

AERONAUTICAL CHARTING MEETING (ACM)
MEETING 22-01 April 25-26, 2022
Virtual – Zoom platform

Instrument Procedures Group (IPG) Meeting Minutes

1. Opening Remarks: Jeff Rawdon, FAA Flight Procedures and Airspace Group, welcomed the participants and provided an in-depth guide to how the virtual meeting would be managed. An attendance roster for the virtual meeting is [attached](#).

2. Review of Minutes from Last Meeting, ACM 21-02: Steve VanCamp, Digital iBiz, advised there were no comments, and the minutes were accepted.

3. Briefing: ACM Recommendation Review Group (ARRG): Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the new review process for submitted ACM issues for both the Instrument Procedures Group and Charting Group from the attached [slides](#). Generally, there are many issues for the Agency to consider and finite resources are available to address and potentially implement ACM recommendations. All representatives for the affected offices may not be in attendance when new recommendation documents (RDs) are first presented at the ACM. There have been instances when a new issue is accepted for work, but after the meeting, necessary offices advise they are not able to do the work. It is also difficult to determine the benefits and impacts of an issue during the initial RD introduction, especially when all stakeholders are not present. The intent of the ARRG is to review benefits and impacts of new RDs and decide if the Agency should accept proposed RDs for future work. The results will be briefed at the following ACM, however, if the item was accepted, work may commence prior to the next meeting. ARRG acceptance or declination of an issue may be revisited if other factors become apparent, and ARRG review may not be necessary if the appropriate stakeholders acknowledge the recommendation and are willing to accept it for work without ARRG review. Joshua Fenwick, Garmin, said the ACM is one of the best avenues of feedback to the FAA, but does understand the ARRG effort. Jeff said this is not an effort to discourage new RDs, but rather provide consideration of merits for each due to finite resources available in the Agency. John Moore, Boeing/Jeppesen, pointed out ARRG has no non-FAA members deciding issues to be worked by the Agency, adding the ACM is transparent and he would hate to lose that. The ARRG process will only review items after they are first discussed the ACM, with the ACM discussion captured in the minutes. Bruce McGray, FAA Flight Operations Group (FOG), added the ACM has functioned well in the past, and wants that to continue. Rich Boll, NBAA, asked what the timeline is for the ARRG to review and make these decisions, trying to avoid a possible six-month lag time for the next meeting. Jeff said the intention is for the ARRG to meet about a month after the ACM. TJ Nichols, FPAG, said part of the effort is to be more reactive, allowing work to start earlier than the next meeting on items that the Agency can work. John said it may possibly become incumbent for non-FAA participants to socialize issues between themselves prior to the ACM to help present the best case for each RD to be presented at the ACM. John stated he was worried that transparency may be lost, but added he does understand the constraints the Agency has in working issues. Jeff confirmed that ARRG decisions will be briefed at the following ACM. TJ pointed out the Agency does this with other groups already. Jeff and TJ discussed the idea of the submitter of the RD being informed of the decision soon after the ARRG to facilitate the process and increase transparency. Joshua thought the slide

presentation could be reworked to show this is an internal FAA process and not a major change to the ACM itself. Jeff added once the ARRG process is refined over the next few months it will be incorporated into FAA Order 7910.5, Aeronautical Charting Meeting. TJ appreciates all folks who are and have been involved in the ACM, pointing out not long ago the continued necessity of the ACM was questioned by upper level management, which ultimately resulted in changes to the order. He also pointed out that the ACM cannot assign work to the Agency, but does provide valuable input to the Agency on what is important to the users of the system. Jeff added we have great participation by management from various offices in the ARRG. Rich asked if it is feasible when a decision is made to work an issue for the Agency to task individuals outside the Agency to assist with issues accepted for work, and both TJ and Jeff thought that would be a good idea. John Collins, Foreflight, thought this was a solution without a problem, and the ARRG should have to justify a decision to not accept an issue for work. TJ pointed out the Agency ultimately has to make these decisions anyway, and this effort was to attain consistency in the decision-making process for acceptance based on benefits and impacts. Rich suggested that each office identified in the ARRG should have a representative at the ACM, and Jeff stated he thought this was a good idea.

4. Old Business (Open Issues)

a. 15-01-320: Common Sounding Fix Names: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed from the ([slide](#)). The FPAG did discuss this with AIS, and the process to resolve identified issues continues to be via a report through the [IFP Gateway website](#). Jeff said various suggestions on how to resolve these issues discussed in the past have not been feasible, but added FAA NFDC says the availability of usable fix names is large. There have been technological solutions explored, but automated solutions are not available yet and MITRE is still investigating possibilities. Jeff said there is nothing more that can be done at this time with this issue, since a mechanism is already in place to resolve identified concerns. Bennie Hutto, NATCA, said that a recent PARC recommendation to add waypoint names at or near DME fixes was rejected, with the shortage of pronounceable fix names provided as a reason, and asked Jeff to confirm there is no shortage of five-letter fix names. Valerie Watson, FAA Charting Products Integration Team (AJV-A250), said that became an issue of redundancy (placing a five-letter fix at the same point where an identifier already exists), adding there is a finite number of useable fixes but not a shortage, and they should be used judiciously. Gary Fiske, FAA ATC Procedures (Terminal) Team (AJV-P310), added the problem is pronounceability, not the quantity available. He suggested the alphanumeric naming as used in other states may have to be considered. Rich Boll, NBAA, agreed with Gary, and added understandability is another issue. TJ Nichols, FPAG, suggested if the concern is pronounceability, perhaps criteria should exist for fixes that are used in ATC communications to be given priority for pronounceability. Jeff pointed out that pronounceability is subjective. TJ said this RD was originally about two similar-sounding fix names in close proximity. Vince Massimini, general aviation pilot, added this item was actually for fix names that the facilities did not want to change when identified. Michael Stromberg, Independent Pilots Association (IPA)/UPS, concurred with the discussion and agrees the issue should be closed. Jeff said the issue will be closed, and the [IFP Gateway link](#) is provided here for access on how to report identified issues.

Status: Item closed.

b. 15-02-323: Depiction of Low, Close-in Obstacles on SIDs and ODPs: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue summary and current status from the [slide](#). The Departure Working Group (DWG) has been working on a revision of the initial climb area (ICA) for several years, to reduce the quantity of listed low, close-in obstacles. The plan is for Order 8260.3, U.S. Standard for Terminal Instrument Procedures (TERPS) (Version 8260.3E Chg 2 or Order 8260.3F) to include the ICA revision. Order 8260.46K, Departure Procedure (DP) Program, with the associated revision to low, close-in obstacle notes will be published concurrently with changes to Order 8260.3. Bill Tuccio, Garmin, asked about the original RD example, and Rich Boll, NBAA, said higher performance aircraft are generally well above and not affected by any low, close-in obstacles, so this typically applies more to less capable aircraft. These are for pilot awareness if the aircraft performance does not allow a climb above the obstacles. Joshua Fenwick, Garmin, said they have noticed some charts no longer show obstacle notes. Valerie Watson, FAA Charting Products Integration Team (AJV-A250), advised if there are takeoff obstacle notes on the Form 8260-15C, Graphic Departure Procedures, they should be on the chart. Rich said the original issue was to reduce number of listed low, close-in obstacles in the ICA, and the obstacles should be the same, just listed differently on ODPs and SIDs. Jeff said Order 8260.46 and Order 8260.19, Flight Procedures and Airspace, guidance has been aligned for consistent requirements on charting documentation from a recently closed RD. Dan Wacker, FPAG, said the new ICA and obstacle description will be released at the same time, so the pilots will know there is a new ICA by the drastically different notes format. Dan will brief anyone that requests an explanation. If a pilot sees a T icon on the SID chart they would look in the TPP front matter for the obstacles. Dan added there are procedures that still have obstacles listed on the graphic chart, since they have not been revised yet. Krystal Kime, FAA Aeronautical Information Services Terminal Charting, pointed out there is no chart mismatch on FAA departure charts, since all takeoff obstacle notes have been removed and the T icon has been added on SIDs. Only graphic ODPs currently have low, close-in obstacles listed. Pat Mulqueen, FAA Instrument Flight Procedures Group (AJV-400), said criteria now allows grouping of obstacles to help prevent lengthy listings. Although the listing may appear different due to grouping, it will still cover the same obstacles. Jeff said if there is any concern with specific procedures, those should be submitted via the IFP Gateway website.

Actions: The Agency will report current status of changes to Orders 8260.3 and 8260.46 at the next meeting.

Status: Item open.

c. 16-01-325: Priority of Terminal Procedure Amendments: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue summary and current status from the [slide](#). Susan Walker, FPAG, briefed she and Pat Mulqueen, FAA Instrument Flight Procedures Group (AJV-400), worked this issue together. STARs now go through a “quasi-abbreviated” amendment process, and this is working well and Pat has agreed to utilize the same process for SIDs. There is a list of items that qualify for an abbreviated amendment for SIDs in Order 8260.46, however STARs have a different list. P-NOTAMs will not be used on either SIDs or STARs. Based on the information presented, Jeff recommends the item be closed. Pat emphasized the process is for high priority SIDs and STARs to go through the Flight Procedures Team (FPT) Office as an abbreviated revision, and be worked as such. The items that qualify for

an abbreviated amendment do not affect the flight profile of the aircraft, a redesign or environmental evaluation, and do not require a flight inspection. Altitude changes may qualify for an abbreviated amendment, and would require a flight inspection review. Michael Stromberg, Independent Pilots Association (IPA)/UPS, commented that a NOTAM changing a descent altitude can be flown by the pilot, but cannot be charted and flown without flight inspection, and this abbreviated process would be helpful. Pat said on a T-NOTAM, the process allows for a rapid abbreviated amendment to the procedure if followed correctly. Pat said the only drawback is that on abbreviated amendments the procedure may not be fully revised to meet current criteria. Rich Boll, NBAA, said since T-NOTAMs are only supposed to be out 224 days, this amendment process would help, and wants to ensure the abbreviated process would solve the issue prior to closing the issue. Sue said the Instrument Flight Procedures Validation Team evaluates priorities, and the ATO needs to identify to the FPT the priority of a SID or STAR if expedited action is necessary. Rich also pointed out the input of non-airport sponsors to the [IFP Gateway Portal](#) appears to be unavailable, and are able to input comments for open procedures, but not for amendments. Order 8260.3 says you do not need to be an airport sponsor to make a flight procedure change recommendation, so they would like it opened back up. Steve Madigan, Garmin, concurred it is hard for non-affiliated commenters to make recommendations through the IFP Gateway. With these changes Rich said he would agree to close the issue. Dan Wacker, FPAG, asked if Rich would prefer an abbreviated amendment for a single altitude change, for example to eliminate a T-NOTAM, when the entire procedure actually needs a full amendment, recognizing the full amendment could take several years. Jeff pointed out that both could happen. Pat added the work request would need to get to them, reminding the group that SIDs and STARs go through ATO, and approach procedures go through the airport sponsors. The group agreed to close the issue.

Status: Item closed.

d. 16-02-328: Increasing Complexity of Speed Restriction Notes on SIDs and STARs:

Dan Wacker, FAA Flight Procedures and Airspace Group (FPAG), briefed the Departure Working Group (DWG) is working through the concerns with speed restriction notes. Dan will put some examples together, then reengage with the PARC PCPSI one more time. Dan will report the progress at the next ACM. The item will remain open.

Actions: FPAG will reengage with the PARC PCPSI and report on discussion results and any potential criteria revisions results from that discussion.

Status: Item open.

e. **18-02-337: Improve Remote Altimeter Airport Notes:** Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), said there are several open issues that are somewhat related, and briefed this item in conjunction with open ACM issue **19-01-343: Clarify Text of Notes that Affect Minima (slide)**. These issues were submitted at different meetings. Rune Duke, FPAG, and Diane Adams-Maturo, FPAG, briefed the issues at ACM 21-02. Rune said they presented some solutions to provide clarity for the notes, received comments prior to and during ACM 21-02, but received no additional comments since the meeting. Rune said they incorporated the previous recommendations into the proposed revision. Order 8260.19 and Aeronautical Information Manual (AIM) guidance updates continue on both of these items. Criteria already exists to not require a backup altimeter when the airport weather is on WMSCR. Order 8260.19J is currently in coordination, and has the revised requirement to use the airport identifier instead of the city/airport name for the backup altimeter source. Steve Madigan, Garmin, asked how industry would know if a backup altimeter is on WMSCR service, and would there be any chance of providing a public distribution channel for 8260-9 forms that contain the remote backup altimeter setting information. Pat Mulqueen, FAA Instrument Flight Procedures Group (AJV-400), said the form access request is already being investigated. Jeff recapped the FAA is working on Order 8260.19 changes and AIM updates. Both issues will remain open.

Actions: FPAG will provide continuing status updates to Order 8260.19 and AIM changes.

Status: Item open.

f. **19-01-342: Charting “NA When Local Weather Not Available” for Alternate Minimums:** Diane Adams-Maturo, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue summary and current status from the [slide](#). Work is ongoing to determine what would be the necessary definition and need for “local weather” in the context of alternate minimums. Once the definition is settled, application of the definition to alternate minimums will be determined. Bill Tuccio, Garmin, agreed it will be nice to have this defined. Vince Massimini, general aviation pilot, said there are many potential definitions of local weather, so an effort to clarify is good. Steve Madigan, Garmin, added this appears to be related to his upcoming new RD. Jeff said work will continue on the issue and it will remain open.

Actions: FPAG will provide results from determination of definition of “local weather” and will report any potential order changes resulting from that determination.

Status: Item open.

g. **19-01-343: Clarify Text of Notes that Affect Minima:** Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), said there are several open issues that are somewhat related, and briefed [19-01-343](#) in conjunction with open ACM issue **18-02-337: Improve Remote Altimeter Airport Notes (slide)**. These issues were submitted at different meetings. Rune Duke, FPAG, and Diane Adams-Maturo, FPAG, briefed the issues at ACM 21-02. Rune said they presented some solutions to provide clarity for the notes, received comments prior to and during ACM 21-02, but received no additional comments since the meeting. Rune said they incorporated the previous recommendations into the proposed revision. Order 8260.19 and AIM guidance updates continue on both of these items. Criteria already exists to not require a backup altimeter when the airport weather is on WMSCR. Order 8260.19J is currently in coordination,

and has the revised requirement to use the airport identifier instead of the city/airport name for the backup altimeter source. Steve Madigan, Garmin, asked how industry would know if a backup altimeter is on WMSCR service, and would there be any chance of providing a public distribution channel for 8260-9 forms that contain the remote backup altimeter setting information. Pat Mulqueen, FAA Instrument Flight Procedures Group (AJV-400), said the form access request is already being investigated. Jeff recapped the FAA is working on Order 8260.19 changes and AIM updates. Both issues will remain open.

Actions: FPAG will provide continuing status updates to Order 8260.19 and AIM change.

Status: Item open.

h. 19-02-344: Intermediate Segment Stepdown Altitudes: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). There is a 2011 memo on crossing altitudes in intermediate segments, and it is now incorporated into Order 8260.3E, Change 2 as an appendix. Dan Wacker, FPAG, will discuss with Aeronautical Information Services and MITRE to determine if this capability will be added to TARGETS, adding there may be some confusion with cold weather adjustments.

Actions: FPAG will report on status of the order revision. FPAG will meet with Aeronautical Information Services and MITRE to determine if this capability will be added to TARGETS and will report on outcome of those discussions.

Status: Item open.

i. 19-02-346: Deceleration Segment on STARs Supporting Compliance with 14 CFR 91.117(c): Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue summary ([slide](#)). Language was added to order 8260.3E, Chg 1 for this to be a consideration, and Rich Boll, NBAA, asked for that to be changed to a requirement at ACM 21-02. Dan Wacker, FPAG, said he is revising the language for Order 8260.3E, Chg 2 to make this evaluation mandatory, and it will be out for public comment soon. Dan provided the revised language and it was displayed.

Actions: The Agency will report status of Order 8260.3E, Chg 2 coordination with the revised language.

Status: Item open.

j. 20-02-351: Unnecessary Helicopter Note on Approach Charts: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue summary and current status from the [slide](#). The revised language is in Order 8260.19J and is currently in coordination, and no comments have been received on the language. Jeff recommended closing the issue and Bill Tuccio, Garmin, agreed.

Status: Item closed.

k. 20-02-353: Revised Guidance and Charting for Order 8260.3 Circling Area Dimensions: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed background on the issue from the [slides](#). All circling areas have been evaluated by the Flight Procedures Group and T-NOTAMS have been converted to P-NOTAMS. All that remains is for Flight Inspection to evaluate the remaining areas, with completion of this effort had been expected around May 2022. Flight Inspection has been evaluating these as scheduling allowed, and as of April 2022 still had roughly 135 airports remaining. Once the Flight Inspection evaluations are completed, FAA will publish an InFO (Information for Operators) to explain that the circling icons will be removed. Flight Standards will make IPH and AIM changes as required. Aeronautical Information Services will change the TPP legends and general information sections. The removal of the circling icons will be done in batches by the Charting Office, and should take six chart cycles (approximately one year) to complete. Bill Tuccio, Garmin, asked if any consideration is being given to changes in the FAA instrument knowledge exam or the practical test standards to address this, and Jeff said the FAA will investigate that. Valerie Watson, FAA Charting Products Integration Team (AJV-A250), asked if there should be guidance during the icon removal process, and Jeff said that will be accomplished with the InFO publication and IPH and AIM changes.

Actions: The Agency will provide an updated status at ACM 22-02.

Status: Item open.

l. 20-02-354: Use of Suitable Area Navigation (RNAV) Systems on Conventional Procedures and Routes: Jeff Rawdon, Flight Procedures Airspace Group, FPAG, briefed the issue ([slides](#)). Review of the issue has identified the source of these charted unusable segments, and there is a plan being worked to remove the notes on the charts. Joel Dickinson, FAA Flight Operations Group, briefed that new AC 90-119 will replace AC 90-100, 90-105, 90-107 and 90-108. AC 90-108 is the specific advisory circular allowing the pilots to substitute RNAV on a conventional en route segment. The AC 90-119 draft has been through coordination, with many comments received, and those comments are being adjudicated.

Actions: FPAG will report on the status of removal of the unusable airway segment notes. Flight Operations Group will report status of AC 90-119.

Status: Item open.

m. 20-02-355: Minimum En Route Altitudes (MEAs) Published on Standard Instrument Departures (SIDs) and Standard Terminal Arrivals (STARs): Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). There was an MEA/MOCA working group formed, and the work is complete. Jeff is finalizing the report, but said there would be no significant changes to determination or application of MEAs and MOCAs as a result of that effort. Most of the changes will be to provide consistency across the various orders. The item will remain open.

Actions: FPAG will report the results of the MEA/MOCA Working Group report at ACM 22-02.

Status: Item open.

n. **21-02-357: Five Letter Alphanumeric Waypoint Identifiers:** Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). Jeff said this item was reviewed by the ACM Recommendation Review Group (ARRG), and the Group decided this would not be accepted for work to be taken on by the Agency. There are currently over 49,000 fix names available, and the Group determined the effort necessary to make the necessary changes across the various directives, publications, automation systems, work processes, etc. would be significant and would not provide significant benefit. Michael Stromberg, Independent Pilots Association (IPA)/UPS, said the United States continues to be a global outlier, adding there is no problem using five-character alpha-numeric fix on procedures as they are used by other States. He also said they work well and are clear and easy to understand for use in communications. Jeff said the ARRG did not say they would not work, just that the need is not there at this time. Rich Boll, NBAA, agreed with Michael on the clarity and ease of use, and asked if this was an ATC issue. Rich wanted the rationale for non-acceptance of the issue included in the history of the issue, and Jeff agreed. {Editor's note: This is the summary from the ARRG decision "With approximately 50,000 pronounceable fix names either reserved or available for use (and more possible beyond that), the group felt there was no justification for the recommendation related to a lack of fix names. Since the recommendation was only related to fix names that wouldn't be used in AT communication, this would do nothing to address the concern of inconsistent fix name pronunciation."} Michael thought limiting the RD to just pronounceable names may have been a mistake, and hopes the FAA might reconsider in the future for a broader use as discussed. Mike thought this should remain an open topic for the future, but Jeff said it should only be addressed as a new issue later if needed, especially considering the workload that currently exists. John Moore, Boeing/Jeppesen, said unless the United States is going to create a naming system for using alphanumeric fix names, he agrees with the ARRG decision. Gary Fiske, FAA ATC Procedures (Terminal) Team (AJV-P310), said ATC facilities that have the best names reserved will be reluctant to relinquish them. Pat Mulqueen, FAA Instrument Flight Procedures Group (AJV-400), commented he is surprised the ARRG is not accepting this issue for work. Pat added it is difficult for procedure developers to find new names if they aren't provided names already reserved by ATC. Rich said this decision would be disappointing to the many groups he has talked with, but does understand the workload issue. Joshua Fenwick, Garmin, asked if this can be revisited by the ARRG, and Jeff said for this given RD it would not be since the decision was made that the proposed need and benefits did not justify the effort required. John Barry, FAA Aircraft Certification, said he participated in the ARRG meeting, and noted the group did see some possible benefit, but due to the limited scope of the proposed benefits in the RD, the group did not see the adequate need for the amount of work required. Michael suggested this change will be needed eventually, it will take years to accomplish, and a new RD with additional information should be submitted. Rich discussed how the ARRG process does not seem to allow for the modifications of, or even complete explanations of some RDs as necessary to refine the recommendation. Rich asked if the proponent of a specific RD can be present at the ARRG discussion, and Jeff said that could be a consideration for future meetings. Dan Wacker, FPAG, pointed out fix names currently in use can become available again as procedures are canceled. Jeff said based on the ARRG decision, the issue is closed.

Status: Item closed.

o. 21-02-358: Canned FAA Chart Notes Leading to Pilot Error: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)), is already being worked in the FPAG and no review by the ACM Recommendation Review Group (ARRG) was necessary. The issue is being tracked internally in the FPAG, and revisions will be in a future revision of Order 8260.19. John Moore, Boeing/Jeppesen, said he thinks the RD submitter (United Airlines) needs to be involved to ensure their concerns in the RD are addressed. Jeff said the draft preliminary language will be available when the future revision is in coordination, and the revised language will be presented at one or more ACM meetings. Brian Townsend, Allied Pilots Association, asked if an autopilot deactivation note would be included with the revision. Jeff agreed and said the FAA could look at specificity regarding autopilot usage if it is not already addressed in the order. This issue will remain open.

Actions: FPAG will consider incorporation of a note providing information for timing of autopilot deactivation. FPAG will report outcome of that consideration, and continue to provide status updates to incorporation of notes in Order 8260.19.

Status: Item open.

p. 21-02-359: CNF Used in Airways: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). No ACM Recommendation Review Group (ARRG) review was needed, since, the issue is already an item to be addressed by the ATS Routes Working Group. Diane Adams-Maturo, FPAG, said the issue has not yet been discussed due to other higher priority issues, but it will be investigated. John Collins, Foreflight, said the issue is mostly transitions at the Canadian border, including problems processing CPDLC and ADS-C messages, and asked what the plan was. Dan advised since there has been no identified safety case, the issue will be worked as time allows, but it has been adopted to be worked. Rich Boll, NBAA, inquired if this was coordinated with the Datacom Program Office. Diane said airways terminate at the border, and these CNF fixes are not on the airways. Bennie Hutto, NATCA, asked if the Working Group has coordinated with the ERAM group for processing, and Dan said not yet. Dan added this could require rulemaking action. John explained all of the CNFs are adapted in ERAM, and in the NASR database describing the airways. They are not adapted in Toronto's airspace, which causes the issues. In some instances, there are two fixes in close proximity. John thought one possible solution would be for the FAA to provide the CNF fix data to Canada to adapt in their systems. Diane said that some form of joint use is being looked at, but has not been worked out yet. Dan added there are several issues involved, including some outdated CFR guidance.

Actions: The ATS Routes Working Group will work this issue as it is able. FPAG will report continuing work of the ATS Routes Working Group on this issue.

Status: Item open.

q. 21-02-360: Insufficient Guidance on How to Process Minima-Related Notes on IAPs:

Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). There are already two open issues being worked in the ACM regarding notes, so no ACM Recommendation Review Group (ARRG) review was necessary. The Chart Modernization Working Group proposal has been completed but not yet reviewed, and those review outcomes could impact this RD. Jeff proposes the ACM hold work on this RD, it remain open, and be addressed when the other issues are resolved. In the interim, the FPAG will investigate possible AIM changes that might partially address the issue.

Actions: FPAG will report on any results from the review of the Chart Modernization Working Group proposal. FPAG will determine if any AIM changes can be accomplished to partially address this issue.

Status: Item open.

r. 21-02-361: Differing TACAN Missed Approach Instructions

Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). The ACM Recommendation Review Group (ARRG) did not need to review the issue. Order 8260.3C (2017) no longer allows combined VOR or TACAN procedures to have unique missed approach instructions. As with many order changes, propagation of revised criteria takes time, which is why there are still some VOR or TACAN approaches with differing missed approach instructions in the procedure inventory. Currently, there is no prohibition for unique TACAN-equipped missed approach instructions on ILS or LOC procedures, and FPAG will investigate the possibility of adding the restriction to those procedures also. Gary Fiske, FAA ATC Procedures (Terminal) Team (AJV-P310), said he understood TACAN-equipped aircraft cannot hold over a TACAN, which was the reason for the different missed approach instructions. The item will remain open.

Actions: FPAG will determine if restrictions on separate missed approach instructions for TACAN-equipped aircraft should extend to ILS or LOC procedures as well.

Status: Item open.

s. 21-02-362: Un-Codable Departure Procedures

Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). The Departure Working Group (DWG) is already working this so there was no ACM Recommendation Review Group (ARRG) review necessary. Dan Wacker, FPAG, briefed that the DWG reviewed this with the current application in the NAS. They felt it would be detrimental to air traffic to mandate all conventional procedures have a codeable common route, where for years they have had a radar vector common route. If something needs to be coded it should go to ARINC, and possibly be coded as a radar splay with multiple initial fixes. The DWG does not want to take on the initial RD request, but recommends a look at updating coding for RNAV to include a radar vector common route. John Collins, Foreflight, said there are not a large number of affected procedures, and said Garmin already provides coding for these. Boeing/Jeppesen does not code them since there is no defined ARINC 424 standard. John said the KCLT KNIGHTS TWO departure form would be a good example of how to code these. Dan said radar vector SIDs do not have transitions by current criteria, since they are designed to be hand flown. Joshua Fenwick, Garmin, agreed the

number of affected procedures is small. Dan said vector SIDs do not have common points, and were never intended to. Joshua asked if the FORT LAUDERDALE EIGHT SID is a radar vector SID, since it shows many routes and looks like a non-radar vector SID. Dan noted the departure route description says to expect radar vectors to the appropriate transition. These have been done for a long time and are not an issue, they just can't be coded. Gary Fiske, FAA ATC Procedures (Terminal) Team (AJV-P310), said Air Traffic will not support redesign efforts as stated in the RD on these, since the procedures work well. There are RNAV off-the-ground SIDs that are being used more often than the radar vector SIDs at many of these locations already. Some could be redesigned if there is a confusing chart issue. Joshua asked if the recommendation is to close the item, and Dan said yes, adding he will look at going back to ARINC coding to investigate if there is a way, if the common route is a radar vector with multiple initial fixes. Joshua asked if the charting portion of the RD to show the radar vector transitions differently would be addressed. Kevin Allen, American Airlines, said coding from an initial fix on the transition would appear to be an easy solution with aircraft flying radar vectors, to be followed by the assigned route. Dan said that has been looked at, and for example, at DFW nobody goes to the VOR, so this wouldn't be a clear solution. John said although you will not ever fly to the VOR, it can still be coded and you will intercept the route later. Dan pointed out RD has three issues. The ACM decided to reject the first two RD issues, and the DWG will work the third RD recommendation issue to chart the vector transitions differently than the conventional and RNAV procedure segments and report back.

Actions: Original RD has three recommendations. The first two are rejected, and the DWG will work the third recommendation and report status as the issue is considered.

Status: Item open.

t. 21-02-363: Depict ARINC 424-Coded Missed Approach Point on Conventional Charts: Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), briefed the issue ([slide](#)). The ACM Recommendation Review Group (ARRG) reviewed and decided to reject the issue. Although there would be a limited benefit, it would take a long time to accomplish, and would primarily affect localizer-only procedures where the missed approach point (MAP) is located at the landing threshold point. Joshua Fenwick, Garmin, says this looks like a disconnect between charting and the database. Jeff said the FAA does not provide location data identifying the points, adding the CIFP is not to be considered source. John Barry, FAA Aircraft Certification, said the MAP is what the source documentation form says it is, adding it may happen to be close to the end of the runway. If GPS fails, you must be able to fly the procedure using time and distance information. Bill Tuccio, Garmin, agreed these must be flown conventionally, but since a majority of these are flown with RNAV, they should not confuse the pilot. Jeff said if the issue had been accepted for work, implementing these changes would take a significant period of time, and the RNAV substitution elements would need to be addressed first. Rich Boll, NBAA sees no issues, and agrees the issue is not necessary and could be closed.

Status: Item closed.

5. New Business (New Agenda Items)

a. **21-02-364: Straight-in and Circling Minimums NA Notes:** The issue was presented by Bruce Williams, CFI, using his RD ([slide](#)). Bruce noted previous ACM issue 09-02-291 was closed at meeting 15-01 without a good resolution. Bruce discussed KUDD RNAV approaches to RWY 10 and RWY 28 in the RD, showing there are confusing notes about straight in and circling approaches not being authorized at night. The FAA recently issued a NOTAM to RNAV (GPS) RWY 10, stating “circling to RWY 28 NA at night.” Bruce recommends clarification in TERPS and in the AIM on the intent of these notes to reduce confusion for controllers and pilots, noting the difficulty for a pilot flying at night. Rich Boll, NBAA, inquired if this note is compliant with current Order 8260.19 criteria, and read the applicable criteria aloud. Bruce said the RNAV (GPS) RWY 28 approach note feels clumsy, with the note reading “Rwy 28 Straight-in and Circling minimums NA at night,” which could be interpreted to mean the entire procedure is NA at night if all circling minimums were NA. Rich pointed out the NOTAM for RNAV (GPS) RWY 10 adds a note “Circling to Rwy 28 NA at night,” and should perhaps be changed to “circling minimums NA at night.” Bruce said he sent an inquiry thru the IFP Gateway in November, and this NOTAM appeared. Dan Wacker, FAA Flight Procedures and Airspace Group (FPAG), noted that these notes were all reviewed several years ago, with criteria revised as necessary, and are being updated on a day-forward basis. Dan asked if there is a criteria issue now, and Bruce felt there was not, but that the notes were confusing. Dan added what is charted may be old criteria, but the notes will not be updated until the procedure is reviewed and amended day-forward, and that the old notes may still appear for many years. Dan asked if the AIM needs to be changed, and Bruce felt additional guidance in the AIM would help, citing AIM 5-4 (excerpt in the RD and current at meeting time). Bruce thought the guidance could be modified for clarity, and would be happy to assist any effort. Dan said the two versions of the note could be shown, as old and new, to help with understanding. The group discussed possible iterations of the notes for this airport. Mark Mentovai, Manhattan Flight Club, suggested the confusion is in the way the notes are conjoined with the word “and.” The requirements in Order 8260.19I to designate both straight-in and circling minimums as NA are separate and distinct, but on the approach plate in discussion, they are joined with “and,” rather than as two separate sentences. He noted no policy change should be necessary, but suggested cleaning up the NOTAM language. Mark suggested not including the runway associated with the procedure as that should be obvious, and would just add chart clutter. Bennie Hutto, NATCA, said a review of the notes appears to show only a straight-in to RWY 10 is allowed at night, and Jeff agreed the charted note could be interpreted to imply that, though that was not likely the intent. Bruce said the confusion for users is the note(s) seem to indicate the procedure is unavailable at night. Johnnie Baker, FAA Instrument Flight Procedures Group (AJV-400), said the RWY 10 NOTAM documentation appears incorrect (the NOTAM contains the language “add note” which is not appropriate for a T-NOTAM) but the restriction of circling to RWY 28 at night would be appropriate due to 20:1 penetrations on RWY 28. Johnnie will get the verbiage of the NOTAM corrected. Rich suggested a NOTAM for RNAV (GPS) RWY 28 is needed to bring the note language into compliance with Order 8260.19. Rich added the forms indicate the procedure is 20 years old. Dan said these will be found in the NAS, and should be caught in periodic reviews. Dan asked if the AIM does capture the appropriate steps, and added he believes the criteria is correct but if the AIM is incorrect it should be fixed. If both Order 8260.19 and the AIM are correct, then as procedures are reviewed the notes will be corrected over time. Rich discussed ACM 09-02-291, which was closed in 2015, and if the changes reflected were from that, and

Dan said he believed this was all part of the same effort, adding he and John Bordy also worked the notes issues through the US-IFPP issue 13-02-17. Bruce said his examples came from AIM language in 5-5-4 and Chapter 4 in the Instrument Procedures Handbook. Rich suggested we may need additional information in AIM 5-4 also. Bruce said he would assist in any proposed AIM language changes. Jeff summarized that the Order 8260.19 requirements appear correct, but some AIM review or updated guidance may be necessary. Jeff said it will take time for the procedures to be updated to current criteria, and that we do not issue NOTAMs to correct application of old criteria. Jeff added we need to avoid notes that might be construed to imply a VFR operation cannot land at night. Mark said it appears the 2002 procedure has some incorrect note language and asked if a NOTAM should be considered. Mark also asked to consider future Order 8260.19 language to differentiate IFR vs. VFR operations (i.e., “landing IFR RWY 28 not authorized”) to reduce confusion be developed, and Bruce agreed. Jeff noted that use of notes such as “landing RWY xx NA at night” can be wrongly interpreted as a restriction on VFR landings as well and are not desirable. Rich does think AIM 5-4-5 guidance on circling should be strengthened. Jeff advised this will be reviewed, specifically with AIM intent, and reminded all that criteria changes take a while to appear through all published procedures. He also noted that there is some lag between criteria effective dates and service provider implementation, and that the criteria effective date cannot be effectively compared to a procedure publication date for purposes of determining to what revision of criteria the procedure was developed.

Actions: This item will be reviewed by the ACM Recommendation Review Group to determine any potential action and that outcome will be provided at ACM 22-02. Johnnie Baker, FAA Instrument Flight Procedures Group (AJV-400), will have corrections made to the identified NOTAM.

Status: Item open.

b. 22-01-365: As Charted, Teardrop Course Reversals Lack Pilot Guidance on How to Fly the Reversal: Bill Tuccio, Garmin, briefed the item from the RD ([slide](#)) saying there are not many of these in the NAS, and little guidance on how to chart or fly them exists. An example teardrop is shown on the RD slide. His concern is the aircraft could go into the wrong airspace, and that most pilots may think it requires a standard rate turn. The FAA provides specific guidance for other turns, but this just says teardrop left turn within 10 NM. Bill would like explanatory information in the AIM, IPH, and IFH on how to fly these procedures. Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), advised these are charted to scale, and advised the procedure represented on the first page of the RD at KGUP is an outlier and not compliant with current criteria. FAA Order 8260.3 requires a turn fix for these course reversals and added obstacle protection areas are developed based on that turn point. Bill said the rate of turn after the outbound fix is the question due to lack of guidance. Joshua Fenwick, Garmin, said the question concerns what the pilot should do after the outbound fix. Also, the database providers display the route differently to join the localizer differently. Rich Boll, NBAA, has no problem with the current display, saying he has never had an issue teaching or flying them. Rich said AIM 5-4-9 describes this as a turn after the fix to join the localizer, and is usually done with a standard rate turn. Rich said this a graphical depiction for direction of a turn, not a specific route, arc, or path to follow, but added the guidance is lacking a bit and could be bolstered. Bill asked Rich how he would fly or teach these, and Rich said after the turn fix, they do a standard rate turn to a 30 degree or 45 degree intercept heading, then join the inbound final course. Bill

advised that is what they wanted to know and answers their question. Vince Massamini, general aviation pilot, said these are very common, and do not present a challenge, but agree maybe some more guidance would be helpful.

Actions: This item will be reviewed by the ACM Recommendation Review Group to determine any action and that outcome will be provided at ACM 22-02.

Status: Item open.

c. 22-01-366: Circling NA Areas Conflict with FAA Legal Counsel Limitations on Class G Right Traffic: Bill Tuccio, Garmin, briefed the item from the RD ([slide](#)) with one generalized example, discussing the background and displaying his example slide on the RD. The question is how a Cat D pilot flies to RWY 35, and can you fly a Cat D circling pattern with right hand turns regardless of 14 CFR § 91.126(b)(1) and previous legal opinions (attached in the RD). Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), advised the ACM cannot reinterpret or change a legal opinion. John Collins, Foreflight, advised there is a third legal opinion on this, and after speaking with an FAA attorney with the Office of General Counsel, he is confident there is no issue with this, adding this is what was meant by their opinion. John advised AC 90-66B Change 1 has wording to cover this situation. Bill thanked John for the information and is satisfied the issue has been addressed. Rich Boll, NBAA, suggested clarifying language be added in AIM paragraph 5-4-20 for circling/maneuvering. John added the third legal interpretation basically restates the second one. Michael Stromberg, Independent Pilots Association (IPA)/UPS, concurs with adding language in the AIM. Joel Dickinson, FAA Flight Operations Group, said their group could look at the issue, and see what changes may be warranted in the AIM and other publications.

Actions: This item will be reviewed by the ACM Recommendation Review Group to determine any action and that outcome will be provided at ACM 22-02.

Status: Item open.

d. 22-01-367: Terminal Holds Published with Time and Distance are Confusing: Bill Tuccio, Garmin, briefed the item from the RD ([slide](#)), saying this happens seldom but is a pain for Garmin. The example slide for OLV ILS or LOC RWY 18 shows both time and distance for holding at EFPUB INT, and there is no clear guidance for which the pilot should use. Garmin did submit an aeronautical inquiry on this approach, and the response was the pilot can choose based on aircraft equipment. Bill inquired if AIM guidance exists or is needed for these. Steve Madigan, Garmin, said this is a problem, since there is no way to code both. Rich Boll, NBAA, said this is a conventional procedure (even though it has a TAA), and can be flown either way based on equipment and preference. Valerie Watson, FAA Charting Products Integration Team (AJV-A250), advised there used to be a number of dual holding procedures in the NAS, and in 2013 charting was given guidance from Brad Rush, (then with Aeronautical Information Services) that this was not correct and to only publish one or the other. On conventional procedures, timing was charted, and Valerie added there are only three of these procedures left in the NAS depicting both distance and time. Jeff Rawdon, FAA Flight Procedures and Airspace Group (FPAG), said there is no Order 8260.19 policy to provide both. Johnnie Baker, FAA Instrument Flight Procedures Group (AJV-400), suggested the response to the aeronautical

inquiry sent by Garmin could have a more appropriate response, and took an IOU to revisit that inquiry. Valerie suggested to either add policy in Order 8260.3 to allow these, along with publication of AIM guidance, or to correct the remaining three procedures. Jeff thought correcting the remaining three would be preferable. Vince Massimini, general aviation pilot, added there are thousands of conventional procedures that have the one minute holding patterns, and agreed it would be best to remove the distance on the remaining three. Mark Mentovai, Manhattan Flight Club, said there is a human factors charting issue if there is a difference in the holding distance and/or time between the plan and profile views. Mike Stromberg, Independent Pilots Association (IPA)/UPS, agreed no changes to pilot guidance would be necessary if the three remaining procedures are revised. Dan Wacker, FPAG, said the reason for the 4 NM distance depiction is to support the TAA holding per Order 8260.19 and suggested the FAA needs to remove the TAA and go to conventional only, or change the criteria to support RNAV and conventional holding at the same fix on the hybrid procedures. Jeff added there is a question if timing is prohibited when distance holding is shown, and Dan thought it was and wants to look at the documentation policy. Rich said per Order 8260.19, the MSA and TAA should not be used on the same procedure as they are on this approach plate. Johnnie added on all conventional procedures timing should be used for holding. Diane Adams-Maturo, FPAG, talked about how hybrid procedures can have disconnects with criteria, and the FAA should take a closer look, especially concerning Order 8260.19 policy. John Collins, Foreflight, pointed out that some ILS approaches, with MSA and TAA information both charted, were broken into separate Y & Z procedures, and this procedure could have done the same. Dan said the existing criteria in Orders 8260.19 and 8260.3 is correct. In Order 8260.3, RNAV holding must use distance, and using both MSA and TAA on the same chart is not allowed.

Action: This item will be reviewed by the ACM Recommendation Review Group to determine any action and that outcome will be provided at ACM 22-02. Johnnie Baker will review the previous inquiry sent by Garmin to determine if the response should have been different than that provided.

Status: Item open.

e. **22-01-368: MSA Center for Non-RNAV Procedures:** Joshua Fenwick, Garmin, briefed the item from the RD ([slide](#)). As more VORs are decommissioned, we are seeing more MSAs moving away from the airport centers, and they are not overlying the entire approach area. Joshua displayed examples from his RD, showing non-RNAV procedure MSA centers can be up to 30 NM from the procedure airport by Order 8260.3 criteria, whereas RNAV procedures are typically centered on the runway threshold associated with the approach. Since the rest of the world uses the airport ARP to center MSAs, Garmin suggests using the ARP if no suitable NAVAID is near the airport. Dan Wacker, FAA Flight Procedures and Airspace Group (FPAG), explained the background of the MSA criteria. The MSA was never intended to aid pilot descent on the approach, since they operate at en route altitudes until the approach IAF or the MVA if ATC is vectoring the aircraft. The MSA is provided for emergency use, so if the pilot has an emergency while on the approach, they have a safe altitude to climb to. Dan said it has been this way for years and feels pilots understand it is based on the procedure and not the airport. Dan said the FAA has looked at changing the MSA center to the ARP like Garmin suggests, with only one per airport and possibly allowing sectorization. Dan added this is not considered a high priority, and would likely be a day-forward change, though that could take several years to fully

accomplish. Dan said on the specific example shown, the TAA was not added because of the MSA location, but because they were added on hybrid procedures for RNAV to the ILS. Mike Stromberg, Independent Pilots Association (IPA)/UPS, said the MSA should overfly the entire procedure area in case of an emergency, if that is the intent of the MSA. UPS has tailored charts depicting the MSAs. Dan restated the MSAs are not built to cover the entire procedure path, but only for a safe altitude within 25 NM of the NAVAID. Rich Boll, NBAA, said the MSA is used for other types of procedures, including departures, and asked if a localizer could be used. Jeff Rawdon, FPAG, advised it could not, since criteria requires an omni-directional facility. Rich thinks the MSA should be moved to the ARP. Dan added if there is no NAVAID within 30 NM of the airport current criteria allows the MSA to be centered on the ARP which was a criteria change due to the VOR MON project. John Barry, FAA Aircraft Certification, said maybe ESAs could be used instead of MSAs. Most of the participants felt moving the MSA to the ARP would benefit the pilots. Joshua said this is being done worldwide, so we should look at ICAO procedures and definitions. Jeff said this will go to the ACM Recommendation Review Group for discussion.

Action: This item will be reviewed by the ACM Recommendation Review Group to determine any action and that outcome will be provided at ACM 22-02.

Status: Item open.

f. 22-01-369: Improve IAP Alternate Minimums: 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.

6. Next Meetings

ACM 22-02: October 24-27, 2022

ACM 23-01: April 24-27, 2023