**R, T: Protecting Precision Approach Critical Areas**

Precision Approach Critical Area procedures reside in paragraph 3-7-5 of FAA Order JO 7110.65, Air Traffic Control. Controllers must ensure that both precision approach critical areas (localizer and glideslope) are free of aircraft and vehicles in certain weather conditions. Aircraft, vehicles, and other obstructions can interfere with the signal and cause erroneous Instrument Landing System (ILS) indications on the flight deck, called multipath, or block reception of the ILS signal altogether. When a multipath event occurs, it may not be apparent to the flight crew that the integrity of the signal the aircraft is receiving is not accurate. There have been multiple accidents and incidents attributable to multipath events. Therefore, it is essential to properly protect the critical area to ensure the integrity of the localizer and glideslope signals.

Precision Approach Critical Areas must be free of aircraft or vehicles when the official weather observation is a ceiling of less than 800 feet or visibility of less than 2 miles, and an arrival aircraft is inside the outer marker or fix used in lieu of an outer marker. The localizer critical area protection may be suspended when the arriving aircraft reports the runway in sight or is circling to land on another runway.

There are two exceptions when the localizer critical area must be protected:

1. A preceding arriving aircraft on the same or another runway that passes over or through the localizer critical area while landing or exiting the runway, or
2. A preceding departing aircraft or missed approach on the same or another runway that passes through or over the localizer critical area.
Additional conditions apply when the ceiling is less than 200 feet or the RVR is 2000 feet or less. When these conditions exist, do not authorize aircraft and/or vehicle operations on or over the localizer critical area when the arrival is inside the middle marker or ½ mile final when there is no middle marker.

The glideslope critical area must be protected when the ceiling is less than 800 feet or visibility is less than 2 miles when the arriving aircraft is inside the outer marker or fix in lieu of an outer marker. The only exceptions are when the arriving aircraft either reports the runway in sight or is circling to another runway.

In 2015, pilots and controllers expressed concerns that the term “reported” in the context of a ceiling or visibility needed additional guidance. Many believed the guidance wasn’t clear on what reported ceilings and visibility meant. Some tower controllers thought the weather associated with the Automatic Terminal Information System (ATIS) broadcast was the reported weather to be used regardless of what a pilot reported. The revised paragraph attempted to clarify what constitutes a reported ceiling or visibilities.

Revised guidance concerning protection of the critical area was issued in 2015 because of the lack of understanding, direction, and inconsistent application of the requisite rules pertaining to paragraph 3-7-5, Precision Approach Critical Areas.

Most recently, Air Traffic Standards and Procedures, AJV-P, clarified the provisions of paragraph 3-7-5, to delineate that the official weather observation is the official source for determining when critical area protection is to occur. Further, the controller is to take action to update the official weather observation when METAR/SPECI/PIREPS or controller observation indicates weather conditions are changing from VFR to IFR and are deteriorating. When there is a proactive effort to communicate the official weather, rather than relying on the automated weather equipment to be the sole source for determining the official weather, the expectation will be a more accurate and real-time representation of what is occurring or changing and the commencement of critical area protection.

A future update to FAA Order JO 7110.65 Paragraph 3-7-5, will reflect a revised Note and an additional reference to Paragraph 2-6-3, Reporting Weather Conditions, that states:

*When available weather sources such as METARs/SPECI/PIREPS/controller observations indicate weather conditions are changing from VFR to IFR and are deteriorating, actions are expected to be taken to update the official weather observation.*

*E,*R,*T: Traffic Advisories, Safety Alerts and Positive Control

ATO safety reports and safety data indicate that lack of timely Traffic Advisories (TA) and Safety Alerts (SA) continue to factor into operational events. The following information serves as a reminder for controllers to be vigilant and focused concerning the necessity for issuing
TA/SA’s. This article also provides one-stop-shopping for information to clarify a controller's role and responsibilities.

Positive Control is the Key
Controllers are trained that a VFR aircraft is to “see and avoid” other aircraft. When traffic conflicts arise, the controller may issue traffic to the aircraft but leaves the separation responsibility to the pilots. The common belief is, the aircraft know about each other, so I have fulfilled my obligation. On the contrary: The VFR status of an aircraft does not alleviate the duty of a controller to issue instructions, traffic calls, or safety alerts to those VFR aircraft. Take positive control. Take action. Keep them apart. Keep the pilots informed.

A controller has the authority to assign a VFR pilot to a specific altitude (or range of altitudes) or assign a heading to avoid traffic. If the pilot cannot maintain VFR at the altitude or on the assigned heading or elects to take another course of action, the pilot must advise air traffic.

(Reference: FAA Order JO 7110.65, paragraphs, 2-1-1, 2-1-2, 5-6-1, 7-6-1, 7-7-5, 7-8-2, 7-8-5, 7-9-2, 7-9-3, AIM 4-4-1, 5-5-6, 14 CFR 91.3)

It is the responsibility of the pilot to comply with the applicable parts of CFR Title 14. Exercising good controller judgment and exercising POSITIVE CONTROL is critical. You are not OVERCONTROLLING the aircraft; rather, you are effectively controlling the situation.

The term “positive air traffic control,” is defined in FAA Order JO 3120.4, Air Traffic Technical Training, Appendix B, Instructions for Completing FAA Form 3120-25, under Job Subtasks:

Positive control is provided.

Takes command of control situations and does not act in a hesitant or unsure manner. Observes present and considers forecasted traffic to predict if an overload may occur, and takes appropriate action to prevent or lessen the situation.

The Indicators are:

a. Demonstrates confidence and takes command of control situations.
b. Maintains positive control during stressful situations.
c. Recognizes potential overload situations.

Moreover, as we have seen in writing throughout our air traffic control careers, “The primary purpose of the ATC system is to prevent the collision involving aircraft in the system.” Let’s examine this a bit more.

ATC SERVICE
FAA Order JO 7110.65, Para 2–1–1
a. The primary purpose of the ATC system is to prevent a collision involving aircraft operating in the system.
DUTY PRIORITY
FAA Order JO 7110.65, Para 2–1–2
a. Give first priority to separating aircraft and issuing safety alerts as required in this order. Good judgment must be used in prioritizing all other provisions of this order based on the requirements of the situation at hand.

IFR/VFR Collision Prevention
An Air Traffic Controller’s number one responsibility is to make sure aircraft do not collide; nothing else tops this requirement. FAA Order JO 7110.65, paragraphs 2–1–1 and 2–1–2, clearly identify the controller’s duty priority and refer to the controller’s responsibilities for separation and issuing necessary safety alerts. There appears to be a misperception that these only refer to IFR aircraft. However, these refer to all users in the NAS regardless of the type of flight.

Safety Alert
FAA Order JO 7110.65, Para 2–1–6
Issue a safety alert to an aircraft if you are aware the aircraft is in a position/altitude that, in your judgment, places it in unsafe proximity to terrain, obstructions, or other aircraft.

PHRASEOLOGY—

TRAFFIC ALERT (call sign) (position of aircraft) ADVISE YOU TURN LEFT/RIGHT (heading), and/or CLIMB/DESCEND (specific altitude if appropriate) IMMEDIATELY.

EXAMPLE—
“Traffic Alert, Cessna Three Four Juliet, 12’o clock, 1 mile advise you turn left immediately.” or “Traffic Alert, Cessna Three-Four Juliet, 12’o clock, 1 mile advise you turn left and climb immediately.”

Traffic Advisories
FAA Order JO 7110.65, Para 2–1–21. TRAFFIC ADVISORIES
Unless an aircraft is operating within Class A airspace or omission is requested by the pilot, issue traffic advisories to all aircraft (IFR or VFR) on your frequency when, in your judgment, their proximity may diminish to less than the applicable separation minima. Where no separation minima applies, such as for VFR aircraft outside of Class B/Class C airspace, or a TRSA, issue traffic advisories to those aircraft on your frequency when, in your judgment, their proximity warrants it.

FAA Order JO 7110.65, Pilot/Controller Glossary
TRAFFIC ADVISORIES—Advisories that are issued to alert pilots to other known or observed air traffic, which may be in such proximity to the position or intended route of flight of their aircraft to warrant their attention. Such advisories may be based on:
a. Visual observation.
b. Observation of radar identified and non-identified aircraft targets on an ATC radar display, or Verbal reports from pilots or other facilities.
What’s my legal responsibility? One in three close proximity events in which a traffic advisory and/or safety alert was NOT issued was an IFR/VFR traffic mix.

- What you need to know:
  - ATC has the legal responsibility, authority, and duty to issue control instructions, traffic advisories, and safety alerts to VFR aircraft.
  - ATC instructions include headings, turns, altitude, and general direction.
  - Pilots flying in controlled airspace must comply with all ATC instructions regardless of whether the pilot is flying VFR or IFR.

If you think an unsafe situation may develop, issue traffic advisories or exercise positive control by issuing a heading or an altitude restriction to resolve the conflict. If you feel that you are becoming overloaded in your area of responsibility, exercise good controller judgment by notifying your Supervisor/CIC and request assistance.

The Air Traffic Procedures Bulletin (ATPB) is a means for headquarters to remind field facilities of the proper application of procedures and other instructions. It is published and distributed on an as-needed basis.

Articles must be submitted electronically in Microsoft® Word by the office of primary responsibility with approval at the group level or above. Articles may be submitted throughout the year.

In this publication, the option(s) for which a briefing is required, is indicated by an asterisk followed by one or more letter designators, i.e., *T-Tower, *E-ARTCC, *R-TRACON, or *F-FSS.

For additional information concerning the ATPB, reference FAA Order JO 7210.3, Facility Operation and Administration, paragraph 2-2-9.

 Archived ATPB issues are available online: https://www.faa.gov/air_traffic/publications/