




Federal Aviation Administration

Memorandum

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To: National Flight Procedures Group, AJW-32

From: Flight Procedure Standards Branch, AFS-420 

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Subject: Area Navigation (RNAV) Turn Altitude Determination

PURPOSE. This memo is issued to clarify and standardize the method used to determine the altitude to use in turn radius calculations for area navigation (RNAV) approach procedures.

DISCUSSION. For RNAV fly-over, fly-by, and radius-to-fix (RF) construction, turn radius calculations are dependent on the true airspeed of the fastest category aircraft for which landing minimums are published on the approach chart plus a tailwind component. True airspeed and the tailwind values are altitude dependent; therefore, it is important to quantify the "turn altitude" to use in airspeed calculations.

CLARIFICATION. For turns in the feeder, initial, intermediate, and final segments, project the designed glidepath from threshold crossing height (TCH) out the designed flight track to the turn fix. The turn altitude is the higher of:

- The altitude of the glidepath at the fix, or
- The minimum fix altitude.

For turns in the missed approach segment, project the climb path from the glidepath altitude at the **ab** line out the designed missed approach track assuming a climb rate of 250 ft/NM (24.304:1 slope) for category A/B aircraft, and 500 ft/NM (12.152:1 slope) for category C/D aircraft (*If a climb gradient in excess of these values is published, use the published climb gradient*). The turn altitude is altitude of the climb path at the fix.

This guidance is for calculating turn radius only. It is not the basis for publishing altitude restrictions. If you have questions, contact Jack Corman, (405)954-0012.