

**AERONAUTICAL CHARTING FORUM**  
**Instrument Procedures Group**  
**Meeting 04-01 – April 28-29, 2004**  
**History Record**

**FAA Control # 04-01-253**

**Subject: LNAV/VNAV Landing Minimums**

**Background/Discussion:** For U.S. FAA SIAPs, LNAV/VNAV landing minimums are sometimes equal to or greater than the corresponding LNAV-Only portion of an approach. This seems illogical and makes no operational sense because there is no perceived advantage for utilizing VNAV - as far as landing minimums are concerned. Also, on some approach charts, the LNAV/VNAV minimums column is labeled "NA" or left blank when VNAV minimums are not be established or available. The chart reflects the information on the 8260 procedure source document. When the column is left 'blank' or listed as 'NA', this incorrectly implies that VNAV is not authorized at all.

LNAV/VNAV landing minimums should be adjusted to offer incentive rather than inhibit or penalize improved navigation capabilities available with VNAV. In addition, minimums columns on 8260 procedure sources that list LNAV/VNAV 'NA' or are left 'blank' should be modified to avoid misinterpretation. The use of VNAV should be encouraged, not inhibited, even when LNAV/VNAV minima are not provided.

The current situation is contrary to the expectation that operational advantages would be realized from the utilization of constant angle descents using VNAV.

**Recommendations:** The ATA FMS/RNAV Task Force and the ATA Chart & Data Display Committee both recommend the FAA review its criteria for determining landing minimums for LNAV/VNAV operations. The FAA should 1) implement harmonized AWO minima, or 2) address the need for entirely new VNAV minima or, 3) where applicable, at least duplicate the same minima values in both the LNAV-Only and LNAV/VNAV columns of the 8260 to, in essence, remove any 'blanks' or 'NA placeholders' on the 8260 procedure source (and charts).

**Comments:** The subject was originally presented to the ATA FMS/RNAV Task Force by the Boeing Company. The Task Force's Chart & Database Compatibility Subcommittee reviewed the proposal, and coordinated with the ATA's Chart & Data Display Committee. The recommendation was endorsed by both the FMS/RNAV TF and the CDDC, to be carried forward for presentation to the FAA for consideration.

**Submitted by:** Ted Thompson - on behalf of the Air Transport Association's  
FMS/RNAV Task Force and Chart & Data Display Committees

**Organization:** Jeppesen, Inc.

**Phone:** 303-328-4456

**FAX:** 303-328-4123

**E-mail:** Ted.Thompson@Jeppesen.com

**Date:** April 7, 2004

---

**Initial Discussion – Meeting 04-01:** Ted Thompson, Jeppesen, presented this issue on behalf of the Air Transport Association (ATA) FMS/RNAV Task Force and Chart & Data Display Committee (CDDC). ATA is concerned that LNAV/VNAV landing minimums are sometimes equal to or greater than the corresponding LNAV-only minimums on an approach. This seems illogical and makes no operational sense because there is no perceived advantage for utilizing VNAV as far as landing minimums are concerned. Also, on some approach charts, the LNAV/VNAV minimums column is labeled “NA” or left blank when VNAV minimums are not be established or available. The chart reflects the information on the 8260 procedure source document. When the column is left ‘blank’ or listed as ‘NA’, this incorrectly implies that VNAV is not authorized at all. Vince Massimini, MITRE, stated that LPV was developed to preclude this scenario. Tom Schneider, AFS-420, agreed to research guidance in Order 8260.19 and report. **ACTION: AFS-420.**

---