

**Government/Industry Aeronautical Charting Meeting (ACM)**  
**Meeting 19-01**  
**Charting Group**  
**April 24-25, 2019**  
**ALPA**  
**Herndon, VA 21701**

**CHARTING GROUP MINUTES**

**I. Opening Remarks**

The Aeronautical Charting Meeting (ACM) was hosted by the Air Line Pilots Association (ALPA) at their headquarters in Herndon, VA. Valerie Watson, FAA/AJV-A250, opened the Charting Group portion of the forum on Wednesday, April 24. Valerie expressed appreciation to ALPA and especially to Darrell Pennington for hosting the 19-01 ACM. She acknowledged ACM Co-chair John Bordy, FAA/AFS-420, who presided over the Instrument Procedures Group (IPG) portion of the meeting the previous day.

**II. Review Minutes of Last Meeting, ACM 18-02**

The minutes from ACM 18-02 meeting were distributed electronically last fall via the Aeronautical Information Services (AIS) ACM website: [http://www.faa.gov/air\\_traffic/flight\\_info/aeronav/acf/](http://www.faa.gov/air_traffic/flight_info/aeronav/acf/). The minutes were accepted as submitted with no changes or corrections.

**III. Agenda Approval**

The agenda for the 19-01 meeting was accepted as presented.

## IV. Presentations, ACM Working Group Reports and ACM Project Reports

### Discontinuation of VOR Services

Ernesto Etienne, FAA/AJM-324, [provided an update](#) for the Very High Frequency Omnidirectional Range (VOR) Minimum Operation Network (MON) program. He stated that in Phase 1, 42 of the 74 VORs have been decommissioned. The total number of VORs targeted for discontinuance remains at 311.

Ernesto reported that the Memorandum of Agreement (MOA) for maintenance of the MON Airport list has been signed, and his office will send an updated list in early May to AJV-A for the June 20, 2019 publication date. Rune Duke, AOPA, asked if the plan is still to publish the MON Airport list on the inside back cover of the Chart Supplement. He pointed out that this is valuable real estate and might be better utilized for something pilots use more often, for instance the Pilot Weather Reporting (PIREP) information. Valerie Watson, FAA/AJV-A250, stated that if this publication is moving forward for June, AJV-A will likely have to locate the MON Airport listing on the inside back cover as coordinated, but committed to looking into moving it to another location later.

Ernesto reported that the MON Program Office is in the process of expanding the standard service volume (SSV) from 40 NM to 70 NM for FAA-owned and operated VORs that will remain active in the system. This change will require the establishment of two new NAVAID codes that will correspond to the expanded service volumes: VOR Low (VL) and VOR High (VH). Valerie asked if all the remaining VORs will have the expanded SSV by 2025. Deborah Lawrence, FAA/AJM-32, said that before the new SSVs can be implemented, there needs to be final approval and distribution of FAA Order 6050.32B and all remaining VORs must be flight checked. She said that until those tasks are accomplished, there will be both 40 NM and 70 NM SSVs in the system. John Collins, ForeFlight, asked when pilots should expect to start seeing the new VL and VH NAVAID class codes published. Valerie responded that this effort was still being coordinated. Gary Fiske, Contact Support to FAA/AJV-82, asked if there are expected to be frequency changes to those remaining NAVAIDs due to new interference. Ernesto said yes, frequency changes have already begun.

Rich Boll, NBAA, raised concerns regarding how the discontinuances are being coordinated. He is concerned that there is not enough time to ensure new procedures are developed before procedures are cancelled for the MON. Deborah stated that the VOR MON Program Office coordinates with each facility and with AJV-A to look for mitigations that need to be addressed prior to a discontinuance. Rune stated that some of the Service Centers seems to be very proactive, while others are not. He said users should put in IFP Gateway requests to ensure they have what they need. Rich responded that it should not be users ensuring that proper procedures are in place, it should be the VOR MON Office. Deborah agreed.

There was general audience concern expressed that terminal procedures are being removed before replacement procedures are in place and that more coordination needs to be done with the service centers prior to VOR decommissionings and/or procedure cancellations. Paul Gallant, FAA/AJV-113, said that he is also concerned about the same problem with regard to IFR airways. He reported that his office is finding gaps in the airways (missing segments where an airway simply ends and then resumes at a later point) as the VORs are being decommissioned.

Ernesto committed to looking into the lack of replacement terminal procedures concurrent with cancellations, airway segment gaps and Class airspace definition issues relating to what appear to be uncoordinated VOR decommissionings.

## **NOTAM Briefing**

Lynette McSpadden, FAA/AJR-B3, provided an update on the publication of FAA Order 7930.2S, Notices to Airmen (NOTAM), which became effective 10 Jan 2019. She highlighted that one of the new changes is compliance with International Civil Aviation Organization (ICAO) contractions. She stated that the Program Management Organization user acceptance testing is planned for May 2019 and that the new contractions will be updated in the software.

She then provided an update on the status of the Notice to Airman Publication (NTAP). She briefed that the plan is not to discontinue the NTAP, but to reduce it in size by removing obsolete data and data published elsewhere. She said there is currently a Safety Risk Management (SRM) study in process to establish what can safely be removed from the document. She reported that Part 3 of the NTAP, Graphic Notices, will not be removed, as this information is not published elsewhere.

She then discussed the work of the NOTAM Task Force. She said there are several workgroups that are working to identify software platforms that are touched by NOTAMs, researching necessary changes to manuals, reviewing the NOTAM processes and providing outreach regarding NOTAM modernization. She also said that Aeronautical Information Manual (AIM) updates have been written and are out for comment.

Lynette then talked about the NOTAM modernization effort, briefing that a NOTAM stakeholders meeting with Teri Bristol, FAA/AJO-0, occurred on 24 July 2018, which generated a number of recommendations. Abigail Smith, FAA/AJI-2, is leading the effort to establish a single way for entering NOTAMs into the system and for providing unified training and outreach for all federal and non-federal users.

## **Controller Pilot Data Link Communications (CPDLC) Briefing**

Jesse Wijntjes, FAA/AJM-34, reviewed the [history and background of the CPDLC program](#). He highlighted the success of the CPDLC Departure Clearances (DCL) deployment to 62 Control Towers and showed how resulting efficiencies continue to increase.

Michael Stromberg, UPS, asked if there is a plan to increase the number of towers with Digital-Automatic Terminal Information Service (D-ATIS). Jesse said there is a list of over 2,000 airports that would like D-ATIS, but explained that there is a monetary cost to implementation. He suggested that users continue requesting D-ATIS.

Jesse then discussed the change in the rollout schedule for Enroute CPDLC. He said that during the testing at key sites, interoperability issues arose. He reported that avionics and network issues were in the process of being resolved when the government shutdown halted all testing. Testing restarted at ZKC and ZID at the end of March and work continues to resolve interoperability issues. The revised initial services deployment waterfall is not yet finalized, but Jesse stated that the rollout on the east coast is expected by the summer of 2020 and the entire project should be completed by June of 2021.

Lev Prichard, APA, asked if a pilot is required to log back into the system when flying from an overlying center without CPDCL into one with CPDLC. Jesse replied that no, once logged into the system, the session stays active.

Steve Woodbury, Flight Safety International, asked if the notification of the deployment of Enroute CPDLC services will be broadcast through the NOTAM system. Jesse said they are not planning to issue NOTAMs, but they will be using other outreach mechanisms to get the word out. Rich Boll, NBAA, expressed concern at this, voicing that the original plan was to wait for NOTAMs as the signal to begin outreach to operators. Lynette McSpadden, FAA/AJR-B3, suggested that there are ways that the NOTAM Office can help, such as using an FDC NOTAM or a Commissioning NOTAM with a date to let pilots know when the system will be usable.

Valerie Watson, FAA/AJV-A250, pointed out that the system will likely be active and accessible to users for some time before the Enroute CPDLC capability is depicted on the Enroute charts. The charting office needs to know a system is fully operational and out of the testing phase at least 30 days before the effective date of the chart in order for it to be published. She suggested that it might be wise to begin public outreach when the system is usable and not wait for chart publication.

Jesse said that they anticipate that the transition to using enroute CPDLC will be fairly seamless for pilots. Users will receive notification in the cockpit when the system is available for use.

### **ILS Rationalization Briefing**

Deborah Lawrence, FAA/AJM-32, [briefed the topic](#). She stated that the goal of the FAA Navigation Strategy is to provide resilient navigation services to allow for the transition of the National Airspace System (NAS) more fully to Performance Based Navigation (PBN). Part of attaining that goal is the reduction of infrastructure to improve efficiency. This is being accomplished through the VOR MON Program and the ILS Rationalization effort. The ILS Rationalization effort is centered on the reduction of ILS Category I procedures where duplicate service exists. Before any procedures are removed, they will be evaluated to ensure that Cat I ILS systems that are needed to support safe recovery in a Global Navigation Satellite System (GNSS) outage will be retained. She stated that this effort was put on hold in 2017 while the VOR MON Program Office began its work identifying VORs for decommissioning and ensuring that those NAVAIDs that will remain in the system are sustainable. The plan is to present the ILS Rationalization program strategy during the 4<sup>th</sup> quarter of this year and proceed thereafter toward implementation.

Deborah reported that the near-term goal is to look at all Cat I ILSs at Navigation Service Group 4 and 5 airports and begin investigating the process of discontinuing ILSs in those locations in 2020. John Collins, ForeFlight, stated that he is concerned that as the number of ILS procedures is reduced, there will be fewer opportunities for pilots to ILS train at locations other than major airports. Deborah stated that only a small number of Cat I ILSs will actually be removed so it should not affect training.

Michael Stromberg, UPS, asked if FAR Part 135 operator needs are being considered. Deborah responded that they are. She emphasized that outreach is planned in order to determine who the users are and to

assess their needs. She also said that a list of those ILSs planned for discontinuance will be published and users will have an opportunity to comment. She presented a slide detailing the criteria use for potentially identifying ILS Cat I systems for decommissioning ([See Slide #14](#)).

Rune Duke, AOPA, commented that there are other ways to mitigate the negative impacts. He pointed out that for General Aviation pilots, LPV procedures (procedures with Localizer Performance with Vertical Guidance minima) are becoming a predominant form of navigation. He suggested that the FAA consider the policy that determines the criteria for classifying an LPV procedure as a precision approach.

Deborah summarized the process for reinstating the ILS Rationalization program ([See Slide #19](#)). She said there will be an FAA strategy decision in the fourth quarter of fiscal year 2019 and then activity to begin to identify and discontinue ILSs in 2020 will commence.

## Wrong Surface Landings

John Blair, FAA/AFS-410, [briefed](#) the audience on the findings of a National Transportation Safety Board (NTSB) recommendation from a 2017 incident at San Francisco International Airport (SFO) involving an Air Canada flight that nearly landed on an occupied taxiway parallel to runway 28R while on a visual approach (Ref: NTSB Report/findings at <https://www.nts.gov/investigations/pages/dca17ia148.aspx>). Part of the recommendation states to “either develop an autotune solution or ensure that the manual tune entry has sufficient salience on approach charts”. In response, the Flight Operations Branch has been tasked to look at the charts to see if there is something they can suggest to mitigate this problem. John presented modifications to two Charted Visual Flight Procedures (CVFPs) at SFO ([See Slide #4](#)). He also presented suggested language to add to the Aeronautical Information Manual (AIM) ([See Slide #5](#)).

Gary McMullin, Southwest, asked if CVFPs should be used any more. Because these procedures cannot be coded, he believes that instrument approach procedures should be used instead. Lev Prichard, ASA, added that all CVFPs today need to be RNAV CVFPs. Valerie Watson, FAA/AJV-A250, emphasized that CVFPs are *visual* procedures and not designed to be coded in the flight management system (FMS).

T.J. Nichols, FAA/AFS-420, stated that there are only a small number of CVFPs left in the system. He said that there is new policy guidance that requires that any new CVFP first get Flight Standards approval in order to ensure that there is not a CVFP put in place where an RNAV would be of greater benefit. He emphasized that the purpose of this briefing is to get feedback on how to answer the NTSB recommendation. He agreed with Valerie that these charts were not built to be loaded into an FMS. As a result, when they *are* loaded into an FMS, the FAA does not have the same control over how they are being used. The NTSB needs Flight Standards to make sure that there isn't something on the chart that could be contributing to the problem. Valerie asked if the suggested changes were made to the chart, if that would fix the problem. Aaron Jacobson, Jeppesen, said that the crew was using the Jeppesen chart at the time of the incident, which already shows the suggested information, so that did not prevent the problem.

T.J. reported that his team plans to have a follow-up meeting to further discuss how they will respond to the NTSB recommendation. A signup sheet was circulated to include interested parties to be part of the follow-up discussion.

## Cold Temperature Airport Information NTAP to AIM

Kel Christianson, FAA/AFS-410, briefed the audience on the plan to move the guidance portion of the Cold Temperature Restricted Airports information from the Notice to Airman Publication (NTAP) to the Aeronautical Information Manual (AIM). The list of segment-specific cold temperature correction data will not be published in the AIM, but will continue to be published on the AJV-A Terminal Procedure Publication (TPP) website. This list will continue to be updated approximately once per year in August, as revisions are received by AJV-A from AFS-410.

Valerie Watson, FAA/AJV-A250, noted that the cold temperature explanatory guidance in the front of the TPPs will need to be updated to refer users to the AIM and AJV-A website rather than the NTAP. She asked Kel when this change is expected to take place. Kel reported that the timeline is still being determined and that he will advise. Valerie will initiate changes to the TPP front matter text when appropriate.

## Identification of Trauma Centers on Helicopter Charts

Wayne Palmer, FAA/AJV-A213, from the Visual Charting Team [briefed the issue](#). Wayne stated that on current FAA-produced Helicopter Route Charts, Trauma Center Helipads and Hospital Helipads are identified. ([See Slide #2](#)). Wayne briefed the audience on the challenges of maintaining this information on the charts because there is not a databased source for the data. In the past, the helicopter charts were updated every three to five years, giving the charting team time to reach out to contacts in the local region to verify the data. The charts are now in the process of being automated and will be on a six month update cycle, making more crucial the need to have the data properly sourced and in a database.

Wayne stated that there are two options: (1) don't specify a helipad as a trauma center and show them all as hospital helipads, or (2) secure a sanctioned source for the trauma center data and continue to chart them. He opened the question to the audience.

T.J. Nichols, FAA/AFS-420, said that in the FAA Reauthorization Bill, there is language that requires the FAA to "assess the availability of information to the general public related to the location of heliports and helipads used by helicopters providing air ambulance services." ([Complete language from H.R. 316, Section 314](#)) Nolan Crawford, FAA/AFS-410, commented that depicting trauma centers on the chart is necessary for use during mass casualty and emergency events for both local and non-local flight crews to be able to quickly and efficiently transport patients to the correct facilities.

Valerie Watson, FAA/AJV-A250, stated that if the requirement to show trauma centers is to remain, the next step must be to define how a helipad is classified as a trauma center so the charting can be accurately determined. Nolan replied that his office has a meeting coming up with the Air Medical Group where he can ask for their input on this topic. He also said that his office is looking into updating the Airport Master Record, FAA Form 5010, to add more helicopter information and the identification of a trauma center could be part of that update. Drew Goldsmith, FAA/AAS-100, said that the Office of Airports (FAA/AIS-100) is open to this idea, but stated that in order to capture this information, his office would need to rely on the facilities to self-report their status as a trauma center. He also added that his office is considering the addition of a "medical use" checkbox to FAA Form 7480, Notice of Landing Area Proposal.

Valerie said that the various FAA offices need to work together to define the requirement, clarify the definition and then work to identify the source for the data. She said she would coordinate with Nolan and thereafter look into setting up an informal meeting with AJV-A, AFS-410, and AAS-100 to work these issues.

Scott Jerdan, FAA/AJV-A310, asked about the initial population of the trauma center data in the source (NASR) database. Valerie stated that it would likely be worked internally within AJV-A, and that the Visual Charting Team may have to do some individual outreach to ensure a good starting point for the data. Valerie asked Nolan if AJV-A presented him with a listing of currently charted trauma centers, could he possibly verify them. Nolan said that was a possibility. After verification of the currently charted locations, all agreed that a reliable source flow will have to be determined for the maintenance of the trauma center data.

## V. Outstanding Charting Topics

### [13-01-270 Stepdown Fix Chart Notes](#)

Valerie Watson, FAA/AJV-A250, reviewed the issue. She reiterated that Aeronautical Information Manual (AIM) language published in 2018 explains stepdown fix altitudes and clarifies that they only apply within the Final Approach Segment to the non-precision portion of the procedure and do not apply when flying a precision approach - ILS or approaches with vertical guidance (LPV, LNAV/VNAV) lines of minima. She reported that she has drafted an Interagency Air Committee (IAC) Specification change to update the Terminal Procedures Publication (TPP) Legend Profile View page to clarify stepdown fix altitude use, which she will process for signature after the revised guidance has been published in FAA Order 8260.19.

Valerie then showed an [example of an Instrument Approach Procedure](#) with a Visual Descent Point (VDP) with an asterisk to an "LNAV only" note. She asked if these notes should also be removed. She suggested that the same logic applies in that VDPs also only apply to the non-precision portion of a procedure. Rich Boll, NBAA, stated that the AIM is already clear for VDPs and that yes, those notes should also be removed. There was unanimous audience agreement to remove the VDP notes.

John Bordy, FAA/AFS-420, reported that updates for the removal of stepdown fix altitude notes is in draft FAA Order 8260.19 version I, which is expected to be published in August 2019. He said he would take the VDP issue to the U.S. Instrument Flight Procedures Panel (US-IFPP) in June and if he receives approval for the change, he will work to get that into the same update. Valerie said that she will add VDPs to her draft TPP Profile specification change and await word on the Order changes.

#### **STATUS: OPEN**

**ACTION:** John Bordy, FAA/AFS-420, will take the suggested change regarding VDPs to the US-IFPP for discussion, and if approved, incorporate the necessary changes into FAA Order 8260.19.

**ACTION:** John Bordy, FAA/AFS-420, to report on the status of revised guidance in FAA Order 8260.19.

**ACTION:** Valerie Watson, FAA/AJV-A250, to work an Interagency Air Committee (IAC) Specification change to update the TPP Legend Profile View page to clarify VDP and stepdown fix altitude use after the revised guidance has been published in FAA Order 8260.19.

### [15-01-295 Charting of Airports for the MON](#)

Valerie Watson, FAA/AJV-A250, reviewed the topic and items outstanding from the last ACM. She reported that the Interagency Air Committee (IAC) Specifications for publication of a MON Airport indication on Enroute charts and in the Chart Supplement are in place. Scott Jerdan, FAA/AJV-A310, reported that the National Airspace System Resource (NASR) database has been updated to accommodate MON-designated airports. He also reported that the Memorandum of Agreement (MOA) for maintenance of the MON Airport list is in place. It is expected that the MON Program Office will submit an updated list of MON Airports to AJV-A for the June 20, 2019 publication date.

#### **STATUS: OPEN**

**ACTION:** Scott Jerdan, FAA/AJV-A310, will report on the status of the population of the MON Airport List in the NASR database.

**ACTION:** Guy Copeland, FAA/AJV-A210, and Jeffrey Lamphier, FAA/AJV-A240, will report on the subsequent publication of MON Airports on the Enroute charts and in the Chart Supplements.

### **15-02-298 Charting GLS DMax (Service Volume)**

Valerie Watson, FAA/AJV-A250, briefed the issue. She reviewed that at the last ACM, Joel Dickinson, FAA/AFS-410, presented several charting options for depiction of the GLS approach service volume (ASV) on Instrument Approach Procedure (IAP) charts. At that time, Joel also presented the option of “no charted depiction” because he asserted that the ASV will be standardized and published in pilot guidance. There was audience agreement at the last meeting in support of a charted indication of the GLS ASV using the text “(GLS)” at the first fix on the final approach course (or final approach course extended) where lateral guidance is provided by the GLS signal. Based on this agreement, Joel accepted an action from last meeting to take the ACM-supported charting depiction to the U.S. Instrument Flight Procedures Panel (US-IFPP) for discussion.

At the current meeting, Joel reported that he continues to believe that a charting solution is unnecessary because the standard ASV guidance has now been published in the Aeronautical Information Manual (AIM). Valerie pointed out that of the few currently published GLS procedures, the service volume is *not* standard in all cases and that is the reason pilots wish to know the specific service volume on each procedure. She stated that knowing the “standard” does not help pilots with the non-standard examples.

Michael Stromberg, UPS, commented that GLS ASV as described in the AIM mimics ILS service volume in that it only extends in a single direction, in a cone like configuration. Michael stated GLS service volume in reality projects a distance from the antenna in *all* directions and would better be described in a circular extension. Michael disagrees that the AIM language is sufficient.

Joel stated that there is international agreement on an established ASV for GLS systems. He said that for today, GLS systems are using straight-in criteria. If this is expanded in the future, the explanatory guidance will be revised accordingly.

Valerie asked if it is the Flight Operations Branch position that they will not support a graphic depiction on GLS procedures to indicate the first fix on the final approach course (or final approach course extended) from which lateral guidance from the GLS antenna can be received. She stated that the indication cannot be charted if Flight Standards does support it. Joel stated that Flight Standards will not support a charting solution based on his assertion that the February 2019 update to the AIM guidance is sufficient.

As Joel maintains that his office will not support this proposal, Valerie stated the issue should be closed as a charting solution cannot be obtained without Flight Standards’ support. She stated that she will first reach out to Ron Renk, United Airlines, the original proponent of this RD, to update him on the discussions and ask for his concurrence to close.

**STATUS: OPEN**

**ACTION:** Valerie Watson, FAA/AJV-A250, will reach out to Ron Renk, United Airlines, to discuss the response received from FAA/AFS-410.

**16-02-309 Publishing of CLNC DEL Phone Numbers in Chart Supplement**

Valerie Watson, FAA/AJV-A250, reviewed the issue. Jeff Black, FAA/AJR-B6, [presented a status update](#). He stated that he has forwarded the final list of Air Traffic Route Traffic Control Center (ARTCC) Flight Data Unit (FDU) phone numbers for non-towered and part-time towered airports to the National Flight Data Center, which consisted of over 14,000 entries. John Johnson, FAA/AJV-A313, said that they have been added to the National Airspace System Resource (NASR) database and will be published in the 20 June 2019 subscriber file. Bob Carlson, FAA/AJV-A241, reported that in preparation for the 20 June 2019 chart release, the Chart Supplement team is working on final testing of the automation used to populate the information in the Supplement.

Lev Prichard, APA, asked what is going to happen to the national clearance delivery phone number (1-888-766-8267) currently published and in use. Jeff showed the revised language that will be published in the Aeronautical Information Manual (AIM) in August 2019. The revision will remove the national clearance delivery phone number. He said the number will remain active for a certain amount of time, but will refer pilots to a new number. Valerie said that AJV-A will have to remove the national number from the back of the Chart Supplement (listed as the "Clearance Delivery Only" number in the FSS Telephone Numbers section) after the AIM is revised. Jeff said he would coordinate removal of the number with the Chart Supplement Team.

Rich Boll, NBAA, asked if a Charting Notice will be issued informing the aviation community of these changes. Brian Murphy, FAA/AJV-A130, responded that the FAA has published a [Charting Notice](#) that includes a link to a spreadsheet that contains all of the new phone numbers.

Valerie stated that she would leave this item open to ensure the Chart Supplement publication is successful.

**STATUS: OPEN**

**ACTION:** Jeff Black, FAA/AJR-B6, will coordinate with Bob Carlson, FAA/AJV-A241, to remove the national clearance delivery number from the back of the Chart Supplement after the AIM is revised.

**ACTION:** Bob Carlson, FAA/AJV-A241, will report on the publication status of the clearance delivery phone numbers in the Chart Supplement.

**16-02-310 Inclusion of MSA Info for ODPs, SIDs & STARs**

Valerie Watson, FAA/AJV-A250, reviewed the issue. John Bordy, FAA/AFS-420, stated that the topic had not yet been discussed at the U.S. Instrument Flight Procedures Panel (US-IFPP) because the January meeting

was cancelled due to the government shutdown. He plans to get a final position from the US-IFPP at their meeting in June. John then asked if there is still ACM support for the addition of MSAs on Departure Procedures, but not on Standard Terminal Arrivals. There was strong consensus within the audience to continue working toward this goal.

**STATUS: OPEN**

**ACTION:** John Bordy, FAA/AFS-420, will report on discussions that take place at the June 2019 meeting of the US-IFPP.

**[17-02-311 TFR Charting: Recommendations of the RTCA Tactical Operations Committee](#)**

Valerie Watson, FAA/AJV-A250, reviewed the topic. She reported that the Interagency Air Committee (IAC) Specification change to add National Defense Airspace TFR Area depictions to the VFR charts has been approved. The implementation is on hold until the National Flight Data Center (NFDC) can secure a source for the data. Scott Jerdan, FAA/AJV-A310, reported that the System Operations Security Office, FAA/AJR-24, has agreed to be the charting source, but he did not get AJV-A support for a Memorandum of Agreement (MOA) as the means to document that commitment. Scott is now working with Lynette McSpadden, FAA/AJR-B3, to add a paragraph to the NOTAM Order that will document the System Operations Security Office's obligation to provide and maintain these areas to AJV-A. Lynette reported that she had received support for this plan from Talwyn Haley of the System Operations Security Office, FAA/AJR-24. She stated that that since the latest iteration of the NOTAM Order was recently released, it will likely be two years before the next version is published.

Rune Duke, AOPA, expressed concern about the two year delay and asked if there is something that can be done in the interim so that these areas can be charted sooner. Scott said he would look into options. He suggested that perhaps they could use an interim policy agreement.

**STATUS: OPEN**

**ACTION:** Lynette McSpadden, FAA/AJR-B3, to work on updates to the NOTAM Order for the submission of National Defense Airspace TFR data to AJV-A from the Systems Operations Security Office.

**ACTION:** Scott Jerdan, FAA/AJV-A310, will research an interim mechanism for the submission of National Defense Airspace TFR data until the NOTAM Order can be updated.

**[17-02-312 Standardized Communications on DPs and STARs](#)**

Valerie Watson, FAA/AJV-A250, reviewed the issue. John Bordy, FAA/AFS-420, said that the FAA Order 8260.19 changes are in 8260.19I, scheduled for publication in August 2019. Revisions to FAA Order 8260.46 will be in Change 1, scheduled to be released in December 2019.

Valerie stated that an Interagency Air Committee (IAC) Specification change has been drafted for standardized communications on Departure Procedures (DPs) and Standard Terminal Arrival Routes (STARs). The change, recommended and approved by the ACM, supports automatic depiction of ATIS and APP CON on STARs and only DEP CON on DPs and stipulates that other communication types will be depicted *only when specifically requested on the procedure source document*. She intends to await coordination and concurrence on the proposed changes to FAA Orders 8260.19 and 8260.46 before submitting the specification change. She further briefed that the change will not be implemented on individual procedures until such time as they are formally amended (up numbered), giving procedure proponents the opportunity to request communications in addition to those that will be automatically charted.

**STATUS: OPEN**

**ACTION:** John Bordy, FAA/AFS-420, to report on the status of revised guidance for standardized communications on STARs and DPs in FAA Orders 8260.19 and 8260.46.

**ACTION:** Valerie Watson, FAA/AJV-A250, will submit an Interagency Air Committee (IAC) Specification change for standardized communications on DPs and STARs after the revised guidance has been published in FAA Orders 8260.19 and 8260.46.

**[17-02-314 Charting of ILS Classification System for Category I ILS Approaches](#)**

Valerie Watson, FAA/AJV-A250, reviewed the issue. Doug Dixon, FAA/AFS-410, reported his office is not opposed to adding the suggested ILS facility performance classification codes language to Advisory Circular 121-118, however there is a new effort underway to examine Category I Autoland that may affect the current guidance. He stated that Flight Standards has placed this effort on hold until the larger task is accomplished. Doug said he will continue to track this item and report at the next meeting.

**STATUS: OPEN**

**ACTION:** Doug Dixon, FAA/AFS-410, will report on the outcome of the CAT I Autoland effort as it pertains to this proposal.

**[17-02-316 Improving OROCA to Meet FAR 91.177 Requirements](#)**

Valerie Watson, FAA/AJV-A250, reviewed the history and actions associated with the issue. She asked John Bordy, FAA/AFS-420, to brief his efforts to determine a revised Off-Route Obstruction Clearance Altitude (OROCA) definition and sanctioned use for flight planning purposes assuring compliance with 14 CFR, Part 91.177. John responded that many questions remain before that can be accomplished. He stated that he is still concerned that there is a need to include the Obstruction Evaluation/Airport and Airspace Analysis (OE/AAA) Program in the OROCA obstacle evaluation process. He said there are FAA documents such as the FAA Order 7400.2 and 14 CFR Part 77 that would need to be updated in order to ensure OROCA is on the list of items that are evaluated by OE/AAA.

Rune Duke, AOPA, stated that he was under the impression that it had already been decided that OROCA evaluation does not need to be part of the OE/AAA process, based on the fact that OROCA assessments use the same data as Minimum IFR Altitude (MIA) and Minimum Vectoring Altitude (MVA) assessments. If the OROCA assessment is using the same data and is updated on a weekly basis, this should be sufficient.

Rich Boll, NBAA, pointed out that even if a pilot is using an OROCA, they still have an assigned MIA/MVA and are still covered by Air Traffic Control.

After more discussion, it was clarified that inclusion of OROCA under the current OE/AAA process is not currently being requested. A Flight Standards determination is being requested to determine if the Aeronautical Information Manual (AIM), Instrument Procedures Handbook and the charted OROCA text may be revised to indicate that an OROCA can be used for flight planning purposes to assure compliance with 14 CFR, Part 91.177. The determination should be based on the assumption that OROCA is not protected by the current OE/AAA process, but that the OROCA assessments are run on a weekly basis and an OROCA NOTAM capability exists. John said he would work with John Blair, FAA/AFS-410, and others in Flight Standards to make that determination. If/when this determination is made, work will begin between AJV-A and the NOTAM Policy Office to establish the NOTAM process to update weekly OROCA assessments.

**STATUS: OPEN**

**ACTION:** John Bordy, FAA/AFS-420 and John Blair, FAA/AFS-410, will obtain a Flight Standards determination regarding allowing the use of OROCA values to assure compliance with 14 CFR Part 91.177, Minimum Altitude for IFR Operations.

**[17-02-318 Charting of Helicopter Route per RNP NAVSPEC 0.3](#)**

Mike Webb, FAA/AFS-420, [briefed this issue](#). He reviewed the subject of Required Navigation Performance (RNP) 0.3 values on IFR Low Altitude RNAV Helicopter (TK) routes, including their potential use, aspects of databasing/communicating the RNP values and charting them in association with the subject airways. Mike asked if, in addition to depicting the RNP value along the charted airway itself, there should be a “PBN box” added to the body of the Low Altitude Enroute charts, listing NAVSPEC information for routes in tabular form. Valerie Watson, FAA/AJV-250, said she would prefer a legend note associated with TK routes stating that they are RNAV 2 unless otherwise specified. The group concurred with this suggestion and agreed there is no need for a separate RNP box.

John Collins, ForeFlight, asked if anything needs to be filed on a flight plan to indicate the capability to fly RNP 0.3 routes. Rich Boll, NBAA, asked if there will be a PBN code of RNP 0.3 assigned to the routes that will be entered into ERAM (En Route Automation Modernization). Mike said that they are not yet ready to update flight plan standards to add a new code for RNP values and asserted that pilots are responsible for filing for only what they are capable of. T.J. Nichols, FAA/AFS-420, emphasized that the system relies on pilots self-reporting their capabilities. Rich said pilots understand this and the Operational Approval Guidance Table on the FAA Flight Planning Information website covers it. Valerie asked Mike when he expects ERAM to be updated. He said they are waiting to see what develops internationally as far as standardization the ICAO Master Codes list before making changes to ERAM. In the meantime, he feels that

this gap is covered because pilots understand that they are ultimately responsible for filing for routes they are capable of flying.

Scott Jerdan, FAA/AJV-A310, asked if there will be associated Class E Airspace changes. Paul Gallant, FAA/AJV-1130, said that currently the airspace parameters do not consider RNP, but that may need to be accommodated in the future. He said his office will consider adding specific widths to the legal descriptions.

Valerie stated that AJV-A will need to assign RNP values to airways as per the 8260-16 forms (which have been revised to accommodate RNP airway values) and that will require a National Airspace System Resource (NASR) database enhancement. Brian Murphy, FAA/AJV-A130, said that this NASR enhancement has been discussed but not yet implemented and added that the Coded Instrument Flight Procedures (CIFP) will also require update to accommodate RNP values.

Valerie asked Mike when to anticipate publication of the first RNP 0.3 TK Route. Mike said this would likely happen within the next year.

**STATUS: OPEN**

**ACTION:** Mike Webb, FAA/AFS-410, will provide an update on anticipated publication dates for addition of RNP 0.3 values to TK routes.

**ACTION:** Scott Jerdan, FAA/AJV-A310, and Brian Murphy, FAA/AJV-A130, will report on progress to add an RNP attribute in the airway resource in NASR and to update the CIFP.

**ACTION:** Valerie Watson, FAA/AJV-A250, will submit an IAC specification change to support depiction of RNP values on TK Routes on IFR Enroute Low Altitude charts.

**[18-01-320 Publish Center Surface Boundaries in NASR](#)**

Valerie Watson, FAA/AJV-A250, reported that AJV-A is now posting the requested ARTCC Surface Boundary data on the AJV-A Aeronautical Data website. Brian Murphy, FAA/AJV-A130, said that the data is updated and posted every 28 days. There was agreement that all actions have been fulfilled and this item could be closed.

URL: [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/aero\\_data/Center\\_Surface\\_Boundaries/](https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Center_Surface_Boundaries/)

**STATUS: CLOSED**

**[18-01-322 Recognition of Specific PERM NOTAMs as Authoritative Source](#)**

Lynette McSpadden, FAA/AJR-B3, reviewed the topic and [provided an update](#). Lynette stated that she had reviewed the issue of who has authority to cancel NOTAMs and determined that FAA Flight Service has had the authority to cancel NOTAMs since 1977. She then briefed the numbers and types of PERM NOTAMs that

are currently active in the system ([See Slide #7](#)). She said her office is continuing to reach out to those airports that have outstanding PERM NOTAMs to encourage them to cancel them.

Lynette then stated that once a NOTAM is published in the Chart Bulletin section of the Chart Supplement, the NOTAM can be cancelled. She suggested that perhaps the scope of the Chart Bulletin could be expanded to contain publication of some of this PERM NOTAM information. Valerie Watson, FAA/AJV-A250, explained that the Chart Bulletins are only used to update certain critical between-cycle changes to VFR Charts. Rune Duke, AOPA, pointed out that most PERM NOTAMs do not affect published data on VFR Charts, but revise information primarily published in the Airport Facility Directory portion of the Chart Supplement.

Lynette stated that as she has confirmed that the FAA has the ability to cancel NOTAMs, the next step is to identify what types of PERM NOTAMs could be accepted by AJV-A as source to initiate a NASR revision and subsequent chart change. She provided a list of the types of data changes recommended for the initiation of a chart change ([See Slide #4](#)). She said she is also continuing to look into which FAA offices, in addition to Flight Services, could have or could be granted the authority to cancel NOTAMs.

**STATUS: OPEN**

**ACTION:** Lynette McSpadden, FAA/AJR-B3, will continue to investigate how the FAA can cancel PERM NOTAMs on behalf of an airport and who within the FAA has the authority to do so.

**ACTION:** Lynette McSpadden, FAA/AJR-B3, and Scott Jerdan, FAA/AJV-A310, will report on progress of identifying types PERM NOTAMs that can be accepted as source to initiate a NASR/chart change.

**[18-01-323 Standardizing the Labeling of Parking Areas on Airport Diagrams](#)**

Valerie Watson, FAA/AJV-A250, reviewed the issue. Rune Duke, AOPA, stated that he is in continuing discussions with the Office of Airports and others and feels that progress is being made toward solving this issue. He briefed that letters have been sent by AOPA to FAA executives and that there has been Congressional interest in the issue. He is expecting a conclusion by the next ACM meeting.

**STATUS: OPEN**

**ACTION:** Rune Duke, AOPA, will continue to coordinate with the Office of Airports to sanction use of the proposed terms and update their relevant guidance/documents.

**ACTION:** Valerie Watson, FAA/AJV-A250, and Rune Duke, AOPA, will submit the new parking area definitions for publication in the Pilot/Controller Glossary (PCG) of the Aeronautical Information Manual (AIM) after the Office of Airports has updated their documentation to support them.

**ACTION:** Valerie Watson, FAA/AJV-A250, will revise the Interagency Air Committee (IAC) Specifications and the Chart User's Guide after the new parking area definitions have been published in the Pilot/Controller Glossary (PCG) of the Aeronautical Information Manual (AIM).

**ACTION:** The Airport Mapping Team, FAA/AJV-A240, will research possible outreach to airport proponents in collecting the standardized airport diagram parking area terms after the above steps have been accomplished.

### **18-02-327 IAP Chart Modernization**

Rich Boll, NBAA, [provided an update](#) on progress of the IAP Chart Modernization Workgroup. The Workgroup met several times over the last 6 months and, based on the initial proposal, they have developed prototypes and expanded ideas for improving the Instrument Approach Procedure (IAP) chart layout. The primary proposed revisions involve incorporation of inoperative components into the minima tables, deletion of corresponding notes, and replacement of the current airport sketch with a skeletonized thumbnail sketch. He made a point to stress that every airport with a public-use IAP will have a full-sized Airport Diagram published in the Terminal Procedures Publication (TPP) that will provide users with a detailed airport layout. He then showed the audience several prototypes of expanded Airport Diagrams and reformatted IAPs.

Rich then discussed some issues that still need resolution. He asked the military members in the audience if the military ceiling and visibility minimums could be removed from the charts ([See Slide #12](#)). Valerie Watson, FAA/AJV-A250, pointed out that the military ceiling and visibility are not provided on the procedure source document, but are calculated and added to the minima tables by the charting offices. George Bland, USAF, said that for now, the military minima still need to be charted. Rich asked if the workgroup could start a dialog with the branches of the military to see what can be done. George said yes, they can begin that conversation. Dave Stamos, NGA, said that they only require that the visibility remain. Valerie pointed out that in the current proposal the visibility will remain and the visibility provided in parentheses with the military ceiling is a repetition of the visibility already provided on the source document.

Rich then showed a workgroup proposal to move the “1800 RVR, authorized with use of FD or AP or HUD to DA” note from the notes box in the briefing strip to the revised minima section as shown on his example ([See Slide #13](#)). There was positive feedback from the audience regarding this suggestion.

He then shared the FAA/AFS-400 feedback that he had received ([See Slide #14](#)) with particular attention to the concern about the loss of VGSI indication. He said this is a topic the workgroup plans to discuss.

Rich briefed that the workgroup will continue to meet with plans to continue to refine the proposed IAP chart layout, solicit more feedback from users, and solicit additional Volpe Human Factors Office feedback. Rich said he plans to present a final recommendation to the ACM at the next meeting.

### **STATUS: OPEN**

**ACTION:** Rich Boll, NBAA, will report on progress of the IAP Chart Modernization Workgroup.

**ACTION:** George Bland, USAF, to report on discussions regarding the proposal to remove the military ceiling and visibility values from IAP charts.

### 18-02-328 Standardizing RP\* Notation

Valerie Watson, FAA/AJV-A250, reviewed the topic. She stated that since the last ACM, the Interagency Air Committee (IAC) Specification change that standardizes the position of the asterisk in the RP notation on Visual Charts has been approved. The charts will be revised beginning with the 20 June 2019 effective date. The FAA Chart User's Guide will be updated and released in conjunction with the 20 June 2019 chart cycle. Revised Aeronautical Information Manual (AIM) guidance has been submitted and will appear in the 15 August 2019 edition. There was agreement that all actions had been fulfilled and this item could be closed.

**STATUS: CLOSED**

## VI. New Charting Topics

### [19-01-329 Class B Airspace on IAPs](#)

Valerie Watson, FAA/AJV-A250, introduced the issue of depiction of Class airspace on pre-composed Instrument Approach Procedure (IAP) charts and Charted Visual Flight Procedures (CVFP) by reminding the audience that this topic had been [proposed previously in the ACM](#) arena and closed without support. She stated that because this issue had resurfaced as a recommendation from a Safety Risk Management panel, she would like the audience to re-examine the idea and provide input.

Jose Colon, FAA/AJI-151, and Charlotte Boyd, contact support for FAA/AJI-314, [presented the new recommendation](#). Charlotte explained that ATO Safety identified a risk involving Class B airspace excursions and recommended investigation of the depiction of Class B airspace (sector boundaries, surface & ceiling altitudes) on IAP charts and CVFPs to provide situational awareness. Jose presented a number of prototype charts with Class B airspace depicted.

Michael Stromberg, UPS, asked if the safety panel had considered application of Class B Airspace on Departure Procedures (DPs) and Standard Terminal Arrival (STAR) charts. Valerie reminded the audience that because these procedures cover such large geographic areas and because currently the FAA is limited by page size, FAA-produced DPs and STARs are not currently depicted to scale, making depiction of airspace boundaries on those charts impossible.

Mike then suggested that technology will likely eliminate the need for a paper solution. On a digital chart, a pilot can turn layers of information on and off as needed. Valerie explained that digital solutions exist today. Jeppesen supports the capacity for digital overlay of Class airspace onto cockpit display of these procedures and ForeFlight has developed this capacity for overlay of FAA-produced charts.

Rich Boll, NBAA, stated that he understands and has experienced the issues the Safety Panel is attempting to solve, however he believes that airspace depiction on IAPs or CVFPs goes beyond the intended purpose of those charts. Additionally, he believes it would add too much chart clutter and compromise the depiction of the procedure itself. He also stated that the airspace excursions are typically happening outside the area covered by an IAP. He emphasized that it is incumbent upon the pilot to ensure that they have the right charts and information during preflight. He believes that there are other more appropriate places to get this data than on an IAP or CVFP chart and that this is primarily a pilot training issue.

Rune Duke, AOPA, stated that when AOPA assessed this proposal, they concluded that adding Class B airspace to the IAPs and CVFPs would result in too much clutter and would compromise the integrity of the chart. He stated that pilots would prefer to use electronic depictions for this information.

At the end of the discussion, Valerie asked the group if there was support for the depiction of Class B airspace on pre-composed IAP and CVFP charts. There was agreement that a charting solution is not the answer. The audience did express support for other electronic solutions.

**STATUS: CLOSED**

### [19-01-330 Updating Terminal Procedure Publication \(TPP\) Inop Components or Visual Aids Table](#)

Valerie Watson, FAA/AJV-A250, briefed the topic on behalf of the proponent Tony Lawson, FAA/AJV-A160. The proposal recommends an update to the Inoperative Components or Visual Aids Table published in the Terminal Procedure Publication (TPP). The change will explain that when Approach Lighting with Sequenced Flashing Lights (ALSF) 1 & 2 type systems are operated as a Simplified Short Approach Lighting System (SSALR), or when the sequenced flashing lights are inoperative, there is no effect on visibility for ILS lines of minima. The proposal recommends that a note providing that clarification be added to the explanatory text preceding the table.

John Bordy, FAA/AFS-420, reported that he had already spoken with Matt Harmon, FAA/AFS-410, on this recommendation. He commented that his office has received questions on this issue and agreed that clarification is warranted. John said that AFS-400 would like to circulate the proposed change within Flight Standards before moving forward. Once he receives the approval for the final wording, he will forward that to Valerie Watson, FAA/AJV-A250, who can then process the Interagency Air Committee (IAC) specification change to update the Table.

#### **STATUS: OPEN**

**ACTION:** John Bordy, FAA/AFS-420, will circulate the proposed update to the Inoperative Components or Visual Aids Table within FAA/AFS-400 and provide input to Valerie Watson, FAA/AJV-A250.

**ACTION:** Valerie Watson, FAA/AJV-A250, will process an IAC specification change to update the Inoperative Components or Visual Aids Table after receiving the final FAA/AFS-400-approved wording.

### [19-01-331 Hotspot Information on Departure/Arrival Charts](#)

Jorge Arbona, FAA/AFS-ATL-DELTA-CMO-27, and Brian Dempsey, Flight Safety International, [briefed the new recommendation](#). Jorge said that this proposal is in response to an FAA Safety Recommendation regarding areas that have a high volume of pilot deviations. He is part of a team working to find solutions to mitigate the deviations.

Jorge stated that users flying the RUUDY SIX DEPARTURE out of Teterboro Airport (TEB) experience an inordinately high number of pilot deviations (See [Slide #3](#)). After analysis of this specific Departure, a list of four safety concerns (See [Slide #8](#)) was generated. The recommendation presented to mitigate those safety concerns is the addition of airborne “hot spots”, strategically located and explained, to inform pilots of areas of potential concern, similar to the hot spots currently in use on Airport Diagrams. Jorge presented an example of the RUUDY SIX DEPARTURE with the addition of three proposed airborne hot spots (See [Slide #10](#)). Brian then presented information on the psychological methodology behind the recommendation and reasoning as to why the use of hot spots might be effective. (See [Slides 14-15](#))

The proponents recommended the addition of hot spot information to the RUUDY SIX DEPARTURE for a trial period of six months to see if a reduction in the number of pilot deviations would result. If a marked

reduction in pilot deviations at the test site can be documented, it is recommended that similar changes could then be implemented in other locations with high numbers of deviations.

Rune Duke, AOPA, asked what criteria would be used to determine which procedures qualify for the addition of hot spots. Brian said that if the test at TEB proved successful, a workgroup would be formed to establish criteria.

Michael Stromberg, UPS, commented that pilots need to read and understand the chart. He said calling attention to areas of concern may have the effect of making the rest of the chart seem less important. He also pointed out that Airport Diagram hot spots are different because there is no defined path.

Valerie Watson, FAA/AJV-A250, expanded on this line of thinking, explaining that hot spots on Airport Diagrams are used to highlight confusing ground locations on the airport so that pilots can plan how to approach and transition through them. On a Departure Procedure, she pointed out that the planning has been done for the pilot in the form of published headings and altitudes that he is expected to follow.

Rich Boll, NBAA, said that that he has a lot of personal experience with the issues at TEB. He said it is important to understand the reasons why these deviations are occurring before implementing a solution. If the problems at TEB go beyond pilots having trouble reading the chart, this solution will not fix it. He also does not like the idea of adding clutter to the chart. He pointed out that there have been 12 Notices to Airmen issued at TEB in an attempt to solve these issues and they have not fixed the problem. Several others in the audience also stressed that it is important to find the root cause of these pilot deviations before deciding on a solution.

Valerie stated that she knows of no mechanism within the FAA to publish a new item on a chart as a test case. The Interagency Air Committee (IAC) charting specifications are shared with the military and changes to the charts need to be vetted and formally approved through that group. Additionally, she feels that using hot spots to highlight certain elements on a procedure as more important than others introduces a legal liability issue. She asserted that it is important that pilots comply with ALL published procedural elements and underlining only selected attributes as more crucial than others is legally problematic.

Rich suggested, as an alternative to the proposed hot spot solution, the publication of an Attention All Users Page (AAUP) for locations such as Teterboro that experience a high number of deviations. He showed the audience a [prototype AAUP](#) for TEB with recommended wording that he suggested may help to mitigate the problems at that location. He pointed out that an AAUP can give a pilot a lot more information than the brief explanatory text of the proposed hot spots. Rich stated that he recognizes that Departure AAUPs are not currently used specifically to mitigate pilot deviations, but suggested that if approved, this may be a good solution.

Rich added that he would not recommend the addition of large numbers of new AAUPs as they are not necessary at most airports. He stated that the first step should always be to try to amend the procedures that are believed to be causing the deviations. Rich acknowledged that Flight Standards will have to set criteria for when an AAUP is authorized and should be used only after other mitigations have been pursued.

Valerie asked the group firstly if there was support for the depiction of hot spots on Departures and Arrivals as presented in the original proposal. There was general agreement that the addition of airborne hot spots on Departures and Arrivals was not a good solution. She then asked the group about the proposal to publish an AAUP to address the pilot deviations and historical problem at TEB. There was unanimous support among the pilot audience for an AAUP.

Based on ACM support, Rich will work with Jorge and Brian to initiate coordination for the publication of the proposed Departure AAUP for TEB. Valerie said that the publication specifications already exists for Departure AAUPs, but that Flight Standards would need to approve the process and perhaps issue a waiver to support the publication for purposes of reduction of pilot deviation. If it proves successful, there was ACM support for the possibility of future AAUPs with set criteria as determined by Flight Standards.

**STATUS: OPEN**

**ACTION:** Rich Boll, NBAA, will coordinate with Jorge Arbona, FAA/AFS-ATL-DELTA-CMO-27, and Brian Dempsey, Flight Safety International, to initiate the publication request for an RNAV Departure AAUP for Teterboro Airport (TEB).

**[19-01-332 Charting Waypoints with Both Fly-Over and Fly-By Functions](#)**

Kevin Keszler, AFFSA, presented the new Recommendation Document. Kevin reviewed the current FAA Instrument Approach Procedure charting practice pertaining to the depiction of Fly-over (FO) versus Fly-by (FB) status at holding waypoints. He pointed out that the Interagency Air Committee (IAC) charting specifications state “Waypoints designated as a holding fix will be shown as fly-by, without the circle around the symbol. However, in the event the holding fix/waypoint is also designated in some other part of the procedure (i.e., IAF) with a fly-over function, then the holding fix/waypoint will be charted as a fly-over point”. This contradicts what is documented in FAA Order 8260.19, which indicates that the missed approach holding waypoint will be charted as a FO unless it is used as a FB on another segment of the procedure.

George Bland, USAF, said that the military charts depict the holding waypoint as FO unless it is used as FB in another part of the procedure, which is completely opposite to the FAA standard. He also pointed out that it causes confusion when the symbols do not match between the planview and the missed approach icon box.

Kevin showed the audience the current language used for waypoints from the 8260.19H, IAC Charting Specifications and the Aeronautical Information Manual (AIM), along with suggested changes to the language in all three that would support the current military standard. He pointed out that the coding of dual-use waypoints is not an issue for the flight management systems so no change there is required.

Valerie Watson, FAA/AJV-A250, commented that the current FAA charting practice has been in place for nearly 15 years and there have been no reports of pilot confusion. She explained that the current FAA process was agreed upon based on the thinking that it is unnecessary to chart these points as FO because pilots know that in establishing a hold, they are *required to fly over* the waypoint/fix on which the holding pattern is predicated. Valerie said that the FAA does not feel it is necessary to revise over 7,000 charts to

“fix” something that has not been shown to cause confusion in the pilot community. She also pointed out that in the interim period, as the 7,000 charts were in the process of being revised, there would be a mixture of contradictory depictions and that *would* cause confusion. She suggested that a more practical solution would be to clarify the guidance to ensure it supports what is currently being charted. The audience agreed.

Kevin and George both stated that they concur with the decision to not change the FAA charting standard as long as the guidance is updated to support it. This includes updates to FAA Order 8260.19 and the AIM. Kevin agreed to draft proposed language revisions to the AIM guidance and submit to Valerie, who will then coordinate with Flight Standards and the AIM office.

John Bordy, FAA/AFS-420, will work to revise the 8260.19 text to agree with the current charting standard.

**STATUS: OPEN**

**ACTION:** John Bordy, FAA/AFS-420, will report on the status of revised guidance in FAA Order 8260.19

**ACTION:** Kevin Keszler, AFFSA, will draft revised text for the AIM and submit to Valerie Watson, FAA/AJV-A250 for coordination.

**19-01-333 LED Lighting on Airfields**

Matt Harmon, FAA/AFS-410, [briefed the new topic](#) and provided a brief history on issues associated with the use of Light Emitting Diode (LED) lighting at airports. Matt explained that most incandescent lamp suppliers have been forced to become LED suppliers so the FAA has no choice but to change Runway Lighting and Approach Lighting Systems (ALS) to LEDs. He said there are currently no certified LED ALSs in the National Airspace System (NAS) though there are a number of High Intensity Runway Edge Lighting (HIRL) systems in place and users of Enhanced Flight Vision Systems (EFVS) have requested they be identified. In the near future, in addition to runway edge lighting systems, it is expected that ALS will also begin being installed with LEDs.

In order to increase awareness of LED lighting, Matt is recommending that the FAA modify the lighting symbols on Instrument Approach Procedure (IAP) charts to identify the presence of LEDs. He suggested adding an “L” to denote the presence of LED lighting, or modifying the symbol used on the chart ([See Slides 4-6](#)). He also recommends that a note be added to the airport remarks in Chart Supplement entries to indicate that LED lighting is in use (See [Slide #7](#)). He understands that updates to pilot guidance in the Instrument Procedure Handbook (IPH), Aeronautical Information Manual (AIM), and Chart User’s Guide will also have to follow.

Michael Stromberg, UPS, commented that because LED lights are not visible when using EFVSs, there have been experiments done adding Infrared signatures to LED systems, but he understands that is very expensive. Michael then asked if there could be a mix of LED and incandescent lighting at an airport. Matt said there would not be both types of lighting used in a single lighting system, but that there could be both LED and incandescent systems at a given airport.

Gary McMullen, Southwest Airlines, expressed concern that LED lights are overly bright. Matt responded that his office is aware of that problem and the intensity has been lowered at some locations. He recommended that pilots file complaints for lights that are too bright.

The question arose whether LEDs will be used for Runway Touchdown Zone or Centerline Lighting systems. Chris Hope, FAA/AFS-410, said that as the runway edge lights are tied to procedure minima, they are looking into that first. Rich Boll, NBAA, said that they would like to see all LED lighting identified, including touchdown zone lighting. Juergen Kuhnhenh, Lido, said that Lido supports the identification of LED lighting, but they would like more details on the impacts. He asked about minima credits depending on the type of runway lighting. Chris responded that minima credit is yet to be determined and that currently the focus is on impacts for flight planning.

Valerie Watson, FAA/AJV-A250, noted strong consensus of the audience for publishing the existence of LED lighting systems. She stated that, in the past, the charting offices could not pursue the publication of LED lighting systems because there was not a source for the data. She suggested working with the FAA Office of Airports to collect this data is the first step. Chris said his office is working with the Office Airports and are working toward getting this information added to FAA Form 5010, Airport Master Record. She stated that once a reliable source for LED lighting system locations is established, the charting offices will investigate the best way to communicate this information to users.

**STATUS: OPEN**

**ACTION:** Matthew Harmon, FAA/AFS-410, will continue to work with the Office of Airports to secure a source for the LED data.

**[19-01-334 Deletion of VFR Waypoint Tabulations from VFR Products](#)**

Rick Fecht, FAA/AJV-A214, presented the new recommendation. Rick showed the audience [three examples of VFR charts](#) to demonstrate the proliferation of VFR Waypoint Tabulations (that list VFR waypoint names and their geographic coordinates) and how much space they occupy on the chart. He pointed out that these waypoints are depicted graphically on the body of the chart in their correct geographic positions. This proposal recommends the deletion of the tabulated listings from the charts.

John Bordy, FAA/AFS-420, asked what the original intent was for adding the tabulations. Rune Duke, AOPA, stated that they were added in the early 2000s for pilots that were not equipped with GPS. He stated that they are not necessary anymore and AOPA supports their removal.

Rick Mayhew, FAA/AJV-A311, stated that if a user needed the published waypoint coordinates, they are easily accessible through other FAA sources such as eNASR and AIRNAV databases.

John Barry, FAA/AIR-6B1, asked if a note will be added to the chart to alert pilots where to go for the data. Valerie Watson, FAA/AJV-A250, stated that concurrent with the removal of the tabulations, AJV-A will put out a Charting Notice to alert pilots of the change and direct them to other sources for the data. There was agreement that this would be sufficient.

**STATUS: OPEN**

**ACTION:** Valerie Watson, FAA/AJV-A250, will submit an Interagency Air Committee (IAC) specification change for the removal of the VFR Waypoint Tabulations from VFR Charts.

**ACTION:** Rick Fecht, FAA/AJV-A214, will develop a Charting Notice for publication on the AJV-A website concurrent with the removal of the VFR Waypoint Tabulations from VFR Charts that will include notification of where users may find VFR Waypoint geographic coordinates.

**19-01-335 Charting of Unusable Airway Segments**

Jason Hughes, Garmin, briefed the new recommendation regarding the depiction of unusable airway segments on IFR Enroute Charts. He stated that when a segment of an airway is designated as unusable, it is unclear to pilots exactly what that means. Is everything along that airway segment unusable, or can pilots still fly it using RNAV? He recommends that the FAA clarify the definition of an unusable segment and make sure that the pilot guidance is clear. He suggested that if the segment is truly unusable under all conditions and with any equipment, it should be removed entirely from the charts.

Valerie Watson, FAA/AJV-A250, explained that airways are published from two sources. She said that the source for AJV-A to chart an unusable airway segment is FAA Form 8260-16. The legal (point-to-point linework) description for the airway is published as an airway docket in the Federal Register. She stated that as long as a segment is part of the legal description, it must be charted, whether that segment is designated “unusable” or not. Changing a legal description is a lengthy process and the “unusable” status for an airway segment is, in most cases, a temporary condition and may be revised at any time. Valerie explained that the specification for the charting of unusable airway segments was created many years ago, before the inception of RNAV in the NAS. She agreed with Jason that it is not clear whether an unusable airway segment on a conventional route can be flown using RNAV or not. Can a pilot file point to point to the next usable segment to transition the unusable part of the route? It is not clear and there is currently no explanatory documentation available.

There was a lot of discussion about how these unusable airway segments are being interpreted, highlighting the need for published explanatory material/guidance. Some pilots stated they believed these segments should not be used at all while others believe the routes can still be used with RNAV. Rich Boll, NBAA, stated that a flight plan can be filed for a route that is designated on the chart as unusable and it will be accepted; however, Rich stated he does not believe that a pilot can rightfully file for an airway segment that is published or NOTAM'd as unusable. Joel Dickinson, FAA/AFS-410, said that it depends why the segment is unusable, but either way, pilots can still navigate point-to-point on an unusable segment using RNAV. Valerie asked Joel if that point-to-point RNAV use of an unusable segment is documented for pilots in commonly available documents. Joel said that to his knowledge, it is not. Valerie stated that addressing this scenario is necessary and that the pilot confusion in the room highlights the problem. She said she believes that unusable airway segments and their sanctioned use needs to be defined and clarified by Flight Standards so it can be documented and made clear in the Aeronautical Information Manual (AIM), the Instrument Procedures Handbook and other resources available to pilots.

Jason pointed out that some data suppliers code the unusable segment of the airway in their database, while others do not. He asked if Garmin should be coding it. Valerie said that, in her view, if it is designated as unusable, it should not be coded in the database. She asked Joel about the coding aspect of these segments, but he did not state a Flight Standards opinion.

There was a consensus in the room that there is a need to provide more information to pilots to clarify the definition of unusable airway segments. Jason voiced that he would like to see clear guidance published by the FAA in the AIM, the Chart User's Guide and other relevant documents. It was suggested that AJV-A work with Flight Standards to come up with new language for the Chart User's Guide and possibly the AIM. Joel will also look into how it is defined in the Flight Standard documents and see if updates are necessary.

**STATUS: OPEN**

**ACTION:** Jennifer Hendi, FAA/AJV-A250, will work with Joel Dickinson, FAA/AFS-410, to develop explanatory guidance for the Chart User's Guide regarding Unusable Airway Segments.

**ACTION:** Joel Dickinson, FAA/AFS-410, will investigate how Unusable Airway Segments are defined in Flight Standards documentation and see if updates are necessary.

## Closing Remarks

Valerie Watson, FAA/AJV-A250, thanked the attendees for their participation and voiced special appreciation to Darrell Pennington and to ALPA for hosting the ACM.

Notices of the official minutes will be announced via email and provided via the Internet. The two website addresses (CG and IPG) are provided below:

- Charting Group – [http://www.faa.gov/air\\_traffic/flight\\_info/aeronav/acf/](http://www.faa.gov/air_traffic/flight_info/aeronav/acf/)
- Instrument Procedures Group – [http://www.faa.gov/about/office\\_org/headquarters\\_offices/avs/offices/afx/afs/afs400/afs420/acfi/pg/](http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs400/afs420/acfi/pg/)

Please note the attached Office of Primary Responsibility (OPR) listing for action items. It is requested that all OPRs be prepared to provide verbal input at the next meeting or provide the Chair, Valerie Watson (with an informational copy to Alex Rushton, Contract Support), a written status update. These status reports will be used to compile the minutes of the meeting and will serve as a documented statement of your presentation.

Appreciation to Jennifer Hendi, FAA/AJV-A250, and Alex Rushton, Contract Support to FAA/AJV-A250, for presentation assistance, conference support pre- and post-conference, and for taking detailed notes during the meeting and assisting with drafting the final Charting Group meeting minutes.

## VII. Next Meetings

ACM 19-02 is scheduled for October 22-24, 2019, hosted by FAA in the NOAA Science Center Auditorium, Silver Spring, MD.

ACM 20-01 is scheduled for **April 14-16, 2020**, hosted by FAA in the NOAA Science Center Auditorium, Silver Spring, MD.

## VIII. Attachments

- a. 19-01 Attendee Roster
- b. Office of Primary Responsibility (OPR)
- c. List of Abbreviations Used in Minutes