

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
(Transcribed/Re-Formatted)
HISTORY RECORD

FAA Control # 93-01-120

SUBJECT: Portrayal of Final Approach Segment descent Gradients on High Descent Gradient SIAPs

BACKGROUND/DISCUSSION: TERPS criteria place no limit on the descent gradient from the FAF to touchdown provided only circling minimums are authorized.

Over the years since the 1967 implementation of TERPS, the increased flexibility afforded by these criteria has resulted in IAP's which would not have been permitted by the previous criteria. Secondary procedures have been implemented at some mountain airports for traffic flow purposes when weather conditions permit the higher minimums which some procedures often have. Also, because of terrain constraints, some of these procedures do not qualify for straight in minimums because of final approach segment (FAS) limitations, even though the IAP may be properly aligned with a runway.

The system drives pilots to make straight-in landings out of these procedures even though the required descent gradients to touchdown are far beyond the 400-foot-per-mile limitation envisioned in TERPS for straight-in landings. A case in point is the Medford, OR VOR/DME C where the design gradient for a straight in landing from the FAF is 584 ft. per NM. At 140 kts ground speed, this translates into a sustained descent rate of 1,364 ft. per minute, from 7,000 feet to 1,331 feet, MSL.

RECOMMENDATION: Where the final approach course is aligned within 30 degrees of a runway, but descent gradient requirements prohibit the publishing of straight in minima, the blank straight in minima box should contain rate-of-descent information similar to that provided for ILS IAPs. Further, a caution note should be provided to advise pilots that circling is an option to landing straight-in from such procedures. These criteria should be contained in 8260.3B with the imperative that they be charted.

COMMENT: This recommendation affects the United States Standard for Instrument Procedures (TERPS), FAA Handbook 8260.3B, FAA Handbook 8260.19B, and various cartography directives.

Submitted by: Charles K. Guy
June 3, 1993
AIR LINE PILOTS ASSOCIATION

INITIAL DISCUSSION MEETING 93-1: Unavailable

MEETING 94-01: (From Frank Parr, AVN-210 notes) If circling only is authorized, there is no limit on the descent gradient for straight-in approach, yet many pilots will execute same when possible. ALPA wants descent gradients published so the pilot does not have to calculate. Lyle says OK. Paul said it would take a while as they might do this during the quarterly review of procedures. The AT Handbook would need changing, as would the 8269.19. **Action: Item Open (Unassigned, but must be done)**

MEETING 94-02: Group agreed to leave item open pending a proposal from ALPA. **Action: Item Open (ALPA).**

MEETING 95-01: Group agreed to leave item open pending further study from ALPA. i.e.: "3 degree descent", "420 feet per KM" degree vs. rate etc. **Action: Item Open (ALPA)**

MEETING 95-02: ALPA re-submitted their position paper. Discussion indicates that this issue applies to SIAPOs that are aligned with the runway, yet have circling only minima published. This appears to be more of a charting than a criteria issue. AFS-420 agreed to prepare a proposal of what verbiage should be used, and on what procedures it should be applied to. i.e. 'for straight-in landing 3.75 degree descent', "descent gradient 420 ft./NM for straight-in landing", etc. Once agreed to by the TERPS Subgroup, the issue will be referred to the ACF. AFS-420 will present a proposal at the next meeting. **Action: Item Open (AFS-420)**

MEETING 96-01: Bill Hammett, AFS-420 presented an AFS-400 coordinated position that the descent gradient from FAF to threshold would be included as a note on the appropriate 8260 procedure forms for those procedures that are published with circling minimums only due to the final descent gradient exceeding straight-in tolerances. The accepted verbiage is "FAF to threshold descent gradient, (###) Ft/NM". AFS-440 will provide AVN-100 with an interim policy letter pending publication in Order 8260.19. **Status: Item Closed.**