

The National FAA Safety Team Presents

Topic of the Month - February Expanding Your Horizons

Presented to: WAFC and Friends

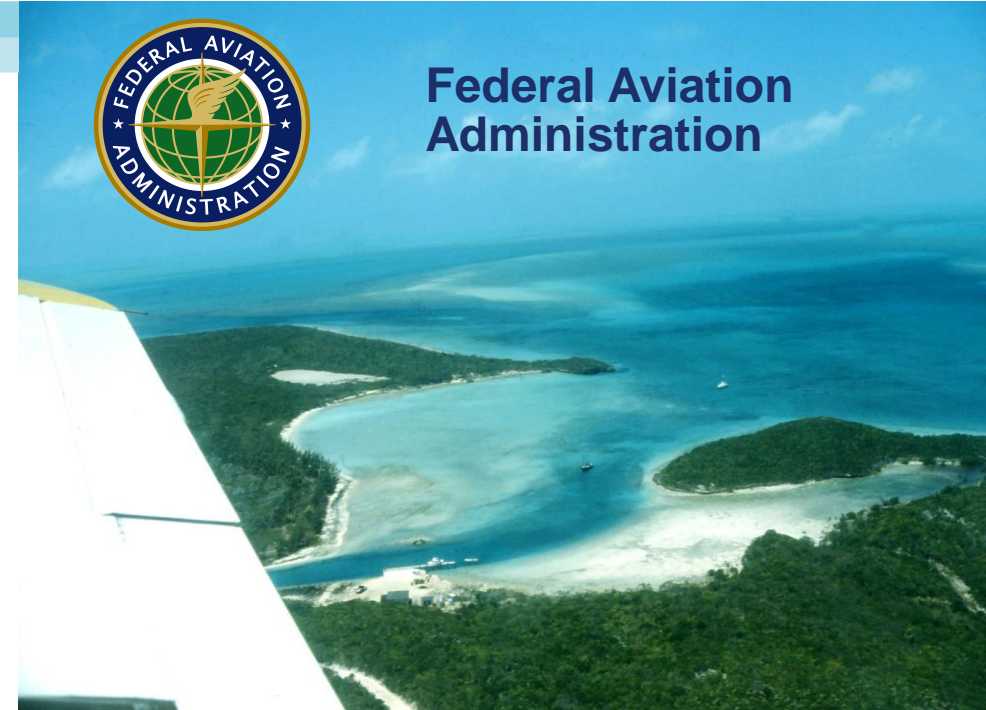
By: Stephen Bateman, CFI

Date: February 8th 2021

Produced by AFS-850
The National FAA Safety Team (FAASTeam)



Federal Aviation
Administration



Welcome

- **Steve Bateman, AOPA Director of Flying Clubs & treasurer, maintenance and safety officer – Westminster Aerobats Flying Club**
- **Sponsor Acknowledgment – WAFC, AOPA, FAASTeam, Baltimore FSDO**
- **Please - MUTE your microphone**
- **WINGS Credit: Yes...but give me a day or two...**
- **In-and-out...no time for questions, but send email:**
 - **steve.bateman@aopa.org**

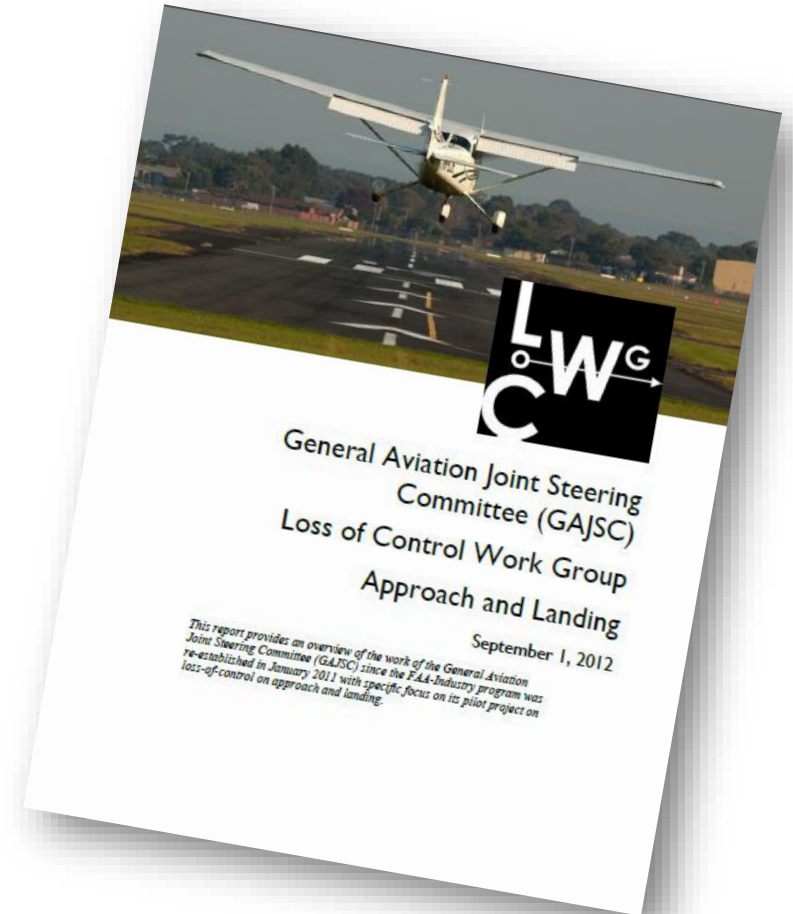
FAA Safety Team | Safer Skies Through Education
FAASTeam



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Overview

- **Expanding your Horizons**
 - Branch Out – not the same hour over and over...
 - Proficiency & Recency
 - Transition Training
 - Environmental Unfamiliarity
 - Mountains
 - High desert
 - Over water
 - Different airspace and rules
- **Broad range of piloting experience**
 - Better at handling challenges



Where would you fly?



Recent flight experience – 14 CFR 61.57

- **Takeoffs & Landings**
 - Day and night
 - Tailwheel – wheel landings?
 - Instrument
- **Flight Review**
 - Combine the review with other training – checkouts, etc.

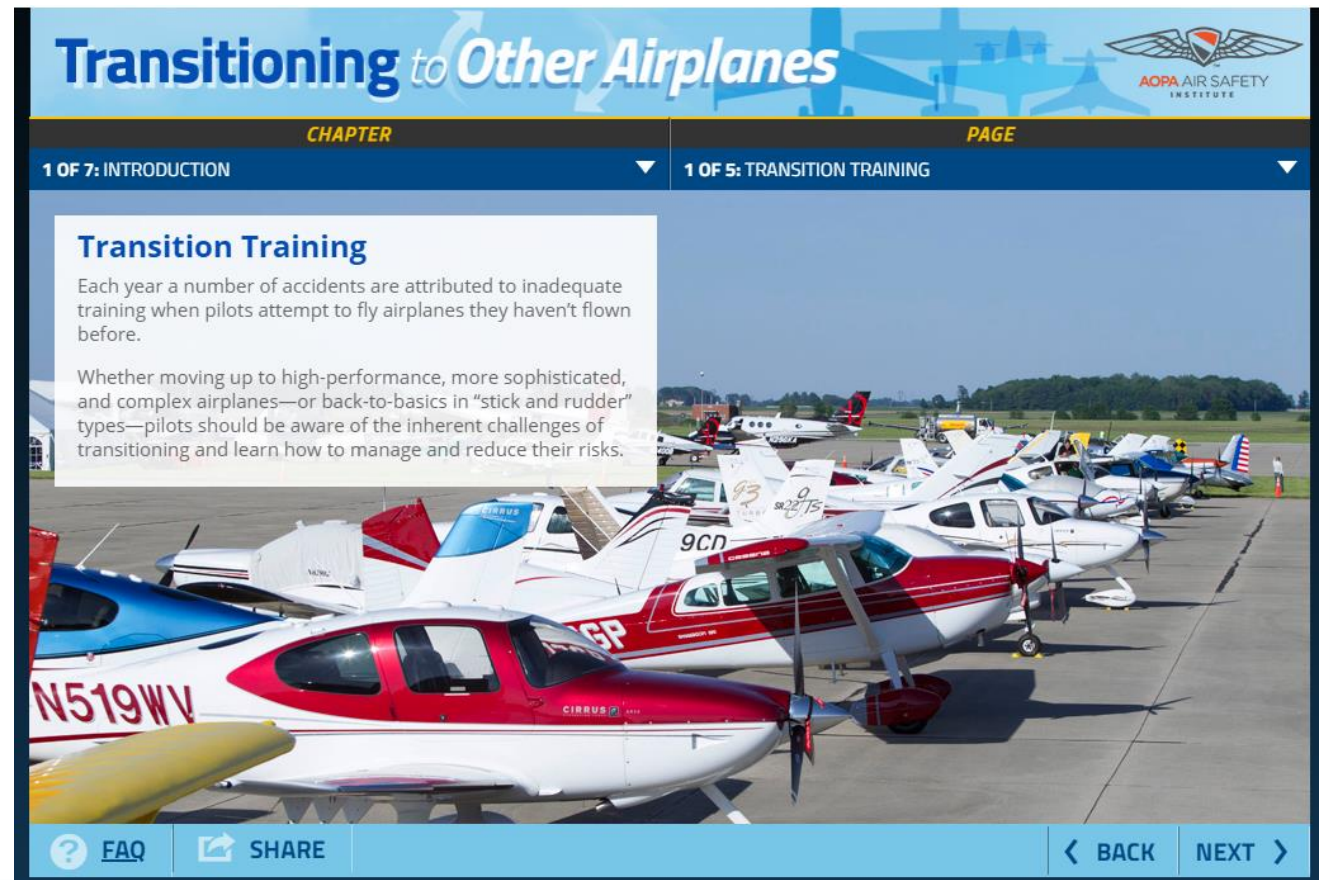


Horses for Courses



Transition Training

- AFH Chapters 13-16



Transitioning to Other Airplanes

CHAPTER PAGE

1 OF 7: INTRODUCTION 1 OF 5: TRANSITION TRAINING

Transition Training

Each year a number of accidents are attributed to inadequate training when pilots attempt to fly airplanes they haven't flown before.

Whether moving up to high-performance, more sophisticated, and complex airplanes—or back-to-basics in “stick and rudder” types—pilots should be aware of the inherent challenges of transitioning and learn how to manage and reduce their risks.

FAQ SHARE BACK NEXT



Pick a destination

- **High density altitude**
 - Mountains
 - Desert
- **Complex high-traffic airspace**
- **Short/Soft Field**
- **Maritime**
- **Survival considerations**



Know the DA

- **4-H Club:**
 - Hot
 - High
 - Heavy
 - Humid
- **Atmospheric Pressure influences DA**
- **Lower pressure = Higher PA = Higher DA**

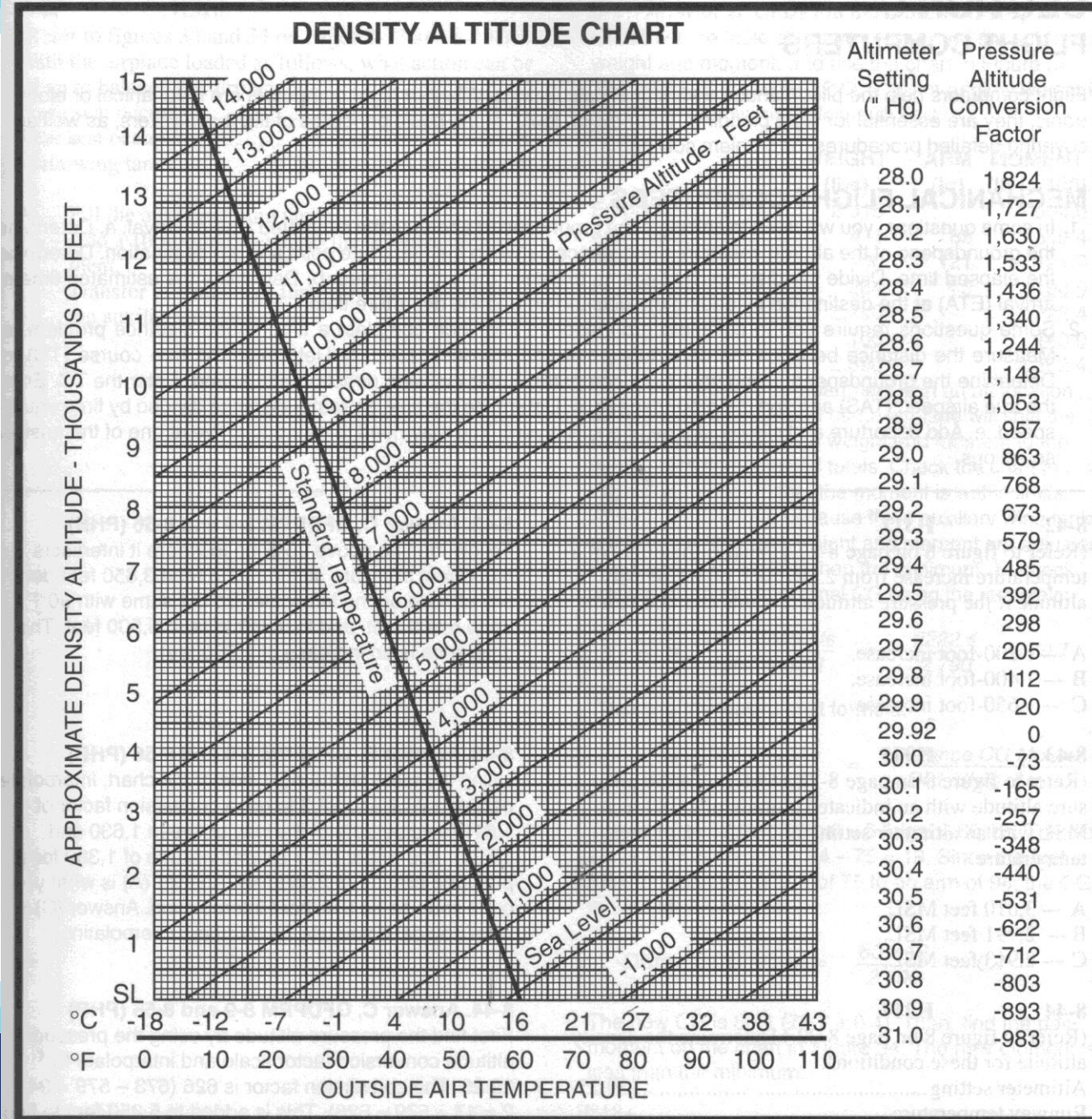
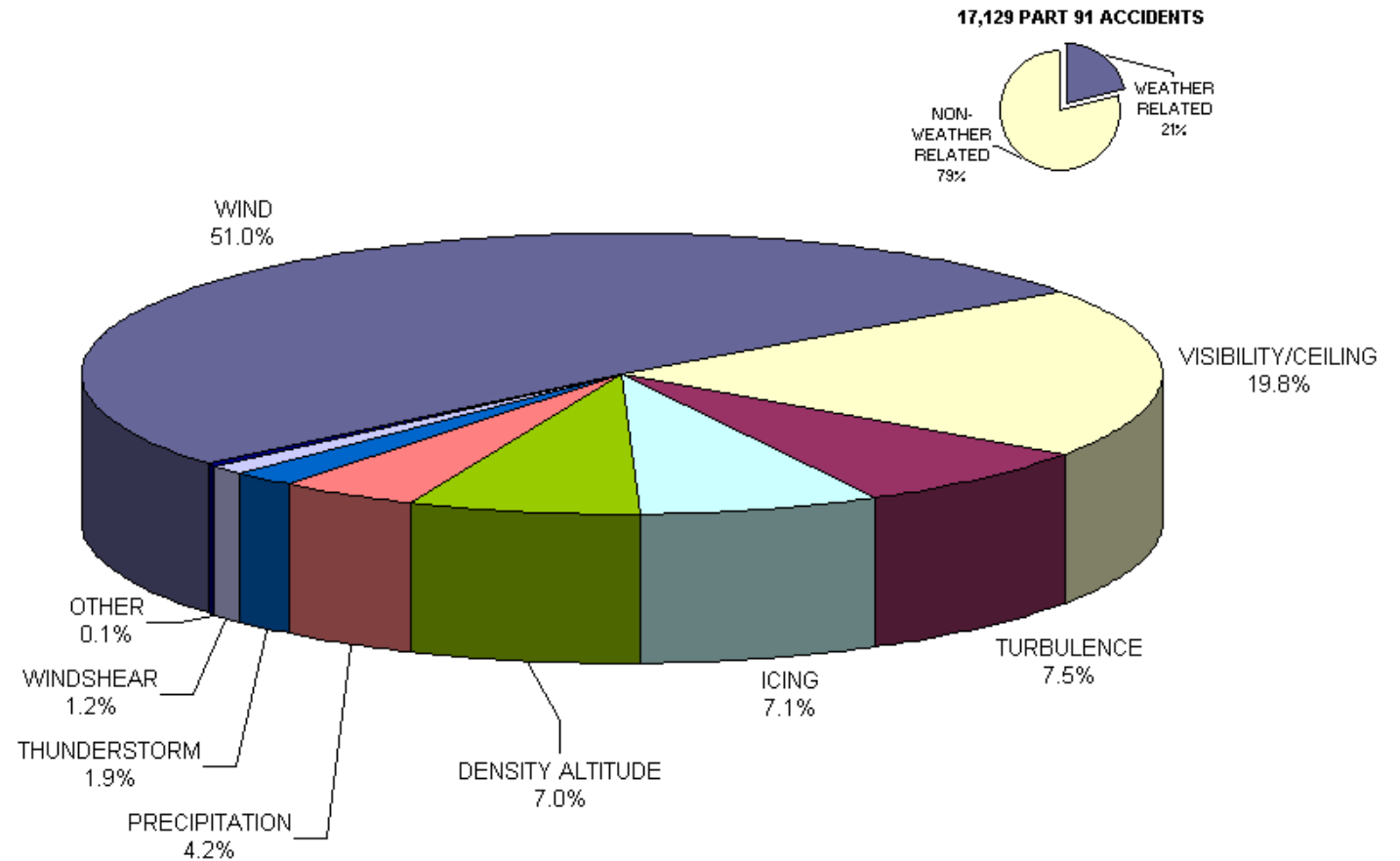


FIGURE 8.—Density Altitude Chart.

DA Kills

PART 91 NTSB WEATHER RELATED ACCIDENTS BY WEATHER CONDITION 1994-2003



Ref: Foreflight Documentation

Between 1994 and 2003, there were 19,562† aircraft accidents, involving 19,823 aircraft, of which 17,129 were conducted under FAR Part 91. Weather was a contributing cause or factor in 3,617 of the Part 91 accidents. This chart identifies the breakout of Part 91 weather related accidents according to the weather condition(s) involved in the event.

† Accidents include final reports only where causal factors were identified.

§ A single accident may involve multiple weather conditions.



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Its All About Air Density, T, P and DP

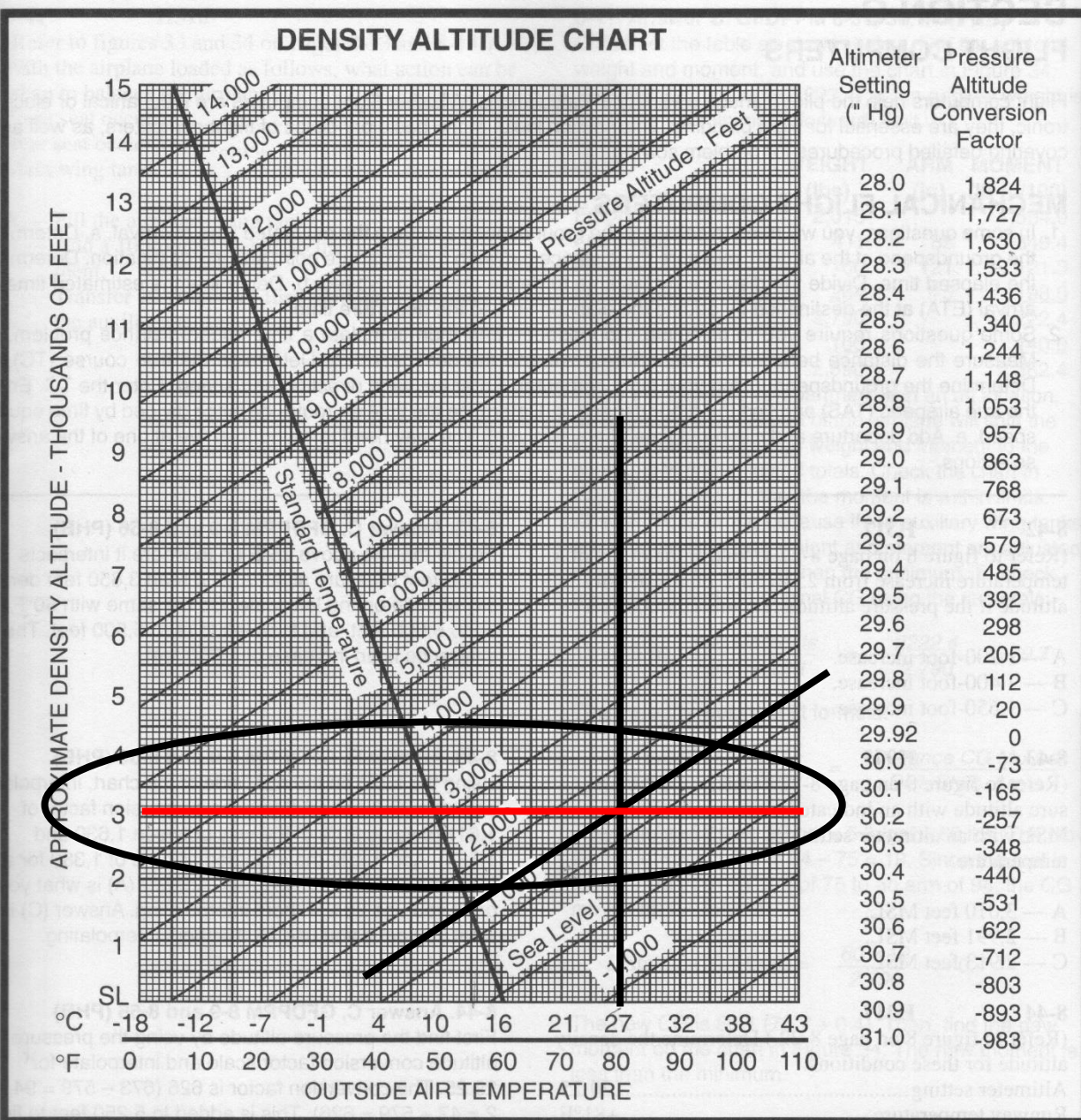


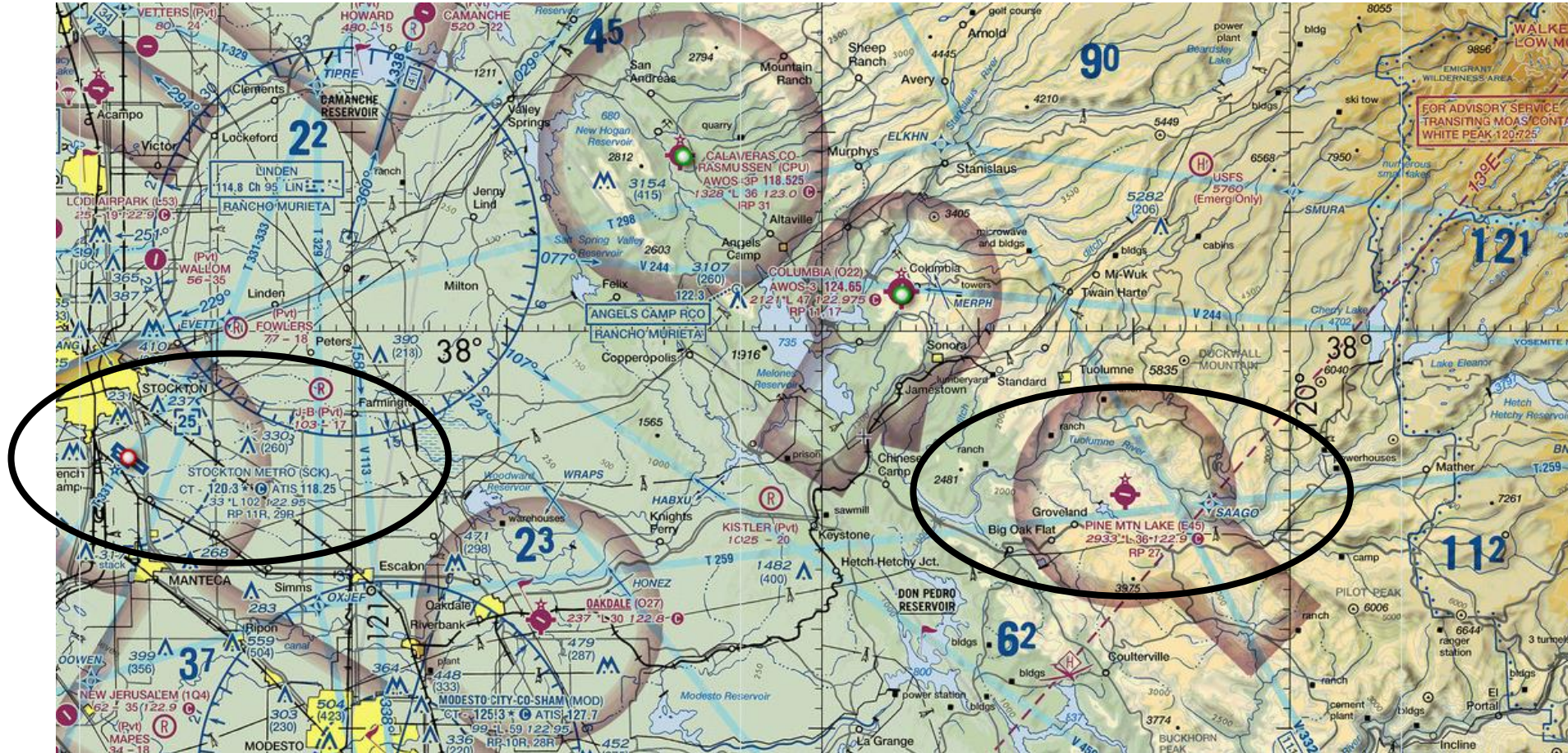
FIGURE 8 Density Altitude Chart

- **PA = MSL+(29.92-AS)*1,000**
 - AS = Actual altimeter setting
- **At KFDK (309' MSL)**
 - On std day, PA=309'
 - AS = 28.92", PA=1,309'
 - 27C day?
 - DA = 3,000'
- **Lower atmospheric pressure means higher PA means higher DA**



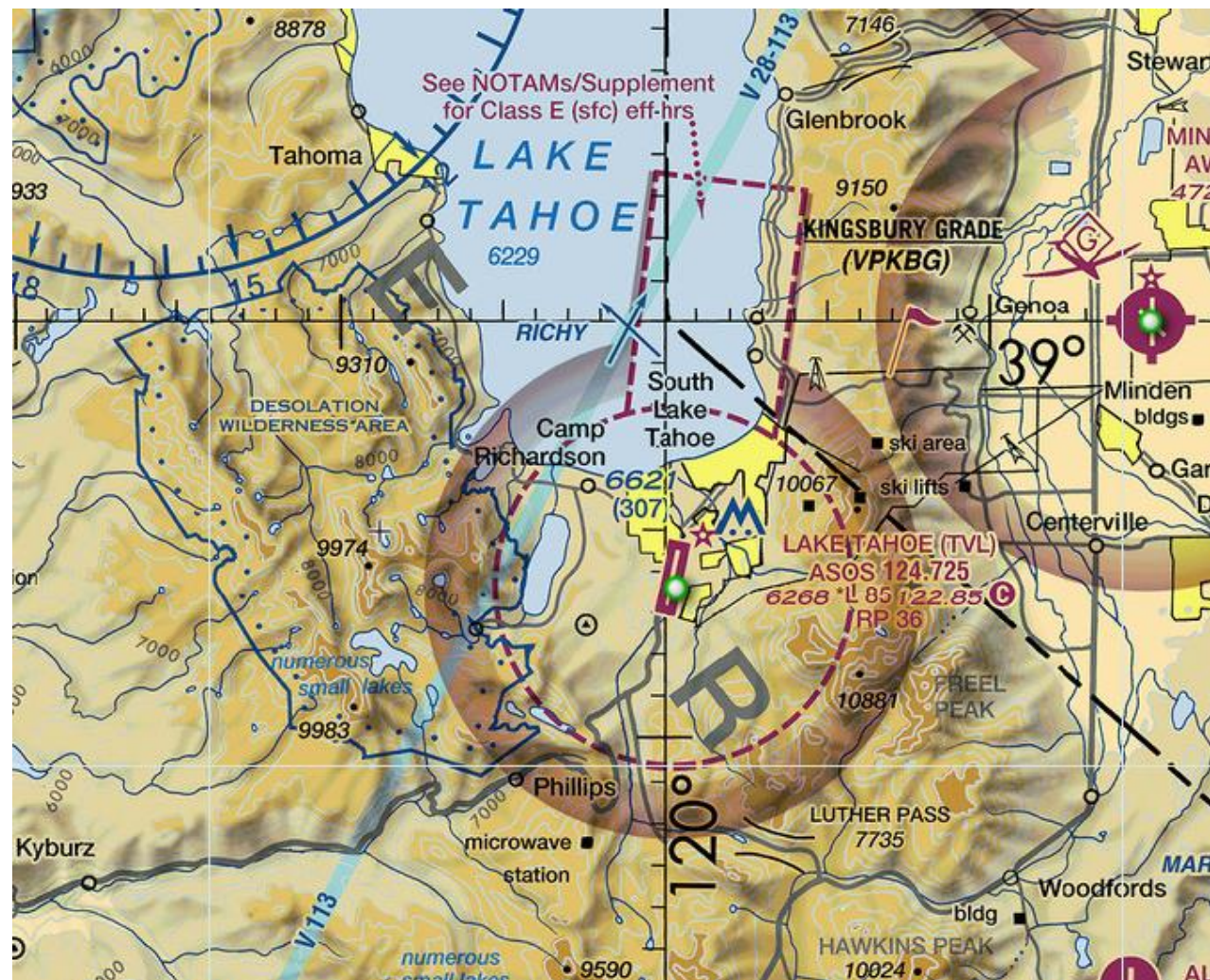
Pick a destination

- Mountains
- Use the MEF
- Stockton
 - 33' MSL
- Pine Mountain
 - 2,933' MSL
- 2,900' increase in 50NM



Pick a destination - Tahoe

- 6,268' MSL
- Peaks all around 10,000'
- Easily gets to 30C
- DA gets to: 11,400'
- (T accounts for ~3,500')
- C172 climb rate <200FPM
- Need to gain ~4,000'
- Will take some 20 mins!
- Will have to circle over airport



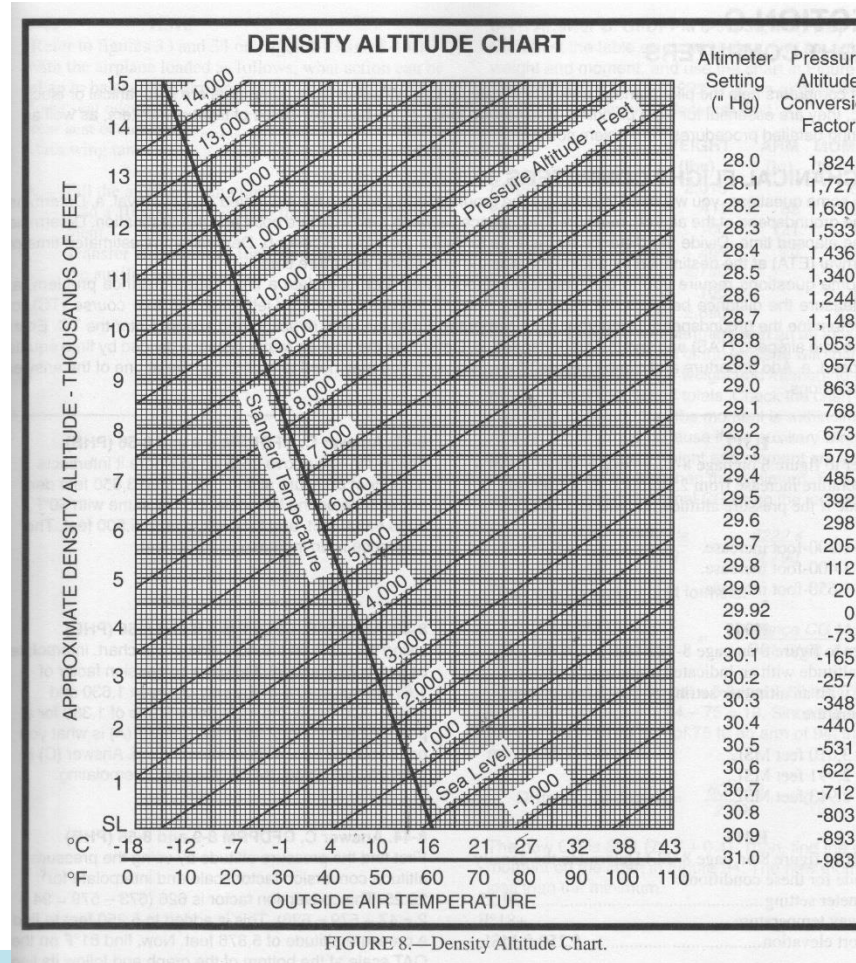
Pick a destination

- High desert
- Note the MEF
- Flagstaff 7,015'



But calculating DA is so....hard...

- Use the chart
- Listen to the METAR
- Use, e.g. Foreflight!



The screenshot shows the Foreflight app interface for flight N761GG to KFLG. The METAR data is highlighted with a red circle:

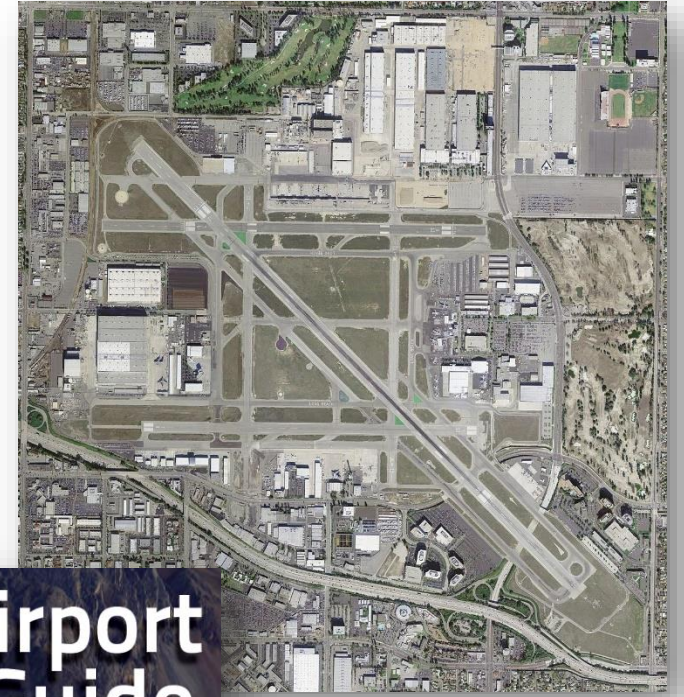
KFLG
12:05 PM EST
VFR
KFLG 071657Z 24007KT 10SM CLR 07/M15
A3004 RMK AO2 SLP144 T00721150

Time: 11:57 AM EST
Wind: 240° at 7 kts
Visibility: 10 sm
Clouds: Sky clear
Dewpoint: -15°C (5°F)
Altimeter: 30.04 inHg
Humidity: 19%
Density Altitude: 7,611'



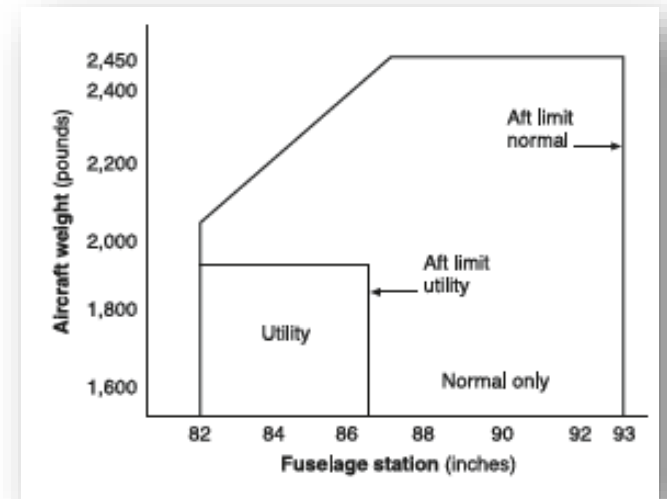
Research the destination

- Chart supplement
- VFR charts
- IFR charts for MEA, MOCA
- Magazine articles
 - Caution!
- On-line videos
 - Caution!
- Local knowledge:
 - Pilot/Instructor interviews
 - Local flying clubs



Research the requirements

- Over water equipment
- Survival gear
- Weight & balance calculation



Find an Instructor

- **You may have to travel**
 - Look for schools, instructors & courses near your destination
 - Ask for local instructor recommendations
- **Interview several instructors**
 - Pick the best fit for you
- **Get a thorough local checkout**
 - Perhaps combine with a Flight Review



Work up to the challenge

- **Get some hours in the density altitude environment**
 - At a good-sized airport
- **Before you tackle something like this**



Dress for Success

- “In an emergency, what you have in your pockets is survival equipment. What you have in the baggage compartment is camping gear”



Few more things

File a Flight Plan
and....



Be prepared:

- **Basic Survival Training**
 - http://www.faa.gov/pilots/training/airman_education/survival_training/
- **SAS Survival Handbook**

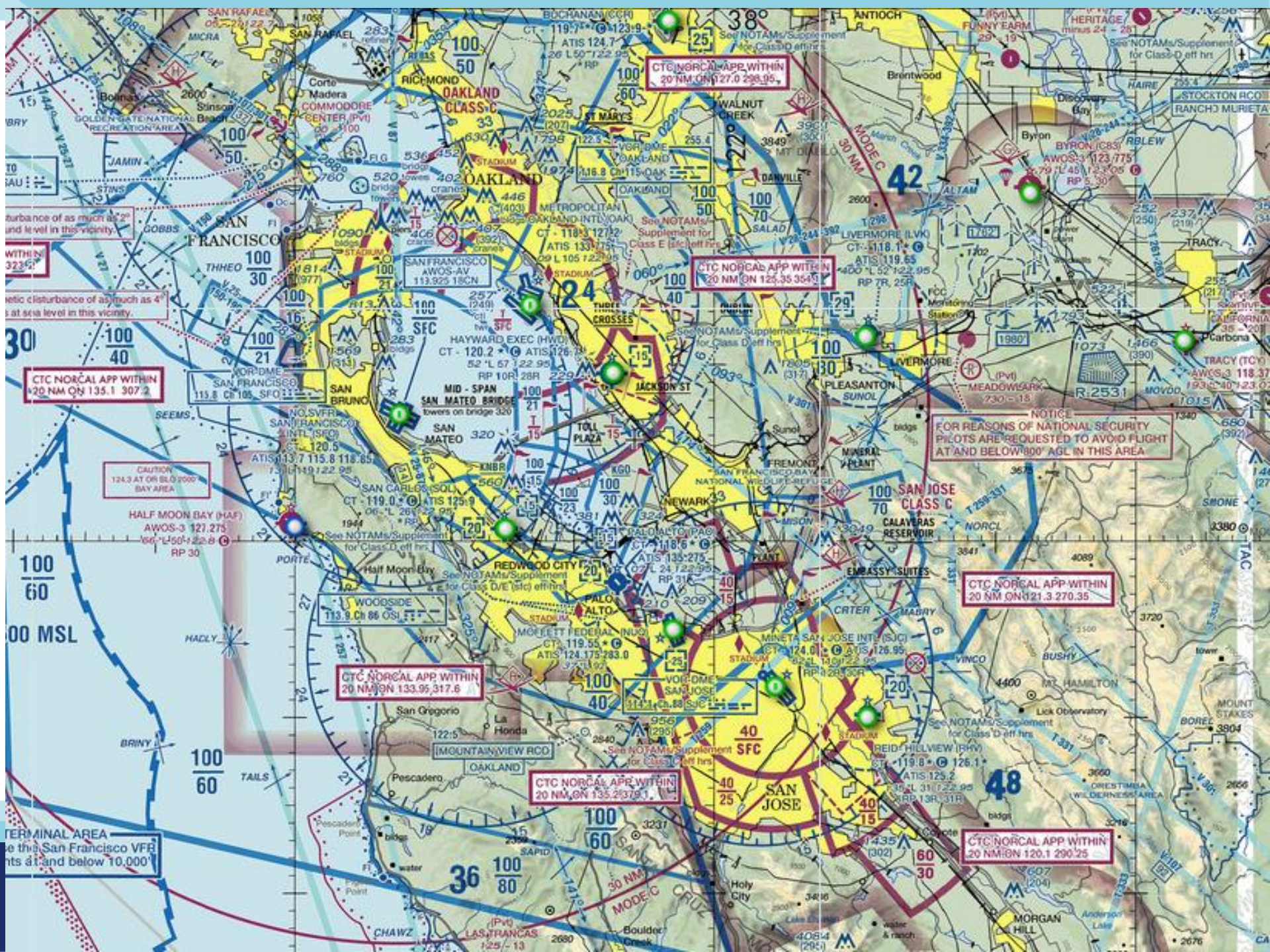


Airspace

- ***Study* the charts**
- **Don't forget the Fly chart on the reverse of a TAC**
- **Get local instruction**
- **May have to take additional training. e.g. DC-SFRA and FRZ**



Airspace SFO SEC



Airspace SFO TAC

- Class B
- Multiple Class C
- Multiple Class D
- Restricted



Airspace SFO FLY

WFR FLYWAY PLANNING CHART
SAN FRANCISCO
Scale 1:50,000
NOT TO BE USED FOR NAVIGATION

SUPPORTS
Flight Number
NAME (IATA)
NAME (IATA)
Name (IATA)
Name (IATA)

PAGE AIDS TO NAVIGATION
WFR
WFR
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WFR
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WFR
WFR

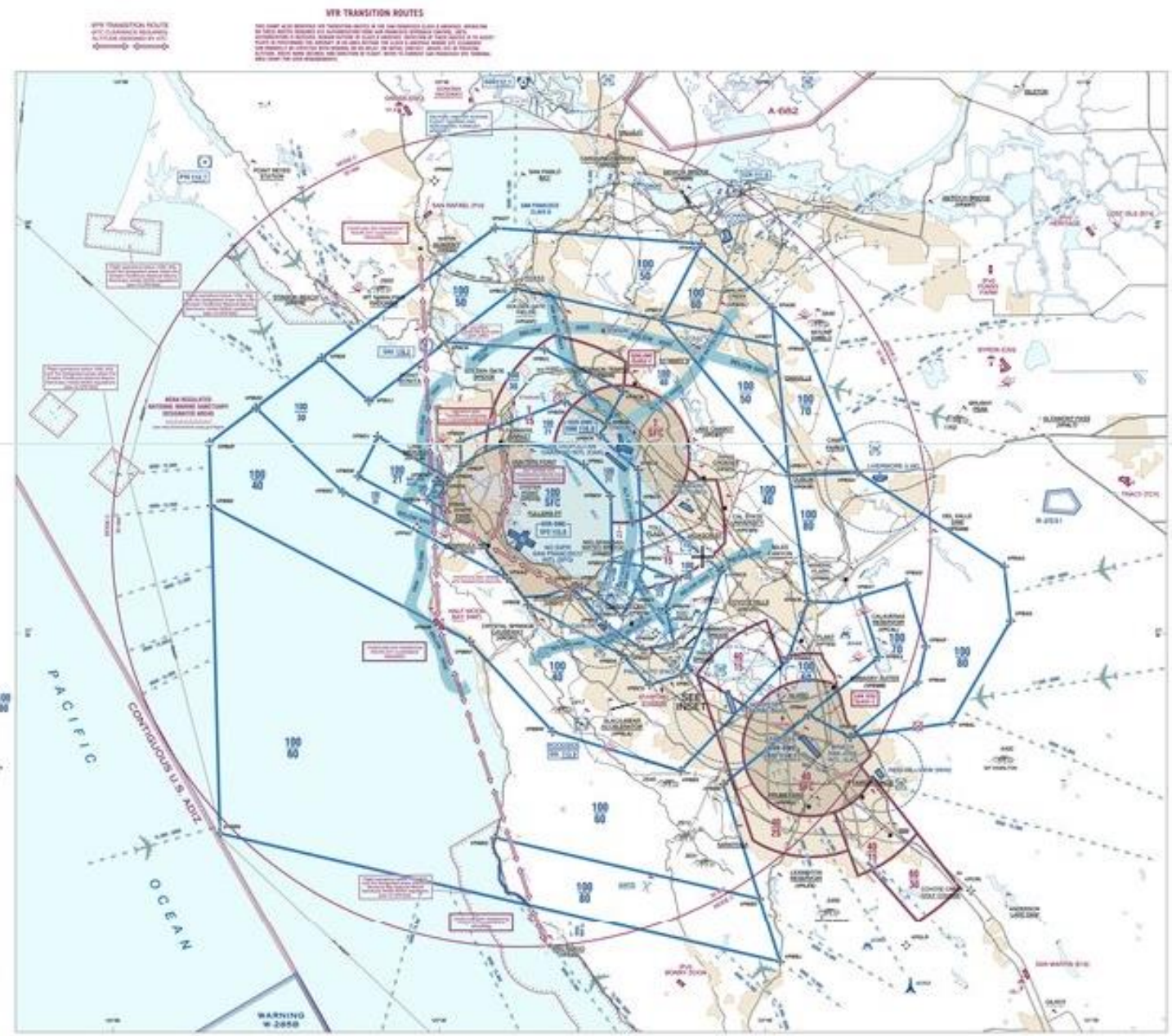
REPORT TRAFFIC SERVICE AND AIRSPACE INFORMATION
Class of Airspace
Class of Airspace
Class of Airspace
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OBSTRUCTIONS
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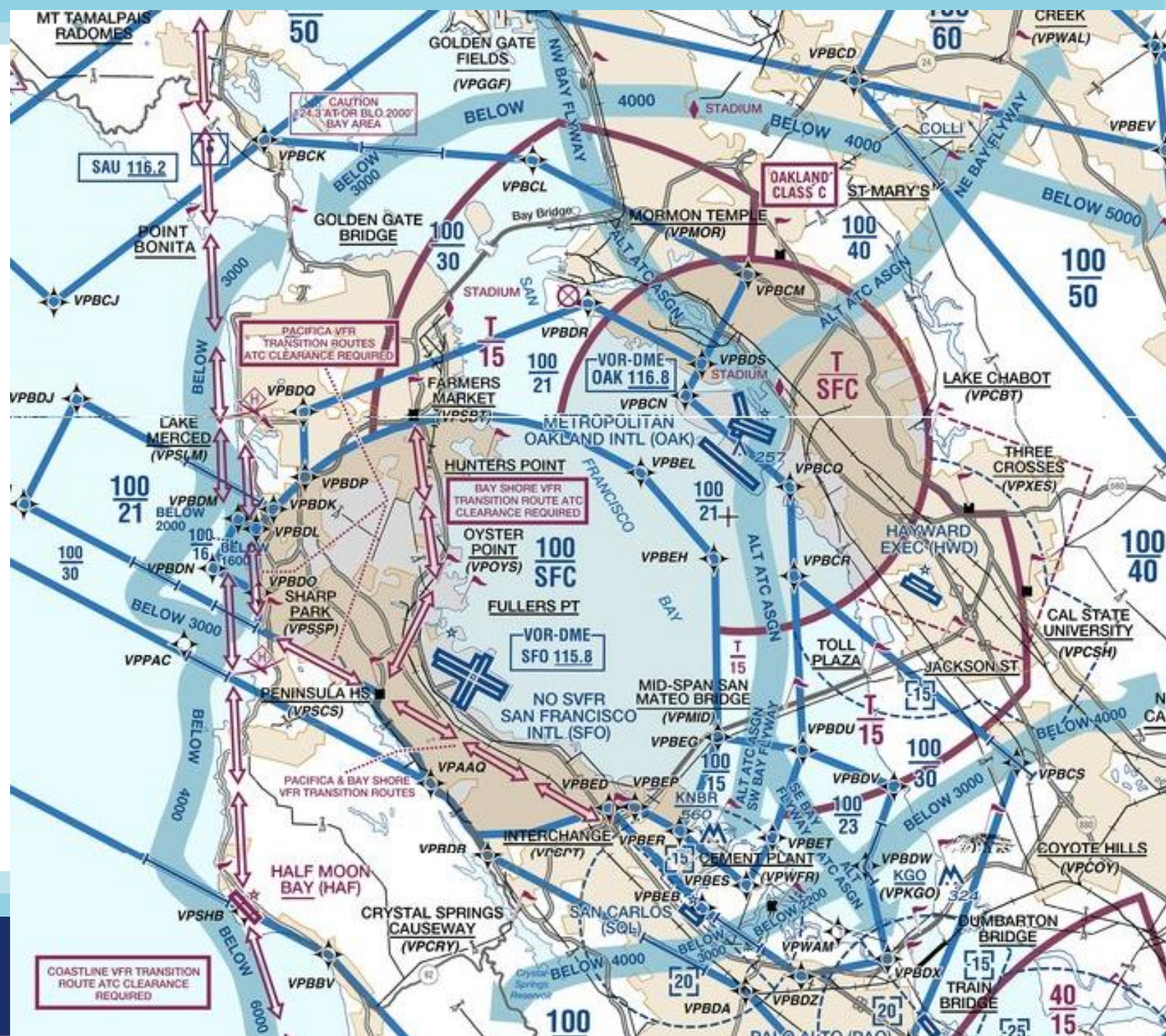
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SYMBOLIC INFORMATION
Symbolic Information
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Symbolic Information

CAUTION
This chart contains information intended to help pilots and other users of the chart to understand the current status of the airspace and to plan their flights accordingly. It is not intended to be used as a substitute for the current status of the airspace and to plan their flights accordingly. It is not intended to be used as a substitute for the current status of the airspace and to plan their flights accordingly.

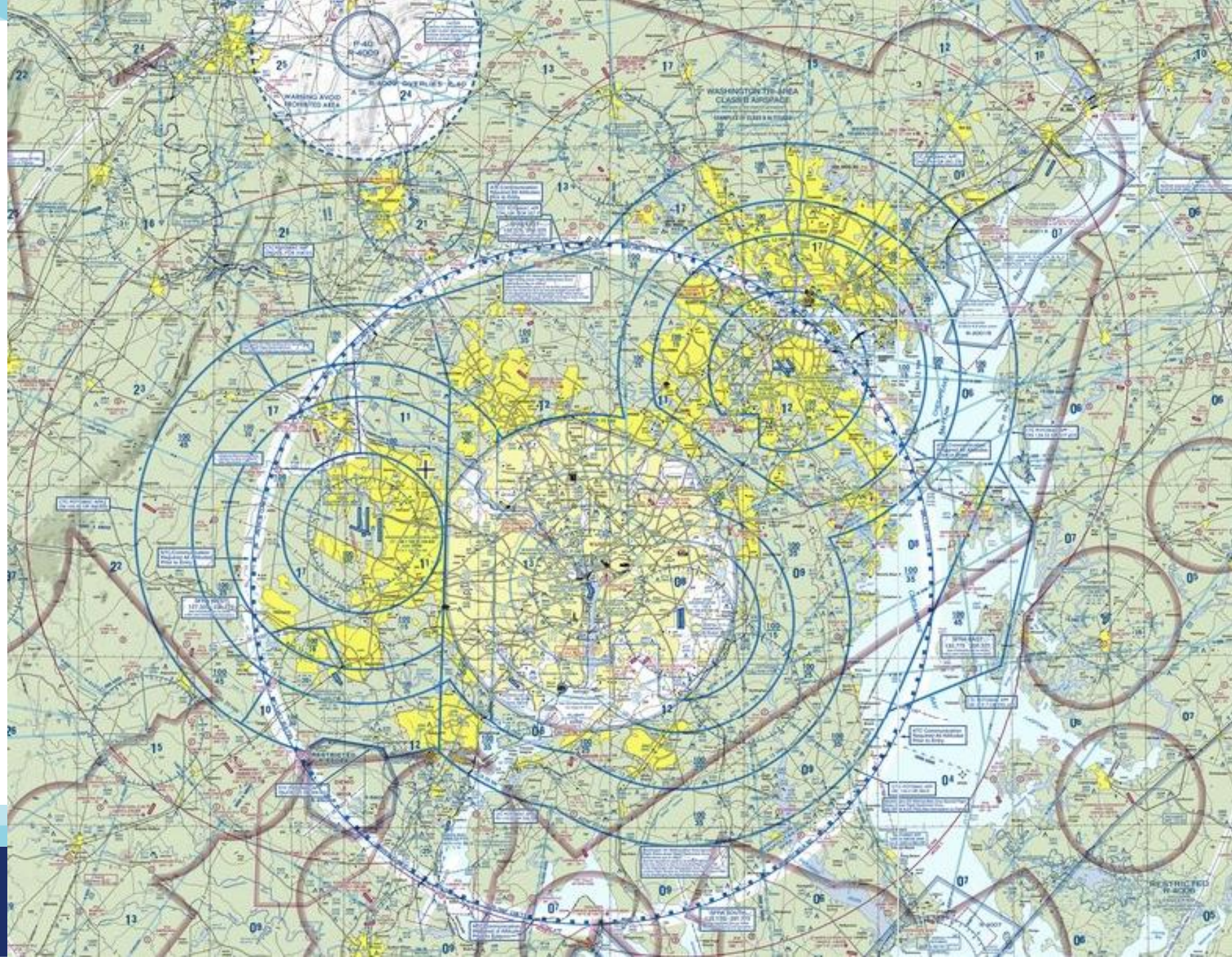


Airspace SFO Bay Tour



DC-SFRA

- Multiple Class B
- MOAs
- Restricted
- Prohibited
- Pop-up TFRs



DC-SFRA Fly

IFR FLYWAY PLANNING CHART
BALTIMORE - WASHINGTON
NOT TO BE USED FOR NAVIGATION

AIRPORTS
Front Runway
Main Runway
Taxiway
Grass Runway
Water Runway

REGULATED AIRSPACE
Class E
Class G
Class D
Class C
Class B
Class A

APPROACH TRAFFIC SERVICE AND ARRIVAL INFORMATION
Arrival
Departure
Enroute
Terminal
Tower
Unicom
Weather
Fuel
Maintenance
Medical
Police
Fire
Ambulance
Customs
Immigration
Security
Other

RESTRICTIONS
No-fly zone
Prohibited area
Warning area
Obstruction clearance surface
Obstruction clearance dome
Obstruction clearance surface
Obstruction clearance dome

SYMBOLS
Obstruction
Obstruction clearance surface
Obstruction clearance dome
Obstruction clearance surface
Obstruction clearance dome

TOPOGRAPHIC INFORMATION
Contour
Spot elevation
Spot elevation
Spot elevation

NOTES
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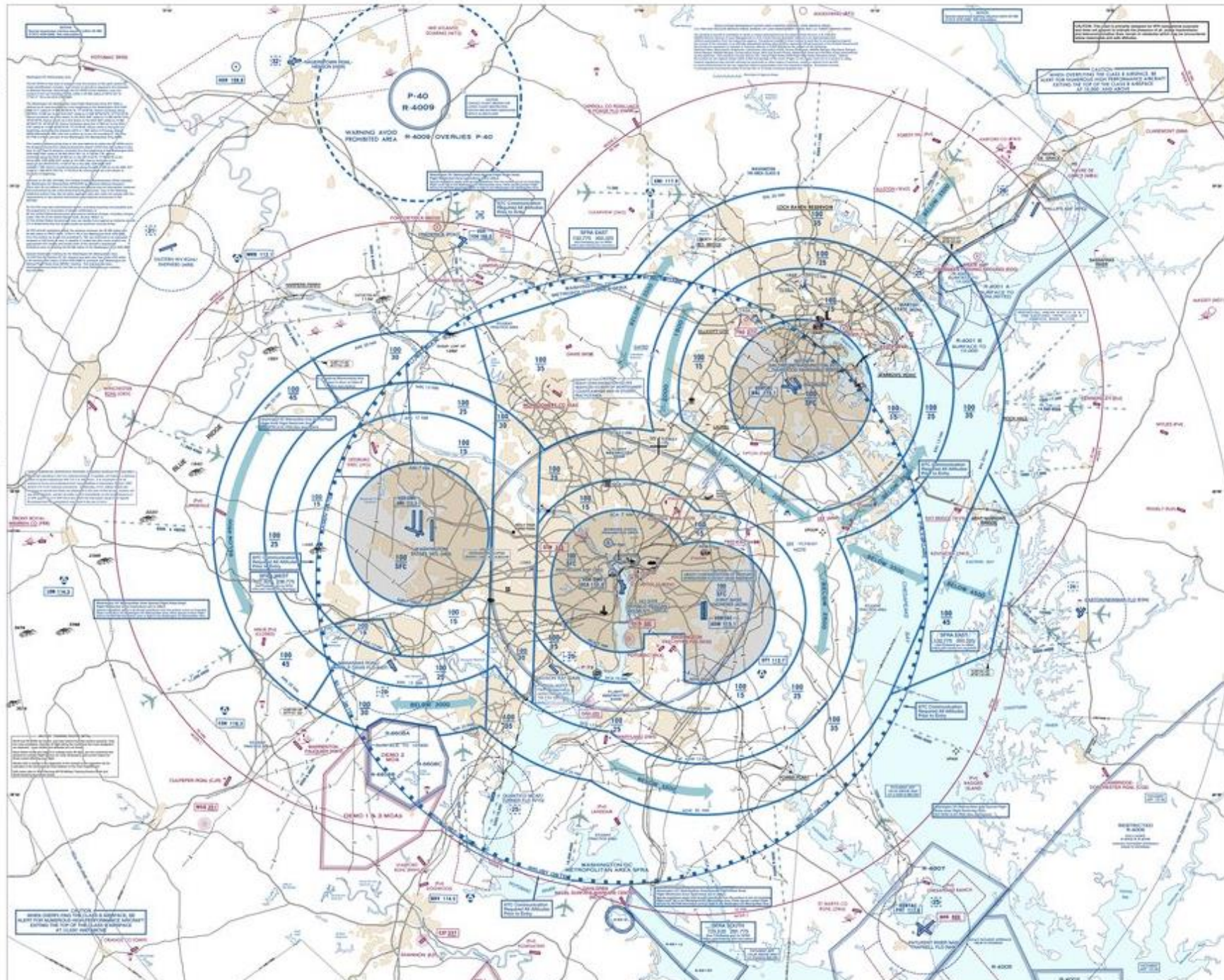
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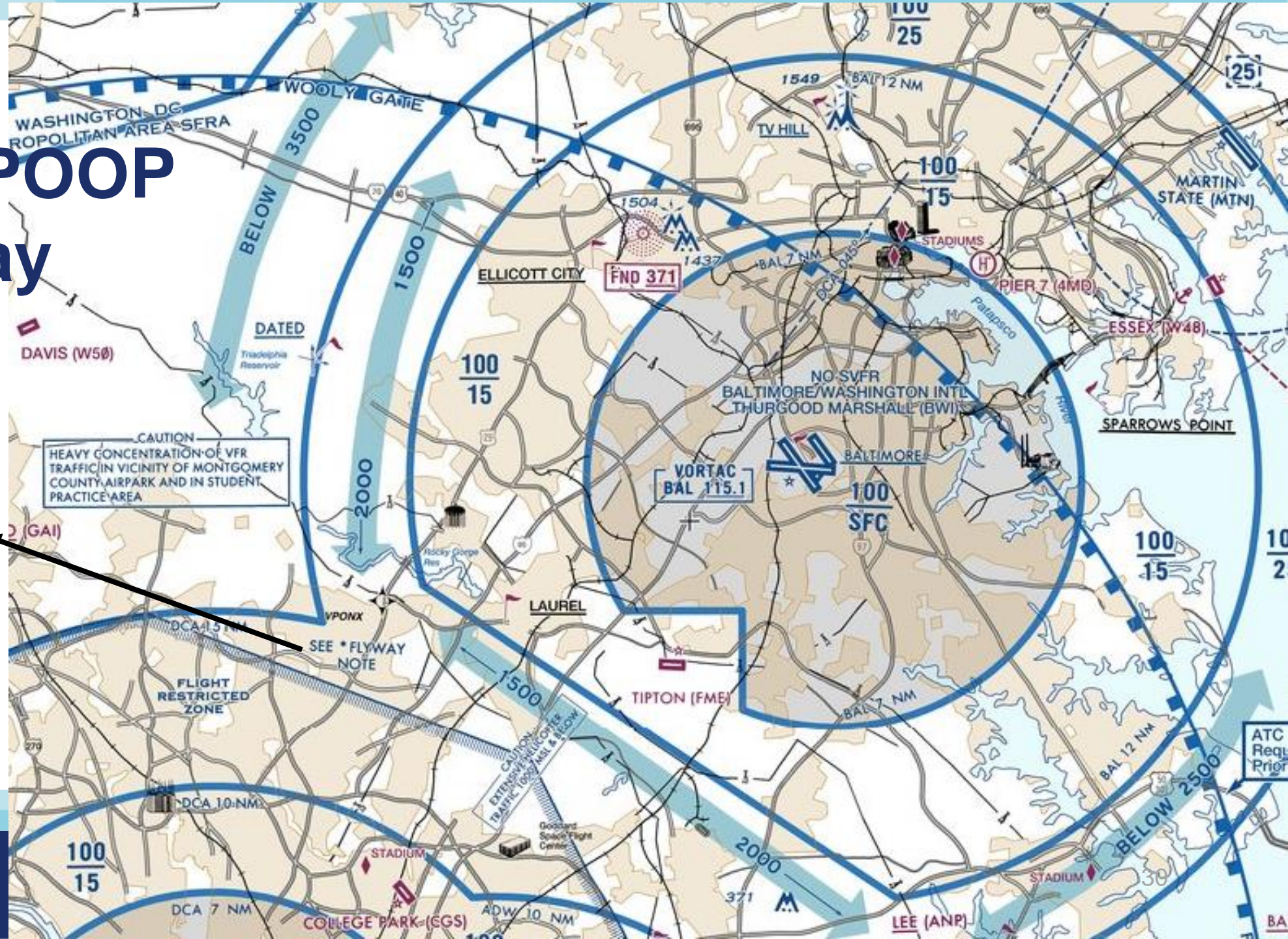
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DC-SFRA VPONX-VPOOP VFR Flyway

*FLYWAY NOTE
RECOMMENDATIONS FOR FLIGHT
THROUGH THIS AREA:
1. Indicated airspeed should not exceed
140 knots.
2. Anticollision, position/navigation, and/
or landing lights should be on.



Have you earned your *WINGS*?

- **Proficient Pilots are:**
 - Confident
 - Capable
 - Safe
- ***WINGS*** will keep you on top of your game



Thank you for attending

- You are vital members of our GA safety community



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