



3er Taller PANS-OPS (SAM/PANS-OPS/3) Información del Miembro del IFPP



FERNANDES JR – DECEA/BRASIL



**Departamento de Controle
do Espaço Aéreo**



OBJETIVO

- ➔ Presentar informaciones sobre el 14º ciclo de trabajo del Panel de Procedimientos (IFPP) de la OACI y la enmienda 8 del PANS-OPS.

TEMARIO

- ➔ ¿Qué es IFPP?
- ➔ Enmienda 8 del PANS-OPS
- ➔ Temas del 14º Ciclo de Trabajo del IFPP

¿IFPP?



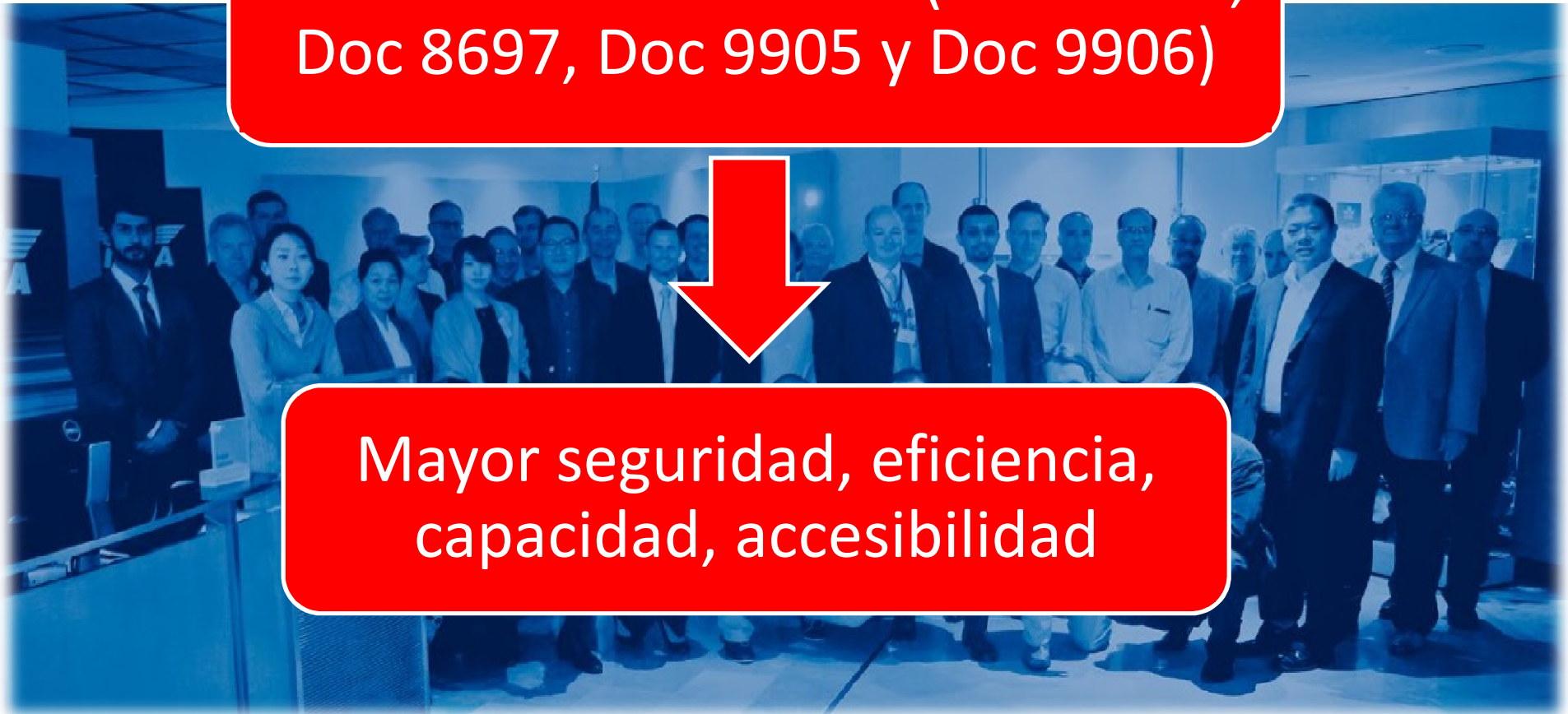
Instrument Flight Procedures Panel (IFPP)

The Obstacle Clearance Panel (OCP) was established in 1966, and renamed to the Instrument Flight Procedures Panel (IFPP) in 2007. The IFPP is responsible for the development of performance-based instrument flight procedures to meet the emerging requirements of

of automation, the need for quality assurance and the consideration of environmental issues in instrument flight procedures. The IFPP also conducts specific studies and provides recommendations and provisions for associated domains.

Desarrollar estándares (PANS-OPS, Doc 8697, Doc 9905 y Doc 9906)

Mayor seguridad, eficiencia, capacidad, accesibilidad



¿Cómo funciona el IFPP?

IFPP (OACI)
WG 1a PBN/New Criteria
WG 1c Helicopters
WG 1d Maintenance and Implementation
WG 2 Integration
WG 3 ATM
WG 4 Quality Assurance
WG 5 CRM Development
WG 6 Operations
OLS Task Force

- Reuniones plenarias (2x año)
- Reuniones de los subgrupos
- Ciclos de trabajo (4 reuniones)
Septiembre 2016 cierra el ciclo 13
- Representantes de los Estados y otras organizaciones (Jeppesen, FAA, IFALPA, Boing, ICCAIA)

TEMARIO

→ ¿Qué es IFPP?

→ Enmienda 8 del PANS-OPS

→ Temas del 14^º Ciclo de Trabajo del IFPP

ENMIENDA 8 DEL PANS-OPS

International
Civil Aviation
Organization

Organisation
de l'aviation civile
internationale

Organización
de Aviación Civil
Internacional

Международная
организация
гражданской
авиации

منظمة الطيران
المدني الدولي

国际民用
航空组织

Tel.: +1 514-954-8219 ext. 8080

Ref.: AN 11/19.1, AN 11/19.2, AN 11/19.10-18/87

4 September 2018

Subject: Approval of Amendment 8 to the *Procedures for Air Navigation Services — Aircraft Operations*, Volume I — *Flight Procedures* and Amendment 8 to Volume II — *Construction of Visual and Instrument Flight Procedures*, and the first edition of Volume III — *Aircraft Operating Procedures* (PANS-OPS, Doc 8168)

Action Required: a) Implementation of the amendments on 8 November 2018; b) Publication of any differences as of 8 November 2018

ENMIENDA 8 DEL PANS-OPS

→ 08 NOV 2018

- Volumen I (*Flight Procedures*)

- Volumen II (*Construction of Flight Procedures*)

- Volumen III (*Aircraft Operating Procedures*) (??)

→ IFPP/12 y IFPP/13 – FLTOPSP/3 – SASP/1 – AIS-AIMSG/12

ENMIENDA 8 DEL PANS-OPS

- ➔ Volume I — **Flight Procedures** describes the **operational requirements for flying the procedures** ~~recommended for the guidance of flight operations personnel and flight crew. It also outlines the various parameters on which~~ **designed in accordance with the criteria provided in Volume II** ~~are based so as to illustrate the need to adhere strictly to the published procedures in order to achieve and maintain an acceptable level of safety in operations~~
- ➔ Volume III — **Aircraft Operating Procedures** describes operational procedures recommended for the guidance of flight operations personnel and flight crew.

ENMIENDA 8 DEL PANS-OPS

- ➔ Review of helicopter PinS criteria
- ➔ Revised procedure altitude/height definition
- ➔ Review of the SBAS-related, GBAS and GLS terminology
- ➔ Introduction of VSS-OCS
- ➔ Clarification of intermediate segment protection area limits
- ➔ PBN departure procedures from parallel runways
- ➔ New PBN procedures for parallel runway operations

IMPLEMENTATION TASK LIST

- c) drafting of the necessary modifications to the national regulations;
- e) establishment of a national implementation plan that takes into account the new ICAO provisions;
- f) training of procedure designers and regulatory oversight personnel on the new PANS-OPS criteria;
- i) **publication of significant differences**, if any, in the State's AIP.

SIMULTANEOUS PARALLEL APPROACH

ACTUAL

ILS or MLS procedures

NOV 2018

ILS/MLS or PBN procedures

LNAV/BARO-VNAV/SBAS/GBAS/RNP AR

PROCEDURE ALTITUDE/HEIGHT

ACTUAL

A specified altitude/height flown operationally at or above the minimum altitude/height and established to accommodate a stabilized descent at a prescribed descent gradient/angle in the intermediate/final approach segment.

NOV 2018

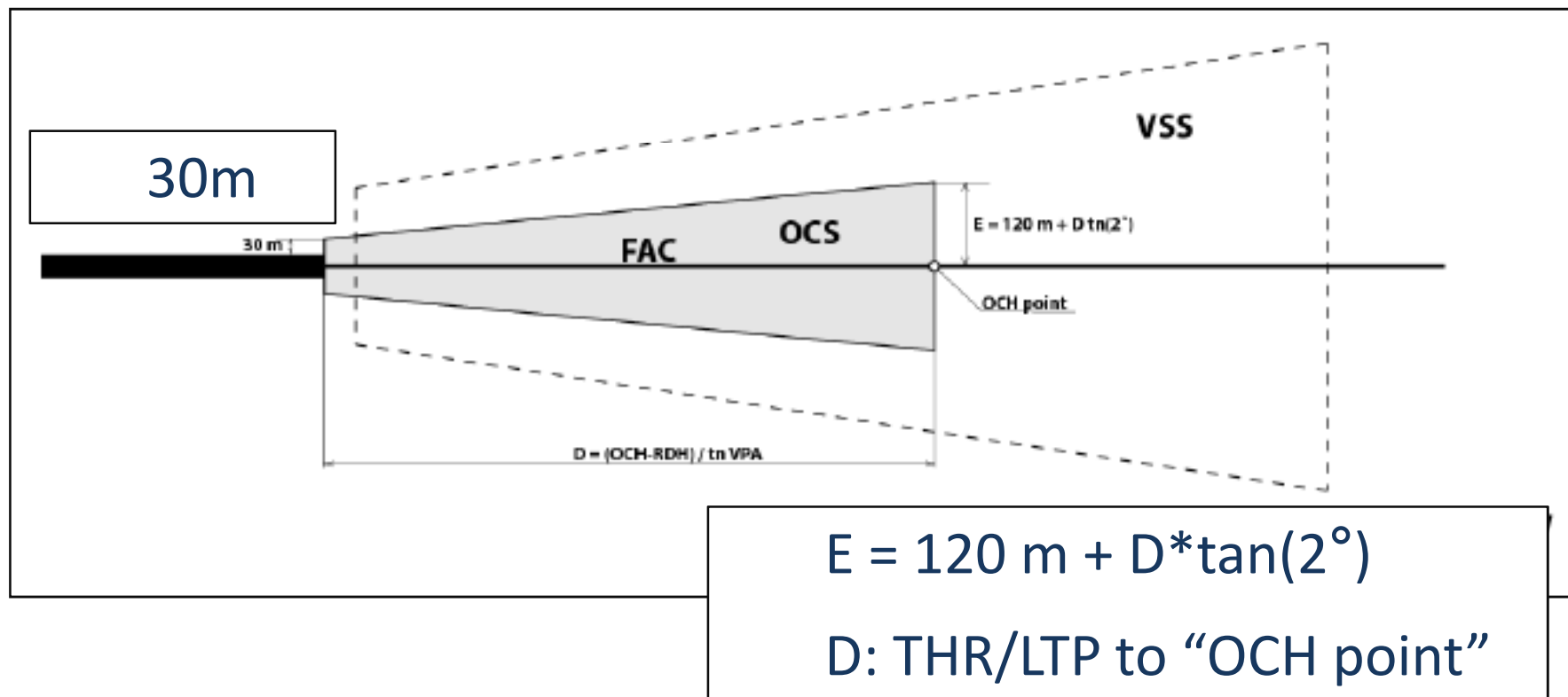
A published altitude/height used in defining the vertical profile of a flight procedure, at or above the minimum obstacle clearance altitude/height where established.

IFR DEPARTURES FROM PARALLEL RUNWAYS

When it is intended to use two instrument departure procedures from parallel runways simultaneously, the nominal departure tracks shall diverge by at least 15 degrees immediately after take-off **or at least 10 degrees when both aircraft are flying a PBN SID provided the turn commences no more than 3.7 km (2.0 NM) from the departure end of the runway**

VISUAL SEGMENT SURFACE (VSS)

5.4.6.6.1 For this purpose, no obstacle shall penetrate an obstacle clearance surface (OCS) defined as follows:

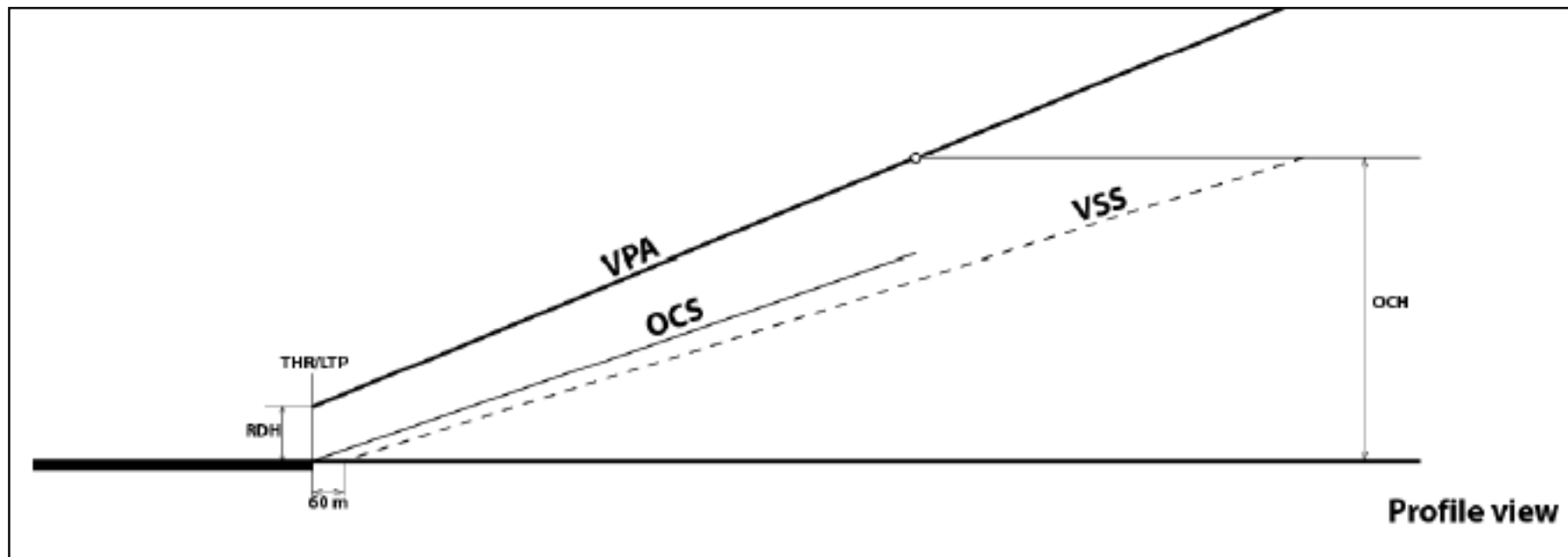


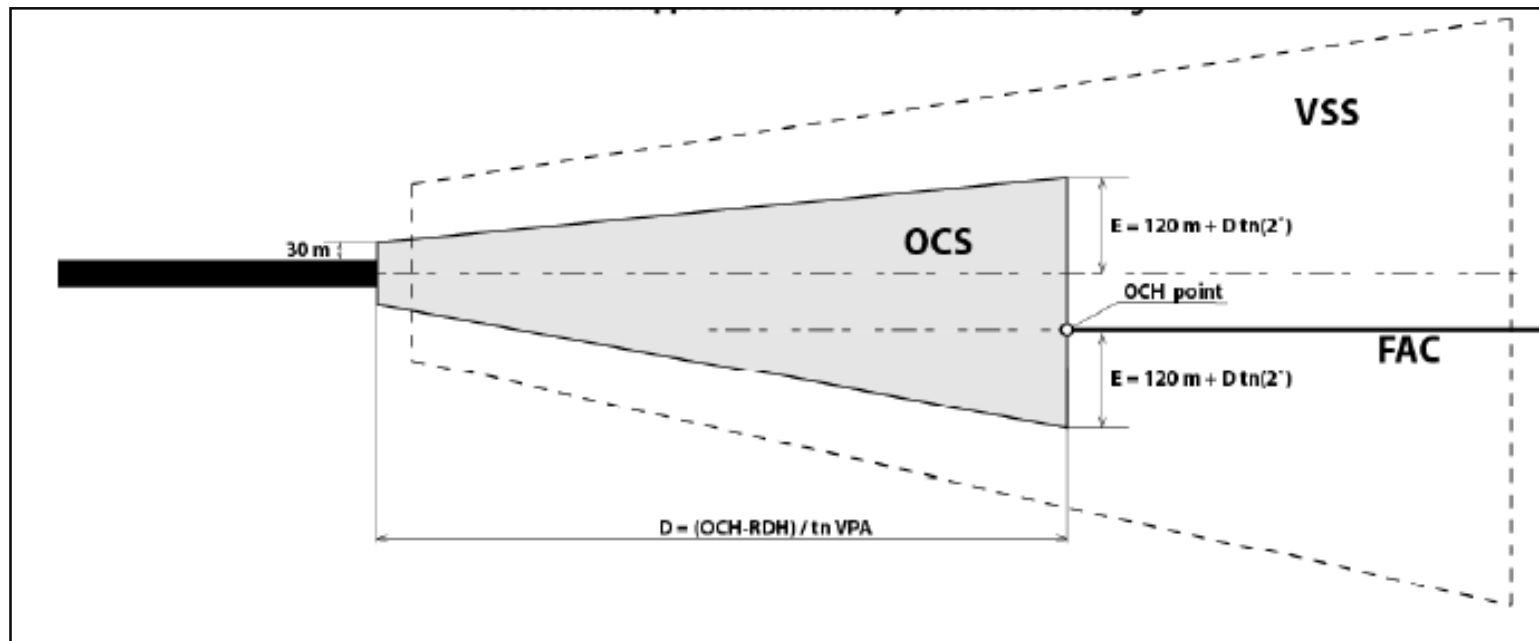
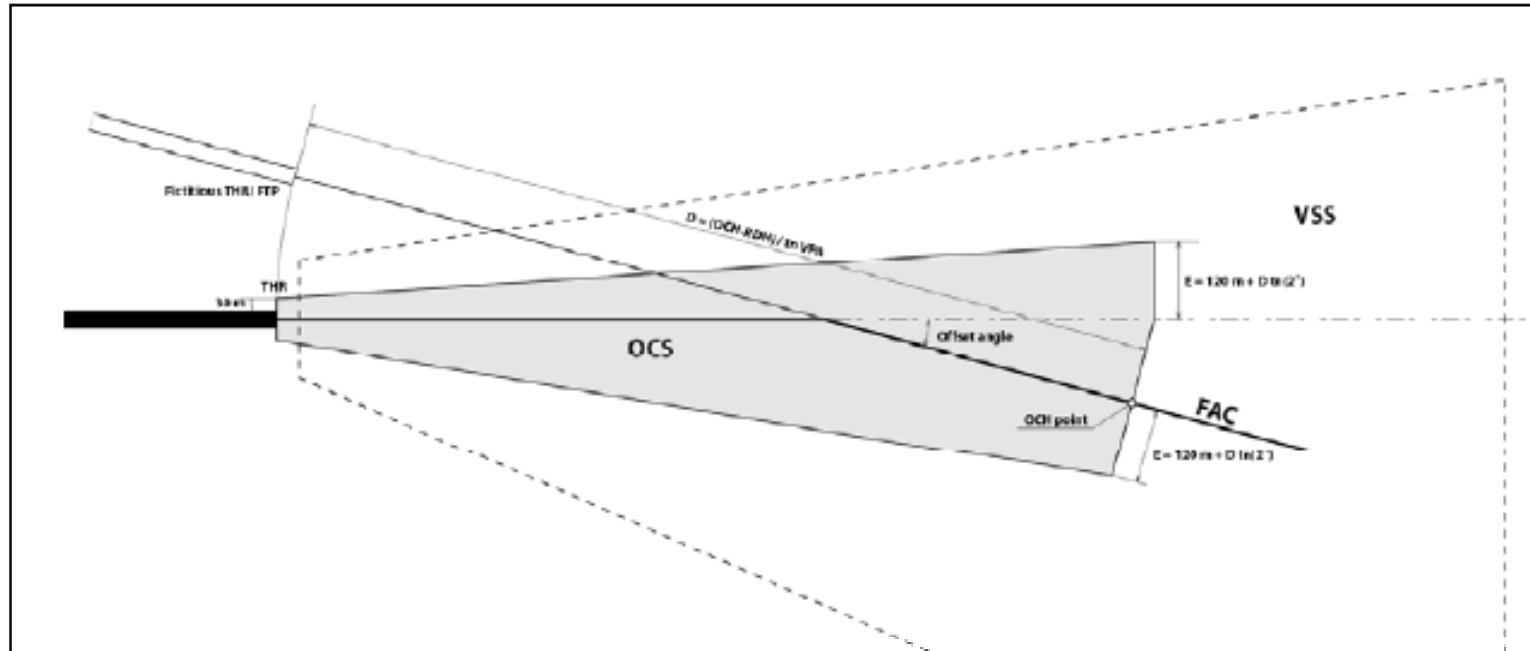
VISUAL SEGMENT SURFACE (VSS)

a) for NPA: $\theta = VPA - 1^\circ$

b) for APV Baro: $\theta = VPA_{\text{COLD}} - 0.5^\circ$

c) for APV (geometric vertical guidance): $\theta = VPA - 0.5^\circ$





ÁREA DE PROTECCIÓN (FINAL / INTERM)

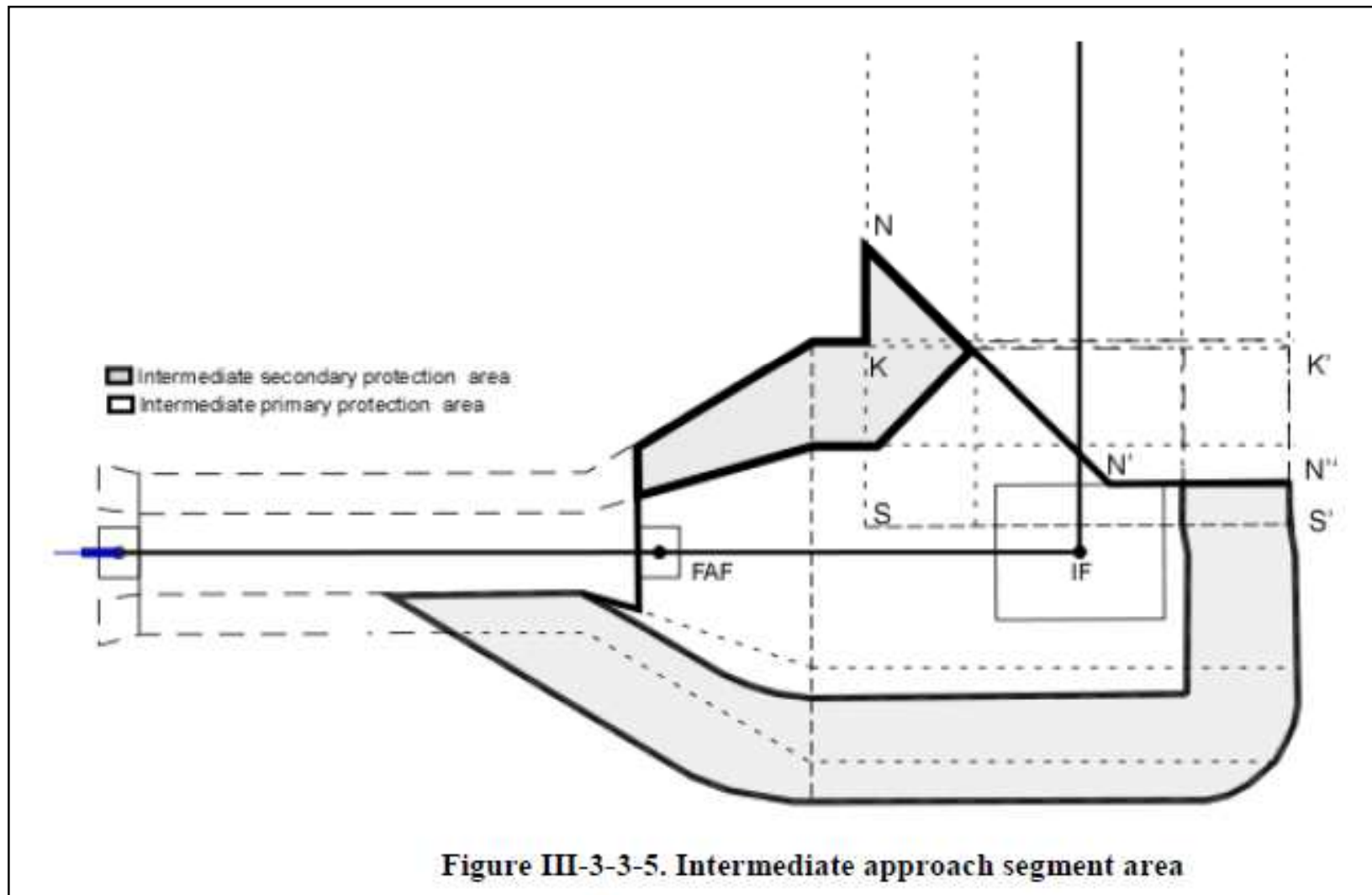
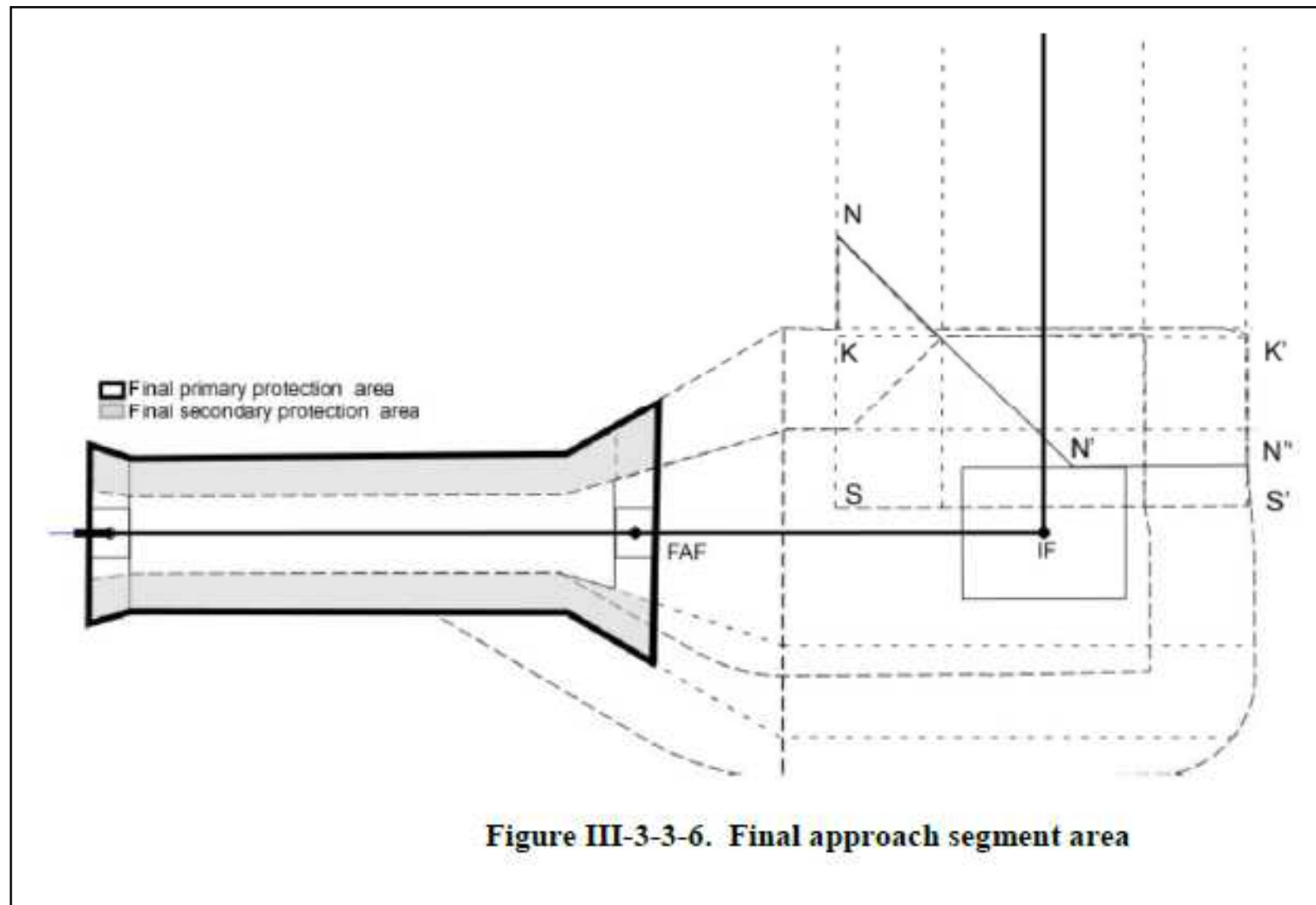
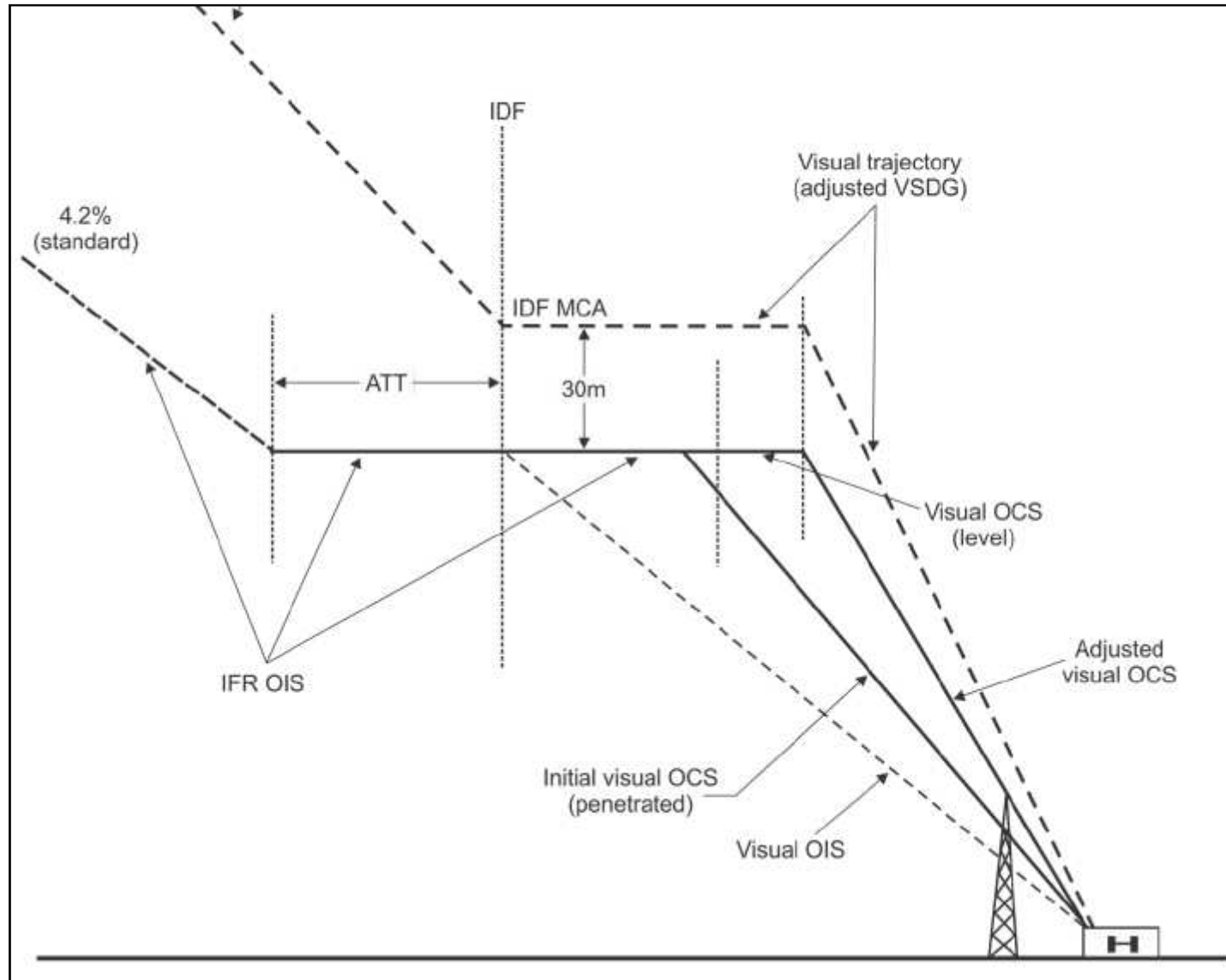


Figure III-3-3-5. Intermediate approach segment area

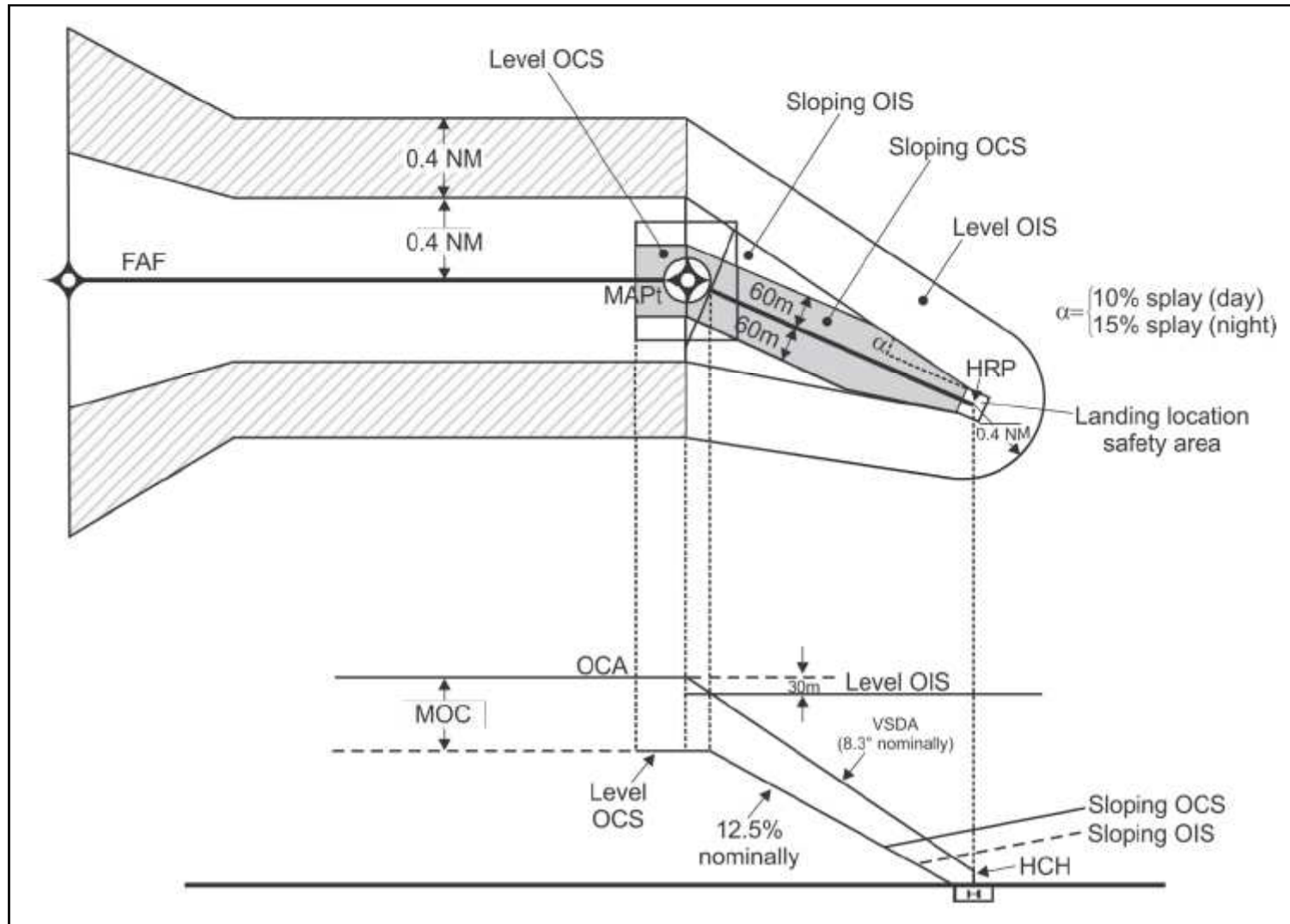
ÁREA DE PROTECCIÓN (FINAL / INTERM)



HELICOPTER POINT-IN-SPACE (PinS) DEPARTURES



HELICOPTER POINT-IN-SPACE (PinS) APPROACHES



FIRST EDITION
OF THE
PROCEDURES
FOR
AIR NAVIGATION SERVICES

AIRCRAFT OPERATIONS

(Doc 8168)

VOLUME III

(AIRCRAFT OPERATING PROCEDURES)

TEMARIO

- ¿Qué es IFPP?
- Enmienda 8 del PANS-OPS
- Temas del 14^º Ciclo de Trabajo del IFPP

¿Cuáles son los temas del 14º Ciclo del IFPP?



TEMAS DESARROLLADOS POR EL IFPP

APPENDIX C
Action Item Check List

Action Item	Description	Action by	Deadline	Status
13-1/1	Visually Guided procedures: The IFPP Secretary to ensure the Job Card FLTOPSP.023.01 to be updated with the timeframes stated above (Q4 2017).	Secretariat	IFPP 13-2	overdue

- **5 páginas – 72 temas**
- **Ni todos son discutidos en las reuniones**
- **Muchos dependen de la interacción con otros WG**
- **Algunos están retrasados o suspendidos (falta expertos)**

	Annex 4 at IFPP/13 in fall 2016.			
	GBAS Text: The WG1a to present a mature			

REUNIÓN IFPP/14

IFPP/14 ORDER BUSINESS AND PAPER ALLOCATION
 (Plenary: Conference Room 5/ Breakout sessions: Conference Rooms 7A, 7B and A)

Date	Order of Business	
	Morning Session (09:00-12:30)	Afternoon Session (13:30-17:00)
FIRST WEEK		
17 Sept. (Mon)	<p>Opening of the meeting</p> <ul style="list-style-type: none"> Opening remarks by P/ANC Welcome remarks by Chief PCI Election of the Chair person Welcome remarks by Chair person Introduction of participants <p>Meeting arrangement</p> <ul style="list-style-type: none"> Agenda, time schedule and meeting arrangements <p>Agenda Item 2 – IFP for Helicopter PBN Operations</p> <ul style="list-style-type: none"> IFPP 14 WP – 002 Corrections concerning Promulgation of PinS Procedures 	<p>Agenda Item 2 – IFP for Helicopter PBN Operations (Cont'd)</p> <ul style="list-style-type: none"> IFPP 14 WP - 004 IMC Entry Prior to the IDF IFPP 14 WP - 003 Charting Requirements for IMC Entry Prior to the IDF MCA IFPP14 WP - 005 Proposed amendment to helicopter PinS criteria
18 Sep. (Tue)	<p>Agenda Item 2 – IFP for Helicopter PBN Operations (Cont'd)</p> <ul style="list-style-type: none"> IFPP 14 WP - 007 Use of 175 KIAS on Helicopter Routes IFPP 14 WP - 006 Specimen Charts IFPP 14 WP - 020 RNP 0.3 Discussion on the other Job-Cards items 	<p>Agenda Item 3 – Harmonization of charting Criterial Databases of Criteria and Avionics Systems</p> <ul style="list-style-type: none"> IFPP 14 WP – 017 Conventional Nav. Aids on PBN Charts paper IFPP 14 WP – 018 Relocation and Renaming Criteria for Significant Waypoints
19 Sep. (Wed)	<p>Agenda Item 4 – Development of new PBN design criteria to support current and future PBN operations</p>	<p>Agenda Item 5 – GBAS Cat II/III</p> <ul style="list-style-type: none"> IFPP 14 WP – 001 GBAS Cat II/III

REUNIÓN IFPP/14

SECOND WEEK		
	Morning Session (09:00-12:30)	Afternoon Session (13:30-17:00)
24 Sep. (Mon)	<p>Agenda Item 10 – Altitudes on instrument procedures: definition, guidance and depiction</p> <ul style="list-style-type: none"> • IFPP 14 WP – 013 Charted Altitudes – Flight Levels • IFPP 14 WP – 014 Charted Altitudes – Flight Levels Doc 8697 • Discussion on the other Job-Cards items 	<p>Agenda Item 11 – Visual Segment Surface (VSS): use and promulgation</p> <ul style="list-style-type: none"> • IFPP 14 WP – 016 Issues with Charting of VSS Penetrations and Proposed Amendments <p>Agenda Item 12 – The Quality Assurance Manual for Flight Procedure Design (Doc 9906)</p> <ul style="list-style-type: none"> • Status update on the other Job-Cards items
25 Sep. (Tue)	<p>Agenda Item 13 – SBAS Criteria Modernization</p> <ul style="list-style-type: none"> • Status update on the other Job-Cards items <p>Agenda Item 14 – Inter Panel Job Cards (Cont'd)</p> <ul style="list-style-type: none"> • IFPP 14 WP – 011 Simultaneous Parallel PBN operations • IFPP 1 WP – 015 Chart Notes to support Simultaneous Parallel Operations • SASP – one item for coordination <p><i>Group Photo at 10:30 AM</i></p>	<p>Agenda Item 14 – Inter Panel Job Cards (Cont'd)</p> <ul style="list-style-type: none"> • PBN SG 003 – RNP AR Departures - Job Card Discussion • FLTOPSP.023 visually guided approaches - Job Card Discussion • FLTOPSP 026 – SID STAR charting concerns - Job Card Discussion • FLTOPSP.038 - Development of PBN approaches to enhance airport access and TMA efficiency • OPSP14 - Use of Area Navigation (RNAV) on Conventional Routes and Procedures <p><i>Group Dinner at 06:30 PM</i></p>
26 Sep. (Wed)	<p>Agenda Item 15 – Work related to maintenance of provisions</p> <ul style="list-style-type: none"> • RNP AR Manual Status Update (Go To Meeting) • CRM Status update (Go To Meeting) 	<p>Review of agenda items 1 to 15 (IFPP/14 deliverables)</p>

REUNIÓN IFPP/14 (Primera semana)

IFP for Helicopter PBN Operations

- 002 Corrections concerning Promulgation of PinS Procedures
- 004 IMC Entry Prior to the IDF
- 003 Charting Requirements for IMC Entry Prior to the IDF MCA
- 005 Proposed amendment to helicopter PinS criteria
- 006 Specimen Charts
- 020 RNP 0.3

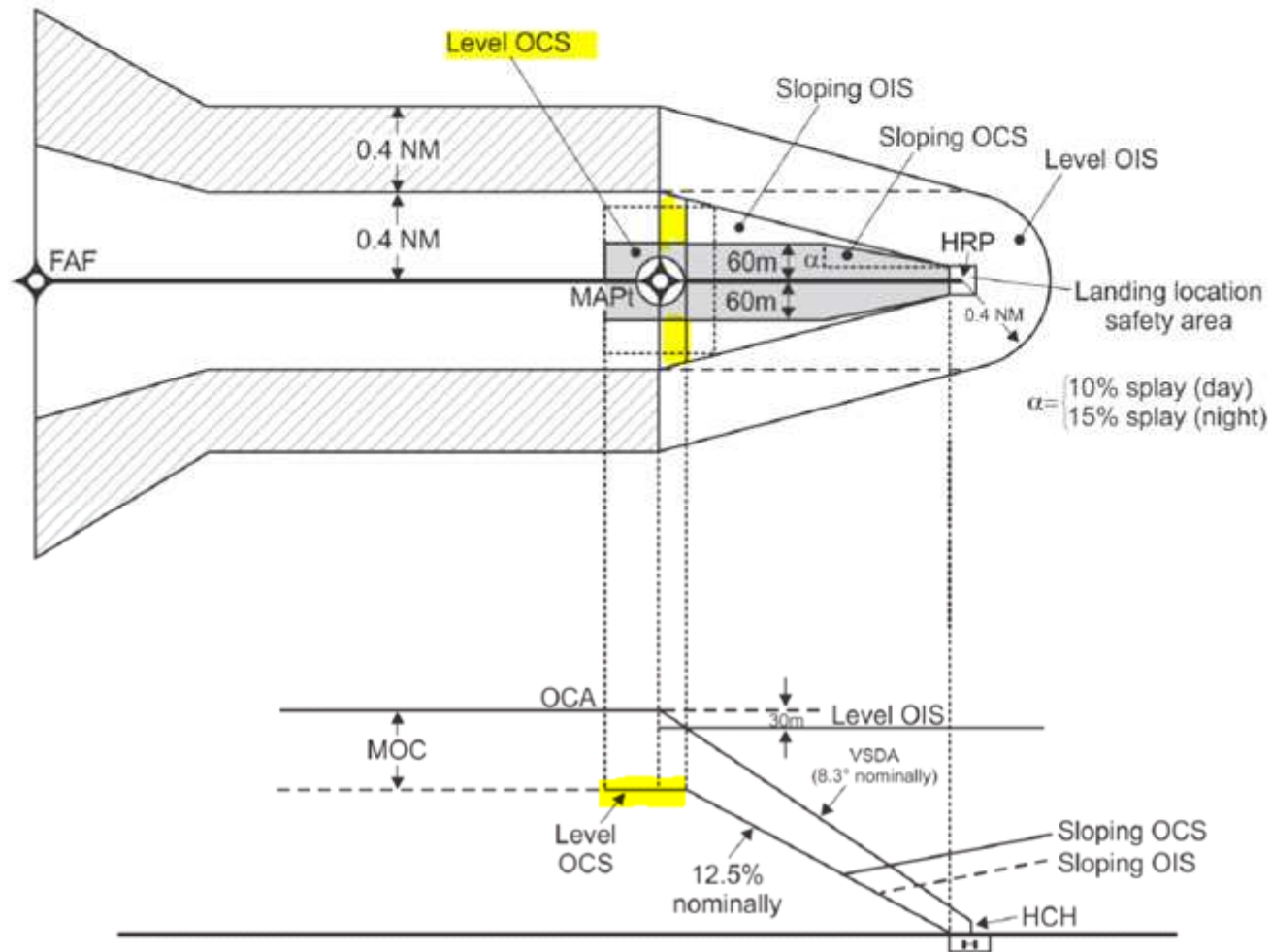
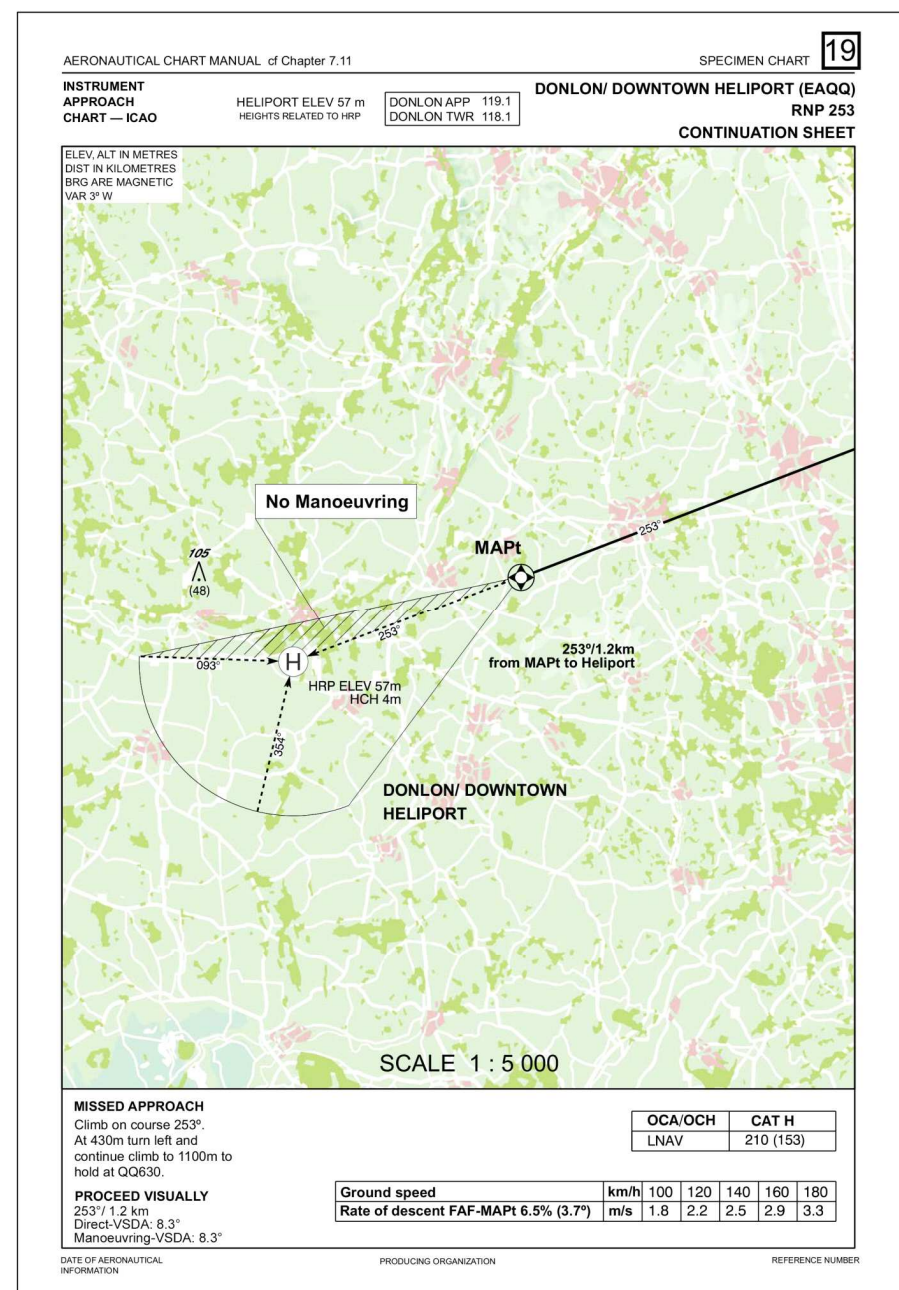
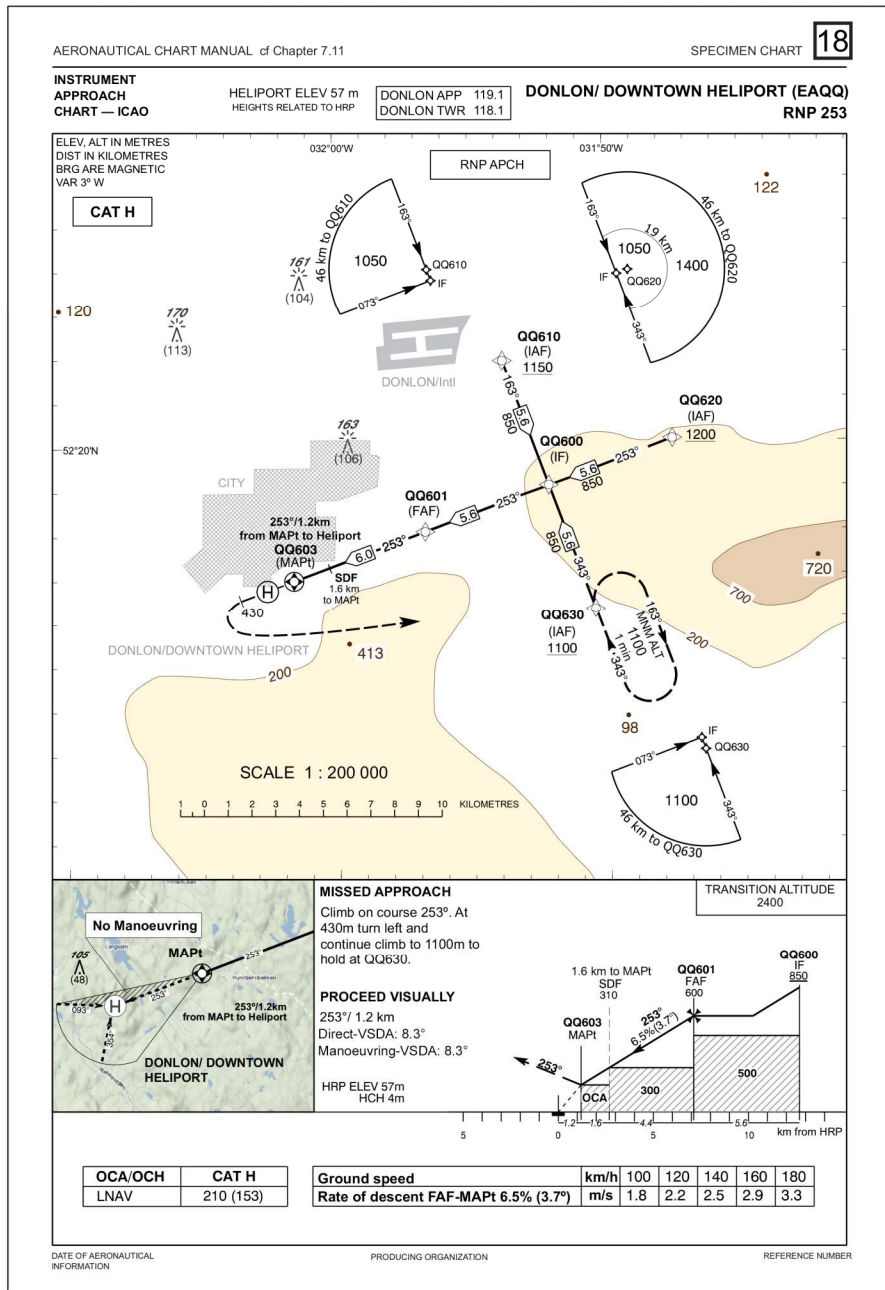


Figure IV-2-5. Direct-VS without DP and without course change



REUNIÓN IFPP/14 (Primera semana)

IFP for Helicopter PBN Operations

→ 020 RNP 0.3

1.4.2 For RNP 0.3 procedures for helicopters, **assuming that the route will be flown with autopilot**, reduced buffer values can be used. In this case, a statement in the AIP must advise that these routes require autopilot.

Table III-1-2-12. XTT, ATT and area semi-width for RNP 0.3 (NM)

	<i>En-route/STAR/SID (>30NMARP)</i>			<i>STAR/SID/IF/IAF/Missed Approach (≤30 NM ARP)</i>			<i>SID/Missed Approach (<15 NM ARP)</i>		
	XTT	ATT	½ A/W	XTT	ATT	½ A/W	XTT	ATT	½ A/W
Manual or autopilot flight	0.30	0.24	1.45	0.30	0.24	1.15	0.30	0.24	0.8
Autopilot required	0.30	0.24	0.8	0.30	0.24	0.8	0.30	0.24	0.8

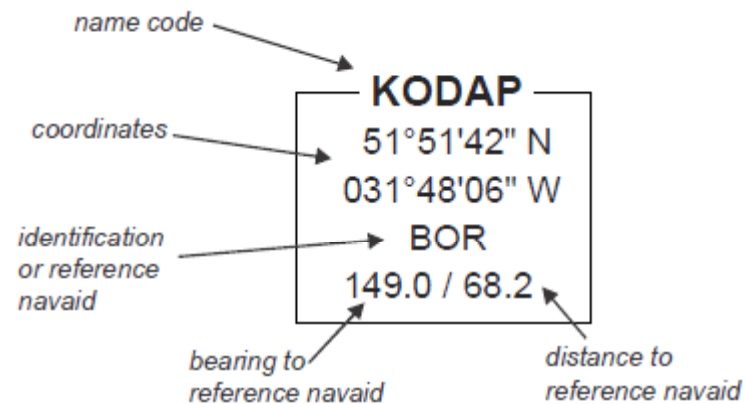
REUNIÓN IFPP/14 (Primera semana)

Harmonization of charting Criterial Databases of Criteria and Avionics Systems

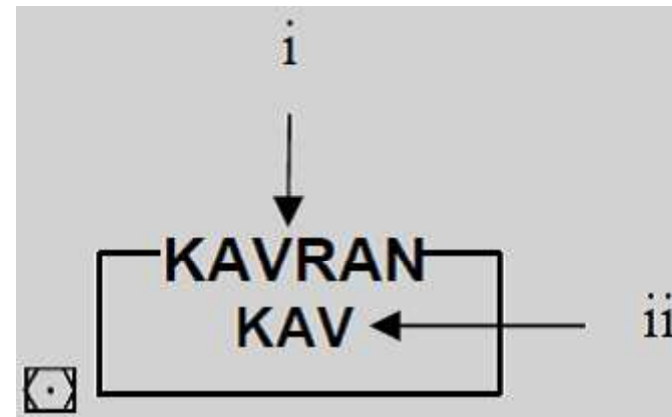
- 017 Conventional Nav. Aids on PBN Charts paper
- 018 Relocation and Renaming Criteria for Significant Waypoints

REUNIÓN IFPP/14 (Primera semana)

→ 017 Conventional Nav. Aids on PBN Charts paper



Conventional Procedure



PBN Procedure

REUNIÓN IFPP/14 (Primera semana)

- 018 Relocation and Renaming Criteria for Significant Waypoints
 - No se puede definir un estándar
 - Estados tienen que desarrollar su criterio
 - No hay “consenso”

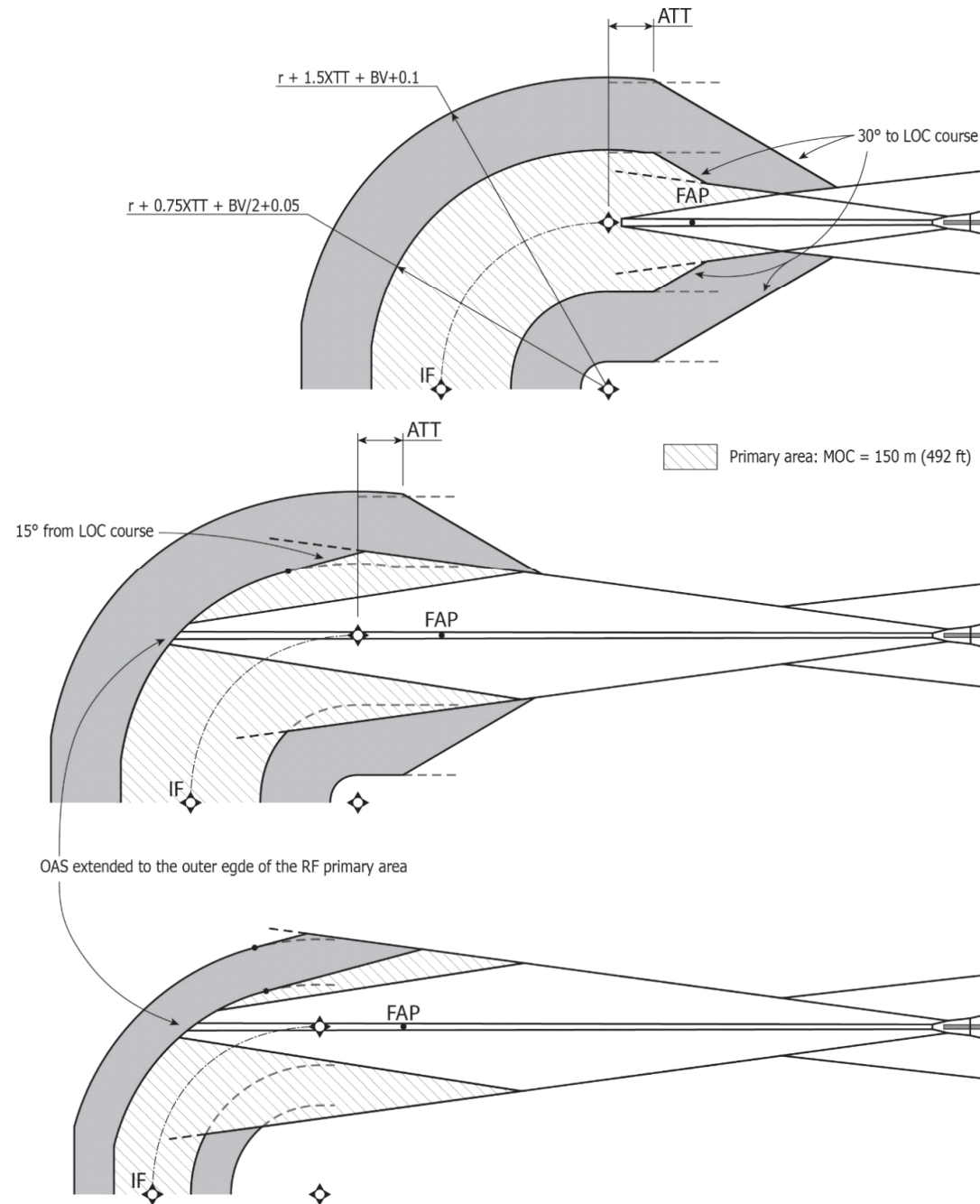
REUNIÓN IFPP/14 (Primera semana)

Development of new PBN design criteria to support current and future PBN operations

→ 009 RF to Xls

1.3.6 RF turn to the localizer course

1.3.6.1 The intermediate approach segment may incorporate a PBN route ending with a radius-to-fix turn to the localizer course. In this case the RF turn shall terminate at a waypoint located on the localizer course. The position of this waypoint is considered as the point of localizer interception.



REUNIÓN IFPP/14 (Primera semana)

GBAS Cat II/III

→ 001 GBAS Cat II/III

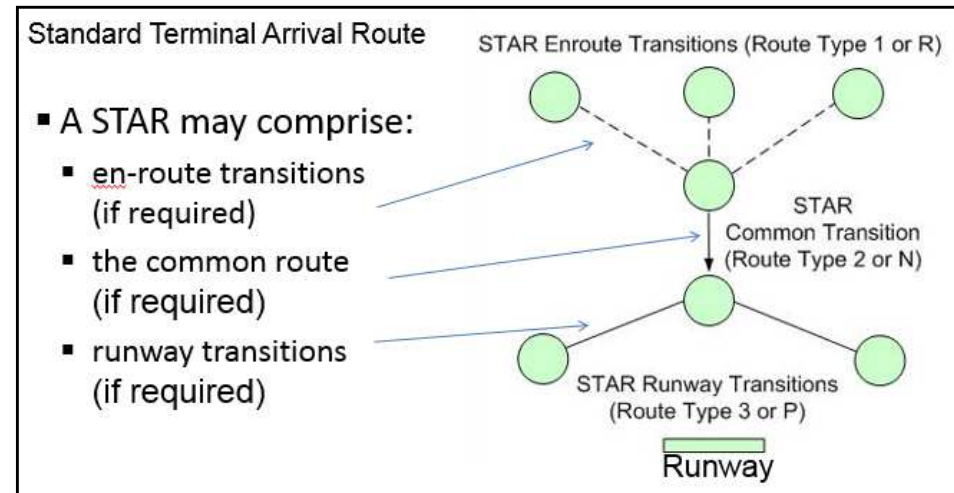
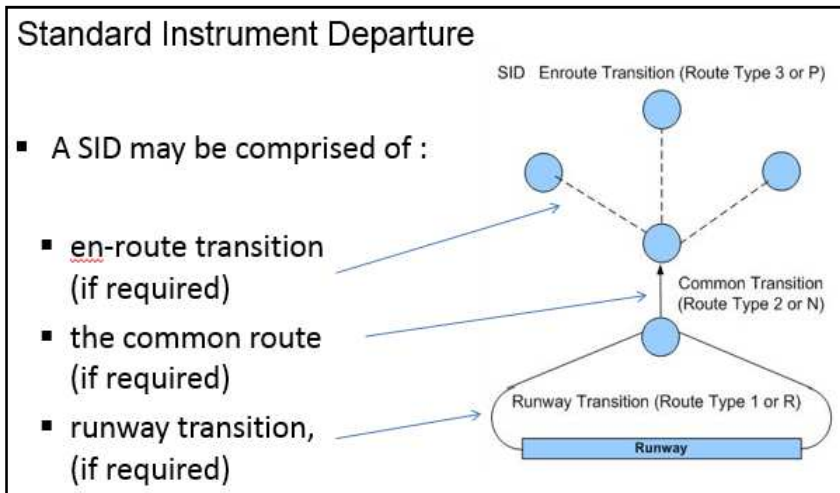
*For **Cat II and Cat III operations** the Annex 14 inner approach, inner transitional and balked landing surfaces have not been penetrated. Where the Cat II OCA/H is higher than the level of the inner horizontal surface, but below 60 m, Category III operations can be accommodated provided the inner approach, inner transitional and balked landing surfaces are extended to the Cat II OCA/H level to accommodate Cat III operations (see Figure II-1-1-8 a)).*

REUNIÓN IFPP/14 (Primera semana)

SID and STAR Transitions

➔ Status update on the other Job-Cards items

Discusión se basa en la manera en que los procedimientos son codificados y cargados >> ARINC 424



REUNIÓN IFPP/14 (Semana 2)

Visual Segment Surface (VSS): use and promulgation

- 016 Issues with Charting of VSS Penetrations and Proposed Amendments

11.10.2 Obstacles

~~*11.10.2.8 — Obstacles that penetrate the visual segment surface shall be identified on the chart.*~~

~~*Note. Guidance on the charting of visual segment surface (VSS) penetrations can be found in the Aeronautical Chart Manual (Doc8697).*~~

REUNIÓN IFPP/14 (Semana 2)

Inter Panel Job Cards (Cont'd)

- PBN SG 003 – RNP AR Departures - Job Card Discussion
 - >> NAVSPEC Q4 2018 >> Criterios IFPP 1º SEM 2019
- FLTOPSP.023 Visually Guided Approaches - Job Card Discussion
- RNP AR Manual Status Update (Go To Meeting)

ACTUALIZACIÓN DEL MANUAL RNP AR (DOC 9905)

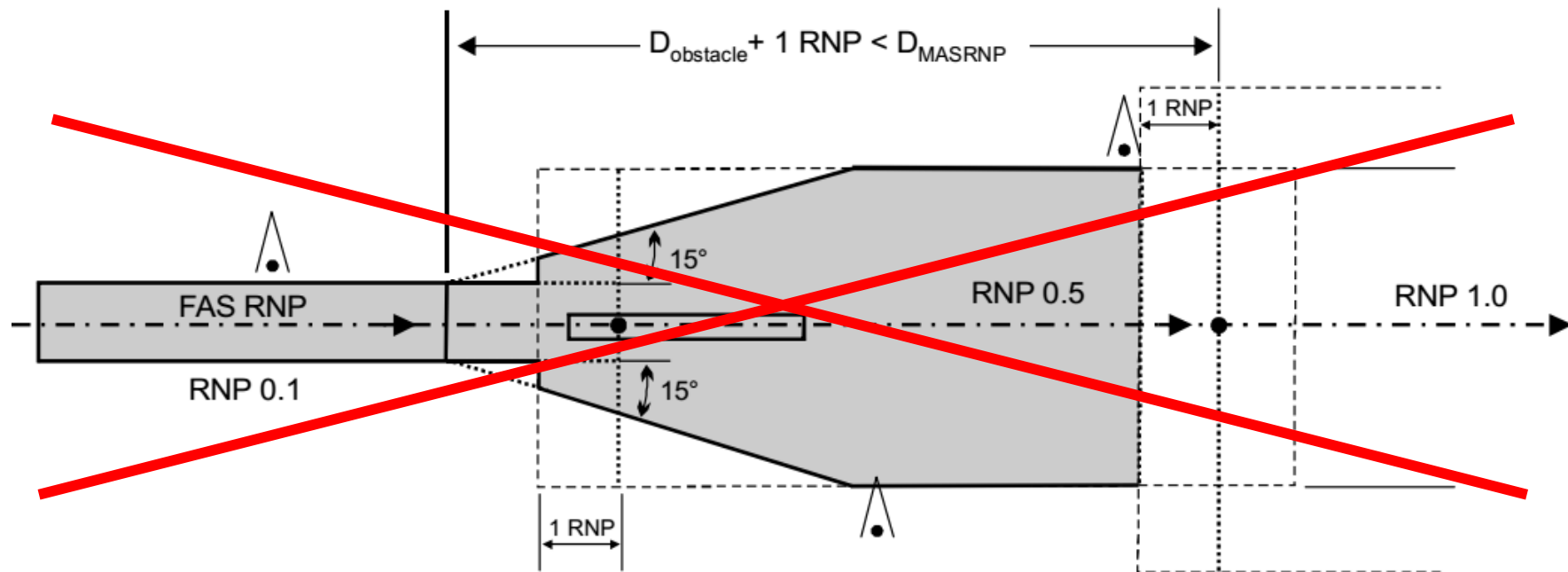
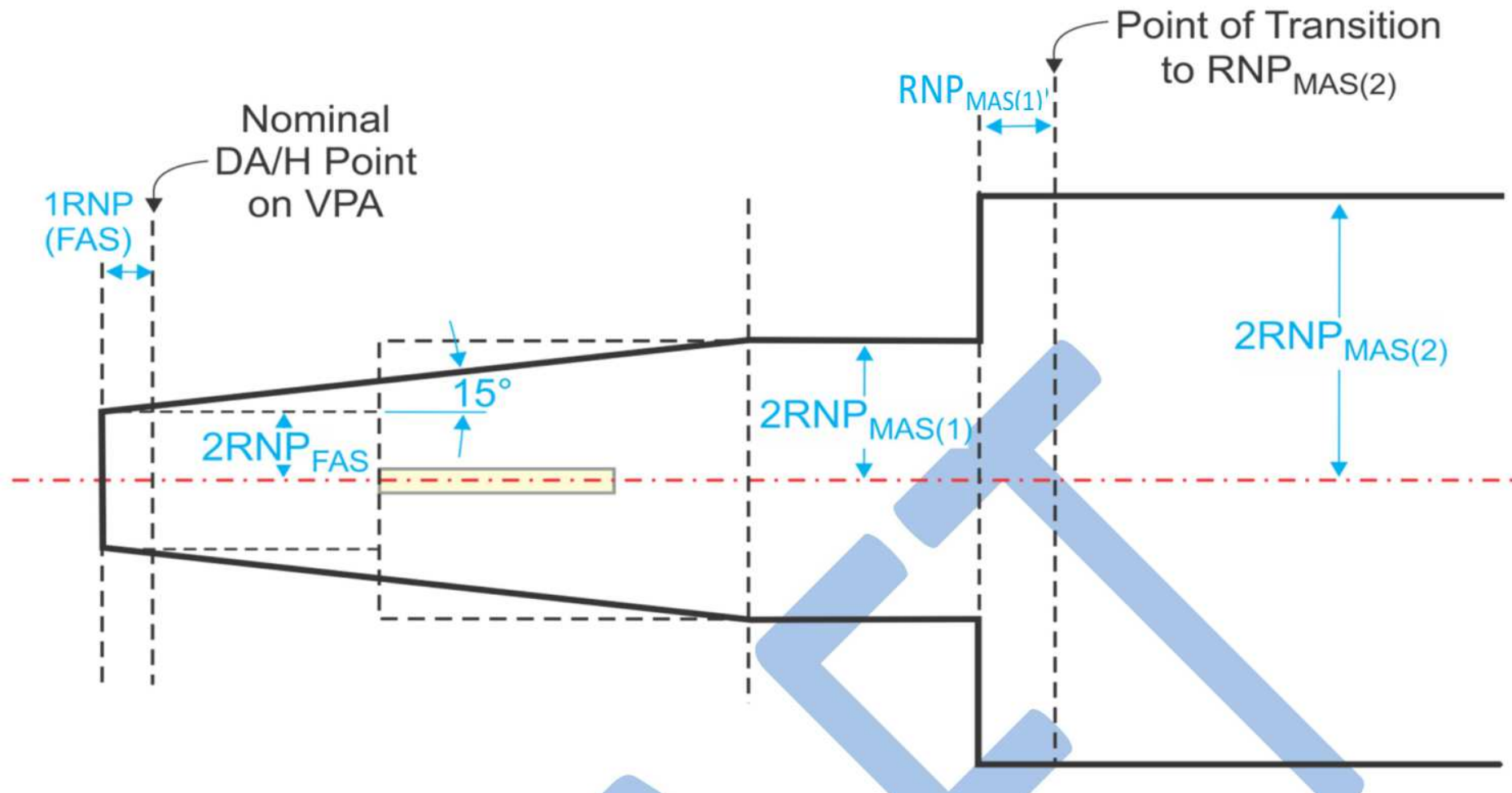


Figure 4-22. Maximum extension of RNP < 1.0 in the missed approach

ACTUALIZACIÓN DEL MANUAL RNP AR (DOC 9905)

Area Construction: Missed Approach RNP < 1



ICAO Circular 353-AN/209

Transition Planning for IAC Identification Change

Table 1-1. Summary of chart identification changes

Navigation specification	Existing chart identification	New chart identification
RNP APCH	RNAV (GNSS) RWY 23	RNP RWY 23
RNP AR APCH	RNAV (RNP) RWY 23	RNP RWY 23 (AR)

TEMARIO

- ¿Qué es IFPP?
- Enmienda 8 del PANS-OPS
- Temas del 14º Ciclo de Trabajo del IFPP

OBJETIVO

- ➔ Presentar informaciones sobre el 14º ciclo de trabajo del Panel de Procedimientos (IFPP) de la OACI y la enmienda 8 del PANS-OPS.

TEMARIO

- ➔ ¿Qué es IFPP?
- ➔ Enmienda 8 del PANS-OPS
- ➔ Temas del 14º Ciclo de Trabajo del IFPP

INFORMACIÓN DEL MIEMBRO DEL IFPP



FERNANDES JÚNIOR – ESPECIALISTA PANS-OPS

e-mail: juniorcta@gmail.com
fernandesjuniorcfj@fab.mil.br

Tel: (41) 3251-5239