Airport Obstructions Standards Committee (AOSC)
Decision Document #02b (Replaces DD# 02) Summary

Approved: July 12, 2004
Revised September 13, 2004

40:1 Departure Surface and Obstruction Evaluations

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1) Introduction

a) Historically, the FAA has applied measures to address the risk associated with obstacles near airports. The FAA works to protect airspace and ensure flight operational safety by limiting encroachment of obstacle penetration of surfaces defined by Order 8260.3, *United States Standard for Terminal Instrument Procedures (TERPS)* and 14 CFR Part 77 airport imaginary surfaces. Efforts to protect airspace by limiting the height of structures or vegetation often affect property development in the vicinity of airports.

b) Section 6-3-1 of FAA Order 7400.2E, *Procedures for Handing Airspace Matters*, states the following:
- The prime objective of the FAA in conducting Obstruction Evaluation (OE) studies is to ensure the safety of air navigation and the efficient utilization of navigable airspace by aircraft. There are varied demands being placed on the use of the navigable airspace. However, when conflicts arise concerning a structure being studied, the FAA emphasizes the need for conserving the navigable airspace for aircraft, preserving the integrity of the national airspace system, and protecting air navigation facilities from either electromagnetic or physical encroachments that would preclude normal operation.
- In the case of such a conflicting demand for the airspace by a proposed construction or alteration, the first consideration should be given to altering the proposal.

c) The FAA does not have the authority to regulate or control how land (real property) may be used in regard to structures that may penetrate navigable airspace. (FAA Order 7400.2E, section 5-1-2a) This responsibility is generally fulfilled by local authorities or airport sponsors.

d) Aircraft operators have the responsibility to consider obstacles and make the necessary adjustments to their departure procedures to ensure safe clearance for aircraft over those obstacles.

e) This decision document addressed the issues related to the inconsistent application of the 40:1 Obstacle Clearance Surface (OCS) in the evaluation of obstacles with respect to instrument departure procedures under 14 CFR Part 77.23, *Objects Affecting Navigable Airspace*. This decision document also identified actions to ensure safety while minimizing the airspace impact by:
- Establishing a consistent standard for the 40:1 OCS that will be applied across the NAS.
- Providing aircraft operators with departure obstacle information for all 40:1 penetrations utilizing existing notification processes (e.g. charting).
- Revising both the internal coordination procedures and the policy criteria governing the circularization process in the OE/AAA program.

2) Rationale for Decision

a) The "Departure Obstacle Clearance Surface (OCS)" begins at the departure end of runway (DER) at DER elevation, and rises at a 40:1 slope in the direction of departure. Where an existing obstacle penetrates this slope, procedure specialists are allowed for the purpose of determining Part 97 departure minimums and ensuring operational efficiency, to consider the OCS originating at a height no greater than 35 feet above the DER elevation. Over time, application of the 35-foot adjustment was broadly applied to both existing and new obstacles. Policy clarification was required to reestablish a consistent standard for applying the 35-foot adjustment across the NAS.

b) In situations where proposed obstacles may conflict with air operations, the FAA solicits aeronautical information from interested parties regarding the potential impacts of these obstacles and the means by which these impacts can be mitigated. This process supports informed decision-making by various community elements on land usage. Aircraft operators have raised safety concerns in cases where penetrations to the 40:1 OCS have been built without notification that the 35-foot adjustment was used to effectively elevate the departure surface. Therefore, policy clarification was required to improve user notification where this adjustment has been made.

3) AOSC Decision (Refer to Figure 1)

In issuing determinations for proposed obstacles under 14 CFR Part 77, the following cases apply:

- Case I: Any proposed obstacle that is below a 40:1 surface originating at the DER, at DER elevation, will be evaluated according to existing OE/AAA guidance.
- Case II: Any proposed obstacle that penetrates the 40:1 surface originating at the DER, at DER elevation, by up to 35 feet will be evaluated for aeronautical effect and circularized.
- Case III: Any obstacle that penetrates the 40:1 surface originating at the DER, at DER elevation, by more than 35 feet will have a presumed adverse aeronautical effect and will be evaluated according to OE/AAA guidance for "Determination of Presumed Hazards (DPH)".

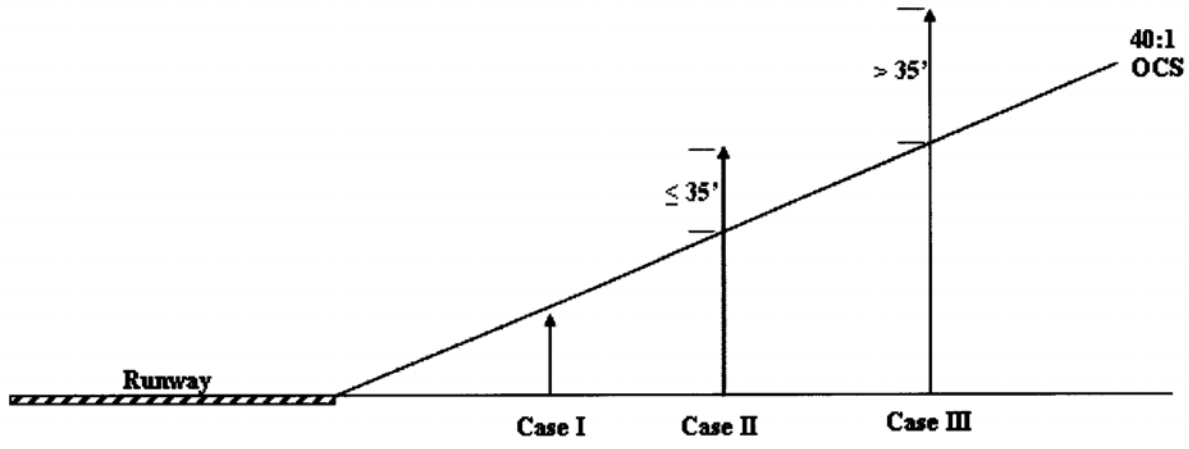

Figure 1

AOSC Decision (continued)

Note: Shielding provisions apply to any proposed obstacles which do not impose additional aeronautical effect per Order 7400.2E.

Note: *The above referenced decision has now been appropriately updated in current FAA order, directives, advisory circulars, etc and has resulted in the sun setting of the original decision document and its replacement by this summary.*