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Mr. Rick Marinelli
 Manager, Airports Design Division
 Federal Aviation Administration
 AAS-100
 800 Independence Avenue, SW
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Subject: ACC Review Comments – Draft FAA Advisory Circular 150/5325-4B, Runway Length Requirements for Airport Design

Dear Mr. Marinelli:

On behalf of the Airport Consultants Council (ACC), I would like to thank you for the opportunity to provide input on draft FAA Advisory Circular 150/5325-4B, *Runway Length Requirements for Airport Design*. The general feedback from ACC members is that the document is straightforward, easy to understand and well presented. In addition, we received the following, more specific comments:

1. General:

Temperature is a significant factor in determining take-off runway length. ACs or APMs just provide ISA (International Standard Atmospheric) conditions, standard day (59°F) and hottest day (86°F). In some areas, we need to consider that the temperature is over 86°F. Can a chart be added for an extreme hot day or can the AC provide an indication of the trend for more runway length at temperatures over 86°F?

2. Page 1, Section 102, a., (8):

The AC defines Substantial Use as "at least 500 or more annual itinerant operations at this airport (landings and takeoffs are considered as separate operations) for an individual airplane or family grouping of airplanes. Under very unusual circumstances, adjustments may be made to the standard 500 total annual itinerant operations benchmark after considering the circumstances of a particular airport. Two examples are airports with demonstrated seasonal traffic variations or airports situated in isolated or remote areas that have special needs." In the past, the FAA applied the following definition of "substantial use means either 500 or more annual itinerants operations or scheduled commercial service." On a recent project, this definition was

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important, since the commercial service carrier was the critical aircraft regard to runway length.

More discussion is required on the issue of exceptions to the 500 operations per year criterion. Some small communities depend on the ability of a corporate jet to visit a plant only once every three months. Also, if a specific turbojet aircraft type is based at a small airport and only uses the runway once per week, this justification should be equivalent to 500 operations per year.

3. Page 3, Section 104:

The old AC identified crosswind runway length requirements at 80% of the primary runway length. More specific guidance should be included in the AC for crosswind runways at general aviation (GA) airports.

4. Page 4, Table 1-3:

The crosswind runway length guidance for non-scheduled operations is not very clear. It lists "wind rose for the crosswind-limited airplanes lacking 95% wind coverage on the primary runway." This provides guidance for when a crosswind runway should be considered, but not what length. For scheduled service, it lists 100% of primary runway length.

Even with scheduled service, we question whether there is a need to develop the crosswind to 100% of primary length. We've found that something less than that has met carrier's needs at several airports where we are engaged.

5. Page 5 par. 202:

More discussion is required on the issue of turbojet accelerate-stop distances (ASD). What is the relationship of the aircraft take-off performance curves to ASD?

Also more discussion would be helpful on the relationship of Runway Safety Areas (RSAs) to take-off distances.

More discussion would be very helpful concerning the "safety" benefits of using a combination of runway pavement and full length RSAs.

More discussion is needed on the effects that wet runways have on aircraft take-off length requirements. Understanding the benefits of providing a sufficient runway length to accommodate an aircraft operating with max take-off weight, hot day, wet runway, and single-engine out at V-1 take-off speed is necessary to understand the FAA's position on runway length justification.

The presence of an obstruction off the end of a runway, such as a dike or a gas station, has a significant effect on pilots when they compute required runway take-off length. A discussion is needed to address pilot perceptions and take-off length requirements related to their "level of comfort". How much do these individual airport conditions/variables affect the interpretation of the runway length graphs?

When recommending a runway length, we find that our airport clients want to see the "special exceptions" written in the FAA's AC. Also, some junior FAA engineers only want to use numbers from the AC tables.

6. Page 5, par. 205, second sentence:

Typo - (The).

7. Pages 13 and 14, Tables 3-1 and 3-2:

Guidance provided as to what large GA airplanes constitute 75% of the fleet versus 100%, Table 3-1 and 3-2 is much improved from the old AC. However, as new aircraft come into the fleet, this section will need to be updated. The FAA takes this same current fleet issue on in AC 150/5300-13.

8. APPENDIX 2:

The aircraft manufacturer web site information is very helpful.

The ACC members who contributed the time to consolidate and vet these comments to ensure that they accurately reflect the consultant community's views are as follows: ACC Engineering Committee Chair **Monty Wade** with *Applied Pavement Technology*; ACC Engineering Committee member **Bill Peduzzi** with *Michael Baker Jr., Inc.*; ACC Planning Committee Chair and Vice Chair, **Jill Tiedt** with *PB Aviation* and **Mike Arnold** with *Environmental Science Associates*, respectively.

On behalf of the ACC, I again thank you for allowing us to provide input on this very important document. If you have any questions regarding our comments, please do not hesitate to call me at (703) 683-5900.

Sincerely,



Anthony N. Mavrogiannis
Vice President
Airport Consultants Council

Cc: George Legarreta, FAA AAS-100