

SESSION 13: CROSS-COUNTRY PLANNING —

1. Under the 1-2-3 rule, an alternate must be filed when, for at least 1 hour before to 1 hour after the ETA, the forecast ceiling is less than:

- A. 1,000 feet or visibility less than 2 miles
- B. 3,000 feet or visibility less than 3 miles
- C. 2,000 feet or visibility less than 3 miles
- D. 1,500 feet or visibility less than 1 mile

2. The "1" in the 1-2-3 rule refers to the time window of:

- A. 1 hour before to 1 hour after the ETA
- B. 1,000-foot ceiling threshold
- C. 1 mile of visibility
- D. 1 alternate airport minimum

3. A destination TAF within the ± 1 -hour window forecasts a 2,500-foot ceiling and 4 miles visibility. Regarding an alternate:

- A. An alternate is required because the ceiling is below 3,000
- B. An alternate is required because visibility is below 5 miles
- C. No alternate is required; conditions are at or above 2,000/3
- D. An alternate is required regardless of forecast conditions

4. When an alternate IS required, the standard alternate minimums for an airport with a precision approach are:

- A. 800-foot ceiling and 2 miles visibility
- B. 400-foot ceiling and 1 mile visibility
- C. 600-foot ceiling and 2 miles visibility
- D. 200-foot ceiling and ½ mile visibility

5. The standard alternate minimums for an airport with only a non-precision approach are:

- A. 600-foot ceiling and 2 miles visibility
- B. 800-foot ceiling and 2 miles visibility
- C. 1,000-foot ceiling and 3 miles visibility
- D. 400-foot ceiling and 1 mile visibility

6. The "600-2" and "800-2" standard alternate minimums apply to:

- A. The forecast at the alternate airport at the ETA at the alternate
- B. The forecast at the destination at the ETA
- C. The conditions at the departure airport
- D. The enroute conditions at cruise altitude

7. A destination TAF shows `TEMPO` conditions of a 1,500-foot ceiling within the ±1-hour window. Regarding the alternate requirement:

- A. An alternate is required; TEMPO conditions below 2,000/3 trigger the requirement
- B. TEMPO conditions are excluded from the alternate determination
- C. No alternate is needed because TEMPO is brief
- D. The requirement depends only on the prevailing forecast, not TEMPO

8. For an airport to be used as an alternate, the forecast at the alternate's ETA must be:

- A. Below the standard alternate minimums by at least 200 feet
- B. Exactly at the published landing minimums
- C. At or above the applicable alternate minimums (standard or as published)
- D. At or above 2,000 feet and 3 miles

9. When an instrument approach procedure is annotated "NA" for alternate minimums, it means:

- A. The approach has no published minimums
- B. The airport may only be used as an alternate at night
- C. The approach is not authorized for any use
- D. That approach may not be used to qualify the airport as an alternate

10. A common reason an approach is annotated "Alternate minimums NA" is:

- A. The runway is too short for most aircraft
- B. The approach has circling minimums only
- C. The airport has no control tower
- D. The absence of local weather reporting or required monitoring at the airport

11. For a GPS/RNAV-equipped (WAAS) aircraft planning an RNAV (GPS) approach at the alternate, current guidance allows the pilot to:

- A. Disregard the alternate requirement entirely
- B. Use only the LNAV/VNAV line for alternate planning
- C. Plan for the LNAV or circling minimums (not the LPV DA) when using GPS at the alternate
- D. Use the LPV DA as the alternate planning minimum in all cases

12. A non-WAAS GPS-only aircraft planning to use an RNAV (GPS) approach at both the destination and the alternate faces what limitation?

- A. It may not plan to use GPS-based approaches at both the destination and alternate simultaneously
- B. It must file two alternates instead of one
- C. It may use GPS at the alternate but not the destination
- D. There is no limitation for non-WAAS aircraft

13. A pilot determines an alternate is required and selects an airport whose only approach yields standard non-precision alternate minimums of 800-2. The forecast at the alternate ETA is an 800-foot ceiling and 3 miles. This alternate is:

- A. Not usable because the ceiling is exactly at minimums
- B. Usable; the forecast meets the 800-2 requirement
- C. Not usable because visibility must exceed 5 miles
- D. Usable only if a precision approach is added

14. The fuel requirement under §91.167 when an alternate is required includes fuel to fly to the destination, then to the alternate, plus:

- A. 30 minutes at normal cruise
- B. 1 hour at normal cruise
- C. 30 minutes at maximum continuous power
- D. 45 minutes at normal cruise speed

15. When NO alternate is required, the §91.167 fuel reserve for IFR flight is fuel to the destination plus:

- A. 30 minutes at normal cruise
- B. 1 hour at maximum range
- C. 45 minutes at normal cruise speed
- D. 15 minutes at approach speed

16. A pilot reads a destination TAF forecasting `BKN025` (2,500 ceiling) and `P6SM` within the window, but with a `PROB30 1SM` group. The conservative interpretation regarding an alternate is:

- A. No alternate is needed under any reading
- B. The PROB30 below-minimums possibility argues for filing an alternate despite the prevailing forecast
- C. PROB groups never affect the alternate decision
- D. An alternate is legally prohibited in this case

17. When evaluating the destination for the alternate requirement and the alternate airport's own suitability, the pilot applies:

- A. The same 2,000/3 standard to both
- B. The 600-2/800-2 standard to both
- C. The destination landing minimums to both
- D. The 2,000/3 standard to the destination and the 600-2/800-2 standard to the alternate

18. A pilot files an alternate that, on closer inspection, has its only approach annotated with an "A NA" symbol. The correct action is:

- A. Select a different alternate whose approach is authorized for alternate use
- B. File it anyway since the destination weather is good
- C. Use the airport but plan to circle visually
- D. File it as a second backup alternate only

19. The phrase "2,000-3" in the 1-2-3 rule represents:

- A. A 2,000-foot ceiling and 3 miles required at the alternate
- B. A 2,000-foot ceiling and 3 miles below which an alternate is required at the destination
- C. The standard alternate minimums for a precision approach

D. The required fuel reserve in feet and miles

20. A flight has a destination forecast comfortably above 2,000/3, so no alternate is legally required. A prudent instrument pilot:

A. Never carries extra fuel in this case

B. Files an alternate only if the aircraft is non-WAAS

C. Is legally prohibited from listing an alternate

D. May still identify a "personal alternate" and carry extra fuel for safety margin

21. Standard alternate minimums of 600-2 are associated with which approach capability at the alternate?

A. A non-precision approach only

B. A precision approach (ILS, LPV, or equivalent)

C. A visual approach

D. A circling-only procedure

22. A destination has a forecast of a 1,800-foot ceiling and 5 miles visibility within the window. Regarding the alternate requirement:

A. No alternate is needed because visibility exceeds 3 miles

B. An alternate is required because the ceiling is below 2,000 feet

C. No alternate is needed because the ceiling exceeds 1,500 feet

D. An alternate is required only if the visibility were also below 3 miles

23. When an airport's standard alternate minimums are raised above 600-2 or 800-2 (non-standard alternate minimums), these values are found:

A. On the enroute low-altitude chart

- B. In the METAR remarks section
- C. Only by contacting Flight Service
- D. In the alternate minimums section of the Terminal Procedures Publication

24. A pilot planning with a WAAS GPS may, per current FAA guidance, plan to use:

- A. An RNAV (GPS) approach at the alternate using LNAV/circling minimums for planning
- B. The LPV DA as the alternate planning minimum
- C. No GPS approach at any alternate
- D. Only ILS approaches at the alternate

25. The fundamental purpose of the alternate airport requirement is to:

- A. Ensure a viable landing option exists if the destination becomes unusable
- B. Reduce the total fuel a flight must carry
- C. Satisfy a recordkeeping formality with no operational value
- D. Limit IFR flights to airports with control towers

ANSWER KEY & EXPLANATIONS – SESSION 13

1. C. 2,000/3 — Under the 1-2-3 rule, an alternate is required when the forecast ceiling is below 2,000 feet or visibility below 3 miles in the window.
2. A. ± 1 hour of ETA — The "1" refers to the time window of 1 hour before to 1 hour after the ETA.
3. C. No alternate — 2,500 ceiling and 4 miles are both at or above 2,000/3, so no alternate is required.

4. C. 600-2 precision — Standard alternate minimums for an airport with a precision approach are a 600-foot ceiling and 2 miles visibility.

5. B. 800-2 non-precision — Standard alternate minimums for a non-precision-only airport are an 800-foot ceiling and 2 miles visibility.

6. A. Alternate forecast at its ETA — The 600-2/800-2 minimums apply to the forecast at the alternate airport at the ETA at the alternate.

7. A. TEMPO triggers — TEMPO conditions below 2,000/3 within the window trigger the alternate requirement.

8. C. At/above alternate mins — To use an airport as an alternate, the forecast at its ETA must be at or above the applicable alternate minimums.

9. D. Cannot qualify airport — "Alternate minimums NA" means that approach may not be used to qualify the airport as an alternate.

10. D. No local weather — A common reason for "Alternate minimums NA" is the absence of local weather reporting or required monitoring.

11. C. LNAV/circling for planning — A WAAS aircraft plans for LNAV or circling minimums (not the LPV DA) when using GPS at the alternate.

12. A. Not both GPS — A non-WAAS GPS-only aircraft may not plan to use GPS-based approaches at both the destination and alternate simultaneously.

13. B. Meets 800-2 — An 800-foot ceiling and 3 miles meets the 800-2 requirement, so the alternate is usable.

14. D. +45 min cruise — With an alternate, §91.167 requires fuel to destination, then to alternate, plus 45 minutes at normal cruise.

. C. +45 min cruise — When no alternate is required, the §91.167 IFR reserve is fuel to the destination plus 45 minutes at normal cruise speed.

16. B. PROB30 argues for alternate — The PROB30 below-minimums possibility argues for filing an alternate despite the prevailing forecast.

17. D. 2,000/3 then 600-2/800-2 — The 2,000/3 standard applies to the destination determination; the 600-2/800-2 standard applies to the alternate's suitability.

18. A. Pick authorized alternate — The pilot should select a different alternate whose approach is authorized for alternate use.

19. B. Destination trigger — "2,000-3" represents the destination ceiling/visibility below which an alternate is required.

20. D. Personal alternate — A prudent pilot may still identify a personal alternate and carry extra fuel even when none is legally required.

21. B. Precision — 600-2 standard alternate minimums are associated with a precision approach capability.

22. B. Below 2,000 ceiling — A 1,800-foot ceiling is below 2,000, triggering the alternate requirement regardless of the 5-mile visibility.

23. D. TPP alternate section — Non-standard alternate minimums are found in the alternate minimums section of the Terminal Procedures Publication.

24. A. GPS alternate LNAV/circling — A WAAS GPS may plan to use an RNAV (GPS) approach at the alternate using LNAV/circling minimums for planning.

25. A. Viable landing option — The purpose of the alternate requirement is to ensure a viable landing option if the destination becomes unusable.