# FINDINGS & RECOMMENDATIONS: SUBCOMMITTEE ON AIRPORTS SUMMER 2013 MEETING SEPTEMBER 10-11, 2013

# **FINDINGS & RECOMMENDATIONS**

## Progress Made on Heated Pavement and Aircraft Braking Friction Studies

**Finding 1.** The Subcommittee is pleased that FAA has addressed most of the recommendations from the Subcommittee's spring meeting. In particular, we note that substantial progress has been made on both RPD 155 (Heated Pavements) and RPD 147 (Aircraft Braking Friction). The FAA has met project milestones proposed at the Spring Meeting and seems on track to meet milestones proposed for next Spring. With respect to RPD 147, initial data from dry and wet pavement testing appears promising, providing some degree of confidence that it will be possible to collect pavement/tire interaction data for snow-contaminated pavements this winter season.

#### Research on Trapezoidal Grooves Ready to be Translated into Practice

**Finding 2:** The Subcommittee notes that FAA Office of Airports has not yet taken action on the Subcommittee's recommendation that FAA Office of Airports make necessary modifications to its advisory guidance—particularly Advisory Circular 150/5320-12C, *Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces*—so that airport operators can utilize trapezoidal grooves to improve runway drainage and friction under wet conditions should they desire.

**Recommendation 2.** The Subcommittee reiterates its recommendation that FAA Office of Airports make necessary modifications to its advisory guidance—particularly Advisory Circular 150/5320-12C, *Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces*—so that airport operators can utilize trapezoidal grooves to improve runway drainage and friction under wet conditions should they desire.

#### High Strength Concrete Research Should Incorporate Material Properties Considerations

**Finding 3:** Regarding RPD138, the Subcommittee appreciates the progress the FAA continues to make regarding how use of high strength concrete may affect pavement fatigue life. However, the team also notes that constructability, quality, and practicability considerations can be significant when high strength concrete is used.

**Recommendation 3.** The Subcommittee recommends that the RPD138 project team include consideration of constructability, quality, and practicability considerations in its evaluation of high strength concrete pavements, especially when it comes to the development of new or revised design standards for these pavements.

#### <u>Greater Situational Awareness Needed Among Research Programs when it</u> <u>comes to Safety Database Development and Management</u>

**Finding 4:** The Airport Technology Program is currently engaged in the development of an airport safety database as part of RPD141. This database fuses information from the FAA's wildlife strike database as well as accident and incident reports from FAA and NASA databases. Subcommittee members would like to ensure that this database is being developed in coordination with other FAA lines of business, particularly when it comes to the use of these databases to drive new standards and advisory guidance.

**Recommendation 4:** The Subcommittee recommends that the development of databases—especially safety databases—be readily available to other research programs, particularly those underway within the Aviation Safety and NAS Operations portfolios to ensure that other lines of business and research teams are aware of them. We also suggest that there be some means of coordination among the various FAA research programs when it comes to the development and use of these databases.

## Better Definition is Needed Regarding "Safety Mitigation Plans" to be Developed as Part of the Airport Safety Database Project and These Plans Should Be Coordinated with Stakeholders Outside of FAA

**Finding 5:** As part of their briefings on RPD141, the FAA noted that an upcoming task will be development of "safety mitigation plans". However, it was unclear what the content of these plans would be. Subcommittee members expressed concern that if such plans include airport-specific recommendations—rather than systemic recommendations—they must be coordinated with affected airport operators and other stakeholders.

**Recommendation 5:** We recommend that the FAA establish an informal "safety working group" similar to the already established "40-year design life working group", which can be used as a sounding board by the FAA regarding the feasibility, effectiveness, and priorities of identified mitigation strategies. We also recommend that the FAA more clearly define the intent and scope behind the terminology "safety mitigation plans".

# The Subcommittee Should be More Involved in the Development and Prioritization of New Research Tasks

**Finding 6:** In recent years, the Subcommittee has not taken a very active role in developing and reviewing new or revised research tasks that are undertaken by the Airport Technologies Research Program.

**Recommendation 6:** The Subcommittee recommends that the FAA seek input and advice from the Subcommittee when new research requirements are developed. We believe that Subcommittee member expertise can help to strengthen and/or focus these research requirements and will provide the Subcommittee with improved situational awareness regarding new research the FAA is undertaking.

### FAA Research into Extended Airfield Pavement Life-Cycles Needs to Include Consideration of Paving and Subbase Material Characteristics

**Finding 7:** Regional paving material and subbase characteristics can have a significant impact on pavement life and should be considered in the FAA's "40-year airfield pavement project" (RPD146).

**Recommendation 7:** The Subcommittee recommends that regional paving material and subbase characteristics and their impacts on pavement design life be explicitly addressed in RPD146.