VFR FLYWAY

VFR TERMINAL AREA CHART
SAN FRANCISCO

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Airports having Control Towers are shown in Blue, all others in Magenta. Consult Airport/Facility Directory (A/FD) for details involving airport lighting, navigation aids, and services. All times are local. For additional symbol information refer to the Chart User's Guide.

AIRPORTS

Other than hard-surfaced runways

Seaplane Base

Hard-surfaced runways 1500 ft. or greater

Open dot within hard-surfaced runway configuration indicates approximate VOR, VOR-DME, or VORTAC location.

All recognizable hard-surfaced runways, including those closed, are shown for visual identification. Airports may be public or private.

ADDITIONAL AIRPORT INFORMATION

Private "(Pvt)" - Non-public use having emergency or landmark value

Military - Other than hard-surfaced; all military airports are identified by abbreviations AFB, NAS, AAF, etc. DoD users, for complete airport information consult DoD FLIP.

Heliport Selected · Unverified · Abandoned - paved having landmark value, 3000 ft. or greater · Ultralight Flight Park Selected

Services - fuel available and field tended during normal working hours depicted by use of ticks around basic airport symbol. (Normal working hours are Mon thru Fri 10:00 A.M. to 4:00 P.M.) Consult A/FD for service availability at airports with hard-surfaced runways 1500 ft. or greater.

Rotating airport beacon in operation Sunset to Sunrise

OBJECTIONABLE - Airport may adversely affect airspace use.

AIRPORT DATA

Box indicates FAR 93 Special Air Traffic Rules & Airport Traffic Patterns. FSS · FAR 91 · NO SVFR · Location Identifier · NAME (NAM) (PNAM) · ICAO Location Indicator shown outside contiguous U.S.

Runways with Right Traffic Patterns (public use) · CT - 118.3 ★ Ⓒ ATIS 123.8 · 285 L 72 122.95 · RP 23, 34 · UNICOM

RP * Special conditions exist - see A/FD. · VFR Advsy 125.0 · AOE · Airport of Entry

FSS - Flight Service Station

NO SVFR - Fixed-wing special VFR flight is prohibited.

CT - 118.3 - Control Tower (CT) - primary frequency

★ - Star indicates operation part-time. See tower frequencies tabulation for hours of operation.

Ⓒ - Follows the Common Traffic Advisory Frequency (CTAF)

ATIS 123.8 - Automatic Terminal Information Service

ASOS/AWOS 135.42 - Automated Surface Weather Observing Systems (shown where full-time ATIS not available). Some ASOS/AWOS facilities may not be located at airports.

UNICOM - Aeronautical advisory station

VFR Advsy - VFR Advisory Service shown where full-time ATIS not available and frequency is other than primary CT frequency.

285 - Elevation in feet

L - Lighting in operation Sunset to Sunrise

*L - Lighting limitations exist; refer to Airport/Facility Directory.

72 - Length of longest runway in hundreds of feet; usable length may be less.

When information is lacking, the respective character is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.

AIRPORT TRAFFIC SERVICE AND AIRSPACE INFORMATION

Only the controlled and reserved airspace effective below 18,000 ft. MSL are shown on this chart.

- Class B Airspace
- Class C Airspace (Mode C - see FAR 91.215/AIM.)
- Class D Airspace
- [40] Ceiling of Class D Airspace in hundreds of feet (A minus ceiling value indicates surface up to but not including that value.)
- Class E (sfc) Airspace
- Class E Airspace with floor 700 ft. above surface that laterally abuts Class G Airspace. CLASS G
- Class E Airspace with floor 700 ft. above surface that laterally abuts 1200 ft. or higher Class E Airspace
- Class E Airspace with floor 1200 ft. or greater above surface that laterally abuts Class G Airspace
- 2400 MSL / 4500 MSL Differentiates floors of Class E Airspace greater than 700 ft. above surface.

Class E Airspace exists at 1200' AGL unless otherwise designated as shown above.

Class E Airspace low altitude Federal Airways are indicated by center line.

Intersection - Arrows are directed towards facilities which establish intersection.

132° V 69 [169] Total mileage between NAVAIDs on direct Airways

Class E Airspace low altitude RNAV 2 Routes are indicated by center line.

T 319 TK 313 (Helicopter Only) · RNAV Waypoint

- Prohibited, Restricted, and Warning Areas; Canadian Advisory, Danger, and Restricted Areas
- Alert Area and MOA - Military Operations Area
- Special Airport Traffic Area (See FAR 93 for details.)
- ADIZ - Air Defense Identification Zone
- MODE C (See FAR 91.215/AIM.)
- National Security Area
- Terminal Radar Service Area (TRSA)
- IR211 MTR - Military Training Route
- IFR Departure Route
- IFR Arrival Route
- IFR Arrival/Departure Route

COMMUNICATION BOXES

122.1R 122.6 123.6 · OAKDALE · 362★ 116.4 OAK · 122.1R CHICAGO CHI

Underline indicates no voice on frequency.

- Crosshatch indicates Shutdown status.

★ - Operates less than continuous or On-Request.

Ⓐ - ASOS/AWOS

Ⓗ - HIWAS

Heavy line box indicates Flight Service Station (FSS). Frequencies 121.5, 122.2, 243.0 and 255.4 (Canada - 121.5, 126.7 and 243.0) are available at many FSSs and are not shown above boxes. All other frequencies are shown.

Certain FSSs provide Airport Advisory Service, see A/FD.

R - Receive only

122.1R · MIAMI · FSS radio providing voice communication

Frequencies above thin line box are remoted to NAVAID site. Other FSS frequencies providing voice communication may be available as determined by altitude and terrain. Consult Airport/Facility Directory for complete information.

RADIO AIDS TO NAVIGATION

VHF OMNI RANGE (VOR) · VOR-DME · VORTAC · Other facilities, i.e., FSS Outlet, RCO, etc. · Non-Directional Radio Beacon (NDB) · NDB - DME

OBSTRUCTIONS

1000 ft and higher AGL · Below 1000 ft AGL · Wind Turbine · Wind Turbine Farm 2894' UC

Group Obstruction

Elevation of the top above mean sea level 2049 · Height above ground (1149) · Under construction or reported; position and elevation unverified UC

Obstruction with high-intensity lights; may operate part-time

NOTICE: Guy wires may extend outward from structures.

MISCELLANEOUS

G - Glider Operations · H - Hang Glider Activity · U - Ultralight Activity · UA - Unmanned Aircraft Activity

Parachute Jumping Area (See Airport/Facility Directory.)

Space Launch Activity Area (See Airport/Facility Directory.)

VPXYZ · VFR Waypoints (See chart tabulation for latitude/longitude.) · NAME (VPXYZ)

−1°E− Isogonic Line (2015 VALUE)

Marine Light

TOPOGRAPHIC INFORMATION

Power Transmission Line · Aerial Cable · Lookout Tower 618 (Elevation Base of Tower)

Mountain Pass 11823 (Elevation of Pass)

Pass symbol does not indicate a recommended route or direction of flight and pass elevation does not indicate a recommended clearance altitude. Hazardous flight conditions may exist within and near mountain passes.

SAN FRANCISCO TAC

VFR TERMINAL AREA CHART SCALE 1:250,000

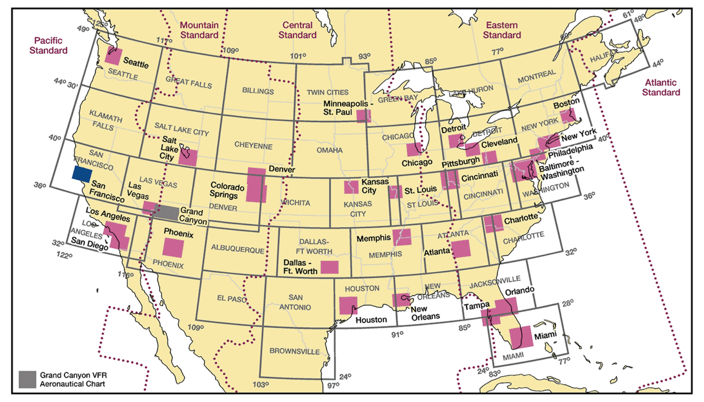
Federal Aviation Administration

88TH EDITION EFFECTIVE 0901Z **3 MAR 2016**

TO 0901Z **18 AUG 2016**

Includes airspace amendments effective **4 FEB 2016**
and all other aeronautical data received by **7 JAN 2016**

Information on this chart will change; consolidated updates of chart changes are available every 56 days in the AIRPORT/FACILITY DIRECTORY Chart Bulletin section (online at http://faa.gov/go/ais). Also consult appropriate NOTICES TO AIRMEN (NOTAMs) and other FLIGHT INFORMATION PUBLICATIONS (FLIPs) for the latest changes.



PUBLISHED IN ACCORDANCE WITH INTERAGENCY AIR CARTOGRAPHIC COMMITTEE SPECIFICATIONS AND AGREEMENTS, APPROVED BY: DEPARTMENT OF DEFENSE * FEDERAL AVIATION ADMINISTRATION

Warning: Refer to current foreign charts and flight information publications for information within foreign airspace.

FAA Product ID: TSF

NSN 7641014100134

NGA REF. NO. VFRTAFRISCO

EFF. DATE 16063

MILITARY TRAINING ROUTES (MTRs)

All IR and VR MTRs are shown, and may extend from the surface upwards. Only the route centerline, direction of flight along the route and the route designator are depicted - route widths and altitudes are not shown.

Since these routes are subject to change every 56 days, and the charts are reissued every 6 months, you are cautioned and advised to contact Flight Service for route dimensions and current status for those routes affecting your flight.

Routes with a change in the alignment of the charted route centerline will be indicated in the Aeronautical Chart Bulletin of the Airport/Facility Directory.

DoD users refer to Area Planning AP/1B Military Training Routes North and South America for current routes.

NORTH AMERICAN AEROSPACE DEFENSE COMMAND (NORAD) PROCEDURES

All aircraft operating in the U.S. national airspace, if capable, will maintain a listening watch on guard frequencies VHF 121.5 or UHF 243.0. It is incumbent upon all aviators to know and understand their responsibilities if intercepted. Review "AIM" section 5-6-2 for intercept procedures. Additionally, if U.S. military fighter jets intercept an aircraft and flares are dispensed in the area of that aircraft, aviators will pay strict attention, contact air traffic control immediately on the local frequency or on VHF guard 121.5 or UHF 243.0 and follow the interceptor visual ICAO signals. Be advised that non-compliance may result in the use of force.

CONTROL TOWER FREQUENCIES ON SAN FRANCISCO TERMINAL AREA CHART

Airports with control towers are indicated on the face of the chart by the letters CT followed by the primary VHF local control frequency (ies). Information for each tower is listed in the table below. Operational hours are local time. The primary VHF and UHF local control frequencies are listed. An asterisk (*) indicates the part-time tower frequency is remoted to a collocated full-time FSS for use as Airport Advisory Service (AAS) during hours the tower is closed. The primary VHF and UHF ground control frequencies are listed.

Automatic Terminal Information Service (ATIS) frequencies shown on the face of the chart are primary arrival VHF/UHF frequencies. All ATIS frequencies are listed in the table below. ATIS operational hours may differ from tower operational hours.

ASR and/or PAR indicate Radar Instrument Approach available.

"MON-FRI" indicates Monday through Friday.

O/T indicates other times.

CONTROL TOWER	OPERATES	TWR FREQ	GND CON	ATIS	ASR/PAR
BUCHANAN	0700-2200	119.7 123.9 257.8	121.9	124.7	
HAYWARD EXEC	0700-2100	120.2 257.8	121.4	126.7	
LIVERMORE	0700-2100	118.1 239.25	121.6	119.65	
METROPOLITAN OAKLAND INTL	CONTINUOUS	118.3 291.65 (RWYS 28R/10L, 28L/10R, 15/33) 127.2 256.9 (RWYS 12/30)	121.9 (RWYS 28R/10L, 28L/10R, 15/33) 121.75 (RWYS 12/30)	133.775	
MINETA SAN JOSE INTL	0600-2400	124.0 257.6	121.7	126.95	
MOFFETT FEDERAL	0700-2300	119.55 259.65	121.85 278.95	124.175 283.0	
PALO ALTO	0700-2100	118.6	125.0	135.275	
REID-HILLVIEW	0700-2200	119.8 (RWY 13L/31R) 126.1 (RWY 13R/31L)	121.65	125.2	
SAN CARLOS	0700-2100	119.0 326.2	121.6	125.9	
SAN FRANCISCO INTL	CONTINUOUS	120.5 269.1	121.8	113.7 115.8 118.85 135.45	

CLASS B, CLASS C, TRSA, AND SELECTED APPROACH CONTROL FREQUENCIES

FACILITY	FREQUENCIES	SERVICE AVAILABILITY
SAN FRANCISCO CLASS B	120.9 323.2 (NW) 127.0 298.95 (N) 125.35 354.1 (NE-E) 134.5 338.2 (SE) 135.65 310.8 (S) 135.1 307.2 (W)	CONTINUOUS
OAKLAND METRO CLASS C	127.0 298.95 (N) 125.35 354.1 (E) 135.65 310.8 (S) 135.1 307.2 (W) 120.9 323.2 (NW)	CONTINUOUS
SAN JOSE CLASS C	121.3 270.35 (280°-080°) 120.1 290.25 (081°-135°) 135.2 379.1 (136°-279°)	0600-2400 O/T CLASS E

SPECIAL USE AIRSPACE ON SAN FRANCISCO TERMINAL AREA CHART

Unless otherwise noted altitudes are MSL and in feet. Time is local.
"TO" an altitude means "To and including."
FL – Flight Level
NO A/G – No air to ground communications.
Contact Flight Service for information.

† Other times by NOTAM.
NOTAM – Use of this term in Restricted Areas indicates FAA and DoD NOTAM systems. Use of this term in all other Special Use areas indicates the DoD NOTAM system.

U.S. P–PROHIBITED, R–RESTRICTED, W–WARNING, A–ALERT, MOA–MILITARY OPERATIONS AREA

NUMBER	ALTITUDE	TIME OF USE	CONTROLLING AGENCY/ CONTACT FACILITY	FREQUENCIES
R-2531	TO BUT NOT INCL 4000	1000-2050 MON-FRI OCNL SAT-SUN BY NOTAM 24 HRS IN ADVANCE	NORCAL TRACON	123.85 278.3
W-285 B	TO FL 190	0630-2100 MON-FRI†	NORCAL TRACON	128.57 254.25
A-682	TO 6000 (NORTH OF TRAVIS AFB EXTND RWY CENTERLINES)	0800-2100 MON-FRI	NO A/G	
A-682	TO 3000 (SOUTH OF TRAVIS AFB EXTND RWY CENTERLINES)	0800-2100 MON-FRI	NO A/G	

Flight Following Services are available on request and highly recommended in and around Class B, C, and TRSA areas.

REGULATIONS REGARDING FLIGHTS OVER CHARTED NATIONAL PARK SERVICE AREAS, U.S. FISH AND WILDLIFE SERVICE AREAS, AND U.S. FOREST SERVICE AREAS

The landing of aircraft is prohibited on lands or waters administered by the National Park Service, U.S. Fish and Wildlife Service or U.S. Forest Service without authorization from the respective agency. Exceptions include: 1) when forced to land due to an emergency beyond the control of the operator, 2) at officially designated landing sites, or 3) on approved official business of the Federal Government.

All aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface of the following: National Parks, Monuments, Seashores, Lakeshores, Recreation Areas and Scenic Riverways administered by the National Park Service, National Wildlife Refuges, Big Game Refuges, Game Ranges and Wildlife Ranges administered by the U.S. Fish and Wildlife Service; and Wilderness and Primitive areas administered by the U.S. Forest Service. FAA Advisory Circular (AC) 91-36, "Visual Flight Rules (VFR) Flight Near Noise-Sensitive Areas," defines the surface as: the highest terrain within 2,000 feet laterally of the route of flight, or the upper-most rim of a canyon or valley.

Federal regulations also prohibit airdrops by parachute or other means of persons, cargo, or objects from aircraft on lands administered by the three agencies without authorization from the respective agency. Exceptions include: 1) emergencies involving the safety of human life, or 2) threat of serious property loss.

Boundary of National Park Service areas, U.S. Fish and Wildlife Service areas, and U.S. Forest Service Wilderness and Primitive areas.

Boundary of NOAA Regulated National Marine Sanctuary Designated Areas (see http://sanctuaries.noaa.gov/flight).

Lambert Conformal Conic Projection Standard Parallels 33° and 45°

Horizontal Datum: North American Datum of 1983 (World Geodetic System 1984)

CONVERSION OF ELEVATIONS

FEET (Thousands) 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

METERS (Thousands) 0 1 2 3 4 5 6 7 8 9

GROUND ELEVATIONS IN FEET: 4400 · 3000 · 2000 · 1000 · Sea Level

CONTOUR INTERVAL 500'

Entire area of this chart is within the Pacific Standard Time Zone +8 (+7DT)=UTC

CAUTION: Severe turbulence may occur over rugged terrain. See AIM.

CAUTION: This chart is primarily designed for VFR navigational purposes and does not purport to indicate the presence of all power transmission and telecommunication lines, terrain or obstacles which may be encountered below reasonable and safe altitudes.

Features normally used as checkpoints for controlling VFR traffic are emphasized on this series of charts so they may be readily identified.

Example: POWER PLANT

The name shown is that used by the controlling personnel and is not necessarily the official name of the feature.

Class G Airspace within the United States extends up to 14,500 feet MSL. At and above this altitude all airspace is within Class E Airspace, excluding the airspace less than 1500 feet above the terrain and certain special use airspace areas.

CAUTION: GPS accuracy necessitates extra vigilance for other aircraft when navigating near any fix retrieved from a GPS database

SAN FRANCISCO VFR WAYPOINTS

VFR Waypoint names consist of five letters beginning with "VP". Stand-alone VFR Waypoints are portrayed on VFR Charts using the same four-point star symbol currently used for Instrument Flight Rules (IFR) Waypoints.

VFR Waypoints collocated with Visual Checkpoints (Visual Reporting Points) are portrayed with a Checkpoint flag. The VFR Waypoint name is shown in parentheses adjacent to the Visual Checkpoint name.

VFR Waypoint names are not intended to be pronounceable and shall not be used in ATC Communications.

VPALT	ALTAMONT PASS	N37°44.35'/W121°35.42'
VPANT	ANTIOCH BRIDGE	N38°01.45'/W121°45.02'
VPBBR	BENICIA BRIDGE	N38°02.50'/W122°07.45'
VPCAL	CALAVERAS RESERVOIR	N37°28.16'/W121°48.93'
VPCBT	LAKE CHABOT	N37°43.68'/W122°06.94'
VPCOY	COYOTE HILLS	N37°32.50'/W122°05.06'
VPCQZ	CARQUINEZ BRIDGE	N38°03.66'/W122°13.52'
VPCRL		N37°11.00'/W121°41.06'
VPCRY	CRYSTAL SPRINGS CAUSEWAY	N37°30.56'/W122°21.10'
VPCSH	CAL STATE UNIVERSITY	N37°39.52'/W122°03.52'
VPDAM	DEL VALLE DAM	N37°36.91'/W121°44.78'
VPDLR		N37°07.00'/W121°47.06'
VPDUB	DUBLIN	N37°42.06'/W121°55.36'
VPEMB	EMBASSY SUITES	N37°26.05'/W121°53.83'
VPGGF	GOLDEN GATE FIELDS	N37°53.07'/W122°18.71'
VPGIL	GILROY	N37°01.37'/W121°33.99'
VPHHH	HAMILTON	N38°03.58'/W122°30.66'
VPKGO	KGO	N37°31.58'/W122°06.10'
VPLEX	LEXINGTON RESERVOIR	N37°11.66'/W121°59.18'
VPMID	MID-SPAN SAN MATEO BRIDGE	N37°36.28'/W122°11.81'
VPMOR	MORMON TEMPLE	N37°48.46'/W122°11.95'
VPNUM	NUMMI PLANT	N37°29.56'/W121°56.58'
VPPAC		N37°38.00'/W122°32.07'
VPPRU	PRUNEYARD	N37°17.33'/W121°56.01'
VPSAR	SARATOGA	N37°15.26'/W122°02.33'
VPSLA	SLAC / LINEAR ACCELERATOR	N37°24.75'/W122°14.35'
VPSTB	STINSON BEACH	N37°54.45'/W122°40.41'
VPSUN	SUNOL GOLF COURSE	N37°34.85'/W121°53.23'
VPUTC	UTC	N37°13.93'/W121°41.35'
VPWAL	WALNUT CREEK	N37°53.78'/W122°04.30'
VPWAM		N37°30.28'/W122°10.00'
VPWFR	CEMENT PLANT	N37°30.88'/W122°12.26'

REPORTING CHART ERRORS

You are requested to inform us of chart errors and/or additions that come to your attention while using this chart. Frequently asked questions (FAQs) are answered on our website at http://faa.gov/go/ais. See the FAQs prior to contact via toll free number or email. Telephone toll free at 1-800-638-8972, or email us at 9-AMC-Aerochart@faa.gov or mail to: FAA, Aeronautical Information Services, Customer Operations Team, 1305 East-West Highway, SSMC 4, Suite 4400, Silver Spring, MD 20910-3281.

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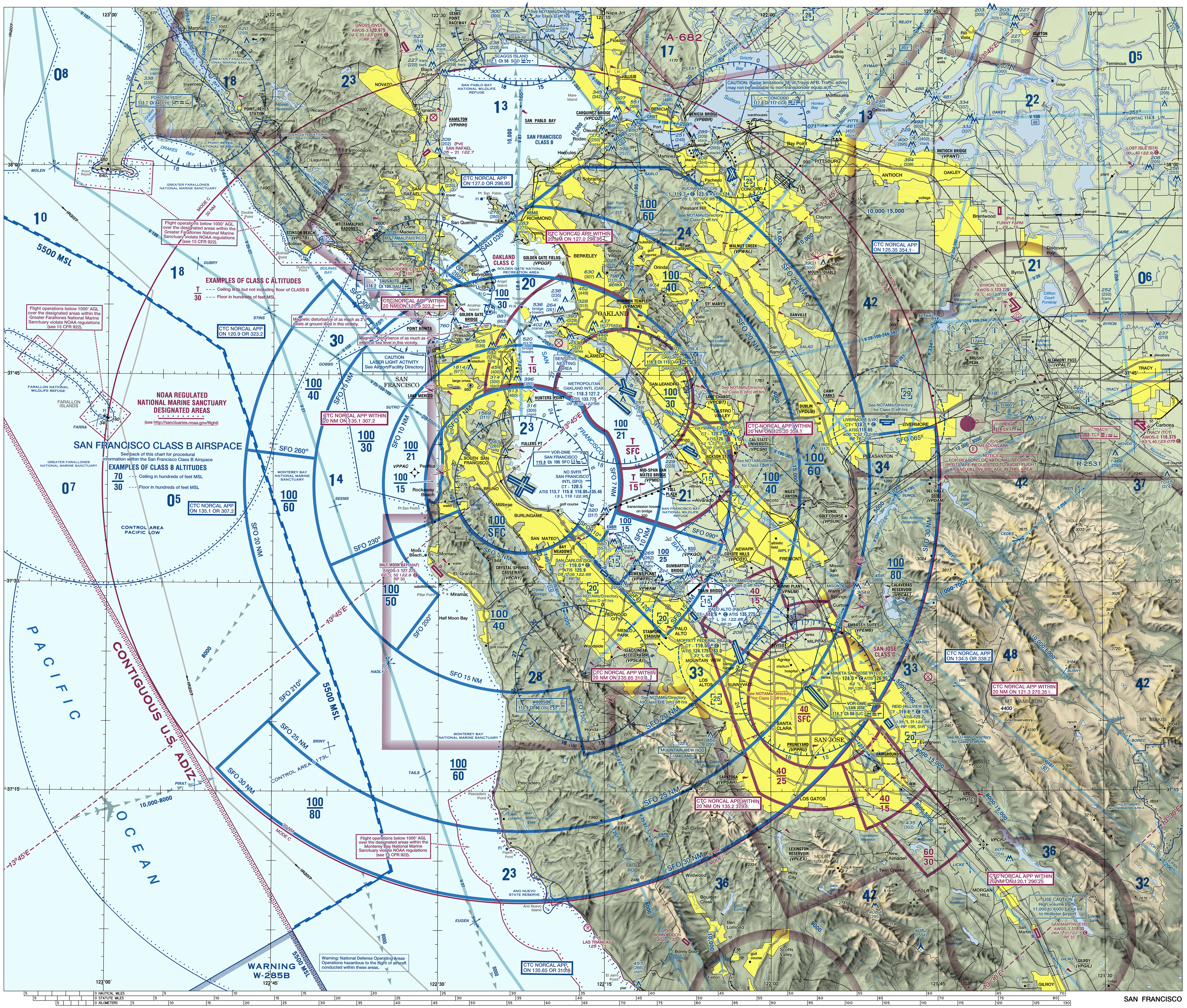
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