Federal Aviation Administration

UNITED STATES GOVERNMENT SPECIFICATIONS

FLIGHT INFORMATION PUBLICATION CHART SUPPLEMENT

IAC 8
13 February 2024

Prepared by the Interagency Air Committee (IAC)

OK-10-1818

UNITED STATES GOVERNMENT SPECIFICATIONS FOR THE FLIGHT INFORMATION PUBLICATION CHART SUPPLEMENT

13 February 2024

These specifications have been developed by the Interagency Air Committee (IAC), composed of representatives of the Department of Defense and the Federal Aviation Administration, for use in the preparation of the United States Government Flight Information Publication Chart Supplement. These specifications shall be complied with, without deviation, until such time as they are amended by formal IAC action.

Changes to these specifications will be provided when necessitated by new requirements or through development action of the IAC.

Questions of interpretation that arise in the use of these specifications shall be referred to the Chair, Interagency Air Committee.

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CHANGES APPLIED TO CURRENT EDITION

REQUIREMENT DOCUMENTS

a. None applied to this edition

EDITORIAL CHANGES

a. EC 24-01 - Clarification of OPR in Chart Supplement

CHANGES APPLIED 28 NOVEMBER 2024

REQUIREMENT DOCUMENTS

a. RD 870 – OPR in Chart Supplement

EDITORIAL CHANGES

a. None applied to this edition

CHANGES APPLIED 3 OCTOBER 2023

REQUIREMENT DOCUMENTS

a. RD 863 – Addition of Arrival Alert Notices in the Chart Supplement

EDITORIAL CHANGES

a. None applied to this edition

CHANGES APPLIED 9 MAY 2023

REQUIREMENT DOCUMENTS

This edition captured all signed and approved Requirement Documents and Editorial Changes as of 9 May 2023. This edition was an overhaul of IAC 8 to capture the current state of the Chart Supplement U.S., with sections reserved for Alaska and Pacific in future editions.

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AMENDMENT OF SPECIFICATIONS

1. PROCEDURE

a. Recommendations for amendments to specifications from the Department of Defense shall be directed to:

National Geospatial-Intelligence Agency
7500 GEOINT Drive
Springfield, VA 22150-7500

b. Recommendations for amendments to specifications from the Federal Aviation Administration shall be directed to:

Federal Aviation Administration /
Aeronautical Information Services
SSMC-4 Sta # 4445
1305 East-West Highway
Silver Spring, MD 20910

2. AMENDMENT SYSTEM

a. Change to the specifications will be issued at the effective date of the latest Requirement Document (RD) and / or Editorial Change (EC).
b. The Specification will be dated, indicated along the upper margin of each page, to reflect the most current change.

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CHAPTER 8 – ALASKA CHART SUPPLEMENT (RESERVED)

CHAPTER 1
GENERAL

1.1 PURPOSE AND SCOPE

1.1.1 General

These specifications provide basic criteria and guidance for the production of the United States Government Flight Information Publication Chart Supplements.

The Chart Supplement is designed to satisfy validated Department of Defence (DoD) and civil user requirements for Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) flight data. It is distributed and used as a companion product to US Government Enroute and VFR Charts and/or the Flight Information Handbook (FIH). It is used by DoD aircrews and civil pilots planning for and engaging in all phases of air navigation.

This specification outlines items that shall be published in the supplement. Other than the directory legend, selected notices, ARTCC, FSS/RCO, routes and supplemental communications content of the supplement will be limited to data required for the specific geographic areas covered by the supplement.

1.1.2 Purpose

The purpose of these specifications is to provide appropriate guidelines to ensure uniformity and standardization of content and portrayal of airport and facility data, Notices and Associated Data published in the supplements.

1.2 REQUIREMENTS

1.2.1 General

The supplements are bound booklets containing aeronautical information in textual, tabulated or graphic formats. Format chosen for any particular item of data varies according to the nature of the information.

1.2.2 Color

The supplements shall be printed in black. Instrument Approach Procedure Charts will be printed in accordance with IAC 4, Instrument Approach Procedures (IAPs) and Airport Diagrams. Various screens and percentages of color, as specified, shall be used to obtain a suitable contrast. All information, both textual and graphic, will be in solid colors unless otherwise specified.

1.2.3 Area of Coverage

Each supplement shall contain required information appropriate to a specific geographic area of coverage. The contents of each supplement will be as outlined in this specification.

1.2.3.1 Chart Supplement Contents

The Chart Supplement contains aeronautical data required to support flight operations within the United States and its territories. The following additional selected data shall also be included:

a. Facilities in Canada that fall within Alaska Enroute Chart parameters and meet Alaska Enroute Charting requirements will be included in the Alaska Supplement;
b. Other facilities in Canada will be included in the appropriate supplement when requested by the appropriate authority;
c. The Pacific Supplement contains ATC procedures and terminal SID, STAR and IAP charts applicable to that area.

1.2.3.2 Chart Supplement Volumes

Chart Supplement volumes shall be titled as follows and shall contain the states listed below:

a. Northeast U.S. - Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia.
b. Southeast U.S. - Alabama, Florida, Georgia, Kentucky, North Carolina, Puerto Rico, South Carolina, Tennessee, and the Virgin Islands.
c. East Central U.S. - Illinois, Indiana, Michigan, Ohio, and Wisconsin.
d. Northwest U.S. - Idaho, Montana, Oregon, Washington, and Wyoming, and selected Canadian facilities as requested.
e. North Central U.S. - Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.
f. South Central U.S. - Arkansas, Louisiana, Mississippi, Oklahoma, and Texas.
g. Southwest U.S. - Arizona, California, Colorado, Nevada, New Mexico, and Utah.
h. Alaska U.S. - Alaska and selected Canadian facilities as requested.
i. Pacific - Hawaii, Pacific Islands.

1.2.4 Symbolization

1.2.4.1 General

The symbols contained in this manual have been developed for use in the production of U.S. Government aeronautical charts and publications. These symbols have been developed through the United States Government Interagency Air Committee (IAC), and their supporting technical groups, for the purpose of standardization of the aeronautical symbols portrayed on charts and publications used by both military and civil aviation.

1.2.4.2 Airport Sketches

Symbolization used in the preparation of the Airport Sketch shall be in accordance with the Aeronautical Information/Chart Symbols included herein and in the appendices.

- Graphics contained in the supplement may utilize symbology defined in IAC 2, Sectional Aeronautical and VFR Terminal Area Charts.
- Landmarks can be depicted pictorially, as required.
- Symbology used in the preparation of the Airport Diagrams shall be in accordance with IAC 4, Instrument Approach Procedures (IAPs) and Airport Diagrams.

1.2.4.3 Chart Supplement Pacific: Terminal Procedures

Departures, Arrivals, and IAPs published in the Pacific Supplement utilize existing specifications and symbolization documented in

- IAC 4, Instrument Approach Procedures (IAPs) and Airport Diagrams
- IAC 7, Graphic Instrument Departure Procedure (DP) Charts
- IAC 14, Standard Terminal Arrival (STAR) Charts
- IAC 17, Terminal Procedures Publication (TPP)

1.2.5 Type Styles

Unless otherwise specified, the type style shall be News Gothic BT and News Gothic Condensed BT, or as depicted in the various appendices.

When the use of equivalent type styles is necessary, printed characters shall be such as to equal the height, width and line weight of the specified type as determined by the naked eye.

1.2.6 Abbreviations/Acronyms

Abbreviations and acronyms should conform to ICAO standards when feasible. When no ICAO abbreviation exists, the FAA abbreviation will be used. If no FAA abbreviation exists, the DoD abbreviation will be used.

1.2.7 Quality Standards

The highest standards of accuracy and currency of information shall be maintained. Final product quality shall be achieved by conformance to these specifications, to other appropriate operating procedures and to the in-process quality control system designed for this product.

Although the digital chart files are compiled in accordance with these specifications, the final product may vary slightly in appearance due to differences in printing techniques/processes and/or digital display technique.

1.3 APPENDICES

The appendices included within these specifications are for use as general guides in layout, format and content. They do not necessarily reflect all possible operational content.

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CHAPTER 2
LAYOUT AND FORMAT

2.1 GENERAL

Unless otherwise specified, textual, tabulated, and graphic data shall be positioned so as to read perpendicular to the bound edge. Page-size graphics may be positioned with the top or bottom at the bound edge if the east-west dimensions are greater than north-south. The bottom of the graphic will be at the bound edge on even-numbered pages, and the top of the graphic will be at the bound edge on odd-numbered pages.

Each Section will begin at the top of a new page.

Each item of information has its own basic layout and format and is discussed under the subject heading for the specific data.

Separation between Airport/Facility entries will be solid or dash line. A solid ruled line, extending across the width of the page, will be used between entries with differing associated cities. A dashed ruled line, extending across the width of the page, will be used between entries that have the same associated city.

2.2 SIZE AND DIMENSIONS

The trim size of the Supplement shall measure 5 3/8" x 8 1/4". The page limitation shall measure 4 3/4" x 7 3/4".

2.3 COVERS

2.3.1 Outside Front Cover

The outside front cover color, font style, size, color and position shall be as indicated in the following Appendices:

- **Appendix 1** - Front Cover - Chart Supplement U.S.
- **Appendix 2** - Front Cover - Chart Supplement U.S. with Important Notice
- **Appendix 3** - Front Cover - Chart Supplement Alaska
- **Appendix 4** - Front Cover - Chart Supplement Pacific

2.3.1.1 FAA Logo/Banner

The FAA logo/banner shall be shown in white type on a blue background strip located at the top of the cover as indicated in appendices.

2.3.1.2 Trademark Logo

The trademark symbol (TM) shall be shown in white type screen as indicated in the appendices.

2.3.1.3 Publication Title and Geographic Area Name

The title of the United States Government Flight Information Publication Chart Supplement shall be:

UNITED STATES GOVERNMENT FLIGHT INFORMATION PUBLICATION

CHART SUPPLEMENT
(Specific Geographic Area Name)

2.3.1.4 Effective Dates and Times

The dates on the cover shall reflect the effective Z (Zulu) time and date, and the expiration Z time and date of the aeronautical data. Dates shown shall consist of the day, month, and year; e.g Effective 0901Z 8 JAN 2022. Names of the months shall be abbreviated to the first three letters as appropriate.

2.3.1.5 Coverage Area

The area of coverage applicable to each volume shall be shown in blue. State boundaries in the contiguous U.S. will be depicted in green. Identification text in white. The Chart Supplement Alaska will show a graphic of the state of Alaska in blue with identification text in white. The Chart Supplement Pacific will show a graphic of the earth in blue and white. See Appendices for examples.

2.3.1.6 Notes

Type size and style shall be 8 pt. Arial Bold (upper/lower case). Notes will be shown in the following order as follows and as shown in the Appendices.

2.3.1.6.1 Consult NOTAMs Note

The note “Consult NOTAMs for latest information” note shall be shown.

2.3.1.6.2 Consult/Subscribe to FAA Safety Alerts and Charting Notices Note

The note “Consult/Subscribe to FAA Safety Alerts and Charting Notices at: *(link to current Safety Alerts and Charting Notices website here)*” note shall be shown.

2.3.1.6.3 Warning Note

The note “Warning: Refer to current foreign chart and flight information publications for information within foreign airspace” will be shown.

2.3.1.6.4 IAC Credit Note

The following Interagency Air Committee (IAC) credit note shall be shown, positioned .25" above the lower trim edge as indicated in appendices. “Published from digital files compiled in accordance with Interagency Air Committee specifications and agreements approved by: Department of Defense • Federal Aviation Administration”

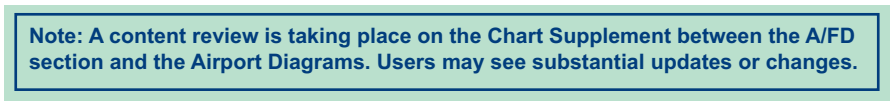
2.3.1.7 QR Code

The QR Code shall be positioned on the title panel.

2.3.1.8 Flags - Important Notices

Important notices may be flagged on the front cover positioned below the effective dates as space permits. Type size and style shall be 8 pt. Arial Bold (upper/lower case) and bound within a frame box.

Figure 2.1 Flags - Important Notice Example



References:

Appendix 2 - Front Cover - Chart Supplement U.S. with Important Notice

2.3.2 Inside Front Cover

References:

Appendix 5 - Inside Front Cover - Chart Supplement U.S.
Appendix 6 - Inside Front Cover - Chart Supplement Alaska
Appendix 7 - Inside Front Cover - Chart Supplement Pacific

2.3.2.1 General Information

The title “GENERAL INFORMATION”, will begin on the inside front cover and continue to the succeeding pages as necessary. See **Chapter 3** for detailed specifications.

2.3.3 Inside Back Cover

2.3.3.1 Chart Supplement U.S. & AK

The PIREP Form shall be included in the Chart Supplement. The PIREP form is made up of two pages. the PIREP Form will be on the inside back cover with the information for submitting PIREPs on the facing page.

References:

Appendix 8 - Submitting Pilot Weather Reports (PIREP) - PIREP FORM
Appendix 9 - Inside Back Cover - Chart Supplement U.S. & AK - PIREP FORM

2.3.3.2 Chart Supplement Pacific

The inside back cover shall contain the Instrument Takeoff or Approach Procedures Chart Rate of Climb/Descent Table. This section will follow the specifications in IAC 17.

References:

Appendix 10 - Inside Back Cover - Chart Supplement Pacific

2.3.4 Outside Back Cover

References:

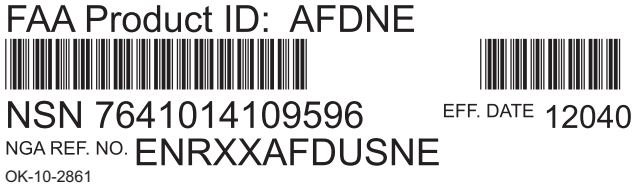
Appendix 11 - Outside Back Cover - Chart Supplement U.S.
Appendix 12 - Outside Back Cover - Chart Supplement Alaska
Appendix 13 - Outside Back Cover - Chart Supplement Pacific

2.3.4.1 Common Items - Applies to All Three Products

2.3.4.1.1 Bar Codes

Bar code information and associated text shall be positioned at the bottom right as shown in Appendices. Bar codes shall be depicted for the National Stock Number and the Effective Julian Date. The National Stock Number (NSN), the NGA Reference number and the effective date (Julian) will also be shown textually. Font and type size as shown in the appendices. The FAA Product ID shall be shown above the NSN bar code. The branding approval code will be shown below the NGA Ref. No.

Figure 2.2 Bar Codes



2.3.4.2 Chart Supplement U.S.

2.3.4.2.1 Area of Coverage

The Outside Back Cover shall show an "AREA OF COVERAGE" graphic depicting the boundaries of each volume. Each volume area shall be identified by volume name, in 8 pt Arial (Caps). Each state shall be identified with the individual two letter Post Office code in 6 pt. Arial (Caps). The area of coverage for the volume will be shown with states shaded in a blue color with white type.

2.3.4.3 Chart Supplement Alaska and Chart Supplement Pacific

The Alaska and Pacific outside back cover shall contain the IFR and VFR Position Reporting, Change in Flight Plan and Flight Plan Filing procedures. The font style Arial, type size shall be 10 pt (caps) for the title and 6 pt (caps and lowercase) for the remaining text.

2.3.5 Spine

The spine shall contain the following:

References:

Appendix 14 - Spines

2.3.5.1 Abbreviated Chart Supplement Name

Two or three-letter abbreviated supplement name.

2.3.5.2 Two Letter Area Code (Postal Code) for Chart Supplement U.S.

Alphabetized coverage using two letter post office code negative 18 point type (caps) on black background.

2.3.5.3 Full Name Coverage - Alaska and Pacific Chart Supplements

Full name coverage in negative 18 point type (caps) on black background for Alaska and Pacific Chart Supplements.

2.3.5.4 Effective Dates

The effective dates of the volume in 10 point type (caps).

2.3.5.5 Read of Spine

The spine shall read from left to right with the front cover facing up

2.4 TEXTUAL/TABULATED DATA

2.4.1 General Format

Unless otherwise specified, all data shall be set flush left using 6 pt type News Gothic BT (caps and lowercase). Emphasis of words, phrases, or sentences shall be accomplished by using 6 pt News Gothic BT type (caps). Type for headings, sub-headings and paragraph numbers shall be of an appropriate size and style for visual distinction.

2.4.2 Page Heading Format

Page headings shall be shown in 10 pt News Gothic Condensed BT Bold text, centered at top of page and will indicate the section title.

Figure 2.3 Sample Page Heading

AIRPORT/FACILITY DIRECTORY LEGEND

2.4.3 Airport/Facility Directory Entry Format

1. The heading and individual city name shall be in 10 pt News Gothic Condensed BT Bold type (caps).
2. The facility title name(s) shall be in 8 pt News Gothic Condensed BT Bold type (caps).
3. Type size for major data groupings, e.g., SERVICE, REMARKS, etc., shall be 6 pt News Gothic Condensed BT Bold (caps).
4. Other sub-heading identification shall be 6 News Gothic Condensed BT Bold point (caps) and indented.

2.4.4 Borders and Specific Tabulations

Borders around specific tabulations, vertical and/or horizontal separation lines shall be of a size or line weight that reflects good graphic practice.

2.4.5 Page Footer

Page footers shall be shown in 6 pt NewsGoth Cn BT Bold text, centered at bottom of page and will indicate the two or three letter abbreviated supplement name, effective start and end date as shown in the example below.

Figure 2.4 Sample Page Footer

NW, 19 MAY 2022 to 14 JUL 2022

2.5 GRAPHICS DATA

It is the responsibility of the compiling agency to evaluate each individual requirement and portray required data in accordance with good graphic/cartographic practice. Symbols used shall be standard IAC approved symbols or as submitted by approving authority, and reduced in size if necessary. Line weights and type shall be of a size commensurate with the scale or size of the graphic.

2.5.1 Graphic Size Limitations

2.5.1.1 Graphics and Images

All graphics and images that make up the Notice, must be in gray scale and fit withing the margins of the Chart Supplement Notices. Images/graphics that exceed the maximum height and width listed below will be rescaled by the production software to fit withing those dimension listed.

2.5.1.1.1 Graphic/Image Dimensions

Max Width: 4 11/16 inches
Max Height: 7 1/4 inches
Minimum Resolution: 300 dpi

2.6 PAGE NUMBERS

Front and back covers (inside and outside) shall not be numbered.

Odd-numbered pages shall be identified by page number, positioned in the upper right hand corner of the page. Even-numbered pages shall be identified by page number, positioned in the upper left corner of the page.

Type for page numbers shall be 10 point News Gothic Condensed BT Bold (caps).

2.6.1 Pacific Chart Supplement - Terminal Procedures

The Chart Supplement Pacific will contain a section of Terminal Procedures. This section will follow the specifications for page numbering as described in IAC 17 - Flight Information Publication Terminal Procedures Publication.

2.7 ARRANGEMENT

Data within individual sections of the Supplement shall be arranged, unless otherwise specified, in the same sequence as mentioned within this specification.

2.7.1 Chart Supplement - U.S.

The Supplement will be divided into sections of information published in the following sequence:

Outside Front Cover	
Inside Front Cover	General Information
General Information	Table of Contents City/Military Airport Cross Reference Seaplane Landing Areas Abbreviations
Section 1	Airport/Facility Directory Legend
Section 2	Airport/Facility Directory
Section 3	Notices
Section 4	Associated Data
Section 5	Airport Diagrams Legend Airport Hot Spots Airport Diagrams
Inside Back Cover	PIREP Form
Outside Back Cover	Locator Map (U.S. Chart Supplement)

References:

Chapter 5 - Airport/Facility Directory Content

2.7.2 Chart Supplement - Alaska (AK)

The Supplement will be divided into sections of information published in the following sequence:

Outside Front Cover	
Inside Front Cover	General Information
General Information	Table of Contents City/Military Airport Cross Reference Seaplane Landing Areas Abbreviations
Section 1	Airport/Facility Directory Legend
Section 2	Airport/Facility Directory
Section 3	Notices
Section 4	Associated Data
Section 5	Procedures
Section 6	Emergency Procedures
Section 7	Airport Diagrams Legend Airport Hot Spots Airport Diagrams
Inside Back Cover	PIREP Form
Outside Back Cover	Position Reports/Flight Plans

References:

Chapter 8 - Alaska Chart Supplement (Reserved)

2.7.3 Chart Supplement - Pacific

The Supplement will be divided into sections of information published in the following sequence:

Outside Front Cover	
Inside Front Cover	General Information
General Information	Table of Contents Abbreviations
Section 1	Airport/Facility Directory Legend
Section 2	Airport/Facility Directory
Section 3	Notices
Section 4	Associated Data
Section 5	Procedures
Section 6	Emergency Procedures
Section 7	Terminal Procedures Table of Contents
Inside Back Cover	Climb-Descent Table (PAC)
Outside Back Cover	Position Reports/Flight Plans

References:

Chapter 9 - Pacific Chart Supplement (Reserved)

2.7.4 Blank Pages

The layout of this publication may require the insertion of blank pages to complete a signature, to ensure that a graphic and its associated descriptive text are on facing pages, or to start a section on an odd-numbered page. All blank pages will be numbered and identified by the following note centered in 10 pt type (caps):

Figure 2.5 Intentionally Left Blank

INTENTIONALLY

LEFT

BLANK

2.7.5 Lengthy Airport Entries

Airport/Facility entries may be continued on the next page provided a major grouping (SERVICES, REMARKS, etc.) is completed at the bottom of the first page and a new major grouping begins at the top of the succeeding page. A note will be added indicating 'CONTINUED ON NEXT PAGE' and 'CONTINUED FROM PRECEDING PAGE' centered in 10 point type (caps) bold.

Figure 2.6 Continued On Next Page / Continued From Previous Page Example

MILITARY REMARKS: ANG Ang ramp official business only; PPR—V966–8131. Birds invof arpt. BASH Phase II Apr–May and Aug–Oct; current Bird Watch cond not on ATIS. Transient acft rqr follow me assist entering ANG ramp. PPR 24 hr PN rqr; offl bus only. Ctc ramp control 121.8 for entry on ANG ramp. ANG freqs 138.95, 353.45. Aft hr ctc Command Post—DSN 726–7148; C901–291–7311/7312 or security forces—DSN 726–7101; C901–291–7101/7133. PPR DSN 726–7131/7505, C901–291–7131/7505. Mil ramp ops 1230–0430Z‡ Mon–Fri; clsd altn Mon and hol. Mil ramp clsd outside of pub HR without OG/CC apvl DSN 726–7557, C901–291–7557. Tnst acft maint not avbl. Refuel svc for otr than C17 acft rqr qualified crew chief or crewmembers. Non–C17 acft support prvdd by contract FBO on fld. Security avbl 24 hrs, DSN 726–7101, C901–291–7101. Comd Post DSN 726–7148/7311/7312, C901–291–7148/7311/7312. Opr 1230–0430Z‡ Mon–Fri, clsd altn Mon and hol due to altn work sched. Afld mgr does not issue or store COMSEC for tran crews. Tmpry stor of classified materials up to TOP SECRET at Comd Post. ATIS info reports bird activity H24 in area. Mil ramp ops at reduced ARFF, downgraded to yellow.

CONTINUED ON NEXT PAGE

SE, 22 APR 2021 to 17 JUN 2021

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CONTINUED FROM PRECEDING PAGE

AIRPORT MANAGER: 901-922-8000
WEATHER DATA SOURCES: ASOS 127.75 (901) 842–8483. TDWR.
COMMUNICATIONS: D–ATIS 127.75 **UNICOM** 122.95
RCO 122.2 (JACKSON RADIO)
Ⓡ **APP CON** 119.1 (176°–355°) 125.8 (356°–175°)
TOWER 118.3 (Rwy 09–27) 119.7 (Rwy 18C–36C, Rwy 18L–36R) 128.425 (Rwy 18R–36L)
GND CON 121.0 (Rwy 09–27) 121.65 (Rwy 18R–36L) 121.9 (Rwy 18C–36C, Rwy 18L–36R) **CLNC DEL** 125.2
Ⓡ **DEP CON** 124.15 (356°–175°) 124.65 (176°–355°)
CPDLC (LOGON KUSA)
PDC

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CHAPTER 3
CONTENT

3.1 GENERAL

The page heading "GENERAL INFORMATION", will begin on the inside front cover and continue to the succeeding pages. The General Information section shall contain the following items in the order listed below:

1. Inside Front Cover
2. Table of Contents
3. City/Military Airport Cross Reference (U.S. and AK)
4. Seaplane Landing Areas (U.S. and AK)
5. Abbreviations

References:

Appendix 5 - Inside Front Cover - Chart Supplement U.S.
Appendix 6 - Inside Front Cover - Chart Supplement Alaska
Appendix 7 - Inside Front Cover - Chart Supplement Pacific

3.2 INSIDE FRONT COVER - U.S.

3.2.1 General Information - Inside Front Cover - U.S.

The inside front cover of U.S. Chart Supplement editions shall contain the following items:

1. Introductory Text
2. Corrections, Comments, and/or Procurement
3. Aeronautical Information Publication Note

References:

Appendix 5 - Inside Front Cover - Chart Supplement U.S.

3.2.2 General information - Introductory Text

3.2.2.1 Introductory Text (U.S.)

Figure 3.1 General Information - Introductory Text - U.S.

This Chart Supplement is a Civil Flight Information Publication updated every eight weeks by the U.S. Department of Transportation, Federal Aviation Administration, Aeronautical Information Services, (current FAA AIS Homepage URL here).
It is designed for use with Aeronautical Charts covering the conterminous United States, Puerto Rico and the Virgin Islands.

The Airport/Facility Directory section contains all public–use airports, seaplane bases and heliports, military facilities, and selected private use facilities specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally, this publication contains communications data, navigational facilities and certain special notices and procedures.

Military data contained within this publication is provided by the National Geospatial–Intelligence Agency and is intended to provide reference data for military and/or joint use airports. Not all military data contained in this publication is applicable to civil users.

3.2.3 Corrections, Comments, and/or Procurement Text

The Corrections, Comments, and/or Procurement text contains the following information in the order listed below:

1. Critical Note
2. Comments or Corrections
3. Cut-off Notice
4. Cut-off Date Table
5. Procurement Note

Additional specific notes for a specific series of Chart Supplement may follow as detailed in ths specifications.

3.2.3.1 Critical Note

The supplement shall contain a critical note at the start of the Corrections, Comments, and/or Procurement text. “Critical” shall appear in News Goth Cn BT in 6pt font, bold, in all caps, with the remainder of the text appearing in NewGoth BT.

Figure 3.2 Corrections, Comments, and/or Procurement Text - U.S. & AK

CORRECTIONS, COMMENTS, AND/OR PROCUREMENT

CRITICAL information such as equipment malfunction, abnormal field conditions, hazards to flight, etc., should be reported as soon as possible.

3.2.3.2 Comments or Corrections Note with Address

The Comments or Corrections Note with Address shall appears as illustrated in the Appendices.

References:

Appendix 5 - Inside Front Cover - Chart Supplement U.S.

3.2.3.3 Cut-off Notice

The Cut-off Notice will appear as follows:

Figure 3.3 Cut-off Notice

NOTICE: Changes must be received by Aeronautical Information Services as soon as possible but not later than the “cut–off” dates listed below to assure publication on the desired effective date. Information cut–off dates that fall on a federal holiday must be received the previous work day.

3.2.3.4 Cut-off Date Table

The Supplement shall contain a table that provides the cut off dates for the current chart supplement and the five following editions. The table shall consist of Effective Date, Airport Information Cut-off date and Airspace Information Cut-off date.

Figure 3.4 Sample Cut-off Date Table

Effective Date	Airport Information Cut–off date	Airspace Information* Cut–off date
19 May 22	6 Apr 22	22 Mar 22
14 Jul 22	1 Jun 22	17 May 22
8 Sep 22	27 Jul 22	12 Jul 22
3 Nov 22	21 Sep 22	6 Sep 22
29 Dec 22	16 Nov 22	1 Nov 22
23 Feb 23	11 Jan 23	27 Dec 22

*Airspace Information includes changes to preferred routes and graphic depictions on charts.

3.2.3.5 Procurement Note

Figure 3.5 Procurement Note

FOR PROCUREMENT:

For digital products, visit our website at:
(current digital products website URL here)

For a list of approved FAA Print Providers, visit our website at:
(current list of approved FAA Print Providers website URL here)

3.2.4 Aeronautical Information Publication (AIP) Note - U.S.

The AIP Note - U.S. shall appear after the Procurement information in all Caps.

Figure 3.6 AIP Note Text - U.S.

THIS PUBLICATION COMPRISES PART OF THE FOLLOWING SECTIONS OF THE UNITED STATES AERONAUTICAL INFORMATION PUBLICATION (AIP): GEN, ENR AND AD.

3.2.5 Inside Front Cover - AK

3.2.5.1 General Information - Inside Front Cover - AK

The inside front cover of the Chart Supplement Alaska shall contain the following items:

1. Introductory Text - AK
2. Corrections, Comments, and/or Procurement - Civil
3. Corrections, Comments, and/or Procurement - Military
4. Aeronautical Information Publication Note - AK
5. Aeronautical Information Manual, Basic Flight Information and ATC Procedures Note

References:

Appendix 6 - Inside Front Cover - Chart Supplement Alaska

3.2.5.2 General information - Introductory Text -AK

3.2.5.2.1 Introductory Text (AK)

Figure 3.7 Introductory Text - AK

This Chart Supplement is a joint Civil/Military Flight Information Publication (FLIP), updated every 8 weeks by the U.S. Department of Transportation, Federal Aviation Administration, Aeronautical Information Services, http://www.faa.gov/go/ais. It is designed for use with the Flight Information Publication Enroute Charts, Alaska Terminal, USAF TACAN Charts covering Alaska and portions of Southwest and Northwest Canada, and Sectional Aeronautical Charts.

This Chart Supplement contains an Airport/Facility Directory of all airports shown on Enroute Charts, and those requested by appropriate agencies, communications data, navigational facilities, RADAR data, special notices and procedures applicable to the area of chart coverage. Military data of a more static or planning nature, is published in DoD Flight Information Publication AP/I Area Planning, North and South America.

The official ATC procedures for operating in the State of Alaska are the same as those in the conterminous United States, with a few exceptions, and are contained in the FAA Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

3.2.5.3 Corrections, Comments, and/or Procurement Text - Civil

The Corrections, Comments, and/or Procurement Page with the following information in the order listed below:

1. Critical Note
2. Comments or Corrections
3. Cut-off Notice
4. Cut-off Dates Table
5. Procurement Note

3.2.5.3.1 Critical Note

The supplement shall contain a critical note at the start of the Corrections, Comments, and/or Procurement text as specified in **3.2.3.1**.

3.2.5.3.2 Comments or Corrections Note with Address

The Comments or Corrections Note with Address shall appears as illustrated in the Appendices.

References:

Appendix 6 - Inside Front Cover - Chart Supplement Alaska

3.2.5.3.3 Cut-off Notice Note

The Cut-off Notice Note will appear as specified in **3.2.3.3** and shown in **Figure 3.3**.

3.2.5.3.4 Cut-off Date Table

The Supplement shall contain a table that provides the cut off dates for the current chart supplement and the five following editions as specified in **3.2.3** and shown in **Figure 3.4**.

3.2.5.3.5 Procurement Note

The Procurement Note shall appear as specified after the Cut-off Date table as shown in **Figure 3.5**.

3.2.5.3.6 Corrections, Comments, and/or Procurement Text - Military

The Military Note - AK shall appear after the Procurement Note.

Figure 3.8 Military Note - AK

MILITARY

For Corrections Information, See Chapter 11 of General Planning (GP). For Procurement refer to DOD Catalog of Aeronautical Charts and Flight Information Publications.

3.2.5.4 Aeronautical Information Publication Note - AK

The AIP Note - AK shall appear after the Military Note - AK.

Figure 3.9 AIP Note - AK

THIS PUBLICATION COMPRISES PART OF THE FOLLOWING SECTIONS OF THE UNITED STATES AERONAUTICAL INFORMATION PUBLICATION (AIP): GEN, AGA 3, COM 2.

3.2.5.5 Aeronautical Information Manual, Basic Flight Information and ATC Procedures Note (AK)

The Aeronautical Information Manual, Basic Flight Information and ATC Procedures note shall appear after the AIP Note - AK.

Figure 3.10 AIM, Basic Flight Information and ATC Procedures Text

NOTE: AERONAUTICAL INFORMATION MANUAL, BASIC FLIGHT INFORMATION AND ATC PROCEDURES
Civil pilots are urged to use the FAA Aeronautical Information Manual (AIM), Basic Flight Information and ATC Procedures to complement the operational data contained in the Alaska Supplement. The AIM contains information on the basic fundamentals required to fly in the U.S. National Airspace System which are not necessarily repeated within this Supplement.
Representative of data contained consists of a Pilot/Controller Glossary; descriptions of Radio Aids to Navigation; Airspace, Air Traffic Control information involving services, rules, regulations, flight procedures, and emergency procedures; Safety of flight concerning weather, Medical Facts for Pilots and Good Operating Practices.

3.3 INSIDE FRONT COVER - PAC

3.3.1 General Information - Inside Front Cover - PAC

The inside front cover of the Chart Supplement - Pacific shall contain the following items:

1. Introductory Text - PAC
2. Corrections, Comments, and/or Procurement - PAC
3. FAA AIS Notes - PAC
4. IFR Enroute Pacific Ocean and Hawaiian Island Chart Note
5. Amendment Notice
6. Aeronautical Information Publication Note - PAC

References:

Appendix 7 - Inside Front Cover - Chart Supplement Pacific

3.3.2 General information - Introductory Text

3.3.2.1 Introductory Text (PAC)

Figure 3.11 Introductory Text - PAC

This Chart Supplement is a Civil Flight Information Publication updated every eight weeks by the U.S. Department of Transportation, Federal Aviation Administration, Aeronautical Information Services, http://www.faa.gov/go/ais.
It is designed for use with Flight Information Publication Enroute Charts, and the Sectional Aeronautical Chart covering the State of Hawaii and that area of the Pacific served by U.S. facilities.

This Chart Supplement contains an Airport/Facility Directory, ATC procedures and terminal SID, STAR and IAP charts applicable to the Pacific area.

The official ATC procedures for operating in the Pacific, outside sovereign US airspace are prescribed by ICAO and are contained in ICAO documents 4444, 7030 and Annexes 2 and 11.

3.3.3 Corrections, Comments, and/or Procurement Text

The Supplement shall contain a Corrections, Comments, and/or Procurement Page with the following information in the order listed below:

1. Critical Note
2. Comments or Corrections
3. Cut-off Notice
4. Cut-off Dates Table
5. Procurement Note

Additional specific notes for a specific series of Chart Supplement may follow as detailed in ths specifications.

3.3.3.1 Critical Note

The supplement shall contain a critical note at the start of the Corrections, Comments, and/or Procurement text. “Critical” shall appear in News Goth Cn BT in 6pt font, bold, in all caps, with the remainder of the text appearing in NewGoth BT.

The Critical Note in the Pacific book shall contain the same first sentence and font format as the U.S. and AK Supplements, but add a Note immediately following it. “NOTE:” shall appear in all caps and underlined.

Figure 3.12 Corrections, Comments, and/or Procurement Text - PAC

CORRECTIONS, COMMENTS, AND/OR PROCUREMENT

CRITICAL information such as equipment malfunction, abnormal field conditions, hazards to flight, etc., should be reported as soon as possible. NOTE: Requests for the creation or revision to Airport Diagrams should be in accordance with FAA Order 7910.4.

3.3.3.2 Comments or Corrections Note with Address

The Comments and Corrections Note with Address shall appears as illustrated in the Appendices.

References:

Appendix 7 - Inside Front Cover - Chart Supplement Pacific

3.3.3.3 Cut-off Notice

The Notice Note will appear as specified in **3.2.3.3**.

3.3.3.4 Cut-off Date Table

The Supplement shall contain a table that provides the cut off dates for the current chart supplement and the five following editions. The table shall consist of Effective Date, Airport Information Cut-off date and Airspace Information Cut-off date.

Figure 3.13 Sample Cut-off Date Table - PAC

Effective Date	Airport Information Cut–off date	Airspace Information* Cut–off date
19 May 22	6 Apr 22	22 Mar 22
14 Jul 22	1 Jun 22	17 May 22
8 Sep 22	27 Jul 22	12 Jul 22
3 Nov 22	21 Sep 22	6 Sep 22
29 Dec 22	16 Nov 22	1 Nov 22
23 Feb 23	11 Jan 23	27 Dec 22

*Airspace Information includes changes to preferred routes, SID’s, STAR’s, IAP’s and graphic depictions on charts.

3.3.3.5 Procurement Note

The Procurement Note will appear as specified in **3.2.3.5**.

3.3.4 FAA AIS Note - PAC

The FAA AIS Note - PAC shall appear after the Procurement Note.

Figure 3.14 FAA AIS Note - PAC

The following publications for use in the Pacific area are available from the FAA, Aeronautical Information Services:

CHART SUPPLEMENT PACIFIC. This supplement is issued every 56 days.
HAWAIIAN ISLAND–MARIANA ISLANDS SECTIONAL CHART. This chart is issued every 56 days.
NORTH PACIFIC OCEAN ROUTE CHARTS. Charts are issued every 56 days at 1:12,000,000 composite or four 1:7,000,000 area charts.

3.3.5 IFR Enroute Pacific Ocean and Hawaiian Island Chart Note (PAC)

The note below shall appear after the FAA AIS-PAC Note.

Figure 3.15 IFR Enroute Pacific Ocean and Hawaiian Island Chart Note Text

IFR ENROUTE PACIFIC OCEAN AND HAWAIIAN ISLAND CHART. Available from the National Geospatial–Intelligence Agency, provides coverage of Pacific areas served by US facilities.
NGA Combat Support Center, ATTN: DDCP
Washington, D.C. 20315–0020
Telephone (301) 227–2495 or Toll Free 1–800–826–0342

3.3.6 Amendment Notice (PAC)

The Amendment Notice will appear after the IFR Note.

Figure 3.16 Amendment Notice - PAC

AMENDMENT NOTICE

A change notice will only be issued for safety considerations such as when an amended or original instrument approach procedure is issued.
UPON RECEIPT, THE AMENDMENT NOTICE SHOULD BE ATTACHED TO THIS PAGE SO THAT USERS HAVE ALL SIGNIFICANT CHANGES AVAILABLE.

3.3.7 Aeronautical Information Publication (AIP) Note - PAC

The AIP Note - PAC Shall appear after the Amendment Notice - PAC.

Figure 3.17 AIP Note - PAC

This Airport/Facility Directory comprises part of the following sections of the United States Aeronautical Information Publication (AIP): GEN, AGA 3, COM 2.

3.4 TABLE OF CONTENTS

The Table of Contents page immediately follows “GENERAL INFORMATION” (inside front cover) at the top of the next page.

References:

Appendix 15 - Table of Contents - Chart Supplement U.S.
Appendix 16 - Table of Contents - Chart Supplement Alaska
Appendix 17 - Table of Contents - Chart Supplement Pacific

3.4.1 Title

The title “TABLE OF CONTENTS” in 8 point bold type (caps) followed by the contents in 8 point type.

3.4.2 Chart Supplement Section Titles

Section title shall appear in all CAPS. The title "SECTION", i.e. SECTION 3: NOTICES, as part of a section title shall only appear in the Table of Contents.

3.4.3 Chart Supplement Section Sub-Titles

Sub-Titles shall appear with the first letter of each word capitalized and indented under the Section title.

3.5 CROSS REFERENCE LISTINGS

Cross reference listings of military airports, and seaplane bases for all locations that fall within the chart supplement volume will be shown following the TOC page.

The listings shall be columnized listings alphabetical by facility name followed by abbreviated state name (or if in a foreign area, the abbreviated country name) and the city name.

3.5.1 City/Military Airport Cross Reference (U.S. & AK)

References:

Appendix 18 - City/Military Airport Cross Reference - U.S. & AK

3.5.1.1 City/Military Airport Cross Reference Header

The header text shall appear in NewsGoth BT, 8 pt, bold font, in all CAPs, center justified.

3.5.1.2 City/Military Airport Cross Reference Note

The City/Military Airport Cross Reference note shall appear in NewsGoth Bt, 6 pt font. The Reference note shall appear at the top of the first page only.

Figure 3.18 City/Military Airport Cross Reference Note

Military airports are listed alphabetically by state and official airport name. The following city/military airport cross–reference listing provides alphabetical listing by state and city name for all military airport published in this directory.

3.5.1.3 City/Military Airport Cross Reference Layout and Organization

3.5.1.3.1 Column Heading

Column headings shall appear in NewsGoth Bt, 6pt, Bold font.

Figure 3.19 City/Military Heading Sample

STATE	CITY NAME	AIRPORT NAME
AK	ANCHORAGE	ELMENDORF AFB
AK	ANCHORAGE	ELMENDORF HOSPITAL HELIPORT

3.5.1.3.2 City/Military Airport Cross Reference Organization

Military airports shall be listed alphabetically first by state abbreviation, then by city name and then by facility name for all Military or joint-use Military/Civilian airports contained in the supplement.

Figure 3.20 Same City with Multiple City/Military Airport Cross Reference Listing Example

FL	HOMESTEAD	HOMESTEAD ARB
FL	JACKSONVILLE	JACKSONVILLE NAS (TOWERS FLD)
FL	JACKSONVILLE	WHITEHOUSE NOLF
FL	JUPITER	WILLIAM P GWINN
FL	KEY WEST	KEY WEST NAS (BOCA CHICA FLD)
FL	MARY ESTHER	HURLBURT FLD
FL	MAYPORT	MAYPORT NS (ADM. DAVID L. MCDONALD FLD)
FL	MILTON	CHOCTAW NOLF
FL	MILTON	WHITING FLD NAS NORTH
FL	MILTON	WHITING FLD NAS SOUTH
FL	PANAMA CITY	TYNDALL AFB

3.5.2 Seaplane Landing Areas Listing (U.S. & AK)

Seaplane Landing Areas will be listed for all locations that fall within the Chart Supplement volume.

References:

Appendix 19 - Seaplane Landing Areas - U.S. & AK

3.5.2.1 Seaplane Landing Areas Header

The header text shall appear in NewsGoth BT, 8 pt, bold font, in all CAPs, center justified.

3.5.2.2 Seaplane Landing Areas Note

The Seaplane Landing Listing note shall appear in NewsGoth Bt, 6 pt font. The note shall appear at the top of the first page only.

Figure 3.21 Seaplane Landing Areas Note

The following locations have Seaplane Landing Areas (Waterways). See alphabetical listing for complete data on these facilities.

3.5.2.3 Seaplane Landing Areas Layout and Organization

3.5.2.3.1 Column Heading

Column headings shall appear in NewsGoth Bt, 6pt, Bold font.

Figure 3.22 Seaplane Landing Heading Sample

STATE	CITY NAME	FACILITY NAME
AK	AKIACHAK	AKIACHAK SPB
AK	AKUTAN	AKUTAN SPB
AK	ALEKNAGIK	ALEKNAGIK SPB

3.5.2.3.2 Seaplane Landing Areas Organization

Seaplane Landing Listing shall consist of columnized listing alphabetical first by state abbreviation, then by city name and then by facility name of all seaplane landing areas/waterways contained in the supplement.

Figure 3.23 Same City with Multiple Seaplane Landing Listing Example

AK	ELLAMAR	ELLAMAR SPB
AK	EXCURSION INLET	EXCURSION INLET SPB
AK	FAIRBANKS	CHENA MARINA SPB
AK	FAIRBANKS	CHENA RIVER SPB
AK	FAIRBANKS	FAIRBANKS INTL SPB
AK	FAIRBANKS	LAKLOEY AIR PARK SPB
AK	FALSE ISLAND	FALSE ISLAND SPB
AK	FAREWELL LAKE	FAREWELL LAKE SPB

3.5.2.4 Canadian Seaplane Landing Listing - AK Only

Seaplane Landing entries published in the A/FD section shall appear listed in the Seaplane Landing Listing after the US listing. The two letter Canadian Province code shall be used in place of State abbreviation in the state column for each Canadian seaplane landing entry listed. Canadian Seaplane listing shall be separated from the last U.S. entry by a blank space.

Figure 3.24 Canadian Seaplane Landing Listing - AK Only

AK	WRANGELL	WRANGELL SPB
AK	YAKUTAT	YAKUTAT SPB
AK	YES BAY LODGE	YES BAY LODGE SPB
BC	CAMPBELL RIVER	CAMPBELL RIVER SPB
BC	COMOX	COMOX SPB
BC	VANCOUVER	VANCOUVER INTL SPB
BC	VICTORIA	VICTORIA SPB

3.6 ABBREVIATIONS

Abbreviations and acronyms shall conform to ICAO standards when feasible. When no ICAO abbreviation exists, the FAA abbreviation will be used. If no FAA abbreviation exists, the DoD abbreviation will be used. All abbreviations/acronyms used in the Supplements must appear in the General Information - Abbreviations section of that Supplement.

Abbreviations/acronyms shall be used in Airport/Facility Directory except on those occasions where misinterpretation or confusion would result by such usage. The use of abbreviations/acronyms in the following sections are discouraged:

- Section 1: Airport/Facility Directory Legend
- Section 3: Notices
- Section 4: Associated Data
- Section 5: Procedures (For AK and PAC Only)

However, common abbreviations/acronyms should continue to be used; e.g., ADIZ, ICAO, IFR, FL.

Landing facility (Airport, Heliport, Seaplane Base, etc.) names shall be extracted verbatim from the authoritative database and will not be further abbreviated.

Abbreviations listed represent grammatical variations of the basic word. An “s” will not be added to pluralize an abbreviation; e.g., hr may mean hour, hours; req may mean request, requesting, requested or requests.

The abbreviation "OPS" shall be construed to mean part of a specific call sign, e.g., HICK OPS or as used in Base OPS. The abbreviation "opr" is intended to represent the grammatical variations of operate including operations, operational, operator, e.g., C-130 opr restricted to Rwy 09L-27R.

References:

Appendix 20 - General Information - Abbreviations

3.6.1 Placement of Abbreviations Section

3.6.1.1 U.S. and Alaska

The Abbreviations Section will immediately follow after the Seaplane Landing Area Section.

3.6.1.2 Pacific

The Abbreviations Section will immediately follow after the Table of Contents Section.

3.6.2 Abbreviations Header

The header text shall appear in NewsGoth BT, 8 pt, bold font, in all CAPs, center justified.

3.6.3 Abbreviations Note

After the Abbreviations Header the following note shall appear at the top of the first page of the Abbreviations section before the listing of Abbreviations. Abbreviations Note text shall appear in NewsGoth BT, 6 pt font.

Figure 3.25 Abbreviations Note

The following abbreviations/acronyms are those commonly used within this Directory. Other abbreviations/acronyms may be found in the Legend and are not duplicated below. The abbreviations presented are intended to represent grammatical variations of the basic form. (Example–"req" may mean "request", "requesting", "requested", or "requests").

For additional FAA approved abbreviations/acronyms please see FAA Order JO 7340.2 —Contractions

3.6.4 Abbreviations Listing Layout and Organization

3.6.4.1 Column Heading

Column headings shall appear in NewsGoth Bt, 6pt, Bold font.

Figure 3.26 Abbreviations Heading Sample

Abbreviation	Description
A/G	air/ground
AAF	Army Air Field
AAS	Airport Advisory Service
AB	Airbase

Abbreviation	Description
alt	altitudealtnalternate
AM	Amplitude Modulation, midnight til noon
AMC	Air Mobility Command

3.6.4.2 Abbreviations Listings

Column headings shall appear in NewsGoth Bt, 6pt font.

Abbreviations shall be organized in alphabetical order first by abbreviation. If there a second description associated with a the same abbreviations, the order is alphabetical by the first word of the description. Abbreviations groups will be separated by one blank line as illustrated in the figure below. Descriptions that have long descriptions, the description will continue as necessary with text wrapping underneath the first line of the description.

Figure 3.27 Abbreviations - Example

ints .....intense, intensity
invof.....in the vicinity of
irreg .....Irregularly

Jan.....January
JASU.....Jet Aircraft Starting Unit
JATO .....Jet Assisted Take–Off
JOAP.....Joint Oil Analysis Program
JOSAC .....Joint Operational Support Airlift Center
JRB.....Joint Reserve Base
Jul .....July
Jun.....June

K or Kt.....Knots
kHz .....kilohertz
KIAS.....Knots Indicated Airspeed
KLIZ .....Korea Limited Identification Zone
km .....Kilometer
kw .....kilowatt

L.....Compass locator (Component of ILS system) under 25 Watts, 15 NM, Enroute Low Altitude Chart (followed by identification)
L.....Local Time
LAHSO .....Land and Hold–Short Operations

CHAPTER 4
AIRPORT/FACILITY DIRECTORY LEGEND

4.1 AIRPORT/FACILITY DIRECTORY LEGEND

The Supplement shall contain an Airport/Facility Directory Legend that shall consist the following sections:

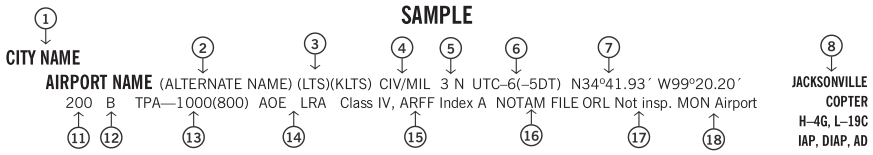
a. Airport/Facility Directory Legend Sample - first page
b. Sketch Legend - second page
c. Legend - breakdown of items numbered in Airport/Facility Directory Legend Sample

The Section Header "Airport/Facility Directory Legend" shall appear for this portion of the Chart Supplement.

4.2 AIRPORT/FACILITY DIRECTORY LEGEND SAMPLE

The legend shall be representative of items found within the directory. The legend shall include a sample pictorial type depiction of an airport entry, with data keyed by sequenced circled numbers to detail the location and nature of the data tabulated within the directory. The header "SAMPLE" shall appear centered at the top of the sample section in NewsGothCnBT, Bold, in 9 point font and in all CAPS.

Figure 4.1 SAMPLE Header



In addition, the following statements shall be shown at the bottom of the Legend Sample page, separated by a line. The statements shall appear in NewsGoth BT, 4.53pt font.

Figure 4.2 Legend Statements - Bottom of Sample Page

All bearings and radials are magnetic unless otherwise specified. All mileages are nautical unless otherwise noted.
All times are Coordinated Universal Time (UTC) except as noted. All elevations are in feet above/below Mean Sea Level (MSL) unless otherwise noted.
The horizontal reference datum of this publication is North American Datum of 1983 (NAD83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

References:

Appendix 21 - A/FD Directory Legend Sample

4.3 SKETCH LEGEND

The Sketch Legend will reflect items used in an airport sketch that are not self-explanatory.

References:

Appendix 22 - A/FD Sketch Legend

4.4 LEGEND

4.4.1 Description of Data

A brief description of data contained within the Airport/Facility Directory will be shown. Explanations shall be arranged in the same sequence in which the data appears in the directory tabulation. Explanation of data shall be keyed by sequenced bold circled numbers to data portrayed in the sample directory entries.

4.4.1.1 Legend Header Text

The "LEGEND" title shall appear on the first page of the legend in NewGothCnBT, bold, 7.16 pt font, centered.

Figure 4.3 Legend Header Text

4.4.1.2 Description Data Title

Bolded circle numbers shall be in 5.5 pt NewsGoth Bt, bold font and in all CAPS.

Data Title shall be in 8 point NewsGoth Cn Bt, bold font in all Caps.

Figure 4.4 Description Data Title Example

4.4.1.3 Description Data Text

Description Data text shall be in 6 pt NewsGoth Bt unless otherwise specified in these specifications.

Figure 4.5 Description of Data Text Example

The highest point of an airport's usable runways measured in feet from mean sea level. When elevation is sea level it will be indicated as "00". When elevation is below sea level a minus "–" sign will precede the figure.

4.4.1.4 Subheadings Text

Subheading text shall appear centered in NewsGothCnBT, bold, 6 point font, centered and in all CAPS.

Figure 4.6 Subheading Text Example

RUNWAY DESIGNATION

Runways are normally numbered in relation to their magnetic orientation rounded off to the nearest 10 degrees. Parallel runways can be designated L (left)/R (right)/C (center). Runways may be designated as Ultralight or assault strips. Assault strips are shown by magnetic bearing.

4.5 LEGEND INTRODUCTORY TEXT

Figure 4.7 Legend Introductory Text

This directory is a listing of data on record with the FAA on public–use airports, military airports and selected private–use airports specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally this listing contains data for associated terminal control facilities, air route traffic control centers, and radio aids to navigation within the conterminous United States, Puerto Rico and the Virgin Islands. Civil airports and joint Civil/Military airports which are open to the public are listed alphabetically by state, associated city and airport name and cross–referenced by airport name. Military airports and private–use (limited civil access) joint Military/Civil airports are listed alphabetically by state and official airport name and cross–referenced by associated city name. Navaids, flight service stations and remote communication outlets that are associated with an airport, but with a different name, are listed alphabetically under their own name, as well as under the airport with which they are associated.

The listing of an airport as open to the public in this directory merely indicates the airport operator's willingness to accommodate transient aircraft, and does not represent that the airport conforms with any Federal or local standards, or that it has been approved for use on the part of the general public. Military airports, private–use airports, and private–use (limited civil access) joint Military/Civil airports are open to civil pilots only in an emergency or with prior permission. See Special Notice Section, Civil Use of Military Fields.

The information on obstructions is taken from reports submitted to the FAA. Obstruction data has not been verified in all cases. Pilots are cautioned that objects not indicated in this tabulation (or on the airports sketches and/or charts) may exist which can create a hazard to flight operation. Detailed specifics concerning services and facilities tabulated within this directory are contained in the Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

The legend items that follow explain in detail the contents of this Directory and are keyed to the circled numbers on the sample on the preceding pages.

4.6 LEGEND ITEMS (BY REFERENCE NUMBER)

4.6.1 Item 1 - City/Airport Name

Figure 4.8 City/Airport Name Title Text

① CITY/AIRPORT NAME

Figure 4.9 City/Airport Name Text

Civil and joint Civil/Military airports which are open to the public are listed alphabetically by state and associated city. Where the city name is different from the airport name the city name will appear on the line above the airport name. Airports with the same associated city name will be listed alphabetically by airport name and will be separated by a dashed rule line. A solid rule line will separate all others. FAA approved helipads and seaplane landing areas associated with a land airport will be separated by a dotted line. Military airports and private–use (limited civil access) joint Military/Civil airports are listed alphabetically by state and official airport name.

4.6.2 Item 2 - Alternate Name

Figure 4.10 Alternate Name Title Text

② ALTERNATE NAME

Figure 4.11 Alternate Name Text

Alternate names, if any, will be shown in parentheses.

4.6.3 Item 3 - Location Identifier

Figure 4.12 Location Identifier Title Text

③ LOCATION IDENTIFIER

Figure 4.13 Location Identifier Text

The location identifier is a three or four character FAA code followed by a four–character ICAO code, when assigned, to airports. If two different military codes are assigned, both codes will be shown with the primary operating agency's code listed first. These identifiers are used by ATC in lieu of the airport name in flight plans, flight strips and other written records and computer operations. Zeros will appear with a slash to differentiate them from the letter "O".

4.6.4 Item 4 - Operating Agency

Figure 4.14 Operating Agency Title Text

④ OPERATING AGENCY

Figure 4.15 Operating Agency Text

Airports within this directory are classified into two categories, Military/Federal Government and Civil airports open to the general public, plus selected private–use airports. The operating agency is shown for military, private–use and joint use airports. The operating agency is shown by an abbreviation as listed below. When an organization is a tenant, the abbreviation is enclosed in parenthesis. No classification indicates the airport is open to the general public with no military tenant.

A	US Army	MC	Marine Corps
AFRC	Air Force Reserve Command	MIL/CIV	Joint Use Military/Civil Limited Civil Access
AF	US Air Force	N	Navy
ANG	Air National Guard	NAF	Naval Air Facility
AR	US Army Reserve	NAS	Naval Air Station
ARNG	US Army National Guard	NASA	National Air and Space Administration
CG	US Coast Guard	P	US Civil Airport Wherein Permit Covers Use by Transient Military Aircraft
CIV/MIL	Joint Use Civil/Military Open to the Public		
DND	Department of National Defense Canada	PVT	Private Use Only (Closed to the Public)
DOE	Department of Energy		

4.6.5 Item 5 - Airport Location

Figure 4.16 Airport Location Title Text

⑤ AIRPORT LOCATION

Figure 4.17 Airport Location Text

Airport location is expressed as distance and direction from the center of the associated city in nautical miles and cardinal points, e.g., 3 N.

4.6.6 Item 6 - Time Conversion

Figure 4.18 Time Conversion Title Text

⑥ TIME CONVERSION

Figure 4.19 Time Conversion Text

Hours of operation of all facilities are expressed in Coordinated Universal Time (UTC) and shown as "Z" time. The directory indicates the number of hours to be subtracted from UTC to obtain local standard time and local daylight saving time UTC–5(–4DT). The symbol ‡ indicates that during periods of Daylight Saving Time (DST) effective hours will be one hour earlier than shown. In those areas where daylight saving time is not observed the (–4DT) and ‡ will not be shown. Daylight saving time is in effect from 0200 local time the second Sunday in March to 0200 local time the first Sunday in November. Canada and all U.S. Conterminous States observe daylight saving time except Arizona and Puerto Rico, and the Virgin Islands. If the state observes daylight saving time and the operating times are other than daylight saving times, the operating hours will include the dates, times and no ‡ symbol will be shown, i.e., April 15–Aug 31 0630–1700Z, Sep 1–Apr 14 0600–1700Z.

4.6.7 Item 7 - Geographic Position of Airport - Airport Reference Point (ARP)

Figure 4.20 Geographic Position of Airport - Airport Reference Point (ARP) Title Text

⑦ GEOGRAPHIC POSITION OF AIRPORT—AIRPORT REFERENCE POINT (ARP)

Figure 4.21 Geographic Position of Airport - Airport Reference Point (ARP) Text

Positions are shown as hemisphere, degrees, minutes and hundredths of a minute and represent the approximate geometric center of all usable runway surfaces.

4.6.8 Item 8 - Charts

Figure 4.22 Charts Title Text

⑧ CHARTS

Figure 4.23 Charts Text

Charts refer to the Sectional Chart and Low and High Altitude Enroute Chart and panel on which the airport or facility is depicted. Pacific Enroute Chart will be indicated by P. Area Enroute Charts will be indicated by A. Helicopter Chart depictions will be indicated as COPTER. IFR Gulf of Mexico West and IFR Gulf of Mexico Central will be referenced as GOMW and GOMC.

4.6.9 Item 9 - Instrument Approach Procedures, Airport Diagrams

Figure 4.24 Instrument Approach Procedures, Airport Diagrams Title Text

⑨ INSTRUMENT APPROACH PROCEDURES, AIRPORT DIAGRAMS

Figure 4.25 Instrument Approach Procedures, Airport Diagrams Text

IAP indicates an airport for which a prescribed (Public Use) FAA Instrument Approach Procedure has been published. DIAP indicates an airport for which a prescribed DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures. See the Special Notice Section of this directory, Civil Use of Military Fields and the Aeronautical Information Manual 5–4–5 Instrument Approach Procedure Charts for additional information. AD indicates an airport for which an airport diagram has been published. Airport diagrams are located in the back of each Chart Supplement volume alphabetically by associated city and airport name.

4.6.10 Item 10 - Airport Sketch

Figure 4.26 Airport Sketch Title Text

⑩ AIRPORT SKETCH

Figure 4.27 Airport Sketch Text

The airport sketch, when provided, depicts the airport and related topographical information as seen from the air and should be used in conjunction with the text. It is intended as a guide for pilots in VFR conditions. Symbology that is not self–explanatory will be reflected in the sketch legend. The airport sketch will be oriented with True North at the top.

4.6.11 Item 11 - Elevation

Figure 4.28 Elevation Title Text

⑪ ELEVATION

Figure 4.29 Elevation Name Text

The highest point of an airport's usable runways measured in feet from mean sea level. When elevation is sea level it will be indicated as "00". When elevation is below sea level a minus "–" sign will precede the figure.

4.6.12 Item 12 - Rotating Light Beacon

Figure 4.30 Rotating Light Beacon Title Text

⑫ ROTATING LIGHT BEACON

Figure 4.31 Rotating Light Beacon Name Text

B indicates rotating beacon is available. Rotating beacons operate sunset to sunrise unless otherwise indicated in the AIRPORT REMARKS or MILITARY REMARKS segment of the airport entry.

4.6.13 Item 13 - Traffic Pattern Altitude

Figure 4.32 Traffic Pattern Altitude Title Text

⑬ TRAFFIC PATTERN ALTITUDE

Figure 4.33 Traffic Pattern Altitude Name Text

Traffic Pattern Altitude (TPA)—The first figure shown is TPA above mean sea level. The second figure in parentheses is TPA above airport elevation. TPA will only be published if they differ from the recommended altitudes as described in the AIM, Traffic Patterns. Multiple TPA shall be shown as "TPA—See Remarks" and detailed information shall be shown in the Airport or Military Remarks Section. Traffic pattern data for USAF bases, USN facilities, and U.S. Army airports (including those on which ACC or U.S. Army is a tenant) that deviate from standard pattern altitudes shall be shown in Military Remarks.

4.6.14 Item 14 - Airport of Entry, Landing Rights, and Customs User Fee Airports

Figure 4.34 Airport of Entry, Landing Rights, and Customs User Fee Airports Title Text

⑭ AIRPORT OF ENTRY, LANDING RIGHTS, AND CUSTOMS USER FEE AIRPORTS

4.6.14.1 U.S. Customs User Fee Airport

Figure 4.35 U.S. Customs User Fee Airport, AOE and LRA Text

U.S. CUSTOMS USER FEE AIRPORT—Private Aircraft operators are frequently required to pay the costs associated with customs processing.

AOE—Airport of Entry. A customs Airport of Entry where permission from U.S. Customs is not required to land. However, at least one hour advance notice of arrival is required.

LRA—Landing Rights Airport. Application for permission to land must be submitted in advance to U.S. Customs. At least one hour advance notice of arrival is required.

4.6.14.2 AOE and LRA Note

Figure 4.36 AOE and LRA Note Text

NOTE: Advance notice of arrival at both an AOE and LRA airport may be included in the flight plan when filed in Canada or Mexico. Where Flight Notification Service (ADCUS) is available the airport remark will indicate this service. This notice will also be treated as an application for permission to land in the case of an LRA. Although advance notice of arrival may be relayed to Customs through Mexico, Canada, and U.S. Communications facilities by flight plan, the aircraft operator is solely responsible for ensuring that Customs receives the notification. (See Customs, Immigration and Naturalization, Public Health and Agriculture Department requirements in the International Flight Information Manual for further details.)

4.6.14.3 U.S. Customs Contacts

Figure 4.37 U.S. Customs Contacts

U.S. CUSTOMS AIR AND SEA PORTS, INSPECTORS AND AGENTS

Northeast Sector (New England and Atlantic States—ME to MD)	407–975–1740
Southeast Sector (Atlantic States—DC, WV, VA to FL)	407–975–1780
Central Sector (Interior of the US, including Gulf states—MS, AL, LA)	407–975–1760
Southwest East Sector (OK and eastern TX)	407–975–1840
Southwest West Sector (Western TX, NM and AZ)	407–975–1820
Southwest West Sector (Western TX, NM and AZ)	407–975–1820
Pacific Sector (WA, OR, CA, HI and AK)	407–975–1800

4.6.15 Item 15 - Certificated Airport (14 CFR Part 139)

Figure 4.38 Certificated Airport Title Text

⑮ CERTIFICATED AIRPORT (14 CFR PART 139)

Figure 4.39 Certificated Airport Text

Airports serving Department of Transportation certified carriers and certified under 14 CFR part 139 are indicated by the Class and the ARFF Index; e.g. Class I, ARFF Index A, which relates to the availability of crash, fire, rescue equipment. Class I airports can have an ARFF Index A through E, depending on the aircraft length and scheduled departures. Class II, III, and IV will always carry an Index A.

4.6.15.1 Airport Classifications

Figure 4.40 Airport Classifications

AIRPORT CLASSIFICATIONS

Type of Air Carrier Operation	Class I	Class II	Class III	Class IV
Scheduled Air Carrier Aircraft with 31 or more passenger seats	X			
Unscheduled Air Carrier Aircraft with 31 or more passengers seats	X	X		X
Scheduled Air Carrier Aircraft with 10 to 30 passenger seats	X	X	X	

4.6.15.2 Indices and Aircraft Rescue and Fire Fighting Equipment Requirements

Figure 4.41 Indices and Aircraft Rescue and Fire Fighting Equipment Requirements

INDICES AND AIRCRAFT RESCUE AND FIRE FIGHTING EQUIPMENT REQUIREMENTS

Airport Index	Required No. Vehicles	Aircraft Length	Scheduled Departures	Agent + Water for Foam
A	1	<90´	≥1	500#DC or HALON 1211 or 450#DC + 100 gal H_2O
B	1 or 2	≥90´, <126´ —————— ≥126´, <159´	≥5 —— <5	Index A + 1500 gal H_2O
C	2 or 3	≥126´, <159´ —————— ≥159´, <200´	≥5 —— <5	Index A + 3000 gal H_2O
D	3	≥159´, <200´ —————— >200´	—— <5	Index A + 4000 gal H_2O
E	3	≥200´	≥5	Index A + 6000 gal H_2O

> Greater Than; < Less Than; ≥ Equal or Greater Than; ≤ Equal or Less Than; H_2O–Water; DC–Dry Chemical.

4.6.15.3 ARFF Note

Figure 4.42 ARFF Note Text

NOTE: The listing of ARFF index does not necessarily assure coverage for non–air carrier operations or at other than prescribed times for air carrier. ARFF Index Ltd.—indicates ARFF coverage may or may not be available, for information contact airport manager prior to flight.

4.6.16 Item 16 - NOTAM Service

Figure 4.43 NOTAM Service Title Text

⑯ NOTAM SERVICE

Figure 4.44 NOTAM Service Text

All public use landing areas are provided NOTAM service. A NOTAM FILE identifier is shown for individual landing areas, e.g., "NOTAM FILE BNA". See the AIM, Basic Flight Information and ATC Procedures for a detailed description of NOTAMs. Current NOTAMs are available from flight service stations at 1–800–WX–BRIEF (992–7433) or online through the FAA PilotWeb at https://pilotweb.nas.faa.gov. Military NOTAMs are available using the Defense Internet NOTAM Service (DINS) at https://www.notams.faa.gov. Pilots flying to or from airports not available through the FAA PilotWeb or DINS can obtain assistance from Flight Service.

4.6.17 Item 17 - FAA Inspection

Figure 4.45 FAA Inspection Title Text

⑰ FAA INSPECTION

Figure 4.46 FAA Inspection Text

All airports not inspected by FAA will be identified by the note: Not insp. This indicates that the airport information has been provided by the owner or operator of the field.

4.6.18 Item 18 - Minimum Operational Network (MON) Airport Designation

Figure 4.47 Minimum Operational Network (MON) Title Text

⑱ MINIMUM OPERATIONAL NETWORK (MON) AIRPORT DESIGNATION

Figure 4.48 Minimum Operational Network (MON) Text

MON Airports have at least one VOR or ILS instrument approach procedure that can be flown without the need for GPS, WAAS, DME, NDB or RADAR. The primary purpose of the MON designation is for recovery in case of GPS outage.

4.6.19 Item 19 - Runway Data

Figure 4.49 Runway Data Title Text

⑲ RUNWAY DATA

Figure 4.50 Runway Data Text

Runway information is shown on two lines. That information common to the entire runway is shown on the first line while information concerning the runway ends is shown on the second or following line. Runway direction, surface, length, width, weight bearing capacity, lighting, and slope, when available are shown for each runway. Multiple runways are shown with the longest runway first. Direction, length, width, and lighting are shown for sea–lanes. The full dimensions of helipads are shown, e.g., 50X150. Runway data that requires clarification will be placed in the remarks section.

4.6.19.1 Runway Designation

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.51 Runway Designation Text

RUNWAY DESIGNATION

Runways are normally numbered in relation to their magnetic orientation rounded off to the nearest 10 degrees. Parallel runways can be designated L (left)/R (right)/C (center). Runways may be designated as Ultralight or assault strips. Assault strips are shown by magnetic bearing.

4.6.19.2 Runway Dimensions

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.52 Runway Dimensions Text

RUNWAY DIMENSIONS

Runway length and width are shown in feet. Length shown is runway end to end including displaced thresholds, but excluding those areas designed as overruns.

4.6.19.3 Runway Surface and Surface Treatment

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.53 Runway Surface and Surface Treatment Text and Codes

RUNWAY SURFACE AND SURFACE TREATMENT

Runway lengths prefixed by the letter "H" indicate that the runways are hard surfaced (concrete, asphalt, or part asphalt–concrete). If the runway length is not prefixed, the surface is sod, clay, etc. The runway surface composition is indicated in parentheses after runway length as follows:

(AFSC)—Aggregate friction seal coat
(AM2)—Temporary metal planks coated with nonskid material
(ASPH)—Asphalt
(CONC)—Concrete
(DIRT)—Dirt
(GRVD)—Grooved
(GRVL)—Gravel, or cinders
(MATS)—Pierced steel planking, landing mats, membranes
(PEM)—Part concrete, part asphalt
(PFC)—Porous friction courses
(PSP)—Pierced steel plank
(RFSC)—Rubberized friction seal coat
(SAND)—Sand
(TURF)—Turf
(TRTD)—Treated
(WC)—Wire combed

4.6.19.4 Runway Weight Bearing Capacity

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.54 Runway Weight Bearing Capacity Text

RUNWAY WEIGHT BEARING CAPACITY

Runway strength data shown in this publication is derived from available information and is a realistic estimate of capability at an average level of activity. It is not intended as a maximum allowable weight or as an operating limitation. Many airport pavements are capable of supporting limited operations with gross weights in excess of the published figures. Permissible operating weights, insofar as runway strengths are concerned, are a matter of agreement between the owner and user. When desiring to operate into any airport at weights in excess of those published in the publication, users should contact the airport management for permission. Runway strength figures are shown in thousand of pounds, with the last three figures being omitted. Add 000 to figure following S, D, 2S, 2T, AUW, SWL, etc., for gross weight capacity. A blank space following the letter designator is used to indicate the runway can sustain aircraft with this type landing gear, although definite runway weight bearing capacity figures are not available, e.g., S, D. Applicable codes for typical gear configurations with S=Single, D=Dual, T=Triple and Q=Quadruple:

Table column headings shall appear in NewsGothBT, bold, 5.7 point font, left justified.

Figure 4.55 Runway Weight Bearing Capacity Codes

CURRENT	NEW	NEW DESCRIPTION
S	S	Single wheel type landing gear (DC3), (C47), (F15), etc.
D	D	Dual wheel type landing gear (BE1900), (B737), (A319), etc.
T	D	Dual wheel type landing gear (P3, C9).
ST	2S	Two single wheels in tandem type landing gear (C130).
TRT	2T	Two triple wheels in tandem type landing gear (C17), etc.
DT	2D	Two dual wheels in tandem type landing gear (B707), etc.
TT	2D	Two dual wheels in tandem type landing gear (B757, KC135).
SBTT	2D/D1	Two dual wheels in tandem/dual wheel body gear type landing gear (KC10).
None	2D/2D1	Two dual wheels in tandem/two dual wheels in tandem body gear type landing gear (A340–600).
DDT	2D/2D2	Two dual wheels in tandem/two dual wheels in double tandem body gear type landing gear (B747, E4).
TTT	3D	Three dual wheels in tandem type landing gear (B777), etc.
TT	D2	Dual wheel gear two struts per side main gear type landing gear (B52).
TDT	C5	Complex dual wheel and quadruple wheel combination landing gear (C5).

AUW—All up weight. Maximum weight bearing capacity for any aircraft irrespective of landing gear configuration.

SWL—Single Wheel Loading. (This includes information submitted in terms of Equivalent Single Wheel Loading (ESWL) and Single Isolated Wheel Loading).

PSI—Pounds per square inch. PSI is the actual figure expressing maximum pounds per square inch runway will support, e.g., (SWL 000/PSI 535).

Omission of weight bearing capacity indicates information unknown.

4.6.19.4.1 ACN/PCN System

Figure 4.56 ACN/PCN System Text

The ACN/PCN System is the ICAO standard method of reporting pavement strength for pavements with bearing strengths greater than 12,500 pounds. The Pavement Classification Number (PCN) is established by an engineering assessment of the runway. The PCN is for use in conjunction with an Aircraft Classification Number (ACN). Consult the Aircraft Flight Manual, Flight Information Handbook, or other appropriate source for ACN tables or charts. Currently, ACN data may not be available for all aircraft. If an ACN table or chart is available, the ACN can be calculated by taking into account the aircraft weight, the pavement type, and the subgrade category. For runways that have been evaluated under the ACN/PCN system, the PCN will be shown as a five–part code (e.g. PCN 80 R/B/W/T). Details of the coded format are as follows:

NOTE: ICAO adopted the ACR/PCR System as the new standard method for reporting pavement strength in July 2020. The ACR/PCR System methodology remains unchanged from the ACN/PCN system described above. The Pavement Classification Rating (PCR) remains a five-part code (e.g. PCR 460 R/B/W/T) with the number being one order of magnitude higher than PCNs. The details of the code below are not changed with PCR. ICAO has established a four year transition period during which time a PCN or a PCR may be reported. Currently Aircraft Classification Rating (ACR) data may not be available for all aircraft.

Figure 4.57 ACN/PCN Note and Codes

NOTE: Prior permission from the airport controlling authority is required when the ACN/ACR of the aircraft exceeds the published PCN/PCR or aircraft tire pressure exceeds the published limits.

(1) The PCN/PCR NUMBER—The reported PCN/PCR indicates that an aircraft with an ACN/ACR equal or less than the reported PCN/PCR can operate on the pavement subject to any limitation on the tire pressure.

(2) The type of pavement:
R — Rigid
F — Flexible

(3) The pavement subgrade category:
A — High
B — Medium
C — Low
D — Ultra–low

(4) The maximum tire pressure authorized for the pavement:
W — Unlimited, no pressure limit
X — High, limited to 254 psi (1.75 MPa)
Y — Medium, limited to 181 psi (1.25MPa)
Z — Low, limited to 73 psi (0.50 MPa)

(5) Pavement evaluation method:
T — Technical evaluation
U — By experience of aircraft using the pavement

4.6.19.5 Runway Lighting

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.58 Runway Lighting Text

RUNWAY LIGHTING

Lights are in operation sunset to sunrise. Lighting available by prior arrangement only or operating part of the night and/or pilot controlled lighting with specific operating hours are indicated under airport or military remarks. At USN/USMC facilities lights are available only during airport hours of operation. Since obstructions are usually lighted, obstruction lighting is not included in this code. Unlighted obstructions on or surrounding an airport will be noted in airport or military remarks. Runway lights nonstandard (NSTD) are systems for which the light fixtures are not FAA approved L–800 series: color, intensity, or spacing does not meet FAA standards. Nonstandard runway lights, VASI, or any other system not listed below will be shown in airport remarks or military service. Temporary, emergency or limited runway edge lighting such as flares, smudge pots, lanterns or portable runway lights will also be shown in airport remarks or military service. Types of lighting are shown with the runway or runway end they serve.

NSTD—Light system fails to meet FAA standards.
LIRL—Low Intensity Runway Lights.
MIRL—Medium Intensity Runway Lights.
HIRL—High Intensity Runway Lights.
RAIL—Runway Alignment Indicator Lights.
REIL—Runway End Identifier Lights.
CL—Centerline Lights.
TDZL—Touchdown Zone Lights.
ODALS—Omni Directional Approach Lighting System.
AF OVRN—Air Force Overrun 1000´ Standard Approach Lighting System.
MALS—Medium Intensity Approach Lighting System.
MALSF—Medium Intensity Approach Lighting System with Sequenced Flashing Lights.
MALSR—Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights.
RLLS—Runway Lead–in Light System
SALS—Short Approach Lighting System.
SALSF—Short Approach Lighting System with Sequenced Flashing Lights.
SSALS—Simplified Short Approach Lighting System.
SSALF—Simplified Short Approach Lighting System with Sequenced Flashing Lights.
SSALR—Simplified Short Approach Lighting System with Runway Alignment Indicator Lights.
ALSAF—High Intensity Approach Lighting System with Sequenced Flashing Lights.
ALSF1—High Intensity Approach Lighting System with Sequenced Flashing Lights, Category I, Configuration.
ALSF2—High Intensity Approach Lighting System with Sequenced Flashing Lights, Category II, Configuration.
SF—Sequenced Flashing Lights.
OLS—Optical Landing System.
WAVE–OFF.

NOTE: Civil ALSF2 may be operated as SSALR during favorable weather conditions. When runway edge lights are positioned more than 10 feet from the edge of the usable runway surface a remark will be added in the "Remarks" portion of the airport entry. This is applicable to Air Force, Air National Guard and Air Force Reserve Bases, and those joint use airfields on which they are tenants.

4.6.19.6 Visual Glideslope Indicators

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.59 Visual Glideslope Indicators Text

VISUAL GLIDESLOPE INDICATORS

APAP—A system of panels, which may or may not be lighted, used for alignment of approach path.

PNIL	APAP on left side of runway	PNIR	APAP on right side of runway

PAPI—Precision Approach Path Indicator

P2L	2–identical light units placed on left side of runway	P4L	4–identical light units placed on left side of runway
P2R	2–identical light units placed on right side of runway	P4R	4–identical light units placed on right side of runway

PVASI—Pulsating/steady burning visual approach slope indicator, normally a single light unit projecting two colors.

PSIL	PVASI on left side of runway	PSIR	PVASI on right side of runway

SAVASI—Simplified Abbreviated Visual Approach Slope Indicator

S2L	2–box SAVASI on left side of runway	S2R	2–box SAVASI on right side of runway

SAVASI—Simplified Abbreviated Visual Approach Slope Indicator

S2L	2–box SAVASI on left side of runway	S2R	2–box SAVASI on right side of runway

TRCV—Tri–color visual approach slope indicator, normally a single light unit projecting three colors.

TRIL	TRCV on left side of runway	TRIR	TRCV on right side of runway

VASI—Visual Approach Slope Indicator

V2L	2–box VASI on left side of runway	V6L	6–box VASI on left side of runway
V2R	2–box VASI on right side of runway	V6R	6–box VASI on right side of runway
V4L	4–box VASI on left side of runway	V12	12–box VASI on both sides of runway
V4R	4–box VASI on right side of runway	V16	16–box VASI on both sides of runway

NOTE: Approach slope angle and threshold crossing height will be shown when available; i.e., –GA 3.5º TCH 37´.

4.6.19.7 Pilot Control of Airport Lighting

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.60 Pilot Control of Airport Lighting Text

PILOT CONTROL OF AIRPORT LIGHTING

Key Mike	Function
7 times within 5 seconds	Highest intensity available
5 times within 5 seconds	Medium or lower intensity (Lower REIL or REIL–Off)
3 times within 5 seconds	Lowest intensity available (Lower REIL or REIL–Off)

Available systems will be indicated in the Service section, e.g., **LGT** ACTIVATE HIRL Rwy 07–25, MALSR Rwy 07, and VASI Rwy 07—122.8.
Where the airport is not served by an instrument approach procedure and/or has an independent type system of different specification installed by the airport sponsor, descriptions of the type lights, method of control, and operating frequency will be explained in clear text. See AIM, "Aeronautical Lighting and Other Airport Visual Aids," for a detailed description of pilot control of airport lighting.

4.6.19.8 Runway Slope

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.61 Runway Slope Text

RUNWAY SLOPE
When available, runway slope data will be provided. Runway slope will be shown only when it is 0.3 percent or greater. On runways less than 8000 feet, the direction of the slope up will be indicated, e.g., 0.3% up NW. On runways 8000 feet or greater, the slope will be shown (up or down) on the runway end line, e.g., RWY 13: 0.3% up., RWY 31: Pole. Rgt tfc. 0.4% down.

4.6.19.9 Runway End Data

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.62 Runway End Data Text

RUNWAY END DATA
Information pertaining to the runway approach end such as approach lights, touchdown zone lights, runway end identification lights, visual glideslope indicators, displaced thresholds, controlling obstruction, and right hand traffic pattern, will be shown on the specific runway end. "Rgt tfc"—Right traffic indicates right turns should be made on landing and takeoff for specified runway end. Runway Visual Range shall be shown as "RVR" appended with "T" for touchdown, "M" for midpoint, and "R" for rollout; e.g., RVR-TMR.

4.6.20 Item 20 - Land and Hold-Short Operations (LAHSO)

Figure 4.63 Land and Hold-Short Operation Title Text

⑳ LAND AND HOLD–SHORT OPERATIONS (LAHSO)

Figure 4.64 Land and Hold-Short Operation Text

LAHSO is an acronym for "Land and Hold–Short Operations" These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.
Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold–short operations and markings.

4.6.21 Item 21 - Runway Declared Distance Information

Figure 4.65 Runway Declared Distance Title Text

㉑ RUNWAY DECLARED DISTANCE INFORMATION

4.6.21.1 Take-off Run Available (TORA)

Figure 4.66 Take-off Run Available (TORA) Text

TORA—Take–off Run Available. The length of runway declared available and suitable for the ground run of an aeroplane take–off.
TODA—Take–off Distance Available. The length of the take–off run available plus the length of the clearway, if provided.
ASDA—Accelerate–Stop Distance Available. The length of the take–off run available plus the length of the stopway, if provided.
LDA—Landing Distance Available. The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

4.6.22 Item 22 - Arresting Gear/Systems

Figure 4.67 Arresting Gear/Systems Title Text

㉒ ARRESTING GEAR/SYSTEMS

Figure 4.68 Arresting Gear Systems Text

Arresting gear is shown as it is located on the runway. The a–gear distance from the end of the appropriate runway (or into the overrun) is indicated in parentheses. A–Gear which has a bi–direction capability and can be utilized for emergency approach end engagement is indicated by a (B). Up to 15 minutes advance notice may be required for rigging A–Gear for approach and engagement. Airport listing may show availability of other than US Systems. This information is provided for emergency requirements only. Refer to current aircraft operating manuals for specific engagement weight and speed criteria based on aircraft structural restrictions and arresting system limitations.

Following is a list of current systems referenced in this publication identified by both Air Force and Navy terminology:

4.6.22.1 Bi-Directional Cable (B)

Figure 4.69 Bi-Directional Cable Codes and Text

BI–DIRECTIONAL CABLE (B)

TYPE	DESCRIPTION
BAK–9	Rotary friction brake.
BAK–12A	Standard BAK–12 with 950 foot run out, 1–inch cable and 40,000 pound weight setting. Rotary friction brake.
BAK–12B	Extended BAK–12 with 1200 foot run, 1¼ inch Cable and 50,000 pounds weight setting. Rotary friction brake.
E28	Rotary Hydraulic (Water Brake).
M21	Rotary Hydraulic (Water Brake) Mobile.

The following device is used in conjunction with some aircraft arresting systems:

BAK–14	A device that raises a hook cable out of a slot in the runway surface and is remotely positioned for engagement by the tower on request. (In addition to personnel reaction time, the system requires up to five seconds to fully raise the cable.)
H	A device that raises a hook cable out of a slot in the runway surface and is remotely positioned for engagement by the tower on request. (In addition to personnel reaction time, the system requires up to one and one–half seconds to fully raise the cable.)

4.6.22.2 Uni-Directional Cable

Figure 4.70 Uni-Directional Cable Codes and Text

UNI–DIRECTIONAL CABLE

TYPE	DESCRIPTION
MB60	Textile brake—an emergency one–time use, modular braking system employing the tearing of specially woven textile straps to absorb the kinetic energy.
E5/E5–1/E5–3	Chain Type. At USN/USMC stations E–5 A–GEAR systems are rated, e.g., E–5 RATING–13R–1100 HW (DRY), 31L/R–1200 STD (WET). This rating is a function of the A–GEAR chain weight and length and is used to determine the maximum aircraft engaging speed. A dry rating applies to a stabilized surface (dry or wet) while a wet rating takes into account the amount (if any) of wet overrun that is not capable of withstanding the aircraft weight. These ratings are published under Service/Military/A-Gear in the entry.

4.6.22.3 Foreign Cable

Figure 4.71 Foreign Cable Codes and Text

FOREIGN CABLE

TYPE	DESCRIPTION	US EQUIVALENT
44B–3H	Rotary Hydraulic (Water Brake)	
CHAG	Chain	E–5

4.6.22.4 Uni-Directional Barrier

Figure 4.72 Uni-Directional Barrier Codes and Text

UNI–DIRECTIONAL BARRIER

TYPE	DESCRIPTION
MA–1A	Web barrier between stanchions attached to a chain energy absorber.
BAK–15	Web barrier between stanchions attached to an energy absorber (water squeezer, rotary friction, chain). Designed for wing engagement.

NOTE: Landing short of the runway threshold on a runway with a BAK–15 in the underrun is a significant hazard. The barrier in the down position still protrudes several inches above the underrun. Aircraft contact with the barrier short of the runway threshold can cause damage to the barrier and substantial damage to the aircraft.

4.6.22.5 Other System

Figure 4.73 Other System Codes and Text

OTHER

TYPE	DESCRIPTION
EMAS	Engineered Material Arresting System, located beyond the departure end of the runway, consisting of high energy absorbing materials which will crush under the weight of an aircraft.

4.6.23 Item 23 - Service

Figure 4.74 Service Title Text

㉓ SERVICE

4.6.23.1 Civil

4.6.23.1.1 Servicing-Civil

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.75 Servicing-Civil Codes

SERVICING—CIVIL

S1:	Minor airframe repairs.	S5:	Major airframe repairs.
S2:	Minor airframe and minor powerplant repairs.	S6:	Minor airframe and major powerplant repairs.
S3:	Major airframe and minor powerplant repairs.	S7:	Major powerplant repairs.
S4:	Major airframe and major powerplant repairs.	S8:	Minor powerplant repairs.

4.6.23.1.2 Fuel

Subheading shall appear as specified in Section 4.4.1.4. Column headings shall appear in NewsGothBT, bold, 5.25 point font, left justified.

Figure 4.76 Fuel Codes

FUEL

CODE	FUEL	CODE	FUEL
100	Grade 100 gasoline (Green)	J5 (JP5)	(JP–5 military specification) Kerosene with FS–II, FP** minus 46ºC.
100LL	100LL gasoline (low lead) (Blue)		
A	Jet A, Kerosene, without FS–II*, FP** minus 40º C.	J8 (JP8)	(JP–8 military specification) Jet A–1, Kerosene with FS–II*, CI/LI#, SDA##, FP** minus 47ºC.
A+	Jet A, Kerosene, with FS–II*, FP** minus 40ºC.		
A++	Jet A, Kerosene, with FS–II*, CI/LI#, SDA##, FP** minus 40ºC.	J8+100	(JP–8 military specification) Jet A–1, Kerosene with FS–II*, CI/LI#, SDA##,FP** minus 47ºC, with +100 fuel additive that improves thermal stability characteristics of kerosene jet fuels.
A++100	Jet A, Kerosene, with FS–II*, CI/LI#, SDA##, FP** minus 40ºC, with +100 fuel additive that improves thermal stability characteristics of kerosene jet fuels.	J	(Jet Fuel Type Unknown)
		MOGAS	Automobile gasoline which is to be used as aircraft fuel.
A1	Jet A–1, Kerosene, without FS–II*, FP** minus 47ºC.	UL91	Unleaded Grade 91 gasoline
		UL94	Unleaded Grade 94 gasoline
A1+	Jet A–1, Kerosene with FS–II*, FP** minus 47º C.	UL100	Unleaded Grade 100 gasoline

*(Fuel System Icing Inhibitor) **(Freeze Point) # (Corrosion Inhibitors/Lubricity Improvers) ## (Static Dissipator Additive)

4.6.23.1.3 Fuel Note

Figure 4.77 Fuel Note Text

NOTE: Certain automobile gasoline may be used in specific aircraft engines if a FAA supplemental type certificate has been obtained. Automobile gasoline, which is to be used in aircraft engines, will be identified as "MOGAS", however, the grade/type and other octane rating will not be published.

Data shown on fuel availability represents the most recent information the publisher has been able to acquire. Because of a variety of factors, the fuel listed may not always be obtainable by transient civil pilots. Confirmation of availability of fuel should be made directly with fuel suppliers at locations where refueling is planned.

4.6.23.1.4 Oxygen-Civil

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.78 Oxygen-Civil Codes

OXYGEN—CIVIL

OX 1	High Pressure	OX 3	High Pressure—Replacement Bottles
OX 2	Low Pressure	OX 4	Low Pressure—Replacement Bottles

4.6.23.2 Service-Military

The topic title SERVICE-MILITARY shall appear in NewsGothCNBT,bold, 7.40 point font, left justified.

Figure 4.79 Service-Military Text

SERVICE—MILITARY

Specific military services available at the airport are listed under this general heading. Remarks applicable to any military service are shown in the individual service listing.

4.6.23.2.1 Jet Aircraft Starting Units (JASU) - Military

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.80 Jet Aircraft Starting Units (JASU) - Military Text

JET AIRCRAFT STARTING UNITS (JASU) MILITARY

The numeral preceding the type of unit indicates the number of units available. The absence of the numeral indicates ten or more units available. If the number of units is unknown, the number one will be shown. Absence of JASU designation indicates non availability.

The following is a list of current JASU systems referenced in this publication:

4.6.23.2.1.1 USAF JASU

Figure 4.81 USAF JASU Unit Codes and Text

USAF JASU (For variations in technical data, refer to T.O. 35–1–7.)

ELECTRICAL STARTING UNITS:

A/M32A–86	AC: 115/200v, 3 phase, 90 kva, 0.8 pf, 4 wire DC: 28v, 1500 amp, 72 kw (with TR pack)
MC–1A	AC: 115/208v, 400 cycle, 3 phase, 37.5 kva, 0.8 pf, 108 amp, 4 wire DC: 28v, 500 amp, 14 kw
MD–3	AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire DC: 28v, 1500 amp, 45 kw, split bus
MD–3A	AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire DC: 28v, 1500 amp, 45 kw, split bus
MD–3M	AC: 115/208v, 400 cycle, 3 phase, 60 kva, 0.75 pf, 4 wire DC: 28v, 500 amp, 15 kw
MD–4	AC: 120/208v, 400 cycle, 3 phase, 62.5 kva, 0.8 pf, 175 amp, "WYE" neutral ground, 4 wire, 120v, 400 cycle, 3 phase, 62.5 kva, 0.8 pf, 303 amp, "DELTA" 3 wire, 120v, 400 cycle, 1 phase, 62.5 kva, 0.8 pf, 520 amp, 2 wire

AIR STARTING UNITS

AM32–95	150 +/– 5 lb/min (2055 +/– 68 cfm) at 51 +/– 2 psia
AM32A–95	150 +/– 5 lb/min @ 49 +/– 2 psia (35 +/– 2 psig)
LASS	150 +/– 5 lb/min @ 49 +/– 2 psia
MA–1A	82 lb/min (1123 cfm) at 130° air inlet temp, 45 psia (min) air outlet press
MC–1	15 cfm, 3500 psia
MC–1A	15 cfm, 3500 psia
MC–2A	15 cfm, 200 psia
MC–11	8,000 cu in cap, 4000 psig, 15 cfm

COMBINED AIR AND ELECTRICAL STARTING UNITS:

AGPU	AC: 115/200v, 400 cycle, 3 phase, 30 kw gen DC: 28v, 700 amp AIR: 60 lb/min @ 40 psig @ sea level
AM32A–60*	AIR: 120 +/– 4 lb/min (1644 +/– 55 cfm) at 49 +/– 2 psia AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire, 120v, 1 phase, 25 kva DC: 28v, 500 amp, 15 kw
AM32A–60A	AIR: 150 +/– 5 lb/min (2055 +/– 68 cfm at 51 +/– psia AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire DC: 28v, 200 amp, 5.6 kw
AM32A–60B*	AIR: 130 lb/min, 50 psia AC: 120/208v, 400 cycle, 3 phase, 75 kva, 0.75 pf, 4 wire DC: 28v, 200 amp, 5.6 kw

*NOTE: During combined air and electrical loads, the pneumatic circuitry takes preference and will limit the amount of electrical power available.

4.6.23.2.1.2 USN JASU

Figure 4.82 USN JASU Unit Codes and Texts

USN JASU

ELECTRICAL STARTING UNITS:

NC–8A/A1	DC: 500 amp constant, 750 amp intermittent, 28v; AC: 60 kva @ .8 pf, 115/200v, 3 phase, 400 Hz.
NC–10A/A1/B/C	DC: 750 amp constant, 1000 amp intermittent, 28v; AC: 90 kva, 115/200v, 3 phase, 400 Hz.

AIR STARTING UNITS:

GTC–85/GTE–85	120 lbs/min @ 45 psi.
MSU–200NAV/A/U47A–5	204 lbs/min @ 56 psia.
WELLS AIR START SYSTEM	180 lbs/min @ 75 psi or 120 lbs/min @ 45 psi. Simultaneous multiple start capability.

COMBINED AIR AND ELECTRICAL STARTING UNITS:

NCPP–105/RCPT	180 lbs/min @ 75 psi or 120 lbs/min @ 45 psi. 700 amp, 28v DC. 120/208v, 400 Hz AC, 30 kva.

4.6.23.2.1.3 Army JASU

Figure 4.83 Army JASU Codes and Texts

ARMY JASU

59B2–1B	28v, 7.5 kw, 280 amp.

4.6.23.2.1.4 Other JASU

Figure 4.84 Other JASU Codes and Text

OTHER JASU

ELECTRICAL STARTING UNITS (DND):	
CE12	AC 115/200v, 140 kva, 400 Hz, 3 phase
CE13	AC 115/200v, 60 kva, 400 Hz, 3 phase
CE14	AC/DC 115/200v, 140 kva, 400 Hz, 3 phase, 28vDC, 1500 amp
CE15	DC 22–35v, 500 amp continuous 1100 amp intermittent
CE16	DC 22–35v, 500 amp continuous 1100 amp intermittent soft start
AIR STARTING UNITS (DND):	
CA2	ASA 45.5 psig, 116.4 lb/min
COMBINED AIR AND ELECTRICAL STARTING UNITS (DND)	
CEA1	AC 120/208v, 60 kva, 400 Hz, 3 phase DC 28v, 75 amp AIR 112.5 lb/min, 47 psig
ELECTRICAL STARTING UNITS (OTHER)	
C–26	28v 45kw 115–200v 15kw 380–800 Hz 1 phase 2 wire
C–26–B, C–26–C	28v 45kw: Split Bus: 115–200v 15kw 380–800 Hz 1 phase 2 wire
E3	DC 28v/10kw
AIR STARTING UNITS (OTHER):	
A4	40 psi/2 lb/sec (LPAS Mk12, Mk12L, Mk12A, Mk1, Mk2B)
MA–1	150 Air HP, 115 lb/min 50 psia
MA–2	250 Air HP, 150 lb/min 75 psia
CARTRIDGE:	
MXU–4A	USAF

4.6.23.2.2 Fuel - Military

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.85 Fuel - Military Text

FUEL—MILITARY

Fuel available through US Military Base supply, DESC Into–Plane Contracts and/or reciprocal agreement is listed first and is followed by (Mil). At commercial airports where Into–Plane contracts are in place, the name of the refueling agent is shown. Military fuel should be used first if it is available. When military fuel cannot be obtained but Into–Plane contract fuel is available, Government aircraft must refuel with the contract fuel and applicable refueling agent to avoid any breach in contract terms and conditions. Fuel not available through the above is shown preceded by NC (no contract). When fuel is obtained from NC sources, local purchase procedures must be followed. The US Military Aircraft Identaplates DD Form 1896 (Jet Fuel), DD Form 1897 (Avgas) and AF Form 1245 (Avgas) are used at military installations only. The US Government Aviation Into–Plane Reimbursement (AIR) Card (currently issued by AVCARD) is the instrument to be used to obtain fuel under a DESC Into–Plane Contract and for NC purchases if the refueling agent at the commercial airport accepts the AVCARD. A current list of contract fuel locations is available online at https://cis.energy.dla.mil/ip_cis/. See legend item 14 for fuel code and description.

4.6.23.2.3 Supporting Fluids and Systems - Military

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.86 Supporting Fluids and Systems - Military Codes and Text

SUPPORTING FLUIDS AND SYSTEMS—MILITARY

CODE	
ADI	Anti–Detonation Injection Fluid—Reciprocating Engine Aircraft.
W	Water Thrust Augmentation—Jet Aircraft.
WAI	Water–Alcohol Injection Type, Thrust Augmentation—Jet Aircraft.
SP	Single Point Refueling.
PRESAIR	Air Compressors rated 3,000 PSI or more.
De–Ice	Anti–icing/De–icing/Defrosting Fluid (MIL–A–8243).

OXYGEN:

LPOX	Low pressure oxygen servicing.
HPOX	High pressure oxygen servicing.
LHOX	Low and high pressure oxygen servicing.
LOX	Liquid oxygen servicing.
OXRB	Oxygen replacement bottles. (Maintained primarily at Naval stations for use in acft where oxygen can be replenished only by replacement of cylinders.)
OX	Indicates oxygen servicing when type of servicing is unknown.

NOTE: Combinations of above items is used to indicate complete oxygen servicing available;

LHOXRB	Low and high pressure oxygen servicing and replacement bottles;
LPOXRB	Low pressure oxygen replacement bottles only, etc.

NOTE: Aircraft will be serviced with oxygen procured under military specifications only. Aircraft will not be serviced with medical oxygen.

NITROGEN:

LPNIT — Low pressure nitrogen servicing.
HPNIT — High pressure nitrogen servicing.
LHNIT — Low and high pressure nitrogen servicing.

4.6.23.2.4 Oil - Military

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.87 Oil - Military Codes

OIL—MILITARY

US AVIATION OILS (MIL SPECS):

CODE	GRADE, TYPE
O–113	1065, Reciprocating Engine Oil (MIL–L–6082)
O–117	1100, Reciprocating Engine Oil (MIL–L–6082)
O–117+	1100, O–117 plus cyclohexanone (MIL–L–6082)
O–123	1065, (Dispersant), Reciprocating Engine Oil (MIL–L–22851 Type III)
O–128	1100, (Dispersant), Reciprocating Engine Oil (MIL–L–22851 Type II)
O–132	1005, Jet Engine Oil (MIL–L–6081)
O–133	1010, Jet Engine Oil (MIL–L–6081)
O–147	None, MIL–L–6085A Lubricating Oil, Instrument, Synthetic
O–148	None, MIL–L–7808 (Synthetic Base) Turbine Engine Oil
O–149	None, Aircraft Turbine Engine Synthetic, 7.5c St
O–155	None, MIL–L–6086C, Aircraft, Medium Grade
O–156	None, MIL–L–23699 (Synthetic Base), Turboprop and Turboshaft Engines
JOAP/SOAP	Joint Oil Analysis Program. JOAP support is furnished during normal duty hours, other times on request. (JOAP and SOAP programs provide essentially the same service, JOAP is now the standard joint service supported program.)

4.6.23.2.5 Transient Alert (Tran Alert) - Military

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.88 Transient Alert (Tran Alert) Text

TRANSIENT ALERT (TRAN ALERT)—MILITARY

Tran Alert service is considered to include all services required for normal aircraft turn–around, e.g., servicing (fuel, oil, oxygen, etc.), debriefing to determine requirements for maintenance, minor maintenance, inspection and parking assistance of transient aircraft. Drag chute repack, specialized maintenance, or extensive repairs will be provided within the capabilities and priorities of the base. Delays can be anticipated after normal duty hours/holidays/weekends regardless of the hours of transient maintenance operation. Pilots should not expect aircraft to be serviced for TURN–AROUNDS during time periods when servicing or maintenance manpower is not available. In the case of airports not operated exclusively by US military, the servicing indicated by the remarks will not always be available for US military aircraft. When transient alert services are not shown, facilities are unknown. NO PRIORITY BASIS—means that transient alert services will be provided only after all the requirements for mission/tactical assigned aircraft have been accomplished.

4.6.24 Item 24 - Noise

Figure 4.89 Noise Title Text

㉔ NOISE

Figure 4.90 Noise Text

Remarks that indicate noise information and/or abatement measures that exist in the vicinity of the airport.

4.6.25 Item 25 - Airport Remarks

Figure 4.91 Airport Remarks Title Text

㉕ AIRPORT REMARKS

4.6.25.1 Attendance Schedule

Figure 4.92 Attendance Schedule Text

The Attendance Schedule is the months, days and hours the airport is actually attended. Airport attendance does not mean watchman duties or telephone accessibility, but rather an attendant or operator on duty to provide at least minimum services (e.g., repairs, fuel, transportation).

4.6.25.2 Airport Remarks Grouping

Figure 4.93 Airport Remarks Grouping Text

Airport Remarks have been grouped in order of applicability. Airport remarks are limited to those items of information that are determined essential for operational use, i.e., conditions of a permanent or indefinite nature and conditions that will remain in effect for more than 30 days concerning aeronautical facilities, services, maintenance available, procedures or hazards, knowledge of which is essential for safe and efficient operation of aircraft. Information concerning permanent closing of a runway or taxiway will not be shown. A note "See Special Notices" shall be applied within this remarks section when a special notice applicable to the entry is contained in the Special Notices section of this publication.

4.6.25.3 Parachute Jumping

Figure 4.94 Parachute Jumping Text

Parachute Jumping indicates parachute jumping areas associated with the airport. See Parachute Jumping Area section of this publication for additional Information.

4.6.25.4 Landing Fee

Figure 4.95 Landing Fee Text

Landing Fee indicates landing charges for private or non–revenue producing aircraft. In addition, fees may be charged for planes that remain over a couple of hours and buy no services, or at major airline terminals for all aircraft.

4.6.25.5 Airport Remarks Note:

Figure 4.96 Airport Remarks Note Text

Note: Unless otherwise stated, remarks including runway ends refer to the runway's approach end.

4.6.26 Item 26 - Military Remarks

Figure 4.97 Military Remarks Text

㉖ MILITARY REMARKS

4.6.26.1 Joint Civil/Military Airports

Figure 4.98 Joint Civil/Military Airport Text

Joint Civil/Military airports contain both Airport Remarks and Military Remarks. Military Remarks published for these airports are applicable only to the military. Military and joint Military/Civil airports contain only Military Remarks. Remarks contained in this section may not be applicable to civil users. When both sets of remarks exist, the first set is applicable to the primary operator of the airport. Remarks applicable to a tenant on the airport are shown preceded by the tenant organization, i.e., (A) (AF) (N) (ANG), etc. Military airports operate 24 hours unless otherwise specified. Airport operating hours are listed first (airport operating hours will only be listed if they are different than the airport attended hours or if the attended hours are unavailable) followed by pertinent remarks in order of applicability. Remarks will include information on restrictions, hazards, traffic pattern, noise abatement, customs/agriculture/ immigration, and miscellaneous information applicable to the Military.

4.6.26.2 Type of Restrictions

Figure 4.99 Type of Restrictions Text

Type of restrictions:

CLOSED: When designated closed, the airport is restricted from use by all aircraft unless stated otherwise. Any closure applying to specific type of aircraft or operation will be so stated. USN/USMC/USAF airports are considered closed during non–operating hours. Closed airports may be utilized during an emergency provided there is a safe landing area.

OFFICIAL BUSINESS ONLY: The airfield is closed to all transient military aircraft for obtaining routine services such as fueling, passenger drop off or pickup, practice approaches, parking, etc. The airfield may be used by aircrews and aircraft if official government business (including civilian) must be conducted on or near the airfield and prior permission is received from the airfield manager.

AF OFFICIAL BUSINESS ONLY OR NAVY OFFICIAL BUSINESS ONLY: Indicates that the restriction applies only to service indicated.

PRIOR PERMISSION REQUIRED (PPR): Airport is closed to transient aircraft unless approval for operation is obtained from the appropriate commander through Chief, Airfield Management or Airfield Operations Officer. Official Business or PPR does not preclude the use of US Military airports as an alternate for IFR flights. If a non–US military airport is used as a weather alternate and requires a PPR, the PPR must be requested and confirmed before the flight departs. The purpose of PPR is to control volume and flow of traffic rather than to prohibit it. Prior permission is required for all aircraft requiring transient alert service outside the published transient alert duty hours. All aircraft carrying hazardous materials must obtain prior permission as outlined in AFJI 11–204, AR 95–27, OPNAVINST 3710.7.

4.6.26.2.1 Note: Official Business Only and PPR

Figure 4.100 Note: Official Business Only and PPR Text

Note: OFFICIAL BUSINESS ONLY AND PPR restrictions are not applicable to Special Air Mission (SAM) or Special Air Resource (SPAR) aircraft providing person or persons on aboard are designated Code 6 or higher as explained in AFJMAN 11–213, AR 95–11, OPNAVINST 3722–8J. Official Business Only or PPR do not preclude the use of the airport as an alternate for IFR flights.

4.6.27 Item 27 - Airport Manager

Figure 4.101 Airport Manager Title Text

⑰ AIRPORT MANAGER

Figure 4.102 Airport Manager Text

The phone number of the airport manager.

4.6.28 Item 28 - Weather Data Sources

Figure 4.103 Weather Data Sources Title Text

㉘ WEATHER DATA SOURCES

Figure 4.104 Weather Data Sources Text

Weather data sources will be listed alphabetically followed by their assigned frequencies and/or telephone number and hours of operation.

4.6.28.1 Weather System Identifiers

Figure 4.105 Weather System Identifier List Text

ASOS—Automated Surface Observing System. Reports the same as an AWOS–3 plus precipitation identification and intensity, and freezing rain occurrence;

AWOS—Automated Weather Observing System

AWOS–A—reports altimeter setting (all other information is advisory only).

AWOS–AV—reports altimeter and visibility.

AWOS–1—reports altimeter setting, wind data and usually temperature, dew point and density altitude.

AWOS–2—reports the same as AWOS–1 plus visibility.

AWOS–3—reports the same as AWOS–1 plus visibility and cloud/ceiling data.

AWOS–3P reports the same as the AWOS–3 system, plus a precipitation identification sensor.

AWOS–3PT reports the same as the AWOS–3 system, plus precipitation identification sensor and a thunderstorm/lightning reporting capability.

AWOS–3T reports the same as AWOS–3 system and includes a thunderstorm/lightning reporting capability.

See AIM, Basic Flight Information and ATC Procedures for detailed description of Weather Data Sources.

AWOS–4—reports same as AWOS–3 system, plus precipitation occurrence, type and accumulation, freezing rain, thunderstorm and runway surface sensors.

LAWRS—Limited Aviation Weather Reporting Station where observers report cloud height, weather, obstructions to vision, temperature and dewpoint (in most cases), surface wind, altimeter and pertinent remarks.

LLWAS—indicates a Low Level Wind Shear Alert System consisting of a center field and several field perimeter anemometers.

SAWRS—identifies airports that have a Supplemental Aviation Weather Reporting Station available to pilots for current weather information.

SWSL—Supplemental Weather Service Location providing current local weather information via radio and telephone.

TDWR—indicates airports that have Terminal Doppler Weather Radar.

WSP—indicates airports that have Weather System Processor.

When the automated weather source is broadcast over an associated airport NAVAID frequency (see NAVAID line), it shall be indicated by a bold ASOS or AWOS followed by the frequency, identifier and phone number, if available.

4.6.29 Item 29 - Communications

Figure 4.106 Communications Title Text

㉙ COMMUNICATIONS

Figure 4.107 Communications Introductory Text

Airport terminal control facilities and radio communications associated with the airport shall be shown. When the call sign is not the same as the airport name the call sign will be shown. Frequencies shall normally be shown in ascending order with the primary frequency listed first. Frequencies will be listed, together with sectorization indicated by outbound radials, and hours of operation. Communications will be listed in sequence as follows:

4.6.29.1 SFA, CTAF, UNICOM or AUNICOM and ATIS

Figure 4.108 Airport Information Approach Frequency Text

Single Frequency Approach (SFA), Common Traffic Advisory Frequency (CTAF), Aeronautical Advisory Stations (UNICOM) or (AUNICOM), and Automatic Terminal Information Service (ATIS) along with their frequency is shown, where available, on the line following the heading “COMMUNICATIONS.” When the CTAF and UNICOM frequencies are the same, the frequency will be shown as CTAF/UNICOM 122.8.

4.6.29.2 FSS Telephone Services

Figure 4.109 FSS Telephone Services Text

The FSS telephone nationwide is toll free 1–800–WX–BRIEF (1–800–992–7433). When the FSS is located on the field it will be indicated as “on arpt”. Frequencies available at the FSS will follow in descending order. Remote Communications Outlet (RCO) providing service to the airport followed by the frequency and FSS RADIO name will be shown when available. FSS’s provide information on airport conditions, radio aids and other facilities, and process flight plans. Airport Advisory Service (AAS) is provided on the CTAF by FSS’s for select non–tower airports or airports where the tower is not in operation.
(See AIM, Para 4–1–9 Traffic Advisory Practices at Airports Without Operating Control Towers or AC 90–42C.)
Aviation weather briefing service is provided by FSS specialists. Flight and weather briefing services are also available by calling the telephone numbers listed.

4.6.29.3 Remote Communications Outlet (RCO)

Figure 4.110 Remote Communications Outlet (RCO) Text

Remote Communications Outlet (RCO)—An unmanned air/ground communications facility that is remotely controlled and provides UHF or VHF communications capability to extend the service range of an FSS.

4.6.29.4 Civil Communications Frequencies

Figure 4.111 Civil Communications Frequencies Text

Civil Communications Frequencies–Civil communications frequencies used in the FSS air/ground system are operated on 122.0, 122.2, 123.6; emergency 121.5; plus receive–only on 122.1.

a. 122.0 is assigned as the Enroute Flight Advisory Service frequency at selected FSS RADIO outlets.

b. 122.2 is assigned as a common enroute frequency.

c. 123.6 is assigned as the airport advisory frequency at select non–tower locations. At airports with a tower, FSS may provide airport advisories on the tower frequency when tower is closed.

d. 122.1 is the primary receive–only frequency at VOR's.

e. Some FSS's are assigned 50 kHz frequencies in the 122–126 MHz band (eg. 122.45). Pilots using the FSS A/G system should refer to this directory or appropriate charts to determine frequencies available at the FSS or remoted facility through which they wish to communicate.

Emergency frequency 121.5 and 243.0 are available at all Flight Service Stations, most Towers, Approach Control and RADAR facilities.

Frequencies published followed by the letter "T" or "R", indicate that the facility will only transmit or receive respectively on that frequency. All radio aids to navigation (NAVAID) frequencies are transmit only. In cases where communications frequencies are annotated with (R) or (E), (R) indicates Radar Capability and (E) indicates Emergency Frequency.

4.6.29.5 Terminal Services

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.112 Terminal Services Text

TERMINAL SERVICES

SFA—Single Frequency Approach.

CTAF—A program designed to get all vehicles and aircraft at airports without an operating control tower on a common frequency.

ATIS—A continuous broadcast of recorded non–control information in selected terminal areas.

D–ATIS—Digital ATIS provides ATIS information in text form outside the standard reception range of conventional ATIS via landline & data link communications and voice message within range of existing transmitters.

AUNICOM—Automated UNICOM is a computerized, command response system that provides automated weather, radio check capability and airport advisory information selected from an automated menu by microphone clicks.

UNICOM—A non–government air/ground radio communications facility which may provide airport information.

PTD—Pilot to Dispatcher.

APP CON—Approach Control. The symbol Ⓡ indicates radar approach control.

TOWER—Control tower.

GCA—Ground Control Approach System.

GND CON—Ground Control.

GCO—Ground Communication Outlet—An unstaffed, remotely controlled, ground/ground communications facility. Pilots at uncontrolled airports may contact ATC and FSS via VHF to a telephone connection to obtain an instrument clearance or close a VFR or IFR flight plan. They may also get an updated weather briefing prior to takeoff. Pilots will use four "key clicks" on the VHF radio to contact the appropriate ATC facility or six "key clicks" to contact the FSS. The GCO system is intended to be used only on the ground.

DEP CON—Departure Control. The symbol Ⓡ indicates radar departure control.

CLNC DEL—Clearance Delivery.

CPDLC—Controller Pilot Data Link Communication. FANS ATC data communication capability from the aircraft to the ATC Data Link system.

PDC—Pre-Departure Clearance. ACARS-based clearance delivery capability from tower to gate printer or aircraft.

PRE TAXI CLNC—Pre taxi clearance.

VFR ADVSY SVC—VFR Advisory Service. Service provided by Non–Radar Approach Control. Advisory Service for VFR aircraft (upon a workload basis) ctc APP CON.

COMD POST—Command Post followed by the operator call sign in parenthesis.

PMSV—Pilot–to–Metro Service call sign, frequency and hours of operation, when full service is other than continuous. PMSV installations at which weather observation service is available shall be indicated, following the frequency and/or hours of operation as "Wx obsn svc 1900–0000Z‡" or "other times" may be used when no specific time is given. PMSV facilities manned by forecasters are considered "Full Service". PMSV facilities manned by weather observers are listed as "Limited Service".

OPS—Operations followed by the operator call sign in parenthesis.

CON

RANGE

FLT FLW—Flight Following

MEDIVAC

NOTE: Communication frequencies followed by the letter "X" indicate frequency available on request.

4.6.30 Item 30 - Airspace

Figure 4.113 Airspace Title Text

㉚ AIRSPACE

Figure 4.114 Airspace Text

Information concerning Class B, C, and part–time D and E surface area airspace shall be published with effective times, if available.

CLASS B—Radar Sequencing and Separation Service for all aircraft in CLASS B airspace.

CLASS C—Separation between IFR and VFR aircraft and sequencing of VFR arrivals to the primary airport.

TRSA—Radar Sequencing and Separation Service for participating VFR Aircraft within a Terminal Radar Service Area.

Class C, D, and E airspace described in this publication is that airspace usually consisting of a 5 NM radius core surface area that begins at the surface and extends upward to an altitude above the airport elevation (charted in MSL for Class C and Class D). Class E surface airspace normally extends from the surface up to but not including the overlying controlled airspace.

When part–time Class C or Class D airspace defaults to Class E, the core surface area becomes Class E. This will be formatted as:
AIRSPACE: CLASS C svc "times" ctc **APP CON** other times CLASS E:
or
AIRSPACE: CLASS D svc "times" other times CLASS E.

When a part–time Class C, Class D or Class E surface area defaults to Class G, the core surface area becomes Class G up to, but not including, the overlying controlled airspace. Normally, the overlying controlled airspace is Class E airspace beginning at either 700´ or 1200´ AGL and may be determined by consulting the relevant VFR Sectional or Terminal Area Charts. This will be formatted as:
AIRSPACE: CLASS C svc "times" ctc **APP CON** other times CLASS G
or
AIRSPACE: CLASS D svc "times" other times CLASS G
or
AIRSPACE: CLASS E svc "times" other times CLASS G

NOTE: AIRSPACE SVC "TIMES" INCLUDE ALL ASSOCIATED ARRIVAL EXTENSIONS. Surface area arrival extensions for instrument approach procedures become part of the primary core surface area. These extensions may be either Class D or Class E airspace and are effective concurrent with the times of the primary core surface area. For example, when a part–time Class C, Class D or Class E surface area defaults to Class G, the associated arrival extensions will default to Class G at the same time. When a part–time Class C or Class D surface area defaults to Class E, the arrival extensions will remain in effect as Class E airspace.

NOTE: CLASS E AIRSPACE EXTENDING UPWARD FROM 700 FEET OR MORE ABOVE THE SURFACE, DESIGNATED IN CONJUNCTION WITH AN AIRPORT WITH AN APPROVED INSTRUMENT PROCEDURE.
Class E 700´ AGL (shown as magenta vignette on sectional charts) and 1200´ AGL (blue vignette) areas are designated when necessary to provide controlled airspace for transitioning to/from the terminal and enroute environments. Unless otherwise specified, these 700´/1200´ AGL Class E airspace areas remain in effect continuously, regardless of airport operating hours or surface area status. These transition areas should not be confused with surface areas or arrival extensions.

(See Chapter 3, AIRSPACE, in the Aeronautical Information Manual for further details)

4.6.31 Item 31 - VOR Test Facility (VOT)

Figure 4.115 VOR Test Facility (VOT) Title Text

㉛ VOR TEST FACILITY (VOT)

Figure 4.116 VOR Test Facility (VOT) Text

The VOT transmits a signal which provided users a convenient means to determine the operational status and accuracy of an aircraft VOR receiver while on the ground. Ground based VOTs and the associated frequency shall be shown when available. VOTs are also shown with identifier, frequency and referenced remarks in the VOR Receiver Check section in the back of this publication.

4.6.32 Item 32 - Radio Aids to Navigation

Figure 4.117 Radio Aids to Navigation Title Text

(32) RADIO AIDS TO NAVIGATION

Figure 4.118 Radio Aids to Navigation Text

The Airport/Facility Directory section of the Chart Supplement lists, by facility name, all Radio Aids to Navigation that appear on FAA, Aeronautical Information Services Visual or IFR Aeronautical Charts and those upon which the FAA has approved an Instrument Approach Procedure, with exception of selected TACANs. All VOR, VORTAC, TACAN and ILS equipment in the National Airspace System has an automatic monitoring and shutdown feature in the event of malfunction. Unmonitored, as used in this publication, for any navigational aid, means that monitoring personnel cannot observe the malfunction or shutdown signal. The NAVAID NOTAM file identifier will be shown as "NOTAM FILE IAD" and will be listed on the Radio Aids to Navigation line. When two or more NAVAIDS are listed and the NOTAM file identifier is different from that shown on the Radio Aids to Navigation line, it will be shown with the NAVAID listing. NOTAM file identifiers for ILSs and its components (e.g., NDB (LOM) are the same as the associated airports and are not repeated. Automated Surface Observing System (ASOS) and Automated Weather Observing System (AWOS) will be shown when this service is broadcast over selected NAVAIDs.

NAVAID information is tabulated as indicated in the following sample:

Figure 4.119 NAVAID Legend Example

NAVAIDs with Single SSV (VOR, DME, TACAN, NDB, NDB/DME)

NAVAIDs with Two SSVs (VOR/DME, VORTAC)

SSV for each component shown in paired parentheses with the VOR SSV shown first followed by the DME or TACAN SSV.

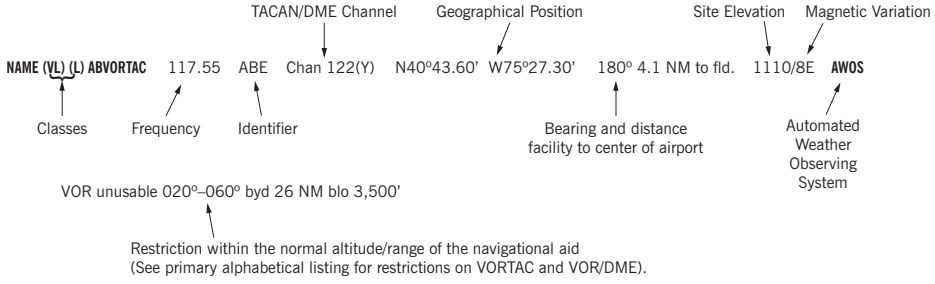


Figure 4.120 "Y" Mode Note

Note: Those DME channel numbers with a (Y) suffix require TACAN to be placed in the "Y" mode to receive distance information.

Figure 4.121 ASR/PAR Note

ASR/PAR—Indicates that Surveillance (ASR) or Precision (PAR) radar instrument approach minimums are published in the U.S. Terminal Procedures. Only part–time hours of operation will be shown.

4.6.32.1 Radio Class Designations

Subheading shall appear as specified in Section 4.4.1.4.

Figure 4.122 Radio Class Designations

RADIO CLASS DESIGNATIONS

VOR/DME/TACAN Standard Service Volume (SSV) Classifications

SSV Class	Altitudes	Distance (NM)
(T) Terminal	1000´ to 12,000´	25
(L) Low Altitude	1000´ to 18,000´	40
(H) High Altitude	1000´ to 14,500´	40
	14,500´ to 18,000´	100
	18,000´ to 45,000´	130
	45,000´ to 60,000´	100
(VL) VOR Low	1000´ to 5,000´	40
	5,000´ to 18,000´	70
(VH) VOR High	1000´ to 5,000´	40
	5,000´ to 14,500´	70
	14,500´ to 18,000´	100
	18,000´ to 45,000´	130
	45,000´ to 60,000´	100
(DL) DME Low & (DH) DME High*	1000´ to 12,900´	40 increasing to 130
(DL) DME Low	12,900´ to 18,000´	130
(DH) DME High	12,900´ to 45,000´	130
	45,000´ to 60,000´	100

*Between 1000´ to 12,900´, DME service volume follows a parabolic curve used by flight management computers.

4.6.32.1.1 Service Volume Notes

Figure 4.123 Service Volume Notes Text

NOTES: Additionally, High Altitude facilities provide Low Altitude and Terminal service volume and Low Altitude facilities provide Terminal service volume. Altitudes are with respect to the station's site elevation. Coverage is not available in a cone of airspace directly above the facility. In some cases local conditions (terrain, buildings, trees, etc.) may require that the service volume be restricted. The public shall be informed of any such restriction by a remark in the NAVAID entry in this publication or by a Notice to Airmen (NOTAM).

4.6.32.1.2 NAVAID Terms and Codes

Figure 4.124 VOR Note

The term VOR is, operationally, a general term covering the VHF omnidirectional bearing type of facility without regard to the fact that the power, the frequency protected service volume, the equipment configuration, and operational requirements may vary between facilities at different locations.

Figure 4.125 NAVAID Codes

AB	Automatic Weather Broadcast.
DF	Direction Finding Service.
DME	UHF standard (TACAN compatible) distance measuring equipment.
DME(Y)	UHF standard (TACAN compatible) distance measuring equipment that require TACAN to be placed in the "Y" mode to receive DME.
GS	Glide slope.
H	Non–directional radio beacon (homing), power 50 watts to less than 2,000 watts (50 NM at all altitudes).
HH	Non–directional radio beacon (homing), power 2,000 watts or more (75 NM at all altitudes).
H–SAB	Non–directional radio beacons providing automatic transcribed weather service.
ILS	Instrument Landing System (voice, where available, on localizer channel).
IM	Inner marker.
LDA	Localizer Directional Aid.
LMM	Compass locator station when installed at middle marker site (15 NM at all altitudes).
LOM	Compass locator station when installed at outer marker site (15 NM at all altitudes).
MH	Non–directional radio beacon (homing) power less than 50 watts (25 NM at all altitudes).
MM	Middle marker.
OM	Outer marker.
S	Simultaneous range homing signal and/or voice.
SABH	Non–directional radio beacon not authorized for IFR or ATC. Provides automatic weather broadcasts.
SDF	Simplified Direction Facility.
TACAN	UHF navigational facility–omnidirectional course and distance information.
VOR	VHF navigational facility–omnidirectional course only.
VOR/DME	Collocated VOR navigational facility and UHF standard distance measuring equipment.
VORTAC	Collocated VOR and TACAN navigational facilities.
W	Without voice on radio facility frequency.
Z	VHF station location marker at a LF radio facility.

4.6.32.2 ILS Facility Performance Classification Codes

Subheading shall appear as NewsGothCnBT, bold, 7.58 point font in all CAPS.

Figure 4.126 ILS Facility Performance Classification Codes Text

ILS FACILITY PERFORMANCE CLASSIFICATION CODES

Codes define the ability of an ILS to support autoland operations. The two portions of the code represent Official Category and farthest point along a Category I, II, or III approach that the Localizer meets Category III structure tolerances.

Official Category: I, II, or III; the lowest minima on published or unpublished procedures supported by the ILS.

Farthest point of satisfactory Category III Localizer performance for Category I, II, or III approaches: A – 4 NM prior to runway threshold, B – 3500 ft prior to runway threshold, C – glide angle dependent but generally 750–1000 ft prior to threshold, T – runway threshold, D – 3000 ft after runway threshold, and E – 2000 ft prior to stop end of runway.

ILS information is tabulated as indicated in the following sample:

Figure 4.127 ILS Facility Performance Classification Codes

ILS/DME 108.5 I–ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB.

ILS Facility Performance Classification Code

4.6.32.2.1 Frequency Pairing Tables

Subheading and Table Headers for both the Frequency Pairing Table and Frequency Pairing Table - VOR/ILS VHF Freq with TACAN Channels shall appear as NewsGothCnBT, bold, 7 point font in all CAPS.

Figure 4.128 Frequency Pairing Table

FREQUENCY PAIRING TABLE

VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL
108.10	18X	108.55	22Y	111.05	47Y	114.85	95Y
108.30	20X	108.65	23Y	111.15	48Y	114.95	96Y
108.50	22X	108.75	24Y	111.25	49Y	115.05	97Y
108.70	24X	108.85	25Y	111.35	50Y	115.15	98Y
108.90	26X	108.95	26Y	111.45	51Y	115.25	99Y
109.10	28X	109.05	27Y	111.55	52Y	115.35	100Y
109.30	30X	109.15	28Y	111.65	53Y	115.45	101Y
109.50	32X	109.25	29Y	111.75	54Y	115.55	102Y
109.70	34X	109.35	30Y	111.85	55Y	115.65	103Y
109.90	36X	109.45	31Y	111.95	56Y	115.75	104Y
110.10	38X	109.55	32Y	113.35	80Y	115.85	105Y
110.30	40X	109.65	33Y	113.45	81Y	115.95	106Y
110.50	42X	109.75	34Y	113.55	82Y	116.05	107Y
110.70	44X	109.85	35Y	113.65	83Y	116.15	108Y
110.90	46X	109.95	36Y	113.75	84Y	116.25	109Y
111.10	48X	110.05	37Y	113.85	85Y	116.35	110Y
111.30	50X	110.15	38Y	113.95	86Y	116.45	111Y
111.50	52X	110.25	39Y	114.05	87Y	116.55	112Y
111.70	54X	110.35	40Y	114.15	88Y	116.65	113Y
111.90	56X	110.45	41Y	114.25	89Y	116.75	114Y
108.05	17Y	110.55	42Y	114.35	90Y	116.85	115Y
108.15	18Y	110.65	43Y	114.45	91Y	116.95	116Y
108.25	19Y	110.75	44Y	114.55	92Y	117.05	117Y
108.35	20Y	110.85	45Y	114.65	93Y	117.15	118Y
108.45	21Y	110.95	46Y	114.75	94Y	117.25	119Y

Figure 4.129 Frequency Pairing Table - VOR/ILS VHF Freq with TACAN Channels

FREQUENCY PAIRING TABLE

The following is a list of paired VOR/ILS VHF frequencies with TACAN channels.

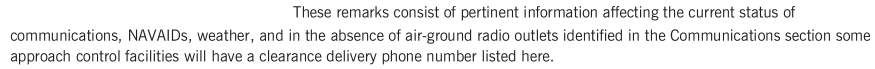
TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY
2X	134.50	43X	110.60	72X	112.50	101X	115.40
2Y	134.55	43Y	110.65	72Y	112.55	101Y	115.45
11X	135.40	44X	110.70	73X	112.60	102X	115.50
11Y	135.45	44Y	110.75	73Y	112.65	102Y	115.55
12X	135.50	45X	110.80	74X	112.70	103X	115.60
12Y	135.55	45Y	110.85	74Y	112.75	103Y	115.65
17X	108.00	46X	110.90	75X	112.80	104X	115.70
17Y	108.05	46Y	110.95	75Y	112.85	104Y	115.75
18X	108.10	47X	111.00	76X	112.90	105X	115.80
18Y	108.15	47Y	111.05	76Y	112.95	105Y	115.85
19X	108.20	48X	111.10	77X	113.00	106X	115.90
19Y	108.25	48Y	111.15	77Y	113.05	106Y	115.95
20X	108.30	49X	111.20	78X	113.10	107X	116.00
20Y	108.35	49Y	111.25	78Y	113.15	107Y	116.05
21X	108.40	50X	111.30	79X	113.20	108X	116.10
21Y	108.45	50Y	111.35	79Y	113.25	108Y	116.15
22X	108.50	51X	111.40	80X	113.30	109X	116.20
22Y	108.55	51Y	111.45	80Y	113.35	109Y	116.25
23X	108.60	52X	111.50	81X	133.40	110X	116.30
23Y	108.65	52Y	111.55	81Y	113.45	110Y	116.35
24X	108.70	53X	111.60	82X	113.50	111X	116.40
24Y	108.75	53Y	111.65	82Y	113.55	111Y	116.45
25X	108.80	54X	111.70	83X	113.60	112X	116.50
25Y	108.85	54Y	111.75	83Y	113.65	112Y	116.55
26X	108.90	55X	111.80	84X	113.70	113X	116.60
26Y	108.95	55Y	111.85	84Y	113.75	113Y	116.65
27X	109.00	56X	111.90	85X	113.80	114X	116.70
27Y	109.05	56Y	111.95	85Y	113.85	114Y	116.75
28X	109.10	57X	112.00	86X	113.90	115X	116.80
28Y	109.15	57Y	112.05	86Y	113.95	115Y	116.85
29X	109.20	58X	112.10	87X	114.00	116X	116.90
29Y	109.25	58Y	112.15	87Y	114.05	116Y	116.95
30X	109.30	59X	112.20	88X	114.10	117X	117.00
30Y	109.35	59Y	112.25	88Y	114.15	117Y	117.05
31X	109.40	60X	133.30	89X	114.20	118X	117.10
31Y	109.45	60Y	133.35	89Y	114.25	118Y	117.15
32X	109.50	61X	133.40	90X	114.30	119X	117.20
32Y	109.55	61Y	133.45	90Y	114.35	119Y	117.25
33X	109.60	62X	133.50	91X	114.40	120X	117.30
33Y	109.65	62Y	133.55	91Y	114.45	120Y	117.35
34X	109.70	63X	133.60	92X	114.50	121X	117.40
34Y	109.75	63Y	133.65	92Y	114.55	121Y	117.45
35X	109.80	64X	133.70	93X	114.60	122X	117.50
35Y	109.85	64Y	133.75	93Y	114.65	122Y	117.55
36X	109.90	65X	133.80	94X	114.70	123X	117.60
36Y	109.95	65Y	133.85	94Y	114.75	123Y	117.65
37X	110.00	66X	133.90	95X	114.80	124X	117.70
37Y	110.05	66Y	133.95	95Y	114.85	124Y	117.75
38X	110.10	67X	134.00	96X	114.90	125X	117.80
38Y	110.15	67Y	134.05	96Y	114.95	125Y	117.85
39X	110.20	68X	134.10	97X	115.00	126X	117.90
39Y	110.25	68Y	134.15	97Y	115.05	126Y	117.95
40X	110.30	69X	134.20	98X	115.10		
40Y	110.35	69Y	134.25	98Y	115.15		
41X	110.40	70X	112.30	99X	115.20		
41Y	110.45	70Y	112.35	99Y	115.25		
42X	110.50	71X	112.40	100X	115.30		
42Y	110.55	71Y	112.45	100Y	115.35		

4.6.33 Item 33 - Comm/NAV/Weather Remarks

Due to spacing and page pagination, the Title Text may appear along the same line as the first line as the remarks text. If header text is on the same line as the first line as the remarks text, a colon will follow appear last word of title text.

Figure 4.130 COMM/NAV/WEATHER Remarks Title Text

Figure 4.131 COMM/NAV/Weather Remarks Text



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CHAPTER 5
AIRPORT/FACILITY DIRECTORY CONTENT

5.1 AIRPORT/FACILITY DIRECTORY (A/FD)

The Supplement shall contain an Airport/Facility Directory and supplementary textual, tabulated, and graphic data, as required, to support flight operations. Data published will be for use in conjunction with US Government Enroute and Visual Charts and the Flight Information Handbook.

Remarks in the Airport/Facility Directory shall not include pilot instruction or procedural information.

5.1.1 Supplement Data Attributes

The Supplement shall contain data attributes, which unless otherwise specified, shall be published as follows:

5.1.1.1 Communication Frequencies

Frequencies will be grouped in the following order: VHF, UHF, HF, LF/MF. Within each grouping individual frequencies will be listed in ascending order.

Primary frequencies in each group will be listed first, followed by secondary frequencies.

5.1.1.1.1 Emergency Frequencies

Emergency VHF (121.5) and UHF (243.0) frequencies are normally available at all facilities and will not be listed. If not available it will be noted as a remark.

5.1.1.1.2 ‘On Request’, ‘Receive Only’ and/or ‘Transmit Only’ Frequencies

Frequencies which are ‘On Request’, ‘Receive Only’, and/or ‘Transmit Only’ shall be symbolized by the letter ‘X’ (on request), ‘R’ (receive only), ‘T’ (transmit only), following the frequency.

5.1.1.1.3 Frequency Sectors

Frequency sectors are indicated by outbound radials and are shown in parentheses after the frequency.

5.1.1.2 Tabulated Data

Tabulated data shall have column headings on each page where the data appears.

5.1.1.3 Reporting Times

Reporting of Times shall be published as follows:

a. All times will be Coordinated Universal Time (UTC).
b. Standard time converted to UTC shall be shown, e.g., 1500-0600Z.
c. The symbol (‡) will be shown following all UTC (Z) time affected by daylight saving time. Winter operating hours will be used as primary times.
d. If the state or country observes daylight savings time and the operating times are other than those daylight savings times specified, the operating hours will include the dates and no ‡ symbol will be shown; e.g., 0630-1700Z Apr 15-Aug 31, 0630-1700Z Sep 1–Apr 14.

Airports operate continuously unless otherwise specified.

5.1.1.4 Communication Services

Communications Services (ATIS, PTD, APP/DEP, TWR, A/G, etc.) operate continuously unless otherwise specified.

5.1.1.5 NAVAIDs

NAVAIDS operate and are monitored continuously unless otherwise specified.

5.1.1.6 Bearings, Radials, Courses and Tracks

All bearings, radials, courses, and tracks shall be magnetic and shown as a three-digit number (e.g., 001 to 360).

5.1.1.7 Mileages

All mileages shown shall be nautical miles unless otherwise specified.

5.1.1.8 Elevations

All elevations shall be in feet above/below Mean Sea Level (MSL) unless otherwise indicated. When the elevation is “Sea Level” it shall be shown as “00”. When the elevation is “Below Sea Level” it shall be prefixed by a minus sign (-).

5.1.1.9 Runways Designators

All runway designators shall be shown using a two-digit number. Parallel runways shall be further identified by L, C, or R, i.e., Runway 09R, Runway 20L. Reciprocal runway headings shall be shown together separated by a dash, e.g., Runway 07-25. Assault strips (landing zone) designators shall be expressed in three digits.

5.1.1.10 Geographic Coordinates

Geographic coordinates shall be shown as hemisphere, degrees, minutes, hundredths-of-minutes, e.g., N42°20.25’ W102°24.57’.

Published positions shall be compatible with the World Geodetic System 1984 (WGS 84).

5.1.2 Airport/Facility Directory - Arrangement of Data

The directory shall be an arrangement of data related to airports, heliports, seaplane landing areas, air traffic control, air traffic service facilities, communication stations, and NAVAIDs falling within the area of coverage of the publication.

The Page Heading for this section will be the State of the entries listed.

References:

Appendix 23 - A/FD Directory Sample Page

5.1.2.1 Layout and Format

The format of the Airport/Facility Directory is an alphabetical listing of individual entries, each entry being a flexible arrangement or grouping of data for an individual airport or facility. The flexibility of a data-grouping format is aimed at achieving the best possible utilization of space within a given area on a page. Listings will be organized by state within each Chart Supplement volume. Facilities listed within each state will be alphabetized by associated city and then by facility name. In the Chart Supplement, Alaska, and Canadian data will be listed following the U.S. data.

5.1.2.2 Required Items

The required items includes the following:

1. Associated City
2. Facility Name
3. Alternate Name
4. Location Identifier
5. ICAO Location Indicator
6. Airport Operating Agency
7. Tenant Units
8. Airport Location
9. Time Conversion
10. Geographic Location
11. Airport Elevation
12. Rotating Beacon
13. Airport of Entry
14. Landing Rights Airport
15. Airport NOTAM File
16. MON Airport Designation
17. Sectional Chart Reference
18. Helicopter Chart Reference
19. Enroute Chart Number(s) and Panel Identification
20. Enroute Area Chart Indicator (A)
21. Enroute Pacific Chart Indicator (P)
22. Terminal Procedures Volume and Number (IAP)
23. Airport Diagrams Indicator (AD)
24. Runway Designation
25. Runway Dimensions
26. Runway Surface
27. Runway Weight Bearing Capacity
28. Pavement Classification Number (PCN)/Pavement Classification Rating (PCR)
29. Runway Lighting,
30. Runway Slope Information (runways less than 8000 feet)
31. Followed by data related to a given runway end, to include
    a. runway end designation
    b. approach lighting
    c. visual glideslope Indicators
    d. glide angle and threshold crossing heights
    e. centerline lights
    f. runway visual range
    g. displaced threshold,
    h. controlling obstruction
    i. right traffic indication
    j. runway slope information (runways 8,000 feet or greater)
32. Land and Hold-Short Data,
33. Runway Declared Distance Information
34. Arresting Gear/System Data

35. Service
36. Noise
37. Airport Remarks, Military Remarks, Heliport Remarks, Seaplane Remarks
38. Airport Manager
39. Weather Data Services
40. Communication
41. Airspace
42. VOR Test Facility
43. Radio Aids to Navigation (NAVAIDs) and Instrument Landing Systems
44. Radar
45. Comm/NAV/Weather Remarks

Except as otherwise specified, entries for NAVAIDs, weather data, and remote communications outlets not depicted at an individual airport entry will have their own separate entry and shall be listed in the Directory under the appropriate name in alphabetical sequence.

Each major grouping of information shall be proceeded by the appropriate heading and sub-headings, e.g., SERVICE, LGT, FUEL, etc.

5.1.2.3 Weather Data, Communications, Airspace and NAVAIDs Remark(s)

WEATHER DATA, COMMUNICATIONS, AIRSPACE, and NAVAIDS remarks will follow at the end of the appropriate entry; e.g.,

Figure 5.1 Weather Data, Communications, Airspace and NAVAIDs Remark(s)

KINGSTON (VH) (H) VORTAC 113.8 KGS CH76 N37˚47.36' W122˚49.13' at fld. 150/8E. Unmonitored. OTS indef.

Additional remarks relating to Communications, NAVAIDs or Weather can also be displayed in the Comm/NAV/Weather Remarks section at the bottom of the airport entry if necessary.

5.1.2.4 Services, Airport, and Military Remarks

In the SERVICES, AIRPORT, and MILITARY REMARKS sections, remarks will follow the item titles to which they pertain.

Figure 5.2 Special Remarks

LGT ACTIVATE MIRL Rwy 03-21 and VASI Rwy 03 and Rwy 21-CTAF.
FUEL J8 Avbl 0700-2000Z‡, callout fee other times.

5.1.2.5 Specific Remarks

Specific remarks applicable to individual elements in a listing will be enclosed in parentheses with the element.

Figure 5.3 Special Remarks

APP/DEP CON 119.8 124.4 290.1 (during twr hrs) **TWR** 119.6 126.5 (0600-2000Z‡.).

5.1.2.6 Descriptive Terms, Abbreviations, and Acronyms

The following descriptive terms, abbreviations, and acronyms, as part of the airport data, shall always be capitalized and in bold type.

Table 5.1 Descriptive Terms Headings and Sub-headings

Section Heading	Sub-headings
ASSOCIATED CITY AIRPORT NAME	
SECTIONAL CHART, COPTER CHART, ENROUTE CHART NUMBER AND PANEL IDENTIFICATION, TERMINAL PROCEDURE VOLUME, AIRPORT DIAGRAM (AD),	
RUNWAY DESIGNATION	RUNWAY END DESIGNATION
LAND AND HOLD SHORT OPERATIONS (LAHSO)	LANDING, HOLD SHORT POINT, DIST AVBL, RUNWAY END DESIGNATION
RUNWAY DECLARED DISTANCE INFORMATION	LDG/TKOF, TORA, TODA, ASDA, LDA, RUNWAY END DESIGNATION
ARRESTING GEAR/SYSTEM	RUNWAY END DESIGNATION
SERVICES	ARFF, LGT, A-GEAR, JASU, FUEL, FLUID, OIL, MAINT
NOISE	
AIRPORT REMARKS HELIPAD REMARKS SEAPLANE REMARKS	GENERAL, TFC PAT, CSTMS/AG/IMG, TRAN ALERT
MILITARY REMARKS	RSTD, CAUTION, MISC, TENANT UNIT NAME
AIRPORT MANAGER	
WEATHER DATA SOURCES	ASOS, AWOS, etc., PMSV

Table 5.1 Descriptive Terms Headings and Sub-headings (Continued)

COMMUNICATIONS	SFA,CTAF, UNICOM, AUNICOM, PTD, ATIS, D-ATIS, AFIS (Alaska), FSS ANME, NAME RDO, NAME RCO, CALL NAME-APP, CALL NAME-CALL NAME TWR, CALL NAME-GND, CALL NAME-DEP, CALL NAME-GCA, NAME-GCO, CALL NAME-CLNC DEL, CPDLC SVC (LOGON IDENT), PDC, CALL NAME-PRE TAXI CLNC, CALL NAME-VFR ADVSY SVC, NAME COMD POST, CALL NAME-A/G, NAME-ARPT OPS, MF (Canada), etc.
AIRSPACE	CLASS B, CLASS C, CLASS D, CLASS E, APP CON, TRSA
VOR TEST FACILITY (VOT)	
RADIO AIDS TO NAVIGATION (NAVAIDS)	VORTAC, VOR, VOR/DME, TACAN, DME, NDB, LOM, VHF/UHF, ILS, ILS/DME, LOC, SDF, LDA
ASR, PAR, ASR/PAR	

5.1.3 Airport/Facility Directory - Organization of Facilities

Listings in the airport/facility directory will be organized by state and then associated city name. In the Chart Supplement Alaska, Canadian data will be listed following the U.S. data.

The directory shall consist of an alphabetical listing, within the area of coverage, of

1. Airports, heliports and seaplane landing areas;
2. Communications stations;
3. NAVAIDs; and
4. Weather data.

5.1.3.1 Airports

5.1.3.1.1 Public-use Civil Airports and Joint Public-use Civil/Military Airports

Airports within the Directory will be classified into two basic categories, military/federal government or civil airport open to the general public. Some selected private airports may be published at the specific request of the appropriate authority to meet operational needs. A joint-use airport (civil and military) is jointly controlled and used/operated by both military and civil agencies. Civil designation will be shown first; e.g., CIV/MIL.

5.1.3.1.1.1 Airport Listing - Organizational Rules

5.1.3.1.1.1.1 City Name Same Name as First Word of Multiple-Word Airport Name

When the city name is the same name as the first word of a multiple-word airport name (e.g., Boise Air Terminal), or a hyphenated airport name (e.g., Altoona-Blair Co) the listing under the airport name shall suffice. The city name will not be shown.

5.1.3.1.1.1.2 Airport Name is Different than the Associated City Name

When the airport name is different than the city name, the city name will be shown on the preceding line in 10 pt. bold face type.

Airports with names other than the city name will be cross-referenced alphabetical by the airport name and page number, e.g., ELLINGTON FLD, TX See HOUSTON page xxx.

5.1.3.1.1.1.3 Multiple Airports Referenced to the Same City

In cases where multiple airports are referenced to the same city, those airports shall be sub listed alphabetically, with all associated data, and separated by a dashed ruled line extending across the width of the page. The city name will not be repeated.

References:

Appendix 24 - A/FD Directory Multiple Airports Referenced to Same City Sample

5.1.3.1.2 Airport has an Associated Helipad or Waterway

When an airport has an associated helipad or waterway, data pertinent to the helipad/waterway shall be grouped separately and placed immediately following the last data entry for the airport. The same arrangement and sequence of data prescribed for airport data shall be used and modified as necessary to accommodate any unique feature of the heliport/waterway data. General information common to both facilities will only be shown at the airport entry, e.g., facility name, coordinates, chart references, etc. When this situation exists, airport groupings and heliport groupings shall be separated by a horizontal dotted line extending across the width of the page.

References:

Appendix 21 - A/FD Directory Legend Sample

5.1.3.2 NAVAIDs

5.1.3.2.1 NAVAIDs - Same Name as an Airport Published in Directory

NAVAIDs having the same name as an airport published in the Directory shall be listed in the NAVAIDS section of that airport listing. A separate alphabetical listing with the NAVAID under its own name is not required.

5.1.3.2.2 NAVAIDs - Has same first word/name as Airport Published in Directory

When a NAVAID has the same name as the first word of a multiple-word airport name (e.g., Boise Air Terminal) or a hyphenated airport name (e.g., Allentown-Bethlehem-Easton) the listing under the airport name shall suffice.

5.1.3.2.3 NAVAIDs - Same name as an associated city name

NAVAIDs having the same name as an associated city name for an airport published in the Directory shall be listed in the NAVAIDS section of that airport listing. A separate alphabetical listing with the NAVAID under its own name is not required.

5.1.3.2.4 Weather Data (Not Associated with NAVAID)

Weather data facilities not associated with an airport or NAVAID will be listed alphabetically by name.

5.1.3.3 Remote Communications Outlets (RCO)

5.1.3.3.1 RCO - Same Name as an Airport

Remote Communication Outlets (RCO) having the same name as an airport published in the Directory shall be listed in the COMMUNICATIONS section of that airport listing. A separate alphabetical listing with the RCO name is not required.

5.1.3.3.2 RCO - Same Name as the Airport's Associated City

Remote Communication Outlets (RCO) having the same name as the airport's associated city published in the Directory shall be listed in the COMMUNICATIONS section of that airport listing. A separate alphabetical listing with the RCO name is not required.

5.1.3.4 NAVAIDs, RCOs and AWOS/ASOS Facilities with the Same Name

NAVAIDs, RCOs, and AWOS/ASOS facilities with the same name may be listed together under the same name listing.

5.1.4 Airport, Heliport and Seaplane Base entries

The following information and sequence of data shall be shown, when available, for airport, heliport and seaplane bases:

5.1.4.1 Primary Airport Data

Primary airport data is indicated on the first line of an airport entry.

5.1.4.1.1 Associated City

The name of the associated city will appear on the line above the facility name when the city name differs from the facility name. See organizational rules in Section **5.1.3.1.1.1** - Airport Listing - Organizational Rules.

References:

Appendix 23 - A/FD Directory Sample Page

5.1.4.1.2 Airport Name

Airport name extracted verbatim from the authorized database in 8 point bold type (caps).

5.1.4.1.3 Heliports

The word HELIPORT shall be shown immediately following the facility name extracted verbatim from the authorized database.

5.1.4.1.4 Seaplane Bases

The abbreviation SPB shall be shown immediately following the facility name extracted verbatim from the authorized database.

5.1.4.1.5 Alternate Names for Military Fields

Alternate names for military fields extracted verbatim from the authorized database shall be shown in parentheses.

Figure 5.4 Alternate Names for Military Fields

BEAUFORT MCAS (MERRITT FLD)

5.1.4.1.6 Island Names

Island name may be shown in lieu of State/Province/City name for clarification purposes.

5.1.4.1.7 Airport Location Identifiers

The three or four character FAA Location Identifier shall be shown in parentheses; e.g., (ADW).

The four character ICAO Location Indicator will be shown in parentheses immediately following the FAA Identifier; e.g., (ADW)(KADW).

Zeros will be shown with a slash (Ø) to differentiate them from the letter O in Indicators and Identifiers.

If two four-character codes are assigned, the civil code will be shown first, followed by the military code. Codes shall be separated by a slash. If two military codes are assigned, show the primary operating agency's code first; e.g., (KADW/KNSF).

5.1.4.1.8 Operating Agency

To readily identify the type of airport, an abbreviation to indicate operating entity (e.g., AF, N, CG, CIV/MIL, PVT, etc.) shall be shown. When another organization shares airport management responsibility, but is a military or civil tenant unit, the appropriate official/approved abbreviation shall be enclosed in parentheses.

Figure 5.5 Operating Agency

N (AFRC), AF (ANG), etc.

5.1.4.1.9 Airport Location Relative to Associated City

Shows distance and direction of the airport from the center of the associated city in nautical miles and cardinal points; e.g., 4 NE.

5.1.4.1.10 Time Conversion

All airport listings shall indicate the time conversion factor from UTC to local time, and where appropriate, the conversion factor for daylight saving time (DT), e.g., UTC-5 (-4DT). A double plus (‡) symbol will be shown following all UTC (Z) time affected by daylight saving time wherever it appears within the listing. Within states/countries that do not observe daylight saving time, the airport listing shall indicate the UTC + or – local time conversion only, e.g., UTC+5 or UTC-5.

5.1.4.1.11 Geographic Location

The geographic coordinates of the facility shall be shown as hemisphere, degrees, minutes, and hundredths-of-minutes.

5.1.4.2 Secondary Airport Data

The following airport data, when available, shall be shown on the second or following lines of the airport data tabulations indented two spaces.

5.1.4.2.1 Elevation

The airport elevation in feet above/below mean sea level (MSL) shall be indicated. When elevation is sea level, "00" will be shown; when elevation is below sea level a minus sign (-) shall precede the figure. A leading zero is not required for single digit elevations.

5.1.4.2.2 Airport Rotating Beacon

The letter B shall indicate the availability of an airport rotating beacon. If beacon does not operate sunset to sunrise, remarks will be shown in the **SERVICES** entry following the LGT subheading; e.g., **SERVICES LGT** Rotating bcn opr 2100-2300Z‡. Should on-request or PPR be used, the method of requesting by letter, telephone, etc., will be included.

5.1.4.2.3 Traffic Pattern Altitude (TPA)

The first figure shown is TPA above mean sea level. The second figure in parentheses is TPA above airport elevations. Multiple TPA shall be shown as "TPA–See Remarks" and detailed information shall be shown in the Airport or Military Remarks Section.

5.1.4.2.4 Airport of Entry

An Airport of Entry will be indicated by AOE.

5.1.4.2.5 Landing Right Airport

A Landing Rights Airport will be LRA.

5.1.4.2.6 NOTAM File Identifier

The NOTAM File Identifier for this airport is listed.

5.1.4.2.7 Chart References

Chart references will be shown in a continuous row set flush right in the following order:

- Sectional Chart
- Helicopter Chart
- Enroute High Chart Number(s) and Panel Identification
- Enroute Low Chart Number(s) and Panel Identification
- Enroute Area Chart Indicator (A)
- Enroute Pacific Chart Indicator (P)
- Terminal Procedures indicator (IAP)
- Airport Diagram indicator (AD)

5.1.4.2.7.1 Sectional Chart

The primary sectional chart on which the airport is shown will be referenced. The Terminal Area Chart will be referenced for Puerto Rico and Virgin Islands facilities.

5.1.4.2.7.2 Helicopter Chart

When the airport is shown on a helicopter chart the word COPTER will be shown after the sectional chart reference.

5.1.4.2.7.3 Chart References to Airport Entry Only

Chart references in an airport entry only refer to the location of the airport.

5.1.4.2.7.4 Enroute and Terminal Area Charts

The Enroute and Terminal Area Chart number(s) and panel identification on which the airport is shown shall be indicated in ascending order following the copter chart reference. Enroute Area Charts and Enroute Pacific Chart indicators will be shown with A or P without the chart number of panel identification.

Figure 5.6 Enroute and Terminal Chart Listings

H-11C, 12J, L-25B, 26F, A-2H.

5.1.4.2.7.5 Instrument Approach Procedures, Airport Diagrams

IAP indicates an airport for which Terminal Procedures have been published. AD indicates an airport for which an airport diagram has been published. These will be shown following the Enroute chart references, e.g., **IAP. AD**.

5.1.4.3 Runway Data

Runway data common to the entire runway will be shown on the following line(s) indented and aligned with the elevation. Information common to the entire runway will be listed in the following sequence:

a. Runway Designators
b. Runway Length and Width
c. Runway Surface
d. Runway Weight Bearing Capacity and PCN/PCR
e. Runway Edge Lighting
f. Runway Slope (for runways under 8000')

Information pertaining to the runway approach end characteristics will follow on the next line indented two spaces. Data will be listed in the following sequence:

a. Runway End Designator
b. Approach Lights
c. Centerline Lights
d. Touchdown Zone Lights
e. Runway End Identification Lights
f. Visual Glideslope Indicators
g. Glide angle and threshold crossing heights
h. Runway Visual Range
i. Displaced Threshold Information
j. Controlling Obstruction
k. Right Traffic Indication
l. Runway Slope (for runways 8000' and longer)

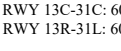
5.1.4.3.1 Runway Arrangement

Runways are arranged by runway length in descending order with the longest runway depicted first. Leading zero is used on runway designation lower than 10; e.g., **RWY 07**.

5.1.4.3.2 Runway Designators

Runway designators will be identified by RWY followed by the runway number; e.g., RWY 18-36. The letters 'L', 'C', and 'R' will follow the two-digit runway number if required.

Figure 5.7 Runway Designators



5.1.4.3.3 Ultralight Runways

Ultralight runways will be identified by the letter U following the runway designator.

Figure 5.8 Ultralight Runways

5.1.4.3.4 Water Landing Areas

Water landing areas will be identified by the term WATERWAY; e.g., WATERWAY 18-36, WATERWAY NE-SW.

5.1.4.3.5 Helicopter Landing Areas

Helicopter landing areas will be identified by the term HELIPAD; e.g., HELIPAD H1.

5.1.4.3.6 Landing Zone Runways

Landing zone runways (Assault strip) will be identified by magnetic bearing; e.g., 173-353.

5.1.4.3.7 Runway Dimensions

Runway dimensions are shown in feet. Length shown is the actual runway length end to end including any displaced thresholds, but does not include overruns or stopways; e.g., 8000x150.

5.1.4.3.8 Permanently Closed Runways

Permanently closed runways shall not been shown. Temporarily closed runways and runways under construction shall be addressed in the AIRPORT REMARKS.

5.1.4.3.9 Runway Surface Material

Runway surface material is the visible material comprising the major portion of the usable rolling surface. It will be classified as follows:

a. AM2 - Temporary metal planks coated with nonskid material
b. ASPH - Asphalt, asphaltic concrete, tar macadam, or bitumen-bound macadam – where asphalt or tar is used as a binder to create a surfacing. Includes those runways with concrete ends.
c. BRICK– Brick, laid or mortared
d. CALICHE – Caliche
e. CONC – Concrete or cement (white surface)
f. DECK – Deck
g. DIRT –Dirt
h. GRASS – Grass landing area
i. GRVL – Gravel
j. ICE – Ice
k. MATS –Mats
l. PEM – Part concrete, part asphalt, or part bitumen-bound macadam
m. PSP – Pierced steel plank
n. ROOF-TOP – Roof-Top
o. SN – Snow
p. TRTD –Treated

5.1.4.3.10 Runway Surface Treatment

Runway surface treatment shall be shown immediately after the runway surface, as follows:

a. AFSC – Aggregate friction seal
b. GRVD – Saw-cut or plastic grooved
c. PFC – Porous friction course
d. RFSC – Rubberized friction seal
e. WC – Wire comb or wire tine

5.1.4.3.11 Runway Weight Bearing Capacity

A weight bearing capacity in thousands of pounds shall be shown for each runway expressed in terms of gross aircraft weight accepted for continuing operations. Applicable codes will be published from the following list:

Figure 5.9 Runway Weight Bearing Capacity Codes

S- single wheel type landing gear	DC3, C47, F15, etc.
D- dual wheel type landing gear	B737, BE1900, etc.
D - dual wheel type landing gear	P3, C9, etc.
2S - two singe wheels in tandem type landing gear	C130
2T - two triple wheels in tandem type landing gear	C17, etc.
2D - two dual wheels in tandem type landing gear	B707, etc.
2D - two dual wheels in tandem type landing gear	B757, KC135
2D/D1 - to dual wheels in tandem/dual wheel body gear type landing gear	KC10
2D/2D1 - tow dual wheels in tandem/two dual wheels in tandem body gear type	A340-600
2D/2D2 - two dual wheels in tandem/two dual wheels in double tandem body gear type landing gear	B747, E4
3D - three dual wheels in tandem type landing gear	B777, etc
D2 - dual wheel gear two struts per side main gear type landing gear	B52
C5 - complex dual wheel and quadruple wheel combination landing gear	C5

The last three digits of the runway weight bearing capacity shall not be shown. Blank spaces after S or D indicate that the runway has weight bearing capacity to sustain aircraft with the type landing gear configuration shown, but definite figures are not available.

When the runway weight bearing capacity codes specified above are not available, the following data may be shown:

1. Figures for Equivalent Single Wheel Loading (ESWL) and Single Isolated Wheel Loading (SIWL) shall be published as SWL for a single wheel aircraft. It shall be symbolized as SWL110. The last three digits of SWL weight bearing capacity shall not be shown.

2. If only pounds per square inch (PSI) equated to pavement fracturing load capacity is available, it shall be symbolized as PSI200. Total PSI capacity shall be shown.

3. When only All Up Weight (AUW) and/or aircraft type is available, it shall be symbolized as AUW120, C9A or AUW120/C9A. The last three digits of AUW shall not be shown. Aircraft types will be of DoD aircraft, if available. If DoD type is not available, a civil aircraft commonly known in U.S. air carrier operations may be indicated.

5.1.4.3.12 Runway Bearing Strength Based on Pavement Classification Number (PCN)/Pavement Classification Rating (PCR)

Runway bearing strength based on a Pavement Classification Number (PCN)/Pavement Classification Rating (PCR) will be published as a five part code (e. g. PCN 80 R/B/W/T), PCR 560 R/B/W/T). Do not publish SWL, PSI, AUW, and aircraft types when PCN/PCR value is available. PCN/PCR codes are formatted based on the following:

1. PCN/PCR – The reported PCN/PCR indicates that an aircraft with an ACN/ACR equal or less than the reported PCN/PCR can operate on the pavement subject to any limitation on the tire pressure.

2. The type of pavement:
   R – Rigid
   F – Flexible

3. The pavement sub-grade category:
   A - High
   B - Medium
   C - Low
   D - Ultra-low

4. The maximum tire pressure authorized for the pavement:
   W – Unlimited - no pressure limit
   X – High, limited to 254 psi (1.75 MPa)
   Y – Medium, limited to 181 psi (1.25 MPa)
   Z – Low, limited to 73 psi (0.50 MPa)

5. Pavement evaluation method:
   T – Technical evaluation
   U – By experience of aircraft using the pavement

Figure 5.10 PCR Example Single Runway

RWY 08–26: H6802X100 (ASPH) S–75, D–100, 2S–127
PCR 617 F/A/X/T. MIRL

Figure 5.11 PCN Example Multiple Runways

RWY 07–25: H5005X75 (ASPH) S–30 PCN 58 F/C/X/T MIRL
0.6% up W
RWY 07: REIL. PAPI(P4L)—GA 3.0° TCH 37´. Pole.
RWY 25: REIL. PAPI(P4L)—GA 3.0° TCH 36´.
RWY 12R–30L: H5000X75 (ASPH) S–30 PCN 48 F/C/X/T MIRL
0.8% up NW
RWY 12R: REIL. PAPI(P4L)—GA 3.0° TCH 25´. Bldg.
RWY 30L: REIL. PAPI(P4L)—GA 3.0° TCH 40´.
RWY 12L–30R: H4199X75 (ASPH) S–30 PCN 15 F/C/X/T MIRL
1.0% up NW
RWY 12L: REIL. PAPI(P4L)—GA 3.2° TCH 48´. Bldg.
RWY 30R: REIL. PAPI(P4L)—GA 3.0° TCH 40´. Thld dsplcd 199´.

5.1.4.3.13 Lighting

Lights are in operation sunset to sunrise. Lighting available by prior arrangement or operating part of the night and/or pilot controlled with specific operating hours will be explained in the SERVICES entry following the subheading LGT; e.g., MIRL Rwy 03-21 opr dusk-0800Z‡.

At USN/USMC facilities lights are available only during the airport hours of operation.

5.1.4.3.13.1 Runway Edge Lighting Systems

Runway edge lighting systems are classified as show below.

Threshold lights are not part of the runway edge light system.

Figure 5.12 Runway Edge Lighting System Codes

NSTD—Light system fails to meet FAA Standards (Non-Standard).
LIRL—Low Intensity Runway Lights.
MIRL—Medium Intensity Runway Lights.
HIRL—High Intensity Runway Lights.

5.1.4.3.13.2 Non-standard (NSTD) Runway Lighting Systems

Runway lighting systems that are defined as non-standard (NSTD) in the source documentation, and provide a remark describing the lighting system type, will be shown as a HIRL, MIRL, or LIRL (NSTD) on the runway line. A qualifying remark will be shown in the SERVICES entry following the subheading LGT.

Figure 5.13 Non-standard Runway Lighting Systems

Rwy 15-33 NSTD MIRL, lgts 25’ from rwy edge.

Runway lighting system types that are defined as NSTD in the source documentation and do not provide a qualifying remark describing the lighting system type will be shown as RWY LGTS (NSTD) on the runway line.

5.1.4.3.13.3 Private Use Lighting

Private use lighting will not be shown on the runway line. The lighting availability will be shown in the SERVICES entry following the LGT subheading.

Figure 5.14 Private Use Lighting

MIRL Rwy 18-36 private use only.

5.1.4.3.13.4 Temporary, Emergency or Portable Runway Lighting

Temporary, emergency or portable runway lighting such as flares, smudge pots, and lanterns will be shown in the SERVICES entry under the LGT subheading.

5.1.4.3.13.5 Helipad Boundary Lights

Helipad boundary lights availability will be shown in the SERVICES entry under the LGT subheading.

5.1.4.3.13.6 Types of Lighting

Types of lighting are shown with the runway or runway end they serve.

Figure 5.15 Types of Lighting - Sample Entries

RWY 08-26: H11489x150 (CONC-GRVD) S-30, D-200, 2S-175,
2D-400, 2D/2D2-620 PCN 74 R/B/W/T HIRL
RWY 08: MALSF. PAPI(P4L)–GA 3.0º TCH 69'. Thld dsplcd 898'.Bldg.
RWY 26: REIL. PAPI(P4L)–GA 3.0º TCH 60'. Road. Rgt tfc.

RWY 07L-25R: H10300x150 (CONC-GRVD) S-30, D-200, 2S-175,
2D-400, 2D/2D2-620 PCN 70 R/B/W/T HIRL
RWY 07L: MALSF. PAPI(P4L)–GA 3.0º TCH 73'. Pole. Rt tfc.
RWY 25R: PAPI(P4L)–GA 3.0º TCH 70'. Antenna.

RWY 07R-25L: H7800x150 (CONC-GRVD) S-30, D-200, 2S-175,
2D-400, 2D/2D2-620 PCN 79 R/B/W/T HIRL
RWY 07R: MALSR. PAPI(P4L)–GA 3.0º TCH 70'. Pole.
RWY 25L: MALSR. PAPI(P4L)–GA 3.0º TCH 66'. Antenna.

5.1.4.3.13.7 Centerline Lights

Centerline lights may be shown on the runway line when bi-directional or will be shown on the runway end line when unidirectional using the abbreviation shown:

Figure 5.16 Centerline Lights

RWY 11L-29R: H0539x150 (ASPH-GRVD) S-70, D-170, 2S-175,
2D-250 HIRL CL
RWY 11L: REIL. PAPI(P4L)–GA 3.0º TCH 50'. Pole.
RWY 29R: ALSF2. TDZL. PAPI(P4L)–GA 3.0º TCH 73'. Thld dsplcd.

5.1.4.3.13.8 Approach Lighting Systems

Approach lighting systems, touchdown zone lights, and runway end identifier lights are shown on the runway end line using the abbreviations shown and sequenced as follows:

Figure 5.17 Approach Lighting System Codes

RLLS	Runway Lead-In Lighting System.
AF OVRN	Air Force Overrun 1000' Standard Approach Lighting System.
ALSAF	High Intensity Approach Lighting System with Sequenced Flashing Lights.
ALSF-1	High Intensity Approach Lighting System with Sequenced Flashing Lights, Category I, Configuration.
ALSF-2	ALSF-2—High Intensity Approach Lighting System with Sequenced Flashing Lights, Category II, Configuration.
MALS	Medium Intensity Approach Lighting System.
MALSF	Medium Intensity Approach Lighting System with Sequenced Flashing Lights.
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights.
ODALS	Omni Directional Approach Lighting System.
SALS	Short Approach Lighting System.
SALSF	Short Approach Lighting System with Sequenced Flashing Lights.
SSALF	Simplified Short Approach Lighting System with Sequenced Flashing Lights.
SSALS	Simplified Short Approach Lighting System.
SSALR	Simplified Short Approach Lighting System with Runway Alignment Indicator Lights.
OLS	Optical Landing System.
CL	Centerline Lights.
TDZL	Touchdown Zone Lights.
RAIL	Runway Alignment Indicator Lights.
REIL	Runway End Identifier Lights.
WAVE–OFF	

5.1.4.3.13.9 Visual Glideslope Indicators

Visual glideslope indicators will be shown using the abbreviations shown:

Figure 5.18 Visual Glideslope Indicator Codes

VISUAL GLIDESLOPE INDICATORS

APAP - A system of panels, which may or may not be lighted, used for alignment of approach path

PNIL	APAP on left side of runway	PNIR	APAP on right side of runway

PAPI—Precision Approach Path Indicator

P2L	2-identical light units placed on left side of runway	P4L	4-identical light units placed on left side of runway
P2R	2-identical light units placed on right side of runway	P4R	4-identical light units placed on right side of runway

PVASI - Pulsating/steady burning visual approach slope indicator, normally a single light unit projecting two colors.

PSIL	PVASI on left side of runway	PSIR	PVASI on right side of runway

SAVASI—Simplified Abbreviated Visual Approach Slope Indicator

S2L	2-box SAVASI on left side of runway	S2R	2-box SAVASI on right side of runway

TRCV - Tri-color visual approach slope indicator, normally a single light unit projecting three colors.

TRIL	TRCV on left side of runway	TRIR	TRCV on right side of runway

VASI—Visual Approach Slope Indicator

V2L	2-box VASI on left side of runway	V6L	6-box VASI on left side of runway
V2R	2-box VASI on right side of runway	V6R	6-box VASI on right side of runway
V4L	4-box VASI on left side of runway	V12	12-box VASI on both sides of runway
V4R	4-box VASI on right side of runway	V16	16-box VASI on both sides of runway

5.1.4.3.13.10 Approach Slope Angle and Threshold Crossing Height

Approach slope angle and threshold crossing height will be shown when available immediately after the visual glideslope indicator. For 3-bar VASI systems (6 box and 16 box), both upper angle & threshold crossing height and lower angle & threshold crossing height will be shown when provided by source.

Figure 5.19 Approach Slope Angle and Threshold Crossing Height

RWY18: PAPI(P2R)–GA 3.0º TCH 36'.
RWY18: VASI(V6L)–Upper GA 3.25º TCH 105'. Lower GA GA 3.0º TCH 60'.

5.1.4.3.13.11 Runway Visual Range

Runway Visual Range shall be shown as RVR appended with T for touchdown, M for midpoint, and R for rollout; e.g., RVR-TMR.

5.1.4.3.13.12 Displaced Thresholds

Displaced Thresholds are shown in feet from the runway end.

5.1.4.3.13.13 Controlling Obstruction

Only one obstruction will be shown for each runway end.

5.1.4.3.14 Right Hand Traffic Pattern

"Rgt tfc" will be used to indicate right turns should be made on landing and takeoff for the specified runway end.

5.1.4.3.15 Runway Slope

Runway slope data for both VFR and IAP runways will be shown, when available, only when the rounded slope value is 0.3% or greater. Runway slope shall be shown as a percentage value of the slope of the runway measured from each threshold to midpoint of all runways 8,000 feet or longer, from threshold to threshold on all runways shorter than 8,000 feet, and portrayed when the unrounded calculated value is greater than or equal to 0.25% (expressed to the nearest 0.1%). (0.249% does not require charting, 0.250% would be charted as 0.3%.).

Slopes on runways 8,000 feet or longer shall be expressed as either up or down in the direction from the threshold to the midpoint and placed on the runway end line as shown:

Figure 5.20 Runway Slope

RWY 12R–30L: 8502x150 (CONC–GRVD S-95, D-190, 2D-270 HIRL CL

RWY 12R: ALSF2. TDZL. PAPI(P4L)—GA 3.0° TCH 75'. 0.3% down.

RWY 30L: MALSR. PAPI(P4L)—GA 3.0°. Building. 0.4% up.

Slopes on runways shorter than 8,000 feet shall always be expressed as up with cardinal direction and placed on the runway line as shown:

Figure 5.21 Runway Slopes Shorter than 8,000 feet

RWY 02-20: 6011x100 (ASPH) S-42, D-73 HIRL 0.3% up SW

5.1.4.3.16 Land and Hold-Short Operations (LAHSO)

Land and hold-short operations include landing and holding short of an intersecting runway, an intersecting taxiway, or other predetermined point on the runway. The measured distance represents the available landing distance on the landing runway in feet. LASHO will be shown in a tabular listing arranged by runway designator in ascending order with the lowest numerical designation on the first line.

Figure 5.22 Land and Hold-Short (LAHSO)

LAND AND HOLD-SHORT OPERATIONS

LDG RWY:	HOLD-SHORT POINT	AVBL LDG DIST
RWY 04	14L/32R	4700
RWY 14L	04/22	7550
RWY 22	TWY B	5050

5.1.4.3.17 Declared Distance Information

Declared distance information is published, when available. The TORA (Take-off Run Available), TODA (Take-off Distance Available), ASDA (Accelerate-Stop Distance Available), and the LDA (Landing Distance Available) will be shown in a tabular listing arranged by runway designator in ascending order with the lowest numerical designation on the first line.

Figure 5.23 Runway Declared Distance Information

RUNWAY DECLARED DISTANCE INFORMATION

RWY 06L: TORA-12004 TODA-12700 ASDA-12700 LDA-11704

RWY 06C:	TORA-15004	TODA-10700	ASDA-10700	LDA-10000
RWY 06R:	TORA-17004	TODA-12700	ASDA-11700	LDA-10000
RWY 24R:	TORA-12004	TODA-12700	ASDA-12040	LDA-11704

5.1.4.3.18 Arresting Gear/System

5.1.4.3.18.1 Arresting Gear

Arresting Gear (**A-GEAR**) shall be shown by type and position. Information will be read from left or right depending on landing direction. The location of an arresting gear system will be expressed as distance from the end of the landing runway toward the center of the runway or, when located in an overrun area, the distance to the nearest runway end. Distance will be shown in parentheses immediately following the type; equipment located at the threshold shall be indicated by end of runway.

5.1.4.3.18.1.1 A-Gear

A-GEAR for a runway will be shown on a separate line(s) immediately below the ARRESTING GEAR/SYSTEM heading. If there is insufficient space on this line, the A-GEAR for lower end runway will be on one line and the A-GEAR for higher end runway will be below it.

Figure 5.24 Arresting Gear/System

ARRESTING GEAR/SYSTEM
RWY 07 BAK–15 CHAG (2276 FT OVRN) HOOK BAK–12B(B) (1500 FT). HOOK BAK–12B(B) (1630 FT). **RWY 25**
RWY 16 HOOK BAK–12B (63 FT OVRN) HOOK BAK–12B(B) (1500 FT).
HOOK BAK–12B(B) (1507 FT) HOOK BAK–12B (59 FT OVRN) BAK–15 (NI) UNK (121 FT OVRN). **RWY 34**
RWY 04 HOOK BAK–12B(B) (1450 FT) HOOK BAK–12B(B) (5287 FT). HOOK BAK–12B(B) (1498 FT). **RWY 22**

5.1.4.3.18.1.2 Navy Directional Equipment

Navy directional equipment shall have the engagement direction indicated by an arrow pointing in the direction of travel for the engaging aircraft.

Figure 5.25 Navy Directional Equipment

RWY 05 ⟵HOOK E5 (65’ OVRN) BAK-14 BAK-12B(B) (1650’)
BAK-14 BAK-12B(B) (1087’) HOOK E5 (74’ OVRN) ⟶ **RWY 23**.

5.1.4.3.18.1.3 Bi-directional Equipment

Bi-directional equipment shall be indicated by the letter “B” enclosed within parentheses following the type.

Figure 5.26 Bi-directional Equipment

BAK-12(B).

5.1.4.3.18.2 Arresting Systems

Engineered Material Arresting System (EMAS) located at the departure end of the runway will be shown.

Figure 5.27 Arresting Systems

RWY 08: EMAS

5.1.4.4 Services

Specific services available at the airport shall be listed under this general heading. These services will include, but not be limited to, **AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF), LIGHTING (LGT)** remarks, **A-GEAR** remarks, **JET AIRCRAFT STARTING UNITS (JASU), FUEL, FLUID, OIL, OXYGEN, NITROGEN, MAINTENANCE (MAINT)**. Remarks applicable to any service will be shown in the individual service listing. If a service, function or item does not exist the subheading will not be shown.

5.1.4.4.1 Aircraft Rescue and Fire Fighting (ARFF)

Airports serving Department of Transportation certified carriers and certified under 14 CFR part 139 are indicated by the Class and the ARFF Index which relates to the availability of crash, fire, rescue equipment.

Figure 5.28 Aircraft Rescue and Fire Fighting Example

Class I, ARFF Index A

The hours during which an aircraft rescue and fire-fighting service is operated will be shown immediately following the ARFF data. The absence of published hours denotes a 24 hour service.

5.1.4.4.2 Lighting (LGT)

Show remarks when unusual conditions exist or if hours of operation do not approximate sunset to sunrise.

Figure 5.29 Lighting

LGT LIRL Rwy 03-21 OTS indef. ACTIVATE MIRL Rwy 16-34, LIRL Rwy 03-21, VASI Rwy 16 and Rwy 34–CTAF. PAPI Rwy 03 and Rwy 21 opr continuously.

5.1.4.4.3 A-Gear

Non-standard installations, prior notice required, or any necessary operational information will be explained by a remark.

Figure 5.30 Arresting Gear Example

A-GEAR 30 min notice rqr.

5.1.4.4.4 Jet Aircraft Starting Units (JASU)

Show the type and quantity of Jet Aircraft Starting Units (JASU) available. The number (quantity) of units of a specific type shall be shown preceding the type designation. The type designation shall be shown in parentheses. When ten or more units are available, no number will be shown. If the number of units is unknown, the number one will be shown.

Figure 5.31 Jet Aircraft Starting Unit Example

JASU (C-26) 3(AM32A-60) 4(MA-1)

Starter Probes shall be shown when available.

Figure 5.32 Starter Probes Example

(A4, F8 probes)

5.1.4.4.5 Fuel

All types of fuel, aviation oil, supporting fluids, and single point refueling capacity which are available to U.S. military and/or civil aircraft shall be shown by applicable codes (See **Figure 4.76** - Fuel Codes).

When military contract fuel is available the phone number of the refueling agency will be shown when available.

Figure 5.33 Military Contract Fuel

J8(Mil), 301-554-3456

Aviation fuels available through U.S. military base supply, into-plane contracts, or reciprocal agreements shall be listed first. When U.S. military supplied fuel is available at a non-military airport, the fuel entry shall be followed by Mil in parentheses.

Figure 5.34 Military Supplied Fuel Available at a Non-Military Airport

FUEL J8(Mil)

Additional aviation fuels not available through military contract at the same facility shall be shown after "(Mil)".

Figure 5.35 Additional Fuels Not Available Through Military Contract

FUEL J8(Mil) 80, 100LL, JET A

Fuel types available through both contract and non-contract means shall be shown in both locations. After hour phone number will be shown if known.

Figure 5.36 Fuel Types Available - Contract and Non-Contract Means

J8(Mil) 80, 100LL, JET A, J4, 301-555-1234.

AVGAS availability will be shown followed by jet fuel and associated remarks.

Figure 5.37 AVGAS Availability

FUEL 80, 100LL, J8. Fuel avbl 24 hrs self-serve with credit card. For J8 after hrs call 425-555-6656.

5.1.4.4.6 Supporting Fluids and Systems

Supporting fluids that are available to U.S. military and/or civil aircraft shall be shown by applicable codes (See **Figure 4.86** - Supporting Fluids and Systems - Military Codes and Text).

5.1.4.4.7 Oil

Various types of oil available for use shall be shown by applicable codes (See **Figure 4.87** - Oil - Military Codes).

5.1.4.4.8 Oxygen

Various types of oxygen available for use by aircrew/aircraft shall be shown by applicable codes (See **Figure 4.86** - Supporting Fluids and Systems - Military Codes and Text).

5.1.4.4.9 Nitrogen

Nitrogen available for use by aircrew/aircraft shall be shown by applicable codes (See **Figure 4.86** - Supporting Fluids and Systems - Military Codes and Text).

5.1.4.4.10 Maintenance

Show the type of maintenance service by the codes shown. Pertinent remarks shall be shown immediately after the code. (See **Figure 4.75** - Servicing-Civil Codes)

Figure 5.38 Maintenance

MAINT S1. Mon-Fri 1000-2200Z. Call out fee after hours.

5.1.4.5 Noise

Remarks pertaining to noise information and/or noise abatement measures shall be included.

Figure 5.39 Noise Abatement

NOISE: Noise abatement 3 miles from Rwy 18. Contact tower manager.

5.1.4.6 Remarks

Facility remarks will be listed under the general heading **AIRPORT REMARKS**, **MILITARY REMARKS**, **HELICOPTER REMARKS** or **SEAPLANE REMARKS** as applicable.

5.1.4.6.1 Civil and Joint Civil/Military Airports

At civil and joint civil/military airports, the attendance schedule is listed first. Airport attendance does not mean watchman duties or telephone accessibility, but rather an attendant or operator on duty to provide at least minimum services (e.g., repairs, fuel, transportation). The airport attendance schedule is the days, months and hours the airport is actually attended.

Figure 5.40 Civil and Joint Civil/Military Airports

Attended 1500-0300Z‡ Mon-Sat 1 May-30 Sep 1500-0300Z‡, 1 Oct-30 Apr.

5.1.4.6.2 Military Facilities

At military facilities the airport operating hours are listed first. Operating hours are those during which airport services (Fuel, Transient Service, etc.) and communications (ATIS, PTD, UNICOM, APP, DEP, TWR, A/G, etc.) are available unless otherwise specified. Airport operating schedule is the days, months and hours the airport is operational.

Figure 5.41 Military Facilities

Opr 1500-0300Z‡ Mon-Sat 1 May-30 Sep 1500-0300Z‡, 1 Oct-30 Apr.

5.1.4.6.3 Pertinent Remarks

Pertinent remarks are grouped in the order of applicability under the subheadings – RSTD, CAUTION (Only MILITARY REMARKS section), TFC PAT, CSTMS/AG/IMG, TRANS ALERT and MISC. Remarks applicable to the military only or tenants on the airport are shown following the general remarks under the subheading MILITARY. Remarks applicable to a specific tenant(s) will be shown after the appropriate subheading; e.g., ARNG, A, NAVY etc.

5.1.4.6.4 Publishing Criteria for Item in SERVICE and REMARKS

The following criteria shall be used for items to be published in SERVICE and REMARKS sections.

5.1.4.6.4.1 Remarks about conditions of an indefinite nature and conditions

Remarks about conditions of an indefinite nature and conditions that will be in effect 56 days or more, the knowledge of which is essential for safe and efficient operation of civil and military aircraft, will be listed. These conditions may be related to, but are not limited to, aeronautical facilities, services, maintenance availability, procedures, hazards, etc.

5.1.4.6.4.2 Remarks describing occurrence of defects, correction of defects

Remarks describing occurrence of defects, correction of defects, or changes in the landing or operating area will be included.

Note: Remarks such as “Do not land first 1000’ of rwy” are both instructional and incomplete and should not be published. Remarks should be qualified as to the reason for the condition; e.g., First 1000’ Rwy 12 CLOSED due to construction.

Figure 5.42 Remarks Describing Occurrence of Defects, Correction of Defects

First 1000’ Rwy 12 CLOSED due to construction.

5.1.4.6.4.3 Other remarks of operational significance

Other remarks of operational significance may be included at the specific request of the airport manager or appropriate authority.

5.1.4.6.4.4 Conditions which will be in a effect for 56 days or more

Conditions which will be in effect for 56 days or more and in the opinion of the airport manager or the appropriate authority should be brought to the attention of aviators will be listed. Examples follow.

5.1.4.6.4.4.1 RSTD Remarks

Remarks describing airport conditions such as PPR, Official Business, CLOSED indef, which limit aircraft operations at the airport will be included.

5.1.4.6.4.4.2 CAUTION Remarks

Caution remarks will be included and placed in this section when provided by source - military only.

5.1.4.6.4.4.3 GENERAL Remarks

General remarks that do not fit the existing descriptive categories including but limited to the following:

- Landing, ram, and other fees. The existence of a fee when civil or military aircraft may be liable for the fee will be indicated; e.g. “Ldg fee for acft over 12,500 lb” “Commercial ldg and tie down fee” or “Fee for all charter, travel club, and revenue producing acft.” The following will be shown if only military aircraft will be liable for the fee; e.g., “Fee for US mil acft using N ramp”. Service fees should be listed with the service type.
- Seasonal availability, if it exists, will be indicated.
- Non-standard markings, should they exist, will be indicated and described.
- Published information concerning overruns, stopways, and blast pads will be described
- Telephone numbers listed in the Directory are commercial telephone numbers unless otherwise noted and will be shown with the area code and number; e.g., 240-857-2740. Defense Switching Network numbers will be identified by the prefix DSN and number; e.g., DSN 857-5761.

5.1.4.6.4.4.4 TFC PAT Remarks

Remarks pertaining to traffic pattern altitude and exceptions to the standard traffic pattern altitude shall be included.

5.1.4.6.4.4.5 CSTMS/AG IMG Remarks

Customs, agriculture, quarantine, and immigration services shall be shown. The designation of an Airport of Entry (AOE) or Landing Rights Airport (LRA) shall be shown when applicable. Supplement legends will carry a definition of terms. Restrictions to available facilities at airports that are not designated an AOE or LRA will be identified.

5.1.4.6.4.4.6 Military Transient Alert Services (TRAN ALERT)

Show the availability of normal Transient Alert Services by use of TRAN ALERT. Transient Alert service is considered to included all services required for normal Military aircraft turn around: i.e., servicing (fuel, oxygen, etc.), debriefing to determine requirements for maintenance, minor maintenance, inspection, and parking assistance for military transient aircraft.

Figure 5.43 TRAN ALERT Example

TRAN ALERT Opr Sun-Sat 1200-0400Z‡ except holidays. TRAN ALERT NAVY Servicing not avbl T-43 acft.
No maintenance/cargo handling avbl. Expect servicing delay. Local staging fight prohibited.

5.1.4.6.4.4.7 Notices

The notation Special Air Traffic Rules Part 93 shall be listed when applicable. 'See Regulatory/Special Notices' and the title of the notice shall be shown when a notice applicable to the facility is contained in the Notices section of the directory. When both a Regulatory and a Special Notice are published for a single facility, the Regulatory Notice shall be referenced first.

Figure 5.44 Notice Example

NOTE: See Special Notices —District of Columbia Ronald Reagan Washington National Airport. Noise Abatement and Prohibited Area (P–56) Avoidance Procedures.

5.1.4.6.4.5 Types of Data Not Published in the SERVICES and REMARKS Sections

The following types of data shall NOT be published in the SERVICES and REMARKS sections:

a. Any condition which is expected to remain in effect for less than 56 days. This type of data will normally be disseminated by NOTAM.
b. Permanent closures of airports, runways, taxiways (these items will be deleted from the supplement);
c. Remarks about obstructions designated as close-in or controlling obstructions;
d. Presence or removal of hazardous conditions due to snow, ice, water, or temporary obstructions on or adjacent to the landing area;
e. Incomplete remarks such as "Do not use Rwy 12 or Twy A2," etc.; complete remarks indicate the condition which makes the remark effective. "Do not use Rwy 23 under crosswind conditions."
f. Data regarding IFR arrival and departure procedures, including noise abatement procedures;
g. Temporary shortages of certain types of fuel, starting equipment, or other aircraft services;
h. Data regarding temporary closures or restrictions at airports due to air shows, close proximity of athletic events, etc.;
i. Data regarding availability of box lunches, hotel reservations, government transportation, billeting, etc.;
j. Telephone numbers not directly necessary for the advance coordination of aircraft movements.
k. Names of commercial entities; non-government web sites;
l. Any other information not described in the allowable remarks.

5.1.4.7 Airport Manager

The telephone number for the airport manager shall be shown.

5.1.4.8 Weather Data

Weather data associated with the airport shall be shown by the following abbreviations, see **Figure 4.105** - Weather System Identifier List Text.

5.1.4.8.1 Listing of Weather Data

Weather data will be listed alphabetically followed by the assigned frequencies and/or telephone number and hours of operation.

Figure 5.45 Weather Data

AWOS-3 121.25 470-876-1291. LLWAS. PMSV 306.5 41.2 (Full svc avbl 1115-0315Z‡)

5.1.4.8.2 Automated Weather Source Broadcast over a NAVAID

When the automated weather source is broadcast over the primary (NAVAID main entry) NAVAID frequency, it shall be indicated by a ASOS, AWOS, followed by the frequency, NAVAID identifier and phone number, if available.

Figure 5.46 Automated Weather Source Broadcast over a NAVAID

ASOS 114.4. MIE N40º14.52′ W85º23.78′. (765) 288–9617.

5.1.4.9 Communications

Specific communication data available at the airport will be listed under this general heading. Data entries shall include call sign, applicable frequencies and hours of operations. When the call sign is the same as the airport name, the call sign will not be shown. Remarks applicable to any communication item shall appear after the specific call sign or frequency entry. Items published in this entry will include, but will not be limited to, SFA, CTAF, UNICOM, AUNICOM, ATIS, D-ATIS, PTD, FSS, RADIO, NAME/IDENT/FREQUENCIES/TELEPHONE NUMBER, NAME RCO, APP, TWR, GND, GCO, DEP, VFR ADVSY SVC, CLNC DEL, CPDLC, PDC, COMD POST, ARPT OPS, and MF (Canada).

The availability of Single Frequency Approach (SFA) service, Common Traffic Advisory Frequency (CTAF), Private Aeronautical Advisory Stations (UNICOM), Automated UNICOM (AUNICOM), Automatic Terminal Information Service (ATIS), Data Link Automatic Terminal Service (D-ATIS) and Pilot to Dispatcher (PTD) service will be shown in the above order by their abbreviations immediately following the heading, “COMMUNICATIONS”.

5.1.4.9.1 CTAF, UNICOM, AUNICOM, ATIS, D-ATIS and PTD Frequencies

CTAF, UNICOM, AUNICOM, ATIS, D-ATIS, and PTD assigned frequencies will be published.

Figure 5.47 CTAF, UNICOM, AUNICOM, ATIS, D-ATIS and PTD Frequencies

SFA CTAF 118.7 UNICOM 122.95 ATIS 127.25 301-584-6541 PTD 372.2

5.1.4.9.2 Language - ATIS Frequencies

Only English speaking ATIS frequencies will be published.

5.1.4.9.3 CTAF and UNICOM Frequencies

When the CTAF and UNICOM frequencies are the same, the frequency, the headings will be combined and published as CTAF/UNICOM 122.8.

5.1.4.9.4 Flight Service Stations (FSS)

The servicing FSS name shall be shown followed by the identifier and information concerning availability of telephone service.

5.1.4.9.4.1 FSS Located at Airport

Where the servicing FSS is located on the airport the notation ‘on arpt’ will be shown after the FSS identifier.

5.1.4.9.4.2 FSS Frequencies

Frequencies available at the FSS will follow listed in ascending order. Alaska emergency frequencies 121.5 and 243.0 will not be shown at FSSs where published.

5.1.4.9.4.3 FSS Telephone Numbers

FSS telephone numbers will only be shown when other then the standard TF 1-800-WX-BRIEF.

Figure 5.48 FSS Telephone Numbers - AK

COMM/NAV/WEATHER REMARKS: Dillingham FSS Local call 842–5275. For a toll free call to Kenai FSS dial 1–866–864–1737.

Figure 5.49 FSS Telephone Numbers - PAC

COMM/NAV/WEATHER REMARKS: For arpt information ctc New Zealand NOTAM and briefing office (643) 358–1688. FSS: NEW ZEALAND, 643–358–1688/FAP 643–358–9192.

5.1.4.9.4.4 FSS Call Sign

When the call sign is the same as the airport name the call sign will not be shown.

Figure 5.50 FSS Call Sign

FSS (ORL) 122.2 122.65 123.65

5.1.4.9.4.5 FSSs with Names Other than the Airport

FSSs with names other than the airport shall be listed separately in the normal alphabetical listing.

5.1.4.9.4.6 FSS Operating Hours (Includes Part Time)

When a Flight Service Station operates part time and a different Flight Service Station takes over during other periods, the listing will be shown as follows:

Figure 5.51 FSS Operating Hours

ILIAMNA FSS (ILI) 1200-0300Z‡. OT ctc KENAI FSS (ENA).

5.1.4.9.5 Remote Communications Outlet (RCO)

At those airports which offer remote voice communications with Flight Service Stations, the entry will be shown by the name of RCO (NAME RCO) followed by the available frequencies and the associated FSS facility, followed by the world “RADIO”.

Figure 5.52 Remote Communications Outlet

NUTSY RCO 117.1T 122.1R (ILIAMNA RADIO)

5.1.4.9.5.1 RCO Name is Different than the Airport Name

When the RCO name is different than the airport it will be shown in a separate listing.

5.1.4.9.5.2 Two Same Name RCOs with Same Associated Radio (FSS in Alaska)

When two same name RCOs with the same associated RADIO(FSS in AK) are published, the RCO frequencies can be combined and published as a single entry.

Figure 5.53 Two Same Name RCOs with Same Associated Radio (FSS in AK)

RCO 255.4 122.2 (KENAI FSS)
RCO 122.55 122.3 (KENAI FSS)

5.1.4.9.5.3 Emergency Frequencies - Alaska

Alaska emergency frequency 121.5 and 243.0 will be shown, if available.

5.1.4.9.5.4 Stand-alone RCO Entries

Stand-alone RCO entries that are not at an airport or NAVAID shall be listed in the normal alphabetical listing.

5.1.4.9.6 Remaining Communication Frequencies

The remaining communication frequencies will be shown after the RCO data in the following sequence by the abbreviations shown:

Figure 5.54 Communication Frequency Abbreviations

APP	Approach Control. The symbol ® indicates radar approach control
ARRIVAL	Arrival Control
TWR	Control Tower
GCA	Ground Control Approach System
GND CON	Ground Control
GND METERING	Ground Metering
GCO	Ground Communication Outlet
DEP	Departure Control. The symbol ® indicates radar departure control
CLNC DEL	Clearance Delivery
CPDLC	Controller Pilot Data Link Communication
PDC	Pre-Departure Clearance
PRE TAXI CLNC	Pre Taxi Clearance
GATE HOLD	Gate Hold
VFR ADVSY SVC	VFR Advisory Service. Service provided by Non-Radar Approach Control
COMD POST	Command Post

5.1.4.9.6.1 Approach Control Data

Approach Control data shall be shown immediately following the subheading APP. A bold circle R symbol ® shall be shown preceding the approach control data to indicate that the approach control has radar capability.

Figure 5.55 Approach Control Data

® DOVER APP 132.425

5.1.4.9.6.2 Tower and Ground Control Data

Tower and Ground Control data will be shown immediately following the subheadings TWR and GND CON.

5.1.4.9.6.3 Departure Control Data

Departure Control data shall be shown immediately following the subheading DEP. A bold circle R symbol ® shall be shown preceding the departure control data to indicate that the departure control has radar capability.

Figure 5.56 Departure Control Data

® DOVER DEP 132.425.

5.1.4.9.6.4 Order of Frequencies

Frequencies shall be shown in ascending order with the primary frequency listed first. All primary frequencies will be listed together with sectorization, hours of operation and any pertinent remarks.

Figure 5.57 Order of Frequencies

GALVESTON APP 132.15 321.0 (090°-270°) 135.55 232.0 (271°-089°)(1200 0300Z‡)
other times etc
HOUSTON CENTER APP 127.9 330.1

Call name shall be shown.

Figure 5.58 Call Name

GALVESTON APP/DEP 132.15 329.7

5.1.4.9.6.5 UHF Frequencies

UHF frequencies will be shown for military and joint-use facilities, when available.

5.1.4.9.6.6 Approach and Departure Information

Approach and departure information shall be combined where information is the same.

Figure 5.59 Approach and Departure Information

GALVESTON APP/DEP 132.15 329.7

5.1.4.9.6.7 Air Route Traffic Control Center (ARTCC)

Where the enroute air traffic control facility (ARTCC) provides approach or departure control service, the listing will contain the Center name followed by the frequencies and service information.

Figure 5.60 Air Traffic Route Control Center (ARTCC)

OAKLAND CENTER APP/DEP 125.7 328.6

5.1.4.9.6.8 Part-Time Approach and/or Departure Control

When approach control and/or departure control operates part time and the alternate approach and/or departure takes over during other periods, the listing will be shown as follows:

Figure 5.61 Part-Time Approach and/or Departure Control

GALVESTON APP 132.15 321.0 (1200-0300Z‡), other times ctc
HOUSTON CENTER APP 127.9 330.1.

5.1.4.9.6.9 CLNC DEL - Clearance Delivery

5.1.4.9.6.10 CPDLC - Controller Pilot Data Link Communications

When CPDLC service is provided, the listing will contain the CPDLC services offered, e.g. DCL, followed by the logon in parentheses.

Figure 5.62 CPDLC - Controller Pilot Data Link Communications

CPDLC DCL (LOGON KMEM)

5.1.4.9.6.11 PDC - Pre-Departure Clearance

5.1.4.9.6.12 NAME COMD POST - RAMP and AMC AIRLIFT COORDINATION CNTR, etc.

5.1.4.10 Airspace

Information concerning Class B, C, D and E surface area airspace shall be published with effective times.

Figure 5.63 Airspace

CLASS D svc Mon-Sat 1300-0500Z‡ OT CLASS G. CLASS B See VFR Terminal Area Chart. CLASS E svc Sun–Fri 1100–0300Z‡, Sat 1200–2300Z‡, OT CLASS G. TRSA svc ctc APP 20 NM out.

5.1.4.11 VOR Test Facility (VOTs)

On-airport ground based VOR test facilities shall be shown with identifier, frequency and referenced remarks.

5.1.4.12 Radio aids to Navigation (NAVAIDs)

All public use NAVAIDs and private use military owned and operated TACANs shall be listed. Navigational Aids will not refer to airports not listed in the supplement.

The grouping shall consist of radio aids to navigation (NAVAIDs) to include all same name NAVAIDs available at the alphabetized radio facility and/or airport name listing, and different name NAVAIDs, which:

a. Are located on the airport.
b. Provide final approach guidance on a published U.S. Government or DoD instrument approach procedure (high or low) serving the airport.
c. Are the closest usable NAVAID to an airport depicted on the Enroute Chart.

NAVAIDs that do not share the name, the first portion of a hyphenated name, or multiple word name of the airport or associated city shall be listed separately in the normal alphabetical list.

The chart(s) on which the NAVAID is depicted shall be listed when the NAVAID appears as its own separate entry.

5.1.4.12.1 NOTAM Accountability

When a NAVAID is listed as a separate entry, the NOTAM accountability identifier will be shown immediately following geographical position and on the same line with the NAVAID name.

When the NAVAID is listed under an airport entry, the NOTAM accountability identifier will be shown if it is different than that of the airport on the same line with the NAVAID heading. When two or more NAVAIDs are listed and the NOTAM FILE identifier is different than shown on the NAVAID line, then it will be shown with the NAVAID listing.

5.1.4.12.2 VHF/DF Availability

VHF/DF availability will be shown immediately following and on the same line with the NOTAM accountability identifier. Controlling facility will be shown when more than one FSS serves the airport.

Figure 5.64 VHF/DF Availability

"VHF/DF ctc Pheonix RADIO (or FSS)"

5.1.4.12.3 NAVAID Listing Sequencing

NAVAIDS shall be listed in the following sequence: VORTAC, VOR/DME, VOR, TACAN, DME, NDB/DME, UHF NDB, LF/MF NDB, NDB/LOM, NDB/LMM, and NDB. LOM and LMM when published as compass locators shall be shown. Marker beacons shall not be shown.

5.1.4.12.4 NAVAID DATA

NAVAIDs shall be shown as follows:

Figure 5.65 NAVAID DATA

KINGSTON (VH)(H) VORTAC 113.8 KGS CH 76 N37°47.36' W122°49.13' at fld. 150/8E.
(0100-2200Z‡). Unmonitored. NOTAM FILE ABC. No NOTAM MP 2200-0100Z‡. SHUTDOWN.
COLUMBIA (H) TACAN 109.2 CBU CH29 N28°32.65' W81°21.12' 177° 5.4 NM to fld. 1115/8E

5.1.4.12.5 Types of Radio Facilities

The types of radio facilities and standard service volume class code(s) in parentheses shall be shown using the Radio Class Codes from the Directory legend; e.g., FORNEY (L) VOR, ANCHORAGE (H) (DH) VORW/DME.

5.1.4.12.6 DME and VOR/DME

DME or VOR NAVAIDs with Distance Measuring Equipment shall be indicated by the letters "DME", e.g., VOR/DME. VOR/DME facilities that require TACAN to be placed in the "Y" mode to receive DME will be indicated by a (Y) suffix following the channel; e.g.,

Figure 5.66 VOR/DME Example

HARBER (T) (DL) VOR/DME 112.15 HAR CH 58(Y).

5.1.4.12.7 NAVAID Standard Service Volume (SSV) Classifications

The SSV classification code of VHF/UHF NAVAIDs (VORTAC, VOR, VOR/DME, TACAN, DME) facilities shall be shown in parentheses followed by the type of designation; e.g., (L) VOR.

SSV Classifications:

(T) Terminal
(L) Low
(H) High
(VL) VOR Low
(VH) VOR High
(DL) DME Low
(DH) DME High

For NAVAIDs with two components, e.g. VOR/DME, the designated SSV for each component will be shown in paired parentheses with the VOR SSV shown first; e.g., (H)(DL) VORTAC.

5.1.4.12.8 NAVAID Identifier

The identifier of the NAVAID shall be shown.

5.1.4.12.9 NAVAID Frequencies

NAVAID frequencies shall be shown.

5.1.4.12.10 Channel Number and (Y) Suffix

The channel number and (Y) suffix if applicable shall be shown. Add the paired VHF frequency, in parenthesis, to the TACAN and DME data block after the NAVAID identifier.

Figure 5.67 Channel Number and (Y) Suffix

COLUMBIA (H) TACAN CH 29 CBU (109.2) N28°32.65' W81°21.12' 177° 5.4 NM to fld. 1115/8E

5.1.4.12.11 Geographic Coordinates

The geographic coordinates as hemisphere, degrees, minutes and hundredths-of-minutes for NAVAIDs shall be shown. For NAVAIDs with two components, i.e. VOR/DME and VORTAC, only the geographic coordinates for the VOR will be shown.

Figure 5.68 Geographic Coordinates

N28°49.56’ W81°09.33’

5.1.4.12.12 Magnetic Bearing and Distance

The magnetic bearing and distance to the field shall be shown for all NAVAIDs listed under the airport.

5.1.4.12.13 NAVAID Co-Located at Field (1 NM or Less)

If the NAVAID is located at the field (1 nautical mile or less from the Airport Reference Point) show “at fld”.

In addition, other magnetic bearing and distance information from the NAVAID to the airport may be shown when specifically and officially requested. Care must be taken to effect a correlation of identical information at each affected airport or NAVAID.

5.1.4.12.14 Elevation and Magnetic Variation

The elevation and magnetic variation will be shown when available, e.g., 135/8E.

5.1.4.12.15 NOTAM Identifier

The NOTAM identifier will be shown when it is different than shown on the Radio Aids to Navigation line.

5.1.4.12.16 Hours of Operation

Specific hours of operation, if any, will be shown in UTC, i.e., 1500-0700Z. A double dagger (‡) symbol will be shown following all UTC (Z) time affected by daylight saving time.

5.1.4.12.17 NAVAID Remarks

Pertinent remarks affecting the current status or usability of NAVAID facilities shall be shown, on the same line(s) following the NAVAID data.

Figure 5.69 NAVAID Remarks

NOTAM FILE FTW. Unmonitored. VFR only. OTS indef.

5.1.4.12.18 NAVAID Restriction

The NAVAID restriction will be preceded by the NAVAID or component type. Restrictions will be listed north going clockwise.

NAVAID restrictions will be listed at every instance where the NAVAID appears.

Figure 5.70 NAVAID Restriction

BRADLEY (L) (DL) VOR/DME 115.8 SFO CH 105 (Y) N37°37.16’ W122°22.00’ at fld. 160/14W. 1200-2000Z‡.

VOR unusable: 015°-070° byd 25 NM blo 4500’
150°-180° byd 20 NM blo 6300’

181°-260° byd 20 NM blo 9000’

DME unusable: 015°-030° byd 25 NM blo 4500’
031°-040° byd 30 NM blo 7000’

HUMBLE (VH) (H) VORTAC IAH 116.6 CH 113 N29°57.42’ W95°20.74’ 003° 1.7 NM to fld. 90/5E.
VOR unusable: 015°-070° byd 25 NM blo 4500’
150°-180° byd 20 NM blo 6300’
181°-260° byd 20 NM blo 9000’

TACAN unusable: 040°-055° blw 5,000’
150°-320°

DME unusable: 015°-030° byd 25 NM blw 4500’
031°-040° byd 30 NM blw 7000’

5.1.4.13 Instrument Approach Procedures

This grouping shall consist of the availability of ILS, LOC, LDA, and SDF, which are used, in an approved instrument approach procedure.

5.1.4.13.1 Procedure Type - ILS, ILS Y, ILS Z and LOC

The procedure type ILS, ILS Y, ILS Z and LOC shall be shown followed by the procedure components. ILS with DME shall be indicated as ILS/DME, LOC with DME shown as LOC/DME.

5.1.4.13.1.1 Localizer Frequency

5.1.4.13.1.2 Localizer Identification

5.1.4.13.1.3 DME Channel

5.1.4.13.1.3.1 DME Channel Numbers with a (Y) Suffix

Those DME channel numbers with a (Y) suffix require the TACAN to be placed in the (Y) mode to receive distance information.

5.1.4.13.1.4 Runway Identifier

5.1.4.13.1.5 ILS Facility Performance Classification Codes

5.1.4.13.1.6 Locator Outer Marker

If the marker is designated a MARKER/COMLO or MARKER/NDB it will be shown as LOM NAME NDB.

The entire NDB data shall be listed separately, in the same manner as other NAVAIDs.

Pertinent remarks shall be shown, positioned on the same line.

Figure 5.71 Locator Outer Marker

ILS/DME 108.5 I-ORL CH 22 RWY 18 Class IIE LOM HENRY NDB

5.1.4.13.2 Simplified Directional Facility (SDF)

The procedure type Simplified Directional Facility will be shown by the abbreviation SDF followed by the procedure data.

5.1.4.13.2.1 Frequency

5.1.4.13.2.2 Identification

5.1.4.13.2.3 DME Channel

5.1.4.13.2.4 Runway Identifier

5.1.4.13.3 Airport Surveillance Radar (ASR) and Precision Approach Radar (PAR) Approaches

The availability of Airport Surveillance Radar and Precision Approach Radar shall be shown by their RADAR abbreviation shown in NewsGoth Cn Bt, 6 point, bold font. Operational text that follows the RADAR type, shall be shown in NewsGoth BT, 6 point font. Operational text published may consist of the following:

- Part-time hours of operation will be shown, if available.
- Frequency data will not be shown.

Figure 5.72 ASR without Operational Text Example

ASR/PAR

Figure 5.73 ASR with Operational Text Example

ASR No NOTAM MP Mon, Tue 0700–1300Z‡.

Figure 5.74 Digital ASR Example

Digital ASR No NOTAM MP: 0600–1200Z‡ Mon–Fri (1500/3+1).

Figure 5.75 ASR/PAR Example

ASR/PAR 1200–0400Z‡. PAR unavbl 0400–1400Z‡.

5.1.5 Airport Sketch

References:

Appendix 21 - A/FD Directory Legend Sample

Appendix 22 - A/FD Sketch Legend

5.1.5.1 General

A sketch of the airport providing a depiction of the runway pattern, taxiways and related cultural information enclosed within a border line and placed to the right of the textual information shall be positioned in the upper right corner of the airport entry under the chart references.

5.1.5.2 Scale

The scale of each sketch shall be that which provides detail required to be shown by these specifications.

5.1.5.3 Sketch Orientation

Sketches shall be oriented with True North at the top.

5.1.5.4 Plotting of Information

All information shall be plotted in its relative geographic position.

5.1.5.5 Bearings/Radials

All bearings/radials shall be magnetic and shall be depicted by a three (3) digit figure, e.g., 001, 012, 123.

5.1.5.6 Textual or Type Data

All textual or type data, unless otherwise stated, shall be positioned perpendicular to True North.

5.1.5.7 Identification and Data Notes

Identification and data notes shall be positioned adjacent to or as near to the symbol as possible except when such placement would result in the obliteration of other detail.

5.1.5.8 Leader Lines

Leader lines, with arrowheads, may be used when necessary for clarity of detail or to show the correct relationship between type and symbolization.

5.1.5.9 Placement of Type

The placement of type plays an important part in the overall acceptable design of an airport sketch. A definite sense of proportion, balance, and good presentation is essential in preparing a sketch that represents the ultimate in readability and user appeal. Therefore, rules and standards concerning type placement must by necessity be flexible.

5.1.5.10 Symbol Patterns

Symbol patterns specified within these specifications shall be as stated, or an equivalent symbol size and line weight.

5.1.5.11 Drag Strips

Drag strips or any other form of a strip in the proximity of the airport and falling within the coverage of the airport sketch shall be shown and identified.

5.1.5.12 Scale

All runways/landing areas shown shall be drawn to scale.

5.1.5.13 Runway Patterns

References:

Appendix 22 - A/FD Sketch Legend

5.1.5.13.1 Paved and Hard Surfaced Runways

Paved or hard surfaced runways consisting of concrete, asphalt, bitumen, or macadam shall be shown in solid pattern.

5.1.5.13.2 Metal Surfaced Runways

Metal surfaced runways shall be shown in solid color, by the cross-hatched pattern at right angles to each other and 45° to the edge of the runway as indicated in the **Appendix 22**. A .005" line shall be used to form the runway boundary.

5.1.5.13.3 Light Plane, Ski Landing Area, Unpaved or Other Than Hard Surface Runways

Light Plane, Ski Landing Area, Unpaved or other than hard surface runways, such as grass, gravel, etc., shall be shown by the solid dot pattern indicated in **Appendix 22** and outlining the runway with a solid .005" line.

5.1.5.13.4 Permanently Closed Runways

Runways that exist in the authoritative source database as permanently closed will be indicated by the outline only, using a .005" solid line, and an "X" overprinted on both ends of the runway. No data (dimensions, lighting systems, runway end designations etc.) will be shown for these runways.

Hard surface runways that have been removed from the authoritative source database (but continue to exist as closed pavement) will be depicted in screen with X's to indicate closed pavement either along the entire extent of the pavement or as needed to define closed section(s).

5.1.5.13.5 Future Runways Under Construction

Future runways under construction shall be shown by outline only, using a .005" solid black dotted outline.

5.1.5.13.6 Area Around an Existing Operational Runway Under Construction

The area around an existing operational runway under construction shall be outlined using a .005" solid black dotted outline. Currently published runway data (dimensions, lighting systems, runway end designations etc.) will be shown for these runways.

5.1.5.13.7 Water Runways

Water runways shall be displayed using a 1 weight (.005") line .01" dash, separated by a .04" space to outline the runway boundary. Water runways will be shown in the approximate geographic location when coordinates are not available.

5.1.5.13.8 Hard Surfaced Overruns, Stopways and Blast Pads

Only hard surfaced overruns, stopways and blast pads shall be shown, using 120L/15%.

5.1.5.14 Taxiways, Aprons, and Hardstands

Taxiways, aprons, and hardstands shall be drawn to scale using 120L/15%.

5.1.5.14.1 Dispersal Areas

Dispersal areas shall not be shown.

5.1.5.14.2 Closed Taxiways

Permanently closed taxiways will be identified by a series of X's to indicate closed pavement either along the entire extent of the pavement or as needed to define closed section(s), over-printing the taxiways using 4 to 7 point upper case type, solid color.

5.1.5.14.3 Future Taxiways Under Construction

Future taxiways under construction shall be shown by outline only, using a .005" solid black dotted outline.

5.1.5.14.4 Area Around an Existing Operational Taxiway Under Construction

The area around an existing operational taxiway under construction shall be outlined using a .005" solid black dotted outline. Currently published taxiway designations will be shown for these taxiways.

5.1.5.15 Runway Dimensions

Runway dimensions (length and width) shall be shown for all operational runways with the numerals positioned along and parallel to the runway using 6 point type.

Runway length shall be the actual published length of the runway (pavement, end to end) including displaced thresholds, but excluding overruns, stopways and blast pads.

5.1.5.15.1 Displaced Thresholds

Displaced thresholds shall be shown in their relative position on the runway by the symbol illustrated in **Appendix 22**.

5.1.5.16 Runway Numbers

Runway numbers, as shown on the runway shall be placed as close as possible to the end of the associated runways.

Runway numbers shall not be shown for "new runways under construction" or closed runways.

5.1.5.17 Helicopter Alighting Area

Known helicopter alighting areas will be shown if they are in the database or by request. Helipad dimensions will not be shown.

The alighting area symbols on the chart shall be representative of the markings painted on the heliport. When unknown, the standard circle H symbol shall be used.

The intended landing point shall be shown by the appropriate alighting area symbol in negative print.

A paved surface with various alighting areas shall be treated the same as a runway surface, with the various alighting areas superimposed thereon, in solid color.

5.1.5.18 Approach Lighting Systems

Various approach lighting systems shall be shown symbolized in miniature as illustrated in **Appendix 22**.

The circled letters associated with and identifying the various systems shall also be shown.

The approach lighting system symbols and associated letter designation shall be positioned as illustrated in the appendices. A dot "•" portrayed with approach lighting indicates sequenced flashers are installed with the approach lights.

5.1.5.18.1 Threshold Lights

Threshold lights shall be indicated only when an integral part of the approach lighting symbol. They shall not be shown separately.

5.1.5.18.2 Airport Beacon (Rotating Light)

The Airport Beacon (rotating light) shall be symbolized by the five-pointed star with an open center, as shown in **Appendix 22**, positioned as near the proper location as possible.

5.1.5.18.3 Runway Centerline Lights

The centerline lights will be symbolized by a dotted line down the center of the runway. If directionality exists it will be noted on the runway end line of the airport entry.

5.1.5.18.4 Pilot Activated Airport Lighting Systems

Pilot capability to activate airport lighting systems, including beacons, shall be shown using negative symbols or type, as shown in **Appendix 22**.

5.1.5.18.5 USN Optical Landing System

U.S. Navy Optical Landing System shall be shown by the symbol indicated in **Appendix 22**, in its exact position alongside of the runway.

5.1.5.19 Control Tower

The location of the control tower shall be indicated by symbol as indicated in **Appendix 22** and positioned as near the proper location as possible, accompanied by the notation “TWR”. If the rotating beacon is located on the tower, the rotating beacon symbol shall suffice for the tower symbol, supplemented by the letters "TWR". The elevation of the tower, when available, shall be shown.

5.1.5.20 Landing Direction Indicator

If a wind cone, landing tee, and/or tetrahedron is located on the sketch; they will be positioned as near the proper location as possible.

5.1.5.21 Obstructions

Obstructions, as specifically requested, shall be shown as lighted or unlighted. The obstruction shall be supported by the elevation data and symbolized as illustrated in **Appendix 22**.

5.1.5.21.1 Spot Elevations

Spot elevations shall not be shown.

5.1.5.22 Radio Aids to Navigation (NAVAIDs)

Radio aids to navigation that fall within the area of the airport sketch, except components of the ILS, shall be indicated by symbol as indicated in **Appendix 22**.

5.1.5.23 Base Information

Base information having significant landmark value that would assist the user in rapid airport identification shall be shown.

Significant visual landmark features shall be charted and symbolized as indicated in **Appendix 22** and IAC 2, Sectional Aeronautical and VFR Terminal Area Charts. Other symbology may be designed as needed.

5.1.5.23.1 Hydrography

Hydrography shall include such features of which water is a constituent part as shown in the appendices.

5.1.5.23.1.1 Lakes

The shoreline of lakes shall be that which corresponds to the normal water stage.

5.1.5.23.1.2 Reservoirs and Pools

The shoreline represents the water level at the normal stage.

5.1.5.23.1.3 Streams

Streams are shown by a single line or shape.

5.1.5.23.1.4 Aqueducts, Flumes and Conduits

Aqueducts, flumes, and conduits shall be shown as illustrated in IAC 2.

5.1.5.23.1.5 Canals and Levees

Canals and levees shall be shown using a .04" line and labeled in .45 point type.

Multiple channels shall be shown with two (2) .04" lines and labeled in .45 point type.

5.1.5.23.2 Railroads, Roads and Related Features

5.1.5.23.2.1 Railroads

####### 5.1.5.23.2.1.1 Single and Multiple Track Railroads

A railroad consisting of one or more track(s) on an roadbed. They shall be shown using a .01" line. Crossties will be displayed by a .01" line, .01" long at .25" intervals.

####### 5.1.5.23.2.1.2 Railroads Under Construction or Abandoned Railroads

They shall be labeled "Under Construction" or "Abandoned".

####### 5.1.5.23.2.1.3 Marshalling and Storage Yards

Marshalling and Storage Yards shall be outlined to scale with a pattern of tracks shown.

5.1.5.23.2.2 Roads

They are all weather roads, hard surface and otherwise which have exceptional landmark value. They shall be shown with a .02" line.

5.1.5.23.2.2.1 Multi-Lane Highways

Multi-Lane Highways are highways that are separated by a median strip between the two directions of travel. They shall be shown with a .02" line, separated by a .012" space

5.1.5.23.2.3 Tunnels

Tunnels shall be shown on the appropriate railroad or road symbol using a .04" dash separated by a .02" space.

5.1.5.23.2.4 Bridges

Bridges shall be shown on the appropriate railroad or road symbol.

5.1.5.23.3 Residential Area

The term ‘residential area’ as used in these specifications shall be interpreted as a concentration of structures designed and built for human occupancy. Residential areas may vary in size and shall be shown textually as ‘Residential Area’.

5.1.5.23.4 Built Up Areas

5.1.5.23.4.1 Industrial Area

The term ‘industrial area’ as used in these specifications shall be interpreted as an area containing multiple buildings for the purpose of industrial development. Industrial areas may very in size and shall be shown textually as ‘Industrial Area’.

5.1.5.23.4.2 Mobile Home Parks

The term ‘mobile home park’ as used in these specifications shall be interpreted as a neighborhood consisting of an area of land where travel trailers rest. Mobile home areas may vary in size and shall be shown textually as ‘Mobile Home Area’.

5.1.5.23.4.3 Areas of Landmark Value

Areas of landmark value such as cemeteries, parks, campgrounds, baseball fields, soccer fields, football fields, tennis courts and golf courses shall be shown textually in their approximate locations.

5.1.5.23.4.4 Buildings

All buildings located within the airport sketch boundary shall be shown to scale in the approximate location. Sketches should not be cluttered with buildings which have no landmark value. Exercise good cartographic judgment when evaluating building placement.

5.1.5.23.5 Relief Features

Relief features, such as hills, ditches, cliffs, depressions, cuts, fills, strip mines, mine dumps and tailings, shall be portrayed symbolically as shown in IAC 2. Open pit mines and quarries shall be portrayed symbolically and labeled as illustrated in IAC 2.

5.1.5.23.5.1 Hachuring

Hachuring shall be used to portray (1) great difference (not gradual slopes) between airport and surrounding terrain, i.e., peaks, ridges, hills, etc. and (2) relief which falls in the category of obstructions. Hachuring depicted in the legend will be defined as a hill and shall be shown as illustrated in IAC 2.

5.1.5.23.6 Vegetation

Trees shall be shown as illustrated in **Appendix 22**. If they create an obstruction, the tree symbol will be used. Sketches should not be cluttered with the tree symbol. Wooded areas should be shown by the use of multiple tree symbol scattered within the area. Exercise good cartographic judgment when evaluating tree placement.

5.1.5.23.7 Swamps

Swamp shall be shown as illustrated in IAC 2. Sketches should not be cluttered with the swamp symbol. Swamp areas should be shown by the use of multiple swamp symbols scattered within the area. Exercise good cartographic judgment when evaluating swamp placement.

5.1.5.23.8 Miscellaneous Cultural Features

If the feature creates an obstruction or if it used as a landmark it will be shown.

5.1.5.23.8.1 Power Lines and High Tension Lines

Power Lines and High Tension Lines shall be shown as illustrated in **Appendix 22**.

5.1.5.23.8.2 Dams

Dams shall be plotted to scale using a solid line and labeled.

5.1.5.23.8.3 Race Tracks

Race Tracks shall be plotted to scale using a solid line for the outline.

5.1.5.23.8.4 Stadiums

Stadiums shall be plotted to scale using a solid line for the outline.

5.1.5.23.8.5 Outdoor Theaters

Outdoor Theaters shall be shown in their approximate location as illustrated in IAC 2.

5.1.5.23.8.6 Towers, Tanks, Oil Wells and Smoke Stacks

Towers, Tanks, Oil Wells and Smoke Stacks shall be positioned as near the proper location as possible.

CHAPTER 6
NOTICES AND ASSOCIATED DATA - CHART SUPPLEMENT - U.S.

6.1 SCOPE

Notices and Associated Data contained within the Chart Supplement shall pertain to and consist of information of operational value to the pilot. Information pertaining to air traffic control procedures; noise abatement procedures; special cautionary notes; permanent restrictions to radio aids to navigation; etc., are representative of the type of notice to be carried.

Due to the unique nature and organization of the Chart Supplement Alaska and the Chart Supplement Pacific, refer to **Chapter 8** and **Chapter 9** for specifications.

6.2 NOTICES

6.2.1 Organization of Notices

The following types of notices that shall appear in the Chart Supplement - U.S. in the following order:

1. Special Notices
2. Regulatory Notices

6.2.2 Special Notices

The page heading “Special Notices” is used for this section. Only those notices that fall within the Chart Supplement volume will be included.

Special Notices contained within this section shall consist of information of operational value to the pilot as determined by FAA. Example of types of Special Notices:

- Air Traffic Control Procedures
- Airport Services or Facilities Available
- Special Cautionary Notes
- Permanent restriction to radio aids to navigation (NAVAIDs)
- Changes to FARs and other regulatory or advisory matters of operational interest; etc., are representative of the type of notices to be carried
- Noise Abatement Procedures
- Arrival Alert Notices

6.2.2.1 Special Notices Data Attributes

Notices pertinent to a specific geographic area may be grouped alphabetically by state, then by city or location within the state, then by airport (if applicable).

6.2.2.2 Arrival Alert Notices

Arrival Alert Notices will appear as the last set of notices within the Special Notices Section. The Arrival Alert Notices will be organized first alphabetically by airport name and then numerically by runway identifiers.

The first Arrival Alert Notice will have a solid line at the top of the notice page to indicate the start of the Arrival Alert Notice section of the Special Notices.

6.2.3 Regulatory Notices

The page heading "Regulatory Notices" is used for this section.

New or revised Rules, Parts, Advisory Circulars, Special Procedures and other regulatory matters of operational interest to the pilot shall be published collectively in this section.

6.2.3.0.1 Explanatory Note

An explanatory note will precede the listing on the first page only.

Figure 6.1 Regulatory Notices Explanatory Note

The following narratives summarize the FAR Part 93 Special Air Traffic Rules, and Airport Traffic Patterns in effect as prescribed in the rule. This information is advisory in nature and in no way relieves the pilot from compliance with the specific rules set forth in FAR Parts 91 and 93.

Special Airport Traffic Areas prescribed in Part 93 are depicted on Sectional Aeronautical Charts, Enroute Low Altitude Charts, and where applicable, on VFR Terminal Area Charts.

6.2.4 Format of Textual Notices

Textual notices shall conform to the following format.

6.2.4.1 Notice Header (Category)

The header text shall be centered, bold in all CAPs in News Goth BT, 8 pt font.

6.2.4.2 Location Sub Header

The location sub header text shall be centered, bold on the second line after the Notice Header in News Goth BT, 8 pt font.

Figure 6.2 Special Notice Example with One Line Location Sub Header

AEROBATIC PRACTICE AREA
Roxbury, Connecticut

Aerobatic practice area will be conducted between the altitudes of 2500 ft and 4500 ft MSL and performed within an approximate 2 mile radius of a point defined from the CARMEL VOR/DME (CMK) as the 052 degree radial/21.9 GPS–DME fix. It is 8 NM NW of the Oxford, CT airport (OXC).

Entries that include expanded location information, the City and State will appear on the first line and more detailed location information provided on subsequent lines.

Figure 6.3 Special Notice Example with Multi-line Location Sub Header

SEARCH LIGHT DEMONSTRATION
Baltimore, Maryland
Downtown, at the Inner Harbor
Each evening, seven days per week

A vertical search light beam demonstration will be conducted at the Pier V Hotel, at Baltimore Inner Harbor, Baltimore, Maryland, BAL 028/7. Lat N39º17´24″, Long W76º36´27″. Search light beams are being radiated from the SFC upward. Flashblindness or cockpit illumination may occur at several miles distance.

6.2.4.3 Notice Text

The Notice Text shall appear in News Goth BT, 6 pt font. Tables and graphics may be part of a specific entry and shall appear as required.

6.2.4.4 Use of Solid Black Lines (Bounding Lines)

Solid Black Lines shall be used at the top/start of each notice above each Notice's title and after the OPR Footnote.

Figure 6.4 Example of Use of Solid Black Lines

NORTH SHORE HELICOPTER ROUTE
Long Island, New York

Effective August 6, 2012 UFN, civil helicopter pilots operating VFR along Long Island, New York's northern shoreline between the VPYLD waypoint and Orient Point, must utilize the North Shore Helicopter route and altitude, as published. Deviations are permitted for safety, weather conditions, or transitioning to or from a destination or point of landing. For a detailed explanation of the requirement, see 14 CFR part 93, subpart H.

AEROBATIC PRACTICE AREA
Roxbury, Connecticut

Aerobatic practice area will be conducted between the altitudes of 2500 ft and 4500 ft MSL and performed within an approximate 2 mile radius of a point defined from the CARMEL VOR/DME (CMK) as the 052 degree radial/21.9 GPS–DME fix. It is 8 NM NW of the Oxford, CT airport (OXC).

SEARCH LIGHT DEMONSTRATION
Baltimore, Maryland
Downtown, at the Inner Harbor
Each evening, seven days per week

A vertical search light beam demonstration will be conducted at the Pier V Hotel, at Baltimore Inner Harbor, Baltimore, Maryland, BAL 028/7. Lat N39º17´24″, Long W76º36´27″. Search light beams are being radiated from the SFC upward. Flashblindness or cockpit illumination may occur at several miles distance.

6.2.4.5 Notice Graphics

Notice graphics shall be published when received by an authoritative source. Whole page graphics must conform to the margin boundaries of the Chart Supplement, not to exceed 4 5/8" wide and 7 1/4" high. The graphic shall be published as received, with no edits.

6.2.4.6 Multi-Page Notices

Notices that exceed one page, the first page shall show "CONTINUED ON NEXT PAGE" in NewsGoth Cn BT, 8 point, bold, all CAPs and centered.

6.2.5 Office of Primary Responsibility (OPR) Footnote

An Office of Primary Responsibility (OPR) footnote shall appear at the end of a Notice, regardless of whether it is a text or graphic-only notice. The footnote shall appear in Special Notices and Regulatory Notices in the U.S. Chart Supplement.

The OPR footnote shall appear in Special, General, Area, and Regulatory Notices published in the Alaska and Pacific Chart Supplement. Notices in Associated Data, Procedures, and Emergency Procedures shall have the OPR footnote at the end of each Notice.

The OPR footnote shall contain the official OPR name, contact information, and original/amend date. The information shall be shown in NewsGoth Bt, 5-point font and left justified.

Figure 6.5 Office of Primary Responsibility (OPR) Footnote Example

LOWER SEPARATION MINIMA – OAKLAND OCEANIC FIR

In accordance with ICAO Regional Supplementary Procedures – DOC 7030 PAC Region 6.2.6, notice is hereby given that separation lower than those specified in 6.2.1 and 6.2.2 may be applied in accordance with PANS–ATM DOC 4444 within the Oakland Oceanic FIR/OCA. The use of lower separation standards within the airspace listed below is contingent upon satisfactory and current flight check data of the navigational aids.

AIRSPACE	NAVIGATIONAL AIDS
100 NM seaward of the boundary of the Honolulu Domestic area	SOK, LIH, HNL, MKK, LNY, OGG, ITO, UPP and KOA VORTACS
50 NM of Guam	AJA NDB
130 NM of Wake Island	AWK VORTAC FL180–450
40 NM of Wake Island	AWK VORTAC SFC–FL180
130 NM of Midway Island	NQM TACAN FL180–450
40 NM of Midway Island	NQM TACAN SFC–FL180
50 NM of Majuro Island	MAJ NDB/DME
50 NM of Kwajalein Island	NDJ NDB
50 NM of Weno Island/Chuuk	TKK NDB/DME
50 NM of Yap Island	YP NDB/DME
50 NM of Ponape Island	PNI NDB/DME
50 NM of Saipan Island	SN NDB
50 NM of Babelthuap Island/Koror	ROR NDB/DME

Office of Primary Responsibility (OPR): Oakland Center – FAA/AJT-ZOA-IAP
Contact Information: 510-745-3326/3464; email: AJT-ZOA-IAP@faa.gov
Amended: August 2023

6.2.5.1 Office of Primary Responsibility (OPR)

The first line of the OPR footnote shall appear with “Office of Primary Responsibility (OPR):” followed by the name of the office. Personal names shall not be published as individuals cannot be owners of Notices published in the Chart Supplement. OPRs from FAA offices will be shown with “FAA” followed by the office name. FAA Routing codes shall not be published in lieu of official office names.

6.2.5.2 Contact Information

The second line of the OPR footnote shall appear with “Contact Information:” followed by either an office main phone line or email address. Personal phone numbers and personal email addresses shall not be published in the Chart Supplement. For FAA Offices, an organization/team/office inquiry email address is published.

6.2.5.3 Original/Amended Date

The third line of the OPR footnote shall appear with “Original:” or “Amended:” followed by the month and year published. The month shall be spelled out.

6.3 ASSOCIATED DATA

The following types of Associated Data may be shown in the following order.

1. FAA Telephone Numbers and National Weather Service
2. Air Route Traffic Control Centers
3. Flight Service Station Communication Frequencies
4. VOR Receiver Checkpoints and VOR Test Facilities
5. Parachute Jumping Areas
6. Supplemental Communications Reference
7. Preferred IFR Routes
8. Tower Enroute Control Routes
9. North American Routes
10. Minimum Operational Network (MON) Airport Listing

6.3.1 FAA Telephone Numbers and National Weather Service Information

The Page Heading "FAA Telephone Numbers and NWS" will be used for this section.

FAA telephone numbers and pertinent National Weather Service information are included within this section.

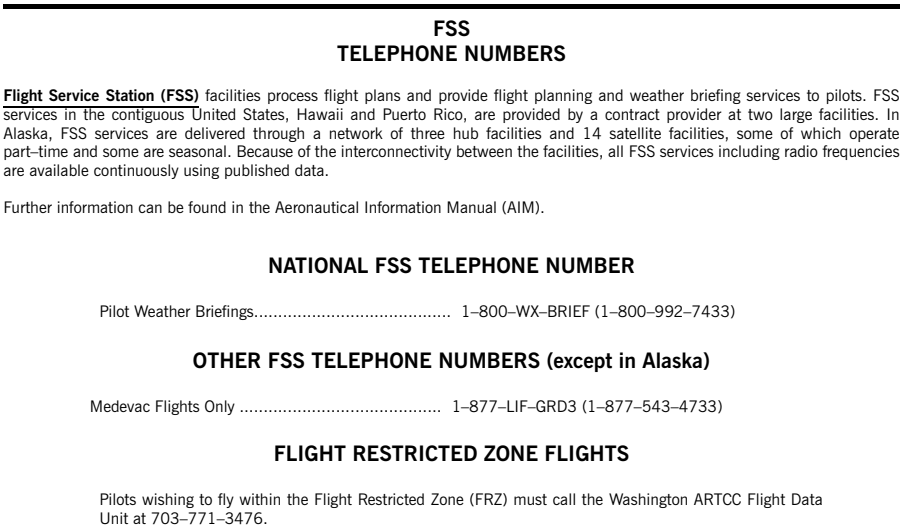
The following is included in all Chart Supplement volumes:

a. FSS Telephone Numbers
b. Key Air Traffic Facilities which includes Regional Air Traffic Divisions, ARTCCs, Major TRACONs, and Daily NAS Reportable Airports
c. Key to Aerodrome Forecast (TAF) and Aviation Routine Weather Report (METAR)
d. National Weather Service (NWS) Upper Air Observing Station (UAOS) and Weather Radar Network

6.3.1.1 FSS Telephone Numbers

All items in this section are the same for all Chart Supplement - U.S. volumes. The FSS Telephone Numbers section will consist of Section Title, FSS Explanatory Text, FSS Phone Numbers and FRZ Flight Information.

Figure 6.6 FSS Telephone Numbers



FSS
TELEPHONE NUMBERS

Flight Service Station (FSS) facilities process flight plans and provide flight planning and weather briefing services to pilots. FSS services in the contiguous United States, Hawaii and Puerto Rico, are provided by a contract provider at two large facilities. In Alaska, FSS services are delivered through a network of three hub facilities and 14 satellite facilities, some of which operate part–time and some are seasonal. Because of the interconnectivity between the facilities, all FSS services including radio frequencies are available continuously using published data.

Further information can be found in the Aeronautical Information Manual (AIM).

NATIONAL FSS TELEPHONE NUMBER

Pilot Weather Briefings..... 1–800–WX–BRIEF (1–800–992–7433)

OTHER FSS TELEPHONE NUMBERS (except in Alaska)

Medevac Flights Only 1–877–LIF–GRD3 (1–877–543–4733)

FLIGHT RESTRICTED ZONE FLIGHTS

Pilots wishing to fly within the Flight Restricted Zone (FRZ) must call the Washington ARTCC Flight Data Unit at 703–771–3476.

6.3.1.1.1 FSS Telephone Numbers Title

The FSS Telephone Numbers title shall appear in News Goth BT, 8 pt, centered, bold as “Telephone Numbers”.

6.3.1.1.2 FSS Explanatory Text

Explanatory text shall appear in News Goth BT, 6 point font. At the introduction of the first paragraph, the following shall appear Bold and Underlined: Flight Service Station (FSS).

6.3.1.1.3 FSS Phone Numbers

6.3.1.1.3.1 FSS National and Other Telephone Numbers Titles

The FSS Telephone Numbers title shall appear in News Goth BT, 8 pt, centered.

6.3.1.1.3.2 FSS National and Other Text

Explanatory text shall appear in News Goth BT, 6 point font, with the entry centered.

6.3.1.1.4 Flight Restricted Zone Flight Information

6.3.1.1.4.1 FRZ Flight Information Title

The FSS Telephone Numbers title shall appear in News Goth BT, 8 pt, centered.

6.3.1.1.4.2 FRZ Flight Information Text

Explanatory text shall appear in News Goth BT, 6 point font, with the entry centered.

6.3.1.2 Key Air Traffic Facilities

All items in this section are the same for all Chart Supplement - U.S. volumes. The Key Air Traffic Facilities section shall consist of the following tabulations and in the following order:

1. Air Traffic Control System Command Center
2. Air Route Traffic Control Centers (ARTCCs)
3. Major Terminal RADAR Approach Controls (TRACONs)
4. Daily NAS Reportable Airports

6.3.1.2.1 Key Air Traffic Facilities Title

The title “Key Air Traffic Facilities” shall appear centered in NewGoth Cn Bt, 10 pt, bold.

6.3.1.2.2 Air Traffic Control System Command Center

The Air Traffic Control System Command Center information is not tabulated. It appears as follows:

Figure 6.7 ATC System Command Center Example

6.3.1.2.2.1 Title

The title shall appear centered in NewGoth Bt, 8 pt, bold as “Air Traffic Control System Command Center”

6.3.1.2.2.2 Main Number Information

The Main Number Information shall appear centered in NewGoth Bt, 6 pt,

6.3.1.2.3 Air Route Traffic Control Centers (ARTCCs) Tabulation

ARTCC Tabulation data shall be organized in alphabetical order by ARTCC name.

Figure 6.8 ARTCC Tabulations

AIR ROUTE TRAFFIC CONTROL CENTERS (ARTCCs)

ARTCC NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #	**CLEARANCE DELIVERY TELEPHONE #
Albuquerque	817–222–5006	7:30 a.m.–4:00 p.m.	505–856–4300	505–856–4561
Anchorage	907–271–5936	7:30 a.m.–4:00 p.m.	907–269–1137	
Atlanta	404–305–5180	7:30 a.m.–5:00 p.m.	770–210–7601	770–210–7692
Boston	404–305–5156	7:30 a.m.–4:00 p.m.	603–879–6633	603–879–6859
Chicago	817–222–5006	8:00 a.m.–4:00 p.m.	630–906–8221	630–906–8921
Cleveland	817–222–5006	8:00 a.m.–4:00 p.m.	440–774–0310	440–774–0490
Denver	206–231–2099	7:30 a.m.–4:00 p.m.	303–342–1600	303–651–4257
Ft. Worth	817–222–5006	7:30 a.m.–4:00 p.m.	817–858–7500	817–858–7584
Honolulu	310–725–3300	7:30 a.m.–4:00 p.m.	808–840–6100	808–840–6201
Houston	817–222–5006	7:30 a.m.–4:00 p.m.	281–230–5300	281–230–5622
Indianapolis	817–222–5006	8:00 a.m.–4:00 p.m.	317–247–2231	317–247–2411
Jacksonville	404–305–5180	8:00 a.m.–4:30 p.m.	904–549–1501	904–845–1592
Kansas City	817–222–5006	7:30 a.m.–4:00 p.m.	913–254–8500	913–254–8508
Los Angeles	661–265–8200	7:30 a.m.–4:00 p.m.	661–265–8200	661–575–2079
Memphis	404–305–5180	7:30 a.m.–4:00 p.m.	901–368–8103	901–368–8453
Miami	404–305–5180	7:00 a.m.–3:30 p.m.	305–716–1500	305–716–1731
Minneapolis	817–222–5006	8:00 a.m.–4:00 p.m.	651–463–5580	651–463–5588
New York	718–995–5426	8:00 a.m.–4:40 p.m.	631–468–1001	631–468–1425
Oakland	310–725–3300	6:30 a.m.–3:00 p.m.	510–745–3331	
Salt Lake City	206–231–2099	7:30 a.m.–4:00 p.m.	801–320–2500	801–320–2568
San Juan	404–305–5180	7:30 a.m.–5:00 p.m.	787–253–8663	787–253–8664
Seattle	206–231–2099	7:30 a.m.–4:00 p.m.	253–351–3500	253–351–3694
Washington	718–995–5426	8:00 a.m.–4:30 p.m.	703–771–3401	703–771–3587

*Facilities can be contacted through the Rgnl Duty Officer during non–business hours.
**For use when numbers or frequencies are not listed in the airport listing

6.3.1.2.3.1 ARTCC Title Header

The ARTCC Title Header shall appear in NewGoth Bt, 8 pt, bold, in all CAPs centered above the ARTCC Tabulation as “AIR ROUTE TRAFFIC CONTROL CENTERS (ARTCCs). The Header shall be bound by a horizontal solid black lines, with a lineweight of 1pt, above and below the title.

6.3.1.2.3.2 Table Headers

The Air Route Traffic Control Centers (ARTCCs) Tabulation Table Headers shall be in NewGoth Bt, 6 pt, bold, in all CAPs.

6.3.1.2.3.3 Tabulation Text

Tabulation text shall appear in NewGoth Bt, 6 pt. Footnotes shall be added at the bottom left of the tabulation when needed.

6.3.1.2.3.4 First Column

The first column of the Tabulation shall consist of ARTCC Name and title “ARTCC NAME”.

6.3.1.2.3.5 Second Column

The second column will consist of the facility’s 24-hour duty telephone number and titled, “24 HR RGNL DUTY OFFICE TELEPHONE #”.

6.3.1.2.3.6 Third Column

The third column will consist of the facility's business hours and titled, "BUSINESS HOURS".

6.3.1.2.3.7 Fourth Column

The fourth column will consist of the facility's business phone number and title "BUSINESS TELEPHONE #".

6.3.1.2.3.8 Fifth Column

The fifth column will consist of the facility's clearance delivery telephone number and titled "CLEARANCE DELIVERY TELEPHONE #".

6.3.1.2.4 Major TRACON and Daily NAS Reportable Airports Tabulations

The Major TRACON and the Daily NAS Reportable Airports Tabulation share the same settings as provided below, except where noted.

The Major TRACON tabulation data shall be organized in alphabetical order by TRACON Name.

The Daily NAS Reportable Airports Tabulation tabulation data shall be organized in alphabetical order by Airport Name.

Figure 6.9 Major TRACON Tabulation

MAJOR TERMINAL RADAR APPROACH CONTROLS (TRACONs)

TRACON NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #
Atlanta	404–305–5180	7:00 a.m.–3:30 p.m.	404–669–1200
Chicago	817–222–5006	8:00 a.m.–4:00 p.m.	847–608–5509
Dallas–Ft. Worth	817–222–5006	7:30 a.m.–4:00 p.m.	972–615–2500
Denver	425–227–1389	7:30 a.m.–4:00 p.m.	303–342–1500
Houston	817–222–5006	7:30 a.m.–4:00 p.m.	281–230–8400
New York	718–995–5426	8:00 a.m.–4:30 p.m.	516–683–2901
Northern CA	310–725–3300	7:00 a.m.–3:30 p.m.	916–366–4001
Potomac	718–995–5426	8:00 a.m.–4:30 p.m.	540–349–7500
Southern CA	310–725–3300	7:30 a.m.–4:00 p.m.	858–537–5800

*Facilities can be contacted through the Rgnl Duty Officer during non–business hours.

Figure 6.10 Excerpt of Daily NAS Reportable Airports Tabulation

KEY AIR TRAFFIC FACILITIES

DAILY NAS REPORTABLE AIRPORTS

AIRPORT NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #
Albuquerque Intl Sunport, NM	817–222–5006	8:00 a.m.–5:00 p.m.	505–842–4366
Andrews AFB, MD	718–995–5426	8:00 a.m.–4:30 p.m.	301–735–2380
Baltimore/Washington Intl Thurgood Marshall, MD	718–995–5426	8:00 a.m.–4:30 p.m.	410–962–3555
Boston Logan Intl, MA	404–305–5156	7:30 a.m.–4:00 p.m.	617–455–3100
Bradley Intl, CT	404–305–5156	7:30 a.m.–4:00 p.m.	203–627–3428
Burbank/Bob Hope, CA	310–725–3300	7:00 a.m.–5:30 p.m.	818–567–4806
Charlotte Douglas Intl, NC	404–305–5180	8:00 a.m.–4:30 p.m.	704–344–6487
Chicago Midway, IL	817–222–5006	8:00 a.m.–4:00 p.m.	773–884–3670
Chicago O'Hare Intl, IL	817–222–5006	8:00 a.m.–4:00 p.m.	773–601–7600
Cleveland Hopkins Intl, OH	817–222–5006	8:00 a.m.–4:00 p.m.	216–352–2000
Covington/Cincinnati, OH	817–222–5006	8:00 a.m.–4:30 p.m.	859–372–6440
Dallas–Ft. Worth Intl, TX	817–222–5006	8:30 a.m.–5:00 p.m.	972–615–2531

6.3.1.2.4.1 Major TRACON Title Header

The Major TRACON Title Header shall appear in NewGoth Bt, 8 pt, bold, in all CAPs centered above the Major TRACON Tabulation. The Header shall be bound by a horizontal solid black lines, with a lineweight of 1pt, above and below the title.

6.3.1.2.4.2 Daily NAS Reportable Airports Title Header

The Daily NAS Reportable Airports Title Header shall appear in NewGoth Bt, 8 pt, bold, in all CAPs centered above the Daily NAS Reportable Points Tabulation.

6.3.1.2.4.3 Tabulation Headers

Tabulation headers shall be in NewGoth Bt, 6 pt, bold, in all CAPs.

6.3.1.2.4.4 Tabulation Text

Tabulation text shall appear in NewGoth Bt, 6 pt. Footnotes shall be added at the bottom left of the tabulation when needed.

6.3.1.2.4.5 First Column (TRACON Name / Airport Name)

The first column of the Major TRACON Tabulation shall be titled “TRACON Name”. The TRACON name shall appear on one line.

The first column of the Daily NAS Reportable Airports Tabulation shall be title “Airport Name.” Airport names shall appear on one line, however, if the airport name requires two lines, the second line of the airport name is indented.

6.3.1.2.4.6 Second Column

The second column will consist of the facility’s 24-hour duty telephone number and titled, “24 HR RGNL Duty Office Telephone #”.

6.3.1.2.4.7 Third Column

The third column will consist of the facility’s business hours and titled, “Business Hours”.

6.3.1.2.4.8 Fourth Column

The fourth column will consist of the facility’s business phone number and titled “Business Telephone #”.

6.3.1.3 Key to Aerodrome Forecast (TAF) and Aviation Routine Weather Report (METAR)

The Key to Aerodrome Forecast shall be published as provided by the authorized source. This two page entry shall appear with the first page on the left hand page and the second page on the right page.

References:

Appendix 25 - Key to Aerodrome Forecast (TAF) and Aviation Routine Weather Report (METAR)

6.3.1.4 National Weather Service (NWS) Upper Air Observing Stations (UAOS) and Weather Radar Network

A graphic of the NWS network of the UAOS and Weather Radar Network for the locations that fall within the Chart Supplement coverage are shall be published. The graphic shall be published as received from the authoritative source. Graphics may be received in either portrait or landscape in terms of page orientation. Refer to Appendices for examples.

References:

Appendix 26 - NWS-UAOS - Portrait Layout Example
Appendix 27 - NWS-UAOS - Landscape Layout Example

6.3.2 Air Route Traffic Control Centers (ARTCCs)

The Page Heading "Air Route Traffic Control Centers (ARTCCs)" will be used for this section. ARTCC frequencies and their remote transmitter sites are listed for all locations that fall within the Chart Supplement volume; however, if the remote site falls outside the coverage area, but provides APP/DEP CON for an airport within the volume of coverage, it will be shown.

References:

Appendix 28 - Air Route Traffic Control Centers (ARTCCs)

6.3.2.1 Explanatory Note

An explanatory note will precede the listing on the first page only.

Figure 6.11 ARTCC Explanatory Note Text

Air Route Traffic Control Center frequencies and their remoted transmitter sites are listed below for the coverage of this volume. Bold face type indicates high altitude frequencies, light face type indicates low altitude frequencies. To insure unrestricted IFR operations within the high altitude enroute sectors, the use of 720 channel communications equipment (25 kHz channel spacing) is required.

6.3.2.2 ARTCC Data Elements

The ARTCC Data Elements consist of the following:

1. Center Name
2. Center Frequencies
3. CPDLC Login Information
4. Enroute Chart Information
5. Center Ident
6. Remote Transmitter Sites
7. Remote Transmitter Site Frequencies
8. Solid Line Separator

ARTCC Data shall be organized in alphabetical order by Center Name. Remote Transmitter Names associated with a Center, shall be organized after the Center Name in alphabetical order.

References:

Appendix 28 - Air Route Traffic Control Centers (ARTCCs)

6.3.2.2.1 Center Name

The Center Name shall appear in NewsGoth Bt, Bold 6 point font in all CAPs. The Remote Symbol, an R within a circle, shall appear before the Center Name if designated as a Remote location by authorized source.

6.3.2.2.2 Center Frequencies

The Center Frequencies shall appear in NewsGoth Bt, 6 point font. High altitude frequencies will appear in bold.

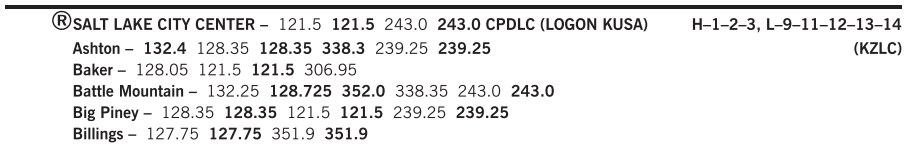
6.3.2.2.3 CPDLC Login Information

CPDLC Login Information shall appear in parentheses after ARTCC frequencies in NewsGoth Bt, Bold 6 point font in all CAPs.

6.3.2.2.4 Enroute Chart Information

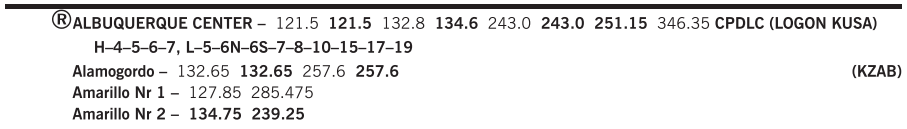
Enroute Chart Information shall appear after ARTCC frequencies and if applicable, after CPDLC information. The Enroute Chart Information will be right justified shall appear in NewsGoth Bt, Bold 6 point font.

Figure 6.12 ARTCC Example - Chart Ident on One Line



Enroute Chart Information may appear on the second line if the Center Name, Center Frequencies and/or CPDLC Login information takes up the whole first line. Enroute Chart Information on the second line will be indented under the Center Name.

Figure 6.13 ARTCC Example - Chart Ident on Second Line



6.3.2.2.5 Center Ident

Center Ident shall appear in parentheses on the next available line under the Enroute Chart Information, right justified in NewsGoth Bt, Bold 6 point font in all CAPs.

6.3.2.2.6 Remote Transmitter Site Name

The Remote Transmitter Site Name shall appear in NewsGoth Bt, Bold 6 point font.

6.3.2.2.7 Remote Transmitter Site Frequencies

The Remote Transmitter Site Frequencies shall appear in NewsGoth Bt, 6 point font. High altitude frequencies will appear in bold.

6.3.2.2.8 Solid Rule Line

The use of the Solid Rule Line is to aid in distinguishing the start and end of data associated with a given center. A solid rule line shall be used before the start of an ARTCC entry and after the last Remote Transmitter Site information data line. Solid line shall be black with a lineweight of 1 point.

6.3.3 Flight Service Station Communication Frequencies

The Page Header "Flight Service Station Communication Frequencies" will be used for this section.

References:

Appendix 33 - Flight Service Station Communication Frequencies

6.3.3.1 Explanatory Note

An explanatory note will precede the listing on the first page only.

Figure 6.14 FSS Comm Frequencies Explanatory Note Text

VHF frequencies available at Flight Service Stations and at their remote communication outlets (RCO's) are listed below for the coverage of this volume. Frequencies in bold type are available all altitudes but recommended for use FL180 and above. 'T' indicates transmit only and 'R' indicates receive only. RCO's available at NAVAID's are listed after the NAVAID name. RCO's not at NAVAID's are listed by name.

6.3.3.2 Data Elements

a. VHF Frequencies available at Flight Service Station Radio locations, Automated Flight Service Stations (AFSS) and their remote communications outlets (RCOs) are alphabetically listed by name and type.
b. RCOs at NAVAIDs are listed after the NAVAID name. RCOs not at NAVAIDs are listed by name.
c. Frequencies in bold type are available for all altitudes, but recommended for use FL180 and above.
d. "T" indicates transmit only; "R" indicates receive only.

6.3.3.3 Organization of Data

Flight Service Station entries shall be organized in alphabetical order by Radio Name.

Figure 6.15 Flight Service Station Comm Frequencies Example

HAWTHORNE RADIO
FILLMORE VORTAC 112.5T 122.1R
GUADALUPE VOR 111.0T 122.1R
LAKE HUGHES RCO 122.3
PASO ROBLES RCO 122.4 255.4
SADDLE PEAK RCO 255.4
SAN LUIS OBISPO RCO 122.4
SAN MARCUS VORTAC 114.9T 122.1R
SANTA BARBARA RCO 122.3 255.4

6.3.3.3.1 Radio Name

Radio Name shall appear in NewsGoth Bt, bold, 8 point font in all CAPs.

6.3.3.3.2 Outlet Name (RCO or NAVAID) Listings, Frequencies and Associated Notes

Outlet Name (RCO Name or NAVAID Name), Frequencies and Associated notes shall appear in NewsGoth Bt, 6 point font in all CAPs. The data will be organized by Outlet Name in alphabetical order.

Frequencies shall be published in numerical order. Any notes associated with an FSS Entry follows after the FSS Frequencies and shall appear within parentheses.

6.3.3.3.3 Radio Name with Oceanic Data

Radio Names that have Oceanic information shall appear next to the Radio Name and if the data continues on to additional lines, those lies will appear indented under the Radio Name and shall appear in NewsGoth Bt, 6 point font in all CAPs.

Flight Service Station entries shall follow after the Oceanic Data.

Figure 6.16 Flight Service Station Comm Frequencies - Oceanic

NEW YORK RADIO 11309 NORTH ATLANTIC FAMILY E 11342 LONG DISTANCE OPS CTL FAC 11387 CARIBBEAN FAMILY B 11396 CARIBBEAN FAMILY A 13297 CARIBBEAN FAMILY A 13306 NORTH ATLANTIC FAMILY A 13330 LONG DISTANCE OPS CTL FAC 13354 NORTH ATLANTIC FAMILY E 17907 CARIBBEAN FAMILY A 17907 CARIBBEAN FAMILY B 17925 LONG DISTANCE OPS CTL FAC 17946 NORTH ATLANTIC FAMILY A 17946 NORTH ATLANTIC FAMILY B 17964 NORTH ATLANTIC FAMILY E 21964 LONG DISTANCE OPS CTL FAC 2887 CARIBBEAN FAMILY A 3016 NORTH ATLANTIC FAMILY A 3455 CARIBBEAN FAMILY B 3494 LONG DISTANCE OPS CTL FAC 5520 CARIBBEAN FAMILY B 5550 CARIBBEAN FAMILY A 5598 NORTH ATLANTIC FAMILY A 6577 CARIBBEAN FAMILY A 6586 CARIBBEAN FAMILY B 6628 NORTH ATLANTIC FAMILY E 6640 LONG DISTANCE OPS CTL FAC 8825 NORTH ATLANTIC FAMILY E 8846 CARIBBEAN FAMILY A 8846 CARIBBEAN FAMILY B 8906 NORTH ATLANTIC FAMILY A 8918 CARIBBEAN FAMILY A
DEER PARK VOR/DME 122.2 255.4
HAMPTON VORTAC 122.6
HUGUENOT VOR/DME 116.1T 122.1R
KENNEDY VOR/DME 115.9T 122.1R
KINGSTON VOR/DME 117.6T 122.1R
POUGHKEEPSIE RCO 255.4

6.3.3.4 Solid Rule Line

The use of the Solid Rule Line is to aid in distinguishing the start and end of data associated with a given FSS entry. A solid rule line shall be used before the start of an Flight Service Station entry and after the last Flight Service Station entry. Solid line shall be black with a lineweight of 1 point.

6.3.4 VOR Receiver Checkpoints and VOR Test Facilities

The Page Header "VOR Receiver Checkpoints and VOR Test Facilities" will be used for this section.

6.3.4.1 Explanatory Note

An explanatory note will precede the listing on the first page only. The explanatory note shall appear in NewsGoth BT, 6 point. The word NOTE shall appear in all CAPs and the accompanying text shall appear indented after the first line.

Figure 6.17 VOR Receiver Checkpoints and VOR Test Facilities Explanatory Note Text

The use of VOR airborne and ground checkpoints is explained in Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

NOTE: Under columns headed "Type of Checkpoint" & "Type of VOT Facility" G stands for ground. A/ stands for airborne followed by figures (2300) or (1000–3000) indicating the altitudes above mean sea level at which the check should be conducted. Facilities are listed in alphabetical order, in the state where the checkpoints or VOTs are located.

6.3.4.2 Data Elements

VOR Receiver Check Points and VOR Test Facilities (VOT) are alphabetical listings of locations organized by state.

References:

Appendix 29 - VOR Receiver Checkpoints and VOR Test Facilities - U.S.

6.3.4.3 Organization of Data

The VOR Receiver Checkpoints and VOR Test Facilities shall be first organized in alphabetical order by state. VOR Receiver Checkpoint Tabular Data shall be presented first, followed by VOR Test Facilities Tabular Data. The Tabular Data shall be organized in alphabetical order by Facility Name and then by Airport Name.

Figure 6.18 VOT Tabular Listing - Example with Same City with Multiple Locations

VOR TEST FACILITIES (VOT)

Facility Name (Airport Name)	Freq.	Type, VOT Facility	Remarks
Bakersfield (Meadows Fld)	111.2	G	
Hawthorne (Jack Northrop Fld/Hawthorne Muni)	113.9	G	Unusable on South taxiway.
Long Beach (Daugherty Field)	113.9	G	Unusable all areas except runup Rwy 26L at Twy J, runup Rwy 26R.
Los Angeles Intl	113.9	G	Unusable all areas except intersection of Twy C and Twy C10.
Sacramento Executive	111.4	G	
Sacramento Intl	111.4	G	
San Diego (EL Cajon) (Gillespie Fld)	110.0	G	
San Diego (Mount Soledad) (San Diego Intl)	109.0	G	Unusable all areas except Twy B4.
San Diego (Mount Soledad) (Montgomery)	109.0	G	Unusable all areas except runup areas for Rwys 05, 28L, 28R.
San Diego (Mount Soledad) (North Island NAS–Halsey Fld)	109.0	G	Unusable all areas except runup areas for Rwys 18 and 29.
San Francisco Intl	111.0	G	
Santa Ana (John Wayne Airport/Orange Co)	110.0	G	
Torrance (Zamperini Fld)	113.9	G	

6.3.4.4 State Title

The State Title for shall appear in NewsGoth Bt, Bold 9 point font in all CAPs, centered.

6.3.4.5 VOR / VOT Sub Title

The VOR and VOT Titles for shall appear in NewsGoth Bt, Bold 8 point font in all CAPs, centered.

Figure 6.19 VOR and VOT Sub Title Example

UTAH

VOR RECEIVER CHECKPOINTS

Facility Name (Airport Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag.	Dist. from Fac. N.M.	Checkpoint Description
Provo (Provo Muni)	108.4/PVU	G	180	0.4	Runup area Twy D.
	108.4/PVU	G	331	0.7	Runup area Twy B.
St. George (St. George Rgnl)	108.6/UTI	G	005	1.9	Runup area Twy B1.
	108.6/UTI	G	011	1.9	Runup area Twy A1.

VOR TEST FACILITIES (VOT)

Facility Name (Airport Name)	Freq.	Type, VOT Facility	Remarks
Salt Lake City Intl	111.0	G	

6.3.4.6 VOR / VOT Tabulations - Text

The text used for both the tabulation headers and data shown in the tabulation shall appear in NewsGoth Bt, Bold 6 point font.

6.3.4.7 VOR Receiver Checkpoints Tabulation

6.3.4.7.1 Facility Name (Airport Name) Column

The first column, titled “Facility Name (Airport Name)”, shall consist of facility name and the airport where the VOR Receiver Checkpoint is located. The Facility Name shall appear in bold followed by the official airport name in parentheses. For airports with a long name, the second line will be indented.

Figure 6.20 Facility Name with Long Airport Name Example

Norfolk (Norfolk Rgnl/Karl Stefan Mem Fld)	109.6/OFK	G	144	0.5	On runup pad for Rwy 32.
North Platte (North Platte Rgnl Airport Lee Bird Field).....	117.4/LBF	G	013	5.5	On S edge of ramp 200´ N of Twy B.

6.3.4.7.2 Frequency/Ident Column

The second column, titled “Freq/Ident”, shall consist of the VOR frequency followed by the “/” and the VOR Identifier.

6.3.4.7.3 Type Check Point Ground Airborne/Altitude Column

The third column, titled “Type Check Pt. Gnd. AB/ALT”, shall consist of the facility’s appropriate designation, “G” for ground or “A/” for airborne, followed by altitude at which the check should be conducted.

6.3.4.7.4 Azimuth from Facility Magnetic Column

The fourth column, titled “Azimuth from Fac. Mag.”, shall consist of the magnetic heading information.

6.3.4.7.5 Distance from Facility Nautical Miles Column

The fifth column, titled “Dist. from Fac. N.M.”, shall consist of distance information in nautical miles.

6.3.4.7.6 Checkpoint Description Column

The sixth column, titled “Checkpoint Description”, shall consist of a description of the checkpoint to be used by the pilot in locating the VOR Receiver Checkpoint. If the Checkpoint Description continues on to a second or more lines, those lines shall be indented under the first line.

Figure 6.21 VOR Checkpoints - Long Entry Example and Airport w/Multiple Check Points

Facility Name (Airport Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag.	Dist. from Fac. N.M.	Checkpoint Description
Thermal (Jacqueline Cochran Rgnl)	116.2/TRM	G	329	0.3	On centerline of twy 375´ in front of hangar.
Van Nuys	113.1/VNY	G	169	0.5	At intersection of Twy D and Twy A.
	113.1/VNY	G	161	1.6	On West runup area Rwy 34L.
	113.1/VNY	G	142	0.4	Runup area Rwy 16L.

6.3.4.7.7 Facilities with Multiple VOR Checkpoints

Facilities that have multiple VOR Checkpoints will be listed as shown in **Figure 6.21**.

6.3.4.8 VOR Test Facilities (VOT) Tabulation

6.3.4.8.1 Facility Name (Airport Name) Column

The first column, titled “Facility Name (Airport Name)”, shall consist of facility name and the airport where the VOR Test Facility is located. The Facility Name shall appear in bold followed by the official airport name in parentheses. Airports with a long name, the second line will be indented.

Figure 6.22 Facility Name with Long Airport Name Example

Bakersfield (Meadows Fld)	111.2	G	
Hawthorne (Jack Northrop Fld/Hawthorne Muni)	113.9	G	Unusable on South taxiway.

6.3.4.8.2 Frequency Column

The second column titled “Freq.”, shall consist of the VOR frequency for the VOT Facility.

6.3.4.8.3 Type VOT Facility Column

The third column, titled “Type, VOT Facility” shall consist of the VOT Type Code. G for ground or A for airborne followed by the altitude at which the test should be conducted.

6.3.4.8.4 Remarks Column

The fourth column, titled “Remarks” shall consist of any remarks associated with the VOT entry. If the remarks require two or more lines, the second and subsequent lines are indented under the first line or remarks.

Figure 6.23 Example of Long VOT Remarks Entry

VOR TEST FACILITIES (VOT)

Facility Name (Airport Name)	Freq.	Type, VOT Facility	Remarks
Colorado Springs	110.4	G	
Denver (Centennial)	108.2	G	VOT unusable east of Twy C–4.
Denver International	110.0	G	VOT unusable in terminal area N of Twy AA to Twy BN and W Twy L to Twy F.

6.3.5 Parachute Jumping Areas

The Page Header “Parachute Jumping Areas” will be used for this section.

6.3.5.1 Explanatory Note

An explanatory note will precede the listing on the first page only. The explanatory note shall appear in NewsGoth BT, 6 point font.

Figure 6.24 Parachute Jumping Areas Explanatory Note Text

The following tabulation lists all reported parachute jumping areas in the area of coverage of this directory. Unless otherwise indicated, all activities are conducted during daylight hours and under VFR conditions. NOTAM D’s may be issued to advise users of specific dates and times if outside the times /altitudes that are published. The busiest periods of activity are normally on weekends and holidays, but jumps can be expected at anytime during the week at the locations listed. Parachute jumping areas within restricted airspace are not listed.

All times are local and altitudes MSL unless otherwise specified.
Contact facility and frequency is listed at the end of the remarks, when available, in bold face type.
Refer to Federal Aviation Regulations Part 105 for required procedures relating to parachute jumping.
Organizations desiring listing of their jumping activities in this publication should contact Flight Service, tower, or ARTCC.
Qualified parachute jumping areas will be depicted on the appropriate visual chart(s).

Note: (c) in this publication indicates that the parachute jumping area is charted.

References:

Appendix 32 - Parachute Jumping Areas

6.3.5.2 Charting Criteria Note

A charting criteria note will precede after the Explanatory Note. The charting criteria note shall appear in NewsGoth BT, 6 point font.

Figure 6.25 Charting Criteria Note Text

To qualify for charting, a jump area must meet the following criteria:
(1) Been in operation for at least 1 year.
(2) Log 1,000 or more jumps each year.
In addition, parachute jumping areas can be nominated by FAA Regions if special circumstances require charting.

References:

Appendix 32 - Parachute Jumping Areas

6.3.5.3 Data Elements

Parachute Jumping Areas as listed for all locations that fall within the chart supplement volume. The tabular listing will include:

1. State
2. Location organized alphabetically - "(C)" indicates that the parachute area is charted
3. Distance and Radial from Nearest VOR/VORTAC or geographic coordinates
4. Maximum Altitude
5. Remarks

Public use airports with parachute jumping activity will carry the remark "Parachute Jumping" in the remarks section of the individual airport.

Jump information will be organized in alphabetical order first by State and then by Location and then by airport/facility.

Figure 6.26 Parachute Jumping Area Table Example

LOCATION	DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC OR GEOGRAPHIC COORDINATES	MAXIMUM ALTITUDE	REMARKS
	IDAHO		
Burley	13 NM; 035° Burley	15,000	Daily SR–SS.
(c) Caldwell Industrial Arpt	20 NM; 269° Boise	17,500	5 NM radius. 1/2 hour before SR–1 hour after SS.
Joslin Fld–Magic Valley Rgnl	0.1 NM; 359° Twin Falls	14,500	2 NM radius. May–Oct, weekends.
(c) McCall Muni Arpt, Smokejumper Base	8.55 NM; 012.41° Donnelly	9,500	8 NM radius. Apr–Oct, SR–SS daily.
(c) Star Skydiving Center	17 NM; 289° Boise	16,000	5NM radius. SR–2 hrs after SS daily.
	MONTANA		
Bozeman Yellowstone Intl	1 NM; 038° Bozeman	15,000	2 NM radius. Daily SR–SS.
(c) Butler Creek	19 NM; 300° Missoula	2,000 AGL	0.5 NM radius. Occasional use.
Dornblaser Fld	5.2 NM; 124° Missoula	12,500 AGL	0.5 NM radius. Occasional use.
(c) Grant Creek	1.5 NM; 057° Missoula	12,500 AGL	0.5 NM radius. Occasional use.
(c) Helena, Ft Harrison AAF	6 NM; 265° Helena	14,500	2 NM radius. Daily 24 hrs. **Helena Rgnl ATCT-A/C (HLN) 118.3.**

6.3.5.3.1 Parachute Jumping Area Tabulation

6.3.5.3.1.1 State Header

State header shall appear in NewsGoth BT font, 8pt, Bold, CAPS, centered within the width of the Parachute Jumping Area Table.

6.3.5.3.1.2 Table Column Headers

Table column headers shall appear in NewsGoth BT font, 6pt, Bold, centered within each column.

6.3.5.3.1.3 Location Data

Location data text shall appear in NewsGoth BT font, 6pt, Bold, left justified within the width of designated column. At the end of the Location name, periods will fill in the rest of the column.

6.3.5.3.1.4 Distance and Radial From... Data

Distance and radial from data shall appar in NewsGoth BT font, 6pt, left justified within the width of designated column. At the end of the Distance and Radial From... Data, periods will fill in the rest of the column.

6.3.5.3.1.5 Maximum Altitude Data

Maximum altitude data shall appear in NewsGoth BT font, 6pt, centered within the width of designated column.

6.3.5.3.1.6 Remarks Data/Text

Remarks data/text shall appear in NewsGoth BT font, 6pt, left justified within the width of designated column. If the text continues on to a second line, the second and subsequent lines of data shall be indented. As indicted from authorized source, some text may appear in bold.

6.3.6 Supplemental Communication Reference

The Page Header "Supplemental Communication Reference" will be used for this section.

6.3.6.1 Explanatory Note

An explanatory note will precede the listing on the first page only. Text shall be in NewGoth BT, 6 point font.

Figure 6.27 Supplemental Communication Reference Explanatory Note

Contained within this tabulation, and listed alphabetically by airport name, are all private–use airports charted on the U.S. IFR Enroute Low and High Altitude charts in the United States, having terminal approach and departure control facilities. Additionally, listed by country, are all Canadian and Mexican airports that appear on the U.S. IFR Enroute charts with approach and departure control services. All frequencies transmit and receive unless otherwise noted. Radials defining sectors are outbound from the facility.

6.3.6.2 Data Elements

This tabulation, listed alphabetically by airport name is for all private–use airports charted on the U.S. IFR Enroute Low and High Altitude charts in the United States having terminal approach and departure control facilities. Additionally, listed by country, are all Canadian and Mexican airports that appear on the U.S. IFR Enroute charts with approach and departure control services.

United States tabulation shall be listed first, followed by Canada and then Mexico.

The tabulation contains:

1. Facility Name
2. Chart & Panel
3. Supplemental Communications

References:

Appendix 34 - Supplemental Communication Reference

Figure 6.28 Supplemental Communications Reference Example

UNITED STATES

FACILITY NAME	CHART & PANEL
Cabaniss Fld NOLF, TX (NGW)	L–20H, 21A
Corpus App/Dep Con 125.4 307.9	
Navy Cabaniss Tower 119.65 299.6 (Mon–Thu 1400–0500Z‡, Fri 1400–0100Z‡)	

6.3.6.3 Supplemental Communication Reference Tabulation

6.3.6.3.1 Country Header Text

Country Header shall appear at the start of Supplemental Communication Reference tabulation and if a country's information continues on to additional pages, appears at the top of the table for each page. Country Header shall be in NewsGoth Cn BT, Bold, in 8 point, centered.

6.3.6.3.2 Table Headers

Table headers shall appear in NewsGoth BT, Bold in 6 point font, in all CAPs. The first column shall be titled "FACILITY NAME", left justified. The second column shall be title "CHART & PANEL", right justified.

6.3.6.3.3 Supplemental Communication Listing

Supplemental Communications listings shall be organized in alphabetical order by Facility Name. Each Facility's entry shall be separated by a solid line.

6.3.6.3.3.1 Facility Name and Ident

Facility name shall appear in NewsGoth BT in 6 point font. Where a location has multiple facilities associated with it, location/city name shall appear first followed by "/" and then facility name. Airport Ident shall follow after facility name information in parentheses.

Figure 6.29 Example of Multiple Facilities Associated with Same City

Oshawa, ON (CYOO) ATIS 125.675 (1130–0330Z‡) Toronto Trml App/Dep Con 133.4 Tower 120.1 (1130–0330Z‡) Gnd Con 118.4 MF 120.1 (0330–1130Z‡ 5 NM to 3000´)	L–31E
Ottawa/Carp, ON (CYRP) ATIS 121.15 Ottawa Trml App/Dep Con 127.7	L–31E, 32F
Ottawa/Gatineau, QC (CYND) Ottawa Trml App/Dep Con 127.7 128.175 MF 122.3 (5 NM shape irregular to 2500) VFR Advisory Ottawa Trml 127.7	H–11C, L–32G
Ottawa/MacDonald–Cartier Intl, ON (CYOW) ATIS 121.15 Ottawa App Con 135.15 Tower 118.8 (VFR South) 120.1 (VFR North) 118.8 341.3 Gnd Con 121.9 Clnc Del 119.4 Ottawa Dep Con 128.175	L–11C
Owen Sound/Billy Bishop Rgnl, ON (CYOS) Toronto Center App/Dep 132.575 290.6	L–31D

6.3.6.3.3.2 Supplemental Communications

Supplemental Communication information shall appear in NewsGoth BT in 6 point font, indented under the Facility Name and Ident.

6.3.6.3.3.3 Chart Listing Information

The FAA Enroute chart listings shall appear in NewsGoth BT in 6 point font, right justified. FAA High Enroute Chart listings shall appear first, followed by Low Enroute Charts.

Chart Information is presented as L for Low Enroute, H for High Enroute, followed by a dash and then the chart number and panel letter. If the information appears across multiple charts in the same chart series (Low or High Enroute), after the listing the first chart number and panel set, only the following chart number and panel letter are shown, separated by commas and organized in numerical order by chart number.

Figure 6.30 Chart Listing Example - Multiple Chart Entries

H–10G, 11B, L–30G, 31D

6.3.7 Preferred IFR Routes Tabulation

The Page Heading "Preferred IFR Routes" will be used for this section.

6.3.7.1 Explanatory Note

An explanatory note will precede the listing on the first page only. Content and arrangement of content, shall be as shown in **Appendix 35**.

Title "PREFERED IFR ROUTES" shall be NewsGoth Bt, Bold 8pt font, all CAPs and centered.

Explanatory note text font shall be NewsGoth Bt, 6pt font. Numbered paragraphs will be indented under main body paragraphs.

References:

Appendix 35 - Preferred IFR Route - First Page

6.3.7.2 Organization of Tables

Preferred IFR Route tables shall be organized in the following order:

a. Low Altitude Routes
b. Special Low Altitude Preferred Direction Routes
c. High Altitude Routes
d. Special High Altitude Preferred Direction Routes
e. High Altitude-Preferred Direction Routes

6.3.7.3 Tabulations (Except for High Altitude-Preferred Direction Routes)

Preferred IFR Routes with terminals located within the volume coverage will be listed. The data shall include in alphabetical order by Terminals with associated airports, followed by the Route and Effective Times (UTC) columns.

High Altitude-Preferred Direction Routes will be listed by Airway Identifier, followed by Segment Fixes, Direction Effective, and Effective Times (UTC) columns.

Figure 6.31 Preferred IFR Route Tabulation Example

LOW ALTITUDE

Terminals	Route	Effective Times (UTC)
SAN FANCISCO METRO(WEST BAY AIRPORTS)		
LOS ANGELES(LAX)	(70–90–110–130–150–170)V27 VTU V299 SADDE V107 LAX	1400–0800

HIGH ALTITUDE

Terminals	Route	Effective Times (UTC)
ALBUQUERQUE(ABQ)		
CHICAGO(ORD)	J18 GCK J96 IRK BRADFORD–STAR	1100–0400
	or	
	(TURBOJETS – RNAV 1)J18 GCK J96 IRK BENKY (RNAV)–STAR	1100–0400
HOUSTON(HOU)	(TURBOJETS – DME/DME/IRU OR GPS)LLO KIDDZ (RNAV)–STAR	
HOUSTON(IAH)	(TURBOJETS & TURBOPROPS – DME/DME/IRU OR GPS)(IAH WEST FLOW)DIESL MSCOT (RNAV)–STAR	
	or	
	(TURBOJETS & TURBOPROPS – DME/DME/IRU OR GPS)(IAH EAST FLOW)DIESL TTORO (RNAV)–STAR	
FRESNO(FAT)		
DENVER(DEN)	INSLO DTA LBERT LONGZ (RNAV)–STAR	1400–0000

6.3.7.3.1 Title Text

Title font shall be NewsGoth Bt, Bold 8pt font, all CAPs and centered for each Altitude Route Title tabulation published.

Figure 6.32

LOW ALTITUDE

6.3.7.3.2 Column Headings Text

Column Heading Text shall use NewsGoth Bt, 6pt font, bold. Terminals and Route header shall be left justified. Effective Times (UTC) shall be center justified.

6.3.7.3.3 First Column - Terminals

The Terminal Name, which may consist of an airport name with three letter FAA Airport ident in parentheses or an Airport/ATC Area Name with description of area in parentheses shall appear in the first line of the first column. Appearing on subsequent lines shall be the individual airport with three letter FAA Airport ident in parentheses or metro area airport name with multiple three letter FAA Airport idents and/or four letter ICAO Airport Idents for non-US Airports, separated by commas, in parentheses.

6.3.7.3.3.1 First Line - Terminal Airport or Air Traffic Region Name

The Terminal Airport Name or Terminal Air Traffic Region shall appear before the data and shall use NewsGoth Bt, 6pt font in bold.

Terminal Airports or Air Traffic Regions will be organized in alphabetical order.

Figure 6.33 Terminal Name - Airport Example

ALBUQUERQUE(ABQ)

Figure 6.34 Terminal Name Metro - Air Traffic Region Example

SAN FANCISCO METRO(WEST BAY AIRPORTS)

6.3.7.3.3.2 Second Line - Airport Name or Metro/Satellite Airports

Airports assigned to Terminal Name, shall use NewsGoth Bt, 6pt font, in all CAPs and organized in alphabetical order by Airport Name.

Airports with Metro or Satellite designation (SATS or METRO) shall appear with associated airports listed in alphabetical order by FAA 3 letter Airport Ident, ICAO 4 letter Airport Ident for non-U.S. Airports in parentheses. If the associated airport data requires a second or more lines, those lines shall appear indented under the first line.

Figure 6.35 Airport Name - Metro and SATS Examples

CLEVELAND METRO(CLE,CGF,BKL,LNN,LPR)	(RNAV TURBOJET)OBK DETMR BRWNZ (RNAV)–STAR	
DETROIT SATS(DET,ARB,PTK,YIP,CYQG)	(DME/DME/IRU OR GPS REQUIRED)MRBIL (RNAV)–DP JARPA RSK ALS J13 FQF J128 DBQ BAE WEBOR RRALF (RNAV)–STAR	1100–0300
DETROIT(DTW)	(DME/DME/IRU OR GPS REQUIRED)(DTW NORTH FLOW)PORZL KKISS (RNAV)–STAR..... or (DME/DME/IRU OR GPS REQUIRED)(DTW SOUTH FLOW)PORZL RKCTY (RNAV)–STAR..... or (DME/DME/IRU OR GPS REQUIRED)(DTW NORTH FLOW)PXV WWOOD LECTR (RNAV)–STAR ..... or (DME/DME/IRU OR GPS REQUIRED)(DTW SOUTH FLOW)PXV WWOOD HANBL (RNAV)–STAR	

6.3.7.3.3.3 Special Low and Special High Altitude Preferred Direction Route - Terminal Entries

Terminal Entries that make up the Special Low and Special High Altitude Preferred Direction Route tabulations shall use NewsGoth Bt, 6pt font, in all CAPs and organized in alphabetical order by the first word of the Terminal Entry. Approach or direction of route name shall appear indented after name/title of Terminal route. If no approach or direction of route name is provided, a leadered dotted line shall be shown, indented. See **Figure 6.36** below for an example.

Figure 6.36 Special Low Altitude Preferred Direction Routes Example

SPECIAL LOW ALTITUDE PREFERRED DIRECTION ROUTES

Terminals	Route	Effective Times (UTC)
BI–DIRECTIONAL ROUTES FOR TRAFFIC OVERFLYING NEW YORK METRO		
EAST OF NY METRO.....	V139	1100–0300
WEST OF NY METRO.....	V93	1100–0300
BI–DIRECTIONAL ROUTES FOR TRAFFIC OVERFLYING WASHINGTON METRO		
.....	HAR V377 MOL.....	1100–0300
.....	HAR V377 V38 GVE.....	1100–0300
.....	LRP V93 PXT.....	1100–0300
SINGLE–DIRECTION ROUTE		
SOUTHBOUND	MXE V474 V377 HGR	1100–0300

6.3.7.3.4 Second Column - Route

Route information data shall use NewsGoth Bt, 6pt font. If the route data continues on to two or more lines, those lines shall be indented under the first line. Airports with multiple route descriptions will be separated by the word “or” indented under the route description and indented.

Routes notes, i.e. altitude limits, aircraft category (Turboprop, Turbojet), Approach Type (RNAV, DME-DME-IRU, etc.) shall appear in parentheses within the text of the description as provided by authoritative source.

Figure 6.37 Routes Column Examples

SAN JOSE(SJC)		
CHICAGO(ORD)	(TURBOJETS)ORRCA Q120 GALLI BAM J94 FOD MYRRS FYTTE (RNAV)–STAR	
DENVER(DEN)	TIPRE Q126 INSLO LBERT LONGZ (RNAV)–STAR	1400–0000
HOUSTON(HOU)	(TURBOJETS – DME/DME/IRU OR GPS)SYRAH Q128 JSICA ILC BCE TXO LBB LLO KIDDZ (RNAV)–STAR	
HOUSTON(IAH)	(TURBOJETS & TURBOPROPS – DME/DME/IRU OR GPS)(IAH EAST FLOW)BOILE Q4 ELP PEQ FUSCO DIESL TTORO (RNAV)–STAR or (TURBOJETS & TURBOPROPS – DME/DME/IRU OR GPS)(IAH WEST FLOW)BOILE Q4 ELP PEQ FUSCO DIESL MSCOT (RNAV)–STAR	
PHOENIX(PHX)	BOILE BLH HYDRR (RNAV)–STAR	1600–0500

6.3.7.3.5 Third Column - Effective Times (UTC)

Effective Times shall use NewsGoth Bt, 6pt font, centered and appear in 24 hour format.

6.3.7.4 Tabulation - High Altitude-Preferred Direction Routes

The High Altitude-Preferred Direction Routes tabulation shall be organized in alphabetical, then numerical order by Airway Identifier.

Figure 6.38 High Altitude - Preferred Direction Routes Tabulation Example

HIGH ALTITUDE—PREFERRED DIRECTION ROUTES

Airway	Segment Fixes	Direction Effective	Effective Times (UTC)
J48	POTTSTOWN, PA to TOCCOA, SC	SW BND	1100–0300
Q103	RICCS, WV to CYNTA, GA	S BND	

6.3.7.4.1 Table Headers

Column Heading Text shall use NewsGoth Bt, 6pt font, bold. Airway, Segment Fixes and Direction Effective shall be left justified. Effective Times (UTC) shall be center justified.

6.3.7.4.2 First Column - Airway

First column airway information shall consist of airway designator in NewsGoth BT, 6 point front, left justified, followed by leadered dotted for the remainder of the cell.

6.3.7.4.3 Second Column - Segment Fixes

Second column segment fix information shall consist of the city and state of the beginning and end points of the route, with the state shown using the two letter state designation in NewsGoth BT, 6 point front, left justified, followed by leadered dotted for the remainder of the cell.

6.3.7.4.4 Third Column - Direction Effective

Third column direction effective shall consist of direction information pertaining to the direction of the route with compass direction given in a one or two letter abbreviation (Example, E - East, NE - Northeast, etc.) followed by the abbreviation "BND" for the word bound in NewsGoth BT, 6 point front, left justified.

6.3.7.4.5 Fourth Column - Effective Times (UTC)

Fourth column, effective times (UTC), shall consist of the effective times as provided by authoritative source, shall use NewsGoth Bt, 6pt font, centered and appear in 24 hour format.

6.3.8 Tower Enroute Control (TEC Routes) Tabulation

The page header "Tower Enroute Control" will be used for this section. Tower Enroute Control (TEC Routes) information will be included for areas where tower enroute flight is permitted. This section is only published in specific Chart Supplement Volumes. The contents of this section is different for each volume. Generally, it includes a location map(s), explanatory information, and a tabulation of the route descriptions.

6.3.8.1 TEC Routes - Volumes Published

TEC Routes are published in the following volumes of the Chart Supplements:

a. Northeast (NE)
b. South Central (SC)
c. Southwest (SW)

6.3.8.2 TEC Route Diagrams

TEC Routes diagrams provided by the ATC Centers or authorized source precede the TEC Route introductory pages and TEC Route tables. The TEC Route diagrams shall appear as provided by authoritative source.

6.3.8.3 TEC Route Introductory Text and Legend

6.3.8.3.1 Title

Title shall appear centered at the top of the page in NewsGoth Bt Bold 8pt.

6.3.8.3.2 Introductory Text

Due to the unique nature of each region, the introductory text for TEC Route section will vary from book to book. An example of each can be found in the Appendices. Text shall appear in NewsGoth Bt, 6pt font.

The NE Book will include an Terminal Enroute Control City Pair listing after the introductory text.

The SW Book will include a legend that follows after the introductory text.

References:

Appendix 37 - Tower Enroute Control (TEC) - Introduction - NE
Appendix 39 - Tower Enroute Control (TEC) - Introduction & Table - SC
Appendix 40 - Tower Enroute Control (TEC) - Introduction & Legend - SW

6.3.8.4 TEC Route Tables - General

Due to the unique nature of each region, the tables used to organize and depict TEC Route information will vary from book to book. An example of each can be found in the Appendices.

6.3.8.4.1 TEC Route Table Headers

Table Headers shall appear in NewsGoth Bt, bold, 6pt font.

6.3.8.4.2 TEC Route Table Entries

Table entries shall appear in NewsGoth Bt, 6pt font.

References:

Appendix 38 - Tower Enroute Control (TEC) - Table - NE
Appendix 39 - Tower Enroute Control (TEC) - Introduction & Table - SC
Appendix 41 - Tower Enroute Control (TEC) - Table - SW

6.3.9 North American Routes Tabulation (Northeast Book Only)

Chart Supplement Northeast Volume contains an entry for North American Routes for North Atlantic Traffic. It includes explanatory guidance and a tabulation of the routes. Text will be organized as provided by authorized source.

The Page Header “North American Routes” will be used for this section.

References:

Appendix 42 - North American Routes
Appendix 43 - North American Routes - Common Portion Table
Appendix 44 - North American Routes - Non-Common Portion Table

6.3.9.1 Explanatory Text

References:

Appendix 42 - North American Routes

6.3.9.1.1 Title Text

Title Text will appear in NewsGoth BT, bold, 8pt font, centered and all caps.

6.3.9.1.2 Subtitles

Subtitles will appear in NewsGoth BT, bold, 6pt font and depicted as indicated in the source document (centered or left justified).

6.3.9.1.3 Text

Text will be in NewsGoth BT, 6pt font. As indicated in original source document, some text may appear as bold.

6.3.9.2 North American Routes - Tabulation - Common Portion

The common portion of the North American Routes section contains introductory text followed by tables. The Title Text and the Text shall follow the same text specifications as listed under **6.3.9.1** - Explanatory Text.

References:

Appendix 43 - North American Routes - Common Portion Table

6.3.9.2.1 Table Title

The Table Title shall appear in NewsGoth Bt, bold, 6pt font, all CAPs and centered

6.3.9.2.2 Column Headers

Column Headers shall appear in NewsGoth Bt, bold, 6pt font.

6.3.9.2.3 Table Entries

Common Data table entries shall appear in NewsGoth Bt, 6pt font, and left justified.

6.3.9.3 Affected NARs Entries

Affected NARs Entries, when provided by an authorized source, are published at the end of the table (Eastbound or Westbound tables).

Figure 6.39 Affected NARs Entry Example

AFFECTED NARS BLW FL330:
CYR630: N458A, N460A, N344C, N500B, N542B
CYR629: N388A, N390A, N392F, N420A, N422A, N462A, N464F, N506A, N542B, N544A, N550A, N590A, N596A
CYR628: N388A, N390A, N392F, N420A, N422A, N462A, N464F, N506A, N544A, N550A, N590A, N596A
AFFECTED NARS ABV FL310:
CYR666: N458A, N460A, N500B, N542B
CYR665: N388A, N390A, N392F, N420A, N422A, N462A, N464F, N506A, N542B, N544A, N550A, N590A, N596A
CYR664: N388A, N390A, N392F, N420A, N422A, N462A, N464F, N506A, N544A, N550A, N590A, N596A

6.3.9.3.1 Subtitle Text

Subtitle text shall appear in NewsGoth Bt, bold, 6pt font, all CAPs.

6.3.9.3.2 Affected NARS Text

Affected NARS text shall appear in NewsGoth Bt, 6pt font.

6.3.9.4 North American Routes - Table - Non-Common Portion

NARs Non-Common Position Tables consist of a VIA Title, followed by a three columned table. Each table will be organized alphabetically by VIA NAVAID Facility/Fix name.

References:

Appendix 44 - North American Routes - Non-Common Portion Table

6.3.9.4.1 Via Title

Via Title shall appear in NewsGoth Bt, bold, 6pt font, all CAPs and centered.

6.3.9.4.2 Column Table Headers

The Column Table Headers shall appear in NewsGoth Bt, bold, 6pt font, and left justified.

6.3.9.4.3 Non-Common Portion Data

Non-Common Portion Data shall appear in NewsGoth Bt, 6pt font, all Caps, and left justified. Entires that continue on to another line are indented.

6.3.9.4.4 Notes

Notes associated with a Non-Common Portion Table, shall appear at the end of the table, after the bottom horizontal line. Text shall appear in NewsGoth Bt, 6pt font with the VIA fix or NAVAID facility bold.

Figure 6.40 Non-Common Portion - Notes Example

VIA MOUGH

Inland Navigation Facility/Fix	Non–Common Portion	Destination
MOUGH	Y497 DRIFT Q439 BRIGS J55 SIE	DOVER
MOUGH	Y486 CREEL Q430 RBV HYPER (RNAV)–STAR	DULLES
MOUGH	Y495 CAMRN	KENNEDY
MOUGH	Y95 OWENZ DRIFT BRIGS JIMS (RNAV)–STAR	PHILADELPHIA
MOUGH	Y495 OWENZ MANTA V267 GAMBY	MCGUIRE

* NOTE: St. Louis route usable only for aircraft at or above FL350.

6.3.10 Minimum Operational Network (MON) Airport Listing

A listing of MON Airports in the geographical area of the subject Supplement will be published as the last entry in the Associated Data section. Layout, format, and content arrangement as shown in **Figure 6.41**.

Figure 6.41 MON Airport Listing Example

MINIMUM OPERATIONAL NETWORK (MON) AIRPORT LISTING

STATE	CITY	AIRPORT NAME	LOCATION IDENTIFIER
CT	WINDSOR LOCKS	BRADLEY INTL	BDL
MA	HYANNIS	CAPE COD GATEWAY	HYA
MD	FREDERICK	FREDERICK MUNI	FDK
ME	MILLINOCKET	MILLINOCKET MUNI	MLT
ME	PORTLAND	PORTLAND INTL JETPORT	PWM
ME	PRESQUE ISLE	NORTHERN MAINE RGNL ARPT AT PRESQUE IS	PQI
ME	WATERVILLE	WATERVILLE ROBERT LAFLEUR	WVL
NJ	WILDWOOD	CAPE MAY COUNTY	WWD
NY	BINGHAMTON	GREATER BINGHAMTON/EDWIN A LINK FIELD	BGM
NY	JAMESTOWN	CHAUTAUQUA COUNTY/JAMESTOWN	JHW
NY	NEW YORK	NEW YORK STEWART INTL	SWF
NY	WATERTOWN	WATERTOWN INTL	ART
PA	BUTLER	PITTSBURGH/BUTLER RGNL	BTP
VA	CHARLOTTESVILLE	CHARLOTTESVILLE-ALBEMARLE	CHO
VA	RICHMOND	RICHMOND INTL	RIC

References:

Appendix 45 - Minimum Operational Network (MON) Airport Listing Example

6.3.10.1 MON Title Text

"MINIUMUM OPERATIONAL NETWORK (MON) AIRPORT LISTING" title text shall appear centered at the top of the page, above the MON Tabulation in News Goth CN Bt, 8 pt, bold, in all CAPs.

6.3.10.2 MON Tabulation

6.3.10.2.1 Column Title Text

Column Title Text shall appear in NewsGoth Bt, bold, 6pt font, all CAPs and left justified.

6.3.10.2.2 MON Table Entries

MON Table Entries shall appear in NewsGoth Bt, 6pt font, all CAPs and left justified.

6.3.10.2.3 Organization of Data

Entries shall be listed in alphabetical order first by state, then by city and then by airport name.

6.3.10.2.3.1 State

State shall consist of two letter abbreviation.

6.3.10.2.3.2 City

City shall consist of the associated city name.

6.3.10.2.3.3 Airport Name

Airport Name shall be the official name of the airport.

6.3.10.2.3.4 Location Identifier

Location Identifier shall consist of the 3 letter FAA ident associated with the Airport Name.

CHAPTER 7
AIRPORT DIAGRAMS

7.1 AIRPORT DIAGRAMS - U.S. AND AK

The Page Header "Airport Diagrams" will be used for this section.

7.1.1 Airport Diagram Legends

Airport Diagram Legends will be produced in accordance with IAC 4.

7.1.1.1 Airport Diagram General Information Legend

The first page of the Airport Diagram Legend is made up of the following:

1. Introductory Text
2. Airport Diagram Note
3. Pilot Controlled Airport Lighting Systems
4. Chart Currency Information
5. Miscellaneous

7.1.1.1.1 Introductory Text

Introductory Text shall appear in NewsGoth Bt, 6pt font

Figure 7.1 Introductory Text

In support of the Federal Aviation Administration's Runway Incursion Program, selected towered airport diagrams have been published in the Airport Diagram section of the Chart Supplement. Diagrams will be listed alphabetically by associated city and airport name. Airport diagrams, depicting runway and taxiway configurations, will assist both VFR and IFR pilots in ground taxi operations. The airport diagrams in this publication are the same as those published in the U.S. Terminal Procedures Publications. For additional airport diagram legend information see the U.S. Terminal Procedures Publication.

7.1.1.1.2 Airport Diagram Note

Airport Diagrams Note text shall appear in NewsGoth Bt, 6pt font

Figure 7.2 Airport Diagram Note

NOTE: Some text data published under the individual airport in the front portion of the Chart Supplement may be more current than the data published on the Airport Diagrams. The airport diagrams are updated only when significant changes occur.

7.1.1.1.3 Pilot Controlled Airport Lighting Systems

The Pilot Controlled Airport Lighting Systems content shall appear as specified in IAC 17 Appendices - General Information.

7.1.1.1.4 Chart Currency Information

The Chart Currency Information content shall appear as specified in IAC 17 Appendices - General Information.

7.1.1.1.5 Miscellaneous

The Miscellaneous content shall appear as specified in IAC 17 Appendices - General Information.

7.1.1.2 Airport Diagram/Airport Sketch Legend

The Airport Diagram/Airport Sketch Legend will be produced in accordance with IAC 4.

7.1.2 Airport Diagram Hot Spots

7.1.2.1 Section Header

The Section Header "Hot Spots" will be used on the first page only. Header shall appear in News-Goth CN Bt, 10pt font, bold, in all CAPs, and centered.

Figure 7.3 Hot Spots Section Header Text

HOT SPOTS

7.1.2.2 Explanatory Note

An explanatory note will precede the listing on the first page only. Explanatory Note text shall appear in NewsGoth Bt, 6pt font, left justified.

Figure 7.4 Explanatory Text

An "Airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or ellipses designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

7.1.2.3 Organization of Data

Hot Spot information will organized alphabetically first by State, then by Airport City and then by Airport Name. Hot Spots for a given airport are then organized numerically by Hot Spot numbering, e.g. HS 1, HS 2, etc.

7.1.2.4 Data Elements

A tabular listing of Hot Spots in the geographical area of the subject Supplement will be published. The table will include City/Airport, Hot Spot, and Description columns organized by state.

Figure 7.5 Hot Spot Table Example

CITY/AIRPORT	HOT SPOT	DESCRIPTION
CONNECTICUT		
DANBURY		
DANBURY MUNI (DXR)	HS 1	Maint vigilance confusing twy configuration. Pilots unfamiliar should ask for progressives.
	HS 2	Area not visible from the twr.
	HS 3	Active ramp adjacent to twy.
	HS 4	Hold position marking on Twy C for Rwy 26 is further from the rwy than the std location. It will appear before you expect it.
GROTON (NEW LONDON)		
GROTON–NEW LONDON (GON)	HS 1	When ldg Rwy 15–33 and exit on Twy C, you immediately enter the parallel Twy B.
	HS 2	When ldg Rwy 15–33 and exit on Twy J, you immediately enter the parallel Twy B.
HARTFORD		
HARTFORD–BRAINARD (HFD)	HS 1	Helipad is in close proximity to the intersection of Twy A and Twy H.
WINDSOR LOCKS		
BRADLEY INTL (BDL)	HS 1	Twy C and Twy E complex int in close proximity to Rwy 01–19.
	HS 2	Acft on Twy S missing Twy C may enter Rwy 24.
	HS 3	Acft on Twy J missing Twy S may enter Rwy 33.

References:

Appendix 47 - Hot Spots - U.S. and AK

7.1.2.4.1 Hot Spot Table Headers

Hot Spot Table headers shall appear at the start of each Hot Spot Table, appearing on the first page after the Explanatory Note and at the top of each Hot Spot page on successive pages. Header text shall appear in NewsGoth Bt, 6pt font, bold, in all CAPS.

7.1.2.4.2 State Header

State Header shall appear at the start of each State's Hot Spot entries. State Header text shall appear in NewsGoth Bt, 9pt font, bold, in all CAPS, centered.

7.1.2.4.3 City/Airport Column

City name, with associated city name in parentheses if applicable, shall appear on the first line. The Airport Name with three letter FAA ident in a parentheses shall appear indented one space on the next line after the City Name. Text shall appear in NewsGoth Bt, 6pt font, in all CAPS.

7.1.2.4.4 Hot Spot Column

The Hot Spot designation, e.g. HS 1, shall appear along the same line as the Airport Name. The text shall appear in NewsGoth Bt, 6pt font, in all CAPS, centered under HOT SPOT column header.

7.1.2.4.5 Description Column

Hot Spot description text shall appear in NewsGoth Bt 6pt font.

7.1.3 Airport Diagrams

Airport Diagrams will be produced in accordance with IAC 4. Airport Diagrams are listed in alphabetical order by the city associated with the FAA assigned number and by the airport name. Military airports are listed alphabetically by the airport name followed by the associated city.

When there is more than one airport associated with a city, the airports will be arranged under the city name in alphabetical order by the first word in the official name. Abbreviations will be alphabetized as complete names; e.g. St. Louis as Saint Louis.

7.1.3.1 Airport Diagram Resizing

Airport Diagrams are sized to fit within the print space as specified in Section **2.5.1** - Graphic Size Limitations.

CHAPTER 8
ALASKA CHART SUPPLEMENT (RESERVED)

8.1 GENERAL

The Alaska Chart Supplement is broken out into its own chapter due to the unique operating environment for pilots and aircraft within the vast expanse of the State of Alaska.

The differences associated with the Alaska Chart Supplement are detailed in this section.

8.1.1 Alaska CS Organization

8.1.1.1 Airport/Facility Directory Legend

See **Chapter 4** - Airport/Facility Directory Legend.

8.1.1.2 Airport/Facility Directory

See **Chapter 5** - Airport/Facility Directory Content.

8.1.1.3 Notices

This section is made up of Notices that are organized in the following order:

a. Special Notices
b. General Notices
c. Area Notices
d. Regulatory Notices

8.1.1.4 Associated Data

The Associated Data section is made up of different types of Associated Data that may be in text and/or graphic form. They are organized in the following order:

a. FSS Telephone Numbers
b. FAA and NWS Pilot Weather Briefing Numbers
c. DOD Automated Weather Observing System
d. FAA Automated Weather Observing System (AWOS/ASOS)
e. FAA Aviation Camera Locations
f. NWS upper Air Observing Stations
g. Air Route Traffic Control Centers
h. Flight Service Station Communication Frequencies
i. VOR Receiver Checkpoints and VOR Test Facilities
j. Parachute Jumping Areas
k. Radio NAVAIDs by Identification
l. Airports by ICAO Location Indicator
m. Marine Radio Beacons
n. Alaska Forces Radio Network Stations (AFRN)
o. Flight Service Stations (FSS) & Enhanced Special Reporting Service
p. Military Training Routes
q. Special Use Airspace Information Service Site Locations
r. Military Aerial Refueling Tracks
s. Military Training Routes IFR (IR) VFR (VR)
t. Conversion Tables and Julian Calendar
u. ICAO International Phonetic Alphabet/Morse Code

Note: Items that have specific specifications due to the use of tabulation or unique text and/or paragraph styles are cross referenced.

8.1.1.5 Procedures

The Procedures section is made up of different types of Procedures that may be in text and/or graphic form. They are organized in the following order:

a. Weather/Notam Procedures
b. Instrument Departures at Civil Airports
c. ARTCC Communications
d. CIRVIS Reports
e. Meaconing, Intrusion, Jamming & Interference (MIJI) Procedures
f. Traffic Advisories at Non-Towered Airports
g. Air Route Traffic Control Centers
h. Pilot VIP Notification Procedures (USAF & Navy Only)
i. Automatic Terminal Information Service (ATIS)
j. Altimeter Settings
k. Cruising Altitudes Diagrams
l. Airport Traffic Control Light Signals
m. Special VFR and VFR Advisory Information
n. Air Traffic Control RADAR Beacon System (ATCRBS)
o. Military Air Traffic Control Procedures
p. Civil Air Traffic Control Procedures
q. Alaska ADIZ

Note: Items that have specific specifications due to the use of tabulation or unique text and/ or paragraph styles are cross referenced.

8.1.1.6 Emergency Procedures

The Emergency Procedures section is made up of different types of Emergency Procedures that may be in text and/or graphic form. They are organized in the following order:

a. Interception Signals-ICAO
b. Search Procedures Emergency Locator Transmitter (ELT)
c. Search & Rescue
d. Coast Guard and Air Force Rescue Coordination Centers
e. Fuel Jettisoning
f. Two-Way Radio Failure IFR-VFR
g. International Ground/Air Emergency Code

Note: Items that have specific specifications due to the use of tabulation or unique text and/ or paragraph styles are cross referenced.

8.1.1.7 Airport Diagrams

See **Chapter 7** - Airport Diagrams.

8.2 AIRPORT/FACILITY DIRECTORY LEGEND (RESERVED)

A/FD Directory Legend shall follow the same specifications as utilized for the U.S. Chart Supplement as detailed in **Chapter 4**.

8.3 AIRPORT/FACILITY DIRECTORY (RESERVED)

A/FD entries shall follow the same specifications as utilized for the U.S. Chart Supplement as detailed in **Chapter 5**.

8.4 NOTICES (RESERVED)

8.5 ASSOCIATED DATA

8.5.1 FAA Telephone Numbers

FAA telephone numbers and pertinent National Weather Service information are included within this section.

The Page Heading "FAA Telephone Numbers" will be used for this section.

8.5.1.1 FSS Telephone Numbers Title

The FSS Telephone Numbers title shall appear in News Goth BT, 8 pt, centered, bold as "Telephone Numbers".

8.5.1.2 FSS Explanatory Text

Explanatory text shall appear in News Goth BT, 6 point font. At the introduction of the first paragraph, the following shall appear Bold and Underlined: Flight Service Station (FSS).

8.5.1.3 FSS Telephone Numbers

8.5.1.3.1 FSS Telephone Numbers

The FSS Telephone Numbers section shall consist of Section Title, FSS Explanatory Text, FSS Phone Numbers and Other FSS Telephone Numbers information. Font type and style specifications can be found in **6.3.1.1**

Figure 8.1 FSS Telephone Numbers - Introductory Text (AK)

FSS
TELEPHONE NUMBERS

Flight Service Station (FSS) facilities process flight plans and provide flight planning and weather briefing services to pilots. FSS services in the contiguous United States, Hawaii and Puerto Rico, are provided by a contract provider at two large facilities. In Alaska, FSS services are delivered through a network of three hub facilities and 14 satellite facilities, some of which operate part–time and some are seasonal. Because of the interconnectivity between the facilities, all FSS services including radio frequencies are available continuously using published data.

Further information can be found in the Aeronautical Information Manual (AIM).

NATIONAL FSS TELEPHONE NUMBER

Pilot Weather Briefings..... 1–800–WX–BRIEF (1–800–992–7433)

OTHER FSS TELEPHONE NUMBERS

Telephone numbers for individual FSSs in Alaska may be found in the Weather-FAA and NWS Pilot Weather Briefing Numbers section of this directory.

8.5.1.3.2 Key Air Traffic Facilities

The Key Air Traffic Facility section consists of the same tabulations as used in the U.S. Chart Supplement and follows the same specifications as found in **6.3.1.2**.

8.5.2 Weather (Reserved)

8.5.3 Air Route Traffic Control Centers (ARTCCs)

ARTCC section shall be published as specified in **6.3.2**.

8.5.4 Flight Service Station Communications Frequencies

Flight Service Stations Communication Frequencies shall be shown as specified in **6.3.3**.

8.5.5 VOR Receiver Checkpoints and VOR Test Facilities

VOR Receiver Checkpoints and VOR Test Facilities shall be shown as specified in **6.3.4**.

References:

Appendix 30 - VOR Receiver Checkpoints and VOR Test Facilities - AK

8.5.5.1 Explanatory Note

An explanatory note will precede the listing on the first page only. The explanatory note shall appear in NewsGoth BT, 6 point. The word CAUTION shall appear in all CAPs.

Figure 8.2 VOR Receiver Checkpoints and VOR Test Facilities Explanatory Note Text - AK

Airborne and ground checkpoints consist of certified radials that should be received at specific points on the airport surface, or over specific landmarks while airborne in the immediate vicinity of the airport.
Should an error in excess of +4° be indicated through use of the ground check, or +6° using the airborne check, IFR flight should not be attempted without first correcting the source of the error.
CAUTION: No correction other than the "correction card" figures supplied by the manufacturer should be applied in making these VOR receiver checks.

8.5.6 Parachute Jumping Areas

Parachute Jumping Areas shall be shown as specified in **6.3.5** except for Explanatory Note, which will appear as shown in **8.5.6.1**.

8.5.6.1 Explanatory Note

An explanatory note will precede the listing on the first page only. The explanatory note shall appear in NewsGoth BT, 6 point font.

Figure 8.3 Parachute Jumping Areas Explanatory Note Text

The following tabulation lists all known Parachute Jump sites in Alaska. Unless otherwise indicated, all activities are conducted during daylight hours and under VFR conditions. NOTAM D's may be issued to advise users of specific dates and times if outside the times/altitudes that are published. The busiest periods of activity are normally on weekends and holidays, but jumps can be expected at anytime during the week at the locations listed. Parachute jumping areas within restricted airspace are not listed.

All times are local and altitudes MSL unless otherwise specified.
Contact facility and frequency is listed at the end of the remarks, when available, in bold face type.
Refer to Federal Aviation Regulations Part 105 for required procedures relating to parachute jumping.
Organizations desiring listing of their jumping activities in this publication should contact the nearest FSS, tower, or ARTCC.
Qualified parachute jumping areas will be depicted on the appropriate visual chart(s).

Note: (c) in this publication indicates that the parachute jumping area is charted.

To qualify for charting, a jump area must meet the following criteria:
(1) Been in operation for at least 1 year.
(2) Log 1,000 or more jumps each year.

In addition, parachute jumping areas can be nominated by FAA Regions if special circumstances require charting.

8.5.7 Radio NAVAIDs by Identification (Reserved)

8.5.8 Airports by ICAO Location Identifier (Reserved)

8.5.9 Marine Radio Beacon (Reserved)

8.5.10 Alaska Forces Radio Network Stations (AFRN) (Reserved)

8.5.11 Flight Service Stations (FSS) & Enhanced Special Reporting Service (Reserved)

8.5.12 Military Training Routes (Reserved)

8.5.13 Special Use Airspace Information Service Site Locations (Reserved)

8.5.14 Military Aerial Refueling Tracks (Reserved)

8.5.15 Military Training Routes IFR (IR) VFR (VR) (Reserved)

8.5.16 Conversion Tables and Julian Calendar (Reserved)

8.5.17 ICAO International Phonetic Alphabet/Morse Code

The ICAO International Phonetic Alphabet/Morse Code page shall be the last page header of the Associated Data section in the Alaska Chart Supplement.

The Page Heading “Associated Data” will be used for this section.

References:

Appendix 46 - ICAO International Phonetic Alphabet/Morse Code

8.5.17.1 Title Text

Title Text shall in be in all CAPSs, centered in NewsGoth BT, 8 pt font, Bold

8.5.17.2 Phonetic Alphabet and Morse Code Text

Phonetic Alphabet and Morse Code text shall be in all NewsGoth BT, 7pt font, Bold. Each alphabetic character shall be in all CAPs. The spelling of the phonetic alphabet shall have the first letter capitalized. The phonetic pronunciation shall appear within parentheses and in all caps.

The content shall be organized into four columns. The first column shall be the alphabet. The second column the Morse Code code for the associated letter of the alphabet. The third column shall be the phonetic alphabet spelling. The fourth column shall be the phonetic pronunciation.

Where there are two examples of phonetic pronunciation, the second instance shall appear in a separate set of parentheses and with the word “or” in lower case preceding the second phonetic pronunciation.

Figure 8.4 Phonetic Alphabet and Morse Code Layout and Text

A	· –	Alfa	(AL-FAH)
B	– · · ·	Bravo	(BRAH-VOH)
C	– · – ·	Charlie	(CHAR-LEE) (or SHAR-LEE)
D	– · ·	Delta	(DELL-TAH)
E	·	Echo	(ECK-OH)
F	· · – ·	Foxtrot	(FOKS-TROT)
G	– – ·	Golf	(GOLF)

8.6 PROCEDURES (RESERVED)

8.7 EMERGENCY PROCEDURES (RESERVED)

8.8 AIRPORT DIAGRAMS

Airport Diagrams section shall follow the same specifications as utilized for the U.S. Chart Supplement as detailed in **Chapter 7**.

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CHAPTER 9
PACIFIC CHART SUPPLEMENT (RESERVED)

9.1 GENERAL

The Pacific Chart Supplement is broken out into its own chapter due to the unique purpose and use of this publication.

The differences associated with the Pacific Chart Supplement are detailed in this section.

9.1.1 Pacific Chart Supplement Organization

9.1.1.1 Airport/Facility Directory Legend

See **Chapter 4** - Airport/Facility Directory Legend.

9.1.1.1.1 Airport Locator Index

The Airport Locator Index shall follow after the A/FD Legend.

9.1.1.2 Airport/Facility Directory

9.1.1.3 Notices

The Notices section is made up of three different categories of notices. They are organized in the following order:

a. Special Notices
b. General Notices
c. Area Notices

9.1.1.4 Associated Data

The Associated Data section is made up of different types of associated data that may be in text and/or graphic form. They are organized in the following order:

a. ICAO International Phonetic Alphabet/Morse Code
b. Radio Navigational Aids by Identifier
c. VOR Receiver Checkpoints and VOR Test Facilities
d. San Francisco Radio
e. Parachute Jumping Areas
f. Special Use Airspace
g. Key to Aerodrome Forecast (TAF) and Aviation Routine Weather Report (METAR)
h. PIREP Form
i. Flight Service Stations & National Weather Service Offices
j. Key Air Traffic Facilities
k. Military Training Routes
l. Conversion Tables
m. Hot Spots

Note: Items that have specific specifications due to the use of tabulation or unique text and/or paragraph styles are cross referenced.

9.1.1.5 Procedures

The Procedures section is made up of different types of procedures that may be in text and/or graphic form. They are organized in the following order:

a. Flight Plans
b. Altimeter Setting Oakland Oceanic FIR
c. Air Traffic Control Radar Beacon Systems (ATCRBS)
d. Oceanic Position Reporting Procedures
e. Climb Times/Change of Flight Level
f. Class C Airspace
g. Emergency Security Control of Air Traffic (ESCAT) Procedures
h. National Security and Air Defense Identification Zones (ADIZ)

Note: Items that have specific specifications due to the use of tabulation or unique text and/or paragraph styles are cross referenced.

9.1.1.6 Emergency Procedures

The Emergency Procedures section is made up of different types of emergency procedures that may be in text and/or graphic form. They are organized in the following order:

a. Interception Signals ICAO Standard
b. Search and Rescue
c. Emergency Procedures
d. Emergency Signals

Note: Items that have specific specifications due to the use of tabulation or unique text and/or paragraph styles are cross referenced.

9.1.1.7 Terminal Procedures

The Terminal Procedures section is made up of Terminal Procedures produced by Terminal Charting in accordance with IAC 4. The following sections/material will appear in the Procedures section in the order as listed below:

a. Table of Contents
b. Instrument Approach Procedures

9.1.1.8 Position Reports

9.2 AIRPORT/FACILITY DIRECTORY LEGEND (RESERVED)

A/FD Directory Legend shall follow the same specifications as utilized for the U.S. Chart Supplement as detailed in **Chapter 4**.

9.3 AIRPORT LOCATOR INDEX (RESERVED)

References:

Appendix 49 - Airport Locator Index - PAC

9.4 AIRPORT/FACILITY DIRECTORY (A/FD) (RESERVED)

A/FD entries shall follow the same specifications as utilized for the U.S. Chart Supplement as detailed in **Chapter 5**.

9.4.1 Organization of A/FD Entries (Territory/State)

A/FD entries are organized in alphabetical order by Territory or State first, then by city, airport or facility name within the given Territory or State. Each State or Territory shall start at the top of the page.

References:

Appendix 50 - Airport/Facility Directory Sample - PAC

9.4.2 State/Territory Title

State/Territory Title shall appear at the top of the page at the start of each Territory/State section. The text shall appear in all CAPs, centered, with a solid line above and below. Text shall be in NewsGoth Cn BT 10pt font.

Figure 9.1 State/Territory Title Example

AMERICAN SAMOA

9.5 NOTICES (RESERVED)

9.6 ASSOCIATED DATA (RESERVED)

9.6.1 ICAO International Phonetic Alphabet/Morse Code

The ICAO International Phonetic Alphabet/Morse Code page shall be the first page of the Associated Data section in the Pacific Chart Supplement. See Section **8.5.17** for specifications.

References:

Appendix 46 - ICAO International Phonetic Alphabet/Morse Code

9.6.2 Radio Navigational Aids by Identifier (Reserved)

9.6.3 VOR Receiver Checkpoints and VOR Test Facilities

VOR Receiver Checkpoints and VOR Test Facilities shall be shown as specified in **6.3.4**, except were specified below.

Figure 9.2 PAC - VOR Receiver Check - Example

VOR RECEIVER CHECK

Airborne and ground checkpoints consist of certified radials that should be received at specific points on the airport surface, or over specific landmarks while airborne in the immediate vicinity of the airport.

Should an error in excess of ±4° be indicated through use of the ground check, or ±6° using the airborne check, IFR flight should not be attempted without first correcting the source of the error. CAUTION: No correction other than the "correction card" figures supplied by the manufacturer should be applied in making these VOR receiver checks.

GROUND RECEIVER CHECKPOINTS

Nimitz	063	3.3 NM	Twy A between Rwy 06L and Rwy 06R.
Pago Pago	242	0.8 NM	On twy Rwy 05.
Wake Island	98	1.3 NM	Runup area Rwy 28.

VOR TEST FACILITIES (VOT)

STATION	FREQ.	TYPE VOT FACILITY
Honolulu	111.0	G

References:

Appendix 31 - VOR Receiver Checkpoints and VOR Test Facilities - PAC

9.6.3.1 Ground Receiver Checkpoints Header

The term "Ground Receiver Checkpoints" shall appear in place of VOR Receiver Points, centered, in NewsGoth BT, bold, 6 point font, in all CAPs centered above the tabulation.

9.6.3.2 Explanatory Note

An explanatory note will precede the listing on the first page only. The explanatory note shall appear in NewsGoth BT, 6 point. The word CAUTION shall appear in all CAPs.

Figure 9.3 VOR Receiver Checkpoints and VOR Test Facilities Explanatory Note Text - PAC

Airborne and ground checkpoints consist of certified radials that should be received at specific points on the airport surface, or over specific landmarks while airborne in the immediate vicinity of the airport.

Should an error in excess of ±4° be indicated through use of the ground check, or ±6° using the airborne check, IFR flight should not be attempted without first correcting the source of the error. CAUTION: No correction other than the "correction card" figures supplied by the manufacturer should be applied in making these VOR receiver checks.

9.6.4 San Francisco Radio (Reserved)

9.6.5 Parachute Jumping Areas

Parachute Jumping Areas shall be shown as specified in **6.3.5**.

9.6.6 Special Use Airspace (Reserved)

9.6.7 Key to Aerodrome Forecast (TAF) and Aviation Route Weather Report (METAR)

The Key to Aerodrome Forecast (TAF) and Aviation Route Weather Report (METAR) pages shall be shown as specified in **6.3.1.3**.

References:

Appendix 25 - Key to Aerodrome Forecast (TAF) and Aviation Routine Weather Report (METAR)

9.6.8 PIREP Form

The PIREP form shall appear with the PIREP Form appearing on the left hand page and the "Submitting Pilot Weather Reports (PIREP) page on the right hand page. The page header for both pages will be "Associated Data".

References:

Appendix 8 - Submitting Pilot Weather Reports (PIREP) - PIREP FORM

Appendix 9 - Inside Back Cover - Chart Supplement U.S. & AK - PIREP FORM

9.6.9 Flight Service Stations & National Weather Service Offices (Reserved)

9.6.10 Key Air Traffic Facilities

Key Air Traffic Facilities shall appear as specified in **6.3.1.2**.

9.6.11 Military Training Routes (Reserved)

9.6.12 Conversion Tables (Reserved)

9.6.13 Hot Spots (Reserved)

9.6.13.1 Page Header - PAC

Airport Hot Spots are published in the Associated Data section of the Pacific Chart Supplement. The page header "Associated Data" shall appear above the Airport Diagram Hot Spots content. A solid line will appear above the title Hot Spots, as shown in the Appendix.

References:

Appendix 48 - Hot Spots - PAC

9.7 PROCEDURES (RESERVED)

9.8 EMERGENCY PROCEDURES (RESERVED)

9.9 TERMINAL PROCEDURES (RESERVED)

9.10 POSITION REPORTS (RESERVED)

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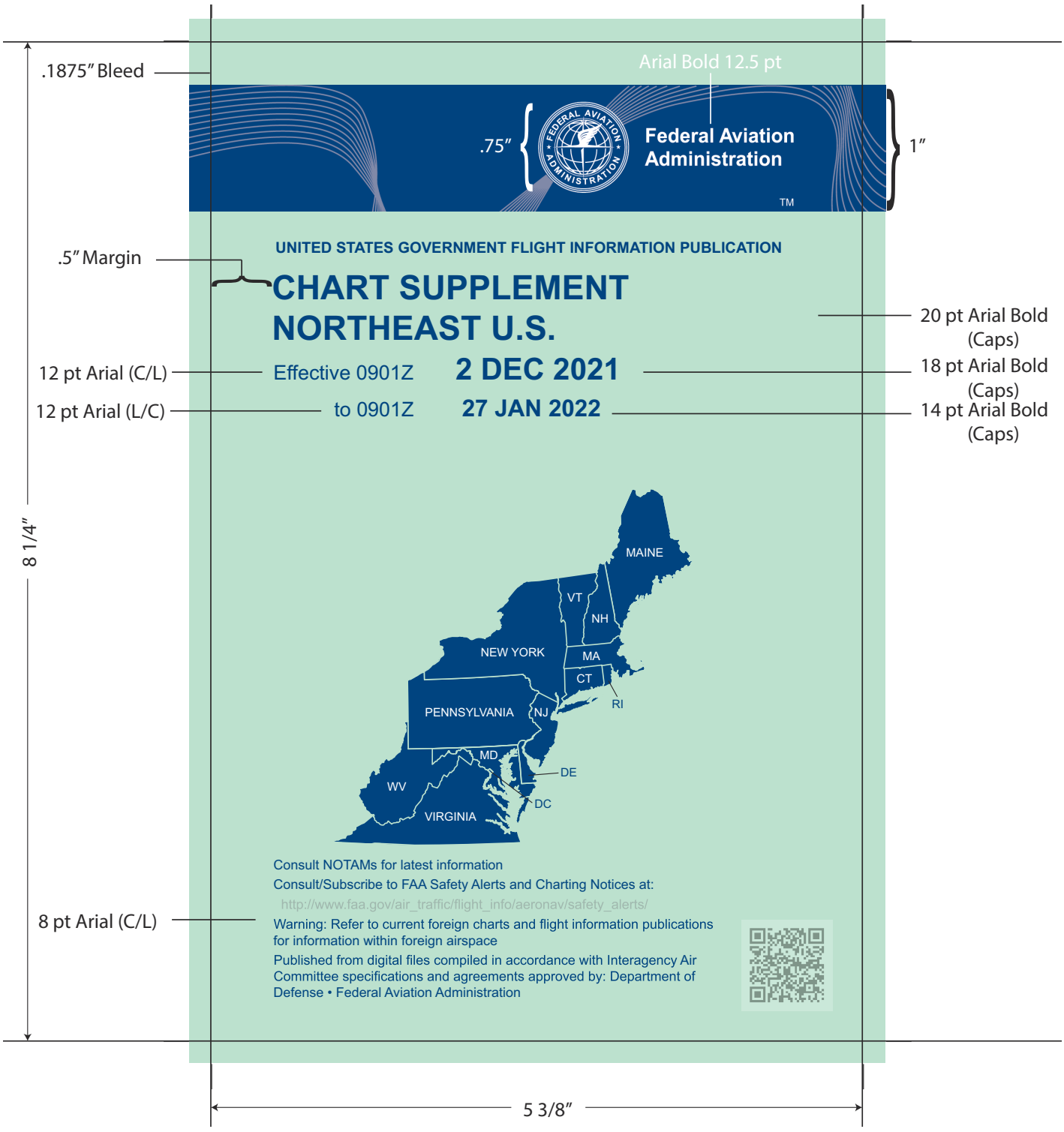
APPENDIX 1
FRONT COVER - CHART SUPPLEMENT U.S.



APPENDIX 2
FRONT COVER - CHART SUPPLEMENT U.S. WITH IMPORTANT NOTICE

Federal Aviation Administration

TM

UNITED STATES GOVERNMENT FLIGHT INFORMATION PUBLICATION

CHART SUPPLEMENT NORTHEAST U.S.

Effective 0901Z **2 DEC 2021**

to 0901Z **27 JAN 2022**

Note: A content review is taking place on the Chart Supplement between the A/FD section and the Airport Diagrams. Users may see substantial updates or changes.

Consult NOTAMs for latest information

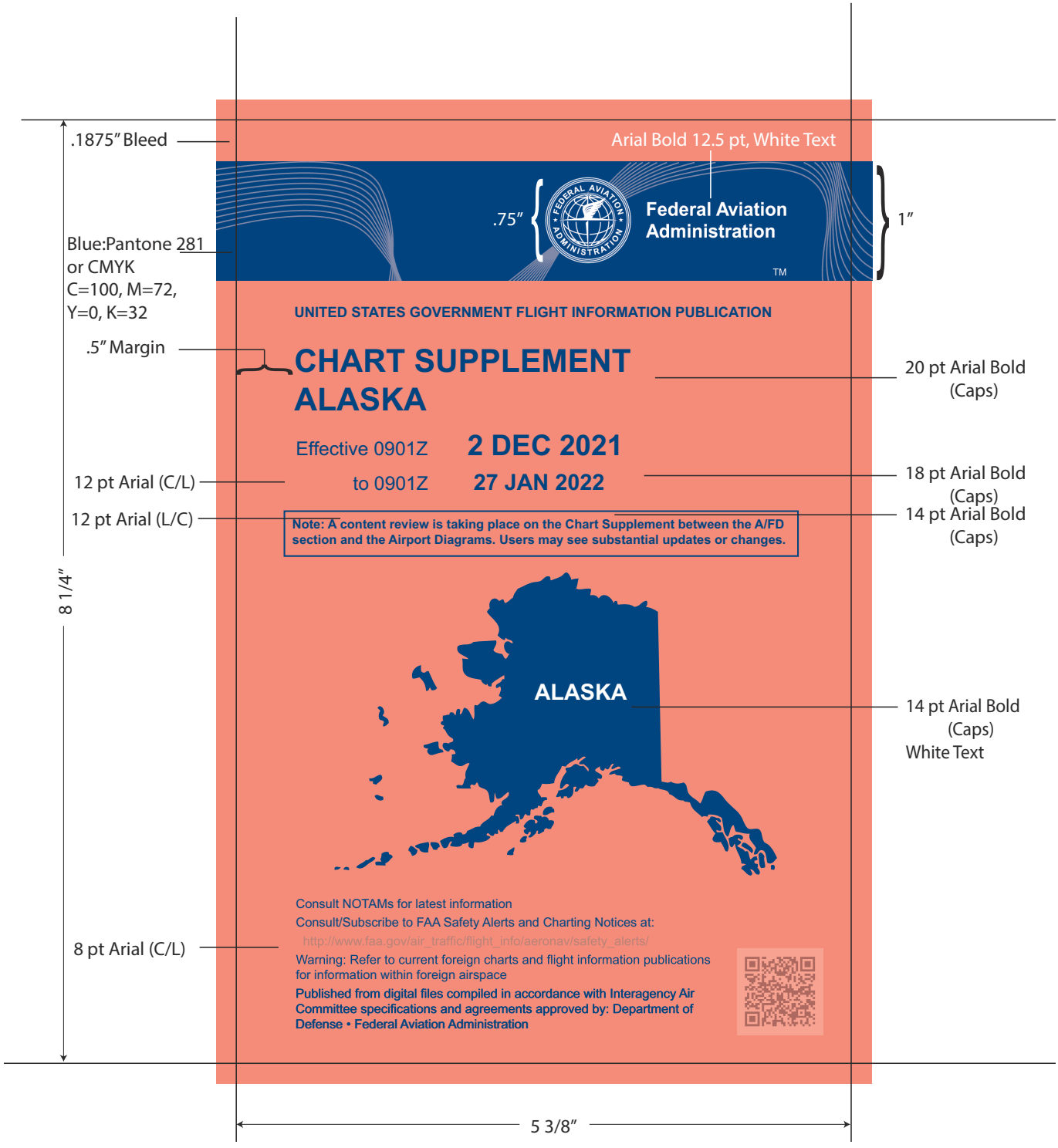
Consult/Subscribe to FAA Safety Alerts and Charting Notices at:

http://www.faa.gov/air_traffic/flight_info/aeronav/safety_alerts/

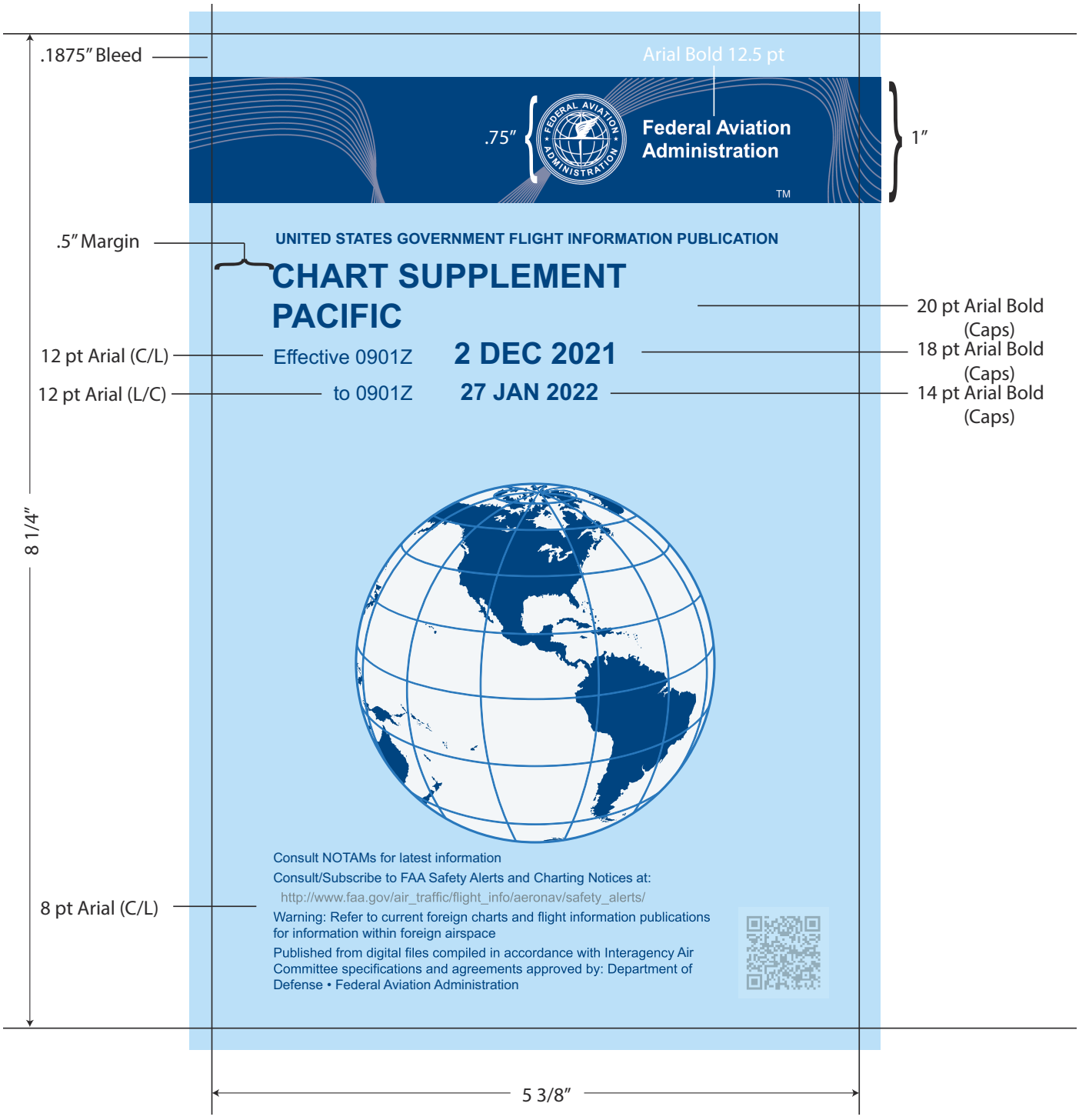
Warning: Refer to current foreign charts and flight information publications for information within foreign airspace

Published from digital files compiled in accordance with Interagency Air Committee specifications and agreements approved by: Department of Defense • Federal Aviation Administration

APPENDIX 3
FRONT COVER - CHART SUPPLEMENT ALASKA



APPENDIX 4
FRONT COVER - CHART SUPPLEMENT PACIFIC



APPENDIX 5
INSIDE FRONT COVER - CHART SUPPLEMENT U.S.

GENERAL INFORMATION

This Chart Supplement is a Civil Flight Information Publication updated every eight weeks by the U.S. Department of Transportation, Federal Aviation Administration, Aeronautical Information Services, (current FAA AIS Homepage URL here)
It is designed for use with Aeronautical Charts covering the conterminous United States, Puerto Rico and the Virgin Islands.

The Airport/Facility Directory section contains all public–use airports, seaplane bases and heliports, military facilities, and selected private use facilities specifically requested by the Department of Defense (DoD) for which a DoD Instrument Approach Procedure has been published in the U.S. Terminal Procedures Publication. Additionally, this publication contains communications data, navigational facilities and certain special notices and procedures.

Military data contained within this publication is provided by the National Geospatial–Intelligence Agency and is intended to provide reference data for military and/or joint use airports. Not all military data contained in this publication is applicable to civil users.

CORRECTIONS, COMMENTS, AND/OR PROCUREMENT

CRITICAL information such as equipment malfunction, abnormal field conditions, hazards to flight, etc., should be reported as soon as possible.

FOR CORRECTIONS TO AERONAUTICAL DATA: (current NFDC website URL here)

(current NFDC
contact information)

NOTICE: Changes must be received by Aeronautical Information Services as soon as possible but not later than the "cut–off" dates listed below to assure publication on the desired effective date. Information cut–off dates that fall on a federal holiday must be received the previous work day.

Effective Date	Airport Information Cut–off date	Airspace Information* Cut–off date
21 Jul 16	8 Jun 16	24 May 16
15 Sep 16	3 Aug 16	19 Jul 16
10 Nov 16	28 Sep 16	13 Sep 16
5 Jan 17	23 Nov 16	8 Nov 16
2 Mar 17	18 Jan 17	3 Jan 17
27 Apr 17	15 Mar 17	28 Feb 17

*Airspace Information includes changes to preferred routes and graphic depictions on charts.

FOR CHARTING COMMENTS:

(current charting comments
contact information)

Frequently asked questions (FAQs) are answered on our website at (current AIS FAQ website URL here)
See the FAQs prior to contact via toll free number.

FOR PROCUREMENT:

For digital products, visit:
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For a list of approved FAA Print Providers, visit our website at:
(current list of approved FAA Print Providers website URL here)

THIS PUBLICATION COMPRISES PART OF THE FOLLOWING SECTIONS OF THE UNITED STATES AERONAUTICAL INFORMATION PUBLICATION (AIP): GEN, ENR AND AD.

APPENDIX 6
INSIDE FRONT COVER - CHART SUPPLEMENT ALASKA

GENERAL INFORMATION

This Chart Supplement is a joint Civil/Military Flight Information Publication (FLIP), updated every 8 weeks by the U.S. Department of Transportation, Federal Aviation Administration, Aeronautical Information Services, (current FAA AIS Homepage URL here)
It is designed for use with the Flight Information Publication Enroute Charts, Alaska Terminal, USAF TACAN Charts covering Alaska and portions of Southwest and Northwest Canada, and Sectional Aeronautical Charts.

This Chart Supplement contains an Airport/Facility Directory of all airports shown on Enroute Charts, and those requested by appropriate agencies, communications data, navigational facilities, RADAR data, special notices and procedures applicable to the area of chart coverage. Military data of a more static or planning nature, is published in DoD Flight Information Publication AP/I Area Planning, North and South America.

The official ATC procedures for operating in the State of Alaska are the same as those in the conterminous United States, with a few exceptions, and are contained in the FAA Aeronautical Information Manual, Basic Flight Information and ATC Procedures.

CORRECTIONS, COMMENTS, AND/OR PROCUREMENT
CIVIL

CRITICAL information such as equipment malfunction, abnormal field conditions, hazards to flight, etc., should be reported as soon as possible.

FOR CORRECTIONS TO AERONAUTICAL DATA: (current NFDC website URL here)

(current NFDC contact information)

NOTICE: Changes must be received by the Aeronautical Information Management as soon as possible but not later than the "cut–off" dates listed below to assure publication on the desired effective date. Information cut–off dates that fall on a federal holiday must be received the previous work day.

Effective Date	Airport Information Cut–off date	Airspace Information* Cut–off date
21 Jul 16	8 Jun 16	24 May 16
15 Sep 16	3 Aug 16	19 Jul 16
10 Nov 16	28 Sep 16	13 Sep 16
5 Jan 17	23 Nov 16	8 Nov 16
2 Mar 17	18 Jan 17	3 Jan 17
27 Apr 17	15 Mar 17	28 Feb 17

*Airspace Information includes changes to preferred routes and graphic depictions on charts.

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MILITARY

For Corrections Information, See Chapter 11 of General Planning (GP). For Procurement refer to DOD Catalog of Aeronautical Charts and Flight Information Publications.

THIS PUBLICATION COMPRISES PART OF THE FOLLOWING SECTIONS OF THE UNITED STATES AERONAUTICAL INFORMATION PUBLICATION (AIP): GEN, AGA 3, COM 2.

NOTE: AERONAUTICAL INFORMATION MANUAL, BASIC FLIGHT INFORMATION AND ATC PROCEDURES
Civil pilots are urged to use the FAA Aeronautical Information Manual (AIM), Basic Flight Information and ATC Procedures to complement the operational data contained in the Alaska Supplement. The AIM contains information on the basic fundamentals required to fly in the U.S. National Airspace System which are not necessarily repeated within this Supplement.
Representative of data contained consists of a Pilot/Controller Glossary; descriptions of Radio Aids to Navigation; Airspace, Air Traffic Control information involving services, rules, regulations, flight procedures, and emergency procedures; Safety of flight concerning weather, Medical Facts for Pilots and Good Operating Practices.

APPENDIX 7
INSIDE FRONT COVER - CHART SUPPLEMENT PACIFIC

GENERAL INFORMATION

This Chart Supplement is a Civil Flight Information Publication updated every eight weeks by the U.S. Department of Transportation, Federal Aviation Administration, Aeronautical Information Services, (current FAA AIS Homepage URL here)
It is designed for use with Flight Information Publication Enroute Charts, and the Sectional Aeronautical Chart covering the State of Hawaii and that area of the Pacific served by U.S. facilities.

This Chart Supplement contains an Airport/Facility Directory, ATC procedures and terminal SID, STAR and IAP charts applicable to the Pacific area.

The official ATC procedures for operating in the Pacific, outside sovereign US airspace are prescribed by ICAO and are contained in ICAO documents 4444, 7030 and Annexes 2 and 11.

CORRECTIONS, COMMENTS, AND/OR PROCUREMENT

CRITICAL information such as equipment malfunction, abnormal field conditions, hazards to flight, etc., should be reported as soon as possible. NOTE: Requests for the creation or revision to Airport Diagrams should be in accordance with FAA Order 7910.4B.

FOR CORRECTIONS TO AERONAUTICAL DATA: (current NFDC website URL here)

(current NFDC contact information)

NOTICE: Changes must be received by Aeronautical Information Services as soon as possible but not later than the "cut–off" dates listed below to assure publication on the desired effective date. Information cut–off dates that fall on a federal holiday must be received the previous work day.

Effective Date	Airport Information Cut–off date	Airspace Information* Cut–off date
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*Airspace Information includes changes to preferred routes, SID's, STAR's, IAP's and graphic depictions on charts.

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The following publications for use in the Pacific area are available from the FAA, Aeronautical Information Services:

CHART SUPPLEMENT PACIFIC. This supplement is issued every 56 days.
HAWAIIAN ISLAND–MARIANA ISLANDS SECTIONAL CHART. Issued semi–annually. Consult the Visual Chart Bulletin in this Supplement for date of the current edition.
NORTH PACIFIC OCEAN ROUTE CHARTS. Charts are issued every 56 days at 1:12,000,000 composite or four 1:7,000,000 area charts.

IFR ENROUTE PACIFIC OCEAN AND HAWAIIAN ISLAND CHART. Available from the National Geospatial–Intelligence Agency, provides coverage of Pacific areas served by US facilities.

(current NGA contact information)

AMENDMENT NOTICE

A change notice will only be issued for safety considerations such as when an amended or original instrument approach procedure is issued.
UPON RECEIPT, THE AMENDMENT NOTICE SHOULD BE ATTACHED TO THIS PAGE SO THAT USERS HAVE ALL SIGNIFICANT CHANGES AVAILABLE.

This Airport/Facility Directory comprises part of the following sections of the United States Aeronautical Information Publication (AIP): GEN, AGA 3, COM 2.

APPENDIX 8
SUBMITTING PILOT WEATHER REPORTS (PIREP) - PIREP FORM

Submitting Pilot Weather Reports (PIREPs)

1. UA - Routine PIREP / UUA - Urgent PIREP

2. /OV - Location: Use Airport or NAVAID identifiers only.
- Location can be reported as a single fix, radial DME, or a route segment (Fix- Fix)

Examples: /OV LAX, /OV LAX-SLI120005, /OV PDZ-PSP.

3. /TM – Time: When conditions occurred or were encountered**.**
- Use 4 digits in UTC.

Examples: /TM 1645, /TM 0915

4. /FL - Altitude/Flight Level
- Use 3 digits for hundreds of feet. If not known, use UNKN.

Examples: /FL095, /FL310, /FLUNKN

5. /TP - Type aircraft: Required if reporting Turbulence or Icing
- No more than 4 characters, use UNKN if the type is not known.

Examples: /TP P28A, /TP RV8, /TP B738, /TP UNKN

6. /SK – Sky Condition/Cloud layers:
- Report cloud coverage using contractions: FEW, SCT, BKN, OVC, SKC
- Report bases in hundreds of feet: BKN005, SCT015, OVC200
- If bases are unknown, use UNKN
- Report cloud tops in hundreds of feet: TOP120

Examples: /SK BKN035, /SK SCT UNKN-TOP125, /SK OVC095-TOP125/ SKC

7. /WX - Weather: Flight visibility is always reported first. Append FV reported with SM.
- Report visibility using 2 digits: FV01SM, FV10SM
- Unrestricted visibility use FV99SM.
- Use standard weather contractions e.g.: RA, SH, TS, HZ, FG, -, +

Examples: /WX FV01SM +SHRA, /WX FV10 SM -RA BR.

8. /TA - Air temperature (Celsius): Required when reporting icing
- 2 digits, unless below zero, then prefix digits with M.

Examples:/TA 15, /TA 04 /TA M06

9. /WV - Wind: Direction in 3 digits, speed in 3 or 4 digits, followed by KT.

Examples: /WV 270045KT, /WV 080110KT

10. /TB - Turbulence:
- Report intensity using LGT, MOD, SEV, or EXTRM
- Report duration using INTMT, OCNL or CONS when reported by pilot.
- Report type using CAT or CHOP when reported by pilot.
- Include altitude only if different from /FL.
- Use ABV or BLO when limits are not defined.
- Use NEG if turbulence is not encountered.

Examples: /TB OCNL MOD, /TB LGT CHOP, /LGT 060, /TB MOD BLO 090, / TB NEG

11. /IC - Icing:
- Report intensity using TRACE, LGT, MOD or SEV
- Report type using RIME,CLR, or MX
- Include altitude only if different than /FL.
- Use NEG if icing not encountered.

Examples: /IC LGT-MOD RIME, /IC SEV CLR 028-045, /IC NEG

12. /RM - Remarks: Use to report phenomena that does not fit in any other field.
- Report the most hazardous element first.
- Name of geographic location from /OV field fix.

Examples: /RM LLWS +/-15KT SFC-003 DURC RWY22 JFK
/RM MTN WAVE, /RM DURC, /RM DURD, /RM MULLAN PASS
/RM BA RWY 02L BA MEDIUM TO POOR 3IN DRY SN OVER COMPACTED SN

Examples of Completed PIREPS

UA /OV RFD /TM 1315 /FL160 /TP PA44 /SK OVC025-TOP095/OVC150 /TA M12 /TB INTMT LGT CHOP

UA /OV DHT360015-AMA /TM 2116 /FL050 /TP PA32 /SK BKN090 /WX FV05SM –RA /TA 04 /TB LGT /IC NEG

UUA /OV PDZ010018 /TM 1520 /FL125 /TP C172 /WV 270048KT TB SEV 055-085 /RM CAJON PASS

*

APPENDIX 9
INSIDE BACK COVER - CHART SUPPLEMENT U.S. & AK - PIREP FORM

PIREP FORM

3 or 4 letter Identifier

____ ____ ____ ____ 1. **UA**_____ **UUA**_____
Routine **Urgent**

2. **/OV**	Location
3. **/TM**	Time
4. **/FL**	Altitude/Flight Level
5. **/TP**	Aircraft Type
Items 1 through 5 are mandatory for all PIREPs	
6. **/SK**	Sky Condition
7. **/WX**	Flight Visibility & Weather
8. **/TA**	Temperature (Celsius)
9. **/WV**	Wind
10. **/TB**	Turbulence
11. **/IC**	Icing
12. **/RM**	Remarks

FAA Form 7110-2 (9/19) Supersedes Previous Edition

APPENDIX 10
INSIDE BACK COVER - CHART SUPPLEMENT PACIFIC

TERMINAL PROCEDURES

21224

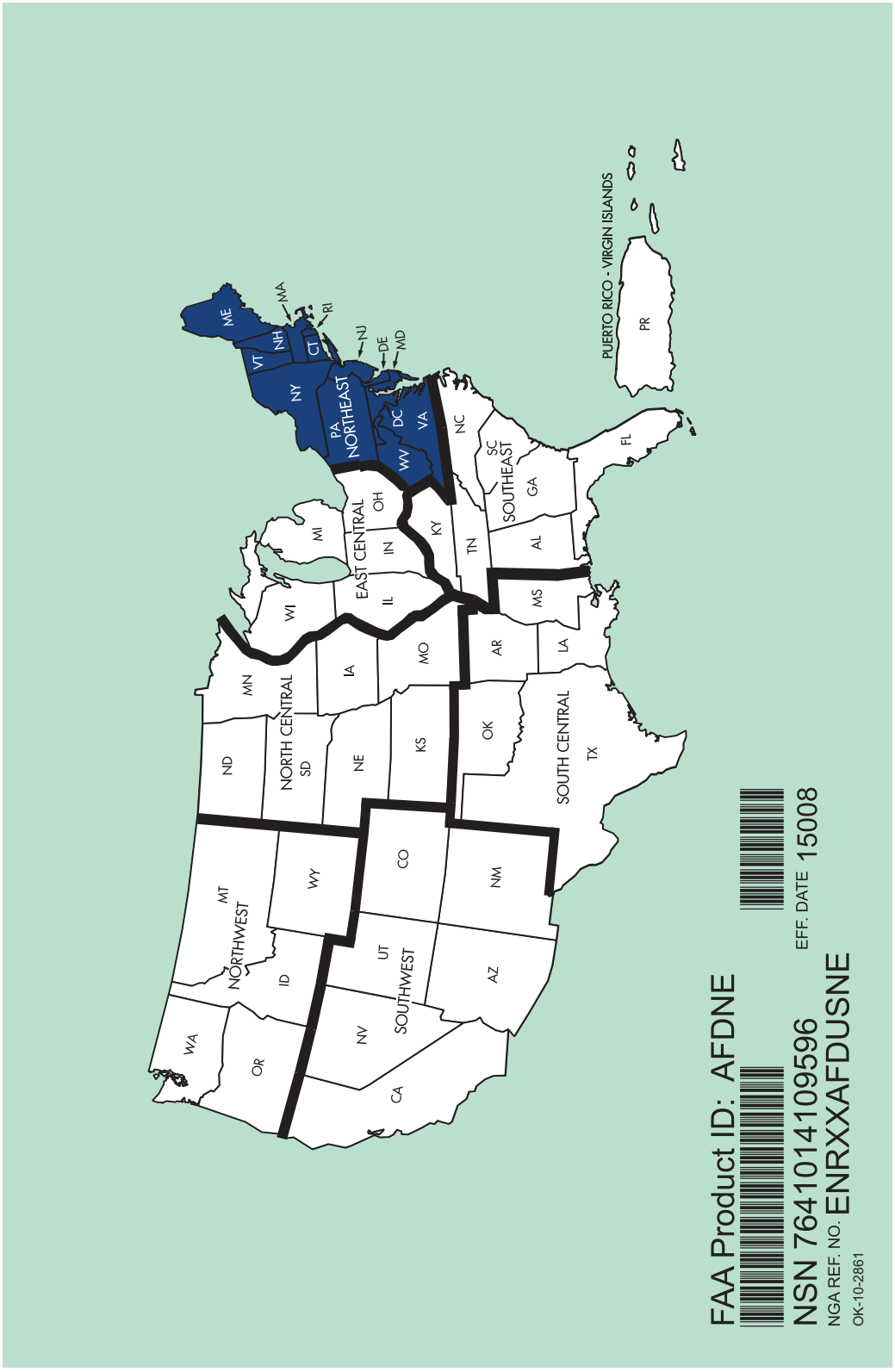
INSTRUMENT TAKEOFF OR APPROACH PROCEDURE CHARTS
RATE OF CLIMB/DESCENT TABLE
(ft per min)

A rate of climb/descent table is provided for use in planning and executing climbs or descents under known or approximate ground speed conditions. It will be especially useful for approaches when the localizer only is used for course guidance. A best speed, power, altitude combination can be programmed which will result in a stable glide rate and altitude favorable for executing a landing if minimums exists upon breakout. Care should always be exercised so that minimum descent altitude and missed approach point are not exceeded.

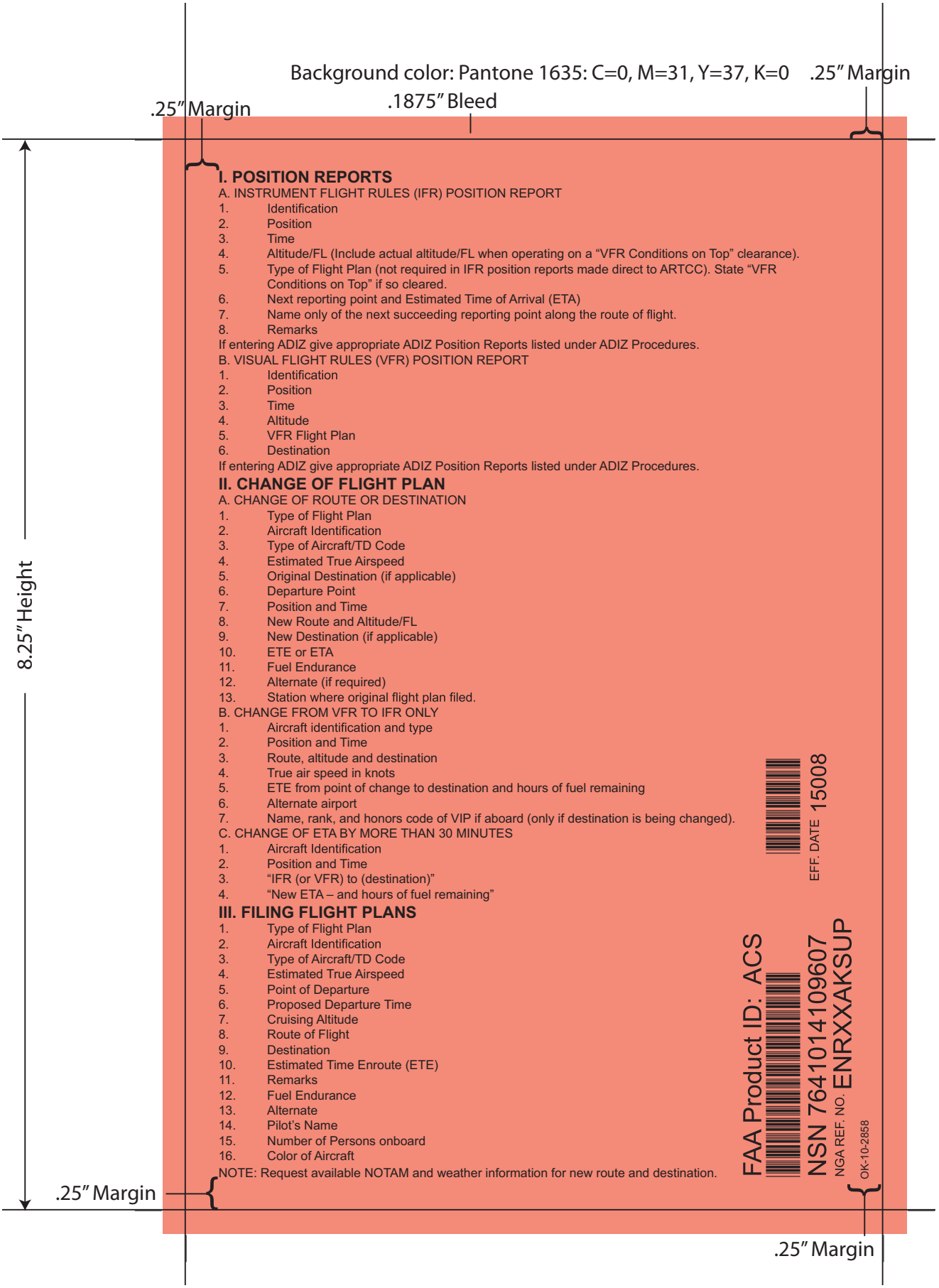
ft/NM	%	GROUND SPEED (knots)											ANGLE
		60	90	120	150	180	210	240	270	300	330	360	
152	2.50	150	230	300	380	460	530	610	680	760	840	910	1.43
200	3.29	200	300	400	500	600	700	800	900	1000	1100	1200	1.89
210	3.46	210	320	420	530	630	740	840	950	1050	1160	1260	1.98
220	3.62	220	330	440	550	660	770	880	990	1100	1210	1320	2.07
230	3.79	230	350	460	580	690	810	920	1040	1150	1270	1380	2.17
240	3.95	240	360	480	600	720	840	960	1080	1200	1320	1440	2.26
250	4.11	250	380	500	630	750	880	1000	1130	1250	1380	1500	2.36
260	4.28	260	390	520	650	780	910	1040	1170	1300	1430	1560	2.45
270	4.44	270	410	540	680	810	950	1080	1220	1350	1490	1620	2.54
280	4.61	280	420	560	700	840	980	1120	1260	1400	1540	1680	2.64
290	4.77	290	440	580	730	870	1020	1160	1310	1450	1600	1740	2.73
300	4.94	300	450	600	750	900	1050	1200	1350	1500	1650	1800	2.83
310	5.10	310	470	620	780	930	1090	1240	1400	1550	1710	1860	2.92
320	5.27	320	480	640	800	960	1120	1280	1440	1600	1760	1920	3.01
330	5.43	330	500	660	830	990	1160	1320	1490	1650	1820	1980	3.11
340	5.60	340	510	680	850	1020	1190	1360	1530	1700	1870	2040	3.20
350	5.76	350	530	700	880	1050	1230	1400	1580	1750	1930	2100	3.30
360	5.92	360	540	720	900	1080	1260	1440	1620	1800	1980	2160	3.39
370	6.09	370	560	740	930	1110	1300	1480	1670	1850	2040	2220	3.48
380	6.25	380	570	760	950	1140	1330	1520	1710	1900	2090	2280	3.58
390	6.42	390	590	780	980	1170	1370	1560	1760	1950	2150	2340	3.67
400	6.58	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	3.77
450	7.41	450	680	900	1130	1350	1580	1800	2030	2250	2480	2700	4.24
500	8.23	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000	4.70
550	9.05	550	830	1100	1380	1650	1930	2200	2480	2750	3030	3300	5.17

21224

APPENDIX 11
OUTSIDE BACK COVER - CHART SUPPLEMENT U.S.



APPENDIX 12
OUTSIDE BACK COVER - CHART SUPPLEMENT ALASKA



I. POSITION REPORTS

A. INSTRUMENT FLIGHT RULES (IFR) POSITION REPORT

1. Identification
2. Position
3. Time
4. Altitude/FL (Include actual altitude/FL when operating on a "VFR Conditions on Top" clearance).
5. Type of Flight Plan (not required in IFR position reports made direct to ARTCC). State "VFR Conditions on Top" if so cleared.
6. Next reporting point and Estimated Time of Arrival (ETA)
7. Name only of the next succeeding reporting point along the route of flight.
8. Remarks

If entering ADIZ give appropriate ADIZ Position Reports listed under ADIZ Procedures.

B. VISUAL FLIGHT RULES (VFR) POSITION REPORT

1. Identification
2. Position
3. Time
4. Altitude
5. VFR Flight Plan
6. Destination

If entering ADIZ give appropriate ADIZ Position Reports listed under ADIZ Procedures.

II. CHANGE OF FLIGHT PLAN

A. CHANGE OF ROUTE OR DESTINATION

1. Type of Flight Plan
2. Aircraft Identification
3. Type of Aircraft/TD Code
4. Estimated True Airspeed
5. Original Destination (if applicable)
6. Departure Point
7. Position and Time
8. New Route and Altitude/FL
9. New Destination (if applicable)
10. ETE or ETA
11. Fuel Endurance
12. Alternate (if required)
13. Station where original flight plan filed.

B. CHANGE FROM VFR TO IFR ONLY

1. Aircraft identification and type
2. Position and Time
3. Route, altitude and destination
4. True air speed in knots
5. ETE from point of change to destination and hours of fuel remaining
6. Alternate airport
7. Name, rank, and honors code of VIP if aboard (only if destination is being changed).

C. CHANGE OF ETA BY MORE THAN 30 MINUTES

1. Aircraft Identification
2. Position and Time
3. "IFR (or VFR) to (destination)"
4. "New ETA – and hours of fuel remaining"

III. FILING FLIGHT PLANS

1. Type of Flight Plan
2. Aircraft Identification
3. Type of Aircraft/TD Code
4. Estimated True Airspeed
5. Point of Departure
6. Proposed Departure Time
7. Cruising Altitude
8. Route of Flight
9. Destination
10. Estimated Time Enroute (ETE)
11. Remarks
12. Fuel Endurance
13. Alternate
14. Pilot's Name
15. Number of Persons onboard
16. Color of Aircraft

NOTE: Request available NOTAM and weather information for new route and destination.

EFF. DATE 15008

FAA Product ID: ACS

NSN 7641014109607

NGA REF. NO. ENRXXAKSUP

OK-10-2858

APPENDIX 13
OUTSIDE BACK COVER - CHART SUPPLEMENT PACIFIC

I. POSITION REPORTS

A. INSTRUMENT FLIGHT RULES (IFR) POSITION REPORT

1. Identification
2. Position
3. Time
4. Altitude/FL (Include actual altitude/FL when operating on a “VFR Conditions on Top” clearance).
5. Type of Flight Plan (not required in IFR position reports made direct to ARTCC). State “VFR Conditions on Top” if so cleared.
6. Next reporting point and Estimated Time of Arrival (ETA)
7. Name only of the next succeeding reporting point along the route of flight.
8. Remarks

If entering ADIZ give appropriate ADIZ Position Reports listed under ADIZ Procedures.

B. VISUAL FLIGHT RULES (VFR) POSITION REPORT

1. Identification
2. Position
3. Time
4. Altitude
5. VFR Flight Plan
6. Destination

If entering ADIZ give appropriate ADIZ Position Reports listed under ADIZ Procedures.

II. CHANGE OF FLIGHT PLAN

A. CHANGE OF ROUTE OR DESTINATION

1. Type of Flight Plan
2. Aircraft Identification
3. Type of Aircraft/TD Code
4. Estimated True Airspeed
5. Original Destination (if applicable)
6. Departure Point
7. Position and Time
8. New Route and Altitude/FL
9. New Destination (if applicable)
10. ETE or ETA
11. Fuel Endurance
12. Alternate (if required)
13. Station where original flight plan filed.

B. CHANGE FROM VFR TO IFR ONLY

1. Aircraft identification and type
2. Position and Time
3. Route, altitude and destination
4. True air speed in knots
5. ETE from point of change to destination and hours of fuel remaining
6. Alternate airport
7. Name, rank, and honors code of VIP if aboard (only if destination is being changed).

C. CHANGE OF ETA BY MORE THAN 30 MINUTES

1. Aircraft Identification
2. Position and Time
3. “IFR (or VFR) to (destination)”
4. “New ETA – and hours of fuel remaining”

III. FILING FLIGHT PLANS

1. Type of Flight Plan
2. Aircraft Identification
3. Type of Aircraft/TD Code
4. Estimated True Airspeed
5. Point of Departure
6. Proposed Departure Time
7. Cruising Altitude
8. Route of Flight
9. Destination
10. Estimated Time Enroute (ETE)
11. Remarks
12. Fuel Endurance
13. Alternate
14. Pilot’s Name
15. Number of Persons onboard
16. Color of Aircraft

NOTE: Request available NOTAM and weather information for new route and destination.

EFF. DATE 15008

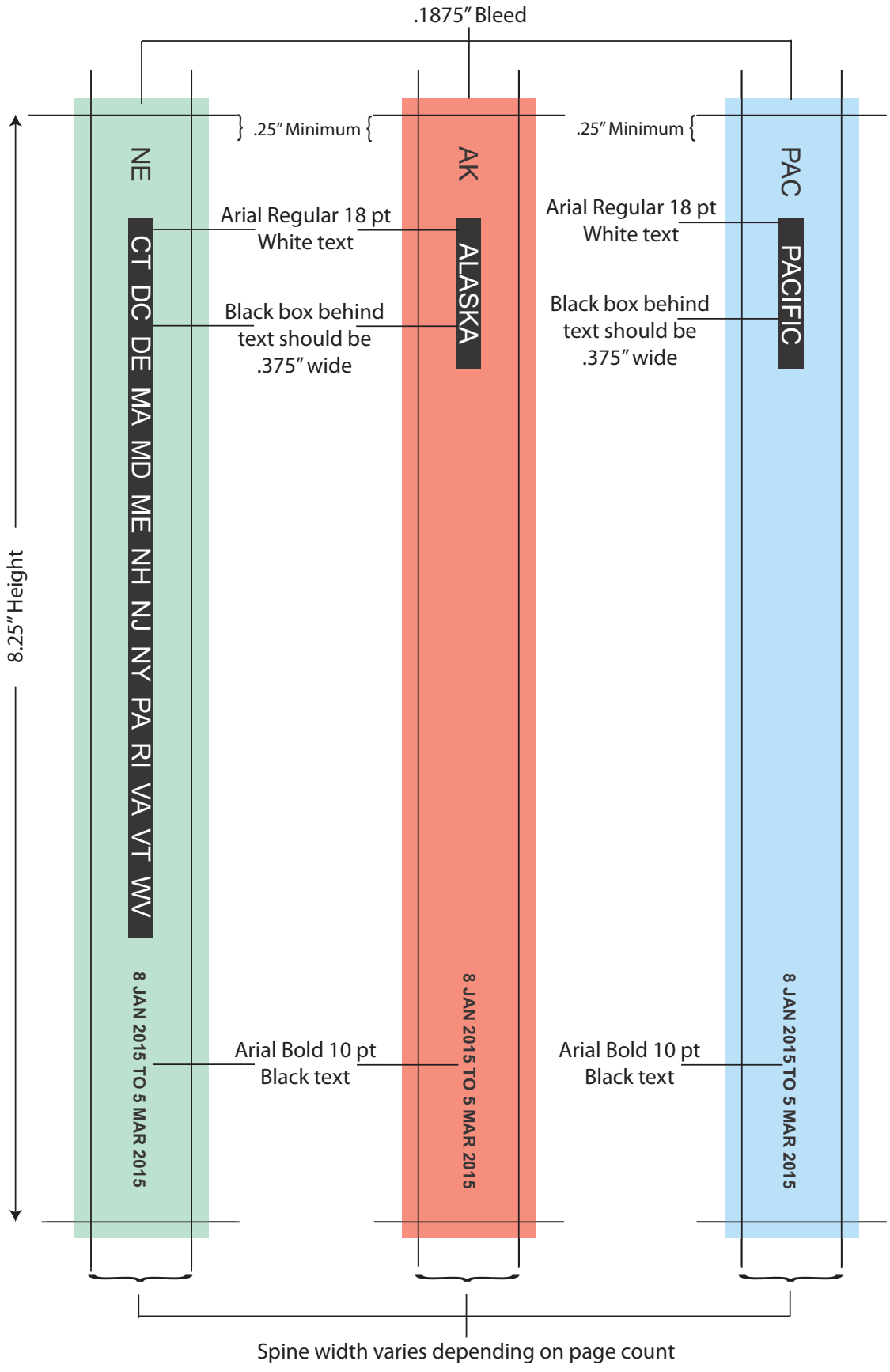
FAA Product ID: PCS

NSN 7641015059601

NGA REF. NO. ENRXXFAAPCS

OK-10-2862

APPENDIX 14
SPINES



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GENERAL INFORMATION 1

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APPENDIX 18
CITY/MILITARY AIRPORT CROSS REFERENCE - U.S. & AK

2 GENERAL INFORMATION

CITY/MILITARY AIRPORT CROSS REFERENCE

Military airports are listed alphabetically by state and official airport name. The following city/military airport cross–reference listing provides alphabetical listing by state and city name for all military airport published in this directory.

STATE	CITY NAME	AIRPORT NAME
AL	FORT RUCKER	CAIRNS AAF
AL	FORT RUCKER	HANCHEY AHP
AL	FORT RUCKER	LOWE AHP
AL	MONTGOMERY	MAXWELL AFB
AL	REDSTONE ARSENAL	REDSTONE AAF
FL	COCOA BEACH	CAPE CANAVERAL SPACE FORCE STATION SKID STRIP
FL	COCOA BEACH	PATRICK SPACE FORCE BASE
FL	CRESTVIEW	DUKE FLD (EGLIN AF AUX NR 3)
FL	HOMESTEAD	HOMESTEAD ARB
FL	JACKSONVILLE	JACKSONVILLE NAS (TOWERS FLD)
FL	JACKSONVILLE	WHITEHOUSE NOLF
FL	JUPITER	WILLIAM P GWINN
FL	KEY WEST	KEY WEST NAS (BOCA CHICA FLD)
FL	MARY ESTHER	HURLBURT FLD
FL	MAYPORT	MAYPORT NS (ADM. DAVID L. MCDONALD FLD)
FL	MILTON	CHOCTAW NOLF
FL	MILTON	WHITING FLD NAS NORTH
FL	MILTON	WHITING FLD NAS SOUTH
FL	PANAMA CITY	TYNDALL AFB
FL	PENSACOLA	PENSACOLA NAS (FORREST SHERMAN FLD)
FL	TAMPA	MACDILL AFB
FL	TITUSVILLE	NASA SHUTTLE LANDING FACILITY
FL	VALPARAISO/DESTIN-FT WALTON BEACH	EGLIN AFB/DESTIN-FT WALTON BEACH
GA	FORT BENNING	LAWSON AAF
GA	FORT STEWART(HINESVILLE)	WRIGHT AAF (FORT STEWART)/MIDCOAST RGNL
GA	MARIETTA	DOBBINS ARB
GA	SAVANNAH	HUNTER AAF
GA	VALDOSTA	MOODY AFB
GA	WARNER ROBINS	ROBINS AFB
KY	FORT KNOX	GODMAN AAF
KY	HOPKINSVILLE	CAMPBELL AAF
NC	CAMP MACKALL	MACKALL AAF
NC	CHERRY POINT	CHERRY POINT MCAS (CUNNINGHAM FLD)
NC	FAYETTEVILLE	POPE AAF
NC	FORT BRAGG	SIMMONS AAF
NC	GOLDSBORO	SEYMOUR JOHNSON AFB
NC	NEW RIVER	NEW RIVER MCAS (MCCUTCHEON FLD)
NC	SWANSBORO	BOGUE MCALF
SC	BEAUFORT	BEAUFORT MCAS
SC	EASTOVER	MC ENTIRE JNGB
SC	CHARLESTON	CHARLESTON AFB/INTL
SC	NORTH	NORTH AF AUX
SC	SUMTER	SHAW AFB
TN	FORT CAMPBELL	SABRE AAF (FORT CAMPBELL)

APPENDIX 19
SEAPLANE LANDING AREAS - U.S. & AK

GENERAL INFORMATION 3

SEAPLANE LANDING AREAS

The following locations have Seaplane Landing Areas (Waterways). See alphabetical listing for complete data on these facilities.

STATE	CITY NAME	FACILITY NAME
AK	AKIACHAK	AKIACHAK SPB
AK	AKUTAN	AKUTAN SPB
AK	ALEKNAGIK	ALEKNAGIK SPB
AK	ANCHORAGE	CAMPBELL LAKE SPB
AK	ANCHORAGE	LAKE HOOD SPB
AK	ANCHORAGE	SIXMILE LAKE SPB
AK	ANGOON	ANGOON SPB
AK	ANIAK	ANIAK SPB
AK	ANNETTE	TAMGAS HARBOR SPB
AK	ANVIK	ANVIK SPB
AK	BARANOF	BARANOF WARM SPRINGS FLOAT AND SEAPLANE FLOAT SPB
AK	BARTLETT COVE	BARTLETT COVE SPB
AK	BELL ISLAND	BELL ISLAND HOT SPRINGS SPB
AK	BETHEL	BETHEL SPB
AK	BETHEL	HANGAR LAKE SPB
AK	BETTLES	VOR LAKE WATERLANE SPB
AK	BIG LAKE	BEAVER LAKE SPB
AK	BIG LAKE	BROCKER LAKE SPB
AK	BIG LAKE	JONES LANDING SPB
AK	CAPE POLE	CAPE POLE SPB
AK	CHIGNIK	CHIGNIK BAY SPB
AK	COFFMAN COVE	COFFMAN COVE SPB
AK	COLD BAY	BLINN LAKE SPB
AK	COMOX	COMOX SPB
AK	CORDOVA	CORDOVA MUNI SPB
AK	CRAIG	CRAIG SPB
AK	CRAIG	EL CAPITAN LODGE
AK	DILLINGHAM	SHANNONS POND SPB
AK	EAGLE RIVER	D&C FIRE LAKE FLYING CLUB
AK	ELFIN COVE	ELFIN COVE SPB
AK	ELLAMAR	ELLAMAR SPB
AK	EXCURSION INLET	EXCURSION INLET SPB
AK	FAIRBANKS	CHENA MARINA SPB
AK	FAIRBANKS	CHENA RIVER SPB
AK	FAIRBANKS	FAIRBANKS INTL SPB
AK	FAIRBANKS	LAKLOEY AIR PARK SPB
AK	FALSE ISLAND	FALSE ISLAND SPB
AK	FAREWELL LAKE	FAREWELL LAKE SPB
AK	FUNTER BAY	FUNTER BAY SPB
AK	GOLDEN HORN LODGE	GOLDEN HORN LODGE SPB
AK	HOLLIS	CLARK BAY SPB
AK	HOMER	HOMER
AK	HOMER	HOMER–BELUGA LAKE SPB
AK	HOONAH	HOONAH SPB
AK	HOUSTON	MORVRO LAKE SPB
AK	HYDABURG	HYDABURG SPB
AK	HYDER	HYDER SPB
AK	ILIAMNA	ILIAMNA
AK	JUNEAU	JUNEAU INTL SPB
AK	KAKE	KAKE SPB
AK	KARLUK LAKE	KARLUK LAKE SPB
AK	KASAAN	KASAAN SPB
AK	KASILOF	ENCELEWSKI LAKE SPB
AK	KATMAI NATIONAL PARK	LAKE BROOKS SPB
AK	KENAI	ISLAND LAKE SPB

APPENDIX 20
GENERAL INFORMATION - ABBREVIATIONS

ABBREVIATIONS

The following abbreviations/acronyms are those commonly used within this Directory. Other abbreviations/acronyms may be found in the Legend and are not duplicated below. The abbreviations presented are intended to represent grammatical variations of the basic form. (Example–"req" may mean "request", "requesting", "requested", or "requests").

For additional FAA approved abbreviations/acronyms please see FAA Order JO 7340.2 —Contractions

Abbreviation	Description
A/G	air/ground
AAF	Army Air Field
AAS	Airport Advisory Service
AB	Airbase
abm	abeam
ABn	Aerodrome Beacon
abv	above
ACC	Air Combat Command Area Control Center
acft	aircraft
ACLS	Automatic Carrier Landing System
act	activity
ACWS	Aircraft Control and Warning Squadron
ADA	Advisory Area
ADCC	Air Defense Control Center
ADCUS	Advise Customs
addn	addition
ADF	Automatic Direction Finder
adj	adjacent
admin	administration
ADR	Advisory Route
advs	advise
advsy	advisory
AEIS	Aeronautical Enroute Information Service
AER	approach end rwy
AFA	Army Flight Activity
AFB	Air Force Base
afct	affect
AFFF	Aqueous Film Forming Foam
AFHP	Air Force Heliport
AFIS	Automatic Flight Information Service
afld	airfield
AFOD	Army Flight Operations Detachment
AFR	Air Force Regulation
AFRC	Armed Forces Reserve Center/Air Force Reserve Command
AFRS	American Forces Radio Stations
AFS	Air Force Station
AFTN	Aeronautical Fixed Telecommunication Network
AG	Agriculture
A–G, A–GEAR	Arresting Gear
agcy	Agency
AGL	above ground level
AHP	Army heliport
AID	Airport Information Desk
AIS	Aeronautical Information Services
AL	Approach and Landing Chart
ALF	Auxiliary Landing Field
ALS	Approach Light System
ALSF–1	High Intensity ALS Category I configuration with sequenced Flashers (code)
ALSF–2	High Intensity ALS Category II configuration with sequenced Flashers (code)
alt	altitude
altn	alternate
AM	Amplitude Modulation, midnight til noon
AMC	Air Mobility Command
amdt	amendment
AMSL	Above Mean Sea Level
ANGS	Air National Guard Station
ant	antenna
AOE	Airport/Aerodrome of Entry
AP	Area Planning
APAPI	Abbreviated Precision Approach Path Indicator
apch	approach
apn	apron
APP	Approach Control
Apr	April
aprx	approximate
APU	Auxiliary Power Unit
apv, apvl	approve, approval
ARB	Air Reserve Base
ARCAL (CANADA)	Aircraft Radio Control of Aerodrome Lighting
ARFF	Aircraft Rescue and Fire Fighting
ARINC	Aeronautical Radio Inc
arng	arrange
arpt	airport
arr	arrive
ARS	Air Reserve Station
ARSA	Airport Radar Service Area
ARSR	Air Route Surveillance Radar
ARTCC	Air Route Traffic Control Center
AS	Air Station
ASAP	as soon as possible
ASDA	Accelerate–Stop Distance Available
ASDE	Airport Surface Detection
ASDE–X	Airport Surface Detection Equipment–Model X
asgn	assign
ASL	Above Sea Level
ASOS	Automated Surface Observing System
ASR	Airport Surveillance Radar
ASSC	Airport Surface Surveillance Capability
ASU	Aircraft Starting Unit
ATA	Actual Time of Arrival
ATC	Air Traffic Control
ATCC	Air Traffic Control Center
ATCT	Airport Traffic Control Tower
ATD	Actual Time of Departure Along Track Distance
ATIS	Automatic Terminal Information Service
ATS	Air Traffic Service
attn	attention
Aug	August
auth	authority
auto	automatic
AUW	All Up Weight (gross weight)
aux	auxiliary
AVASI	abbreviated VASI
avbl	available
AvGas	Aviation gasoline
avn	aviation

APPENDIX 21
A/FD DIRECTORY LEGEND SAMPLE

12

SAMPLE

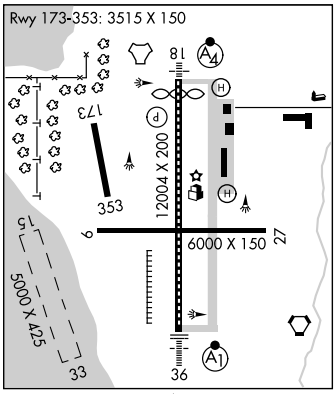
(1) CITY NAME

AIRPORT NAME (ALTERNATE NAME) (2)(LTS)(3)(KLTS)(4) CIV/MIL (5) 3 N UTC–6(–5DT) (6) N34º41.93´ W99º20.20´ (7) (8) JACKSONVILLE COPTER H–4G, L–19C IAP, DIAP, AD

(11) 200 (12) B (13) TPA—1000(800) (14) AOE (15) LRA Class IV, ARFF Index A (16) NOTAM FILE ORL (17) Not insp. (18) MON Airport

(9)

(19)→ **RWY 18–36:** H12004X200 (ASPH–CONC–GRVD)
S–90, D–160, 2D–300 PCN 80 R/B/W/T HIRL CL
RWY 18: RLLS. MALSF. TDZL. REIL. PAPI(P2R)—GA 3.0º TCH 36´. RVR–TMR. Thld dsplcd 300´. Trees. Rgt tfc. 0.3% up.
RWY 36: ALSF1. 0.4% down.
RWY 09–27: H6000X150 (ASPH) MIRL
RWY 173–353: H3515X150 (ASPH–PFC) AUW PCN 59 F/A/W/T



(10)

(20)→ **LAND AND HOLD–SHORT OPERATIONS**

LDG RWY	HOLD–SHORT POINT	AVBL LDG DIST
RWY 18	09–27	6500
RWY 36	09–27	5400

(21)→ **RUNWAY DECLARED DISTANCE INFORMATION**
RWY 18: TORA–12004 TODA–12004 ASDA–11704 LDA–11504
RWY 36: TORA–12004 TODA–12004 ASDA–12004 LDA–11704

(22)→ **ARRESTING GEAR/SYSTEM**
RWY 18 HOOK E5 (65´ OVRN) BAK–14 BAK–12B (1650´)
BAK–14 BAK–12B (1087´) HOOK E5 (74´ OVRN) **RWY 36**

(23)→ **SERVICE:** S4 **FUEL** 100LL, JET A **OX** 1, 3 **LGT** ACTIVATE MALSR Rwy 29, REIL Rwy 11, VASI Rwy 11, HIRL Rwy 11–29, PAPI Rwy 17 and Rwy 35, MIRL Rwy 17–35—CTAF. **MILITARY**— **A–GEAR** E–5 connected on dep end, disconnected on apch end.
JASU 3(AM32A–60) 2(A/M32A–86) **FUEL** J8(Mil)(NC–100, A)
FLUID W SP PRESAIR LOX **OIL** O–128 **MAINT** S1 Mon–Fri 1000–2200Z‡
TRAN ALERT Avbl 1300–0200Z‡ svc limited weekends.

(24)→ **NOISE:** Noise abatement 3 miles from Rwy 18. Contact tower manager.

(25)→ **AIRPORT REMARKS:** Special Air Traffic Rules—Part 93, see Regulatory Notices. Attended 1200–0300Z‡. Parachute Jumping. Deer invof arpt. Heavy jumbo jet training surface to 9000´. Twy A clsd indef. Flight Notification Service (ADCUS) avbl.

(26)→ **MILITARY REMARKS: ANG** PPR/Official Business Only. Base OPS DSN 638–4390, C503–335–4222. Ctc Base OPS 15 minutes prior to ldg and after dep. Limited tran parking.

(27)→ **AIRPORT MANAGER:** (580) 481–5739

(28)→ **WEATHER DATA SOURCES: AWOS–1** 120.3 (202) 426–8000. LAWRS.

(29)→ **COMMUNICATIONS: SFA CTAF** 122.8 **UNICOM** 122.95 **ATIS** 127.25 273.5 (202) 426–8003 **PTD** 372.2
NAME RCO 112.2T 112.1R (NAME RADIO)
Ⓡ **NAME APP/DEP CON** 128.35 257.725 (1200–0400Z‡)
TOWER 119.65 255.6 (1200–0400Z‡) **GND CON** 121.7 **GCO** 135.075 (ORLANDO CLNC) **CLNC DEL** 125.55
CPDLC D–HZWXR, D–TAXI, DCL (LOGON KMEM)
PDC
NAME COMD POST (GERONIMO) 311.0 321.4 6761 **PMSV METRO** 239.8 **NAME OPS** 257.5

(30)→ **AIRSPACE: CLASS B** See VFR Terminal Area Chart.

(31)→ **VOR TEST FACILITY (VOT):** 116.7

(32)→ **RADIO AIDS TO NAVIGATION:** NOTAM FILE ORL. VHF/DF ctc FSS.
(H) VORTAC 112.2 MCO Chan 59 N28º32.55´ W81º20.12´ at fld. 1110/8E.
(H) TACAN Chan 29 CBU (109.2) N28º32.65´ W81º21.12´ at fld. 1115/8E.
HERNY NDB (LOM) 221 OR N28º37.40´ W81º21.05´ 177º 5.4 NM to fld.
ILS/DME 108.5 I–ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB.
ASR/PAR (1200–0400Z‡)

(33)→ **COMM/NAV/WEATHER REMARKS:** Emerg frequency 121.5 not avbl at twr.

• • • • • • • • • • • • • • • • • • •

(1)

HELIPAD H1: H100X75 (ASPH)
HELIPAD H2: H60X60 (ASPH)
HELIPORT REMARKS: Helipad H1 lctd on general aviation side and H2 lctd on air carrier side of arpt.

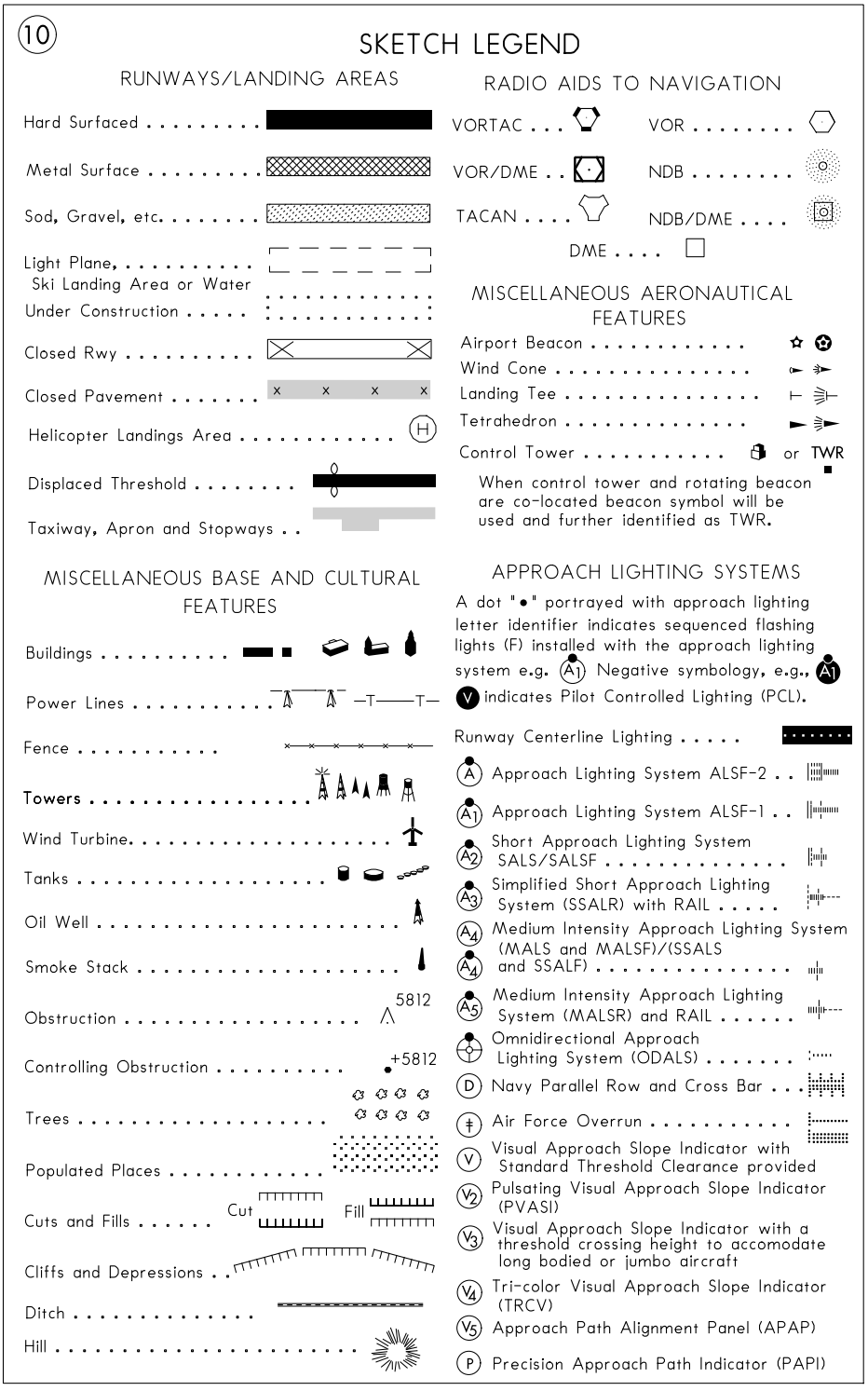
• • • • • • • • • • • • • • • • • • •

187 TPA 1000(813)
WATERWAY 15–33: 5000X425 (WATER)
SEAPLANE REMARKS: Birds roosting and feeding areas along river banks. Seaplanes operating adjacent to SW side of arpt not visible from twr and are required to ctc twr.

All bearings and radials are magnetic unless otherwise specified. All mileages are nautical unless otherwise noted.
All times are Coordinated Universal Time (UTC) except as noted. All elevations are in feet above/below Mean Sea Level (MSL) unless otherwise noted.
The horizontal reference datum of this publication is North American Datum of 1983 (NAD83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

EC, 12 AUG 2021 to 7 OCT 2021

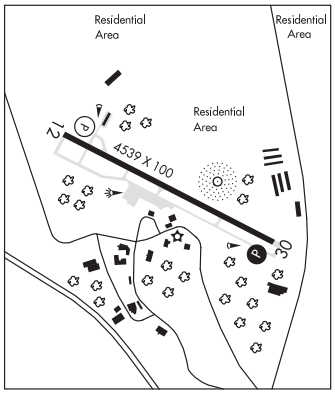
APPENDIX 22
A/FD SKETCH LEGEND



APPENDIX 23
A/FD DIRECTORY SAMPLE PAGE

BLACKSBURG

VIRGINIA TECH/MONTGOMERY EXECUTIVE (BCB)(KBCB) 3 S UTC–5(–4DT) N37°12.46´ W80°24.47´ CINCINNATI L–26I IAP
2132 B TPA—See Remarks NOTAM FILE BCB
RWY 12–30: H4539X100 (ASPH–GRVD) MIRL 0.4% up SE
RWY 12: REIL. PAPI(P4L)—GA 3.0° TCH 40´. Sign.
RWY 30: REIL. PAPI(P2L)—GA 3.75° TCH 45´. Brush.
SERVICE: S2 **FUEL** 100LL, JET A+ **LGT** MIRL Rwy 12–30 preset low ints; ACTIVATE REIL Rwy 12 and Rwy 30, PAPI Rwy 30, MIRL Rwy 12–30—CTAF.
NOISE: Noise sensitive area north of arpt. VFR departures maintain rwy heading until reaching 1000´ AGL.
AIRPORT REMARKS: Attended Apr–Oct 1300–0000Z‡, Nov–Mar 1300–2300Z‡. Unattended New Year´s Day, Thanksgiving Day, Christmas Day. PPR for fuel when arpt unattended, phone 540–231–4444. Fee for after hrs. Occasional wildlife on arpt. NSTD twy in–line with rwy. White arrow should be yellow. Thld is end of rwy. NSTD marking prior to thld Rwy 30. Marking should be for twy inline with rwy. TPA—3132(1000) for non turbine powered acft, 3632(1500) turbine powered acft.
AIRPORT MANAGER: 540-231-4444
WEATHER DATA SOURCES: AWOS–3 133.325 (540) 231–4837.
COMMUNICATIONS: CTAF/UNICOM 123.05
ROANOKE APP/DEP CON 126.9
CLNC DEL 124.85
CLEARANCE DELIVERY PHONE: For CD ctc Roanoke Apch at 540-563-1307.
RADIO AIDS TO NAVIGATION: NOTAM FILE PSK.
PULASKI (H) VORTACW 116.8 PSK Chan 115 N37°05.26´ W80°42.77´ 070° 16.3 NM to fld. 2120/6W.
TACAN AZIMUTH & DME unusable:
034°–038° byd 25 NM
135°–175° byd 25 NM blo 10,000´
200°–225° byd 10 NM
284°–286° byd 10 NM blo 10,000´
287°–316° byd 25 NM blo 10,000´
315°–335° byd 10 NM blo 10,000´
334°–039° byd 25 NM blo 10,000´
DME unusable:
250°–350° byd 25 NM blo 10,000´
TACAN AZIMUTH unusable:
052°–100°
234°–283°
TECH NDB (MHW) 368 TEC N37°12.52´ W80°24.21´ at fld. 2125/6W. NOTAM FILE BCB.
LOC/DME 109.1 I–BCB Chan 28 Rwy 12. LOC/DME unmonitored when arpt unatndd.
COMM/NAV/WEATHER REMARKS: ROA twr svcs avbl at 540–563–1307.



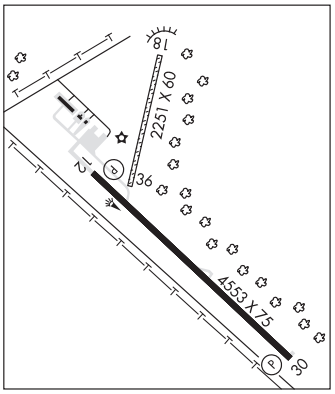
BLUE RIDGE (See MARTINSVILLE on page 363)

BOJAR N37°15.75´ W79°14.59´ NOTAM FILE LYH. CINCINNATI L–26J, 36G
NDB (MHW/LOM) 385 LY 036° 4.3 NM to Lynchburg Rgnl/Preston Glenn Fld. 804/8W. NDB unmonitored when ATCT closed.

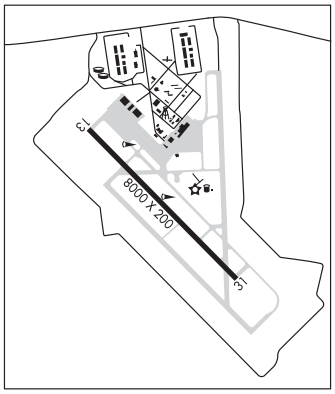
APPENDIX 24
A/FD DIRECTORY MULTIPLE AIRPORTS REFERENCED TO SAME CITY SAMPLE

BEEVILLE

BEEVILLE MUNI (BEA)(KBEA) 3 SW UTC–6(–5DT) N28°21.85′ W97°47.52′ **SAN ANTONIO**
273 B NOTAM FILE BEA **L–20H, 21A, GOMW**
RWY 12–30: H4553X75 (ASPH) S–25 MIRL 0.5% up NW **IAP**
RWY 12: PAPI(P2L)—GA 3.0° TCH 20′. Road.
RWY 30: PAPI(P2L)—GA 3.0° TCH 43′. Trees.
RWY 18–36: 2251X60 (TURF) 0.3% up N
RWY 18: P–line.
RWY 36: Trees.
SERVICE: S2 **FUEL** 100LL, JET A **LGT** MIRL Rwy 12–30 preset low ints, to increase ints ACTIVATE—CTAF.
AIRPORT REMARKS: Unattended. For svc after hrs call 361–358–0410. Rwy 18–36 thlds marked with reflective traffic cones. Rwy 12–30 markings faded.
AIRPORT MANAGER: (361) 358-4641
WEATHER DATA SOURCES: AWOS–3 118.675 (361) 362–7627.
COMMUNICATIONS: CTAF/UNICOM 122.8
Ⓡ **HOUSTON CENTER APP/DEP CON** 134.6
CLEARANCE DELIVERY PHONE: For CD ctc Houston ARTCC at 281-230-5622.
RADIO AIDS TO NAVIGATION: NOTAM FILE SJT.
THREE RIVERS (L) VORTAC 111.4 THX Chan 51 N28°30.30′ W98°09.03′ 106° 20.8 NM to fld. 266/8E.



CHASE FLD INDUSTRIAL (TX2) 5 SE UTC–6(–5DT) N28°21.75′ W97°39.72′ **SAN ANTONIO**
184 B NOTAM FILE SJT **H–7C, L–20H, 21A**
RWY 13–31: H8000X200 (ASPH) MIRL **IAP**
SERVICE: **FUEL** JET A **LGT** MIRL Rwy 13–31 preset to low intst SS–SR; to increase intst and ACTIVATE—122.8.
AIRPORT REMARKS: Attended Mon–Fri 1400–2300Z‡. After hrs and weekends call 361–362–3666. Rwy 13 and Rwy 31 rwy paint mkgs faded.
AIRPORT MANAGER: 361-358-2023
COMMUNICATIONS: CTAF/UNICOM 122.8
HOUSTON CENTER APP/DEP CON 134.6
CLEARANCE DELIVERY PHONE: For CD ctc Houston ARTCC at 281-230-5622.
RADIO AIDS TO NAVIGATION: NOTAM FILE SJT.
THREE RIVERS (L) VORTAC 111.4 THX Chan 51 N28°30.30′ W98°09.03′ 100° 27.2 NM to fld. 266/8E.



BELLVILLE

GRAWUNDER FLD (Ø6R) 1 SE UTC–6(–5DT) N29°56.46′ W96°14.72′ **HOUSTON**
292 NOTAM FILE CXO
RWY 15–33: H2480X30 (ASPH) S–4 LIRL(NSTD)
RWY 15: Tree.
RWY 33: Trees. Rgt tfc.
SERVICE: **LGT** Rwy 15–33 nonstd LIRL north 135 ft and south 126 ft unlgtd. No thr lgts.
AIRPORT REMARKS: Unattended. 2 ft electric fence around rwy for cattle guard. Skydiving, ultralights, RC model acft prohibited. Courtesy car avbl by calling 832–797–3903 or 281–468–4297. Rwy 15–33 extensive cracking. South end or rwy elev 45 ft lwr than north end. Rwy 15 thr relctd 135 ft for ngt opns; Rwy 33 thr relctd 126 ft for ngt opns. 2219 ft of rwy lgtd at ngt. Rwy 15–33 unmkd. Prim sfc obstd by 20–35 ft trees at AER 33, 65′ ft west of cntrln, from thr to 250 ft and 90 ft east of cntrln from thr to 400 ft.
AIRPORT MANAGER: 979-865-3136
COMMUNICATIONS: CTAF/UNICOM 123.0
CLEARANCE DELIVERY PHONE: For CD ctc Houston Apch at 281-443-5844 to cnl IFR call 281-443-5888.

BENGER AIR PARK (See FRIONA on page 301)

APPENDIX 25
KEY TO AERODROME FORECAST (TAF) AND AVIATION ROUTINE WEATHER REPORT (METAR)

KEY to AERODROME FORECAST (TAF) and AVIATION ROUTINE WEATHER REPORT (METAR)

TAF KPIT 091730Z 091818 15005KT 5SM HZ FEW020 WS010/31022KT
FM1930 30015G25KT 3SM SHRA OVC015 TEMPO 2022 1/2SM +TSRA OVC008CB
FM0100 27008KT 5SM SHRA BKN020 OVC040 PROB40 0407 1SM -RA BR
FM1015 18005KT 6SM -SHRA OVC020 BECMG 1315 P6SM NSW SKC

METAR KPIT 091955Z COR 22015G25KT 3/4SM R28L/2600FT TSRA OVC010CB 18/16 A2992 RMK SLP045 T01820159

Forecast	Explanation	Report
TAF	Message type: TAF-routine or TAF AMD-amended forecast, METAR-hourly, SPECI-special or TESTM-non-commissioned ASOS report	**METAR**
KPIT	ICAO location indicator	**KPIT**
091730Z	Issuance time: ALL times in UTC "Z", 2-digit date, 4-digit time	**091955Z**
091818	Valid period: 2-digit date, 2-digit beginning, 2-digit ending times	
	In U.S. **METAR**: CORrected ob; or AUTOmated ob for automated report with no human intervention; omitted when observer logs on	**COR**
15005KT	Wind: 3 digit true-north direction, nearest 10 degrees (or VaRiaBle); next 2-3 digits for speed and unit, KT (KMH or MPS); as needed, Gust and maximum speed; 00000KT for calm; for **METAR**, if direction varies 60 degrees or more, Variability appended, e.g. 180V260	**22015G25KT**
5SM	Prevailing visibility: in U.S., Statute Miles & fractions; above 6 miles in **TAF** Plus6SM. (Or, 4-digit minimum visibility in meters and as required, lowest value with direction)	**3/4SM**
	Runway Visual Range: R; 2-digit runway designator Left, Center, or Right as needed; "/"; Minus or Plus in U.S., 4-digit value, FeeT in U.S., (usually meters elsewhere); 4-digit value Variability 4-digit value (and tendency Down, Up or No change)	**R28L/2600FT**
HZ	Significant present, forecast and recent weather: see table (on back)	**TSRA**
FEW020	Cloud amount, height and type: SKy Clear 0/8, FEW >0/8-2/8, SCaTtered 3/8-4/8, BroKeN 5/8-7/8, OVerCast 8/8; 3-digit height in hundreds of ft; Towering CUmulus or CumulonimBus in **METAR**; in **TAF**, only CB. Vertical Visibility for obscured sky and height "VV004". More than 1 layer may be reported or forecast. In automated **METAR** reports only, CLeaR for "clear below 12,000 feet"	**OVC010CB**
	Temperature: degrees Celsius; first 2 digits, temperature "/" last 2 digits, dew-point temperature; Minus for below zero, e.g., M06	**18/16**
	Altimeter setting: indicator and 4 digits; in U.S., A-inches and hundredths; (Q-hectoPascals, e.g., Q1013)	**A2992**

NC, 22 APR 2021 to 17 JUN 2021

APPENDIX 25
KEY TO AERODROME FORECAST (TAF) AND AVIATION ROUTINE WEATHER REPORT (METAR) (CONTINUED)

KEY to AERODROME FORECAST (TAF) and AVIATION ROUTINE WEATHER REPORT (METAR)

Forecast	Explanation	Report
WS010/31022KT	In U.S. **TAF**, non-convective low-level (≤2,000 ft) Wind Shear; 3-digit height (hundreds of ft); "/"; 3-digit wind direction and 2-3 digit wind speed above the indicated height, and unit, KT	
	In **METAR**, ReMarK indicator & remarks. For example: Sea-Level Pressure in hectoPascals & tenths, as shown: 1004.5 hPa; Temp/ dew-point in tenths °C, as shown: temp. 18.2°C, dew-point 15.9°C	**RMK SLP045 T01820159**
FM1930	FroM and 2-digit hour and 2-digit minute **beginning** time: indicates significant change. Each FM starts on new line, indented 5 spaces.	
TEMPO 2022	TEMPOrary: changes expected for < 1 hour and in total, < half of 2-digit hour **beginning** and 2-digit hour **ending** time period	
PROB40 0407	PROBability and 2-digit percent (30 or 40): probable condition during 2-digit hour **beginning** and 2-digit hour **ending** time period	
BECMG 1315	BECoMinG: change expected during 2-digit hour **beginning** and 2-digit hour **ending** time period	

Table of Significant Present, Forecast and Recent Weather - Grouped in categories and used in the order listed below; or as needed in TAF, No Significant Weather.

QUALIFIER

Intensity or Proximity

- Light "no sign" Moderate + Heavy

VC Vicinity: but not at aerodrome; in U.S. **METAR**, between 5 and 10SM of the point(s) of observation; in U.S. **TAF**, 5 to 10SM from center of runway complex (elsewhere within 8000m)

Descriptor

MI Shallow	BC Patches	PR Partial	TS Thunderstorm
BL Blowing	SH Showers	DR Drifting	FZ Freezing

WEATHER PHENOMENA

Precipitation

DZ Drizzle	RA Rain	SN Snow	SG Snow grains
IC Ice crystals	PL Ice pellets	GR Hail	GS Small hail/snow pellets

UP Unknown precipitation in automated observations

Obscuration

BR Mist (≥5/8SM)	FG Fog (<5/8SM)	FU Smoke	VA Volcanic ash
SA Sand	HZ Haze	PY Spray	DU Widespread dust

Other

SQ Squall	SS Sandstorm	DS Duststorm	PO Well developed dust/sand whirls
FC Funnel cloud	+FC tornado/waterspout		

- Explanations in parentheses "( )" indicate different worldwide practices.
- Ceiling is not specified; defined as the lowest broken or overcast layer, or the vertical visibility.
- NWS **TAFs** exclude turbulence, icing & temperature forecasts; NWS **METARs** exclude trend fcsts
- Although not used in US, Ceiling And Visibility OK replaces visibility, weather and clouds if: visibility ≥10 km; no cloud below 5000 ft (1500 m) or below the highest minimum sector altitude, whichever is greater and no CB; and no precipitation, TS, DS, SS, MIFG, DRDU, DRSA or DRSN.

UNITED STATES DEPARTMENT OF COMMERCE

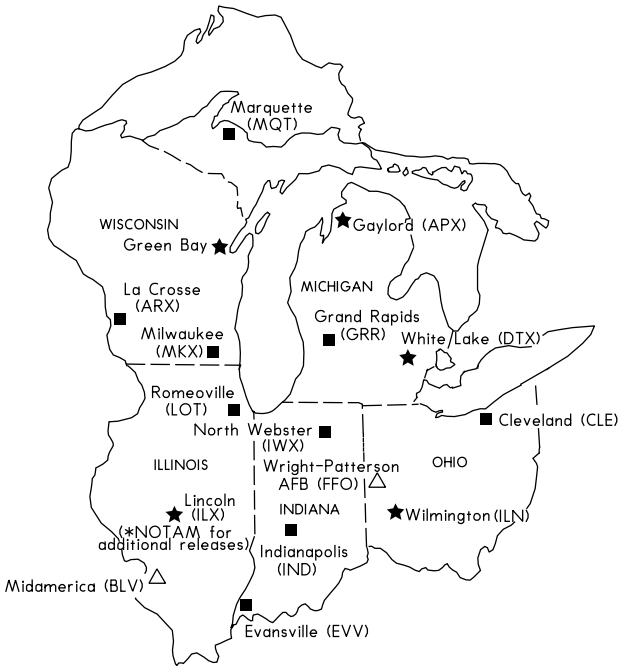
NOAA/PA 96052 **National Oceanic and Atmospheric Administration**—National Weather Service

NC, 22 APR 2021 to 17 JUN 2021

APPENDIX 26
NWS-UAOS - PORTRAIT LAYOUT EXAMPLE

396 FAA TELEPHONE NUMBERS AND NWS

NATIONAL WEATHER SERVICE (NWS)
UPPER AIR OBSERVING STATION (UAOS)
AND
WEATHER RADAR NETWORK



LEGEND

△ AVIATION WEATHER SERVICE (MILITARY)

▲ AIR TRAFFIC CONTROL RADAR

★ UPPER AIR OBSERVING STATION
HYDROGEN FILLED BALLOON RELEASES AROUND
1100 UTC AND 2300 UTC DAILY/RADAR

■ RADAR ONLY

● UAOS-BALLOON RELEASES AROUND 1100 UTC
AND 2300 UTC DAILY

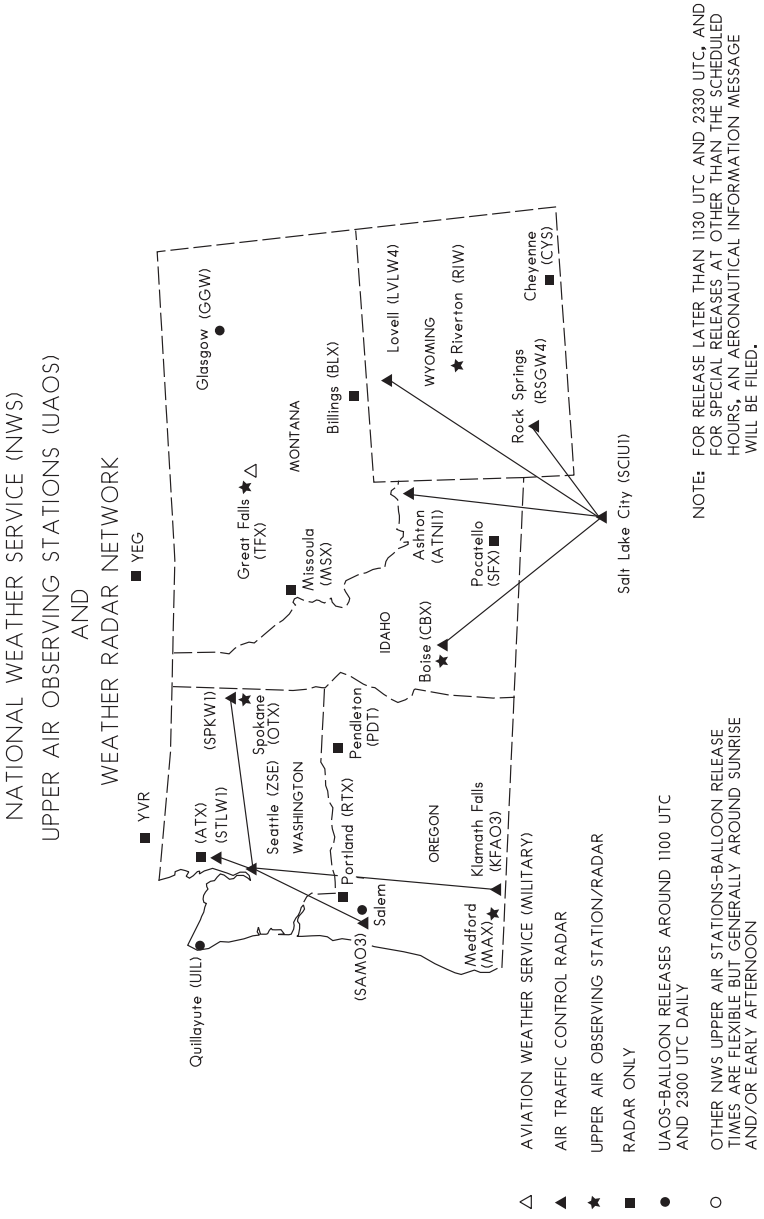
○ OTHER NWS UPPER AIR STATIONS-BALLOON RELEASE
TIMES ARE FLEXIBLE BUT GENERALLY AROUND SUNRISE
AND/OR EARLY AFTERNOON

NOTE: FOR RELEASES LATER THAN 1130 UTC AND 2330 UTC, AND
FOR SPECIAL RELEASES AT OTHER THAN THE SCHEDULED
HOURS, AN AERONAUTICAL INFORMATION MESSAGE OR NOTAM*
WILL BE FILED.

EC, 22 APR 2021 to 17 JUN 2021

APPENDIX 27
NWS-UAOS - LANDSCAPE LAYOUT EXAMPLE

278 FAA TELEPHONE NUMBERS AND NWS



NW, 22 APR 2021 to 17 JUN 2021

APPENDIX 28
AIR ROUTE TRAFFIC CONTROL CENTERS (ARTCCS)

AIR ROUTE TRAFFIC CONTROL CENTERS 465

Air Route Traffic Control Center frequencies and their remoted transmitter sites are listed below for the coverage of this volume. Bold face type indicates high altitude frequencies, light face type indicates low altitude frequencies. To insure unrestricted IFR operations within the high altitude enroute sectors, the use of 720 channel communications equipment (25 kHz channel spacing) is required.

®ATLANTA CENTER CPDLC (LOGON KUSA) **H–6–9–10–12, L–18–22–24–25–26–36, A–1**
(KZTL)

Albemarle – 133.15 251.1
Anderson – 121.5 **121.5** 243.0 **243.0**
Anniston – 134.95 323.175 243.0 **243.0**
Athens – 134.2 127.5 **127.5** **120.425** **327.15** 316.05 **316.05** 254.35
Atlanta/A – 135.0 **135.0** **369.9** 317.7 **317.7**
Augusta – 128.1 322.325
Birmingham – **128.725** 127.3 **350.325** 251.05
Chattanooga – **133.175** 132.05 **126.675** **124.875** **363.1** 354.025 **299.2** **257.675**
Columbus – **125.575** 120.45 **353.95** 298.85
Crossville – 121.5 **121.5** 243.0 **243.0**
Foothills – 134.8 **124.375** 379.95 **353.925**
Gadsden – 124.5 270.325
Glade Springs – 127.85 269.3
Greensboro – 128.8 **124.425** 360.825 **323.025**
Greer – 121.5 **121.5** 243.0 **243.0**
Hampton – **127.125** 121.5 **121.5** **119.375** **371.95** **363.25** **306.975** 268.7 243.0 **243.0**
Hickory – 134.55 125.15 124.25 121.5 **121.5** **369.9** 290.2 263.0 243.0 **243.0**
Hinch Mountain – 133.6 **125.925** **269.175** 254.3
Macon – 134.5 **126.425** 123.95 379.95 360.75 342.425 **335.65** 269.625 **269.625** 263.075 **263.075** **257.9**
Millen – 127.95 343.75
Monroeville – 118.55 267.9
Montgomery – **128.025** 120.55 **307.15** 280.1 **280.1** 270.25
Mount Oglethorpe – 134.8 133.1 127.05 **127.05** 121.35 **379.95** 377.05 370.9 342.425 **342.425** 290.8 282.35 **282.35**
Newport – 127.55 269.5
Owing – 135.35 **125.625** **123.725** **327.0** **269.1** 263.125
Pine Level – 243.0 **243.0**
Sugarloaf Mountain – 132.625 121.5 **121.5** 353.625 243.0 **243.0**
Tri City – 127.85 **126.775** **120.725** **353.575** 269.3 **257.775**
Uniontown – 132.25 352.8 343.725 327.05 **307.15** 263.025 252.9

SE, 22 APR 2021 to 17 JUN 2021

APPENDIX 29
VOR RECEIVER CHECKPOINTS AND VOR TEST FACILITIES - U.S.

VOR RECEIVER CHECKPOINTS and VOR TEST FACILITIES 473

The use of VOR airborne and ground checkpoints is explained in Aeronautical Information Manual. Basic Flight Information and ATC Procedures.

NOTE: Under columns headed "Type of Checkpoint" & "Type of VOT Facility" G stands for ground. A/ stands for airborne followed by figures (2300 or 1000–3000) indicating the altitudes above mean sea level at which the check should be conducted. Facilities are listed in alphabetical order, in the state where the checkpoints or VOTs are located.

ALABAMA

VOR RECEIVER CHECKPOINTS

Facility Name (Arpt Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag	Dist. from Fac. N.M.	Checkpoint Description
Cairns AAF (Fort Rucker)	111.2/OZR	G	071	1.0	On Foxtrot pad Twy F.
Monroeville (Monroe Co Aeroplex)	116.8/MVC	G	196	0.6	Rwy 03 runup area/turnaround pad.

VOR TEST FACILITIES (VOT)

Facility Name (Airport Name)	Freq.	Type VOT Facility	Remarks
Birmingham–Shuttlesworth Intl	110.0	G	
Huntsville Intl–Carl T Jones Fld	111.0	G	

FLORIDA

VOR RECEIVER CHECKPOINTS

Facility Name (Arpt Name)	Freq/Ident	Type Check Pt. Gnd. AB/ALT	Azimuth from Fac. Mag	Dist. from Fac. N.M.	Checkpoint Description
Lakeland Linder Intl	116.0/LAL	G	038	0.5	On NE end of Twy C.
	116.0/LAL	G	283	1.1	On Twy A–1.
Melbourne Intl	110.0/MLB	G	189	0.5	SW corner of arpt at intersection of Twy C and D.
Ocala Intl–Jim Taylor Fld	113.7/OCF	G	167	1	Twy A adjacent to A9.
Orlando (Executive)	112.2/ORL	G	45	0.6	On E ramp near Twy A–3.
		G	311	0.5	On SW side AER 13.
		G	324	0.5	On NW side AER 13.
St. Pete–Clearwater Intl	116.4/PIE	G	052	0.5	On circle NE end of Twy G.
Sarasota (Sarasota/Bradenton Intl)	117.0/SRQ	G	152	0.5	On run up area at intersection of Twys C and F.

VOR TEST FACILITIES (VOT)

Facility Name (Airport Name)	Freq.	Type VOT Facility	Remarks
Daytona Beach Intl	111.0	G	
Jacksonville Intl	111.0	G	Unuseable east of Twy F.
Tallahassee Intl	111.0	G	

APPENDIX 30
VOR RECEIVER CHECKPOINTS AND VOR TEST FACILITIES - AK

448 VOR RECEIVER CHECKPOINTS and VOR TEST FACILITIES

Airborne and ground checkpoints consist of certified radials that should be received at specific points on the airport surface, or over specific landmarks while airborne in the immediate vicinity of the airport.
Should an error in excess of +4° be indicated through use of the ground check, or +6° using the airborne check, IFR flight should not be attempted without first correcting the source of the error.
CAUTION: No correction other than the "correction card" figures supplied by the manufacturer should be applied in making these VOR receiver checks.

VOR RECEIVER CHECKPOINTS

AIRBORNE RECEIVER CHECKPOINTS

Station	Radial	Distance	Location

GROUND RECEIVER CHECKPOINTS

Eareckson AS	096°	1.8 NM	Twy in front of twr.
Ladd AAF	058°	10.8 NM	South ramp adj to Rwy 25 touchdown.

VOR TEST FACILITIES (VOT)

City/Facility Name (Ident)	Freq.	Type VOT Facility	Remarks
Anchorage/Anchorage (ANC)	108.4	G	Unusbl east of Twy K South of Twy M to Twy R.
Anchorage/Merrill (MRI)	111.0	G	
Juneau/Juneau (JNU)	111.0	G	
Ketchikan/Ketchikan (ECH)	111.0	G	

APPENDIX 31
VOR RECEIVER CHECKPOINTS AND VOR TEST FACILITIES - PAC

RADIO NAVIGATIONAL AIDS BY IDENT

Ident	Name	Ident	Name
AJA	Mt. Macajna (NDB)	NDJ	Bucholz (NDB)
AWK	Wake (VORTAC)	OGG	Maui (VORTAC)
BSF	Bradshaw (NDB)	PNI	Pohnpei (NDB/DME)
CKH	Koko Head (VORTAC)	POA	Pahoa (NDB)
GRO	Rota (NDB)	ROR	Koror (NDB/DME)
HN	Ewabe (NDB)	SN	Saipan (NDB)
HNL	Honolulu (VORTAC)	SOK	South Kauai (VORTAC)
IAI	Kona (VORTAC)	TKK	Truk (NDB/DME)
ITO	Hilo (VORTAC)	TUT	Pago Pago (NDB)
LIH	Lihue (VORTAC)	TUT	Pago Pago (VORTAC)
LLD	Lanai (NDB)	UKS	Kosrae (NDB/DME)
LNY	Lanai (VORTAC)	UNZ	NIMITZ (VORTAC)
MAJ	Majuro (NDB/DME)	UPP	Upolu Point (VORTAC)
MDY	Midway (NDB)	VYI	Valley Island (NDB)
MKK	Molokai (VORTAC)	XI	Christmas Island (NDB)
MUE	Kamuela (VOR/DME)	YP	Yap (NDB/DME)

VOR RECEIVER CHECK

Airborne and ground checkpoints consist of certified radials that should be received at specific points on the airport surface, or over specific landmarks while airborne in the immediate vicinity of the airport.

Should an error in excess of ±4° be indicated through use of the ground check, or ±6° using the airborne check, IFR flight should not be attempted without first correcting the source of the error. CAUTION: No correction other than the "correction card" figures supplied by the manufacturer should be applied in making these VOR receiver checks.

GROUND RECEIVER CHECKPOINTS

Nimitz	063	3.3 NM	Twy A between Rwy 06L and Rwy 06R.
Pago Pago	242	0.8 NM	On twy Rwy 05.
Wake Island	98	1.3 NM	Runup area Rwy 28.

VOR TEST FACILITIES (VOT)

STATION	FREQ.	TYPE VOT FACILITY
Honolulu	111.0	G

APPENDIX 32
PARACHUTE JUMPING AREAS

478 PARACHUTE JUMPING AREAS

The following tabulation lists all reported parachute jumping areas in the area of coverage of this directory. Unless otherwise indicated, all activities are conducted during daylight hours and under VFR conditions. NOTAM D's may be issued to advise users of specific dates and times if outside the times /altitudes that are published. The busiest periods of activity are normally on weekends and holidays, but jumps can be expected at anytime during the week at the locations listed. Parachute jumping areas within restricted airspace are not listed.

All times are local and altitudes MSL unless otherwise specified.
Contact facility and frequency is listed at the end of the remarks, when available, in bold face type.
Refer to Federal Aviation Regulations Part 105 for required procedures relating to parachute jumping.
Organizations desiring listing of their jumping activities in this publication should contact Flight Service, tower, or ARTCC.
Qualified parachute jumping areas will be depicted on the appropriate visual chart(s).

Note: (c) in this publication indicates that the parachute jumping area is charted.

To qualify for charting, a jump area must meet the following criteria:
(1) Been in operation for at least 1 year.
(2) Log 1,000 or more jumps each year.

In addition, parachute jumping areas can be nominated by FAA Regions if special circumstances require charting.

LOCATION	DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC OR GEOGRAPHIC COORDINATES	MAXIMUM ALTITUDE	REMARKS
	ALABAMA		
Bayou La Batre, Roy E Ray Arpt	12 NM; 217º Brookley	12,500	Daily SR–SS.
Bessemer, Old Bessemer Arpt	16 NM; 057º Brookwood	10,000	1030–SS; weekends.
(c) Cullman, Cullman Rgnl-Folsom Fld Arpt	36 NM; 001º Vulcan	14,500	3 NM radius. SR–SS Sat–Sun, other times by NOTAM.
(c) Elberta, Horak Arpt	11 NM; 268º Saufley	14,000	Daily 0700–1/2 hour after SS.
(c) Elberta, Perdido Winds Airpark	28.9 NM; 109° Brookley	10,000	2 NM radius. SR–SS. Joint use
Ellis Drop Zone	32 NM; 229º Rocket	1,500	0.4 NM radius. Occasional use.
Eutaw Muni Arpt	40 NM; 231º Brookwood	13,000 AGL	5 NM radius. Weekends and holidays.
(c) Fort Rucker, Cairns AAF	1.5 NM; 225° Cairns	14,500	SR-SS weekends.
Gadsden, Northeast Alabama Rgnl Arpt	3 NM; 230º Gadsden	14,000	Weekends and holidays 0900–SS.
Harvest, Epps Arpk	9 NM; 297º Rocket	13,500	Daily SR–SS.
Headland Muni Arpt	8 NM; 070º Wiregrass	15,000	1200–SS weekdays, SR-SS Sat–Sun and holidays.
Jones Drop Zone	6 NM; 276º Rocket	1,500	0.25 NM radius. Occasional use.
Kilby Drop Zone	13 NM; 014º Montgomery	1,500	0.2 NM radius. Occasional use.
Longstreet Drop Zone	13 NM; 345° Cairns	3,500 AGL	Occasional use.
Moundville Arpt	25 NM; 231º Brookwood	12,000 AGL	5 NM radius. 0900–SS on weekends, occasionally weekdays by NOTAM.
(c) Prattville–Grouby Fld Arpt	17 NM; 300º Montgomery	2,000	10NM radius. For specific times call 334–953–7325.**Montgomery Rgnl (Dannelly Fld) ATCT-Tracon (MGM) 121.2**.
Redstone Drop Zone	9 NM; 220º Rocket	1,500	0.2 NM radius. Occasional use.
Tommy Drop Zone	17 NM; 235º Montgomery	1,500	0.2 NM radius. Occasional use.
(c) Tuskegee, Moton Fld Muni	2 NM; 198º Tuskegee	12,500	3 NM radius. Occasionally on weekends.
Vincent	37 NM; 130º Vulcan	10,000	5 NM radius. 0900–SS weekends.

APPENDIX 33
FLIGHT SERVICE STATION COMMUNICATION FREQUENCIES

VHF frequencies available at Flight Service Stations and at their remote communication outlets (RCO's) are listed below for the coverage of this volume. Frequencies in bold type are available all altitudes but recommended for use FL180 and above. 'T' indicates transmit only and 'R' indicates receive only. RCO's available at NAVAID's are listed after the NAVAID name. RCO's not at NAVAID's are listed by name.

ALBUQUERQUE RADIO

ALAMOGORDO RCO 122.15
ALBUQUERQUE RCO 122.55 255.4
ANIMAS RCO 122.5
ANTON CHICO VORTAC 117.8T 122.1R
CARLSBAD RCO 122.65 255.4
CIMARRON VORTAC 116.4T 122.1R
CLINES CORNERS RCO 122.3
CLOVIS RCO 122.5
CONCHAS LAKE RCO 122.6
CORONA VORTAC 115.5T 122.1R
DEMING RCO 122.2 255.4
EL PASO RCO 122.55 255.4
FARMINGTON RCO 122.4 255.4
GALLUP RCO 122.6 255.4
GALLUP VORTAC 115.1T 122.1R
GUADALUPE PASS RCO 122.35 255.4
HOBBS RCO 122.2
LAS VEGAS RCO 122.6 255.4
ROSWELL RCO 122.45 255.4
RUIDOSO RCO 122.25
SANTA FE RCO 122.2 255.4
SILVER CITY RCO 122.3
SILVER CITY VOR/DME 110.8T 122.1R
SOCORRO VORTAC 116.8T 122.1R
TAOS RCO 122.25
TAOS VORTAC 117.6T 122.1R
TRUTH OR CONSEQUENCES RCO 122.2 255.4
TUCUMCARI VORTAC 122.35 255.4
WEST MESA RCO 122.5
ZUNI RCO 122.05 255.4

CEDAR CITY RADIO

ABAJO PEAK RCO 122.55
BONNEVILLE VORTAC 112.3T 122.1R
BRYCE CANYON RCO 122.2
BULLFROG BASIN RCO 122.4
CARBON VOR/DME 122.2
CEDAR CITY RCO 122.3
CEDAR CITY RCO 122.2 255.4
DELLE RCO 122.5
DELTA VORTAC 122.55
FAIRFIELD RCO 122.25
FRANCIS PEAK RCO 122.2
HANKSVILLE VORTAC 122.65
LUCIN VORTAC 113.6T 122.1R
MILFORD VORTAC 112.1T 122.1R
MOAB RCO 122.3
MYTON VOR/DME 112.7T 122.1R
OGDEN RCO 122.45
PROVO RCO 122.6
RICHFIELD RCO 122.5
SALT LAKE CITY RCO 122.4 255.4
ST GEORGE RCO 122.5
SUNNYSIDE RCO 122.5
VERNAL RCO 122.35

APPENDIX 34
SUPPLEMENTAL COMMUNICATION REFERENCE

412 SUPPLEMENTAL COMMUNICATION REFERENCE

Contained within this tabulation, and listed alphabetically by airport name, are all private–use airports charted on the U.S. IFR Enroute Low and High Altitude charts in the United States, having terminal approach and departure control facilities. Additionally, listed by country, are all Canadian and Mexican airports that appear on the U.S. IFR Enroute charts with approach and departure control services. All frequencies transmit and receive unless otherwise noted. Radials defining sectors are outbound from the facility.

UNITED STATES

FACILITY NAME	CHART & PANEL
Cabaniss Fld NOLF, TX (NGW) Corpus App/Dep Con 125.4 307.9 Navy Cabaniss Tower 119.65 299.6 (Mon–Thu 1400–0500Z‡, Fri 1400–0100Z‡)	L–20H, 21A
Fentress NALF, VA (NFE) Oceana App/Dep Con 123.9 266.8	H–10I, 12I, L–35D
Fry, OH (ØOH8) Columbus App/Dep Con 118.425	L–27E
Gila Bend AF AUX, AZ (GXF) Luke App/Dep Con 125.45 263.125 (South) (Mon–Thu 1300–0530Z, Fri 1300–0130Z, clsd weekends and hol)	H–4J, L–5B
Glasgow Industrial, MT (Ø7MT) Salt Lake Center App/Dep Con 126.85 305.2	H–1E, 2G, L–13D
Joe Williams NOLF, MS (NJW) Meridian App/Dep Con 276.4 Bravo Tower 118.475 279.2 355.8 (Mon–Fri 1400–2330Z‡)	H–6J, L–18G
Oak Grove MCOLF, NC (13NC) Cherry Point App/Dep Con 119.35 377.175	L–35B
Shell AHP, AL (SXS) Cairns App/Dep Con 133.45 239.275 (24 hrs Tue–Sat, 1200–0500Z‡ Sun–Mon) other times ctc Jax Center App/Dep Con 134.3 322.55 Shell Tower 139.125 244.5 (1230–0600Z‡ Mon–Fri, exc hol)	L–22I
USAF Academy Bullseye Aux Airfield, CO (CO9Ø) ASOS 125.0	L–10F
Webster NOLF, MD (NUI) Patuxent App/Dep Con 121.0 250.3 Navy Webster Tower 126.2 358.0 (Mon–Fri, exc hol, other times on request, 1400–2200Z‡ or SS, whichever occurs first) For Clnc Del when NHK Apch is clsd ctc Potomac Apch at 866–640–4124	H–10I, 12I, L–34E, 36I
Whitehouse NOLF, FL (NEN) Jax Center App Con 127.775 377.075 Jax Center Dep Con 127.775 379.9 Whitehouse Tower 125.15 307.325 340.2 (Manned during scheduled operations only)	H–8H, L–21D, 24G
William P Gwinn, FL (Ø6FA) Palm Beach App/Dep Con 317.4 Gwinn Tower 120.4 279.25 (Mon–Fri 1300–2100Z‡) Gnd Con 121.65 279.25	H–8I, L–23C

CANADA

FACILITY NAME	CHART & PANEL
Abbotsford, BC (CYXX) ATIS 119.8 (1500–0700Z‡) Victoria Trml App/Dep Con 132.7 (Avbl on ground) Tower 119.4 (Inner) 121.0 (Outer) 295.0 (1500–0700Z‡) Gnd Con 121.8 MF 119.4 295.0 (0700–1500Z‡) (Shape irregular to 4500´)	H–1B, L–12F
Amos/Magny, QC (CYEY) Montreal Center App/Dep Con 125.9	H–11B
Atikokan Muni, ON (CYIB) MF 122.3 (5 NM to 4500´ No ground station)	L–14I
Barrie–Orillia (Lake Simcoe Rgnl), ON (CYLS) Toronto Center App/Dep Con 124.025	H–11B, L–31D
Bar River, ON (CPF2) Toronto Center App/Dep Con 132.65	L–31C
Bathurst, NB (CZBF) Moncton Center App/Dep Con 134.25 AWOS 127.925	L–32J
Boundary Bay, BC (CZBB) ATIS 125.5 (1500–0700Z‡) Vancouver App/Dep Con 132.3 363.8 Tower 118.1 (Inner) 127.6 (Outer) (1500–0700Z‡) Gnd Con 124.3 MF 118.1 (0700–1500Z‡ to 2000´. Vancouver Trml 125.2 above 2000´. Shape irregular to 2500´.)	H–1B, L–1E
Brampton, ON (CNC3) Toronto Trml App/Dep Con 119.3	L–31D
Brandon Muni, MB (CYBR) Winnipeg Center App/Dep Con 132.25 MF 122.1 (5 NM to 4000´)	H–2H

APPENDIX 35
PREFERRED IFR ROUTE - FIRST PAGE

458 PREFERRED IFR ROUTES

PREFERRED IFR ROUTES

A system of preferred routes has been established to guide pilots in planning their route of flight, to minimize route changes during the operational phase of flight, and to aid in the efficient orderly management of the air traffic using federal airways. The preferred IFR routes which follow are designed to serve the needs of airspace users and to provide for a systematic flow of air traffic in the major terminal and en route flight environments. Cooperation by all pilots in filing preferred routes will result in fewer traffic delays and will better provide for efficient departure, en route and arrival air traffic service.

The following lists contain preferred IFR routes for the low altitude stratum and the high altitude stratum. The high altitude list is in two sections; the first section showing terminal to terminal routes and the second section showing single direction route segments. Also, on some high altitude routes low altitude airways are included as transition routes.

The following will explain the terms/abbreviations used in the listing:

1. Preferred routes beginning/ending with an airway number indicate that the airway essentially overlies the airport and flight are normally cleared directly on the airway.
2. Preferred IFR routes beginning/ending with a fix indicate that aircraft may be routed to/from these fixes via a Standard Instrument Departure (SID) route, radar vectors (RV), or a Standard Terminal Arrival Route (STAR).
3. Preferred IFR routes for major terminals selected are listed alphabetically under the name of the departure airport. Where several airports are in proximity they are listed under the principal airport and categorized as a metropolitan area; e.g., New York Metro Area.
4. Preferred IFR routes used in one direction only for selected segments, irrespective of point of departure or destination, are listed numerically showing the segment fixes and the direction and times effective.
5. Where more than one route is listed the routes have equal priority for use.
6. Official location identifiers are used in the route description for VOR/VORTAC navaids.
7. Intersection names are spelled out.
8. Navaid and distance fixes (e.g., ARD201113) have been used in the route description in an expediency and intersection names will be assigned as soon as routine processing can be accomplished. Navaid radial (no distance stated) may be used to describe a route to intercept a specified airway (e.g., MIV MIV101 V39); another navaid radial (e.g., UIM UIM255 GSW081); or an intersection (e.g., GSW081 FITCH).
9. Where two navaids, an intersection and a navaid, a navaid and a navaid radial and distance point, or any navigable combination of these route descriptions follow in succession, the route is direct.
10. The effective times for the routes are in UTC. During periods of daylight saving time effective times will be one hour earlier than indicated. All states observe daylight saving time except Arizona, Puerto Rico and the Virgin Islands. Pilots planning flight between the terminals or route segments listed should file for the appropriate preferred IFR route.
11. (90–170 incl) altitude flight level assignment in hundred of feet.
12. The notations “pressurized” and “unpressurized” for certain low altitude preferred routes to Kennedy Airport indicate the preferred route based on aircraft performance.
13. All Preferred IFR Routes are in effect continuously unless otherwise noted.
14. Use current SIDs and STARSs for flight planning.
15. For high altitude routes, the portion of the routes contained in brackets [ ] is suggested but optional. The portion of the route outside the brackets will likely be required by the facilities involved.

LOW ALTITUDE

Terminals	Route	Effective Times (UTC)
SAN FANCISCO METRO(WEST BAY AIRPORTS)		
LOS ANGELES(LAX)	(70–90–110–130–150–170)V27 VTU V299 SADDE V107 LAX	1400–0800

HIGH ALTITUDE

Terminals	Route	Effective Times (UTC)
ALBUQUERQUE(ABQ)		
CHICAGO(ORD)	J18 GCK J96 IRK BRADFORD–STAR	1100–0400
	or	
	(TURBOJETS – RNAV 1)J18 GCK J96 IRK BENKY (RNAV)–STAR	1100–0400
HOUSTON(HOU)	(TURBOJETS – DME/DME/IRU OR GPS)LLO KIDDZ (RNAV)–STAR	
HOUSTON(IAH)	(TURBOJETS & TURBOPROPS – DME/DME/IRU OR GPS)(IAH EAST FLOW)DIESL TTORO (RNAV)–STAR	
	or	
	(TURBOJETS & TURBOPROPS – DME/DME/IRU OR GPS)(IAH WEST FLOW)DIESL MSCOT (RNAV)–STAR	
FRESNO(FAT)		
DENVER(DEN)	INSLO DTA LBERT LONGZ (RNAV)–STAR	1400–0000
MONTEREY(MRY)		
	INSLO DTA LBERT LONGZ (RNAV)–STAR	1400–0000
OAKLAND(OAK)		
CHICAGO(ORD)	(TURBOJETS)ORRCA Q120 GALLI ONL J94 FOD MYRRS FYTTE (RNAV)–STAR	

SW, 12 AUG 2021 to 7 OCT 2021

APPENDIX 36
PREFERRED IFR ROUTE SAMPLE PAGE

PREFERRED IFR ROUTES

LOW ALTITUDE

Terminals	Route	Effective Times (UTC)
CHICAGO(MDW)		
DETROIT SATS(DET,ARB,PTK,YIP,CYQG)	(DME/DME/IRU OR GPS REQUIRED)GIJ HOSSA PETTE (RNAV)–STAR	
DETROIT(DTW)	(DME/DME/IRU PR GPS REQUIRED)(DTW SOUTH FLOW)LEWKE GIJ HOSSA VCTRZ (RNAV)–STAR or (DME/DME/IRU OR GPS REQUIRED)(DTW NORTH FLOW)LEWKE GIJ HOSSA HAYLL (RNAV)–STAR	
PITTSBURGH(PIT)	GIJ V6 MODEM DJB ACO JESEY (RNAV)–STAR	
CHICAGO(ORD)		
DETROIT SATS(DET,ARB,PTK,YIP,CYQG)	(AOB 170; DME/DME/IRU OR GPS REQUIRED)DUFEE ELX HOSSA PETTE (RNAV)–STAR	
DETROIT(DTW)	(150–230 INC; DME/DME/IRU OR GPS REQUIRED)(DTW NORTH FLOW)RAYNR BRTMN DNIKA TAAYZ PETTY DUUDA KKISS (RNAV)–STAR or (150–230 INC; DME/DME/IRU OR GPS REQUIRED)(DTW SOUTH FLOW)RAYNR BRTMN DNIKA TAAYZ PETTY DUUDA RKCTY (RNAV)–STAR	1100–0300 1100–0300
MUSKEGON(MKG)	PETTY	
PITTSBURGH(PIT)	GIJ V6 DJB ACO JESEY (RNAV)–STAR	
SAGINAW(MBS)	PETTY MKG	
CHICAGO/ROCKFORD(RFD)		
SOUTH BEND(SBN)	GRIFT T265 KLROY	
DETROIT METRO(DTW,DET,YQG,PTK,YIP,ARB)		
MILWAUKEE(MKE)	(RNAV ONLY)MIGGY (RNAV)–DP GETCH LYSTR SUDDS	

SPECIAL LOW ALTITUDE PREFERRED DIRECTION ROUTES

Terminals	Route	Effective Times (UTC)
TRAFFIC OVERFLYING ZOB ARTCC LANDING AT ORD		
WESTBOUND	OXI KNOX–STAR	

HIGH ALTITUDE

Terminals	Route	Effective Times (UTC)
AKRON(CAK)		
CHARLOTTE(CLT)	CTW JPU HVQ LNDIZ PARQR (RNAV)–STAR	
CHICAGO(ORD)	(ADVANCED RNAV)MFD092 MFD WEEVR Q62 WATSN WATSN (RNAV)–STAR	

SPECIAL HIGH ALTITUDE PREFERRED DIRECTION ROUTES

Terminals	Route	Effective Times (UTC)
TRAFFIC OVERFLYING BADGER (BAE) VORTAC TO WASHINGTON DULLES (IAD) (GPS OR DME/DME–IRU EQUIPPED)	J34 AIR MGW GIBBZ (RNAV)–STAR	
TRAFFIC OVERFLYING GIPPER (GIJ) VORTAC TO WASHINGTON DULLES (IAD) (GPS OR DME/DME–IRU)	J146 WOOST J34 AIR MGW GIBBZ (RNAV)–STAR	

HIGH ALTITUDE—PREFERRED DIRECTION ROUTES

Airway	Segment Fixes	Direction Effective	Effective Times (UTC)
J30	JOLIET, IL to TRIXY, VA	E BND	1100–0300
J34	BELLAIRE, OH to TRIXY, VA	E BND	1100–0300
J162	BELLAIRE, OH to MARTINSBURG, WV	E BND	1100–0300

APPENDIX 37
TOWER ENROUTE CONTROL (TEC) - INTRODUCTION - NE

508 TOWER ENROUTE CONTROL (TEC)

Within the national airspace system it is possible for a pilot to fly IFR from one point to another without leaving approach control airspace. This is referred to as “tower enroute” which allows flight beneath the enroute structure. The tower enroute concept has been expanded (where practical) by reallocating airspace vertically/geographically to allow flight planning between city pairs while remaining within approach control airspace. Pilots are encouraged to solicit tower enroute information from FSS's and to use the route descriptions provided in this directory when filing flight plans. Other airways which appear to be more direct between two points may take the aircraft out of approach control airspace thereby resulting in additional delays or other complications. All published TEC routes are designed to avoid enroute airspace and the majority are within radar coverage. Additional routes and other changes will appear in forthcoming editions as necessary. The acronym “TEC” should be included in the remarks section of the flight plan. This will advise ATC that the pilot intends to remain within approach control airspace for the entire flight. The following items should be noted before using the graphics and route descriptions:

1. The graphic is not to be used for navigation nor detailed flight planning. Not all city pairs are depicted. It is intended to show general geographic areas connected by tower enroute control. Pilots should refer to route descriptions for specific flight planning.

2. The route description contains four columns of information: i.e., the approach control area (listed alphabetically) within which the departure airport is located (check appropriate flight information publications), the specific route (airway, radial, etc.), the highest altitude allowed for the route, and the destination airport (listed alphabetically). Be advised, many destination airports are associated with a larger primary airport. Check the legend preceding this listing for this association.

3. The word “DIRECT” will appear as the route when radar vectors will be used or no airway exists. Also, this indicates that a Standard Instrument Departure (SID) or Standard Terminal Arrival Route (STAR) may be applied by ATC.

4. When a NAVAID or intersection identifier appears with no airway immediately preceding or following the identifier, the routing is understood to be DIRECT to or from that point unless otherwise cleared by ATC.

5. Routes beginning or ending with an airway indicate that the airway essentially overflies the airport or radar vectors will be applied.

6. Where more than one route is listed to the same destination, the pilot may select which route is desired. Unless otherwise stated, all routes may be flown in either direction.

7. Routes are effective only during each respective terminal facility's normal operating hours. Pilots are cautioned to check NOTAMS to ensure appropriate terminal facilities will be operating for the planned flight time.

8. All identifiers used for NAVAIDS, airports, and intersections are official identifiers.

9. Altitudes are listed in thousands of feet. ATC may require altitude changes to maintain flight within approach control airspace. ATC will provide radar monitoring and, if necessary, course guidance if the highest altitude assigned by ATC is below the Minimum Enroute Altitude (MEA).

10. Although all airports are not listed under the destination column, IFR flight may be planned to satellite airports in proximity to major airports via the same routing.

11. Flight plans should be filed with a Flight Service Station (FSS).

TOWER ENROUTE CONTROL CITY PAIRS

(1) Single Engine only.
(2) Props less than 210 KT IAS.
(3) Props less than 250 KT IAS.
(4) Jets and Props greater than 210 KT IAS.
(5) Jets and Props greater than 250 KTS IAS.

Boston—NO SATS = BED/LWM/BVY/FIT/6B6/2B2
SO SATS = BOS/OWD/1B9/3B2
Bradley = BDL/BAF/CEF/7B2
Bradley/Hartford = HFD/MMK/IJD/4B8
Bradley/Worcester = ORH/3B0/1B6
Manchester = MHT/ASH/CON/LCI
Manchester/Pease = PSM/DAW/3B4
New York/Bridgeport = BDR/HVN/OXC/3B9
Philadelphia = NO SATS = OQN/MQS/LOM/DYL/PNE/CKZ/PTW/UKT/TTN
SO SATS = ILG/EVY
Portland = PWM/IWI/NHZ/RKD
Portland/Augusta = AUG/LEW/WVL/IZG/81B
Providence = PVD/EWB/TAN/SFZ/UUU/LZD
Providence/Groton = GON/WST/BID/0B8

APPENDIX 38
TOWER ENROUTE CONTROL (TEC) - TABLE - NE

Approach Control Area (Including Satellites)		Route	Highest Altitude	Destination
ALBANY(ALB)	.....	ALB GDM V431 LOBBY	10000	BEDFORD(BED)
	.....	ALB GDM V431 REVER	10000	BOSTON(BOS)
	.....	ALB V44 DENNA	10000	BRIDGEPORT(BDR)
	.....	ALB T608 WOZEE	10000	BUFFALO(BUF)
	.....	(3)ALB V123 HAARP	10000	DANBURY(DXR)
	.....	(4)ALB V157 HAARP	10000	DANBURY(DXR)
	.....	ALB T300 STELA	10000	GROTON (NEW LONDON)(GON)
	.....	DIRECT	10000	HARTFORD(HFD)
	.....	CTR PVD T393 GAILS	10000	HYANNIS(HYA)
	.....	KEYNN MANCH	10000	MANCHESTER(MHT)
	.....	ALB CTR PVD PVD167 NEWBE DEEPO	10000	NANTUCKET(ACK)
	.....	ALB V123 TRESA	10000	NEW YORK(SWF)
	.....	ALB GDM V431 LOBBY	10000	NORWOOD(OWD)
	.....	ALB CAM CON	10000	PORTLAND(PWM)
	.....	ALB CON	10000	PORTSMOUTH(PSM)
	.....	ALB CTR PVD	10000	PROVIDENCE(PVD)
	.....	CTR PVD T393 GAILS	10000	PROVINCETOWN(PVC)
	.....	ALB T608 ROC	10000	ROCHESTER(ROC)
	.....	ALB T608 LAMMS	10000	ROME(RME)
	.....	ALB CTR V405 PVD	10000	VINEYARD HAVEN(MVY)
	.....	ALB T300 STELA	10000	WINDSOR LOCKS(BDL)
	.....	DIRECT	10000	WINDSOR LOCKS(BDL)
	.....	ALB T300 STELA	10000	WORCESTER(ORH)
ALLENTOWN(ABE)	.....	FJC LAAYK	7000	ALBANY(ALB)
	.....	FJC ARD CYN	5000	ATLANTIC CITY(ACY)
	.....	ETX V39 LRP V499 BAL	8000	BALTIMORE(BWI)
	.....	(2)ETX V30 SBJ	5000	FARMINGDALE(FRG)
	.....	ETX V162 HAR	8000	HARRISBURG(HAR)
	.....	FJC V162 HUO IGN PWL PWL111 BRISS	5000	HARTFORD(HFD)
	.....	ETX V39 LRP	4000	LANCASTER(LNS)
	.....	FJC BWZ	6000	NEWARK(EWR)
	.....	BUSKY PTW(RNAV EQUIPPED TURBOJETS ONLY)	7000	PHILADELPHIA(PHL)
	.....	ETX V29 PTW(PISTON ONLY)	4000	PHILADELPHIA(PHL)
	.....	BUSKY PTW(RNAV EQUIPPED TURBOPROPS ONLY)	5000	PHILADELPHIA(PHL)
	.....	FJC ARD	5000	PHILADELPHIA(PNE)
	.....	FJC V6 SEG	8000	PITTSBURGH(PIT)
	.....	ETX	4000	READING(RDG)
	.....	FJC STW	5000	TETERBORO(TEB)
	.....	ETX V39 LRP V499 BAL	8000	WASHINGTON(DCA)
	.....	ETX LRP V143 MULRR AML	8000	WASHINGTON(IAD)
	.....	(4)STW SAX V39 BREZY	5000	WHITE PLAINS(HPN)
	.....	(2)FJC V162 HUO IGN V157 HAARP	5000	WHITE PLAINS(HPN)
	.....	FJC LVZ	7000	WILKES-BARRE/SCRANTON(AVP)
	.....	ETX V29 PTW	4000	WILMINGTON(ILG)
	.....	FJC V162 HUO IGN PWL PWL111 BRISS	5000	WINDSOR LOCKS(BDL)
ATLANTIC CITY(ACY)	.....	(1)CRESI V1 DIXIE V276 ARD	5000	ALLENTOWN(ABE)
	.....	V229 DIXIE V276 ARD	5000	ALLENTOWN(ABE)
	.....	LEEAH V268 BAL	4000	BALTIMORE(BWI)
	.....	CRESI V1 JFK V229 HFD CLOWW(SINGLE ENGINE AND /E, /F, /G ONLY)	5000	BANGOR(BGR)
	.....	CRESI V1 JFK V229 HFD CLOWW(SINGLE ENGINE AND /E, /F, /G ONLY)	5000	BAR HARBOR(BHB)
	.....	(1)CRESI V1 JFK V229 HFD DREEM	5000	BOSTON (NORTH)
	.....	CRESI V1 JFK V229 HFD FOSTY WOONS(SINGLE ENGINE AND /E, /F, /G ONLY)	5000	BOSTON(BOS)
	.....	(1)CRESI V1 JFK V229 HFD V3 WOONS	5000	BOSTON(BOS)
	.....	V184 ZIGGI JFK210 JFK V229 BDR(TWINS ONLY; N/A 1400-2100)	5000	BRIDGEPORT(BDR)
	.....	(1)HOWIE V1 JFK V229 BDR	5000	BRIDGEPORT(BDR)
	.....	LEEAH V1 ATR V308 OTT	4000	CAMP SPRINGS(ADW)

APPENDIX 39
TOWER ENROUTE CONTROL (TEC) - INTRODUCTION & TABLE - SC

TOWER ENROUTE CONTROL (TEC)
FOR
SOUTH CENTRAL TEXAS AND LOUISIANA

Within the national airspace system it is possible for a pilot to fly IFR from one point to another without leaving approach control airspace. This is referred to as "Tower Enroute" which allows flight beneath the enroute structure. The tower enroute concept has been expanded (where practical) by reallocating airspace vertically/geographically to allow flight planning between city pairs while remaining within approach control airspace. Pilots are encouraged to use the TEC route descriptions provided in the South Central U.S. Chart Supplement when filing flight plans. Other airways which appear to be more direct between two points may take the aircraft out of approach control airspace thereby resulting in additional delays or other complications. All published TEC routes are designed to avoid enroute airspace and the majority are within radar coverage. The following items should be noted before using the graphics and route descriptions.

1. The graphic is not to be used for navigation nor detailed flight planning. Not all city pairs are depicted. It is intended to show geographic areas connected by tower enroute control. Pilots should refer to route descriptions for specific flight planning.

2. The route description contains three columns of information after geographic area listed in the heading, where the departure airport is located; i.e., the airport/airports of intended landing using FAA three letter/letter–two number identifiers, the specific route (airway, radial, etc.), the altitudes allowed for the routes.

3. The word "DIRECT" will appear as the route when radar vectors will be used or no airway exists. Also this indicates that a Standard Instrument Departure (SID) or Standard Terminal Arrival (STAR) may be applied by ATC.

4. Routes beginning and ending with an airway indicate that the airway essentially overflies the airport or radar vectors will be applied.

5. Although all airports are not listed under the destination column, IFR flight may be planned to satellite airports in the proximity of major airports via the same routing.

6. The altitudes shown are to be used for the route. This allows for separation of various arrival routes, departure routes, and overflights to, from, and over all airports in the Houston area.

FROM: AUS

TO:	ROUTE	ALTITUDE
45R	TNV V306 DAS	050 OR 070
BMT	TNV V306 DAS	050 OR 070
BPT	TNV V306 DAS	050 OR 070
LCH	TNV V306 DAS	050 OR 070
ORG	TNV V306 DAS	050 OR 070

FROM: EDC

TO:	ROUTE	ALTITUDE
45R	TNV V306 DAS	050 OR 070
BMT	TNV V306 DAS	050 OR 070
BPT	TNV V306 DAS	050 OR 070
LCH	TNV V306 DAS	050 OR 070
ORG	TNV V306 DAS	050 OR 070

FROM: GTU

TO:	ROUTE	ALTITUDE
45R	CLL T254 LCH	050 OR 070
BMT	CLL T254 LCH	050 OR 070
BPT	CLL T254 LCH	050 OR 070
LCH	CLL T254 LCH	050 OR 070
ORG	CLL T254 LCH	050 OR 070

FROM: HYI

TO:	ROUTE	ALTITUDE
45R	WEMAR V198 ELA V556 SBI	050 OR 070
BMT	WEMAR V198 ELA V556 SBI	050 OR 070
BPT	WEMAR V198 ELA V556 SBI	050 OR 070
LCH	WEMAR V198 ELA V556 SBI	050 OR 070
ORG	WEMAR V198 ELA V556 SBI	050 OR 070

APPENDIX 40
TOWER ENROUTE CONTROL (TEC) - INTRODUCTION & LEGEND - SW

TOWER ENROUTE CONTROL (TEC) FOR NORTHERN CALIFORNIA

Within the national airspace system it is possible for a pilot to fly IFR from one point to another without leaving approach control airspace. This is referred to as "Tower Enroute" which allows flight beneath the enroute structure. The tower enroute concept has been expanded (where practical) by reallocating airspace vertically/geographically to allow flight planning between city pairs while remaining within approach control airspace. Pilots are encouraged to use the TEC route descriptions provided in the Southwest U.S. Chart Supplement when filing flight plans. Other airways which appear to be more direct between two points may take the aircraft out of approach control airspace thereby resulting in additional delays or other complications. All published TEC routes are designed to avoid enroute airspace and the majority are within radar coverage. The following items should be noted before using the graphics and route descriptions.

1. The graphic is not to be used for navigation nor detailed flight planning. Not all city pairs are depicted. It is intended to show geographic areas connected by these routes. Pilots should refer to route descriptions for specific flight planning.

2. The route description contains five columns of information after geographic area listed in the heading, where the departure airport is located; i.e., the airport/airports of intended landing using FAA three letter/letter-two number identifiers, the coded route number, route direction (See item 8), the specific route (airway, radial, etc.), the altitude allowed for type of aircraft and the routes.

3. The word "DIRECT" will appear as the route when radar vectors will be used or no airway exists. Also this indicates that a Standard Instrument Departure (SID) or Standard Terminal Arrival (STAR) may be applied by ATC.

4. When a NAVAID or intersection identifier appears with no airway immediately preceding or following the identifier, the routing is understood to be DIRECT to or from that point unless otherwise cleared by ATC or radials are listed (See item 5).

5. Routes beginning and ending with an airway indicate that the airway essentially overflies the airport or radar vectors will be applied.

6. Where more than one route is listed to the same destination, ensure you file correct route for type of aircraft which is denoted after the route in the altitude column using J,M,P, or Q. These are listed after item 10 under Aircraft Classification.

7. Although all airports are not listed under the destination column, IFR flight may be planned to satellite airports in the proximity of major airports via the same routing.

8. The runway in use at San Francisco International Airport (SFO) determines which route to file in Northern California. When SFO is landing Runways 28/01, file the applicable SFOW route. When SFO is landing Runways 19/10, file the applicable SFOE route. If there is no direction listed, the route may be filed regardless of the runway in use at SFO.

9. Aircraft types (i.e. J, M, P, and Q) are listed at the beginning of the altitude and should be used with the route of flight filed. (See Aircraft Classification below). The altitudes shown are to be used for the route. This allows for separation of various arrival routes, departure routes, and overflights to, from, and over all airports in the Northern California area.

10. Until further notice, do not file coded route identifiers; file the full route listed

LEGENDS

AIRCRAFT CLASSIFICATION

(J) =Jet powered
(M) =Turbo Props/Special (cruise speed 190 knots or greater)
(P) =Non-jet (cruise speed 190 knots or greater)
(Q) =Non-jet (cruise speed 189 knots or less)

APPENDIX 41
TOWER ENROUTE CONTROL (TEC) - TABLE - SW

TOWER ENROUTE CONTROL FOR NORTHERN CALIFORNIA

HAYWARD

FROM: HWD

TO:	ROUTE	DIRECTION	ROUTE	ALTITUDE
AUN BAB E36 GOO JAQ LHM MCC MHR MYV O61 OVE PVF RIU	HWD01	SFOW	OAK V6 SAC	Q50MP90
AUN BAB E36 GOO JAQ LHM MCC MHR MYV O61 OVE PVF RIU	HDW12	SFOW	SAC	J110
CCR DWA EDU O41 SUU VCB	HWD02		OAK V6 COLLI	JMPQ50
CVH MRY OAR SNS WVI	HWD03	SFOW	OSI V25 SNS	JMPQ50
CVH MRY OAR SNS WVI	HWD72	SFOE	OAK V107 CATHE V111 SNS	JMPQ50
HAF	HWD40	SFOE	GOBBS	MPQ40
LSN MCE MER MOD LVK SCK TCY C83 O27 103	HWD04		OAK MOD	JMP70Q50
NUQ PAO RHV SJC E16	HWD05	SFOW	OSI	J50
NUQ PAO RHV SJC E16	HWD12	SFOE	SJC	JMPQ40
NUQ PAO RHV SJC E16	HWD08	SFOW	SAC	J110
NUQ PAO RHV SJC E16	HWD07	SFOW	SUNOL SJC	MPQ60
SAC SMF O88	HWD74	SFOE	OAK V244 ALTAM V392 SAC	MP70Q50
SAC SMF O88	HWD09	SFOW	OAK V6 SAC	MP90Q50
SMF	HWD10	SFOW	SAC	J110MP90
SQL	HWD71	SFOE	OSI	JMPQ50
SQL	HWD11	SFOW	OSI JEFNY	MPQ40

LIVERMORE

FROM: LVK

TO:	ROUTE	DIRECTION	ROUTE	ALTITUDE
AUN BAB E36 GOO JAQ LHM MCC MHR MYV O61 OVE PVF RIU	LVK01		ALTAM V392 SAC	JMP70Q50
CVH MRY SNS OAR WVI	LVK02		ALTAM MOD V111 SNS	J100MPQ60
HAF	LVK03		ALTAM V334 SUNOL	JPT40
LSN MCE MER MOD	LVK05		ALTAM MOD	JMPQ50
LVK SCK TCY C83 O27 103	LVK06		ALTAM	JMPQ50
NUQ PAO RHV SJC E16	LVK07		ALTAM V334 SJC	JMPQ60
OAK HWD	LVK79		ALTAM	JMPQ60
SAC SMF O88	LVK14		ALTAM V334 SAC	MPQ70
SFO	LVK10		ALTAM	JMPQ60
SQL	LVK12		ALTAM V334 SUNOL DOCAL	MPQ60

MATHER

FROM: AUN BAB E36 GOO JAQ LHM MCC MHR MYV O61 OVE PVF RIU

TO:	ROUTE	DIRECTION	ROUTE	ALTITUDE
AUN BAB E36 GOO JAQ	MHR01			JMPQ50
CVH MRY OAR SNS WVI	MHR13		MOD V111 SNS	JMP130
CVH MRY OAR SNS WVI	MHR02		MOD V111 SNS	Q70
HAF	MHR15		SAC V334 SUNOL	MPQ70
HWD	MHR12		THORN SHARR CATTY	J100
HWD	MHR16		SAC V334 SUNOL	MPQ70
LSN MCE MER MOD	MHR11		MOD	JMP70Q50
LVK SCK TCY C83 O27	MHR10		LIN	J70MPQ50
NUQ PAO RHV SJC E16	MHR14		SAC MOD KLIDE	J100MP90
NUQ PAO RHV SJC E16	MHR17		MOD BORED KLIDE	J100MP90Q60
NUQ PAO RHV SJC E16	MHR09		MOD BUSHY LICKE	J100MP90Q60
OAK	MHR72	SFOE	SAC V494 POPES SGD V87 REBAS	MPQ60
OAK	MHR08	SFOW	THORN BANND TOOOL OAK	J100
OAK	MHR07	SFOW	SAC V334 SUNOL	MPQ60
OAK	MHR75	SFOW	THORN BANND KEENR HIRMO	J100
SAC SMF O88	MHR06		SAC	JMPQ50
SFO	MHR17	SFOE	SAC V6 RYMAR CCR	MPQ80
SFO	MHR74	SFOE	THORN ALWYS ARRTU BERKS SFO	J150
SFO	MHR04	SFOW	THORN ALWYS CEDES ARCHI SFO	J150
SFO	MHR05	SFOW	ORRCA RISTI (RNAV)-STAR	MPQ90
SQL	MHR03		CEDES	MPQ70

APPENDIX 42
NORTH AMERICAN ROUTES

NORTH AMERICAN ROUTES

NORTH AMERICAN ROUTES FOR NORTH ATLANTIC TRAFFIC (NAR)

"NORTH AMERICAN ROUTE PROGRAM (NRP)."

Introduction

(a) The North American Route Program (NRP) is a joint FAA and NAV CANADA program, the objective of which is to harmonize and adopt common procedures, to the extent possible, for application to random route flight operations at and above FL 290 within the conterminous U.S. and Canada.
(b) The NRP will be implemented through various phases with the end goal of allowing all international and domestic flight operations to participate in the NRP throughout the conterminous U.S., Alaska, and Canada.
(c) Flights may participate in the NRP under specific guidelines and filing requirements:
1. provided the flight originates and terminates within conterminous U.S. and Canada; or,
2. for North Atlantic international flights operating within the North American Route (NAR) System.

FAA/NAV CANADA Common Procedures

The following common FAA and NAV CANADA procedures apply:
(a) Flights to operate at or above FL 290.
(b) For that portion of flight within 200 NM of the departure or destination airport, flights shall be filed and operated via Standard Instrument Departures (SID), Departure Procedures (DP), Standard Terminal Arrival Routes (STAR) or published Preferred IFR Routes. If none of the above are available, airways may be used.
(c) NRP flights are not normally subject to routing restrictions such as published Preferred IFR Routes or airways, beyond a 200 NM radius of both the departure and destination airports.
(d) Flight planning requirements are:
1. routes shall contain at least one significant point in each delegated area of airspace jurisdiction for each FAA Air Route Traffic Control Center (ARTCC) or Canadian FIR/CTA;
2. significant points may be a navigational aid or waypoint defined in fix–radial distance (FRD) format from a navigational aid. Within Canadian airspace a significant point may also be a coordinate described in degrees and minutes of latitude/longitude;
3. for routes that cross the U.S./Canadian border, a significant point within 30 NM of either side of the border shall be filed;
4. significant points should be filed for all turnpoints;
5. route(s) shall avoid active Class F airspace;
6. "NRP" shall be entered in the Remarks section of the flight plan; and
7. flight plans to be filed at least one hour prior to departure.
(e) In the event that a NRP aircraft has to be recleared due to weather or tactical reasons, ATC will attempt to return the aircraft to the original NRP routing as soon as practical. Aircraft that depart from the NRP routing due to a pilot request or an ATC clearance authorizing a direct routing will be considered as a non participant of the NRP.
(f) Unless published routing restrictions are in effect, North Atlantic International flights planning to operate within the NAR System may file NRP routes beyond 200 NM of the NAR identified system airport and the published Inland Navigation Fixes (INFs).

Specific FAA Requirements

The following specific FAA requirements apply:
(a) Flights may not be filed via a DP/STAR within offshore transition areas (12 NM or more off the U.S. shoreline).
(b) Flights may be filed and flown on the complete transition of DPs and/or STARs for specific airports in lieu of the 200 NM route planning requirement described in Common Procedures, paragraph "b" above. For listing of the airports refer to the current FAA Advisory Circular–NRP.
(c) Flights not meeting the above guidelines are to be requested through the FAA nonpreferred route programs. Those requests will be approved/disapproved on a workload permitting basis.

NORTH AMERICAN ROUTE (NAR) SYSTEM

GENERAL

a. The objectives of the NAR System are as follows:
1. To expedite flight planning.
2. To reduce the complexity of route clearances and thereby minimize the confusion and error potential inherent in lengthy transmissions and readbacks; and
3. To minimize the time spent in the route clearance delivery function.
b. The NAR System is designed to accommodate major airports in North America where the volume of North Atlantic (NAT) traffic and route complexity dictate a need to meet the above objectives. It is for the use of traffic entering/exiting the NAT and consists of a series of pre–planned routes from/to coastal fixes and identified system airports. Most of the routes are divided into two portions:
1. Common Portion: That portion of the route between a specified coastal fix or an oceanic entry/exit point and a specified inland navigation fix (INF). Some routes have a common portion only (N598A-N700A); and
2. Non–common Portion: That portion of the route between a specified INF and a system airport. The routes are within the high level airspace structure with a transition to/from system airports.
c. The routes are prefixed by the abbreviation "N" with the numbering for the common portions orientated geographically from south to north. The ODD numbers have eastbound applications while the EVEN numbers apply to westbound. Following a one–to three–digit number, an alpha character indicates the validation codes and forms part of the route identifier. Validation codes are associated to amendments to the common routes only and not to non–common route portions.
d. Since a primary function of the NAR system is to compliment the NAT traffic flow, a limited number of NAR routes, appropriate for the coastal fixes or oceanic entry/exit points serving the organized Organized Track System (OTS) and the domestic traffic organization, are included in the daily NAT/OTS message published by the Gander and Shanwick Oceanic Area Centers.
e. Aircraft can only join the NAR system:
1. At an identified coastal fix or oceanic entry/exit point; or
2. On departure from one of the identified system airports; or
3. At an identified INF.

APPENDIX 42
NORTH AMERICAN ROUTES (CONTINUED)

NORTH AMERICAN ROUTES

FLIGHT PLANNING—GENERAL

Westbound

a. Westbound routes begin at the oceanic exit points, thence along common route portions to an INF and then fan-out along non common routes to selected system airports;
b. For aircraft proceeding to an identified system airport and the route of flight to destination is described by a single NAR designator, use the designator;
c. For aircraft proceeding to a non system airport but the route of flight is described by the common route portion to an identified INF, use the designator to the INF followed by a detailed routing to the destination.

Eastbound

a. Eastbound routes only have a common portion from the INF to a coastal fix or oceanic entry point;
b. When the route of flight is described by a single NAR designator, use the designator;
c. For aircraft departing from a non-system airport, file via an appropriate detailed routing to the applicable INF and thence via the common portion to the coastal fix or oceanic entry point using the NAR designator;

General

For those cases not described above, a detailed routing is required.

NAR REQUIREMENT

General

a. Generally there is no requirement to flight plan and operate using the NAR system. Eastbound aircraft intending to operate on the NAT OTS and operating wholly on or south of a line between the intersections BAREE and TUDEP shall flight plan and operate using one of the NARs published on the daily OTS Message. Westbound aircraft exiting the ocean via oceanic/coastal fixes JEBBY, CARAC, BOBTU, JAROM or VODOR must file via one of the published NAR common portions as specified in the CFS unless re-entering NY oceanic via M201/M202/M203:
  i. JEBBY CARAC - N14B, N16B, N18D, N20A, N22A
  ii. BOBTU JAROM - N24A, N26A, N28A, N30A, N32A, N34A, N36F, N38F, N40F
  iii. VODOR - N42C, N44C, N46F, N48F, N50F, N52F, N54F, N56F
b. NARs may be assigned by air traffic control for the tactical management of air traffic in Canadian domestic airspace.
c. For operators who elect not to use the NAR system, the rules of the NRP apply.

ROUTE CLEARANCES

a. For aircraft operating within the NAR System, the ATC routing clearance and pilot readback will be indicated by the NAR designator, e.g., “North American Route 105B”;
b. For aircraft operating in the NAR System, but only using the common route portion, the ATC routing clearance and pilot readback will be indicated by the NAR designator followed by the detailed routing;
c. For aircraft not operating in the NAR System, the ATC routing clearance and pilot readback will be via a detailed route;
d. Aircraft cleared to a system airport via a NAR designator are to follow the common and the non–common portion of the route to a system airport. If either the common or non–common portion of the issued NAR is incompatible or unacceptable, the pilot is to advise ATC accordingly.

DOCUMENTATION

a. It is expected that the following NAR documentation will be carried on the flight deck of each aircraft operating within the NAR system:
  1. The current publications of NAV CANADA Canadian Flight Supplement; or Federal Aviation Administration Airport/Facility Directory Northeast U.S. (AFDNE); or another product which provides the current NAR; and
  2. the information in the current NAT/OTS message.
b. Changes to the NAR routes are advertised in the monthly publication Notices to Airmen Publication (NTAP).

COMMON PROCEDURES FOR RADIO COMMUNICATIONS FAILURE

a. The following procedures are intended to provide general guidance for North Atlantic (NAT) aircraft experiencing a communications failure. These procedures are intended to complement and not supersede state procedures/regulations. It is not possible to provide guidance for all situations associated with a communications failure.
  1. If so equipped, the pilot of an aircraft experiencing a two–way radio communications failure shall:
    i. operate the secondary radar transponder on identity Mode A) Code 7600 and Mode C; and
    ii. attempt to contact any ATC facility or another aircraft and inform them of the difficulty and request they relay information to the ATC facility with whom communications are intended.
b. Communications failure prior to entering NAT oceanic airspace
  1. If operating with a received and acknowledged oceanic clearance, the pilot shall enter oceanic airspace at the cleared oceanic entry point, level and speed and proceed in accordance with the received and acknowledged oceanic clearance. Any level or speed changes required to comply with the oceanic clearance shall be completed within the vicinity of the oceanic entry point.
  2. If operating without a received and acknowledged oceanic clearance, the pilot shall enter oceanic airspace at the first oceanic entry point, level and speed, as contained in the filed flight plan and proceed via the filed flight plan route to landfall. That first oceanic level and speed shall be maintained to landfall.
c. Communications failure prior to exiting NAT oceanic airspace
  1. Cleared on flight plan route
  The pilot shall proceed in accordance with the last received and acknowledged oceanic clearance to the last specified oceanic route point, normally landfall, then continue on the flight plan route. Maintain the last assigned oceanic level and speed to landfall. After passing the last specified oceanic route point, conform with the relevant State procedures/regulations.
  2. Cleared on other than flight plan route
  The pilot shall proceed in accordance with the last received and acknowledged oceanic clearance to the last specified oceanic route point, normally landfall. After passing this point, rejoin the filed flight plan route by proceeding directly to the next significant point ahead of the track of the aircraft as contained in the filed flight plan. Where possible use published ATS route structures, then continue on the flight plan route. Maintain the last assigned oceanic level and speed to the last specified oceanic route point. After this point conform with the relevant State procedures/regulations.

APPENDIX 42
NORTH AMERICAN ROUTES (CONTINUED)

NORTH AMERICAN ROUTES

BOSTON ARTCC NORTH ATLANTIC ADVISORY

The Boston ARTCC North Atlantic Advisory is published daily and establishes required routing for aircraft that transition into the North American Route structure and the North Atlantic Track system. The North Atlantic Advisory provides specific routing for international traffic transitioning Boston ARTCC airspace and proceeding across the North Atlantic with the following exceptions:

Departures from ATL, CLT, DFW, IAD, IAH, MCO, MIA, RDU via eastbound routes that will traverse Boston ARTCC airspace may file the following:

(1) Via RBV LLUND
   a. LLUND BAYYS PUT QUBIS/TAFFY/ MIILS/TOPPS/EBONY
   b. LLUND BAYYS PUT WITCH ALLEX
   c. LLUND BAYYS PUT TUSKY/BRADD/KANNI

(2) Via RBV J62 RIFLE SHHAR TUSKY/BRADD/KANNI/WHALE/VITOL

(3) Via J174 RIFLE SHHAR TUSKY/BRADD/KANNI/WHALE/VITOL

(4) When the tracks are ALLEX and North, users may file to the most southern INF published on the daily track message
   a. Via RBV J62 RIFLE ACK (then direct to the most southern published INF)
   b. Via J174 RIFLE ACK (then direct to the southernmost published INF)

The Boston ARTCC North Atlantic Advisory is effective between the hours of 2000–0500 UTC.

APPENDIX 43
NORTH AMERICAN ROUTES - COMMON PORTION TABLE

NORTH AMERICAN ROUTES (NAR)

The following listing divides the NAR Route descriptions into two sections according to the direction of flight (eastbound or westbound). Each section is subdivided according to the route portion (Common or Non-common). The Common portion describes the NAR route between the Coastal Fix and the Inland Navigational Facility/Fix. The Non-common portion describes the route between the NAR route system airport being used and the Inland Navigational Facility/Fix.

COMMON PORTION (EASTBOUND)

NAR Designator	Inland Navigation Facility/Fix	Route Description	Coastal Fix
N3A	SIE	B24 LYNUS	SLATN
N7A	MANTA	OWENZ LINND R56	SLATN
N11A	SIE	B24 LYNUS	JOBOC
N15B	MANTA	OWENZ LINND R56 KENDA	JOBOC
N21A	VITOL	Direct	CARAC
N23A	WHALE		CARAC
N25A	ALLEX	Direct	CARAC
N27A	KANNI		CARAC
N29A	KANNI	GAYBL	CARAC
N31F	VITOL	LOMPI	JAROM
N33D	WHALE	LOMPI	JAROM
N35B	WHALE	GAYBL LOMPI	JAROM
N37C	EBONY	LOMPI	JAROM
N39A	KANNI	LOMPI	JAROM
N41A	KANNI	GAYBL LOMPI	JAROM
N43B	BRADD	LOMPI	JAROM
N45D	VITOL	NANSO	RAFIN
N47C	VITOL	CARAC NANSO	RAFIN
N49C	WHALE	NANSO	RAFIN
N51D	WHALE	GAYBL NANSO	RAFIN
N53D	KANNI	NANSO	RAFIN
N55A	BRADD	SCOTS	RAFIN
N57A	MIILS	PEPRA	RAFIN
N59C	MIILS	Direct	RAFIN
N61A	KANNI	GAYBL NANSO	RAFIN
N63A	BRADD	Direct	RAFIN
N65A	TUSKY	Direct	RAFIN
N67A	TUSKY	SCOTS	RAFIN
N69A	ALLEX	Direct	RAFIN
N71A	EBONY	Direct	RAFIN
N73A	VITOL	Direct	SUPRY
N75A	WHALE	Direct	SUPRY
N77A	WHALE	GAYBL	SUPRY
N79A	KANNI	Direct	SUPRY
N81A	BRADD	Direct	SUPRY
N83A	BRADD	SCOTS	SUPRY
N85A	TUSKY	SCOTS	SUPRY
N87A	TUSKY	Direct	SUPRY
N89A	MIILS	PEPRA	SUPRY
N91A	MIILS	RUBDA	SUPRY
N93A	MIILS	Direct	SUPRY
N95A	ALLEX	Direct	SUPRY
N97A	EBONY	Direct	SUPRY
N99A	VITOL	GAYBL	SUPRY
N101A	VITOL	Direct	RELIC
N103A	VITOL	GAYBL	RELIC
N105D	WHALE	Direct	RELIC
N107D	WHALE	GAYBL	RELIC
N109D	KANNI	Direct	RELIC
N111D	BRADD	Direct	RELIC
N113D	BRADD	SCOTS	RELIC
N115D	TUSKY	Direct	RELIC

NE, 12 AUG 2021 to 7 OCT 2021

APPENDIX 44
NORTH AMERICAN ROUTES - NON-COMMON PORTION TABLE

NON–COMMON PORTION (WESTBOUND)
VIA ALLEX

Inland Navigation Facility/Fix	Non–Common Portion	Destination
ALLEX	FOXBO RIFLE J174 ZIZZI ATR LAFLN SPISY (RNAV)–STAR	ANDREWS
ALLEX	ENE BAF Q448 PTW J48 FLASK OZZZI (RNAV)–STAR	ATLANTA
ALLEX	KAYCC KYLOH NELIE Q75 MXE V378 NUGGY TRISH (RNAV)–STAR	BALTIMORE
ALLEX	AJJAY OOSHN (RNAV)–STAR	BOSTON
ALLEX	FOXBO RIFLE J174 ORF RAPZZ AMYLU (RNAV)–STAR	CHARLESTON, SC
ALLEX	KAYCC KYLOH NELIE Q75 GVE LYH CHSLY (RNAV)–STAR	CHARLOTTE
ALLEX	ENE BAF Q406 BWZ J6 HVQ Q68 LITTR FEWWW SEEVR (RNAV)–STAR	DALLAS/FT. WORTH
ALLEX	GONZZ DONEO TPGUN (RNAV)–STAR	DETROIT
ALLEX	LARIE Q220 RIFLE Q439 BRIGS J121 SIE	DOVER
ALLEX	ENE BAF Hyper Arrival	DULLES
ALLEX	FOXBO RIFLE J174 SWL CEBEE WETRO ILM AR21 CRANS FISEL (RNAV)–STAR	FT. LAUDERDALE
ALLEX	ENE BAF Q448 PTW J48 CSN FANPO Q40 AEX DOOBI (RNAV)–STAR	HOUSTON
ALLEX	ENE Parch Arrival	KENNEDY
ALLEX	LARIE Q220 RIFLE Q439 DRIFT V312 CYN	MCGUIRE
ALLEX	FOXBO RIFLE J174 SWL CEBEE WETRO DIW AR22 JORAY HILEY (RNAV)–STAR	MIAMI
ALLEX	HANAA FLOSI (RNAV)–STAR	NEWARK
ALLEX	FOXBO RIFLE J174 SWL CEBEE WETRO ILM AR15 HIBAC CWRLD (RNAV)–STAR	ORLANDO
ALLEX	LARIE Q220 RIFLE Q439 BRIGS JIIMS (RNAV)–STAR	PHILADELPHIA
ALLEX	ENE CTR HNK CFB J190 SLT HAYNZ (RNAV)–STAR	PITTSBURGH
ALLEX	FOXBO RIFLE J174 WARNN ZJAAY TAQLE (RNAV)–STAR	RALEIGH–DURHAM
ALLEX	ALB V123 TRESA	STEWART
ALLEX	KAYCC KYLOH NELIE Q75 TEUFL GEEYE JAYJA DADES (RNAV)–STAR	TAMPA
ALLEX	ALB V489 COATE	TETERBORO
ALLEX	ALB VALRE–STAR	WESTCHESTER

VIA BRADD

Inland Navigation Facility/Fix	Non–Common Portion	Destination
BRADD	LARIE JAWZZ SEY HTO J174 ZIZZI ATR LAFLN SPISY (RNAV)–STAR	ANDREWS
BRADD	BOS BAF Q448 PTW J48 FLASK OZZZI (RNAV)–STAR	ATLANTA
BRADD	BOS Q75 MXE V378 NUGGY TRISH (RNAV)–STAR	BALTIMORE
BRADD	EURRO OOSHN (RNAV)–STAR	BOSTON
BRADD	FOXBO RIFLE J174 ORF RAPZZ AMYLU (RNAV)–STAR	CHARLESTON, SC
BRADD	BOS Q75 GVE LYH CHSLY (RNAV)–STAR	CHARLOTTE
BRADD	BOS BAF Q406 BWZ J6 HVQ Q68 LITTR FEWWW SEEVR (RNAV)–STAR	DALLAS/FT. WORTH
BRADD	GONZZ DONEO TPGUN (RNAV)–STAR	DETROIT
BRADD	LARIE Q220 RIFLE Q439 BRIGS J121 SIE	DOVER
BRADD	BOS BAF HYPER Arrival	DULLES
BRADD	FOXBO RIFLE J174 SWL CEBEE WETRO ILM AR21 CRANS FISEL (RNAV)–STAR	FT. LAUDERDALE
BRADD	BOS BAF Q448 PTW J48 CSN FANPO Q40 AEX DOOBI (RNAV)–STAR	HOUSTON
BRADD	PLYMM Parch Arrival	KENNEDY
BRADD	LARIE Q220 RIFLE Q439 DRIFT V312 CYN	MCGUIRE
BRADD	FOXBO RIFLE J174 SWL CEBEE WETRO DIW AR22 JORAY HILEY (RNAV)–STAR	MIAMI
BRADD	COPLY BOS NELIE FLOSI (RNAV)–STAR	NEWARK
BRADD	FOXBO RIFLE J174 SWL CEBEE WETRO ILM AR15 HIBAC CWRLD (RNAV)–STAR	ORLANDO
BRADD	LARIE Q220 RIFLE Q439 BRIGS JIIMS (RNAV)–STAR	PHILADELPHIA
BRADD	BOS CTR HNK CFB J190 SLT HAYNZ (RNAV)–STAR	PITTSBURGH

NE, 12 AUG 2021 to 7 OCT 2021

APPENDIX 45
MINIMUM OPERATIONAL NETWORK (MON) AIRPORT LISTING EXAMPLE

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MINIMUM OPERATIONAL NETWORK (MON) AIRPORT LISTING

STATE	CITY	AIRPORT NAME	LOCATION IDENTIFIER
AL	BIRMINGHAM	BIRMINGHAM-SHUTTLESWORTH INTL	BHM
AL	HUNTSVILLE	HUNTSVILLE INTL-CARL T JONES FIELD	HSV
AL	MONTGOMERY	MONTGOMERY RGNL (DANNELLY FIELD)	MGM
FL	MIAMI	MIAMI EXECUTIVE	TMB
FL	PENSACOLA	PENSACOLA INTL	PNS
FL	TALLAHASSEE	TALLAHASSEE INTL	TLH
FL	TAMPA	TAMPA EXECUTIVE	VDF
FL	TITUSVILLE	SPACE COAST RGNL	TIX
GA	AUGUSTA	AUGUSTA RGNL AT BUSH FIELD	AGS
GA	EASTMAN	HEART OF GEORGIA RGNL	EZM
GA	ROME	RICHARD B RUSSELL RGNL - J H TOWERS FIELD	RMG
GA	VALDOSTA	VALDOSTA RGNL	VLD
KY	LEXINGTON	BLUE GRASS	LEX
KY	LONDON	LONDON-CORBIN ARPT-MAGEE FIELD	LOZ
KY	PADUCAH	BARKLEY RGNL	PAH
NC	GREENSBORO	PIEDMONT TRIAD INTL	GSO
NC	HICKORY	HICKORY RGNL	HKY
SC	COLUMBIA	COLUMBIA METROPOLITAN	CAE
SC	GREER	GREENVILLE SPARTANBURG INTL	GSP
SC	NORTH MYRTLE BEACH	GRAND STRAND	CRE
TN	CROSSVILLE	CROSSVILLE MEMORIAL-WHITSON FIELD	CSV

SE, 22 APR 2021 to 17 JUN 2021

APPENDIX 46
ICAO INTERNATIONAL PHONETIC ALPHABET/MORSE CODE

ICAO INTERNATIONAL PHONETIC ALPHABET/MORSE CODE

A	· –	Alfa	(AL–FAH)
B	– · · ·	Bravo	(BRAH–VOH)
C	– · – ·	Charlie	(CHAR–LEE) (or SHAR–LEE)
D	– · ·	Delta	(DELL–TAH)
E	·	Echo	(ECK–OH)
F	· · – ·	Foxtrot	(FOKS–TROT)
G	– – ·	Golf	(GOLF)
H	· · · ·	Hotel	(HOH–TEL)
I	· ·	India	(IN–DEE–AH)
J	· – – –	Juliett	(JEW–LEE–ETT)
K	– · –	Kilo	(KEY–LOH)
L	· – · ·	Lima	(LEE–MAH)
M	– –	Mike	(MIKE)
N	– ·	November	(NO–VEM–BER)
O	– – –	Oscar	(OSS–CAH)
P	· – – ·	Papa	(PAH–PAH)
Q	– – · –	Quebec	(KEH–BECK)
R	· – ·	Romeo	(ROW–ME–OH)
S	· · ·	Sierra	(SEE–AIR–RAH)
T	–	Tango	(TANG–GO)
U	· · –	Uniform	(YOU–NEE–FORM) (or OO–NEE–FORM)
V	· · · –	Victor	(VIK–TAH)
W	· – –	Whiskey	(WISS–KEY)
X	– · · –	Xray	(ECKS–RAY)
Y	– · – –	Yankee	(YANG–KEY)
Z	– – · ·	Zulu	(ZOO–LOO)
1	· – – – –	One	(WUN)
2	· · – – –	Two	(TOO)
3	· · · – –	Three	(TREE)
4	· · · · –	Four	(FOW–ER)
5	· · · · ·	Five	(FIFE)
6	– · · · ·	Six	(SIX)
7	– – · · ·	Seven	(SEV–EN)
8	– – – · ·	Eight	(AIT)
9	– – – – ·	Nine	(NIN–ER)
0	– – – – –	Zero	(ZEE–RO

APPENDIX 47
HOT SPOTS - U.S. AND AK

582 AIRPORT DIAGRAMS

HOT SPOTS

An "Airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or ellipses designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

CITY/AIRPORT	HOT SPOT	DESCRIPTION
CONNECTICUT		
DANBURY		
DANBURY MUNI (DXR)	HS 1	Maint vigilance confusing twy configuration. Pilots unfamiliar should ask for progressives.
	HS 2	Area not visible from the twr.
	HS 3	Active ramp adjacent to twy.
	HS 4	Hold position marking on Twy C for Rwy 26 is further from the rwy than the std location. It will appear before you expect it.
GROTON (NEW LONDON)		
GROTON–NEW LONDON (GON)	HS 1	When ldg Rwy 15–33 and exit on Twy C, you immediately enter the parallel Twy B.
	HS 2	When ldg Rwy 15–33 and exit on Twy J, you immediately enter the parallel Twy B.
HARTFORD		
HARTFORD–BRAINARD (HFD)	HS 1	Helipad is in close proximity to the intersection of Twy A and Twy H.
WINDSOR LOCKS		
BRADLEY INTL (BDL)	HS 1	Twy C and Twy E complex int in close proximity to Rwy 01–19.
	HS 2	Acft on Twy S missing Twy C may enter Rwy 24.
	HS 3	Acft on Twy J missing Twy S may enter Rwy 33.
DELAWARE		
DOVER		
DOVER AFB (DOV)	HS 1	Intersecting of Rwy 01–19, Rwy 14–32 and Twy D btn the runways can create confusion. Query twr if lost or need help.
	HS 2	Rwy 01–19 btn Twy B and Twy E has had an increased No of rwy incursions.
	HS 3	Rwy 14–32 btn C Twy has had an increased No of rwy incursions.
WILMINGTON		
NEW CASTLE (ILG)	HS 1	Twy F intersects Rwy 09–27 which is in close proximity to the thld of Rwy 14–32.
DISTRICT OF COLUMBIA		
WASHINGTON		
MANASSAS RGNL/HARRY P DAVIS FLD (HEF)	HS 1	Maint vigilance on Twy K crossing Rwy 16L–34R to flw markings leading towards Twy B3.
WASHINGTON		
RONALD REAGAN WASHINGTON NTL (DCA)	HS 1	Twy N, Twy K, Twy L, and Twy J complex int in close proximity of the rwy.
	HS 2	Maint awareness of Hold Line posn for Rwy 19 fr the Hold Bay and while approaching Rwy 19 on Twy J.
	HS 3	Acft joining Twy J inadvertently cont onto Twy G or Twy M and enter Rwy 01–19 wo clnc.

NE, 19 MAY 2022 to 14 JUL 2022

APPENDIX 48
HOT SPOTS - PAC

ASSOCIATED DATA 129

HOT SPOTS

An "Airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or ellipses designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

CITY/AIRPORT	HOT SPOT	DESCRIPTION
HAWAII		
HONOLULU		
DANIEL K INOUYE INTL (HNL) (PHNL)	HS 1	Rwy 04R/Rwy 04L thresholds: wrong sfc ldg risk. Pilots cleared to land Rwy 04L or 04R sometimes land on the wrong rwy.
	HS 2	Acft ldg Rwy 04R and exiting left onto Twy K sometimes fail to hold short of Rwy 04L–22R and Rwy 08L–26R.
	HS 3	Acft proceeding north on Twy E and instructed to turn left onto Twy B sometimes miss the turn onto Twy B and proceed onto Rwy 08L–26R without clearance.
	HS 4	Twy A, Twy V, Twy T, Twy J, and Twy M all converge at or in close proximity to Rwy 08L.
	HS 5	Area not visible from twr.
	HS 6	Minimal dist btn rwy hold short lines btn Rwy 04L–22R/Rwy 04R–22L. Plan to hold short of the parl rwy. ATC is aware the acft tail is encroaching the landed rwy.
KAHULUI		
KAHULUI (OGG) (PHOG)	HS 1	Acft ldg Rwy 05 and instructed to exit on Twy A with a left turn onto Twy F to the east ramp, sometimes turn left onto Twy G by mistake.
	HS 2	Rwy holding position marking Rwy 02–20 located at the intersection of Twy E and the ramp.
	HS 3	Acft ldg Rwy 02 that are instructed to exit left on Twy A sometimes cross Rwy 05–23 wo clnc.
KAILUA/KONA		
ELLISON ONIZUKA KONA INTL AT KEAHOLE (KOA) (PHKO)	HS 1	Extv helicopter OPS on twy A abm ramp K.
	HS 2	Extv helicopter OPS on twy A S of twy C.
KAUNAKAKAI		
MOLOKAI (MKK) (PHMK)	HS 1	Area not visible from ctl twr.

APPENDIX 49
AIRPORT LOCATOR INDEX - PAC

AIRPORT LOCATOR INDEX

*indicates unknown datum.....

APPENDIX 50
AIRPORT/FACILITY DIRECTORY SAMPLE - PAC

AMERICAN SAMOA

OFU ISLAND

OFU (ZØ8)(NSAS) 1 SE UTC–11 S14º11.06´ W169º40.21´ **HAWAIIAN–MARIANA**
12.2 Class III, ARFF Index A NOTAM FILE HNL
RWY 08–26: H1980X60 (CONC–WC) S–12.5 D–12.5 PCN 7 R/C/Z/U
RWY 08: Tree.
RWY 26: Tree.
AIRPORT REMARKS: Attended during scheduled flights only. To land ctc airport manager Pago Pago Intl, call 699–9101. Brush and trees Rwy 08–26 along ldg area encroach into imaginary sfc defined by FAR PART 77. Boulders/rocks adjacent to Rwy 08 apch. 400´ MSL powerlines between OFU and Olosega Islands. Numerous high voltage transformer boxes 3´ high along north side of rwy. Numerous hydrants 4+´ along north side of rwy.
AIRPORT MANAGER: (684) 699–9101
COMMUNICATIONS: CTAF/UNICOM 122.95
COMM/NAV/WEATHER REMARKS: For arpt information ctc New Zealand NOTAM and briefing office (643) 358–1688/FAX (643) 358–9192.

TAU ISLAND

FITIUTA (FAQ)(NSFQ) 0 N UTC–11 S14º12.97´ W169º25.41´ **HAWAIIAN–MARIANA**
110.4 B Class III, ARFF Index A NOTAM FILE HNL
RWY 12–30: H3200X75 (CONC–GRVD) S–12.5 PCN 7 R/C/Z/U MIRL
RWY 12: REIL. PAPI(P2L)—GA 3.0º TCH 39´.
RWY 30: REIL. PAPI(P2L)—GA 3.0º TCH 39´.
SERVICE: LGT ACTVT REIL Rwys 12 and 30; PAPI Rwys 12 and 30; MIRL Rwy 12–30—CTAF (122.9). Rwy 12 and Rwy 30 PAPI OTS indef.
AIRPORT REMARKS: Attended 1600–0400Z.
AIRPORT MANAGER: (684) 699–9101
COMMUNICATIONS: CTAF 122.9
COMM/NAV/WEATHER REMARKS: For arpt information ctc New Zealand NOTAM and briefing office (643) 358–1688. FSS: NEW ZEALAND, 643–358–1688/FAP 643–358–9192.

TUTUILA ISLAND

PAGO PAGO INTL (PPG)(NSTU) 3 SW UTC–11 S14º19.90´ W170º42.69´ **HAWAIIAN–MARIANA**
31.2 B LRA Class I, ARFF Index C NOTAM FILE PPG **IAP**
RWY 05–23: H10001X150 (ASPH–GRVD) S–75, D–170, 2D–250, 2D/2D2–600 PCN 60 F/A/W/T HIRL
RWY 05: MALSR. PAPI(P4L)—GA 3.25º TCH 57´. Thld dsplcd 1002´. Hill. Rgt tfc.
RWY 23: PAPI(P4L)—GA 3.0º TCH 75´. Thld dsplcd 790´. Fence.
RWY 08–26: H3801X100 (ASPH–GRVD) S–75, D–150, 2D–230, 2D/2D2–550 PCN 45 F/A/W/T HIRL
RWY 08: Rgt tfc.
SERVICE: S8 **FUEL** 100, JET A1+ **LGT** Dusk–Dawn. ACTIVATE MALSR Rwy 05; PAPI Rwy 05 and Rwy 23; HIRL Rwy 05–23 and Rwy 08–26; twy lgts freq—118.3.
AIRPORT REMARKS: Attended continuously. Olotele Mt. 1617´ MSL 3.5 miles west of thld Rwy 08. 399´ MSL obstruction light on LOG NDB located on hill 2.0 SM southwest of thld Rwy 05. Permanently lighted and marked 226´ tower atop Mt. Alava 4.3 SM north-northeast of airport. All flights (except scheduled) prior permission from airport manager required with 24 hour prior notice. All aircraft transitioning Pago Pago (except commercial carriers) must make fuel arrangements with PPG at (684) 733–3158. All acft exceeding 100,000 lbs GWT upon touchdown taxi to thld turn around before taxiing to apron. Acft under 100,000 lbs may make a turn–around wherever feasible. Sea spray from surf and blow holes may drift across Rwy 05–23 under rough sea conditions. Minor power plant repairs only. Customs available. Landing fee.

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