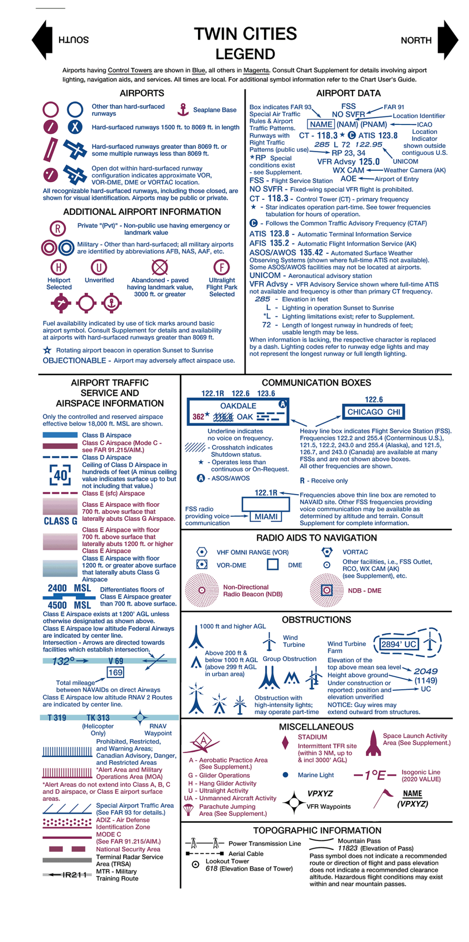
TWIN CITIES
LEGEND



PLOTTING DIRECT ROUTE ON NORTH/SOUTH SIDE

There are approximately two minutes of latitude overlap between the north and south sides of each sectional chart. To plot a course line from one side to the other, the user must first locate two pair of corresponding latitude tick marks, one pair on each side of the chart and follow the steps below.

STEP 1 - Draw a horizontal line (MATCH LINE) between each pair of corresponding latitude tick marks on each side of the chart just to the left or right of where your plot line crosses. (Figure 1)

STEP 2 - Decide which side of the chart has the departure or destination point closer to the edge of the chart. On that side, line up a blank piece of paper along the MATCH LINE (Figure 1) so that it is completely on the chart, not extending beyond its edge). Make a mark (MARK A) on edge of the paper where it meets that point.

STEP 3 - Slide the paper sideways left or right so that a side edge of the paper aligns with the departure or destination point (POINT A). Make a MARK A on edge of the paper where it meets that point.

STEP 4 - Without moving the paper, on the same edge as MARK A, extend a short line on the chart from the corner of the paper where it meets the MATCH LINE out to the edge of the chart. Make that LINE B.

STEP 5 - Turn the chart over and transfer the end of LINE B to the other side, and extend it straight to the MATCH LINE. (Figure 2)

STEP 6 - Take the sheet of paper with MARK A on it and align the (top or bottom) edge of the paper with the MATCH LINE and side edge with LINE B with the bulk of the sheet extending off of the chart. Plot a line from MARK A to the departure or destination point (POINT B).

STEP 7 - Where your plot line crosses the MATCH LINE make a MARK C. Extend a line straight from that mark to the edge of the chart.

STEP 8 - Turn the chart back over and transfer MARK C to that side and extend it to the MATCH LINE. Plot a line from MARK C to the destination. (Figure 3)

REGULATIONS REGARDING FLIGHTS OVER CHARTED NATIONAL PARK SERVICE AREAS, U.S. FISH AND WILDLIFE SERVICE AREAS, BUREAU OF LAND MANAGEMENT AREAS, U.S. FOREST SERVICE AREAS

The landing of aircraft is prohibited on lands or waters administered by the National Park Service, U.S. Fish and Wildlife Service, Bureau of Land Management or U.S. Forest Service without authorization from the respective agency. Exceptions include: 1) when forced to land due to an emergency beyond the control of the operator, 2) at officially designated landing sites, or 3) on approved official business of the Federal Government. All aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface of the following: National Parks, Monuments, Seashores, Lakeshores, Recreation Areas, Scenic Riverways, Wildlife Refuges, Big Game Refuges, Game Ranges, Wildlife Ranges, Conservation Areas, Wild and Scenic Rivers, Wilderness Areas and Primitive Areas administered by the Agencies. FAA Advisory Circular (AC) 91-36, "Visual Flight Rules (VFR) Flight Near Noise-Sensitive Areas," defines the surface as: the highest terrain within 2,000 feet laterally of the route of flight, or the upper-most rim of a canyon or valley. Federal regulations also prohibit airdrops by parachute or other means of persons, cargo, or objects from aircraft on lands administered by the four agencies without authorization from the respective agency. Exceptions include: 1) emergencies involving the safety of human life, or 2) threat of serious property loss.

Boundary of Agency Areas

MILITARY TRAINING ROUTES (MTRs)

All IR and VR MTRs are shown, and may extend from the surface upwards. Only the route centerline, direction of flight along the route, and the route designator are depicted - route widths and altitudes are not shown.

DoD users refer to Area Planning AP/1B Military Training Routes North and South America for current routes.

Flight Following Services are available on request and highly recommended in and around Class B, C, and TRSA areas.

Features normally used as checkpoints for controlling VFR traffic are emphasized on this series of charts so they may be readily identified.

Example: POWER PLANT

The name shown is that used by the controlling personnel and is not necessarily the official name of the feature.

NORTH AMERICAN AEROSPACE DEFENSE COMMAND (NORAD) PROCEDURES

All aircraft operating in the U.S. national airspace, if capable, will maintain a listening watch on guard frequencies VHF 121.5 or UHF 243.0. It is incumbent upon all aviators to know and understand their responsibilities if intercepted. Please review "AIM" section 5-6-13 for intercept procedures. Additionally, if U.S. military fighter jets intercept an aircraft and flares are dispensed in the area of that aircraft, aviators will pay strict attention, contact air traffic control immediately on the local frequency or on VHF guard 121.5 or UHF guard 243.0 and follow the intercept pilots' visual ICAO signals. Be advised that non-compliance may result in the use of force.

Lambert Conformal Conic Projection Standard Parallels 41° 20' and 46° 40'
Horizontal Datum: North American Datum of 1983 (World Geodetic System 1984)

CONTOUR INTERVAL 500 *feet*

HIGHEST TERRAIN elevation is *2550 feet* located at 49° 00' N - 100° 26'W

Spot elevation 4254
Approximate elevation .... × 3200

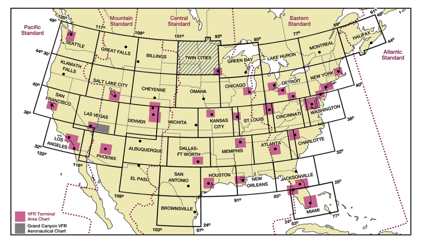
CONVERSION OF ELEVATIONS

TWIN CITIES SECTIONAL
SECTIONAL AERONAUTICAL CHART SCALE 1:500,000

Federal Aviation Administration

EFFECTIVE 0901Z **25 FEB 2021**
TO 0901Z **22 APR 2021**

Consult NOTAMs for latest information
Consult/Subscribe to FAA Safety Alerts and Charting Notices at:
http://www.faa.gov/air_traffic/flight_info/aeronav/safety_alerts/



ATTENTION

THIS CHART CONTAINS MAXIMUM ELEVATION FIGURES (MEF). The Maximum Elevation Figures shown in quadrangles bounded by ticked lines of latitude and longitude are represented in THOUSANDS and HUNDREDS of feet above mean sea level. The MEF is based on information available concerning the highest known feature in each quadrangle, including terrain and obstructions (trees, towers, antennas, etc.).

Example: 12,500 feet 12⁵

Class G Airspace within the United States extends up to 14,500 feet MSL. At and above this altitude all airspace is within Class E Airspace, excluding the airspace less than 1500 feet above the terrain and certain special use airspace areas.

FOR PROCUREMENT: For digital products, visit
http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/
For a list of approved FAA Print Providers, visit our website at:
http://www.faa.gov/air_traffic/flight_info/aeronav/print_providers/

REPORTING CHART ERRORS

You are requested to inform us of chart errors and/or additions that come to your attention while using this chart. See frequently asked questions (FAQs) on our website at http://faa.gov/go/ais prior to contacting us via toll free number at 1-800-638-8972 or visit https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data or mail to: FAA, Aeronautical Information Services,1305 East-West Highway, SSMC 4, Suite 4400, Silver Spring, MD 20910-3281.

FAA Product ID: STC
NSN 7641014100145
NGA REF. NO. SECXXTWINCITIES
EFF. DATE 21056

CONTROL TOWER FREQUENCIES ON TWIN CITIES SECTIONAL CHART

Airports with control towers are indicated on the face of the chart by the letters CT followed by the primary VHF tower frequency(ies). Information for each tower is listed in the table below. Operational hours are local time. The primary VHF and UHF tower and ground control frequencies are listed.

Automatic Terminal Information Service (ATIS) frequencies shown on the face of the chart are arrival VHF/UHF frequencies. All ATIS frequencies are listed in the table below. ATIS operational hours may differ from tower operational hours.

ASR and/or PAR indicate Radar Instrument Approach available.
"MON-FRI" indicates Monday through Friday.
O/T indicates other times.

CONTROL TOWER	OPERATES	TOWER	GND CON	ATIS	ASR/PAR
ANOKA COUNTY-BLAINE (JANES FLD)	0700-2100 OCT-APR 0700-2200 MAY-SEP	132.4	121.85	120.625	
BISMARCK	0600-2400	118.3 257.8	121.9	119.35	ASR
CRYSTAL	0700-2100 OCT-APR 0700-2200 MAY-SEP	120.7	121.6	124.475	
FLYING CLOUD	0600-2100 1ST SUN NOV—2ND SAT MAR 0600-2200 2ND SUN MAR—1ST SAT NOV	119.15	121.7	124.9	
GRAND FORKS AFB	0600 MON-2330 FRI 0600-2330 SAT-SUN CLSD HOL	124.9 349.0	119.15 275.8	273.45	
GRAND FORKS INTL	0600-2330	118.4 350.35	124.575	119.4	
HECTOR INTL	CONTINUOUS	133.8 290.4	121.9 348.6	124.5 379.2	
MILLER AAF	0700-2245 MON-THU 0800-1600 FRI CLSD HOL	126.2 254.4			
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	CONTINUOUS	123.675 273.55 (RWY 17/35) 123.95 273.55 (RWY 12L/30R) 126.7 273.55 (RWYS 12R/30L & 4/22)	121.8 (N) 121.9 (S) 127.925 (W) 348.6	120.8 (DEP) 135.35 (ARR) 239.275 (ARR)	
ST CLOUD RGNL	0700-2300	118.25	123.75	119.375	
ST PAUL DOWNTOWN HOLMAN	0600-2200 MON-FRI 0700-2200 SAT-SUN	119.1 257.8	121.675	118.35	

CLASS B, CLASS C, TRSA, AND SELECTED APPROACH CONTROL FREQUENCIES

FACILITY	FREQUENCIES	SERVICE AVAILABILITY
MINNEAPOLIS CLASS B	121.2 (NE) 126.5 (NW) 134.7 (S)	CONTINUOUS
FARGO TRSA	120.4 377.15	CONTINUOUS
GRAND FORKS AFB	118.1 132.3 294.7 318.1 O/T 132.15 269.6 MINNEAPOLIS CNTR	0600 MON-2330 FRI 0600-2330 SAT-SUN CLSD HOL

SPECIAL USE AIRSPACE ON TWIN CITIES SECTIONAL CHART

Unless otherwise noted altitudes are MSL and in feet. Time is local. "TO" an altitude means "To and including." FL - Flight Level. NO A/G - No air to ground communications. Contact Flight Service for information.

† Other times by NOTAM. NOTAM – Use of this term in Restricted Areas indicates FAA and DoD NOTAM systems. Use of this term in all other Special Use areas indicates the DoD NOTAM system.

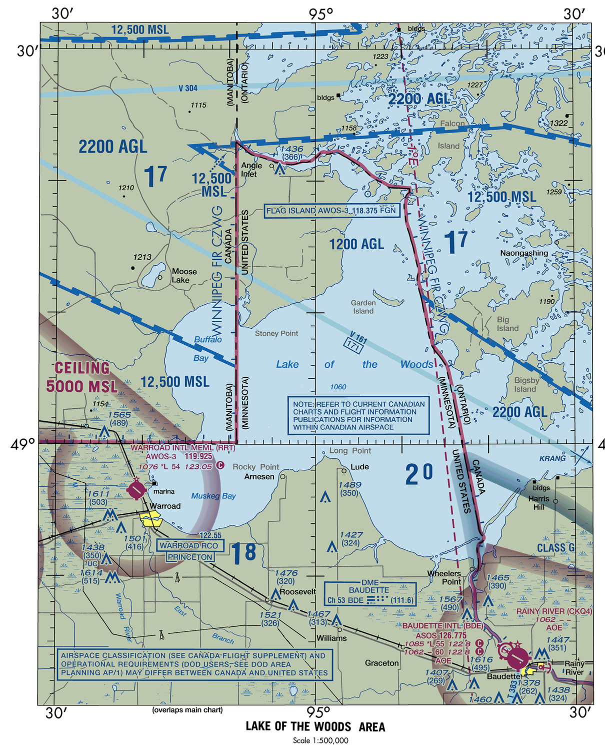
U.S. P-PROHIBITED, R-RESTRICTED, W-WARNING, A-ALERT, MOA-MILITARY OPERATIONS AREA

NUMBER	ALTITUDE	TIME OF USE	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES
P-204	TO BUT NOT INCL 4000	CONTINUOUS	NO A/G	
P-205	TO BUT NOT INCL 4000	CONTINUOUS	NO A/G	
R-4301	TO 27,000	0730-2400 †24 HRS IN ADVANCE	MINNEAPOLIS CNTR	118.05 239.0
R-5401	TO 5000	30 DAYS IN ADVANCE BY NOTAM 24 HRS IN ADVANCE	MINNEAPOLIS CNTR	124.2 270.3
R-5402	500 AGL TO BUT NOT INCL 10,000	0700-2000 BY NOTAM 6 HRS IN ADVANCE†	MINNEAPOLIS CNTR	124.2 270.3
R-5403 A	8000 TO BUT NOT INCL 10,000	0700-2000 BY NOTAM 6 HRS IN ADVANCE†	MINNEAPOLIS CNTR	124.2 270.3
R-5403 B	10,000 TO BUT NOT INCL 14,000	0700-2000 BY NOTAM 6 HRS IN ADVANCE†	MINNEAPOLIS CNTR	124.2 270.3
R-5403 C, F	14,000 TO BUT NOT INCL FL 180	0700-2000 BY NOTAM 6 HRS IN ADVANCE†	MINNEAPOLIS CNTR	124.2 270.3
R-5403 D	10,000 TO BUT NOT INCL 12,000	0700-2000 BY NOTAM 6 HRS IN ADVANCE†	MINNEAPOLIS CNTR	124.2 270.3
R-5403 E	12,000 TO BUT NOT INCL 14,000	0700-2000 BY NOTAM 6 HRS IN ADVANCE†	MINNEAPOLIS CNTR	124.2 270.3

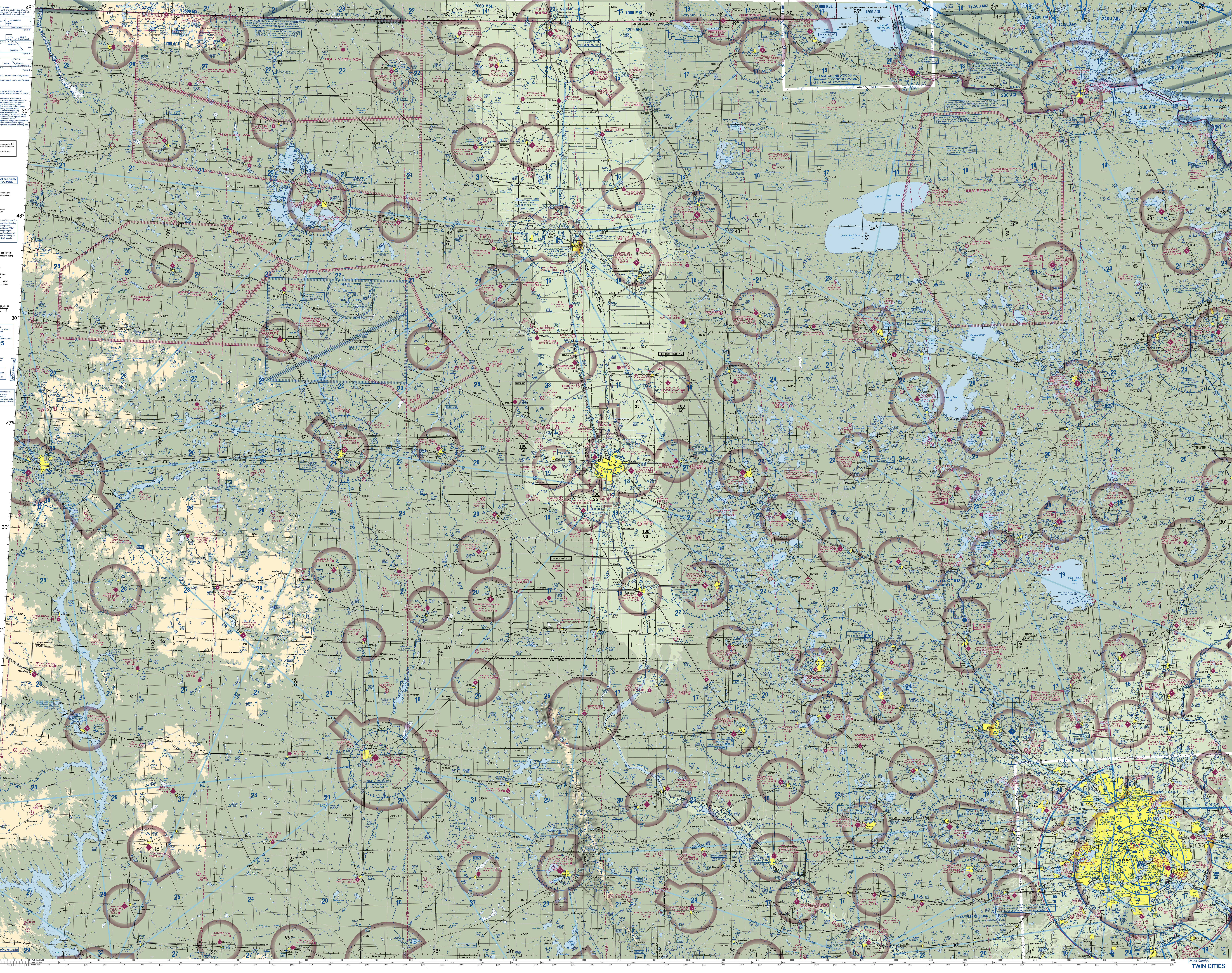
MOA NAME	ALTITUDE*	TIME OF USE†	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES
BEAVER	300 AGL	BY NOTAM 0800-2200 MON-FRI, 0800-1600 SAT-SUN	MINNEAPOLIS CNTR	127.9 281.45
DEVILS LAKE EAST	3500	INTERMITTENT BY NOTAM	MINNEAPOLIS CNTR	124.2 270.3
DEVILS LAKE WEST	4000	INTERMITTENT BY NOTAM	MINNEAPOLIS CNTR	135.25 270.3
SNOOPY WEST	6000	BY NOTAM NORMALLY INTERMITTENT 0800-2200 MON-SAT	MINNEAPOLIS CNTR	127.9 281.45
TIGER NORTH	300 AGL	INTERMITTENT BY NOTAM	MINNEAPOLIS CNTR	132.15 269.6
TIGER SOUTH	300 AGL	INTERMITTENT BY NOTAM	MINNEAPOLIS CNTR	132.15 269.6

*Altitudes indicate floor of MOA. All MOAs extend to but do not include FL 180 unless otherwise indicated in tabulation or on chart.
†Other times by DoD NOTAM.

CAUTION: This chart is primarily designed for VFR navigational purposes and does not purport to indicate the presence of all power transmission and telecommunication lines, terrain or obstacles which may be encountered below reasonable and safe altitudes.



LAKE OF THE WOODS AREA
Scale 1:500,000

CAUTION: Unmanned Aircraft Systems (UAS) may be approved to operate above critical infrastructure including obstacles and linear features such as high-voltage powerlines and railroads pipelines. Check NOTAMs and see AIM for details.

CAUTION: Severe turbulence may occur over rugged terrain. See AIM.