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Mr. Jeroen Dijsselbloem
Chairman
Dutch Safety Board
P.O. Box 95404
2509 CK The Hague
Netherlands
Email: [redacted]@safetyboard.nl

Dear Mr. Dijsselbloem,

I wish to refer to an email from the Dutch Safety Board dated 29 April 2020, enquiring about follow up actions to a safety recommendation addressed to the International Civil Aviation Organization (ICAO) related to a serious incident involving an Embraer EMB-120ER, registration EC-JBD, on 18 January 2016 at the Amsterdam Schiphol Airport, Netherlands. The relevant Final Report contains a safety recommendation addressed to ICAO as follows:

> "It is recommended to initiate the process to develop, within Annex 14, Volume I "Aerodrome Design and Operations", a standard for runway edge lights that would allow pilots to identify them, specifically, without reference to other lights or other airfield features."

The safety recommendation was referred to the Aerodrome Design and Operations Panel (ADOP) for further study during its Visual Aids Working Group (VAWG) meeting in November 2019. The meeting considered the safety recommendation and concluded that, in the absence of a cost benefit study at a global level, changing the characteristics of the runway edge lights might not be the most practicable solution. Furthermore, introducing changes to the provisions for runway edge lights in Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations* would have the potential to create additional hazards and unintended consequences. Other solutions should be considered, such as the provisions of runway side stripe marking and taxiway centre line marking, and in particular, the details of those markings when they extend into a complex runway geometry with additional pavement. In this regard, work is currently in progress to develop appropriate specifications in Annex 14 related to the provision of continuous taxiway centre line marking into runway centre line, since it was noted that, at some airports, the taxiway centre line marking terminates at the edge of the runway.

From design and operational perspectives, Annex 14, Volume I, Attachment A, Section 22 contains guidance on improved taxiway design to preclude entry into the runway by angled taxiway, which prevented a full visual scan by pilots prior to entering or crossing a runway. Angled taxiways, such as S5 at Amsterdam Schiphol Airport, could be reconfigured to be used as an "exit-only taxiway" from the runway, rather than entry into the runway for aircraft requesting to take-off from intersections.

The intersection at Amsterdam Schiphol Airport involving taxiway B and Runway 24 with exits S5 to S8 resembles a classic example of a complex intersection, also known as a "hot spot". You may wish to note that further information on hot spots, the definition and strategies to mitigate the hazards arising therefrom, can be found in the *Manual on the Prevention of Runway Incursions* (Doc 9870).

I trust that the foregoing information meets the intent of the safety recommendation of the Dutch Safety Board.

Yours sincerely,

Stephen P. Creamer
Director
Air Navigation Bureau

cc: Representative of Netherland
on the Council of ICAO