TWIN CITIES
LEGEND

Airports having Control Towers are shown in Blue, all others in Magenta. Consult Chart Supplement for details involving airport lighting, navigation aids, and services. All times are local. For additional symbol information refer to the Chart User's Guide.

AIRPORTS

Other than hard-surfaced runways — Seaplane Base

Hard-surfaced runways 1500 ft. to 8069 ft. in length

Hard-surfaced runways greater than 8069 ft. or some multiple runways less than 8069 ft.

Open dot within hard-surfaced runway configuration indicates approximate VOR, VOR-DME, or VORTAC location.

All recognizable hard-surfaced runways, including those closed, are shown for visual identification. Airports may be public or private.

ADDITIONAL AIRPORT INFORMATION

Private "(Pvt)" - Non-public use having emergency or landmark value

Military - Other than hard-surfaced; all military airports are identified by abbreviations AFB, NAS, AAF, etc. DoD users, for complete airport information consult DoD FLIP.

Heliport Selected — Unverified — Abandoned - paved having landmark value, 3000 ft. or greater — Ultralight Flight Park Selected

Fuel - available Mon thru Fri 10:00 A.M. to 4:00 P.M. depicted by use of ticks around basic airport symbol. Consult Supplement for details and for availability at airports with hard-surfaced runways greater than 8069 ft.

Rotating airport beacon in operation Sunset to Sunrise

OBJECTIONABLE - Airport may adversely affect airspace use.

AIRPORT DATA

Box indicates FAR 93 Special Air Traffic Rules & Airport Traffic Patterns.

Runways with Right Traffic Patterns (public use)

RP ★ Special conditions exist - see Supplement.

FSS NO SVFR — FAR 91 — NAME (NAM) (PNAM) — ICAO Location Identifier — CT - 118.3 ★ Ⓒ ATIS 123.8 — 285 L 72 122.95 — RP 23, 34 — VFR Advsy 125.0 — AOE — Location Indicator shown outside contiguous U.S. — UNICOM — Airport of Entry

FSS - Flight Service Station

NO SVFR - Fixed-wing special VFR flight is prohibited.

CT - 118.3 - Control Tower (CT) - primary frequency

★ - Star indicates operation part-time. See tower frequencies tabulation for hours of operation.

Ⓒ - Follows the Common Traffic Advisory Frequency (CTAF)

ATIS 123.8 - Automatic Terminal Information Service

ASOS/AWOS 135.42 - Automated Surface Weather Observing Systems (shown where full-time ATIS not available). Some ASOS/AWOS facilities may not be located at airports.

UNICOM - Aeronautical advisory station

VFR Advsy - VFR Advisory Service shown where full-time ATIS not available and frequency is other than primary CT frequency.

285 - Elevation in feet

L - Lighting in operation Sunset to Sunrise

*L - Lighting limitations exist; refer to Supplement.

72 - Length of longest runway in hundreds of feet; usable length may be less.

When information is lacking, the respective character is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.

AIRPORT TRAFFIC SERVICE AND AIRSPACE INFORMATION

Only the controlled and reserved airspace effective below 18,000 ft. MSL are shown on this chart.

Class B Airspace

Class C Airspace (Mode C - see FAR 91.215/AIM.)

Class D Airspace

Ceiling of Class D Airspace in hundreds of feet. (A minus ceiling value indicates surface up to but not including that value.)

Class E (sfc) Airspace

Class E Airspace with floor 700 ft. above surface

CLASS G — Class E Airspace with floor 700 ft. above surface that laterally abuts Class G Airspace.

Class E Airspace with floor 1200 ft. or greater above surface that laterally abuts Class G Airspace.

2400 MSL / 4500 MSL — Differentiates floors of Class E Airspace greater than 700 ft. above surface.

Class E Airspace exists at 1200' AGL unless otherwise designated as shown above.

Class E Airspace low altitude Federal Airways are indicated by center line.

Intersection - Arrows are directed towards facilities which establish intersection.

Total mileage between NAVAIDs on direct Airways

Class E Airspace low altitude RNAV 2 Routes are indicated by center line.

T-319 (Helicopter Only) — TK 313 — RNAV Waypoint

Prohibited, Restricted, and Warning Areas; Canadian Advisory, Danger, and Restricted Areas

Alert Area and MOA - Military Operations Area

Special Airport Traffic Area (See FAR 93 for details.)

ADIZ - Air Defense Identification Zone

MODE C (See FAR 91.215/AIM.)

National Security Area

Terminal Radar Service Area (TRSA)

MTR - Military Training Route

COMMUNICATION BOXES

122.1R 122.6 123.6 — OAKDALE — 362 — OAK — 122.1R — CHICAGO CHI

Underline indicates no voice on frequency.

- Crosshatch indicates Shutdown status.

• Operates less than continuous or On-Request.

Ⓐ - ASOS/AWOS

Ⓗ - HIWAS

Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.2, 243.0 and 255.4 (Canada - 121.5, 126.7 and 243.0) are available at many FSSs and are not shown above boxes. All other frequencies are shown.

Certain FSSs provide Airport Advisory Service, see Supplement.

R - Receive only

FSS radio providing voice communication — 122.1R — MIAMI — Frequencies above thin line box are remoted to NAVAID site. Other FSS frequencies providing voice communication may be available as determined by altitude and terrain. Consult Supplement for complete information.

RADIO AIDS TO NAVIGATION

VHF OMNI RANGE (VOR) — VORTAC — VOR-DME — DME — Other facilities, i.e., FSS Outlet, RCO, etc.

Non-Directional Radio Beacon (NDB) — NDB - DME

OBSTRUCTIONS

1000 ft and higher AGL — Below 1000 ft AGL — Wind Turbine — Wind Turbine Farm

Group Obstruction

Obstruction with high-intensity lights; may operate part-time

Elevation of the top above mean sea level — Height above ground — Under construction or reported; position and elevation unverified — 2049 (1149) UC

NOTICE: Guy wires may extend outward from structures.

MISCELLANEOUS

A - Aerobatic Practice Area (See Supplement.)
G - Glider Operations
H - Hang Glider Activity
U - Ultralight Activity
UA - Unmanned Aircraft Activity

Parachute Jumping Area (See Supplement.)

Space Launch Activity Area (See Supplement.)

-1°E- Isogonic Line (2015 VALUE)

VPXYZ — VFR Waypoints (See chart tabulation for latitude/longitude.)

NAME (VPXYZ) — Marine Light

TOPOGRAPHIC INFORMATION

Power Transmission Line

Aerial Cable

Lookout Tower 618 (Elevation Base of Tower)

Mountain Pass 11823 (Elevation of Pass)

Pass symbol does not indicate a recommended route or direction of flight and pass elevation does not indicate a recommended clearance altitude. Hazardous flight conditions may exist within and near mountain passes.

PLOTTING DIRECT ROUTE ON NORTH/SOUTH SIDE

There are approximately two minutes of latitude overlap between the north and south sides of each sectional/WAC 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 (the paper should be completely on the chart, not extending beyond its edge).

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 (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 other side 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)

Figure 1 — NORTH SIDE — Sheet of paper — MARK A — POINT A — MATCH LINE — LINE B — Overlap area

Figure 2 — same latitude — MARK A — LINE B (transferred) — MATCH LINE — MARK C — SOUTH SIDE

Figure 3 — NORTH SIDE — POINT A — MATCH LINE — LINE B — MARK C (transferred) — Overlap area

REGULATIONS REGARDING FLIGHTS OVER CHARTED NATIONAL PARK SERVICE AREAS, U.S. FISH AND WILDLIFE SERVICE AREAS, AND 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 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, Recreationa areas and Scenic Riverways administered by the National Park Service; National Wildlife Refuges, Big Game Refuges, Game Ranges and Wildlife Ranges administered by the U.S. Fish and Wildlife Service; and Wilderness and Primitive areas administered by the U.S. Forest Service. 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 three 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 National Park Service areas, U.S. Fish and Wildlife Service areas, and U.S. Forest Service Wilderness and Primitive 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.

Since these routes are subject to change every 56 days, you are cautioned and advised to contact Flight Service for route dimensions and current status for those routes affecting your flight.

Routes with a change in the alignment of the charted route centerline will be indicated in the Aeronautical Chart Bulletin of the Chart Supplement.

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. Review "AIM" section 5-6-2 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 243.0 and follow the intercepter 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

2550 — 2000 — 1000 — Sea Level

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

Spot elevation 4254

Approximate elevation . . . . × 3200

CONVERSION OF ELEVATIONS

FEET (Thousands)	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30						
METERS (Thousands)	0	1	2	3	4	5	6	7	8	9												

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 — 12[5]

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:
Contact an Authorized FAA Chart Sales Agent.
Visit our website http://faa.gov/go/ais and click on "Chart Agent Locator."
For digital products, visit http://faacharts.faa.gov.

REPORTING CHART ERRORS

You are requested to inform us of chart errors and/or additions that come to your attention while using this chart. Frequently asked questions (FAQs) are answered on our website at http://faa.gov/go/ais. See the FAQs prior to contact via toll free number or email. Telephone toll free at 1-800-638-8972, or email us at 9-AMC-Aerochart@faa.gov or mail to: FAA, Aeronautical Information Services, Customer Operations Team, 1305 East-West Highway, SSMC 4, Suite 4400, Silver Spring, MD 20910-3281.

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TWIN CITIES SECTIONAL

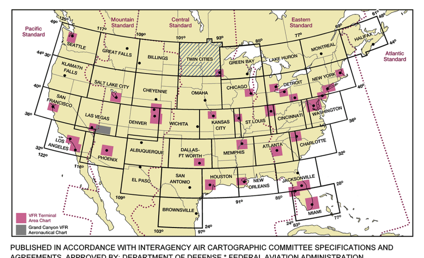
SECTIONAL AERONAUTICAL CHART SCALE 1:500,000

Federal Aviation Administration

92ND EDITION EFFECTIVE 0901Z 23 JUN 2016
TO 0901Z 5 JAN 2017

Includes airspace amendments effective 26 MAY 2016
and all other aeronautical data received by 28 APR 2016

Information on this chart will change; consolidated major updates of chart changes are available every 56 days in the CHART SUPPLEMENT Aeronautical Chart Bulletin section (online at http://faa.gov/go/ais). Also consult appropriate NOTICES TO AIRMEN (NOTAMs) and other FLIGHT INFORMATION PUBLICATIONS (FLIPs) for the latest changes.



PUBLISHED IN ACCORDANCE WITH INTERAGENCY AIR CARTOGRAPHIC COMMITTEE SPECIFICATIONS AND AGREEMENTS, APPROVED BY: DEPARTMENT OF DEFENSE * FEDERAL AVIATION ADMINISTRATION

Warning: Refer to current foreign charts and flight information publications for information within foreign airspace.

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NSN 7641014100145
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EFF. DATE 16175

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 local control frequency(ies). Information for each tower is listed in the table below. Operational hours are local time. The primary VHF and UHF local control frequencies are listed. An asterisk (*) indicates the part-time tower frequency is remoted to a collocated full-time FSS for use as Airport Advisory Service (AAS) during hours the tower is closed. The primary VHF and UHF ground control frequencies are listed.

Automatic Terminal Information Service (ATIS) frequencies shown on the face of the chart are primary 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	TWR FREQ	GND CON	ATIS	ASR/PAR
ANOKA CO-BLAINE	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 SUN MAR 0600-2200 2ND SUN MAR—1ST SUN NOV	119.15	121.7	124.9	
GRAND FORKS AFB	CONTINUOUS	124.9 349.0	119.15 275.8	273.45	
GRAND FORKS INTL	0600-2330	118.4 350.35	121.575	119.4	
HECTOR INTL	CONTINUOUS	133.8 290.4	121.9 348.6	124.5 379.2	
MILLER AAF	1300-2230 TUE-THU 0800-1730 FRI CLSD HOL	126.2 254.4			
MINNEAPOLIS-ST PAUL INTL	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	CONTINUOUS

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.

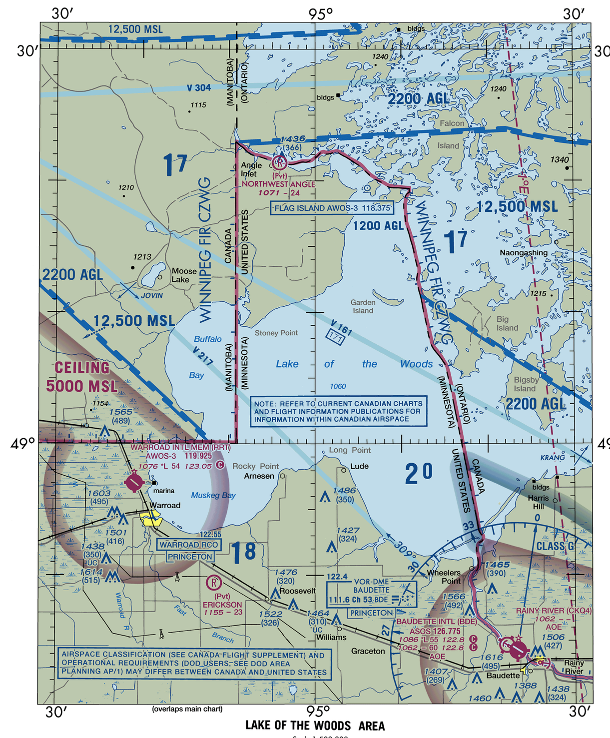
† Other times by NOTAM. NOTAM – Use of this term in Restricted Areas indicates FAA and DoD NOTAM systems. Use of this term in all other Special Use areas indicates the DoD NOTAM system.

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

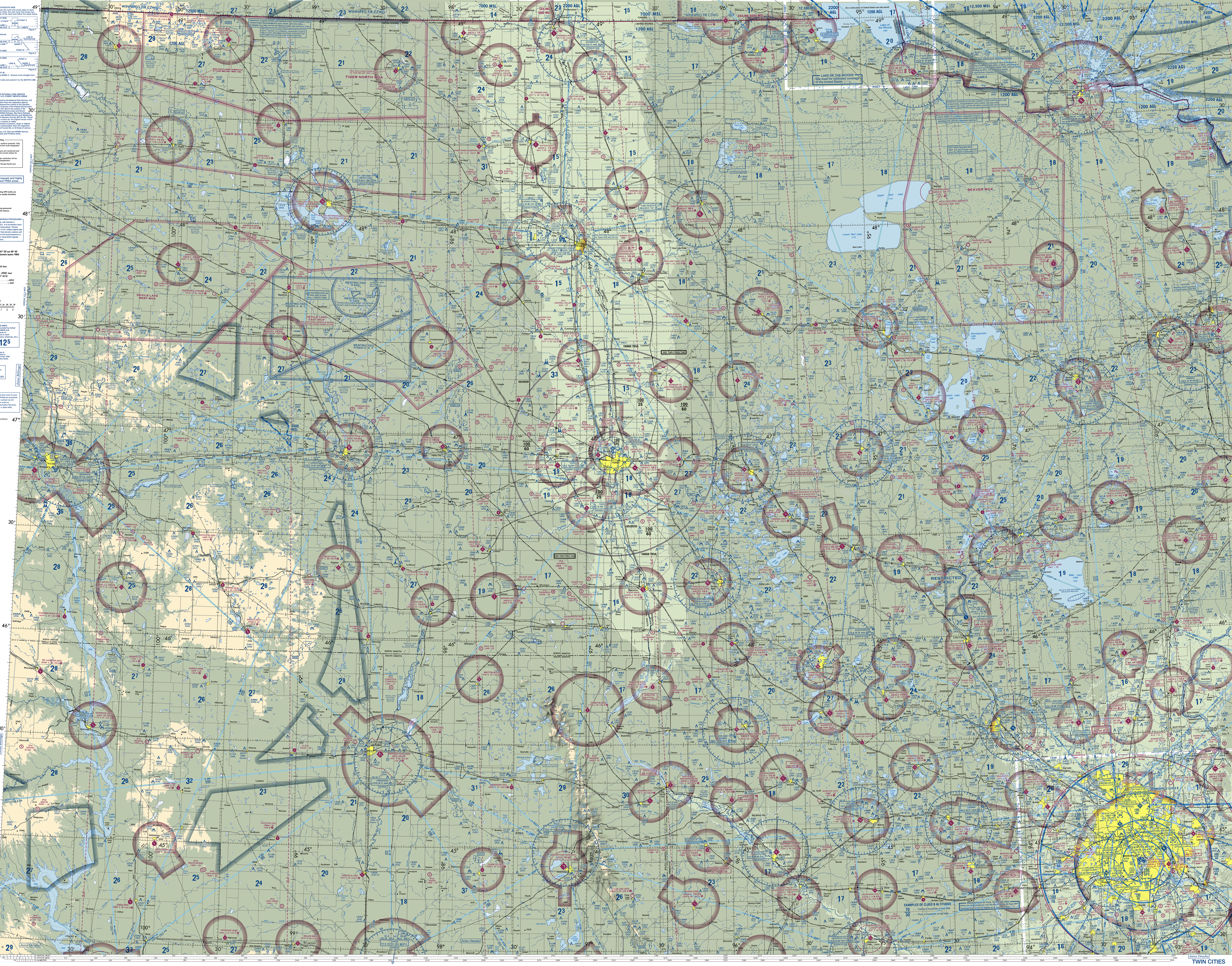
NUMBER	ALTITUDE	TIME OF USE	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES
P-204	TO BUT NOT INCL 4000	CONTINUOUS	NO A/G	
P-205	TO BUT NOT INCL 4000	CONTINUOUS	NO A/G	
R-4301	TO 37,000	0730-2400 †24 HRS IN ADVANCE	MINNEAPOLIS CNTR	118.05 239.0
R-5401	TO 5000	30 DAYS IN ADVANCE †24 HRS IN ADVANCE	MINNEAPOLIS 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 (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	6000	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.



LAKE OF THE WOODS AREA
Scale 1:500,000

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

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.