



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

**ORDER  
JO 7110.118C**

**Air Traffic Organization Policy**

Effective date:  
08/07/2025

**SUBJ:** Land and Hold Short Operations (LAHSO)

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**1. Purpose of This Order.** This order prescribes the policy and procedures for use by the Air Traffic Organization (ATO), Flight Standards Service, and the Office of Airports (ARP) in approving and conducting land and hold short operations (LAHSO). This order provides procedures to be applied when LAHSO clearances are being issued to Title 14, Code of Federal Regulations (CFR), parts 91, 121, 125, 129, and 135 aircraft operators.

**2. Audience.** This order applies to the ATO, Flight Standards Service (AFS), and Office of Airports (ARP).

**3. Where Can I Find This Order.** This order is available on the MyFAA employee website at [https://employees.faa.gov/tools\\_resources/orders\\_notices/](https://employees.faa.gov/tools_resources/orders_notices/) and on the Air Traffic Publications website at [https://www.faa.gov/air\\_traffic/publications/](https://www.faa.gov/air_traffic/publications/). Public access is available at [Orders & Notices \(faa.gov\)](#).

**4. What This Order Cancels.** This order cancels FAA Order JO 7110.118B, Land and Hold Short Operations (LAHSO), effective November 15, 2020.

**5. Explanation of Policy Changes.**

**a.** Incorporates select LAHSO content from FAA Orders JO 7210.3, Facility Operation and Administration, and JO 7360.1, Aircraft Type Designators.

**b.** Removes responsibilities for Safety and Technical Training (AJI), as its responsibilities shown in the order being replaced are core business.

**c.** Provides revised guidance for the determination of Available Landing Distance (ALD).

**6. Effective Date.** This order is effective August 7, 2025.

**7. Overview.** This order sets policy for conducting the following LAHSO combinations:

**a.** Landing and holding short of an intersecting runway.

**b.** Landing and holding short of an intersecting taxiway.

**c.** Landing and holding short of an approach/departure flight path.

d. Landing and holding short of a predetermined point.

8. **Waivers.** No waivers to this order will be granted.

9. **Responsibilities.**

a. ATO Mission Support Services (AJV) must:

- (1) Serve as the Office of Primary Responsibility for this order.
- (2) Coordinate with all lines of business (LOBs) identified in this order.
- (3) Publish LAHSO information in the Aeronautical Information Manual (AIM).

b. Air Traffic Managers (ATMs) must:

- (1) Determine if an operational need warrants LAHSO.
  - (2) Organize a LAHSO development team consisting of representatives from Air Traffic Services, the responsible Flight Standards Service office, the Airports Regional Office and/or District Office, airport operator, National Air Traffic Controllers Association facility representative, and airport user(s).
  - (3) Coordinate with airport operator, fixed based operators and representatives of the aviation community, including the military authority where units are based at the airport.
  - (4) Provide AJV Policy Directorate (AJV-P) and Aeronautical Information Services (AJV-A) a list of runways authorized for LAHSO, along with the ALDs, for publication in the Chart Supplement and U.S. Terminal Procedures. On a temporary basis, a Notice to Airmen may be issued in lieu of the above.
  - (5) Prepare a facility LAHSO directive. The directive must contain a diagram that depicts the airport runway configuration, identifies the configurations to be used, and specifies the ALDs. The facility LAHSO directive must also list aircraft groups authorized to use each runway configuration.
- REFERENCE-**  
*FAA Order JO 7360.1, Aircraft Type Designators*
- (6) Ensure FAA Order JO 7360.1, Aircraft Type Designators, is readily available for controller reference in the operation.
  - (7) Maintain a list of 14 CFR part 121, 125, 129, and 135 operators authorized to participate in LAHSO at the airport. This list must be readily available for controller reference in the operation. The use of automated display tools fulfills this requirement.

**NOTE–**

*A list of 14 CFR part 121, 125, 129, and 135 authorized to participate in LAHSO operations may be obtained from the responsible Flight Standards Service office.*

(8) Conduct user briefings at least 45 days before implementation.

(9) Obtain concurrence from the responsible Flight Standards Service office prior to implementing LAHSO.

(10) Conduct an annual review of LAHSO and convene a local safety council meeting to review all LAHSO events; forward a report to the Service Area Director of Air Traffic Operations through the OSG.

**c. Flight Standards Service must:**

(1) Participate in LAHSO development teams.

(2) Provide LAHSO guidance materials for pilots and FAA inspectors. Additional educational programs and other initiatives may be developed to reach the general aviation pilot population concerning procedures and safety concerns when conducting LAHSO.

(3) Review participating air carrier LAHSO training procedures, including any special or unique go-around procedures resulting from a rejected landing.

(4) Recommend LAHSO topics for inclusion in flight training curricula under 14 CFR part 141 Pilot Schools, and instructor certification seminars.

(5) Provide information relative to aircraft performance required for conducting LAHSO. Flight Standards Service will support identification of eligible aircraft for operating within assigned LAHSO groups for use by controllers.

**d. Office of Airports:**

(1) Incorporate standards, procedures, criteria, and requirements contained in this order into the appropriate documents.

(2) Participate in LAHSO development teams.

(3) Publish technical standards, siting specifications, and guidance for the design and installation of hold short position markings, signs, and in-pavement lighting.

(4) Publish standards and guidance for maintaining skid-resistant pavements and for evaluating pavement with friction measuring equipment.

(5) Develop appropriate information on visual aids for incorporation into the AIM.

(6) Provide instructions to airport certification safety inspectors for reviewing and inspecting hold short position markings, signs, and lights required for LAHSO as specified within this order and in the Airport Certification Manual for airports certificated under 14 CFR part 139.

**10. Criteria for Developing LAHSO Procedures.** LAHSO development teams must use the following criteria:

**a.** The minimum ALD on the hold short runway to the intersecting runway/taxiway, approach/departure flight path or predetermined point must be no less than 2,500 feet.

**b.** The ALD is calculated by measuring the distance from the landing threshold to the designated hold short point. If the ALD is measured to be greater than a runway's landing distance available (LDA) as published on FAA Form 5010-1, Airport Master Record, the LDA value must be used as the ALD for that runway. For runways without an LDA, the measured value is the ALD.

**c.** At locations requesting to use LAHSO with aircraft requiring greater than 8,000 feet of ALD, ATMs must coordinate with the responsible Flight Standards Service office to obtain a Letter of Authorization for applicable Group 9 and Group 10 aircraft. Such Letters of Authorization are not considered waivers under this order.

**d.** LAHSO involving air carrier aircraft on intersecting runways:

(1) Arrival/arrival. The distance from the landing threshold of the full-length runway to the intersection of the hold short runway must be greater than 3,000 feet.

(2) Arrival/departure. The distance from the departure threshold of the full-length runway to the intersection of the hold short runway must be less than 2,000 feet.

(3) If the distance requirements above for intersecting runways are not met, the operation may still be authorized provided rejected landing procedures (RLP) are developed per the following:

(a) The LAHSO development team is responsible to collaboratively develop the procedure, considering:

[1] A heading to fly with instructions to remain clear of clouds.

[2] The point from which the rejected landing is initiated (the first one-third of the runway, or 3,000 feet, whichever is less).

[3] Potential conflict with terrain or obstacles along the rejected landing flight path.

[4] Potential conflict with other procedural requirements; for example, is there a possible conflict between an RLP and a one-engine-out procedure with an aircraft using the full-length runway?

[5] Performance of the LAHSO aircraft and the aircraft using the full-length runway.

[6] Different full-length runway traffic scenarios (for example, arrival, departure, go-around).

[7] Any other locally specific issues.

(b) Develop only one RLP for each runway configuration. Each RLP must accommodate all types of aircraft that could possibly use it.

(c) The LAHSO development team must validate the RLP through modeling prior to submission for approval.

(d) The ATM must request approval for RLPs from the Service Area Director of Air Traffic Operations. RLP approval request packages should be forwarded through the OSG for review and processing for approval by the Service Area Director of Air Traffic Operations.

## **11. Weather, Glideslope and Runway Requirements for Conducting LAHSO.**

### **a. For all operations:**

(1) The LAHSO runway ALD must be reported as dry and free of contaminants.

(2) Quality of braking action must not be reported less than “good.”

(3) The tailwind on the hold short runway must be calm (less than 3 knots).

(4) LAHSO must be discontinued if low level wind shear or microburst activity is reported or indicated. LAHSO may resume 20 minutes following the last report or indication of low level wind shear/microburst activity and low level windshear/microburst advisories have been removed from the ATIS broadcast, if previously included.

### **REFERENCE-**

*FAA Order JO 7110.65, Para 3–1–8, Low Level Wind Shear/Microburst Advisories.*

*FAA Order JO 7110.65, Para 2–9–3, Content.*

*FAA Order JO 7210.3, Para 10–3–3, Low Level Wind Shear/Microburst Detection Systems.*

**b. For non-air carrier operations:** Reported ceiling must be a minimum 1,000 feet above ground level (AGL) and a reported minimum visibility of 3 miles.

**c. For operations involving air carrier aircraft:**

(1) An operating electronic glide slope or an operating Visual Glide Slope Indicator (VGSI) is required for any runway an air carrier aircraft will be issued a land and hold short clearance. The VGSI must be either a Precision Approach Path Indicator (PAPI) or a Visual Approach Slope Indicator (VASI).

**REFERENCE—**

*FAA Order JO 6850.2, Visual Guidance Lighting Systems.*

(2) Day/night requirements:

(a) Day: LAHSO is only authorized on a runway that has an electronic glideslope or VGSI.

(b) Night: LAHSO is only authorized on a runway that has a VGSI.

(3) Ceiling and visibility requirements:

(a) For runways without a VGSI, the reported ceiling must be a minimum 1,500 feet AGL and a reported minimum visibility of 5 miles.

(b) For runways with an operating VGSI, the reported ceiling must be a minimum 1,000 feet AGL and a reported minimum visibility of 3 miles.

(c) For configurations requiring an RLP, the ceiling and visibility may differ.

**12. Runway Equipment and Facilities.** There must be only one designated hold short point per operational direction on a runway. FAA Advisory Circular (AC) 150/5340-1, Standards for Airport Markings; and AC 150/5340-18, Standards for Airport Sign Systems apply, as indicated below:

**a.** Runway hold-short position markings will be installed and clearly visible.

**b.** Runway hold short position signs will be installed at the hold short point and will be located on both sides of the runway. If one of the two signs is not functional or is destroyed, LAHSO may continue until the sign is repaired or replaced, if Land and Hold Short Lights are installed and operating.

**13. Lighting.**

**a.** AC 150/5340-30, Design and Installation Details for Airport Visual Aids, and AC 150/5345-54, Specification for L-884, Power and Control Unit for Land and Hold Short Lighting Systems apply to Land and Hold Short Lights.

**b.** When more than one light in a Land and Hold Short Light bar is not functional, operations requiring those lights must be terminated.

**REFERENCE–**

*AC 150/5345-3, Specification For L-821, Panels for the Control of Airport Lighting.*

*AC 150/5345-54, Specification For L-884, Power and Control Unit For Land and Hold Short Lighting Systems.*

c. If the ATIS broadcast contains a generic LAHSO announcement (for example, “LAHSO in effect”), then all Land and Hold Short Lights must be on. If the ATIS broadcast contains specific runway hold short point(s), then only those Land and Hold Short Lights must be on (for example, “Expect landing on Runway 22 to hold short of Runway 27” only requires Land and Hold Short Lights installed on Runway 22 to be on).

d. Land and Hold Short Lights are required and must be illuminated for the operations listed below:

(1) Air carrier instructed to hold short: Land and Hold Short Lights on the hold short runway are always required.

(2) Non-air carrier instructed to hold short: Land and Hold Short Lights on the hold short runway are required only at night.

**14. Eligible Aircraft Types.**

a. LAHSO involving helicopters may be authorized upon pilot request.

b. FAA Order JO 7360.1, Aircraft Type Designators, provides a group number for aircraft types that have been assessed for LAHSO. Aircraft types without a LAHSO group number are ineligible for LAHSO. The required landing distance for each aircraft group based on field elevation is shown in Table 1. All values listed in Table 1 are in feet.

**Table 1. LAHSO Aircraft Group/Distance Minima**

	Field Elevation							
	Sea Level –999	1,000– 1,999	2,000– 2,999	3,000– 3,999	4,000– 4,999	5,000– 5,999	6,000– 6,999	7,000 & Above
<b>Group 1</b>	2,500	2,550	2,600	2,650	2,700	2,750	2,800	2,850
<b>Group 2 &amp; Below</b>	3,000	3,050	3,100	3,150	3,200	3,250	3,300	3,500
<b>Group 3 &amp; Below</b>	3,500	3,550	3,600	3,650	3,700	3,750	3,800	3,850
<b>Group 4 &amp; Below</b>	4,000	4,050	4,100	4,150	4,200	4,250	4,300	4,350
<b>Group 5 &amp; Below</b>	4,500	4,550	4,600	4,650	4,700	4,750	4,800	4,850
<b>Group 6 &amp; Below</b>	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700
<b>Group 7 &amp; Below</b>	6,000	6,100	6,200	6,300	6,400	6,500	6,600	6,700
<b>Group 8 &amp; Below</b>	7,000	7,100	7,200	7,300	7,400	7,500	7,600	7,700
<b>Group 9 &amp; Below</b>	8,000	8,100	8,200	8,300	8,400	8,500	8,600	8,700
<b>Group 10</b>	Greater than 8,000							

**15. LAHSO Clearance Restrictions.**

a. If a pilot advises as a “student pilot” or an “experimental” aircraft, ATC must not issue a land and hold short clearance.

b. Pilots may not be able to accept a LAHSO clearance when their aircraft is less than 1,000 feet AGL. Pilots should receive the LAHSO clearance, or expectation of a LAHSO clearance, with ample time to configure the aircraft and/or brief LAHSO procedures prior to landing.

**16. Pilot Notification.**

a. When LAHSO operations are expected to be used, an announcement must be made on the ATIS; for example, “LAHSO in effect” or “Expect landing on Runway 22 to hold short of Runway 27.” LAHSO development teams will recommend whether to broadcast ALDs on the ATIS.

b. When LAHSO is conducted at locations not served by an ATIS or the ATIS is out of service, inform pilots on initial contact, or as soon as practicable, that LAHSO is in effect.



c. Aircraft conducting closed traffic need only be advised once that “LAHSO is in effect.” Acknowledgment of the ATIS meets this requirement.

d. Traffic information must be exchanged, and a read-back must be obtained from the landing aircraft with a LAHSO clearance.

## 17. Ground Movement and Adverse Impacts

a. Aircraft/vehicles may be permitted to cross the portion of the runway surface beyond the arriving aircraft’s hold short point. The pilot/operator must be informed of the landing traffic to that runway and acknowledge the crossing instruction. All other taxi and ground movement operations on the LAHSO runway beyond the hold short point are prohibited.

### **REFERENCE—**

*FAA Order JO 7110.65, Para 2–10–3, Tower Team Responsibilities.*

*FAA Order JO 7110.65, Para 3–1–12, Visually Scanning Runways.*

b. The airport traffic control tower supervisor/controller in charge must terminate LAHSO for any situation or weather condition that, in their judgment, would adversely affect LAHSO.

**18. Letter of Agreement (LOA).** LAHSO requires airport operators to undertake specific actions, including the installation and maintenance of required markings, signs, and in-pavement lighting. This involves a considerable capital investment and imposes specific responsibilities and obligations on the airport operator. To ensure that LAHSO is conducted safely, and to ensure that airport operators agree and are fully aware of their responsibilities, an LOA between the airport operator and the airport traffic control tower is required for LAHSO. At a minimum, the LOA must address:

a. Procedures for use of LAHSO.

b. Installation and maintenance of markings, signs, and lighting.

c. Determination of the measured length of the ALD.

d. Coordination procedures for prompt exchange of required information (inoperative lights, runway condition reports, pilot reports, braking action reports, etc.).

JON M  
STOWE

Digitally signed by JON M  
STOWE  
Date: 2025.06.13  
19:29:07 -04'00'

Jon M. Stowe  
Acting Director, Policy, AJV-P  
Mission Support Services  
Air Traffic Organization (ATO)

**Appendix A. Sample Letter of Agreement****Letter of Agreement (LOA) Between the Metro Airport Traffic Control Tower and  
Metropolitan Airport Authority (MAA)**

SUBJECT: Land and Hold Short Operations (LAHSO)

**1. PURPOSE:** This agreement delineates the responsibilities of the Metro Airport Traffic Control Tower (Metro ATCT) and Metropolitan Airport Authority (MAA) that are necessary for implementing LAHSO on specified runways at the Metropolitan Airport.

**2. BACKGROUND:** LAHSO is an air traffic control procedure that permits the issuance of landing clearances to aircraft to land and hold short of an intersecting runway, taxiway, or other designated point on the runway. It is a procedure designed to increase airport capacity and to more efficiently move aircraft within the terminal airspace and on the airport surface.

**3. CANCELLATION:** This agreement cancels the Metro ATCT and MAA Letter of Agreement, Land and Hold Short Operations (LAHSO), dated September 5, 2023.

**4. DISTRIBUTION:** This Letter of Agreement is available to Metro ATCT and MAA personnel.

**5. PROCEDURES:** Approved LAHSO Runways/Locations.

The following runway hold short locations are approved for conducting LAHSO at Metropolitan Airport:

Runway Designation	Location	Designation
10L	Prior to Runway 15/33 intersection	Day
10R	Prior to Runway 15/33 intersection	Day, night
11R	Prior to Taxiway B1 intersection	Day, night
15R	Prior to Runway 10R/28L intersection	Day
15L	Designated Point "HS-1"	Day

**6. RESPONSIBILITIES:****a. MAA.**

To conduct LAHSO at the Metropolitan Airport, the MAA agrees to be responsible for the following actions:

(1) Installing LAHSO runway markings and signs at all the above specified locations in accordance with FAA Advisory Circular (AC) 150/5340-1, Standards for Airport Markings, and AC 150/5340-18, Standards for Airport Sign Systems.

(2) Providing FAA with distance measurements from the landing runway threshold to the LAHSO runway position marking at each specified LAHSO location. If the ALD is measured to be greater than a runway's landing distance available (LDA) as published on FAA Form 5010-1, Airport Master Record, the LDA value must be used as the ALD for that runway. For runways without an LDA, the measured value is the ALD.

(3) Installing a LAHSO in-pavement lighting system at those required LAHSO locations installed in accordance with AC 150/5340-30, Design and Installation Details for Airport Visual Aids, and that pulse at the rate specified in AC 150/5345-54, Specification for L-884, Power and Control Unit for Land and Hold Short Lighting Systems.

(4) Notifying the FAA airport traffic control tower whenever runway markings, signs, and/or lighting systems are inoperative.

**b. Metro ATCT.**

In conducting LAHSO at Metropolitan Airport, the Metro ATCT must:

(1) Maintain a list of runways at the Metropolitan Airport that are approved for LAHSO, together with the ALD for each hold-short location.

(2) Terminate LAHSO for a runway when MAA reports that signs and markings are not installed or operating in accordance with this LOA or when weather or runway conditions prohibit this operation.

(3) Terminate LAHSO at any location when, in the judgment of the air traffic manager or designee, conditions may result in an unsafe operation.

(4) Issue Notice to Airmen relating to LAHSO, as may be necessary.

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Archie League  
Manager, Metropolitan Airport Tower  
Federal Aviation Administration

Date: \_\_\_\_\_

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Betty Ong  
Metropolitan Airport Manager

Date: \_\_\_\_\_

## Appendix B. Administrative Information

**1. Distribution.** This order is distributed electronically to all FAA and Air Traffic Organization elements.

**2. Authority to Change This Order.** The issuance, revision, or cancellation of the material in this order is the responsibility of the AJV-P.

**3. Related Publications.** FAA Order JO 7110.65, Air Traffic Control; FAA Order JO 7210.3, Facility Operation and Administration; FAA Order JO 7360.1, Aircraft Type Designators; and Aeronautical Information Manual.

**4. Definitions.** The following terms and their definitions are used throughout this order:

**a. Air Carrier** - Aircraft operating under 14 CFR parts 121, 125, 129, and 135.

**b. Available Landing Distance (ALD)** - The declared distance available to complete landing and rollout for an aircraft conducting LAHSO.

**c. Contaminated Runway** – Per this order, a runway is considered contaminated whenever standing water, ice, snow, slush, frost in any form, heavy rubber deposits, or other substances are present. A runway is contaminated with respect to rubber deposits or other friction degrading substances when the average friction value for any 500-foot segment of the runway within the ALD falls below the recommended minimum friction level, and the average friction value in the adjacent 500-foot segment falls below the maintenance planning friction level.

**d. Dry Runway** - No visible moisture present. The runway must be free of contaminants.

**e. Hold Short Point** - A point on the runway beyond which a landing aircraft with a LAHSO clearance is not authorized to proceed.

**f. Hold Short Position Marking** - The painted runway marking located at the hold short point on all LAHSO runways.

**g. Hold Short Position Sign** – A sign with an inscription in white on a red background is located adjacent to the hold short point on a LAHSO runway.

**h. Land and Hold Short Operations (LAHSO)** - These operations include landing and holding short of an intersecting runway, taxiway, predetermined point, or approach/departure flight path.

**i. Land and Hold Short Lights** - In-pavement, pulsing white lights at the LAHSO hold short point.

**j. Mixed Operations.** - LAHSO conducted between an air carrier and any other type of aircraft.

**k. Rejected Landing** - For LAHSO, a rejected landing occurs when the pilot/flight crew elects to go around.

**l. Rejected Landing Procedure (RLP)** - A published heading to be used in the event of a rejected landing. Unless alternate instructions are given by ATC, pilots are expected to execute the procedure as published and remain clear of clouds.

**5. Suggestions for Improvements.** Please forward all comments on deficiencies, clarifications, or improvements regarding the contents of this order to the AJV-P Correspondence Mailbox at [9-AJV-P-HQ-Correspondence@faa.gov](mailto:9-AJV-P-HQ-Correspondence@faa.gov).

Your suggestions are welcome. FAA Form 1320-19, Directive Feedback Information, is located in Appendix C of this order for your convenience.

**6. Records Management.** Refer to FAA Order 0000.1, *FAA Standard Subject Classification System*; FAA Order 1350.14, *Records Management*; or your office Records Management Officer (RMO)/Directives Management Officer (DMO) for guidance regarding retention or disposition of records.

**Appendix C. Directive Feedback Information**

## Directive Feedback Information

Please submit any written comments or recommendation for improving this directive, or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: FAA Order JO 7110.118, Land and Hold Short Operations (LAHSO)

To: [9-AJV-P-HQ-Correspondence@faa.gov](mailto:9-AJV-P-HQ-Correspondence@faa.gov)

*(Please mark all appropriate line items)*

☐ An error (procedural or typographical) has been noted in paragraph \_\_\_\_\_ on page \_\_\_\_\_.

☐ Recommend paragraph \_\_\_\_\_ on page \_\_\_\_\_ be changed as follows:  
*(attach separate sheet if necessary)*

☐ In a future change to this order, please include coverage on the following subject:  
*(briefly describe what you want added.)*

☐ Other comments:

☐ I would like to discuss the above. Please contact me.

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_ Routing Symbol: \_\_\_\_\_

FAA Form 1320-19 (08/21) Supersedes Previous Edition