

Pierre Clément Chief, National Flight Operations Approach Ban Team Lead









<u>Canadian</u> <u>Stakeholders</u>

- NAV CANADA
  - Air Operator Associations
- Air Operators
- Pilot Associations
- Pilots
- Airport Associations
- Flight Training Units
- Educational Institutions
- Manufacturers
- And many more...

# We are delighted to see so many Canadian stakeholders joining us today!

### OCTOBRE 2023

Lundi	Mardi	Mercredi	Jeudi	Vendredi	Samedi	Dimanche
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Nous aurons une séance d'information entièrement en français le 4 octobre.

### **OBJECTIVES**:



- 1. To share the compelling safety reasons for the approach bans regulatory initiative;
- 2. To explain how these changes will be implemented; and
- 3. To provide an opportunity for your feedback



# There is a great deal of important information that we want to share with you today.



### We are requesting your kind cooperation...





### Your feedback is important!



### Introducing Our Team





### DISCUSSION

- 1. Identified Safety Issues / TSB Recommendations
- 2. Solutions
- 3. Next Steps



### DISCUSSION

1. Identified Safety Issues / TSB Recommendations

- 2. Solutions
- 3. Next Steps







### Report A20C0037 Runway excursion – Nunavut

Report A18Q0030 King Air A100 runway overrun on landing - Quebec

# There have been many accidents related to approaches and landings in low visibility...

11

### Report A15H0002 Collision with terrain, Halifax

# There have been many accidents related to approaches and landings in low visibility...

12

### **Accidents and Incidents**

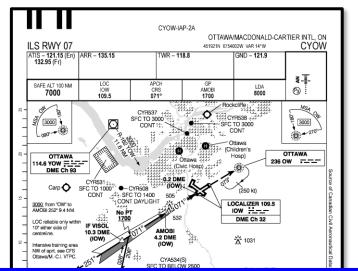


Between December 2006 [current approach ban] and May 2020, the TSB identified 32 events that occurred following approaches conducted below the MDA with inadequate visual references.

Of these 32 incidents, 18 occurred during a landing in weather conditions where <u>visibility was below what is published on the approach chart.</u>

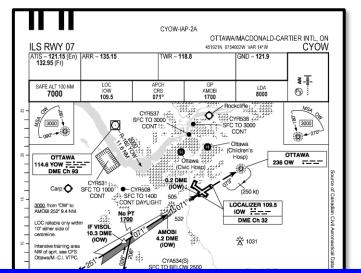
Furthermore, this type of incident has been persisting....

RDIMS No. 19468459



18 incidents occurred during a landing in weather conditions where visibility was below what is published on the approach chart.

CATEGORY	А	В			С			D	
ILS/DME	5	73	(20	)0)	1/2	R\	/R 26		
LOC/DME	6	80	(30	)7)	1	R∖	/R 50		
LOC/VOR	7	60	(38	37)	1	R∖	/R 50		
CIRCLING	<b>880</b> (5	503) 1½	2	880	(503)	2	1080	(703)	21⁄4



18 incidents occurred during a landing in weather conditions where visibility was below what is published on the approach chart.

CATEGORY	А	В	С		D
ILS/DME	5	73	(200)	½ RVR 26	
LOC/DME	6	80	(307)	1 RVR 50	]
LOC/VOR	7	60	(387)	1 RVR 50	]
CIRCLING	<b>880</b> (5	503) 1½	<b>880</b> (503)	2 108	<b>0</b> (703) 2¼

### In Canada this represents ADVISORY VISIBILITY.

## In the rest of the world this is *REQUIRED* VISIBILITY.

18 incidents occurred during a landing in weather conditions where visibility was below what is published on the approach chart.

CATEGORY	A	В		С	-		D
ILS/DME	5	73	(200)		½ R\	/R 26	
LOC/DME	6	80	(307)		1 R\	/R 50	
LOC/VOR	7	60	(387)		1 R\	/R 50	
CIRCLING	<b>880</b> (5	i03) 1½	2 88	<b>0</b> (503)	2	1080	(703) 21⁄4

In Canada this represents	
ADVISORY VISIBILITY.	

What do these visibility values represent?

## In the rest of the world this is *REQUIRED* VISIBILITY.

What is their purpose?

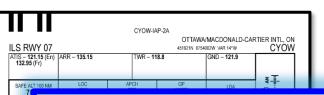
How are they determined?

CATEGORY	А	В		С	-	D
ILS/DME	5	73	(200	))	½ R\	/R 26
LOC/DME	6	80	(307	7)	1 RV	/R 50
LOC/VOR	7	60	(387	7)	1 RV	′R 50
CIRCLING	<b>880</b> (5	03) 1½	2	<b>880</b> (503)	2	<b>1080</b> (703) 2¼



### To safely descend from the DA or MDA the pilot needs sufficient visibility to:

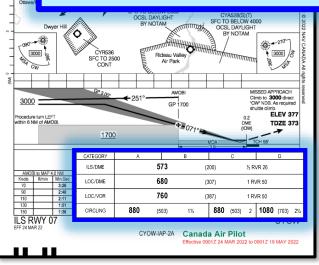
- assess the position of the aircraft relative to the runway
- maintain control of the flight path both laterally and vertically
- counter the effect of crosswind and prevent lateral drift
- align the fuselage during the landing flare
- maintain directional control during the touchdown and rollout



114.6

LOC rel 10" eith To safely descend from the DA or MDA the pilot needs sufficient visibility to:

The instrument procedure design criteria establish the minimum visibility which will allow the pilot to safely accomplish all these things while descending below DA or MDA.

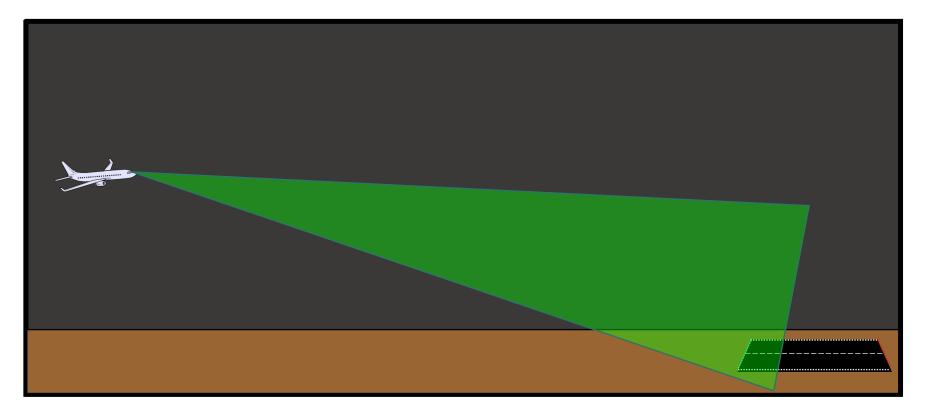


- counter the effect of crosswind and prevent lateral drift
- align the fuselage during the

This is the visibility which is published on the IAP.

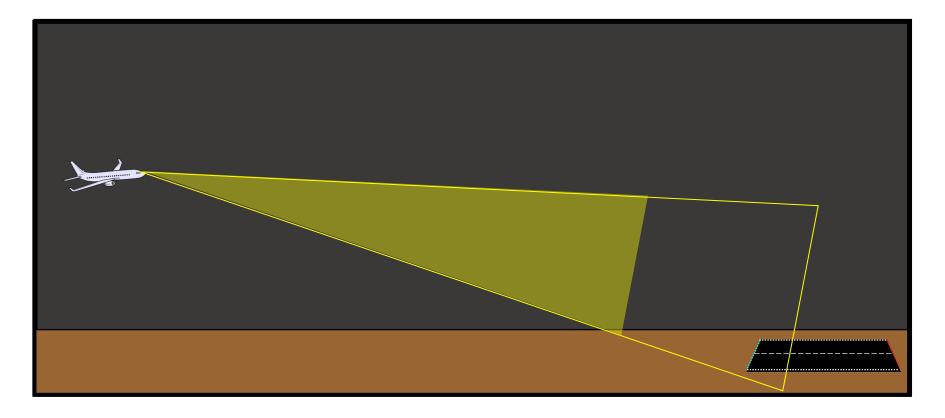
the touchdown and rollout

during



What we call "ADVISORY visibility" is, in fact, what the instrument procedure design criteria establish as : The minimum standard visibility required for the pilot to establish visual reference in time to descend safely from the DA or MDA.

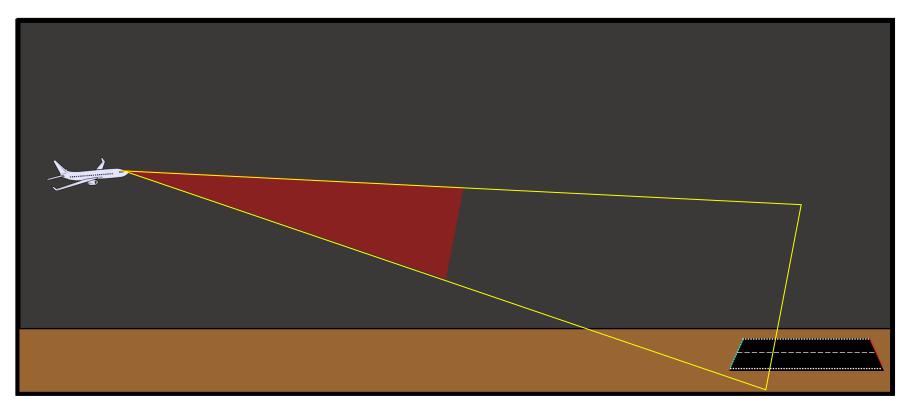
Ref: TP 308, Sections 331 and 332



CAR 700.10 allows for approaches with 75% of Advisory Visibility.

This is only 75% of "the minimum visibility required for the pilot to establish visual reference in time to descend safely ..."

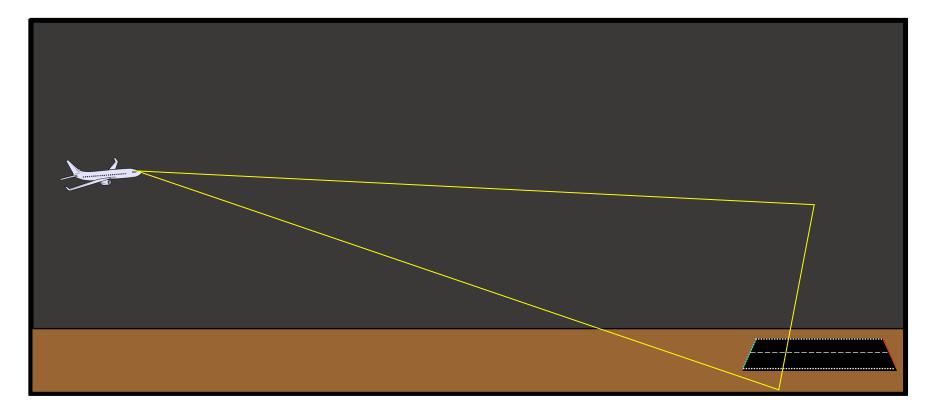




### CAR 703.41, 704.37 and 705.48 allow approaches to be conducted with 50% of Advisory Visibility.

This is only half of "the minimum visibility required for the pilot to establish visual reference in time to descend safely ..."





CAR 700.10 stipulates that there is no approach visibility requirement North of 60° unless there is an RVR available.

There is no requirement to adhere to "the minimum visibility required for the pilot to establish visual reference in time to descend safely ..."

Bureau de la sécurite AIR TRANSPORTATION SAFETY INVESTIGATION REPORT A20C0037 RUNWAY EXCURSION Buffalo Airways Ltd.

Buffalo Airways Ltd. Beechcraft King Air A100, C-FCBZ Kugaaruk Airport, Nunavut 28 April 2020

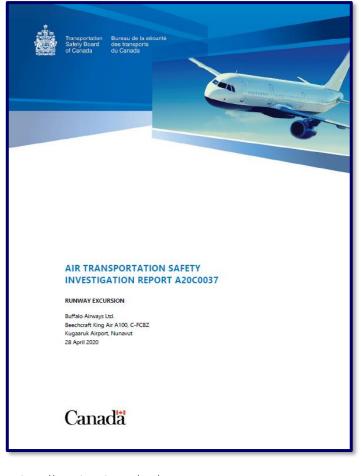
Canada

There is valuable information in the TSB reports from the incidents where visibility was below the value published on the approach chart.

These reports point to key elements – including human factors – that come into play with our current regulations.



### A20C0037 – Runway Excursion – A100 – Kugaaruk, NU





Immediately after touchdown the aircraft veered to the right and departed from the runway surface. The aircraft came to rest after colliding with a snowbank on the northwest side of the runway...

## ...the aircraft sustained substantial damage

### A20C0027 – Runway Excursion – A100 – Kugaruuk, NU



CYBB RNAV (GNSS) RWY 23 TRUE				
IAP Visibility Reported Visibility				
1 ¾ SM	1/4 SM			



### A20C0027 – Runway Excursion – A100 – Kugaruuk, NU



CYBB RNAV (GNSS) RWY 23 TRUE					
IAP Visibility Reported Visibility					
1 ¾ SM	1/4 SM				

The flight crew believed that the lack of an approach ban permitted a landing, and landed at CYBB even though the reported ground visibility was below the minimum aerodrome operating visibility.

Until TC simplifies (Recommendation A20-01) and enforces (Recommendation A20-02) the operating minima for approaches and landings, there remains a risk that flight crews will initiate, or continue, approaches in weather conditions that do not permit a safe landing.





...the aircraft landed approximately 3800 feet past the threshold, 700 feet from the end of the runway, and stopped its landing roll in a snowbank, 220 feet beyond the runway.

The aircraft sustained substantial damage.



CYGV LOC/DME RWY 08				
IAP Visibility Reported Visibility				
1 SM	1/4 SM			





CYGV LOC/DME RWY 08				
IAP Visibility Reported Visibility				
1 SM	1/4 SM			

The crew only had a few visual references with which to accurately determine the aircraft's position in relation to the start and end of the runway.

Therefore, the difficult manoeuvre of aligning the aircraft over the runway was made even more difficult by the visibility...





CYGV LOC/DME RWY 08				
IAP Visibility Reported Visibility				
1 SM	1/4 SM			

When the aircraft reached the MDA, the PM did not have visual contact and made the standard call "MINIMUM, NO CONTACT" ... the PM still did not have visual contact and asked the PF if he was going to conduct a go-around.

At that point, the PF (and captain) advised that he had visual contact and continued the descent below the MDA, without making the SOP calls confirming a landing and requesting the aircraft landing configuration.

### A15H0002 – Collision with Terrain – A320 – Halifax, NS

Transportation Bureau de la sécurité Satety Board des transports ol Canada du Canada
AVIATION INVESTIGATION REPORT A15H0002
<b>Collision with terrain</b> Air Canada Airbus Industrie A320-211, C-FTJP Halifax/Stanfield International Airport Halifax, Nova Scotia 29 March 2015
Canadä



...the aircraft severed power lines, then struck the snow-covered ground about 740 feet before the runway threshold. The aircraft continued airborne through the localizer antenna array, then struck the ground twice more before sliding along the runway... 25 people sustained injuries... The aircraft was destroyed.

TSB Air transportation safety investigation A15H0002  $\_$ 

https://www.tsb.gc.ca/eng/rapports-reports/aviation/2015/a15h0002/a15h0002.html



### A15H002 – Collision with Terrain – A320 – Halifax, NS



CYHZ LOC RWY 05	
IAP Visibility	Reported Visibility
1 SM	1/2 SM



### A15H002 – Collision with Terrain – A320 – Halifax, NS



CYHZ LOC RWY 05	
IAP Visibility	Reported Visibility
1 SM	1/2 SM

The limited number of visual cues and the short time that they were available to the flight crew, combined with potential visual illusions and the reduced brightness of the approach and runway lights, diminished the flight crew's ability to detect that the aircraft's approach path was taking it short of the runway.



### A15O0015 – Impact with Terrain – DHC-8 – Sault Ste-Marie, ON

Transportation Bureau de la sécurité Safety Board des transports of Canada du Canada
AVIATION INVESTIGATION REPORT A1500015
Canadä

...the aircraft touched down approximately 450 feet prior to the runway threshold.

Following touchdown, the aircraft struck one of the runway approach lights before coming to a stop approximately 1500 feet past the threshold

... there was significant damage to the aircraft.



### A15O0015 – Impact with Terrain – DHC-8 – Sault Ste-Marie, ON

CYAM VOR/DME RWY 30	
IAP Visibility	Reported Visibility
1 ¼ SM	RVR1000 *

\* Last visibility report received by crew prior to occurrence; SPECI issued 1 minute before occurrence reported visibility was 1/4 SM.



# A15O0015 – Impact with Terrain – DHC-8 – Sault Ste-Marie, ON

CYAM VOR/DME RWY 30					
IAP Visibility	Reported Visibility				
1 ¼ SM	RVR1000 *				

Last visibility report received by crew prior to occurrence;
 SPECI issued 1 minute before occurrence reported visibility was 1/4 SM.

... the combination of a higher workload resulting from the unstable approach, decreased situational awareness in deteriorating weather, and confirmation bias [expectation bias] at the culmination of the approach likely led to plan continuation bias.

# A15O0015 – Impact with Terrain – DHC-8 – Sault Ste-Marie, ON

CYAM VOR/DME RWY 30					
IAP Visibility	Reported Visibility				
1 ¼ SM	RVR1000 *				

\* Last visibility report received by crew prior to occurrence; SPECI issued 1 minute before occurrence reported visibility was 1/4 SM.

Although the loss of visual reference required a go-around, the crew continued the approach to land as a result of this plan continuation bias.



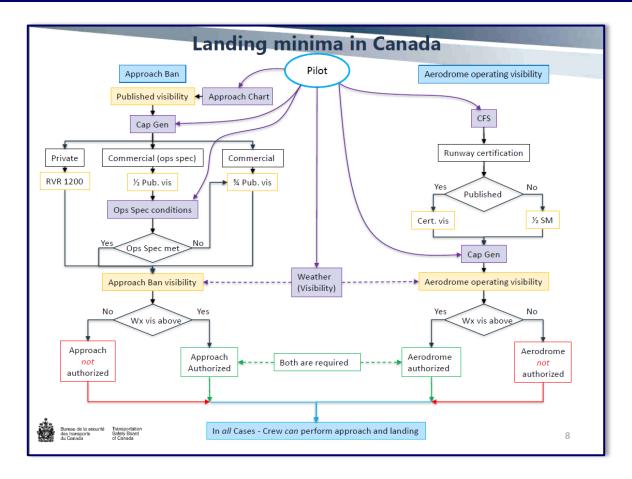






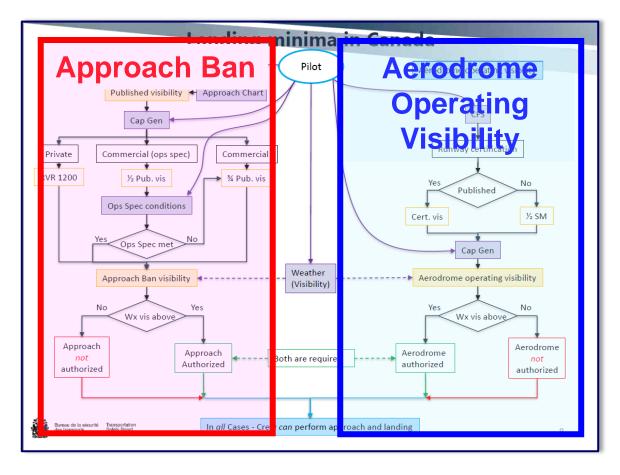
The analysis of approaches that were conducted in visibility that is less than the charted visibility – clearly demonstrate that approaches in these conditions carry an increased level of risk.





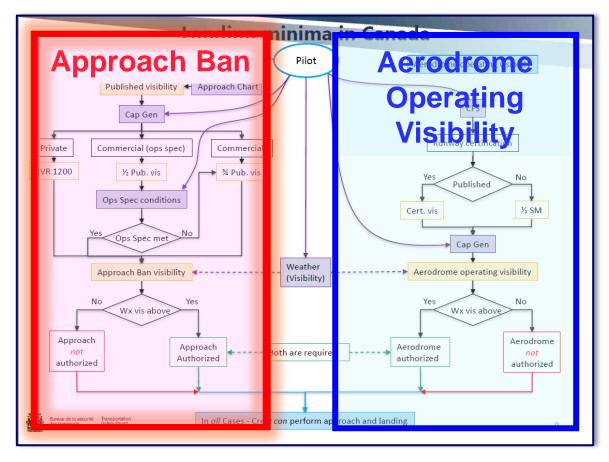
In reviewing these accidents and incidents, the TSB also commented on how complicated the current procedures for determining visibility are.





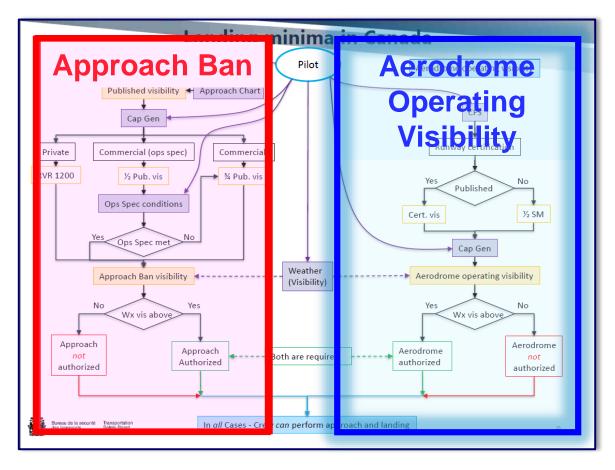
This complexity is due, in part, to having two, separate decision-making processes to determine whether visibility is suitable for an approach and landing.





The soon-to-be repealed approach ban (CAR 700.10) is overly complicated because – contrary to the ICAO standard and the globally accepted practice – Canada did not stipulate that the published visibility was required to conduct an approach.

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The soon-to-be-replaced hierarchy for determining aerodrome operating visibility is also overly complicated; moreover, it does not align with the hierarchy used to determine visibility for the approach ban.

# The Board recommends that

the Department of Transport review and simplify operating minima for approaches and landings at Canadian aerodromes.

TSB Recommendation A20-01

the Department of Transport introduce a mechanism to stop approaches and landings that are actually panned.

TSB Recommendation A20-02



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# Canada's current approach ban regulations do not align with the ICAO Standards.





Canada's current approach ban regulations do not align with the globally accepted practice that has been embraced by the world's leading civil aviation authorities including:

US Federal Aviation Administration (FAA) and
European Aviation Safety Agency (EASA).





Pilots find the current regulations to be overly complicated, confusing and a source of unnecessary workload and distraction during critical phases of flight.

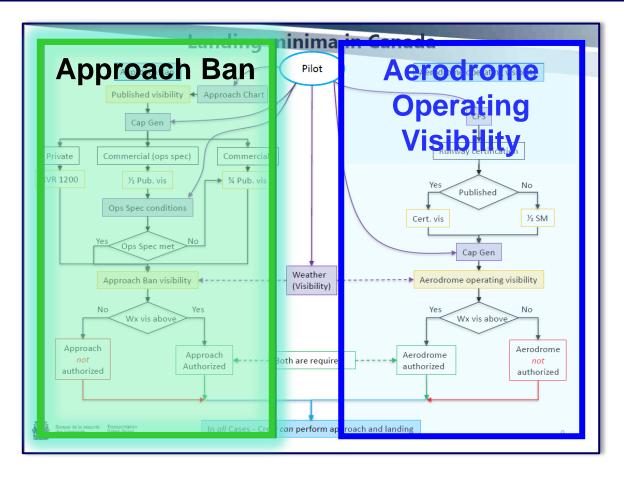


# **DISCUSSION**

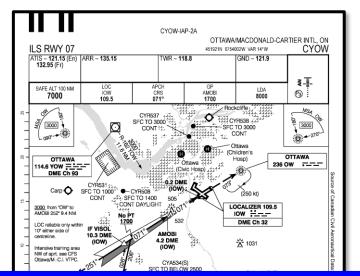
# 1. Identified Safety Issues / TSB Recommendations

- 2. Solutions
- 3. Next Steps

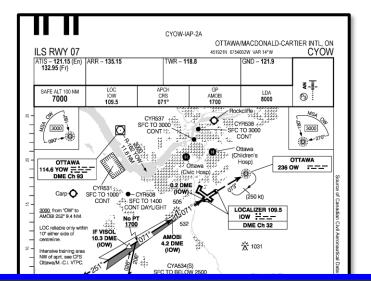




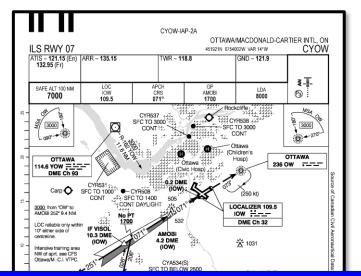
Our new regulations in Section 602.129 – Approach Ban will now prescribe required visibility in a simple and straight-forward manner!



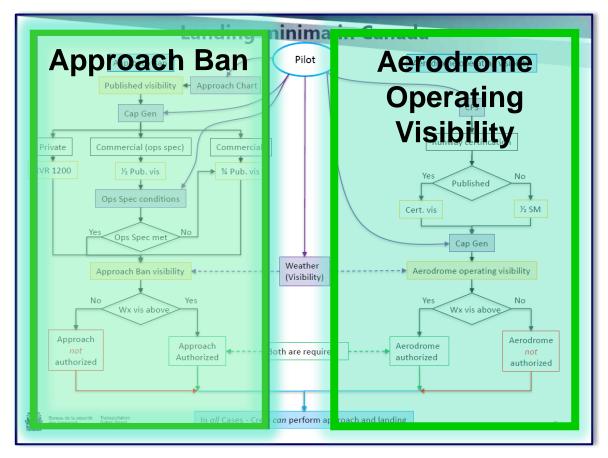
CATEGORY	А	В	C		D	
ILS/DME	<b>573</b> (200)			½ RVR 26		
LOC/DME	6	<b>680</b> (307)				
LOC/VOR	7	<b>760</b> (387)				
CIRCLING	<b>880</b> (5	03) 1½	<b>880</b> (503)	2 1080	(703) <mark>21⁄4</mark>	



CATEGORY	А	В			С			D	
ILS/DME					\$[	½ R\	/R 26		
LOC/DME	e	580	(3	(07)		1 R\	/R 50		
LOC/VOR	7	760	(3	87)		1 R\	/R 50		
CIRCLING	<b>880</b> (	503) 1½		880	(503)	2	1080	(703)	21⁄4

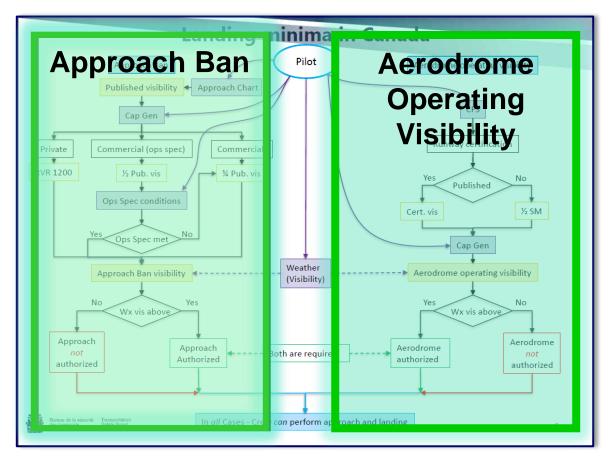


CATEGORY	А	В			С			D	
ILS/DME	5	73	(20	)0)		½ R\	/R 26		
LOC/DME					¢Г	1 R\	/R 50		
LOC/VOR	7	60	(38	37)		1 R\	/R 50		
CIRCLING	<b>880</b> (5	i03) 1½		880	(503)	2	1080	(703)	21⁄4



To facilitate this change, IAPs will now be designed to ensure that the required visibility published for all instrument approaches will be greater than or equal to the minimum aerodrome operating visibility.

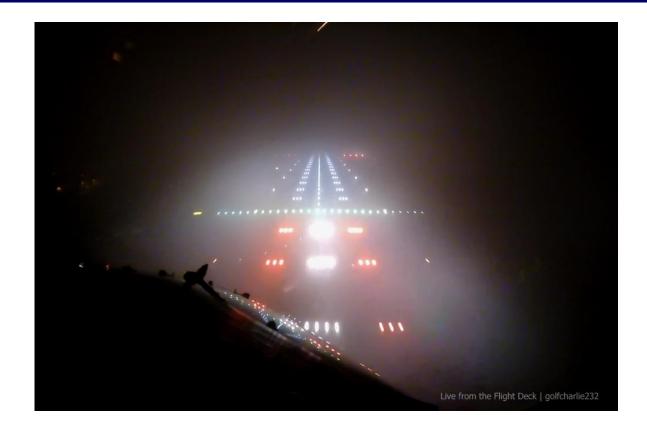




In addition, we have made a comprehensive review of the processes for determining required visibility for all phases of flight.

We are also addressing these opportunities for improvement.

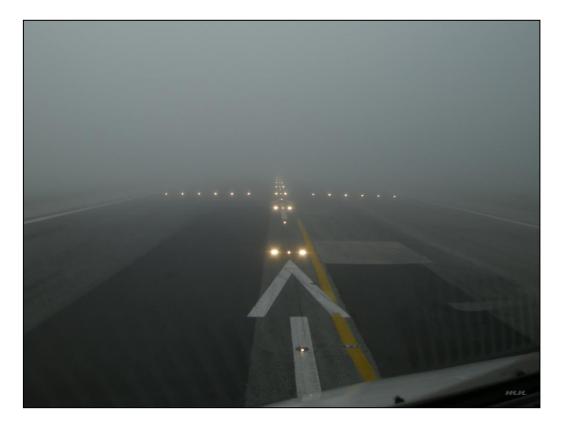
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For aerodrome operating visibility during the ARRIVAL (approach and landing as well as taxiing after landing) we have adopted the same hierarchy of visibility reports used for the approach.

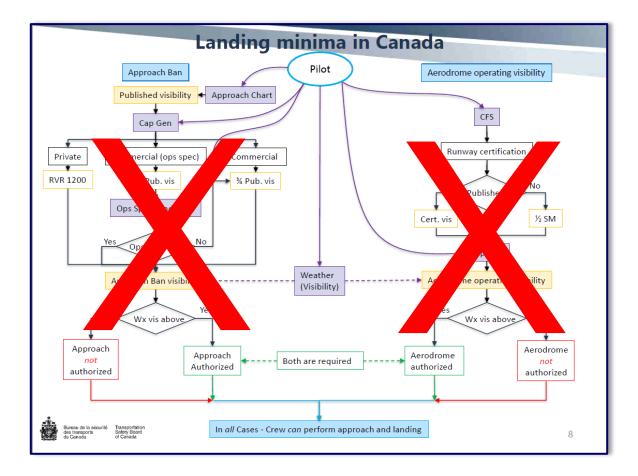
We will now have one single decision-making process.



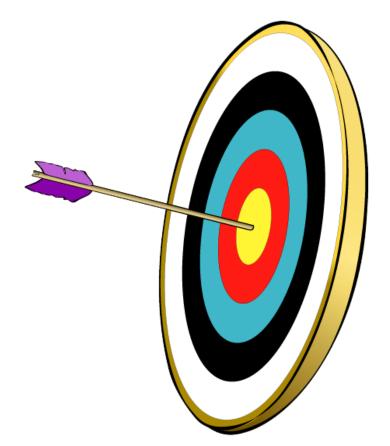


AND... For aerodrome operating visibility during the DEPARTURE (pushback, taxi prior to take-off and take-off) we've adopted the hierarchy of visibility reports in 602.126(2) – *Take-off Minima*.

Here again, we will now have one single decision-making process.



This will eliminate the two, separate decision-making processes that we currently have to determine the required visibility for the departure and arrival phases.



# Instead, we will now have a single decision-making process which is clear, simple and easy to use.



# The Board recommends that

the Department of Transport review and simplify operating minima for approaches and landings at Canadian aerodromes.

## **TSB Recommendation A20-01**

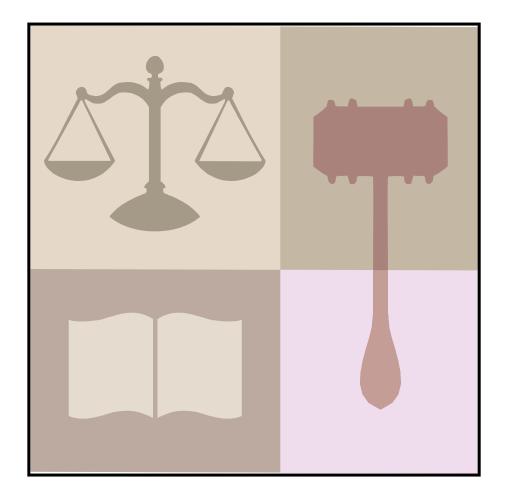
the Department of Transport introduce a mechanism to stop approaches and landings that are actually panned.

# TSB Recommendation A20-02



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Let's take a quick overview of the new regulations...



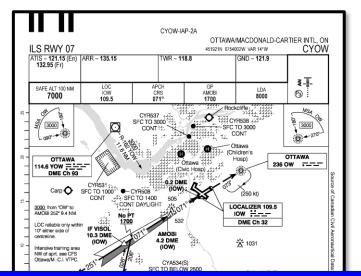
602.129 (1) – Approach Ban

No pilot-in-command (PIC) of an IFR aeroplane or IFR helicopter shall continue an instrument approach procedure beyond the FAF inbound or, where there is no FAF, the point where the final approach course is intercepted, unless the visibility reported is equal to or greater than the minimum prescribed visibility specified in the Canada Air Pilot (CAP) or the Restricted Canada Air Pilot (RCAP) in respect of the runway or surface of intended approach for the instrument approach procedure conducted.

# Subsection 602.129(1):

- This is the foundational regulation for all of Section 602.129.
- Addresses the identified safety issues and TSB Recommendation A20-01
- Aligns with ICAO, FAA
   and EASA
- Now includes aerodrome operating visibility requirements





CATEGORY	А	В		С	D
ILS/DME	5	73	(200)	½ R∖	/R 26
LOC/DME		••			(R 50
LOC/VOR	7	60	(387)	1 RV	/R 50
CIRCLING	<b>880</b> (5	11/2	8	<b>380</b> (503) 2	<b>1080</b> (703) 2¼

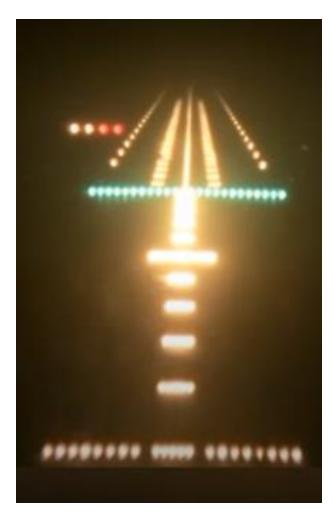
# 602.129 (2) – Approach Ban

Exception to subsection (1), no pilotin-command (PIC) of an IFR helicopter shall continue an airplane instrument approach procedure beyond the FAF inbound or, where there is no FAF, the point where the final approach course is intercepted, unless the visibility reported is equal to or greater than one half of the Category A visibility minima but not less than <sup>1</sup>/<sub>4</sub> status mile visibility (1200 RVR) and no less than the aerodrome operating visibility, as specified in the Canada Air Pilot (CAP) or the Restricted Canada Air Pilot (RCAP)

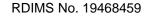
# Subsection 602.129(2)

- Provides an option for IFR helicopters not conducting a "Copter" IAP
- Aligns with US Title 14 CFR 97.3. So we will now have harmonized approach visibility requirements for all of North America.
- Allows for one-half of Category A visibility but not less than ¼ SM (RVR 1200)





- New simplified hierarchy for visibility reports that prioritizes:
   RVR
  - Ground visibility
  - Runway visibility
- This same hierarchy will be used to determine aerodrome operating visibility for the arrival phase.
- The same basic hierarchy will be common to all phases of flight.



9468459

# Text presented in NPA / Subject to revision

## 602.129 (3) – Approach Ban

The Minister may approve an operator to conduct an instrument approach with lower visibility than the published prescribed visibility minima using an approved onboard aircraft system, subject to the Minister's certification of an operator's flight crew qualification program, operating procedures and type of instrument approach procedures authorized.

- a) The specific approval/special authorization issued to the air operator will specify an applicable visibility credit based on the approved onboard aircraft system.
- b) For the purposes of subsection (3), an approved onboard aircraft system is an aircraft-based system that has been approved...

# Subsection 602.129(4)

- This provision provides operational credits through the use of *Enhanced Flight Vision Systems* (EFVS) and other advanced technologies.
- We'll have more on this later...



# Text presented in NPA / Subject to revision 602.129 (4) – Approach Ban (4) Where the visibility is less than the minimum prescribed visibility set out in subsection (1) or (2) as applicable, no pilot-in-command (PIC)shall continue an Instrument Approach Procedure(IAP) in an IFR aircraft unless: (a) at the time a visibility report is received, the aircraft has passed the FAF inbound...; (b) the aircraft is on a training flight where a landing is not intended...;

- (c) the reported visibility is varying between distances less than and greater than the prescribed visibility;
- (d) the RVR is less than the minimum RVR, and the ground visibility at the aerodrome where the runway is located is reported to be equal or greater than the minimum prescribed visibility;
- (e) the visibility is equal or greater than the VFR Flight Visibility ...;
- (f) a localized meteorological phenomenon is affecting the ground visibility...

# Subsection 602.129(5)

- This provision provides exceptions that allow an approach to be continued when the reported visibility is less than that stipulated in Subsections (1) or (2).
- Our objective is to provide the highest degree of operational flexibility in consideration of the safety imperatives.

66

# 602.129 (5) – Approach Ban

The PIC may depart IFR to a destination where there is no RVR or ground visibility (METAR) or Tower visibility for the runway of intended approach available, based on the following conditions:

- a) The PIC may use the GFA weather information at destination at ETA which must be forecast to be at or above the published visibility/minima for the instrument approach intended to be used at destination; and
- b) The PIC is required to plan for an alternate aerodrome.
- Note: Where there is a range of visibility in the GFA for the destination aerodrome at ETA, the higher visibility value needs to be equal or greater to the intended published visibility/minima of the intended approach procedure available at destination. Patchy (PTCHY) and local (LCL) visibility are not to be used as visibility limits for planning purposes at destination.

# Subsection 602.129(6)

- For situations where there will be no reported RVR, ground visibility or runway visibility at the ETA, the forecast visibility for the GFA must be must meet the required visibility.
- Here again, our objective is to provide the highest degree of operational flexibility in consideration of the safety imperatives.



# 602.129 (5) – Approach Ban

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- a) The PIC may use the GFA weather information at destination at ETA which must be forecast to be at or above the published visibility/minima for the instrument approach intended to be used at destination; and
- b) The PIC is required to plan for an alternate aerodrome.
- Note: Where there is a range of visibility in the GFA for the destination aerodrome at ETA, the higher visibility value needs to be equal or greater to the intended published visibility/minima of the intended approach procedure available at destination. Patchy (PTCHY) and local (LCL) visibility are not to be used as visibility limits for planning purposes at destination.

# Subsection 602.129(6)

- For situations where there will be no reported RVR, ground visibility or runway visibility at the ETA, the forecast visibility for the GFA must be must meet the required visibility.
- Here again, our objective is to provide the highest degree of operational flexibility in consideration of the safety imperatives.



# 602.129 (5) – Approach Ban

The PIC may depart IFR to a destination where there is no RVR or ground visibility (METAR) or Tower visibility for the runway of intended approach available, based on the following conditions:

- a) The PIC may use the GFA weather information at destination at ETA which must be forecast to be at or above the published visibility/minima for the instrument approach intended to be used at destination; and
- b) The PIC is required to plan for an alternate aerodrome.
- Note: Where there is a range of visibility in the GFA for the destination aerodrome at ETA, the higher visibility value needs to be equal or greater to the intended published visibility/minima of the intended approach procedure available at destination. Patchy (PTCHY) and local (LCL) visibility are not to be used as visibility limits for planning purposes at destination.

# Subsection 602.129(6)

- For situations where there will be no reported RVR, ground visibility or runway visibility at the ETA, the forecast visibility for the GFA must be must meet the required visibility.
- Here again, our objective is to provide the highest degree of operational flexibility in consideration of the safety imperatives.



# The Board recommends that

the Department of Transport review and simplify operating minima for approaches and landings at Canadian aerodromes.

## **TSB Recommendation A20-01**

the Department of Transport introduce a mechanism to stop approaches and landings that are actually banned.

**TSB Recommendation A20-02** 



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# These changes will bring Canada's approach ban regulations into alignment with the ICAO Standards.

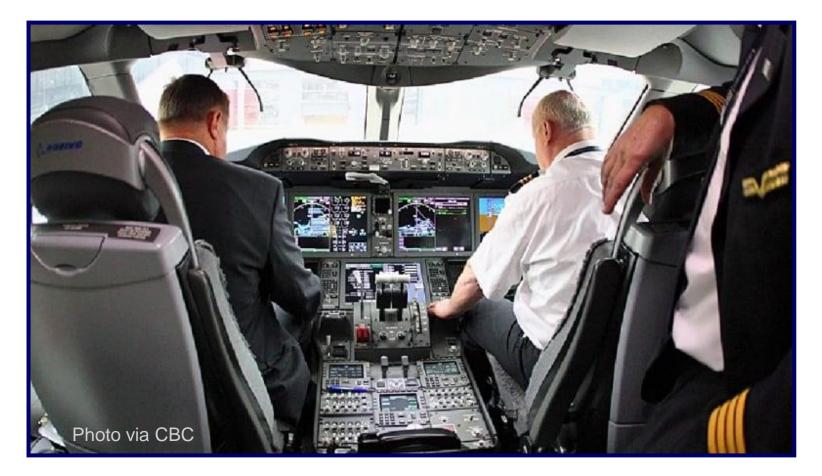




These changes also align Canadian regulations with the globally accepted practice that has been embraced by the world's leading civil aviation authorities including:

US Federal Aviation Administration (FAA) and
European Aviation Safety Agency (EASA).





The new regulations will provide pilots with a streamlined decision-making process that will eliminate unnecessary workload and distraction during critical phases of flight.

## Initial feedback from pilots and operators:



#### **Overall reaction from pilots**

- \* Notice of Proposed Amendment (NPA)
- \*\* Preliminary Issue and Consultation Assessment (PICA)

- Strong support from pilots
- Major subpart 705 air operators strongly support this initiative; Feedback from NPA\* (2021) and PICA\*\* (2017)
- We've addressed the concerns that we've already received
- There will be additional opportunities for consultation (CG I and Guidance)



## DISCUSSION

## 1. Identified Safety Issues / TSB Recommendations

- 2. Solutions
- 3. Next Steps



## **NEXT STEPS**

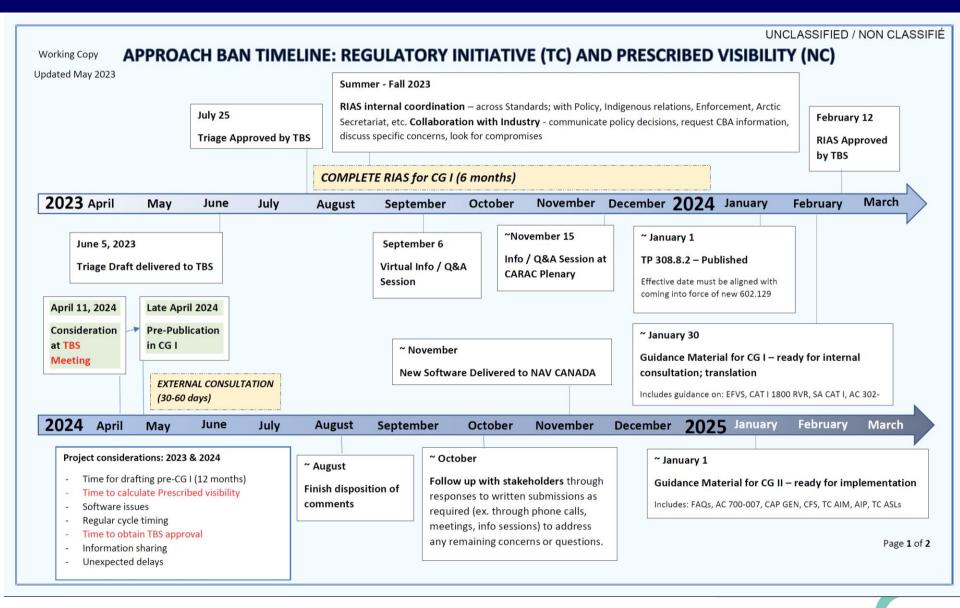
- 1. Work with Department of Justice to finalize Approach Ban regulations
- 2. Develop guidance for our new approach ban regulations and aerodrome operating visibility
- 3. Move forward towards implementation with our NAV CANADA partners

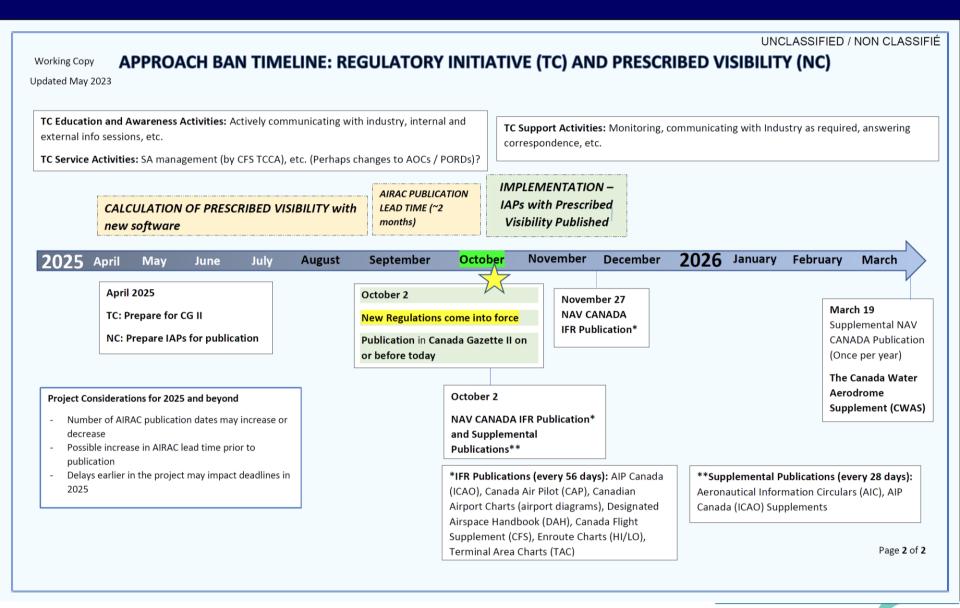


## **NEXT STEPS**

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### **OBJECTIVE:**

To provide pilots and operators with guidance that is:

- Comprehensive,
- Accurate, and
- User Friendly



Our plan is to have the key guidance documents ready for consultation at the same time as regs go to CG I.



# This will facilitate a coordinated review of all relevant documents.

The remaining documents will be ready on or before CG II.





Pushback and Taxi



Take-off



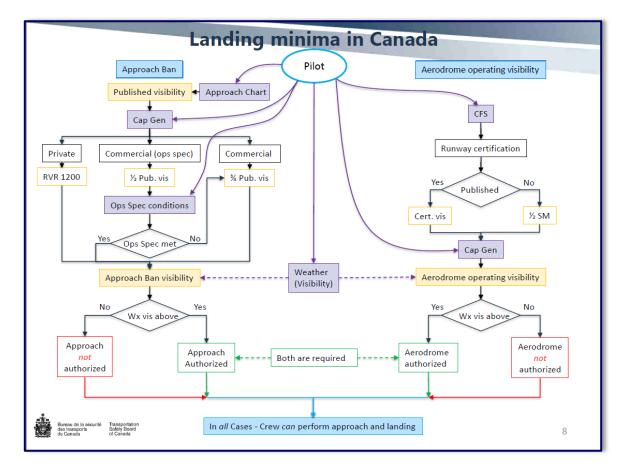
**Approach and Landing** 

Visibility requirements for all phases of flight – pushback, taxi, take-off, approach and landing – were the subject of a comprehensive review.

**Opportunities for improvement are being addressed.** 

Why look at visibility for all phases of flight?





The need for simplification and alignment that TSB identified for the approach phase also needs to be addressed for other phases of flight.





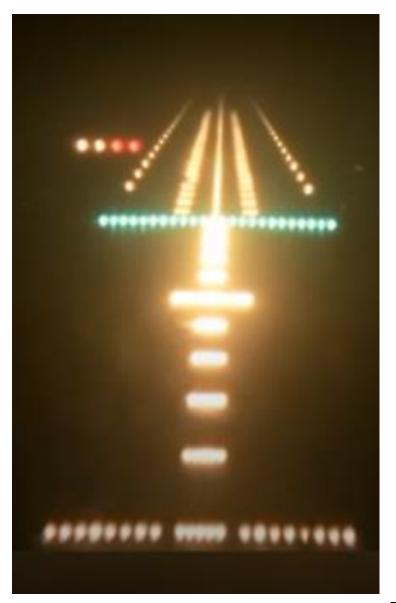
Minimum aerodrome operating visibility requirements are a common thread to all phases of flight where the aircraft is maneovring on the ground.



We are reviewing all existing guidance to ensure that all elements are either:

- Captured in the new guidance; or
- Addressed (with documented reasons for change)





# Work has begun on AC 602-006 – *Approach Ban*:

- 1. Goal: to explain how the new regulations will work and the rationale for their development
- 2. A focus on operational decision-making



Provision No.	Text of New Provision	Rationale for New Provision	Practical Application of New Provision

For each provision that has been developed or modified – including definitions – the matrix in Appendix A will provide:

- 1. Number and text of the new provision
- 2. Rationale for the new provision
- 3. Practical application of the new provision

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Subject	:	Aerodrome Ope	rating Visibility	1	
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File Class	sification No.:	Z 5000- 34		Issue No.: Effective Date:	02 2011-06-30
RDIMS N	0.:	6675576-v5		Effective Date:	2011-06-30
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## AC 602-002 – *Aerodrome Operating Visibility* is now undergoing a major revision:

- 1. New aligned criteria for departure and arrival
- 2. Enhanced background information
- 3. A focus on operational decision-making



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1.2 Applicability					
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STANDARDS	AND RECOMMENDED PRACTS	48			
APPENDIX 8-TABL	A AR FORMAT OF APPENDIX A		- 10		
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AC 302-001 – Publication of the Level of Service with Respect to Departure Below RVR 2600 (½ Statute Mile)

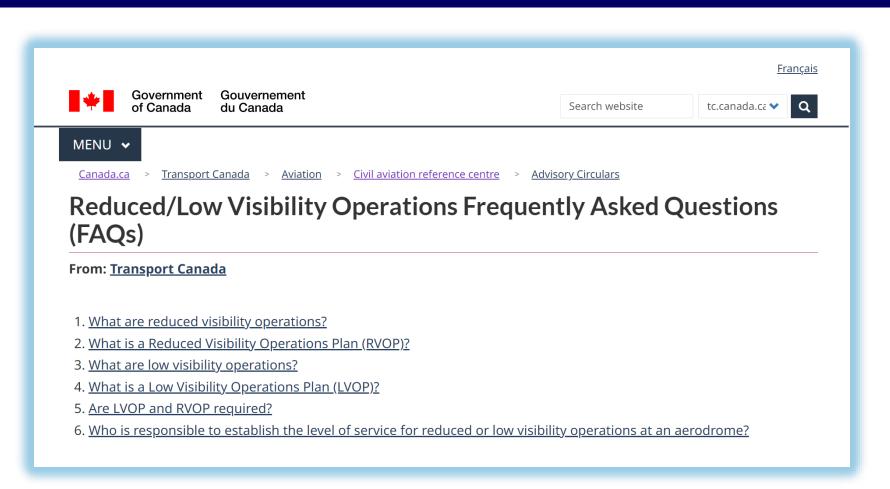
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AC 302-006 – Publication of Special Reduced/Low Visibility Procedures in the appropriate Aeronautical Information Publication(s) Review, revise and combine



The CAP GEN, Canada Flight Supplement and TC AIM will need to be revised with updated guidance on:

- approach ban
- aerodrome operating visibility



## The information in the online FAQs regarding Reduced and Low Visibility Operations will need to be updated.

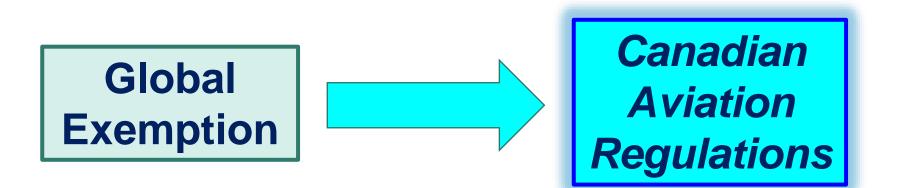




An Enhanced Flight Visibility System (EFVS) utilizes enhanced vision to enable pilots to conduct approaches and landings under lower visibility conditions than is possible using natural vision.



## **EFVS Regulatory Development in Canada**



A Global Exemption is currently under development to enable EFVS operations in Canada.

With our approach ban regulatory initiative, we have an opportunity to authorize EFVS operations through the CARs.



*	Transport Canada	Fransports Canada				
		Advisory Ci	cular			
Subject	:	Enhanced Flight Vision System Operations – Special Authorization/Specific Approval and Guidance				
ssuing O	ffice:	Civil Aviation, Standards	Document No.:	AC 700-XXX-X		
File Classification No.:		Z 5000-34	Issue No.:	01		
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		Table of cont	ents			
1.0 I	ntroduction			3		
1.1 F	Purpose			3		
1.2 /	Applicability					
1.3 I	Description of a	hanges		4		
2.0 F	References an	d requirements		4		
2.1 F	Reference documents					
	Cancelled documents					
2.3 [	Definitions and abbreviations					
3.0 E	Background					
3.1 5	Structure and application of this Advisory Circular					
	Definition of an EFVS					
3.3 1	Types of EFVS Operations					
4.0 E	EFVS operations to touchdown and rollout (EFVS-TD)					
4.1 F	Required visual references for EFVS operations to touchdown and rollout					
5.0 E	EFVS operations to 100 feet above TDZE (EFVS-100)					
5.1 F	Required visual references for EFVS operations to 100 feet above TDZE					
6.0 E	EFVS operatio	nal concepts		13		
6.1 E	EFVS visual advantage					
	EFVS sensor performance limitations					
6.3 l	Use of EFVS for situational awareness					
6.4 l	Use of EFVS in conjunction with Category II and Category III approaches					
	Use of EFVS in conjunction with RNP AR approaches					
	Go-around and balked landing considerations					
	Future disposition					
8.0 I	Information management16					
9.0 [	Document his	tory		16		
10.0	Contact us					

Canada

- EFVS Operations both under the Global Exemption and under the pending CARs – will require a Specific Approval (SA).
- The conditions for the SA as well as the guidance material will be contained in a new 700-series advisory circular – which is currently under development.



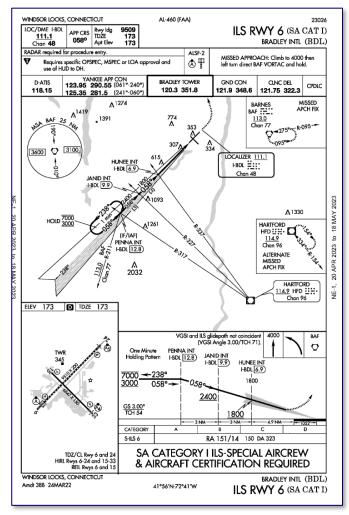
## Looking to the future...



There are other initiatives that can further improve access to Canadian airports under reduced or low visibility conditions.



## **Examples of operational framework**



The FAA has successfully implemented a framework addressing operations below RVR2600. (See FAA Order 8400.13F and AC 120-118)

- CAT I RVR1800
- SA CAT I
- SA CAT II



## **NEXT STEPS**

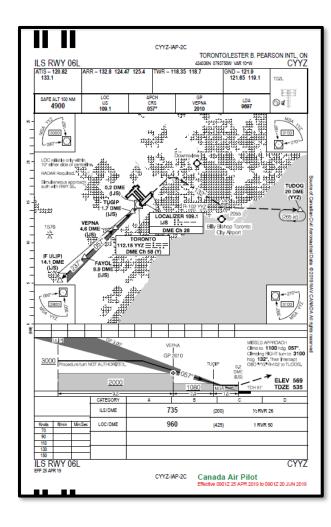
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Approach chart visibilities will be reviewed / updated to facilitate implementation of the new approach ban regulations.





TP 308 - Criteria for the Development of Instrument Procedures:

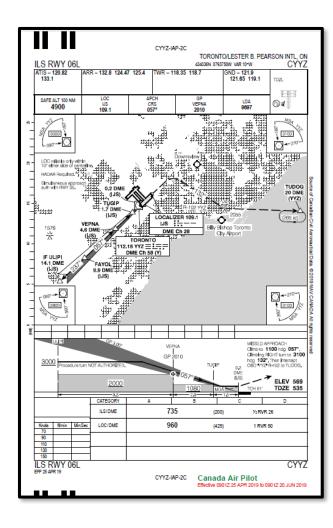
- New criteria for the determination of charted visibility values based on:
  - o DH / HAT
  - DA / MAP to threshold distance
  - Approach lighting
  - Approach type
  - Approach characteristics
  - Runway lighting
  - Runway certification
  - Aircraft category
  - Aerodrome operating visibility

- Charted visibility up? down? same?
- Moving from approach ban based on 1200 RVR (GA), or 75% / 50% charted visibility (Part VII)

Reducing impact to industry:

 Implementation of additional types (CAT I 1800 RVR, SA CAT I, SA CAT II)





**TP 312 - Aerodromes Standards** *and Recommended Practices*:

- To facilitate CAT I approaches with RVR 1800 for runways with suitable approach lighting
- The definitions for CAT I Precision Runway is being modified: RVR 2600 to RVR 1800





## Your feedback is important!





We'll respond to as many questions as we can during the session.

As a follow-up to the meeting, your questions will be addressed and the responses will be posted on the CARAC website.





## **FEEDBACK:** Your Questions and Comments

- Meeting chat
- Raise your hand
- CARAC Email

## We have posted CARAC email address – together with the guidelines for this discussion – in the meeting chat.





