

HIGH-SPEED



TRANSPORTATION

Dallas-Fort Worth

5.19.21 and 5.20.21 Public Meeting #3



Agenda

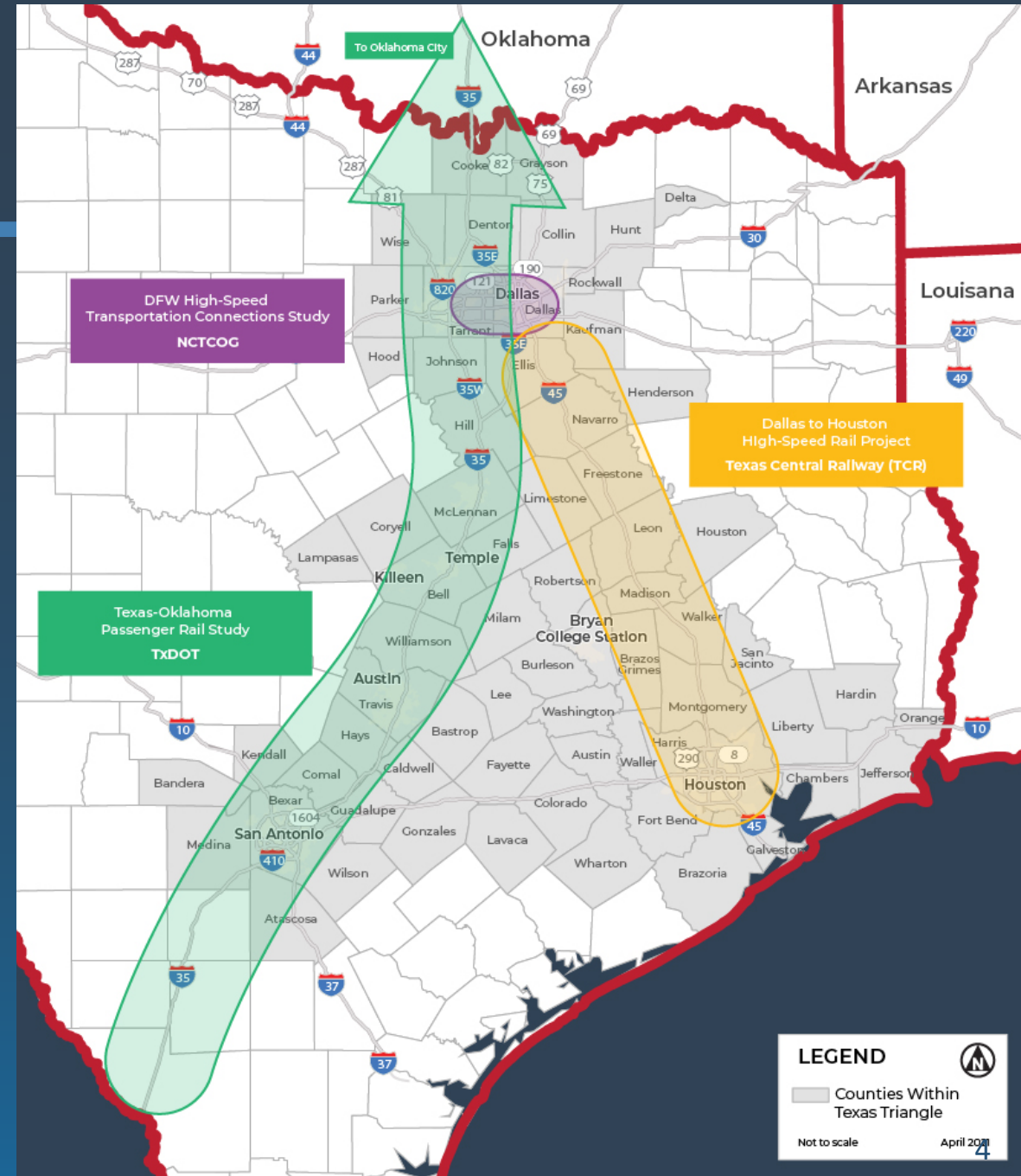
- Study Overview Brendon Wheeler, NCTCOG
- Public and Agency Engagement Rebekah Hernandez, NCTCOG
- Analysis Update Chris Masters, HNTB
- Phase 1 Recommendations Ian Bryant, HNTB
- Next Steps Ian Bryant, HNTB
- Public Comments All

Study Overview

Objective of this Study

Evaluate high-speed transportation alternatives (both alignments and technology) to:

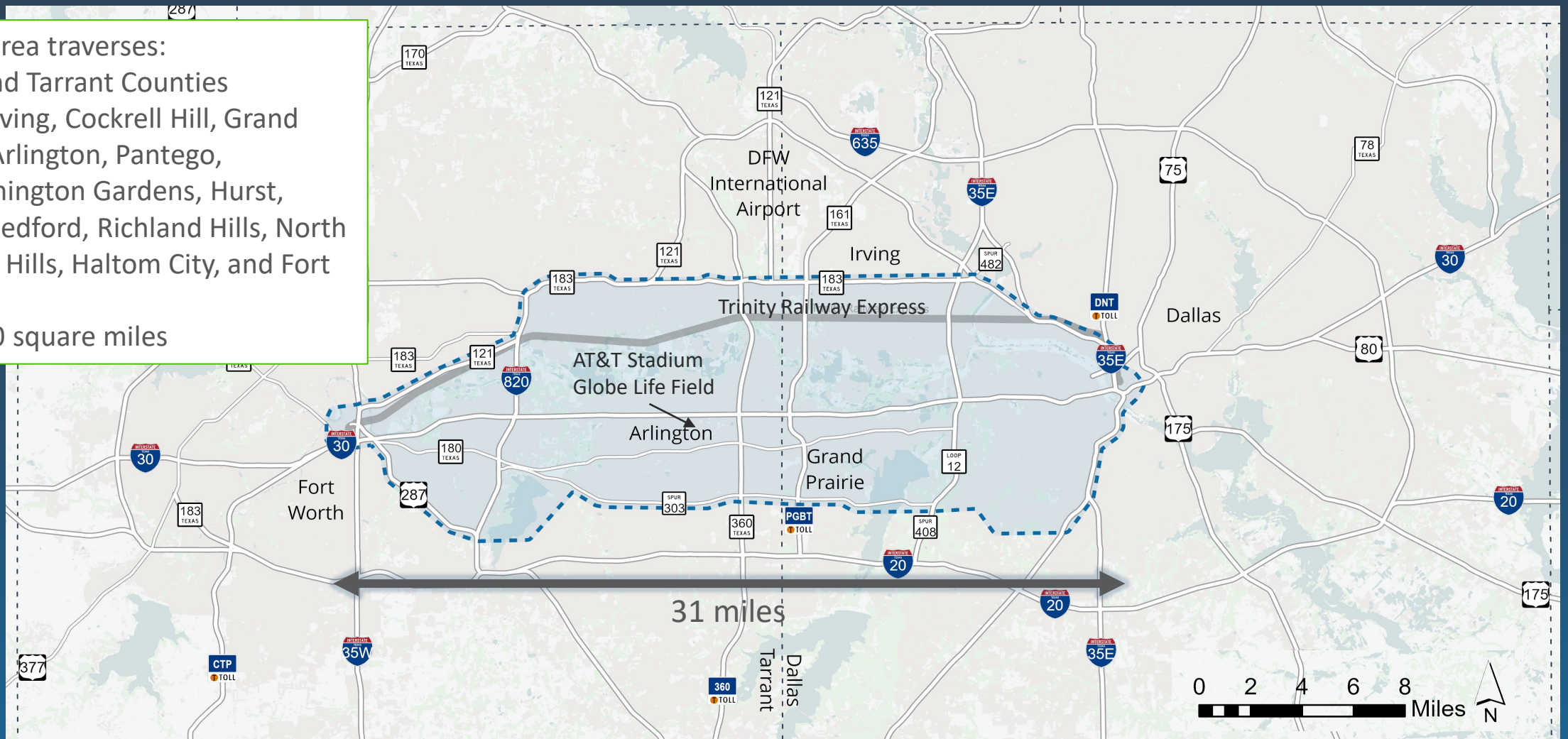
- Connect Dallas-Fort Worth to other proposed high-performance passenger systems in the state
- Enhance and connect the Dallas-Fort Worth regional transportation system



Study Area

The study area traverses:

- Dallas and Tarrant Counties
- Dallas, Irving, Cockrell Hill, Grand Prairie, Arlington, Pantego, Dalworthington Gardens, Hurst, Euless, Bedford, Richland Hills, North Richland Hills, Haltom City, and Fort Worth
- Over 230 square miles



Phased Approach

Phase 1 – Alternative Development

- Public and Agency Engagement
- Alternative Development
- Alternative Screening

Includes a technology forum

Includes alignments & technology

Goal for Phase 1

Identify technologies and alignments to be carried into Phase 2

Phase 2 – Engineering & Environmental

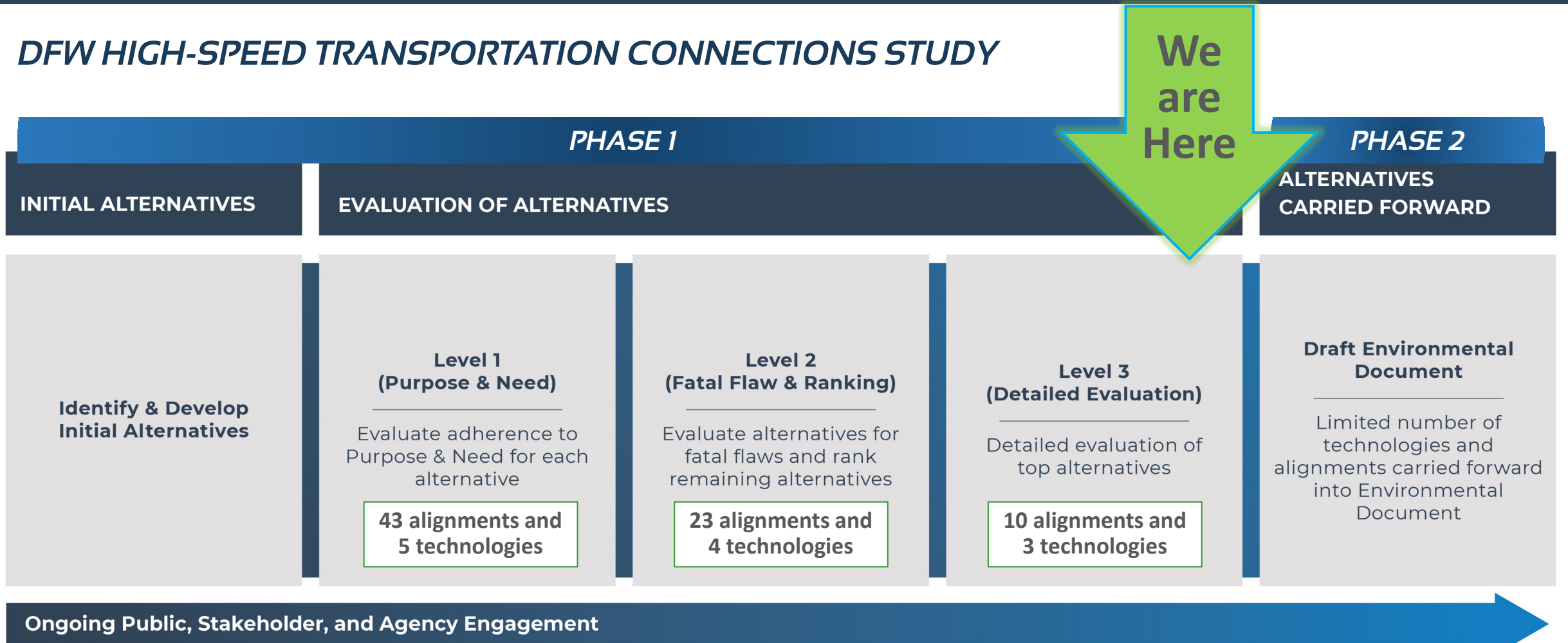
- Conceptual Engineering
- National Environmental Policy Act Documentation and Approval
- Preliminary Engineering
- Financial and Project Management Plans
- Public and Agency Engagement

Goal for Phase 2

Federal environmental approval of alignment & technology

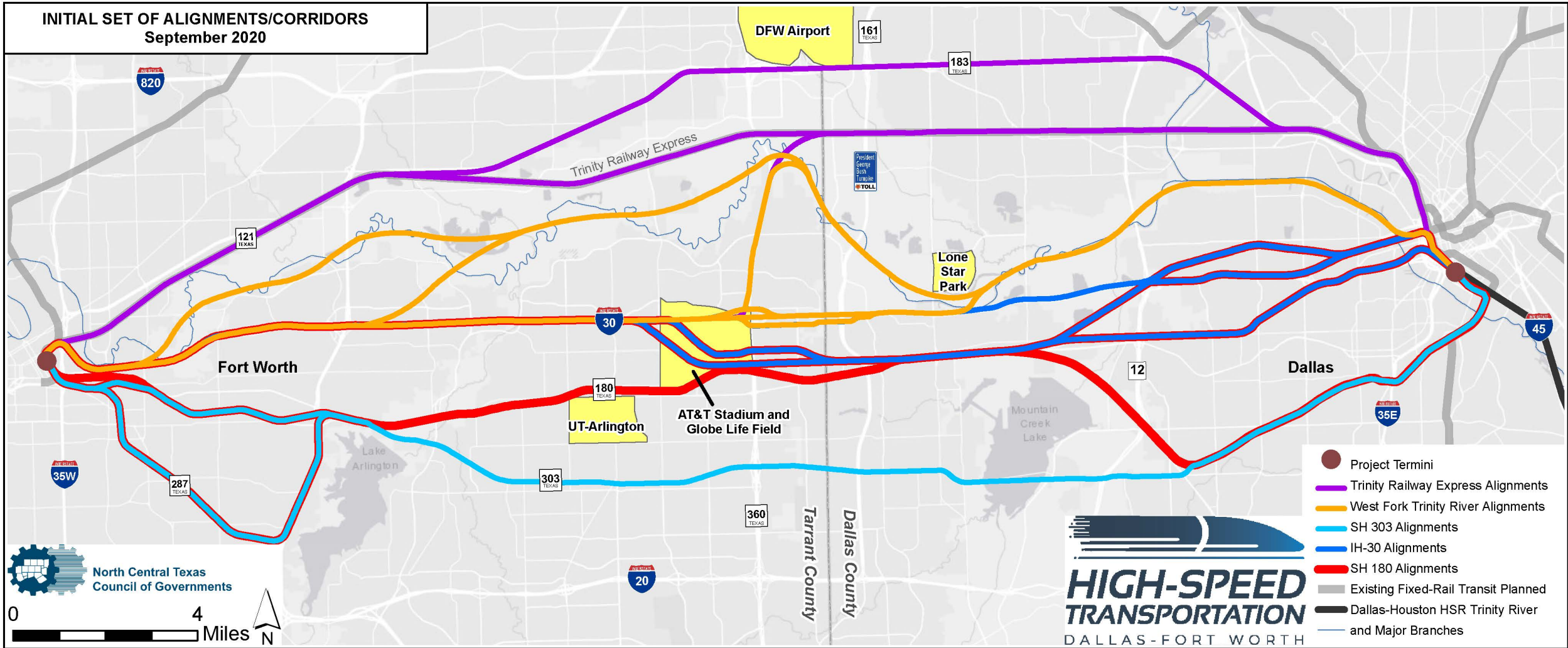
Evaluation Methodology

DFW HIGH-SPEED TRANSPORTATION CONNECTIONS STUDY



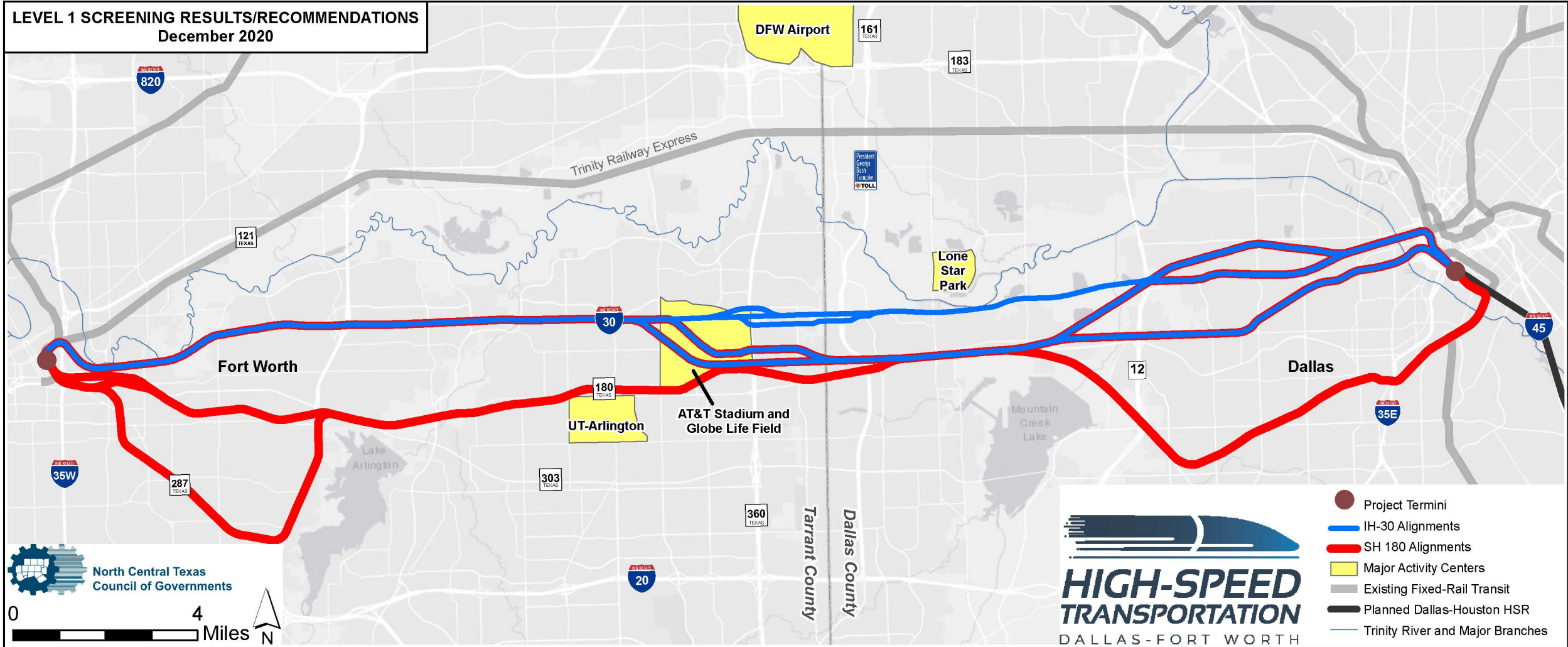
Phase 1: Level 1 Alignments

INITIAL SET OF ALIGNMENTS/CORRIDORS
September 2020



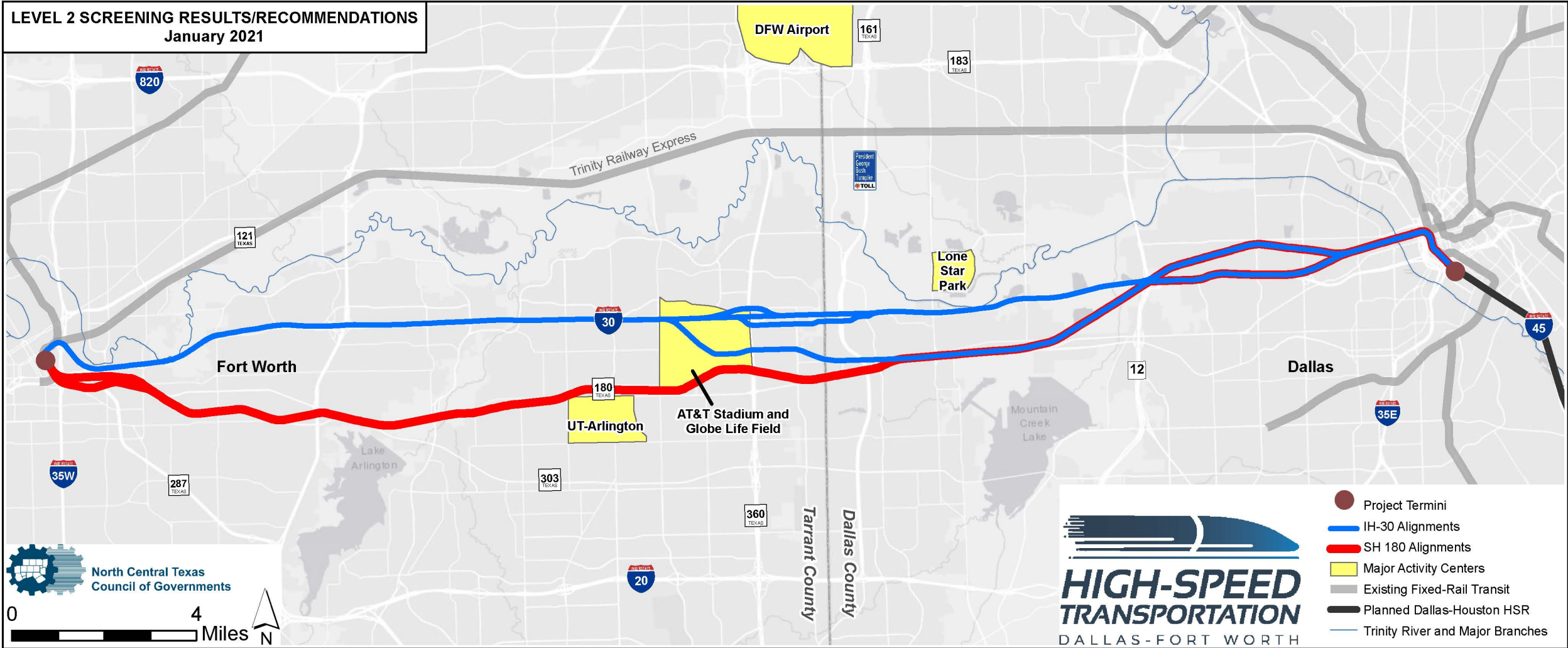
Phase 1: Level 2 Alignments

LEVEL 1 SCREENING RESULTS/RECOMMENDATIONS
December 2020



Phase 1: Level 3 Alignments

LEVEL 2 SCREENING RESULTS/RECOMMENDATIONS
January 2021





Modes of Transportation

● Conventional



● Higher-Speed



● High-Speed



● Maglev



● Hyperloop



● Emerging Technologies



Modes of Transportation

● Conventional



● Higher-Speed



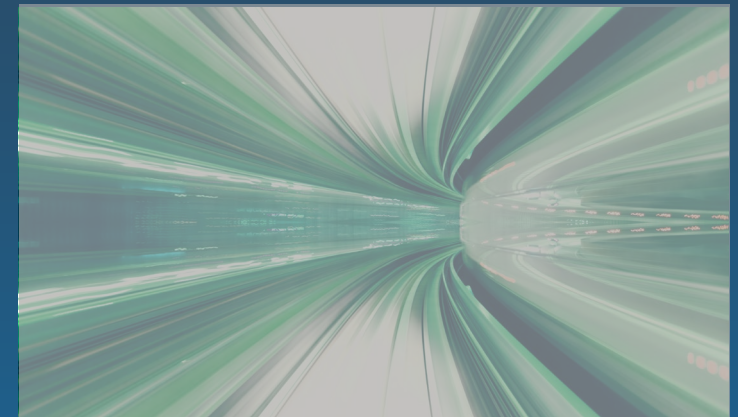
● High-Speed



● Maglev



● Hyperloop



● Emerging Technologies

The background features several abstract, overlapping geometric shapes in various shades of blue. A large, light blue triangle is positioned in the upper right quadrant. Below it, several parallel, diagonal lines in a medium blue shade extend from the top right towards the bottom right. In the bottom right corner, there are several vertical, rounded rectangular shapes in a darker blue shade, arranged in a slightly curved pattern.

Public & Agency --- Engagement Update

Completed Public and Agency Engagement (2020-2021)

Over 90 meetings held so far

- Public meetings
- Technical Work Group
- Federal and State Coordination
- Technology Forum & one-on-ones with providers
- Transportation Agencies and railroads
- Study area cities
- Elected officials
- Resource agencies
- Community groups and organizations



Thank you for your participation in our previous meetings!

You can find responses to questions and comments from previous meetings and a FAQs document at our project website: www.nctcog.org/dfw-hstcs >> Project Information

Other Engagement Activities

DFW High-Speed Update Monthly Newsletter

- Latest updates on progress
- Upcoming events for the public to attend
- Publishes last Friday of the month
- Sign up at: <https://bit.ly/2RaZ3Ju>



DFW HIGH-SPEED UPDATE
THE LATEST MOVEMENTS IN THE DALLAS-FORT WORTH HIGH-SPEED TRANSPORTATION CONNECTIONS STUDY

Study Investigates High-Speed Transportation Between Dallas and Fort Worth

Just think about the benefits of traveling between Downtown Dallas and Downtown Fort Worth in 20 minutes—and then also connecting with transit services throughout Texas and beyond!

How to connect these two downtowns quickly and safely is being explored in the comprehensive DFW High-Speed Transportation Connections Study (HSTCS) directed by the North Central Texas Council of Governments (NCTCOG), the local Metropolitan Planning Organization which has been tackling complicated regional growth issues like traffic congestion for decades.

The Dallas-Fort Worth area's population is projected to grow from 7.5 million today to 11.2 million in 2045; that's a 51.2 percent increase. Employment numbers are expected to jump by 46.5 percent in this same time period. Lane expansions and more freeways will not be sufficient to keep vehicles moving. Intensifying traffic congestion will continue to create bigger and bigger hurdles for traveling to jobs, schools, healthcare, retail locations, mega-entertainment centers, and even leisure travel.

"Now is the time for us to be exploring all aspects of developing a high-speed transportation mode connecting Downtown Dallas and Downtown Fort Worth," Michael Morris, the agency's Director of Transportation, says with determination.

"Equally important to all Texans, if our vision becomes a reality, will be how this service successfully connects with other high-speed passenger projects now in planning. These combined efforts will build out a geographic area known as the Texas Triangle for unparalleled mobility among our major urban areas."

"Because of high construction costs and a lack of available land, expanding highways between these two cities is cost prohibitive. New travel modes are needed to keep the DFW region moving," Morris added.

Partner agencies in the study are the Federal Transit Administration (FTA), Federal Railroad Administration (FRA), Texas Department of Transportation (TxDOT), U.S. Army Corps of Engineers, Dallas Area Rapid Transit (DART), and Trinity Metro among others. Once a technology is recommended, either the FRA or FTA will assume responsibility for leading the federal environmental assessment process.

"Contributing significantly to this ongoing process is the input of local community members, government members, businesses, advocacy groups, and other stakeholders," Morris emphasized. "We encourage everyone to participate in our public meetings, as well as to go on our website at www.nctcog.org/dfw-hstcs to keep updated on our progress, ask questions, and make comments. This project benefits all of us."

SPRING 2021 Calendar

MAR 4, 9am
Virtual Event: Greater Dallas Planning Council

MAR 11
Presentation to the Regional Transportation Council

MAY 19 and 20
Virtual Public Meetings

Let Your Voice Be Heard!
Let's Talk About Travel Across DFW. Give Us Your Ideas.
www.nctcog.org/dfw-hstcs

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DFW HIGH-SPEED UPDATE
THE LATEST MOVEMENTS IN THE DALLAS-FORT WORTH HIGH-SPEED TRANSPORTATION CONNECTIONS STUDY

High-Speed Rail Among Three Transportation Modes Now Under Study

TECH UPDATE

Capable of traveling up to 250 miles on a fixed schedule, High-Speed Rail's (HSR) operational readiness is among its strengths, according to North Central Texas Council of Government's (NCTCOG) study team leading the DFW High-Speed Transportation Connections Study.

Also under intense review are magnetic levitation (Maglev) and hyperloop technologies. Early on, conventional rail and higher-speed rail services were eliminated as possible transportation modes due, in part, to their travel times of more than 20 minutes for the 31-mile trip between Dallas and Fort Worth.

The first high-speed rail system, known as the Shinkansen, or "bullet" train, began operations in Japan in 1954. Today, Japan has a network of nine high-speed rail lines serving 22 of its major cities, carrying more than 420,000 passengers on a typical weekday. The railway has never had a passenger fatality or injury due to accidents.

High-speed rail is now under development in the United States as well. The first HSR system in the U.S., located in California, is currently under construction, but the first phase, connecting San Francisco to Los Angeles and Anaheim, is not expected to be completed until 2029. Texas Central Railroad is also planning a Shinkansen HSR line between Dallas and Houston, with a goal to be operational in 2026.

SPRING 2021 Calendar

APR 16
Presentation to The University of Texas at Arlington, Walkable Arlington

APR 22
Arlington Rotary Club Briefing

MAY 19 and 20
Virtual Public Meetings

Plug Into This Discussion
Let's Talk About Travel Across DFW. Give Us Your Ideas.
www.nctcog.org/dfw-hstcs

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Other Engagement Activities

- Allows the public to review all Level 3 alignments
- Asking for feedback on areas of significance and concern
- PIMA link

Map layer testing
Project for test map layer functionality.

 Open Project Documents ▾

1) Tell us about yourself and stay up to date with the project

Zip Code * Required Last Name * Required

2) Select any of the following topics that apply to your comment: (Select up to 3)

3) Below, you will find a map with the remaining ten alignments. On the left side of the map, you can toggle through layers to hide or show individual alignments, so you can review each one separately. In your review of the alignments, do you have any areas of concern? Please explain in detail. * Required

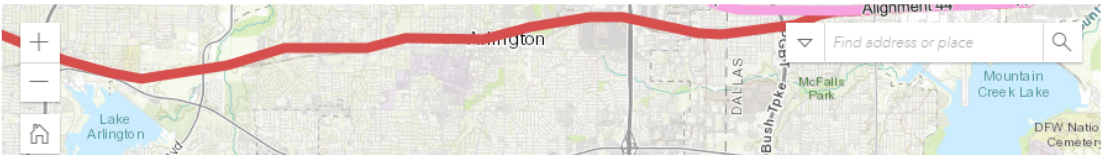
Please do not place any personally identifiable information (name, phone, or email) within your comment.

4) Would you like a response to your question or concern?

Send me a response

5) To drop a pin on an area of concern, tap the location. If you drop one in a wrong location, click the correct location to move your existing pin on the map. Only one pin can be dropped on the map at a time. If zoomed in, please use arrow keys to pan around the map, or use the + or - keys to zoom in and out.

Tap another location to move your pin. Use arrow keys to pan around. Use + or - keys to zoom in and out.





Additional Outreach

- Public Meeting comment period open until June 18, 2021!
- Project team is available to speak at events or to groups within the project study area.
- Please contact us with any additional meeting requests or outreach suggestions!

Rebekah Hernandez
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Stay Connected to DFWHSTC

Project Website Link

www.nctcog.org/dfw-hstcs

For future meeting dates, please monitor the project website.

Analysis Update



Analysis Update

- Developed constraints maps and conceptual design for remaining alignments
- Purpose of initial design is to inform the Level 3 Screening only; actual alignments are not defined until Phase 2
- Technology Forum
 - Purpose: Solicit information from high-speed transportation technology professionals to inform technology screening and design
 - Technology Scan (November 2020)
 - Industry Workshop (December 2020)
 - One-on-One Meetings (January – April 2021)
 - Independent Review (March – April 2021)

IH 30 Options for Further Refinement

IH 30 West

Opportunity to reconstruct freeway

- A) Redesign freeway to incorporate HST System as integrated corridor
- B) Design HST System along periphery of existing freeway to avoid infrastructure conflicts

IH 30 East

No additional major improvements planned

- A) Design HST System within managed lanes footprint
- B) Design HST System along periphery of existing freeway to avoid infrastructure conflicts



Design Update

Urban Center Connection Concepts

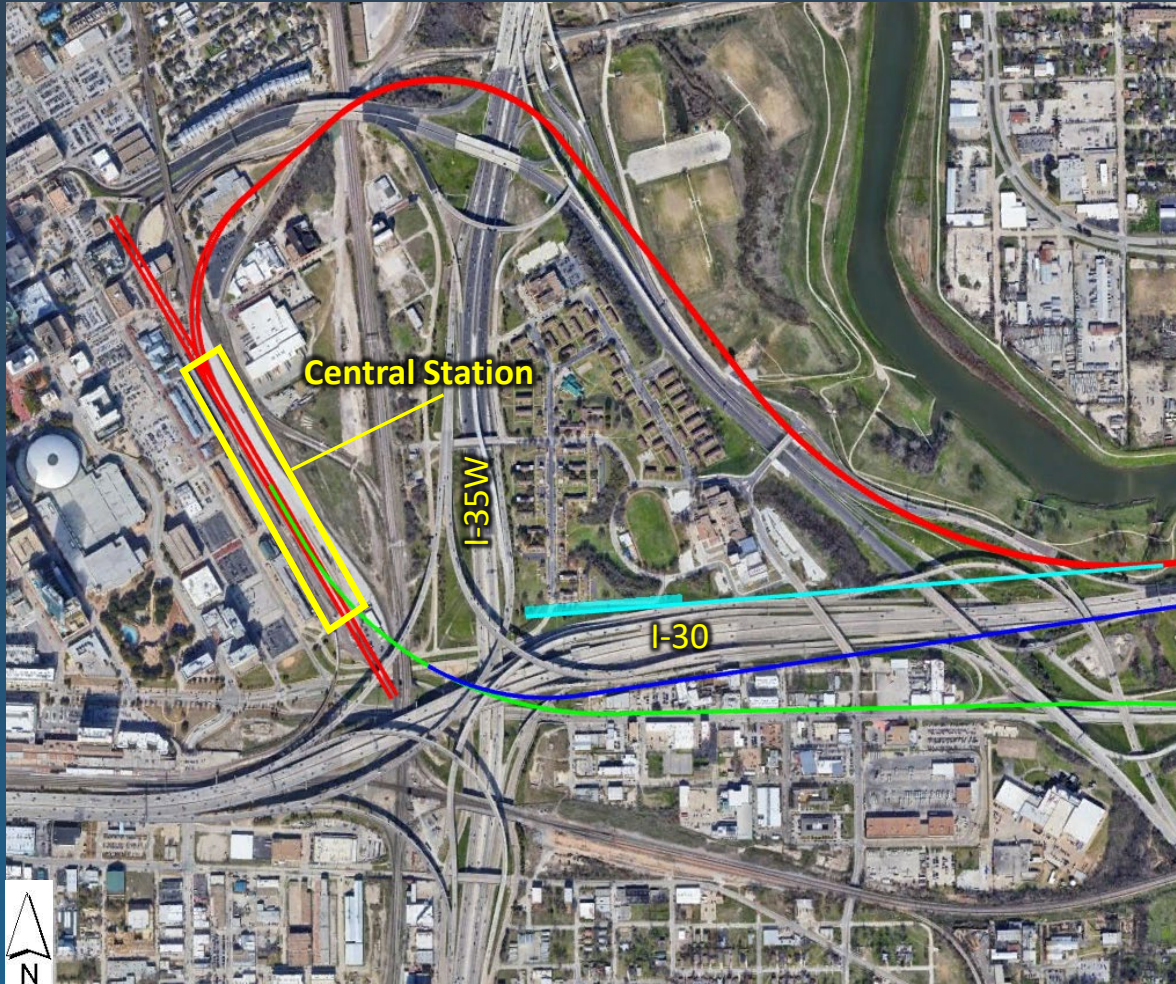




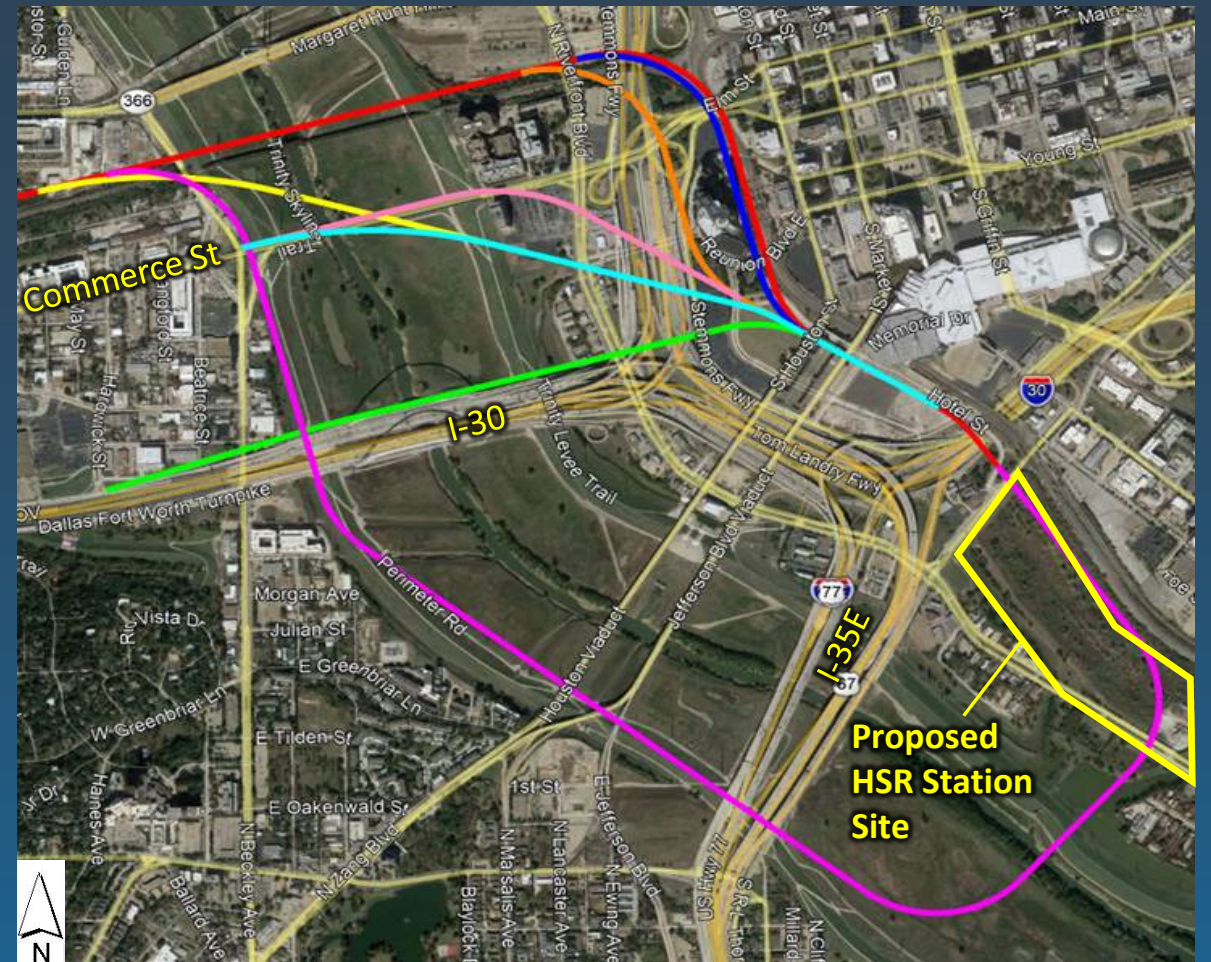
Urban Center Connection Options

- Urban center connections not evaluated in Phase 1: Level 3 Screening; will be evaluated in Phase 2
- Similar urban center connection configuration for all alignment alternatives
- Collaborate with TxDOT, cities, relevant jurisdictions, and stakeholders
- Develop consolidated list of pros and cons for each connection concept

Preliminary Urban Connection Concepts



Fort Worth



Dallas



Urban Center Connection Options

Type of factors to be considered during urban connection concept evaluation in Phase 2

- Impacts upon existing and planned transportation infrastructure
- Impacts upon existing and planned developments
- Environmental considerations
- Adverse visual impacts
- Adverse effects to high-speed corridor capital, operations, and maintenance costs
- Economic development opportunities

Station Area Economic Development Opportunity

High-speed stations typically much larger than commuter/light rail stations

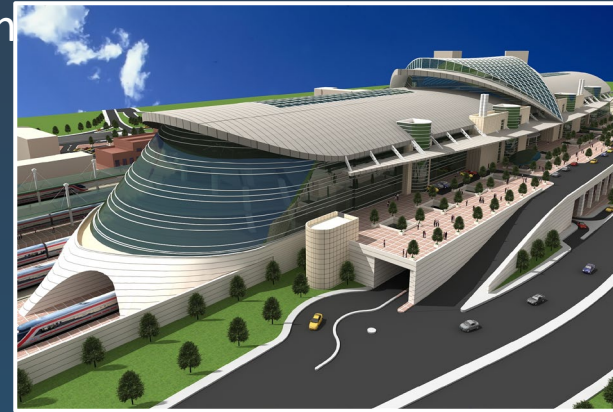
- Large economic development impact potential
- High-density developments surrounding stations
- Serve as huge multimodal hubs for entire regions

Hong Kong HSR West Kowloon Station



Source: Mark Rowse, and Winson Wong, South China Morning post, 2019

Turkey HSR Ankara Station



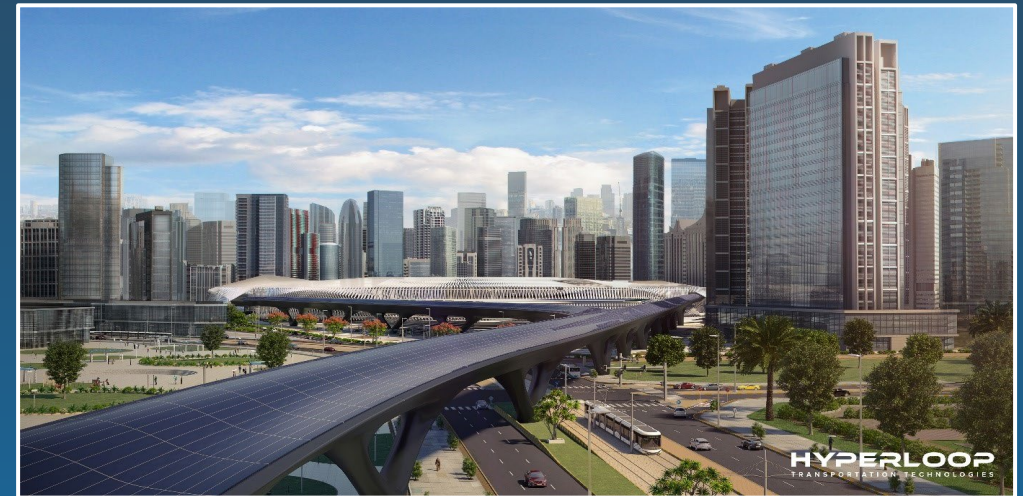
Source: edilon/sedra, 2016.

Virgin Hyperloop Concept Station



Source: Virgin Hyperloop

Hyperloop TT Concept Station



Source: Hyperloop TT

Phase 1 Recommendations

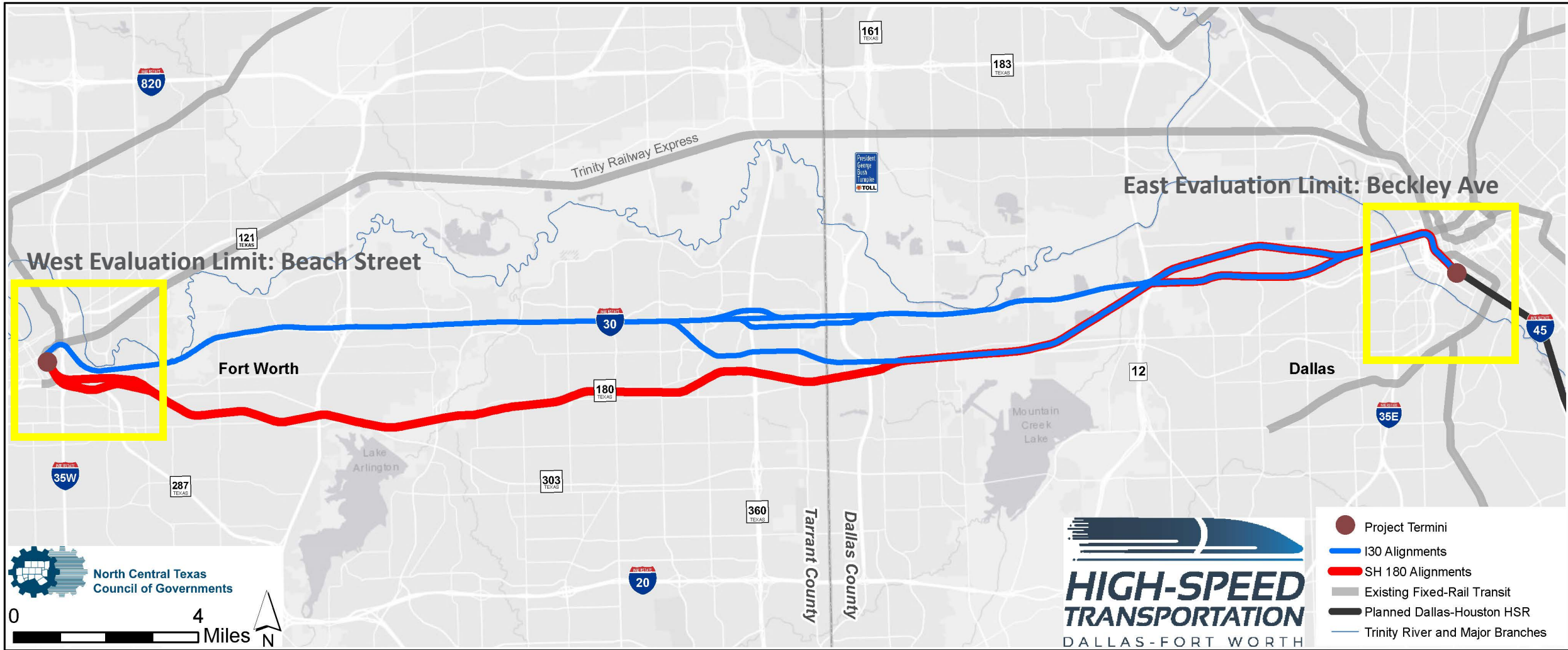
Phase 1: Level 3 Screening Criteria

	Criteria	Description
Potential Impacts to Sensitive Social, Biological, or Cultural Areas	Potential water body & floodplain impacts	Total length (linear feet) of alignment that crosses a water body or floodplain
	Potential wetland impacts	Total acres of wetland within the proposed right-of-way
	Existing structures that could be impacted by the potential right-of-way	Number of potential structures displaced (houses, outbuildings, business, public buildings, billboards, etc.)
	Potential parks/public recreation area impacts	Total acres of parks and public recreational areas within proposed right-of-way
	Potential historic resources impacts	Number of national and state historic sites potentially impacted
Potential Community Impacts	Noise & Vibration - # of receptors	Number of sensitive receptors (residences, educational facilities, hospitals, childcare facilities, senior housing, theaters) within 500 feet (250 feet on each side of centerline)
	Visual/Aesthetics - # of receptors	Number of sensitive receptors (historic neighborhoods, historic places, cultural landmarks or districts, parks and open space) within 500 feet (250 feet on each side of centerline)
Design Considerations	Vertical profile	Does the known profile of the alignment create opportunity for the possible use of multiple high-speed transportation modes?

Phase 1: Level 3 Screening Criteria

	Criteria	Description
Constructability/Operability	Required non-public right-of-way	Total distance of new or non-public right-of-way needed
	Potential adverse impacts to transportation systems during construction	Potential adverse impacts to existing transportation systems during construction
	Potential opportunity to improve transportation systems	Potential opportunity to improve safety, capacity, and/or state of good repair of existing transportation systems during construction
	Technology Maturity (Safety Systems)	Technology Readiness Levels (TRLs) for safety systems requirements including emergency response, ventilation, fire life safety, etc.
	Technology Maturity (Operations Systems)	Technology Readiness Levels (TRLs) for operational systems requirements including signaling, autonomous vehicle operations, control systems, etc.
	Technology Maturity (Revenue Operation)	Number of routes (10+ miles) currently in revenue operation in the world
	Potential to serve as an extension to planned high-speed systems	Ability of a mode to serve as an extension to planned high-speed systems assuming specific chosen technology, equipment, and specifications are appropriately compatible
	Potential Adverse Impacts to Transportation Systems	Are there any potential adverse impacts to existing transportation systems due to mode-specific operations or maintenance
Cost	Capital (Construction) Cost	Rough order of magnitude construction cost for structure, ancillary facilities, maintenance facilities and vehicles, per mile
Operations	Travel Time	Running time between Dallas and Fort Worth under an express scenario
	Vertical Profile	How well can each technology accommodate higher grades?
	Max Curve Speed	Theoretical design speed at which a mode is able to travel through curves in the alignment

Phase 1: Level 3 Alignments

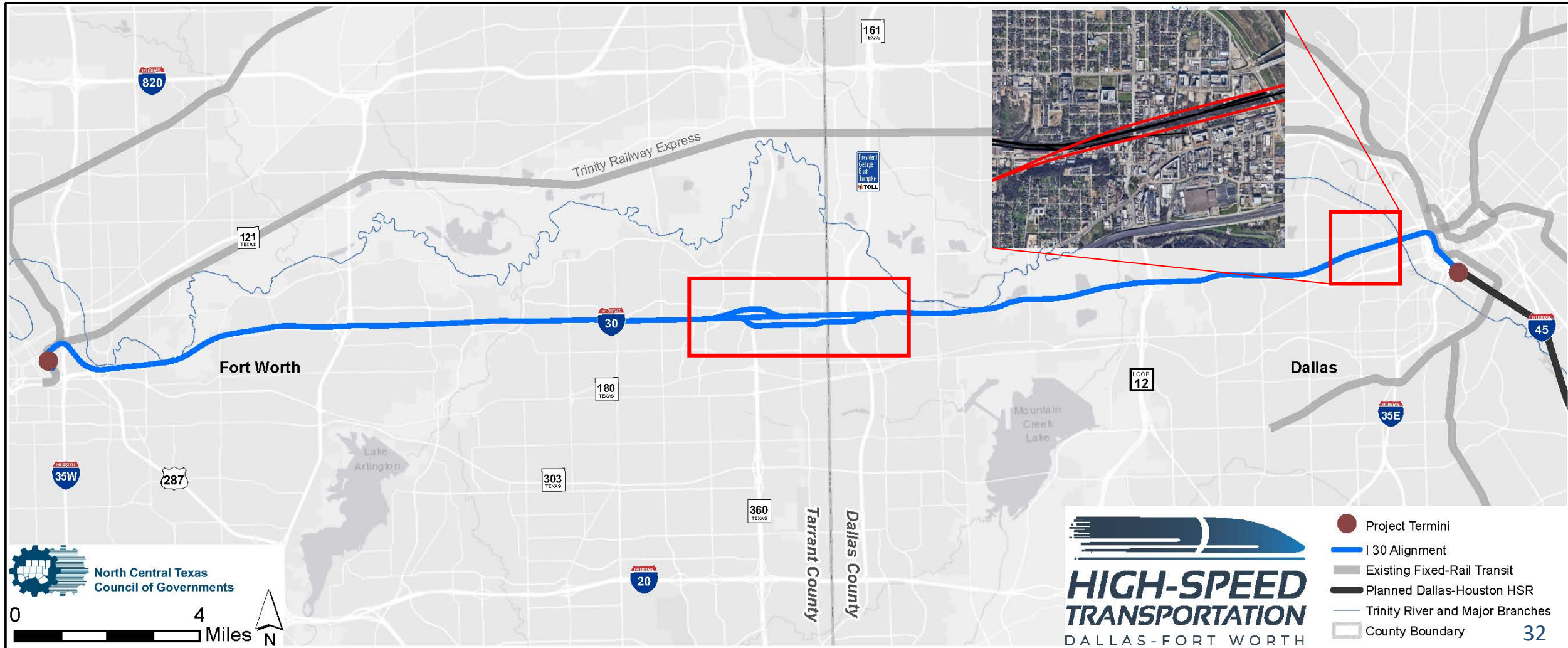




Phase 1: Level 3 Alignment Recommendations

- Highest ranked IH 30 Alignments
 - Fewest existing structures and parks/open spaces within proposed right-of-way
 - Lowest potential noise & vibration impacts
 - Least amount of non-public right-of-way required
 - Lowest potential adverse impact to existing transportation infrastructure
- Recommend to carry these alignments into Phase 2

Recommended Phase 1 Alignments

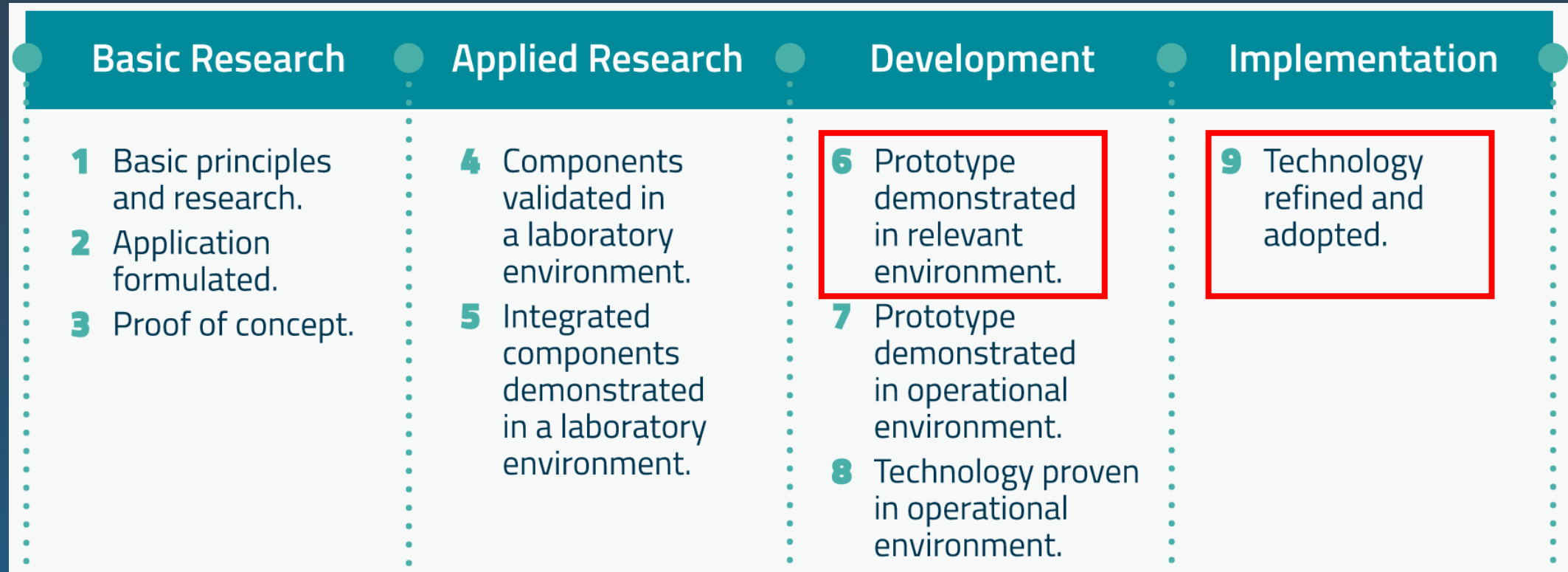




Phase 1: Level 3 Mode Recommendations

- Highest ranked: High-Speed Rail and Hyperloop
 - High-Speed Rail scores high across all technology maturity criteria
 - Hyperloop scores high in travel time, vertical profile, and max curve speed, and has the lowest potential adverse impact to existing transportation systems from operations and maintenance activities
 - Maglev capital cost is cost-prohibitive
- Recommend to carry only High-Speed Rail and Hyperloop into Phase 2

Technology Readiness Levels



Hyperloop

High-Speed Rail

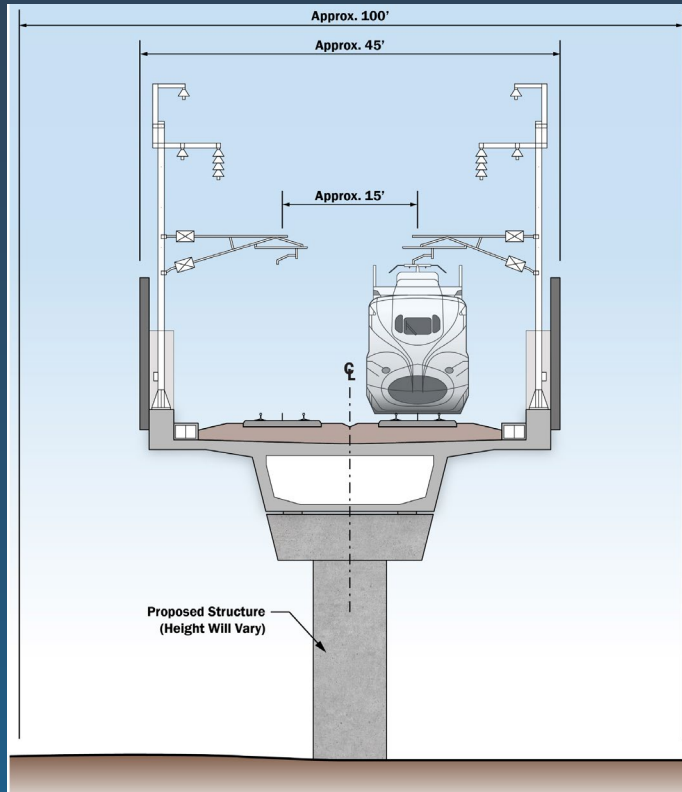


Technology Readiness

- Technology Readiness Levels
 - Hyperloop – Technology Readiness Level 6
 - High-Speed Rail – Technology Readiness Level 9
- Advancing proven (High-Speed Rail) and evolving (Hyperloop) technologies
- Project schedule allows time for technology advancement
- Hyperloop technology is advancing rapidly

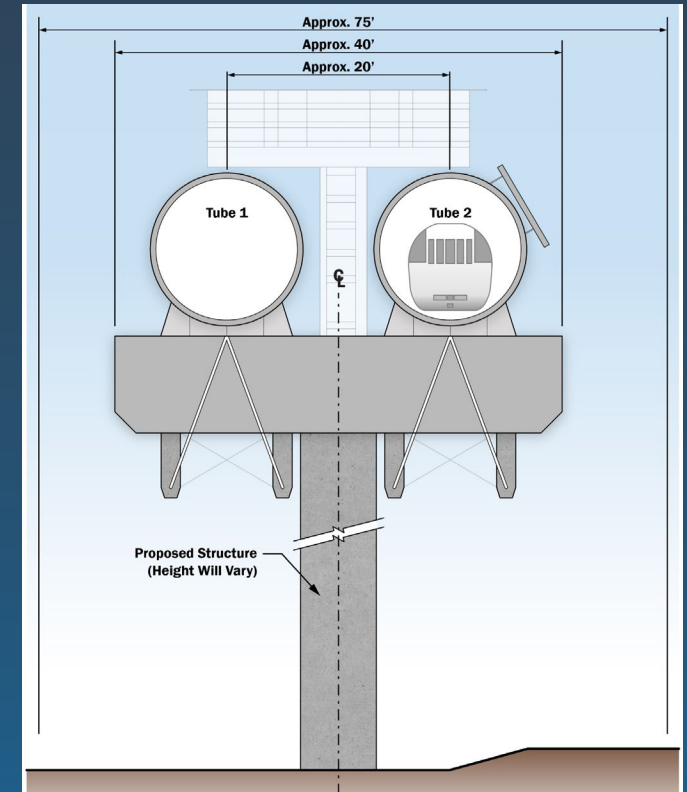
Potential Typical Sections

High-Speed

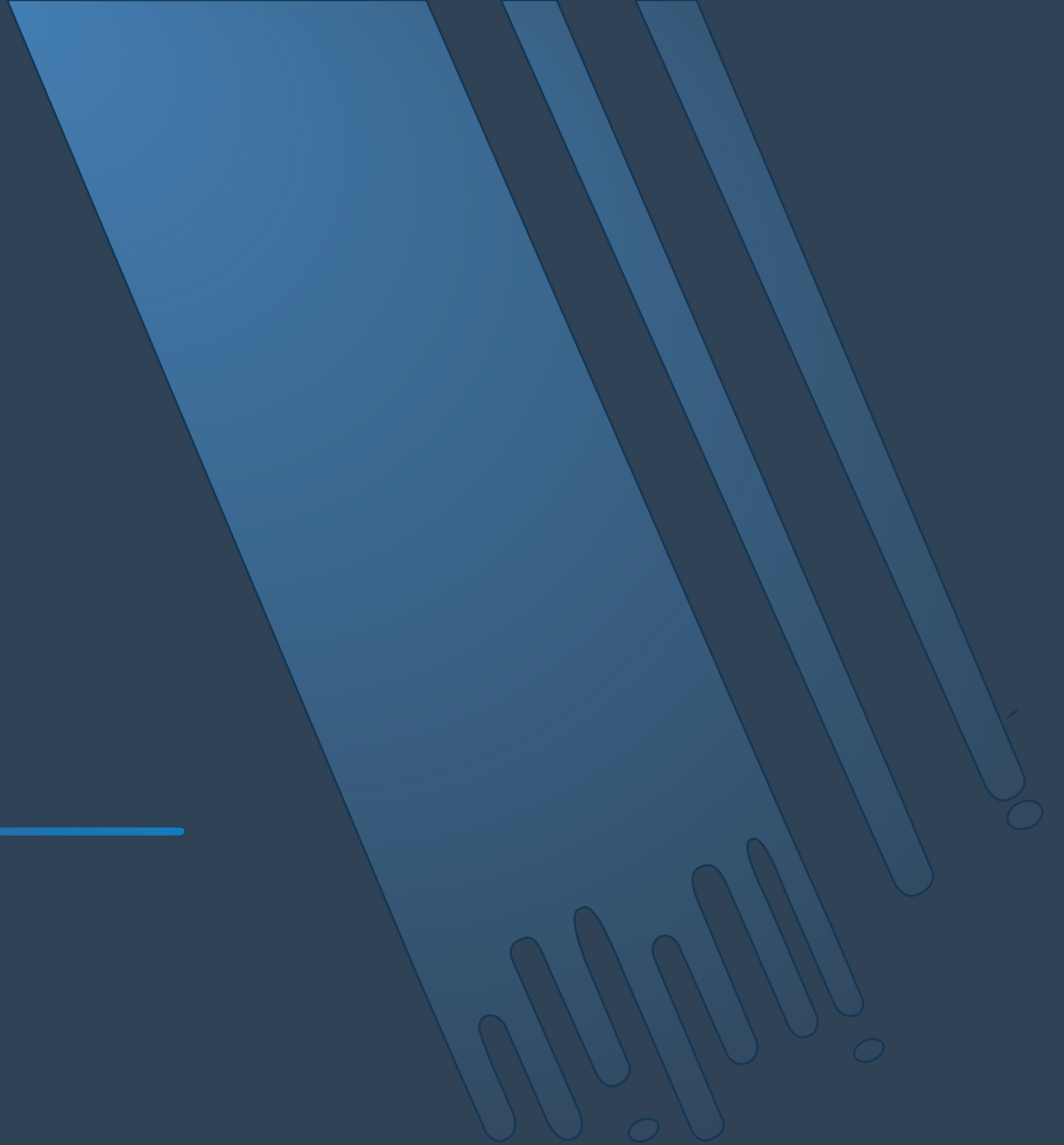


Infrastructure characteristics of High-Speed Rail and Hyperloop

Hyperloop



Next Steps





Next Steps: Phase 1 Wrap-up

- Continue to accept public comments on the Phase 1 results and recommendations through June 18, 2021
- Continued coordination with:
 - Federal Transit Administration and Federal Railroad Administration
 - Cities and transportation providers
 - Study area stakeholders
 - Federal and State resource agencies
- Requesting Regional Transportation Council Approval of Phase 1 Recommendations (July 8, 2021)



Summer 2021 Engagement

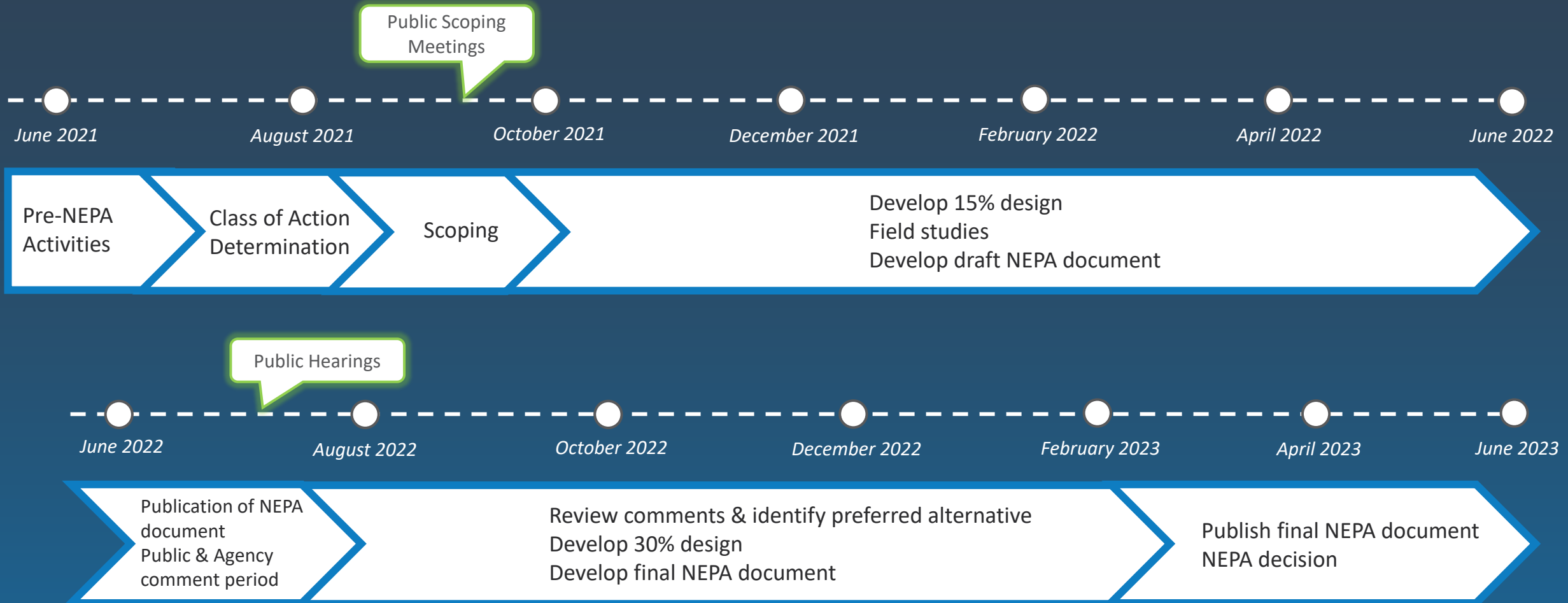
- Targeting outreach to community groups in the remaining alignment corridors
 - Please contact us if you want us to speak to your group
- Open Houses
 - In-person events that will allow people to ‘walk through’ Phase 1 studies before beginning Phase 2
 - In development to ensure safety protocols will be managed



Next Steps: Phase 2 Elements

- Two-year timeframe anticipated (August 2021 – August 2023)
- Environmental document in accordance with National Environmental Policy Act
- Preliminary Engineering
- Financial and Project Management Plans
- Public, Stakeholder, and Agency outreach

Phase 2 Schedule – 24 Months



Public Comment

Public Comment

How to provide comments

At the public meeting

- Click “Join the Podium”
- Enter and submit question or comment
- Comment will be read aloud

Before/after public meeting

- Go to project website at www.nctcog.org/dfw-hstcs
- Click on “submit a comment”
- Or click on “Give input through online mapping” to give a location-specific comment

Having trouble seeing the video?

DFW High-Speed Transportation Connections Study Public Meeting

The study area traverses:
• Dallas and Tarrant Counties
• Dallas, Irving, Cockrell Hill, Grand Prairie, Arlington, Pantego, Dalworthington Gardens, Hurst, Euless, Bedford, Richland Hills, North Richland Hills, Haltom City, and Fort Worth
• Over 230 square miles

31 miles

Stakeholder Comments
No comments currently visible...

49 active stakeholders Connection Status: [green dot]

DFWHSTC Public Meeting Series #2

The DFW High-Speed Transportation Connections Study will review high-speed passenger service options in the Dallas to Fort Worth corridor.

Welcome to the NCTCOG High-Speed Transportation Corridor Study public meeting. Press Play to start the video. If you have questions or comments during or after the presentation, please click "Join the Podium." All comments will be addressed after the presentation. Not seeing video? Click the HELP link for troubleshooting tips. You can also email arobicheaux@hntb.com or call 972-628-3003.

Join the Podium

When enabled, click Join the Podium to submit a question or comment to the project team. Your virtual podium comment will be entered into the official

Your input is extremely important!

Deadline for comments is June 18, 2021

Thank you for your interest and time!

Online Comment Form and Project Information:

www.nctcog.org/dfw-hstcs

General Questions:

Email HST_DFW@nctcog.org

