U.S. Department
of Transportation

**Federal Aviation
Administration**

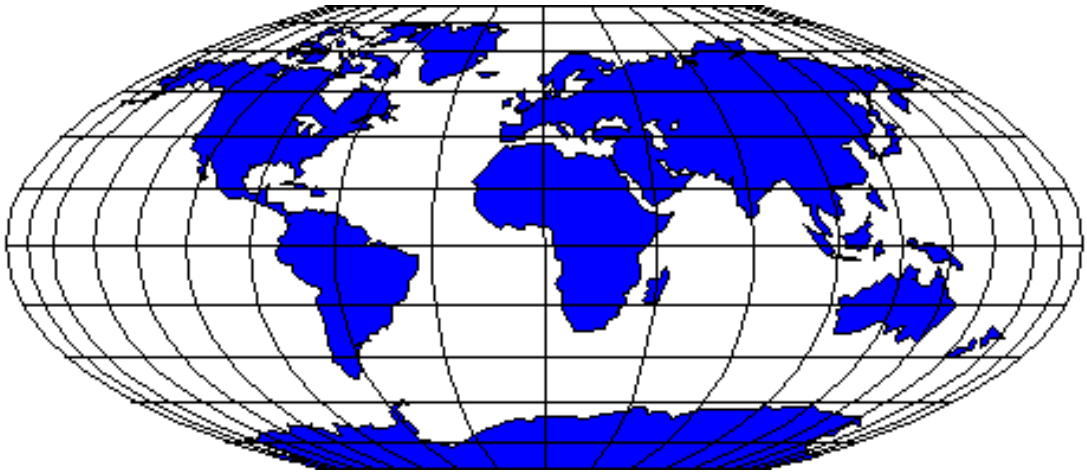
NOTICES TO AIRMEN

Domestic/International

July 18, 2019

Next Issue

August 15, 2019



*Notices to Airmen included in this publication are **NOT** given during pilot briefings unless specifically requested by the pilot. An electronic version of this publication is on the internet at http://www.faa.gov/air_traffic/publications/notices*

JANUARY – 2019

SUN	MON	TUE	WED	THU	FRI	SAT
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FEBRUARY – 2019

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MARCH – 2019

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31						

APRIL – 2019

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MAY – 2019

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JUNE – 2019

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JULY – 2019

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AUGUST – 2019

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SEPTEMBER – 2019

SUN	MON	TUE	WED	THU	FRI	SAT
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29	30					

OCTOBER – 2019

SUN	MON	TUE	WED	THU	FRI	SAT
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NOVEMBER – 2019

SUN	MON	TUE	WED	THU	FRI	SAT
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DECEMBER – 2019

SUN	MON	TUE	WED	THU	FRI	SAT
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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

= Cutoff dates for submitting information to AJV−5 for next publication. (Twenty−three (23) days before effective date.)

= Effective dates and cutoff dates for submitting information to the Publications Staff, AJV−8 for next publication. (Twenty−eight (28) days before next effective date.)

NOTICES TO AIRMEN

July 18, 2019

Note: Part 1, FDC NOTAMs, was removed from the Notices to Airmen Publication effective February 28, 2019. NOTAMs can always be obtained prior to flight via www.1800wxbrief.com, notams.aim.faa.gov/notamSearch/, or through Flight Service Stations. FDC NOTAMs are available upon request from Flight Service (1–800–WX–BRIEF). Check the Foreword for more information.

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Section 3. Airport and Facility Notices

Northeast United States

**There are no Northeast United States notices for this edition.*

Southeast United States

**There are no Southeast United States notices for this edition.*

East Central United States

South Central United States

**There are no South Central United States notices for this edition.*

North Central United States

**There are no North Central United States notices for this edition.*

Northwest United States

**There are no Northwest United States notices for this edition.*

Southwest United States

Alaska and Hawaii

**There are no Alaska and Hawaii notices for this edition.*

Section 4. Major Sporting & Entertainment Events

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Temporary Flight Restrictions (TFR) and additional NOTAM information are available on the FAA website at http://www.faa.gov

NOTICES TO AIRMEN

Publication Schedule

PART 1

Information for **Part 1** (Part 95 Revisions) shall be submitted to the **National Flight Data Center, AJV−5,** before the information cutoff dates listed in the chart below. Information, as well as inquiries, should be addressed to:

Address	Category
Federal Aviation Administration National Flight Data Center (AJV−5) 1305 East−West Hwy Silver Spring, MD 20910	Airports & NAVAIDs Airspace & Procedures Part 95 Revisions

Current NOTAMs are available from *www.1800wxbrief.com*, *notams.aim.faa.gov*/*notamSearch*/, or through Flight Service Stations at 1−800−WX−BRIEF. Notices, restrictions, and advisories may change at any time and without notice. Do not attempt any operation in the National Airspace System without first obtaining and understanding a thorough pre−flight briefing.

PARTS 2 AND 3

Information for **Part 2** (International) and **Part 3** (Graphic Notices) shall be submitted electronically to **Air Traffic Procedures (AJV−8),** through the appropriate regional office. Requirements for Graphic Notices are listed on page viii of the Foreword and **must** be submitted well in advance of the event, but not later than 28 days prior to publication (see table below). Changes to submissions cannot be accepted after the cutoff dates. Graphic Notices for special events are published in two editions prior to the event. Information for Parts 2 and 3, as well as inquiries, should be addressed to:

Address	E−Mail	Phone Number
FAA HQ, Mission Support Services **Air Traffic Procedures (AJV−8)** **600 Independence Ave., SW** **Washington, DC 20597**	9−ATOR−HQ−PubGrp@faa.gov	1−202−267−0916

Cutoff Dates for Submitting Information To Be Published

Effective Date of Publication	Information Submission Cutoff Dates for **Graphic Notices (Parts 2 & 3)**	Information Submission Cutoff Dates for **FDC NOTAMs (Parts 1)**
~~January 3, 2019~~	~~December 6, 2018~~	~~December 12, 2018~~
~~January 31, 2019~~	~~January 3, 2019~~	~~January 9, 2019~~
~~February 28, 2019~~	~~January 31, 2019~~	~~February 6, 2019~~
~~March 28, 2019~~	~~February 28, 2019~~	~~March 6, 2019~~
~~April 25, 2019~~	~~March 28, 2019~~	~~April 3, 2019~~
~~May 23, 2019~~	~~April 25, 2019~~	~~May 1, 2019~~
~~June 20, 2019~~	~~May 23, 2019~~	~~May 29, 2019~~
~~July 18, 2019~~	~~June 20, 2019~~	~~June 26, 2019~~
August 15, 2019	July 18, 2019	July 24, 2019
September 12, 2019	August 15, 2019	August 21, 2019
October 10, 2019	September 12, 2019	September 18, 2019
November 7, 2019	October 10, 2019	October 16, 2019
December 5, 2019	November 7, 2019	November 13, 2019

SUBSCRIPTION INFORMATION

This and other selected Air Traffic publications are available online: www.faa.gov/air_traffic/publications

*General Public**	*Government Organizations**
Contact: Superintendent of Documents U.S. Government Printing Office P.O. Box 979050 St. Louis, MO 63197–9000 **Call:** 202–512–1800 **Online:** http://bookstore.gpo.gov	This publication is available on the FAA Website. All Government organizations are responsible for viewing, downloading, and subscribing to receive electronic mail notifications when changes occur to this publication. Electronic subscription information can be obtained by visiting the aforementioned website.
**For those desiring printed copies, current pricing is available on the GPO website at http://bookstore.gpo.gov*	

FOREWORD

NATIONAL AIRSPACE SYSTEM CHANGES

The main references for changes to the National Airspace System (NAS) are the Aeronautical Charts and the Chart Supplements. Most changes to the NAS meeting NOTAM criteria are known sufficiently in advance to be carried in these publications. When this cannot be done, changes are carried as a NOTAM.

NOTAMS IN THE NOTICES TO AIRMEN PUBLICATION

The Notices to Airmen publication is issued every 28 days. Data in this publication that is current on the effective date of the next Chart Supplement will be transferred to the supplements and removed from this publication.

PART 1. PUBLICATION CRITERIA

Revisions to Part 95 of the Code of Federal Regulations – Minimum En Route IFR Altitudes and Changeover Points are published four (4) weeks prior to the 56–day IFR chart cycle.

The revisions will remain in the NTAP until four (4) weeks prior to the next IFR chart 56–day cycle. (IFR 56–day cycle dates are published in the AFD in the General Information Section under Effective Date.)

The consolidation of Part 95 Altitudes will continue to be published as a separate document.

PART 2. INTERNATIONAL NOTICES TO AIRMEN

The International Notices to Airmen feature significant international information and data which may affect a pilot's decision to enter or use areas of foreign or international airspace. Each issuance of this Part is complete in itself. Temporary data will be repeated in each issue until the condition ceases to exist. Permanent data will be carried until it is sufficiently published or is available in other permanent sources. New items will be indicated by a black bar running in the left or right margin.

The information in Part 2 is divided into two sections. Section 1, Flight Prohibitions, Potentially Hostile Situations, and Foreign Notices is arranged alphabetically by country. Section 2, International Oceanic Airspace Notices, is divided into two sections: General and Region Specific.

Any notice submitted for inclusion must include the following information at the end of the notice: submitting office and date of the revision (e.g., AJV–81, 2/2/2017). In addition, all electronic mail submissions to 9–ATOR–HQ–PubGrp@faa.gov should specify a time frame in which to expect the removal of the notice from the publication. Submitting offices should notify AJV–8 when notices are no longer needed in the publication.

PART 3. GRAPHIC NOTICES

This section contains special notices and notices containing graphics pertaining to almost every aspect of aviation, such as military training areas, large scale sporting events that may attract media attention or draw large crowds of aircraft, air show information, and airport–specific information.

Data in this section is updated continuously. All submissions for inclusion in this section must have regional office approval and be submitted to AJV–8 through the regional office.

Notices for events requiring Special Traffic Management Programs (STMP) should be coordinated following the procedures in FAA Order JO 7210.3, Facility Operation and Administration.

Submissions should be sent to AJV–8 well in advance of but **no later than 28 days prior to** the effective date of the Notices to Airmen edition to ensure adequate lead time for inclusion in the publication.

Notices to Airmen (NOTAMS) submitted for inclusion in the NTAP are published **no earlier than two publication cycles (56 day periods) prior to the cycle in which the NOTAM becomes effective.** Special NOTAMS capture special events, like the Super Bowl, and are generally published in the NTAP for two consecutive publication cycles. NOTAMS that are more permanent in nature are posted in the NTAP until transferred to other appropriate Air Traffic Publications.

With the exception of dated special events, any notice submitted for inclusion must include the following information at the end of the notice: submitting office and date of the revision (e.g., AJV−81, 2/2/2017). In addition, all electronic mail submissions should specify a time frame in which to expect the removal of the notice from the publication. Regional offices should notify AJV−8 when notices are no longer needed in the publication.

Text files should be submitted as Word documents. Any graphics submitted for inclusion must be of high quality and in camera ready form; *FAX copies will not be accepted*. Electronic mail submissions are required and should be addressed to 9−ATOR−HQ−PubGrp@faa.gov . Graphics should be submitted in one of the following formats: GIF, JPEG, TIFF, BMP, or PDF. Please do not submit graphics with a ".doc" file extension. Each graphic must be submitted as a separate attachment. Graphic notices may be submitted in color or black and white. Avoid using white text in any graphic. Copyrighted materials, such as maps, should not be submitted for publication without written permission of the copyright owner.

REMOVED PARTS

Part 1. FDC NOTAMs

Effective with the February 28, 2019, edition, this part was removed from the publication. This included Section 1, Airway NOTAMs; Section 2, Airport, Facility and Procedural NOTAMs; and Section 3, General NOTAMs. These NOTAMs are still considered on request items when obtaining a briefing from Flight Service Stations (FSS). The most current and up−to−date information on NOTAMs is contained in the FAA's official NOTAM Search website, which can be found at https://notams.aim.faa.gov/notamSearch/. Pilots should obtain preflight IFR route and amendment FDC NOTAM information via the NOTAM Search website, an approved Flight Service web portal, or upon request by calling a Flight Service Station. Part 2, 3, and 4 of the NTAP were renumbered as Part 1, 2, and 3, respectively.

Part 5. Special Temporary Flight Restrictions/Prohibited Areas Around the Washington, DC, Thurmont, MD, and Crawford, TX, Areas

Effective with the November 27, 2003, edition, this part was removed from the publication. For information on flight restrictions, pilots are directed to www.1800wxbrief.com, notams.aim.faa.gov/notamSearch/, or through Flight Service Stations at 1−800−WX−BRIEF.

TIME REFERENCES

All time references are indicated as UTC or local. During periods of Daylight Saving Time, effective hours in local time will be one hour earlier than shown. All states observe Daylight Savings Time except Arizona, Hawaii, Puerto Rico, and the Virgin Islands.

NEW INFORMATION

Vertical lines in the outside margin indicate new or revised information.

INTERNET

The entire Notices to Airmen publication is published on the internet at the following address in PDF and HTML format: http://www.faa.gov/air_traffic/publications/notices/.

There are two copies of the NTAP on the website, the current version and the previous version. This is done to overlay any current NOTAMs and information that may be needed.

ERROR OR OBSOLETE DATA NOTIFICATION

Notification of erroneous or obsolete data should be directed to the Federal Aviation Administration, Air Traffic Procedures, AJV−81, 600 Independence Avenue, SW, Washington, DC 20597, or via e−mail at 9−ATOR−HQ−PubGrp@faa.gov.

CONTRACTIONS

NOTAM CONTRACTIONS

This list contains most of the commonly used contractions currently in use in Notices to Airmen (NOTAMS) and the standard aviation weather products, such as METAR/TAF, area forecasts, SIGMETs, AIRMETs, etc.

Contraction	*Decode*
A	
ABN	Aerodrome Beacon
ABV	Above
ACFT	Aircraft
ACT	Active or Activated or Activity
AD	Aerodrome
ADJ	Adjacent
AGL	Above ground level
ALS	Approach Light System
ALT	Altitude
ALTN	Alternate
AP	Airport
APCH	Approach
APP	Approach control or Approach Control Office
ARR	Arrival or Arrive
ASPH	Asphalt
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
AUTH	Authority
AVBL	Available
AWY	Airway
AZM	Azimuth
B	
BA GOOD	Braking action good
BA GOOD TO MEDIUM	Braking action good to medium
BA MEDIUM	Braking action medium
BA MEDIUM TO POOR	Braking action medium to poor
BA NIL	Braking action nil
BC	Back Course
BCN	Beacon
BLW	Below
C	
CAT	Category
CK	Check
CL	Center Line
CLSD	Closed
CMB	Climb
COM	Communications
CONC	Concrete
CTC	Contact
CTL	Control
D	
DCT	Direct
DEG	Degrees
DH	Decision Height
DIST	Distance
DLA	Delay or delayed
DLY	Daily
DME	Distance Measuring Equipment
DP	Dew Point Temperature

Contraction	*Decode*
E	
E	East
ELEV	Elevation
ENG	Engine
EXC	Except
F	
FAF	Final Approach fix
FAN MKR	Fan Marker
FDC	Flight Data Center
FM	From
FREQ	Frequency
FNA	Final approach
FRI	Friday
FSS	Automated/Flight Service Station
FT	Foot, feet
G	
GCA	Ground Control Approach
GP	Glide Path
GPS	Global Positioning System
GRVL	Gravel
H	
HDG	Heading
HEL	Helicopter
HELI	Heliport
HIRL	High Intensity Runway Lights
HIWAS	Hazardous Inflight Weather Advisory Service
HLDG	Holding
HR	Hour
I	
IAF	Initial approach fix
IAP	Instrument Approach Procedure
INBD	Inbound
ID	Identification
IDENT	Identify/Identifier/Identification
IF	Intermediate approach fix
ILS	Instrument Landing System
IM	Inner Marker
IN	Inch/Inches
INFO	Information
INOP	Inoperative
INSTR	Instrument
INT	Intersection
INTL	International
INTST	Intensity
K	
KT	Knots
L	
L	Left
LAA	Local Airport Advisory
LAT	Latitude

Contraction	*Decode*
LAWRS	Limited Aviation Weather Reporting Station
LB	Pound/Pounds
LC	Local Control
LOC	Localizer
LGT	Light or lighting
LGTD	Lighted
LIRL	Low Intensity Runway Lights
LM	Locator Middle
LDG	Landing
LO	Outer Locator
LONG	Longitude
M	
MAINT	Maintain, maintenance
MALS	Medium Intensity Approach Light System
MALSF	Medium Intensity Approach Light System with Sequenced Flashers
MALSR	Medium Intensity Approach Light System with Runway Alignment Indicator Lights
MAPT	Missed Approach Point
MCA	Minimum Crossing Altitude
MDA	Minimum Descent Altitude
MEA	Minimum Enroute Altitude
MIN	Minute
MIRL	Medium Intensity Runway Lights
MLS	Microwave Landing System
MM	Middle Marker
MNM	Minimum
MNT	Monitor/Monitoring/Monitored
MOC	Minimum Obstruction Clearance
MON	Monday
MSG	Message
MSL	Mean Sea Level
N	
N	North
NA	Not Authorized
NAV	Navigation
NB	Northbound
NDB	Nondirectional Radio Beacon
NE	North−east
NGT	Night
NM	Nautical Mile(s)
NTAP	Notice To Airmen Publication
NW	North−west
O	
OBSC	Obscured
OBST	Obstacle
OM	Outer Marker
OPR	Operate
OPS	Operation
P	
PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
PARL	Parallel
PAX	Passenger
PCL	Pilot Controlled Lighting
PERM	Permanent/Permanently
PJE	Parachute jumping exercise
PLA	Practice Low Approach
PN	Prior Notice Required

Contraction	*Decode*
PPR	Prior Permission Required
PRN	Psuedo random noise
PROC	Procedure
PTN	Procedure Turn
R	
RAIL	Runway Alignment Indicator Lights
RCL	Runway Centerline
RCLL	Runway Centerline Light System
REC	Receive/Receiver
REDL	Runway Edge Light
REIL	Runway End Identifier Lights
REP	Report
RLLS	Runway Lead−in Lights System
RNAV	Area Navigation
RPLC	Replace
RSR	En Route Surveillance Radar
RTS	Return to Service
RVR	Runway Visual Range
RWY	Runway
S	
S	South
SAT	Saturday
SB	Southbound
SE	Southeast
SID	Standard Instrument Departure
SIMUL	Simultaneous
SKED	Scheduled
SSALF	Simplified Short Approach Lighting System with Sequenced Flashers
SSALR	Simplified Short Approach Lighting System with Runway Alignment Indicator Lights
SSALS	Simplified Short Approach Lighting System
SSR	Secondary Surveillance Radar
STA	Straight−in Approach
STAR	Standard Terminal Arrival
SUN	Sunday
SW	Southwest
T	
T	Temperature
TACAN	Tactical Air Navigational Aid
TAR	Terminal area surveillance radar
TDZ	Touchdown Zone
TEMPO	Temporary
TFC	Traffic
TFR	Temporary Flight Restriction
TGL	Touch and Go Landings
THR	Threshold
THRU	Through
THU	Thursday
TKOF	Takeoff
TUE	Tuesday
TWR	Tower
TWY	Taxiway
U	
U/S	Unserviceable
UNREL	Unreliable
V	
VASI	Visual Approach Slope Indicator

Contraction	*Decode*
VIS	Visibility
VOR	VHF Omni–Directional Radio Range
VORTAC	VOR and TACAN (colocated)
W	
W	West

Contraction	*Decode*
WB	Westbound
WED	Wednesday
WI	Within
WPT	Waypoint
WX	Weather

WEATHER CONTRACTIONS

Contraction	*Decode*
A	
A	Absolute (temperature)
A	Alaskan Standard Time (time groups only)
A	Arctic (air mass)
A01	Automated Observation without Precipitation Discriminator (rain/snow) (METAR)
A02	Automated Observation with Precipitation Discriminator (rain/snow) (METAR)
AAWF	Auxiliary Aviation Weather Facility
AC	Altocumulus
ACC	Altocumulus Castellanus
ACSL	Standing Lenticular Altocumulus
ACYC	Anticyclonic
ADRNDCK	Adirondack
ADV	Advise
ADVCTN	Advection
ADVY	Advisory
AFC	Area Forecast Center
AFDK	After Dark
ALF	Aloft
ALGHNY	Allegheny
ALQDS	All Quadrants
ALSEC	All Sectors
ALTA	Alberta
ALUTN	Aleutian
ALWF	Actual Wind Factor
AM	Ante Meridiem
AMD	Amended Forecast (TAF)
AMPLTD	Amplitude
AMS	Air Mass
AMS	American Meteorological Society
ANLYS	Analysis
APLCN	Appalachian
AS	Altostratus
ASOS	Automated Surface Observing System
ATLC	Atlantic
AURBO	Aurora Borealis
AWP	Aviation Weather Processors
B	
B	Beginning of Precipitation (time in minutes) (weather reports only)
B	Bering Standard Time (time groups only)
BACLIN	Baroclinic or Baroclinic Prognosis
BATROP	Barotropic or Barotropic Prognosis
BC	Patches (METAR)
BC	British Columbia
BCFG	Patchy Fog (METAR)
BCH	Beach
BCKG	Backing
BDA	Bermuda

Contraction	*Decode*
BECMG	Becoming (expected between 2 digit beginning hour and 2 digit ending hour) (TAF)
BFDK	Before Dark
BINOVC	Breaks in Overcast
BKN	Broken
BL	Between Layers
BL	Blowing (METAR)
BLD	Build
BLDUP	Buildup
BLKHLS	Black Hills
BLKT	Blanket
BLZD	Blizzard
BMS	Basic Meteorological Services
BNDRY	Boundary
BOVC	Base of Overcast
BR	Mist (METAR)
BRF	Brief
BRKHIC	Breaks in Higher Overcast
BRKSHR	Berkshire
BRM	Barometer
BTWN	Between
C	
C	Central Standard Time (time groups only)
C	Continental (air mass)
CAN	Canada
CARIB	Caribbean
CASCDS	Cascades
CAVOK	Cloud and Visibility OK (METAR)
CAVU	Clear or Scattered Clouds and Visibility Greater Than Ten Miles
CAWS	Common Aviation Weather Sub–system
CB	Cumulonimbus
CBMAM	Cumulonimbus Mamma
CC	Cirrocumulus
CCLKWS	Counterclockwise
CCSL	Standing Lenticular Cirrocumulus
CDFNT	Cold Front
CFP	Cold Front Passage
CHARC	Characteristic
CHSPK	Chesapeake
CI	Cirrus
CIG	Ceiling
CLD	Cloud
CLR	Clear at or below 12,000 feet (AWOS/ASOS report) (METAR)
CLRS	Clear and Smooth
CNCL	Cancel
CNDN	Canadian
CNVTV	Convective

Contraction	*Decode*
CONFDC	Confidence
CONTDVD	Continental Divide
CONTRAILS	Condensation Trails
COR	Correction to the observation (METAR)
CS	Cirrostratus
CST	Coast
CTGY	Category
CTSKLS	Catskills
CU	Cumulus
CUFRA	Cumulus Fractus
CYC	Cyclonic
CYCLGN	Cyclogenesis
D	
DABRK	Daybreak
DCAVU	Clear or Scattered Clouds and Visibility Greater than Ten, Remainder of Report Missing (weather reports only)
DKTS	Dakotas
DMSH	Diminish
DNS	Dense
DNSLP	Downslope
DNSTRM	Downstream
DP	Deep
DPNG	Deepening
DPTH	Depth
DR	Low Drifting (METAR)
DRFT	Drift
DS	Dust Storm (METAR)
DSIPT	Dissipate
DTLN	International Dateline
DTRT	Deteriorate
DU	Widespread Dust (METAR)
DVV	Downward Vertical Velocity
DWNDFTS	Downdrafts
DWPNT	Dew Point
DZ	Drizzle (METAR)
E	
E	Eastern Standard Time (time groups only)
E	Ending of Precipitation (time in minutes) (weather reports only)
E	Equatorial (air mass)
E	Estimated (weather reports only)
ELNGT	Elongate
EMBDD	Embedded
EMSU	Environment Meteorological Support Unit
ENERN	East−northeastern (weather reports only)
ENEWD	East−northeastward (weather reports only)
EOF	Expected Operations Forecast
ESERN	East−southeastern (weather reports only)
ESEWD	East−southeastward (weather reports only)
EXTRAP	Extrapolate
EXTRM	Extreme
F	
FA	Area Forecast
FAH	Fahrenheit
FEW	1 or 2 octas (eighths) cloud coverage (METAR)
FC	Funnel Cloud (METAR)
+FC	Tornado/ Water Spout (METAR)
FG	Fog (METAR)
FIBI	Filed but Impractical to Transmit
FILG	Filling

Contraction	*Decode*
FINO	Weather Report Will Not Be Filed for Transmission
FL	Flash Advisory
FLDST	Flood Stage
FLG	Falling
FLRY	Flurry
FLWIS	Flood Warning Issued
FM	From (4 digit beginning time in hours and minutes) (TAF)
FNT	Front
FNTGNS	Frontogenesis
FNTLYS	Frontolysis
FORNN	Forenoon
FRMG	Forming
FROPA	Frontal Passage
FROSFC	Frontal Surface
FRST	Frost
FRWF	Forecast Wind Factor
FRZ	Freeze
FRZLVL	Freezing Level
FRZN	Frozen
FT	Terminal Forecast
FU	Smoke (METAR)
FULYR	Smoke Layer Aloft
FUOCTY	Smoke Over City
FWC	Fleet Weather Central
FZ	Supercooled/freezing (METAR)
G	
G	Gusts Reaching (knots) (weather reports only)
GLFALSK	Gulf of Alaska
GLFCAL	Gulf of California
GLFMEX	Gulf of Mexico
GLFSTLAWR	Gulf of St. Lawrence
GR	Hail (METAR)
GRAD	Gradient
GRBNKS	Grand Banks
GRDL	Gradual
GRTLKS	Great Lakes
GS	Small Hail/Snow Pellets (METAR)
GSTS	Gusts
GSTY	Gusty
H	
HCVIS	High Clouds Visible
HDFRZ	Hard Freeze
HDSVLY	Hudson Valley
HI	Hi
HIEAT	Highest Temperature Equaled for All Time
HIEFM	Highest Temperature Equaled for The Month
HIESE	Highest Temperature Equaled So Early
HIESL	Highest Temperature Equaled So Late
HIFOR	High Level Forecast
HITMP	Highest Temperature
HIXAT	Highest Temperature Exceeded for All Time
HIXFM	Highest Temperature Exceeded for The Month
HIXSE	Highest Temperature Exceeded So Early
HIXSL	Highest Temperature Exceeded So Late
HLSTO	Hailstones
HLTP	Hilltop
HLYR	Haze Layer Aloft
HURCN	Hurricane
HUREP	Hurricane Report
HX	High Index
HZ	Haze (METAR)

Contraction	*Decode*
I	
IC	Ice Crystals (METAR)
ICG	Icing
ICGIC	Icing in Clouds
ICGICIP	Icing in Clouds and Precipitation
ICGIP	Icing in Precipitation
IMDT	Immediate
INLD	Inland
INSTBY	Instability
INTR	Interior
INTRMTRGN	Inter−Mountain Region
INTS	Intense
INTSFY	Intensify
INVRN	Inversion
IOVC	In Overcast
IR	Ice on Runway
J	
JTSTR	Jet Stream
K	
K	Cold (air mass)
KFRST	Killing Frost
L	
LABRDR	Labrador
LCTMP	Little Change in Temperature
LDG	Landing
LFT	Lift
LGRNG	Long Range
LIFR	Low IFR (weather reports only)
LK	Lake
LOEAT	Lowest Temperature Equaled for All Time
LOEFM	Lowest Temperature Equaled for The Month
LOESE	Lowest Temperature Equaled So Early
LOESL	Lowest Temperature Equaled So Late
LOTMP	Lowest Temperature
LOXAT	Lowest Temperature Exceeded for All Time
LOXFM	Lowest Temperature Exceeded for The Month
LOXSE	Lowest Temperature Exceeded So Early
LOXSL	Lowest Temperature Exceeded So Late
LSR	Loose Snow on Runway
LTGCC	Lightning Cloud-to-Cloud
LTGCCCG	Lightning Cloud-to-Cloud, Cloud-to-Ground
LTGCG	Lightning Cloud-to-Ground
LTGCW	Lightning Cloud-to-Water
LTGIC	Lightning in Clouds
LTLCG	Little Change
LTNG	Lightning
LX	Low Index
LYR	Layer or Layered or Layers
M	
M	Maritime (air mass)
M	In temperature field means ”minus” or below zero (METAR)
M	In RVR Field, indicates visibility less than lowest reportable sensor value (e.g. M0600FT)
M	Missing (weather reports only)
M	Mountain Standard Time (time groups only)
MA	Map Analysis

Contraction	*Decode*
MAN	Manitoba
MEGG	Merging
MEX	Mexico
MHKVLY	Mohawk Valley
MI	Shallow (METAR)
MIDN	Midnight
MIFG	Patches of Shallow Fog Not Deeper Than Two Meters (METAR)
MLTLVL	Melting Level
MMO	Main Meteorological Office
MNLD	Mainland
MOGR	Moderate or Greater
MONTR	Monitor
MOV	Move
MRGL	Marginal
MRNG	Morning
MRTM	Maritime
MS	Minus
MSTLY	Mostly
MSTR	Moisture
MTN	Mountain
MVFR	Marginal VFR
MXD	Mixed
N	
NB	New Brunswick
NCWX	No Change in Weather
NELY	Northeasterly (weather reports only)
NERN	Northeastern
NEW ENG	New England
NFLD	Newfoundland
NGT	Night
NL	No Layers
NMBR	Number
NNERN	North−northeastern (weather reports only)
NNEWD	North−northeastward (weather reports only)
NNWRN	North−northwestern (weather reports only)
NNWWD	Northwestward (weather reports only)
NO	Not available (e.g. SLPNO, RVRNO)
NORPI	No Pilot Balloon Observation Will Be Filed Next Collection Unless Weather Changes Significantly
NPRS	Nonpersistent
NS	Nimbostratus
NS	Nova Scotia
NSCSWD	No Small Craft or Storm Warning are Being Displayed
NSW	No Significant Weather (METAR)
NVA	Negative Vorticity Advection
NWLY	Northwesterly (weather reports only)
NWRN	Northwestern (weather reports only)
O	
OBS	Observation
OBSC	Obscure
OCFNT	Occluded Front
OCLD	Occlude
OCLN	Occlusion
OFP	Occluded Frontal Passage
OFSHR	Offshore
OMTNS	Over Mountains
ONSHR	On Shore
ONT	Ontario

Contraction	*Decode*
ORGPHC	Orographic
OSV	Ocean Station Vessel
OTAS	On Top and Smooth
OTLK	Outlook
OVC	Overcast
P	
P	Pacific Standard Time (time group only)
P	Polar (air mass)
P	In RVR field, indicates visibility greater than highest reportable sensor value (e.g. P6000FT)
P6SM	Visibility greater than 6 statute miles (TAF only)
PAC	Pacific
PBL	Probable
PCPN	Precipitation
PDMT	Predominant
PDMT	Predominate
PDW	Priority Delayed Weather
PL	Ice Pellets (METAR)
PEN	Peninsula
PGTSND	Puget Sound
PIBAL	Pilot Balloon Observation
PISE	No Pilot Balloon Observation Due To Unfavorable Sea Conditions
PISO	No Pilot Balloon Observation Due To Snow
PIWI	No Pilot Balloon Observation Due To High, or Gusty, Surface Wind
PLW	Plow (snow)
PNHDL	Panhandle
PO	Dust/Sand Whirls (METAR)
PPINA	Radar Weather Report Not Available (or omitted for a reason different than those otherwise stated)
PPINE	Radar Weather Report No Echoes Observed
PPINO	Radar Weather Report Equipment Inoperative Due To Breakdown
PPIOK	Radar Weather Report Equipment Operation Resumed
PPIOM	Radar Weather Report Equipment Inoperative Due To Maintenance
PR	Partial (METAR)
PRBLTY	Probability
PRESFR	Pressure Falling Rapidly
PRESRR	Pressure Rising Rapidly
PRJMP	Pressure Jump (weather reports only)
PROB40	Probability 40 percent (METAR)
PROG	Prognosis or Prognostic
PRSNT	Present
PS	Plus
PSG	Passage
PSG	Passing
PTCHY	Patchy
PTLY	Partly
PVA	Positive Vorticity Advection
PY	Spray (METAR)
Q	
QSTNRY	Quasi-stationary
QUE	Quebec
R	
R	Runway (used in RVR measurement)
RA	Rain (METAR)
RABA	No RAWIN Obs., No Balloons Available
RABAL	Radiosonde Balloon Wind Data
RABAR	Radiosonde Balloon Release

Contraction	*Decode*
RACO	No RAWIN Obs., Communications Out
RADAT	Radiosonde Observation Data
RADNO	Report Missing Account Radio Failure
RAFI	Radiosonde Observation Not Filed
RAFRZ	Radiosonde Observation Freezing Levels
RAHE	No RAWIN Obs., No Gas Available
RAICG	Radiosonde Observation Icing at
RAOB	Radiosonde Observation
RAREP	Radar Weather Report
RAVU	Radiosonde Analysis and Verification Unit
RAWE	No RAWIN obs., Unfavorable Weather
RAWI	No RAWIN Obs., High and Gusty Winds
RAWIN	Upper Winds Obs. (by radio methods)
RCD	Radar Cloud Detection Report
RCDNA	Radar Cloud Detection Report Not Available
RCDNE	Radar Cloud Detection Report No Echoes Observed
RCDNO	Radar Cloud Detector Inoperative Due to Breakdown Until
RCDOM	Radar Cloud Detector Inoperative Due to Maintenance Until
RCKY	Rockies (mountains)
RDG	Ridge
RDWND	Radar Dome Wind
RESTR	Restrict
RGD	Ragged
RH	Relative Humidity
RHINO	Radar Echo Height Information Not Available
RHINO	Radar Range Height Indicator Not Operating on Scan
RIOGD	Rio Grande
RMK	Remark(s)
RNFL	Rainfall
ROBEPS	Radar Operating Below Prescribed Standard
RPD	Rapid
RSG	Rising
RUF	Rough
RY/RWY	Runway
S	
SA	Sand (METAR)
SASK	Saskatchewan
SBSD	Subside
SC	Stratocumulus
SCSL	Standing Lenticular Stratocumulus
SCT	Scattered
SELS	Severe Local Storms
SELY	Southeasterly (weather reports only)
SERN	Southeastern (weather reports only)
SFERICS	Atmospherics
SG	Snow Grains (METAR)
SGD	Solar–Geophysical Data
SH	Showers (METAR)
SHFT	Shift (weather reports only)
SHLW	Shallow
SHRTLY	Shortly
SHWR	Shower
SIERNEV	Sierra Nevada
SKC	Sky Clear (METAR)
SLD	Solid
SLP	Sea Level pressure (e.g. 1013.2 reported as 132)
SLR	Slush on Runway
SLT	Sleet
SM	Statute mile(s)

Contraction	*Decode*
SMK	Smoke
SMTH	Smooth
SN	Snow (METAR)
SNBNK	Snowbank
SNFLK	Snowflake
SNOINCR	Snow Depth Increase in Past Hour
SNW	Snow
SNWFL	Snowfall
SP	Station Pressure
SPECI	Special Report (METAR)
SPKL	Sprinkle
SPLNS	South Plains
SPRD	Spread
SQ	Squall (METAR)
SQAL	Squall
SQLN	Squall Line
SS	Sandstorm (METAR)
SSERN	South-southeastern (weather reports only)
SSEWD	South-southeastward (weather reports only)
SSWRN	South-southwestern (weather reports only)
SSWWD	South–southwestward (weather reports only)
ST	Stratus
STAGN	Stagnation
STFR	Stratus Fractus
STFRM	Stratiform
STG	Strong
STM	Storm
STNRY	Stationary
SWLG	Swelling
SWLY	Southwesterly (weather reports only)
SWRN	Southwestern (weather reports only)
SX	Stability Index
SXN	Section
SYNOP	Synoptic
SYNS	Synopsis
T	
T	Trace (weather reports only)
T	Tropical (air mass)
TCU	Towering Cumulus
TEMPO	Temporary changes expected (between 2 digit beginning hour and 2 digit ending hour) (TAF)
THD	Thunderhead (non METAR)
THDR	Thunder (non METAR)
THK	Thick
THN	Thin
TKOF	Takeoff
TOP	Cloud Top
TOVC	Top of Overcast
TPG	Topping
TRIB	Tributary
TROF	Trough
TROP	Tropopause
TRPCD	Tropical Continental (air mass)
TRPCL	Tropical
TRPLYR	Trapping Layer
TS	Thunderstorm (METAR)
TSHWR	Thundershower (non METAR)
TSQLS	Thundersqualls (non METAR)
TSTM	Thunderstorm (non METAR)
TURBC	Turbulence
TURBT	Turbulent
TWRG	Towering

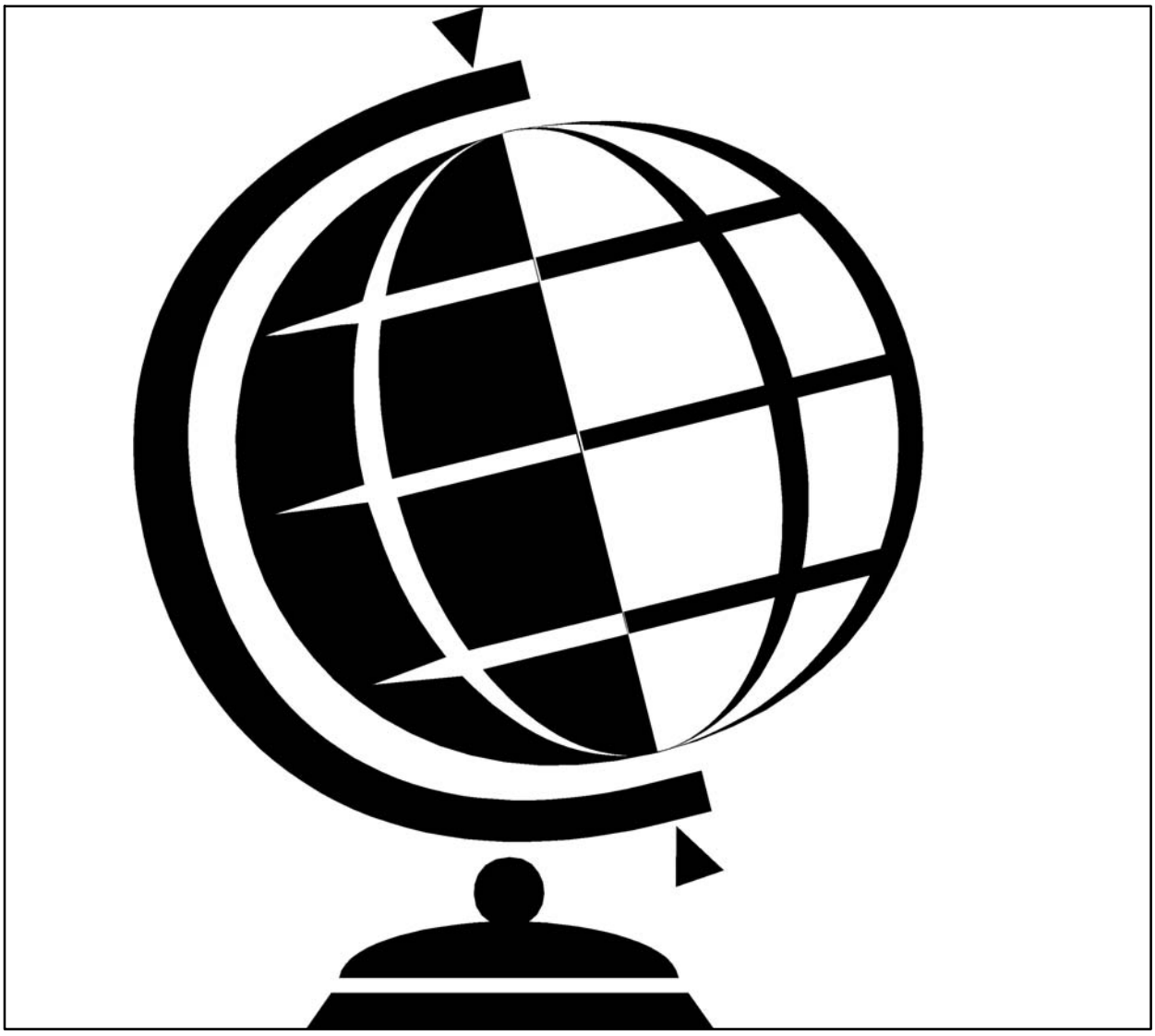
Contraction	*Decode*
U	
UAG	Upper Atmosphere Geophysics
UDDF	Up and Down Drafts
UNSBL	Unseasonable
UNSTBL	Unstable
UNSTDY	Unsteady
UNSTL	Unsettle
UP	Unknown Precipitation (Automated Observations)
UPDFTS	Updrafts
UPR	Upper
UPSLP	Upslope
UPSTRM	Upstream
UVV	Upward Vertical Velocity
UWNDS	Upper Winds
V	
V	Varies (wind direction and RVR)
V	Variable (weather reports only)
VA	Volcanic Ash (METAR)
VC	Vicinity
VLCTY	Velocity
VLNT	Violent
VLY	Valley
VR	Veer
VRB	Variable wind direction when speed is less than or equal to 6 knots
VRISL	Vancouver Island, BC
VRT MOTN	Vertical Motion
VSBY	Visibility
VSBYDR	Visibility Decreasing Rapidly
VSBYIR	Visibility Increasing Rapidly
VV	Vertical Visibility (Indefinite Ceiling) (METAR)
W	
W	Warm (air mass)
WA	AIRMET
WDC–1	World Data Centers in Western Europe
WDC–2	World Data Centers Throughout Rest of World
WDLY	Widely
WDSPRD	Widespread
WEA	Weather
WFP	Warm Front Passage
WINT	Winter
WND	Wind
WNWRN	West–northwestern (weather reports only)
WNWWD	West–northwestward (weather reports only)
WPLTO	Western Plateau
WR	Wet Runway
WRM	Warm
WRMFNT	Warm Front
WRNG	Warning
WS	Wind Shear (in TAFs, low level and not associated with convective activity)
WS	SIGMET
WSHFT	Wind Shift
WSOM	Weather Service Operations Manual
WSR	Wet Snow on Runway
WSWRN	West–southwestern (weather reports only)
WSWWD	West–southwestward (weather reports only)
WTR	Water
WTSPT	Waterspout
WV	Wave
WW	Severe Weather Forecast
WXCON	Weather Reconnaissance Flight Pilot Report

Contraction	*Decode*
X	
XCP	Except
XPC	Expect
Y	
Y	Yukon Standard Time (time groups only)

Contraction	*Decode*
YKN	Yukon
YLSTN	Yellowstone
Z	
ZI	Zonal Index
ZI	Zone of Interior

PART 1. Part 95 Revisions

Section 1. Revisions to Minimum En Route IFR Altitudes & Changeover Points



REVISIONS TO IFR ALTITUDES & CHANGEOVER POINT
AMENDMENT 546
EFFECTIVE DATE June 20, 2019

§95.4000 HIGH ALTITUDE RNAV ROUTES

§95.4073 RNAV ROUTE Q73

FROM	TO	MEA	MAA
IS AMENDED TO READ IN PART			
HAKMN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZZYZX, NV WP	*18000	45000
ZZYZX, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	LAKRR, NV WP	*18000	45000

§95.4088 RNAV ROUTE Q88

FROM	TO	MEA	MAA
IS AMENDED BY ADDING			
CHESZ, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	SINRY, CO WP	*22000	45000
SINRY, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZAKRY, CO WP	*22000	45000
ZAKRY, CO WP *22000 - GNSS MEA *DME/DME/IRU MEA	YAMPA, CO WP	*22000	45000
YAMPA, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	BICAR, NE WP	*22000	45000
BICAR, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	CHUWY, NE WP	*22000	45000
CHUWY, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	KEEFF, NE WP	*22000	45000
KEEFF, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	GUDDY, SD WP	*22000	45000
GUDDY, SD WP *18000 - GNSS MEA *DME/DME/IRU MEA	VIVID, SD FIX	*22000	45000
VIVID, SD FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JOYCC, SD WP	*22000	45000

JOYCC, SD WP *18000 - GNSS MEA *DME/DME/IRU MEA	DKOTA, SD WP	*22000	45000

IS AMENDED TO READ IN PART

HAKMN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZZYZX, NV WP	*18000	45000
ZZYZX, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	LAKRR, NV WP	*18000	45000

§95.4090 RNAV ROUTE Q90

FROM	TO	MEA	MAA

IS AMENDED BY ADDING

JASSE, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	NAVJO, AZ WP	*24000	45000
NAVJO, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	YAMHA, CO WP	*24000	45000
YAMHA, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	DAAYE, CO WP	*24000	45000
DAAYE, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	SKWYR, CO WP	*24000	45000
SKWYR, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	HUSQA, KS WP	*24000	45000
HUSQA, KS WP *18000 - GNSS MEA *DME/DME/IRU MEA	VARNE, KS WP	*24000	45000
VARNE, KS WP *18000 - GNSS MEA *DME/DME/IRU MEA	ATIJA, KS WP	*20000	45000
ATIJA, KS WP *18000 - GNSS MEA *DME/DME/IRU MEA	LEFAM, NE WP	*20000	45000
LEFAM, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	BOVEY, MO WP	*20000	45000
BOVEY, MO WP *18000 - GNSS MEA *DME/DME/IRU MEA	WELKY, IA WP	*20000	45000

§95.4092 RNAV ROUTE Q92

FROM	TO	MEA	MAA
IS AMENDED BY ADDING			
CHUWY, NE WP *20000 - GNSS MEA *DME/DME/IRU MEA	KUTCH, NE WP	*22000	45000
KUTCH, NE WP *20000 - GNSS MEA *DME/DME/IRU MEA	WYYTE, NE WP	*22000	45000
WYYTE, NE WP *20000 - GNSS MEA *DME/DME/IRU MEA	MAASI, NE WP	*20000	45000
MAASI, NE WP *20000 - GNSS MEA *DME/DME/IRU MEA	HANKU, IA WP	*20000	45000
HANKU, IA WP *20000 - GNSS MEA *DME/DME/IRU MEA	JORDY, IA FIX	*20000	45000

§95.4098 RNAV ROUTE Q98

FROM	TO	MEA	MAA
IS AMENDED TO READ IN PART			
HAKMN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZZYZX, NV WP	*18000	45000
ZZYZX, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	LAKRR, NV WP	*18000	45000

§95.4114 RNAV ROUTE Q114

FROM	TO	MEA	MAA
IS AMENDED BY ADDING			
BUGGG, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZAKRY, CO WP	*24000	45000
ZAKRY, CO WP *20000 - GNSS MEA *DME/DME/IRU MEA	BULDG, CO WP	*20000	45000
BULDG, CO WP *20000 - GNSS MEA *DME/DME/IRU MEA	COUGH, CO WP	*20000	45000
COUGH, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	AVVVS, CO FIX	*20000	45000
AVVVS, CO FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BRAFF, CO WP	*20000	45000

BRAFF, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	GOORE, CO WP	*20000	45000
GOORE, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	AYOLE, NE WP	*20000	45000
AYOLE, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	PECKS, NE WP	*20000	45000
PECKS, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	LEONG, IA WP	*20000	45000

§95.4126 RNAV ROUTE Q126

FROM	TO	MEA	MAA
IS AMENDED BY ADDING			
GAROT, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	KREYK, UT WP	*19000	45000
KREYK, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	DRRSI, UT WP	*19000	45000
DRRSI, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	LBATO, UT WP	*19000	45000
LBATO, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	BASNN, CO WP	*19000	45000
BASNN, CO WP *19000 - GNSS MEA *DME/DME/IRU MEA	BRAFF, CO WP	*19000	45000
IS AMENDED TO DELETE			
GAROT, UT WP *GNSS REQUIRED	MEEKER, CO VOR/DME	*18000	45000
IS AMENDED TO READ IN PART			
INSLO, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	CHUKR, NV WP	*26000	45000
CHUKR, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	TTOES, NV WP	*26000	45000
TTOES, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	GAROT, UT WP	*26000	45000

§95.4136 RNAV ROUTE Q136

FROM	TO	MEA	MAA
IS AMENDED BY ADDING			
VOAXA, CO FIX *21000 - GNSS MEA *DME/DME/IRU MEA	COUGH, CO WP	*21000	45000
COUGH, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	BIIKE, CO WP	*21000	45000
BIIKE, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZIRKL, NE WP	*21000	45000
ZIRKL, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	KAWWA, NE WP	*21000	45000
KAWWA, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	SYTHH, NE WP	*21000	45000
SYTHH, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	AYEGI, NE WP	*19000	45000
AYEGI, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	TURCK, NE WP	*19000	45000
TURCK, NE WP *18000 - GNSS MEA *DME/DME/IRU MEA	WRNCH, IA WP	*19000	45000
WRNCH, IA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BVEEE, IA WP	*19000	45000
BVEEE, IA WP *18000 - GNSS MEA *DME/DME/IRU MEA	HIBAV, IA WP	*19000	45000
HIBAV, IA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BAACN, IA WP	*19000	45000
IS AMENDED TO READ IN PART			
COALDALE, NV VORTAC *GNSS REQUIRED	RUMPS, NV WP	*18000	45000
RUMPS, NV WP *GNSS REQUIRED	KATTS, NV WP	*18000	45000
KATTS, NV WP *GNSS REQUIRED	CRLES, NV WP	*18000	45000

CRLES, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	GDGET, UT WP	*26000	45000
GDGET, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	TRALP, UT WP	*26000	45000
TRALP, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	MANRD, UT WP	*26000	45000
MANRD, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	WEEMN, UT WP	*26000	45000
WEEMN, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	ELLFF, CO WP	*26000	45000
ELLFF, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	VOAXA, CO FIX	*21000	45000

§95.4150 RNAV ROUTE Q150

FROM	TO	MEA	MAA
IS AMENDED BY ADDING			
OPPEE, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	YAMPA, CO WP	*24000	45000
YAMPA, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	BIIKE, CO WP	*24000	45000
BIIKE, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	DUUZE, KS WP	*24000	45000
SNY DUUZE, KS WP *18000 - GNSS MEA *DME/DME/IRU MEA	EXHAS, KS WP	*24000	45000

§95.6001 VICTOR ROUTES-U.S

§95.6013 VOR FEDERAL AIRWAY V13

FROM	TO	MEA
IS AMENDED TO READ IN PART		
SOLON, TX FIX	CORPUS CHRISTI, TX VORTAC	1800
*WORRY, TX FIX *2100 - MRA	PALACIOS, TX VORTAC	1700

§95.6020 VOR FEDERAL AIRWAY V20

FROM	TO	MEA
IS AMENDED TO READ IN PART		
SOLON, TX FIX	CORPUS CHRISTI, TX VORTAC	1800
TUXDO, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6200
SUGARLOAF MOUNTAIN, NC VORTAC	BARRETTS MOUNTAIN, NC VOR/DME	6200
BARRETTS MOUNTAIN, NC VOR/DME	LEAKS, NC FIX	3600

§95.6035 VOR FEDERAL AIRWAY V35

FROM	TO	MEA
IS AMENDED TO READ IN PART		
TUXDO, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6200
SUGARLOAF MOUNTAIN, NC VORTAC *9000 - MCA BUSIC, NC FIX , N BND	*BUSIC, NC FIX	8800
BUSIC, NC FIX *9000 - MCA ROANS, TN FIX , S BND	*ROANS, TN FIX	9000
CHARLESTON, WV VOR/DME *3000 - MOCA	CARLA, WV FIX	*4000
CARLA, WV FIX *3300 - MOCA	BENZO, WV FIX	*4000
BENZO, WV FIX	CLARKSBURG, WV VOR/DME	3300

§95.6053 VOR FEDERAL AIRWAY V53

FROM	TO	MEA
IS AMENDED TO READ IN PART		
CARTT, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	
NW BND		6200
SE BND		3000
SUGARLOAF MOUNTAIN, NC VORTAC *9000 - MCA BUSIC, NC FIX , N BND	*BUSIC, NC FIX	8800
BUSIC, NC FIX *9000 - MCA ROANS, TN FIX , S BND	*ROANS, TN FIX	9000
HAZARD, KY VOR/DME *6000 - MRA	*IRVIN, KY FIX	4000
*IRVIN, KY FIX *6000 - MRA	LEXINGTON, KY VOR/DME	4000
LEXINGTON, KY VOR/DME *7000 - MCA LOUISVILLE, KY VORTAC , NW BND	*LOUISVILLE, KY VORTAC	2800

§95.6097 VOR FEDERAL AIRWAY V97

FROM	TO	MEA
IS AMENDED TO READ IN PART		
LA BELLE, FL VORTAC	ROGAN, FL FIX	
SE BND		*2000
NW BND		*4000
*2000 - GNSS MEA		

ROGAN, FL FIX		*BRDGE, FL FIX	**5000
*4300 - MCA BRDGE, FL FIX , SE BND			
**1400 - MOCA			
**2000 - GNSS MEA			
BRDGE, FL FIX		*ST PETERSBURG, FL VORTAC	2000
*3600 - MCA ST PETERSBURG, FL VORTAC , NW BND			
ST PETERSBURG, FL VORTAC		DARBS, FL FIX	
	SE BND		*2100
	NW BND		*6000
*2100 - GNSS MEA			
DARBS, FL FIX		PLYER, FL FIX	*8000
*1400 - MOCA			
*4000 - GNSS MEA			
PLYER, FL FIX		CLAMP, FL FIX	*8000
*1400 - MOCA			
*4000 - GNSS MEA			
CLAMP, FL FIX		HEVVN, FL FIX	
	NW BND		*6000
	SE BND		*8000
*1400 - MOCA			
*4000 - GNSS MEA			
HEVVN, FL FIX		ADDAX, FL FIX	
	NW BND		*3000
	SE BND		*6000
*1400 - MOCA			
*2000 - GNSS MEA			
ADDAX, FL FIX		SEMINOLE, FL VORTAC	
	NW BND		*2000
	SE BND		*5000
*2000 - GNSS MEA			

§95.6121 VOR FEDERAL AIRWAY V121

FROM		**TO**	**MEA**
IS AMENDED TO READ IN PART			
MOURN, OR FIX		ROSEBURG, OR VOR/DME	
	W BND		6000
	E BND		7000
ROSEBURG, OR VOR/DME		NORTH BEND, OR VOR/DME	6000
NORTH BEND, OR VOR/DME		SCOTY, OR FIX	
	NE BND		5000
	SW BND		4400
SCOTY, OR FIX		*VAUGN, OR FIX	5000
*7000 - MRA			
*VAUGN, OR FIX		**EUGENE, OR VORTAC	
	NE BND		4100
	SW BND		5000
*7000 - MRA			
**9000 - MCA EUGENE, OR VORTAC , E BND			

EUGENE, OR VORTAC		DOSEE, OR FIX	
	E BND		10000
	W BND		5200
DOSEE, OR FIX		VIDAS, OR FIX	
	E BND		11600
	W BND		6000
VIDAS, OR FIX		WHIFF, OR FIX	*13000
*7500 - MOCA			
*12000 - GNSS MEA			
SNOKY, OR FIX		*DESCHUTES, OR VORTAC	
	E BND		8000
	W BND		13000
*10400 - MCA DESCHUTES, OR VORTAC , W BND			

§95.6159 VOR FEDERAL AIRWAY V159

FROM		TO	MEA
IS AMENDED TO READ IN PART			
OCALA, FL VORTAC		*PERSE, FL FIX	2000
*3000 - MRA			
*PERSE, FL FIX		**WILON, FL FIX	2000
*3000 - MRA			
**3000 - MRA			
*WILON, FL FIX		CROSS CITY, FL VORTAC	2000
*3000 - MRA			

§95.6160 VOR FEDERAL AIRWAY V160

FROM		TO	MEA
IS AMENDED TO READ IN PART			
*BLUE MESA, CO VOR/DME		MURFE, CO FIX	16400
*13100 - MCA BLUE MESA, CO VOR/DME , NE BND			

§95.6163 VOR FEDERAL AIRWAY V163

FROM		TO	MEA
IS AMENDED TO READ IN PART			
SOLON, TX FIX		CORPUS CHRISTI, TX VORTAC	1800
CORPUS CHRISTI, TX VORTAC		SINTO, TX FIX	1800
SINTO, TX FIX		THREE RIVERS, TX VORTAC	2000
THREE RIVERS, TX VORTAC		YENNS, TX FIX	
	S BND		2000
	N BND		3000

§95.6198 VOR FEDERAL AIRWAY V198

FROM	TO	MEA
IS AMENDED TO READ IN PART		
BROOKLEY, AL VORTAC	CRESTVIEW, FL VORTAC	3100
CRESTVIEW, FL VORTAC	DEFUN, FL FIX	
W BND		2000
E BND		3000
DEFUN, FL FIX	*CHEWS, FL FIX	**3000
*2500 - MCA CHEWS, FL FIX , W BND		
**1800 - MOCA		

§95.6222 VOR FEDERAL AIRWAY V222

FROM	TO	MEA
IS AMENDED TO READ IN PART		
FOOTHILLS, SC VORTAC	SUNET, SC FIX	*6100
*4800 - MOCA		
SUNET, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	7100
SUGARLOAF MOUNTAIN, NC VORTAC	BARRETTS MOUNTAIN, NC VOR/DME	6200

§95.6241 VOR FEDERAL AIRWAY V241

FROM	TO	MEA
IS AMENDED TO READ IN PART		
SEMMES, AL VORTAC	CRESTVIEW, FL VORTAC	3100

§95.6295 VOR FEDERAL AIRWAY V295

FROM	TO	MEA
IS AMENDED TO READ IN PART		
OCALA, FL VORTAC	*PERSE, FL FIX	2000
*3000 - MRA		
*PERSE, FL FIX	**WILON, FL FIX	2000
*3000 - MRA		
**3000 - MRA		
*WILON, FL FIX	CROSS CITY, FL VORTAC	2000
*3000 - MRA		

§95.6312 VOR FEDERAL AIRWAY V312

FROM	TO	MEA
IS AMENDED TO READ IN PART		
*DRIFT, NJ FIX	**PREPI, OA FIX	***4800
*6000 - MRA		
**8000 - MRA		
***2500 - GNSS MEA		

§95.6314 VOR FEDERAL AIRWAY V314

FROM		TO	MEA
IS AMENDED TO READ IN PART			
U.S. CANADIAN BORDER *10000 - MRA **3900 - MOCA		*PATTA, ME FIX	**6000
*PATTA, ME FIX *10000 - MRA **3900 – MOCA		MILLINOCKET, ME VOR/DME	**6000

§95.6352 VOR FEDERAL AIRWAY V352

FROM		TO	MEA
IS AMENDED TO READ IN PART			
U.S. CANADIAN BORDER *10000 - MRA		*PATTA, ME FIX	6500
*PATTA, ME FIX *10000 - MRA		HOULTON, ME VOR/DME	6500

§95.6407 VOR FEDERAL AIRWAY V407

FROM		TO	MEA
IS AMENDED TO READ IN PART			
*WORRY, TX FIX *2100 - MRA		PALACIOS, TX VORTAC	1700

§95.6441 VOR FEDERAL AIRWAY V441

FROM		TO	MEA
IS AMENDED TO READ IN PART			
BAYPO, FL FIX *1500 - MOCA		NITTS, FL FIX	*4000
NITTS, FL FIX		OCALA, FL VORTAC	
	NE BND		2000
	SW BND		4000

§95.6492 VOR FEDERAL AIRWAY V492

FROM		TO	MEA
IS AMENDED TO DELETE			
ST PETERSBURG, FL VORTAC		LA BELLE, FL VORTAC	2000

§95.6499 VOR FEDERAL AIRWAY V499

FROM		TO	MEA
IS AMENDED TO READ IN PART			
LANCASTER, PA VOR/DME		CHLSE, PA FIX	
	N BND		*8000
	S BND		*6000
*4000 - MOCA			
CHLSE, PA FIX *4300 - MOCA		MEGSS, PA FIX	*8000
MEGSS, PA FIX		BINGHAMTON, NY VOR/DME	
	N BND		4900
	S BND		8000

§95.6579 VOR FEDERAL AIRWAY V579

FROM		TO	MEA
IS AMENDED TO READ IN PART			
BAYPO, FL FIX		NITTS, FL FIX	*4000
*1500 - MOCA			
NITTS, FL FIX		GATORS, FL VORTAC	
	S BND		*4000
	N BND		*3000
*2100 - MOCA			

§95.6605 VOR FEDERAL AIRWAY V605

FROM	TO	MEA
IS AMENDED TO READ IN PART		
#SPARTANBURG, SC VORTAC	*GENOD, NC FIX	**7000
*10000 - MCA GENOD, NC FIX , N BND		
**6000 - MOCA		
**6000 - GNSS MEA		
#5200 - MCA SPARTANBURG, SC VORTAC , N BND		
GENOD, NC FIX	*HOLSTON MOUNTAIN, TN VORTAC	**10000
*8500 - MCA HOLSTON MOUNTAIN, TN VORTAC , S BND		
**8500 - MOCA		

§95.7001 JET ROUTES

§95.7211 JET ROUTE J211

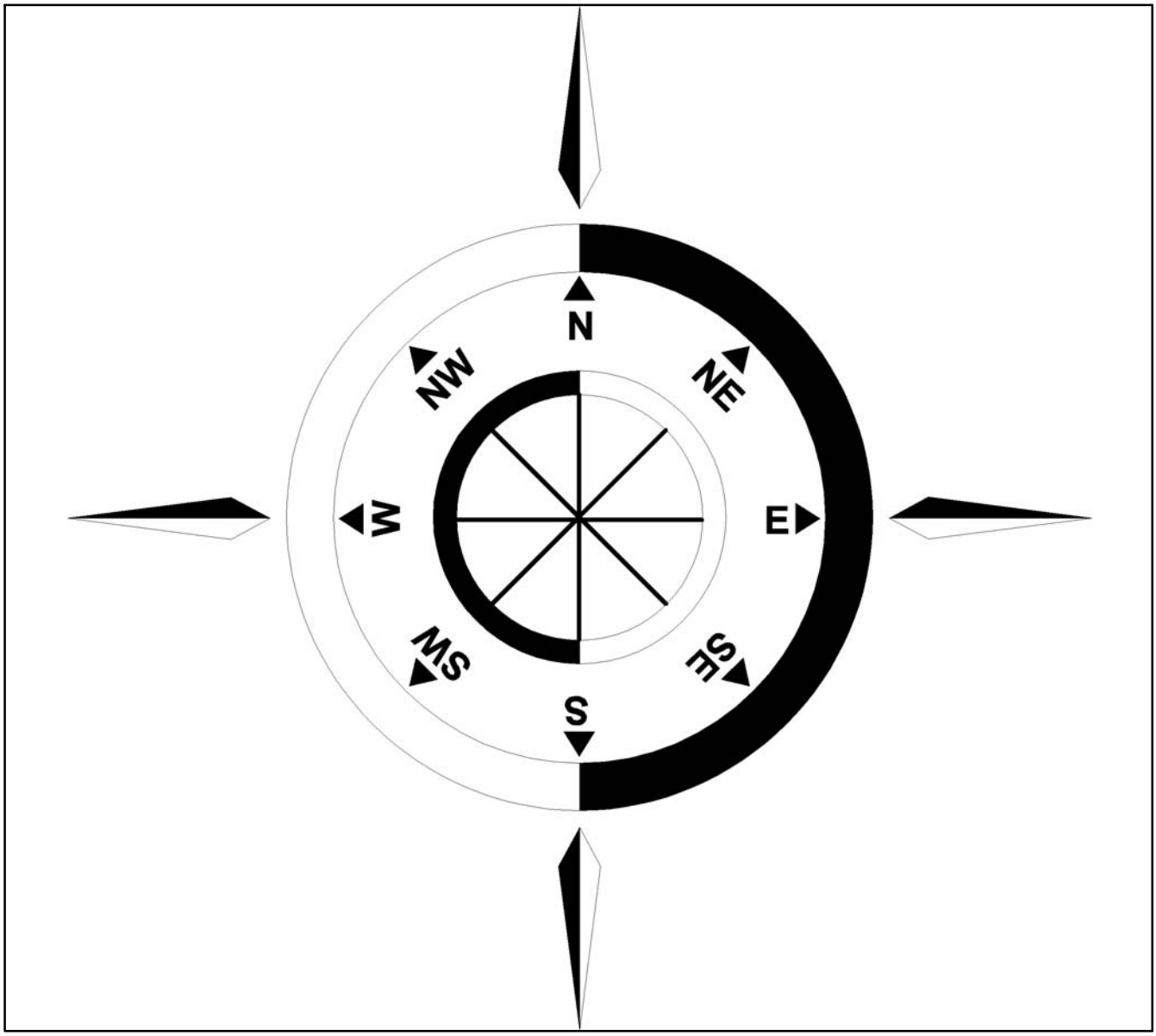
FROM	TO	MEA	MAA
IS AMENDED TO READ IN PART			
YOUNGSTOWN, OH VORTAC	JOHNSTOWN, PA VOR/DME	18000	45000

§95.8003 VOR FEDERAL AIRWAY CHANGEOVER POINT

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	**TO**	**DISTANCE**	**FROM**
V159			
IS AMENDED TO ADD CHANGEOVER POINT			
OCALA, FL VORTAC	CROSS CITY, FL VORTAC	28	OCALA
V295			
IS AMENDED TO ADD CHANGEOVER POINT			
OCALA, FL VORTAC	CROSS CITY, FL VORTAC	28	OCALA

Part 2.

INTERNATIONAL NOTICES TO AIRMEN



GENERAL

This part features significant international notices to airmen (NOTAM) information and special notices.

The information contained in the International Notices to Airmen section is derived from international notices and other official sources. International notices are of two types: Class One International Notices are those NOTAMs issued via telecommunications. They are made available to the U.S. flying public by the International NOTAM Office (Washington, DC) through the local Flight Service Station (FSS). Class Two International Notices are NOTAMs issued via postal services and are not readily available to the U.S. flying public. The International Notices to Airmen draws from both these sources and also includes information about temporary hazardous conditions which are not otherwise readily available to the flyer. Before any international flight, always update the International Notices to Airmen with a review of Class One International Notices available at your closest FSS.

Foreign notices carried in this publication are carried as issued to the maximum extent possible. Most abbreviations used in this publication are listed in ICAO Document DOC 8400. Wherever possible, the source of the information is included at the end of an entry. This allows the user to confirm the currency of the information with the originator.

International Information Source Code Table

Code	*Information Source*
I or II (followed by the NOTAM number)	Class One or Class Two NOTAMs
AIP	Aeronautical Information Publication (followed by the AIP change number)
AIC	Aeronautical Information Circular (followed by the AIC number)
DOS	Department of State advisories
FAA	Federal Aviation Administration.

The International Notices to Airmen section gives world wide coverage in each issue. Coverage for the U.S. and its external territories is limited and normally will not include data available on the domestic NOTAM circuit or published in other official sources available to the user.

Each issue of this section is complete in itself. Temporary data will be repeated in each issue until the condition ceases to exist. Permanent data will be carried until it is sufficiently published or is available in other permanent sources. New items will be indicated by a black bar running in the left or right margin.

This section includes data issued by foreign governments. The publication of this data in no way constitutes legal recognition of the validity of the data. This publication does not presume to tabulate all NOTAM data, although every effort is made to publish all pertinent data. The Federal Aviation Administration does not assume liability for failure to publish, or the accuracy of, any particular item.

INTERNATIONAL NOTICES TO AIRMEN

SECTION 1

Flight Prohibitions, Potentially Hostile Situations, and Foreign Notices

Introduction: This section contains information concerning FAA–issued flight prohibitions for countries and territories outside the United States, advisory notices on potentially hostile situations abroad, and notices issued by foreign governments and civil aviation authorities.

These may affect a pilot's decision to enter or use areas of foreign or international airspace. During the flight planning process, pilots should review FAA's Prohibitions, Restrictions, and Notices at https://www.faa.gov/air_traffic/publications/us_restrictions/ for foreign airspace and entry restrictions. Foreign airspace penetration without official authorization can involve extreme danger to the aircraft and the imposition of severe penalties and inconvenience on both passengers and crew. A flight plan on file with ATC authorities does not necessarily constitute the prior permission required by certain authorities. The possibility of fatal consequences cannot be ignored in some areas of the world.

All operators also should check the latest U.S. Department of State Travel Warnings and Public Announcements at http://travel.state.gov, and can obtain additional information by contacting the appropriate foreign government authorities.

BAHAMAS, THE

Communication Procedures for Aircraft Operations Within the Nassau and Grand Bahama Terminal Control Areas (TMAS')

Effective immediately, all aircraft operating or about to operate (IFR, VFR, including military unless specifically exempted, etc.) within the Nassau and Grand Bahama TMAS' and within a 50 nautical mile radius of Nassau and Freeport Int'l airports SHALL report, as a minimum, to the respective Approach Control Unit as follows:

1. Their identification.

2. Aircraft type.

3. Position.

4. Direction of flight.

5. Cruising level.

These reports shall enable the respective approach control unit to provide a more effective advisory service to possible conflicting flights, controlled and uncontrolled within the TMAS'.

Pilots shall contact the appropriate approach control unit as follows:

1. "Nassau Approach" on frequency 121.0 MHz.

2. "Freeport Approach" on frequency 126.5 MHz.

(Bahamas AIC 2/20/2010)

CHINA

Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace

All aircraft with China registrations beginning with B; aircraft using the ICAO designator of a China company; or aircraft used for China diplomatic flights require FAA routing authorization for flights in United

States Territorial Airspace, unless the aircraft is registered in Hong Kong, Macau, or Taiwan, or the aircraft is operated by a company with FAA Part 129 operations specifications.

Only IFR flights are eligible for FAA routing authorization. See current FAA KFDC NOTAMS for other requirements and information regarding Aircraft that Operate To or From or Within or Transit Territorial Airspace of the United States (US).

FAA routing authorization is in addition to any US State Department (DOS) diplomatic clearance or US Transportation Security Administration (TSA) waiver. To obtain FAA routing authorization, contact the FAA System Operations Support Center at 9-ATOR-HQ-RT-REQ@faa.gov or FAX 202-267-5289 (Attention FAA SOSC), or call 202-267-8115.

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.

2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.

3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).

4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

(FAA/AJR–2 System Operations Security 6/27/2013)

CUBA

Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace

All aircraft with Cuba registration beginning with CU; aircraft using the ICAO designator of a Cuba company; or aircraft used for Cuba diplomatic flights require FAA routing authorization for flights in United States Territorial Airspace.

Only IFR flights are eligible for FAA routing authorization. See current FAA KFDC NOTAMS for other requirements and information regarding Aircraft that Operate To or From or Within or Transit Territorial Airspace of the United States (US).

FAA routing authorization is in addition to any US State Department (DOS) diplomatic clearance or US Transportation Security Administration (TSA) waiver. To obtain FAA routing authorization, contact the FAA System Operations Support Center at 9-ATOR-HQ-RT-REQ@faa.gov or FAX 202-267-5289 (Attention FAA SOSC), or call 202-267-8115.

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.

2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.

3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).

4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

(FAA/AJR–2 System Operations Security 6/27/2013)

EUROPE

EUROCONTROL Integrated Initial Flight Plan Processing System (IFPS).

All aircraft flying into, departing from, or transiting Europe within the General Air Traffic (GAT) Civil system must file an International Civil Aviation Organization (ICAO) flight plan with the Integrated Initial Flight Plan Processing System (IFPS) managed by the EUROCONTROL Central Flow Management Unit (CFMU). This system is the sole source for the distribution of the IFR/GAT portions of flight plan information to Air Traffic Control (ATC) within participating European Countries collectively known as the IFPS Zone (IFPZ). Flight plans and associated messages for all IFR flights, including the IFR portions of mixed IFR/VFR flights, entering, over flying or departing the IFPZ, shall be addressed only to the two IFPS addresses for that portion of the flight within the IFPZ. The IFPS addresses to be included in flight plans and associated messages submitted by operators that intend to fly into or through the IFPZ are as follows:

Network	IFPS Unit Addresses	
IFPU1		
Haren, Belgium	**AFTN**	EUCHZMFP
SITA BRUEP7X		
IFPU2		
Brétigny, France	**AFTN**	EUCBZMFP
SITA PAREP7X		

IFPS will ensure distribution of the accepted flight plan to all relevant ATS units within their area of responsibility. Flight plan message originators filing to IFPS are responsible for ensuring that the flight plan and any modifications made thereto are addressed to all the relevant ATS units outside the IFPZ. In order to ensure consistency between the flight plan data distributed within the IFPZ and that distributed outside the IFPZ, the EUROCONTROL CFMU has established a “re-addressing function”. The “re-addressing function” is intended primarily for flights originating within the IFPZ and proceeding outside the IFPZ.

Note.— Detailed procedures and information applicable to flight plan addressing and distribution are contained in the EUROCONTROL “Basic CFMU Handbook”.

Additional information may be obtained from Aeronautical Information Publications (AIP) and/or Aeronautical Information Circulars (AIC) issued by individual countries, through commercial flight planners, or by contacting EUROCONTROL, rue de la Fusee, 96, B−1130, Brussels, Belgium. Telephone: 32−2− 745−1950, FAX: 32−2− 729−9041 and on the EUROCONTROL Web site: www.eurocontrol.int.

NOTE−IFPS Zone Countries − Albania, Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Former Yugoslav Republic of Macedonia, Malta, Monaco, Morocco, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Serbia and Montenegro.

(AEU-500 6/7/2010)

IRAN (ISLAMIC REPUBLIC OF)

Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace

All aircraft with Iran registrations beginning with EP; aircraft using the ICAO designator of an Iran company; or aircraft used for Iran diplomatic flights require FAA routing authorization for flights in United States Territorial Airspace.

Only IFR flights are eligible for FAA routing authorization. See current FAA KFDC NOTAMS for other requirements and information regarding Aircraft that Operate To or From or Within or Transit Territorial Airspace of the United States (US).

FAA routing authorization is in addition to any US State Department (DOS) diplomatic clearance or US Transportation Security Administration (TSA) waiver. To obtain FAA routing authorization, contact the FAA System Operations Support Center at 9-ATOR-HQ-RT-REQ@faa.gov or FAX 202-267-5289 (Attention FAA SOSC), or call 202-267-8115.

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.

2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.

3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).

4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

(FAA/AJR–2 System Operations Security 6/27/2013)

DEMOCRATIC PEOPLE'S REPUBLIC OF NORTH KOREA (DPRK)

Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace

All aircraft with DPRK registrations beginning with P; aircraft using the ICAO designator of a DPRK company; or aircraft used for DPRK diplomatic flights require FAA routing authorization for flights in United States Territorial Airspace.

Only IFR flights are eligible for FAA routing authorization. See current FAA KFDC NOTAMS for other requirements and information regarding Aircraft that Operate To or From or Within or Transit Territorial Airspace of the United States (US).

FAA routing authorization is in addition to any US State Department (DOS) diplomatic clearance or US Transportation Security Administration (TSA) waiver. To obtain FAA routing authorization, contact the FAA System Operations Support Center at 9-ATOR-HQ-RT-REQ@faa.gov or FAX 202-267-5289 (Attention FAA SOSC), or call 202-267-8115.

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.

2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.

3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).

4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

(FAA/AJR–2 System Operations Security 6/27/2013)

RUSSIA FEDERATION

Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace

All aircraft with Russian Federation registrations beginning with RA; aircraft using the ICAO designator of a Russian Federation company; or aircraft used for Russian Federation diplomatic flights require FAA

routing authorization for flights in United States Territorial Airspace, unless the aircraft is operated by a company with FAA Part 129 operations specifications.

Only IFR flights are eligible for FAA routing authorization. See current FAA KFDC NOTAMS for other requirements and information regarding Aircraft that Operate To or From or Within or Transit Territorial Airspace of the United States (US).

FAA routing authorization is in addition to any US State Department (DOS) diplomatic clearance or US Transportation Security Administration (TSA) waiver. To obtain FAA routing authorization, contact the FAA System Operations Support Center at 9-ATOR-HQ-RT-REQ@faa.gov or FAX 202-267-5289 (Attention FAA SOSC), or call 202-267-8115.

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.

2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.

3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).

4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

(FAA/AJR–2 System Operations Security 6/27/2013)

SUDAN

Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace

All aircraft with Sudan registrations beginning with ST; aircraft using the ICAO designator of a Sudan company; or aircraft used for Sudan diplomatic flights require FAA routing authorization for flights in United States Territorial Airspace.

Only IFR flights are eligible for FAA routing authorization. See current FAA KFDC NOTAMS for other requirements and information regarding Aircraft that Operate To or From or Within or Transit Territorial Airspace of the United States (US).

FAA routing authorization is in addition to any US State Department (DOS) diplomatic clearance or US Transportation Security Administration (TSA) waiver. To obtain FAA routing authorization, contact the FAA System Operations Support Center at 9-ATOR-HQ-RT-REQ@faa.gov or FAX 202-267-5289 (Attention FAA SOSC), or call 202-267-8115.

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.

2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.

3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).

4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

(FAA/AJR–2 System Operations Security 6/27/2013)

SYRIAN ARAB REPUBLIC

Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace

All aircraft with Syrian Arab Republic registrations beginning with YK; aircraft using the ICAO designator of a Syrian Arab Republic company; or aircraft used for Syrian Arab Republic diplomatic flights require FAA routing authorization for flights in United States Territorial Airspace.

Only IFR flights are eligible for FAA routing authorization. See current FAA KFDC NOTAMS for other requirements and information regarding Aircraft that Operate To or From or Within or Transit Territorial Airspace of the United States (US).

FAA routing authorization is in addition to any US State Department (DOS) diplomatic clearance or US Transportation Security Administration (TSA) waiver. To obtain FAA routing authorization, contact the FAA System Operations Support Center at 9-ATOR-HQ-RT-REQ@faa.gov or FAX 202-267-5289 (Attention FAA SOSC), or call 202-267-8115.

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.

2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.

3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).

4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

(FAA/AJR–2 System Operations Security 6/27/2013)

SECTION 2

INTERNATIONAL OCEANIC AIRSPACE NOTICES

INTRODUCTION

The following information contains the most current notices involving airspace matters pertaining to U.S. internationally delegated airspace. The information provided is divided into two sections: General and Region Specific.

GENERAL

COMMUNICATIONS REQUIREMENTS IN OCEANIC AIRSPACE DELEGATED TO THE FAA FOR PROVISION OF AIR TRAFFIC SERVICES

1. The United States Aeronautical Information Publication (AIP), (section ENR 7.1, paragraph 6) describes satellite voice (SatVoice) communications services available in Anchorage, New York and Oakland oceanic control areas (OCAs), along with the requirements for use of those services. The AIP currently allows use of suitably installed and operated SatVoice to communicate with New York and San Francisco Radio only "when unable to communicate on HF" (High Frequency) radio. Some questions have arisen as to what constitutes being "unable" to communicate on HF.

2. Anchorage, New York and Oakland OCAs are "high seas" (international) airspace (for U.S. operators, 14 CFR § 91.703 refers). Therefore, all operations therein must comply with ICAO Annex 2 (*Rules of the Air*), which requires that aircraft "maintain continuous air–ground voice communication watch on the appropriate communication channel…" (Paragraph 3.6.5.1). This means that a long–range communication system (LRCS) is required whenever operations will exceed the range of VHF voice communications between aircraft and air traffic control. Additionally, regulations issued by the State of Registry/ State of the Operator may stipulate how many LRCS are required. Examples of such regulations, for U.S. operators, include 14 CFR §§ 91.511, 121.351, 125.203 and 135.165.

3. A flight crew is considered to be "unable to communicate on HF" during poor HF propagation conditions (commonly referred to as "HF Blackouts"), or if there is an inflight HF radio failure. In those cases, that flight crew can use AIP–compliant SatVoice equipment and procedures to continue the flight to destination. A one–time return flight through Anchorage, New York and Oakland OCAs, to obtain maintenance on the HF radios, would also be acceptable under these circumstances, and would meet the criteria for use of SatVoice with New York and San Francisco Radio as per the AIP. Operators must still comply with applicable regulations on how many LRCS are required, as well as with applicable Minimum Equipment List (MEL) provisos.

4. When first establishing communications with New York or San Francisco Radio via SatVoice, the flight crew should request a "callback check." Such a check will help ensure Radio can contact the crew during the period of SatVoice use. The table below illustrates a sample callback check. Additionally, in the event the operator has indicated capability for SatVoice via both Iridium and Inmarsat (by listing codes M1 and M3 in Item 10 of the ATC flight plan), the flight crew should inform the Radio operator of the service to use for communicating with the aircraft.

Sample Transcript of SatVoice Callback Check	
SatVoice call from the air:	*"New York RADIO, Airline 123, request SatVoice Callback check."* For aircraft equipped with both Inmarsat and Iridium: *"… on Inmarsat/Iridium* (as applicable)*"*
Answer from the ground:	*"Airline 123, copy, terminating call, will call you right back"*
New SatVoice call from ground:	*"Airline 123, New York Radio with your SatVoice callback, how do you read?"*
SatVoice answer from the air:	*"Loud and clear, SatVoice callback check good, good day!"*

5. FAA point of contact: Aviation Safety Inspector Kevin C. Kelley, Flight Technologies and Procedures Division, 202–267–8854, Kevin.C.Kelley@faa.gov.

(Flight Operations Group, Flight Technologies and Procedures Division, Flight Standards Service, 7/18/2019)

REGION SPECIFIC

SPECIAL EMPHASIS ITEMS FOR OPERATIONS ON NORTH ATLANTIC TRACKS/ROUTES EMPLOYING REDUCED AIRCRAFT SEPARATION

The ICAO North Atlantic (NAT) region has implemented reduced aircraft separation, both longitudinally and laterally, between appropriately equipped and qualified aircraft. A trial of further reduced lateral separation will begin in October 2019 between ADS–B equipped aircraft flying in the NAT.

The purpose of this notice is to alert U.S. operators to a number of NAT OPS Bulletins published by the ICAO Europe/North Atlantic region office. (Anyone planning to fly across the NAT should read and become very familiar with the information contained in ALL current NAT OPS Bulletins.) The bulletins provide information on aircraft equipment and aircrew qualification requirements for taking advantage of the tracks and routes where air traffic controllers use reduced aircraft separation minimums. The bulletins also contain *special emphasis items* that should be part of aircrew training and operating procedures to enhance safety of operations in the NAT.

The bulletins most relevant to operations under reduced aircraft separation minimums are as follows:

Number 2018_006 *Trial Implementation of ASEPS Using ADS–B*

Number 2018_005 *Special Procedures for In–flight Contingencies in Oceanic Airspace*

Number 2018_004 *Implementation of Performance Based Separation Minima–Expanded Publication of PBCS OTS*

Number 2018_003 *Waypoint Insertion/Verification Special Emphasis Items*

Special emphasis items covered in these bulletins include:

- Pilot training on map and FMC displays of ½ degree and whole degree waypoints
- **Required** pilot procedures for verifying waypoint degrees and minutes inserted into navigation systems
- Pilot in–flight contingency and weather deviation procedures

To reiterate, operators are strongly encouraged to review all the current NAT OPS Bulletins and include relevant information in their training programs and normal oceanic procedures. Use the information in the bulletins hand in hand with the information published in the U.S. Aeronautical Information Publication (AIP).

Note: The emphasis items contained in bulletin 2018_003 are of value to safe operations in *any* oceanic airspace. ALL operators should provide the information contained therein to their oceanic flight crews.

Operators may find the bulletins on the *ICAO EUR/NAT* website (https://www.icao.int/EURNAT/Pages/welcome.aspx), then selecting *EUR/NAT Documents*, then *NAT Documents*, and then *NAT OPS Bulletins.*

(Flight Operations Group, Flight Technologies and Procedures Division, Flight Standards Service, AFS-470, 7/18/19)

NORTH ATLANTIC DATA LINK MANDATE MARCH 2018 UPDATE

1. Introduction.

a. This notice updates operators on the status of and requirements related to the International Civil Aviation Organization (ICAO) North Atlantic (NAT) region Data Link Mandate (DLM), first instituted in February 2015. This notice also identifies those portions of North Atlantic region airspace where data link equipment is not required. This notice is derived from information published in NAT OPS BULLETIN 2017–1 *NAT Common DLM AIC*. That bulletin is available at the ICAO Europe/North Atlantic office website, under EUR & NAT Documents > NAT Documents > NAT Ops Bulletins. All U.S. operators intending flights in the NAT region should familiarize themselves with all the current NAT Ops Bulletins.

b. Except as identified below, aircraft operating at FL 350 through FL 390, throughout the ICAO North Atlantic region, must be equipped with operable FANS 1/A (or equivalent) CPDLC and ADS–C equipment. This new phase of the NAT DLM went into effect on December 7, 2017. (Prior to December 7, 2017, the mandate applied only to the tracks of the NAT Organized Track System (OTS).)

c. The objectives of the ICAO NAT DLM are to enhance communication, surveillance and ATC intervention capabilities in the NAT in order to reduce collision risk and meet NAT target levels of safety. ADS–C provides conformance monitoring of aircraft adherence to cleared route and flight level, thereby significantly enhancing safety in the NAT. ADS–C also facilitates search and rescue operations and the capability to locate the site of an accident in oceanic airspace. CPDLC significantly enhances air/ground communications and controller intervention capability.

Note: The NAT DLM is expected to expand to include all operations at and above FL 290 beginning in January 2020.

2. Exceptions to DLM.

a. There is airspace within the NAT region where data link equipment is not required. That airspace is as follows:

(1) Air traffic services (ATS) surveillance airspace: airspace where ATS provides surveillance through radar, multilateration, and/or ADS–B and where VHF voice communications are available. In addition to VHF voice capability, aircraft operating in these areas must be equipped with a transponder and/or ADS–B extended squitter transmitter.

Note: The graphic provided at the end of this notice illustrates where ATS surveillance and VHF voice capability generally exists within the NAT region. Operators planning flights in the NAT region with aircraft not meeting DLM requirements must however consult with the applicable State Aeronautical Information Publication (AIP) to determine exactly where they may fly under this exception. Some portions of this surveillance airspace may specifically require ADS–B capability in order to qualify for the DLM exception.

(2) Airspace north of 80° North latitude. (Such airspace lies outside the reliable service area of geostationary satellites.)

(3) The entire New York Oceanic CTA/FIR.

(4) Tango routes T9, T13, T16, T25, and T213 (eastern portion of the NAT). However, the exception for data link equipage on these routes will end not later than January 2020. Operators must check with the applicable State AIPs before planning flights without data link equipment on those routes.

Note: Whenever a NAT OTS track infringes on a Tango route, data link equipage is required on that part of the route infringed upon, for operations at FL 350 through FL 390, for the duration of the published OTS time.

b. Certain specific categories of aircraft are also exempt from the data link equipage requirement. Those aircraft for which Item 18 of the ATC flight plan includes codes STS/FFR, HOSP, HUM, MEDEVAC SAR, or STATE are exempt. However, depending on traffic loading, ATC may not be able to clear those non−equipped flights on the requested route and/or flight level.

c. Pilots of non−equipped aircraft may request a continuous climb or descent, without intermediate level off, through DLM airspace (i.e. FL 350 through FL 390). ATC will approve such requests as traffic allows.

d. Altitude reservation (ALTRV) requests will likewise be considered by ATC on a case by case basis.

3. Contingency Procedures. The following procedures should be followed by operators/pilots experiencing data link equipment failure:

a. Failure prior to departure. Pilots/operators of aircraft with less than fully operational CPDLC and/or ADS−C equipment should flight plan to remain clear of NAT region data link mandate airspace (i.e. FL 350 through FL 390).

b. Failure after departure. ATC may clear aircraft with less than fully operational CPDLC and/or ADS−C equipment to operate in NAT data link mandate airspace as traffic permits. Pilots of such aircraft must notify ATC of their data link equipment status before entering NAT DLM airspace.

c. Failure after entering DLM airspace. Pilots must immediately notify ATC of a CPDLC or ADS−C equipment failure while operating within data link mandate airspace. Depending on traffic, ATC may permit the degraded aircraft to continue in DLM airspace, otherwise a climb or descent out of DLM flight levels may be required.

4. U.S. Operator Authorization to Use FANS 1/A (or equivalent) Data Link Systems.

a. U.S. operators intending to fly in NAT DLM airspace are required to have been issued operational authorization via Operations Specification, Management Specification or Letter of Authorization (as appropriate) A056 *Data Link Communications*. Advisory Circular (AC) 90−117 *Data Link Communications* provides guidance on operational use, aircraft eligibility, minimum performance and services of communication service providers, performance monitoring, training requirements, and discrepancy reporting related to the use of data link communication systems.

b. Operators may also find helpful the information posted in the "FAA NAT Resource Guide for U.S. Operators," under the Comm/Nav/Surveillance, Data Link Communications sections. Operators can find the resource guide at the following address:

https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs470/media/NAT.pdf

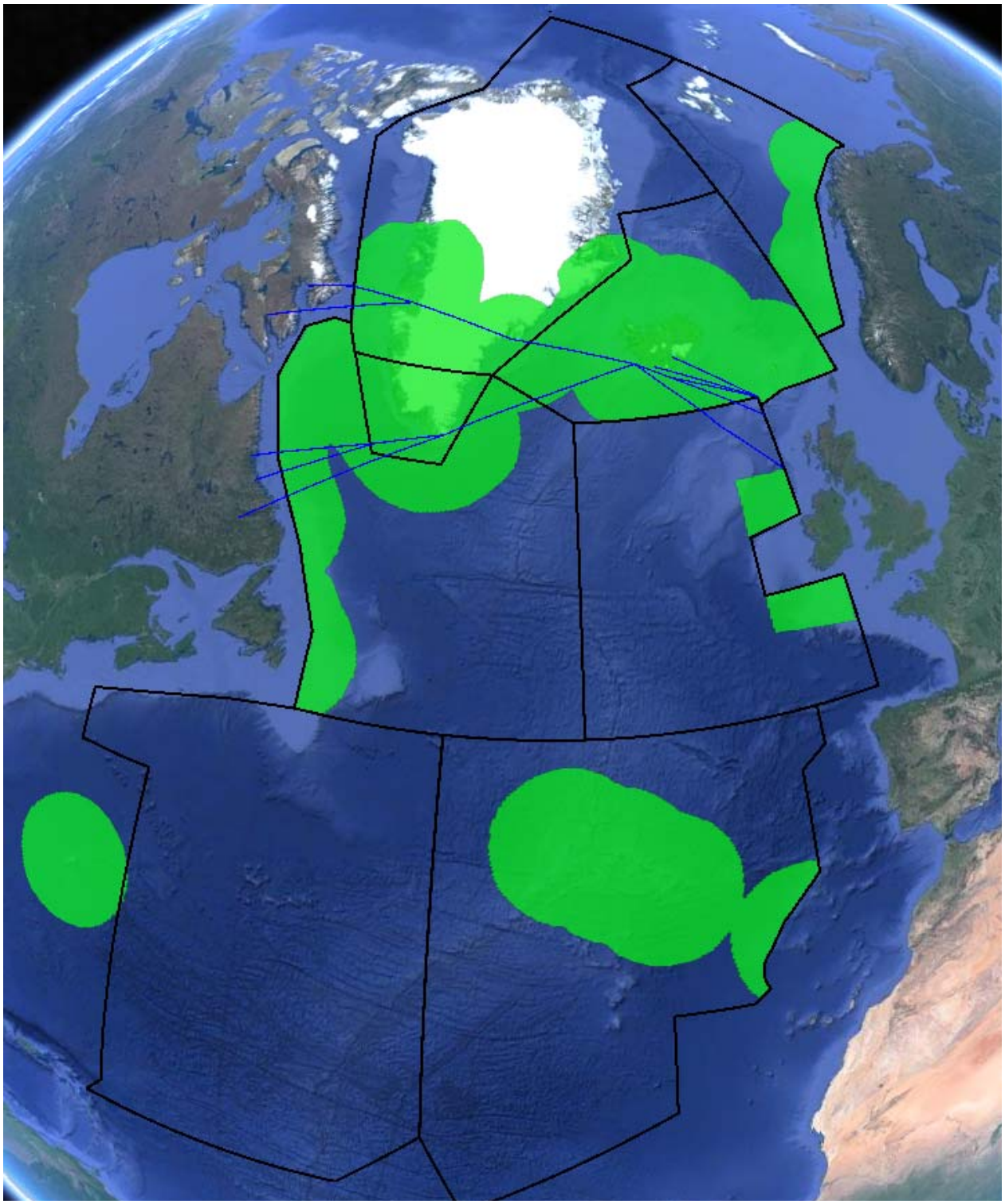
5. Contacts.

a. Aviation Safety Inspector Mark Patterson, Performance Based Flight Systems Branch, 202−267−8848, Mark.Patterson@faa.gov.

b. Aviation Safety Inspector Madison Walton, Performance Based Flight Systems Branch, 202−267−8850, Madison.Walton@faa.gov.

c. Senior Aviation Analyst Mark Wisniewski (SAIC), Performance Based Flight Systems Branch, 202−267−8843, Mark.ctr.Wisniewski@faa.gov.

ATS Surveillance Airspace Graphic - NAT Regional Data Link Mandate Phase 2



Note 1. ATS surveillance and VHF voice coverage is provided at and above FL 300 in the green shaded areas.

Note 2. the blue lines on the map represent the NAT Blue Spruce Routes.

(Performance Based Flight Systems Branch, AFS-470, 3/1/18)

SPECIAL NOTICE –– NAT ATS MESSAGE FORMAT

The following is submitted in an effort to standardize ATS message formats for air/ground communications in the North Atlantic (NAT) Region:

1. General

a. All NAT air–ground messages are categorized under one of the following headings (excluding emergency messages):

(1) Position Report.

(2) Request Clearance.

(3) Revised Estimate.

(4) Miscellaneous Message.

b. In order to enable ground stations to process messages in the shortest possible time, pilots should observe the following rules:

(1) Use the correct type of message applicable to the data transmitted.

(2) State the message type on the contact call to the ground station or at the start of the message.

(3) Adhere strictly to the sequence of information for the type of message.

(4) All times in each of the messages should be expressed in hours and minutes.

2. Description of ATS Message Types. Aircraft should transmit air–ground messages using standard RTF phraseology in accordance with the following:

a. POSITION. To be used for routine position reports.

Content and Data Sequence

(1) "POSITION."

(2) Flight identification.

(3) Present position.

(4) Time over present position (hours and minutes).

(5) Present flight level.

(6) Next position on assigned route.

(7) Estimated time for next position (hours and minutes).

(8) Next subsequent position.

(9) Any further information; e.g., MET data or Company message.

EXAMPLE–
"Position, SWISSAIR 100, 56N 010W 1235, flight level 330, estimating 56N 020W 1310, next 56N 030W"

b. REQUEST CLEARANCE.

(1) To be used, in conjunction with a routine position report, to request a change of mach number, flight level, or route and to request westbound oceanic clearance prior to entering Reykjavik, Santa Maria or Shanwick CTAs.

Content and Data Sequence

(a) "REQUEST CLEARANCE."

(b) Flight identification.

(c) Present or last reported position.

(d) Time over present or last reported position (hours and minutes).

(e) Present flight level.

(f) Next position on assigned route or oceanic entry point.

(g) Estimate for next position or oceanic entry point.

(h) Next subsequent position.

(i) Requested Mach number, flight level or route.

(j) Further information or clarifying remarks.

EXAMPLE–
"Request clearance, TWA 801, 56N 020W 1245, flight level 330, estimating 56N 030W 1320, next 56N 040W, requesting flight level 350"

(2) To be used to request a change in Mach number, flight level, or route when a position report message is not appropriate.

Content and Data Sequence

(a) "REQUEST CLEARANCE."

(b) Flight identification.

(c) Requested Mach number, flight level or route.

(d) Further information or clarifying remarks.

EXAMPLE–
"Request clearance, BAW 212, requesting flight level 370"

c. REVISED ESTIMATE. To be used to update estimate for next position.

Content and Data Sequence

(1) "Revised Estimate."

(2) Flight identification.

(3) Next position on route.

(4) Revised estimate for next position (hours and minutes).

(5) Further information.

EXAMPLE–
"Revised estimate, WDA 523, 57N 040W 0325"

d. MISCELLANEOUS. To be used to pass information or make a request in plain language that does not conform with the content of other message formats. No message designator is required as this will be inserted by the ground station.

Content and Data Sequence

(1) Flight identification.

(2) General information or request in plain language and format free.

(ZNY, Updated 5/24/2018)

GULF OF MEXICO RNAV ROUTES Q100, Q102, AND Q105

This NOTAM defines RNAV equipment requirements for operators filing Q100, Q102, and Q105 through Gulf of Mexico airspace. Only aircraft approved for IFR Area Navigation operations will be cleared to operate on Q100, Q102, and Q105 between the surface and FL600 (inclusive).

Operator Determination of RNAV Equipment Eligibility

In accordance with Federal Aviation Regulations 91.511, 121.351, 125.203, and 135.165 (as applicable) an approved Long-Range Navigation System (INS, IRS, GPS or Loran C) is required for operation on these routes.

In addition, operators will not flight plan or operate on these routes unless their aircraft are equipped with RNAV systems that are approved for IFR navigation and the pilots are qualified to operate them. Aircraft may be considered eligible to operate on these routes if they fall under one of the following categories:

1. For new installations, the Airplane Flight Manual must show that the navigation system installation has received airworthiness approval in accordance with one of the following FAA ACs:

a. AC 20-138, as amended (Airworthiness Approval of Positioning and Navigation Systems).

b. AC 25-15 (Flight Management System [FMS] approval).

2. Installations that have previously received airworthiness approval under the following ACs are eligible for Gulf of Mexico Q-route operation provided it is shown in the Airplane Flight Manual:

a. AC 90-45A (RNAV system approval).

b. AC 20-130, as amended (Multi-Sensor Navigation system approval).

***NOTE** - INS LIMITATIONS. See paragraph 6, below.*

Operational Requirements and Procedures

1. Class I Navigation: operations on Q100, Q102 and Q105 will continue to be categorized as Class I navigation, as defined in FAA Order 8900.1, Vol. 4, Chapter 1, Section 3, Class I Navigation.

2. Operations Specifications: operators are considered eligible to conduct operations on the Q-routes provided that aircraft are equipped with the appropriate equipment in accordance with the "Operator

Determination of RNAV Equipment Eligibility" paragraph above and operations are conducted in accordance with paragraph 3, 4, 5 and 6 below. Title 14 CFR Parts 121, 125, 135 operators are authorized to operate on the Q-routes when they are issued Operations Specifications (OpSpecs) paragraph B034 (Class I Navigation Using Area Navigation Systems). In addition, OpSpecs B034 must be annotated in OpSpecs paragraph B050 (Enroute Authorizations, Limitations and Procedures), for the Gulf of Mexico High Offshore Airspace.

3. Pilots in command filing on RNAV routes are certifying that the crews and equipment are qualified to conduct RNAV operations.

4. Pilots in command shall be responsible for navigating along route centerline (as defined by the aircraft navigation system) in accordance with the requirements of Title 14 CFR 91, section 181 (course to be flown) and ICAO Annex 2, paragraph 3.6.2.1.1. (Annex 2, paragraph 3.6.2.1 states that flights shall "in so far as practical, when on an established ATS route, operate on the defined centerline of that route.")

5. Pilots in command shall notify the Air Route Traffic Control Center (ARTCC) of any loss of navigation capability that affects the aircraft's ability to navigate within the lateral limits of the route.

6. INS or IRS LIMITATION. For the purposes of operating on the following RNAV routes, Q100, Q102, and Q105, aircraft equipped with Inertial Navigation Systems (INS) or Inertial Reference Systems (IRS) that cannot receive automatic position updates (e.g., DME/DME update) for the entire length of the route, are limited to 1.5 consecutive hours of un-updated operation. In preparation for take-off, this time starts at the time that the INS or IRS is placed in the navigation mode. En route, the maximum time allowed between automatic position updates is 1.5 hours. Systems that perform updating after the pilot has manually selected the navigation aid are considered to have "automatic update" capability.

7. Radar monitoring will normally be provided. In the event of loss of radar, aircraft will be advised. ATC will ensure that the appropriate nonradar separation is applied during these time periods.

FAA Contacts

Madison Walton	Performance Based Flight Systems Branch (AFS-470)	202-267-8850	Madison.Walton@faa.gov
Vincent McMenamy	AJT–2210	202-267–0627	Vincent.McMenamy@faa.gov

(AFS-470, 4/29/14)

PROCEDURES FOR IN–FLIGHT CONTINGENCIES IN THE NEW YORK OCEANIC CTA/FIR DURING ASEPS TRIAL

1. Introduction

a. The International Civil Aviation Organization's (ICAO) Separation and Airspace Safety Panel (SASP) has submitted a proposal for amendment to ICAO Document 4444, Procedures for Air Navigation Services – Air Traffic Management, which modifies aircraft contingency procedures to support the operational use of Advanced Surveillance Enhanced Procedural Separation (ASEPS) minima. The amendments for the new ASEPS minima and the new contingency procedures are expected to be published in November 2020.

b. Three Air Navigation Service Providers (ANSP) in the ICAO North Atlantic (NAT) Region – Gander (Canada), Shanwick (the United Kingdom and Ireland), and Santa Maria (Portugal) are planning to trial the ASEPS minima, using ADS–B as the advanced surveillance, beginning no earlier than March 28, 2019. To support this trial, and maintain regional procedural harmony, all of the NAT ANSPs are planning to implement the proposed contingency procedures at the time the trial starts. The trial is intended to last until

November 2020 when the new ASEPS minima are published in ICAO Doc 4444. At that time, the use of trial minima will transition to actual usage by those ANSPs who wish to do so.

c. The procedures contained herein are to be used in place of the procedures contained in the U.S. Aeronautical Information Publication (AIP), ENR 7.3, paragraphs 1, 2, and 4 for operations within the entirety of the New York Center oceanic CTA/FIR. The contingency procedures contained in the U.S. AIP, ENR 7.3, paragraphs 1, 2, and 4 remain applicable to operations within the Anchorage and Oakland Air Route Traffic Control Centers.

d. Although all possible contingencies cannot be covered, the procedures in paragraphs 2, 3, and 4 provide for the more frequent cases, such as:

(1) inability to comply with assigned clearance due to meteorological conditions (see paragraph 4);

(2) enroute diversion across the prevailing traffic flow (for example, due to medical emergencies (see paragraphs 2 and 3); and

(3) loss of, or significant reduction in, the required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations, or pressurization failure (see paragraphs 2 and 3).

NOTE–
Guidance on procedures to follow when an aircraft experiences a degradation in navigation capabilities can be found in ICAO Doc 4444, Procedures for Air Navigation Services – Air Traffic Management, chapter 5, section 5.2.2.

e. The pilot shall take action as necessary to ensure the safety of the aircraft, and the pilot's judgement shall determine the sequence of actions to be taken, having regard to the prevailing circumstances. Air traffic control shall render all possible assistance.

2. General Procedures

NOTE–
Figure 1 provides an aid for understanding and applying the contingency procedures contained in paragraphs 2 and 3.

a. If an aircraft is unable to continue the flight in accordance with its ATC clearance, a revised clearance should be obtained, whenever possible, prior to initiating any action.

b. If prior clearance cannot be obtained, the following contingency procedures should be employed until a revised clearance is received:

(1) leave the cleared route or track by initially turning at least 30 degrees to the right or to the left in order to intercept and maintain a parallel, same direction track or route offset of 9.3 km (5.0 NM). The direction of the turn should be based on one or more of the following:

(a) aircraft position relative to any organized track or route system;

(b) the direction of flights and flight levels allocated on adjacent tracks;

(c) the direction to an alternate airport;

(d) any strategic lateral offset being flown; and

(e) terrain clearance;

(2) the aircraft should be flown at a flight level and an offset track where other aircraft are less likely to be encountered;

(3) maintain a watch for conflicting traffic both visually and by reference to ACAS (if equipped) leaving ACAS in RA mode at all times, unless aircraft operating limitations dictate otherwise;

(4) turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

(5) keep the SSR transponder on at all times and, when able, squawk 7700, as appropriate;

(6) as soon as practicable, the pilot shall advise air traffic control of any deviation from assigned clearance;

(7) use whatever means is appropriate (i.e. voice and/or CPDLC) to communicate during a contingency or emergency;

(8) if voice communication is used, the radiotelephony distress signal (MAYDAY) or urgency signal (PAN PAN) preferably spoken three times, shall be used, as appropriate;

(9) when emergency situations are communicated via CPDLC, the controller may respond via CPDLC. However, the controller may also attempt to make voice communication contact with the aircraft;

NOTE–
Additional guidance on emergency procedures for controllers and radio operators, and flight crew, in data link operations can be found in the Global Operational Data Link (GOLD) Manual (Doc 10037).

(10) establish communications with and alert nearby aircraft by broadcasting, at suitable intervals on 121.5 MHz (or, as a backup, on the inter−pilot air−to−air frequency 123.45 MHz) and where appropriate on the frequency in use: aircraft identification, the nature of the distress condition, intention of the person in command, position (including the ATS route designator or the track code, as appropriate) and flight level; and

(11) the controller should attempt to determine the nature of the emergency and ascertain any assistance that may be required. Subsequent ATC action with respect to that aircraft shall be based on the intentions of the pilot and overall traffic situation.

3. Actions to be Taken Once Offset from Track

NOTE–
The pilot's judgement of the situation and the need to ensure the safety of the aircraft will determine if the actions outlined in 3. b. (1) or (2) will be taken. Factors for the pilot to consider when diverting from the cleared route or track without an ATC clearance include, but are not limited to:

a. operation within a parallel track system;

b. the potential for User Preferred Routes (UPRs) parallel to the aircraft's track or route;

c. the nature of the contingency (e.g. aircraft system malfunction); and

d. weather factors (e.g. convective weather at lower flight levels).

a. If possible, maintain the assigned flight level until established on the 9.3 km (5.0 NM) parallel, same direction track or route offset. If unable, initially minimize the rate of descent to the extent that is operationally feasible.

b. Once established on a parallel, same direction track or route offset by 9.3 km (5.0 NM), either:

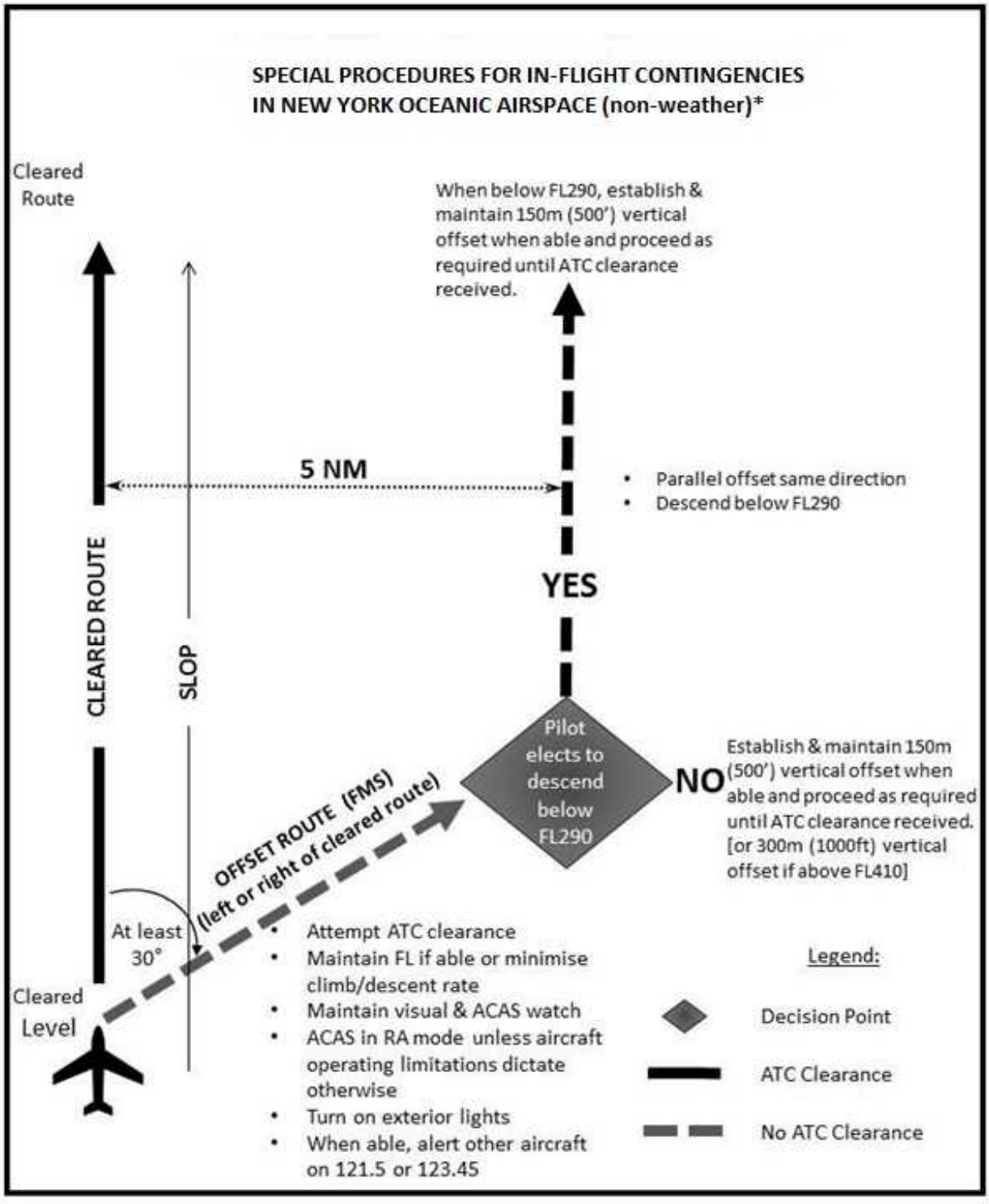
(1) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or, if an ATC clearance has been obtained, proceed in accordance with the clearance; or

NOTE–
Descent below FL 290 is considered particularly applicable to operations where there is a predominant traffic flow (e.g. east–west) or parallel track system where the aircraft's diversion path will likely cross adjacent tracks or routes. A descent below FL 290 can decrease the likelihood of conflict with other aircraft, ACAS RA events, and delays in obtaining a revised ATC clearance.

(2) establish a 150 m (500 ft) vertical offset (or 300 m (1000 ft) vertical offset if above FL 410 from those flight levels normally used, and proceed as required by the operational situation, or if an ATC clearance has been obtained, proceed in accordance with the clearance.

NOTE–
Altimetry system error may lead to less than actual 500 ft vertical separation when the procedure above is applied. In addition, with the 500 ft vertical offset applied, ACAS RAs may occur.

Figure 1. Visual aid for understanding and applying the contingency procedures guidance



*Consistent with North Atlantic regional implementation.

4. Weather Deviation Procedures

a. General

NOTE–
The following procedures are intended for deviations around adverse meteorological conditions.

(1) When weather deviation is required, the pilot should initiate communications with ATC via voice or CPDLC. A rapid response may be obtained by either:

(a) stating, "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response; or

(b) requesting a weather deviation using a CPDLC lateral downlink message.

(2) When necessary, the pilot should initiate the communications using the urgency call "PAN PAN" (preferably spoken three times) or by using a CPDLC urgency downlink message.

(3) The pilot shall inform ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to its cleared route.

b. Actions to be Taken When Controller–Pilot Communications are Established

(1) The pilot should notify ATC and request clearance to deviate from track or route, advising when possible, the extent of the deviation requested. The flight crew will use whatever means is appropriate (i.e. CPDLC and/or voice) to communicate during a weather deviation.

NOTE–
Pilots are advised to contact ATC as soon as possible with requests for clearance in order to provide time for the request to be assessed and acted upon.

(2) ATC should take one of the following actions:

(a) when appropriate separation can be applied, issue clearance to deviate from track; or

(b) if there is conflicting traffic and ATC is unable to establish appropriate separation, ATC should:

[1] advise the pilot of inability to issue clearance for the requested deviation;

[2] advise the pilot of conflicting traffic; and

[3] request the pilot's intentions.

(3) The pilot should take one of the following actions:

(a) comply with the ATC clearance issued; or

(b) advise ATC of intentions and execute the procedures provided in paragraph 4.c. below.

c. Actions to be Taken if a Revised ATC Clearance Cannot be Obtained

NOTE–
The provisions of this paragraph apply to situations where a pilot needs to exercise the authority of a pilot–in–command under the provisions of ICAO Annex 2, 2.3.1.

(1) If the aircraft is required to deviate from track or route to avoid adverse meteorological conditions, and prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. Until an ATC clearance is received, the pilot shall take the following actions:

(a) if possible, deviate away from an organized track or route system;

(b) establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: aircraft identification, flight level, position (including ATS route designator or the track code) and intentions, on the frequency in use and on 121.5 MHz (or, as a backup, on the inter–pilot air–to–air frequency 123.45 MHz);.

(c) watch for conflicting traffic both visually and by reference to ACAS (if equipped);

(d) turn on all aircraft exterior lights (commensurate with appropriate operating limitations);

(e) for deviations of less than 9.3 km (5.0 NM) from the originally cleared track or route remain at a level assigned by ATC;

(f) for deviations greater than or equal to 9.3 km (5.0 NM) from the originally cleared track or route, when the aircraft is approximately 9.3 km (5.0 NM) from track, initiate a level change in accordance with the Table below;

(g) if the pilot receives clearance to deviate from cleared track or route for a specified distance and, subsequently, requests, but cannot obtain a clearance to deviate beyond that distance, the pilot should apply an altitude offset in accordance with the Table below before deviating beyond the cleared distance;

(h) when returning to track or route, be at its assigned flight level when the aircraft is within approximately 9.3 km (5.0 NM) of the centerline; and

(i) if contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.

NOTE–
If, as a result of actions taken under the provisions of 4. c. (1), the pilot determines that there is another aircraft at or near the same flight level with which a conflict may occur, then the pilot is expected to adjust the path of the aircraft, as necessary, to avoid conflict.

Altitude Offset When Denied Clearance to Deviate 9.3 km (5.0 NM) or More, Applicable in New York's Oceanic Airspace (consistent with North Atlantic regional implementation)

Originally Cleared Track or Route Center Line	Deviations ≥ 9.3 km (5.0 NM)	Level Change
EAST (000° – 179° magnetic)	LEFT	DESCEND 90 m (300 ft)
	RIGHT	CLIMB 90 m (300 ft)
WEST (180° – 359° magnetic)	LEFT	CLIMB 90 m (300 ft)
	RIGHT	DESCEND 90 m (300 ft)

(2/28/19)

Part 3.

GRAPHIC NOTICES

Section 1. General

DECOMMISSIONING OF COMPUTER VOICE RESERVATION SYSTEM (CVRS), AIRPORT RESERVATION OPERATIONS AND SPECIAL TRAFFIC MANAGEMENT PROGRAMS FOR TELEPHONE USERS

June 21, 2018

Purpose: Decommission the Computer Voice Reservation System (CVRS), Airport Reservation Operations and Special Traffic Management Programs for telephone users.

Discussion: The CVRS telephone service for users has been cited as a security risk and is no longer serviceable. This service will be decommissioned.

Recommended Action: Operators of aircraft, directors of safety, directors of operations, chief pilots, dispatch supervisors, fractional ownership program managers and training managers should ensure pilots are aware of this decommissioning.

This change will be effective June 21, 2018.

Contact: Direct questions or comments regarding this subject to the Traffic Flow Management System, 9–AWA–ATCSCC–SLE–Support@faa.gov.

Traffic Flow Management System (TFMS)
2nd Level Engineering
AJM–2521

COLD TEMPERATURE RESTRICTED AIRPORTS

Aug 16, 2018

Cold Temperature Altitude Corrections

Subject: Cold temperature altitude corrections at airports with a published cold temperature restriction.

Purpose: 1. To provide an updated list of 14 CFR Part 97 Cold Temperature Restricted Airports (CTRA) and segments designated with a temperature restriction; 2. Describe how to calculate and apply altitude corrections during cold temperature operations; 3. Describe the two methods, All Segments Methods and NTAP Segment(s) Method, which operators are allowed to use when making cold temperature altitude corrections.

This year's list includes restricted temperatures based on standard Required Obstacle Clearance (ROC) values and published approach altitudes that account for additional altitude adjustments. These adjustments do not only reflect the minimum ROC for an approach segment based on terrain and/or an obstacle, but also an upward adjustment for other operational and/or ATC needs. These adjusted approach altitudes can result in the segment no longer being identified with a restriction or in a revised restricted temperature for the airport being published, i.e. (−24C now −30C).

This list may also be found at the bottom of the, "Terminal Procedures Basic Search" page. http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/search/

Background: In response to aviation industry concerns over cold weather altimetry errors, the FAA conducted a risk analysis to determine if current 14 CFR Part 97 instrument approach procedures, in the United States National Airspace System, place aircraft at risk during cold temperature operations. This study applied the coldest recorded temperature at the given airports in the last five years and specifically determined if there was a probability that during these non−standard day operations, anticipated altitude errors in a barometric altimetry system could exceed the ROC used on procedure segment altitudes. If a probability, of the ROC being exceeded, went above one percent on a segment of the approach, a temperature restriction was applied to that segment. In addition to the low probability that these procedures will be required, the probability of the ROC being exceeded precisely at an obstacle position is extremely low, providing an even greater safety margin.

The CTRA risk analysis was only performed on airports of 2500 ft. and greater due to database constraints. Pilots must calculate a cold temperature altitude correction at any airport included in the airports list below. Pilots operating into an airport with a runway length less than 2500 feet may make a cold temperature altitude correction in cold temperature conditions, if desired. Pilots must advise ATC with the corrected altitude when applying altitude corrections on any approach segment with the exception of the final segment.

All Segments Method: Pilots may correct all altitudes from the IAF altitude to the missed approach final holding altitude. Pilots familiar with the NTAP procedure for making altitude corrections and choosing to use the All Segments Method are only required to use the published "snowflake" icon,  /CTRA temperature limit on the approach chart for making corrections and do not need to reference the restricted airports list in this NTAP. Calculations will be made based on the altitude at the Final Approach Fix (FAF)/Precision Final Approach Fix (PFAF), the Minimum Descent Altitude or Decision Altitude (DA) and the Missed Approach (MA) final holding altitude. The calculations made at these fixes will be used to make altitude corrections on the other fixes in the applicable approach segment(s).

NTAP Segment(s) Method: Pilots may correct only the required segment(s) indicated in this NTAP's restricted airports list. Pilots using the NTAP Segment(s) Method will need to reference the NTAP restricted

airports list to determine which segment(s) require a correction. Calculations will be made based on the altitude at the Final Approach Fix (FAF)/Precision Final Approach Fix (PFAF), the Minimum Descent Altitude or Decision Altitude (DA) and the Missed Approach (MA) final holding altitude. The calculations made at these fixes will be used to make altitude corrections on the other fixes in the applicable approach segment(s).

Actions:

When and where to correct: Pilots must make an altitude correction to the published, "at", "at or above" and "at or below" altitudes on all designated segment(s), for all published procedures and runways when the reported airport temperature is at or below the published airport cold temperature restriction on the approach plate. Pilots must advise ATC of the amount of altitude correction applied when correcting on any segment of the approach other than the final segment. ATC requires this information to ensure appropriate vertical separation between known traffic. Reference the **How to Apply Cold Temperature Altitude Corrections on an Approach** for examples and additional information.

Affected Airports: Cold Temperature Restricted Airports are identified by a "snowflake" icon (**❄**) and temperature limit, in Celsius, on U.S. Government approach charts or a "textual" Note published on commercial charting publications. The NTAP will maintain the list of airports and segment(s) affected. Pilots correcting all segments will need only to use the instrument approach chart to determine whether the approach requires a cold temperature altitude correction.

Altitudes not corrected: ATC does not apply a cold temperature correction to Minimum Vectoring Altitude (MVA) charts. Pilots must request approval from ATC to apply a cold temperature correction to an ATC assigned altitude or an assigned altitude when flying on a radar vector in lieu of a published missed approach procedure. Pilots must not correct altitudes published on Standard Instrument Departures (SIDs), Obstacle Departure Procedures (ODPs) and Standard Terminal Arrivals (STARs).

Use of corrected MDA/DA: Pilots must use the corrected Minimum Descent Altitude (MDA) or Decision Altitude/ Decision Height (DA) as the minimum for an approach. Pilots must meet the requirements in 14 CFR Part 91.175 in order to operate below the corrected MDA or DA. Pilots must see and avoid obstacles when descending below the MDA.

Methods for Calculating Altitude Corrections: Pilots of aircraft **not equipped with** an RNAV system capable of temperature compensation must use the AIM 7−2−3, ICAO Cold Temperature Error Table to calculate a cold temperature altitude correction. The calculations for the approach will be calculated from three points on the approach:

NOTE: For the purpose of this procedure, when the FAF is referenced, it is the FAF altitude or the PFAF/Glideslope intercept altitude.

1. The FAF/PFAF will be used to calculate the correction to be applied to all altitudes from the FAF/PFAF:
   a. Up to but not including the intermediate fix (IF) altitude for the NTAP Segment(s) Method
   b. Up to and including the initial approach fix (IAF) for the All Segments Method
2. The published MDA or DA will be used to calculate the correction to be applied to all altitudes in the final approach segment as applicable.
3. The final missed approach (MA) holding altitude will be used to calculate the correction to be applied to the final missed approach holding altitude only.

NOTE: Pilots may use Real Time Mesocscale Analysis (RTMA): Alternate Report of Surface Temperature, for computing altitude corrections, when airport temperatures are not available via

normal reporting. See InFO 15006 for additional information, http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/media/2015/info15006.pdf.
The RTMA website is http://nomads.ncep.noaa.gov/pub/data/nccf/com/rtma/prod/airport_temps/

Pilots of aircraft **equipped with** an RNAV system capable of temperature compensation, and choosing to use this system, must ensure the system is active and operating correctly. If the system is not operating correctly, or not being used, the pilot must manually calculate and apply a cold weather altitude correction using the AIM 7−2−3, ICAO Cold Temperature Error Table. The MDA/DA and step down fixes in the final segment will still require a manual correction.

PILOTS MUST NOT MAKE AN ALTIMETER CHANGE to accomplish an altitude correction. Pilots must ensure that the altimeter is set to the current altimeter setting provided by ATC in accordance with 14 CFR §91.121.

ICAO COLD TEMPERATURE ERROR TABLE
HEIGHT ABOVE AIRPORT IN FEET

REPORTED TEMP °C	200	300	400	500	600	700	800	900	1000	1500	2000	3000	4000	5000
+10	10	10	10	10	20	20	20	20	20	30	40	60	80	90
0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
-30	40	60	80	100	120	140	150	170	190	280	380	570	760	950
-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1210
-50	60	90	120	150	180	210	240	270	300	450	590	890	1190	1500

Acceptable Use of Table:
Pilots may calculate a correction with a visual interpolation of the chart when using reported temperature and height above airport. This calculated altitude correction may then be rounded to the nearest whole hundred or rounded up. I.e., a correction of 130 ft. from the chart may be rounded to 100 ft. or 200 ft. A correction of 280 ft. will be rounded up to 300 ft. This rounded correction will be added to the FAF, all step−down fixes outside of the FAF and the IAF altitudes. The correction calculated from the MDA or DA may be used as is, rounded up, but never rounded down. This number will be added to the MDA, DA and all step−down fixes inside of the FAF as applicable. Do not round down when using the 5000 ft. column for calculated height above airport values greater than 5000 ft.

No extrapolation above the 5000 ft. column is required. Pilots may use the 5000 ft. “height above airport in feet” column for calculating corrections when the calculated altitude is greater than 5000 ft. above reporting station elevation. Pilots must add the correction(s) from the table to the affected segment altitude(s) and fly at the new corrected altitude.

It is important to understand that the correction from the table will place the aircraft back to an altitude based on a standard day. Although the techniques adopted in this NTAP to use the FAF altitude and MDA to correct the affected segment altitudes may not place the aircraft back to a standard day altitude on all fixes, a safe obstacle clearance will be maintained. These techniques have also been adopted to minimize the number of entries into the table while making corrections required by the pilot.

Additional Temperature Restrictions on IAP Charts: The charted temperature restriction for “uncompensated baro−VNAV systems” on 14 CFR Part 97 RNAV (GPS) and RNAV (RNP) Authorization Required (AR)

approach plates is independent of the temperature restriction established at a "Cold Temperature Restricted Airport". The charted temperature restriction for an uncompensated baro−VNAV system is applicable when the LNAV/VNAV line of minima is used on an RNAV (GPS) approach. The temperature restriction for an uncompensated baro−VNAV system on an RNAV (RNP) AR approach applies to the entire procedure. Aircraft without a compensating baro−VNAV system may not use the LNAV/VNAV line of minima on the RNAV (GPS) approach when the actual temperature is above or below the charted baro−VNAV temperature restriction. For aircraft without a compensating baro−VNAV system, the RNAV (RNP) AR approach is not authorized when the actual temperature is above or below the charted baro−VNAV temperature restriction. In all cases, a cold temperature altitude correction must be applied when the actual temperature is at or below the cold temperature restricted airport temperature restriction.

How to Apply Cold Temperature Altitude Corrections on an Approach:

All Segments Method: All segments corrected from IAF through MA holding altitude:

Step 1: Determine if there is a published "snowflake" icon, /CTRA temperature limit on the approach chart.

Step 2: If the reported airport temperature is at or below the published CTRA temperature limit, apply cold temperature altitude corrections to all published altitudes from the IAF altitude to the MA final holding altitude.

A Aircraft not equipped with a temperature compensating RNAV system or not using that system (use manual correction).

- All altitudes from the FAF/PFAF up to and including the IAF altitude: Calculate correction by taking FAF/PFAF altitude and subtracting the airport elevation. This number will be used to enter the height above airport in the ICAO table until reaching the reported temperature. Round this number as applicable and then add to all altitudes from the FAF altitude through the IAF altitude.

- All altitudes in final segment: Calculate correction by taking the MDA or DA for the approach being flown and subtract the airport elevation. This number will be used to enter the height above airport in the ICAO table until reaching the reported temperature. Use this number or round up. Add this number to MDA or DA/DH, as applicable, and any applicable step−down fixes in the final segment.

- Final holding altitude in the Missed Approach Segment: Calculate the correction by taking the final missed approach (MA) holding altitude and subtract the airport elevation. This number will be used to enter the height above airport in the ICAO table until reaching the reported temperature. Round this number as applicable and then add to the final MA altitude only.

B If flying an aircraft equipped with a RNAV system capable of temperature compensation, follow the instructions for applying temperature compensation provided in the AFM, AFM supplement, or RNAV system operating manual. Ensure that temperature compensation is active prior to the IAF and remains active through the entire approach. Manually calculate an altimetry correction for the MDA or DA. Determine an altimetry correction from the ICAO table based on the reported airport temperature and the height difference between the MDA or DA, as applicable, and the airport elevation.

NOTE: Some RNAV systems apply temperature compensation only to those altitudes associated with an instrument approach procedure loaded into the active flight plan while other systems apply temperature compensation to all procedure altitudes or user entered altitudes in the active flight plan,

including altitudes associated with a STAR. For those systems that apply temperature compensation to all altitudes in the active flight plan, delay activating temperature compensation until the aircraft has passed the last altitude constraint associated with the active STAR.

Step 3: For RNAV (GPS) approaches flown to the LNAV/VNAV line of minima using baro−VNAV vertical guidance, determine if there are published uncompensated baro−VNAV temperature limits. If the reported airport temperature is above or below the published limits, do not use the LNAV/VNAV line of minima unless the RNAV system is capable of temperature compensation and the system is active. Use an alternative line of minima (e.g., LNAV). CTRA correction must still be made on this approach if applicable.

Step 4: For RNAV (RNP) AR approaches, determine if there are uncompensated baro−VNAV temperature limits published on the approach. If the reported airport temperature is above or below the published temperature limits, the RNP (AR) approach may not be flown.

NOTE: When executing an approach with vertical guidance at a CTRA airport (i.e., ILS, LPV, LNAV/VNAV), pilots are reminded to follow the glideslope/glidepath as published when it is intersected inbound on the approach at the corrected altitude. The ILS glideslope and WAAS generated glidepath are unaffected by cold temperatures and will be provide reliable vertical guidance to the corrected DA/DH. A baro−VNAV generated glidepath will be affected by cold temperatures and must be corrected when at or below the published temperature limit and using the LNAV/VNAV line of minima to DA/DH.

NTAP Segment(s) method:

Step 1: Determine if there is a published “snowflake” icon, /CTRA temperature limit on the approach chart.

Step 2: If the reported airport temperature is at or below the published CTRA temperature limit, apply cold temperature altitude corrections to all published altitudes, on the affected segments, listed in Cold Temperature Restricted Airports List found in this NTAP.

A Aircraft not equipped with a temperature compensating RNAV system or not using the system will make a manual correction using ICAO Cold Temperature Error Table.

- Intermediate Segment: All altitudes from the FAF/PFAF up to but not including the intermediate fix (IF) altitude. Calculate correction by taking FAF/PFAF altitude and subtracting the airport elevation. This number will be used to enter the height above airport in the ICAO table until reaching the reported temperature. Round this number as applicable and then add to FAF altitude and all step−down altitudes.

- Final segment: Calculate correction by taking the MDA or DA for the approach being flown and subtract the airport elevation. This number will be used to enter the height above airport in the ICAO table until reaching the reported temperature. Use this number or round up. Add this number to MDA or DA/DH, as applicable, and any applicable step−down fixes in the final segment.

- Missed Approach Segment: Calculate the correction by taking the final missed approach (MA) holding altitude and subtract the airport elevation. This number will be used to enter the height above airport in the ICAO table until reaching the reported temperature. Round this number as applicable and then add to the final MA altitude only.

B If flying an aircraft equipped with a RNAV system capable of temperature compensation, follow the instructions for applying temperature compensation provided in the AFM, AFM supplement, or

RNAV system operating manual. Ensure that temperature compensation is active on the segment being corrected. Manually calculate an altimetry correction for the MDA or DA. Determine an altimetry correction from the ICAO table based on the reported airport temperature and the height difference between the MDA or DA, as applicable, and the airport elevation.

NOTE: Some RNAV systems apply temperature compensation only to those altitudes associated with an instrument approach procedure loaded into the active flight plan while other systems apply temperature compensation to all procedure altitudes or user entered altitudes in the active flight plan, including altitudes associated with a STAR. For those systems that apply temperature compensation to all altitudes in the active flight plan, delay activating temperature compensation until the aircraft has passed the last altitude constraint associated with the active STAR.

Step 3: For RNAV (GPS) approaches flown to the LNAV/VNAV line of minima using baro−VNAV vertical guidance, determine if there are published uncompensated baro−VNAV temperature limits. If the reported airport temperature is above or below the published limits, do not use the LNAV/VNAV line of minima unless the RNAV system is capable of temperature compensation and the system is active. Use an alternative line of minima (e.g., LNAV). CTRA correction must still be made on this approach if applicable.

Step 4: For RNAV (RNP) AR approaches, determine if there are uncompensated baro−VNAV temperature limits published on the approach. If the reported airport temperature is above or below the published temperature limits, the RNP (AR) approach may not be flown.

NOTE: When executing an approach with vertical guidance at a CTRA airport (i.e., ILS, LPV, LNAV/VNAV), pilots are reminded to follow the glideslope/glidepath as published when it is intersected inbound on the approach at the corrected altitude. The ILS glideslope and WAAS generated glidepath are unaffected by cold temperatures and will be provide reliable vertical guidance to the corrected DA/DH. A baro−VNAV generated glidepath will be affected by cold temperatures and must be corrected when at or below the published temperature limit and using the LNAV/VNAV line of minima to DA/DH.

Communication: Pilots must request approval from ATC whenever applying a cold temperature altitude correction. Pilots do not need to inform ATC of the final approach segment correction (i.e., new MDA or DA/DH). This report should be provided on initial radio contact with the ATC facility issuing approach clearance. ATC requires this information in order to ensure appropriate vertical separation between known traffic. Pilots should query ATC when vectored altitudes to a segment are lower than the requested corrected altitude. Pilots are encouraged to self−announce corrected altitude when flying into non−towered airfields.

The following are examples of appropriate pilot−to−ATC communication when applying cold−temperature altitude corrections.

- On initial check−in with ATC providing approach clearance: Hayden, CO (example below).
    - Vectors to final approach course: Outside of PICIN: "*Request 12000 ft. for cold temperature operations."*
    - Vectors to final approach course: Inside of PICIN: *"Request 10500 ft. for cold temperature operations.*"
    - Missed Approach segment: "*Require final holding altitude, 10500 ft. on missed approach for cold temperature operations.*"
- Pilots cleared by ATC for an instrument approach procedure; "Cleared the RNAV RWY 28 approach (from any IAF)". Hayden, CO (example below).
    - IAF: "*Request 13500 for cold temperature operations at TUSKK, TILLI or HIPNA*"

For additional information contact Kel Christianson, AFS−470, at 202−267−8838.

Cold Temperature Restricted Airports: Airports are listed by ICAO code, Airport Name, Temperature Restriction in Celsius. The temperature will be indicated on Airport IAPs next to a snowflake symbol, ❄−XX°C in the United States Terminal Procedure Publication (TPP).

Identifier	Airport Name	Temperature	Affected Segment		
			Intermediate	Final	Missed Appr
Alaska					
PABL	Buckland	−36C	X		
PABR	Wiley Post−Will Rogers	−42C	X		
PABT	Bettles	−37C	X	X	
PACE	Central	−43C	X	X	
PACH	Chuathbaluk	−43C	X	X	
PACI	Chalkyitsik	−32C	X		
PACM	Scammon Bay	−21C	X		
PACX	Coldfoot	−11C	X	X	
PADE	Deering	−24C	X	X	
PADM	Marshall Don Hunter Sr	−22C		X	
PAEE	EEK	−38C	X		
PAEG	Eagle	−49C	X		
PAEN	Kenai	−31C	X		
PAFA	Fairbanks Intl	−45C	X		
PAFM	Ambler	−42C	X		
PAGA	Edward G. Pitka Sr	−33C	X		
PAGH	Shungnak	−20C	X		X
PAGK	Gulkana	−37C	X		
PAGM	Gambell	−26C		X	
PAHC	Holy Cross	−26C		X	
PAHL	Huslia	−32C	X		
PAHX	Shageluk	−37C	X		
PAIK	Bob Baker Memorial	−7C	X	X	
PAIL	Iliamna	−13C	X		
PAIW	Wales	−12C		X	
PAJN	Juneau Intl	−13C	X		
PAKN	King Salmon	−31C	X		
PAKP	Anaktuvuk	−9C	X		
PAKV	Kaltag	−21C	X	X	
PALG	Kalskag	−42C	X		
PAMB	Manokotak	−34C	X		
PAMC	McGrath	−31C	X	X	X
PAMH	Minchumina	−37C	X		
PAMK	St Michael	−37C	X		
PANA	Napakiak	−37C	X		
PANI	Aniak	−34C		X	
PANN	Nenana Muni	−43C	X		

Identifier	Airport Name	Temperature	Intermediate	Final	Missed Appr
PANU	Nulato	–29C	X		X
PANV	Anvik	–32C	X		
PAOB	Kobuk	–23C	X		
PAOM	Nome	–27C	X		
PAOR	Northway	–43C	X		
PAOT	Ralph Wien Memorial	–44C	X		
PAQH	Quinhagak	–36C	X		
PAQT	Nuiqsut	–41C	X		
PARC	Artic Village	–38C	X	X	
PARS	Russian Mission	–15C	X	X	
PARY	Ruby	–33C	X	X	
PASA	Savoonga	–27C	X		
PASC	Deadhorse	–45C	X		
PASK	Selawik	–36C	X		X
PATA	Ralph M Calhoun Memorial	–51C		X	
PATE	Teller	–25C		X	
PATQ	Atqasuk Edward Burnell Sr. Mem	–43C	X		
PAUN	Unalakleet	–39C	X		
PAVD	Valdez Pioneer Field	–11C	X		
PAVE	Venetie	–42C	X		
PAVL	Kivalina	–34C	X		
PAWB	Beaver	–42C	X		
PAWD	Seward	–3C	X		
PAWG	Wrangell	–5C	X	X	
PAWI	Wainwright	–42C	X		
PAWS	Wasilla	–31C	X		
PFAL	Allakaket	–44C	X		
PFCL	Clarks Point	–34C	X		
PFEL	Elim	–29C		X	
PFKT	Brevig Mission	–24C	X		
PFKU	Koyukuk	–30C		X	
PFKW	Kwethluk	–38C	X		
PFSH	Shaktoolik	–35C	X		
PFTO	Tok Junction	–20C	X		
PFYU	Fort Yukon	–45C	X	X	
California					
KMMH	Mammoth Yosemite	–25C		X	
KSVE	Susanville Muni	–22C	X	X	
KTRK	Truckee – Tahoe	–13C	X	X	
KTVL	Lake Tahoe	–27C	X		
Colorado					
KAEJ	Central Colorado Rgnl	–25C		X	

Identifier	Airport Name	Temperature	Intermediate	Final	Missed Appr
KASE	Aspen–Pitkin County/Sardy Field	–22C	X		
KCAG	Craig–Moffat	–26C		X	
KCEZ	Cortez Muni	–25C		X	
KEEO	Meeker Coulter Field	–25C		X	
KEGE	Eagle County Rgnl	–18C	X		
KGUC	Gunnison–Crested Butte Rgnl	–28C	X		
KHDN	Yampa Valley	–24C		X	
KLXV	Lake County	–27C		X	
KRIL	Garfield County Rgnl	–15C	X	X	
KSBS	Steamboat Springs/Bob Adams Fld	–32C	X		
KTAD	Perry Stokes	–26C	X		
Connecticut					
KBDL	Bradley Intl	–23C		X	
Idaho					
KJER	Jerome County	–22C		X	
KMYL	McCall Muni	–21C	X		
KSMN	Lemhi County	–11C	X	X	X
KSUN	Friedman Memorial	–16C		X	
65S	Boundary County	–8C		X	
Indiana					
KSMD	Smith Field	–27C		X	
Iowa					
KAMW	Ames Muni	–27C	X		
KIKV	Ankeny Rgnl	–27C	X		
KSPW	Spencer Muni	–32C	X		
Maine					
KPQI	Northern Maine Rgnl	–30C	X		
3B1	Greenville Muni	–29C	X		
Massachusetts					
KBAF	Westfield–Barnes Regional	–21C		X	
KFIT	Fitchburg Muni	–25C		X	
KPSF	Pittsfield Muni	–24C		X	
0B5	Turners Falls	–22C	X		
7B2	Northampton	–24C	X		
Michigan					
KAPN	Alpena County Rgnl	–32C	X		
KBFA	Boyne Mountain	–29C		X	
KIWD	Gogebic–Iron County	–27C		X	
KPLN	Pellston Rgnl of Emmet County	–30C		X	
KTVC	Cherry Capital	–20C		X	

Identifier	Airport Name	Temperature	Intermediate	Final	Missed Appr
Minnesota					
KBFW	Silver Bay Municipal	−35C	X	X	
KCKC	Grand Marais/Cook County	−30C			X
KCQM	Cook Muni	−38C	X		
KELO	Ely Muni	−39C	X		
KHIB	Range Rgnl	−31C	X		
KINL	Falls Intl	−31C	X		
KRRT	Warroad Intl Memorial	−37C	X		
Montana					
KBTM	Bert Mooney	−19C	X	X	
KBZN	Bozeman Yellowstone Intl	−33C	X		X
KEKS	Ennis−Big Sky	−26C	X		X
KGTF	Great Falls Intl	−33C	X		
KHLN	Helena Rgnl	−21C	X	X	
KHVR	Havre City−County	−30C			X
KMSO	Missoula Intl	−11C	X	X	X
KOLF	L M Clayton	−38C	X		
KSBX	Shelby	−31C			X
KWYS	Yellowstone	−19C	X	X	
M46	Colstrip	−32C	X		
M75	Malta	−37C	X		
3U3	Bowman Field	−33C	X		
6S5	Ravalli County	−30C			X
6S8	Laurel Municipal	−30C	X		
7S0	Ronan	−27C	X		
8S1	Polson	−20C	X	X	
32S	Stevensville	−20C	X		
Nebraska					
KCDR	Chadron Muni	−32C	X		
Nevada					
KEKO	Elko Rgnl	−20C		X	
KELY	Ely (Yelland Field)	−31C	X		
KLOL	Derby Field	−25C	X		
KRNO	Reno/Tahoe Intl	−15C		X	
KRTS	Reno/Stead	−15C		X	
KWMC	Winnemucca Muni	−22C			X
05U	Eureka	−24C			X
New Hampshire					
KBML	Berlin Rgnl	−24C		X	
KCNH	Claremont Muni	−28C		X	
KHIE	Mount Washington Rgnl	−24C		X	
KLCI	Laconia Muni	−25C	X		
KLEB	Lebanon Muni	−20C	X	X	

Identifier	Airport Name	Temperature	Intermediate	Final	Missed Appr
5B9	Haverhill/Dean Memorial	−27C		X	
New Mexico					
KAXX	Angel Fire	−31C	X		
New York					
KART	Watertown Intl	−37C	X		
KDKK	Chautauqua County/Dunkirk	−20C		X	
KELM	Elmira/Corning Rgnl	−21C	X	X	
KGFL	Floyd Bennett Memorial	−18C	X	X	
KITH	Ithaca Tompkins Rgnl	−19C		X	
KLKP	Lake Placid	−22C		X	
KPBG	Plattsburgh Intl	−29C	X		
KSLK	Adirondack Rgnl	−26C		X	
4B6	Ticonderoga Muni	−27C		X	
20N	Kingston−Ulster	−21C	X		
North Carolina					
KRHP	Western Carolina Rgnl	−5C		X	
1A5	Macon County	−17C	X		
North Dakota					
KBIS	Bismarck	−35C	X		
KDIK	Dickinson−Theodore Roosevelt Rgnl	−30C	X		
KFAR	Hector Intl	−25C	X		
KISN	Sloulin Field Intl	−36C	X		
Ohio					
KBKL	Burke Lakefront	−23C		X	
KILN	Wilmington Air Park	−22C	X		
Oregon					
KBDN	Bend Muni	−23C	X		
KBKE	Baker City Muni	−21C	X		X
KGCD	Grant County Rgnl/Ogilvie Field	−19C			X
KLGD	La Grande/Union County	−13C		X	
KLKV	Lake County	−29C			X
KLMT	Klamath Falls	−27C	X		
KMFR	Rogue Valley Intl−Medford	−5C	X		
KPDT	Eastern Oregon Rgnl at Pendleton	−19C	X		
KRDM	Roberts Field	−21C	X		
S39	Prineville	−26C	X		
Pennsylvania					
KAFJ	Washington County	−27C		X	
KAVP	Wilkes−Barre/Scranton Intl	−21C	X		
KIPT	Williamsport Rgnl	−14C		X	

Identifier	Airport Name	Temperature	Intermediate	Final	Missed Appr
South Dakota					
KEFC	Belle Fourche Muni	–27C	X		
KIEN	Pine Ridge	–33C		X	
KMBG	Mobridge Muni	–31C	X		
KSPF	Black Hills–Clyde Ice Field	–28C	X		
Tennessee					
0A9	Elizabethton Muni	–12C		X	
6A4	Mountain City/Johnson County	–12C		X	
Utah					
KBCE	Bryce Canyon Airport	–30C	X		
KDTA	Delta Muni	–27C			X
KENV	Wendover	–12C	X		
KLGU	Logan–Cache	–25C	X		
KRIF	Richfield Muni	–34C	X		
KSGU	St George Muni	–14C	X		
U52	Beaver Municipal	–27C	X		
U55	Panguitch Municipal	–28C	X		
Vermont					
KBTV	Burlington Intl	–10C	X		
KDDH	William H. Morse State	–17C	X	X	
KEFK	Newport State	–30C	X		
KMPV	Edward F. Knapp State	–20C	X		
KMVL	Morrisville–Stowe State	–30C		X	
KRUT	Rutland–Southern Vermont Rgnl	–4C	X	X	
KVSF	Hartness State (Springfield)	–24C		X	
Virginia					
KMTV	Blue Ridge	–18C	X		
KROA	Roanoke Rgnl/Woodrum Field	–13C		X	
KVBW	Bridgewater Air Park	–16C	X		
W13	Eagle's Nest	–19C	X		
Washington St.					
KEAT	Pangborn Memorial	–7C	X		
KOMK	Omak	–15C		X	
KRLD	Richland	–19C	X		
West Virginia					
KEKN	Elkins–Randolph County Jennings Randolph Field	–17C		X	
W99	Grant County	–9C		X	
3I2	Point Pleasant/Mason County	–18C		X	
Wisconsin					

Identifier	Airport Name	Temperature	Intermediate	Final	Missed Appr
KASX	John F. Kennedy Memorial	–31C	X		
KCMY	Sparta/Fort McCoy	–33C	X		
KLSE	La Crosse Muni	–20C		X	
KOVS	Boscobel	–27C		X	
KPDC	Prairie du Chien Muni	–28C		X	
KRHI	Rhinelander–Oneida County	–31C	X		
KRPD	Rice Lake Rgnl–Carl's Field	–35C	X		
4R5	Major Gilbert Field	–30C	X		
Wyoming					
KAFO	Afton Municipal Airport	–22C		X	
KCOD	Yellowstone Rgnl	–31C	X		
KEMM	Kemmerer Muni	–35C	X		
KGCC	Gillette–Campbell County	–26C		X	
KGEY	South Big Horn County	–33C	X	X	
KJAC	Jackson Hole	–26C	X	X	
KLAR	Laramie Rgnl	–35C	X		
KSHR	Sheridan County	–24C	X		
KWRL	Worland Muni	–33C			X
W43	Hulett Muni	–34C	X		

Additional Information: The following military airfields meet the criteria to be identified as a Cold Temperature Restricted Airport using the FAA cold temperature model. USAF, USA, USM, USN and USCG are not required to adhere to the procedures found in this NTAP at these airfields. This information is applicable to FAA authorized operators operating into these airfields.

Identifier	Airport Name	Temperature	Intermediate	Final	Missed Appr
KGTB	Wheeler–Sack AAF	–29C	X		
KRYM	Ray S. Miller AAF	–34C	X		
PAEI	Eielson AFB	–37C	X		X
PAFB	Ladd AAF	–33C	X		X
PAIM	Indian Mountain LRRS	–44C	X		
PALU	Cape Lisburne LRRS	–34C	X		
PASV	Sparrevohn LRRS	–21C	X		
PATC	Tin City LRRS	–37C	X		
PATL	Tatalina LRRS	–21C	X		X
PPIZ	Point Lay LRRS	–41C	X		

See the following examples for identifying and applying altitude corrections.

Hayden/Yampa Valley (KHDN). Reported Temperature –24°C: RNAV (GPS) RWY 28.

All Segments Method: All segments corrected from IAF through MA holding altitude.

Uncompensated Baro–VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: –24°C

2 Altitude at the Final Approach Fix (FAF) (BEEAR) = 10000 ft.
3 Airport elevation = 6606 ft.
4 Difference: 10000 ft. – 6606 ft. = 3394 ft.
5 Use the AIM 7−2−3 ICAO Cold Temperature Error Table for a height above airport of 3394 ft. and −24°C. Visual interpolation is approximately 500 ft. Actual interpolation is 546 ft. Add 500 ft. to the FAF and all procedure altitudes outside of the FAF up to and including IAF altitude:
   - TUSKK (IAF), TILLJ (IAF) and HIPNA (IAF HILO): 13000 + 500 = 13500 ft.
   - PICIN (stepdown fix): 11500 + 500 = 12000 ft.
   - BEEAR (FAF): 10000 + 500 = 10500 ft.
6 Correct altitudes within the final segment altitude based on the minima used. LP MDA = 7080 ft.
7 Difference: 7080 ft. – 6606 ft. = 474 ft.
8 AIM 7−2−3 Table: 474 ft. at −24°C is approximately 80ft. Use 80 ft. or round up to 100 ft.
9 Add corrections to altitudes up to but not including the FAF:
   - DICEV (stepdown fix): 8400 + 80 = 8480 ft.
   - BUYYA (stepdown fix): 7860 + 80 = 7940 ft.
   - LP MDA: 7080 + 80 = 7160 ft.
10 Correct MEKWY/Missed Approach Holding Altitude: MA altitude is same as BEEAR (10000); therefore, the same table calculation in step 5 may be used at MEKWY. Take 500 ft. correction for 10000 ft. and add to MA holding altitude:
   - MEKWY: 10000 + 500 = 10500 ft.

Compensated Baro−VNAV System:
Operators using a temperature compensating RNAV system to make altitude corrections will be set to the current airport temperature (−24°C) and activated prior to the passing the IAF. A manual calculation of the cold temperature altitude correction is required for the MDA/DA. Although using the temperature compensating system should provide clearance over step−down fixes on any segment, a correction will be added to all applicable step−down fixes and monitored during descent to ensure aircraft will be “at” or “above” the corrected step−down fix altitude during the approach.

Hayden/Yampa Valley (KHDN). Reported Temperature −24°C: RNAV (GPS) RWY 28.

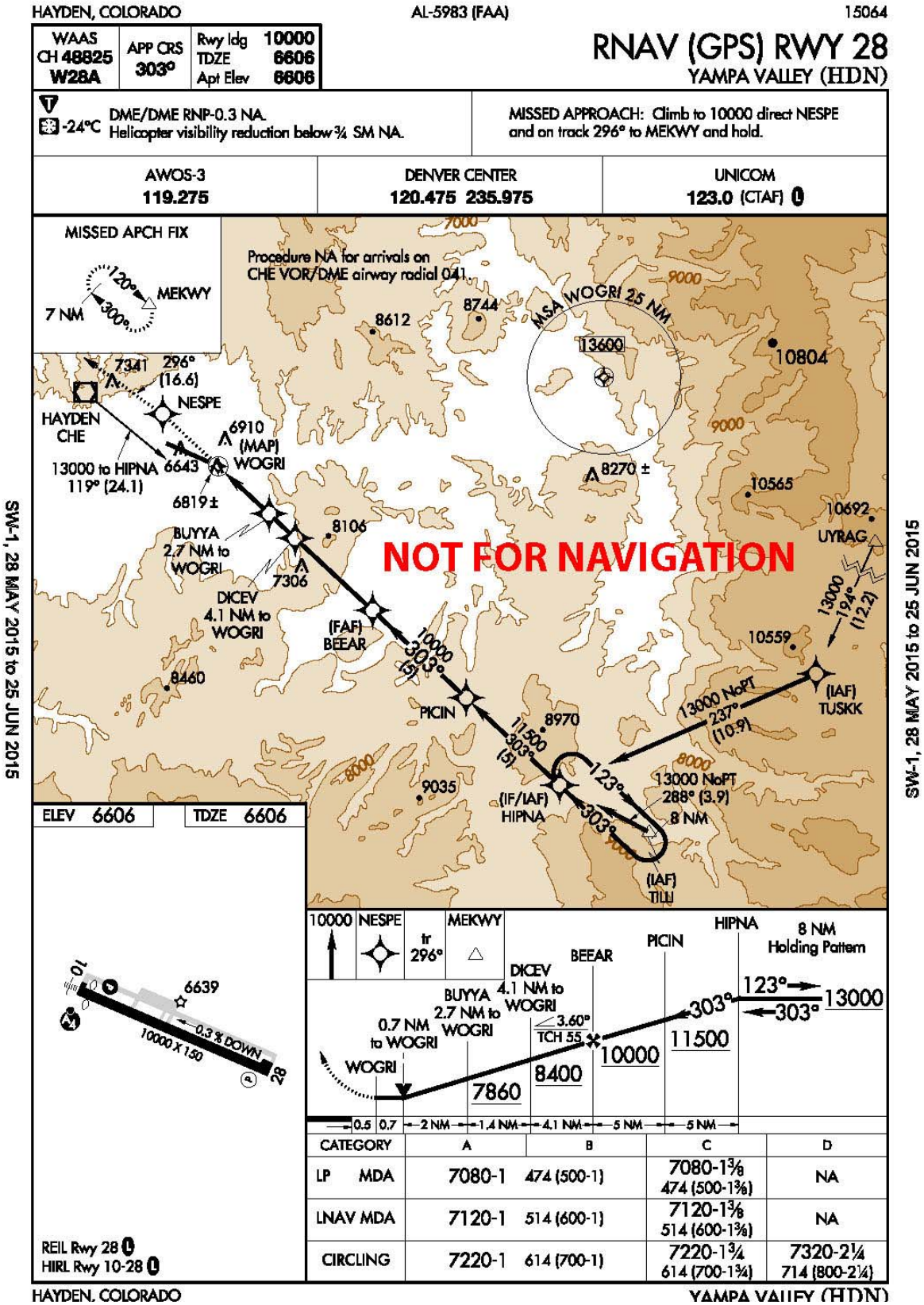
NTAP Segments Method: Final segment required.

Uncompensated Baro−VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: −24°C
2 Airport elevation = 6606 ft.
3 Correct altitudes within the final segment altitude based on the minima used. LP MDA = 7080 ft.
4 Difference: 7080 ft. – 6606 ft. = 474 ft.
5 AIM 7−2−3 Table: 474 ft. at −24°C is approximately 80ft. Use 80 ft. or round up to 100 ft.
6 Add corrections to MDA and all stepdown fix altitudes in final segment up to but not including the FAF:
   - DICEV (stepdown fix): 8400 + 80 = 8480 ft.
   - BUYYA (stepdown fix): 7860 + 80 = 7940 ft.
   - LP MDA: 7080 + 80 = 7160

Compensated Baro−VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will set the current airport temperature (−24°C) and activate the system for the required segment(s). A manual calculation of the cold temperature altitude correction is required for the MDA/DA. Although using the temperature compensating system should provide clearance over step−down fixes on any segment, a correction will be added to all applicable step−down fixes and monitored during descent to ensure aircraft will be “at” or “above” the corrected step−down fix altitude during the approach.


HAYDEN, COLORADO
AL-5983 (FAA)
15064
RNAV (GPS) RWY 28
YAMPA VALLEY (HDN)
WAAS CH 48825 W28A
APP CRS 303°
Rwy ldg 10000
TDZE 6606
Apt Elev 6606
-24°C
DME/DME RNP-0.3 NA.
Helicopter visibility reduction below ¾ SM NA.
MISSED APPROACH: Climb to 10000 direct NESPE and on track 296° to MEKWY and hold.
AWOS-3 119.275
DENVER CENTER 120.475 235.975
UNICOM 123.0 (CTAF)
MISSED APCH FIX
120°
300°
MEKWY
7 NM
Procedure NA for arrivals on CHE VOR/DME airway radial 041.
MSA WOGRI 25 NM
13600
9000
7000
8612
8744
10804
7341
296°
(16.6)
NESPE
HAYDEN
CHE
6910
(MAP)
WOGRI
13000 to HIPNA
119° (24.1)
6643
6819±
8270 ±
10565
10692
UYRAG
BUYYA
2.7 NM to
WOGRI
8106
7306
NOT FOR NAVIGATION
DICEV
4.1 NM to
WOGRI
(FAF)
BEEAR
10000
303°
(5)
13000
194°
(12.2)
10559
8460
PICIN
8970
11500
303°
(5)
13000 NoPT
237°
(10.9)
(IAF)
TUSKK
8000
123°
13000 NoPT
288° (3.9)
8 NM
9035
(IF/IAF)
HIPNA
303°
(IAF)
TILLI
ELEV 6606
TDZE 6606
10000
NESPE
MEKWY
tr
296°
HIPNA
8 NM
Holding Pattern
PICIN
BEEAR
DICEV
4.1 NM to
WOGRI
BUYYA
2.7 NM to
WOGRI
0.7 NM
to WOGRI
3.60°
TCH 55
123°
303°
13000
303°
11500
10000
8400
7860
WOGRI
0.5
0.7
2 NM
1.4 NM
4.1 NM
5 NM
5 NM
6639
10
28
0.3% DOWN
10000 X 150
REIL Rwy 28
HIRL Rwy 10-28
CATEGORY
A
B
C
D
LP MDA
7080-1
474 (500-1)
7080-1⅜
474 (500-1⅜)
NA
LNAV MDA
7120-1
514 (600-1)
7120-1⅜
514 (600-1⅜)
NA
CIRCLING
7220-1
614 (700-1)
7220-1¾
614 (700-1¾)
7320-2¼
714 (800-2¼)
HAYDEN, COLORADO
YAMPA VALLEY (HDN)
SW-1, 28 MAY 2015 to 25 JUN 2015
SW-1, 28 MAY 2015 to 25 JUN 2015

(KMFR) Rogue Valley Intl−Medford. Reported Temperature −5°C: RNAV (RNP) RWY 32.

All Segments Method: All segments corrected from IAF through MA holding altitude.

Uncompensated Baro−VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: −5°C
2 Altitude at the Final Approach Fix (FAF) (CUNBA) = 2600 ft.
3 Airport elevation = 1335 ft.
4 Difference: 2600 ft. – 1335 ft. = 1265 ft.
5 Use the AIM 7−2−3 ICAO Cold Temperature Error Table for a height above airport of 1265 ft. and −5°C. The approximate calculation is 100 ft. Add the correction to the FAF and all procedure altitudes outside of the FAF up to and including IAF altitude:
    - BAYTS (IAF): 9100 + 100 = 9200, ZUNAS (IAF): 7400 + 100 = 7500, ACLOB (IAF): 7700 + 100 = 7800, SAMIE (IAF): 7300 + 100 = 7400
    - All Stepdown fixes between FILPU and the IAFs (BAYTS, ZUNAS, ACLOB and SAMIE).
        - OMACO (9200), NIGEE (7500), IPAGY (7500), HIDVO (6200)
        - NIGEE (7500), IPAGY (7500), HIDVO (6200)
        - KUSNE (7800), INITY (7700), HIDVO (6200)
        - RURTE (7400), ZIDAX (7400), WONIG (6700), PUNRE (5700)
    - FILPU (IF): 4600 +100 = 4700
    - ERBAW (Stepdown Fix): 3800 + 100 = 3900 ft.
    - CUNBA (PFAF): 2600 + 100 = 2700 ft.
6 Correct altitudes within the final segment altitude based on the minima used. RNP 0.15 DA = 1609 ft. or RNP 0.30 DA 1661 ft.
7 Difference: 1609 ft. – 1335 ft. = 274 ft.
8 AIM 7−2−3 Table: 274 ft. at −5°C is approximately 25 ft. Use 25 ft. or round up to 100 ft. for correction.
    - Add correction to RNP 0.15 DA: 1609 ft. + 25 ft. = 1634 ft.
9 Correction at CUTTR: Take final holding altitude and subtract field elevation: 9000 – 1335 = 7665 ft. Using table, 5000 ft height above airport and −5°C correction is approximately 230 ft. Round up to 300 ft.
    - Missed Approach Holding Altitude/CUTTR: 9000 + 300 = 9300 ft.

If the airport temperature decreases below −8°C, an uncompensated baro−VNAV system may not be used to fly this RNAV (RNP) approach. Cold temperature correction is still required on all segments for all other non RNAV (RNP) approaches flown at this airport.

Compensated Baro−VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will be set to the current airport temperature (−5°C) and activated prior to the passing the IAF. A manual calculation of the cold temperature altitude correction is required for the MDA/DA. At temperatures below −8°C, a compensating baro−VNAV system must be on and active to fly the RNAV (RNP) approach. Manual calculation of a cold temperature compensated MDA or DA, as applicable, is still required. Cold temperature correction is still required on all segments.

(KMFR) Rogue Valley Intl−Medford. Reported Temperature −5°C: RNAV (RNP) RWY 32.

NTAP Segment(s) method: Intermediate segment required

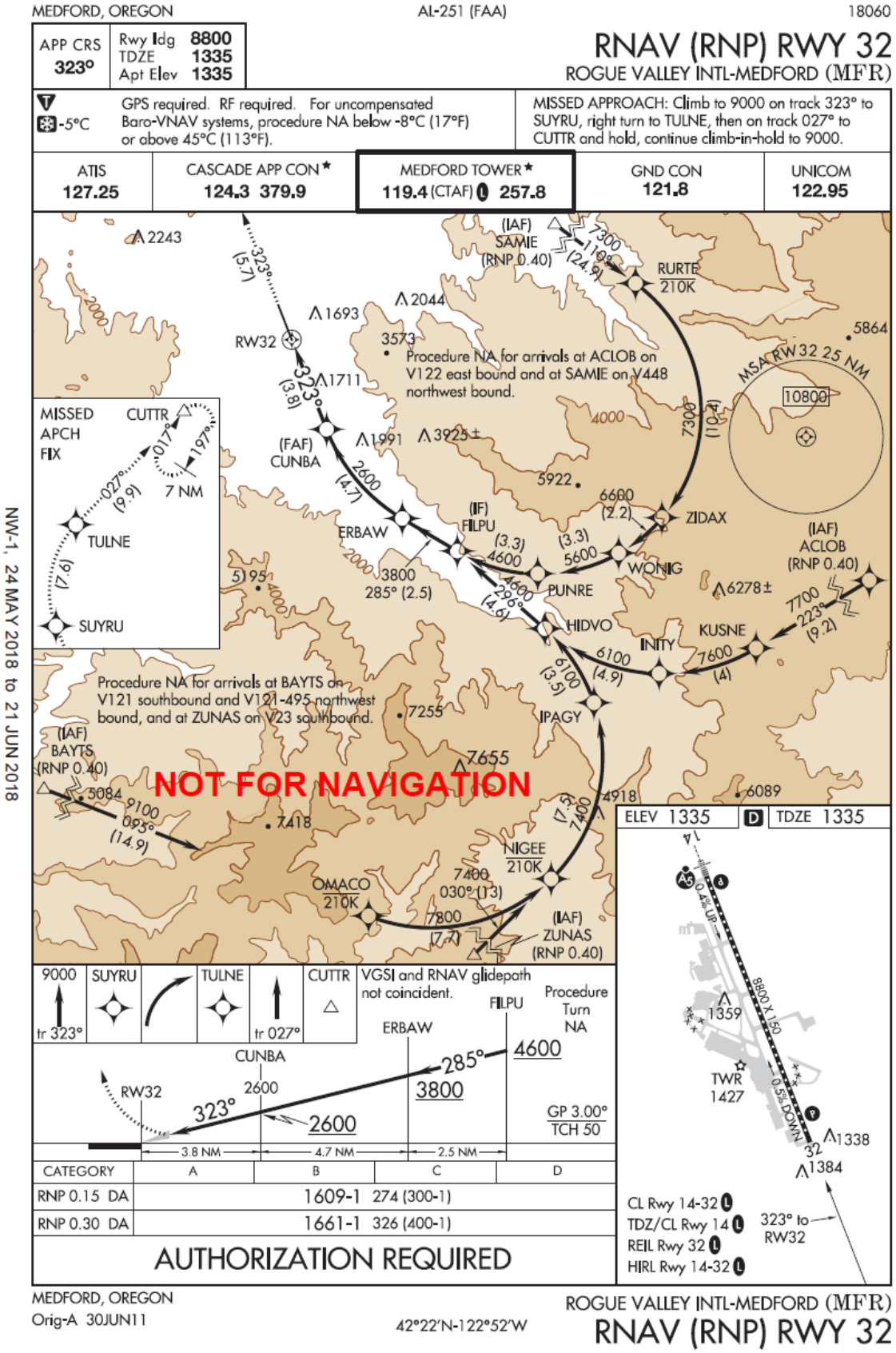
Uncompensated Baro−VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: −5°C
2 Altitude at the PFAF (CUNBA) = 2600 ft.
3 Airport elevation = 1335 ft.
4 Difference: 2600 ft. – 1335 ft. = 1265 ft.
5 Use the AIM 7−2−3 ICAO Cold Temperature Error Table for a height above airport of 1265 ft. and −5°C. The approximate calculation is 100 ft. Add the correction to the FAF and all procedure altitudes outside of the FAF up to but not including IF:
    - ERBAW (Stepdown Fix): 3800 + 100 = 3900 ft
    - CUNBA (PFAF): 2600 + 100 = 2700 ft.

If the airport temperature decreases below −8°C, an uncompensated baro−VNAV system may not be used to fly this approach. Cold temperature correction is still required on the intermediate segment for all other non RNAV (RNP) approaches flown at this airport.

Compensated Baro−VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will set the current airport temperature (−5°C) and activate the system for the intermediate segment. At temperatures below −8°C, baro−VNAV temperature compensation must be on and active to fly this approach. Manual calculation of a cold temperature compensated MDA or DA, as applicable, is still required. Cold temperature correction is still required on the intermediate segment.


MEDFORD, OREGON
AL-251 (FAA)
18060
APP CRS 323°
Rwy Idg 8800
TDZE 1335
Apt Elev 1335
RNAV (RNP) RWY 32
ROGUE VALLEY INTL-MEDFORD (MFR)
-5°C
GPS required. RF required. For uncompensated Baro-VNAV systems, procedure NA below -8°C (17°F) or above 45°C (113°F).
MISSED APPROACH: Climb to 9000 on track 323° to SUYRU, right turn to TULNE, then on track 027° to CUTTR and hold, continue climb-in-hold to 9000.
ATIS 127.25
CASCADE APP CON* 124.3 379.9
MEDFORD TOWER* 119.4 (CTAF) L 257.8
GND CON 121.8
UNICOM 122.95
NW-1, 24 MAY 2018 to 21 JUN 2018
NOT FOR NAVIGATION
(IAF) SAMIE (RNP 0.40)
RURTE 210K
ZIDAX
WONIG
PUNRE
HIDVO
INITY
KUSNE
(IAF) ACLOB (RNP 0.40)
IPAGY
(IAF) BAYTS (RNP 0.40)
NIGEE 210K
OMACO 210K
(IAF) ZUNAS (RNP 0.40)
(FAF) CUNBA
(IF) FILPU
ERBAW
RW32
MSA RW32 25 NM
10800
Procedure NA for arrivals at ACLOB on V122 east bound and at SAMIE on V448 northwest bound.
Procedure NA for arrivals at BAYTS on V121 southbound and V121-495 northwest bound, and at ZUNAS on V23 southbound.
MISSED APCH FIX
CUTTR
TULNE
SUYRU
7 NM
VGSI and RNAV glidepath not coincident.
Procedure Turn NA
GP 3.00°
TCH 50
CATEGORY A B C D
RNP 0.15 DA 1609-1 274 (300-1)
RNP 0.30 DA 1661-1 326 (400-1)
AUTHORIZATION REQUIRED
ELEV 1335
TDZE 1335
CL Rwy 14-32 L
TDZ/CL Rwy 14 L
REIL Rwy 32 L
HIRL Rwy 14-32 L
323° to RW32
TWR 1427
MEDFORD, OREGON
Orig-A 30JUN11
42°22'N-122°52'W
ROGUE VALLEY INTL-MEDFORD (MFR)
RNAV (RNP) RWY 32

(KMFR) Rogue Valley Intl−Medford. Reported Temperature −5°C ILS or LOC/DME RWY 14.

All Segments Method: All segments corrected from IAF through MA holding altitude.

Uncompensated Baro−VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: −5°C
2 Altitude at the FAF (OSSAJ) = 3800 ft.
3 Airport elevation = 1335 ft.
4 Difference: 3800 ft. – 1335 ft. = 2465 ft.
5 Use the AIM 7−2−3 ICAO Cold Temperature Error Table for a height above airport of 2465 ft. and −5°C. The approximate calculation is 200 ft.
6 Add the correction to the FAF and all procedure altitudes outside of the FAF up to and including IAF altitudes:
   - SAMIE (IAF): 6000 + 200 = 6200 ft.
   - FISTA (IF): 5900 + 200 = 6100 ft.
   - AMASE (stepdown fix): 4700 + 200 = 4900 ft.
   - OSSAJ (FAF): 3800 + 200 = 4000 ft.
7 Correct altitudes in the final segment based on the minima used. ILS DA(H): 1503 ft.
8 Difference: 1503 ft. – 1335 ft. = 168 ft.
9 AIM 7−2−3 Table: 168 ft. at −5C is 20 ft. Use 20 ft. for correction or round up to 100 ft.
10 Add correction to DA: 1503 ft. + 20 ft. = 1523 ft.
11 Correction at final holding altitude (OED VORTAC): Take final holding altitude and subtract field elevation: 6400 ft. – 1335 ft. = 5065 ft. Using table, correction is approximately 400 ft.
   - Missed Approach final holding altitude (OED VORTAC): 6400 + 400 = 6800 ft.

Compensated Baro−VNAV System:
Operators using a temperature compensating RNAV system to make altitude corrections will be set to the current airport temperature (−5°C) and activated prior to the passing the IAF. A manual calculation of the cold temperature altitude correction is required for the MDA/DA.

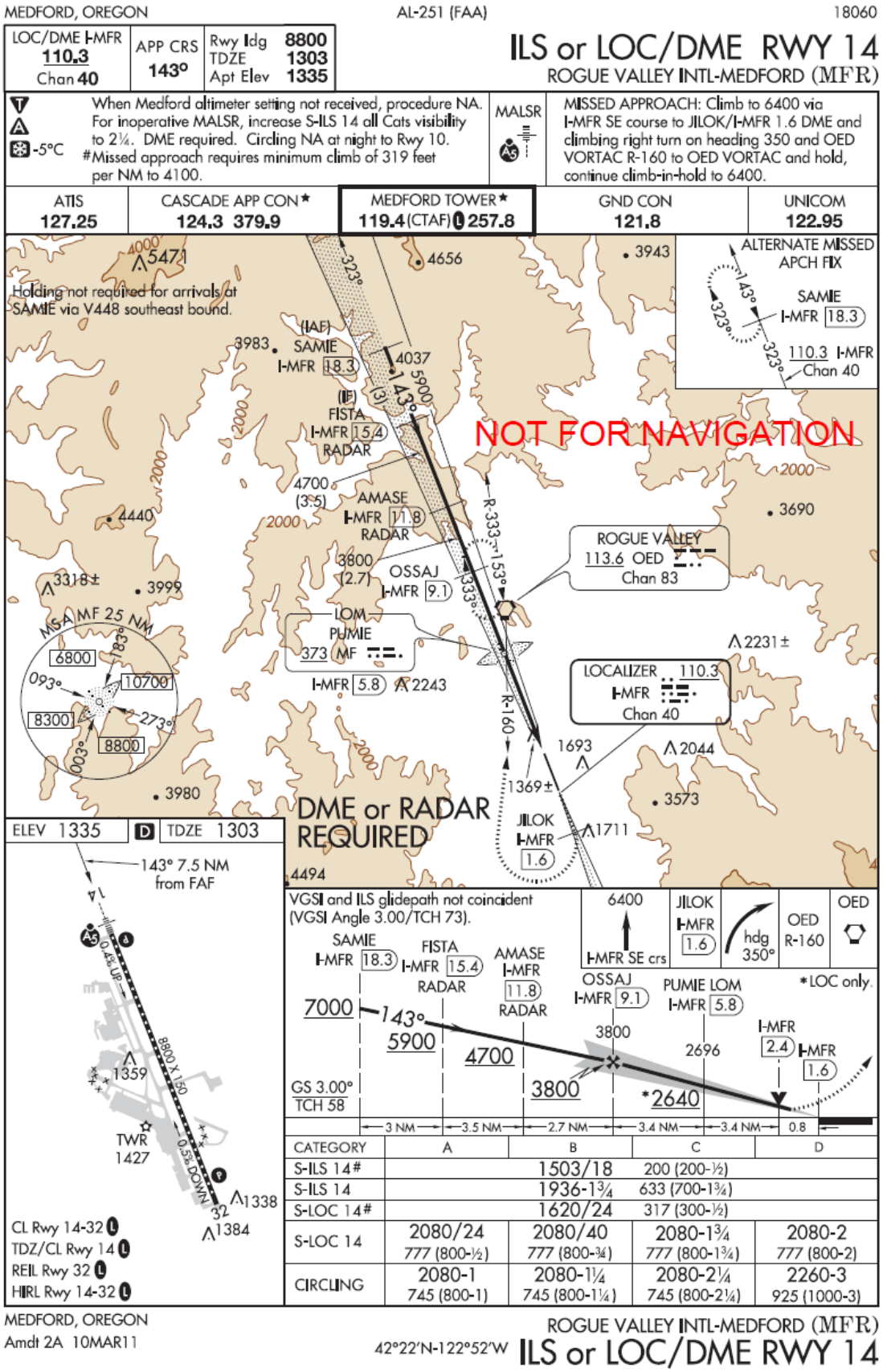
NTAP Segment(s) method: Intermediate segment required

Uncompensated Baro−VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: −5°C
2 Altitude at the FAF (OSSAJ) = 3800 ft.
3 Airport elevation = 1335 ft.
4 Difference: 3800 ft. – 1335 ft. = 2465 ft.
5 Use the AIM 7−2−3 ICAO Cold Temperature Error Table for a height above airport of 2465 ft. and −5° C. The approximate calculation is 200 ft. Add the correction to the FAF and all procedure altitudes outside of the FAF up to but not including IF:
   - AMASE (stepdown fix): 4700 + 200 = 4900 ft.
   - OSSAJ (FAF): 3800 + 200 = 4000 ft.

Compensated Baro−VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will set the current airport temperature (−5°C) and activate the system for the intermediate segment.


MEDFORD, OREGON
AL-251 (FAA)
18060
ILS or LOC/DME RWY 14
ROGUE VALLEY INTL-MEDFORD (MFR)
LOC/DME I-MFR 110.3 Chan 40
APP CRS 143°
Rwy Idg 8800
TDZE 1303
Apt Elev 1335
When Medford altimeter setting not received, procedure NA. For inoperative MALSR, increase S-ILS 14 all Cats visibility to 2¼. DME required. Circling NA at night to Rwy 10. #Missed approach requires minimum climb of 319 feet per NM to 4100.
-5°C
MALSR
MISSED APPROACH: Climb to 6400 via I-MFR SE course to JILOK/I-MFR 1.6 DME and climbing right turn on heading 350 and OED VORTAC R-160 to OED VORTAC and hold, continue climb-in-hold to 6400.
ATIS 127.25
CASCADE APP CON* 124.3 379.9
MEDFORD TOWER* 119.4 (CTAF) L 257.8
GND CON 121.8
UNICOM 122.95
Holding not required for arrivals at SAMIE via V448 southeast bound.
ALTERNATE MISSED APCH FIX
SAMIE I-MFR 18.3
110.3 I-MFR Chan 40
NOT FOR NAVIGATION
(IAF) SAMIE I-MFR 18.3
(IF) FISTA I-MFR 15.4 RADAR
AMASE I-MFR 11.8 RADAR
OSSAJ I-MFR 9.1
LOM PUMIE 373 MF
I-MFR 5.8
ROGUE VALLEY 113.6 OED Chan 83
LOCALIZER 110.3 I-MFR Chan 40
MSA MF 25 NM
6800
10700
8300
8800
DME or RADAR REQUIRED
JILOK I-MFR 1.6
ELEV 1335
D
TDZE 1303
143° 7.5 NM from FAF
0.45% UP
0.5% DOWN
8800 X 150
TWR 1427
CL Rwy 14-32 L
TDZ/CL Rwy 14 L
REIL Rwy 32 L
HIRL Rwy 14-32 L
VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 73).
6400
I-MFR SE crs
JILOK I-MFR 1.6
hdg 350°
OED R-160
OED
*LOC only.
GS 3.00°
TCH 58
7000
5900
4700
3800
*2640
2696
I-MFR 2.4
I-MFR 1.6
3 NM
3.5 NM
2.7 NM
3.4 NM
3.4 NM
0.8
CATEGORY A B C D
S-ILS 14# 1503/18 200 (200-½)
S-ILS 14 1936-1¾ 633 (700-1¾)
S-LOC 14# 1620/24 317 (300-½)
S-LOC 14 2080/24 777 (800-½) 2080/40 777 (800-¾) 2080-1¾ 777 (800-1¾) 2080-2 777 (800-2)
CIRCLING 2080-1 745 (800-1) 2080-1¼ 745 (800-1¼) 2080-2¼ 745 (800-2¼) 2260-3 925 (1000-3)
MEDFORD, OREGON
Amdt 2A 10MAR11
42°22'N-122°52'W
ROGUE VALLEY INTL-MEDFORD (MFR)
ILS or LOC/DME RWY 14
NW-1, 24 MAY 2018 to 21 JUN 2018
NW-1, 24 MAY 2018 to 21 JUN 2018

(KAMW) Ames Muni. Reported Temperature −27°C: RNAV (GPS) RWY 1.

All Segments Method: All segments corrected from IAF through MA holding altitude.

Uncompensated Baro−VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: −27°C
2 Altitude at the Final Approach Fix (FAF) (NIYKU) = 3400 ft.
3 Airport elevation = 956 ft.
4 Difference: 3400 ft. – 956 ft. = 2444 ft.
5 Use the AIM 7−2−3 ICAO Cold Temperature Error Table for a height above airport of 2444 ft. and −27° C. The approximate calculation is 400 ft. Add the correction to the FAF and all procedure altitudes outside of the FAF up to and including IAF altitude:
   - WOWLU (IAF): 4000 + 400 = 4400, SIFAY (IAF): 4000 + 400 = 4400, OHFAH (IAF): 4000 + 400 = 4400
   - OHFAH (IF): 4000 + 400 = 4400
   - NIYKU (PFAF): 3400 + 400 = 3800 ft.
6 Correct altitudes within the final segment altitude based on the minima used. LNAV/VNAV DA = 1364 ft.
7 Difference: 1364 ft. – 956 ft. = 408 ft.
8 AIM 7−2−3 Table: 408 ft. at −27°C is approximately 70 ft. Use 70 ft. or round up to 100 ft. for correction.
   - Add correction to LNAV/VNAV DA: 1364 ft. + 70 ft. = 1434 ft. No correction at CEXOG required, only required if using LNAV minima.
9 Correction at FULLE: Take final holding altitude and subtract field elevation: 3000 ft. – 956 ft. = 2044 ft. Using table, 2044 ft height above airport and −27°C correction is approximately 330 ft. Round down to 300 ft. or up to 400 ft.
   - Missed Approach Holding Altitude/FULLE: 3000 + 300 = 3300 ft.

If the airport temperature decreases below −16°C, an uncompensated baro−VNAV system may not be used to fly to the RNAV (GPS) LNAV/VNAV approach minima.

Compensated Baro−VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will be set to the current airport temperature of −27°C and activated prior to the passing the IAF. A manual calculation of the cold temperature altitude correction is required for the MDA/DA. At temperatures below −16°C, a compensating baro−VNAV system must be on and active to fly to the LNAV/VNAV line of minima on this approach. Manual calculation of a cold temperature compensated MDA or DA is still required.

(KAMW) Ames Muni. Reported Temperature −27°C: RNAV (GPS) RWY 1.

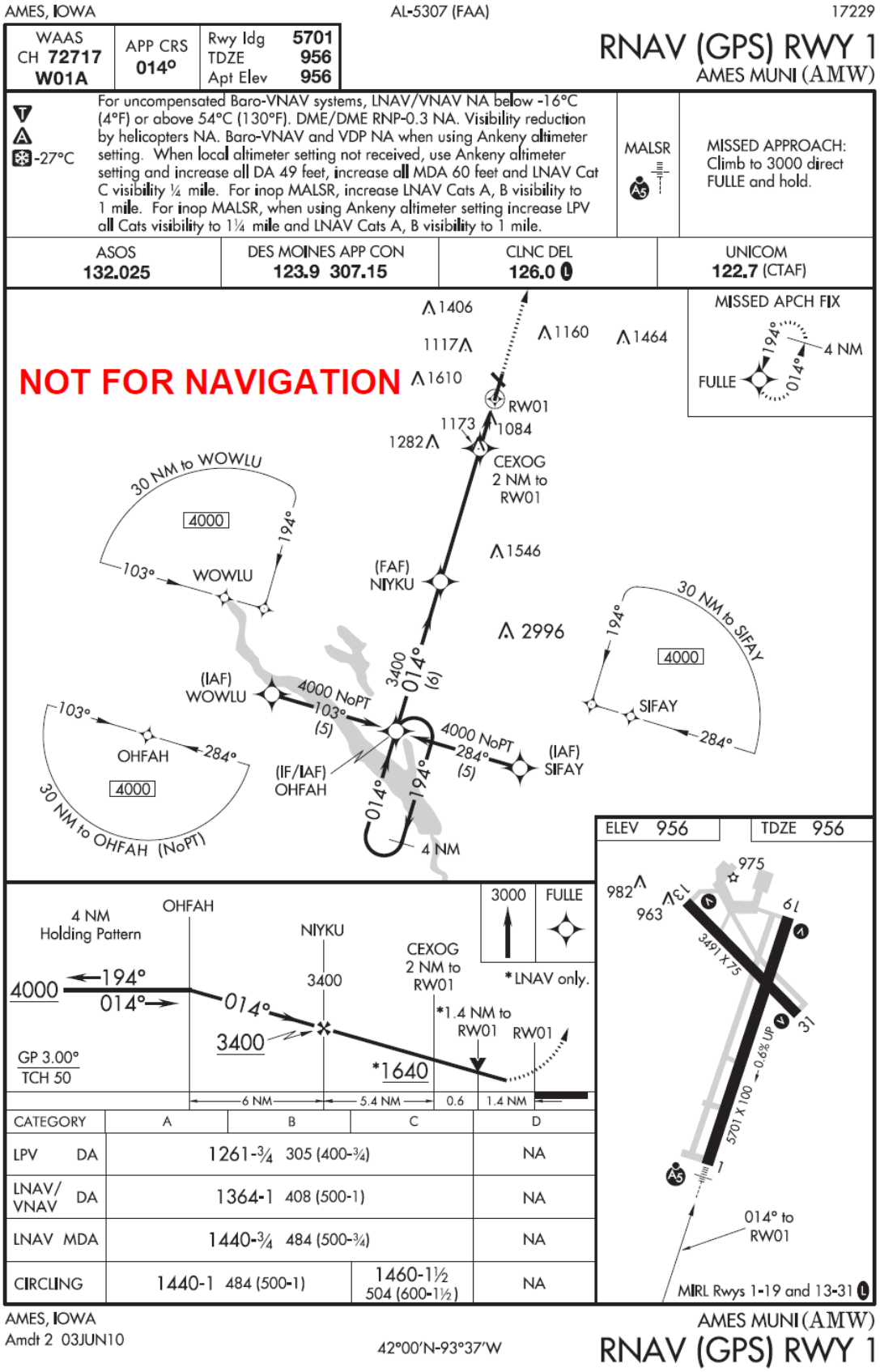
NTAP Segment(s) method: Intermediate segment required

Uncompensated Baro−VNAV System or Manual Method:

1 Cold Temperature Restricted Airport Temperature Limit: −27°C
2 Altitude at the PFAF (NIYKU) = 3400 ft.
3 Airport elevation = 956 ft.
4 Difference: 3400 ft. – 956 ft. = 2444 ft
5 Use the AIM 7−2−3 ICAO Cold Temperature Error Table for a height above airport of 2444 ft. and −27° C. The approximate calculation is 400 ft. Add the correction to the FAF and all procedure altitudes outside of the FAF up to but not including IF:
   - NIYKU (PFAF): 3400 + 400 = 3800 ft.

Compensated Baro−VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will be set to the current airport temperature of −27°C and activated prior to the intermediate segment. At temperatures below −16°C, a compensating baro−VNAV system must be on and active to fly to the LNAV/VNAV line of minima on this approach. Manual calculation of a cold temperature compensated MDA or DA is still required.


AMES, IOWA
AL-5307 (FAA)
17229
WAAS CH 72717 W01A
APP CRS 014°
Rwy Idg 5701
TDZE 956
Apt Elev 956
RNAV (GPS) RWY 1
AMES MUNI (AMW)
-27°C
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Baro-VNAV and VDP NA when using Ankeny altimeter setting. When local altimeter setting not received, use Ankeny altimeter setting and increase all DA 49 feet, increase all MDA 60 feet and LNAV Cat C visibility ¼ mile. For inop MALSR, increase LNAV Cats A, B visibility to 1 mile. For inop MALSR, when using Ankeny altimeter setting increase LPV all Cats visibility to 1¼ mile and LNAV Cats A, B visibility to 1 mile.
MALSR
MISSED APPROACH: Climb to 3000 direct FULLE and hold.
ASOS 132.025
DES MOINES APP CON 123.9 307.15
CLNC DEL 126.0
UNICOM 122.7 (CTAF)
NOT FOR NAVIGATION
MISSED APCH FIX
FULLE
194°
014°
4 NM
1406
1117
1160
1464
1610
RW01
1173
1084
1282
CEXOG
2 NM to RW01
30 NM to WOWLU
4000
103°
194°
WOWLU
1546
(FAF)
NIYKU
2996
30 NM to SIFAY
(IAF)
WOWLU
4000 NoPT
103°
(5)
3400
014°
(6)
SIFAY
284°
OHFAH
(IF/IAF)
OHFAH
(IAF)
SIFAY
30 NM to OHFAH (NoPT)
4 NM
ELEV 956
TDZE 956
975
982
963
13
6
24
3491 X 75
31
5701 X 100
0.6% UP
014° to RW01
MIRL Rwys 1-19 and 13-31
3000
FULLE
*LNAV only.
4 NM Holding Pattern
OHFAH
NIYKU
CEXOG 2 NM to RW01
4000
194°
014°
3400
*1.4 NM to RW01
RW01
GP 3.00°
TCH 50
*1640
6 NM
5.4 NM
0.6
1.4 NM
CATEGORY A B C D
LPV DA 1261-¾ 305 (400-¾) NA
LNAV/VNAV DA 1364-1 408 (500-1) NA
LNAV MDA 1440-¾ 484 (500-¾) NA
CIRCLING 1440-1 484 (500-1) 1460-1½ 504 (600-1½) NA
AMES, IOWA
Amdt 2 03JUN10
42°00'N-93°37'W
AMES MUNI (AMW)
RNAV (GPS) RWY 1
NC-3, 24 MAY 2018 to 21 JUN 2018
NC-3, 24 MAY 2018 to 21 JUN 2018

Automatic Dependent Surveillance – Broadcast (ADS–B) Out Preflight Responsibilities

Purpose: To describe preflight responsibilities for Automatic Dependent Surveillance–Broadcast Out (ADS–B Out) operations in United States National Airspace System. The Federal Aviation Administration will incorporate this guidance into the next revision of Advisory Circular (AC) 90–114A Change 1, *Automatic Dependent Surveillance – Broadcast Operations* (https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_90-114A_CHG_1.pdf).

Background: In 2016, the FAA published guidance for ADS–B operations in AC 90–114A CHG 1. Since that time, the agency has refined and clarified ADS–B policy in a number of areas, most significantly with respect to preflight requirements and responsibilities for operators with specific ADS–B position sources. Use the information in this Graphic Notice to supplement guidance in AC 90–114A CHG 1.

a. Flight Planning Requirements. Operators of aircraft with position sources identified in this Notice are expected to conduct a preflight prediction to ensure compliance with Title 14 of the Code of Federal Regulations (14 CFR) section § 91.227(c)(1)(i) and (iii) (https://www.ecfr.gov/cgi-bin/text-idx?SID=8137158693744ba666e318c1f474d81b&node=se14.2.91_1227&rgn=div8). Preflight prediction requirements are summarized in Table 1–1 below.

b. Global Positioning System (GPS) Performance Prediction. For aircraft equipped with Technical Standard Order (TSO) C129() or TSO–C196() GPS units to support ADS–B Out equipment, a Navigation Accuracy Category for Position (NACp) and Navigation Integrity Category (NIC) GPS service availability prediction should be performed for the intended route of flight (route and time) using available GPS satellite information and guidance published in AC 90–114A CHG 1 as amended here.

Note: It is not necessary for operators of aircraft equipped with the Wide Area Augmentation System (WAAS) (TSO–C145 or TSO–C146) receivers to conduct a preflight availability prediction. Operators of aircraft equipped with specific aircraft–based augmentation systems (ABAS) that have been reviewed by the FAA and are approved for ADS–B operations (i.e., 14 CFR §§ 91.225 [https://www.ecfr.gov/cgi-bin/text-idx?node=se14.2.91_1225&rgn=div8] and 91.227) also do not need to conduct a preflight availability prediction.

1. Prediction Methods. Refer to AC 90–114A CHG 1, section 4–5c.(1) for a discussion of preflight availability prediction methods.

2. Flight Planning Guidance. Predictions should be conducted within 24 hours of departure and as close to departure time as feasible, but with sufficient time to re–plan the flight in the event a segment along the planned route is predicted to have insufficient GPS service availability. The prediction should be reevaluated prior to flight if new information (i.e., a Notice to Airmen) provides notice of an unscheduled GPS satellite outage. In the event of a *predicted* loss of performance for any part along the intended route in the airspace where ADS–B Out is required, the flight should be re–planned so that ADS–B Out performance requirements specified in 14 CFR § 91.227 can be met. Alternatively, to continue on the planned route, operators must obtain air traffic control (ATC) authorization to deviate from applicable regulatory requirements.

c. Operations conducted under Exemption No. 12555. Operators approved to conduct operations under the conditions and limitations of Exemption No. 12555 (https://www.faa.gov/nextgen/equipadsb/research/exemption/media/Exemption12555.pdf) should adhere to the guidance provided in this section.

1. Under the conditions of Exemption No. 12555, operators with receivers meeting the performance requirements of TSO–C196() may operate in designated airspace for which ADS–B Out is required when the

aircraft's NACp and NIC do not meet the performance specified in 14 CFR § 91.227. For these operations, the operator does not need to conduct any preflight availability prediction.

2. Operators conducting operations under Exemption No. 12555 equipped with TSO−C129() receivers may operate where ADS−B Out is required with performance below that specified in 14 CFR § 91.227 when the FAA determines use of backup surveillance is available. In these instances, operators must use the FAA Service Availability Prediction Tool (SAPT). The applicable SAPT run should be completed no more than 3−hours before the planned departure time. If ATC in the departure jurisdiction requires flight plan submission earlier than 3 hours prior, the SAPT for backup surveillance should be run just prior to flight plan submission. Under Exemption No. 12555, operators may elect their own tool for preflight prediction and use SAPT only to determine the availability of backup surveillance when needed under Exemption No. 12555.

NOTE: Some GPS receivers manufactured with a TSO−C129a approval are SA−Aware, and, therefore, have the same NACp and NIC availability as TSO−C196() approved equipment. Operators should check with their GPS receiver supplier to verify whether their installed TSO−C129() GPS receiver is SA−On or SA−Aware.

Note: Refer to AC 90−114A CHG 1, section 4−5c.(1) for determination of backup surveillance availability during a predicted GPS service disruption.

Table 1−1

Preflight Availability Prediction?			
	Years 2020 – 2024		**After 2024**
Equipment	**Exemption 12555**	**No Exemption**	
SA−On	Yes SAPT will determine backup surveillance and exemption authorizes flight if prediction results in NIC <7 and/or NACp<8.	Yes If prediction results in NIC <7 and/or NACp < 8, operator should re−plan the flight or request ATC authorization.	Yes If prediction results in NIC <7 and/or NACp < 8, operator should re−plan the flight or request ATC authorization.
SA−AWARE	No Exemption authorizes flight without the need for preflight prediction.	Yes If prediction results in NIC <7 and/or NACp < 8, operator should re−plan the flight or request ATC authorization.	Yes If prediction results in NIC <7 and/or NACp < 8, operator should re−plan the flight or request ATC authorization.
SBAS/ABAS	No	No	No

d. Preflight prediction compliance. Operators need to perform an ADS−B Out preflight prediction only for the intended route of flight to the intended destination. For example, when departure and/or arrival alternate airports are required, no preflight prediction is necessary for these routes. However, if you become aware of a change that could result in degraded ADS−B Out performance, such as a satellite outage prior to receiving an ATC clearance for the intended route of flight, then you should conduct a subsequent preflight prediction for the planned flight to ensure that ADS−B Out performance is still predicted to comply with the performance requirements of § 91.227(c)(1)(i) and (iii). Once the pilot has received an ATC route clearance, there is no requirement to conduct a subsequent preflight prediction. Therefore, upon receiving a satisfactory preflight availability prediction and an ATC clearance for an intended route of flight, the operator will be deemed to have complied with the preflight availability prediction requirement and the performance requirements of § 91.227(c)(1)(i) and (iii). The FAA accepts that unanticipated changes in route of flight and environmental conditions may adversely affect ADS−B Out performance. ATC will continue to exercise its responsibility for the safe and efficient movement of air traffic, including the routing of traffic to meet those objectives.

▶ ADS–B preflight planning should include:
- Identification of flights or aircraft that require completion of a preflight prediction.
- Identify the preflight prediction system (or systems) to be used.
- Include a means to document completion of a satisfactory prediction for each flight where a prediction is required.
- Retain documentation of prediction completion for a suitable period of time, such as three months.

e. GPS Interference. There may be times when the GPS position source cannot meet the required technical performance due to planned GPS interference. In the event of a scheduled interference outage of GPS, the FAA will issue a Notice to Airmen (NOTAM) that identifies the airspace and time periods that may be affected by the interference. The FAA has determined that it would be impractical and not in the public interest to require operators to avoid the affected area based on the chance that an otherwise compliant flight could experience GPS interference. Accordingly, operators should proceed with their intended operation if the only impediment to their operation is possible planned GPS interference. An operator who is required to perform a preflight availability prediction for the intended route of flight is still required to obtain a satisfactory preflight availability prediction. When a NOTAM identifies the airspace and time periods that may be affected by GPS interference, an operator will not be required to alter his or her route of flight to avoid the area based solely on that NOTAM. If an operator encounters actual GPS interference during their flight that results in a degradation of ADS–B Out performance, the FAA will not consider these events to constitute noncompliance with
§ 91.227.

f. SAPT Outages. The FAA will issue a NOTAM in the event of a SAPT outage. Operators who use SAPT as their preflight prediction tool will not need to conduct a preflight predication for the duration of the outage. When there is a SAPT outage, the FAA will not initiate compliance or enforcement actions against operators who rely on the SAPT if an operation falls below the performance requirements, despite the technical non–compliance with § 91.227. The FAA cautions that, for operators who have been notified by the FAA of consistent and repeated ADS–B Out performance issues, operating during SAPT outage without first redressing the identified non–performance issue will be considered a continuation of existing non–compliance of the performance requirements.

(AFS–410, 7/18/19)

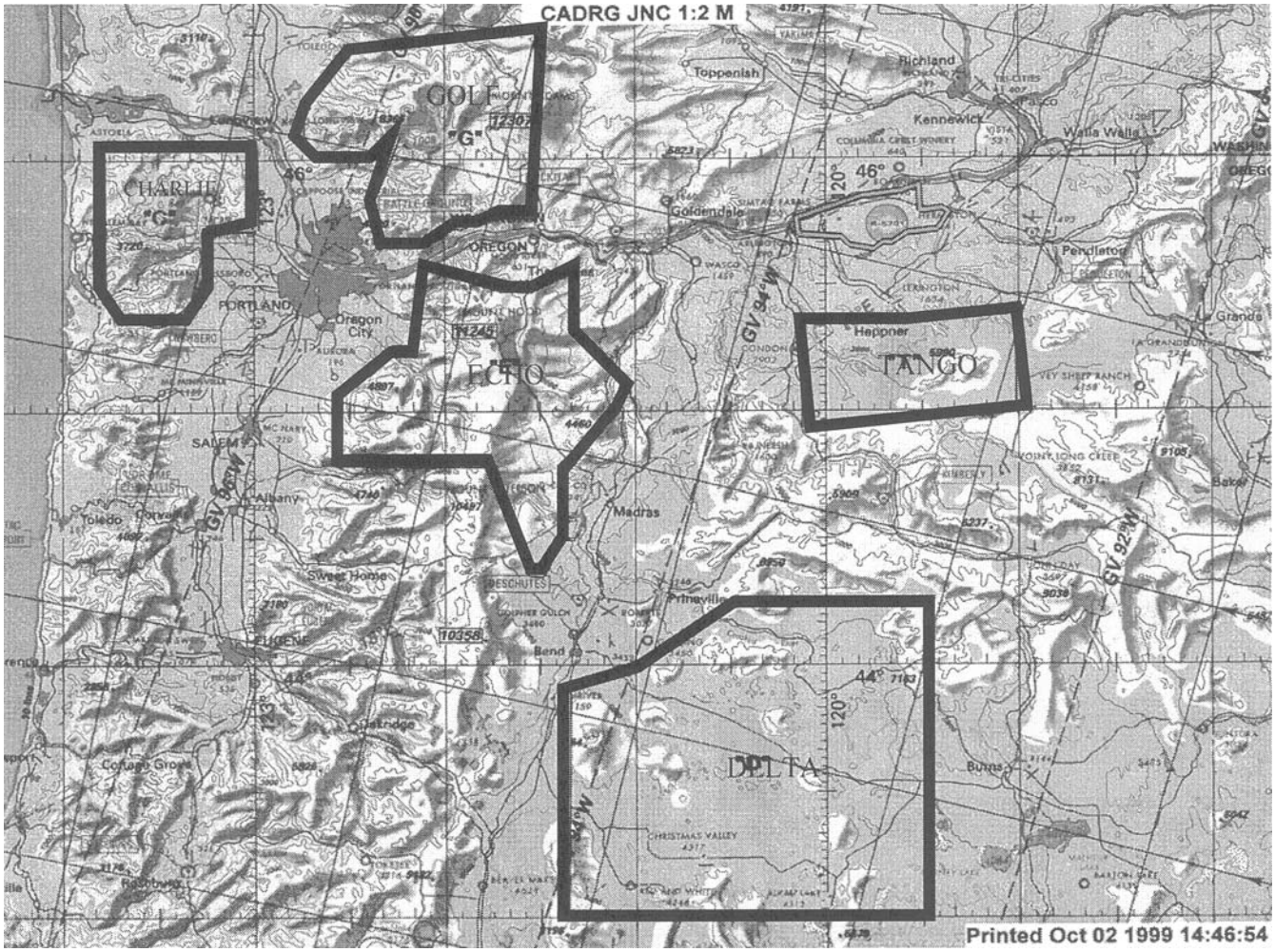
Section 2. Special Military Operations

Notice to Pilots and Interested Personnel in Northern Oregon and Southwest Washington

LIGHTS OUT MILITARY HELICOPTER OPERATIONS

Effective Date: April 30, 2000

The U.S. Air Force 304th Rescue Squadron conducts low altitude flight in five low altitude tactical navigation (LATN) Areas: “Charlie,” “Delta,” “Echo,” “Golf,” and “Tango.” These operations are conducted day and night below 200 feet above ground level (AGL). The night operations are conducted utilizing night vision goggles (NVGs). FAA exemption 5891A authorized NVG training in Air Force helicopters to be conducted without lighted position lights. These operations will ONLY be conducted below 200 feet AGL and outside of five (5) nautical miles from any public use airport, within the five (5) LATN areas.



(ANM–520.6 3/2/2000)

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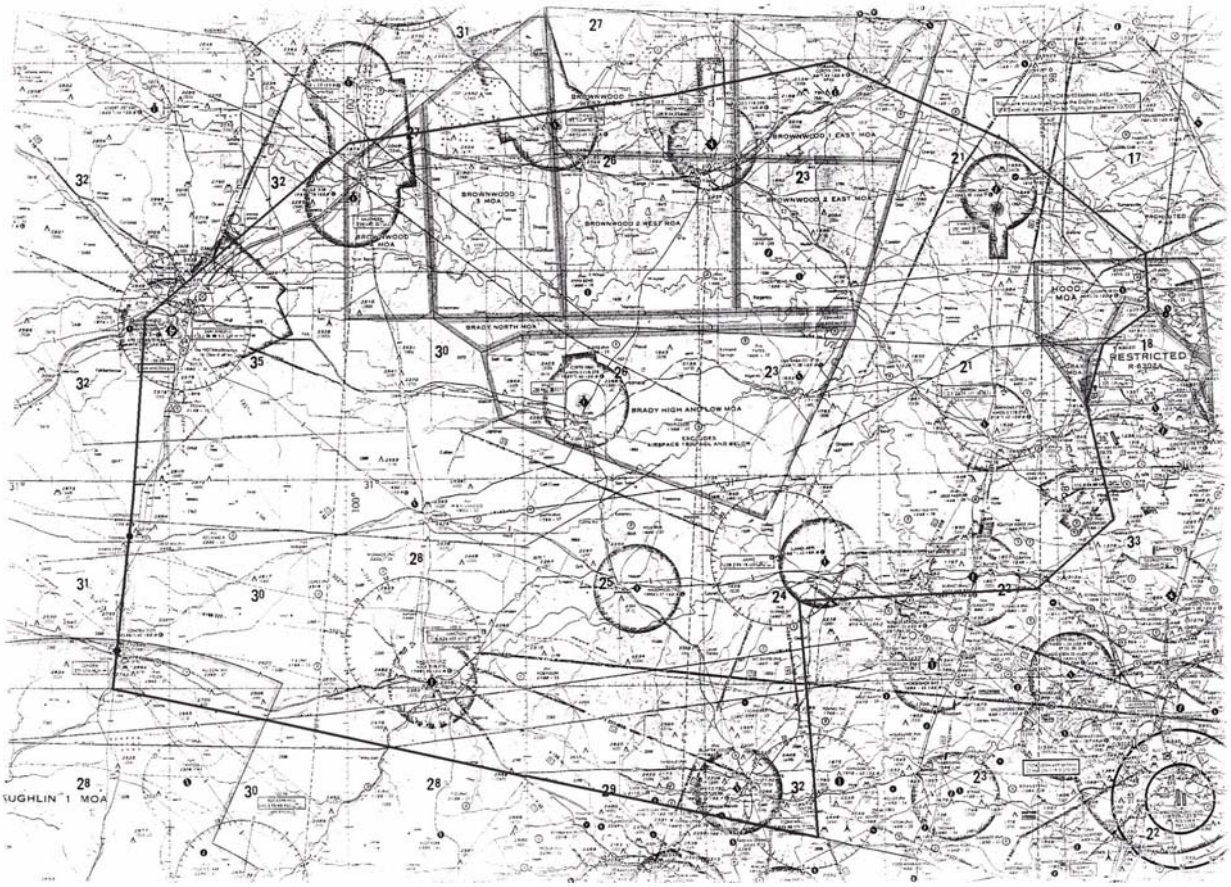
Notice to Pilots and Interested Personnel in Central and Southwest Texas

LIGHTS OUT MILITARY HELICOPTER OPERATIONS

The U.S. Army/National Guard is conducting "lights out" tactical helicopter training. These operations are conducted day and night. The night operations are conducted without the use of exterior aircraft lights from the surface up to 200 feet AGL, outside four (4) nautical miles from any public–use airport, and within the boundaries depicted below:



Beginning at lat. 31°24'00" N., long. 097°44'00" W./ North Fort Hood;
to lat. 31°30'00" N., long. 097°44'00" W.; to lat. 31°48'00" N., long. 098°07'00" W.;
to lat. 31°57'00" N., long. 098°37'00" W.; to lat. 31°48'00" N., long. 099°59'00" W.;
to lat. 31°23'00" N., long. 100°35'00" W.; to lat. 30°29'00" N., long. 100°40'00" W.;
to lat. 30°16'00" N., long. 098°42'00" W.; to lat. 30°43'00" N., long. 098°41'00" W.;
to lat. 30°45'00" N., long. 098°03'00" W.; to lat. 30°52'00" N., long. 097°52'00" W.;
to lat. 31°09'00" N., long. 097°55'00" W.; to lat. 31°17'00" N., long. 097°53'00" W.;
to point of origin.

(SJT 2/21/02)

LIGHTS OUT/LOW LEVEL MILITARY HELICOPTER OPERATIONS IN SOUTHWEST WISCONSIN

The Army National Guard is conducting "Lights Out" tactical operation training IAW FAA Exemption 3946J. These operations are conducted between official sunset and official sunrise at an altitude below 500' agl. and outside four (4) nautical miles from any public use airport.

The Routes are defined as below:

LONE ROCK (NVG Route #1)

42º 49.70' N 89º 24.70' W – SP

42º 45.50' N 89º 58.00' W – CP A

42º 46.00' N 90º 17.50' W – CP B

43º 03.80' N 90º 56.40' W – CP C

43º 17.74' N 91º 01.13' W – CP D

43º 43.16' N 91º 04.76' W – CP E

43º 53.21' N 91º 00.64' W – CP F

44º 08.82' N 90º 44.30' W – RP

DELLS (NVG Route #2)

43º 11.00' N 89º 54.50' W – SP

43º 26.35' N 90º 21.24' W – CP A

43º 41.34' N 90º 47.89' W – CP B

43º 43.49' N 90º 54.37' W – CP C

43º 50.10' N 90º 57.31' W – CP D

43º 51.32' N 90º 59.43' W – CP E

43º 53.21' N 91º 00.64' W – CP F

44º 08.82' N 90º 44.30' W – RP

CW3 TRAVIS E. BOXRUCKER
AASF#2 MADISON, WI
travis.boxrucker@us.army.mil

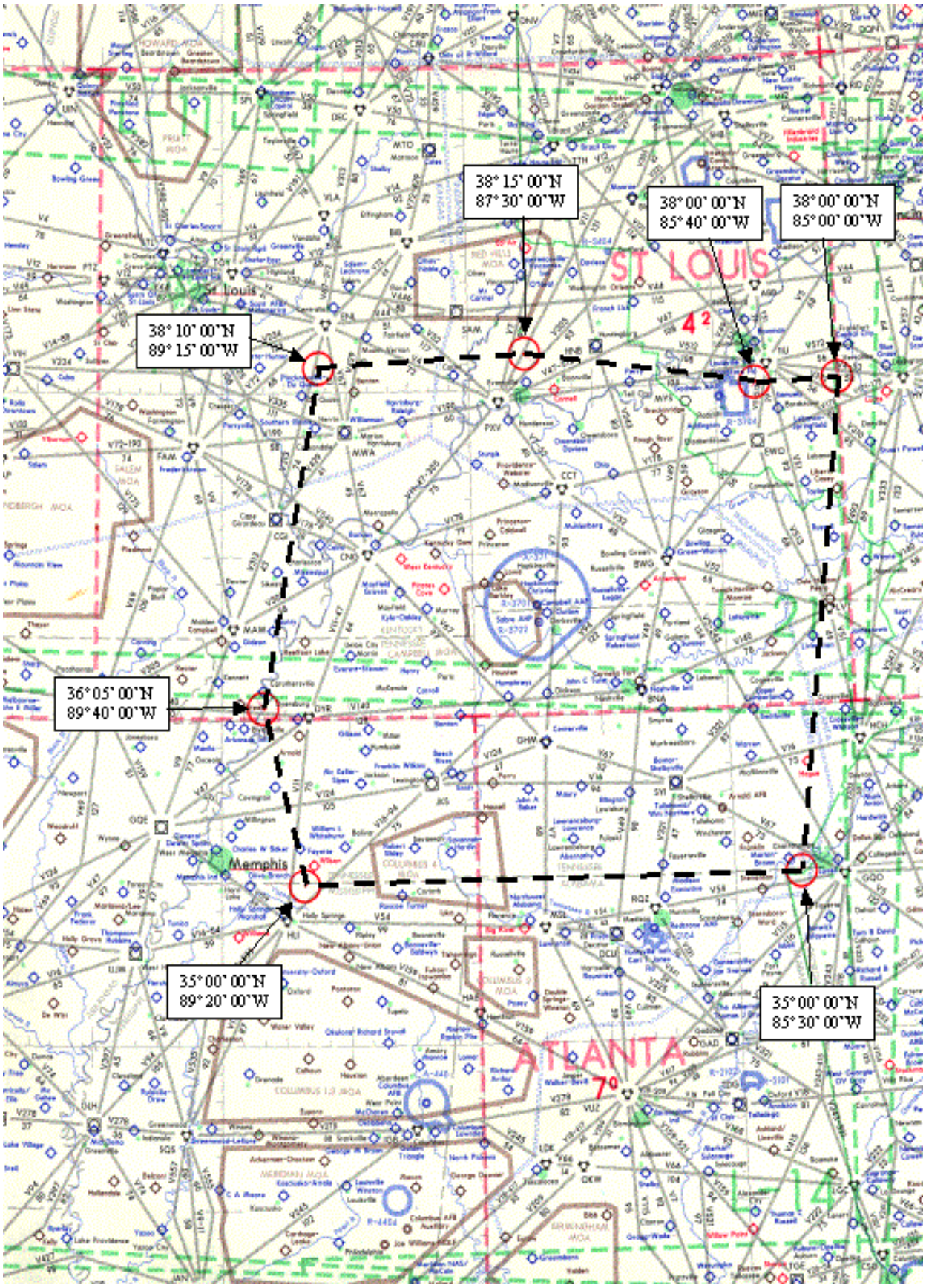
Notice to Pilots and Interested Persons in KY, TN, Southern IL, IN and Northern AL

LIGHTS OUT MILITARY HELICOPTER OPERATIONS

The U.S. Army is conducting "lights out" tactical helicopter training. These operations are conducted without the use of exterior aircraft lights from the surface to 500 feet above ground level, in accordance with FAA Exemption 3946, as amended, during the times of Sunset to Sunrise, and within the boundaries depicted below:

Lat. 38−00−00N, Long. 085−00−00W, to
Lat. 35−00−00N, Long. 085−30−00W, to
Lat. 35−00−00N, Long. 089−20−00W, to
Lat. 36−05−00N, Long. 089−40−00W, to
Lat. 38−10−00N, Long. 089−15−00W, to
Lat. 38−15−00N, Long. 087−30−00W, to
Lat. 38−00−00N, Long. 085−40−00W, to
point of origin. Excluding that airspace within a 4 nautical mile radius of all public use airports, and also excluding all class "B", "C", "D" and "E" controlled airspace.

(ASO−530/920 6/8/06)


38° 15' 00"N
87° 30' 00"W
38° 00' 00"N
85° 40' 00"W
38° 00' 00"N
85° 00' 00"W
38° 10' 00"N
89° 15' 00"W
36° 05' 00"N
89° 40' 00"W
35° 00' 00"N
89° 20' 00"W
35° 00' 00"N
85° 30' 00"W
ST LOUIS
ATLANTA
Memphis

SPECIAL USE AIRSPACE

Playas Temporary Military Operations Area, NM

Effective Dates: August 10–24, 2019.

The USAF will use the airspace for Exercise RED FLAG–RESCUE 19–2 from August 10–24, 2019. The purpose of this exercise is to allow combat air forces the opportunity to practice effective integration with ground forces, which is critical to the success of the real–world Combat Search and Rescue (CSAR) mission. It is designed to provide Personnel Recovery training for both U.S. and allied foreign combat aircrews, para–rescue teams, survival specialists, intelligence personnel, air battle managers, and Joint Personnel Recovery Center personnel.

Aeronautical activities will consist of A–10, C–12, HH–60G, MH–60S, HC–130J, and EC–130H aircraft conducting high speed combat maneuvering, non–standard formation flights, rescue escort, close air support, free–fall and static line parachute operations, and VFR aerial helicopter refueling missions. There will be no weapons employed, chaff/flares dispensed, or aerial refueling conducted.

PLAYAS Temporary MOA, NM

Boundaries: Beginning at lat. 32º10'43"N., long. 108º42'48"W.;
to lat. 32º09'20"N., long. 108º19'29"W.;
to lat. 31º49'27"N., long. 108º21'03"W.;
to lat. 31º50'48"N., long. 108º44'28"W.;
to the point of beginning.

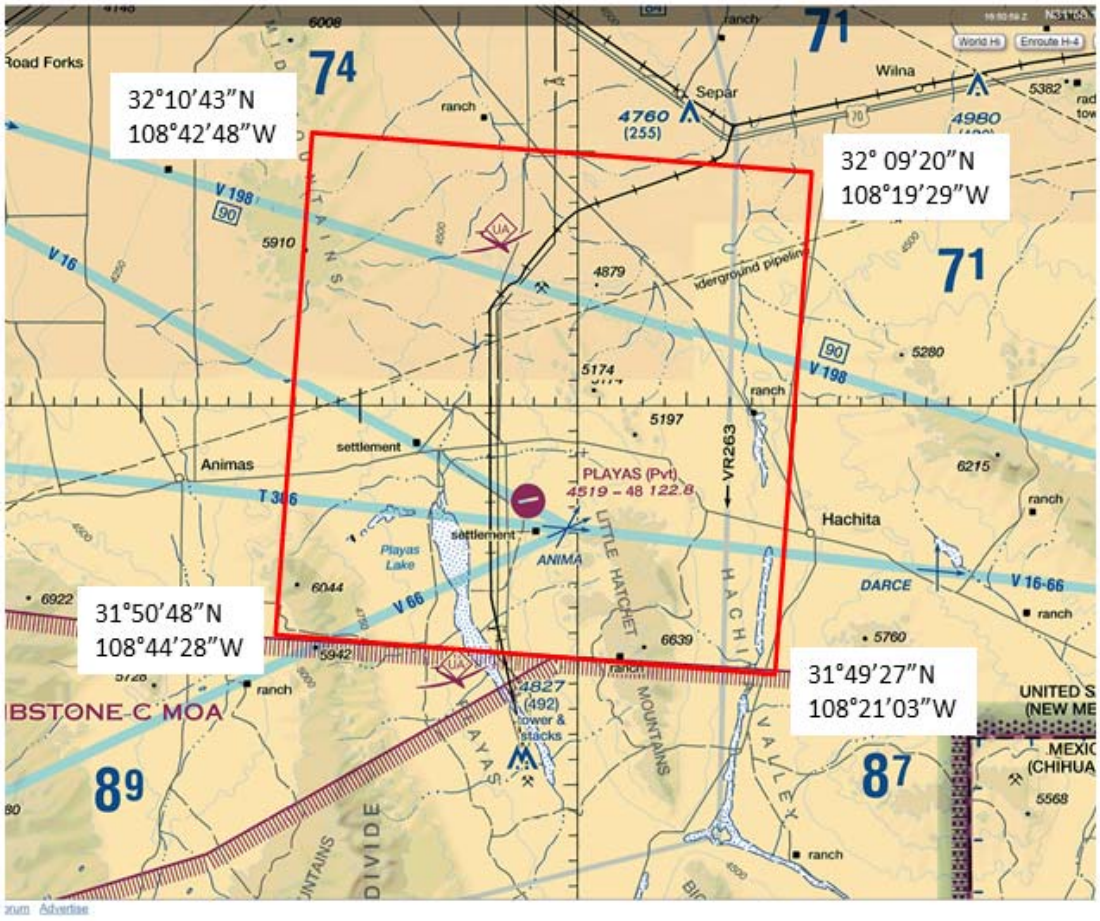
Altitudes: 300 feet AGL to, but not including, FL180.

Times of Use: August 10 – 24, 2019, by NOTAM.

Controlling Agency: FAA, Albuquerque ARTCC.

Using Agency: U.S. Air Force, Det 1, 414 CTS, Davis–Monthan AFB, AZ.

EL PASO SECTIONAL



PLAYAS Temporary MOA, NM

August 10 – 24, 2019

Times of Use: August 10 - 24, 2019, by NOTAM.

Altitudes: 300 feet AGL to, but not including FL180.

NOT FOR NAVIGATION

SPECIAL USE AIRSPACE

Grayling Temporary Military Operations Area, MI

Effective Dates: July 20 – August 3, 2019, for Exercise Northern Strike.

The Grayling Temporary Military Operations Area (TMOA) is established in the vicinity of Grayling, MI, to provide maneuvering airspace between the Grayling Aerial Gunnery Range (R–4201A & B) and the Pike West MOA in support of Exercise Northern Strike. The exercise is designed to integrate ground forces with air operations in training scenarios that meet current and future combat tactics requirements. The execution of the exercise allows combat air forces to practice weapons attack mechanics, target acquisition, and reaction to simulated surface–to–air threats while coordinating with friendly ground elements.

The Grayling TMOA will support mission profiles including air–to–air refueling, holding, and tactical combat maneuvering by fixed wing aircraft on ordnance deliveries into the R–4201 range complex. The exercise missions will be conducted from the Alpena Combat Readiness Training Center located at the Alpena County Regional Airport, Alpena, MI; Camp Grayling Joint Maneuver Training Center located at Grayling, MI; and several military bases located in MI, OH, MN, IN, ND, VT, and MD. A maximum of 36 sorties per day/night will be performed during the exercises. The aircraft types participating in the exercises will include A–10, F–16, B–1, C–130, F/A–18, and B–52. Activities will occur between 7,000 feet Mean Sea Level (MSL) to, but not including, Flight Level 180 (FL180).

The Grayling TMOA will only be activated for aircraft participating in Exercise Northern Strike. Military aircraft will conduct aggressive three–dimensional tactical combat maneuvering by attack and transport category fixed wing aircraft involving abrupt, unpredictable changes in altitude, attitude, and direction of flight. Chaff will be employed in the Grayling TMOA; however, supersonic flight is not authorized and flares will not be employed.

Contact the Minneapolis Air Route Traffic Control Center (ARTCC) for status.

Grayling Temporary MOA, MI

Boundaries. Beginning at lat. 45º08’00”N., long. 84º39’00”W.;
to lat. 45º15’00”N., long. 84º08’08”W.;
to lat. 44º41’00”N., long. 84º06’00”W.;
to lat. 44º34’00”N., long. 83º59’11”W.;
to lat. 44º34’00”N., long. 84º35’00”W.;
to lat. 44º41’00”N., long. 84º40’00”W.;
to lat. 44º43’00”N., long. 84º40’00”W.;
to lat. 44º43’00”N., long. 84º38’00”W.;
to lat. 44º47’00”N., long. 84º38’00”W.;
to lat. 44º47’00”N., long. 84º39’00”W.;
to the point of beginning, excluding R–4201A
and R–4201B when active.

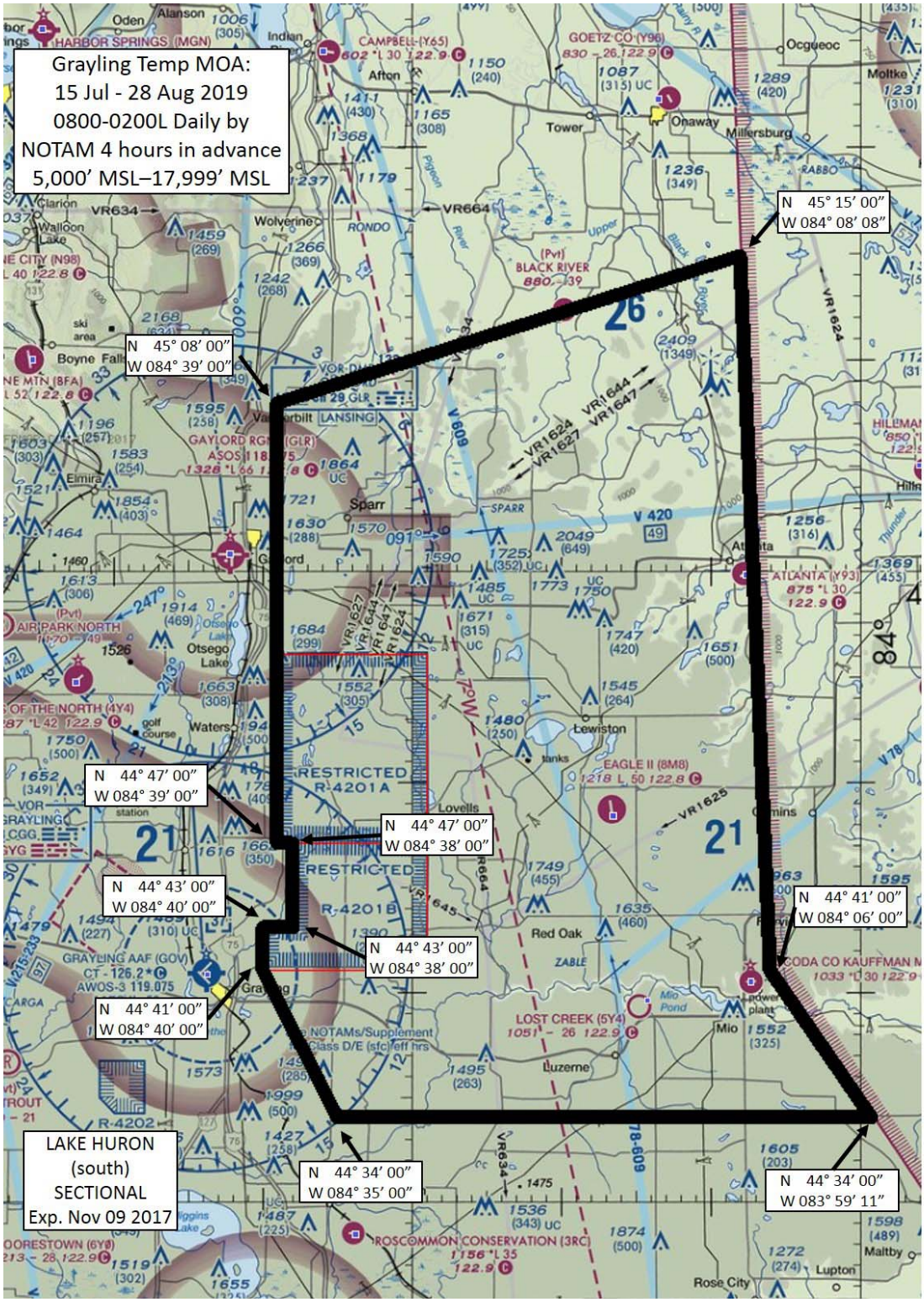
Altitudes. 7,000 feet MSL to but not including FL180.

Times of use. July 20 – August 3, 2019: By NOTAM 4 hours in advance, 0800 – 0200, daily.

Controlling agency. FAA, Minneapolis ARTCC.

Using agency. U.S. Air Force, Alpena Combat Readiness Training Center, Alpena, MI.

Grayling TMOA



SPECIAL USE AIRSPACE

Playas Temporary Military Operations Area, NM

Effective Dates: August 26–30, 2019.

The USMC will use the airspace for Exercise CERTEX 20.1 from August 26–30, 2019. The purpose of this exercise is to provide the Marine commander the opportunity to conduct training in unfamiliar environments during the final phase of its pre–deployment training program. During CERTEX, the USMC will be required to conduct a series of challenging and realistic training events to test its ability to conduct conventional and specialized missions relating to Tactical Recovery of Aircraft and Personnel (TRAP).

Aeronautical activities will consist of (2) MV–22B, (2) FA– 18C/D or (2) F–16C, (4) A–10C, (1) HC–130J, and (2) HH–60G conducting tactical assaults, simulated air–to–ground ordnance delivery, and Close Air Support coordination between ground units and fixed/tilt/rotary wing aircraft. There will be no use of chaff/flares, surface–to–surface or surface–to–air weapons firing, or aerial refueling operations.

PLAYAS Temporary MOA, NM

Boundaries: Beginning at lat. 32º10'43"N., long. 108º42'48"W.;
to lat. 32º09'20"N., long. 108º19'29"W.;
to lat. 31º49'27"N., long. 108º21'03"W.;
to lat. 31º50'48"N., long. 108º44'28"W.;
to the point of beginning.

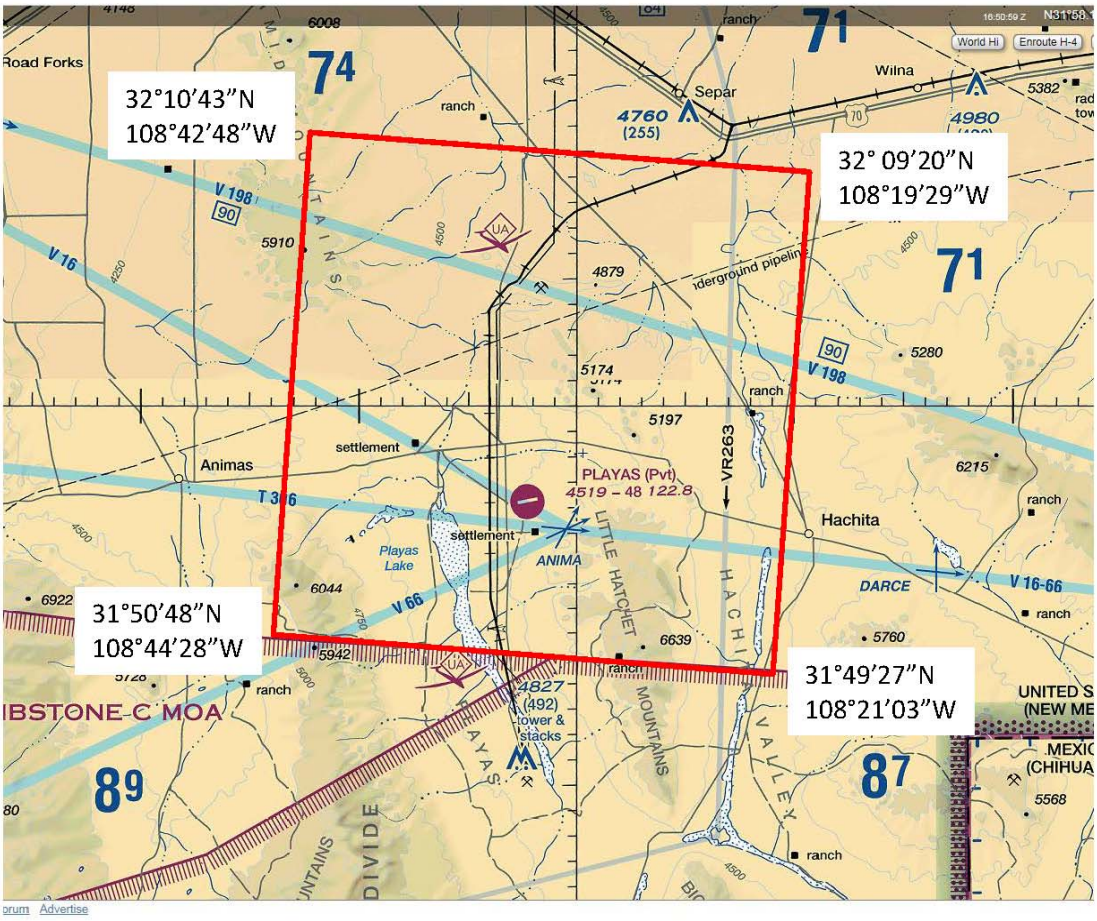
Altitudes: 300 feet AGL to, but not including, FL180.

Times of Use: August 26 – 30, 2019, by NOTAM.

Controlling Agency: FAA, Albuquerque ARTCC.

Using Agency: U.S. Marine Corps, Expeditionary Operations Training Group, I Marine Expeditionary Force, Camp Pendleton, CA.

EL PASO SECTIONAL



PLAYAS Temporary MOA, NM

Times of Use: August 26 - 30, 2019, by NOTAM.

Altitudes: 300 feet AGL to, but not including FL180.

NOT FOR NAVIGATION

Section 3. Airport and Facility Notices

Northeast
United States

**There are no Northeast United States notices for this edition.*

Southeast
United States

**There are no Southeast United States notices for this edition.*

East Central United States

CLEVELAND-HOPKINS INTERNATIONAL AIRPORT (CLE)

STANDARD (CODED) TAXI ROUTES

Effective: Until Further Notice

The Cleveland–Hopkins International Airport (CLE) has instituted standardized taxi routes to all runways for departure aircraft.

These standardized taxi routes will use color-coded designations for routings to various runways. The color-coded routes may be issued by the CLE ground controller instead of the normal traditional full taxiway routings. The routes and associated codes are published in text form below. Pilots who are unable to comply with standardized routes should advise ground control on initial contact.

READBACK ALL HOLD SHORT INSTRUCTIONS

Runway 6L		
Route ID	**Start Point**	**Routing Via**
Violet	All Terminal Parking Areas	Juliet, Kilo, Lima, November **HOLD SHORT OF RUNWAY 6R** and monitor 120.9, Golf. *(Monitor 124.5 when west of Runway 6R)*

Runway 6R		
Route ID	**Start Point**	**Routing Via**
Emerald	All Terminal Parking Areas	Juliet, Kilo and Lima.

Runway 6R, Intersection Tango		
Route ID	**Start Point**	**Routing Via**
Red	All Terminal Parking Areas	Juliet, Kilo, Lima and Tango

Runway 24L		
Route ID	**Start Point**	**Routing Via**
Blue	All Terminal Parking Areas	Juliet, Sierra, Lima, Whiskey

Runway 24R		
Route ID	**Start Point**	**Routing Via**
Grey	All Terminal Parking Areas	Juliet, Sierra, **HOLD SHORT OF RUWNAY 24L** and monitor 120.9, Sierra. *(Monitor 124.5 when west of Runway 24L)*

Runway 24R		
Route ID	**Start Point**	**Routing Via**
Orange	All Terminal Parking Areas	Juliet, Romeo **HOLD SHORT OF RUNWAY 24L** and monitor 120.9, Bravo, Golf, Sierra. *(Monitor 124.5 when west of Runway 24L)*

(CLE ATCT 10/23/08)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

STANDARD (CODED) TAXI ROUTES

RUNWAY 22L

Route ID	Starting Point	Routing Via
Green 5	**South terminal** circles 3N or 4N. CONTACT GROUND ON 121.8	Uniform, Yankee.
Green 6	**South terminal** circle 2S. CONTACT GROUND ON 119.25	J-8, Tango, Yankee. Hold short of Quebec and contact ground on 132.72. Hold short of Uniform and contact ground on 121.8.
Green 7	**North terminal** circle 1. CONTACT GROUND ON 119.45	Hotel, Yankee. Hold short of Kilo and contact ground 121.8.
Green 8	**South terminal** circle 2N. CONTACT GROUND ON 119.45	Uniform, Foxtrot, Hotel and Yankee. Hold short of Kilo and contact ground on 121.8.

RUNWAY 21R

Route ID	Starting Point	Routing Via
Blue 1	**South terminal** circles 3N or 4N. CONTACT GROUND ON 121.8.	TURN RIGHT on Uniform, Golf, RY 9L, Mike and M-6. Hold short of U-8 and contact ground on 119.45.
Blue 2	**South terminal** circles 3N or 4N. CONTACT GROUND ON 121.8.	TURN RIGHT on Uniform, Golf, Victor, Mike and M-6. Hold short of U-8 and contact ground on 119.45.
Blue 3	**South terminal** circle 2N. CONTACT GROUND ON 119.45.	Uniform, Golf, Victor, Mike, M-6.
Blue 4	**South terminal** circle 2N. CONTACT GROUND ON 119.45.	Uniform, Golf, RY 9L, Mike, M-6.
Blue 6	**South terminal** circle 3N or 4N CONTACT GROUND ON 121.8.	TURN LEFT on Uniform, join Kilo, RY 9L, Golf, Victor, Mike and M-6. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L.

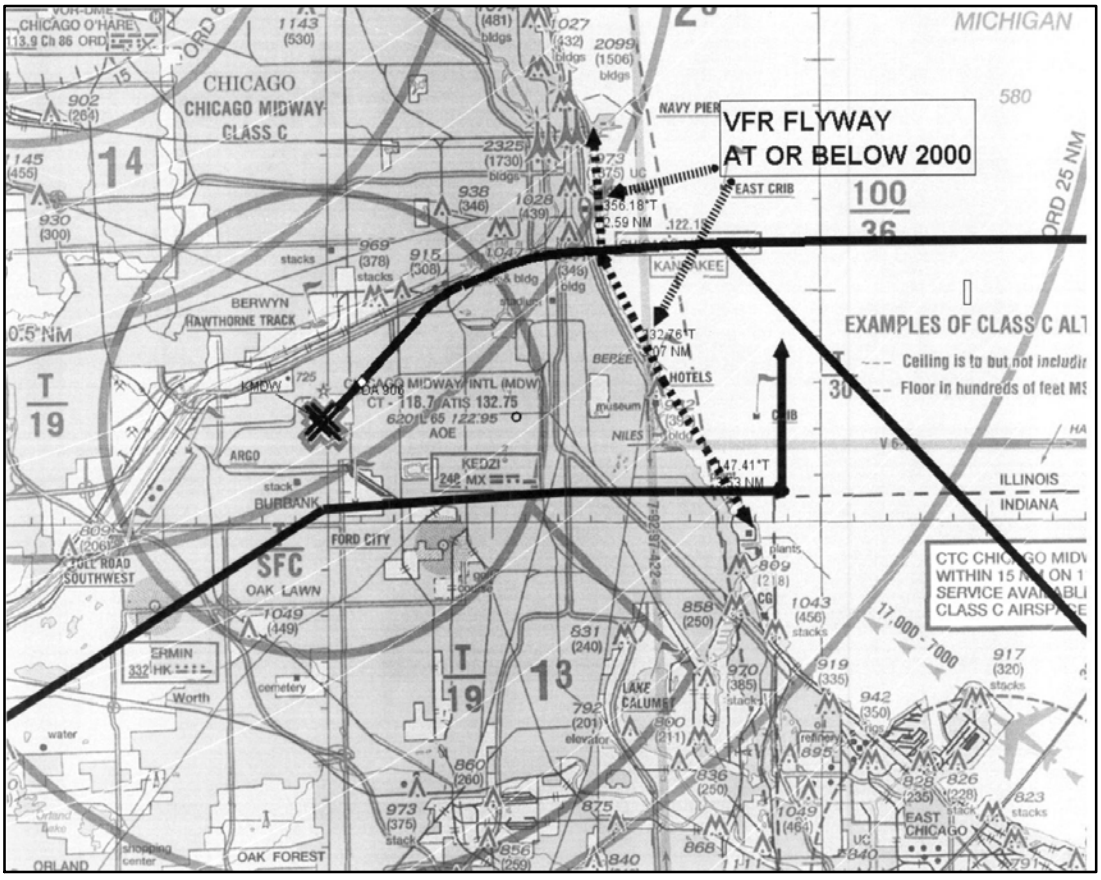
Blue 7	**South terminal** circles 2S. CONTACT GROUND ON 119.25	Juliet, Papa Papa, Foxtrot, Whiskey and Papa.
Blue 11	**South terminal** circles 3N or 4N CONTACT GROUND ON 121.8	TURN LEFT on Uniform, join Kilo, RY 9L, Mike and M-6. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L.
Blue 16	**South terminal** Taxiway Kilo between Taxiways Romeo and Uniform CONTACT GROUND ON 132.72.	Kilo, RY 9L, Mike and M-6. Hold short of Uniform and contact ground 121.8. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L.
Blue 17	**South terminal.** Taxiway Kilo between Taxiways Romeo and Uniform CONTACT GROUND ON 132.72.	Kilo, RY 9L, Golf, Victor, Mike and M-6. Hold short of Uniform and contact ground 121.8. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L.
Blue 14	**North terminal** circle 1 CONTACT GROUND ON 119.45	Foxtrot, Victor, Mike, and M-6.
Blue 15	**North terminal** circles 2 through 6 CONTACT GROUND ON 121.8	Kilo, Victor, Mike and M-6. Hold short of Foxtrot and contact ground on 119.45.

RUNWAY 3L

Route ID	Starting Point	Routing Via
Brown 8	**South terminal** Taxiway Kilo between Taxiways Romeo and Uniform. CONTACT GROUND ON 132.72.	Kilo, RY 9L, Foxtrot and Mike. Hold short of Uniform and contact ground 121.8. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L.
Brown 2	**South terminal** circle 2S. CONTACT GROUND ON 119.25.	Juliet, Papa Papa. Hold short of PP-1 and **MONITOR** tower on 118.4
Brown 4	**North terminal** circles 2 through 6 CONTACT GROUND ON 121.8	Kilo, Victor, Foxtrot, Mike. Hold short of Foxtrot and contact ground on 119.45.
Brown 6	**North terminal** circle 1 CONTACT GROUND ON 119.45	Foxtrot, Mike.
Brown 7	**South terminal** circle 2S. CONTACT GROUND ON 119.25.	Juliet, Papa Papa, PP1.

MIDWAY AIRPORT (MDW) ARRIVALS TO RUNWAY 22L AND VFR AIRCRAFT

During times when MDW arrivals are landing on runway 22L, MDW arrivals will cross the Lake Michigan shoreline (from Navy Pier to Gary/Chicago Int'l airport) between 3,000 feet and 2,400 feet, inbound to runway 22L. When transitioning the Chicago Metropolitan area along the Lake Michigan shoreline, VFR aircraft are advised that lower altitudes are strongly suggested.



*Solid bold tracks indicate the estimated flight paths into Runway 22L

Should you have any questions, please feel free to contact the Chicago TRACON Plans and Procedures office at:

847.608.5548
847.608.5590

(AJV–C21, 2/1/2018)

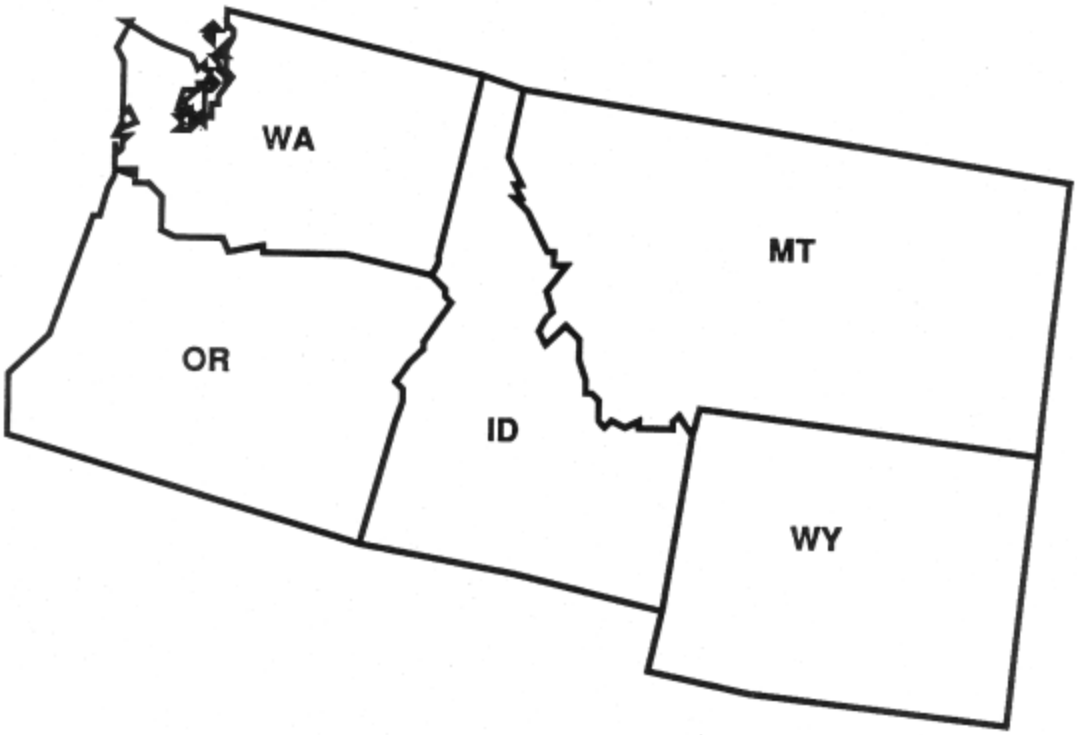
South Central United States

**There are no South Central United States notices for this edition.*

North Central United States

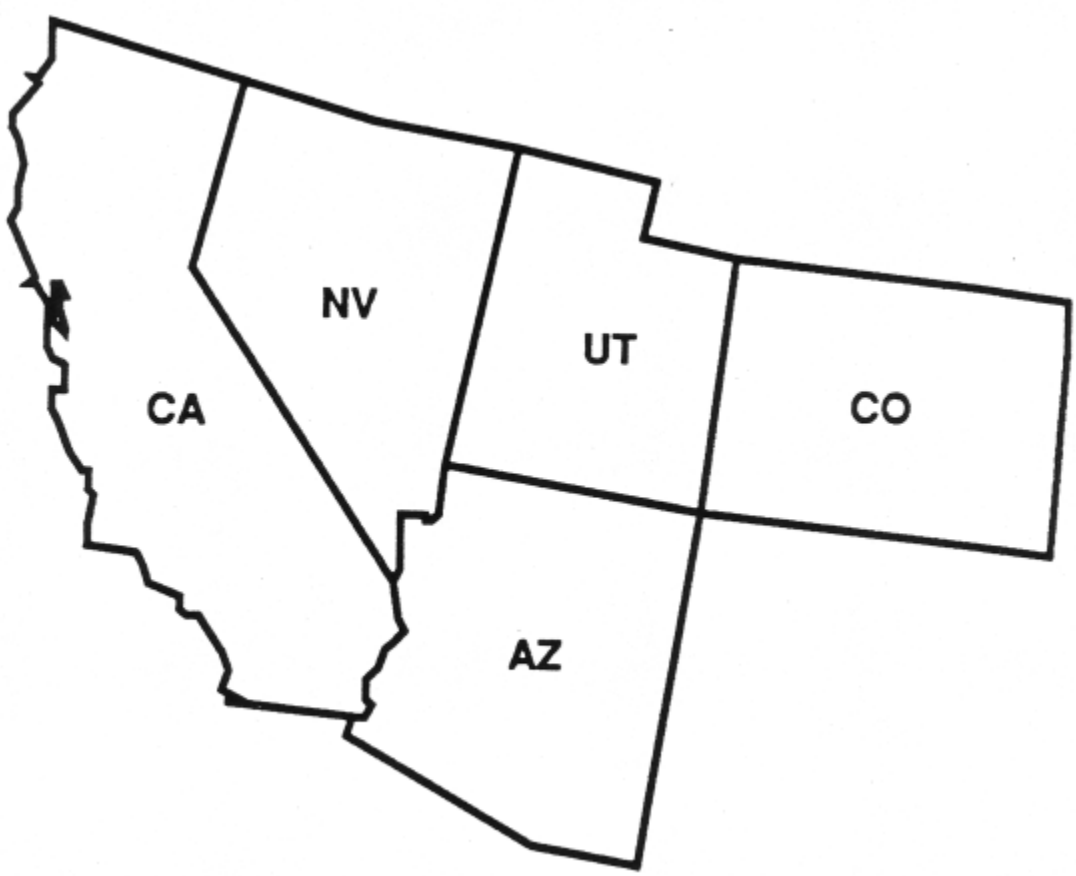
**There are no North Central United States notices for this edition.*

Northwest
United States



**There are no Northwest United States notices for this edition.*

Southwest
United States



Denver Tower

Standard Ramp Taxi Routes

Denver, Colorado

Denver Ramp Tower has instituted Standard Ramp Departure Taxi Routes for aircraft departing the main ramp and south cargo. Pilots who are unable to comply with standardized routes should advise Ramp Control on initial contact. The route will be issued by Ramp Control as "Standard Taxi East" or "Standard Taxi West".

Standard Ramp Departure Taxi Routes

Standard Taxi East	
Origin	**Routing**
Concourse A – South Side	Taxi via Taxiway Alfa Sierra (AS) towards Apron Location Point 2E. Hold short of Taxiway Lima (L). Contact Ground on 121.85 when number one at Apron Location Point 2E.
Concourse A – North Side	Taxi via Taxiway Bravo Sierra (BS) towards Apron Location Point 4E Hold short of Taxiway Lima (L). Contact Ground on 121.85 when number one at Apron Location Point 4E.
Concourse B – South Side	Taxi via Taxiway Bravo Sierra (BS) towards Apron Location Point 4E. Hold short of Taxiway Lima (L). Contact Ground on 121.85 when number one at Apron Location Point 4E.
Concourse B – North Side	Taxi via Taxiway Charlie Sierra (CS) towards Apron Location Point 6E. Hold short of Taxiway Lima (L).Contact Ground on 121.85 when number one at Apron Location Point 6E.
Concourse C – South Side	Taxi via Taxiway Charlie Sierra (CS) towards Apron Location Point 6E. Hold short of Taxiway Lima (L). Contact Ground on 121.85 when number one at Apron Location Point 6E.
Concourse C – North Side	Taxi via Taxiway Charlie November (CN) towards Apron Location Point 7E. Hold short of Taxiway Lima (L). Contact Ground on 121.85 when number one at Apron Location Point 7E.
South Cargo	Taxi east on Taxiway Alfa (A). Hold short of Taxiway Lima (L).Contact Ground on 121.85 when number one at the taxiway clearance bar.

Standard Ramp Departure Taxi Routes

Standard Taxi West	
Origin	**Routing**
Concourse A – South Side	Taxi via Taxiway Alfa Alfa (AA) towards Apron Location Point 1W. Hold short of Taxiway Golf (G). Contact Ground on 127.5 when number one at Apron Location Point 1W.
Concourse A – North Side	Taxi via Taxiway Alfa November (AN) towards Apron Location Point 3W. Hold short of Taxiway Golf (G). Contact Ground on 127.5 when number one at Apron Location Point 3W.
Concourse B – South Side	Taxi via Taxiway Alfa November (AN) towards Apron Location Point 3W. Hold short of Taxiway Golf (G). Contact Ground on 127.5 when number one at Apron Location Point 3W.
Concourse B – North Side	Taxi via Taxiway Bravo November (BN) towards Apron Location Point 5W. Hold short of Taxiway Golf (G). Contact Ground on 127.5 when number one at Apron Location Point 5W.
Concourse C – South Side	Taxi via Taxiway Bravo November (BN) towards Apron Location Point 5W. Hold short of Taxiway Golf (G). Contact Ground on 127.5 when number one at Apron Location Point 5W.
Concourse C – North Side	Taxi via Taxiway Charlie November (CN) towards Apron Location Point 7W. Hold short of Taxiway Golf (G). Contact Ground on 127.5 when number one at Apron Location Point 7W.

STANDARDIZED TAXI ROUTES FOR LOS ANGELES INTERNATIONAL AIRPORT (KLAX)

The following standardized taxi routes may be issued to all taxiing aircraft:

North Route:
Taxi towards Taxiway Tango (T), taxi northbound on Taxiway Tango (T), and at checkpoint 1 contact Ground Control on frequency 121.65; hold short of Taxiway Delta (D).

(Taxiway Tango (T) is not visible from the ATCT)

South Route:
Taxi towards Taxiway Romeo (R), taxi southbound on Taxiway Romeo (R), and at checkpoint 2 contact Ground Control on frequency 121.4; hold short of Taxiway Charlie (C).

(Taxiway Romeo (R) is not visible from the ATCT)

West Route:
Taxi westbound on Taxiway Charlie (C) towards Taxiway Alfa Alfa (AA), hold short of Taxiway Alfa Alfa (AA), contact Ground Control on frequency 121.65 when number one approaching Taxiway Alfa Alfa (AA).

Bridge Route:
Taxi towards Taxiway Alfa Alfa (AA), taxi southbound on Taxiway Alfa Alfa (AA), and at checkpoint 3 contact Ground Control on frequency 121.4; hold short of Taxiway Charlie (C).

(Taxiway Alfa Alfa (AA) is not visible from the ATCT)

Romeo Route:
Taxi westbound on Taxiway Charlie (C) towards Taxiway Romeo (R)**,** hold short of Taxiway Romeo (R), contact Ground Control on frequency 121.65 when number one approaching Taxiway Romeo (R).

(Taxiway Romeo (R) is not visible from the ATCT)

The Bradley Route was removed due to the extended closure of Taxilane Sierra (S)

(AJV–W21, 5/24/2018)

SAN DIEGO MCCLELLAN−PALOMAR AIRPORT

Pilots are encouraged to exercise caution when flying over exhaust plumes from power plant exhaust stacks 3.15 west of the McClellan−Palomar Airport. Information on avoiding flights over exhaust plumes is found in the Aeronautical Information Manual, Chapter 7, Section 7−5−15.

(AJV−W21, 5/24/2018)

Alaska

Hawaii

**There are no Alaska and Hawaii notices for this edition.*

Section 4. Major Sporting and Entertainment Events

MICHIGAN INTERNATIONAL SPEEDWAY MONSTER ENERGY NASCAR CUP SERIES

Consumers Energy 400
Corrigan Oil 200

Brooklyn, Michigan
August 7–11, 2019

SPECIAL AIR TRAFFIC PROCEDURES

Airport	Identifier
Jackson County	JXN
Adrian–Lenawee County	ADG
Willow Run Airport–Detroit	YIP

ADG– LENAWEE COUNTY INFORMATION	
ADG CTAF/UNICOM	122.80
IFR CLEARANCES TOLEDO (419) 865–1495	Call No earlier than 15 min before departure
TOLEDO APPROACH	134.35
ZOB Litchfield Sector	134.650
JXN– JACKSON COUNTY INFORMATION	
Jackson Tower Frequency	128.475
Ground Control Freq Clearance Delivery	121.9
ATIS	125.725
GREAT LAKES APPROACH	127.3
ZOB Jackson Sector	120.450
JXN CTAF	128.475
JXN UNICOM	122.95

IFR ARRIVAL PROCEDURES

Routes to use from **Wednesday August 7th** through **Sunday August 11th**

DEPARTURE AIRPORT	DESTINATION	ROUTE	ALTITUDE ENTERING ZOB
JQF, CLT, GSP, AVL, TRJ, VJI	JXN, ADG	*via* FLM..DQN..JXN/ADG	AOB FL230
SVH, RDU, INT, GSO, EXX, MTV, HKY	JXN, ADG	*via* APE..FBC..JXN/ADG	AOB FL230

JQF, CLT, GSP, AVL, TRJ, VJI	YIP	*via* TORRR.PETTE1.YIP	AOB FL210
SVH, RDU, INT, GSO, EXX, MTV, HKY	YIP	*via* BOBCT.FOREY1.YIP	AOB FL300

Due to the complexity and volume associated with this event, users can anticipate dynamic reroutes and altitude assignments.

Expect delays if Severe Weather Avoidance Routes are necessary.

DEPARTURE ROUTING

Be advised that if departing VFR, there will not be any IFR pickups available within 125nm from your departure airport due to traffic volume, complexity and frequency congestion.

ADG Departure Routes

CLT	ROD FLM TAFTT PARQR3 CLT
JQF	ROD FLM GZG MULBE BZM PEGTE JQF
SVH, HKY	ROD DORFF BZM SVH/HKY
EXX, MTV	ROD BLF TRAKS EXX/MTV
GSO, INT	ROD OTONE TRAKS2 GSO/INT
RDU	ROD BKW ROA SBV6 RDU
TRI, VJI	ROD FLM TRI/VJI
AVL	ROD J43 VXV AVL
GSP	ROD FLM DAJPI RCTOR2

JXN Departure Routes

CLT	LFD ROD FLM TAFTT PARQR3 CLT
JQF	LFD ROD FLM GZG MULBE BZM PEGTE JQF
SVH, HKY	LFD ROD DORFF BZM SVH/HKY
EXX, MTV	LFD ROD BLF TRAKS EXX/MTV
GSO, INT	LFD ROD OTONE TRAKS2 GSO/INT
RDU	LFD ROD BKW ROA SBV6 RDU
TRI, VJI	LFD ROD FLM TRI/VJI
AVL	LFD ROD J43 VXV AVL
GSP	LFD ROD FLM DAJPI RCTOR2

WILLOW RUN AIRPORT (YIP) DEPARTURE ROUTING

CLT	CLVIN1 STAZE FLM TAFTT PARQR3 CLT
JQF	CLVIN1 STAZE FLM GZG MULBE BZM PEGTE JQF
SVH, HKY	CLVIN1 STAZE DORFF BZM SVH/HKY
EXX, MTV	CLVINI STAZE BLF TRAKS EXX/MTV

GSO, INT	CLVIN1 STAZE OTONE TRAKS2 GSO/INT
RDU	LIDDSl GRIVY BKW ROA SBV6 KRDU
TRI, VJI	CLVIN1 STAZE TRI/VJI
AVL	CLVIN1 STAZE VXV AVL
GSP	CLVINl STAZE DAJPI RCTOR2

FOR SUNDAY DEPARTURES FILE FLIGHT PLANS NO LATER THAN 2000Z.

GANDER RV 400

MONSTER ENERGY NASCAR CUP EVENT

MOUNT POCONO, PA

July 26–28, 2019

SPECIAL AIR TRAFFIC PROCEDURES

Special air traffic procedures to manage increased traffic, enhance safety, and minimize delays are in effect for the following airports:

Airport	Identifier
Wilkes–Barre/Scranton International	AVP
Pocono Mountains Municipal	MPO

VFR DEPARTURES / IFR PICKUP

Due to traffic volume and controller workload do **not** depart VFR and expect to obtain IFR clearance within 100 miles of departure, except in an emergency or unless otherwise coordinated with New York ARTCC (ZNY).

FLIGHT PLANS

To facilitate ATC planning and coordination, flight crews should file departure flight plans at least **two (2) hours** prior to proposed departure time. To minimize delays, users should file routes that conform to published departure procedures and traffic flows. IFR file via preferred routes listed below.

PREFERRED ROUTES

Arrivals

FROM	ROUTE
GSO/INT	QUAK7 CREWE FAK COURG SCAPE SEG LVZ
CLT/EQY/JQF/RUQ/VUJ	BARMY4 AUDII FAK COURG SCAPE SEG LVZ OR KRITR5 FILDS ILLSA COURG SCAPE SEG LVZ
EXX/HKY/SVH	LYH COURG SCAPE SEG LVZ

Departures

TO	ROUTE (JETS at/above FL180)
CLT	LVZ V106 DIANO LRP EMI GVE LYH CHSLY4
JQF/RUQ/VUJ	LVZ V106 DIANO LRP EMI GVE LYH NASCR4
EQY	LVZ V106 DIANO LRP EMI GVE LYH MAJIC3
GSO/INT	LVZ V106 DIANO LRP EMI GVE LYH HENBY3
HKY/SVH	LVZ V106 DIANO LREMI J75 GVE LYH V222 BURCH BZM
EXX	LVZ V106 DIANO LRP EMI GVE LYH V222 HENBY

AIRCRAFT below FL180 – LVZ V226 SWANK MIP HAR EMI GVE LYH

Note: some departures to the CLT area may be dynamically re–routed via LVZ V106 DIANO PSB HVQ

For other route information call:

New York Air Route Traffic Control Center
Traffic Management Unit
(631) 468–1015
0700–1500 EDT Monday–Friday

GO BOWLING AT THE GLEN

MONSTER ENERGY NASCAR CUP EVENT

WATKINS GLEN, NY

August 2–4, 2019

SPECIAL AIR TRAFFIC PROCEDURES

Special air traffic procedures to manage increased traffic, enhance safety, and minimize delays are in effect for the following airports:

Airport	Identifier
Elmira/Corning Regional	ELM
Ithaca Tompkins County Regional	ITH

VFR DEPARTURES / IFR PICKUP

Due to traffic volume and controller workload do NOT depart VFR and expect to obtain IFR clearance within 100 miles of departure, except in an emergency or unless otherwise coordinated with New York ARTCC (ZNY).

FLIGHT PLANS

To facilitate ATC planning and coordination, flight crews should file departure flight plans at least **two (2) hours** prior to proposed departure time. To minimize delays, users should file routes that conform to published departure procedures and traffic flows. IFR file via preferred routes listed below.

PREFERRED ROUTES

Arrivals

From **GSO/INT**

TYPE	ROUTE
JETS	QUAK7 CREWE FAK AML J227 ULW
PROPS	GSO V143 MOL V377 TOMAC THS PSB V35 ULW

From **CLT/JQF/RUQ**

TYPE	ROUTE
JETS	KILNS4 AUDII FAK AML J227 ULW
PROPS	PSK MOL V377 TOMAC THS PSB V35 ULW

From **HKY/SVH/VJI/TRI**

TYPE	ROUTE
JETS	FAK AML J227 ULW
PROPS	PSK MOL V377 TOMAC THS PSB V35 ULW

Departures

To **CLT**

TYPE	ROUTE
JETS	SFK PSB HVQ LNDIZ PARQR3
PROPS (at/above FL180)	FQM EMI CSN MOL V143 GIZMO
PROPS (belowFL180)	ULW V31 HAR V377 MOL V143 GIZMO

To **JQF/RUQ/VUJ**

TYPE	ROUTE
JETS	ELZ HVQ BZM PEGTE
PROPS (at/above FL180)	FQM EMI CSN MOL LYH NASCR4
PROPS (below FL180)	ULW V31 HAR V377 MOL V143 LYH NASCR4

To **EQY**

TYPE	ROUTE
JETS	SFK PSB HVQ BZM PETGE KEQY
PROPS (at/above FL180)	FQM EMI CSN MOL LYH
PROPS (belowFL180)	ULW V31 HAR V377 MOL V143 GIZMO

To **GSO/INT**

TYPE	ROUTE
JETS	SFK PSB J61 EMI GVE HENBY3
PROPS (at/above FL180)	FQM EMI CSN MOL LYH HENBY3
PROPS (belowFL180)	ULW V31 HAR V377 MOL V143 LYH V222 HENBY

To **HKY**

TYPE	ROUTE
JETS	SFK PSB HVQ BZM
PROPS (at/above FL180)	FQM EMI CSN MOL LYH BZM
PROPS (belowFL180)	ULW V31 HAR V377 MOL V143 GIZMO

To **SVH**

TYPE	ROUTE
JETS	SFK PSB HVQ BZM
PROPS (at/above FL180)	FQM EMI CSN MOL LYH V222 BURCH
PROPS (belowFL180)	ULW V31 HAR V377 MOL V143 LYH V222 BURCH

For airports south of CAE – SFK PSB J61 EMI GVE J75 CAE then via any preferred route AT OR ABOVE FL180

Note: some departures to the CLT area may be dynamically re–routed via ELZ HVQ.

For other route information, call:

New York Air Route Traffic Control Center Traffic Management Unit, (631) 468–1015
0700–1500 EDT Monday–Friday

ELMIRA DEPARTURE PROCEDURES
****Sunday, August 4****

FREQUENCIES

Clearance Delivery	**118.15** ****Sunday, 8/6, 1500–2000 EDT**
Clearance Delivery (normal)	121.9
Ground Control	121.9
Local Control	121.1
Departure/Approach Control	128.42
First New York Center Sector	133.35
First Cleveland Center Sector	124.32
Elmira/Corning Air Service (FBO)	122.95
Elmira ATIS	125.475

Check ATIS (125.475).

Checkpoints:
Two checkpoints have been established on field
FBO ramp – checkpoint is ***Bravo*** holding short of ***Alfa***
Juliet ramp – checkpoint is ***Juliet*** holding short of ***Alfa***

Clearance Delivery Procedures:
Procedure start time will be broadcast on ATIS (125.475).
Expect IFR clearance via the Elmira Four Standard Instrument Departure (ELM4 SID).
IFR aircraft must receive IFR clearance from Elmira Clearance Delivery (118.15) prior to moving.

Checkpoint/Taxi Procedures:
Aircraft on main ramp or de–ice pad contact Elmira Ground (121.9) prior to moving on to Taxiway Alfa, advising position and ready to taxi.
Aircraft on Echo or Juliet ramps proceed to associated checkpoint and contact Elmira Ground (121.9) ***when first in line at checkpoint,*** advising position and ready to taxi.

VFR departures:
Do not expect to depart VFR and receive IFR clearance when airborne. These requests cannot be accommodated due to volume.

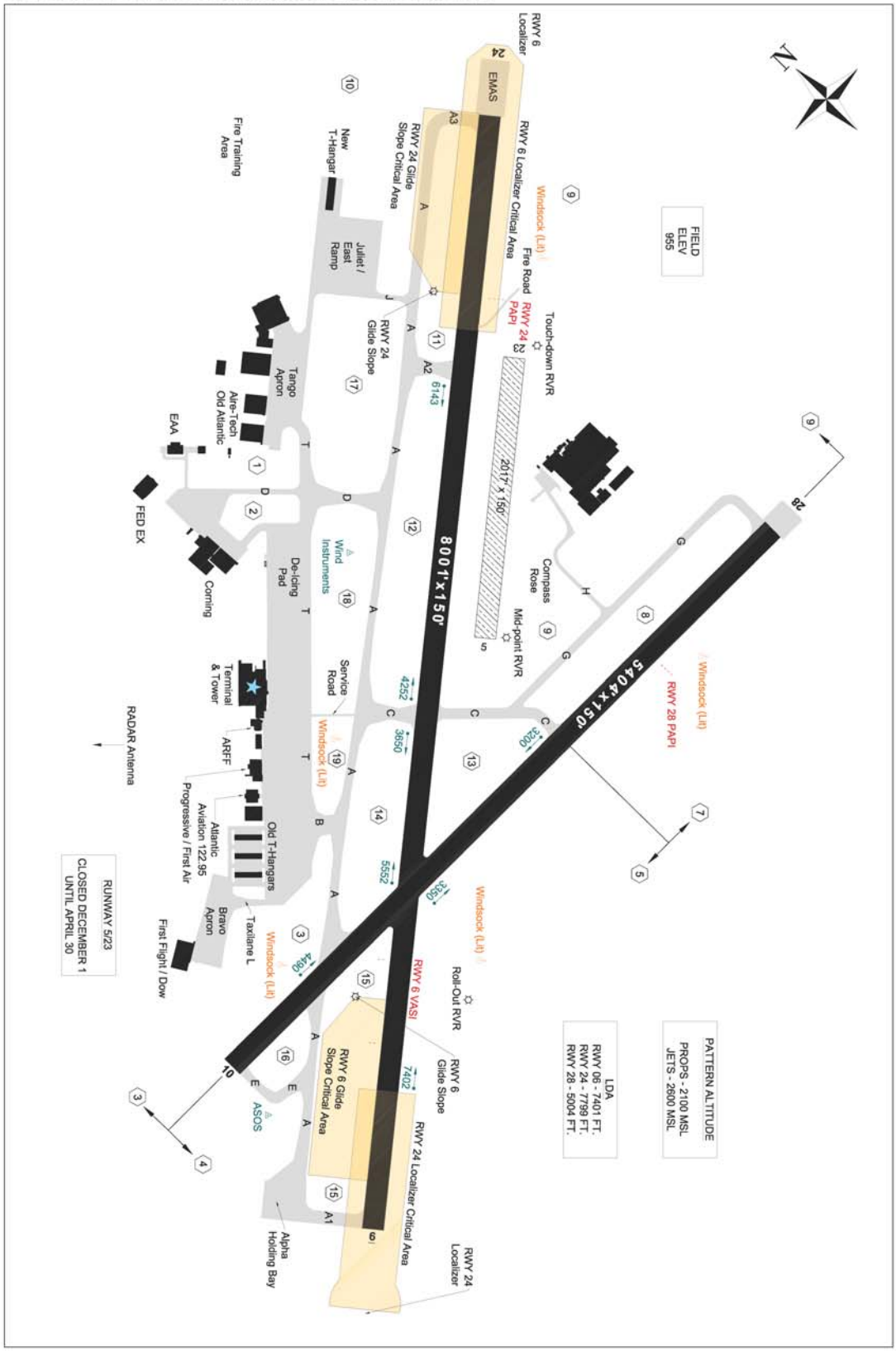
IFR departures:
Expect 3 to 5 minutes between like aircraft departures on the same route. New York and Washington Centers require 10–15 miles between aircraft, which may increase to 20 miles. Delays up to 75 minutes are possible.

Alternate routing:
To reduce delays, Prop aircraft filed at or above FL180 to destinations in the CLT area may be issued alternate offload routes. Offload routes will take aircraft west before turning south out of the ZNY route structure. Potential alternates routes are:

DESTINATION	ROUTE
CLT/EQY	ELZ HVQ then appropriate arrival
HKY/JQF/RUQ/VUJ	ELZ HVQ BZM PEGTE direct
SVH	ELZ HVQ BZM SVH

Race Day Helicopter Operations:
Helicopters ferrying to and from Watkins Glen will use the grass area in front of the FBO between *Alfa* and the west edge of the east ramp. Portions of your landing and departure will not be visible from the tower. Contact Elmira Tower on 121.1 for departure/landing instructions. Do not expect Stage III advisories.

****If weather delays the race until Monday, August 5,** Elmira Departure procedures remain in effect. Special clearance delivery frequency (118.15) will be in use beginning one hour after the start of the race.


N
FIELD ELEV 955
PATTERN ALTITUDE
PROPS - 2100 MSL
JETS - 2600 MSL
LDA
RWY 06 - 7401 FT.
RWY 24 - 7799 FT.
RWY 28 - 5004 FT.
8001' X 150'
5404' X 150'
2017' X 150'
RWY 6 Localizer
RWY 6 Localizer Critical Area
RWY 24 Glide Slope Critical Area
Windsock (Lit)
Fire Road
RWY 24 PAPI
Touch-down RVR
Mid-point RVR
Compass Rose
RWY 28 PAPI
RWY 24 Glide Slope
RWY 6 VASI
Roll-Out RVR
RWY 6 Glide Slope
RWY 6 Glide Slope Critical Area
RWY 24 Localizer Critical Area
RWY 24 Localizer
EMAS
New T-Hangar
Fire Training Area
Juliet / East Ramp
Tango Apron
Alre-Tech Old Atlantic
EAA
FED EX
Deicing Pad
Corning
Wind Instruments
Service Road
Terminal & Tower
ARFF
RADAR Antenna
Old T-Hangars
Taxilane L
Bravo Apron
Atlantic Aviation 122.95 Progressive / First Air
First Flight / Dow
Alpha Holding Bay
ASOS
RUNWAY 5/23
CLOSED DECEMBER 1
UNTIL APRIL 30
6143
4252
3650
3200
5552
3350
4490
7402

FOXWOODS RESORT CASINO 301
MONSTER ENERGY NASCAR CUP EVENT

NEW HAMPSHIRE MOTOR SPEEDWAY
Loudon, New Hampshire
July 18–21, 2019

SPECIAL AIR TRAFFIC PROCEDURES

Special air traffic procedures to manage increased traffic, enhance safety, and minimize delays are in effect for the following airports:

AIRPORT	IDENTIFIER
Laconia Municipal	KLCI
Concord Municipal	KCON
Manchester	KMHT

MANCHESTER CLASS C AIRSPACE

Due to traffic volume and controller workload, practice instrument approach requests may incur large delays or be unavailable.

VFR pilots contact Boston Approach **at least 20 miles** outside of the Manchester Airport for Class C service on the following frequencies:

LOCATION	ALTITUDE (MSL)	FREQUENCY
Nashua Area	4,500 – 10,000	134.75
Manchester Area	4,500 – 10,000	134.75
Concord Area	4,500 – 10,000	134.75
Laconia Area	at or below 10,000	134.75
Nashua Area	at or below 4,000	124.9
Manchester Area	at or below 4,000	124.9
Concord Area	at or below 4,000	124.9
Pease Area	at or below 10,000	125.05

ARRIVALS

To minimize delays, close IFR flight plans with Boston Approach Control while airborne or promptly upon arrival via:

AIRPORT	FREQUENCY
LCI RCO	119.85
CON RCO	133.65

PREFERRED ARRIVAL ROUTES

From CLEVELAND ARTCC
JHW Q82 PONCT CAM V542 JAMMA KLCI/KCON
JHW Q82 PONCT ROZZE2 KMHT (Turbojets Only)
JHW ALB POPPP1 KMHT (Props Only)

From CLT/JQF
BARMY4 RDU THHMP MAAXY OOD J42 RBV LGA ALB CAM V542 JAMMA KLCI/KCON
BARMY4 RDU THHMP MAAXY OOD J42 RBV LGA CMK SMYTH ROZZE2 KMHT
BARMY4 TYI ORF J174 HTO BOS WEEZE PSM KLCI/KCON/KMHT
OR
BARMY4 TYI J79 JFK CAM V542 JAMMA KCON/KLCI
BARMY4 TYI J79 JOANI LGA CMK SMYTH ROZZE2 KMHT

From EXX/HKY/SVH
LYH THHMP MAAXY OOD J42 RBV LGA ALB CAM V542 JAMMA KCON/KLCI
LYH THHMP MAAXY OOD J42 RBV LGA CMK SMYTH ROZZE2 KMHT

From GSO
QUAK7 GSO CREWE THHMP MAAXY OOD J42 RBV LGA ALB CAM V542 JAMMA KLCI/KCON
OR
QUAK7 GSO CREWE THHMP MAAXY OOD J42 RBV LGA CMK SMYTH ROZZE2 KMHT

From or Through ZJX
CHS J79 JFK ALB CAM V542 JAMMA KCON/KLCI
CHS J79 JOANI LGA CMK SMYTH ROZZE2 KMHT
OR
ILM KEMPR SBY J79 JFK ALB CAM V542 JAMMA CON/LCI
ILM KEMPR SBY J79 JOANI LGA CMK SMYTH ROZZE2 KMHT

IFR DEPARTURES

To minimize delays, file IFR flight plans via preferred routes. **File flight plans no later than 1600 UTC** (12 pm local) with a proposed departure time of 1600 UTC. ATC will amend the proposed departure time if necessary. Preferred Departure Routes will be posted in FBOs in the Concord and Laconia airports. Routes will also be available through:

FACILITY	PHONE
Boston ARTCC Clearance Delivery Relay	(603) 879–6859
Boston ARTCC Traffic Management Unit	(603) 879–6666
Washington ARTCC Traffic Management Unit	(703) 771–3504

Aircraft filing routes that include J6, Q406, J48, Q448, J75, J77, J80 and Q480 west of the New York Metropolitan area (near SAX and CMK VORs) may experience delays and/or reroutes. Pilots flying at altitudes 11,000–17,000 MSL should file the preferred routes associated with those altitudes. Pilots filing Tower Enroute Control (TEC) routes at and below 10,000 MSL, file approved routes through the New York and Washington Metropolitan areas as listed in the Chart Supplement. For unlisted destinations, use a route to a nearby NAVAID or airport listed in the route guide.

Except in emergencies, air filed flight plans and VFR departures requesting IFR clearance may encounter considerable airborne delay.

DEPARTURE PROCEDURES

(Sunday, July 21)

LACONIA, NH:
To obtain IFR clearance, pilots should visit (in person) the Customer Service Desk in the terminal building to receive a hard copy clearance and instructions. Use UNICOM 123.0 for airport movement. Contact Boston Approach on 119.85 at start of taxi, providing Call Sign, CID, and revision number. Boston Approach will issue IFR release via the LCI RCO. Pilots are expected to fly the published IFR departure procedure.

CONCORD, NH:
To obtain IFR clearance, pilots should visit (in person) the Customer Service Desk in the Concord Aviation Services hangar to receive a hard copy clearance and instructions. Use UNICOM 122.7 for airport movement. Contact Boston Approach on 133.65 at start of taxi, providing Call Sign, CID, and revision number. Pilots are expected to fly the published IFR departure procedure.

PREFERRED IFR DEPARTURE ROUTES

To CLT
CAM ALB CMK J75 GVE LYH CHSLY4
(AOA FL240) PPORT SHOEL RBELA JJIMY ORW CCC GEDIC J174 ORF J121 BARTL OKNEE MLLET2

To EQY
CAM ALB CMK J75 GVE LYH MAJIC3
(AOA FL240) PPORT SHOEL RBELA JJIMY ORW CCC GEDIC J174 ORF J121 BARTL J4 FLO RASLN3

To EXX/HKY/SVH
CAM ALB CMK J75 GVE LYH HENBY BZM
(AOA FL240) PPORT SHOEL RBELA JJIMY ORW CCC GEDIC J174 ORF COUPN ARGAL JAYRR

To GSO/INT
CAM ALB CMK J75 GVE LYH HENBY3
(AOA FL240) PPORT SHOEL RBELA JJIMY ORW CCC GEDIC J174 ORF COUPN ARGAL JAYRR

To JQF
CAM ALB CMK J75 GVE LYH NASCR4
(AOA FL240) PPORT SHOEL RBELA JJIMY ORW CCC GEDIC J174 ORF COUPN ARGAL NASCR4

*Props below 17,000 to North Carolina airports may file SEG V31 HAR V377 MOL V143 LYH

SEVERE WEATHER ROUTES

The following routes will be used (after coordination with the ATCSCC Severe Weather Unit) to allow aircraft to bypass areas of severe weather and/or en route system constraints. Aircraft filed to JQF via one of these routes as a primary route of flight, will be allowed to fly unrestricted to the extent possible.

CAM SYR J59 PSB Q71 GEFFS BZM (or)
CAM SYR Q29 JHW EWC HVQ V133 BZM (or)
CAM SYR Q29 JHW EWC PSK BZM

Section 5. Airshows

2019 U.S. & Canadian Military Aerial Aircraft/Parachute Demonstrations

During CY 2019, the U.S. and Canadian Military Aerial Demonstration Teams (Thunderbirds, Blue Angels, Snowbirds, and Golden Knights) will be performing on the dates and locations listed below.

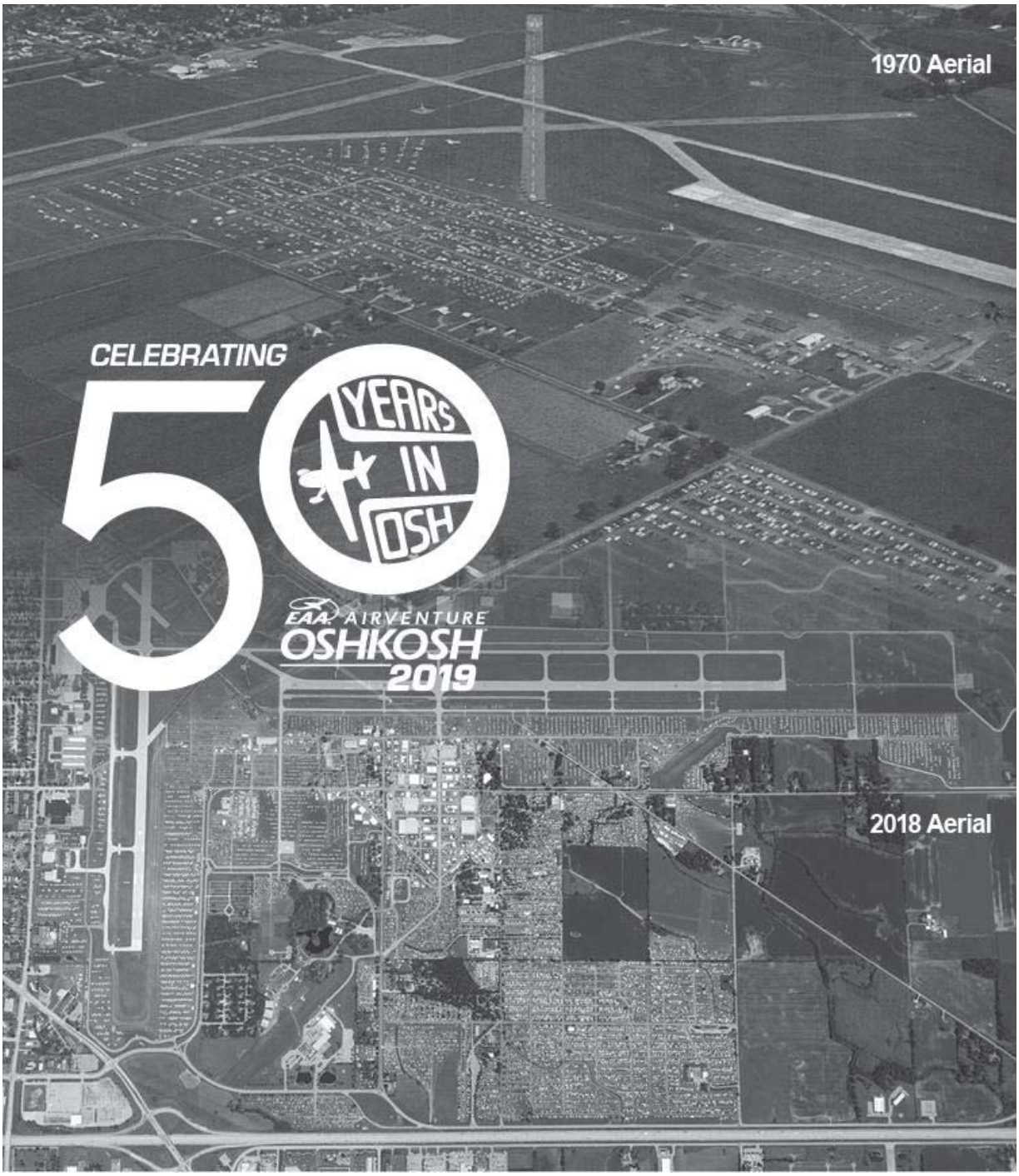
Pilots should expect Temporary Flight Restrictions (TFR) in accordance with 14 CFR Section 91.145, Management of aircraft operations in the vicinity of aerial demonstrations and major sporting events. The dimensions and effective times of the TFRs may vary based upon the specific aerial demonstration event and will be issued via the U.S. NOTAM system. Pilots are strongly encouraged to check FDC NOTAMs to verify they have the most current information regarding these airspace restrictions.

The currently scheduled 2019 aerial demonstration locations, subject to change without notice, are:

DATE		USAF Thunderbirds	USN Blue Angels	USA Golden Knights	Canadian Snowbirds
July	20–21	Fargo, ND	Duluth, MN		
	24	Cheyenne, WY			
	27–28	Milwaukee, WI	Grand Junction, CO		
August	3–4		Seattle, WA		
	17–18	Sioux Falls, SD	Chicago, IL		
	21	Atlantic City, NJ			
	24–25	Rochester, NY	New Windsor, NY		
	31	Cleveland, OH			
September	1–2	Cleveland, OH			
	7–8	Grissom ARB, IN	Chesterfield, MO		
	14–15	Reno, NV			
	18				Columbus, IN
	21–22	NAS Oceana, VA	NAS Lemoore, CA		
	28–29	Robins AFB, GA	MCAS Miramar, CA		Santa Rosa, CA
October	5–6	San Juan, PR	Sacramento, CA		Huntington Beach, CA
	12–13	Hampton, GA	San Francisco, CA		Hampton, GA
	19–20	Houston, TX	Fort Worth, TX		Houston, TX
	26–27	Sheppard AFB, TX	Jacksonville Beach, FL		
November	2–3	Punta Gorda, FL	Moody AFB, GA		
	8–9		NAS Pensacola, FL		
	16–17	Nellis AFB, NV			

Note: Dates and locations are scheduled "show dates" only and do not reflect arrival or practice date TFR periods that may precede the specific aerial demonstration events listed above. Again, pilots are strongly encouraged to check FDC NOTAMs to verify they have the most current information regarding any airspace restrictions.

NOTAM



Special Flight Procedures effective 6 AM CDT July 19 to Noon CDT July 29, 2019

For a free, printed copy of this NOTAM booklet, call EAA at 1-800-564-6322.
To view or download this information, visit *www.eaa.org/notam*,
or *www.faa.gov/air_traffic/publications/notices*.

Table of Contents

Changes for 2019 include:

- New procedure for diversion to Fond du Lac
- Restriction on transponder use removed
- IFR routing changes
- Manitowoc (MTW) VOR decommissioned
- Numerous text and graphics changes

This notice does not supersede restrictions contained in other FDC NOTAMs. Be sure to check current NOTAMs.

Preflight Planning

For one week each year, EAA AirVenture Oshkosh has the highest concentration of aircraft in the world. Your careful reading and adherence to the procedures in this NOTAM are essential to maintaining the safety record of this event. Flight planning should include thorough familiarity with NOTAM procedures, as well as knowledge of primary and alternate airports. Keep a copy of this NOTAM available for in-flight reference.

Planning your Alternate Airport

- Pilots intending to land at Wittman Regional Airport (OSH) should be prepared for the possibility of diverting to an alternate airport, such as Fond du Lac (FLD), Appleton (ATW), or Green Bay (GRB). These airports have parking and scheduled transportation to Oshkosh.
- If your alternate is Fond du Lac, check pages 20-21 for temporary control tower information.
- Pilots on VFR flight plans diverting from Oshkosh are reminded to change their flight plan destination with flight service.

OSH Flight Planning

Beginning Friday, July 19, 2019, OSH is closed to all arriving aircraft from 8:00 PM until 7:00 AM CDT daily. Also, some or all categories of aircraft may not be accepted due to parking saturation, ground conditions, TFRs, scheduled airshows, or other activities.

OSH Airshow Demonstration Area/TFRs

The Airshow Demonstration Area and Temporary Flight Restrictions (TFRs) are within a 5 NM radius of Wittman Regional Airport from the surface to 16,000' MSL. TFR information will be posted at *tfr.faa.gov*.

2019 Oshkosh Airshow/TFR Times (CDT)

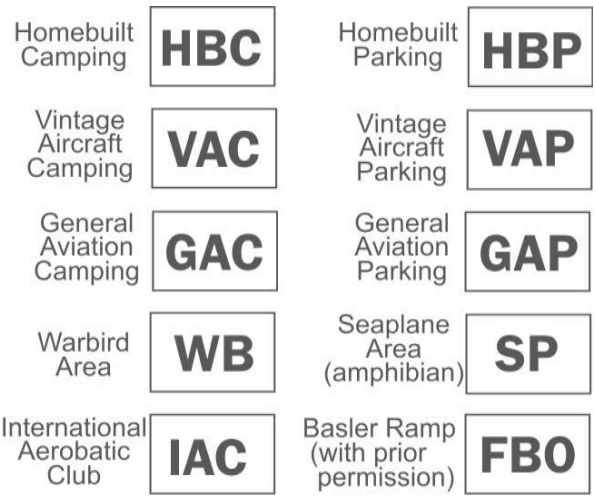
Monday, July 22, thru Saturday, July 27: 2:30- 6:30 PM
Wednesday, July 24: 8:00-10:00 PM
Saturday, July 27: 8:00-10:00 PM
Sunday, July 28: 1:00- 4:30 PM

Wittman Regional Airport will be closed via Class D NOTAMs and all aircraft must remain clear of the Airshow Demonstration Area and the TFRs when they are active.

Check the Arrival ATIS (125.9) to determine when the airport is reopened. OSH arrivals are normally resumed 30 minutes after each afternoon airshow.

OSH Aircraft Parking

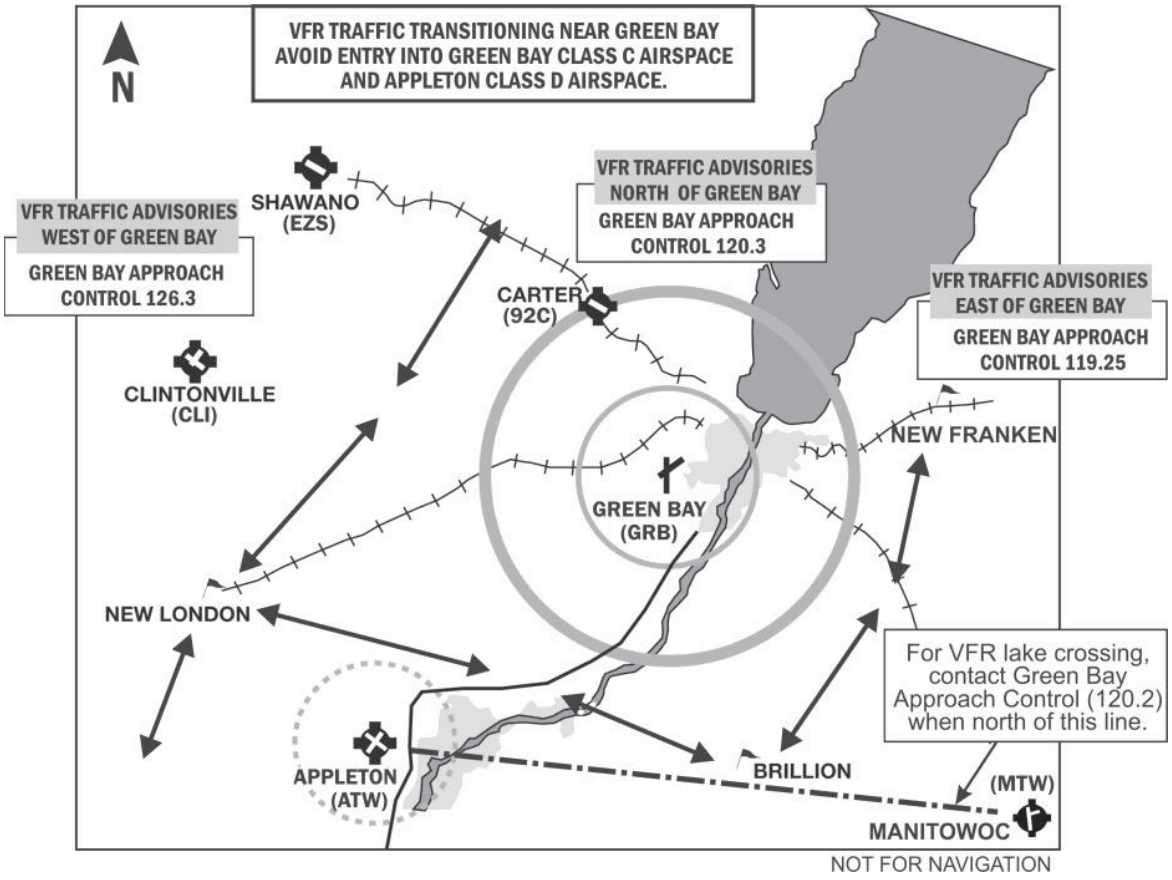
- Separate aircraft parking areas are used at OSH for different types of aircraft. Parking for show planes (experimental, warbird, rotorcraft, amphibian, and production aircraft manufactured prior to 1971) has generally been available throughout EAA AirVenture. Parking and camping areas for other aircraft may reach saturation at times.
- Parking area status is available via telephone recording (920-230-7820) and at *www.eaa.org/aircraftparking*. The AirVenture Arrival ATIS (125.9) also has parking availability information, when applicable.
- Some aircraft camping and parking areas have changed for 2019 to maximize use of available space. Pilots need to follow ground marshal signals to the locations currently in use.
- Pilots landing at OSH must use a printed sign to designate their intended parking or camping area. The sign should have large dark letters readable from at least fifty feet. It can be handmade or printed from *www.eaa.org/signs* (no tablet computer signs, please). Display it in the left side of your windshield after landing. Use one of the following codes:

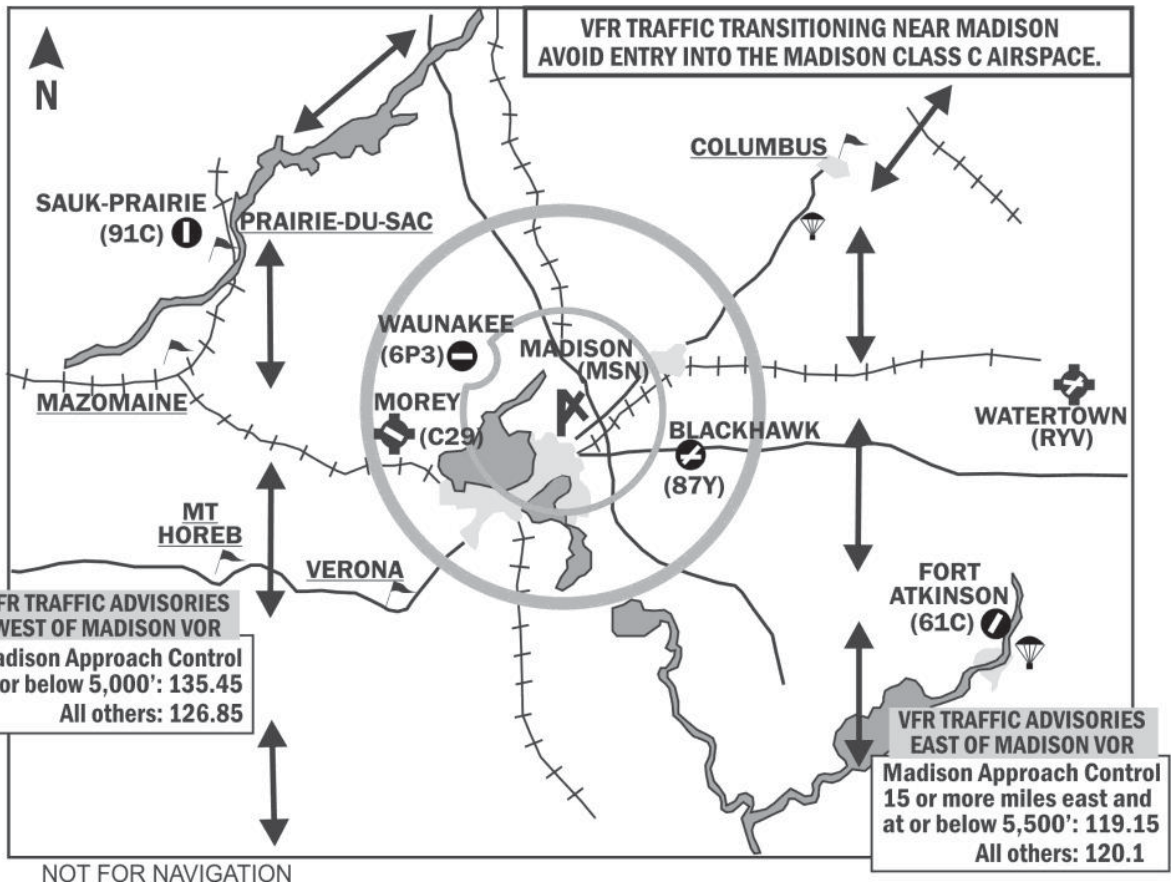


- A similar sign with the letters VFR or IFR will be used when you depart.

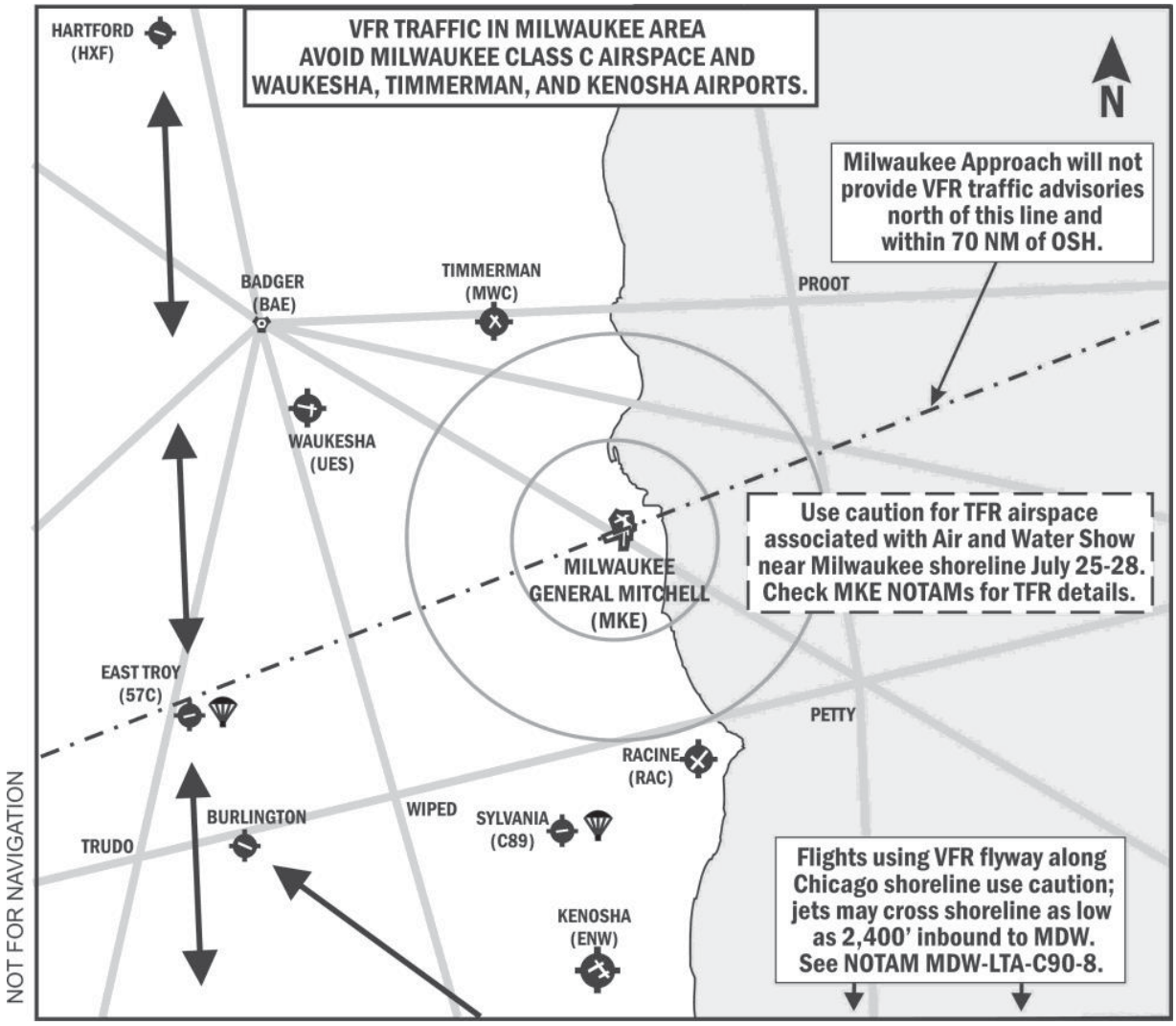
VFR Route Planning Guide

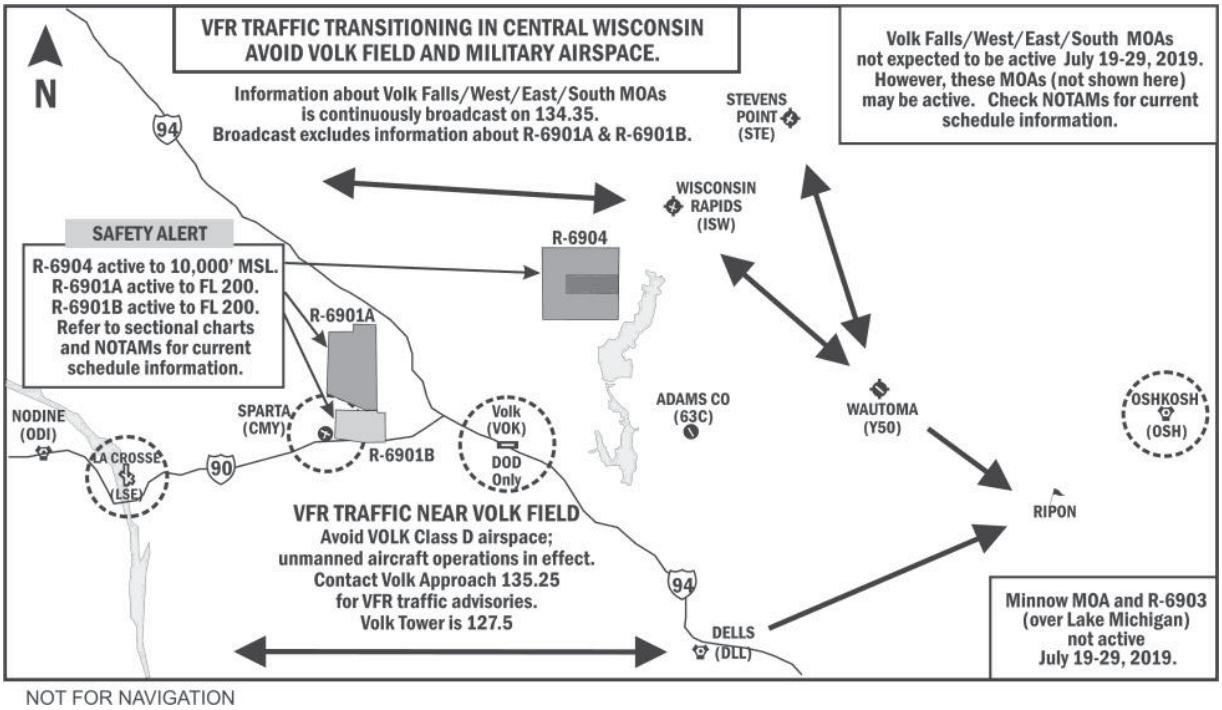
The VFR arrival to Oshkosh starts at the city of Ripon, Wisconsin (Chicago sectional chart). These four graphics show sample routes that bypass high-density airports en route to Ripon and leaving the AirVenture area. Be sure to use current charts. Use extra caution for heavy traffic.





VFR Route Planning Guide





Check NOTAMs for large Military Operations Areas (MOAs) in west central Wisconsin.

Fisk VFR Arrival to OSH

General Information

This procedure is to be used by all VFR aircraft landing at OSH from Friday, July 19, through Sunday, July 28, 2019 (except those using the Turbine/Warbird, Ultralight or NORDO arrivals).

The procedure starts at Ripon, WI (15 NM SW of Oshkosh) and requires visual navigation. Pilots follow a railroad track from Ripon to Fisk, WI. ATC at Fisk controls traffic flow and assigns OSH landing runways and approach paths (pages 8-11).

Planning

Plan your arrival to avoid airport closure periods, such as the daily airshows listed on page 1. Arrivals normally resume 30 minutes after daytime airshows. Allow ample time to arrive and park before the daily airport closure at 8 PM CDT.

Plan your fuel load carefully. If you do not have sufficient fuel for unexpected holding and possible landing go-arounds, divert to an alternate. **If your fuel status is critical, notify ATC immediately.**

First, fly the aircraft. If you are not comfortable with the OSH AirVenture procedures, please consider flying into FLD or ATW and taking public transportation to OSH.

Approaching Ripon

Ensure lights are on within 30 miles of OSH. Leave transponder on throughout approach.

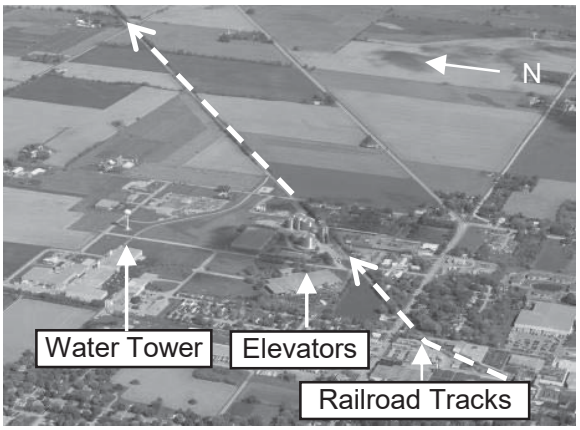
Obtain Arrival ATIS (125.9) no later than 15 miles from Ripon and note arrival runways in use. Have NOTAM arrival pages mentioned on ATIS available. Then monitor Fisk Approach (120.7).

Arrive at Ripon at 90 knots and 1,800'. For aircraft unable to operate comfortably at 90 knots:

- Slower aircraft should use maximum cruising speed. ATC recommends arrival at Fisk 7:00-7:30 AM CDT, if practicable.
- Faster aircraft use 135 knots and 2,300'.

Ripon to Fisk

If holding is not in progress, enter the VFR Arrival Procedure over the northeast corner of Ripon (OSH 232°, 15.5 DME).



Proceed single file, directly over the railroad tracks from Ripon northeast to Fisk (10 miles). Remain at least ½ mile in-trail behind any aircraft you are following. Do not overtake another aircraft unless authorized by ATC.

Do not "S-turn" to follow an aircraft; instead, break off the procedure; return to Ripon; and follow another aircraft of similar speed.

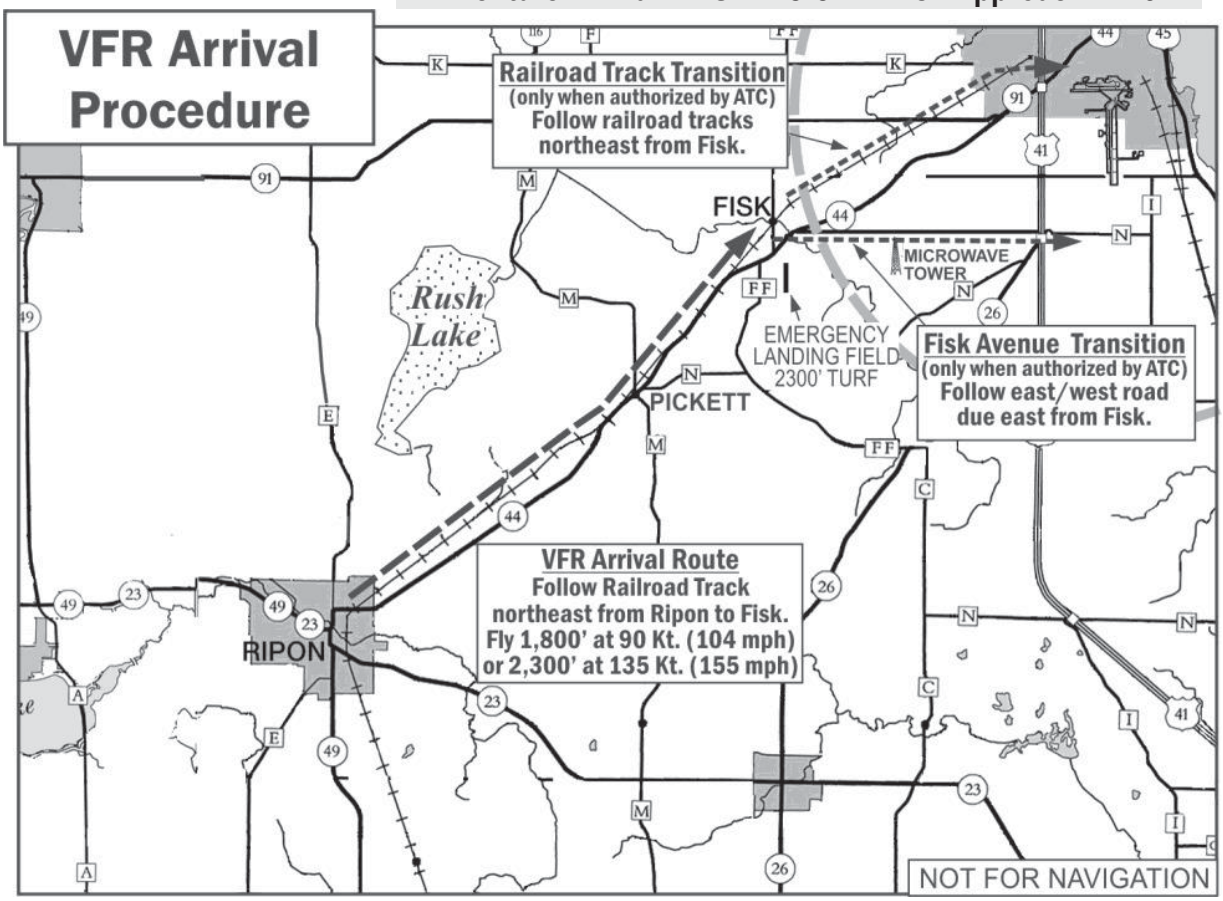
GPS-equipped pilots may reference RIPON and FISKE intersections, but must visually navigate directly over the railroad tracks.

If possible, lower your landing gear prior to reaching Fisk.

The small town of Pickett is about 4 miles from Fisk (you may see steam from the grain drying facility adjacent to the tracks). At this point, listen very carefully for ATC instructions directed at your aircraft.

Fisk VFR Arrival to OSH

AirVenture Arrival ATIS: 125.9 **Fisk Approach: 120.7**



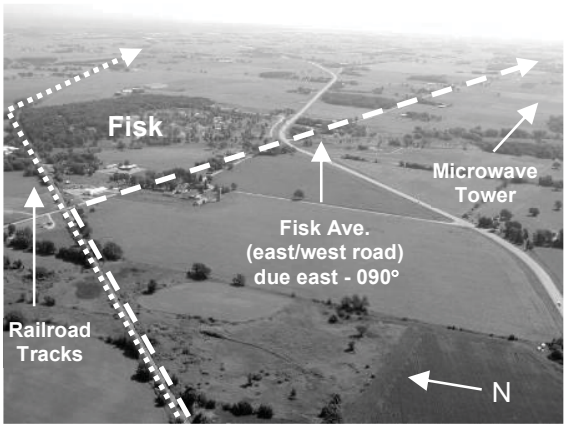
At Fisk

Controllers will call your aircraft by color and type (if known). No verbal responses are required. If you do not understand the ATC instructions, or need clarification, request instructions on frequency.

When you are in the immediate vicinity of Fisk (less than 2 miles), ATC will issue a runway assignment, transition to the airport and appropriate Tower frequency to monitor. **Do not proceed beyond Fisk or change to Tower frequency without ATC authorization.**

Fisk to Oshkosh

Transition instructions to the airport will either be "**Follow the railroad tracks northeast**" or "**Reaching Fisk, turn right and follow east/west road (Fisk Ave.)**".



(continued on next page)

Fisk VFR Arrival to OSH

Fisk to Oshkosh (continued)

Railroad Track Transition: Continue following the railroad tracks northeast from Fisk to Oshkosh.

Fisk Avenue Transition: Fisk Avenue runs 090° from the town of Fisk. Do not confuse this road with Highway 44.
A large microwave tower is located approximately one mile east of Fisk and ¼ mile south of Fisk Avenue. Navigate **close** to Fisk Ave. on south side, but remain north of the microwave tower.

Landing Approach at Oshkosh

A waiver has been issued reducing arrival and departure separation standards for category 1 and 2 aircraft (primarily single-engine and light twin-engine aircraft).

Pilots should be prepared for a combination of maneuvers that may include a short approach with descending turns, followed by touchdown at a point specified by ATC which may be almost halfway down the runway. **Use extra caution to maintain a safe airspeed throughout the approach to landing.**

Arrivals and Departures on Separate ATC Frequencies

Note that two separate ATC radio frequencies are used for each landing runway – departures on one frequency and arrivals on a separate frequency. As a result, landing pilots may see aircraft departing from or crossing the landing runway, but not hear ATC communications with those aircraft.

Flights of Aircraft

Some pilots travel together to AirVenture as a "flight". Flights approaching Ripon should, traffic volume permitting, advise Fisk ATC (120.7) of position, identifying as a "flight of number and type aircraft."

Flights that choose to maintain formation less than ½ mile in-trail are responsible for their own separation between members of the flight.

Although flight members generally want to remain together to the airport, this may not always be feasible. Make advance reconnection plans with all flight members in the event you become separated from one another upon arrival.

Large Formation Arrivals

To increase efficiency and safety of traffic arriving at Wittman Regional Airport, several large groups of similar-performance aircraft have been approved to make formation arrivals. Participation in these arrivals is limited to aircraft registered in each group and requires an FAA letter of authorization.

These formation arrivals are scheduled for late morning through mid-afternoon on Saturday, July 20, and for early morning on Sunday, July 21. Weather and other factors may change the schedule. Traffic using the Fisk VFR arrival to Oshkosh can expect delays during these large formation arrivals.

Fisk Holding

Holding

ATC controllers at Fisk will advise on 120.7 when holding is necessary.

Aircraft at or beyond Ripon: Continue to Fisk and enter the Rush Lake holding pattern as depicted.

Aircraft approaching Ripon: Watch for traffic to follow and enter the hold at Green Lake as depicted.

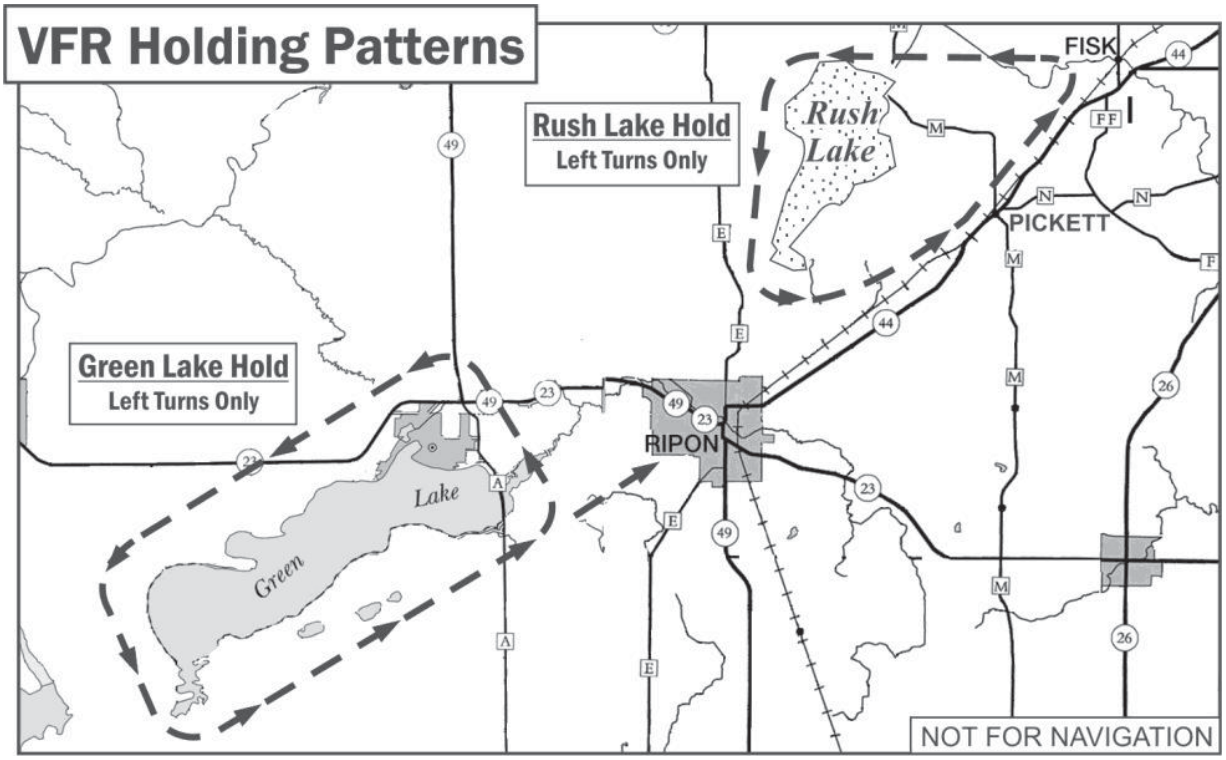
Holding pattern saturation: If the Green Lake holding pattern is observed or reported to be nearing capacity, stay clear and proceed no further. Instead, make left turns over a point on the ground and continue to hold until ATC advises you to proceed or to transition into one of the published holding patterns.

Holding Altitudes/Airspeeds: Maintain 90 knots (or maximum cruise speed if below 90 knots) and 1,800' MSL. If unable, maintain 135 knots and 2,300' MSL.

Clearing Holding Patterns

When ATC advises aircraft to depart a specific holding pattern, those aircraft shall transition to the arrival procedure in the following manner:

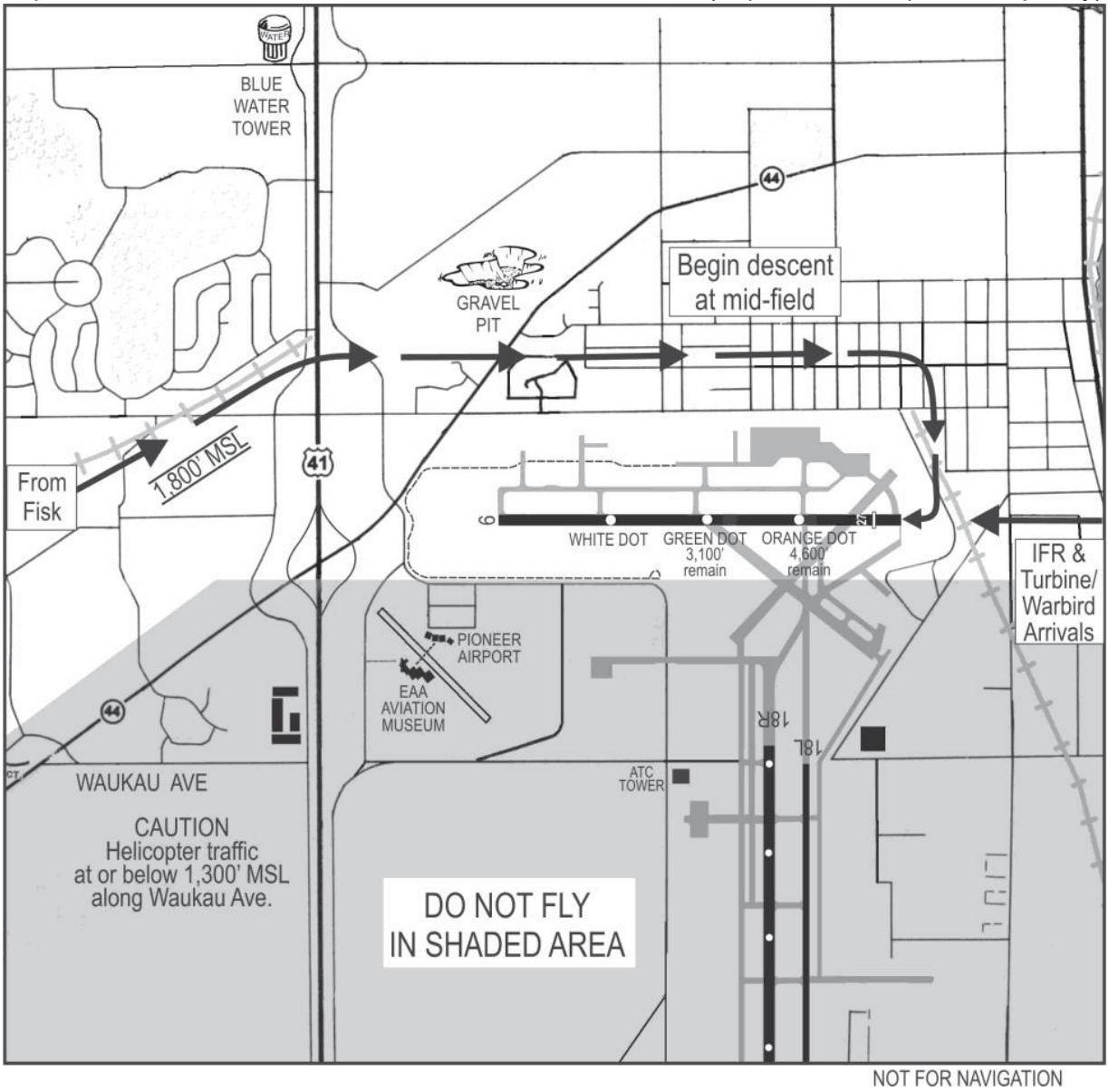
- Rush Lake: Rejoin railroad tracks at the southeast corner of Rush Lake and proceed northeast towards Fisk.
- Green Lake: Upon reaching the south-east corner of Green Lake, proceed directly to Ripon and follow the railroad tracks northeast towards Fisk.
- Others: Proceed to Ripon and follow the railroad tracks northeast towards Fisk.



Fisk VFR Arrival to OSH RWY 27

This Arrival May Require a Short Approach.

Airport Elevation 808’ Oshkosh Tower North: **118.5** (Departures on separate frequency)



Turn base prior to reaching shoreline. **Do not** continue past shoreline **unless advised by ATC.**

If a go-around is needed, notify ATC immediately for resequencing instructions.

RWY 27 landing distances
Displaced Threshold...5,647’
Orange Dot.....4,600’
Green Dot.....3,100’

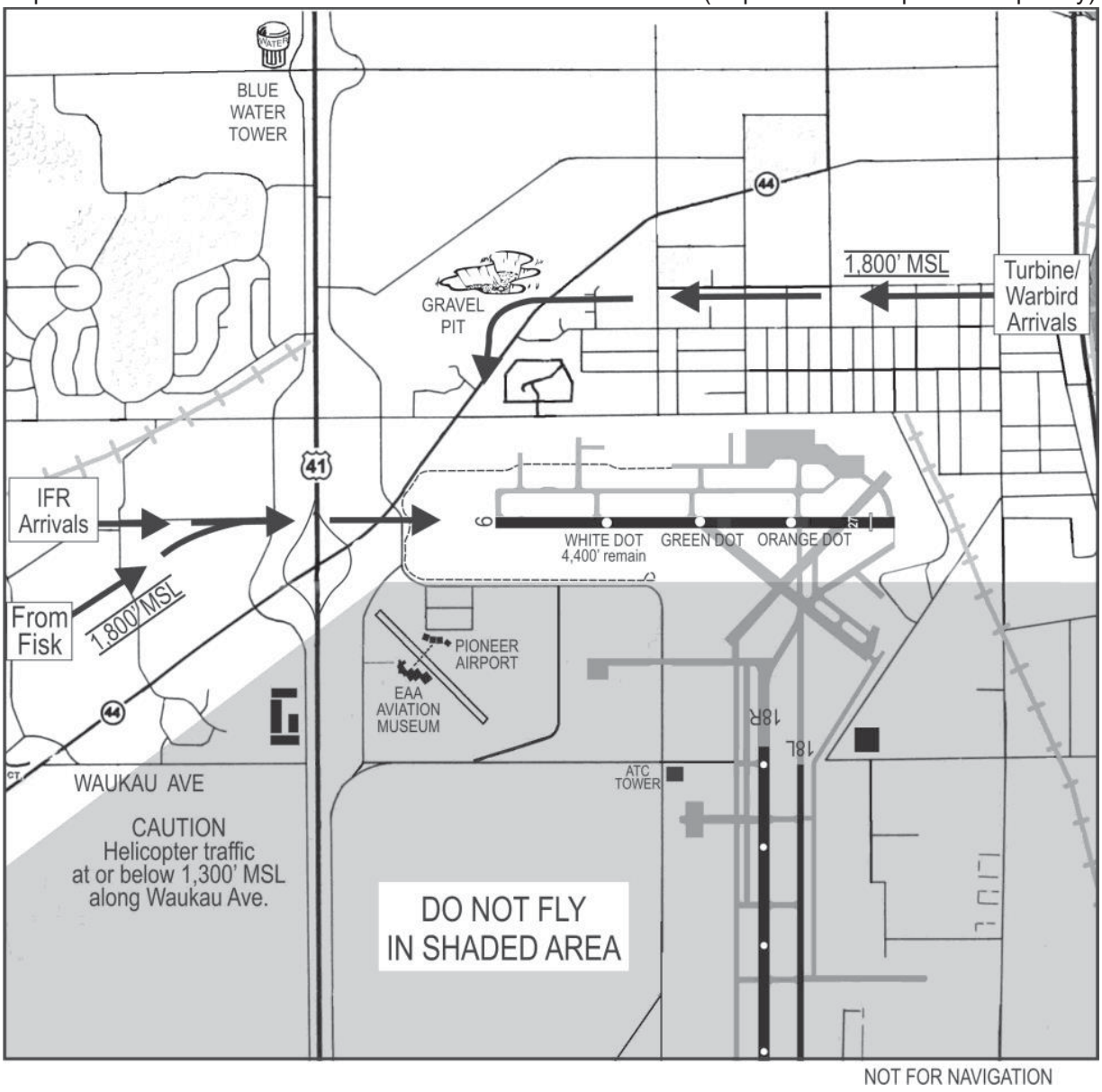
After landing and when speed permits, aircraft under 6,250 lbs. are required to exit RWY 27 to the left or right, as directed, onto the sod. **Do not turn back onto the runway.** Be alert and use caution for hazards marked with cones and/or flags.

After exiting runway, you must put a parking/camping sign in windshield and follow EAA flagperson directions.

Maintain a safe airspeed and avoid low turns on landing approach.

Fisk VFR Arrival to OSH RWY 9

Airport Elevation 808’ Oshkosh Tower North: **118.5** (Departures on separate frequency)



If a go-around is needed, notify ATC immediately for resequencing instructions.

RWY 9 landing distances
Threshold ..... 6,179’
White Dot ..... 4,400’

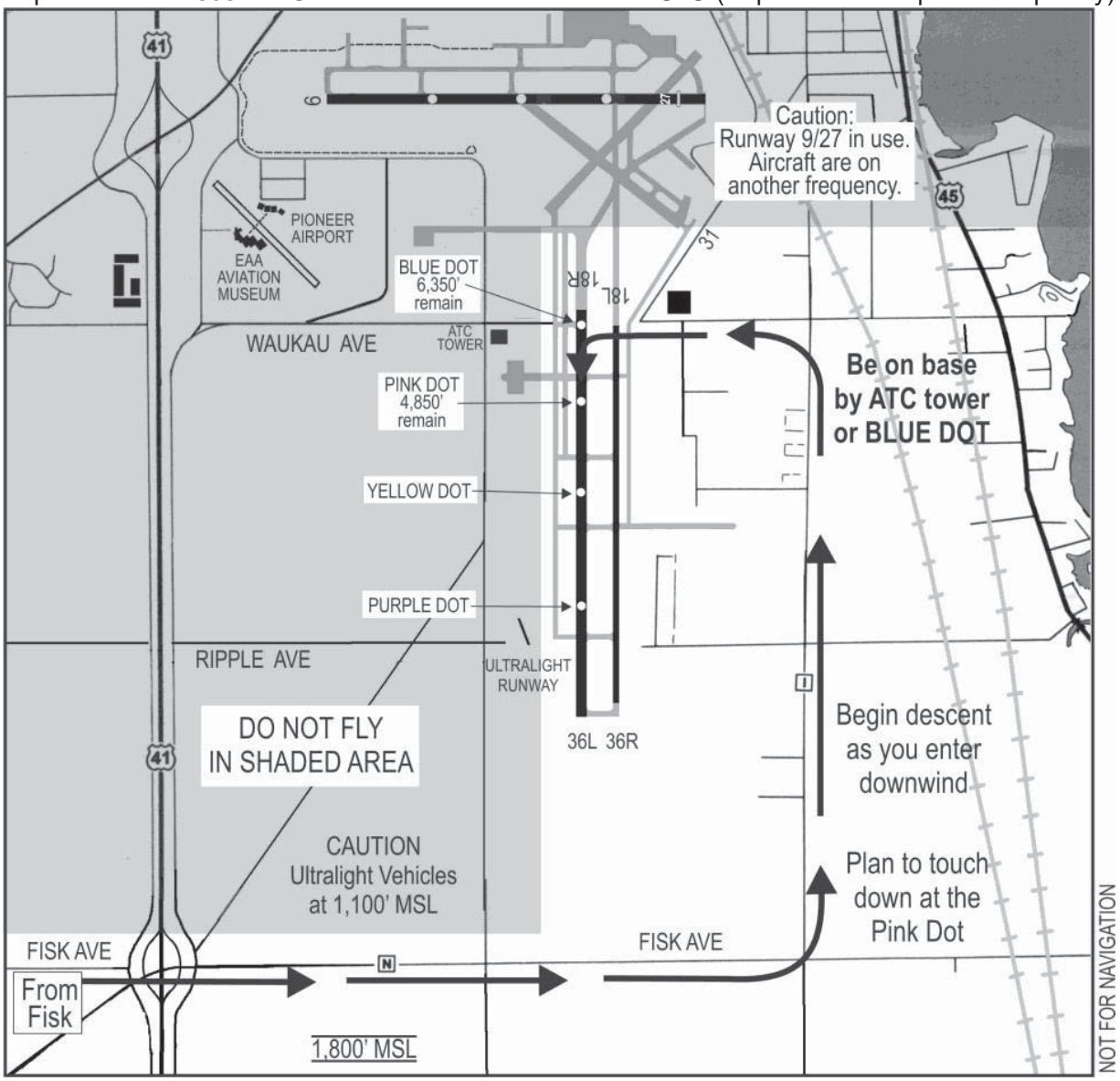
After landing and when speed permits, aircraft under 6,250 lbs. are required to exit RWY 9 to the left or right, as directed, onto the sod. **Do not turn back onto the runway.** Be alert and use caution for hazards marked with cones and/or flags.

After exiting runway, you must put a parking/camping sign in windshield and follow EAA flagperson directions.

Fisk VFR Arrival to OSH RWY 18R

This Arrival Requires a Short Approach and a Long Landing.

Airport Elevation 808’ Oshkosh Tower South: **126.6** (Departures on separate frequency)



Turn base abeam the Blue Dot. If unable, make immediate right turn to the Southeast for resequencing, **Do not** continue past the Blue Dot **unless advised by ATC.**

The RWY 18R relocated threshold is well <u>beyond</u> the concrete edge and is marked by Runway End Identification Lights and white lines. Do not land short of this threshold without specific Tower approval.

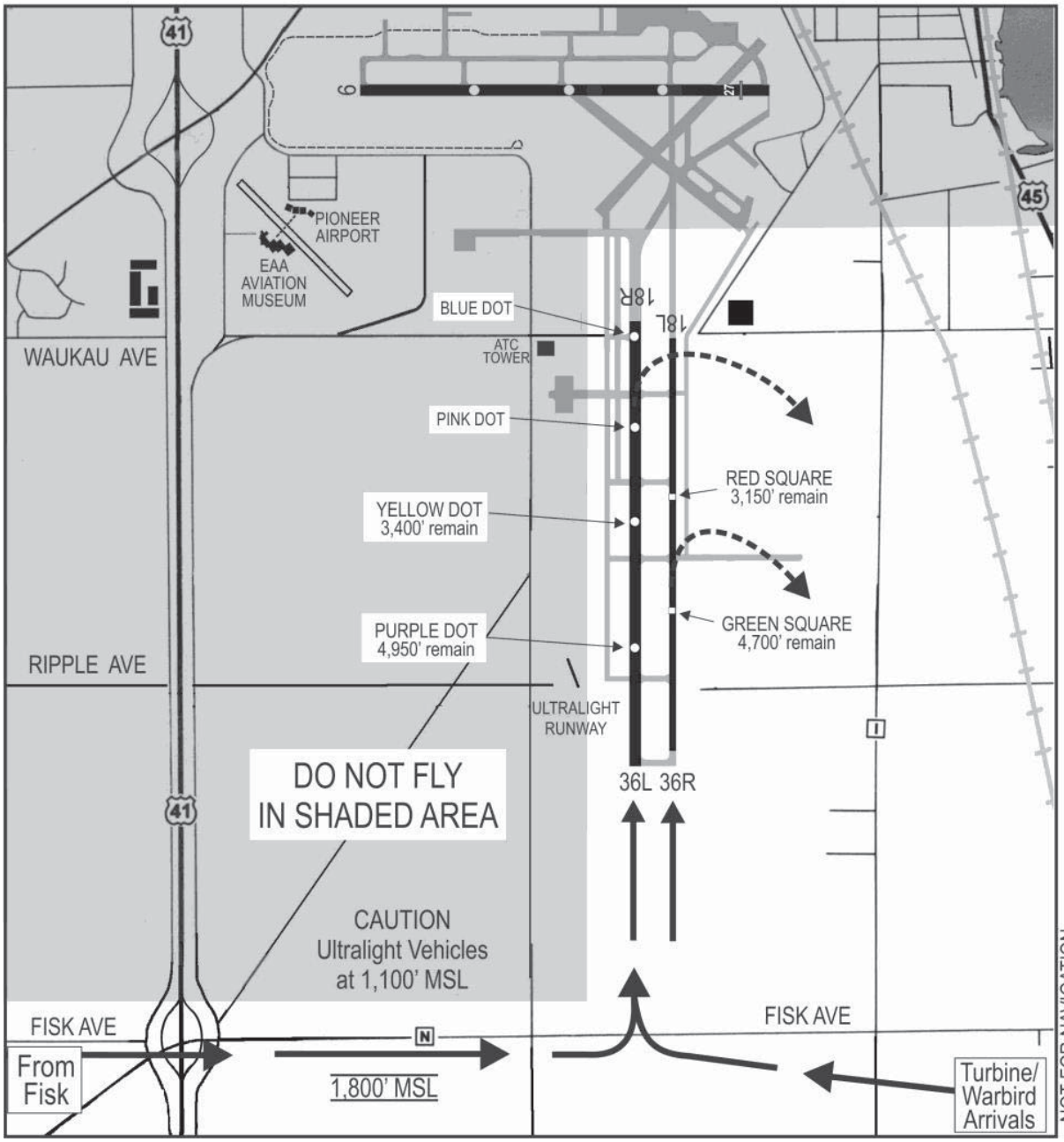
If a go-around or pattern break is needed, notify ATC immediately.

<u>RWY 18R landing dist.</u>
Blue Dot.....6,350’
Pink Dot.....4,850’

Maintain a safe airspeed and avoid low turns on landing approach.

Fisk VFR Arrival to OSH RWYs 36L/R

Airport Elevation 808’ Oshkosh Tower South: **126.6** (Departures on separate frequency)



If a go-around is needed, notify ATC immediately and do not continue past ATC Tower. If unable to notify ATC, make a right turn to the southeast prior to ATC tower for resequencing.

RWY 36L landing dist.	RWY 36R landing dist.
Yellow Dot ... 3,400’	Red Square..... 3,150’
Purple Dot ... 4,950’	Green Square .. 4,700’
Threshold .... 6,700’	Threshold..... 6,300’ (50’ wide)

Aircraft landing on RWY 36L **must not** roll beyond the Blue Dot without specific Tower authorization.

Aircraft landing on RWY 36R can expect to land long and roll to end for parking. **Do not turn left unless advised by ATC. If so, you must hold short of RWY 36L until cleared via 126.6 or a pink shirt OSH controller.**

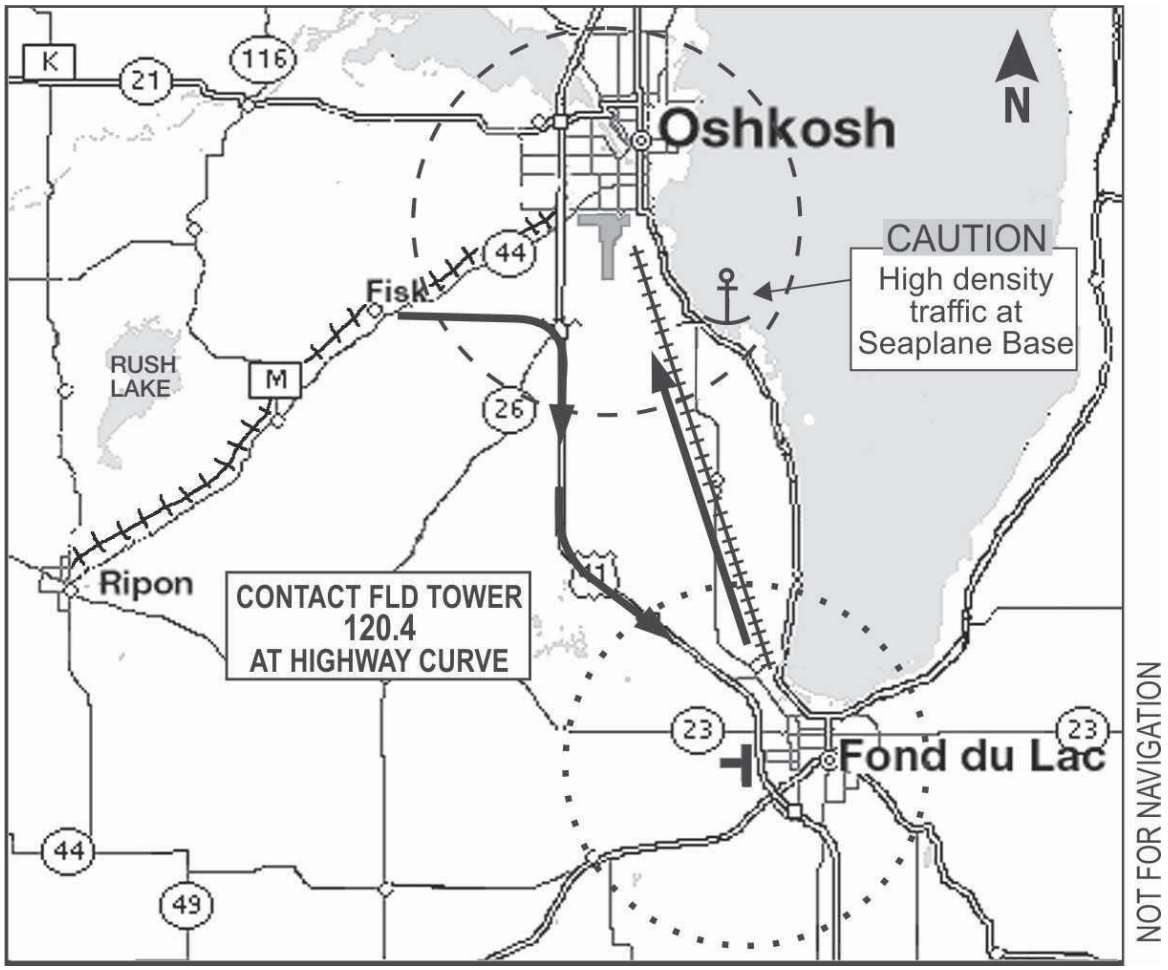
Fond du Lac Diversion Procedure

This procedure will be used if ATC determines that aircraft intending to land at Oshkosh should be diverted to Fond du Lac (FLD), such as when OSH is expected to be closed for an extended period. This procedure is to be used only when directed by ATC.

ATC will make a best effort to expedite return to Oshkosh when conditions permit.

If Fisk ATC directs you for this procedure:

- Fly eastbound over Fisk Avenue with ½ mile in-trail spacing at 90 kt. and1,800'.
- Monitor the FLD ATIS (121.1).
- At six-lane Highway 41, turn right and fly southbound over the highway.
- Abeam the highway curve, contact FLD Tower (**120.4**). Further information about landing at FLD is on pages 20-21.

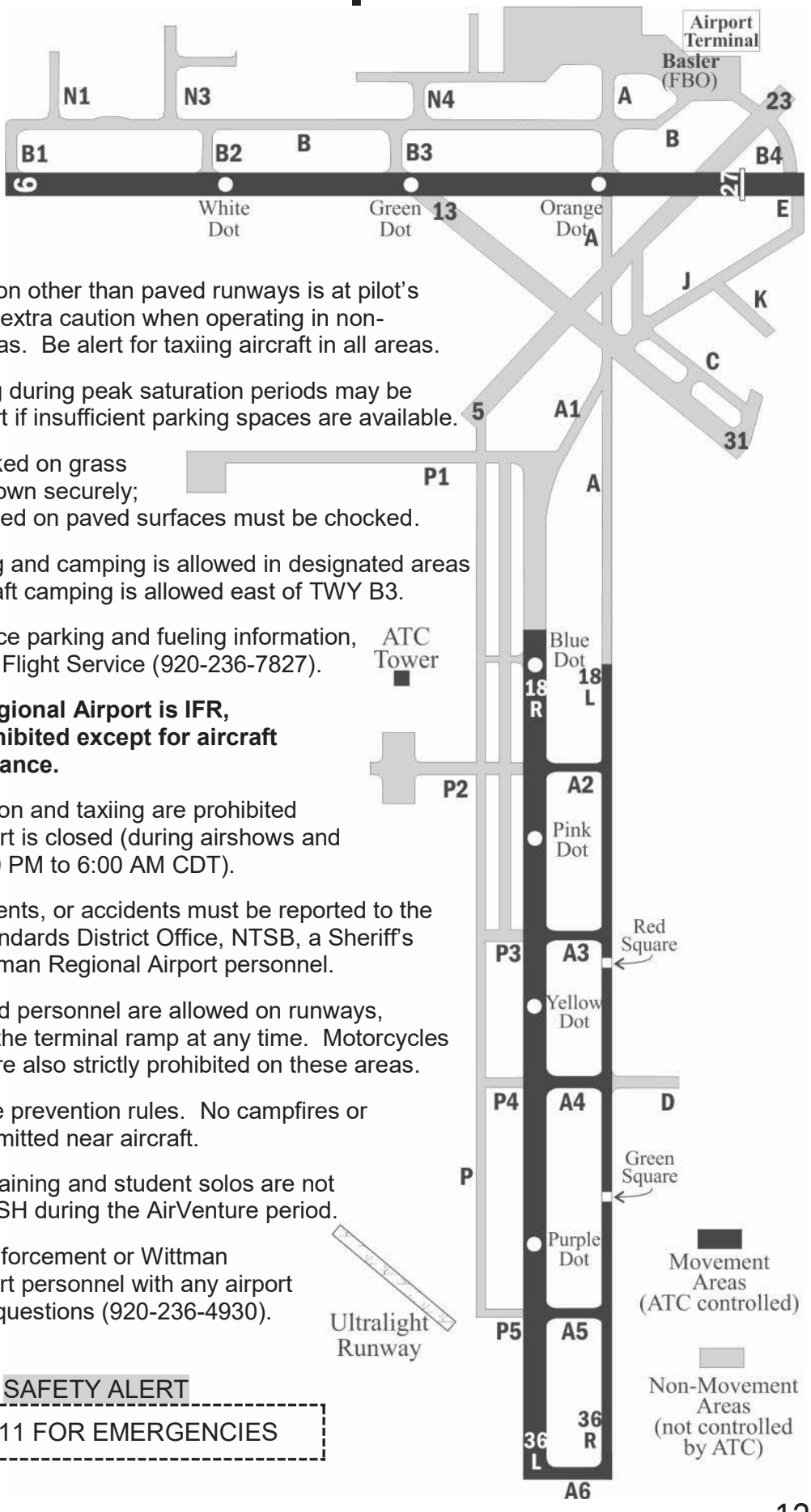


Recovery to Oshkosh

Aircraft that used the procedure above and intend to return to Oshkosh will be directed to a separate parking area at FLD for expedited handling when conditions permit. This return procedure will only be used for those diverted aircraft ready to depart within a designated timeframe.

FLD Tower will issue specific departure instructions to these aircraft. They will proceed northbound along the railroad tracks and monitor Oshkosh Tower (126.6) when three miles south of OSH for runway assignment and possible frequency change.

Oshkosh Airport Notes



- All movement on other than paved runways is at pilot's own risk. Use extra caution when operating in non-movement areas. Be alert for taxiing aircraft in all areas.
- Aircraft landing during peak saturation periods may be asked to depart if insufficient parking spaces are available.
- All aircraft parked on grass must be tied down securely; all aircraft parked on paved surfaces must be chocked.
- Aircraft parking and camping is allowed in designated areas only. No aircraft camping is allowed east of TWY B3.
- For hard-surface parking and fueling information, contact Basler Flight Service (920-236-7827).
- **If Wittman Regional Airport is IFR, taxiing is prohibited except for aircraft with IFR clearance.**
- Engine operation and taxiing are prohibited when the airport is closed (during airshows and overnight: 8:00 PM to 6:00 AM CDT).
- Mishaps, incidents, or accidents must be reported to the FAA Flight Standards District Office, NTSB, a Sheriff's Deputy or Wittman Regional Airport personnel.
- Only authorized personnel are allowed on runways, taxiways, and the terminal ramp at any time. Motorcycles and bicycles are also strictly prohibited on these areas.
- Observe all fire prevention rules. No campfires or stoves are permitted near aircraft.
- Student pilot training and student solos are not permitted at OSH during the AirVenture period.
- Contact law enforcement or Wittman Regional Airport personnel with any airport safety related questions (920-236-4930).

SAFETY ALERT

CALL 911 FOR EMERGENCIES

VFR Departure from Oshkosh

- Pilots are urged to obtain a complete weather briefing and review all applicable NOTAMs prior to departure. FSS weather briefings and flight plan filing services are available via phone at 800-WX-BRIEF.
- You must place a sign in your windshield with the letters "VFR" to show ground personnel that you intend to depart VFR. Note that Wittman Regional Airport is closed to departing aircraft from 8 PM until 6 AM CDT daily, during the scheduled airshows and at other times.
- Monitor the Departure ATIS (121.75) prior to engine start. There must be no engine operation or aircraft movement until the Departure ATIS indicates the airport is open**.**
- **When the airport is IFR, all taxiing is prohibited except for aircraft with an IFR clearance.**
- Taxi toward the designated runway without contacting Ground Control. Follow EAA flagperson instructions. To expedite departures, you may be directed to a different runway than you expected.
- FAA controllers wearing pink shirts are stationed on elevated platforms near the runway departure points. Monitor their radio frequency, listed on page 15.
- After takeoff, fly the routes depicted on page 15, based on your departure runway.
  -- You must avoid the Ripon/Fisk arrival route and the AirVenture Seaplane Base.
  -- RWY 36L departures must turn right to heading 150° prior to ATC Tower.
- Milwaukee Approach Control will not provide VFR traffic advisories within 70 NM of Oshkosh.

A waiver has been issued reducing arrival and departure separation standards for category1 and 2 aircraft (primarily single-engine and light twin engine aircraft).

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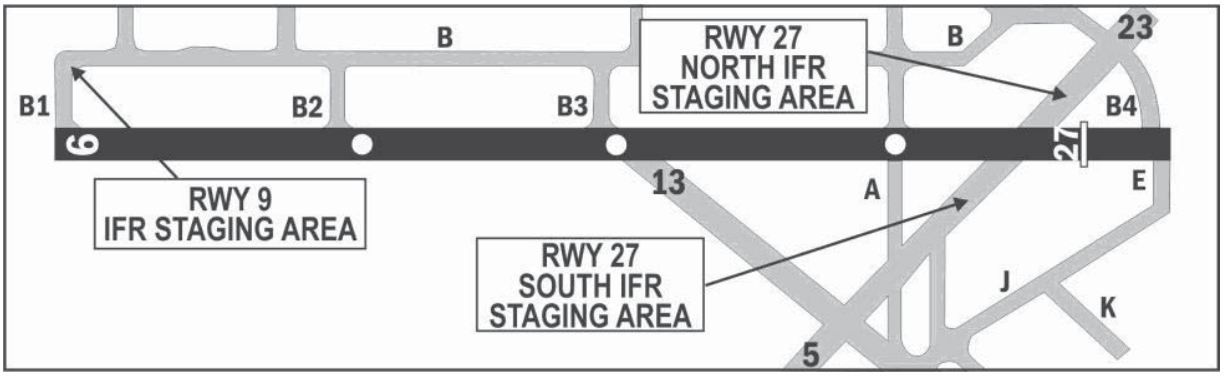
Another waiver has been issued amending "Line Up and Wait" procedures; more than one aircraft may be instructed to "Line Up and Wait" on the runway using both sides of the centerline.

IFR Departure from Oshkosh

- See page 26 for departure routings.
- **You must place a sign in aircraft windshield with block letters "IFR"** to specify routing by ground personnel.
- Monitor Departure ATIS (121.75) prior to engine start.
- Request IFR departure clearance from Clearance Delivery (119.05) no more than 20 minutes prior to your STMP reservation time (see page 24). Do not start engines until authorized by Clearance Delivery.
- Remain on 119.05 until told to contact Ground Control (132.3).
- Taxi as instructed by Ground Control and EAA flagpersons. Unless directed by Ground Control, ensure you are established in the IFR staging area for your assigned runway (see chart below)
- IFR clearances are not valid without a transponder code. Expect transponder code assignment just prior to departure. **Do not take off without an assigned transponder code.**

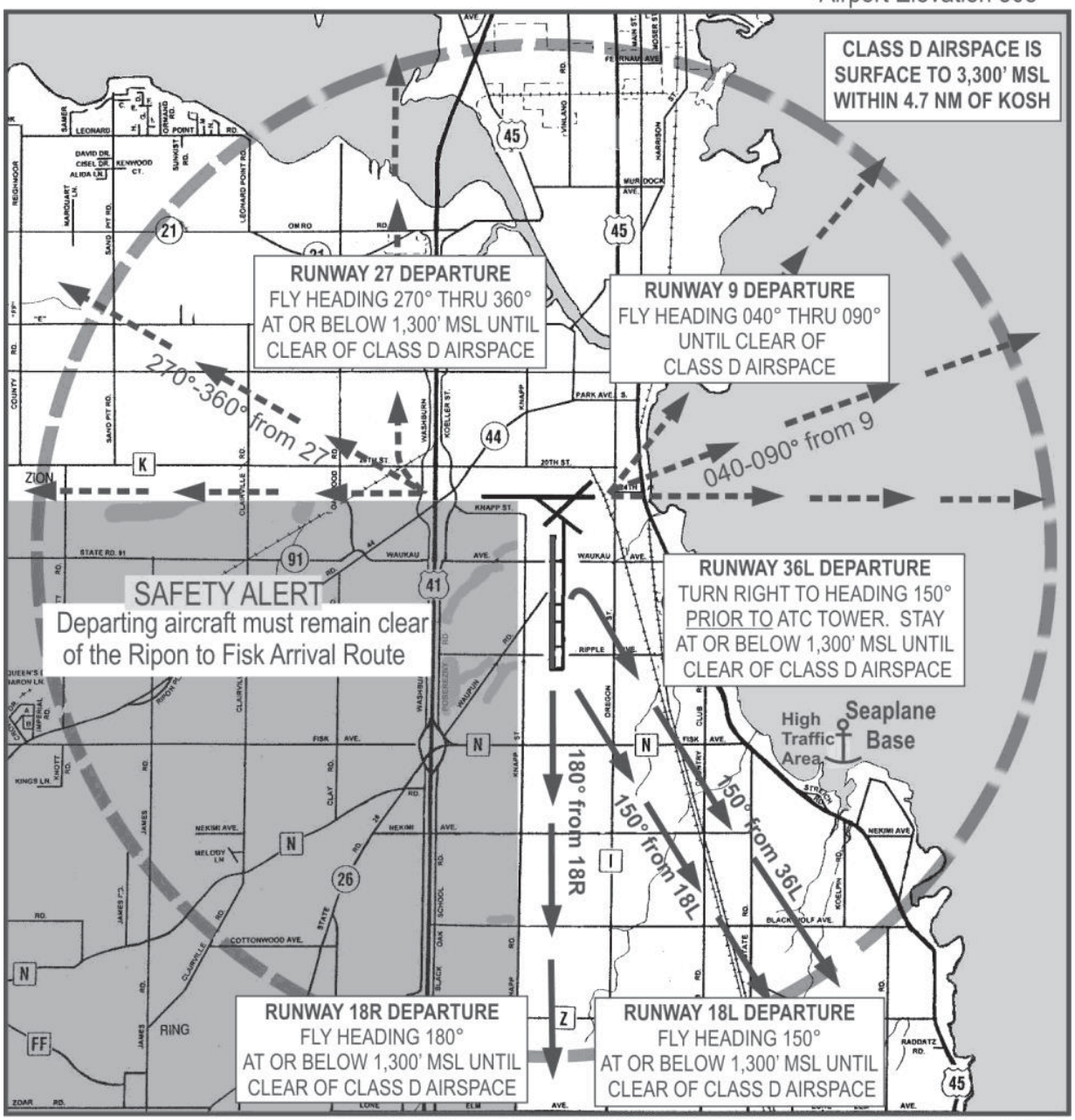


VFR Departure from Oshkosh

Departure From	Remaining	Monitor
RWY 9 at TWY B1	6,150’	128.75
RWY 9 at TWY B2	4,600’	128.75
RWY 18L	6,300’	126.6
RWY 18R at Tower Road	6,300’	118.9
RWY 27 at TWY A	4,600’	128.75
RWY 36L at TWY P5	5,050’	118.9

Oshkosh Departure Frequencies	
AirVenture Departure ATIS	121.75
Oshkosh Clearance Delivery	119.05
Oshkosh Ground Control	132.3
Oshkosh UHF	290.9
Green Bay Radio	122.25
OSH VORTAC	111.8

Airport Elevation 808’



NOT FOR NAVIGATION

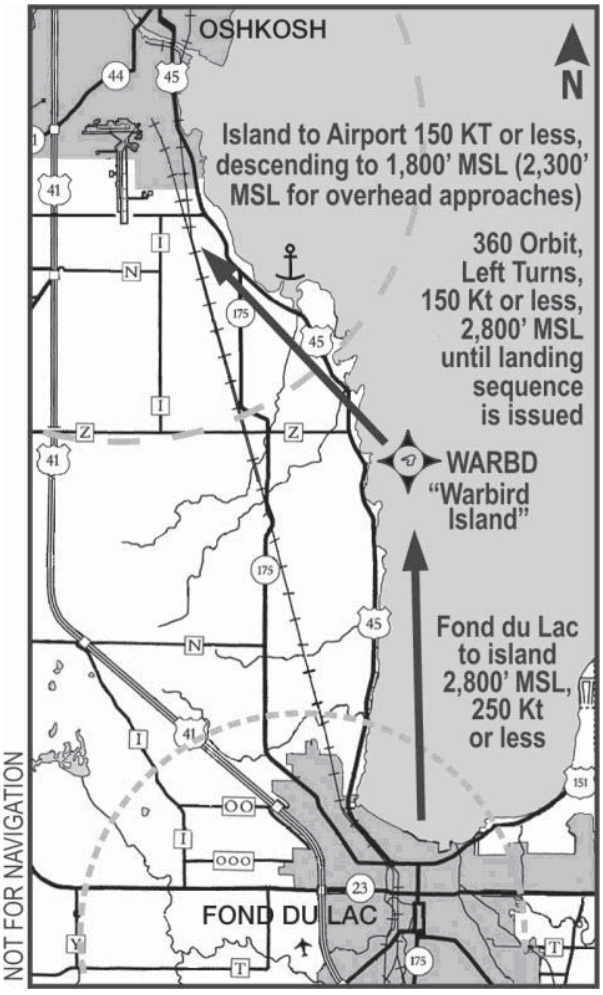
SAFETY ALERT: Do not depart on RWYs 13/31 or 5/23; they are closed.

Turbine/Warbird Arrival

Restricted to aircraft types listed

- This procedure is restricted to high-performance turbojet, turboprop, and Warbird aircraft capable of cruising at 130 knots or greater. Slower Warbird aircraft shall use the VFR Arrival from Ripon (pages 4-12).
- The city of Fond du Lac is the entry point for all Turbine/Warbird arrivals. Monitor the AirVenture Arrival ATIS (125.9) for anticipated landing runways (see charts on pages 8-11).
- Avoid the Fond du Lac County Airport (FLD) airspace. FLD has a temporary control tower from Saturday, July 20 until Sunday, July 28, 2019 (operating hours on page 20). FLD airspace is 3,300' MSL and below within 4 NM.
- Aircraft weighing more than 12,500 pounds must advise ATC on initial contact.
- All aircraft shall report arrival over the city of Fond du Lac and again at Warbird Island to Oshkosh Tower on the appropriate tower frequency:
  - **When RWY 36L/R is in use, report on 126.6**
  - **Otherwise report on 118.5**

  Examples: "Blue and yellow Wildcat, Fond du Lac"
  "White Citation, Warbird Island"
- Proceed from the city of Fond du Lac direct to Warbird Island (6 miles SE of OSH, along the west shore of Lake Winnebago). When within 4 NM from FLD, descend to maintain 2,800' MSL.
- Pilots may be instructed to orbit the island until a landing sequence is issued. **Use caution; make left turns; and stay alert for other aircraft!**
- When cleared at Warbird Island, proceed to the assigned runway as directed by ATC, reduce speed to 150 knots or less and begin descent to 1,800' MSL (2,300' MSL for overhead approaches). Pilots are cautioned to maintain VFR separation at all times.
- If your landing clearance appears unsafe because of spacing, speed of preceding aircraft, or any other reason, go around! A new sequence will be issued.
- Pilots may request a 360° overhead approach to RWY 36 L/R or RWY 27. Break altitude is 2,300' MSL. Expect a right break only.
- ATC may initiate a 360° overhead approach to other runways as needed for spacing. Break altitude will be 2,300' MSL. Expect a north break for RWYs 9/27 and an east break for RWYs 18/36.
- Under all circumstances, avoid the VFR arrivals area southwest of OSH.
- Pilots of Warbird aircraft are encouraged to call Warbird Ground (123.9) when arriving at the Warbird area and also before starting engines for departure.



AirVenture Seaplane Base

The EAA AirVenture Seaplane Base, 3.8 NM southeast of OSH (134º), on the west shore of Lake Winnebago, will be operational Saturday, July 20 – Sunday, July 28, 2019 (Monday-Saturday 8:00 AM-6:00 PM and Sunday 8:00 AM-5:00 PM).

VFR Arrival

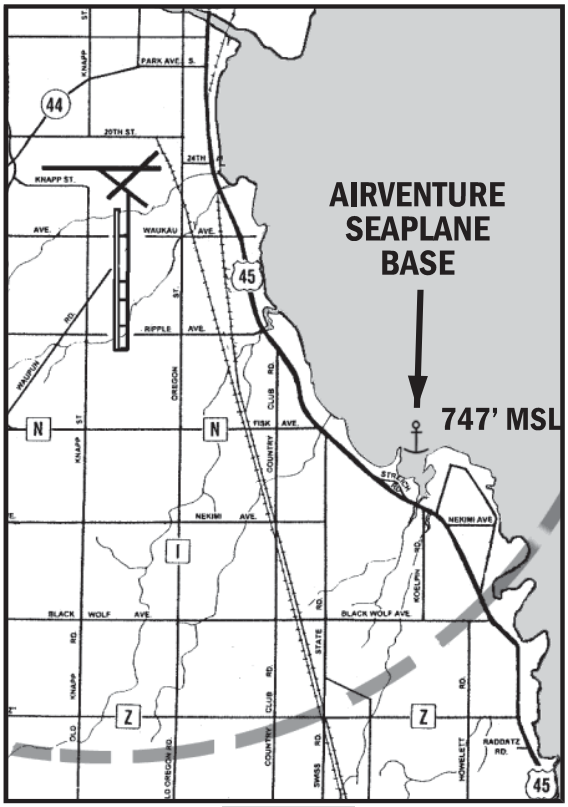
VFR flight plans should use destination identifier 96WI.

At times, Lake Winnebago can have very rough water conditions. Water condition information is available by radio call to 123.3 or by telephone at 920-230-7829. A rough water alternate landing area at Warbird Island is shown on page 16.

Seaplane arrivals should avoid nearby Class D airspace, except when on approach and departure east from the Seaplane Base over Lake Winnebago.

Do not use the Fisk VFR arrival route and do not contact Oshkosh Tower.

Fly a pattern over water, 1,350' MSL or below, with left turns. Landing and takeoff patterns are at pilot's discretion. Avoid flying low over boats and structures.



NOT FOR NAVIGATION

CAUTION

Turbine and Warbird aircraft along shoreline at or above 1,800' MSL.

AirVenture Seaplane Base	123.3
Green Bay Radio	122.25
AirVenture Arrival ATIS	125.9
AirVenture Departure ATIS	121.75
Seaplane Base telephone	920-230-7829

Seaplane Base Notes

Information on housing, food, activities, arrival procedures, and important **rough water alternate landing areas** is available at *www.eaa.org/seaplanebase,* by calling 920-203-9099, or by e-mail before the event to *airventureseaplanes@gmail.com*.

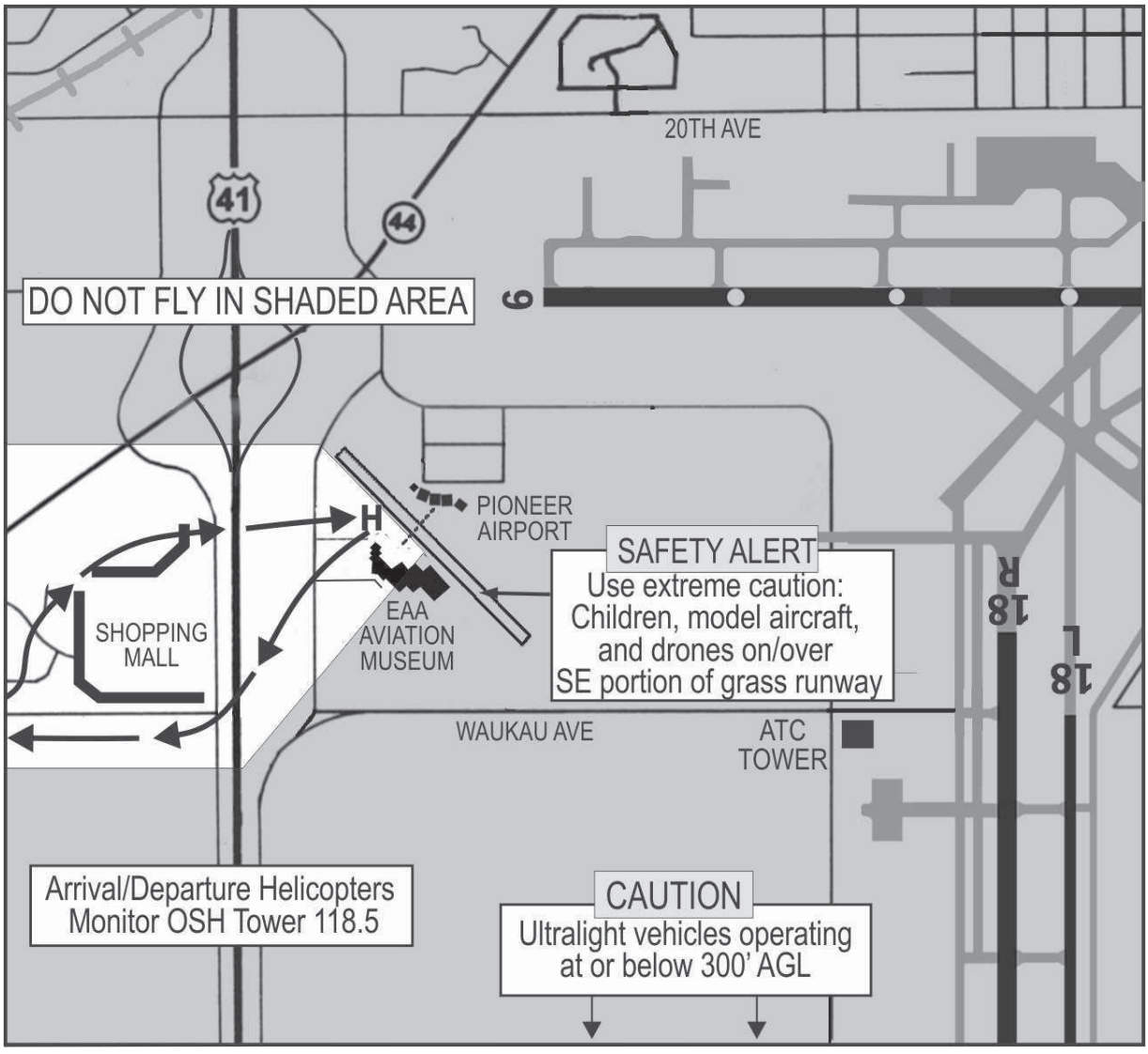
- The Seaplane Base radio frequency is 123.3; however a radio is not required. Operators are authorized to deviate from the two-way radio communications requirements of FAR 91.129(c) for arriving and departing at EAA AirVenture 2019.
- Helicopter operations require prior approval via telephone (920-230-7829).
- Pilot briefings are mandatory prior to local flights or departures.
- Taxi slowly in bay near lagoon; heavy traffic enters and leaves lagoon.
- No takeoff or landings allowed in lagoon.
- No takeoffs allowed directly over seaplane base shoreline or crowds. With south wind use lagoon opening as line of reference for takeoffs and turn east to stay over lagoon and farm fields when climbing.
- Boats are available to take you to and from your aircraft.
- Larger aircraft may anchor in the bay next to the lagoon.
- Daily camping with showers is available to pilots and crew operating from the base.
- Bus transportation is available to and from the main EAA AirVenture site.
- Wittman Regional Airport (OSH) is closed during airshows, so you must land outside its Airshow Demonstration Area (page 1) and then taxi to the Seaplane Base. No operations are allowed during TFRs.
- Amphibian aircraft may also land at OSH and park in a designated location in the Vintage Aircraft area. Use the Fisk VFR Arrival (pages 4-11) and windshield sign code SP as described on page 1.

Transient Helicopter VFR Arrival/Departure

The AirVenture helipad and long-term helicopter parking are located on Pioneer Airport. The helipad is designated on a turf area with a white box surrounding the letters “HELI”. Camping is not allowed in this area.

- Obtain AirVenture Arrival ATIS (125.9) prior to entering Oshkosh Class D airspace.
- Helicopters arriving VFR shall enter the Oshkosh Class D airspace from the west, following and remaining north of Waukau Ave. at 1,300’ MSL. Stay south of Runway 9/27 and monitor Oshkosh Tower (118.5).
- Caution: High-volume, fixed-wing traffic along railroad tracks to Runway 9/27; Ultralight vehicles operating at or below 1,100’ MSL south of Waukau Ave.; Continuous Pioneer EAA helicopter operations; Zeppelin mooring near helipad. Landing at Pioneer Airport is at pilot’s discretion.
- Transient helicopter operations are limited to arrivals and departures; no local flights.
- Arrivals/departures are not authorized when Wittman Regional Airport (OSH) is IFR or closed, including during the daily airshows (times on page 1).
- Helicopters may depart VFR from Pioneer Airport at pilot’s discretion. Obtain AirVenture Departure ATIS (121.75) and then monitor Oshkosh Tower (118.5). Depart north of the AirVenture Museum and remain well south of the RWY 9/27 extended centerline. Follow and remain south of Waukau Ave at 1,300’ MSL until clear of Class D airspace to the west.

Helicopter operators are authorized to deviate from the two-way radio communications requirements specified in FAR 91.129(c) for arriving and departing at EAA AirVenture 2019.



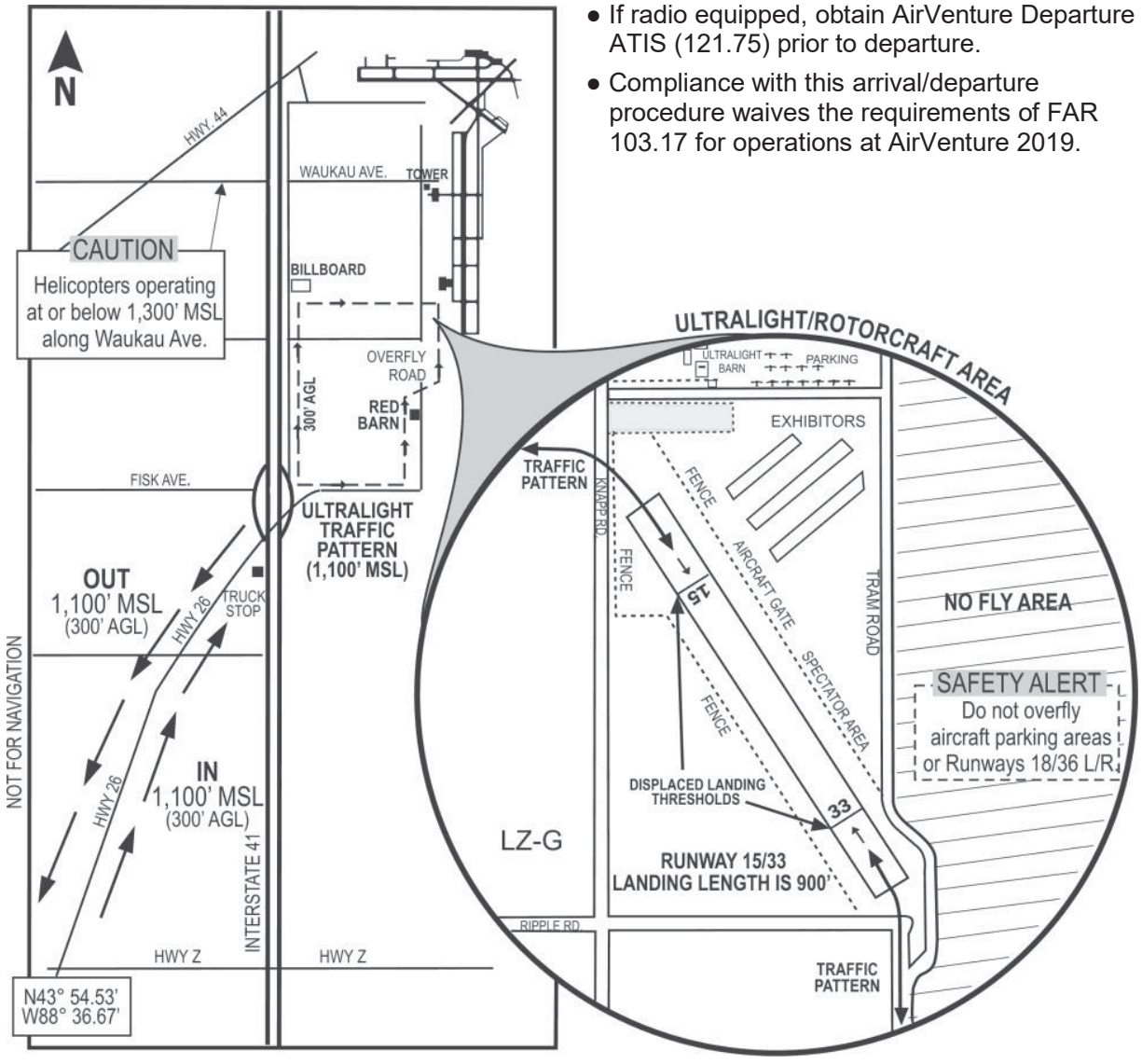
Ultralight/Homebuilt Rotorcraft Arrival/Departure

This procedure is effective Saturday, July 20, and Sunday, July 21, 2019, 7:00 AM to 8:00 PM CDT, and Monday July 22 through Sunday July 28, 2019, 7:00 AM to 2:30 PM and 6:30 PM to 8:00 PM CDT.

The procedure may be used only after receiving approval from EAA Ultralight Flightline Operations (920-230-7759).

Helicopters and gyroplanes flying in should arrive between Noon and 2:00 PM CDT unless prior arrangements have been made. Large helicopters should use the Transient Helicopter procedure (page 18) and land at Pioneer Airport.

- If radio equipped, monitor AirVenture Arrival ATIS (125.9) prior to entering at Highway Z and Highway 26. Then monitor Ultralight/ Rotorcraft advisory frequency (123.75).
- Enter at Highway Z and Highway 26, approximately 5 miles SW of Oshkosh.
- Be alert for aircraft inbound from Fisk entering a left base for RWY 36L/R. Maintain a vigilant watch at all times while flying into or out of the Oshkosh area.
- Pattern is clockwise (right turns) for landings to the southeast. Pattern is counter-clockwise (left turns) for landings to the northwest.
- Ultralights/Rotorcraft must remain clear of OSH RWYs 18L/R and 36L/R.
- Runway closure will be marked with a yellow X. Be prepared to divert to an alternate airport when runway is closed.
- Use caution for numerous obstructions near approach and departure ends of Ultralight RWYs 15 and 33.
- Departing traffic has the right of way.
- Do not fly over people, houses, livestock, parked aircraft, etc. lower than 300' AGL.
- If radio equipped, obtain AirVenture Departure ATIS (121.75) prior to departure.
- Compliance with this arrival/departure procedure waives the requirements of FAR 103.17 for operations at AirVenture 2019.



Fond du Lac Arrival/Departure

The FAA will operate a temporary air traffic control tower at the Fond du Lac County Airport (FLD) from Saturday, July 20 through Sunday, July 28, 2019. The Tower will be operational from 7:00 AM until 8:30 PM CDT, except closing at 5:00 PM CDT on Sunday, July 28.

Communication with FLD Tower is required when at or below 3,300' MSL within 4 NM of FLD. See graphic below for locations to contact Tower.

- Because of expected delays due to heavy traffic volume, watch your fuel status closely.
- To enhance safety, arrivals after sunset are discouraged.
- Be alert for high-density traffic en route to Oshkosh and for Turbine/Warbird aircraft in vicinity of FLD airport.
- Turn lights on within 30 miles of FLD.

VFR Arrival

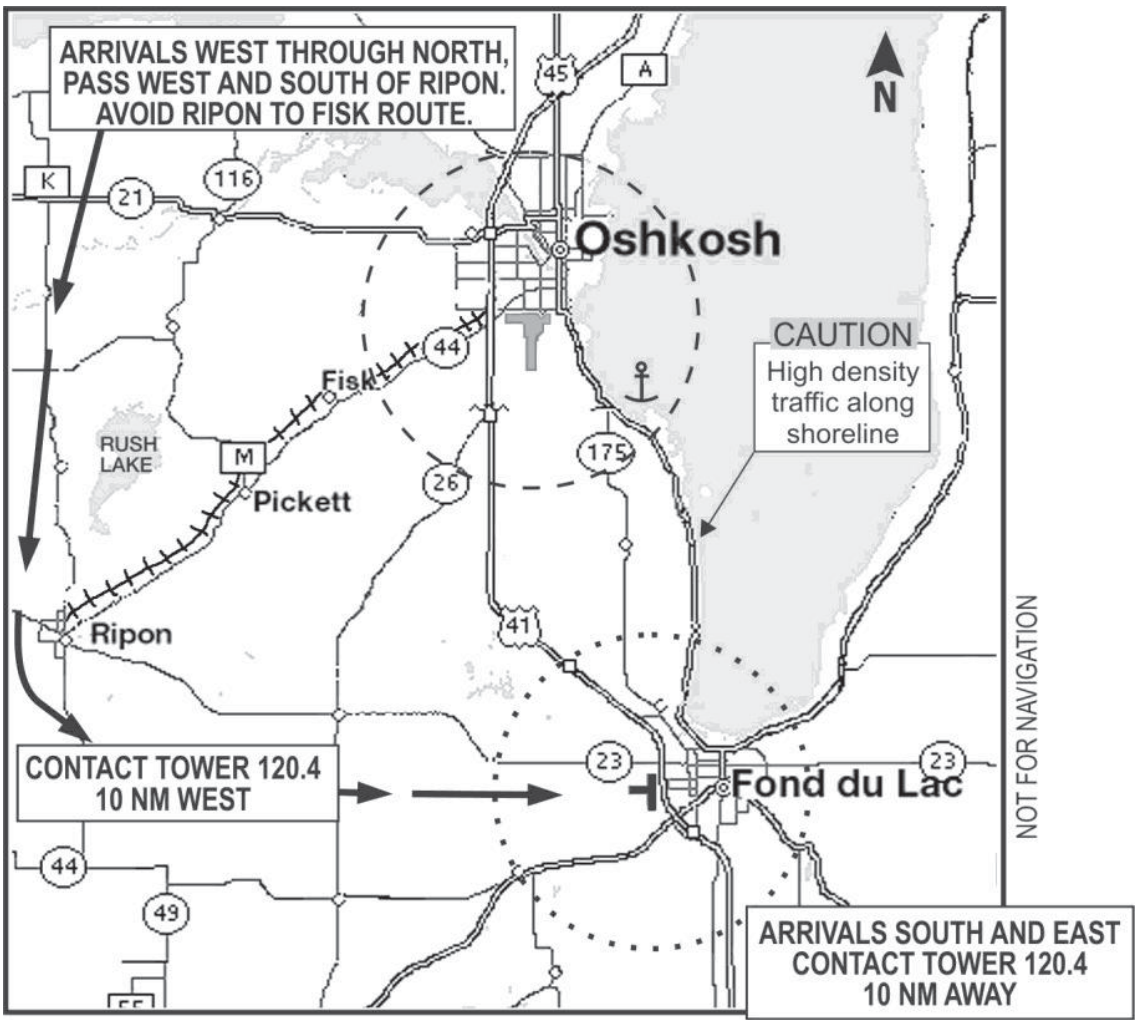
- Obtain Fond du Lac ATIS (121.1).
- Avoid high-traffic arrival routes from Ripon to Fisk and along shoreline.
- Contact Fond du Lac Tower (120.4) when 10 NM from airport.
- After landing, close VFR flight plan with Green Bay Radio (122.5).

IFR Arrival

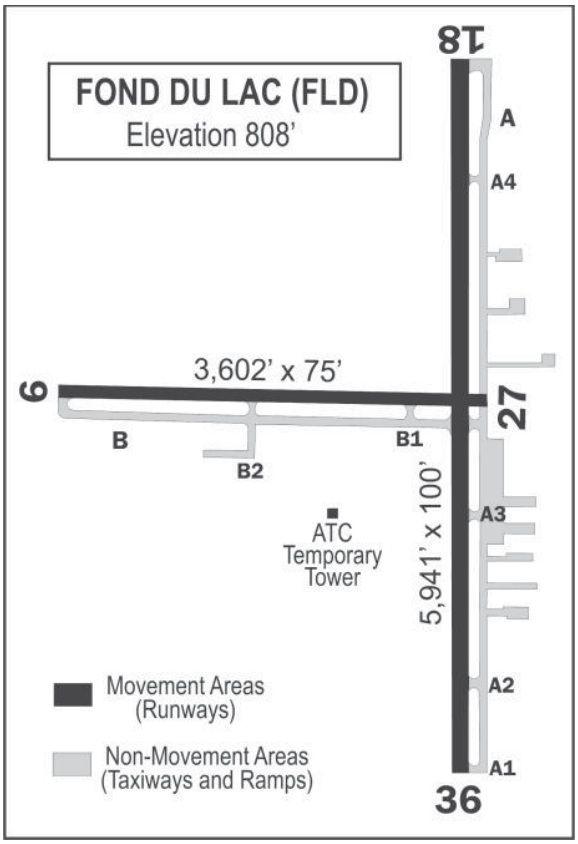
See IFR Information on pages 24-25. Expect a visual approach or radar vectors to a final approach course from Milwaukee Approach. Weather permitting, cancel IFR with Milwaukee Approach and proceed VFR to the airport.

No-radio (NORDO) Arrival

Follow another aircraft if possible and watch the Tower for a green or red light.



Fond du Lac Arrival/Departure continued



Fond du Lac Airport Notes

- All movement on other than paved runways is at pilot's own risk.
- **Do not** walk across taxiways or runways.
- **Camping and showers are available.**
- Bring your own tiedowns; all aircraft must be secured.
- Hard surface parking available by prior arrangement with Fond du Lac Skyport (920-922-6000).
- Scheduled transportation is available to/from Oshkosh.
- FBO is unattended 9:00 PM – 6:30 AM.

PILOT NOTICE

A waiver has been issued reducing arrival and departure standards for category 1 and 2 aircraft (primarily single engine and light twin engine aircraft).

Fond du Lac Area Frequencies

ATIS	121.1
Milwaukee Approach	127.0
Temporary Tower	120.4
Ground Control	121.85
Unicom (CTAF when tower closed)	123.05
ASOS (920-922-4444)	134.0
Green Bay Radio	122.5

- Intersection Departures

Intersection	Runway Available
RWY 18 at A4	4,940'
RWY 18 at B	2,940'
RWY 27 at B1	2,900'
RWY 36 at A2	5,040'
RWY 36 at A3	3,740'
RWY 36 at B	3,000'

VFR Departure

Pilots are urged to obtain a complete weather briefing and review all applicable NOTAMs prior to departure. Flight plan filing and briefing services are available from Flight Service (1-800-992-7433).

IFR Departure

See page 26 for required IFR departure routings.

Within 5 minutes of taxi, contact Ground Control (121.85) and advise that you are IFR. Clearance, taxi and departure information will be issued on Ground Control frequency.

After takeoff, FLD Tower will advise when to contact Milwaukee Approach, normally when clear of traffic.

Appleton Arrival/Departure

The Control Tower at Appleton International Airport (ATW) operates from 5:30 AM until 11:00 PM CDT daily. See graphic for recommended arrival routes.

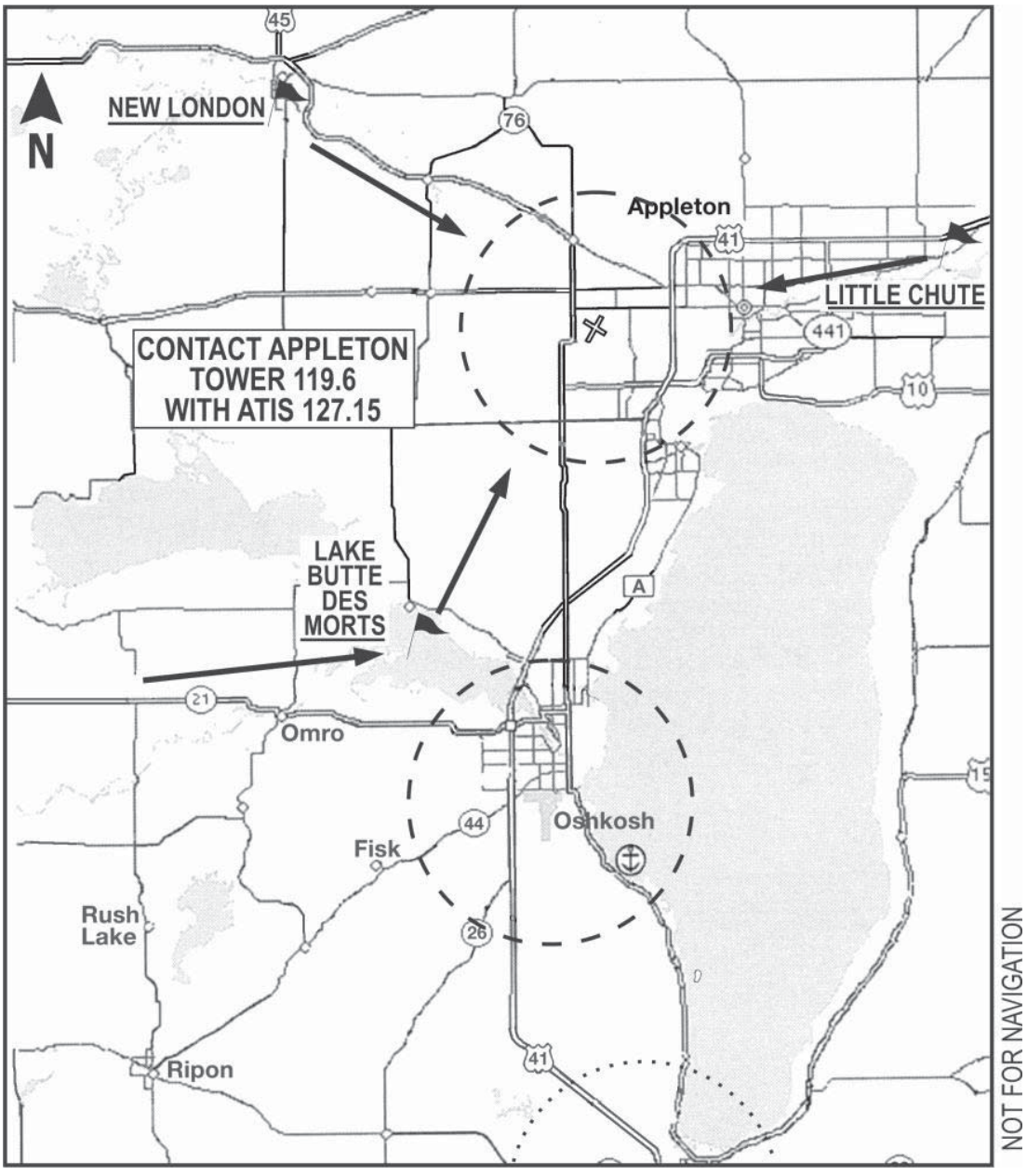
- Because of expected delays due to heavy traffic volume, watch your fuel status closely and plan an extra reserve.
- Be alert for high-density traffic en route to Oshkosh.
- Leave lights on within 30 miles of Appleton.

VFR Arrival

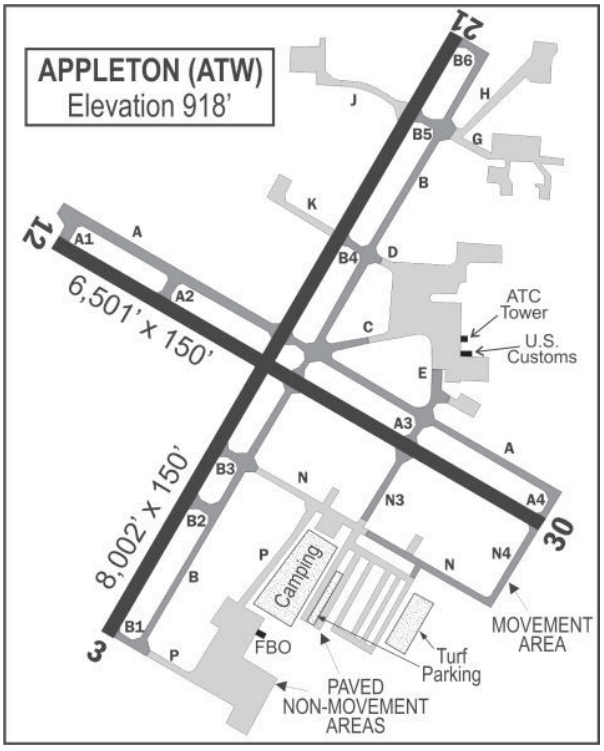
- Obtain Appleton ATIS (127.15).
- Contact Appleton Tower (119.6) over recommended VFR reporting points (New London, Little Chute, or Lake Butte Des Morts). Advise Tower of position and ATIS code received.
- After landing, cancel VFR flight plan in person at Civil Air Patrol ramp facility.

IFR Arrival

See IFR arrival information on pages 24-25.



Appleton Arrival/Departure continued



Appleton Area Frequencies

ATIS	127.15
Green Bay Approach	126.3
Tower (5:30 AM–11:00 PM CDT), CTAF	119.6
Ground Control	121.7
Clearance Delivery	124.25
Platinum Flight Center Unicom	122.95
AWOS (920-832-2597)	127.15
Green Bay Radio (airborne only)	122.55

Land and Hold Short (LAHSO) Information (Day only)

Landing Runway	Hold Short Point	Measured Distance
RWY 03	RWY 12/30	3,300 feet
RWY 21	RWY 12/30	4,100 feet
RWY 30	RWY 03/21	3,400 feet

Appleton Airport Notes

- All transient parking (hard surface and grass) is in the south GA area, south of RWY 12/30 and east of RWY 3/21. Shuttles transport visitors to the FBO (Platinum Flight Center, 920-738-3034).
- Aircraft camping is also available. For reservations, visit *www.platinumflightcenter.com*.
- Transient grass and hard surface parking areas are closed to all operations from 8:00 PM until 6:00 AM CDT from Saturday, July 20, through Sunday, July 28, 2019.
- Airport management requires that all aircraft be secured to the ground. Aircraft on grass must be tied down. Tiedowns are available for purchase.
- Scheduled transportation to and from Oshkosh is at the terminal and the FBO.
- The self-service fuel station is not available during AirVenture. Fueling is at aircraft parking and the FBO.
- International arrivals must clear Customs, located just south of the Tower. For more information, contact 920-968-2348.

IFR Departure Routings

IFR departures must use the following routes to avoid long delays for flight plan amendment.

- Routing to KMKE and its satellite airports: KATW CHING BJB…
- Routing to KORD satellite airports: KATW CHING BJB OBK…
- Routing to KMSN and its satellite airports: KATW BANKY DLL...
- Routing to other destinations below 14,000' should avoid MKE airspace:
  - Southeast: KATW NEROE WELKO...
  - South around ORD airspace: KATW BANKY DLL…(see page 26 for routing after DLL)
  - Southwest: KATW BANKY DLL…
  - West: KATW BANKY…

VFR or IFR Departure

- Obtain ATIS (127.15).
- IFR flights: Request IFR clearance prior to engine start from Ground Control (121.7) or Clearance Delivery (124.25), as indicated on ATIS.
- Taxi to grass-parking exit, holding short of hard surface taxiways.
- When number one at the grass-parking exit, contact Ground Control (121.7) with position, ATIS code received, and direction of flight.
- For VFR flight following over Lake Michigan, contact Green Bay Approach (120.2) 10 NM northwest of KMTW.

IFR Reservation Program

Special Traffic Management Program

A Special Traffic Management Program (STMP) will be implemented at the following Oshkosh Area and Madison Area airports:

Oshkosh Area Airports (use page 25 routes)

KOSH	Wittman Regional
KATW	Appleton International
KFLD	Fond du Lac County
KRYV	Watertown Municipal
KSBM	Sheboygan County Memorial
KUNU	Dodge County - Juneau
8D1	New Holstein Municipal

Madison Area Airports (no required routes)

C29	Middleton Municipal - Morey
C35	Reedsburg Municipal
C47	Portage Municipal
KDLL	Baraboo Wisconsin Dells
KLNR	Tri-County Regional – Lone Rock
61C	Fort Atkinson Municipal

ARRIVAL RESERVATIONS

Arrival slot reservations will be required for all domestic non-scheduled IFR arrivals from:
Friday, July 19 through Sunday, July 28, 2019
0700-2000 CDT (1200-0100 UTC).
Arrival slot reservations will be available beginning Tuesday, July 16 at 0700 CDT (1200 UTC) and will not be assigned more than 72 hours in advance.

Reservations will not be allocated to KOSH during the scheduled hours of the daily airshows, but they will be allocated to the other listed airports.

An IFR arrival slot reservation does not guarantee a parking spot at KOSH if parking areas are full.

DEPARTURE RESERVATIONS

Departure slot reservations will be required for all domestic non-scheduled IFR departures from Wittman Regional Airport (KOSH), but not from the other listed airports. They will be required from Monday, July 22 through Sunday, July 28, 2019
0600-2000 CDT (1100-0100 UTC).

Departure slot reservations will be available beginning Friday, July 19 at 0600 CDT (1100 UTC) and will not be assigned more than 72 hours in advance or be allocated during the daily airshows.

How to Obtain a Reservation

- STMP reservation may be obtained by using the computer interface (e-STMP) or a touch-tone telephone interface. See Aeronautical Information Manual sections 4-1-21 b, c and d for STMP details.
- e-STMP: Computer access is available at *www.fly.faa.gov/estmp/index.html*. A user guide is available on the web site.
- The reservation system is available 24 hours a day. If you experience difficulty completing a slot reservation, you may contact the Air Traffic Control System Command Center, Airport Reservation Office at (540) 422-4246.
- Be prepared to provide your departure / destination airports, estimated UTC time of departure / arrival, UTC date, aircraft call sign and type. Upon completion of a slot reservation, you will receive a preliminary reservation number.
- Between 24 and 12 hours prior to your arrival/departure reservation, you must confirm your reservation and you will receive a confirmation number. If your reservation is not confirmed by 12 hours prior to your reservation time, it will be cancelled and automatically returned to the reservations system for reassignment. Reservations made within 24 hours of the arrival/departure time are automatically confirmed with a confirmation number.
- **The slot reservation confirmation number must be included in the remarks section of your flight plan.** If possible, file flight plan at least six hours prior to departure.
- Aircraft are required to arrive at a reservation airport or depart KOSH **within +/- 15 minutes of their reservation time.** If a reservation requires change or cancellation, please do so as early as possible, to release the slot for another flight.
- Slot reservations do not preclude possible delays if weather conditions necessitate additional traffic management initiatives.

IFR Arrival Route Planning

An IFR slot reservation confirmation number is required for IFR flights to the Oshkosh Area and Madison Area STMP airports listed on page 24. Keep this number onboard for verification by ATC.

<u>If you do not have a confirmed reservation number, do not file IFR to one of the STMP airports</u> – file to a destination airport away from the Oshkosh area; then cancel IFR as appropriate and proceed to the Oshkosh area using the published VFR routes.

- File flight plans early (minimum 6 hours prior to departure, maximum 22 hours).
- Pilots departing from airports within 600 NM of KOSH should receive their IFR clearances before departure; to prevent excessive airborne holding, airborne IFR clearance pickup is not recommended.
- Cancelling IFR: When the KOSH ceiling is reported at or above 4,500' and the visibility is greater than 5 miles, all IFR arrivals except turbojet and air carrier aircraft are **strongly encouraged to cancel their IFR flight plan 60 NM from Oshkosh.** Piston aircraft must then execute the VFR arrival procedure from Ripon (pages 4-7); high-performance aircraft unable to use that procedure must use the Turbine/ Warbird arrival from Fond du Lac (page 16).
- When the reported weather is less than 4,500' ceiling or 5 miles visibility, you may retain your IFR flight plan and expect radar vectors to the active instrument runway. KOSH arrivals can expect Direct IGVEW or PRIMO for the RNAV (GPS) RWY 27 approach, or Direct WUVMO or HETUP for the RNAV (GPS) RWY 9 approach.
- Be extremely alert for a high volume of traffic with widely varying performance characteristics in the Oshkosh area.
- In VFR weather conditions, IFR arrivals at Oshkosh will be sequenced with VFR arrivals and may be asked to land on a runway dot. Review NOTAM pages 8-11.

IFR Routings to Oshkosh Area airports (listed on page 24)

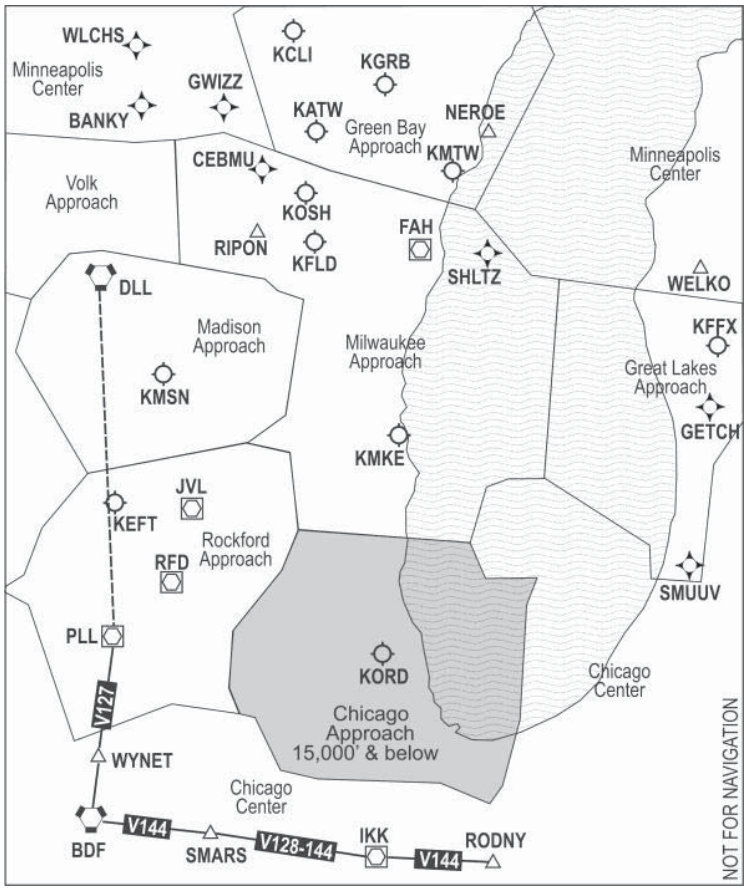
(non-RNAV aircraft can expect radar vectors)

FROM	DESTINATION	ROUTE (Shaded routes are over water.)
Northeast:	KOSH, KFLD, KSBM, KRYV, KUNU, or 8D1	WELKO NEROE Direct or MBL NEROE Direct
	KATW	TVC V420 GRB KATW or WELKO NEROE GRB KATW
East:	KOSH, KFLD, KSBM, KRYV, KUNU, or 8D1	GETCH GAYLE FAH Direct *
	KATW:	GETCH GRB Direct
Southeast:	All area airports	SMUUV GAYLE FAH Direct *
	or KOSH, KATW, or KFLD	OXI V156 MAPPS V144 IKK V128 JVL V9 OSH Direct
	KSBM, KMTW, or 8D1	OXI V156 MAPPS V144 IKK V128 JVL V63 BAE Direct
	KUNU or KRYV	OXI V156 MAPPS V144 IKK V128 JVL Direct
South:	KOSH, KATW, or KFLD	PNT V9 OSH Direct
	KSBM, KMTW, or 8D1	PNT V9 JVL V63 BAE Direct
	KUNU or KRYV	PNT V9 JVL Direct
Southwest:	KOSH, KATW, or KMTW	DBQ V341 OSH Direct
	KFLD, KSBM, or 8D1	DBQ V341 MSN UNU Direct
	KUNU or KRYV	DBQ V341 MSN Direct
West:	KOSH, KATW, or KMTW	BOOTY DLL RANDO V341 OSH Direct
	KFLD, KSBM, or 8D1	BOOTY UNU Direct or ZZIPR MSN UNU Direct
	KUNU or KRYV	BOOTY DLL RANDO Direct or ZZIPR MSN Direct
Northwest:	KOSH, KFLD, KSBM, KRYV, KUNU, or 8D1	WLCHS RIPON Direct
	KATW	BIPID KATW
North:	All area airports	GRB Direct

* Expect to cross GAYLE at or above 6,000'

IFR Departure Route Planning

- IFR flight plans should be filed prior to departure. Chicago Center, Minneapolis Center and surrounding Approach Control facilities will not accept airborne filing of flight plans within 150 NM of OSH. See page 27 for airborne clearance pick-up.
- Non-transponder and inoperative transponder IFR aircraft may experience lengthy delays and will only be handled as workload-permits.
- Aircraft operating at or below 15,000' MSL shall not file flight plans through Chicago Approach Control airspace.
- **Oshkosh departures:** See IFR Reservation Program (page 24), procedures on page 14, and use routings in chart below.
- **Appleton (KATW) departures:** Use routings on page 23.
- **Other area airport departures:** Use routings in chart below.



IFR Routings for departures from Oshkosh area airports

DIRECTION	ALTITUDE	TYPE	REQUIRED INITIAL ROUTES
All except SBM departures departing Northeast thru Southeast:	16,000' & above	All	*Radar Vectors* on course
	16,000' & above	RNAV	SHLTZ WELKO
		Non-RNAV	*Radar Vectors* WELKO
North	15,000' & below	All	*Radar Vectors* on course
Northeast thru Southeast	15,000' & below	All	DLL PLL V127 BDF V144 RODNY or *Radar Vectors* SHLTZ WELKO
South	15,000' & below	All	DLL PLL V127 BDF
Southwest	15,000' & below	All	DLL
West	15,000' & below	All	BOOTY
Northwest	15,000' & below	RNAV	CEBMU GWIZZ
		Non-RNAV	*Radar Vectors* EAU

Note: Shaded routes are over water.

Airborne IFR Clearance Pickup after VFR Departure

Aircraft departing VFR from Oshkosh area airports must use the following procedures in order to pick up IFR clearances when airborne. Note that Milwaukee Approach Control will not issue airborne IFR clearances within 100 NM of OSH.

Airborne pickup of IFR clearances may be received from the ATC facilities listed below. Flight plans must specify the appropriate pickup point within the facility's airspace; otherwise the facility will not be able to access your flight plan and may not issue an IFR clearance.

Madison Approach Control / Chicago Center

File from Dells VOR (**DLL**). Your filed route must avoid Chicago Approach Control airspace (see page 26 airspace diagram) with initial routing from table below.

When over Dells VOR request IFR clearance based on your current altitude as follows:

- at or below 5,000', contact Madison Approach Control (135.45),
- from 5,500' through 10,000', contact Madison Approach Control (126.85),
- at or above 10,500', contact Chicago Center (133.3).

DIRECTION	FILED ALTITUDE	REQUIRED INITIAL ROUTE
East	15,000' & below	DLL PLL V127 BDF V144 RODNY
South	15,000' & below	DLL PLL V127 BDF

Rockford Approach Control

File from Monroe, WI (**KEFT**). Your filed route must avoid Chicago Approach Control airspace (see page 26 airspace diagram) with initial routing from table below.

Request IFR clearance from Rockford Approach Control (126.0) when west of Janesville VOR (JVL) at or below 11,500'.

DIRECTION	FILED ALTITUDE	REQUIRED INITIAL ROUTE
East	15,000' & below	KEFT PLL V127 BDF V144 RODNY
South	15,000' & below	KEFT PLL V127 BDF

Great Lakes Approach Control (formerly Muskegon Approach Control)

File from Fremont, MI (**KFFX**). Request IFR clearance from Great Lakes Approach Control (119.8) when 40 NM northwest of GETCH or 10 NM east of GAYLE at or below 9,500' MSL.

Green Bay Approach Control

File from Clintonville, WI (**KCLI**). Filed route cannot re-enter Milwaukee Approach airspace (see page 26 airspace diagram). Use initial routing from table below.

Request IFR clearance from Green Bay Approach Control (126.3) when in vicinity of KCLI at or below 12,500'.

DIRECTION	FILED ALTITUDE	REQUIRED INITIAL ROUTE *
Southeast	13,000' & below 14,000' & higher	KCLI NEROE GETCH (or north of that route) KCLI GRB GETCH (or north of that route)
West	All	KCLI BANKY

* Non-RNAV aircraft can expect radar vectors.

Canadian Pilots

- Canadian pilots flying Canadian registered experimental amateur-built aircraft, or basic or advanced ultralight aeroplanes must obtain an FAA Special Flight Authorization (SFA) to operate in the United States.
- The SFA may be obtained from the FAA web site: *www.faa.gov/aircraft/gen_av/ultralights/sfa*
- The SFA must be carried on board the aircraft when operating in the United States. It constitutes valid FAA authorization to operate in United States airspace, provided the operator of one of these specific aircraft types complies with the operating limitations that are part of the SFA.
- Canadian pilots flying experimental Warbirds are encouraged to contact the FAA Milwaukee Flight Standards District Office (FSDO) to apply for an SFA for their flight to/from Oshkosh.
- Questions concerning this SFA should be addressed to: FAA Milwaukee FSDO, 414-486-2920; EAA Aviation Services, 920-426-4821; or Transport Canada, Recreational Aviation, 613-993-7284 or 800-305-2059.
- Canadian pilots flying aircraft issued a Canadian “Flight Permit-Owner Maintenance” are prohibited from flying in the U.S.

Oshkosh No-Radio Arrival

- To enhance safety, all pilots are encouraged to use radios (including hand-held aircraft radios).
- **This no-radio (NORDO) procedure is provided for use only by Vintage aircraft incapable of radio communication.**
- Each arriving no-radio aircraft must land at an airport within approximately 45 minutes of Wittman Regional Airport (OSH), call Oshkosh Tower (920-424-8002) between **7 AM and 10 AM CDT** and receive approval for a NORDO arrival.
- If authorized by Oshkosh Tower, no-radio aircraft will be assigned a route and runway to use based on traffic and weather conditions.
- No-radio arrivals must not taxi across RWY 18R/36L until receiving a clearance via hand signal from an FAA controller wearing a pink shirt.

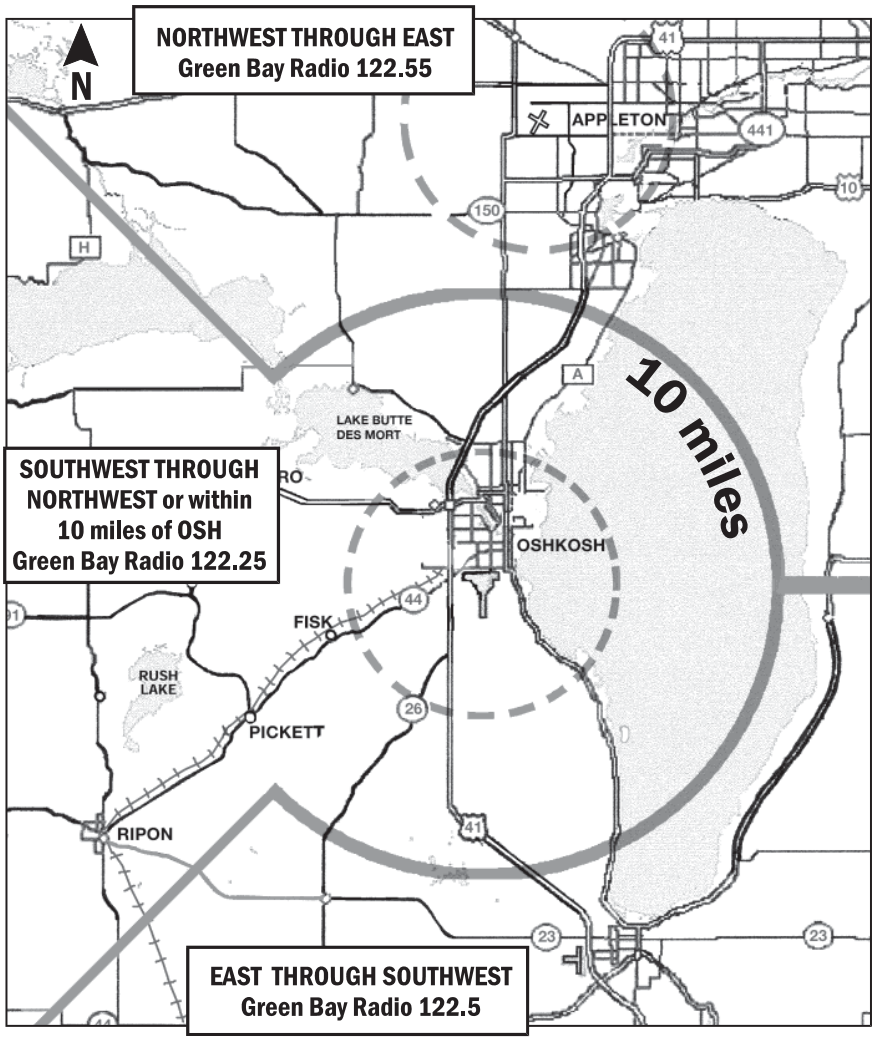
Flight Service Information

Preflight Planning and Flight Plan Filing

- Please file all flight plans as far in advance as possible. IFR flight plans can be filed up to 22 hours in advance. VFR flight plans have no advance time limit.
- Telephone briefings and flight plan filing are available 24 hours/day at 1-800-WX-BRIEF (1-800-992-7433).
- In-flight services include flight plan activation, cancellation and weather updates. See chart below for frequency.

Helpful Hints

- Inbound flights – **Add 30 minutes** to your ETE.
- Flight plans containing multiple stops are strongly discouraged. They should be filed as separate flight plans.
- Please cancel VFR flight plans while approaching destination airport. Parking delays can exceed 45 minutes.
- Air Traffic Control Towers do not forward VFR arrival information to Flight Service.
- When contacting Flight Service, provide your complete call sign, general location, and the frequency you are using.
  Example:
  Green Bay Radio, N5241A over Ripon, 122.25



NOT FOR NAVIGATION

- Due to frequency congestion, air filing of flight plans is discouraged between 0600-2100 CDT.
- Avoid using 122.25 and 122.5 for weather information. For weather information contact Green Bay Radio near:
  Green Bay: 122.55,
  Milwaukee: 122.4,
  Madison: 122.6,
  Wausau: 122.4.

Oshkosh Arrival Frequencies

AirVenture Arrival ATIS	125.9
Fisk Approach	120.7
Oshkosh Tower North, RWY 09/27	118.5
Oshkosh Tower South, RWY 18/36	126.6
Unicom (Basler Flight Service FBO)	122.95
Green Bay Radio	122.25
OSH VORTAC	111.8

Oshkosh Departure Frequencies

AirVenture Departure ATIS	121.75
Oshkosh Clearance Delivery	119.05
Oshkosh Ground Control	132.3
RWY 09/27 Departures Monitor	128.75
RWY 18/36 Departures Monitor	118.9
Milwaukee Approach	127.0
Green Bay Radio	122.25
AirVenture Seaplane Base	123.3
AirVenture Warbird Area	123.9

2019 Oshkosh Airshow/TFR Times (CDT)

Monday, July 22, thru Saturday, July 27: 2:30- 6:30 PM
Wednesday, July 24: 8:00-10:00 PM
Saturday, July 27: 8:00-10:00 PM
Sunday, July 28: 1:00- 4:30 PM

Appleton Area Frequencies

ATIS	127.15
Green Bay Approach	126.3
Tower (5:30 am-11:00pm CDT), CTAF	119.6
Ground Control	121.7
Clearance Delivery	124.25
Unicom	122.95
AWOS (920-832-2597)	127.15
Green Bay Radio (airborne only)	122.55

Oshkosh Telephone Numbers

AirVenture Arrival ATIS	866-493-5553
Oshkosh Tower for No-Radio Arrival Instructions	920-424-8002
Police/Fire/Medical at Oshkosh Emergencies	911
Non-Emergencies	920-236-7300
Wittman Regional Airport	920-236-4930

Fond du Lac Area Frequencies

ATIS	121.1
Temporary Tower	120.4
Ground Control	121.85
Unicom (CTAF when tower closed)	123.05
ASOS (920-922-4444)	134.0
Green Bay Radio	122.5

From 6 AM CDT July 20 through Noon CDT July 29, 2019, Wittman Regional Airport will be closed to all ARRIVING aircraft from 8 PM until 7 AM CDT daily and closed to all DEPARTING aircraft from 8 PM until 6 AM CDT daily.

The airport will also close periodically for aerobatic demonstrations, TFRs, or other special activities.
During airport closure periods, no arrivals, departures, engine operation or aircraft movement is permitted.

FUTURE AIRVENTURE DATES

July 20-26, 2020

July 26-August 1, 2021

Arlington Fly-In
NOTAM

August 16-18, 2019

2019 ARLINGTON FLY-IN
August 16-18, 2019

Please submit any questions, comments or suggestions to:

Stephnie Anason
Spokane ATCT Manager
8314 W. Electric Ave.
Spokane, WA 99224
Phone: (509) 742-2501
E-mail: Stephnie.L.Anason@Faa.gov

CONTROL TOWER HOURS AND AIRSHOW CLOSURES

Control Tower Hours

The fly-in procedures outlined in this NOTAM will be in effect only during the times the control tower is open. Outside the below times, consult the FAA Chart Supplement for normal airport operations.

Friday, August 16, 2019	9:00 AM to 6:30 PM local time
Saturday, August 17, 2019	9:00 AM to 6:30 PM local time
Sunday, August 18, 2019	8:00 AM to 4:00 PM local time

Airport Closures and Airshow Times

There will be a TFR in effect from the surface to 8000' MSL within a 5 NM radius of AWO during the airshow. All departures will stop 15 minutes prior to these airshow times and there will be no arrivals or departures during the following periods[1]:

Friday, August 16, 2019	6:30 PM to 10:30 PM local time
Saturday, August 17, 2019	2:00 PM to 5:00 PM local time

[1] The only exception to operations during the TFR is through prior permission from the Airport Manager, Air Show Boss and Air Traffic Control.

FREQUENCY AND CONTACT GUIDE

Arlington ATIS	132.225
Arlington Tower	127.2
Arlington Tower Back-up	118.575
Arlington Ground	121.25
Arlington Ramp Control	124.375
Seattle Approach Control	128.5
Arlington Unicom & CTAF	122.725
Arlington AWOS	135.625
Warbird Parking Advisory	125.225
Light Flight Advisory	133.575
Flight Service	1(800)992-7433
Fly-In Flight Operations	1(425)224-6611 Flyin@arlingtonflyin.org www.arlingtonflyin.org
FAA Control Tower	1(425)466-2672

*Please use this number for NORDO requests and urgent requests.

COMMUNICATING WITH ATC

The Arlington temporary tower is staffed by FAA air traffic controllers. The tower is a modified trailer outfitted with two-way radio communications and 180° windows. Unlike most towered airports throughout the country, the controllers are working with no radar to assist in providing traffic calls or sequencing arrivals. Instead, they are constantly scanning the sky with binoculars searching for inbound aircraft near Green Valley Airfield. Because of this, it is important for pilots to fly inbound via the standard routes and be vigilant in searching for other aircraft.

After you are spotted near Green Valley, ATC will issue instructions using color and type instead of registration number. Aircraft call signs will not be used. Use wing rocks instead of verbal acknowledgements, unless requested, to minimize frequency congestion.

When departing during the busiest traffic periods, red or green hand paddles may be used for takeoff clearances. See 'VFR Departures' section for more information about this procedure.

Arlington Temporary Tower (Photo Credit: JBFlying.com)

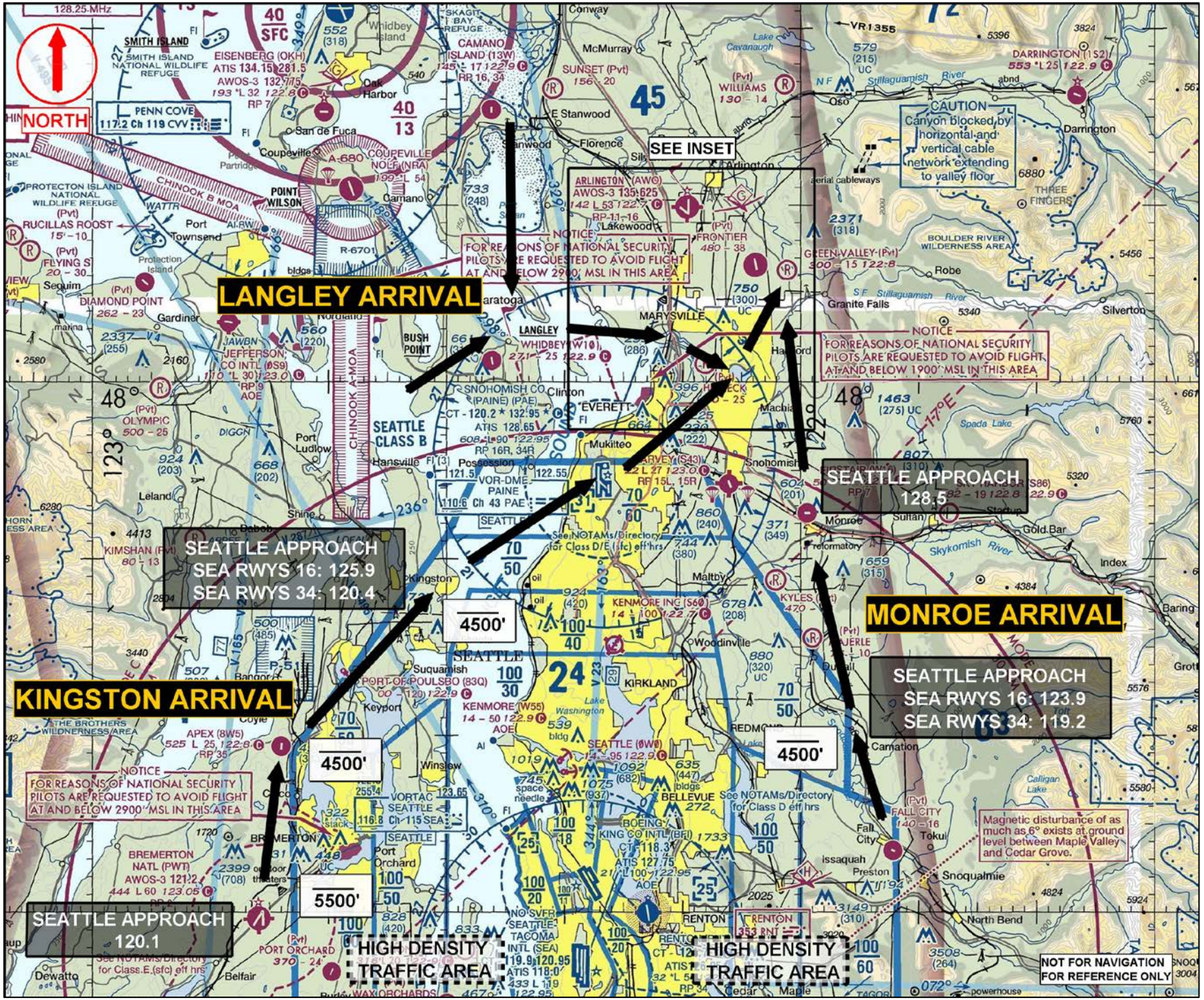
VFR ROUTE PLANNING TO GREEN VALLEY

General Planning:

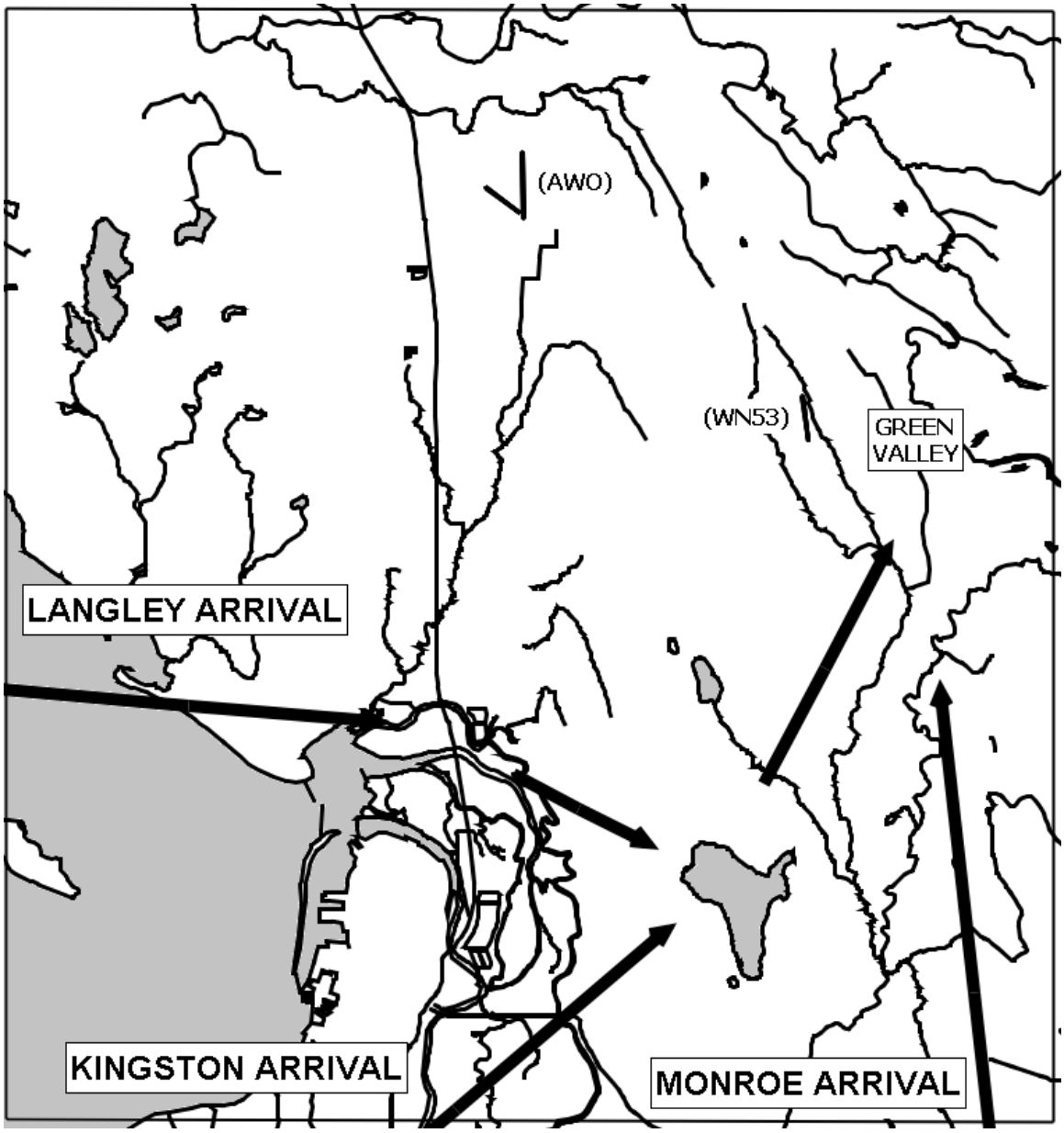
- Turn on landing lights 30NM from AWO to aid in being spotted.
- Monitor Arlington ATIS 15-20 miles from the airport for landing information.
- Be familiar with and avoid the nearby:
    - Prohibited Area (P-51)
    - 3 National Security Areas (NSAs)
    - Parachuting zone near Harvey Field (S43)
- Remain outside the Seattle Class B airspace unless authorized by ATC.
- No transponder aircraft: refer to the Seattle-Tacoma Airport Mode C Veil Exemption included at the end of this packet.

VFR sequencing inbound to Arlington Airport begins over Green Valley Airfield. Green Valley Airfield (WA25) is a grass strip located 7 NM SE of Arlington Airport and 3NM SE of Frontier Airpark (WN53) at N48 06 W 122 04.

To reach Green Valley, ATC strongly recommends you obtain VFR flight following from Seattle Approach and request the Langley, Kingston or Monroe Arrival. See the following pages for route depictions.



Request the Langley, Kingston, or Monroe Arrival towards Green Valley.



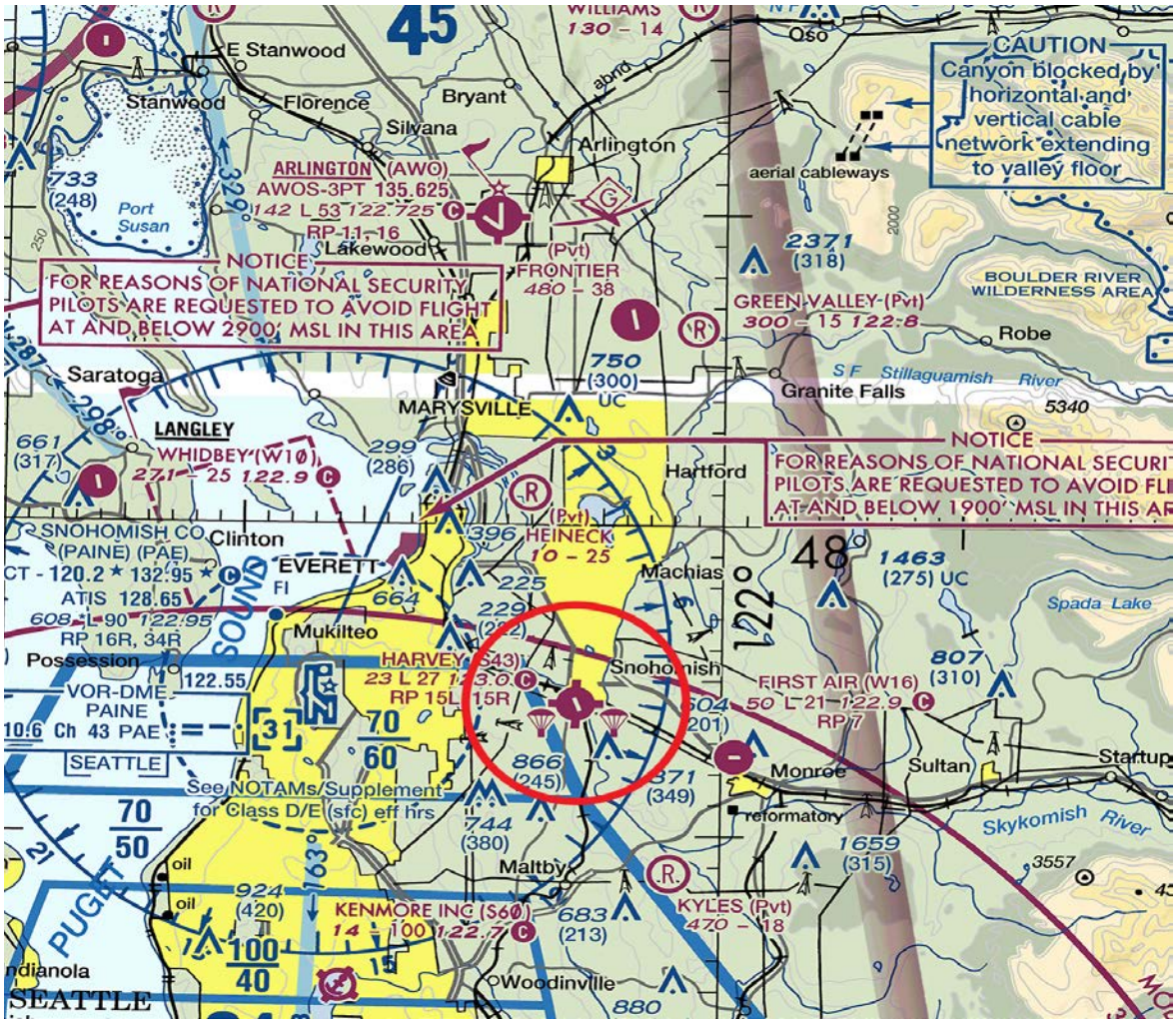
Inset showing the three VFR flight following routes feeding toward Green Valley. The area over Lake Stevens where the Langley and Kingston Arrivals merge as well as the airspace over Green Valley where all routes merge are traffic hot spots.

Approaching Green Valley (Flying north)

Green Valley Airfield (Facing north)

Parachute Activities at Harvey Field S43

Use extreme cation skydivers descending both in freefall and under their parachute canopy can be expected within a 3 NMR (three nautical mile radius) from the center of the Harvey Field airport (S43) from 14,000 ft. to the surface. This skydive dropzone is active at all times. Radio calls will be made on the Harvey Field CTAF 123.0 MHz and on Seattle Approach frequency 128.5 MHz at the time skydiving commences. The absence of a radio call should not be misrepresented that there are no skydivers in the air. Jump planes, climbing and descending at high vertical speeds (climb rates of up to 2,000 ft./min., descent rates of more then 6,000 ft./min) can be expected within the same area.



GENERAL ARRIVAL PROCEDURES FROM GREEN VALLEY TO ARLINGTON

From Green Valley Airfield, all arrivals must fly inbound to Arlington via the routes depicted in the following pages for the runway in use unless instructed otherwise by ATC.

If VFR holding becomes necessary due to traffic volume or an unanticipated runway closure, ATC will provide holding instructions and advertise it on the ATIS. If holding is in effect, do not proceed past Green Valley without clearance to do so. Expect to hold over the Stillaguamish River between Green Valley and Granite Falls. Be vigilant of heavy traffic in the vicinity and look for another aircraft to follow. Plan for right turns.

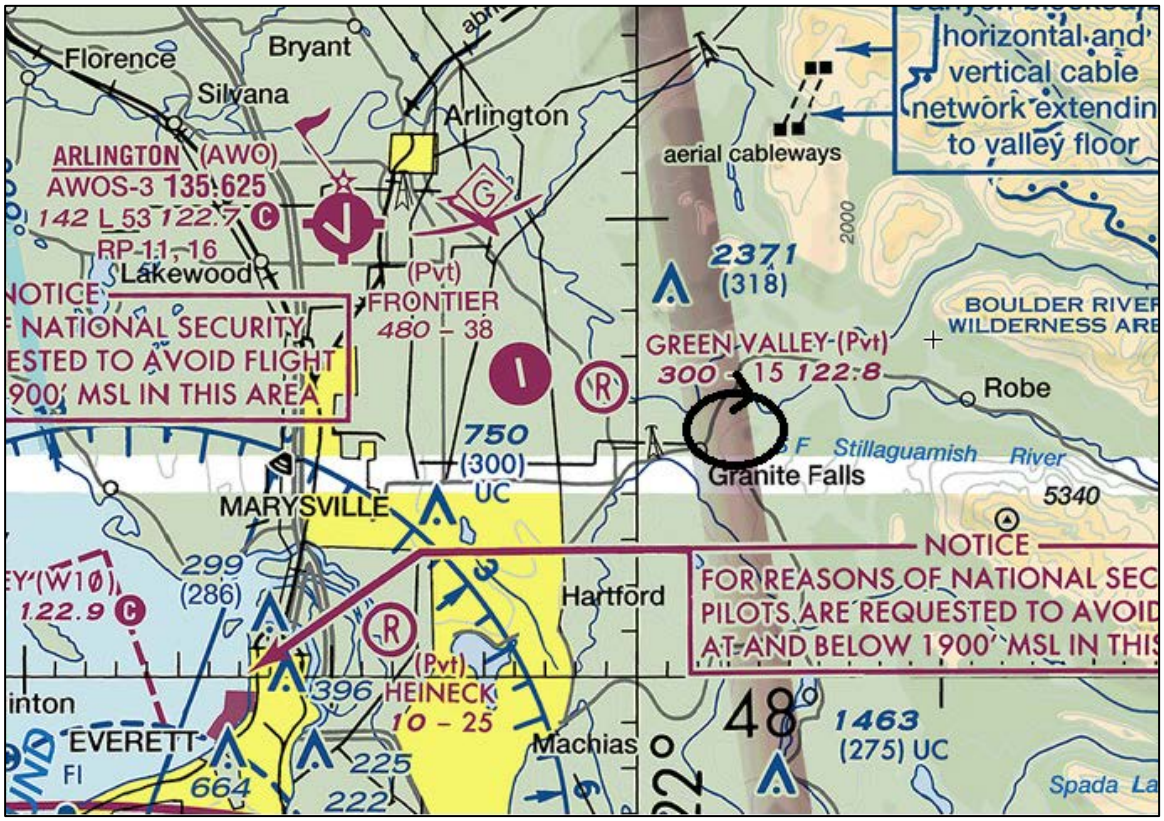


Diagram of VFR holding area (Shown as a black oval)

All inbound and departure patterns must be flown east of the runway. The airspace west of the runway is reserved for pre-authorized fly-by aircraft that are not under ATC control. To join the fly-by pattern west of the runway you must first receive a briefing from Arlington Fly-In Flight Operations.

Monitor Arlington Tower as you approach Green Valley and expect to be contacted and sequenced by ATC.

Watch for and sequence your aircraft with other observed traffic. Maintain single file. Maintain 90 KTS and 1200 MSL. If unable, maintain 135 KTS and 1700 MSL. Notify ATC if you are unable to maintain at least 90 KTS. Advise ATC immediately if your fuel status is critical.

Touch-and-go or closed traffic operations may not be authorized during the fly-in.

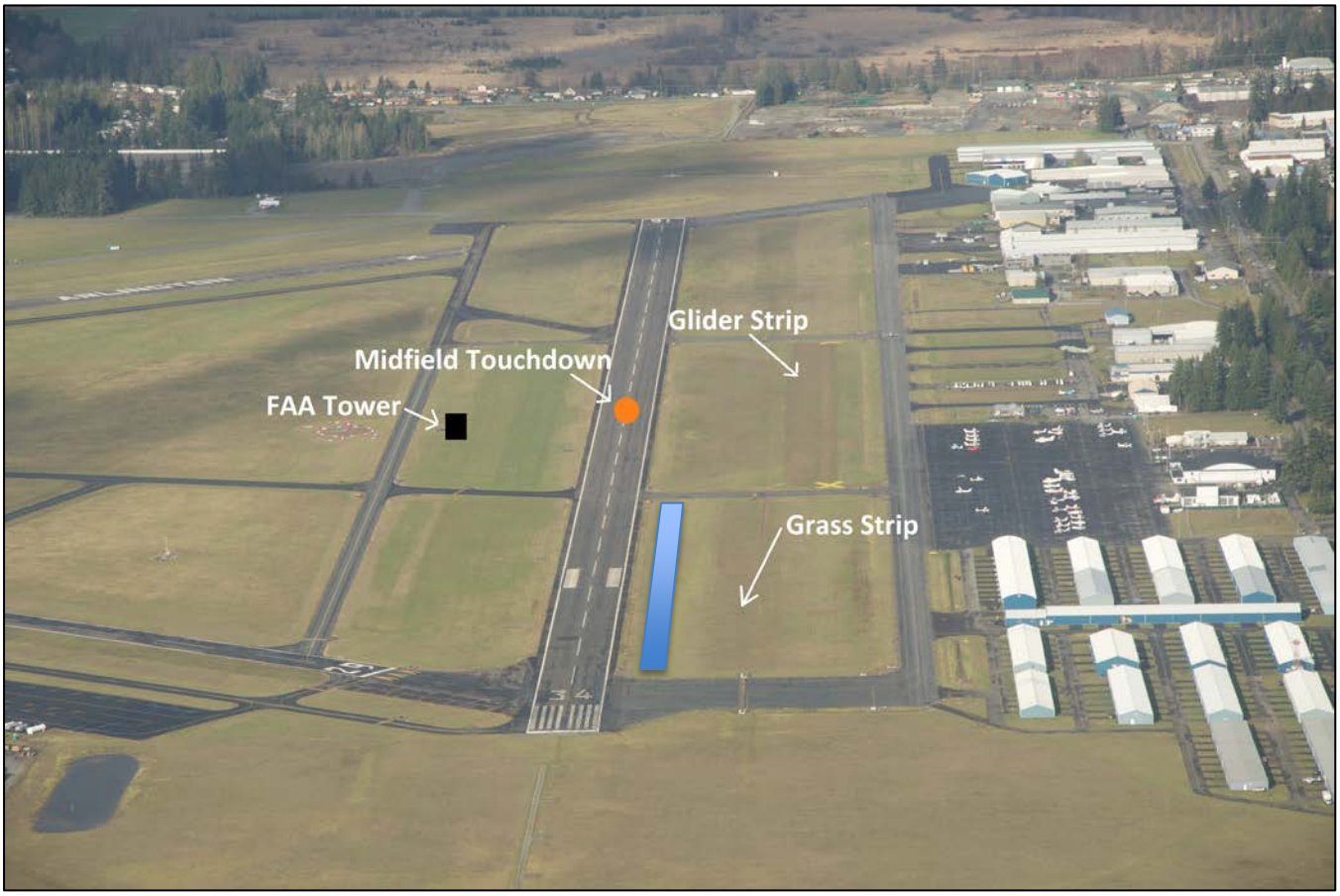
Use caution for gliders flying a high east-side pattern on approach to the grass glider strip located east of Runway 16/34.

Runway 16/34 has an orange dot painted on the runway surface to designate the mid-field touchdown point. You may be asked to land long and touch down at the midfield intersection for traffic. Reduced runway separation may be in effect.

The grass strip landing area available upon request as traffic permits. It is immediately east and adjacent to Runway 34 at the south end. The landing area is marked with orange cones in the shape of a chevron. The glider strip is marked with an X farther northeast of the grass strip.

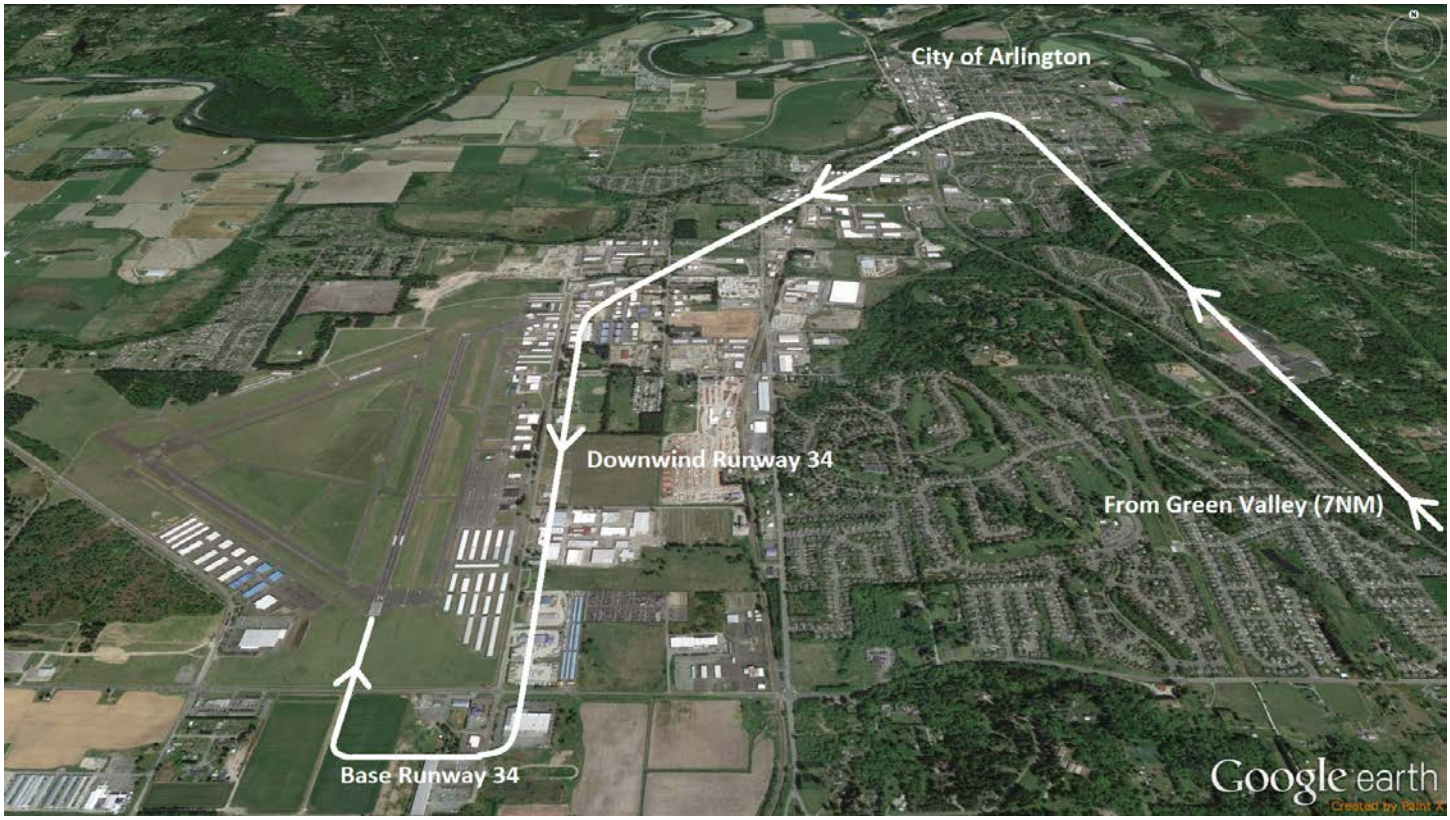
After landing, exit the runway onto a taxiway without delay. Remain on the hard surfaces at all times unless instructed otherwise by ATC.

Fly-in parking is on the west side. If your destination is on the east side, use caution for glider tow operations departing and arriving the glider strip.



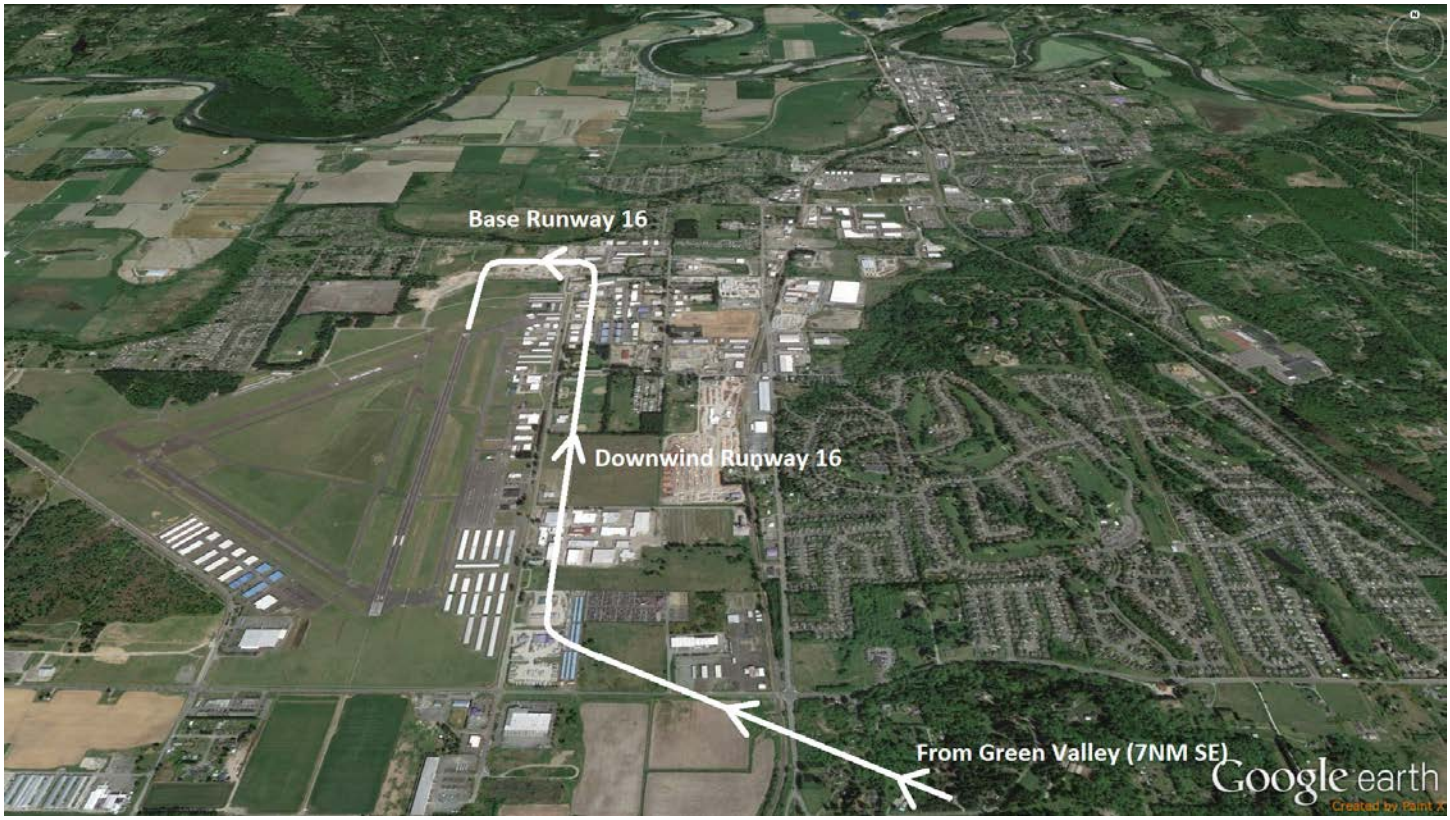
North facing picture of RWY 16/34

VFR RUNWAY 34 ARRIVAL



From Green Valley Airfield, fly single file direct to the City of Arlington, then turn inbound to Arlington Airport and enter a right downwind for Runway 34.

VFR RUNWAY 16 ARRIVAL



From Green Valley Airfield, fly single file directly toward Arlington Airport and enter a left downwind for Runway 16.

IFR ARRIVALS

IFR practice approaches will not be permitted.

Be prepared to discontinue IFR approach and enter the VFR traffic pattern for landing sequence. When the ceiling and visibility at Arlington Airport is reported at or above 3000 feet and five (5) miles, expect a vector for a visual approach. Arlington tower will assign VFR pattern entry instructions on initial contact.

Provide IFR cancellation information to Seattle TRACON. If you have not canceled prior to landing, advise ground control.

GROUND OPERATIONS AND PARKING

Arrivals

Contact Arlington Ground Control (121.25) for taxi instructions after exiting the runway. When nearing the parking area, Ground Control will instruct you to contact Arlington Ramp Control (124.375) for parking instructions. Monitor ramp control at all times when active on the fly-in grounds.

Departures

Contact Arlington Ramp Control (124.375) prior to start-up for instructions. Monitor the ATIS (132.225) before taxiing and contact Arlington Ground Control (121.25) for instructions after passing Taxiway D2. Complete any required run-up before reaching the runway.

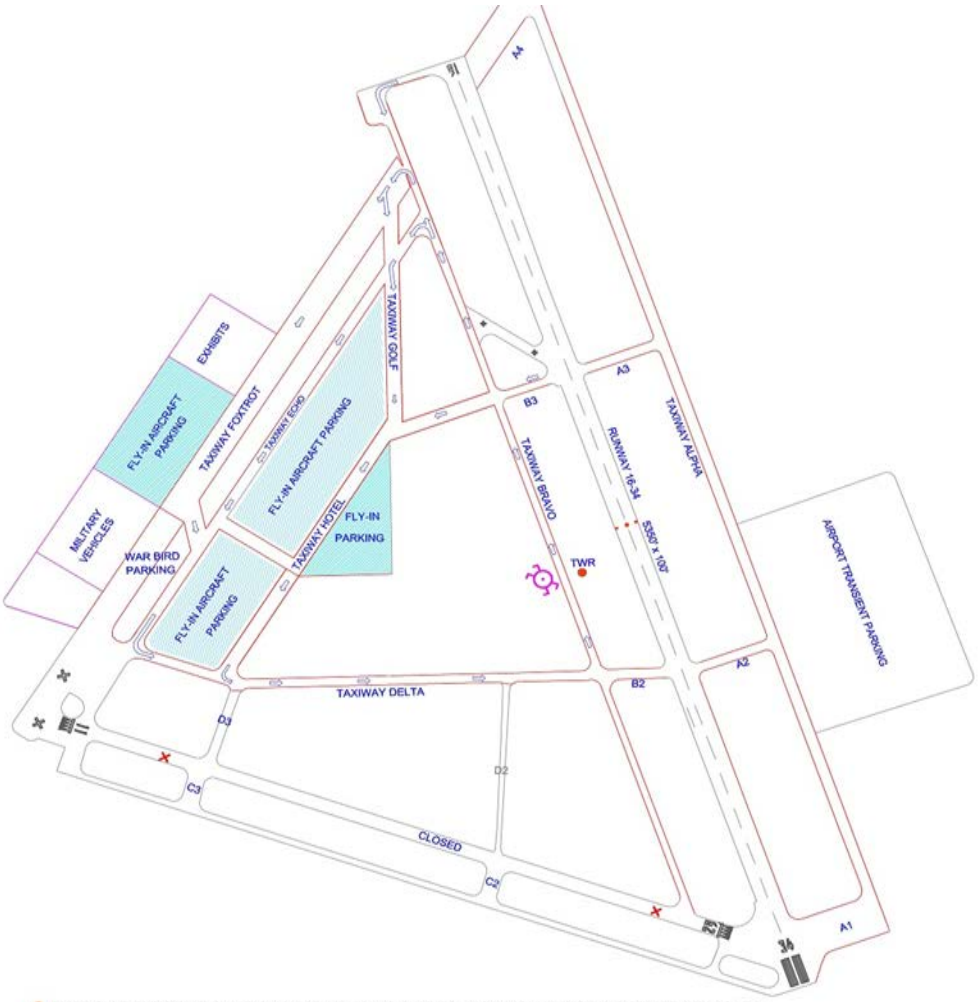
Runway 11/29 and Taxiway Echo are closed from Saturday August 10th to Wednesday August 21st.

Fly-in parking is closed sunset to sunrise local time. Parking will also close 15 minutes prior to airshow times and this will be denoted by a red flag flown over the orange aircraft parking tower. During the time the flag is displayed no running engines will be permitted. Arrivals will be temporarily redirected to park at east airport transient parking.
Please prepare a sign that denotes your parking area and display it on the left side of your windshield. The sign should have dark letters on a light background readable from 50 feet away. Signs can be handmade or printed from www.arlingtonflyin.org/flying-in/aircraft-parking-signs/ . Use one of the following codes:

Abbreviation	Category
GA	General Aviation Daily
GAO	General Aviation Overnight
HB	Home-Built Daily
HBO	Home-Built Overnight
ANQ	Antique Barn Display
VA	Vintage Aircraft Daily
VAO	Vintage Aircraft Overnight
WBD	Warbird Parking
IAC	Aerobatic Aircraft
EXH	Exhibit-Vendor Area
CHK	Cherokee Daily & Overnight
LSA	Light Sport Aircraft
ZEN	Zenith Aircraft
WPA	Washington Pilots Association
FATPNW	Flights Above the Pacific Northwest

Parking Sign Example

Arlington Airport Diagram and Parking Map



- EXERCISE EXTREME CAUTION WHEN TAXIING DUE TO HIGH VOLUME OF AIRCRAFT, VEHICLES, AND PERSONNEL
- CONTACT AIRCRAFT PARKING AT BRAVO 3
- TAXIWAYS GOLF, HOTEL, AND PARTS OF BRAVO 3 ARE GRASS
- PARK ONLY WHRE DIRECTED BY FLY-IN PERSONEL

VFR DEPARTURES

Contact tower as you approach the runway. On departure, fly straight out until reaching 500 AGL.

During heavy departure traffic, orange-vested controllers may be positioned on the runway and directing aircraft with red and green paddles. Aircraft will be lined up on both the left and right side of the runway. To avoid conflict, if you depart the left side depart straight out or via left turn only. If you depart the right side depart the area straight out or right turn only.

IFR DEPARTURES

File your flight plan at least one hour prior to the proposed departure time. Ensure you have received an IFR clearance from Ground Control prior to taxiing for departure.

Ensure you have received your departure release from Ground Control prior to entering the runway for takeoff. If you have not received it prior to reaching the runway, attempt to taxi into an area that allows VFR aircraft to pass you for departure.

SPECIAL OPERATIONS

Ultralight and Light-Sport (LSA) Operations

All LSA aircraft must conduct initial arrivals to Runway 16/34. Ultralight arrivals to Arlington Airport should join the Ultralight pattern from the northwest, observing the altitude restriction.

Pre-briefed Ultralight and LSA operations are to be conducted in the southwest quadrant of the airport south of the numbers of Runway 11. Pattern altitude is 500 AGL. Fly left traffic to the midfield of Runway 29 only. Remain west of Runway 16/34 at all times. All operations will be conducted between the southwest corner of the airfield and the Island Crossing (I-5) intersection to the northwest.

No-Radio (NORDO) Procedures

This procedure is provided for use by vintage aircraft incapable of radio communication. Each arriving no-radio aircraft must land at an airport within approximately 45 minutes of AWO. Contact the FAA Tower via phone or tower frequency to coordinate your arrival.

If a red light gun signal is observed from the control tower (see graphics on page 10 or 12 for tower location), exit the traffic pattern then re-enter following the published arrival procedures for the runway in use.

Helicopters

The northwest helicopter arrival route runs from Interstate Highway 5 (I-5) from the State Route 530 exit (Island Crossing) to the landing zone. Crossing I-5, at 800 feet, descend at your discretion to arrive at the NE corner of the housing development at 500 feet as depicted on the graphic. From that point to the LZ, descend to 250 feet for your final approach to landing.

Use caution for commercial helicopter operations and passengers near the civilian landing zone, light sport operations on Runway 11/29 and aircraft in the fly-by pattern.

There are two parking areas for helicopters at Arlington. Arlington Tower (127.3) will hand you to Arlington Ramp (124.375) who will direct you to your landing zone.

- The civilian landing zone is on the grass near the Taxiway B grass extension (see map). Look for the ride hopping R44 and land just south of their location.
- Military display helicopters are to operate as briefed from the Warbird parking area.

Tower will clear aircraft into these areas but pilots should be familiar with the traffic patterns established for the event. See the attached diagram.

Departing the Fly-In please fly the reverse inbound course from your landing zone to I-5. Over the airport property, do not ascend above 500 feet, once over the streets, ascend to 800 feet before resuming own navigation at I-5. Contact Arlington Ramp (124.375) prior to engine start and Arlington Tower (127.3) prior to departure.

Helicopter route and landing zone in and out of AWO

SEATTLE-TACOMA AIRPORT MODE C VEIL EXEMPTION

AUTHORIZATION TO DEVIATE FROM ATC TRANSPONDER AND ALTITUDE REPORTING EQUIPMENT REQUIREMENTS WITHIN THE SEATTLE-TACOMA AIRPORT 30 MILE MODE C VEIL DURING THE ARLINGTON FLY-IN, August 16-18, 2019.

Seattle TRACON has authorized aircraft to deviate from the ATC transponder and altitude reporting equipment and use requirements prescribed in 14 CFR 91.215b(2) within the Seattle-Tacoma Airport Mode C veil during the Arlington Fly-In, August 16-18, 2019. This exemption provides pilots with a general north/south route through the Seattle area 30 mile Mode C Veil, along the following designated route only.

ROUTING
The route starts in the vicinity of Eatonville, to the Eastside of Lake Kapowsin, then to Orting, Enumclaw, Issaquah, Monroe to Arlington. Pilots are advised to follow the arrival procedures outlined in the Arlington Fly-In NOTAM. All operations shall be conducted VFR; at or below 2500' MSL South of Enumclaw, and at or below 4500' MSL North of Enumclaw to Monroe.

This exemption does not authorize entry into the Seattle Class B airspace.

This exemption does not authorize pilots to operate within the Boeing, Renton or Paine Class Delta surface areas without establishing two-way communication.

A GENERAL WARNING

- Use caution for heavy traffic and parachute jump activity around Snohomish airport/Harvey Field
- Prohibit Area (P-51), up to 2,500' MSL, located over Bangor, WA
- National Security Area's (NSA's) in effect, over Everett, Bremerton and Port Townsend, WA up to the altitude specified on the VFR sectional charts.

All pilots are encouraged to obtain the coordinates and dimensions of these areas, mark them for easy visibility on your navigational charts and comply with FAR's while navigating to/from the Arlington Fly-In.

Due to the restrictions of P-51 and the NSA's, NO West route Mode C Veil Exemption will be authorized for this event.

JANUARY – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
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5	6	7	8	9	10	11
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FEBRUARY – 2020

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MARCH – 2020

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APRIL – 2020

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MAY – 2020

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JUNE – 2020

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JULY – 2020

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AUGUST – 2020

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SEPTEMBER – 2020

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OCTOBER – 2020

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NOVEMBER – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
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DECEMBER – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
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= Cutoff dates for submitting information to AJV−5 for next publication. (Twenty−three (23) days before effective date.)

= Effective dates and cutoff dates for submitting information to the Publications Staff, AJV−8 for next publication. (Twenty−eight (28) days before next effective date.)

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Federal Aviation
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Washington, DC 20591

Critical to
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Flight Information Publication
Notices to Airmen