

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 16-01 – April 27 - 28, 2016

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 16-01-301

Subject: RVR Locations in FAA Documentation

Background/Discussion:

RVR location information is required for calculating and publishing minima on instrument charts. In the FAA documentation KPHL – Philadelphia airport, it is unclear whether certain RVR information given in the DAFD section of the FAA.gov website (http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dafd/search/), can be used in conjunction with other runways given in the airports remark section. Another section of the FAA website, (<http://rvr.fly.faa.gov/cgi-bin/rvr-status.pl?fs=lq>), gives live RVR reporting information, but in some cases, some airports do not appear in the DAFD that do in RVR.fly, or vice versa, or the information given in each is contradictory. It is therefore difficult to clearly determine how many RVR sensors, if any, are available for use on a runway, which affects the publication of safe minima values on charts.

Recommendations:

TERPS Order 8900.1, Volume 3, Chapter 18, Section 5, Part C (current change 417), states “OPSPEC C078/C079—IFR LOWER-THAN-STANDARD TAKEOFF MINIMA, 14 CFR PART 121 AIRPLANE OPERATIONS—ALL AIRPORTS E. Lower-Than-Standard Takeoff Minimums for TDZ RVR.

C078 and C079 authorize lower-than-standard takeoff minimums for TDZ RVR 1600 (500 meters). If TDZ RVR is inoperative, mid-point RVR may substitute for TDZ RVR. Below RVR 1600, two operating RVR sensors are required and controlling. If more than two RVR sensors are installed, all operating RVR sensors are controlling, with the exception of a fourth, far-end RVR sensor that may be installed on extremely long runways. A far-end RVR sensor is advisory only.” This suggests that unless there are two or more RVR sensors available for use on a RWY, take off cannot be commenced with a minima value less than 1600ft.

The issue at KPHL is that in the DAFD, it states that “Rwy 09 rollout RVR used for Rwy 09L midpoint RVR. Rwy 09L touchdown RVR avbl. Rwy 27R touchdown RVR avbl. Rwy 09R rollout RVR avbl. Rwy 27L touchdown, and rollout RVR avbl. Rwy 17 touchdown RVR avbl. Rwy 35 touchdown RVR avbl. Rwy 08 touchdown, rollout RVR avbl. Rwy 26 touchdown, rollout RVR avbl.” This report suggests that for RWY 27R for example, that only the touchdown zone RVR is available for use, meaning that when taking off from this RWY, there is only one controlling RVR and therefore as per the TERPS order mentioned, the minima cannot be lower than 1600ft. On the reciprocal end though for RWY 09L it states there is also a TDZ RVR available, and also presumably when it says RWY 09, this means RWY 09R, and this rollout RVR can be used as a midpoint for RWY 09L. This means that RWY 09L has two RVR sensors available for use, meaning lower minima can be used.

With this combination of RVR sensors on just this RWY for example, this means there are 3 located along the length of the same RWY, why then does the text only mention one is available for RWY 27R? If a TDZ RVR is available for a RWY, can this also count as a Rollout RVR for the reciprocal RWY? An operator who uses KPHL airport regularly, has confirmed that RWY 09L has 3 available RVR sensors, this is also mirrored in the RVR.fly section of the FAA website suggesting 3 RVR sensors, so clarification is required regarding the way the RVR information is presented in the FAA documentation. This issue does not just affect this RWY 09L/27R at KPHL, and affects the safe and accurate publication of minima on our charts.

It would be beneficial to have these sensors shown on the AD chart in the DTP section of the website (http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtp/search/) for example, in the same way that other countries use as a generic method for showing the sensors. It would also be acceptable to see this as textual data that clearly lists the RVR sensors available for each RWY, either on the individual procedure charts, or in the USTAL (<https://nfdc.faa.gov/nfdcApps/airportLookup/index.jsp?category=nasr>) section, as this clearly lists other RWY data for individual aerodromes. This would be an improvement to seeing this data as hidden in a sometimes large paragraph, that is easy to miss or interpret, and that is not even present in this section for a lot of aerodromes. The RVR.fly is also a good way of showing this data, however again, this does not give a definitive list of all aerodromes in the USA with RVR sensors, and as this is live data, would this be adequate for permanent use on aeronautical charts?

If the data cannot be presented in this way, a solution is required to define whether an RVR sensor listed as "RWY 27R TDZ avbl.", is actually available for use as the RWY 09L rollout RVR also, as the location of them along the RWY length suggests.

Comments:

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MEETING 16-01

Kamal Ahmed, Navtech, briefed the issue. Kamal recommended that the airport Chart Supplement entries contain the complete RVR sensors available for use on a given runway. The RD states that currently only those RVR sensors physically situated on a specific runway are listed for that runway, but that other RVR sensors (for instance those on a parallel runway, or designated for a use on the opposite runway) may be available and *should* be associated. RVR location information is necessary in the calculation and publication of minima on instrument approach procedures.

After presenting his RD, Kamal relayed a recent discussion with Rick Mayhew, FAA/AJV-5331, and said that he learned that RVRs are now being published differently in NASR and that some of the information Kamal is looking for is now being databased in a more useful way. Kamal felt

that the FAA could go a step further by publishing the geographic coordinates of the individual RVR sensors and by depicting them on airport diagrams.

Ted Thompson, Jeppesen, agreed that the lack of more detailed RVR sensor data, coupled with the removal of a related parcel of RVR/ILS data once made available by the FAA, is also an issue for Jeppesen. Ted stated that in the past, FAA Flight Standards (AFS-410) maintained and made publicly available a spreadsheet called the ILS Component List that served as a primary source for RVR information. He stated that because this list is no longer available (it was removed approximately 2 years ago), it has become difficult for Jeppesen to derive and publish lower than standard minimums. Ted stated that Jeppesen would like to see either this spreadsheet reinstated and made publicly available, or for the FAA in some other way provide a consolidated listing of RVR installations and applicability to runways for airports where U.S. OP SPEC Lower-Than-Standard operating minimums are permitted for air carriers.

Dale Courtney, FAA/AJW-292, said that he had a copy of the spreadsheet, but that it is not current. Dale stated that NASR has all the necessary RVR information. Ted responded that the data in NASR is fragmented and disagreed that NASR provides all the information that is needed.

Bruce McGray, FAA/AFS-410, suggested that AFS take responsibility for providing the data and possibly resurrecting the ILS Component List once maintained by AFS-410. John Blair, FAA/AFS-410, agreed to take the recommendation to AFS-410 management, express the industry need and seek support for his office providing the information. John shared that in the past, some 5000 users regularly accessed the ILS Component List and he acknowledged its popularity. He stressed that it would be helpful if he could provide to his management exactly what information is needed and why. Representatives from Jeppesen, Lido and others agreed to meet with John at a break during the ACF and provide him detailed input.

Dale restated his belief that all the necessary information is already contained in NASR and suggested that NASR may be able to generate a report to support the need. Jill Olson, FAA/AJV-553, suggested that a scrub of NASR be completed to determine if all the information is already in the database and if a report can be generated. Jill committed to working with AJV-5 management to determine the possibility.

STATUS: OPEN

ACTION: John Blair, FAA/AFS-410, and Bruce McGray, FAA/AFS-410, to discuss the ILS Component List with AFS-410 management.

ACTION: Jill Olson, FAA/AJV-553, will work with AJV-5 management to determine if all RVR information exists in NASR and if a report fulfilling the use of the ILS Component List can be generated.

MEETING 16-02

Valerie Watson, FAA/AJV-553, reviewed the topic. Jill Olson, FAA/AJV-553, provided an update stating that work has begun to determine if the information in the ILS Components List can be pulled from the National Airspace System Resources (NASR) database. Jill said that there is still a question whether all of the Runway Visual Range (RVR) information being requested is

available in NASR. She also said that work would have to be done to be able to output the data in a reportable format.

Dale Courtney, FAA/AJW-292, echoed the concern that all attributes of the ILS Components List are not populated in NASR.

Ted Thompson, Jeppesen, commented that he had submitted what RVR information Jeppesen requires to John Blair. Ted said that one thing he knows is missing from NASR is information on how the RVR is used at an airport, in particular, RVR sensors that can be borrowed from parallel runways. Dale agreed that there is nothing in NASR to describe how they are being operationally used, only that they exist.

Nate Rahn, FAA/AJV-552, said that he will coordinate with Dale and John Blair, FAA/AFS-410, to determine what data is stored in NASR and what data is not, and where that missing data might be obtained and made available by AJV-5.

Jill Olson, AJV-553, will brief AJV-5 management to gain support for generating, maintaining and publicly disseminating the data previously made available to the public by AFS-410 via the ILS Components List.

STATUS: OPEN

ACTION: John Blair, FAA/AFS-410, Nate Rahn, FAA/AJV-552 and Dale Courtney, FAA/AJW-292, to discuss what information is being requested and the details of the RVR information that is available in NASR.

ACTION: Jill Olson, FAA/AJV-553, to work with AJV-5 management to determine support for generating and maintaining an ILS Component List.

MEETING 17-01

Meeting was cancelled.

MEETING 17-02

Brain Murphy, FAA/AJV-562, provided an update on the progress made since the last ACF. Brian stated that his office has produced a NASR-generated report that contains the majority of the information that was contained in the original discontinued ILS Components List previously made available by AFS410. [A sample report](#) was presented to the audience and Brian asked for feedback to determine if this would fulfill user's needs. Brain stated that once the comments have been received and the spreadsheet has been finalized, it can be generated and made available by AJV-5 every 28 days.

Ted Thompson, Jeppesen, said that he will take the spreadsheet back so they he can take a closer look at it and would provide feedback after the ACF. He said he is particularly interested

in RVR availability and use. He wants to know where RVRs are authorized for use or “borrowed” at differing runway ends and at parallel runways.

Dale Courtney, FAA/AJW-292, stated that ATC doesn’t know what RVRs are shared or not. He believes that it does not matter if it is listed as available for use on multiple runways.

Valerie Watson, FAA/AJV-553, said that she will email and post on the ACF website the [prototype spreadsheet](#) for the ACF audience to review. Interested parties should review the sample report and provide feedback via email to Valerie Watson, Valerie.s.watson@faa.gov, who will then consolidate all the comments received and forward them to Brian Murphy and John Blair, FAA/AFS-410.

STATUS: OPEN

ACTION: Brian Murphy, FAA/AJV-562 and John Blair, FAA/AFS-410 to review ACF input regarding the NASR generated ILS Components List, work on suggested modifications, and report back at the next ACF.

MEETING 18-01

John Blair, FAA/AFS-410, stated that Brian Murphy, FAA/AJV-562, and his team have gathered feedback and have refined the National Airspace System Resource (NASR) generated report so that it contains the majority of the information that was contained in the discontinued ILS Components List. John said that they had received a request to add the ILS classification codes and he said they are working on that enhancement. He said that the plan is to make the spreadsheet available on the AJV-5 and AFS-400 websites on a 28-day production cycle.

Valerie Watson, FAA/AJV-553, asked about some missing data in the spreadsheet in the columns labeled DH, VIS, and HAT_HAA. In the VIS column, it seems it is only pulling data for those expressed in Statute Miles and not those in RVR (feet). It is also not populating any data in the DH, VIS, or HAT_HAA columns for ILS CAT IIIa or ILS CATIIIb. Brian said they would have to take that back and look into how they can populate that missing data.

Valerie then asked about the possibility of adding a field for the lowest allowable takeoff RVR value. John replied that the FAA will not be able to support adding that field. He said that in order for a vendor to offer reduced takeoff minimums to their customers, they will have to use the data contained in the spreadsheet to make those determinations themselves. John added that lowest allowable RVR values are heavily dependent upon an aircraft’s equipment and OpSpec.

Ted Thompson, Jeppesen, stated that the lowest allowable RVR values is what they want but understands the reasons for the FAA deciding not to provide that. He said that the new spreadsheet is still providing valuable information.

John shared with the audience an email with additional information for those who would like to understand what goes into calculating lower than standard takeoff minimums. He emphasized that it is not just as simple as plugging the numbers into a formula. He said it depends on the OpSpec and there are a lot of variances, caveats, and conditions. The email demonstrated the complexity.

Kemal Ahmed, NavTech, thanked the FAA for their work on the spreadsheet and said he expects that we will be able to close this item at the next meeting.

STATUS: OPEN

ACTION: Brian Murphy, FAA/AJV-562, will investigate the missing data in the DH, VIS, and HAT_HAA columns of the spreadsheet and repost the result on the ACF website.

ACTION: John Blair, FAA/AFS-410 and Brian Murphy, FAA/AJV-562, will come up with a production schedule and dissemination plan for the new NASR-generated spreadsheet.

MEETING 18-02

Valerie Watson, FAA/AJV-553, reviewed the topic. She reported that since the last ACM, an AJV-5 generated [test spreadsheet](#) was published for review on the ACM-CG website that it is hoped will satisfy user needs for ILS information. Based on the input received since the posting, it is believed that this report contains the majority of the information that was contained in the discontinued ILS Components List and that it meets the needs of the original request.

Valerie asked Brian Murphy, FAA/AJV-562, about the plan for the publication of the spreadsheet. Brian stated that his office is still working on finalizing the process, but that he expects regular posting on the AJV-5 website http://www.faa.gov/air_traffic/flight_info/aeronav/procedures/reports/ every 28 days beginning with the January 3, 2019 effective date. There was agreement that all actions have been fulfilled and this item could be closed.

STATUS: CLOSED