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".

FAA Order 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.

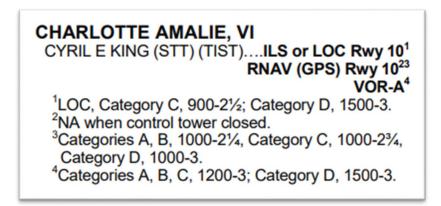


Figure 1: TIST Alternate Mins Publication

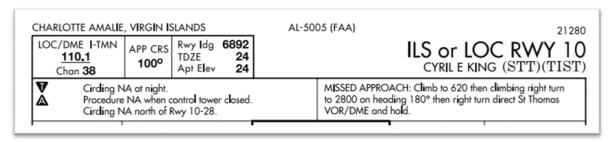


Figure 2: TIST IL10

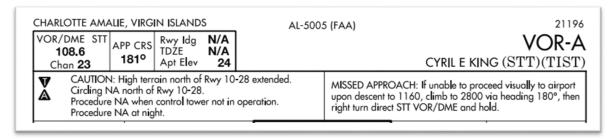


Figure 3: TIST VOR-A

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.

| С | | | 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 | | | 1 |
| 1200 | 1 3/4 | 653 | 1200 | 2 | 653 | | | |
| | I ALTIME | V NA BELOV TER SETTIN SETTING. | | @ NA W | HEN LOCAL | WEATHER I | NOT AVA | ILABLE |

Figure 4: KMUT R24 AMDT ORIG

AIRAC Date: 13 SEPTEMBER 2018

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

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. ALTERNATE MINIMUMS: CIRCLING CAT D, 1000-3. THIS IS RNAV (GPS) RWY 24, ORIG-A. 1806281003-PERM

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



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.

| С | | | D | | | E | | |
|-------------------|------------|---------|--------|-----------|---------|-----------|-------|------------|
| OH/MDA | VIS | HAT/HAA | DH/MDA | VIS | HAT/HAA | DH/MDA | VIS | HAT/HA |
| 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 | | | |
| NG. (8F) OR AB | BOVE 54C (| 130F). | @ NA W | HEN LOCAL | WEATHER | NOT AVAIL | ABLE. | WILL OF CE |

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

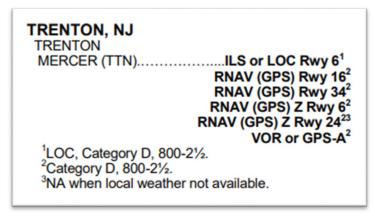


Figure 9: KTTN Alternate Mins pub showing no textual restriction

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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