ORDER

1100.161 CHG 1

AIR TRAFFIC SAFETY OVERSIGHT

August 11, 2006

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

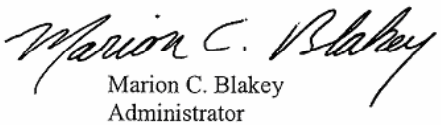
Initiated By: AOV-1

FOREWORD

In November 2003 the Federal Aviation Administration (FAA) established the Air Traffic Organization (ATO) as a performance-based organization (PBO).

The 1997 National Civil Aviation Review Commission (NCARC) recommended that the air traffic service provider in FAA be subject to the safety policies of a separate part of the FAA to provide independent safety oversight. On November 1, 2001, the International Civil Aviation Organization (ICAO) adopted an amendment requiring States to implement formal safety management procedures for their air traffic services systems by November 2003.

This Order implements the procedures that will be used within FAA to conduct oversight of the Air Traffic Organization. The Order describes the application of the systems safety approach and identifies the responsibilities of the ATO and the Air Traffic Safety Oversight Service (AOV) regarding safety in the National Airspace System. This Order will ensure that we maintain the highest levels of safety standards within the FAA's Air Traffic Organization.



Marion C. Blakey
Administrator

CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1100.161 CHG 1

8/11/06

SUBJ: AIR TRAFFIC SAFETY OVERSIGHT

1. PURPOSE. This change transmits revised pages to Order 1100.161 and adds Chapter 6, Credentialing Program Implementation.

2. DISTRIBUTION. All FAA organizations involved in/or supporting the operation or maintenance of the National Airspace System (NAS).

3. EXPLANATION OF CHANGES. This change incorporates name changes resulting from recent organizational realignment and the expansion of responsibilities within AOV. These changes:

a. Rename the Office of the Associate Administrator for Regulation and Certification (AVR) to the Associate Administrator for Aviation Safety (AVS).

b. Add the Credentialing Program for ATO safety personnel to AOV's responsibility.

c. Add a clarifying statement pertaining to risk classifications in chapter 4, paragraph 4-1b.

d. Remove definition of "System Engineering."

e. Add definition of "System Safety."

f. Correct grammatical errors and make minor editorial changes.

4. DISPOSITION OF TRANSMITTAL. This transmittal is to be RETAINED AND FILED IN THE BACK OF THIS HANDBOOK until it is superseded by a new basic order.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
Table of Contents, pp. i (and ii)	3/14/05	Table of Contents, pp. i (and ii)	8/11/06
pp. 1-20	3/14/05	pp. 1-21	8/11/06

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CHAPTER 1. GENERAL

1-1. PURPOSE. This order specifies the manner by which safety oversight will be conducted by the Air Traffic Safety Oversight Service (AOV), within the Office of the Associate Administrator for Aviation Safety (AVS), on the Air Traffic Organization (ATO), and other organizations within the Federal Aviation Administration (FAA) regarding safety management of the air traffic system.

1-2. DISTRIBUTION. This order is distributed to the division level and all FAA headquarters organizations.

1-3. BACKGROUND. In recognition of the emphasis placed on ATO's mission to improve the capacity and efficiency of the National Airspace System (NAS), the Administrator has deemed it necessary to ensure that a commensurate level of emphasis is placed on safety in the NAS. To this end, the Administrator created AOV, to serve within AVS, and assigned this service the responsibility for independent safety oversight of ATO's provision of air traffic services.

a. AOV oversight of the ATO will follow a systems safety approach to the operations of the ATO. A systems safety approach requires safety to be an inherent part of the operational system; therefore, the policies, procedures, and practices used by ATO are integral to the safety of the system. The systems safety approach dictates continuous improvement and requires a closed loop system. This means that safety-related data is captured regularly, analyzed for trends or hazards, and systems are changed to reduce or eliminate safety risk decisions that potentially have a safety impact.

b. This order is intended to describe the application and supporting documents of the systems safety approach, identify the respective responsibilities of ATO and AOV regarding safety in the NAS, and detail the requirements and safety standards under which ATO will operate.

c. The Occupational Safety and Health Agency (OSHA) requirements and FAA Order 3900.19, FAA Occupational Safety and Health Program, current edition) are not within scope of this order.

1-4. DELEGATION OF AUTHORITY. Authority for future revisions of this order is delegated to the Associate Administrator for Aviation Safety.

1-5. DEFINITIONS.

a. Acceptance. The process whereby the regulating organization has delegated the authority to the service provider to make changes within the confines of approved standards and only requires the service provider to notify the regulator of those changes within 30 days. Changes made by the service provider in accordance with their delegated authority can be made without prior approval by the regulator.

b. Approval. The formal act of approving a change submitted by a requesting organization. This action is required prior to the proposed change being implemented.

c. Assumptions. Characteristics or requirements of a system or system state that are neither validated nor verified.

d. ATO Safety Personnel. ATO personnel who perform direct safety-related air traffic control services, and/or certification on certifiable systems/subsystems/equipment or services in support of the NAS.

e. Cause(s). Events that result in a hazard or failure. Causes can occur by themselves or in combinations.

f. Configuration Management. A management process for establishing and maintaining consistency of a product's performance, functional, and physical attributes with its requirements, design, and operational information throughout its life.

g. Control. Anything that mitigates the risk of a hazard's effects. A control is the same as a safety requirement. All controls must be written in requirement language. There are three types of controls:

(1) Validated. Those controls and requirements that are unambiguous, correct, complete, and verifiable.

(2) Verified. Those controls and requirements that are objectively determined to have been met by the design solution.

(3) Recommended. Those controls that have the potential to mitigate a hazard or risk but have not yet been validated as part of the system or its requirements.

h. Credentialing Program. A program for issuing, amending and removing credentials of ATO safety personnel, examiners and others, as appropriate, to ensure their currency and continued competency to perform safety functions as described in AOV's Credentialing order.

i. Effect. A description of the potential outcome or harm of the hazard if it occurs in the defined system state.

j. Hazard. Any real or potential condition that can cause injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard is a condition that is a prerequisite to an accident or incident.

k. Letter of Correction. Formally documents ATO's correction of instances of noncompliance.

l. Letter of Investigation. Provides official notification to ATO that it has not been able to informally resolve an alleged noncompliance issue. The letter informs ATO of the specific matter being investigated and provides ATO an opportunity to respond in writing.

m. Maintenance. Any repair, adaptation, upgrade, or modification of NAS equipment or facility.

n. Oversight. To validate the development of a defined system and verify compliance to a predefined set of standards; Regulatory Supervision.

o. Requirement. An essential attribute or characteristic of a system. It is a condition or capability that must be met or passed by a system to satisfy a contract, standard, specification, or other formally imposed document or need.

p. Risk. The composite of predicted severity and likelihood of the potential effect of a hazard in the worst credible system state. There are three types of risk: (1) initial, (2) current, and (3) residual.

(1) Initial Risk. The severity and likelihood of a hazard when it is first identified and assessed. It is used to describe the severity and likelihood of a hazard in the beginning or very preliminary stages of a decision, program, or analysis. Initial risk is determined by considering both verified controls and assumptions made about system state. When assumptions are made, they must be documented as recommended controls. Once the initial risk is established, it is not changed.

(2) Current Risk. The predicted severity and likelihood of a hazard at the current time. When determining current risk, both validated controls and verified controls may be used in the risk assessment. Current risk may change based on the actions taken by the decisionmaker that relate to the validation and/or verification of the controls associated with a hazard.

(3) Residual Risk. The remaining risk that exists after all control techniques have been implemented or exhausted, and all controls have been verified. Only verified controls can be used for the assessment of residual risk.

q. Safety Council. A forum for top management officials from AOV and the ATO Safety Service to meet and discuss noncompliance and other safety issues in an attempt to resolve those issues.

r. Safety Directive (SD). A mandate from AOV to ATO to take immediate corrective action to address a noncompliance issue that creates a significant unsafe condition.

s. Safety Management System (SMS). An integrated collection of processes, procedures, and programs that ensure a formalized and proactive approach to system safety through risk management. Risk assessments are required for all changes to identify safety impacts. The SMS

is a closed-loop system ensuring that all changes are documented and all problems or issues are tracked to conclusion.

t. Safety Requirement. A control written in requirement language.

u. System. An integrated set of constituent pieces that are combined in an operational or support environment to accomplish a defined objective. These pieces include people, equipment, information, procedures, facilities, services, and other support services.

v. System Safety. The application of technical and managerial skills to the systematic, forward-looking identification and control of hazards throughout the life cycle of a project, program, or activity.

w. System State. An expression of the various conditions, characterized by quantities or qualities, in which a system can exist.

x. Validation. The process of proving that the functions, procedures, controls, and safety standards are correct and the right system is being built (i.e., the requirements are unambiguous, correct, complete, and verifiable).

y. Verification. The process that ensures that the system requirements have been met by the design solution and the system is ready to be used in the operational environment for which it is intended.

z. Warning Notice. A notice that brings to ATO's attention that immediate action is required to correct a significant unsafe condition. It warns that, if the issue is not corrected, a Safety Directive (SD) mandating specified action will be issued. In emergency situations, where time does not permit the issuance of a warning notice, a safety directive may be issued without a warning notice.

CHAPTER 2. RESPONSIBILITIES

2-1. AIR TRAFFIC SAFETY OVERSIGHT SERVICE (AOV). AOV has the following responsibilities regarding safety oversight of the Air Traffic Organization (ATO):

a. Establish, approve, and/or accept the safety standards as outlined in Chapter 4 of this order.

b. Establish and implement a Credentialing Program to issue, amend and remove credentials of ATO Safety Personnel, examiners, and others, as appropriate.

c. Manage the Control Tower Operator Certificate Program.

d. Establish the requirements for ATO safety management system (SMS) in accordance with International Civil Aviation Organization (ICAO) Annex 11 to the Convention on International Civil Aviation, Air Traffic Services, and ICAO Document 4444 (ATM/501), Procedures for Air Navigation Services, Air Traffic Management.

e. Approve the SMS Manual and any changes to the SMS Manual.

f. Monitor ATO compliance with the safety standards and the SMS. AOV will:

(1) Require ATO to provide reporting, as requested, of the status of the SMS, including information on safety occurrences/data;

(2) Primarily use audit techniques to monitor ATO compliance with the safety standards and the SMS, but is free to use direct sampling (e.g., inspections) or other methods to determine the level of compliance;

(3) Have access to any and all records in ATO that AOV believes are useful in determining ATO compliance with the safety standards and the SMS;

(4) Monitor corrective actions taken by ATO to assure resolution of identified safety hazards. AOV's and ATO's focus is on continuous improvement; and

(5) Through AVS, will provide essential information to the FAA Administrator regarding ATO compliance with safety standards and the SMS.

g. Approve the following actions prior to implementation by ATO:

(1) Controls that are defined to mitigate or eliminate initial or current high-risk hazards.

(2) Changes or waivers to provisions of handbooks, orders, and documents, including FAA Order 7110.65, Air Traffic Control, current edition, that pertains to separation minima.

(3) NAS equipment availability program and any changes to the program.

h. AOV has the authority to issue Letters of Correction, Warning Notices, and Safety Directives (SD) requiring ATO to make a change, stop a procedure, or alter a practice where there is a safety concern that warrants such an action.

i. Review, for concurrence, any proposed responses to safety recommendations from the National Transportation Safety Board (NTSB), the Office of the Inspector General (OIG), or General Accounting Office (GAO) involving ATO.

j. Review, for concurrence, any notifications of differences proposed to be filed by ATO with ICAO.

k. Serve as the primary interface with ATO on safety issues, integrating the input from other AVS components and providing ATO with the official AVS position on those issues.

l. Share safety data with ATO.

2-2. ATO. Responsibilities of ATO under this order are:

a. Operate the NAS at the highest practicable level of safety. The primary responsibility for the safety of the NAS rests within ATO.

(1) The Chief Operating Officer (COO) will have primary responsibility for system safety. Clear and unambiguous lines of authority and responsibility for ensuring safety will be established and maintained at all organization levels.

(2) Everyone involved in the provision of NAS services has an individual safety responsibility for his/her own actions. Further, managers are accountable for the safety performance of those ATO elements for which they are responsible.

(3) Accountability for safety within ATO is a critical aspect of the systems safety approach. A safety culture must be developed within ATO in which all employees feel personally responsible for the aspects of safety under their control and all managers understand that many of their decisions have safety implications.

b. Ensure that there is a documented and auditable process to manage, conduct, and record required training, certifications, and ratings for all employees performing safety-related duties. Ensure that all contractors performing safety-related duties maintain a training and certification program that meets or exceeds all pertinent FAA requirements.

c. Develop and maintain an SMS and submit it, and any changes thereto, to AOV for approval.

d. Comply with established safety standards, the approved SMS, any SD(s) issued by AOV, and AOV's Credentialing and Control Tower Operator Certification programs.

e. Maintain and adhere to a system of FAA directives, manuals, and orders that document the specifications, processes, and procedures that are used to operate and maintain the NAS.

f. Provide to AOV regular and periodic (as set by AOV) status briefings, to include information regarding NAS changes being tracked by the ATO Safety Service. The NAS change tracking data will be developed. ATO compliance with this reporting requirement will be effective September 15, 2006.

g. Develop and maintain a hazard tracking database in which all types of medium and high-risk hazards are tracked, and provide continuous AOV access to the database. ATO compliance with this reporting requirement will be effective September 15, 2006.

h. Report safety data to AOV in accordance with chapter 3, paragraph 3-3, of this order.

2-3. OTHER FAA ORGANIZATIONS. Changes to FAA safety standards initiated by FAA organizations other than ATO, which will create an operational impact on the provision of air traffic services, or significantly change operating practices or procedures for ATO personnel and/or FAA stakeholders, must comply with safety management system requirements.

2-4. SAFETY COUNCIL. The Safety Council is a forum for top management officials from AOV and ATO Safety Service to meet and discuss noncompliance or other safety issues in an attempt to resolve those issues.

CHAPTER 3. SAFETY MANAGEMENT SYSTEM REQUIREMENTS

3-1. AIR TRAFFIC ORGANIZATION (ATO) RESOURCES. All elements of ATO are bound by all requirements of the safety management system (SMS), unless specifically excluded by the ATO Safety Service, with the exclusion being acceptable to the Air Traffic Safety Oversight Service (AOV). It is essential that ATO assign resources to support the SMS. The following are the minimum requirements:

a. ATO must maintain an organization that has the necessary competent personnel, procedures, and facilities and equipment as are necessary to meet requirements of this order and to develop, operate, and support the SMS.

b. ATO will establish an ATO Safety Service responsible for developing and maintaining the SMS.

(1) The Safety Service must be organizationally independent from the service delivery portion of ATO.

(2) The ATO Safety Service will be headed by the Vice President of Safety, who will report directly to ATO Chief Operating Officer.

3-2. SAFETY RISK MANAGEMENT PROGRAM.

a. As part of the SMS, the ATO shall develop and use a formal, documented methodology for conducting safety risk assessments that is tailored to the scope and timeliness of the planned change. However, planned changes within the National Airspace System (NAS), including those at the local level, must apply safety risk assessment techniques before ATO can implement changes. Safety risk assessment techniques may range from formal statistical modeling, to dynamic simulations, to qualitative judgments from content experts. ATO must conduct the analysis at the appropriate level of complexity and rigor for the scope and immediacy of the potential hazard. Tactical decisionmaking in the field, even involving significant safety risk, may require such rapid decisionmaking that formal safety risk assessment is not feasible.

(1) ATO must conduct risk assessments in accordance with the provisions of the ATO SMS Manual.

(2) Risk assessments must include a plan to evaluate identified safety critical parameters during initial operational implementation and after it is complete. These measurements shall take in the actual operating environment to validate that predicted performance is being realized and, therefore, the original safety assessment remains valid.

(3) The ATO will develop and implement a safety status reporting program consistent with its own internal review of programs to provide AOV insight into NAS changes. The ATO will provide to AOV regular and periodic (as set by AOV) status briefings, to include information regarding NAS changes.

(4) AOV may, at its discretion, participate in the planning and conduct of safety risk assessments.

b. In accordance with the ATO SMS Manual, the safety risk management program will include hazard identification, risk assessment, risk-control decisionmaking, and a hazard tracking and risk resolution process.

c. High-risk hazards identified in the safety risk assessment.

(1) ATO must mitigate all high residual risk hazards. No changes will be allowed that result in high residual risk hazards, which cannot be mitigated down to medium or low risk.

(2) AOV must approve controls that are defined to mitigate or eliminate initial or current high-risk hazards before ATO can implement the change.

d. Medium-risk hazards may be accepted. ATO will develop and maintain a hazard-tracking database that will track all medium- and high-risk hazards, and provide AOV with continuous access to the database. ATO will maintain an AOV-approved process for acceptance of medium risk hazards and/or approval of medium-risk hazard mitigations.

e. Low-risk hazards may be accepted. ATO will maintain an AOV-approved process for acceptance of low-risk hazards and/or approval of low-risk hazard mitigations.

f. In cases where medium- or low-safety risk and/or controls/mitigations go outside of ATO (i.e., the Associate Administrator for Airports (ARP) and/or the Office of the Associate Administrator for Aviation Safety (AVS)), the mitigations must be approved by the designated management officials within each affected line of business (LOB) and accepted by AOV. The ATO Safety Service will ensure that other FAA LOBs are informed of medium-/low-risk hazards that it has either accepted or approved.

3-3. OTHER REQUIRED PROGRAMS. In addition to the safety risk management program, ATO must have the following programs:

a. Internal oversight, evaluation, and quality assurance. The program(s), at a minimum, must have the following components.

(1) Regularly scheduled internal ATO inspections of air traffic control, airway facility operations and maintenance, acquisition programs, and the ATO Aviation System Standards organization.

(2) Internal ATO no-notice spot inspections of air traffic control, and airway facility operations and maintenance, including the ATO Aviation System Standards organization, conducted by a party independent of the service organization that is inspected.

(3) A process for inclusion of AOV personnel in the inspections, audits, and/or evaluations. ATO must allow AOV personnel to be included in inspections, audits, and/or evaluations when AOV requests to do so.

(4) Development of minimum NAS service level availability requirements, which includes validation and verification of these requirements for new systems entering the NAS and hardware, and/or software improvements to existing systems.

(5) Monitoring and validation of NAS service availability standards, which includes the comparison of fielded service availability performance within the standards.

(6) Audits of the SMS performance and operations.

(7) A defined decisionmaking process for the implementation of corrective actions that result from the findings of these programs.

(8) Internal ATO executive management review of the results, findings, and corrective actions.

(9) Collection of data from the operating NAS on safety and quality incidents, concerns, and issues.

(10) A process that periodically verifies that the controls required to mitigate hazards identified during risk assessments, and tracked in the hazard tracking and risk resolution system, are being met throughout the NAS. The ATO will develop and implement a methodology to determine the frequency of verification based on risk classification at a minimum.

b. Personnel qualifications, training, testing, and proficiency.

(1) ATO must provide employees training, in accordance with current directives, to perform their specific job functions.

(2) ATO must test employees' proficiency and deal with deficiencies in an effective and timely manner as they relate to safety.

(3) ATO must provide safety risk management training to all personnel involved in executing the SMS.

c. Assess the effectiveness of the SMS in affecting the safety of the NAS.

(1) Collect, track, and analyze safety data, to include:

(a) Air traffic control operational error rates;

(b) Runway incursion rates (at controlled airports);

(c) Operational deviation rates;

(d) Pilot deviations (air traffic control contributed);

(e) Near midair collisions (air traffic control contributed);

(f) ATO-related accident rates;

(g) Missed equipment preventative maintenance;

(h) Expired equipment certifications;

(i) Missed periodic flight inspections;

(j) Failure to mitigate high-risk hazards identified as part of a safety risk assessment; and

(k) Results of internal audits and surveys conducted in the internal oversight, evaluation, and quality assurance programs.

(2) ATO must compare safety data to past baselines in its analysis, when past baselines are available. Establish baselines where none exist.

(3) ATO must identify additional safety indicators to demonstrate that it is meeting the safety objectives outlined in the SMS strategic plan.

(4) If safety indicators point to a safety concern, ATO will take action to mitigate the issue, and perform ongoing analysis to assess the effectiveness of those actions.

d. Communicate the results of SMS operations throughout ATO and to AOV.

e. Safety strategic planning.

(1) ATO must address safety and SMS in its strategic plan.

(2) ATO must develop specific safety objectives and policies based on its strategic plan.

CHAPTER 4. SAFETY STANDARDS

4-1. ELEMENTS RELATED TO ACQUIRING AND IMPLEMENTING NEW SYSTEMS. (Includes new equipment, as well as hardware and software modifications to existing equipment).

a. ATO decisions to acquire or implement new systems must be made in accordance with the Federal Aviation Administration (FAA) Acquisition Management System (AMS), Configuration Control Change Board (CCB) policies and procedures, and the Air Traffic Organization (ATO) Safety Management System (SMS) Manual. ATO must assess new systems and modifications in accordance with the ATO SMS Manual.

b. In the case where the hazard and/or failure of the system has a direct impact on aircraft operations, ATO may evaluate those systems in accordance with the risk chart and classification documented in Advisory Circular (AC) 25.1309-1A, System and Design Analysis, current edition; International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARP); and National Standards and Operations Specification. For example, hazards associated with an Instrument Landing System (ILS), a ground system (ILS outputs have a direct effect on the aircraft) would be classified, for risk, according to AC 25.1309-1A. Other examples include navigational aids (NAVAID) and Microwave Landing Systems (MLS). This provision does not relieve programs from the requirements of the SMS; it merely permits the use of alternative risk classifications in special circumstances where systems directly interface with aircraft.

c. ATO shall validate and verify the safety requirements identified during the safety risk management process before deployment and full operational use by the appropriate ATO element.

4-2. ELEMENTS RELATED TO AIR TRAFFIC CONTROL FUNCTIONS.

a. Organization. ATO or any contractor must maintain an organization that has competent personnel, procedures, and processes for:

(1) The proper provision of air traffic control services in the National Airspace System (NAS).

(2) The management, maintenance, and distribution of aeronautical information.

(3) The management of the sovereign airspace and delegated international airspace.

b. Operations.

(1) Air traffic control services provided by ATO and by each person or provider, with whom it arranges for the performance of that work, must be performed in accordance with appropriate FAA directives, manuals, and orders.

(2) ATO must provide aeronautical information in accordance with its manuals and all appropriate rules and regulations.

(3) Sovereign airspace and airspace in which ATO has been assigned the responsibility for service provisions will be managed in accordance with its manuals and all appropriate rules and regulations.

c. Personnel and Training.

(1) ATO may not use any person or provider to perform direct safety-related air traffic control services unless the person performing the work is appropriately qualified, properly trained, certificated, and authorized to do so in accordance with ATO policies, manuals, and AOV's Credentialing and Control Tower Operator Certificate programs.

(2) ATO or any person performing air traffic control services for it must have a training program to ensure that each person (including inspection/evaluation personnel who determine the adequacy of work done) is fully informed about procedures, techniques, and new equipment in use, and is competent to perform his/her duties. ATO will:

(a) Maintain a training program that meets the requirements described in this order such that each person in a safety-related position is adequately trained to perform his/her assigned duties;

(b) Provide training facilities and properly qualified instructors;

(c) Provide and keep current with respect to each service type, appropriate training material, examinations, forms, instructions, and procedures for use in conducting training and checks; and

(d) Provide enough instructors to conduct required training courses.

(3) Each supervisor responsible for a particular employee's course of training and/or competence check must certify as to the proficiency and knowledge of the employee upon completion of his/her training and/or check. That certification shall be made a part of the employee's training/certification record.

(4) Changes to personnel certification requirements require acceptance by AOV.

d. Operations and Procedural Handbooks, Orders, and Documents.

(1) ATO will prepare, and keep current, handbooks, orders, and documents that delineate procedures, standards, and processes for the provision of air traffic control services and the management of its personnel in conducting its operations.

(2) ATO is delegated the authority to make changes to those handbooks, orders, and documents within the existing standards.

(3) Any provisions of handbooks, orders, and documents, including Order 7110.65 that pertain to separation minima will not be changed or waived without prior approval by AOV.

4-3. ELEMENTS RELATED TO EQUIPMENT AND FACILITY MAINTENANCE FUNCTIONS.

a. Organization.

(1) ATO, in performing operations, maintenance (other than required inspections), preventive maintenance, or modifications, and each person or provider with whom it arranges for the performance of that work, must have an organization to perform the work.

(2) ATO must maintain an organization that has the necessary competent personnel, procedures, and facilities and equipment (including spare parts, supplies, and materials) as are necessary for the proper servicing, maintenance, and preventive maintenance of the NAS.

b. Equipment Maintenance Availability Program.

(1) ATO will have an overall NAS equipment availability program. This program will define the required availability of all safety-critical NAS equipment used in the provision of air traffic services and the methods to measure and report on achieved availability on a regular basis.

(2) AOV shall approve the availability program and any changes to the program.

c. Maintenance Operations and Technical Manuals.

(1) ATO shall prepare, keep current, and comply with, manuals, which delineate procedures, standards, and processes for equipment and facility maintenance and the management of its technical personnel in conducting its operations.

(2) Changes to FAA Order 6000.15, General Maintenance Handbook for National Airspace System (NAS) Facilities, current edition (in paragraph 504), require acceptance by AOV.

d. Personnel and Training.

(1) ATO may not use any person or provider to perform required direct safety-related maintenance or inspections/evaluations unless the person performing the work is appropriately qualified, properly trained, certificated, and authorized to do so in accordance with ATO policies, manuals, and AOV's Credentialing and Control Tower Operator Certification programs.

(2) ATO or any person performing maintenance or preventive maintenance functions for the ATO will have a training program to ensure that each person (including inspection/evaluation personnel) who determines the adequacy of work done is fully informed about procedures, techniques, and new equipment in use, and is competent to perform his/her duties. ATO will:

(a) Maintain a maintenance-training program such that each person in a safety-related position is adequately trained to perform his/her assigned duties;

(b) Provide training facilities and properly qualified instructors to conduct the training; and

(c) Provide and keep current, with respect to each system type, appropriate training material, examinations, forms, instructions, and procedures for use in conducting the training.

(3) Each supervisor who is responsible for a particular employee's course of training and/or performance evaluation must certify as to the proficiency and knowledge of the employee upon completion of that training and/or check. That certification will be made a part of employee's training/certification record.

(4) Each person directly responsible for performing ATO certification of facilities, systems, and services beyond those activities authorized under paragraph 4-3d(1) of this chapter must hold an appropriate relevant ATO certification in accordance with FAA Order 3400.3, Airway Facilities Maintenance Personnel Certification Program, current edition. Changes to the personnel certification requirements contained in FAA Order 3400.3 require acceptance by AOV.

4-4. ELEMENTS RELATED TO FLIGHT INSPECTION FUNCTIONS.

a. ATO must maintain an organization that has the necessary competent personnel, procedures, and facilities and equipment as are necessary for proper flight inspection of the systems that comprise the NAS.

b. ATO will conduct flight inspection services in accordance with FAA Order 8200.1, United States Standard Flight Inspection Manual, current edition. Changes to those areas of FAA Order 8200.1 (listed below) require approval of AVS though the Flight Standards Service (AFS) and acceptance by AOV.

(1) Flight inspector's authority and responsibilities.

(2) Facility status classification and issuance of Notices to Airmen (NOTAM).

(3) Records and reports.

(4) Extensions in the periodicity or interval of inspections.

(5) Changes in established tolerances or those proposed for new equipment or new functionality.

(6) Changes in required checklist items for specific areas of systems to be inspected.

(7) Changes in the procedures for evaluating safety and flyability of instrument flight procedures.

c. No person will perform flight inspection duties unless he/she has been trained and certified in accordance with Order VN 8240.3, Certification of Flight Inspection Personnel.

d. Changes to personnel certification requirements contained in Order VN 8240.3 require approval of AFS and acceptance by AOV.

4-5. ELEMENTS RELATED TO FLIGHT PROCEDURE DEVELOPMENT FUNCTIONS.

a. ATO must maintain an organization that has the necessary competent personnel, procedures, and processes as are necessary for the development of instrument flight procedures and aeronautical charts.

b. Instrument flight procedures must be developed in accordance with appropriate FAA orders and policy promulgated by the Director, Flight Standards Service.

c. Before any terminal procedures (TERPS) criteria (e.g., special procedures) are constructed and approved for issuance, they must meet the requirements of the Safety Risk Management Program in the SMS and obtain AFS approval. Additionally, in the absence of an operating SMS, such procedures require approval of AFS before they are used in the NAS.

d. Any person who designs or certifies instrument flight procedures must be properly trained, qualified, and certified in accordance with standards established or approved by the Director, Flight Standards Service, and FAA Order VN 3330.2, National Flight Procedures Office (NFPO) Certification Program for Procedures Personnel.

e. Changes to the certification standards contained in Order VN 3330.2 require approval of AFS and acceptance by AOV.

4-6. ELEMENTS RELATED TO CHARTING FUNCTIONS. Charting will be accomplished in accordance with Interagency Air Cartographic Committee (IACC) specifications.

CHAPTER 5. OVERSIGHT PRIOR TO IMPLEMENTATION OF THE SMS

NOTE: While this order is implemented immediately upon signature, several elements will require some time for full implementation. In particular, the development and full implementation of the safety management system (SMS) by the Air Traffic Organization (ATO) will require 3 to 5 years for all of the necessary personnel to be trained on safety risk management and the SMS. This section describes the method by which ATO will operate while it is developing and implementing the SMS.

5-1. ATO MAINTAINS THE CURRENT SYSTEM. At the time of original implementation of this order (March 14, 2005), the current status of the National Airspace System (NAS) was accepted as the baseline. This means the written processes, procedures, specifications, and other conditions of the system, at the time, were accepted as the starting point for oversight of safety in the NAS. ATO must maintain the NAS at a safety level that is at least equal to that state, in compliance with current policies, processes, and procedures that are documented in its orders, handbooks, and manuals.

5-2. PROPOSED CHANGES TO THE CURRENT SYSTEM. Proposed changes to the NAS must follow the procedures described below.

a. Proposed changes to the NAS must meet the full SMS requirements for safety risk assessment, unless all the following conditions are met:

(1) The office proposing the change has not received SMS training and is not yet operating under the purview of the SMS.

(2) The change does not affect any safety standard as described in chapter 4 of this order.

(3) The change is documented per the direction of the ATO Safety Service.

(4) The change is made in accordance with orders and operating practices in place immediately before SMS implementation.

b. Waivers to safety standards as described in chapter 4 of this order require approval by AOV.

CHAPTER 6. CREDENTIALING PROGRAM IMPLEMENTATION

6-1. THE AIR TRAFFIC ORGANIZATION (ATO) MAINTAINS THE CURRENT SYSTEM. At the time this order is implemented, the current personnel training and certification system is accepted as the baseline. Therefore, the existing documented processes, procedures, and methods for certifying personnel have been accepted as the starting point for determining the qualifications of the Air Traffic Organization (ATO) personnel performing direct safety-related air traffic control services, and/or certification on certifiable systems/subsystems/equipment or services in support of the National Airspace System (NAS).

6-2. TRANSITION PLAN. The Air Traffic Safety Oversight Service (AOV) will develop and coordinate with ATO a transition plan for implementing its Credentialing and Control Tower Operator Certification programs. ATO must have an Office of Personnel Management (OPM)-compliant and AOV-approved skills evaluation and begin administering such evaluations no later than October 31, 2008.

6-3. PROPOSED CHANGES TO THE CURRENT SYSTEM. Changes to personnel certification, training, proficiency, and currency standards must follow procedures described below:

a. Proposed changes must be made in accordance with the requirements of the AOV Credentialing and Control Tower Operator Certification programs.

b. If the AOV Credentialing and Control Tower Operator Certification program does not specifically address the proposed changes, the changes must be made in accordance with chapter 4.