20:1 Letter for Airports

The purpose of the 20:1 area visual surface is to protect aircraft during the last stages of Instrument Approach Procedures (IAP) when pilots transition from instruments to visual guidance. Starting in January of 2014, the FAA began a compliance program to remove or mitigate obstacles to make this area safer for pilots.

The FAA conducts a review of all IAP on a two year cycle to identify obstacles that penetrate the 20:1 visual surface. The FAA also uses these reviews to determine if the IAP needs to be amended to support changes to new/revised FAA policies.

Objects penetrating the surface must be lowered or lit to ensure pilots of approaching aircraft can see them. If they cannot be, the visibility minimums associated with the approach may need to be increased or nighttime use of the procedure may be disallowed.

After a review is completed of the airports 20:1 area visual surface, the FAA will send a notification of potential 20:1 surfaces penetrations to the airport manager. The FAA will provide a list of penetrations for each runway and IAP and describe them in detail so the airport operator can locate them. The penetrations will be broken out by severity. High risk penetrations (more than 11 feet above the 20:1 surface) will result in immediate action by the FAA to restrict the IAP. Medium risk penetrations (more than 3 feet above the 20:1 surface) are required to be mitigated within 180 days to avoid restrictions to the IAP. The airport has one year to mitigate low risk penetrations.

If an airport receives a letter the first step is to understand what objects are penetrating the surface and where they are located. The FAA provides a tool using Airports Geographic Information System (AGIS) Surface Analysis and Visualization (SAV). This tool gives the airport operators an interactive aerial view of the airport and the location of the penetrations. Airports can view this tool by gaining access to the AGIS on the FAA website. They will first have to create an account to get access to the system. Once in the system they can view the obstruction data. By downloading the KML files they can view the obstructions offline using Google Earth.

You may be surprised to find that some of your obstacles are not in areas that you protected with your zoning. The 20:1 surface is based upon the airspace need for the IAP and in some cases the IAP is not aligned with the runway. The 20:1 surface also looks at the airspace needed to circle to another runway if circling minimums are provided. Category C and D aircraft are aircraft with higher approach speeds so their circling radii are larger than Category A and B aircraft. Faster aircraft normally require longer runways. If your runway is less than 4,000 feet long you may ask the FAA to eliminate the ability for Category C and D to use your IAP. This can eliminate obstacles that might be hard to mitigate, without impacting the operations of the aircraft that normally use the airport.

Google Earth gas a free version that works on most smart phones, tablets, and iPads that allows the airport manager to walk to the location of the obstructions. The FAA developed a policy to address penetrations through validation. This process allows airport operators to dispute obstacle data which

they feel is inaccurate in the FAA database before NOTAMs are issued restricting airport access. Sometimes the database contains old information and the obstacles have already been removed. If the airport manager determines that the data is invalid, the FAA will remove it from their database.

For those objects that are verified to be 20:1 visual area penetrations, the next step for airport operators is to provide a compliance plan to the FAA. The compliance plan must be submitted no later than 30 days. Returning to the AGIS website the airport manager updates the obstacle information for their airport, reporting those objects that no longer penetrate the 20:1 surface and verifying the objects that do penetrate the 20:1 surface.

Compliance plans include a full range of options for obstacle mitigation including obstacle elimination/lowering, obstacle lighting, use of visual aids, and acceptance of procedural restrictions. Though Visual Glide Slope Indicators (VGSI) may exist at the airport and they are listed as a means of compliance, our experience has been that getting acceptance for using VGSI to mitigate obstacles takes longer than the grace period. The Regional Airspace Procedures Team (RAPT) will monitor completion of the compliance plan put in place to ensure the penetrations are being mitigated.

Your airport consultant or MnDOT operations staff can assist you in responding to a 20:1 letter. Both can gain access to the AGIS site and help you to identify the objects and prepare your response.

The best way to deal with a 20:1 letter is to keep it from appearing. The FAA posts their schedule for IAP reviews and by working ahead, the airport can identify and mitigate obstacles before they are identified in the IAP review.