



Venice of America

CITY OF  
**FORT LAUDERDALE**

**AVIATION ADVISORY BOARD  
FORT LAUDERDALE EXECUTIVE AIRPORT  
ADMINISTRATIVE OFFICE - MULTIPURPOSE ROOM  
6000 NW 21 AVENUE, FORT LAUDERDALE, FL  
THURSDAY, APRIL 22, 2010 1:30 P.M.**

Board Members	Attendance	Cumulative Attendance 7/09 through 6/10	
		Present	Absent
Bunney Brenneman, Chair	P	7	0
Deborah VanValkenburgh, Vice Chair	P	7	0
Lee Alexander	P	6	1
Gloria Brown	A	3	3
Linda Iversen	P	6	1
Jackie Kaht	A	5	2
Bruce Larkin	P	6	1
Stephen Stella	P	3	1
Pamela Bushnell, Commissioner, City of Tamarac [non-voting]	P	4	2
Anthony Niedwiecki, Commissioner, City of Oakland Park [non-voting]	P	3	1

**Airport/City Staff**

- Clara Bennett, Airport Manager
- Mark Cervasio, Assistant Airport Manager
- Florence Straugh, Noise Abatement Officer
- Rufus A. James, Airport Operations Supervisor
- Fernando Blanco, Airport Engineer
- Victoria Minard, Assistant City Attorney
- Jim Koeth, Principal Planner, City of Fort Lauderdale
- Leslie Carhart, Administrative Assistant II
- J. Opperee, Recording Secretary, Prototype Services

**Communications to the City Commission**

None

**Call to Order**

Chair Brenneman called the meeting to order at 1:35 p.m.

Chair Brenneman announced that Ms. Kaht was stranded in London by the volcanic ash cloud and could not attend today's meeting. She also announced that Mr. Niedwiecki had resigned from the City of Oakland Park Commission to



relocate and this would be his last meeting. Mr. Niedwiecki stated he had accepted a senior administrative position at a law school in Chicago.

**1. Approve Minutes of March 2010 Meeting**

**Motion** made by Ms. VanValkenburgh, seconded by Mr. Larkin, to approve the minutes of the Board's March 2010 meeting. In a voice vote, motion passed unanimously.

**2. Joint Participation Agreement with Florida Department of Transportation for Rehabilitation of Taxiways C & D**

Mr. Cervasio stated Airport staff and engineers had developed an Airport Pavement Management Program (APMP) in 2007 to inventory all pavements on the airfield and apply condition ratings to them. This plan was required by the FAA in order to be eligible for funding of any airport pavement replacement or reconstruction project.

Mr. Cervasio explained that the APMP used a Pavement Condition Index (PCI) to indicate the condition of a particular pavement section. As a general rule, funding agencies considered pavement with a PCI rating of 70 or less to require some type of rehabilitation. A PCI of 55 or below was assigned to pavements in definite need of rehabilitation.

Mr. Cervasio stated the combined average PCI rating for Taxiways Charlie and Delta was 14 indicating they were badly in need of a major rehabilitation.

The Florida Department of Transportation had initiated a Joint Participation Agreement in the amount of \$2,527,500 to provide up to 80% funding for the design and construction to rehabilitate the airfield pavement along Taxiways Charlie and Delta. The remainder of the project costs would be funded from the Airport's approved Capital Improvement Plan in the amount of \$409,375.

**Staff Recommendation**

The staff recommends the Joint Participation Agreement be approved for the City to accept \$2,527,500 from the Florida Department of Transportation for up to 80% of the project cost for the pavement rehabilitation of Taxiways Charlie and Delta.

**Motion** made by Ms. VanValkenburgh, seconded by Ms. Iversen, to approve staff's recommendation. In a voice vote, motion passed unanimously.

**3. Joint Participation Agreement with Florida Department of Transportation for Design of Taxiway G**

Mr. Cervasio reminded the Board that at their February 25, 2010 meeting, staff had presented an item recommending that the City accept and execute a Grant

Agreement with the FAA in the amount of \$164,920 for 95% of the costs associated with the design of the relocation of the southernmost 1,000 feet of Taxiway Golf.

Mr. Cervasio referred to a map and indicated that Taxiway Golf ran parallel along the east side of Runway 13-31 with a centerline-to-centerline separation distance ranging from 250 feet for approximately 1,000 feet at its southern end to 400 feet for the remaining 3,000 feet, which did not meet current FAA standards. Taxiway Golf was frequently used by larger aircraft taxiing to the hangar areas on the south side of the airport or to Runway 8-26. Mr. Cervasio stated in the future, Taxiway Golf would also be used for aircraft traffic taxiing into the proposed U.S. Customs and Border Protection facility proposed for Parcel 18.

Mr. Cervasio said the project to increase the separation had been included in the JACIP a few years ago and the Florida Department of Transportation has initiated a Joint Participation Agreement in the amount of \$3,750 to provide up to 2.5% of the design costs for the project. The original estimated cost was \$150,000 for design, which anticipated a \$142,500 grant from the FAA and the \$3,750 from FDOT as the Airport's share for the matching funds. In March, staff had presented a Task Order for Kimley-Horn to perform design services for \$164,000.

Mr. Cervasio explained that by the time the project was to begin, the cost estimate had increased to \$173,600. Staff had approached the FAA for a 95% grant associated with that cost and the FAA had indicated that \$7,650 of the new estimate would not be eligible for grant funding, and gave the Airport a grant for \$157,653. Mr. Cervasio said the \$3,750 FDOT contribution had already been set aside, but it was possible that additional funds could become available in the future.

#### **Staff Recommendation**

The staff recommends the Joint Participation Agreement be approved for the City to accept \$3,750 from the Florida Department of Transportation for up to 2.5% of the project cost for the rehabilitation of Taxiway Golf.

**Motion** made by Mr. Larkin, seconded by Ms. Iversen, to approve staff's recommendation. In a voice vote, motion passed unanimously.

#### **4. Lochard Corporation - Contract Renewal - Airport Noise & Operations Monitoring System (ANOMS) Software User Support**

Ms. Straugh reminded the Board that the City Commission now required all proprietary contract renewals be presented individually, rather than in bundles, to the City Commission.

Ms. Straugh explained that this proprietary, sole source agreement with Lochard Corporation for the Software Support of the Airport Noise and Operations

Monitoring System (ANOMS) would expire on July 15, 2010. Lochard had requested a 2.1% annual CPI adjustment for \$773.21. The total annual cost would be \$37,592.71.

**Staff Recommendation**

Staff recommends renewing this ANOMS Software Support agreement for one year with Lochard Corporation for a total amount of \$37,592.71

**Motion** made by Ms. VanValkenburgh, seconded by Ms. Iversen, to approve staff's recommendations. In a voice vote, motion passed unanimously.

**5. PASSUR Aerospace, Inc. - Contract Renewal - Enhanced Radar Service and Reporting Software**

Ms. Straugh stated this was a one-year contract renewal for the subscription agreement with PASSUR Aerospace, Inc. for the PASSUR Portal & Pulse and Mode-S data feed, which would expire on July 31, 2010.

Ms. Straugh informed the Board that this subscription service provided more access to aircraft tail numbers. PASSUR had requested a 7% renewal fee, increasing the amount to \$1,910 per month for a total of \$22,919.40 for one year. If the entire year were paid in advance, there would be a 10% discount.

**Staff Recommendation**

Staff recommends renewing this Enhanced Radar Service and Reporting Software subscription / agreement for one year with PASSUR Aerospace, Inc. for a total amount of \$22,919.40.

**Motion** made by Ms. Iversen, seconded by Ms. VanValkenburgh, to approve staff's recommendation. In a voice vote, motion passed unanimously.

**6. PASSUR Aerospace, Inc. - Contract Renewal - Software and Equipment Maintenance**

Ms. Straugh explained this was one of three components that comprised their noise monitoring system. PASSUR Software and Equipment Maintenance had requested a 7% renewal fee increasing the amount to \$26,193.60 for the year. If the entire year were prepaid, there would be a 10% discount. Ms. Bennett clarified that the new monthly total would be \$2,182.75, an increase of \$142.75.

**Staff Recommendation**

Staff recommends renewing this PASSUR Software and Equipment Maintenance agreement for one year with PASSUR Aerospace, Inc. for a total amount of \$26,193.60.

Dr. Alexander asked if the cost had increase at this rate in previous years. Ms. Straugh did not believe the cost had increased at all the previous year, but agreed to check and report back to the Board. Ms. Bushnell asked if the increase was negotiable. Ms. Straugh said they had negotiated in the past if the CPI adjustment was out of proportion. Ms. Bennett thought this was a bit higher than normal because the rates had remained steady for the past couple of years. Ms. Bennett explained that there was only one provider who did anything similar, so the Airport was, to a certain extent, forced to accept the increase.

Dr. Alexander noted that tail numbers could be blocked, and asked how prevalent this practice was. Ms. Straugh said there were a few companies who took advantage of this, either because of a wish to protect the anonymity of their clientele or because they did not want to be contacted.

Mr. Stella asked if the Airport owned the equipment. Ms. Bennett explained that they subscribed to the data and maintenance, but not the radar equipment that collected the information. Ms. Straugh pointed out that if they went to another firm, they would be forced to purchase an entire new system. Ms. Bennett said PASSUR had provided them with the information they needed for a long time and they saw no reason to sever that relationship.

**Motion** made by Ms. Iversen, seconded by Mr. Stella, to approve staff's recommendation. In a voice vote, motion passed unanimously.

## **7. City of Fort Lauderdale/Executive Airport/Stadium(s) and Vicinity Land Use Amendment**

Ms. Bennett said reminded the Board that several issues had arisen as a result of the City's discussions with the FAA regarding attempts to retain the contract with the Baltimore Orioles with a plan to redevelop both stadium properties to a larger, more modern complex. Specifically, there was an FAA requirement that any non-aeronautical use of Airport property must be a fair market value transaction. Ms. Bennett explained that when the City had conducted an appraisal of the property based on the current "open space" land use designation with recreational zoning, the appraiser had been precluded from performing a highest and best use appraisal as required by the FAA due to the existing designation. Ms. Bennett said the FAA had conducted its own appraisal and arrived at a value of \$7 per square foot, or \$1.3 million per year in rental payments to the Airport for a non-aeronautical use. This rental figure had been a deal breaker with the Baltimore Orioles and the Airport had been unable to get any exemptions to the requirement.

### **Staff Recommendation**

The staff recommends that the City submit a Land Use Amendment to change Park/Open Space designated property at Executive Airport to Transportation LU designation to comport with the surplus property deed restrictions and to allow for public airport purposes.

Ms. Bennett stated the FAA had been "not very happy to discover" that in 1969 the zoning had been changed and the land use had been changed through subsequent land use plan amendments to the open space (County) designation and recreational (City) zoning, and required the City to take immediate action to amend the zoning to an airport zoning that would not preclude aeronautical uses in the future, should the property revert back to the Airport Division.

Ms. Bennett said the City's Planning and Zoning Department had devised a strategy to address the City's mandate that the property's designation allow for aviation while also not immediately causing a compliance issue of having a use that did not conform with the land use and zoning. This would continue to allow for recreational uses while a long-term development plan was established for the property. Ms. Bennett stated the goal of the City Commission was, to the greatest extent possible, to preserve the recreational uses on this property.

Ms. Bennett described the process for the County land use plan amendment, the City's DRC process, and the City's General Aviation (GA) zoning to allow recreational uses on GA zoned property. She added that the GA zoning only existed at the Airport, so this would preclude any airport use in any other City park.

Ms. Bennett added that if Amendment 4: Hometown Democracy passed in the fall, they could run into some issues because there were no grandfathering provisions. Ms. Bennett said the City Attorney was clarifying the federal preemptions as a route they might be able to use instead.

Mr. Jim Koeth, Planning and Zoning Department, explained they were currently in the transmittal stage to Broward County. This step was necessary because the City's land use map must match the County's land use map. The Planning and Zoning Board would then need to make a recommendation to the City Commission. After the County Commission approved this for transmittal, it would be reviewed by the South Florida Regional Planning Council and the Florida Department of Community Affairs. After adoption by the City, it must go back to the County for re-certification of the land use map.

Mr. Niewiński stated the City of Oakland Park opposed this change because it would open up expansion of the Airport and bring operations closer to Oakland Park neighborhoods. Ms. Bennett explained that the FAA was requiring the Airport to make this change because there was a deed restriction indicating the property could be used for airport purposes only. Although the stadium property was allowed to be used for recreational use, the FAA always intended that as an interim, short-term use and if it were needed for aviation, the property would be converted to aviation. This change did not mean there would soon be aircraft activity on this property; it allowed the Airport to comply with FAA requirements.

Dr. Alexander asked about the vision for the use of the property. Ms. Bennett said the City had received proposals from athletic organizations, and the Commission had directed staff to receive proposals from these groups and submit to the FAA for review. The idea was to try to gauge if any of those uses met the FAA criteria for how airport property was used for non-airport uses. They had not yet heard back from the FAA on these proposals.

Ms. Bennett stated the criteria to be exempt from the fair market requirement included the interim nature of the use, proof that the property was not needed for aviation within the interim period, proof that the revenue received from a non-aviation use would be de minimis and that the use would generate goodwill in the community for the Airport.

Ms. Iversen asked what would happen if the proposal for the change was denied and they were not in compliance. Ms. Bennett explained that typically, the FAA would first withhold funding for any future grants. Next, the FAA could make them pay back the existing grants. Next, the FAA could assess civil fines and penalties. Ultimately the FAA could take the Airport away from the City and give to another entity to operate.

Dr. Alexander felt the FAA would never accept a proposal for a water park with such a long timeline. Ms. Bennett said a Master Plan had a 20-year time horizon, and in their last Master Plan that was being updated during negotiations with the Orioles, they had shown that within a 20-year horizon they could meet their growth needs by converting other properties to aviation.

Ms. Bennett said they believed a mistake had been made when the land use was changed; when the change was made they had not looked at the quitclaim deed, they had only considered the use. So they were questioning whether the mistake could be "undone" without the lengthy process, and they had prepared a letter pursuant to this that was under review by the City Attorney.

Mr. Niedwiecki understood that costs could be borne by Fort Lauderdale, but he felt severe costs could be borne by the City of Oakland Park. Whenever the Airport was expanded, Oakland Park did not realize the benefit, but they did realize the cost.

Ms. Carhart pointed out that "the move you may be opposing is that one move that allows the continuation of this recreation use." She acknowledged that this might be a difficult reality to explain to a constituency, but the reality was that they might be in opposition to the thing that was really serving their interest.

Ms. Bennett stated the FAA's biggest concern was always setting precedents; this was why this was such an issue for them. There were airports all over the country where land use issues were coming to the forefront.

Ms Bennett said the Airport staff's main objective was to recommend that they not continue to be in non-compliance. The Airport served a vital economic role in the area, and the City had always complied with FAA requirements.

Dr. Alexander noted that if this "came to a head" it would mean an end to the kind of progress the Airport had seen for the last 20 years with the 95% funding that came from the FAA.

**Motion** made by Ms. VanValkenburgh, seconded by Mr. Larkin, to approve staff's recommendations. In a voice vote, motion passed unanimously.

## **UPDATE ITEMS**

### **A. Noise Compatibility Program**

#### **FAA Reauthorization Bills - Provision to Ban Stage 1 and 2**

Ms. Straugh reported that both the Federal Senate and House of Representatives had passed the FAA reauthorization bill, with each version including a provision to ban Stage 1 and 2 aircraft.

#### **I-95 Turn Procedure**

Ms. Straugh described how the I-95 turn worked. Between the hours of 11:00 p.m. and 7:00 a.m., all jet aircraft departing Runway 8 were assigned a northwest heading, except air ambulance flights, emergencies and during adverse weather conditions.

#### **Nighttime and I-95 Turn**

For March 2010, there was one (1) noise event over 80 dB at night between 10:00 p.m. and 7:00 a.m. There were five (5) nighttime straight-out departures, one (1) was a stage-two aircraft, air ambulance flight and four (4) were stage-three aircraft with one (1) being an air ambulance flight. Four (4) of the aircraft departed before 11:00 p.m. and one (1) departed at 6:30 a.m.

#### **Noise Abatement Program Statistics**

Noise abatement program statistics for March 2010 were included in the Board's packet.

## **B. Development and Construction**

### Airport Projects In Development

#### **Taxiway Bravo Pavement Rehabilitation Project # 11134 – Weekly Asphalt**

Mr. James reported the project was 85 to 90% complete, and was now in Phase 6. One of the critical aspects of Phase 5 had been the closure of the Taxiway Charlie ramp and coordinating access for pilots to and from the taxiway runway system. This closure had gone well, but as they entered Phase 7, the Bravo 5 taxiway connector would be closed, leaving only one way in and one way out.

Mr. James explained that Phase 7 would involve milling and overlaying of asphalt. Staff would meet with tenants responsible for the ramp area to coordinate alternate parking for the aircraft operators for the few days it would take to complete the project. Mr. James hoped the project would be completed by the end of May.

Mr. Cervasio thanked Banyan Air for moving their aircraft to allow other aircraft to taxi along their ramp to the Bravo connector. He added that Weekly Asphalt had been very accommodating regarding the Super Bowl and had completed work as quickly as possible.

## **C. Arrearages**

Ms. Bennett reported there were no rent or fuel flow arrearages for March 2010.

## **D. Communications to the City Commission**

None

## **E. FLL Update**

Ms. Straugh reported a runway closing from May 16 to July 6 from 11 p.m. until 5 a.m. for maintenance.

## **F. Runway Safety Presentation**

Ms. Bennett gave a Runway Safety PowerPoint presentation, a copy of which is attached to these minutes for the public record.

### Other items and announcements

This item was taken out of order.

Chair Brenneman drew Board members' attention to the Earth Day gifts provided by staff.

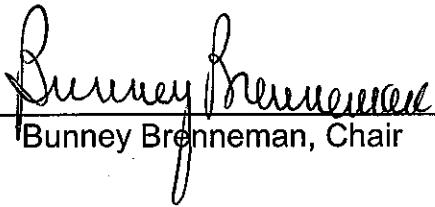
Chair Brenneman announced that it was Ms. Minard's birthday.

Chair Brenneman announced the Better Meetings Academy would take place on April 27 at 5:45 p.m. and on June 7 at 5:45 p.m. on the third floor of City Hall. She urged Board members to attend.

Mr. Niedwiecki thanked everyone and asked that staff continue to send him the agenda that he would forward to the appropriate party.

There being no further business before the Board, the meeting adjourned at 3:40 p.m.

- Next scheduled meeting date: Thursday – May 27, 2010 – 1:30 PM

  
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Bunney Brenneman, Chair

**PLEASE NOTE:**

If any persons decide to appeal any decision made with respect to any matter considered at this public meeting or hearing, he/she will need a record of the proceedings and, for such purpose, he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.



**“From the Ground Up”  
Report on Ongoing  
FXE Runway Safety Initiatives**

April 22, 2010  
Aviation Advisory Board Meeting  
Update Item F

## **Introduction**

**Purpose:**

- **FXE Runway Safety Overview - Update**
- **Q&A - Discussion**

**Highlights:**

- **Background – Context**
- **Data - Analysis**
- **Runway Safety Program - Project Initiatives**

Background

# FXE Property & Community FAQs

**PROPERTY**

- 1,000 Acres Airport Property  
800 Airfield  
200 Non-Airfield
- 400+ Hangars
- 2 Million sq ft Office Warehouse
- 1 Million sq ft Hangar

**TENANTS**

- 20 Aviation Tenants (+ Subs)
- 22 Non-Aviation Tenants (+ Subs)
- 6 FBO's
- Est. 700 Aircraft

**PROGRAMS & OPERATIONS**

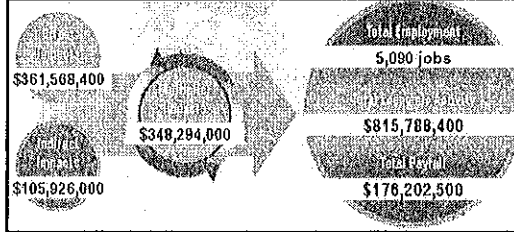
- 200,000 Operations/Yr
- 24-7-365 Tower
- 12-7-365 Customs
- 24-7-365 Security
- 24-7-365 ARRF
- Designated Police Detail
- \$30.5 million in Airfield Safety Improvements over 10 years

**ECONOMIC DEVELOPMENT**

- Total Employment: 5,090
- Total Payroll: \$176,202,500
- Total Output: \$815,788,400

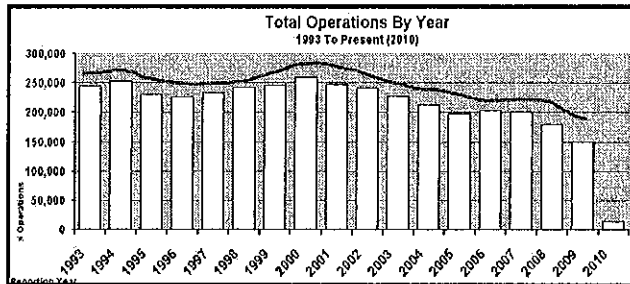
Two major tenants at the airport include Hop-A-Jet Worldwide Jet Charter, an aircraft charter company, and Banyan Air Services, the airport's largest fixed base operator (FBO). Fort Lauderdale Executive serves as a corporate aviation and charter flight center for South Florida. In addition, there is a notable volume of air ambulance and medical activity, flight training, recreational flying, and real estate and sightseeing tours that take place at the airport. All of the airport's tenants and flight activities are important to the airport's revenue streams and to the airport's economic impacts.

The annual economic impact of Fort Lauderdale Executive Airport is associated with direct impacts that come from tenants/businesses located at the airport and construction projects that are undertaken by the airport or by on-site businesses. Indirect impacts are associated with spending from visitors who arrive in the area via general aviation aircraft. The airport's total annual economic impact follows:

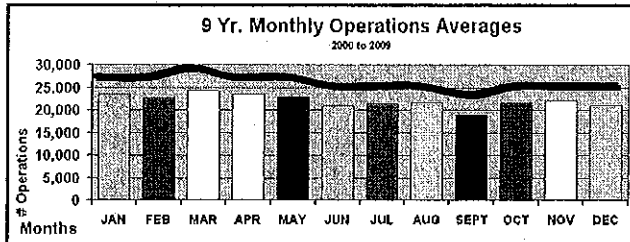


2010 FDOT Aviation Economic Impact Study  
Complete Technical Study Available April 2010 at:  
<http://www.dot.state.fl.us/Aviation/economicimpact.shtm>

## Operations – A Busy GA Airport



Year	Operations	Change
2000	259,878	5.9%
2001	246,518	-5.1%
2002	240,625	-2.4%
2003	228,899	-5.8%
2004	212,246	-6.4%
2005	197,397	-7.0%
2006	202,154	2.4%
2007	200,094	-1.0%
2008	180,081	-10.0%
2009	149,637	-16.9%

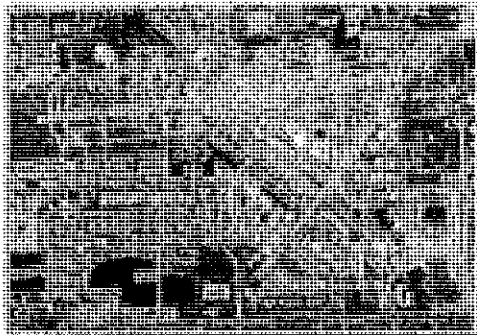


- Consistently one of the busiest general Aviation airports in the country
- Recent declines associated with economic downturn
- No real "season" though operations run a bit higher in the winter-fall period
- High levels of non-based, visitor pilots

## Environment – A Busy Airfield Map



## Regarding Relative Complexity of Airfield Geometry



### Boca Airfield Layout:


- Single Runway
- Single Taxiway
- No Runway Crossings

### FXE Airfield Layout Complexity as a Factor:

- 2 Runways
- 5 Full Length Parallels
- Multiple Connecting Taxiways




# Regarding Roles & Responsibilities

<p><b>Primary Role</b></p> <ul style="list-style-type: none"> <li>Regulating civil aviation to promote safety</li> <li>Encouraging and developing civil aeronautics, including new aviation technology</li> <li>Developing and operating a system of air traffic control and navigation for both civil and military aircraft</li> <li>Researching and developing the National Airspace System and civil aeronautics</li> <li>Developing and carrying out programs to control aircraft noise and other environmental effects of civil aviation</li> <li>Regulating U.S. commercial space transportation</li> </ul> <p><b>Safety Regulation</b></p> <ul style="list-style-type: none"> <li>Issue and enforce regulations and minimum standards covering manufacturing, operating, and maintaining aircraft</li> <li>Certify airmen and airports that serve air carriers</li> </ul> <p><b>Airspace and Air Traffic Management</b></p> <ul style="list-style-type: none"> <li>Ensure the safe and efficient use of navigable airspace</li> <li>Operate a network of airport towers, air route traffic control centers, and flight service stations</li> <li>Develop air traffic rules, assign the use of airspace, and control air traffic</li> </ul> <p><b>Air Navigation Facilities</b></p> <ul style="list-style-type: none"> <li>Build or install visual and electronic aids to air navigation</li> <li>Administer, operate, and assure the quality of these facilities</li> <li>Sustain other systems to support air navigation and air traffic control, including voice and data communications equipment, radar facilities, computer systems, and visual display equipment at flight service stations</li> </ul> <p><b>Research, Investigation, &amp; Development</b></p> <ul style="list-style-type: none"> <li>Conduct research on and develop the systems and procedures we need for a safe and efficient system of air navigation and air traffic control</li> <li>Help develop better aircraft, engines, and equipment and test or evaluate aviation systems, devices, materials, and procedures</li> <li>Conduct aeronautical research</li> </ul> <p><b>Other Programs</b></p> <ul style="list-style-type: none"> <li>Register aircraft and record documents reflecting title or interest in aircraft and their parts</li> <li>Administer an aviation insurance program, develop specifications for aeronautical charts, and publish information on airports, airport services, and other technical subjects in aeronautics</li> </ul>	<p><b>Fort Lauderdale Executive Airport, FTX</b></p> <p><b>Primary Role</b></p> <ul style="list-style-type: none"> <li>Airfield, airport property owner/manager</li> </ul>  <p><b>Develops, Maintains and Operates Airfield</b></p> <ul style="list-style-type: none"> <li>Daily airfield inspections</li> <li>Airfield maintenance</li> <li>Pavement maintenance and rehabilitation</li> <li>Proper signage, marking, and lighting</li> <li>Environmental compliance and Waste management</li> <li>Long-term planning and development</li> <li>Airfield Security</li> </ul> <p><b>Establishes Minimum Standards for Based Businesses</b></p> <ul style="list-style-type: none"> <li>Minimum insurance requirements</li> <li>Verification of appropriate FAA certifications</li> <li>Compliance with all governmental regulations</li> <li>Minimum levels of service to public</li> <li>Emergency contact information</li> </ul> <p><b>Establishes Rules and Regulations (Chapter 7, M.B.R.R)</b></p> <ul style="list-style-type: none"> <li>General conduct</li> <li>Aircraft operations in accordance with federal regulations</li> <li>Vehicle safety on ramps and movement areas</li> <li>Food operations</li> <li>Security procedures</li> </ul> <p><b>Establishes Development Guidelines</b></p> <ul style="list-style-type: none"> <li>Standard leases</li> <li>Market-based rates and charges</li> <li>Development criteria and minimum investment requirements</li> </ul> <p><b>Develops and Implements Noise Abatement Procedures</b></p> <ul style="list-style-type: none"> <li>Must have FAA approval</li> <li>Supported by community and pilots</li> <li>Continuous monitoring and reporting</li> </ul> <p><b>Develops and Implements Safety Programs</b></p> <ul style="list-style-type: none"> <li>FTX has invested \$30.5 million in airfield safety improvements in the last 10 years</li> <li>Strict Enforcement of Rules and Regulations and compliance with operating standards</li> <li>Extensive communications with airport users and operators and community outreach programs</li> <li>Regular coordination with industry groups representatives to ensure timely and current dissemination of safety information</li> <li>Multiple Safety/Security measures with supplemental law enforcement coordination</li> </ul>
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**We have no jurisdictional authority or responsibilities related to aircraft, airspace, pilots or the actual control and operation of the airfield.**

**The FAA handles the certification, standards, and licensing of pilots and aircraft. The Air Traffic Control (ATC) personnel operate the airfield.**

**Our job is to manage the property and assure the safe and secure condition of the airfield and it's surrounds. We do this through a variety of promotional, programmatic and capital initiatives.**



**Federal Aviation Administration**

## FAA Safety Monitoring & Measures

<p><b>Surface Incident</b> - Movement Area -</p> <p>Any event, including runway incursions, other than an accident, where <u>unauthorized or unapproved movement occurs within the airport surface movement area or an occurrence in the airport surface area associated with the operation of an aircraft that affects or could affect the safety of flight.</u></p>	<p><b>Runway Incursion</b> - Runways -</p> <p><i>Previous Definition:</i> Any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in a loss of separation with an aircraft taking off, intending to take off, landing, or intending to land.</p> <p><i>New Definition:</i> FAA defines incursions as any <u>incorrect presence of an aircraft, vehicle or person on a runway, regardless of the presence of an aircraft intending to land or take off.</u></p>
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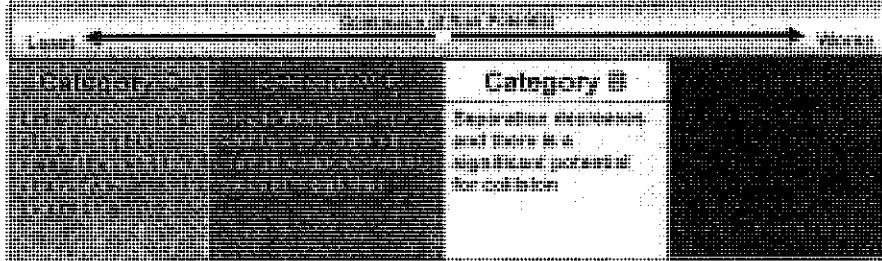
**IMPLICATIONS/Results:**  
More Incursions Being Reported

Source: FAA Definitions per Regional Runway Safety Team

# Categories of Runway Incursions

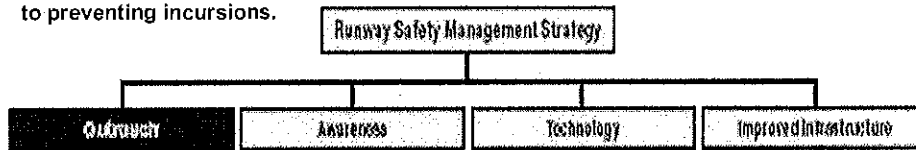
## Types and Degree of Severity

- 1 **Operational Error (OE)** - A failure of the air traffic control system that results in loss of separation.
- 2 **Pilot Deviation (PD)** - The action of a pilot that results in violation of the Federal Aviation regulations (FAR).
- 3 **Vehicle/Pedestrian Deviation (V/PD)** - Any entry or movement on the movement area by a vehicle or pedestrian that has not been authorized by air traffic control. This runway incursion type includes mechanics taxiing aircraft for maintenance or gate re-positioning.



## FAA Safety Initiatives – RSAT’s

The sheer number of flights, people and vehicles moving across airport runways and taxiways means there is no single way to reduce runway incursions. Runway safety is a shared responsibility among pilots, controllers, and vehicle drivers. Automated warning systems enhance runway safety, but education and situational awareness are the keys to preventing incursions.



A Runway Safety Action Team (RSAT) is established at either the regional or local level to develop a Runway Safety Action Plan for a specific airport. The RSAT's primary purpose is to address existing runway safety problems and issues. A secondary purpose is to identify and address potential runway safety issues. The differences between regional and local teams are explained below. RSATs operate in accordance with this order and standard operating procedures issued by the Office of Runway Safety.

- Collaborative Assessments
- Airport Specific Plans
- Coordination of Effort

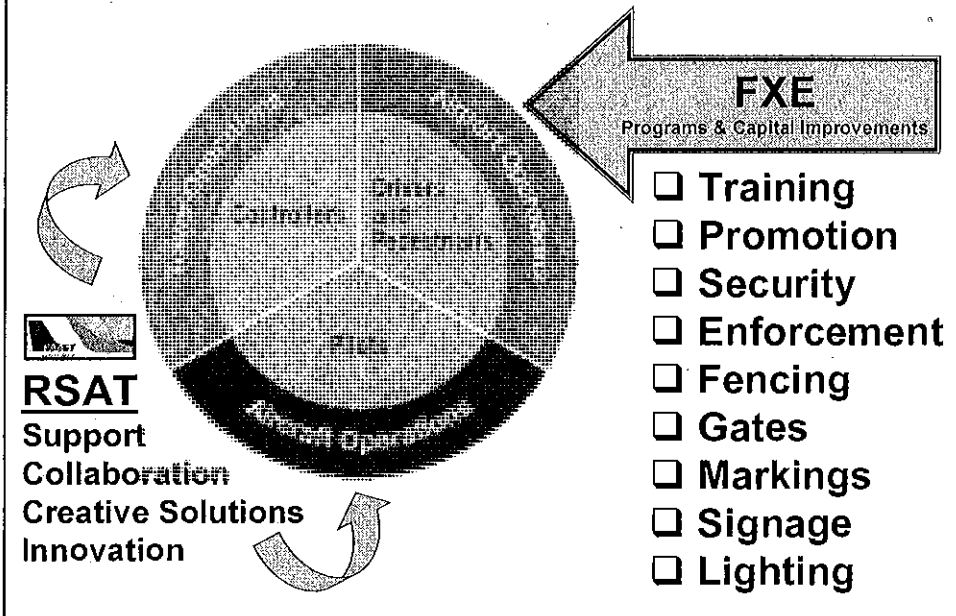


FAA Runway Safety Action Teams at FXE

Ongoing Since Late 90's  
Recent

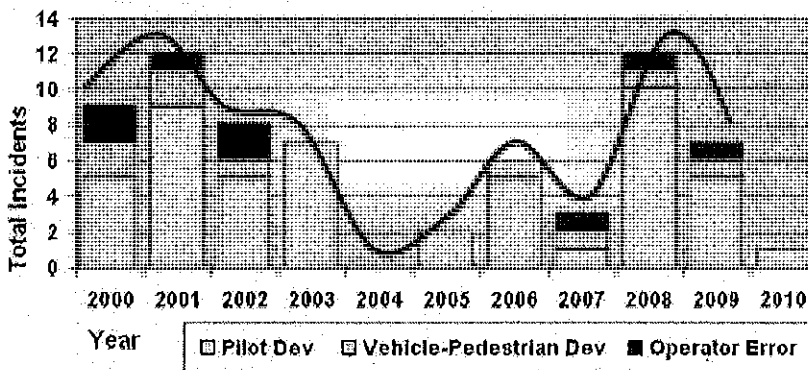
- March 2008
- March 2010

# Everybody's Job #1: A Great Airport, Safe & Secure



## Cumulative - Historical Data

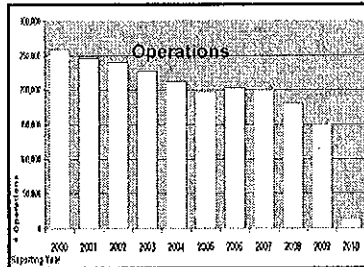
2000-2010 Surface Incident Counts



Pilots - PD	49	75%
Vehicles & Pedestrians - V/PD	9	13%
Controller - OE	8	12%

# Historical Data – Updated Data

	INCURSIONS - Types						INCURSIONS - Severity					
	TotOps	PDs	VIPDs	OEs	TotIncr		TotOps	A	B	C	D	TotIncr
2000	259,876	6	2	2	9	2000	259,876	0	0	4	5	9
2001	246,518	9	2	1	12	2001	246,518	0	1	2	9	12
2002	240,625	5	1	2	8	2002	240,625	0	0	4	4	8
2003	226,699	7	0	0	7	2003	226,699	0	1	1	5	7
2004	212,246	0	0	0	8	2004	212,246	0	0	0	0	0
2005	197,397	2	0	0	2	2005	197,397	0	0	1	1	2
2006	202,154	5	1	0	6	2006	202,154	0	0	0	6	6
2007	200,094	1	1	1	3	2007	200,094	0	0	1	2	3
2008	180,081	10	1	1	12	2008	180,081	0	0	6	6	12
2009	149,637	5	1	1	7	2009	149,637	0	0	6	1	7
2010	25,766	1	0	0	1	2010	25,766	0	0	0	1	1
<b>Totals</b>	<b>2,141,093</b>	<b>50</b>	<b>9</b>	<b>8</b>	<b>67</b>	<b>Totals</b>	<b>2,141,093</b>	<b>0</b>	<b>2</b>	<b>25</b>	<b>40</b>	<b>67</b>
		<b>76%</b>	<b>13%</b>	<b>12%</b>				<b>0%</b>	<b>3%</b>	<b>37%</b>	<b>60%</b>	



Predominantly  
Pilot Deviations  
(76%)

Predominantly  
Low Severity  
(97%)

# Analysis – Contributing Factors

- 67 Reports in 10 yrs = Average 6.7 yr 3+ per 100,000 operators
- Predominantly Pilot Deviations (76%)
- Predominantly 'C' & 'D' Severity (97%)
- High Incident Locations & Issues Identified & Addressed

- Human Factors – People, Missions, Manual
- Pilot Diversity – Variable Training & Experience
- Transient Pilot Population – Love of Non-Locals
- High Volume of Surface Movements – Intensity of Development & Uses
- Traffic Volume – Avg. 2.5,000 Operations Per Year
- Relative Airfield Geometry Complexity
- Controller Perception/Discretion
- Data Availability – Communications, Monitoring, Reporting
- Realities vs. Perception – Trends, Media, Severity, etc.

## Framing the Issues & "Fixes"

### Issues:

- Perimeter Hardening, Access Control, Monitoring
- Visibility, Legibility, Uniformity, Clarity Of Airfield: Markings, Signs, Lights
- Awareness & Recognition Initiatives
- Monitoring & Enforcement

### Fixes:

- "Hot Spots" – Prioritizing Corrective Actions & Completing Timely Interventions
- Move Toward Standardization & Enhancement
- Programmatic Solutions – Training & Promotion, Operations & Enforcement
- Physical improvements - Target Hardening, Situational Awareness & Legibility

## Addressing the Issues

### PROGRAMS

#### Training, Promotion, Operations & Enforcement

- Distributed Materials to Improve Wayfinding on Airfield & Roadways -- Maps, Decals, Notices & Reminders
- AOA Driver Training
- AOA Construction Workshops
- AOA Award/Incentives Program
- Ramp Permit Program
- Pilot Safety Workshops & Briefings
- Electronic Message Boards
- Safety Orientation for On-Site Agencies
- Warning Ticket Initiative
- Added Police Detail
- Added A Full-Time Security Guard
- Added Full-time Electrician for Gate Maintenance & Repair
- Perimeter Security & Access Studies

### PHYSICAL IMPROVEMENTS

#### Target Hardening, Situational Awareness & Legibility

#### To Aid Pilots

- Airfield Signage
- Airfield Markings
- Runway Guard Lights

#### For Vehicles & Pedestrians

- Roadway Signage
- Fences and Gates
- Security System
- Wayfinding Program

#### Surface Incident Hot Spots

- Removal of Excess Pavement
- Fences and Gates
- Taxiway Guard Lights



## 2000-10 PROGRAMS & PROJECTS A Decade of Prevention & Corrective Action

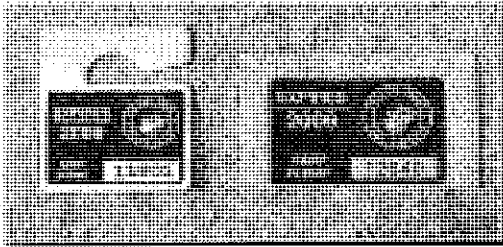
### Programs – Operations

- Training
- Promotions
- Administrative Controls
- Monitoring & Oversight



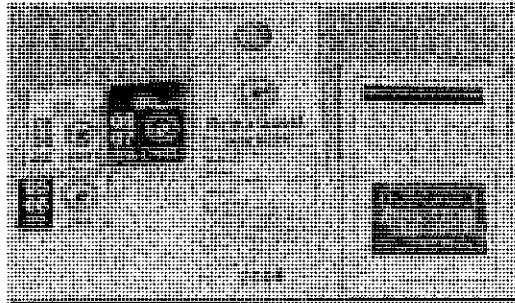
Runway Safety Improvements  
April 2010

**Programs:  
Gate Cards, Ramp Permits & Ramp Driving  
Guidelines**



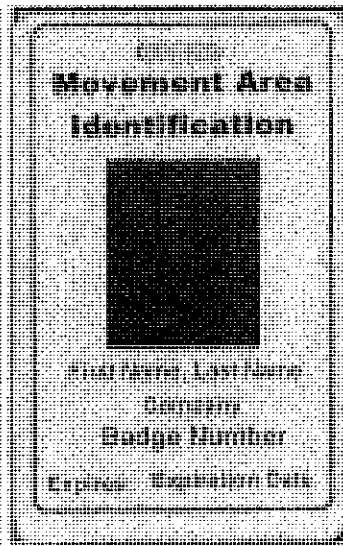
1. All Vehicles in Ramp Areas Must Display a Current Ramp Permit
2. Permits Issued at Time of Gate Card Application
3. Parking Tickets Issued for Ramp Permit Violations

4. Guest Permits Processed as Needed
5. Booklets Distributed to Detail Program Requirements
6. Signature Required to Acknowledge Receipt of Materials



**Programs:  
AOA Driver Training**

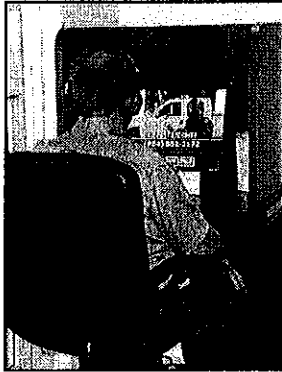
- Established Initial Training to Promote Awareness and Adherence to Movement Area Requirements
- Completion of Training & Passage of Written Test Required for Issuance of AOA Movement Area Badge
- Unique Identifier Assigned to Each Badge Holder – i.e. Name Specific & Badge ID Numbers Provided to Tower
- Annual Recurrent Training



**Programs:**

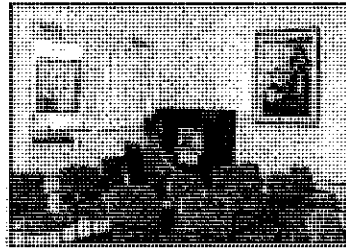
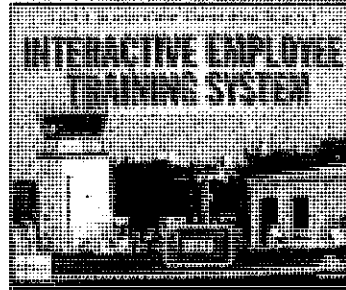
**Interactive AOA Recurrent Training**

- Computer-based Interactive Training System
- FDOT Funded, \$130,000
- Video Footage Filmed On Site
- Secure/Redundant Database to Track Name, Data, Employer and Courses
- Provides for Recurrent Training



Purpose is to Provide Airport employees and tenants with:

- A Better Understanding of Airport Security Procedures
- Ability to Recognize Suspicious Behaviors
- A Working Knowledge of Ramp Driving Procedures



**Programs:**

**Construction Personnel Training**

- Current/Ongoing -

**INITIAL TRAINING**

Air Operations Area  
Security & Safety  
Construction/Access  
Road



**Movement Area Safety**

1. Do not enter the Movement Area construction site without a pass.
2. Look both ways before entering or crossing a runway or taxiway.
3. Constantly scan for aircraft. Be alert for helicopters or other aircraft.

**Construction Setup**

- Mark the construction area
- Use cones or barricades to mark unsafe areas.
- Provide access to airfield only to your work area.
- Stay alert to activity around your work area.
- Think safety and security.

**Construction Before the end of the working day...**

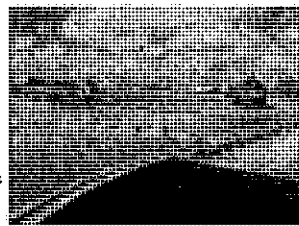
- Clean-up the work area.
- Impact the work area for safety.
- SECURE the work area.

- Every Project
- All Personnel on Project Site
- Everyone Issued a Badge
- Regular/Ongoing Monitoring & Oversight

**Construction Emergencies Other than Fire, Injury, or Crime:**

- Broken water pipe
  - Broken electrical or phone line
  - Problem with a Tenant or person.
- Contact Security to reach Operations (954) 882-3172

**Specialized Training also Provided for Police, Security & Fire Personnel**



Programs:

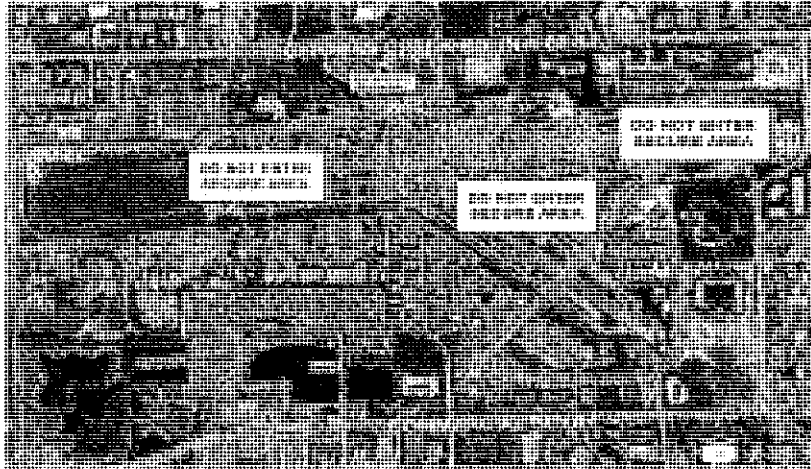
## Pilot Awareness Initiatives

- Regular Distribution of Notices and Flyers to Emphasize Runway Safety
- Regular Pilot Controller Forums
- Runway Safety Content Added to and Emphasized in Pilot Workshops
- Use of Electronic Message Boards For Safety Related Communications
- Outreach to Various Industry Groups/Meetings
- Physical Improvements Constructed to Increase Situational Awareness. Worked With FAA to ID 'Hot Spots'

## Physical Improvements

- Roadway Signage
- Fences & Gates
- Airfield Signage
- Airfield Markings
- Pavement Rehabilitation

**Physical Improvement:  
Issue: People Got Lost, Too Few Physical & Visual Cues  
Fix: Street Addressing Program**



Implemented a Conventional Street Numbering & Hangar Addressing System To Improve Way Finding, Developed an Address Base Map, Broadly Distributed Updated Map

**Physical Improvement (2010):  
Signage/Wayfinding**

Fort Lauderdale Executive Airport  
Aviation Services "Wayfinding"

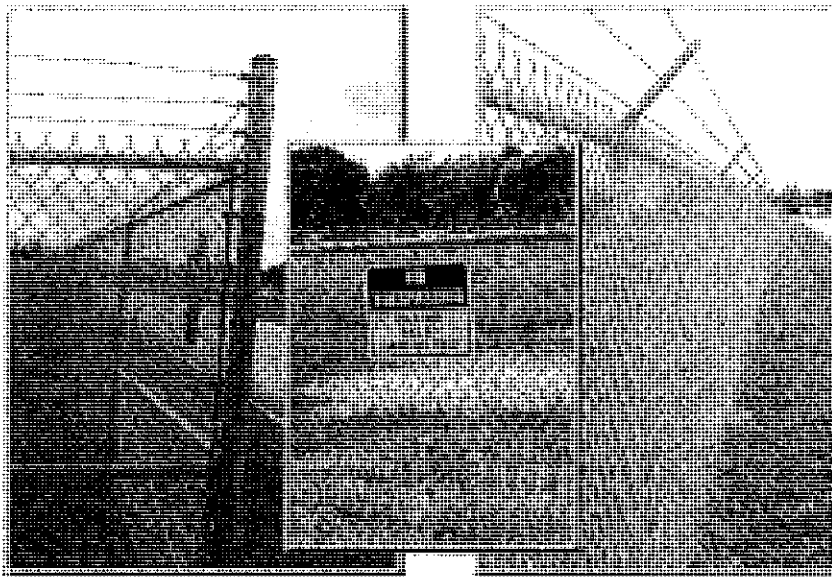
14 Geographic Zones - 26 Total Signs  
2-Main FXE Signs - 24-Tenant Signs  
75 Individual Listings

**Physical Improvement:  
Issue: Inadequate & Non-Standard Security Barriers**

- No Standardized Fence & Gate Heights
- Phased/Protracted Implementation
- Entire Property Not Fully Enclosed



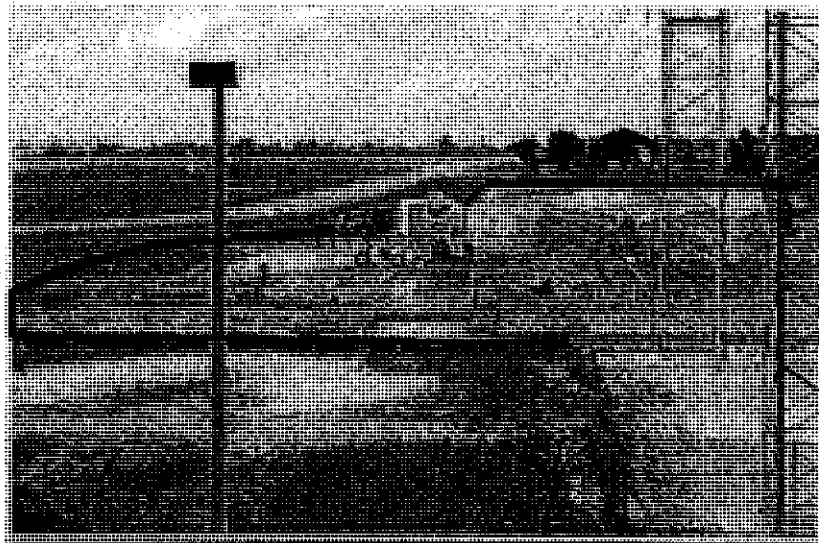
**Physical Improvement:  
Fix: Installed Approximately 5 Miles of Perimeter Fence**



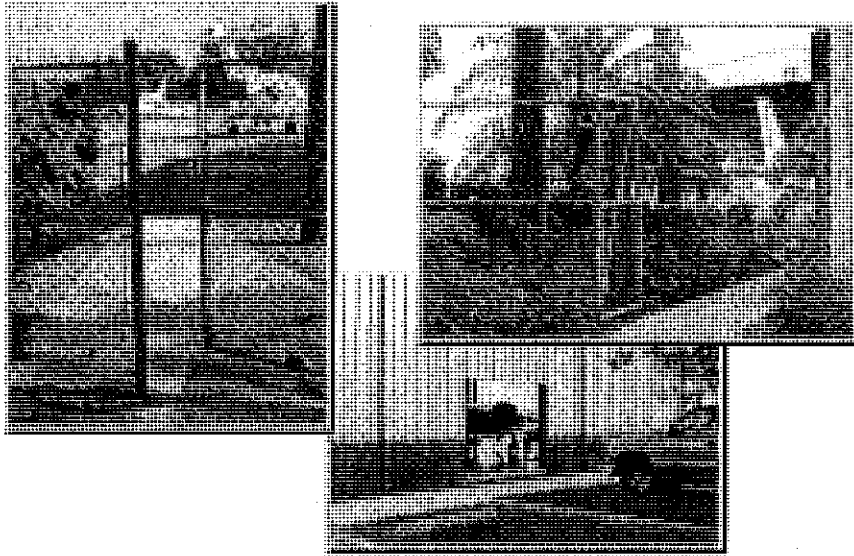
**Physical Improvement:  
Fix: Perimeter Fence & Gate System**



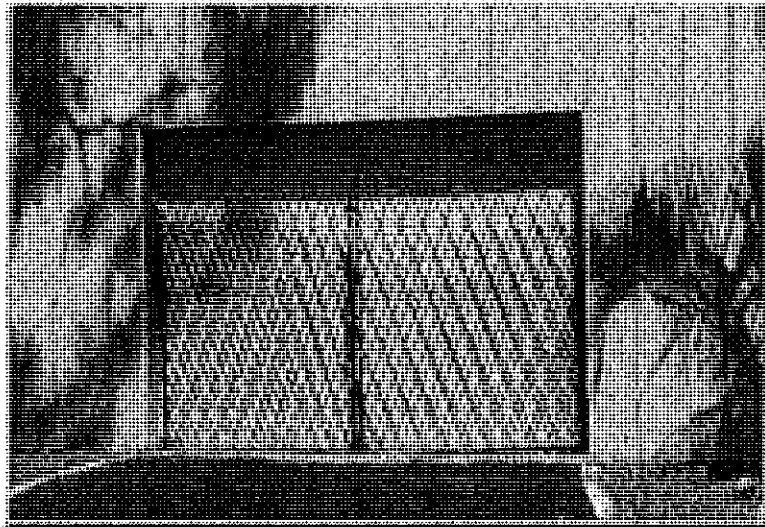
**Physical Improvement:  
Fix: All Construction Projects Adjacent to Airfield Are Secured With Temporary Fencing**



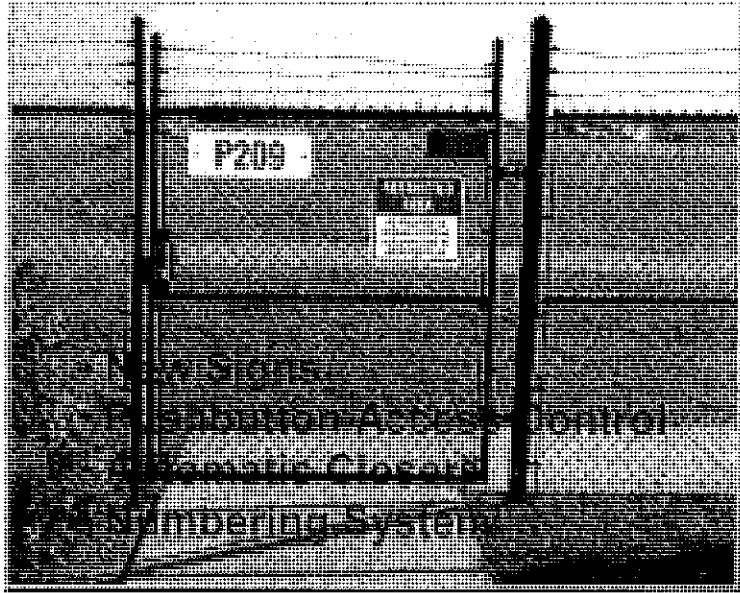
**Enforcement Challenges & Frustrations of GA Security  
Issue: Open Doors Open Gates**



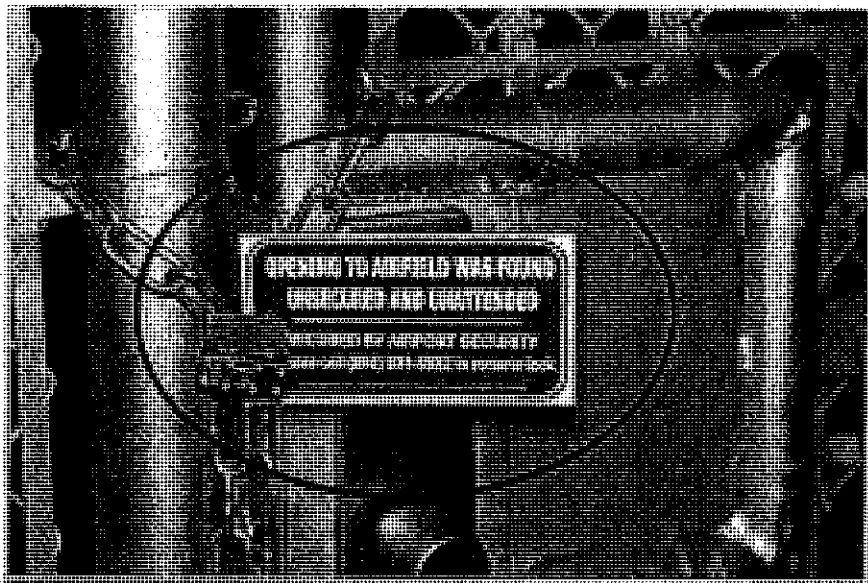
**Physical Improvement:  
Fix: All Overhead Doors On Tenant Hangars  
Secured With Scissor Gates**



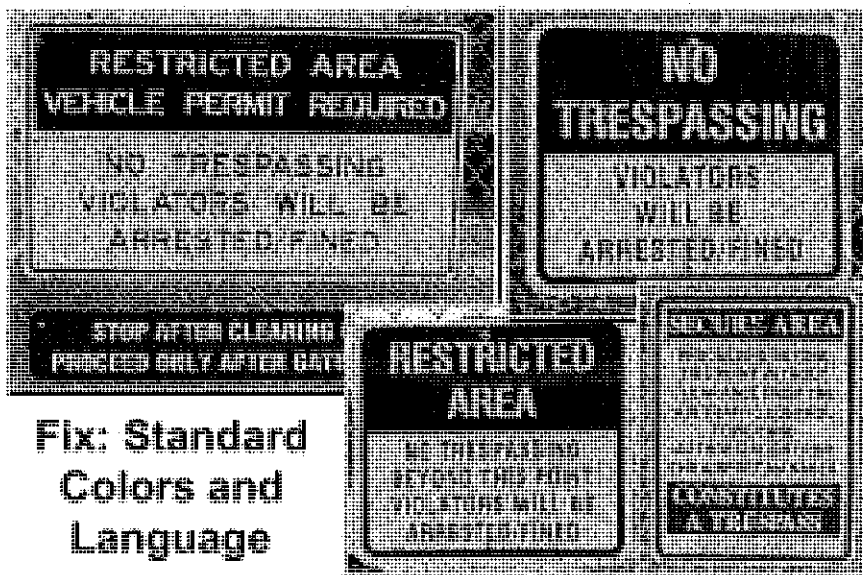
**Physical Improvement:  
Fix: New Pedestrian Gates**



**Enforcement:  
Fix: Pedestrian Gates Found Open Are Closed & Locked**



## Physical Improvement: Fence and Gate Signage



**Fix: Standard  
Colors and  
Language**

## Programmatic & Physical Improvement (2010): Security Improvements

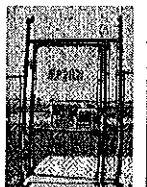
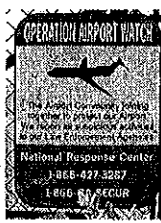
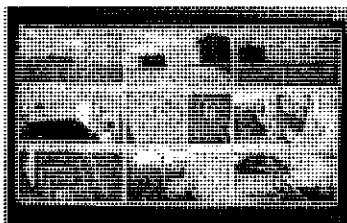
- Implemented, Based on 2007 Security & Access Study -

### HELISTOP

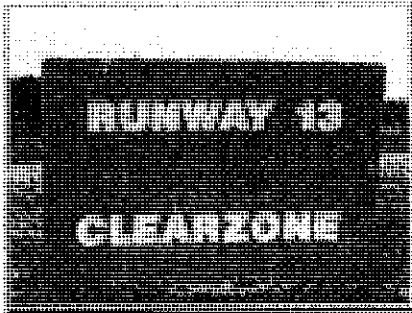
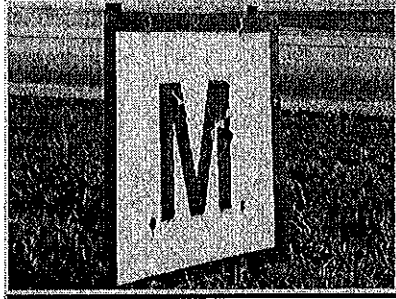
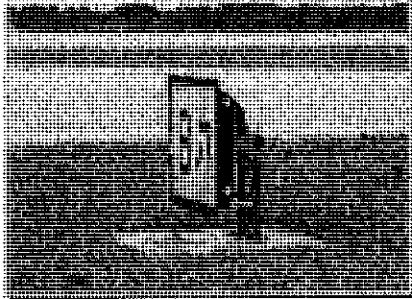
- 8 Cameras, New Digital Video Recorded
- Linkage to Airport Security Monitoring System

### AIRFIELD

- Vehicle Gate Improvements
- 32 New/Better Pedestrian Gates
- Industrial Wireless Fire & Crash Gates
- 57 Gate Monitors/Transmitters, 12 Repeaters, 27 Receivers
- Software - Intelligent Video, Real-time Alarms



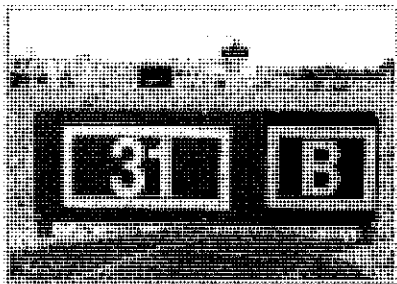
Physical Improvement:  
**Issue: Non- Standard Airfield Signage**



PRE-2000

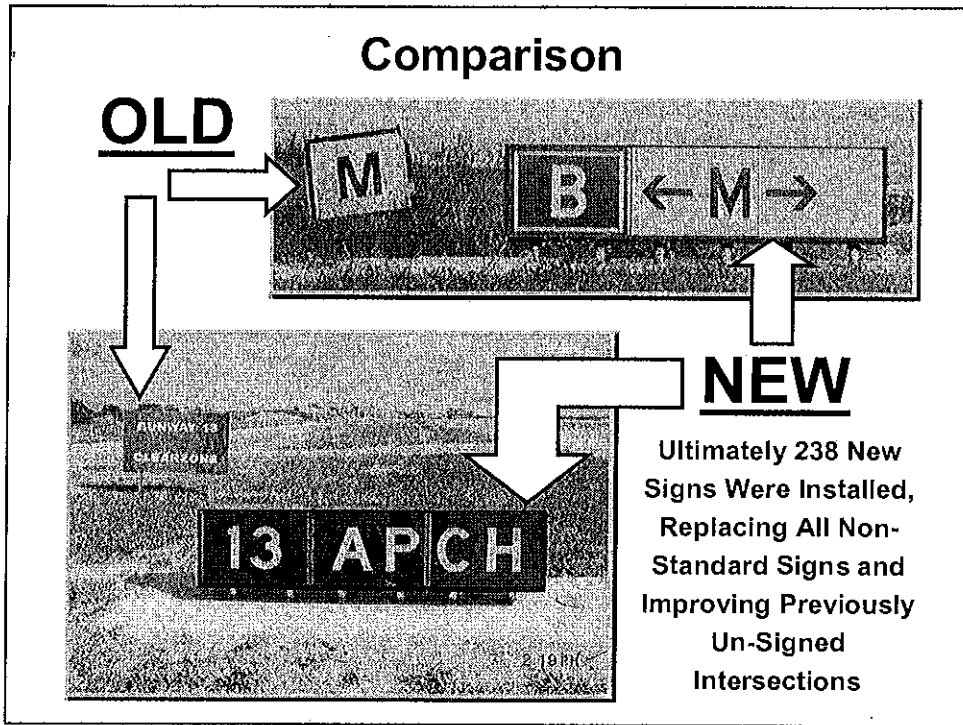
- Non-Standard
- Un-Lit
- Stake Mounted

**Interim Fix: Airfield Signs**



Interim Improvement

- Consistent Design
- Un-Lit
- Stake Mounted

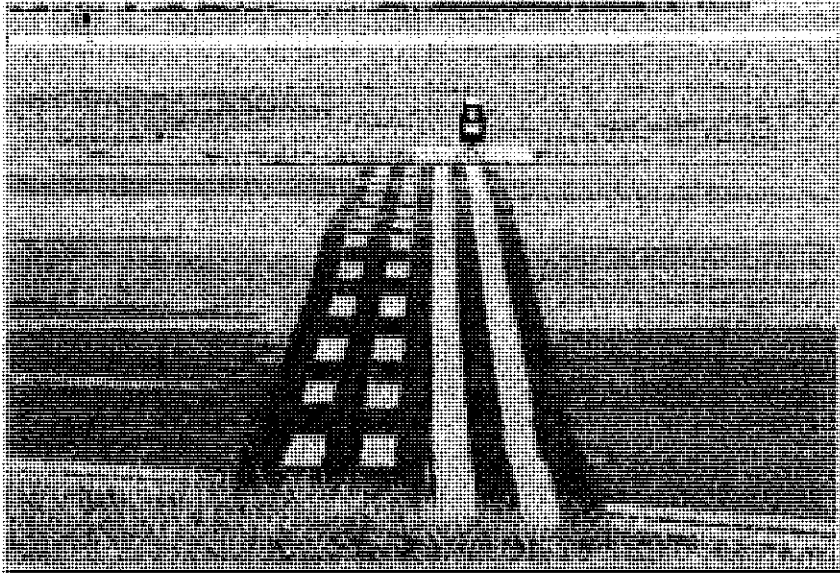


### Physical Improvement: Issue: Surface Markings Were Not Clearly Visible

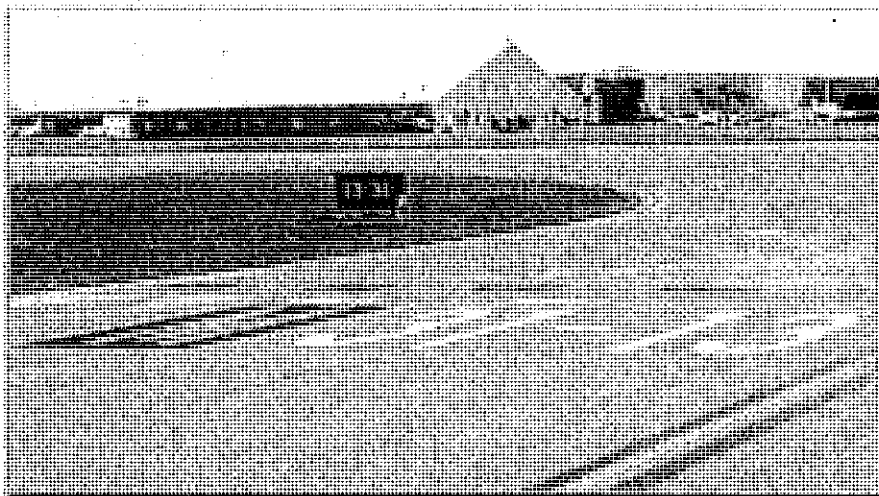
Pre 1999

- Hold Short Bar
- Un-enhanced Centerlines
- Faded Paint

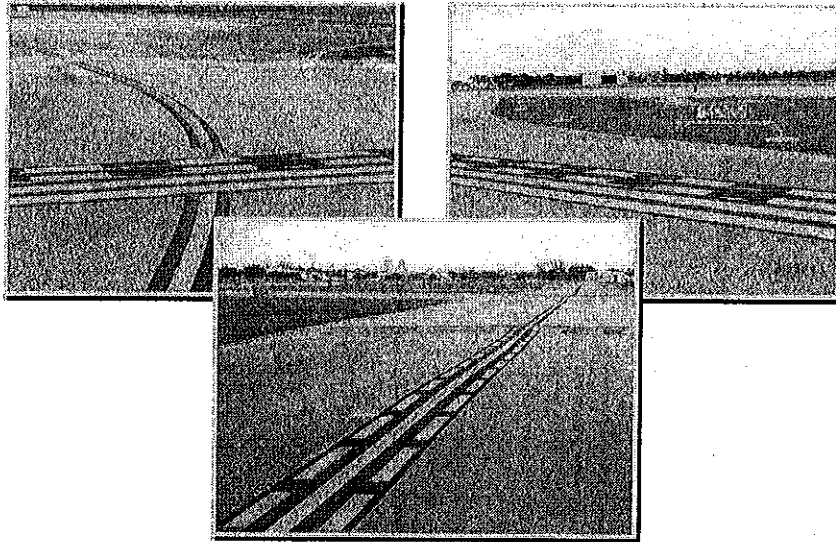
**Intermediate Fix: Outlined Markings in Black to Increase Visibility**



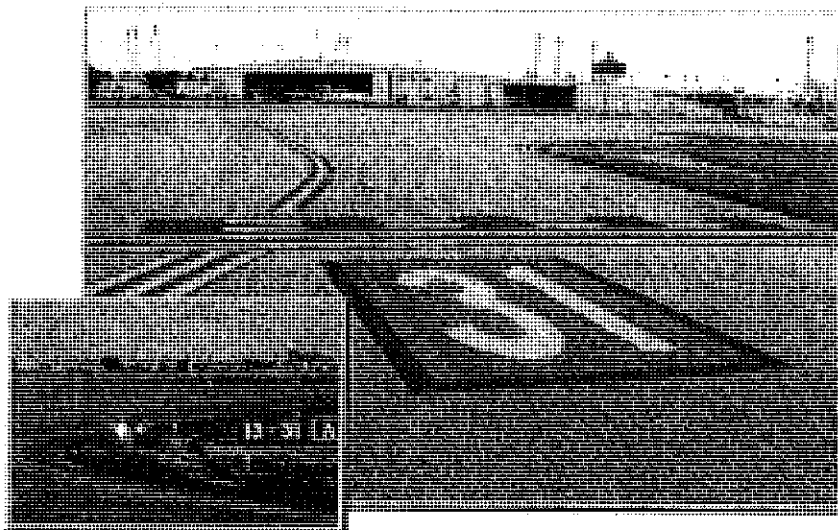
**Physical Improvement:  
Issue: Signs and Markings Did Not Line Up Further Adding to Pilot Confusion**



**Fix: Upgrade to FAA Standards of 12" Hold Position Markings with Enhanced Center Line**

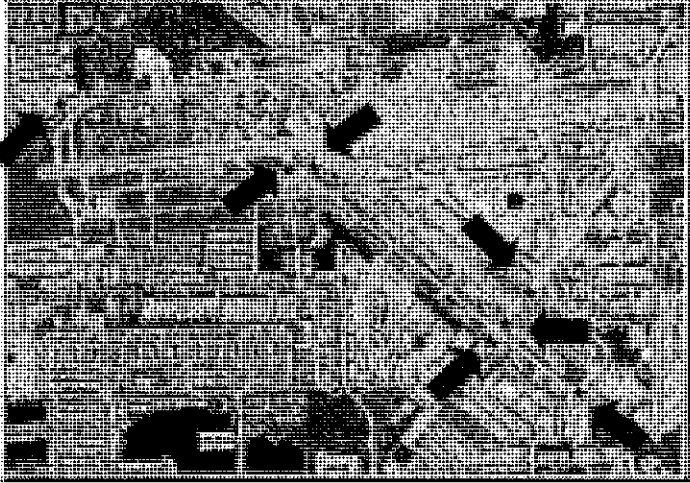


**Fix: Runway Guard Light, Standard Signage & Enhanced Markings**



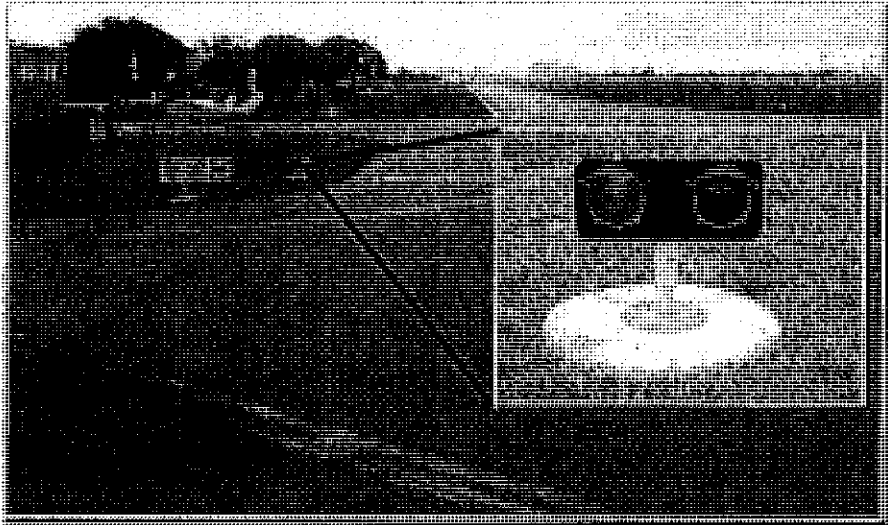
Physical Improvements  
Some Creative, Site Specific Improvements

- F1
- B5
- C
- B@8
- A@13

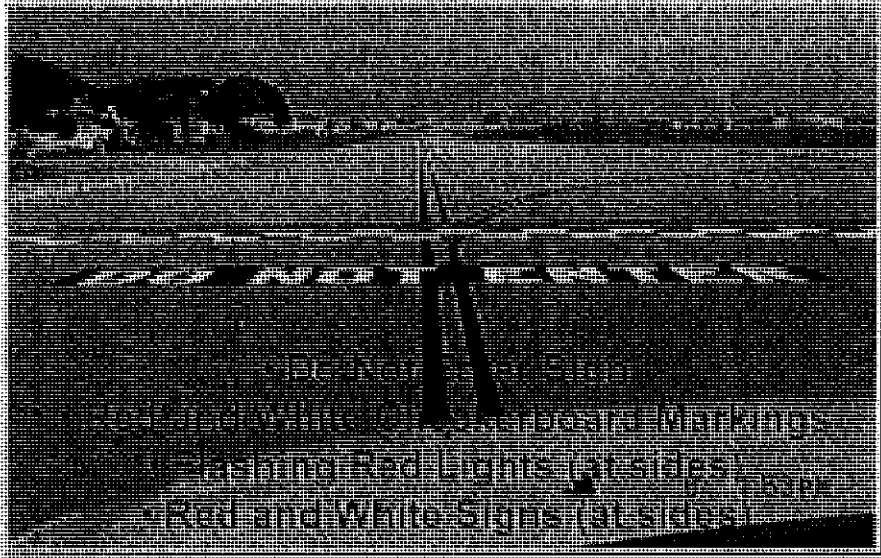


fxe

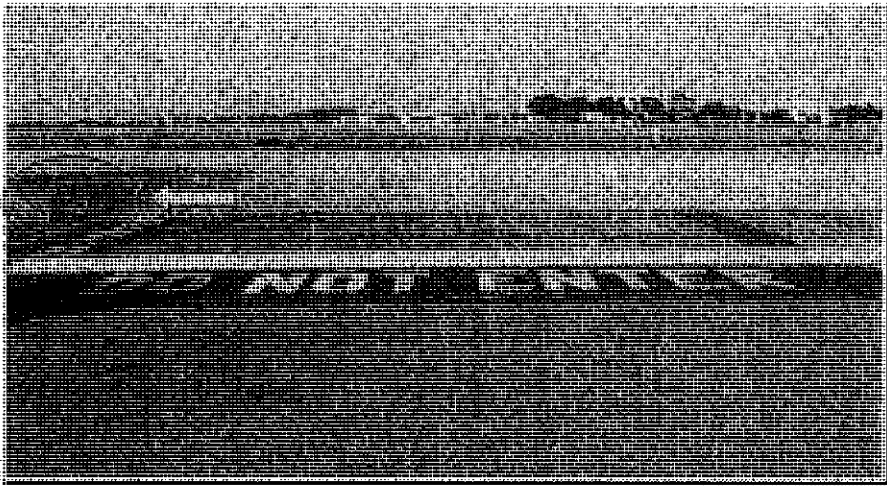
**Immediate Fix:  
F1 Surface Incident Hot Spot**



**Fix : F1 Hot Spot**



**Fix: B5 Surface Incident Hot Spot**



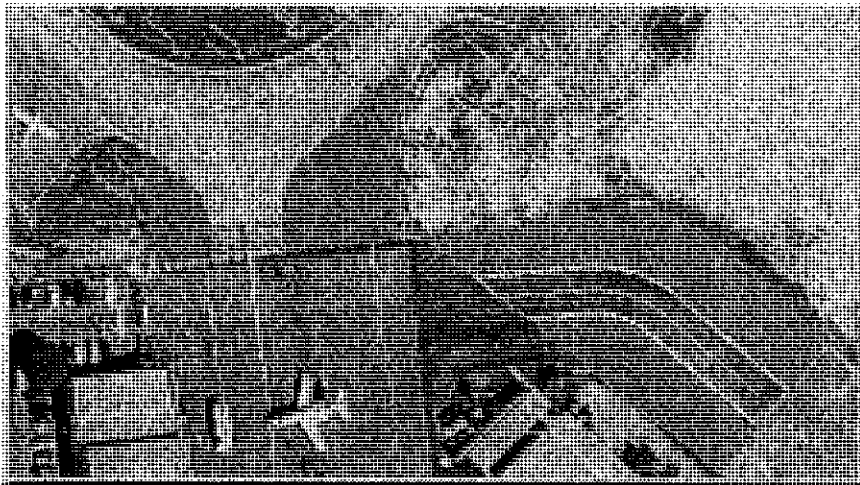
## Fix: B5

- Red and White Signs
- Checkerboard Markings
- Do Not Enter Signs
- Red Flashing Lights



## ...Further Improvements to B5 Area

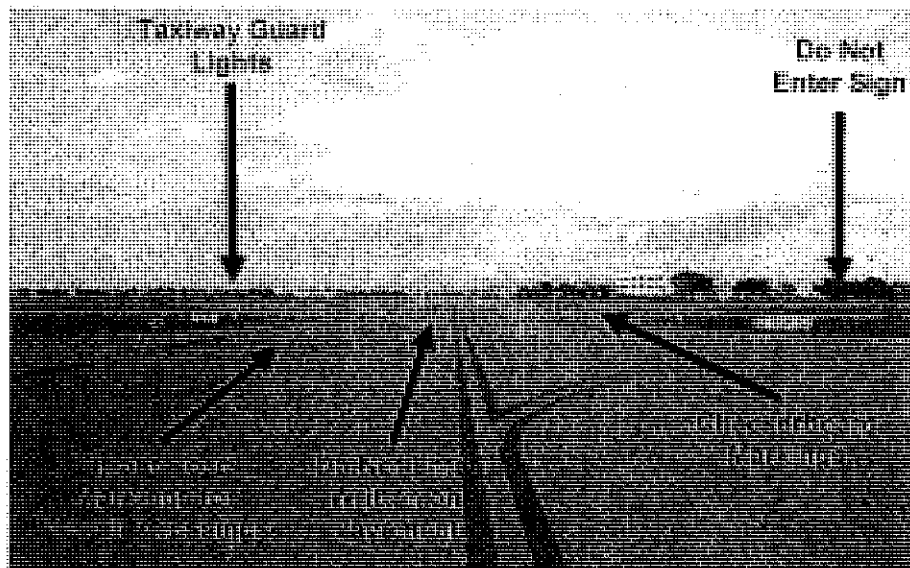
Modified Lease Boundaries to Allow Narrowed Entrance to Match Standard Taxiway Width and Provide Better Situational Awareness for Taxiing Pilots



## Fix: Charlie Hot Spot - Improved Roadway Markings

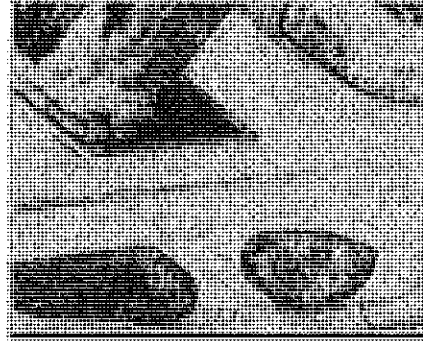
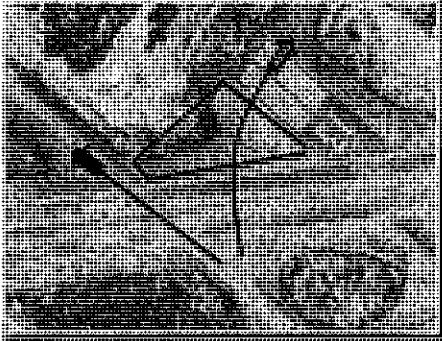


## Fix: Charlie Hot Spot



## Issue: Surface Incident Hot Spot Right Way vs Wrong Way

Extra Pavement Gave the Appearance of A Continuing Path to the Right Which Created the Risk of Aircraft Crossing Two Runways versus the One for Which They Had Clearance..



**Fix: Pavement Removed, Standard Shoulder Width Established, Markings Improved**

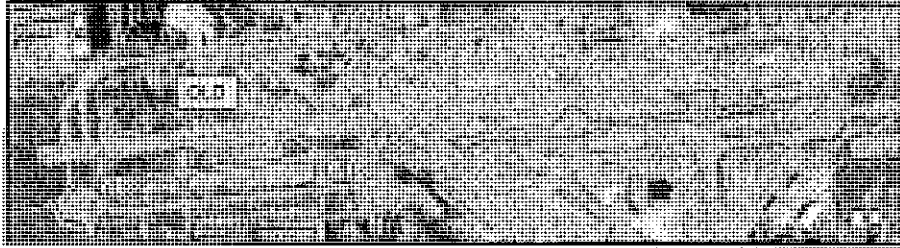
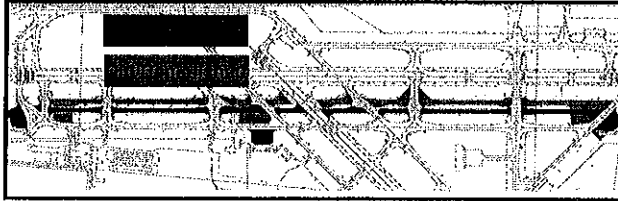


Physical Improvements:  
**2010+ PROJECTS**  
Recent/Ongoing Improvements

## Physical Improvement (2010): Alpha Relocation & Rehabilitation

- Completed -

Project provided for relocating Alpha taxiway 90' south to assure a centerline-to-centerline separation of 340' between Runway 8/26 and Alpha and 160' between taxiways Alpha and Echo in adherence with FAA standards. This allows the removal of the operating restriction on the use of Alpha when Jets are on the runway and allows simultaneous jet traffic on Alpha and Echo.

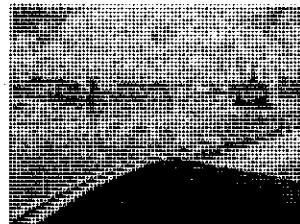
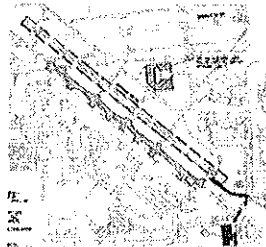
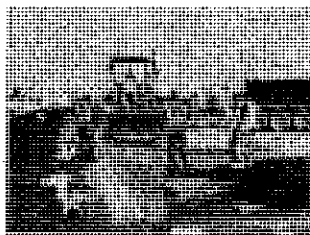
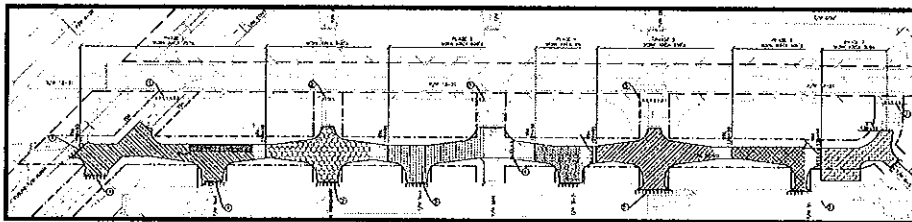


## Physical Improvement (2010): Taxiway Bravo Improvements

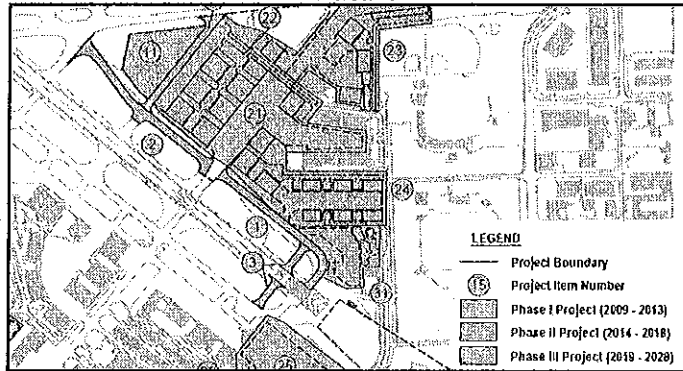
- Underway -

### P11134 - Taxiway Bravo Pavement Rehabilitation

Multi-Year Phased Project - Pavement Rehabilitation  
Widen Ramp Entrances - Meet Current FAA Design Standards



Physical Improvement (2010):  
**Taxiway Golf**  
 - Future -



**PHASE I - DESIGN** In Current Fort Lauderdale-FXE 5 Yr. Capital Improvement Program

**Description:** Design for the relocation of the southern 1,000 feet of Taxiway Golf between RWY 51 and Taxiway Charlie as proposed in the Airport's draft AIP.

**Justification:** Relocation to conform the taxiway-runway to current FAA design standards separation distance from 250' to 300'. The relocation will also improve airfield operations and provide for the relocation of the U.S. Customs Facility.

**PHASE II - DESIGN & CONSTRUCTION**

**Description:** Design and construction for the relocation of 1,000' of Taxiway Golf including lighting and signage.

**Justification:** Proposed in the Airport's current AIP to conform to current FAA design standards and improve airfield operations.

## On Going Initiatives

- AOA Initial and Interactive Recurrent Training Program
- Enhanced Tenant Registration Initiative & Safety Collaborations
- Driver Safety Awards Recognition
- Rules & Regulations Rewrite
- Research "Best Practices" (PD's)
- Industry Outreach (AOPA, etc.)
- Review of RSAT Recommendations
- Use of Message Board for Pilots & Public
- Continuous Airfield Markings Maintenance
- Continuous Airfield Signage Maintenance
- Continued Advocacy for New FAA Tower
- ATC Construction Safety Management
- Ongoing Pavement Rehabilitation
- Ongoing Airfield Inspections

**Closing:**

**Discussion  
Questions & Answers**

