



# Advisory Circular

**Subject: Publication of the Level of Service with Respect to Departure Below RVR 2600 (1/2 Statute Mile)**

Issuing Office:	Civil Aviation, Standards	Document No.:	AC 302-001
File Classification No.:	Z 5000-34	Issue No.:	02
RDIMS No.:	11252361-V10	Effective Date:	2017-10-25

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>2</b>
1.1	Purpose .....	2
1.2	Applicability .....	2
1.3	Description of Changes .....	2
<b>2.0</b>	<b>REFERENCES AND REQUIREMENTS</b> .....	<b>2</b>
2.1	Reference Documents .....	2
2.2	Cancelled Documents .....	2
2.3	Definitions and Abbreviations.....	3
<b>3.0</b>	<b>BACKGROUND</b> .....	<b>4</b>
<b>4.0</b>	<b>APPLICABLE REQUIREMENTS</b> .....	<b>4</b>
<b>5.0</b>	<b>INFORMATION MANAGEMENT</b> .....	<b>5</b>
<b>6.0</b>	<b>DOCUMENT HISTORY</b> .....	<b>5</b>
<b>7.0</b>	<b>CONTACT OFFICE</b> .....	<b>5</b>
	<b>APPENDIX A — REFERENCE TP 312, 5<sup>TH</sup> EDITION, DATED SEPTEMBER 15<sup>TH</sup> 2015 – AERODROME STANDARDS AND RECOMMENDED PRACTICES</b> .....	<b>6</b>
	<b>APPENDIX B — TABULAR FORMAT OF APPENDIX A</b> .....	<b>12</b>

## **1.0 INTRODUCTION**

- (1) This Advisory Circular (AC) is provided for information and guidance purposes. It may describe 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) This Advisory Circular is provided to highlight each airport's certification and publication requirements to support operations below a visibility value of Runway Visual Range (RVR) 2600 (½ statute mile) including taxiing to and from the runway.
- (2) This Advisory Circular supports the Commercial and Business Aviation Advisory Circular (CBAAC) 0256, dated 2006.07.31 - *Low Visibility Take-Off Airport Requirements* (as amended).

### **1.2 Applicability**

- (1) This document is applicable to all Airport Operators as defined in Part I of the Canadian Aviation Regulations.

### **1.3 Description of Changes**

- (1) This document reflects information updates contained in the current edition of TP312 Aerodrome Standards and Recommended Practices 5<sup>th</sup> edition, effective September 15<sup>th</sup> 2015, including operations to RVR 300.
- (2) This document serves to complement AC700-035 which covers Special Authorization for Take-off Operations below RVR 600 down to and including RVR 300.

## **2.0 REFERENCES AND REQUIREMENTS**

### **2.1 Reference Documents**

- (1) The following reference materials should be used in conjunction with this document:
  - (a) Part III Subpart 2 of the *Canadian Aviation Regulations* (CARs) - Airports;
  - (b) TP 312, 5<sup>th</sup> Edition, effective September 15<sup>th</sup> 2015 - *Aerodrome Standards and Recommended Practices*;
  - (c) Part I, Subpart I "Interpretation" of the *Canadian Aviation Regulations* (CARs);
  - (d) Part III, Subpart 2, Article 302.07 of the *Canadian Aviation Regulations* (CARs);
  - (e) *Commercial and Business Aviation Advisory Circular* (CBAAC) No. 0256 - *Low Visibility Take-off Airport Requirements*.
  - (f) AC700-035 Special Authorization for Take-off Operations below RVR 600 down to and including RVR 300

### **2.2 Cancelled Documents**

- (1) Not applicable.
- (2) 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 definitions and abbreviations are used in this document:

(a) **Runway types:** Runways intended for the operation of aircraft and categorized as follows:

(i) **Non-instrument runway.** A runway intended for the operation of aircraft using visual approach procedures, or an instrument approach procedure down to a height above aerodrome (HAA)/ height above threshold (HAT) not lower than 500 ft.

(ii) **Non-precision runway.** A runway served by visual and non-visual navigation aids that provides at least lateral guidance adequate for instrument approach procedure down to a HAA/ HAT lower than 500 ft but not lower than 250 ft, and with an approach visibility not less than ¾ SM (RVR4000).

(iii) **Precision runway**

Category I - A runway served by visual and non-visual navigation aids that provide lateral and vertical guidance adequate for an instrument approach procedure down to a HAT lower than 250 ft but not lower than 200 ft, or with an approach visibility less than ¾ SM (RVR4000) but not less than ½ SM (RVR2600); (*Catégorie I*)

Category II - A runway served by visual and non-visual navigation aids that provide lateral and vertical guidance adequate for an instrument approach procedure down to a HAT lower than 200 ft but not lower than 100 ft, or with an approach visibility less than ½ SM (RVR2600) but not less than ¼ SM (RVR1200); (*Catégorie II*)

Category III - A runway served by visual and non-visual navigation aids that provide lateral and vertical guidance adequate for an instrument approach procedure to a HAT lower than 100 ft or no decision height, or with an approach visibility less than ¼ SM (RVR1200) or no visibility (RVR) limit. (*Catégorie III*) (*Types de piste*)

**Note to (a) :** For aerodrome certification purposes the type of runway is determined by the minimum intended landing limits for that runway regardless of the type of navigation aid or the type of approach

(b) **HAA** - Height above Aerodrome

(c) **HAT** - Height above Touchdown Zone Elevation

(d) **Take off visibility** in order of precedence is:

(i) The reported RVR of the runway to be used

(ii) The reported ground visibility of the aerodrome; and

(iii) When neither (i) nor (ii) is available the visibility of the runway of departure as observed by the pilot-in-command.

(e) **Reduced Visibility Operations (RVO)** - Operations below RVR 2600 (½ SM) down to and including RVR 1200 (¼ SM)

(f) **Reduced Visibility Operations Plan (RVOP)** – Is a plan that calls for specific procedures by the Airport Operator and/or ATC when operating in visibility conditions below RVR 2600 (½ SM) down to RVR 1200 (¼ SM). The RVOP would be activated or terminated when the RVR is stabilized at the targeted RVR. This is consistent with CAR 602 in recognizing fluctuating or localized weather conditions.

(g) **Low Visibility Operations (LVO)** - Operations below RVR 1200 (¼ SM).

- (h) **Low Visibility Operations Plan (LVOP)** – Is a plan that calls for specific procedures by the Airport Operator and/or ATC when the RVR is below RVR 1200 (¼ SM).
- (i) **RGL** – Runway Guard Lights
- (j) **SMGCS** – Surface Movement Guidance and Control System
- (k) **N/A (Not Applicable)** - Means that the element would not be required in TP312, 5<sup>th</sup> Edition, dated September 15<sup>th</sup> 2015 – *Aerodrome Standards and Recommended Practices* for operations at the specified visibility condition

### 3.0 BACKGROUND

- (1) Air Operators were informed of the airport certification requirements to support taxi and takeoff operations below a visibility of RVR 2600 (1/2 SM) through the issuance of CBAAC 0256, *Low Visibility Take-Off Airport Requirements*.
- (2) These airport certification requirements have been part of regulatory documents since the creation of Part III of the CARs and in most cases formed part of the previous airport certification requirements. The safety parameters provided by the certification requirements under CARs Part III together with those of other parts of the CARs form the overall safety net needed to support public air transportation at an acceptable level of safety.
- (3) Air Operators require specific crew training, aircraft equipment and runway requirements with respect to aircrew visual references while conducting take-offs below RVR 2600. They are issued Special Authorizations (SA) to conduct departures down to RVR 1200, RVR 600 or RVR 300 under Part VII of the CARs. Aircrews would then refer to the appropriate publication (e.g. CFS/WAS) of the Integrated Aeronautical Information Publications System to confirm if the airport provides the necessary infrastructure to support activities in conditions of low or reduced visibilities.
- (4) Runway incursions have been recognized as a major worldwide aviation risk in all visibility conditions. The publication of related runway information is critical for operations in conditions of low or reduced visibility where the Runway Visual Range (RVR) is below 2600 feet (½ SM).

### 4.0 APPLICABLE REQUIREMENTS

- (1) The Airport Operator is responsible for operating and maintaining their airport as certified under Part III, Subpart 2 of the CARs. Under Part III of the CARs, the Airport Operator specifies the level of service chosen to be provided in their Airport Operations Manual (AOM), and where applicable publishes the level of service in Aeronautical Information Publications (i.e. type of runways, taxiways, hours of operation, CRFI, PLR/PCN available, weight restrictions, etc.)
- (2) Where an Airport Operator is planning for operations below RVR 2600 (½ SM) or RVR 1200 (¼ SM), they must ensure that the airport facility meets the requirements of Part III, Subpart 2 of the CARs applicable standards for Reduced Visibility Operations and Low Visibility Operations.
- (3) Some of the standards that relate to operations in lower visibilities include items such as:
  - (a) Lighting and marking;
  - (b) Standby power supply;
  - (c) Circuit design and monitoring; and
  - (d) Operational Plans.
- (4) Appendix A lists in detail the TP 312 5<sup>th</sup> edition standards for operations below 2600 RVR (½ SM) and below 1200 RVR (¼ SM). The table includes;
  - (a) Current TP 312 standard not met (missing element);

- (b) Acceptable Mitigation/Limitation Options acceptable to Transport Canada until the required missing element can be installed. The mitigation measures must be documented in the AOM and if appropriate in other operational plan(s) such as the Winter Maintenance Plan, Airside Vehicle Operations Plan, etc.; and
  - (c) Comments related to the relevant standard(s).
- (5) Appendix B is a summary of Appendix A in tabular format.
  - (6) A Low Visibility Operational Plan (LVOP) is required whenever operations are conducted in visibility conditions less than RVR 1200 (¼ SM).
  - (7) Pursuant to sections 302.07 and 302.08 of the CARs, Airport Operators are required to notify Transport Canada before any change to the airport, its facilities and level of service, maintain their AOM up to date and review each issue of the relevant aeronautical information publication for its accuracy.
  - (8) In support of CBAAC 0256, dated 2006.07.31 - *Low Visibility Take-Off Airport Requirements* Airport Operators need to publish the operational certification level of runway in order that flight crews have the applicable information for flight planning and decision making purposes.
  - (9) Example of the runway information to be published;
    - (a) RWY 06/24 RVR 1200 (¼ SM) /DAY Only;
    - (b) RWY 03/21 RVR 1800 (¾ SM);
    - (c) RWY 12/30 RVR 600 (⅙ SM) ; and
    - (d) RWY 10/28 RVR 300.
  - (10) Airport operators are reminded that NAVCANADA needs a minimum of 76 days lead time prior to any publication changes

## 5.0 INFORMATION MANAGEMENT

- (1) Not applicable

## 6.0 DOCUMENT HISTORY

- (1) Advisory Circular (AC) 302-001 Issue 01, *Publication of the Level of Service with Respect to Departure Below RVR 2600 (½ Statute Mile)*, RDIMS 2323240 (E), 2326709 (F), dated 2008-03-07.

## 7.0 CONTACT OFFICE

For more information, please contact: <http://www.tc.gc.ca/eng/regions.htm>

Suggestions for amendment to this document are invited, and should be submitted via:  
[TC.FlightStandards-Normsvol.TC@tc.gc.ca](mailto:TC.FlightStandards-Normsvol.TC@tc.gc.ca)

### ***Original signed by***

Robert Sincennes  
Director, Standards  
Civil Aviation

**APPENDIX A — REFERENCE TP 312, 5<sup>TH</sup> EDITION, DATED SEPTEMBER 15<sup>TH</sup> 2015 – AERODROME STANDARDS AND RECOMMENDED PRACTICES**

RVR 2600 – 1200	ITEM	ACCEPTABLE MITIGATION / LIMITATION OPTIONS	COMMENTS
1.	<b>8.6.1.2</b> A reduced visibility operations plan is provided at an aerodrome operating in visibility conditions below RVR2600 (½ SM) down to RVR1200 (¼ SM).	RVOP not required for runways certified for RVR 1200 prior to publication of TP312 5 <sup>th</sup> Edition.	Components of the reduced visibility plan are stated in TP312 5 <sup>th</sup> 8.6.1.4.
2.	<b>5.3.12.1</b> Runway edge lights are provided as follows: (a) Medium intensity runway edge lights for: (i) a non-instrument runway; or (ii) non-precision runway, used at night. (b) High intensity runway edge lights for: (i) a precision runway; or (ii) a runway used for aircraft take-off in visibility conditions below RVR1200 (¼ SM).		Edge lights not required for take-off between RVR 2600 - RVR 1200 values during day.
3.	<b>5.3.26.1</b> Runway guard lights, configuration A or configuration B (refer to Figure 5-56), are provided at each taxiway/runway-holding position associated with a runway operating in visibility conditions below RVR2600 (½ SM), except: (a) where a stop bar is installed and operated below RVR2600 (½ SM); or (b) where there are procedures in place to manage the vehicular traffic to essential minimum, and limit aircraft movement to one at any time on the manoeuvring area.	Operations limited to one aircraft on the manoeuvring area at a time.	Alternate means of compliance are already in the standard where operational procedures exist to limit one aircraft on the manoeuvring area at any time.
4.	<b>5.4.1.10</b> Subject to 5.4.1.11 and 5.4.5.5, signs are illuminated when used in support of operations: (a) at night; or (b) in visibility conditions below RVR1200 (¼ SM). <b>5.4.1.11</b> Signs positioned on private taxiways or taxiways serving non-instrument runways of AGNs I and II may be retroreflective and non-illuminated <b>5.4.5.5</b> A road-holding position sign intended for night use is retroreflective or illuminated		Non-illuminated signs acceptable only to daytime operations above RVR1200.

RVR 2600 – 1200	ITEM	ACCEPTABLE MITIGATION / LIMITATION OPTIONS	COMMENTS												
5.	<p>Illuminated signs  <b>5.4.7.14</b> Sign face luminance (average sign luminance) is as follows:                      (a) Where operations are conducted at night, the average sign luminance is at least:</p> <table border="1" data-bbox="415 510 748 611"> <tr> <td>Red</td> <td>10 cd/m<sup>2</sup></td> </tr> <tr> <td>Yellow</td> <td>50 cd/m<sup>2</sup></td> </tr> <tr> <td>White</td> <td>100 cd/m<sup>2</sup></td> </tr> </table> <p>(b) Where operations are conducted in visibility conditions less than RVR2600 (½ SM), the average luminance is at least:</p> <table border="1" data-bbox="415 726 748 827"> <tr> <td>Red</td> <td>30 cd/m<sup>2</sup></td> </tr> <tr> <td>Yellow</td> <td>150 cd/m<sup>2</sup></td> </tr> <tr> <td>White</td> <td>300 cd/m<sup>2</sup></td> </tr> </table>	Red	10 cd/m <sup>2</sup>	Yellow	50 cd/m <sup>2</sup>	White	100 cd/m <sup>2</sup>	Red	30 cd/m <sup>2</sup>	Yellow	150 cd/m <sup>2</sup>	White	300 cd/m <sup>2</sup>	<p>Fibre-Optic Signs may be provided in lieu of Illuminated (internally or externally) signs.</p> <p>(b) Internally illuminated signs installed prior to the effective date of TP312 5<sup>th</sup> edition are acceptable provided they conform to TP312 4<sup>th</sup> edition - Appendix C, C.3.2.3.</p>	<p>Illuminated signs refers to internal or external illumination of panel face.</p>
Red	10 cd/m <sup>2</sup>														
Yellow	50 cd/m <sup>2</sup>														
White	100 cd/m <sup>2</sup>														
Red	30 cd/m <sup>2</sup>														
Yellow	150 cd/m <sup>2</sup>														
White	300 cd/m <sup>2</sup>														
6.	<p><b>8.2.1.1</b> For a precision runway or for take-off operations in visibility conditions below RVR1800 (¾ SM), the electrical circuits for the power supply, lighting and control of the lighting systems included in Table 8.1.1.2 are so designed that the failure of one circuit will not leave the pilot without visual guidance nor will it result in a misleading or inadequate pattern.</p>	<p>When the RVR is &lt;2600 down to 1200 take-offs are limited to RVR1200 in daytime and RVR1800 at night time conditions.</p>													
7	<p><b>9.1.3.1</b> The serviceability of a lighting system is in accordance with the requirements of Table 9.1.3.1—Lighting Serviceability Table (Maximum Light Failures) and associated notes for the continued operation of the system.</p>		<p>Reduction in level of service is required as stated in standards 9.1.3.3 and 9.1.3.4</p>												

Below RVR 1200	ITEM	ACCEPTABLE MITIGATION / LIMITATION OPTIONS	COMMENTS
1	<p><b>8.6.1.1</b> A low visibility operations plan is provided at an aerodrome operating in visibility conditions below RVR1200 (¼ SM).</p>		<p>Components of the low visibility plan are stated in TP312 5<sup>th</sup> 8.6.1.3.</p>
2	<p><b>5.3.12.1</b> Runway edge lights are provided as follows:</p> <p>(a) Medium intensity runway edge lights for:</p> <p>(i) a non-instrument runway; or</p> <p>(ii) non-precision runway, used at night.</p> <p>(b) High intensity runway edge lights for:</p> <p>(i) a precision runway; or</p> <p>(ii) a runway used for aircraft take-off in visibility conditions below RVR1200 (¼ SM).</p>		
3	<p><b>5.3.21.1</b> Taxiway centreline lights are provided on:</p> <p>(a) an exit taxiway, taxiway, runway turn pad, and aircraft stand taxilane used in visibility conditions below RVR1200 (¼ SM) in such a way as to provide continuous guidance between the runway centreline and the point on the apron where aircraft commence manoeuvring for parking, except for take-off operations in RVR600 (⅛ SM) and above, where procedures exist to limit aircraft on the manoeuvring area to one at a time and vehicles on the manoeuvring area to essential minimum; or</p> <p>(b) a runway forming part of a normal taxi route used in visibility conditions below RVR1200 (¼ SM), except for take-off operations in RVR600 (⅛ SM) and above, where procedures exist to limit aircraft on the manoeuvring area to one at a time and vehicles on the manoeuvring area to essential minimum.</p>	<p>Operations limited to one aircraft on the manoeuvring area at a time and restricted to no lower than RVR600.</p>	<p>Alternate means of compliance are already in the standard.</p> <p>Switchable stop bars require interlocking with taxiway centreline lighting (Standard 5.3.23). Therefore the requirement for taxiway centreline lights is directly related to the installation of stop bars.</p>
4	<p><b>5.3.23.1</b> A stop bar is provided at every runway-holding position serving a runway operating in visibility conditions below RVR1200 (¼ SM), except where operational procedures exist in the reduced or low visibility plan to limit the number of aircraft on the manoeuvring area to one at a time and vehicles on the</p>	<p>Operations limited to one aircraft on the manoeuvring area at a time.</p>	<p>Alternate means of compliance are already in the standard.</p> <p>The Low Visibility Operational Plan addresses other vehicles and pedestrians. See 8.6.1.3.</p>



Below RVR 1200	ITEM	ACCEPTABLE MITIGATION / LIMITATION OPTIONS	COMMENTS
	manoeuvring area to the essential minimum.		
5	<p><b>5.3.13.1</b> Runway centreline lights are provided on:</p> <p>(a) a precision runway category II or III; or</p> <p>(b) a runway used for take-off in visibility conditions below RVR1200 (¼ SM)</p>		
6	<p><b>5.3.22.1</b> Taxiway edge lights are provided on:</p> <p>(a) a holding bay, apron, runway turn pad used at night and on a taxiway not provided with taxiway centreline lights and intended for use at night;</p> <p>(b) curved portions of taxiways where aircraft operations are being conducted in visibility conditions below RVR600 (⅛ SM); or</p> <p>(c) a daytime only runway used for aircraft taxiing at night.</p>	Where taxiway edge lights are not provided as stated in 5.3.22.1 (b), operations are restricted to no lower than RVR600 (⅛ SM).	
7	<p><b>8.2.1.1</b> For a precision runway or for take-off operations in visibility conditions below RVR1800 (¾ SM), the electrical circuits for the power supply, lighting and control of the lighting systems included in Table 8.1.1.2 are so designed that the failure of one circuit will not leave the pilot without visual guidance nor will it result in a misleading or inadequate pattern.</p>		In the context of systems to support operations below RVR 1200.
8	<p><b>8.1.1.1</b> A secondary power supply is provided for:</p> <p>(a) a precision runway, or</p> <p>(b) a take-off runway operating in visibility conditions less than RVR1200 (¼ M).</p>		
9	<p><b>5.3.31.1</b> A road-holding position light is provided at each road-holding position serving a runway when it is intended that the runway will be used in conditions below RVR1200 (1/4 SM).</p>	Where road holding lights are required but not provided it is acceptable, as a component of the LVOP to physically close the access to the road thereby protecting the	

Below RVR 1200	ITEM	ACCEPTABLE MITIGATION / LIMITATION OPTIONS	COMMENTS												
		runway.													
10	<p><b>5.4.1.10</b> Subject to 5.4.1.11 and 5.4.5.5, signs are illuminated when used in support of operations:</p> <p>(a) at night; or</p> <p>(b) in visibility conditions below RVR1200 (¼ SM)</p> <p><b>5.4.1.11</b> Signs positioned on private taxiways or taxiways serving non-instrument runways of AGNs I and II may be retroreflective and non-illuminated</p> <p><b>5.4.5.5</b> A road-holding position sign intended for night use is retroreflective or illuminated.</p>	Through the LOVP, provide routing with proper illuminated signage.	Internally illuminated signs meeting the maximum candela output specified in TP312 4 <sup>th</sup> edition - Appendix C, C.3.2.3 would be acceptable for low visibility operations.												
11	<p>Illuminated Signs</p> <p><b>5.4.7.14</b> Sign face luminance (average sign luminance) is as follows:</p> <p>(a) Where operations are conducted at night, the average sign luminance is at least:</p> <table border="1" data-bbox="428 1058 760 1203"> <tr> <td style="background-color: red; color: black;">Red</td> <td>10 cd/m<sup>2</sup></td> </tr> <tr> <td style="background-color: yellow; color: black;">Yellow</td> <td>50 cd/m<sup>2</sup></td> </tr> <tr> <td style="background-color: white; color: black;">White</td> <td>100 cd/m<sup>2</sup></td> </tr> </table> <p>(b) Where operations are conducted in visibility conditions less than RVR2600 (½ SM), the average luminance is at least:</p> <table border="1" data-bbox="422 1341 764 1486"> <tr> <td style="background-color: red; color: black;">Red</td> <td>30 cd/m<sup>2</sup></td> </tr> <tr> <td style="background-color: yellow; color: black;">Yellow</td> <td>150 cd/m<sup>2</sup></td> </tr> <tr> <td style="background-color: white; color: black;">White</td> <td>300 cd/m<sup>2</sup></td> </tr> </table>	Red	10 cd/m <sup>2</sup>	Yellow	50 cd/m <sup>2</sup>	White	100 cd/m <sup>2</sup>	Red	30 cd/m <sup>2</sup>	Yellow	150 cd/m <sup>2</sup>	White	300 cd/m <sup>2</sup>	<p>Fibre-Optic Signs may be provided in lieu of Illuminated (internally or externally) signs.</p> <p>(b) Internally illuminated signs installed prior to the effective date of TP312 5<sup>th</sup> edition are acceptable provided they conform to the maximum performance stated in TP312 4<sup>th</sup> edition Appendix C, C.3.2.3.</p>	Illuminated signs refers to internal or external illumination of panel face.
Red	10 cd/m <sup>2</sup>														
Yellow	50 cd/m <sup>2</sup>														
White	100 cd/m <sup>2</sup>														
Red	30 cd/m <sup>2</sup>														
Yellow	150 cd/m <sup>2</sup>														
White	300 cd/m <sup>2</sup>														
12	<p><b>8.3.1.1</b> Where lighting systems are used for aircraft control purposes (e.g. stop bars), within 5 seconds of pressing the stop bar button on the ATC airfield lighting control panel, the actual status of the lights is displayed on the lighting control panel.</p>	Operations limited to one aircraft on the manoeuvring area at a time.													
13	<p><b>9.1.3.1</b> The serviceability of a lighting system is in accordance with the requirements of Table 9.1.3.1—Lighting</p>		Reduction in level of service is required as stated in standards												

Below RVR 1200	ITEM	ACCEPTABLE MITIGATION / LIMITATION OPTIONS	COMMENTS
	Serviceability Table (Maximum Light Failures) and associated notes for the continued operation of the system.		9.1.3.3 and 9.1.3.4

**APPENDIX B — TABULAR FORMAT OF APPENDIX A**

Column 1	Column 2	Column 3		Column 4		Column 5	
TP 312 5 <sup>th</sup> edition Standard	Missing Element	Reduced Visibility Takeoff (1200 ≤ RVR < 2600)		Low Visibility Takeoff (600 ≤ RVR < 1200)		Low Visibility Takeoff (300 ≤ RVR < 600)	
		Day	Night	Day	Night	Day	Night
5.3.12.1	Runway Edge Lights	YES	NO (Note 1)	NO	NO	NO	NO
5.3.13.1	Runway Centreline Lights	N/A	N/A	NO	NO	NO	NO
8.2.1.1	Circuit Design	YES	NO (Note 2)	NO	NO	NO	NO
8.1.1.1	Secondary Power	N/A	N/A	NO	NO	NO	NO
5.3.26.1	Runway Guard Lights	NO (Notes 3 and 4)	NO (Notes 3 and 4)	N/A	N/A	N/A	N/A
5.3.23.1	Stop Bars	N/A	N/A	NO (Note 3)	NO (Note 3)	NO (Note 3)	NO (Note 3)
8.6.1.1 8.6.1.2	Low / Reduced Visibility Operations Plan	NO (Note 9)	NO (Note 9)	NO	NO	NO	NO
5.3.22.1 (b)	Taxiway edge lights	N/A	NO (Note 8)	N/A	NO (Note 8)	NO	NO
5.3.21.1	Taxiway Centreline Lights	N/A	N/A	NO (Note 6)	NO (Note 6)	NO	NO
5.3.31.1	Road Hold Position Light	N/A	N/A	NO (Note 7)	NO (Note 7)	NO (Note 7)	NO (Note 7)
5.4.1.10 5.4.7.14	Illumination of Signs	N/A	NO (Note 5)	NO	NO	NO	NO
8.3.1.1	Automatic Monitoring of Stop Bars	N/A	N/A	NO (Note 3)	NO (Note 3)	NO (Note 3)	NO (Note 3)
9.3.1.1	Serviceability of lighting systems	NO	NO	NO	NO	NO	NO

Column 1: States the applicable TP 312 5<sup>th</sup> edition standard

Column 2: Statement of missing infrastructure elements of the standard

Columns 3, 4 and 5: Are the various visibility operation (day/night)

**If YES:**

The takeoff operation MAY be conducted with the missing element (may have a corresponding # referenced in addition)

**If NO:**

The takeoff operation MAY NOT be conducted with the missing infrastructure element. (If a # footnote is referenced a mitigating procedure may be applicable)

Notes: For use of table always refer to TP 312 5<sup>th</sup> edition

- (Note 1) While these specifications do not reference operations below RVR 2600, they are required to support night operations.
- (Note 2) Yes, operations are restricted to no lower than RVR1800 (<sup>3</sup>/<sub>8</sub> SM).
- (Note 3) YES, with operational procedures are in place to limit to one at any time the number of aircraft on the manoeuvring area.
- (Note 4) YES, if stop bars are available in lieu of RGL.
- (Note 5) YES, for signs that meet the conditions set in 5.4.1.11, including definition of a "private taxiway"
- (Note 6) YES, where operational procedures are in place to limit to one at any time the number of aircraft on the manoeuvring area and taxiway edge lights are provided for night operations.
- (Note 7) YES, where the access to roadway is physically closed.
- (Note 8) YES, where taxiway centreline lights are provided in lieu of taxiway edge lights.
- (Note 9) YES, where the runway was certified for RVR 1200 operations prior to the effective date of TP312 5<sup>th</sup> Edition,