

Implementation of RNP Approach (RNP APCH) Operations with an Extended Visual Segment AVS Action Plan

Recommendation: Establish a new public Performance Based Navigation (PBN) approach procedure that uses the RNAV (GPS) approach procedures encompassing an extended visual segment utilizing RNAV fixes and calculate altitudes for those fixes to provide advisory guidance and advisory vertical navigation to the runway.

Discussion: The Performance Based Operations Aviation Rulemaking Committee (PARC) made a direct request to the Associate Administrator for Aviation Safety for new, public instrument approach operations to enable access to runways within complex airspace systems. The PARC developed this concept to assist aircraft having difficulty negotiating extended visual segments of certain conventional approaches. The procedures provide advisory guidance from the aircraft’s RNP system throughout the procedure’s extended visual segment. Calculated altitudes assigned to the navigation fixes in the visual segment provides advisory vertical navigation reducing the risk of controlled flight into terrain (CFIT) and improving the aircrew’s ability to fly a stabilized approach. The capability to build RNAV (GPS) approach procedures with extended visual segments currently exists. That capability will continue to be available on case-by-case basis. The results of this action plan will establish national standards based on a NAS wide analysis of potential issues. Currently, procedure designers must manipulate automation for each specific situation to include waivers to current criteria. Future criteria will eliminate the need for waivers, and allow procedure designers to use automated tools to build procedures without undue manipulation. The timeline for this plan addresses the writing of standard criteria, the coordination, programming and implementation of the automation for these procedures. At the end of this plan, the automation will be available for users to begin to build standard RNAV (GPS) approach procedures with extended visual segments, where appropriate.

Task 1: Assess need for defined unique terminology and naming convention for these procedures and establish appropriate guidance in the Aeronautical Information Manual and the US Aeronautical Information Publication.

Responsible Office(s)	Expected Completion Date
AFS-410	10/2024

Proposed: Evaluate requirements for terminology to define specific concepts and usage of these standard, but unique, public procedures to ensure pilot understanding. Develop guidance on using advisory RNAV fixes while navigating visually, ensuring that users adhere to Title 14 Part 91 section 91.175 throughout the extended visual segment. Standardize the missed approach guidance so pilots clearly understand their responsibility if a missed approach is required at any point on the procedure. Assess the need for a unique naming convention to ensure pilots and controllers understand the procedure, while standard, is unique in design, and pilot/controller educational material in the AIM & AIP will help pilots use the new procedures correctly.

Deliverable: Completed & submitted DCP for new AIM & AIP guidance and illustrations

Task 2: Update the guidance in FAA Order 8260.43

Responsible Office(s)	Expected Completion Date
AFS-420	10/2024

Proposed: Establish guidance in Order 8260.43 Flight Procedures Management Program defining the validation process for these procedures specifying that these IFPs will only be developed when standard IFR PBN approaches are not viable, due to airspace, environmental concerns, and other unique circumstances.
 Deliverable: Completed revisions to FAA Order 8260.43()

Task 3: Update the guidance in FAA Order 8260.58

Responsible Office(s)	Expected Completion Date
AFS-420	10/2024
<p>Proposed: Establish IFP design criteria in Order 8260.58 for RNAV (GPS) approaches with extended visual segments that use RNAV fixes in the visual segment for advisory guidance and vertical navigation. This guidance will require the explanation of the final segment transition to this unique extended visual segment. Clearly define this is a visual maneuver, with RNAV fixes in the visual segment. These fixes are for advisory purposes only. Establish specific guidance on the placement of these visual segment fixes for the extended visual segments. Develop specific design standards for the missed approach. Deliverable: Completed revisions to FAA Order 8260.58()</p>	

Task 4: Update the guidance in FAA Order 8260.19

Responsible Office(s)	Expected Completion Date
AFS-420	10/2024
<p>Proposed: Update Order 8260.19 to add the criteria necessary for documentation of the procedures. This includes criteria to document the RNAV fixes and advisory altitudes. Establish unique notes required to ensure users properly maintain visual track. Develop documentation to capture the missed approach segments to ensure proper charting. Update missed approach fix as a fly by fix for these operations with the LTP being documented as a flyover fix to ensure proper coding to support this extended visual segment procedure. Deliverable: Completed revisions to FAA Order 8260.19()</p>	

Task 5: Update the landing minimums guidance in appropriate FAA Order

Responsible Office(s)	Expected Completion Date
AFS-420	10/2024
<p>Proposed: Update landing minimums criteria for these unique approach procedures to include construction and evaluation of visual portion of final areas. Develop and describe the new RNAV (GPS) extended visual segment terminology in the appropriate order to reflect the AIM and AIP updates. Collaborate on Task 1: develop a method of IFP identification to reflect the unique procedure type. Deliverable: Completed revisions to appropriate FAA Order</p>	

Task 6: Update Instrument Procedures Handbook

Responsible Office(s)	Expected Completion Date
AFS-410	10/2024
<p>Proposed: Update Instrument Procedures Handbook, as necessary with detailed explanatory information for pilots on the construction, use case, and description of RNAV (GPS) IAPs with extended visual segments, including visual artwork. This should contain a comprehensive list of new terms and expectations for flying visually while using RNAV</p>	

fixes in the visual segment in an advisory capability to confirm position and altitude. We will include information identifying the necessity of maintaining visual contact with the runway environment during the extended visual portion of the operation.

Deliverable: Completed revision/updates to FAA H-8083-16()

Task 7: Work with Aeronautical Information Services to update IFP automation.

Responsible Office(s)	Expected Completion Date
AFS-420 and AJV-A	10/2024
<p>Proposed: Coordinate criteria development with AIS to ensure the Terminal Area Route Generation Evaluation & Traffic Simulation (TARGETS) and the IFP Standard Instrument Approach Procedures (SIAP) software is updated in conjunction with the publication of criteria across all orders and handbooks. TARGETS will require an update to the Requirement Specifications and a coding update to amend the software to support this change. SIAP will require updates to capture the data and coding for processing and publication. AIS testing of the software and training will then be necessary prior to fielding the software and publication of criteria.</p>	
<p>Deliverable: Completed automation updates to TARGETs and SIAP software</p>	