ForeFlight for the Private Pilot

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Tampa Bay Aviation

Pro’s of an EFB

- Can be updated
- Take up less space (ie. yolk mount, knee board)
- Easier/faster to navigate

Con’s of an EFB

- Limited by the battery/functionality of the device
- Cause pilots to look down/inside the cockpit too much
- Can be difficult to use if unfamiliar

If You Choose to Use an EFB…

- Create personal minimums - Consider that Part 135 operations have rules that can be used as guidelines for Part 91 pilots (For example, Tampa Bay Aviation students could use Skyway Aviation Charter's General Operation Manual to create realistic and safe personal minimums for using an EFB).
  - For example- only using a device with 90% or more charge, or the duration of the flight plus an hour
- Know what the FAA says about EFB's – Part 91.21 in the FARs
- Read additional safety material- AD 120-76D

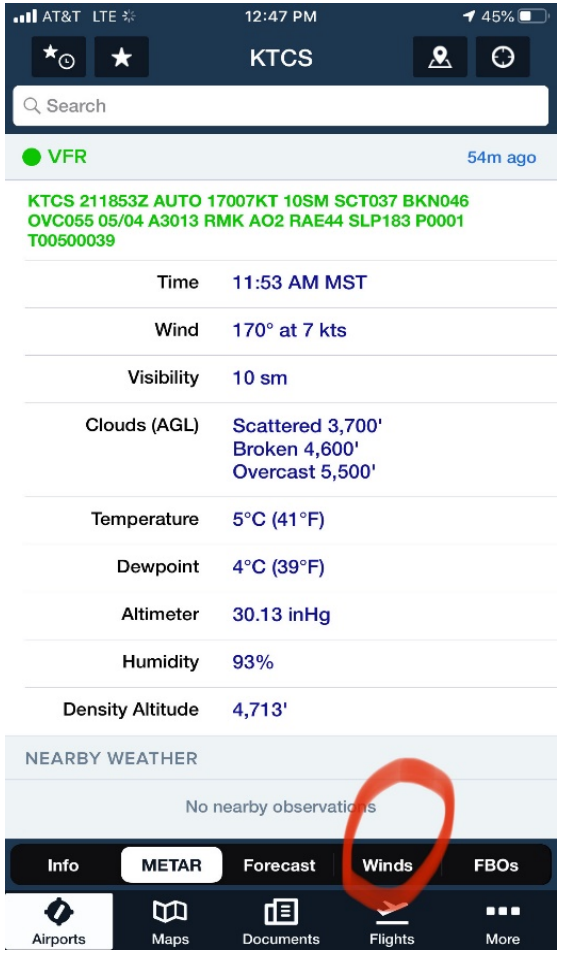
Three Components of ForeFlight

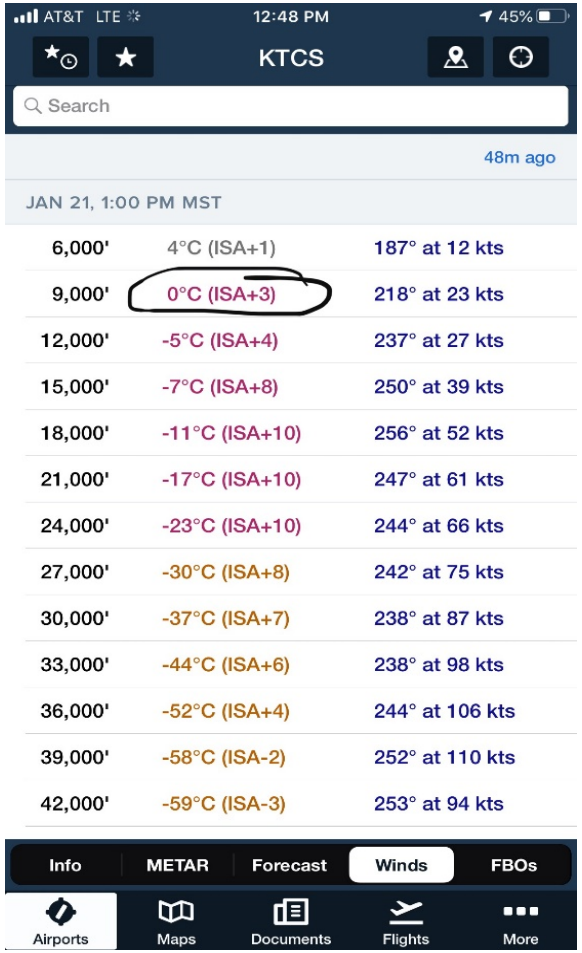
- Weather
- Flight Planning
- Performance

Private level pilots should be able to do the following in each of these components…

Weather

- Reading the Metar (non-abbreviated)
- Reading the TAF (non-abbreviated)
- Zulu time- switching in and out and understanding the purpose of UTC
- Using Zulu time to determine weather AT TIME OF ARRIVAL
- Finding lapse rate and winds aloft for the route and stops in flight plan
- Make sure students know other acceptable sources for weather (WXBRIEF, National Weather Service, etc.), they shouldn’t just rely on ForeFlight





The lapse rate formula (2 degree Celsius drop for every 1000 feet) is hardly ever the case in real life.

Know how to calculate but also how to find the real atmospheric conditions at your altitude (Winds Aloft)

*Notice the difference in color (below 0, -30)

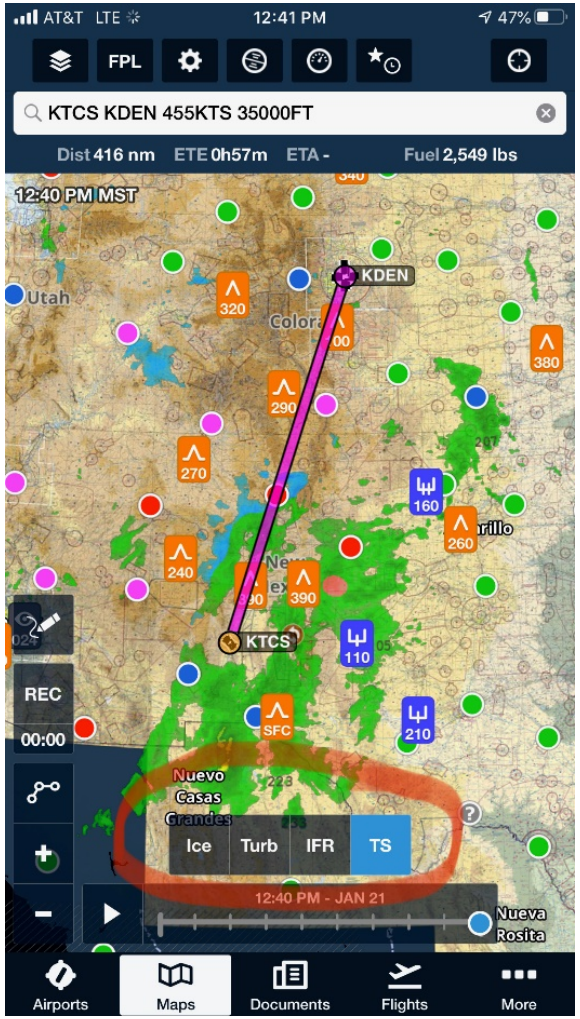
Note: ForeFlight's Winds/Temps Aloft has a lot of additional measurements/data

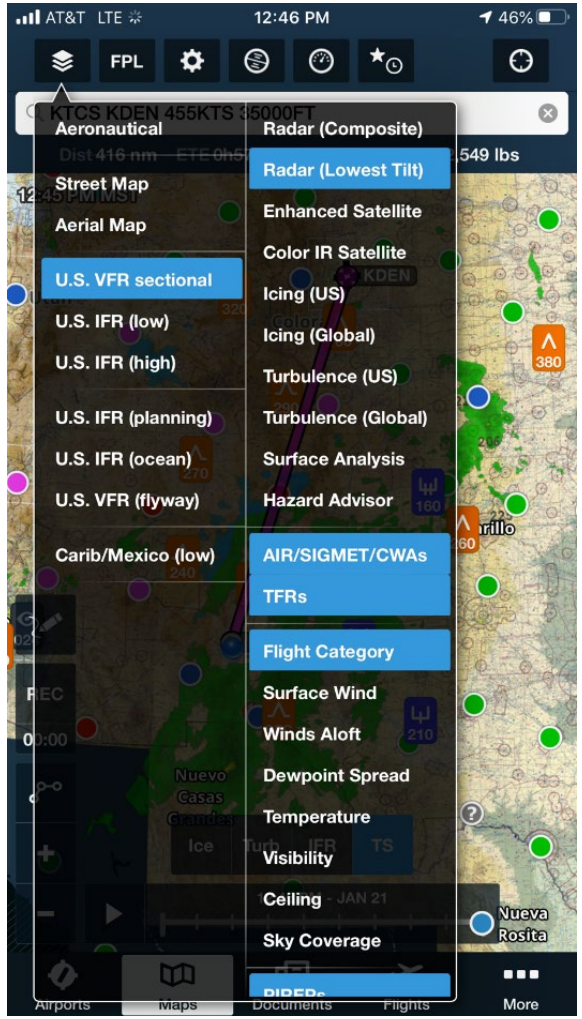
To minimize data when creating a Navlog, Aviation Weather Center's Winds Aloft page provides limited, accurate data:

Know how to switch in between the different layers of weather reporting on the “Maps” page

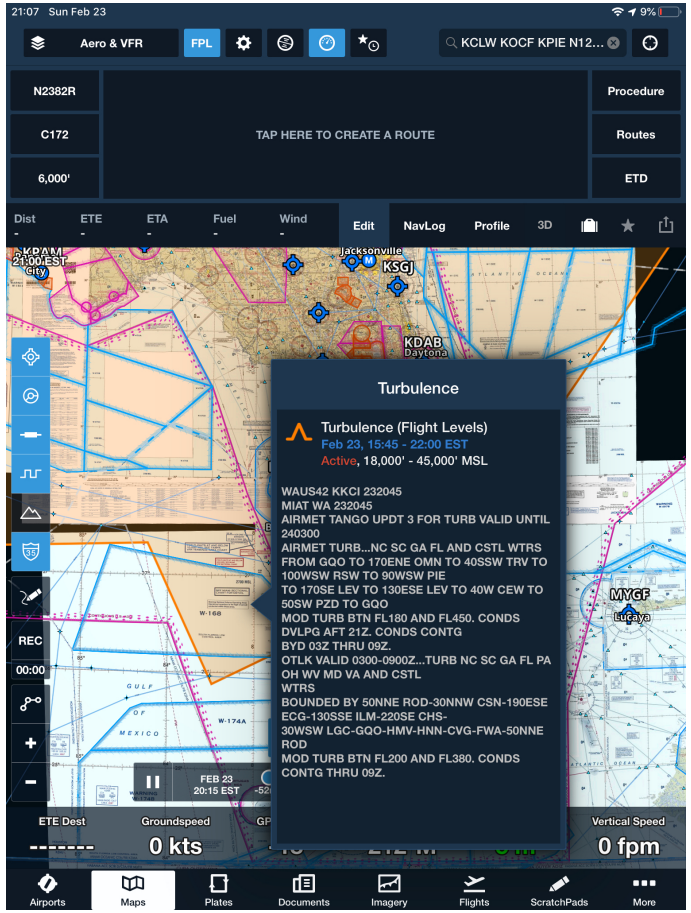
- Airmets
- Sigmets
- Conv Sigmets
- TFR’s

And how to read the information these

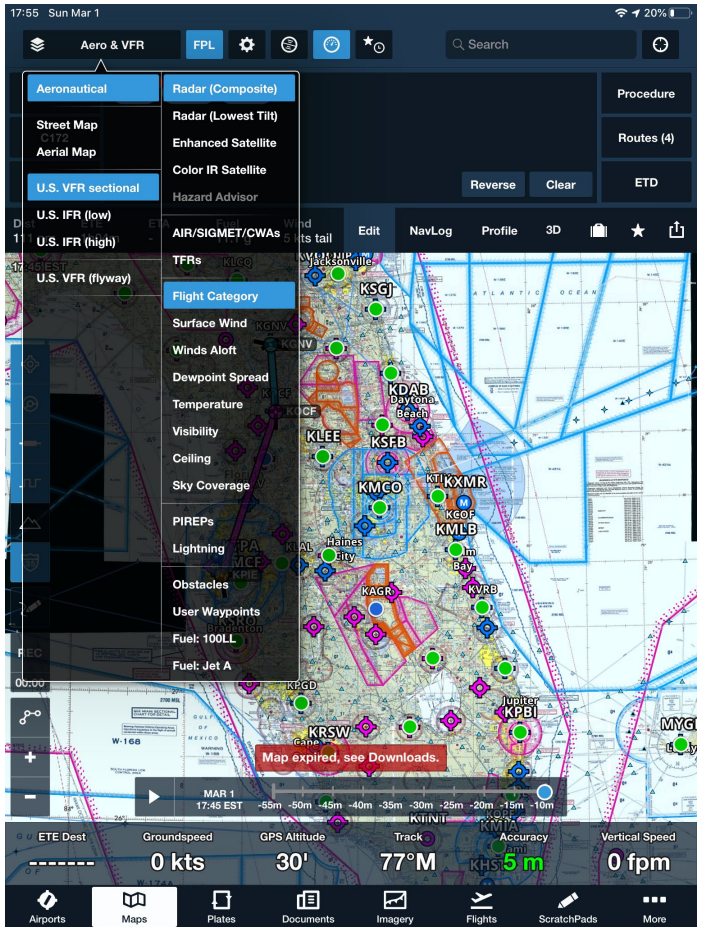


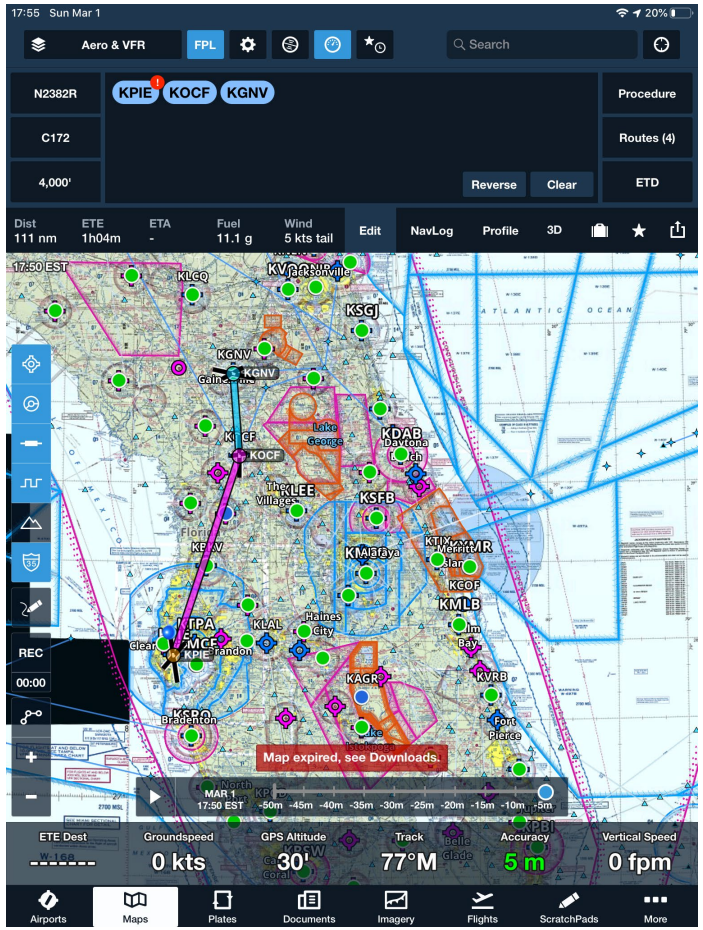


Tap on the Airmet/Sigmet on the map to see the information:



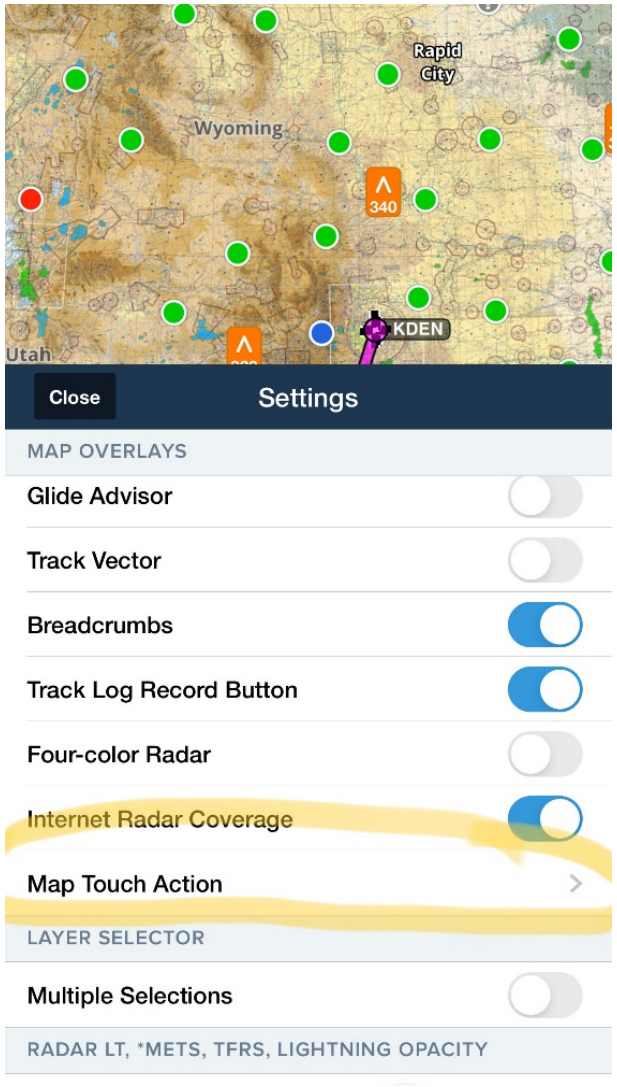
Additionally, it's helpful to turn on "Flight Category" in the Sectional settings to get a quick view of airport reporting weather, shown in colored dots:

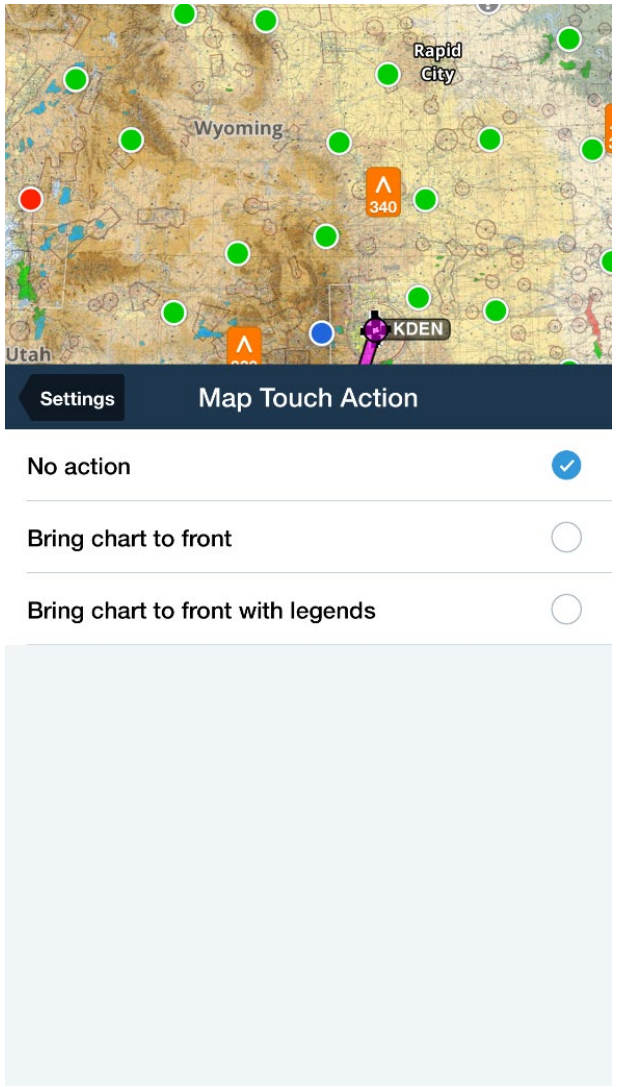




Pay attention to the time stamp in the top corner- know how current your weather is.

Know how to find the legend of the sectional (most DPE's will find symbols that are very difficult to force the student to use the legend)

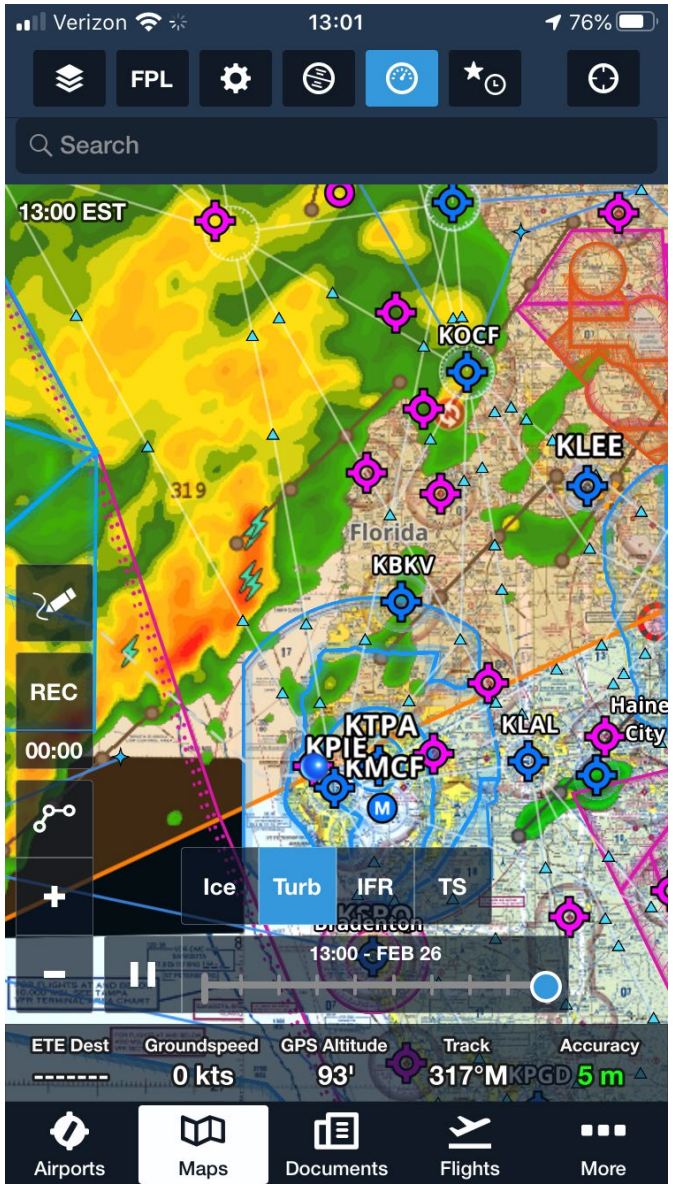




What the legend on ForeFlight looks like zoomed out:

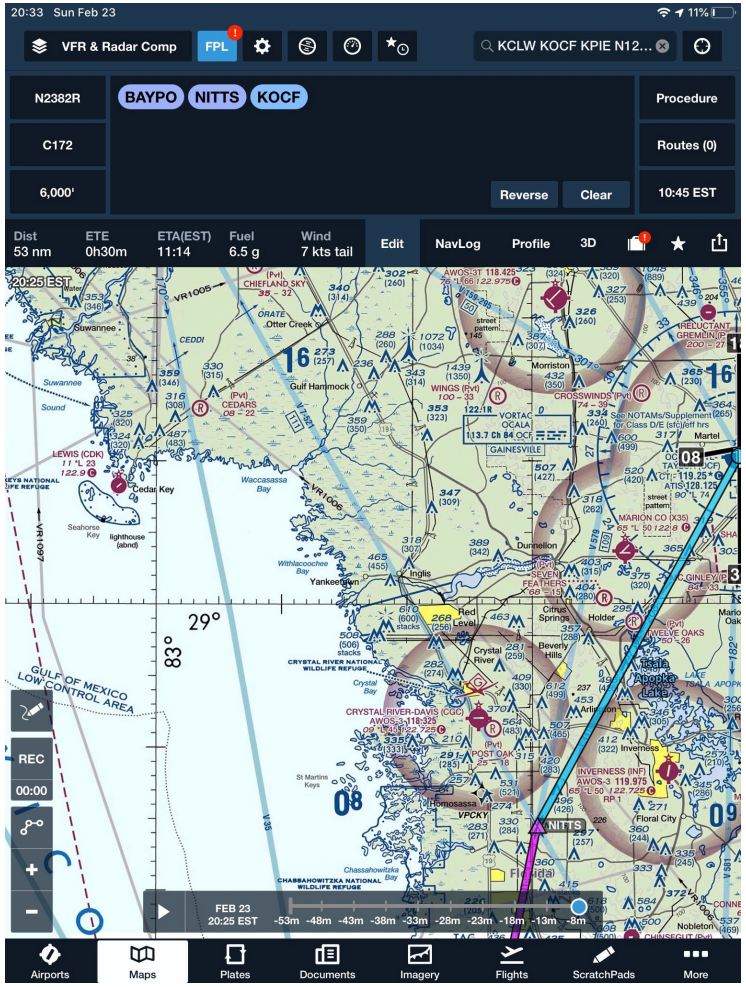
Pay attention the little things on the map, know how to interpret:

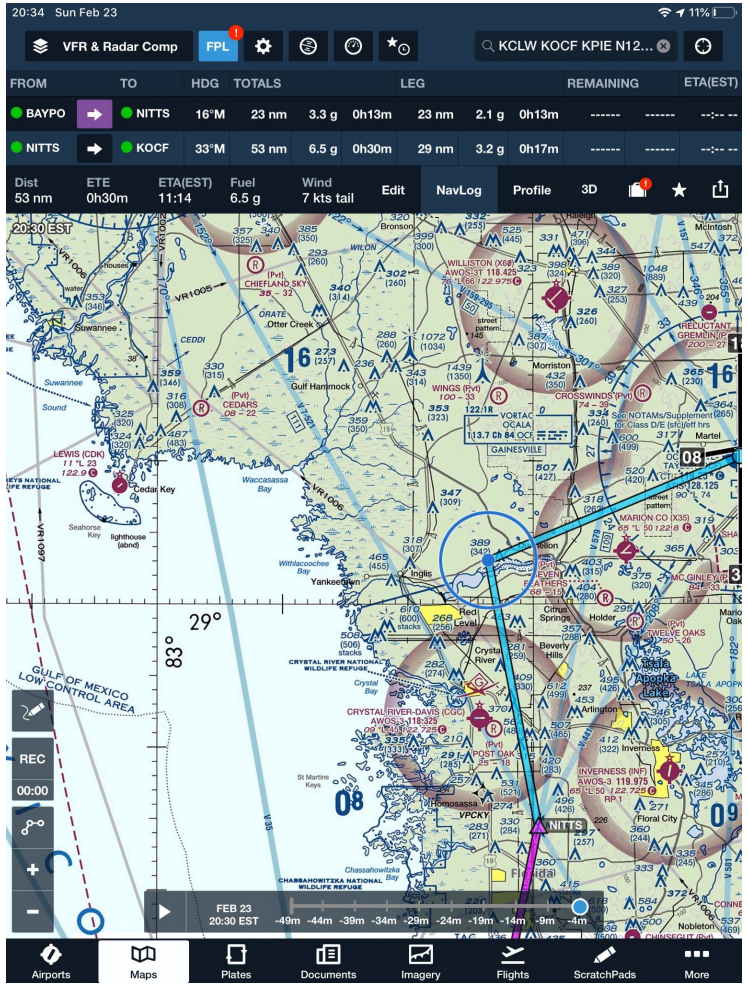
For example, the black dots connected by lines inside storm cells represent where the cells will be at 20-minute increments:

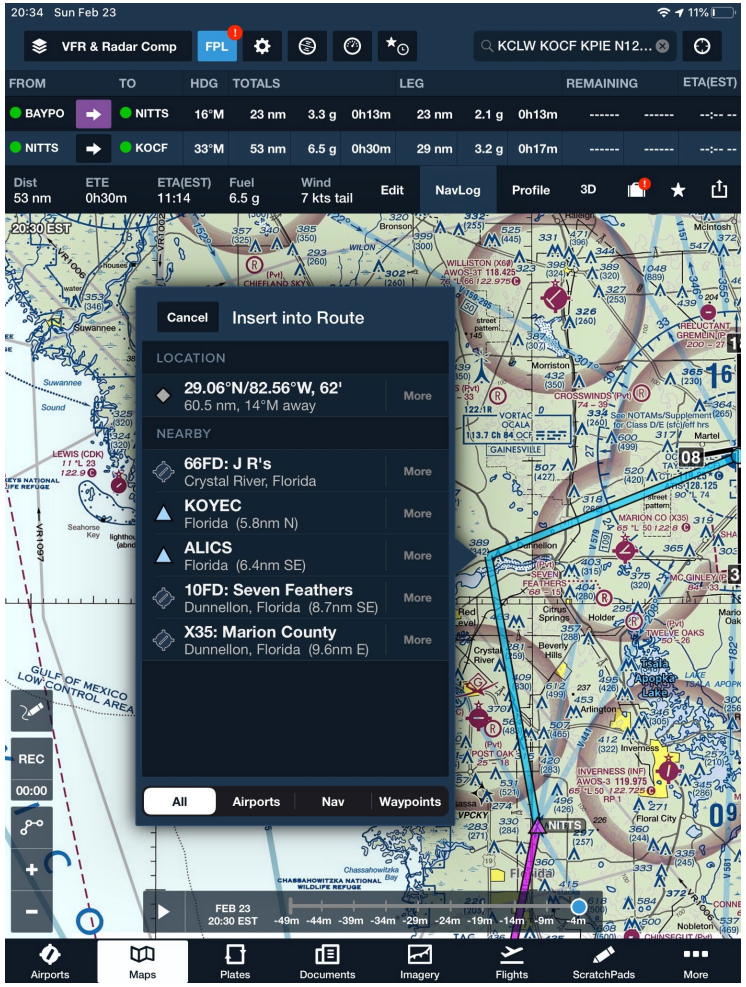


Flight Planning

- Pick good VISUAL points- something that could be easily spotted from the planned altitude
- Points should be no more than 20 nm apart- pay attention to the day's visibility (Example: If it's 10 sm viz, pick points that are 5-7 nm apart)
- First point of the checkride should be no more than 5-7 nm from the starting point
- Know how to add points in between waypoints by "rubber banding" the route:


20:33 Sun Feb 23
11%
VFR & Radar Comp
FPL
KCLW KOCF KPIE N12...
N2382R
C172
6,000'
BAYPO
NITTS
KOCF
Procedure
Routes (0)
Reverse
Clear
10:45 EST
Dist 53 nm
ETE 0h30m
ETA(EST) 11:14
Fuel 6.5 g
Wind 7 kts tail
Edit
NavLog
Profile
3D
20:25 EST
REC
00:00
FEB 23
20:25 EST
-53m -48m -43m -38m -33m -28m -23m -18m -13m -8m
Airports
Maps
Plates
Documents
Imagery
Flights
ScratchPads
More


20:34 Sun Feb 23
11%
VFR & Radar Comp
FPL
KCLW KOCF KPIE N12...
FROM
TO
HDG
TOTALS
LEG
REMAINING
ETA(EST)
BAYPO
NITTS
16°M
23 nm
3.3 g
0h13m
23 nm
2.1 g
0h13m
NITTS
KOCF
33°M
53 nm
6.5 g
0h30m
29 nm
3.2 g
0h17m
Dist 53 nm
ETE 0h30m
ETA(EST) 11:14
Fuel 6.5 g
Wind 7 kts tail
Edit
NavLog
Profile
3D
20:30 EST
REC
00:00
FEB 23
20:30 EST
-49m -44m -39m -34m -29m -24m -19m -14m -9m -4m
Airports
Maps
Plates
Documents
Imagery
Flights
ScratchPads
More


20:34 Sun Feb 23
11%
VFR & Radar Comp
FPL
KCLW KOCF KPIE N12...
FROM
TO
HDG
TOTALS
LEG
REMAINING
ETA(EST)
BAYPO
NITTS
16°M
23 nm
3.3 g
0h13m
23 nm
2.1 g
0h13m
NITTS
KOCF
33°M
53 nm
6.5 g
0h30m
29 nm
3.2 g
0h17m
Dist 53 nm
ETE 0h30m
ETA(EST) 11:14
Fuel 6.5 g
Wind 7 kts tail
Edit
NavLog
Profile
3D
20:30 EST
Cancel
Insert into Route
LOCATION
29.06°N/82.56°W, 62'
60.5 nm, 14°M away
More
NEARBY
66FD: J R's
Crystal River, Florida
More
KOYEC
Florida (5.8nm N)
More
ALICS
Florida (6.4nm SE)
More
10FD: Seven Feathers
Dunnellon, Florida (8.7nm SE)
More
X35: Marion County
Dunnellon, Florida (9.6nm E)
More
All
Airports
Nav
Waypoints
REC
00:00
FEB 23
20:30 EST
-49m -44m -39m -34m -29m -24m -19m -14m -9m -4m
Airports
Maps
Plates
Documents
Imagery
Flights
ScratchPads
More

- Weather along the route (recap)- students should not be using Metars for enroute weather, it should be Winds/Temps Aloft

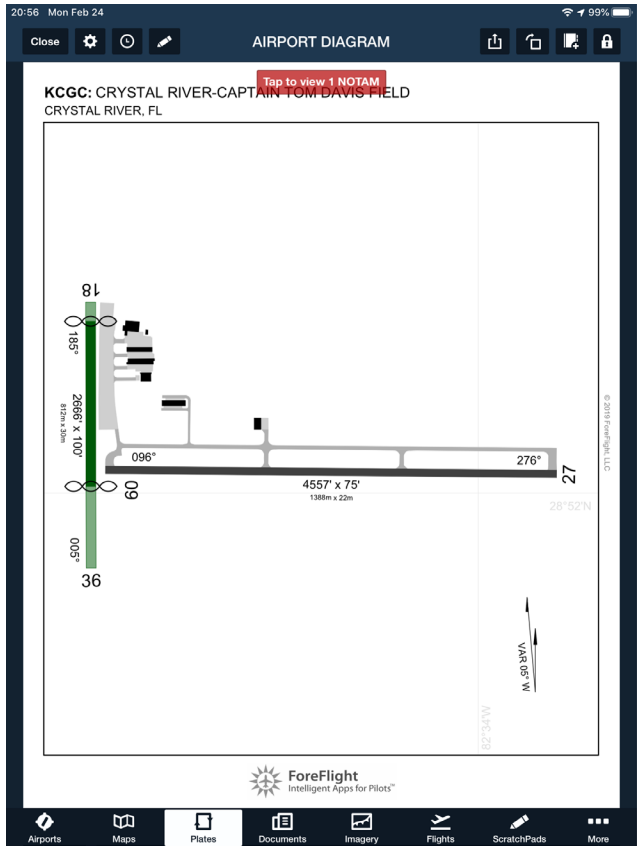
- Winds Aloft affects ground speed along route- understand how and why this is the case (see Performance)

- Where to find NOTAMS for arrival/departure airports

- Where to find Chart Supplements for airports

This is the Airport Diagram and Notams that ForeFlight provides, HOWEVER…

Make sure students know how to find Notams (ftcnotams.com) and the Airport Diagram (Chart Supplement) outside of ForeFlight!!



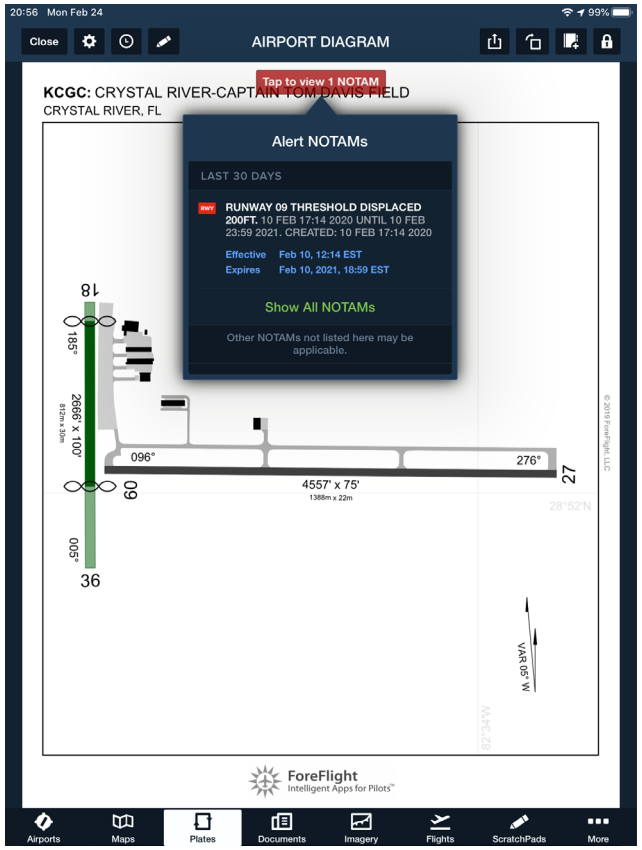
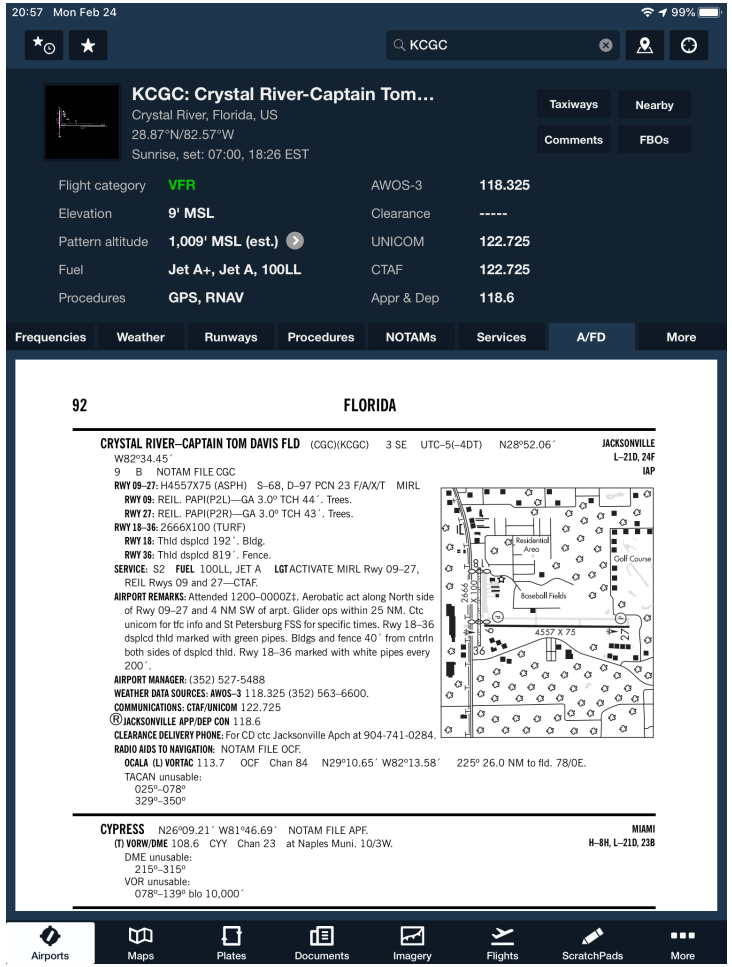
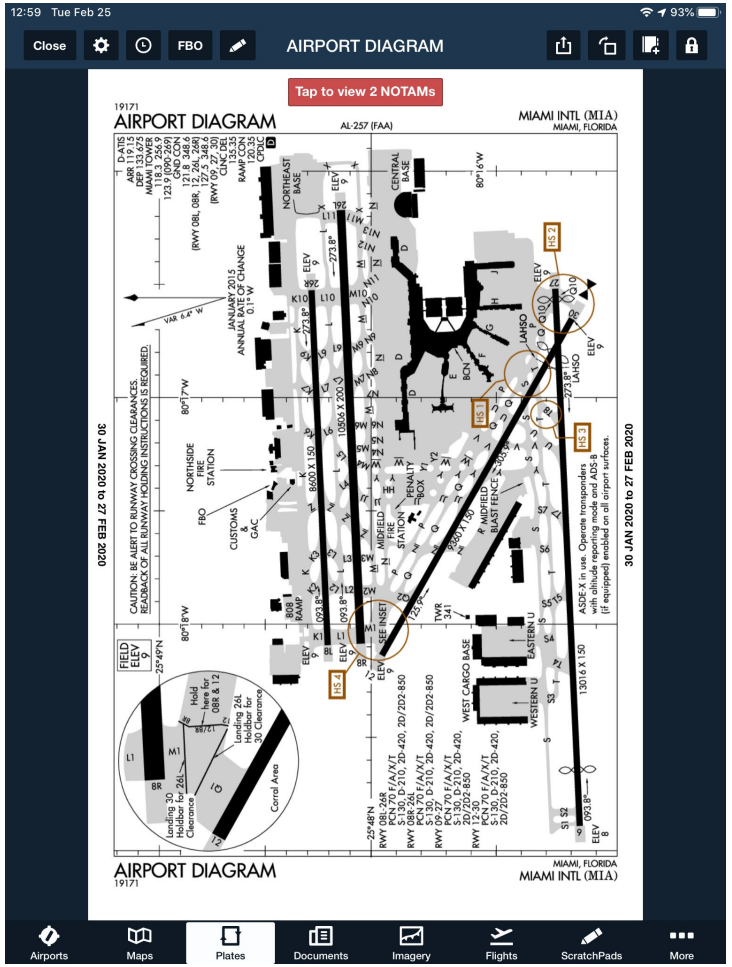


Chart Supplement on ForeFlight:



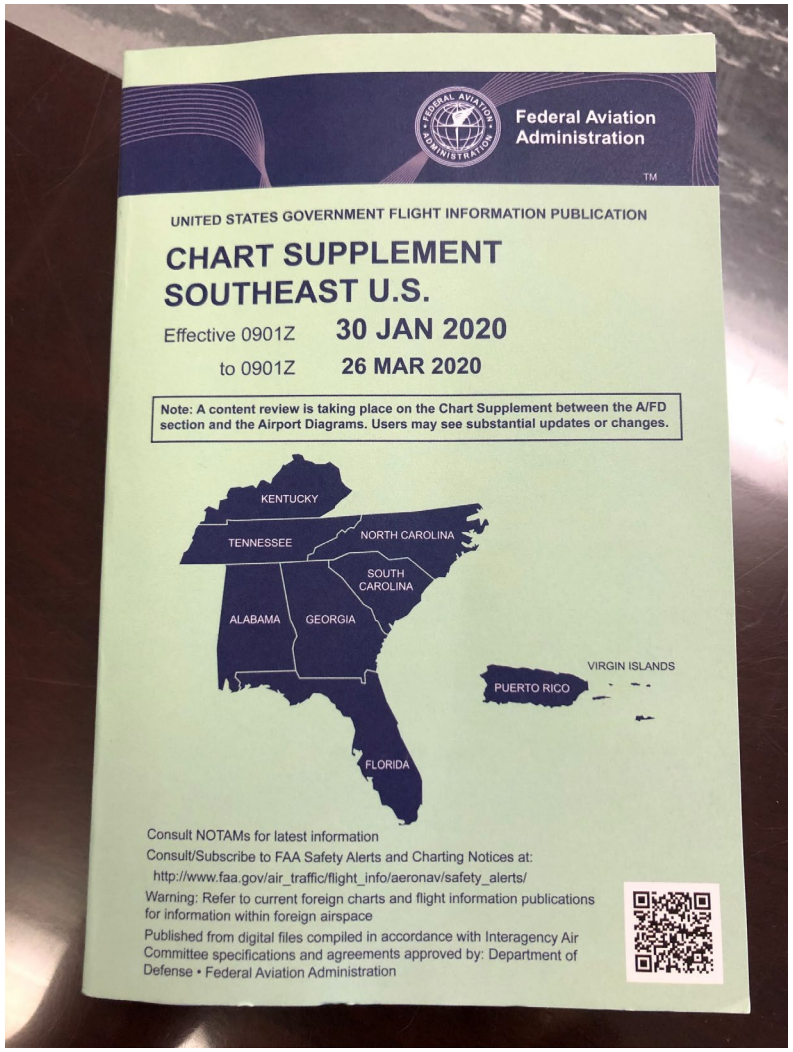
Airport Diagram with Hot Spots on ForeFlight :



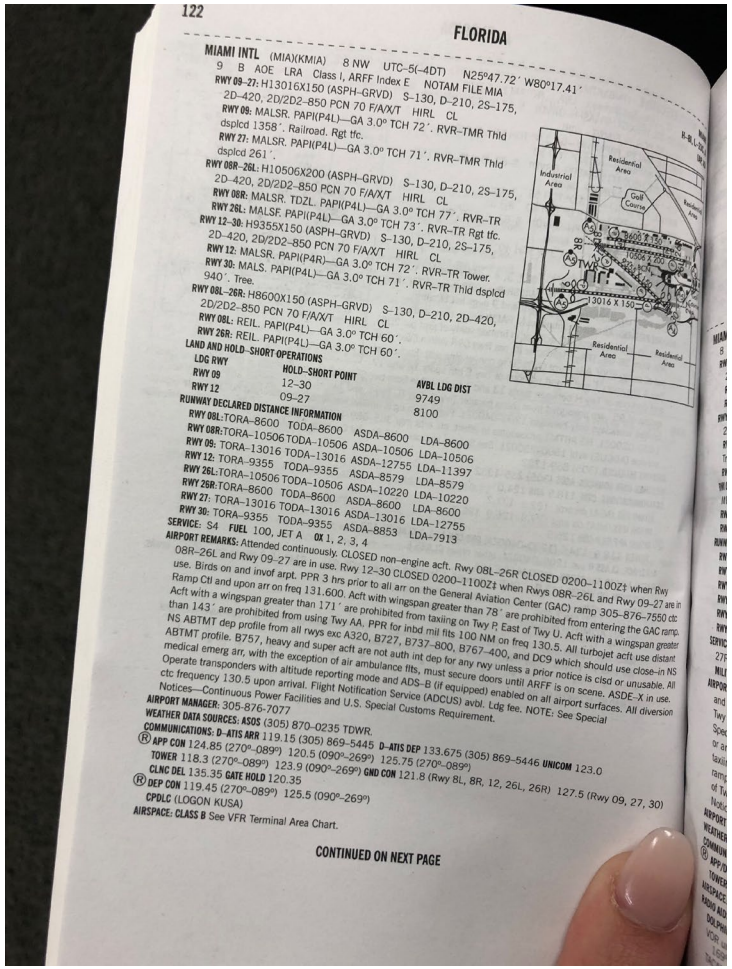
Paper Chart Supplement:

Students can find Hot Spots easily in ForeFlight (Airport Diagram), but make sure they can find them in the paper chart

Hot Spots have their own section in the back of the Chart Supp with their description



Paper Chart Supplement:



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FLORIDA

MIAMI INTL (MIA)(KMIA) 8 NW UTC–5(–4DT) N25°47.72′ W80°17.41′
9 B AOE LRA Class I, ARFF Index E NOTAM FILE MIA
RWY 09–27: H13016X150 (ASPH–GRVD) S–130, D–210, 2S–175, 2D–420, 2D/2D2–850 PCN 70 F/A/X/T HIRL CL
RWY 09: MALSR. PAPI(P4L)—GA 3.0° TCH 72′. RVR–TMR Thld dsplcd 1358′. Railroad. Rgt tfc.
RWY 27: MALSR. PAPI(P4L)—GA 3.0° TCH 71′. RVR–TMR Thld dsplcd 261′.
RWY 08R–26L: H10506X200 (ASPH–GRVD) S–130, D–210, 2S–175, 2D–420, 2D/2D2–850 PCN 70 F/A/X/T HIRL CL
RWY 08R: MALSR. TDZL. PAPI(P4L)—GA 3.0° TCH 77′. RVR–TR
RWY 26L: MALSF. PAPI(P4L)—GA 3.0° TCH 73′. RVR–TR Rgt tfc.
RWY 12–30: H9355X150 (ASPH–GRVD) S–130, D–210, 2S–175, 2D–420, 2D/2D2–850 PCN 70 F/A/X/T HIRL CL
RWY 12: MALSR. PAPI(P4R)—GA 3.0° TCH 72′. RVR–TR Tower.
RWY 30: MALS. PAPI(P4L)—GA 3.0° TCH 71′. RVR–TR Thld dsplcd 940′. Tree.
RWY 08L–26R: H8600X150 (ASPH–GRVD) S–130, D–210, 2D–420, 2D/2D2–850 PCN 70 F/A/X/T HIRL CL
RWY 08L: REIL. PAPI(P4L)—GA 3.0° TCH 60′.
RWY 26R: REIL. PAPI(P4L)—GA 3.0° TCH 60′.

LAND AND HOLD–SHORT OPERATIONS

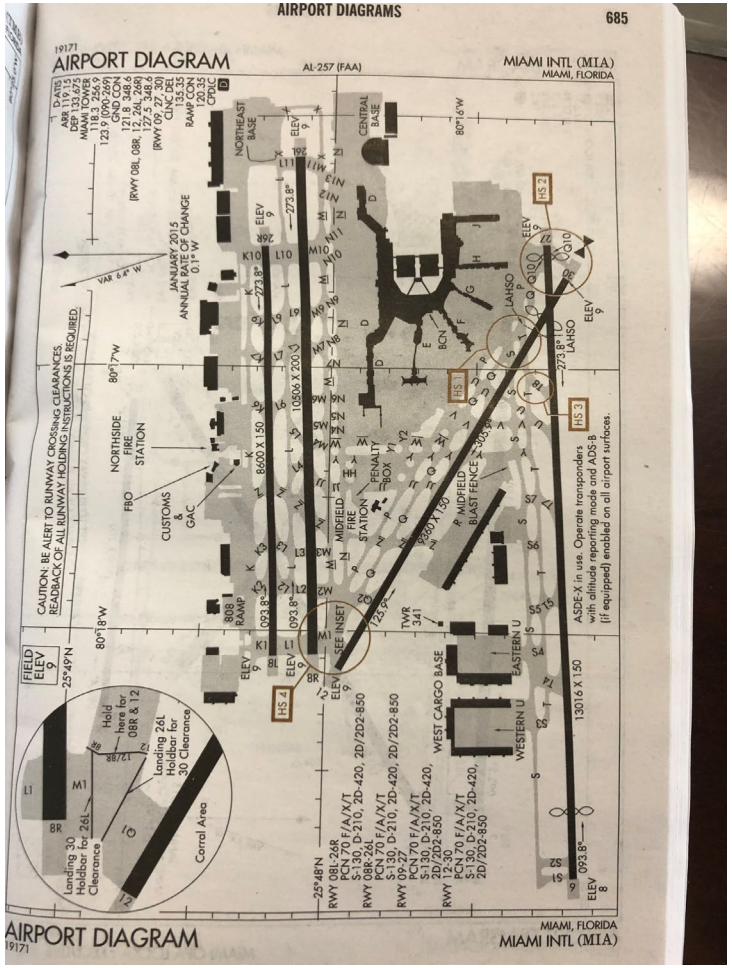
LDG RWY	HOLD–SHORT POINT	AVBL LDG DIST
RWY 09	12–30	9749
RWY 12	09–27	8100

RUNWAY DECLARED DISTANCE INFORMATION

RWY 08L:	TORA–8600	TODA–8600	ASDA–8600	LDA–8600
RWY 08R:	TORA–10506	TODA–10506	ASDA–10506	LDA–10506
RWY 09:	TORA–13016	TODA–13016	ASDA–12755	LDA–11397
RWY 12:	TORA–9355	TODA–9355	ASDA–8579	LDA–8579
RWY 26L:	TORA–10506	TODA–10506	ASDA–10220	LDA–10220
RWY 26R:	TORA–8600	TODA–8600	ASDA–8600	LDA–8600
RWY 27:	TORA–13016	TODA–13016	ASDA–13016	LDA–12755
RWY 30:	TORA–9355	TODA–9355	ASDA–8853	LDA–7913

SERVICE: S4 **FUEL** 100, JET A **OX** 1, 2, 3, 4
AIRPORT REMARKS: Attended continuously. CLOSED non–engine acft. Rwy 08L–26R CLOSED 0200–1100Z‡ when Rwy 08R–26L and Rwy 09–27 are in use. Rwy 12–30 CLOSED 0200–1100Z‡ when Rwys 08R–26L and Rwy 09–27 are in use. Birds on and invof arpt. PPR 3 hrs prior to all arr on the General Aviation Center (GAC) ramp 305–876–7550 ctc Ramp Ctl and upon arr on freq 131.600. Acft with wingspan greater than 78′ are prohibited from entering the GAC ramp. Acft with a wingspan greater than 171′ are prohibited from taxiing on Twy P, East of Twy U. Acft with a wingspan greater than 143′ are prohibited from using Twy AA. PPR for inbd mil flts 100 NM on freq 130.5. All turbojet acft use distant NS ABTMT dep profile from all rwys exc A320, B727, B737–800, B767–400, and DC9 which should use close–in NS ABTMT profile. B757, heavy and super acft are not auth int dep for any rwy unless a prior notice is cisd or unusable. All Operate transponders with altitude reporting mode and ADS–B (if equipped) enabled on all airport surfaces. All diversion ctc frequency 130.5 upon arrival. Flight Notification Service (ADCUS) avbl. Ldg fee. NOTE: See Special medical emerg arr, with the exception of air ambulance flts, must secure doors until ARFF is on scene. ASDE–X in use. Notices—Continuous Power Facilities and U.S. Special Customs Requirement.
AIRPORT MANAGER: 305-876-7077
WEATHER DATA SOURCES: ASOS (305) 870–0235 TDWR.
COMMUNICATIONS: D–ATIS ARR 119.15 (305) 869–5445 **D–ATIS DEP** 133.675 (305) 869–5446 **UNICOM** 123.0
Ⓡ **APP CON** 124.85 (270°–089°) 120.5 (090°–269°) 125.75 (270°–089°)
TOWER 118.3 (270°–089°) 123.9 (090°–269°) **GND CON** 121.8 (Rwy 8L, 8R, 12, 26L, 26R) 127.5 (Rwy 09, 27, 30)
CLNC DEL 135.35 **GATE HOLD** 120.35
Ⓡ **DEP CON** 119.45 (270°–089°) 125.5 (090°–269°)
CPDLC (LOGON KUSA)
AIRSPACE: CLASS B See VFR Terminal Area Chart.

CONTINUED ON NEXT PAGE



19171 AIRPORT DIAGRAM AL-257 (FAA) MIAMI INTL (MIA) MIAMI, FLORIDA

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

JANUARY 2015 ANNUAL RATE OF CHANGE 0.1° W

VAR 6.6° W

FIELD ELEV 9

25°47'N

80°17'W

80°16'W

NORTHSIDE FIRE STATION

CUSTOMS & GAC

FBO

808 RAMP

MIDFIELD FIRE STATION

PENALTY BOX

MIDFIELD BLAST FENCE

NORTHEAST BASE

CENTRAL BASE

WEST CARGO BASE

EASTERN U

WESTERN U

LAHSO

TWR 341

HS 1 HS 2 HS 3 HS 4

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

RWY 08L-26R: PCN 70 F/A/X/T S-130, D-210, 2D-420, 2D/2D2-850

RWY 08R-26L: PCN 70 F/A/X/T S-130, D-210, 2D-420, 2D/2D2-850

RWY 09-27: PCN 70 F/A/X/T S-130, D-210, 2D-420, 2D/2D2-850

RWY 12-30: PCN 70 F/A/X/T S-130, D-210, 2D-420, 2D/2D2-850

Hold here for 08R & 12

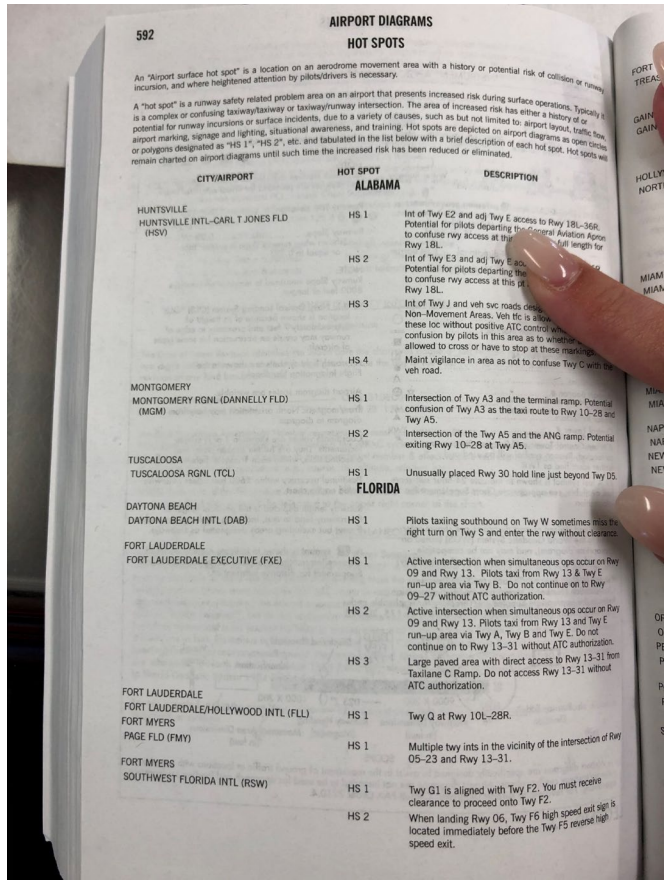
Landing 26L Holdbar for 30 Clearance

Landing 30 Holdbar for 26L Clearance

Corral Area

AIRPORT DIAGRAM 19171 MIAMI, FLORIDA MIAMI INTL (MIA)

Hot Spots and their descriptions are in their own separate section of the paper Chart Supplement near the back. These say where the Hot Spot is located and what kind of hazard it presents



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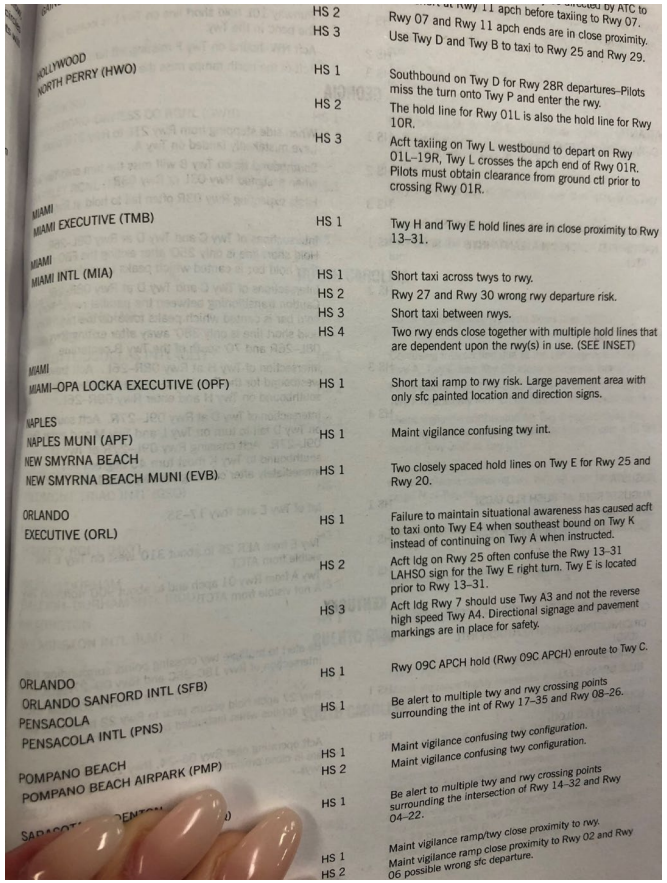
AIRPORT DIAGRAMS

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.

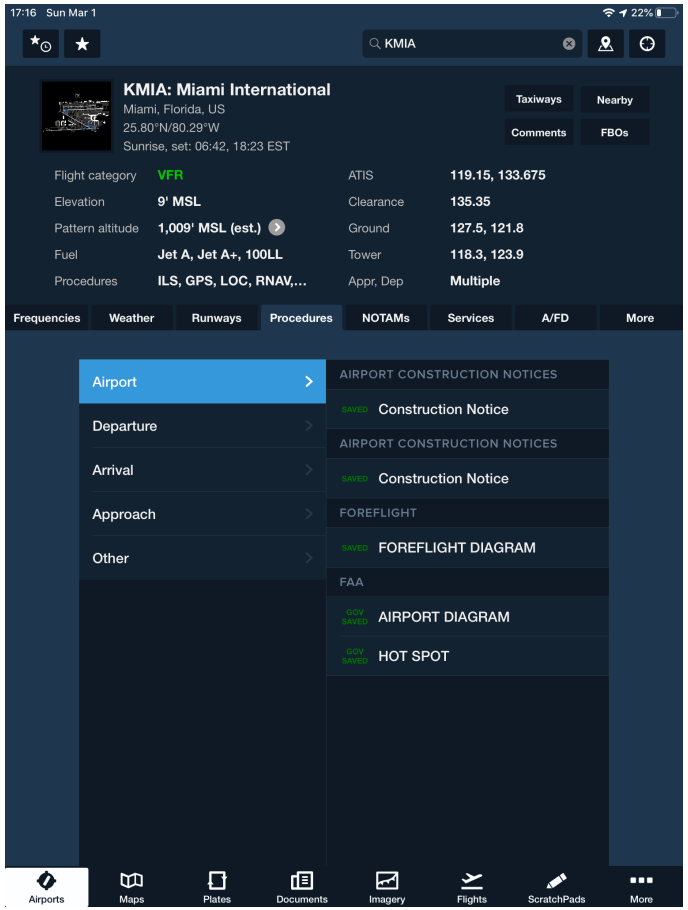
A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface 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 polygons 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.

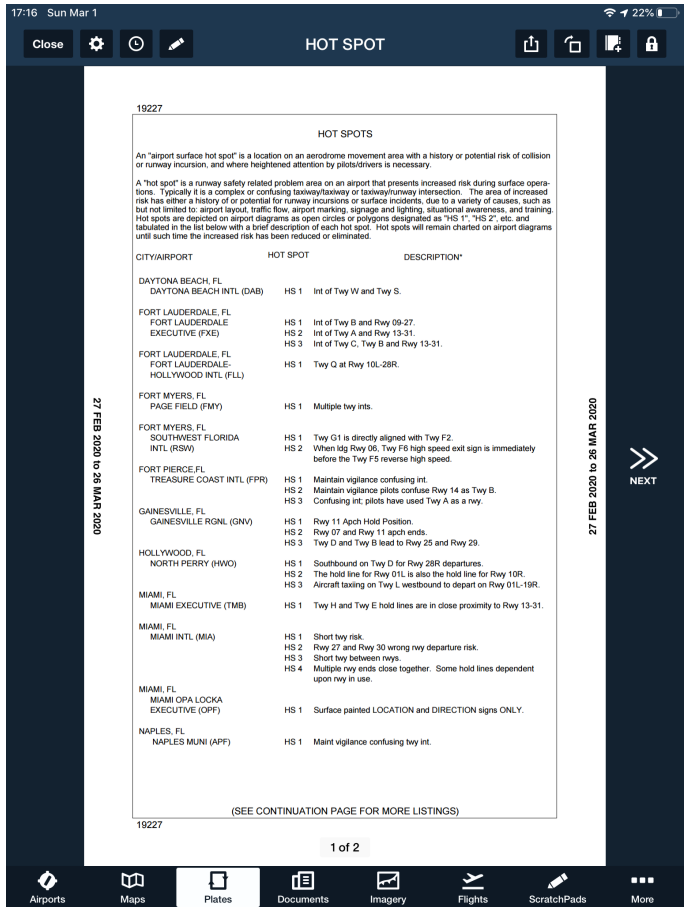
CITY/AIRPORT	HOT SPOT	DESCRIPTION
ALABAMA		
HUNTSVILLE HUNTSVILLE INTL–CARL T JONES FLD (HSV)	HS 1	Int of Twy E2 and adj Twy E access to Rwy 18L–36R. Potential for pilots departing the General Aviation Apron to confuse rwy access at the Rwy 18L.
	HS 2	Int of Twy E3 and adj Twy E ac... Potential for pilots departing the ... to confuse rwy access at this pt ... Rwy 18L.
	HS 3	Int of Twy J and veh svc roads des... Non–Movement Areas. Veh tfc is also ... these loc without positive ATC control w... confusion by pilots in this area as to whether ... allowed to cross or have to stop at these markings.
	HS 4	Maint vigilance in area as not to confuse Twy C with ... veh road.
MONTGOMERY MONTGOMERY RGNL (DANNELLY FLD) (MGM)	HS 1	Intersection of Twy A3 and the terminal ramp. Potential confusion of Twy A3 as the taxi route to Rwy 10–28 and Twy A5.
	HS 2	Intersection of the Twy A5 and the ANG ramp. Potential exiting Rwy 10–28 at Twy A5.
TUSCALOOSA TUSCALOOSA RGNL (TCL)	HS 1	Unusually placed Rwy 30 hold line just beyond Twy D5.
FLORIDA		
DAYTONA BEACH DAYTONA BEACH INTL (DAB)	HS 1	Pilots taxiing southbound on Twy W sometimes miss the right turn on Twy S and enter the rwy without clearance.
FORT LAUDERDALE FORT LAUDERDALE EXECUTIVE (FXE)	HS 1	Active intersection when simultaneous ops occur on Rwy 09 and Rwy 13. Pilots taxi from Rwy 13 & Twy E run–up area via Twy B. Do not continue on to Rwy 09–27 without ATC authorization.
	HS 2	Active intersection when simultaneous ops occur on Rwy 09 and Rwy 13. Pilots taxi from Rwy 13 and Twy E run–up area via Twy A, Twy B and Twy E. Do not continue on to Rwy 13–31 without ATC authorization.
	HS 3	Large paved area with direct access to Rwy 13–31 from Taxilane C Ramp. Do not access Rwy 13–31 without ATC authorization.
FORT LAUDERDALE FORT LAUDERDALE/HOLLYWOOD INTL (FLL)	HS 1	Twy Q at Rwy 10L–28R.
FORT MYERS PAGE FLD (FMY)	HS 1	Multiple twy ints in the vicinity of the intersection of Rwy 05–23 and Rwy 13–31.
FORT MYERS SOUTHWEST FLORIDA INTL (RSW)	HS 1	Twy G1 is aligned with Twy F2. You must receive clearance to proceed onto Twy F2.
	HS 2	When landing Rwy 06, Twy F6 high speed exit sign is located immediately before the Twy F5 reverse high speed exit.



	HS 2	Rwy 07 and Rwy 11 apch ends are in close proximity.
	HS 3	Use Twy D and Twy B to taxi to Rwy 25 and Rwy 29.
HOLLYWOOD NORTH PERRY (HWO)	HS 1	Southbound on Twy D for Rwy 28R departures–Pilots miss the turn onto Twy P and enter the rwy.
	HS 2	The hold line for Rwy 01L is also the hold line for Rwy 10R.
	HS 3	Acft taxiing on Twy L westbound to depart on Rwy 01L–19R, Twy L crosses the apch end of Rwy 01R. Pilots must obtain clearance from ground ctl prior to crossing Rwy 01R.
MIAMI MIAMI EXECUTIVE (TMB)	HS 1	Twy H and Twy E hold lines are in close proximity to Rwy 13–31.
MIAMI MIAMI INTL (MIA)	HS 1	Short taxi across twys to rwy.
	HS 2	Rwy 27 and Rwy 30 wrong rwy departure risk.
	HS 3	Short taxi between rwys.
	HS 4	Two rwy ends close together with multiple hold lines that are dependent upon the rwy(s) in use. (SEE INSET)
MIAMI MIAMI–OPA LOCKA EXECUTIVE (OPF)	HS 1	Short taxi ramp to rwy risk. Large pavement area with only sfc painted location and direction signs.
NAPLES NAPLES MUNI (APF)	HS 1	Maint vigilance confusing twy int.
NEW SMYRNA BEACH NEW SMYRNA BEACH MUNI (EVB)	HS 1	Two closely spaced hold lines on Twy E for Rwy 25 and Rwy 20.
ORLANDO EXECUTIVE (ORL)	HS 1	Failure to maintain situational awareness has caused acft to taxi onto Twy E4 when southeast bound on Twy K instead of continuing on Twy A when instructed.
	HS 2	Acft ldg on Rwy 25 often confuse the Rwy 13–31 LAHSO sign for the Twy E right turn. Twy E is located prior to Rwy 13–31.
	HS 3	Acft ldg Rwy 7 should use Twy A3 and not the reverse high speed Twy A4. Directional signage and pavement markings are in place for safety.
ORLANDO ORLANDO SANFORD INTL (SFB)	HS 1	Rwy 09C APCH hold (Rwy 09C APCH) enroute to Twy C.
PENSACOLA PENSACOLA INTL (PNS)	HS 1	Be alert to multiple twy and rwy crossing points surrounding the int of Rwy 17–35 and Rwy 08–26.
POMPANO BEACH POMPANO BEACH AIRPARK (PMP)	HS 1	Maint vigilance confusing twy configuration.
	HS 2	Maint vigilance confusing twy configuration.
	HS 1	Be alert to multiple twy and rwy crossing points surrounding the intersection of Rwy 14–32 and Rwy 04–22.
	HS 1	Maint vigilance ramp/twy close proximity to rwy.
	HS 2	Maint vigilance ramp close proximity to Rwy 02 and Rwy 06 possible wrong sfc departure.

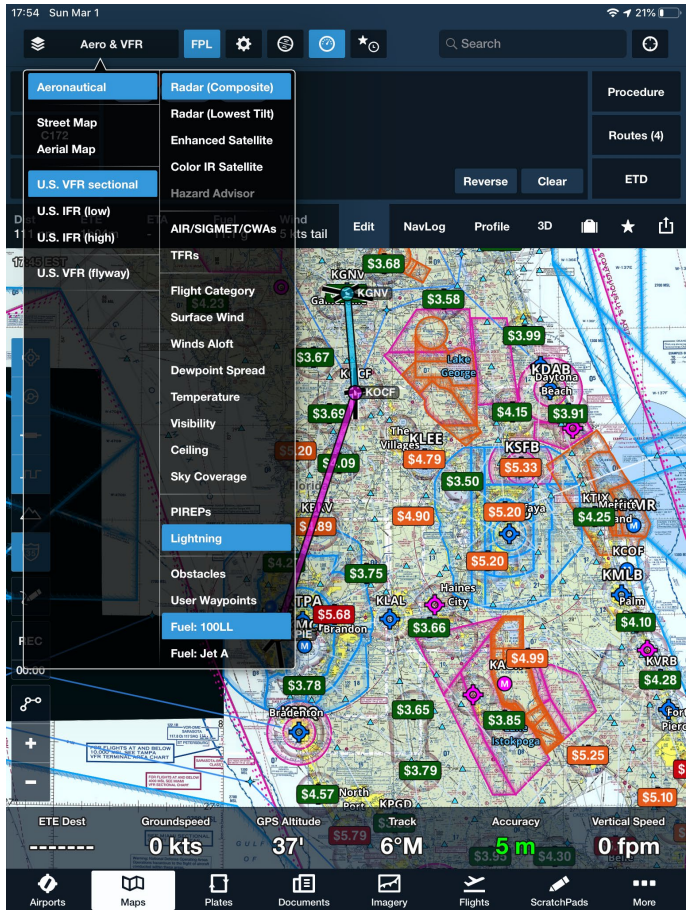
The same information can be found on ForeFlight under “Procedures”> “Airport” > “Hot Spot”

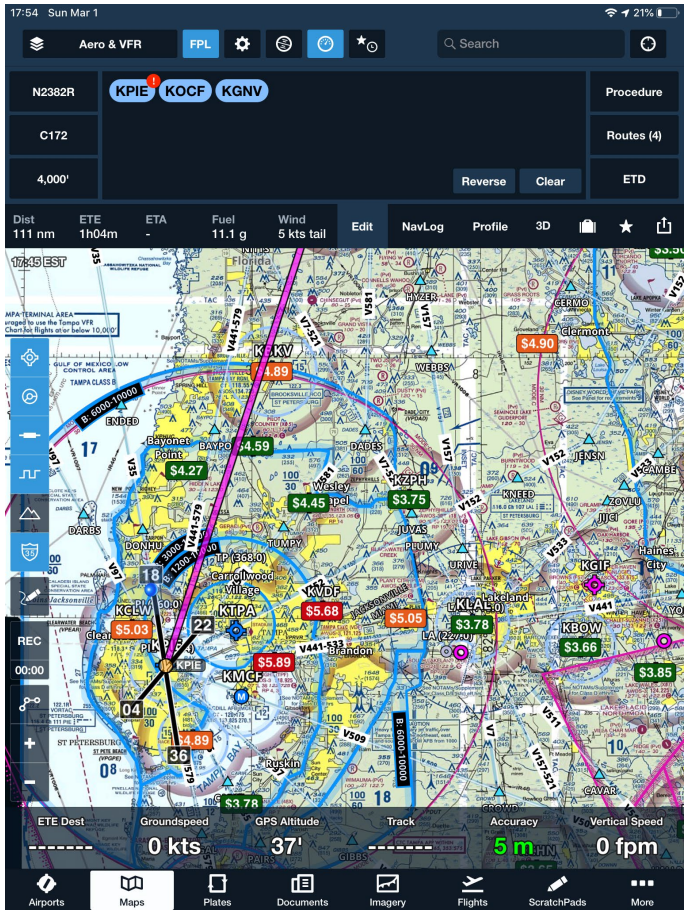




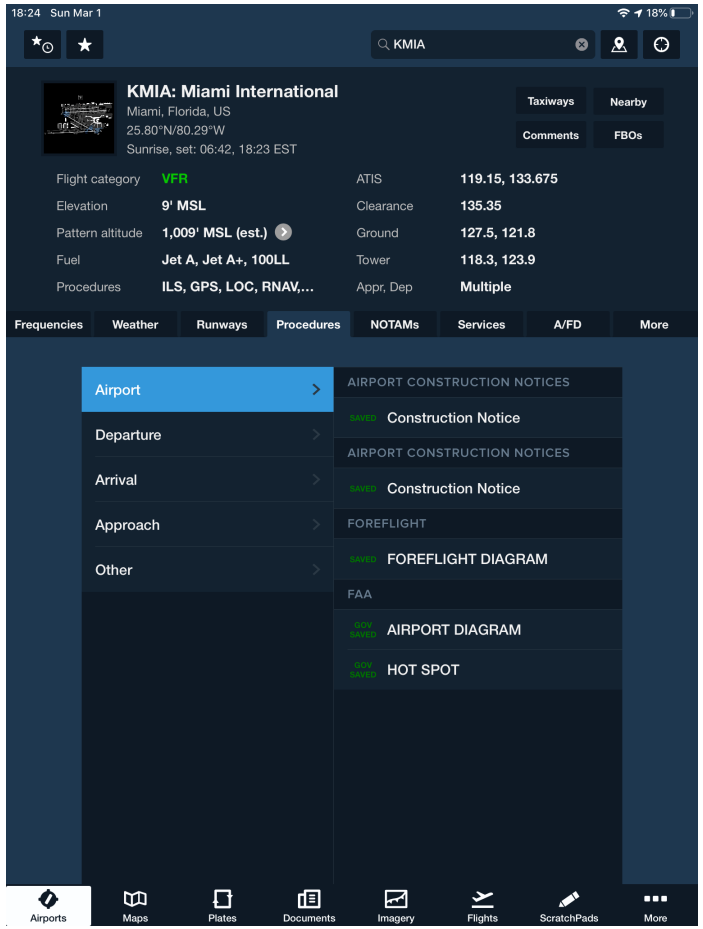
For alternate airport or divert planning, FBO and fuel price choices can be good considerations.

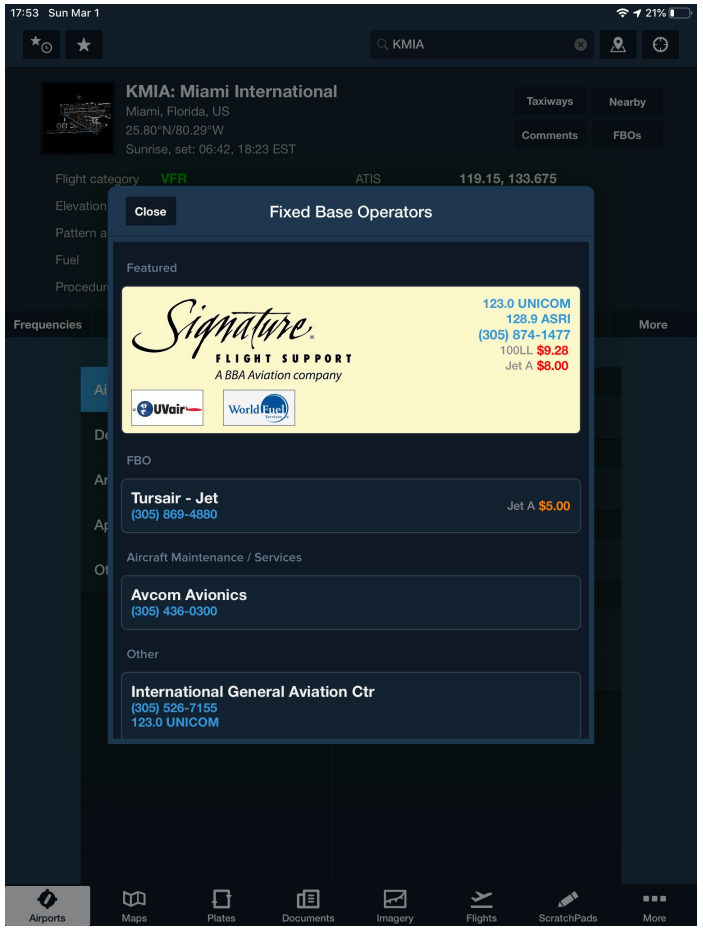
This can be turned on in the sectional information pull-down page as well.





Furthermore, on the “Airports” page, you can click on “FBO’s” on the top left corner and get additional information:





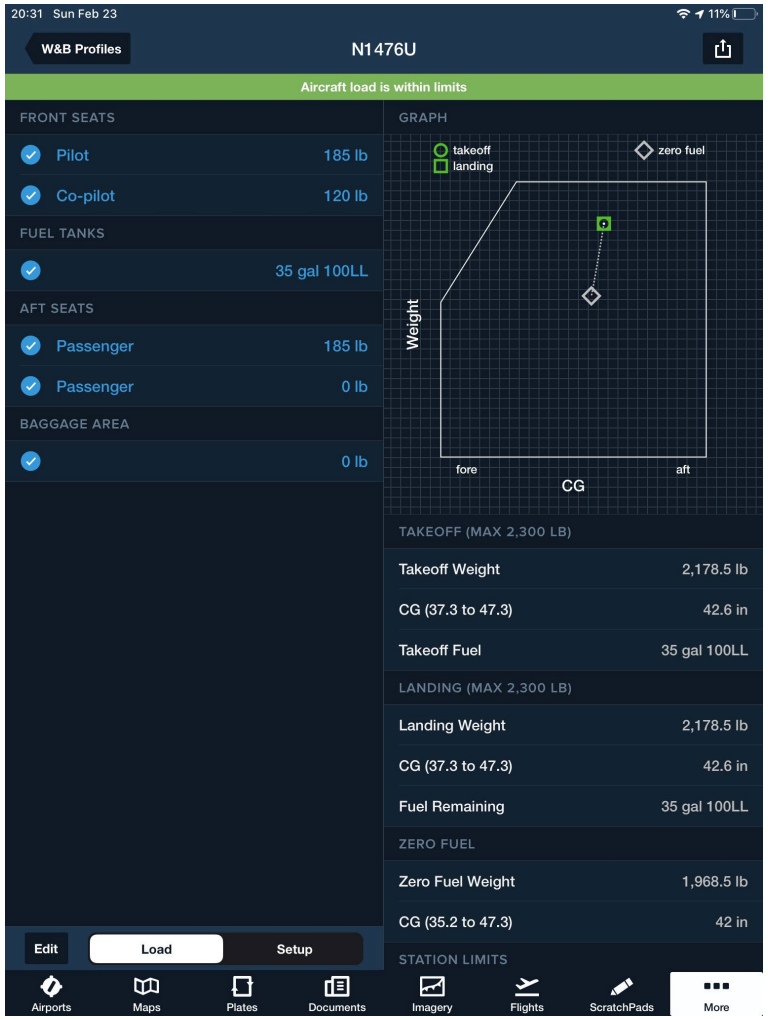
Performance

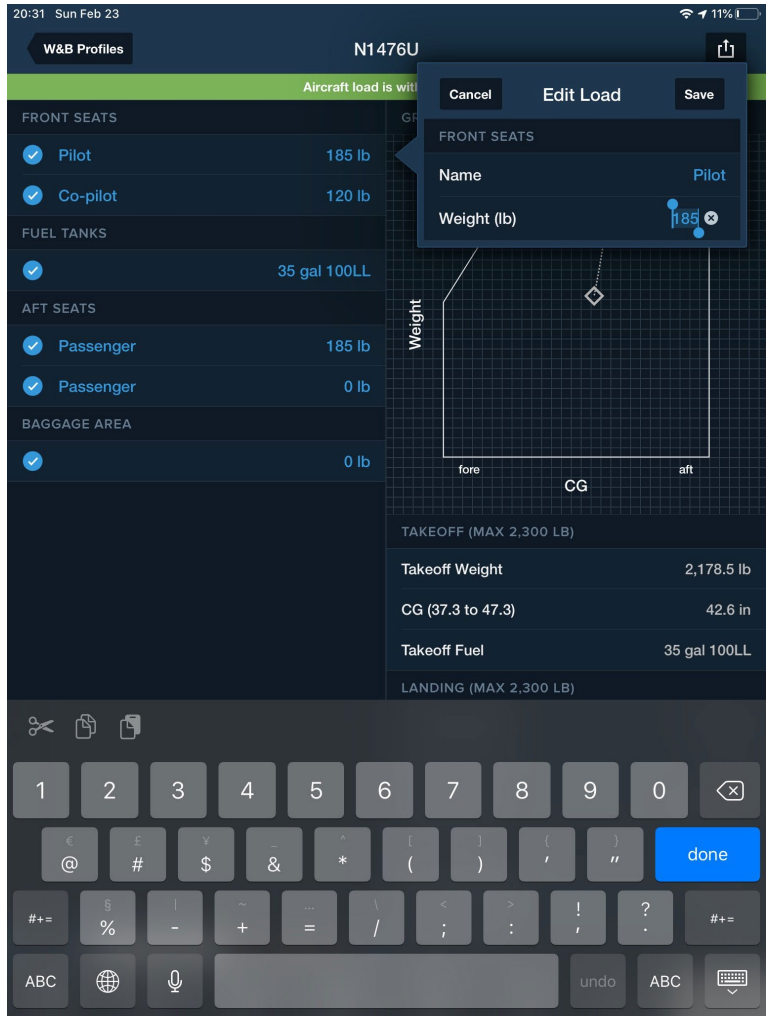
- When creating Weight and Balance profiles, make sure student uses the exact numbers from the POH of the plane taken to the checkride (and be able to show where they found them)

- Make sure students know how to properly change the load- add/subtract weight to certain stations, adjust fuel load, etc.

- Know the different types of Empty Weight and what is calculated in each and what is used in W+B


20:32 Sun Feb 23
11%
W&B Profiles
N1476U
Aircraft load is within limits
IDENTIFICATION
Tail Number N1476U
Profile Name
Make Cessna
Model 172M #17267143 (1976)
UNITS
Length in
Weight lb
%MAC
Additional Fuel Unit gal
Fuel Type 100LL
Fuel Density 6 lb/gal
STATIONS
Front Seats 37 in
Fuel Tanks (limit 38 gal 100LL) 48 in
Aft Seats 73 in
Baggage Area (limit 120 lb) 95 in
EMPTY AIRCRAFT
GRAPH
takeoff
landing
zero fuel
Weight
fore
aft
CG
TAKEOFF (MAX 2,300 LB)
Takeoff Weight 2,178.5 lb
CG (37.3 to 47.3) 42.6 in
Takeoff Fuel 35 gal 100LL
LANDING (MAX 2,300 LB)
Landing Weight 2,178.5 lb
CG (37.3 to 47.3) 42.6 in
Fuel Remaining 35 gal 100LL
ZERO FUEL
Zero Fuel Weight 1,968.5 lb
CG (35.2 to 47.3) 42 in
STATION LIMITS
Edit
Load
Setup
Airports
Maps
Plates
Documents
Imagery
Flights
ScratchPads
More


20:31 Sun Feb 23
11%
W&B Profiles
N1476U
Aircraft load is within limits
FRONT SEATS
Pilot 185 lb
Co-pilot 120 lb
FUEL TANKS
35 gal 100LL
AFT SEATS
Passenger 185 lb
Passenger 0 lb
BAGGAGE AREA
0 lb
GRAPH
takeoff
landing
zero fuel
Weight
fore
aft
CG
TAKEOFF (MAX 2,300 LB)
Takeoff Weight 2,178.5 lb
CG (37.3 to 47.3) 42.6 in
Takeoff Fuel 35 gal 100LL
LANDING (MAX 2,300 LB)
Landing Weight 2,178.5 lb
CG (37.3 to 47.3) 42.6 in
Fuel Remaining 35 gal 100LL
ZERO FUEL
Zero Fuel Weight 1,968.5 lb
CG (35.2 to 47.3) 42 in
STATION LIMITS
Edit
Load
Setup
Airports
Maps
Plates
Documents
Imagery
Flights
ScratchPads
More

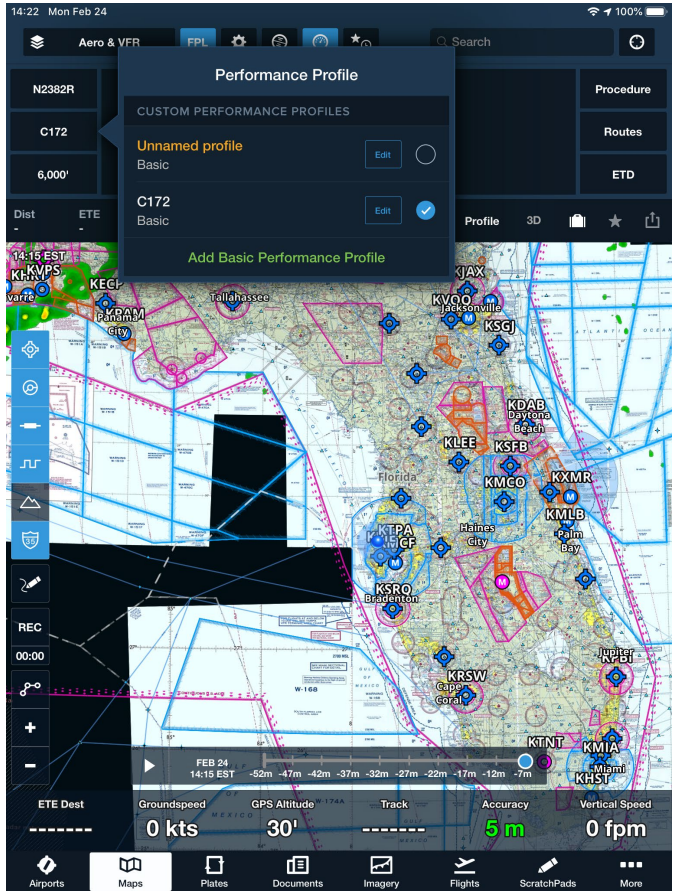

20:31 Sun Feb 23
11%
W&B Profiles
N1476U
Cancel
Edit Load
Save
FRONT SEATS
Name Pilot
Weight (lb) 185
Pilot 185 lb
Co-pilot 120 lb
FUEL TANKS
35 gal 100LL
AFT SEATS
Passenger 185 lb
Passenger 0 lb
BAGGAGE AREA
0 lb
Weight
fore
aft
CG
TAKEOFF (MAX 2,300 LB)
Takeoff Weight 2,178.5 lb
CG (37.3 to 47.3) 42.6 in
Takeoff Fuel 35 gal 100LL
LANDING (MAX 2,300 LB)
done
undo
ABC

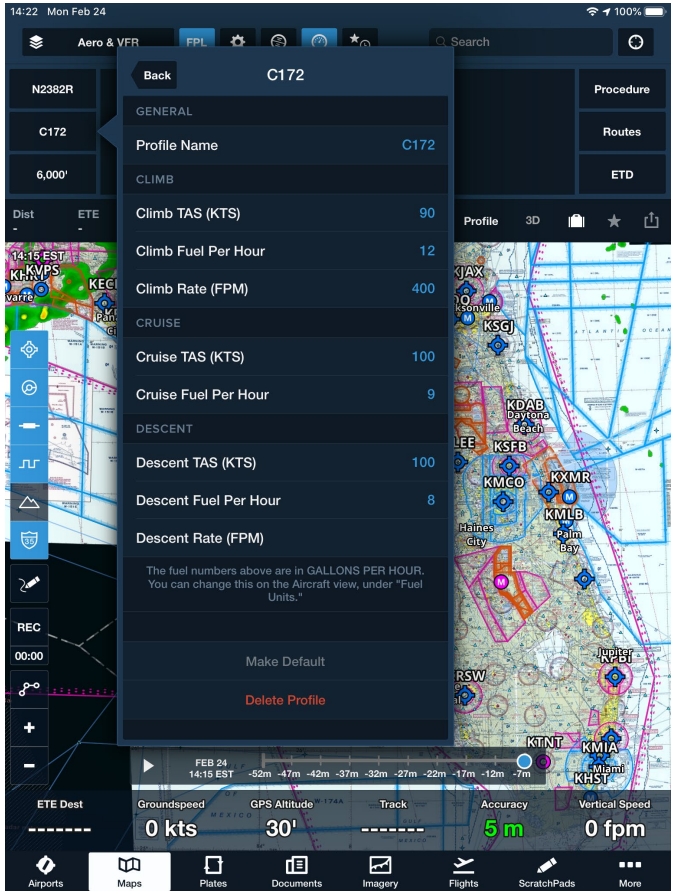
- Know what ISA (International Standard Atmosphere) is and how to calculate, explain to the student that ISA is almost never the case

- For Performance, students with BASIC FOREFLIGHT have to make their own performance profiles for their plane for their flight plan/nav log (if they have the upgraded ForeFlight, it will do this for them)

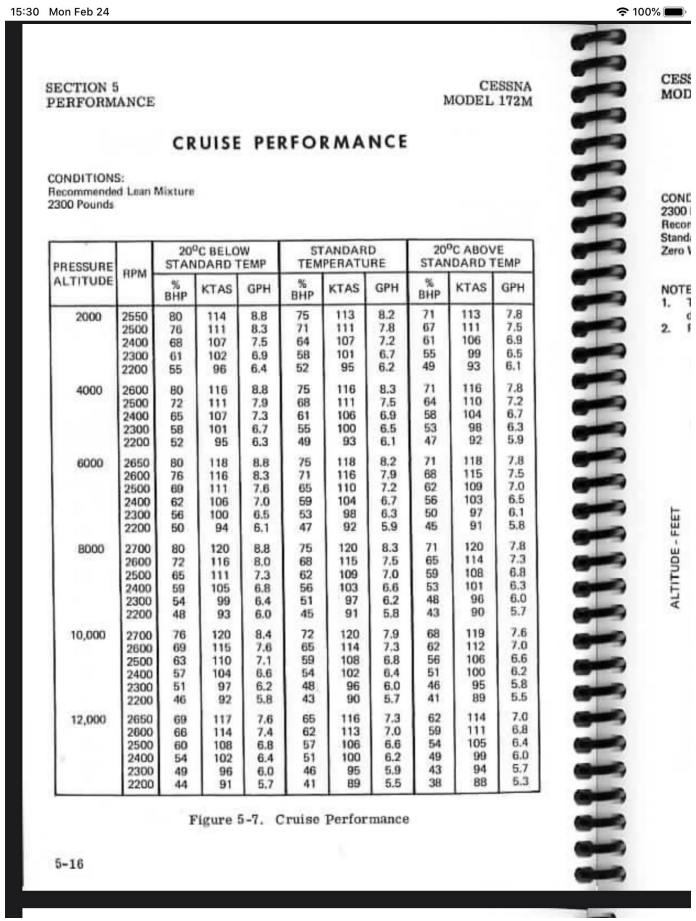
- The performance profile they make for their nav log has to consider percent of power usage and altitude because TAS changes drastically with these two factors

If you change the cruise altitude or the power usage in cruise, a new performance profile has to be created/used





Use POH to determine exact performance profiles for the student's flight plan- planned altitude and percent power usage



SECTION 5
PERFORMANCE

CESSNA
MODEL 172M

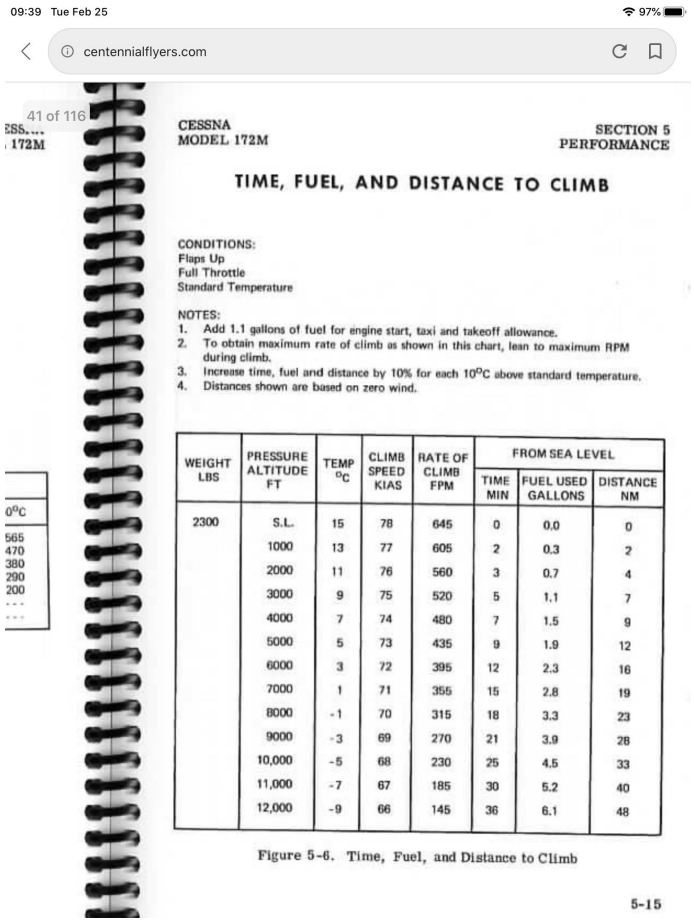
CRUISE PERFORMANCE

CONDITIONS:
Recommended Lean Mixture
2300 Pounds

PRESSURE ALTITUDE	RPM	20°C BELOW STANDARD TEMP			STANDARD TEMPERATURE			20°C ABOVE STANDARD TEMP		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2000	2550	80	114	8.8	75	113	8.2	71	113	7.8
	2500	76	111	8.3	71	111	7.8	67	111	7.5
	2400	68	107	7.5	64	107	7.2	61	106	6.9
	2300	61	102	6.9	58	101	6.7	55	99	6.5
	2200	55	96	6.4	52	95	6.2	49	93	6.1
4000	2600	80	116	8.8	75	116	8.3	71	116	7.8
	2500	72	111	7.9	68	111	7.5	64	110	7.2
	2400	65	107	7.3	61	106	6.9	58	104	6.7
	2300	58	101	6.7	55	100	6.5	53	98	6.3
	2200	52	95	6.3	49	93	6.1	47	92	5.9
6000	2650	80	118	8.8	75	118	8.2	71	118	7.8
	2600	76	116	8.3	71	116	7.9	68	115	7.5
	2500	69	111	7.6	65	110	7.2	62	109	7.0
	2400	62	106	7.0	59	104	6.7	56	103	6.5
	2300	56	100	6.5	53	98	6.3	50	97	6.1
	2200	50	94	6.1	47	92	5.9	45	91	5.8
8000	2700	80	120	8.8	75	120	8.3	71	120	7.8
	2600	72	116	8.0	68	115	7.5	65	114	7.3
	2500	65	111	7.3	62	109	7.0	59	108	6.8
	2400	59	105	6.8	56	103	6.6	53	101	6.3
	2300	54	99	6.4	51	97	6.2	48	96	6.0
	2200	48	93	6.0	45	91	5.8	43	90	5.7
10,000	2700	76	120	8.4	72	120	7.9	68	119	7.6
	2600	69	115	7.6	65	114	7.3	62	112	7.0
	2500	63	110	7.1	59	108	6.8	56	106	6.6
	2400	57	104	6.6	54	102	6.4	51	100	6.2
	2300	51	97	6.2	48	96	6.0	46	95	5.8
	2200	46	92	5.8	43	90	5.7	41	89	5.5
12,000	2650	69	117	7.6	65	116	7.3	62	114	7.0
	2600	66	114	7.4	62	113	7.0	59	111	6.8
	2500	60	108	6.8	57	106	6.6	54	105	6.4
	2400	54	102	6.4	51	100	6.2	49	99	6.0
	2300	49	96	6.0	46	95	5.9	43	94	5.7
	2200	44	91	5.7	41	89	5.5	38	88	5.3

Figure 5-7. Cruise Performance

5-16



CESSNA
MODEL 172M

SECTION 5
PERFORMANCE

TIME, FUEL, AND DISTANCE TO CLIMB

CONDITIONS:
Flaps Up
Full Throttle
Standard Temperature

NOTES:
1. Add 1.1 gallons of fuel for engine start, taxi and takeoff allowance.
2. To obtain maximum rate of climb as shown in this chart, lean to maximum RPM during climb.
3. Increase time, fuel and distance by 10% for each 10°C above standard temperature.
4. Distances shown are based on zero wind.

WEIGHT LBS	PRESSURE ALTITUDE FT	TEMP °C	CLIMB SPEED KIAS	RATE OF CLIMB FPM	FROM SEA LEVEL		
					TIME MIN	FUEL USED GALLONS	DISTANCE NM
2300	S.L.	15	78	645	0	0.0	0
	1000	13	77	605	2	0.3	2
	2000	11	76	560	3	0.7	4
	3000	9	75	520	5	1.1	7
	4000	7	74	480	7	1.5	9
	5000	5	73	435	9	1.9	12
	6000	3	72	395	12	2.3	16
	7000	1	71	355	15	2.8	19
	8000	-1	70	315	18	3.3	23
	9000	-3	69	270	21	3.9	28
	10,000	-5	68	230	25	4.5	33
	11,000	-7	67	185	30	5.2	40
	12,000	-9	66	145	36	6.1	48

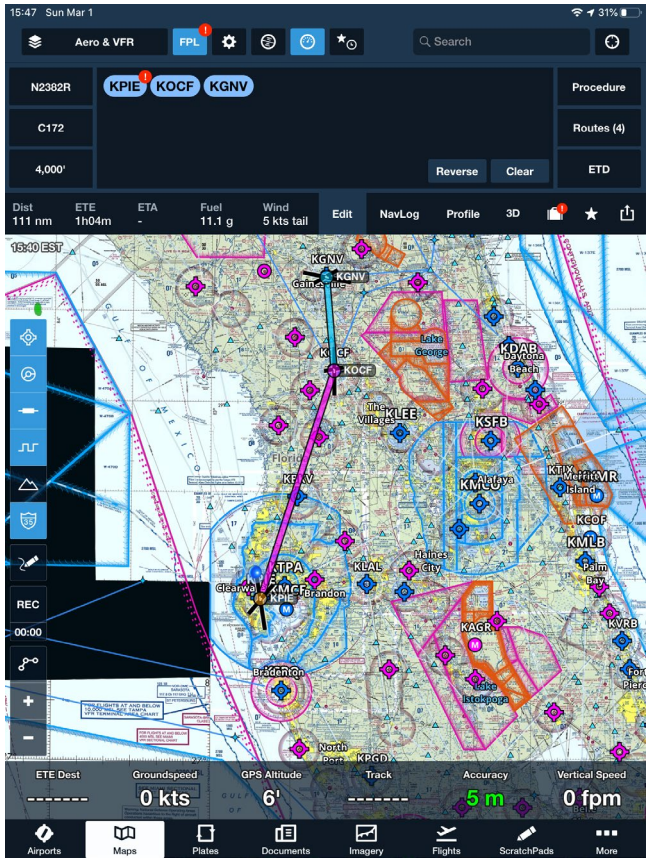
Figure 5-6. Time, Fuel, and Distance to Climb

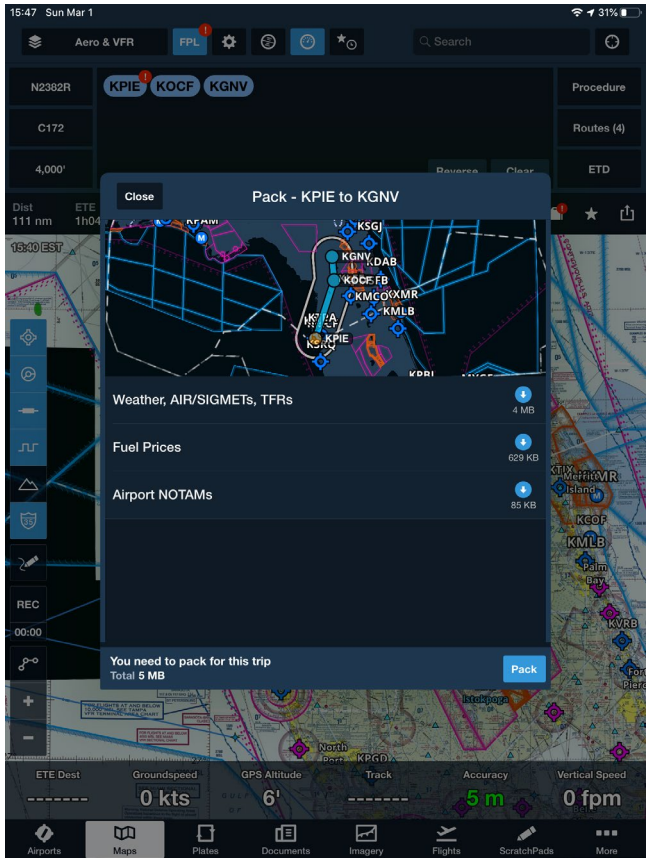
5-15

Once the Weather, Flight Plan, and Performance are completed in ForeFlight, you can “pack” the flight.

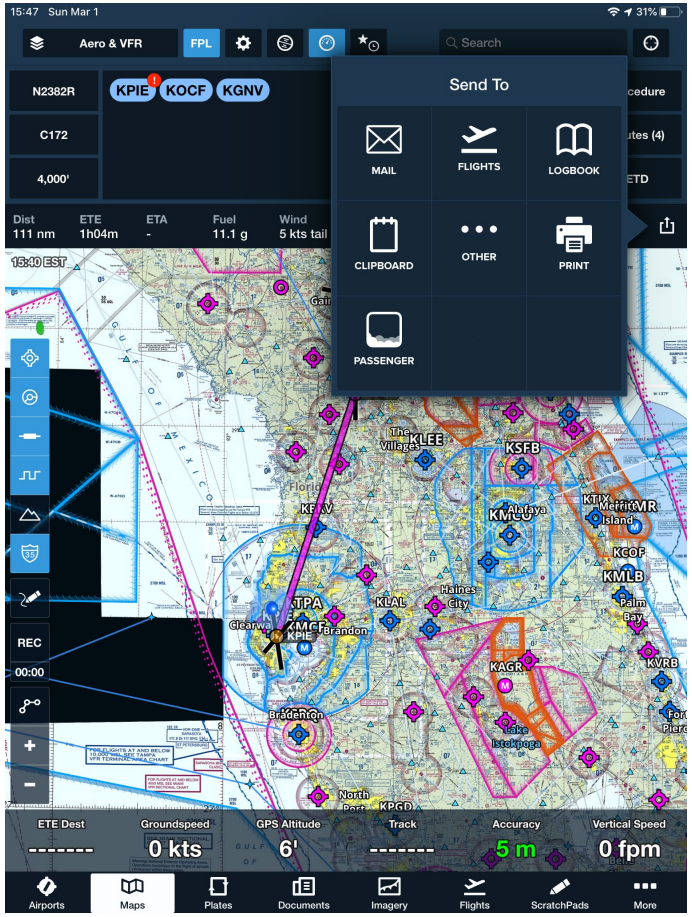
This allows the app to gather and sum up all the important preflight information for the flight (NWKRAFT)

Then you can send this summary to the “Flights” page

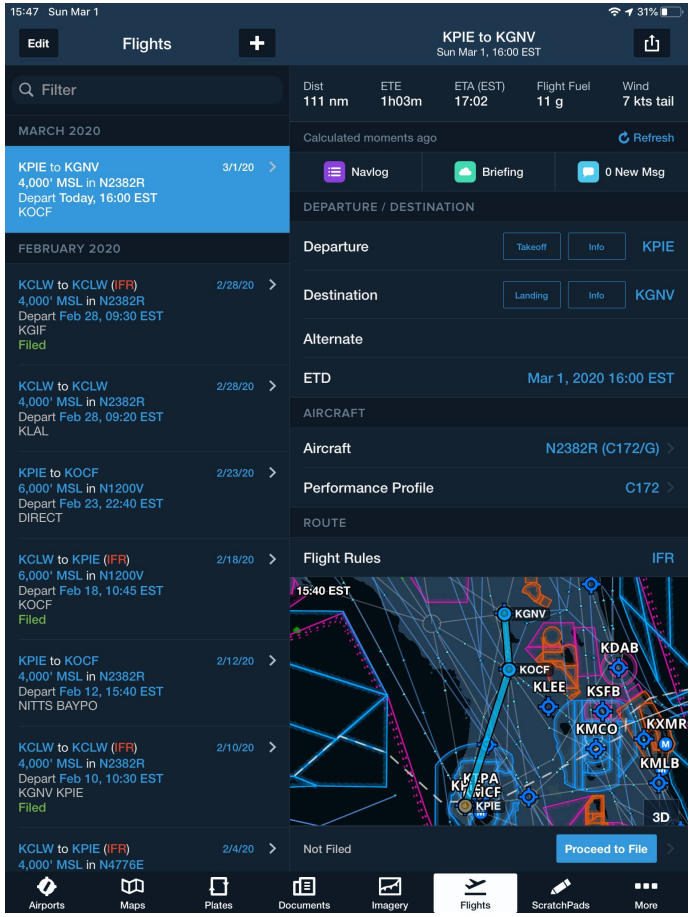




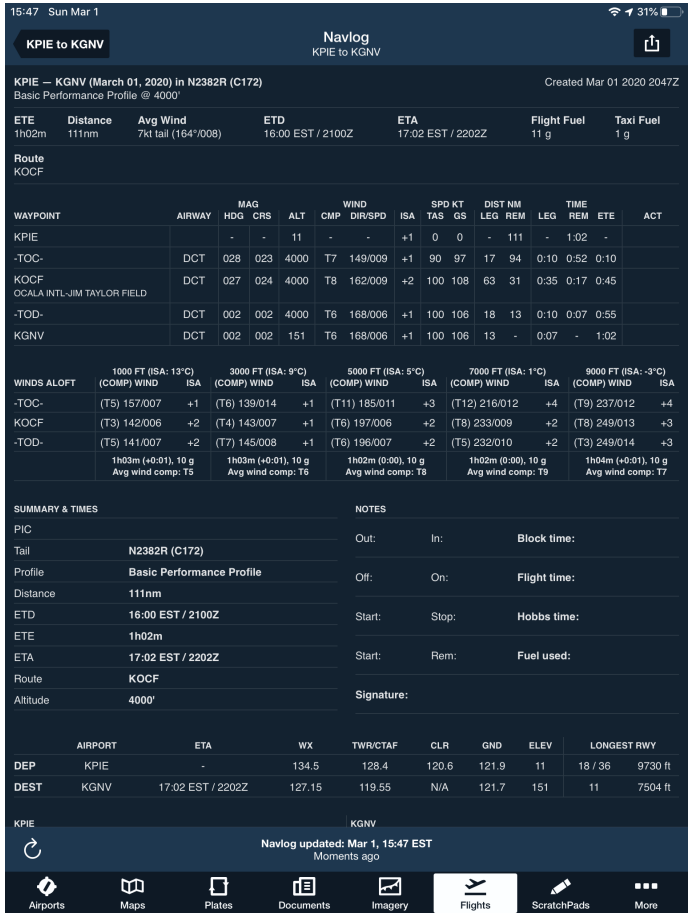
Send to “Flights” page:



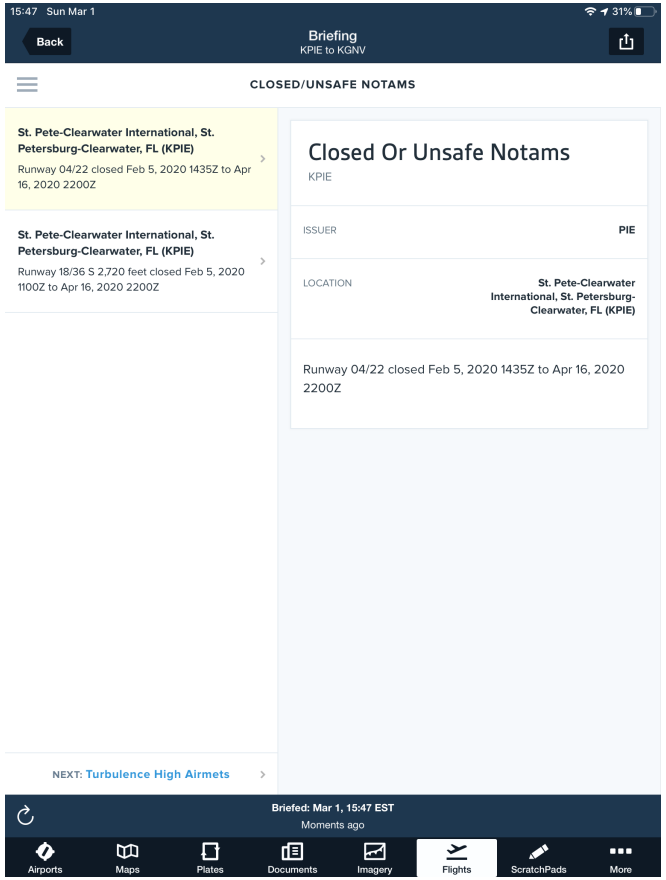
Highlight the flight on the “Flights” page, brings up summary options



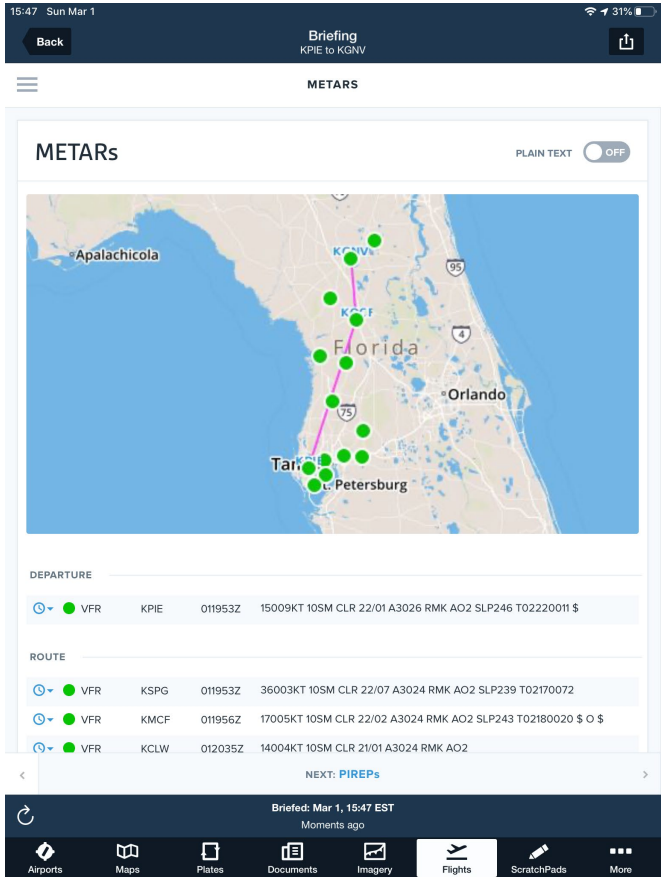
Click on the “Navlog” option to see the Foreflight generated Navlog based on the performance profile



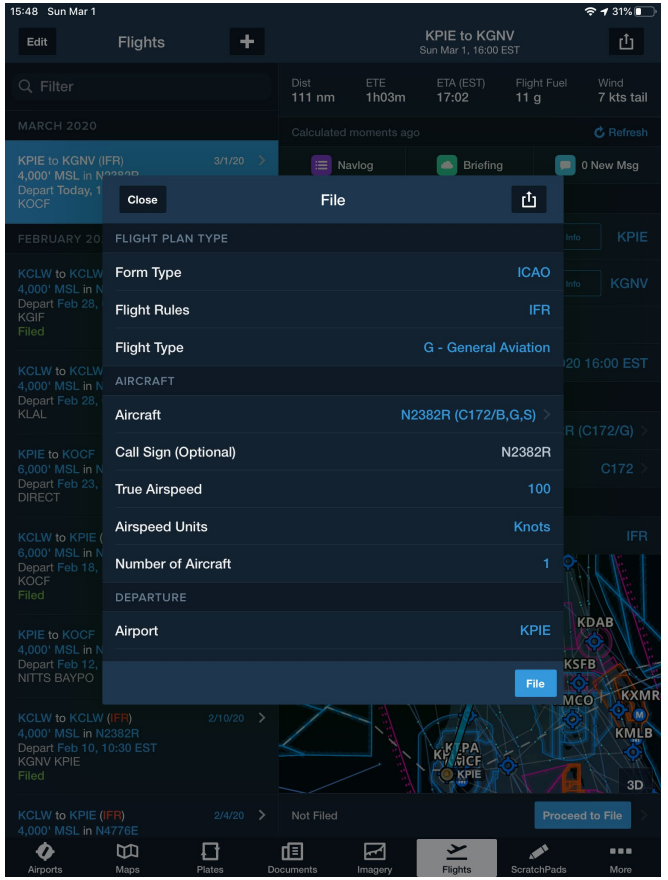
Open the “Briefing” option the get Weather information:



This option gives all preflight information as well, adjusted for Departure and Arrival time:



After reading the “Briefing”, you can hit “Proceed To File” if you wanted to file your flight plan:



For Additional Information

- ForeFlight's website has training videos for each of the app's functions
- Show students this resource, but make sure that they understand the concepts fully before sending them to a DPE (how and why).
- Students with an EFB need to have either two iPads or an acceptable Plan B (ie. iPhone, back-up battery, paper charts).
- Paper back-ups are always a good option. Arm students with a current Chart Supplement and current sectionals. A paper navlog and weight and balance should also be completed.