

Obstacles in the Visual Segment

20:1 Background, Policies and Action

Presented to: 2016 Hershey Airports Conference

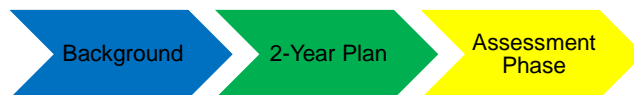
By: Gerard G Lebar
Eastern Flight Procedures Team

Date: March 22, 2016



Overview

- Background
- 2-Year Plan
- Assessment Phase



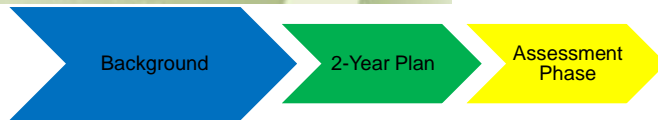
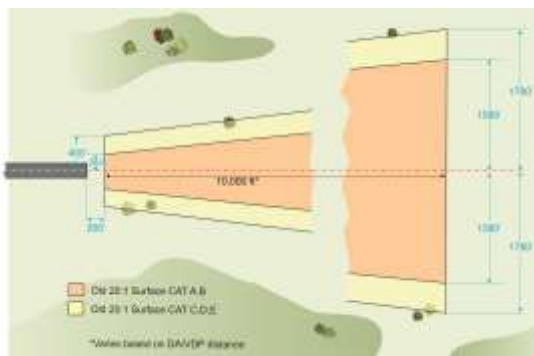
Background – 20:1 Visual Area

The purpose of the surface is to protect aircraft during the last stages of approach procedures when pilots transition from instruments to visual guidance



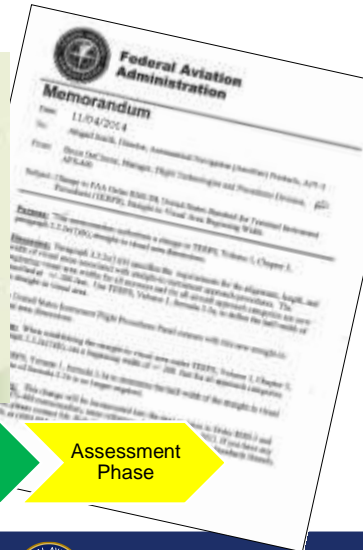
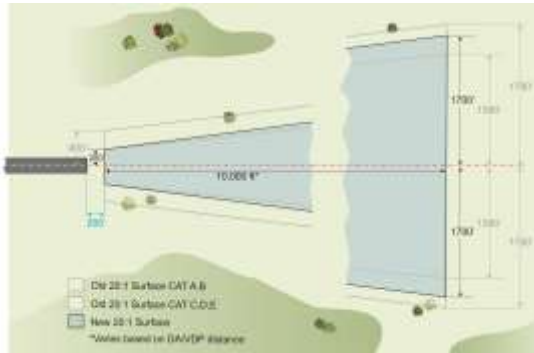
Background – 20:1 Visual Area Graphic

Area Defined – historic



Background – 20:1 Visual Area Graphic

Area Defined – New (Nov 2014)



Background: 20:1 Penalties

1. Object lighted - Approach visibility restricted to at least 1 SM
2. Object not lighted – Restrict night operations – Landing NA



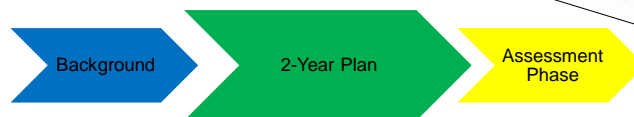
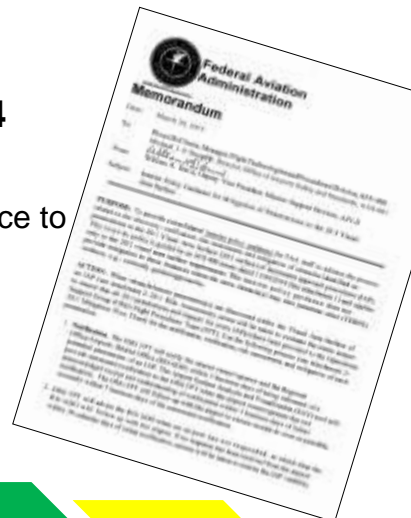
Background – Problem Identified

- Due to improvements in how we identify and track obstacles, the FAA began enforcing a clear 20:1 surface in April, 2013
 - Subsequently, penetrations of airport approach surfaces were discovered at several high visibility airports (e.g., LGA, SAN)
 - Enforcement of requirements caught airport and operator community by surprise, affecting access on some procedures where operations have occurred for years



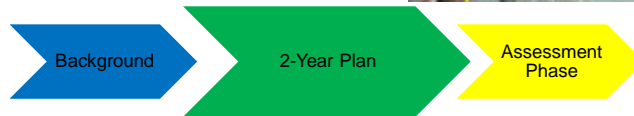
Interim Policy

- **Effective January 6, 2014**
- **Long term goal**
Achieve and sustain compliance to required obstacle surfaces by January 2016

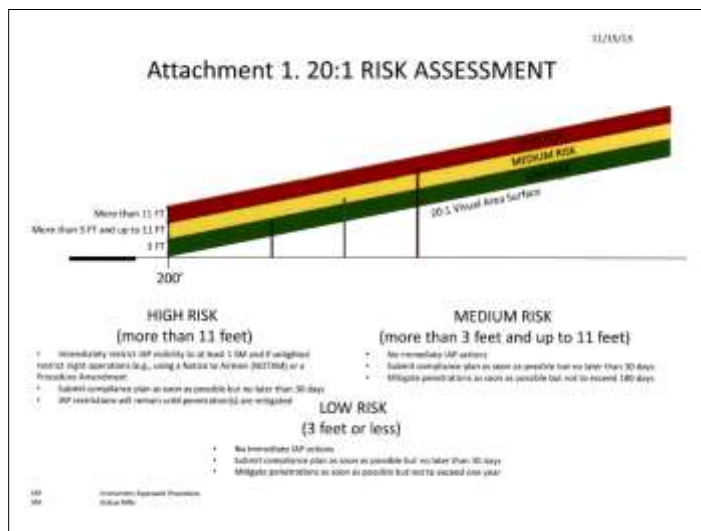


Interim Policy- Action

When 20:1 surface obstacle/terrain penetrations are discovered within the Visual Area Surface of an Instrument Approach Procedure (IAP), action will be taken to evaluate the entire airport to ensure that all 20:1 penetrations for every IAP have been identified



Interim Policy- Action



Timelines and IAP Restrictions

Attachment 3. Timelines and IAP Restrictions 11/15/2013

RISK CATEGORIES	Obstacle Penetrates 20:1 by	Verification Timelines	IAP Restrictions if 20:1 are valid	Compliance Plan Timelines
HIGH	More than 11 feet	Not to exceed 30 days	Immediately restrict IAP visibility and if unlighted restrict night operations (e.g., using a Notice to Airmen (NOTAM) or a Procedure Amendment	IAP Restrictions will remain until penetrations are mitigated
MEDIUM	More than 3 feet and up to 11 feet	Not to exceed 30 days	No immediate action	30 days for Compliance Plan & 180 days to light, lower, or remove
LOW	3 feet or less	Not to exceed 30 days	No immediate action	30 days for Compliance Plan & 1 year to light, lower, or remove

NOTE: Verification and compliance timelines should be completed as soon as possible but not to exceed the appropriate number of calendar days. If any of the timelines are not met or the obstructions cannot be removed, lighted or lowered the IAP will be restricted immediately.

IAP Instrument Approach Procedure
VIS Visibility



2-Year Plan – Scope of Issue

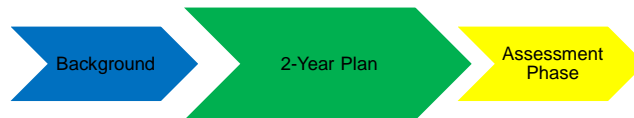
- Aeronautical Information Services reviewed more than 16,000 Instrument Flight Procedures at 3002 airports
- More than 1500 airports had possible 20:1 penetrations



2-Year Plan Report Card (Ending Jan 2016)



- FAA restricted IFPs at 913 airports
- More than 800 procedures amended
- More than 500 airports have either removed or mitigated obstacles to address safety risks
- More than 100 airports remain in the notification, validation and/or mitigation phase



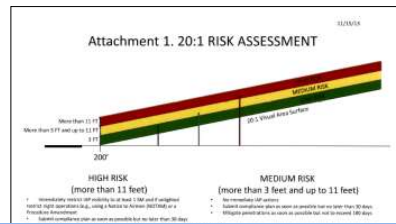
Assessment Phase

- Objective: Determine if the 2-year plan was successful in obtaining compliance throughout the NAS
 - If successful, there should be very few noncompliances
 - If not successful, a new strategy to achieve compliance will be needed
- Began with initial procedure reviews of procedures which had been addressed under the 2-year plan



Assessment Phase - Criteria

- Each case: Continue to apply principles of the 2-year plan, with some additional considerations
 - Was the airport able to mitigate a prior low or medium risk penetration?
 - How was the new obstacle discovered, and what caused it?
 - Grant time-limited waivers when warranted
- Detailed tracking of reviews
 - What recurring factors contribute to new obstacles (e.g., tree growth, new survey/old obstacle, ..?)
 - How can we address root causes and achieve 100% compliance?



Next Steps

- Share Insights from Assessment
 - Potential for new root-cause actions
- Goal is 100% Compliance
 - Anticipate penetrations before FAA review and take corrective action
 - Use of the SAV tool to monitor obstructions around airport



Latest Guidance



Federal Aviation Administration

Memorandum

Date:
To: William S. Davis, Deputy Vice President, Airman Support Services, AAV-8
 Michael J. O'Donnell, Director, Office of Airports Safety and Standards, AAS-8001
From: Brent DalChiesa, Manager, Flight Technologies and Procedures Division, AFS-400
Subject: Policy Guidance for Penetrations to the 20:1 Visual Area Surface of Instrument Approach Procedures

SEARCHED
SERIALIZED
INDEXED
FILED
MAR 20 2015
FEDERAL AVIATION ADMINISTRATION

In November 2013, Airman Support Services issued standardized criteria 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 flight procedure (IFP). This policy guidance memorandum was subsequently updated and released with minor changes in March 2015. The updated guidance provided for a two-year period to verify or remove all IFPs, to assess or determine the existence and effect of any 20:1 surface penetrations and to provide a plan to mitigate the effect. The goal was to achieve and sustain compliance to the required obstacle surface by January 2016.

In December 2014, Aeronautical Information Services completed the last of five 20:1 surface evaluations at more than 3000 airports. The purpose of this memorandum is to provide guidance in application of 20:1 surface requirements as we move forward in remaining compliance.

When new 20:1 visual surface obstructions/penetrations (i.e., not previously identified and mitigated) are discovered, the airport owner/operator may be allowed up to 30 calendar days from the date the penetration was first discovered, to verify the validity of such penetrations. The goal is to verify the existence or non-existence and general characteristics (e.g., location, height, type of object, lighted, etc.) of the penetrating obstacle. A new survey is not required in order to verify the obstructions/obstacle penetrations reported by FAA. Flight inspection history entries are considered as having been verified.

If a 20:1 penetration is determined valid, then the Flight Technologies and Procedures Division (AFS-400) must be notified the next business day and be provided with the obstacle specifics, i.e. type object, location, height, lighted or not, amount of surface penetration and affected IFPs. The AFS-400 Procedure Review Board will subsequently conduct an assessment of all verified 20:1 visual surface penetrations and provide A/V-3 an appropriate/approved course of action to be taken until the airport/IFPs are made compliant.

If a 20:1 penetration is determined to be invalid, Aeronautical Information Services should take appropriate action to have the obstacle information corrected or removed, as appropriate, from the obstacle data base.

Please contact Danny Hamilton at danny.e.hamilton@faa.gov or (405) 954-9359 if you have any questions.

Attachment:
 Memorandum dated XX March 2015, Interim Policy Guidance for Mitigation of Penetrations to the 20:1 Visual Area Surface



QUESTIONS

- **Questions will be taken after Mr John Dermody presents his slideshow.**
- **Gerard Lebar**
- **Eastern Flight Procedures Team**
- **404-305-5953**

