STATE OF MAINE
AIRPORT MANAGERS

STUDY GUIDE

MaineDOT

Prepared by:

The Maine Department of Transportation
Office of Passenger Transportation

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State of Maine
Airport Managers Study Guide

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Overview of the Airport Managers Training Program

Airport Managers Training Program

This Airport Managers Training Program is established under 6 MRSA Chapter 6 for the purpose of enhancing public safety and protecting property, and is applicable to all commercial airport facilities, whether publicly or privately owned, that fall within the following categories:

- Air Carrier
- Commuter Air Carrier
- General Aviation I

Title 6 requires that each of these airports have a designated airport manger and that those airport managers complete this training program. Accordingly, this will be a requirement for the issuance of MaineDOT commercial airport registration certificates beginning January 1, 2008. The intent of this program is to ensure that all designated airport managers are trained on both Maine rules and laws on aviation and FAA safety rules and regulations.

Functions and Roles of Airport Managers

An airport manager is responsible for the daily operations of an airport. Either alone or through subordinate supervisors, the manager directs, coordinates, and reviews all aircraft operations, maintenance of the airfield and buildings, community relations and financial matters of the airport. Some airport managers are also responsible for running the airports fixed base operation (FBO) under a separate agreement with the airport owning jurisdiction.

No matter what specific duties an airport manager has each day, the number one responsibility of an airport manger is to operate a safe and efficient airport. The overall quality of the national airspace system depends on it.

An airport manager reports to, and receives direction from, the airport's owner/operator. In Maine, most public airports are owned by municipalities, airport authorities, or counties. The airport manager is also responsible for interpreting the functions and activities of the airport to the public. Public relations are also an important function of airport management.

Exemptions

Airport managers that meet any of the following conditions are considered trained and qualified to the requirements of Title 6 and shall be exempt from this training program. To receive this exemption, the airport manager must submit the stated documentation to the Maine DOT, Office of Passenger Transportation.

Training Requirements

Knowledge Standards:

General Aviation I Airports

- Understand state laws processes and procedures regarding the airport manager's availability and terms of employment (e.g., full- or part-time), the filing of Notices to Airmen, displaying the local traffic pattern, airport traffic safety rules, noise abatement procedures, and the submittal of aircraft registration information to MaineDOT.
- Understand state laws and regulations, including enforcement and penalties, pertaining to airport and aircraft registration, trespass and air traffic. Understand the state law regarding jurisdiction of political subdivisions with respect to the promulgation, administration and enforcement of airport zoning regulationUnderstand the processes, procedures, and standards for the inspection of airport facilities, including, but not limited to, runways, buildings, beacons, and vehicles to determine repair or replacement needs.
- Understand federal laws and regulations regarding ownership and operations of an airport.
- Understand fueling facility safety, including compliance with fire safety regulations and the recommendations of the National Fire Protection Association.
- Understand the Federal Aviation Administration Grant Assurances and state grant assurances.
- Understand Airport Emergency Procedures.
- Understand the airport design, construction, and maintenance process.

Air Carrier and Commuter Air Carrier Airports

The same as for General Aviation I airports above, with the addition of the following:

- Understand the F.A.A. requirements for 14 C.F.R. Part 139 continued certification.

Training Resources:

- MaineDOT has prepared an Airport Managers web page that includes downloadable training materials for this program (also available in paper copy and on Compact Disk).
- MaineDOT's annual Airport Regional Meetings. These meetings consist of a two-hour block of time to review material for the Airport Managers Training Program. Additionally, airport self-inspection field visits to the host airports are available following the Airport Regional Meetings.
- Upon request, MaineDOT will provide training at the airport manager's location.
- Upon request, Maine DOT will provide up to two hours of training at the Maine Airport Managers Association annual meeting.

Training Program Certification Test:

The Airport Managers Certification Test is a take-home examination. It can be downloaded from the MaineDOT web page at http://www.maine.gov/mdot/aviation/aviation-home.php , or mailed to you in paper form upon request. Beginning with 2008, the annual application for airport registration will include an item asking if the airport's designated manager has completed the required training program. For those airports that meet all registration requirements except for manager training, a 60-day temporary registration certificate will be issued, and the manager will be provided with information regarding the Airport Managers Training Program and available training resources.

CHAPTER ONE

TITLE SIX

Learning objectives:

- Understand state law, processes and procedures regarding the airport manager's availability and terms of employment (e.g., full- or part-time), displaying the local traffic pattern, airport traffic safety rules, noise abatement procedures, and the submittal of aircraft registration information to MaineDOT.
- Understand the laws and regulations, including enforcement and penalties, pertaining to airport and aircraft registration, trespass and air traffic. Understand the laws regarding jurisdiction of political subdivisions with respect to the promulgation, administration, and enforcement of airport zoning regulations.

Reference materials:

- State of Maine Title Six - Aeronautics

The Maine Aeronautics Act:

The Maine Aeronautics Act was created to provide for the protection and promotion of the public interest and safety in connection with aeronautical activities. It defined the Department of Transportation's commissioner's duties regarding the laws relating to aeronautics. The commissioner shall adopt and administer such rules concerning aeronautical activities not inconsistent with federal regulations covering aeronautics within the State by studying aviation needs, assisting and advising authorized representatives of political subdivisions within the state in the development of aeronautics and by cooperating and coordinating with such other agencies whether local, state, regional or federal, as may be working toward the development of aeronautics within the State.

The commissioner shall have, in any part of the State, the same authority to enforce and to make arrests for the violation of any of the provisions of this chapter or any rule or regulation promulgated there under as sheriffs, policemen, and constables have in their respective jurisdictions.

The commissioner shall have the power to conduct studies relating to aeronautical development within the State or any part thereof and may apply for and receive, on behalf of the State, federal aid in connection with those studies.

The MaineDOT shall also have the responsibility to aid and assist municipalities in the:

- development, maintenance and operation of their public airports,
- request for state and federal aid in the development of the capital improvement programs, planning grants, design and construction of airport projects, and
- repair of, maintenance of and removal of snow from municipal, state, and county airports.

However, in the pursuit of seeking funding for the airport, no municipality or other political subdivision in this State, whether acting alone or jointly with another municipality, a political subdivision or with the State, shall submit to the administration any request for federal aid, unless the project and the project application have first been approved by the commissioner. This subsection may be waived by the commissioner if no state funds are involved and the project falls within the latest airport master plan for that airport.

Registrations:

Title Six, Chapter 4 provides for the registration of airports, aircraft, and aircraft dealers in Maine. By law, no airport, aircraft, or aircraft dealer required to be registered in this state may operate without such registration.

For registration purposes, Chapter 4 classifies airports, and requires fees, as follows:

- Commercial airports
  - Air carrier airports ($100)
  - Commuter air carrier airports (regularly scheduled air taxi operations) ($100)
  - General Aviation I airports ($50)
- Utility airport ($25)
- Commercial heliports ($25)
- Non-commercial heliports ($5)
- Temporary landing areas ($10)
- Private airports with commercial activity ($50)

To be issued a registration certificate, an airport must meet the minimum standards established in Title Six, Chapter 6. The Maine Section 102, sub-section 2, requires that all air carrier and commuter air carrier airports have a “generally available” (full-time) manager, and all other commercial general aviation airports have at least a part-time manager.

Minimum airport standards; airport managers; fire equipment and safety:

All air carrier and commuter air carrier airports, as defined under chapter 4, shall designate a person generally available who shall have administrative responsibility for operation and maintenance of the airport. All general aviation commercial airports, as defined under Chapter 6 shall have at least a part-time airport manager. All airport managers shall perform the following duties:

- The airport manager, or his authorized representative, shall be available during all hours of operation. A current telephone number shall be on file with the department.
- The manager shall file a "notice to airmen" with the Federal Aviation Administration designating any changes in airport conditions that may affect safety. A "notice to airmen" file shall be maintained at the airport.
- The manager shall display the local traffic pattern, airport traffic safety rules, any noise abatement procedures, and any special orders relating to the airport and its operations at a prominent location the airport.
- The manager shall submit a list of federal aviation registration numbers twice yearly to the department in May and November of all aircraft based at his airport.

Fire equipment and safety:

There shall be fire extinguishers of adequate size, type, and amounts in locations as recommended by the National Fire Protection Association.

Physical description of airports and minimum airport facilities:

Commercial airports:

- There shall be adequate toilet facilities approved by the proper authority in the community in which the commercial airport is located, an operation area contained in a building, which has an interior floor area measuring no less than 6 feet by 8 feet, and a public telephone.
- There shall be a wind direction indicator consisting of a windsock, a tetrahedron, or a wind tee.
- All paved runways shall be marked in accordance with the latest State or Federal Aviation Administration Advisory Circular.
- All lighted runways shall be lighted in accordance with the latest State or Federal Aviation Administration Advisory Circular.

Noncommercial airports; land; open to the public:

- There shall be a wind direction indicator consisting of a windsock, tetrahedron, or wind tee located adjacent to the landing area.
- Land airports without paved runways must have the boundaries of the usable landing area defined with clearly visible markers painted white.

Aviation fueling facilities:

Please see Chapter 7 of this Study Guide.

Enforcement:

It shall be unlawful:

- For any person to operate or authorize the operation of any civil aircraft which is not possessed of a valid identification mark assigned or approved therefore by the administration
- For any person to operate or authorize the operation of any civil aircraft within the State which is not possessed of a currently effective airworthiness certificate
- For any person to taxi takeoff from or land on any public highway in this State except in the case of emergency or with prior written permission granted by the commissioner
  - For any person to operate an airport, heliport or temporary landing gear as within the State without having first been issued and holding a valid state registration certificate as required by the commissioner pursuant to Chapter 4
  - For any person to operate an aircraft within the state without having first been issued and holding a valid state registration certificate as required by the commissioner. It shall be prime facie evidence that an aircraft is being operated unlawfully if a current decal is not affixed to the aircraft or an exemption obtained.
- For any person to operate an aircraft in the air or on the ground or water in careless or reckless manner so as to endanger the life or property of another. In any proceeding charging careless or reckless operation of an aircraft in violation of this section, the court in determining whether the operation was careless or reckless shall consider the standards for safe operation of aircraft prescribed by federal statutes or regulations governing aeronautics
- For any person to trespass upon the landing area of any licensed or registered airport.
- For any person to operate or attempt to operate an aircraft under the influence of intoxicating liquor or drugs or a combination of liquor and drugs or with excessive blood-alcohol level. Notwithstanding Section 203, a person is guilty of a Class D crime if that person operates or attempts to operate an aircraft.
  - While under the influence of intoxicating liquor or drugs or combination of liquor and drugs or
  - While having a 0.04% or more by weight of alcohol in that person's blood and

Penalties:

Any person who violates any provisions of Chapters 1 – 17 pertaining to registration, trespass or air traffic rules, or who violates any provisions of an order, rule, or regulation made hereunder, or fails to answer a subpoena or to testify before the commissioner, shall be guilty of a Class E crime.

CHAPTER TWO
AIRPORT GRANT ASSURANCES AND AIRPORT COMPLIANCE

Learning objectives:

Understand the Federal and State Grant Assurances.

Reference materials:

- State of Maine Title Six – Aeronautics
- Federal Aviation Administration Grant Assurances: Airport Sponsors (full copy)
- State of Maine Grant Assurances - project contract (full copy).
- FAA Order 5190.6A: Airport Compliance Requirements (title page only, full copy on www.faa.gov website)
- FAA Order 5100.38C: Airport Improvement Program Handbook (title page only, full copy on www.faa.gov website)
- FAA Order 5100.39A: Airports Capital Improvement Plan (full copy)
- AC 150/5100-19C: Guide for Airport Financial Reports Filed by Airport Sponsors (full copy)

Federal Aviation Administration Grant Assurance Obligations:

When airport owners or sponsors, planning agencies, or other organizations accept funds from FAA-administered airport financial assistance programs, they must agree to certain obligations (or assurances). These obligations require the recipients to maintain and operate their facilities safely and efficiently and in accordance with specified conditions. The assurances appear either in the application for Federal assistance and become part of the final grant offer or in restrictive covenants to property deeds. The duration of these obligations depends on the type of recipient, the useful life of the facility being developed, and other conditions stipulated in the assurances.

- FAA Order 5190.6A: Airport Compliance Requirements
- AC 150/5100-19C: Guide for Airport Financial Reports Filed by Airport Sponsors
- FAA Form 5100-127, Operating and Financial Summary

Federal Aviation Administration Authorization Act of 1994: Section 111 "Required sponsors to file two new reports. Section 111(a) required sponsors to report amounts airport paid to any other units of government and the purpose for each payment It also required sponsors to report all services and property that the airport provided to other units of government and the amount of compensation the airport received. Section 111 (b) required sponsors to use the FAAs uniform format to report funds collected and spent at their airports. These sections are codified at 49 U.S. C. 47107(19)

FAA Order 5190.6A: Airport Compliance Requirements

The Airports Compliance Program embraces the policy and guidelines of the FAA for monitoring the performance of airport owners under its obligations to the Federal Government. The obligations that airport owners assume in consideration of Federal aid flow from various agreements and statutes, including but not limited to:

- Grant agreements issued under the various Federal Grant programs.
- Surplus airport property instruments of transfer issued under the provisions of Section 13g of the Surplus Property Act of 1944.
- Deeds of conveyance issued under Section 16 of the Federal Airport Act of 1946, under Section 23 of the Airport and Airway Development Act of 1970, or under Section 516 of the Airport and Airway Improvement Act of 1982 (AAIA).
- Section 308(a) of the Federal Aviation Act of 1958 (exclusive rights).
- Title VI of the Civil Right Act of 1964.

FAA Order 5100.39A: Airport Capital Improvement Plan

The FAA establishes a regional ACIP that is a constrained, usually 5-year financial plan for the funding of airport development. The focus of which is usually specific to Airport Improvement Program (AIP) funding. In the development of such a financial plan, consideration is always given to all types of revenue streams available to an airport. The ACIP is a continuous process, Airport or State Evaluation and Development Stage. March through November. Each airport/state through a master plan effort or some other method creates a Capital Improvement Plan (CIP), which is for the individual airport or state. This CIP should focus on development within a 5-year timeframe. The plan should consider such things as realistic cost estimates, justification, environmental requirements, and all types of revenue streams. The state organizations are responsible for developing one state CIP for GA, reliever and commercial service airports within their states. The airports or states should also prioritize all of projects within the CIPs.

- Regional FAA Evaluation and Development Stage. March through November. The airport or state communicates and coordinates these individual CIPs with the FAA. This can be accomplished through a series of meetings or in any other method, which is better suited for the individual situation. This is a continuous process. During the fall, the FAA planners will make an effort to coordinate and again update the CIPs prior to the regional analysis process. The planners will evaluate not only funding but also such things as the timing of a project, additional required elements such as environmental and sponsor performance.
- Regional ACIP Evaluation: December through May. The FAA will review the individual airport or state CIP's on a regional level and determine if these plans are reasonable, acceptable, do they meet FAA criteria and evaluate the likelihood of the AIP funding within the plans. Most of this effort will focus on those airports and projects that require AIP discretionary funding.

- For larger more complex development programs, the FAA and airports will have many more coordination and communication efforts. Under these types of projects, it will be imperative that all types of funding are under consideration within the financial plans. Alternative funding scenarios such as LOIs will be considered.
- Washington Submittal: June 1st. The regional FAA office will establish and submit to FAA Washington a regional ACIP for 5 years by June 1st. The first three years must be considered sound financial plans. With the outer years not having to be as firm. Coordination between the FAA Region and Washington will result in funding planning levels. These planning levels are the basis for the financial planning being accomplished throughout the regional, airport and state evaluation and development processes and the regional ACIP evaluation step.

AC 150/5100-19C: Guide for Airport Financial Reports Filed by Airport Sponsors

This revision announces the following changes:

- Security Reimbursements. The level of security services has increase substantially. To reflect this increase, the FAA is including security reimbursements in Aeronautical Operating Revenue.
- Enplanements. Each year the air carriers report their enplanements to the FAA. In response to requests from the public, the FAA will now incorporate that enplanement data into the Form 5100-127, Operating, and Financial Summary. The FAA will enter this data. This change will not require airports to gather or enter any additional data.
- Hardcopy forms. Since airports may now enter information directly on the web, the FAA will no longer automatically accept hardcopy forms. The FAA will make exceptions for airport that have difficulty accessing the site.

The Federal Aviation Administration Authorization Act of 1994 required Sponsors to file two new reports. Report amounts the airport paid to any other units of government and the purpose for each payment. It also required Sponsors to report all services and property that the airport provided to other units of government and the amount of compensation the airport received. Sponsors are required to use the FAA's uniform format to report funds collected and spent at their airports. Congress enacted the reporting requirements to inform the public about how airports collect and disburse their funds and to provide the FAA with a means for evaluating the Sponsor compliance with revenue – use requirements. Sponsors are required to use airport revenue for the capital or operating costs of the airport, the local airport system, or other local facilities that are directly and substantially related to air transportation of passengers or property. Congress exempted certain financial arrangements for the requirement. This Advisory Circular provides Sponsors with guidance for filing reports in accordance with 49 U.S.C. §47107(a) (15) and (19). It does not impose any new obligations, so the terms "mandatory" and "must" refer to statutory obligations that already exist. It requires

CHAPTER THREE
AIRPORT MASTER RECORD 5010 DATA

Learning objectives:

- The processes, procedures, and standards for the inspection of airport facilities, including, but not limited to, runways, buildings, beacons, and vehicles to determine repair or replacement needs.

Reference materials:

- Sample Airport Master Record

Airport Master Record – form 5010:

The purpose of providing airport data to the Federal Aviation Administration using Forms 5010-1 is to collect, maintain, and disseminate accurate, complete, and timely airport data for the safe and efficient movement of people and goods through air transportation. Within the FAA, this is accomplished through the Airport Safety Data Program. The Airport Safety Data Program is the primary means for gathering aeronautical information on landing facilities.

The information collected from the FAA 5010 forms is included in the Airport/Facility Directory AFD). The AFD is a flight information publication published by the FAA's National Aeronautical Charting Office every 56 days and is effective on the first day of the56-day airspace cycle. http://www.naco.faa.gov/ .

The 5010-1 Airport Master Record contains aeronautical data describing the physical and operational characteristics of civil public-use airports, joint-use military airports, and private-use military airports that are active and in the National Airspace.

Updated forms should be sent to:

Tracey McInnis
Management & Program Analyst
ANE-620
12 New England Executive Park
Burlington, MA 01803.

Phone number: 781-238-7621

CHAPTER FOUR
NOTICE TO AIRMEN

Learning objectives:

- Understand filing of Notices to Airmen

Reference materials:

- FAA Order 7930.2K: Notice to Airmen (title page only, full copy on www.faa.gov website)
- AC 150/5200-28C: Notice to Airmen (NOTAMS) for Airport Operators (full copy)

Notice to Airmen:

The NOTAM system provides essential information to personnel concerned with flight and airport operations. NOTAMs provide timely information on unanticipated or temporary changes to components of or hazards in the National Airspace System (NAS). Component changes may pertain to facilities, services, procedures, or hazards in the national airspace system. A NOTAM provides information that becomes available too late to publicize in the associated aeronautical charts and related publications.

The NOTAM system is not intended to be used to impose restrictions on airport access for the purpose of controlling or managing noise, or to advertise data already published or charted.

The management of a public use airport is expected to make known, as soon as practical, any condition on or in the vicinity of the airport, existing or anticipated, that will prevent, restrict, or present a hazard during the arrival or departure of aircraft. Airport management is responsible for observing and reporting the condition of airport movement areas.

Normally notification should be made not more than 3 days before the expected condition is to occur. Public notification is usually accomplished by the NOTAM system. This same notification system should be used when the condition has been corrected or otherwise changed. Airport operators are also responsible for canceling NOTAMS that are no longer applicable to airport facilities.

Some facilities components, such as pavements, runway lights and guidance sign systems are always the responsibly of the airport operator. Others such as navigation facilities and approach lights are usually the responsibility of the FAA. To avoid confusion airport operators should initiate a NOTAM on a facility only when its operation and maintenance are clearly within their sphere of responsibility. However, airport operators should make every effort to alert the responsible party when outages/discrepancies are observed in facilities that fall outside their sphere of responsibility

Airport operators are responsible for providing an up to date list of airport employees who are authorized to issue NOTAMs to the appropriate air traffic facility (normally the associated Flight Service station listed in the Airport Facilities Directory (A/FD). This will help expedite the NOTAM because information obtained from personnel not on this list may have to be confirmed by the Flight Service station before a NOTAM will be issued.

Authorized airport personnel submit NOTAMs to Flight Service stations (FSS) that receive and manage most NOTAM information for processing and dissemination on the NOTAM system. The National Flight Data Center (FFDC) in Washington, DC, has national program management responsibilities for the systems and has exclusive operational control of certain NOTAM elements.

In some cases, it may be desirable to execute letters of agreement with servicing Air Traffic Control facilities outlining NOTAM procedures.

NOTE: although the airport operator has primary NOTAM origination responsibilities for the landing area, the Air Traffic Control facility managing the NOTAM system is responsible for, and has the authority to ensure the systems compatibility of the format and content of the proposed NOTAM message.

Initiating a NOTAM

- Identify the affected facility and component.
- Describe the condition of the affected facility that prompted the NOTAM
- Furnish the month, day, and the time for the beginning and end of the condition or the effective time. In addition to listing the outage time, NOTAMs should specify an expected time of return to service or previous condition.

Submitting the NOTAM

- Filing with the Local ATC facility
- Filing with the National Flight Data Center
- Fax to Aeronautical Information Services (202) 267-5322
- Phone Aeronautical Information Services (800) WX BRIEF

Allowing Verification

Phone: 1-800-WX-BRIEF for verification.

CHAPTER FIVE
AIRPORT EMERGENCY PROCEDURES

Learning objectives:

- Understand Airport Emergency Procedures.

Reference materials:

- FAA's Emergency Plan Airports
- AC 150/5200-31A: Airport Emergency Plan (title page only, full copy on www.faa.gov website)
- 14 CFR Parts 121 and 139 Certification of Airports; Final Rule (full copy)

Airport emergency procedures:

- Execute life safety activities
- Secure the scene
- Preserve evidence

National Transportation Safety Board Communication Center 24 hour phone number for investigative agencies:

202-314-6290

Establish inner and outer perimeter:

- protect property
- prevent the disturbance of wreckage and debris except to preserve life, rescue the injured, or protect the wreckage from further damage
- protect and preserve ground scars and marks made by the aircraft
- admit public safety personnel access to the wreckage to the extent necessary to preserve life, and/or stabilize HAZMAT
- Maintain a record of personnel who enter the accident site.

Prior to NTSB arrival on scene, restrict access only to authorize personnel:

- Federal Aviation Administration
- Police/Fire/Emergency Medical Service
- Medical Examiner/Coroner
- Other Emergency Services Agency

After NTSB arrival on scene, no access without NTSB authorization:

BIOHAZARD/HAZMAT:

Potentially dangerous materials that might be present may include but are not limited to: Chemicals-explosives-biological-radioactive materials, fuel, pressure vessels, compressed air, hydraulics, batteries, accumulators, igniters, oxygen systems, oxygen bottles, fire extinguishers, evacuation chutes, flares, composite materials, ballistic parachute systems, tires

Wreckage Documentation (if possible):

- Use best judgment to obtain these goals:
- Obtain aircraft registration number (N number)
- Obtain number of casualties
- Photograph or video the overall wreckage including cockpit starting at the initial point of impact if possible
- Photograph or video any ground scars or marks made by the aircraft

Injured/Fatalities:

- Coordinate with the NTSB prior to the removal of fatalities. If unable, document that part of the scene to be disturbed, including switch/control positions, and instrument/gauge readings

Witness Documentation:

- Obtain name/address/phone numbers (home & work)
- Obtain their location relative to the accident site
- Obtain description of what they observed or heard
- Obtain name of person reporting accident (911 tapes)

Media Relations:

- Consistent with site security policies, only authorized emergency service individuals should be allowed on site
- No one should speculate on the cause of the accident
- Refer all media questions about the accident investigation to the NTSB
- Local authorities normally retain the responsibility for the release of victims' names

CHAPTER SIX
AIRPORT DESIGN, CONSTRUCTION, AND MAINTENANCE

Learning objectives:

- The processes, procedures, and standards for the inspection of airport facilities, including, but not limited to, runways, buildings, beacons, and vehicles to determine repair or replacement needs.
- Understand the airport design, construction, and maintenance process.
- Understand the Federal Aviation Grant Assurances and the state grant assurances.

Reference materials:

- State of Maine Title Six – Aeronautics
- AC 150/5320-17: Airfield Pavement Surface Evaluation and Rating Manual (PASER Manual) (full copy)
- AC 150/5380-7A: Airport Pavement Management Program (full copy)
- AC 150/5100-14D: Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects (full copy)
- AC 150/5300-13: Airport Design (title page only, full copy on www.faa.gov website)
- AC 150/5370-2E: Operational Safety on Airports During Construction (full copy)
- AC 150/5370-6C: Construction Progress and Inspection Report – Airport Improvement Program (full copy)
- AC 150/5370-12A: Quality Control of Construction for Airport Grant Projects (full copy)

A/C 150/5320-17: Airfield Pavement Surface Evaluation and Rating Manual and AC 150/5380-7A: Airport Pavement Management Program:

An airport manager's goal is to use available funds to provide a safe and economical pavement surface – no simple task. It requires balancing priorities and making difficult decisions in order to manage pavements. General aviation airfield pavements are often managed informally, based on the staffs judgment and experience. While this process is both important and functional, using a slightly more formalized technique can make it easier to manager pavements effectively.

Experience has shown that there are three especially useful steps in management pavements:

- Inventory all pavements
- Periodically evaluate the condition of all pavements
- Use the condition evaluations to set up priorities for projects and evaluate alternative treatments.

The FAA recommends using the information and procedures contained in the Pavement Surface Evaluation Manual by airport staff and consultants to begin a comprehensive pavement maintenance program.

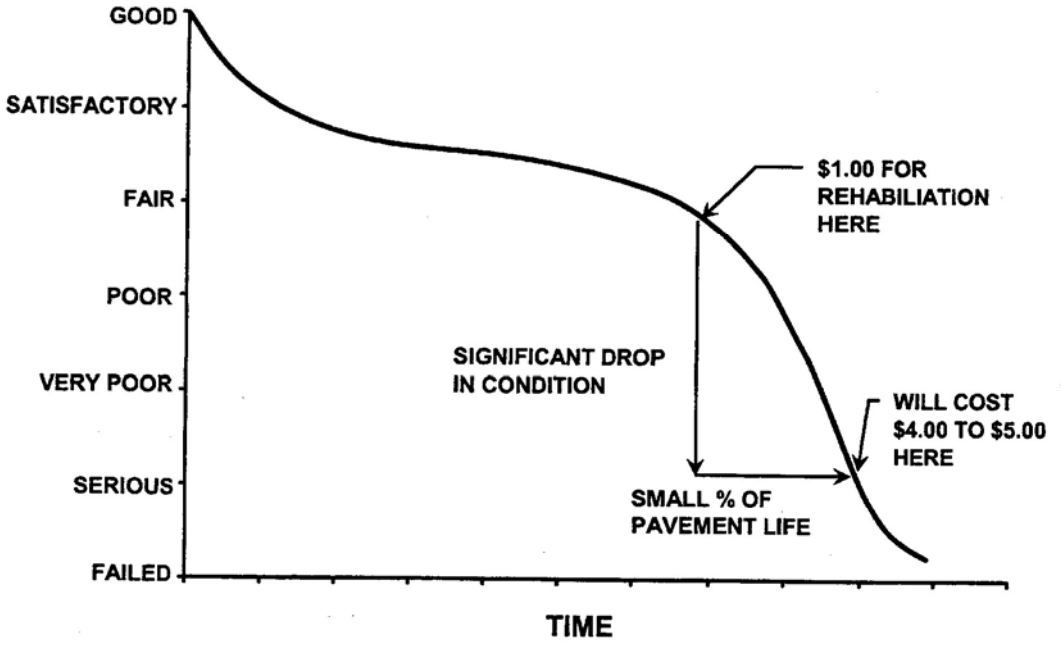

FIGURE 1. Typical Pavement Condition Life Cycle (Springer 2005)

Figure also shows that the ideal time for major rehabilitation is just as a pavement's rate of deterioration begins to increase. Maintenance and rehabilitation solutions would be easy to plan if pavements exhibited clear signs they had reached this point, but unfortunately, they do not. The shape of the deterioration curve, and therefore the optimal maintenance and repair points, vary considerably within a pavement network. A pavement experiencing a sudden increase in operations or aircraft loading will have a tendency to deteriorate more rapidly than a pavement deteriorating solely from environmental causes. A pavement deteriorating from environmental damage may have a number of cracks that need filling but still remain structurally sound. Conversely, this same pavement may be in the early stages of load damage deterioration, which can only be detected with proper testing.

AC 150/5100-14D: Architectural, engineering, and planning consultant services for airport grant projects:

The FAA offers guidance for airport sponsors in the selection and engagement of architectural, engineering, and planning consultants. It also discusses services that normally would be included in an airport grant projects, types of contracts for these services, contract format and provisions, and guidelines for determining the reasonableness of consultant fees.

The FAA requires that consultants are selected based on qualifications. The FAA also mandates contracting procedures, ownership of documents and drawings, and requires FAA contract review and approval. Prior to undertaking a consultant selection process, airport managers should review the advisory circular and consult the MaineDOT for assistance.

Environmental Impact Statements are unique because they require the FAA to participate in the selection process.

AC 150/5300-13: Airport Design:

All airport development carried out at federally obligated airports must be done in accordance with an FAA-approved Airport Layout Plan (ALP). An ALP is a scaled drawing of existing and proposed land and facilities necessary for the operation and development of the airport. Any airport will benefit from a carefully developed plan that reflects current FAA design standards and planning criteria.

The FAA-approved ALP, to the extent practicable, should conform to the FAA airport design standards existing at the time of its approval. Due to unique site, environmental or other constraints, the FAA may approve an ALP not fully complying with design standards. Such approval requires an FAA study and finding that the proposed modification is safe for the specific site and conditions. When the FAA upgrades a standard, airport owners should, to the extent practicable, include the upgrade in the ALP before starting future development. AC/150/5070-6, Airport Master Plans, contains background information on the development of ALPs, as well as a detailed listing of the various components that constitute a well-appointed ALP. The ALP map set includes a location map, vicinity map, basic data table, wind information, and an approach and clear zone plan.

AC 150/5370-2E: Operational Safety on Airports during Construction:

An airport operator has overall responsibility for construction activities on an airport. This includes the pre design, design, pre construction, construction, and inspection phases. The airport operator's responsibilities and the construction contractor's responsibilities are outlined in this advisory circular.

AC 150/5370-6C: Construction Progress and Inspection Report – Airport Improvement Program & Form 5370-1:

The FAA recommends the guidelines and standards in this AC for airport construction projects. This AC does not constitute a regulation and in general is not mandatory. However, use of these gu9idelines is mandatory for construction projects funded under the Airport Improvement Program. Mandatory terms such as "must" apply only to those who undertake construction projects using AIP funds.

In order to meet its responsibilities, the FAA needs information as to what work is in progress, completed, or planned; recent testing; and problem areas. This information is discussed at the preconstruction conference and can be obtained in a convenient manner in an appropriate timeframe through the use of FAA form 5370-1, Construction Progress and Inspection Report. Use of this form is not mandatory. The sponsor may prepare and use customized forms.

AC 150/5370-12A: Construction Progress and Inspection Report – Airport Improvement Program (AIP):

The airport sponsor has primary responsibility for supervision and inspection of construction work under the Airport Improvement Program. The FAA Airports Division/District Field Offices are responsible for monitoring the project to ensure the terms and conditions of the grant agreement are met, to maintain a broad overview of the construction to be reasonably certain the work is accomplished in accordance with the plans and specifications, and to evaluate the adequacy of the sponsor's construction inspection.

In order to meet the above responsibility, the FAA needs information as to what work is in progress, completed, or planned; recent testing; and problem areas. The information is discussed as the preconstruction conference and can be obtained in a convenient manner in an appropriate timeframe through use of FAA Form 5370-1, Construction Progress, and Inspection Report. Use of this form is not mandatory. The sponsor may prepare and use customized forms.

The airport sponsor is responsible for all project engineering, including the preparation of plans and specifications, construction supervision, and inspection and testing for acceptability and quality. If the sponsor does not have the staff or the expertise to perform these services, then the sponsor should retain a consulting engineering firm. The consultant represents the sponsor and has overall responsibility for reporting on the acceptability and quality of the work. The relations of the consultant with the sponsor must be clearly defined by a written agreement before the start of work.

CHAPTER SEVEN
AIRPORT FUELING

Learning objectives:

- Understand fueling facility safety, including compliance with fire safety regulations and the recommendations of the National Fire Protection Association.

Reference materials:

- State of Maine Title Six – Aeronautics
- AC 150/5230-4A: Aircraft Fuel Storage, Handling, and Dispensing on Airports (full copy)
- National Fire Protection Association 403: Aircraft Rescue and Fire-Fighting Services at Airports 2003 Edition (title page only- airports must purchase copy from NFPA)
- National Fire Protection Association 407: Standard for Aircraft Fuel Servicing 2007 Edition (title page only – airports must purchase copy from NFPA)

Title Six; Chapter Aviation fueling facilities:

Aircraft fuel servicing operations. Airports may, at their option, provide aircraft fuel servicing. The operations must meet the following minimum standards.

- Aviation fuel must be stored in National Fire Protection Association approved facilities.
- Aircraft fuel servicing must be conducted in accordance with accepted standards and requirements established by the National Fire Protection Association;
- There must be fire extinguishers of adequate size, type, and numbers in locations as recommended by the National Fire Protection Association.

National Fire Protection Association 407

Aviation fuel must be stored in National Fire Protection Association approved facilities. Fuel storage tanks must conform to the applicable requirements of NFPA 30. Fuel servicing stations can be installed in a cabinet above or below the ground. Tanks located in designated aircraft movement areas or aircraft servicing areas must be underground or mounded over with earth. Vents from these tanks must be constructed in a manner to prevent collision hazards with operating aircraft. Each fuel system must have a means for quickly and completely shutting off the flow of fuel in an emergency. In areas where it is likely to have spills, the emergency fuel shutoff system must include shutoff stations located outside of this area and near the route that is normally used to leave the spill area or to reach the fire extinguishers provided for the protection of the area. At least one emergency shutoff control station must be conveniently accessible to each fueling position. Each station must include signage stating EMERGENCY FUEL SHUTOFF in letters at least 2 inches high and the method of operation shall be indicated by an arrow or by the word PUSH or PULL, as appropriate. Any action necessary to gain access to the shutoff device (i.e. BREAK GLASS) must be shown clearly. Lettering must be of a color contrasting sharply with the signage background for visibility. Signage must be weather

resistant, located at least 7 feet above grade, and be positioned so that they can be seen from a distance of at least 25 feet.

There must be fire extinguishers of adequate size, type, and numbers in locations as recommended by the National Fire Protection Association. Extinguishers must conform to the requirements of NFPA 10. Fire extinguishers must be available on aircraft servicing ramps or aprons. Each aircraft fuel servicing tank vehicle must have 2 listed fire extinguishers, each having a rating of at least 20-B:C, with one extinguisher mounted on each side of the vehicle. One listed fire extinguisher having a rating of at least 20-B:C must be installed on each hydrant fuel servicing vehicle or cart. Where the open hose discharge capacity of the aircraft fueling system or equipment is more than 200 gpm, at least one listed wheeled extinguisher having a rating of not less than 80-B:C and a minimum capacity of 125 pounds of agent must be provided. Extinguishers must be kept clear of ice and snow. Keep extinguishers that are in enclosed compartments readily accessible, and their locations marked clearly in letters at least 2 inches high. Fuel servicing personnel must be trained in the use of the available fire extinguishing equipment they could be expected to use.

Aircraft fuel servicing must be conducted in accordance with accepted standards and requirements established by the National Fire Protection Association. Entrances to fueling areas must be posted with “no smoking” signs. Open flames on aircraft fuel servicing ramps or aprons within 50 feet of any aircraft fuel servicing operation or fueling equipment must be prohibited. This must include but not be limited to:

- Lighted cigarettes, cigars, pipes
- Exposed flame heaters, liquid, solid, or gaseous devices, including portable and wheeled gasoline or kerosene heaters
- Heat-producing, welding, or cutting devices and blow-torches
- Flare pots or other open-flame lights

Aircraft fueling must be performed outdoors. Aircraft fuel servicing incidental to aircraft fuel system maintenance operations must comply with the requirements of NFPA 401. When fueling aircraft, position so that aircraft fuel system vents or fuel tank openings are not closer than 25 feet to any terminal building, hangar, service building, or enclosed passenger concourse other than a loading walkway. Aircraft being fueled must not be positioned so that the vent or tank openings are within 50 feet of any combustion and ventilation air-intake to any boiler, heater, or incinerator room. If passengers remain onboard an aircraft during fuel servicing, at least one qualified person trained in emergency evacuation procedures must be in the aircraft at or near a door at which there is a passenger loading walkway, integral stairs that lead downward, or a passenger loading stair or stand.

AC 150/5230-4A: Aircraft Fuel Storage, Handling, and Dispensing on Airports

This Advisory Circular identifies standards and procedures for storage, handling, and dispensing of aviation fuel on airports. Although airports that are not Part 139 certified are not required to develop fuel safety standards, the Federal Aviation Administration recommends that these airports develop such standards. The Federal Aviation Administration does not intend this Advisory Circular to replace airport procedures that are tailored to meet requirements imposed because of the use of special equipment or as a result of local regulations.

Refer to National Fire Prevention Association 407, Standard for Aircraft Fuel Servicing for the specifications for the design, operation, maintenance, location of fuel storage areas, and aircraft fueling devices. This document can be ordered from:

National Fire Protection Association
1 Batterymarch Park
P.O. Box 9101
Quincy, Massachusetts 02269-9101

Telephone: 1-800-344-3555
Website: http://www.nfpa.org/catalog/

Refer to National Air Transportation Association publication for Refueling and Quality Control Procedures for Airport Service and Support Operations for information about fuel safety, types of aviation fuels, fueling vehicle safety, facility inspection procedures, fueling procedures, and methods for handling spills. This document can be ordered from:

National Air Transportation Association
4226 King Street
Alexandria, Virginia 22302

Telephone: 1-800-808-6282
Website: http://www.nata.aero

Additional information regarding refueling and facility specifications are available through the American Petroleum Institute at:

American Petroleum Institute
1220 L Street, NW
Washington, DC 20005

Telephone: (202) 682-8375
Website: http://www.api.org

At Part 139 certified airports, at least one supervisor with each fueling agent must complete an acceptable training course in fuel safety training programs that fulfills the requirements of 14 CFR Part 139, Section 321(e)(1). At airports not certificated under 14 CFR Part 139, fuel safety training programs should be developed.

CHAPTER EIGHT
14 CODE OF FEDERAL REGULATIONS PART 139

Learning objectives:

- Understand the F.A.A. requirements for 14 C.F.R. Part 139 continued certification.

Reference material:

- 14 CFR Parts 121 and 139 Certification of Airports; Final Rule (full copy)

14 Code of Federal Regulations Part 139:

14 CFR Part 139 requires the FAA to issue airport operating certificates to airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats; serve scheduled air carrier operations in aircraft with more than 9 seats but less than 31 seats; and the FAA Administrator requires to have a certificate.

This Part does not apply to airports at which air carrier passenger operations are conducted only because the airport has been designated as an alternate airport. Airport Operating Certificates serve to ensure safety in air transportation. To obtain a certificate, an airport must agree to certain operational and safety standards, provide for such things as firefighting, and rescue equipment. These requirements vary depending on the size of the airport and the type of flights available. The regulation, however, does allow the FAA to issue certain exemptions to airports that serve few passengers yearly and for which some requirements might create a financial hardship.

Basic Phases of a Part 139 Inspection

To ensure that airports with Airport Operating Certificates are meeting the requirements of Part 139, nearly 35 FAA Airport Certification Safety Inspectors conduct certification inspections. These inspections typically occur yearly, but the FAA can also make unannounced inspections. Certification inspections include the following steps:

- **Pre-inspection review** of office airport files and airport certification manual.
- **In-briefing with airport management.** Organize inspection time schedule, meet with different airport personnel.
- **Administrative inspection of airport files, paperwork, etc.** Also includes updating the Airport Master Record (FAA Form 5010) and review of the Airport Certification Manual/Specifications (ACM/ACS), Notices to Airmen (NOTAM), airfield self-inspection forms, etc.
- **Movement area inspection.** Check the approach slopes of each runway end; inspect movement areas to find out condition of pavement, markings, lighting, signs, abutting shoulders, and safety areas; watch ground vehicle operations; ensure the public is protected against inadvertent entry and jet or propeller blast; check for the presence of any wildlife; check the traffic and wind direction indicators.

- **Aircraft rescue and fire fighting inspection.** Conduct a timed-response drill; review aircraft rescue and firefighting personnel training records, including annual live-fire drill and documentation of basic emergency medical care training; check equipment and protective clothing for operation, condition, and availability.
- **Fueling facilities inspection.** Inspection of fuel farm and mobile fuelers; check airport files for documentation of their quarterly inspections of the fueling facility; review certification from each tenant fueling agent about completion of fire safety training.
- **Night inspection.** Evaluate runway/taxiway and apron lighting and signage, pavement marking, airport beacon, wind cone, lighting, and obstruction lighting for compliance with Part 139 and the ACM/ACS. A night inspection is conducted if air carrier operations are conducted or expected to be conducted at an airport at night or the airport has an instrument approach.
- **Post inspection briefing with airport management.** Discuss findings; issue Letter of Correction noting violations and/or discrepancies if any are found; agree on a reasonable date for correcting any violations, and give safety recommendations.

Compliance with Part 139

If the FAA finds that an airport is not meeting its obligations, it often imposes an administrative action. It can also impose a financial penalty for each day the airport continues to violate a Part 139 requirement. In extreme cases, the FAA might revoke the airport's certificate or limit the areas of an airport where air carriers can land or takeoff.

CHAPTER NINE
AIRPORT OPERATIONS AND SELF-INSPECTION

Learning objectives:

- The processes, procedures, and standards for the inspection of airport facilities, including, but not limited to, runways, buildings, beacons, and vehicles to determine repair or replacement needs.
- Understand federal laws and regulation regarding ownership and operations of an airport.

Reference materials:

- AC 150/5370-2E: Operational Safety on Airports During Construction (full copy)
- AC 150/5210-20: Ground Vehicle Operations on Airports (full copy)
- AC 150/5200-30B: Airport Winter Safety and Operations (title page only, full copy on www.faa.gov website)
- AC 150-5380-5B: Debris Hazards at Civil Airports (full copy)
- AC 150/5200-33B: Hazardous Wildlife Attractants on or Near Airports (full copy)
- AC 150/5200-32A: Reporting Wildlife Aircraft Strikes (full copy)
- AC 150/5200-18C: Airport Safety Self-Inspection (full copy)

Airport operations:

AC 150/5370-2E: Operational Safety on Airports during Construction

AC 150/5210-20: Ground Vehicle Operations on Airports

The overall responsibility for the operation of vehicles on an airport rests with the airport operator. The airport operator is also responsible for compliance with the requirements of airport operators should establish procedures and policies concerning vehicle access and vehicle operation on the airside of the airport. This procedures and policies should address such matters as access, vehicle operator requirements, vehicle requirements, operations, and enforcement and should be incorporated into tenant leases and agreements.

Each bidding document for development work on an airport or for installation an air navigation facility should incorporate a section on ground vehicle operations on airports during construction activity.

AC 150/5200-30B: Airport Winter Safety and Operations

This AC provides guidance to assist airport operators in developing a snow and ice control plan, conducting and reporting runway friction surveys, and establishing snow removal and control procedures. This AC also contains guidance on developing plans, methods, and procedures for snow and ice control equipment, materials, and removal that are acceptable to the FAA.

AC 150/5200-5B: Debris Hazards at Civil Airports

Foreign Object damage/debris (FOD) hazards on airports are considered to be comparable to those associated with birds and winter operations. Tests and experience have shown that foreign objects on airport pavements can be readily ingested by aircraft engines, resulting in engine failure. Debris can also become lodged in mechanisms, affecting the operation of landing gear, flaps, etc. These hazards can be reduced, however, by the establishment of an active FOD prevention program.

AC 150/5200-32A: Hazardous Wildlife Attractants on or Near Airports

Information about the risks posed to aircraft by certain wildlife species has increased a great deal in recent years. Improved reporting, studies, documentation, and statistics clearly show that aircraft collisions with birds and other wildlife are a serious economic and public safety problem.

During the past century, wildlife-aircraft strikes have resulted in the loss of hundreds of lives worldwide, as well as billions of dollars in aircraft damage. Hazardous wildlife attractants on and near airports can jeopardize future airport expansion, making proper community land-use planning essential. This AC provides airport operators and those parties with whom they cooperate with the guidance they need to assess and address potentially hazardous wildlife attractants when locating new facilities and implementing certain land-use practice on or near public-use airports.

AC 150/5200-32A: Reporting Wildlife Aircraft Strikes

A wildlife strike has occurred when:

- a pilot reports striking 1 or more birds or other wildlife
- aircraft maintenance personnel identify aircraft damage as having been caused by a wildlife strike
- personnel on the ground report seeking an aircraft strike 1 or more birds or wildlife
- bird or wildlife remains, whether in whole or in part, are found within 200 feet of a runway centerline, unless another reason for the animal's death is identifies; and
- an animals presence on the airport had a significant negative effect on a flight

This AC explains the importance of reporting collisions between aircraft and wildlife more commonly referred to as wildlife strikes. It also examines recent improvements in the FAA Bird/Other wildlife strike reporting system; how to report a wildlife strike; what happens to the wildlife strike report data; how to access the FAA national wildlife aircraft strike database; and the FAA's feather identifi8faation program.

Airport self-inspections:

AC 150/5200-18C: Airport Safety Self-Inspection

While some hazardous airport conditions develop virtually spontaneously, others are gradual. It is important to have an airport safety self-inspection program that monitors specific areas so that small problems do not have the chance to grow into safety hazards.

Self-inspection is a primary responsibility of the airport owner, operator, or a duly authorized representative. The self-inspection checklist should cover pavement areas, safety areas, marking and signs, lighting, aircraft rescue and fire fighting, fueling operations, navigational aids, ground vehicles, obstructions, public protection, wildlife hazard management, construction, and snow and ice removal.

CHAPTER TEN
AIRPORT MANAGERS TEST

The Airport Managers Test consists of a 25 Question, open book test. Multiple choice, T/F, matching, etc. All answers will be found in this Airport Managers Study Guide. The Airport Managers Study Guide Materials book will not be required to successfully complete the test, but is available for further learning.

CHAPTER ELEVEN
DEFINITIONS/ACRONYMS

Airport Acronyms

A

A/C	Aircraft
ACFT	Aircraft
ADAP	Aircraft Development Aid Program
AF	Airway Facilities
AFB	Air Force Base
AFSS	Automated Flight Service Station
AGL	Above Ground Level
AIM	Airman's Information Manual
AIP	Airport Improvement Plan
ALS	Approach Lighting System
AMASS	Airport Movement Area Safety System
AMP	ARINC MESSAGE Processor Airport Master Plan
ANG	Air National Guard Base
AOA	Air Operations Area
AP	Acquisition Plan
APP	Approach
APS	Airport Planning Standard
ARFF	Aircraft Rescue and Fire Fighting
ARP	Airport Reference Point
ARSA	Airport Service Radar Area
ARSR	Air Route Surveillance Radar
ARTCC	Air Route Traffic Control Center
ARTS	Automated Radar Terminal System
ASCP	Aviation System Capacity Plan
ASOS	Automated Surface Observation System
ATA	Air Transport Association of America
ATC	Air Traffic Control
ATCCC	Air Traffic Control Command Center
ATCO	Air Taxi Commercial Operator
ATCT	Airport Traffic Control Tower
ATIS	Automated Terminal Information Service
ATISR	ATIS Recorder
AWIS	Airport Weather Information
AWOS	Automated Weather Observation System

B

BCA	Benefit/Cost Analysis
BCR	Benefit/Cost Ratio
BMP	Best Management Practices

C

CAA	Civil Aviation Authority
CAB	Civil Aeronautics Board
CGAS	Coast Guard Air Station
COE	U.S. Army Corps of Engineers
CTAF	Common Traffic Advisory Frequency

D

DEIS	Draft Environmental Impact Statement
DH	Decision Height
DME	Distance Measuring Equipment
DME/P	Precision Distance Measuring Equipment
DNL	Day – Night Equivalent Sound Level (Also called Ldn)
DOT	Department of Transportation

E

EIS	Environmental Impact Statement
ELT	Emergency Locator Transmitter
EPA	Environmental Protection Agency

F

FAA	Federal Aviation Administration
FAC	Facility
FAR	Federal Aviation Regulation
FBO	Fixed Base Operator
FCC	Federal Communications Commission
FED	Federal
FEIS	Final Environmental Impact Statement
FIRE	Fire Station
FL	Flight Level
FOIA	Freedom of Information Act
FSS	Flight Service Station
FSSA	Flight Service Station Automated Service

G

GA	General Aviation
GAA	General Aviation Activity
GADO	General Aviation District Office
GNSS	Global Navigation Satellite System
GPS	Global Positioning Satellite
GS	Glide Slope Indicator

H

HAT	Height Above Touchdown
HAZMAT	Hazardous Materials
HDQ	FAA Headquarters
HELI	Heliport
HWAS	Hazardous In – Flight Weather Advisory

I

IAP	Instrument Approach Procedures
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
INM	Integrated Noise Model

J

K

Kbps	Kilobits Per Second
Khz	Kilohertz
KVDT	Keyboard Video Display Terminal

L

LAA	Local Airport Advisory
LF	Low Frequency
LOC	Localizer
LOI	Letter of Intent
LPV	Localizer Performance with Vertical Guidance

M

MALS	Medium Intensity Approach Lighting System
MALSF	MALS with Sequenced Flashers
MALSR	MALS with Runway Alignment Indicator Lights
MAP	Military Airport Program
MAP	Missed Approach Point
MISC	Miscellaneous
MLS	Microwave Landing System
MOA	Memorandum of Agreement
MOA	Military Operations Area
MOCA	Minimum Obstruction Clearance Altitude
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MPS	Maintenance Processor Subsystem
	Master Plan Supplement
MSL	Mean Sea Level
MVFR	Marginal Visual Flight Rules

N

NAS	National Airspace System
	Naval Air Station
NASP	National Airspace System Plan
NAVAID	Navigation Aid
NDB	Non-Directional Radio Homing Beacon
NEPA	National Environmental Policy Act
NEXRAD	Next Generation Weather Radar
NFAX	National Facsimile Service
NFDC	National Flight Data Center
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration
NOC	Notice of Completion
NOTAM	Notice to Airmen
NPIAS	National Plan of Integrated Airport Systems
NTP	National Transportation Policy
NTSB	National Transportation Safety Board
NWS	National Weather Service

O

OAG	Official Airline Guide
OFA	Object Free Area
OFZ	Obstacle Free Zone
OMB	Office of Management and Budget

P

PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
PFC	Passenger Facility Charge
PHONE	Telephone
POLIC	Police Station
PUB	Publication
PVD	Plan View Display

Q

R

RAIL	Runway Alignment Indicator Lights
RAPCO	Radar Approach Control (USAF)
RAPCON	Radar Approach Control (FAA)
REIL	Runway End Identification Lights
RL	General Aviation Reliever Airport
RNAV	Area Navigation
ROD	Record of Decision
RPZ	Runway Protection Zone
RVR	Runway Visual Range
RW	Runway

S

SATCOM	Satellite Communications
SEL	Single Event Level
SHPO	State Historic Preservation Officer
SID	Station Identifier
SID	Standard Instrument Departure
SIGMET	Significant Meteorological Information
SIMMOD	Airport and Airspace Simulation Model
SIP	State Implementation Plan
SM	Statute Miles
SSALF	SSALS with Sequenced Flashers
SSALR	Simplified Short Approach Lighting System
STD	Standard
STOL	Short Takeoff and Landing
SVFR	Special Visual Flight Rules

T

TACAN	Tactical Aircraft Control and Navigation
TAF	Terminal Area Forecast
TAS	True Air Speed
TCA	Terminal Control Area
TERPS	Terminal Instrument Procedures
TH	Threshold
TL	Taxilane
TODA	Takeoff Distance Available
TORA	Take-off Run Available
TRACON	Terminal Radar Approach Control Facility
TRNG	Training
TSA	Taxiway Safety Area
TW	Taxiway
TWR	Tower (non-controlled)

U

UHF	Ultra High Frequency
URA	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
USAF	United States Air Force

V

VASI	Visual Approach Slope Indicator
VDME	VOR with Distance Measuring Equipment
VFR	Visual Flight Rules
VHF	Very High Frequency
VLF	Very Low Frequency
VMC	Visual Meteorological Conditions
VNAV	Visual Navigational Aids
VNTSC	Volpe National Transportation System Center
VOR	VHF Omnidirectional Range
VOR/DME	VHF Omnidirectional Range/Distance Measuring Equipment
VORTAC	VOR collocated with TACAN
VRS	Voice Recording System
VTOL	Vertical Takeoff and Landing

W

WAAS	Wide Area Augmentation System
WAN	Wide Area Network
WTHR	“Weather”
WX	Weather

X

Y

Z

INDEX