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PANS-OPS Flight Procedure Design Training for CAAs

23 August – 03 September 2021





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10 – Visual Segment Surface

(Doc. 8168, Vol. 2, Part I, Section 4, Chap. 5, § 5.4.6)





1. General
2. Visual Segment Surface
3. VSS management



❑ Except ILS Cat. 3, no final approach segment is guided down to the runway:

☞ Existence of a visual segment either after the MAPt or the DA/H.

☞ This segment shall be protected.

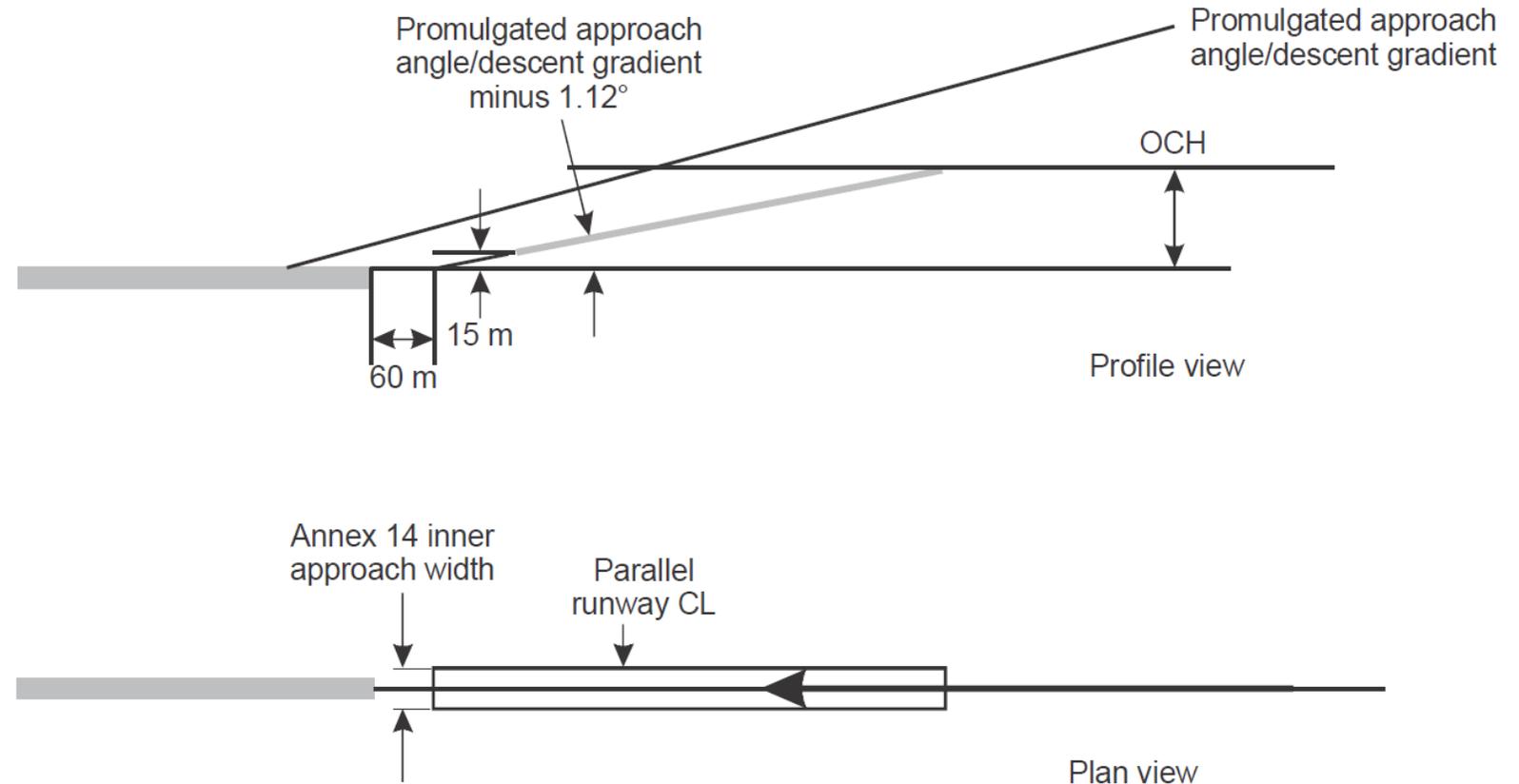
❑ ICAO VSS provision:

☞ Doc. 8168, vol. 2, § 5.4.6.1 **“All new straight-in instrument approach procedures published on or after 15 March 2007 shall be protected for obstacles in the visual segment. For this purpose no obstacles, except subject to 5.4.6.4, shall penetrate a Visual Segment Surface (VSS)...”**

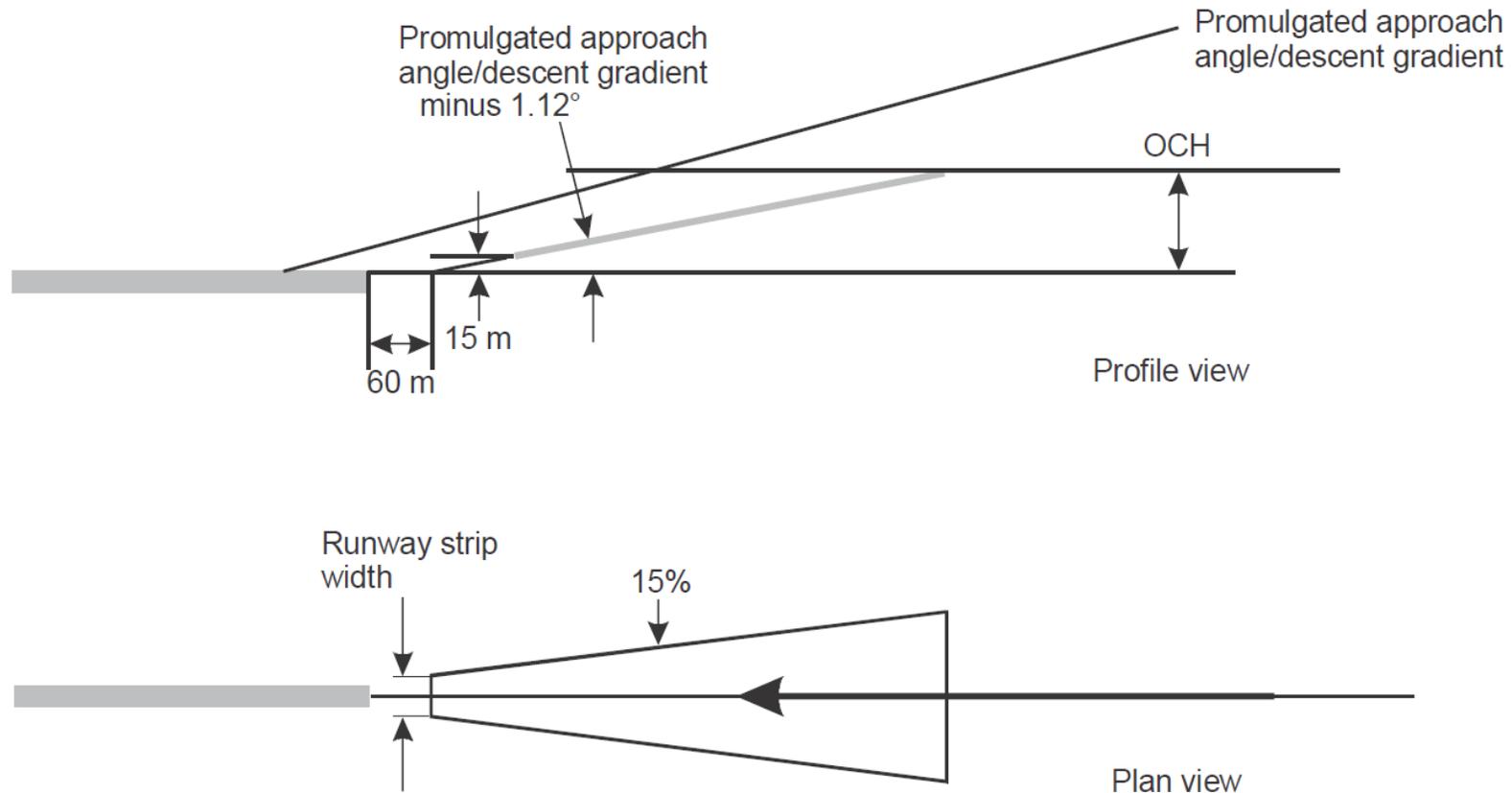


VSS for procedures with LOC or localizer look-alike

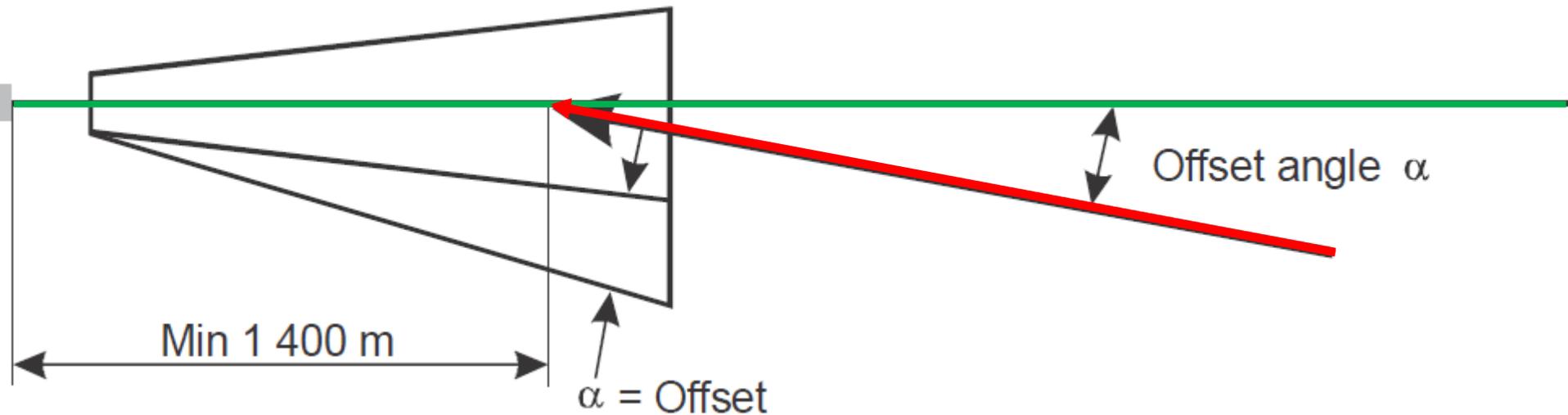
LOC only, APV I, PA



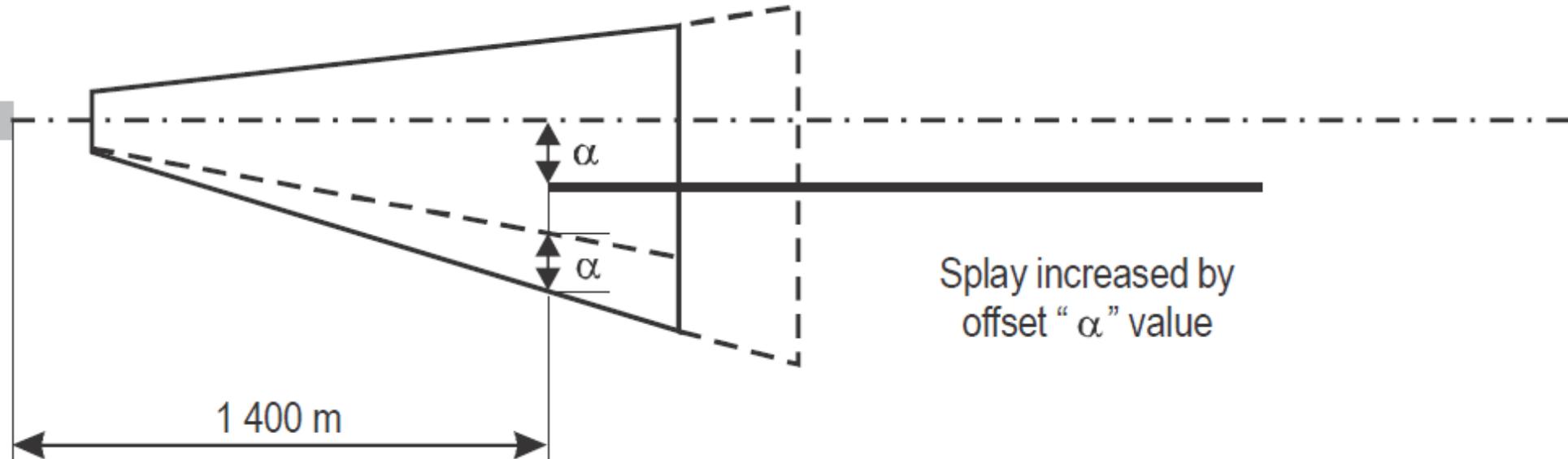
VSS for other straight-in approach procedures



VSS for other straight-in approach procedures: offset final approach



VSS for other straight-in approach procedures: offset final approach parallel to runway centre line





☐ If VSS is penetrated:

☞ Aeronautical study;

▪ Mitigation actions to be taken:

- Removal or lowering of the obstacle;
- Increase of the descent angle/gradient;
- Displacement of the runway threshold.

☞ Any VSS penetration depicted on the instrument approach chart.

☐ Obstacles with height < 15 m above threshold may be ignored as well as temporary moving obstacles (aircraft, etc.).

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