



Runway Status Lights (RWSL)

Critical Construction Elements

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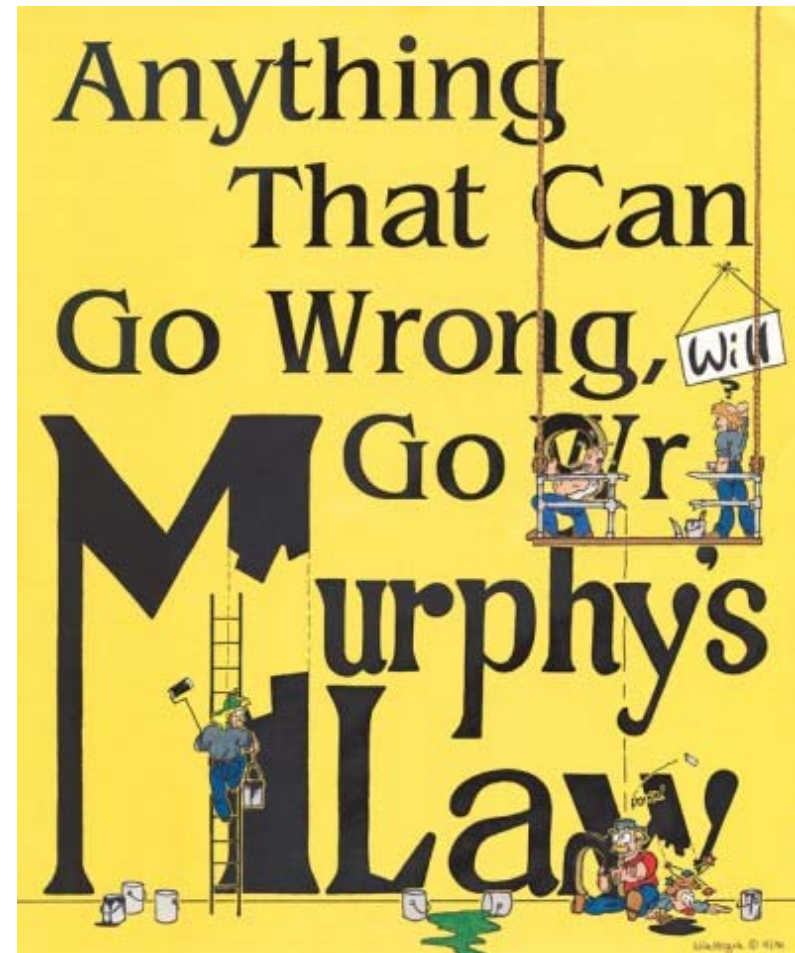
October 24, 2017

Bolt Torqueing

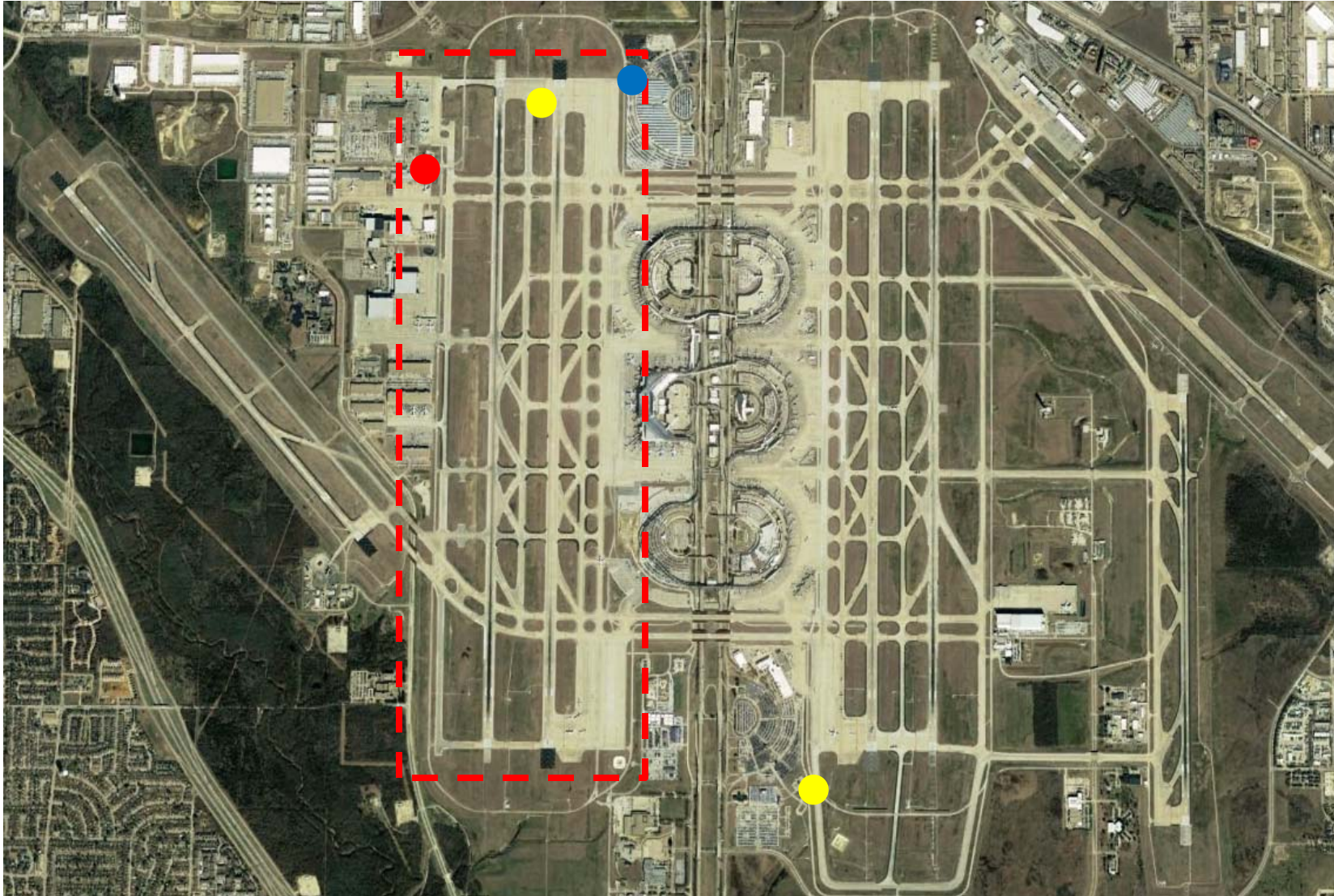
I won't be talking about bolts.

Design to Construction (cont.)

- Design
 - Meets Advisory Circular
 - Meets Applicable Codes
 - Addresses Airport's Needs
- Construction
 - Quick Work
 - Correct Work
 - Minimize Airfield impact



DFW Airport



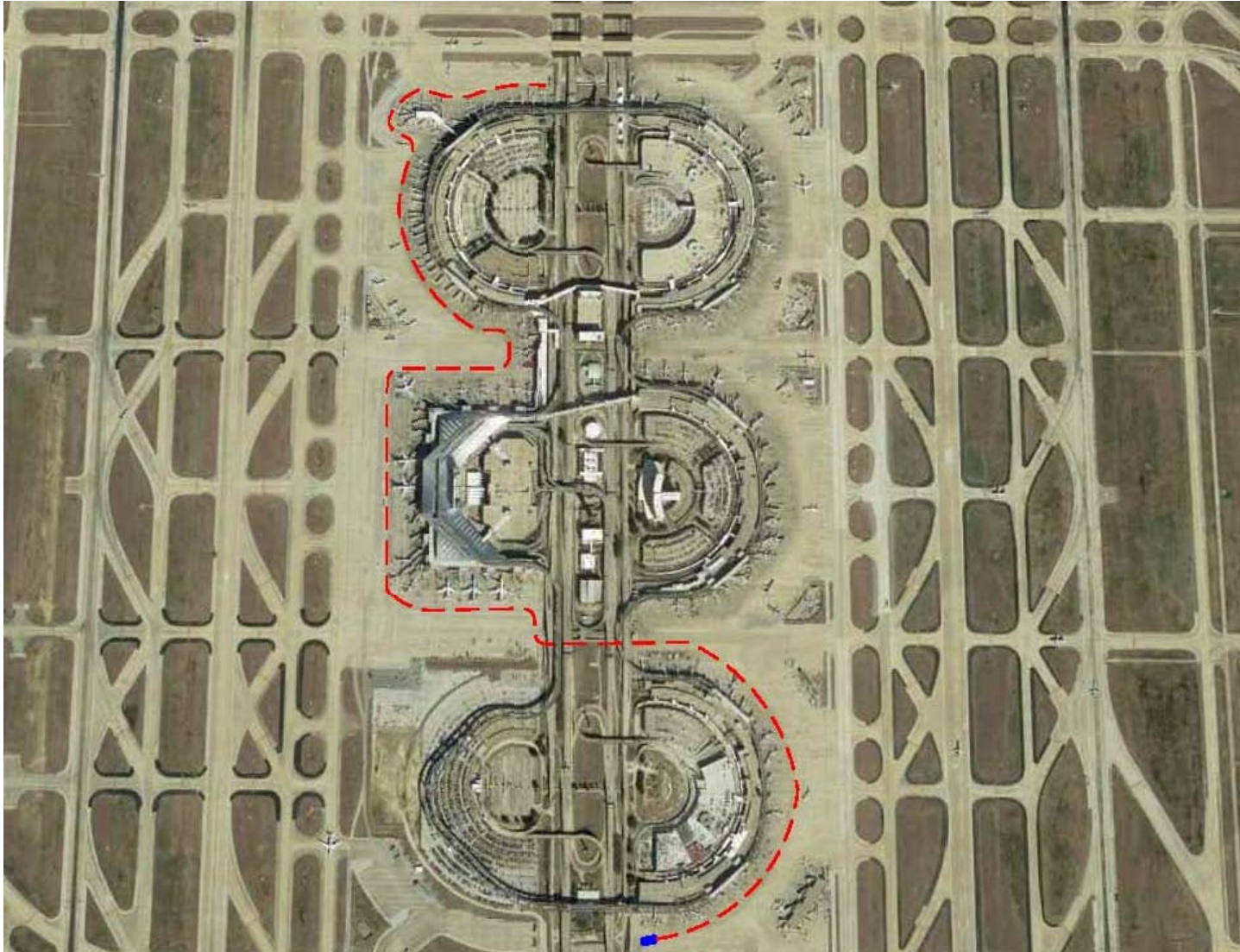
DFW Airport (cont.)



DFW Airport (cont.)



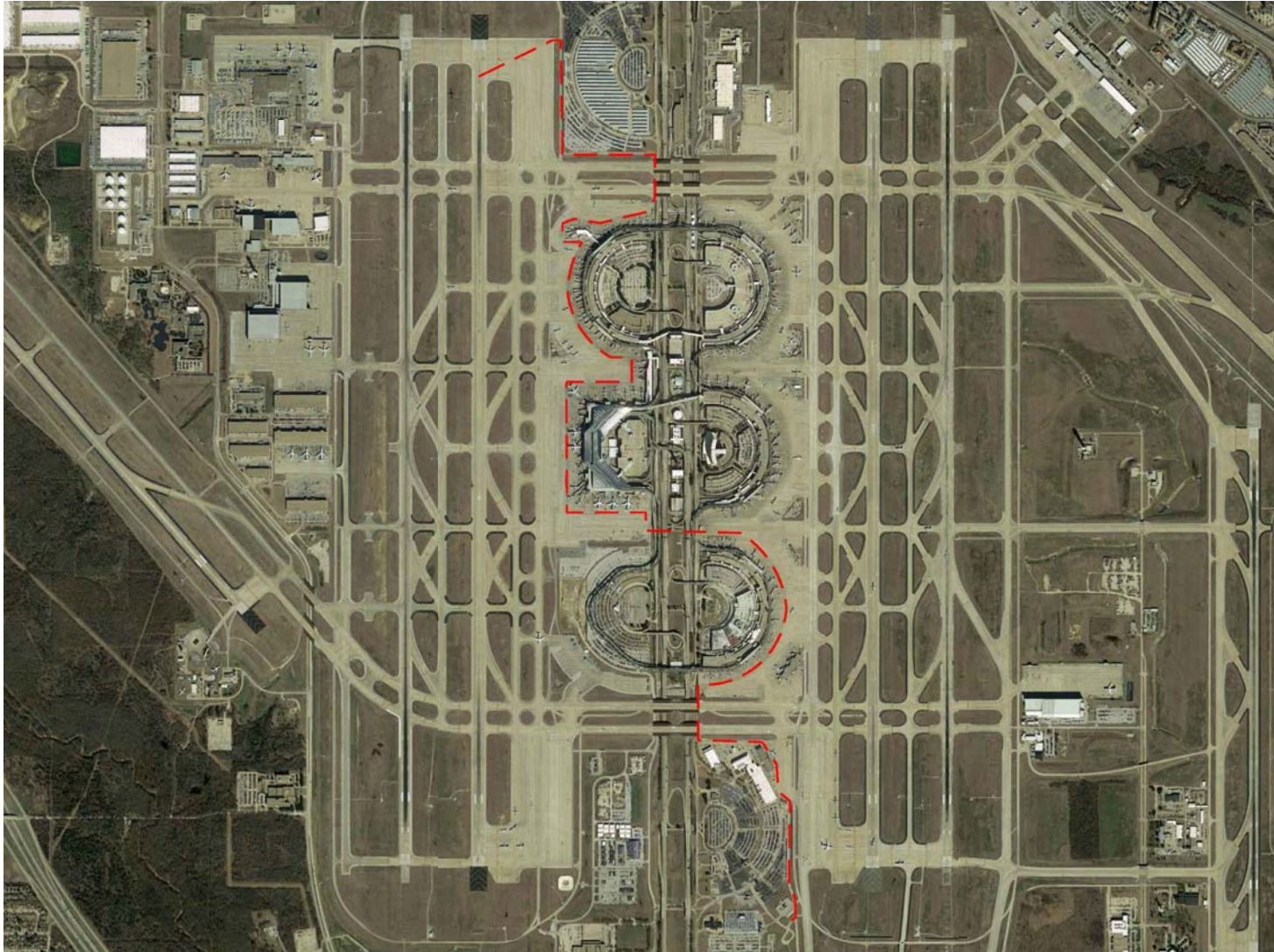
DFW Airport (cont.)



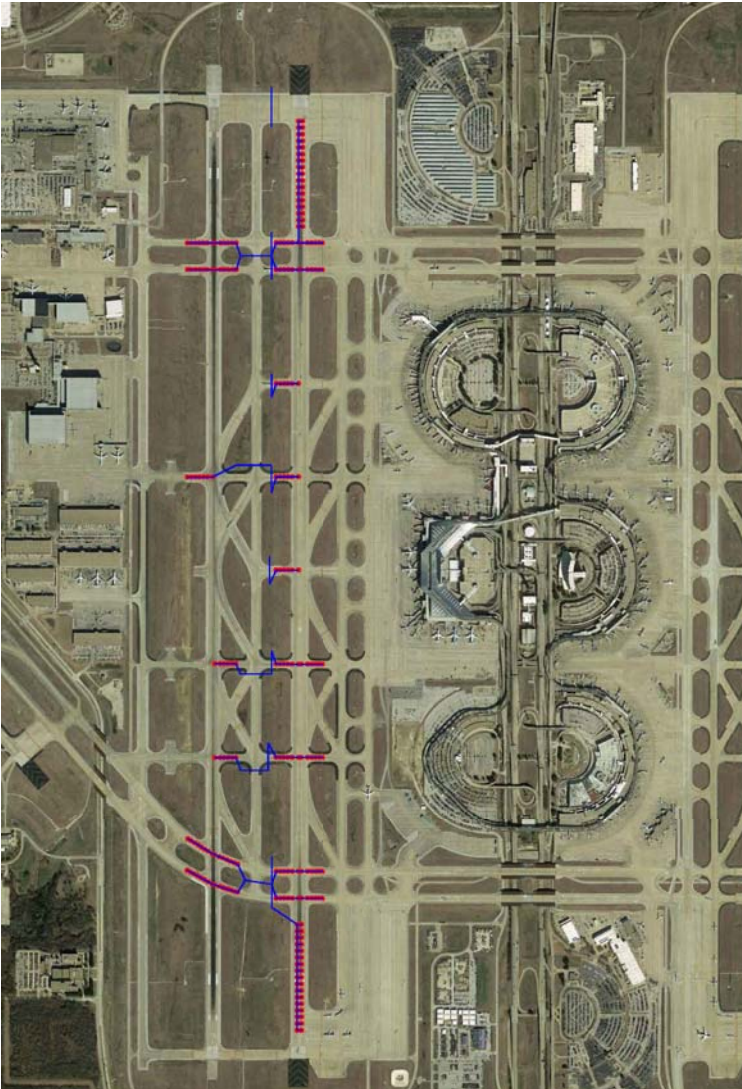
DFW Airport (cont.)



DFW Airport (cont.)

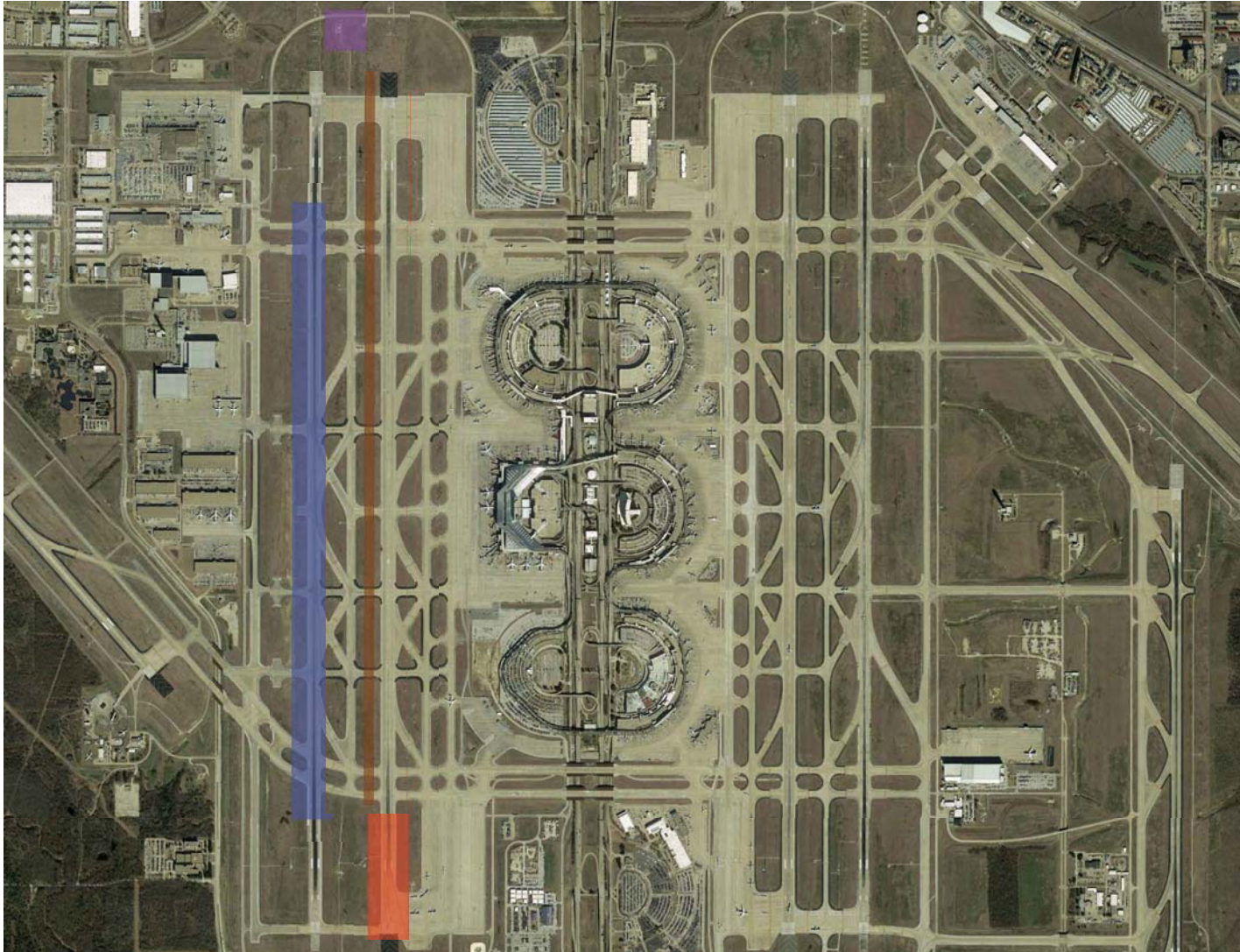


DFW RWSL Project



- 64 Takeoff Hold Lights (THL)
- 190 Runway Entrance Lights (REL)
- 2" HDD – 14500'
- 3" HDD – 7000'
- Pneumatic Mole – 384'
- 2" GRSC – 615'

DFW Phases



Potential Delays

Preventing delays is **CRITICAL**



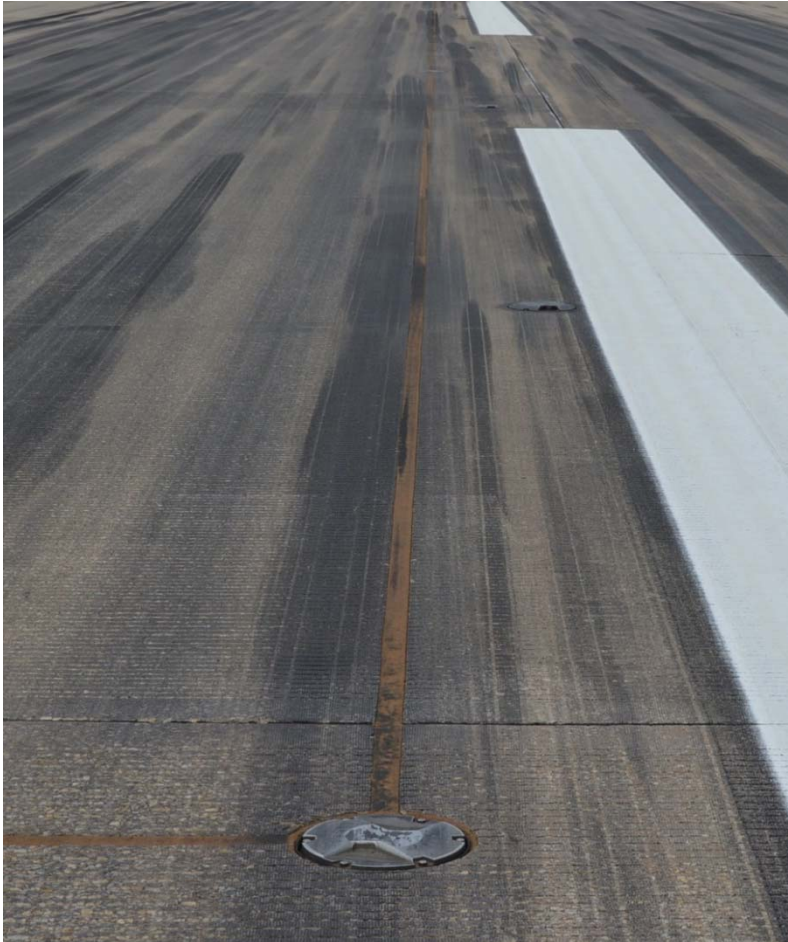
Potential Delays (cont.)

- Slow concrete cores
- Poor scheduling
- Difficult subbase
- Weather
- Equipment Failure
- Even small items can cause large delays

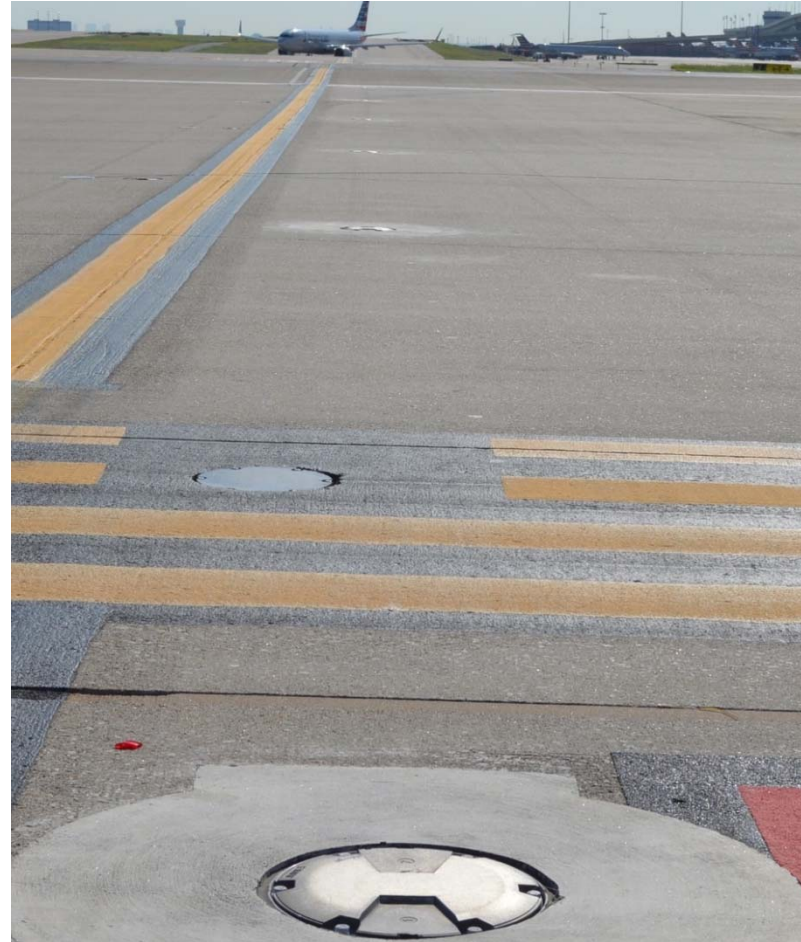


Horizontal Directional Drilling (HDD)

SAWCUT PAVEMENT



HDD PAVEMENT



■ HDD & Gila-Duct During Construction

- Reduces pavement impact
- Faster Installation
- Closing taxiways not always required
- No method of construction is flawless



Potential Issues For HDD

- Difficult subbase
 - Slows installation
 - Shallow depth at can difficult for installation
 - Deep depth at can could require enclosed working space requirements
- Night Work
 - Circuits must reactivate
 - Could prevent night work



■ Potential Issues for Gila-Duct

- Failing to maximize useable Gila-duct
- Damage during pullback



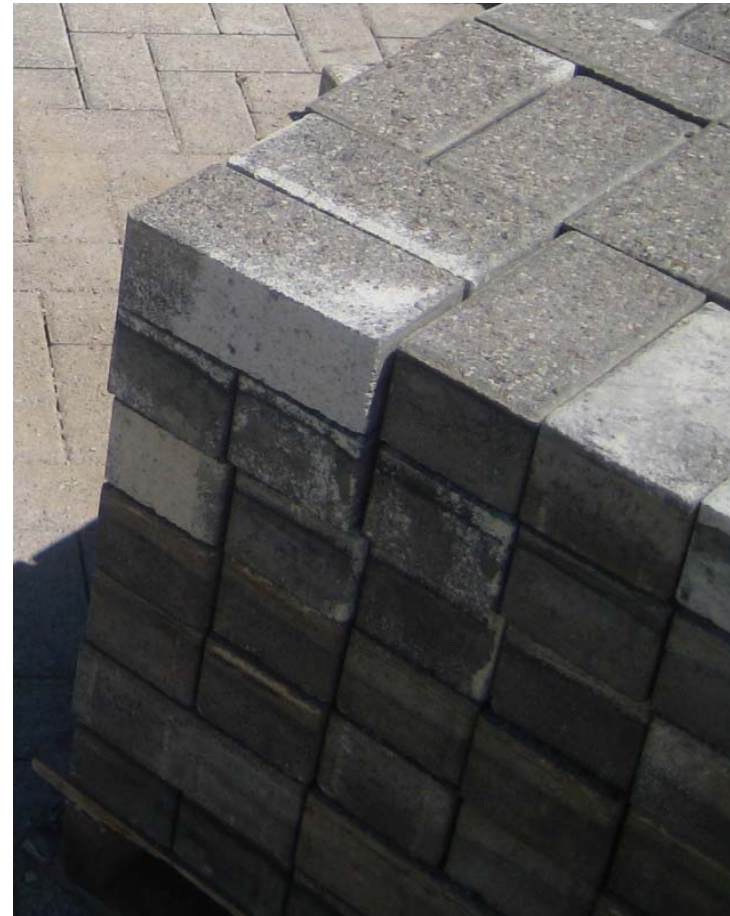
Unique Issues for DFW Construction

- Large airports are a mix of decades of design.
- Some of these decisions present unique issues for new projects.
- Some provide surprises during excavation.



Block Pavers

- Test System
- Concrete Bricks on Cement treated base (CTB)
- Limited to Two Taxiways
- Made Construction Difficult



Block Pavers Difficulties

- Bricks no longer manufactured
- Bricks had to be cut to fit around light fixture
- Slow process removing bricks
- Light fixture difficult to level
- Sand difficult to level



Other DFW Construction Issues

- Abandoned Concrete
 - Required deeper core
 - Delayed duct bank installation
- Underground Electrical
 - Some FAA, some airfield
 - Some active, some abandoned
 - Interception creates additional delays



Critical Items in Construction

- Concrete Strength
 - Needed to re-open runway/taxiway
 - Difficult and expensive to fix
- Core Locations
 - Surveyor must be accurate
 - Small window for error
- Gila-duct Usage
 - Must utilize as much as possible
 - Long lead time



DFW RWSL Project



- How long can we keep the existing system in operation?
- How long until we can activate the new system?

Questions?

