



# 7506406 Canada Inc.

## Flight Operations Policy & Procedure

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**Title:** ORNGE H1 Helipad Standard  
**P&P #:** 7506406-FO-P&P-029 R1  
**Applies to:** All Pilots  
**Issue Date:** March 05, 2024  
**Issued By:** Director of Flight Operations

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In response to continued urban encroachment as it pertains to the special requirements for roof top (elevated) H1 heliports, Ornge has reviewed flight path and aircraft performance requirements and has determined that existing flight path protections do not sufficiently protect the currently defined H1 pathways. Ornge has determined the requirements for elevated (rooftop) H1 heliport pathways that shall serve as our position for the required protections and serve as the Ornge standard going forward.

### 1. ORNGE Requirements for Elevated (Rooftop) H1 FATO Slopes

The approach/departure path area shall consist of a quadrilateral areas on the surface of the earth (or at the elevation of an elevated heliport) lying directly below the approach/take-off surface. The point of origin will commence at the edge of the safety area and extend 625 meters at a slope of 0%, before transitioning to a 12% slope out to 3000 meters or an altitude of 1000ft above the helipad surface.

The width of the approach/departure path area at its point of origin shall be the same as the width of the safety area and increase at the rate of  $0.15D$  where 'D' is the distance from the point of origin (Edge of Safety Area).

### 2. The Touchdown and Lift-Off (TLOF)

(TLOF) area must consist of a load-bearing surface of at least 150% of MTOW (AW139 MTOW 6400 KG X 150% = 9800KG). A surface level TLOF must be a minimum of 2.0 times the undercarriage length or width whichever is greater (2.0 X AW139 Undercarriage of 4.34m = 8.68m or 28.5ft). A rooftop TLOF is required to have a minimum of 1.0 times the overall length of the helicopter (1.0 X AW139 overall length of 16.62m = 16.62m or 54.55ft). The maximum slope of the TLOF must not exceed 2.0% in any direction.



### **3. The Final Approach and Take-Off (FATO)**

(FATO) area shall be a minimum of 1.5 times the length of the helicopter (1.5 X AW139 Length of 16.62m = 24.93m or 81.8ft). The FATO shall support into wind operations and shall consist of two separate flight paths to ensure an appropriate arrival and departure path that supports balked landings. The facility shall be serviced by at least two approach paths separated by not less than 135° from their centerline. The flight paths should be aligned with the prevailing winds in the area. The FATO shall be clear of all obstacles except those required for air navigation purposes and those shall be flush mounted. The over-all slope in any direction on a FATO shall not exceed 3 per cent in any direction.

### **4. The Safety Area (SA)**

(SA) is an area surrounding the FATO that is free of obstacles other than objects required for navigation purposes. It shall be at a minimum 3 metres or 0.166 times the FATO whichever is greater. The minimum Safety area shall be 3 metres or 9.8ft as 0.116 times a FATO of 24.93m is 2.9m.

It is important to note, these requirements notwithstanding, that the pilot-in-command has final authority for the safe operation of the aircraft, including the safety of all persons on-board. It must also be noted that pilots using these heliports are still subject to the requirements of CAR 602.96 (2) b), which states:

- a) Before taking off from, landing at or otherwise operating an aircraft at an aerodrome, the pilot-in-command of the aircraft shall be satisfied that,
- b) there is no likelihood of collision with another aircraft or a vehicle; and
- c) the aerodrome is suitable for the intended operation



**Assumptions:**

- AW139 at 6400KG
- Temp 30°, Zero Wind, 500 Pressure Altitude,
- Max Altitude 14000ft (Hp or Hd whichever comes first)
- Max Altitude with TDPe7000ft (Hp or Hd whichever comes first)
- Max Cross Wind component must not exceed 20 kts(10m/s)
- Take off with tail wind component is prohibited
- VTOSS = 60 KIAS through PATH1 (200 feet above the helipad surface) to the end of PATH 2 (1000ft above helipad surface)
- PATH 1 - The segment between the end of the CTO distance (or BL distance) to a height of 200 ft ATS during an OEI 2.5 min power climb at Vtoss (or VBLSS) and for a minimum ROC of 100 fpm.
- PATH 2, The Segment between 200ft ATS and 1000ft ATS during an OEI MCP power climb at Vy and for a minimum ROC of 150fpm.