



Takeoff & Landing Decision Points

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TAKEOFF

§ 91.103 Preflight action.

Each pilot in command shall, before beginning a flight, become familiar with all available information concerning that flight. This information must include -

For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information:

(1) For civil aircraft for which an approved Airplane or Rotorcraft Flight Manual containing takeoff and landing distance data is required, the takeoff and landing distance data contained therein;



TAKEOFF

- ❖ For every take off that a pilot performs they must determine what factors effect the performance of the aircraft in the take off
- ❖ Pilots must calculate their takeoff distance accordingly to several variables, prior to flight, to ensure adequate performance.
- ❖ It is important to realize that any calculated performance may be different from what is experienced during taking off.



ABORTING A TAKEOFF

- ❖ Whenever you are performing a take off you must **always be ready to abort the takeoff**
- ❖ If you are landing you must **always be ready to perform a go-around.**
- ❖ This is the same mentality as always having an emergency landing field/area in site, within gliding distance in case of an engine (full or partial) loss of power and whether at a cruising altitude or on takeoff.

Decision Points

- ❖ For takeoffs, this is the distance down the runway the aircraft must become airborne to meet climb and obstacle clearance.
- ❖ You must determine the aircraft's liftoff distance using the POH performance graphs.
All pilots must calculate this as per the regulations.
- ❖ Pick a reference point on the runway that the aircraft should be airborne by - for example:

If the aircraft is not airborne by the time you have reached the decision point. Reduce power to idle and use brakes to SLOW TO TAXI SPEED TO EXIT THE RUNWAY safely and under control

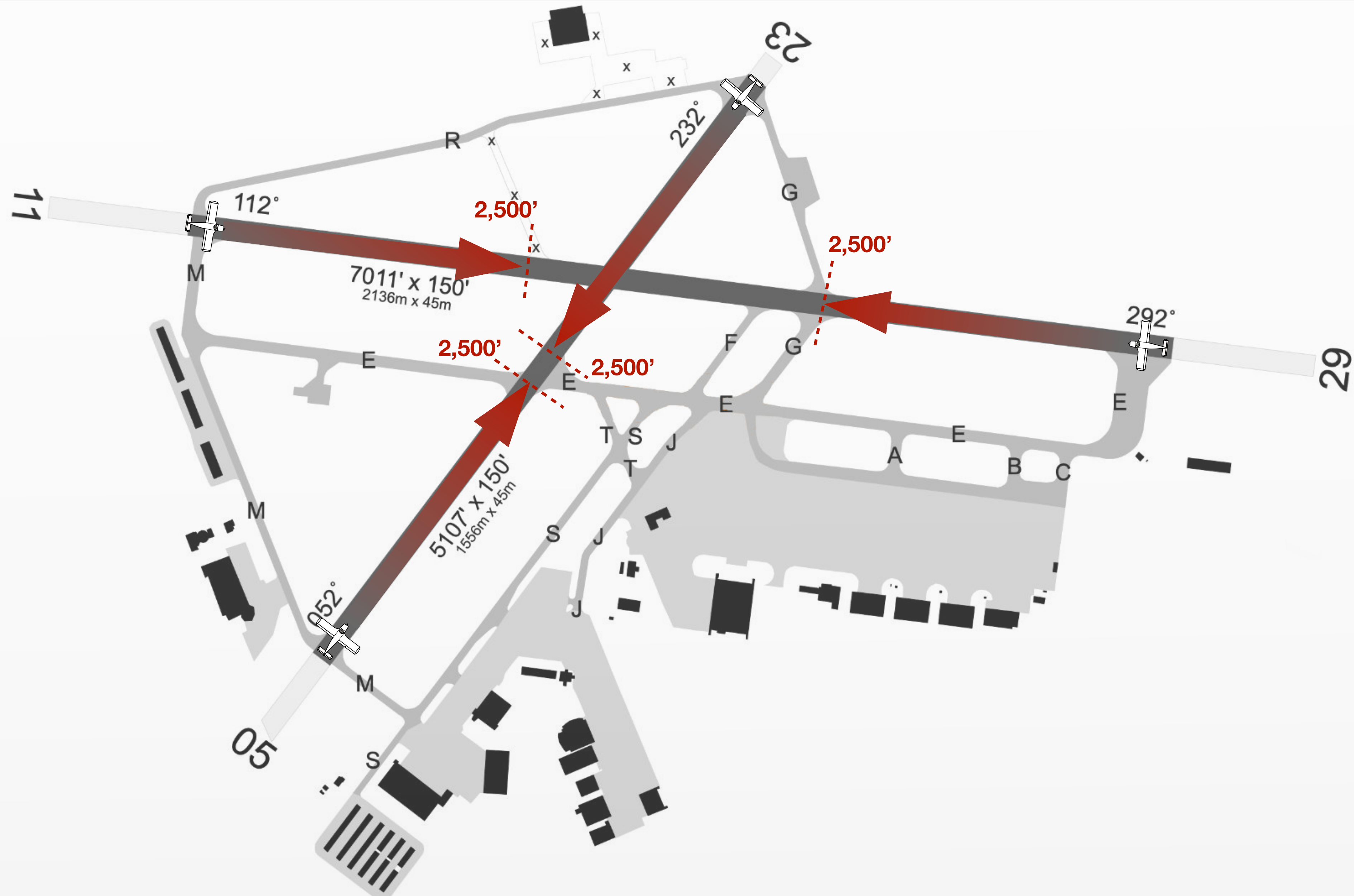


DECISION POINTS HANSCOM

- ❖ Runway 29 at Hanscom, the aircraft normally becomes airborne passing taxiway G (2,500') or taxiway F (2,800') on the left hand side of the runway.
- ❖ Taking off on runway 11 passing taxiway N is 2,500' on the left hand side of the runway.
- ❖ Taking off on runway 23 passing taxiway E is 2,500' on the left hand side of the runway.
- ❖ Taking off on runway 5 passing taxiway E is 2,500' on the left hand side of the runway.



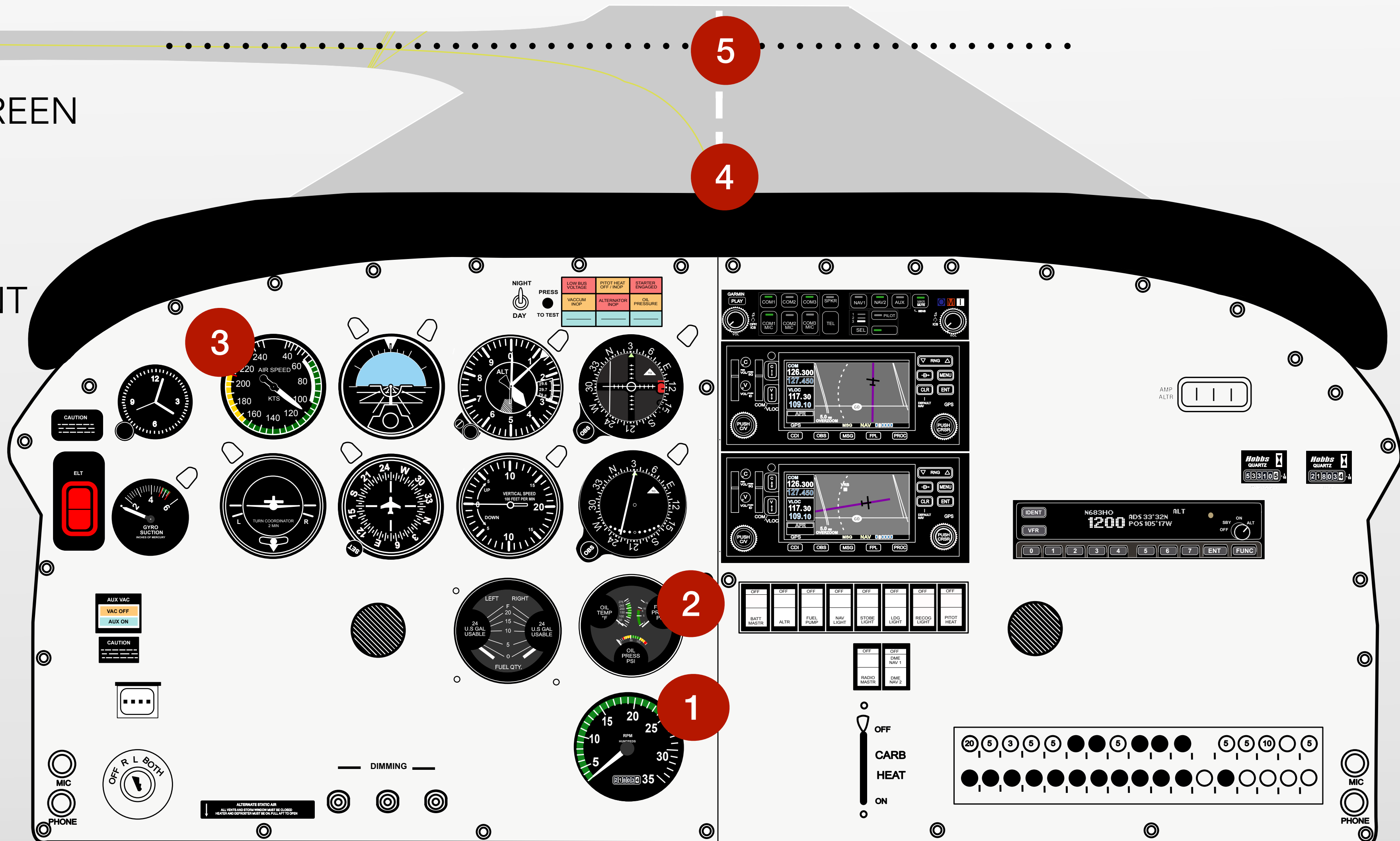
DECISION POINTS HANSCOM AIRPORT



REACT TAKEOFF CHECKLIST

- 1 RPM'S = 2330 - 2430
- 2 ENGINE GAUGES = GREEN
- 3 AIRSPEED = "ALIVE"
- 4 CENTERLINE
- 5 TAKEOFF ABORT POINT (DECISION POINT)

Once the decision is made to abort a takeoff, immediately reduce the power to IDLE while maintaining directional control using the rudder and aileron into a crosswind to stop the drift.



DETERMINING TAKEOFF DISTANCES:

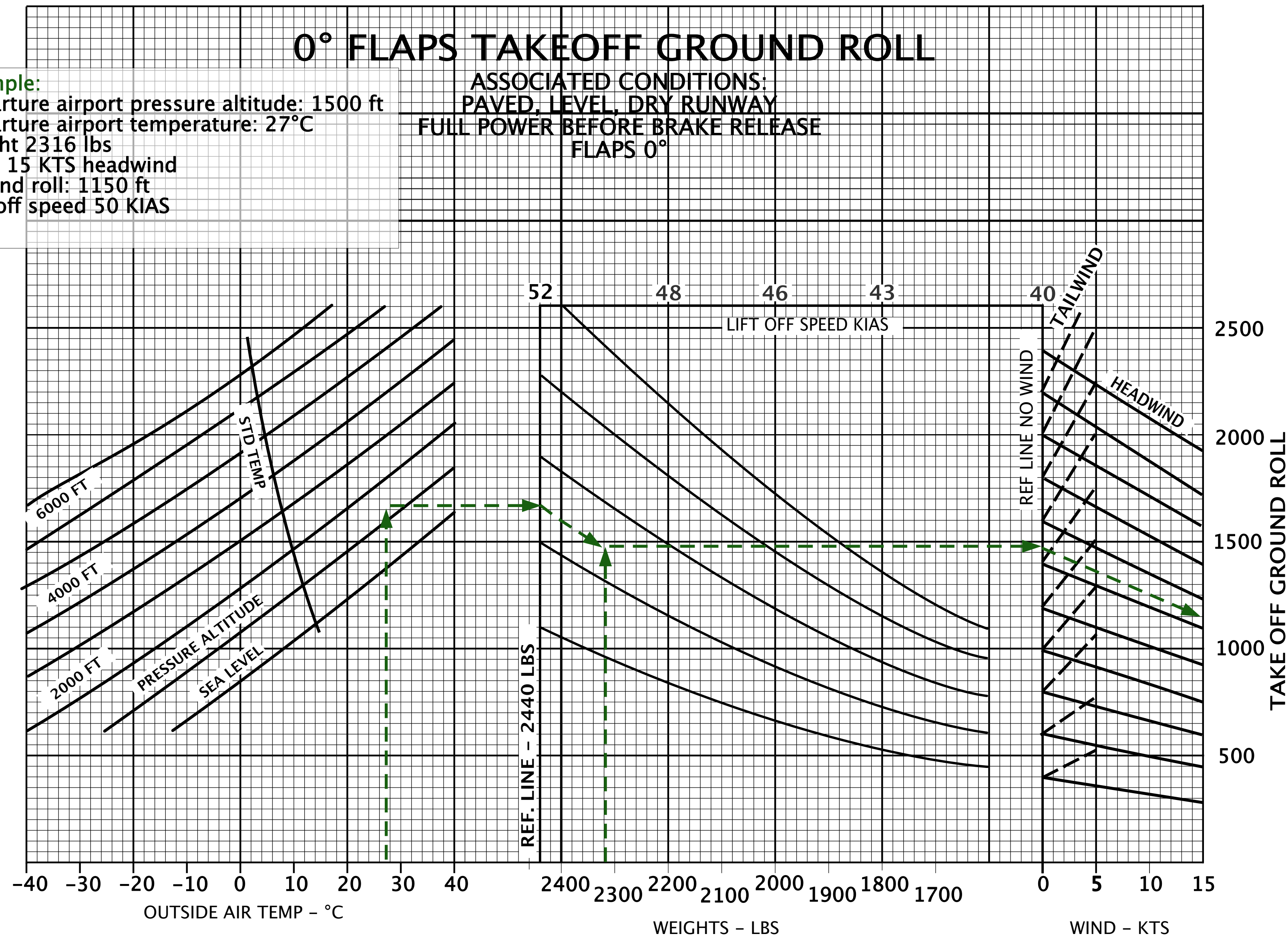
- ❖ Takeoff distance is calculated using performance charts which can be found in the Pilot Operating Handbook for the aircraft you are flying.
- ❖ Once calculated, cross-check required takeoff distance against runways available to see what is, or is not acceptable



GROUND ROLL CALCULATIONS

Example:
Departure airport pressure altitude: 1500 ft
Departure airport temperature: 27°C
Weight 2316 lbs
Wind 15 KTS headwind
Ground roll: 1150 ft
Lift-off speed 50 KIAS

ASSOCIATED CONDITIONS:
PAVED, LEVEL, DRY RUNWAY
FULL POWER BEFORE BRAKE RELEASE
FLAPS 0°



GROUND ROLL RULES OF THUMB (FAASTEAM VIDEO)

