



Reno-Area IMC Club



EAA Chapter 1361

Introduction and Administrative

Restroom and Refreshments are up to you.

If you want to receive WINGS credit for this session you will have to sign into your faasafety.gov account and use the procedures described in the past meetings.

IMC Club Purpose

The IMC Club's purpose is to promote instrument flying, proficiency, and safety. The intent is to create a community of pilots willing to share information, provide recognition, foster communications, promote safety, and build proficiency in instrument flying.

IMC Club is a subsidiary of the Experimental Aircraft Association (EAA). Continued participation in IMC Club activities requires an active EAA membership. See your meeting coordinator for more information.

IMC Club Presentation Archive

The slides from these presentations can reviewed at:

<https://eaa1361.org/>

Select: Blog - Flight Training - IMC Club Presentations

Notes From Last Meeting

We discussed a day IFR flight from Leesburg, VA to Columbia County, MA during which the pilot received GPS downgrade and failure messages while executing a GPS approach in IMC.

Any questions or comments?

Announcements

Tue, Jan 5 - VMC Club Meeting - 6 PM

~~Thu, Jan 7 - EAA Chapter 1361 Meeting~~ - Replaced by Volunteer Recognition Dinner.

Sat, Jan 9 - EAA Chapter 1361 Volunteer Recognition Dinner

Thu-Sat, Jan 21-23 - Concord Battery Online IA Renewal Seminar

Tue, Jan 26 - IMC Club Meeting - 6 PM - Online using Zoom

Discussion - Quiz Time!

1. You're planning an IFR flight, and the weather at your destination is marginal. What's the minimum weather you need to NOT be required to file an alternate? (at least +/- 1 hour around the ETA)

- A.** Ceilings 1000+ MSL, 1 SM Vis
- B.** Ceilings 2000+ MSL, 3 SM Vis
- C.** Ceilings 3000+ MSL, 3 SM Vis
- D.** Ceilings 1000+ AGL, 1 SM Vis
- E.** Ceilings 2000+ AGL, 3 SM Vis
- F.** Ceilings 3500+ AGL, 3 SM Vis

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- F.** Ceilings 3500+ AGL, 3 SM Vis

According to 91.167, you need 2,000+ foot ceilings AGL with 3SM or more visibility within +/- 1 hour to land at an airport to not need to file an alternate airport. But if the weather is close to that, you should think about having enough fuel on board and filing an alternate to give yourself a good out.

2. The Victor airway for your flight has a MOCA. What distance from the VOR does the MOCA assure acceptable VOR navigation signal?

- A. 18 NM
- B. 20 NM
- C. 22 NM
- D. 24 NM
- E. 26 NM
- F. 28 NM

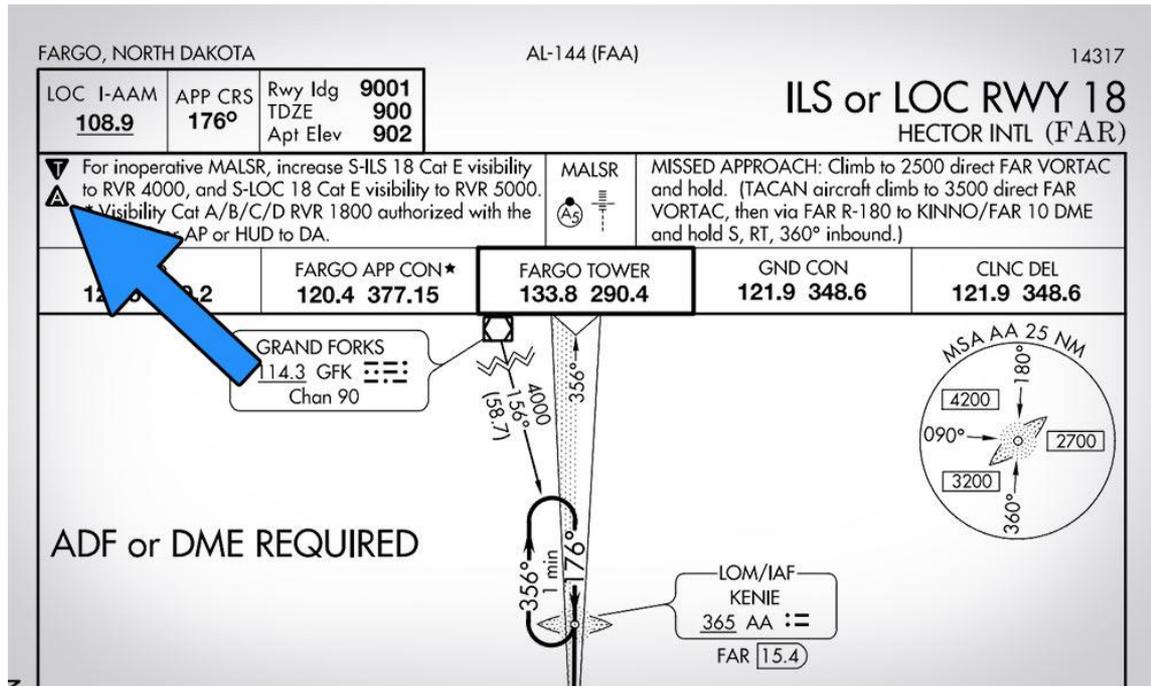
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A MOCA assures acceptable navigation signal within 22 NM of the NAVAID.

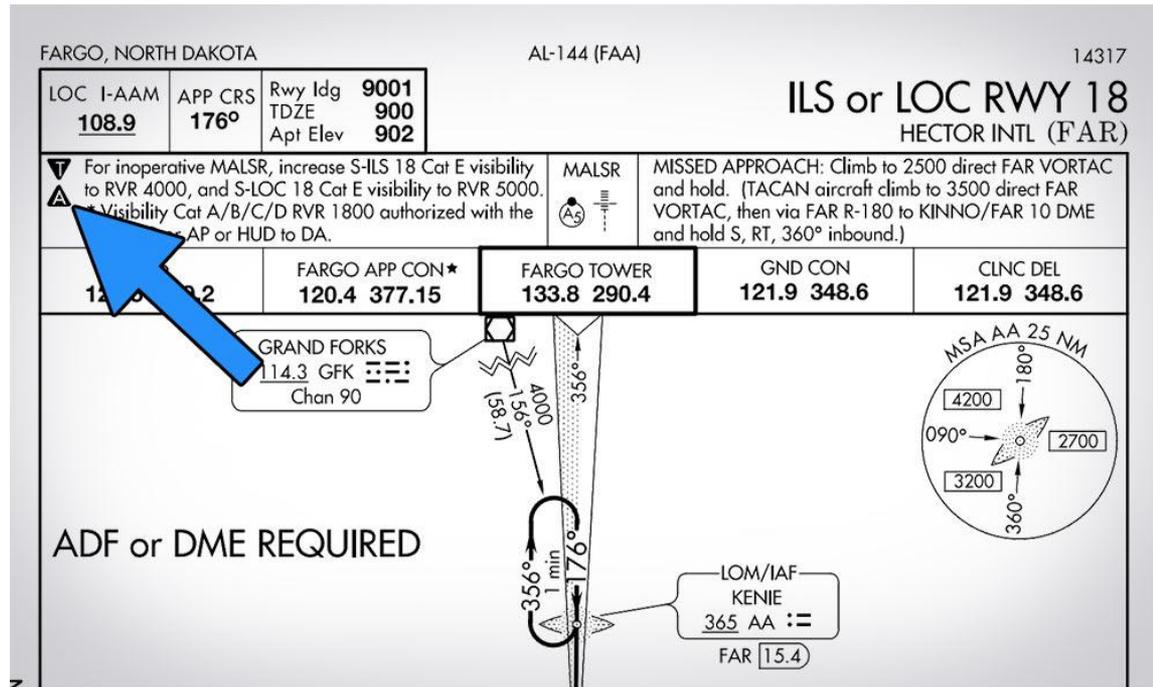
3. You're looking at the approach chart for the instrument approach you're expecting to fly at your destination. There's an 'A' in a black triangle in the briefing strip. What does it mean?

- A. Non-standard takeoff minimums exist for the airport
- B. Non-standard alternate minimums exist for the airport
- C. Approach lighting limitations exist.
- D. Approach lights available upon request.



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The 'A' means alternate minimums exist, which you can find on the IFR Alternate Airport Minimums pages. In this example, for the ILS RWY 18, minimums for Category E are 700-2. For LOC, Category E minimums are 800-2.

4. If an obstacle departure procedure (ODP) exists for the departure airport, are pilots required to fly it?

- A.** Yes, if it exists it must be flown
- B.** Only if the weather is IMC
- C.** No, it is the pilot's choice

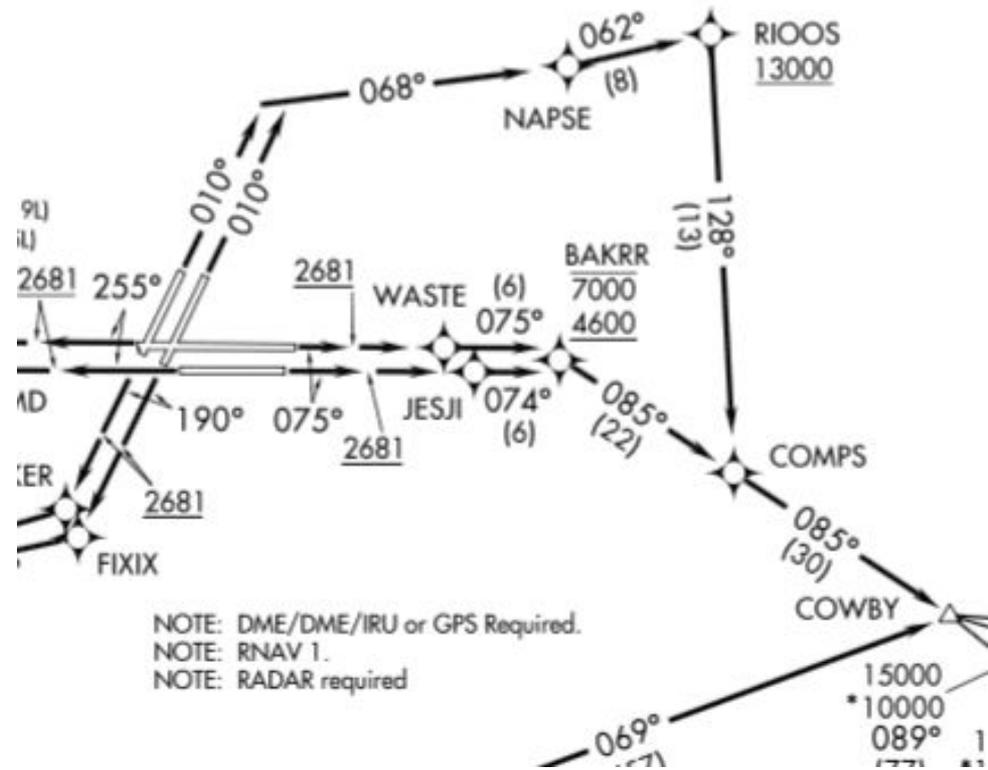
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Per the Instrument Flying Handbook: "ODPs are not assigned by ATC unless absolutely necessary to achieve aircraft separation. It is the pilot's responsibility to determine if there is an ODP published for that airport. If a Part 91 pilot is not given a clearance containing an ODP, SID, or radar vectors and an ODP exists, compliance with such a procedure is the pilot's choice."

5. What altitude should you fly at the BAKRR intersection if cleared to "climb via the departure?"

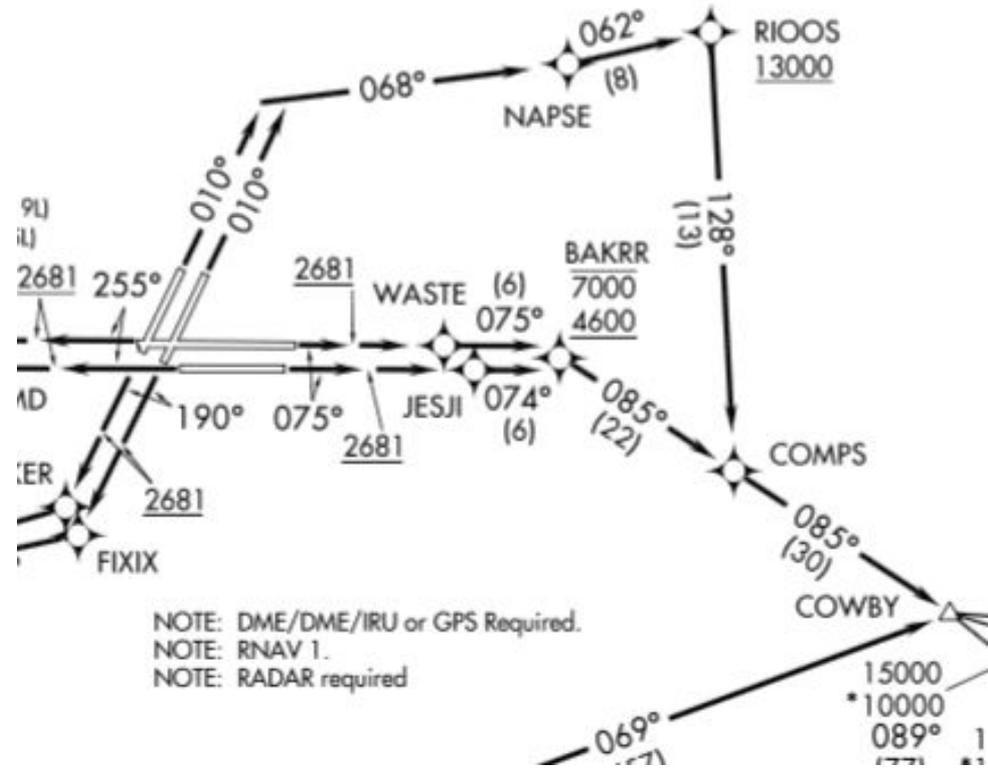
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- B. Above 7000'
- C. at 4600'



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The line above an altitude specifies it as the maximum, while the line below an altitude specifies a minimum. In this case, the correct altitude would be anything between the minimum and maximum.



6. When the controller says, "radar contact" after takeoff, who is responsible for obstacle clearance?

- A.** The controller
- B.** The pilot

6. When the controller says, "radar contact" after takeoff, who is responsible for obstacle clearance?

A. The controller

B. The pilot

From the FAA: "The controller is not required to provide terrain and obstacle clearance just because ATC has radar contact with your aircraft. It remains your responsibility until the controller begins to provide navigational guidance in the form of radar vectors. "

7. You depart under day VFR conditions from the Cherokee (4O6) airport, and out of 700 feet you call ATC for an IFR clearance. What weather conditions do you need to continue your climb legally?

- A. 3 SM visibility and 500' below the clouds.
- B. 1 SM visibility and clear of clouds
- C. 5 SM visibility and 1000' below the clouds

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- C. 5 SM visibility and 1000' below the clouds

The magenta circle indicates Class E airspace begins at 700 feet AGL. Class E weather minimums are 3 miles visibility and 500 feet below/1000 above/2000 horizontal from clouds.

8. You took off from your local airport and you're climbing out at V_y , which is giving you a 500 FPM climb. You experience an increased headwind. Your VSI shows...

- A.** An increased rate of climb because you have a stronger relative wind, meaning more lift is produced
- B.** It stays the same but you have a slower ground speed.
- C.** It decreases because of the increase in parasite drag.
- D.** An increased rate of climb because you have a higher indicated airspeed.

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- D.** An increased rate of climb because you have a higher indicated airspeed.

If you are climbing out at V_y and 500 ft/min, an increase in headwind will only affect your ground speed. The rate and airspeed you climb will remain constant. However, the distance you cover over the ground will be reduced because of the increase in headwind.

9. You're flying an aircraft that isn't certified for flight into known ice. On an IFR flight, you inadvertently pick up considerable amounts of ice on the leading edge of the wings and tail. Should you extend full flaps for landing?

- A.** No, extending the flaps will put you at risk of a tail plane stall.
- B.** Yes, extending them will help break off the ice.
- C.** No, the ice build up will cause the camber of the wing to increase, creating more lift.
- D.** Yes, the ice build up has no direct effect on the normal usage of flaps on approach.

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When you extend your flaps, the center of pressure moves aft on the airfoil, causing a forward pitching moment about the lateral axis. In order to compensate for this pitching moment, a greater tail down force is needed. If your horizontal tail has ice buildup on the leading edge, an increased angle-of-attack on it may cause it to exceed the critical angle of attack, resulting in a tailplane stall.

10. As your true airspeed increases...

- A.** Parasite drag increases as induced drag increases
- B.** Parasite drag decreases as induced drag increases
- C.** Parasite drag increases as induced drag decreases
- D.** Parasite drag decreases as induced drag decreases

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- D. Parasite drag decreases as induced drag decreases

As you accelerate and your true airspeed increases, the amount of parasite drag will rise exponentially due to increased aircraft interference with the air. However, induced drag decreases because you need a lower angle-of-attack in order to maintain a desired altitude at a higher true airspeed.

Tonight's Scenario

You are flying on a day IFR flight from your home at Crest Airpark (S36) SE of Seattle to Paine Field (KPAE) in Everett, WA with a friend.

You are flying a rented 1976 Cessna 172 with the standard 6-pack, 2 VORs, one with GS, 2 KX-155 comm radios and an ADF. The aircraft is not equipped with an autopilot.

Comments about tonight's scenario.



Next IMC Club Meetings

Online at 6 PM:

January 26

February 23

March 23

Coordinated by:

EAA Chapter 1361, Inc.



Meetings: 6 pm on 1st Thursday of the Month

Reno-Stead Airport Terminal Meeting Room

Contact: imc-club@eaa1361.org

<https://eaa1361.org>

Click on 'Membership' to join online.