



Agenda Item 5: Other business

**PROPOSAL OF AMENDMENT TO ANNEX 14 INTRODUCING
RECOMMENDATIONS ON TAXIWAY EDGE MARKINGS**

(Presented by Uruguay)

SUMMARY

After reviewing Annex 14, Volume I Aerodrome Design and Operations, and Doc 9157, Aerodrome Design Manual, Part 4, Visual Aids, and with a view to strengthening safety, situational awareness, and thus aircraft safety on the aerodrome runway surface, it is proposed that the Meeting comment on this working paper and recommend the introduction of amendments to Annex 14 on taxiway side stripe marking.

References:

- ICAO Annex 14, Volume I, Aerodrome Design and Operations
- ICAO Doc 9157, Aerodrome Design Manual, Part 4, Visual Aids
- *Manual Normativo de Señalización en el Área de Movimiento* (AENA)
- FAA - AC/150/5340-1J Standards for airport markings

ICAO strategic objective: Safety

1. Introduction

1.1 Annex 14, Volume I, Aerodrome Design and Operations, and Doc 9157 Aerodrome Design Manual, Part 4 Visual Aids, describe taxiway side stripe markings on non-load bearing surfaces.

1.2 In order to enhance safety on the runway surface, reduce aircraft accidents at the aerodrome, and improve aerodrome operations, a recommendation is made for taxiway side stripe markings to be applied over any surface in general, since in Annex 14, Volume I Aerodrome Design and Operations, they are applied only over non-load bearing surfaces.

1.3 Doc 9157, Aerodrome Design Manual, Part 4, Visual Aids, in paragraphs 2.2.1 and 2.2.2 and in Fig. 2-1 Marking of paved taxiway shoulders, contains details of the *taxiway side stripe marking*, and Annex 14, Volume I, Aerodrome Design and Operations, describes its application in section 7.2.1, under the heading of non-load bearing surfaces.

2.2.1 Aprons and taxiways may be provided with shoulder stabilisation which has the appearance of pavement but which is not intended to support aircraft. Similarly, small areas within the apron area may have non-load bearing pavement that appears to be full strength. This stabilisation may be provided to prevent blast and water erosion as well to provide a smooth surface that can be kept free of debris.

2.2.2 On straight segments this stabilisation may be readily recognisable by the provision of the taxi side stripe markings recommended in Annex 14, Volume I. At intersections of taxiways and on other areas where, due to turning, the possibility for confusion between the side stripe markings and centre line markings may exist or where the pilot may not be sure on which side of the edge marking the non-load bearing pavement is, the additional provision of transverse stripes on the non-load bearing surface has been found to be of assistance.

7.2 Non-load bearing

Application

7.2.1 Shoulders for taxiways, runway turn pads, holding bays and aprons and other non-load bearing surfaces which cannot readily be distinguished from load-bearing surfaces and which, if used by aircraft, might result in damage to the aircraft shall have the boundary between such areas and the load-bearing surface marked by a taxi side stripe marking.

Note.— The marking of runway side stripes is specified in 5.2.7.

Location

7.2.2 **Recommendation.**— *A taxi side stripe marking should be placed along the edge of the load-bearing pavement, with the outer edge of the marking approximately on the edge of the load-bearing pavement.*

2. Discussion

2.1 After reviewing the standards and recommended practices contained in Annex 14, Volume I, Aerodrome Design and Operation, it is suggested that a Recommendation be added concerning the taxiway side strip marking, containing item 7.2.1 of Annex 14.

3. Introduction of the following recommended practice

5.2.9 Taxi side stripe marking

Application

5.2.9.1 **Recommendation.** Taxi side stripe markings shall be placed to delineate the edge of the usable taxiway and the edge of the pavement, with the outer edge of the marking band defining the usable edge of the pavement. See figure 5.5.

Location and characteristics

5.2.9.2 A taxi side stripe marking shall consist of a pair of solid lines, each 15 cm wide and spaced 15 cm apart and the same colour as the taxiway centre line marking.

5.2.9.3 When there is an operational need to define the edge of the taxiway or parking position on a paved surface adjacent to the edge of the taxiway, and the pavement is designed to be used by aircraft, such as an apron, or when the taxiway is adjacent to an apron, markings will be those specified in 5.2.9.4 and must be painted at a distance half the width of the taxiway from the taxiway centre line.

5.2.9.4 The taxiway edge marking, in accordance with 5.2.9.3, will consist of a pair of dotted lines, 15 cm wide and 15 cm apart, in the same colour as the taxiway centre line marking, and lines should be 4.5 m long and 7.5 m apart. These markings must not be used for delineating islands, except under very special conditions. See figure 5.8

5.2.9.5 Shoulders for taxiways, runway turn pads, holding bays and aprons and other non-load bearing surfaces which cannot readily be distinguished from load-bearing surfaces and which, if used by aircraft, might result in damage to the aircraft shall have the boundary between such areas and the load-bearing surface marked by a taxi side stripe marking, providing additional transverse stripes in accordance with 5.2.9.8. The characteristics of the taxi edge transverse stripe marking will be those shown in Fig. 5.6 and 5.7

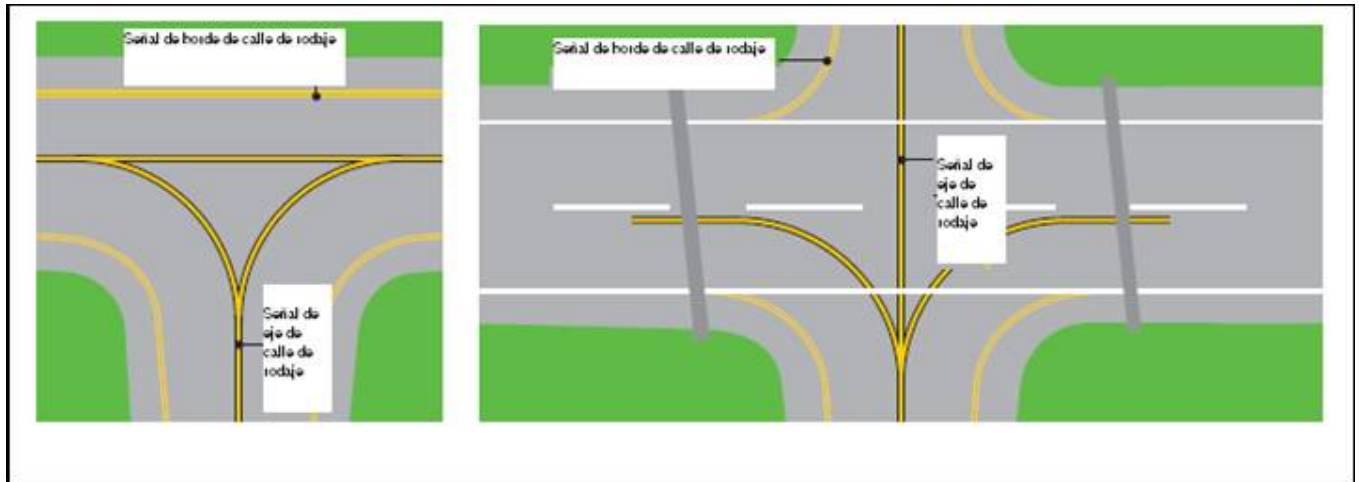


Fig. 5.5 Taxi side stripe markings

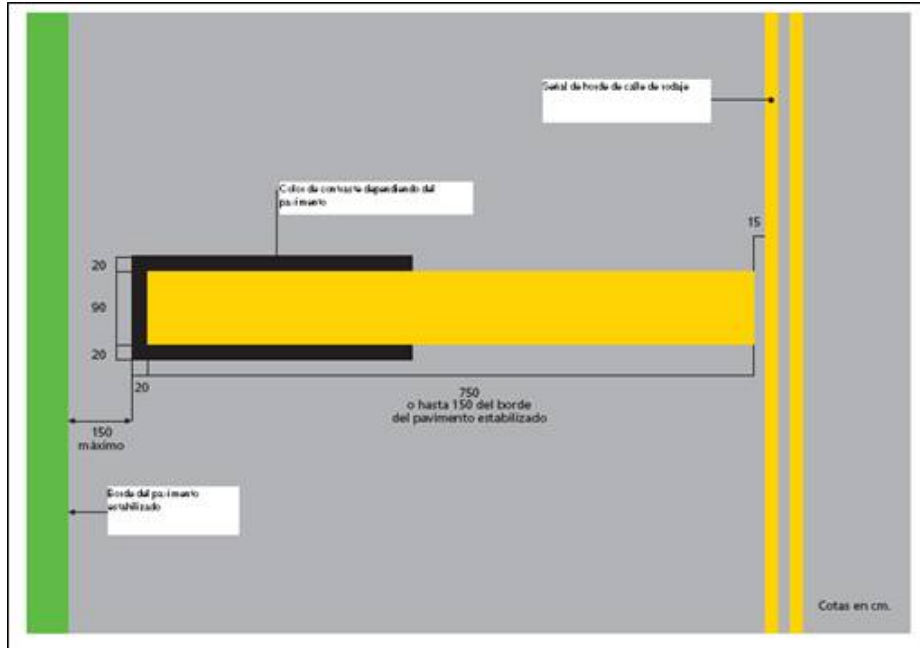


Fig. 5.6 Transverse stripe marking

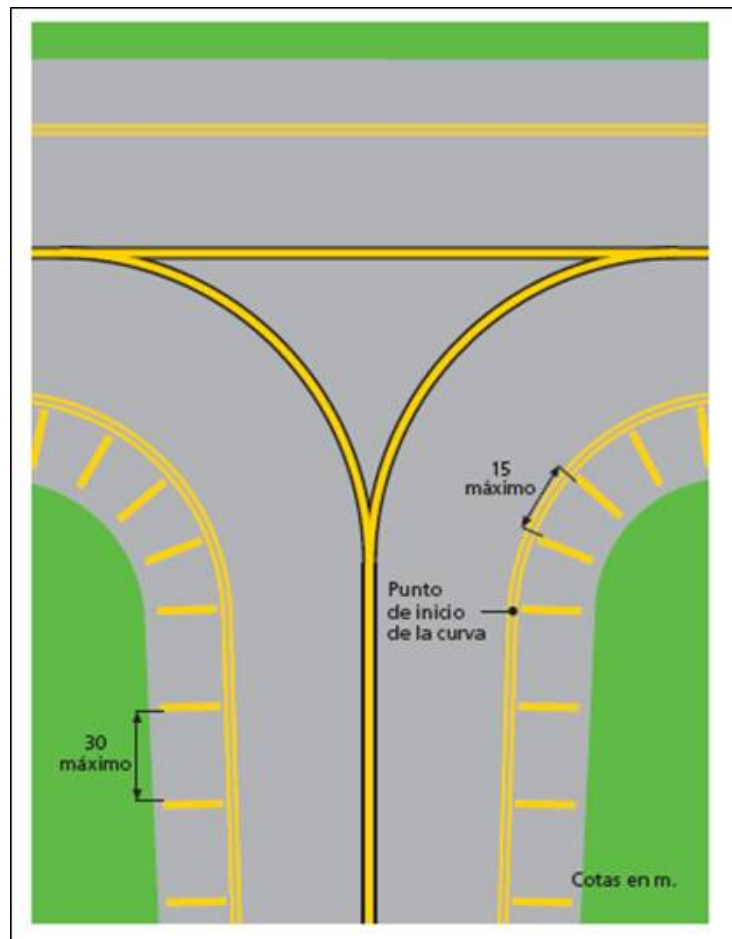


Fig. 5.7 Taxi side stripe markings with transverse stripes

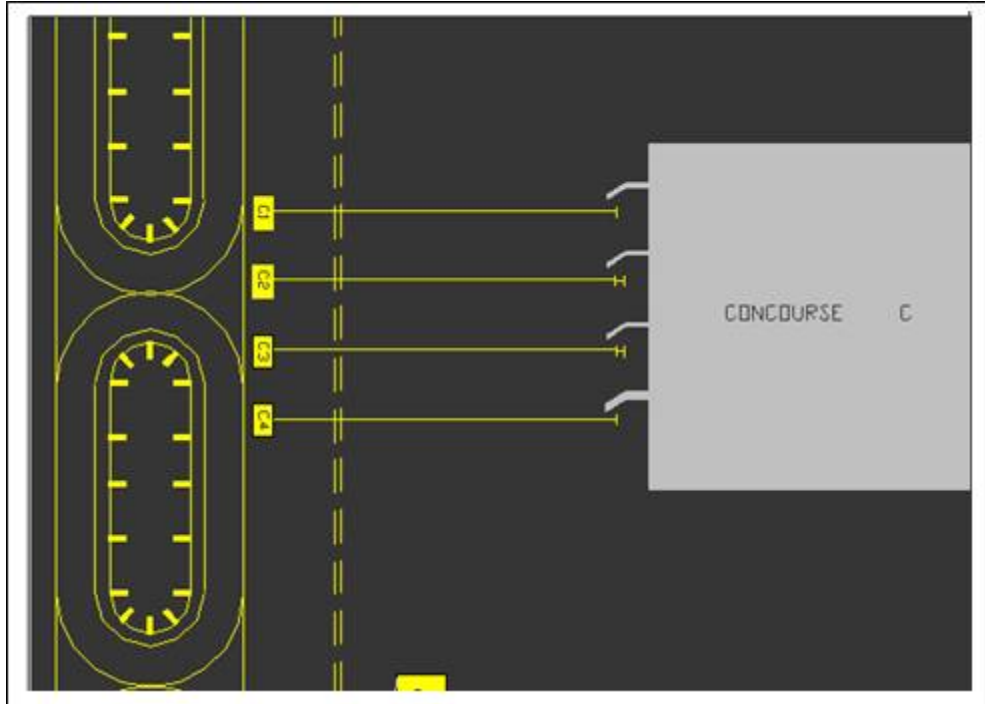


Fig. 5.8 Dotted-line taxi side stripe markings

4. **Suggested action**

4.1 The Meeting is invited to take note of the information provided in this paper and to comment on the proposal of amendment to Annex 14, Volume I, Aerodrome Design and Operations.

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