

*Volato*

# HA-420 PLANNING AND RISK MITIGATION

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# *THE PHONE BOOTH*

Out of altitude, airspeed, and options

01



# ENTERING THE PHONE BOOTH

*Fighter Pilots refer to this frequently*

## **Altitude**

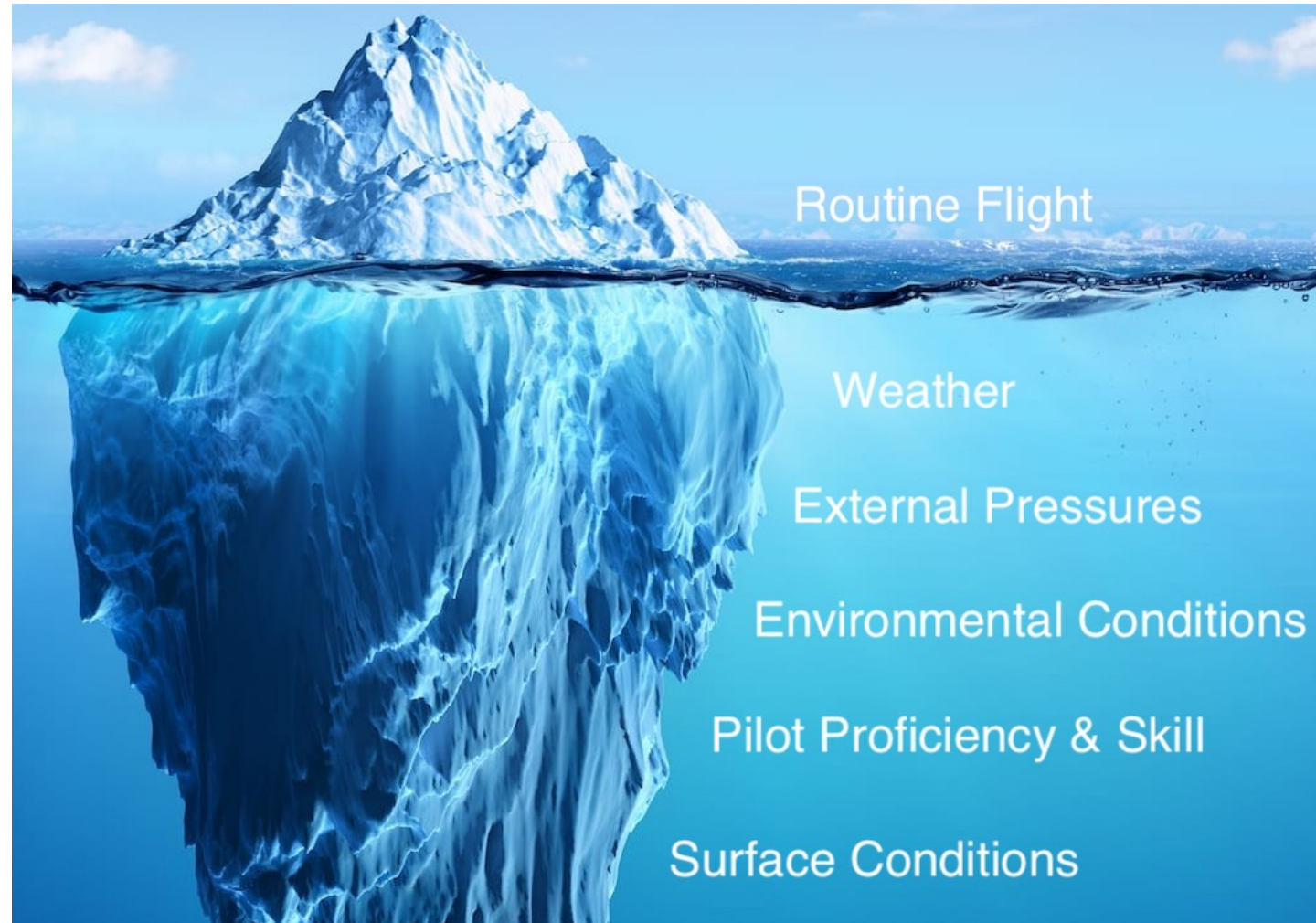
- *Distance*
- *Fuel Requirements?*
- *Weather?*

## **Airspeed**

- *Go too fast, burn too much fuel*
- *Environmental Factors*

## **Options**

- *Surface conditions dictate suitable alternates*
- *ATC constraints/Routing Constraints*
- *External Pressures*



# AVOIDING THE PHONE BOOTH



6 Ps - Prior Proper Planning Prevents Poor Performance

Contingencies and capability expansion: with a narrowing solution sets comes trade-offs.

Do not let the sum of circumstances & timing exceed the capability of skill and knowledge.



# CAPABILITY AND MISSION SET

*Realistic Expectation Management*

02



# EXPECTATION MANAGEMENT

*HONDA LIMITATIONS MUST BE ADHERED TO, EVERY FLIGHT*



*Limitation 1: MZFW-Max Zero Fuel weight: how many passengers and how much cargo can we carry with a crew/pilot?*



*Limitation 2: MTOW-Max Take Off Weight= MZFW +Fuel-80 lbs for taxi*



*Limitation 3: Runway handling/wet/crosswind capability (Various)*



# AN EXAMPLE OF AN IMPOSSIBLE MISSION

*2 Pilots, 4 passengers, 180 lbs of baggage, 20 lbs of fly away (Even Part 91, this mission is too heavy)*

The screenshot displays a flight planning application interface. On the left, a table provides weight and balance data for various stages of the flight. On the right, a map shows the flight path from KBFJ to KSDL, with various waypoints and weather data overlays.

Item	Weight (lb)	MAC	Limit
BEW	7233	36.38	8900
Aircraft Items	65		
BOW	7698	23.79	10780
Passengers (4)	815		
Cargo	200		
ZFW	8713	21.13	10700
Fuel On Board	2580		
TAXI	11293	28.45	10700
Taxi Out Fuel	80		
TOW	11213	28.01	9960
Enroute Burn	1631		
LDW	9582	23.17	

The map on the right shows a flight path from KBFJ to KSDL, with waypoints including TAOMA, NEERO, BERYL, and FLG.DSERT2. Weather data overlays include Rain (dBZ), Mixed, Snow, Ice, Turb High, Turb Low, IFR, and TS. The map also shows various airports and terrain features.





# WEIGHT AND BALANCE

*Examples from real world operations*

03



## *EXAMPLE SETS*

Each of the next slides will demonstrate an example where something can be done non-stop, fuel stop, or well exceeds capability

Will query the group for their suggestions and guidance

Debrief the actual solution that was agreed upon

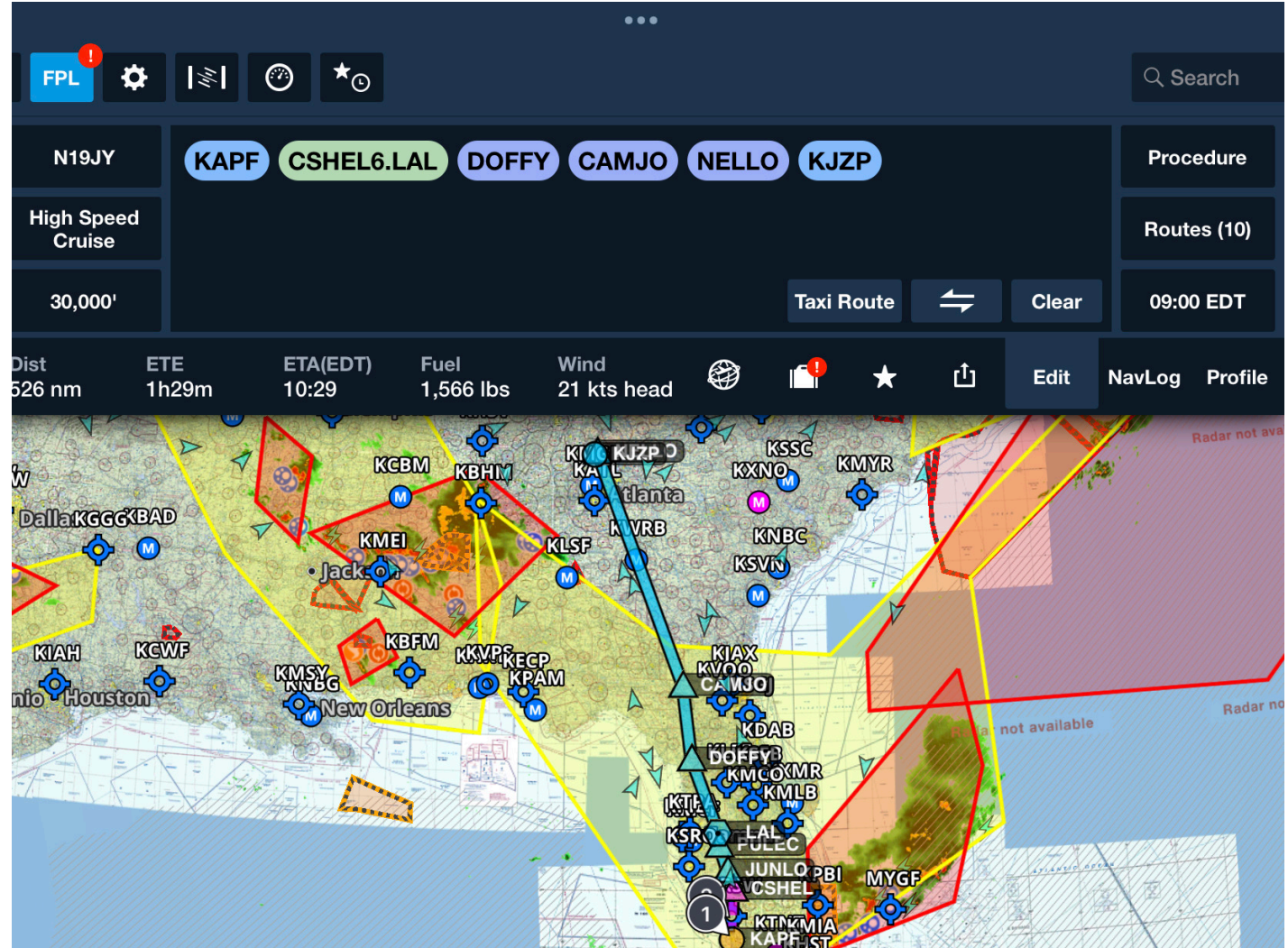


# • ForeFlight Planning Requirement

## EXAMPLE 1: KAPF-KJZP 4 PAX

- *N110HJ: MSN HA4200020*
- *APMG Aircraft*
  - *BEW: 7,325.00 lbs*
  - *Useful Load: 3,375.00 lbs*
- *Crew Weight (Volato always operates with two pilots)*
- *Add 50-60 lbs of bags for crew weight*
- *Add 50 lbs for aircraft stock and fly-away essentials.*

*Most ATC routing showed close to direct. Altitude at pilot's discretion, but MOST representative for direction and duration of flight*



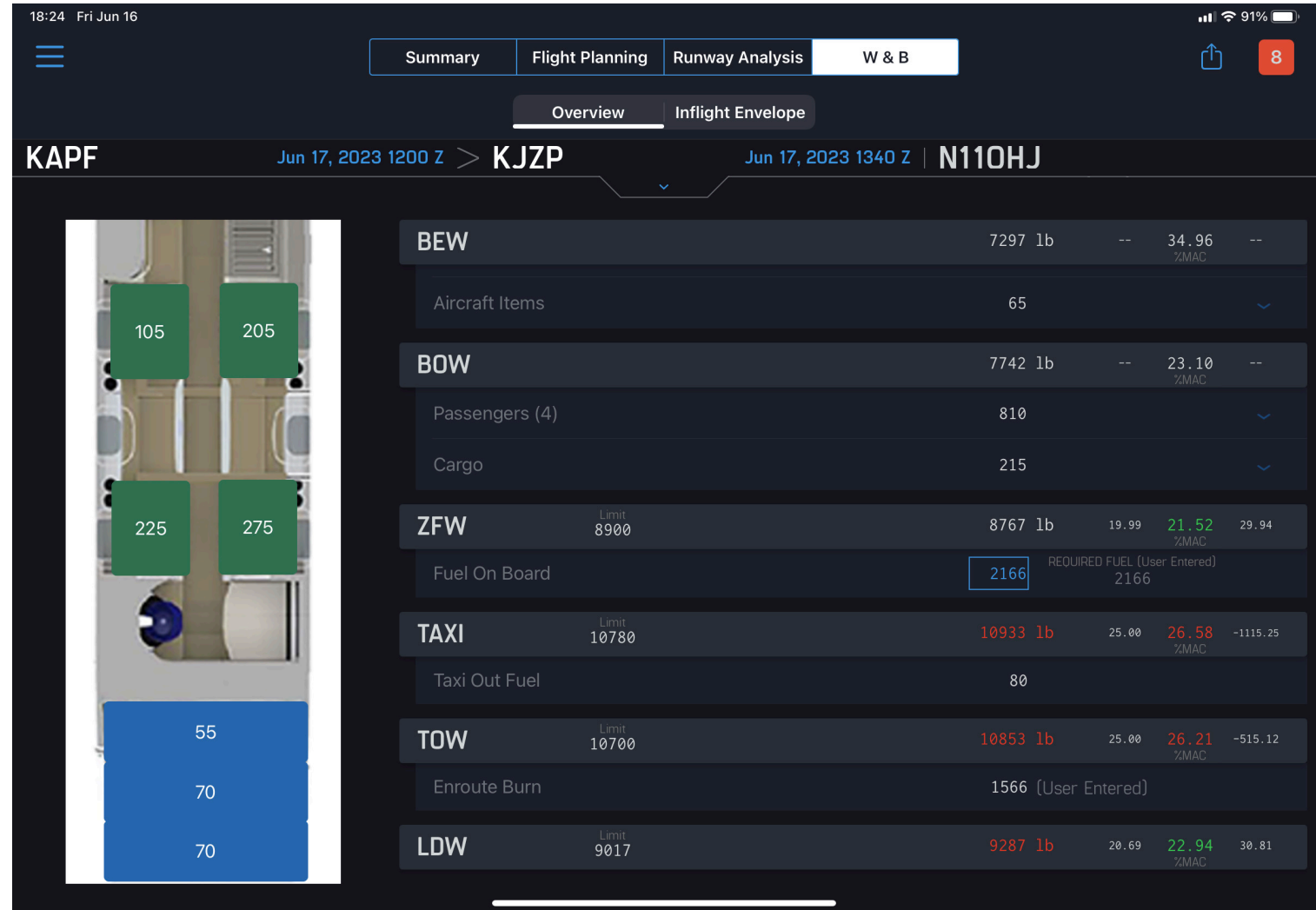
*Volato's landing fuel limit is 600 lbs. minimum fuel policy: 480 lbs. 45 Min Reserve, 120 lbs. contingency*



# • Weight and Balance Example

## EXAMPLE 1: KAPF-KJZP 4 PAX

- N110HJ: SerNo HA4200020
- APMG Aircraft
  - BEW: 7,325.00 lbs
  - Useful Load: 3,375.00 lbs
- Crew Weight (Volato always uses two pilots)
- As you can see, the Honda runs out of useful incredibly quick.
- Because of the limit (s) of fuel, there can be an added factor to “get there” at all costs.



Volato's landing fuel limit is 600 lbs. minimum fuel policy: 480 lbs. 45 Min Reserve, 120 lbs. contingency



# DECISION MAKING TIME

*Think objectively what you would do as pilot in command...*

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Remove weight: unsustainable due to pax weights, crew requirements, and even with removal of pax luggage, still overweight ?

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Take less fuel and require a fuel stop: will equate to a 20-30 minute turn at a point midway through the flight ?

---

Kick passengers off, or remove crewmember (saves 225 lbs-still 8 lbs overweight) ?



# SURFACE CONDITIONS (MORE EMPHASIS NEXT PRESENTATION)

## Take Off Distance Considerations

- *Brake energy distance*
- *Second segment climb gradient*
- *Special Engine Failure Path Departures*

## Landing Distance Considerations

- *Actual Unfactored Landing Distance*
- *Contamination*
- *Wet vs. Dry (30per % Honda AFM Chpt. 4)*
- *Stabilized Approach Criteria (Volato SOP)*



# FLIGHT PHASE

*Considerations and Concerns*

04



# TAKE OFF CONSIDERATIONS

- *Anti Ice/De Ice fluid requires extra take off distance due to contamination of the wing surface/airfoil. Add 10% take off distance*
- *Altitude, especially in summertime conditions, will severely limit aircraft capability. Ensure that not only you have adequate distance, but the ability to meet single-engine climb gradients (Ref Honda AFM Chapter 5 for performance capabilities)*
- *Like landing, crosswinds play a major factor with aircraft controllability. Crosswind inputs should be placed full deflection and reduced to maintain sight picture. (Think of a wheelbarrow and maintaining balance down the paved surface)*





# CLIMB CONSIDERATIONS



- *Range vs. Economy vs. Rate*
- *Range-210 knots is the default economy cruise climb for the Honda. This represents a solid number as there is relatively little fluctuation in the high-altitude flight regime.*
- *Rule of thumb: 200 knots or greater, ISA +5 and below, and AoA Indexer at .5 or less, will equal a balance between rate, altitude, and speed. Also maintains conservation of momentum at higher altitudes*
- *Use caution transitioning through high ISA areas-climb rate and true airspeeds degrade in hot ISA environments.*
- *ATC climb limits will also eat into predicated burns...should the pilot fall into these situations, slowing down will conserve fuel (more applicable to > 2 Hr flights)*



# ROUTING CONSTRAINTS OVERWATER OPERATIONS

- *Raft capability*
- *PBI to TEB the overwater routes are feasible with a raft, weight restricted.*
- *Extremely uncommon with the Giant Killer Warning Areas active (Military Airspace)*
- *Volato required fuel: 2559 lbs*
- *Part 91 Required Fuel: 2439 lbs*
- *Fuel Delta: 120 lbs*
- *Weight Delta: TOW+35/50 lbs (raft)*
- *Volato will have a raft in situations where one is required (50NM or greater power off glide distance from shore)*

## Proposed Routing with Raft



# ROUTING CONSTRAINTS OVERLAND FLIGHTS

- *No raft needed as over the shore*
- *PBI to TEB overland routing (most commonly cleared routing)*
- *Military Airspace non-factor*
- *Volato Required Fuel: 2663 lbs*
- *Part 91 Required Fuel: 2543 lbs*
- *Fuel Delta: 120 Lbs*
- *Weight Delta: 0*

## Proposed Routing without Raft

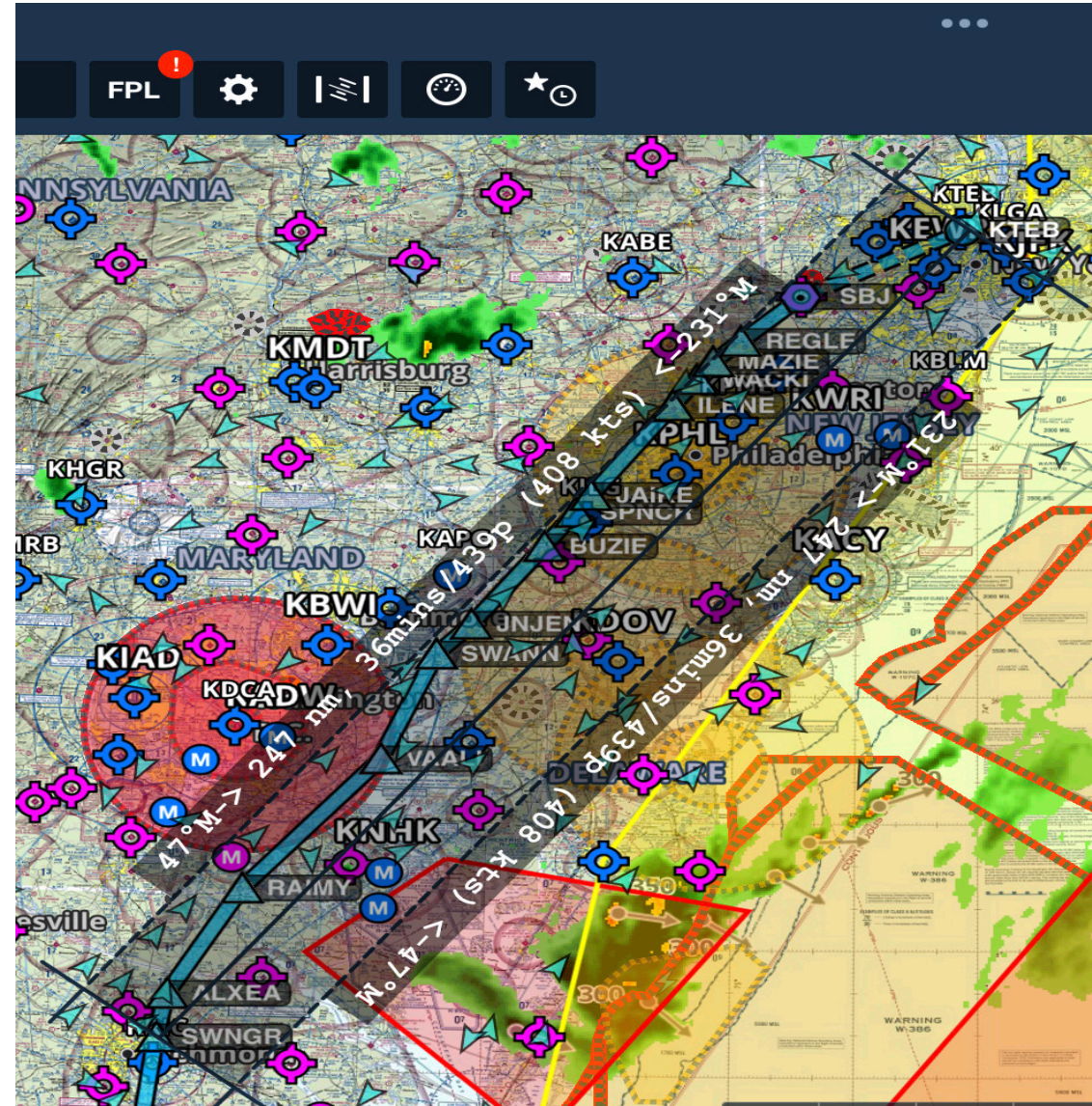


# ROUTING CONSTRAINTS

## OVERLAND FLIGHTS

- *ATC will descend aircraft early moving anywhere into the NE Corridor*
- *Key phrase in Fuel Regulations is “planned” fuel. You can dip below min fuel for unforeseen circumstances*
- *Honda Specific QRH Action for low quantity lights (440 lbs)-”Land at Nearest Suitable airport”*

## STAR JAIKE3 into KTEB



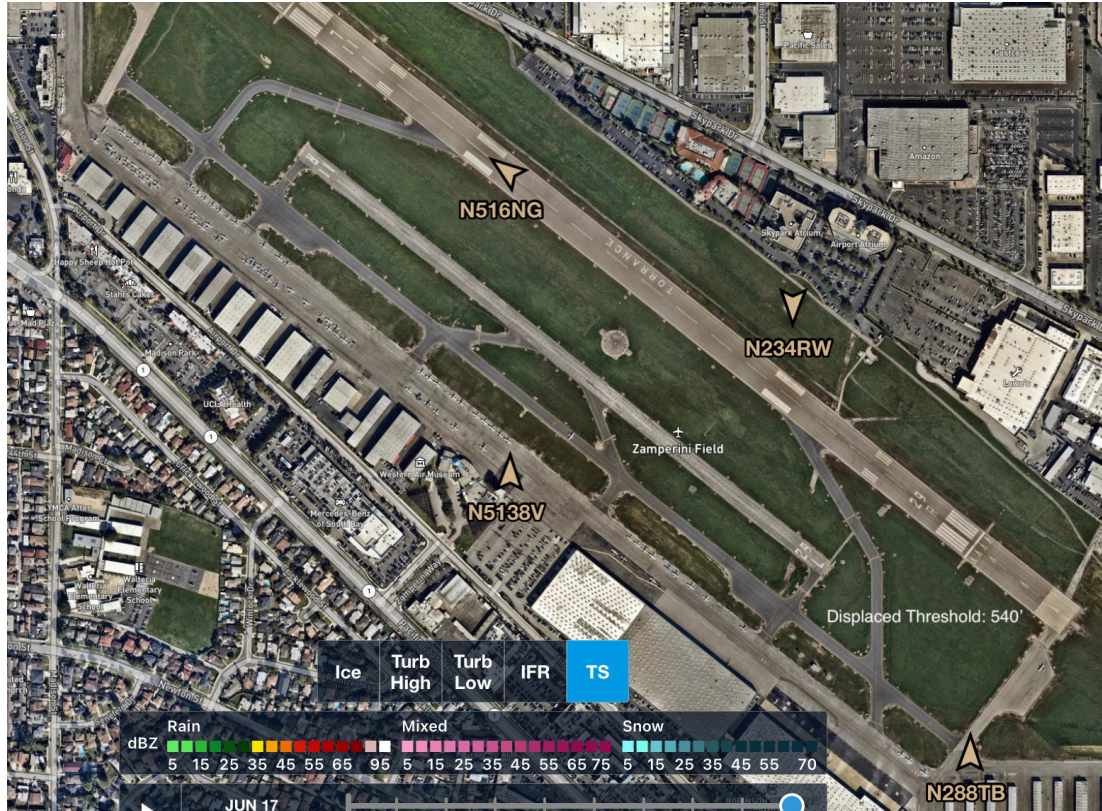
# TERMINAL PHASE

*When to bail...*

05



# KTOA: ZAMPERINI FIELD



- *ForeFlight LDA 5,001 feet long.*
- *Displaced Thresholds: 541' on 11L, 540' 29R*
- *This leaves 3,920 feet available.*
- *What factors would play a role in stopping distance? (winds, rain, traffic, fuel, etc)*
- *TOA is a fantastic example of common situations: KLAX is 8 miles north, and KLGB is 9 miles directly east, with much longer runways (2 Outs)*
- *Will explore into landing distance factors in next presentation*



# Q&A

*Will answer these to the best of my ability*

06



*Volato*

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