Transport Canada Transports Canada

Advisory Circular

Subject:	**Procedure to be followed in order to support Instrument Approach Procedures (IAP) at a non-certified aerodrome**

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1.0 Introduction

(1) This Advisory Circular (AC) is provided for information and guidance purposes. It describes an example of an acceptable means, but not the only means, of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements, nor does it establish minimum standards.

1.1 Purpose

(1) The purpose of this AC is to provide operators of non-certified aerodromes with a set of instructions that outlines the procedure and specifications to be followed in order to support Instrument Approach Procedures (IAP) at a non-certified aerodrome.

1.2 Applicability

(1) This document is applicable to operators of all non-certified aerodromes, registered aerodromes, TCCA headquarters and regional Aerodromes and Air Navigation divisional personnel, IP designers and sponsors, and is also available to the aviation industry for information purposes.

1.3 Description of changes

(1) The concept related to the application of the aerodrome attestation specifications changed from Approach Speed Category to Aircraft Group Number resulting in changes in every section of this AC, including to the attestation specifications.

2.0 References and requirements

2.1 Reference documents

(1) It is intended that the following reference materials be used in conjunction with this document:

(a) *Aeronautics Act* (R.S.C., 1985, c. A-2)

(b) Part VIII Subpart 3 of the *Canadian Aviation Regulations* (CARs) – Aeronautical Information Services;

(c) Section 803.02 of the CARs – Development and Publication of Instrument Procedures;

(d) AC 302-019 – Methodology for the Identification of the Aircraft Group Number;

(e) AC 803-007 – Notification of changes to the Aerodrome Operator Attestation requirements;

(f) Transport Publication (TP) 308/GPH 209 - Criteria for the Development of Instrument Procedures; and

(g) TP 312 5th Edition — Aerodrome Standards and Recommended Practices.

2.2 Cancelled documents

(1) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and abbreviations

(1) The following **definition**s are used in this document:

(a) **Aerodrome reference point.** The designated geographical location of an aerodrome**.**

Note: The aerodrome reference point is typically located at the actual or planned geometric centre of the aerodrome and normally remains at that location.

(b) **Aircraft Group Number** is a method for interrelating the numerous technical specifications concerning the aerodrome and the characteristics of the critical aircraft for which the aerodrome, or part thereof is provided.

(c) **Critical aircraft** means the aircraft identified by the aerodrome operator with respect to the determination of the aerodrome characteristics.

(d) **Obstacle limitation surfaces** means surfaces that establish the limit to which objects may project into the airspace associated with an aerodrome so that aircraft operations at the aerodrome may be conducted safely. These surfaces consist of the following:

i. Approach surface. An inclined plane preceding the threshold of a runway.

ii. Transitional surface. A complex surface along the side of the runway strip and all or part of the side of the approach surface, that slopes upwards and outwards to a specified height.

(e) **Runway-holding position.** A designated position intended to protect a runway, an obstacle free zone, or an ILS critical/sensitive area at which taxiing aircraft and vehicles stop and hold, unless otherwise authorized by the air traffic service unit where provided.

(f) **Runway strip.** A defined area, which includes the runway, and stopway where provided, intended to protect aircraft flying over it during take-off or landing operations.

(g) **Sponsor.** A “sponsor” is deemed to be an individual or organization that has agreed to assume the regulatory responsibility for an Instrument Procedure (IP) at an aerodrome or operational location.

(2) The following **abbreviations** are used in this document:

(a) **AGN** means Aircraft Group Number;

(b) **ARP** means Aerodrome Reference Point;

(c) **IAP** means Instrument Approach Procedure;

(d) **IP** means Instrument Procedure; and

(e) **OLS** means Obstacle Limitation Surfaces.

3.0 Background

(1) Since the publication of the revised attestation in Issue 02 and its subsequent extensions due to COVID, multiple stakeholders submitted comments regarding the challenges and operational impacts resulting from the implementation of the specifications. In consideration of the comments received, Transport Canada undertook a review of the related specifications. In doing so, Issue 04 was published which extended the submission deadline to March 31, 2022, to allow for completion of the review and update of the attestation specifications.

(2) The objective of the review was to reduce, where possible, the impact of the specifications on aerodrome access while at the same time harmonizing the level of safety offered at all Canadian airports with regards to the obstacle free environment needed to support instrument approach procedures. To achieve this harmonization, the attestation now includes specifications relating to the obstacle limitation surfaces and minimum distances from runway centreline for runway holding positions.

(3) Section 803.02 of the CARs regulates the development of civil instrument procedures in Canada through the standards manual entitled Criteria for the Development of Instrument Procedures, known as TP308. Paragraph 120(a) of this document requires that specific aerodrome specifications be met prior to the publishing of any instrument procedure.

(4) The rationale for linking the aerodrome specifications and TP308 is to ensure that a specific obstacle-free environment is provided in the vicinity of the non-certified aerodrome to support the visual segment of an IAP.

(5) TP312 5th Edition - Aerodrome Standards and Recommended Practices document came into effect on September 15th 2015 and includes a number of changes relating to the obstacle-free environment needed to support an IAP at an airport. While TP312 5th is not in itself binding on aerodromes, it does establish the minimum level of safety with regards to the characteristics of the runway obstacle-free environment needed to support an IAP.

(6) The attestation has been updated to use the Aircraft Group Number (AGN) as the reference element linking to the aerodrome requirements for IAPs. This change is for consistency with the application of the obstacle free environment supporting IAPs at Canadian airports (certified aerodromes). In doing so, all Canadian aerodromes (certified and registered) supporting IAPs will provide the same level of safety with regards to the runway obstacle free environment.

(7) The aerodrome operator will complete the attestation based on the actual runway obstacle free environment provided at their aerodrome in support of an IAP.

Note: AC 302-019 – Methodology for the Identification of the Aircraft Group Number provides guidance regarding sources of information for aircraft characteristics.

~~(8)~~ This AGN will be published in the CFS - RWY DATA section relating to the specific aerodrome. Its publication in the CFS does not result in any additional limitations to the minima's published in the CAP but does provide supplemental information for aircrews when considering the suitability of the runway and its obstacle free environment for the intended operation as per subsection 602.96 (2)(b) of the CARs.

4.0 Requirement

(1) The aerodrome attestation form is required to support:

(a) public IAPs at non-certified aerodromes; and

(b) minima's lower than 500 ft for restricted IAPs at non-certified aerodromes.

(2) The aerodrome operator must submit a signed attestation that includes all of the information from Appendix A using the procedure stated in this AC for new and existing IAPs.

(3) The attestation for existing IAPs, should be updated by the aerodrome operator and provided to the IP sponsor before 2023-03-31.

(4) The IP sponsor should submit the updated attestation and other associated documentation with an existing IP to NAV CANADA before 2023-06-30 for consideration of publication amendments in the next available AIRAC cycle(s).

(5) Where the aerodrome operator does not complete the updated attestation, or the IP sponsor does not submit the updated attestation form and other applicable documentation to NAV CANADA by 2023-06-30, including an indication if the landing surface is declared as “no aerodrome status”, Transport Canada will request NAV CANADA to NOTAM the affected IAPs ‘not authorized’ and initiate action to permanently remove the IAPs from the inventory. Reinstatement of these IAPs will require submission to NAV CANADA through the normal process for submission of new IAPs.

(6) In order to define the aerodrome characteristics needed to support an IAP, the aerodrome operator should consider the physical and operating characteristics of the identified critical aircraft as some aircraft may be assigned a higher AGN due to their reference approach speed at threshold (V_{REF}). See example(s) in Table 2 and Appendix C.

4.1 Procedure

(1) Table 1, attached, specifies the type of instrument procedure, the associated minima and application (public or restricted use) authorized for any combination of navigation aid (NAVAID capability versus the landing surface and applicable aerodrome design requirements) and approach system

(2) The procedure that a non-certified aerodrome operator is to follow in order to support a public IAP, or a restricted IAP with minima lower than 500 ft is outlined in this section.

(a) The aerodrome operator is responsible to ensure an assessment of the “Aerodrome Characteristics” is conducted and to maintain the aerodrome in the attested, or improved, condition. It is expected that a qualified person will conduct the assessment of the actual aerodrome characteristics. A qualified person in respect of this assessment, is a person who, because of their knowledge, training and experience, is qualified to perform this assessment.

(b) The aerodrome operator must ensure an assessment is conducted for each runway end for which an IAP is published. The assessment is based on the minimum requirements for the Aircraft Group Number (AGN) specified in Tables 3(a) Runway Strip width and length, 3(b) Obstacle Limitation Surfaces, and 3(c) Runway Holding Position attached. Figures 1, 2 and 3 are provided as illustration examples of the obstacle limitation surfaces.

(c) The aerodrome operator is responsible for:

(i) gathering all the required information to complete the Aerodrome Operator Attestation (Appendix A); and,

(ii) providing a signed copy of the completed attestation form along with the assessment results to the IP sponsor.

Note: This information and the attestation provide the IP designer with the documentation to confirm compliance with the requirements set out in paragraph 120(a) of TP 308.

5.0 Information management

(1) Not applicable.

6.0 Document history

(1) AC 301-001 Issue 04, RDIMS 18130920 (E), 181309408 (F), dated 2021-12-15 – Procedure to be followed in order to support an IAP at a non-certified aerodrome

(2) AC 301-001 Issue 03, RDIMS 16595796 (E), 16595838 (F), dated 2020-11-15 – Procedure to be followed in order to support an IAP at a non-certified aerodrome.

(3) AC 301-001 Issue 02, RDIMS 11230682 (E), 13198791 (F), dated 2018-10-15 – Procedure to be followed in order to support an IAP at a non-certified aerodrome.

(4) AC 301-001 Issue 01, RDIMS 4014811 (E), 4172160 (F), dated 2008-10-01 – Procedure to be followed in order to support an IAP at a non-certified aerodrome.

7.0 Contact us

For more information, please contact the appropriate Transport Canada Civil Aviation Regional Office - Aerodromes at the following address:

https://tc.canada.ca/en/corporate-services/regions

We invite suggestions for amendment to this document. Submit your comments to:

AARTDocServices-ServicesdocAART@tc.gc.ca

Original signed by

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Director, Standards branch
Civil Aviation

Appendix A — Aerodrome operator attestation and minimum requirements

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Aerodrome Operator Attestation

SECTION A

Attestation type – Check appropriate box

☐ INITIAL

☐ UPDATED

Note: Sections A, B and C must be fully completed for proper processing.

SECTION B

I attest that the information, specified in Section C below, on Aerodrome Characteristics provided for _____ is accurate,

Name of aerodrome

and I further agree to maintain the characteristics of the aerodrome in the same, or improved, condition as they were on the date of the signing of this document. Failing this, I agree to immediately inform NAV CANADA and the sponsor of the Instrument Procedure of any change or modification of the aerodrome characteristics in order that an assessment of the continuing validity of these procedures be made.

_____

Print name of aerodrome operator

_____ _____

Signature of Aerodrome Operator Date

SECTION C		
EXISTING AERODROME CHARACTERISTICS		
Runway end Identification _____	Threshold Elevation _____(ft)	RWY Orientation ____ degrees (True)
Threshold Coordinates (1/100th sec) _____	Aerodrome Reference Point (degrees/minutes/seconds) _____	
Critical Aircraft: _____	AGN: _____	
CHARACTERISTICS		
Type of Runway	**Non-Instrument Runway**	**Non-Precision Runway**
Runway Strip Specifications:		
Strip width (each side of centreline)	_____m	_____m
Strip length (Prior to threshold)	_____m	_____m
Approach Surface Specifications		
Length of inner edge	_____m	_____m
Distance from threshold	_____m	_____m
Divergence (minimum each side)	_____ %	_____ %
Length (minimum)	_____m	_____m
Slope(maximum)	_____ %	_____ %
Slope offset (where applicable) • Offset degrees and orientation relative to extended runway centreline • Length of straight segment	_____degrees___(N, S, E, W) _____m	
Transitional Surface Specifications		
Slope (maximum) • Lower segment • Upper segment (where required)	_____ % _____ %	_____ % _____ %
Runway Holding Position(s) Specifications		
Taxiway designator(s) and holding position distance from centreline	Taxiway: ____ _____m Taxiway: ____ _____m	Taxiway: ____ _____m Taxiway: ____ _____m
Notes: 1) The values entered in this section must meet or exceed the minimum requirements of TABLES 3 (a), (b), (c), and TABLE 4 where applicable. 2) A form is required for each runway end served by an instrument approach procedure. 3) For offset approach surfaces, the visual procedures must be annotated on the IAP chart.		

Table 1 - Instrument procedure and minima authorized versus aerodrome operator attestation

Non-Certified Aerodrome		**TP 308**		
NAVAID / Approach System Capability	**Type of Runway**	**Type of Procedure**	**Minima Authorized**	**Application**
Precision	Non-Precision	PA, NPA or APV	DH, MDA or DA not lower than 250 feet HAA/HAT	Public or Restricted
Precision	Non-Instrument	PA, NPA or APV	DH, MDA or DA not lower than 500 feet HAA/HAT	Public or Restricted
Non-Precision/ APV	Non-Precision	NPA or APV	MDA or DA not lower than 250 feet HAA/HAT	Public or Restricted
Non-Precision/ APV	Non-Instrument	NPA or APV	MDA or DA not lower than 500 feet HAA/HAT	Public or Restricted

APV: Approach Procedure with Vertical Guidance

DA: Decision Altitude

DH: Decision Height

HAA: Height Above Aerodrome

HAT: Height Above Touchdown Zone Elevation

MDA: Minimum Descent Altitude

NPA: Non-precision Approach

PA: Precision Approach

Resolution of runway data:

- Threshold elevation: elevation shall be given to the nearest foot.
- Threshold coordinates: the geographic coordinates of the runway threshold shall be given to the nearest 1/100th of a second.
- Runway Orientation: bearings shall be given to the nearest degree.

Table 2: Aircraft Group Number Groupings		
Column I	Column II	Column III
Aircraft Group Number (AGN)	**Critical Aircraft Wingspan**	**Critical Aircraft Reference Landing Speed (V_{REF})**
I	Less than 14.94 m	Less than 121 kts
II	14.94 m up to but not including 24.10 m	Less than 121 kts
IIIA	24.10 m up to but not including 36.00 m	Less than 121 kts
IIIB	Less than 36.00 m	121 kts or more
IV	36.00 m up to but not including 52.12 m	————————
V	52.12 m up to but not including 65.23 m	————————
VI	65.23 m up to but not including 79.86 m	————————

Note: Table 2 includes consideration of the higher aircraft operating speeds that occur in the runway environment.

Examples on use of the table: 1) The critical aircraft has a wingspan of 16.5 m and a reference landing speed (V_{REF}) of 98 kt. The aircraft falls into AGN II when referencing across the columns

2) The critical aircraft has a wingspan of 20.7 m and a reference landing speed (V_{REF}) of 129 kt. The aircraft falls into AGN II when referencing the wingspan in column II; ***however,*** *Column III limits AGN II to a V_{REF} less than 121 kts. The aircraft therefore falls into AGN IIIB due to the V_{REF} being 121 kts or greater.*

Table 3(a) —Runway Strip Width and length (metres)

Aircraft Group Number	I	II	IIIA	IIIB	IV	V	VI
	Minimum width each side of runway centreline and extended centreline						
NON-INSTRUMENT	30	40	40	75	75	75	75
NON-PRECISION	70	70	70	122	122	122	122
	Minimum length before threshold and beyond end of runway, or stopway if provided						
NON-INSTRUMENT	30	60	60	60	60	60	60
NON-PRECISION	60	60	60	61	61	61	61

Table 3(b) — Obstacle Limitation Surfaces
Length/distances are in metres, slopes are in percentages

NON-INSTRUMENT

Aircraft Group Number		I	II	IIIA	IIIB	IV	V	VI
Approach: Length of inner edge each side of centreline		30	40	40	75	75	75	75
Distance from threshold		30	60	60	60	60	60	60
Divergence		10 %	10 %	10 %	10 %	10 %	10 %	10 %
First section	Length	2 500	2 500	2 500	3 000	720	720	720
	Slope	5 %	4 %	4 %	3.33 %	2.5 %	2.5 %	2.5 %
Second section	Length	-	-	-	-	2 280	2 280	2 280
	Slope	-	-	-	-	2.9 %	2.9 %	2.9 %
Total length		2 500	2 500	2 500	3 000	3 000	3 000	3 000
Transitional: Slope first segment		20 %	20 %	20 %	14.3 %	14.3 %	14.3 %	14.3 %
Slope second segment		-	-	-	-	-	-	-

NON-PRECISION

Approach: Length of inner edge each side of centreline		70	70	70	122	122	122	122
Distance from threshold		60	60	60	61	61	61	61
Divergence		10 %	10 %	10 %	15 %	15 %	15 %	15 %
First section	Length	2 500	2 500	2 500	720	720	720	720
	Slope	3.33 %	3.33 %	3.33 %	2.5 %	2.5 %	2.5 %	2.5 %
Second section	Length	-	-	-	4 280	4 280	4 280	4 280
	Slope	-	-	-	2.9 %	2.9 %	2.9 %	2.9 %
Total length		2 500	2 500	2 500	5 000	5 000	5 000	5 000
Transitional: Slope first segment		25 %	25 %	25 %	25 %	25 %	25 %	25 %
Slope second segment		14.3 %	14.3 %	14.3 %	14.3 %	14.3 %	14.3 %	14.3 %

Table 3(c) — Runway-Holding Position
Minimum Distances from Runway Centreline (in metres)

Aircraft Group Number	I	II	IIIA	IIIB	IV	V	VI
NON-INSTRUMENT	30	40	40	75	75	75	75
NON-PRECISION	40	40	61	75	75	75	75

Aerodrome characteristics

Runway Strip

The elevation of the runway strip at any point is equal to the elevation of the centreline, or edge if higher, of the runway, perpendicular to that point.

The runway strip is clear of fixed and mobile objects except for recognized aviation visual aids and holding aircraft.

Obstacle Limitation Surfaces

Approach Surface

The approach surface comprises of:

(a) an inner edge of specified length, perpendicular to and located on each side of the extended centreline of the runway, at the specified distance from the threshold;

(b) two sides beginning at the ends of the inner edge, diverging at a specified rate, in the direction of take-off, ending at the outer edge; and

(c) an outer edge perpendicular to the centreline of the approach surface, at the specified length from the inner edge.

Where the length of the inner edge of the approach surface is less than the width of the runway strip, the approach surface is as presented in Figure 3.

Transitional surface – Non-Precision runways

For non-precision runways, the transitional surface adjacent to the runway, comprises of:

(a) subject to (c), a first segment commencing at the edge of the runway strip extending outwards at a right angle to the runway centreline, at a vertical slope of 1:4 up to an elevation of 23 m above the nearest elevation point on the runway centreline; and

(b) a second segment beginning at the upper point of the first segment extending outwards at a right angle to the runway centreline, at a vertical slope of 1:7 up to a point that is 45 m above the nearest elevation point on the runway centreline;

(c) where the highest elevation point on the runway is at the nearest or opposing runway edge, the highest elevation of the two runway edges nearest the runway centreline described in (a) is used as the reference elevation.

For non-precision runways, the limits of the transitional surface adjacent to the approach slope comprises of:

(a) a lower segment beginning at the edge of the approach surface extending outwards at a right angle to the extended runway centreline, at a vertical slope of 1:4, up to an elevation of 23 m above the elevation point on the approach surface; and

(b) an upper segment beginning at the upper point of the lower segment extending outwards at a right angle to the extended runway centreline at a vertical slope of 1:7 up to a point that is 45 m above the elevation point on the approach surface.

Transitional surface – Non-Instrument runways

For non-instrument runways, the transitional surface adjacent to a runway comprises of:

(a) a lower edge beginning at the edge of the runway strip extending outwards at a right angle to the runway centreline, at the specified vertical slope; and

(b) an upper edge located at an elevation 45 m above the nearest elevation point on the runway centreline

For non-instrument runways, the limits of the transitional surface adjacent to the approach slope comprises of;

(a) a lower edge beginning at the edge of the approach surface extending outwards at a right angle to the extended runway centreline, at the specified vertical slope; and

(b) an upper edge located at an elevation of 45 m above the nearest runway threshold.

Where the runway is non-precision at the other end, the limits of the transitional surface adjacent to the non-instrument approach slope comprises of:

(a) a lower segment beginning at the edge of the approach surface extending outwards at a right angle to the extended runway centreline, at a vertical slope of 1:4, up to an elevation of 23 m above the nearest runway threshold; and

(b) an upper segment beginning at the upper point of the lower segment extending outwards at a right angle to the extended runway centreline at a vertical slope of 1:7 up to a point that is 45 m above the nearest runway threshold.

Table 4 – Offset Approach Surface (Non-Instrument Runways)

Straight segment for Offset Approach Surfaces	
Intercept angle (degrees)	**Minimum length**
< 5	0 m (0 ft)
5 < 10	458 m (1503 ft)
10 < 20	915 m (3002 ft)
20 < 30	1372 m (4502 ft)

NOTES:

(1) An approach surface offset from the extended runway centreline may be established for non-instrument runways provided that;

(a) there are geographical points and/or other visual aids available to reference the offset approach;

(b) the visual manoeuvring procedures relating to the offset approach are published;

(c) the divergence on the affected side of the approach surface is increased in the same direction and number of degrees as the off-set from the extended runway centreline;

(d) a final straight-in segment is established in accordance to the criteria above; and

(e) obstacle(s) in the area opposite to the offset, (identified as area “D”) in Figure 2, are assessed using the same slope as the approach surface, for the identification of obstacles that may require marking, lighting and publication.

(2) See Figure 2 for depiction of an offset approach surface.

Appendix B — Figures depicting Obstacle Limitation Surfaces

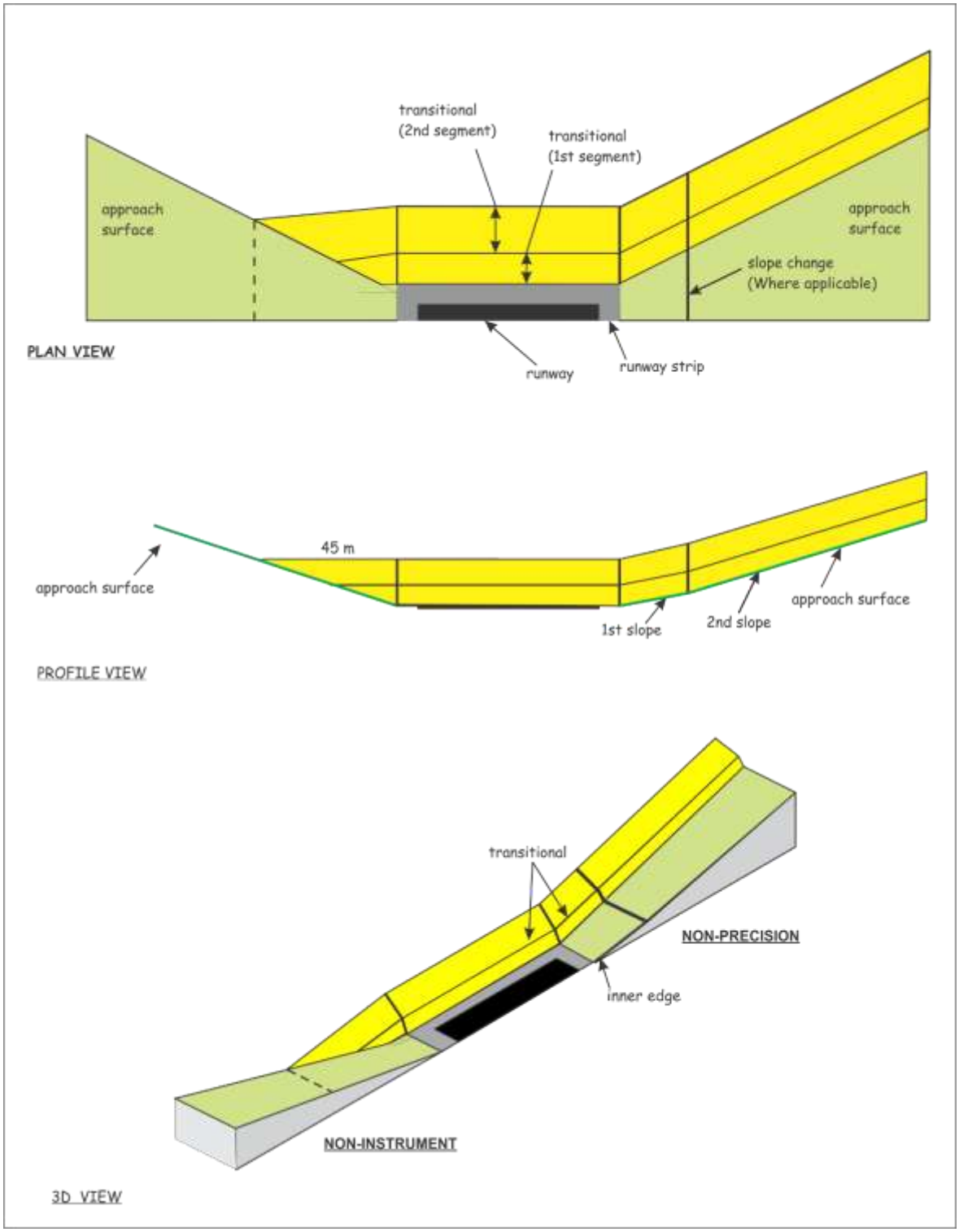

Figure 1 – Overview of the Obstacle Limitation Surfaces

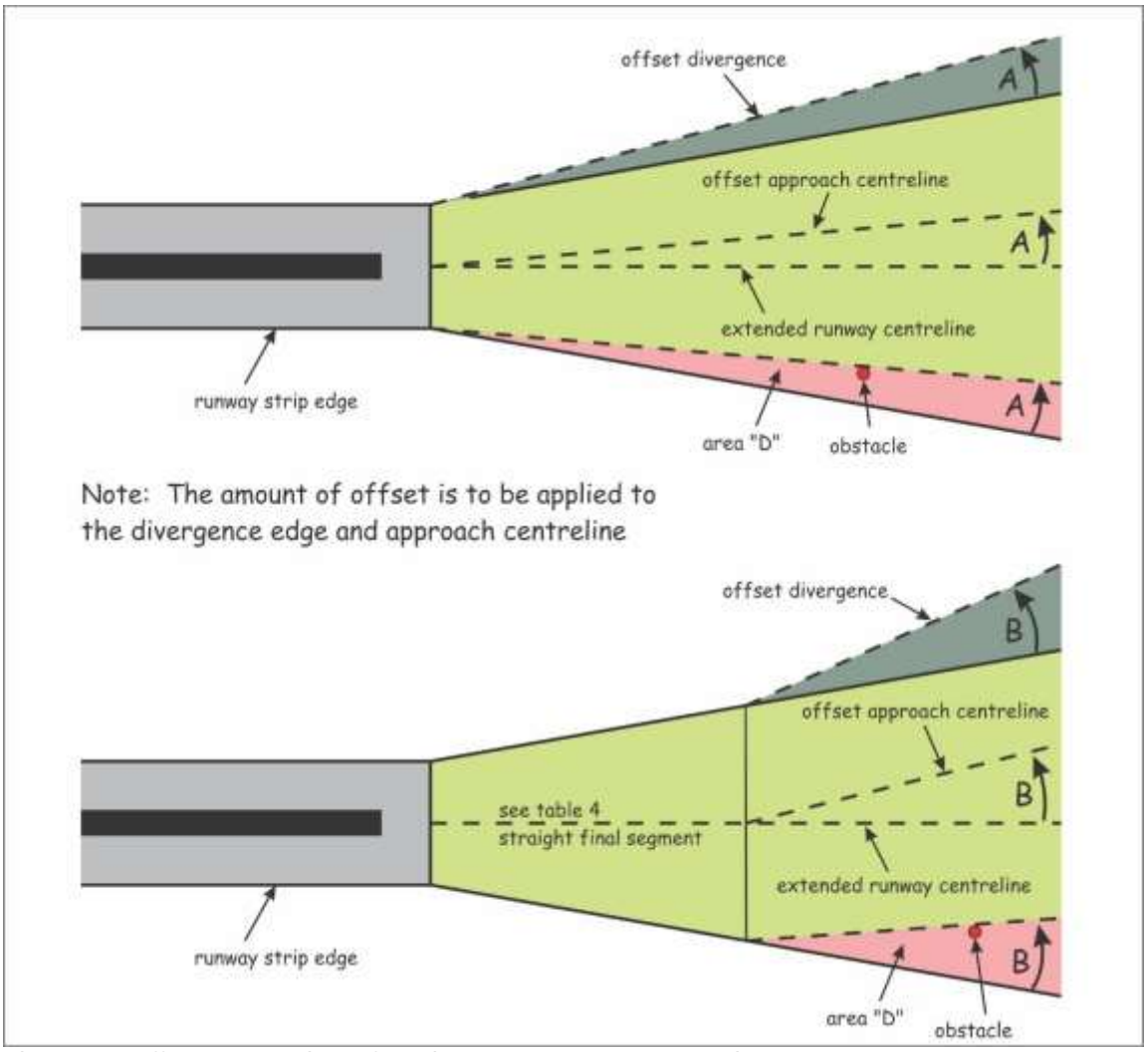

Figure 2 – Offset Approach Surface (Non-Instrument Runways)

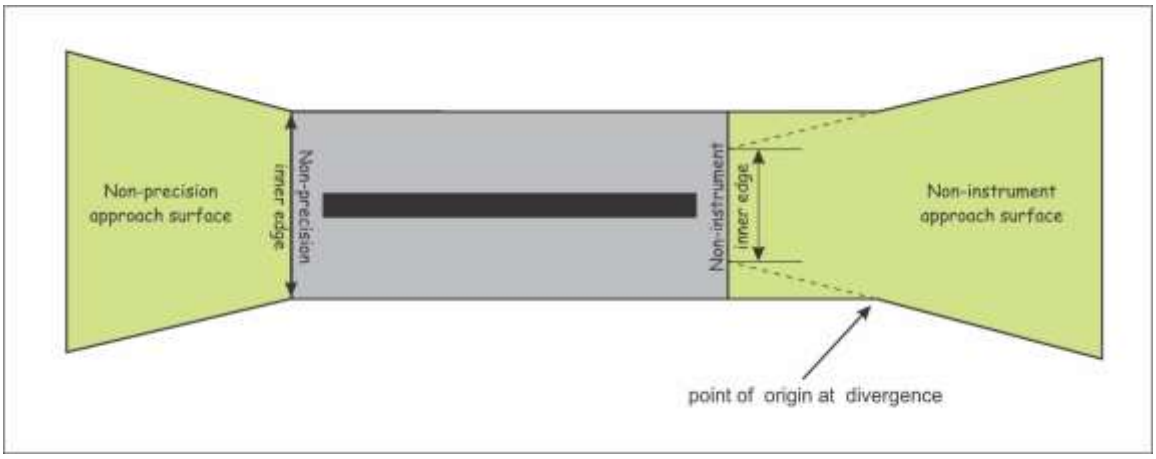

Figure 3 – Example of a non-precision approach surface and a non-instrument approach surface at opposite ends.

Appendix C — AGN flow methodology examples

(1) The aircraft characteristics provided in the below examples are for illustrative purposes only. Actual characteristics should be obtained from a reliable source for the determination of the AGN.

(2) The following is an example using the provided tables to identify the aircraft group number relating to the minimum runway strip width to provide an obstacle free environment.

A Beechcraft King Air 350 has the following characteristics;

- Wingspan – 17.65 m
- Reference landing speed (V_{REF}) - 107 kts

Table 2: Aircraft Group Number Groupings

Column I	Column II	Column III
Aircraft Group Number (AGN)	**Critical Aircraft**	
	Wingspan	**Reference Landing Speed (V_{REF})**
I	Less than 14.94 m	Less than 121 kts
II	14.94 m up to but not including 24.10 m	Less than 121 kts
IIIA	24.10 m up to but not including 36.00 m	Less than 121 kts
IIIB	Less than 36.00 m	121 kts or more
IV	36.00 m up to but not including 52.12 m	————————
V	52.12 m up to but not including 65.23 m	————————
VI	65.23 m up to but not including 79.86 m	————————

Table 3(a) —Runway Strip Width and length (metres)

Aircraft Group Number	I	II	IIIA	IIIB	IV	V	VI
	Minimum width each side of runway centreline and extended centreline						
NON-INSTRUMENT	30	40	40	75	75	75	75
NON-PRECISION	70	70	70	122	122	122	122
	Minimum length before threshold and beyond end of runway, or stopway if provided						
NON-INSTRUMENT	30	60	60	60	60	60	60
NON-PRECISION	60	60	60	61	61	61	61

(3) The following is an additional example using the provided tables to identify the aircraft group number relating to the minimum runway strip width to provide an obstacle free environment.

A Boeing 737-400 has the following characteristics;

- Wingspan - 28.9 m
- Reference Landing speed (V_{REF}) – 139 kts

Table 2: Aircraft Group Number Groupings

Column I	Column II	Column III
Aircraft Group Number (AGN)	**Critical Aircraft**	
	Wingspan	**Reference Landing Speed (V_{REF})**
I	Less than 14.94 m	Less than 121 kts
II	14.94 m up to but not including 24.10 m	Less than 121 kts
IIIA	24.10 m up to but not including 36.00 m	Less than 121 kts
IIIB	Less than 36.00 m	121 kts or more
IV	36.00 m up to but not including 52.12 m	————————
V	52.12 m up to but not including 65.23 m	————————
VI	65.23 m up to but not including 79.86 m	————————

Table 3(a) —Runway Strip Width and length (metres)

Aircraft Group Number	I	II	IIIA	IIIB	IV	V	VI
	Minimum width each side of runway centreline and extended centreline						
NON-INSTRUMENT	30	40	40	75	75	75	75
NON-PRECISION	70	70	70	122	122	122	122
	Minimum length before threshold and beyond end of runway, or stopway if provided						
NON-INSTRUMENT	30	60	60	60	60	60	60
NON-PRECISION	60	60	60	61	61	61	61