

CHANGE

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Air Traffic Organization Policy

**JO 7400.2M
CHG 3**

Effective Date:
December 31, 2020

SUBJ: Procedures for Handling Airspace Matters

- 1. Purpose of This Change.** This change transmits revised pages to Federal Aviation Administration Order JO 7400.2M, Procedures for Handling Airspace Matters.
- 2. Audience.** This change applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives. This order also applies to all regional, service area, and field organizational elements involved in rulemaking and nonrulemaking actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the management of air navigation aids.
- 3. Where Can I Find This Change?** This change is available on the FAA website at http://faa.gov/air_traffic/publications and https://employees.faa.gov/tools_resources/orders_notices.
- 4. Explanation of Policy Change.** See the Explanation of Changes attachment that has editorial corrections and changes submitted through normal procedures.
- 5. Distribution.** This change is available online and will be distributed electronically to all offices that subscribe to receive email notification/access to it through the FAA website at http://faa.gov/air_traffic/publications.
- 6. Disposition of Transmittal.** Retain this transmittal until superseded by a new basic order.
- 7. Page Control Chart.** See the page control chart attachment.

NATASHA A. DURKINS Digitally signed by
NATASHA A. DURKINS
Date: 2020.11.30
12:20:35 -05'00'

Natasha Durkins
Director, Policy, AJV-P
Mission Support Services
Air Traffic Organization

Distribution: Electronic

Initiated By: AJV-0
Vice President, Mission Support Services

Explanation of Changes

Change 3

**Direct questions through appropriate facility/service center office staff
to the Office of Primary Interest (OPI).**

a. 1-1-1. PURPOSE OF THIS ORDER

This change adds Technical Services and Airport District Office to applicable offices in Paragraph 1-1-1, as division responders in the obstruction evaluation process.

b. 2-4-2. IDENTIFICATION

An example is reworded for clarity and other examples are updated to reflect the current year.

c. 5-1-5. RESPONSIBILITY

Paragraph is reworded for clarity regarding OEG responsibility of obstruction evaluations, with the exception of Airport Airspace Analysis on public use-airports.

d. 6-2-1. VERIFICATION/E-FILING

Paragraph is changed from referencing contour intervals to the National Elevation Dataset (NED), which is the underlying data on the IOE/AAA Get Elevation Tool, and provides better accuracy than measuring against contour intervals on quad charts. Includes the option of publicly available geographical information as an alternative resource.

e. 6-2-3. DIVISION COORDINATION

Paragraph is changed to include exemptions for Department of Homeland Security review of structures that do not increase heights.

f. 6-3-6. RESPONSIBILITY

6-3-17. CIRCULARIZATION

11-2-3. NON-PART 157 PROPOSED CONSTRUCTION OR ALTERATION ON NON OBLIGATED PUBLIC USE AIRPORTS

Paragraphs are changed to reflect renumbering 14 CFR. Subparagraph b.3. is changed to remove the requirement for Regional Airports Division personnel to resist structures based on "recommendations from other divisions/service area offices." Subparagraph b.4. is added to require Regional Airports Division personnel to make recommendations to mitigate or eliminate any adverse effects identified if

possible. Subparagraph d. is changed to require Regional Flight Standards personnel to identify the effect on charted visual approaches.

g. 6-3-9. EVALUATING EFFECT ON IFR OPERATIONS

Paragraph is administratively changed to reflect "OEG" in place of "Air Traffic" and "Obstacle Data Team" in place of "AeroNav". Also includes updated survey requirements. FPT personnel and Obstacle Data Team will review the survey in the aeronautical study Documents Section.

h. 6-3-15. RECOMMENDING MARKING AND LIGHTING OF STRUCTURES

Paragraph is changed to reflect the current organization title of Airspace Policy Group and that the OEG responds to the sponsor.

i. 7-1-2. RESPONSIBILITY

This paragraph provides pertinent advisory circular numbers when a Wildlife Hazard Assessment is required. Additionally, paragraph 7-1-2 is changed for clarity to reflect that OEG is responsible for issuing determinations.

j. 7-1-3. DETERMINATIONS

This change removes a note referring to No Notice Required (NNR). Paragraph 7-1-3 Note referencing Subparagraph c is changed to reflect "Notice of Preliminary Findings" instead of the previously used term "Notice of Presumed Hazard" in order to reduce the angst experienced by the public when receiving this initial report on preliminary findings. Of note, the letter remains the same and informs the public of the findings, and that with no change it is presumed to be a hazard to navigable airspace or airport capacity. All references to NPH are also changed to NPF. Additionally, miscellaneous editorial corrections are made.

k. 7-1-4. DETERMINATION CONTENT AND OPTIONS

Paragraph 7-1-4 was updated to reflect that AeroNav is now the Aeronautical Information Services,

ensuring their return address is correct, and to remove reference to mailing forms due to automation. Also changed, “AeroNav Obstacle Digital File” to “Digital Obstacle File.”

I. 7-1-4. DETERMINATION CONTENT AND OPTIONS

This change, also to paragraph 7-1-4, is the addition of two advisory statements pertaining to proposals that may attract birds and other wildlife. Subparagraph (d) is specific to municipal solid waste landfills, as this is supported by CFR 258. The second advisory statement (e) pertains to all other proposals (e.g., retention pond).

m. Editorial Changes

Editorial changes include reference corrections in FIG 6-3-7 and FIG 6-3-10, adding a missing term to 32-4-3c, adding “Municipal Solid Waste Landfill (MSWLF)” to the list of abbreviations, adding a correction to the term Diverse Vector Areas (DVA), as well as a global change updating out of date office names.

n. Entire Publication

Additional editorial/format changes were made where necessary. Revision bars were not used because of the insignificant nature of these changes.

FAA Order JO 7400.2M
Change 3
Page Control Chart
December 31, 2020

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Order JO 7400.2M

Procedures for Handling Airspace Matters

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Part 1. General Procedures for Airspace Management

Chapter 1. General

Section 1. Introduction

1-1-1. PURPOSE OF THIS ORDER

a. This order prescribes policy, criteria, guidelines, and procedures applicable to the System Operations Services; Mission Support Services; Aeronautical Information Services; Technical Operations Services; Technical Operations Air Traffic Control Spectrum Engineering Services; Technical Operations Technical Services; the Office of Airport Planning and Programming, (APP); the Office of Airport Safety and Standards, (AAS); Airports District Office (ADO); and the Flight Standards Service.

b. While this order provides procedures for handling airspace matters, additional procedures and criteria to supplement those contained herein may be set forth in other directives and should be consulted.

1-1-2. AUDIENCE

a. This order applies to all ATO personnel and anyone using ATO directives.

b. This order also applies to all regional, Service Center, and field organizational elements involved in rulemaking and nonrulemaking actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the management of air navigation aids. States that participate in the State Block Grant Program (SBGP) assist the Office of Airport Safety and Standards in these actions, but the overall responsibility remains with the Office of Airports. Participating states include Georgia, Illinois, Michigan, Missouri, New Hampshire, North Carolina, Pennsylvania, Tennessee, Texas, and Wisconsin.

1-1-3. WHERE TO FIND THIS ORDER

This order is available on the FAA website at http://www.faa.gov/air_traffic/publications and

http://employees.faa.gov/tools_resources/orders_notices.

1-1-4. WHAT THIS ORDER CANCELS

FAA Order JO 7400.2L, Procedures for Handling Airspace Matters, dated April 27, 2017, and all changes to it are canceled.

1-1-5. CHANGE AUTHORITY

The Director of Policy (AJV-P) will issue changes to this directive after obtaining concurrence from the affected Headquarters offices/services/service units on the cover of this order.

1-1-6. EXPLANATION OF CHANGES

a. The significant changes to this order are identified in the Explanation of Changes page(s). It is advisable to retain the page(s) throughout the duration of the basic order.

b. If further information is desired, please direct questions through the appropriate facility/service area/regional office to the headquarters office of primary responsibility.

1-1-7. SUBMISSION CUTOFF AND EFFECTIVE DATES

This order and its changes are scheduled to be published to coincide with AIRAC dates. However, due to the infrequent nature of changes submitted for this order, publishing may be postponed.

Publication Schedule		
Basic or Change	Cutoff Date for Submission	Effective Date of Publication
JO 7400.2M	9/13/18	2/28/19
Change 1	8/15/19	1/30/20
Change 2	1/30/20	7/16/20
Change 3	7/16/20	12/31/20
JO 7400.2N	12/31/20	6/17/21

1-1-8. DELIVERY DATES

This order will be available on the FAA website 30 days prior to its effective date.

All organizations are responsible for viewing, downloading, and subscribing to receive electronic mail notifications when changes occur to this order.

Subscriptions can be made at http://www.faa.gov/air_traffic/publications.

1-1-9. RECOMMENDATIONS FOR PROCEDURAL CHANGES

a. The responsibility for processing and coordinating revisions to this order is delegated to the Airspace Policy Group Manager.

b. Proposed changes or recommended revisions must be submitted, in writing, to the Airspace Policy Group. The proposal should include a description of the change or revision, the language to be inserted in the order, and the rationale for the change or revision.

c. The Airspace Policy Group will review and revise proposed changes as necessary and submit supported proposals to Policy (AJV-P). When appropriate, the Airspace Policy Group may convene a workgroup for this purpose. Composition of the workgroup will be determined by the subject matter and the expertise required. The Airspace Policy Group is responsible for the selection of the members of the workgroup, and for appointing the chairperson of the group.

d. The Policy directorate is responsible for ensuring all approved revisions are published.

e. When revised, reprinted, or additional pages are issued, they will be marked as follows:

1. Each revised or added page will show the change number and effective date of the change.

2. Bold vertical lines in the margin of the text will mark the location of substantive procedural, operational, or policy changes (for example, when material that affects the performance of duty is added, revised, or deleted).

1-1-10. DISTRIBUTION

This order is available online and will be distributed electronically to all offices that subscribe to receive email notification/access to it through the FAA website at http://www.faa.gov/air_traffic/publications.

1-1-11. SAFETY MANAGEMENT SYSTEM

Every employee is responsible for ensuring the safety of equipment and procedures used in the provision of services within the National Airspace System (NAS).

a. Risk assessment techniques and mitigations, as appropriate, are intended for implementation of any planned safety significant changes within the NAS, as directed by FAA Order 1100.161, Air Traffic Safety Oversight.

b. Direction regarding the Safety Management System and its application can be found in the Air Traffic Organization Safety Management System Manual; FAA Order JO 1000.37, Air Traffic Organization Safety Management System; and FAA Order 1100.161, Air Traffic Safety Oversight.

Abbreviation	Meaning
ERP	Effective Radiated Power
FAAO	Federal Aviation Administration Order
FACSFAC	Fleet Area Control and Surveillance Facility
FCC	Federal Communications Commission
FDA	Food and Drug Administration
FL	Flight Level
FPT	Flight Procedures Team
FSDO	Flight Standards District Office
FSS	Flight Service Station
GAO	Government Accountability Office
HIL	High Intensity Light
IAP	Instrument Approach Procedure
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IR	IFR Military Training Route
IRAC	Interdepartmental Radio Advisory Committee
J	Joule
L/MF	Low/Medium Frequency
LFZ	Laser Free Zone
LLWG	Local Laser Working Group
LMM	Middle Compass Locator
LOA	Letter of Agreement
LOD	Letter of Determination
LOM	Outer Compass Locator
LSO	Laser Safety Officer
MAJCOM	Military Major Command
MCA	Minimum Crossing Altitude
MCP	Minimum Crossing Point
MEA	Minimum En Route Altitude
MHA	Minimum Holding Altitude
MIA	Minimum IFR Altitude
MOA	Military Operations Area
MOCA	Minimum Obstruction Clearance Altitude

Abbreviation	Meaning
MPE	Maximum Permissible Exposure
MRAD	Milliradian
MRU	Military Radar Unit
MSA	Minimum Safe Altitude
MSL	Mean Sea Level
MSWLF	Municipal Solid Waste Landfill
MTR	Military Training Route
MVA	Minimum Vectoring Altitude
NAD	North American Datum
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NAVAID	Navigational Aid
NDB	Nondirectional Radio Beacon
NEPA	National Environmental Policy Act
NFDC	National Flight Data Center
NFDD	National Flight Data Digest
NFZ	Normal Flight Zone
NM	Nautical Mile
NPH	Notice of Presumed Hazard
NOHD	Nominal Ocular Hazard Distance
NOTAM	Notice to Airmen
NPIAS	National Plan of Integrated Airport Systems
NPRM	Notice of Proposed Rulemaking
NR	Nonrulemaking
NRA	Nonrulemaking Airport
NSA	National Security Area
NWS	National Weather Service
OE	Obstruction Evaluation
OE/AAA	Obstruction Evaluation/Airport Airspace Analysis
OFZ	Obstacle Free Zone
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PL	Public Law
PSR	Project Status Request
RBS	Radar Bomb Scoring
REIL	Runway End Identifier Lights

Abbreviation	Meaning
RNAV	Area Navigation
ROFA	Runway Object Free Area
RPZ	Runway Protection Zone
RVR	Runway Visual Range
RVV	Runway Visibility Value
SFZ	Sensitive Flight Zone
SIAP	Standard Instrument Approach Procedure
SMO	System Maintenance and Operations
SR	Scientific/Research Lasers
STAR	Standard Terminal Arrival Route
SUA	Special Use Airspace
TERABA	Termination/Abandoned Letter
TEREXP	Termination/Expired Letter

Abbreviation	Meaning
TERPS	United States Standard for Terminal Instrument Procedures
TERPSR	Termination Project Status Letter
TOFA	Taxiway Object Free Area
USC	United States Code
UTC	Coordinated Universal Time
VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
VGSI	Visual Glide Slope Indicator
VOR	Very High Frequency Omnidirectional Range
VORTAC	Very High Frequency Omni-Directional Range/Tactical Air Navigation Aid
VR	VFR Military Training Route

Section 4. Processing Nonrulemaking Airspace Actions

2-4-1. PURPOSE

This section prescribes the procedures to be followed when establishing, modifying, or revoking nonrulemaking airspace.

2-4-2. IDENTIFICATION

Nonrulemaking cases are identified by a study number. The study number includes the last two digits of the calendar year, the appropriate FAA regional or airports office abbreviation that the action falls within, a consecutively assigned number within each calendar year, and either an “NR” (nonrulemaking), “NRA” (nonrulemaking airport), or “OE” (obstruction evaluation) suffix as appropriate.

EXAMPLE—

1. *21-AWP-1-NR for studies involving navigational aids and nonrulemaking Special Use Airspace (SUA) cases (i.e., Alert Areas, Controlled Firing Areas, MOAs, and Warning Areas).*
2. *21-ASO-1-NRA for studies involving airports.*
3. *21-AGL-1-OE for studies involving surface structures not located on public-use airports*
4. *21-ORL-1-NRA for studies processed by an airports district office.*

2-4-3. CIRCULARIZATION

a. Except for NRA airspace proposals, nonrulemaking airspace proposals must be circularized by the service area office unless procedures for processing those types of proposals allow exemptions to circularization. Each notice must contain a complete, detailed description of the proposal including charts, if appropriate, to assist interested persons in preparing comments. Circularization lists must include, but not be limited to, all known aviation interested persons and groups such as the state aviation agencies; Service Center military representatives; national and local offices of aviation organizations; local flight schools, local airport owners, managers, and fixed base operators; and local air taxi and charter flight offices. In order to ensure the widest public participation, service centers should consider all available communication alternatives for distributing circulars and receiving

comments (for example, e-mail, fax, etc.). Normally, a 45-day comment period should be provided. Other parts in this order contain additional guidance regarding circularization.

b. Discuss in the nonrulemaking circular any regulatory changes (for example, Part 71, Part 73) that might be affected if the nonrulemaking proposal is adopted. Describe the regulatory changes in as much detail as is known at the time.

c. Regional/service area offices must coordinate with their respective state aviation representatives to ascertain which nonrulemaking circulars each state is interested in receiving. If various agencies within a state government request copies of particular circulars, the regional/service area office may request that one agency be designated to receive and distribute the requested copies.

d. Send one copy of each SUA nonrulemaking circular to the Rules and Regulations Group.

e. Except for Class B and Class C airspace actions, when a nonrulemaking action is associated with a rulemaking action, the nonrulemaking proposal may be included in the NPRM, and a separate nonrulemaking circular is not required. The NPRM will satisfy the circularization requirement and present the full scope of both the rulemaking and nonrulemaking proposal.

2-4-4. CIRCULARIZATION DOCUMENTATION

All notices of aeronautical studies, informal airspace meetings, and determinations issued for obstruction evaluation and airport airspace analysis studies require certificates of mailing. The certificate must be recorded in each case file as follows:

AERONAUTICAL STUDY [NUMBER]
CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT A COPY OF THE ATTACHED [notice/determination] WAS MAILED TO EACH OF THE ADDRESSEES LISTED ON THE ATTACHED [mailing list/distribution list number] THIS [date] DAY OF [month/year].

SIGNED: [specialist/mail clerk/etc.]

2-4-5. SUBMISSION OF NONRULEMAKING SUA CASES TO RULES AND REGULATIONS GROUP

a. After the circular public comment period ends, the OSG must analyze all comments received and coordinate with the concerned ATC facility to develop a response to the issues raised by the comments, and determine if the proposal should be modified as a result of the comments. Coordinate with the appropriate Service Center military representative to discuss possible mitigations or changes based on the comments. If significant changes are made to what was circularized, it may be necessary to recircularize the proposal for additional public comment.

b. After considering all pertinent information, the OSG and the ATC facility will determine whether the proposal should be forwarded for approval or disapproved. If the action is to be disapproved, the OSG will comply with the guidance in Paragraph 21-5-6, Disapproval of Proposals, of this Order.

c. Within 90 days after the circular comment period closing, the OSG Manager will submit a memorandum to the Rules and Regulations Group Manager with either a recommendation to approve, or a status update on the proposal. Include the following information in the memorandum:

1. A discussion of each issue raised by the comments and how it was resolved or addressed.

2. The final version of the airspace description (including a revised chart, if applicable).

3. The requested airspace effective date.

4. Copies of public comments received and any additional information that should be considered by the Rules and Regulations Group.

2-4-6. EFFECTIVE DATE OF NONRULEMAKING ACTIONS

Nonrulemaking actions must be made effective at 0901 UTC and must coincide with the 56-day en route charting dates published in FAA Order 8260.26, Appendix A. Exceptions are as follows:

a. Safety or national interest actions that require an earlier effective time or date.

b. Editorial changes.

c. Actions that lessen the burden on the public (for example, revocation of special use airspace).

d. To the extent practical, consider making the nonrulemaking SUA effective on a sectional chart date that matches the 56-day en route charting dates.

2-4-7. PUBLICATION OF NONRULEMAKING ACTIONS

Nonrulemaking actions must be published in the National Flight Data Digest (NFDD) on or before the applicable charting cutoff date.

REFERENCE-
FAA Order 8260.26, Appendix A.

Part 2. Objects Affecting Navigable Airspace

Chapter 5. Basic

Section 1. General

5-1-1. PURPOSE

The guidelines, procedures, and criteria detailed in this part supplement those contained in Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace, and address the following:

- a. The performance of functions relating to the processing of notices of proposed construction or alteration.
- b. The conduct of aeronautical studies of any existing or proposed object affecting the navigable airspace.
- c. The conduct of aeronautical studies of the electromagnetic radiation effect of proposed or existing objects on the operation of air navigation facilities.
- d. The conduct of aeronautical studies of the physical effect of proposed or existing objects on the line-of-sight view of all runways, taxiways, and traffic pattern areas from the airport traffic control tower.
- e. The conduct of aeronautical studies regarding the physical effect of proposed or existing objects on airport approach lighting systems.

5-1-2. AUTHORITY

a. The FAA's authority to promote the safe and efficient use of the navigable airspace, whether concerning existing or proposed structures, is predominantly derived from Title 49 U.S.C. Section 44718 (Section 44718). It should be noted however, that Section 44718 does not provide specific authority for the FAA to regulate or control how land (real property) may be used in regard to structures that may penetrate navigable airspace.

b. Title 14 of the Code of Federal Regulations (14 CFR) Part 77, Safe, Efficient Use, and

Preservation of the Navigable Airspace, was adopted to establish notice standards for proposed construction or alteration that may result in an obstruction or an interference with air navigation facilities and equipment or the navigable airspace.

5-1-3. POLICY

The prime objective of the FAA in administering Section 44718 and 14 CFR Part 77 in conducting aeronautical studies is to ensure the safety of air navigation and efficient utilization of navigable airspace by aircraft.

5-1-4. SCOPE

a. 49 U.S.C. Sections 40103 and 44718, and Part 77 apply only to structures located within any state, territory, or possession of the United States, within the District of Columbia, or within territorial waters (12 NM) surrounding such states, territories, or possessions.

b. Structures that are subject to study requirements associated with 49 U.S.C. Section 40103, 44718, and Part 77 may be man made (including mobile structures) or of natural growth and terrain whether existing, proposed, permanent, or temporary.

5-1-5. RESPONSIBILITY

The responsibility for managing the obstruction evaluation program for those structures that may affect the navigable airspace is delegated to the Obstruction Evaluation Group (OEG), except for those structures located on public-use airports covered under FAA Order JO 7400.2, Part 3, Airport Airspace Analysis.

NOTE-

See paragraph 10-1-3.f.

5-1-6. SENSITIVE CASES REFERRED TO WASHINGTON

The OEG Manager, or designated representative, must brief sensitive or high profile cases to the Manager, Rules and Regulations Group before issuing, revising, or extending the determination.

5-1-7. AUTOMATION

a. To the extent practicable, the obstruction evaluation/airport airspace analysis (OE/AAA) automated programs must be used in lieu of manual processing.

b. Automated obstruction evaluation (OE) correspondence forms must be used.

5-1-8. OE/AAA AUTOMATED SYSTEM AIRPORT/RUNWAY DATABASE

a. To ensure the automated Part 77 obstruction criteria and the military Part 77 obstruction criteria conflict analysis programs consider all known plans on file, the regional Airports Division is responsible for maintaining the automated airport/runway database.

1. Either the Airports Division or the Airports District Office must enter the ultimate airport reference point for any proposed public-use or military airport into the database within two working days from receipt of the information.

2. Either the Airports Division or the Airports District Office must enter any change of airport status

from private-use to public-use into the database within two working days from receipt of the information. As workload permits, information on private-use airports must also be entered into the database.

3. Either the Airports Division or the Airports District Office must enter all other public-use and military airport/runway information in the database within 10 working days from receipt of the information.

b. Airports must resolve and correct any discrepancies that have been identified in the automated airport/runway database.

c. Any required corrections must be forwarded to AIM.

5-1-9. TRAINING

Employees involved with the OE/AAA program must attend the Basic Obstruction Evaluation and Airport/Airspace Analysis Course offered by the FAA Academy.

5-1-10. RELEASE OF INFORMATION

Requests from the public for access to or copies of information contained in aeronautical study files are occasionally made to the regional offices. Such requests must be processed in accordance with the provisions of the Freedom of Information Act (5 U.S.C. 552), as implemented by Part 7 of the Department of Transportation Regulations and Order 1270.1, Freedom of Information Act Program.

Section 2. Initial Processing/Verification

6-2-1. VERIFICATION/E-FILING

a. The OEG must verify each obstruction evaluation case to ensure that the submitted site elevation and coordinates appear to be correct and that all necessary information has been included. Verification must include, as a minimum, the following actions:

1. Compare the submitted site depiction to the submitted coordinates when plotted.

2. Compare the submitted site elevation to the National Elevation Dataset (NED) in the area of the submitted coordinates when plotted. Other resources may include, but are not limited to, the topographical chart contour elevation intervals, publicly available geographic information systems, or nearby prior studies.

3. If a survey is submitted, compare the information contained on the survey, with the submitted information and the site as plotted.

4. If the submission involves an existing structure, compare the submitted information to the digital obstacle file, with the previous aeronautical study (if any), and possibly the FCC tower registration information.

5. Ensure that the submission provides a complete description and clearly explains the reason for submission. The submission should include sufficient information to allow each division/service area office to accomplish its specialized portion of the obstruction evaluation.

6. If the submission involves a structure that would normally radiate frequencies, ensure that the frequencies and effective radiated power are included.

7. If the submission involves a structure over 200 feet AGL, ensure marking and/or lighting preferences are part of the submission. Sponsors must be required to specifically request the type of marking and/or lighting they desire when submitting FAA Form 7460-1. They should be encouraged to become familiar with the different type of lighting systems available. The sponsor should obtain information about these systems from the manufacturers. The

sponsor can then determine which system best meets his/her needs based on purchase, installation, and maintenance costs. The FAA will consider the sponsor's desired marking and/or lighting system when conducting the aeronautical study.

b. If the submission contains errors, discrepancies, or lack of information, the OEG must request resolution by the sponsor and/or the sponsor's representative. If the sponsor does not resolve the issues within 30 days of the written request, the OEG may terminate the aeronautical study.

c. If the submission passes verification and there are no unresolved issues, initiate evaluation by other divisions by changing the status in the OE/AAA automation program to "WRK."

NOTE-

It is imperative that all data in the automated OE case file is reviewed and verified for accuracy before proceeding to "Division/Service Area Office Coordination." Any correction or change to the heights and/or coordinates after the divisions/service area offices begin evaluation must require initiating a new aeronautical study.

6-2-2. VERIFICATION/PAPER-FILING

a. Prior to assigning an aeronautical study into the OE/AAA automation program, review the submission for completeness. The following information should be considered:

1. Ground elevation of the site (site elevation).

2. Above ground elevation of the structure (AGL).

3. Latitude and longitude of the structure.

4. A 7.5-Minute U.S.G.S. Topographic Map (Quadrangle Chart) depicting the site of the structure.

b. If the submission package contains all of the required information, assign an aeronautical study number and initiate an obstruction evaluation study. Exceptions may be made for emergency situations in accordance with 77.17(d).

c. If the submission package does not contain the required information, the entire package may be returned to the sponsor with a clear explanation and a request for the sponsor to provide the information necessary to initiate the study.

d. For submission packages pertaining to structures that may be time critical, an effort should be made to obtain the required information by telephone. Information received by telephone conversation should be added to case notes. If written confirmation is received from the sponsor, it should be faxed/scanned into the file.

6-2-3. DIVISION COORDINATION

Each division described in paragraph 5-2-2 must evaluate all notices of proposed construction or alteration received regardless of whether notice was required under Part 77, except as follows:

NOTE-

For the purpose of division/service area office coordination, Frequency Management (FM) will be considered separately in addition to Technical Operations Services. It should also be noted that FM responds separately.

a. Side Mounted Non-Microwave Antennas. Airports, Technical Operations Services, Airway Facilities, Department of Homeland Security, and the military normally are not required to review OE cases that involve the addition of antennas to a previously studied structure that does not increase in overall height of the structure. FM will continue to evaluate these cases. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the previously studied case.

b. Side Mounted Microwave Dishes. Airports, Flight Standards, Department of Homeland Security, and the military normally must not be required to review OE cases that involve the addition of microwave dishes to a structure that does not increase in overall height. FM will continue to evaluate these cases. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the previously studied case.

c. Marking and Lighting Changes. Airports, Flight Standards, Flight Procedures Team, FM, Technical Operations Services, Department of Homeland Security, and the military normally are not required to review OE cases which involve only marking and lighting changes. The FAA must have previously studied the structure and the data of the present case and it must exactly match the data of the prior case.

d. Temporary Structures. Airports, Flight Standards, FM, Department of Homeland Security, and the military normally must not be required to review OE cases which involve temporary structures of a 6 month or less duration. All appropriate divisions/service area offices must review temporary structures of a longer duration.

e. Flight Procedures Team normally must not be required to review OE cases that are beyond 14 NM from the airport reference point of the nearest public-use or military airport and the height of the structure is not more than 200 feet above ground level.

f. Airports normally must not be required to review OE cases that are beyond 3 NM from the airport reference point of the nearest public-use or military airport.

g. Flight Standards must review OE cases that are circularized for public comment.

h. FM normally must only be required to review OE cases, that involve transmitting frequencies.

6-2-4. ADDITIONAL COORDINATION

Air traffic may request any division to review an OE case on a case-by-case basis. For instance, Flight Standards may be requested to review a marking and lighting change, the DOD may be requested to review a temporary structure if the closest airport is a DOD base, or FM may be requested to review a temporary structure if it radiates a frequency.

Section 3. Identifying/Evaluating Aeronautical Effect

6-3-1. POLICY

a. The prime objective of the FAA in conducting OE studies is to ensure the safety of air navigation, and the efficient utilization of navigable airspace by aircraft. There are many 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.

b. 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. In the case of an existing structure, first consideration should be given to adjusting the aviation procedures to accommodate the structure. This does not preclude issuing a "Determination Of Hazard To Air Navigation" on an existing structure when the needed adjustment of aviation procedures could not be accomplished without a substantial adverse effect on aeronautical operations. In all cases, consideration should be given to all known plans on file received by the end of the public comment period or before issuance of a determination if the case was not circularized.

6-3-2. SCOPE

Part 77 establishes standards for determining obstructions to air navigation. A structure that exceeds one or more of these standards is presumed to be a hazard to air navigation unless the aeronautical study determines otherwise. An obstruction evaluation must identify:

a. The effect the structure would have:

1. On existing and proposed public-use, private use with at least one FAA-approved instrument approach procedure, and DOD airports and/or aeronautical facilities.

2. On existing and proposed visual flight rule (VFR)/instrument flight rule (IFR) aeronautical

departure, arrival and en route operations, procedures, and minimum flight altitudes.

3. Regarding physical, electromagnetic, or line-of-sight interference on existing or proposed air navigation, communications, radar, and control systems facilities.

4. On airport capacity, as well as the cumulative impact resulting from the structure when combined with the impact of other existing or proposed structures.

b. Whether marking and/or lighting is necessary.

6-3-3. DETERMINING ADVERSE EFFECT

If a structure first exceeds the obstruction standards of Part 77, and/or is found to have physical or electromagnetic radiation effect on the operation of air navigation facilities, then the proposed or existing structure, if not amended, altered, or removed, has an adverse effect if it would:

a. Require a change to an existing or planned IFR minimum flight altitude, a published or special instrument procedure, or an IFR departure procedure for a public-use airport.

b. Require a VFR operation, to change its regular flight course or altitude. This does not apply to VFR military training route (VR) operations conducted under Part 137, or operations conducted under a waiver or exemption to the CFR.

c. Restrict the clear view of runways, helipads, taxiways, or traffic patterns from the airport traffic control tower cab.

d. Derogate airport capacity/efficiency.

e. Affect future VFR and/or IFR operations as indicated by plans on file.

f. Affect the usable length of an existing or planned runway.

6-3-4. DETERMINING SIGNIFICANT VOLUME OF ACTIVITY

The type of activity must be considered in reaching a decision on the question of what volume of aeronautical activity is "significant." For example, if one or more aeronautical operations per day would be

affected, this would indicate regular and continuing activity, thus a significant volume no matter what the type of operation. However, an affected instrument procedure or minimum altitude may need to be used only an average of once a week to be considered significant if the procedure is one which serves as the primary procedure under certain conditions.

6-3-5. SUBSTANTIAL ADVERSE EFFECT

A proposed structure would have, or an existing structure has, a substantial adverse effect if it causes electromagnetic interference to the operation of an air navigation facility or the signal used by aircraft, or if there is a combination of:

- a. Adverse effect as described in paragraph 6-3-3; and
- b. A significant volume of aeronautical operations, as described in paragraph 6-3-4, would be affected.

6-3-6. RESPONSIBILITY

The FAA's obstruction evaluation program transcends organizational lines. In order to determine the effect of the structure within the required notice period, each office should forward the results of its evaluation within 15 working days to the Obstruction Evaluation Group (OEG) for further processing. In cases of evaluating the effects of a proposed wind turbine farm, see Appendix 12 for field air traffic control facility responsibility and procedures. Areas of responsibility are delegated as follows:

a. OEG personnel must:

- 1. Identify when the structure exceeds Section 77.17 (a)(1), (a)(2), and (a)(5) (see FIG 6-3-1 thru FIG 6-3-6) and apply Section 77.17 (b) (see FIG 5-2-4).
- 2. Identify the effect on existing and planned aeronautical operations, air traffic control procedures, and airport traffic patterns and making recommendations for mitigating adverse effect including marking and lighting recommendations.
- 3. Identify when the structure would adversely affect published helicopter route operations as specified in paragraph 6-3-8 subparagraph e, of this order, and forward the case to Flight Standards.

4. Identify whether obstruction marking/lighting are necessary and recommend the appropriate marking and/or lighting.

5. Identify when negotiations are necessary and conduct negotiations with the sponsor. This may be done in conjunction with assistance from other division/service area office personnel when their subject expertise is required (for example, in cases of electromagnetic interference).

6. Identify when circularization is necessary and conduct the required circularization process.

7. Evaluate all valid aeronautical comments received as a result of the circularization and those received as a result of the division evaluation.

8. Issue the determination (except as noted in paragraph 7-1-2, subparagraph b).

b. Regional Airports Division personnel must:

1. Verify that the airport/runway database has been reviewed, is correct, and contains all plans on file pertaining to the OE case.

2. Identify the structure's effect on existing and planned airports or improvements to airports concerning airport design criteria including potential restrictions/impacts on airport operations, capacity, efficiency and development, and making recommendations for eliminating adverse effect. Airports Divisions are not required to perform evaluations on OE cases that are further than 3 NM from the Airport Reference Point (ARP) of a public-use or military airport.

3. Determine the effect on the efficient use of airports and the safety of persons and property on the ground. Airports will resist structures and activities that conflict with an airport's planning and/or design.

4. State what mitigations may be made to mitigate or eliminate any adverse effect of the structure on existing or planned airports.

c. FPT personnel must:

1. Identify when the structure exceeds Sections 77.17 (a)(3), and 77.17 (a)(4).

2. Identify the effect upon terminal area IFR operations, including transitions; radar vectoring; holding; instrument departure procedures; any segment of a standard instrument approach procedure (SIAP) or special SIAP, including proposed instrument procedures and departure areas; and

instrument procedures and departure areas; and making recommendations for eliminating adverse effect.

NOTE—

This paragraph applies to any IAP and Special SIAP at public-use and private-use airports.

3. Identify the effect on minimum en route altitudes (MEA); minimum obstruction clearance altitudes (MOCA); minimum vectoring altitudes (MVA); minimum IFR altitudes (MIA); minimum safe altitudes (MSA); minimum crossing altitudes (MCA); minimum holding altitudes (MHA); turning areas and termination areas; and making recommendations for eliminating adverse effect.

4. Coordinate with air traffic and technical operations services personnel to determine the effect of any interference with an air navigation facility on any terminal or en route procedure.

5. State what adjustments can be made to the procedure/structure to mitigate or eliminate any adverse effects of the structure on an instrument flight procedure.

d. Flight Technologies and Procedures Division (FTPD) personnel must identify the effect on fixed-wing and helicopter VFR routes, terminal operations, and other concentrations of VFR traffic.

When requested by OEG, FTPD must also evaluate the mitigation of adverse effect on VFR operations for marking and/or lighting of structures.

e. Technical Operations Services personnel must identify any electromagnetic and/or physical effect

on air navigation and communications facilities including:

1. The presence of any electromagnetic effect in the frequency protected service volume of the facilities shown in FIG 6-3-16, FIG 6-3-17, and FIG 6-3-18.

2. The effect on the availability or quality of navigational or communications signals to or from aircraft including lighting systems (for example, VGSI), and making recommendations to eliminate adverse effect.

3. The effect on ground-based communications and NAVAID equipment, and the signal paths between ground-based and airborne equipment, and making recommendations to eliminate adverse effect.

4. The effect on the availability or quality of ground-based primary and secondary radar; direction finders; and air traffic control tower line-of-sight visibility; and making recommendations to eliminate adverse effect.

5. The effect of sunlight or artificial light reflections, and making recommendations to eliminate adverse effect.

f. Military personnel are responsible for evaluating the effect on airspace and routes used by the military.

g. Other applicable FAA offices or services may be requested to provide an evaluation of the structure on a case-by-case basis.

FIG 6-3-1
ANYWHERE

§77.17 – Obstruction Standards.

(a)(1) – A height of 499 feet AGL at the site of the object.

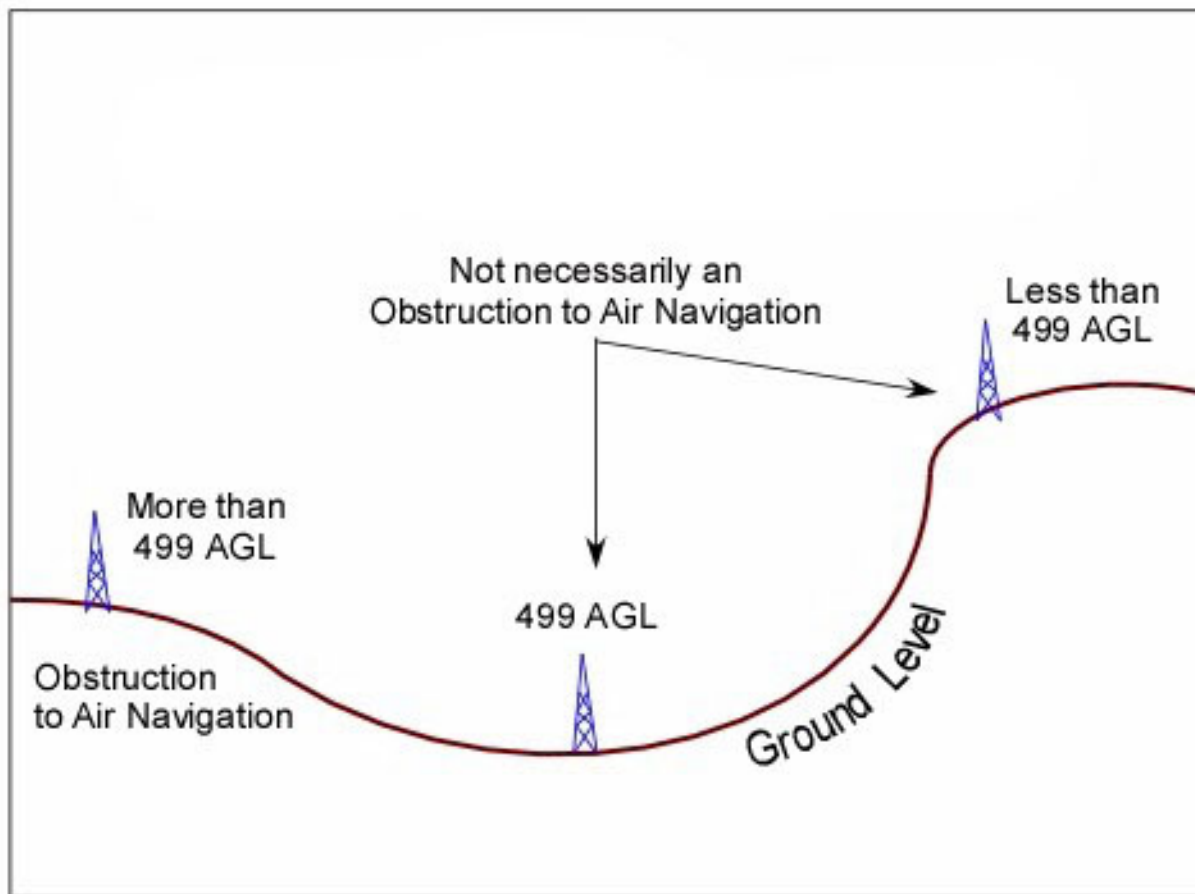


FIG 6-3-6
AIRPORT IMAGINARY SURFACES FOR HELIPORTS

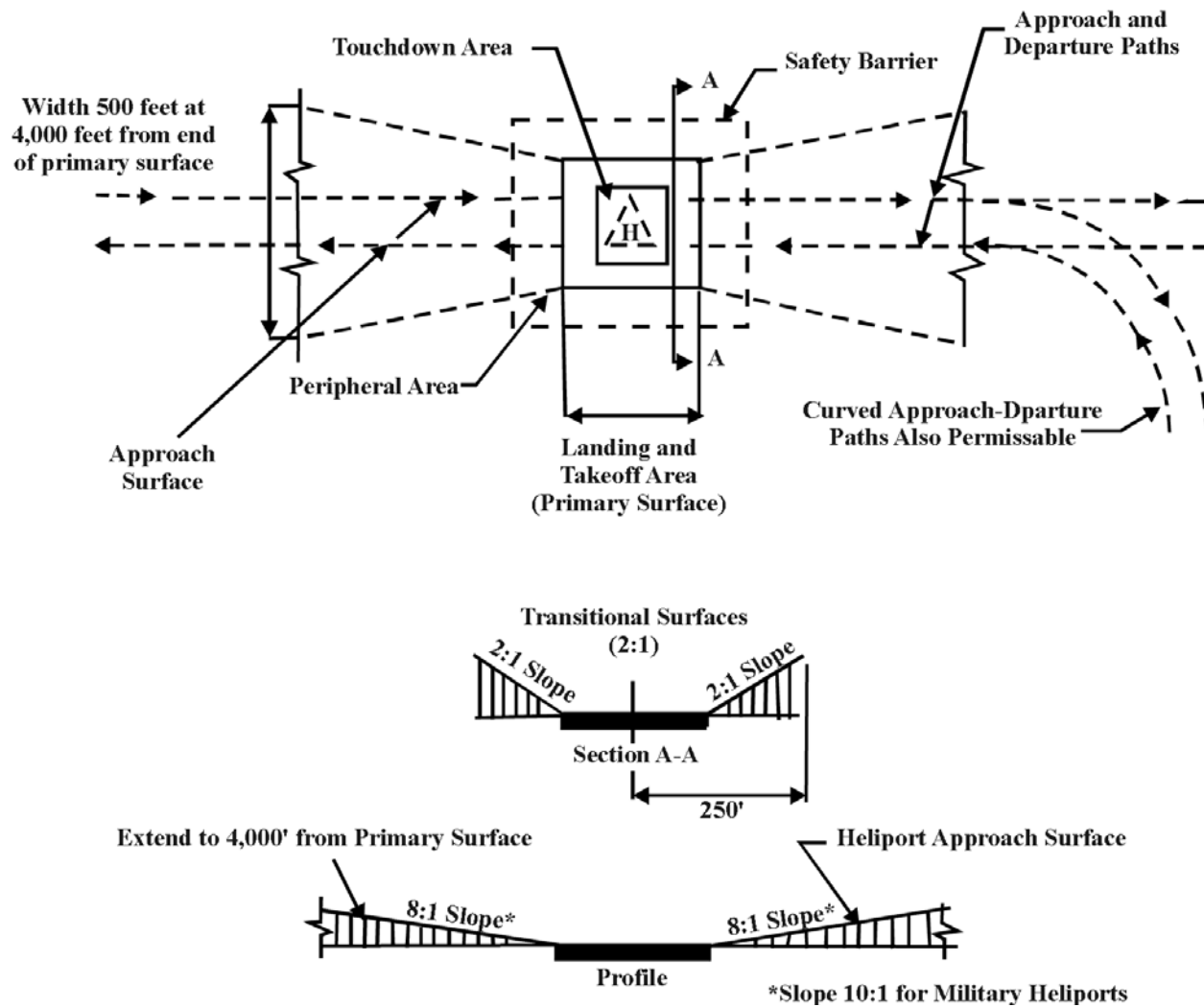


FIG 6-3-7
PART 77, APPROACH SURFACE DATA

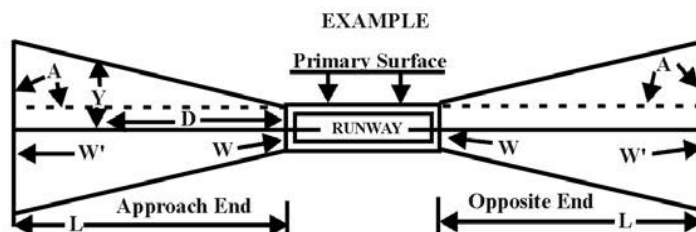
RUNWAY TYPE	RWY USE AVAILABLE/PLANNED		APPROACH SURFACE DIMENSIONS			SLOPES AND FLARE RATIOS	
	APPROACH/OPPOSITE RUNWAY END COMBINATIONS		LENGTH - L	INNER WIDTH - W	OUTER WIDTH - W'	SLOPE RATIO	FLARE RATIO - A
UTILITY RUNWAYS	V		5,000	250	1,250	20:1	.1:1
		V	5,000	250	1,250	20:1	.1:1
	V		5,000	500	1,250	20:1	.075:1
		NP	5,000	500	2,000	20:1	.15:1
	NP		5,000	500	2,000	20:1	.15:1
		NP	5,000	500	2,000	20:1	.15:1
OTHER THAN UTILITY RUNWAYS	V		5,000	500	1,500	20:1	.1:1
		V	5,000	500	1,500	20:1	.1:1
	V		5,000	500	1,500	20:1	.1:1
		NP $\frac{3}{4}$ +	10,000	500	3,500	34:1	.15:1
	V		5,000	1,000	1,500	20:1	.05:1
		NP $\frac{1}{4}$	10,000	1,000	4,000	34:1	.15:1
	V		5,000	1,000	1,500	20:1	.05:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1
	NP $\frac{3}{4}$ +		10,000	500	3,500	34:1	.15:1
		NP $\frac{3}{4}$ +	10,000	500	3,500	34:1	.15:1
	NP $\frac{3}{4}$ +		10,000	1,000	3,500	34:1	.125:1
		NP $\frac{1}{4}$	10,000	1,000	4,000	34:1	.15:1
	NP $\frac{3}{4}$ +		10,000	1,000	3,500	34:1	.125:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1
	NP $\frac{1}{4}$		10,000	1,000	4,000	34:1	.15:1
		NP $\frac{1}{4}$	10,000	1,000	4,000	34:1	.15:1
	NP $\frac{1}{4}$		10,000	1,000	4,000	34:1	.15:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1
	P		50,000	1,000	16,000	50:1/40:1	.15:1
		P	50,000	1,000	16,000	50:1/40:1	.15:1

V - Visual

NP - Nonprecision

 $\frac{3}{4}$ + - Visibility Minimums More Than $\frac{3}{4}$ SM

P - Precision

 $\frac{3}{4}$ - Visibility Minimums As Low As $\frac{3}{4}$ SM

Sample Use Problem: Proposed structure would be located by measurement to be 20,000 feet from the end of the primary surface and 3,400 feet at 90° from the extended centerline of a precision runway (refer to Section 77.19(c) for relation of primary surface to end of runway). To determine whether it would fall within the approach surface of that runway, apply the following formula:

$$Y = D \times A + W/2$$

Y = distance for runway centerline to edge of the approach

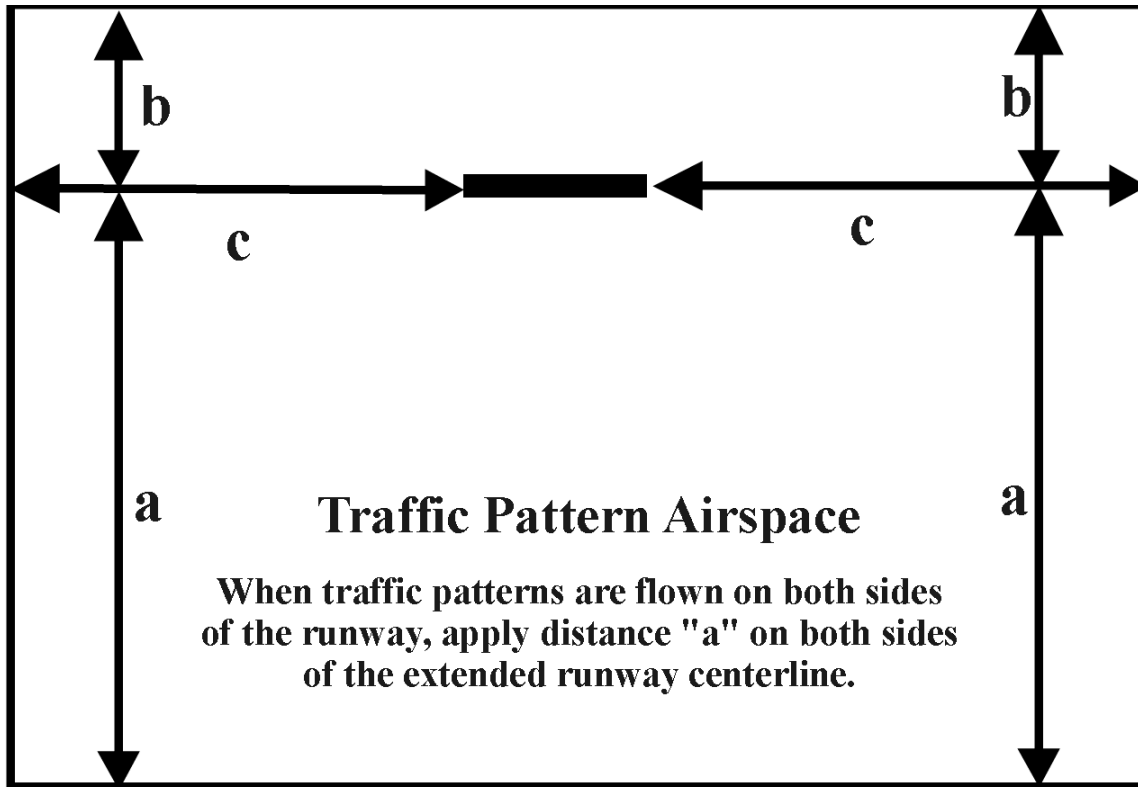
D = distance from end of primary surface at which proposed construction is 90° from extended runway centerline

$$Y = 20,000 \times .15 + 1,000/2$$

$$Y = 3,000 + 500$$

$$Y = 3,500 \text{ (structure would be within approach surface)}$$

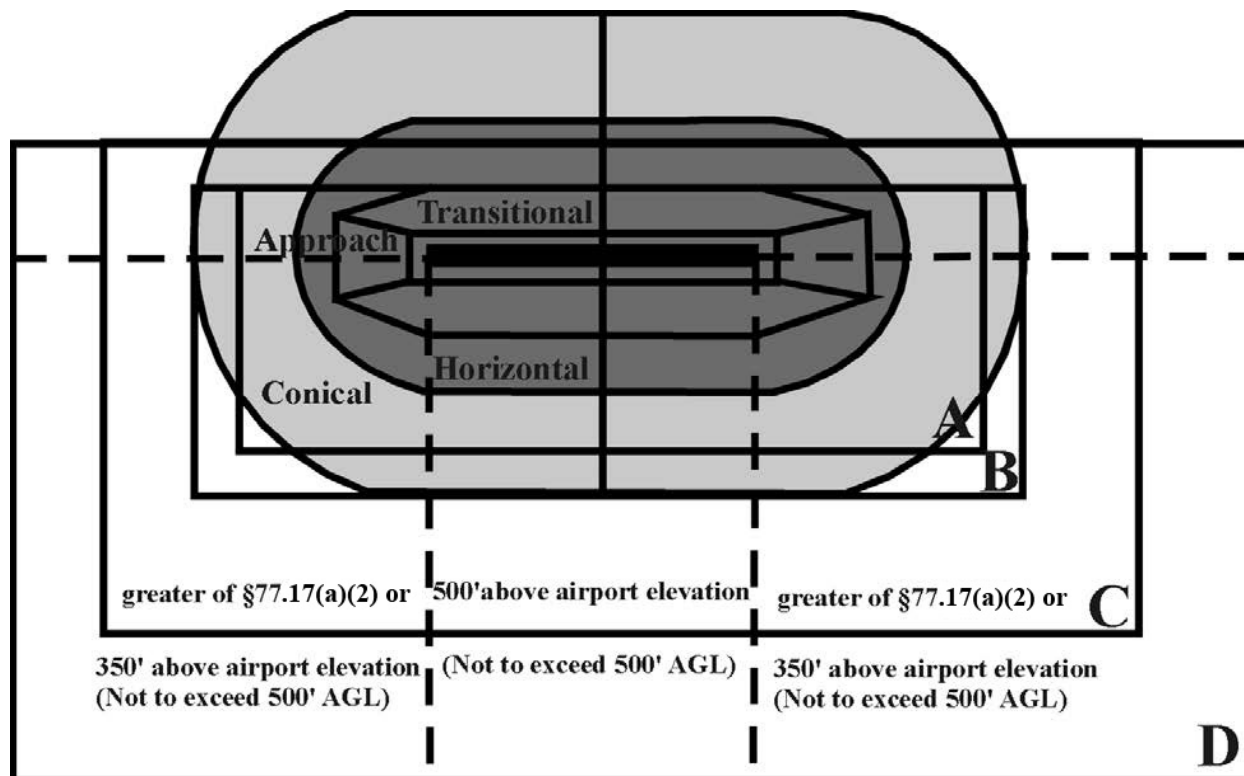
FIG 6-3-9
TRAFFIC PATTERN AIRSPACE



Aircraft Category	Distance (nautical miles)			
	a	b	c	d*
A	1.25	.25	1.25	.375
B	1.5	.25	1.5	.5
C	2.25	.5	2.25	.875
D	4.0	.5	3.0	1.0

*Increase distance "C" by adding distance specified in "d" for each aircraft over four (of the same category) anticipated to be operating in the traffic pattern at the same time.

FIG 6-3-10
TRAFFIC PATTERN AIRSPACE ADVERSE EFFECT



that the affected MEA is not normally flown by aircraft, nor used for air traffic control purposes.

2. Minimum Obstruction Clearance Altitudes (MOCA). MOCAs assure obstacle clearance over the entire route segment to which they apply and assure navigational signal coverage within 22 NM of the associated VOR navigational facility. For that portion of the route segment beyond 22 NM from the VOR, where the MOCA is lower than the MEA and there are no plans to lower the MEA to the MOCA, a structure that affects only the MOCA would not be considered to have substantial adverse effect. Other situations require study as ATC may assign altitudes down to the MOCA under certain conditions.

3. Minimum IFR Altitudes (MIA). These altitudes are established in accordance with Order 7210.37, En Route Minimum IFR Altitude Sector Charts, to provide the controller with minimum IFR altitude information for off-airway operations. MIAs provide the minimum obstacle clearance and are established without respect to flight-checked radar or normal radar coverage. Any structure that would cause an increase in a MIA is an obstruction, and further study is required to determine the extent of adverse effect. Radar coverage adequate to vector around such a structure is not, of itself, sufficient to mitigate a finding of substantial adverse effect that would otherwise be the basis for a determination of hazard to air navigation.

4. IFR Military Training Routes (IRs) – Operations on IRs provide pilots with training for low altitude navigation and tactics (see FAA Order JO 7610.4, Special Operations). Flight along these routes can be conducted below the minimum IFR altitude specified in Part 91, and the military conducts operational flight evaluations of each route to ensure compatibility with their obstructions clearance requirements. A proposed structure's location on an IR is not a basis for determining it to be a hazard to air navigation; however, in recognition of the military's requirement to conduct low altitude training, disseminate Part 77 notices and aeronautical study information to military representatives. Additionally, attempt to persuade the sponsor to lower, or relocate proposed structures that exceed obstruction standards and have been identified by the military as detrimental to their training requirement.

5. Radar Bomb Sites (RBS) – These sites are a vital link in the low level training network used by the

U.S. Air Force to evaluate bomber crew proficiency. They provide accurate radar records for aircraft flying at low altitudes attacking simulated targets along the RBS scoring line. An obstruction located within the flights' RBS boundaries may have a substantial adverse effect and a serious operational impact on military training capability.

e. TERMINAL AREA IFR OPERATIONS. The obstruction standards contained in Part 77 are also used to identify obstructions within terminal obstacle clearance areas. Any structure identified as an obstruction is considered to have an adverse effect; however, there is no clear-cut formula to determine what extent of adverse effect is considered substantial. Instrument approach and departure procedures are established in accordance with published obstacle clearance guidelines and criteria. However, there are segments of instrument approach procedures where the minimum altitudes may be revised without substantially effecting landing minimums. Thus, the determination must represent a decision based on the best facts that can be obtained during the aeronautical study.

1. Instrument Approach Procedures (IAP)/Special SIAP. Flight Procedures Team personnel are responsible for evaluating the effect of structures upon any segment of an IAP/Special SIAP, any proposed IAP/Special SIAP, or any departure restriction. However, all FAA personnel involved in the obstruction evaluation process should be familiar with all aspects of the terminal area IFR operations being considered. If Flight Procedures Team personnel determine that a structure will affect instrument flight procedures, their evaluation should include those procedural adjustments that can be made without adversely affecting IFR operations. When the study discloses that procedural adjustments to reduce or mitigate any adverse effect cannot be accomplished, then the comments to air traffic must identify the significance of this effect on procedures and aeronautical operations.

NOTE–

This paragraph applies to any IAP and Special SIAP at public-use and private-use airports.

2. Minimum Vectoring Altitudes (MVA). These altitudes are based upon obstruction clearance requirements only (see Order 8260.19). The area considered for obstacle clearance is the normal operational use of the radar without regard to the flight-checked radar coverage. It is the responsibility

of individual controllers to determine that a target return is adequate for radar control purposes. MVAs are developed by terminal facilities, approved by the Terminal Procedures and Charting Group and published for controllers on MVA Sector Charts. Any structure that would cause an increase in an MVA is an obstruction and a study is required to determine the extent of adverse effect. Radar coverage adequate to vector around such a structure is not, of itself, sufficient to mitigate a finding of substantial adverse effect that would otherwise be the basis for a determination of hazard to air navigation.

3. Military Airports. With the exception of the U.S. Army, the appropriate military commands establish and approve terminal instrument procedures for airports under their respective jurisdictions. Consequently, the OEG must ensure that the military organizations are provided the opportunity to evaluate a structure that may affect their operations. While the military has the responsibility for determining the effect of a structure, it is expected that the FPT will assist air traffic in reconciling differences in the military findings.

4. Departure Procedures. TERPS, Chapter 12, Civil Utilization of Area Navigation (RNAV) Departure Procedures, contains criteria for the development of IFR departure procedures. An obstacle that penetrates the 40:1 departure slope is considered to be an obstruction to air navigation. Further study is required to determine if adverse effect exists. Any proposed obstacle that penetrates the 40:1 departure slope, originating at the departure end of runway (DER) by up to 35 feet will be circularized. If an obstacle penetrates the 40:1 departure slope by more than 35 feet, it is presumed to be a hazard, and a Notice of Presumed Hazard will be issued, and processed accordingly. Analysis by the Terminal Procedures and Charting Group and air traffic personnel is necessary to determine if there would be a substantial adverse effect on the navigable airspace.

5. Minimum Safe Altitudes (MSA). A MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These are either Minimum Sector Altitudes, established for all procedures within a 25-mile radius of the navigational facility (may be

increased to 30 miles under certain conditions), or Emergency Safe Altitudes, established within a 100-mile radius of the navigation facility and normally used only in military procedures at the option of the approval authority. These altitudes are designed for emergency use only and are not routinely used by pilots or by air traffic control. Consequently, they are not considered a factor in determining the extent of adverse effect, used as the basis of a determination, or addressed in the public notice of an aeronautical study.

f. CONSIDERING ACCURACY. Experience has shown that submissions often contain elevation and/or location errors. For this reason, the Flight Procedures Team uses vertical and horizontal accuracy adjustments, as reflected below, to determine the effect on IFR operations.

1. Accuracy Application – Current directives require the FPT to apply accuracy standards to obstacles when evaluating effects on instrument procedures. These accuracy standards typically require an adjustment of 50 feet vertically and 250 feet horizontally to be applied in the most critical direction. Normally, these adjustments are applied to those structures that may become the controlling obstructions and are applicable until their elevation and location are verified by survey.

2. Certified Accuracy – The FPT must notify the OEG whenever certified accuracy is needed to determine if the structure will have an adverse effect. OEG personnel must then contact the sponsor to request a surveyed verification of the elevation and location. The acceptable accuracy verification method must be developed and certified by a licensed engineer or surveyor from a registered surveying firm in the state the survey is performed. Survey horizontal data must be based on the North American Datum of 1983 (NAD83), provided in geographic latitude and longitude coordinates (degrees, minutes, seconds to the hundredth of a second). The site elevation must be based on the current Vertical Datum for the State or Territory. The horizontal and vertical datums will need to be identified on the survey. The survey must include the plus or minus accuracy required by the FPT, as well as the signature of the engineer/surveyor and the appropriate seal.

3. Determination – A final determination based on improved accuracy must not be issued until after the certified survey is received and evaluated.

4. Survey Information Distribution – When the certified survey is received, OEG personnel must ensure that the survey information is uploaded to the Documents Section in the aeronautical study. The FPT personnel and Obstacle Data Team will review the survey in the aeronautical study Documents Section.

6-3-10. EVALUATING EFFECT ON AIR NAVIGATION AND COMMUNICATION FACILITIES

a. The FAA is authorized to establish, operate, and maintain air navigation and communications facilities and to protect such facilities from interference. During evaluation of structures, factors that may adversely affect any portion or component of the NAS must be considered. Since an electromagnetic interference potential may create adverse effects as serious as those caused by a physical penetration of the airspace by a structure, those effects must be identified and stated. Proposals will be handled, when appropriate, directly with FCC through Spectrum Assignment and Engineering Services.

b. Technical operations services personnel must evaluate notices to determine if the structure will affect the performance of existing or proposed NAS facilities. The study must also include any plans for future facilities, proposed airports, or improvements to existing airports.

c. The physical presence of a structure and/or the electromagnetic signals emanating or reflecting there from may have a substantial adverse effect on the availability, or quality of navigational and communications signals, or on air traffic services needed for the safe operation of aircraft. The following general guidelines are provided to assist in determining the anticipated interference.

1. Instrument Landing System (ILS) – Transmitting antennas are potential sources of electromagnetic interference that may effect the operation of aircraft using an ILS facility. The antenna height, radiation pattern, operating frequency, effective radiated power (ERP), and its proximity to the runway centerline are all factors contributing to the possibility of interference.

Normally, any structure supporting a transmitting antenna within the established localizer and/or glide-slope service volume area must be studied carefully. However, extremes in structure height, ERP, frequency, and/or antenna radiation pattern may require careful study of structures up to 30 NM from the ILS frequency's protected service volume area.

(a) ILS Localizer. Large mass structures adjacent to the localizer course and/or antenna array are potential sources of reflections and/or re-radiation that may affect facility operation. The shape and intensity of such reflections and/or re-radiation depends upon the size of the reflecting surface and distance from the localizer antenna. The angle of incidence reflection in the azimuth plane generally follows the rules of basic optical reflection. Normally, in order to affect the course, the reflections must come from structures that lie in or near the on-course signal. Large mass structures of any type, including metallic fences or powerlines, within plus/minus 15 degrees of extended centerline up to 1 NM from the approach end of the runway and any obstruction within 500 feet of the localizer antenna array must be studied carefully. (Refer to FAA Order 6750.16, Siting Criteria for Instrument Landing Systems).

(b) ILS Glide Slope. Vertical surfaces within approximately 1,000 feet of the runway centerline and located up to 3,000 feet forward of the glide slope antenna can cause harmful reflections. Most interference to the glide slope are caused by discontinuities in the ground surface, described approximately as a rectangular area 1,000 feet wide by 5,000 feet long, extending forward from the glide slope antenna and centered at about the runway centerline. Discontinuities are usually in the form of rough terrain or buildings (refer to FAA Order 6750.16, Siting Criteria for Instrument Landing Systems).

2. Very High Frequency Omni-Directional Radio Range and Tactical Air Navigation Aid (VOR/TACAN). Usually, there should be no reflecting structures or heavy vegetation (trees, brush, etc.) within a 1,000 foot radius of the VOR or the TACAN antenna. Interference may occur from large structures or powerlines up to 2 NM from the antenna. Wind turbines are a special case, in that they may cause interference up to 8 NM from the antenna.

(Refer to FAA Order 6820.10, VOR, VOR/DME, and TACAN Siting Criteria).

3. Air Route Surveillance Radar/Airport Surveillance Radar (ARSR/ASR). Normally, there should be no reflecting structures within a 1,500-foot radius of the radar antenna. In addition, large reflective structures up to 3 NM from the antenna can cause interference unless they are in the “shadow” of topographic features. Wind turbines are a special case, in that they may cause interference up to the limits of the radar line of site.

4. Air Traffic Control Radar Beacon (ATCRB). The effects encountered due to reflections of the secondary radar main lobe are more serious than those associated with primary radar. Therefore, it is necessary to ensure that no large vertical reflecting surface penetrates a 1,500-foot radius horizontal plane located 25 feet below the antenna platform. In addition, interference may occur from large structures up to 12 miles away from the antenna. This distance will depend on the area of the reflecting surface, the reflection coefficient of the surface, and its elevation with respect to the interrogator antenna. (Refer to FAA Order 6310.6, Primary/Secondary Terminal Radar Siting Handbook).

5. Directional Finder (DF). The DF antenna site should be free of structures that will obstruct line-of-sight with aircraft at low altitudes. The vicinity within 300 feet of the antenna should be free of metallic structures which can act as re-radiators.

6. Communication Facilities. Minimum desirable distances to prevent interference problems between communication facilities and other construction are:

(a) 1,000 feet from power transmission lines (other than those serving the facility) and other radio or radar facilities.

(b) 300 feet from areas of high vehicle activity such as highways, busy roads, and large parking areas.

(c) One (1) NM from commercial broadcasting stations (e.g., FM, TV).

7. Approach Lighting System. No structure, except the localizer antenna, the localizer far field monitor antenna, or the marker antenna must protrude above the approach light plane. For approach light plane clearance purposes, all roads,

highways, vehicle parking areas, and railroads must be considered as vertical solid structures. The clearance required above interstate highways is 17 feet; above railroads, 23 feet; and for all other public roads, highways, and vehicle parking areas, 15 feet. The clearance required for a private road is 10 feet or the highest mobile structure that would normally use the road, which would exceed 10 feet. The clearance for roads and highways must be measured from the crown of the road; the clearance for railroads must be measured from the top of the rails. For vehicle parking areas, clearance must be measured from the average grade in the vicinity of the highest point. Relative to airport service roads substantial adverse effect can be eliminated if all vehicular traffic is controlled or managed by the air traffic control facility. A clear line-of-sight is required to all lights in the system from any point on a surface, one-half degree below the aircraft descent path and extending 250 feet each side of the runway centerline, up to 1,600 feet in advance of the outermost light in the system. The effect of parked or taxiing aircraft must also be considered when evaluating line-of-sight for approach lighting systems.

8. Visual Approach Slope Indicator (VASI)/Precision Approach Path Indicator (PAPI). No structures or obstructions must be placed within the clearance zone for the particular site involved or the projected visual glide path.

NOTE—

VASI and PAPA now fall under the heading of VGSI.

9. Runway End Identifier Lights (REIL). No structures or obstructions must be placed within the established clearance zone.

d. Factors that modify the evaluation criteria guidelines require consideration. Some facility signal areas are more susceptible to interference than others. The operational status of some signals may already be marginal because of existing interference from other structures. In addition, the following characteristics of structures must be considered:

1. The higher the structure's height is in relation to the antenna, the greater the chance of interfering reflections. Any structure subtending a vertical angle greater than one degree from the facility is usually cause for concern. Tall structures, such as radio towers and grain elevators, can interfere from distances greater than those listed in the general criteria.

2. The type of construction material on the reflecting surface of the structure is a factor, with nonmetallic surfaces being less troublesome than metallic or metallic impregnated glass.

3. Aircraft hangars with large doors can be a special problem because the reflecting surface of the hangar varies appreciably with changes in the position of the doors.

4. Interference is usually caused by mirror reflections from surfaces on the structure. Orientation of the structure therefore plays an important part in the extent of the interference. Reflections of the largest amplitude will come from signals striking a surface perpendicular to the signals. Signals striking a surface at a shallow angle will have a smaller amplitude.

e. Air traffic personnel must request technical operations services personnel to assist them in discussions with sponsors to explore alternatives to resolve the prospective adverse effects to facilities. These may involve design revisions, relocation, or reorientation depending on the character of the construction and facility involved.

f. Attempt to resolve electromagnetic interference (EMI) before issuing a hazard determination. Notify the sponsor by letter (automated DPH letter) that the structure may create harmful EMI and include in the letter the formula and values that were applied, the specific adverse effects expected, and an offer to consider alternatives. Provide the sponsor, as well as the FAA, ample time to exhaust all available avenues for positive resolution. The intent of this process is to allow the sponsor adequate time to consider the problems and the alternatives before a decision is rendered by the issuance of the FAA determination. Follow these guidelines in all situations where harmful EMI is projected by the study.

6-3-11. EVALUATING PLANNED OR FUTURE AIRPORT DEVELOPMENT PROGRAMS

The national system of airports consists of public, civil, and joint-use airport facilities considered necessary to adequately meet the anticipated needs of civil aeronautics. Airport Planning and Programming Offices are the most accurate sources of up-to-date information on airport development plans. Consequently, Airports personnel are expected to

extensively review structures in reference to the safe and orderly development of airport facilities, including what development will realistically be accomplished within a reasonable time. Areas of consideration in accomplishing this responsibility are:

a. **Future Development of Existing Airports.** A detailed review in this area requires looking at current planned airport projects, national airport plan data, and land-use planning studies in the vicinity of the structure. The results of the study forwarded to air traffic must include appropriate comments regarding the extent of Federal aid, sponsor airport investments, the airport owner's obligations in existing grant-in-aid agreements, and anticipated aeronautical activity at the airport and in the general area. If a structure would adversely impact an airport's efficiency, utility, or capacity, the responsible Airports Office should document this impact in its evaluation. Comments should include recommended new location(s) for the structure as appropriate.

b. **New Airport Development.** When a structure requiring notice under Part 77 and any new airport development are both in the same vicinity, Airports personnel must study the interrelationship of the structure and the airport. Additionally, supplemental information on the proposed airport site must be furnished to the OEG. If a substantial adverse effect is anticipated, Airports personnel must provide detailed comments and specific recommendations for mitigating the adverse effects.

6-3-12. EVALUATING TEMPORARY CONSTRUCTION

a. **Temporary Construction Equipment.** Construction of structures normally requires use of temporary construction equipment that is of a greater height than the proposed structure. Appropriate action is necessary to ensure that the temporary construction equipment does not present a hazard to air navigation. It is not possible to set forth criteria applicable to every situation; however, the following action examples may help to minimize potential problems:

1. If use of the temporary construction equipment is on an airport, it may be necessary to negotiate with airport managers/owners to close a runway, taxiway, temporarily move a runway threshold, or take other similar action.

2. Negotiate with equipment operators to raise and lower cranes, derricks, or other construction

equipment when weather conditions go below predetermined minimums as necessary for air traffic operations or as appropriate for the airport runways in use.

3. Control the movement of construction vehicle traffic on airports.

4. Adjust minimum IFR altitudes or instrument procedures as necessary to accommodate the construction equipment if such action will not have serious adverse effects on aeronautical operations.

5. Request that the temporary construction equipment be properly marked and/or lighted if needed.

b. Temporary Structures – OE notices for temporary structures are processed in the same manner as a permanent structure, but require special consideration in determining the extent of adverse effect. This is especially true of structures such as cranes and derricks that may only be at a particular site for a short time period. As a general policy, it is considered in the public interest to make whatever adjustments necessary to accommodate the temporary structure of 30 days or less if there is no substantial adverse affect on aeronautical operations or procedures. However, this policy does not apply if the aeronautical study discloses that the structure would be a hazard to aviation. Reasonable adjustments in aeronautical operations and modifications to the temporary structure should be given equal consideration.

6-3-13. CONSIDERING SHIELDING

Shielding as described below should not be confused with notice criteria as stated in Section 77.9(e).

a. Consideration. Shielding is one of many factors that must be considered in determining the physical effect a structure may have upon aeronautical operations and procedures. Good judgment, in addition to the circumstances of location and flight activity, will influence how this factor is considered in determining whether proposed or existing structures would be physically shielded.

b. Principle. The basic principle in applying the shielding guidelines is whether the location and height of the structures are such that aircraft, when operating with due regard for the shielding structure, would not collide with that structure.

c. Limitations. Application of the shielding effect is limited to:

1. The physical protection provided by existing natural terrain, topographic features, or surface structures of equal or greater height than the structure under study; and

2. The structure(s) providing the shielding protection is/are of a permanent nature and there are no plans on file with the FAA for the removal or alteration of the structure(s).

d. Guidelines. Any proposed construction of or alteration to an existing structure is normally considered to be physically shielded by one or more existing permanent structure(s), natural terrain, or topographic feature(s) of equal or greater height if the structure under consideration is located:

1. Not more than 500 feet horizontal distance from the shielding structure(s) and in the congested area of a city, town, or settlement, provided the shielded structure is not located closer than the shielding structures to any heliport or airport located within 5 miles of the structure(s).

2. Such that there would be at least one such shielding structure situated on at least three sides of the shielded structure at a horizontal distance of not more than 500 feet.

3. Within the lateral dimensions of any runway approach surface but would not exceed an overall height above the established airport elevation greater than that of the outer extremity of the approach surface, and located within, but would not penetrate, the shadow plane(s) of the shielding structure(s).

e. OEG must coordinate with FPT before applying shielding criteria for precision approach surface penetrations.

NOTE-

See FIG 6-3-7 and FIG 6-3-12.

6-3-14. CONSIDERING SHADOW PLANE

The term “shadow plane” means a surface originating at a horizontal line passing through the top of the shielding structure at right angles to a straight line extending from the top of the shielding structure to the end of the runway. The shadow plane has a width equal to the projection of the shielding structure’s width onto a plane normal to the line extending from the top and center of the shielding structure to the

midpoint of the runway end. The shadow plane extends horizontally outward away from the shielding structure until it intersects or reaches the end of one of the imaginary approach area surfaces; see FIG 6-3-13, FIG 6-3-14, and FIG 6-3-15.

6-3-15. RECOMMENDING MARKING AND LIGHTING OF STRUCTURES

a. STANDARDS. FAA standards, procedures, and types of equipment specified for marking and lighting structures are presented in AC 70/7460-1, Obstruction Marking and Lighting. These standards provide a uniform means to indicate the presence of structures and are the basis for recommending marking and lighting to the public. These standards are the minimum acceptable level of conspicuity to warn pilots of the presence of structures. They must also apply when Federal funds are to be expended for the marking and lighting of structures.

b. AERONAUTICAL STUDY. All aeronautical studies must include an evaluation to determine whether obstruction marking and/or lighting are necessary and to what extent. The entire structure or complex, including closely surrounding terrain and other structures, must be considered in recommending marking and lighting. A subsequent study may indicate a need to change an earlier determination by recommending marking and/or lighting when such recommendation was not made in the original study or, in some cases, after a determination was issued.

1. Proposed Structures. A change in runway length or alignment, a new airport development project, a change in aeronautical procedures, or other similar reasons may be cause for additional study of proposed structures to determine whether marking and/or lighting are now appropriate even when not recommended in the original study.

2. Existing Structures. A marking and/or lighting recommendation may be made at any time. In making the recommendation consider changes that have occurred in the vicinity of the structure since the initial determination was made and include such factors as increased aircraft activity, the closing of an airport, changes in IFR and VFR routes, and shielding by taller structures.

c. RECOMMENDATIONS. Recommend the marking and/or lighting standard most appropriate

for the height and location of any temporary or permanent structure that:

1. Exceeds 200 feet in overall height above ground level at its site or exceeds any obstruction standard contained in Part 77, Subpart C, unless an aeronautical study shows the absence of such marking and/or lighting will not impair aviation safety.

2. Is not more than 200 feet AGL, or is not identified as an obstruction under the standards of Part 77, Subpart C, but may indicate by its particular location a need to be marked or lighted to promote aviation safety.

d. PARTIAL MARKING AND/OR LIGHTING. Omitting marking and/or lighting on the structure's bottom section; for example, the lowest 200 feet of a tall structure should be discouraged unless that part of the structure is shielded. Marking and lighting standards are based on a total system configuration and are only effective when used as intended. Therefore, the structure and its location must be given careful consideration before recommending partial marking and/or lighting.

e. OMISSION/DELETION OF MARKING AND/OR LIGHTING. When recommending that marking and/or lighting be omitted because the structure is sufficiently conspicuous by its shape, size, and/or color, include a judgment that the structure would not blend into any physical or atmospheric background that may reasonably be expected in the vicinity.

f. EXCESSIVE MARKING AND/OR LIGHTING. Recommend specific advisory circular chapters, paragraphs, and, when appropriate, specific intensities that address the minimum marking and/or lighting standards for safety. Recommendation of specific chapters allow for the use of those chapters only, although they may contain references to other chapters. If the sponsor insists on or the FAA finds that high intensity white lights would not be objectionable, indicate in the determination that the FAA does not object to increased conspicuity provided the lighting is in accordance with guidelines of AC 70/7460-1, Obstruction Marking and Lighting.

g. VOLUNTARY MARKING AND/OR LIGHTING. When it is determined not necessary for aviation safety, marking and/or lighting may be accomplished on a voluntary basis. However,

marking and/or lighting should not be a condition of the determination, but instead, it must be recommended that, if voluntary, marking and/or lighting be installed and maintained in accordance with AC 70/7460-1.

h. HIGH AND MEDIUM INTENSITY WHITE OBSTRUCTION LIGHTING SYSTEMS:

1. High intensity lighting systems should not be recommended for structures 700 feet above ground level or less, except when an aeronautical study shows otherwise. This does not apply to catenary support structures.

2. Use caution in recommending the use of high or medium intensity white obstruction lighting systems, especially in a populated area. Aircraft operations can be adversely affected where strobe-lighted structures are located in an area of limited visual cues. These situations can contribute to spatial disorientation when pilots are maneuvering in minimum visibility conditions. Marine or surface vessels and other vehicles, especially on nearby elevated roadways, could also experience operational difficulties from strobe lights. External shielding may minimize adverse effects. Examples are:

(a) At locations within the airport/heliport environment in a sparsely lighted rural setting.

(b) At an offshore installation.

3. Dual lighting systems should be considered when a structure is located in or near residential areas, especially in hilly terrain where some houses are higher than the base of the structure.

i. LIGHTED SPHERICAL MARKERS. Lighted spherical markers are available for increased night conspicuity of high-voltage (69kv or greater) transmission-line catenary wires. These markers should be recommended for increased night conspicuity for such wires when located near airports, heliports, across rivers, canyons, lakes, etc. Consider the following when recommending lighted spherical markers: aeronautical activity, nighttime operations, low level operations, local weather conditions, height of wires, length of span, etc. If the support structures are to be lighted, also consider lighting the catenary wires. Installation, size, color, and pattern guidelines can be found in Advisory

Circular 70/7460-1, Obstruction Marking and Lighting.

j. DEVIATIONS AND MODIFICATION TO MARKING AND/OR LIGHTING. When the sponsor or owner of a structure requests permission to deviate from or modify the recommended marking and/or lighting, an appropriate aeronautical study should be made to determine whether the deviation/modification is acceptable, and/or whether the recommended marking and/or lighting should be retained.

1. A deviation refers to a change from the standard patterns, intensities, flashing rates, etc. A marking and lighting deviation is considered to be marking patterns or colors and lighting patterns, intensities, flashing rates, or colors other than those specified in AC 70/7460-1.

(a) Examples of deviations are contained in the AC 70/7460-1 and requests for deviations must be forwarded to the OEG to conduct an aeronautical study for the proposal. The results of the evaluation will be sent to the Team Manager for review.

(b) Deviations require final approval by the OEG Group Manager. The Team Manager will forward the results of the study to the OEG Group Manager for approval or denial and the OEG must effect all coordination necessary for issuing the decision.

2. The OEG may approve a request for a modified application of marking and/or lighting. Examples of modified applications may be found in AC 70/7460-1. A modified application of marking and lighting refers to the amount of standard marking and/or lighting such as:

(a) Placing the standard marking and/or lighting on only a portion of a structure.

(b) Adding marking and/or lighting in addition to the standard marking and lighting to improve the conspicuity of the structure;

(c) Reducing the amount of standard marking and/or lighting to the extent of eliminating one or the other as may be considered appropriate.

(d) Adjusting the standard spacing of recommended intermediate light levels for ease of installation and maintenance as considered appropriate.

6-3-16. NEGOTIATIONS

Negotiations must be attempted with the sponsor to reduce the structure's height so that it does not exceed obstruction standards, mitigate any adverse effects on aeronautical operations, air navigation and/or communication facilities, or eliminate substantial adverse effect. If feasible, recommend collocation of the structure with other structures of equal or greater heights. Include in the aeronautical study file and determination a record of all the negotiations attempted and the results. If negotiations result in the withdrawal of the OE notice, the obstruction evaluation study may be terminated. Otherwise, the obstruction evaluation must be continued to its conclusion.

6-3-17. CIRCULARIZATION

a. Circularizing a public notice allows the FAA to solicit information that may assist in determining what effect, if any, the proposed structure would have to the navigable airspace. The OEG determines when it is necessary to distribute a public notice.

1. If a structure first exceeds obstruction standards, then a public notice should be circularized if:

- (a) An airport is affected;
- (b) There is possible VFR effect; or
- (c) There is a change in aeronautical operations or procedures.

2. Circularization is not necessary for the following types of studies:

- (a) A reduction in the height of an existing structure.
- (b) A structure that would be located on a site in proximity to another previously studied structure, would have no greater effect on aeronautical operations and procedures, and the basis for the determination issued under the previous study could be appropriately applied.

(c) A proposed structure replacing an existing or destroyed structure, that would be located on the same site and at the same or lower height as the original structure, and marked and/or lighted under the same provisions as the original structure (this does not preclude a recommendation for additional marking/lighting to ensure conspicuity).

(d) A proposed structure that would be in proximity to, and have no greater effect than, a previously studied existing structure, and no plan is on file with the FAA to alter or remove the existing structure.

(e) A structure that would be temporary and appropriate temporary actions could be taken to accommodate the structure without an undue hardship on aviation.

(f) A structure found to have substantial adverse effect based on an internal FAA study.

(g) A structure that would exceed Part 77.17 (a)(2) and would be outside the traffic pattern.

(h) A structure that would affect IFR operations but would only need FAA comment. For instance a structure that:

- (1) Would raise a MOCA, but not a MEA.
- (2) Would raise a MVA.
- (3) Would raise a MIA.

3. Circularization for existing structures will be determined on a case-by-case basis.

b. Each public notice (automated letter CIR) must contain:

1. A complete, detailed description of the structure including, as appropriate, illustrations or graphics depicting the location of the structure:

(a) On-airport studies. Use airport layout plans or best available graphic.

(b) Off-airport studies. Use the appropriate aeronautical chart. Additional illustrations may be included, as necessary.

2. A complete description of the obstruction standards that are exceeded, the number of feet by which the structure exceeds the standards.

3. An explanation of the potential effects of the structure in sufficient detail to assist interested persons in formulating comments on how the structure would affect aeronautical operations.

4. A date by which comments are to be received. The date established should normally allow interested persons 30 days in which to submit comments, but a shorter comment period may be established depending upon circumstances.

c. Public notices should be distributed to those who can provide information needed to assist in

evaluating the aeronautical effect of the structure. As a minimum, the following governmental agencies, organizations, and individuals should be included on distribution lists due to their inherent aeronautical interests:

- 1.** The sponsor and/or his representative.
- 2.** All known aviation interested persons and groups such as state, city, and local aviation authorities; airport authorities; various military organizations within the DOD; flying clubs; national, state, and local aviation organizations; flight schools; fixed base operators; air taxi, charter flight offices; and other organizations or individuals that demonstrate a specific aeronautical interest such as county judges and city mayors.
- 3.** Airport owners as follows:
 - (a)** All public-use airports within 13 NM of the structure.
 - (b)** All private-use airports within 5 NM of the structure.
- 4.** The specific FAA approach facility, en route facility (ARTCC), and Flight Service Station (FSS) in whose airspace the structure is located.
- 5.** Flight Standards.
- 6.** An adjacent regional/service area office if the structure is within 13 NM of the regional state boundary.
- 7.** As appropriate, state and local authorities; civic groups; organizations; and individuals who do not have an aeronautical interest, but may become involved in specific aeronautical cases, must be included in the notice distribution, and given supplemental notice of actions and proceedings on a case-by-case basis. Those involved should clearly understand that the public notice is to solicit

aeronautical comments concerning the physical effect of the structure on the safe and efficient use of airspace by aircraft.

8. A proposed structure that penetrates the 40:1 by 35 feet or more, departure slope must be circularized to the following:

- (a)** Aircraft Owners and Pilots Association;
 - (b)** National Business Aviation Association;
 - (c)** Regional Air Line Association;
 - (d)** Department of Defense;
 - (e)** Air Transport Association;
 - (f)** Air Line Pilots Association; and
 - (g)** Other appropriate persons and organizations listed in this section.
- d.** Document and place in the obstruction evaluation file the names of each person and/or organizations to which public notice was sent. Reference to a distribution code, mailing list, or other evidence of circularization is sufficient provided a printout or list of each coded distribution is maintained for future reference. Also record the time period during which each printout or list is used. The retention schedule is listed in Order 1350.15, Records Organization, Transfer, and Destruction Standards.
- e.** Consider only valid aeronautical objections or comments in determining the extent of adverse effect of the structure. Comments of a non-aeronautical nature are not considered in obstruction evaluation as described in Part 77.
- f.** If the sponsor agrees to revise the project so that it does not exceed obstruction standards and would have no adverse effect, cancel the public notice, advise interested parties, as necessary, revise the obstruction evaluation study, and proceed as appropriate.

Chapter 7. Determinations

Section 1. Issuing Determinations

7-1-1. POLICY

All known aeronautical facts revealed during the obstruction evaluation must be considered when issuing an official FAA determination. The determination must be a composite of all comments and findings received from interested FAA offices. Should there be a disagreement in the findings, the disagreement must be resolved before issuance of a determination. The basis for all determinations must be on the aeronautical study findings as to the extent of adverse physical or electromagnetic interference effect upon navigable airspace or air navigation facilities. Evidence of adverse effect alone, either physical or electromagnetic, is not sufficient justification for a determination of hazard. However, a finding of a substantial physical or electromagnetic adverse effect normally requires issuance of a determination of hazard.

7-1-2. RESPONSIBILITY

a. OEG is responsible for issuing determinations.

b. If any division objects to a structure that does not exceed Part 77, and/or is not found to have a physical or electromagnetic radiation effect on the operation of air navigation facilities, an advisory statement may be submitted to OEG for inclusion in the determination. Examples would be:

1. Objections identifying potential airport hazards based on airport design criteria such as a structure within the runway protection zone (RPZ).

2. Objections identifying potential airport hazards such as structures which may not be above ground level (for example, landfills, retention ponds, and waste recycling areas) but may create an environment that attracts birds and other wildlife.

3. When the Airports Division or the Airports District Office (ADO) determines a Wildlife Hazard Assessment is required per Advisory Circular 150/5200-33, the Airports Division or ADO will provide the contact information for the appropriate US Department of Agriculture (USDA) or private

biologist meeting the education and experience requirements set forth in the current Advisory Circular 150/5200-36 in the divisional response in the aeronautical study. This information will be incorporated by the OEG in the Notice of Preliminary Findings letter to the proponent.

7-1-3. DETERMINATIONS

Determinations issued by the FAA receive widespread public distribution and review. Therefore, it is essential that each determination issued is consistent in form and content to the extent practicable. To facilitate this and to achieve economy in clerical handling, automated correspondence through the OE/AAA automation program must be used in lieu of previously approved FAA forms. Determinations must be issued as follows:

a. Issue a “Does Not Exceed” (automated DNE letter) determination if the structure does not exceed obstruction standards, does not have substantial adverse physical or electromagnetic interference effect upon navigable airspace or air navigation facilities, and would not be a hazard to air navigation.

b. Issue an “Exceeds But Okay” (automated EBO letter) determination if the structure exceeds obstruction standards but does not result in a substantial adverse effect, circularization was not necessary, and meets one of the following conditions:

1. The structure is temporary;

2. The structure is existing; or

3. The structure involves an alteration with no physical increase in height or change of location such as a proposed decrease in height or proposed side mount.

NOTE-

The significant difference between an EBO determination and a “Determination of No Hazard to Air Navigation” (DNH) is that the EBO determination does not allow for petition rights.

c. Issue a “Notice of Preliminary Findings” (automated NPF letter) if the structure exceeds obstruction standards and/or has an adverse effect

upon navigable airspace or air navigation facilities and resolution or further study is necessary to fully determine the extent of the adverse effect. The NPF facilitates negotiation and is useful in preserving navigable airspace. Normally, the FAA should not automatically initiate further study (including circularization) without a request to do so by the sponsor. The intent of the NPF is to inform the sponsor of the initial findings and to attempt resolution. If the sponsor fails to contact the FAA after receiving the notice, terminate the case. No further action by the FAA is required unless the sponsor refiles. If negotiation is successful, and resolution is achieved, or further study is completed, an appropriate subsequent determination should be issued.

d. Issue a “Determination of No Hazard” (DNH) if the structure exceeds obstruction standards but does not result in a substantial adverse effect.

e. Issue a “Determination of Hazard” (DOH) if the structure would have or has a substantial adverse effect; negotiations with the sponsor have been unsuccessful in eliminating the substantial adverse effect; and the affected aeronautical operations and/or procedures cannot be adjusted to accommodate the structure without resulting in a substantial adverse effect. The obstruction evaluation may or may not have been circularized.

7-1-4. DETERMINATION CONTENT AND OPTIONS

Use the following items, as appropriate, to ensure that the necessary information is included in each determination:

a. All no hazard determinations must address or include:

1. FULL DESCRIPTION. A full description of the structure, project, etc., including all submitted frequencies and ERP must be included. Use exact information to clearly identify the nature of the project (for example, microwave antenna tower; FM, AM, or TV antenna tower; suspension bridge; four-stack power plant; etc.).

2. LATITUDE, LONGITUDE, AND HEIGHT. Specify the latitude, longitude, and height(s) of each structure. When an obstruction evaluation study concerns an array of antennas or other multiple-type

structures, specific information on each structure should be included.

3. MARKING AND/OR LIGHTING. A marking and/or lighting recommendation must be a condition of the determination when aeronautical study discloses that the marking and/or lighting are necessary for aviation safety.

(a) If the OE notice was for an existing structure with no physical alteration to height or location (for example, a side mount or an editorial correction to coordinates and/or elevations due to more accurate data), and the structure was previously studied, the recommended marking and/or lighting may be in accordance with the prior study.

(b) If the notice is for a new structure, a physical alteration (height/location) to an existing structure, or an existing structure that did not involve a physical alteration but was not previously studied, the recommended marking and/or lighting must be in accordance with appropriate chapters of the current AC 70/7460-1, Obstruction Marking and Lighting.

(c) If the OE notice was for a change in marking and/or lighting of a prior study whether the structure exists or not yet built, the recommended marking and/or lighting must be in accordance with appropriate chapters of the current AC 70/7460-1.

(1) If it is an existing FCC-licensed structure, and the requested marking and/or lighting change is recommended, notify the sponsor to apply to the FCC for permission to make the change. Use the following specific language: “If the structure is subject to the authority of the Federal Communications Commission, a copy of this letter must be forwarded to them and application should be made to the FCC for permission to change the marking and/or lighting as requested.” This language is available in the automated letters.

(2) If the marking and/or lighting change involves high intensity white obstruction lights on an FCC-licensed structure, the sponsor must be notified that the FCC requires an environmental assessment. Use the following specific language: “FCC licensees are required to file an environmental assessment with the Commission when seeking authorization for the use of the high intensity flashing white lighting system on structures located in residential neighborhoods, as defined by the applicable zoning law.”

(3) If it is an existing structure and the requested marking and/or lighting change is

recommended, the sponsor must be required to notify Aeronautical Information Services (AJV-A) directly when the change has been accomplished. Use the following specific language: "So that aeronautical charts and records can be updated, please notify Aeronautical Information Services in writing when the new system is installed and operational. Notification should be addressed to: Aeronautical Information Services, AJV-A, 6500 South MacArthur Blvd, Oklahoma City, Oklahoma 73169. The sponsor may also indicate marking and/or lighting change with a Supplemental Notice, 7460-2 Actual Construction Notice, submitted electronically using the OEAAA website.

(d) If it is determined that marking and/or lighting are not necessary for aviation safety, marking and/or lighting may be accomplished on a voluntary basis. However, marking and/or lighting should not be a condition of the determination. Instead, it must be recommended that voluntary marking and/or lighting be installed and maintained in accordance with AC 70/7460-1. Use specific language as follows: "Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking and/or lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory Circular 70/7460-1."

4. SUPPLEMENTAL NOTICE. FAA Form 7460-2, Notice of Actual Construction or Alteration, Part 2, is the authorized form for sponsors to report the start, completion, or abandonment of construction, and the dismantlement of structures. Furnish this form to each sponsor when supplemental notice is required. Each service area office must take action to ensure that their return address is correct before sending the form to the sponsor.

(a) When deemed necessary, request sponsors to complete and mail Part 1 of FAA Form 7460-2, to be received at least 10 days before the start of construction or alteration, when:

(1) An aeronautical procedure or minimum flight altitude will be affected (supplemental notice earlier than 10 days may be requested to permit adjustments).

(2) The construction will be in progress over an extended period of time.

(3) The structure will exceed 500 feet AGL and will be erected within a relatively short period of time, as in the case of a TV tower.

(b) In addition, submission by the sponsor of FAA Form 7460-2, must be required when the structure is a new construction or involves a proposed physical alteration, and:

(1) Is more than 200 feet above ground level (AGL).

(2) Is less than 200 feet AGL but exceeds obstruction standards, requires a change to an established FAA procedure or flight minimum, requires certified accuracy so as not to exceed minimums.

(3) The FAA deems it necessary for any other reason.

(c) The information submitted on FAA Form 7460-2 is used for:

(1) Charting obstructions to air navigation on aeronautical charts.

(2) Giving notice to airmen, when applicable, of the construction of obstructions.

(3) Changing affected aeronautical procedures and operations.

(4) Revising minimum flight altitudes.

(5) Updating the AeroNav Obstacle Digital File.

(d) Do not require supplemental notice for existing structures that do not involve a proposed physical alteration. Instead, directly communicate the known information to AeroNav and other relevant persons or organizations, as necessary.

5. EXPIRATION DATE. Include an expiration date, if applicable.

(a) Assign an expiration date to all determinations that involve new construction or alterations.

(1) Normally all determinations, whether FCC construction permit related or not, must be assigned an expiration date 18 months from the effective/issued date. In the case of determinations involving petition rights, the expiration must be 18 months from the final date of the determination.

(2) If circumstances warrant, an expiration date not to exceed 18 months should be assigned.

(b) The determination expires on the date prescribed unless:

(1) Extended, revised, or terminated by the issuing office.

(2) The construction is subject to the licensing authority of the FCC and an application for a construction permit has been filed as required by the FCC within six months of the date of the determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application. A request for extension must be postmarked or delivered at least 15 days prior to expiration.

(c) If the date of a final determination is changed because of a petition or review, a new expiration date will be specified as appropriate.

(d) Determinations involving existing structures that do not involve a proposed physical alteration must not contain an expiration date.

6. SPECIAL CONDITIONS. Any condition upon which a no hazard determination is based must be specified in the determination. When FAA Form 7460-2 is requested, a condition of the determination will be for the sponsor to keep the FAA informed of the project's status. Use the following specific language: "As a result of this structure being critical to flight safety, it is required that the FAA be kept informed as to the status of the project. Failure to respond to periodic FAA inquiries could invalidate this determination."

7. SPECIAL STATEMENTS. To help prevent potential problems, all determinations must include the following statements:

(a) "This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any change in coordinates, heights, frequency(ies) or use of greater power will void this determination. Any future construction or alteration, including increase in heights, power, or the addition of other transmitters, requires separate notice to the FAA."

(b) "This determination does include temporary construction equipment, such as cranes, derricks, etc., which may be used during the actual construction of the structure. However, this equipment must not exceed the overall heights as

indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA."

(c) "This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, state, or local government body."

8. ADVISORIES. Determinations may require advisory statements (available in the automated letters) to notify sponsors of potential issues.

(a) Issues pertaining to noise can be addressed as a statement in the determination with the following language: "The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport."

(b) When requested by the military, issues pertaining to military training areas/routes can be addressed in a determination with the following language: "While the structure does not constitute a hazard to air navigation, it would be located within or near a military training area and/or route."

(c) Issues pertaining to a runway protection zone can be addressed in the determination as follows: "While the structure does not constitute a hazard to air navigation, it would be located within the Runway Protection Zone (RPZ) of the airport/runway. Structures, which will result in the congregation of people within an RPZ, are strongly discouraged in the interest of protecting people and property on the ground. In cases where the airport owner can control the use of the property, such structures are prohibited. In cases where the airport owner exercises no such control, advisory recommendations are issued to inform the sponsor of the inadvisability of the project from the standpoint of safety to personnel and property."

(d) Issues pertaining to municipal solid waste landfills can be addressed in the determination as follows:

"The FAA has identified the need for an analysis of potential wildlife hazards to aircraft as described in Advisory Circular 150/5200-33, Hazardous Wildlife Attractants on or Near Airports, to be accomplished for this proposal in accordance with 40 Code of Federal Regulation (CFR) 258 section 258.10.

Owners or operators of new, existing, and lateral expansions of Municipal Solid Waste Landfill (MSWLF) units that are located within 10,000 feet of any airport runway end used by turbojet aircraft, or within 5,000 feet of any airport runway end used by only piston-type aircraft, must demonstrate the MSWLF units design and operation do not pose a bird hazard to aircraft.

When the services of a wildlife damage management biologist are required, the FAA recommends that land use developers contact a consultant specializing in wildlife damage management or the appropriate United States Department of Agriculture (USDA) State Director of Wildlife Services. The USDA's state offices can be found on their website: (<https://www.aphis.usda.gov>)."

(e) Issues pertaining to other proposals that may create an environment that attracts birds and other wildlife can be addressed in the determination as follows:

"The proposal has the potential to attract hazardous wildlife on or near a public-use airport. The FAA recommends, and local code may require, adherence to guidance in Advisory Circular 150/5200-33, Hazardous Wildlife Attractants on or Near Airports. The FAA encourages the sponsor to coordinate with the local airport owner/operator prior to any construction at the site and to verify that no potential exists to attract hazardous wildlife on or near the public-use airport."

b. In addition to the above items, a DNH must also include or address:

1. Obstruction standards exceeded.
2. Effect on VFR/IFR aeronautical departure/arrival and en route operations, procedures, and minimum flight altitudes.
3. Effect on existing public-use airports and aeronautical facilities.
4. Effect on all planned public-use airports and aeronautical facilities.
5. Cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures.

6. Information and comments received as a result of circularization, informal airspace meetings, and negotiations.

7. Reasons and basis for the determination that the structure will not be a hazard to air navigation and any accommodations necessary by aeronautical users or sponsors.

8. Consideration given to any valid aeronautical comments received during the aeronautical study. The official FAA determination must be a composite of the comments and findings received from other interested FAA offices.

9. Conditions of the determination including recommendations for marking and/or lighting of a structure, changes in procedures and/or altitudes that are necessary to accommodate the structure. The "conditions" should include a statement that appropriate action will be taken to amend the effected procedure(s) and/or altitude(s) upon notification to the FAA by the sponsor prior to the start of construction or alteration.

10. Limitations, if any.

11. Petitioning information regardless of whether the structure is proposed or existing using the following specific language: "This determination is subject to review if an interested party files a petition that is received by the FAA (30 days from issued date). In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager, Rules and Regulations Group, Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591. This determination becomes final on [40 days from issued date] unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review."

c. A DOH must include or address:

1. FULL DESCRIPTION. A full description of the structure, project, proposal, etc. including all submitted frequencies and ERP must be included. Use exact information to clearly identify the nature of the project. Use wording, such as microwave antenna tower, FM or AM antenna tower, suspension bridge, TV antenna tower, or four-stack power plant.

2. LATITUDE, LONGITUDE, AND HEIGHT. Specify the latitude, longitude, and height(s) of each

structure. When an obstruction evaluation study concerns an array of antennas or other multiple-type structures, specific information on each structure should be included.

3. BASIS FOR THE DETERMINATION. The reasons and basis for the determination must include the adverse effect of the proposal upon the safe and efficient use of the navigable airspace by aircraft and upon air navigation facilities. Also, state the reasons the affected aeronautical operations or the procedure cannot be adjusted to alleviate or eliminate the conflicting demands for the airspace. As a minimum, the determination must address the following:

- (a) Obstruction standards exceeded.
- (b) The effect on VFR/IFR aeronautical departure/arrival and en route operations, procedures, and the minimum flight altitudes effect on existing public-use airports and aeronautical facilities.
- (c) The effect on all planned public-use airports and aeronautical facilities on file with the FAA or for which the FAA has received adequate notice.
- (d) The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures.
- (e) Information and comments received as a result of circularization, informal airspace meetings and negotiations.
- (f) Reasons and basis for the determination as to why the structure would be a hazard to air navigation (for example, a clear showing of substantial adverse effect).

4. PETITIONING INFORMATION – Include petitioning information regardless of whether the structure is proposed or existing using the following specific language: “This determination is subject to review if an interested party files a petition on or before [30 days from issued date]. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager, Rules and Regulations Group, Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591. This determination becomes final on [40 days from issued date] unless a petition is timely filed. The

determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review.”

7-1-5. DETERMINATION DATES

a. ISSUED DATE – The issuance date of a determination is the date the determination is distributed.

b. PETITION DEADLINE – For determinations that involve petition rights, the deadline for receipt of petition must be 30 days from the date of issuance.

c. EFFECTIVE DATE –

1. The effective date of determinations that do not involve petition rights must be the date of issuance.

2. The effective date of determinations that involve petition rights, whether for existing or proposed structures, must be 40 days from the date of issuance provided a petition for review is not filed. If a petition for review is filed, the determination will not become final pending disposition of the petition.

NOTE–

The effective date and the issued date may or may not be the same. The effective date may also be referred to as the final date.

7-1-6. EXISTING STRUCTURES

A determination issued as a result of the study of an existing structure may be written in the following forms:

- a.** As a DOH or DNH.
- b.** As a formal letter outlining the effects of the structure and perhaps recommending to the sponsor that the structure be marked and/or lighted, specifying that it be reduced in height, or specifying that it be removed.
- c.** As an informal letter or staff study making an internal FAA recommendation.
- d.** As a formal letter to the FCC recommending the dismantling of an abandoned tower.

7-1-7. DISTRIBUTION OF DETERMINATIONS

A record of the distribution for each determination whether original, revised, extended, or affirmed must be maintained in the aeronautical study file. When

Section 2. Processing of Airport Proposals By Regional Airports Offices

11-2-1. PROPOSALS

Airport proposals received by any FAA office must be forwarded to the appropriate Airports Office for initial processing and study.

NOTE—

Notification under Part 157 is not required for projects on Federally-assisted airports.

a. General. The Airports Office, after receipt of a proposal, will check the information submitted for correctness, clarity, completeness, and proper detail. The Airports office will verify critical data or require proponents to verify any data deemed critical. The proponent may need to be contacted if insufficient information is submitted or if significant errors appear in the submission. The Airports Office must maintain a record by list, map, or other method so that the status of new proposals may be easily correlated with existing airports, airports under construction, or other airport proposals.

b. Establishment of New Airports. Initial review concerning the proposed construction of new airports must include but is not limited to the following:

- 1.** Determining conformance of the proposal with agency design criteria.

- 2.** Identifying the objects that exceed the obstruction criteria of Part 77.

- 3.** Anticipating the operational use of the airport, including the number and type of aeronautical operations and the number of based aircraft.

- 4.** Ascertaining whether the airport is for private or public use.

- 5.** Identifying runway and taxiway layout in relation to compass rose data, existing or proposed obstructions, or other airports.

- 6.** Identifying known or anticipated controversial aspects of the proposal.

- 7.** Identifying potential noise aspects.

- 8.** Identifying possible conflict with airport improvement and/or development or other agency plans. The Airports Division, in the NRA proposal processing, will identify all seaplane bases that may

be impacted by Part 157 proposals or other development on public use airports. If the airspace study reveals that a seaplane base is adversely impacted, the Airports Division will notify the seaplane base owner of the NRA proposal and the potential conflict.

- 9.** Obtaining runway threshold coordinates and elevations.

c. Alteration of Existing Airports – The nature and magnitude of an existing airport alteration will determine the extent of processing and analysis required. Alteration, such as new runway construction, runway realignment projects, runway extension; runway upgrading, change in status, such as VFR to IFR use, and widening of runways or taxiway/ramp areas normally require the same type of processing and study as that required for new airport construction proposals.

d. Deactivation and Abandonment of Airports:

- 1.** Airport owners/sponsors are required to notify the FAA concerning the deactivation, discontinued use, or abandonment of an airport, runway, landing strip, or associated taxiway. On partial or specific runway deactivation proposals, a description with a sketch or layout plan and the anticipated operational changes should be forwarded together with any other pertinent information needed to update agency records.

- 2.** When it is believed that an airport is abandoned or unreported and appropriate notification has not been received, the Airports Office, after making a reasonable effort to obtain such notification, must advise the air traffic office of the situation by memorandum. The memorandum should contain a statement that the airport is considered either abandoned or unreported. Forward a copy of the memorandum to the airport owner or sponsor, to AIM and to the Airport Safety Data Branch, AAS-330.

e. Construction safety plans are received as appropriate for Airport Improvement Program requests for aid and the Airports Regional Capital Improvement Program.

f. Other Airport Notices – Occasionally, an airport owner/sponsor will make alterations or changes to

the airport without filing notice in accordance with Part 157. Generally, this information will be obtained through the airport safety data program (FAA Form 5010) and after-the-fact. From a legal standpoint, this constitutes notice to the FAA and appropriate action is necessary. The Airports Office must initiate a study of such information received in the same manner as if the notice had been received under Part 157 requirements.

11-2-2. AIRPORT LAYOUT PLANS (ALP)

ALPs generally show the location, character, dimensions, details of the airport, and the work to be done. The extent of information needed for any specific airport development will vary depending on the scope and character of the project, plus the anticipated role and category of the airport. Detailed information on the development of ALPs is contained in AC 150/5070-6, Airport Master Plans, and AC 150/5300-13, Airport Design.

a. Non-Federally Assisted Airports. Airports personnel will take into consideration an ALP or plan on file in developing a determination with reference to the safe and efficient use of airspace.

b. Federally Assisted Airports. Projects at Federally assisted airports require review based on considerations relating to the safe and efficient utilization of airspace, factors affecting the control of air traffic, conformance with FAA design criteria, and Federal grant assurances or conditions of a Federal property conveyance. The product of this review is derived from analysis of information supplied in the ALP. A formal or tentative determination may be given depending on the complexity of the proposal or the timing of the request. The review and subsequent determination must be made as expeditiously as possible to facilitate processing of the project request. Normally a project is not placed under grant nor Federal property conveyed until a favorable determination is made and the ALP approved.

c. Extent of Review. A review is normally required for all proposals involving new construction or relocation of runways, taxiways, ramp areas, holding or run-up apron projects, airport and runway lighting and marking, fire and rescue building locations, and other projects affecting, or potentially affecting, the movement of aircraft. At all public-use airports, projects which conform to a previously

approved non-objectionable airport layout plan for the construction or resurfacing of existing airport paving, site preparation work, or paving to overlies existing unpaved landing strips may be omitted from the normal review process. For an airport that has a construction safety plan, the plan needs to undergo the review process with appropriate FAA offices (see AC 150/5370-2, Operational Safety On Airports During Construction).

11-2-3. NON-PART 157 PROPOSED CONSTRUCTION OR ALTERATION ON NON-OBLIGATED PUBLIC-USE AIRPORTS

Sponsors/proponents of non-Part 157 proposals for construction or alteration on public-use airports are required to file notice with the FAA in accordance with Part 77.13 (a)(5). The appropriate Airports Office will process these proposals in accordance with procedures established for Part 157 proposals. Generally, these proposals will be submitted on FAA Form 7460-1 along with appropriate drawings and necessary supporting documentation. The procedures contained in Part 2. of this order are not applicable to such proposals. However the information contained in Part 2. may be helpful to airports personnel in applying the obstructions standards of Sections 77.17, 77.19, 77.21, and 77.23.

11-2-4. FAA COORDINATION

Upon receipt of a Part 157 proposal or a change to an ALP, the appropriate Airports Office must assign an aeronautical study number, ensure that the proposal is complete and correct, review the proposal from an airport's planning viewpoint and the effect on airport programs, enter the proposal into the OE/AAA automation program, and forward a proposal package with comments to the appropriate FAA offices (e.g., air traffic, Flight Procedures Team, Flight Standards, and technical operations services offices) for processing. Other organizations to consider in the review process are (if applicable) the Airport Traffic Control Tower (ATCT), System Management Office (SMO), Security and Hazardous Materials Division, Military representative and Airports Certification Branch. Flight Standards or the Flight Standards District Office (FSDO) will be sent all Part 157 proposals for seaplane bases and heliports depending on regional preference. Comments will be provided either to the originating Airports Office or to its respective divisional offices depending on regional

procedures. Additional internal coordination must be accomplished, as appropriate, by the responsible division offices.

a. Part 157. Include a copy of the FAA Form 7480-1 and comments on the effect of existing or proposed man-made objects on file with the FAA, plus the effect of natural growth and terrain. Direct particular attention to, and comment on object proposals that would exceed the obstruction standards of Part 77. Also, comment if the review indicated a potential noise problem and, if applicable, the effect of the proposal on the safety of persons and property on the ground. Also, enclose, as appropriate, sketches and other data required for the aeronautical study and determination. Include a plot of the proposed runway alignments, associated taxiways or seaplane alignments, and any obstructions on U.S. Geological Survey quadrangle map or equivalent.

b. ALPs. Forward a copy of the ALP and include, when appropriate, an analysis of and rationale for the plan, as well as the various stages of construction, if applicable. Include information on the location of structures that may adversely affect the flight or movement of aircraft, cause electromagnetic interference to NAVAIDs, communication facilities, or derogate the line-of-sight visibility from a control tower. Should review of the plan reveal a potential noise problem, comment to this effect. Comment, as applicable, on the proximity of urban congestion and any potential problem related to the safety of persons and property on the ground. If the layout plan is a revision of one previously approved, summarize the changes for which an airspace determination is required. Also, include comments on objects that would exceed the obstruction standards of Part 77 and any other Airports comments that may be appropriate.

c. Federally Assisted Airport Proposals. Transmit by letter a description of the work to be done in the proposed project. If the project is in conformance with an approved ALP, comment to this effect. If the project is at variance with the ALP, comment accordingly and forward a proposed revision to the ALP or an appropriate programming sketch that depicts the location and nature of the proposed work. Also, in the latter event, or if it is a new proposal, forward information on the appropriate items set forth in subparagraph b. above.

d. Disposal or Conveyance of Federal Surplus or Non Surplus Property. Process proposals by public agencies to acquire property interest in land owned and controlled by the United States for public airport purposes as set forth in subparagraph c.

NOTE-

Military representative notification – The military representative may review all new landing area proposals (airports/heliports/seaplane bases), all proposals that have changes to existing landing areas, and all ALPs. Normally, the notification will be through the OE/AAA computer program, unless the military representative requests a hard copy. The military will review proposals, indicated by Airports for review, to determine impacts on military training routes (MTR), MOAs, and restricted areas.

11-2-5. NEGOTIATION WITH SPONSOR

a. During the course of a study, the Airports Office may find it necessary to negotiate with the sponsor to change a proposal. This may be due to a safety problem, efficient use of the airport, etc. After coordination by and agreement with the interested FAA offices (for example, air traffic, Flight Procedures Team, Flight Standards, and technical operations services), military representatives negotiate with the sponsor for changes to the proposal as necessary. Advise interested FAA offices of the results of the negotiation.

b. When an airport proposal poses a problem with respect to the safe and efficient use of airspace by aircraft or with respect to the safety of persons and property on the ground, negotiate with the sponsor to revise the proposal, if feasible, so as to resolve the problem. Should a case involve a proposal for a new airport that would create problems not resolved by revisions to the proposal, negotiate with the sponsor for a relocation of the proposal to a new site to resolve the problem.

11-2-6. CIRCULARIZATION

The Airports Office should circularize airport proposals in accordance with nonrulemaking procedures as necessary to obtain comments from aeronautical interests, municipal, county and state groups, civic groups, military representatives, and FAA facilities and offices on proposals located within their areas of responsibility. All controversial proposals and those that have a potential adverse effect on the users of the airspace should be included

in the circularization process. However, do not circularize a proposal that may compromise the sponsor's position in land acquisition negotiations.

11-2-7. EVALUATE COMMENTS AND AERONAUTICAL EFFECT

The Airports Office must examine comments received in response to coordination and evaluate their validity as related to the safe and efficient use of airspace and to the safety of persons or property on the ground. If the Airports Office's determination contains additional items and/or alterations of the responses previously received from the other FAA offices, request the appropriate air traffic, Flight Procedures Team, Flight Standards, and technical operations services offices to assist in evaluating the validity of the determination. The guidelines in Chapter 12 will assist in evaluating the aeronautical effect of airport proposals.

11-2-8. INFORMAL AIRSPACE MEETINGS

The appropriate Airports Office, with the assistance of the air traffic office, may convene an informal airspace meeting with interested parties as set forth in Part 1. of this order. The informal airspace meeting provides the opportunity to gather additional facts

relevant to the aeronautical effect of the proposal, provides interested persons an opportunity to discuss aeronautical objections to the proposal, and provides the FAA with the opportunity to negotiate a resolution to objectionable aspects of the proposal.

11-2-9. ISSUE DETERMINATION

Upon completion of the airspace study, the Airports Office must develop and issue the FAA determination by letter to the airport sponsor in accordance with the guidelines in Chapter 12. Disapprove the request if a previous airport study determination was objectionable and remains uncorrected, or if the determination listed provisions that have not been complied with by the airport owner or sponsor. The FAA determination does not constitute a commitment to provide Federal financial assistance to implement any development contained in the proposal. Also, if the proposal is not objectionable but would exceed Part 77 obstruction standards, notify the sponsor of what obstruction marking and lighting would be required or recommended. Additionally, advise the sponsor that a separate notice will be required for any construction equipment, such as temporary cranes, whose working limits would exceed the height and lateral dimensions of the proposed object.

Section 4. Air Traffic–Specific Environmental Guidance and Requirements

32–4–1. DEPARTMENT OF TRANSPORTATION (DOT) ACT SECTION 4(f) (RECODIFIED AS 49 USC SECTION 303(c))

Air Traffic personnel need to consult with all appropriate Federal, state and local officials having jurisdiction over an affected Section 4(f) resource when determining whether project–related noise impacts would constitute a use of that resource.

FAA Order 1050.1, Appendix B, provides guidance on matters relevant to Section 4(f). (See also Appendix 9, Noise Policy for Management of Airspace Over Federally Managed Lands.)

32–4–2. ENVIRONMENTAL JUSTICE (TITLE VI/NEPA)

a. Environmental Specialists need to know the process and requirements for environmental justice compliance.

b. DOT Order 5610.2, Environmental Justice, requires analysis of impacts of proposed FAA actions to ensure that minority and low–income population groups are not disproportionately affected. Additionally, FAA Order 1050.1, Appendix B, paragraph B-1.5; Chapter 2, paragraphs 2-2.1.b(2)(a), 2-5.2.b, and Chapter 4, paragraph 4-1, summarize the requirements and procedures to be used in environmental impact analysis related to environmental justice, as well as other socioeconomic impacts and children’s environmental health and safety risks.

c. Environmental Specialists should identify who benefits and who is adversely affected by the proposed actions, while noting impacts on specific subgroups.

32–4–3. COMMUNITY INVOLVEMENT

a. Community involvement is the process of engaging in dialogue and collaboration with communities affected by FAA actions. Collaboration means all parties taking responsibility to engage in meaningful dialogue with their counterparts. This includes making a genuine effort to ensure that the

interests of all have been identified and as many as possible have been addressed before an outcome is determined.

b. The FAA is committed to open dialogue with communities and regards community input as an important consideration in decisions that affect the airspace. Because the FAA must prioritize the safe and efficient operation of the National Airspace System, community involvement does not guarantee outcomes that satisfy everyone. However, decisions that take community input into consideration are more likely to reflect the collective public interest, receive broader community acceptance, and experience fewer implementation and post–implementation problems.

REFERENCE–

FAA Community Involvement Manual, February 2016, Section 1.1 “Background”

c. Therefore, ATO personnel should reference the following materials to determine the type and extent of community involvement, if any, for a project or action:

1. *FAA Order 1050.1*
2. *FAA Community Involvement Manual (CIM)*
3. *FAA Air Traffic Organization Community Involvement Plan (ATO CIP)*
4. *FAA Community Involvement Performance Based Navigation Desk Guide (CIPDG)*
5. *FAA Order JO 7400.2, Appendix 10, FAA’s “Community Involvement Policy” statement.*
6. *FAA Scenario–Based Guidance for Community Engagement.*

d. Community involvement should be considered early in the project development process. Note that the type of community involvement (workshops, airport meetings, roundtables, presentations, etc.) must be determined on a case–by–case basis.

32–4–4. SEGMENTATION, INDEPENDENT UTILITY, AND CUMULATIVE IMPACTS

a. Environmental Specialists must ensure that projects that do not have independent utility are not separated into smaller components (segmented) in

order to avoid analyzing the overall impact of the project. A project has independent utility when a portion of the project can be implemented without any of the other portions being implemented.

b. Environmental Specialists must ensure that cumulative impacts are appropriately addressed in all EAs or EISs for air traffic actions.

1. Cumulative impacts are those that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal and non-Federal) or person undertakes such other actions.

2. Cumulative impacts may result from individually minor, but collectively significant actions taking place over a period of time. (See FAA Order 1050.1, paragraph 4-2.d (3) and also “Considering Cumulative Effects Under the National Environmental Policy Act (1997).”)

32-4-5. DIVERSE VECTOR AREAS (DVA)

a. According to FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS), a DVA is an area established to avoid obstacles.

1. A DVA is used by air traffic control (ATC) radar facilities to allow the radar vectoring of aircraft below the minimum vectoring altitude (MVA), or for en route facilities, the minimum instrument flight rules altitude (MIA).

2. A DVA consists of designated airspace associated with a departure runway where the use of the applicable departure criteria, specified in FAA Order 8260.3, and this order have been applied to identify and avoid obstacles that penetrate the departure obstacle clearance surface (OCS).

3. Avoidance of obstacles is achieved through the application of a sloping OCS within the boundaries of the DVA. Since a sloping OCS is applicable to climb segments, a DVA is valid only when aircraft are permitted to climb uninterrupted from the departure runway to the MVA/MIA (or higher). A DVA is not applicable once an aircraft's climb is arrested.

b. Since DVAs generally do not define a specific route to avoid potential obstacles, this type of action is not considered a major Federal action under NEPA

and therefore, FAA Order 1050.1, Paragraph 2-1.2.b, Advisory Actions, applies.

c. In accordance with FAA Order 1050.1, paragraph 2-1.2.b, the establishment of a DVA could result in subsequent action that may be subject to NEPA. The facility and Service Center specialists working on these subsequent actions need to consult with their environmental specialist to determine if that action is subject to NEPA. (See questions in paragraph 32-2-1.)

32-4-6. NATIONAL SECURITY AREAS (NSAs)

a. According to Paragraph 28-1-1, Definition, a National Security Area (NSA) consists of airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security of ground facilities. Pilots are requested to voluntarily avoid flying through an NSA. When it is necessary to provide a greater level of security, flight in an NSA may be temporarily prohibited pursuant to the provisions of 14 CFR 99.7, Special Security Instructions.

b. In accordance with Paragraph 28-2-1, NSA Proposals, NSAs do not require environmental analysis; therefore, this type of action is not considered a major Federal action under NEPA, and FAA Order 1050.1, Paragraph 2-1.2.b, Advisory Actions, applies.

32-4-7. RECORDS RETENTION

Records retention must be in accordance with the appropriate paragraph(s) in FAA Order 1350.15, Records Organization, Transfer, and Destruction Standards.

NOTE-

Although chapter 10 of FAA Order 1350.15 contains Air Traffic-specific information, guidance for retention of environmental documentation is contained in that portion of the order specific to the Airports Division.

a. Environmental record-keeping should receive special attention at the field facility level. If an action requires preparation of an EA or an EIS, the Service Area Environmental Specialist must maintain the Administrative File. The Administrative File is important in the environmental process because it is a compilation of all the information relied upon by FAA in the decision-making process.

b. Since some environmental projects may extend over several years, the Administrative File becomes

a history of events. In the event of a legal challenge, the Administrative File will be used to develop the Administrative Record. The Administrative Record will be reviewed by the U.S. Court of Appeals to determine if the FAA complied with the requirements of NEPA. The data and documentation contained in the File can also be used as the starting point for any follow-on environmental studies.

c. Field facility personnel must consult with their Service Area Environmental Specialist to obtain guidance on what should or should not become part of the Administrative File. Regional counsel or AGC-620, as appropriate, should also be consulted on this. Federal court rules provide that when an FAA action is challenged in court, the agency has 40 days to compile the Administrative Record, make necessary copies, and file an index to the Record with the court. Therefore, it is preferable to begin development of the Administrative Record by maintaining an accurate Administrative File from the earliest stages of a project, instead of waiting until a lawsuit is filed.

32-4-8. APPENDICES

a. Appendix 1. Environmental Study Process Flow Chart.

b. Appendix 2. Special Use Airspace Aeronautical Processing Flow Chart

c. Appendix 3. Special Use Airspace Environmental Processing Flow Chart

d. Appendix 4. FAA Procedures for Processing SUA Actions Summary Table

e. Appendix 5. Air Traffic Initial Environmental Review (IER)

f. Appendix 6. Sample Categorical Exclusion Declaration.

g. Appendix 7. FAA/DOD Memorandum of Understanding.

h. Appendix 8. FAA Special Use Airspace Environmental Processing Procedures.

i. Appendix 9. Noise Policy for Management of Airspace Over Federally Managed Lands.

j. Appendix 10. Community Involvement Policy.

32-4-9. MEMORANDUMS AND EMAILS SUPERSEDED BY THIS ORDER

The following guidance memorandums (memos) and emails have been incorporated and therefore cancelled.

a. ATA-1 Memo dated January 17, 2001, Change in Air Traffic Noise Screen Policy (Federal Register/Vol. 65, No. 235/Wednesday, December 6, 2000/Notices, p. 76339).

b. ATA-300 Memo dated September 15, 2003, Altitude Cut-Off for National Airspace redesign (NAR) Environmental Analyses.

c. AJR-34 Memo dated August 21, 2009, Environmental Guidance for Actions Involving Propeller-Driven Aircraft.

d. AJR-34 Memo dated August 21, 2009, Guidance Regarding the Number of Procedures for Noise Screening.

e. AJV-1 Memo dated December 15, 2010, Guidance for Conducting Environmental Review of Proposed Performance Based Navigation (PBN) Flight Procedures.

f. AEE-400 Guidance Memo #1 dated December 20, 2010, Clarification of CATEXs 311g and 311i for Procedural Actions; FAA Order 1050.1E.

g. AEE-400 Memo #2 dated January 10, 2011, Guidance on Preparing Focused, Concise and Timely Environmental Assessments.

h. AEE-400 Guidance Memo #4 dated March 21, 2012, Guidance on Using AEDT2a to Conduct Environmental Modeling for FAA Air Traffic Airspace and Procedure Actions.

i. D. Warren email dated March 23, 2012; In accordance with FAA Order 1050.1, National Security Areas (NSAs) are considered Advisory Actions and do not require environmental analysis.

j. D. Warren email, dated May 8, 2012, CATEXs for Departure.

k. AJV-114 memo dated July 17, 2012, Interim Guidance: Using the Lateral Movement Tests (LAT Tests) for Noise Screening of Air Traffic Actions.

l. AJV-11 memo dated January 4, 2013, Authorized Use of the MITRE Noise Screening Guidance Document, dated December 2012.

m. D. Warren email dated March 11, 2013, Diverse Vector Areas (DVAs).

Appendix 4. FAA Procedures for Processing SUA Actions: Aeronautical and Environmental Summary Table

The aeronautical and environmental processes may not always occur in parallel.

This appendix is for use with Appendix 2 and Appendix 3, and the numbers correlate to numbers on those charts.

AERONAUTICAL	ENVIRONMENTAL
<p>Pre-SUA Proposal</p> <p>1. Proponent must coordinate with locally affected ATC facilities and military units to discuss the concept (for example, new/revisions to SUA needed or required).</p>	<p>1. The DoD Proponent must coordinate an environmental review of its proposal (for both rule-making and non-rulemaking actions) with the appropriate FAA Service Center OSG Manager and Environmental Specialist early in the Proponent's environmental documentation process to determine the potential for environmental impacts associated with the airspace portion of the DoD proposal.</p> <p>The Service Center Environmental Specialist is the FAA primary point of contact throughout the development of required environmental document reviews and required FAA adoption documentation. He/she is also responsible for ensuring DoD NEPA documents and FAA adoption NEPA documents comply with FAA Order 1050.1, paragraph 1–10.23, and Chapter 32, Environmental Matters, of this order.</p>
<p>2. Service Center Airspace Specialist coordinates with the Service Center Environmental Specialist to discuss the proposal's environmental review requirements.</p>	<p>2. If there is the potential for airspace environmental impacts¹, Proponent must make a request to the FAA for a Cooperating Agency (CA) status when Proponent decides to initiate the NEPA documentation process. Proponent forwards a request for Cooperating Agency Status to the Director of Mission Support, Policy (AJV–P). Rules and Regulations Group Manager (AJV–P2) and the AJV–P21 Environmental Specialist will prepare and forward the response to the DoD Proponent and coordinate the action for tracking by the Mission Support Environmental Policy Team (AJV–P21) which sends a courtesy copy of FAA's Acceptance of Cooperating Agency Status to the responsible Service Center Environmental Specialist.</p>

¹ Establishment of new SUA, or changes to the dimensions, times of use, type of aircraft, or aircraft mix flown in SUA present the potential for environmental effects and must be properly analyzed for potential environmental impacts per FAA Order 1050.1 and Chapter 32, Environmental Matters, of this order.

<p>3. Proponent meets with the ATC facility having jurisdiction over the affected airspace area to discuss mission requirements and desired SUA parameters.</p>	<p>3. Proponent submits a Preliminary Draft EA or Draft EIS (or other relevant environmental documentation), along with the aeronautical information package, to the Service Center Mil Rep, who shares it with the Environmental Specialist for review and comment. For previously reviewed and revised SUA actions, or proposals for re-activation of previously established SUA, the Service Center Environmental Specialist should request, and DoD Proponent should submit, previous environmental analysis documentation to the Service Center Environmental Specialist who will review and incorporate updated SUA information in the FAA Adoption document.</p> <p>4. The Service Center Environmental Specialist must provide comments, in consultation with the Service Center Airspace Specialist and the Headquarters Airspace and Rules Team (AJV-P21), back to Proponent via the Service Center's Mil Rep and or other appropriate DoD project POC.</p>
<p>4. Proponent submits the SUA proposal to the FAA Service Center for review and processing by the Airspace Specialist.</p>	<p>5. After the Service Center Environmental Specialist reviews the DoD Proponent's draft environmental document to ensure that all airspace and other pertinent and applicable environmental issues were addressed per FAA Order 1050.1, the Service Center Environmental Specialist then forwards the DoD Proponent's draft environmental document to the FAA Headquarters Environmental Team (AJV-P21) for review and comment by the Headquarters Environmental Specialist and the Office of Chief Counsel (AGC-600) to begin Legal Sufficiency Review (LSR).</p> <p>6. The Service Center Environmental Specialist then prepares a draft FAA Adoption EA or Adoption EIS of the DoD Proponent's airspace portion of the proposed action, and sends it to AJV-P21 for policy compliance review and to AGC for LSR.</p>

<p>5. The Service Center Airspace Specialist, in accordance with this order, determines the type of airspace action(s) necessary, either Non–Rule-making or Rulemaking. FAA service center determines if Informal Airspace Meetings are required.</p>	<p>7. The DoD proponent reviews the FAA’s comments on their Draft EA/FONSI or Draft EIS and prepares responses to comments, in consultation with FAA and other cooperating agencies as necessary, and in accordance with chapter 32 of this order. Proponent then incorporates FAA’s comments into their NEPA document and prepares a Draft EA or EIS with a 30 to 45–day public comment period.</p>
	<p>8. Proponent prepares and submits their Final EA/FONSI or EIS/ROD to the Service Center Environmental Specialist.</p>
	<p>9. The Service Center Environmental Specialist amends, as necessary the Draft FAA Adoption EA–FONSI/ROD or Draft FAA Adoption EIS and ROD and submits the FAA’s Adoption document to AJV–P21 for airspace review and to AGC for a final LSR.</p>
	<p>10. AGC’s comments are incorporated into the final FAA Adoption EA/FONSI or Adoption EIS/ROD by the Service Center Environmental Specialist in coordination with the AJV–P21 Environmental Specialist.</p>
	<p>11. The AJV–P21 Environmental Specialist prepares a signature copy of the final FAA Adoption EA/FONSI or Adoption EIS/ROD and submits it for signature by the Headquarters Rules and Regulations Group Manager (AJV–P2). The AJV–P21 Environmental Specialist submits signed copies of the document(s) to the DoD Proponent’s POC, to AJV–P21 for final rulemaking action, and to the Service Center Environmental Specialist for their records.</p>
	<p>12. The Service Center Environmental Specialist submits the signed Final FAA Adoption EA and FONSI or Adoption EIS and FONSI/ROD with the Proponent’s Final EA/FONSI or EIS/ROD to the Service Center Airspace Specialist for inclusion with the airspace proposal package, and provides a courtesy copy of the FAA’s final Adoption document to the Service Center Mil Rep.</p>

FOR NON-RULEMAKING	
AERONAUTICAL	ENVIRONMENTAL
<p>6. The Service Center Airspace Specialist:</p> <p>a. Tasks the ATC facility to conduct an aeronautical study of the proposal;</p> <p>b. Sends a circularization with a 45-day public comment period.</p> <p>The Service Center Airspace Specialist reviews and prepares, in consultation with the DoD Proponent, responses to the aeronautical comments from the aeronautical study and circularization in accordance with chapter 21 of this order.</p> <p>c. Coordinates with the Service Center Environmental Specialist regarding environmental documentation.</p>	<p>See process above. The environmental documentation review and development process is the same for non-rulemaking as for rulemaking.</p>
<p>7. The Service Center Airspace Specialist sends the completed package containing the aeronautical proposal, Aeronautical study, copies of comments, response to comments, DoD Proponent's Final EA/FONSI, and the Draft FAA FONSI/ROD, and a recommendation for final action to the Headquarters Airspace Policy Group.</p>	

FOR RULEMAKING	
AERONAUTICAL	ENVIRONMENTAL
<p>8. The Service Center Airspace Specialist:</p> <p>a. Tasks the ATC facility to conduct an aeronautical study of the proposal;</p> <p>b. Sends the proposal to the Airspace Policy Group who then prepares a Notice of Proposed Rulemaking (NPRM).</p> <p>The Headquarters Airspace Policy Group submits the NPRM for publication in the Federal Register with a 45-day comment period in accordance with chapter 2 of this order.</p> <p>The Airspace Specialist receives the environmental document from the Service Center Environmental Specialist.</p>	<p>See process above. The environmental documentation review and development process is the same for non-rulemaking as for rulemaking.</p>
<p>9. The Service Center Airspace Specialist reviews the comments on www.regulations.gov and coordinates with the proponent, as required, to resolve aeronautical impacts.</p>	
<p>10. The Service Center Airspace Specialist then sends the completed package containing the aeronautical study, response to comments, final Service Center recommendation, the proposal, Proponent's Final EA/FONSI or EIS/ROD, and the Draft FAA FONSI/ROD or Draft FAA Adoption Document/ROD to the Headquarters Airspace Policy Group (AJV-P21) for preparation of the Final Rule.</p>	
<p>11. The Service Center Airspace Specialist, in accordance with this order, determines the type of airspace action(s) necessary, either Non-Rulemaking or Rulemaking. FAA service center determines if Informal Airspace Meetings are required.</p>	<p>9. The Headquarters Environmental Specialist (AJV-P21) reviews the draft final rulemaking and draft Federal Register Notice for compliance with FAA Order 1050.1; chapter 32 of this order and this appendix; drafts the environmental compliance paragraph for the Federal Register Notice; then, as necessary, submits the changes to the environmental documentation to AGC-600 for legal sufficiency review.</p>
	<p>10. AGC's comments are incorporated into the rulemaking document, returned to the AJV-P21 Environmental Team for a final review, and forwarded back to the AJV-P21 Airspace and Rules Team.</p>

<p>10. For Non–rulemaking:</p> <p>The Airspace Specialist submits the non–rule-making action to the National Flight Data Center (NFDC) for publication in the National Flight Data Digest (NFDD).</p> <p>11. For Rulemaking:</p> <p>The Airspace Specialist submits the Final Rule for publication in the Federal Register. The Final Rule will contain a reference to the decision rendered and location of documentation for the associated environmental process.</p>	
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Consult the following documents throughout the process for further information:

- A.** Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act (NEPA), 40 C.F.R. Parts 1500–1508.
- B.** FAA Order 1050.1, Environmental Impacts: Policies and Procedures
- C.** FAA Order JO 7400.2, Procedures for Handling Airspace Matters, Part 5, Special Use Airspace
- D.** FAA Order JO 7400.2, Chapter 32, Environmental Matters, and the associated appendices (for specific SUA environmental documentation directions).

NOTE–

The documentation time periods below are approximations only, and are for non–controversial aeronautical proposals and associated environmental processes. The documentation time periods are for FAA review/processing only. Documentation schedules for DOD proponent and/or environmental contract support processing must be accounted for during overall document coordination scheduling between FAA and the DOD proponents.

ENVIRONMENTAL: Estimated time of completion for EA processing is 12 to 18 months or, for EIS processing, 18 to 36 months.

AERONAUTICAL (Non–Rulemaking): A minimum time period of 8 months is required from submission of the Formal Airspace Proposal by the Proponent to the Service Center through completion of the charting process.

AERONAUTICAL (Rulemaking): A minimum time period of 10 months is required from submission of the Formal Airspace proposal by the Proponent to the Service Center through completion of the charting process.

Appendix 5. Air Traffic Initial Environmental Review (IER)

Facility: _____

Date: _____

Prepared by: _____

Phone: _____

=====

NOTE: This IER provides basic information about the proposed action to better assist in preparing for the environmental analysis phase of a proposed action. Although it requests information in several categories, not all the data may be available initially; however, it does represent information, in accordance with FAA Order 1050.1, *Environmental Impacts: Policies and Procedures*, which ultimately will be needed for preparation of the appropriate environmental document. If the Instrument Flight Procedure (IFP) Environmental Pre-Screening Filter is used for initiating the environmental review process, and it passes the initial screening, then the IER is unnecessary. Additional guidance on the identification of potential environmental impacts by environmental category is available in the 1050.1 Desk Reference.

Section 1. Proposed Project Description

Describe the proposed project. Include general information identifying procedure(s) and/or airspace action(s) to be implemented and/or amended. Identify the associated airports and/or facilities.

- 1.1.** Describe the operational and/or environmental benefits that may result if the proposed action is implemented.

- 1.1.1.** Is a reduction of fuel cost and/or energy consumption anticipated as a result of the proposed action?

☐ Yes ☐ No ☐ N/A

- 1.1.1.a.** If so, can it be quantified, and how?

☐ Yes ☐ No

- 1.1.1.b.** If not quantifiable, describe the approximate anticipated benefits in lay terms.

- 1.1.2.** Describe any additional operational and/or environmental benefits that may result from the proposed action.

- 1.2.** Describe the existing procedure(s) (the no action alternative) in full detail. Provide the necessary chart(s) depicting the current procedure(s). Describe the typical fleet mix, including (if possible) the number and types of aircraft on the route (both annually and average day) and depict their altitude(s) along the route.

- 1.3.** Describe the proposed action, providing the necessary chart(s) depicting changes. Describe anticipated changes to the fleet mix, numbers of aircraft on the new routes and their altitude(s), if any.

- 1.3.1.** Has airspace modeling been conducted using Sector Design Analysis Tool (SDAT), Aviation Environmental Screening Tool (AEST), Terminal Area Route Generation, Evaluation, and Traffic Simulation (TARGETS), or another airspace/air traffic design tool?

☐ Yes. Model: _____ ☐ No

If yes, provide a summary of the output from the modeling.

- 1.3.2.** Will there be actions affecting changes in aircraft flights between the hours of 10 p.m. – 7 a.m. local?

☐ Yes ☐ No

Describe:

- 1.3.3.** Are any noise abatement programs presently in effect for the affected airport(s), formal or informal?

☐ Yes ☐ No

Describe:

- 1.3.4.** Will airport preferential runway configuration use change as a result of the proposed action?

☐ Yes ☐ No

Explain:

- 1.3.5.** Is the proposed action primarily designed for Visual Flight Rules (VFR), Instrument Flight Rules (IFR) operations, or both?

☐ VFR ☐ IFR ☐ Both

If the proposed action specifically involves a charted visual approach (CVA) procedure, provide a detailed local map indicating the route of the CVA, along with a discussion of the rationale for how the route was chosen.

- 1.3.6.** Will there be a change in takeoff power requirements?

☐ Yes ☐ No

If so, what types of aircraft are involved, i.e., general aviation propeller-driven versus large air carrier jets?

- 1.3.7.** Will all changes occur over 3,000 feet above ground level (AGL)?

☐ Yes ☐ No

- 1.3.8.** What is the lowest altitude on newly proposed routes or on existing routes that will receive an increase in operations?

- 1.3.9.** Will there be actions involving civil jet aircraft arrival procedures between 3,000–7,000 feet AGL or departures between 3,000–10,000 feet AGL?

☐ Yes ☐ No

Section 2. Purpose and Need

- 2.1.** Describe the purpose and need for the proposed action. Present the problem being addressed and describe what the FAA is trying to achieve with the proposed action. The purpose and need for the proposed action must be clearly explained and stated in terms that are understandable to individuals who are not familiar with aviation or commercial aerospace activities. If detailed background information is available, summarize here and provide a copy as an attachment to this review.

- 2.1.1.** Is the proposed action the result of a user or community request or regulatory mandate?

☐ Community Request ☐ Regulatory Mandate ☐ User Request

2.1.2. If not, describe what necessitates this proposed action:

Section 3. Alternatives

3.1. Are there alternatives to the proposed action?

☐ Yes ☐ No

If yes, describe any alternatives to the proposed action.

3.2. Please provide a summary description of eliminated alternatives and the reasons for their elimination.

Section 4. Environmental Review and Evaluation

The determination of whether a proposed action may have a significant environmental effect is made by considering requirements applicable to the specific environmental impact categories discussed below (see FAA Order 1050.1, appendix B).

4.1. Describe the Affected Environment

4.1.1. Describe the existing land use, including noise sensitive areas (if any) in the vicinity of the proposed action.

4.1.2. Will the proposed action introduce air traffic over noise sensitive areas not currently affected?

☐ Yes ☐ No

Describe:

4.2. Environmental Consequences

As stated in FAA Order 1050.1, paragraph 5–2. b., extraordinary circumstances exist when a proposed action meets both of the following criteria:

4.2.a. Involves any of the following circumstances below; and

4.2.b. May have a significant impact (see 40 CFR 1508.4).

4.2.1. Air Quality

Has research been conducted to identify areas of concern or communication with air quality regulatory agencies to determine if the affected area is a non–attainment area (an area which exceeds the Clean Air Act (CAA) National Ambient Air Quality Standards (NAAQS) for the following criteria air pollutants: ozone, carbon monoxide, lead, particulate matter, sulfur dioxide, or nitrogen dioxide) or maintenance area (an area which was in non–attainment but subsequently upgraded to an attainment area) concerning air quality?

☐ Yes ☐ No

Comment:

Evaluation: Will implementation of proposed action result in an impact on air quality or a violation of local, state, tribal, or federal air quality standards under the Clean Air Act amendments of 1990? (See FAA Order 1050.1, paragraph 5–2. b. (8), the Air Quality Handbook, and 1050.1 Desk Reference, chapter 1, for details on how to make the determination.)

☐ Yes ☐ No

Comment:

4.2.2. Biological Resources (including Marine Mammals; Wildlife and Waterfowl; Endangered/Threatened Species; Critical Habitat)

4.2.2.1. Are wildlife and/or waterfowl refuge/management areas, protected or critical habitats within the affected area of the proposed action?

☐ Yes ☐ No

Identify:

4.2.2.2. If so, has there been any communication with the appropriate wildlife management regulatory agencies (federal or state) agencies to determine if endangered or protected species inhabit the area?

☐ Yes ☐ No

If yes, identify endangered or protected species.

4.2.2.3. At what altitude would aircraft overfly these habitats?

4.2.2.4. During what times of the day would operations be more/less frequent?

Evaluation: Will implementation of the proposed action result in an impact on natural, ecological or biological resources of federal, tribal, state, or local significance (for example, federally listed or proposed endangered, threatened, or candidate species or proposed or designated critical habitat under the Endangered Species Act)? (See FAA Order 1050.1, paragraph 5–2. b. (3), and 1050.1 Desk Reference, chapter 2, for details on how to make the determination.)

4.2.2.a. ☐ Yes

Comment:

4.2.2.b. ☐ No. An impact to biological resources is not anticipated.

4.2.3. Climate

NOTE: The FAA has not established a significance threshold for climate. The Council on Environmental Quality (CEQ) has noted that “...it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions; as such direct linkage is difficult to isolate and to understand.”¹ Accordingly, it is not useful to attempt to determine the significance of such impacts. (See FAA Order 1050.1, Desk Reference, chapter 3.)

4.2.4. Coastal Resources

NOTE: Coastal resources include both coastal barriers and coastal zones.

4.2.4.1. Are there designated coastal resources in the affected area?

☐ Yes ☐ No

Identify:

4.2.4.2. Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground with the potential to affect coastal resources?

☐ Yes ☐ No

Evaluation: Will implementation of the proposed action result in an impact in to coastal resources? (See FAA Order 1050.1, paragraph 5–2. b. (4), and 1050.1 Desk Reference, chapter 4, for details on how to make the determination.)

¹ Draft NEPA Guidance on *Consideration of the Effects of Climate Change and Greenhouse Emissions*, CEQ (2010).
http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_ofGHG_Draft_NEPA_Guidance_FINAL_02182010.pdf

4.2.4.a. ☐ Yes

Comment:

4.2.4.b. ☐ No. An impact to coastal resources is not anticipated.

4.2.5. Department of Transportation Act, Section 4(f)

4.2.5.1. Are there cultural or scenic resources, of national, state, or local significance, such as national parks, publicly owned parks, recreational areas, and public and private historic sites in the affected area?

☐ Yes ☐ No

Identify:

4.2.5.2. If so, during what time(s) of the day would operations occur that may impact these areas?

Evaluation: Will implementation of the proposed action result in an impact to properties protected under Section 4(f) of the Department of Transportation Act? (See FAA Order 1050.1, paragraph 5–2. b. (2), and 1050.1 Desk Reference, chapter 5, for details on how to make the determination.)

4.2.5.a. ☐ Yes

Comment:

4.2.5.b. ☐ No. Section 4(f) impacts are not anticipated.

4.2.6. Farmlands

Are the following resources present: National Resources Conservation designated prime and unique farmlands or, state, or locally important farmlands including pastureland, cropland, and forest?

☐ Yes ☐ No

Identify:

Evaluation: Will the implementation of the proposed action involve the development of land regardless of use, or have the potential to convert any farmland to non–agricultural uses? (See FAA Order 1050.1, paragraph 5–2. b. (4), and the 1050.1 Desk Reference, chapter 6, for details on how to make the determination.)

4.2.6.a. ☐ Yes

Comment:

4.2.6.b. ☐ No. An impact to farmland resources is not anticipated.

4.2.7. Hazardous Material, Solid Waste, and Pollution Prevention

Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground in an area known to contain hazardous materials, hazardous waste, solid waste, or other forms of pollution or contamination?

☐ Yes ☐ No

Evaluation: Is implementation of the proposed action likely to cause contamination by hazardous materials, hazardous waste, or likely to disturb existing hazardous materials, hazardous waste site, or other area of contamination? (See FAA Order 1050.1, paragraph

5–2. b. (12), and the 1050.1 Desk Reference, chapter 7, for details on how to make the determination.)

4.2.7.a. ☐ Yes

Comment:

4.2.7.b. ☐ No. An impact to existing areas of hazardous material, hazardous or solid waste, or pollution prevention activities, is not anticipated; and implementation of the proposed action is not anticipated to result in the production of hazardous material, hazardous or solid waste.

4.2.8. National Historic Preservation Act of 1966 (NHPA)

***NOTE:** Section 106 of the NHPA applies to actions that have the potential to affect historic properties in a way that alters any of the characteristics that make the property significant, including changes in noise where a quiet setting is an attribute of significance. Direct effects include the removal or alteration of historic resources. Indirect effects include changes in noise, vehicular traffic, light emissions, or other changes that could interfere substantially with the use or character of the resource.*

4.2.8.1. Are there historic resources protected under Section 106 of the NHPA in the study area of the proposed action ?

☐ Yes ☐ No

Identify:

4.2.8.2. Will the proposed action include removal or alteration of historic resources (direct effect)?

☐ Yes ☐ No

4.2.8.3. Do any of the historic resources identified have quiet as a generally recognized feature or attribute?

☐ Yes ☐ No

If yes, explain:

4.2.8.4. Will the proposed action substantially interfere with the use or character of the resource (indirect effect)?

☐ Yes ☐ No

Explain:

Evaluation: Will the proposed action result in an adverse effect on resources protected under the National Historic Preservation Act of 1966, as amended? (See FAA Order 1050.1, paragraph 5–2. b. (1), and the 1050.1 Desk Reference, chapter 8, for details on how to make the determination.)

4.2.8.a. ☐ Yes

Comment:

4.2.8.b. ☐ No. An impact to resources subject to Section 106 review is not anticipated.

4.2.9. Land Use

The compatibility of existing and planned land uses with an aviation or aerospace proposal is usually associated with noise impacts. In addition to the impacts of noise on land use compatibility, other potential impacts of FAA actions may affect land use compatibility. The

impact on land use, if any, should be analyzed and described under the appropriate impact category.

Evaluation: The determination that significant impacts exist in the Land Use impact category is normally dependent on the significance of other impacts. (See 1050.1 Desk Reference, chapter 9, for details on how to make the determination.)

4.2.10. National Resources and Energy Supply

NOTE: *This resource category excludes fuel burn.*

Will the proposed action have the potential to cause demand or strain on a natural resource(s) or material(s) that exceeds current or future availability of these resources? (See FAA Order 1050.1, paragraph 5–2. b. (4).)

☐ Yes ☐ No

If yes, explain:

Evaluation: Will implementation of the proposed action result in an impact in relation to natural resources and energy supply?

4.2.10.a. ☐ Yes

Comment:

4.2.10.b. ☐ No. An impact to natural resources and materials and/or energy supply is not anticipated.

4.2.11. Noise and Noise-Compatible Land Use

The significance threshold for noise is whether the proposed action would increase noise by Day–night average sound level (DNL) 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level; or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB increase, when compared to the No Action alternative for the same timeframe.

NOTE: *An area is noise sensitive if aircraft noise may interfere with the normal activities associated with the use of the land. See FAA Order 1050.1, paragraph 11–5. b. (10), for the full definition of noise sensitive areas.*

Noise compatibility or non-compatibility of land use is determined by comparing the proposed action DNL values to the values in the 14 CFR Part 150, Appendix A, Table 1, Land–Use Compatibility guidelines. (See FAA Order 1050.1 and the 1050.1 Desk Reference, section 11.)

NOTE: *14 CFR Part 150 guidelines are not sufficient to address the effects of noise on some noise sensitive areas.*

4.2.11.1.1. Will the proposed action introduce air traffic over noise sensitive areas *not* currently affected?

☐ Yes ☐ No

Comment:

4.2.11.1.2. Do the results of the noise analysis indicate that the proposed action would result in an increase in noise exposure by DNL 1.5 dB or more for a noise sensitive area

that is exposed to noise at or above the DNL 65 dB noise exposure level?

☐ Yes ☐ No

4.2.11.1.3. If yes, are the results of the noise analysis incompatible with one or more of the Land Use Compatibility categories? (See FAA Order 1050.1, Desk Reference Exhibit 11–3.)

☐ Yes ☐ No

If yes, explain:

4.2.11.1.4. Do the results of the noise analysis indicate a threshold of significance over noise sensitive areas *not* listed under the Land Use Compatibility categories (for example, national parks, wildlife/waterfowl refuges)?

☐ Yes ☐ No

If yes, explain:

4.2.11.2. Do the results of the noise analysis indicate a change in noise meeting threshold criteria considered “reportable”?

i. For DNL 60 dB to <65 dB: + 3 dB ☐ Yes ☐ No

ii. For DNL 45 dB to <60 dB: + 5 dB ☐ Yes ☐ No

Evaluation:

4.2.11.a. Will the proposed action result in a significant noise impact over noise sensitive land use? (See FAA Order 1050.1, paragraph 5–2. b. (7), and the 1050.1 Desk Reference, chapter 11, for details on how to make the determination.)

☐ Yes

If yes, explain:

4.2.11.b. ☐ No. The results of the noise analysis indicate that no significance threshold noise criteria are reached as a result of the implementation of the proposed action.

4.2.11.c. Will the proposed action result in a significant noise impact over noise sensitive areas? (See FAA Order 1050.1, paragraph 5–2. b. (7), and the 1050.1 Desk Reference, chapter 8, for details on how to make the determination.)

☐ Yes

If yes, explain:

4.2.11.d. ☐ No. The results of the noise analysis indicate that no reportable noise impacts are expected to result from the implementation of the proposed action.

4.2.12. Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risk

4.2.12.1. Socioeconomics

4.2.12.1.a. Will the proposed action result in a division or disruption of an established community; a disruption of orderly, planned development; or an inconsistency with plans or goals that have been adopted by the community in which the proposed action is located? (See FAA Order 1050.1, paragraph 5–2. b. (5).)

☐ Yes ☐ No

- 4.2.12.1.b.** Will the proposed action result in an increase in congestion from surface transportation, by causing a decrease in the Level of Service below the acceptable level determined by the appropriate transportation agency? (i.e., a highway agency) [See FAA Order 1050.1, paragraph 5–2 b. (6).]
☐ Yes ☐ No

Evaluation: Will implementation of the proposed action result in an impact to socioeconomics? (See the 1050.1 Desk Reference, chapter 12, for details on how to make the determination.)

- 4.2.12.a.** ☐ Yes
 Comment:

- 4.2.12.b.** ☐ No. The proposed action is not anticipated to involve acquisition of real estate, relocation of residence or community business, disruption of local traffic patterns, loss of community tax base, or changes to the fabric of the community.

4.2.12.2.Environmental Justice

NOTE: FAA has not established a significance threshold for Environmental Justice. Impacts to Environmental Justice in the context of other impact categories should be considered.

Evaluation: Will the proposed action have the potential to lead to a disproportionately high and adverse impact to an environmental justice population, (i.e., a low income or minority population) due to significant impacts in other environmental impact categories or impacts on the physical or natural environment that affect an environmental justice population in a way that the FAA determines are unique to the environmental justice population and significant to that population? (See the 1050.1 Desk Reference, chapter 12, for details on how to make the determination.)

- 4.2.12.2.a.** ☐ Yes
 Comment:

- 4.2.12.2.b.** ☐ No. An impact related to environmental justice is not anticipated.

4.2.12.3.Children’s Environmental Health and Safety Risk

NOTE: FAA has not established a significance threshold for Children’s Environmental Health and Safety Risk. Impacts to Children’s health and safety in the context of other impact categories should be considered.

Evaluation: Will the proposed action have the *potential* to lead to a disproportionate health or safety risk to children due to significant impacts in other environmental impact categories? (See the 1050.1 Desk Reference, chapter 12, for details on how to make the determination.)

- 4.2.12.3.a.** ☐ Yes
 Comment:

- 4.2.12.3.b.** ☐ No. An impact related to children’s environmental health and safety is not anticipated.

4.2.13.Visual Effects

NOTE: There are no special purpose laws for light impacts and visual impacts. Impacts from light emissions are generally related to airport aviation lighting.

4.2.13.1. Will implementation of the proposed action create annoyance or interfere with normal activities from light emissions?

☐ Yes ☐ No

Explain:

4.2.13.2. Will implementation of the proposed action affect the visual character of the area including the importance, uniqueness, and aesthetic value of the affected visual resources?

☐ Yes ☐ No

Explain:

Evaluation: Will the proposed action result in an impact to visual resources? (See FAA Order 1050.1, paragraph 5–2. b. (5), and 1050.1 Desk Reference, chapter 13, for details on how to make the determination.)

4.2.13.a. ☐ Yes

Comment:

4.2.13.b. ☐ No. The proposed action is not anticipated to interfere or have an effect on the visual resources.

4.2.14. Water Resources (including Wetlands, Flood Plains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

4.2.14.1. Are there wetlands, flood plains, and/or Wild and Scenic Rivers in the proposed action study area?

☐ Yes ☐ No

4.2.14.2. Are there reservoirs or other public water supply systems in the affected area?

☐ Yes ☐ No

4.2.14.3. Will implementation of the proposed action result in any construction or development or any physical disturbances of the ground?

☐ Yes ☐ No

4.2.14.4. Will implementation of the proposed action result in any changes to existing discharges to water bodies, create a new discharge that would result in impacts to water quality, or modify a water body?

☐ Yes ☐ No

If yes, is there a potential for an impact to water quality, sole source aquifers, a public water supply system, federal, state or tribal water quality standards established under the Clean Water Act and the Safe Drinking Water Act?

☐ Yes ☐ No

Evaluation: Will the proposed action result in an impact to water resources? (See FAA Order 1050.1, paragraph 5–2. b. (9), and 1050.1 Desk Reference, chapter 14, for details on how to make the determination.)

4.2.14.a. ☐ Yes

Comment:

4.2.14.b. ☐ No. The potential for impact to water resources is not anticipated.

4.2.15. Effects on the Quality of the Human Environment that are Likely to be Highly Controversial on Environmental Grounds.

***NOTE:** The term “highly controversial on environmental grounds” means there is a substantial dispute involving reasonable disagreement over the degree, extent, or nature of a proposed action’s environmental impacts or over the action’s risks of causing environmental harm. Mere opposition is not sufficient for a proposed action or its impacts to be considered highly controversial on environmental grounds. Opposition on environmental grounds by a federal, state, or local government agency or by a tribe or a substantial number of the persons affected by the action should be considered in determining whether or not reasonable disagreement regarding the impacts of a proposed action exists.*

***NOTE:** If in doubt about whether a proposed action is highly controversial on environmental grounds, consult the Line of Business/Staff Office (LOB/SOB) headquarters environmental division, AEE, Regional Counsel, or AGC for assistance. (See FAA Order 1050.1, paragraph 5–2. b. (10).)*

4.2.15.1. Will implementation of the proposed action result in the likelihood of an inconsistency with any federal, state, tribal, or local law relating to the environmental aspects of the proposed action. (See FAA Order 1050.1, paragraph 5–2. b. (11).)

☐ Yes ☐ No

If yes, explain:

Evaluation: Is there likelihood for the proposed action to be highly controversial based on environmental grounds?

4.2.15.a. ☐ Yes

Comment:

4.2.15.b. ☐ No. The potential for controversy is not anticipated.

Section 5. Mitigation

Are there measures which can be implemented that might mitigate any of the potential impacts, i.e., GPS/FMS plans, NAVAIDS, etc.?

☐ Yes ☐ No ☐ N/A

Describe:

Section 6. Cumulative Impacts

What other projects (FAA, non-FAA, or non-aviation) are known, planned, have been previously implemented, or are ongoing in the affected area that would contribute to the proposed project’s environmental impact?

Section 7. Community Involvement

Community involvement is the process of engaging in dialog and collaboration with communities affected by FAA actions. The appropriate level of community involvement and public engagement will vary to some degree depending on the project scope and affected communities. (See FAA Order JO 7400.2, appendices 10 and 11, and the Community Involvement Performance Based Navigation Desk Guide, and/or AEE’s Community Involvement Manual, or other available Community Involvement guidance for further information.)

- 7.1.** Are the airport proprietor and/or users providing general support for the proposed action?
☐ Yes ☐ No ☐ N/A
- 7.2.** Are local community leaders or groups who could have an interest in FAA activity (i.e., aviation roundtables, historical preservation society, etc) due to their location or by their function in the community been notified, consulted, or otherwise informed of this proposed action?
☐ Yes ☐ No ☐ Not Known
- 7.2.1.** Are any ☐ opposed to or ☐ supporting it? ☐ Not Known
- 7.2.2.** Identify the parties and indicate whether they are in opposition or in support of the proposed action.
- 7.2.3.** If they are opposed, what is the basis of their opposition?
- 7.3.** Are local citizens aware of the proposed action?
☐ Yes ☐ No ☐ Not Known
- 7.3.1.** Are any ☐ opposed to or ☐ supporting it? ☐ Not Known
- 7.3.2.** Identify the parties and indicate whether they are in opposition or in support of the proposed action.
- 7.3.3.** If they are opposed, what is the basis of their opposition?
- 7.4.** Has the FAA received one or more comments objecting to the proposed project on environmental grounds from local citizens or elected officials?
☐ Yes ☐ No
- 7.4.1.** If so, state the nature of the comment and how the FAA was notified (for example, resolution, Congressional, Public meeting/workshop, etc.).
- 7.4.2.** How is the comment(s) being responded to? Can the comment(s) be mitigated through changes in design?
- 7.5.** Is the proposed project consistent with local plans and development efforts?
☐ Yes ☐ No
- 7.6.** Has there been any previous aircraft-related environmental or noise analysis, including a FAR Part 150 Study, conducted at this location?
☐ Yes ☐ No
- 7.6.1.** If so, was the study reviewed as a part of this initial review?
☐ Yes ☐ No ☐ N/A

Section 8. References/Correspondence

Attach written correspondence, summarized phone contacts using Memorandums for the File, etc.

Section 9. Additional Preparers

The person(s) listed below, in addition to the preparer indicated on page 1, are responsible for all or part of the information and representations contained herein:

Name: _____

Title: _____

Facility: _____

Telephone Number: _____

Specific Area of Responsibility: _____

Section 10. Facility/Service Area Conclusions

☐ This initial review and analysis indicates that no extraordinary circumstances or other reasons exist that would cause the responsible federal official to believe that the proposed action might have the potential for causing significant environmental impacts. The undersigned have determined that the proposed action qualifies as a categorically excluded action in accordance with FAA Order 1050.1, and on this basis, recommend that further environmental review need not be conducted before the proposed project is implemented.

☐ The undersigned have determined that the proposed action may not qualify as a categorically excluded action in accordance with FAA Order 1050.1, and on this basis, recommend that further environmental review be conducted before the proposed action is implemented.

The undersigned recommend that the proposed action be submitted for environmental funding for preparation of an ☐ EA ☐ EIS ☐ Not sure – more analysis is needed.

Facility Manager Review/Concurrence

Signature: _____ Date: _____

Name: _____

Title: _____

Address: _____

Phone: _____ Email: _____

Service Area Environmental Specialist Review/Concurrence

Signature: _____ Date: _____

Name: _____

Title: _____

Address: _____

Phone: _____ Email: _____

Service Area Director Review/Concurrence, if necessary

Signature: _____ Date: _____

Name: _____

Title: _____

Address: _____

Phone: _____ Email: _____

Appendix 7. FAA/DOD Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING BETWEEN THE FEDERAL AVIATION ADMINISTRATION AND THE DEPARTMENT OF DEFENSE FOR ENVIRONMENTAL REVIEW OF SPECIAL USE AIRSPACE ACTIONS

I. Definitions.¹

In addition to definitions in the Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) (40 CFR Part 1508), the following definitions also apply to this Memorandum of Understanding (MOU):

“DoD” means the Department of Defense or one or more components thereof, depending on the context.

“SUA” means “special use airspace,” as defined in FAA Order JO 7400.2.

“DoD SUA Action” means a DoD activity for which the FAA determines an FAA SUA Action is required or otherwise warranted.

“Environmental Review Process” means all activities that are necessary for compliance with the following and must be completed before DoD and FAA SUA Actions can be implemented: the National Environmental Policy Act (NEPA); the CEQ Regulations; DoD and FAA NEPA–implementing procedures; and other federal environmental laws, regulations, executive orders, and administrative directives.

“Proponent” means: (1) DoD for FAA SUA Actions for which the FAA requires submission of a proposal by DoD; and (2) the FAA for other FAA SUA Actions.

“FAA SUA Action” means the FAA’s establishment, designation, or modification of SUA for which a component of DoD is the “using agency,” as defined in FAA Order JO 7400.2.

II. Purpose and Scope.

The purpose of this MOU is to describe guidelines for efficiently conducting the Environmental Review Process for DoD and FAA SUA Actions by avoiding unnecessary duplication of effort and reducing delay through effective coordination and cooperation between the agencies.

This MOU applies “lead agency” (40 CFR §1501.5) and “cooperating agency” (40 CFR §1501.6) concepts and requirements to Categorical Exclusions (CATEXs), Environmental Assessments (EA), Environmental Impact Statements (EIS), and other related or supporting documents for DoD and FAA SUA Actions.

1. Terms defined in this section are capitalized throughout the document.

III. Designation of Lead and Cooperating Agencies (40 CFR §1508.16 and §1508.5).

A. Introduction. DoD and FAA SUA Actions can be subject to different levels and scope of environmental impact analyses pursuant to NEPA, as implemented by the CEQ regulations and by the DoD's and the FAA's agency-specific NEPA-implementing procedures. The CEQ regulations encourage designation of a lead agency where related actions by several Federal agencies are involved.

Either the DoD or the FAA may be the lead or cooperating agency for a NEPA review addressing both DoD and FAA SUA Actions. The lead agency, in such instances, is responsible for consultation with other agencies, for early and continuing coordination of appropriate environmental evaluations and analyses, and, in coordination with the cooperating agency, for making and documenting determinations under other applicable environmental laws and regulations (e.g., the Endangered Species Act and the National Historic Preservation Act) and incorporating such documentation into the appropriate NEPA document. The lead agency will invite other federal agencies having jurisdiction by law or special expertise with respect to any environmental issue that should be addressed in the NEPA process to become a cooperating agency (40 CFR §§1501.6, 1508.5).

Both the FAA and the DoD acknowledge the purposes of NEPA (40 CFR §1500.1), and the need to both eliminate unnecessary duplication and reduce delay. Accordingly, the FAA and the DoD will integrate NEPA considerations and requirements of both agencies into the SUA project planning process as early as possible in their respective project planning schedules. The agencies will also strive cooperatively to coordinate development of environmental documents that meet the standards for adequacy in accordance with both agencies' NEPA implementing procedures, thereby expediting completion of the Environmental Review Process.

B. Designation of lead agency. The Proponent will serve as the lead agency (40 CFR §1501.5).

C. Designation of cooperating agency. The DoD and the FAA will ensure designation of the cooperating agency early in the NEPA process (40 CFR §1501.6). Upon request of the lead agency, the DoD or the FAA will serve as a cooperating agency.

Written requests by the FAA and the DoD will be directed to:

Federal Aviation Administration	
Rules and Regulations Group (AJV-P2)	OSG Manager of the applicable FAA Service Center
Air Force	
Deputy Assistant Secretary of the Air Force for Installations (SAF/IEI) 1665 Air Force Pentagon Rm 4B941 Washington, DC 20330-1665	cc: AF/A3TI – Airspace Policy Rm 5D756 1480 AF Pentagon Washington, DC 20330-1480 (703) 692-7752 HQ AF/A4CP Installation Strategy and Plans Division Rm 4D950 1260 Air Force Pentagon Washington DC, 20330-1260 (703) 614-0237

Navy	
Director Chief of Naval Operations (N45) 2000 Navy Pentagon (Rm 2E259) Washington, DC 20350-2000	cc: Chief of Naval Operations will direct to appropriate code
Marine Corps	
MCICOM (Attn: NEPA) Headquarters Marine Corps 3000 Marine Corps Pentagon Room 2D153A Washington, DC 20350-3000	
Army	
Asst. Chief of Staff for Installation Management Installation Services, Environmental (DAIM-ISE) 600 Army Pentagon (5A120-1) Washington, DC 20310-0600	Cc: Deputy Assistant Secretary of Army, Environmental Safety and Environmental Health (DASA(ESOH)) Headquarters, U.S. Army Aeronautical Services Agency (Attn: Airspace Branch) 9325 Gunston Road, Suite N319, Fort Belvoir, Virginia 22060
Major Range and Test Facility Base (MRTFB)	
Director, Test Resource Management Center (TRMC) 4800 Mark Center Dr., Suite 07J22 Alexandria, VA 22350	

*The MRTFB is managed by the TRMC and includes Army, Navy, and Air Force test ranges and associated airspace as designated by annual issuance. The TRMC will coordinate with the lead or cooperating agency as necessary.

IV. Documentation.

A. General. To eliminate unnecessary duplication, reduce paperwork, and reduce delay, the FAA and the DoD will cooperatively develop necessary environmental documentation. The agencies will share and may use, as allowed by their respective regulations/directives, background data and impact analysis prepared by either agency in support of a DoD or FAA SUA Action. Documentation will be developed and processed in accordance with applicable FAA Orders, DoD directives and regulations, and established cooperating agency relationships (40 C.F.R. §1506.1).

The lead agency will provide, within scope (40 C.F.R. §1508.25), project-specific related data supporting the proposed action, alternatives, and impact analyses to the cooperating agency to facilitate the development of a legally defensible NEPA document and support appropriate determinations.

The lead and/or cooperating agency will independently evaluate any information or analysis before using it to support a NEPA review. The intent of the lead and cooperating agency relationship is to ensure mutually adequate documentation that complies with both the lead and cooperating agencies'

NEPA–implementing procedures. Deficiencies in information, analysis, or other issues covered within the scope of the documentation will be addressed and corrected during cooperating agency concurrent review(s).

B. Categorical Exclusions.

The DoD and the FAA will address the availability of CATEXs early in the development of DoD and FAA SUA Actions. CATEXs are not interchangeable between the agencies. If the Proponent decides to rely on a CATEX for its action and the cooperating agency cannot rely on a CATEX for its action, the Proponent will provide information and analysis the cooperating agency identifies as necessary for the cooperating agency’s NEPA review. To the extent consistent with the cooperating agency’s NEPA–implementing procedures, the cooperating agency may request that the Proponent prepare an EA or fund the preparation of an EA or EIS.

V. General Guidance

A.Scheduling. To help avoid unnecessary delay in the Environmental Review Process, the DoD and the FAA will establish a mutually agreed–upon schedule that reflects appropriate time limits to ensure that required actions are taken on a timely basis, consistent with the cooperating agency designation (ref. III.C.). The schedule will accommodate both agencies’ requirements (e.g., DoD mission requirements, FAA requirements for processing SUA proposals, both agencies’ NEPA–implementing procedures). Each agency will promptly notify the other of any difficulty with meeting scheduled deadlines or any need to revise the schedule.

B.Administrative Records. The FAA and the DoD, as either lead or cooperating agency, agree to develop and maintain an administrative record of each SUA project in accordance with their agency’s respective administrative record and document retention rules and requirements. In the event either agency’s action is timely challenged, the other agency will make its administrative record available to the agency whose action has been challenged.

C.Resolution of disagreements. If the FAA and the DoD fail to reach agreement at the normal working level on any issue relating to environmental processing of proposed SUA Actions, the matter will be referred, in ascending order, as outlined in the table below. At any time, the FAA’s Office of the Chief Counsel and the Office of the General Counsel of the Service Department involved shall be consulted for assistance with legal issues.

Equivalent Levels of Responsibility for Resolution of Disagreements

FAA Administrator	DoD Policy Board on Federal Aviation (PBFA) Chairman
FAA Chief Operating Officer, Air Traffic Organization	DoD PBFA Executive Director Principal Member
FAA VP, Mission Support Services	DoD PBFA Deputy Executive Director
FAA Director, Policy	DoD PBFA Airspace and Procedures Subgroup Chair

D.Funding. Agency budget constraints may delay processing and implementation of DoD and FAA SUA Actions. As part of the lead agency–cooperating agency relationship, the DoD and the FAA will determine responsibilities, consistent with this MOU, for funding the preparation of NEPA documentation (40 CFR §1501.6(b)(5)) and, if appropriate, decision implementation measures (40 CFR §1505.3).

E.Amendments. If either party determines that it is necessary to amend this MOU, it will notify the other party in writing of the specific change(s) desired, with proposed language and the reason(s) for the amendment. The proposed amendment will become effective upon written agreement of both parties.

2. Encourage the Proponent to work proactively with other Federal, State, and Local agencies; Tribal Governments; and the public on environmental concerns as they arise. This will ensure that mitigation to address environmental concerns is considered early in the process.

3. Advise attendees that the FAA cannot render a final determination on the environmental effects of the SUA proposal until after completion of the Proponent's environmental process, the FAA's aeronautical process, the FAA's independent review of the Proponent's environmental documentation, and any additional environmental analyses conducted by the FAA.

e. The meeting format may be tailored to the needs of the specific proposal. It may be conducted by a teleconference, if permitted by the scope of the proposal or if necessary due to funding or other constraints.

f. Additional meetings should be scheduled as needed to discuss changes, revise milestones, share updated environmental and/or aeronautical impact data or public comments, discuss alteration of the proposal in order to mitigate valid aeronautical objections, incorporate agreements by the Proponent to mitigate environmental impacts, or discuss other matters.

7. RELATIONSHIPS AND TIMING OF ENVIRONMENTAL AND AERONAUTICAL PROCESSES

a. SUA proposals are subject to both environmental and aeronautical processing requirements. These processes are separate but closely related. Any actions by a Proponent to mitigate environmental impacts, and/or changes to the proposal to address valid aeronautical objections, may alter the type and extent of environmental analysis required.

b. Normally, the SUA Proponent will initiate the environmental process well in advance of submitting an actual SUA proposal to the FAA for review. The appropriate Milrep should inform the appropriate Service Center as soon as possible after receiving notice that a DoD Proponent plans to initiate the environmental study process. A letter requesting FAA participation in the environmental study process as a Cooperating Agency should be forwarded to AJV-P2, Manager of the Rules and Regulations Group of the Office of Mission Support, Policy, at FAA Headquarters.

c. Proponents should submit SUA proposals to the applicable FAA Service Center prior to completion of the NEPA process. This will enable the FAA to initiate the aeronautical processing phase prior to completion of any required NEPA documents, which will facilitate the earlier consideration of aeronautical factors that may result in modification of the proposal and may affect the environmental analysis. In all cases, the FAA will defer a final decision on the proposal until the required DoD Proponent's NEPA documentation is completed.

d. During the aeronautical processing of a proposal with alternatives, only the alternative submitted to the FAA in accordance with Part 5. of this order will be subjected to the aeronautical process described in this order (such as non-rulemaking circularization or Notice of Proposed Rulemaking (NPRM)) by the FAA. However, all reasonable alternatives, including the alternative of no action, must be evaluated in the DoD SUA Proponent's environmental document.

8. SERVICE CENTER PROCEDURES

a. Normally, FAA participation in the SUA environmental process will begin at the headquarters level with a request by the Proponent of an SUA proposal for the FAA to participate in the process as a Cooperating Agency. However, the FAA point of contact will generally be a representative from the Air Traffic Organization at the Service Center level. Close coordination is required between the Service Center Airspace Specialist and

Environmental Specialist throughout the process. This will ensure that FAA concerns are provided to the Proponent for consideration, and that NEPA and DOT/FAA environmental requirements are met.

b. Once notified of the initiation of the environmental process by the DoD SUA Proponent, the Service Center Environmental Specialist should request that the Proponent provide an electronic copy of all preliminary, draft, and final environmental documents for FAA review. The Service Center Environmental Specialist will forward these documents to FAA Headquarters Rules and Regulations Group (AJV-P2).

c. To the extent practicable, the Service Center should provide FAA representation at pre-scoping, scoping, and/or other NEPA public meetings concerning the SUA proposal. If requested by the Service Center, representation from the headquarters Airspace Policy and/or Airspace Management Groups will be provided.

d. Service Center Airspace Specialist Responsibilities:

1. Coordinate requests from the Milrep to schedule an interagency SUA environmental planning meeting with the Service Center Director (or the Director's designee) and the environmental specialist.

2. Participate in interagency SUA environmental planning meetings as directed, by the Service Center Director (or the Director's designee). (See paragraph 6, above.)

3. Participate in pre-scoping, scoping and/or other public meetings as directed.

4. Provide information and assistance as required to the Proponent regarding the aeronautical aspects of the proposal and processing procedures under Part 5 of this order.

5. Coordinate with and assist the Environmental Specialist in the review of environmental documents to ensure consideration of pertinent aeronautical issues. Compare the SUA proposal parameters with the analysis in the environmental document to ensure that the analysis is consistent with the Proponent's airspace request. Provide corrections and/or comments to the environmental specialist for transmittal to the Proponent.

6. Maintain liaison with the Proponent's environmental team to determine if any comments received pertain to aeronautical issues; provide information regarding the aeronautical aspects of alternatives developed by the Proponent.

7. Provide to the Proponent aeronautical impact information obtained from the formal aeronautical study conducted in accordance with Chapter 21 of this order and during the aeronautical public comment period. As required, negotiate with the Proponent to modify the proposal to mitigate valid aeronautical objections or adverse aeronautical impact.

8. Upon receipt of the SUA proposal, initiate processing in accordance with Part 5 of this order.

(a) Determine if an Informal Airspace Meeting will be held in accordance with the procedures in Part 5. of this order. If a meeting is planned, request participation by the Proponent to explain and answer questions about the proposal.

NOTE—

Informal Airspace Meetings are optional for SUA proposals. Normally, they are held only if the Service Center determines that there is a need to obtain additional aeronautical facts and information relevant to the SUA proposal under study. Informal airspace meetings may also be held based on known or anticipated controversy of the proposal.

(b) Complete the appropriate rulemaking or non-rulemaking processing requirements as defined in Part 5 of this order.

9. In consultation with the Service Center Environmental Specialist and the Regional Counsel, review the Proponent's decision document to ensure that it is consistent with any modifications made to the SUA proposal, if applicable, and that any agreed upon aeronautical mitigation measures are included.

10. If the Service Center Airspace Specialist recommends approval of the SUA proposal, submit the completed proposal package to the Airspace and Rules Team (AJV-P21) for final review and determination.

e. Service Center Environmental Specialist Responsibilities:

1. Coordinate as required with the Service Center Airspace Specialist regarding SUA matters.

2. Notify the Rules and Regulations Group (AJV-P2) when informed of scheduled interagency SUA environmental planning meetings. Participate in planning meetings as directed by the Service Center Director (or the Director's designee) (see paragraph 6 above). Provide a review copy of the Proponent's environmental documentation to FAA HQ AJV-P21 and request their participation in environmental planning meetings as necessary.

3. Provide information as required to the SUA Proponent regarding FAA environmental requirements and concerns.

4. In coordination with the Service Center Airspace Specialist, review the SUA Proponent's environmental documents to ensure that applicable impact categories and any specific FAA environmental concerns are considered. After each review, forward any corrections and FAA comments to the Proponent.

5. Review the Proponent's final document to assess whether it meets the standards for an adequate document under NEPA, the CEQ regulations, DOT Order 5610.1C, and FAA Order 1050.1. Following consultation with the Regional Counsel, determine if the FAA considers the document adequate for adoption. If so, prepare a draft Adoption document and provide a copy of the draft to FAA HQ AJV-P2 for review and comment, and to Regional Counsel or HQ AGC-600 for a Legal Sufficiency Review (LSR). In cases where the DoD Proponent's NEPA document does not meet the above-listed standards, the Service Center Environmental Specialist must return the document to the DoD Proponent for correction or additional analysis and documentation. Provide documentation of the results of each review and a recommendation regarding FAA adoption to the Rules and Regulations Group (AJV-P2).

6. If the DoD SUA Proponent determines that a DoD categorical exclusion (CATEX) applies to an SUA proposal:

(a) Determine if FAA Order 1050.1, Chapter 5, Categorical Exclusions, lists a CATEX that adequately covers the action. Verify that no extraordinary circumstances exist that would preclude use of the CATEX for the SUA proposal. Determine what additional environmental analysis would be required if the CATEX is not listed. Where the actions of one agency are subject to a categorical exclusion, and the actions of the other agency, with respect to the same SUA proposal require an EA, the agency requiring the EA will prepare the appropriate environmental analysis with the assistance of the Proponent. Applicability of a CATEX to parts of a proposed action of one of the agencies will be noted in the EA. Background information in support of CATEXs or project data necessary to support adequate impact analysis in an EA, identified by either DoD or FAA, must be forwarded to the agency requiring preparation of the EA and may be used by either agency, as allowed by their respective regulations/directives.

(b) Document the results of the review in subparagraph (a) above, and submit the findings to the Rules and Regulations Group (AJV-P2).

7. Retain the administrative record in accordance with FAA retention guidelines. If DoD is the lead agency for the proposed project, a copy of DoD Proponent's NEPA document, their letter requesting Cooperating Agency status, FAA's acceptance, and other supporting documentation should be included in FAA's administrative record.

9. MISSION SUPPORT, AIRSPACE SERVICES, AIRSPACE REGULATIONS AND RULES AND REGULATIONS GROUP (AJV-P2) ENVIRONMENTAL DOCUMENTATION REVIEW PROCEDURES:

a. Review the Proponent's environmental document(s) to verify that the analysis matches the parameters specified in the SUA aeronautical proposal and that any required environmental issues are adequately analyzed for potential impacts. Verify that the environmental analysis matches the parameters specified in the SUA proposal and that any required aeronautical issues are considered. Conduct this review simultaneously with the Service Center's review as described in paragraph 8. Provide corrections and identify deficiencies to the Service Center Airspace and/or Environmental Specialist for transmittal to the Proponent.

b. The Rules and Regulations Group (AJV-P2) must review the Proponent's environmental documents for content and compliance with NEPA, CEQ regulations, and applicable DOT and FAA Orders. Coordinate within the Rules and Regulations Group (AJV-P2) as needed, regarding concerns, corrections, or other comments on aeronautical impacts. Provide FAA Headquarters' comments to the Service Center Environmental Specialist for transmittal to the Proponent.

c. Ensure that the Service Center Airspace Specialist has provided a copy of the SUA aeronautical proposal, including any environmental documentation, to the Service Center Environmental Specialist. Provide assistance and policy guidance regarding SUA environmental processing to the Service Center Environmental Specialist upon request.

d. Coordinate within the Rules and Regulations Group (AJV-P2) as needed for additional information concerning the SUA proposal including any airspace and aeronautical impact matters.

e. Assist the Service Center Environmental Specialist in reviewing the Proponent's Final EIS or EA/Finding of No Significant Impact (FONSI), and the Service Center Environmental Specialist's comments regarding compliance with NEPA, CEQ, and applicable DOT and FAA requirements. Assist the Service Center Environmental Specialist in determining if the Proponent's NEPA document is suitable for adoption by the FAA. Assist the Service Center Environmental Specialist in preparing the FAA adoption documentation in accordance with FAA Order 1050.1, chapter 8, paragraph 8-2; and keep a copy with the Rules and Regulations Group (AJV-P2) for inclusion in the airspace docket or case file.

f. Review the Proponent's and Service Center Environmental Specialist's comments regarding applicability of a CATEX. If a CATEX does not apply, determine if additional environmental analysis is required. Consider if CATEX documentation is required in accordance with FAA Order 1050.1, chapter 5. Provide a copy of the determination to the Rules and Regulations Group (AJV-P2) for inclusion in the airspace docket or case file.

g. As appropriate, coordinate with the FAA Office of the Chief Counsel, Airports and Environmental Law Division. See FAA Order 1050.1, paragraphs 2-2.1b(2)(b); 4-3.3, 5-2a(2) and b(10); 5-3e; 6-4a; 7-1.2b; 7-1.2d(3)(c); 8-2c; 8-7; 9-2e; 10-2b, d, e; 10-3b; 10-4a(2); 10-6a(2), b; 11-3; 11-4a, b.

h. Ensure that the FAA has adopted the Proponent's EIS or EA as applicable, that all additional FAA environmental requirements are satisfied, and that final decision notices are not published in the Federal Register until after the NEPA process is completed. Submit copies of the DoD Proponent's and FAA's NEPA documentation for inclusion in the rulemaking docket file or non-rulemaking airspace case file.

i. For rulemaking SUA actions, prepare the environmental compliance statement for inclusion in the ENVIRONMENTAL REVIEW sections of the NPRM and Final Rule. Insert the following statement in the environmental review section of SUA NPRMs:

"This proposal will be subject to appropriate environmental impact analysis by the FAA prior to any final FAA regulatory action."

For non-rulemaking SUA actions, include the DoD Proponent's and FAA's NEPA documentation for the airspace case file, and notify the public in accordance with FAA Order 1050.1, paragraph 6-2.2b.

NOTE-

For "Direct-to-Final-Rule" actions which are categorically excluded under FAA Order 1050.1, the following statement may be inserted in the environmental review section of the Final Rule:

"This action is categorically excluded under FAA Order 1050.1, Environmental Impacts: Policies and Procedures, Paragraph (insert Paragraph Number). Therefore, this action is not subject to further environmental review."

j. Prepare and provide a signature copy of the Final FAA Adoption NEPA document to the manager of the Rules and Regulations Group (AJV-P2) for signature. Provide a signed copy to the Service Center's Environmental Specialist for additional distribution as necessary or requested.

