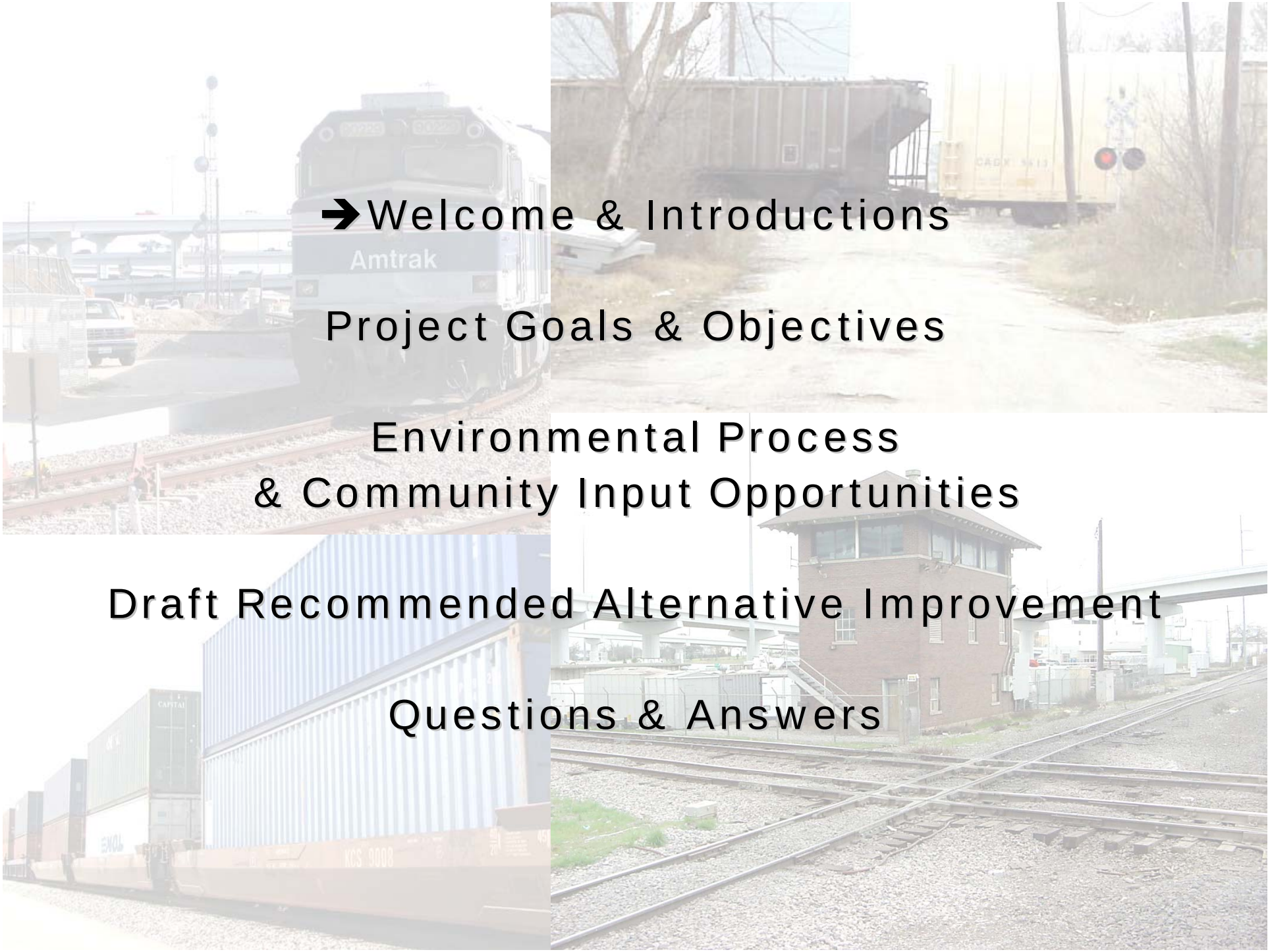
Tower 55 Rail Reliever Study
Public Meeting

February 18, 2009

North Central Texas Council of Governments
Transportation Department



➔Welcome & Introductions

Project Goals & Objectives

Environmental Process
& Community Input Opportunities

Draft Recommended Alternative Improvement

Questions & Answers

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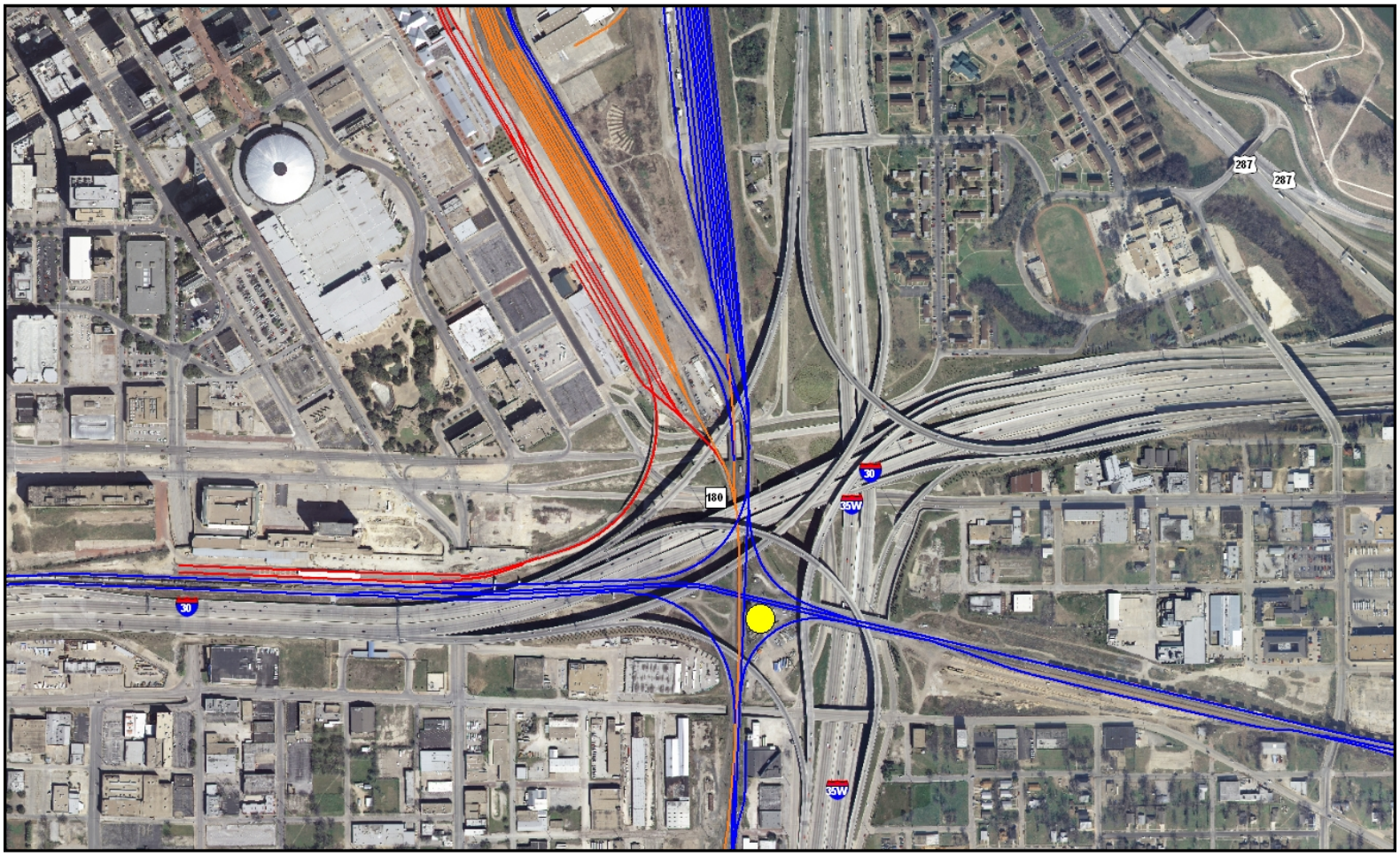
Questions & Answers

Tower 55 Rail Reliever Study



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Legend

- Tower 55
- UP Railroad
- BNSF Railway
- Trinity Railway Express
- Fort Worth & Western Railroad

North Central Texas Council of Governments

Transportation Department

Tower 55 Rail Reliever Study
Why is Tower 55 Important?

- Military Shipments
- Pacific Rim Shipments
- Passenger Rail Access
- Hazardous Materials Shipments
- Growth in East / West Movements
- Growth in North / South Movements
- Local Noise, Air Quality, and Neighborhood Impacts
- The North American Free Trade Agreement (NAFTA)
- Effectiveness of Dallas – Fort Worth as an “Inland Port”

Tower 55 Rail Reliever Study
Problems Solved by Fixing Tower 55

- **Interruption of operations at the Alliance Intermodal Terminal, the South Dallas Global Logistic Center, and other freight rail hubs in the Dallas – Fort Worth (DFW) Region**
- **Impact on Free Trade Zone (FTZ) logistic efficiencies at DFW and other satellite FTZ's**
- **Impact on freight rail on-time deliveries to industries and retailers in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties**
- **Shippers placing cargo on trucks instead of rail, increasing freight truck volumes on I.H. 20, I.H. 30, I.H. 35E, I.H. 35W, I.H. 635, S.H. 183, and other congested urban roadways**

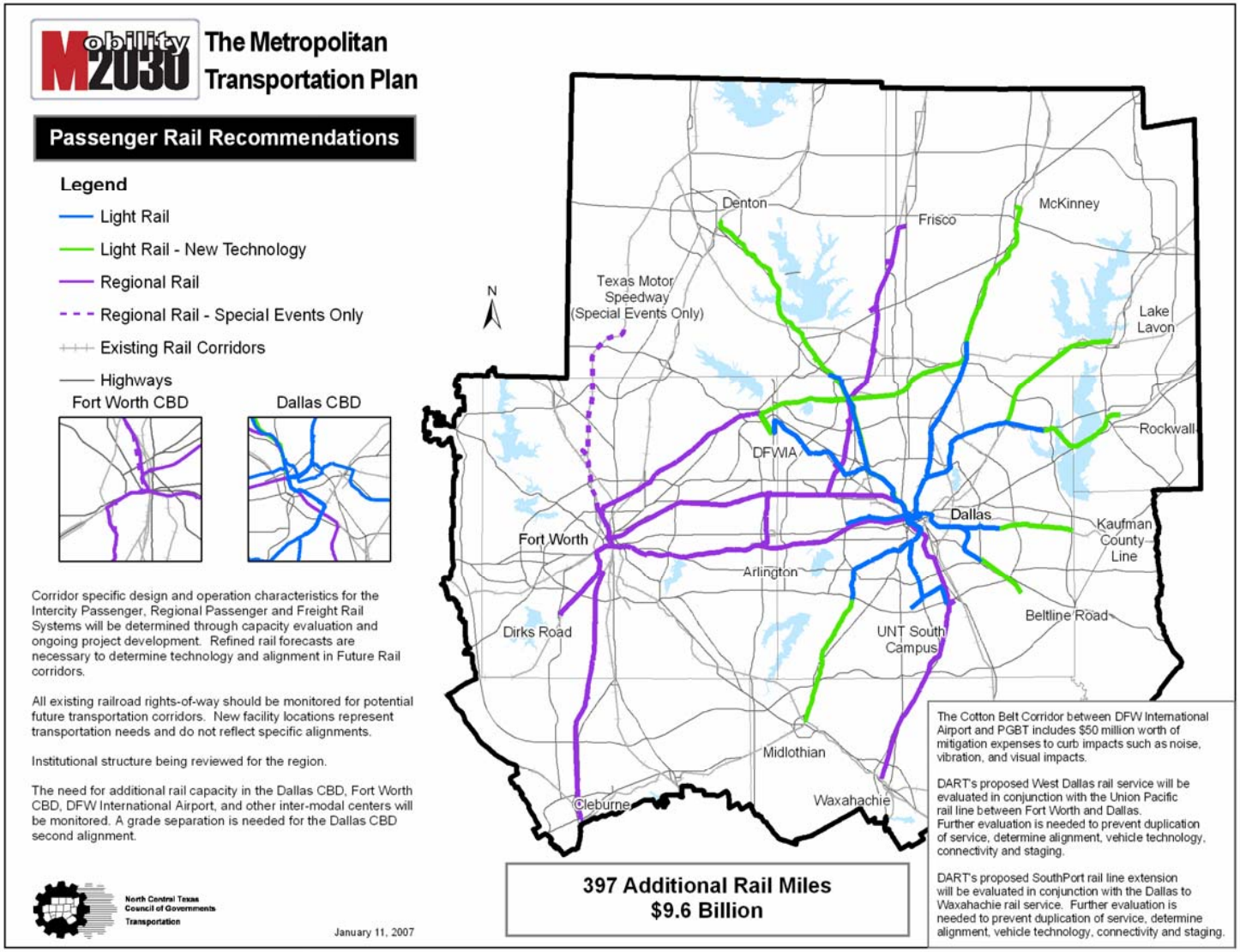
Tower 55 Rail Reliever Study

Problems Solved by Fixing Tower 55 *(cont.)*

- **Increased diesel exhaust along all railroad lines in the Dallas-Fort Worth area as trains stop and wait up to 50 miles away for their opportunity to cross Tower 55**
- **Deteriorated safety and reliability of adjacent roadway system due to increased blockage of road-rail intersections by trains**
- **Commuter rail operations potential inability to access Southeast Fort Worth, Mansfield, Arlington, Grand Prairie, and West Dallas**
- **Future complications of commuter rail operations to Dallas/Fort Worth International Airport, Grapevine, Texas Motor Speedway, and the Fort Worth Stockyards**

Tower 55 Rail Reliever Study

Commuter Rail Requires Tower 55 Solution



Tower 55 Rail Reliever Study
Safety / Reliability Requires Solution

Schools Near Tower 55

1) **Terrell Elementary**
2) **Gunn-Van Zandt Elementary**
3) **Nash Elementary**
4) **Williams Elementary**
5) **Trimble Technical High School**
6) **De Zavala Elementary**
7) **Carroll Peak**

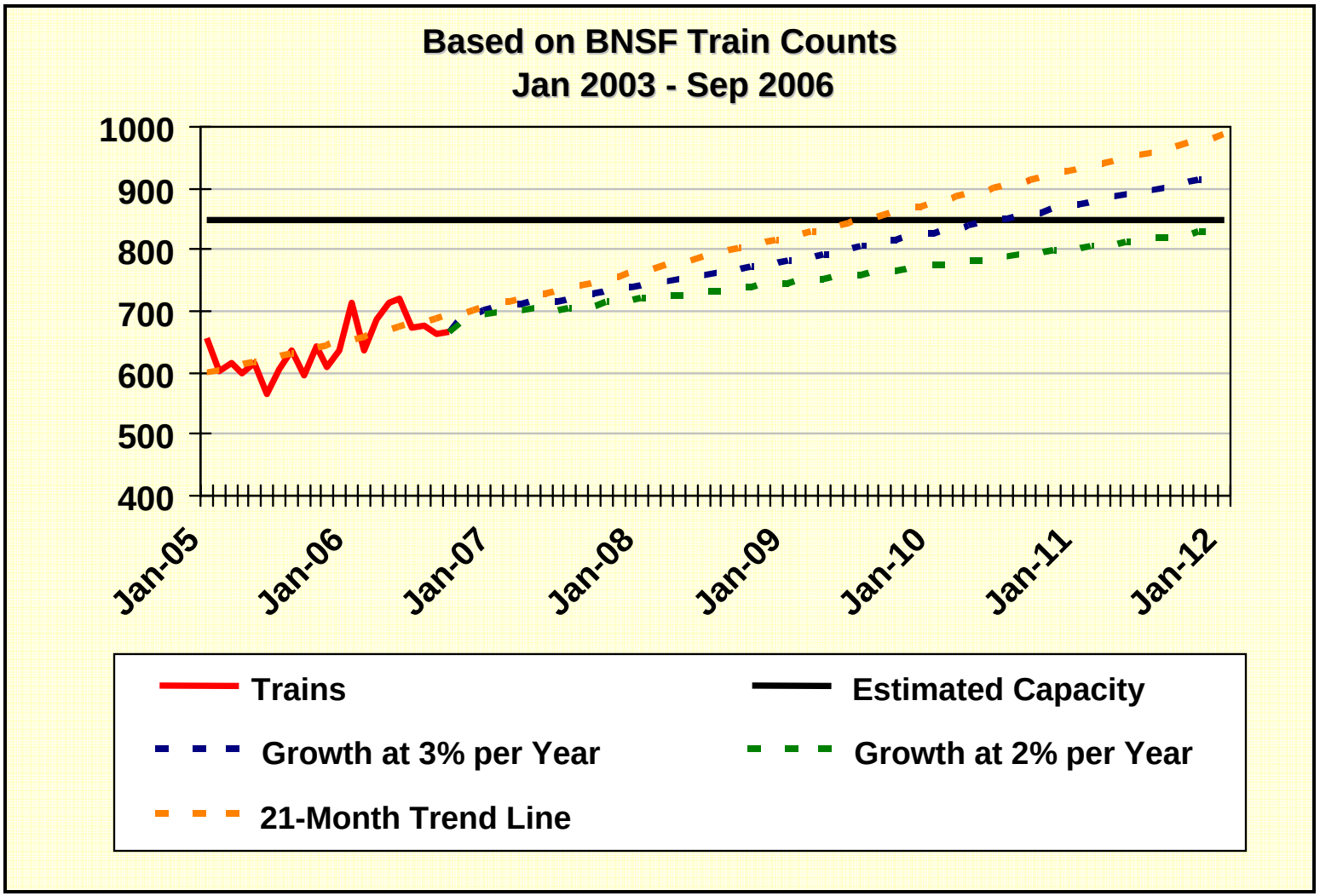
Texas is #1 in railroad crossing fatalities with 42 in 2006. *

Texas is #2 in trespass fatalities with 51 in 2006. *

*According to Federal Railroad Administration (FRA) statistics

Tower 55 Rail Reliever Study

Approaching Current Capacity Limits



Tower 55 Rail Reliever Study
Technical Advisory Group (TAG)

Voting Members

- BNSF Railway
- City of Arlington
- City of Fort Worth
- North Central Texas Council of Governments [1]
- Tarrant County
- Texas Department of Transportation
- Union Pacific Railroad
- Fort Worth Transportation Authority

Non-Voting Members

- Amtrak
- City of Haltom City
- City of Saginaw
- Dallas, Garland & Northeastern Railroad
- Federal Highway Administration [2]
- Federal Railroad Association
- Federal Transit Authority
- Kansas City Southern Railroad
- Surface Transportation Board

1. NCTCOG serves as the lead local sponsor.
2. FHWA serves as the lead federal sponsor.

Tower 55 Rail Reliever Study
NCTCOG Project Goal

The Tower 55 Rail Reliever Study will determine if a local solution can be developed that is feasible and environmentally, socially, culturally, economically, and politically acceptable.

Welcome & Introductions

Project Goals & Objectives

➔Environmental Process
& Community Input Opportunities

Draft Recommended Alternative Improvement

Questions & Answers

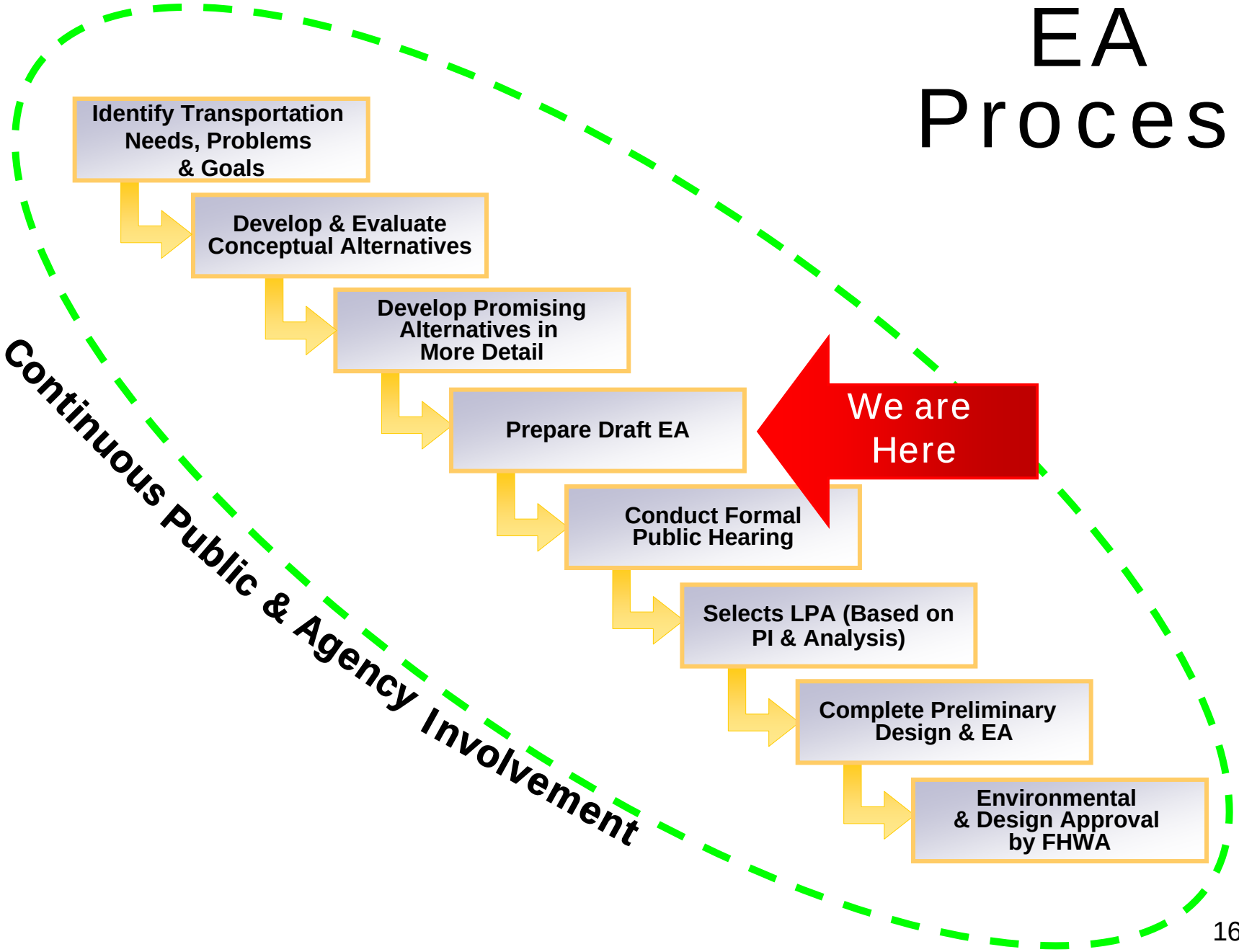
Environmental Study
National Environmental Policy Act (NEPA)

- Type of Document: Environmental Assessment (EA)
- Document Type Has Received State & FHWA Approval
- Discusses the Social, Economic & Environmental Effects of the Proposed Alternatives
- EA Outline:
  - Introduction
  - Need & Purpose
  - Description of Existing Facility
  - Alternatives
  - Environmental Resources, Effects, and Mitigation
    - Section 4(f) Evaluation
    - Appendices

Environmental Assessment Subjects

- **Land Use**
- **Farm Land**
- **Social**
- **Relocations**
- **Economic**
- **Air Quality**
- **Energy**
- **Noise**
- **Water Quality**
- **Wetlands**
- **Consideration Relating to Pedestrians & Bicyclists**
- **Water Body Modification & Wildlife**
- **Floodplain**
- **Wild & Scenic Rivers**
- **Threatened & Endangered Species**
- **Historic & Archeological Sites**
- **Regulated Material Sites**
- **Visual**
- **Indirect & Cumulative Impacts**

EA Process


Identify Transportation Needs, Problems & Goals
Develop & Evaluate Conceptual Alternatives
Develop Promising Alternatives in More Detail
Prepare Draft EA
We are Here
Conduct Formal Public Hearing
Selects LPA (Based on PI & Analysis)
Complete Preliminary Design & EA
Environmental & Design Approval by FHWA
Continuous Public & Agency Involvement

Public & Agency Involvement:
Continuous Throughout the Project

- Public Meetings
- Public Hearings
- Newsletters
- Information on the Website
- Presentations
- Briefings to Elected Officials
- Technical Advisory Group

Welcome & Introductions

Project Goals & Objectives

Environmental Process
& Community Input Opportunities

➔Draft Recommended Alternative Improvement

Questions & Answers

"A Progression of Improvements"
November 2007 Public Meeting

- Short Term Improvements
  - A system of at-grade solutions
  - Commuter rail opportunities
- Mid-Term Improvements
  - Grade separated solution
  - Trench, Fly-Over, or FWWR Bypass
  - Commuter rail opportunities
- Long-Term Improvement
  - Regional Rail Bypass

    (not part of this study and/or environmental process)

Early Alternatives Considered
November 2007 Public Meeting

Eight Improvement Alternatives were Initially Considered

- Third North-South track at–grade (3 options)
- North-South Trench (2 options)
- East-West Flyover (1 option)
- FW&WRR Bypass (2 options)

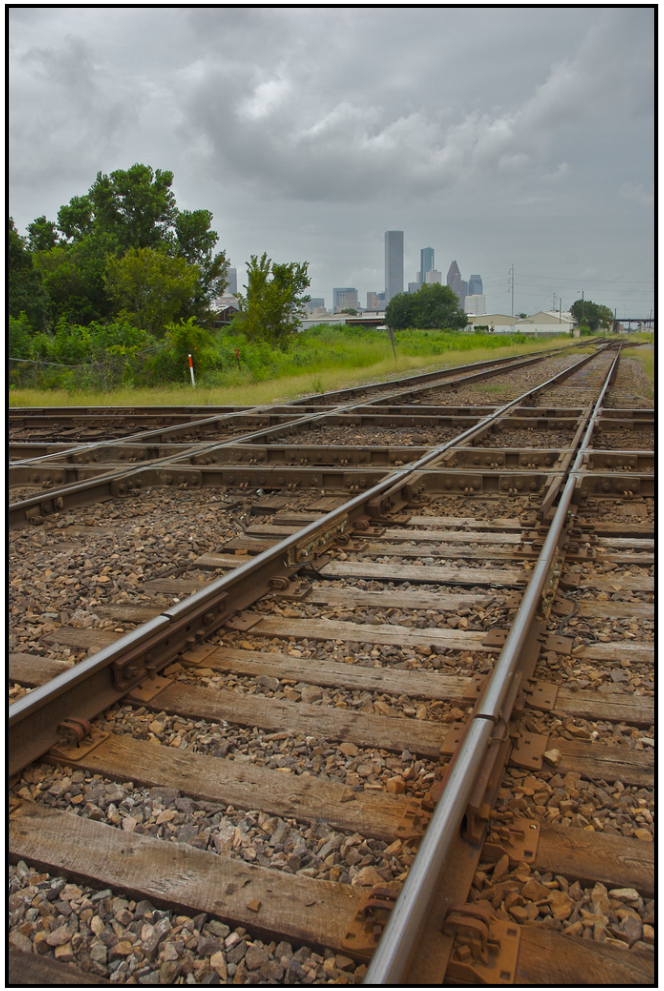
Early Conclusions to Some Alternatives

- At Grade Alternatives
  - Two alternatives were geometrically infeasible
  - BNSF/UP developed a joint plan and have proceeded with design, which has become At-Grade alternative
- Trench Alternatives
  - One alternative was geometrically infeasible
- FWWR Bypass
  - Single track alternative did not provide sufficient capacity for long term solution

In January 2008, proceeded with evaluation of remaining alternatives

Immediate At-Grade Improvement

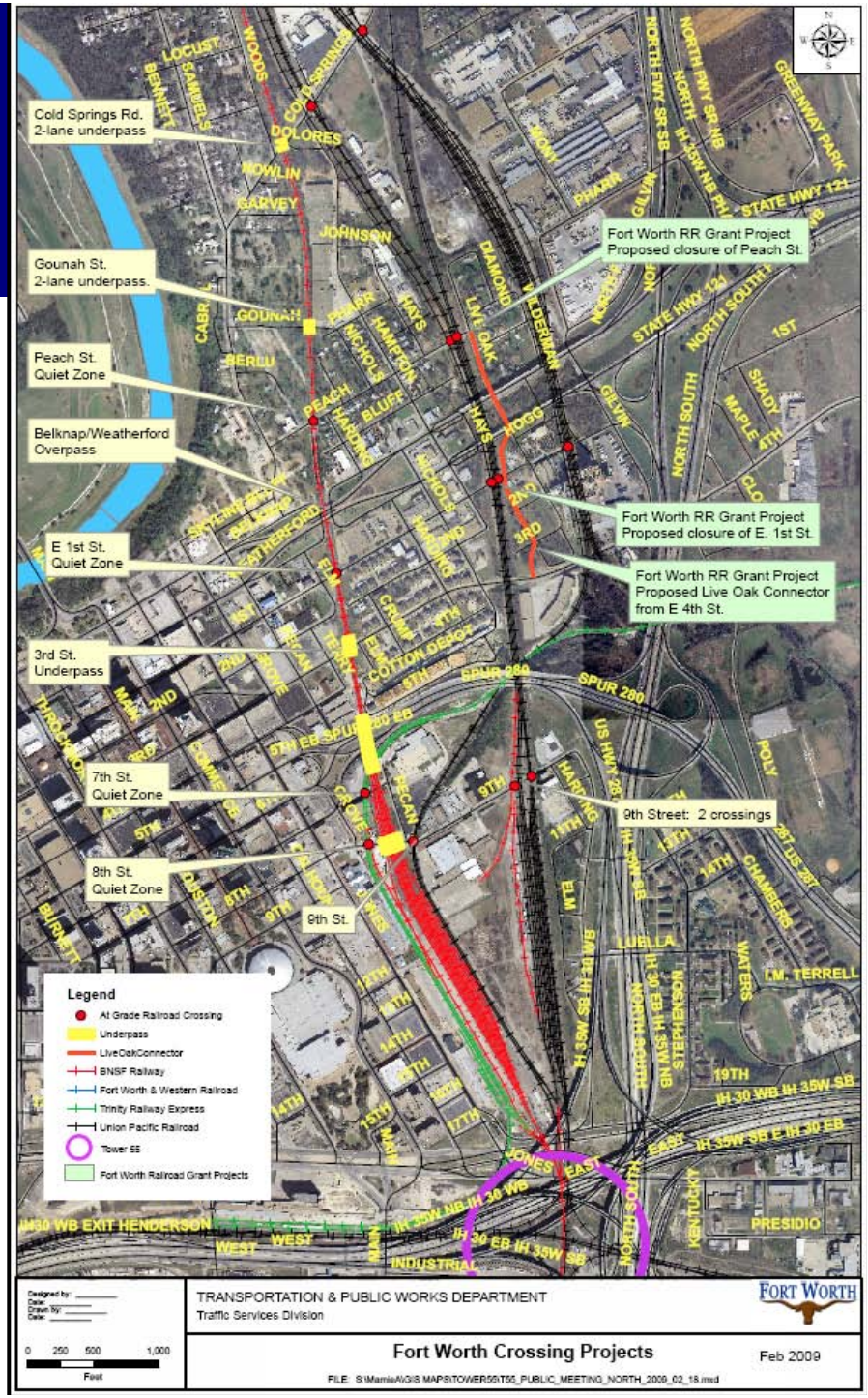
- **BNSF, UP, and City of Ft. Worth Joint Project**
- **$70-100 million***
- **"Short Term Improvements"**
  - Concept to direct traffic to routes that have multiple existing tracks and to establish directional routes
    - Crossovers for route usage
    - Grade crossing closures and/or grade separations increase freight capacity and public safety
  - Implementation: 1-3 years



*** Cost estimates are subject to further planning and engineering review.**

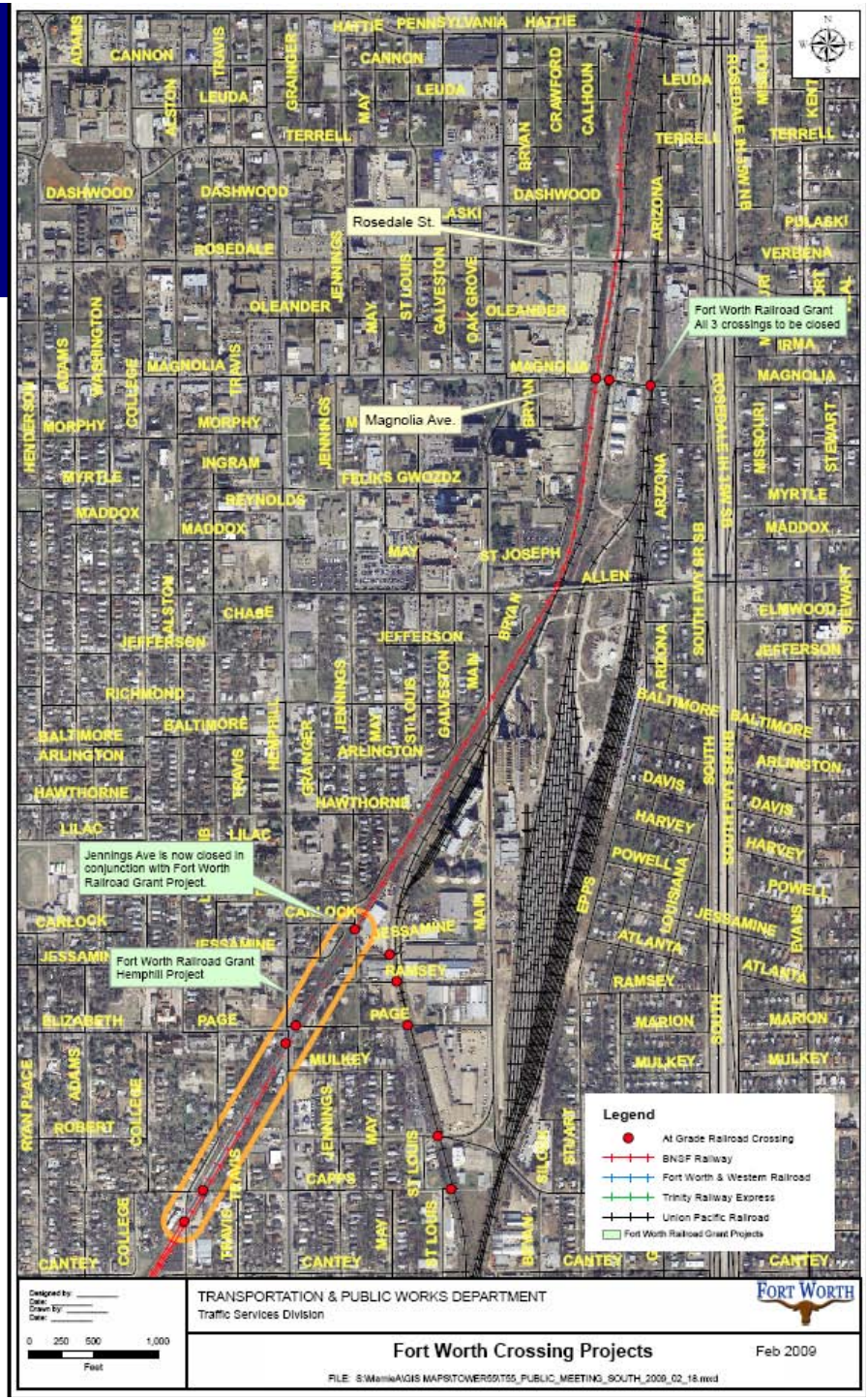
At-Grade Improvement – North of Tower 55

- **BNSF Railway construct approx. 9,000 LF of new track**
- **Street Crossing Improvements North of Tower 55**
- **Quiet Zones**
- **Underpass Improvement at Cold Springs, Gounah & 3rd Street**
- **Proposed Extension of Live Oak Street**
- **Proposed closure of Peach and 1st Streets**



At-Grade Improvement – South of Tower 55

- **BNSF Railway construct approx. 9,000 LF of new track**
- **Street Crossing Improvements South of Tower 55**
- **Jennings Avenue recently closed**
- **Hemphill Project**
- **Magnolia Avenue – 3 crossings planned to be closed**

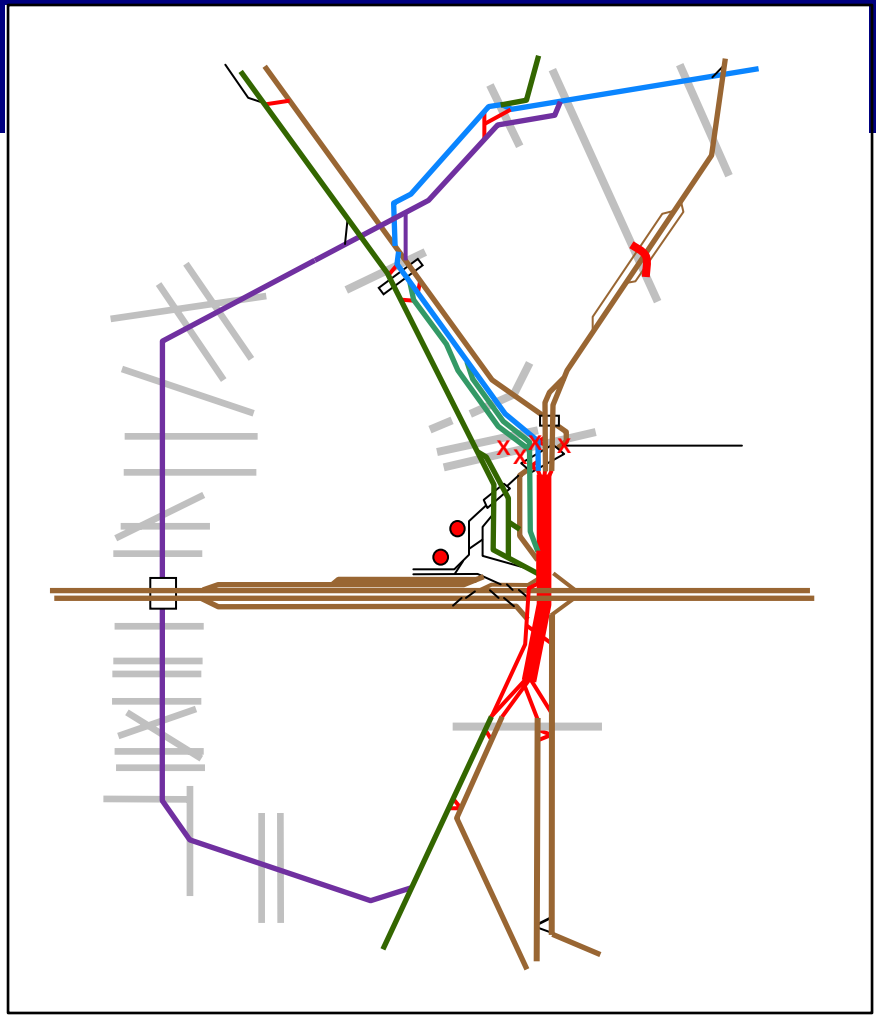


Mid-Term Improvement Alternative
North / South Trench

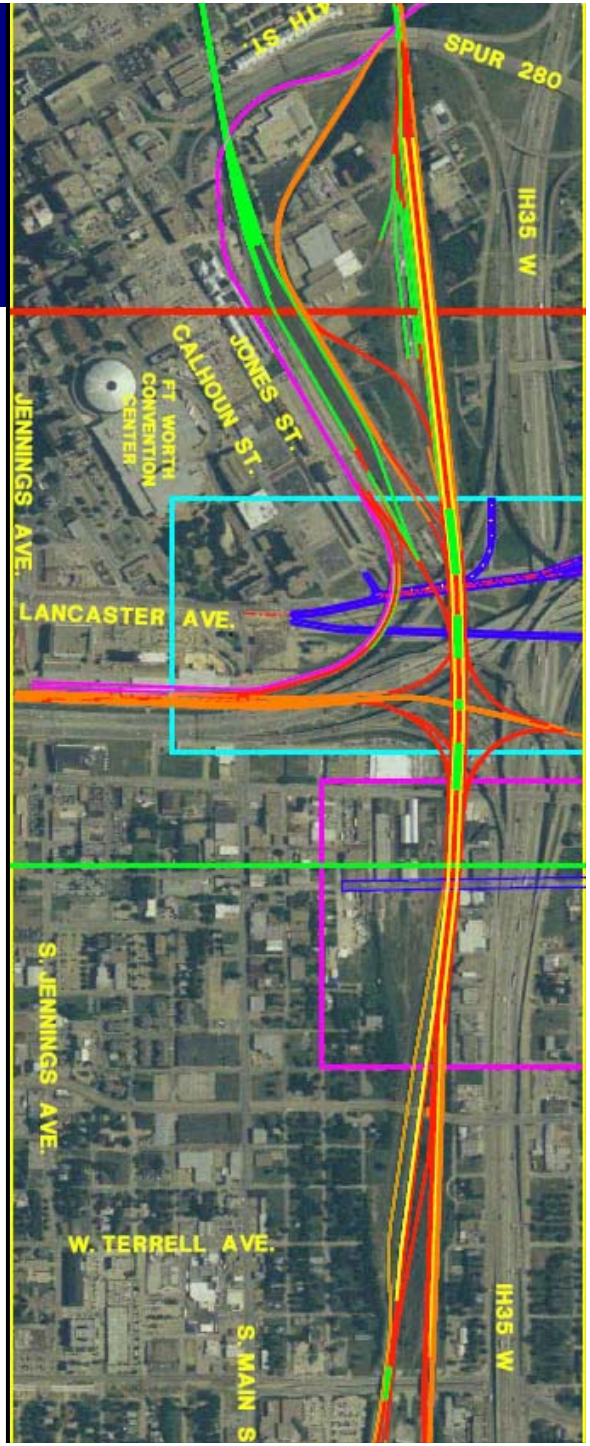
- **$550 – 625 Million***
- **"Mid-Term Improvement"**
  - Grade Separated Alternative
    - Dovetails with at-grade improvements
    - Creates additional North/South capacity with third track and eliminates conflicting North/South and East/West movements
  - Implementation: 5 – 10 years

*** Cost estimates are subject to further planning and engineering review.**

North-South Trench



Alternative 2b
East Side Trench

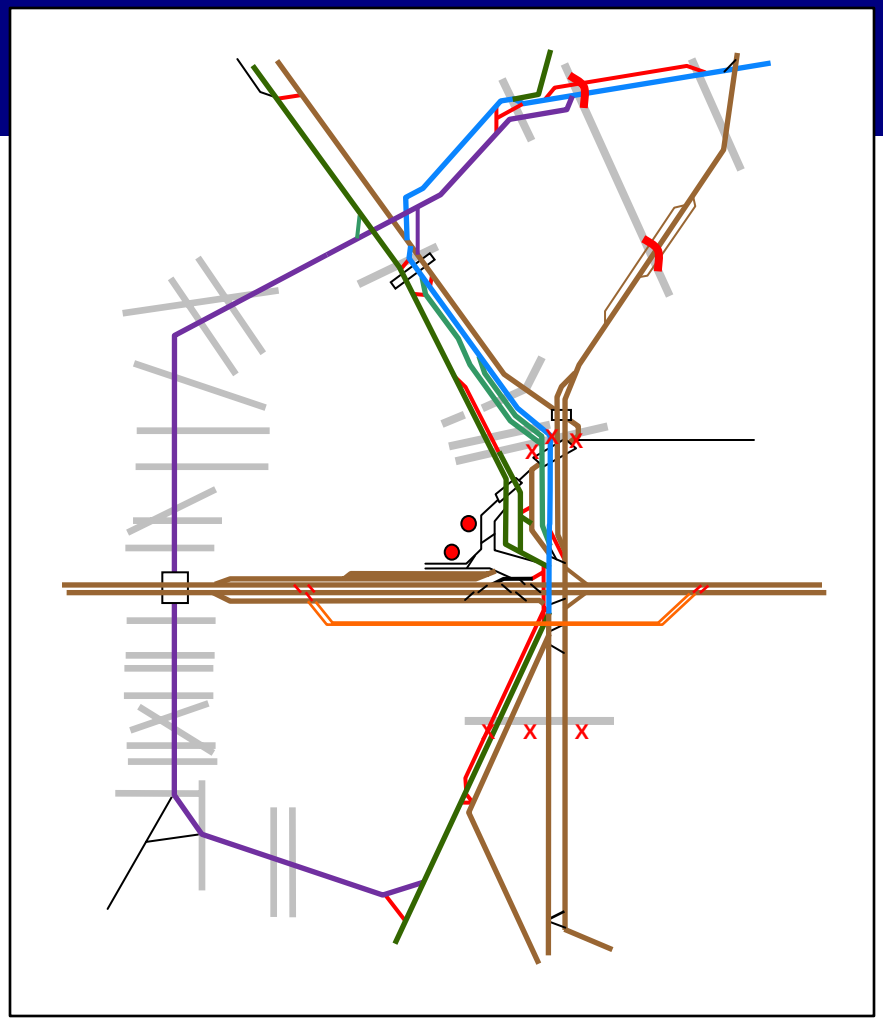


Mid-Term Improvement Alternative
East / West Flyover

- **$550 – 725 Million***
- **"Mid-Term Improvement"**
  - Grade Separated Alternative
    - Dovetails with at-grade improvements
    - Eliminates conflicting North/South and East/West movements
    - Potential for additional East/West capacity
    - Estimated length = ~15,000 feet
  - Implementation: <u>5 – 10 years</u>

*** Cost estimates are subject to further planning and engineering review.**

East-West Flyover



Alternative 3a
East-West Flyover

Mid-Term Improvement Alternative
Fort Worth & Western Railroad By-Pass

- **$150-200 million***
- **"Mid-Term Improvement"**
  - Construction phase bypass option
    - Diverts some North-South movements around Tower 55
    - Improved single track or new double track bypass
  - Implementation: 3-10 years

*** Cost estimates are subject to further planning and engineering review.**

Tower 55 Rail Reliever Study
Measures of Effectiveness

Railroad

Capacity Improvements: The amount of overall additional capacity added due to the construction of an alternative.

Created Meet/Pass Capacity Near Tower 55: Tracks designated to hold trains to meet other trains or to perform normal terminal operational procedures such as crew changes, equipment maintenance, etc.

Number of Conflicting EW/NS Movements at Tower 55: Quantity of incompatible East-West and North-South movements.

Number of Conflicting Turning Movements near Tower 55: Quantity of incompatible turning movements with either EW or NS movements.

Cost of Operations: Long-term cost of railroad operations.

Cost of Long-Term Maintenance: Long-term cost of railroad maintenance.

Tower 55 Rail Reliever Study
Measures of Effectiveness

Public

Interactions between Railroad and Roadway Traffic: The number of crossing blockages caused by stopped or slowly moving trains.

Interactions between Railroad and Pedestrian Access: Ability to reduce railroad related obstructions to pedestrian traffic.

Commuter Rail Access North/South: The potential opportunity for North and South commuter rail operations through Tower 55.

Commuter Rail Access East/West: The potential opportunity for East and West commuter rail operations through Tower 55.

Goods Movement Diversion: The ability for goods movement to transfer from truck to rail, thus reducing congestion and maintenance on highway system.

Tower 55 Rail Reliever Study
Measures of Effectiveness

Environmental

Air Quality Impact: Impact on air quality as determined by locomotive emissions per ton of freight moved.

Right-of-Way Requirements: Evaluation of the number of parcels affected, number of buildings displaced, and use and accessibility of remaining parcels.

Community Effects: Indication of how well each alternative affects access to neighborhoods and community resources such as medical facilities, schools, and parks.

Tower 55 Rail Reliever Study
Measures of Effectiveness

Environmental (cont'd)

Effects on Cultural Resources: Evaluation of effects to parklands and historical resources.

Visual Effect: The visual effect each alternative has on the surrounding areas.

Noise and Vibration Effect: The level of noise and vibration caused by increased rail traffic over each alternative.

Tower 55 Rail Reliever Study
Measures of Effectiveness

Combined

Cost: Financial commitment required to construct a specific alternative.

Constructability: The extent to which an alternative can be constructed on-site at a reasonable cost with minimum impacts to railroad, vehicular, and pedestrian operations.

Customer Impact during Construction: Level of impact of freight delivery to local during construction of the alternative.

Partnership: The potential for all public & private stakeholders to reach consensus on funding and implementation of a specific alternative.

Tower 55 Rail Reliever Study

Measures of Effectiveness

Draft Preliminary Evaluation

	Mid-Term (5-10 Years)					
Neutral (0) Very Favorable (++) Unfavorable (-) Favorable (+) Very Unfavorable (- -)	Alt. 2B N/S Trench		Alt. 3A E/W Flyover		2 Track FWWR Bypass	
	UP	BNSF	UP	BNSF	UP	BNSF
Railroad Benefits						
Capacity Improvements	++	++	++	+	+	++
Created Meet/Pass Capacity Near Tower 55	++	+	0	0	+	0
Number of Conflicting EW/NS Movements at Tower 55	++	++	++	++	+	++
Number of Conflicting Turning Movements at Tower 55	++	++	0	0	+	++
Cost of Operations	-	0	0	0	-	-
Cost of Long-Term Maintenance	0	0	-	0	--	--

Tower 55 Rail Reliever Study

Measures of Effectiveness

Draft Preliminary Evaluation

	Mid-Term (5-10 Years)		
Neutral (0) Very Favorable (++) Unfavorable (-) Favorable (+) Very Unfavorable (--)	Alt. 2B N/S Trench	Alt. 3A E/W Flyover	2 Track FWWR Bypass
Public Benefits			
Interactions between Railroad and Roadway Traffic	+	+	--
Interactions between Railroad and Pedestrian Access	+	+	--
Commuter Rail Access North/South	0	0	--
Commuter Rail Access East/West	+	-	-
Goods Movement Diversion – Truck to Rail	+	+	-

Tower 55 Rail Reliever Study

Measures of Effectiveness

Draft Preliminary Evaluation

	Mid-Term (5-10 Years)		
Neutral (0) Very Favorable (++) Unfavorable (-) Favorable (+) Very Unfavorable (--)	Alt. 2B N/S Trench	Alt. 3A E/W Flyover	2 Track FWWR Bypass
Environmental Benefits			
Air Quality Impact	++	++	+
Right-of-Way Requirements	0	--	--
Community Effect	+	-	--
Effect on Cultural Resources	-	-	--
Noise and Vibration Effect	-	-	--
Visual Effect	+	--	--

Tower 55 Rail Reliever Study

Measures of Effectiveness

Draft Preliminary Evaluation

	Mid-Term (5-10 Years)		
Neutral (0) Very Favorable (++) Unfavorable (-) Favorable (+) Very Unfavorable (--)	Alt. 2B N/S Trench	Alt. 3A E/W Flyover	2 Track FWWR Bypass
Combined Benefits			
Cost	--	--	--
Constructability	-	+	--
Customer Impact during Construction	-	+	--
Partnership	++	--	--
Very Favorable (++) (5 points)	9	4	3
Favorable (+) (4 points)	7	6	5
Neutral (0) (3 points)	5	8	1
Unfavorable (-) (2 points)	5	5	4
Very Unfavorable(--) (1 point)	1	4	14
Total Points	99	82	60

Tower 55 Rail Reliever Study
Conclusions to Alternatives

- FWWR Bypass
  - Significant challenges due to community noise impacts and commercial & residential property acquisition required to create connections at south end of alternative near Biddison Road

- East-West Fly-Over
  - Significant challenges due to community visual impacts and right-of-way acquisition of commercial property along Vickery Blvd.

Tower 55 Rail Reliever Study

Draft Recommendation of the Locally Preferred Alternative (LPA)

Based on Measures of Effectiveness Evaluation Results and Public/Political Input:

LPA: North-South Trench with additional improvements to north and south ends. Developed as a "progressive build-upon" set of improvements to BNSF/UPRR at-grade improvements.

Improved Commuter Rail Opportunities –

- Reconstruction of the "Hole in the Wall" as part of the trench construction would allow future simultaneous TRE and SW2NE operations through the Hole in the Wall.

- A new additional bridge over Lancaster Avenue parallel to the TRE Bridge would be used by freight during trench construction and then be transferred to TRE for double track between ITC and T&P Stations.

Tower 55 Rail Reliever Study
Draft Recommendation of the Locally Preferred Alternative (LPA)

South End: Page Street @ BNSF Ft. Worth Sub
North End: Meacham Boulevard @ Cotton Belt Railroad Corridor

<u>Project Components (general description from south to north):</u>

1. Railroad "crossovers" in area of Allen and Magnolia streets to assist in improving railroad operations
2. 3-Track "Trench" (approx. 8000') constructed between Rosedale Avenue and MLK Freeway (Spur 280)
3. "Trench" vertical profile closes Vickery Blvd.; 4 options being evaluated
4. Reconstruction of Lancaster Ave. from Jones Street to Kentucky Ave. and I-30 ramp connections due to construction of "Trench"; and maintaining the 19th Street connection

Tower 55 Rail Reliever Study

Draft Recommendation of the Locally Preferred Alternative (LPA)

5. New bridge parallel to TRE bridge between ITC and T&P Station for initial purposes during construction transferring to TRE for permanent use
6. Widening “Hole In Wall” to allow construction of two additional tracks to create three track underpass benefitting both freight rail and commuter rail
7. Set of crossovers at Tower 60 to facilitate train movements
8. New 8500’ foot siding track from Beach Street on the DART-owned Cotton Belt to I-35W in a location within right-of-way allowing for future double tracking of SW2NE
9. A new grade separation of Sylvania Avenue over the Cotton Belt line with clear span of railroad right-of-way

Tower 55 Rail Reliever Study

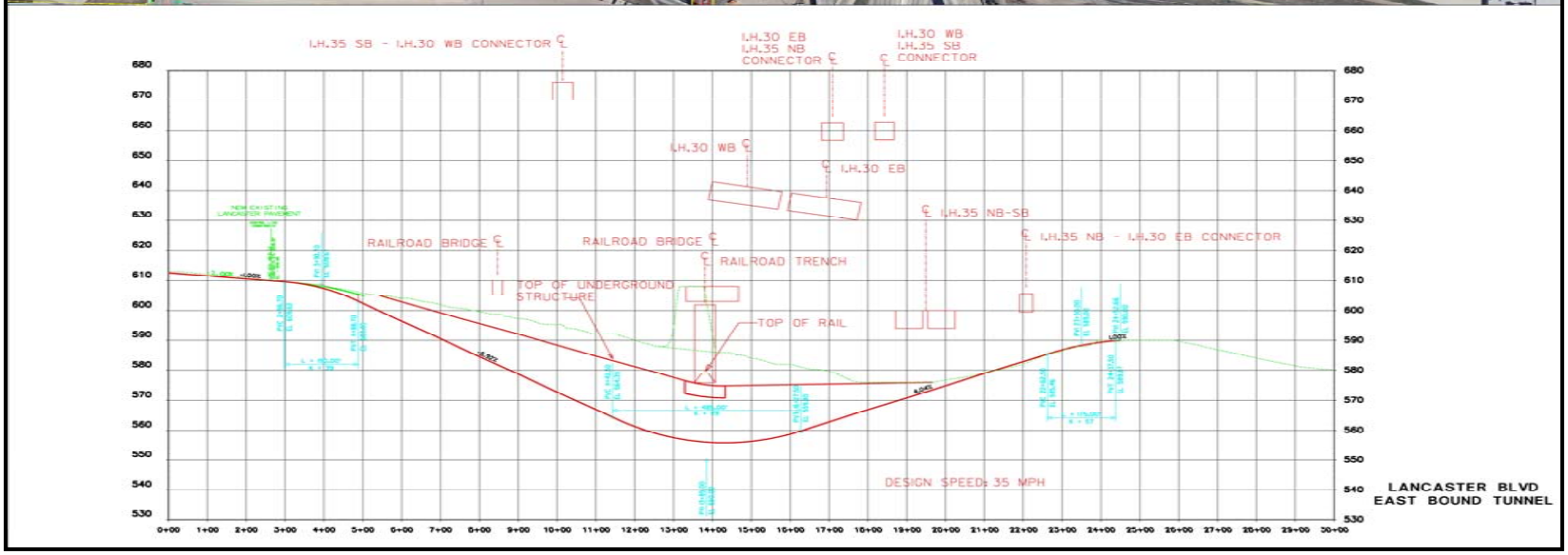
Draft Recommendation of the Locally Preferred Alternative (LPA)

Reconstruction of Lancaster Avenue

Tower 55 Rail Reliever Study

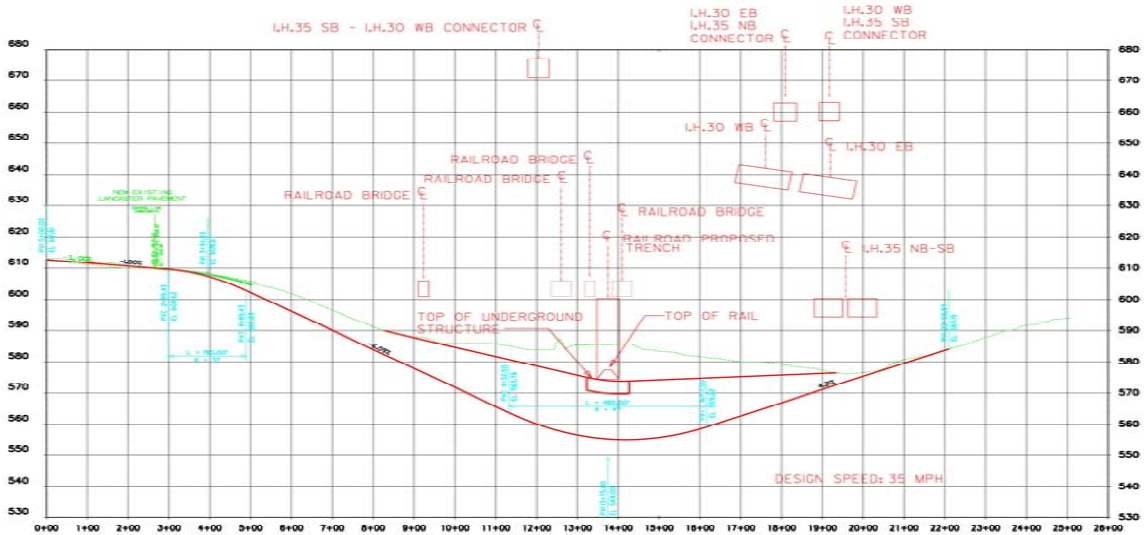
North / South Trench Effects

Lancaster Avenue



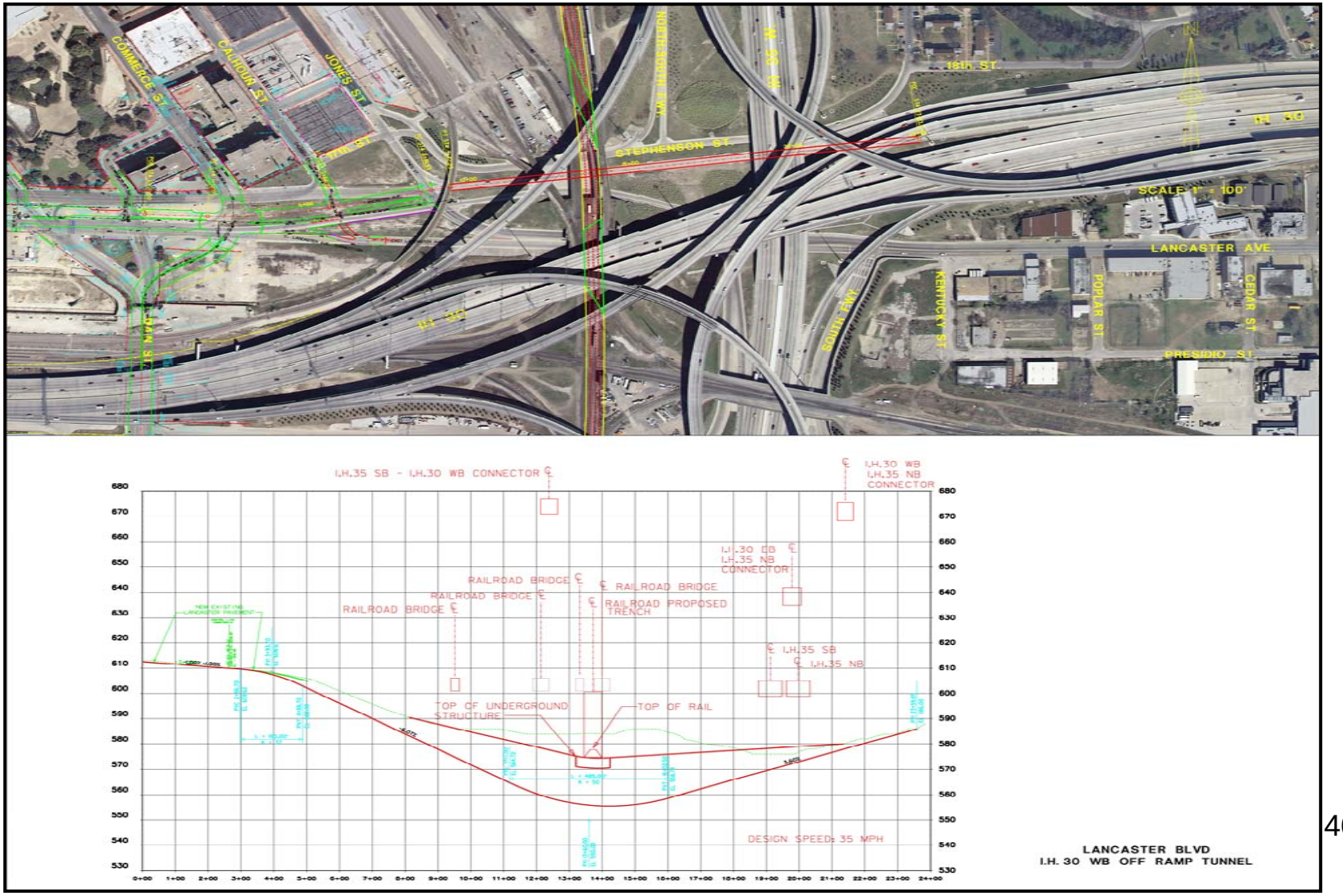
Tower 55 Rail Reliever Study

North / South Trench Effects – EB I.H. 30 Ramp



Tower 55 Rail Reliever Study

North / South Trench Effects – WB I.H. 30 Ramp



Tower 55 Rail Reliever Study
North / South Trench Effects – Vickery Boulevard

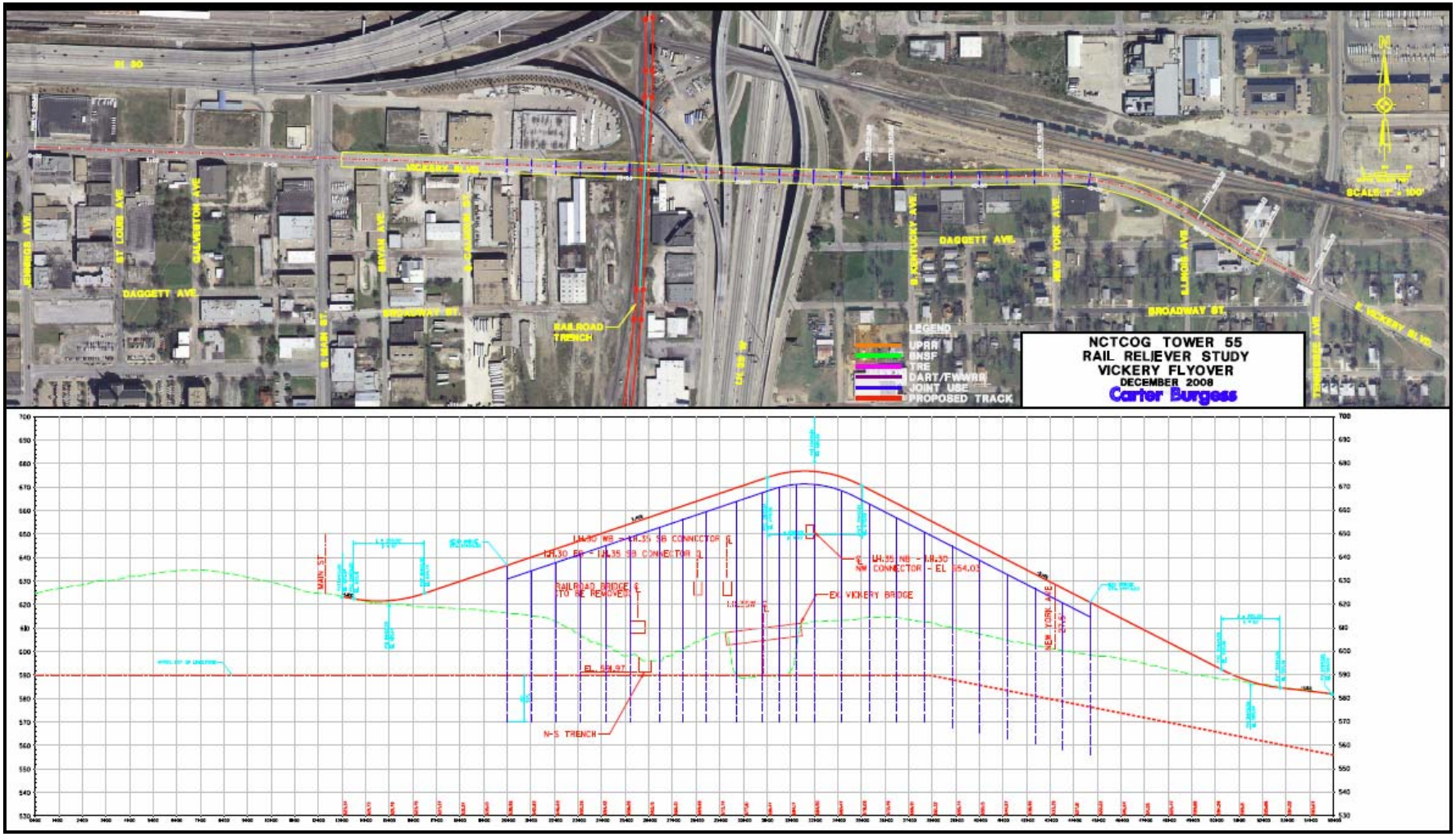
- **The Tower 55 North / South Trench would sever Vickery Boulevard at the underpass beneath the railroad corridor**
- **Four alternatives have been identified at this time:**
  - No-Build (close Vickery Boulevard between I.H. 35W and Calhoun Street)
    - East-west access is maintained at Lancaster Avenue and at Pennsylvania Avenue
  - New Vickery Boulevard Bridge
    - Bridge would stretch from east of Main Street to west of Tennessee Avenue (travels over the I.H. 35W direct connector ramps – approximately 60 feet high)
    - Estimated Cost = **$49.5 Million** *
  - New Vickery Boulevard Tunnel
    - Tunnel would stretch from east of Main Street to west of Illinois Avenue (travels beneath I.H. 35W and the North / South Trench)
    - Estimated Cost = **$123.3 Million** *
  - New Bridge at Broadway Street
    - Bridge would stretch from east of Calhoun Street to west of New York Avenue (travels over the I.H. 35W direct connector ramps – approximately 40 feet high)
    - Broadway Street would be reconstructed with direct tie-in to New York Ave.
    - Estimated Cost = **$25.5 Million** *

*** Cost estimates are subject to further planning and engineering review.**

Tower 55 Rail Reliever Study

Potential Vickery Overpass

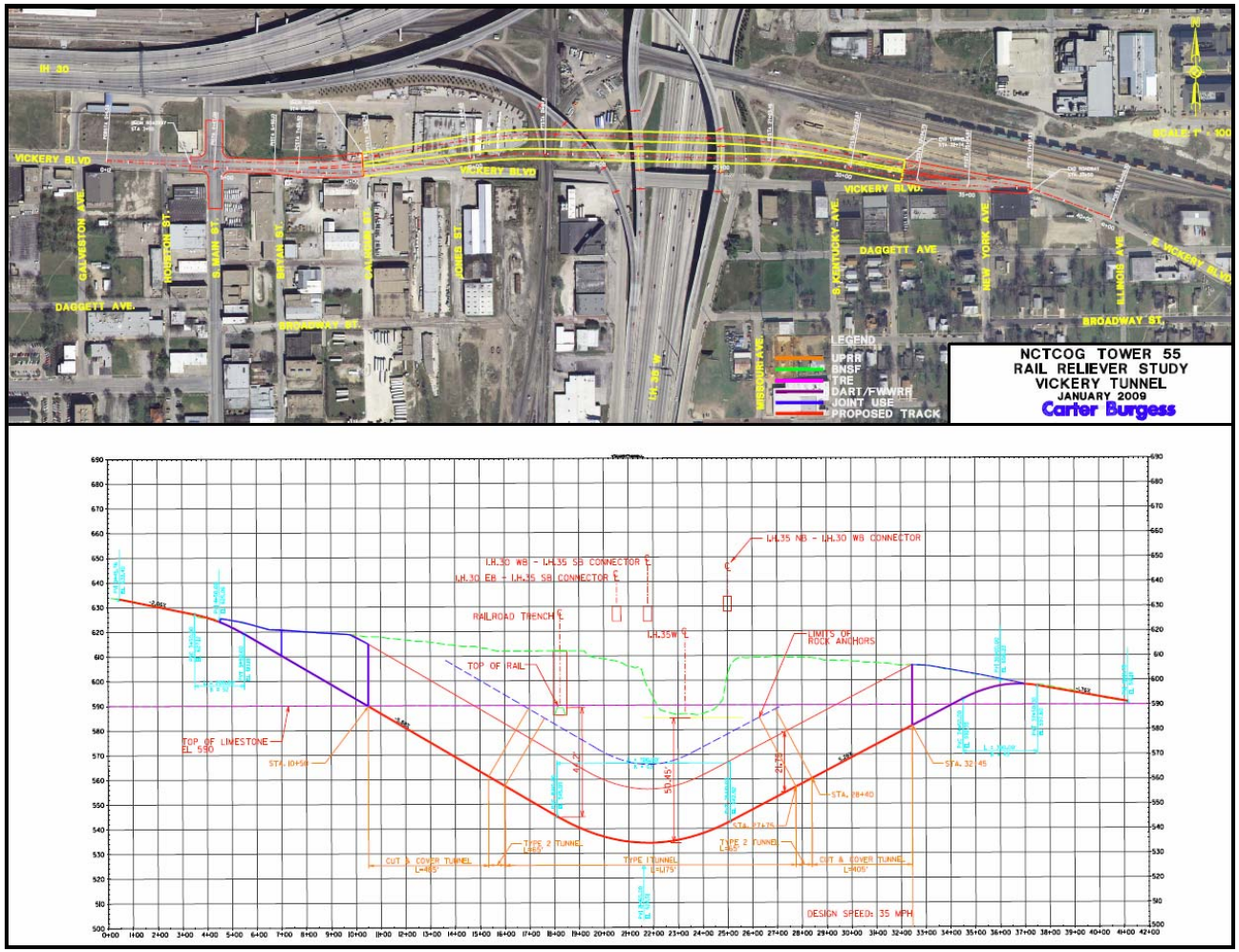
Bridge would stretch from east of Main Street to west of Tennessee Avenue
(travels over the I.H. 35W direct connector ramps – approximately 60 feet high)



Tower 55 Rail Reliever Study

Potential Vickery Tunnel

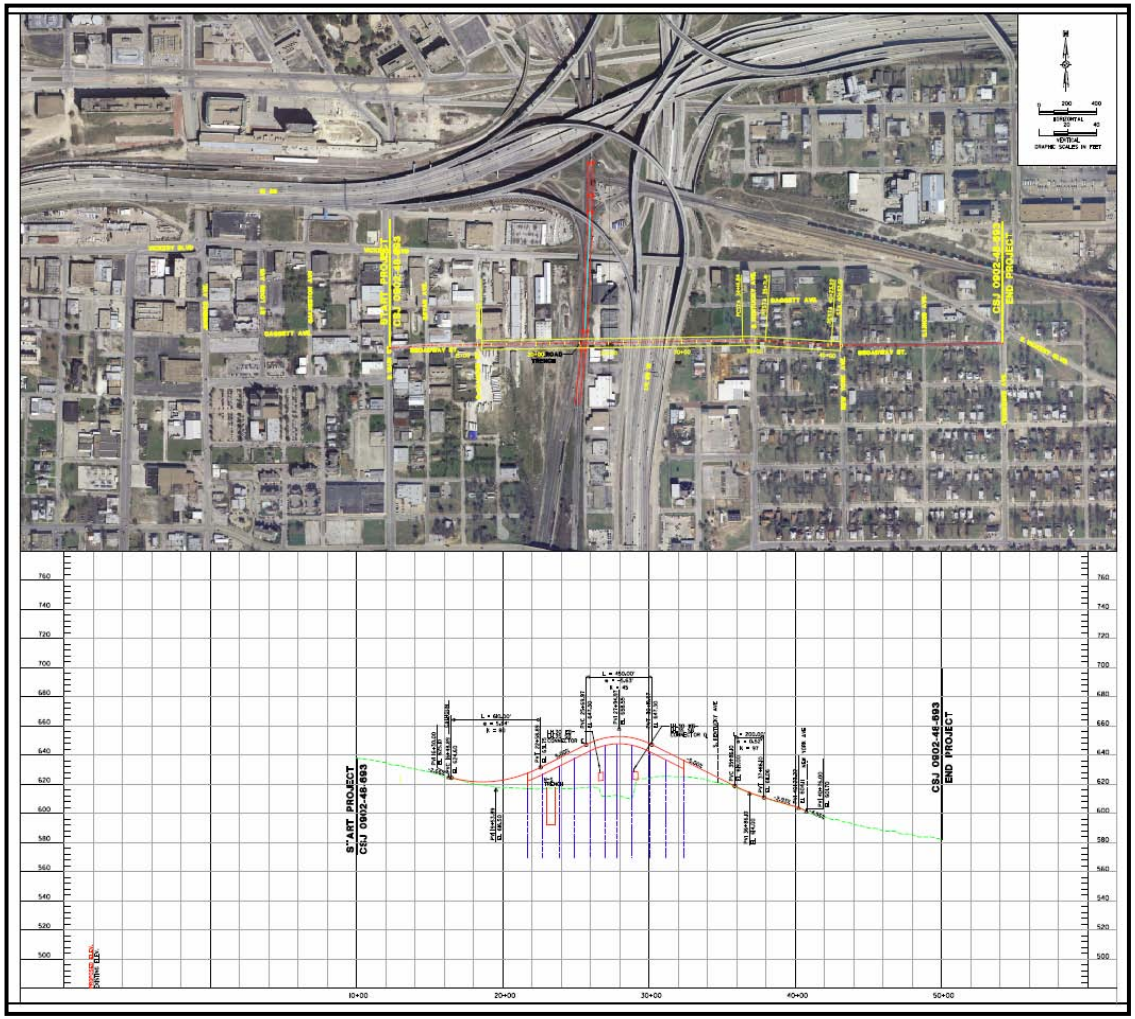
Tunnel would stretch from east of Main Street to west of Illinois Avenue
(travels beneath I.H. 35W and North / South Trench)



Tower 55 Rail Reliever Study

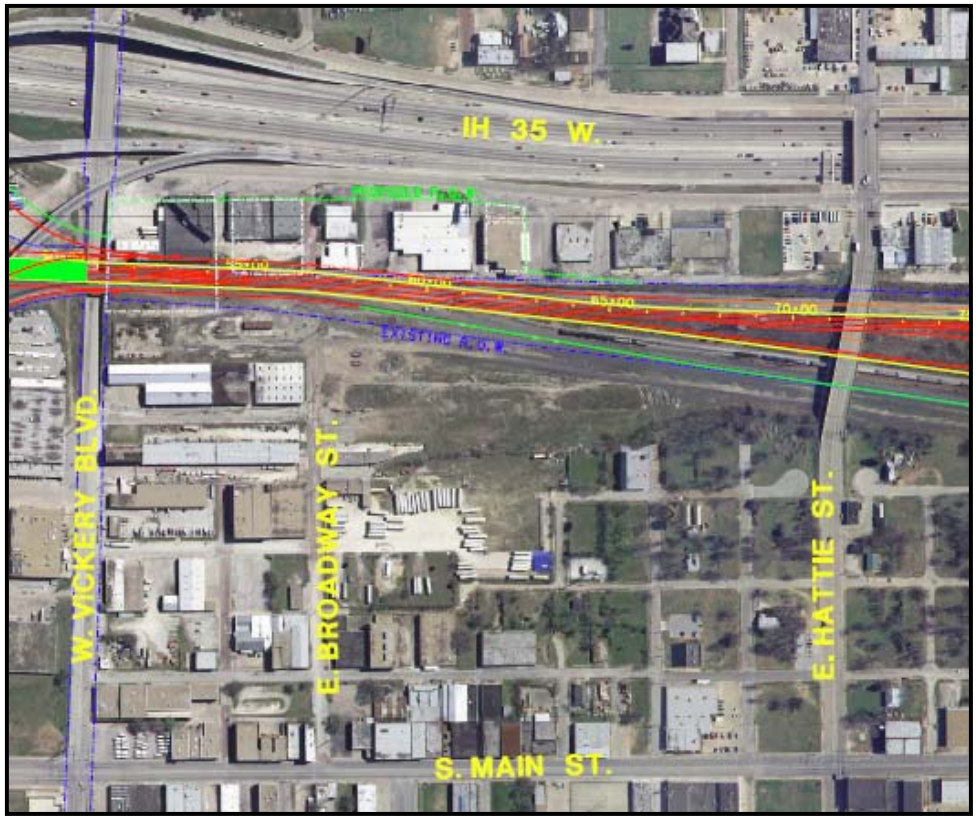
Potential Broadway Overpass

Bridge would stretch from east of Calhoun Street to west of New York Avenue
(travels over the I.H. 35W direct connector ramps – approximately 40 feet high)



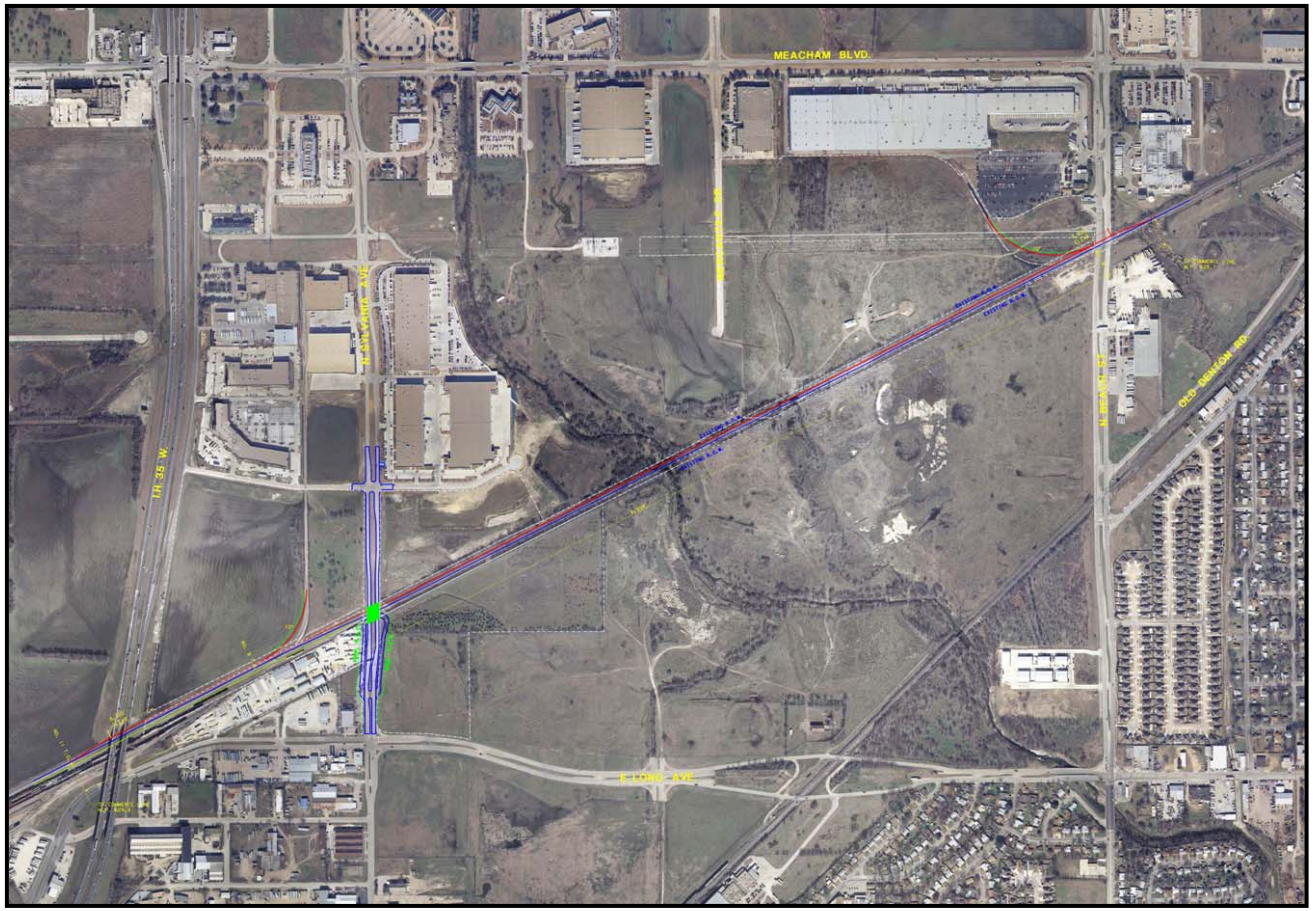
Potential Right-of-Way Impacts
"Draft – Preliminary – Subject to Change"

- **Just South of Tower 55 – Between Vickery Blvd. & Hattie St.**
  - **Total of 6 properties between railroad and highway frontage road**
  - **Anticipated 4 full acquisitions south of Vickery**
  - **Anticipate 2 partial acquisitions of the next properties**



Potential Right-of-Way Impacts
"Draft – Preliminary – Subject to Change"

- **At New Sylvania Grade Separation at Cotton Belt RR near Meacham Blvd**
  - **4 properties at corner of intersection anticipated to be partial acquisitions**



Tower 55 Rail Reliever Study
Commuter Rail Opportunities

- **Active and continuous partnerships will be required to ensure preservation of commuter rail opportunities within/adjacent to existing freight corridors**

- **Consideration of the following commuter rail corridors serving Fort Worth will be given as part of this effort:**
  - **Improvements to existing Trinity Railway Express (TRE) operations**
  - **Enhancing opportunity to implement the SW2NE Commuter Rail**
  - **Union Pacific (UP) Main Line to Arlington/Grand Prairie**
  - **BNSF Railway Line to Joshua/Cleburne**
  - **UP Line to Mansfield/Midlothian**
  - **BNSF Railway Line to Alliance Area & Texas Motor Speedway**

- **A major goal before conclusion of the Tower 55 Rail Reliever Study is to develop a commuter rail concept supported in principle by FWTA, the City of Fort Worth, and the freight railroads**

Tower 55 Rail Reliever Study
Potential Funding Options

- **Texas Rail Relocation and Improvement Fund (TRRIF)**
- **Direct Funding out of Railroad Revenues, State/Local Appropriations, and Congressional Funding as available**
- **Federal Rail Assistance Programs (Railroad Rehabilitation and Improvement Financing Program; Transportation Infrastructure Finance and Innovation Act)**
- **Federal-Aid Formula Grant Programs (Congestion Mitigation and Air Quality Program)**
- **Highway and Rail-Safety Programs**
- **Federal Tax Credit Bond Programs**
- **Toll or User-Charges on Increased Freight Rail Traffic and Revenue (Comprehensive Development Agreements)**
- **Sale of Freight Assets for Passenger Use**
- **Other State/Local Approaches (i.e. Property Tax Relief in exchange for Public-Purpose Improvements)**

Future NCTCOG Study
Regional Outer Loop / Rail Bypass

- **$8 – 10 Billion***
- **"Long-Term Improvement"**
  - Single Loop System or Collection of Multiple Bypass Routes
    - Diverts rail through-traffic around the Dallas-Fort Worth Region
    - Most effective as a high-speed double-track bypass route (up to 300 miles)
  - Implementation: <u>15 – 30 years</u>

*** Cost estimates are subject to further planning and engineering review.**

Tower 55 Rail Reliever Study

Upcoming Steps

- **Finalize Schematic Development and refine Cost Estimates of the Locally Preferred Alternative ("Trench")**
- **Continue partnership with BNSF, UP, and City of Fort Worth to implement proposed At-Grade Rail & Street Improvements beginning in 2010**
- **Further analyze opportunity for all proposed commuter rail corridors in the Western Sub-Region as a result of Tower 55 Locally Preferred Grade-Separated Alternative**
- **Begin development of initial Financing Plan and Train Operations Plan for phased construction of Locally Preferred Grade-Separated Alternative**
- **Complete Environmental Assessment documentation and obtain Federal Approval (FONSI) in December 2009**

Tower 55 Rail Reliever Study
Public Comment Opportunities

- Next Public Meeting tentatively Schedule for June 2009
- Public Hearing tentatively scheduled for October 2009
- Mail any additional public comment
- View project web site:
  http://www.nctcog.org/trans/goods/tower55/

Welcome & Introductions

Project Goals & Objectives

Environmental Process
& Community Input Opportunities

Draft Recommended Alternative Improvement

➔Questions & Answers

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