U.S. Department
of Transportation

**Federal Aviation
Administration**

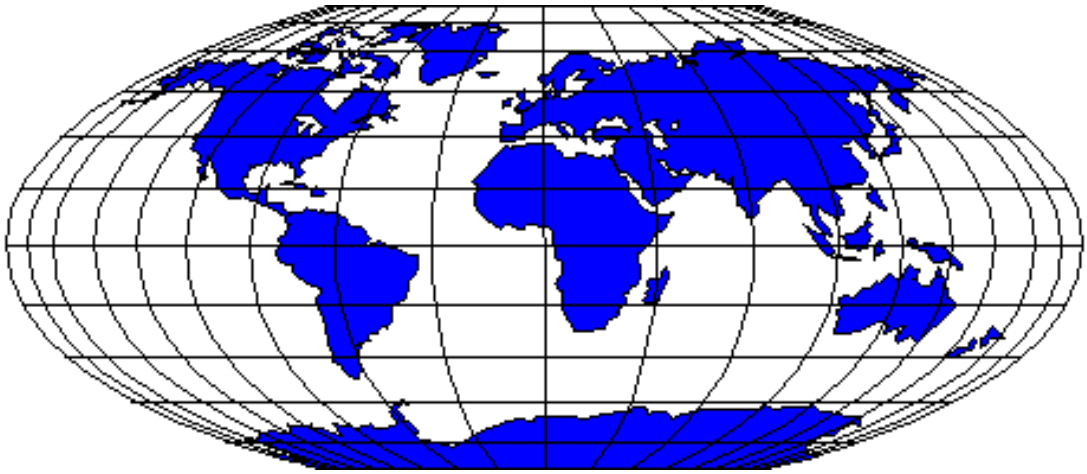
NOTICES TO AIRMEN

Domestic/International

April 25, 2019

Next Issue

May 23, 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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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

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OCTOBER – 2019

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NOVEMBER – 2019

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DECEMBER – 2019

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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.)

NOTICES TO AIRMEN

April 25, 2019

Note: Part 1, FDC NOTAMs, was removed from the Notices to Airmen Publication effective February 28, 2019. These NOTAMs are still considered on request items when obtaining a briefing from Flight Service Stations (FSS). Prior to flight, pilots should always check with Flight Service for current NOTAMs (1–800–WX–BRIEF). Check the Foreword for more information.

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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 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 in the Notices to Airmen publication (NTAP) and/or the Service A telecommunications system as a NOTAM D item.

NOTAMS IN THE NOTICES TO AIRMEN PUBLICATION

NOTAM D information printed in this publication is **NOT** included on the Service A circuit.

The Notices to Airmen publication is issued every 28 days. Data in this publication which 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 the FAA website at http://www.faa.gov. Pilots may also call flight service 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

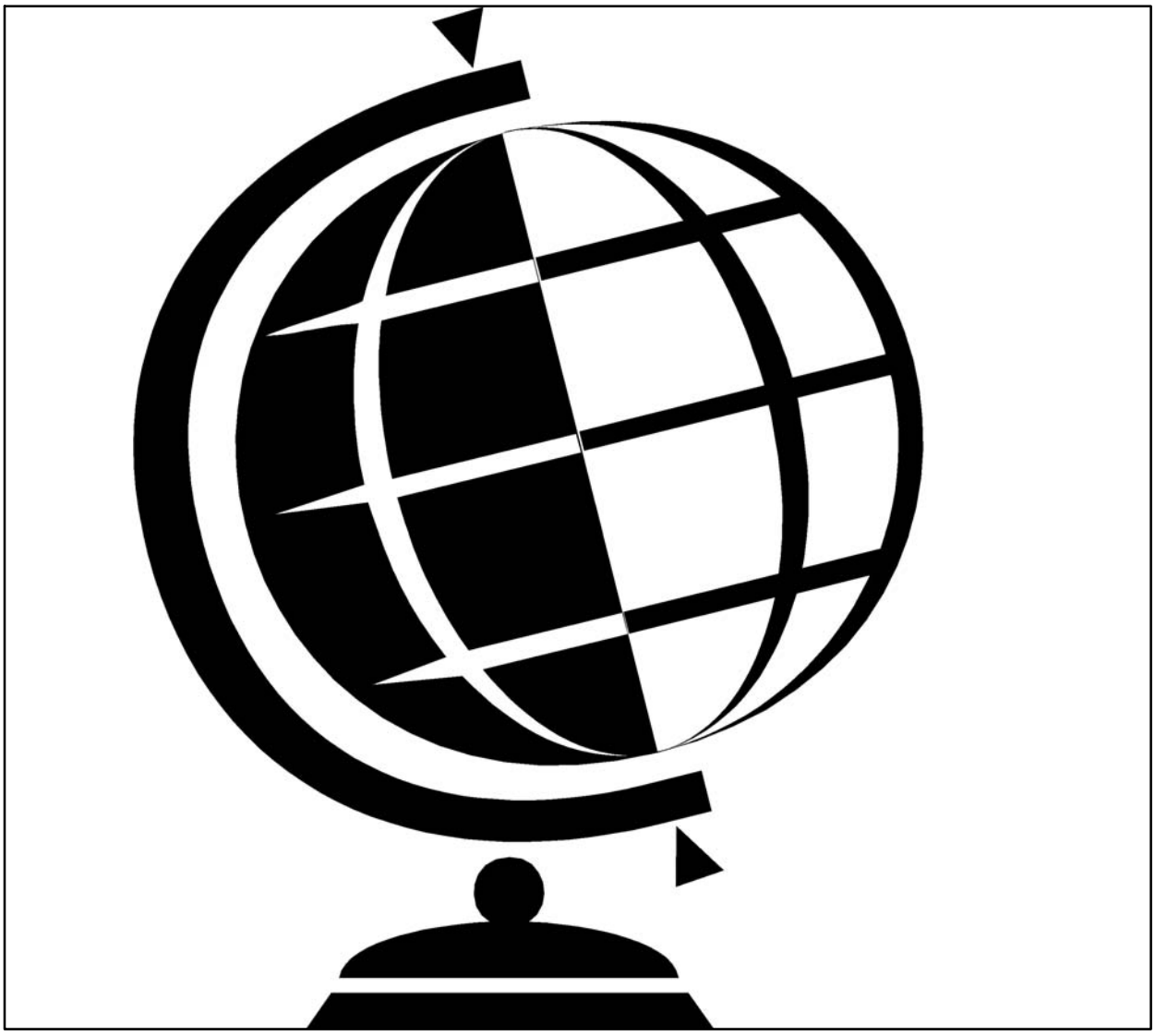
Contraction	*Decode*
U	
UAG	Upper Atmosphere Geophysics
UDDF	Up and Down Drafts
UNSBL	Unseasonable
UNSTBL	Unstable
UNSTDY	Unsteady
UNSTL	Unsettle
UP	Unknown Precipitation (Automated Observations)
UPDFTS	Updrafts
UPR	Upper
UPSLP	Upslope
UPSTRM	Upstream
UVV	Upward Vertical Velocity
UWNDS	Upper Winds
V	
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 545
EFFECTIVE DATE April 25, 2019

§95.3000 LOW ALTITUDE RNAV ROUTES

§95.3273 RNAV ROUTE T273

FROM	TO	MEA	MAA
IS AMENDED TO READ IN PART			
AYKID, AK FIX	TUVVO, AK FIX	6400	17500

§95.6001 VICTOR ROUTES-U.S

§95.6014 VOR FEDERAL AIRWAY V14

FROM		TO	MEA
IS AMENDED TO READ IN PART			
CHISUM, NM VORTAC		ONSOM, NM FIX	
	W BND		*7000
	E BND		*7500
*6000 - MOCA			
LUBBOCK, TX VORTAC		CHILDRESS, TX VORTAC	5100

§95.6044 VOR FEDERAL AIRWAY V44

FROM	TO	MEA
IS AMENDED TO READ IN PART		
SEA ISLE, NJ VORTAC	*KARRS, NJ FIX	**6000
*7000 - MCA KARRS, NJ FIX , NE BND		
**1800 - MOCA		
**2000 - GNSS MEA		
KARRS, NJ FIX	GAMBY, NJ FIX	*7000
*1300 - MOCA		
*2500 - GNSS MEA		
GAMBY, NJ FIX	DEER PARK, NY VOR/DME	*5000
*1600 - MOCA		
*2500 - GNSS MEA		

§95.6063 VOR FEDERAL AIRWAY V63

FROM	TO	MEA
IS AMENDED TO READ IN PART		
BURLINGTON, IA VOR/DME	MOLINE, IL VOR/DME	3100
MOLINE, IL VOR/DME	DAVENPORT, IA VORTAC	3100

§95.6068 VOR FEDERAL AIRWAY V68

FROM		TO	MEA
IS AMENDED TO READ IN PART			
CHISUM, NM VORTAC		HAGER, NM FIX	
	W BND		6000
	E BND		6500

§95.6078 VOR FEDERAL AIRWAY V78

FROM	TO	MEA
IS AMENDED TO READ IN PART		
IRON MOUNTAIN, MI VOR/DME	VUKFI, MI FIX	3300
VUKFI, MI FIX *2300 – MOCA	ESCANABA, MI VOR/DME	*3000

§95.6148 VOR FEDERAL AIRWAY V148

FROM	TO	MEA
IS AMENDED TO READ IN PART		
IRONWOOD, MI VOR/DME *3200 - MOCA	HOUGHTON, MI VOR/DME	*3700

§95.6175 VOR FEDERAL AIRWAY V175

FROM	TO	MEA
IS AMENDED TO READ IN PART		
MALDEN, MO VORTAC *2700 - MOCA	BUNKS, MO FIX	*4000
BUNKS, MO FIX	VICHY, MO VOR/DME	3000
VICHY, MO VOR/DME *2500 - MOCA	ZIPUR, MO FIX	*3000
ZIPUR, MO FIX	HALLSVILLE, MO VORTAC	2700
HALLSVILLE, MO VORTAC	MACON, MO VOR/DME	3100
*LINDE, IA FIX *5500 - MRA **5500 - MRA ***3000 - MOCA	**MADUP, IA FIX	***5500
*MADUP, IA FIX *5500 - MRA **3900 - MRA	**WELTE, IA FIX	5500
*WELTE, IA FIX	SIOUX CITY, IA VORTAC	
W BND		3000
E BND		5500
*3900 - MRA		
REDWOOD FALLS, MN VOR/DME	ALEXANDRIA, MN VOR/DME	3600
ALEXANDRIA, MN VOR/DME	PARK RAPIDS, MN VOR/DME	3300
ROSEAU, MN VOR/DME *2600 - MOCA	U.S. CANADIAN BORDER	*3600

§95.6217 VOR FEDERAL AIRWAY V217

FROM	TO	MEA
IS AMENDED TO READ IN PART		
GREEN BAY, WI VORTAC	WISOM, WI FIX	2700
WISOM, WI FIX	RHINELANDER, WI VOR/DME	3600

§95.6276 VOR FEDERAL AIRWAY V276

FROM	TO	MEA
IS AMENDED TO READ IN PART		
CASVI, NJ FIX *6000 - MCA GAMBY, NJ FIX , SE BND **1500 - MOCA	*GAMBY, NJ FIX	**3000
GAMBY, NJ FIX *8000 - MRA **2000 - MOCA **3000 - GNSS MEA	*PREPI, OA FIX	**6000

§95.6376 VOR FEDERAL AIRWAY V376

FROM	TO	MEA
IS AMENDED TO READ IN PART		
RICHMOND, VA VOR/DME *3000 - MCA GRUBY, VA FIX , N BND	*GRUBY, VA FIX	2000
GRUBY, VA FIX *1700 - MOCA	IRONS, MD FIX	*4500

§95.6430 VOR FEDERAL AIRWAY V430

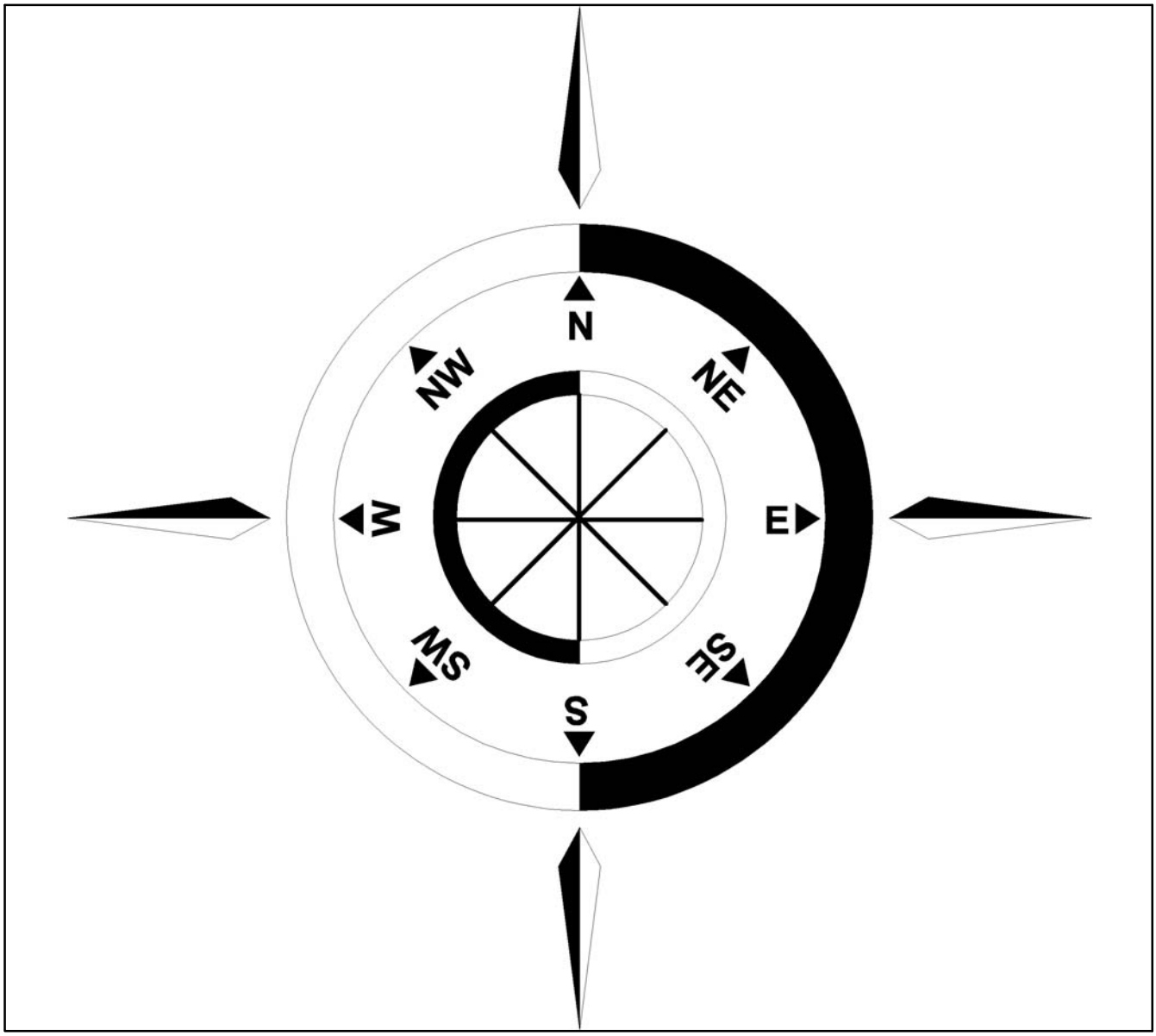
FROM	TO	MEA
IS AMENDED TO READ IN PART		
IRONWOOD, MI VOR/DME	DINER, MI FIX	3600
DINER, MI FIX *4000 - GNSS MEA	IRON MOUNTAIN, MI VOR/DME	*5000
IRON MOUNTAIN, MI VOR/DME	VUKFI, MI FIX	3300
VUKFI, MI FIX *2300 - MOCA	ESCANABA, MI VOR/DME	*3000

§95.8003 VOR FEDERAL AIRWAY CHANGEOVER POINT

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	**TO**	**DISTANCE**	**FROM**
	V376		
IS AMENDED TO ADD CHANGEOVER POINT			
RICHMOND, VA VOR/DME	WASHINGTON, DC VOR/DME	53	RICHMOND

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:

a. Their identification.

b. Aircraft type.

c. Position.

d. Direction of flight.

e. 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:

a. "Nassau Approach" on frequency 121.0 MHz.

b. "Freeport Approach" on frequency 126.5 MHz.

(Bahamas AIC 2/20/2010)

COMMONWEALTH OF INDEPENDENT STATES (CIS)

Special Notice: Provideniya Bay Airport, CIS.

In accordance with Federal Aviation Administration (FAA) Order 8260.31B, The Alaska Region is modifying the arrival and departure minimums for Provideniya Bay Airport, CIS.

Provideniya Bay PAR+2 NDB RWY 01 Visual RWY 19:

Approach visibility minimums are 9 km (9000 meters) IFR or VFR.

Departure minimums IFR or VFR:

RWY 01 ceiling 750 meters, visibility 5 km (5000 meters)

RWY 19 ceiling 300 meters, visibility 1.5 km (1500 meters)

NOTE–
NDB minimums apply when using PAR (VIS 9 KM/9000 METERS).

(FAA/AAL–200 2/22/2010)

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. An operator is considered to be "unable to communicate on HF" during poor HF propagation conditions (commonly referred to as "HF Blackouts"), or if he/she suffers inflight HF radio failure. In those cases, that operator 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, 2/28/2019)

REGION SPECIFIC

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

On 29 March 2018 the Reduced Lateral Separation Minimum (RLatSM) trial on the ICAO North Atlantic (NAT) Organized Track System (OTS) concluded. In its place, the ICAO NAT region implemented 23 nautical mile lateral spacing (with waypoints defined by ½–degree latitude) for operators specifically authorized for Performance Based Communications and Surveillance (PBCS) and Performance Based Navigation (PBN) separation criteria. Implementation of PBCS and PBN separation criteria began with three OTS tracks, between flight levels 350–390 inclusive, being set aside specifically for aircraft authorized PBCS and PBN operations.

The ICAO Europe/North Atlantic (EUR/NAT) office has published a number of NAT Ops Bulletins. The office provides those bulletins on its public website. Three bulletins provide particularly useful information to help operators safely fly wherever reduced lateral separation minimums, e.g. ½–degree latitude, are applied in oceanic airspace. Those bulletins are:

Number 2018_001 *Implementation of Performance Based Separation Minima*
Number 2017_003 *RLatSM Phase 2 Aeronautical Information Circular*
Number 2015_003 *RLatSM Special Emphasis Items – Phase 2 Update*

While the information provided in the two RLatSM bulletins generally focuses on the now–concluded RLatSM trials, the guidance provided on the *special emphasis items*, and the procedures to follow in the event of communication, navigation and surveillance equipment failures, remains relevant to operations under PBCS separation minimums. Information includes:

– 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

Operators are strongly encouraged to review the bulletins and include relevant information in their training programs on oceanic operations. Use the information in the bulletins hand in hand with the information published in the U.S. Aeronautical Information Publication (AIP).

The ICAO EUR/NAT office will coordinate the revision of the NAT Ops Bulletins over the coming months to reflect the conclusion of the RLatSM trials.

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.*

(Performance Based Flight Systems Branch, AFS-470, 5/24/18)

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.

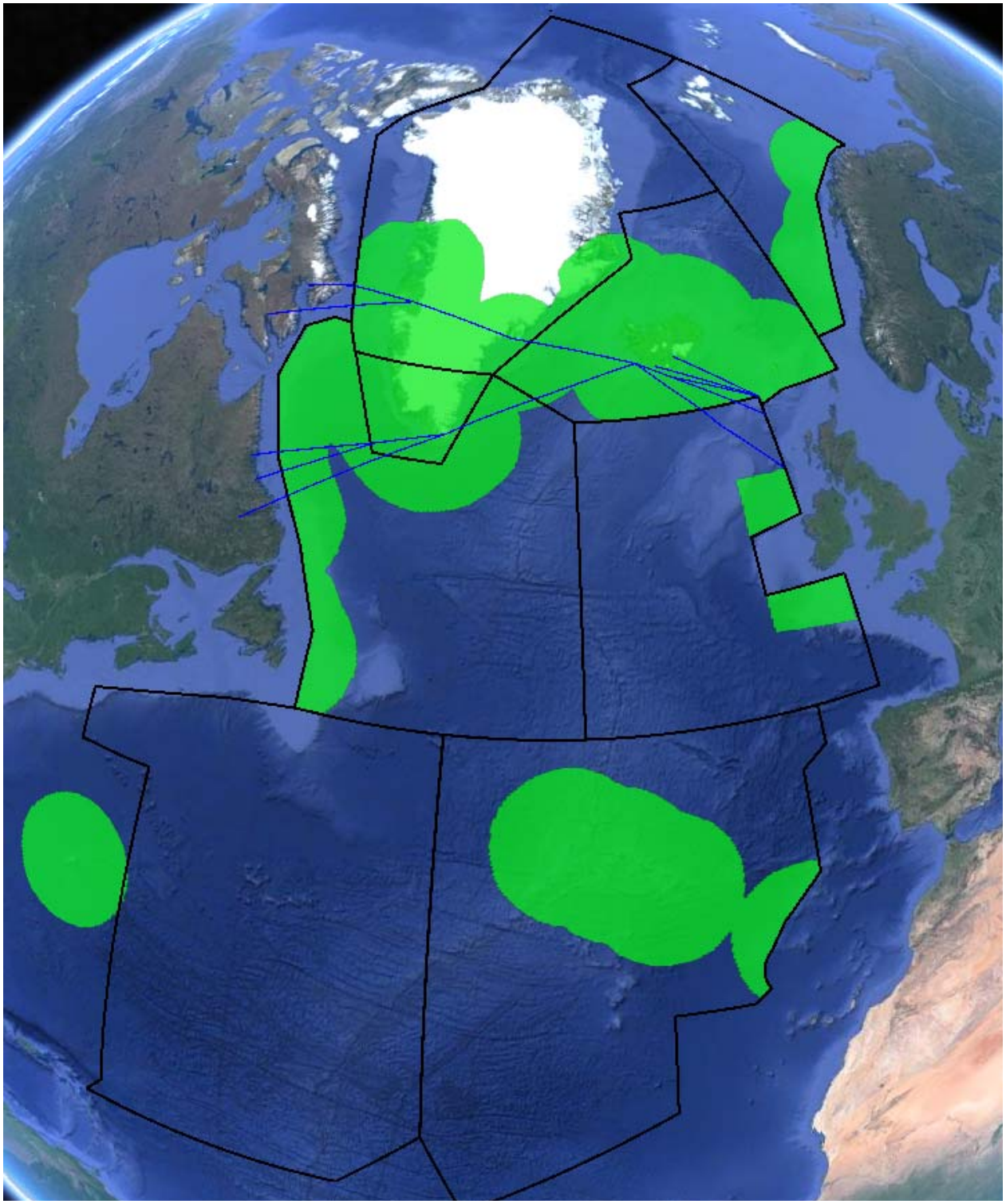
a. Aviation Safety Inspector Mark Patterson, Performance Based Flight Systems Branch, 202−267−8848, Mark.Patterson@faa.gov.

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.

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

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.

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
Jorge A. Chades	Oceanic Air Traffic Procedures Group (AJV-824)	202-385-8461	Jorge.A.Chades@faa.gov
Jerry Bordeaux	AJV-824	202-385-8329	Jerry.Bordeaux@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:

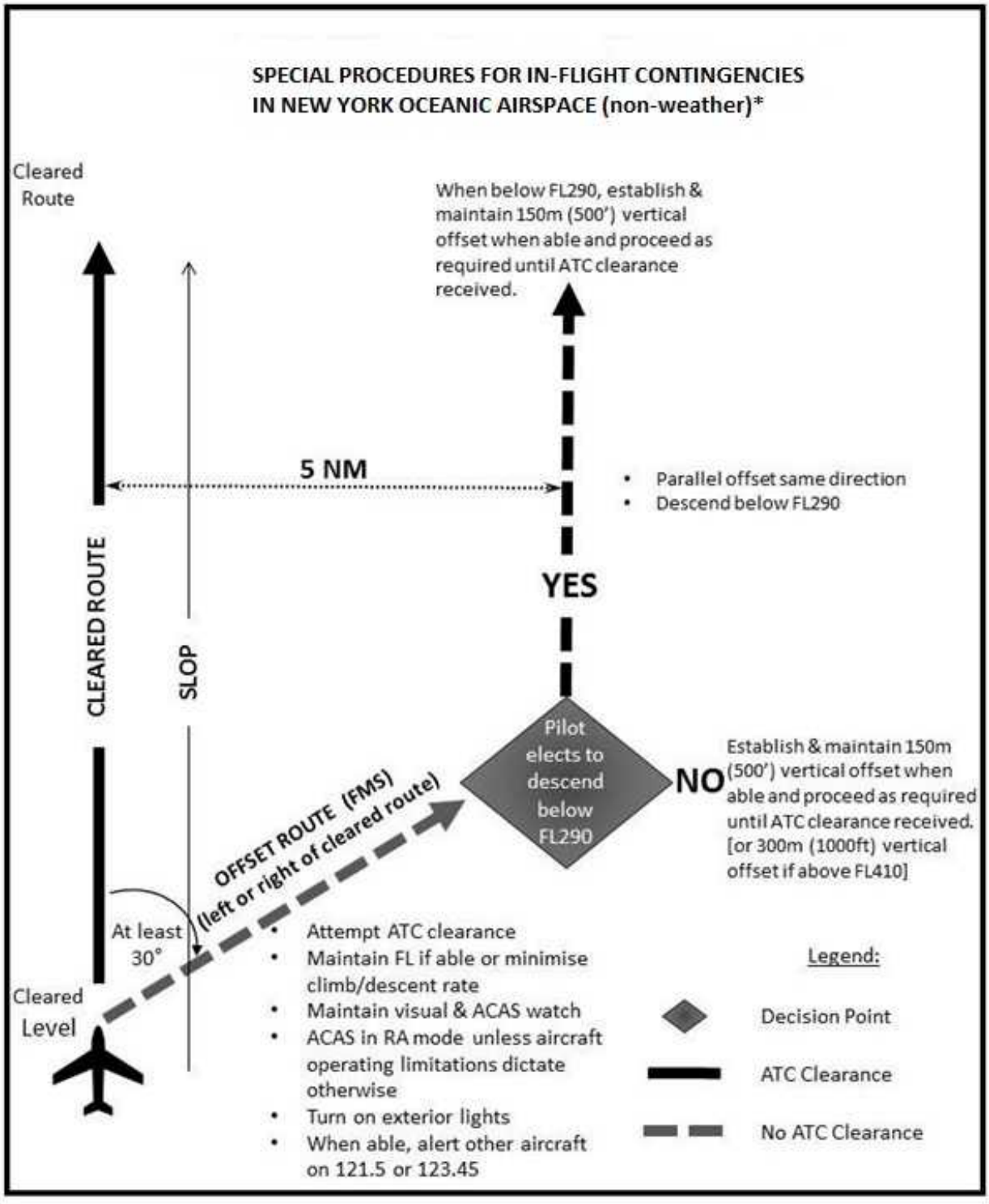
(1) descend below FL 290, and establish a 150 m (500 ft) vertical offset from those flight levels normally used, and proceed as required by the operational situation or, if an ATC clearance has been obtained, proceed in accordance with the clearance; or

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.

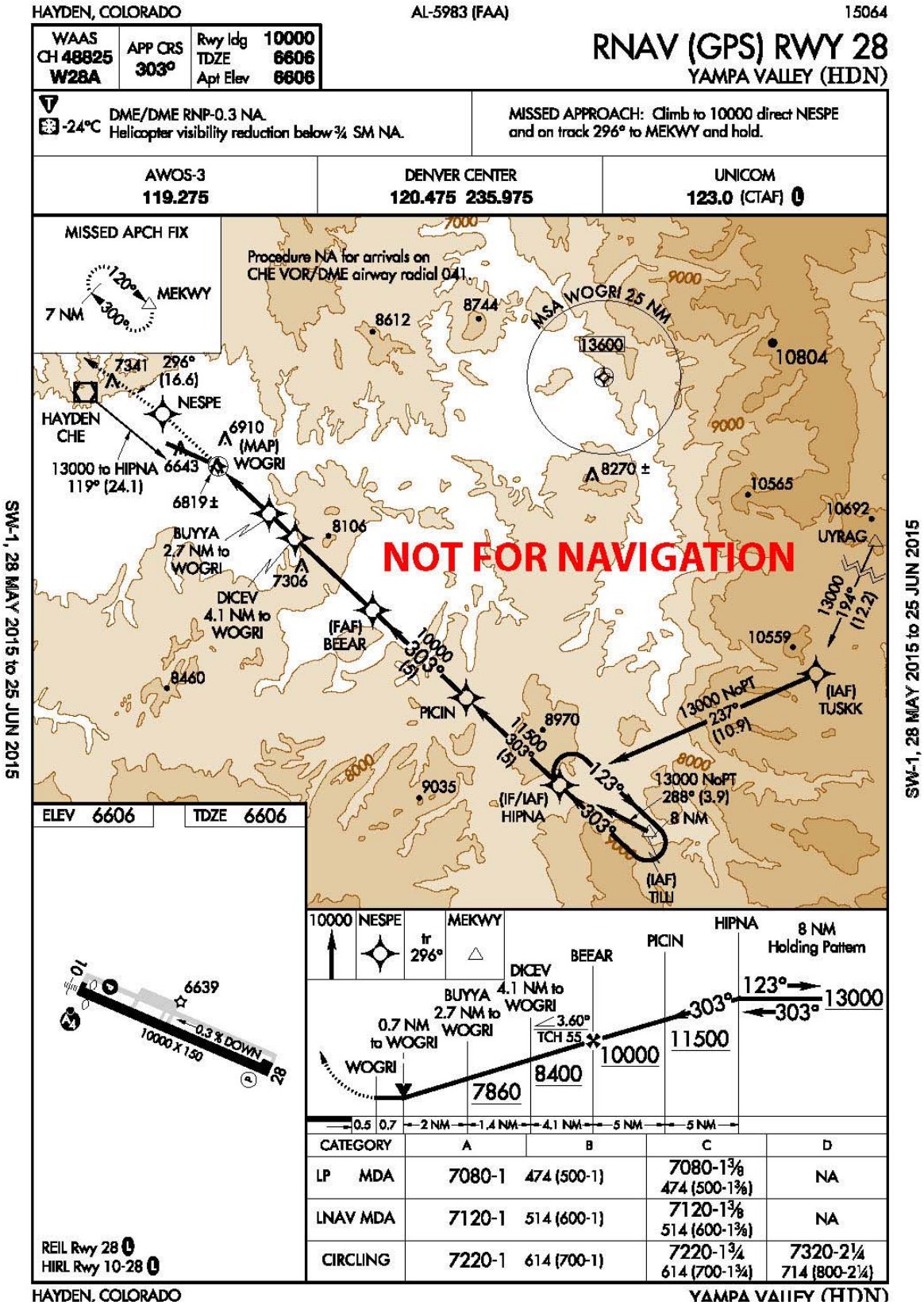
NTAP Segments Method: Final segment required.

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

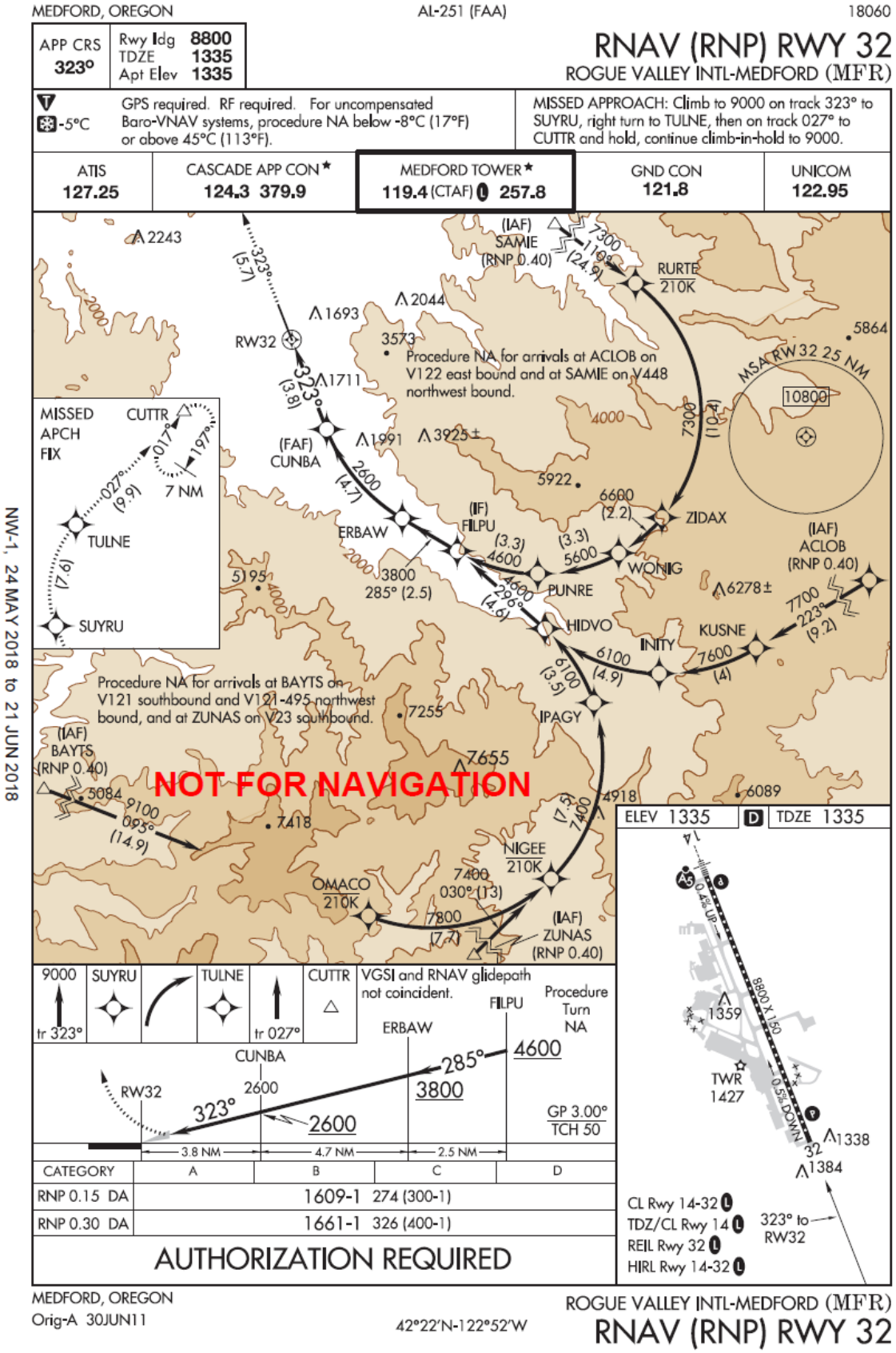
Uncompensated Baro−VNAV System or Manual Method:

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.

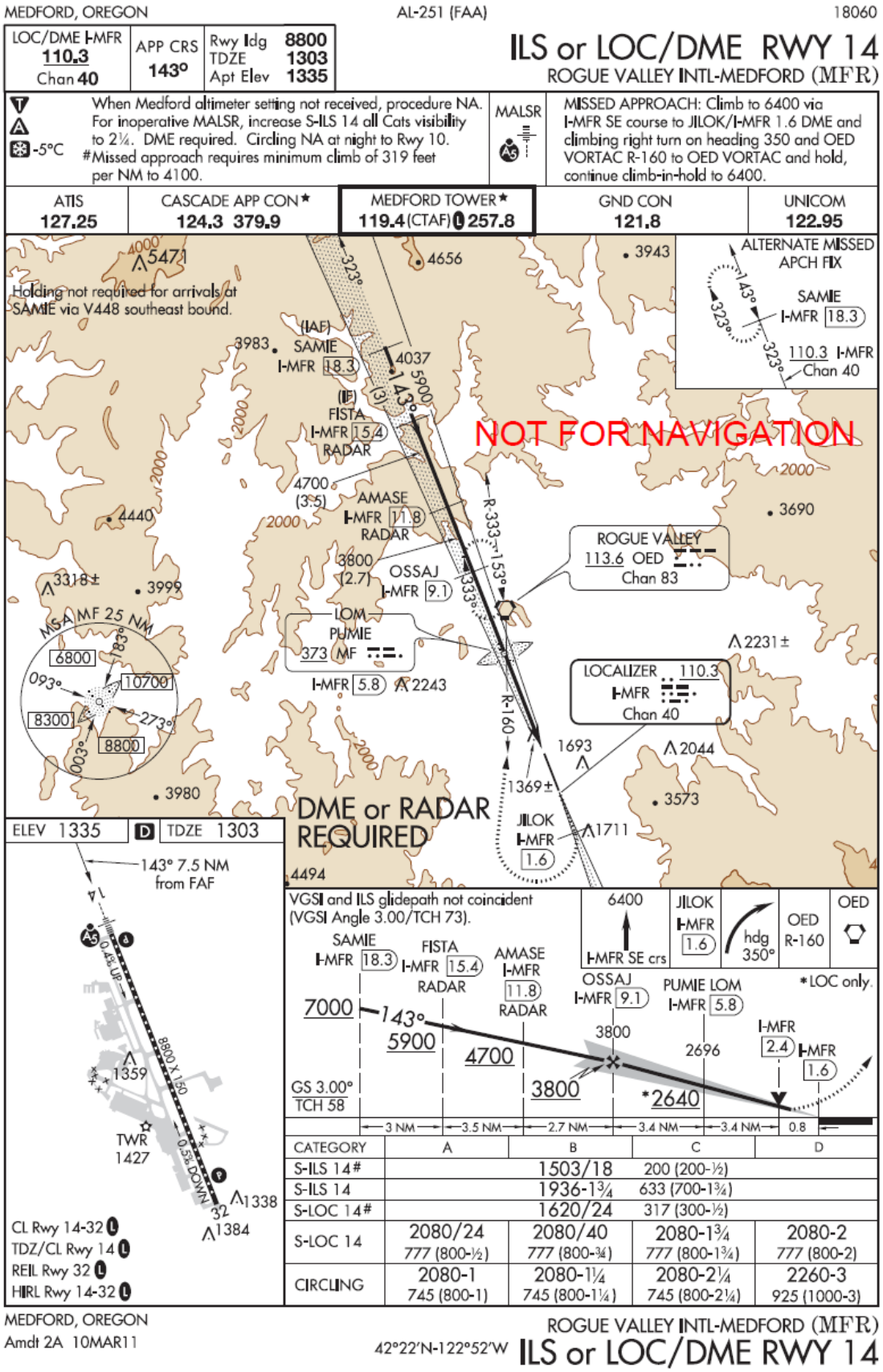
NTAP Segment(s) method: Intermediate segment required

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.

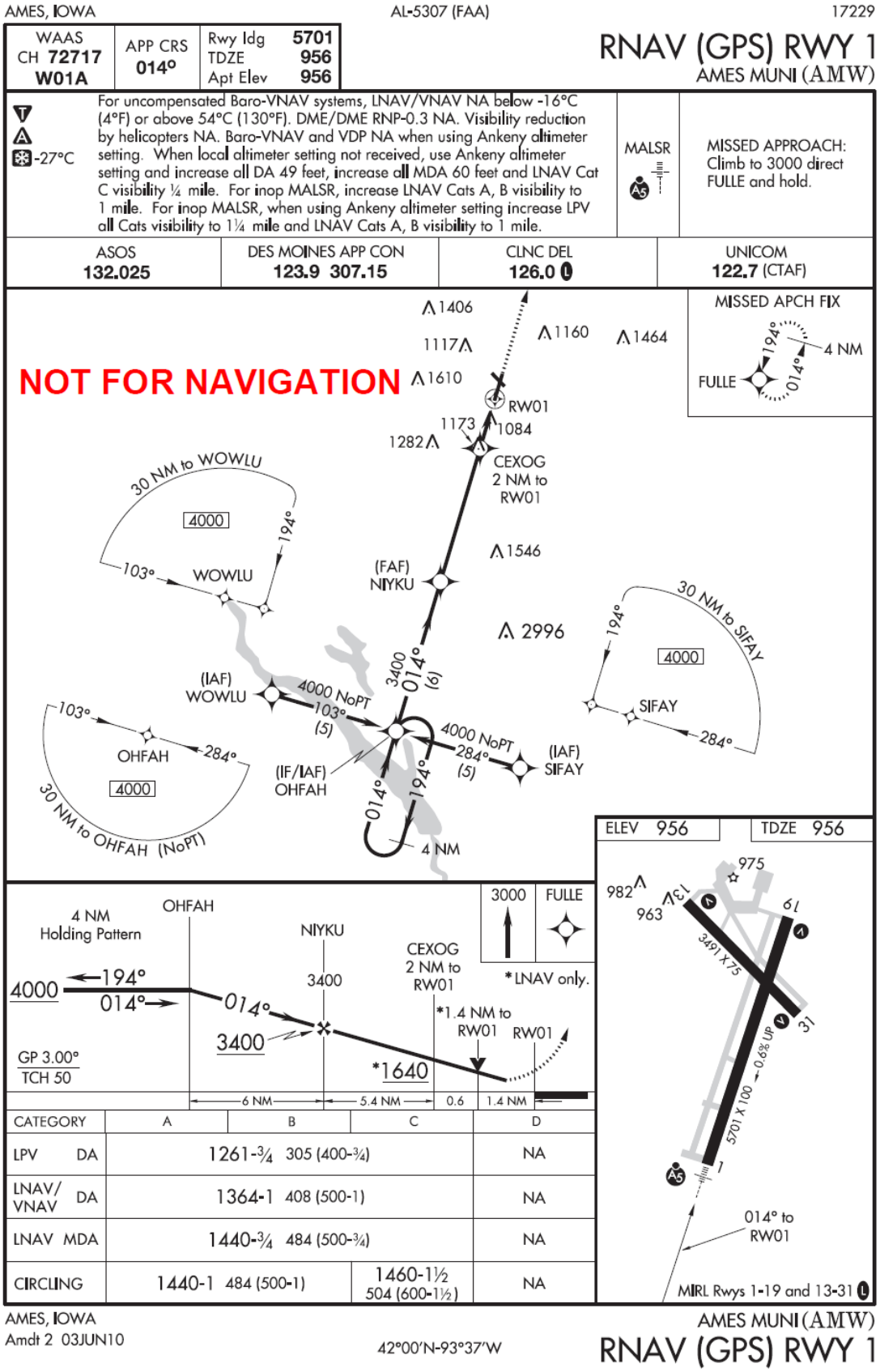
NTAP Segment(s) method: Intermediate segment required

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

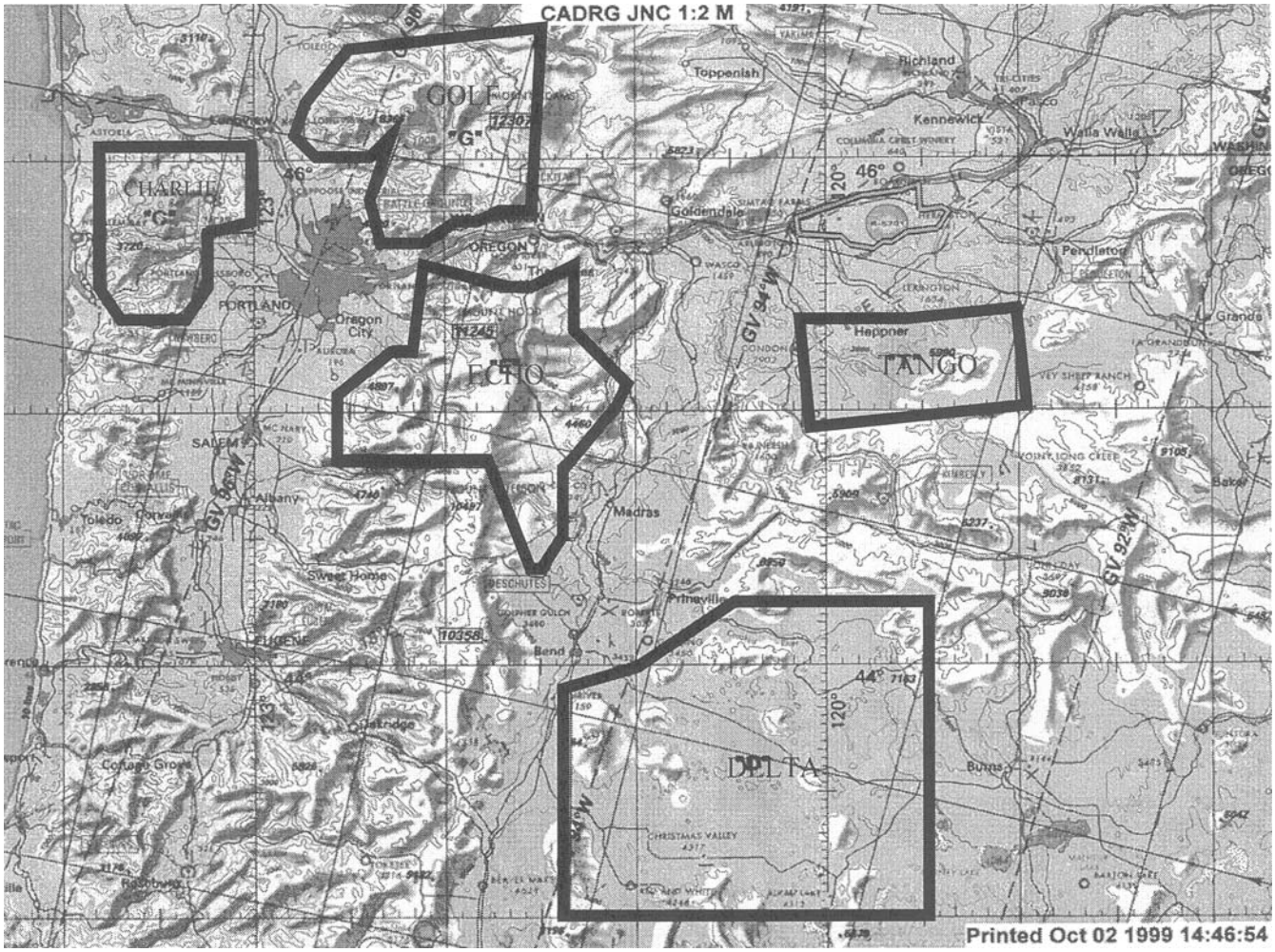
Section 2. Special Military Operations

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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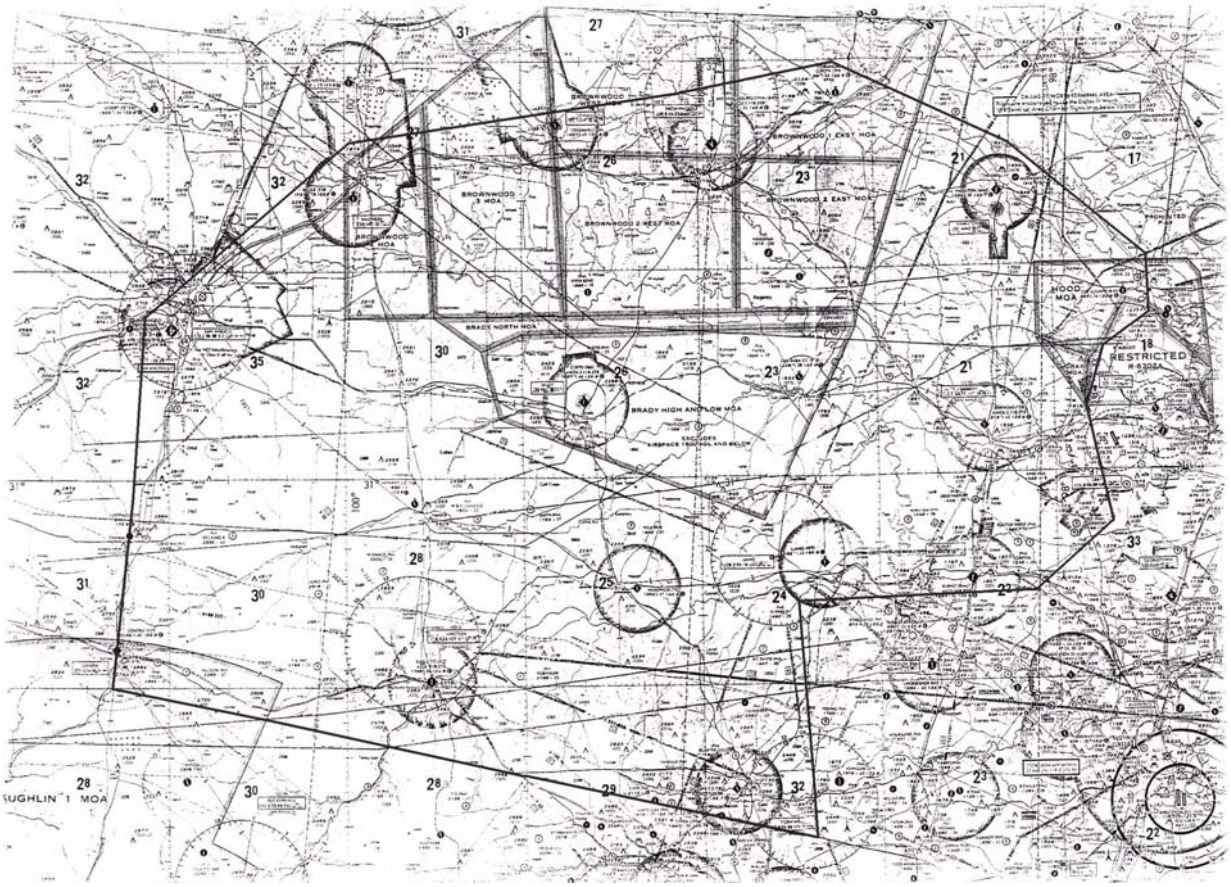
Notice to Pilots and Interested Personnel in Central and Southwest Texas

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

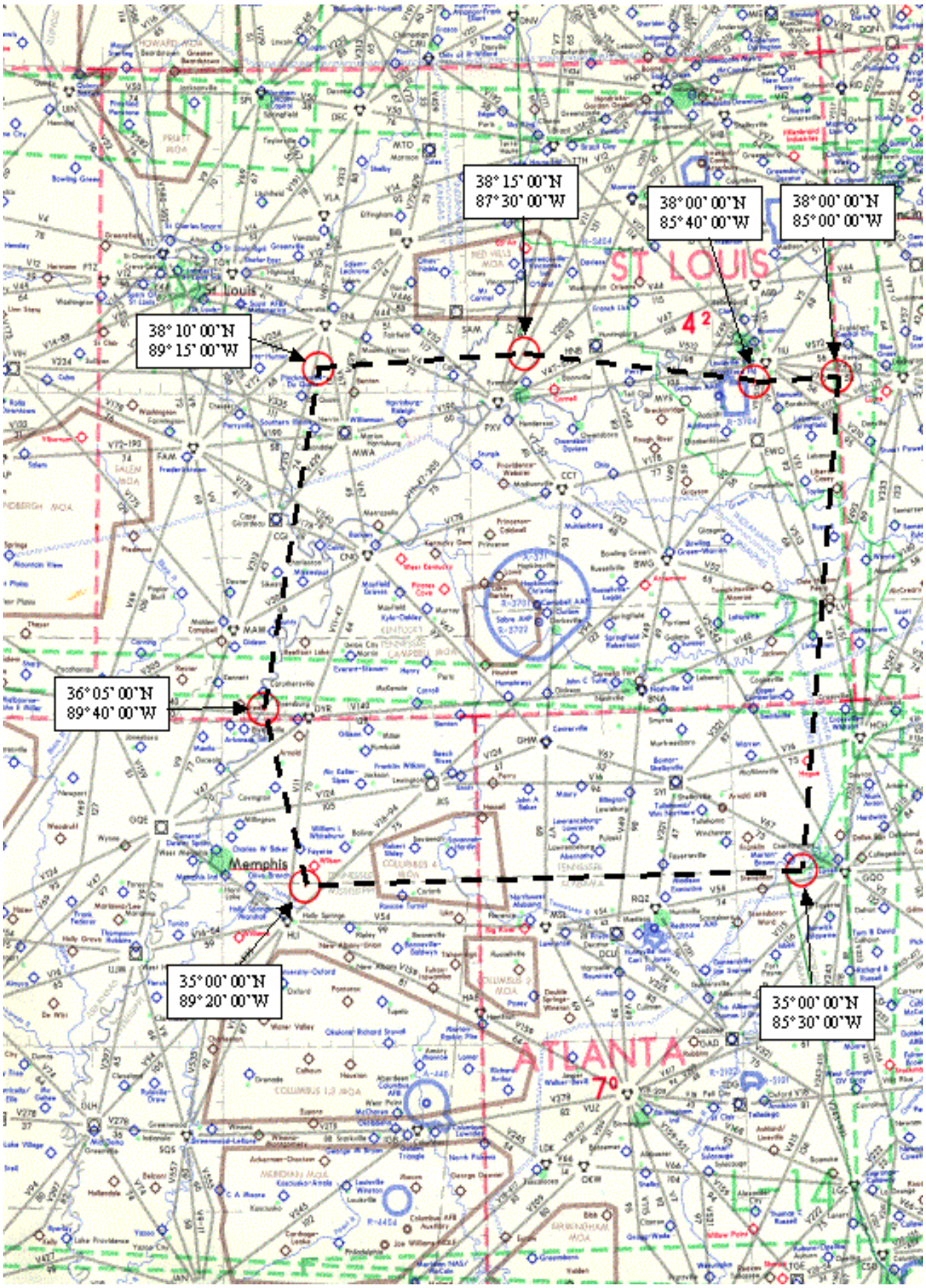
Notice to Pilots and Interested Persons in KY, TN, Southern IL, IN and Northern AL

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.

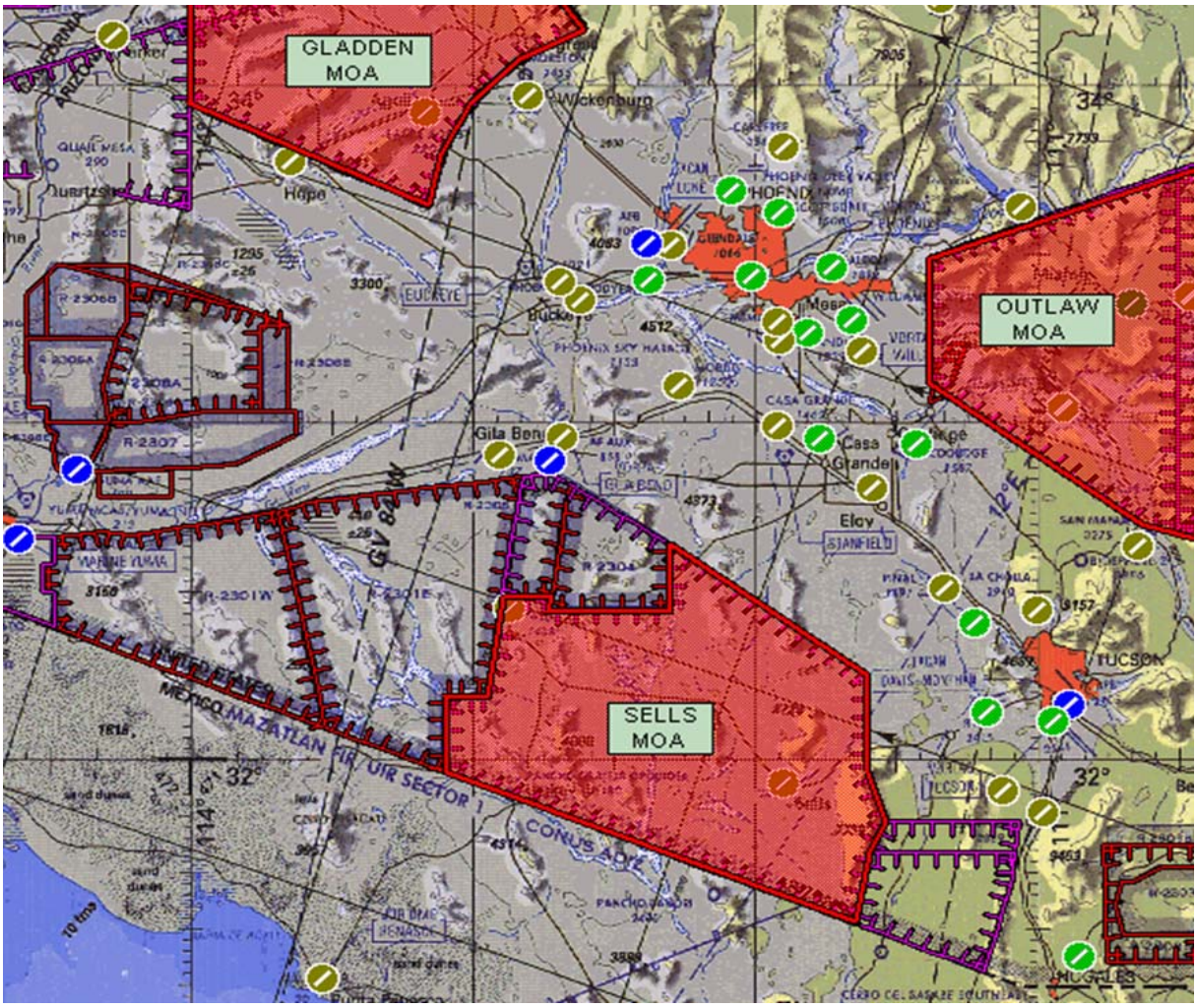
(ASO−530/920 6/8/06)


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

Notice to Pilots and Other Interested Personnel in Southern Arizona

Night Vision Goggle Lights-Out Operations
Sells Low/Sells 1 MOA, Arizona

Lights-out night vision goggle training operations will be conducted within the Sells Low/Sells 1 MOAs at all altitudes from sunset to 0700Z, Monday-Friday, or as scheduled by NOTAM when the MOAs are activated for military training. Nonparticipating pilots should contact Albuquerque Center on 126.45 or 125.25 for traffic advisories and NOTAM information.



Fox 3 High/Low, Paxon High/Low, and Delta 5 Military Operations Areas (MOAs)

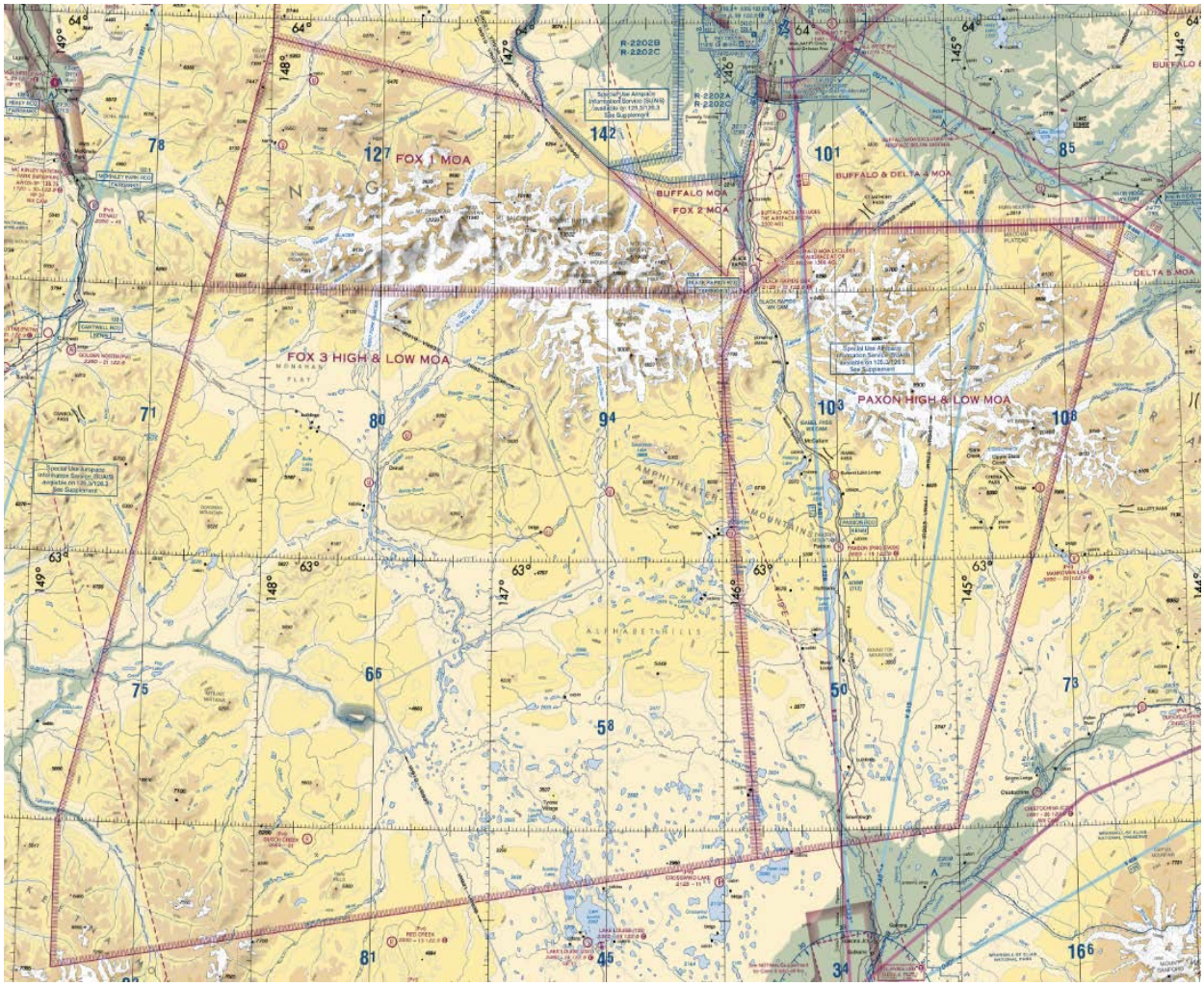
Big Delta, AK

Effective: beginning November 8, 2018

New airspace: Fox 3 High/Low, Paxon High/Low, and Delta 5 Military Operations Areas (MOAs) in the vicinity of Big Delta, AK will be effective November 8, 2018. The printed/folded chart copies of the Anchorage Sectional 103rd Edition (effective November 8, 2018) do not depict this airspace. A depiction of the new airspace and coordinates are provided below. Also provided is a corrected inset table showing altitude structure, time of use, controlling agency and contact frequencies.

Digital copies of the corrected sectional charts are available at https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/vfr/

Anchorage Sectional depiction of missing airspace:



Coordinates for the new airspaces are as follows:

Fox 3 High MOA, AK

Boundaries: Beginning at lat. 63°30'00" N., long. 145°54'00" W.;
to lat. 63°23'00" N., long. 146°00'00" W.;
to lat. 62°26'53" N., long. 145°51'33" W.;
to lat. 62°13'35" N., long. 148°50'50" W.;
to lat. 62°30'00" N., long. 148°50'50" W.;
to lat. 63°30'00" N., long. 148°16'46" W.;
to the point of beginning.

Fox 3 Low MOA, AK

Boundaries: Beginning at lat. 63°30'00" N., long. 145°54'00" W.;
to lat. 63°23'00" N., long. 146°00'00" W.;
to lat. 62°26'53" N., long. 145°51'33" W.;
to lat. 62°13'35" N., long. 148°50'50" W.;
to lat. 62°30'00" N., long. 148°50'50" W.;
to lat. 63°30'00" N., long. 148°16'46" W.;
to the point of beginning.

Paxon High MOA, AK

Boundaries: Beginning at lat. 63°30'00" N., long. 145°54'00" W.;
to lat. 63°37'00" N., long. 145°33'00" W.;
to lat. 63°37'00" N., long. 144°33'14" W.;
to lat. 63°32'22" N., long. 144°16'22" W.;
to lat. 62°30'00" N., long. 145°00'00" W.;
to lat. 62°26'53" N., long. 145°51'33" W.;
to lat. 63°23'00" N., long. 146°00'00" W.;
to the point of beginning.

Paxon Low MOA, AK

Boundaries: Beginning at lat. 63°30'00" N., long. 145°54'00" W.;
to lat. 63°37'00" N., long. 145°33'00" W.;
to lat. 63°37'00" N., long. 144°33'14" W.;
to lat. 63°32'22" N., long. 144°16'22" W.;
to lat. 62°30'00" N., long. 145°00'00" W.;
to lat. 62°26'53" N., long. 145°51'33" W.;
to lat. 63°23'00" N., long. 146°00'00" W.;
to the point of beginning.

Delta 5 MOA, AK

Boundaries: Beginning at lat. 63°37'00" N., long. 144°33'14" W.;
to lat. 63°37'00"N., long. 144°13'00" W.;
to lat. 63°32'22" N., long. 144°16'22" W.;
to the point of beginning.

Anchorage Sectional inset table:

MOA NAME	ALTITUDE*	TIME OF USE†	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES
BIRCH	500 AGL TO BUT NOT INCL 5000	0800-1800 MON-FRI	ANCHORAGE CNTR	135.3 322.5
BUFFALO	300 AGL TO BUT NOT INCL 7000	0800-1800 MON-FRI	ANCHORAGE CNTR	135.3 322.5
DELTA 2	5000	0700-2400 MON-FRI MAJOR FLYING EXERCISES ONLY	ANCHORAGE CNTR	135.3 322.5
DELTA 3	3000 AGL	0700-2400 MON-FRI MAJOR FLYING EXERCISES ONLY	ANCHORAGE CNTR	135.3 322.5
DELTA 4	7000	0700-2400 MON-FRI MAJOR FLYING EXERCISES ONLY	ANCHORAGE CNTR	135.3 322.5
DELTA 5	500 AGL	0700-2400	ANCHORAGE CNTR	125.55 254.3
EIELSON	100 AGL	0800-1800 MON-FRI	ANCHORAGE CNTR	135.3 322.5
FOX 1	5000 AGL	0800-1800 MON-FRI	ANCHORAGE CNTR	135.3 322.5
FOX 2	7000	0800-1800 MON-FRI	ANCHORAGE CNTR	135.3 322.5
FOX 3 HIGH	5000 AGL	0800-1800 MON-FRI	ANCHORAGE CNTR	125.55 254.3
FOX 3 LOW	500 AGL TO BUT NOT INCL 5000	0700-2400	ANCHORAGE CNTR	125.55 254.3
PAXON HIGH	14,000	0800-1800 MON-FRI	ANCHORAGE CNTR	125.55 254.3
PAXON LOW	500 AGL TO BUT NOT INCL 14,000	0700-2400	ANCHORAGE CNTR	125.55 254.3
SUSITNA	10,000 OR 5000 AGL WHICHEVER IS HIGHER	INTERMITTENT 0800-1800 MON-FRI	ANCHORAGE CNTR	125.55 254.3
YUKON 1	100 AGL	0800-1800 MON-FRI	ANCHORAGE CNTR	133.1 285.4
YUKON 3 HIGH	10,000	1000-1500 MON-FRI	ANCHORAGE CNTR	135.3 322.5
YUKON 3A LOW	100 AGL TO BUT NOT INCL 10,000	1000-1130 & 1330-1500 MON-FRI	ANCHORAGE CNTR	135.3 322.5
YUKON 3B	2000 AGL	BY NOTAM	ANCHORAGE CNTR	135.3 322.5

*Altitudes indicate floor of MOA. All MOAs extend to but do not include FL 180 unless otherwise indicated in tabulation or on chart.
†Other times contact USAF SUAIS or FAA FSS, see SUAIS in Supplement.

//END//

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.

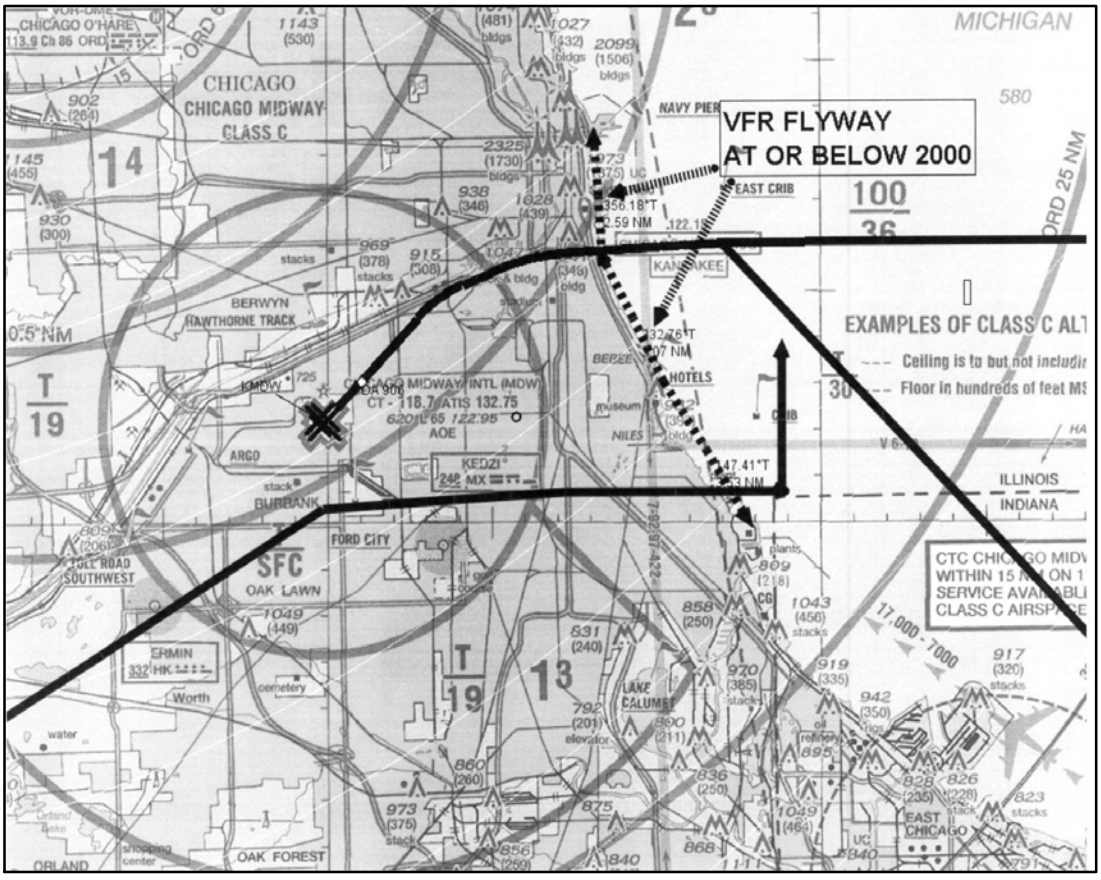
Blue 7	**South terminal** circles 2S. CONTACT GROUND ON 119.25	Juliet, Papa Papa, Foxtrot, Whiskey and Papa.
Blue 11	**South terminal** circles 3N or 4N CONTACT GROUND ON 121.8	TURN LEFT on Uniform, join Kilo, RY 9L, Mike and M-6. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L.
Blue 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

NOTICES TO AIRMEN (NOTAM) FOR THE PROTOTYPE RUNWAY STATUS LIGHTS (RWSL) AT DALLAS FT WORTH INTERNATIONAL AIRPORT (DFW), DFW, TX

The Federal Aviation Administration (FAA) operates prototype Runway Status Lights (RWSL) system at DFW.

Runway Status Lights, indicate when a runway is unsafe to enter, cross, or take−off through the use of in−pavement red lights installed only at selected intersections and runways as described below.

LIGHTING

RWSL conveys the **runway occupancy status**, indicating when a runway is unsafe to enter through the use of red in−pavement warning Runway Entrance Lights (RELs) and when it is unsafe to take off through the use of red in−pavement warning Takeoff Hold Lights (THLs).

The RELs are a series of red lights, typically 6, 7 or up to 20+ in−pavement lights spaced evenly along the taxiway centerline from the taxiway hold line to the runway edge. One REL is placed just before the hold line and one REL is placed near the runway centerline. All RELs are directed toward the **runway hold line** and are oriented to be visible only to pilots and vehicle operators entering or crossing the runway from that location.

RELs are operational at the following intersections at DFW:

- **Runway 18L/36R**
- **Runway 17R/35L**
  - **Taxiways EK, K8, EL, EM (East Side)**
  - **Taxiways Y, Z, EJ, B, A (East and West Side)**
- **Runway 17C/35C**
  - **Taxiways EJ, EL, ER (East Side)**
  - **Taxiways Y, Z, B, A (East and West Side)**

The THLs are directed toward the **approach end** of the runway and are visible to pilots in position for takeoff or just commencing departure roll. There are two sets of THLs, each comprising a series of **red** in−pavement lights at 100’ spacing along the runway centerline.

There are four sets of THLs on the following runways at DFW:

- **17R/35L comprised of 16 pairs for a total of 32 lights at each end of the runway**

When operating at airports with RWSL, pilots will operate with the transponder “On” when departing the gate or parking area until arrival at the gate or parking area. This ensures interaction with the FAA surveillance systems which provide information to the RWSL system.

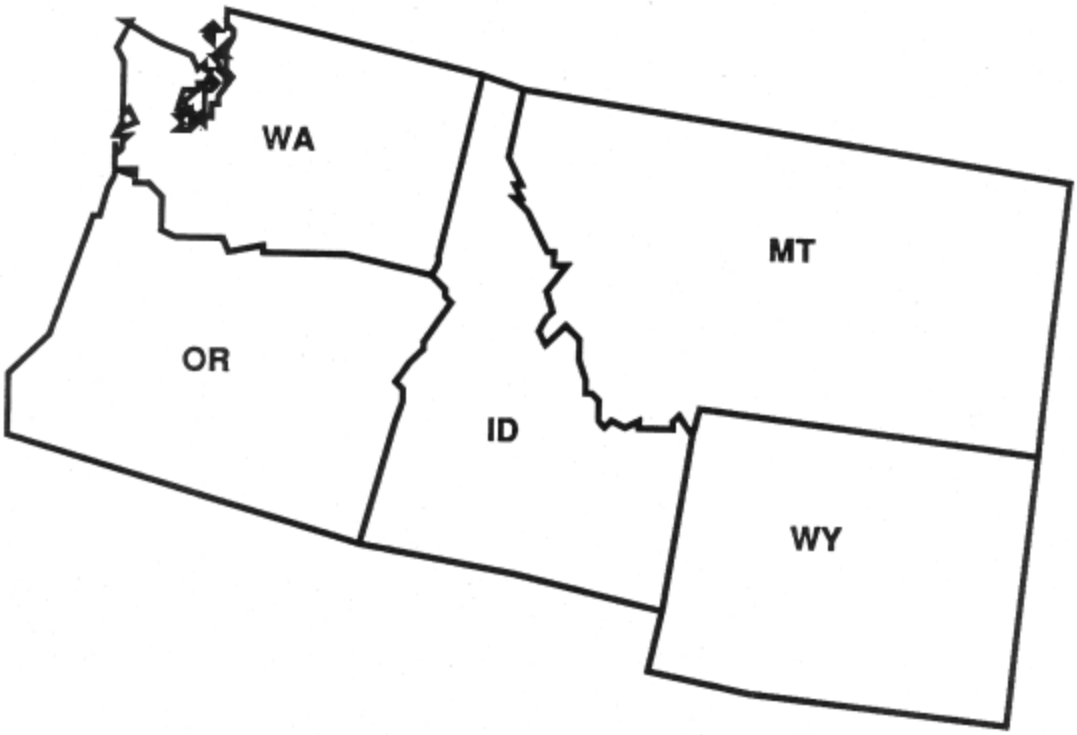
Runway Status Lights indicate runway status only. They do not substitute for an ATC clearance. Pilots are still required to receive an ATC clearance as they normally would for any operation on the runway.

Pilots are encouraged to learn more about the RWSL system at
http://www.faa.gov/air_traffic/technology/rwsl/

North Central United States

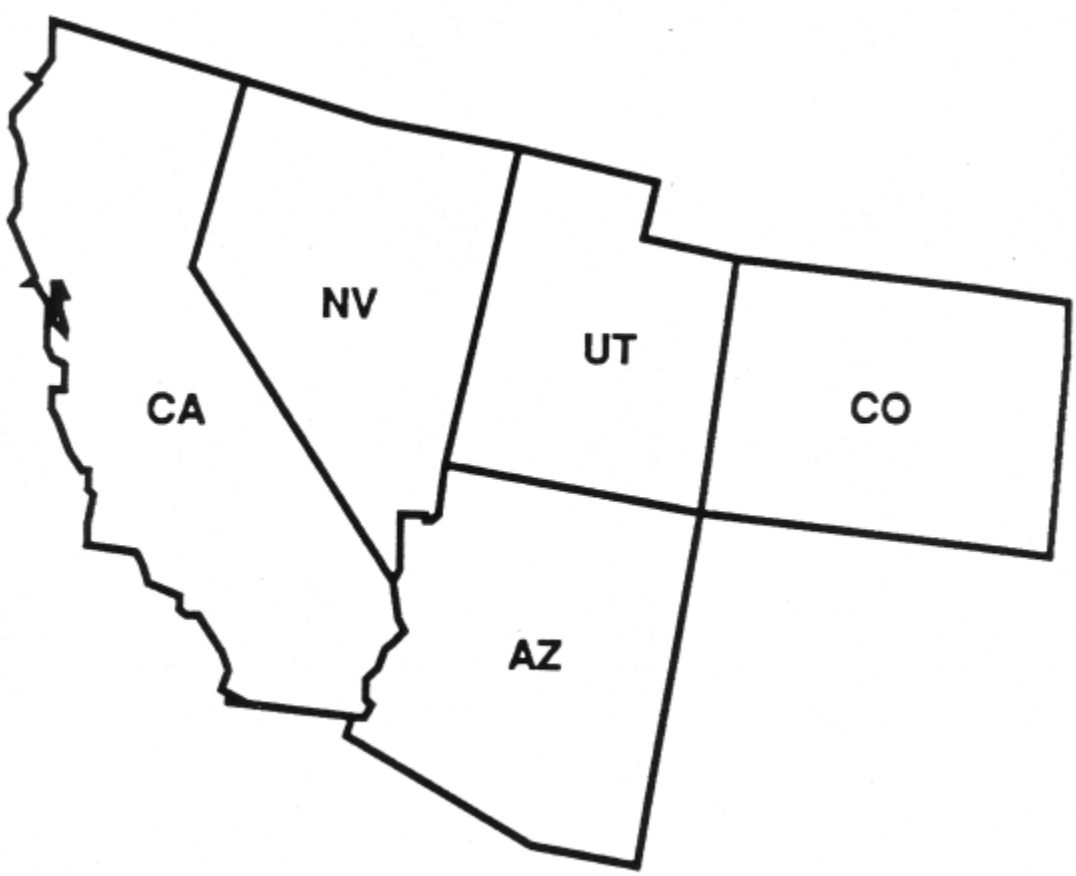
**There are no North Central United States notices for this edition.*

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

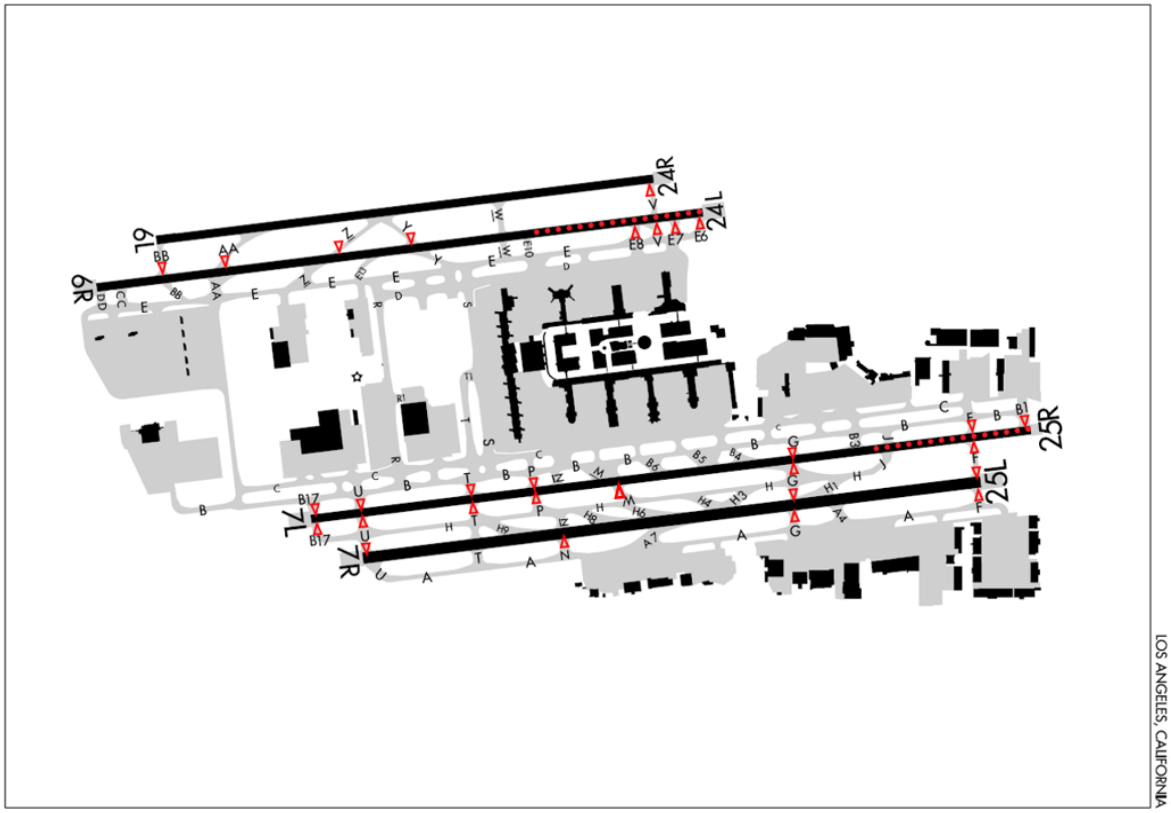
Standard Taxi West	
Origin	**Routing**
Concourse A – South Side	Taxi via Taxiway Alfa Alfa (AA) towards Apron Location Point 1W. Hold short of Taxiway Golf (G). Contact Ground on 127.5 when number one at Apron Location Point 1W.
Concourse A – North Side	Taxi via Taxiway Alfa November (AN) towards Apron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

LOS ANGELES INTERNATIONAL AIRPORT (LAX) RUNWAY STATUS LIGHTS (RWSLs)

LAX Runway Status Lights (RWSLs) are operating. RWSLs are red in−pavement lights that serve as warning lights on runways and taxiways indicating that it is unsafe to enter, cross, or begin takeoff on a runway when illuminated.

Note: *RWSLs indicate a runway's status only, they do not indicate clearance. Pilots and vehicle operators are required to receive a clearance from air traffic control before proceeding.*

Runway Status Lights at Los Angeles (LAX)



Takeoff Hold Lights (THLs)

- Runway 24L (North Complex)
- Runway 25R (South Complex)

Runway Entrance Lights (RELs)

South Complex:

- Taxiway B1 (North of Runway25R)
- Taxiway F (North and South of Runways 25L/25R)
- Taxiway G (North and South of Runways 25L/25R)
- Taxiway M (South of Runway 25R)
- Taxiway N (South of Runway 25L)

- Taxiway P (North and South of Runway 25R)
- Taxiway T (North and South of Runway 25R)
- Taxiway U (North and South of Runway 25R and North of Runway 25L)
- Taxiway B17 (North and South of Runway 25R)

North Complex:

- Taxiway E6 (South of Runway 24L)
- Taxiway E7 (South of Runway 24L)
- Taxiway E8 (South of Runway 24L)
- Taxiway V (South of Runway 24R)
- Taxiway V (South of Runway 24L)
- Taxiway Y (North of Runway 24L)
- Taxiway Z (North of Runway 24L)
- Taxiway AA (North of Runway 24L)
- Taxiway BB (North of Runway 24L)

For more information, visit the website: https://www.faa.gov/air_traffic/technology/rwsl/

(AJV–W21, revision 2/1/2018)

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

KENTUCKY DERBY

LOUISVILLE, KY
May 1–5, 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:

AIRPORTS	IDENTIFIER
Louisville International Airport	SDF
Bowman Field Airport	LOU
Clark County Airport	JVY

TRAFFIC MANAGEMENT

When traffic demand exceeds airport capacity, the Air Traffic Control Systems Command Center (ATCSCC) may apply traffic management initiatives to **domestic, IFR arrivals**. Pilots should anticipate Expect Departure Clearance Times (EDCT), holding, or other potential delay.

Expect heavy demand and potential traffic management initiatives during the following periods:

DAY	DATE	TIME EDT	TIME UTC
Wednesday	May 1,2019	0800–1959	1200–2359
Thursday	May 2, 2019	0800–1959	1200–2359
Friday	May 3, 2019	0800–1959	1200–2359
Saturday	May 4, 2019	0600–2159	1000–0159
Sunday	May 5, 2019	0600–1559	1000–1959

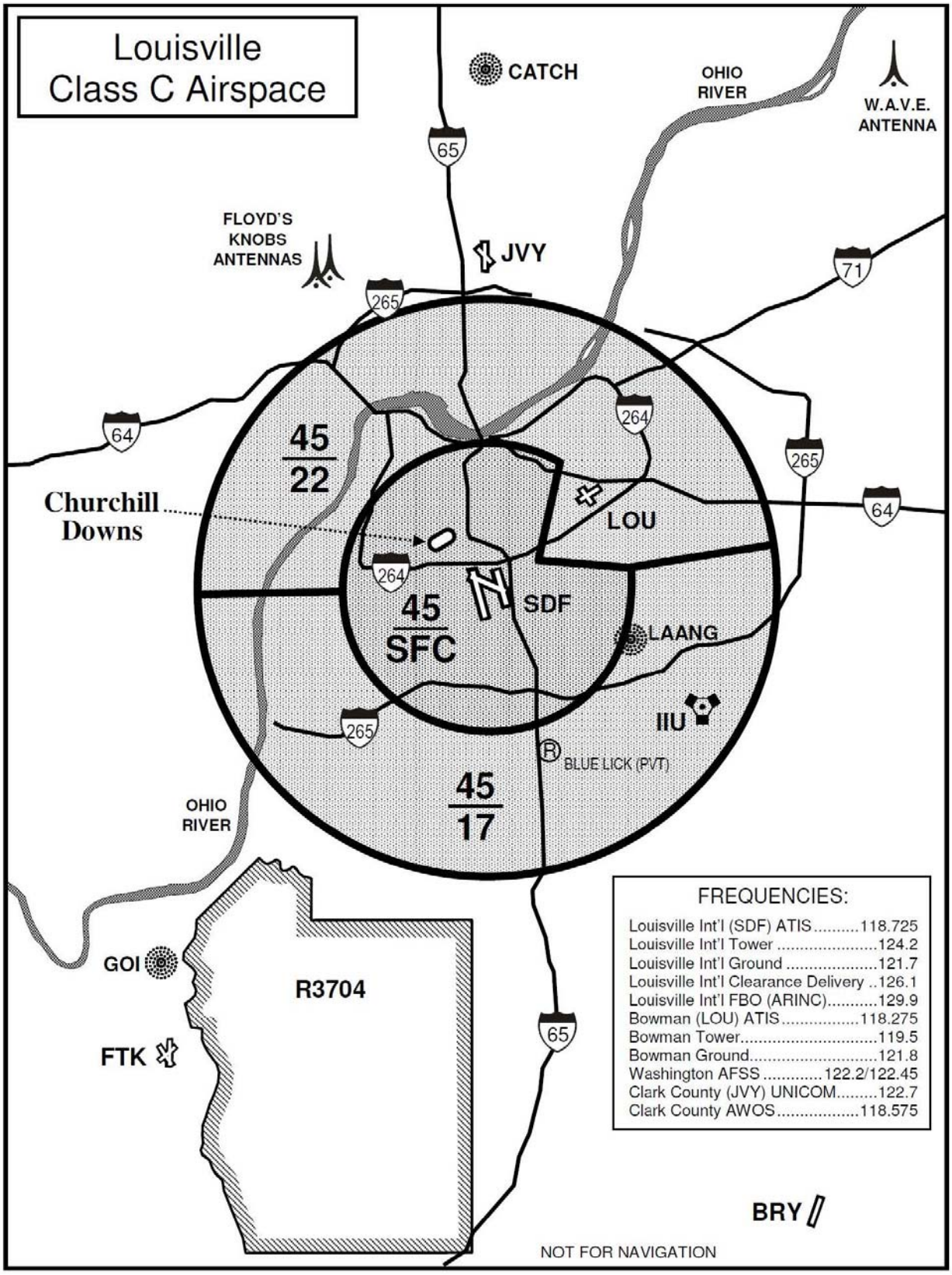
FLIGHT PLANS

Indy Center and Louisville ATCT will not accept air filed flight plans to or from the Louisville area from Thursday, May 2, 2019, through Sunday, May 5, 2019, **except in emergencies.** Airborne filed flight plans filed with other facilities may experience lengthy delays.

ATIS

MONITOR ATIS prior to initial contact with Louisville Approach Control.
SDF – 118.725 MHz
LOU – 118.275 MHz

VFR ARRIVALS
*****CLASS C SERVICE IS MANDATORY*****


Louisville
Class C Airspace
CATCH
OHIO
RIVER
W.A.V.E.
ANTENNA
65
FLOYD'S
KNOBS
ANTENNAS
JVY
265
71
64
264
45
22
Churchill
Downs
LOU
265
64
264
45
SFC
SDF
LAANG
IIU
265
BLUE LICK (PVT)
45
17
OHIO
RIVER
GOI
R3704
FTK
65
BRY
NOT FOR NAVIGATION
FREQUENCIES:
Louisville Int'l (SDF) ATIS.....118.725
Louisville Int'l Tower 124.2
Louisville Int'l Ground 121.7
Louisville Int'l Clearance Delivery ..126.1
Louisville Int'l FBO (ARINC).....129.9
Bowman (LOU) ATIS.....118.275
Bowman Tower.....119.5
Bowman Ground.....121.8
Washington AFSS 122.2/122.45
Clark County (JVY) UNICOM.....122.7
Clark County AWOS.....118.575

Set transponder to 1200 and squawk altitude prior to reaching an outer VFR entry point and Louisville Approach Class C Airspace. Contact Louisville Approach Control and advise them of destination airport and ATIS code.

Hold at an outer VFR entry point until advised by Approach Control to proceed inbound. Expect instruction to depart VFR entry points on a first−come, first−served basis. Aircraft arriving from 0800−1959 EDT (1200−2359 UTC) may expect holding of 30 minutes or longer.

Single and twin−engine propeller aircraft are encouraged to use LOU/Bowman Field Airport (5nm northeast) or JYV/Clark County Airport (11nm north), due to parking congestion at Louisville International Airport.

Other Airports within the Louisville ATCT Area: Radar service will be available to aircraft landing at airports outside of Louisville Class C Airspace, workload permitting. For IFR clearance/cancellation at airports without a clearance delivery frequency, contact Louisville ATCT at (502) 375−7499.

IFR DEPARTURE ROUTES

If RNAV equipped, file the RNAV SID for the appropriate departure gate.

DEPARTURE GATE	ROUTE
NORTH	V53 STREP or STREP3 (RNAV Only)
EAST	V4 HYK or FEDRA3 (RNAV Only)
SOUTH	direct MYS or CRRGO2 (RNAV Only)
WEST	V4 APALO or APALO3 (RNAV Only)

File flight plans to destination via Preferred IFR Routes as listed in the Airport/Facility Directory or as listed below. Direct routes to airports with preferred arrival routes not allowed.

DESTINATION	ROUTE
ABE	HYK BKW LDN LDN031 V377 HAR V162 DUMMR
ACY	HYK BKW J42 OTT SIE
ALB	STREP ROD DJB DKK ALB
ATL	MYS BNA NEWBB IHAVE MTHEW CHPPR −STAR
BDL	STREP ROD JHW Q82 MEMMS WILET STELA−STAR
BOS	STREP ROD WWSHR Q82 PONCT JFUND−STAR
BWI	HYK BKW FAK OTT−STAR
CAE	HYK LOZ HMV SPA
CLT	HYK SKYWA FLIPZ−STAR
DCA	HYK BKW TRUPS−STAR
DFW	MYS PXV J131 LIT BYP−STAR
DTW	STREP DQN MIZAR−STAR
EWR	STREP ROD WWSHR Q29 DORET J584 SLT FQM−STAR
HPN	STREP ROD JHW ITH VALRE−STAR
IAD	HYK HVQ GIBBZ−STAR

ISP	STREP ROD J152 J78 PSB J49 HNK DNY LOVES–STAR
LGA	STREP ROD WWSHR CXR ETG MIP–STAR
MDT	STREP ROD J152 HAR
MDW	STREP OKK FISSK–STAR
MEM	MYS BWG WLDER–STAR
MMU	STREP ROD JHW J70 LVZ LVZ–STAR
ORD	STREP MZZ ROYKO–STAR
ORF	HYK BKW J42 MOL TERKS–STAR
PHL	HYK BKW J42 GVE DPNT–STAR
PHL	STREP ROD J152 JST BUNTS–STAR
RDU	HYK BKW ROA SBV–STAR
RIC	HYK HVQ J24 FAK
SYR	STREP ROD DJB SYR
TEB	STREP ROD WWSHR JHW LVZ LVZ–STAR
TOL	STREP DQN V275 KLINE VWV

SDF VFR DEPARTURES

Before starting engines, monitor ATIS on 118.725. Contact Clearance Delivery on 126.1 for required Class C clearance and information on departure delays. Anticipate departure delays 0800–1959 EDT (1200–2359 UTC) on May 4, all day on May 5, and until 1559 EDT (1959 UTC) on May 6.

ADDITIONAL PILOT INFORMATION

Wake Turbulence: Exercise caution when flying within 30 miles of Louisville due to numerous heavy jet aircraft operations and potentially significant wake turbulence.

Overflight Traffic: Aircraft not landing in the Louisville Area, avoid overflight below 10,000 feet MSL within 50 miles of Louisville International Airport.

Restricted Area Advisory: Restricted Area R3704A to the southwest of the Louisville (IIU) VORTAC is active daily 0600–0000 EDT (1100–0500 UTC); other times by NOTAM. R3704B is active only by NOTAM.

Parking: For General Aviation parking at the FBO, contact Atlantic Aviation on 129.9 thirty minutes prior to arrival for parking instructions. For advanced reservations, contact Atlantic Aviation at (502) 368–1515, ext. 0. Long–term parking will be on taxiways L, N, K, P, and others as necessary.

Transponders on: All aircraft conduct ground operations with transponder in the “on” position.

CAUTION

Expect numerous helicopter, banner tow, and blimp operations near Churchill Downs Race Track, 2NM northwest of Louisville International Airport, Wednesday, May 2 through Saturday, May 5, 2019.

OBTAIN A COMPLETE WEATHER BRIEFING AND REVIEW ALL APPLICABLE NOTAMS PRIOR TO CONDUCTING FLIGHT

Lockheed Martin Flight Service	
Telephone Flight Planning	1–800–WX–BRIEF (1–800–992–7433)
Web Site	www.1800wxbrief.com

For further information contact:

FAA Indianapolis ARTCC
Traffic Management Unit
1850 S. Sigsbee Street
Indianapolis, IN 46241
317–247–2243

ALL–STAR RACE
AND
COCA–COLA 600

MONSTER ENERGY NASCAR CUP SERIES EVENTS

CHARLOTTE MOTOR SPEEDWAY
CHARLOTTE, NC

May 18–19, 2019
May 24–27, 2019

SPECIAL AIR TRAFFIC PROCEDURES

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

DATE	TIME EDT	TIME UTC
May 18–19	0700–2300	1100–0300
May 24–27	0700–2300	1100–0300

VFR HELICOPTER OPERATIONS

Charlotte International Airport to Speedway– BLUE ROUTE
Contact CLT Tower 118.1 and request "BLUE ROUTE". After receiving VFR departure instructions, proceed direct Central Piedmont Community College, inside the I–277 loop, then on course Charlotte Motor Speedway. Expect Radar Service termination when leaving CLT CLASS B airspace.

Speedway to Charlotte International Airport– GREY ROUTE
Contact CLT Tower 118.1 on the north side of Highway 49/29 and W. Sugar Creek Road, request "GREY ROUTE". After receiving Class B clearance, proceed VFR inbound remaining on the North side of Highway 49/29 to I–277 loop, direct Bank of America Stadium, direct CLT Airport.

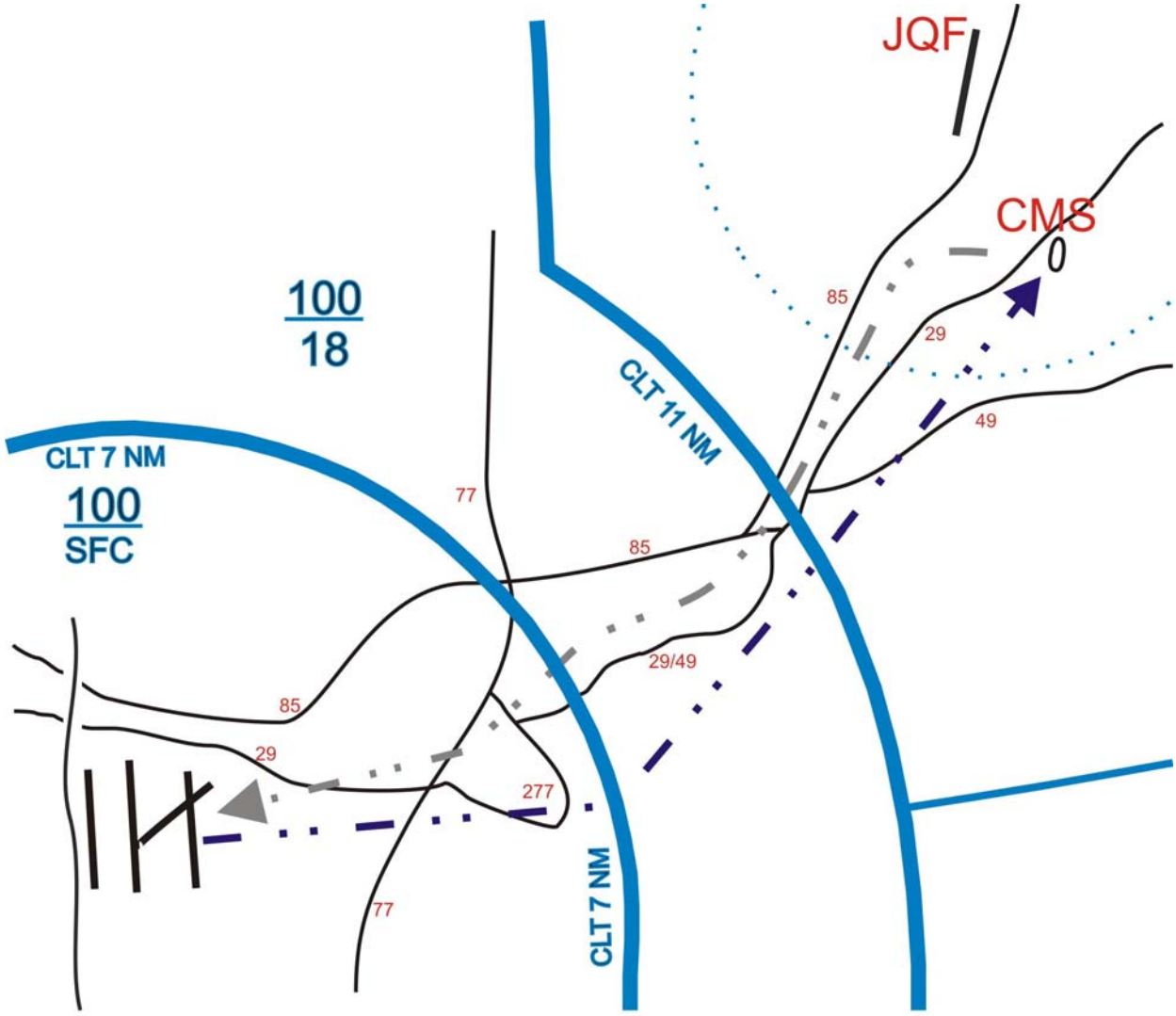
TRAFFIC MANAGEMENT INITIATIVES

IFR and VFR flights operating to/from Concord Regional Airport should anticipate traffic management initiatives including Expect Departure Clearance Times (EDCT), holding, or other potential delay.

Inbound and outbound helicopters squawk assigned beacon codes.

FREQUENCIES

Concord (JQF) Tower	134.65
Charlotte (CLT) Approach	128.32



REMAIN CLEAR OF CHARLOTTE CLASS B AIRSPACE UNLESS AUTHORIZED BY ATC

GEICO 500

MONSTER ENERGY NASCAR CUP EVENT

TALLADEGA, ALABAMA
April 25 – April 29, 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
Talladega Municipal	KASN
Anniston Regional	KANB
St. Clair County Airport	KPLR

TRAFFIC MANAGEMENT INITIATIVES

When traffic demand exceeds airport capacity, the Air Traffic Control System Command Center (ATCSCC) may apply traffic management initiatives to **domestic, IFR arrivals**. Pilots should anticipate Expect Departure Clearance Times (EDCT), holding, or other potential delay.

Aircraft issued an EDCT are expected to depart within 5 minutes of the assigned time. Aircraft unable to depart within 5 minutes of their EDCT shall advise ATC and request a new EDCT assignment.

The program may be in effect **April 28, 0800–1400 CDT (1300–1900 UTC)**

To ensure equitable airspace access and minimize delays, ATC will not accept air–filed flight plans or airborne changes of destination to/from the Talladega area, except in emergencies. Duplicate flight plans (same call sign/multiple times) are subject to removal from the system.

TEMPORARY AIRPORT TRAFFIC CONTROL TOWER

The FAA will operate a Temporary Airport Traffic Control Tower (TATCT) at KASN as follows:

DAY	DATE	TIME (CDT)	TIME (UTC)
Saturday	April 27, 2019	1000 – 1800	1500 – 2300
Sunday	April 28, 2019	0600 – 1900	1100 – 0000

FREQUENCIES / TELEPHONE

KASN	
Tower	119.075
Ground Control	121.7
Clearance Delivery	125.275
AWOS	118.425 / (256) 362–5847
ATIS	134.05

KANB and AFSS	
KANB CTAF	123.6
KANB ASOS	119.675 / (256) 835−3931
En Route Weather (Airborne)	122.2

ARRIVAL PROCEDURES

MONITOR ATIS on 134.05. Enter the traffic pattern with lights on and gear down. Maintain a pattern as close to the airport boundary as safety will allow. Be alert for specific landing point and runway exit instructions. Expeditious compliance is expected. After exiting the runway, airport personnel will direct you to parking. There is a limited amount of paved parking, anticipate parking in grassy areas. Comply promptly with airport ground crew directions to keep the runway clear of traffic.

CAUTION: Use extreme caution when entering the area around the Talladega Airport due to limited radar coverage, high minimum vectoring altitude (4,000FT) and mountainous terrain in the KASN area.

ASN VFR ARRIVALS

During ATCT hours of operation

Two−way radio is required. MONITOR Talladega Tower frequency and contact the tower no earlier than 10 miles from the airport. Keep transmissions brief to reduce frequency congestion. Unless otherwise directed by the Tower, enter the traffic pattern via a standard downwind entry. Traffic pattern directions: RWY 22 left−hand, RWY 04 right−hand. Only arrival/departure aircraft operations authorized below 2500MSL within 5NM of ASN.

IFR ARRIVALS

There is LIMITED radar coverage in the Talladega area. To minimize delays and make the best use of the radar coverage west of Talladega, expect visual approach or ILS/RNV RWY 04 approach if weather requires. Pilots should expect radar vectors 15NM west of Talladega and to remain at or above 4000MSL for radar coverage. Due to the close proximity of PLR, ASN, and ANB, expect holding for non−radar separation and sequencing.

ANB arrivals expect vectors to hold at LINTZ at or above 4000MSL.

PLR arrivals expect holding at HANUR at or above 4000MSL

NOTE: IFR arrivals on April 28, 2019 from 1600−2000 CDT (2100−0100 UTC) may expect a **2−3 hour delay** due to KASN/KANB departure traffic. Pilots should plan to arrive before 1600 CDT or after 2000 CDT.

PREFERRED IFR ARRIVAL ROUTES / ALTITUDES

Arrivals file **AT OR BELOW FL220** and via:

FROM	AIRCRAFT	ROUTE
HKY/SVH	JET PROP	BZM SPA CHOPZ CTEEE POUNC GOSSE BZM SUG HRS GQO GOUBR JOTAV
CLT	JET- PROP	ESTRR4 IPTAY CHOPZ CTEEE POUNC GOSSE KNI2 NEANO HRS GQO GOUBR JOTAV

JQF/RUQ	JET PROP	ESTRR4 IPTAY CHOPZ CTEEE POUNC GOSSE KNI2 NEANO HRS GQO GOUBR JOTAV
GSO	JET PROP	TRI9 CARWN CHOPZ CTEEE POUNC GOSSE TRI9 YADKI BZM SUG HRS GQO GOUBR JOTAV
INT	JET PROP	TRSHA1 BAWDS CHOPZ CTEEE POUNC GOSSE TRI9 YADKI BZM SUG HRS GQO GOUBR JOTAV
EXX	JET PROP	BZM SPA CHOPZ CTEEE POUNC GOSSE BZM SUG HRS GQO GOUBR JOTAV
TRI/VJI	ALL	HMV VXV GQO GOUBR JOTAV
AVL	ALL	HRS GQO GOUBR JOTAV

Aircraft departing airports not listed file:

FROM	AIRCRAFT	ROUTE
Between VXV–ODF	ALL	GOUBR JOTAV DEST
Between GRD–ODF	AOA 150000 AOB 140000	CHOPZ CTEEE POUNC GOSSE destination ODF V415 YESVU GOUBR JOTAV destination
N of KASN	ALL	RQZ VUZ HEENA destination
W of KASN	ALL	VUZ HEENA destination
SW of KASN	ALL	HEENA destination

KASN DEPARTURE PROCEDURES

Due to close proximity and limited radar coverage, KASN, KANB, and KPLR are one airport for departure clearance purposes.

MONITOR ATIS on 134.05 prior to engine start to determine the runway in use and applicable procedure.

Pilots must adhere to departure procedures to reduce frequency congestion and provide ATC a method of sequencing and spacing. It is critical that pilots MONITOR the correct frequency as indicated.

IFR aircraft departing **after** the race on Sunday, April 28, 2019 **prior** to 1930 CDT, are asked to file flight plans with a **1530 CDT (2030Z)** proposed departure time to ensure flight plan delivery to the temporary tower and reduce departure delays. Atlanta ARTC Center will ensure flight plans with a 2030 UTC departure time remain in the system until 0030 UTC (April 29, 2019).

NOTE: IFR clearances are available at the FBO thirty minutes prior to the filed proposed departure time. Users are encouraged to obtain clearance at the FBO to reduce frequency congestion and expedite the overall departure process.

RUNWAY 22 TAXI PROCEDURE

Aircraft parked in the grass between the airport and the racetrack, taxi to the STOP sign located between taxiways A2 and A3 via the designated taxi route. (See airport diagrams). When number one (1) at the STOP sign, call Ground Control on 121.7.

Aircraft parked on the ramp adjacent to the FBO may taxi via either "A2" or "A1" to the stop signs short of "Alpha." When number one (1) at the STOP sign, call Ground Control on 121.7.

IFR aircraft that have NOT received clearance from the FBO, call Clearance Delivery on 125.275 prior to reaching the STOP sign.

On initial contact, advise Ground Control of call sign, type aircraft, assigned beacon code (if IFR), direction of departure (if VFR), and ATIS code. **If you received your IFR clearance in the FBO, state "IFR, with clearance, beacon code _ _ _ _".**

Do not pass the STOP sign until instructed by Ground Control. Taxi as instructed.

All aircraft MONITOR – do not call – Tower on 119.075 after receiving taxi instructions.

Tower will consider aircraft ready for departure when number one (1) for assigned runway.

RUNWAY 04 TAXI PROCEDURE

All aircraft taxi to and hold short of Taxiway Alpha. Stop signs will be located at A1, A2, A3, and A4. (See Airport diagrams). When number one (1) at the STOP sign, call Ground Control on 121.7.

IFR aircraft that have NOT received clearance from the FBO call Clearance Delivery on 125.275 prior to reaching the STOP sign.

On initial contact advise Ground Control of call sign, type aircraft, assigned beacon code (if IFR), direction of departure (if VFR), and ATIS code. **If you received your IFR clearance in the FBO, state "IFR, with clearance, beacon code _ _ _ _".**

Do not enter Taxiway Alpha or pass the STOP signs until instructed by Ground Control. Taxi as instructed.

All aircraft MONITOR – do not call – Tower on 119.075 after receiving taxi instructions.

Tower will consider aircraft ready for departure when number one (1) for assigned runway.

KANB IFR DEPARTURES

Expect the same route procedures as aircraft departing KASN. Due to close proximity, ANB, KASN, and KPLR are one airport for IFR departure clearance purposes. Contact Birmingham Approach Ground Control on 132.15 for clearance.

PREFERRED IFR DEPARTURE ROUTES
Effective Sunday, April 28, 2019

Pilots should anticipate reroutes and alternate altitude assignments to allow orderly departures. This may be especially relevant for aircraft landing in the Charlotte terminal area. Eastbound aircraft may expect initial routing via the TDG 110 radial or the TDG 065 radial, as traffic dictates. Check current NOTAMs for possible changes to effective dates / times. File via one the following routes:

DESTINATION	AIRCRAFT	ROUTE
JQF/RUQ (filed AOA 150)*	Props Jets	DDASH ATL UNARM6 FNISH ATL CHPTR3

JQF/RUQ (filed AOB 140)	Props Jets	DDASH RMG FNISH RMG
CLT	Props Jets (non–RNAV) Jets (RNAV)	DDASH ATL UNARM6 FNISH ATL CHPTR3 FNISH BESTT JONZE2
HKY/SVH	Jets / T–Props Props	GAD GQO VXV BZM MRICA GQO VXV BZM
GSO/INT	(RNAV) (non–RNAV) (Props)	GAD GQO VXV MAACK TRAKS TRAKS2 GAD GQO VXV GZG BROOK3 MRICA GQO VXV GZG PSK SMOKN3
EXX/MTV/TRI/VJI	Jets/T–Props Props	GAD GQO VXV BZM MRICA GQO VXV BZM
N of a line RQZ to BKW**	All	WAMPM RQZ

*Dependent upon traffic and weather conditions at KJQF on April 28, 2019, users may receive routing via: ATL IRQ CAE FLO KABEE KABEE2 KJQF. Expect to cross IRQ at or below FL230.

**07C, 3I3, BMG, ENW, HNB, UMP, SDF, JVY, OEB, RID, PTK, LUK, LEX, HTS, PBX (not a complete list)

VFR /IFR PICKUP PROCEDURES

KASN/KANB/KPLR departures

Due to the high volume of traffic in the Talladega area, follow these procedures except in emergencies:

DO NOT request IFR pickup below 5,000 feet MSL due to radar coverage. If ceilings are below 5,000, you should depart IFR. Use caution for mountainous terrain.

DO NOT call Birmingham Approach until at least 15 miles from KASN. DO NOT call any Atlanta Center frequency until at least 20 miles east of KASN, or above 10,000 feet if westbound.

CAUTION: Remain clear of the Atlanta Class B airspace. IFR pickup within 40 NM of ATL will be extremely limited due Atlanta arrivals.

Squawk 1200 on departure.

If planning an IFR pick–up, ensure that an IFR flight plan is on file with Flight Service.

ATC will not accept air–filed flight plans or airborne changes of destination within 100 miles of KASN, except in emergencies.

AFTER DEPARTURE

Aircraft AT OR BELOW 10,000:

BETWEEN	FACILITY	FREQUENCY
TDG 328 radial ––– 110 radial	ATLANTA CENTER	124.5
TDG 111 radial ––– 138 radial	ATLANTA APPROACH	125.5
TDG 139 radial ––– 164 radial	ATLANTA CENTER	120.45

TDG 165 radial −−− 200 radial	MONTGOMERY APCH	121.2
TDG 201 radial −−− 327 radial	BIRMINGHAM APCH	123.8

Aircraft ABOVE 10,000:

BETWEEN	FACILITY	FREQUENCY
TDG 261 radial −−− 320 radial	ATLANTA CENTER	127.3
TDG 321 radial −−− 110 radial	ATLANTA CENTER	134.95
TDG 111 radial −−− 190 radial	ATLANTA CENTER	120.45
TDG 191 radial −−− 260 radial	ATLANTA CENTER	132.25

TEMPORARY FLIGHT RESTRICTION

A Temporary Flight Restrictions (TFR) will be in effect for this event. See **FDC NOTAM 7/4319** for details.

GENERAL INFORMATION

Use caution for all types of traffic operating in the area including banner tows, helicopters, and blimps.

CAUTION: Pilots are requested to avoid flight at and below 5000 FT AGL in the National Security Area (NSA) northeast of Talladega.

Pilots should ensure they receive a thorough briefing on all NOTAMS for the Talladega area.

TALLADEGA MUNICIPAL AIRPORT
Parking Information

The Talladega Airport has implemented a parking reservation program. Aircraft arriving April 25−28, 2019 should obtain a parking slot prior to landing. Parking fees: jets $300, twins $200, and singles $100. For reservations, call the Talladega Municipal Airport at 256−761−4815 weekdays between 0800−1600 CDT.

LEIDOS FLIGHT SERVICE

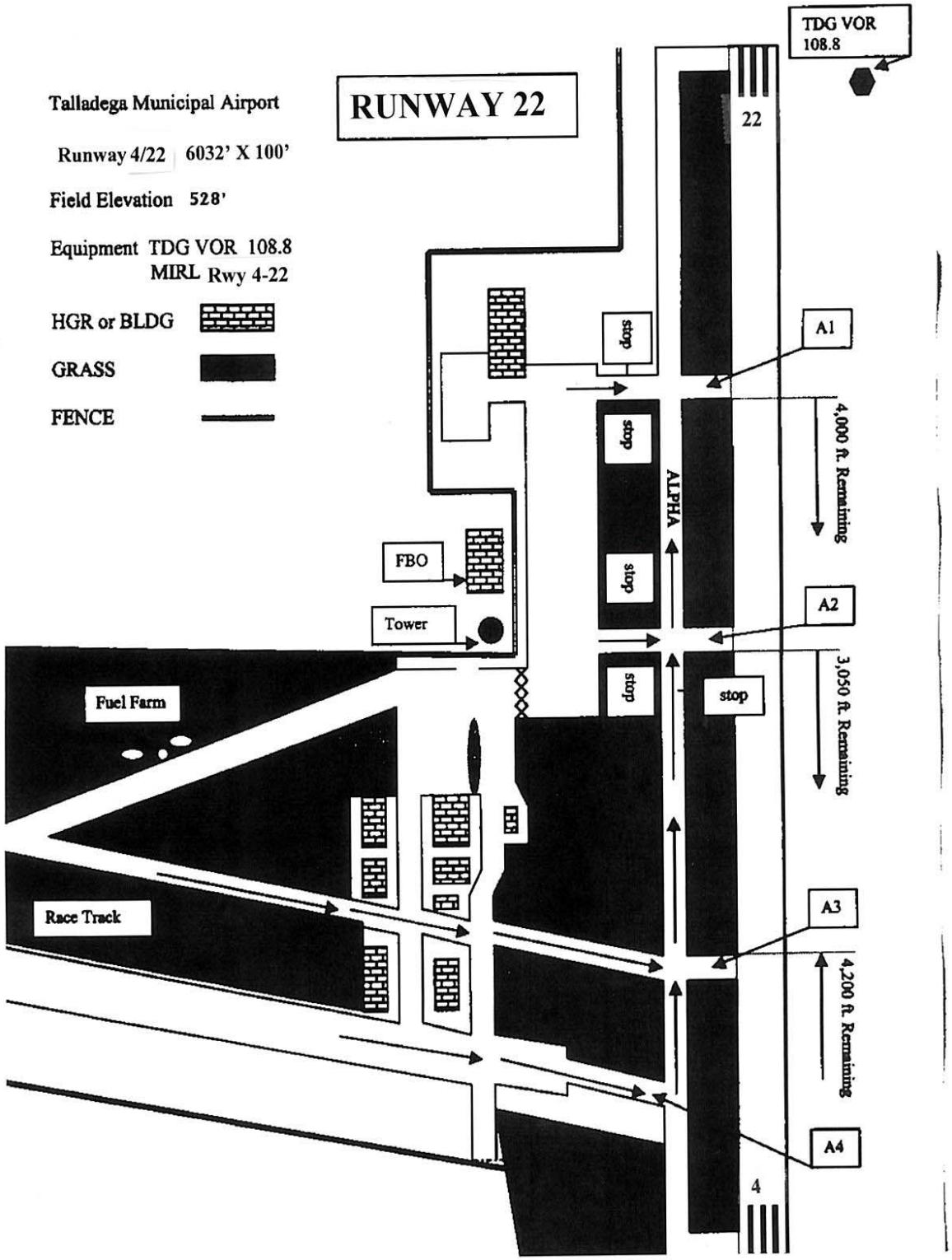
Pilot briefing and flight planning services are available online through the Leidos Pilot Portal at https://www.1800wxbrief.com/Website/ or by telephone at 1−800−WX−BRIEF (1−800−992−7433). Press 1, or say “Briefer”, then press 2−5−2 or say “Alabama”

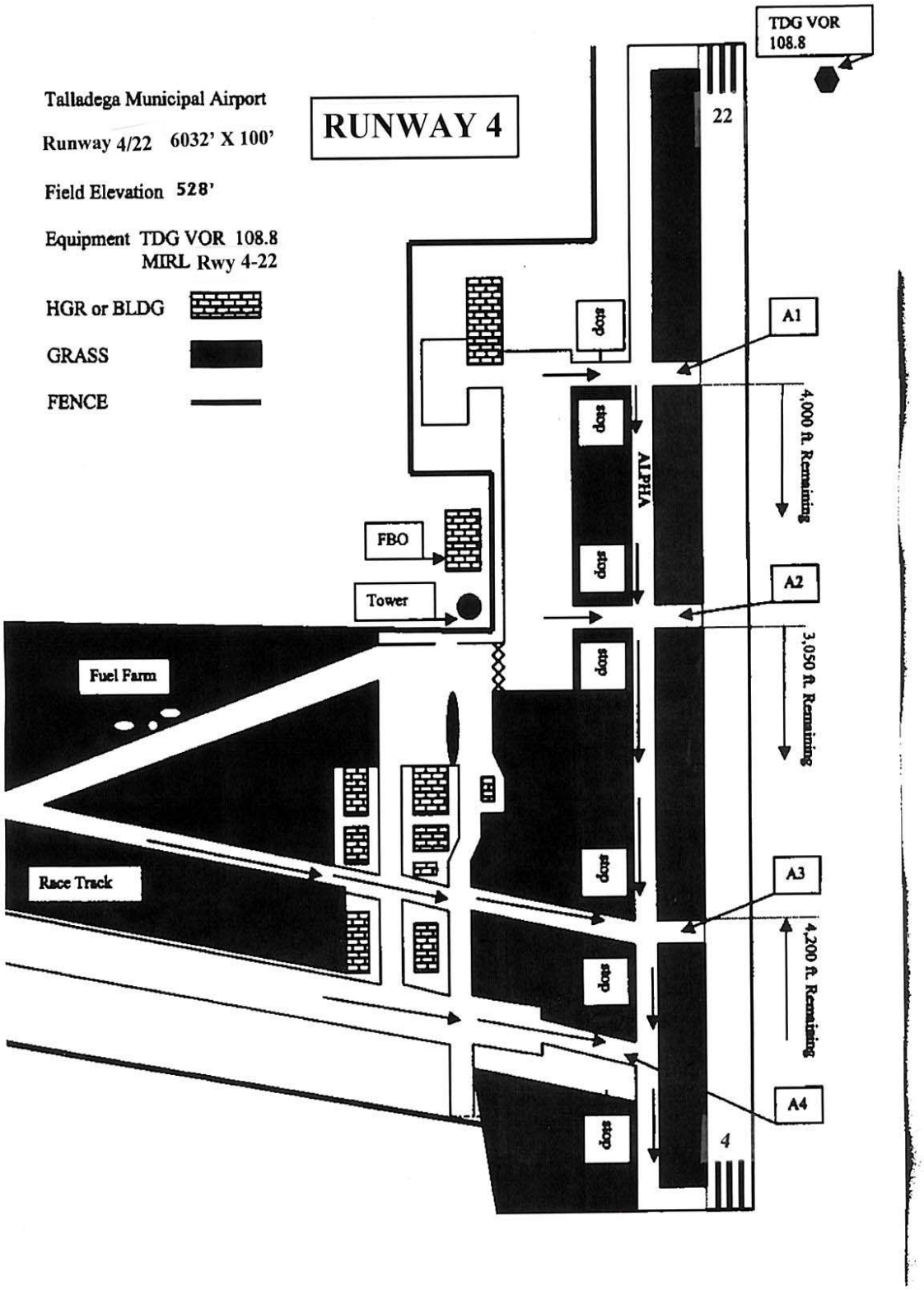
Contact Anniston Radio on 122.2 in the Talladega, Alabama area for VFR flight plan activation and closure. Contact Flight Service on the following frequencies for in−flight briefing services:

Direction from Talladega, Alabama

North	122.2 MHz
East	122.2 / 122.6 MHz (Macon Radio)
West	122.2 / 123.65 MHz
South	122.2 / 122.55 MHz
Northwest	122.6 MHz

In−flight pilot reports are encouraged on these frequencies.


Talladega Municipal Airport
Runway 4/22 6032' X 100'
Field Elevation 528'
Equipment TDG VOR 108.8
MIRL Rwy 4-22
HGR or BLDG
GRASS
FENCE
RUNWAY 22
TDG VOR
108.8
22
A1
stop
stop
stop
ALPHA
4,000 ft. Remaining
FBO
Tower
A2
stop
stop
3,050 ft. Remaining
Fuel Farm
Race Track
A3
4,200 ft. Remaining
A4
4


Talladega Municipal Airport
Runway 4/22 6032' X 100'
Field Elevation 528'
Equipment TDG VOR 108.8
MIRL Rwy 4-22
HGR or BLDG
GRASS
FENCE
RUNWAY 4
TDG VOR
108.8
22
A1
4,000 ft. Remaining
ALPHA
FBO
Tower
A2
3,050 ft. Remaining
Fuel Farm
Race Track
A3
4,200 ft. Remaining
A4
4
stop

INDIANAPOLIS 500
NTT IndyCar Series Event

INDIANAPOLIS, INDIANA
May 23 – May 26, 2019

In anticipation of a large number of aircraft operating to and from the Indianapolis area in conjunction with this event, the following procedures will be used to enhance safety and minimize air traffic delays. These procedures will be in effect for aircraft operating to and from the following airports.

Indianapolis Area Airports	Identifier
Indianapolis International Airport	IND
Greenwood Municipal Airport	HFY
Shelbyville Municipal Airport	GEZ
Indianapolis Executive Airport	TYQ
Indianapolis Metropolitan Airport	UMP
Indianapolis Regional Airport	MQJ
Eagle Creek Airpark	EYE

These procedures will be in effect during the following time periods.

Day	Date	Time EDT	Time UTC
Thursday	May 23, 2019	0900–2059	1300–0059
Friday	May 24, 2019	0900–2059	1300–0059
Saturday	May 25, 2019	0900–2059	1300–0059
Sunday	May 26, 2019	0600–2059	1000–0059

Pilots are requested to adhere to preferential arrival and departure routes when filing their flight plans.

PREFERRED IFR ROUTES

Pilots are requested to file Preferred IFR Routes as listed in the Airport/Facility Directory or as noted below.

Destination	Route
ABE	BDOCK DJB J29 CXR J146 ETG
ACY	BDOCK APE JST J152 HAR LRP DQO ENO SIE
ALB	BDOCK DJB JHW J82 ALB
ATL	MYS BNA NEWBB IHAVE MTHEW CHPPR – STAR
BDL	BDOCK DJB JHW Q82 MEMMS WILET STELA– STAR
BNA	DAWNN BWG HEHAW–STAR
BOS	BDOCK WWSHR JHW Q82 PONCT JFUND–STAR
BWI	BDOCK APE AIR EMI–STAR
CAE	DAWNN IIU HMV SPA

CLT	DAWNN IIU SKYWA FLIPZ–STAR
DCA	BDOCK APE J30 BUCKO FRDMM–STAR
DFW	OOM PXV J131 LIT BYP–STAR
DTW	OKK FWA MIZAR–STAR
EWR	BDOCK WWSHR Q29 DORET J584 SLT FQM–STAR
EXX	DAWNN IIU GZG TRAKS
GSO	DAWNN IIU GZG BROOK–STAR
GSP	DAWNN IIU SOT SUG
HKY	DAWNN IIU GZG MULBE BZM
HPN	BDOCK DJB JHW ITH DNY VALRE–STAR
IAD	BDOCK APE AIR MGW GIBBZ– STAR
IAH	OOM PXV J131 LIT J180 SWB DAS– STAR
INT	DAWNN IIU GZG BROOK STAR
ISP	BDOCK APE JST J152 J78 PSB J49 HNK DNY LOVES– STAR
JFK	BDOCK DJB JHW LVZ LENDY– STAR
JQF	DAWNN IIU GZG MULBE BZM PEGTE
LGA	BDOCK DJB CXR ETG MIP– STAR
MDT	BDOCK JST J152 HAR
MDW	OKK FISSK– STAR
MEM	OOM PXV WLDER– STAR
MMU	BDOCK DJB JHW LVZ –STAR
MTV	DAWNN IIU GZG TRAKS
ORD	MZZ ROYKO– STAR
ORF	DAWNN IIU J526 BKW J42 MOL TERKS– STAR
PHL	BDOCK JST BUNTS– STAR
RDU	DAWNN IIU J526 BKW ROA SBV–STAR
RIC	DAWNN IIU J6 HVQ J24 FAK
SVH	DAWNN IIU GZG MULBE BZM
SYR	BDOCK DJB SYR
TEB	BDOCK WWSHR JHW LVZ– STAR

FREQUENCY CONGESTION

Due to anticipated frequency congestion, Indianapolis Center and Indianapolis ATCT, **except for emergency situations**, will not accept air filed flight plans to or from the Indianapolis area during the time frames listed above. Airborne filed flight plans filed with other facilities may experience lengthy delays.

ATIS

Pilots should monitor ATIS on 134.25 prior to initial contact with Indianapolis Approach Control.

VFR ARRIVALS

VFR arrivals operating within the **Indianapolis Approach Class C airspace** should conform to the following guidelines during these times.

Day	Date	Time EDT	Time UTC
Thursday	May 23, 2019	0900–1959	1300–2359
Friday	May 24, 2019	0900–1959	1300–2359
Saturday	May 25, 2019	0900–1959	1300–2359
Sunday	May 26, 2019	0600–2059	1000–0059

SET TRANSPONDER TO 1200 AND SQUAWK ALTITUDE

VFR Inbound from 225–044 degrees, contact INDY Approach on 119.05
VFR Inbound from 045–224 degrees, contact INDY Approach on 124.95

VFR DEPARTURES

Due to traffic volume, Class C service will not be available beyond 10 miles of Indianapolis International Airport from 1600–2059 EDT (2000–0059 UTC) on Sunday, May 26, 2019. **Except for emergency situations, air filed flight plans will not be accepted from those aircraft that depart the Indianapolis area VFR.**

INDIANAPOLIS INTERNATIONAL AIRPORT

IND ATIS 134.25
Clearance Delivery 128.75
Ground Control 121.9
Tower 120.9 Rwy.23L/5R / 127.82 Rwy.23R/5L

- Obtain VFR/IFR clearances on 128.75

  VFR—Advise A/C ID, A/C type, direction of flight, destination & initial cruise altitude.

  IFR—Flight plans will be stored in NAS computer for 2 hours after proposed departure time. Do not contact Clearance Delivery earlier than 30 minutes prior to proposed departure time.

- **DO NOT** contact ground control until aircraft has moved to the *colored ramp exit or exit point.*

- **Million Air** – When aircraft is #1 at the exit point, call ground control and specify position by stating Million Air and exit point (i.e., N500TS, number 1 at Million Air INTL Point 1/2/3, Golf – Hotel 1/2, Remote Parking – Hotel 1/2, Hotel – Hotel 1/2, Wind Sock – Hotel… Taxi).

- **Signature** – When aircraft is #1 at the colored ramp exit sign, call ground control and specify position by stating Signature and exit sign color (i.e., N18JG, number 1 at Signature Red/Blue/Yellow/Green/White, Wind Sock – Hotel… Taxi). If no colored ramp signs are posted, report position.

- **DO NOT CONTACT THE TOWER UNTIL A/C IS #1 HOLDING SHORT OF RUNWAY.**

TEMPORARY FLIGHT RESTRICTION
INDIANAPOLIS MOTOR SPEEDWAY

Temporary Flight Restrictions will be in effect over the Speedway. For details, see FDC NOTAM 7/4319 available on the following web site:

tfr.faa.gov

Additional security provisions could be in effect. Pilots are encouraged to check Local and FDC NOTAMs frequently to verify they have the most current information.

ADDITIONAL PILOT INFORMATION

WAKE TURBULENCE – Pilots should be aware that a significant amount of wake turbulence may exist due to the large number of aircraft operating in the Indianapolis area. Exercise caution when flying within 30 miles of Indianapolis.

OVERFLIGHT TRAFFIC – Aircraft not landing in the Indianapolis area are requested to avoid overflight below 13,000 MSL within 20 miles of Indianapolis.

RESTRICTED AREA ADVISORY – Pilots should be aware of the existence of Restricted Area R3401A/B to the southeast of Indianapolis. This area is active during scheduled times noted on the aeronautical charts as well as other times by NOTAM. Pilots are reminded penetration of Restricted Areas without authorization from the using or controlling agency may be extremely hazardous.

PILOTS ARE URGED TO OBTAIN A COMPLETE WEATHER BRIEFING AND REVIEW ALL APPLICABLE NOTAMS PRIOR TO CONDUCTING FLIGHT

Lockheed Martin Flight Service Hub	
Telephone Flight Planning	1–800–WX–BRIEF (1–800–992–7433)
Web Site	www.1800wxbrief.com

For further information contact:

FAA Indianapolis ARTCC
Traffic Management Unit
1850 S. Sigsbee Street
Indianapolis, IN 46241
317–247–2243

MONSTER ENERGY
NASCAR CUP SERIES RACE AT DOVER

DOVER, DELAWARE
May 2–5, 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	LOCATION	IDENTIFIER
Dover AFB	Dover, Delaware	DOV
New Castle	Wilmington, Delaware	ILG
Delaware Coastal	Georgetown, Delaware	GED

PREFERRED ARRIVAL ROUTES

From CLT/JQF:
BARMY4 TYI ORF ENO3 KDOV
BARMY4 TYI ORF J121 SWL JIIMS3 KILG
BARMY4 TYI ORF SBY KGED

From EXX/HKY/SVH:
LYH V16 PXT ENO3 KDOV
LYH V16 ENO KILG
LYH V16 TAPPA V213 RIDGY KGED

From or through ZJX:
ORF ENO3 KDOV
ORF J121 SWL JIIMS3 KILG
ORF SBY KGED

PREFERRED DEPARTURE ROUTES

To minimize delays, **IFR JET** aircraft file via the following routes:

From DOV/GED to:

JQF
PRICE GRACO CONLE FIXET SCRAM WALCE LYH NASCR4 or
SBY CCV COUPN ARGAL NASCR4

CLT
PRICE GRACO CONLE FIXET SCRAM WALCE LYH CHSLY4 or
SBY CCV COUPN CHSLY4

EXX
PRICE GRACO CONLE FIXET SCRAM WALCE LYH V222 BURCH or
SBY CCV COUPN ARGAL JAYRR

HKY/SVH
PRICE GRACO CONLE FIXET SCRAM WALCE LYH V222 BURCH BZM or
SBY CCV COUPN ARGAL JAYRR

From ILG to:

JQF
STOEN J75 GVE NASCR4 or
OOD TEBEE HAYDO SBY J79 KATZN COUPN ARGAL NASCR4

CLT
STOEN J75 GVE LYH CHSLY4 or
OOD TEBEE HAYDO SBY J79 KATZN COUPN CHSLY4

EXX
STOEN J75 GVE LYH V222 BURCH or
OOD TEBEE HAYDO SBY J79 KATZN COUPN ARGAL JAYRR

HKY/SVH
STOEN J75 GVE LYH V222 BURCH BZM or
OOD TEBEE HAYDO SBY J79 KATZN COUPN ARGAL JAYRR

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
April	27–28	Seymour Johnson AFB, NC	MCAS Beaufort, SC		
May	4–5	Keesler AFB, MS	Fort Lauderdale, FL		
	10			JB Andrews, MD	
	11–12	Joint Base Andrews. MD	JB Andrews, MD	JB Andrews, MD	
	18	Kirtland AFB, NM			
	18–19		Cape Girardeau, MO		Barksdale AFB, LA
	22		Annapolis, MD		Peachtree City, GA
	25–26	Wantagh, NY	Miami Beach, FL	Wantagh, NY Miami Beach, FL	Latrobe, PA
	29				Winston Salem, NC
	30	USAF Academy, CO			
June	1–2		Oklahoma City, OK		
	8–9	Ft. Wayne, IN	Smyrna, TN		
	15–16	Mankato, MN	Ocean City, MD	Whiteman AFB, MO	Ocean City, MD
	21–23			Fairchild AFB, WA	
	22–23	Dayton, OH		Dayton, OH	
	29–30	Traverse City, MI	Davenport, IA		
July	4				Minot, ND
	6–7		Kansas City, MO		
	13		Pensacola Beach, FL		
	13–14				
	20–21	Fargo, ND	Duluth, MN		
	24	Cheyenne, WY			
	27–28	Milwaukee, WI	Grand Junction, CO		

DATE		USAF Thunderbirds	USN Blue Angels	USA Golden Knights	Canadian Snowbirds
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, 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		
	15–17	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.

AOPA FLY−IN

FREDERICK MUNICIPAL AIRPORT
FREDERICK, MD

May 9−11, 2019

SPECIAL AIR TRAFFIC PROCEDURES

Special air traffic procedures are in effect for aircraft operating to/from the Frederick Municipal Airport (FDK) during the following dates/times:

DATE	DAY	TIME (EDT)	TIME (UTC)
May 09	Thursday	1200−2015	1600−0015
May 10	Friday	0600−1900	1000−2300
May 11	Saturday	0600−1900	1000−2200

Caution: Remain clear of: Prohibited Area P40 (15NM N FDK), Restricted Area R−4009 (overlies P−40), and Washington DC Special Flight Rules Area (7NM SE FDK). Remain clear of Hagerstown (HGR) and Martinsburg (MRB) Class D Airspace unless specifically authorized by ATC to enter.

Procedures are subject to change. Review all applicable NOTAMs and arrival/departure procedures prior to flying to FDK. Check NOTAMs frequently to ensure you have the most current information.

DC SPECIAL FLIGHT RULES AREA

Pilots must comply with 14 CFR §91.161 − Special awareness training required for pilots flying under visual flight rules within a 60−nautical mile radius of the Washington, DC VOR/DME. The DC SFRA course is available at: https://www.faasafety.gov/. After completing the course, print a copy of your certificate of training.

FLIGHT PLANNING/IFR PICK UP

ATC will not accept air−filed flight plans or issue airborne IFR clearance within 30 NM of FDK except an emergency.

File flight plans at least **6 hours** prior to proposed departure time.

Be prepared for potentially lengthy delays during peak arrival and departure times.
Heavy arrival traffic expected 0800−1100 EDT (1200−1500 UTC) Friday and Saturday.
Heavy departure traffic expected 1500−1800 EDT (1900−2200 UTC) Saturday.
Consider arriving/departing during off−peak hours.

IFR ARRIVALS/TRAFFIC MANAGEMENT

Traffic Management Initiatives including, but not limited to, reroutes, miles−in−trail, altitude restrictions, ground stops, and ground delay programs may be required due to airport demand/weather condition. Be prepared for potential holding.

Expect clearance for ILS or LOC RWY23 or RNAV (GPS) RWY05.

VFR flight via VFR arrival procedures is highly recommended, if possible.

VFR FLIGHT FOLLOWING

VFR Traffic Advisories/Flight Following are available as workload permits. Advisories will not be available for **departing** aircraft within 30 NM of FDK.

FLIGHT TRAINING/STUDENT PILOTS

Local traffic pattern training, low approaches, and practice instrument approaches are not available at FDK during the AOPA Fly−In. Solo student pilot operations are highly discouraged.

NO RADIO (NORDO) AIRCRAFT

Due to high−density traffic, no radio aircraft operations are not authorized

HELICOPTER OPERATIONS

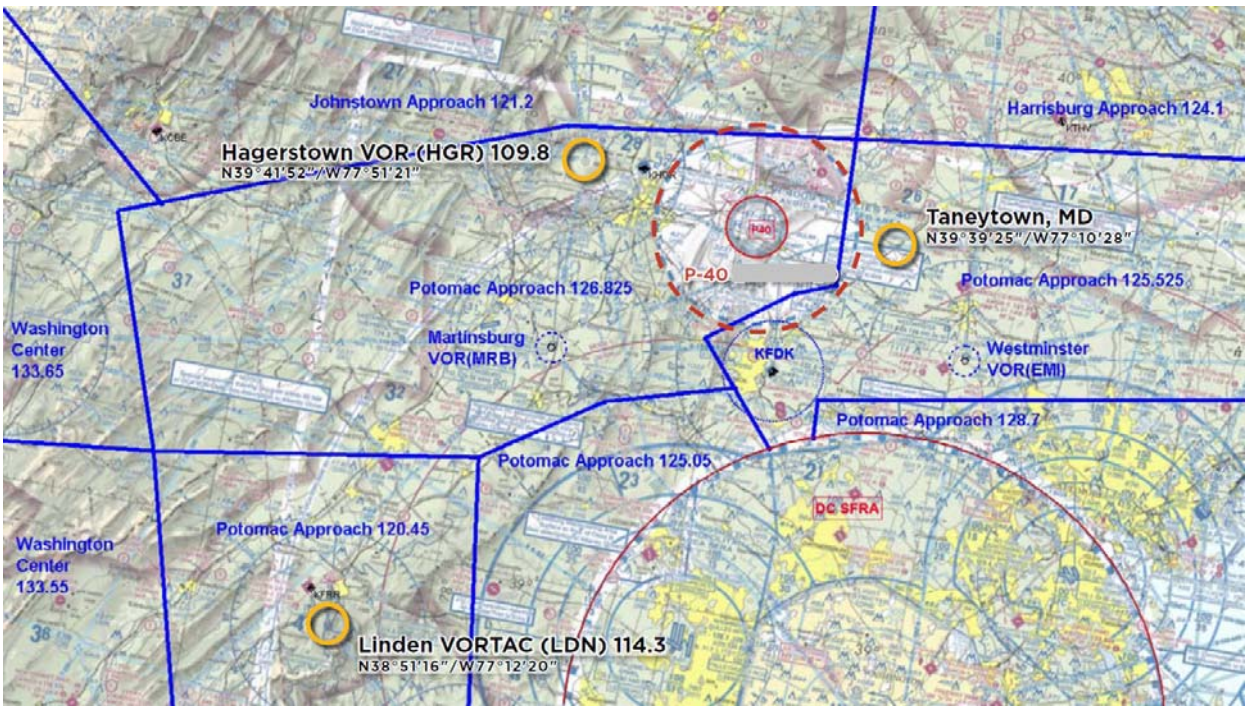
Helicopters are not expected to fly the special VFR Arrival Procedures. When inbound, contact Frederick Tower on 132.4 as soon as practical for specific instructions.

FREQUENCIES

FDK FREQUENCIES	
ATIS	124.875
ATIS Telephone	301−600−1457
Tower	132.4
Ground	121.975
Clearance Delivery	121.975
Potomac Approach/Departure NE	125.525
Potomac Approach/Departure W	126.82
Signature Flight Support (Fuel)	130.275

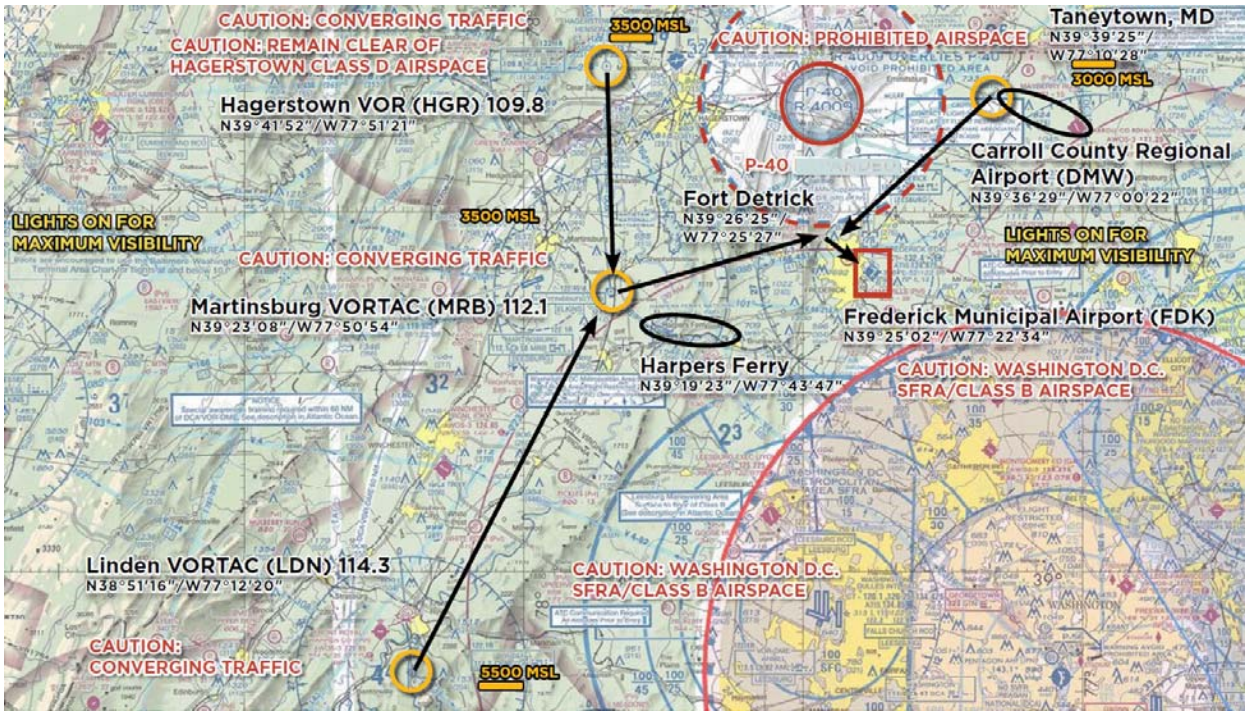
ENROUTE FREQUENCIES	
Washington Center − West	133.65
Washington Center − West	133.55
Potomac Approach − Southwest	120.45
Potomac Approach − Southwest	125.05
Potomac Approach − Southeast	128.7
Potomac Approach − West	126.825
Potomac Approach − East	125.525
Johnstown Approach − Northwest	121.2
Harrisburg Approach− Northeast	124.1

See graphic for facility position in reference to FDK



VFR ARRIVAL PROCEDURES

OVERVIEW



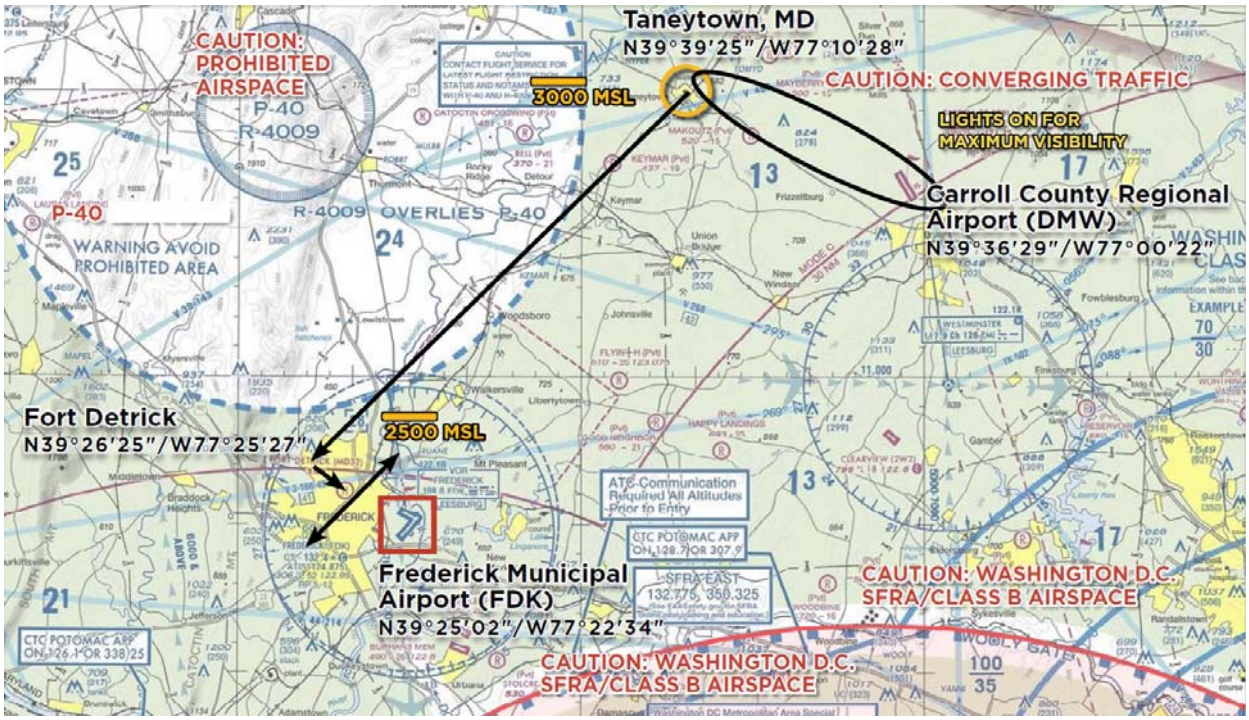
You are strongly encouraged to obtain flight following from the appropriate ATC facility well before starting VFR Arrival Procedures. (See frequency graphic)

Check FDK ATIS as soon as practical.

COORDINATE

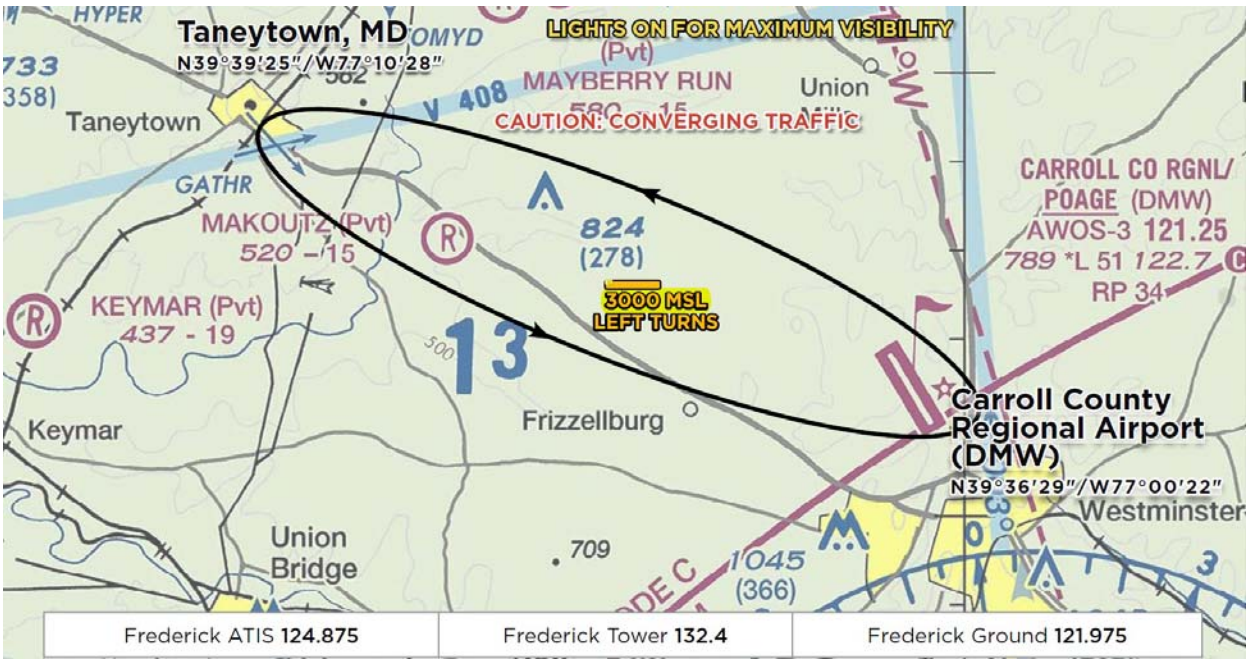
LOCATION	COORDINATES
Taneytown, MD	393925N0771028W
Carroll County Regional/Jack B Poage Field Airport (DMW)	393629N0770022W
Fort Detrick	392625N0772527W
Frederick Municipal Airport (FDK)	392502N0772234W
Hagerstown VOR (HGR)	394152N0775121W
Linden VORTAC (LDN)	385116N0771220W
Martinsburg VOR (MRB)	392308N0775054W
Harpers Ferry	391923N0774347W

ARRIVALS OVER TANEYTOWN



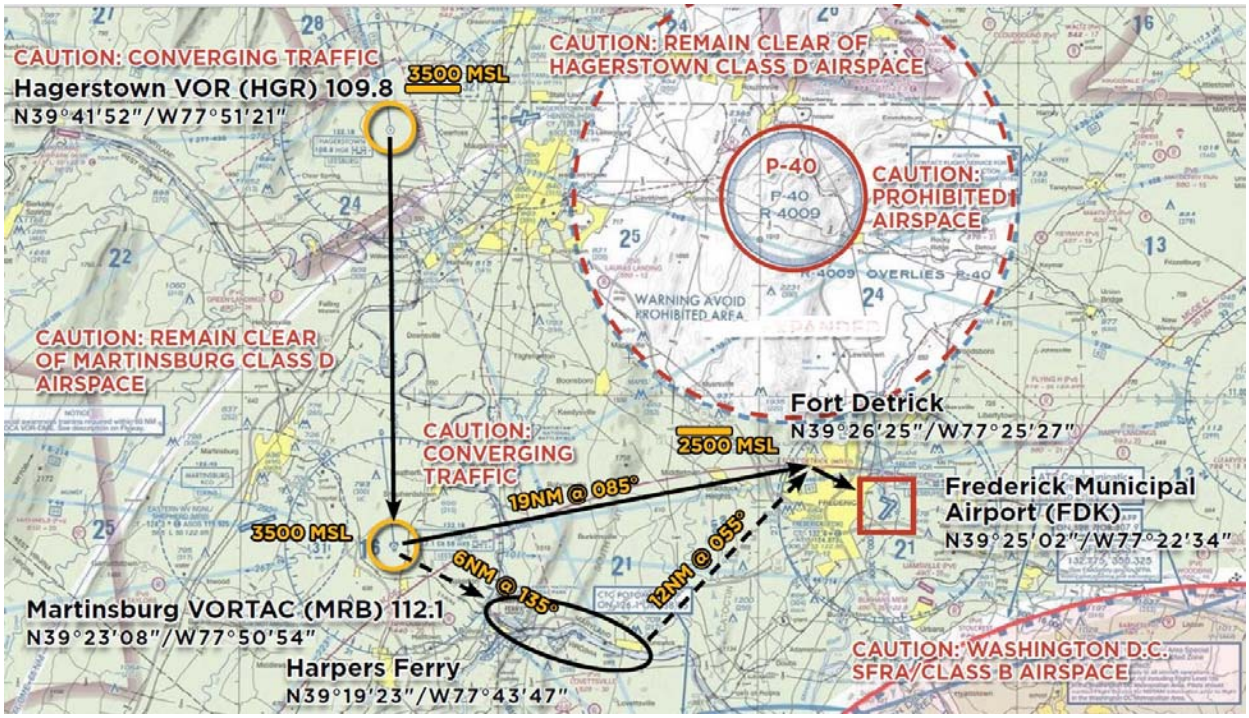
This procedure begins over Taneytown, MD at or below 3000 FT MSL. From Taneytown, MD, proceed direct to Fort Detrick, descend at pilot's discretion to at or below 2500 FT MSL.

If traffic volume requires holding, ATC will instruct you to fly the hold procedure depicted in the Taneytown VFR hold graphic. Fly left turns at or below 3000 FT MSL



When ATC advises that holding is no longer required, complete the holding turn to depart the hold over Taneytown, MD. Proceed inbound toward Fort Detrick.

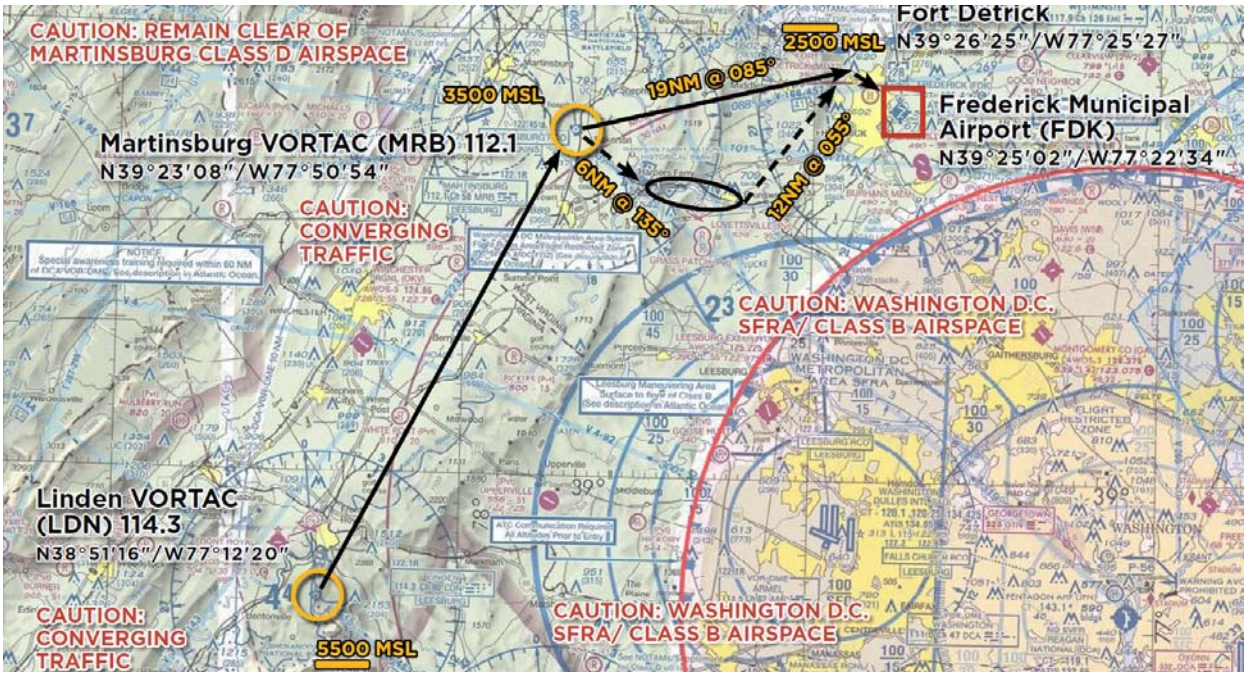
ARRIVALS OVER HAGERSTOWN VOR (HGR)



This procedure begins over Hagerstown VOR (HGR) 109.8 at or above 3500 FT MSL. From HGR, proceed direct to the Martinsburg VORTAC (MRB) 112.1. Descend at pilot's discretion to 3500 FT MSL. Prior to reaching MRB, ATC will instruct you to either continue inbound from MRB to Fort Detrick and descend at pilot's discretion to at or below 2500 feet MSL **or** to proceed to Harpers Ferry to hold.

If instructed to hold, fly the hold procedure as depicted in the Harpers Ferry VFR hold graphic. Fly left turns at or below 2500 feet MSL.

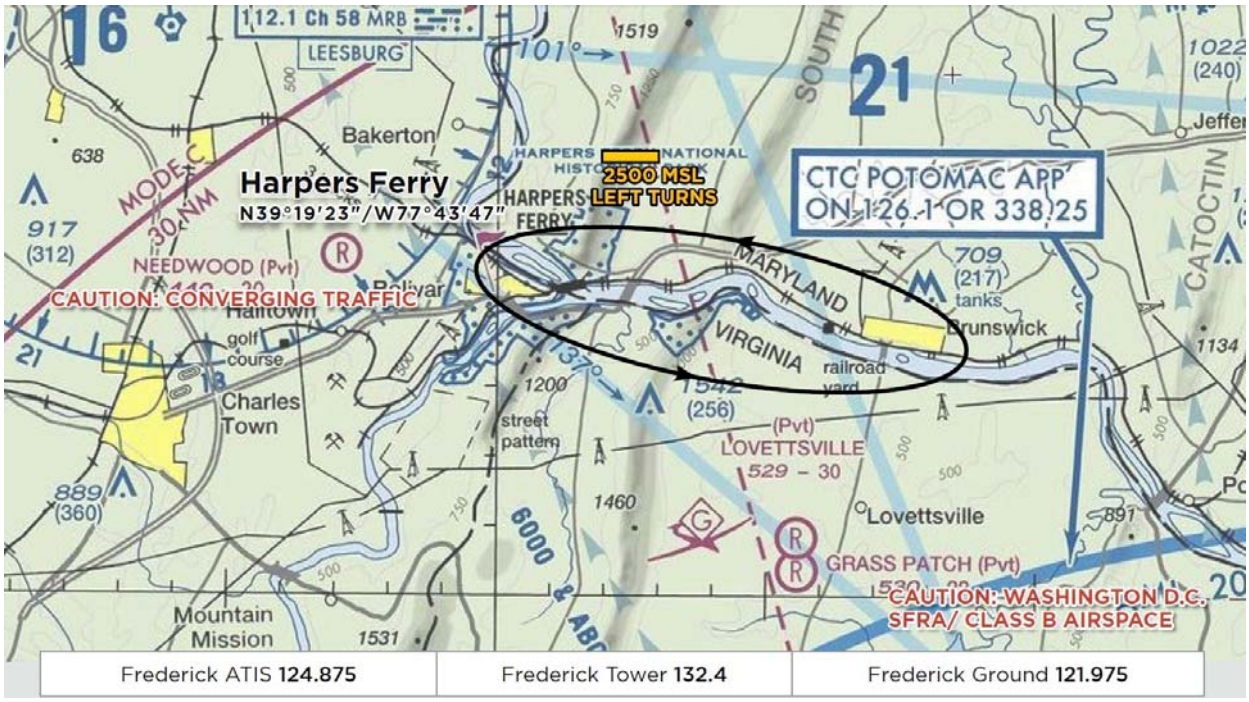
ARRIVALS OVER LINDEN VORTAC (LDN)



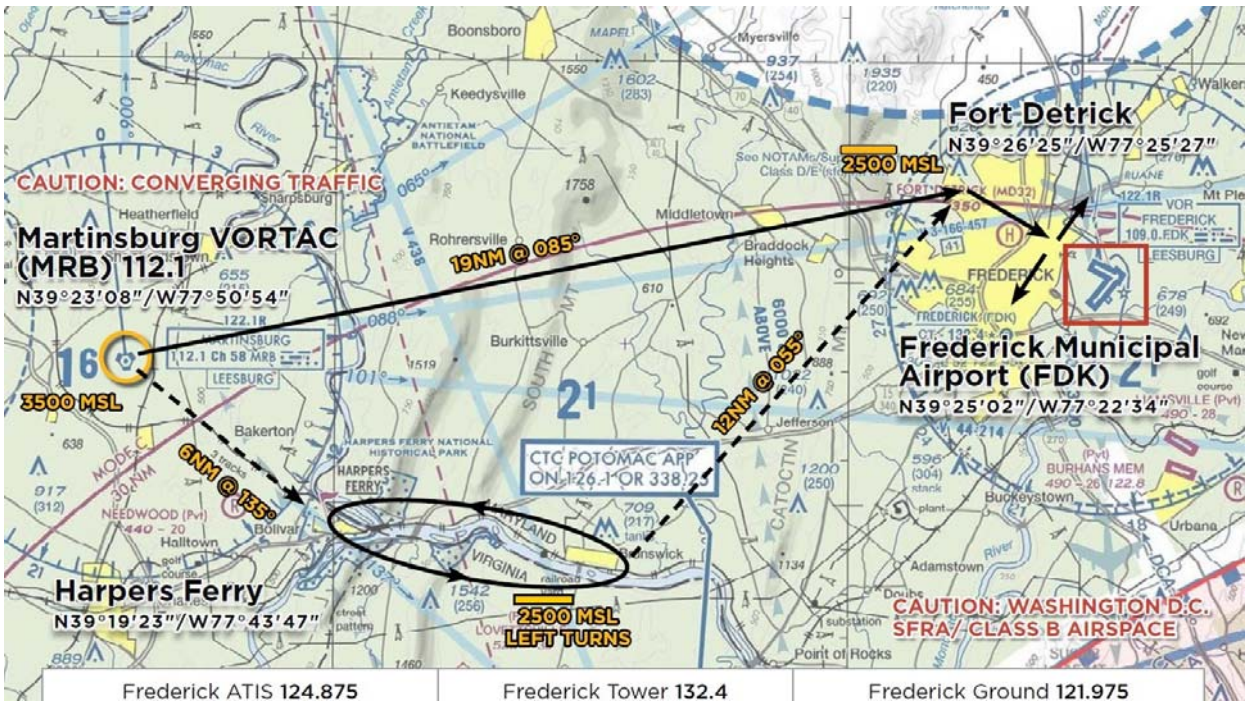
This procedure begins over the Linden VORTAC (LDN) 114.3 at or above 5500 feet MSL. From LDN proceed direct to the Martinsburg VORTAC (MRB) 112.1 and descend at pilot's discretion to 3500 feet MSL.

Prior to reaching the MRB, you will be instructed by ATC to either continue inbound from MRB toward Fort Detrick and descend at pilot's discretion to at or below 2500 FT MSL, **or** to proceed to Harpers Ferry for the Harpers Ferry VFR Hold

HARPERS FERRY HOLDING PROCEDURE



Fly left turns at or below 2500 FT MSL.



When ATC advises holding is no longer required, depart holding over the Brunswick Railroad Yard and proceed inbound toward Fort Detrick. Expect radar service termination prior to reaching Fort Detrick. ATC will instruct you to contact Frederick Tower on 132.4.

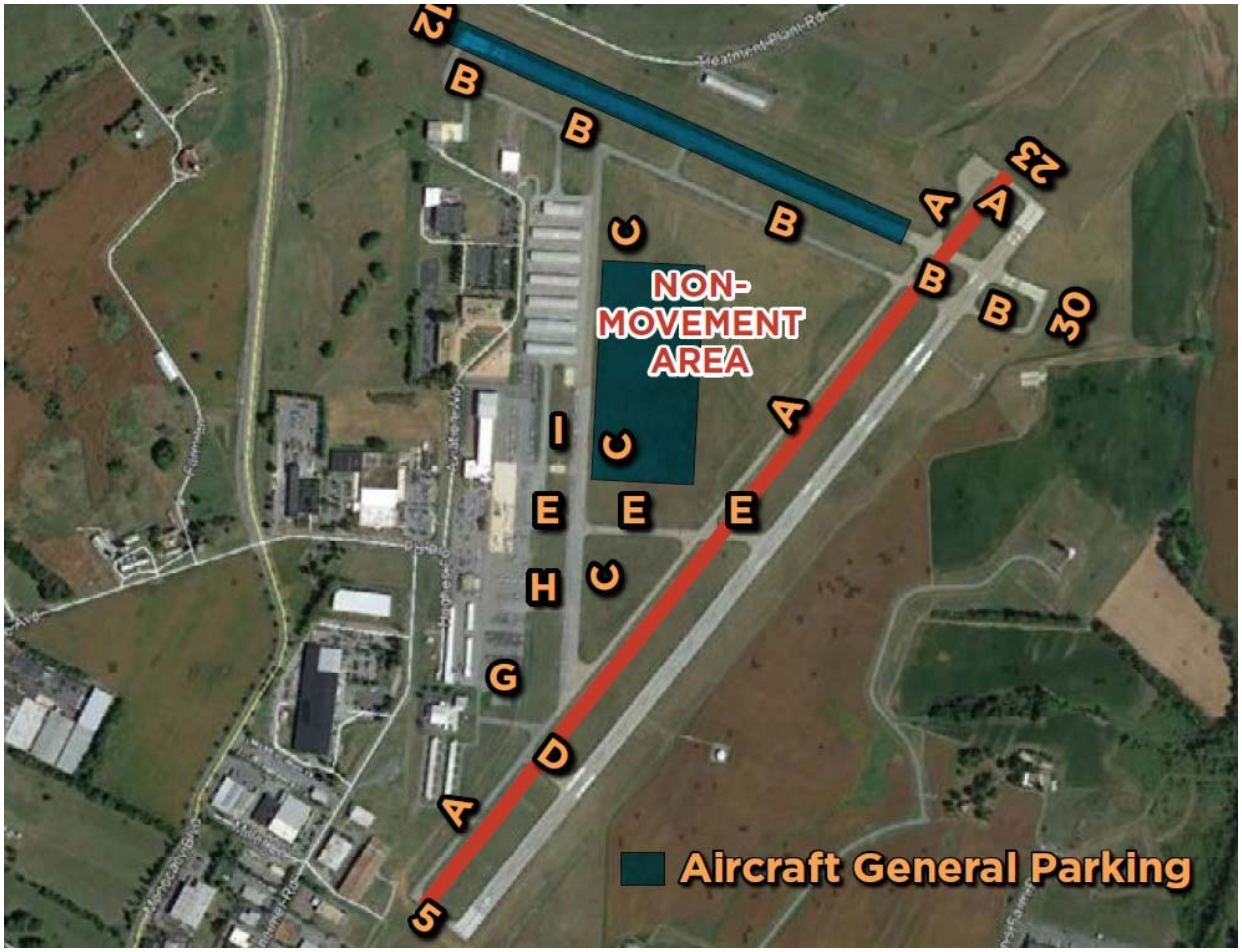
From Fort Detrick, fly direct to FDK. Expect to enter a midfield downwind for RWY23 or RWY05.

Follow instructions from Frederick Tower on 132.4 and descend at pilot's discretion to traffic pattern altitude.

FDK Traffic Pattern Altitude: 1300 FT MSL light aircraft; 1800 FT MSL multiengine/turbine aircraft

After landing, do not stop on the runway unless necessary. Exit the runway as quickly and as safely as possible at the first available taxiway. Continue forward far enough to ensure you do not block subsequent arrivals. Follow instructions from Frederick Tower and **monitor** Frederick Ground on 121.975. Marshallers will guide you to a parking space after you enter the non–movement/aircraft parking area.

FDK AIRPORT INFORMATION



AIRPORT CLOSURE

FDK will be closed:
2015 EDT (0015 UTC) Thursday, May 9 until 0600 EDT (1000 UTC) Friday, May 10
1900 EDT (2300 UTC) Friday, May 10 until 0600 EDT (1000 UTC) Saturday, May 11
1200 EDT (1600 UTC) Saturday, May 11 until 1315 EDT (1715 UTC) Saturday, May 11

Arrivals and departures will be stopped for the duration of STOL Demonstration, D–Day Squadron Flyover, and Parachute Drop activities. Please plan accordingly

RUNWAY CLOSURE

Expect RWY 12/30 to be closed for parking during the AOPA Fly−In.

NON−MOVEMENT AREAS

All areas west of Runway 5/23 are non−movement areas.

PARKING

Early arrivals (prior to 1200 EDT/1600 UTC Thursday, May 9) may not park in AOPA attendee parking.

Aircraft parking is at designated transient spaces managed by the FBOs.

Overnight fees apply.

Marshallers will assist aircraft to and from parking and run−up areas.

When operating in the parking areas, be extra alert for taxiing aircraft, aircraft with engine(s) running, and vehicle/pedestrian traffic.

High RPM engine running is prohibited in designated parking areas.

Departures should conduct their run−up procedures in queue, if practical.

Please review the parking map prior to landing and departing.

CHOCKS/TIE DOWNS

Chocks are required, but not provided. Tie down hooks are limited and parking on a tie−down space is very unlikely. Please bring your own chocks, tie−downs, and anchors to secure your aircraft.

AIRCRAFT SERVICE

We will take fuel/oil orders as soon as you park your aircraft. Please make your request at that time, as later orders may delay your departure. We request credit card information with your order. Receipts will be emailed (if requested) or available in the FBO. The order slip will be attached to your propeller. If you are uncomfortable providing credit card information on the ramp, you may provide the information directly to the FBO front desk.

If you need service after airport operating hours, please contact the after−hours Line Service number for the FBO that serviced you. An after−hours callout is subject to an additional fee.

VEHICULAR TRAFFIC

No vehicles allowed on ramps (except vehicles owned by airport operator and tenants).

AIRCRAFT CAMPING

Aircraft camping is permitted from 1200 EDT (1600 UTC) Thursday, May 9 until 1200 EDT (1600 UTC) Sunday, May 12. You may not camp prior to Thursday, May 9.

All campers must pre−pay and pre−register.

Space is limited and available on a first−come, first−served basis.

If you plan to camp, you must RSVP ahead of time. You will receive a confirmation with additional information.

Food is not provided on the airfield. Please bring your own food and water. Sunscreen and rain gear is highly recommended.

Restroom and shower facilities are “primitive”. Porta−potties and hand washing stations are provided. Limited shower facilities may be available, but not assured. No guarantee on hot water. Please come prepared!

Ground transportation is not provided to offsite locations. You must make taxi or rental car reservations on your own.

Campers should prominently display the letter C in their aircraft windshield.

See the AOPA website for more information.

DEPARTURE PROCEDURES

IFR DEPARTURES

Place large printed IFR letters in aircraft windshield.

Follow marshallers instructions to taxi to the nearest designated IFR departure holding area.

Contact Frederick Ground on 121.975 for clearance.

Expect initial clearance direct to MRB or EMI, depending on your route of flight.

Note: ATC will not issue airborne IFR clearances within 30 NM of FDK, except in an emergency.

VFR DEPARTURES

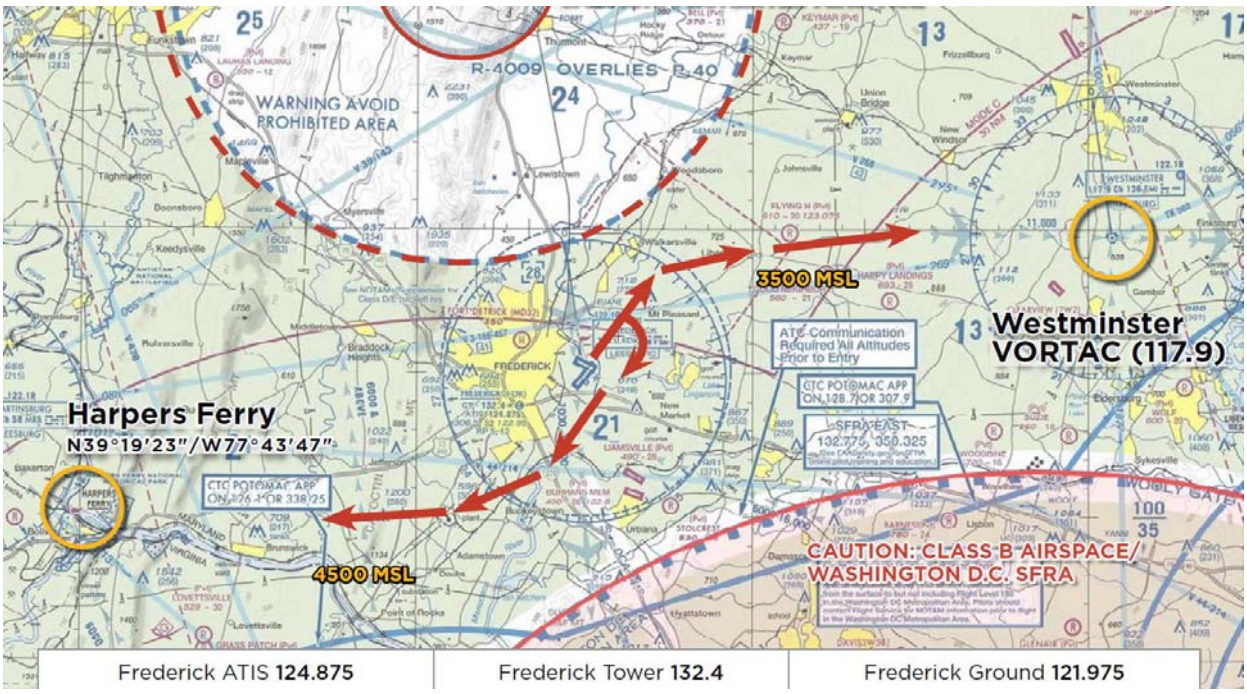
Prior to start−up: make sure you have reviewed the special flight information, departure procedures, and taxi procedures. Check ATIS on 124.875.

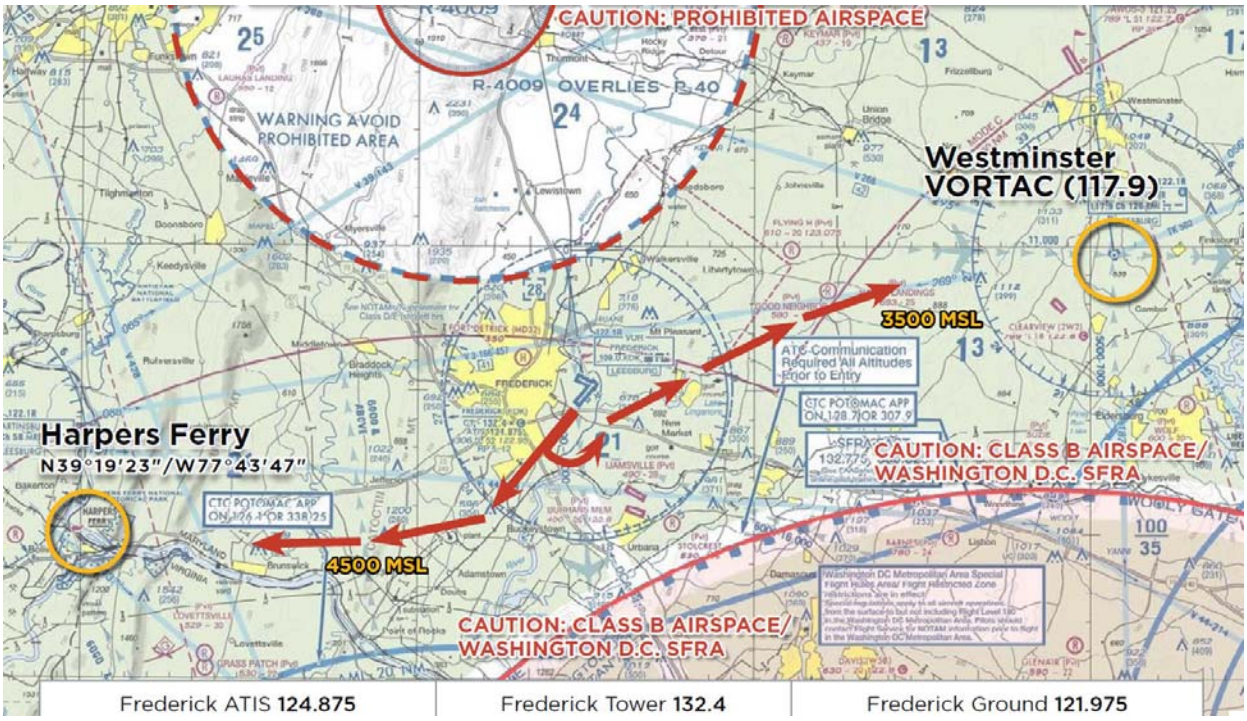
Engine start/run−up: if practical, conduct your run−up while in queue for departure. Please consider your propeller blast during run−up.

Taxi: Follow instructions from marshallers, and monitor Frederick Ground on 121.975.

Departure: Contact Frederick Tower on 132.4 when number one for departure. State ATIS code and direction of departure. Depending on destination, expect to depart westbound (4500 MSL) toward Harpers Ferry, WV or northeast bound (3500 MSL) toward the Westminster VORTAC (EMI) 117.9 before proceeding on course. When clear of FDK Class D Airspace, change frequency at pilot’s discretion. There is no need to contact tower for frequency change if you are clear of the Class D.

Caution: Remain clear of the Washington DC Special Flight Rules Area and Prohibited Area P−40.


R-4009 OVERLIES R-40
WARNING AVOID PROHIBITED AREA
3500 MSL
Westminster VORTAC (117.9)
ATC Communication Required All Altitudes Prior to Entry
CTC POTOMAC APP ON 128.7 OR 307.9
SFRA/FRZ EAST 132.775, 350.325
Harpers Ferry
N39°19'23"/W77°43'47"
CTC POTOMAC APP ON 126.4 OR 338.25
4500 MSL
CAUTION: CLASS B AIRSPACE/ WASHINGTON D.C. SFRA
Frederick ATIS 124.875
Frederick Tower 132.4
Frederick Ground 121.975


CAUTION: PROHIBITED AIRSPACE
R-4009 OVERLIES R-40
WARNING AVOID PROHIBITED AREA
Westminster VORTAC (117.9)
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CAUTION: CLASS B AIRSPACE/ WASHINGTON D.C. SFRA
Frederick ATIS 124.875
Frederick Tower 132.4
Frederick Ground 121.975

AIRCRAFT WINDOW CARDS

Print & place graphic in aircraft windshield upon arrival

Print & place graphic in aircraft windshield if departing IFR

JANUARY – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
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2	3	4	5	6	7	8
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16	17	18	19	20	21	22
23	24	25	26	27	28	29

MARCH – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
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19	20	21	22	23	24	25
26	27	28	29	30		

MAY – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SEPTEMBER – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER – 2020

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	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.)

U.S. Department
of Transportation

Federal Aviation
Administration

800 Independence Ave., S.W.
Washington, DC 20591

Critical to
Flying
Safety

Flight Information Publication
Notices to Airmen