

Airport Obstructions Standards Committee (AOSC) Decision Document #07 Summary

September 21, 2006

National Departure Case Standard for End-Around Taxiways

1) **Introduction**

In an effort to increase capacity, many airports have added multiple parallel runways. Delays often occur when traffic which has landed on an outboard runway has to cross an inboard departure runway. Significant forecasted growth in airport operations nationally will generally further increase these delays. In the “departure case” scenario, an End-Around Taxiway (EAT) provides arriving aircraft with a safe and improved means of movement around the end of an inboard departure runway, while reducing delays, runway crossings and controller-pilot communications.

Previous AOSC Decision Document #03 and #06 provided site-specific approvals for use of EATs in the departure case scenario at Atlanta (ATL) and Dallas-Fort Worth (DFW). Aside from these two documents, no other existing regulatory criteria or standards specifically govern EAT design and/or operation. While requests have been made to review the “arrival over end-around” case, the initial Agency focus has been limited to the “departure over end-around” case.

This decision document builds on the analysis performed in advance of the ATL and DFW approvals to establish the criteria for a national standard that will support a broader implementation of EATs. The visual and operational parameters which were identified as necessary have been incorporated into the recommended national standard, including visual screen specifications developed and validated by The William J. Hughes Technical Center.

The EAT projects in ATL and DFW are fully compliant with the recommended national guidance, and the AOSC member organizations have agreed the End-Around Taxiways at ATL and DFW will be operated as previously approved by the AOSC, including those mitigations specified in the approval documents.

2) Rationale for Decision

Since there is interest in the concept of End-Around Taxiways (EATs), guidance is necessary to ensure that these taxiways are designed and operated in compliance with agency standards to avoid improper siting or unintended operations, and to ensure the Safety Management System (SMS) process is applied.

The recommended national standard guidance is a product of over two years of analysis, including multiple proof of concept demonstrations, human factors studies, high fidelity simulations, and meetings with industry and other Agency subject matter experts. The recommendation is consistent with existing Terminal Instrument Approach Procedures (TERPS), One-Engine-Inoperative (OEI) and Runway Safety Areas requirements. In addition to thorough reviews of existing taxi operations and simulations of proposed EAT operational concepts, the AOSC has prepared a Safety Risk Management Document (SRMD) for departure case End-Around Taxiways. The SRMD includes an operational restriction limiting the implementation of EATs to those airports which have demonstrated the potential to significantly benefit from EAT. Specifically, airports must have greater than 10,000 minutes of delay annually to qualify for an EAT. While approximately 30 airfields currently meet these criteria, it is highly improbable that all of these airports would pursue construction of an EAT.

The SRMD commits the FAA to track the risk associated with any proposed or constructed EAT to ensure that the risk associated with EAT operations at any specific location does not exceed once per 100 years and that the cumulative NAS-wide risk of an EAT-related incident does not exceed once per 30 years. A site-specific supplemental SRMD will be required for each new proposed EAT location.

3) AOSC Decision

The AOSC approves the addition of the recommended national departure-case standard for free-flowing End-Around Taxiways (EATs) to section 415 of Change 10 of the Airport Design Advisory Circular, AC 5300-13. This guidance establishes criteria to locate EATs outside the standard Runway Safety Area (RSA) and ILS critical areas and mandates an airspace study to ensure compliance with TERPS and 121.189 requirements. It also establishes siting and other design criteria associated with the visual screening required under certain physical conditions.

The AOSC also commits to comply with Safety Management System (SMS) requirements and to track the risk associated with both proposed and constructed EATs to manage the associated risk.

Note: The above referenced decision has now been appropriately updated in current FAA order, directives, advisory circulars, etc and has resulted in the sun setting of the original decision document and its replacement by this summary.