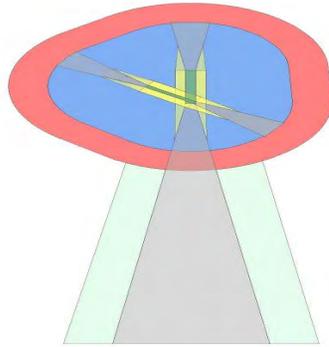


ICAO Worldwide Symposium on Enabling the Net-Centric Information Environment



FAA's Approach for Obstruction Evaluation

Presented to: **Great Lakes Airport Conference**

By: **Kevin P. Haggerty - FAA Manager of OES**

Date: **07 November, 2008**



**Federal Aviation
Administration**



What is OE/AAA?

- **Intranet Obstruction Evaluation/Airport Airspace Analysis**
- **“Obstruction Evaluation”**
 - Refers to the FAA’s responsibility to determine whether a proposed construction or alteration would cause a hazard to air navigation.
- **“Airport Airspace Analysis”**
 - Refers to evaluations and analyses that are specifically on Airports

iOE/AAA Capabilities

- **Data input and capture**
- **Case review**
- **Online coordination among divisions**
- **Part 77 evaluation**
- **Analysis tools**
- **Mapping of cases, airports, runways and facilities**
- **Satellite imagery**



OE/AAA Data Uses

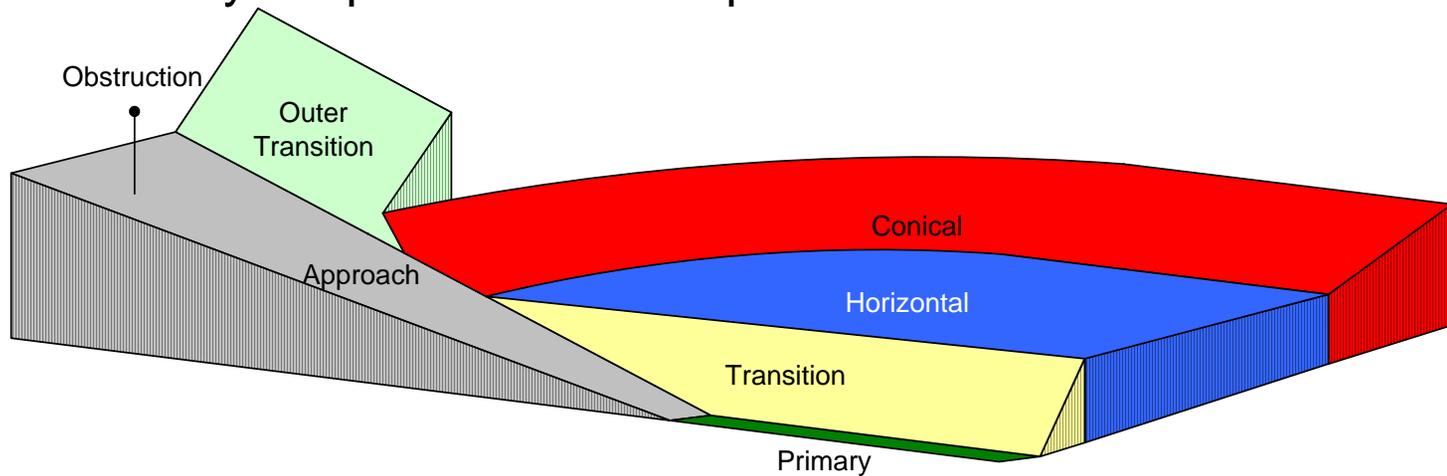
- **Airport Data (Runway, Design Surfaces)**
- **Facility Data (Radar, ILS, VOR, ATCT, Freq's)**
- **Procedure Data (TERPS, MEA/MVA)**
- **Air Traffic Data (Traffic Patterns, Airspace Classifications)**
- **Military Data (SUA, MOA, Training Routes)**
- **Civilian Data (Local Zoning, Obstruction Data)**

Part 77

- **Part 77**

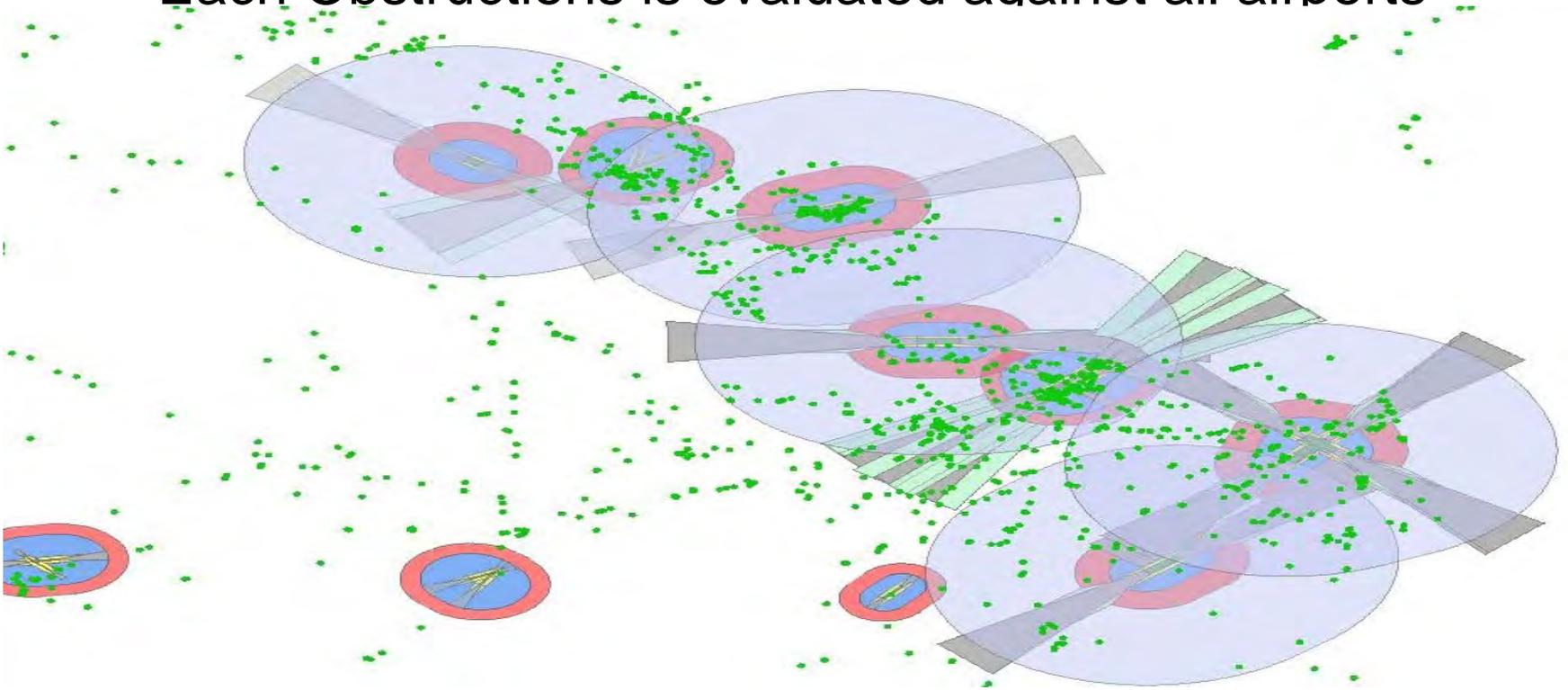
- 3D Evaluation

- Every 2D penetration is evaluated in 3D.
 - The height of the obstruction against the height of the surface.
 - Every 3D penetration is reported.



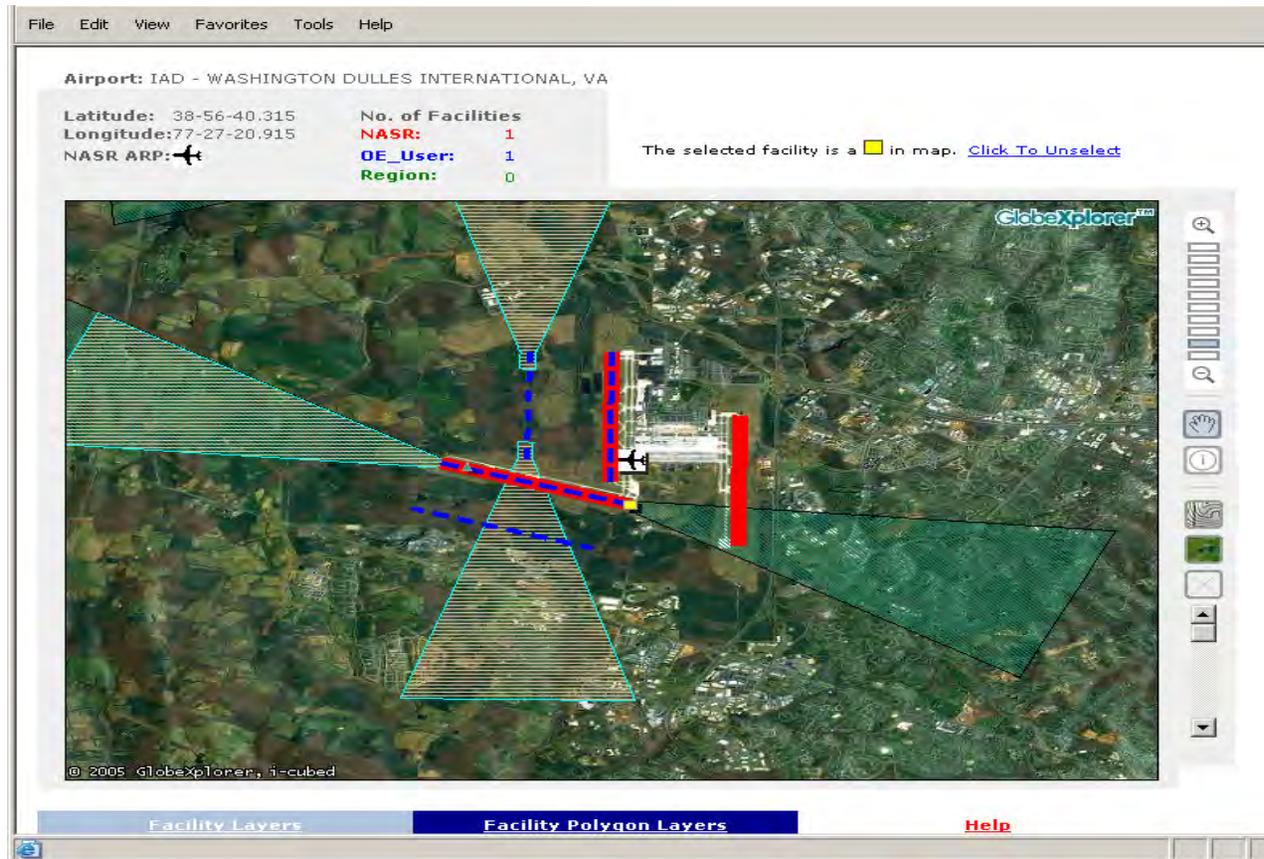
Part 77 Cont.

- **Part 77**
 - Each Obstructions is evaluated against all airports



OE/AAA Automation Tool

- Plot Facility: Satellite Image with watch areas



Atlantic City, NJ

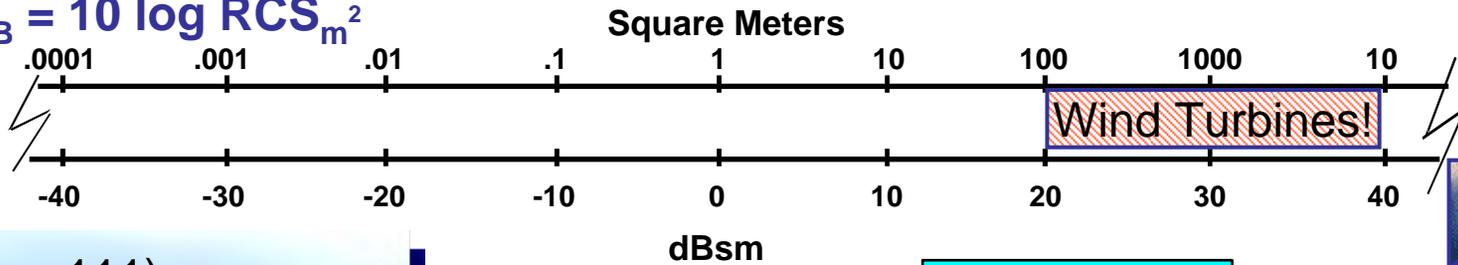
Five 1.5 MW Turbines
Operations Started Dec 30, 2005



Atlantic City Municipal Airport
(Bader Field)

High Frequency RCS

$$RCS_{dB} = 10 \log RCS_{m^2}$$



C-29 (Bac-111)



Space Shuttle with Boosters (Engine View)

LARGE A/C (747)

CONVENTIONAL AIRCRAFT (C-29)

IMPROVED CONVENTIONAL AIRCRAFT

CONVENTIONAL CRUISE MISSILES

BIRDS

MAN

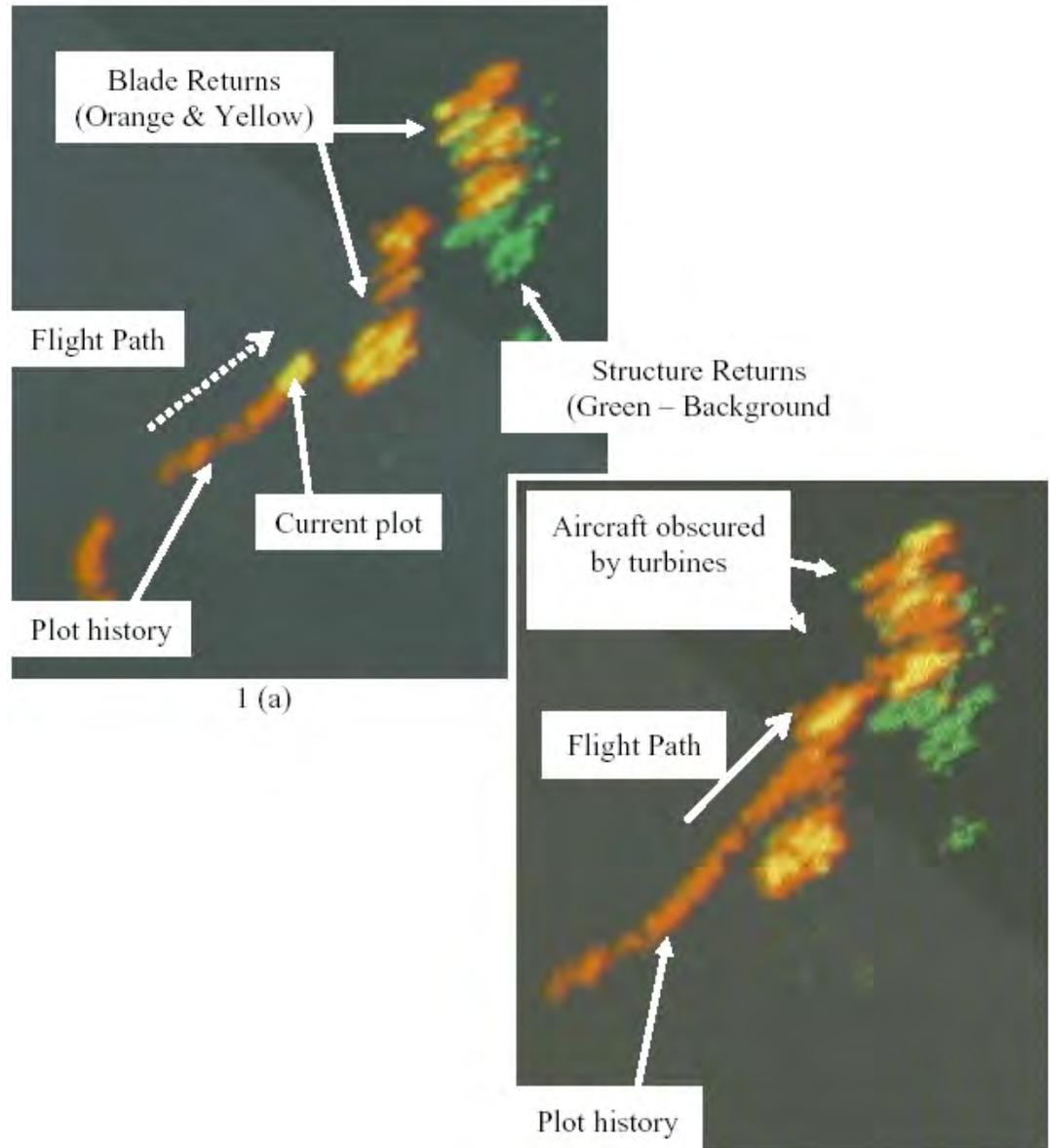
CARS

INSECTS

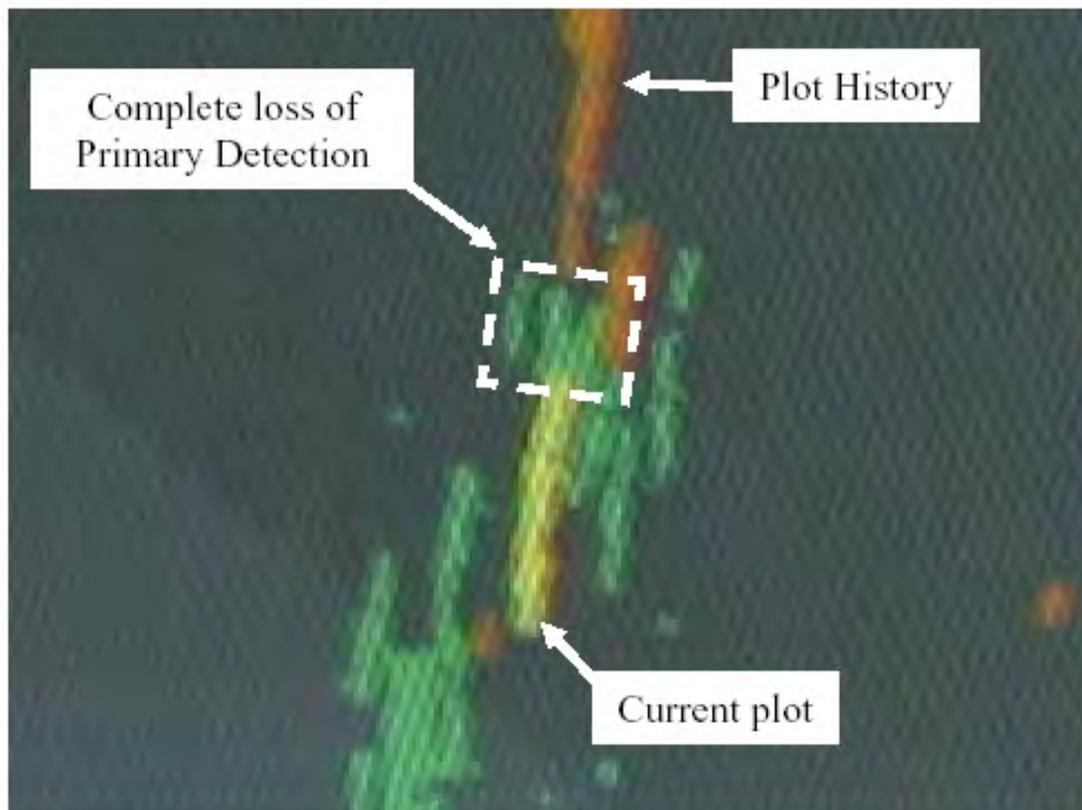


747

Obscured Effects



Loss of Aircraft Primary Detection Above Farm @ 6,000 feet



CONUS - Coverage

Long Range Radar

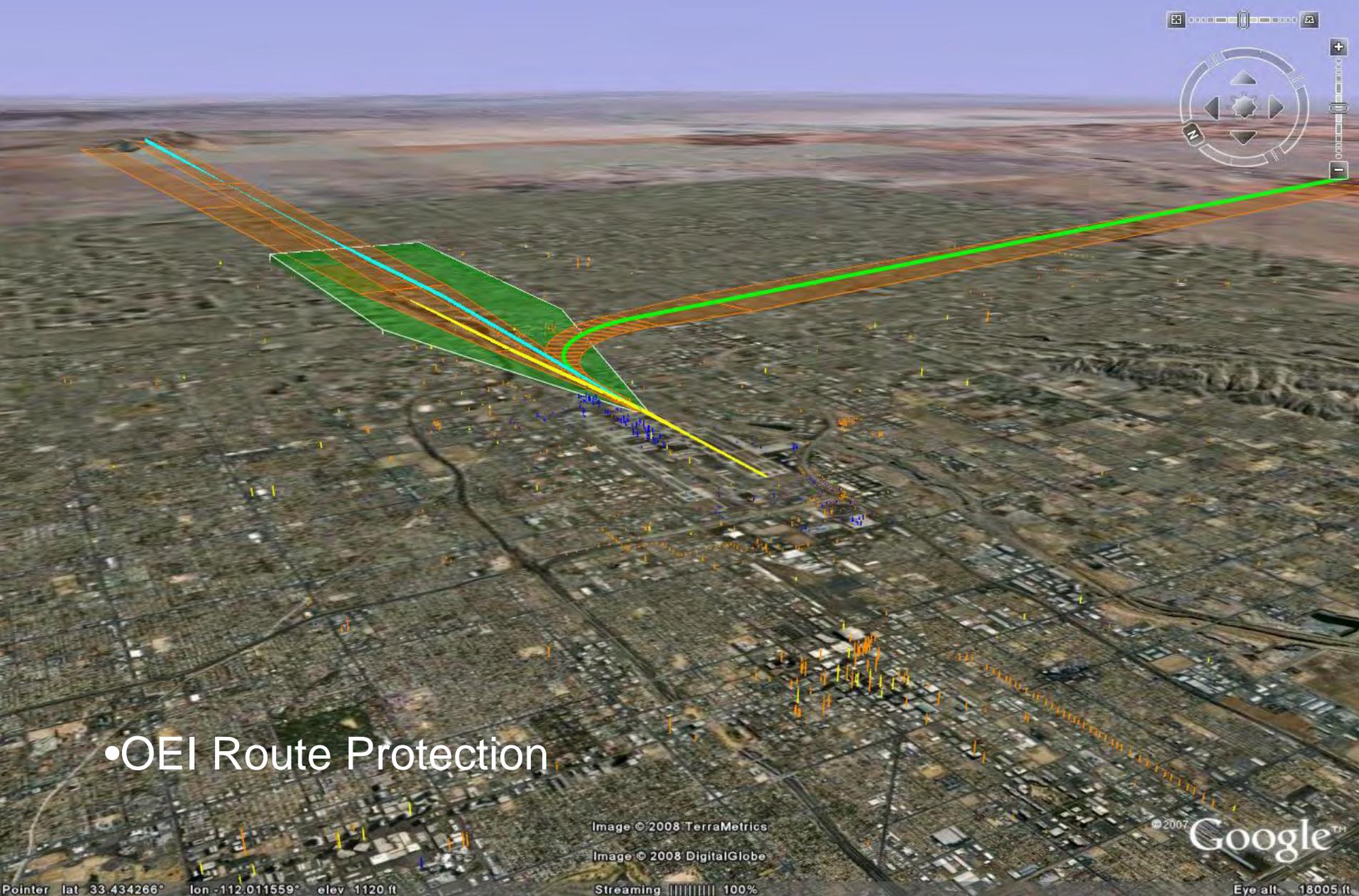


OEI & Obstruction Encroachment

- **FAA is building teams and evaluation procedures with willing partners.**
 - Miami International
 - Boston Logan
 - Washington National (Reagan - if you must)
- **Evaluates entire airport airspace.**
- **Identifies areas of concern for aviation and growth for community.**
- **Results in comprehensive zoning that protects airport/airspace infrastructure.**

•OEI Surface Protection





•OEI Route Protection

Image © 2008 TerraMetrics

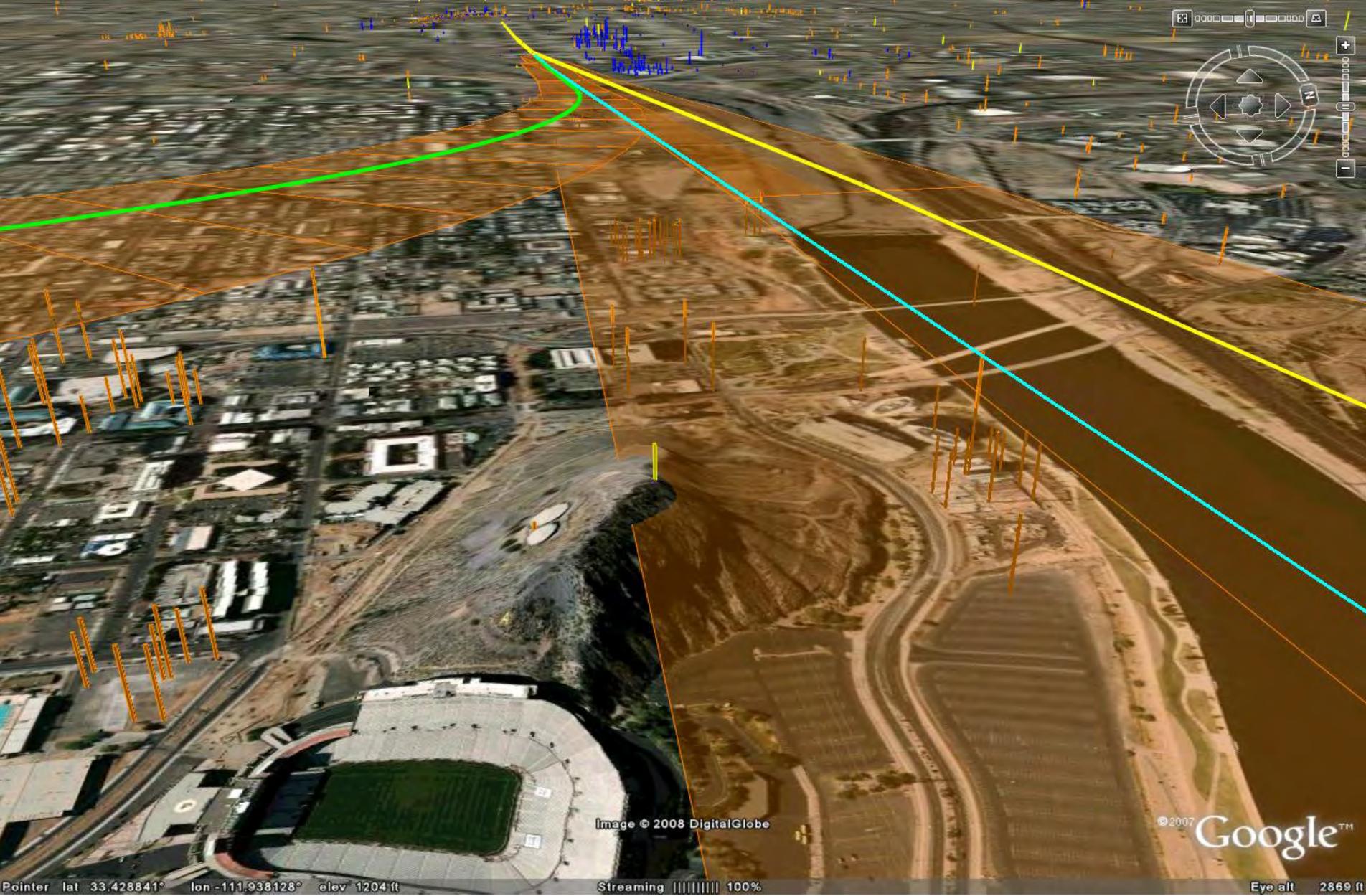
Image © 2008 DigitalGlobe

Streaming ||| 100%

© 2007 Google™

Eye alt. 18005 ft





SURFACE TYPES	COMPOSITE OPTION 2 PARAMETERS
CIRCLE TO LAND	M0.0 - 0.0000 EXCEPT 1.0
CASCADING OBSTACLE SURF	M0.0, K, 1.0, 1.0, 20.0, 200.0, 300.0
WE STRIP-0 DEFINITION	M0.0, 1.0, 20.0, 20.0, 20.0
ST STRIP-0THD EXPLANATION	M, 1.0, 20.0
LS APPROACH - 1	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 1	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 2	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 3	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 4	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 5	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 6	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 7	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 8	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 9	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 10	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 11	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 12	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 13	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 14	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 15	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 16	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 17	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 18	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 19	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 20	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 22	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 24	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 26	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 28	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 30	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 32	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 33	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 34	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 35	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 36	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 37	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 61	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 62	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 63	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 64	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 65	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 67	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 80	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 81	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 92	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 93	M, 1.0, 20.0, 20.0, 20.0
LS MISSED APPROACH - 94	M, 1.0, 20.0, 20.0, 20.0
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LS MISSED APPROACH - 100	M, 1.0, 20.0, 20.0, 20.0



•BOS Composite Map

**COPY FOR
FAA REVIEW ONLY**
JANUARY 23, 2008

Boston - Downtown Zone
Composite of Critical Airspace Surfaces

CRITICAL AIRSPACE MORAIC PARAMETERS

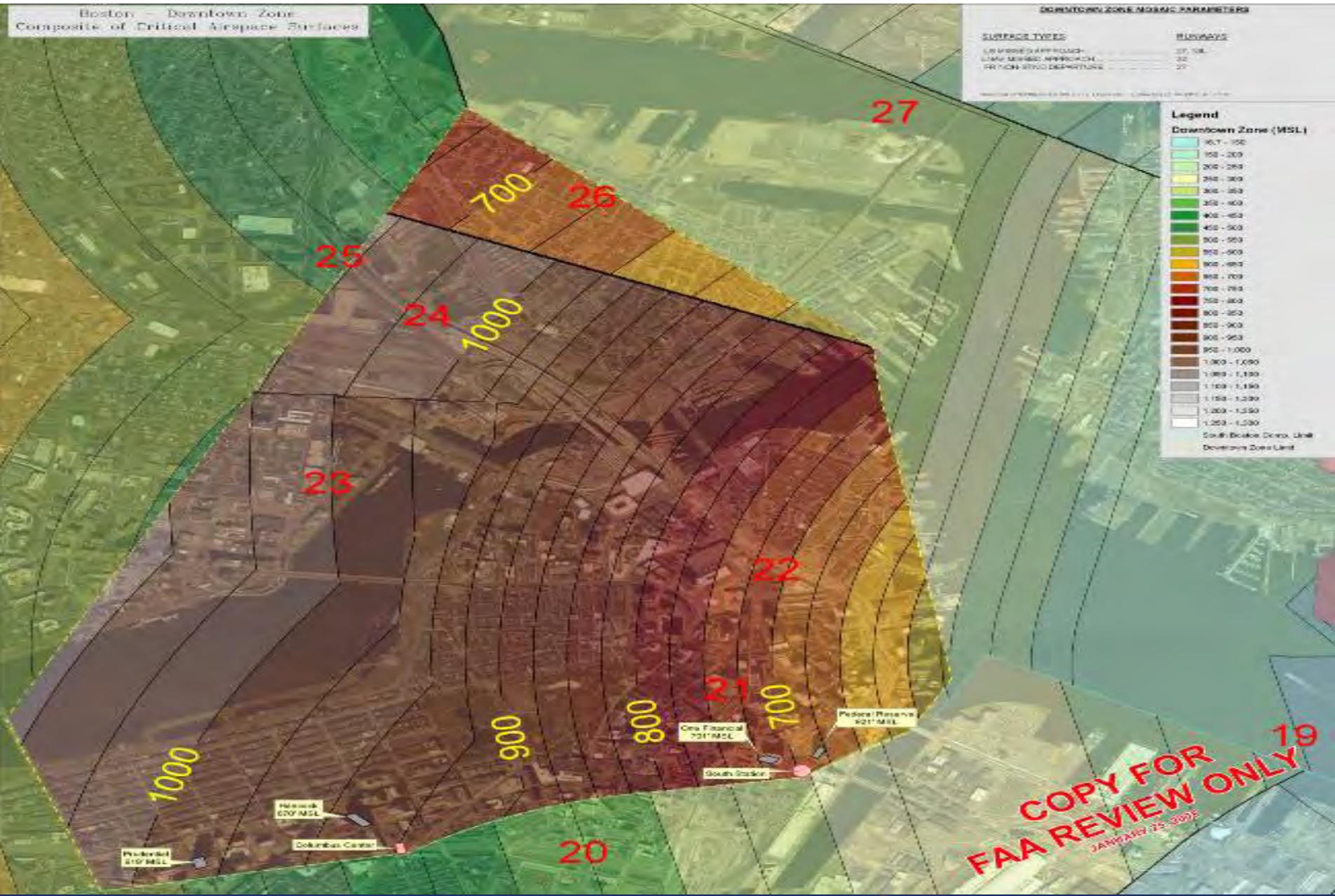
SURFACE TYPES	HEIGHTS
LOW SPEED APPROACH	27, 28
LINE MORAIC APPROACH	22
PARALLEL DEPARTURE	27

Legend

Downtown Zone (MSL)

90.7 - 100
100 - 200
200 - 250
250 - 300
300 - 350
350 - 400
400 - 450
450 - 500
500 - 550
550 - 600
600 - 650
650 - 700
700 - 750
750 - 800
800 - 850
850 - 900
900 - 950
950 - 1,000
1,000 - 1,050
1,050 - 1,100
1,100 - 1,150
1,150 - 1,200
1,200 - 1,250
1,250 - 1,300
1,300 - 1,350
1,350 - 1,400
1,400 - 1,450
1,450 - 1,500
1,500 - 1,550

South Boston Center, Limit
Downtown Zone Limit



2001

ONE FINANCIAL

FEDERAL RESERVE

SEAPORT HOTEL COMPLEX

FAN PIER PROPOSED

2004

MANULIFE

CONVENTION CENTER

FAN PIER APPROVED

2007

PARK LANE

RENAISSANCE

MADISON PROP. APPROVED (SHADOWED)

COLUMBUS CENTER APPROVED

PIER 4 APPROVED

FAN PIER APPROVED

*APPROVED BUILDING LOCATIONS APPROXIMATED



Developing New OE Concept

- **Legal Review and Interpretation**
 - Part 77 Limitations
 - New Rulemaking
- **Identification of Critical Airports in the NAS**
 - 35 OEP
 - Airports within local zoning authority
- **Establish New Office That Crosses All Lines of Business.**
 - Requires cooperation of data and specialist resources
- **Leverage New Automation Tools and Data Bases to Define the NAS.**
 - #1 goal is to preserve the NAS.

Preserving the NAS

- **Tough to preserve anything when you know not what you have!**
 - Define all aspects of the NAS
 - Procedures
 - Airspace and Airport Design
 - Facility Service Volumes
 - Navigational
 - Surveillance
 - Communication
 - Create measurable matrix
 - Ensure Data is Visible and transparent to all Users

Final Result

- **Increased ability to protect NAS.**
- **Determinations result from comprehensive cumulative airspace analysis.**
- **Airspace use and adverse effect is pre-determined.**
- **Managing Airspace vs. Managing Individual Obstruction Cases.**
- **Public receives determinations faster.**
- **FAA better utilizes human resources.**

OE Case on Public Notice

Form 7460-1 for ASN: 2007-ASO-222-OE

Federal Aviation Administration
Bringing Safety to America's Skies

Obstruction Evaluation Form 7460-1 for ASN: 2007-ASO-222-OE [faa.gov Tools](#) [Print this page](#)

Overview

Study (ASN): 2007-ASO-222-OE
 Prior Study:
 Status: Circularization
 Letters: [Circularization](#)

Received Date: 01/18/2007
 Entered Date: 01/18/2007
 Completion Date:
 Expiration Date:
 Map: [View Map](#)

Sponsor Information

Sponsor: COX Radio, Inc.
 Attention Of: Charles Kinney
 Address: 1601 West Peachtree Street, NE
 City: Atlanta
 State: GA
 Postal Code: 30309
 Country: USA
 Phone: 404-897-7500
 Fax: 404-897-7363

Sponsor's Representative Information

Representative:
 Attention Of: Robert du Treil
 Address: 201 Fletcher Ave.
 City: Sarasota
 State: FL
 Postal Code: 34237-6019
 Country: US
 Phone: 202-223-6700
 Fax: 941-329-6030

Construction Info

Notice Of: Construction
 Duration: Permanent (Months: 0 Days: 0)
 Work Schedule:
 Date Built:

Structure Summary

Structure Type: Antenna Tower
 Other Description:
 NACO Number:
 FCC Number:

Structure Details

Latitude (NAD 83): 34° 06' 57.48" N
 Longitude (NAD 83): 84° 01' 15.66" W

Height and Elevation

Proposed DNE DET
 Site Elevation: 1099

Done



Public Comment/Response Section

The screenshot shows a Windows Internet Explorer browser window displaying the FAA Form 7460-1 public comment interface. The browser's address bar shows the URL: <https://oeaaa.faa.gov/oeaaaEXT/searchAction.jsp?action=displayOECASE&oeCaseID=499591>. The page title is "Form 7460-1 for ASN: 2007-ASO-222-OE".

The main content area displays the "Public Comments for ASN: 2007-ASO-222-OE" form. The form includes the following fields:

- ASN: 2007-ASO-222-OE
- Structure: Antenna Tower
- Latitude: 34° 06' 57.48" N
- Longitude: 84° 01' 15.66" W
- * Comments: (A large text area for entering comments)

Below the comments field, there is a note: "* Maximum length of comments is 3500 characters." At the bottom of the form, there are "Cancel" and "Submit" buttons.

The browser window also shows a taskbar at the bottom with several open applications: "6 Micros...", "ASSET - Mic...", "Microsoft Vis...", "Calendar", "3 Interne...", and "Microsoft Po...". The system clock shows "12:01 PM".

