
PILOT

- A pilot must continually make decisions about competency, condition of health, mental and emotional state, level of fatigue, and many other variables.

AIRCRAFT

- A pilot frequently bases decisions on evaluation of the airplane, such as performance, equipment, or airworthiness. This task will concentrate on the aircraft (ASEL – Airplane Single Engine Land).

ENVIRONMENT

- The environment encompasses many elements that are not pilot or airplane related, including such factors as weather, air traffic control (ATC), navigational aids, terrain, takeoff and landing areas and surrounding obstacles. Weather is one element that can change drastically over time and distance. Flight planning is your flight on paper. Every detail of your route can be planned. Fuel, Time, Distance and Diverts and key factors.

EXTERNAL PRESSURES

- The pilot must evaluate the three previous areas to decide on the desirability of undertaking or continuing the flight as planned. It is worth asking why the flight is being made, how critical it is to maintain the schedule, and if the trip is worth the risks.

P – Pilot for the Private Pilot:

Start with I’M SAFE: Illness, medication, stress, alcohol (.04), fatigue (acute and chronic) and eating/emotional factors. If any of these factors apply, you should not fly. As a private pilot, you are required to carry your pilot’s certificate, medical and a government ID. As a private pilot, you are allowed to carry passengers (not for hire) – 61.113, fly when visibility is less than 3 miles (SVFR – Special VFR) and can fly without visual reference to the surface. Special requirements for the Private Pilot are: Must be a Private Pilot to take off and land within (KSFO) Class B Airspace (AIM 3-2-3) and can fly at night. Must maintain currency to carry passengers: 1.) 3 touch-n-go’s during the day and 3 full stop landings at night every 90 days – 61.57. 2.) Complete a BFR (Flight Review) (minimum 1 hour of ground and 1 hour of flight – every 24 calendar months – 61.56. 3.) Have a First Class (valid for 6 months), Second Class (valid for 12 months) or Third Class (valid for 2 years if over 40 years old or 5 years if under 40 years old) medical certificate to be pilot in command.
A – Aircraft for the Private Pilot:

Remember A R O W. Airworthiness Certificate (Has the aircraft had an Annual, 100 hour, Progressive - 91.409, Pitot Static/Transponder check (24 months - 91.411, 91.413), Aircraft has the required equipment – 91.205 if NOT Special Flight Permit 21.197 & 21.199, ELT check - 91.207 and all AD’s have been complied - 91.403 39.3, Registration (Every Three Years) – 47.41, Operating Limits (Section 2 of POH, Pilot’s Operating Handbook) – 91.9 and Weight and Balance (Section 6 of POH). Fuel requirements for all flights (30 minutes Day, 45 minutes Night) - 91.151. The required takeoff and landing distances, runway lengths and weather forecasts - 91.103. Avionics familiarity, density altitude and a current sectional information.

V – Environment for the Private Pilot:

Think of the Airport and weather conditions: Crosswind, Takeoff and Landing distances, Ceiling conditions, visibility and your personal minimums. Plan on the weather for your Departure, En-route and Destination. For example: Current Metar, TAF and FA (Area Forecast), surface analysis chart, radar summary chart, winds and temperature aloft, significant weather prognostic chart, convective outlook chart, Airmets and Sigmets, PIREPs, wind shear reports, icing and freezing levels and AWOS, ASOS and ATIS reports for the route and destination. The pilot wants to make a competent “go/no-go” decision based on available weather information. Reference Weather Information – Task C in RAM Study Guide.

E – External Pressures for the Private Pilot:

Think about “Get there Itis.” The determination to reach a destination, combined with hazardous weather, claims the lives of dozens of pilots and their passengers yearly. Think about the hazardous attitudes: Anti-authority, Impulsivity, Invulnerability, Macho and Resignation to see if they may apply to this flight. Allowance for delays and diversions, alternative plans and personal equipment. After you use the PAVE checklist (step 1), use the CARE checklist (Consequences, Alternatives, Reality and External pressures) (step 2) and determine the level and severity of the risk. (Step 3) perform the TEAM checklist. Transfer Risk, Eliminate Risk, Accept Risk and Mitigate Risk.

Current VFR Sectional:
## VFR Navigation Log:

**NAVIGATION LOG**

<table>
<thead>
<tr>
<th>Aircraft Number</th>
<th>N</th>
<th>Notes</th>
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<tbody>
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**Check Points (Times)**

<table>
<thead>
<tr>
<th>VFR</th>
<th>Course/Route</th>
<th>Distance</th>
<th>Temp</th>
<th>Wind</th>
<th>CAS</th>
<th>TC</th>
<th>TD</th>
<th>L</th>
<th>Alt</th>
<th>Fuel</th>
<th>ETA</th>
<th>ETA</th>
<th>Final</th>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dist</th>
<th>O/D</th>
<th>Time Off</th>
<th>GPS</th>
<th>Airport &amp; ATIS Information</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

**Airport Frequencies**

<table>
<thead>
<tr>
<th>Departure</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>

**VFR Navigation Log on Reverse Side**

**Flight Plan and Weather Log**

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## VFR Flight Plan Form:

![VFR Flight Plan Form](image)

**U.S. DEPARTMENT OF TRANSPORTATION**

**FEDERAL AVIATION ADMINISTRATION**

**FLIGHT PLAN**

1. **TYPE**
   - VFR
   - IFR
   - DVFR

2. **AIRCRAFT IDENTIFICATION**

3. **AIRCRAFT TYPE/ SPECIAL EQUIPMENT**

4. **TRUE AIRSPEED**
   - KTS

5. **DEPARTURE POINT**
   - PROPOSED (Z)

6. **DEPARTURE TIME**
   - ACTUAL (Z)

7. **CRUISING ALTITUDE**

8. **ROUTE OF FLIGHT**

9. **DESTINATION (Name of airport and city)**

10. **EST. TIME ENROUTE**
     - HOURS
     - MINUTES

11. **REMARKS**

12. **FUEL ON BOARD**
     - HOURS
     - MINUTES

13. **ALTERNATE AIRPORT(S)**

14. **PILOT’S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE**

15. **NUMBER ABOARD**

16. **COLOR OF AIRCRAFT**

17. **DESTINATION CONTACT/TELEPHONE (OPTIONAL)**

**CLOSE VFR FLIGHT PLAN WITH __________ FSS ON ARRIVAL**

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CIVIL AIRCRAFT PILOTS. FAR Part 91 requires you file an IFR flight plan to operate under instrument flight rules in controlled airspace. Failure to file could result in a civil penalty not to exceed $1,000 for each violation (Section 901 of the Federal Aviation Act of 1956, as amended). Filing of a VFR flight plan is recommended as a good operating practice. See also Part 99 for requirements concerning VFR flight plans.
Pre-Planning Process

1) Set-up Aircraft Profile:

<table>
<thead>
<tr>
<th></th>
<th>Speed</th>
<th>gal/hr</th>
<th>lbs/hr</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climb</td>
<td>70</td>
<td>8.5</td>
<td>51.0</td>
<td>500 fpm</td>
</tr>
<tr>
<td>Cruise</td>
<td>100</td>
<td>6.5</td>
<td>39.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Descent</td>
<td>90</td>
<td>5.0</td>
<td>30.0</td>
<td>500 fpm</td>
</tr>
</tbody>
</table>

2) Look and pick Route: Terrain, Airspace, VOR’s, Good visual check points, Emergency fields, and Alternate airports.

3) Pick Altitude: Use maximum elevation figures – Easterly (Odd + 500 feet) Westerly (Even + 500 feet).

4) Find Top of Climb (TOC) and Top of Descent (TOD). Mark on sectional.
   - Remember to plan TOD for your Uncontrolled Field Entry Overfly or for Airspace Entry Altitudes.

5) Pick Checkpoints: Every 30 – 40 NM apart. VOR’s are good.

6) Fill out check points on Navigation Log.
   - Example: STS to TOC to Mining Lake to Williams VOR to TOD to OVE.

7) Fill out Navigation log Left to Right.
   - Wind (Day of flight), TAS (Use profile), TC (Plotter), WCA (Day of flight), VAR (Subtract Easterly/Add Westerly), DEV (Compass card), Dist.(Plotter), GS(Day of flight), ETE (Use E-6B).

8) Fill out all Check Points (Fixes) on Navigation Log.

9) Fill out Totals (on the bottom), Frequency’s Information, all other data.

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**VFR Cruising Altitudes**

- Example 4,600 5,600 6,500 7,500
- VFR Even 1000’s +500’
- VFR Odd 1000’s +500’
- Magnetic Track Above 3000’ AGL
Day of Flight

1) Call FSS 1-800-WX-BRIEF or DUATS.COM to get your weather brief.  
   - Be sure to check for TFR’s. Actually say ”Are there any TFR’s for my Route.”
2) File a VFR Flight Plan
   - Remember to use different winds aloft for your check points.
4) Fill out WCA (Back side of E-6B Flight Computer)
5) TC + or - WCA=TH  TH + or - VAR=MH  MH + or - DEV=CH. Complete Log.
6) Ground speed (GS), Add or subtract the winds. Fill in the box.
7) Continue until Navigation Log is complete.

Frequencies Needed

Oakland Flight Service Station: **122.35** (Open/Close Flight Plans)

Oakland Center: **127.80** or **125.85** (Radar Flight Following Services)

Flight Service Station: **122.35** (En-route Weather Advisory Services)

All of these frequencies will be asked by the Examiner, during the Oral or Flight portion of the check-ride.
E-6B Flight Computer: Fuel, Time, and Distance

1) Finding Time:
Diamond on Speed
Distance on Outside
Time on the Inside
Example: Speed=80kts
Distance=16nm
Time=12 minutes

2) Finding Fuel:
Diamond on Fuel Lbs/hr
Time on the Inside
Fuel on the Outside
Example: 72 Lbs/hr
Time=15 minutes
Fuel=you burned 18 Ls of fuel
Flight Following - Oakland Center: 127.80 or 125.85

Start: “Oakland Center, Tomahawk 2406K with request.”

1. Oak Center: Tomahawk 2406K say Aircraft type and Destination. 
   OR
2. Oak Center: Tomahawk 2406K go ahead.

Response: Tomahawk 2406K is a PA38/U, Destination KOVE, at 5500, request Flight Following.

Oak Center: Tomahawk 2406K SQUAWK: 4263

N2406K: SQUAWK 4263 - 06K

Turn Transponder off, put squawk in and turn back to ALT.

Ident: In order to help ATC identify an aircraft on their screen, they may ask the aircraft to "ident." The pilot presses a button on their transponder, and the controller can verify that the aircraft they are talking to is the one they are looking at on the screen.

General Squawk Codes: 7700 – Emergency  7600 – Lost Com  7500 - Hijacking
Rough Engine or Engine Failure Procedures

PA38-112 Piper Tomahawk

1. Pitch for Best Glide (70kts) and Trim for (70kts)
2. Find Landing Area and Turn for it...

Pilot’s Flow Procedures

3. Magneto’s (Turn Left and Right, back to both)
4. Electric Fuel Pump (On check Pressure)
5. Carb Heat (On)
6. Fuel Valve (Switch)
7. Mixture Full Rich
8. Primer In and Locked
9. Squawk (7700)
10. Talk (121.50) or (118.50) if local - Mayday, Mayday, Mayday
11. Crack (Doors for Landing)
12. Once ensured landing (Electrical/Master OFF)
## Altitudes

**Indicated Altitude:** Altitude data shown on the altimeter using the current altimeter setting input by the pilot.

**True Altitude:** Height above mean sea level (MSL).

**Absolute Altitude:** Height above ground level (AGL).

**Pressure Altitude:** Indicated altitude when an altimeter is set to 29.92 in HG and used primarily in performance calculations at high altitude flight.

**Density Altitude:** Pressure altitude corrected for nonstandard temperature variations.

## Airspeeds

**Indicated Airspeed:** The speed you see in KTS or MPH.

**Calibrated Airspeed:** Indicated corrected for installation and instrument errors.

**Equivalent Airspeed:** Calibrated corrected for adiabatic compressible flow (above 200 KIAS).

**True Airspeed:** Actual speed the aircraft moves through undisturbed air.
**Diverts:**

1) Find out where you are at on the sectional.
2) Where are you diverting?
3) Move to VOR (Heading) and check distance (LAT and LONG).
4) Turn aircraft to Heading.
5) Place Airspeed under △, find distance outside, look inside for (TIME).
6) Place △, 6.5 gallons per/hour, find (TIME) inside, come out for gallons per/hour.
7) Place △, 39 pounds per/hr, find (TIME) inside, come out for pounds per/hour.
8) Get weather if available at divert airport.
9) Put in CTAF, make a call….and descend to overfly altitude.

**Estimate Average Groundspeed:**

1) Find distance on the sectional.
2) Look at the clock for time since departure.
3) Place distance on the outside and time on the inside together.
4) Read △ for estimated ground speed.
Stall/Spin Recovery for PA38-112:

Intentional spins are permitted only with flaps fully retracted for Utility category operation. Should a spin be entered inadvertently, the following procedure should be initiated:

a) Neutralize the ailerons
b) Apply and maintain full rudder opposite the direction of rotation.
c) As the rudder hits the stops, push the control wheel fully forward.
d) Close the throttle to idle.
e) Retract the flaps if they have been extended.

A good memory aid is: **AFYT**

1) Ailerons Neutral
2) Full Opposite Rudder
3) Yoke Full Forward
4) Throttle to Idle

Always refer to the POH (Pilot’s Operating Handbook) for the correct stall/spin recovery. Expect your Examiner to ask you the correct stall/spin recover procedure in the Oral Examination.
Military Training Routes (MTRs)
MTRs are routes used by military aircraft to maintain proficiency in tactical flying. These routes are usually established below 10,000 feet MSL for operations at speeds in excess of 250 knots. Some route segments may be defined at higher altitudes for purposes of route continuity. Routes are identified as IFR (IR), and VFR (VR), followed by a number. MTRs with no segment above 1,500 feet AGL are identified by four number characters (e.g., IR1206, VR1207). MTRs that include one or more segments above 1,500 feet AGL are identified by three number characters (e.g., IR206, VR207). IFR low altitude en route charts depict all IR routes and all VR routes that accommodate operations above 1,500 feet AGL. IR routes are conducted in accordance with IFR regardless of weather conditions. VFR sectional charts depict military training activities such as IR, VR, MOA, restricted area, warning area, and alert area information.

Temporary Flight Restrictions (TFR)
A flight data center (FDC) Notice to Airmen (NOTAM) is issued to designate a TFR. The NOTAM begins with the phrase “FLIGHT RESTRICTIONS” followed by the location of the temporary restriction, effective time period, area defined in statute miles, and altitudes affected. The NOTAM also contains the FAA coordination facility and telephone number, the reason for the restriction, and any other information deemed appropriate. The pilot should check the NOTAMs as part of flight planning.
Some of the purposes for establishing a TFR are:
• Protect persons and property in the air or on the surface from an existing or imminent hazard.
• Provide a safe environment for the operation of disaster relief aircraft.
• Prevent an unsafe congestion of sightseeing aircraft above an incident or event, which may generate a high degree of public interest.
• Protect declared national disasters for humanitarian reasons in the State of Hawaii.
• Protect the President, Vice President, or other public figures.
• Provide a safe environment for space agency operations.

Since the events of September 11, 2001, the use of TFRs has become much more common. There have been a number of incidents of aircraft incursions into TFRs, which have resulted in pilots undergoing security investigations and certificate suspensions. It is a pilot’s responsibility to be aware of TFRs in their proposed area of flight. One way to check is to visit the FAA website, www.tfr.faa.gov, and verify that there is not a TFR in the area.

Parachute Jump Aircraft Operations
Parachute jump aircraft operations are published in the Airport/Facility Directory (A/FD). Sites that are used frequently are depicted on sectional charts.
Published VFR Routes
Published VFR routes are for transitioning around, under, or through some complex airspace. Terms such as VFR flyway, VFR corridor, Class B airspace VFR transition route, and terminal area VFR route have been applied to such routes. These routes are generally found on VFR terminal area planning charts.

Terminal Radar Service Areas (TRSAs)
TRSAs are areas where participating pilots can receive additional radar services. The purpose of the service is to provide separation between all IFR operations and participating VFR aircraft. The primary airport(s) within the TRSA become(s) Class D airspace. The remaining portion of the TRSA overlies other controlled airspace, which is normally Class E airspace beginning at 700 or 1,200 feet and established to transition to/from the en route/terminal environment. TRSAs are depicted on VFR sectional charts and terminal area charts with a solid black line and altitudes for each segment. The Class D portion are charted with a blue segmented line. Participation in TRSA services is voluntary; however, pilots operating under VFR are encouraged to contact the radar approach control and take advantage of TRSA service.

National Security Areas (NSAs)
NSAs consist of airspace of defined vertical and lateral dimensions established at locations where there is a requirement for increased security and safety of ground facilities. Flight in NSAs may be temporarily prohibited by regulation under the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 99, and prohibitions are disseminated via NOTAM. Pilots are requested to voluntarily avoid flying through these depicted areas.

Time Zones
The meridians are also useful for designating time zones. A day is defined as the time required for the Earth to make one complete rotation of 360°. Since the day is divided into 24 hours, the Earth revolves at the rate of 15° an hour. Noon is the time when the sun is directly above a meridian; to the west of that meridian is morning, to the east is afternoon.

These time zone differences must be taken into account during long flights eastward—especially if the flight must be completed before dark. Remember, an hour is lost when flying eastward from one time zone to another, or perhaps even when flying from the western edge to the eastern edge of the same time zone. Determine the time of sunset at the destination by consulting the flight service stations (AFSS/FSS) or National Weather Service (NWS) and take this into account when planning an eastbound flight. In most aviation operations, time is expressed in terms of the 24-hour clock. ATC instructions, weather reports and broadcasts, and estimated times of arrival are all based on this system. For example: 9 a.m. is expressed as 0900, 1 p.m. is 1300, and 10 p.m. is 2200. Because a pilot may cross several time zones during a flight, a standard time system has been adopted. It is called Universal Coordinated Time (UTC) and is often referred to as Zulu time. UTC is the time at the 0° line of longitude which passes.
through Greenwich, England. All of the time zones around the world are based on this reference. To convert to this time, a pilot should do the following:
Eastern Standard Time..........Add 5 hours
Central Standard Time..........Add 6 hours
Mountain Standard Time...... Add 7 hours
Pacific Standard Time......... Add 8 hours
For Daylight Saving Time, 1 hour should be subtracted from the calculated times.
Pilotage
Pilotage is navigation by reference to landmarks or check points. It is a method of navigation that can be used on any course that has adequate checkpoints, but it is more commonly used in conjunction with dead reckoning and VFR radio navigation.

Dead Reckoning
Dead reckoning is navigation solely by means of computations based on time, airspeed, distance, and direction. The products derived from these variables, when adjusted by wind speed and velocity, are heading and GS. The predicted heading takes the aircraft along the intended path and the GS establishes the time to arrive at each checkpoint and the destination. Except for flights over water, dead reckoning is usually used with pilotage for cross-country flying. The heading and GS as calculated is constantly monitored and corrected by pilotage as observed from checkpoints.

Use of Airport/Facility Directory (A/FD)
Study available information about each airport at which a landing is intended. This should include a study of the Notices to Airmen (NOTAMs) and the A/FD. This includes location, elevation, runway and lighting facilities, available services, availability of aeronautical advisory station frequency (UNICOM), types of fuel available (use to decide on refueling stops), AFSS/FSS located on the airport, control tower and ground control frequencies, traffic information, remarks, and other pertinent information. The NOTAMs, issued every 28 days, should be checked for additional information on hazardous conditions or changes that have been made since issuance of the A/FD. The sectional chart bulletin subsection should be checked for major changes that have occurred since the last publication date of each sectional chart being used. Remember, the chart may be up to 6 months old. The effective date of the chart appears at the top of the front of the chart. The A/FD generally has the latest information pertaining to such matters and should be used in preference to the information on the back of the chart, if there are differences.
In United States, NOTAMs are classified by the FAA into five categories.

**NOTAM (D) or distant NOTAMs**
A NOTAM (D) information is disseminated for all navigational facilities that are part of the National Airspace System (NAS), all public use airports, seaplane bases, and heliports listed in the Airport/Facility Directory (A/FD) (e.g., such information as whether or not an airport or a certain facility is usable). NOTAM (D) information includes, among other topics, such data as taxiway closures, personnel and equipment near or crossing runways, and airport lighting aids that do not affect instrument approach criteria, such as VASI.

**Flight Data Center (FDC) NOTAMs**
The National Flight Data Center will issue these NOTAMs when it becomes necessary to disseminate information that is regulatory in nature, and they contain such things as amendments to published IAPs and other current aeronautical charts. They are also used to advertise temporary flight restrictions caused by such things as natural disasters or large-scale public events that may generate congestion of air traffic over a site.

**Pointer NOTAMs**
NOTAMs issued by a flight service station to highlight or point out another NOTAM, such as an FDC or NOTAM (D) NOTAM. This type of NOTAM will assist users in cross-referencing important information that may not be found under an airport or NAVAID identifier.

**Special activity airspace (SAA) NOTAMs**
SAA NOTAMs are issued when SAA (the term "SAA" includes SUA, as well as instrument and visual military training routes, aerial refueling tracks and anchors) will be active outside the published schedule times and when required by the published schedule.

**Military NOTAMs**
NOTAMs pertaining to U.S. Air Force, Army, Marine, and Navy navigational aids/airports that are part of the NAS.
Pilot Responsibilities When Conducting Land and Hold Short Operations (LAHSO)

LAHSO is an acronym for "Land and Hold Short Operations." Land and hold short operations are an air traffic control procedure intended to increase airport capacity without compromising safety. This means that, as pilot-in-command (or as an operator), several minutes of valuable time can be saved during every LAHSO landing and taxi-in. Think of the savings in fuel and operating expense - not to mention freeing up the runway for others to use, thereby increasing overall system capacity. This program, however, will work more effectively only if pilots have a clear understanding of what's expected of them. That's what this booklet is all about. For starters, LAHSO include landing and holding short of an intersecting runway, an intersecting taxiway, or some other designated point on a runway other than an intersecting runway or taxiway. (See Figures 1-3.)

**Figure 1-LAHSO of intersecting taxiway**

*FIGURES 1, 2, and 3. - (1) Land and hold short of an intersecting runway, (2) Land and hold short of an intersecting taxiway, and (3) Land and hold short of a designated point on a runway other than an intersecting runway or taxiway. (In this latter case, for example, holding short at a designated point may be required to avoid conflicts with the runway safety area/flight path of a nearby runway.) Each figure shows the approximate location of LAHSO markings, signage, and in-pavement lighting when installed. For further information on LAHSO markings, signage, and lighting, see the Airman's Information Manual, Chapter 2, "Aeronautical Lighting and Other Airport Visual Aids."*
Figure 2-LAHSO of intersecting taxiway

Figure 3-LAHSO of designated point on runway
Background

For years, pilots have been asked to land and hold short of intersecting runways. Previously, the acronym "SOIR," for Simultaneous Operations on Intersecting Runways, was used exclusively to describe simultaneous operations on two intersecting runways—either two aircraft landing simultaneously or one aircraft landing while another was taking off.

SOIR has been used as a tool by air traffic controllers to increase airport capacity since 1968. SOIR has grown into a procedure now used at over 850 intersecting runway combinations at more than 220 airports in the United States, including many general aviation only (i.e., non FAR Part 139) airports.

Tens of thousands of safe landings and departures have been achieved using SOIR. As airport operations increase, operations such as SOIR will become even more important, allowing aviation to grow while keeping expensive airport construction and delays down.

The term LAHSO now replaces SOIR because SOIR is being expanded to include landing operations to hold short of an intersecting taxiway and to hold short of a designated point (such as a flight path hold short point). Increased LAHSO operations on wet runways are also anticipated.

Pilot Responsibilities and Basic Procedures

LAHSO is an air traffic control procedure that requires pilot participation to balance the needs for increased airport capacity and system efficiency, consistent with safety. This procedure can be done safely, provided pilots and controllers are knowledgeable and understand their responsibilities. With minimal additional preflight planning, pilots can help increase airport capacity—SAFELY! The following paragraphs outline specific pilot/operator responsibilities when conducting LAHSO.

At controlled airports, air traffic may clear a pilot to land and hold short provided certain weather minimums and runway lengths are available, among other considerations. Pilots may accept such a clearance provided that the pilot-in-command determines that the aircraft can safely land and stop within the
Available Landing Distance (ALD). ALD data are published in the special notices section of the Airport/Facility Directory (A/FD). Controllers will also provide ALD data upon request. Student pilots or pilots not familiar with LAHSO should not participate in the program.

The pilot-in-command has the final authority to accept or decline any land and hold short clearance. The safety and operation of the aircraft remain the responsibility of the pilot. Pilots are expected to decline a LAHSO clearance if they determine it will compromise safety.

FAR Part 121 and 135 operators (air carrier and air taxi) are required to develop appropriate training programs and procedures before receiving LAHSO approval authorization.

To conduct LAHSO, pilots should become familiar with all available information concerning LAHSO at their destination airport. Pilots should have, readily available, the published ALD and runway slope information for all LAHSO runway combinations at each airport of intended landing. Additionally, knowledge about the aircraft's landing performance data permits the pilot to readily determine that the ALD for the assigned runway is sufficient for safe LAHSO. As part of a pilot's preflight planning process, pilots should determine if their destination airport has LAHSO. Domestic airports with LAHSO will have a note in the "Airport Remarks" section of the A/FD stating "See SPECIAL NOTICE-Land and Hold Short Operations." For airports that have LAHSO, the preflight planning process should include an assessment of which LAHSO combinations would be acceptable given their aircraft's required landing distance. Good pilot decision making is knowing in advance whether one can accept a LAHSO clearance if offered.

The decision to accept a LAHSO clearance is completely up to the pilot. Many LAHSO combinations provide generous margins for most aircraft. Others may not. Consequently, it's up to the pilot or operator to establish their own margins and to use these standards as a basis to either accept or decline a LAHSO clearance.

If, for any reason, such as difficulty in discerning the location of a LAHSO intersection, wind conditions, aircraft condition, etc., the pilot elects to request to land on the full length of the runway, to land on another runway, or to decline LAHSO, the pilot is expected to promptly inform air traffic, ideally even before the
clearance is issued. A LAHSO clearance, once accepted, must be adhered to, just as any other ATC clearance. The exceptions would be if an amended clearance is obtained or if emergency occurs. A LAHSO clearance does not preclude a rejected landing.

Controllers need a full read back of all LAHSO clearances. In this read back, include the words, "HOLD SHORT OF (RUNWAY[TAXIWAY/OR POINT]." In order to reduce frequency congestion, pilots are encouraged to read back the LAHSO clearance without prompting. Don't make the controller ask for a read back!

A pilot who accepts a LAHSO clearance should land and exit the runway at the first convenient taxiway (unless directed otherwise) before reaching the hold short point. Otherwise, the pilot must stop and hold at the hold short point. If a rejected landing becomes necessary after accepting a LAHSO clearance, the pilot should maintain safe separation from other aircraft or vehicles, and should promptly notify the controller.