



**Federal Aviation
Administration**

Aeronautical Information Services

Aeronautical Chart Users' Guide

Effective as of 5 September 2024

TABLE OF CONTENTS

TABLE OF CONTENTS	3
INTRODUCTION	7
KEEP YOUR CHARTS CURRENT	7
EFFECTIVE DATE OF CHART USERS' GUIDE AND UPDATES.....	7
COLOR VARIATION	7
REPORTING CHART DISCREPANCIES.....	7
WHAT'S NEW?	9
VFR CHARTS.....	9
IFR ENROUTE CHARTS	9
TERMINAL PROCEDURE PUBLICATION (TPP)	9
EXPLANATION OF VFR TERMS AND SYMBOLS.....	11
WATER FEATURES (HYDROGRAPHY)	11
LAND FEATURES (TERRAIN) AND OBSTRUCTIONS.....	11
LAND FEATURES - MOUNTAIN PASSES.....	14
RADIO AIDS TO NAVIGATION	15
AIRPORTS	15
AIRSPACE.....	17
FOREIGN AREAS	20
TERMINAL AREA CHART (TAC) COVERAGE	21
INSET AND SPECIAL CHART COVERAGE	21
CHART TABULATIONS.....	21
VFR SECTIONAL AND TERMINAL AREA CHARTS	23
AIRPORTS	23
RADIO AIDS TO NAVIGATION	25
AIRSPACE INFORMATION.....	26
NAVIGATIONAL AND PROCEDURAL INFORMATION	32
CULTURE.....	34
HYDROGRAPHY	37
RELIEF	40
VFR FLYWAY PLANNING CHARTS	43
GENERAL INFORMATION.....	43
AIRPORTS	43
RADIO AIDS TO NAVIGATION	43
AIRSPACE INFORMATION.....	44
NAVIGATIONAL AND PROCEDURAL INFORMATION	47
CULTURE.....	48
BOUNDARIES.....	48
HYDROGRAPHY	48
RELIEF	48

TABLE OF CONTENTS

HELICOPTER ROUTE CHARTS.....	49
GENERAL INFORMATION.....	49
AIRPORTS	49
RADIO AIDS TO NAVIGATION	50
AIRSPACE INFORMATION.....	51
NAVIGATIONAL AND PROCEDURAL INFORMATION	54
CULTURE.....	55
 CARIBBEAN VFR AERONAUTICAL CHARTS (CAC)	 57
 AIRSPACE	 59
 EXPLANATION OF IFR ENROUTE TERMS	 61
AIRPORTS	61
RADIO AIDS TO NAVIGATION	63
AIRSPACE INFORMATION.....	65
INSTRUMENT AIRWAYS	66
FOREIGN AREAS	70
TERRAIN CONTOURS ON AREA CHARTS.....	71
AIRPORTS	73
 IFR ENROUTE LOW / HIGH ALTITUDE SYMBOLS (U.S., PACIFIC AND ALASKA CHARTS)	 73
RADIO AIDS TO NAVIGATION	74
AIRSPACE INFORMATION.....	79
NAVIGATIONAL AND PROCEDURAL INFORMATION	92
CULTURE.....	93
HYDROGRAPHY	93
TOPOGRAPHY	93
 U.S. TERMINAL PROCEDURES PUBLICATION	 95
EXPLANATION OF TPP TERMS AND SYMBOLS	95
INSTRUMENT APPROACH PROCEDURE CHART.....	96
PLANVIEW	102
MISSED APPROACH INFORMATION.....	113
PROFILE VIEW	114
LANDING MINIMUMS.....	118
AIRPORT SKETCH	120
AIRPORT DIAGRAMS	121
DEPARTURE PROCEDURES (DPs).....	123
STANDARD TERMINAL ARRIVAL (STARs) CHARTS.....	124
CHARTED VISUAL FLIGHT PROCEDURE (CVFP) CHARTS	124
 U.S. TERMINAL PROCEDURES PUBLICATION SYMBOLS	 125
GENERAL INFORMATION.....	125
PLANVIEW SYMBOLS.....	125

TABLE OF CONTENTS

PROFILE VIEW	127
STANDARD TERMINAL ARRIVAL (STAR) CHARTS.....	128
DEPARTURE PROCEDURE (DP) CHARTS.....	129
AIRPORT DIAGRAM/AIRPORT SKETCH	130
APPROACH LIGHTING SYSTEM.....	131
 REFERENCES.....	 133
 ABBREVIATIONS	 135

RADIO AIDS TO NAVIGATION (Continued)

Automated Weather Broadcast Services

Automated Weather Observing System (AWOS) / Automated Surface Observing System (ASOS).

VHF/UHF

LF/MF



Flight Service Station (FSS)

Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.2 and 243.0 are available at many Alaskan FSSs and are not shown above boxes. All other frequencies are shown. Frequencies transmit and receive except those followed by an R.

R - receive only

PONTIAC PTK
No NAVAID of the same name as FSS
OR

122.1R
123.6

NORTHWAY
116.3 Ch 110 ORT

FSS oper 0600-2200
Rancho Murieta FSS other times.
NAVAID same name as FSS but not an RCO

Off Airport AWOS/ASOS

SANDBERG ASOS 120.625 SDB

Broadcast Stations (BS)

On request by the proper authority or when a VFR Check-point

KFTM **BS KFTM 1400**

Remote Communications Outlet (RCO)

Frequencies above thin line box are remot to NAVAID site. Other frequencies at FSS providing voice communication may be available determined by altitude and terrain. Consult Chart Supplement for complete information.

Thin line box without frequencies and controlling FSS name indicates no FSS frequency available.

HANCOCK RCO
122.525 123.65
GREEN BAY

ST PAUL
122.35 108.6 STP
MINNEAPOLIS

HUMPHREY
122.35 275 HPY
MILES CITY

FSS Radio providing voice communications

AIRSPACE INFORMATION

Class B Airspace

Sectional

LAS VEGAS CLASS B



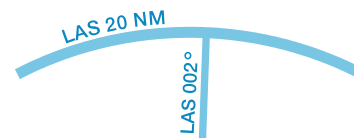
Appropriate notes as required may be shown.

Only the airspace effective below 18,000 feet MSL are shown.

(Mode C see FAR 91.215 / AIM)

Terminal Area Chart (TAC)

LAS VEGAS CLASS B



CTC LAS VEGAS APP
ON 121.1 OR 257.8

All mileages are nautical (NM).

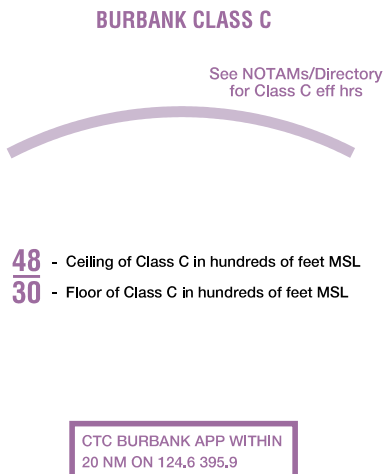
All radials are magnetic.

AIRSPACE INFORMATION (Continued)

Class C Airspace

Appropriate notes as required may be shown.

(Mode C see FAR 91.215/ AIM)



Class E Airspace

The limits of Class E airspace shall be shown by narrow vignettes or by the dashed magenta symbol. Individual units of designated airspace are not necessarily shown; instead, the aggregate lateral and vertical limits shall be defined by the following:



Airspace beginning at the surface (sfc) designated around airports.

Airspace beginning at 700 feet AGL that laterally abuts 1200 feet or higher Class E Airspace.



Airspace beginning at 700 feet AGL that laterally abuts uncontrolled (Class G) airspace.

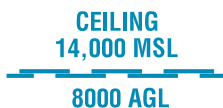


Airspace beginning at 1200 feet AGL that laterally abuts uncontrolled (Class G) airspace.



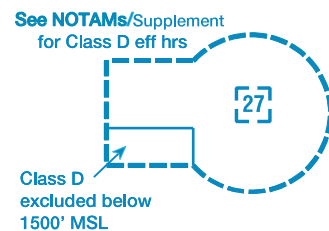
Differentiates floors of airspace greater than 700 feet above the surface.

When the ceiling is less than 18,000 feet MSL, the value prefixed by the word "CEILING", shall be shown along the limits.



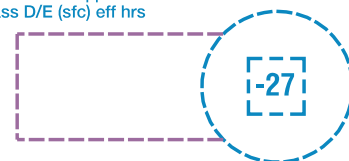
Class D Airspace

Altitude in hundreds of feet MSL



See NOTAMs/Supplement
for Class D/E (sfc) eff hrs

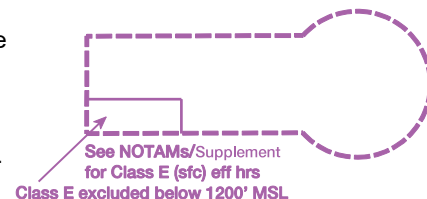
(A minus in front of the figure is used to indicate "from surface to but not including...")



Airspace beginning at the surface (sfc) designated around airports.



Airspace beginning at the surface with an airspace exclusion area where Class E airspace is excluded below 1200' MSL.



AIRSPACE INFORMATION (Continued)

Class E Airspace (Continued)

Low Altitude Airways VOR and LF/MF (Class E Airspace)

Low altitude Federal Airways are indicated by centerline.

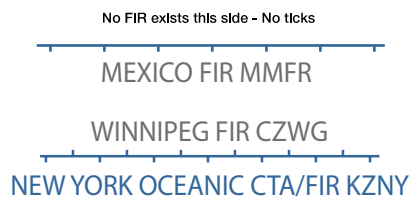
Only the controlled airspace effective below 18,000 feet MSL is shown

Miscellaneous Air Routes

Combined Federal Airway/RNAV 2 "T" Routes are identified in solid blue type adjacent to the solid magenta federal airway identification.

The joint route symbol is screened magenta.

Flight Information Regions (FIR)

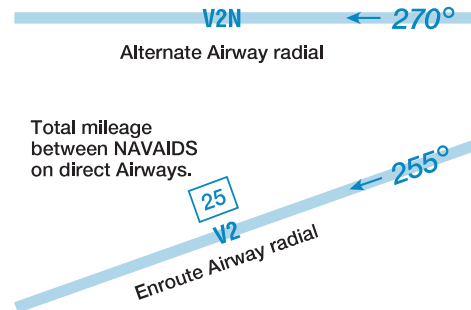


Oceanic Control Areas (OCA)

OAKLAND OCEANIC
CONTROL AREA

Control Areas (CTA)

MONTERREY CTA SECTOR 3



Offshore Control Areas



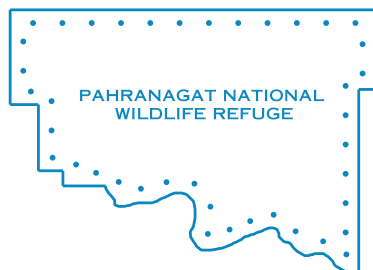
Foreign Airspace Note

NOTE: Limited chart information provided outside of U.S. airspace. Refer to DoD (NGA) or foreign charts and flight information publications outside U.S. airspace.

AIRSPACE INFORMATION (Continued)

Special Conservation Areas

National Park, Wildlife Refuge, Primitive and Wilderness Areas, etc.

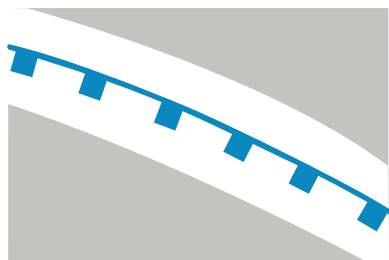


Special Flight Rules Area (SFRA) Relating to National Security

Example: Washington DC

Appropriate notes as required may be shown.

Note: Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.



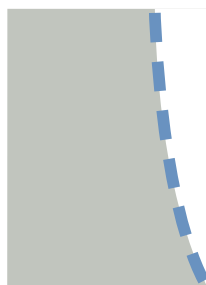
WASHINGTON DC METROPOLITAN AREA SFRA

Washington DC Metropolitan Area Special Flight Rules Area/Flight Restricted Zone (DC SFRA & DC FRZ) (See description in Atlantic Ocean).

Temporary Flight Restriction (TFR) Relating to National Security

Example: Washington DC

Appropriate notes as required may be shown.



CAUTION
CONTACT FLIGHT SERVICE FOR
LATEST FLIGHT RESTRICTION
STATUS AND NOTAMS ASSOCIATED
WITH P-40 AND R-4009

NOAA Regulated National Marine Sanctuary
Designated Areas



Flight operations below 1000' AGL over the designated areas within the Gulf of Farallones National Marine Sanctuary violate NOAA regulations (see 15 CFR 922).



AIRSPACE INFORMATION (Continued)

Special Flight Rules Area (SFRA)

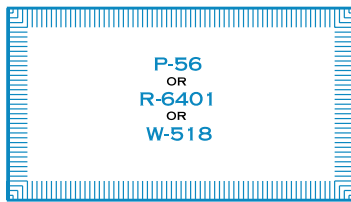


SPECIAL FEDERAL AVIATION REGULATIONS (SFAR)
14 CFR Part 93, Subpart U and SFAR 50.2 -
GRAND CANYON NATIONAL PARK SPECIAL
FLIGHT RULES AREA. Special regulations apply
to all aircraft operations below 18,000 feet MSL.

Special Use Airspace

Only the airspace effective below 18,000 feet MSL is shown.

The type of area shall be spelled out in large areas if space permits.



**PROHIBITED, RESTRICTED
or WARNING AREA**

* Alert Areas do not extend into Class A, B, C and D airspace, or Class E airport surface areas.



ALERT AREA



**MILITARY OPERATIONS
AREA (MOA)**

Special Air Traffic Rules / Airport Patterns (FAR Part 93)

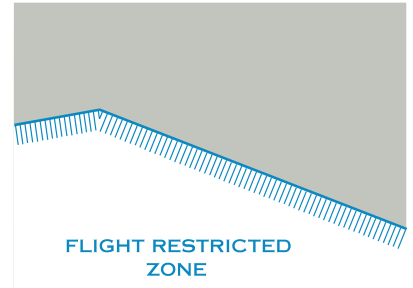
Appropriate boxed note as required shown adjacent to area.

Inside the FAR Part 93 boundary area, the cross hatching is at a 45 degree angle. The hypsometric tint shall be masked within the area around the yellow city tint when applicable (should not be confused with white glacier tint).



SPECIAL NOTICE
Pilots are required to
obtain an ATC clearance
prior to entering this area.

Flight Restricted Zone (FRZ) Relating to National Security



National Security Area

Appropriate notes as required may be shown



Small Area

NOTICE
FOR REASONS OF NATIONAL SECURITY
PILOTS ARE REQUESTED TO AVOID FLIGHT
BELOW 1200' MSL IN THIS AREA

Special Awareness Training Areas



NOTICE
Special awareness training required within 60 NM
of DCA VOR-DME. See description on Flyway.

Mode C (FAR 91.215)

Appropriate notes as required may be shown.



Air Defense Identification Zone (ADIZ)

Note: Delimiting line not shown when it coincides with International Boundary, projection lines or other linear features.

