



U.S. Department
of Transportation

Federal Aviation
Administration

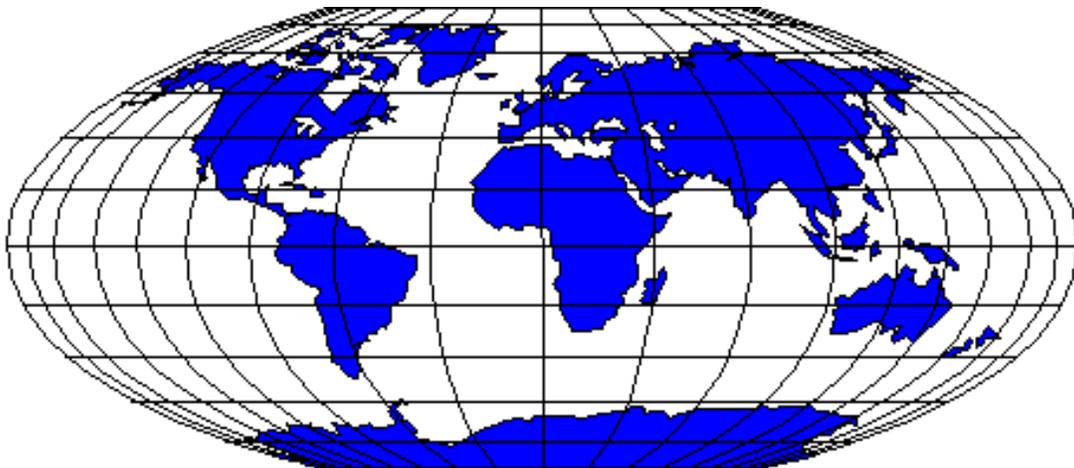
NOTICES TO AIRMEN

Domestic/International

February 27, 2020

Next Issue

March 26, 2020



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

NOTICES TO AIRMEN - February 27, 2020

| JANUARY – 2020 | | | | | | | FEBRUARY – 2020 | | | | | | | MARCH – 2020 | | | | | | |
|----------------|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|-----|------------------|-----|-----|-----|-----|-----|-----|
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | 1 | 2 | 3 | 4 | | | | | | | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 26 | 27 | 28 | 29 | 30 | 31 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| APRIL – 2020 | | | | | | | MAY – 2020 | | | | | | | JUNE – 2020 | | | | | | |
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | 1 | 2 | 3 | 4 | | | | | | 1 | 2 | | 1 | 2 | 3 | 4 | 5 | 6 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 26 | 27 | 28 | 29 | 30 | | | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 28 | 29 | 30 | | | | |
| | | | | | | | 31 | | | | | | | | | | | | | |
| JULY – 2020 | | | | | | | AUGUST – 2020 | | | | | | | SEPTEMBER – 2020 | | | | | | |
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | 1 | 2 | 3 | 4 | | | | | | | 1 | | | 1 | 2 | 3 | 4 | 5 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 26 | 27 | 28 | 29 | 30 | 31 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 27 | 28 | 29 | 30 | | | |
| | | | | | | | 30 | 31 | | | | | | | | | | | | |
| OCTOBER – 2020 | | | | | | | NOVEMBER – 2020 | | | | | | | DECEMBER – 2020 | | | | | | |
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | 1 | 2 | 3 | 4 | 5 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 29 | 30 | | | | | | 27 | 28 | 29 | 30 | 31 | | |
| | | | | | | | | | | | | | | | | | | | | |

||| = 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

February 27, 2020

NOTE: The Notices to Airmen Publication (NTAP) will be discontinued effective June 18, 2020; the last NTAP will be published on May 21, 2020. Effective June 18, 2020, International Notices will be available at https://www.faa.gov/air_traffic/publications/internationalnotices/ and Graphic Notices will be available at https://www.faa.gov/air_traffic/publications/graphicnotices/. Information from the International and Graphic Notices sections of the NTAP will be transferred to these new websites. In addition, links to International Notices and Graphic Notices will be available on the FAA NOTAM Search website. Please see the Foreword for more information.

Note: Part 1, Part 95 Revisions, has been removed from the Notices to Airmen Publication (NTAP) effective January 30, 2020. Part 95 Revisions can be found on the Aeronautical Information Services (AJV-A) website (https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Part_95_Consolidation/) and in the Federal Register Notice (<https://www.federalregister.gov>). Please see the Foreword for more information.

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**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

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South Central United States

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

North Central United States

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

Northwest United States

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

Southwest United States

| | | |
|---------|--|--------|
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|---------|--|--------|

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

SUBSCRIPTION INFORMATION

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

| <i>General Public*</i> | <i>Government Organizations*</i> |
|--|--|
| <p>Contact: Superintendent of Documents U.S. Government Printing Office P.O. Box 979050 St. Louis, MO 63197-9000</p> <p>Call: 202-512-1800</p> <p>Online: http://bookstore.gpo.gov</p> | <p>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.</p> |
| <p><i>*For those desiring printed copies, current pricing is available on the GPO website at http://bookstore.gpo.gov</i></p> | |

NOTICES TO AIRMEN

Publication Schedule

PARTS 1 AND 2

Information for **Part 1** (International) and **Part 2** (Graphic Notices) shall be submitted electronically to **Mission Support Services, Policy (AJV-P)**, 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 1 and 2, as well as inquiries, should be addressed to:

| Address | E-Mail | Phone Number |
|---|--------------------------|----------------|
| FAA HQ, Mission Support Services Mission Support Services, Policy (AJV-P) 600 Independence Ave., SW Washington, DC 20597 | 9-ATOR-HQ-PubGrp@faa.gov | 1-202-267-0140 |

Cutoff Dates for Submitting Information To Be Published

| Effective Date of Publication | Information Submission Cutoff Dates for Graphic Notices (Parts 1 & 2) |
|-------------------------------|--|
| January 2, 2020 | December 5, 2019 |
| January 30, 2020 | January 2, 2020 |
| February 27, 2020 | January 30, 2020 |
| March 26, 2020 | February 27, 2020 |
| April 23, 2020 | March 26, 2020 |
| May 21, 2020 | April 23, 2020 |
| June 18, 2020 | May 21, 2020 |
| July 16, 2020 | June 18, 2020 |
| August 13, 2020 | July 16, 2020 |
| September 10, 2020 | August 13, 2020 |
| October 8, 2020 | September 10, 2020 |
| November 5, 2020 | October 8, 2020 |
| December 3, 2020 | November 5, 2020 |

FOREWORD

As part of the Notices to Airmen (NOTAM) Modernization effort, the NTAP will be discontinued effective June 18, 2020; the last NTAP will be published on May 21, 2020. Effective June 18, 2020, International Notices will be available at https://www.faa.gov/air_traffic/publications/internationalnotices/ and Graphic Notices will be available at https://www.faa.gov/air_traffic/publications/graphicnotices/. Information from the International and Graphic Notices sections of the NTAP will be transferred to these new websites. In addition, links to International Notices and Graphic Notices will be available on the FAA NOTAM Search website (<https://notams.aim.faa.gov/notamSearch/>) and on the Air Traffic Plans and Publications website (https://www.faa.gov/air_traffic/publications/). More information, including notice submission procedures and submission cut-off dates, will be published on the International Notices website https://www.faa.gov/air_traffic/publications/internationalnotices/ and Graphic Notices website https://www.faa.gov/air_traffic/publications/graphicnotices/ when available. Please email 9-ATOR-HQ-PubGrp@faa.gov if you have any questions.

NATIONAL AIRSPACE SYSTEM CHANGES

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

NOTAMS IN THE NOTICES TO AIRMEN PUBLICATION

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

PUBLICATION CRITERIA

Part 95 Revisions

Effective with the January 30, 2020, edition, this Part has been removed from the publication in its entirety. Part 2, International NOTAMs, and Part 3, Graphic Notices, have been renumbered as Part 1 and Part 2, respectively.

PART 1. 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 1 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-P, 10/10/2019). 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-P when notices are no longer needed in the publication.

PART 2. 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-P 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-P 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-P, 10/10/2019). 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-P12 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 95 Revisions

Part 95 Revisions can be found on the Aeronautical Information Services (AJV-A) website (https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Part_95_Consolidation/) and in the Federal Register Notice (<https://www.federalregister.gov>). A Safety Panel held on June 26, 2018 concluded there was no safety risk by the removal of Part 95 Revisions from the publication.

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

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

TIME REFERENCES

All time references are indicated as UTC or local. During periods of Daylight Saving Time, effective hours in local time will be one hour earlier than shown. All states observe Daylight Saving 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, Mission Support Services, Policy, AJV-P, 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.

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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 |

Contractions

Notices to Airmen

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|--|
| PPR | Prior Permission Required |
| PRN | Pseudo 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|----------------------------------|
| VIS | Visibility |
| VOR | VHF Omni-Directional Radio Range |
| VORTAC | VOR and TACAN (colocated) |
| | |
| W | |
| W | West |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---------------|
| WB | Westbound |
| WED | Wednesday |
| WI | Within |
| WPT | Waypoint |
| WX | Weather |

WEATHER CONTRACTIONS

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|--|
| 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 |
| CSSL | 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| CONFDC | Confidence |
| CONTDVD | Continental Divide |
| CONTRAILS | Condensation Trails |
| COR | Correction to the observation (METAR) |
| CS | Cirrostratus |
| CST | Coast |
| CTGY | Category |
| CTSCLS | 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|--|
| 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 |
| FROFSC | 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) |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|--|
| 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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) |
| NNEWWD | 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|--|
| 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 |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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) |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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) |
| SSEEN | 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 |
| | |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|---|
| 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 |

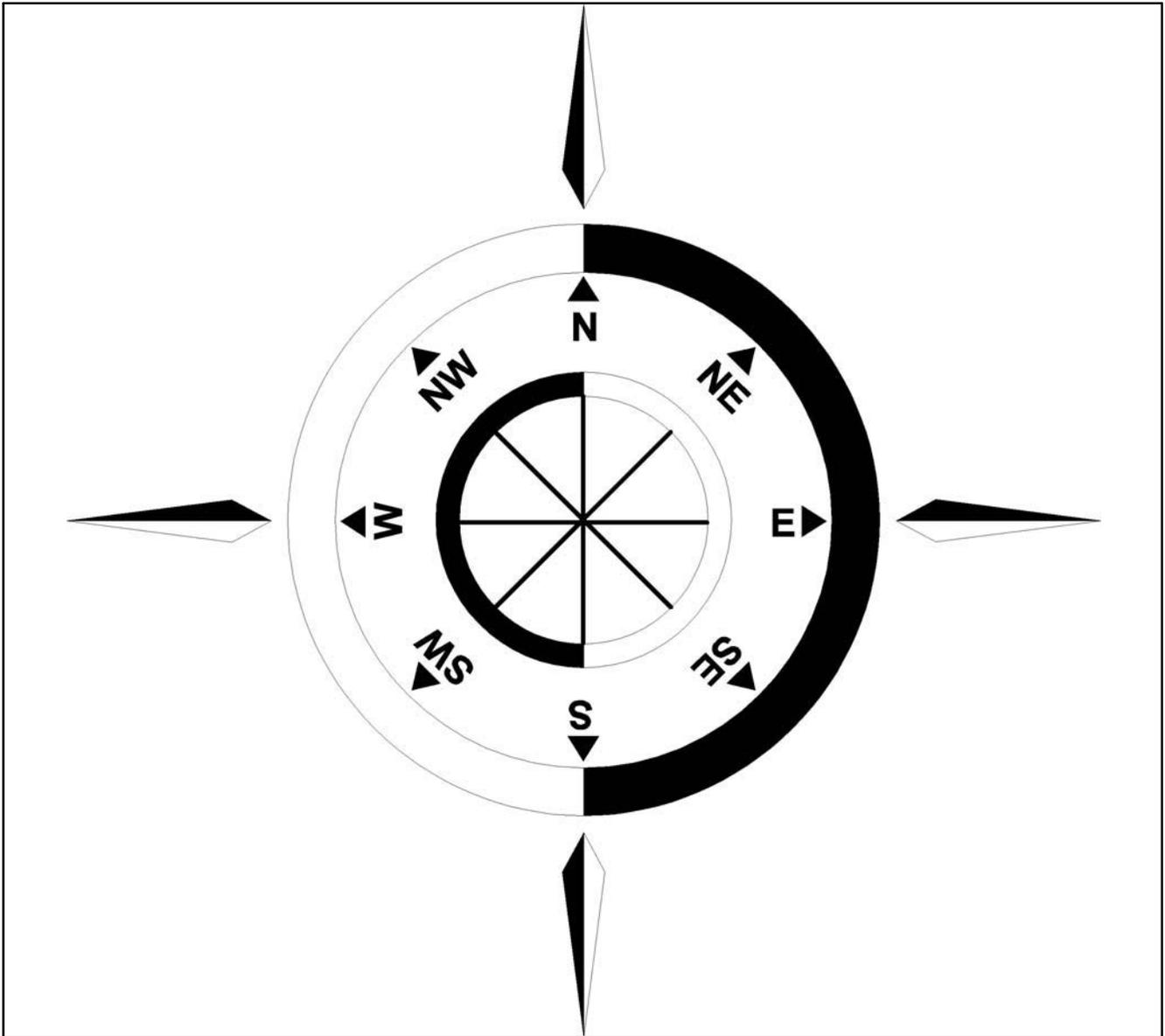
Contractions**Notices to Airmen**

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|--|
| X | |
| XCP | Except |
| XPC | Expect |
| | |
| Y | |
| Y | Yukon Standard Time (time groups only) |

| <i>Contraction</i> | <i>Decode</i> |
|--------------------|------------------|
| YKN | Yukon |
| YLSTN | Yellowstone |
| | |
| Z | |
| ZI | Zonal Index |
| ZI | Zone of Interior |

Part 1.

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

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

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

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

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

INTERNATIONAL NOTICES TO AIRMEN

SECTION 1

Flight Prohibitions, Potentially Hostile Situations, and Foreign Notices

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

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

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

BAHAMAS, THE

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

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

1. Their identification.
2. Aircraft type.
3. Position.
4. Direction of flight.
5. Cruising level.

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

Pilots shall contact the appropriate approach control unit as follows:

1. "Nassau Approach" on frequency 121.0 MHz.
2. "Freeport Approach" on frequency 126.5 MHz.

(Bahamas AIC 2/20/2010)

CHINA

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

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

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

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

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

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.
2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.
3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).
4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

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

CUBA

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

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

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

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

Provide the following information:

1. Name and address of company or individual. Include a phone number (in case there are questions concerning your request) and a return E-Mail address. Aircraft Information: Callsign (including ICAO designator if assigned)/type/registration number.
2. General Route Itinerary: Date range. City (ICAO Location Identifier)- City (ICAO Location Identifier)- City (ICAO Location Identifier), etc.
3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).
4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

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

EUROPE**EUROCONTROL Integrated Initial Flight Plan Processing System (IFPS).**

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

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

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

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

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

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

(AEU-500 6/7/2010)

IRAN (ISLAMIC REPUBLIC OF)**Federal Aviation Administration (FAA) Flight Routing Authorization Requirements in United States Territorial Airspace**

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

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

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

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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 SOSOC), or call 202-267-8115.

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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 SOSOC), or call 202-267-8115.

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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 SOSOC), or call 202-267-8115.

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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.
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3. Specific route information for each leg of the flight: Callsign, departure point, date/time (UTC), route, destination, date/time (UTC).
4. Purpose: Cargo, Passenger, Diplomatic, etc. for each leg of flight.

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

SECTION 2

INTERNATIONAL OCEANIC AIRSPACE NOTICES

INTRODUCTION

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

GENERAL

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

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

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

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

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

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

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

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

REGION SPECIFIC

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

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

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

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

Number 2019_002 *Trial Implementation of ASEPS (Lateral) using ADS-B*

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

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

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

Special emphasis items covered in these bulletins include:

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

To reiterate, operators are strongly encouraged to review all the current NAT OPS Bulletins and include relevant information in their training programs and normal oceanic procedures. Use the information in the

bulletins hand in hand with the information published in the U.S. Aeronautical Information Publication (AIP).

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

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

(Flight Operations Group, Flight Technologies and Procedures Division, Flight Standards Service, January 2, 2020)

NORTH ATLANTIC DATA LINK MANDATE SEPTEMBER 2019 UPDATE

1. Introduction.

a. This notice updates operators on the status of the International Civil Aviation Organization (ICAO) North Atlantic (NAT) region Data Link Mandate (DLM). The comprehensive source of information and guidance on the DLM is NAT OPS Bulletin 2017–1 (Revision 4) *NAT Common DLM AIC*, issued July 9, 2019. That bulletin is available free of charge at the ICAO Europe/North Atlantic region 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, and update operations manuals and training materials as applicable.

b. The NAT OPS Bulletin identifies specific airspace within the NAT region and specific types of flights that are exempt from the mandate. (Notably, the entire New York Oceanic CTA/FIR is exempt from the mandate.) Otherwise, since December 2017 **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.**

c. **On January 30, 2020**, the NAT DLM will extend from **FL 290 to FL 410** inclusive, throughout the NAT region. Many of the current exemptions for specific airspace and types of flights will remain in effect. See the NAT OPS Bulletin for details.

2. Contingency Procedures. NAT OPS Bulletin 2017–1 provides procedures pilots should use in the event of data link equipment failure prior to and after departure, as well failures after entering DLM airspace. Aircraft separation standards within DLM airspace are based on fully operational data link equipment. Pilots must promptly notify ATC of any data link equipment failures prior to entering or while in DLM airspace.

3. 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 must 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/afs410/media/NAT.pdf

4. Contacts.

a. Aviation Safety Inspector Mark Patterson, Flight Technologies and Procedures Division, 202-267-8848, Mark.Patterson@faa.gov.

b. Aviation Safety Inspector Madison Walton, Flight Technologies and Procedures Division, 202-267-8850, Madison.Walton@faa.gov.

c. Senior Aviation Analyst Mark Wisniewski (SAIC), Flight Technologies and Procedures Division, 202-267-8843, Mark.ctr.Wisniewski@faa.gov.

(Flight Operations Group, Flight Technologies and Procedures Division, Flight Standards Service, 9/12/2019)

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 | Flight Technologies and Procedures Division | 202-267-8850 | Madison.Walton@faa.gov |
| Vincent McMenemy | AJT-2210 | 202-267-0627 | Vincent.McMenemy@faa.gov |

(Flight Operations Group, Flight Technologies and Procedures Division, Flight Standards Service, 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-

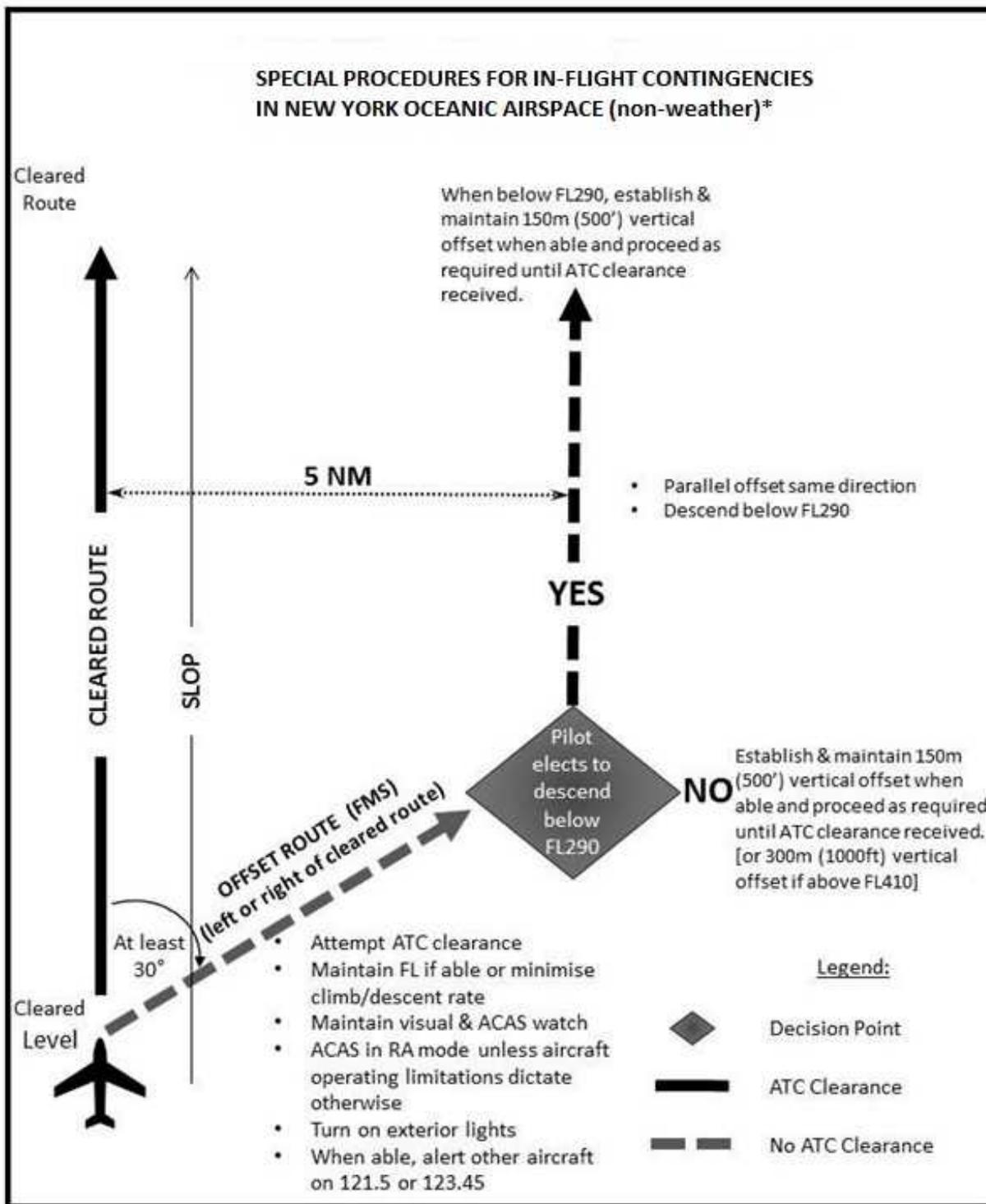
Descent below FL 290 is considered particularly applicable to operations where there is a predominant traffic flow (e.g. east-west) or parallel track system where the aircraft's diversion path will likely cross adjacent tracks or routes. A descent below FL 290 can decrease the likelihood of conflict 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 \geq 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)

NORTH ATLANTIC TRIAL IMPLEMENTATION OF ASEPS (LATERAL) USING ADS-B

The ICAO North Atlantic (NAT) region is conducting trials of reduced aircraft separation minimums based on the use of ADS-B. The NAT region officially refers to these aircraft separation minimums as *Advanced Surveillance-Enhanced Procedural Separation (ASEPS)*. The trials, conducted exclusively in the Gander, Shanwick and Santa Maria Oceanic Control Areas (OCA), began in March 2019 with reduced longitudinal separation minimums. The NAT region will expand the trials to include reduced *lateral* separation minimums, again only in Gander, Shanwick and Santa Maria OCAs, beginning as early as October 10, 2019. During the trials, the participating OCAs may separate aircraft on non-intersecting tracks not less than 19 nautical miles (NM) laterally. Aircraft currently flying on Performance Based Communications and Surveillance (PBCS) tracks in the NAT region can experience lateral spacing limited to 23 NM.

Air traffic controllers for the Gander and Shanwick OCAs will use space based ADS-B for aircraft surveillance during the trials, while controllers for Santa Maria OCA will use their existing ground-based ADS-B network.

As with the PBCS tracks, ATC will limit application of reduced lateral spacing to aircraft whose flight plan indicates authorization for RNP 4, RCP 240, RSP 180, RVSM, and operations in the North Atlantic High Level Airspace (NAT HLA). The flight plan must also indicate equipage with ADS-B out (1090 MHz) (Item 10 codes B1 or B2) and FANS 1/A CPDLC SATCOM (Item 10 codes J5 or J7).

ICAO NAT OPS Bulletin 2019-002 *Trial Implementation of ASEPS (Lateral) Using ADS-B* is the comprehensive source of guidance and information on the trials. Operators may find this OPS Bulletin, as well as all active NAT OPS Bulletins at www.icao.int/EURNAT. Subsequently click on *EUR/NAT Documents*, then *NAT Region Documents*, then *NAT OPS Bulletins*.

Flight crews crossing the NAT may experience some new and/or non-standard terminology regarding *surveillance* of their aircraft, particularly as they enter or travel between trial participating OCAs. Regardless of the surveillance status terminology that flight crews hear or receive via CPDLC when in oceanic airspace, they must perform *all* their normal oceanic procedures.

The FAA *recommends* flight crews of U.S. aircraft opt out of the ASEPS reduced lateral separation trial if flying with less than a fully functioning TCAS (ACAS II). Flight crews should inform ATC that they have “no ACAS” either when requesting their oceanic clearance (voice or CPDLC), 30 minutes prior to crossing the Gander, Shanwick or Santa Maria OCA boundaries if entering from New York or Iceland oceanic airspace, or otherwise as soon as possible if ACAS failure occurs while in Gander, Shanwick or Santa Maria OCAs.

Strategic Lateral Offset Procedures (SLOP) remain in effect during ASEPS trials. For safety of operations, flight crews should always use SLOP while within oceanic airspace on their NAT crossing.

Operators who fly across the North Atlantic should ensure their pilots are aware of the reduced lateral separation trials and the information presented in both this notice and NAT OPS Bulletin 2019-002.

For questions regarding this notice contact the Flight Technologies and Procedures Division, 202-267-8790.

(Flight Operations Group, Flight Technologies and Procedures Division, Flight Standards Service, 8/15/19)

NORTH ATLANTIC OPERATIONS WITHOUT AN ASSIGNED FIXED SPEED

1. The purpose of the notice is to alert operators flying in the International Civil Aviation Organization (ICAO) North Atlantic (NAT) region of opportunities to fly other than a fixed speed. A speed assignment has long been a component of a NAT oceanic clearance. As a result of extensive coordination among NAT air navigation service providers (ANSP), operators may now have the opportunity to fly a variable speed, for all or a portion of their NAT oceanic crossing. NAT ANSPs are implementing operations without an assigned fixed speed as changes to their individual flight data processing systems and procedures allow. Therefore, the opportunities to fly other than a fixed speed will vary with the oceanic control area, traffic density, and direction of flight.

2. ICAO NAT OPS Bulletin 2019–1 *Operations Without an Assigned Fixed Speed in the NAT (OWAFS) Special Emphasis Items (SEI)*, issued July 9, 2019, is the comprehensive source of information on operations without an assigned fixed speed in the NAT. The bulletin includes an example operational scenario illustrating how a nominal oceanic flight crew may obtain clearance to fly other than a fixed assigned speed in the NAT. It is important to note that, in accordance with Title 14 of the Code of Federal Regulations, § 91.703, operators must observe the provisions of paragraph 3.6.2.2 of ICAO Annex 2. Operators should not interpret anything in the bulletin as authorizing a deviation from Annex 2.

3. Operators can obtain this bulletin, as well as all NAT OPS Bulletins, free of charge on the ICAO EUR/NAT website. Visitors to the website should select EUR/NAT Documents, then NAT Documents, then NAT OPS Bulletins to view the complete list of effective bulletins. All U.S. operators intending flights in the NAT region should familiarize themselves with **all** current NAT OPS Bulletins.

4. Operators may direct questions to Aviation Safety Inspector Madison Walton, Flight Technologies and Procedures Division, at 202–267–8850, or Madison.Walton@faa.gov.

(Flight Operations Group, Flight Technologies and Procedures Division, Flight Standards Service, 9/12/2019)

STRATEGIC LATERAL OFFSET PROCEDURE (SLOP) WHILE WITHIN OCEANIC AIRSPACE

The strategic lateral offset procedure (SLOP) has been promoted and practiced in oceanic airspace for a number of years. The standards for SLOP have been established by ICAO through Document 4444, Procedures for Air Navigation Services – Air Traffic Management. Until recently, application of SLOP offered aircraft operators options only to fly the track centerline, 1.0 NM, or 2.0 NM right of track. However, a change to the International Civil Aviation Organization Document 4444, Procedures for Air Navigation Services – Air Traffic Management, established new criteria for SLOP such that offsets may be performed at .1 NM intervals up to a maximum of 2.0 NM right of track. The new criteria will allow 21 offset positions versus the existing three positions, thereby, increasing safety. These procedures will be published in the United States Aeronautical Information Publication on 30 January 2020.:

It has been determined that allowing aircraft conducting oceanic flight to fly lateral offsets, in increments of .1 nautical mile (NM) up to a maximum of 2 NM right of center line, will provide an additional safety margin and mitigate the risk of conflict when non-normal events, such as aircraft navigation errors, altitude deviation errors, and turbulence-induced altitude-keeping errors occur.

Effective 12 September 2019, these procedures are authorized in U.S.-controlled Oceanic Airspace and also the airspace surrounding the island of Bermuda, the airspace controlled by Honolulu Control Facility (HCF) and the airspace controlled by Guam Combined Center Radar Approach Control (CERAP).

These procedures provide for offsets within the following guidelines: Along a route or track there will be 21 positions that an aircraft may fly: on center line or at increments of .1 NM (e.g. .1, .2, .3, .4 1.8, 1.9, 2.0)

right of center line out to a maximum offset of 2 NM. Offsets must not exceed 2 NM right of centerline. The intent of this procedure is to reduce risk (add safety margin) by distributing aircraft laterally across the 21 available positions.

Pilots must fly the track center line if their aircraft does not have automatic offset programming capability. Pilots of aircraft unable to offset at .1 NM increments should fly on the track centerline, or at the 1.0 NM or 2.0 NM positions right of centerline when using SLOP.

An aircraft overtaking another aircraft should offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken.

Pilots should also fly one of the available offset positions shown above to avoid wake turbulence.

(9/12/2019)

OPERATIONS OF AIRCRAFT WITHOUT AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS–B) OUT IN U.S. ADS–B OUT RULE AIRSPACE (OUTSIDE 48 CONTIGUOUS STATES)

Purpose: To describe FAA Air Traffic policy for aircraft operations without Automatic Dependent Surveillance–Broadcast Out (ADS–B Out) in United States sovereign airspace outside of the 48 Contiguous States.

Pursuant to 14 CFR § 91.225, when operating in Class A airspace an aircraft must:

1. Meet the performance requirements in TSO–C166b, Extended Squitter Automatic Dependent Surveillance–Broadcast (ADS–B) and Traffic Information Service–Broadcast (TIS–B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz); and,
2. Meet the requirements of 14 CFR § 91.227.

For the purposes of § 91.225, Class A airspace is located within U.S. domestic airspace. U.S. domestic airspace exists over all land mass regions of the U.S. as defined in 14 CFR § 1.1 and includes the States (contiguous and non–contiguous), the District of Columbia, Puerto Rico, and the possessions, including the surrounding territorial waters.

NOTE–

Areas beyond 12 nautical miles from the U.S. coastline are considered part of International Civil Aviation Organization (ICAO) airspace. U.S. airspace regulations do not apply in these areas even if the FAA opts to apply domestic air traffic procedures.

Several U.S. territories in the Pacific and Caribbean region have Class A airspace defined over them. Per the Department of the Interior, Insular Affairs Policy Division, the U.S. possessions, or territories, in the Pacific and Caribbean regions include the following:

Caribbean: Navassa Island, Puerto Rico, U.S. Virgin Islands

Pacific: American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Northern Mariana Islands, Palmyra Atoll, Wake Atoll.

For flight operations within the Class A domestic airspace of Puerto Rico, U.S. Virgin Islands, Guam, and the Northern Mariana Islands south of latitude North 17 degrees 49 minutes, the FAA notes the following expectations:

1. Operators without equipment meeting the performance requirements in TSO–C166b are expected to plan their routes of flight (including alternate airports) around this airspace; and

2. Operators without equipment meeting the performance requirements in TSO-C166b should train their flight crews to generally decline a voluntary ATC rerouting through this airspace unless required to safely operate their aircraft (e.g., in-flight emergencies, weather deviations, or diversions, etc.), advising ATC that they are not equipped with appropriate ADS-B avionics. If, however, ATC chooses to proceed with the new routing, the flight crew should accept and execute the clearance.

The remaining locations in the Pacific and Caribbean regions do not have FAA ADS-B or radar coverage at this time. The specific locations within the Pacific and Caribbean regions without coverage are: American Samoa, Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Palmyra Atoll, Navassa Island, and the Northern Mariana Islands north of latitude North 17 degrees 49 minutes.

In airspace without FAA ADS-B or radar coverage, the FAA cannot provide (and does not provide) Air Traffic Service (ATS) surveillance services. Also, without ADS-B coverage, FAA has no practical means to detect violations of § 91.225. Therefore, until such coverage exists, FAA does not anticipate devoting its resources to identifying non-equipped aircraft briefly traversing these locations without FAA ADS-B or radar coverage.

(AJV-1, 10/10/2019)

TRIAL TO REMOVE FLIGHT PLANNING REQUIREMENT OF EASTBOUND NORTH AMERICAN ROUTES

Background

For several decades, eastbound aircraft transitioning from North America to Europe have been required to flight plan a North American Route (NAR) with the associated oceanic entry point (OEP) of their preferred oceanic track, as outlined in the U.S. Northeast Chart Supplement and *Canada Flight Supplement* (CFS).

Given the desire from operators to have the ability to flight plan more efficiently and optimize their routings, NAV CANADA and the Federal Aviation Administration (FAA) have embarked on a project to remove this flight planning requirement on a trial basis, as outlined below.

Trial Details

Beginning in January 2020, departures from several North American cities will have the ability to optimize their routings to the OEP. This will be a gradual introduction of departure points and operators as the trial moves forward in five stages. Additional departure airports may be considered as the trial moves forward and the impact of the change has been adequately evaluated.

Note: At all times, in every stage, departures must still comply with any departure routes, structures, and/or restrictions from the departure airport. Optimized routings can only begin from points within the Boston air route traffic control center (ARTCC), Moncton flight information region (FIR) airspace or both. Once inside the Boston ARTCC/Moncton FIR area, random routings to the OEP will be permitted. Flight paths of aircraft participating in the trial must remain at or north of a VITOL–LOMPI line. **The daily ZBW North Atlantic Advisory shall be the primary method of communicating specifics of this trial.**

| Stage Number | Date | Description |
|--------------|-------------------------------------|--|
| Stage 1 | 6 January 2020 to 19 January 2020 | All flights operated by Air Canada, departing from CYYZ and CYUL, operating within the organized track structure (OTS) will not be required to file the associated NAR listed on the daily ZBW North Atlantic Advisory. Associated NARs are referenced under the “JFK Departures” section of the advisory. |
| Stage 2 | 20 January 2020 to 2 February 2020 | All flights departing from CYYZ and CYUL, operating within the OTS, will not be required to file the associated NAR listed on the daily ZBW North Atlantic Advisory. Associated NARs are referenced under the “JFK Departures” section of the advisory. |
| Stage 3 | 3 February 2020 to 16 February 2020 | All flights as indicated in Stage 1 and Stage 2 in addition to American airlines flights departing from KORD, operating within the OTS will not be required to file the associated NAR listed on the daily ZBW North Atlantic Advisory. Associated NARs are referenced under the “JFK Departures” section of the advisory. |

| | | |
|---------|-------------------------------------|--|
| Stage 4 | 17 February 2020 to 1 March 2020 | All flights departing from CYYZ, CYUL and KORD, operating within the OTS will not be required to file the associated NAR listed on the daily ZBW North Atlantic Advisory. Associated NARs are referenced under the “JFK Departures” section of the advisory. |
| Stage 5 | 2 March 2020 to 16 March 2020 | All flights departing from CYYZ, CYUL, KORD, KDTW and KMSB, operating within the OTS will not be required to file the associated NAR listed on the daily ZBW North Atlantic Advisory. Associated NARs are referenced under the “JFK Departures” section of the advisory. |

ICAO NOTAMS will be issued in conjunction with each stage of this trial.

The trial may be discontinued at any time, based on the operational impact of the trial. If the trial is discontinued, dispatchers and operators shall revert back to the OTS structure. Please refer to the daily ZBW North Atlantic Advisory for specific information and status of this trial.

Dispatchers shall include “NO NARS EAST TRIAL” in the remarks section of flight plans for participating aircraft.

Flight crews are expected to carry applicable NAR documentation on the flight deck for all flights, regardless if participating in the trial or not.

For further information, please contact:

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Part 2.

GRAPHIC NOTICES



Section 1. General

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 1-1

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

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

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

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

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

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

COLD TEMPERATURE RESTRICTED AIRPORTS

Aug 15, 2019

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. Change the NTAP Segment(s) Method to the Individual Segment(s) Method; 3. Explain how to calculate and apply altitude corrections during cold temperature operations; 4. Explain how the All Segments Methods and Individual Segment(s) Method are used to make cold temperature altitude corrections.

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 2019 list includes restricted temperatures based on standard Required Obstacle Clearance (ROC) values and values 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 may result in the segment no longer being identified with a restriction or in a revised restricted temperature for the airport being published.

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.

Identifying Cold Temperature Restricted Airport in the Terminal Procedure publication: Cold Temperature Restricted Airports are identified by a “snowflake” icon (E3) and temperature limit, in Celsius, i.e., E3 -30°C, on U.S. Government approach charts or a “textual” Note published on commercial charting publications.

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 E3 and associated temperature on the chart for making corrections. Pilots do not need to reference the restricted airports list in the NTAP or Terminal Procedures Basic Search” page. 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).

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

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 Individual 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 Mesoscale 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/medi a/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**

| | 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 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.

Individual 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 segment(s), listed in Cold Temperature Restricted Airports List.

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 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 12100 ft. for cold temperature operations.”*
 - Vectors to final approach course: Inside of PICIN: *“Request 10600 ft. for cold temperature operations.”*
 - Missed Approach segment: *“Require final holding altitude, 10600 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 13600 for cold temperature operations at TUSKK, TILLI or HIPNA”*

For additional information contact Kel Christianson, Flight Operations Group, 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 | -34C | | X | |
| PACI | Chalkyitsik | -32C | X | | |
| PACM | Scammon Bay | -21C | | X | |
| PACX | Coldfoot | -11C | X | X | |
| PADE | Deering | -39C | | X | |
| PADM | Marshall Don Hunter Sr | -28C | | X | |
| PAEG | Eagle | -49C | X | | |
| PAEN | Kenai | -31C | X | | |
| PAFA | Fairbanks Intl | -45C | X | | |
| PAFM | Ambler | -35C | | X | |
| PAGA | Edward G. Pitka Sr | -33C | X | | |
| PAGH | Shungnak | -44C | X | | |
| PAGK | Gulkana | -37C | X | | |
| PAGM | Gambell | -26C | | X | |
| PAHC | Holy Cross | -29C | | X | |
| PAHV | Healy River | -11C | X | X | |
| PAHX | Shageluk | -37C | X | | |
| PAIK | Bob Baker Memorial | -28C | X | X | |
| PAIL | Iliamna | -23C | X | | |
| PAIW | Wales | -12C | | X | |
| PAJN | Juneau Intl | -15C | X | | |
| PAKN | King Salmon | -31C | X | | |
| PAKP | Anaktuvuk | -31C | X | | |
| PAKV | Kaltag | -32C | X | X | |
| PALG | Kalskag | -42C | X | | |
| PAMB | Manokotak | -34C | X | | |
| PAMH | Minchumina | -37C | | X | |
| PAMK | St Michael | -37C | X | | |
| PANA | Napakiak | -37C | X | | |
| PANI | Aniak | -34C | | X | |
| PANN | Nenana Muni | -43C | X | | |
| PANV | Anvik | -32C | X | | |
| PAOM | Nome | -34C | X | | |

| Identifier | Airport Name | Temperature | Intermediate | Final | Missed Appr |
|-------------------|---------------------------------|-------------|--------------|-------|-------------|
| PAOR | Northway | -41C | X | | |
| PAOT | Ralph Wien Memorial | -44C | X | | |
| PAQH | Quinhagak | -36C | X | | |
| PAQT | Nuiqsut | -41C | X | | |
| PARC | Artic Village | -46C | X | | |
| PARS | Russian Mission | -18C | X | X | |
| PARY | Ruby | -33C | X | X | |
| PASC | Deadhorse | -45C | X | | |
| PASK | Selawik | -36C | X | | X |
| PATA | Ralph M Calhoun Memorial | -51C | | X | |
| PATQ | Atkasuk 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 | -5C | X | | |
| PAWG | Wrangell | -5C | | 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 | -26C | X | | |
| PFKU | Koyukuk | -25C | | X | |
| PFKW | Kwethluk | -38C | X | | |
| PFSH | Shaktolik | -35C | X | | |
| PFYU | Fort Yukon | -45C | X | X | |
| California | | | | | |
| KSVE | Susanville Muni | -22C | X | X | |
| KTRK | Truckee – Tahoe | -13C | X | X | |
| O02 | Nervino | -14C | | X | |
| Colorado | | | | | |
| KAEJ | Central Colorado Rgnl | -17C | | X | |
| KASE | Aspen–Pitkin County/Sardy Field | -26C | X | | |
| KCAG | Craig–Moffat | -26C | | X | |
| KEEO | Meeker Coulter Field | -25C | | X | |
| KEGE | Eagle County Rgnl | -18C | X | | |
| KGUC | Gunnison–Crested Butte Rgnl | -28C | X | | |
| KHDN | Yampa Valley | -30C | | X | |
| KLXV | Lake County | -27C | | X | |

| Identifier | Airport Name | Temperature | Intermediate | Final | Missed Appr |
|-----------------------------|---------------------------------|-------------|--------------|-------|-------------|
| KRIL | Garfield County Rgnl | -15C | X | X | |
| KSBS | Steamboat Springs/Bob Adams Fld | -32C | X | | |
| KTAD | Perry Stokes | -26C | X | | |
| 20V | Mc Elroy Airfield | -21C | | X | |
| <u>Idaho</u> | | | | | |
| KMYL | McCall Muni | -21C | X | | |
| KSMN | Lemhi County | -14C | X | X | |
| KSUN | Friedman Memorial | -16C | | X | |
| 65S | Boundary County | -8C | | X | |
| <u>Indiana</u> | | | | | |
| KSMD | Smith Field | -24C | | X | |
| <u>Iowa</u> | | | | | |
| KAMW | Ames Muni | -27C | X | | |
| KSPW | Spencer Muni | -32C | X | | |
| <u>Kansas</u> | | | | | |
| KDDC | Dodge City Rgnl | -20C | | X | |
| <u>Kentucky</u> | | | | | |
| KBYL | Williamsburg-Whitley County | -21C | | X | |
| <u>Maine</u> | | | | | |
| KPQI | Northern Maine Rgnl | -30C | X | | |
| <u>Massachusetts</u> | | | | | |
| KBAF | Westfield-Barnes Regional | -21C | | X | |
| KFIT | Fitchburg Muni | -25C | | X | |
| <u>Michigan</u> | | | | | |
| KAPN | Alpena County Rgnl | -32C | X | | |
| KIWD | Gogebic-Iron County | -27C | | X | |
| KPLN | Pellston Rgnl of Emmet County | -33C | | X | |
| KTVC | Cherry Capital | -20C | | X | |
| <u>Minnesota</u> | | | | | |
| 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 | | |
| <u>Montana</u> | | | | | |
| KBTM | Bert Mooney | -19C | X | X | |
| KBZN | Bozeman Yellowstone Intl | -33C | X | | |
| KGTF | Great Falls Intl | -33C | X | | |
| KHLN | Helena Rgnl | -21C | X | X | |

| Identifier | Airport Name | Temperature | Intermediate | Final | Missed Appr |
|------------------------------|--------------------------------------|-------------|--------------|-------|-------------|
| KHVR | Havre City–County | –30C | | | X |
| KMSO | Missoula Intl | –17C | 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 | | |
| <u>Nebraska</u> | | | | | |
| KCDR | Chadron Muni | –32C | X | | |
| <u>Nevada</u> | | | | | |
| KEKO | Elko Rgnl | –24C | | X | |
| KELY | Ely (Yelland Field) | –31C | X | | |
| KRNO | Reno/Tahoe Intl | –15C | | X | |
| KRTS | Reno/Stead | –15C | | X | |
| <u>New Hampshire</u> | | | | | |
| KBML | Berlin Rgnl | –29C | | X | |
| KCNH | Claremont Muni | –27C | | X | |
| KHIE | Mount Washington Rgnl | –29C | | X | |
| KLEB | Lebanon Muni | –20C | X | X | |
| <u>New Mexico</u> | | | | | |
| KAXX | Angel Fire | –31C | X | | |
| <u>New York</u> | | | | | |
| KART | Watertown Intl | –37C | X | | |
| KDKK | Chautauqua County/Dunkirk | –20C | | X | |
| KELM | Elmira/Corning Rgnl | –17C | | X | |
| KGFL | Floyd Bennett Memorial | –18C | X | X | |
| KITH | Ithaca Tompkins Rgnl | –19C | | X | |
| KLKP | Lake Placid | –16C | | X | |
| KSLK | Adirondack Rgnl | –29C | | X | |
| 4B6 | Ticonderoga Muni | –29C | | X | |
| <u>North Carolina</u> | | | | | |
| KRHP | Western Carolina Rgnl | –8C | | X | |
| <u>North Dakota</u> | | | | | |
| KBIS | Bismarck | –35C | X | | |
| KDIK | Dickinson–Theodore Roosevelt Rgnl | –30C | X | | |
| KISN | Sloulin Field Intl | –36C | X | | |
| <u>Ohio</u> | | | | | |
| KBKL | Burke Lakefront | –23C | | X | |

| Identifier | Airport Name | Temperature | Intermediate | Final | Missed Appr |
|------------------------------|--|-------------|--------------|-------|-------------|
| <u>Oregon</u> | | | | | |
| KLGD | La Grande/Union County | -16C | | X | |
| KMFR | Rogue Valley Intl-Medford | -5C | X | | |
| KPDT | Eastern Oregon Rgnl at Pendleton | -22C | X | | |
| <u>Pennsylvania</u> | | | | | |
| KIPT | Williamsport Rgnl | -14C | | X | |
| KSEG | Penn Valley | -14C | | X | |
| N27 | Bradford County | -25C | | X | |
| <u>South Dakota</u> | | | | | |
| KIEN | Pine Ridge | -33C | | X | |
| KMBG | Mobridge Muni | -31C | X | | |
| <u>Tennessee</u> | | | | | |
| KMOR | Moore-Murrell | -22C | | X | |
| 0A9 | Elizabethton Muni | -12C | | X | |
| 6A4 | Mountain City/Johnson County | -12C | | X | |
| <u>Utah</u> | | | | | |
| KBCE | Bryce Canyon Airport | -30C | X | | |
| KENV | Wendover | -12C | X | | |
| KLGU | Logan-Cache | -15C | X | | |
| KRIF | Richfield Muni | -29C | X | | |
| KSGU | St George Muni | -17C | X | | |
| KVEL | Vernal Rgnl | -27C | | X | |
| U55 | Panguitch Municipal | -28C | X | | |
| <u>Vermont</u> | | | | | |
| KBTV | Burlington Intl | -15C | X | | |
| KDDH | William H. Morse State | -13C | | X | |
| KEFK | Newport State | -30C | X | | |
| KMPV | Edward F. Knapp State | -20C | X | | |
| KMVL | Morrisville-Stowe State | -30C | X | | |
| KRUT | Rutland-Southern Vermont Rgnl | -8C | | X | |
| KVSF | Hartness State (Springfield) | -24C | | X | |
| <u>Virginia</u> | | | | | |
| KROA | Roanoke Rgnl/Woodrum Field | -13C | | X | |
| KVBW | Bridgewater Air Park | -20C | X | | |
| <u>Washington St.</u> | | | | | |
| KEAT | Pangborn Memorial | -7C | X | | |
| KOMK | Omak | -15C | | X | |
| <u>West Virginia</u> | | | | | |
| KEKN | Elkins-Randolph County Jennings Randolph Field | -17C | | X | |

| Identifier | Airport Name | Temperature | Intermediate | Final | Missed Appr |
|-------------------------|-----------------------------|-------------|--------------|-------|-------------|
| W99 | Grant County | -9C | | X | |
| 12V | Ona Airpark | -25C | X | | |
| 312 | Point Pleasant/Mason County | -18C | | X | |
| <u>Wisconsin</u> | | | | | |
| KASX | John F. Kennedy Memorial | -31C | X | | |
| KCMY | Sparta/Fort McCoy | -33C | X | | |
| KLSE | La Crosse Muni | -20C | | X | |
| KOVS | Boscobel | -31C | | X | |
| KRHI | Rhineland-Oneida County | -31C | X | | |
| KRPD | Rice Lake Rgnl-Carl's Field | -35C | X | | |
| 4R5 | Major Gilbert Field | -30C | X | | |
| <u>Wyoming</u> | | | | | |
| KAFO | Afton Municipal Airport | -22C | | X | |
| KCOD | Yellowstone Rgnl | -31C | X | | |
| KDWX | Dixon | -38C | | X | |
| KEMM | Kemmerer Muni | -35C | X | | |
| KGEY | South Big Horn County | -33C | X | X | |
| KHSG | Hot Springs County | -36C | 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.

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

Hayden/Yampa Valley (KHDN), Colorado. Reported Temperature -30°C : RNAV (GPS) RWY 28

Uncompensated Baro-VNAV System or Manual Method:

1. Cold Temperature Restricted Airport Temperature Limit: -30°C
2. Altitude at the Final Approach Fix (FAF) (BEEAR) = 10000 ft.
3. Airport elevation = 6606 ft.
4. Difference: $10000\text{ ft.} - 6606\text{ ft.} = 3394\text{ ft.}$
5. Use the AIM 7-2-3 ICAO Cold Temperature Error Table for a height above airport of 3394 ft. and -30°C . Visual interpolation is approximately 600 ft. Actual interpolation is 645 ft. Add 600 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): $13000 + 600 = 13600\text{ ft.}$
 - PICIN (stepdown fix): $11500 + 600 = 12100\text{ ft.}$
 - BEEAR (FAF): $10000 + 600 = 10600\text{ ft.}$
6. Correct altitudes within the final segment altitude based on the minima used. LP MDA = 7080 ft.
7. Difference: $7080\text{ ft.} - 6606\text{ ft.} = 474\text{ ft.}$
8. AIM 7-2-3 Table: 474 ft. at -30°C is approximately 90ft. Use 90 ft. or round up to 100 ft.
9. Add corrections to altitudes up to but not including the FAF:
 - DICEV (stepdown fix): $8400 + 90 = 8490\text{ ft.}$
 - BUYYA (stepdown fix): $7860 + 90 = 7950\text{ ft.}$
 - LP MDA: $7080 + 90 = 7170\text{ ft.}$
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 600 ft. correction for 10000 ft. and add to MA holding altitude:
 - MEKWY: $10000 + 600 = 10600\text{ ft.}$

Compensated Baro-VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will be set to the current airport temperature (-30°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.

Individual Segments Method: Final segment required.

Hayden/Yampa Valley (KHDN), Colorado. Reported Temperature -30°C : RNAV (GPS) RWY 28.

Uncompensated Baro-VNAV System or Manual Method:

1. Cold Temperature Restricted Airport Temperature Limit: -30°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: $7080\text{ ft.} - 6606\text{ ft.} = 474\text{ ft.}$
5. AIM 7-2-3 Table: 474 ft. at -30°C is approximately 90ft. Use 90 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): $8400 + 90 = 8490\text{ ft.}$
 - BUYYA (stepdown fix): $7860 + 90 = 7950\text{ ft.}$
 - LP MDA: $7080 + 90 = 7170$

Compensated Baro-VNAV System:

Operators using a temperature compensating RNAV system to make altitude corrections will set the current airport temperature (-30°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

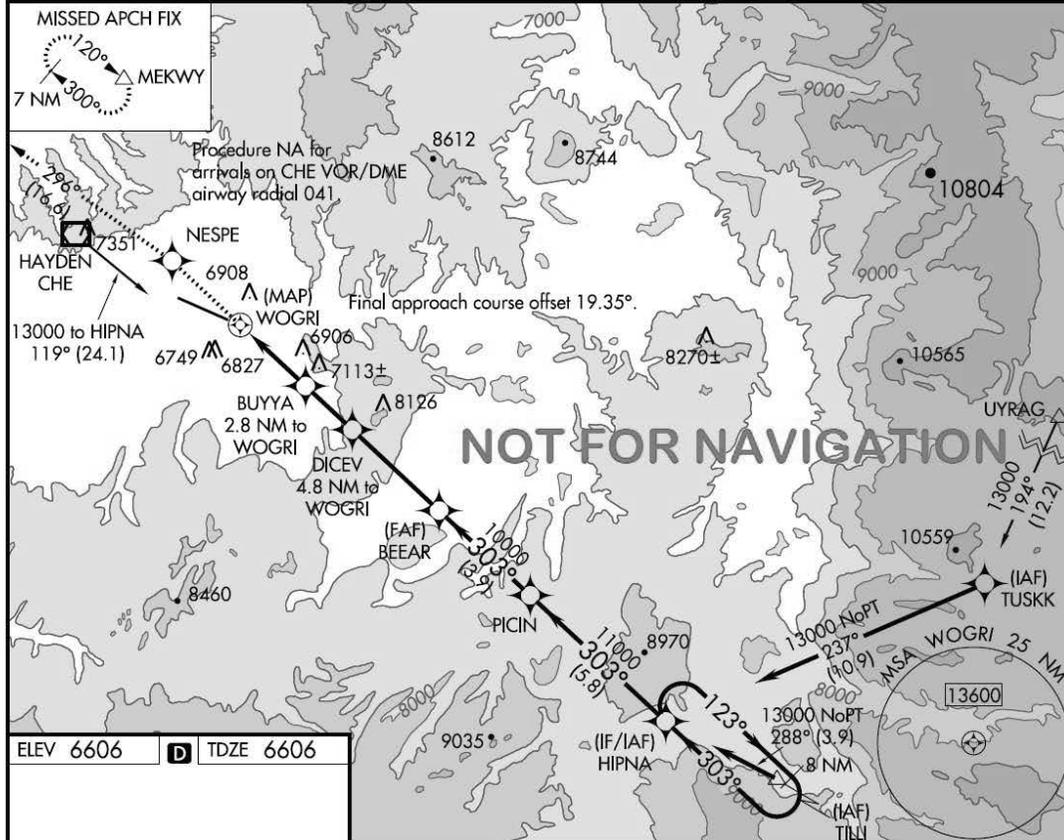
AL-5983 (FAA)

18340

| | | |
|--|------------------------|---|
| WAAS CH 48825 W28A | APP CRS 303° | Rwy ldg TDZE 6606 Apt Elev 6606 |
|--|------------------------|---|

RNAV (GPS) RWY 28
YAMPA VALLEY (HDN)

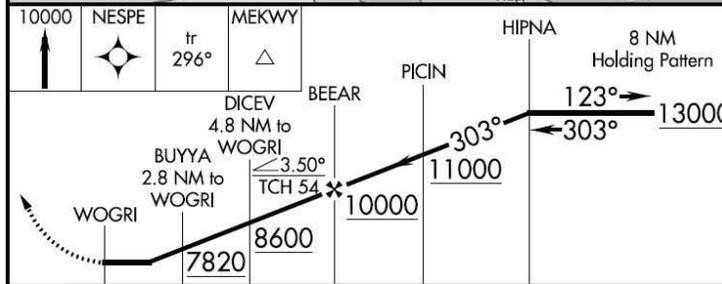
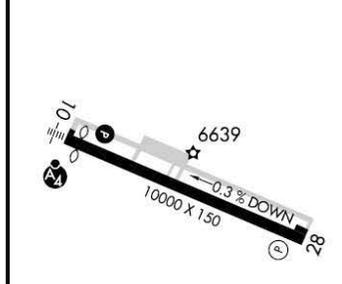
| | | |
|---|---|---|
| RNP APCH. When local altimeter not received use Craig-Moffat altimeter setting and increase all MDA 100 feet, increase LP and LNAV Cat C/D visibility ¼ mile. -30°C Rwy 28 helicopter visibility reduction below ¾ SM NA. | | MISSED APPROACH: Climb to 10000 direct NESPE and on track 296° to MEKWY and hold. |
| AWOS-3PT 119.275 | DENVER CENTER 120.475 235.975 | UNICOM 123.0 (CTAF) |



SW-1, 28 MAR 2019 to 25 APR 2019

SW-1, 28 MAR 2019 to 25 APR 2019

ELEV 6606 **D** TDZE 6606



| | | | | | | | | |
|-------------------|--|--------|-------------|---------|--------------|---------------|---------------|--|
| | | 0.5 | 2.8 NM | 2 NM | 3.7 NM | 3.9 NM | 5.8 NM | |
| CATEGORY | | A | B | C | D | | | |
| LP MDA | | 7000-1 | 394 (400-1) | 7000-1½ | 394 (400-1½) | | | |
| LNAV MDA | | 7080-1 | 474 (500-1) | 7080-1¾ | 474 (500-1¾) | | | |
| C CIRCLING | | 7220-1 | 614 (700-1) | 7660-3 | 8180-3 | 1054 (1100-3) | 1574 (1600-3) | |

HAYDEN, COLORADO
Amdt 3A 06DEC18

40°29'N-107°13'W

YAMPA VALLEY (HDN)
RNAV (GPS) RWY 28

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

(KMFR) Rogue Valley Intl–Medford, Oregon. Reported Temperature -5°C : RNAV (RNP) RWY 32.

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.

Individual Segment(s) method: Intermediate segment required

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

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: $2600\text{ ft.} - 1335\text{ ft.} = 1265\text{ ft.}$
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): $3800 + 100 = 3900\text{ ft}$
 - CUNBA (PFAF): $2600 + 100 = 2700\text{ ft.}$

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 |

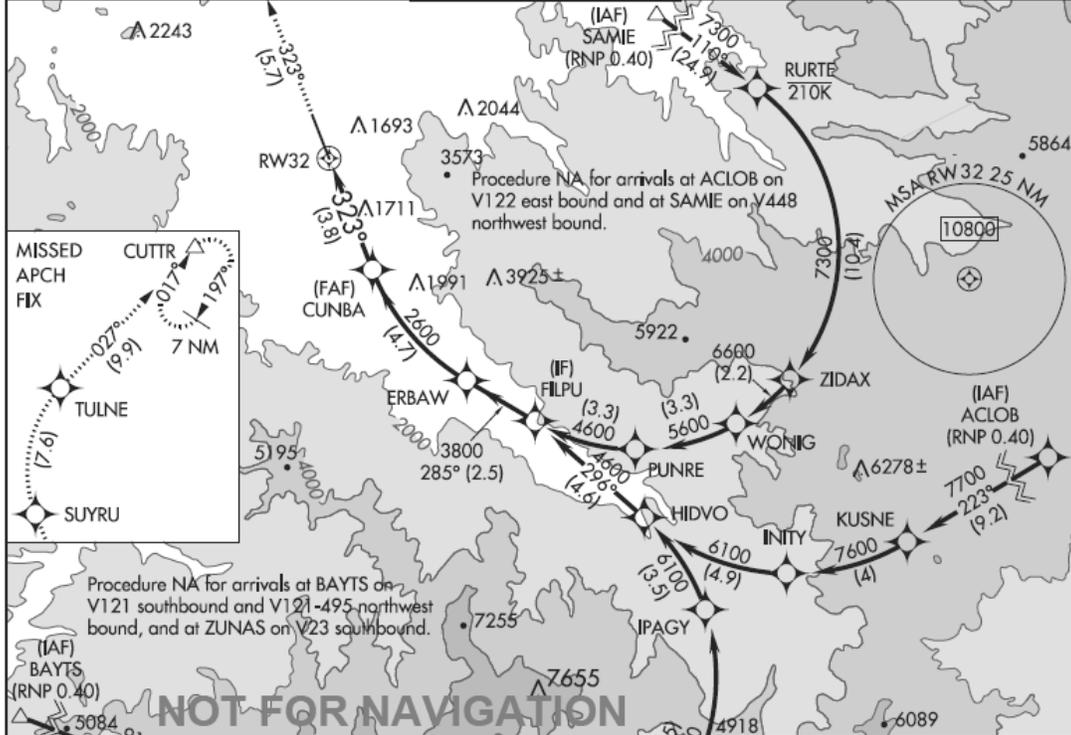
RNAV (RNP) RWY 32

ROGUE VALLEY INTL-MEDFORD (MFR)

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.

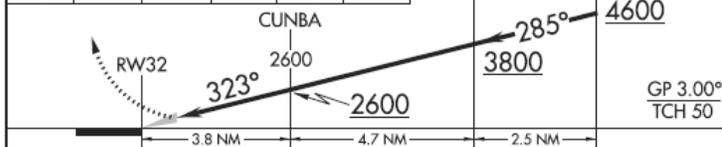
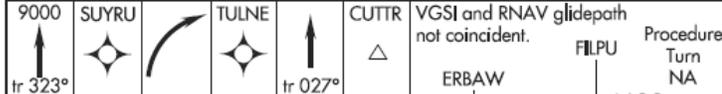
| | | | | |
|-----------------------|---|--|-------------------------|-------------------------|
| ATIS 127.25 | CASCADE APP CON * 124.3 379.9 | MEDFORD TOWER * 119.4 (CTAF) 0 257.8 | GND CON 121.8 | UNICOM 122.95 |
|-----------------------|---|--|-------------------------|-------------------------|



NW-1, 24 MAY 2018 to 21 JUN 2018

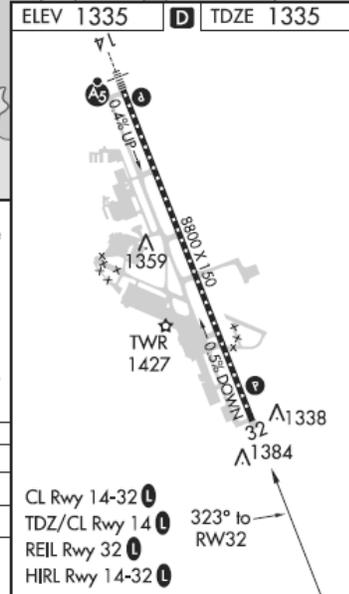
NW-1, 24 MAY 2018 to 21 JUN 2018

| | |
|-----------|-----------|
| ELEV 1335 | TDZE 1335 |
|-----------|-----------|



| | | | | |
|-------------|--------------------|---|---|---|
| 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



MEDFORD, OREGON
Orig-A 30JUN11

42°22'N-122°52'W

RNAV (RNP) RWY 32

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

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

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: $3800\text{ ft.} - 1335\text{ ft.} = 2465\text{ ft.}$
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): $6000 + 200 = 6200\text{ ft.}$
 - FISTA (IF): $5900 + 200 = 6100\text{ ft.}$
 - AMASE (stepdown fix): $4700 + 200 = 4900\text{ ft.}$
 - OSSAJ (FAF): $3800 + 200 = 4000\text{ ft.}$
7. Correct altitudes in the final segment based on the minima used. ILS DA(H): 1503 ft.
8. Difference: $1503\text{ ft.} - 1335\text{ ft.} = 168\text{ ft.}$
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: $1503\text{ ft.} + 20\text{ ft.} = 1523\text{ ft.}$
11. Correction at final holding altitude (OED VORTAC): Take final holding altitude and subtract field elevation: $6400\text{ ft.} - 1335\text{ ft.} = 5065\text{ ft.}$ Using table, correction is approximately 400 ft.
 - Missed Approach final holding altitude (OED VORTAC): $6400 + 400 = 6800\text{ ft.}$

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.

Individual Segment(s) method: Intermediate segment required

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

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: $3800\text{ ft.} - 1335\text{ ft.} = 2465\text{ ft.}$
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): $4700 + 200 = 4900\text{ ft.}$
 - OSSAJ (FAF): $3800 + 200 = 4000\text{ ft.}$

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

AI-251 (FAA)

18060

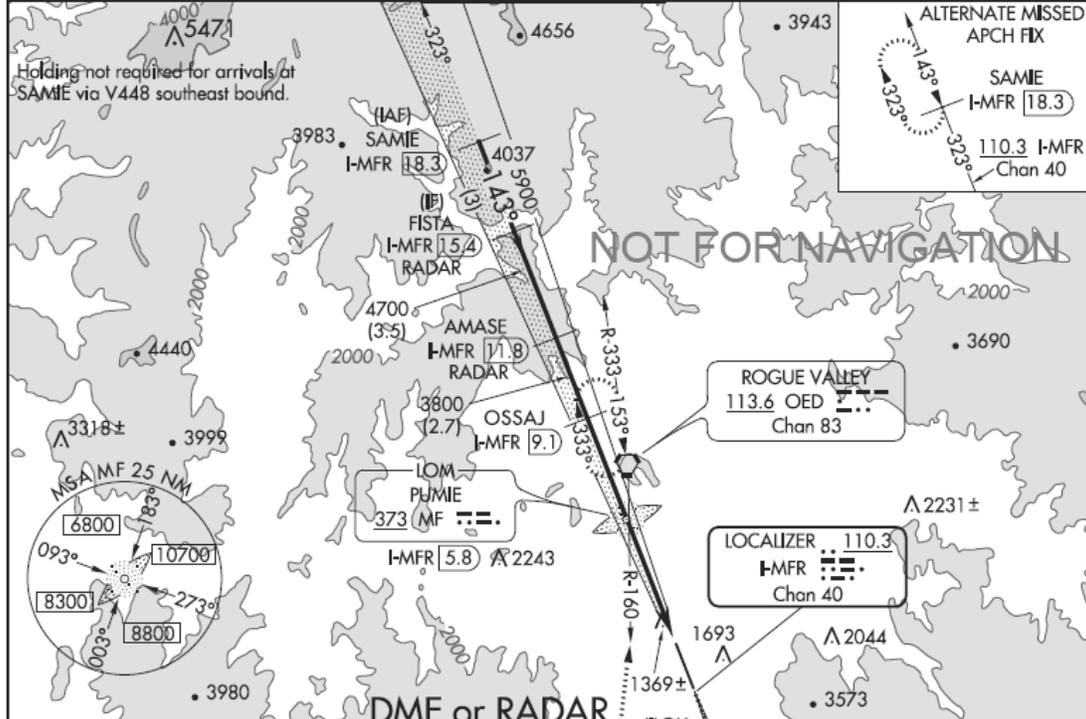
| | | | |
|--|------------------------|-------------------------|---------------------|
| LOC/DME I-MFR 110.3 Chan 40 | APP CRS 143° | Rwy Idg 8800 | TDZE 1303 |
| | | Apt Elev 1335 | |

ILS or LOC/DME RWY 14
ROGUE VALLEY INTL-MEDFORD (MFR)

When Medford altimeter setting not received, procedure NA. For inoperative MALSR, increase S-ILS 14 all Cats visibility to 2 1/4. DME required. Circling NA at night to Rwy 10. #Missed approach requires minimum climb of 319 feet per NM to 4100.

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.

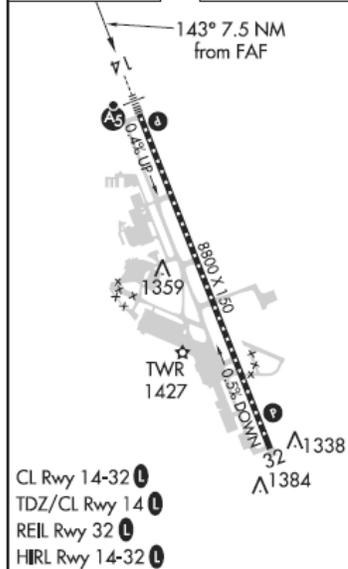
| | | | | |
|-----------------------|--|--|-------------------------|-------------------------|
| ATIS 127.25 | CASCADE APP CON* 124.3 379.9 | MEDFORD TOWER* 119.4 (CTAF) 0257.8 | GND CON 121.8 | UNICOM 122.95 |
|-----------------------|--|--|-------------------------|-------------------------|



NW-1, 24 MAY 2018 to 21 JUN 2018

NW-1, 24 MAY 2018 to 21 JUN 2018

ELEV 1335 TDZE 1303



DME or RADAR REQUIRED

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 73).

| | | | | | | | |
|--|------------------------|------------------------|-----------------|---------------------|-----------------|-----------|-----|
| SAME I-MFR 18.3 | FISTA I-MFR 15.4 RADAR | AMASE I-MFR 11.8 RADAR | OSSAJ I-MFR 9.1 | PUMIE LOM I-MFR 5.8 | JILOK I-MFR 1.6 | OED R-160 | OED |
| 7000 | | | | | | hdg 350° | |
| 5900 | | | | | | | |
| 4700 | | | | | | | |
| 3800 | | | | | | | |
| *2640 | | | | | | | |
| GS 3.00° TCH 58 | | | | | | | |
| ← 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 (200-1/2) | |
| S-ILS 14 | | 1936-1 3/4 | 633 (700-1 3/4) | |
| S-LOC 14# | | 1620/24 | 317 (300-1/2) | |
| S-LOC 14 | 2080/24 777 (800-1/2) | 2080/40 777 (800-3/4) | 2080-1 3/4 777 (800-1 3/4) | 2080-2 777 (800-2) |
| CIRCLING | 2080-1 745 (800-1) | 2080-1 1/4 745 (800-1 1/4) | 2080-2 1/4 745 (800-2 1/4) | 2260-3 925 (1000-3) |

MEDFORD, OREGON
Amdt 2A 10MAR11

ROGUE VALLEY INTL-MEDFORD (MFR)
42°22'N-122°52'W
ILS or LOC/DME RWY 14

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

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

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: $3400\text{ ft.} - 956\text{ ft.} = 2444\text{ ft.}$
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): $3400 + 400 = 3800\text{ ft.}$
6. Correct altitudes within the final segment altitude based on the minima used. LNAV/VNAV DA = 1364 ft.
7. Difference: $1364\text{ ft.} - 956\text{ ft.} = 408\text{ ft.}$
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: $1364\text{ ft.} + 70\text{ ft.} = 1434\text{ ft.}$ No correction at CEXOG required, only required if using LNAV minima.
9. Correction at FULLE: Take final holding altitude and subtract field elevation: $3000\text{ ft.} - 956\text{ ft.} = 2044\text{ ft.}$ 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: $3000 + 300 = 3300\text{ ft.}$

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.

Individual Segment(s) method: Intermediate segment required

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

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: $3400\text{ ft.} - 956\text{ ft.} = 2444\text{ ft.}$
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.

(Flight Operations Branch, Flight Technologies and Procedures Division, AFS-410, 8/15/19)

AMES, IOWA

AL-5307 (FAA)

17229

| | | | |
|--|------------------------|-----------------------------|---|
| WAAS CH 72717 W01A | APP CRS 014° | Rwy Idg TDZE Apt Elev | 5701 956 956 |
|--|------------------------|-----------------------------|---|

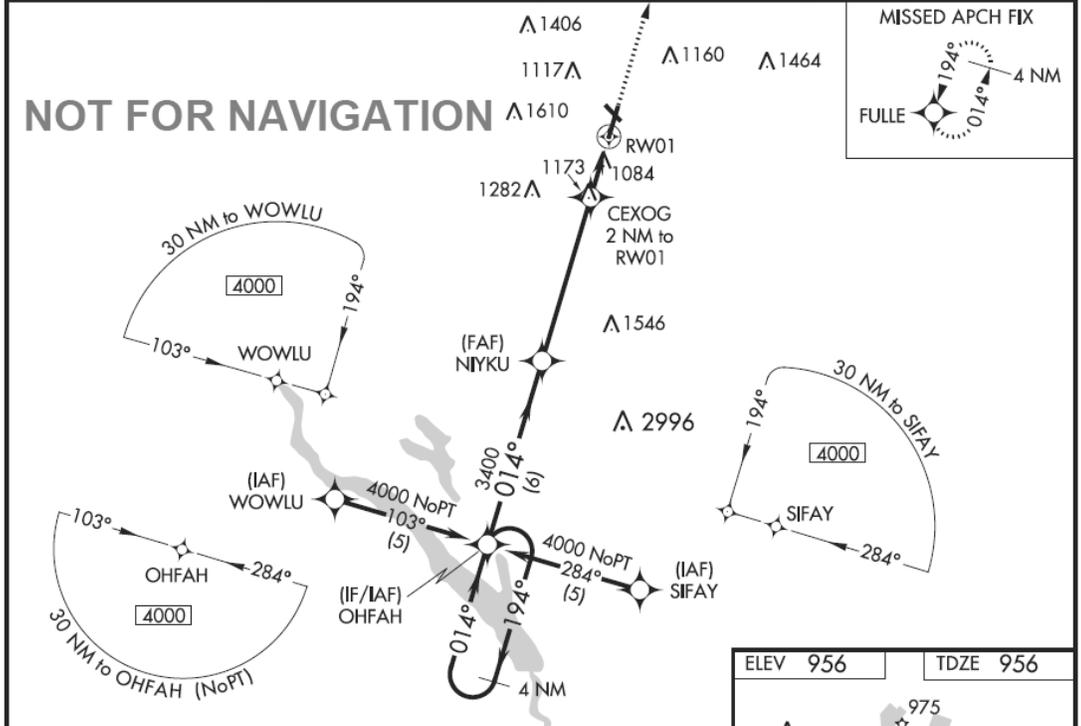
RNAV (GPS) RWY 1
AMES MUNI (AMW)

⚠ 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 ½ mile. For inop MALSRS, increase LNAV Cats A, B visibility to 1 mile. For inop MALSRS, when using Ankeny altimeter setting increase LPV all Cats visibility to 1¼ mile and LNAV Cats A, B visibility to 1 mile.

MALSRS
AS

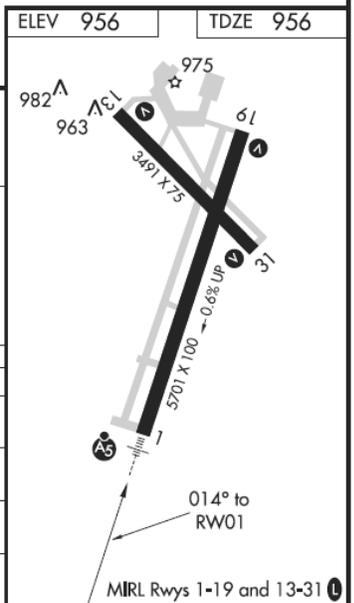
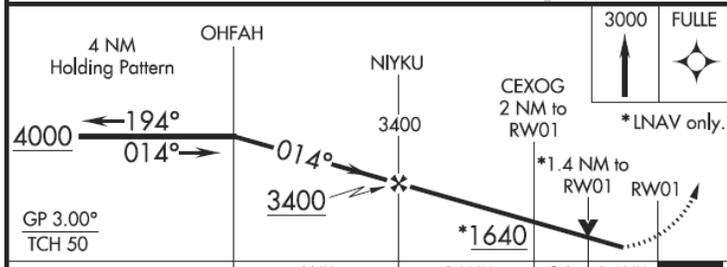
MISSED APPROACH:
Climb to 3000 direct FULLE and hold.

| | | | |
|------------------------|---|--------------------------|-------------------------------|
| ASOS 132.025 | DES MOINES APP CON 123.9 307.15 | CLNC DEL 126.0 | UNICOM 122.7 (CTAF) |
|------------------------|---|--------------------------|-------------------------------|



NC-3, 24 MAY 2018 to 21 JUN 2018

NC-3, 24 MAY 2018 to 21 JUN 2018



| 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

OPERATIONS OF AIRCRAFT WITHOUT ADS-B OUT AT CAPACITY-CONSTRAINED U.S. AIRPORTS

Purpose: To describe FAA Air Traffic policy for aircraft operations without Automatic Dependent Surveillance-Broadcast Out (ADS-B Out) at capacity-constrained U.S. airports.

Background: Pursuant to 14 CFR § 91.225 and § 91.227, when operating in the airspace defined in § 91.225, an aircraft must:

(1) Meet the performance requirements in TSO-C166b, Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Service-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz); or

(2) Meet the performance requirements in TSO-C154c, Universal Access Transceiver (UAT) Automatic Dependent Surveillance-Broadcast (ADS-B) Equipment Operating on the Frequency of 978 MHz; and,

(3) Meet the requirements of § 91.227.

14 CFR § 91.225 contains a provision by which aircraft operators can request an ATC authorized deviation from those requirements. On April 1, 2019, the FAA published a Federal Register Notice (FRN), *Statement of Policy for Authorizations to Operators of Aircraft That are Not Equipped With Automatic Dependent Surveillance-Broadcast (ADS-B) Out Equipment*.

(<https://www.regulations.gov/document?D=FAA-2019-0239-0001>). In that FRN, the FAA noted, in part:

“The ADS-B Out final rule contemplated that those operators with a need to operate regularly in airspace where ADS-B Out is required would equip, and that an exception for per-operation authorizations was designed to accommodate unforeseen or rare circumstances.”

“The preamble to the final rule made it apparent that no operator is guaranteed an ATC authorization to deviate from ADS-B Out equipage requirements. Because ATC may not be able to grant every authorization request, it would be detrimental for an operator to make its scheduled operations into ADS-B Out airspace dependent solely on obtaining an ATC authorization to deviate from the equipage requirements of § 91.225. Relying solely on an ATC authorization—which may not be granted—to operate a non-equipped aircraft in ADS-B Out airspace would put the operator’s scheduled operations in jeopardy.”

“(W)hile a scheduled operator may request a deviation from the ADS-B Out equipage requirements on a per-operation basis in accordance with § 91.225(g), it is unlikely that the FAA will issue repeated authorizations to deviate from ADS-B Out equipage requirements. Accordingly, operators who conduct routine and regular operations into ADS-B Out airspace should be taking the necessary steps to equip their aircraft with ADS-B Out equipment to ensure their scheduled operations are not disrupted.”

“Under the rule, the FAA determined that, to the maximum extent possible, operators of equipped aircraft should not be penalized or have their ATC services affected by operators who choose not to equip their aircraft with ADS-B Out equipment. Therefore, under the policy, ATC will make determinations as necessary to ensure equipped operators are not adversely impacted and that efficiency of operations is maintained.

Consistent with this principle, it will be difficult for unscheduled operators conducting operations at capacity-constrained airports to obtain authorizations.”

“(Capacity-constrained) airports are where demand is consistently at 85% capacity or greater, and operations are often constrained. For that reason, it is far more likely that the FAA will deny rather than issue authorization requests from unscheduled operators to operate nonequipped aircraft at these airports.”

a. Applicability. This Notice applies to civil operators of aircraft not equipped with ADS-B Out in accordance with 14 CFR § 91.225 and who are requesting an ATC authorized deviation from those regulatory requirements to operate into or out of a capacity-constrained airport.

b. Exclusion. This Notice does not apply to U.S. Federal, State and local government aircraft flight operations, inclusive of special flights contracted by U.S. Federal, State or local governments, when the aircraft is performing a sensitive government mission for national defense, homeland security, intelligence or law enforcement purposes. Those aircraft operators must contact their own agency for questions regarding FAA authorized mission accommodations.

c. Capacity-Constrained Airports. Based on FAA’s current analysis, this includes the following airports:

1. Boston Logan International Airport (BOS)
2. Charlotte Douglas International Airport (CLT)
3. Chicago O’Hare International Airport (ORD)
4. Dallas/Fort Worth International Airport (DFW)
5. Hartsfield-Jackson Atlanta International Airport (ATL)
6. John F. Kennedy International Airport (JFK)
7. LaGuardia Airport (LGA)
8. Los Angeles International Airport (LAX)
9. McCarran International Airport (LAS)
10. Philadelphia International Airport (PHL)
11. Ronald Reagan Washington National Airport (DCA)
12. San Diego International Airport (SAN)
13. San Francisco International Airport (SFO)
14. Seattle-Tacoma International Airport (SEA)
15. Newark International Airport (EWR)¹

A Notice to Airman (NOTAM) will be issued at these airports advising that operators should not expect authorizations from ATC per this notice during peak hours, typically 0600–2200 local time. This time-of-day policy applies only to those airports defined as capacity-constrained, as listed above. ATC authorization requests into or out of other airports located in the Class B airspace or Mode C Veil associated with the capacity-constrained airport, or to transit that airspace, will be evaluated individually.

This notice does not negate existing airport Noise Abatement Procedures. Any shifts in traffic must be commensurate with existing noise abatement procedures at these airports.

¹ Note: Newark International Airport (EWR) was inadvertently omitted in the April 1 Federal Register Notice Policy; however, it is a capacity-constrained airport.

Aircraft Operations without ADS-B Out in Delegated Airspace between Canada and the United States

Purpose: To describe FAA Air Traffic policy for aircraft operations without Automatic Dependent Surveillance-Broadcast Out (ADS-B Out) in United States sovereign airspace where air traffic control (ATC) responsibilities have been delegated to Canada.

Policy: Pursuant to a 1963 treaty² between the United States and Canada, the United States has delegated ATC authority over certain segments of United States sovereign airspace within 50 aeronautical miles of the common border between the two countries. The treaty provides that “[t]he air traffic control in such segments shall be in accordance with the air traffic regulations of the country over which the aircraft is operating.” Therefore, aircraft operating within United States airspace whose ATC authority has been delegated to Canada must adhere to FAA aviation regulations, including ADS-B regulations codified in 14 CFR §§ 91.225 and 91.227.

This procedure will assist aircraft in complying with the ADS-B Out requirements in those portions of U.S. airspace for which ATC responsibilities have been delegated to Canada pursuant to the above treaty. Specifically, § 91.225 requires that aircraft be equipped with ADS-B Out equipment that meets certain performance requirements including those in § 91.227, subject to specific and limited exceptions. Section 91.225(g) establishes the process for requesting ATC authorized deviations and requires that operator submit requests to the ATC facility with jurisdiction over the concerned airspace. Anyone seeking the authorization to operate in United States sovereign airspace for which ATC authority has been delegated to Canada would obtain that deviation directly from the appropriate Canadian ATC facility with jurisdiction over the concerned airspace. The ADAPT tool would not be available to request such deviation.

A graphical depiction of these delegated segments can be located on the Equip ADS-B Google Earth Map located on the FAA’s Equip ADS-B website:

<https://www.faa.gov/nextgen/equipadsb/research/airspace/>

² Treaty Series 1963 No. 20, “Aircraft Control Near the Common Boundary”, dated December 27, 1963.

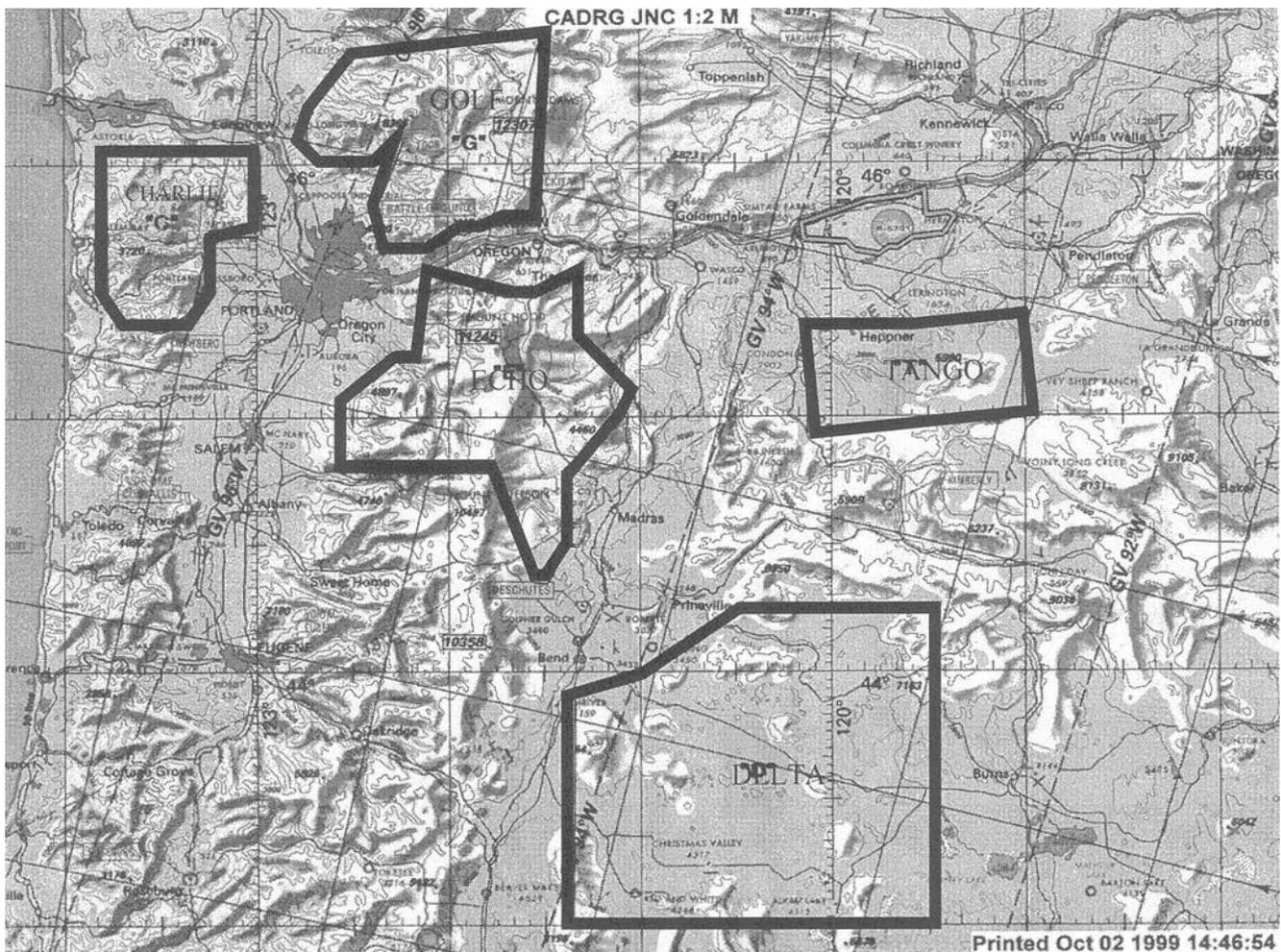
Section 2. Special Military Operations

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.

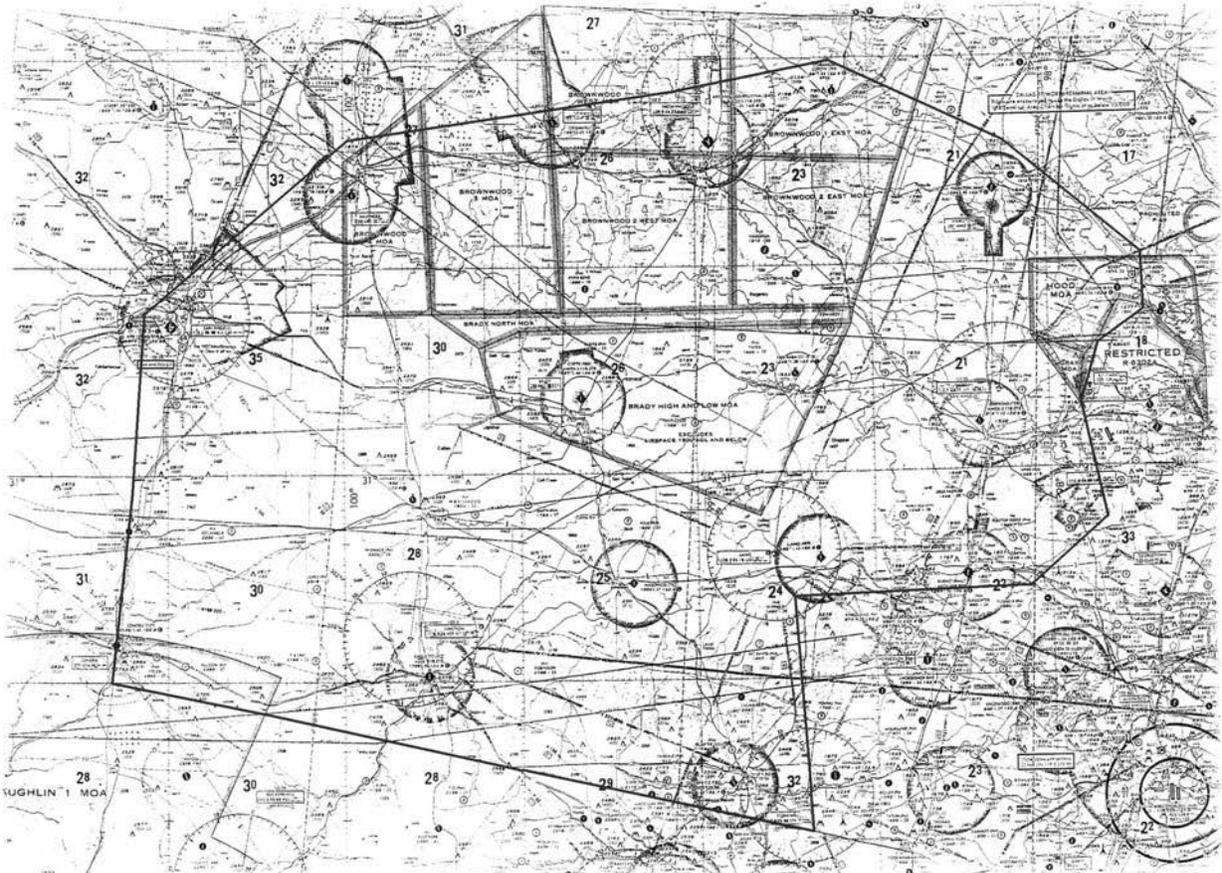


(ANM-520.6 3/2/2000)

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)

42° 49.70' N 89° 24.70' W – SP
42° 45.50' N 89° 58.00' W – CP A
42° 46.00' N 90° 17.50' W – CP B
43° 03.80' N 90° 56.40' W – CP C
43° 17.74' N 91° 01.13' W – CP D
43° 43.16' N 91° 04.76' W – CP E
43° 53.21' N 91° 00.64' W – CP F
44° 08.82' N 90° 44.30' W – RP

DELLS (NVG Route #2)

43° 11.00' N 89° 54.50' W – SP
43° 26.35' N 90° 21.24' W – CP A
43° 41.34' N 90° 47.89' W – CP B
43° 43.49' N 90° 54.37' W – CP C
43° 50.10' N 90° 57.31' W – CP D
43° 51.32' N 90° 59.43' W – CP E
43° 53.21' N 91° 00.64' W – CP F
44° 08.82' N 90° 44.30' W – RP

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

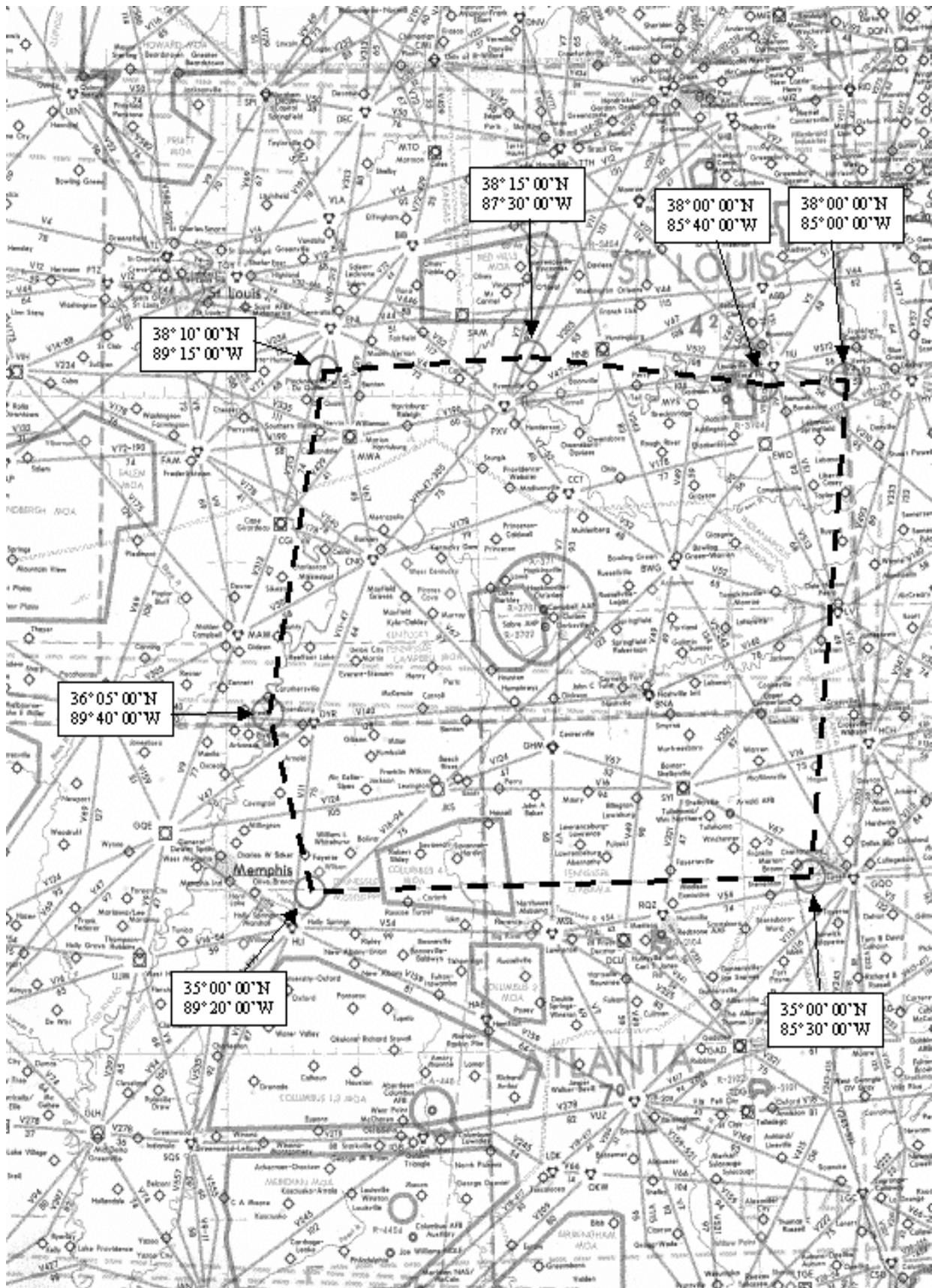
Notice to Pilots and Interested Persons in KY, TN, Southern IL, IN and Northern AL

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:

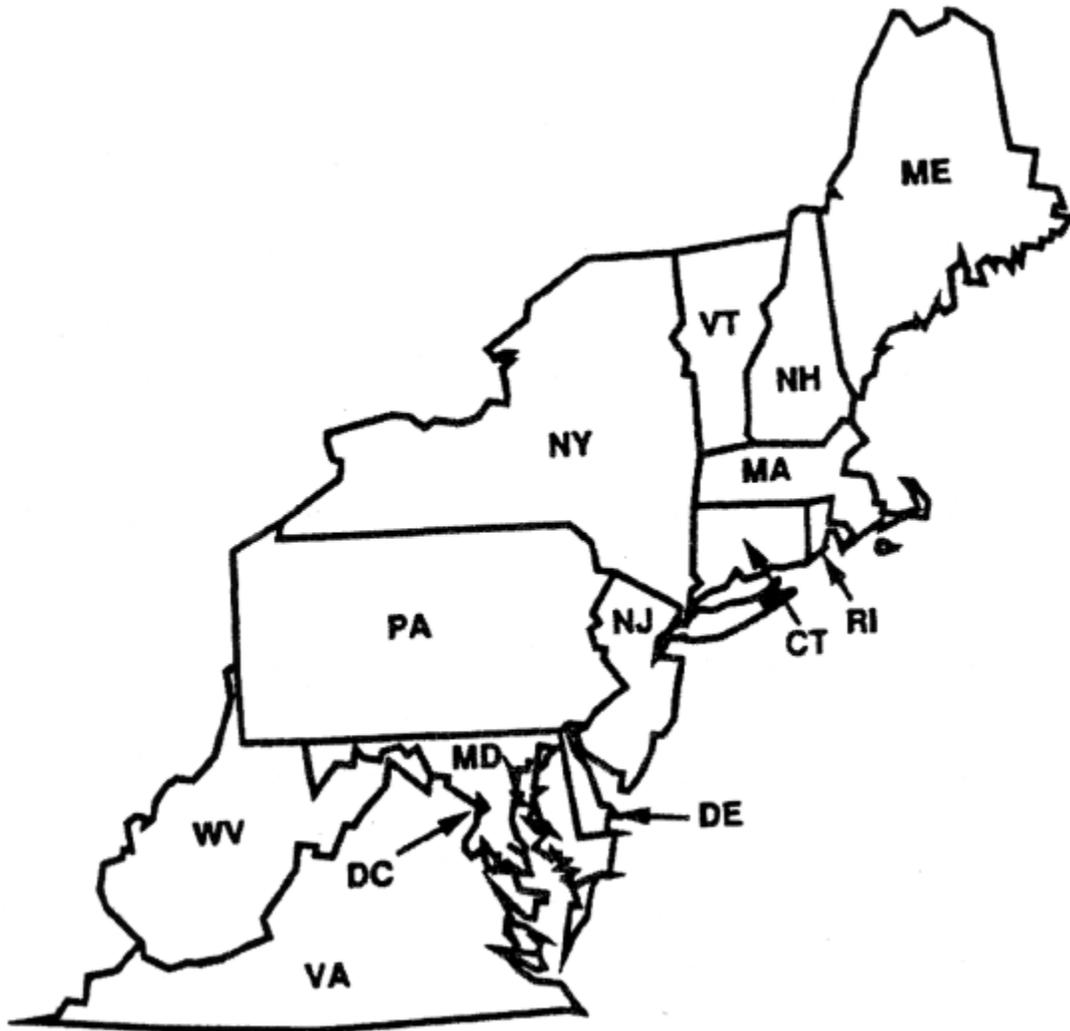
Lat. 38-00-00N, Long. 085-00-00W, to
Lat. 35-00-00N, Long. 085-30-00W, to
Lat. 35-00-00N, Long. 089-20-00W, to
Lat. 36-05-00N, Long. 089-40-00W, to
Lat. 38-10-00N, Long. 089-15-00W, to
Lat. 38-15-00N, Long. 087-30-00W, to
Lat. 38-00-00N, Long. 085-40-00W, to
point of origin. Excluding that airspace
within 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)



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. <i>(Monitor 124.5 when west of Runway 6R)</i> |

| 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 |

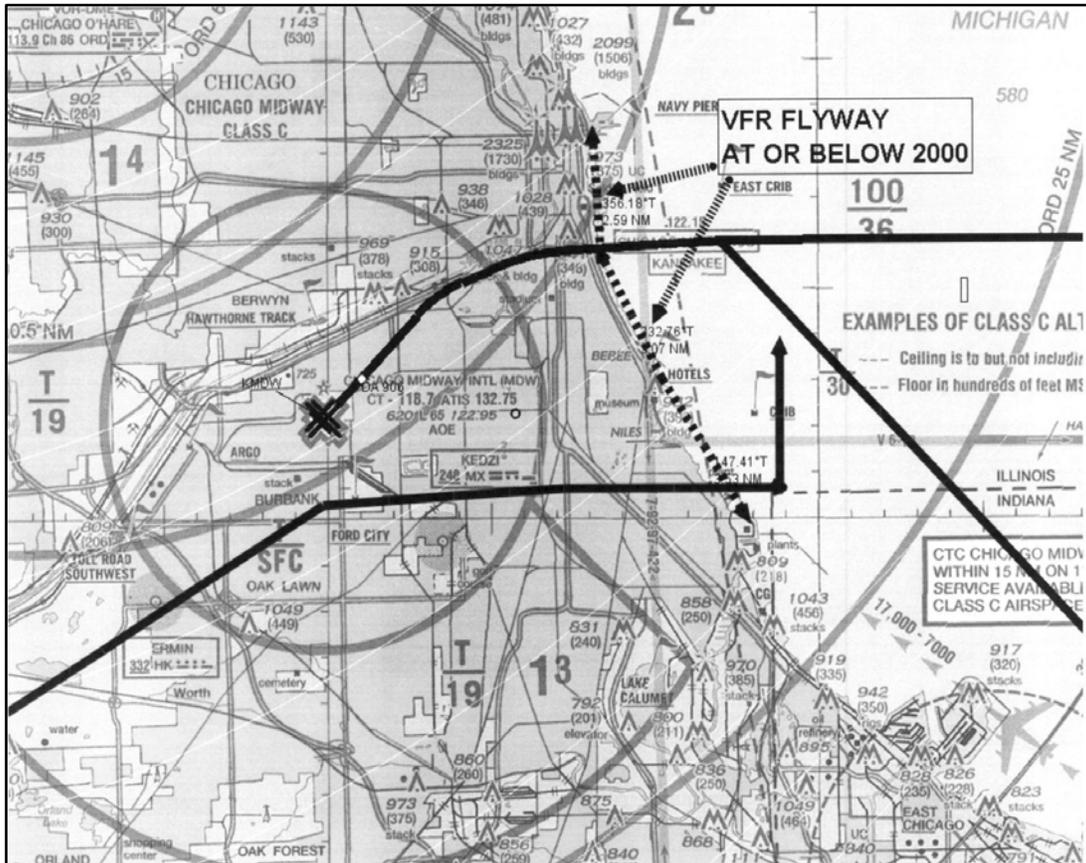
| Runway 24R | | |
|-------------------|----------------------------|--|
| Route ID | Start Point | Routing Via |
| Grey | All Terminal Parking Areas | Juliet, Sierra, HOLD SHORT OF RUNWAY 24L and monitor 120.9, Sierra. <i>(Monitor 124.5 when west of Runway 24L)</i> |

| 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. <i>(Monitor 124.5 when west of Runway 24L)</i> |

(CLE ATCT 10/23/08)

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)

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, Kilo, 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, Bravo, Yankee. Hold short of Kilo and contact ground 121.8. |
| Green 8 | North terminal circle 2N. CONTACT GROUND ON 119.45 | Uniform, Foxtrot, Hotel, Bravo, 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, 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, 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 circles 3N or 4N. CONTACT GROUND ON 121.8 | TURN LEFT on Uniform, Kilo, RY 9L, Golf, Victor, Mike, M-6. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L. |
| Blue 7 | South terminal circle 2S. CONTACT GROUND ON 119.25 | Juliet, Papa Papa, P-3, Whiskey, Papa. |
| Blue 11 | South terminal circles 3N or 4N CONTACT GROUND ON 121.8 | TURN LEFT on Uniform, Kilo, RY 9L, Mike, M-6. 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, M-6. |

| | | |
|---------|---|--|
| Blue 15 | North terminal circles 2 through 6 CONTACT GROUND ON 121.8 | Kilo, Victor, Mike, M-6. Hold short of Foxtrot and contact ground on 119.45. |
| Blue 16 | South terminal Taxiway Kilo between Taxiways Romeo and Uniform CONTACT GROUND ON 132.72 | Kilo, RY 9L, Mike, 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. |

Runway 3L

| Route ID | Starting Point | Routing Via |
|----------|--|---|
| Brown 2 | South terminal circle 2S. CONTACT GROUND ON 119.25 | Juliet, Papa Papa. Hold short of P-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, P-1. |
| Brown 8 | South terminal Taxiway Kilo between Taxiways Romeo and Uniform. CONTACT GROUND ON 132.72 | Kilo, RY 9L, Foxtrot, Mike. Hold short of Uniform and contact ground 121.8. Hold short of Foxtrot and contact ground on 119.45 joining RY 9L. |

South Central United States



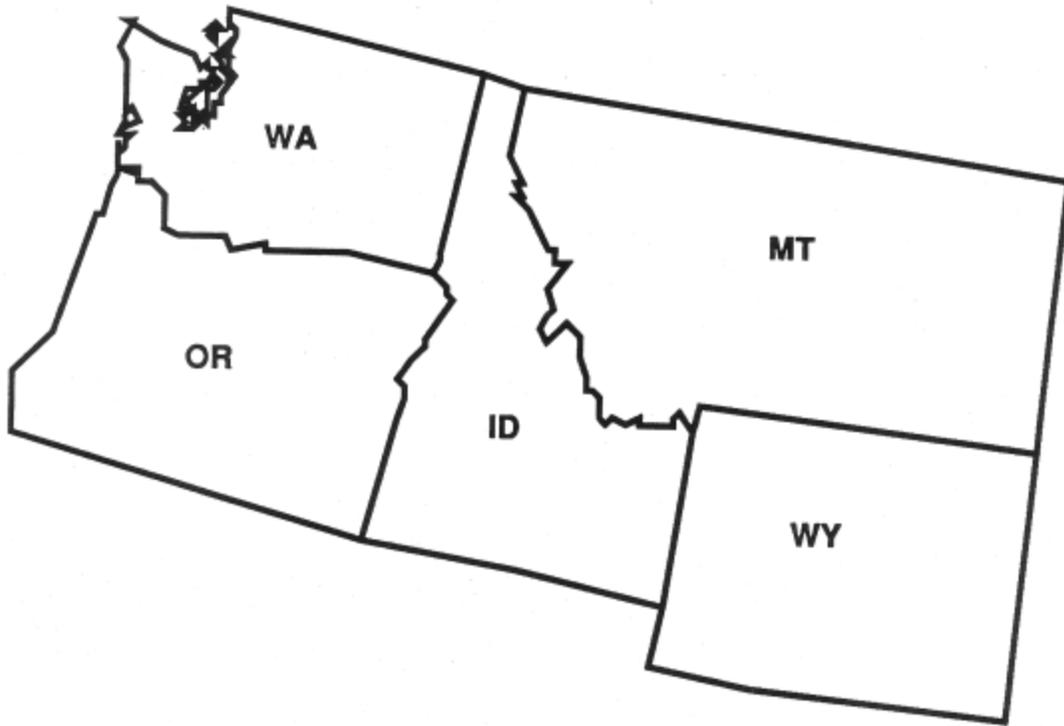
**There are no South Central United States notices for this edition.*

North Central United States



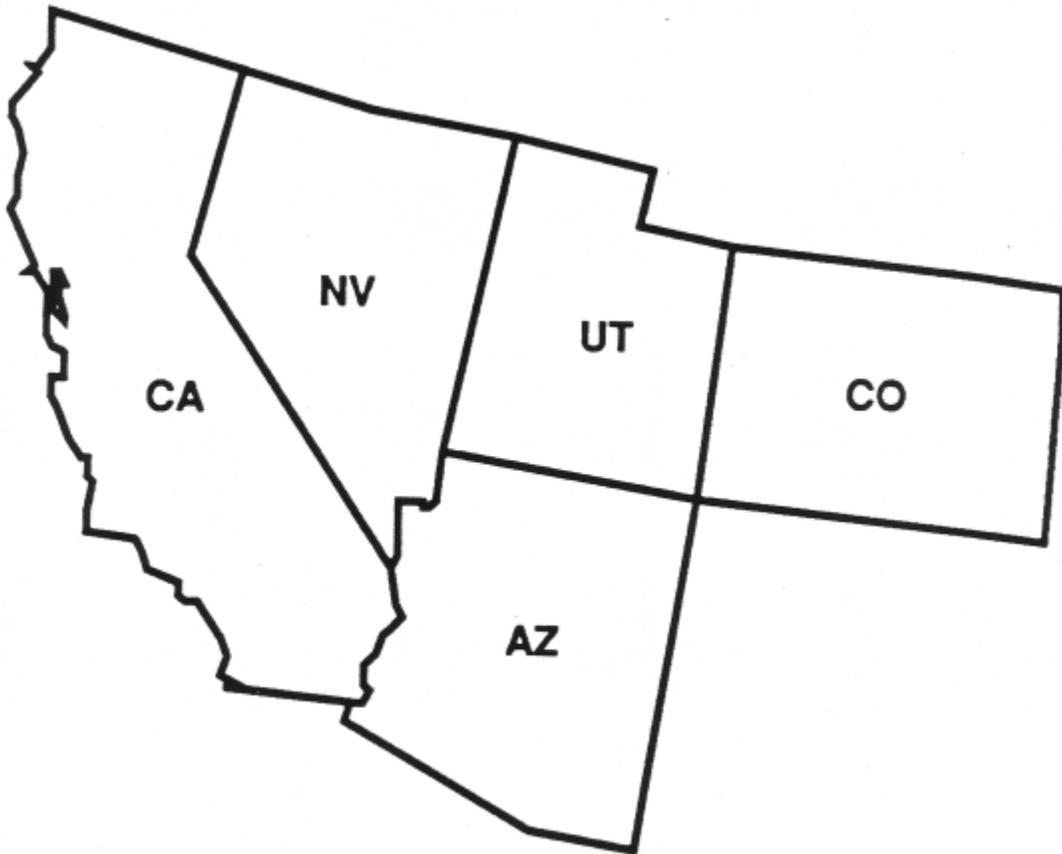
**There are no North Central United States notices for this edition.*

Northwest United States



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

Southwest United States



PHOENIX SKY HARBOR INTERNATIONAL AIRPORT (PHX) STANDARDIZED TAXI ROUTES

Effective: Until Further Notice

PHX has instituted standardized taxi routes to/from runways 8/26 and 7L/25R for arriving and departing aircraft.

Standardized taxi routes may be issued by the PHX tower or ground controller instead of a typical full taxiway routing.

The routes will be issued as “Taxi via South Route, Taxi via West Route, etc.”.

The routes are published in text form below.

| Route Ident | Start Point | Routing Via | End Point |
|-------------|-----------------------------------|--|------------------------------|
| NORTH ROUTE | Terminal 2, 3, and 4 – South Side | Taxi via Taxiway D to Taxiway T. Continue north on Taxiway T and monitor GC 119.75. If further instructions are not received, hold short of Taxiway C and contact GC for approval to continue. When approved by GC, continue taxi to: a) Runway 8 via Taxiway C. b) Runway 26 via Taxiway B. | Runway 8 or 26 |
| | Terminal 3 and 4 – North Side | Taxi to: a) Runway 8 via Taxiway C. b) Runway 26 via Taxiway B. | Runway 8 or 26 |
| | Landing or crossing runway 7L/25R | Taxi via Taxiway E to Taxiway T. Unless otherwise instructed, monitor GC 132.55 while taxiing on Taxiway E. Continue north on Taxiway T and monitor GC 119.75. If further instructions are not received, hold short of Taxiway C and contact GC 119.75 for approval to continue. When approved by GC, continue taxi to the ramp via Taxiway C. | Terminal 3 or 4 – North Side |

| Route Ident | Start Point | Routing Via | End Point |
|-------------|-------------------------------|---|------------------------------|
| SOUTH ROUTE | Terminal 3 and 4 – North Side | Taxi via Taxiway C to Taxiway S. Continue south on Taxiway S and monitor GC 132.55. If further instructions are not received, hold short of Taxiway D and contact GC 132.55 for approval to continue. When approved by GC, continue taxi to: a) Runway 7L via Taxiway D, Taxiway D9, and Taxiway E. b) Runway 25R via Taxiway E. | Runway 7L or 25R |
| | Landing runway 8 | Taxi via Taxiway B to Taxiway S. Unless otherwise instructed, monitor GC 119.75 while on Taxiway B. Continue south on Taxiway S and monitor ground 132.55. If further instructions are not received, hold short of Taxiway D and contact GC 132.55 for approval to continue. When approved by GC, continue taxi to ramp via Taxiway D. | Terminal 3 or 4 – South Side |
| | Landing runway 26 | Cross Taxiway B, taxi via Taxiway C to Taxiway S. Unless otherwise instructed, monitor GC 119.75 while taxiing on Taxiway C. Continue south on Taxiway S and monitor GC 132.55. If further instructions are not received, hold short of Taxiway D and contact GC 132.55 for approval to continue. When approved by GC, continue taxi to the ramp via Taxiway D. | Terminal 3 or 4 – South Side |

| Route Ident | Start Point | Routing Via | End Point |
|--------------------|-----------------------------------|---|------------------------------|
| EAST ROUTE | Terminal 3 and 4 – North Side | Taxi via Taxiway C and Taxiway R. Monitor tower 120.9 on Taxiway R (do not hold short of TWY D unless instructed). | Runway 25R |
| | Landing or crossing runway 7L/25R | Taxi via Taxiway E to Taxiway R. Unless otherwise instructed, monitor GC 132.55 while taxiing on Taxiway E. Continue north on Taxiway R and monitor GC 119.75 when on Taxiway R. If further instructions are not received, hold short of Taxiway C and contact GC for approval to continue. When approved by GC, continue taxi to the ramp via Taxiway C. | Terminal 3 or 4 – North Side |
| | | | |
| Route Ident | Start Point | Routing Via | End Point |
| WEST ROUTE | Terminal 4 – South Side | Taxi via Taxiway D, Taxiway D9, and Taxiway E. | Runway 7L |

Alaska



Hawaii



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

Section 4. Major Sporting and Entertainment Events

FOLDS OF HONOR QUIKTRIP 500

MONSTER ENERGY CUP NASCAR SERIES

HAMPTON, GEORGIA

March 12–16, 2020

SPECIAL AIR TRAFFIC PROCEDURES

The following procedures are in effect to enhance safety and minimize air traffic delays. Use extreme caution while operating near Hampton, GA (KHMP). Obtain current FDC and Local NOTAM information prior to operating in the area.

ATLANTA TRACON FREQUENCIES

| | |
|------------------------------|--------|
| EAST of V97 and SOUTH of V18 | 128.57 |
| WEST of V97 and SOUTH of V18 | 119.8 |
| EAST of V97 and NORTH of V18 | 126.97 |
| WEST of V97 and NORTH of V18 | 121.0 |

IFR ARRIVAL PROCEDURES

All IFR arrivals should be prepared to enter the VFR traffic pattern. IFR arrivals should be familiar with the VFR arrival procedure. Please be **PROMPT** with your IFR cancellation on frequency **128.57**.

PREFERRED IFR ARRIVAL ROUTES/ALTITUDES

| DEPARTURE AIRPORT | ROUTE |
|-----------------------------|--------------------------------------|
| CLT, JQF, RUQ (jets) | BEAVY SID GANDT IRQ BEYLO CANUK KHMP |
| CLT, JQF, RUQ (turbo-props) | KER SID ANDYS IRQ BEYLO CANUK KHMP |
| GSO, INT, EXX, MTV, SVH | BZM SUG V20 MADDI KHMP |
| HKY, AVL, VJI, TRI | SUG V20 MADDI KHMP |

Due to traffic in the Atlanta area, expect a final altitude **no higher than FL220**.

IFR DEPARTURE PROCEDURES

All IFR aircraft departing **after** the race on March 15 should file flight plans with a 1615 LCL (2115 UTC) proposed departure time. Atlanta Center will ensure flight plans will not expire prior to 0100 UTC on March 16, 2020.

Aircraft departing KHMP should request clearance through Atlanta TRACON (A80). To reduce frequency congestion, request clearance by telephone at **678-364-6131 or 770-487-3893**. All telephone clearances will be **HOLD FOR RELEASE**. Do not request release until you are in the number one position and ready for immediate departure.

PREFERRED IFR DEPARTURE ROUTES/ALTITUDES

Departures, particularly aircraft landing HKY, SVH, MTV, EXX, and AVL, should anticipate dynamic reroutes and/or altitude assignments as needed for weather and traffic volume. Do not circumvent preferred routes as they are intended to balance departure operations and minimize delays.

| DESTINATION | ROUTE |
|--------------------|---|
| CLT (Jets) | KHMP EATWO CNTLR JONZE2 KCLT |
| CLT (T-Props) | KHMP EAONE AHN GRD UNARM UNARM6 KCLT |
| JQF, RUQ (Jets) | KHMP EATWO PENFI EYPAD CHPTR3 destination |
| JQF, RUQ (T-Props) | KHMP EAONE AHN GRD UNARM UNARM6 destination |
| HKY, SVH | KHMP NOTWO HRS SUG BZM destination |
| GSO, INT | KHMP EATWO SPA TRAKS2 destination |
| MTV, EXX | KHMP NOTWO HRS SUG BZM destination |
| AVL | KHMP EAONE AHN SUG AVL |
| TRI, VJI | KHMP NOTWO HRS SOT HNV destination |

Expect a final altitude **no higher than FL230**.

HMP VFR DEPARTURE/IFR PICKUP PROCEDURES

Due to the extremely high volume of traffic in the Atlanta area, follow these procedures unless an emergency situation exists:

- Squawk 1200 on departure.
- Remain clear of the Atlanta Class B airspace.
- If planning an IFR pick-up, ensure that an IFR flight plan is on file with Flight Service.
- IFR pick-up service may be limited within 100NM of KHMP. Except in an emergency, IFR air-file clearances will not be issued within 100 miles of KHMP.

TEMPORARY FLIGHT RESTRICTION

A Temporary Flight Restrictions (TFR) is in effect for this event. See **FDC NOTAM 9/1814** for details.

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 for a briefer, press 4-2, then 1 for Georgia.

Contact Macon Radio on 122.6 or 122.2 for VFR flight plan activation and closure.

REMEMBER TO CLOSE YOUR FLIGHT PLAN

DEPARTURE INFORMATION



Flying in for CONEXPO?

CONEXPO is North America's Largest Construction Trade Show. The event is held in Las Vegas March 10–14, 2020

Pacer is a new research application, funded by the FAA, for General Aviation that allows you to submit an intended departure time, view demand information for your departure airport, and give you a better awareness of busy departure times. This allows you and your customers to make informed departure time decisions. This program serves the GA community 24/7 at McCarran International Airport (LAS) and Henderson Executive Airport (HND).

To help mitigate compacted departure demand which can contribute to departure delays, please visit the website below and submit your intended departure time. This is information sharing and is intended to make your flying experience at Las Vegas a better one. Please note, this is not a slot time.

WWW.PACER.AERO

MASTERS GOLF TOURNAMENT

AUGUSTA, GEORGIA

APRIL 5–13, 2020

SPECIAL AIR TRAFFIC PROCEDURES

Special air traffic procedures to manage increased traffic, enhance safety, and minimize delays are in effect for the Augusta, GA area.

TRAFFIC MANAGEMENT INITIATIVES

Traffic Management initiatives including, but not limited to, reroutes, miles-in-trail, altitude restrictions, ground stops, and ground delay programs may be required to/from the following airports:

| AIRPORT | LOCATION | IDENTIFIER |
|--|-------------|------------|
| Augusta Regional Airport at Bush Field | Augusta, GA | AGS |
| Aiken Regional Airport | Aiken, SC | AIK |
| Daniel Field Airport | Augusta, GA | DNL |
| Thomson–McDuffie County Airport | Thomson, GA | HQU |

FLIGHT PLAN FILING

In order to receive advanced navigation (RNAV) procedures/routes, ensure you use the correct PBN capability qualifier, in ICAO format, when filing your flight plan. Flight plans without the correct ICAO RNAV designators will receive conventional procedures.

PREFERRED IFR ARRIVAL ROUTES

Jet and turboprop aircraft file one of the following preferred routes.

AGS (Filed AOA 150)

| | |
|--|--|
| MEM VUZ ATL AHN PLYRR CLUBB CADIE AGS | expect to cross ATL AOB FL240 |
| IGB VUZ ATL AHN PLYRR CLUBB CADIE AGS | expect to cross ATL AOB FL240 |
| BNA ATL AHN PLYRR CLUBB CADIE AGS | expect to cross ATL AOB FL240 |
| ADTOP MGM ATL AHN PLYRR CLUBB CADIE AGS | expect to cross ATL AOB FL240 |
| GCV MVC MGM ATL AHN PLYRR CLUBB CADIE AGS | expect to cross ATL AOB FL240 |
| VXV SOT SUG GRD IRQ CLUBB CADIE AGS | expect to cross 40NM N VXV AOB FL310 |
| OKNEE FLO CAE STWRT3 AGS | expect to cross 20NM N OKNEE AOB FL230 |
| GSO STWRT3 AGS | expect to cross GSO AOB FL300 |
| CAE STWRT3 AGS | |
| SAV STUGE3 AGS | expect to cross SAV AOB FL240 |
| SPIKY Y436 PITRW CHS STUGE3 AGS | |
| PSK SPA GRD IRQ CLUBB CADIE AGS | expect to cross PSK AOB FL300 |

AGS (Filed AOB 140)

| | |
|------------------------------|--|
| HEPUT AGS | |
| GRD IRQ CLUBB CADIE AGS | |
| CAE CAE235 CAE235040 EMR AGS | |

HQU (Filed AOA 150)

| | |
|-------------------------------|--|
| MEM VUZ ATL AHN HQU | expect to cross ATL AOB FL210 |
| IGB VUZ ATL AHN HQU | expect to cross ATL AOB FL210 |
| BNA ATL AHN HQU | expect to cross ATL AOB FL210 |
| ADTOP MGM MCN V56 HARLE HQU | expect to cross MCN AOB 110 |
| GCV MVC MGM MCN V56 HARLE HQU | expect to cross MCN AOB 110 |
| EUF MCN V56 HARLE HQU | expect to cross MCN AOB 110 |
| VXV SOT SUG GRD HQU | expect to cross 40NM N VXV AOB FL310 |
| OKNEE FLO CAE V325 BLANE HQU | expect to cross 20NM N OKNEE AOB FL230 |
| GSO CAE V325 BLANE HQU | expect to cross GSO AOB FL300 |
| ALD NORMS CAE V325 BLANE HQU | |
| PSK SPA GRD HQU | expect to cross PSK AOB FL300 |

HQU (Filed AOB 140)

| | |
|------------------------------|--|
| GRD IRQ HQU | |
| DBN V267 HADOC V56 HARLE HQU | |

DNL (Filed AOA 150)

| | |
|------------------------------------|--|
| MEM VUZ ATL AHN V325 BLANE IRQ DNL | expect to cross ATL AOB FL240 |
| IGB VUZ ATL AHN V325 BLANE IRQ DNL | expect to cross ATL AOB FL240 |
| BNA ATL AHN V325 BLANE IRQ DNL | expect to cross ATL AOB FL240 |
| ADTOP MGM MCN V56 IRQ DNL | expect to cross MCN AOB 110 |
| GCV MVC MGM MCN V56 IRQ DNL | expect to cross 50NM W MCN AOB FL240 |
| VXV SOT SUG GRD IRQ DNL | expect to cross 40NM N VXV AOB FL310 |
| EUF MCN V56 IRQ DNL | expect to cross MCN AOB 110 |
| OKNEE FLO CAE V325 BLANE IRQ DNL | expect to cross 20NM N OKNEE AOB FL230 |
| GSO CAE V325 BLANE IRQ DNL | expect to cross GSO AOB FL300 |
| ALD NORMS CAE V325 BLANE IRQ DNL | |
| PSK SPA GRD IRQ DNL | expect to cross PSK AOB FL300 |

DNL (Filed AOB 140)

| | |
|----------------------------|--|
| GRD IRQ DNL | |
| DBN V267 HADOC V56 IRQ DNL | |

AIK (Filed AOA 150)

| | |
|------------------------------------|--|
| MEM VUZ ATL AHN V325 BLANE AIK | expect to cross ATL at FL240 |
| IGB VUZ ATL AHN V325 BLANE AIK | expect to cross ATL at FL240 |
| BNA ATL AHN V325 BLANE AIK | expect to cross ATL at FL240 |
| ADTOP MGM ATL AHN V325 BLANE AIK | expect to cross ATL at FL240 |
| GCV MVC MGM ATL AHN V325 BLANE AIK | expect to cross ATL at FL240 |
| VXV SOT SUG CAE AIK | expect to cross 40NM N VXV AOB FL310 |
| OKNEE FLO CAE AIK | expect to cross 20NM N OKNEE AOB FL230 |
| GSO CAE AIK | expect to cross GSO AOB FL300 |
| ALD NORMS CAE AIK | |
| PSK SPA CAE AIK | expect to cross PSK AOB FL300 |

AIK (Filed AOB 140)

| | |
|----------------------------|--|
| DBN V267 HADOC V56 IRQ AIK | |
|----------------------------|--|

POTENTIAL HOLDING

Aircraft may be required to hold inbound due to weather or other constraints. Generally, pilots may expect to hold south of the IRQ VORTAC.

VFR ARRIVALS

VFR arrivals may expect lengthy delays outside Augusta Class D airspace during peak traffic periods. VFR advisory service within the Augusta terminal area will be on a workload-permitting basis.

IFR ARRIVALS TO DNL

IFR aircraft should cancel IFR with AGS approach as soon as they get DNL in sight. The pilot is not required to cancel IFR flight plan while airborne.

DEPARTURE PROCEDURES

AUGUSTA REGIONAL AIRPORT (AGS) – All departing aircraft contact clearance delivery on 118.65. Advise if IFR or VFR.

DO NOT CALL GROUND CONTROL TO TAXI until you are the number one aircraft that can enter a taxiway from the ramp or parking area.

DO NOT LEAVE RAMP / PARKING AREA until you have received taxi instructions and, if IFR, have received an IFR clearance.

DO NOT CALL THE TOWER FOR DEPARTURE until you are in the number one position for the runway.

RAMP / PARKING areas are considered uncontrolled.

DANIEL FIELD (DNL): All departing aircraft contact Clearance Delivery on 133.125 prior to contacting Ground Control (121.175) for taxi. Advise if IFR or VFR. During periods when DNL ATCT is closed, IFR aircraft should call HQU GCO (706-771-1777) for IFR clearance.

AIKEN REGIONAL (AIK): All departing IFR aircraft contact Augusta Approach Control on 126.075 for IFR clearance prior to departure.

THOMSON-MCDUFFIE (HQU): IFR aircraft should call HQU GCO (706-771-1777) for IFR clearance.

PREFERRED IFR DEPARTURE ROUTES

Jet and turboprop aircraft filed out of AGS, DNL, HQU, or AIK should file one of the following preferred routes:

Note: Aircraft unable to navigate via RNAV procedures must notify Augusta Tower, Daniel Tower, or Augusta TRACON and should expect radar vectors.

Note: Aircraft cleared via SAMMI, DOVER, KAOLN, MISTY, NDINA, AZALA, or RDBUD SID^s must remain on the published heading until advised by ATC. Aircraft cleared via the JUNPR or CHATT SID^s may proceed on course after the last waypoint.

AGS and AIK

| TYPE | ROUTE |
|------|--------------------------|
| Any | JUNPR3 MCN or JUNPR3 AMG |

| | |
|-----------|--|
| Turbojets | KAOLN5 expect on course with ZTL |
| Turbojets | CHATT6 HOGAP or CHATT6 GSO |
| Any | SAMMI4 SAMMI expect on course with ZJX via CAE |
| Turbojets | DOVER4 DOVER expect on course with ZJX |
| Props | RDBUD3 RDBUD expect on course with GSP TRACON |

DNL and HQU

| TYPE | ROUTE |
|-----------|---|
| Turbojets | MISTY6 HADOC expect on course with ZTL |
| Turbojets | CHATT6 HOGAP or CHATT6 GSO |
| Any | SAMMI4 SAMMI expect on course with ZJX |
| Props | AZALA4 AZALA expect on course with GSP TRACON |
| Props | NDINA5 NDINA expect on course with ATL TRACON |

VFR DEPARTURES/IFR PICKUP

VFR departures should not expect to obtain an IFR clearance within 100 miles of AGS.

IFR OVERFLIGHTS

IFR overflights below 16,000 feet MSL expect a routing to avoid the Augusta area.

VFR ARRIVALS AND DEPARTURES TO/FROM DNL

VFR arrivals and departures operating to/from DNL should navigate between the IRQ250Radial and the IRQ010Radial due to high traffic volume south and east of DNL.

AIR TRAFFIC CONTROL TOWER INFORMATION

The FAA Air Traffic Control Tower at **Augusta Regional (AGS)** will operate during the following periods:

| DATE | TIME (EDT) | TIME (UTC) |
|------------|------------|------------|
| April 6–7 | 0600–2300 | 1000–0300 |
| April 8–12 | 0600–0000 | 1000–0400 |
| April 13 | 0530–2300 | 0930–0300 |

The Daniel Field Airport General Aviation Commission will operate a Temporary Air Traffic Control Tower at **Daniel Field (DNL)** during the following periods:

| DATE | TIME (EDT) | TIME (UTC) |
|------------|------------|------------|
| April 6 | 0900–1800 | 1300–2200 |
| April 7–11 | 0700–2000 | 1100–0000 |
| April 12 | 0700–2100 | 1100–0100 |

FREQUENCIES

| | |
|--------------------------------|-------------|
| DNL ATCT (“DANIEL TOWER”) | 124.85 MHz |
| DNL Ground Control | 121.175 MHz |
| DNL Clearance Delivery | 133.125 MHz |
| Macon AFSS | 122.3 MHz |
| DNL ASOS Weather | 135.275 MHz |
| Aiken (AIK) Clearance Delivery | 126.075 MHz |

RESTRICTED OPERATIONS

Airport Operations will issue a NOTAM prohibiting formation flights, cargo flights, training flights, practice approaches, and touch-and-go operations from April 6–13, 2020.

COLUMBIA METROPOLITIAN AIRPORT (CAE)

Arrivals to CAE transitioning from the west expect to cross MONET at 13,000 feet and 250 knots with route: IRQ V155 WIDER CAE

LEIDOS FLIGHT SERVICES

Pilot briefing and flight planning services are available online through the LEIDOS Pilot Portal at <https://www.1800wxbrief.com/Website/> or by telephoning LEIDOS Flight Service at 1–800–WX–BRIEF (1–800–992–7433). Press 1 for a briefer, press 4–2, then 1 for Georgia.

Contact Macon Radio on 122.3 in the Augusta, Georgia area for VFR flight plan activation, closure, or in-flight pilot reports.

*Remember to close your flight plan**

NCAA MEN'S FINAL FOUR

ATLANTA, GEORGIA

April 1–7, 2020

SPECIAL AIR TRAFFIC PROCEDURES

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

| AIRPORT | LOCATION | IDENTIFIER |
|--|--------------------|-------------------|
| Hartsfield – Jackson Atlanta International Airport | Atlanta, GA | ATL |
| Dekalb–Peachtree Airport | Atlanta, GA | PDK |
| Fulton County Airport – Brown Field | Atlanta, GA | FTY |
| Cobb County International–Mccollum Field Airport | Kennesaw, GA | RYY |
| Gwinnett County – Briscoe Field Airport | Lawrenceville, GA | LZU |
| Newnan Coweta County Airport | Newnan, GA | CCO |
| Paulding Northwest Atlanta Airport | Dallas, GA | PUJ |
| Atlanta Regional Falcon Field Airport | Peachtree City, GA | FFC |
| Henry County Airport | Hampton, GA | HMP |
| Griffin–Spalding County Airport | Griffin, GA | 6A2 |
| Covington Municipal Airport | Covington, GA | CVC |

TRAFFIC MANAGEMENT INITIATIVES

Expect Traffic Management initiatives including but not limited to, reroute, miles–in–trail, altitude restriction, ground stop, and ground delay programs.

When a Ground Delay Program (GDP) is required, aircraft must depart within 5 minutes of their assigned Expect Departure Clearance Time (EDCT). If unable, pilots must advise ATC and request a new EDCT assignment.

Traffic management initiatives are designed to provide equitable access to airports and airspace. To maintain program integrity and minimize delays, airborne changes of destination to Atlanta Area airports may not be accepted, except in emergency situations.

FLIGHT PLANS/IFR PICK UP

File flight plans **at least 6 hours, but not more than 22 hours**, prior to proposed time of departure. Early flight plan submission may minimize your assigned delay during Traffic Management initiatives.

Duplicate flight plans (same call sign/multiple times) are subject to removal from the system and may result in increased delay for your flight.

VFR aircraft requesting airborne IFR clearance/activation may encounter significant reroutes and/or delays. IFR flight plan pick up/activation and airborne changes of destination to Atlanta Area airports will not be accepted within 100NM of ATL, except in an emergency.

TEMPORARY FLIGHT RESTRICTION

A Temporary Flight Restrictions (TFR) will be in effect for this event, see **FDC NOTAM** for details.

PRACTICE APPROACHES

Practice approaches to PDK, FTY, RYY, and LZU may be extremely limited or unavailable due to increased aircraft activity.

AIRPORT STATUS INFORMATION

Real time flight delay, airport status, and program information is available at the following sites:

- www.fly.faa.gov/ois
- www.fly.faa.gov/gaap/jsp/gaapIndex.jsp
- www.fly.faa.gov/edct/jsp/edctLookUp.jsp

**AIRPORT TRAFFIC CONTROL TOWER (ATCT)
HOURS OF OPERATION**

ATL

| |
|----------------|
| 24 Hours a day |
|----------------|

PDK

| | |
|---|--------------------------------|
| Wednesday through Friday April 1–April 3 | 0630 –2300 EST (1030–0300 UTC) |
| Saturday, April 4 | 0700–0230 EST (1100–0630 UTC) |
| Sunday, April 5 | 0700–2300 EST (1100–0300 UTC) |
| Monday, April 6 | 0630–0230 EST (1030–0630 UTC) |
| Tuesday, April 7 | 0630–2300 EST (1030–0300 UTC) |

FTY

| |
|----------------|
| 24 Hours a day |
|----------------|

RYY

| | |
|--|--------------------------------|
| Wednesday through Tuesday April 1–April 7 | 0700 –2300 EST (1100–0300 UTC) |
|--|--------------------------------|

LZU

| | |
|--|--------------------------------|
| Wednesday through Tuesday April 1–April 7 | 0700 –2100 EST (1100–0100 UTC) |
|--|--------------------------------|

NOTE: Check current NOTAMs for possible changes to the hours of operation.

VFR ARRIVALS

VFR arrivals may expect lengthy delays during peak traffic periods. VFR advisory service within the Atlanta TRACON/Atlanta Center will be on a workload–permitting basis.

POTENTIAL HOLDING

Aircraft may be required to hold inbound due to weather or other constraints.

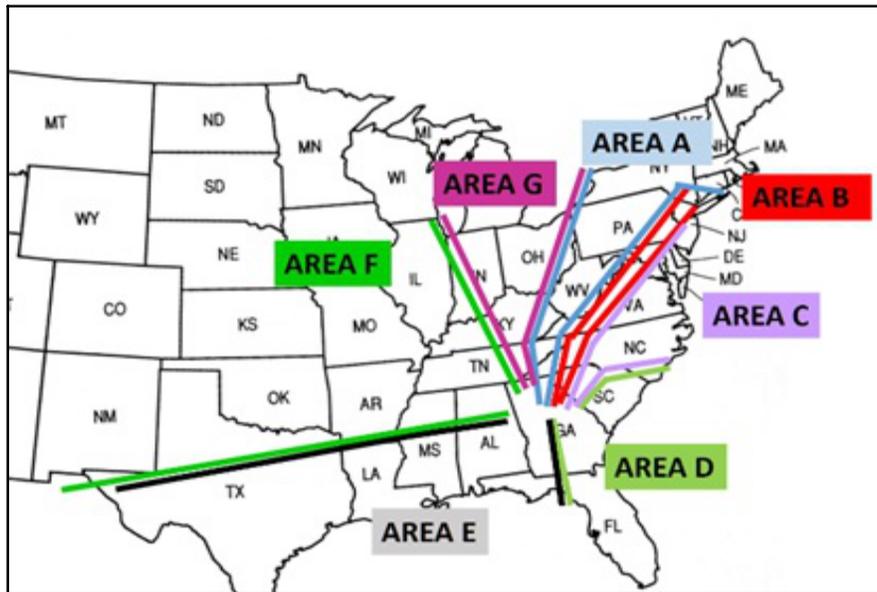
IFR ARRIVAL PROCEDURES

All IFR ARRIVALS should be prepared to enter the VFR traffic pattern. IFR arrivals should be familiar with the VFR arrival procedure. At airports without operational ATCT, please be **PROMPT** with your IFR cancellations.

PREFERRED IFR ARRIVAL ROUTES

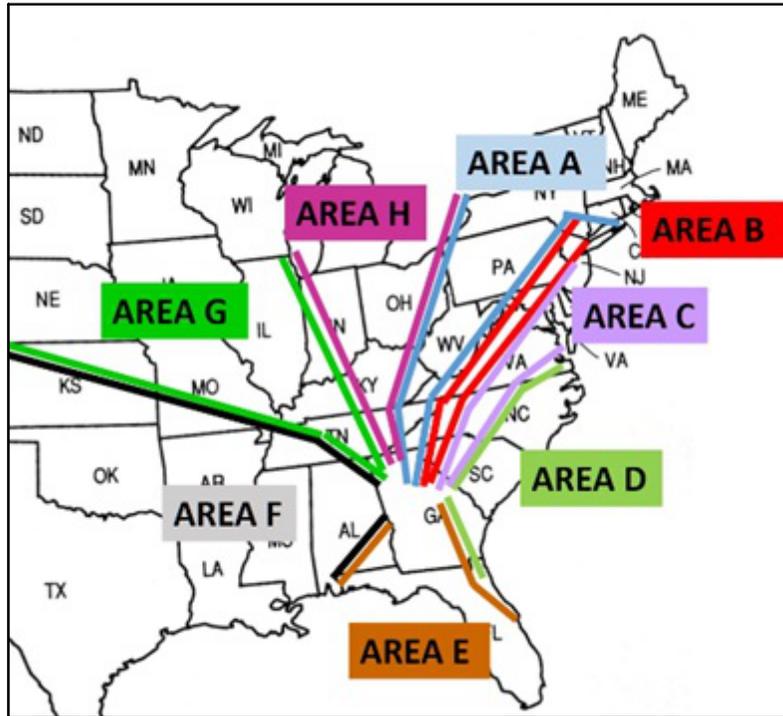
Jet and turboprop aircraft file via the following routes. Expect potential reroute based on demand to allow an orderly transition to the controlled airports.

Arriving PDK/LZU:



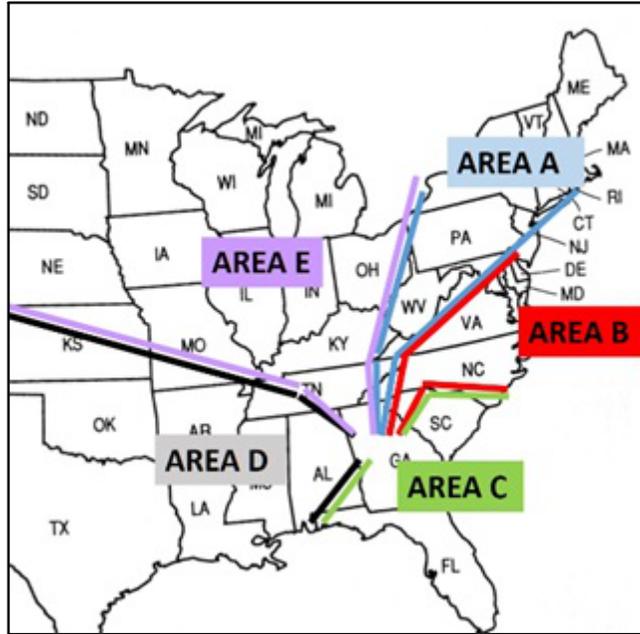
| DEPARTING | ROUTE |
|--|--|
| Area A | BAF Q406 BWZ J6 HVQ KTRYN SCNRY DEHAN1 |
| Area B– TEB/HPN/CDW/EWR/JFK/LGA PHL area | LANNA J48 MOL PSK SCNRY DEHAN1 STOEN REEFI EMI CSN MOL PSK SCNRY DEHAN1 |
| Area C | HUBBS J193 HCM ISO J121 BARTL KAATT Q172 YUTEE KISTN WRGNZ1 |
| Area D | KERLY SHRLT WRGNZ1 |
| Area E | MVC KEEPS BOKRT2 or MEI ORRKK KEEPS BOKRT2 |
| Area F | YAMSS LPTON SWTEE1 or BNA RIZZZ BUKHD1 |
| Area G | WWSHR AIR HVQ KTRYN SCNRY DEHAN1 |

Arriving FTY/RYY/PUJ:



| DEPARTING | ROUTE |
|---|--|
| Area A | GONZZ Q29 KLYNE FLM WUDYA BUKHD1 |
| Area B – TEB/HPN/CDW/EWR/JFK/LGA PHL Area | LANNA J48 MOL PSK SCNRY DEHAN1 STOEN REEFI EMI CSN MOL PSK SCNRY DEHAN1 |
| Area C | LYH COLZI IPTAY AHN WOMAC |
| Area D | HUBBS J193 HCM ISO J121 BARTL KAATT Q172 YUTEE KISTN WRGNZ1 or KERLY SHRLT WRGNZ1 |
| Area E | DAWWN KEEPS BOKRT2 |
| Area F | MVC KEEPS BOKRT2 or MEI ORRKK KEEPS BOKRT2 |
| Area G | YAMSS LPTON SWTEE1 or BNA RIZZZ BUKHD1 |
| Area H | KLYNE FLM WUDYA BUKHD1 |

Arriving CCO/HMP/FFC/CVC/6A2:



| DEPARTING | ROUTE |
|-----------|--|
| Area A | MXE J75 GVE LYH COLZI IPTAY MADDI HUSKY |
| Area B | HUBBS J193 HCM ISO J121 BARTL KAATT Q172 YUTEE KISTN BEYLO CANUK |
| Area C | YUTEE KISTN BEYLO CANUK or KERLY SHRLT CANUK or DAWWN KEEPS LGC V222 HONIE |
| Area D | MVC KEEPS LGC V222 HONIE or MEI ORRKK KEEPS LGC V222 HONIE |
| Area E | NEHAI GAD HEFIN TIROE or BNA HEFIN TIROE |

PDK AIRPORT INFORMATION

| FREQUENCIES | |
|--|---------------|
| Tower – monitor ATIS for appropriate frequency | 120.9 / 127.2 |
| Ground Control | 121.6 |
| Clearance Delivery | 125.2 |
| Clearance Delivery (when ATCT closed) | 120.9 |
| ATIS | 128.4 |

The northwest portion of the airport and railroad tracks leading to the downtown city may be highly saturated with helicopter traffic.

Noise abatement procedures and voluntary night restrictions are in effect due to the close proximity of residential neighborhoods. PDK noise program information can be found at <https://www.dekalbcountyga.gov/airport/noise-program>.

All movement on closed runways and taxiways will be at the pilot’s own risk.

Pedestrians are prohibited on active runways, taxiways, etc., unless specifically authorized by Air Traffic Control (ATC). Bicycles and motorcycles are prohibited on movement areas.

Visit Dekalb–Peachtree Airport website for other information: <https://www.dekalbcountyga.gov/airport>

AIRSHIP AND MILITARY AIRCRAFT OPERATIONS

Airship operation, including parking, is restricted to those operators who have made prior arrangements with the PDK Airport Director’s Office.

Military Aircraft must have Prior Permission Required (PPR) authorization. Military PPR may be obtained by either calling PDK Airport Administration PPR Line at 770–936–5440, or online at <https://www.dekalbcountyga.gov/airport>. Military helicopter contract fuel will not be available.

Airship and military aircraft pilots shall contact the PDK Airport Director’s Office at:

Airport Director
 DeKalb–Peachtree Airport
 Room 212
 2000 Airport Road
 Atlanta, GA 30341
 (770) 936–5440

FIXED–BASED OPERATORS (FBOs)

| FBO | PHONE NUMBER | FREQUENCY |
|---------------------|---------------------|------------------|
| Signature | (770) 452–0010 | 130.90 |
| Epps Aviation | (770) 458–9851 | 129.05 |
| Helicopter Express* | (770) 963–6889 | 122.85 |
| Atlantic Aviation | (770) 454–5000 | 130.70 |

*Helicopter Service Only

NO–RADIO (NORDO AIRCRAFT)

Aircraft without an operable two–way radio will not be authorized to operate at PDK during the event.

RUNWAY CLOSURES

Runways 16/34 and 3L/21R may be closed for additional parking and taxiway use. Consult NOTAM’s for current closure information

IFR ARRIVALS

- Monitor ATIS prior to initial call.
- DO NOT STOP ON ACTIVE RUNWAY. Expeditious clearing of the runway is essential.
- Use the first available exit unless otherwise instructed.
- Contact Ground Control on frequency 121.6 when instructed by the Tower Controller.

VFR ARRIVALS

- Pattern Altitudes: Single–Engine at 2000 MSL, Multi–Engine at 2500 MSL
- Monitor ATIS for VFR arrival procedures and the appropriate tower frequency
- DO NOT STOP ON ACTIVE RUNWAY. Expeditious clearing of the runway is essential.
- Contact Peachtree Tower at least 10 miles from the airport.

- Advise Tower of aircraft type, call sign, direction and distance from the airport, and the appropriate ATIS code.
- Follow the tower controller's directions for pattern entry, sequencing or holding instructions.

DO NOT ENTER THE CLASS DELTA SURFACE AREA WITHOUT INSTRUCTIONS FROM ATC.

VFR HOLDING

Due to the high volume of traffic in the Atlanta area, VFR arrivals can expect lengthy delays outside Class D airspace during peak traffic periods.

If VFR holding is required, expect to hold at one of the following four locations. Be alert for other aircraft holding in the area.

- Concourse – located 4 miles northwest of PDK. Notable by two tall "King & Queen" type buildings. Depicted on Atlanta Terminal VFR chart.
- Junction – located 2 miles northeast of PDK. Junction is a large freeway interchange (I-85 & I-285).
- WSB Antenna – located 3 miles southeast of PDK. 1,703 foot antenna depicted on Atlanta VFR Terminal Chart.
- Lenox Mall – located 4 miles southwest of PDK. Area around mall is dense with tall buildings.

The tower controller will meter holding VFR arrivals into the flow of IFR traffic and issue specific pattern entry and runway information

If you are on tower frequency 127.2, remain on that frequency until instructed by tower controller to contact Peachtree Tower on 120.9.

IFR/VFR DEPARTURES

- All fixed wing VFR/IFR aircraft should monitor the ATIS for special ground movement instructions before engine start.
- Do not call for taxi until you are the number one aircraft that can enter a taxiway from the ramp or parking area.
- If you are IFR do not call for taxi until you have received an IFR clearance.
- Remain on ground control until instructed to contact (or monitor) tower or until number one for departure at the runway.
- ATIS will indicate if IFR clearances are available on ground control or clearance delivery.

GATE HOLD PROCEDURES

Gate-Hold procedures may be implemented during heavy traffic periods. The ATIS will specify which aircraft (VFR and IFR, or IFR only) are subject to ground delay at the ramp. Affected departures will be informed which frequency to contact for engine start/taxi clearance time.

EXAMPLE: "GATE HOLD PROCEDURES ARE IN EFFECT. ALL AIRCRAFT (or ALL IFR AIRCRAFT) CONTACT (ATC Position) ON (frequency) FOR ENGINE START TIME."

NOTE: Due to the high number of itinerant departures, aircraft may be held on the ramp to facilitate sequencing, expedite departures, and comply with traffic management restrictions.

FTY AIRPORT INFORMATION

| FREQUENCIES | |
|----------------|--------|
| Tower | 118.45 |
| Ground Control | 121.7 |

| | |
|--------------------|---------|
| Clearance Delivery | 121.15 |
| ASOS/ATIS | 120.175 |
| ATL ARR/DEP | 121.0 |
| UNICOM | 122.95 |

All departing aircraft should contact Clearance Delivery on 121.15 prior to contacting Ground Control (121.7) for taxi. Advise if IFR or VFR.

FIXED-BASED OPERATORS (FBOs)

| FBO | PHONE NUMBER | FREQUENCY |
|--------------------------|----------------|-----------|
| Hill Aircraft | (404) 691-3330 | 129.575 |
| Signature Flight Support | (404) 443-0231 | 130.575 |

Operators should be prepared for delays due to maximum aircraft capacity. Aircraft towing and parking on closed runway/taxiways should be expected.

The eastern portion of the airport and areas over downtown Atlanta may be highly saturated with helicopter traffic.

Pedestrians are prohibited on active runways, taxiways, etc., unless specifically authorized by Air Traffic Control (ATC). Bicycles and motorcycles are prohibited on movement areas.

AIRSHIP AND MILITARY AIRCRAFT OPERATIONS

Due to limited operational capacity, airship operations are not permitted at FTY during this event

Military Aircraft must have Prior Permission Required (PPR) authorization. Call FTY Airport Administration at 404-613-4203 or 4205 for Military PPR.

FTY Airport Director
 Fulton County Airport
 3977 Aviation Circle
 Suite 105
 Atlanta, GA 30336
 (404) 613-4203/4205

NO-RADIO (NORDO AIRCRAFT)

Aircraft without an operable two-way radio will not be authorized to operate at Fulton County Brown Field during the event.

RUNWAY CLOSURES

Runway 14/32 may be closed for additional parking and taxiway use. Consult NOTAMs for current closure information.

LZU AIRPORT INFORMATION

When the tower is closed, request clearance by telephone at 678-364-6131. All clearances will be HOLD FOR RELEASE. Request release on frequency 134.0 only when the aircraft is number one in position and ready for immediate departure.

RYY AIRPORT INFORMATION

| FREQUENCIES | |
|-------------|-----------|
| RYY Tower | 125.9 MHz |

| | |
|---|-------------|
| RYY Ground Control / Clearance Delivery | 119.0 MHz |
| RYY AWOS-3/ATIS | 128.125 MHz |
| ATL APP/DEP | 121.0 MHz |
| RYY UNICOM | 122.7 MHz |

FIXED-BASED OPERATORS (FBO)

| FBO | PHONE NUMBER | FREQUENCY |
|---------------------------|----------------|-----------|
| Hawthorne Global Aviation | (770) 422-4300 | 132.0 MHz |

Pedestrians are prohibited on active runways, taxiways, etc., unless specifically authorized by Air Traffic Control (ATC).

AIRSHIP AND MILITARY AIRCRAFT OPERATIONS

Due to limited operational capacity, airship operations are not permitted at RYY during the time of this NOTAM.

Military Aircraft must have Prior Permission Required (PPR) authorization. Military PPR may be obtained by calling RYY’s FBO Manager at (770) 422-4300.

Hawthorne Global Aviation
 Cobb County International Airport
 1723 McCollum Pkwy
 Kennesaw GA, 30144
 (770) 422-4300

NO-RADIO (NORDO AIRCRAFT)

Aircraft without an operable two-way radio will not be authorized to operate at Cobb County International – McCollum Field during the event.

Clearance: 770-487-3893; Release: 121.0

LEIDOS FLIGHT SERVICES

Pilot briefing and flight planning services are available online through Leidos Pilot Portal at <https://www.1800wxbrief.com/Website/> or by telephone at 1-800-WX-BRIEF (1-800-992-7433). Press 1 for a briefer, then press 4-2, then 1 for Georgia.

Contact MACON Radio on 122.6 or 122.2 in the Atlanta, GA area for VFR flight plan activation and closure.

SPECIAL AIR TRAFFIC PROCEDURES

NASCAR Monster Energy Cup Series O'Reilly Auto Parts 500

TEXAS MOTOR SPEEDWAY

FORT WORTH, TEXAS

March 26–29, 2020

NOTE: Special security procedures and restrictions remain in effect. Pilots are reminded to contact Leidos Flight Service (LFS) FTW HUB personnel to obtain current NOTAM information.

In anticipation of a significant number of aircraft traveling to the Fort Worth, Texas area during the NASCAR Monster Energy Cup Series AAA Texas 500, the following procedures will be implemented to enhance safety and minimize air traffic delays.

PREFERRED IFR ARRIVAL PROCEDURES TO AFW

Traffic departing airports south of Phoenix (non-inclusive) and west of Houston (non-inclusive) destined AFW should expect the LIKES (RNAV) or the SLUGG arrival.

Traffic departing Houston terminal airports, east to Atlanta (non-inclusive) destined AFW should expect the REEKO (RNAV) or the DODJE arrival.

Traffic departing west of Chicago (non-inclusive) to Denver (non-inclusive) destined AFW should expect the WESAT (RNAV) or the MOTZA arrival.

Traffic departing Denver terminal airports (inclusive) south to Phoenix terminal airports (inclusive) destined AFW should expect the WESAT (RNAV) or the MOTZA arrival.

IFR DEPARTURE PROCEDURES

ALL PILOTS AND AIRCRAFT OPERATORS SHOULD CONTACT LFS FTW HUB TO ENSURE COMPLIANCE WITH ALL NOTAMS AND SECURITY PROCEDURES IN PLACE DURING THIS EVENT.

RACE DAY DEPARTURES ON MARCH 29th SHOULD FILE FLIGHT PLANS PRIOR TO 1800Z TO ALLOW FOR COORDINATION AND PLANNING.

IN THE EVENT THAT THE RACE IS RESCHEDULED FOR THE ALTERNATE RACE DAY (MONDAY, MARCH 30, 2019), ALL PILOTS SHOULD FILE FLIGHT PLANS ONE HOUR PRIOR TO THE SCHEDULED RACE END TIME TO ALLOW FOR COORDINATION AND PLANNING.

PILOTS DEPARTING FROM AFW SHOULD BE AWARE OF THE FOLLOWING RESTRICTIONS:

PRINTED COPIES OF IFR CLEARANCES MUST BE PICKED UP FROM THE CLEARANCE DELIVERY DESK IN THE AIRPORT FBO BUILDING.

Pilots should expect gate hold procedures to be in effect.

DO NOT request IFR departure clearance prior to 20 minutes before estimated time of departure (ETD).

DO NOT taxi until you have received taxi information and appropriate IFR clearance.

DO NOT call ground control to taxi until you are number one aircraft that can enter a taxiway from the ramp or parking area.

DO NOT call the tower for takeoff until you are ready for takeoff and in the number one position to take the runway.

VFR DEPARTURES AND SUBSEQUENT AIRBORNE IFR CLEARANCE REQUESTS WILL NOT BE ACCOMMODATED.

PREFERRED IFR DEPARTURE ROUTES

Note: Due to the complexity and volume associated with this event, users can anticipate dynamic reroutes and altitude assignments to expedite departure. Pilots are advised not to circumvent these preferred routes as they are intended to balance the departure operation and minimize delays.

DUE TO THE INCREASED DEMAND FOR THESE DESTINATIONS, PILOTS SHALL FILE THE FOLLOWING ROUTES:

AIRCRAFT REQUESTING AT OR ABOVE FLIGHT LEVEL 240

| RNAV AIRCRAFT | | |
|---------------|---------------------------|---|
| DESTINATION | AIRCRAFT | ROUTE |
| AVL | ALL | LOOSE MEM J42 BNA VXV SOT KAVL |
| CLT | TURBO-JETS | FORCK ELD SQS J52 ATL BESTT JONZE2 KCLT |
| CLT | PROP / TURBO-PROP | FORCK ELD SQS J52 ATL UNARM6 KCLT |
| EXX / MTV | ALL | LOOSE MEM J42 BNA VXV GZG TRAKS KEXX / KMTV |
| GSO / INT | TURBO-JET / TURBO-PROP | LOOSE MEM J42 BNA VXV MAACK TRAKS TRAKS2 KGSO / KINT |
| GSO / INT | PROP | LOOSE MEM J42 BNA J42 FOUNT PSK KGSO / KINT |
| GSP | TURBO-JET / TURBO-PROP | FORCK ELD SQS J52 ATL BESTT WORXS2 KGSP |
| GSP | PROP | FORCK ELD SQS J52 ATL KGSP |
| JQF / RUQ | TURBO-JET | FORCK ELD SQS J52 ATL CHPTR3 KJQF /KRUQ |
| JQF / RUQ | PROP / TURBO-PROP | FORCK ELD SQS J52 ATL UNARM6 KJQF / KRUQ |
| SVH / HKY | ALL | LOOSE MEM J42 BNA VXV BZM KSVH / KHKY |

| CONVENTIONAL AIRCRAFT | | |
|-----------------------|--------------------------|--------------------------|
| DESTINATION | AIRCRAFT | ROUTE |
| AVL | ALL | TXK J42 BNA VXV SOT KAVL |
| CLT | TURBO-JET | SQS J52 ATL CHPTR3 KCLT |
| CLT | PROP / TURBO-PRO P | SQS J52 ATL UNARM6 KCLT |

| | | |
|--|----------------------|--|
| EXX / MTV | ALL | TXK J42 BNA VXV GZG TRAKS KEXX / KMTV |
| GSO / INT | TURBO-JET | TXK J42 BNA VXV GZG BROOK3 KGSO / KINT |
| GSO / INT | PROP / TURBO PROP | TXK J42 BNA J42 FOUNT PSK KGSO / KINT |
| GSP | ALL | SQS J52 ATL KGSP |
| CONVENTIONAL AIRCRAFT AT OR ABOVE FLIGHT LEVEL 240 - CONTINUED | | |
| JQF / RUQ | TURBO-JET | SQS J52 ATL CHPTR3 KJQF / KRUQ |
| JQF / RUQ | PROP / TURBO PROP | SQS J52 ATL UNARM6 KJQF / KRUQ |
| SVH / HKY | ALL | TXK J42 BNA VXV BZM KSVH / KHKY |

AIRCRAFT REQUESTING AT OR BELOW FLIGHT LEVEL 230

| RNAV AIRCRAFT (FL190-F230) | | |
|----------------------------|----------------------|--|
| DESTINATION | AIRCRAFT | ROUTE |
| ASN | ALL | FORCK..... DIRECT |
| AVL | ALL | LOOSE BNA VXV SOT KAVL |
| CLT | TURBO-JETS | FORCK ATL BESTT JONZE2 KCLT |
| CLT | PROP / TURBO-PROP | FORCK ATL UNARM6 KCLT |
| EXX / MTV | ALL | LOOSE BNA VXV GZG TRAKS KEXX / KMTV |
| GSO / INT | TURBO-JET | LOOSE BNA VXV MAACK TRAKS TRAKS2 KGSO/ KINT |
| GSO / INT | PROP / TURBO PROP | LOOSE BNA J42 FOUNT PSK KGSO / KINT |
| GSP | TURBO-JET | FORCK ATL BESTT WORXS2 KGSP |
| GSP | PROP / TURBO PROP | FORCK ATL KGSP |
| JQF / RUQ | TURBO-JET | FORCK ATL CHPTR3 KJQF /KRUQ |
| JQF / RUQ | PROP / TURBO PROP | FORCK ATL UNARM6 KJQF / KRUQ |
| SVH / HKY | ALL | LOOSE BNA VXV BZM KSVH / KHKY |

| CONVENTIONAL AIRCRAFT | | |
|-----------------------|----------------------|------------------------------------|
| DESTINATION | AIRCRAFT | ROUTE |
| ASN | ALL | UIM..... DIRECT |
| AVL | ALL | TXK BNA VXV SOT KAVL |
| CLT | TURBO-JET | UIM ATL CHPTR3 KCLT |
| CLT | PROP / TURBO PROP | UIM ATL UNARM6 KCLT |
| EXX / MTV | ALL | TXK BNA VXV GZG TRAKS KEXX / KMTV |
| GSO / INT | TURBO-JET | TXK BNA VXV GZG BROOK3 KGSO / KINT |
| GSO / INT | PROP / TURBO PROP | TXK BNA J42 FOUNT PSK KGSO / KINT |
| GSP | ALL | UIM ATL KGSP |
| JQF / RUQ | TURBO-JET | UIM ATL CHPTR3 KJQF / KRUQ |
| JQF / RUQ | PROP / TURBO PROP | UIM ATL UNARM6 KJQF / KRUQ |
| SVH / HKY | ALL | TXK BNA VXV BZM KSVH / KHKY |

ALL OTHER DESTINATIONS SHOULD FILE THE APPROPRIATE DEPARTURE PROCEDURE OVER ONE OF THE PUBLISHED DEPARTURE FIXES. DIRECT DESTINATION FLIGHT PLANS WILL NOT BE ACCEPTED.

VFR ARRIVALS/DEPARTURES

Due to the anticipated increase in the volume of traffic, enroute aircraft desiring to transverse the DFW Class B airspace may encounter delays and alternate routes outside the Class B airspace. (See Dallas/Fort Worth VFR Terminal Area Chart). Note: This is a very congested airspace, issuance of a transponder code is not a clearance to enter Class B airspace, wait for identification and specific clearance from the controller prior to entering Class B airspace.

VFR aircraft are encouraged to cancel/activate flight plans with LFS FTW HUB when approaching or departing the City of Fort Worth.

LFS FTW HUB FREQUENCIES

122.6 MHz Transmit/Receive (WEST)

255.4 MHz Transmit/Receive (EAST/WEST)

122.3 MHz Transmit/Receive (EAST)

LFS FTW HUB serves the Dallas/Fort Worth Metropolitan area and can be reached at the following telephone number: **1-800-WX-BRIEF (1-800-992-7433)**.

HELICOPTER OPERATIONS

SPECIAL HELICOPTER PROCEDURES WILL BE IN EFFECT DURING THIS EVENT. Prior permission is required for all helicopters planning to operate in the Class D airspace around Alliance (AFW) airport. For prior permission, call this number (817) 929-9339 or (817) 215-8592

Note: All helicopter pilots and operators should contact the LFS FTW HUB to ensure compliance with all NOTAMS and security procedures in place during this event.

ATIS

Alliance (AFW) 126.925

AFW TOWER HELICOPTOR FREQUENCY

120.825

KENTUCKY DERBY

LOUISVILLE, KY

April 29 – May 3, 2020

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 Muhammad Ali International Airport | SDF |
| Bowman Field Airport | LOU |
| Clark Regional 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 | April 29, 2020 | 0800–1959 | 1200–2359 |
| Thursday | April 30, 2020 | 0800–1959 | 1200–2359 |
| Friday | May 1, 2020 | 0800–1959 | 1200–2359 |
| Saturday | May 2, 2020 | 0600–2159 | 1000–0159 |
| Sunday | May 3, 2020 | 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 April 30 2020, through Sunday, May 3, 2020, **except in emergencies**. Airborne filed flight plans filed with other facilities may experience lengthy delays.

ATIS

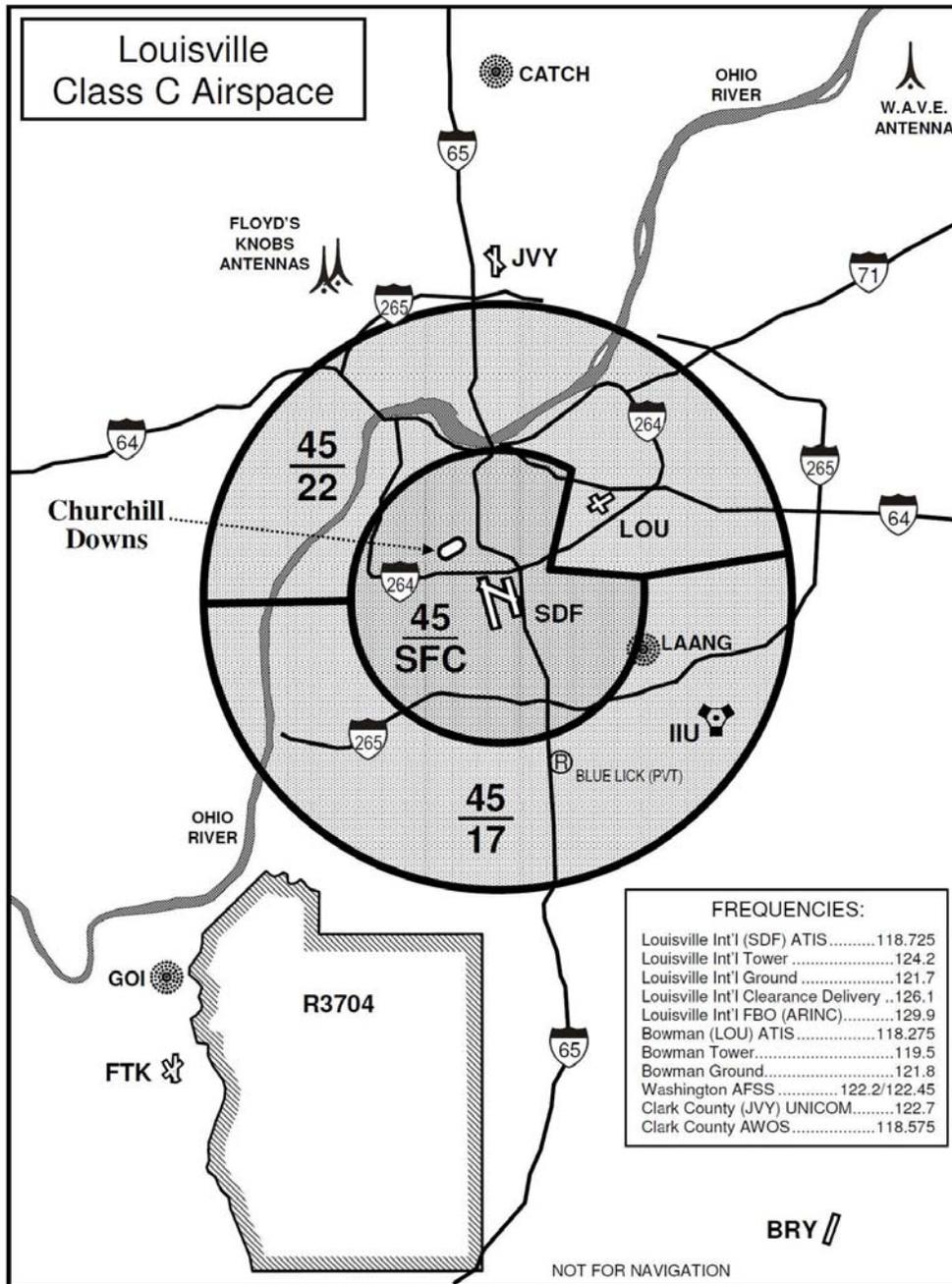
MONITOR ATIS prior to initial contact with Louisville Approach Control.

SDF – 118.725 MHz

LOU – 120.025 MHz

VFR ARRIVALS

*****CLASS C SERVICE IS MANDATORY*****



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.

DEPARTURE PROCEDURES

LOUISVILLE MUHAMMAD ALI INTL – (SDF): All departing aircraft contact clearance delivery on 126.10. Advise if IFR or VFR.

DO NOT CALL GROUND CONTROL TO TAXI until you are the number one aircraft that can enter a taxiway from the ramp or parking area designated exit point.

DO NOT LEAVE RAMP / PARKING AREA until you have received taxi instructions and, if IFR, have received an IFR clearance.

DO NOT CALL THE TOWER FOR DEPARTURE until you are in the number one position for the runway.

RAMP / PARKING areas are considered uncontrolled.

CLARK REGIONAL (JVY): All IFR departing aircraft contact Louisville Clearance Delivery on 118.05 for IFR clearance and RADAR release. **Prompt cancellation of IFR by arriving aircraft is encouraged due to volume.**

IFR aircraft departing JVY can expect an eastbound or northbound heading due to the proximity to SDF. VFR aircraft should exercise extreme caution when departing to the west of JVY due to numerous heavy jet aircraft landing and departing SDF.

BOWMAN FIELD (LOU): All departing aircraft contact clearance delivery on 118.90. Ground control will be on 121.80. Advise if IFR or VFR.

DO NOT CALL GROUND CONTROL TO TAXI until you are the number one aircraft that can enter a taxiway from the ramp or parking area.

DO NOT LEAVE RAMP / PARKING AREA until you have received taxi instructions and, if IFR, have received an IFR clearance.

DO NOT CALL THE TOWER FOR DEPARTURE until you are in the number one position for the runway.

RAMP / PARKING areas are considered uncontrolled.

IFR DEPARTURE ROUTES

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

| DEPARTURE GATE | ROUTE |
|----------------|----------------------------------|
| NORTH | V53 STREP or STREP5 (RNAV Only) |
| EAST | V4 HYK or FEDRA5 (RNAV Only) |
| SOUTH | direct MYS or CRRGO4 (RNAV Only) |
| WEST | V4 APALO or APALO6 (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 | STREP ROD CXR J146 ETG |

| | |
|--------|---|
| ABE | HYK BKW COURG SCAPE V377 HAR V162 DUMMR |
| ACY | HYK BKW J42 OTT SIE |
| ACY | STREP ROD J152 HAR LRP DQO ENO SIE |
| ALB | STREP ROD DJB DKK ALB |
| ATL | MYS BNA NEWBB IHAVE MTHEW CHPPR –STAR |
| BDL | STREP ROD DJB JHW Q82 MEMMS WILET STELA–STAR |
| BOS | STREP ROD WWSHR Q29 JHW Q82 PONCT JFUND–STAR |
| BWI | HYK BKW RAVNN–STAR |
| BWI*** | (GA ONLY) HYK BKW EKN KEESH ANTHM–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 HANBL OR LECTR–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 |
| MMU | HYK BKW J42 GVE JAIKE–STAR |
| ORD | STREP MZZ VEECK–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 ALDAN–STAR |
| RIC | HYK BKW J42 MOL SPIDR–STAR |
| SYR | STREP ROD DJB SYR |
| TEB | STREP ROD WWSHR JHW LVZ LVZ–STAR |
| TEB | HYK BKW J42 GVE JAIKE–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 1, all day on May 2, and until 1559 EDT (1959 UTC) on May 3.

VFR DEPARTURE/IFR PICKUP FROM JVY/LOU

VFR departures should not expect to obtain an IFR clearance within 50 miles of SDF.

AIR TRAFFIC CONTROL TOWER INFORMATION

The FAA Air Traffic Control Tower at **LOUISVILLE INTL – STANDIFORD (SDF)** will operate during the following periods:

| DATE | TIME (UTC) |
|--------------------------------------|---------------|
| All Dates – Daily – 24 Hour Facility | 0000Z – 0000Z |

There is **NO** FAA Air Traffic Control Tower at **CLARK COUNTY (JVY)**. All aircraft shall contact Louisville (SDF) Clearance Delivery at 118.05 for IFR clearance and RADAR release.

The FAA Air Traffic Control Tower at **BOWMAN FIELD (LOU)** will operate during the following periods:

| DATE | TIME (UTC) |
|-------------------|---------------|
| All Dates – Daily | 1100Z – 0200Z |

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, April 29 through Saturday, May 3, 2020.

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

2020 SUN 'N FUN AEROSPACE EXPO

Lakeland, Florida

March 30–April 05, 2020

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- Balloon Launch Advisory / Skydiving Advisory
- Lake Parker and Lake Hancock VFR Holding Procedures
- Lake Parker VFR Arrival Procedures
- Lakeland VFR Departures
- Warbird South Arrivals
- Choppertown
- Paradise City (Ultralight/Light Sport Aircraft/Homebuilt Rotorcraft)
- IFR Procedures
- Requests to Deviate from Mode C Transponder Requirements
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PREFLIGHT PLANNING & SAFETY INFORMATION

Pilots are expected to adhere to all published LAL arrival and departure procedures and ATC instructions. Failure to do so may jeopardize your safety and the safety of others.

No Radio (NORDO) aircraft must land at an airport within approximately thirty (30) minutes of LAL, call Lakeland Tower at 863-834-3335, and receive ATC approval for arrival. Specific routes and runway assignment will be issued based on traffic and weather conditions.

To ensure clear and concise communications with ATC, pilots are asked to carry a copy of the Sun 'n Fun NOTAM aboard their aircraft.

All VFR departures requesting airborne activation of IFR flight plans or VFR flight following in the central Florida area should use published procedures. (*See: IFR Pick Up/VFR Flight Following*)

When weather at Lakeland or along your route of flight is marginal VFR, it is strongly suggested that you file IFR from your departure airport and receive your IFR clearance and departure release on the ground. Tampa, Orlando, and Jacksonville Approaches may be unable to issue IFR pick-up clearances due to traffic volume and complexity.

When traffic volume is low, Air Traffic frequencies and positions may be combined. Ground Air Traffic Operational Remote (GATOR) and flagmen positions may not be staffed. Continue to follow ATC instructions.

Pilots should check Local and FDC NOTAMs frequently for current information that may affect your flight.

Pilots must obtain ATC clearance prior to entering Class B airspace around Tampa and Orlando.

Due to the large number of departures after the daily airshow, arrival traffic is normally not accepted until at least one (1) hour after the airshow ends. Check arrival ATIS to determine when the airport is reopened.

Do NOT plan to arrive or depart after the night airshow. The airport is closed.

Do rock your wings for airborne acknowledgements.

Do NOT make unnecessary radio transmissions where procedures state, "Monitor the frequency only".

AIRCRAFT WINDSHIELD SIGNS

Pilots landing or departing LAL should display a sign in the LEFT side of their windshield to designate their intended parking/camping area or type departure. The sign should have LARGE dark letters readable from at least 50 feet. Computer or tablet signs are not acceptable.

ABBREVIATIONS

| Abbreviation | Meaning |
|--------------|----------------------------------|
| GAP | General Aviation Parking Area |
| GAC | General Aviation Camping Area |
| HB | Homebuilt Parking Area |
| HBC | Homebuilt Camping Area |
| HC | Handicapped Parking |
| SP | Seaplane Parking Area |
| VAC | Vintage Aircraft Camping/Parking |

| | |
|----------------|------------------------------------|
| ONC | One Night Camping |
| CBP | U.S. Customs and Border Protection |
| FBO | Fixed Base Operator |
| E1 | E1 Ramp Tenants |
| E2 | E2 Ramp Tenants |
| EXHIBIT | Exhibitor |
| WB | Warbirds |
| P | Paradise City |
| VFR | VFR Departure |
| IFR | IFR Departure |

Parking sign example:



LAKELAND LINDER INTERNATIONAL AIRPORT (LAL) NOTICE

Do NOT stop on the runway after landing. High-speed taxi to the end of the runway.

Do NOT stand on/near or walk/drive across the runways.

Use caution when operating in non-movement areas. All movement on other than paved runways is at pilots own risk.

All aircraft must be tied down; aircraft on paved surfaces must be chocked. Tie down equipment and chocks may not be available.

Aircraft parking and camping is allowed in designated areas only. Camping north of RWY 09L/27R is prohibited.

Contact the FBO for hard surface reserved parking and fueling information.

Student training flights and solos are NOT permitted at LAL during this event.

Observe all fire prevention rules. NO campfires or stoves are permitted near aircraft.

RWY 05/23 will be CLOSED from 1400 EDT (1800 UTC) March 20 through 1600 EDT (2000 UTC) April 09.

RWY 08/26 will be CLOSED from 1400 EDT (1800 UTC) March 20 through 1600 EDT (2000 UTC) April 09. (See: Paradise City)

Several taxiways will be closed as indicated by orange cones or low profile barricades.

Engine operation and taxi are prohibited SOUTH of RWY 09R/27L from 1930–0700 EDT (2330–1100 UTC).

U.S. Customs and Border Protection General Aviation facility will be CLOSED March 30 through April 06.

AIRPORT CLOSURES

The airport is CLOSED during aerobatic demonstrations and nightly from 1930–0600 EDT (2330–1000 UTC) March 30 through April 06, except for Paradise City.

Paradise City is CLOSED during aerobatic demonstrations and nightly from SUNSET – SUNRISE March 30 through April 06.

AIRSHOW OPERATIONS

The air show operations area is from the surface to 15,000 FT MSL, within a five (5) nautical mile radius of LAL.

| AIR SHOW SCHEDULE | | | |
|-------------------|----------|------------|------------|
| DAY | DATE | TIME (EDT) | TIME (UTC) |
| Tuesday | March 31 | 1330–1730 | 1730–2130 |
| Wednesday | April 01 | 1330–1730 | 1730–2130 |
| Wednesday Night | April 01 | 1930–2230 | 2330–0230 |
| Thursday | April 02 | 1230–1700 | 1630–2100 |
| Friday | April 03 | 1230–1700 | 1630–2130 |
| Saturday | April 04 | 1230–1730 | 1630–2130 |
| Saturday Night | April 04 | 1930–2300 | 2330–0300 |
| Sunday | April 05 | 1230–1730 | 1630–2130 |

NOTE–

Air show and flight restriction schedules are subject to change. Pilots should check NOTAMs (both D and FDC) frequently to ensure the most current information.

TEMPORARY FLIGHT RESTRICTIONS

Temporary flight restrictions (TFR) will be in effect during periods of high performance aerial demonstrations. TFR information is disseminated via FDC NOTAM prior to the event. Once published, text and graphic depictions of restrictions may be found at:

<https://tfr.faa.gov/>

BALLOON LAUNCH ADVISORY

Saturday, April 04, 0700–0800 EDT (1100–1200 UTC)

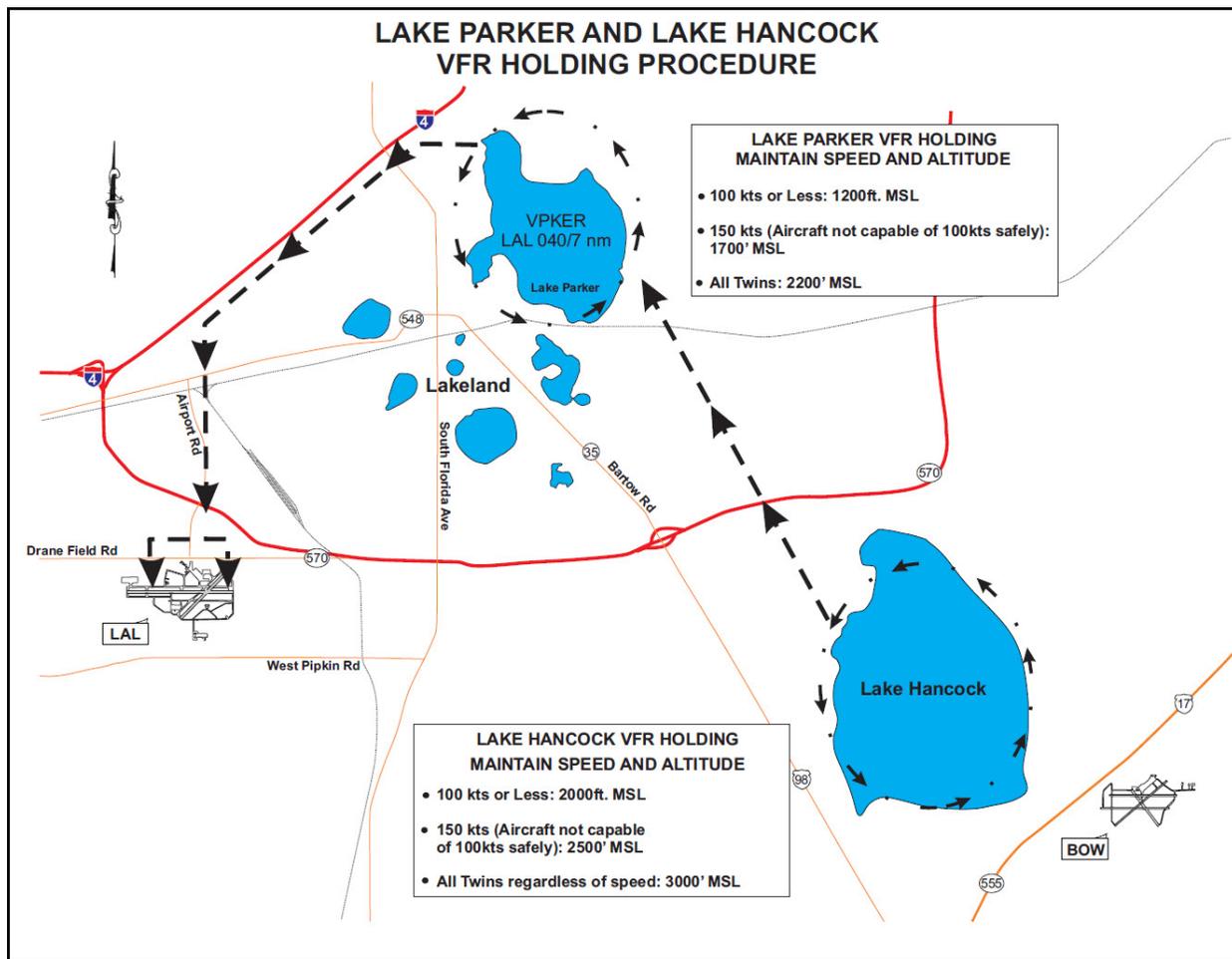
Use caution for balloon activity in the vicinity of LAL. Arriving aircraft may expect delays during this event.

SKYDIVING ACTIVITY ADVISORY

Remain vigilant for skydiving activity in the vicinity of Zephyrhills Airport (ZPH) located 16.4 nm NW of Lakeland on the LAL332 radial. Be alert for skydivers descending from 13,500 feet over ZPH sunrise to sunset.

Remain vigilant for skydiving activity in the vicinity of Blackwater Creek Ultralight Airport (9FD2) located 11.2 nm NW of Lakeland on the LAL326 radial. Be alert for skydivers descending from 17,999 feet over 9FD2 sunrise to sunset.

LAKE PARKER/LAKE HANCOCK VFR HOLDING



VFR HOLDING AT LAKE PARKER

If VFR holding is necessary, ATC will instruct a lead aircraft to turn left and proceed southbound over the west shore of Lake Parker. Hold counter-clockwise around the lakeshore.

All other aircraft will be instructed to follow the leader in single file.

Do not proceed past Lake Parker without ATC clearance.

Maintain 1,200 FT MSL/100 knots or less, 1,700 FT MSL/150 knots, or 2,200 FT MSL (twin-engine aircraft) regardless of airspeed.

VFR HOLDING AT LAKE HANCOCK

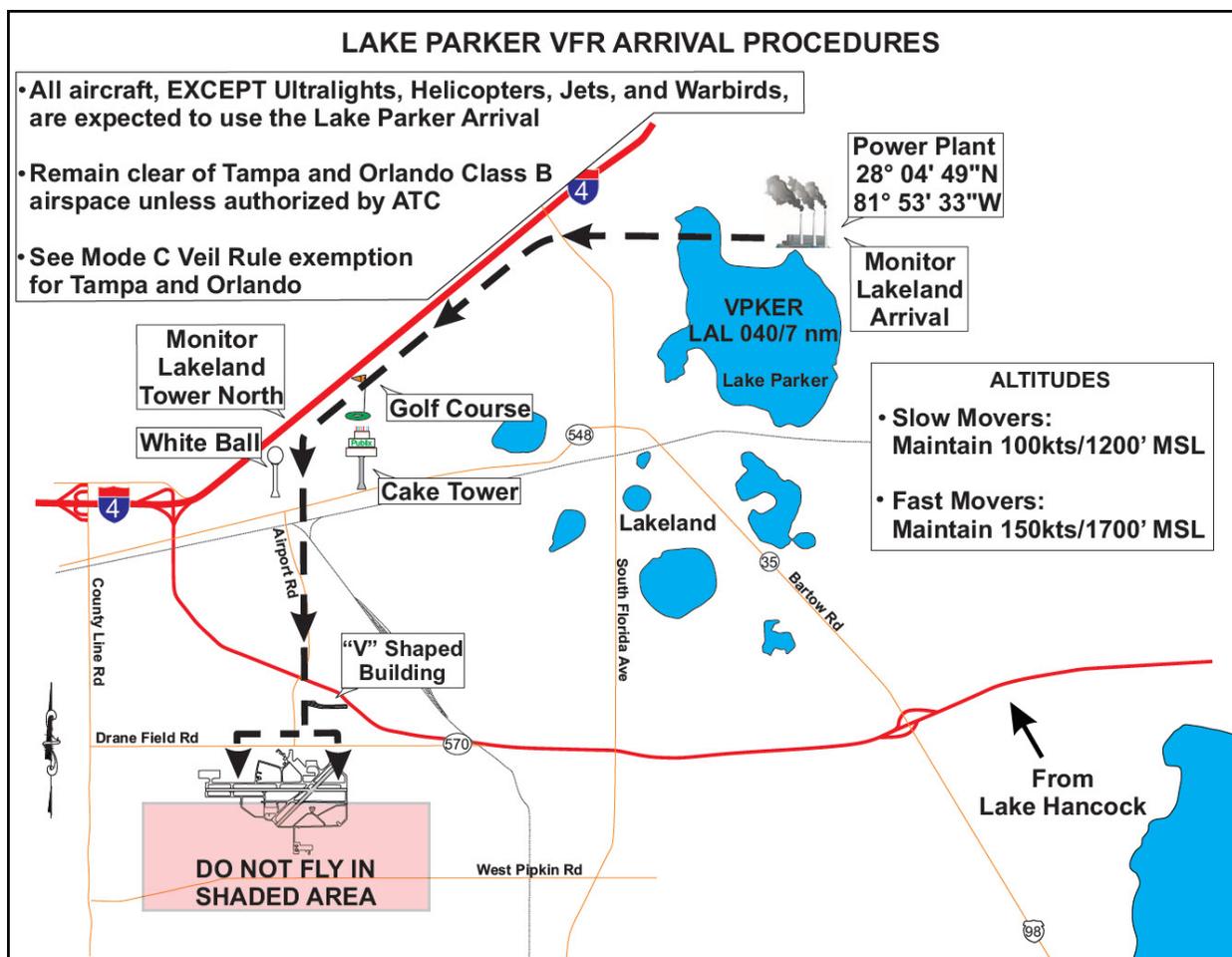
If VFR holding prior to Lake Parker is necessary, ATC will instruct aircraft to proceed to Lake Hancock.

Remain clear of Lake Parker and east of the Lakeland Airport.

Hold counter clockwise around the lakeshore.

Maintain 2000 feet MSL/ 100 knots or less, 2500 feet MSL/150 knots or 3,000 feet MSL (twin-engine aircraft) regardless of speed.

LAKE PARKER VFR ARRIVAL PROCEDURES



30 miles out: turn landing lights ON

Fly toward Lake Parker to approach from the North, Northeast, East or Southeast.

20 miles out: Listen to ARRIVAL ATIS 128.575 for landing and special information, then MONITOR Lake Parker Arrival on 124.5.

Ensure landing lights are ON and landing gear is DOWN.

Fly westbound over the north shore of Lake Parker. The power plant smokestacks with white strobe lights are located at the north side of Lake Parker. Expect heavy air traffic in this area.

All aircraft maintain 100 knots, at 1,200 feet MSL, approaching Lake Parker. Aircraft unable to safely slow to this speed should maintain 150 knots at 1,700 feet.

ATC will contact you in the vicinity of Lake Parker's north shore, using your aircraft "color" and "type" to provide sequencing and other arrival information.

ATC may ask you to "rock your wings" as an acknowledgement for instructions.

Do not transmit unless requested by ATC or if you have an emergency.

Remain in trail to the airport. No side-by-side.

From the north shore, depart the power plant flying westbound. You will see baseball fields to your south. Follow the road north of the baseball fields. Continue westbound.

Continue westbound approximately one-half nautical mile toward the intersection of Interstate I-4 and a four-lane road.

At the intersection of Interstate I-4 and the four-lane road, turn southwest following Interstate I-4 approximately three (3) nautical miles.

Turn southbound, keeping the golf course and cake tower to your east and the white water tower to your west. LAL is approximately 3.5 nautical miles south of you.

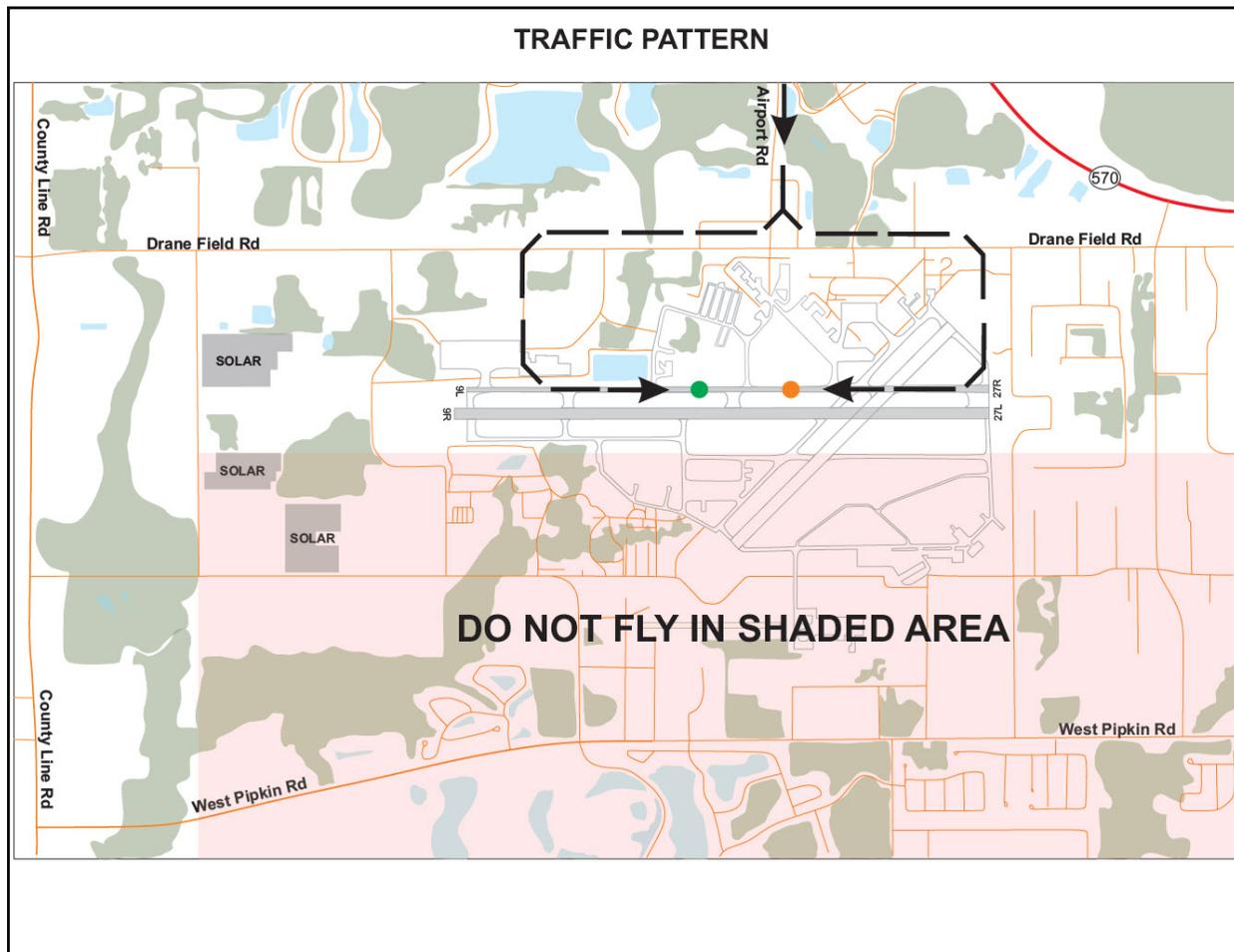
Fly southbound toward the large V-shaped building. The blue-roofed airport terminal building at LAL is directly south of the large V-shaped building.

Monitor Lakeland frequency 135.225 after making your turn southbound toward the blue roof terminal.

LISTEN for ATC instructions.

Over-fly the large V-shaped building. Continue toward the blue-roofed airport terminal building. Plan to turn downwind prior to the airport terminal building in the vicinity of Drane Field Road.

TRAFFIC PATTERN



IMPORTANT – RWY 09L/27R is a narrow strip 75 feet wide (which is usually a taxiway) marked with a green and orange dot. RWY 09L landing distances: orange dot 3173 FT, green dot 4672 FR. RWY 27R landing distances: orange dot 5311 FT, green dot 3812 FT.

CAUTION – Be alert for special event and fly-by aircraft using the main runway with opposite-direction base leg entries. Expect numerous aircraft in the fly-by pattern and other operations at/below 2000 FT MSL south of RWY 09R/27L.

Do not deviate south of RWY 09R/27L in the event of a go-around.

Downwind:

Fly directly toward the blue-roofed terminal building. Plan to turn downwind prior to the blue-roofed terminal building in the vicinity of Drane Field Road. You will fly either left traffic for RWY 09L or right traffic for RWY 27R.

Final: RWY 09L or 09R:

The displaced thresholds are indicated by banners on each side of the runways. If you require the full length (8500 FT), advise the tower.

Short Final:

If landing RWY 09L/27R, you may be instructed by the tower controller to land on either the GREEN or the ORANGE dot

LANDING

Do NOT land on the main (wide) RWY 09R/27L unless specifically instructed by ATC.

Do NOT stop on the runway. High speed taxi to the end of the runway or follow ATC instruction.

AFTER TOUCHDOWN

Remain on hard surface unless directed by parking flagman.

Use caution when taxiing due to the high volume of aircraft, vehicles, and personnel.

When south of RWY 09R/27L, Sun 'n Fun personnel will direct you to the parking area. Monitor Sun 'n Fun Ground Advisory on 126.075. **Note:** Sun 'n Fun Ground Advisory may not be monitored at all times.

Park only where directed. Due to congestion, you may be asked to temporarily stop your aircraft.

Do NOT leave your aircraft until you have reached your final parking spot and have tied your aircraft down.

Select 121.5 prior to radio shutdown to detect inadvertent activation of ELT.

LAKELAND VFR DEPARTURES

If Lakeland Airport is IFR, taxi is prohibited without an IFR clearance.

Prior to engine start, place a sign in your windshield with the letters “**VFR**” to show the you intend to depart VFR.

Before taxiing, monitor Lakeland Departure ATIS on 118.025 for taxi information.

When ready to taxi, do not contact ground control. Follow the flagman's directions and other traffic to the advertised active runway.

Hold short of the runway and monitor the applicable tower frequency.

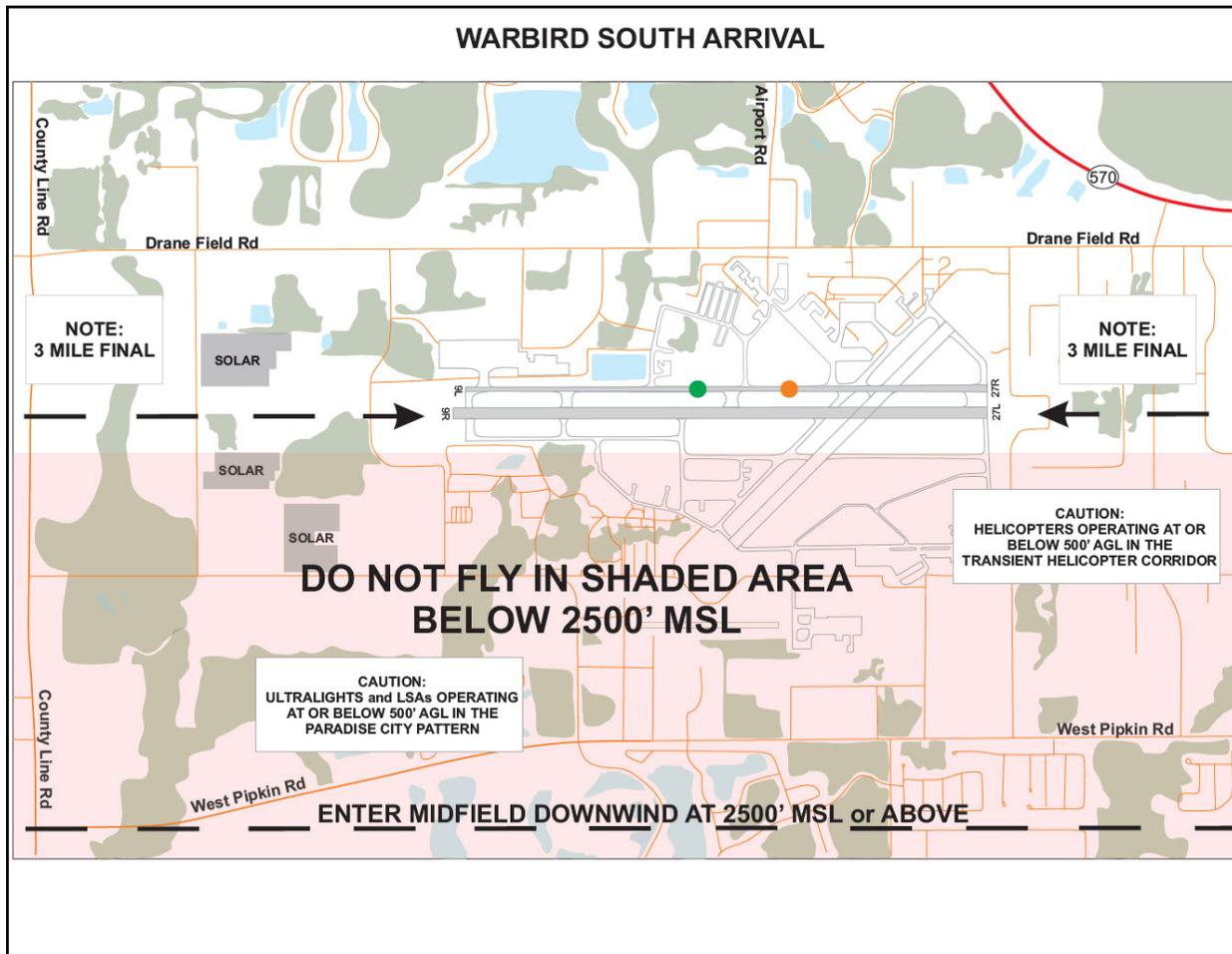
- Departing RWY 09L/27R monitor 133.125.
- Departing RWY 09R/27L monitor 127.850.

FAA air traffic controllers on elevated platforms “GATORS” near runway departure points will clear all aircraft for take off via the applicable departure frequency.

After departure, proceed straight out for three (3) miles before proceeding on course. Avoid Lake Parker and Lake Hancock.

Be alert for numerous aircraft departing, particularly after 1800 EDT, and for arrival traffic from the north. Use caution for special flight activity south of the airport and parachute jumping at the Zephyrhills Airport (ZPH) and Blackwater Creek Ultralight Airport (9FD2).

WARBIRD SOUTH ARRIVALS



CONTACT Lakeland Tower on 118.35 10 NM South of LAL.

Pilot should state: Warbird south arrival, aircraft color and type, position.

Example: "Lakeland Tower, Warbird south arrival, silver mustang, 10 south"

Approach the airport from the south and enter a mid-field downwind for RWY 09R or 27L, as instructed. Remain AT OR ABOVE 2,500 FT MSL until turning a wide base leg to at least a three (3) mile final.

Expect a high volume of traffic for RWY 09L/27R from opposite-direction base legs.

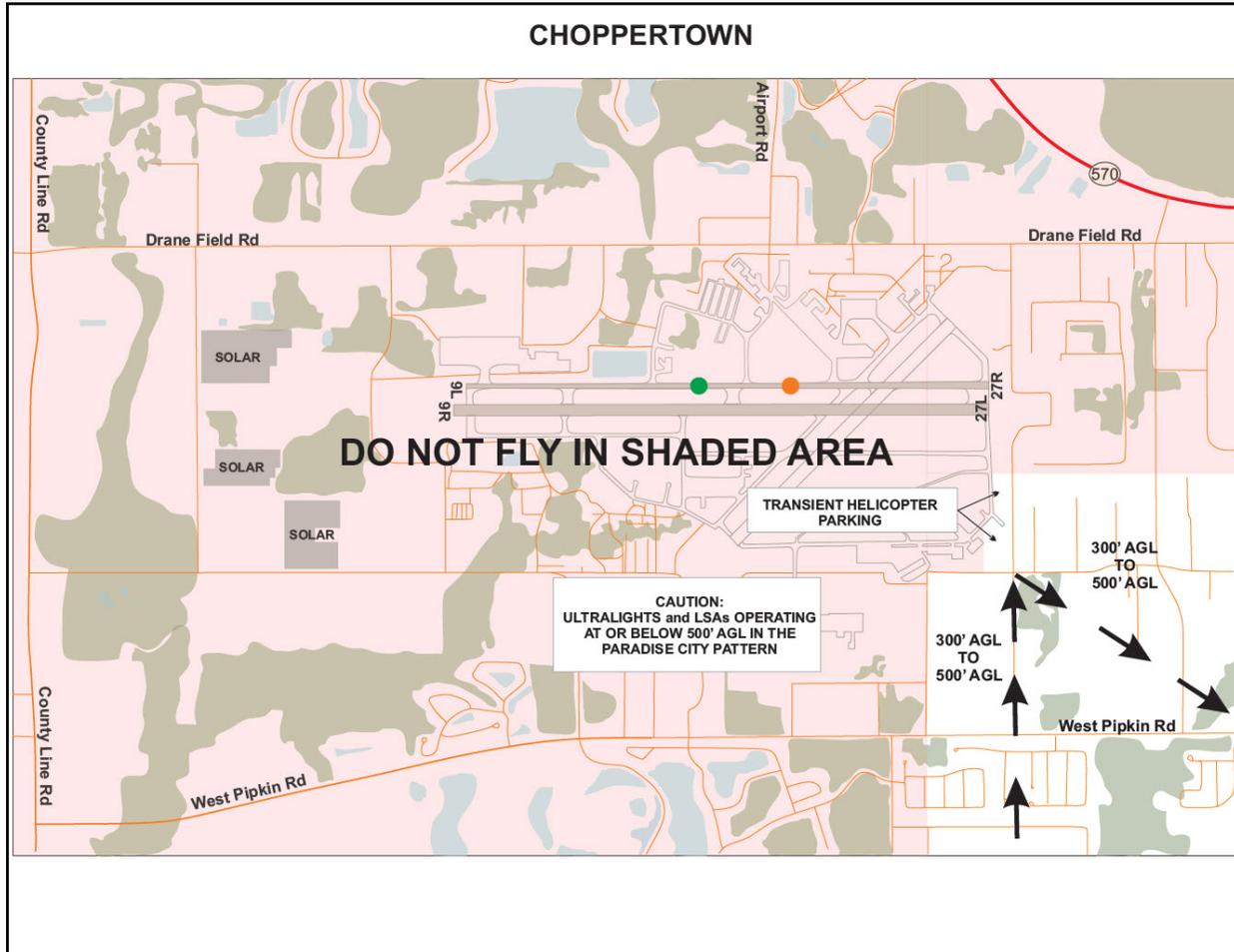
After exiting, and south of RWY 09R/27L, contact Sun 'n Fun Ground Advisory on 126.075.

Note: Sun 'n Fun Ground Advisory may not be monitored at all times.

Use caution for numerous aircraft operating South of RWY 09R/27L at and below 2000 FT MSL.

IMPORTANT – RWY 09R has a displaced threshold. Advise the tower if you require the full length (8500FT).

**CHOPPERTOWN
VFR ARRIVAL/DEPARTURE**



Approach the airport from the southeast at or below 500 feet MSL.

Announce call sign, location, and intentions on Helicopter Advisory frequency 123.025.

Example: "N1234, 3 South on the Helicopter arrival."

Remain in the helicopter corridor. Remain east of the large hangars to avoid the Paradise City flight pattern.

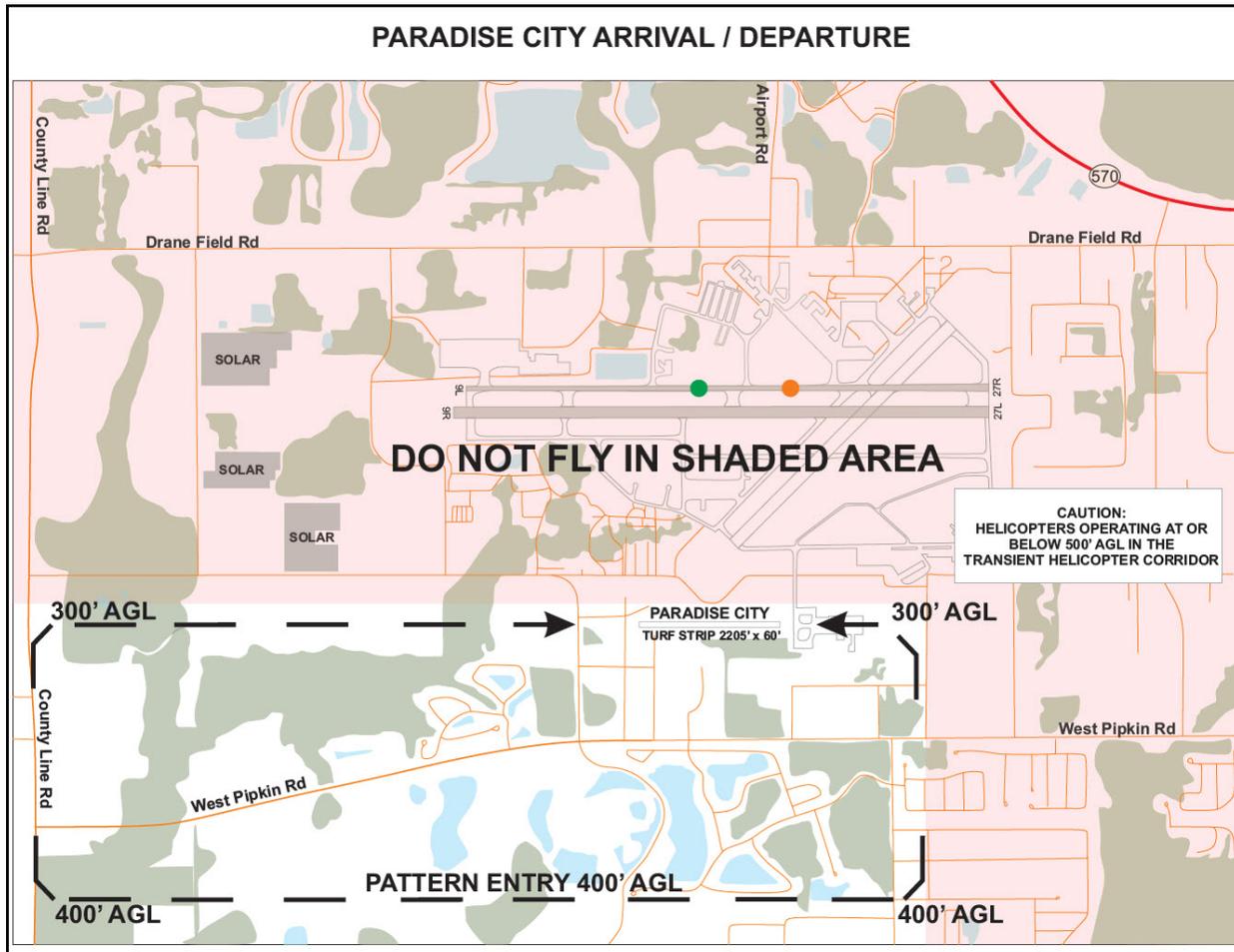
Park in the grass East of Taxiway E.

Remain east of TWY E at all times. Yield to taxiing aircraft.

Helicopters may not depart/arrive during airfield closures.

All pilots must attend a briefing prior to departure from Choppertown. Briefing times are available at the Choppertown Advisory Tower.

**PARADISE CITY
ARRIVAL/DEPARTURE****



Paradise City turf strip is 2205 FT long x 60 FT wide with displaced thresholds on each end. A ditch runs parallel to the south side of the strip.

Inbound traffic approach LAL from the south at 400 FT AGL. Enter the pattern on the downwind leg at a forty-five (45) degree angle.

Avoid South Lakeland Airport (X49) 3.5 NM SW of LAL due to extensive aircraft activity. Be alert for heavy traffic in the airspace surrounding LAL. Use caution for helicopter operations at the same altitudes just east of Paradise City.

Do NOT fly north of the Paradise City turf strip or east of Airside Center Drive.

Monitor Paradise City Advisory frequency 123.825 with enough time to receive advisories. *Note:* The frequency is for airport advisory information and pilot communications. It is NOT intended/authorized for Air Traffic Control clearances, sequencing, or separation of aircraft.

All pilots must attend a pilot briefing prior to departure from Paradise City. Briefing times are available in the Paradise City main tent.

**Paradise City is limited to Ultralight Aircraft (14 CFR 103), Light Sport Aircraft (SLSA), Experimental Light Sport Aircraft (ELSA), and Homebuilt rotorcraft (Ultralight or Experimental). Aircraft not included

in these descriptions may apply through the Paradise City Chairman for special authorization by the Sun 'n Fun Director of Operations. VFR daytime operations only.

IFR PROCEDURES

Special air traffic procedures are effective for IFR aircraft operating to/from the following airports:

| AIRPORT | IDENTIFIER |
|---------------------------------------|-------------------|
| Lakeland Linder International Airport | LAL |
| Plant City Municipal Airport | PCM |
| Bartow Municipal Airport | BOW |
| Lake Wales Municipal Airport | X07 |
| Winter Haven Gilbert Airport | GIF |

TRAFFIC MANAGEMENT

Traffic Management Initiatives will be used when arrival rates exceed airport capacity. Pilots should prepare for potential airborne holding, reroutes, or Expect Departure Clearance Times (EDCT's) issued for domestic IFR arrivals.

Heavy demand periods are expected: DAILY 0700 – 1959 EDT (1100 – 2359 UTC)

IFR TRAFFIC

Due to traffic congestion and ARTCC radar limitations, southbound traffic filed over CHS via V1 should request 8,000 feet or above. Traffic filed V1 at 6,000 feet and below will be rerouted via V437.

Duplicate flight plans (same time/call sign) to multiple airport destinations are subject to removal.

Do NOT request air-filed flight plans or make airborne destination changes to/from the airports listed. Except in an emergency, requests will not be accepted within 200NM of LAL.

NOTE – Please be familiar with the Sun 'n Fun Lake Parker Arrival and Departure Procedures.

IFR PREFERRED ARRIVAL ROUTES

IFR arrivals through Jacksonville Air Route Traffic Control Center (ZJX ARTCC) file via the following routes:

| AREA | ROUTE |
|----------------------|---|
| V579 & West | CTY OCF LAL (dest.) |
| East of V579 to V267 | TAY GNV OCF LAL (dest.) |
| East of V267 | V3 SSI V441 OCF LAL (dest.) or V1 STARY SSI V441 OCF LAL (dest.) |

IFR ARRIVALS

When Lakeland ceiling and visibility are reported at or above 3,000 feet and five (5) miles, plan to cancel IFR and expect a vector to the vicinity of Lake Parker for a VFR approach following the Sun 'n Fun Lake Parker Arrival Procedures.

Jet aircraft are NOT recommended over Lake Parker. Expect ATC vectors to final RWY 09R/27L.

Pilots retaining IFR clearance until landing must contact Tampa Approach on 120.65 after exiting the runway to cancel IFR.

IFR DEPARTURES

File your flight plan at least four (4) hours prior to proposed departure time. IFR flight plans not activated will expire ninety (90) minutes after proposed departure time.

Prior to engine start, place a sign in your windshield with the letters “**IFR**” to show you intend to depart IFR.

Monitor ATIS on 118.025. IFR departures will be instructed via ATIS to contact Ground Control on 124.15 or 121.4.

Contact Ground Control as instructed for clearance. Do NOT taxi until you receive enroute clearance. If you have not received initial departure instructions prior to reaching the runway, attempt to taxi your aircraft to a position that will allow other VFR aircraft to pass for departure.

Do NOT accept FAA flagman’s instructions to enter the runway or take off unless you have received departure release from Ground Control.

IFR OVERFLIGHTS

IFR overflight traffic at and below 15,000 feet MSL expect routing to avoid congested areas.

IFR PICK UP/VFR FLIGHT FOLLOWING

IFR pick-up and VFR flight following procedures are required for the following Lakeland area airports:

| AIRPORT | IDENTIFIER |
|--|------------|
| Lakeland Linder Airport | LAL |
| Plant City Airport | PCM |
| Gilbert Field Municipal Airport (Winter Haven) | GIF |
| Tampa Executive Airport | VDF |
| Peter O. Knight Airport | TPF |
| Bartow Municipal Airport | BOW |
| Zephyrhills Municipal Airport | ZPH |
| South Lakeland Airpark | X49 |
| Lake Wales Airport | X07 |

IMPORTANT– When weather at Lakeland or along your route of flight is marginal VFR, it is strongly suggested that you FILE IFR off your departure airport and receive your IFR clearance/departure release on the ground. Tampa, Orlando, and Jacksonville Approaches may not be able to issue IFR pick-up clearances due to traffic volume and complexity.

Destinations to the Northeast and East coast through Orlando Approach: Orlando

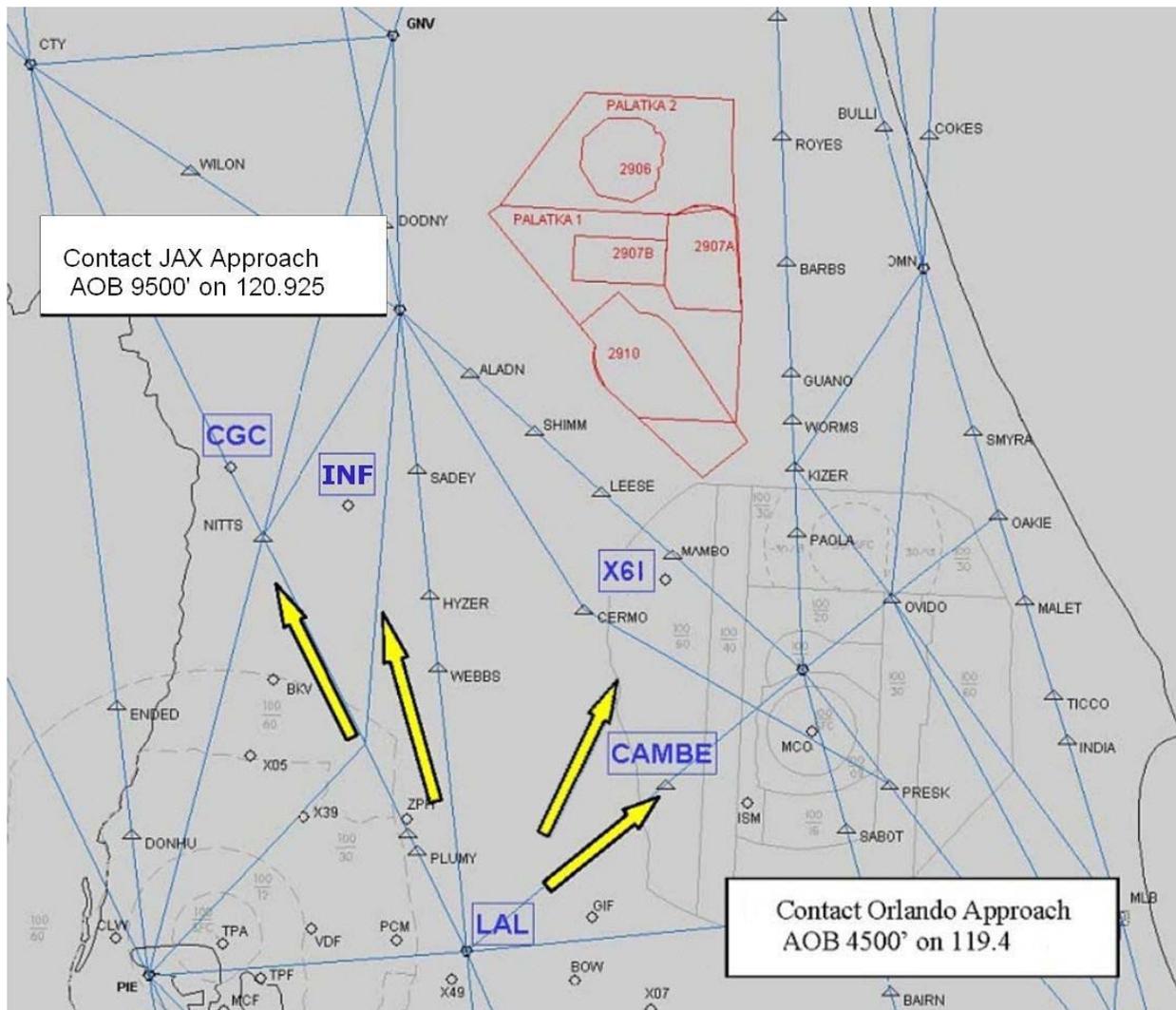
Approach is unable to retrieve flight plan information or activate IFR clearances for aircraft requesting an IFR pick up that file off the Lakeland area airports. Aircraft departing VFR from the LAL area destined to the east coast or northeast must file a flight plan showing CAMBE intersection or X61 (Bob White Airport) as their departure point in order to receive airborne IFR clearance. Enter **AIRFILE** or **IFR PICK UP** in the remarks section of the flight plan. MONITOR first then contact Orlando Approach at or below 4,500 feet on 119.4. Remain clear of Orlando Class B airspace.

Destinations to the North or Northwest through Jacksonville Approach: Jacksonville

Approach is unable to retrieve flight plan information or activate IFR clearances for aircraft requesting an IFR pick up that file off the Lakeland area airports. Aircraft departing VFR from the LAL area destined to the north or northwest must file a flight plan showing either **CGC** (Crystal River Airport) or **INF** (Inverness Airport) as their departure point in order to receive airborne IFR clearance. Enter **AIRFILE** or **IFR PICK UP** in the remarks section of the flight plan. Approximately ten (10) miles south of CGC/INF, MONITOR first then contact Jacksonville Approach at or below 9,500 feet on 120.925.

Departing from a Lakeland area airport through Tampa Approach: Tampa

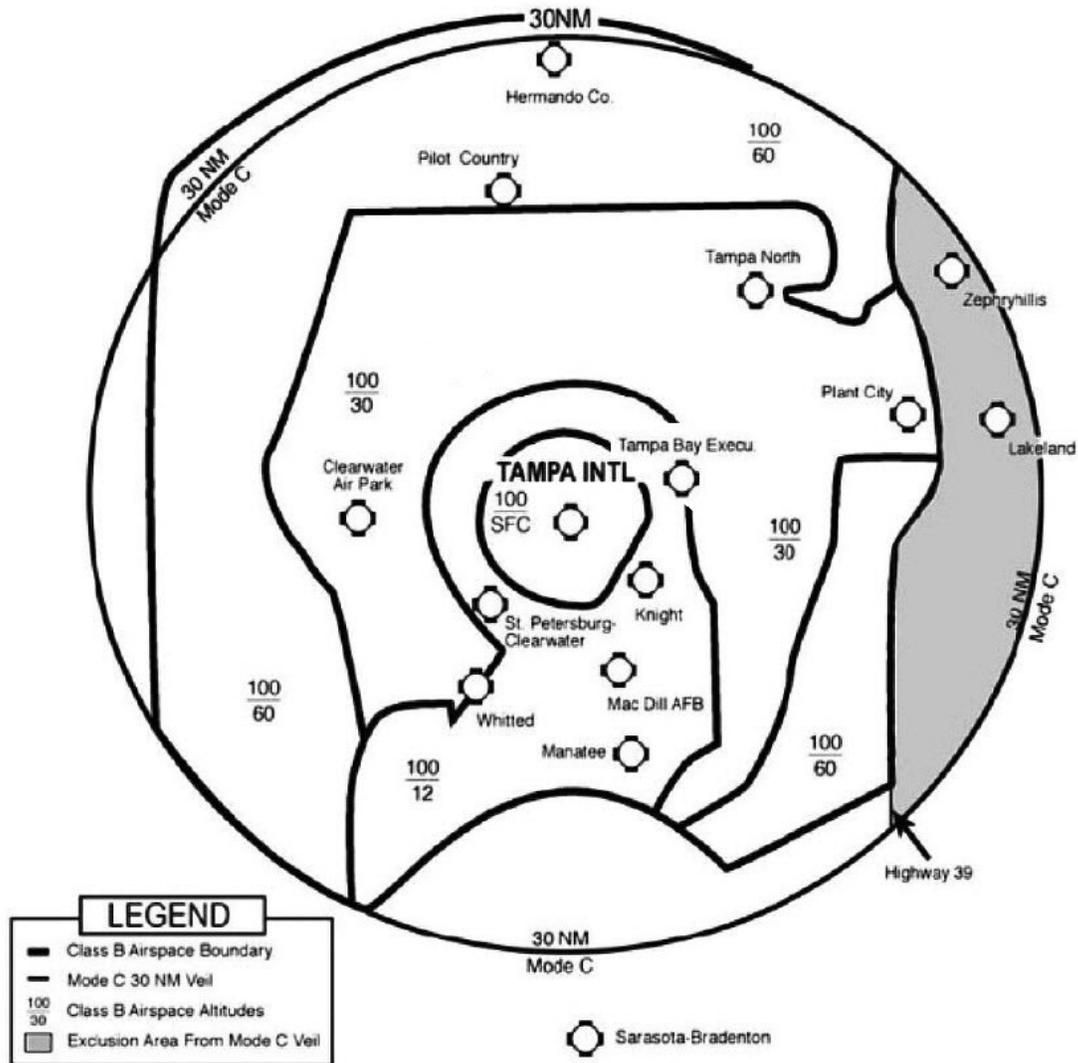
Approach may be unable to issue an IFR pick up clearance due to heavy traffic volume if you depart VFR from one of the Lakeland area airports. Due to anticipated frequency congestion, aircraft not complying with these procedures should NOT expect to receive airborne IFR pickup clearance or VFR flight following until north of the Florida/Georgia border.



DO NOT USE FOR NAVIGATION: NOT TO SCALE

REQUESTS TO DEVIATE FROM MODE C TRANSPONDER REQUIREMENT

TAMPA CLASS B MODE C VEIL
(DO NOT USE FOR NAVIGATION – NOT TO SCALE)



Operators of aircraft not equipped with Mode C transponders may operate within the Tampa Class B Mode C veil to attend the Sun 'n Fun Aerospace Expo at LAL along the following ATC–designated route:

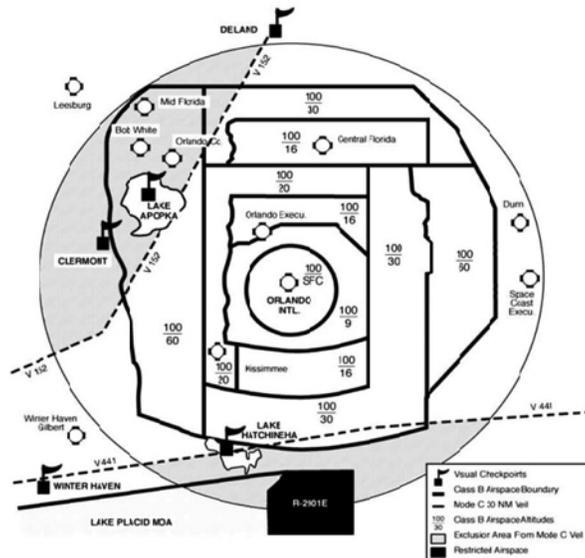
At and below 2,500 FT MSL east of Highway 39.

Remain outside of the lateral boundary of the Tampa Class B airspace.

Aircraft must follow the LAL arrival and departure procedures.

CAUTION: This notice does not constitute authorization to enter the Tampa Class B airspace.

ORLANDO CLASS B MODE C VEIL
 (DO NOT USE FOR NAVIGATION – NOT TO SCALE)



Operators of aircraft not equipped with Mode C transponders may operate within the Orlando Class B Mode C veil to attend the Sun 'n Fun Aerospace Expo at LAL along the following ATC–designated routes:

Northwest portion of Orlando Class B:

At or below 2,500 FT MSL along a route that passes over the city of Deland, Lake Apopka, and the City of Clermont. Remain northwest of V152.

Southern portion of Orlando Class B:

At or below 2,500 FT MSL south of V441 along a route over the center of Lake Hatchineha and east of the City of Winter Haven. Remain outside of the lateral boundaries of the Orlando Class B airspace and outside R–2901E.

CAUTION: This notice does not constitute authorization to enter the Orlando Class B airspace.

EXCEPTIONS

Per 14 CFR 91.215, aircraft without electrical systems, balloons, and gliders are exempt from the Mode C transponder requirement when operating within the Orlando and Tampa Mode C veil. ATC authorization to deviate from transponder requirement is not required.

OTHER REQUESTS FOR AUTHORIZATIONS
ORLANDO APPROACH

Requests to operate along other than the routes specified above must be submitted to Orlando Approach in accordance with 14 CFR 91.215. Such requests will not be considered approved without the express written authorization signed by the Orlando Manager or designee.

Operations conducted in accordance with the procedures outlined in this notice must remain outside the Orlando Class B airspace unless otherwise authorized by Orlando Approach.

FLIGHT SERVICE INFORMATION

Pilot briefing and flight planning services are available online through the Leidos Pilot Portal at <https://www.1800wxbrief.com/Website/> or by contacting Leidos Flight Service at 1–800–WX–BRIEF (1–800–992–7433).

INBOUND VFR FLIGHT PLANS**Filing flight plans:**

Pilots should allow for unexpected delays and add an additional 30 minutes when filing their ETE.

Pilots should ensure the color of their aircraft is included in the remarks section of their VFR flight plan.

Pilots are requested to close their flight plans while airborne. Due to the large number of aircraft, pilots may encounter up to a 30-minute delay in parking their aircraft.

Contacting Flight Service by Radio:

On initial call-up, advise flight service of your full aircraft identification and which frequency you are using.

When transmitting on 122.1 and listening to the VOR, remember to check that volume is up.

Due to frequency congestion, air files and in-flight full route weather briefings are discouraged.

REMEMBER TO CLOSE YOUR VFR FLIGHT PLANS**FREQUENCIES**

| LAKELAND AREA | |
|------------------------------------|---------|
| Lakeland Arrival ATIS | 128.575 |
| Lake Parker Arrival | 124.5 |
| Lakeland Ground Control | 121.4 |
| Lakeland Helicopter | 123.025 |
| Warbird Parking Advisory | 125.025 |
| Lakeland Tower North | 135.225 |
| RWY 9L/27R Departure Monitor | 133.125 |
| Paradise City Advisory | 123.825 |
| Lakeland Departure ATIS | 118.025 |
| Sun 'n Fun Ground Advisory | 126.075 |
| Lakeland IFR Ground Control | 124.15 |
| Lakeland VOR | 116.0 |
| Lakeland UHF | 236.775 |
| Lakeland Tower South | 118.35 |
| RWY 9R/27L Departure Monitor | 127.850 |

| TAMPA (TPA) APPROACH | |
|-----------------------------|--------|
| E of Tampa SFC-4,000' | 119.9 |
| E of Tampa 4,500'-12,000' | 135.5 |
| W of Tampa SFC-4,000' | 125.3 |
| W of Tampa 4,500'-12,000' | 118.8 |
| SRQ Area SFC-4,000' | 119.65 |
| SRQ Area 4,500'-12,000' | 134.25 |
| Tampa Tower | 119.5 |
| LAL IFR Arrivals Cancelling | 120.65 |

| ORLANDO (F11) APPROACH | |
|-------------------------------|--------|
| CAMBE int. 4,500' & Below | 119.4 |
| N of Orlando | 135.3 |
| SE of Orlando | 119.77 |

| DAYTONA (DAB) APPROACH | |
|-------------------------------|--------|
| N of Daytona SFC-3,500' | 125.8 |
| N of Daytona 4,000'-11,000' | 118.85 |
| SW of Daytona SFC-3,500' | 126.55 |
| SSE of Daytona SFC-3,500' | 125.35 |
| S of Daytona 4,000'-11,000' | 127.07 |

| JACKSONVILLE (JAX) APPROACH | |
|------------------------------------|---------|
| Vicinity of GNV – 28J – PGD | |
| SFC to 6,000 | 118.17 |
| 6,500 to 10,000 | 121.3 |
| Vicinity of X60 – OCF – LEE | |
| SFC to 6,000 | 118.6 |
| 6,500 to 10,000 | 128.67 |
| VFR Following/IFR Pick-up | 120.925 |

| JACKSONVILLE (ZJX) ARTCC | |
|---------------------------------|---------|
| TAY Surface & Above | 125.37 |
| CTY Area 10,500' & Above | 128.05 |
| OCF Area 10,500' & Above | 133.325 |

| MIAMI (ZMA) ARTCC | |
|-------------------------------|--------|
| S of Lakeland 9,000' & Below | 134.55 |
| S of Lakeland 10,000' & Above | 127.2 |
| SRQ Area 13,000' & Above | 132.35 |
| LBV Area | 132.45 |

| OTHER FLIGHT SERVICE (AFSS) | |
|------------------------------------|--------|
| BKV | 122.3 |
| FT DRUM | 122.2 |
| LAL (receive) | 116.0 |
| LAL (transmit) | 122.1 |
| MLB | 122.6 |
| OMN | 122.4 |
| OMN (receive) | 112.6 |
| OMN (transmit) | 122.1 |
| ORL | 122.65 |
| ORL | 123.65 |

| | |
|----------------|---------|
| PGD | 122.025 |
| PIE | 122.45 |
| PIE | 123.6 |
| SEF | 122.25 |
| SRQ (receive) | 117.0 |
| SRQ (transmit) | 122.1 |
| TIX | 123.6 |
| VRB | 122.5 |

Section 5. Airshows

2020 U.S. & CANADIAN MILITARY AERIAL AIR-CRAFT/PARACHUTE DEMONSTRATIONS

During CY 2020, 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 2020 aerial demonstration locations, subject to change without notice, are:

| 2020 DATE | USAF Thunderbirds | USN Blue Angels | USA Golden Knights | Canadian Snowbirds |
|--------------|-----------------------------|-----------------------|--------------------|--------------------|
| March | | | | |
| 14 | Laughlin AFB, TX | NAF El Centro, CA | | |
| 21-22 | Luke AFB, AZ | Lancaster, CA | | |
| 28-29 | March ARB, CA | MacDill AFB, FL | | |
| April | | | | |
| 4-5 | Lakeland, FL | NAS Kingsville, TX | | |
| 18-19 | Maxwell AFB, AL | JB Charleston, SC | | |
| 25-26 | Columbus AFB, MS | Vero Beach, FL | | |
| May | | | | |
| 2-3 | Fort Lauderdale, FL | MCAS Cherry Point, NC | | |
| 9-10 | Beale AFB, CA | Dyess AFB, TX | | |
| 16-17 | Shaw AFB, SC | McGuire AFB, NJ | | |
| 20 | | Annapolis, MD | | |
| 23-24 | Miami Beach, FL | Jones Beach, NY | | |
| 28 | Colorado Springs, CO | | | |
| 30-31 | | Scott AFB, IL | | |
| June | | | | |
| 6-7 | Salinas, CA | | | Selfridge AFB, MI |
| 13-14 | Ocean City, MD | Eau Claire, WI | | |
| 20-21 | Youngstown ARB, OH | Millington, TN | | |
| 27-28 | Hill AFB, UT | Dayton, OH | | |
| July | | | | |
| 4-5 | Battle Creek, MI | Traverse City, MI | | Pierre, SD |
| 11 | | Pensacola Beach, FL | | |
| 11-12 | JB Elmendorf-Richardson, AK | | | |

| DATE | | USAF Thunderbirds | USN Blue Angels | USA Golden Knights | Canadian Snowbirds |
|------------------|-------|----------------------|--------------------|--------------------|--------------------|
| | 18-19 | Duluth, MN | | | |
| | 22 | F.E. Warren AFB, WY | | | |
| | 23-26 | | | | Oshkosh, WI |
| | 25-26 | Ellsworth AFB, SD | Milwaukee, WI | | |
| | | | | | |
| August | 1-2 | Grand Forks AFB, ND | Seattle, WA | | |
| | 15-16 | Chicago, IL | Brunswick, ME | | |
| | 22-23 | Avoca, PA | | | |
| | 26 | Atlantic City, NJ | | | |
| | 29-30 | New Windsor, NY | Ypsilanti, MI | | |
| | | | | | |
| September | 5-6 | Gardner, KS | | | |
| | 5-7 | | Cleveland, OH | | |
| | 12-13 | | Baltimore, MD | | |
| | 19-20 | Huntington Beach, CA | NAS Oceana, VA | | |
| | 27-29 | | MCAS Miramar, CA | | |
| | | | | | |
| October | 3-4 | Minden, NV | NAS Point Mugu, CA | | Sacramento, CA |
| | 10-11 | Edwards AFB, CA | San Francisco, CA | | Houston, TX |
| | 16-17 | | NAS Pensacola, FL | | |
| | 17-18 | Fort Worth, TX | | | |
| | 24-25 | Rome, GA | | | |
| | 31 | Orlando, FL | | | |
| | | | | | |
| November | 1 | Orlando, FL | | | |
| | 7-8 | New Orleans, LA | | | |
| | 14-15 | San Antonio, TX | | | |
| | | | | | |

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.

| JANUARY – 2020 | | | | | | | FEBRUARY – 2020 | | | | | | | MARCH – 2020 | | | | | | |
|----------------|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|-----|------------------|-----|-----|-----|-----|-----|-----|
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | 1 | 2 | 3 | 4 | | | | | | | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 26 | 27 | 28 | 29 | 30 | 31 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 29 | 30 | 31 | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| APRIL – 2020 | | | | | | | MAY – 2020 | | | | | | | JUNE – 2020 | | | | | | |
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | 1 | 2 | 3 | 4 | | | | | | 1 | 2 | | 1 | 2 | 3 | 4 | 5 | 6 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 26 | 27 | 28 | 29 | 30 | | | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 28 | 29 | 30 | | | | |
| | | | | | | | 31 | | | | | | | | | | | | | |
| JULY – 2020 | | | | | | | AUGUST – 2020 | | | | | | | SEPTEMBER – 2020 | | | | | | |
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | 1 | 2 | 3 | 4 | | | | | | | 1 | | | 1 | 2 | 3 | 4 | 5 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 26 | 27 | 28 | 29 | 30 | 31 | | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 27 | 28 | 29 | 30 | | | |
| | | | | | | | 30 | 31 | | | | | | | | | | | | |
| OCTOBER – 2020 | | | | | | | NOVEMBER – 2020 | | | | | | | DECEMBER – 2020 | | | | | | |
| SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT | SUN | MON | TUE | WED | THU | FRI | SAT |
| | | | | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | 1 | 2 | 3 | 4 | 5 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 29 | 30 | | | | | | 27 | 28 | 29 | 30 | 31 | | |
| | | | | | | | | | | | | | | | | | | | | |

||| = 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***