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AOPA Informal Feedback on Anchorage Terminal Area Airspace *Feasibility of ILS Approach to RWY16 at Elmendorf AFB*

AOPA has been aware of the USAF's proposal for the establishment of an ILS approach to RWY 16 at Elmendorf for some time. We believe it is important the FAA conduct a thorough and impartial analysis of the impacts of this procedure on adjacent airports and other operators located in the Anchorage bowl. Local general aviation pilots regularly express concern to AOPA regarding military SUA expansion and are apprehensive about what effect the military expanding their footprint in the terminal environment might mean. The concerns these general aviation pilots, who fly commercial as well as Part 91, bring up relate to the possible impact a redesign on Anchorage airspace may have on their ability to operate, VFR and IFR. We submit these initial comments on the topics of scope, and aeronautical and environmental process concerns to begin a dialogue on this effort.

Scope of work

The proposed instrument flight procedure could have significant impacts on the operations of the adjacent civil airports as well as on VFR and IFR traffic efficiency. As you know, the Anchorage area is governed by special air traffic rules published in Part 93. Should the airspace need to be redesigned to allow this ILS approach, the Part 93 airspace, Class C airspace, and D airspace may need to be modified. Many operators have established their routines based on the existing airspace and the freedom to fly that it facilitates. This is a complex area of airspace with significant utilization by all types of aircraft.

AOPA has met with the USAF and is willing to engage in a collaborative initiative to find a solution that will work for the military as well as civil airspace users; however, it must be acknowledged that a practical solution may not be possible in this congested area. We strongly feel it is vital to success that the impacted civil users, not just the military, are offered an opportunity to participate in this airspace study. We would welcome the opportunity to meet with the FAA and their contractors as there are airspace issues that the several thousand general aviation pilots we represent in this area have. We feel it would be a disservice to only capture a single customer's desires, including when discussing scope. Our hope is we can work together and have a better final product as a result if we work collaboratively to discuss related issues.

Aeronautical concerns

Lack of access to relevant documents

We understand previous airspace studies have been completed for Anchorage; however, we have been unable to receive relevant copies. On August 9, 2018, AOPA submitted a Freedom of Information Act requesting a copy of the FAA study from 2008 titled "Alaska National Airspace System Review," which we understand evaluated an Anchorage airspace redesign. We have yet

to receive a copy and do not have a date when we might be provided one. We also do not have current copies of relevant Letters of Agreement. If there are relevant studies or documents, we would appreciate a copy to be better informed as to the complexity of the airspace.

Merrill operations and Cartee airspace

Merrill has about 850 based aircraft and accounts for approximately 130,000 annual operations. General aviation accounts for the majority of these aircraft and operations. The close proximity of this major general aviation hub to EDF puts it in direct conflict with most proposals for an ILS RWY16 missed approach. Negatively impacting the efficiency of operations at Merrill would have an economic impact on operators, the airport, and the surrounding community. AOPA will strongly oppose any adverse operational impacts at Merrill airport. We need to look for a solution that will not create disruptions for other aviation users in the Anchorage airspace environment.

We are concerned that this airspace review may look at increasing utilization of Cartee airspace within the Merrill Class D airspace. Cartee airspace was designed for very limited operations, not routine utilization or for activation for extended periods of time. The details of this airspace utilization and operational practices are not publicly available as they are described in an LOA. Furthermore, as this airspace is informally defined via an LOA, AOPA and the public had no ability to submit comments or concerns on this airspace. The lack of public comment on airspace that effectively prioritizes one user over another is concerning.

Cartee airspace activation is a challenge for general aviation users as it is (a) not charted, (b) not depicted on any moving map or EFB system, (c) depiction in the Chart Supplement is not user friendly and not for navigation, and (d) Cartee is not described in Part 93, the AIM, or other relevant airspace guidance for pilots who may not be locally based. Numerous updates to the primary pilot resource for Cartee airspace, the Chart Supplement, have been proposed; however, those have yet to be submitted. AOPA will strongly oppose any increase in Cartee airspace activation based on the adverse impacts this informal airspace has on general aviation users of Merrill.

Safety reports

The FAA should review ASRS, HATR, and other safety reports for the Anchorage airspace. Recent reports note concerns about the Merrill LOA and air traffic controller communication/process breaking down. There must be effective procedures in place for air traffic controllers and pilots if new airspace or instrument flight procedures are to be implemented. An analysis of existing issues should be undertaken and a survey of user concerns promulgated.

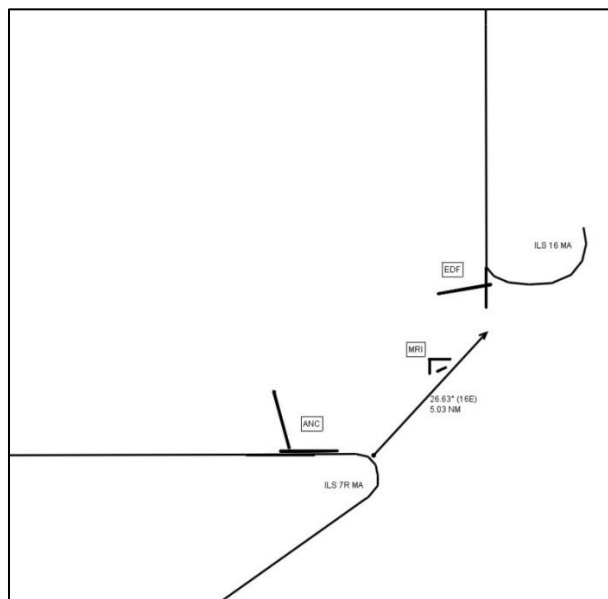
MARS concept

In September 2018, the FAA solicited industry feedback on the Multiple Airport Route Separation (MARS) Concept of Operations (ConOps). The description of the ConOps states:

MARS supports the PBN Strategy and builds on past progress where PBN is used as the basis for daily operations. It extends the Established on RNP (Required Navigation Performance) ConOps where PBN-based procedures are utilized to alleviate separation requirements when vectoring to straight-in approaches to parallel runways at medium or

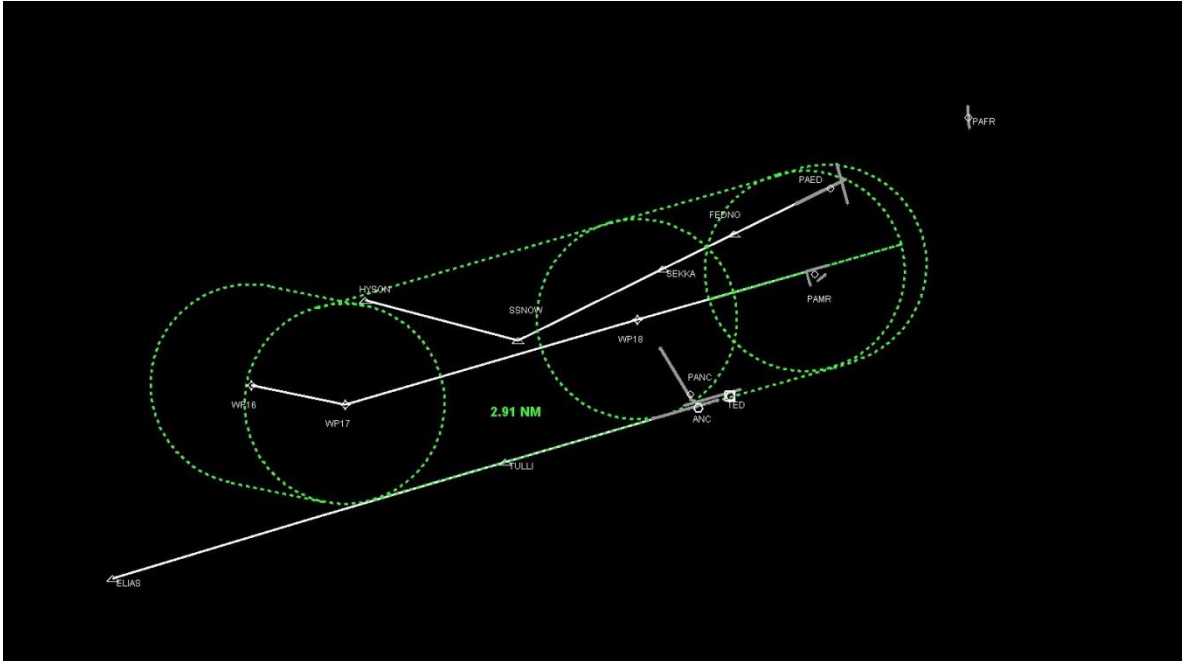
high-density airports. Plus, it applies to adjacent IFP paths to and from neighboring airports to deconflict operations among these airports.

AOPA submitted feedback to AJV-14 and ANG-C5 noting the MARS solution is applicable at more locations than just NSG1 airports and major metro areas. We noted ANC is NSG2 and resides in very congested airspace with MRI and EDF nearby. The large volume of general aviation, commercial aviation, and military aircraft, as well as precipitous terrain in close proximity, makes this a challenging airspace environment. We proposed the Anchorage terminal airspace would be a good example of where MARS would have a positive effect given the USAF is looking at installing an ILS for RWY 16, which would have significant effects on operations at MRI and ANC. PBN and MARS could facilitate safe and efficient separation of the EDF ILS RWY 16/PBN procedure's missed approach with other IFR aircraft.



This is an AOPA produced diagram of a notional concept for how MARS could be employed between ANC/MRI/EDF in order to initiate a conversation with the MARS authors.

The FAA's initial review indicated MARS has the potential to mitigate/deconflict the operations between the Anchorage terminal airports in a couple of the flows; although, local agreements, noise, etc., were not considered and may have a significant impact on procedure design in this area. The below images and analysis were provided by the FAA.



Depiction of notional East flow. An instrument approach can be constructed into MRI RWY7 that is parallel to ANC RWY7R and spaced at 2.91nm. This fits within the MARS ConOps for simultaneous independent operations without any separate monitor controllers. However, it does not separate from Elmendorf's ILS to RWY6. In this scenario, EDF and MRI would be dependent operations and both would be independent from ANC.



ANC departures and missed approach RWY7L with EDF missed approach RWY16.



ANC departures east and EDF missed approach to the south. The missed approach off the new EDF RWY16 ILS could be developed to remain 2.15nm (more if terrain allows) away from the ANC missed approach and departures. A new ANC missed approach and a new ANC SID would be required. In this scenario, EDF and ANC would be independent from each other.

There are many considerations, including military aircraft PBN equipage, that would need to be studied before a solution such as this could be implemented, but we believe the FAA should consider all solutions including more forward leaning NextGen opportunities. As the FAA and their contractors develop an Anchorage Terminal Area Airspace Study to evaluate the new ILS RWY 16 at EDF, the MARS ConOps and PBN solutions should be part of the evaluation.

Environmental process concerns

In September 2017, AOPA submitted comments to the USAF *Proposal to Improve F-22 Operational Efficiency at Joint Base Elmendorf-Richardson, Alaska: Draft Environmental Impact Statement*. Our comments to the Draft EIS centered on the USAF failing to address the inevitable airspace changes that would result from their proposal. We understand the FAA is considering these concerns as part of their evaluation.

As a summary, please find below our relevant comment:

The DEIS notes the large number of civil aircraft operations in close proximity to JBER. General aviation is heavily concentrated in the Anchorage Bowl, operating in and out of airports and seaplane bases only a few miles apart. The DEIS states “the overall manner in which the high density Anchorage Bowl airspace is configured, managed, and used...has provided a safe, efficient, and reasonably compatible airspace environment that meets both military and civilian aviation needs.” AOPA concurs with this statement and agrees it is through our collaboration with the military that this airspace has worked

so well. We are concerned that the DEIS does not address the airspace modifications that are likely to be required following the utilization of new runway configurations. We believe the USAF must fully document the airspace modifications that may be triggered by this action and that may upset the current balance between civil and military operational needs.

General aviation and other civil aviation stakeholders have been unable to participate in the USAF and FAA effort to define a scoping document for an Anchorage airspace study. The need for such a study is directly tied to the USAF's desire for an additional Instrument Landing System (ILS) approach at JBER. Installing an ILS approach for Runway 16 at JBER could have significant airspace impacts in the congested and complicated Anchorage Bowl airspace. The proposals laid out in the DEIS could further increase air traffic's utilization of unusual landing and departing configurations that will eventually overtax the existing airspace structure such that a redesign becomes required. The USAF must address their parallel proposal to install the Runway 16 ILS and what the airspace impact would be in concert with this action.

The DEIS mentions the "Cartee" airspace located south of JBER but the document does not discuss what the proposed change's impact will be on the utilization of this airspace cutout. Understanding JBER must control "Cartee" airspace to ensure safe operations while in certain configurations, the USAF must detail what increase or decrease in "Cartee" activation will be a result of this proposal. "Cartee" airspace activation has a negative impact on operational efficiency at Merrill Field (PAMR), and more frequent activation could result in pilot confusion, increased workload, and needless airspace violations unless additional mitigations are put in place. The USAF should be transparent about their proposal's effect on this airspace segment to ensure general aviation is aware of the impact.

The change proposed for the F-22's runway utilization at JBER could have an adverse impact on IFR general aviation traffic flying in and out of PAMR and Ted Stevens Anchorage International Airport (PANC). In our review of the proposal, we foresee an increase in arrival and departure delays for civil IFR traffic due to the new flight patterns by the F-22. The USAF should document the anticipated impact on IFR aircraft, either awaiting a departure release or inbound for an instrument approach, for those operations at airfields located in the Anchorage Bowl, and the USAF should note which alternative results in the most minimal impact.

As our comments detail, we believe any airspace change in the Anchorage bowl would have significant impacts on general aviation. In the disposal of comments the USAF responds to AOPA stating definitively that "there is no proposed change in the Anchorage Bowl airspace associated with this EIS." In response to our comment on Cartee airspace utilization, the USAF stated:

The F-22 Operational Efficiency EIS alternatives for runway use do not propose changes in the use of the Cartee airspace or in any other Anchorage Bowl airspace (see response to AM-1). The Cartee activation is expected to be comparable to what has been historically experienced.

However, it is apparent from the USAF Record of Decision and the Final EIS that the USAF and FAA have been working collaboratively on an Anchorage Airspace Study, which may lead to changing the terminal airspace. We believe this airspace study is a direct result of the USAF proposal to improve efficiency at JBER. The latest briefing we received from the USAF (July 11, 2018) also indicated that the Anchorage Airspace Study may lead to airspace changes.

We are concerned at the ambiguity and lack of harmony between documents and processes. We contend that if airspace changes are needed to support the USAF proposal of improving operational efficiency, additional environmental analysis and public comment should be allowed. We believe the USAF used definitive language to describe the lack of airspace impacts in their environmental documentation and it is important those statements are honored. Furthermore, AOPA will strongly oppose any increase in Cartee airspace activation based on the absolute statements the USAF included in their Final EIS.

The Aircraft Owners and Pilots Association (AOPA) is a not-for-profit individual membership organization of General Aviation Pilots and Aircraft Owners. AOPA's mission is to effectively serve the interests of its members and establish, maintain and articulate positions of leadership to promote the economy, safety, utility and popularity of flight in general aviation aircraft. Representing two thirds of all pilots in the United States, AOPA is the largest civil aviation organization in the world.