

**AERONAUTICAL CHARTING MEETING**  
**Instrument Procedures Group**  
**Meeting 22-01 – April 25-26, 2022**

**RECOMMENDATION DOCUMENT**

**FAA Control # 22-01-369**

**Subject:** Improve IAP Alternate Minimums

**Background/Discussion:**

Alternate Minimums are established on procedure source (8260-series) forms. Alternate Mins can either be NA, Non-Standard (NSTD), or Standard (STD). In the latter two cases (NSTD and STD), numerical minimums can be accompanied by textual restrictions such as “NA when local altimeter not received” or “NA when control tower closed”.

FAAO 8260.19I, sec. 8-6-11, includes the following:

(4) When alternate minimums are standard, enter the word “Standard”; when not authorized, place an “X” in the “NA” box. When part-time, or higher than standard for some categories, enter “Standard” and annotate the appropriate condition by separate standard note: “NA WHEN CONTROL TOWER CLOSED; CAT D 1000-3; NA WHEN LOCAL WEATHER NOT AVAILABLE”

(5) When alternate minimums are non-standard; e.g., higher than standard for each category available for certain users, etc., do *not* place an X in the NA box. Enter the appropriate condition by separate standard note: “NA EXCEPT STANDARD FOR OPERATORS WITH APPROVED WEATHER REPORTING SERVICE; CAT A, B 900-2, CAT C 900-2 1/2, CAT D 1000-3.”

In some cases, this has led to alternate minimums that are more permissive than the approach itself. See TIST, ILS or LOC RWY 10 and VOR-A, wherein the alternate minimums appear unconstrained by tower closure status, while the “standard” approach plates both show “Procedure NA when control tower closed” note.

## CHARLOTTE AMALIE, VI

CYRIL E KING (STT) (TIST)....ILS or LOC Rwy 10<sup>1</sup>

RNAV (GPS) Rwy 10<sup>23</sup>

VOR-A<sup>4</sup>

<sup>1</sup>LOC, Category C, 900-2½; Category D, 1500-3.

<sup>2</sup>NA when control tower closed.

<sup>3</sup>Categories A, B, 1000-2¼, Category C, 1000-2¾,  
Category D, 1000-3.

<sup>4</sup>Categories A, B, C, 1200-3; Category D, 1500-3.

Figure 1: TIST Alternate Mins Publication

CHARLOTTE AMALIE, VIRGIN ISLANDS			AL-5005 (FAA)	21280
LOC/DME I-TMN <b>110.1</b> Chan <b>38</b>	APP CRS <b>100°</b>	Rwy Idg <b>6892</b> TDZE <b>24</b> Apt Elev <b>24</b>	<b>ILS or LOC RWY 10</b> CYRIL E KING (STT)(TIST)	
<div><div>▼ ▲</div><div>Circling NA at night. Procedure NA when control tower closed. Circling NA north of Rwy 10-28.</div></div>			<div>MISSED APPROACH: Climb to 620 then climbing right turn to 2800 on heading 180° then right turn direct St Thomas VOR/DME and hold.</div>	

Figure 2: TIST IL10

CHARLOTTE AMALIE, VIRGIN ISLANDS			AL-5005 (FAA)	21196
VOR/DME STT <b>108.6</b> Chan <b>23</b>	APP CRS <b>181°</b>	Rwy Idg <b>N/A</b> TDZE <b>N/A</b> Apt Elev <b>24</b>	<b>VOR-A</b> CYRIL E KING (STT)(TIST)	
<div><div>▼ ▲</div><div>CAUTION: High terrain north of Rwy 10-28 extended. Circling NA north of Rwy 10-28. Procedure NA when control tower not in operation. Procedure NA at night.</div></div>			<div>MISSED APPROACH: If unable to proceed visually to airport upon descent to 1160, climb to 2800 via heading 180°, then right turn direct STT VOR/DME and hold.</div>	

Figure 3: TIST VOR-A

In other cases, minor (P-NOTAM) amendments alter the numerical alternate minimums without either restating or canceling the previous textual restrictions, as illustrated below:

### KMUT RNAV (GPS) RWY 24 (photos on next page)

The ORIG 8260 states that the alternate mins are NA when local weather is not available. ORIG-A altered the numerical values (making Circling NSTD) but did not carry across the textual restriction. As a result, the Alt Mins book does not attribute footnote #2 to the R24 procedure.

ALTERNATE: N A			STANDARD @					
C			D			E		
DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
812	1/2	267	812	1/2	267			
874	3/4	329	874	3/4	329			
960	3/4	415	960	1	415			
1200	1 3/4	653	1200	2	653			

**STANDARD CITY MUNI ALTIMETER SETTING AND VISIBILITY TO 1 1/4.**  
**ALTERNATE CITY MUNI ALTIMETER SETTING AND VISIBILITY TO 1 1/4.**  
**NA WHEN LOCAL WEATHER NOT AVAILABLE**

Figure 4: KMUT R24 AMDT ORIG

<b>AIRAC Date: 13 SEPTEMBER 2018</b>	
<p>FDC 8/3780 MUT IAP MUSCATINE MUNI, Muscatine, IA. RNAV (GPS) RWY 24, ORIG... DELETE NOTE: DME/DME RNP-0.3 NA. PBN REQUIREMENTS NOTE: RNP APCH. LNAV/VNAV DA 950/HAT 405 ALL CATS. CIRCLING MDA 1080/HAA 533 CAT A, MDA 1200/HAA 653 CAT B, MDA 1500/HAA 953 CAT D. VISIBILITY 3 SM. CHART CIRCLING ICON. DELETE NOTE: FOR INOPERATIVE MALSR, INCREASE LPV ALL CATS VISIBILITY TO 1, LNAV CAT D VISIBILITY TO 1 1/4 SM. DELETE NOTE: IF LOCAL ALTIMETER SETTING NOT RECEIVED, USE IOWA CITY ALTIMETER SETTING AND INCREASE ALL DAS/MDAS 80 FEET. DELETE NOTE: BARO-VNAV AND VDP NA WHEN USING IOWA CITY MUNI ALTIMETER SETTING. CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV ALL VISIBILITIES TO 1 SM, INCREASE LNAV/VNAV ALL CATS AND LNAV CATS C VISIBILITY TO 1 1/8 SM, AND INCREASE LNAV CAT D VISIBILITY TO 1 1/4 SM. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE IOWA CITY ALTIMETER SETTING AND INCREASE LPV DA TO 992 AND ALL VISIBILITIES 1/8 SM; INCREASE LNAV/VNAV DA TO 1030 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDA 80 FEET AND LNAV CATS C AND D VISIBILITY 1/4 SM AND CIRCLING CAT C VISIBILITY 1/4 SM. CHART NOTE: FOR INOPERATIVE ALS WHEN USING IOWA CITY ALTIMETER SETTING, INCREASE LPV ALL VISIBILITIES TO 1 SM, LNAV/VNAV ALL VISIBILITIES TO 1 3/8 SM, LNAV</p>	
<p>CATS A AND B VISIBILITY TO 1 SM, AND LNAV CATS C AND D VISIBILITY TO 1 3/8 SM. CHART NOTE: BARO-VNAV AND VDP NA WHEN USING IOWA CITY ALTIMETER SETTING. <b>ALTERNATE MINIMUMS: CIRCLING CAT D, 1000-3.</b> THIS IS RNAV (GPS) RWY 24, ORIG-A. 1806281003-PERM</p>	

Figure 5: KMUT AMDT 0A, showing numerical changes to alternates

<b>MUSCATINE, IA</b>	
MUSCATINE	
MUNI (MUT).....	RNAV (GPS) Rwy 6 <sup>12</sup>
	RNAV (GPS) Rwy 12 <sup>2</sup>
	RNAV (GPS) Rwy 24 <sup>3</sup>
	RNAV (GPS) Rwy 30 <sup>2</sup>
<sup>1</sup> Categories A, B, C, D, 800-2½.	
<sup>2</sup> NA when local weather not available.	
<sup>3</sup> Category D, 1000-3.	

Figure 6: KMUT Alt Mins, showing restriction removed for R24  
**KTTN RNAV (GPS) Z RWY 6**

A similar situation is present on this procedure. AMDT ORIG 8260 states that alternates are NA when local weather is not available. Alternates were not modified until AMDT ORIG-D, at which point CAT D became NSTD. Because ORIG-D did not restate the restriction, the Alt Mins book does not attribute footnote #3 to the R06-Z procedure.

ALTERNATE: N A			STANDARD @					
C			D			E		
DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
360	1/2	200	360	1/2	200			
585	7/8	425	585	7/8	425			
700	1	540	700	1	540			
700	1 1/2	488	780	2	568			

ING.  
(8F) OR ABOVE 54C (130F).

@ NA WHEN LOCAL WEATHER NOT AVAILABLE.

QUALITY  
CHECKED

Figure 7: KTTN R06Z AMDT ORIG showing textual restriction

#### **AIRAC Date: 23 APRIL 2020**

FDC 0/1235 TTN IAP TRENTON MERCER, TRENTON, NJ. RNAV (GPS) Z RWY 6, ORIG-C... CHART CIRCLING ICON. DELETE APT ELEV 212. CHART APT ELEV 213. CIRCLING CAT A/B HAA 487, CAT C MDA 760/HAA 547, CAT D MDA 960/747. CIRCLING CAT D VIS 2 1/2. ALTERNATE MINIMUMS: STANDARD - CAT D 800-2 1/2. CHANGE NOTE TO READ: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED USE NORTHEAST PHILADELPHIA ALTIMETER SETTING: INCREASE LPV DA TO 435 FEET; LNAV/VNAV DA TO 658 FEET, AND ALL CATS VISIBILITY 1/8 SM; INCREASE ALL MDA 60 FEET AND LNAV CAT C/D VISIBILITY 1/4 SM AND CIRCLING CAT C VISIBILITY 1/4 SM. THIS IS RNAV (GPS) Z RWY 6, ORIG-D. 2002282039-PERM

Figure 8: KTTN R06-Z AMDT ORIG-D showing numerical changes to alternates

#### **TRENTON, NJ**

TRENTON

MERCER (TTN).....ILS or LOC Rwy 6<sup>1</sup>

RNAV (GPS) Rwy 16<sup>2</sup>

RNAV (GPS) Rwy 34<sup>2</sup>

RNAV (GPS) Z Rwy 6<sup>2</sup>

RNAV (GPS) Z Rwy 24<sup>23</sup>

VOR or GPS-A<sup>2</sup>

<sup>1</sup>LOC, Category D, 800-2½.

<sup>2</sup>Category D, 800-2½.

<sup>3</sup>NA when local weather not available.

Figure 9: KTTN Alternate Mins pub showing no textual restriction



Both IAPs use backup altimeter settings, and alternates are approved for both procedures, so based on the .19, both should appear in the ALT MINS book as “NA when local altimeter setting not available”. Due to NOTAM inconsistency, however, neither are notated as such in the Alternate Mins book.

### **Recommendations:**

Garmin recommends 2 changes to alternate minimums:

- Review of alternate criteria to avoid a situation wherein alternates are more permissive than the standard approach, and
- An improvement to the abbreviated amendment/P-NOTAM process to consistently restate (or cancel) alternate minimums textual restrictions at each amendment. As an example, see PANC IL07R, AMDT 4A PNOTAM:

FDC 1/6735 ANC IAP TED STEVENS ANCHORAGE INTL, ANCHORAGE, AK. ILS OR LOC RWY 7R, AMDT 4, ILS RWY 7R (SA CAT I), AMDT 4, ILS RWY 7R (CAT II AND III), AMDT 4 ... DELETE AT OR BELOW 3000 AND AT OR ABOVE 1600 AT WEWWO. CHART MINIMUM ALTITUDE 1600 AT WEWWO/I-ANC 12.37 DME. DELETE NOTE: \*LOC ONLY. DELETE ASTERISK FROM VDP AT I-ANC 3.23 DME. DELETE ASTERISK FROM MINIMUM ALTITUDE AT WIDVA/I-ANC 4.83 DME 1000. **DELETE ALTERNATE MINIMUMS NOTE: NA WHEN LOCAL WEATHER NOT AVAILABLE.** THIS IS ILS OR LOC RWY 7R, AMDT 4A, ILS RWY 7R (SA CAT I), AMDT 4A, ILS RWY 7R (CAT II AND III), AMDT 4A 2110011313-PERM

### **Comments:**

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**Date:** 03/14/2022

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**Initial Meeting 22-01:** Steve Madigan, Garmin, briefed the issue from the RD (slide). Steve showed several example airports, where the alternate minimums are more permissive. Steve showed where abbreviated amendments by P-NOTAM alter the numerical alternate minimums without either restating or canceling the previous textual restrictions. Johnnie Baker, FAA Instrument Flight Procedures Group (AJV-400), advised the Flight Procedures Group QC is aware of this, and that it is not a criteria issue, but rather a training issue regarding P-NOTAMS and the alternate minimums. Aeronautical Information Services is making initial and recurrent training on this a high-emphasis item for both P- and T-NOTAMs. Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), asked if this is an internal issue, and Johnnie said for the most part that it is. Jeff asked Steve if this adequately addresses their issues, and Steve advised yes but wants the issue to remain open to monitor progress. Johnnie said correction of this will be a day-forward issue over many chart cycles. Valerie Watson, FAA Charting Products Integration Team (AJV-A250), said when the alternate information is repeated in a NOTAM, the charting group views the intent would be the weather remark should be deleted if not repeated. Johnnie added the P-NOTAM just corrects incorrect data, with everything else remaining the same. Kristen Chapman, FAA Aeronautical Information Services Terminal Charting, said their understanding is that whatever is written in the P-NOTAM is the entire alternate procedure, and this will require work from the Instrument Flight Procedures Group to resolve. The specialist needs to ensure the entire alternate minimums language is stated in the P-NOTAM, and this will need to be addressed by the Instrument Flight Procedures Group. Joshua Fenwick, Garmin, said if something impacts minimums, then the alternate minimums need to be considered. Rich Boll, NBAA, pointed out notes defining minimums when the tower is closed need to be standardized. Jeff said Order 8260.19 policy already standardizes the notes, but the notes currently published may have been developed with older criteria versions. Johnnie will coordinate with Kristen regarding front matter data.

**Action:** The Instrument Flight Procedures Group will coordinate with Terminal Charting regarding front matter data. The Instrument Flight Procedure Group will continue to address the internal training issues, and report that outcome at ACM 22-02. This item will be reviewed by the ACM Recommendation Review Group to determine if any other actions are needed and that outcome will be provided at ACM 22-02.

**Status:** Item open.

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**Meeting 22-02:** Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the item from the RD (slide). The issue is already being addressed so no ACM Recommendation Review Group (ARRG) review was necessary. Flight Standards and AJV-A agree the existing criteria is adequate and that the intent is to publish alternate minimums text in their entirety when promulgated as a P-NOTAM. There may be some P-NOTAMs to revise, but the FAA feels there are no criteria changes necessary to address the RD. Steve Madigan, Garmin, asked if day-forward that if previous alternate minimums language is not restated in the P-NOTAM it would be because it was no longer necessary. Valerie Watson, FAA Charting Products Integration Team

(AJV-A250), confirmed that yes, P-NOTAMS would include the entirety of alternate minimums text.

**Status:** Item closed.