



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

National Policy

**ORDER
NUMBER
5300.1G**

Effective Date:
9/29/17

SUBJ: Modifications to Agency Airport Design, Construction, and Equipment Standards

- 1. Purpose of this Order.** This order establishes the process for the initiation, revision, coordination, and management of Modifications of Standards (MOS) applicable to airport design, construction material, and equipment projects. This order is the foundation of a web-based automated application of MOS. The automated application for submitting MOS is a step-by-step process facilitated within Airports Geographic Information System (AGIS).
- 2. Applicability.** This order is applicable to all projects funded under the Airport Improvement Program (AIP) and Passenger Facility Charge (PFC) programs at all obligated airports, or as required to support any public approach procedure. Eligibility determinations under AIP or PFC are independent of any approval action for an MOS. New MOS requests initiated after March 31, 2018, must use the automated MOS process. Manual MOS processing must follow applicable sections of this order as it applies to current regional procedures until the automated tool is accessible.
- 3. Cancellation.** This order cancels Federal Aviation Administration (FAA) Order 5300.1F, *Modifications to Agency Airport Design, Construction, and Equipment Standards*, dated June 30, 2000.
- 4. Audience.** This order applies to all Office of Airports (ARP) personnel.
- 5. Definitions.**
 - a. Design Standards.** Standards applying to the dimensional criteria of runways, taxiways, and location of associated infrastructure found in Advisory Circular (AC) 150/5300-13, *Airport Design*; and current 150/AC series.
 - b. Construction Standards.** Standards applying to installation methods and tolerances found in AC 150/5370-10, *Standards for Specifying Construction of Airports*.
 - c. Equipment Standards.** Standards applying to snow removal, Aircraft Rescue and Fire Fighting (ARFF) and other equipment ACs among the 150/series.
 - d. Materials Standards.** Standards applying to the approval of type, properties, or characteristics of materials found in AC 150/5370-10.
 - e. Modification of Standards (MOS).** Any deviation from, or addition to standards, applicable to airport design, material, and construction standards, or equipment projects resulting in an acceptable level of safety, useful life, lower costs, greater efficiency, or the need to accommodate an unusual local condition on a specific project through approval on a case-by-case basis.

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6. Exemptions. This order does not cover exemptions from Title 14 Code of Federal Regulations (CFR) Part 139, *Certification of Airports*, or from Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*.

7. Background. Laws, regulations and Airport Sponsor Grant Assurances require compliance with current FAA standards. The following provisions require an airport to meet FAA standards:

a. Airport and Airway Improvement Act. The Airport and Airway Improvement Act of 1982 (“the Act”), Public Law 97-248, codified in subchapter I of Chapter 471, Title 49 of the United States Code, as amended, requires an airport requesting an AIP grant to comply with FAA standards. The statute states in part, “An application for a project grant under this subchapter may propose airport development only if the development complies with standards the Secretary prescribes or approves, including standards for site location, airport layout, site preparation, paving, lighting, and safety of approaches.”

b. Airport Improvement Program (AIP) Grant Funded Projects. Grant Assurance No. 34, *Policies, Standards, and Specifications*, requires a federally obligated airport to “carry out the project in accordance with policies, standards, and specifications approved by the Secretary, including but not limited to, the advisory circulars listed in the current Advisory Circulars for AIP Projects, ... and in accordance with applicable state policies, standards, and specifications approved by the Secretary.”

c. Obligated Airport. Title 49 U.S.C. § 47107(a)(16) and Grant Assurance No. 29, *Airport Layout Plan*, require the airport to maintain an up-to-date Airport Layout Plan (ALP) depicting existing and future airport facilities as referenced in paragraph 12.b. AC 150/5070-6, Airport Master Plans, establishes standards for ALPs, which includes the requirement to identify unusual design features and/or modifications to FAA Airports design standards. FAA approval of an ALP indicates the existing or proposed development depicted on the ALP conforms to FAA airport design standards or that an approved modification to standards has been issued.

d. Passenger Facility Charges (PFC). Title 14 CFR Part 158, *Passenger Facility Charges, Appendix A — Assurances 9, Standards and Specifications*, states, “The public agency hereby assures and certifies, with respect to this project that: ...It will carry out the project in accordance with FAA airport design, construction, and equipment standards and specifications contained in advisory circulars current on the date of project approval.”

e. Runway Safety Areas (RSAs).

(1) A MOS is not issued for RSA dimensions. Instead, the Regional Airports Division Manager will evaluate RSAs and issue a RSA determination in accordance with FAA Order 5200.8, *Runway Safety Area Program*, and FAA Order 5200.9, Financial Feasibility and Equivalency of Runway Safety Area Improvements and Engineered Material Arresting Systems, for each affected runway at federally obligated airports and airports certificated under 14 CFR Part 139 within their geographic purview. For further information on RSA design standards, see AC 150/5300-13.

(2) To capture operational mitigations and establish an acceptable level of safety where parallel taxiways are within the RSA, use a runway to parallel taxiway separation MOS.

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(3) A MOS may be considered for RSA grading where existing conditions may not allow for a feasible cost beneficial solution.

f. Procurement Requirements for Federally Assisted Projects. The procurement requirements for Federally assisted projects are typically conveyed to prospective bidders in two locations in a sponsor's procurement document: 1) General Provisions, AC 150/5370-10 sections 10–90, and 2) the sponsor's front end procurement documents (e.g. instructions-to-bidders, bid form, supplementary conditions, etc.). Proposed changes to the General Provisions of AC 150/5370-10 require conformance to this order. Proposed changes to AIP procurement standards (2 CFR §§200.318-200.326), applicable regulatory provisions such as Disadvantaged Business Enterprise requirements (49 CFR Part 26) or AIP statutory requirements such as Buy American Preference (49 U.S.C § 50101) require the airport to directly coordinate with the FAA Airports District Office for allowability and course of action for FAA review.

8. Policy. A national policy for MOS ensures uniformity in the application of standards.

a. An airport must submit a request for a modification of design standards for:

(1) Any proposed deviations from standards during the review of airport design and siting standards.

(2) Any proposed design elements on an airport project not meeting standards.

(3) Any proposed (new scheduled) operations of a higher category of aircraft, regardless of the number of operations, or an increase in service level (for example from CAT I to CAT II) proposed to operate on existing infrastructure that does not meet the standards.

(4) MOS may also be necessary as part of a proposed waiver, Air Traffic Control (ATC) Standard Operating Procedure (SOP), or a Letter of Agreement (LOA).

b. Subject to the limits of paragraph 10, an airport must submit a modification of materials specifications request if available materials cannot meet the requirements of the specification or are at a significantly higher cost.

c. An airport must submit a request for a modification of construction installation method and tolerances (best practices) when it result in cost savings or greater efficiency without sacrificing safety or useful life, and is subject to the limits of paragraph 10.

d. An airport must submit a modification of equipment standards request only when justified by unusual local conditions.

e. An airport may submit a request for a modification from the general provisions of AC 150/5370-10 if the proposed changes are required to conform to local laws and regulations. An airport may bundle all of the revisions in the general provisions sections 10 – 110 into one request.

f. Duration of an MOS Approval:

(1) MOS that are applicable to material and/or construction standards are approved for the life of the project.

(2) All MOS associated with design standards expire no later than 5 years from the approved date. The airport must re-submit the MOS for review and approval if an extension is requested.

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(3) All MOS associated with design standards must be reviewed whenever there is an opportunity to meet standards, when situations change, or if a MOS is no longer required.

g. An approved MOS cannot be modified. The airport must submit a new MOS if changes are needed.

h. Approval or Disapproval of a MOS Requests at any level:

(1) The FAA documents the reason for disapproval and determination by including it in the comment box in Airports GIS. For disapproval, it must include any recommendations or suggestions to improve the request.

i. An MOS is not applicable for:

(1) Non-standard RSA dimensions.

(2) Non-standard Obstacle Free Zone (OFZ) surfaces.

(3) Non-standard approach / departure surfaces.

(4) To match existing equipment owned by the airport.

(5) Impermissible land use within Runway Protection Zone (RPZ) limits. See AC 150/5300-13 for details.

j. State standards must be prepared in accordance with AC 150/5100-13, *Development of State Standards for Nonprimary Airports*. Once the FAA has approved the use of a State Standard, the standard approved under AC 150/5100-13 may be used for nonprimary airport development without a MOS in the state where the standard was approved. Use of the state standard in states other than where the standard was approved is prohibited.

9. Approval Letters. MOS approval letters must contain the following for each modification:

- A reference to the standard being modified
- Conditions associated with the MOS approval, when necessary
- The effective period of the modification
- A statement that the modification is subject to review at any time if conditions originally justifying the modification changes, or if the FAA deems re-evaluation as being in the public's best interest.

10. Determining the Appropriate FAA Review Authority.

a. Headquarters Office. The Director of Airport Safety and Standards, AAS-1 (or designee), must approve a MOS for the following areas listed below, and as specified in Appendix A.

(1) All MOS for runway to parallel taxiway separations.

(2) Standards for siting navigational or lighting aids.

(3) Standards for marking, lighting, and signs on airport runways, taxiways, taxilanes, and aprons.

(4) Equipment specifications in AC 150/5345-53, *Airport Lighting Equipment Certification Program*.

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(5) New, updated, or modified construction methods and material specifications where there is no previous MOS approval.

(6) Quality control or acceptance criteria of materials and finished products.

(a) Quality control criteria, including all performance tests to determine if adjustments are necessary to stay within specification limits. This includes aggregate gradation within tolerance for subbase, base, and surface courses; asphalt content for bituminous mixes; and slump and air content for concrete mixes.

(b) Acceptance testing, including all criteria and performance tests to determine acceptability of the material or finished product, includes: density and thickness for subgrade, sub-base, base courses, and bituminous pavement; flexural strength and thickness for concrete pavement; and surface tolerances for subbase, base, and surface courses.

b. Regional Office. The Regional Airports Division Manager may approve modifications described below and as listed per Appendix A. The Division Manager may choose to delegate the following MOS types to the Airports District Office (ADO) manager:

(1) Modifications of equipment standards (except signs or lighting equipment) on a case-by-case basis when the modification provides an acceptable level of safety and an economically feasible alternative, based on unique local conditions (Note that meeting existing equipment does not constitute a unique local condition.)

(2) Modifications of construction standards having previous AAS-1 approval for use within a region on a case-by-case basis without further review by AAS-1.

(3) Modifications of material standards having previous AAS-1 approval for use within a region on a case-by-case basis without further review by AAS-1.

(4) Modifications based on current Engineering Briefs (EBs).

(5) General Provisions under AC 150/5370-10.

11. **The MOS Process.** For process flow information and diagrams about initiating, viewing, delegating authority, and approving a MOS using Airports GIS, see the Airports GIS online help located at <https://airports-gis.faa.gov>.

a. Airports District Office Review.

(1) The ADO is responsible for validating and accepting the airport's initiation of the MOS. The ADO is also responsible for reviewing the MOS for accuracy, completeness, and providing their recommendation for approving, disapproving, and coordinating with the region and other lines of business.

(2) An airport's request must include a certification that:

(a) Modifications to materials, construction or equipment standards will provide a product that will meet FAA standards for acceptance and that the finished product will perform for its intended design life, based on historical data.

(b) Modifications to standards will provide an acceptable level of safety.

(c) The modification is necessary to conform to local laws and regulations (if applicable).

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(d) Unique local conditions require the MOS.

b. Airports District Office (or Block Grant State) Review. Once the airport has created a MOS, reviewed and electronically signed the MOS, Airports GIS forwards it to the ADO or State Block Grant (SBG) for the appropriate action.

c. Airports Regional Office (RO) Review. The RO (or ADO or SBG if delegated) is responsible for coordinating with regional lines of business. The RO will review the MOS. If required per Appendix A, the RO must forward the MOS electronically along with the Regional recommendation to Headquarters for Headquarters review.

(1) Airspace Review.

(a) Construction or alterations affecting navigable airspace may require an Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) review to fulfill the requirements outlined in 14 CFR Part 77. This may also be coordinated by the ADO.

(b) RO must coordinate modifications that may impact existing or future aircraft operations, instrument flight procedures, navigational aids, or facilities associated with instrument procedures as necessary with Flight Standards, the Air Traffic Organization (ATO) Technical Operations/Engineering Service, the ATO Mission Support Services Aeronautical Navigation Products and appropriate Air Traffic Control Tower (ATCT) where applicable and the Service Center Operations Support Group and Flight Procedures Team.

(c) An aeronautical study in OE/AAA is conducted by the appropriate FAA lines of business before the approval of a MOS. In order to document an airspace or OE/AAA review, the RO/ADO must attach the review and findings to the airport's MOS request in Airports GIS, in a non-editable format such as Portable Document Format (PDF). Include the Nonrule Making Airport (NRA) case number for tracking purposes.

(2) Safety Management System (SMS) / Safety Risk Management (SRM) Review.

(a) The RO must perform an appropriate level of SRM on the MOS request.

(b) A positive SRM result does not automatically mean that a MOS should be approved. Attach SRM documentation to the MOS package in Airports-GIS.

d. Headquarters Office Review. Once the RO reviews the MOS, if necessary per paragraph 10.a, it is then forwarded electronically via Airports GIS to the Headquarters (AAS100) Manager's general delivery mailbox for appropriate action.

12. Documentation.

a. All records pertaining to the MOS, including documents, pictures, and/or approval letters, will be maintained within the Airports GIS MOS Tool.

b. The airport must update the ALP to reflect approved modifications of airport design standards. The airport must include in the ALP a table listing the approved MOS. The table must include the approval letter dates and identify associated airspace review case numbers.

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13. The Airports GIS MOS Tool. For process flow information and diagrams about initiating, viewing, delegating authority, and approving a MOS using Airports GIS, see the Airports GIS online help located at <https://airports-gis.faa.gov>.

A handwritten signature in black ink, appearing to read "John R. Dermody". The signature is stylized and cursive.

John R. Dermody
Director of Airport Safety and Standards

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Appendix A

U.S. Department of Transportation
Federal Aviation Administration

MODIFICATIONS OF AIRPORT DESIGN, CONSTRUCTION, AND EQUIPMENT STANDARDS

This table lists MOS categories and subcategories. An “X” in each row indicates whether ARP regions or headquarters can approve each type of MOS or whether a MOS is applicable. This Appendix is not all inclusive, and is subject to the discretion of the Director of Airport Safety and Standards based on specific details in a MOS submittal.

Category	Sub Category	ARP Region	ARP HQ	MOS Not Applicable
Airport Equipment Standards	Painting Marking and Lighting of Vehicles on the AOA		X	
Airport Equipment Standards	Design Specifications for Snow Removal, Aircraft Rescue & Fire Fighting and other equipment.		X	
Airport Equipment Standards	Installation and Acceptance Standards for Snow Temperature Sensors, Foreign Object Detection and other equipment		X	
Airport Equipment Standards	Operational/Performance Standards for Snow Removal and Aircraft Rescue & Fire Fighting equipment		X	
Airport Equipment Standards	Other		X	
ATC Facility	Automated Weather Systems - Automated Weather Observing System (AWOS)/ Automated Surface Observing System(ASOS)		X	
ATC Facility	Runway Visual Range		X	
Design	Blast Pad Dimensions	X		
Design	Clearway			X
Design	Declared Distances			X
Design	End Around Taxiway (EAT)		X	
Design	Full Length Parallel Taxiway	X		
Design	Horizontal Geometry - Taxiway Curves and Intersections, including 180 degree turns	X		

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Category	Sub Category	ARP Region	ARP HQ	MOS Not Applicable
Design	New Instrument Approaches – Waivers to TERPS		X	
Design	Obstacle Free Zone (OFZ) - TERPS Waivers Related		X	
Design	Runway End Siting Requirements			X
Design	Runway Hold Positions - Marking		X	
Design	Runway Hold Positions - Offset Distance		X	
Design	Runway Object Free Area (ROFA)	X		
Design	Runway or Taxiway Width	X		
Design	Runway Protection Zone (RPZ)			X
Design	Runway to Heliport Separation		X	
Design	Airplane Design Group VI Standards		X	
Design	Runway to Taxilane Separation		X	
Design	Runway to Taxiway Separation		X	
Design	Runway Visibility Zone	X		
Design	Surface Gradient and Line of Sight	X		
Design	Taxilane to Parallel Taxilane	X		
Design	Taxiway Edge Safety Margin	X		
Design	Taxiway Object Free Area (TOFA)	X		
Design	Taxiway Safety Area (TSA)	X		
Design	Taxiway to Object Separation	X		
Design	Taxiway to Taxiway/Taxilane Separation	X		
Design	Taxiway/Taxilane Wingtip Clearance	X		
Design	Treatment of Jet Blast	X		
Design	Other		X	
Lighting	Configuration - Aiming/Beam Spread		X	
Lighting	Configuration - Color		X	
Lighting	Location		X	
Lighting	Configuration - Flash Rate		X	

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Category	Sub Category	ARP Region	ARP HQ	MOS Not Applicable
Lighting	Configuration - Intensity		X	
Lighting	Control and Monitoring		X	
Lighting	Fixture Hardware		X	
Lighting	Installation		X	
Lighting	Interconnecting Hardware		X	
Lighting	Power Source		X	
Lighting	Other		X	
Markings	Configuration - Color		X	
Markings	Location		X	
Markings	Materials		X	
Markings	Other		X	
NAVAIDS	Approach Light Systems		X	
NAVAIDS	Non-NAS Change Proposal's (NCP's) NAVAID Does Not Meet Runway (VFR/IFR) OFZ Standards		X	
NAVAIDS	Non-NCP's NAVAID Requires Exception on a CAT II or III Runway		X	
NAVAIDS	Non-NCP's NAVAID that Requires TERPS Waiver		X	
NAVAIDS	Siting Criteria		X	
NAVAIDS	Other		X	
Methods & Materials	General Provisions	X		
Methods & Materials	Earthwork, P-100s	X		
Methods & Materials	Flexible Base Course, P-200s		X	
Methods & Materials	Rigid Base Course, P-300s		X	
Methods & Materials	Flexible Surface Course, P-400s		X	
Methods & Materials	Rigid Pavement, P-501		X	
Methods & Materials	Miscellaneous, P-600s		X	

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Category	Sub Category	ARP Region	ARP HQ	MOS Not Applicable
Methods & Materials	Fencing, F-100s	X		
Methods & Material	Drainage, D-700s	X		
Methods & Materials	Turf, T-900s	X		
Methods & Materials	Lighting, L-100s		X	
Methods & Materials	Other		X	
Signage	Control and Monitoring		X	
Signage	Dimension		X	
Signage	Fixture Hardware		X	
Signage	Interconnecting Hardware		X	
Signage	Legend - Color		X	
Signage	Legend - Wording		X	
Signage	Location		X	
Signage	Power Source		X	
Signage	Other		X	
Visual Aids	Centerline/Edge		X	
Visual Aids	Land and Hold Short Lighting		X	
Visual Aids	Radio Control		X	
Visual Aids	Runway/Taxiway		X	
Visual Aids	SMGCS		X	
Visual Aids	Visual Guidance Slope Indicator (VGSI) for IFR and VFR Runways		X	
Visual Aids	Airport Beacon		X	
Visual Aids	Wind Cones		X	
Visual Aids	Runway Status Lights		X	
Visual Aids	Obstruction Lights		X	
Visual Aids	Other		X	