Memorandum

Date: NOV 15 2013

To: Bruce DeCleene, Manager, Flight Technologies and Procedures Division, AFS-400
   Michael J. O'Donnell, Director, Office of Airports Safety and Standards, AAS-001

From: William S. Davis, Deputy Vice President, Mission Support Services, AJV-0

Subject: Interim Policy Guidance for Mitigation of Penetrations to the 20:1 Visual Area Surface

PURPOSE: To provide consolidated interim policy guidance for FAA staff to address the process related to the discovery, verification, risk assessment, and mitigation of obstacles identified as penetrations to the 20:1 Visual Area Surface (20:1 surface) of instrument approach procedures (IAP).

ACTION: When 20:1 surface obstacle/terrain penetrations (penetrations) are discovered within the Visual Area Surface of an IAP (see attachment 1- 20:1 Risk Assessment), action will be taken to evaluate the entire airport to ensure that all 20:1 penetrations for every IAP have been identified. Effective January 6, 2014, use the following process (see attachment 2- 20:1 Mitigation Flow Chart) for the notification, verification, risk assessment, and mitigation of each penetration:

1. Notification and Verification. The Operations Support Group (OSG) Flight Procedures Team (FPT) will notify the airport owner/sponsor and the Airports District Office (ADO) within three business days of being informed of a potential penetration of an IAP. The OSG FPT will request the airport owner/sponsor to verify the validity of each penetration as soon as possible but not to exceed 30 calendar days after notification. The airport owner/sponsor must respond in writing to the OSG FPT with a copy to the ADO (scanned documents are acceptable). This reply is due as soon as possible and shall not be delayed to address mitigation, which is addressed through the compliance process (below). The preferred methods for an airport owner/sponsor to update data regarding trees that have been trimmed are contained in the Office of Airports (ARP) Engineering Brief (EB) #91: Management of Vegetation in the Airport Environment. EB #91 is available at the FAA website link: http://www.faa.gov/airports/engineering/engineering_briefs/. If no response is received within the prescribed timeframe, actions must be taken to restrict the IAP visibility minima/night operations as appropriate.
2. **20:1 Penetration Determined Invalid.** If the 20:1 penetration(s) at issue have been
determined to be invalid by an airport owner/sponsor, the OSG FPT will notify
AeroNav Products and the Aeronautical Information Management Terrain and Obstacle
Data (TOD) Team. AeroNav products will update the documentation on the periodic
review sheet. The TOD Team will update the obstacle database within 10 business
days. No action is required to restrict or modify the subject IAP.

3. **20:1 Penetration Determined Valid.** If the 20:1 penetration(s) at issue is/are valid, one
or more of the actions specified in paragraphs 3.1 through 3.3 below is/are required (see
attachment 3-Timelines and IAP Restrictions). If any of the timelines are not met, or
the airport compliance plan does not remove, light, or lower the obstacle, or if no
compliance plan is contemplated (e.g., the airport operator/sponsor elects to not
mitigate the obstacle risk), AeroNav Products must restrict the IAP accordingly (e.g.,
using a Notice to Airmen (NOTAM) or a Procedure Amendment).

3.1 **High Risk.** If the penetration(s) are verified as more than 11.0 feet above the 20:1
surface they are considered as high risk and **immediate action** is required to
restrict the IAP visibility to at least 1 statute mile (SM) and if the obstacle is
unlighted, restrict night operations. The airport operator/sponsor must submit a
compliance plan as soon as possible but no later than 30 calendar days from the
date of obstacle validation (by the airport owner/sponsor) to the OSG FPT with a
copy to the ADO. The compliance plan must indicate actions to remove, light, or
lower the obstruction as soon as possible for FAA to review the removal of
restrictions. Appropriate IAP restrictions (above) must remain in force on subject
IAP(s) until the Visual Area Surface penetration risk is mitigated.

3.2 **Medium Risk.** If the penetrations are verified as more than 3 feet and up to 11.0
feet above the 20:1 surface they are considered as medium risk and no immediate
action is required to restrict the IAP. The airport operator/sponsor must submit a
compliance plan as soon as possible but no later than 30 calendar days from the date
of obstacle validation (by the airport owner/sponsor) to the OSG FPT with a copy to
the ADO. The compliance plan must indicate actions to remove, light, or lower the
obstruction as soon as possible but not to exceed 180 calendar days. If the
penetrations are not mitigated within the prescribed timeframe, appropriate action
must be taken to restrict the IAP.

3.3 **Low Risk.** If the penetration(s) are verified as 3 feet or less above the 20:1 surface,
you are considered as low risk and no immediate action is required to restrict the
IAP. The airport operator/sponsor must submit a compliance plan as soon as
possible but no later than 30 calendar days from the date of obstacle validation (by
the airport operator/sponsor) to the OSG (FPT) with a copy to the ADO. The
compliance plan must indicate actions to remove, light, or lower the obstruction as
soon as possible but not to exceed one year. If the penetrations are not mitigated
within the prescribed timeframe, appropriate action must be taken to restrict the
IAP.
4. **Alternate Mitigation.** The actions specified above do not preclude application of currently approved methods to mitigate 20:1 penetrations (e.g., use of Visual Glideslope Indicator (VGGI) or mitigation based on full-scale deflection, etc.).

5. **Additional Guidance.** This memo applies only to penetrations to existing IAP identified as of the effective date of this memo and is not intended to be used to revise or invalidate previously issued guidance restricting IAP. Obstacles/penetrations reported by FAA Flight Inspection Services aircrews are considered as outside the scope of this memorandum. Penetrations reported by FAA Flight Inspection Services are considered as having been verified and assessed; thus, may result in immediate action to restrict an IAP.

6. **Unusual Circumstances.** Unusual circumstances which prevent compliance with timelines (above) must be submitted by the airport operator/sponsor in writing to the OSG FPT with a copy to the ADO within 10 business days of initial notification. Approval to deviate from the timelines may be granted with consensus of the signatories to this memorandum or their designees. The OSG FPT in coordination with the ADO will respond to airport owner/sponsor submittals no later than 30 calendar days from receipt.

7. **Compliance.** The OSG FPT in coordination with the ADO will monitor the compliance plan and will brief the status during monthly Regional Airspace and Procedures Teams (RAPT) meetings. A standardized report will be used by the OSG FPT and included on the AeroNav Products IFP Gateway. As improved survey data is provided or notification is received that the obstacle is removed, lighted, or lowered to a height below the surface, the OSG FPT will notify AeroNav Products and Aeronautical Information Management Terrain and Obstacle Data (TOD) Team. AeroNav Products will update the documentation on the periodic review sheet. The TOD Team will update the obstacle database within 10 business days. Restrictions imposed on the respective IAP will be removed as appropriate.

**Implementation:** This guidance will be effective on January 6, 2014. Further, this guidance will be reevaluated within 180 calendar days and adjusted as necessary. For the period from the date of this memorandum until January 6, 2014, a national review team will determine the appropriate action for each penetrating case and advise accordingly. Our long term goal is to work with airports to achieve and sustain compliance to the required obstacle surfaces by January 2016.
Approval/Disapproval:

Approve: ✔
Disapprove: 

Bruce DeCleene, Manager,
Flight Technologies and Procedures Division

Date: 11/15/13

Michael J. O’Donnell, Director,
Office of Airport Safety and Standards

Date: 11/15/13

Attachments:
Attachment 1 – 20:1 Risk Assessment
Attachment 2 – 20:1 Mitigation Flow Chart
Attachment 3 – Timelines and IAP Restrictions
(3 feet or less) 

LOW RISK

Medium Risk

High Risk

More than 3 feet and up to 11 feet

200'

0'

3 feet

Visual Area Surface

20:1 Visual Area Surface
Attachment 2. 20:1 Mitigation Flow Chart

Discovery of 20:1 Penetrations

Request Verification

Valid

NO

Coordinate with AeroNav Products and TOD. TOD will update database within 10 days

YES

Airport submits Compliance Plan

RAPT Monitors Compliance Plan

20:1 lighted, lowered or removed

YES

Coordinates with AeroNav Products and TOD. TOD will update database within 10 days No restrictions to IAPs

NO

Take action to restrict the IAPs
<table>
<thead>
<tr>
<th>Visibility</th>
<th>Instrument Approach Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIS</td>
<td>IAP</td>
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</table>

If height of lowered IAP will be restricted immediately, appropriate number of calendar days. If any of the timeliness are not met or the obstructions cannot be removed, IAP Restrictions will remain until IAP Restricions will.

### Timeliness

- **Compliance Plan**
  - If 20:1 are valid, IAP Restrictions
  - IAP Restrictions
  - Verification

### Risk Categories

- **20:1**
  - Peatlands
  - Obstacles

**NOTE:** Verification and compliance timeliness should be completed as soon as possible but not to exceed the

<table>
<thead>
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<th>Low</th>
<th>Medium</th>
<th>High</th>
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<tbody>
<tr>
<td>3 feet or less</td>
<td>and up to 1.1 feet</td>
<td>More than 1.1 feet</td>
</tr>
<tr>
<td>30 days not to exceed</td>
<td>30 days not to exceed</td>
<td>30 days not to exceed</td>
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<table>
<thead>
<tr>
<th>Compliance Plan</th>
<th>30 days Not to Exceed</th>
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**Attachment 3, Timeliness and IAP Restrictions**

11/15/2013