

Flight Standards Interest in VGSI/VDA Coincidence Requirements

Overview

This paper summarizes Flight Standards' interest in, and recent concerns regarding FAA Order 8260.3D requirements for coincidence of the visual glide slope indicator (VGSI) angle and glidepath angle (GPA) or vertical descent angle (VDA).

Background

FAA Order 8260.3D paragraph 2-6-2 has the following requirements:

- a. Approval is required to establish a GPA or a VDA (of a procedure where the FAC is straight-in aligned) that is more than 0.20 degrees greater than the glidepath angle of a visual glide slope indicator (VGSI) installed on the same runway...
- b. Approval is required to establish a VDA (of a procedure where the FAC is straight-in aligned) that is less than the angle of a VGSI installed to the same runway...

It has come to the attention of Flight Procedures and Airspace Group that there may be hesitance within Service Area Flight Procedures Team offices to initiate instrument approach procedure projects where the requirements of paragraph 2-6-2 a. and b. are not met, or suggestions from those offices of possible mitigation measures such as deactivation of VGSI equipment.

Discussion

It is desirable for the VGSI angle and GPA/VDA to coincide within the paragraph 2-6-2 parameters and Flight Standards encourages reasonable efforts to adjust one or both to coincide. If this cannot be reasonably accomplished, Flight Standards encourages procedure development to submit approval requests as allowed by paragraph 2-6-2.

If the VGSI is set to a higher than expected angle due to obstacles, then it would be reasonable to increase the procedure GPA or VDA to match. However, it is important to keep in mind that exceeding the maximum angles allowed by Order 8260.3D table 2-6-1 will result in a loss of approach category. Table 2-6-1 is replicated here for reference.

CAT	Maximum Angle
A (80 knots or less)	6.40
A (81-90 knots)	5.70
B	4.20
C	3.77
D	3.50
E	3.10*

* USAF/USN CAT E maximum is 3.50 degrees.

Flight Standards does not encourage increasing GPA/VDA angles to match VGSI angles resulting in a loss of approach category unless there is a legitimate safety-based reason to do so. Increase of GPA/VDA solely to comply with paragraph 2-6-2 when it results in a loss of approach category is discouraged, and the non-coincidence should be addressed through an approval request.

Other measures such as deactivating an otherwise usable VGSI solely to comply with paragraph 2-6-2 requirements is equally discouraged.

The approval process provides an additional opportunity for review and consideration of the factors contributing to the non-coincidence. Additionally, flight inspection of the procedure will provide a final safety evaluation of the approach procedure, and any potentially unsafe conditions will be identified.

Approvals will be considered on a case-by-case basis incorporating all pertinent data and information, and it is important to understand that an approval will not be granted if the Procedure Review Board determines that approval would introduce an unacceptable level of risk.

Summary

Ideally, VGSI angles and GPA/VDA should coincide. Where this is not feasible, Flight Standards discourages drastic measures such as an increase of GPA/VDA resulting in a loss of one or more approach categories, or deactivation of VGSI equipment solely to achieve compliance with paragraph 2-6-2 and encourages use of the approval process.

From: [9-AWA-AVS-AFS420 \(FAA\)](#)
To: [Eckenrode, Wayne \(FAA\)](#); [Harris, Stephanie C \(FAA\)](#); [Cox, Christopher \(FAA\)](#); [Wolf, Romana \(FAA\)](#); [Noble, Tom \(FAA\)](#); [Radicke, Wayne C \(FAA\)](#); [Brown, Scott E \(FAA\)](#)
Cc: [Powell, Gary L \(FAA\)](#); [Terrell, Wade Ek \(FAA\)](#); [Everhart, Lonnie \(FAA\)](#); [Mulqueen, Patrick J \(FAA\)](#)
Subject: Position paper on VDA/VGSI mismatch
Date: Friday, April 03, 2020 10:39:00 AM
Attachments: [VGSI_GPA_VDA_non_coincidence.pdf](#)

All,

Hope this email finds you and yours safe and healthy!

We've recently fielded questions regarding Order 8260.3, paragraph 2-6-2 at airports where the VGSI owner is either unwilling or unable to adjust the angle. Our standards section (Section S) will address in the next revision to the order, but in the interim, the attached position paper clarifies our expectations. Call or email TJ Nichols if you have questions, comments, or concerns.

Flight Procedures and Airspace Group (AFS-420)