

## FEDERAL AVIATION REGULATIONS PART 77 OBJECTS AFFECTING NAVIGABLE AIRSPACE

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*Amdt. 77-13, Effective January 18, 2011*

### Subpart A GENERAL

#### 77.1 PURPOSE.

This part establishes:

- (a) The requirements to provide notice to the FAA of certain proposed construction, or the alteration of existing structures;
- (b) The standards used to determine obstructions to air navigation, and navigational and communication facilities;
- (c) The process for aeronautical studies of obstructions to air navigation or navigational facilities to determine the effect on the safe and efficient use of navigable airspace, air navigation facilities or equipment; and
- (d) The process to petition the FAA for discretionary review of determinations, revisions, and extensions of determinations.

#### 77.3 DEFINITIONS.

For the purpose of this part:

“Non-precision instrument runway” means a runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in non-precision instrument approach procedure has been approved, or planned, and for which no precision approach facilities are planned, or indicated on an FAA planning document or military service military airport planning document.

Planned or proposed airport is an airport that is the subject of at least one of the following documents received by the FAA:

- (1) Airport proposals submitted under 14 CFR Part 157.
- (2) Airport Improvement Program requests for aid.
- (3) Notices of existing airports where prior notice of the airport construction or alteration was not provided as required by 14 CFR Part 157.
- (4) Airport layout plans.

- (5) DOD proposals for airports used only by the U.S. Armed Forces.
- (6) DOD proposals on joint-use (civil-military) airports.
- (7) Completed airport site selection feasibility study.

“Precision instrument runway” means a runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA-approved airport layout plan; a military service approved military airport layout plan; any other FAA planning document, or military service military airport planning document.

“Public use airport” is an airport available for use by the general public without a requirement for prior approval of the airport owner or operator.

“Seaplane base” is considered to be an airport only if its sea lanes are outlined by visual markers.

“Utility runway” means a runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight and less.

“Visual runway” means a runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA-approved airport layout plan, a military service approved military airport layout plan, or by any planning document submitted to the FAA by competent authority.

## **Subpart B**

### **NOTICE REQUIREMENTS**

#### **77.5 APPLICABILITY.**

- (a) If you propose any construction or alteration described in §77.9, you must provide adequate notice to the FAA of that construction or alteration.
- (b) If requested by the FAA, you must also file supplemental notice before the start date and upon completion of certain construction or alterations that are described in §77.9.
- (c) Notice received by the FAA under this subpart is used to:
  - (1) Evaluate the effect of the proposed construction or alteration on safety in air commerce and the efficient use and preservation of the navigable airspace and of airport traffic capacity at public use airports;
  - (2) Determine whether the effect of proposed construction or alteration is a hazard to air navigation;
  - (3) Determine appropriate marking and lighting recommendations, using FAA Advisory Circular 70/7460–1, Obstruction Marking and Lighting;
  - (4) Determine other appropriate measures to be applied for continued safety of air navigation; and

- (5) Notify the aviation community of the construction or alteration of objects that affect the navigable airspace, including the revision of charts, when necessary.

### **77.7 FORM AND TIME OF NOTICE.**

- (a) If you are required to file notice under §77.9, you must submit to the FAA a completed FAA Form 7460–1, Notice of Proposed Construction or Alteration. FAA Form 7460–1 is available at FAA regional offices and on the Internet.
- (b) You must submit this form at least 45 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.
- (c) If you propose construction or alteration that is also subject to the licensing requirements of the Federal Communications Commission (FCC), you must submit notice to the FAA on or before the date that the application is filed with the FCC.
- (d) If you propose construction or alteration to an existing structure that exceeds 2,000 ft. in height above ground level (AGL), the FAA presumes it to be a hazard to air navigation that results in an inefficient use of airspace. You must include details explaining both why the proposal would not constitute a hazard to air navigation and why it would not cause an inefficient use of airspace.
- (e) The 45-day advance notice requirement is waived if immediate construction or alteration is required because of an emergency involving essential public services, public health, or public safety. You may provide notice to the FAA by any available, expeditious means. You must file a completed FAA Form 7460–1 within 5 days of the initial notice to the FAA. Outside normal business hours, the nearest flight service station will accept emergency notices.

### **77.9 CONSTRUCTION OR ALTERATION REQUIRING NOTICE.**

If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:

- (a) Any construction or alteration that is more than 200 ft. AGL at its site.
- (b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:
  - (1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.
  - (2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports.
  - (3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.
- (c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would

normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

- (d) Any construction or alteration on any of the following airports and heliports:
  - (1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;
  - (2) A military airport under construction, or an airport under construction that will be available for public use;
  - (3) An airport operated by a Federal agency or the DOD.
  - (4) An airport or heliport with at least one FAA-approved instrument approach procedure.
- (e) You do not need to file notice for construction or alteration of:
  - (1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;
  - (2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;
  - (3) Any construction or alteration for which notice is required by any other FAA regulation.
  - (4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

#### **77.11 SUPPLEMENTAL NOTICE REQUIREMENTS.**

- (a) You must file supplemental notice with the FAA when:
  - (1) The construction or alteration is more than 200 feet in height AGL at its site; or
  - (2) Requested by the FAA.
- (b) You must file supplemental notice on a prescribed FAA form to be received within the time limits specified in the FAA determination. If no time limit has been specified, you must submit supplemental notice of construction to the FAA within 5 days after the structure reaches its greatest height.
- (c) If you abandon a construction or alteration proposal that requires supplemental notice, you must submit notice to the FAA within 5 days after the project is abandoned.
- (d) If the construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

## Subpart C

### Standards for Determining Obstructions to Air Navigation or Navigational Aids or Facilities

#### 77.13 APPLICABILITY.

This subpart describes the standards used for determining obstructions to air navigation, navigational aids, or navigational facilities. These standards apply to the following:

- (a) Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used and any permanent or temporary apparatus.
- (b) The alteration of any permanent or temporary existing structure by a change in its height, including appurtenances, or lateral dimensions, including equipment or material used therein.

#### 77.15 SCOPE.

- (a) This subpart describes standards used to determine obstructions to air navigation that may affect the safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities. Such facilities include air navigation aids, communication equipment, airports, Federal airways, instrument approach or departure procedures, and approved off-airway routes.
- (b) Objects that are considered obstructions under the standards described in this subpart are presumed hazards to air navigation unless further aeronautical study concludes that the object is not a hazard. Once further aeronautical study has been initiated, the FAA will use the standards in this subpart, along with FAA policy and guidance material, to determine if the object is a hazard to air navigation.
- (c) The FAA will apply these standards with reference to an existing airport facility, and airport proposals received by the FAA, or the appropriate military service, before it issues a final determination.
- (d) For airports having defined runways with specially prepared hard surfaces, the primary surface for each runway extends 200 feet beyond each end of the runway. For airports having defined strips or pathways used regularly for aircraft takeoffs and landings, and designated runways, without specially prepared hard surfaces, each end of the primary surface for each such runway shall coincide with the corresponding end of the runway. At airports, excluding seaplane bases, having a defined landing and takeoff area with no defined pathways for aircraft takeoffs and landings, a determination must be made as to which portions of the landing and takeoff area are regularly used as landing and takeoff pathways. Those determined pathways must be considered runways, and an appropriate primary surface as defined in §77.19 will be considered as longitudinally centered on each such runway. Each end of that primary surface must coincide with the corresponding end of that runway.
- (e) The standards in this subpart apply to construction or alteration proposals on an airport (including heliports and seaplane bases with marked lanes) if that airport is one of the following before the issuance of the final determination:

- (1) Available for public use and is listed in the Airport/Facility Directory, Supplement Alaska, or Supplement Pacific of the U.S. Government Flight Information Publications; or
- (2) A planned or proposed airport or an airport under construction of which the FAA has received actual notice, except DOD airports, where there is a clear indication the airport will be available for public use; or,
- (3) An airport operated by a Federal agency or the DOD; or,
- (4) An airport that has at least one FAA-approved instrument approach.

### **77.17 OBSTRUCTION STANDARDS.**

- (a) An existing object, including a mobile object, is, and a future object would be an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:
  - (1) A height of 499 feet AGL at the site of the object.
  - (2) A height that is 200 feet AGL, or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.
  - (3) A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.
  - (4) A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.
  - (5) The surface of a takeoff and landing area of an airport or any imaginary surface established under §77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.
- (b) Except for traverse ways on or near an airport with an operative ground traffic control service furnished by an airport traffic control tower or by the airport management and coordinated with the air traffic control service, the standards of paragraph (a) of this section apply to traverse ways used or to be used for the passage of mobile objects only after the heights of these traverse ways are increased by:
  - (1) 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance.
  - (2) 15 feet for any other public roadway.
  - (3) 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road.
  - (4) 23 feet for a railroad.

- (5) For a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it.

### 77.19 CIVIL AIRPORT IMAGINARY SURFACES.

The following civil airport imaginary surfaces are established with relation to the airport and to each runway. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach procedure existing or planned for that runway end.

- (a) Horizontal surface. A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by Swinging arcs of a specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:
- (1) 5,000 feet for all runways designated as utility or visual;
  - (2) 10,000 feet for all other runways. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.
- (b) Conical surface. A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.
- (c) Primary surface. A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; but when the runway has no specially prepared hard surface, the primary surface ends at each end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is:
- (1) 250 feet for utility runways having only visual approaches.
  - (2) 500 feet for utility runways having non-precision instrument approaches.
  - (3) For other than utility runways, the width is:
    - (i) 500 feet for visual runways having only visual approaches.
    - (ii) 500 feet for non-precision instrument runways having visibility minimums greater than three-fourths statute mile.
    - (iii) 1,000 feet for a non-precision instrument runway having a non-precision instrument approach with visibility minimums as low as three-fourths of a statute mile, and for precision instrument runways.
    - (iv) The width of the primary surface of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of that runway.
- (d) Approach surface. A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is

applied to each end of each runway based upon the type of approach available or planned for that runway end.

- (1) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:
    - (i) 1,250 feet for that end of a utility runway with only visual approaches;
    - (ii) 1,500 feet for that end of a runway other than a utility runway with only visual approaches;
    - (iii) 2,000 feet for that end of a utility runway with a non-precision instrument approach;
    - (iv) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater than three-fourths of a statute mile;
    - (v) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile; and
    - (vi) 16,000 feet for precision instrument runways.
  - (2) The approach surface extends for a horizontal distance of:
    - (i) 5,000 feet at a slope of 20 to 1 for all utility and visual runways;
    - (ii) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility; and
    - (iii) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
  - (3) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.
- (e) Transitional surface. These surfaces extend outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. Transitional surfaces for those portions of the precision approach surface which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at right angles to the runway centerline.

## **77.21 DEPARTMENT OF DEFENSE (DOD) AIRPORT IMAGINARY SURFACES.**

- (a) Related to airport reference points. These surfaces apply to all military airports. For the purposes of this section, a military airport is any airport operated by the DOD.
  - (1) Inner horizontal surface. A plane that is oval in shape at a height of 150 feet above the established airfield elevation. The plane is constructed by scribing an arc with a radius of 7,500 feet about the centerline at the end of each runway and interconnecting these arcs with tangents.

- (2) Conical surface. A surface extending from the periphery of the inner horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation.
  - (3) Outer horizontal surface. A plane, located 500 feet above the established airfield elevation, extending outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.
- (b) Related to runways. These surfaces apply to all military airports.
- (1) Primary surface. A surface located on the ground or water longitudinally centered on each runway with the same length as the runway. The width of the primary surface for runways is 2,000 feet. However, at established bases where substantial construction has taken place in accordance with a previous lateral clearance criteria, the 2,000-foot width may be reduced to the former criteria.
  - (2) Clear zone surface. A surface located on the ground or water at each end of the primary surface, with a length of 1,000 feet and the same width as the primary surface.
  - (3) Approach clearance surface. An inclined plane, symmetrical about the runway centerline extended, beginning 200 feet beyond each end of the primary surface at the centerline elevation of the runway end and extending for 50,000 feet. The slope of the approach clearance surface is 50 to 1 along the runway centerline extended until it reaches an elevation of 500 feet above the established airport elevation. It then continues horizontally at this elevation to a point 50,000 feet from the point of beginning. The width of this surface at the runway end is the same as the primary surface, it flares uniformly, and the width at 50,000 is 16,000 feet.
  - (4) Transitional surfaces. These surfaces connect the primary surfaces, the first 200 feet of the clear zone surfaces, and the approach clearance surfaces to the inner horizontal surface, conical surface, outer horizontal surface or other transitional surfaces. The slope of the transitional surface is 7 to 1 outward and upward at right angles to the runway centerline.

### **77.23 HELIPORT IMAGINARY SURFACES.**

- (a) Primary surface. The area of the primary surface coincides in size and shape with the designated take-off and landing area. This surface is a horizontal plane at the elevation of the established heliport elevation.
- (b) Approach surface. The approach surface begins at each end of the heliport primary surface with the same width as the primary surface, and extends outward and upward for a horizontal distance of 4,000 feet where its width is 500 feet. The slope of the approach surface is 8 to 1 for civil heliports and 10 to 1 for military heliports.
- (c) Transitional surfaces. These surfaces extend outward and upward from the lateral boundaries of the primary surface and from the approach surfaces at a slope of 2 to 1 for a distance of 250 feet measured horizontally from the centerline of the primary and approach surfaces.

## **Subpart D**

### **AERONAUTICAL STUDIES AND DETERMINATIONS**

#### **77.25 APPLICABILITY.**

- (a) This subpart applies to any aeronautical study of a proposed construction or alteration for which notice to the FAA is required under 77.9.
- (b) The purpose of an aeronautical study is to determine whether the aeronautical effects of the specific proposal and, where appropriate, the cumulative impact resulting from the proposed construction or alteration when combined with the effects of other existing or proposed structures, would constitute a hazard to air navigation.
- (c) The obstruction standards in subpart C of this part are supplemented by other manuals and directives used in determining the effect on the navigable airspace of a proposed construction or alteration. When the FAA needs additional information, it may circulate a study to interested parties for comment.

#### **77.27 INITIATION OF STUDIES.**

The FAA will conduct an aeronautical study when:

- (a) Requested by the sponsor of any proposed construction or alteration for which a notice is submitted; or
- (b) The FAA determines a study is necessary.

#### **77.29 EVALUATING AERONAUTICAL EFFECT.**

- (a) The FAA conducts an aeronautical study to determine the impact of a proposed structure, an existing structure that has not yet been studied by the FAA, or an alteration of an existing structure on aeronautical operations, procedures, and the safety of flight. These studies include evaluating:
  - (1) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules;
  - (2) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules;
  - (3) The impact on existing and planned public use airports;
  - (4) Airport traffic capacity of existing public use airports and public use airport development plans received before the issuance of the final determination;
  - (5) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures;
  - (6) The potential effect on ATC radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, and other surveillance systems;

- (7) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.
- (b) If you withdraw the proposed construction or alteration or revise it so that it is no longer identified as an obstruction, or if no further aeronautical study is necessary, the FAA may terminate the study.

### **77.31 DETERMINATIONS.**

- (a) The FAA will issue a determination stating whether the proposed construction or alteration would be a hazard to air navigation, and will advise all known interested persons.
- (b) The FAA will make determinations based on the aeronautical study findings and will identify the following:
  - (1) The effects on VFR/IFR aeronautical departure/arrival operations, air traffic procedures, minimum flight altitudes, and existing, planned, or proposed airports listed in §77.15(e) of which the FAA has received actual notice prior to issuance of a final determination.
  - (2) The extent of the physical and/or electromagnetic effect on the operation of existing or proposed air navigation facilities, communication aids, or surveillance systems.
- (c) The FAA will issue a Determination of Hazard to Air Navigation when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact.
- (d) A Determination of No Hazard to Air Navigation will be issued when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation. A Determination of No Hazard to Air Navigation may include the following:
  - (1) Conditional provisions of a determination.
  - (2) Limitations necessary to minimize potential problems, such as the use of temporary construction equipment.
  - (3) Supplemental notice requirements, when required.
  - (4) Marking and lighting recommendations, as appropriate.
- (e) The FAA will issue a Determination of No Hazard to Air Navigation when a proposed structure does not exceed any of the obstruction standards and would not be a hazard to air navigation.

### **77.33 EFFECTIVE PERIOD OF DETERMINATIONS.**

- (a) A determination issued under this subpart is effective 40 days after the date of issuance, unless a petition for discretionary review is received by the FAA within 30 days after issuance. The determination will not become final pending disposition of a petition for discretionary review.

- (b) Unless extended, revised, or terminated, each Determination of No Hazard to Air Navigation issued under this subpart expires 18 months after the effective date of the determination, or on the date the proposed construction or alteration is abandoned, whichever is earlier.
- (c) A Determination of Hazard to Air Navigation has no expiration date.

### **77.35 EXTENSIONS, TERMINATIONS, REVISIONS AND CORRECTIONS.**

- (a) You may petition the FAA official that issued the Determination of No Hazard to Air Navigation to revise or reconsider the determination based on new facts or to extend the effective period of the determination, provided that:
  - (1) Actual structural work of the proposed construction or alteration, such as the laying of a foundation, but not including excavation, has not been started; and
  - (2) The petition is submitted at least 15 days before the expiration date of the Determination of No Hazard to Air Navigation.
- (b) A Determination of No Hazard to Air Navigation issued for those construction or alteration proposals not requiring an FCC construction permit may be extended by the FAA one time for a period not to exceed 18 months.
- (c) A Determination of No Hazard to Air Navigation issued for a proposal requiring an FCC construction permit may be granted extensions for up to 18 months, provided that:
  - (1) You submit evidence that an application for a construction permit/license was filed with the FCC for the associated site within 6 months of issuance of the determination; and
  - (2) You submit evidence that additional time is warranted because of FCC requirements; and
  - (3) Where the FCC issues a construction permit, a final Determination of No Hazard to Air Navigation is effective until the date prescribed by the FCC for completion of the construction. If an extension of the original FCC completion date is needed, an extension of the FAA determination must be requested from the Obstruction Evaluation Service (OES).
  - (4) If the Commission refuses to issue a construction permit, the final determination expires on the date of its refusal.

## Subpart E

### PETITIONS FOR DISCRETIONARY REVIEW

#### 77.37 GENERAL.

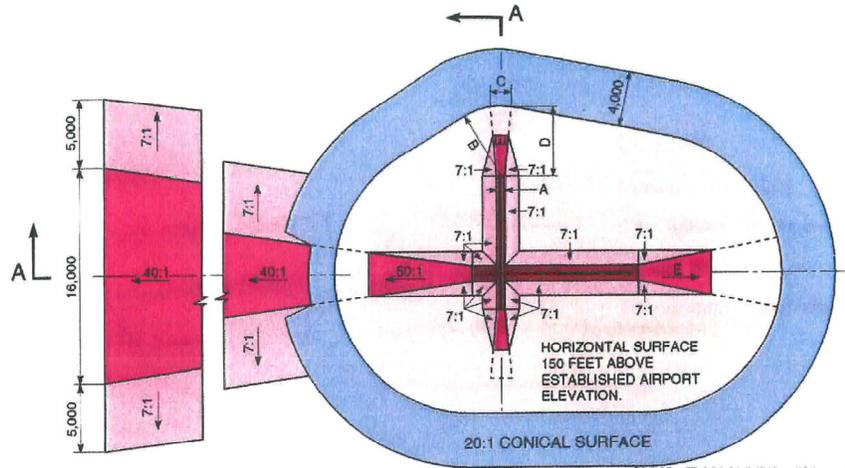
- (a) If you are the sponsor, provided a substantive aeronautical comment on a proposal in an aeronautical study, or have a substantive aeronautical comment on the proposal but were not given an opportunity to state it, you may petition the FAA for a discretionary review of a determination, revision, or extension of a determination issued by the FAA.
- (b) You may not file a petition for discretionary review for a Determination of No Hazard that is issued for a temporary structure, marking and lighting recommendation, or when a proposed structure or alteration does not exceed obstruction standards contained in subpart C of this part.

#### 77.39 Contents of a petition.

- (a) You must file a petition for discretionary review in writing and it must be received by the FAA within 30 days after the issuance of a determination under 77.31, or a revision or extension of the determination under 77.35.
- (b) The petition must contain a full statement of the aeronautical basis on which the petition is made, and must include new information or facts not previously considered or presented during the aeronautical study, including valid aeronautical reasons why the determination, revisions, or extension made by the FAA should be reviewed.
- (c) In the event that the last day of the 30-day filing period falls on a weekend or a day the Federal government is closed, the last day of the filing period is the next day that the government is open.
- (d) The FAA will inform the petitioner or sponsor (if other than the petitioner) and the FCC (whenever an FCC-related proposal is involved) of the filing of the petition and that the determination is not final pending disposition of the petition.

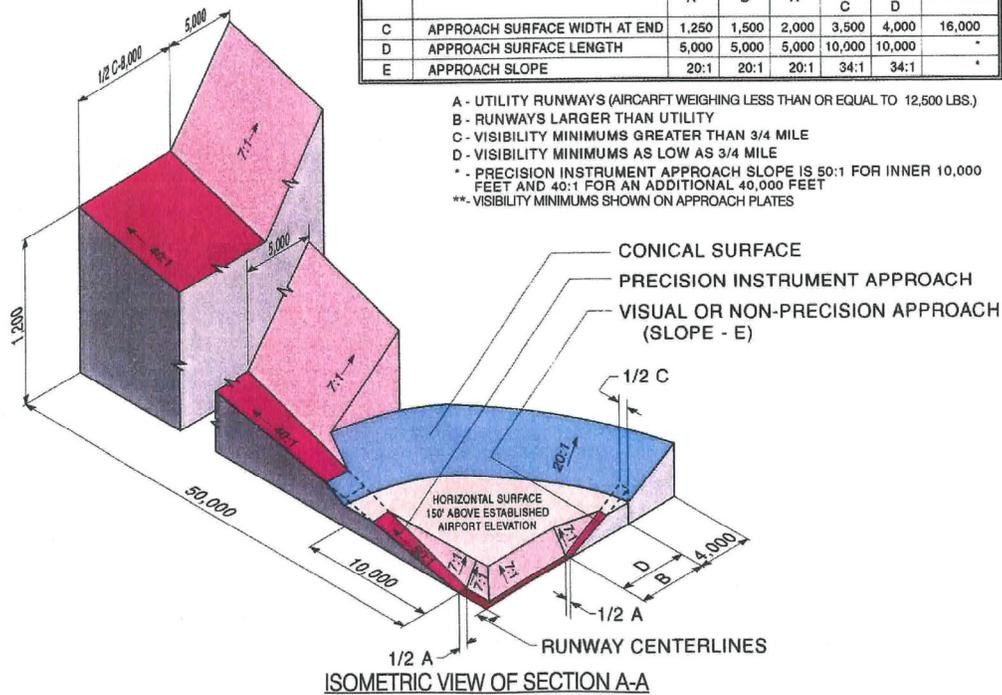
#### 77.41 Discretionary review results.

- (a) If discretionary review is granted, the FAA will inform the petitioner and the sponsor (if other than the petitioner) of the issues to be studied and reviewed. The review may include a request for comments and a review of all records from the initial aeronautical study.
- (b) If discretionary review is denied, the FAA will notify the petitioner and the sponsor (if other than the petitioner), and the FCC, whenever a FCC-related proposal is involved, of the basis for the denial along with a statement that the determination is final.
- (c) After concluding the discretionary review process, the FAA will revise, affirm, or reverse the determination.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY		PRECISION INSTRUMENT RUNWAY	
		A	B	A	B		
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
C	APPROACH SURFACE WIDTH AT END	VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH		PRECISION INSTRUMENT APPROACH	
		A	B	A	B		
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	**

- A - UTILITY RUNWAYS (AIRCRAFT WEIGHING LESS THAN OR EQUAL TO 12,500 LBS.)
- B - RUNWAYS LARGER THAN UTILITY
- C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- \* - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET
- \*\* - VISIBILITY MINIMUMS SHOWN ON APPROACH PLATES



Source: Federal Aviation Regulations Part 77

**Exhibit B1  
FAR Part 77 Imaginary Surfaces**



## Exhibit B3

## Online Submittal of “Notice of Proposed Construction or Alteration”

Historically a paper form called a “7460-1” was required to be submitted to the FAA for any project proposed on airport property and certain projects near airports. Recently, the FAA has moved from paper forms to an on-line system of evaluating the effects of a proposed project on the national airspace system.

 The on-line system can be accessed at <https://oeaaa.faa.gov>.

This new system allows project proponents to submit and track their proposal as it progresses through the FAA evaluation process.

The purpose of this guidance is to supplement and clarify the FAA user guide for the 7460 website.

 available at: [https://oeaaa.faa.gov/oeaaa/external/content/OEexternal\\_Guide\\_v3.1.pdf](https://oeaaa.faa.gov/oeaaa/external/content/OEexternal_Guide_v3.1.pdf)

We recommend that the user first read the entire guide provided by the FAA, and then use this document to clarify some of the more complicated aspects of the online 7460 system.

### WHEN A PROJECT MUST BE SUBMITTED TO THE FAA

CFR Title 14 Part 77.13 states that any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- Any construction or alteration exceeding 200 ft above ground level
- Any construction or alteration:
  - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft
  - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft
  - within 5,000 ft of a public use heliport which exceeds a 25:1 surface
- Any highway, railroad or other traverse way whose prescribed adjusted height would exceed the above noted standards
- When requested by the FAA
- Any construction or alteration located on a public use airport or heliport regardless of height or location.

The FAA has been continuously improving the oe/aaa website to be more user friendly and increase the on-line functionality. The look and feel of the website may change in the future, but the majority of the content should remain as is.

### Create an account

Before accessing the features of the website, the user will be required to create a username and password to access the website.

**Obstruction Evaluation**  
Version 2010.1.0

- Home
- FAA OE/AAA Offices
- View Determined Cases
- View Proposed Cases
- View Supplemental Notices (Form 7460-2)
- View Circularized Cases
- Search Archives
- Download Archives
- Circle Search for Cases
- Circle Search for Airports
- Discretionary Review FAQs
- Notice Criteria Tool
- DoD Preliminary Screening Tool
- Distance Calculation Tool

**OE/AAA Account**

- Login
- New User Registration

**Information Resources**

- FAA Acronyms
- Forms
- Regulatory Policy

**Obstruction Evaluation / Airport Airspace Analysis (OE/AAA)**

faa.gov Tools: [Print this page](#)

In administering Title 14 of the Code of Federal Regulations CFR Part 77, the prime objectives of the FAA are to promote air safety and the efficient use of the navigable airspace. To accomplish this mission, aeronautical studies are conducted based on information provided by proponents on an FAA Form 7460-1, Notice of Proposed Construction or Alteration.

[Advisory Circular 70/7460-1K](#), Obstruction Marking and Lighting, describes the standards for marking and lighting structures such as buildings, chimneys, antenna towers, cooling towers, storage tanks, supporting structures of overhead wires, etc.

**OE/AAA Filing Process**

If your organization is planning to sponsor any construction or alterations which may affect navigable airspace, you must file a **Notice of Proposed Construction or Alteration** (Form 7460-1) with the FAA.



<p><b>If construction or alteration IS NOT LOCATED on an airport:</b></p> <p>You may file forms 7460-1 and 7460-2 electronically via this website - <a href="#">New User Registration</a>.</p> <p>or</p> <p>You may file forms 7460-1 and 7460-2 via US Postal Mail to:</p> <p>Mail Processing Center Federal Aviation Administration Southwest Regional Office Obstruction Evaluation Service, AJR-322 2601 Meacham Boulevard Fort Worth, TX 76193</p> <p><b>Questions?</b> Please contact the <a href="#">appropriate representative</a>.</p>	<p><b>If construction or alteration IS LOCATED on an airport:</b></p> <p>You may file forms 7460-1 electronically via this website - <a href="#">New User Registration</a>.</p> <p>or</p> <p>Find the <a href="#">FAA Airports Region / District Office</a> having jurisdiction over the airport on which the construction is located, and file to that address.</p>
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Once a user has created an account, they will be able to log in and will be directed to the OE/AAA Portal Page. This page displays a summary of any projects which have been entered into the website, categorized by off-airport and on-airport projects.

**Adding a Sponsor**

Before a user can enter project specific information, a project sponsor must be created. A sponsor is the person who is ultimately responsible for the construction or alteration. All FAA correspondence will be addressed to the sponsor. The sponsor could be the airport manager for projects proposed by the airport, or the developer proposing off airport construction. To create a sponsor contact, click “Add New Sponsor” on the “portal” page. From there the user can add sponsors for various projects.

My Account	Off Airport Construction (includes on Military Airport)	On Airport Construction (excludes on Military Airport)																																		
<p><b>Name:</b> <b>User Name:</b> <b>Login Time:</b> <b>IP Address:</b></p> <p><b>Actions:</b>  <a href="#">What's New</a>  <a href="#">Update Account Information</a>  <a href="#">Change Password</a>  <a href="#">Logout</a></p>	<p>My Cases (Off Airport)   <a href="#">Add New Case (Off Airport)</a>                      My Sponsors   <a href="#">Add New Sponsor</a>                      Air Traffic Areas of Responsibility</p> <p><b>My Cases by Status:</b></p> <table border="0"> <tr><td>Draft</td><td>0</td></tr> <tr><td>Accepted</td><td>0</td></tr> <tr><td>Add Letter</td><td>0</td></tr> <tr><td>Work in Progress</td><td>0</td></tr> <tr><td>Determined</td><td>0</td></tr> <tr><td>Circularized</td><td>0</td></tr> <tr><td>Terminated</td><td>0</td></tr> <tr><td>All</td><td>0</td></tr> </table> <p><b>Draft:</b> Cases that have been saved by the user but have not been submitted to the FAA.  <b>Accepted:</b> Cases that have been submitted to the FAA.  <b>Add Letter:</b> Cases that have been reviewed by the FAA and require additional information from the user.  <b>Work in Progress:</b> Cases that are being evaluated by the FAA.  <b>Determined:</b> Cases that have a completed aeronautical study and an FAA determination.  <b>Terminated:</b> Cases that are no longer valid.                      Please allow the FAA a minimum of 30 days to complete a study.  <a href="#">Click here to contact the appropriate representative.</a></p>	Draft	0	Accepted	0	Add Letter	0	Work in Progress	0	Determined	0	Circularized	0	Terminated	0	All	0	<p>My Cases (On Airport)   <a href="#">Add New Case (On Airport)</a>                      My Sponsors   <a href="#">Add New Sponsor</a> ←                      Airports Regional Contacts</p> <p><b>My Cases by Status:</b></p> <table border="0"> <tr><td>Draft</td><td>0</td></tr> <tr><td>Waiting</td><td>0</td></tr> <tr><td>Accepted</td><td>179</td></tr> <tr><td>Add Letter</td><td>0</td></tr> <tr><td>Work in Progress</td><td>64</td></tr> <tr><td>Determined</td><td>4</td></tr> <tr><td>Terminated</td><td>0</td></tr> <tr><td>Deleted</td><td>0</td></tr> <tr><td>All</td><td>247</td></tr> </table> <p><b>Draft:</b> Cases that have been saved by the user but have not been submitted to the FAA.  <b>Waiting:</b> Cases that have not been submitted to the FAA and are waiting for an action from the user, either to verify the map or attach a sketch.  <b>Accepted:</b> Cases that have been submitted to the FAA.  <b>Add Letter:</b> Cases that have been reviewed by the FAA and require additional information from the user.  <b>Work in Progress:</b> Cases that are being evaluated by the FAA.  <b>Determined:</b> Cases that have completed a aeronautical study and an FAA determination.  <b>Terminated:</b> Cases that are no longer valid.</p> <p>NOTE: Please use this section for filing on-airport constructions electronically.</p>	Draft	0	Waiting	0	Accepted	179	Add Letter	0	Work in Progress	64	Determined	4	Terminated	0	Deleted	0	All	247
Draft	0																																			
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Determined	4																																			
Terminated	0																																			
Deleted	0																																			
All	247																																			
Email Notifications	Help	Documents																																		
<p>Circularized Case Notification</p>	<p>OE/AAA Support Desk                      Phone: 202-580-7500                      Email: <a href="mailto:oeaaa_helpdesk@cghtech.com">oeaaa_helpdesk@cghtech.com</a></p>	<ul style="list-style-type: none"> <li>OE/AAA System User Guide</li> <li>FAA Acronyms</li> </ul>																																		

When the user selects “Add New Sponsor”, they will be presented with the following screen:

### Add New Sponsor

- The Sponsor can be you, your company, or your client. The sponsor is the person or business ultimately responsible for the construction or alteration. The sponsor appears as the addressee on all correspondence from the FAA.
- Please populate the following form to add or update a Sponsor.
- Required fields: indicated with \*

\* Sponsor Name:

\* Attention Of:

\* Address:

Address2:

\* City:

\* State:

-OR-

\* Non-US State:

\* Country:

\* Zip / Post Code:

\* Phone: -- ext

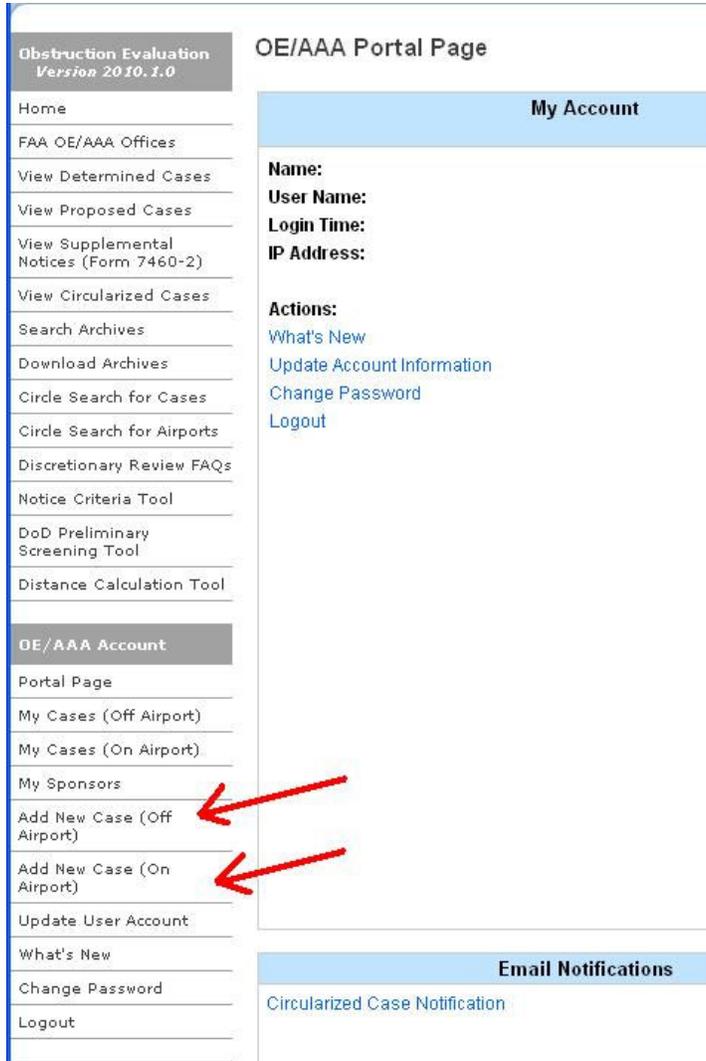
\* Fax: --

\* Email:

**NOTE:** The party submitting information through the FAA website **DOES NOT** have to be the same as the sponsor. Often, a consultant or other party under direction from the sponsor makes the submittal through the website

## Creating a New Submittal

There are two options for creating a new 7460 submittal. Again on the left side, either click “Add New Case (off airport)” or “Add New Case (on airport)”



The screenshot shows the OE/AAA Portal Page. On the left is a navigation menu with the following items:

- Obstruction Evaluation Version 2010.1.0
- Home
- FAA OE/AAA Offices
- View Determined Cases
- View Proposed Cases
- View Supplemental Notices (Form 7460-2)
- View Circularized Cases
- Search Archives
- Download Archives
- Circle Search for Cases
- Circle Search for Airports
- Discretionary Review FAQs
- Notice Criteria Tool
- DoD Preliminary Screening Tool
- Distance Calculation Tool
- OE/AAA Account**
- Portal Page
- My Cases (Off Airport)
- My Cases (On Airport)
- My Sponsors
- Add New Case (Off Airport)
- Add New Case (On Airport)
- Update User Account
- What's New
- Change Password
- Logout

The main content area is titled "OE/AAA Portal Page" and contains a "My Account" section with the following details:

- Name:**
- User Name:**
- Login Time:**
- IP Address:**
- Actions:**
  - [What's New](#)
  - [Update Account Information](#)
  - [Change Password](#)
  - [Logout](#)

At the bottom of the page, there is an "Email Notifications" section with a link for "Circularized Case Notification".

There are some differences in the required fields for “on airport” vs. “off airport” but the differences are minor and self explanatory. One tip: for off airport submittals there is a field for “requested marking/lighting”. If the user does not have a preference, select other from the pull down menu and in the “other field” state “no preference”.

Notice of Proposed Construction or Alteration - Off Airport

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**Sponsor (person, company, etc. proposing this action)**

\* Sponsor:

**Construction / Alteration Information**

\* Notice Of:

\* Duration:

*if Temporary* : Months:  Days:

Work Schedule - Start:  (mm/dd/yyyy)

Work Schedule - End:  (mm/dd/yyyy)

State Filing:

**Structure Summary**

\* Structure Type:

\* Structure Name:

FCC Number:

Prior ASN:  -  -  - OE

**Structure Details**

\* Latitude: ° ′ ″ N

\* Longitude: ° ′ ″ W

\* Horizontal Datum:

\* Site Elevation (SE):  (nearest foot)

\* Structure Height (AGL):  (nearest foot)

\* Requested Marking/Lighting:

*Other* :

Audio Visual Warning System(AVWS):  Yes

\* Current Marking/Lighting:

*Other* :

\* Nearest City:

\* Nearest State:

\* Description of Location:

\* Description of Proposal:

**Common Frequency Bands**

<input type="checkbox"/>	Low Freq	High Freq	Freq Unit	ERP	ERP Unit
<input type="checkbox"/>	806	824	MHz	500	W
<input type="checkbox"/>	824	849	MHz	500	W
<input type="checkbox"/>	851	866	MHz	500	W
<input type="checkbox"/>	869	894	MHz	500	W
<input type="checkbox"/>	896	901	MHz	500	W
<input type="checkbox"/>	901	902	MHz	7	W
<input type="checkbox"/>	930	931	MHz	3500	W
<input type="checkbox"/>	931	932	MHz	3500	W
<input type="checkbox"/>	932	932.5	MHz	17	dBW
<input type="checkbox"/>	935	940	MHz	1000	W
<input type="checkbox"/>	940	941	MHz	3500	W
<input type="checkbox"/>	1850	1910	MHz	1640	W
<input type="checkbox"/>	1930	1990	MHz	1640	W
<input type="checkbox"/>	2305	2310	MHz	2000	W
<input type="checkbox"/>	2345	2360	MHz	2000	W

**Specific Frequencies**

[Add Specific Frequency](#)

**Additional Location(s)**

[Add New Location\(s\)](#)

Accurate lat/long and site elevation is critical for an accurate airspace determination.

It is recommended that survey quality data be obtained from a recent survey, a GPS unit, or worst case, scaled from a topo quad.

- ➔ The most common “notice of” is construction. Select from pull down menu.
- ➔ Latitude and longitude must be entered for the structure/construction activity.
- ➔ Most 7460 submittals will require multiple points with lat/long unless the 7460 is for a pole/tower/ or other single point object. Buildings and construction areas all require points indicating the extents of the building or area. More information is provided below on how to add additional points to a submittal.
- ➔ There is a field to describe the activity taking place. In some complex activities the field does not provide enough room for the required text. An additional explanatory letter can be attached. Additional information is provided in this section on how to add a letter or document to the submittal.
- ➔ Red asterisks indicate the required fields.
- ➔ Unless there has been a previous aeronautical study for this submittal leave the “prior study” fields blank.
- ➔ Only select “common frequency bands” if the proposed structure will transmit a signal.

If the submittal is a building or construction area that is more than a single lat/long point the user must save the data first. Click save at the bottom of the page. This will bring up a summary screen of the case. To add more points click “clone” under the heading “actions”.

## Notice of Proposed Construction or Alteration - Off Airport

faa.gov Tools: Print this page

Project Name: TEST1-000119804-09

Sponsor: test10

## Project Summary : TEST1-000119804-09

[Add Another Case to this Project](#)

Structure	City, State	Lat/Long	Map	Actions
sadfv Draft	edfv, TX	30° 30' 30.00" N 95° 30' 30.00" W	Verify Map	Delete Clone Upload a PDF
sadfv Draft	edfv, TX	30° 30' 3.00" N 95° 41' 1.00" W	Verify Map	Delete Clone Upload a PDF
sadfv Draft	edfv, TX	30° 30' 30.00" N 95° 1' 1.00" W	Verify Map	Delete Clone Upload a PDF
sadfv Draft	edfv, TX	30° 30' 9.00" N 94° 4' 7.00" W	Verify Map	Delete Clone Upload a PDF
sadfv Draft	edfv, TX	30° 30' 15.00" N 95° 41' 4.00" W	Verify Map	Delete Clone Upload a PDF

To submit this project, you must verify the coordinates of each case listed above.

The clone tool copies all the relevant information to a new page where an additional lat/long and elevation can be entered. However, the clone process does not number the various points of a proposed project. When entering the details for a point (see Image 5) it is helpful if the user assigns a number to the point and references the total number of points for the project (e.g. point 2 of 20). The numbering can be included in the project “description/remarks” field for each point.

It should be noted that each individual point associated with a project (e.g. each corner of a building) is evaluated individually, thus the importance of including a numbering system (2 of 20) in the text/description box.

Once done, click “save” again. Now the user will see two records under the “project summary” heading. Continue this process of cloning for all the remaining points.

Once all the points have been entered, each point must be verified. There is a red X with the words “verify map” indicating the user has not verified the location. Click Verify Map, a popup will display the lat/long point on a topo map and the user must verify that it is in the correct location. After clicking “verify map” on the popup, the red X will become a blue checkmark. It seems to be more efficient to enter all of the points associated with a project and then return to verify each point on the map at one time.

Zoom In
 Zoom Out
 Pan
 Measure

Total distance:  Segment distance:

By verifying the coordinates represented on the map, you agree that the location of the case you have entered is correct to the best of your knowledge.

Verify Map
Cancel

All on-airport project submittals must have a “project sketch” included. Under the “actions” column select “upload a PDF”. Once you have uploaded a sketch for all the points associated with the project the red X under “sketch” will turn to a green check mark. Off-airport projects do not require a “project sketch”, but the user can still upload one for informational purposes.

If the user needs to add any other information such as an explanatory letter, clicking on “upload a PDF” will allow the user to upload more documents, although only one at a time. Keep in mind that if additional PDFs or information are being provided, like the project sketch it must be uploaded to every point associated with the project.

Once the maps have been verified and sketches uploaded for all points associated with the case, the user will be able to submit the 7460 to the FAA for review.

### Status of Submitted Projects

To check the status of a submittal, click on either “my cases (off airport)” or “my cases (on airport)” to see a list of what has been submitted. Each of the multiple points associated with one project will be listed as if they are separate, although still associated. The points will have a status:

## ALL of My Cases (Off Airport)

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All Cases	Filter by Case Status	Cases Requiring Action
<a href="#">Show All Cases (31)</a>	<a href="#">Draft (15)</a>   <a href="#">Accepted (0)</a>   <a href="#">Work in Progress (0)</a> <a href="#">Determined (0)</a>   <a href="#">Circularized (0)</a>   <a href="#">Terminated (16)</a>	<a href="#">7460-2 Required (0)</a>   <a href="#">Add Letter (0)</a>

Records 1 to 20 of 31

Page 1 of 2

[Next page →](#)

Project Name	Structure Name	ASN	Status	Date Accepted	Date Determined	City	State
CITY -000038834-06	Test	2007-ASW-11935-OE	Terminated	12/27/2007	12/27/2007	Test	TX
CITY -000059482-07	sdv		Draft			ljkvnasd	AS
CITY -000059483-07			Draft			1WADC	TX
CITY -000060676-07	Clearing		Draft			Loackhaven	PA
GLYN -000102789-08	Belgrade		Draft			Memphis	TN
TEST -000017393-05			Draft			Test	TX
TEST -000017393-05			Draft			Test	VA
TEST -000026823-05	-2 Test	2005-ASW-5900-OE	Terminated	10/24/2005	01/26/2006	Test	TX
TEST -000042518-06			Draft			Test	PW
TEST -000054890-06			Draft			Miami	HI
TEST -000062979-07	Test	2007-ASW-2891-OE	Terminated	03/31/2007	03/31/2007	Test	TX
TEST -000068585-07	Test	2007-ASW-4498-OE	Terminated	06/06/2007	06/06/2007	Test	TX
TEST -000070702-07	Test	2007-AAL-169-OE	Terminated	06/28/2007	06/28/2007	test	AK
TEST -000073196-07	Test	2007-ASW-6665-OE	Terminated	07/28/2007	07/28/2007	Test	TX
TEST -000076148-07	Test Case	2007-ASW-7840-OE	Terminated	08/30/2007	09/24/2007	Test	TX
TEST -000080619-07	Test	2007-ASW-9818-OE	Terminated	10/25/2007	10/25/2007	Test	TX
TEST -000089176-08	Test	2008-ASW-1637-OE	Terminated	02/28/2008	02/28/2008	Test	TX
TEST -000100444-08	test	2008-ASW-5488-OE	Terminated	08/04/2008	08/04/2008	Test	TX
TEST -000102395-08	test	2008-ASW-5898-OE	Terminated	08/28/2008	10/03/2008	Test	TX
TEST -000104649-08	test	2008-ASW-6317-OE	Terminated	10/03/2008	10/09/2008	test	TX

Records 1 to 20 of 31

Rows per Page: 20

Page: 1 2

[Next page →](#)

Page 1 of 2

## Project Status Definitions:

**Draft:** Cases that have been saved by the user but have not been submitted to the FAA.

**Waiting:** Cases that have not been submitted to the FAA and are waiting for an action from the user, either to verify the map or attach a sketch.

**Accepted:** Cases that have been submitted to the FAA.

**Add Letter:** Cases that have been reviewed by the FAA and require additional information from the user.

**Work in Progress:** Cases that are being evaluated by the FAA.

**Determined:** Cases that have a completed aeronautical study and an FAA determination.

**Terminated:** Cases that are no longer valid.

These definitions are also shown at the bottom of the summary screen.

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