Procedures and Operations

Chapter 5

Questions

1. CAP flights are released by an flight release officer (FRO) after a short phone call. When the FRO asks are you safe and you say "I'm safe", what did you tell the FRO?
2. What are four sources of risk you should consider prior to each flight?
3. Do VASI or PAPI provide more information to a pilot and how?
4. Are there any airports Washington airports listed in 14CFR93?
5. Why might you see alternating red and green lights from the tower?
6. If you are not 100% sure you can follow a LAHSO clearance, what should you tell the controller?
7. According to Cessna, what should yo do with the yoke if you, a non-IFR pilot, were to loose visual references like flying into IMC?

The Five Ps

- Plan
- Plane
- Pilot
- Passengers
- Programming

Let's Plan a Flight

- Depart KBLI (Bellingham)
- Arrive KCLM (Port Angeles)
- Flying a Cessna 172

Let's Plan a Flight

Plan

- What airspaces will you fly through?
- Are there any Temporary Flight Restrictions (TFR)?
- What altitude did you select? Can you clear terrain?
- How is the cloud cover?
- Do you have the necessary charts?
- Do you have enough fuel?
- **Can you safely land if the engine fails?**

Plane

- Is this the plane for the task?
- Weights and balances?
- Is it current (e.g., annual, 100-hr, MEL, KOEL)?
- Is there necessary O_2?

Pilot

- **I**llness
- **M**edication
- **S**tress
- **A**lcohol
- **F**atigue
- **E**ternal Pressure

Passengers

Briefed of

- Seat belt operation and requirements
- Exits and emergency procedures
- Sterile cockpit
- Knock-it-off

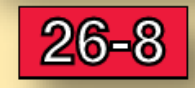
Ask

- First flight
- Nervous fliers
- Prone to airsickness

Programming

- EFB (Foreflight) current?
- EFB Fully charged with backup power (e.g., batteries, vehicle)?
- G1000 current?
- Can you update flight plan on the *fly*?

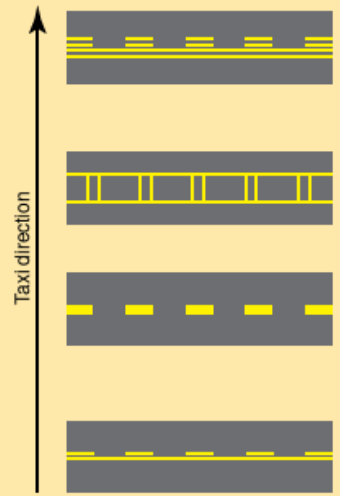
Airport

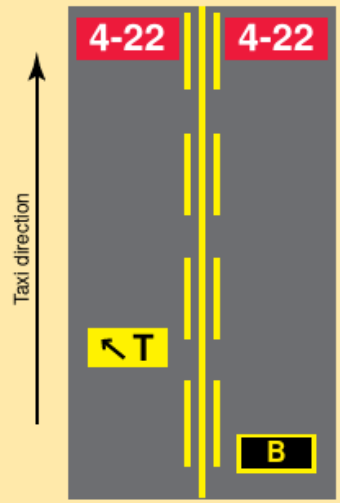
Airport Signs			
Type of Sign	**Action or Purpose**	**Type of Sign**	**Action or Purpose**
	**Taxiway/Runway Hold Position:** Holding position for RWY 4-22 on TWY A.		**Runway Safety Area Boundary:** Identifies exit boundary of runway safety area.
	**Runway/Runway Intersection:** Identifies intersecting runways or holding position for LAHSO operations.		**ILS Critical Area Boundary:** Identifies exit boundary of ILS critical area.
	**Runway Approach Hold Position:** Runway approach holding position for RWY 8 on TWY B.		**Taxiway Direction:** Defines direction and designation of intersecting taxiway(s).
	**ILS Critical Area Hold Position:** Holding position for the ILS critical area on TWY C.		**Runway Exit:** Defines direction and designation of exit taxiway from runway.
	**No Entry:** Identifies paved areas where aircraft entry is prohibited.		**Outbound Destination:** Defines directions to takeoff runway(s).
	**Taxiway Location:** Identifies taxiway on which aircraft is located.		**Inbound Destination:** Defines directions to destination for arriving aircraft.
	**Runway Location:** Identifies runway on which aircraft is located.		**Taxiway Ending Marker:** Indicates taxiway does not continue.
	**Runway Distance Remaining:** Provides remaining runway length in 1,000-foot increments.		**Direction Sign Array:** Identifies location in conjunction with multiple intersecting taxiways.

Airport

Airport Markings

Type of Marking





Action or Purpose

Holding Position:
Denotes entrance to a runway from a taxiway, approach hold position on a taxiway, or LAHSO holding position on a runway.

ILS Critical Area Boundary:
Denotes entrance to an area to be protected for an ILS signal.

Taxiway/Taxiway Holding Position:
Denotes location on taxiway or apron where aircraft hold short of another taxiway.

Non-Movement Area Boundary:
Delineates movement area under control of ATC, from non-movement area.

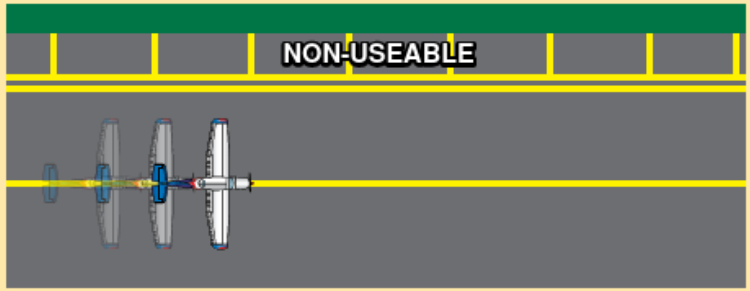
Surface Painted Holding Position:
Denotes entrance to a runway from a taxiway.

Enhanced Taxiway Centerline:
Provides visual cue to help identify location of a runway holding position on a taxiway. These markings are installed 150 feet prior to the holding position markings.

Surface Painted Taxiway Direction:
Defines designation/direction of intersecting taxiway(s).

Surface Painted Taxiway Location:
Identifies taxiway on which the aircraft is located.

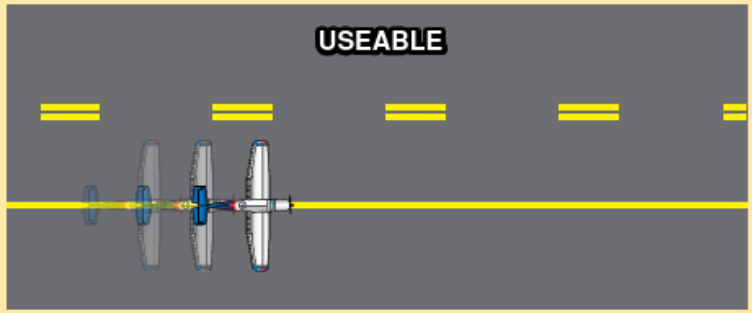
Type of Marking



Action or Purpose

Taxiway Edge: Solid Double Yellow Lines
Defines edge of usable, full strength taxiway. Adjoining pavement IS NOT intended for use by aircraft.

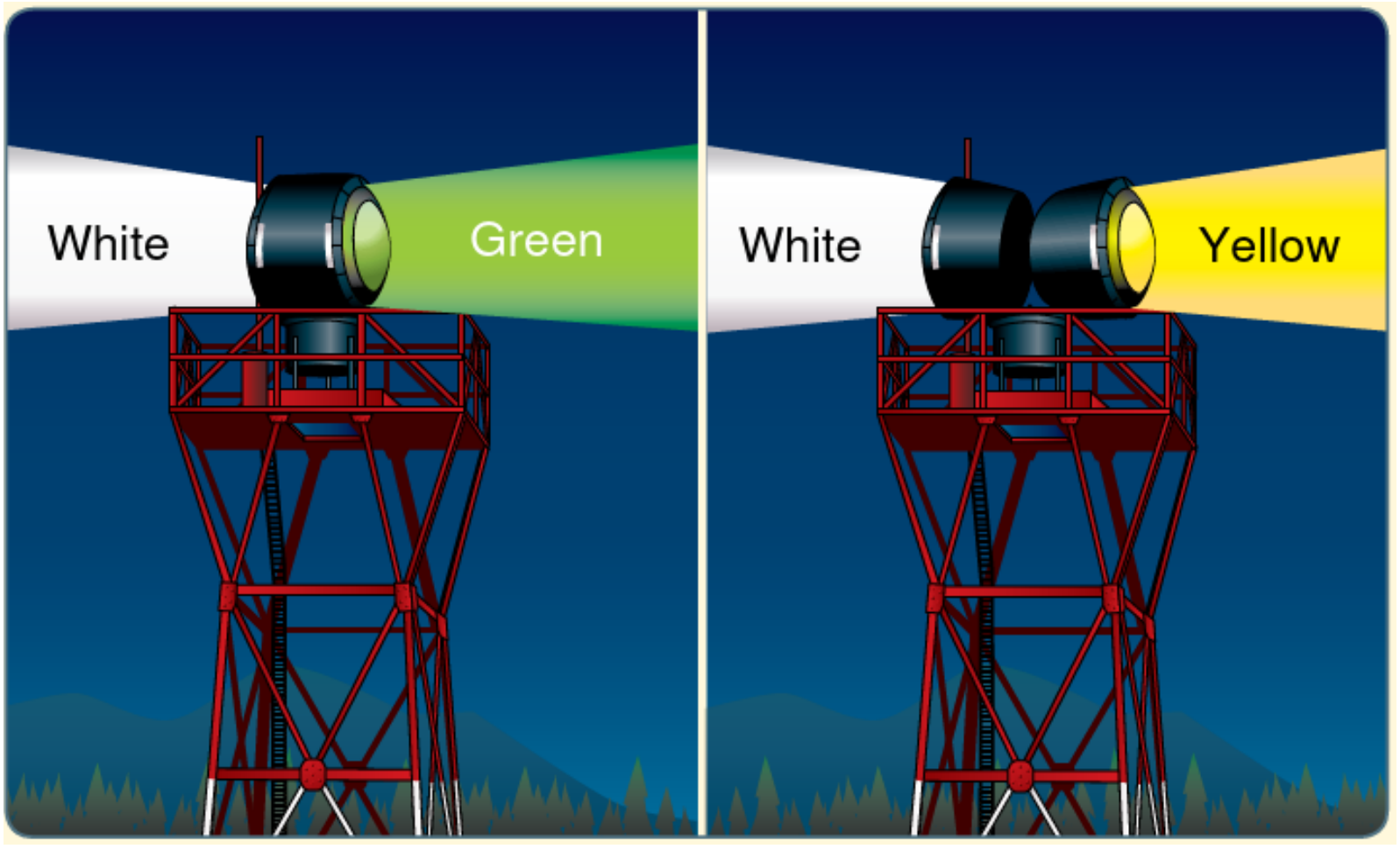
Type of Marking



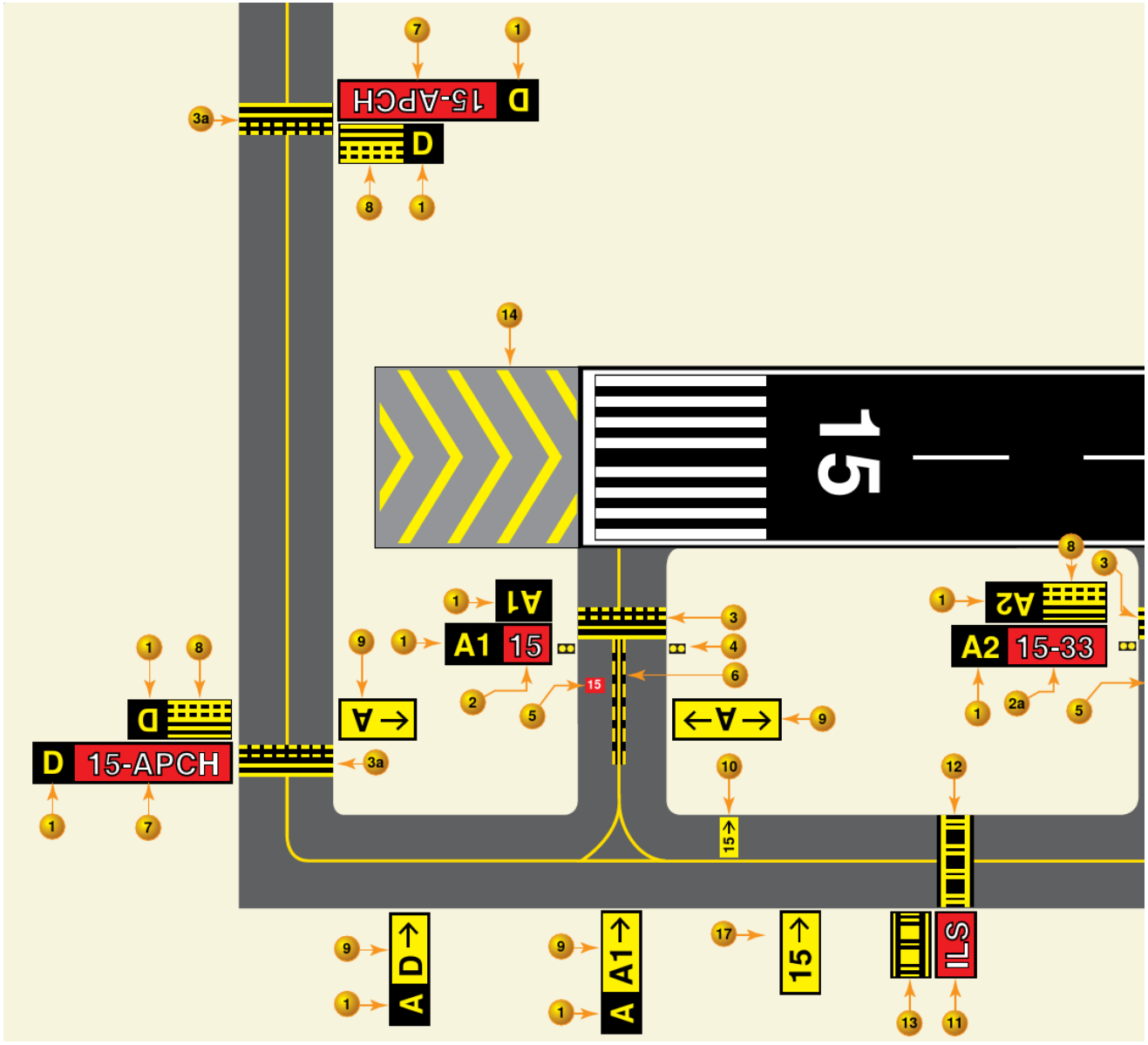
Action or Purpose

Taxiway Edge: Dashed Double Yellow Lines
Defines taxiway edge where adjoining pavement IS USABLE, such as along an apron or ramp.

Airport



Airport



https://www.google.com/maps

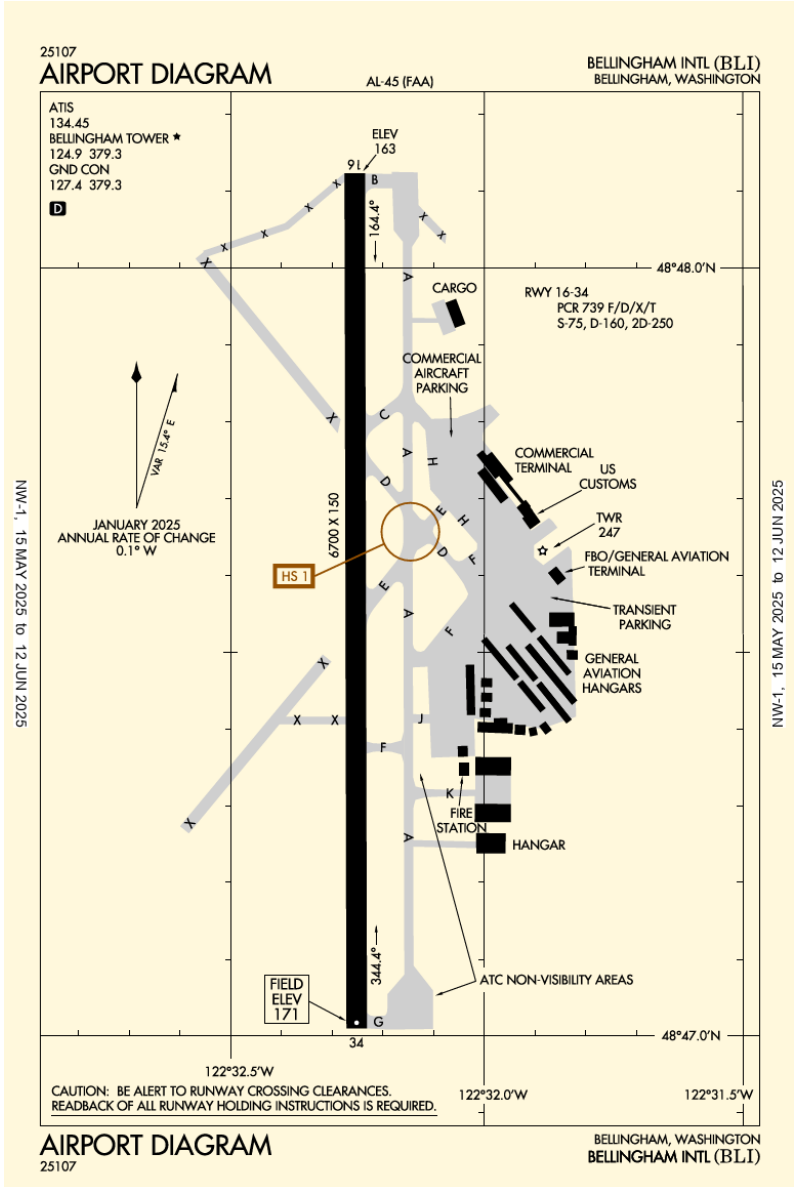
KBLI

- Preflight, start plane, and taxi to visible location.
- Receive and copy ATUS.
- Get taxi instructions (Freq?):

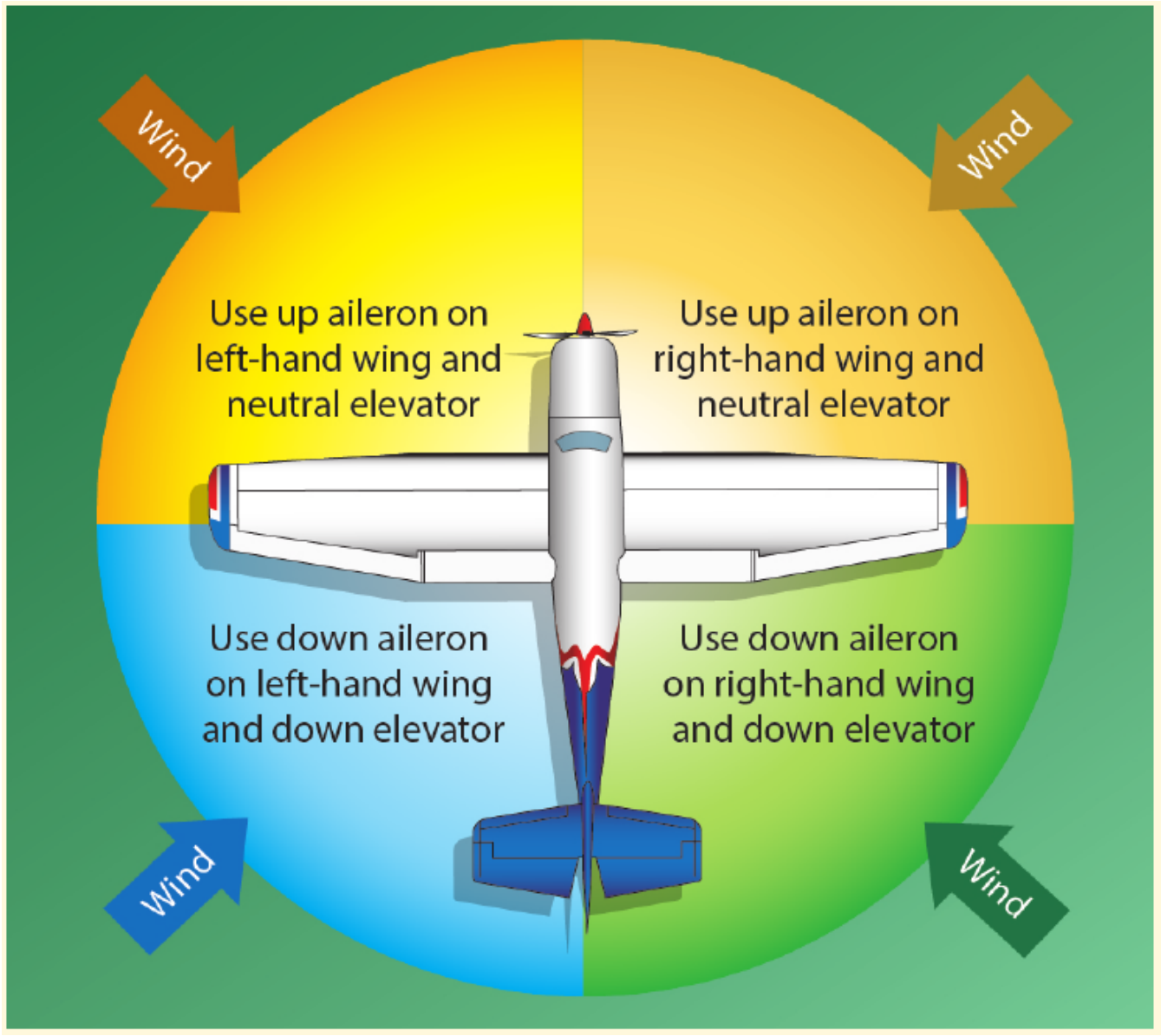
  Bellingham Ground, N1234, GA Ramp, ready to taxi, South Lummi, with Whiskey.

  N1234, taxi 16 via delta, alpha, bravo.

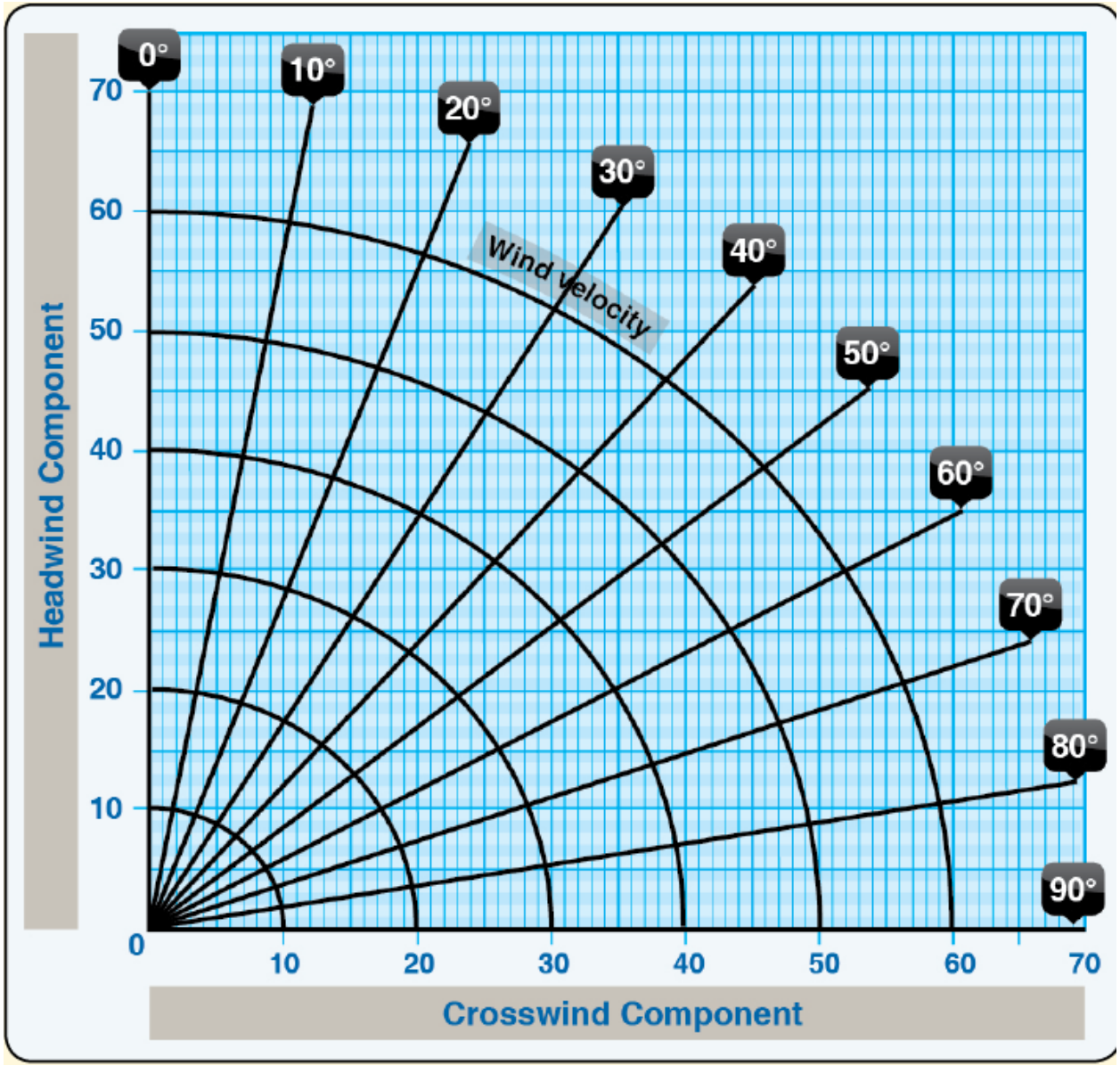
  Taxi 16 via delta, alpha, bravo, N1234.
- Follow the instructions to the run-up area.



Taxiing with Wind



Taxiing with Wind



KBLI

- Finish preflight checks and taxi to hold short line
- Get takeoff clearance (Freq?):

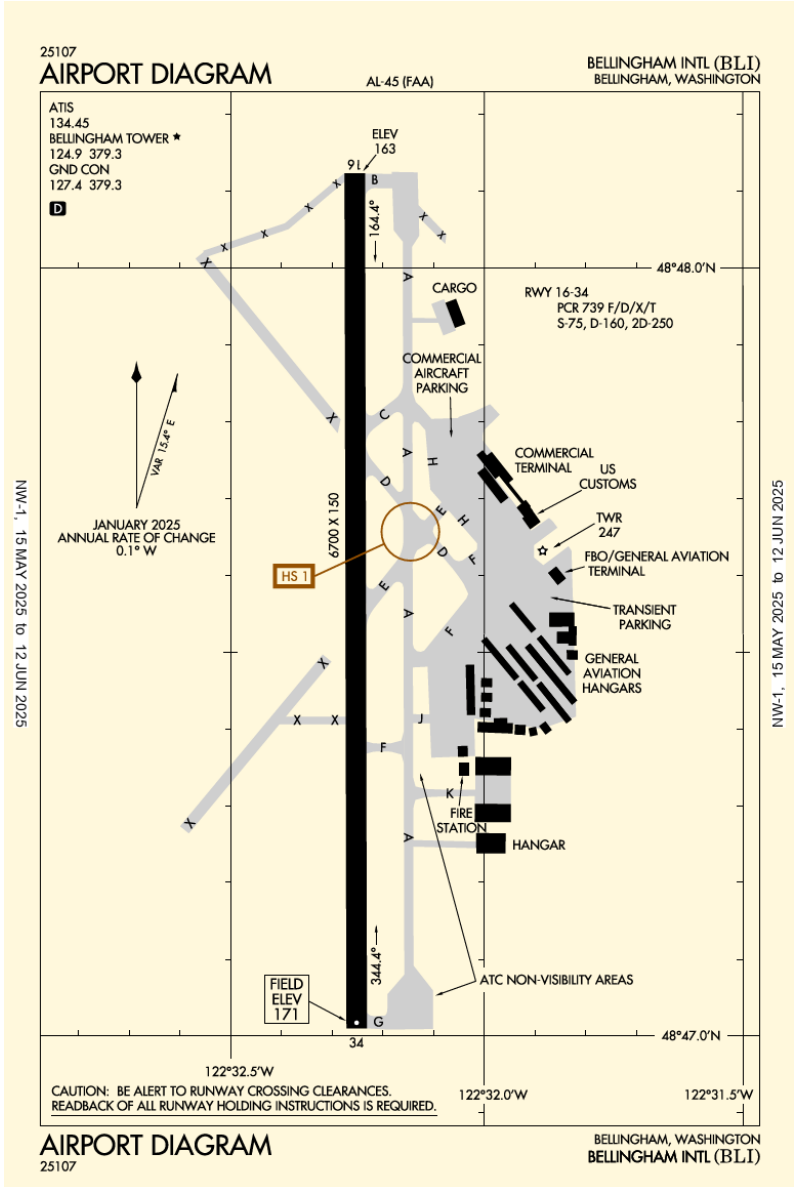
  Bellingham Tower, N1234, holding short 16, ready [for departure].

  N1234, cleared for takeoff runway 16, South Lummi departure.

  Cleared for takeoff runway 16, N1234.

- Follow takeoff checklist.

What if it is Tuesday?



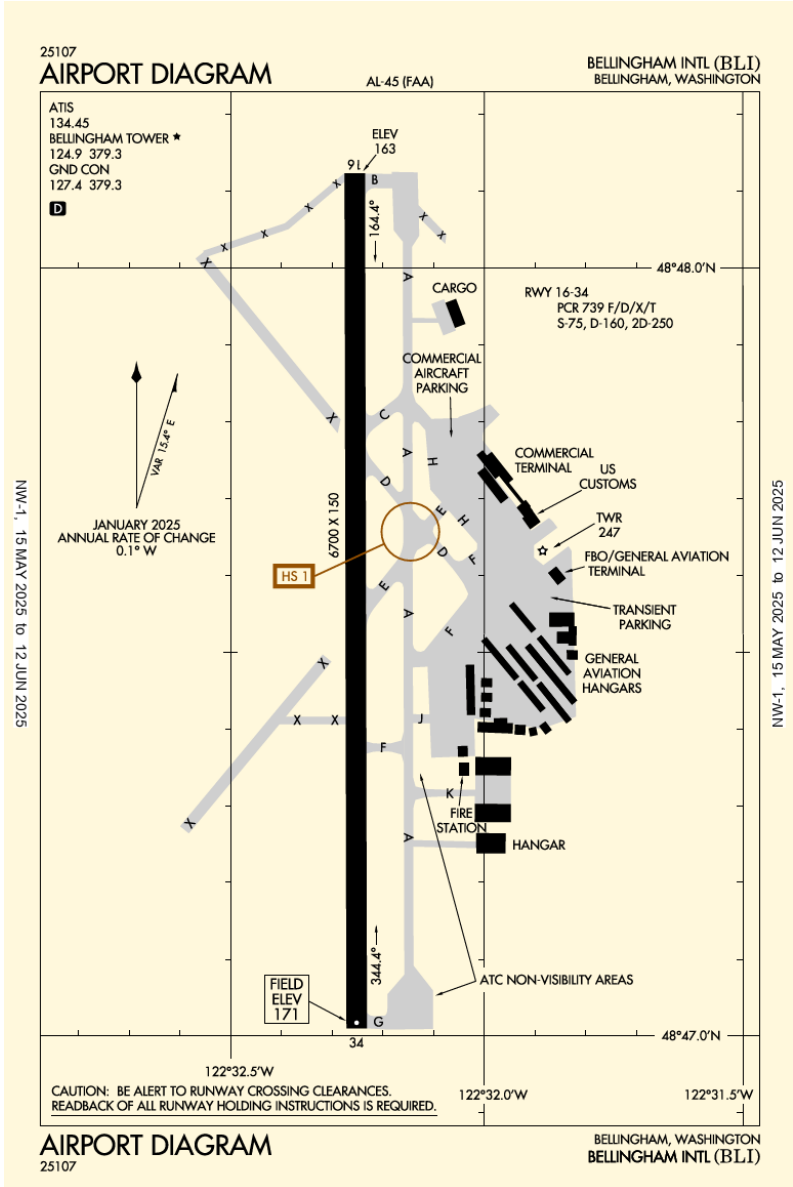
KBLI without TWR

- Start Engine, taxi clear of structures
- Announce intentions on CTAF (FREQ?):

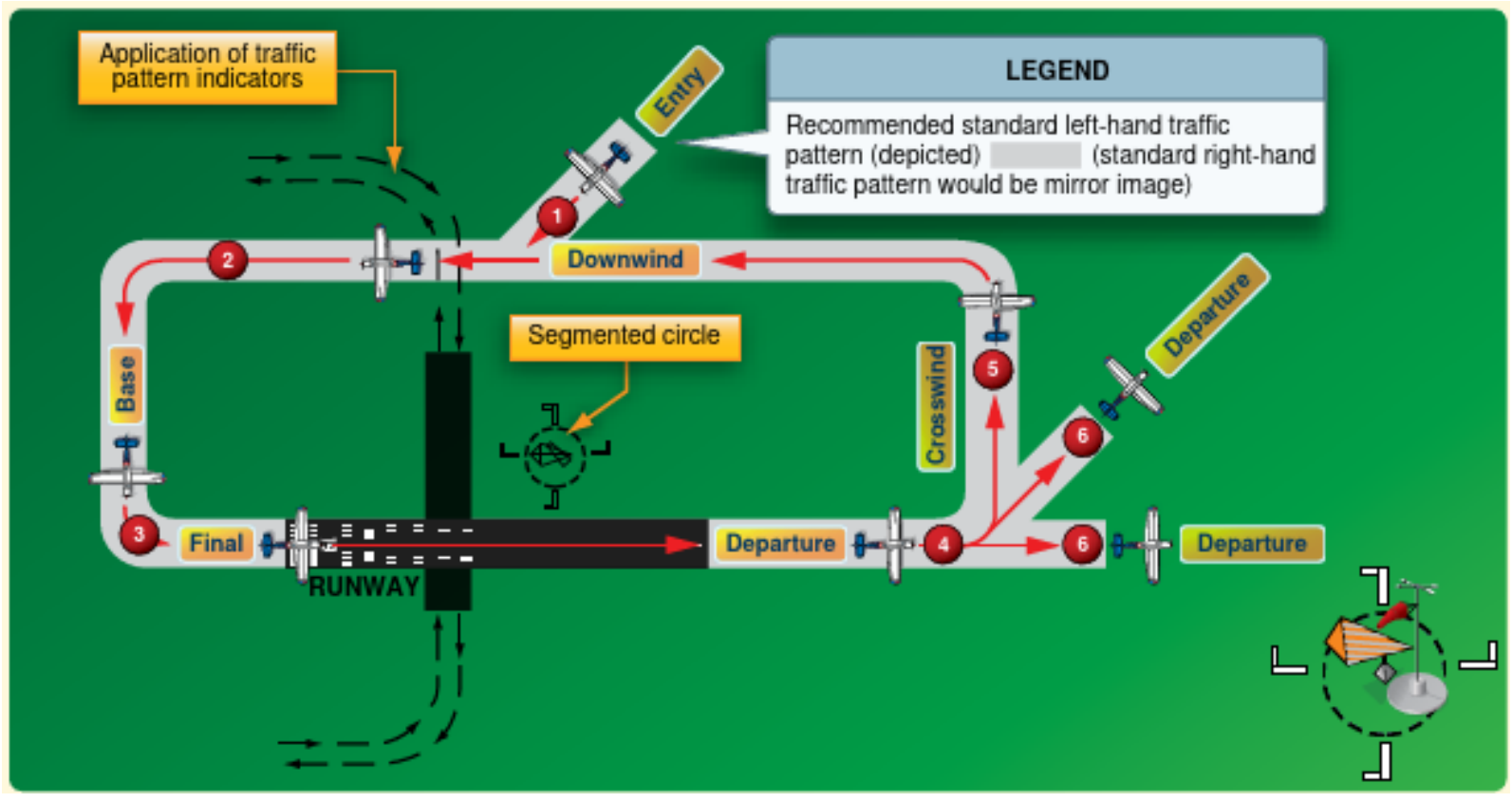
  Bellingham Traffic, N1234, taxiing from tie-downs to runup area runway 16; Bellingham.

  Bellingham Traffic, N1234, taking off runway

  16 departing South Lummi, Bellingham.



Standard Pattern



In Flight

- Physical
  - Sickness, Alcohol, Hypoxia, Hyperventilation, Toxic Fumes, The Bends, Vertigo, Visual Illusions, Disorientation.
- Attitude
  - Anti-authority, Impulsivity, Invulnerability, Macho (Macha), Resignation.

In Flight

- Pilot
- Aircraft
- Environment
- Operation
- Situational Awareness

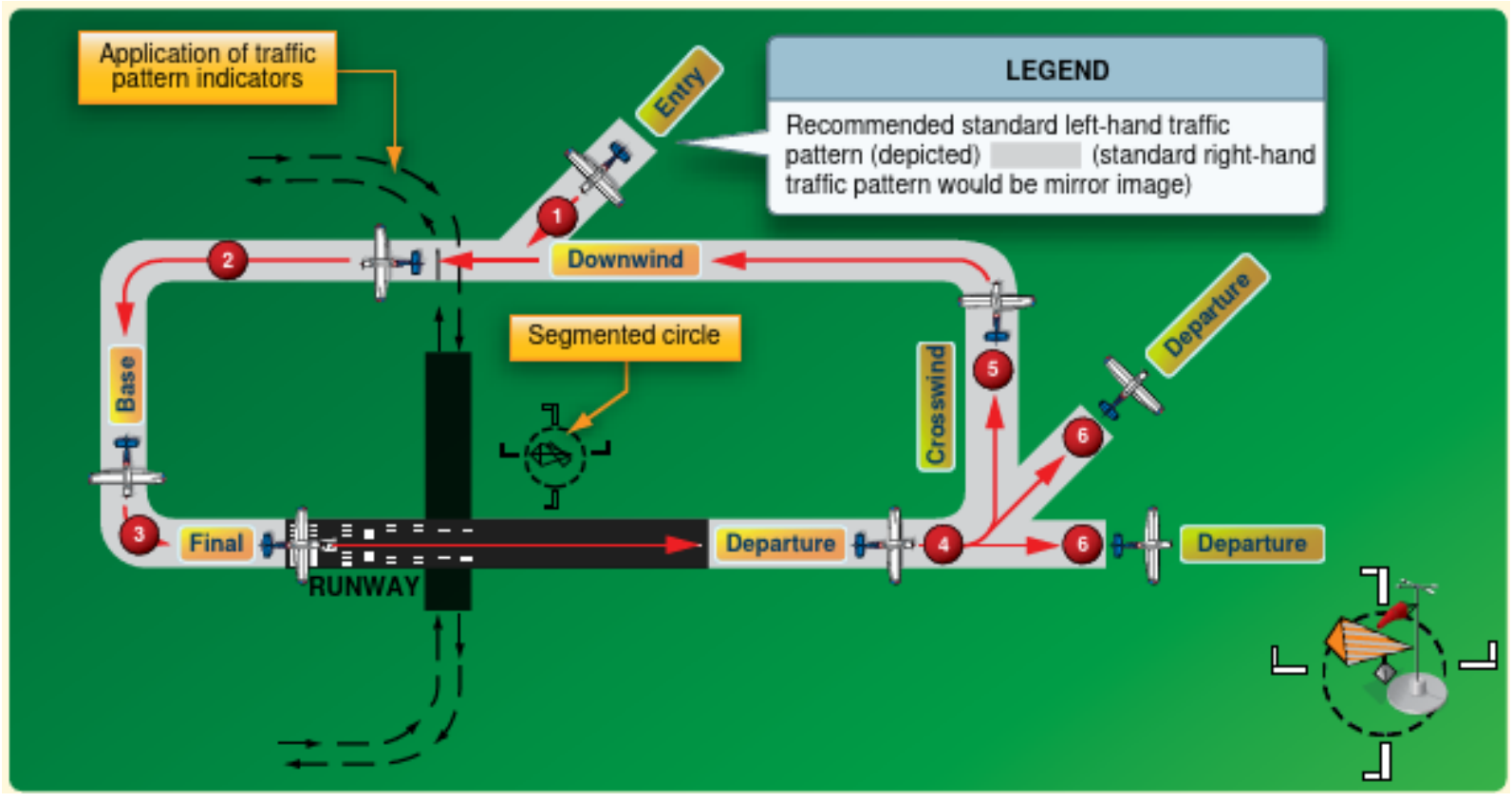
Decision Making

- Detect on facts of the situation
- Estimate the need to react
- Choose the desired outcome (e.g., divert, precautionary landing).
- Identify the necessary actions
- Do the actions
- Evaluate the effectiveness.

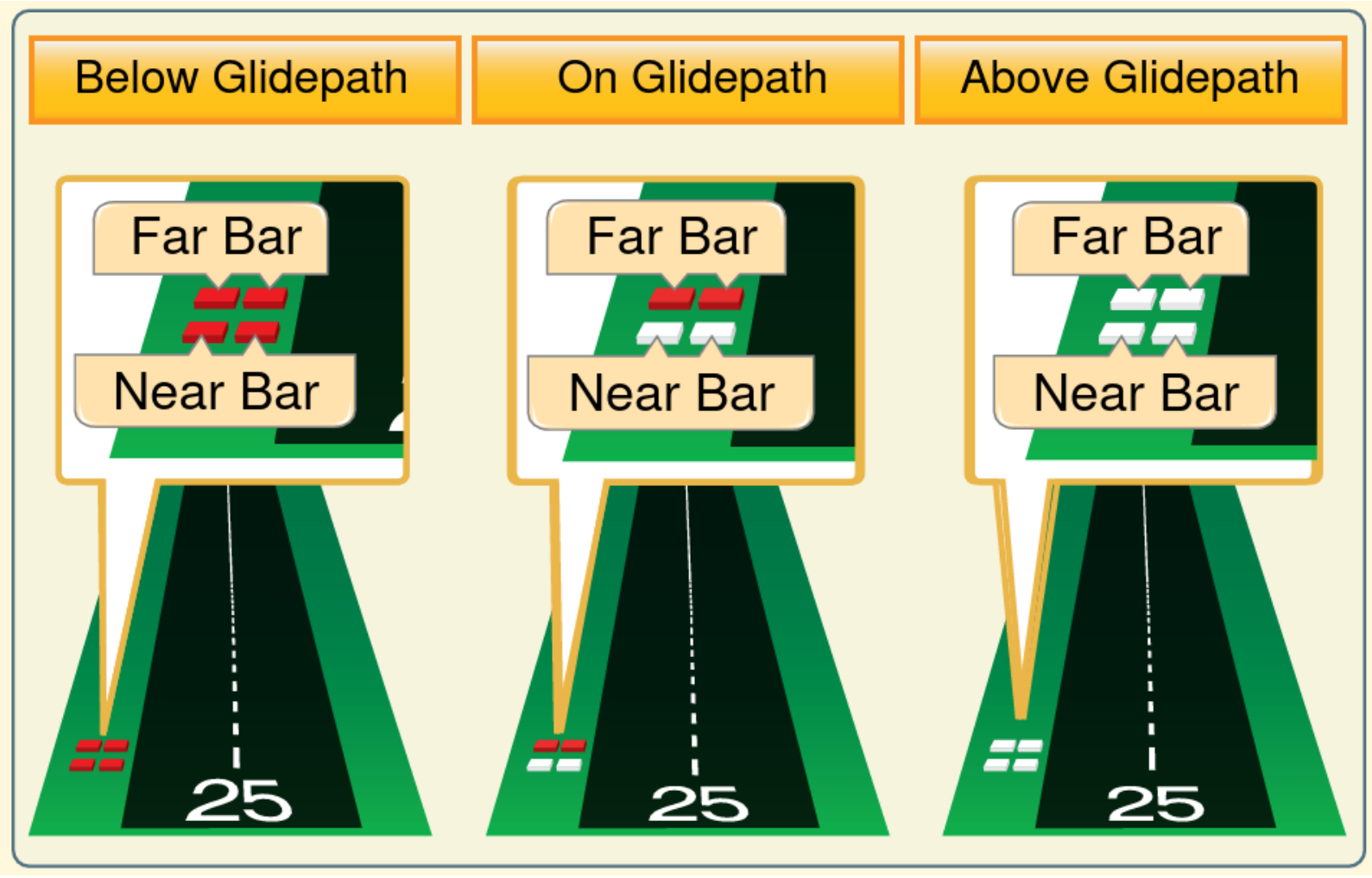
Arrival

- 10 miles out (or more)
  - Get local weather (a.k.a., 1-minute weather)
  - Monitor CTAF or UNICOM for traffic
- 5 miles out (or more)
  - Decide on runway and approach
  - Announce position and intentions

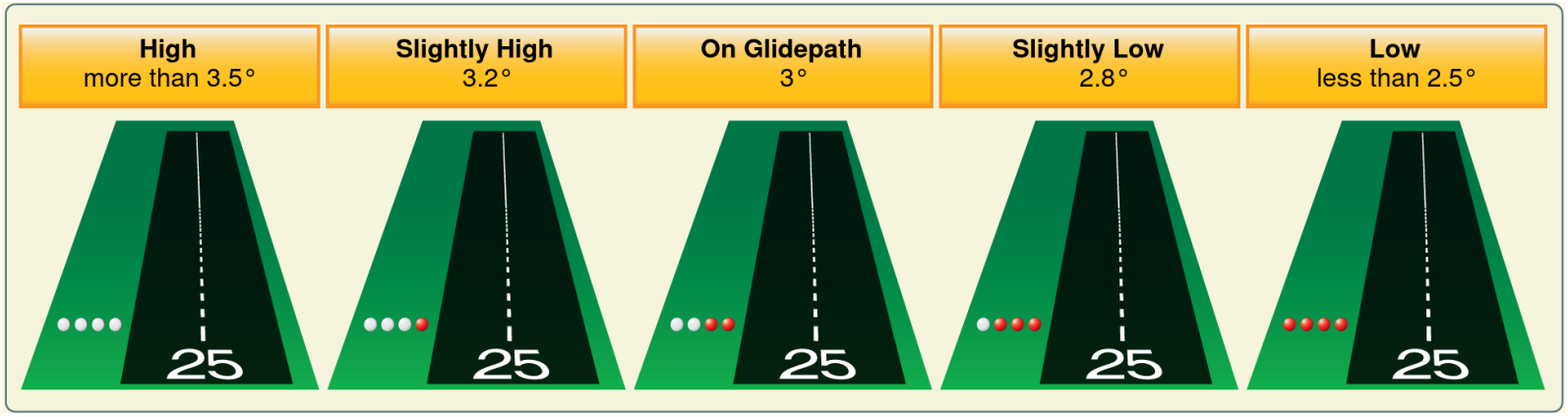
Standard Pattern



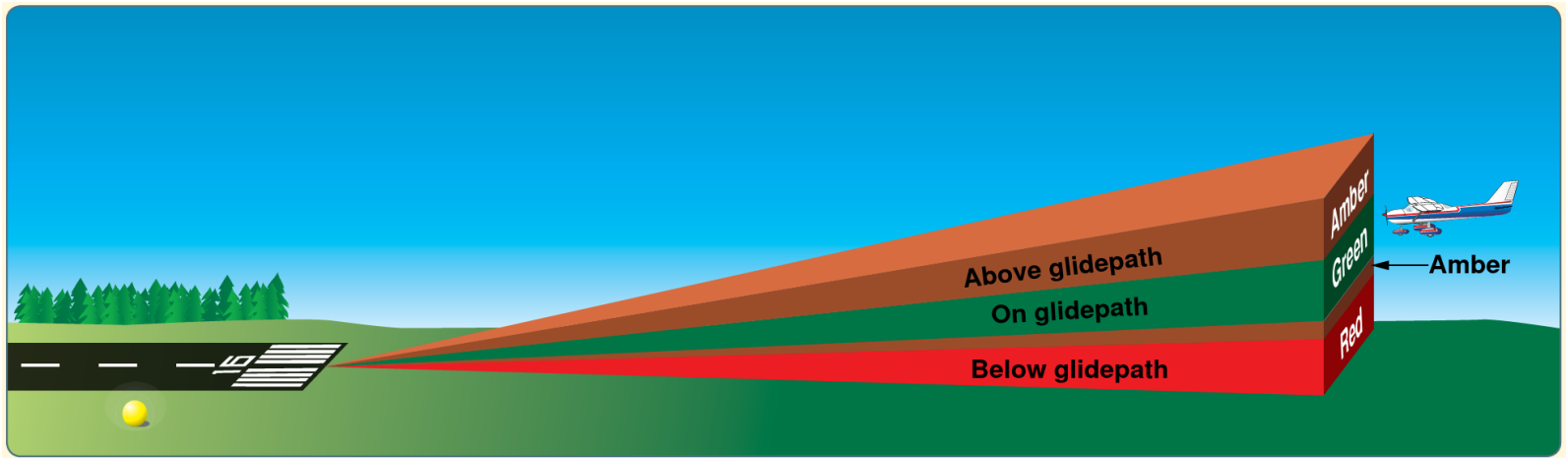
Approach


Below Glidepath
On Glidepath
Above Glidepath
Far Bar
Near Bar
25
Far Bar
Near Bar
25
Far Bar
Near Bar
25

Approach


High
more than 3.5°
Slightly High
3.2°
On Glidepath
3°
Slightly Low
2.8°
Low
less than 2.5°
25
25
25
25
25

Approach


Above glidepath
On glidepath
Below glidepath
Amber
Green
Red
Amber

1) An air traffic control clearance provides

A priority over all other traffic.

B adequate separation from all traffic.

C authorization to proceed under specified traffic conditions in controlled airspace.

2) A flashing green air traffic control signal directed to an aircraft on the surface is a signal that the pilot

A is cleared to taxi.

B should exercise extreme caution.

C should taxi clear of the runway.

3) Which is the correct traffic pattern departure to use at an airport without a control tower?

A Depart in any direction consistent with safety, after crossing the airport boundary.

B Make all turns to the left.

C Comply with any FAA traffic pattern established for the airport.

4) If instructed by ground control to taxi to runway 9, the pilot may proceed

A via taxiways and cross runways to, but not onto, runway 9.

B to the next intersecting runway where further clearance is required.

C via any route at the pilot' discretion unto runway 9 and hold until cleared for takeoff.

5) The numbers 9 and 27 on a runway indicate that the runway is oriented approximately

A 090° and 270° magnetic.

B 090° and 270° true.

C 009° and 027° magnetic.

6) An airport's rotating beacon operated during the daylight hours indicates

A that there are obstructions on the airport.

B that weather is the Class B, C, D, E airspace is below basic VFR weather minimums.

C the airport is temporarily closed.

7) Airport taxiways are identified at night by

A alternating red and greed edge lights.

B white directional edge lights.

C blue omnidirectional edge lights.

8)A below-glidesclope indication from a tri-colored VASI is

A a pink light signal.

B an amber light signal

C a read light signal.

9) How is a runway recognized as being closed?

A Read lights are placed at the approach end of the runway.

B Yellow chevrons are painted on the runway beyond the threshold.

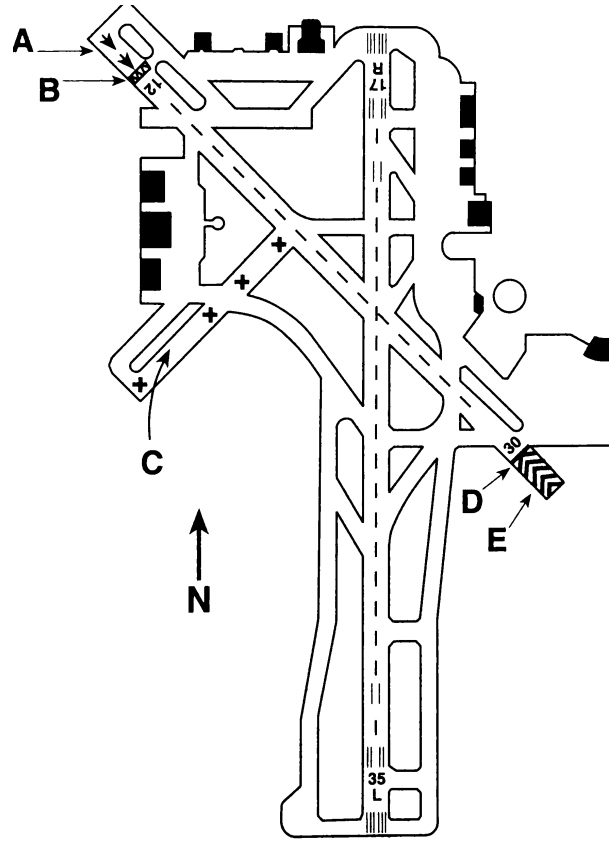
C X is displayed on the runway.

10) According
to the diagram in Figure Q5-1,

A takeoffs and landings are permissible at position C since this is a short takeoff and landing runway.

B Runway 30 is equipped at position E with emergency arresting gear to provide a means of stopping military aircraft.

C takeoffs may be started at position A on runway 12, and the landing portion of this runway begins at position B.

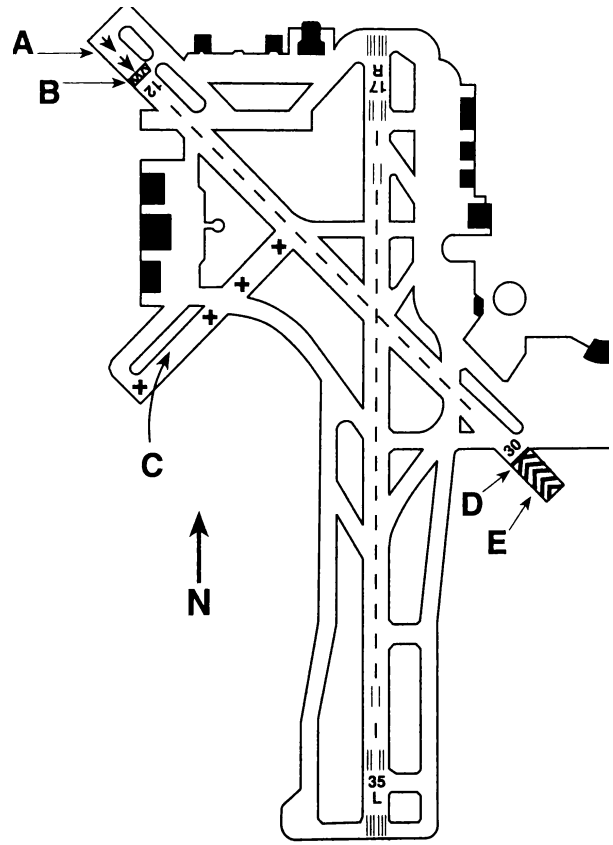


11) That portion of the runway identified by the letter A in Figure Q5-1,

A may be used for taxiing but should not be used for takeoffs or landings.

B may be used for taxiing or takeoffs by not for landings

C may not be used except in an emergency.



12) What is the crosswind component for landing on runway 18 if the tower reports the winds 220° at 30 knots?

A 19 knots.

B 23 knots.

C 30 knots.

13) How should the controls be held while taxiing a tricycle-gear equipped airplane into a left quartering headwind?

A Left aileron up, neutral elevator.

B Left aileron down, neutral elevator.

C Left aileron up, down elevator.

14) Of the following conditions, which is the most critical when taxiing a nosewheel-equipped high-wing airplane.

A Direct crosswind.

B Quartering tailwind

C Quartering headwind.

15) Wing-tip vortices, the dangerous turbulence that might be encountered behind a large aircraft, are created only when that aircraft is

A operating at high airspeeds.

B heavily loaded.

C developing lift.

16) Wing-tip vortices created by large aircraft tend to

A sink below the aircraft generating the turbulence.

B rise into the takeoff pattern.

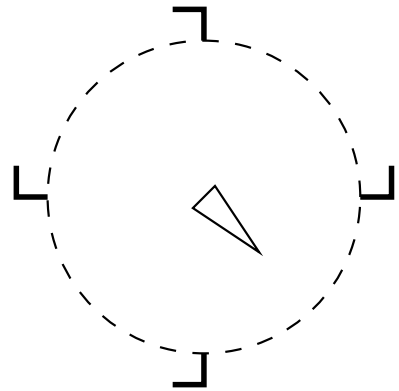
C rise into the takeoff or landing path of a crossing runway.

17) The segmented circle show in Figure Q5-2 indicates that the airport traffic is

A left-hand
for Rwy 17 and right-hand for Rwy 35.

B right-hand
for Rwy 9 and left-hand for Rwy 27.

C left-hand for Rwy 35 and right-hand for Rwy 17.



18) When approaching to land on a runway served by a VASI, the pilot shall

A intercept and remain on the glide slope until touchdown only if the aircraft is operating on an instrument flight plan.

B maintain an altitude at or above the glideslope

C remain on the glideslope and land between the light bars.

19) You are on final approach to a runway equipped with a Precision Approach Path Indicator (PAPI), and see three white lights and one red light. You are

A low on the glide path.

B slightly high on the glide path.

C slightly low on the glide path.

20) A state of temporary confusion resulting from misleading information being sent to the brain by various sensory organs is defined as

A spatial disorientation.

B hyperventilation.

C hypoxia.

21) To preclude the effects of hypoxia, you should

A avoid flying above 10,000 feed MSL for prolonged periods without breathing supplemental oxygen.

B rely on your body's built-in alarm system to warn when you are not getting enough oxygen.

C avoid hyperventilation which is caused by rapid heavy breathing and results in excessive carbon dioxide in the bloodstream.

22) Hypoxia is caused by

A nitrogen bubbles forming in the blood at high altitudes.

B trapped gasses in the body.

C reduced atmospheric pressure.

23) What is the most effective way to use the eyes during night flight?

A Look only at far away, dim lights.

B Scan slowly to permit off center viewing.

C Concentrate directly on each object for a few seconds.

24) The danger of spatial disorientation during flight in poor visual conditions may be reduced by

A shifting the eyes quickly between the exterior visual field and the instrument panel.

B having faith in the instruments rather than taking a chance on the sensory organs.

C leaning the body in the opposite direction of the motion of the aircraft.

25) What effect does haze have on the ability to see traffic or terrain features during flight?

A Haze causes the eyes to focus at infinity.

B Contrasting colors become less distinct making objects easier to see.

C All traffic or terrain features appear to be farther away than their actual distance.

Air Safety

https://www.youtube.com/watch?v=mf3xhjXl454