

Government/Industry Aeronautical Charting Meeting (ACM)
Meeting 24-01
Charting Group
April 24-25, 2024

CHARTING GROUP MINUTES

I. Opening Remarks

FAA Aeronautical Information Services (AIS) hosted the Charting Group Portion of the Aeronautical Charting Meeting (ACM) on April 24-25, 2024. This meeting was held virtually. Samer Massarueh, FAA/AJV-A223, opened the meeting on Wednesday, 24 April. Samer recognized and introduced Jennifer Hendi, FAA/AJV-A250, Chair of the Charting Group, and Jeff Rawdon, FAA/AFS-420, Chair of the Instrument Procedures Group. Samer provided an overview of the purpose of the ACM, his role as the facilitator, and the Zoom platform audio/visual rules of engagement.

II. Review Minutes of Last Meeting, ACM 23-02

The minutes from the ACM 23-02 meeting were distributed electronically via the [AIS ACM website](#) and were accepted as submitted with no changes or corrections.

III. Agenda Approval

The agenda for the 24-01 meeting was accepted as presented.

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

[Chart Supplement Update](#)

Alex Rushton, FAA/AJV-A241, presented an [update](#) on the Chart Supplement Modernization effort.

The briefing began with an overview of the XML Enhancement Project status ([Slide 3](#)). The Chart Supplement team is continuing to work on implementing Phase II of the enhancements and they plan to release the update for 16 May 2024. The update expands the XML to include the notices associated with Airport Facility Directory (A/FD) section entries.

The Chart Supplement Modernization initiative has had to slow due to changes in resources. Phase II is complete, and Phase III and Phase IV are currently being worked. [Slides 6-8](#) show the team's progress and the projected timeline for the phases.

Phase I of the Interagency Air Committee (IAC) 8 specification overhaul is complete, and the updated specification has been approved and published. New Requirements Documents (RD) and Editorial Changes (EC) are being written to the new document and processed as necessary.

[Slide 10](#) outlines the new FAA Order 7090.2, *Notices in the Chart Supplement*. This order establishes the responsibilities and requirements for submissions, revisions, or removals of Chart Supplement Publication Notices. The order is currently in FAA internal circulation and is expected to be released summer of 2024.

Alex then briefed on the effort to remove foreign data from the Chart Supplement ([Slide 11](#)). At ACM 23-02, the Chart Supplement team released a document detailing the items slated for removal and requested feedback from ACM stakeholders. They only received one response from the Cleveland Air Route Traffic Control Center (ARTCC). Chart notices are currently being worked on for the content that will be removed, and an IAC RD has been submitted to update the specification.

Dan Wacker, FAA/AFS-420, asked if FAA Order 7090.2 and the new IAC RD will go through Flight Standards for review. Jennifer Hendi, FAA/AJV-A250, replied that all RDs are coordinated through AFS-400 and AFS-800, however, this RD has not been finalized and circulated for coordination yet. Jeff Lamphier, FAA/AJV-A240, advised Dan that the Order review is coordinated through AJV-P, and he will investigate whether Flight Standards is part of that process.

Rich Boll, NBAA, asked if anything is done to advise users of the Chart Supplement when graphic notices are changed. Alex answered that the team is working on a day forward effort to publish the Office of Responsibility for all notices and that change includes the addition of an effective date. Rich then asked if the change is communicated in the National Flight Data Digest (NFDD). Alex said that is not part of their current process. Rich said NBAA would like to request that this information be added to the NFDD because more graphic notices are being published by the FAA and they are not getting published by 3rd party chart providers. He said they would also like to request that graphic notices be referenced in the A/FD remarks. Jeff Lamphier said he would take an action to investigate adding Aeronautical Chart Change (ACC) Items to NFDD add-on pages. He said they will also ensure graphic notices are cross-referenced in the A/FD entries.

John Collins, Boeing/ForeFlight, asked if XML enhancement samples can be sent out so providers can work with them to make sure they are prepared for the May update. Jeff reported that sample data was included in a Charting Notice published in March ([CN 24-02](#)).

Diane Adams-Maturo, FAA/AFS-420, asked if notices published in the Chart Supplement contain any National Airspace System (NAS) database information and/or aeronautical information that may require a Notice to Air

Missions (NOTAM). Jeff explained that is the responsibility of the proponent of the graphic. There is not a NOTAM process for a graphic notice, or any mechanism other than the proponent submitting a new graphic.

Aaron Jacobson, Boeing/Jeppesen, asked if there is a way to alert the public that a change has been made to a graphic. Alex replied that once the OPR information is added it will include a date of the latest revision. Aaron then asked if the date is visible in the XML. Alex replied that it is not. Odie Silva, FAA/AJV-A241, confirmed that Aaron was looking for a flag in XML to indicate that a notice had been changed. Odie said that is possible and that the option will be investigated.

Noise Abatement

Kent Duffy, FAA/APP-410, [presented](#) a briefing on the presentation of noise abatement information in the Chart Supplements. Kent explained the project is working to standardize how noise abatement information is communicated. The goal of this effort is to identify and provide a primary source for finding noise abatement information. His team developed a Best Practices guidance document to be used by airports when submitting entries for publication in the Chart Supplement. The FAA will also work to revise existing noise abatement entries in the Chart Supplement in accordance with the Best Practices. The guidance document is expected to be published in the fall of 2024.

John Collins, Boeing/Foreflight, pointed out that there are a few RNAV departure procedures that use radius-to-fix (RF) legs to avoid noise-sensitive areas. He questioned if pilots were aware of those procedures. Kent explained that the intent is that those procedures were requested to be filed as used for noise abatement.

JJ Biel-Goebel, Wisk Aero, asked if there are plans for a machine-readable version or shape files of the noise abatement areas. Kent replied that there is not, that it is all text-based.

Rich Boll, NBAA, asked if a scrub of the graphic notices already published was performed. Kent replied that has not been done yet. Rich pointed out that there are several noise abatement procedures that are regulatory. He asked if they would be identified as regulatory. Kent explained that there are not many of these, but the plan is to use the word “mandatory” if the regulatory component of the procedure is validated. Rich said NBAA supports that effort.

Jim McClay, AOPA, expressed concern for the potential ambiguity between the terms Mandatory versus Voluntary. He wants to ensure that it is very explicit when a procedure is mandatory rather than using curfew hours. Kent explained the desire to remove the ambiguity. If it is mandatory, the word mandatory will be stated. They don't want to use the term Voluntary since the majority are voluntary. Jim stated that he agrees and that it's not necessary to spell out Voluntary, but Mandatory should be stated.

John Johnson, FAA/AJV-A313 referenced ([Slide 13](#)) and explained that all times will need to be submitted in local time for the National Airspace System Resource (NASR) database. The times can then be converted to Zulu for the Chart Supplement. He then asked if instrument flight rule (IFR) procedures are included in this effort and if Kent had thought about how that will be maintained when the procedure name is changed. Kent said they are working on a plan to manage that.

Aaron Jacobson, Boeing/Jeppesen, asked if the data will be submitted as a text string or as a .pdf. Jeff Lamphier, FAA/AJV-A240, explained that data gets entered as a text string airport remark in NASR. The Chart Supplement team takes that text and places it in the Chart Supplement entry. The text string will also get published in the National Flight Data Digest (NFDD).

Kent closed the briefing by thanking Jeff Lamphier, Odie Silva, FAA/AJV-A241, and others in FAA/AJV-A for their help with this effort.

[GPS Interference](#)

Christina Clausnitzer, FAA/AFS-410, [presented](#) a briefing on the Global Positioning System/Global Navigation Satellite System (GPS/GNSS) signal interference, otherwise known as “Jamming” or “Spoofing”. Christina explained that these systems are vulnerable because the signals are very weak and easily overpowered. The signal is also not authenticated or encrypted so it is easy to deceive, and most devices blindly trust the signals that are received. There are many systems that are dependent on a valid GPS/GNSS signal. This includes communication, surveillance, safety, automation, and aircraft-specific functions. Also, support equipment and infrastructure are dependent on a valid signal.

Christina then explained jamming and spoofing. Jamming blocks the ability to acquire and track the signals. Spoofing mimics the GPS signal and can give the pilot false information. Pilots are trained to trust their instruments and follow standard operating procedures. Christina then played an audio example of a false alert. Hearing this disruption while flying can affect situational awareness and judgment. A pilot must now use their judgment to determine how to respond to the erroneous alarm. [Slide 8](#) shows how the rate of GNSS jamming and spoofing activity has sharply increased.

[Slide 9](#) demonstrates where and during which phase of flight a GNSS signal loss has occurred. More work is needed to determine how this risk can be mitigated. [Slide 9](#) shows where the hotspots are for these events in the Middle East particularly Beirut. They believe the spoofers and jammers are targeting primarily unmanned aircraft systems. Responses vary due to varying aircraft systems and locations. In the United States, we have had two major incidents. The first was in Denver and it affected trains, planes, and automobiles. The second was a bigger event in October 2022 in the Dallas-Fort Worth area.

[Slide 8](#) lists the short-term actions that the FAA has taken thus far. Christina emphasized three takeaways for the ACM audience: (1) Notice to Air Missions (NOTAM) language will be enriched for when GPS disruptions occur, (2) the FAA will be reviewing GPS resiliency programs, and (3) the FAA will be reviewing everything that says “GPS Required” to ensure GPS is truly required. She emphasized the importance of reporting these events when they happen.

John Collins, Boeing/Foreflight, asked if there are any thoughts on reintroducing Long-Range Navigation (LORAN) as a backup for general aviation. Christina said that has been discussed, however, it looks like distance measuring equipment (DME) navigation is one of the best solutions for a backup. John said that doesn’t work for most general aviation aircraft.

JJ Biel-Goebel, Wisk Aero, asked what the turnaround time is from air traffic control (ATC) being alerted to an issue to a NOTAM being published. Christina said the NOTAM process has not been worked out yet. She said that it would take some time though because the event must first be verified and often by that time, the event is over. That is why they are looking into other means of communicating this information to pilots. JJ then asked if they have considered using Pilot Weather Reports (PIREPS) for reporting these events. Christina said that, for now, alerting ATC is the best way to report an event. JJ then asked how he could stay informed on this topic. Christina explained that the GPS Disruption Action Team is working to get information out to the public via FAA media networks.

Doug Wiley, ALPA ASO, pointed out that some applications have become available to help pilots identify GPS anomalies. He also said there are groups out there researching ways to collaborate and communicate areas of GPS anomalies.

V. New Charting Topics

[24-01-387 Weather Camera Locations on VFR Charts](#)

Westen Curry, FAA/AJR-B200, presented a new recommendation on behalf of the FAA's Weather Camera Program. The weather camera program was started in Alaska which added cameras in low visibility areas across the state to give pilots an opportunity to see weather prior to flight. They have been adding camera locations to the Alaska Visual Flight Rule (VFR) charts for the last decade. They have just gotten approval to add additional cameras to 160 sites in the Continental United States (CONUS) from now until 2030. The FAA Weather Camera Program recommends adding the locations of all FAA-owned weather cameras to the VFR charts. There are also many third-party cameras in use so another option could be to chart all the camera locations. Understanding that adding these locations may cause additional chart clutter, Westen is asking the ACM audience if they would like to see these locations charted in the CONUS.

Rich Boll, NBAA, agreed with the proposal. As an instrument flight rules (IFR) pilot, he only recently became aware of the weather camera website and thinks this information is valuable to both VFR and IFR pilots. He suggested maybe this information could be placed on the Airport Diagram or in the Airport/Facility Directory (A/FD) section of the Chart Supplement. Westen responded that the Alaska cameras are in the Chart Supplement. Vince Massimini, MITRE, pointed out that not all the cameras are located at an airport so there is still a need to show them on the charts and not just in the Chart Supplement.

Jim McClay, AOPA, explained that AOPA supports this program, and they try to highlight the use of weather cameras. However, he said he is interested in hearing from other pilots regarding whether having weather cameras on the charts is beneficial. If pilots will receive the weather camera information as part of their normal pre-flight weather briefing, having it on the chart may be unnecessary. Rich said he does not get that as part of his weather briefing.

Bill De Groh, APA, expressed some hesitation with charting the weather camera locations on the sectional charts. He thinks having it in the Chart Supplement is a good idea. Rich repeated Vince's point that not all cameras are located at an airport so having them on the chart is useful. Tom George, AOPA, said that cartographic judgment will need to be used in cases where there is too much clutter. The principal value of having them on the chart is for the off-airport cameras that are in more remote locations. These locations will not have a chart clutter issue. He believes that adding these locations in areas where there isn't too much chart clutter is a good idea.

Jeff Lamphier, FAA/AJV-A240, said the weather camera locations in Alaska are listed in the Chart Supplement associated data section in table format. He asked if the CONUS airport would be depicted in the same manner. Westen said yes.

Katie Murphy, FAA/AJV-A214, thanked Westen for his briefing. She said there is a need for some more internal coordination and that she can schedule a meeting to begin working out those details. Westen agreed.

STATUS: OPEN

ACTION: Katie Murphy, FAA/AJV-A214, will report on coordination efforts to chart weather camera locations on VFR Charts in the CONUS.

[24-01-388 Removal of 67:1 Obstacles from IAPs](#)

Krystle Kime, FAA/AJV-A222, presented a new recommendation on behalf of the Terminal Charting Team. Her team is requesting that the requirement to chart the 67:1 slope obstacles on Instrument Approach Procedure

(IAP) charts be removed from the Interagency Air Committee (IAC) specification. All obstacles requested for charting on the 8260-3 procedure form and the highest obstacle in the planview area, would continue to be charted.

Krystle explained how Terminal Charting has researched this specification requirement and has been unable to identify its origin or reasoning other than the “situational awareness” they may provide. It has been determined that this specification has been in place since at least the 1970s. However, a Volpe Study (DOT/FAA/AAR-95/2) published in 1995 determined that, according to pilots, obstacles were among the least important elements on IAP charts.

Krystle explained how the number of obstacles has increased greatly over time, and that both the reporting mechanisms and the databases to document obstacles have improved. This has resulted in many more obstacles on IAP charts. Increased obstacle depiction with the added factor of increasing complexity in procedure design has driven a notable increase in chart clutter in recent years. Additionally, the military does not chart these obstacles and only charts the highest obstacle and the obstacles requested on FAA Forms 8260-3 and 8260-5. Krystle showed chart examples [[page 2](#)] of before and after obstacle removal.

Jennifer Hendi, FAA/AJV-A250, thanked Krystle for the briefing and explained that Aeronautical Information Services has already discussed this recommendation internally with Flight Standards and determined that the next step is to present this to the ACM for audience feedback.

Rich Boll, NBAA, expressed support for this proposal. He said pilots are not using these obstacles for flying the approach.

Steve Madigan, Garmin, said this change is needed and overdue. He asked how it would be implemented on the charts. Krystle said a Requirement Document (RD) for the specification change must be processed first. Once approved Terminal Charting will work the charts by airport on a day-forward basis as they have time.

Paul Hannah, Lean Engineering/SAPOE, added that his organization conducted a survey asking pilots if they use the obstacle information found on the IAP and the answer was no. He expressed support for this change.

Jim McClay, AOPA, expressed support for this initiative.

Kevin Carter, NGA, explained that the DoD stopped showing these obstacles in 2011 and has not received any complaints. He continued by explaining that procedures are designed to give the required obstacle clearance so he would like to discuss the potential removal of all obstacle information from the charts. Kevin opened this question up to the group.

Jeff Rawdon, FAA/AFS-420, pointed out that before moving forward with this recommendation, Flight Standards would first conduct a safety review panel to determine whether this change may present a risk to the National Airspace System (NAS).

Pat Mulqueen, FAA/AJV-A440, expressed support for Kevin’s point. He said if pilots don’t care about the obstacles, maybe we don’t need to chart the final approach surface (FAS) obstacles either. He said this is worth investigating. Jeff Rawdon said if we are going to consider that, it should be kept separate because removing the FAS obstacles would require criteria changes.

Krystal asked the audience what they think about the necessity of charting the highest obstacle. Rich said he doesn’t think having that obstacle on the chart is useful.

Doug Wiley, ALPA/ASO, expressed support for the original recommendation and requested to be part of the discussion. He agrees that the team should also investigate not charting the FAS obstacles, however, sees value in charting the highest obstacle.

Aaron Jacobson, Boeing/Jeppesen, agrees that this is a good change proposal. He also agrees with removing the highest. He pointed out that terrain is added for situational awareness.

Jennifer summarized the discussion. Rich requested that the Safety Risk Management (SRM) panel include the removal of the FAS obstacles and the highest obstacle. This will save time in having to conduct an additional SRM later. Jennifer said she would take that back for discussion before conducting the SRM and would keep Rich informed of the plan.

STATUS: OPEN

ACTION: Vic Naso, FAA/AFS-420, will report on the progress of a Safety Review for the removal of 67:1 slope obstacles.

ACTION: Krystle Kime, FAA/AJV-A222, will draft an IAC Specification change for the removal of 67:1 slope obstacles pending the result of the Safety Review.

[24-01-389 Removal of Taxiways on IAP Airport Sketches](#)

Ron Haag, FAA/AJV-A221 presented a new recommendation on behalf of the Terminal Charting Team. The team is requesting that taxiways, aprons, and hardstands be removed from airport sketches for all airports that have a published airport diagram. Ron explained that Aeronautical Information Services (AIS) has begun an effort to publish airport diagrams for all airports that have public procedures. Whenever there is a change to a taxiway, apron, or hardstand, that change is made on both the airport diagram and airport sketch. Because of the much smaller scale on the airport sketch, such changes are often imperceptible. For example, Chicago O'Hare has 70 IAPs and whenever a taxiway changes, 70 IAPs must go into production to update a minor detail on the airport sketch.

It is important to note that this recommendation is being proposed independently from the Instrument Approach Procedure (IAP) Chart Modernization effort (ACM Item [18-02-327](#)), however, that recommendation also includes the removal of taxiways, hardstands, and aprons from airport sketches and no hazards were found during the safety review.

Rich Boll, NBAA, expressed support for the proposal. Rich also emphasized the importance of the use of the airport diagram. Bill de Groh, APA, Doug Wiley, ALPA/ASO, and Jim McClay, AOPA all expressed support for this recommendation.

Dan Wacker, FAA/AFS-420 asked if there was a reason in historical documentation or the International Civil Aviation Organization (ICAO) as to why these elements were initially charted on the airport sketch. Jeff Rawdon, FAA/AFS-420, informed the group that there is no requirement in ICAO Annex 4 for the airport sketch and indicated that this discussion was part of the safety review that was already conducted for IAP Chart Modernization.

Kevin Carter, NGA, pointed out that the military has 8400+ IAPs that do not have the taxiway or apron info and they have not received any complaints from the flying community. He expressed support for this recommendation.

STATUS: OPEN

ACTION: Ron Haag, FAA/AJV-A221, will submit an IAC Specification change for the removal of taxiways, aprons, and hardstands from Instrument Approach Procedures airport sketches.

24-01-390 Self-Serve Fuel

John Collins, Boeing/Foreflight, presented a new recommendation requesting the collection of self-serve fuel location data so that the locations can be charted on more airport diagrams. John said he understands that there is already a symbol in the Terminal Procedures Publication (TPP) for the charting of fuel locations on airport diagrams. There is also information regarding the fuels available in the Chart Supplement airport remarks section ([slide 3](#)). The problem is that there are very few symbols that are actually charted on airport diagrams, and finding the fuel at the airport can be difficult when it is unattended or located at a non-towered airport.

John's recommendation is for the FAA Office of Airports to collect the location of self-serve fuel so it can then be charted on the airport diagram. He said the location data should be databased in the National Airspace System Resource (NASR) so other charting providers can also utilize it. John reiterated that this is especially useful for airports that handle smaller general aviation aircraft. If the airport is attended, this is not an issue. However, if the airport is unattended or if the fuel is unattended, this makes refueling difficult.

Vince Massimini, MITRE, said that it is the airport's responsibility to provide this information to pilots. It should be clearly marked on-site rather than adding clutter to the airport diagrams. John said that most airports have attended fuel stations, and he is only requesting the self-serve locations be charted.

Mike Rottinghaus, FAA/AAS-110, said that airports do have a standard for putting up a sign to indicate fuel.

Jennifer Hendi, FAA/AJA-A250, asked Jeff Lamphier, FAA/AJV-A240, to explain the process for getting these icons on charts today. Jeff explained that self-service fuel is captured as an airport remark in NASR and then published in the chart supplement as an airport remark. Since there is no locational data for the self-service remark, the fuel symbol is charted only on airport diagrams at the request of the facility.

Jennifer asked if the Office of Airports can collect fuel location data. Drew Goldsmith, FAA/AAS-120, replied that they do not have the location data available to satisfy this request. He said all they can offer at this time is to help make the facilities more aware of this need and the process for them to request the symbol on the chart. Rich Boll, NBAA, asked if there is a possibility of collecting this data in the future. Drew replied that they would need help from the airport community to get this data, and it would take a long time to get something like that implemented. He said there is a mechanism in place today to get that information charted. There are also phone numbers that pilots can use to contact to facility for the fuel location. Rich then asked what the means are to communicate to the airport operators that they need to request this in order to get it charted on the airport diagram. Drew said that his office can work to inform the airports that there is a desire among the pilot community to include this information. They can also educate the inspectors and make them aware of how they can request this information. Jennifer added that the proponent can submit the data through the Aeronautical Chart Change (ACC) portal. Drew said he would take an action to educate the inspectors so they are aware that they can request the addition of a fuel symbol to the chart.

STATUS: OPEN

ACTION: Drew Goldsmith, FAA/AAS-120, will report on the progress of educating airport inspectors on the process of requesting self-serve fuel symbology on airport diagrams.

[24-01-391 MON Airport Symbol on IAP Charts](#)

John Collins, Boeing/Foreflight, presented a new recommendation to add a symbol to Instrument Approach Procedures (IAP) to indicate that they are used to satisfy Minimum Operational Network (MON) requirements ([Slides 2-3](#)). He recommends that the indication be documented on the FAA Form 8260-3.

John described the MON program concept of operations and how they are currently charted on the instrument flight rule (IFR) Low Altitude Enroute charts and listed in the Chart Supplement. He said he is concerned because he has found instances where an airport is listed as MON, however, it currently does not have an instrument approach procedure (IAP) that meets the MON program criteria. He said there should be a mechanism in place to use a Notice to Air Missions (NOTAM) to indicate that the airport is no longer MON-qualified.

Vince Massimini, MITRE, highlighted two issues. First, some of the MON approaches are not useable because of NOTAMs. Second, what criteria would be used to put a MON indication on a chart? There can be multiple approaches that meet MON criteria depending on the aircraft's equipment. An airport may have multiple approaches that can be used.

Rich Boll, NBAA, said NBAA concurs with John's proposal. He said he has seen the issues John is describing and thinks adding the icon to the charts quickly alerts the pilot to the approaches at an airport that qualify as MON procedures. He said adding it to the form is also a good idea because that would make the MON designation part of the NOTAM process.

Rick Niles, MITRE, also agreed that there should be an indication on the IAP and that a NOTAM could be issued if there is a MON outage.

Pat Mulqueen, FAA/AJV-A440, reminded the group that this issue has come up in the past and that the Very High-Frequency Omnidirectional Range (VOR) MON airports were picked because the VOR is going to remain. For temporary outages, a NOTAM will be issued, and it will affect the procedure. He did agree that long-term NOTAMs should be addressed.

Dan Wacker, FAA/AFS-420 asked if the recommendation will require changes to FAA Form 8260.3 and FAA Order 8260.19. Rich answered yes.

Dale Courtney, FAA/AJW-2630 cautioned that the chart symbol should be kept separate from the NOTAM discussion. He said there are complex issues with NOTAMs that are issued against a Navigational Aid (NAVAID) facility, and this may impact, or cause confusion regarding the availability of a MON approach.

Vince agreed that this may be two separate recommendations. First, putting a symbol on the approach chart. Second, how to handle a NAVAID being out of service and the process of communicating to pilots that this airport is no longer a MON airport.

Diane Adams-Maturo, FAA/AFS-420 said she would not like to see the MON indication added to the FAA's Part 97 procedures. She thinks it would be better to look at the NOTAM process for VORs.

Pat added that even if the MON designation was placed on the procedure source form, it wouldn't change anything unless there is a change to the NOTAM Order. Rich suggested that if a VOR that is tied to the MON is out of service, the NOTAM should also include language that states that the airport is no longer a MON airport.

Pat agreed and stated that this path would be quicker than changing the criteria. Pat said the NOTAM order would need to be changed to tie the VOR MON airport to the NAVAID going out.

Jennifer Hendi, FAA/AJV-A250 summarized the discussion and stated that the next step is for this issue to go to the ACM Recommendation Review Group (ARRG) for additional discussion.

STATUS: OPEN

ACTION: Jennifer Hendi, FAA/AJV-A250, will bring this issue to the ACM Recommendation Review Group for discussion and will report back at the next meeting.

VI. Outstanding Charting Topics

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

Mike Rottinghaus, FAA/AAS-110, reported that the draft of Advisory Circular (AC) 150/5340-18 has been sent out for internal review. The draft is expected to go out for external review in June. He said he expects the AC to publish this fall. Mike said after publication, he will look to see if any updates are needed in the Aeronautical Information Manual (AIM) or the Pilot-Controller Glossary (PCG).

STATUS: OPEN

ACTION: Mike Rottinghaus, FAA/AAS-110, will report on the status of the update to include the three new parking area terms in AC 150/5340-18, the Aeronautical Information Manual, and the Pilot/Controller Glossary.

[18-02-327 IAP Chart Modernization](#)

Rich Boll, NBAA, began the [briefing](#) by highlighting the outstanding ACM discussion concerning the titling of the instrument flight rule (IFR) minima when non-standard inoperative component minima are published. He explained that after further discussion following ACM 23-02, it is proposed that there will be no titling when the standard adjustments apply. When non-standard adjustments are published, the inoperative component will be listed in the title [Slides 4-7](#), i.e., ALS, TDZ, or RCLS. There were no concerns with this titling expressed by the ACM audience.

Diane Adams-Maturo, FAA/AFS-420, asked how Notices to Air Missions (NOTAMs) will be handled. Rich replied that now that we know how the charts are going to look, we can begin the necessary updates to FAA Order 8260.19 and investigate the NOTAMs to make sure that is covered.

Jennifer Hendi, FAA/AJV-A250, reported that the necessary changes to Interagency Air Committee (IAC) specification 4 have been drafted, however, it will be on hold until the criteria and form changes are determined.

Jeff Rawdon, FAA/AFS-420 informed the group that his responsibilities in the Flight Procedures and Airspace Group have shifted and his role of working on topics related to charting has been reassigned to Vic Naso, FAA/AFS-420. Vic agreed that the action for the Flight Procedures and Airspace Group could be given to him.

Jennifer summarized the discussion and said that the work of the Instrument Approach Procedure (IAP) Chart Modernization workgroup is now complete. All remaining actions related to the implementation of the criteria and charting specifications are actions for the FAA.

STATUS: OPEN

ACTION: Vic Naso, FAA/AFS-420, will report on the FAA Order 8260.19 updates necessary to implement the IAP Chart Modernization recommendations.

ACTION: Jennifer Hendi, FAA/AJV-A250 will report on the status of the IAC Specification change for the IAP Chart Modernization recommendations.

19-01-333 LED Lighting at Airfields

Matt Harmon, FAA/AFS-410, reported that since the last ACM, the light emitting diode (LED) lighting workgroup has met and discussed the collection and charting of LED data. He said there was an agreement to chart an “L” to indicate LED lighting. Matt said that in the interim, his office will list all airfields with LED lights on the AFS-410 enhanced flight vision systems website. This is a temporary solution until an LED lighting indication can be charted. He said the changeover rate to LEDs is very slow. Matt reiterated that he is still working through how to collect this data and how to publish it and he would like to leave this issue open until that is complete.

Aaron Jacobson, Boeing/Jeppesen, asked if this applies to all lighting at an airfield or only approach lighting systems (ALS). Matt replied that this is only for ALS for now because they are FAA-owned, and the other lights are owned by the airfield. That makes it difficult to collect the data.

Krystle Kime, FAA/AJV-A222, asked Matt to clarify that the intent was to have an LED symbol charted on instrument approach procedures (IAP). Matt confirmed. Krystle said terminal charting was not part of the workgroup meeting and she would like to ensure they are included in any future meetings.

Julie Morgan, FAA/AJV-A310, pointed out that if the long-term expectation is to have LED lighting on the charts, the data must first be in the National Airspace System Resource (NASR) database. She emphasized that the Aeronautical Data Team needs to be part of any conversation related to data requirements.

Matt committed to future discussions with the appropriate FAA offices and said he would report back at the next meeting.

STATUS: OPEN

ACTION: Matt Harmon, FAA/AFS-410, will report on the progress of the LED lighting workgroup to develop data and charting requirements for LED lighting.

20-02-348 NASR Improvements for ARTCC/RCAG Frequencies

Brian Murphy, FAA/AJV-A350, reported that National Airspace System Resource (NASR) enhancements are still on hold. He said the improvements for the databasing of Air Route Traffic Control Center (ARTCC) frequencies are still planned to be included in the large database revision, however, this will be a major undertaking and is going to take time. Brian said if anyone has feedback related to NASR or the CSV file, he encourages the use of the [Aeronautical Inquiry Portal](#). Brian said he will continue to provide updates on the status of this item.

STATUS: OPEN

ACTION: Brian Murphy, FAA/AJV-A350, will report on the status of the request to improve the database of ARTCC frequencies in the NASR database.

[21-01-351 Non Air Carrier Runways in the Chart Supplement](#)

Alberto Rodriguez, FAA/AAS-002 [briefed](#) on this issue. He said the Office of Airports is working to establish a new field in the Airport Master Record (AMR) Runway Data section to identify runways at certificated airports that are not available for air carrier use. This data will be captured in the Airport Data and Information Collection Portal (ADIP) as shown on [slide 3](#). The ACM workgroup recommendations are to add the remark to the relevant Chart Supplement entries and Airport Diagrams, update the language of the remark to “Not for Part 121 Air-Carrier Use of Foreign Air Carrier Equivalent”, and remove existing published remarks. See examples on [slide 6](#) and [slide 7](#). Alberto explained that the work is progressing, and they will be sending out more information when it becomes available.

Dan Wacker, FAA/AFS-420, asked if part 91 aircraft that are not qualified as air carriers can still use these runways. Alberto replied that every operator has their operating certificates. The requirement to use a runway is based on the certificates and many variables go into what makes a runway unusable to part 121. Dan asked if once this project is complete, air traffic control be unable to assign an air carrier to those runways. Alberto stated that it is not an air traffic decision. The pilot makes that decision. That is why this work is being done to make the information accessible to pilots.

Rich Boll, NBAA, asked if Jeppesen and Lido plan to add the same standardized note to their airport diagrams. Aaron Jacobson, Boeing/Jeppesen, replied that they plan to do so.

STATUS: OPEN

ACTION: Alberto Rodriguez, FAA/AAS-320, will report on the progress of the Non-Air Carrier Runways Working Group as it continues to investigate the data and publication requirements for the identification of Part 139 runways.

[21-02-362 Graphic Circling Restrictions on Instrument Approach Procedures](#)

Jeff Rawdon, FAA/AFS-420 informed the group that his responsibilities for this item have been turned over to Vic Naso, FAA/AFS-420. Vic reported that the Safety Review has been completed and this change was determined to be No Hazard. The next step is investigating the criteria and form changes that will be necessary.

Diane Adams-Maturo, FAA/AFS-420, suggested that current changes will be needed for the Aeronautical Information Manual (AIM) and the Aeronautical Information Publication (AIP). Vic agreed that there are a lot of pieces to this change that will need to be investigated. Jennifer Hendi, FAA/AJV-A250 said that the Notice to Air Missions (NOTAM) impacts are going to need to be discussed as well. Jennifer said the FAA will continue to work on this issue.

STATUS: OPEN

ACTION: Vic Naso, FAA/AFS-420, will report the investigation of the FAA Order 8260.19 and FAA Form 8260.3 changes necessary to graphically depict circling restrictions.

ACTION: Krystle Kime, FAA/AJV-A222, will draft an IAC Specification change for graphic circling restrictions pending the criteria and form changes.

[22-01-368 Special Use Airspace on IAPs](#)

Jeff Rawdon, FAA/AFS-420 informed the group that his responsibilities for this item have been turned over to Dan Wacker, FAA/AFS-420. Dan briefed that he has begun drafting language and is currently working through

the Flight Standards process for a change to criteria. He said he would be able to update the ACM at the next meeting with the proposed changes.

Steve Madigan, Garmin, asked if Dan could provide a general idea of what the criteria changes will be. Dan said they haven't yet come to a full agreement on what the changes will be. He said that there is agreement that, when needed, certain types of airspace will get charted, however, they are still working to define which types of airspace would and would not get charted.

STATUS: OPEN

ACTION: Dan Wacker, FAA/AFS-420, and the Flight Procedures and Airspace Group will report on updates to Flight Standards criteria regarding the charting of Special Use Airspace areas.

[22-01-369 Wildlife, Seashore & Similar Areas on IAPs](#)

Jeff Rawdon, FAA/AFS-420 informed the group that his responsibilities for this item have been turned over to Dan Wacker, FAA/AFS-420. Dan briefed that he has begun drafting language and is currently working through the Flight Standards process for a change to criteria. He said he would be able to update the ACM at the next meeting with the proposed changes.

Steve Madigan, Garmin, asked if Dan could provide a general idea of what the criteria changes will be. Dan said they haven't yet come to a full agreement on what the changes will be. He said there is agreement that these areas should not be requested for charting on the procedure source form.

STATUS: OPEN

ACTION: Dan Wacker, FAA/AFS-420, will report on the Flight Procedure and Airspace Group investigation into possible criteria changes regarding the charting of wildlife, seashore, and other similar areas on instrument approach procedures and what steps, if any, should be taken to remove currently charted instances.

[22-02-375 Charting Depictions of Stopways](#)

Jennifer Hendi, FAA/AJV-A250 reported that the Interagency Air Committee (IAC) specification change for the new symbol for stopways and blast pads was signed by the IAC. The Airport Mapping team is planning to begin implementation of the new symbol in Summer 2024. This item will remain open to report on the implementation of the change at the next ACM.

STATUS: OPEN

ACTION: Jennifer Hendi, FAA/AJV-A250, will report on the status of the implementation of the IAC Specification change for the revised depiction of stopways and blast pads.

[23-01-378 VASI/PAPI Locations](#)

Brian Murphy, FAA/AJV-A350, reported that his team has come up with a way to provide the visual approach slope indicator/precision approach path indicator (VASI/PAPI) location information in a CSV file. This data is expected to be released beginning in May 2024. A digital product note will be released to notify users where the file may be downloaded.

Jennifer Hendi, FAA/AJV-A250, reported that the original proponent of this issue, Jay Leitner, American Airlines, was not in attendance during the discussion. She will reach out to him after the meeting and if he is satisfied with this solution, the item will be closed.

Paul Hannah, Lean, SAPOE, said he worked on this request with Jay and is appreciative of the effort. He asked if there is an initiative to have airports validate the location of their VASI/PAPI so the data that is entered is as accurate as possible. Jon Gdowik, FAA/AJV-A313, replied that this data is entered directly from the FAA 7900 forms and the data is only as accurate as the proponent supplies. He said an [Aeronautical Inquiry Portal](#) can be sent if errors are found.

Drew Goldsmith, FAA/AAS-120, said the location data is flight-checked, but there is no formal effort by the Office of Airports to validate the data that is submitted. He said his office is unaware that there are issues with this data.

There was a lengthy discussion regarding possible reasons why the accuracy of the location data is in question. This was determined to be outside the scope of the original issue and Bruce McGray, FAA/AFS-410, and Dan Wacker, FAA/AFS-420, agreed to discuss the issue further outside of the ACM.

STATUS: OPEN

ACTION: Jon Gdowik, FAA/AJV-A313, and the Aeronautical Data Team will continue to investigate a way to make VASI/PAPI location information more accessible.

ACTION: Brian Murphy, FAA/AJV-A350, will report on the data release at the next ACM.

[23-02-379 Charting of Coincident Waypoints and Paved Runways on VFR Charts](#)

Jennifer Hendi, FAA/AJV-A250, reported that the Interagency Air Committee (IAC) Requirement Document has been submitted and is currently in the signature process. She said she will leave this issue open to report on the implementation of the change at next the ACM.

STATUS: OPEN

ACTION: Jennifer Hendi, FAA/AJV-A250, will report on the implementation of the IAC Specification change at the next ACM.

[23-02-380 Contour Lines on IAPs](#)

Jennifer Hendi, FAA/AJV-A250, reported that she reached out to Divya Chandra from the DoT's Volpe Center regarding how the removal of the contour lines will look in Electronic Flight Bags, particularly in night mode. Divya completed some testing and reported that the contours are still discernable without the lines. She said she believes this to be a helpful modification to the charts.

As a result of Divya's findings, an Interagency Air Committee (IAC) specification change for the removal of the contour lines has been submitted. Once signed, the plan will be for a day-forward implementation. Jennifer said ICAO Annex 4 will be reviewed this summer and a difference will be filed regarding the removal of the contour lines.

STATUS: OPEN

ACTION: Krystle Kime, FAA/AJV-A222, will report on the status of the IAC Specification change to remove the contour lines from instrument approach procedures.

ACTION: Jennifer Hendi, FAA/AJV-A250, will file an ICAO difference to Annex 4 regarding the removal of contour lines from IAPs.

23-02-382 Procedure Amendment Effective Date

Jennifer Hendi, FAA/AJV-A250, reported that the ACM Recommendation Review Group (ARRG) believes the current agency methodology of updating the procedure effective date on procedure amendments is appropriate. The group did agree that the current Aeronautical Information Manual (AIM) guidance could be confusing. Jennifer said Joel Dickinson, FAA/AFS-410, is planning to update the AIM as part of another project he is working on that includes several updates. The revised language will be ready to share at the next ACM. This issue needs to remain open as the AIM guidance is either revised or changed to point users to the Terminal Procedures Publication (TPP) explanation which we believe is correct and complete. Jennifer said she understands that this may not be the result that was hoped for, but it would be a big change to our current processes and to the criteria to back this up now and only change the procedure amendment date if the coding changed.

Rich Boll, NBAA, disagreed with changing the AIM. He said the procedure amendment date is charted so the pilot can compare a procedure that is charted with the date in the database. That was the intent of the original ACM issue from 2007 that added the procedure amendment date. Dan Wacker, FAA/AFS-420, said there are other changes that can be made to a procedure that will change the amendment date that will not affect the coding. Rich said that should not be the case and not what was intended in the original Recommendation Document (RD) from 2007.

Steve Madigan, Garmin, informed the group that there are many changes every effective date that rolls up the amendment date that do not affect the coded path of the procedure.

Bill de Groh, APA, said that it was his understanding from the original issue in 2007 that we needed to find a way to check that as the effective date changes, those procedures that have changed mid-flight can still be used because nothing procedurally has changed. Jennifer said it would be a huge undertaking to go back and make the changes needed to capture the date as originally intended. Rich said that change does need to be made because how it's being used now was not the intent of adding procedure amendment dates in the first place. John Collins, Boeing/Foreflight, agreed with Rich about the original intent of the 2007 RD.

Aaron Jacobson, Boeing/Jeppesen, suggested to follow-up on what causes the date to change. He said the date should not be changed if the coding hasn't changed. That is how Jeppesen looks at the data and will not change the date unless something affecting the coding has changed. Jennifer replied that the FAA never updated the date based solely on coding changes.

Jeff Rawdon, FAA/AFS-420, referenced Table 8-3-1 from FAA Order 8260.19. This table gives guidance to the procedure developer as to which process they need to follow to get a procedure updated. He said you can have amendments, abbreviated amendments, and Notice to Air Missions (NOTAM) that don't necessarily affect the coding of the procedure. Pat Mulqueen, FAA/AJV-A440, added that every procedure that gets amended goes through the coding team. They then update the Coded Instrument Flight Procedures (CIFP).

Krystle Kime, FAA/AJV-A222, stated that the guidance that is published in the TPP legend exactly describes how Terminal Charting has been implementing the procedure amendment effective date since the original specification change was implemented. Her team does not have a way to determine what has changed in the coding. Krystle thinks the Aeronautical Information Manual (AIM) should be updated to match the TPP, so we

are accurately explaining how the date is being used today, even if that was not the original intent. Then Rich should submit a new RD so the FAA can investigate providing the date that industry needs in the future. Jeff said, that for legal reasons, effective dates are still needed to document when a procedure has been revised that has nothing to do with coding. If it is decided that something needs to be done to capture a date for the coding, it will have to be captured differently because we still need a procedure effective date for the form. Krystle agreed.

Jennifer said the industry concerns have been heard and further internal discussions are needed before determining a path forward. She said she will update the group on the FAA investigation of this issue at the next ACM.

STATUS: OPEN

ACTION: Jennifer Hendi, FAA/AJV-A250, will report on FAA discussions regarding the procedure amendment effective dates and will report back at the next meeting.

[23-02-383 Identification of Radius to Fix Legs on IFPs](#)

Jennifer Hendi, FAA/AJV-A250, briefed that there was agreement at the ACM Recommendation Review Group (ARRG) that the FAA can accommodate the request to always show a track angle on track-to-fix (TF) legs on charts that contain a radial-to-fix (RF) leg.

Krystle Kime, FAA/AJV-A222, reported that she is reviewing the published procedures, but believes this issue is fully addressed in practice already. If a procedure has any RF requirement, all TF legs are charted with a track. If there is no RF requirement, track values can be left off. There is, however, an inadequate explanation of this in the Terminal Procedures Publication (TPP) legend. That will be addressed as part of the Interagency Air Committee (IAC) specification changes.

Aaron Jacobson, Boeing/Jeppesen, asked to clarify that this change is only for charts that have both RF and TF legs. Krystal replied yes.

STATUS: OPEN

ACTION: Jennifer Hendi, FAA/AJV-A250, will report back on the progress of the IAC Specification changes.

[23-02-384 Improvements to NASR CSVs](#)

Brian Murphy, FAA/AJV-A350, briefed that the team is continuing to investigate adding the additional data elements to the National Airspace System Resource (NASR) CSV files. He said that the FAA does not have this data currently in the database so this addition will require a NASR update. The Aeronautical Data Team is researching other ways to provide the data. Brian said he cannot provide a timeline now; however, he hopes to have a better update at the fall ACM.

STATUS: OPEN

ACTION: Brian Murphy, FAA/AJV-A350, will report back on the Aeronautical Data Team's investigation into adding the additional data elements to the NASR CSV files.

[23-02-385 Perpetual Access to Procedure Packets](#)

Pat Mulqueen, FAA/AJV-A440, reported that he had been investigating this recommendation, however, he has been getting a lot of pushback. Pat explained that upcoming changes to procedures, fixes, and routes are posted on the Instrument Flight Procedures (IFP) Gateway website for public comment several cycles before they become effective. There has been a lot of discussion about whether that information could be put in a repository for perpetual access. Concerns were raised about public access to the procedure developer's notes which are for internal coordination with air traffic control. Pat mentioned that he will report back on the results of his continued investigation into this topic. He is hopeful that if access cannot be granted through the IFP Gateway, other methods of providing this data can be found.

Rich Boll, NBAA, asked if he could get access to the procedure packets using a Freedom of Information Act (FOIA) request. Pat said yes, you can get access that way currently. He said for specific questions it would be better to reach out via the [Aeronautical Inquiry Portal](#). FOIA requests could be used if the desire is to get access to the entire procedure packet.

Steve Madigan, Garmin, said that he anticipated the pushback. He said this recommendation was brought to the ACM after being told several times to file a FOIA request. It's time-prohibitive to file a FOIA request every time they need to see an 8260-9 form. He suggested that access could be limited to industry rather than full public access.

John Collins, Boeing/Foreflight, thinks the information should be open to the public, not restricted to only industry. John said he doesn't think the forms would be misused, and having access will save everyone a lot of time by answering a lot of frequently asked questions.

Jennifer Hendi, FAA/AJV-A250, said this item will remain open for Pat to update the group at the next ACM.

STATUS: OPEN

ACTION: Pat Mulqueen, FAA/AJV-A440, will investigate perpetual access to IFP procedure packets and will report back at the next ACM.

VII. Closing Remarks

Samer Massarueh, FAA/AJV-A223, and Jennifer Hendi, FAA/AJV-A250, thanked the attendees for their participation and input on the issues discussed.

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

- [Charting Group](#)
- [Instrument Procedures Group](#)

Please note the action items for each issue. It is requested that all individuals with assigned action items be prepared to provide verbal input at the next meeting or provide the Chair, Jennifer Hendi, with 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.

VIII. Next Meeting

ACM 24-02 is scheduled for October 7-10, 2024.

IX. [Attendance Roster](#)