AERONAUTICAL CHARTING MEETING Charting Group Meeting – April 27 - 29, 2021

RECOMMENDATION DOCUMENT

FAA Control #21-01-353

Subject: Airport & Runway Lighting in the Chart Supplement

Background/Discussion:

While reviewing a recent approach and landing aid lighting issue, NBAA observed that the approach, runway, and airport lighting information is scattered throughout the sub-sections of an individual airport's entry in the FAA Chart Supplement. Below are some examples of the various lighting information and their location in the Chart Supplement entry for an airport:

- Rotating Beacon: Under the "AIRPORT NAME" section with any restrictions or operating times listed in the "REMARKS" section.
- Approach Lights, Runway Lights: Under the "AIRPORT NAME" "RWY" section
- Approach Lights & Runway Lights Pilot Controlled Lighting: Under the "SERVICES" section.
- VGSI Location: Under the "AIRPORT NAME" "RWY" section
- VGSI Limitations: Under the "SERVICES" section and "REMARKS" section (*note: work is underway to consolidate VGSI limitations under the "SERVICES" section*)

The Chart Supplement's legend for the "SERVICES" section fails to discuss anything related to airport, approach, or runway lighting. In fact, everything discussed in this section is completely unrelated to lighting:

	SERVIC	ING-CIV	L
S1:	Minor airframe repairs.	S5:	Major airframe repairs.
S2:	Minor airframe and minor powerplant repairs.	S6:	Minor airframe and major powerplant repairs.
\$3:	Major airframe and minor powerplant repairs.	S7: Major powerplant repairs.	
S4:	Major airframe and major powerplant repairs.	S8:	Minor powerplant repairs.
		FUEL	
CODE	FUEL	CODE	
80	Grade 80 gasoline (Red)	В	Jet B, Wide-cut, turbine fuel without
100	Grade 100 gasoline (Green)		FS-II*, FP** minus 50° C.
100LL 115	100LL gasoline (low lead) (Blue) Grade 115 gasoline (115/145 military	B+	Jet B, Wide-cut, turbine fuel with FS-II*, FP** minus 50° C
	specification) (Purple)	J4 (JF	(JP-4 military specification) FP** minus 58° C.
Α	Jet A, Kerosene, without FS–II*, FP** minus 40° C.	J5 (JF	(JP-5 military specification) Kerosene with FS-II, FP** minus 46°C.
A+	Jet A, Kerosene, with FS-II*, FP** minus 40°C.	J8 (JF	(JP-8 military specification) Jet A-1, Kerosene
A++	Jet A, Kerosene, with FS-II*, CI/LI#, SDA##,		with FS-II*, CI/LI#, SDA##, FP** minus 47°C.
	FP** minus 40°C.	J8+1	00 (JP-8 military specification) Jet A-1, Kerosene
A++10	00 Jet A, Kerosene, with FS-II*, CI/LI [#] , SDA ^{##} , FP** minus 40°C, with +100 fuel additive that improves thermal stability characteristics		with FS-II*, CI/LI [#] , SDA ^{##} ,FP** minus 47°C, with +100 fuel additive that improves thermal stability characteristics of kerosene jet fuels.
	of kerosene jet fuels.	J	(Jet Fuel Type Unknown)
A1	Jet A-1, Kerosene, without FS-II*, FP**	MOG	AS Automobile gasoline which is to be used as aircraft fuel.
	minus 47°C.	UL91	Unleaded Grade 91 gasoline
A1+	Jet A-1, Kerosene with FS-II*, FP** minus 47° C.	UL94	Unleaded Grade 94 gasoline
*(Fuel S	system Icing Inhibitor) **(Freeze Point) # (Corr	osion Inl	hibitors/Lubricity Improvers) ## (Static Dissipator Additive
NOTE: (Certain automobile gasoline may be used in specific	aircraft	engines if a FAA supplemental type certificate has been

Data shown on fuel availability represents the most recent information the publisher has been able to acquire. Because of a variety of factors, the fuel listed may not always be obtainable by transient civil pilots. Confirmation of availability of fuel should be made directly with the suppliers at locations where refueling is planned.

 OX 1
 High Pressure
 OX 3
 High Pressure—Replacement Bottles

 OX 2
 Low Pressure
 OX 4
 Low Pressure—Replacement Bottles

Recommendations:

NBAA believes that something as important as airport, approach, runway, and VGSI lighting information should not be in differing sections of the Chart Supplement, requiring the pilot to "hunt and search" for this critical information. Rather, NBAA believes that all lighting information at an airport should be collectively described in a dedicated "LIGHTING" section in the Chart Supplement. This section should also describe any requirements and/or restrictions on the use of these lighting aids.

If a complete consolidation under a single "LIGHTING" section is deemed not possible, then every effort should be made to consolidate as much of the lighting information as possible in a single, appropriate location. NBAA believes that the "SERVICES" section is not an appropriate location for this information.

Comments:

The recommendation effects:

- Interagency Aeronautical Charting Specification for the Chart Supplement
- The National Aviation System Resource (NASR) Database
- ACM-CG Agenda Item 19-01-333 LED Lighting at Airfields

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MEETING 21-01

Rich Boll, NBAA, presented a <u>new recommendation</u> regarding the publication of airport and runway lighting information in the Chart Supplement. He described how the presentation of airport lighting information is inconsistent and is scattered throughout the different subsections of the Airport/Facility Directory (A/FD) entries. He also said airport lighting is not adequately described in the Chart Supplement Legend. He questioned whether the Services section is the appropriate place for pilot controlled lighting information. He also noted that despite light information being published in the Services section, the legend for that section does not publish any lighting information. Rich recommended creation of a discreet lighting section in the A/FD entries and that all lighting information be consolidated in that location. He provided two

examples of his proposed changes (<u>slides 9-10</u>), pointing out that this change will also provide a location for the planned future addition of LED lighting information.

Jeff Lamphier, FAA/AJV-A240, voiced that further research into the issue would be required by his team before a decision could be made to revise the structure of the A/FD entries as Rich suggested.

Paul Hannah, Lean Engineering, said he fully supports the proposal to consolidate lighting information and standardization.

Valerie queried the audience to gauge support for this proposal. Gary McMullin, Southwest Airlines, Jim McClay, AOPA, Michael Stromberg, UPS, and Bill Tuccio, Garmin, all voiced their support.

Jeff Rawdon, FAA/AFS-420, asked about the level of effort that would be required to accomplish this proposed change. Valerie explained that all the data is in the NASR database and that the change is solely a matter of its arrangement in the Chart Supplement. Bob Carlson, FAA/AJV-A241, said his team would need to discuss this with their automation team to understand what would be required.

Valerie summarized there is pilot support for the proposal to arrange lighting information into a single section. Jeff Lamphier, FAA/AJV-A240, will investigate this proposal further and will report back at the next ACM.

STATUS: OPEN

ACTION: Jeff Lamphier, FAA/AJV-A240, will investigate the consolidation of lighting information under a single Lighting section in the Chart Supplement and report back at the next ACM.

MEETING 21-02

Samer Massarueh, FAA/AJV-A223, reviewed the issue. Jeff Lamphier, FAA/AJV-A240, reported that the Chart Supplement Team has begun investigating the recommendation to consolidate all runway and airport lighting in a single LIGHTING section of airport entries. He explained that there are four principle types of lighting information in the Chart Supplement and a specific purpose for the location of each. He explained that the information is parsed from various locations in the National Airspace System Resource (NASR) database. He said implementing this recommendation would be a significant change, with over 4,000 airports affected. He said this also would need a larger investigation to consider other factors such as pilot training, human factors implications, the impact on air traffic, etc. Jeff said he would like to poll the audience to determine the level of support before proceeding.

Rich Boll, NBAA, summarized that the issue arose because current airport lighting information is inconsistent and scattered throughout the different subsections of the Airport/Facility Directory (A/FD) entries. His recommendation for the creation of a discreet lighting section in the A/FD entries where all lighting information would be consolidated was received at the last ACM with overwhelming pilot support. For more information, see Rich's ACM 21-01 presentation.

Michael Stromberg, UPS-IPA, said new items get added to the products over time and are not always placed in the most appropriate location. He said this is an opportunity to better organize this information and he agrees with proceeding with an in-depth investigation. Doug Willey, ALPA, said the way the information is organized now, a pilot has to read the entire A/FD entry to make sure they get all of the information. He said that is a safety concern. Lev Prichard, APA, said the organization efforts are needed and he supports this effort.

Participants voted in an informal poll and there was audience agreement that the FAA should definitely pursue this recommendation. Based on this level of support, Jeff agreed to continue to investigate the feasibility of implementing the proposal.

STATUS: OPEN

ACTION: Jeff Lamphier, FAA/AJV-A240, will initiate a larger agency investigation into the consolidation of lighting information under a single lighting section in the Chart Supplement and report back at the next ACM.

MEETING 22-01

Jeffrey Lamphier, FAA/AJV-A240, briefed his team's investigation into the recommendation to consolidate airport and runway lighting into a single section within Chart Supplement airport entries. Jeffrey explained that the Chart Supplement is pulled together from a variety of sources and is put together in a desktop publishing application by a small team of employees. Some parts of the process are automated and other parts are manual. The Airport Remarks section is completely manual. To accomplish this recommendation, one third of the changes would be automated and two thirds of this effort would require manual movement of text and information. The team had several internal meetings on this effort and it was determined that they do not have the resources or the technology and automation capabilities at this time to accomplish it. All the information is already there in the airport entry and it would be a major impact to the organization to make this change.

Rich Boll, NBAA, thanked Jeffrey for evaluating the effort. He asked if there were any of the recommended changes that could be accomplished given the office's resources. Rich asked if requesting National Airspace System Resource (NASR) to better classify and organize lighting information and to make it more automated would make it easier for the Chart Supplement team to implement these changes in the future. Jeff said if NASR could be updated, it would help with automating the lighting elements in the Chart Supplement. Rich then asked about the PAPI lighting information that is currently found in both the Runways section and the Service section of the airport entry. He asked why PAPI lighting information is found in two locations and if they could be consolidated. Jeffrey said he would have to look at NASR to see where the PAPI source came from but he suspects it's because they came from different locations in NASR.

Scott Jerdan, FAA/AJV-A310, said this effort would be complicated and require research from the data side. He and Jeffrey haven't discussed the process from the data side, so he doesn't know what is manual and what is automated. He thinks the key factor for Jeffrey would be to determine if the build process could be done in a fully automated way. Scott said his team is also limited in what they can do in NASR. Rich asked if they could just split the lighting

information out from the service section and make it into a separate lighting section above the Service section as an incremental improvement. Jeffrey said his team can investigate that.

Valerie Watson, FAA/AJV-A250, asked if it is possible to modify NASR so the remarks that are currently in all caps could be entered in sentence case so that translation would not need to be manually done and the remarks could be pulled directly from NASR. Scott said that could be looked into.

Valerie suggested the Chart Supplement Team and the Aeronautical Data Team commit to internal discussions about the placement of lighting information (data and the remarks referenced to them) in the NASR database. Scott said his team would investigate and see if a cleanup of the data is needed. This will require collaboration to determine what is desired and where the problems lie. He also committed to looking into the all caps issue. Scott recommended leaving this item open for his and Jeffrey's teams to look into lighting data/remarks placement in NASR and in the Chart Supplement. This investigation will include the recommendation to move the remarks to a pilot controlled lighting subcategory above the Service section.

STATUS: OPEN

- **<u>ACTION</u>**: Jeffrey Lamphier, FAA/AJV-A240, will investigate the addition of a new subcategory for pilot controlled lighting information and report back at the next ACM.
- **<u>ACTION</u>**: Scott Jerdan, FAA/AJV-A310, and the Aeronautical Data Team will investigate the placement of lighting remarks in NASR.
- **<u>ACTION</u>**: Scott Jerdan, FAA/AJV-A310, and the Aeronautical Data Team will determine if remarks in NASR can be stored in upper/lower case rather than all caps.

MEETING 22-02

Jeff Lamphier, FAA/AJV-A240, said that though he agrees that the lighting information is not always found in the best place within the airport entries in the Chart Supplement, his team does not have time or resources to make the requested changes at this time. He said his team is working toward creation of a data inventory of the entire Airport/Facility Directory section to determine the source of each data element and whether or not it is automated. Once they have that inventory they can slowly work toward automation and better addressing stakeholder interests like this one.

Valerie Watson, FAA/AJV-A250, asked Jeff if his team could look into the smaller ask discussed at the last ACM regarding pilot controlled lighting information as a first step. Jeff said he can't commit to individual pieces, but rather needs to complete the full inventory before assessing individual change requests. Scott Jerdan, FAA/AJV-A310, said the Aeronautical Data Team will work with Jeff once there is a documented understanding of the individual data elements and where the data comes from.

Scott said he was asked to investigate if remarks in the National Airspace System Resource (NASR) database can be stored in upper/lower case rather than all caps. This would reduce the amount of modification required to ultimately publish those remarks in the Chart Supplement.

Currently NASR stores text in all caps only and the Chart Supplement team must amend the remarks into upper/lower cases sentence form. This is a time and labor intensive step. Scott reported the change to upper/lower case text in NASR cannot be accomplished in an automated way at this time and his team does not have the time or resources to make those changes manually. He acknowledged this is another update that may be re-addressed at some time in the future.

Valerie said it doesn't seem like this proposal can be supported in the near future, so suggested closing the issue. Doug Willey, ALPA, said he worked with Rich Boll, NBAA, to submit this issue. He understands it cannot be done now, but hopes it can be done eventually. Valerie agreed and suggested the item be closed and updates to the Chart Supplement process, including progress in the data inventory/source endeavor be reported in the future as part of the Chart Supplement modernization briefing. She stated she is hopeful that once that work is completed, proposals like this one can gain traction. The group agreed.

STATUS: CLOSED