

Obstacle Line-of-sight Criteria

The Airport Operational Facility (AOF) line-of-sight requirements apply to all new construction, including NAV CANADA facilities, and are effective immediately. Current structures are exempt; however, any future renovations which may increase the size of the building envelope (footprint or height) of these structures will require approval:

- *Requirement* – unobstructed *line-of-sight* from the AOF cab to the *mandatory viewing area*:
 - *Line-of-sight* is defined as a straight line from the cab eye-level, 4 ft/1.22 m above the cab floor, to any object in the mandatory viewing area.
 - *Line-of-sight* shall not be obstructed by structures or any associated glare, light pollution or obscuring phenomena (exhaust gases, steam) emanating from the structures, surrounding terrain/landscaping, parked aircraft and large vehicles.
- *Mandatory viewing area* is the surface of an aerodrome, and that portion of the surrounding airspace, visible from the cab, including:
 - *aerodrome manoeuvring surfaces*,
 - *approach and departure path areas*, and
 - *airborne traffic patterns*.
- *Aerodrome manoeuvring surfaces* include all *runway zones* and all taxiway surfaces. A *runway zone* is a rectangular area that extends 60 m beyond the ends of the runway surface and 60 m plus half the width of the runway surface on each side of the extended runway centreline. Also, the first 150 m of fire routes and service roads to these areas should be visible. Although there is no specific requirement to view aerodrome aprons, it can be operationally advantageous to do so, particularly the areas leading into or out of the taxiway structure. Note that the requirement to see clearways has been removed.

Rationale: Defining a runway zone instead of the runway surface ensures that potential hazards nearing the runway will be visible as well as runway undershoot/overshoot areas. Dimensions used are similar to TP 312 except the width which is a compromise (TP 312 specifies 30/45/75/150 m) and they also correspond to the minimum taxi holding position distance.

- *Approach and departure path areas* start at the ends of the runway zone. The lower limit rises symmetrically along the extended runway centreline at a slope of 1:40 (1.43° or 2.5%) to a distance of 5 NM (9260 m). The width at the inner edge is the width of the runway zone, the sides then diverge outward by 8.58° (15%) from the track of the centreline as depicted in the diagram in Appendix A.

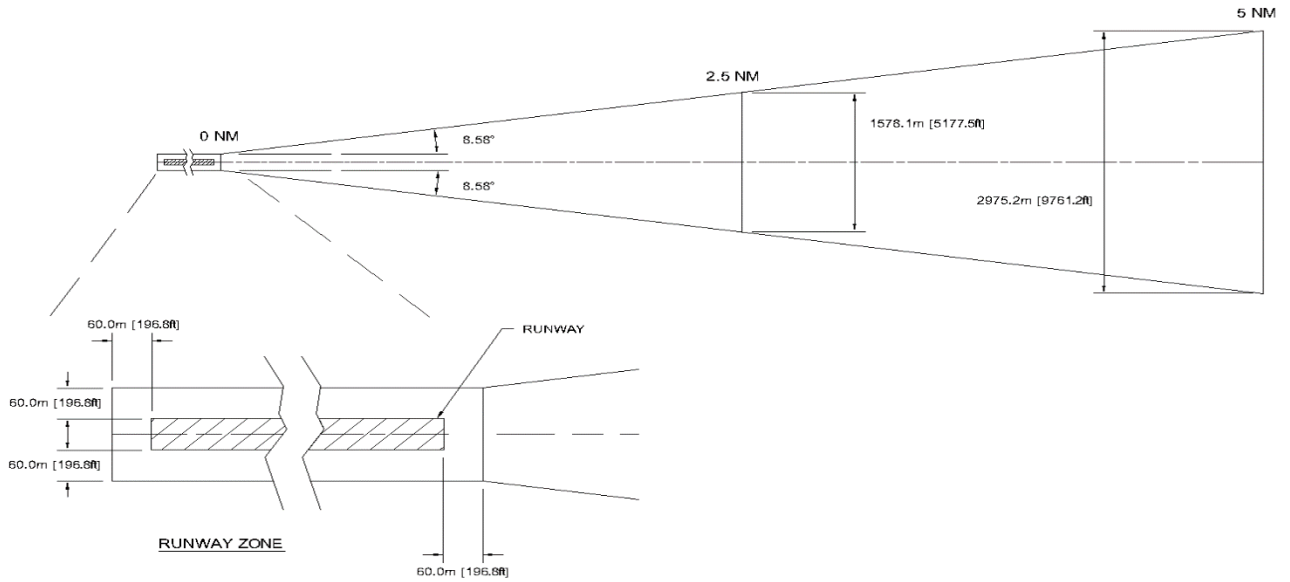
Rationale: The 1:40 slope is common to the TP 312 take-off/approach surface obstacle criteria and TP 308 departure assessments and missed approach criteria. The 5 NM is the typical control zone limit and permits time to sequence aircraft and pass traffic. The lateral dimensions are somewhat narrower than TP 312 but the divergence is similar.

- *Airborne traffic patterns* are defined by the *Flight Manoeuvring Area*, a horizontal surface, 150 m (492 ft) above the aerodrome elevation, contained within arcs of 2.3 NM (4260 m) radius centred on each runway threshold with tangent lines joining the outer boundaries as depicted in the diagram in Appendix B.

Rationale: Defined in TP 312, this is the area considered for circling procedures, night operations and possibly for aircraft operating at 500 ft AGL under Special VFR. Extending the sight-lines through this surface encompasses the area used for normal circuits at 1000 ft or 1500 ft AGL.

Appendix A

LOS APPROACH & DEPARTURE PATH AREA



Appendix B

