I, SHANE PATRICK CARMODY, Director of Aviation Safety, on behalf of CASA, make this instrument under Part 173 of the Civil Aviation Safety Regulations 1998.

[DRAFT FOR CONSULTATION]
Shane Carmody
Director of Aviation Safety

May 2019

Manual of Standards (MOS) Part 173 Amendment Instrument 2019 (No. 1)

1 Name of instrument
This instrument is the Manual of Standards (MOS) Part 173 Amendment 2019 (No. 1).

2 Commencement
This instrument commences on the day after it is registered.

3 Repeal of instrument CASA EX134/17
Instrument CASA EX134/17, Exemptions and direction — publishing requirements for terminal instrument flight procedures, is repealed.

4 Schedules

Schedule 1 Amendments

[1] Before Chapter 2

Insert

1.1.6 Definitions

1.1.6.1 In this Manual of Standards:

ALS means an approach lighting system for a runway.

AMSL means above mean sea level.

BALS or basic ALS, in relation to a runway, means an ALS that is at least 210 m and less than 420 m long.

DH means decision height.

FALS or full ALS, in relation to a runway, means an ALS with a Category I, or Category II and III, lighting system that is at least 720 m long.

ft means feet.

IALS or intermediate ALS, in relation to a runway, means an ALS that is at least 420 m and less than 720 m long. 

kt means knots.

MAPt means missed approach point.

MDA means minimum descent altitude.

MDA/H means minimum descent altitude or height.

MSA means minimum sector altitude.

NALS or no approach lighting system, in relation to a runway, means the runway has no approach lighting system or has an ALS that is less than 210 m long.

NM means nautical miles.

off-shore installation has the meaning as defined in the CASR Dictionary.

runway visual range has the meaning as defined in the CASR Dictionary.

RVR means runway visual range.

specialised helicopter operation has the meaning as defined in the CASR Dictionary.

terminal instrument flight procedure has the meaning as defined in the CASR Dictionary.

TIFP means a terminal instrument flight procedure.

visibility means the distance along a runway over which a person can see and recognise a visibility marker or runway lights.

[2] Paragraph 2.1.1.1 (oa) 
Omit

PINS

Insert

PinS

[3] Paragraph 2.1.1.1 (r) 
Substitute

(r) a description of the procedures to be used to ensure that designs are prepared in accordance with the data product specification provided to the designer, for the design, under regulation 175.160 of CASR;

[4] Paragraph 2.1.1.2 
Omit (wherever occurring)

PINS

Insert

PinS

[5] Paragraph 6.1.2.3 
Omit

Chapter 9 of this Manual
8.1.6.1 Definitions. In this section 8.1.6:

- **APLL** means length of approach lighting system in metres or zero metres for a runway with NALS.

- **straight-in approach procedure closely aligned with runway centreline** means a straight in approach procedure that:
  
  (a) utilises precision approach (ILS or GLS), ILS localiser, VOR or GNSS guidance for the final approach segment, and
  (b) has a final approach segment aligned with the runway or offset by no more than 10 degrees from the runway centreline.

- **TCH** means threshold crossing height.

- **VPA** means vertical path angle in degrees.

8.1.6.1A Application of procedures for determining visibility for straight-in approaches (other than Category II, Category III and Special Authorisation Category approaches). The procedures for determining visibility in paragraphs 8.1.6.1B and 8.1.6.1C apply to the following runway approach procedures when conducted as a straight-in approach:

  (a) precision approach procedures with a DH of not less than 200 ft;
  (b) approach procedures with vertical guidance;
  (c) non-precision approach procedures that meet the ICAO PANS-OPS Vol II and ICAO Doc 9905 requirements for a straight-in approach procedure.

8.1.6.1B Subject to paragraph 8.1.6.2, for a straight-in approach procedure closely aligned with runway centreline, the minimum RVR, or visibility, for the procedure is the larger of the following:

  (a) \[ RVR \text{ or visibility (m)} = 160m + \left(\frac{(MDH \text{ or } DH - TCH) \times 0.3048}{\tan(VPA)} - APLL\right) \]

  (b) the value, as an RVR or visibility, in the table relevant to the type of ALS installed for the runway.
<table>
<thead>
<tr>
<th>Type of ALS</th>
<th>FALS (Column 1)</th>
<th>IALS (Column 2)</th>
<th>BALS (Column 3)</th>
<th>NALS (Column 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RVR</td>
<td>Visibility</td>
<td>RVR or visibility</td>
<td>RVR or visibility</td>
</tr>
<tr>
<td>Distance (m)</td>
<td>550</td>
<td>800</td>
<td>800</td>
<td>1 000</td>
</tr>
<tr>
<td></td>
<td>1 200</td>
<td>1 500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.1.6.1C **Method for determining minimum visibility — other straight-in procedures.** Subject to paragraph 8.1.6.2, for a straight-in approach procedure mentioned in paragraph 8.1.6.1A that is not a straight-in approach procedure closely aligned with runway centreline, the minimum RVR, or visibility, for the procedure is the larger of the following:

(a) \[ RVR \text{ or visibility (m)} = 160m + \frac{([MDH \text{ or } DH] - TCH) \times 0.3048}{\tan(VPA)}, \]

(b) 1,500m.

8.1.6.2 For paragraphs 8.1.6.1B and 8.1.6.1C, an RVR minimum may be used only for a procedure to approach a runway equipped with electronic RVR measuring equipment.

[8] **Paragraph 8.1.6.2A**

*Omit visibility substitute RVR*

[9] **Paragraph 8.1.6.2A, Table 8-1A (first row)**

Repeal the row, substitute:

<table>
<thead>
<tr>
<th>Approach type (Column 1)</th>
<th>Minimum RVR (metres) (Column 2)</th>
<th>Runway capability (Column 3)</th>
</tr>
</thead>
</table>

[10] **Paragraph 8.1.6.2A, Table 8-1A (first cell in column headed “Runway capability”)**

*Omit Runway Visual Range (RVR)*

*Insert RVR*

[11] **Paragraph 8.1.6.2A, after Table 8-1A**

*Insert*

**Note:** Visibility values for Special Authorisation Category I and Special Authorisation Category II procedures can be found in paragraphs 8.1.14 and 8.1.15.

[12] **Paragraph 8.1.6.3**

*Omit*
(The basis upon which the values for circling visibility have been
determined are contained in Section 9.1.)

[13] **Paragraph 8.1.6.3, after the Table**

*Insert*

**Note:** The values in Table 8-2 have been determined allowing for an
omni-directional wind of 25 knots, an achieved bank angle of 25°,
an OAT of ISA + 15, an altitude of aerodrome elevation plus
1 000 ft and the average visual manoeuvring speed for the aircraft
category. Subject to an absolute minimum value of 2 km, the
values were derived using the following formula:

\[ V = 0.9D \]

Where \( V \) = circling visibility

\( D \) = diameter of turn at the average manoeuvring speed for category

0.9 = minimum downwind spacing, in nautical miles, to achieve
alignment on final approach.

The circling visibility recognises that the pilot must be able to see the
runway from the downwind position.

[14] **Paragraph 8.1.7.1**

After “rounded” (wherever occurring), insert “up”.

[15] **Paragraph 8.1.7.1**

*Omit*

Exception. For runway approaches it must not be less than the minimum
values permitted at paragraphs 8.1.6.2, 8.1.6.2A, 8.1.14 and 8.1.15.

[16] **Paragraph 8.1.7.1 (the Note)**

*Omit*

[17] **Paragraph 8.1.14.8**

*Omit*

approach lighting system (ALS)

*insert*

ALS

[18] **Paragraph 8.1.14.8 (after Table 8-4)**

Omit the text after the table.

[19] **Paragraph 8.1.15.7 (after Table 8-5)**

Omit the text after the table.

[20] **Section 8.6.1 (definition of AMSL)**

*Omit*

[21] **Section 8.6.1 (definition of ATP, the note)**

*Omit*

[22] **Section 8.6.1**

*Omit the following definitions*

- CAR 1988
- CASR 1998
- GNSS
Section 8.6.1 (the note after the definition of VF)

Omit

Section 8.9 (excluding the heading)

Substitute

8.9.1 Procedures to be prepared in accordance with data product specifications

8.9.1.1 A certified designer must comply with format and drafting conventions specified in a data product specification given to the certified designer under regulation 175.160 of CASR.

Note Data product specification has the meaning as defined in the CASR Dictionary.

8.9.1.2 A certified designer must ensure that its operations manual includes a description of the processes and documents used to present the standards, rules and procedures mentioned in the data product specification.

Chapter 9

Repeal