FINDINGS & RECOMMENDATIONS:
SUBCOMMITTEE ON AIRPORTS SPRING 2018 MEETING
Atlantic City, NJ | March 20, 2018

The Subcommittee on Airports of the FAA's Research, Engineering, and Development Advisory Committee (REDAC) met on March 20, 2018, at the FAA's William J. Hughes Technical Center in Atlantic City, New Jersey. The Subcommittee had the opportunity to discuss the current status of the FAA's Airport Technology Research Program and the Program's future plans through 2022.

The Subcommittee felt that good progress had been made across the Program's portfolio of 19 research project areas (RPAs) as shown below.

Safety & Planning RPAs	Pavement RPAs
S1 Airport Planning & Design S2 Airport Safety Data Mining S3 Aircraft Rescue & Firefighting S4 Wildlife Hazard Mitigation S5 Visual Guidance S6 Runway Surface Safety Technology S7 Airport Safety & Surveillance Sensors S9 Airport Research Taxiway S10 UAS Integration at Airports	P1 National Airport Pavement Testing Facility P2 National Airport Pavement Materials Research Center P3 Field Instrumentation & Testing P4 Advanced Materials P5 Pavement Design & Evaluation P6 Non-destructive Testing Technologies P7 Software Program Development and Support P8 Extended Pavement Life
Airport Noise & Environmental RPAs*	**New/Enhanced Facilities**
N1 National Noise Survey N2 DNL & Metrics Evaluation N3 Sleep Disturbance N4 Noise Mitigation N5 Operations E1 Environmental Tools and Guidance	Fire Safety Building Pavement Lab Extension Photo Laboratory
* Airport noise and environmental RPAs are being co-managed by the FAA Offices of Airports and Energy & Environment.	

The Subcommittee remains supportive of the program's ongoing work and future research directions, which continue to emphasize foundational research to support (1) advisory circulars and design guidance promulgated by the FAA Office of Airports, (2) airport infrastructure enhancements currently eligible or prospectively eligible for federal grant funding under the Airport Improvement Program, and (3) U.S leadership in areas of airport safety, planning, and infrastructure.

The Subcommittee agreed that all of its prior open recommendations from the Spring and Fall of 2017 can be closed presuming that the draft responses to them are approved by the FAA Acting Administrator.

The Subcommittee was alarmed by the drastic reduction in FAA research and development funding that appeared in the White House's FY2019 budget. Although the Airport Technology Research Program would not be directly affected by these reductions—given that its funding is provided under the Airport Improvement Program, the drastic R&D funding cuts would have negative indirect impacts on the Airport program and significantly harm all of the FAA's other R&D programs. We are pleased that the Administration and the U.S. Congress decided followed a different course with passage of the Consolidated Appropriations Act of 2018 (Pub. L. No.

115-141), which did not include these cuts. We are hopeful for longer-term R&D funding stability via multi-year FAA reauthorization legislation.

Findings and Recommendations

The following findings and recommendations were developed during the Subcommittee's deliberations. The Subcommittee does not believe that any of these require consideration by the FAA Acting Administrator.

FINDING 1: The Subcommittee is pleased that Program staff have begun researching safety and design standards for commercial spaceports. We believe that this research should be coordinated with the recently-established and rapidly-moving commercial airspace aviation rulemaking committees (ARCs), principally the Spaceport Categorization ARC.

RECOMMENDATION 1: The Subcommittee recommends that the Airport Technology Research Program staff coordinate with the FAA's Designated Federal Official assigned to the Spaceport Categorization ARC to ensure the ARC is briefed on and possibly provide input into the spaceport standards research project.

FINDING 2: As was the case at our Fall 2017 meeting, the Subcommittee placed a high priority on research into new categories of aeronautical vehicles--UAS and commercial space vehicles specifically--and their potential impacts on airport safety, operations, and infrastructure. Other high priority research areas are (1) pilot perception of light emitting diode (LED)-based airfield lighting systems (RPA S5), (2) aircraft rescue and firefighting (ARFF) agents (RPA S3), (3) runway incursion prevention technologies (RPA S1), and (4) noise standard development/refinement based on the findings of ongoing noise annoyance data collection (RPAs N2-N5). In order to facilitate ARFF research and store valuable ARFF test equipment and vehicles, the Subcommittee also finds construction of the fire safety building to be a high priority.

RECOMMENDATION 2: The Subcommittee continues to recommend that the FAA Office of Airports place a high priority on research and facilities noted in Finding 2.

FINDING 3: The Subcommittee remains pleased by the FAA's involvement of a Working Group of subject matter experts (SMEs) to reassess aircraft braking research. Given that the Working Group's efforts span multiple subcommittees' areas of expertise, it will be important to coordinate its work across relevant subcommittees.

RECOMMENDATION 3: The Subcommittee recommends that the findings and proposed approach to future braking research developed by the Aircraft Braking Working Group be coordinated with relevant Subcommittees, namely Human Factors, Aircraft Safety, and NAS Operations. This coordination can take the form briefings to each of these Subcommittees at their Summer/Fall 2018 meetings if time permits.

FINDING 4: The Subcommittee understands that safety, technical, and operational issues may preclude effective testing of trapezoidal runway grooving in a worn configuration (e.g., grooving "worn" to a half-depth condition) at Atlantic City International Airport. These issues, which include challenges in getting the Tech Center's B727 aircraft braking test bed to a high enough speed to appropriately simulate landing aircraft braking performance, concerns on the part of the airport operator that half-depth grooving could compromise actual aircraft landing performance, and limited test durations driven by these concerns.

RECOMMENDATION 4: The Subcommittee recommends that the FAA reconsider ways in which the performance of worn trapezoidal grooves—both in terms of drainage and effects on aircraft braking—can be evaluated, including through cooperation with other countries' Civil Aviation Authorities where trapezoidal grooves have been installed on active runways (e.g., Singapore).

FINDING 5: The National Airport Pavement Testing Facility (NAPTF) in Atlantic City, a proven national aviation asset, requires maintenance investments—specifically a roof replacement--to ensure its continuing functionality.

RECOMMENDATION 5: The Subcommittee recommends moving forward with plans to replace the roof of the NAPTF as soon as practicable.

Future Meetings

The Subcommittee will meet next at the FAA Technical Center on August 21-22, 2018.