Attached to the roof on the south end of the Minnesota Department of Transportation's Pine River Truck Station building, in Cass County. On the west side of Trunk Highway 371, south of town.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
464150.38613	942225.20612	372.657	400.44

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42307	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42307	07/17/2013	01/01/2022
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4832K57687	12/30/2010	07/17/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4832K57687	10/02/2008	12/30/2010
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0440103983	04/20/2006	10/02/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30962939	09/30/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60041226	04/20/2006	09/30/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS PINR PINE RIVER ARP	CASS, MN	2/1/2006

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62773.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62773.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
ARVIG MNDT	CASS, MN	4/1/1981

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	HORIZONTAL CONTROL DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_3953.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_3953.pdf

Pine River

Monument



Antenna Monument



Mark



Antenna North



Mark

Antenna East



Pine River

Antenna South



Receiver Serial Number



Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Pine River

Antenna Roof



Pipestone

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
72	Pipestone	Ppst	PIPESTONE	MNPP

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Pipestone	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Pipestone, MN.

Located 1 mile west of Trunk Highway 75 in Pipestone County at the Minnesota Department of Transportation Truck Station, at 604 4th Street Northwest in Pipestone, Minnesota.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440010.95320	961931.05642	502.899	528.91

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5049K72228	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5049K72228	08/09/2011	01/01/2022
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244227	10/22/2008	08/09/2011
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0220303617	06/01/2006	10/22/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109346	08/09/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60108975	06/01/2006	08/09/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS PPST PIPESTONE ARP	PIPESTONE, MN	6/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62774.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62774.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
W 11 A	PIPESTONE, MN	7/5/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62897.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62897.pdf

Pipestone

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Pipestone

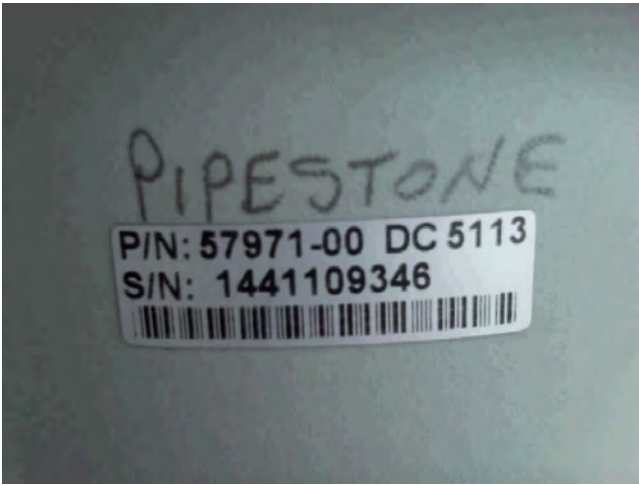
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Pliny - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
38	Pliny	Plny	PLINY	MNPL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Pliny	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 50, on Trunk Highway 65, near Pliny, MN.

Located in Aitkin County on the west side of Trunk Highway 65, near Pliny. 7 miles south of its north junction with Trunk Highway 27.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
462022.33820	931543.48491	355.161	382.72

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5433R49229	11/07/2014	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4816K55322	06/06/2013	11/07/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4816K55322	12/30/2010	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4816K55322	06/05/2008	12/30/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253121	08/28/2007	06/05/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253121	04/28/2006	08/28/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4526253121	12/08/2004	04/28/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30882533	06/04/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12694052	12/08/2004	06/04/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS PLNY PLINY ARP	AITKIN, MN	12/8/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52256.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52256.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
PLINVRS	AITKIN, MN	12/8/2004

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_51065.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_51065.pdf

Pliny - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Pliny - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Pliny 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
169	Pliny 2	Pln2		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Pliny	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Road and Weather Information System (RWIS) site number 50, on Trunk Highway 65, near Pliny, MN.

Located in Aitkin County on the west side of Trunk Highway 65, near Pliny. 7 miles south of its north junction with Trunk Highway 27.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5826R40094	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS PLN2 PLINY 2 ARP	AITKIN, MN	12/5/2018

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110582.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110582.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
PLINVRS	AITKIN, MN	12/8/2004

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_51065.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_51065.pdf

Pliny 2

Prosper

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
62	Prosper	Prsp	PROSPER	MNPS

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Prosper	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 65, on Trunk Highway 52, near Prosper/Canton, MN.

Located on the south side of Trunk Highway 52 in Fillmore County. 2.8 miles east of Canton.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433053.82175	915306.82427	381.969	412.03

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5945R40120	03/10/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5112K74594	03/05/2019	03/10/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5112K74594	03/07/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5112K74594	01/03/2018	03/07/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5112K74594	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5112K74594	08/29/2011	02/19/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241594	10/20/2010	08/29/2011
Trimble Navigation Ltd	Net RS	GPS	Nav 1.20	4504244218	03/25/2009	10/20/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235496	10/05/2008	03/25/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260760	06/30/2008	10/05/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260760	03/30/2006	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1441030940	06/08/2017	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	LMR 400	1441053389	08/29/2011	06/08/2017
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	60115233	03/30/2006	08/29/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS PRSP PROSPER ARP	FILLMORE, MN	5/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62775.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62775.pdf

Prosper

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2309 Q 1	FILLMORE, MN	8/29/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63169.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63169.pdf

Prosper

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Prosper

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Red Lake

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
111	Red Lake	RedL	RED LAKE	MNRL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Red Lake	MN	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Mounted to the roof of the Red Lake Indian Law Enforcement Center in Red Lake Minnesota

IN RED LAKE, 0.65 MILE EAST ALONG TRUNK HIGHWAY 1 FROM JUNCTION OF TRUNK HIGHWAY 1 AND TRUNK HIGHWAY 89 IN RED LAKE, AT TRUNK HIGHWAY 1 MILEPOINT 117.65.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
475234.64219	950208.10188	351.095	379.16

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5433R49310	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5433R49310	07/13/2015	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4831K57559	06/06/2013	07/13/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4831K57559	01/03/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.14	4831K57559	05/05/2010	01/03/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260760	12/19/2008	05/05/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	1440929317	05/05/2010	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS REDL RED LAKE ARP	BELTRAMI, MN	

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85691.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85691.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
0404 U	BELTRAMI, MN	7/1/2008

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_81469.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_81469.pdf

Red Lake

Monument



Antenna North



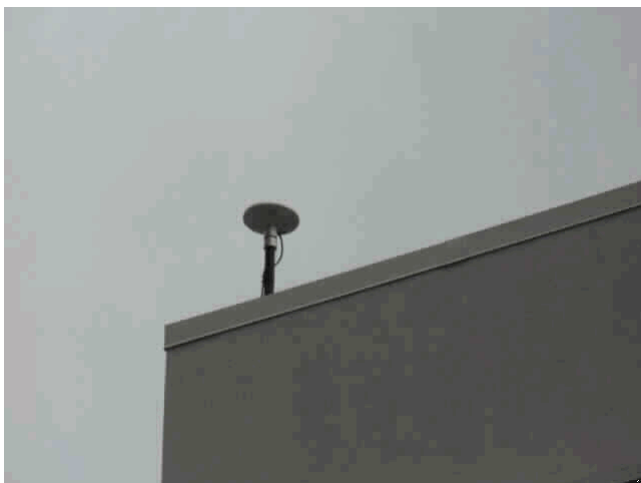
Mark



Antenna East



Antenna Monument



Antenna South

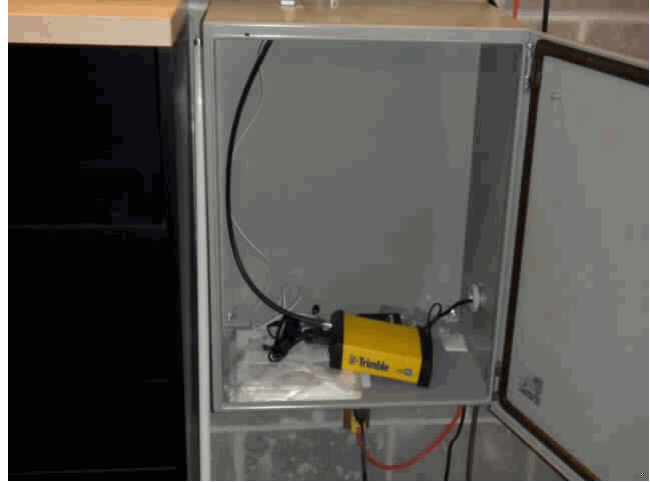


Red Lake

Antenna West



Receiver Location



Antenna Serial Number



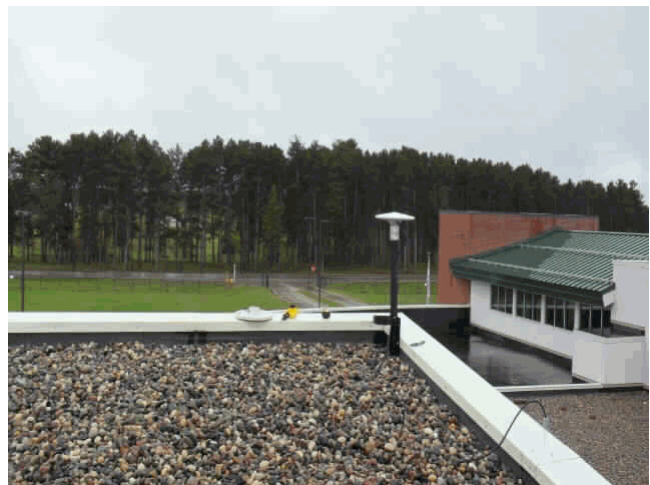
Antenna Building



Receiver Serial Number



Antenna Roof



Red Wing

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
8	Red Wing	RedW	RED WING	MNRW

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Red Wing	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Goodhue County Courthouse in Red Wing, MN

0.30 miles Southeast along West Avenue from the junction of West Avenue and Trunk Highway 61. Attached to west side of building.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
443342.54951	923202.61274	218.609	248.81

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5303K57584	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5303K57584	06/10/2013	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4626K02087	06/06/2013	06/10/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4626K02087	01/03/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4626K02087	08/27/2008	01/03/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4626K02087	06/30/2008	08/27/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4626K02087	10/12/2006	06/30/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241609	04/01/2002	10/12/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	5000112666	06/23/2014	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30213958	10/12/2006	06/23/2014
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12281654	04/01/2004	10/12/2006
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS REDW RED WING ARP	GOODHUE, MN	4/1/2002

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52124.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52124.pdf

Red Wing

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
REW	GOODHUE, MN	12/4/2003

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	FLANGE-ENCASED ROD

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50695.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50695.pdf

Red Wing

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Red Wing

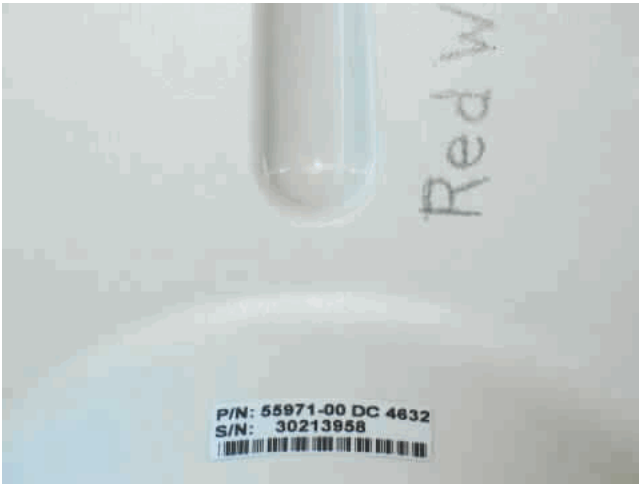
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Regal

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
22	Regal	Regl	REGAL	MNRG

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Regal	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 43, on Trunk Highway 55 near Regal, MN.

0.25 miles west of Georgeville, 0.25 miles west along Trunk Highway 55 from the junction of Trunk Highway 55 and County Road 196 and County Road 69 in Georgeville.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
452556.65886	945557.25212	355.112	381.69

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40052	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42336	07/16/2013	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4812K54631	06/06/2013	07/16/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4812K54631	01/03/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4812K54631	08/27/2008	01/03/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4812K54631	06/30/2008	08/27/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4812K54631	06/19/2008	06/30/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4426235490	11/23/2003	06/19/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30891096	06/19/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12426141	11/23/2003	06/19/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS REGL REGAL ARP	STEARNS, MN	11/25/2003

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_51141.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_51141.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
REGAL	STEARNS, MN	11/25/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50740.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50740.pdf

Regal

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Regal

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Remer

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
78	Remer	Remr	REMER	MNRE

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Remer	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Remer, MN.

Attached to the east side of the Minnesota Department of Transportation Truck Station in Remer, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
470330.66397	935424.15109	388.168	416.93

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42315	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5310K42315	03/07/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42315	07/17/2013	03/07/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4723K06155	06/13/2013	07/17/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4723K06155	01/03/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS	NAV 3.64	4723K06155	01/27/2009	01/03/2011
Trimble Navigation Ltd	Net R5	GPS	NAV 1.20	4426235517	06/11/2008	01/27/2009
Trimble Navigation Ltd	5700	GPS	NAV 1.15	0220310304	01/15/2007	06/11/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30255526	01/27/2009	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12518145	01/15/2007	01/27/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS REMR REMER ARP	CASS, MN	4/1/2007

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65449.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65449.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1108 A 1	CASS, MN	5/23/2007

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65882.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65882.pdf

Remer

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Remer

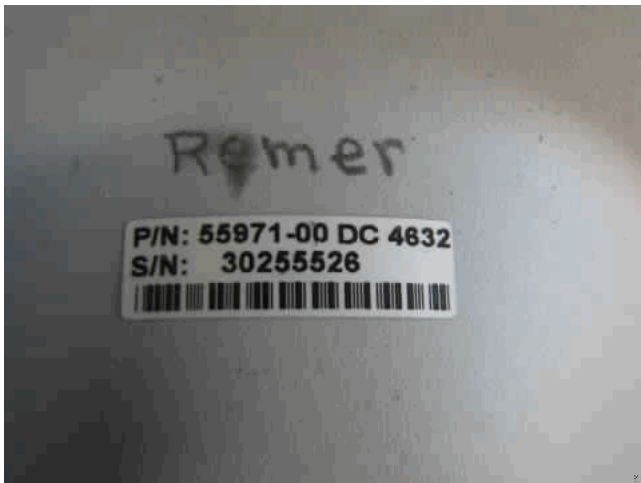
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Roberts - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
30	Roberts	Rbrt	ROBERTS	WIRB

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Roberts	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Wisconsin Department of Transportation Weigh Station (Pier)

Located in the southeast corner of a Wisconsin Department of Transportation Weigh Station on the south side of Interstate 94, 5.5 miles east of Hudson.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
445733.44877	923637.21692	285.991	315.65

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4848K59447	08/23/2011	09/24/2012
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4714K05589	12/30/2010	08/23/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4714K05589	08/28/2008	12/30/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4714K05589	02/08/2008	08/28/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.5	4624K01620	08/04/2007	02/08/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.30	4624K01620	05/17/2007	08/04/2007
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.10	4624K01620	10/04/2006	05/17/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4426235494	02/13/2006	10/04/2006
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4426235494	12/01/2005	02/13/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30213976	10/04/2006	09/24/2012
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12471088	04/01/2004	10/04/2006
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS RBRT ROBERTS ARP	ST. CROIX, WI	4/1/2004

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52135.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52135.pdf

Roberts - Decommissioned

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
ROBERTS	ST. CROIX, WI	7/28/2004

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50868.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50868.pdf

Roberts - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Roberts - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Rock Rapids

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
95	Rock Rapids	RokR	Rock Rapids	IARR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Rock Rapids	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN ROKR ROCK RAPIDS ARP	LYON, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86005.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86005.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Rock Rapids

Roosevelt

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
108	Roosevelt	Rsvt	ROOSEVELT	MNRV

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Roosevelt	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 78 near Roosevelt, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
484721.79710	950304.46005	337.307	365.97

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5114K74826	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5114K74826	03/07/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5114K74826	01/03/2018	03/07/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.10	5114K74826	09/26/2017	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74826	02/19/2013	09/26/2017
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74826	06/14/2011	02/19/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260763	03/09/2010	06/13/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241616	06/30/2009	03/09/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241607	12/17/2008	06/30/2009

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107135	06/13/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12635871	12/17/2008	06/13/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS RSVT ROOSEVELT ARP	LAKE OF THE WOODS, MN	4/1/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85687.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85687.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
TOMATO	LAKE OF THE WOODS, MN	4/1/2009

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86231.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86231.pdf

Roosevelt

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Roosevelt

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Roseau

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
114	Roseau	Rose	Roseau	MNRU

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Roseau	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Roseau, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
485045.29999	954644.93800	301.443	329.46

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5114K74892	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5114K74892	06/14/2011	01/01/2022
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260753	06/30/2009	06/14/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109109	06/14/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12532426	06/30/2009	06/14/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ROSE ROSEAU ARP	ROSEAU, MN	6/30/2009

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_93655.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_93655.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6803 N 1	ROSEAU, MN	6/16/2009

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87068.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87068.pdf

Roseau

Monument



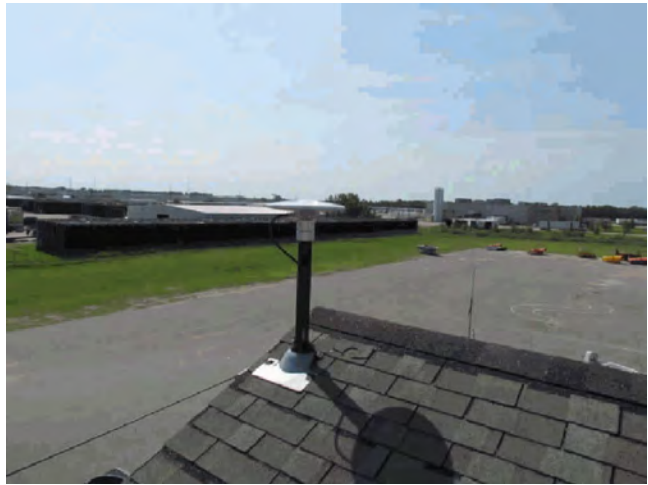
Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Roseau

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Rothsay

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
14	Rothsay	Roth	ROTHSAY	MNRT

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Rothsay	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 14 on I-94 near Rothsay, MN

1.5 MILES NORTH-NORTHWEST ALONG INTERSTATE 94 FROM ROTH SAY, AT INTERSTATE 94 MILEPOINT 37.5.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
462925.80708	961728.56597	346.114	372.92

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5433R49295	04/16/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5433R49295	03/07/2018	04/16/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5433R49295	01/03/2018	03/07/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.93	5433R49295	01/20/2015	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4848K59463	06/06/2013	01/20/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.80	4848K59463	09/07/2011	06/06/2013
Trimble Navigation Ltd	Net R3	GPS	NAV 4.19	4831K57583	01/03/2011	09/07/2011
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57583	09/09/2008	01/03/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235483	08/29/2007	09/09/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4426235483	04/25/2006	08/29/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4426235483	04/01/2003	04/25/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30976564	09/09/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12422962	09/01/2003	09/09/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS ROTH ROTH SAY ARP	WILKIN, MN	4/1/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50692.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50692.pdf

Rothsay

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
ROTHS	WILKIN, MN	11/24/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - MEDIUM	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50691.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50691.pdf

Rothsay

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Rothsay

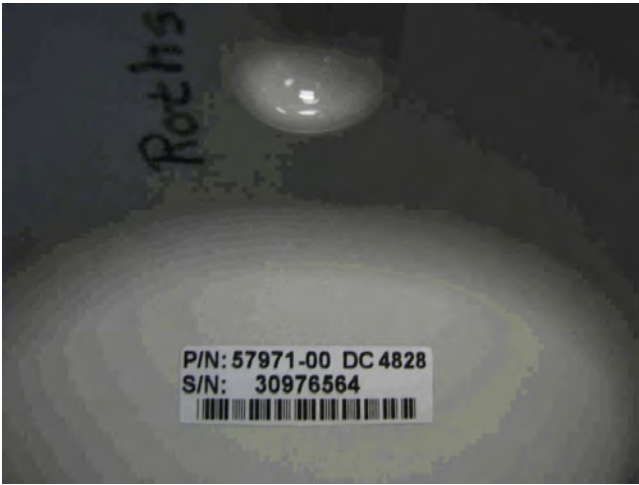
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Rushford

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
70	Rushford	Rshf	RUSHFORD	MNRF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Rushford	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Rushford, MN.

Located 2 block south of Trunk Highway 43 in Fillmore County on the south side of the Minnesota Department of Transportation Truck Station building at the north end of Rushford.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
434921.40745	914545.93745	222.324	252.56

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5704R51263	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5048k72083	11/29/2012	01/01/2022
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253128	07/28/2010	11/29/2012
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260773	05/05/2010	07/28/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4531254542	06/09/2009	05/05/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260766	06/30/2008	06/09/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260766	06/01/2006	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30212693	01/01/2022	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	30962946	05/02/2011	01/01/2022
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60108962	06/01/2006	05/02/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS RSHF RUSHFORD ARP	FILLMORE, MN	6/1/2006

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62776.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62776.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2307 B 1	FILLMORE, MN	7/25/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63024.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63024.pdf

Rushford

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Rushford

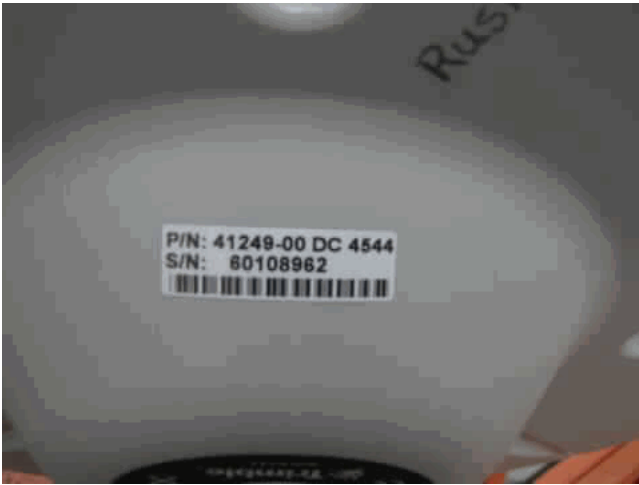
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Rushmore

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
58	Rushmore	Rshm	RUSHMORE	MNRM

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Rushmore	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 7, on Interstate 90, near Rushmore, MN.

Located on the south side of Interstate 90 in Nobles County, 1.3 miles east of Rushmore.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433814.53086	954612.43735	489.806	516.28

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5826R40091	03/18/2020	
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5826R40091	05/20/2019	03/18/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5505R50110	03/05/2019	05/20/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5505R50110	03/07/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5505R50110	01/03/2018	03/07/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5505R50110	07/25/2016	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5101K72887	02/19/2013	07/25/2016
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5101K72887	05/24/2011	02/19/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235483	03/01/2010	05/24/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241571	06/25/2009	03/01/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235496	04/15/2009	06/25/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260773	07/29/2008	04/15/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260773	03/26/2008	07/29/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244255	12/19/2007	03/26/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260761	08/28/2007	12/19/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260761	04/03/2006	08/28/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	2614756189	05/20/2019	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109261	05/24/2011	05/20/2019
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60108836	04/03/2006	05/24/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS RSHM RUSHMORE ARP	NOBLES, MN	3/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62777.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62777.pdf

Rushmore

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
M 388 A	NOBLES, MN	5/17/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets**English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62635.pdf**Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62635.pdf

Rushmore

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Rushmore

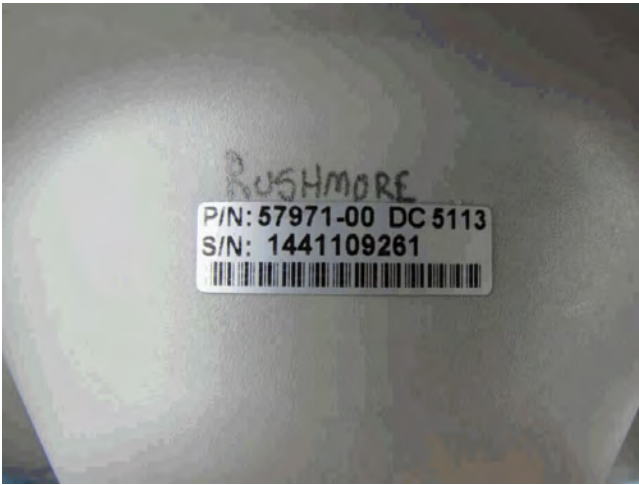
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Sauk Centre

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
31	Sauk Centre	SakC	SAUK CENTRE	MNSC

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Sauk Centre	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 16, on Interstate 94 near Sauk Centre, MN.

Locate 1 mile east of Trunk Highway 71 (Sauk Centre) in Stearns County on the south side of Interstate 94.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
454246.91622	945552.48063	355.102	381.63

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5829R40064	03/25/2020	
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5829R40064	07/02/2019	03/25/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42281	03/05/2019	07/02/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5310K42281	03/09/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5310K42281	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42281	07/16/2013	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4816K55312	06/06/2013	07/16/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4816K55312	01/03/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4816K55312	08/28/2008	01/03/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4816K55312	06/06/2008	08/28/2008
Trimble Navigation Ltd	Net RS	GPS	Nav 1.20	4526253123	02/13/2008	06/06/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237724	08/30/2007	02/13/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4437237724	11/06/2006	08/30/3007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4437237724	07/21/2006	11/06/2006
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4437237724	07/15/2004	07/21/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30895451	06/19/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12648647	07/15/2004	06/19/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS SAKC SAUK CENTRE ARP	STEARNS, MN	7/15/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_51142.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_51142.pdf

Sauk Centre

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
7380 AG 2	STEARNS, MN	7/27/2004

<u>Monument Type</u>	<u>Disk Type</u>
STRUCTURE (MEDIUM - MASONRY OR CONCRET	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50843.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50843.pdf

Sauk Centre

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Sauk Centre

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Silver Bay

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
127	Silver Bay	SlvB	SILVER BAY	MNSY

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Silver Bay	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Silver Bay, MN.

0.65 MILE NORTHEAST ALONG TRUNK HIGHWAY 61 FROM JUNCTION OF TRUINK HIGHWAY 61 AND COUNTY ROAD 5 IN SILVER BAY AT TRUNK HIGHWAY 61 MILEPOINT 54.95, THEN 0.1 MILE NORTHWEST ALONG DRIVEWAY NUMBER 5163 (ENTRANCE TO SILVER BAY TRUCK STATION)

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
471809.36803	911504.35359	208.602	237.89

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69037	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69037	06/06/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69037	05/04/2011	06/06/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441028103	05/04/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS SLVB SILVER BAY ARP	LAKE, MN	5/4/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95780.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95780.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3807 K 1	LAKE, MN	5/5/2011

<u>Monument Type</u>	<u>Disk Type</u>
ROCK (1 TO 3 METERS)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_93696.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_93696.pdf

Silver Bay

Sioux Falls

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
125	Sioux Falls	SFls	SIOUX FALLS COOP	SFSD

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Sioux Falls	SD	USA	City

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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City of Sioux Falls

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433419.39031	964342.61569	428.337	454.61

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5105K73501	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5105K73501	03/09/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5105K73501	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5105K73501	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5105K73501	09/20/2011	02/19/2013

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107584	09/20/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
SIOUX FALLS COOP CORS ARP	MINNEHAHA, SD	5/22/1996

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_64452.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_64452.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:

Metric:

Sioux Falls

Monument



Antenna North



Mark

Antenna East



Antenna Monument



Antenna South



Sioux Falls

Antenna West



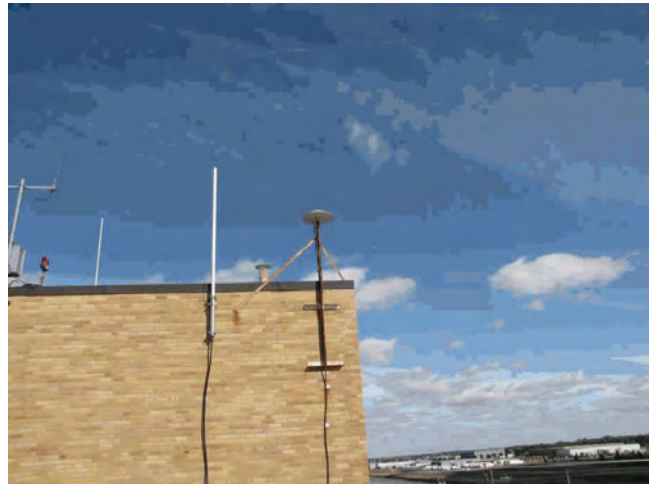
Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof

Siren

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
81	Siren	Sirn	SIREN	WISN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Siren	WI	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Concrete pedestal monument at the Burnett County Airport in Siren, Wisconsin.

Located on the West side of TH35 in Burnett County 0.3 miles north of Hwy 70 near Siren, Wisconsin

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
454919.06013	922206.63521	275.981	302.77

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5309K42183	03/05/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5309K42183	03/09/2018	03/05/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5309K42183	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5309K42183	07/31/2013	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4723K06164	06/06/2013	07/31/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4723K06164	07/28/2010	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4723K06164	08/27/2008	07/28/2010
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4723K06164	08/23/2007	08/27/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	3122181338	12/05/2015	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30473506	08/23/2007	12/05/2015

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS SIRN SIREN ARP	BURNETT, WI	4/1/2007

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_75258.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_75258.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
BM SIREN	BURNETT, WI	11/19/2007

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOUNDATION	BENCH MARK DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_75253.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_75253.pdf

Siren

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Siren

Antenna West



Receiver Location



Antenna Serial Number



Antenna Roof

Receiver Serial Number



Spirit Lake

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
97	Spirit Lake	SptL	Spirit Lake	IASL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Spirit Lake	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN SPTL SPIRIT LAKE ARP	DICKINSON, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86012.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86012.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Spirit Lake

Squaw Lake

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
116	Squaw Lake	SqwL	SQUAW LAKE	MNSQ

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Squaw Lake	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Road and Weather Information System (RWIS) site number 41 near Squaw Lake, MN.

1.0 mile south-southeast of Squaw Lake along trunk highway 46.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
473613.44116	940736.20956	383.088	411.59

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5920R40013	11/04/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69038	03/06/2019	11/04/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5030K69038	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5030K69038	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69038	06/06/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69038	01/04/2011	06/06/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69038	09/15/2010	01/04/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241611	08/12/2009	09/15/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	60403G0037	11/04/2021	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	1441027784	09/15/2010	11/04/2021
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	12422962	08/17/2009	09/15/2010

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS SQWL SQUAW LAKE ARP	ITASCA, MN	8/12/2009

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85706.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85706.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3109 AE	ITASCA, MN	7/30/2009

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE POST (PREFABRICATED)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_87348.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_87348.pdf

Squaw Lake

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Squaw Lake

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



St. Cloud - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
33	St. Cloud	StCl	ST.CLOUD	MNST

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
St. Cloud	MN	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Frontier Precision Office in St. Cloud, MN.

Located on the south side of the Frontier Precision Inc. building, 2852 N 7th Street, in Saint Cloud.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
453347.84059	941133.38294	297.604	324.57

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50009	04/29/2015	09/15/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4645K03013	01/03/2011	04/29/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4645K03013	08/27/2008	01/03/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4645K03013	06/30/2008	08/27/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30255825	06/30/2008	09/15/2018

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS STCL ST CLOUD ARP	STEARNS, MN	6/30/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52125.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52125.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
A 384	STEARNS, MN	4/1/1990

<u>Monument Type</u>	<u>Disk Type</u>
STEEL ROD (NO SLEEVE)	METAL ROD

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_31143.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_31143.pdf

St. Cloud - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



St. Cloud - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



St. Cloud - Initial Site - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
13	St. Cloud - Initial Site	StCx		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
St. Cloud	MN	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Former office of Frontier Precision in St. Cloud, MN.

Located on the north side of the Frontier Precision Inc. building, 1906 North 7th Street, in Saint Cloud.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
453351.22865	941048.15927	295.999	323.03

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235517	10/01/2004	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	30966023	06/01/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12379362	10/01/2004	06/01/2008
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS STCX ST CLOUD ARP	STEARNS, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95872.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95872.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
STCVRS	STEARNS, MN	9/27/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE) (<10 FT)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50944.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50944.pdf

St. Cloud - Initial Site - Decommissioned

St. Croix Falls

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
159	St. Croix Falls	StCF		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
St. Croix Falls	WI	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Polk County Recycling Center

IN ST CROIX FALLS, 2.55 MILES EAST ALONG TRUNK HIGHWAY 8 FROM THE JUNCTION OF TRUNK HIGHWAY 8 AND TRUNK HIGHWAY 35 IN ST CROIX FALLS, THEN 0.05 MILES NORTH ON 208TH STREET, THEN 0.05 MILES EAST ON ENTRANCE TO POLK COUNTY RECYCLING.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.45	5505R50121	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	3122181357	01/01/2022	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS STCF ST CROIX FALLS ARP	POLK, WI	11/3/2015

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110583.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110583.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

English:

Metric:

St. Croix Falls

St. James - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
71	St. James	StJm	ST JAMES	MNSJ

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
St. James	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in St. James, MN.

Attached to the south side of the Minnesota Department of Transportation St. James Truck Station building in Watonwan County. 0.8 miles north of Trunk Highway 60 on Trunk Highway 4 and 0.5 miles east of 7th Avenue.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
435845.60699	943631.65582	304.550	332.44

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5101K72962	09/13/2011	09/17/2012
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237727	06/03/2009	09/13/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241616	06/30/2008	06/03/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241616	05/01/2006	06/30/2009

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	LMR 400	1441112138	09/13/2011	09/17/2012
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60052040	05/01/2006	09/13/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS STJM ST JAMES ARP	WATONWAN, MN	5/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62778.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62778.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
8309 K 2	WATONWAN, MN	7/6/2006

<u>Monument Type</u>	<u>Disk Type</u>
UNKNOWN	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62900.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62900.pdf

St. James - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



St. James - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



St. James 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
143	St. James 2	StJ2	ST JAMES 2	MNSS

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
St. James	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in St. James, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
435845.69207	943629.14321	298.534	326.37

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40004	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5505R50052	09/01/2015	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5113k74671	09/17/2012	09/01/2015

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	LMR 600	1112118519	09/17/2012	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS STJ2 ST JAMES ARP	WATONWAN, MN	8/7/2012

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_97305.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_97305.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
8309 B 1	WATONWAN, MN	8/7/2012

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_97303.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_97303.pdf

St. James 2

Monument



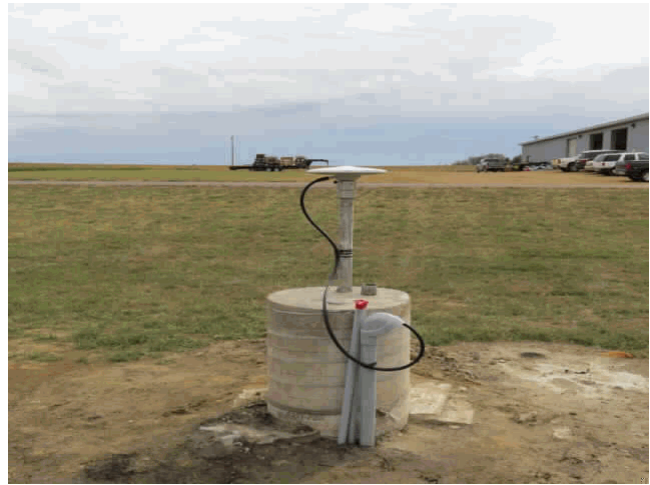
Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



St. James 2

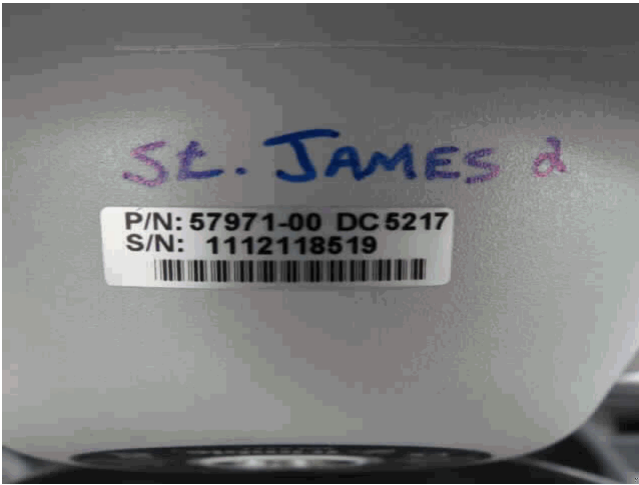
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



St. Paul - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
1	St. Paul		4848k59458	

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
St. Paul	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Mn/Dot Central Office St. Paul, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
445711.94106	930617.04025	289.469	316.81

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS STPL ST PAUL ARP	RAMSEY, MN	4/1/1999

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52136.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52136.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

St. Paul - Decommissioned

St. Vincent

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
115	St. Vincent	StVn	ST.VINCENT	MNVT

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
St. Vincent	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 57 near St. Vincent, MN.

1.3 miles east of St. Vincent along trunk highway 171.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
485815.50187	971205.60556	217.853	244.5

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	6103R40078	10/08/2021	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5114K74932	03/06/2019	10/08/2021
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5114K74932	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5114K74932	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5114K74932	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74932	06/13/2011	02/19/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244255	08/11/2009	06/13/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	61013G0027	10/08/2021	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441107100	06/13/2011	10/08/2021
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR400	12323587	08/11/2009	06/13/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS STVN ST VINCENT ARP	KITTSOON, MN	8/11/2009

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_85704.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_85704.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
3507 D	KITTSOON, MN	6/10/2009

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_88253.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_88253.pdf

St. Vincent

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



St. Vincent

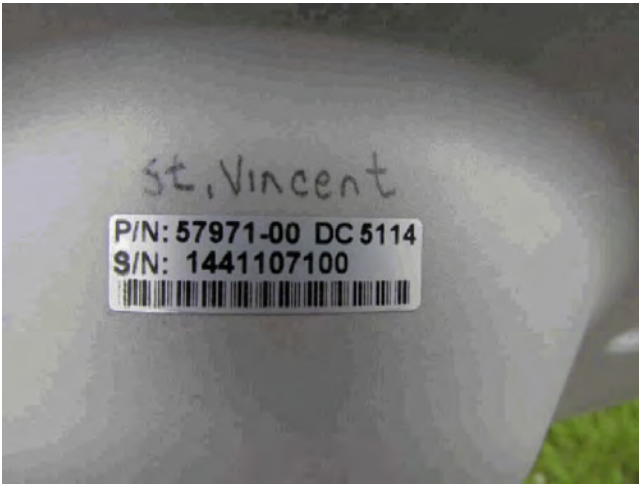
Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Starbuck

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
21	Starbuck	Strb	STARBUCK	MNSB

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Starbuck	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 37 on Trunk Highway 29, near Starbuck, MN.

Located 9 miles south of Starbuck in Pope County on the west side of Trunk Highway 29.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
452917.66969	953343.70977	363.937	390.14

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5949R44096	03/09/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5023K67989	10/14/2019	03/09/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5443R50013	03/06/2019	10/14/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5443R50013	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5443R50013	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50013	08/06/2015	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5218K84828	02/19/2013	08/06/2015
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.60	5218K84828	07/11/2012	02/19/2013
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 4.19	4831K57610	01/03/2011	07/11/2012
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57610	09/09/2008	01/03/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4426235494	08/28/2007	09/09/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4426235494	12/06/2006	08/28/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4426235490	08/17/2006	12/06/2006
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4426235490	12/14/2005	08/17/2006
Trimble Navigation Ltd	Net RS	GPS	1.0-3	4426235490	11/23/2003	12/14/2005

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30976523	09/09/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12323587	11/23/2003	09/09/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS STRB STARBUCK ARP	POPE, MN	11/26/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_51135.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_51135.pdf

Starbuck

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
BENS	POPE, MN	11/26/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50935.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50935.pdf

Starbuck

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Starbuck

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Stewartville

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
40	Stewartville	Stwv	STEWARTVILLE	MNSV

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Stewartville	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 70, on Trunk Highway 63 near Stewartville, MN.

3.2 MILES NORTH OF STEWARTVILLE, 1.25 MILES NORTH ALONG TRUNK HIGHWAY 63 FROM JUNCTION TRUNK HIGHWAY 63 AND INTERSTATE HIGHWAY 90 (2.0 MILES NORTH OF STEWARTVILLE)

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
435409.04772	922855.93016	362.260	392.16

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5829R40031	03/06/2019	
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.33	5829R40031	10/25/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5023K68006	03/09/2018	10/25/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5023K68006	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.10	5023K68006	06/18/2017	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5023K68006	06/06/2013	10/25/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5023K68006	01/03/2011	06/06/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5023K68006	09/29/2010	01/03/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241609	08/28/2007	09/29/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241609	12/01/2005	08/28/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr 3 Geodetic	Trimble	1441043575	10/31/2018	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	1441027834	09/29/2010	10/31/2018
Trimble Navigation Ltd	Zephyr Geodetic	Trimble LMR 400	12693800	02/09/2005	09/29/2010

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS STWV STEWARTVILLE ARP	OLMSTED, MN	10/12/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52207.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52207.pdf

Stewartville

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
STEW	OLMSTED, MN	10/12/2004

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52206.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52206.pdf

Stewartville

Monument



Antenna North



Mark



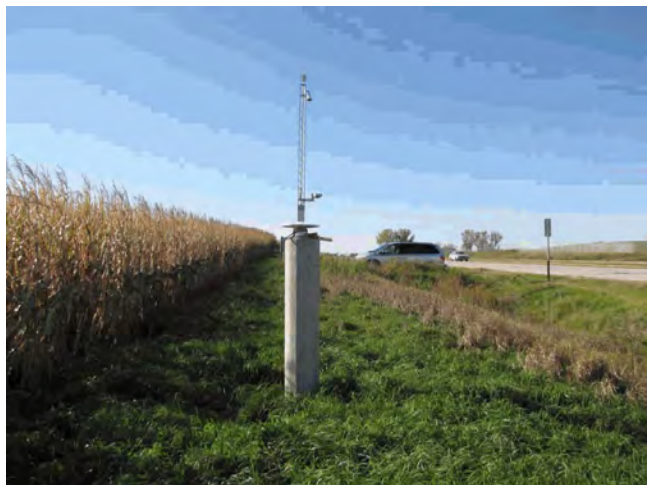
Antenna East



Antenna Monument



Antenna South



Stewartville

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Superior

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
155	Superior	Supr		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Superior	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
464045.24994	920551.39965	179.976	208.11

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN SUPR SUPERIOR ARP	DOUGLAS, WI	4/1/2015

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104489.pdf
Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104489.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
Metric:

Superior

Swea City - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
98	Swea City	SweC	Swea City Decom	IASW

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Swea City	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN SWEC SWEA CITY ARP	KOSSUTH, IA	1/1/2009

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86013.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86013.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Swea City - Decommissioned

Swea City 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
146	Swea City 2	SwC2	Swea City	IASE

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Swea City	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Iowa Department of Transportation Maintenance Building at 806 Hwy. 9, Swea City, IA.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
432300.12314	941747.25816	337.987	366.41

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN SWC2 SWEA CITY 2 ARP	KOSSUTH, IA	4/30/2013

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_100426.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_100426.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Swea City 2

Thief River Falls

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
92	Thief River Falls	TfRF	Thief River Falls	MNTF

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Thief River Falls	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Antenna is mounted on the west side of the building at the Minnesota Department of Transportation Truck Station in Thief River Falls, MN.
 The CORS is Located in Thief Rver Falls Truck Station at the southeast quadrant of the intersection of Trunk Highway 59 and Trunk Highway 1 in Thief River Falls, Minnesota.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
480708.94595	961226.66399	327.037	354.23

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5829R40025	05/02/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5115K74977	03/09/2018	07/26/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5115K74977	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5115K74977	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5115K74977	08/01/2011	02/19/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5051k72672	06/15/2011	08/01/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253121	11/17/2009	06/15/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.25	4545260767	07/15/2008	11/17/2009

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109083	08/01/2011	
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441053283	06/15/2011	08/01/2011
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12426119	07/15/2008	06/15/2011

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS TFRF THIEF RIVER ARP	PENNINGTON, MN	7/15/2008

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_83080.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_83080.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
5701 L	PENNINGTON, MN	8/12/2008

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MAT FOUNDATION (NON-PAVEMENT) SURVEY DISK	

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_82001.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_82001.pdf

Thief River Falls

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Thief River Falls

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Tofte - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
133	Tofte	Toft		MNTO

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Tofte	MN	USA	DNR

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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DNR Temperance River State Park

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5048K72008	09/27/2011	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441027261	09/27/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS TOFT TOFTE ARP	COOK, MN	9/26/2011

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_95791.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_95791.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1601 E 1	COOK, MN	5/5/2011

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE/BITUMINOUS SLAB	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_93697.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_93697.pdf

Tofte - Decommissioned

Twin Lakes - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
64	Twin Lakes	TwnL	TWIN LAKES	MNTL

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Twin Lakes	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 1, on Interstate 90 near Twin Lakes, MN.

Located on the east side of Interstate 35 in Freeborn County, 1/2 mile north of the Iowa border.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433029.43682	932114.79978	342.799	372.03

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5304K49935	06/24/2014	01/15/2020
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260766	08/06/2009	06/24/2014
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4545260770	08/29/2007	08/06/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4545260770	04/15/2006	08/29/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4545260770	03/01/2006	04/15/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	5000112554	06/24/2014	01/15/2020
30 meters of LMR400 cable, assembled N-male to TNC-male					
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60088912	03/01/2006	06/24/2014
30 meters of LMR400 cable, assembled N-male to TNC-male					

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS TWNL TWIN LAKES ARP	FREEBORN, MN	3/1/2006

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62779.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62779.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2480 A 1	FREEBORN, MN	8/24/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63051.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63051.pdf

Twin Lakes - Decommissioned

Monument



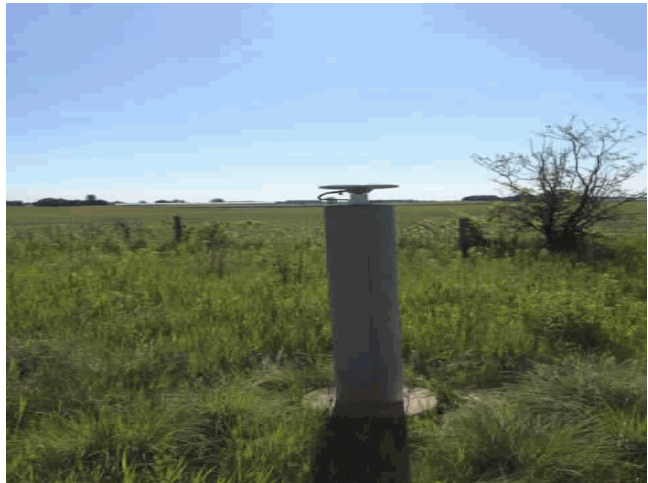
Antenna North



Mark



Antenna East



Antenna Monument



Antenna South

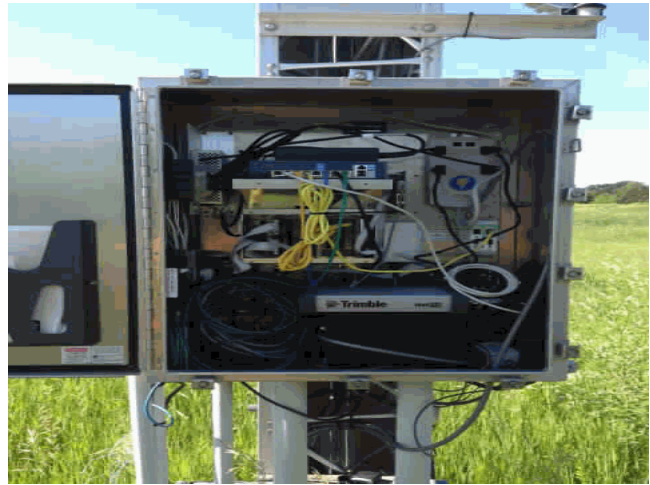


Twin Lakes - Decommissioned

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Two Harbors

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
51	Two Harbors	TwoH	TWO HARBORS	MNTH

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Two Harbors	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Two Harbors, MN.

Attached to the south side of the Minnesota Department of Transportation Two Harbors Truck Station building in St. Louis County. 1.3 miles north of Trunk Highway 61 on the west side of County Road 2.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
470241.95983	914006.96744	227.363	256.14

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42314	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42314	08/01/2013	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4813K54809	06/06/2013	08/01/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4813K54809	01/03/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4813K54809	08/28/2008	01/03/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.60	4813K54809	06/30/2008	08/28/2008
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4813K54809	06/10/2008	06/30/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253103	06/23/2005	06/10/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30895737	06/10/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12694128	06/23/2005	06/10/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS TWOH TWO HARBORS ARP	LAKE, MN	9/1/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62780.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62780.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
B 366 A	LAKE, MN	12/13/2006

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE FOOTING - SMALL	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_64325.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_64325.pdf

Two Harbors

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Two Harbors

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Verndale

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
15	Verndale	Vern	VERNDALE	MNVN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Verndale	MN	USA	RWIS

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Road and Weather Information System (RWIS) site number 63, on Trunk Highway 10 near Verndale, MN.

Located 2 miles west of Verndale in Wadena County on the north side of Trunk Highway 10.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
462448.36222	950316.45547	386.853	413.76

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5945R40094	03/31/2020	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5030K69054	03/06/2019	03/31/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5030K69054	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5030K69054	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69054	06/06/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5030K69054	01/04/2011	06/06/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69054	09/22/2010	01/04/2011
Trimble Navigation Ltd	Net R3	GPS+GLO	NAV 3.63	4831K57599	09/09/2008	09/22/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241571	08/29/2007	09/09/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241571	03/09/2006	08/29/2007
Trimble Navigation Ltd	Net RS	GPS	NAV 1.13	4450241571	08/11/2003	03/09/2006

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR 400	30978597	09/09/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12323607	04/12/2005	09/09/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS VERN VERNDALE ARP	WADENA, MN	11/25/2003

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50690.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50690.pdf

Verndale

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
VERN	WADENA, MN	11/25/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50689.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50689.pdf

Verndale

Mark



Antenna North



Antenna Monument



Antenna East



Antenna Monument



Antenna South



Verndale

Antenna West



Receiver Location



Antenna Serial Number



Receiver Serial Number



Victoria - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
110	Victoria	Vctr	VICTORIA	MNVC

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Victoria	MN	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Arboretum

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4831K57595	02/02/2010	06/12/2014

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	31051176	02/02/2012	06/12/2014

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS VCTR VICTORIA ARP	CARVER, MN	4/1/2009

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_89368.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_89368.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1002 V 2	CARVER, MN	3/10/2010

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE/BITUMINOUS SLAB	SURVEY DISK

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_89580.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_89580.pdf

Victoria - Decommissioned

Virginia

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
77	Virginia	Vrgn	VIRGINIA	MNVI

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Virginia	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Virginia, MN.

Attached to the south side of the Minnesota Department of Transportation Virginia Truck Station building.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
473123.77136	923341.43411	415.275	445.46

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5219K84977	03/06/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5219K84977	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5219K84977	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5219K84977	02/19/2013	01/03/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.60	5219K84977	08/08/2012	02/19/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4747K11308	01/04/2011	08/08/2012
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4747K11308	04/13/2009	01/04/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4811K54387	01/20/2009	04/13/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4747K11308	08/27/2008	01/20/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4747K11308	03/12/2008	08/27/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253126	08/28/2007	03/12/2008
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253126	03/14/2007	08/28/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30686096	03/13/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12481390	03/01/2007	03/13/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS VRGN VIRGINIA ARP	ST. LOUIS, MN	3/14/2007

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_66283.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_66283.pdf

Virginia

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
6918 H	ST. LOUIS, MN	4/1/1963

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE POST (PREFABRICATED)	BENCH MARK DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_27444.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_27444.pdf

Virginia

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Virginia

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Viroqua

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
150	Viroqua	Vrqa		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Viroqua	WI	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
433357.92841	905240.70827	352.428	385.16

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WIRTN VRQA VIROQUA ARP	VERNON, WI	4/1/2015

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104479.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104479.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
- Metric:**

Viroqua

Wabasha

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
44	Wabasha	Wbsh	WABASHA	MNWB

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Wabasha	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Wabasha County Courthouse in Wabasha, MN.

Located on the roof of the Wabasha County Courthouse, 625 Jefferson Avenue, in Wabasha.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
442246.34657	920148.54929	198.535	228.89

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5829R40033	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.19	5101K72943	08/02/2011	01/01/2022
Trimble Navigation Ltd	Net R5	GPS	NAV 3.64	4848K59463	04/06/2009	08/02/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241611	06/30/2008	04/06/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241611	05/01/2005	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31185316	04/06/2009	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12668881	05/01/2005	04/06/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS WBSH WABASHA ARP	WABASHA, MN	5/1/2005

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62781.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62781.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
C 35	WABASHA, MN	4/1/1934

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	BENCH MARK DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_32820.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_32820.pdf

Wabasha

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Wabasha

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Wahkon

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
175	Wahkon	Wahk		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Wahkon	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS WAHK WAHKON ARP	MILLE LACS, MN	4/28/2021

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110588.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110588.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>

<u>Monument Type</u>	<u>Disk Type</u>

Data Sheets

- English:**
- Metric:**

Wahkon

Wahpeton - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
28	Wahpeton	Wahp	WAHPETON	NDWP

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Wahpeton	ND	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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North Dakota State College of Science in Wahpeton, ND.

Attached on the east side roof of the Trades building on the north side of the main entrance of the North Dakota State College of Science in Wahpeton.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
461626.39815	963624.25791	277.473	304.31

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.03	4831K57559	09/29/2009	
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4848K59447	07/07/2009	09/29/2009
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4831K57559	09/10/2008	07/07/2009
Trimble Navigation Ltd	5700	GPS	NAV 2.23	0220308823	04/16/2004	09/10/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30963103	09/10/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12534156	04/16/2004	09/10/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS WAHP WAHPETON ARP	RICHLAND, ND	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52127.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52127.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WAHP	RICHLAND, ND	8/16/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50938.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50938.pdf

Wahpeton - Decommissioned

Monument



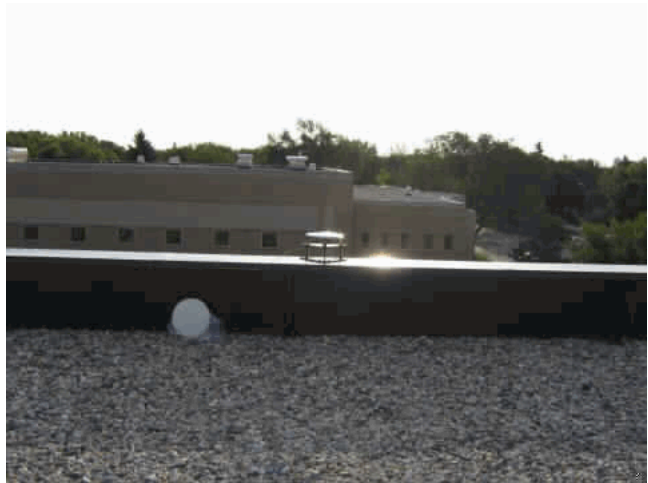
Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Wahpeton - Decommissioned

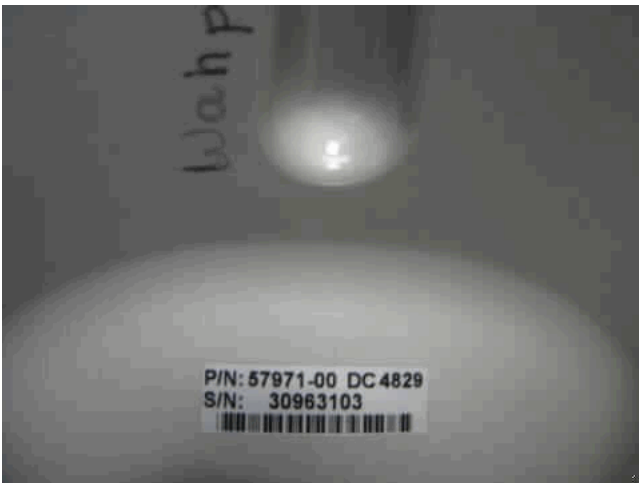
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Wahpeton 2

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
122	Wahpeton 2	Whp2	WAHPETON 2	NDWN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Wahpeton	ND	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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North Dakota State College of Science in Wahpeton, ND.

Attached to the east end of the roof of the Horton Hall building on the campus of North Dakota State College of Science in Wahpeton.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
461626.42415	963624.54060	281.363	308.15

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5503R50038	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5030K69036	06/06/2013	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.42	5030K69036	02/16/2012	06/06/2013
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5030K69036	09/20/2010	02/16/2012
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.15	5030K69036	09/01/2010	09/20/2010

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble LMR400	1441027881	09/01/2010	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS WHP2 WAHPETON 2 ARP	RICHLAND, ND	9/1/2010

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_93648.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_93648.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WAHP	RICHLAND, ND	8/16/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50938.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50938.pdf

Wahpeton 2

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Wahpeton 2

Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Waite Park

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
167	Waite Park	WtPk		

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Waite Park	MN	USA	Private

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Frontier Precision Office in Waite Park, MN.

Located at the Frontier Precision Inc office in Waite Park.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.43	5829R40067	01/01/2022	

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS WTPK WAITE PARK ARP	STEARNS, MN	9/11/2018

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_110584.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_110584.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
A 384	STEARNS, MN	4/1/1990

<u>Monument Type</u>	<u>Disk Type</u>
STEEL ROD (NO SLEEVE)	METAL ROD

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_31143.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_31143.pdf

Waite Park

Walker - Decommissioned

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
79	Walker	Wlkr	WALKER	MNWK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Walker	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota of Transportation Truck Station in Walker, MN.

Attached to the south side fo the Minnesota Department of Transportation Walker Truck Station building in Cass County.
On the west side of Trunk Highway 200.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
470613.64832	943615.60830	395.123	422.85

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5310K42328	01/01/2022	05/10/2020
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5310K42328	05/15/2014	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5310K42328	08/15/2013	05/15/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4626K01807	01/04/2011	08/15/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4626K01807	01/27/2009	01/04/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253103	10/07/2008	01/27/2009
Trimble Navigation Ltd	5700	GPS	NAV 1.24	0440102825	06/30/2008	10/07/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.15	0220315199	05/01/2007	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble LMR400	30213905	01/27/2009	05/10/2020
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12635780	05/01/2007	01/27/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS WLKR WALKER ARP	CASS, MN	4/1/2007

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_65421.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_65421.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
1120 A	CASS, MN	4/1/1972

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE POST (PREFABRICATED)	BENCH MARK DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_3880.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_3880.pdf

Walker - Decommissioned

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Walker - Decommissioned

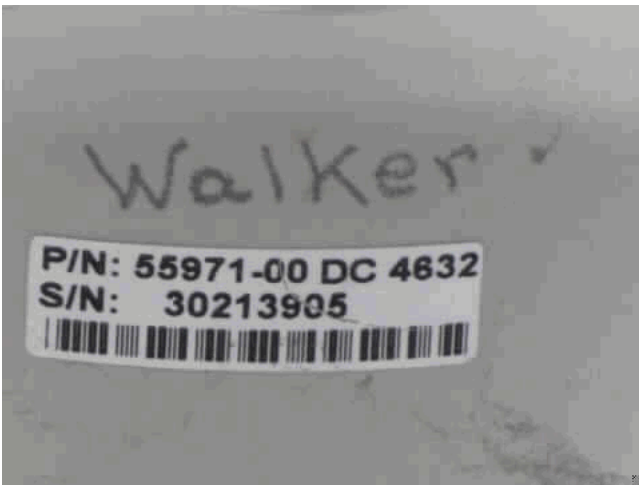
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Warren

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
121	Warren	Warn	WARREN	MNWR

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Warren	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Warren, MN.
417 S. Main St.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
481128.91959	964614.29316	243.202	270.46

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5051K72722	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.17	5051K72722	06/15/2011	01/01/2022
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4437237734	06/23/2010	06/15/2011

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441109300	06/15/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS WARN WARREN ARP	MARSHALL, MN	8/3/2010

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_90327.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_90327.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
4507 B 1	MARSHALL, MN	10/29/2015

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	METAL ROD (WITH REMOVABLE ID DISK)

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_104892.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_104892.pdf

Warren

Monument



Antenna North



Mark

Antenna East



Antenna Monument



Antenna South



Warren

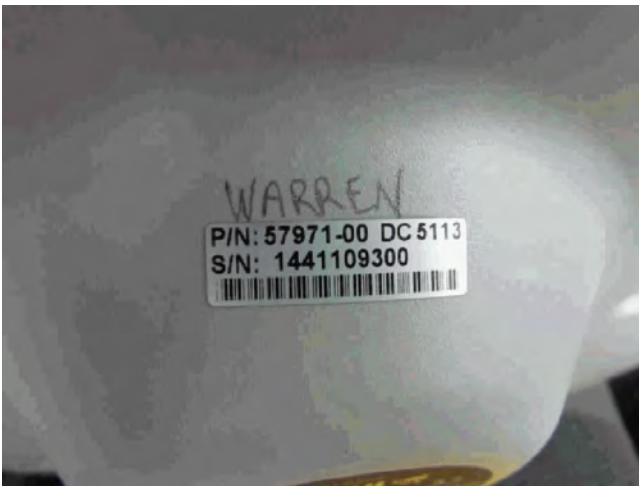
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Waseca

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
27	Waseca	WscA	WASECA	MNWA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Waseca	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Waseca County Facility in Waseca, MN.

Attached to the south side of the Waseca County Highway Department building. 1 mile south along Trunk Highway 13 from its junction with Trunk Highway 14.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440351.80547	933004.57482	328.714	357.36

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Alloy	GPS+GLO	NAV 5.37	5920R40006	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50017	07/20/2015	01/01/2022
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.85	5433R49309	12/08/2014	07/20/2015
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5237K52372	04/08/2013	12/08/2014
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.43	4624K01625	10/30/2012	04/08/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4624K01612	01/04/2011	10/30/2012
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01612	10/28/2008	01/04/2011
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.50	4624K01612	10/14/2008	10/28/2008
Trimble Navigation Ltd	5700	GPS	NAV 1.22	0220292016	04/01/2004	10/14/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	30975462	10/14/2008	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12354218	04/01/2004	10/14/2008

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MNCORS WSCA WASECA ARP	WASECA, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52126.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52126.pdf

Waseca

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
WASECA HWY DEPT	WASECA, MN	4/30/2003

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50661.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50661.pdf

Waseca

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Waseca

Antenna West



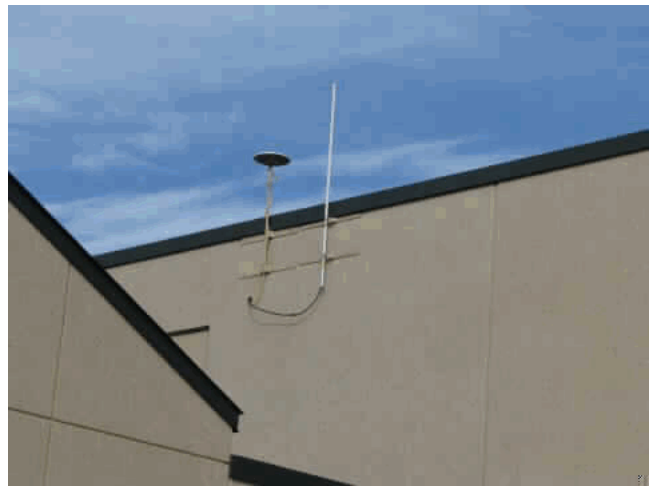
Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Antenna Roof



Waskish

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
137	Waskish	Wask	Waskish	MNWH

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Waskish	MN	USA	City

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Waskish Municipal Airport in Waskish, MN.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
480900.63593	943042.99727	333.258	361.81

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5114K74822	03/06/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5114K74822	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5114K74822	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.22	5114K74822	11/30/2011	01/03/2018

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441053154	11/30/2011	

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS WASK WASKISH ARP	BELTRAMI, MN	11/30/2011

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_94743.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_94743.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
0413 BM	BELTRAMI, MN	10/4/2011

<u>Monument Type</u>	<u>Disk Type</u>
CONCRETE MONUMENT (CAST-IN-PLACE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_94700.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_94700.pdf

Waskish

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Waukon

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
103	Waukon	Wauk	Waukon	IAWK

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Waukon	IA	USA	Other

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
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Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
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ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
IARTN WAUK WAUKON ARP	ALLAMAKEE, IA	

Data Sheets

- English:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_86018.pdf
- Metric:** https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_86018.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
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<u>Monument Type</u>	<u>Disk Type</u>
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Data Sheets

- English:**
- Metric:**

Waukon

Willmar

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
25	Willmar	Wilm	WILLMAR	MNKA

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Willmar	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Kandiyohi County Facility in Willmar, MN.

Attached on the south side of the west building (jail) of the Kandiyohi County Law Enforcement Center in Willmar. The building is west of Trunk Highway 71 and Trunk Highway 23.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
450842.75486	950053.58044	337.554	364.33

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5309K42177	03/06/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5309K42177	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5309K42177	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 4.70	5309K42177	08/06/2013	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.84	4624K01619	01/04/2011	08/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4624K01619	01/20/2009	01/04/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4504244218	06/30/2008	01/20/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4504244218	01/06/2004	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	3121178030	12/21/2015	
Trimble Navigation Ltd	Zephyr Geodetic Model 2	Trimble	30213922	01/20/2009	12/21/2015
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60078758	01/06/2004	01/20/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS WILM WILLMAR ARP	KANDIYOHI, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52128.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52128.pdf

Willmar

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
U 386 A	KANDIYOHI, MN	7/19/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_50747.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_50747.pdf

Willmar

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Willmar

Antenna West



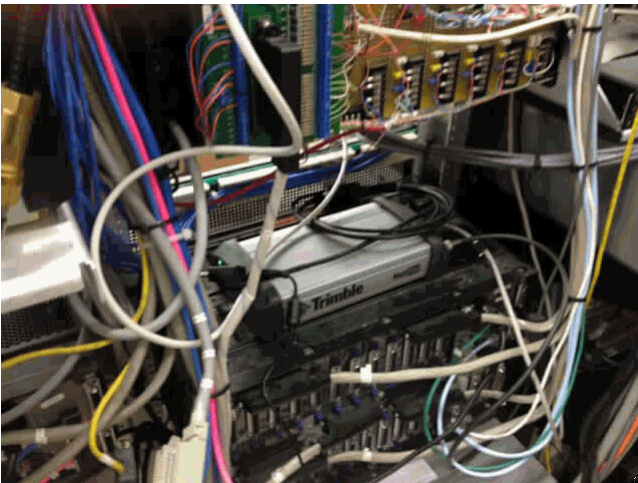
Antenna Building



Receiver Serial Number



Receiver Location



Winona

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
56	Winona	Wino	WINONA	MNWN

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Winona	MN	USA	County

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Winona County Highway Department in Winona, MN.

Attached to the southeast side of the Winona County Highway Department building, Northeast of Trunk Highway 61 at 54th Avenue in Winona.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
440354.00849	914245.48080	179.694	210.12

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5443R50018	03/06/2019	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.30	5443R50018	03/09/2018	03/06/2019
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.22	5443R50018	01/03/2018	03/09/2018
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5443R50018	04/14/2015	01/03/2018
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4828K57167	02/19/2013	04/14/2015
Trimble Navigation Ltd	Net R5	GPS	NAV 4.17	4828K57167	01/18/2011	02/19/2013
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241588	06/09/2010	01/18/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4526253128	06/29/2008	05/07/2010
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4526253128	03/21/2006	08/29/2007

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	1441027922	01/18/2011	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	60078815	03/21/2006	01/18/2011

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS WINO WINONA ARP	WINONA, MN	2/1/2006

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_62752.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_62752.pdf

Winona

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
A 240 A	WINONA, MN	7/26/2006

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_63032.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_63032.pdf

Winona

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Winona

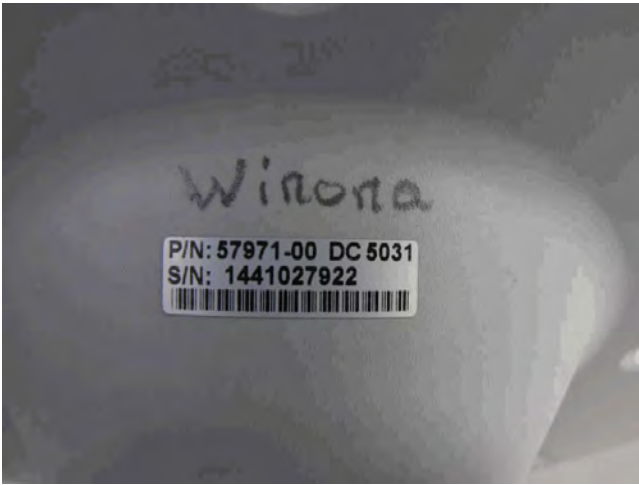
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number



Zumbrota

<u>Site ID</u>	<u>Mn/DoT Site Name</u>	<u>Abbrev</u>	<u>NGS Site Name</u>	<u>NGS Abbrev</u>
34	Zumbrota	Zumb	ZUMBROTA	MNZM

<u>City / Town</u>	<u>State</u>	<u>Country</u>	<u>Site Type</u>
Zumbrota	MN	USA	Mn/DOT

<u>Contact Person</u>	<u>Contact Phone</u>	<u>Contact Email</u>
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Minnesota Department of Transportation Truck Station in Zumbrota, MN.

Located on the east frontage road of Trunk Highway 52 in Goodhue County, 0.2 miles south of Trunk Highway 60 west, attached on the north side of the Minnesota Department of Transportation Zumbrota Trunk Station.

Newest Coordinates - Consult ARP datasheet (link below) to determine source of newest coordinates

<u>Latitude</u>	<u>Longitude</u>	<u>Ellipsoid Height</u>	<u>NAVD88</u>
441726.58013	924052.55391	296.933	326.77

Receivers

<u>Manufacturer</u>	<u>Model</u>	<u>Satellite System</u>	<u>Firmware</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.37	5206K82037	01/01/2022	
Trimble Navigation Ltd	Net R9	GPS+GLO	NAV 5.01	5206K82037	04/14/2015	01/01/2022
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.70	4848K59462	06/06/2013	04/14/2015
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 4.19	4848K59462	01/04/2011	06/06/2013
Trimble Navigation Ltd	Net R5	GPS+GLO	NAV 3.64	4848K59462	04/01/2009	01/04/2011
Trimble Navigation Ltd	Net RS	GPS	NAV 1.20	4450241576	06/30/2008	04/01/2009
Trimble Navigation Ltd	Net RS	GPS	NAV 1.15	4450241576	04/12/2005	06/30/2008

Antennas

<u>Manufacturer</u>	<u>Model</u>	<u>Cable Type</u>	<u>Serial Number</u>	<u>Installed</u>	<u>Removed</u>
Trimble Navigation Ltd	Zephyr Geodetic LF Model 2	Trimble	31051288	04/01/2009	
Trimble Navigation Ltd	Zephyr Geodetic	Trimble	12379386	04/12/2005	04/01/2009

30 meters of LMR400 cable, assembled N-male to TNC-male

ARP Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
MnCORS ZUMB ZUMBROTA ARP	GOODHUE, MN	4/1/2004

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52132.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52132.pdf

Elevation Geodetic Station

<u>Station Name</u>	<u>County</u>	<u>Set Date</u>
2506 D 1	GOODHUE, MN	10/7/2004

<u>Monument Type</u>	<u>Disk Type</u>
ALUMINUM ALLOY ROD (NO SLEEVE)	SURVEY DISK

Data Sheets

English: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Single%20Sheet/GSID_52205.pdf

Metric: https://www.olmweb.dot.state.mn.us/Geod/PDF%20Metric%20Sheet/M_GSID_52205.pdf

Zumbrota

Monument



Antenna North



Mark



Antenna East



Antenna Monument



Antenna South



Zumbrota

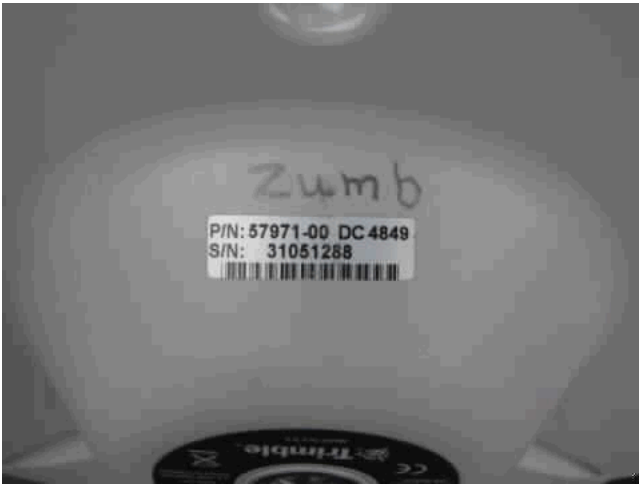
Antenna West



Receiver Location



Antenna Serial Number



Antenna Building



Receiver Serial Number

