

# Memorandum



CITY OF DALLAS

DATE March 23, 2018

TO Honorable Members of the Mobility Solutions, Infrastructure and Sustainability Committee

SUBJECT **Cotton Belt Regional Rail Corridor Project**

On Monday, March 26, 2018, you will be briefed on the Cotton Belt Regional Rail Corridor Project. The briefing materials are attached for your review.

Please feel free to contact me if you have any questions or concerns.

A handwritten signature in blue ink, appearing to read 'Majed A. Al-Ghafry'.

**Majed A. Al-Ghafry**  
Assistant City Manager

[Attachment]

- c: Honorable Mayor and Members of the City Council  
T.C. Broadnax, City Manager  
Larry Casto, City Attorney  
Craig D. Kinton, City Auditor  
Billierae Johnson, City Secretary (Interim)  
Daniel F. Solis, Administrative Judge  
Kimberly Bizer Tolbert, Chief of Staff to the City Manager  
Jo M. (Jody) Puckett, Assistant City Manager (Interim)
- Jon Fortune, Assistant City Manager  
Joey Zapata, Assistant City Manager  
M. Elizabeth Reich, Chief Financial Officer  
Nadia Chandler Hardy, Chief of Community Services  
Raquel Favela, Chief of Economic Development & Neighborhood Services  
Theresa O'Donnell, Chief of Resilience  
Directors and Assistant Directors



# Cotton Belt Regional Rail Corridor Project

Dallas Council Committee on Mobility  
Solutions, Infrastructure and  
Sustainability

March 26, 2018

Stephen Salin, AICP

Vice President, Capital Planning



# Presentation Outline

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Project Overview

Draft Resolution and Recent Public Meetings

Alignment

Stations

Grade Separations

Upcoming Public Involvement Opportunities

# Project Summary - Dallas

Service to DFW

Cypress Waters Alignment and Station

Include Knoll Trail Station

Eliminate Preston Road Station

Include Coit Road Station

Coit Road Grade Separation (Road up and Rail Down)

Rail Freight Service eliminated in North Dallas

Mitigation of Noise, Vibration

Opportunity for application of Betterments

Enhanced Landscaping

Trail within the Cotton Belt Corridor

# **City Resolutions - Status**

Addison – pending (many previously adopted)

Carrollton – pending (anticipated in April)

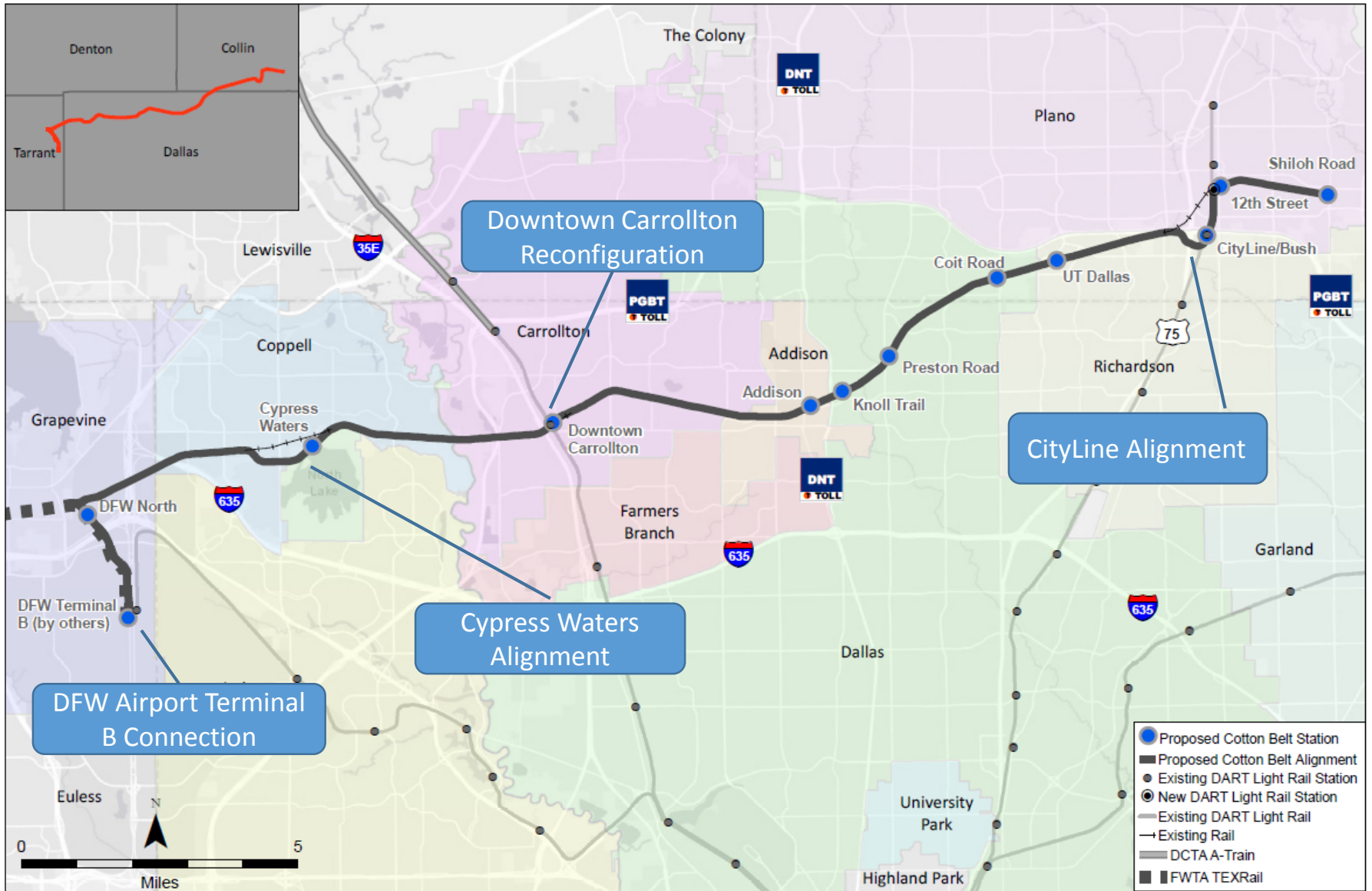
Dallas – pending (anticipated March 26/28)

Plano – passed February 26, 2018 (support)

Richardson – passed January 22, 2018 (support)

Coppell – passed June 13, 2017 (support)

Grapevine – pending (anticipated in April)



**COTTON BELT**

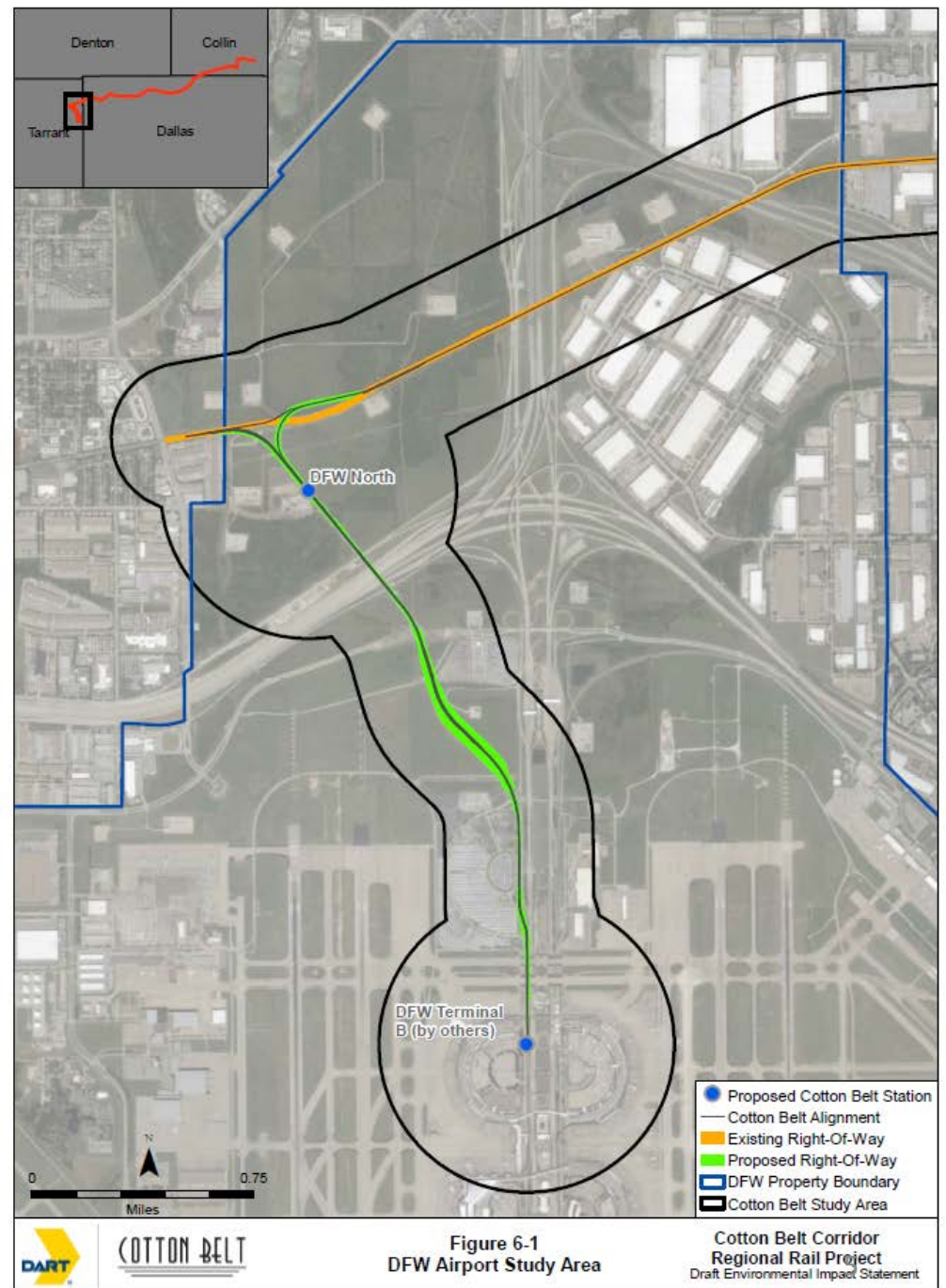
# Proposed Cotton Belt Alignment

DFW Airport to Shiloh Road

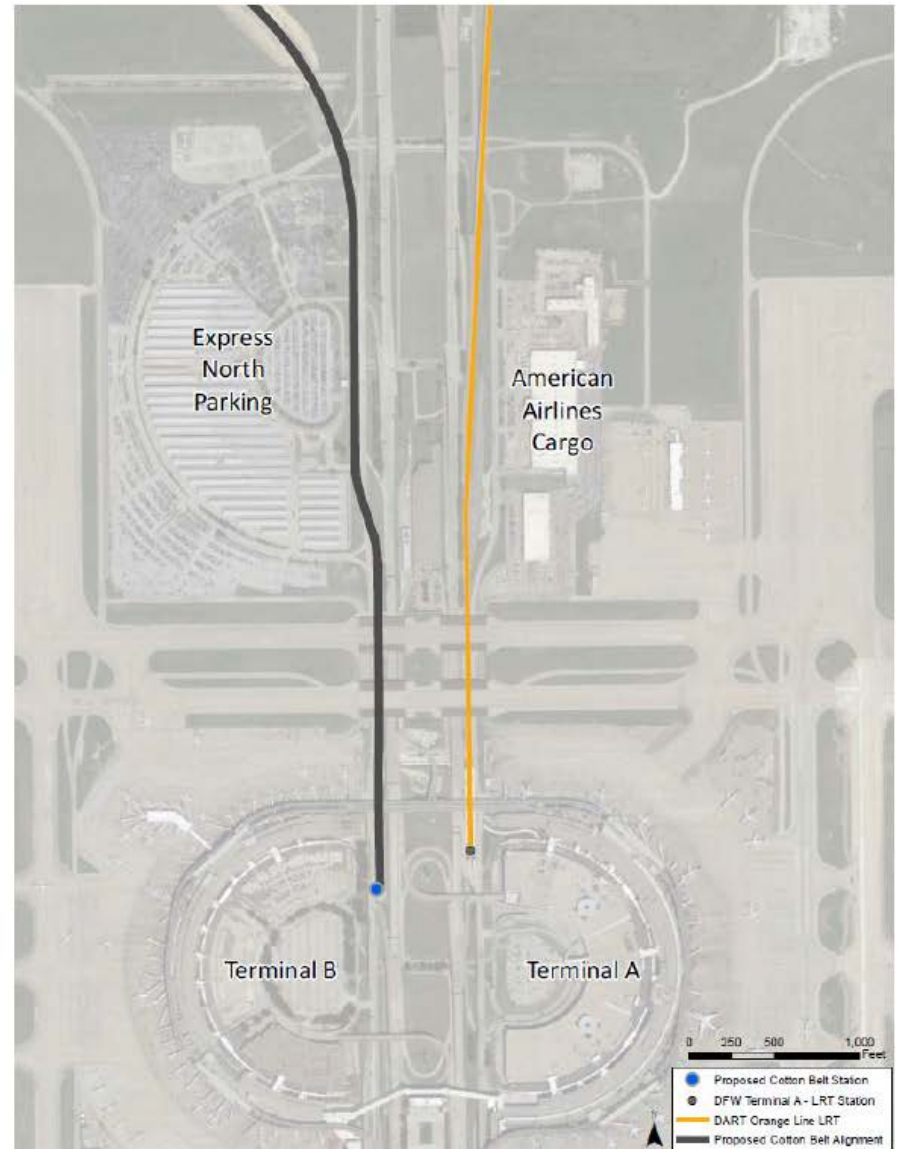
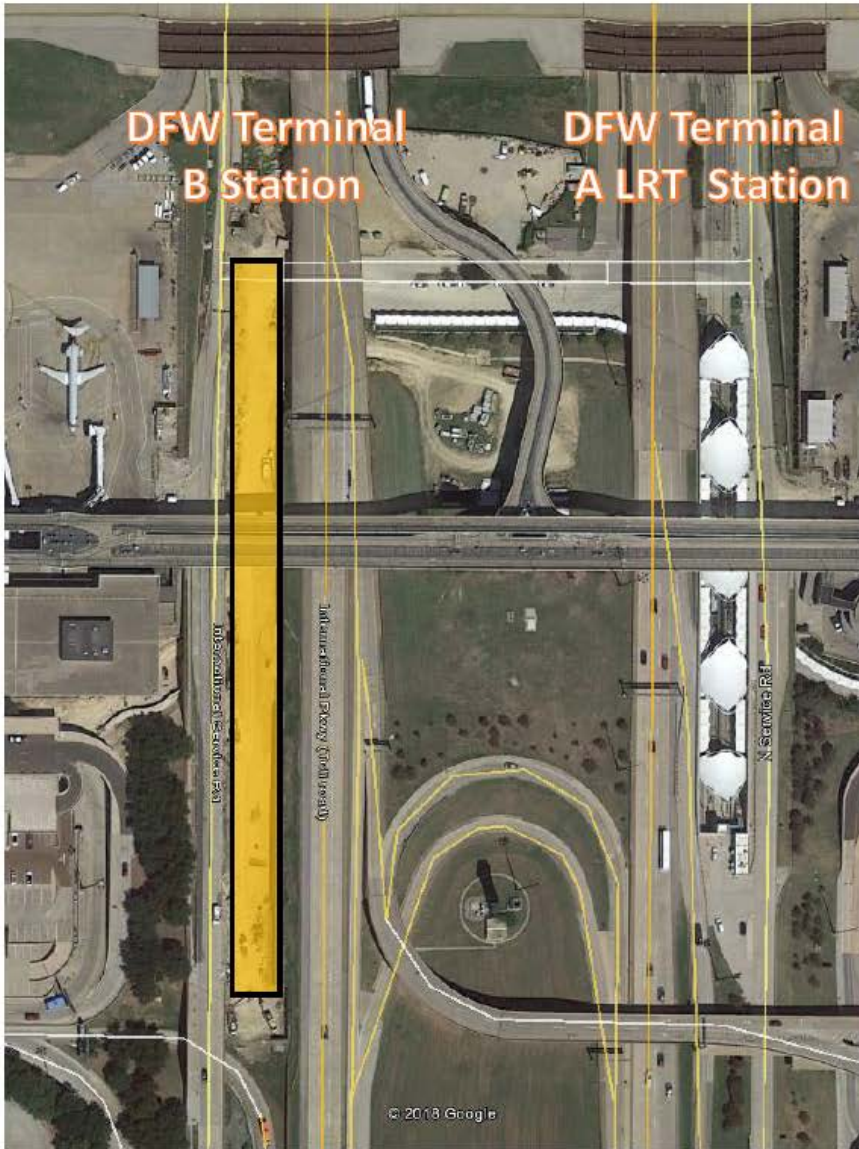
**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement

# DFW Airport Terminal B Connection

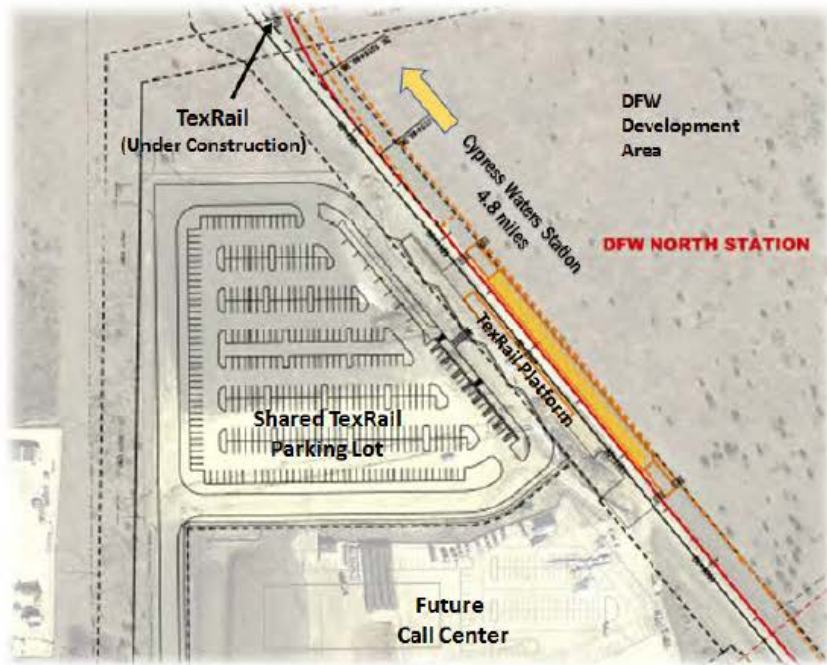
Alignment exits railroad corridor to connect to TEXRail alignment and serve DFW Airport Terminal B







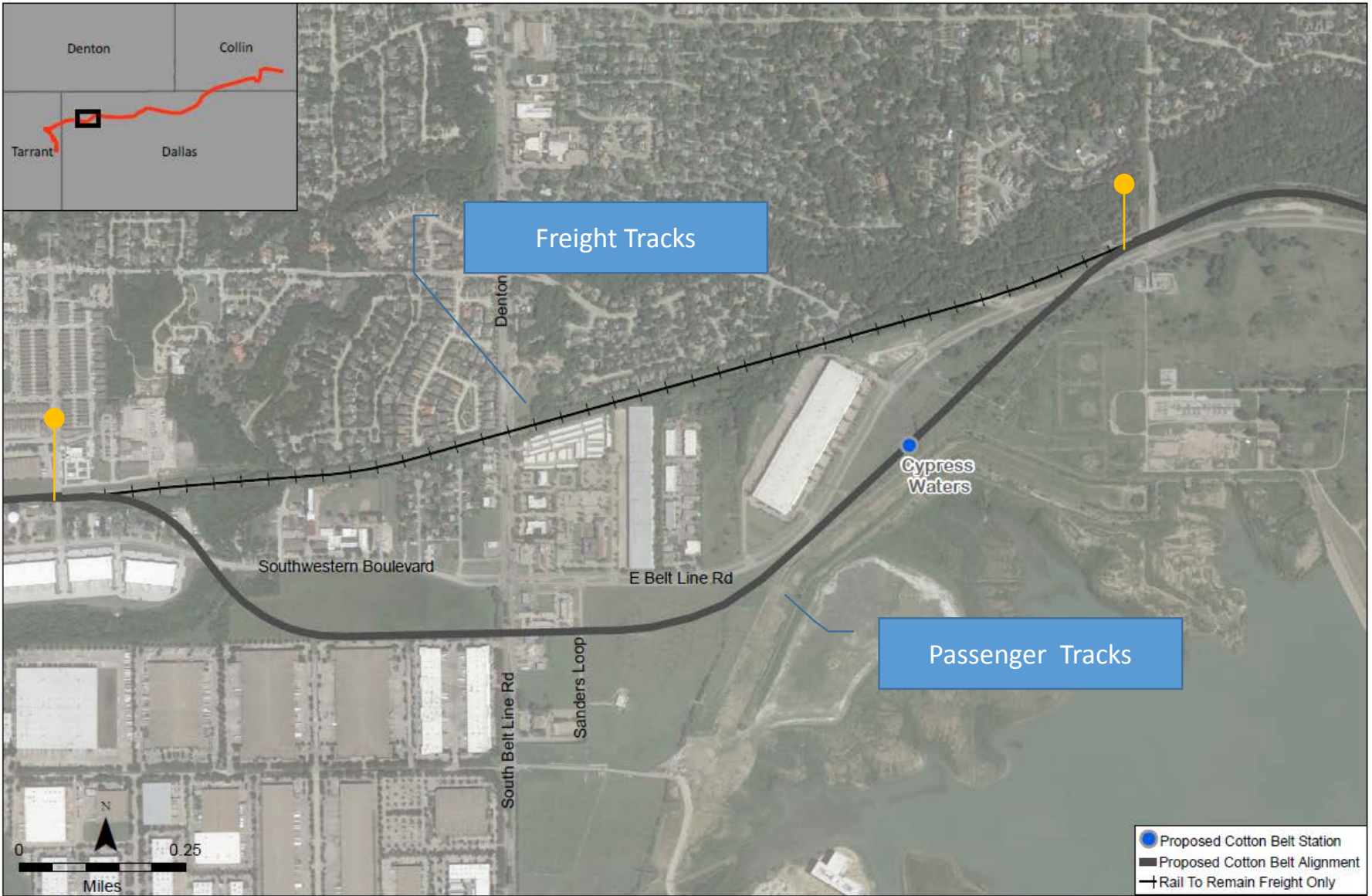




COTTON BELT

# DFW North Station

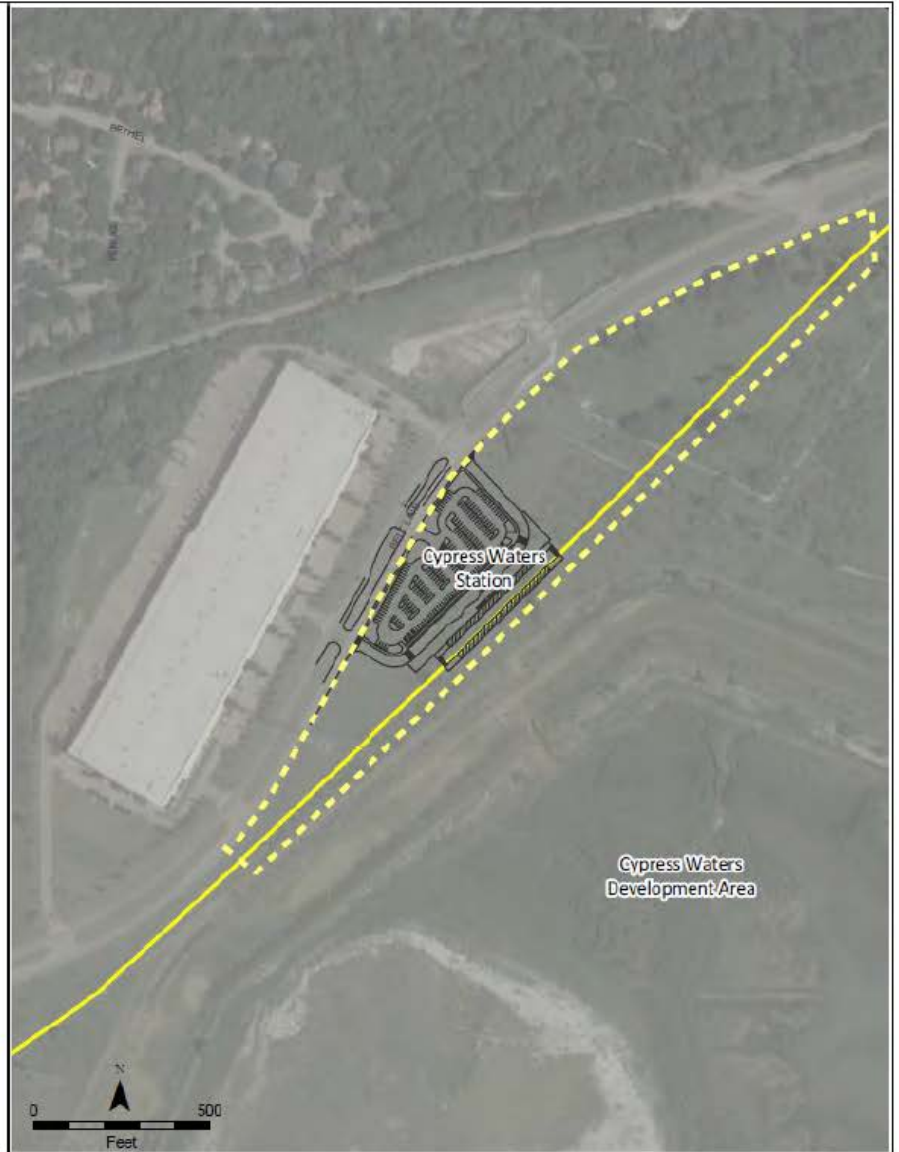
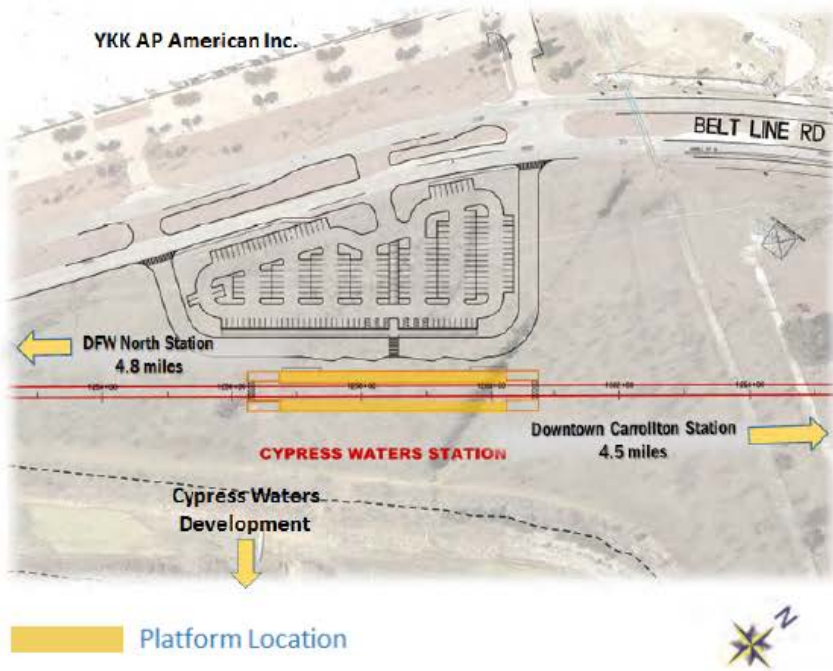
Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement



# Cypress Waters Alignment

**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement

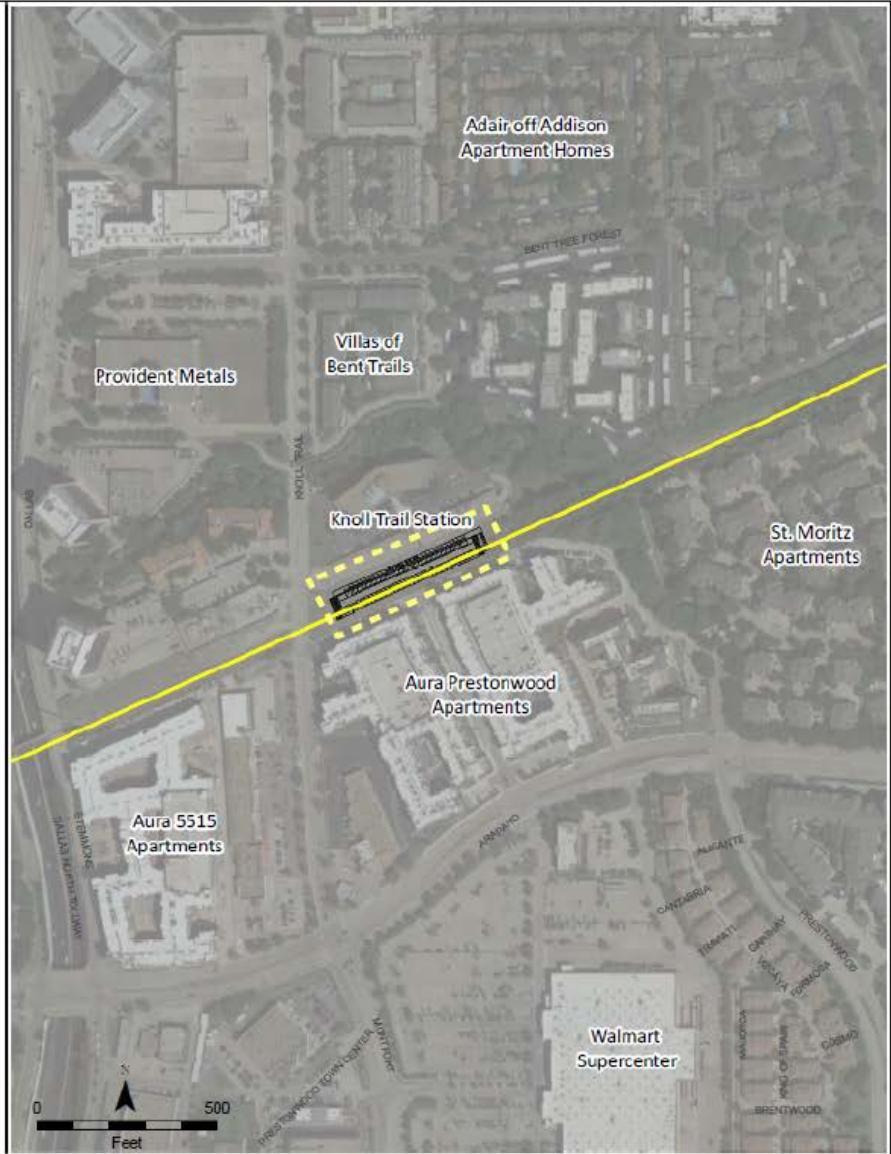
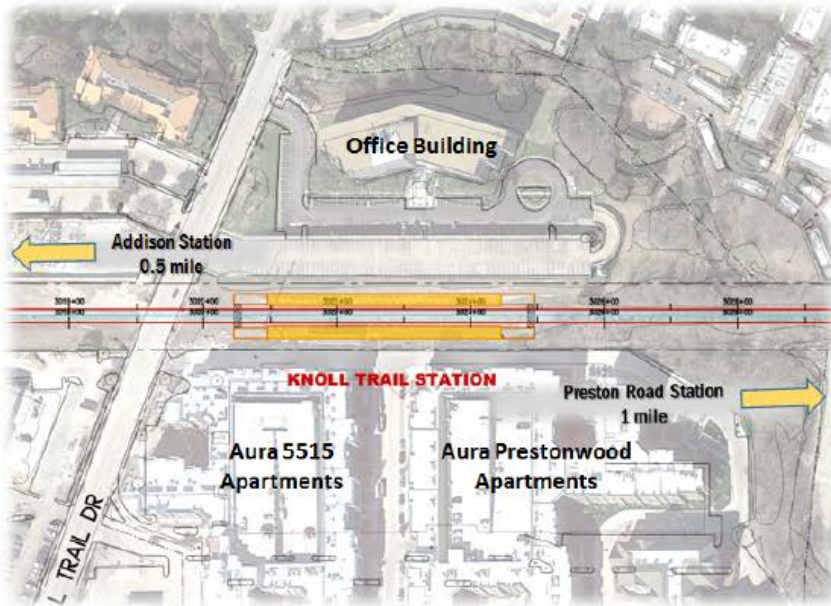




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# Cypress Waters Station

Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement

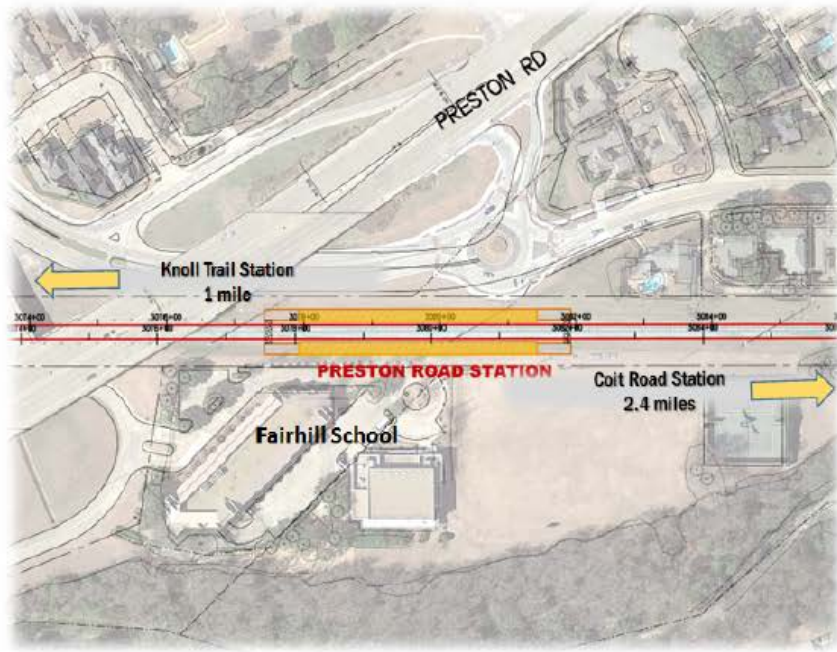


COTTON BELT

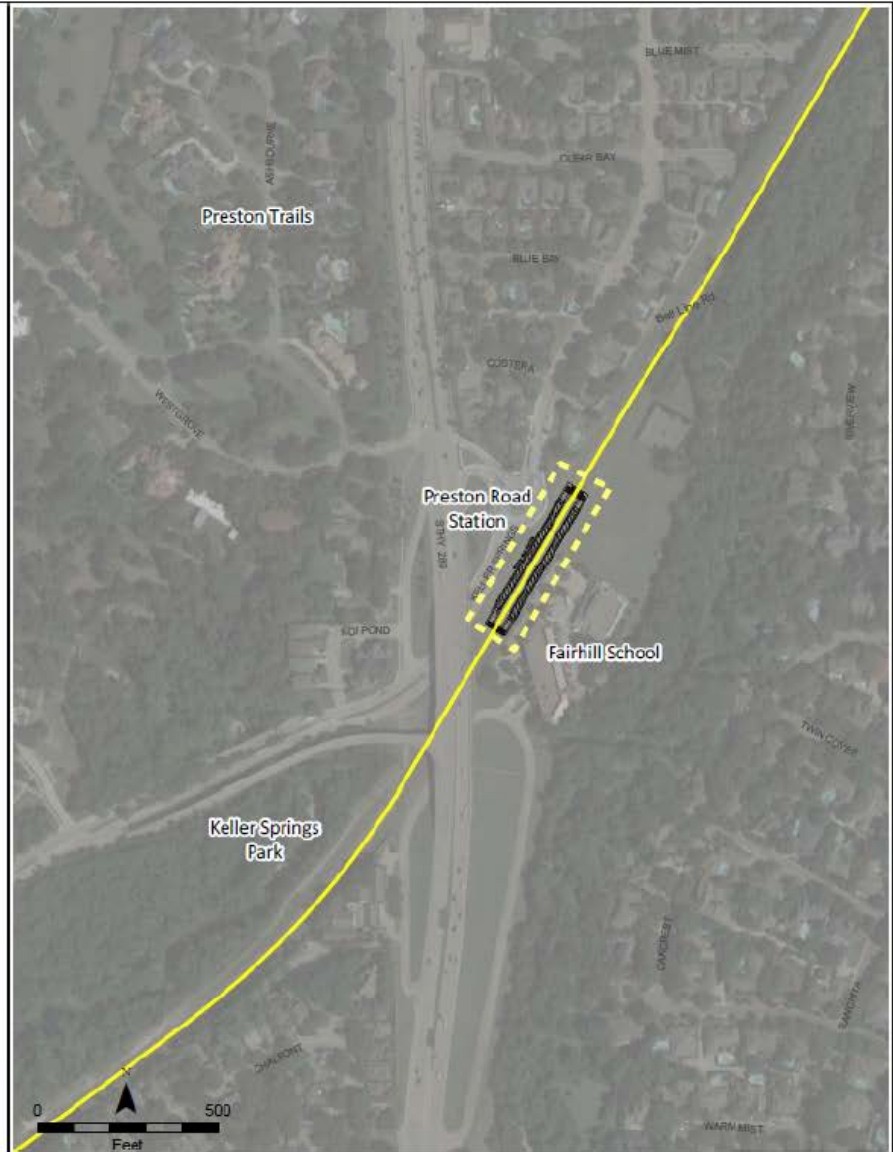
# Knoll Trail Station

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Regional Rail Project  
Draft Environmental Impact Statement





Platform Location

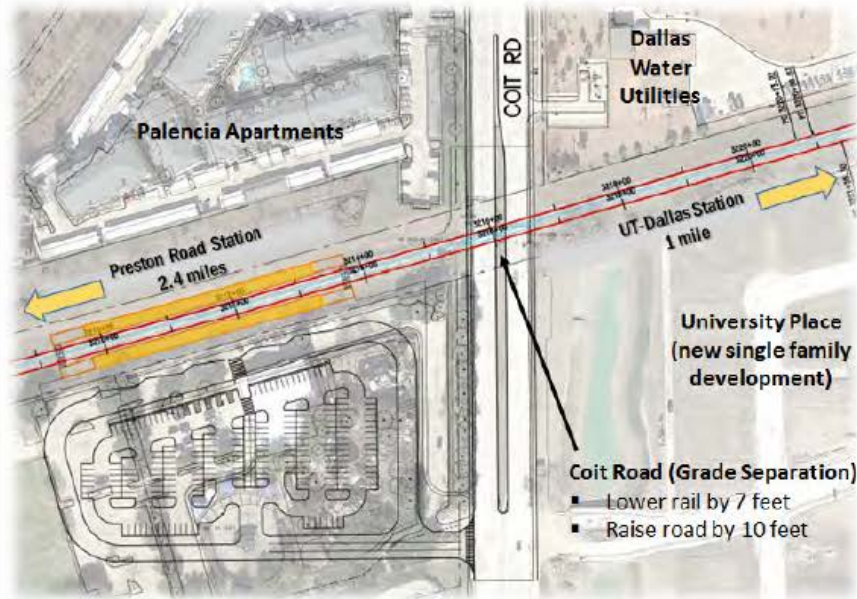


COTTON BELT

# Preston Road Station

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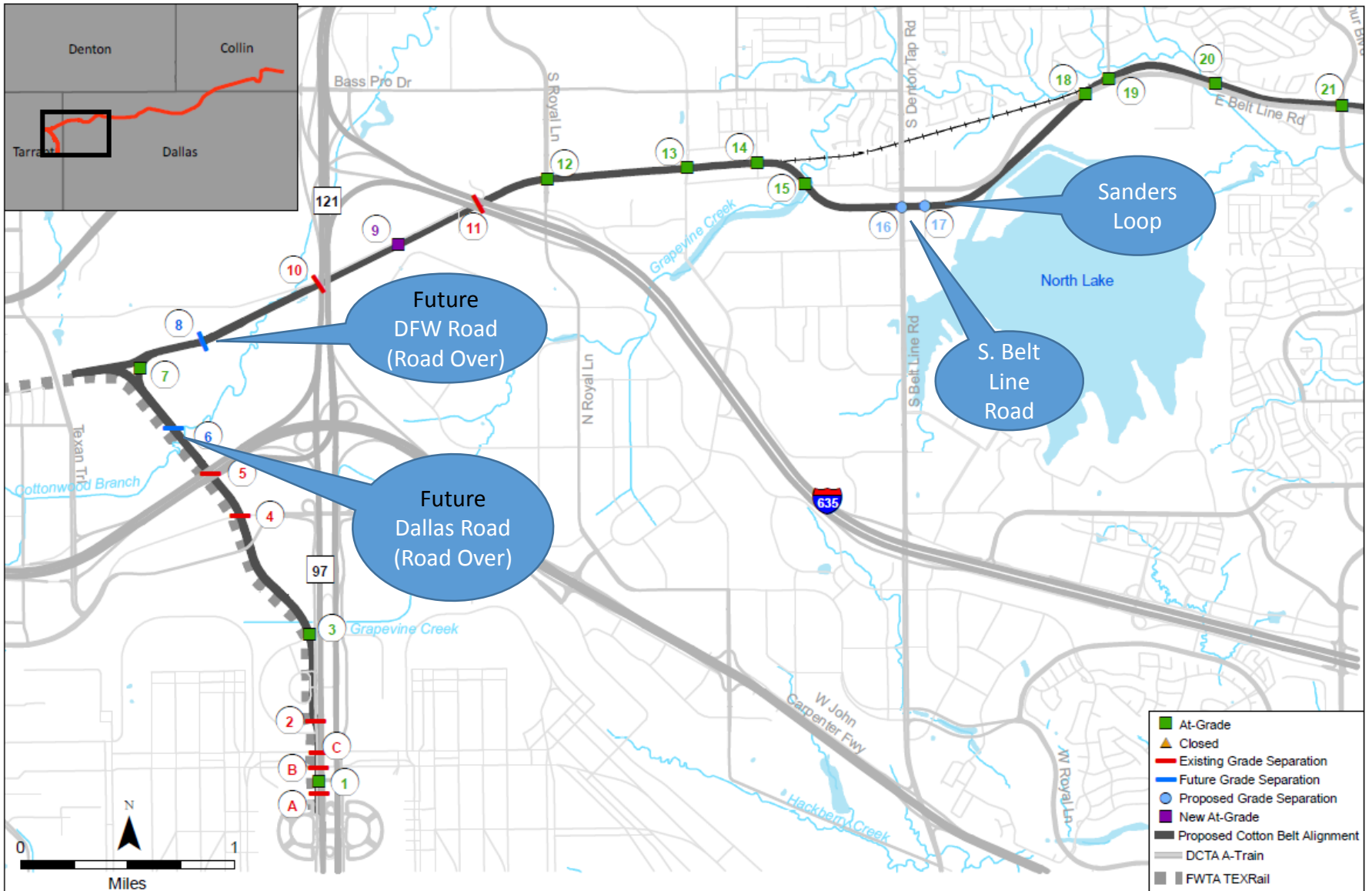
Platform Location



COTTON BELT

# Coit Road Station

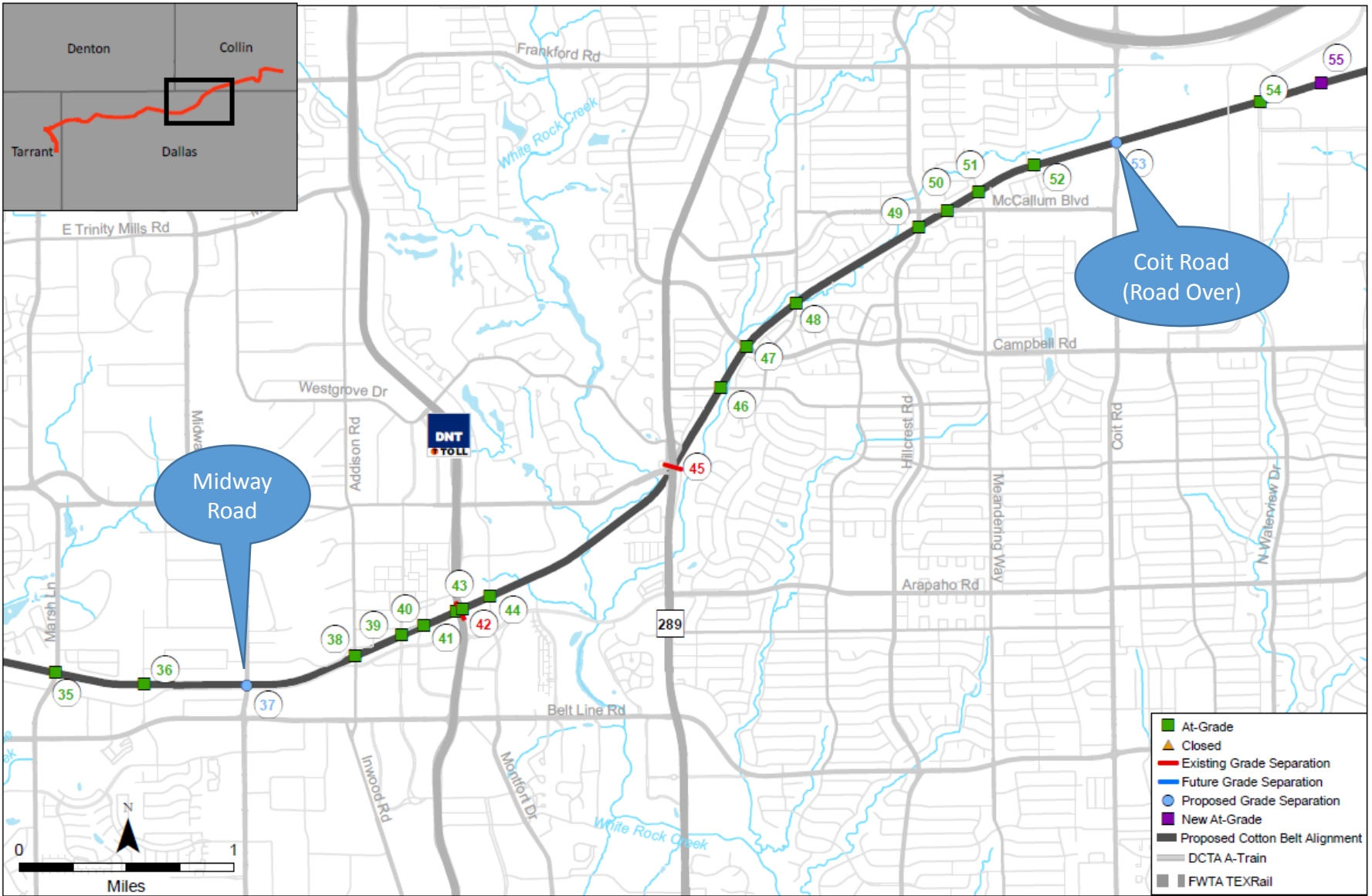
Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement



**COTTON BELT**

# Cotton Belt Proposed Grade Separations

**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement



COTTON BELT

# Cotton Belt Proposed Grade Separations

Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement

# Upcoming Opportunities for Public Involvement

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Always Available

DART web site: [www.DART.org/cottonbelt](http://www.DART.org/cottonbelt)

Email: [cottonbelt@dart.org](mailto:cottonbelt@dart.org)

Letters

Board Meetings

Project Public Meetings and Hearings

March 15, 2018 @ Noon: Facebook Live (DART's Facebook page)

March 27, 2018: Service Plan Amendment Public Hearing

April/May 2018: DEIS Public Hearing






**DART**

*let's go.*



**DART.org**

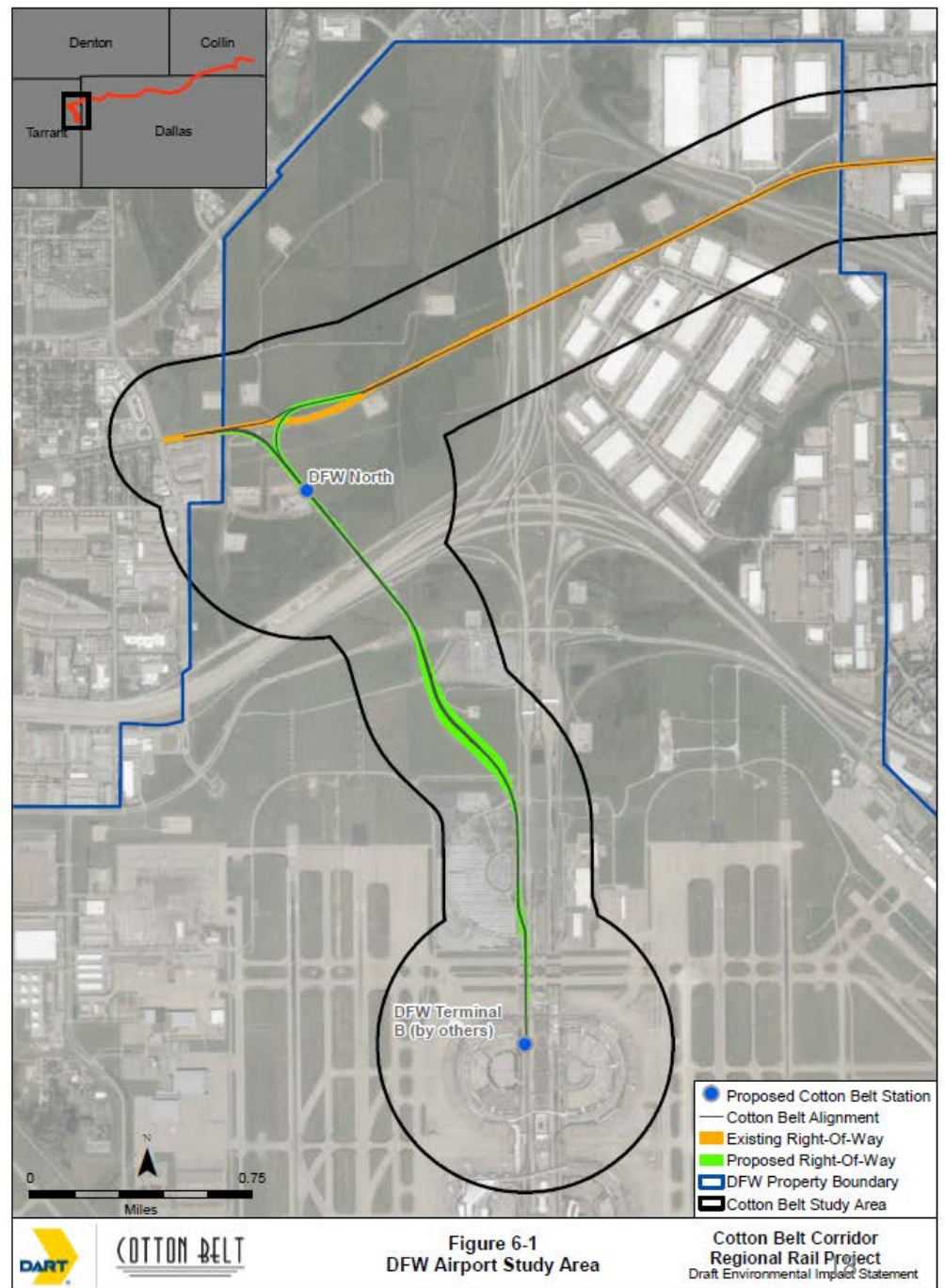




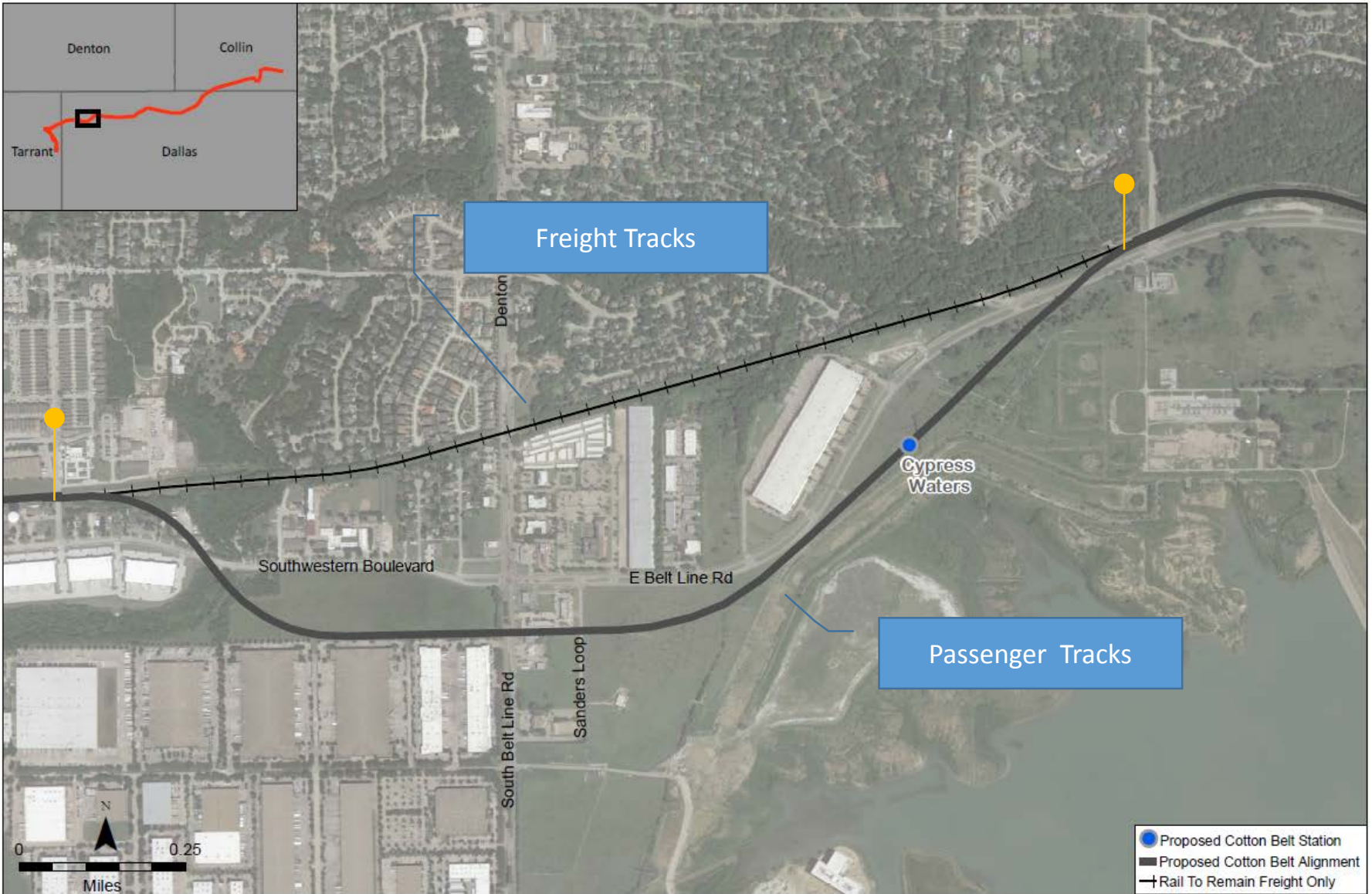
**Supplemental  
Information**

# DFW Airport Terminal B Connection

Alignment exits railroad corridor to connect to TEXRail alignment and serve DFW Airport Terminal B



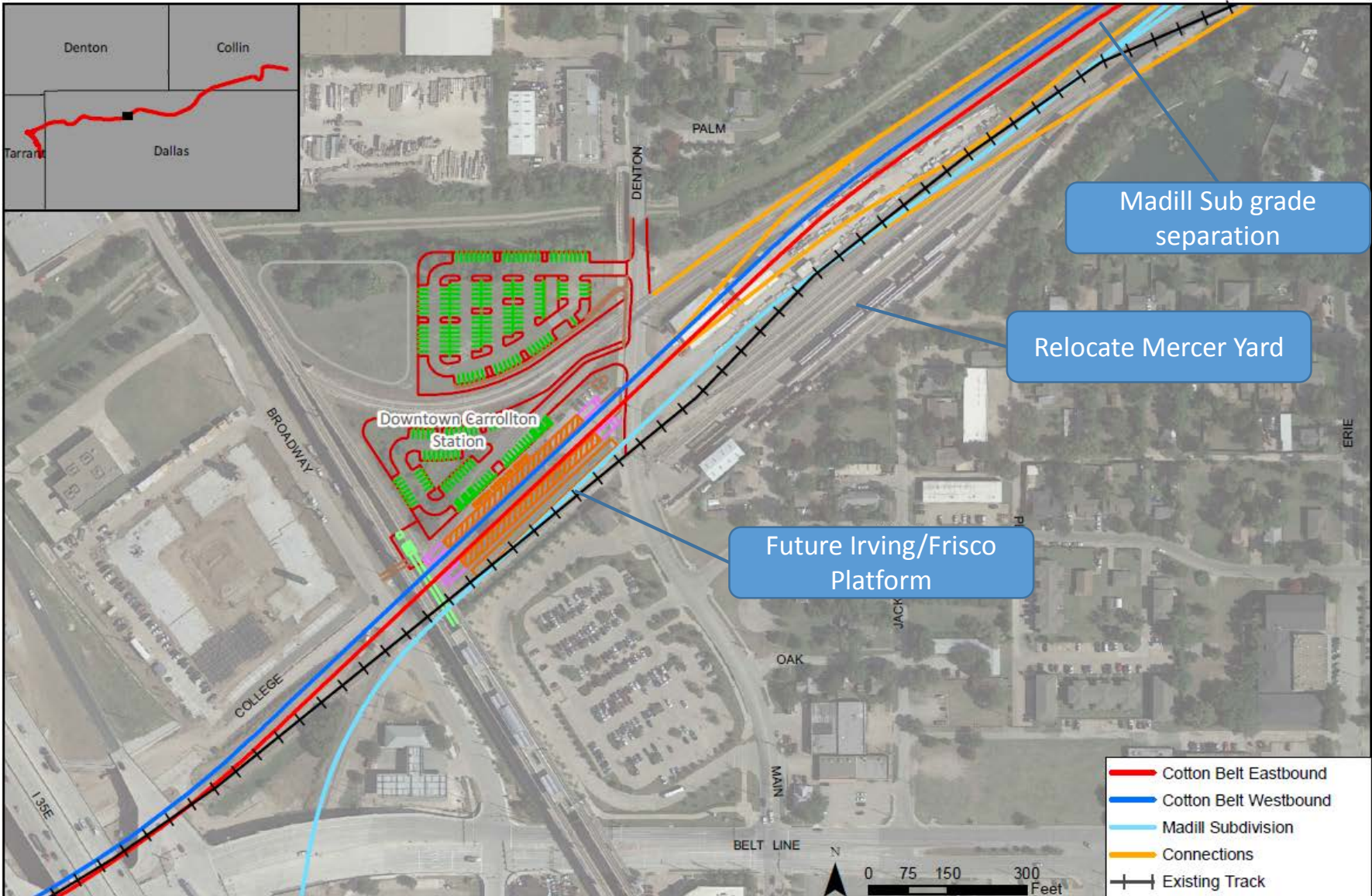




# Cypress Waters Alignment

**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement





# COTTON BELT Downtown Carrollton Proposed Configuration

Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement





# CityLine Alignment

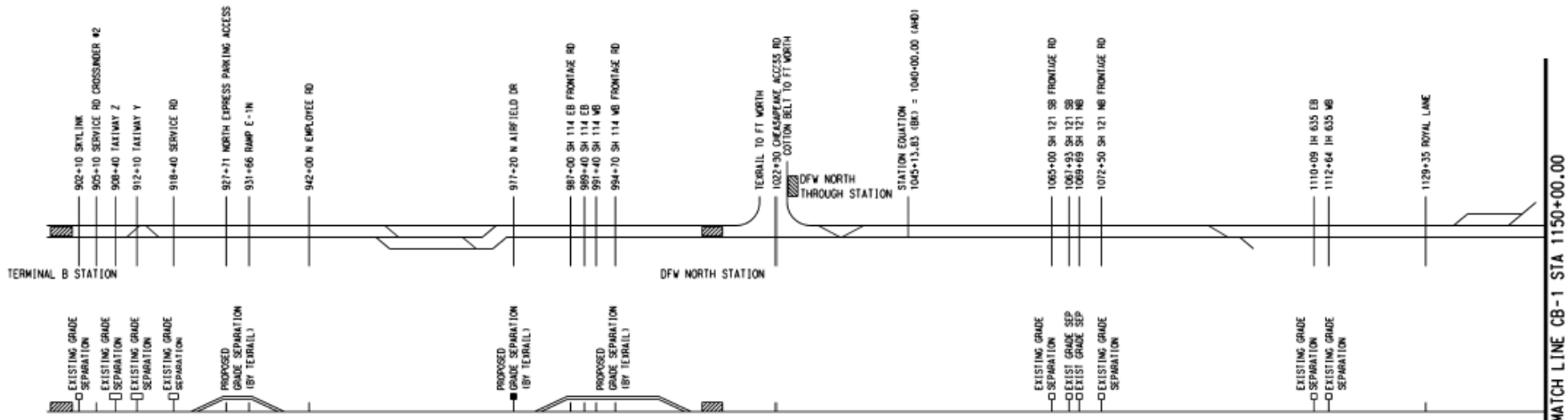
**Cotton Belt Corridor  
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# Alignment Schematic DFW Airport

PLAN

PROFILE

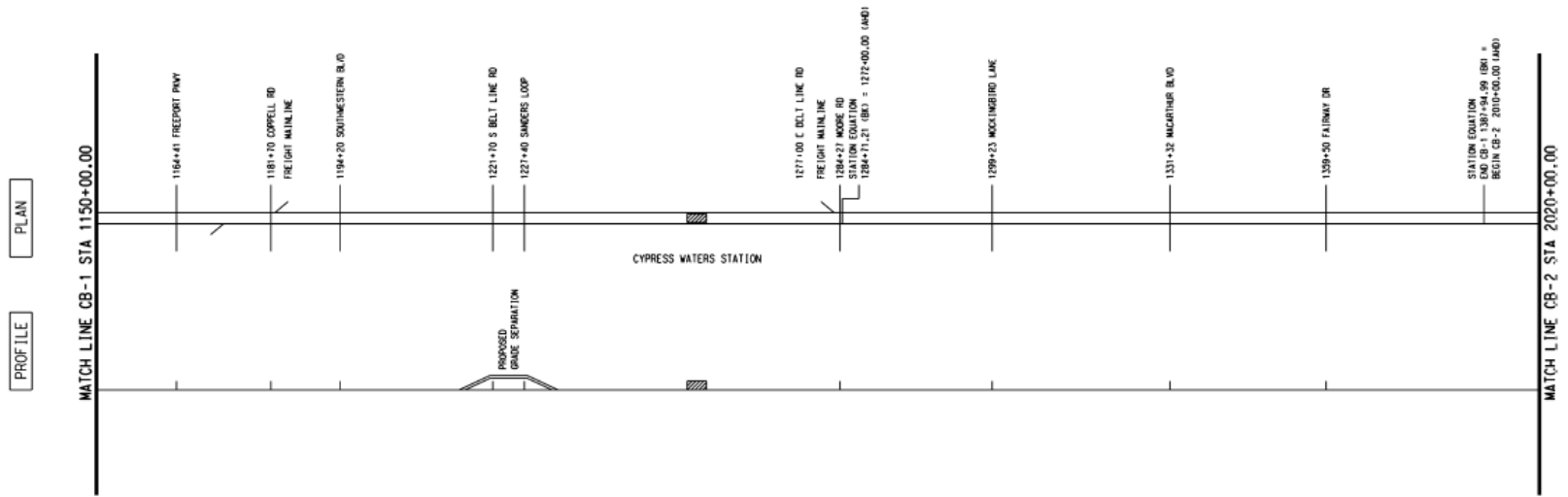


MATCH LINE CB-1 STA 1150+00.00

**LEGEND**

- TRACK CENTERLINE
- CROSSOVER OR TURNOUT TO INDUSTRIAL SPUR
- STATION PLATFORM
- GUIDEWAY GRADE SEPARATION
- EXISTING - OTHER FACILITY GRADE SEPARATION
- PROPOSED - OTHER FACILITY GRADE SEPARATION
- 1000+00 STATION IN FEET

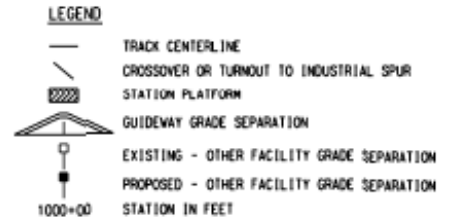
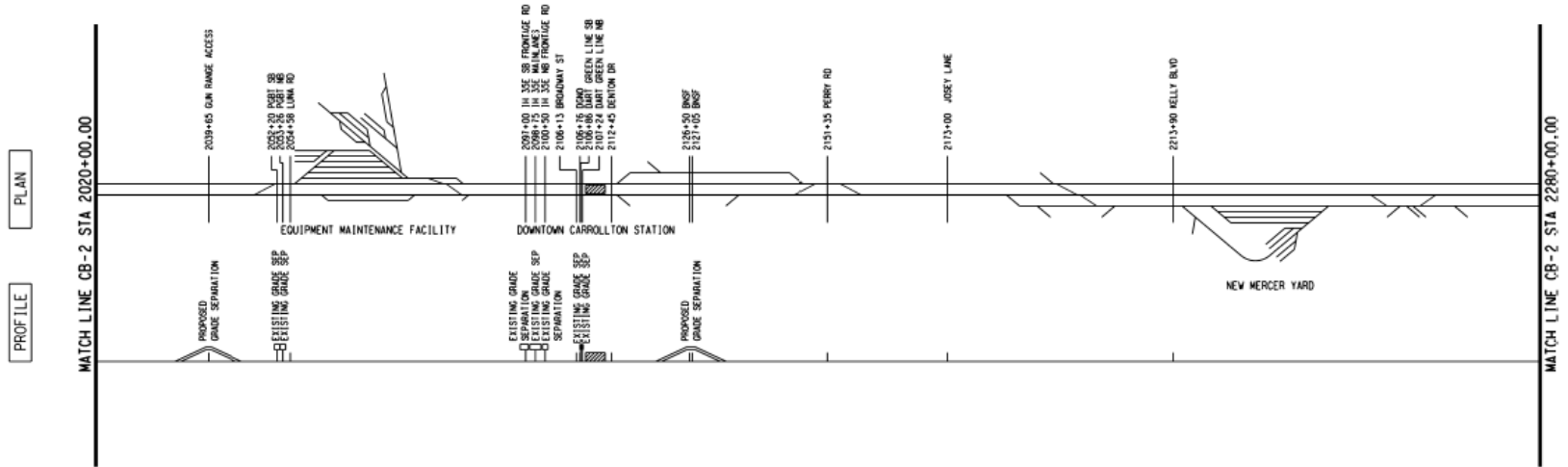
# Alignment Schematic Cypress Waters



- LEGEND**
- TRACK CENTERLINE
  - CROSSOVER OR TURNOUT TO INDUSTRIAL SPUR
  - STATION PLATFORM
  - GUIDEWAY GRADE SEPARATION
  - EXISTING - OTHER FACILITY GRADE SEPARATION
  - PROPOSED - OTHER FACILITY GRADE SEPARATION
  - 1000+00 STATION IN FEET



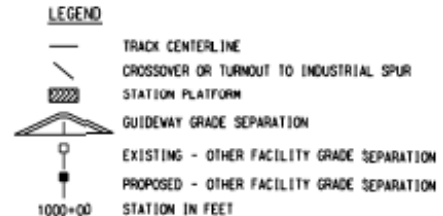
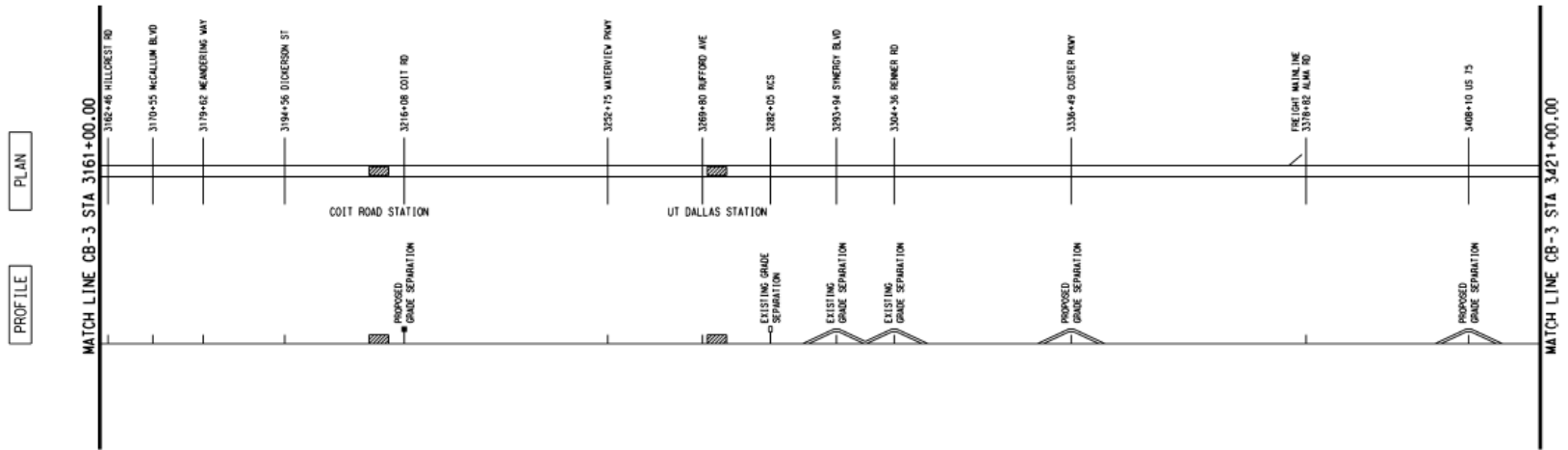
# Alignment Schematic Carrollton



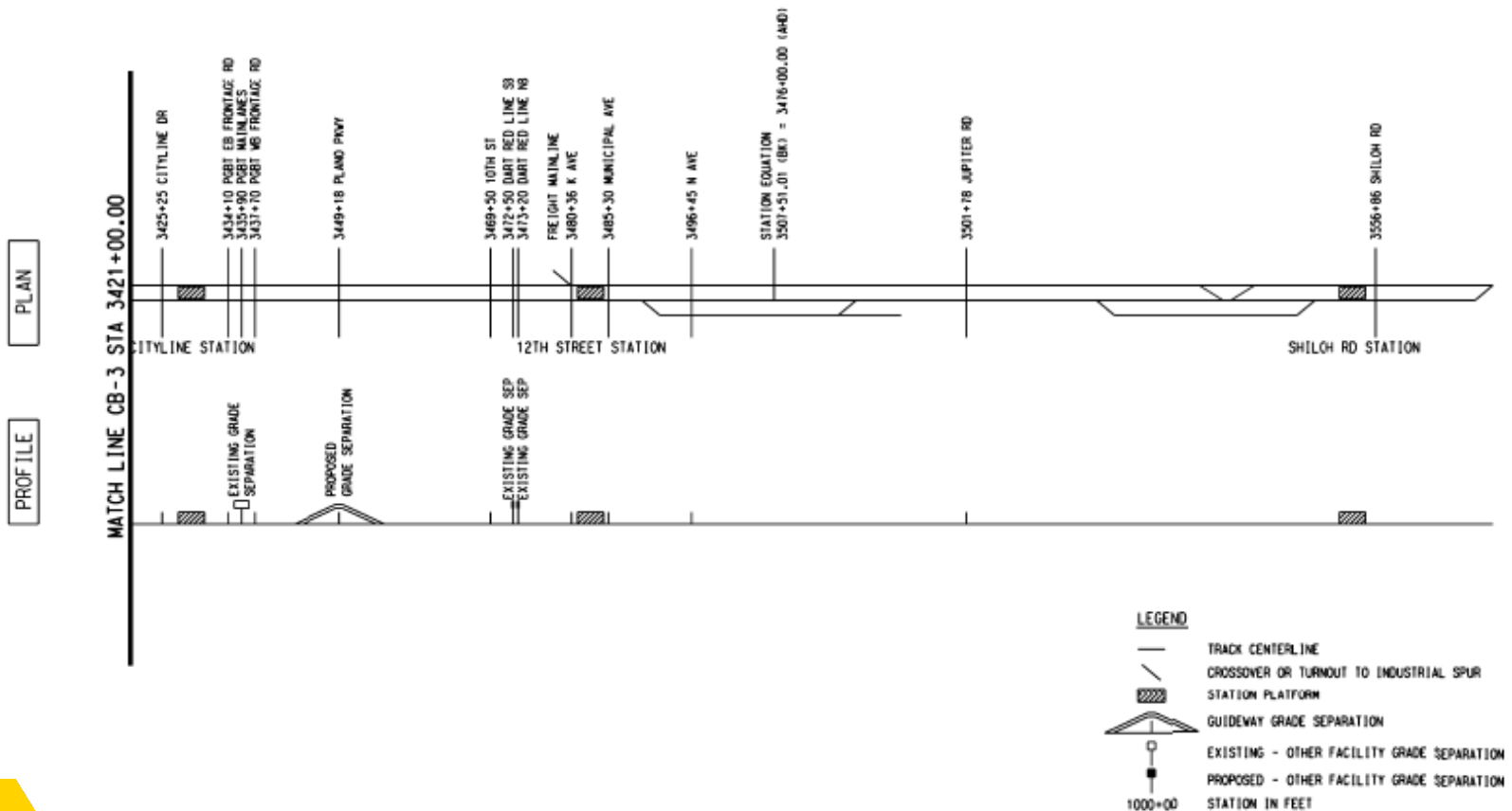




# Alignment Schematic Richardson



# Alignment Schematic Plano







# Stations

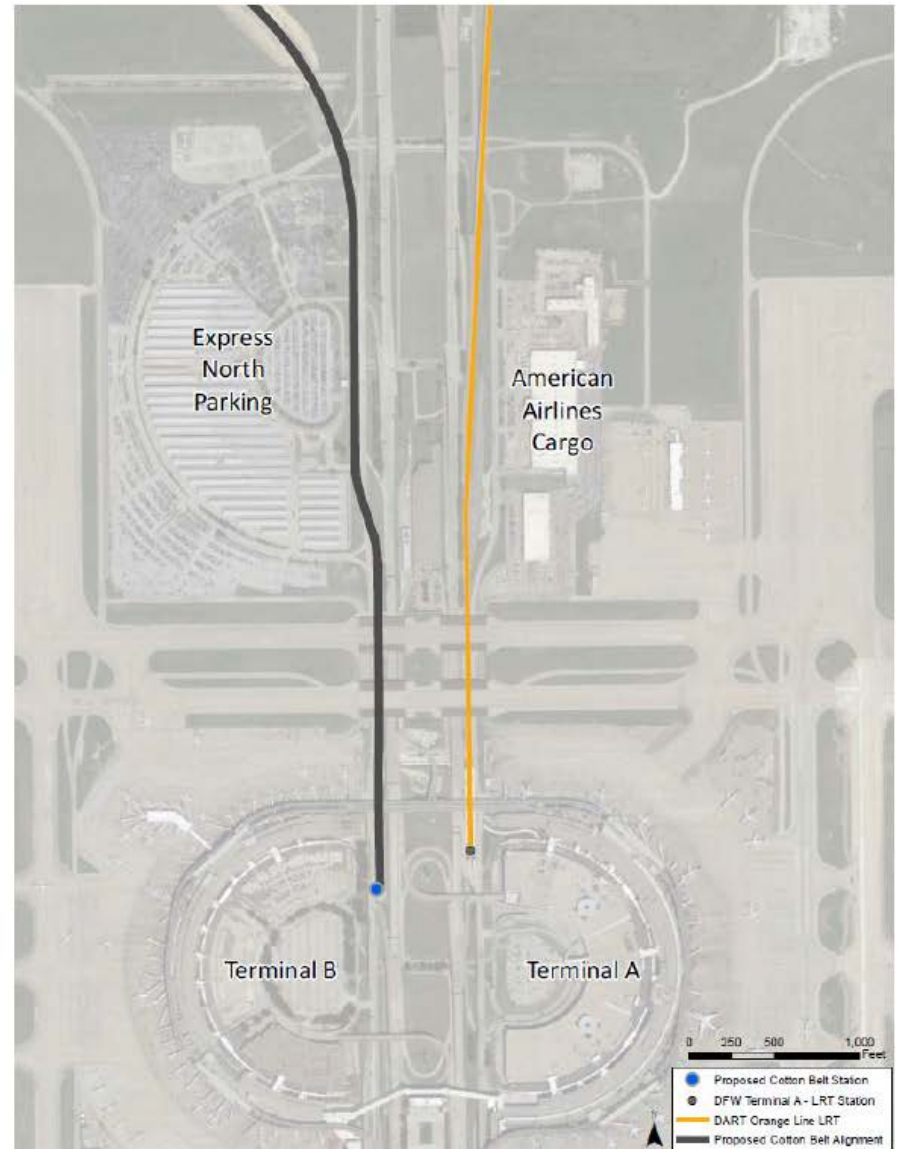
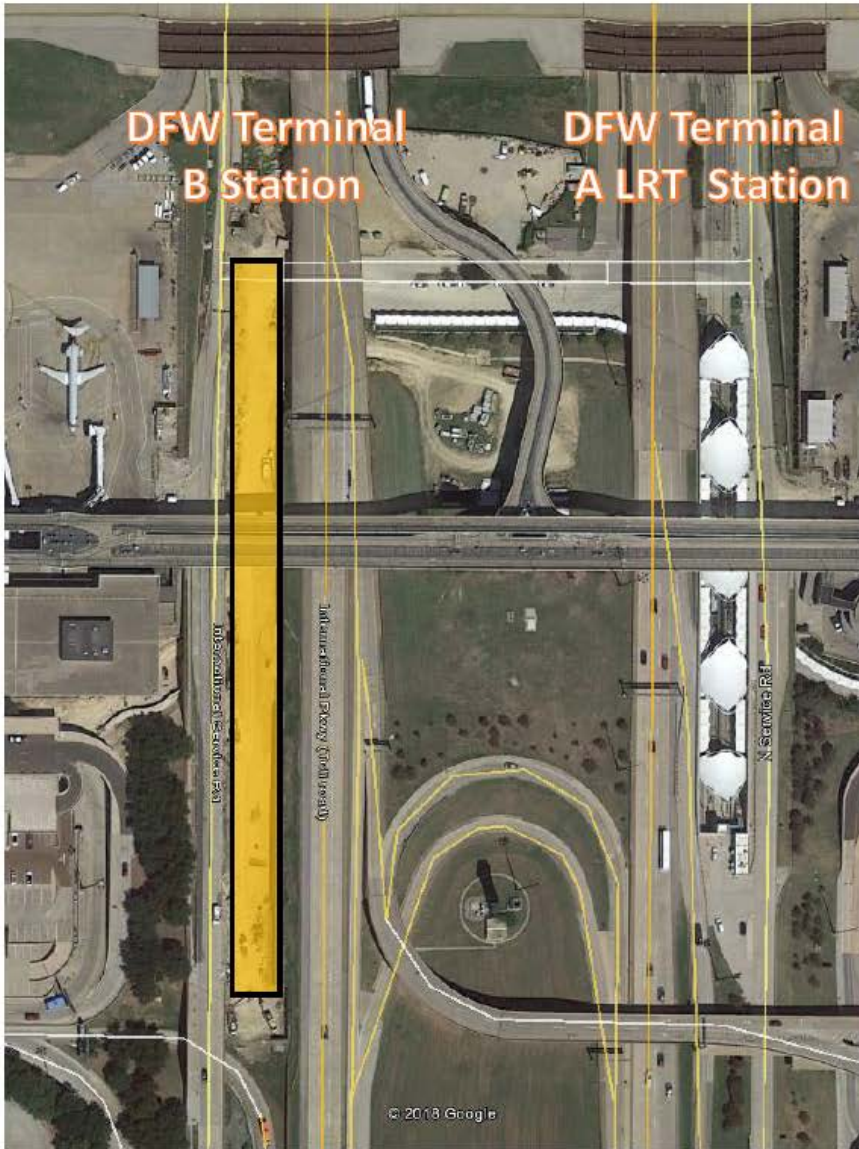
# Station Guidance

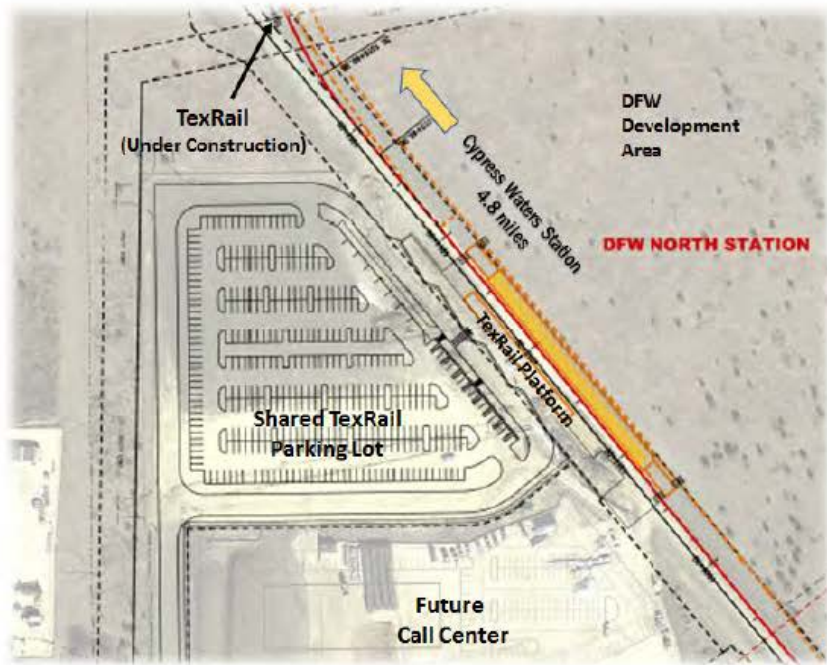
	Station Name	Location	Input To Date*
DFW	DFWIA B Terminal Station	DFW	include in project
1	North DFW Station	DFW	include in project
2	Cypress Waters Station	Dallas	include in project
3	Downtown Carrollton Station	Carrollton	include in project
4	Addison Station	Addison	include in project
5	Knoll Trail Station	Dallas	include in project
6	Preston Rd Station	Dallas	candidate for elimination
7	Coit Rd. Station	Dallas	include in project
8	UT-Dallas Station	Richardson	include in project
9	CityLine/Bush Station	Richardson	include in project
10	12th Street Station (Light Rail and Cotton Belt)	Plano	include in project
11	Shiloh Station	Plano	include in project

# 2040 Ridership Scenarios

STATION NAME	Full Build Regional Model	Full Build All Stations	Without Preston Station	% Change Full Build	Without North Dallas Stations	% Change Full Build
DFWIA AB Terminal Station	3,950	1,170	1,170	0%	1,160	-1%
North DFW Station	900	1,320	1,330	1%	1,310	-1%
Cypress Waters Station	600	910	900	-1%	890	-2%
Downtown Carrollton Station	4,000	1,970	1,930	-2%	1,850	-6%
Addison Station	2,800	1,690	1,750	4%	1,940	15%
Knoll Trail Station	750	530	530	0%	--	--
Preston Rd Station	800	400	--	--	--	--
Coit Rd. Station	1150	760	770	1%	--	--
UT-Dallas Station	1000	850	940	11%	1,200	41%
CityLine/Bush Station	3750	1,380	1,370	-1%	1,240	-10%
12th Street Station	600	370	330	-11%	340	-8%
Shiloh Station	800	660	700	6%	690	5%
Corridor Ridership	<b>21,100</b>	12,010	11,720	-2%	10,620	-12%



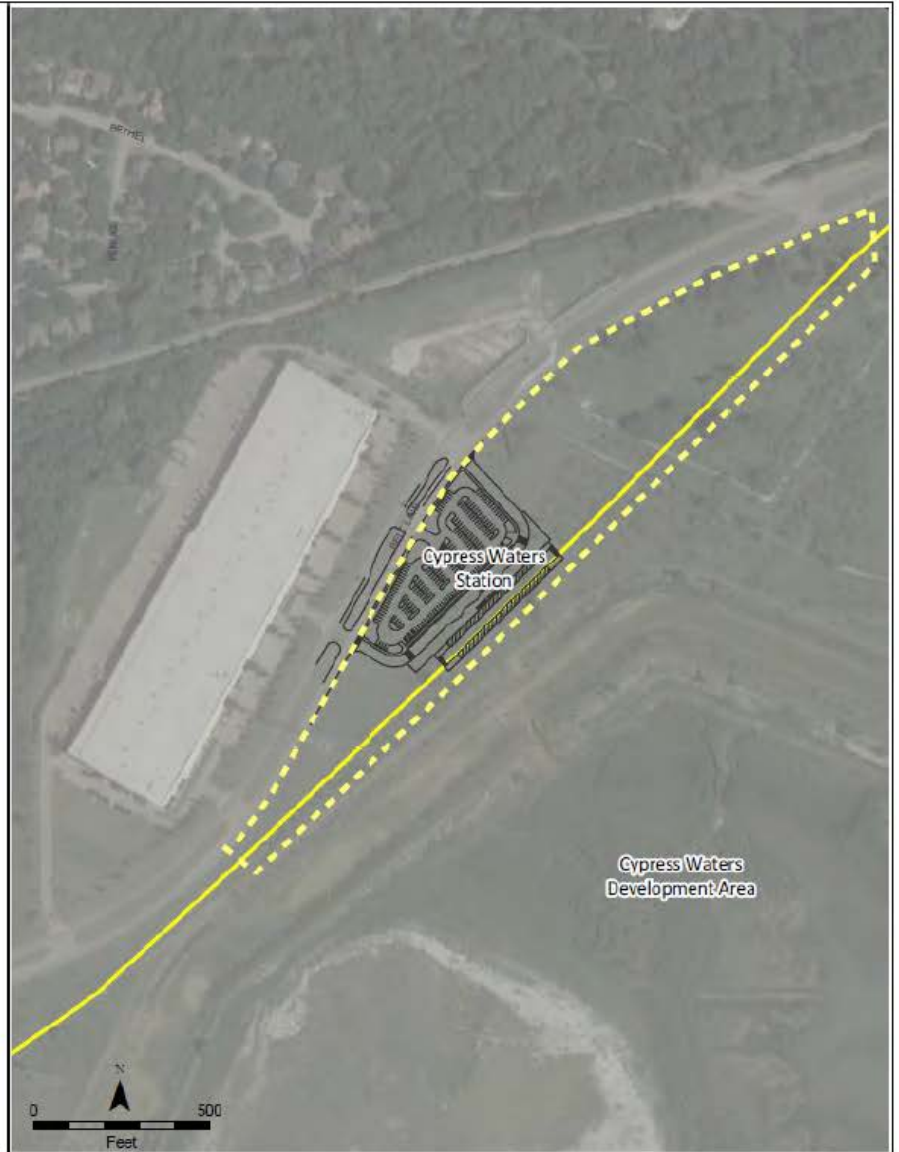
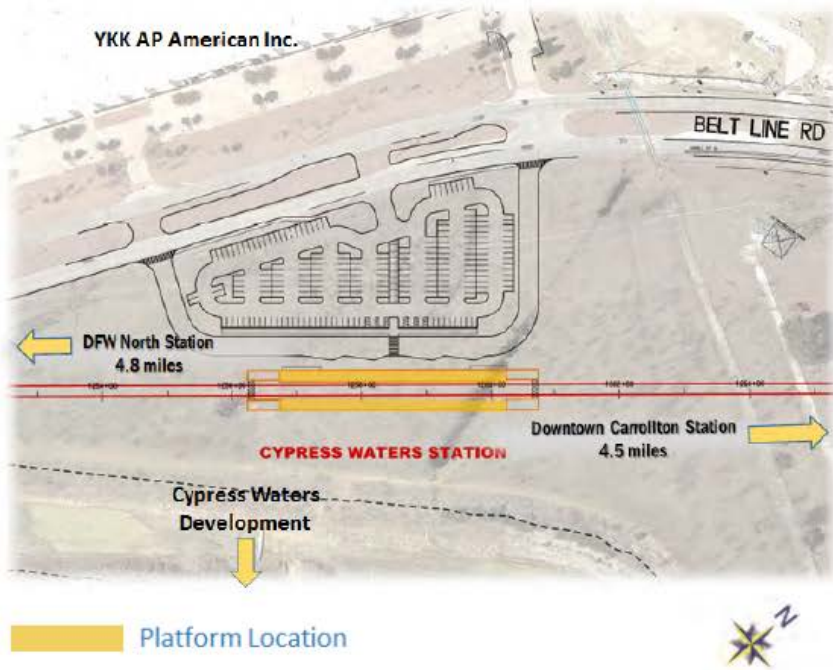




Platform Location



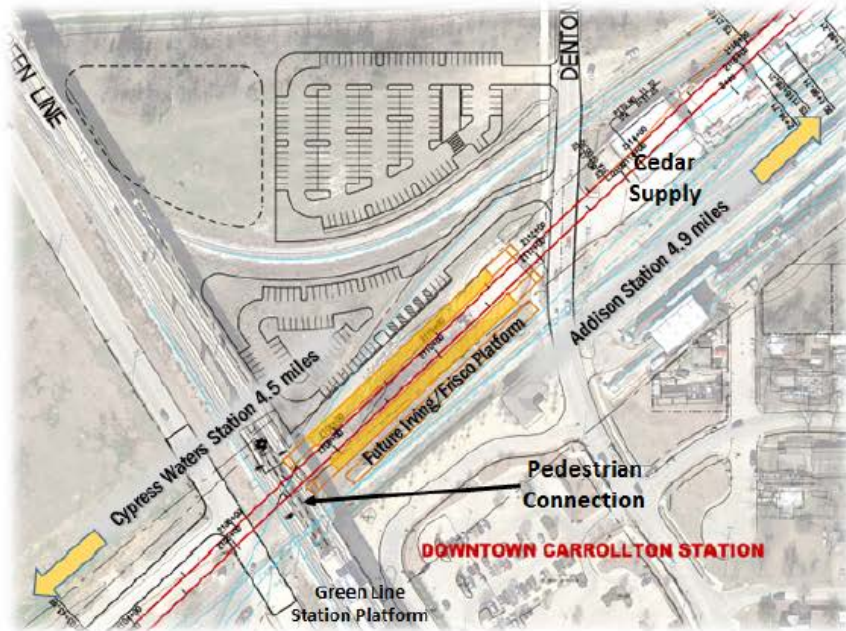




COTTON BELT

# Cypress Waters Station

Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement



Platform Location

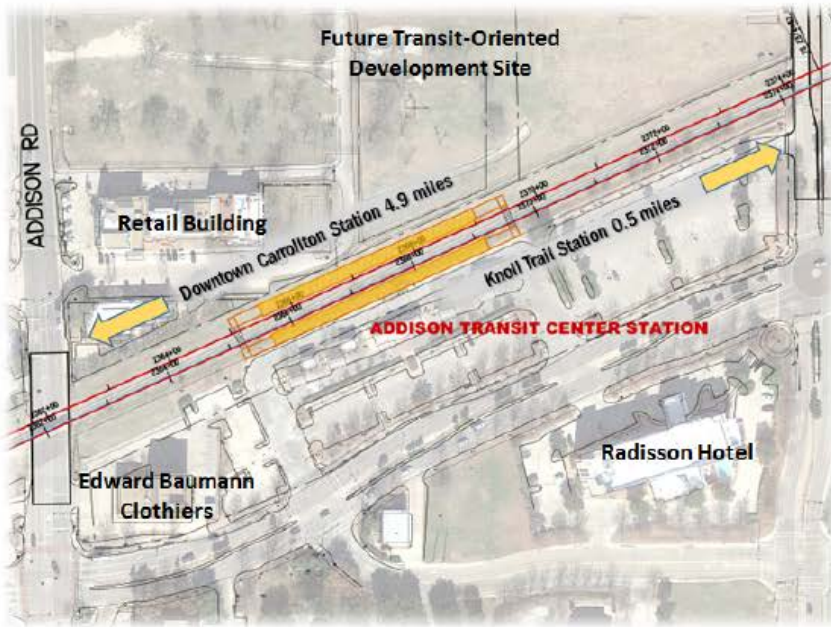


COTTON BELT

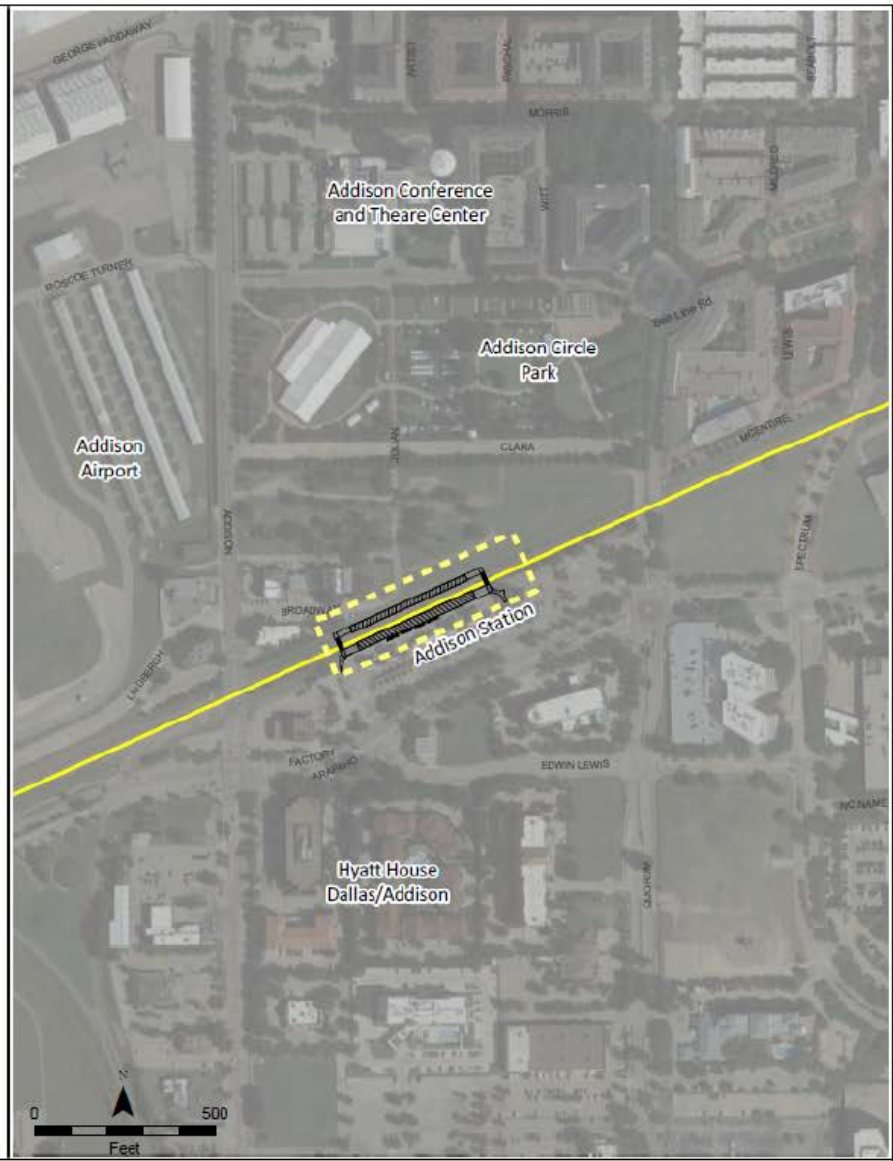
# Downtown Carrollton Station

Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement

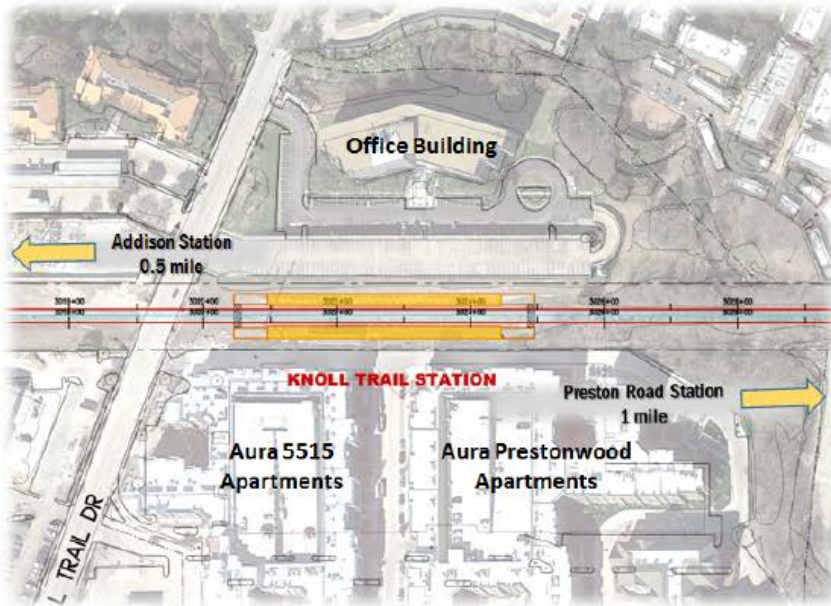




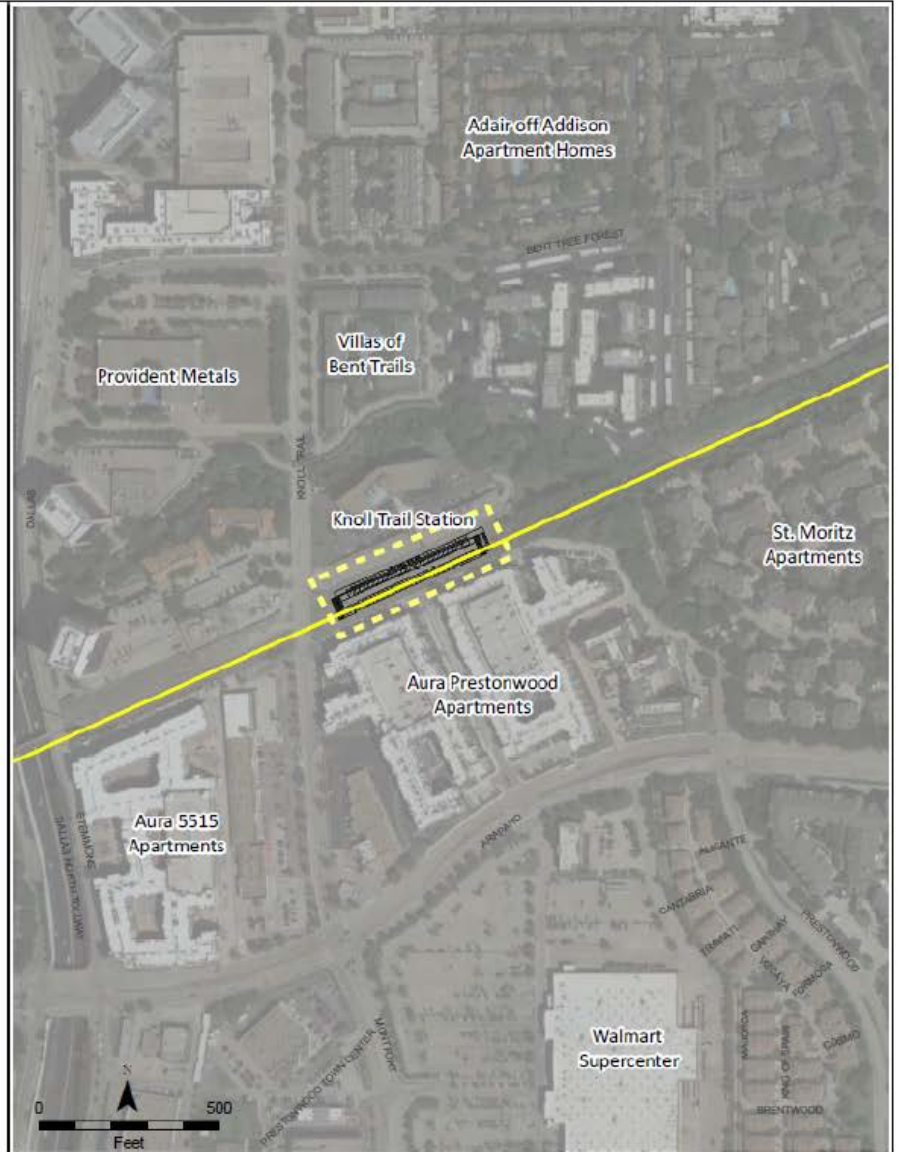
Platform Location



# Addison Station



Platform Location

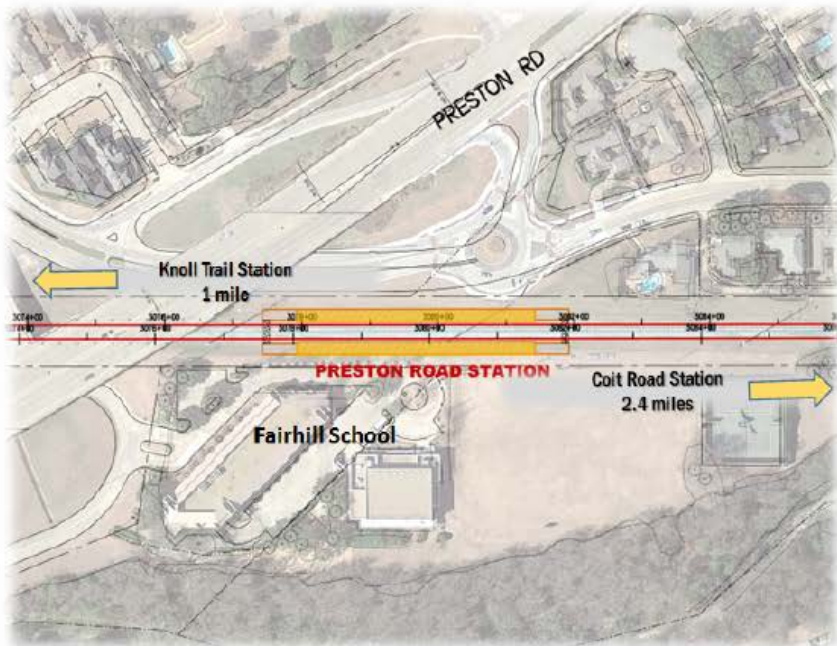


COTTON BELT

# Knoll Trail Station

Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement





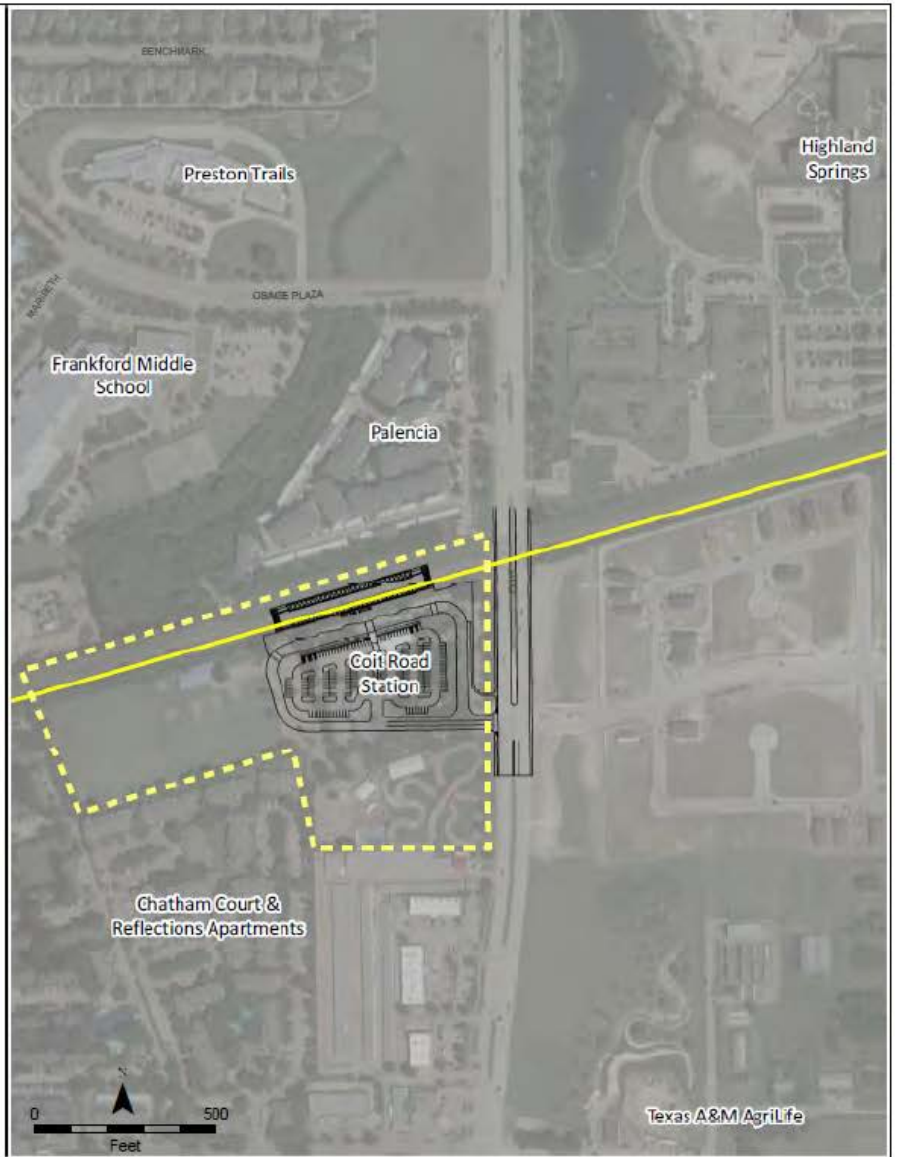
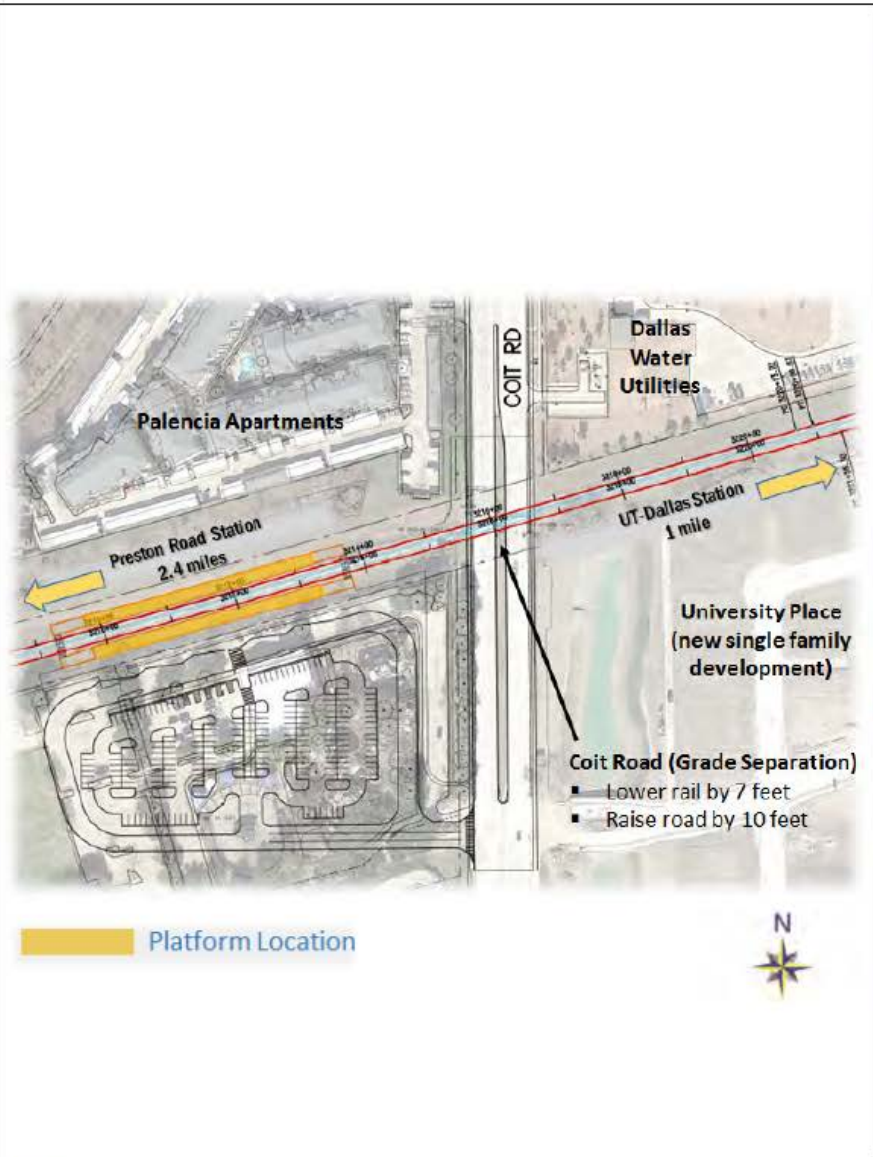
Platform Location



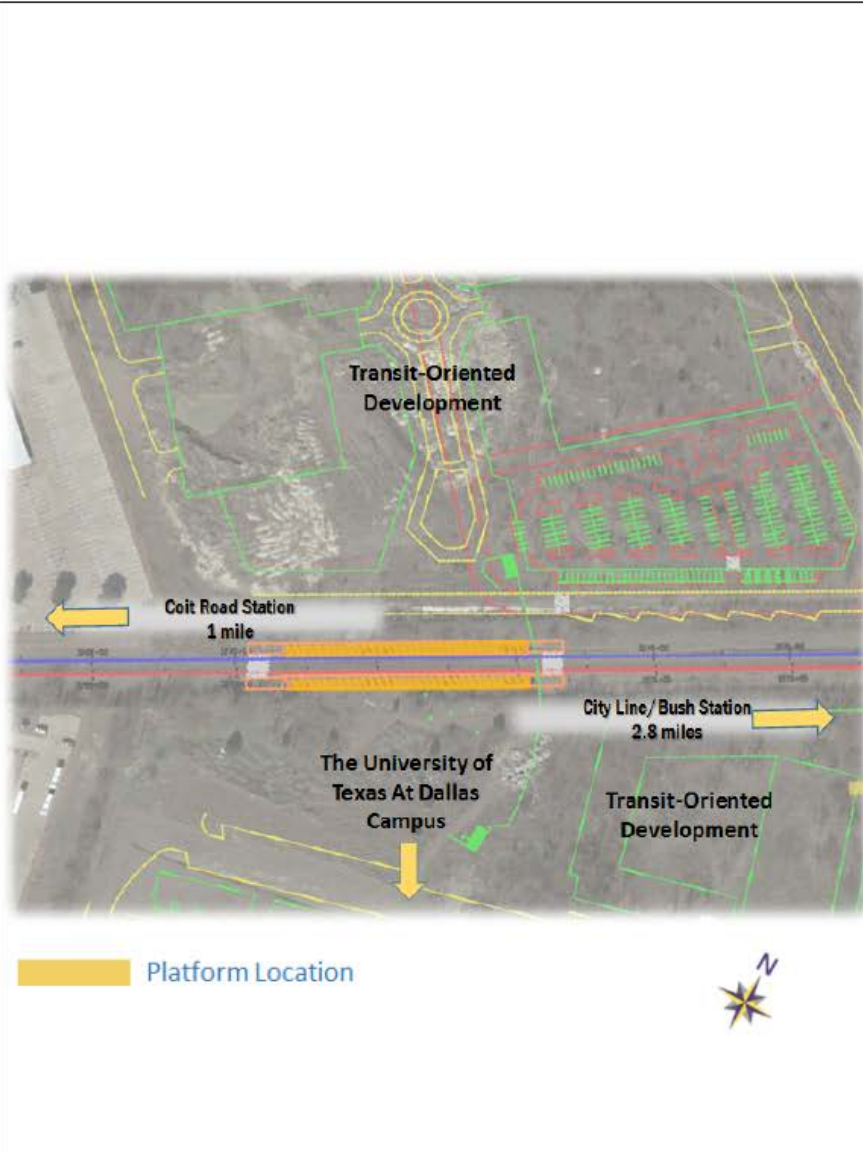
COTTON BELT

# Preston Road Station

Cotton Belt Corridor  
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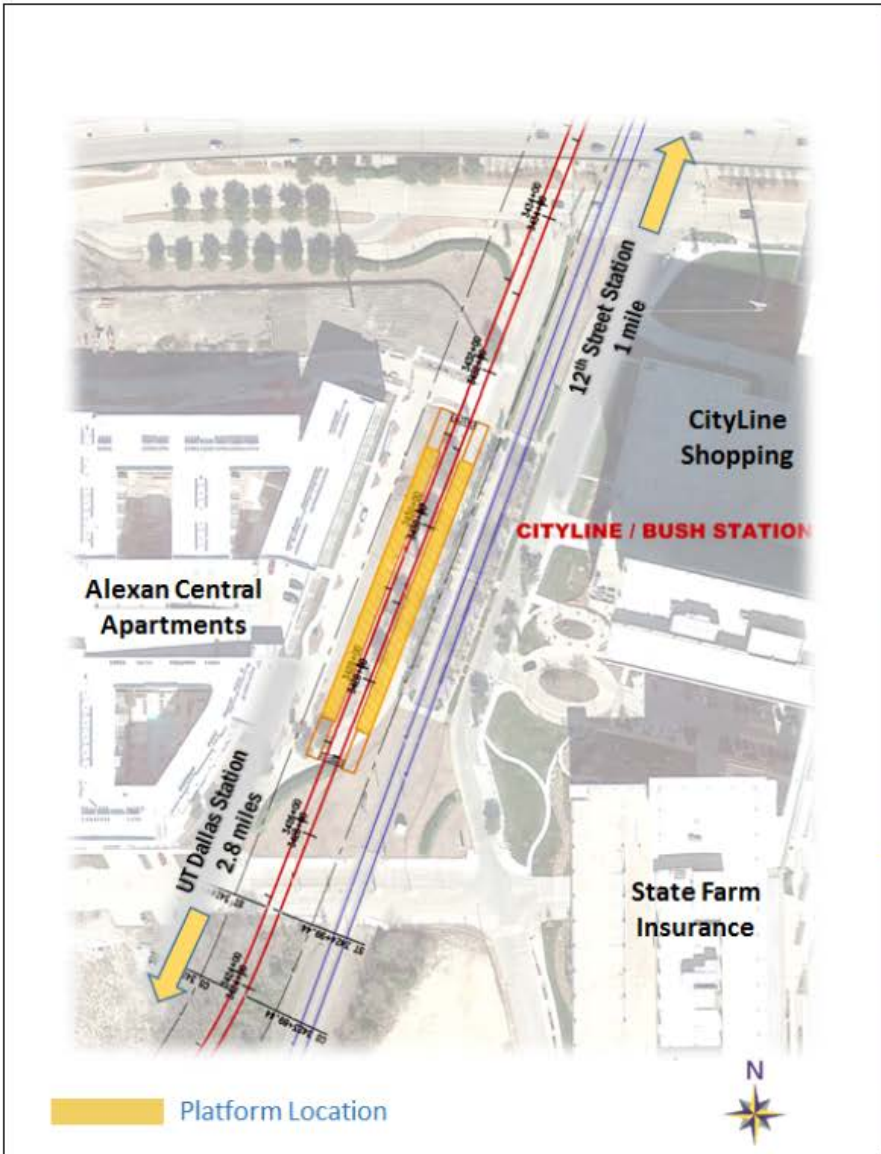




COTTON BELT

# UT Dallas Station

Cotton Belt Corridor  
Regional Rail Project  
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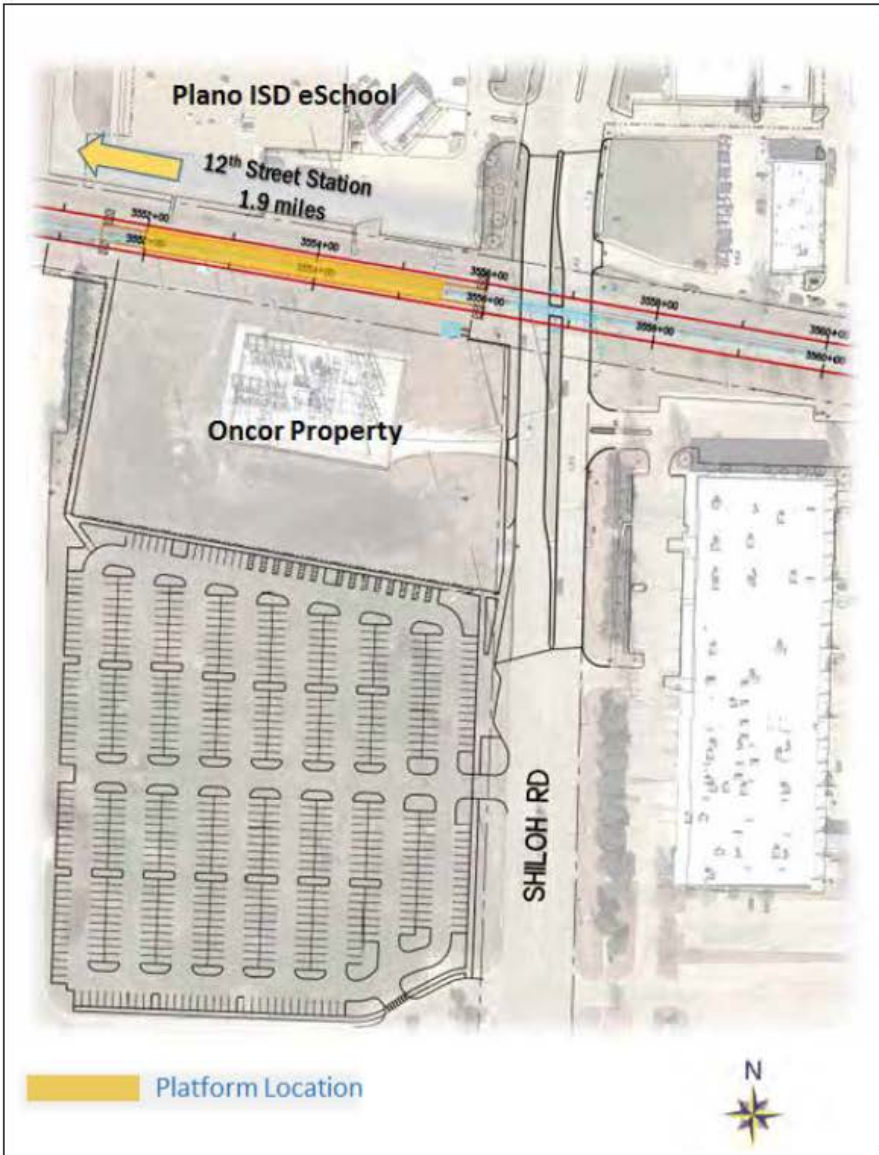
Platform Location



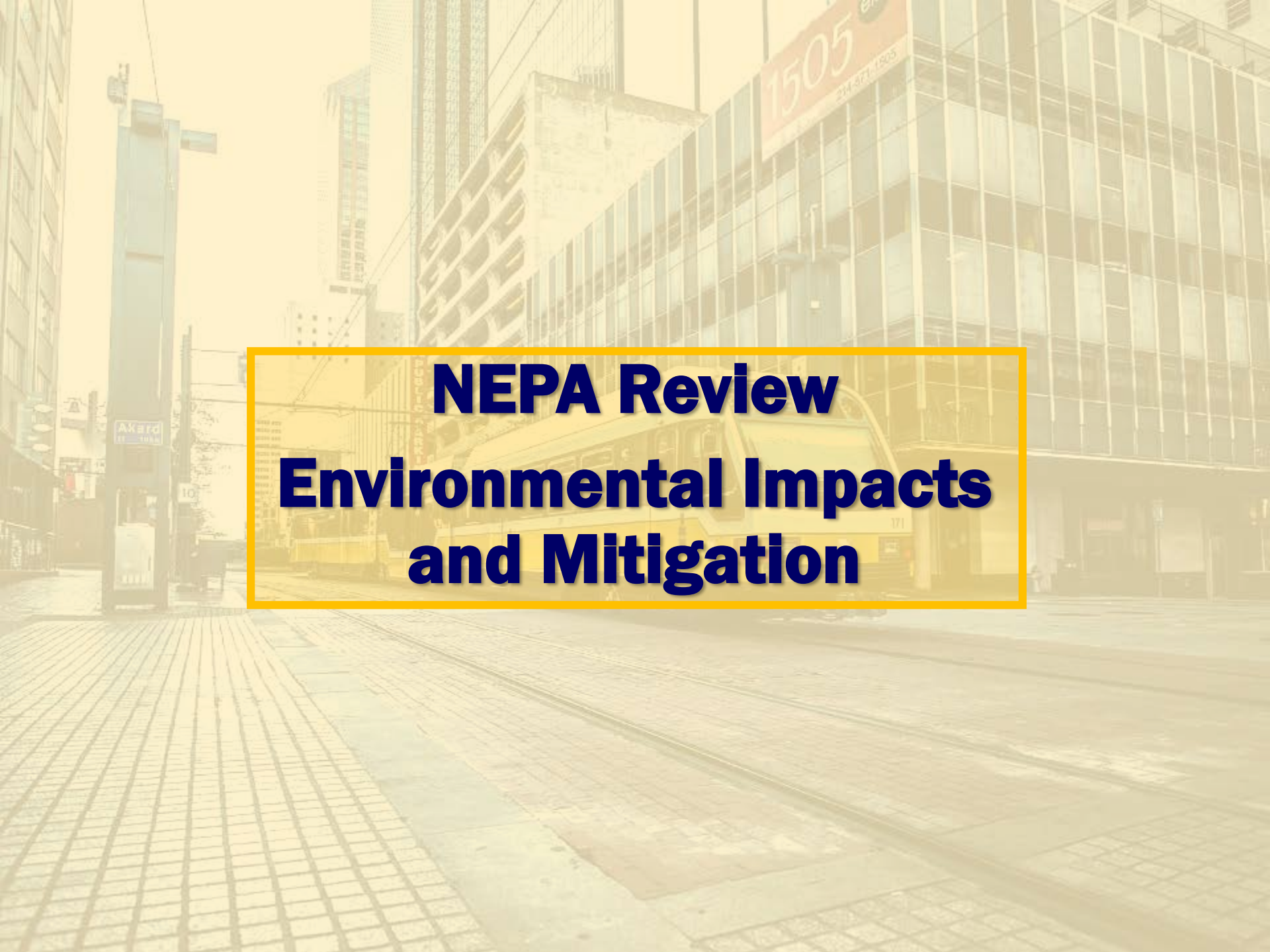
COTTON BELT

# 12<sup>th</sup> Street Station

Cotton Belt Corridor  
Regional Rail Project  
Draft Environmental Impact Statement





A photograph of a city street scene, likely in San Francisco, featuring a yellow tram on tracks. The background shows modern buildings, including one with a large '1505' sign. The entire image has a yellow tint. A yellow rectangular box is centered over the image, containing the title text in bold blue font.

**NEPA Review  
Environmental Impacts  
and Mitigation**

# Environmental Review

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Notice of Intent (NOI) Published- July 8, 2010

Scoping Meeting - July 29, 2010

Administrative Draft – now under review

DEIS – anticipated March/April 2018

DEIS Hearing – anticipated April/May 2018

FEIS – anticipated June 2018

RODs – anticipated July 2018

# Impact and Mitigation Guidance Summary

Impact	Mitigation	Input to Date*
Noise	Quiet Zones	include in project
Noise	Sound Barriers	include in project
Noise	Bell Mitigation	include in project
Vibration	Tire Derived Aggregate (TDA) Material	include in project
Traffic	Grade Separation Intersection and Signal improvements	include in project
Visual	Landscaping	Coordinate with communities/cities
Visual	Wheeler Bridge (Midway Road) Complementary Design	include in project
Historic	Bridge Relocation/Adaptive Reuse	include in project
Parkland - Section 4(f)	Trail Replacement	include in project

A photograph of a city street scene. In the foreground, a yellow and black bus is parked or moving slowly. The bus has the number '41041' on its front. The background features several tall, modern skyscrapers with glass facades. The sky is blue with some clouds. The entire image has a light blue tint. A yellow rectangular box is overlaid on the center of the image, containing the text 'Noise Impacts and Mitigation' in a bold, dark blue font.

# **Noise Impacts and Mitigation**

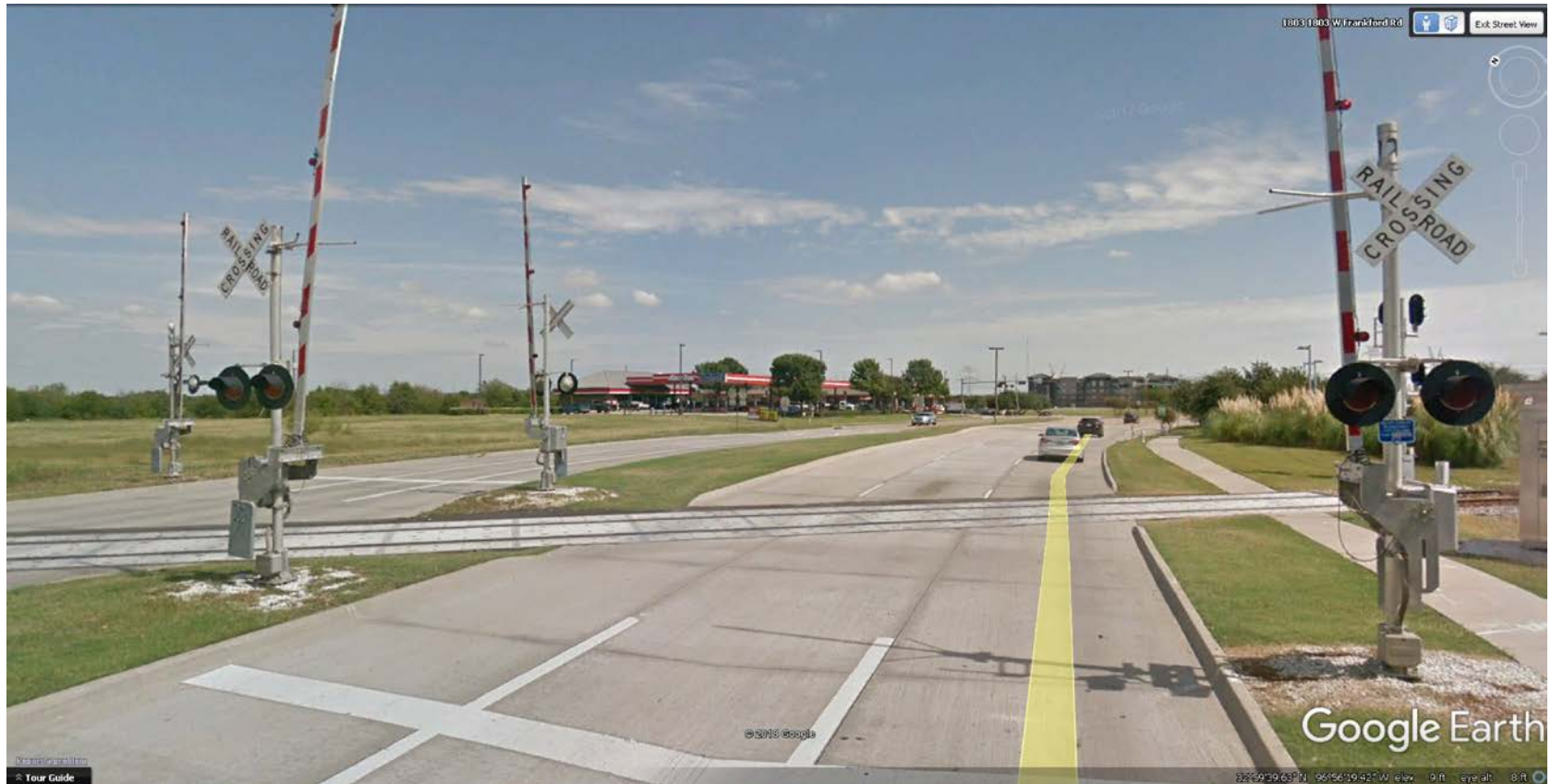


# Residential Noise Impact Summary

Residential Noise Impact						
City	Without Quiet Zones		Quiet Zones without Additional Mitigation		Quiet Zones with Additional Mitigation	
	Moderate	Severe	Moderate	Severe	Moderate	Severe
Coppell	303	425	0	0	0	0
Carrollton	328	547	31	0	*2	0
Addison	414	297	16	0	0	0
Dallas	968	1,502	188	0	0	0
Richardson	0	0	0	0	0	0
Plano	316	319	0	0	0	0
<b>Total</b>	<b>2329</b>	<b>3090</b>	<b>235</b>	<b>0</b>	<b>*2</b>	<b>0</b>

\* Additional mitigation to be considered

# Example of Quiet Zone Quad Gates



# Proposed Noise Mitigation

Mitigation	Corridor	Coppell	Carrollton	Addison	Dallas	Richardson	Plano
Quiet Zones	36	7	9	4	7	5	4
Crossing Bell	8	-	1	1	6	-	-
Noise Barriers	19	-	2	-	17	-	-
Noise Barrier Length (feet)	20,300	-	2,600	-	17,700	-	-



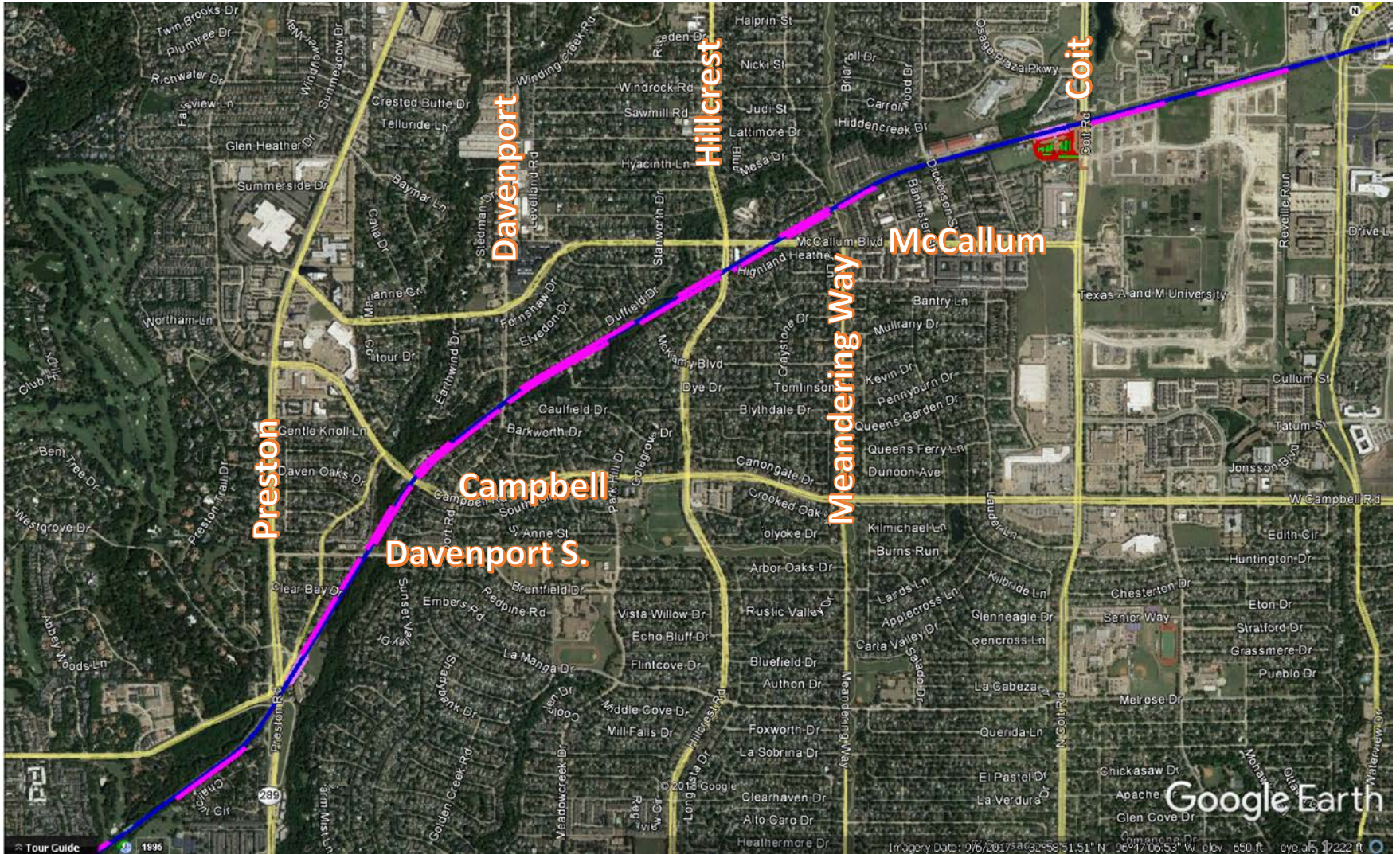


# Noise Barrier Locations Carrollton





# Noise Barrier Locations North Dallas



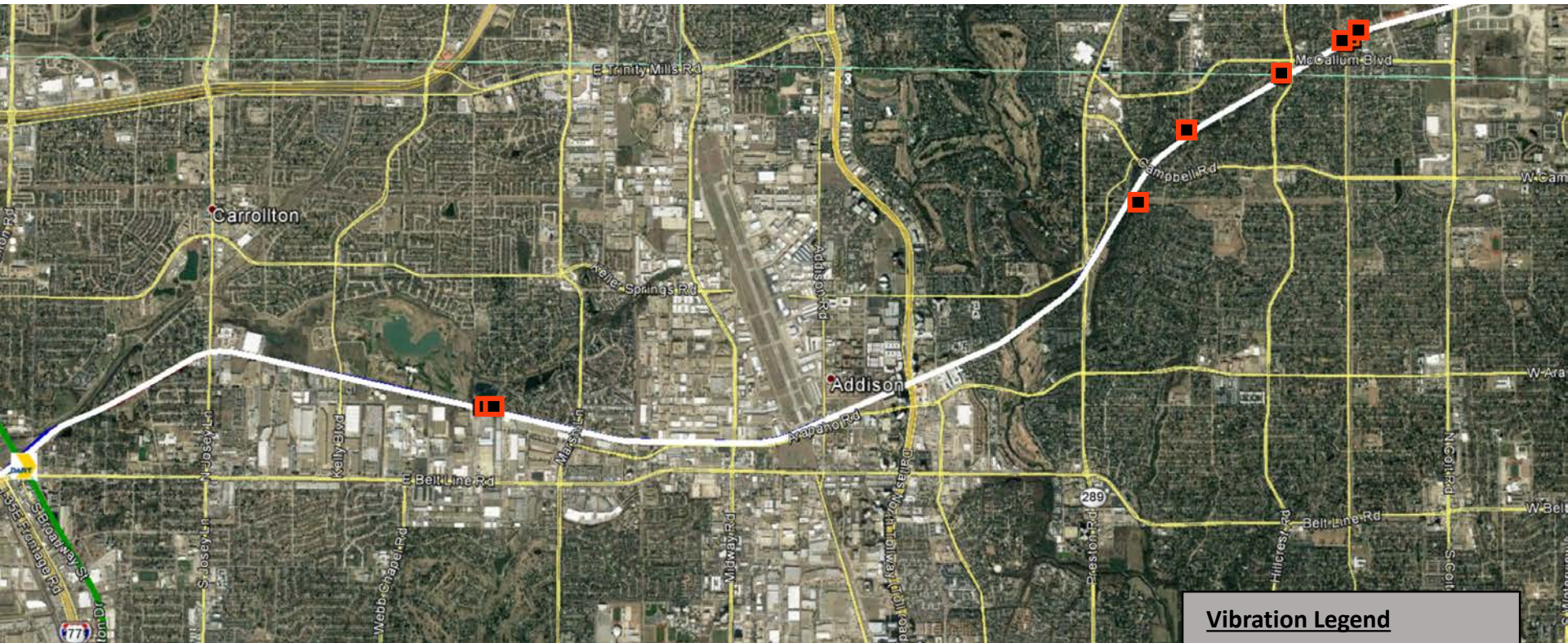


A yellow and black bus with the number 41041 is parked on a city street. The bus has an advertisement on its side. In the background, there are several tall, modern buildings with glass facades under a blue sky with some clouds. The entire scene is overlaid with a semi-transparent blue filter.

# **Vibration Impacts and Mitigation**



# Vibration Impact Location Map Dallas and Carrollton

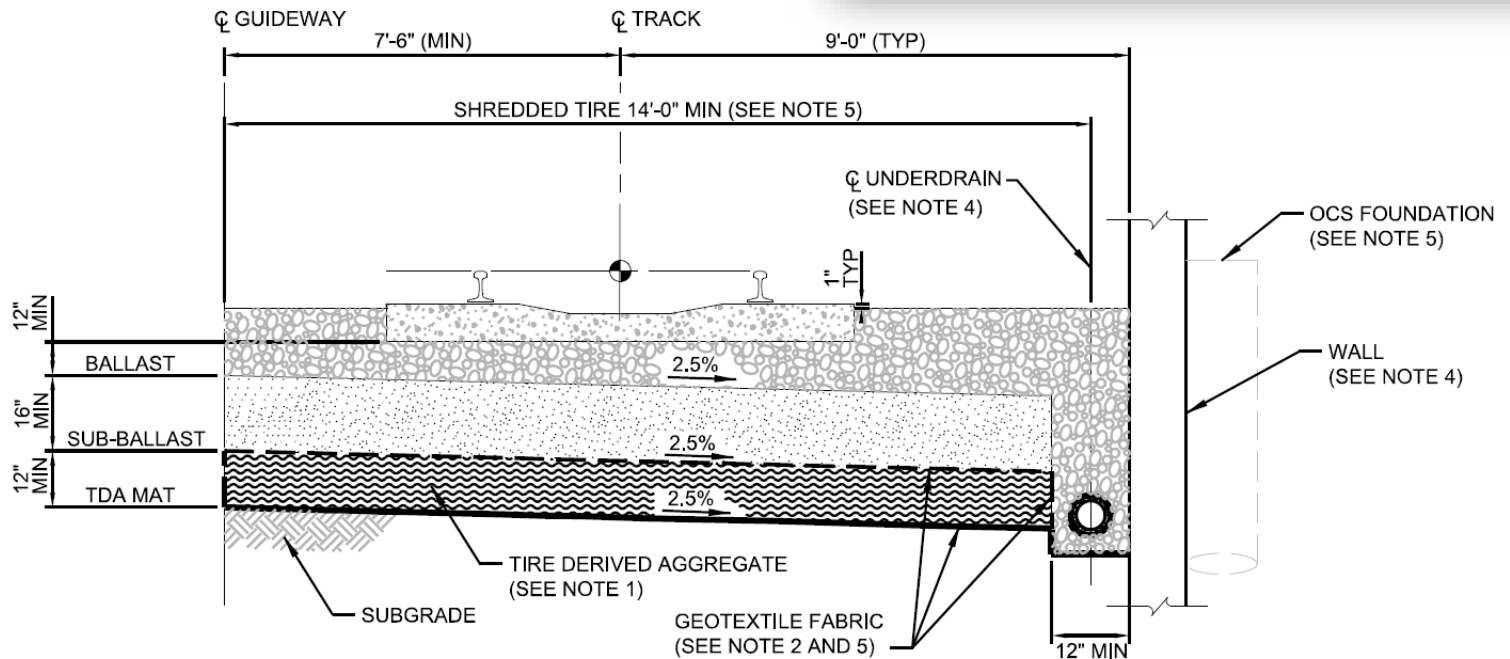


**Vibration Legend**

- Vibration Impact

# Proposed Vibration Mitigation

Track treated with  
Tire Derived Aggregate (TDA)







# Traffic Analysis and Mitigation



# Crossing Configuration Summary

## 71 Roadway Crossings (1-71)

45 At-Grade

14 Existing Grade Separations

8 Proposed New Grade Separations

2 Future Grade Separations

1 Closure or remain grade separated

1 Closure

## 8 Non-Roadway Crossings (A-H)

1 At-Grade

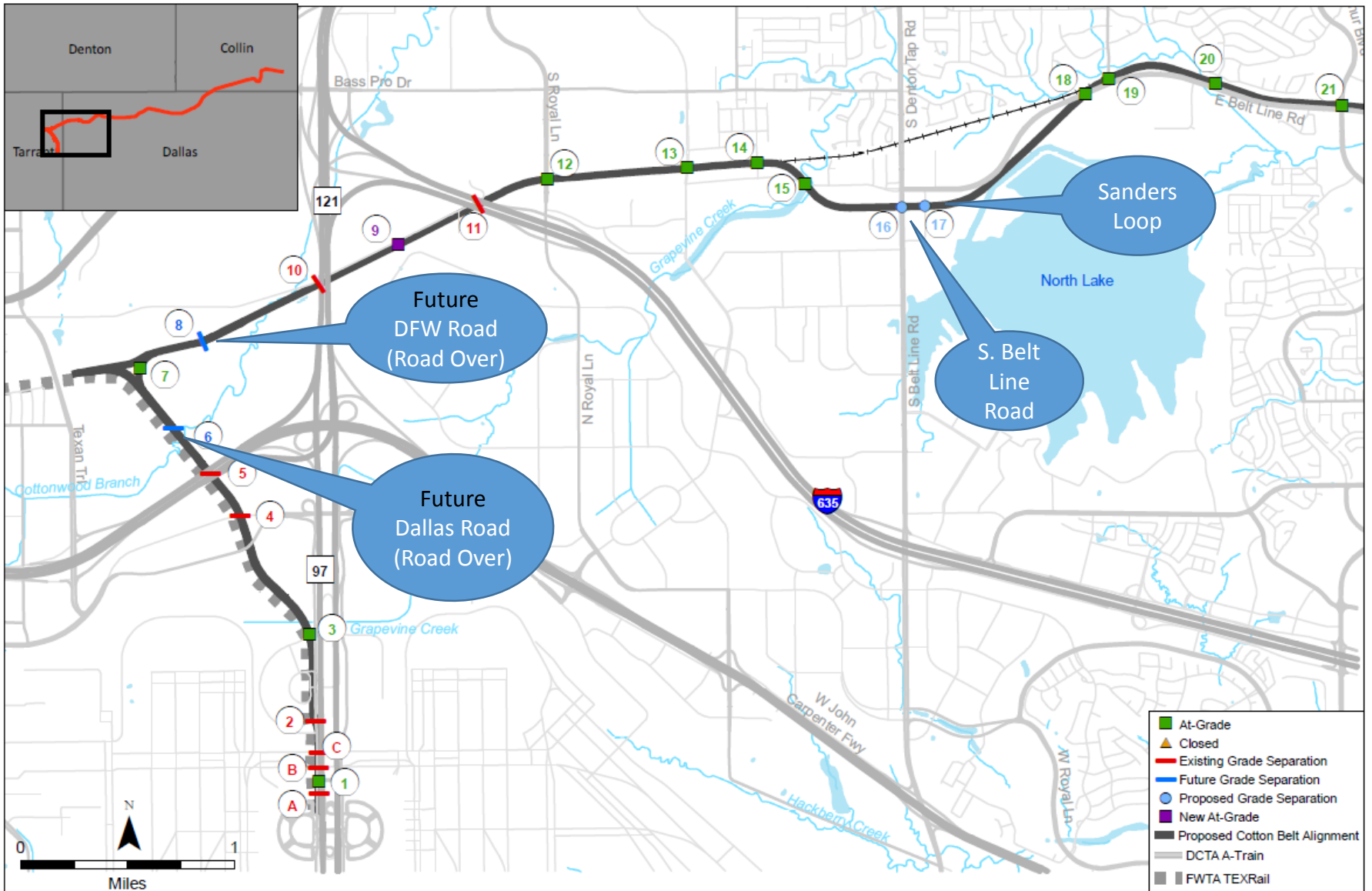
6 Existing Grade Separations

1 Proposed Grade Separations

# Roadway (Arterials Only) Mitigation

## Grade Separations and Signal/Design Improvements

Roadway At-Grade Crossing (Crossing Number)	City	LOS Impacts?	Queuing Impacts?	Recommended Traffic Mitigation
<b>Grade Separation (5 New)</b>				<b>Treatment</b>
South Belt Line Road (16) Includes Sanders Loop (17)	Coppell / Dallas	Yes	Yes	Track over the Road
Midway Road (37)	Addison	No	Yes	Track over the Road
Coit Road (53)	Dallas	No	Yes	Roadway over the Track
Custer Parkway (58)	Richardson	Yes	Yes	Track over the Road
Plano Parkway (66)	Plano	Yes	Yes	Track over the Road
<b>Intersection Improvements (6)</b>				<b>Treatment</b>
MacArthur Boulevard (21)	Coppell	Yes	No	Signal/Design Improvements
Luna Road (26)	Carrollton	Yes	Yes	Signal/Design Improvements (Grade Separation not feasible)
North Marsh Lane (35)	Carrollton / Addison	Yes	Yes	Signal/Design Improvements
Addison Road (38)	Addison	Yes	Yes	Signal/Design Improvements (Grade Separation not feasible)
Hillcrest Road (49)	Dallas	No	No	Signal/Design Improvements
Alma Road (59)	Richardson	Yes	Yes	Signal/Design Improvements (Grade Separation not feasible)

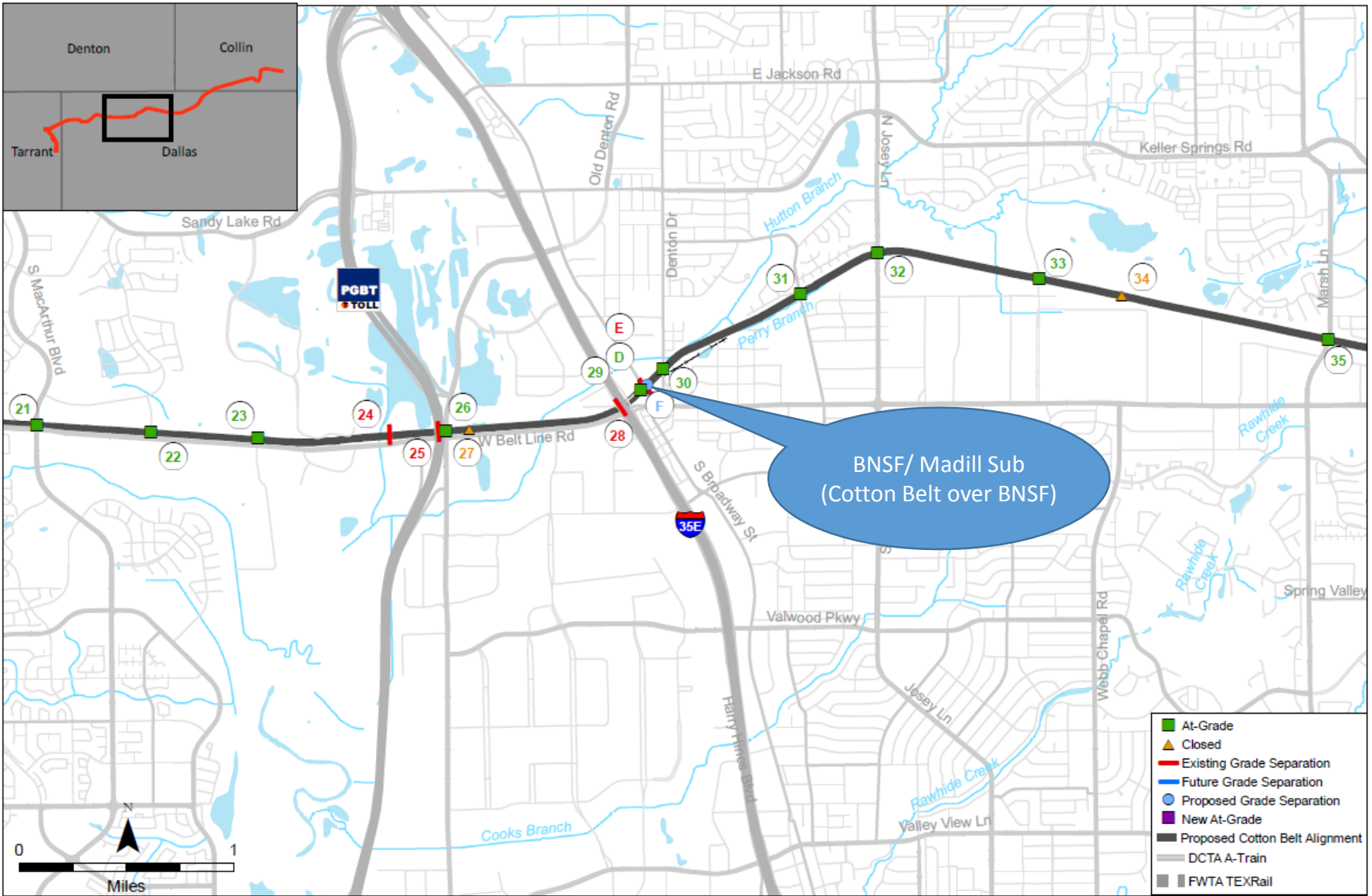


**COTTON BELT**

# Cotton Belt Proposed Grade Separations

**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement

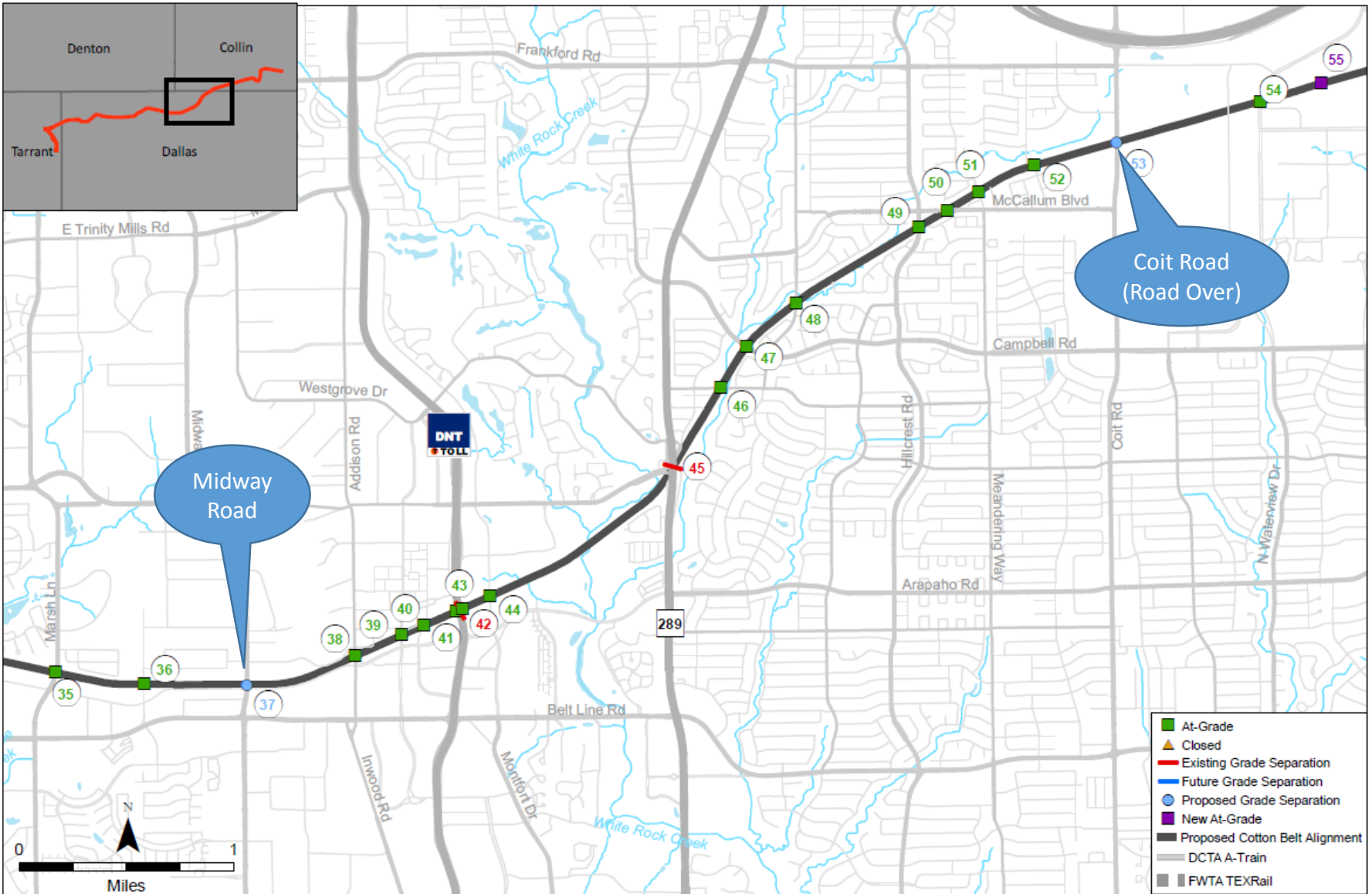




**COTTON BELT**

# Cotton Belt Proposed Grade Separations

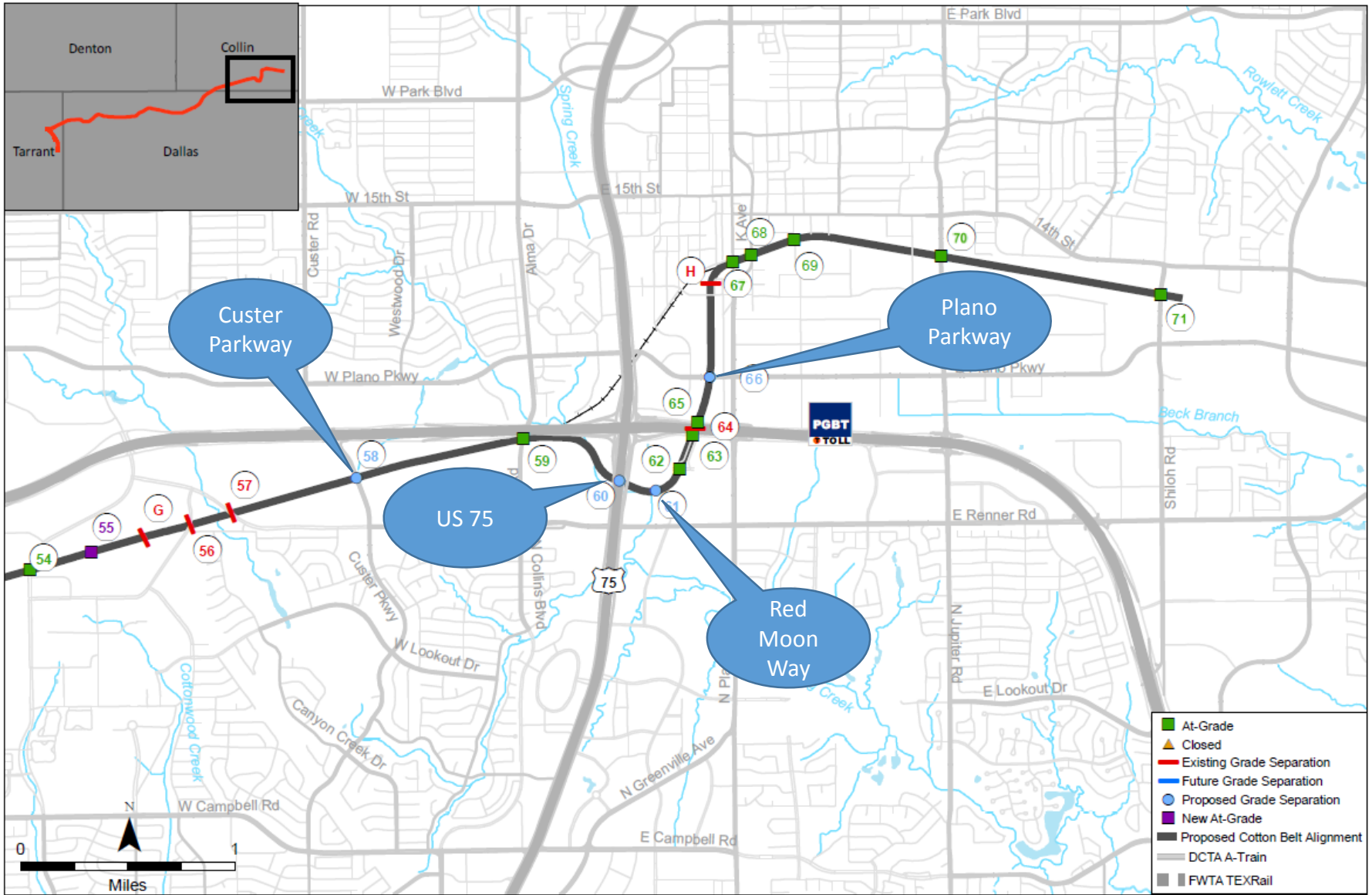
**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement



**COTTON BELT**

# Cotton Belt Proposed Grade Separations

**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement



**COTTON BELT**

# Cotton Belt Proposed Grade Separations

**Cotton Belt Corridor  
Regional Rail Project**  
Draft Environmental Impact Statement



# Cotton Belt Proposed Roadway Crossing Configuration

ID	Location	Name	Type	Configuration
1	DFW	Crossunder # 2	Street	At-Grade
2	DFW	International Service Road	Street	Existing Grade Separation (Rail Under)
3	DFW	North Employee Road	Street	At-Grade
4	DFW	North Airfield Drive	Street	Existing Grade Separation (Rail Under)
5	DFW	SH 121/SH 114	Freeway	Existing Grade Separation (Rail Under)
6	DFW	Dallas Road	Street	Future Grade Separation (Rail Under)
7	DFW	Chesapeake Access Road	Access	At-Grade
8	DFW	New DFW Road	Street	Future Grade Separation (Rail Under)
9	DFW	DFW Fire Station 6 Road	Driveway	New At-Grade
10	DFW	SH 121	Freeway	Existing Grade Separation (Rail Under)
11	DFW	IH 635,	Freeway	Existing Grade Separation (Rail Under)
12	Coppell	Royal Lane	Street	At-Grade
13	Coppell	Freeport Parkway	Street	At-Grade
14	Coppell	Coppell Road	Street	At-Grade
15	Coppell	Southwestern Boulevard	Street	At-Grade
16	Coppell	South Belt Line Road	Street	Proposed Grade Separation
17	Coppell	Sanders Loop	Street	Proposed Grade Separation
18	Dallas	East Belt Line Road	Street	At-Grade
19	Coppell	Moore Road	Street	At-Grade
20	Coppell	Mockingbird Lane	Street	At-Grade
21	Coppell	MacArthur Boulevard	Street	At-Grade
22	Coppell	Fairway Drive	Street	At-Grade
23	Coppell	Private /Ledbetter Road	Driveway	At-Grade
24	Carrollton	Private (Gun Range Road)	Driveway	Existing Grade Separation (Rail Over)

# Cotton Belt Proposed Roadway Crossing Configuration

ID	Location	Name	Type	Configuration
25	Carrollton	PGBT	Freeway	Existing Grade Separation (Rail Under)
26	Carrollton	Luna Road	Street	At-Grade
27	Carrollton	Unnamed dirt road (Utility)	Access	Existing underpass to be relocated
28	Carrollton	IH-35E	Freeway	Existing Grade Separation (Rail Under)
29	Carrollton	North Broadway Street	Street	At-Grade
30	Carrollton	North Denton Drive	Street	At-Grade
31	Carrollton	Perry Road	Street	At-Grade
32	Carrollton	North Josey Lane	Street	At-Grade
33	Carrollton	Kelly Boulevard	Street	At-Grade
34	Carrollton	Private Driveway (Golf Club)	Driveway	Closed
35	Addison	North Marsh Lane	Street	At-Grade
36	Addison	Surveyor Boulevard	Street	At-Grade
37	Addison	Midway Road	Street	Proposed Grade Separation
38	Addison	Addison Road	Street	At-Grade
39	Addison	Quorum Drive	Street	At-Grade
40	Addison	Spectrum Drive	Street	At-Grade
41	Addison	DNT SB Frontage Road	Street	At-Grade
42	Dallas	Dallas North Tollway	Freeway	Existing Grade Separation (Rail Over)
43	Dallas	DNT NB Frontage Road	Street	At-Grade
44	Dallas	Knoll Trail Drive	Street	At-Grade
45	Dallas	Preston Road,	Street	Existing Grade Separation (Rail Under)
46	Dallas	Davenport Road (South)	Street	At-Grade
47	Dallas	Campbell Road	Street	At-Grade
48	Dallas	Davenport Road	Street	At-Grade

# Cotton Belt Proposed Roadway Crossing Configuration

ID	Location	Name	Type	Configuration
49	Dallas	Hillcrest Road	Street	At-Grade
50	Dallas	McCallum Boulevard	Street	At-Grade
51	Dallas	Meandering Way	Street	At-Grade
52	Dallas	Dickerson Street	Street	At-Grade
53	Dallas	Coit Road	Street	Proposed Grade Separation
54	Richardson	Waterview Parkway	Street	At-Grade
55	Richardson	Rutford Avenue	Street	New At-Grade
56	Richardson	Synergy Park Boulevard	Street	Existing Grade Separation (Rail Over)
57	Richardson	Renner Road	Street	Existing Grade Separation (Rail Over)
58	Richardson	Custer Parkway	Street	Proposed Grade Separation
59	Richardson	Alma Road	Street	At-Grade
60	Richardson	US 75	Freeway	Proposed Grade Separation
61	Richardson	Red Moon Way	Street	Proposed Grade Separation
62	Richardson	W. CityLine Drive	Street	At-Grade
63	Plano	PGBT EB Frontage Road	Street	At-Grade
64	Plano	PGBT	Freeway	Existing Grade Separation (Rail Under)
65	Plano	PGBT WB Frontage Road	Street	At-Grade
66	Plano	Plano Parkway	Street	Proposed Grade Separation
67	Plano	K Avenue	Street	At-Grade
68	Plano	Municipal Avenue	Street	At-Grade
69	Plano	N Avenue	Street	At-Grade
70	Plano	Jupiter Road	Street	At-Grade
71	Plano	Shiloh Road	Street	At-Grade



# Proposed Non-Roadway Crossing Configuration

ID	Location	Name	Type	Configuration
A	DFW	Skylink People Mover	APM	Existing Grade Separation (APM Over)
B	DFW	Taxiway Z	Taxiway	Existing Grade Separation (Taxiway Over)
C	DFW	Taxiway Y	Taxiway	Existing Grade Separation (Taxiway Over)
D	Carrollton	UP Railroad	Railroad	At-Grade
E	Carrollton	DART Green Line	LRT	Existing Grade Separation (LRT Over)
F	Carrollton	BNSF/Madill Subdivision	Railroad	Proposed Grade Separation
G	Richardson	KCS Railroad	Railroad	Existing Grade Separation (KCS Over)
H	Plano	DART Red Line	LRT	Existing Grade Separation (LRT Over)



# Visual Mitigation

# Visual Mitigation Examples

Typical landscaping at 120-150 foot intervals along residential areas for:

- Visual screening

- Soften views of sound walls, corridor fencing (where possible)

- Preservation of existing vegetation

- Station landscaping/appropriate lighting in residential areas

- Station materials/finishes to complement surrounding character

- Complementary structure design

- Public and agency coordination to define types of vegetation



A yellow and black bus with the number 41041 is parked on a city street. The bus has an advertisement on its side. In the background, there are several tall, modern buildings with glass facades under a blue sky with some clouds. The entire image has a light blue tint.

# **Other Impacts and Mitigation**

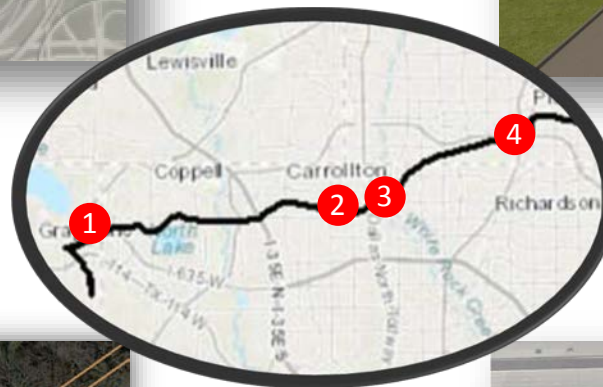
# Other Impacts Identified in DEIS



Cottonwood Creek  
Floodplain Encroachment - DFW



Wheeler Signature Bridge - Addison



White Rock Creek Bridge Reuse - Dallas

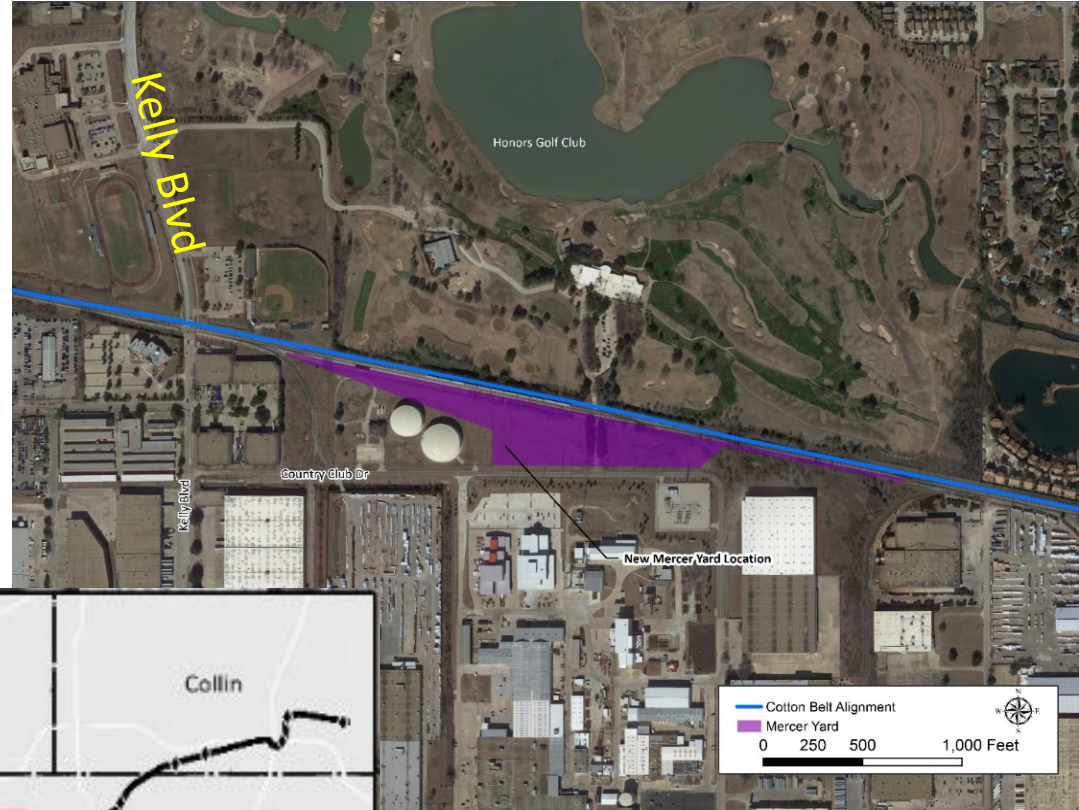


Spring Creek Trail Relocation - Richardson



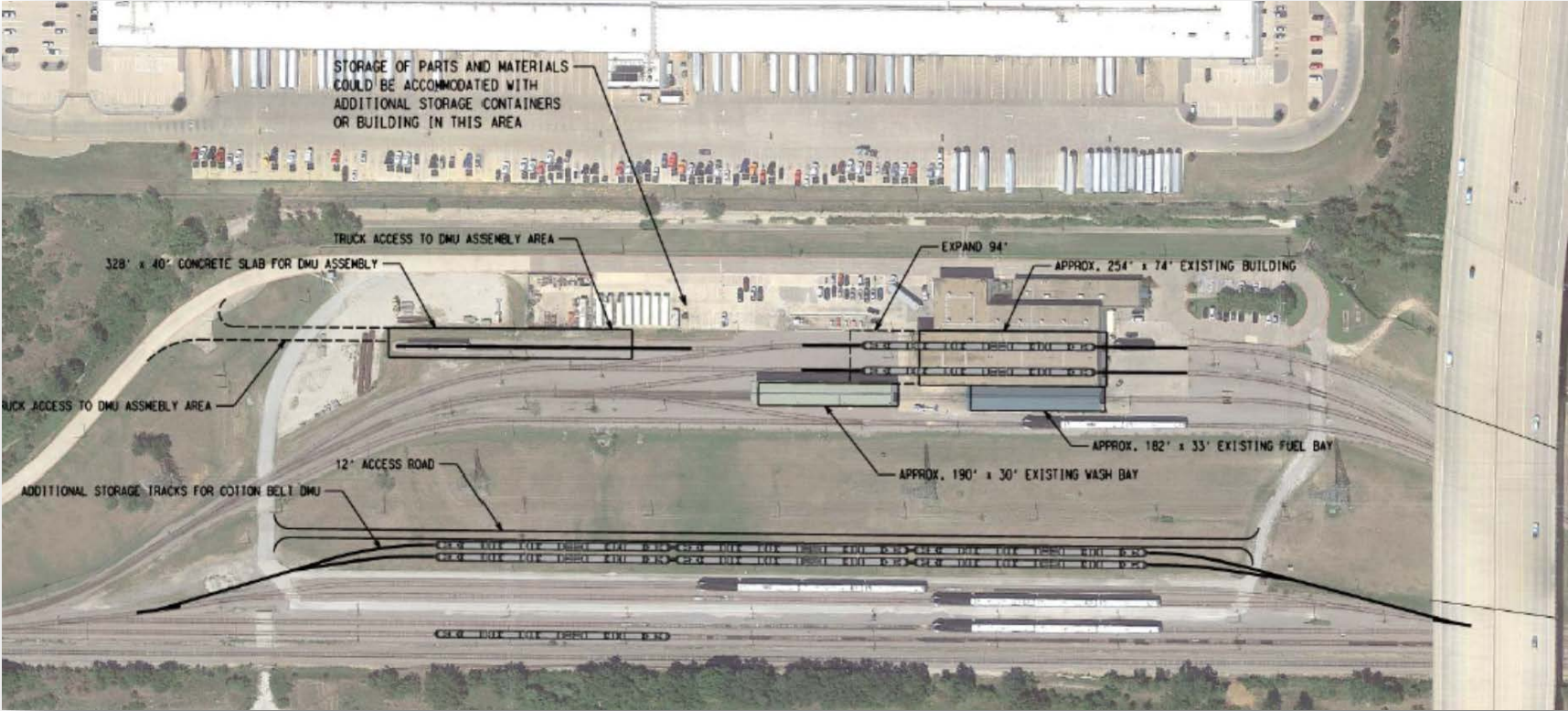
# Relocation of Mercer Yard

Existing rail yard in downtown Carrollton to be relocated approximately two miles to the east





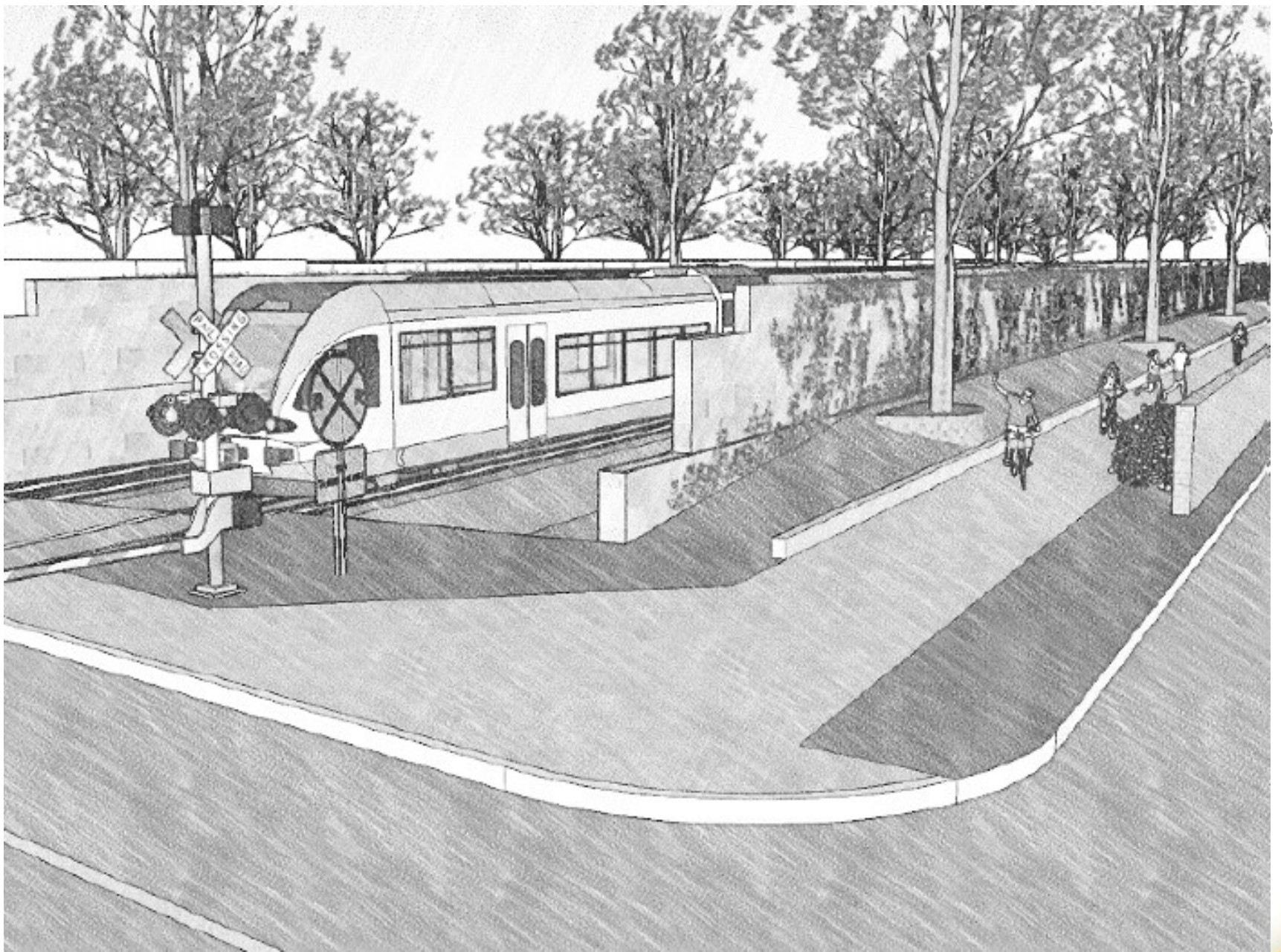
# Proposed TRE Facility Expansion





# **Design Considerations**



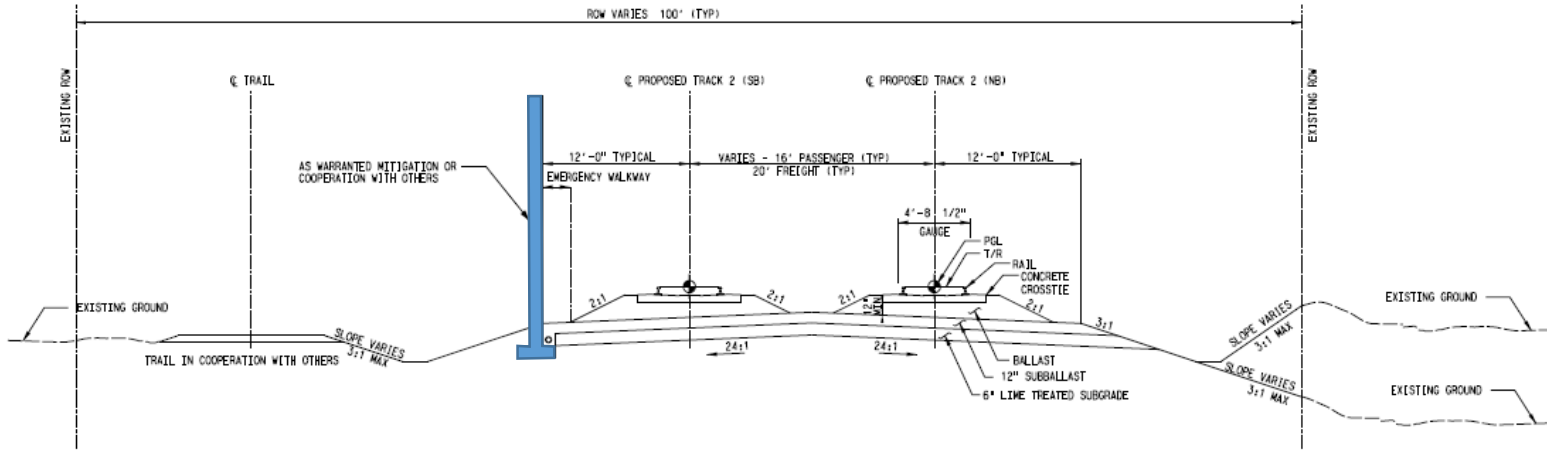


Presented August 2016 Public Meetings

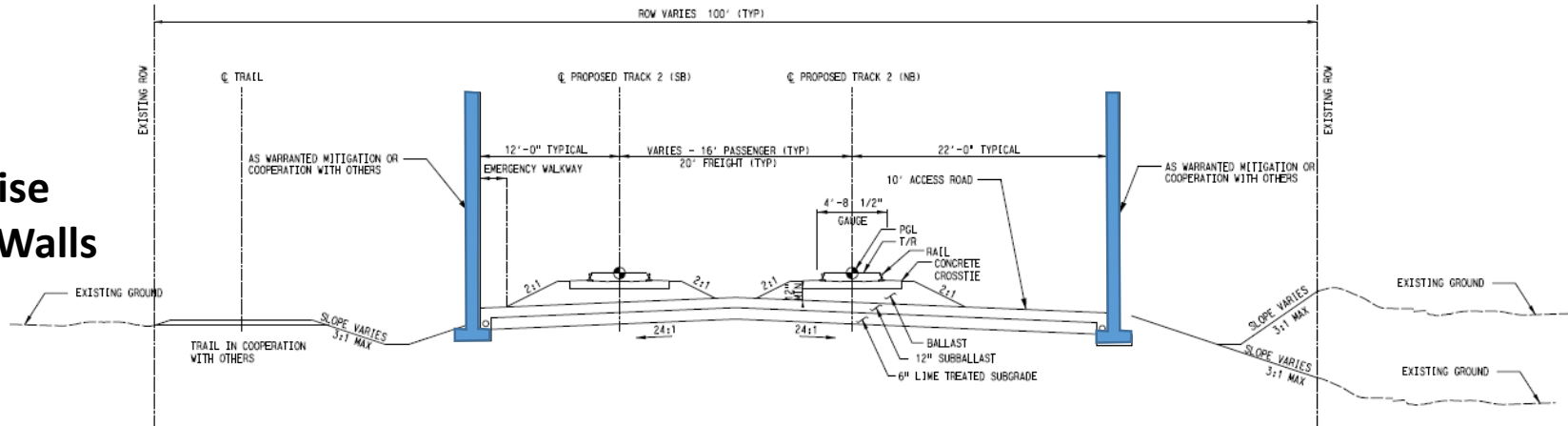


# Proposed Noise Wall Cross-Section

One Noise Barrier Wall



Two Noise Barrier Walls



# Example Wall Treatment – 7 ft Height

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# Example Wall Treatment – 15 ft Height





# Design Examples



Fencing in Residential Areas



Channelized Pedestrian Crossings  
(TCRP Report 69)



Pedestrian Gates

# Increased Aesthetics

**Example Hike/Bike Trail, Planting, Fencing, Wall (Residential Area)**



Los Angeles - Orange Line BRT (dedicated fixed guideway)