

# Memorandum



DATE January 31, 2014

TO Honorable Members of the Economic Development Committee: Tennell Atkins (Chair), Rick Callahan (Vice-Chair), Jerry R. Allen, Scott Griggs, Adam Medrano, Lee Kleinman

SUBJECT Dallas Executive Airport Seeking Flight Into the Future Briefing

On Monday, February 3, 2014, you will be presented the Dallas Executive Airport Seeking Flight into the Future briefing. The briefing material is attached for your review.

If you have questions or need additional information, please let me know.



Theresa O'Donnell,  
Interim Assistant City Manager

Attachment

cc: Honorable Mayor and Members of the City Council  
A.C. Gonzalez, Interim City Manager  
Warren M. S. Ernst, City Attorney  
Judge Daniel F. Solis, Administrative Judge  
Rosa A. Rios, City Secretary  
Craig D. Kinton, City Auditor  
Ryan S. Evans, Interim First Assistant City Manager  
Jill A. Jordan, P. E., Assistant City Manager  
Forest E. Turner, Assistant City Manager  
Joey Zapata, Assistant City Manager  
Charles M. Cato, Interim Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Frank Libro, Public Information Officer  
Elsa Cantu, Assistant to the City Manager – Mayor and Council  
Karl Zavitkovsky, Director, Office of Economic Development

# Dallas Executive Airport Seeking Flight Into the Future

Economic Development Committee  
February 3, 2014



# Background

- The City of Dallas in partnership with TxDOT Aviation received a grant to conduct an airfield pavement analysis to determine the load bearing weight and structural integrity of the airport's runways and taxiways.
- In order to determine the structural condition and material properties below pavement surface, a dual approach of Heavy Weight Deflectometer (HWD) and Rolling Dynamic Deflectometer (RDD) testing was performed on all airfield pavements at Dallas Executive Airport between July 2012 and August 2012.
- The data derived from these two evaluations was thoroughly analyzed and a prioritized pavement rehabilitation schedule was populated. The results determined that Runway 13/31 requires nearly full-length reconstruction which involves removing and replacing existing pavement with a new pavement section.

# Dual Approach Non-Destructive Testing

## → The Heavy Weight Deflectometer (HWD)

- Non-destructive deflection testing
- Testing every 200 feet, multiple lanes
- **Identifies:**
- Strength of pavement layers and subgrade



## → The Rolling Dynamic Deflectometer (RDD)

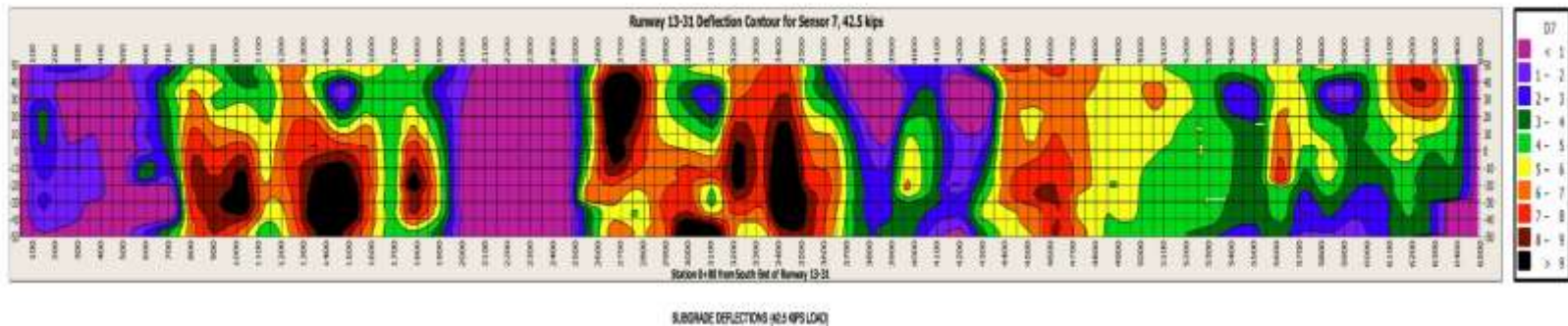
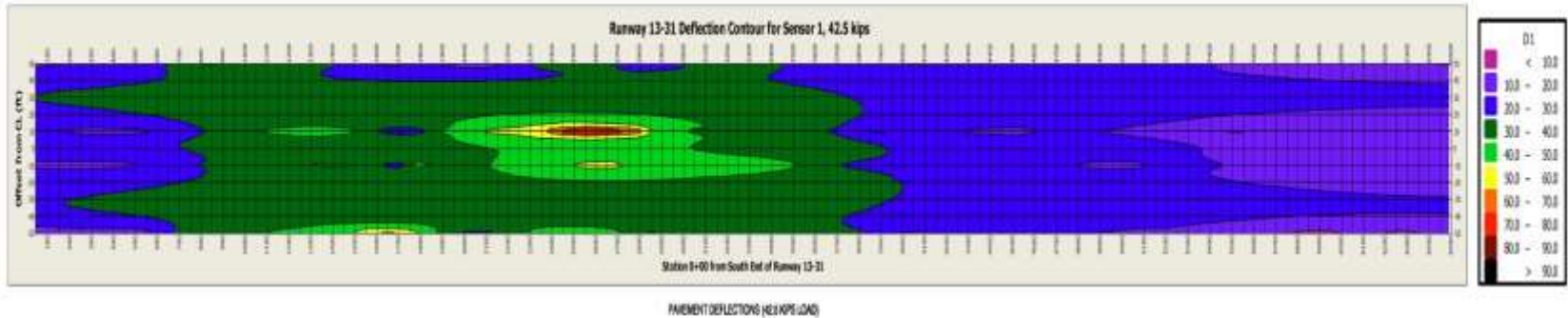
- Non-destructive deflection testing
- Continuous deflection profiles, multiple lanes
- **Identifies:**
- Critical sections of pavement and subgrade



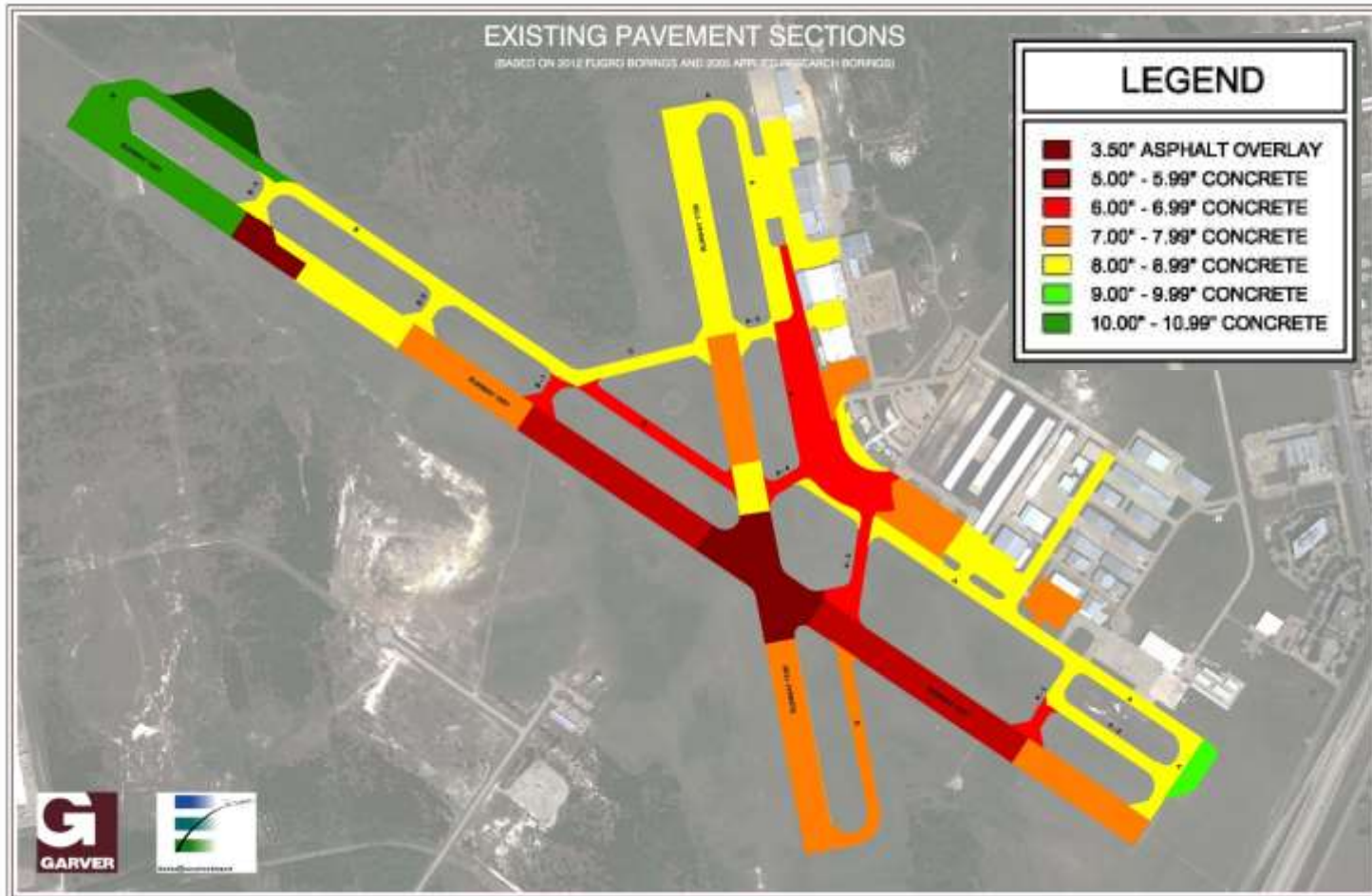
→ Non-destructive testing was completed August 6, 2012

# Non-destructive Testing Data

## RUNWAY 13-31

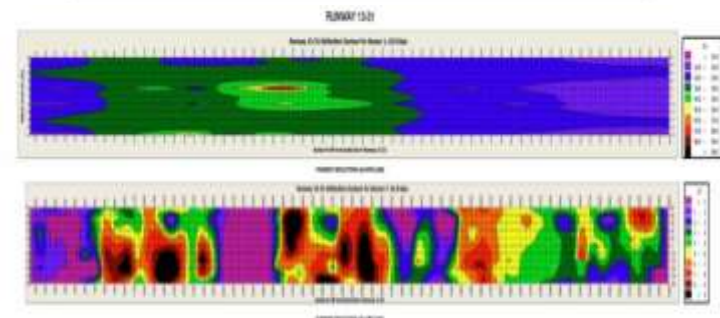
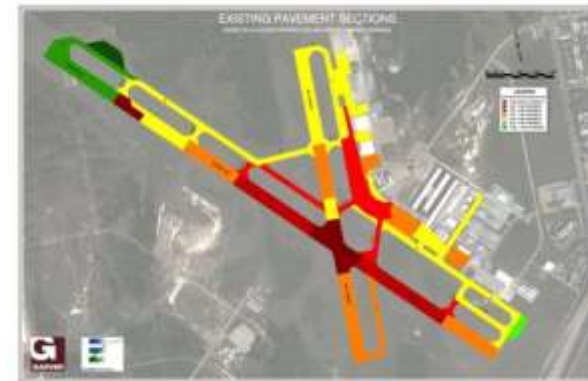


# Existing Pavement Thickness



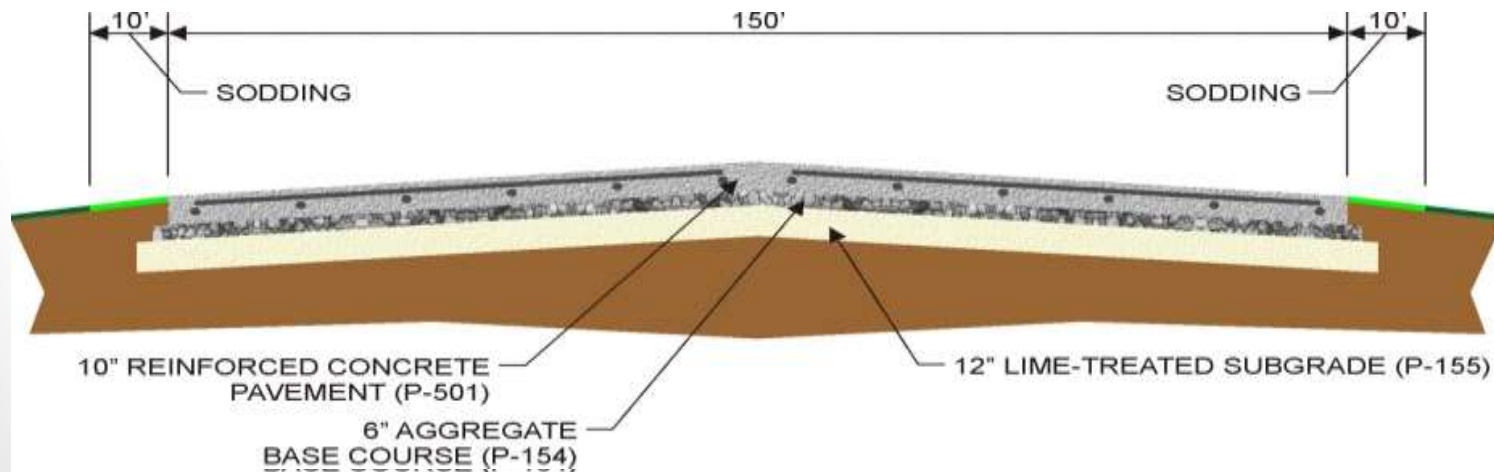
# Pavement Evaluation Results

- High deflection values for pavement and subgrade
- Deficient pavement strength on Runway 13/31
- Existing pavement thickness as little as 5-inches
- Remaining pavement life = 0 to 5 years



# Pavement Design & Recommendations

- Aircraft fleet mix with 90,000 pound aircraft limit (current limit = 60,000 pounds)
- The proposed pavement section
  - 10" reinforced concrete
  - 6" aggregate base
  - 12" lime-treated subgrade
- Construction Phasing
  - Four (4) Construction Phases
  - Runway 13/31 Reconstruction
  - Runway 13 Extension





# Runway 13/31 Reconstruction Phase 1

Description	Phase	Estimated Construction Start Date	Estimated Construction Time	Runway 17/35 Availability	Runway 13/31 Availability	Largest Type of Aircraft Using Airport	Estimated Construction Cost
Runway 17/35 & Runway 13/31 Intersection Reconstruction and Design	1	Summer 2014	3-4 Months	Closed	3,200'	Small Jet (i.e. Cessna Citation 500)	\$9,340,000



# Runway 13/31 Reconstruction Phase 2

Description	Phase	Estimated Construction Start Date	Estimated Construction Time	Runway 17/35 Availability	Runway 13/31 Availability	Largest Type of Aircraft Using Airport	Estimated Construction Cost
Runway 31 End Reconstruction (South)	2	Winter 2014	7-8 Months	Open	4,500'	Medium Jet (i.e. Cessna 560 Citation)	\$7,348,000



# Runway 13/31 Reconstruction Phase 3

Description	Phase	Estimated Construction Start Date	Estimated Construction Time	Runway 17/35 Availability	Runway 13/31 Availability	Largest Type of Aircraft Using Airport	Estimated Construction Cost
Runway 13 End Reconstruction (North)	3	Fall 2015	9-10 Months	Open	Closed	Small Jet (i.e. Cessna 525 Citation)	\$9,961,000



# Runway 13/31 Reconstruction Phase 4

Description	Phase	Estimated Construction Start Date	Estimated Construction Time	Runway 17/35 Availability	Runway 13/31 Availability	Largest Type of Aircraft Using Airport	Estimated Construction Cost
Runway 13 Extension (685 feet)	4	Fall 2016	8-9 Months	Open	5,730'	All Aircraft up to Gulfstream IV	\$8,700,000



# Runway 13/31 Reconstruction Phasing Summary

Description	Phase	Estimated Construction Start Date	Estimated Construction Time	Runway 17/35 Availability	Runway 13/31 Availability	Largest Type of Aircraft Able to use Airport	Estimated Construction Cost
Runway 17/35 & Runway 13/31 Intersection Reconstruction	1	Summer 2014	3-4 Months	Closed	3,200'	Small Jets	\$ 9,340,000
Runway 31 End Reconstruction (South)	2	Winter 2014	7-8 Months	Open	4,500'	Medium Jets	\$ 7,348,000
Runway 13 End Reconstruction (North)	3	Fall 2015	9-10 Months	Open	Closed	Small Jets	\$ 9,961,000
Runway 13 Extension (685 feet)	4	Fall 2016	8-9 Months	Open	5,730'	All Currently Based Aircraft	\$ 8,700,000
Total Construction Time			31 Months	Total Construction Cost			\$35,349,000

# Dallas Executive Based Aircraft Data

Dallas Executive Based Aircraft	
Type	Total
Single Engine	95
Multi Engine	26
Jet	22
Helicopter	7
<b>Total</b>	<b>150</b>

## Examples of Aircraft by Engine Type:

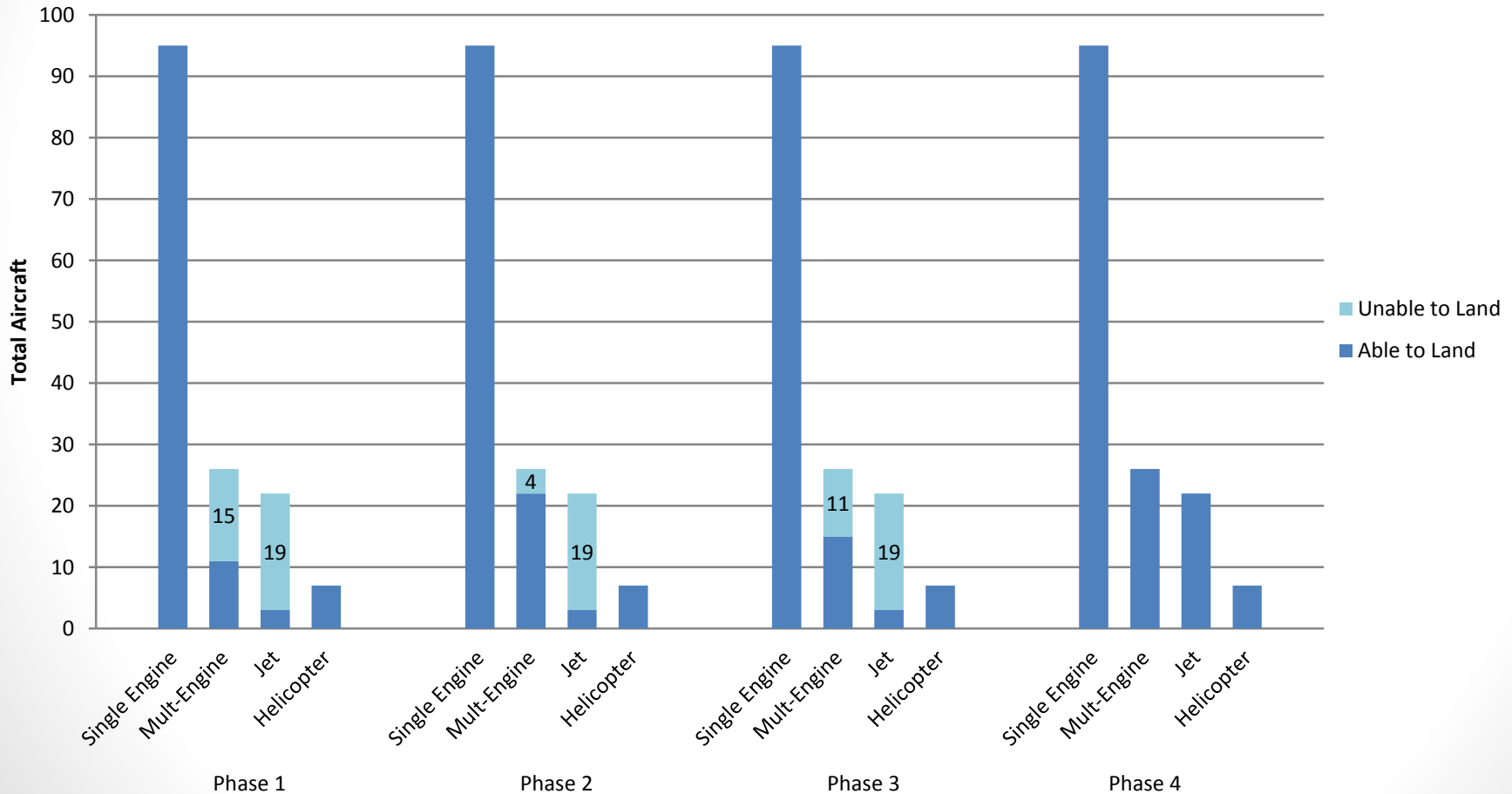
**Single Engine:** Cessna 172 Skyhawk, Cessna 182 Skylane, Piper Cherokee, Cirrus SR20 & SR22, Beechcraft Bonanza, Piper Saratoga

**Multi-Engine:** Beechcraft Baron, Piper Seneca, Cessna 421 Golden Eagle

**Jet:** Cessna 500, 525 & 560 Citation, Falcon 900, Gulfstream, Hawker, Challenger, Beech Jet, Lear Jet, Israel Jet Commander 1124

# Aircraft Affected by Runway 13/31 Reconstruction Project

## Based Aircraft Affected by Runway 13/31 Reconstruction



# Aircraft Affected by Runway 13/31 Reconstruction Project

	Total # of Aircraft Unable to Land	Total # of Aircraft Able to Land	Percentage of Aircraft Negatively Affected
Phase 1	34	116	22.7%
Phase 2	23	127	15.3%
Phase 3	30	120	20.0%
Phase 4	0	150	0.0%

\* By Fall of 2016 all currently based aircraft will be able to use Runway 13/31.



# Tenant Outreach

- Staff has conducted numerous informational meeting with tenants, sub-tenants, and stakeholders.

September 27, 2013

November 7, 2013

January 14, 2014

January 24, 2014

- Included at the meetings were:
  - Garver Engineering discussed aggressive construction phasing plan
  - Rocket Red discussed
    - Marketing plan and website launch
    - [www.dallasexecairport.com](http://www.dallasexecairport.com)
- Follow-up tenant meeting on February 27, 2014

# Accommodation Efforts

- Staff has determined the Department of Aviation does not have any City owned hangars at Dallas Love Field to accommodate aircraft from Executive during reconstruction.
- Currently looking to negotiate ramp space for aircraft parking displaced from Executive to Love Field.
- Issuing fuel permits to FBOs to accommodate fueling at Love Field.
- Staff is researching economic impact to stakeholders to determine potential rent abatement.

# Next Steps

- Staff intends to return to council in April 2014 with suggested lease amendments to reflect the rent abatement that is in alignment with the economic impact findings.