



ON TRACK



Articles of Interest for the Professional Aviator ICP Flight - Central Flying School

Departures and what you may not know about Close-In-Obstacles

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We are all very familiar with the requirements of the diverse departure. The aircraft shall be at least 35 feet above the Departure End Elevation (DER) of the take off runway. The aircraft will climb at 200 feet per nautical mile and the aircraft may turn in any direction once it has reached 400 feet above aerodrome elevation. We also know that an Obstacle Identification Surface (OIS) is established at 152 feet per nautical mile and no obstacles shall penetrate this surface. This provides the aircraft with an ever-increasing Required Obstacle Clearance (ROC) of 48 feet per nautical mile. However, it is NOT all that simple.

When designing a departure for particular aerodromes, the designer may have problems with obstacles close to the departure end of the runway. These close in obstacles can be a tremendous designing burden for one simple reason. If the obstacle penetrates the OIS, an option is to create a specified visibility departure and establish a climb gradient that will provide the required obstacle clearance. If these obstacles are close in as described, the climb gradient is usually astronomically high and unachievable. The designer however has another option. The designer can ignore the requirement to publish the astronomically high climb gradient if the required climb gradient ends at 200 feet or less, above DER. A note regarding the obstacle will be published i.e. RWY 34 Shearwater, NS - ½ - Trees to 186 feet ASL aprx 450 feet left of centerline and aprx 400 feet right of centerline. The thing YOU need to know; these obstacles penetrate the OIS even though the suggestion of the ½ symbol may lead you to believe otherwise! You could be following the aircraft requirements for the diverse departure and climbing at 200 feet per nautical mile and run into these obstacles. If a note is present in the departure instructions regarding close in obstacles, be aware that these obstacles penetrate the OIS and you need to make appropriate considerations to avoid these obstacles!!!