AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
Meeting 16-01 – April 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # 16-01-326

Subject: FAA Order 8260.46F, "Top Altitude" Charting Constraints

Background/Discussion: It appears there is confusion how "Top Altitudes" should be charted when a procedure serves multiple airports based on the language contained within the FAA Order 8260.46F, Departure Procedure Program. Under paragraph 2-1-3-e (1) (f), it states; "Enter the "Top Altitude(s)' on Form 8260-15B for SIDS when provided by ATC. No more than two "Top Altitudes" are allowed per procedure. The variations permitted are specified in appendix d, section2, and E, section 1. "Top Altitudes" 18,000 feet MSL and above must be specified as a "Flight Level". The "Top Altitude" must be at or above all altitude restrictions specified along the departure route and transitions."

Under Appendix D (Conventional SIDS), section 2, paragraph 10 (c) (1) it states; "For a single airport, specify the "Top Altitude(s)" specific to a given runway(s) or transition(s), as applicable.
Examples: CHART: TOP ALTITUDE: 16000, or CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, or CHART: TOP ALTITUDE: STEVE AND DANNO TRANSITIONS: FL230; CHNHO AND KONOH TRANSITIONS: FL180, or CHART: TOP ALTITUDE: ASSIGNED BY ATC."
Section 2, paragraph 10 (c) (2) states: "For multiple airports, in addition to paragraph 10.c(1), include the airport names and/or specific runways when "Top Altitudes" differ between airports and/or specific runways.
Examples: Starship Muni - CHART: TOP ALTITUDE: 16000, Anywhere Intl - CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, and Mayfair Metro - CHART: TOP ALTITUDE 12000. If all airports share a common "Top Altitude," then state as such: All Airports - CHART: TOP ALTITUDE: 12000.

Under Appendix E (RNAV SIDS), section 1, paragraph 10 (b) (1) states; "For a single airport, specify the "Top Altitude(s)" specific to a given runway(s) or transition(s), as applicable.
Examples: CHART: TOP ALTITUDE: 16000, or CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, or CHART: TOP ALTITUDE: STEVE AND DANNO TRANSITIONS: FL230; CHNHO AND KONOH TRANSITIONS: FL180, or CHART: TOP ALTITUDE: ASSIGNED BY ATC.
Under section 2, paragraph 10 (b) (1) states: "For multiple airports, in addition to paragraph 10.b(1), include the airport names and/or specific runways when "Top Altitudes" differ between airports and/or specific runways.
Examples: Starship Muni - CHART: TOP ALTITUDE: 16000, Anywhere Intl - CHART: TOP ALTITUDE RWY 8/25/34L/34R/35L/35R: 16000; RWY 16L/16R/17L/17R: 12000, and Mayfair Metro - CHART: TOP ALTITUDE 12000. If all airports share a common "Top Altitude," then state as such: All Airports - CHART: TOP ALTITUDE: 12000."

I have been advised that “appendix D and E” is a little misleading as they just provide examples of different variations allowed, however, they’ve made it clear in paragraph 2-1-3 e (1) (f), page 2-15 that we are still limited to two per procedure.
I understand that only two “Top Altitudes” can be published per procedure, but if you have a SID that applies to multiple airports, then I believe the language within appendix D and E clearly shows that you can have more than two “Top Altitudes” per procedure, but not more than two per airport. Under paragraph 2-1-3-e (1) (f), it advises you that appendix D and E shows the variations allowed, which includes multiple airports attached to a procedure. Each airport has their own procedure built and charted based on the information contained on FAA Form 8260-15B and therefore stating it doesn’t matter how many airports are tied to procedure, you can only have two “Top Altitudes” in my opinion is inefficient. If this interpretation is allowed to continue, it will add confusion and complexity to the NAS. The goal of adding the “Top Altitudes” to a procedure at a particular airport was to inform the pilot of the highest altitude they could climb to if they received a “Climb Via” clearance, but current policy restricts the number of “Top Altitudes” based on a procedure and not based on the possibility that various airports the procedure serves each may uniquely require a different set of “Top Altitudes” to support operational constraints. Additionally, we believe that current “Top Altitude” policy limitations increase workload and complexities for both ATC and pilots. If we are going to move forward with NEXTGEN in a positive manner that ensures safety, we need to ensure the directives containing the criteria/policy are written to allow this to occur.

Recommendations:

Allow two “Top Altitudes” published based on the procedure serving the airport of intended departure and not based solely on the procedure itself. By allowing this to occur, the “Top Altitudes” for each individual airport the procedure serves will be charted independently and will reduce complexity and communications for ATC and pilots. This retains the two “Top Altitude” maximum that will appear on any one chart, yet give ATC operational flexibility at complex locations where a single SID can serve multiple airports.

Comments:

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INITIAL DISCUSSION – MEETING 16-01: Bennie Hutto (NATCA) presented the issue (View). Order 8260.46F published in December, 2015, and allows for two Top Altitudes per procedure for a Standard Instrument Departure (SID). Bennie gave an example of a procedure being developed that served six airports, and AIS advised the limit was still only two Top Altitudes for the entire procedure; NATCA feels the Order 8260.46F, Appendix D and E examples, which do show variations, are misleading and do not follow text of the Order. At this location, Jeppesen charted three airports on one SID, and individual procedures on the other three airports. The FAA charts each airport individually (no combined procedures). NATCA would like to retain the two Top Altitude restriction, but expand it to accommodate the multiple airport aspect by allowing two Top Altitudes per procedure, per airport. An associated issue is the definition of what a “Top Altitude” is in

Order JO 7110.65 and Order 8260.46F, and because of this ATC must issue a Climb Via clearance (even though many published procedures are truly not Climb Via). Kevin Allen (American Airlines) said he feels industry would prefer to see satellite airports coded as separate procedures. Bennie replied that is problematic in some areas due to the amount of different procedures that would exist for ATC to remember in same area, which is why ATC wants to "tie" as many as possible together (i.e., use same procedure that goes to the same waypoints). The only issue ATC is having is the Top Altitude. Ted Thompson (Jeppesen) says they use an "also serves" concept to reduce the sheer number of procedures. Gary Fiske (AJV-8) said a "Climb/Descend Via Working Group" was formed (no longer active) that discussed the issue, and Tom Schneider (AFS-420) said that group was trying to avoid confusion about a limitless number of Top Altitudes charted and ATC having to worry about which airport an aircraft departed from (different Top Altitude). The anticipated workload for the controller drove the two altitude limit per procedure decision. Tom said AFS (responsible for the Order on source document for charting) will put whatever limit on "Top Altitudes" the ATO requests. Bennie said again the definition of Top Altitude, defined in both Orders, is forcing ATC to issue Climb Via clearances. Tony Lawson (AJV-54) stated that he was part of QC process and when they asked for clarification from AT Headquarters, they were told two per procedure. Gary McMullin (Southwest Airlines) said a Top Altitude does not belong on every procedure (use "climb and maintain" may be applicable phraseology). Brian Townsend (American Airlines) added the Top Altitude is just the ATC clearance limit on the SID, whereas the "Bottom Altitude" on a STAR is a constraint. The Climb Via phraseology for all SIDs with a Top Altitude, even though no published altitude constraints, leads to confusion. There is a recommendation at the Pilot Controller Procedure and Systems Integration (PCPSI) work group to clear up this issue; but as a first step there are a number of facilities that are being forced to apply a Climb Via clearance with their SIDs. There needs to be leeway so that even if a Top Altitude is present and the procedure has no other altitude constraints, a "climb and maintain…" clearance can be used. This would not require the removal of a top altitude if the facility wants it. Ted added that in Houston, if you split out all the procedures separate, the Jeppesen published number would go from 50 to 240. Tom inquired if the Climb/Descend Via working group is being reenergized and some thought so. Gary felt the issue should not go back to AJV-8 thru him, but rather a different avenue. Since "Top Altitude" remains a topic in the PCPSI group, Brian will bring it back to that group for consideration.

Status: Brian Townsend will take the issue to the PCPSI work group and report back. **Item open:** PCPSI

MEETING 16-02: Brian Townsend (American Airlines) briefed he did not follow up with Benny Hutto (NATCA), but that based on ACF and PARC PCPSI work group discussions, changes are needed to the current restrictions allowing only two top altitudes on a SID per procedure. The issue is that many SIDs serve multiple airports and ATC often has the operational need for different altitudes for the different airports on the procedure. The recommendation is to allow two top altitudes *per airport* per procedure (if needed). Rich Boll (NBAA) has a concern that some procedures that serve 10 airports could have 20 top altitudes. Gary Fiske (AJV-82) concurred, adding that this would not be an issue on FAA charts (as an individual chart is created for each airport), but would be an issue when chart providers (Jeppesen, for example) depict multiple airports on the same chart. The appendix in Order 8260.46 provides examples of multiple situations. Gary stated that

he has heard no discussion within ATC regarding the necessity for changes, and thinks we need allow the current Top Altitude policy to occur and then revisit the policy if there is an issue. The group discussed the situations at Baltimore, Dulles and other (possible) scenarios. Lev Prichard (APA) said he felt the bulk of pilots do not want to see 20 top altitudes on a SID; the potential for confusion is too large. Ted Thompson (Jeppesen) said the question is then whether you want 400 SIDs at an airport or 20 top altitudes on one. Discussion followed regarding coding altitudes with various scenarios, single named SID serving multiple airports, leaving the two top altitudes on the procedure and using climb and maintain altitudes as an alternative, leaving the policy alone and reassessing later. Gary Fiske advised DCP changes and the associated SRM document are in final coordination, with an (ambitious) publication goal of April 27, 2017. Brian added the PARC group will continue to work issue.

Status: Gary Fiske took an IOU to report status of any determinations made within the ATO regarding the number of “Top Altitudes” allowed. **Item open: AJV-82**