

DFW HIGH-SPEED TRANSPORTATION CONNECTIONS STUDY UPDATED MARCH 2025

Frequently Asked Questions

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PROJECT OVERVIEW

Phase 1 of the Dallas-Fort Worth High-Speed Transportation Connections Study (DFWHSTCS) was completed in late 2022. Forty-three (43) alignments between Dallas and Fort Worth and five (5) modes of transportation were originally considered. After rigorous investigation and analysis, the project team selected high-speed rail along the existing I-30 corridor as the optimal mode and route. This selection was based on travel time, constructability, anticipated construction costs per mile, anticipated annual operation and maintenance costs per mile, need for and anticipated cost of right-of-way acquisition, environmental impacts, technology, safety, and technology readiness.



Now in Phase 2, the project team is developing preliminary plans that address engineering, environmental effects, ridership estimates, operations and maintenance, implementation, and financing. Phase 2 emphasizes documentation required by the National Environmental Policy Act (NEPA) which includes receiving community input on all aspects of the project.

GENERAL

What is the intent of the study?

The intent of the study is to achieve federal environmental clearance for high-speed transportation from Dallas to Fort Worth. In order to do this, the team examined potential routes and high-speed transportation modes during Phase 1 to select a locally preferred high-speed route for environmental clearance and promoted the corridor for future public/private partnership by attracting high-speed rail development interest.

What are the goals of the study?

Study goals in Phase 1 included selecting a transportation mode (technology) and identifying a locally preferred high-speed route/alignment. The Phase 2 goal is to receive federal environmental approval of the selected route along the existing I-30 corridor for the mode of high-speed rail by developing operations and service plans, preliminary engineering documents, and environmental documentation.

What is the current status and timeline for this study?

Phase 2 for the study is underway and expected to conclude in 2026. Following this study, NCTCOG will continue working to identify potential funding and implementation options, including public/private partnership opportunities.

PROJECT TIMELINE

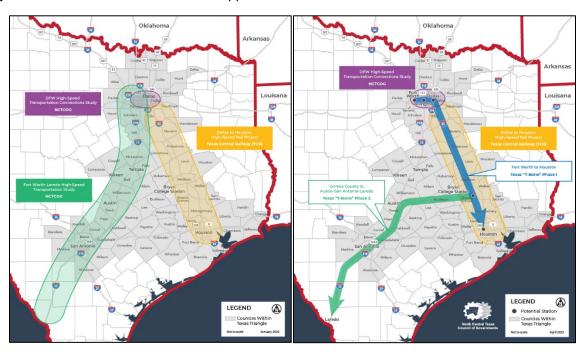
Phase 1 (Spring 2020–Late 2022)	Phase 2 (Spring 2022–Spring 2026)	Future (Timeline undetermined)
 Modes of Transportation evaluated: Conventional Higher-Speed High-Speed Maglev Hyperloop Number of Alignments evaluated: Level 1: 43 alignments Level 2: 23 alignments Level 3: 10 alignments Urban Connections evaluated and selected for Phase 2 Preferred alignment selected for Phase 2 	Action Determination; Urban Connection Analysis and Refinement Alignments with modifications (COD) being further evaluated Open Houses Awaiting information on City of Dallas Economic Impact Study Develop Alignment Refinement Report	 Identify Implementing Agency and Secure Funding Detailed Design Secure Right of Way Operator ID/Agreements City MOUs for Stations Construction Open to Commuters
NCTCOG Lead Role	NCTCOG Lead Role	NCTCOG Support Role

Once the study is complete, will the project be constructed? When?

Following environmental approval, the next phases of the project (securing funding, detailed design, right-of-way acquisition, and construction) can begin. Because an agency who will implement the project and operate the service must be identified and funding must be secured, no construction timeline has been developed. It is anticipated that the project would likely be constructed and operated as part of a public-private partnership. Once complete, this high-speed rail would be considered a "100-year investment," serving patrons in North Texas and around the state for generations to come.

Would this project connect to other planned high-speed projects?

Yes, the proposed project could provide connectivity to the planned future high-speed passenger systems that would connect major metropolitan regions in Texas. Currently, many high-speed projects are being planned, including alignments between Dallas and Houston; Fort Worth and Laredo connecting through Austin and San Antonio; DFW and Oklahoma; San Antonio and Monterrey, Mexico; and Houston and Austin. This proposed project could serve as an extension of the Dallas to Houston high-speed rail project that has received environmental approval.



How is this different from the Dallas to Houston high-speed rail project?

Amtrak announced a partnership with Texas Central in 2023 to help bring the Dallas to Houston high-speed rail line to fruition. Texas Central, a privately funded entity, has completed preliminary engineering and an environmental impact statement for high-speed rail between Dallas and Houston, including a station in the Bryan-College Station area. Concurrently, the North Central Texas Council of Governments (NCTCOG) has been studying high-speed rail between Dallas, Arlington, and Fort Worth, with environmental documentation to be completed in 2026. As of January 2025, these two projects are independent of each other. If both projects move forward into construction, the ultimate goal is to connect both high-speed rail lines in downtown Dallas and provide commuters a seamless "one-seat ride" from Fort Worth to Houston.

Would the Dallas to Fort Worth project be built as a stand-alone project if the Dallas to Houston highspeed rail project is never built?

The DFWHSTC project would provide connectivity between the two largest population centers in North Texas. Rapid population growth in North Texas is impacting existing and planned transportation networks, requiring implementation of high-volume transportation services such as high-speed rail to provide additional mobility options.

Connecting this project to other planned high-speed rail initiatives in Texas is ideal, but the project could stand alone. If the Dallas to Houston high-speed rail project does not come to fruition, opportunities are being studied to connect Fort Worth to other potential high-speed rail projects throughout the state.

Who oversees the study from Dallas to Fort Worth?

NCTCOG, in cooperation with the Federal Transit Administration (FTA), is conducting the study for high-speed passenger service between downtown Dallas and downtown Fort Worth. FTA is the lead federal agency overseeing the NEPA process, including environmental documentation. Additional government agencies, such as the Federal Railroad Administration (FRA), serve as cooperating agencies through the environmental assessment.

What is the role of NCTCOG in this project?

NCTCOG is leading general project management activities that include developing a detailed work plan and project schedule, holding monthly coordination meetings, compiling environmental documentation, and overseeing quality assurance and quality control. NCTCOG is also tasked with developing and implementing a comprehensive public and agency involvement plan.

The Regional Transportation Council (RTC), the independent transportation policy body of NCTCOG, makes final recommendations based on study outcomes and stakeholder input. The RTC is comprised of 45 local elected leaders, appointed officials, and representatives from the region's major transportation providers. The RTC oversees the metropolitan transportation planning process, with special emphasis on multimodal transportation plans, allocating funds, coordinating services among regional transportation providers, and upholding air quality standards. A list of RTC members can be found here.

Are Dallas Area Rapid Transit (DART), Denton County Transit Authority (DCTA), Trinity Metro, and Trinity Railway Express (TRE) involved in this study?

DART, Trinity Metro, and TRE are all participating stakeholders in this study. The DFWHSTCS seeks to create a seamless transportation system to connect high-speed rail to other regional transit systems, easily moving people throughout the region, and these agencies are part of the overall network that allows for better regional mobility. For more information on the TRE and the study of this corridor for high-speed rail, please see page 13 for additional information. While DCTA does not provide service within the study area, DCTA customers could access the DFWHSTC project via existing DART connections.

What is the DFW Core Express Study?

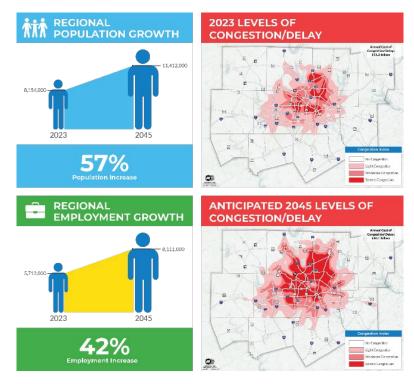
The DFW Core Express Service is a previous study conducted by the Texas Department of Transportation (TxDOT) that analyzed the implementation of high-speed rail between Dallas and Fort Worth. The study concluded early due to limited funding (June 2017) and was narrowly focused, only evaluating high-speed rail and two alignments, whereas Phase 1 of the DFWHSTCS considered the strengths and weaknesses of five transportation technologies and 43 potential alignments. The final report is published on the NCTCOG website can be accessed here.

TRAFFIC RELIEF

Why is the project needed?

The Dallas-Fort Worth area's population of nearly eight million today is anticipated to grow to over 11 million by 2045. Travel time by car along I-30 main lanes between downtown Fort Worth and downtown Dallas is expected to exceed one and half hours during the morning and evening rush hours in the next 20-25 years. With this growth, high-speed transportation options in North Texas are needed. Moreover,

the entire state is experiencing unprecedented growth, demanding alternative transportation modes to connect economic hubs. High-speed rail provides a safe, reliable, and convenient alternative to driving. The project would eventually connect to other high-speed rail networks, linking megaregions in the Texas Triangle and nationwide.

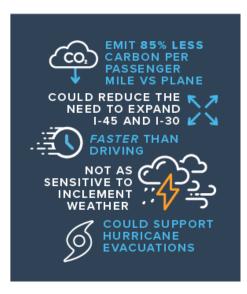


Why can't we just expand the roads/highways?

As the population in North Texas grows, lane expansions simply will not keep up with demand. Due to high construction costs and the lack of available land, continuing to expand highways in North Texas and around the state is not feasible. Transportation options and new transportation modes are needed to keep the region moving. Providing commuters the option of high-speed rail will help with road congestion and also help mitigate emissions along busy corridors.

How would high-speed rail improve mobility?

A high-speed rail line would improve mobility by providing commuters with an additional travel option and reduce congestion along I-30 by transitioning some commuters off the road. Because the high-speed rail alignment would not have at-grade intersections with roads and would operate on an exclusive guideway (a track used by only one passenger rail service), it would not be impacted by vehicular traffic and would be significantly more reliable during peak travel times. High-speed rail would also create a quick, convenient, and safe way for those without cars to travel between major cities.



TECHNOLOGY

What technologies were considered in Phase 1?

When the study began, five high-speed transportation modes were analyzed and included conventional rail, higher-speed rail, high-speed rail, Maglev, and hyperloop.

Conventional rail, such as the TRE and TEXRail, can reach speeds of up to 80 mph. Higher-speed rail, such as the Amtrak Acela in the northeastern United States, can reach speeds of up to 125 mph. These options were the first to be removed from consideration due to their comparatively slower speeds and longer headways (the time between arrivals/departures).

Magnetic levitation, or Maglev, is currently operational in Europe and Asia and can travel upwards of 300 mph on an exclusive guideway. Hyperloop, a technology still in development, could theoretically reach 650 mph and would require an exclusive guideway. Though promising technologies, Maglev and hyperloop were eventually removed from consideration due to fiscal and technology readiness concerns.

High-speed rail was chosen as the transportation mode to move forward into Phase 2. Already widespread in Europe and Asia, the technology can reach up to 250 mph. High-speed rail generally requires three-to-30-minute headways and typically does not mix cargo with passenger transport. A high-speed rail line is under construction in California, and other alignments are being studied and in various stages of implementation across Texas, Nevada, and Florida. Florida's Brightline is now operational from Miami to Orlando.

Dallas and Fort Worth aren't that far apart. Can high-speed rail trains reach maximum speed in that short of a distance?

Despite high-speed rail being capable of reaching 250 mph, project planners currently estimate the top speed for this alignment to be around 160 mph. The estimated 25-minute commute between Fort Worth and Dallas with a stop in Arlington or 20-minute commute without a stop in Arlington (express service) is substantially faster than the hour-long commute in a vehicle during typical peak travel times, or hour plus commute in future years. By implementing high-speed rail in this corridor, the project could seamlessly connect to other proposed high-speed rail projects across Texas where 250 mph speeds are attainable. While top speeds are not attainable between Dallas and Fort Worth, providing the ability for high-speed trains to traverse the grade-separated corridor offers a "one-seat" ride for passengers between Dallas-Fort Worth and Houston. High-speed rail networks around the world operate in a similar fashion with slower speeds near city centers and faster speeds for the longer distances.

Would the alignment be above or below ground?

The currently proposed alignment would have a mix of elevated, trenched, and tunneled sections. Approximately nine miles of the alignment is proposed to be underground in a tunnel with two underground stations—one in downtown Fort Worth and one under I-30 in the Arlington Entertainment District. The alignment's position depends on several factors, such as existing right-of-way; conflicts with existing infrastructure; and avoidance of homes, businesses, and environmentally protected areas. The following map identifies the specific elevated, trenched, and tunneled sections being proposed.



ENVIRONMENTAL AND LAND IMPACTS

What is NEPA?

Signed into law by President Nixon in 1970, the National Environmental Protection Act (NEPA) requires governmental agencies to assess if and how their decisions might affect the surrounding environment and community. This process must be completed before construction begins, giving the project team time to evaluate environmental effects and propose mitigation of potential negative impacts. NEPA gives property owners and the community opportunities to have their voices heard and offer input on projects.

How would this potential project effect the environment along the proposed route and in surrounding areas?

The project's potential environmental effects would be minimized because approximately 85 percent of the proposed high-speed rail alignment is within an existing I-30 public transportation corridor. The portion of the DFWHSTC alignment located outside that corridor is currently proposed to be in an elevated configuration, creating opportunity to span some areas of potential environmental concern, further reducing potential impacts.

The project team and FTA are conducting a thorough environmental review in compliance with NEPA to assess potential beneficial and adverse environmental impacts to both the natural and built environment. The NEPA process began in March 2024 and is anticipated to conclude in 2026.

Has the study determined where stations would be located?

Three stations are proposed along the corridor. The Fort Worth terminal station would be located underground near the existing Fort Worth Central Station. The Dallas terminal station would share the federally approved Texas Central high-speed rail station located just south of the Kay Bailey Hutchison Convention Center in the Cedars area. An underground midpoint station under I-30 located just north of the Arlington Entertainment District, centered on AT&T Way has also been identified. The corridor design concept allows operational flexibility for trains to stop at the Arlington station or to bypass the area via express tracks.

The City of Arlington must join an existing regional transit agency or commit to an equivalent, regionally approved long-term investment in transit for the Arlington station to be implemented.



Rendering of the Dallas Station. Concept by Texas Central.

Would the project use eminent domain? If so, what is the process?

Eminent domain refers to the power of the government to acquire private property for public use. The Fifth Amendment states the government may only exercise this power if just compensation is provided to property owners. The Texas Transportation Code allows a railroad entry onto private property for the purpose of selecting the "most advantageous route for its railroad." Article I, Section 17 of the Texas Constitution allows for the acquisition of private property with adequate compensation by an entity granted the right of eminent domain by Texas law. If eminent domain is required in future steps following the completion of this study, federal and state laws would be followed.

How much right-of-way acquisition is needed?

The amount of right-of-way to be acquired will be determined by the alignment. Specific right-of-way acquisitions are not established at this time but will be determined during the NEPA process. The environmental study includes the evaluation and potential mitigation of impacts to private property.

The vast majority of the project (approximately 90 percent) is located in public right-of-way, predominantly within the I-30 corridor. Following the input from the City of Dallas economic study to determine the alignment to the Dallas station, the NEPA process will identify the exact number of displacements; however, this would be minimal.

SAFETY AND SECURITY

How safe is high-speed transportation?

High-speed rail technology has been operating in other countries for decades. For example, in Japan, high-speed rail has operated for over 60 years with zero fatalities. High-speed rail trains that operate in a "closed" system within dedicated right-of-way means no other trains or vehicles travel within the same right-of-way. The tracks never cross a road at grade, which removes any possibility of vehicle collisions.

What type of security measures would the system use?

Robust security measures for the system are a high priority. High-speed rail systems worldwide undergo regular inspections and preventative maintenance. Physical barriers are incorporated into corridor and

station designs to eliminate public access to the tracks or other infrastructure. Security measures complying with Department of Homeland Security (DHS) requirements would be implemented to ensure the safety of both high-speed rail customers and the general public.

Would stations include security checkpoints like airport terminals?

Like airport terminals, passengers would pass through a security checkpoint before boarding. Current state law requires high-speed rail in Texas to coordinate with DHS, Transportation Security Administration (TSA), Texas Department of Public Safety (TxDPS), Federal Bureau of Investigation (FBI), and local law enforcement.

How early would one need to arrive before departure to go through security checkpoints?

Station platform design concepts are not being developed as part of this study. Estimates of time needed to pass through security checkpoints will be determined once station design concepts are developed.

RIDERSHIP What would be the passenger capacity?

While station design concepts are not being developed as part of this study, the station platform concepts are proposed to be approximately 700 feet long. Train capacity is highly dependent upon the specific configuration of rail cars. Generally, a 700-foot-long train can accommodate around 475 passengers.

How much would it cost to ride?

Ticket prices would be determined

CAPACITY OF HIGH-SPEED TRAINS

Train	Passengers	Train Length (Feet)
Nippon Sharyo LO Series	728	981
China South China Railways CRH380A	494	666
Kawasaki Heavy Industries China Railways CRH2C	610	988
Siemens ICE 3	460	656
Talgo, Bombardier Talgo 350	318	656
ALSTOM SNCF TGV Duplex	512	656

Source: https://socialcompare.com/en/comparison/high-speed-trains

by the operator once the project advances through funding, final design, and construction. Ticket prices are anticipated to be higher than existing regional rail ticket prices because high-speed rail passengers typically pay a premium for the faster speeds, reduced travel time, and increased reliability of the service.

How often would trains run?

A preliminary operating plan, including train frequency, will be developed as part of the current phase of the project. However, service frequency would be determined by operational requirements of the system and passenger travel demand patterns. The corridor design concept includes double tracks for dedicated eastbound and westbound travel as well as express tracks at the Arlington station that would allow trains to bypass the platforms without stopping. These features would create operational flexibility that can accommodate a wide range of possible headways between trains.

Would the high-speed rail be ADA accessible?

Yes, the high-speed rail trains and stations would meet existing federal accessibility regulations required by the Americans with Disabilities Act (ADA).

Would trains operate late at night? What about weekends?

Trains could operate late at night or on weekends but may not be as frequent depending on demand for service. Additionally, it is anticipated that overnight maintenance inspections would be needed on some trains and the guideway/trackage. A preliminary operating schedule will be developed in the current phase as part of the operating plan.

Would there be parking lots at stations?

Yes, parking would be available at stations, likely in parking structures or garages due to the dense nature of developments around high-speed rail stations. Connecting to other forms of transit and ridesharing services would be other options for traveling to and from stations. Bicycle and pedestrian accommodations would also be incorporated into station designs.

How long would the trip take?

Current travel time by car between downtown Fort Worth and downtown Dallas typically takes about an hour during peak travel times and is expected to exceed an hour and a half in 20-25 years. Based on preliminary design and engineering plans, the commute on high-speed rail would take approximately 20–25 minutes, depending on whether the train stops in Arlington or continues as an "express" train without stopping in Arlington. Future operations plans would determine the frequency of express trains and trains that stop at all three stations.

Would high-speed rail connect to local transportation modes (such as light-rail, bus, and DFW international airport)?

At a minimum, bus and/or light-rail connections would be available at stations to ensure passengers can travel throughout the region. Existing connections to Amtrak and DFW International Airport are available in downtown Fort Worth and downtown Dallas, with a future connection planned between the Arlington Entertainment District and DFW International Airport via an elevated automated transportation system. Bicycle and pedestrian accommodations would also be incorporated into station designs.

Would this project affect ridership on DART, TEXRail, and TRE?

Some passengers may specifically choose high-speed rail because of its travel time, while others may continue to ride DART, TEXRail, and TRE if these services are a more convenient or economical choice for their commute. Greater transportation connectivity created by high-speed rail—combined with the region's rapidly growing population—is expected to increase ridership across all public transportation modes.

Existing transit options like DART light rail, TEXRail, and TRE are designed to provide reliable and convenient service to numerous locations along their respective corridors. The DFWHSTC project is designed to serve patrons looking to travel quickly between Fort Worth, Arlington, and Dallas, with the potential to connect to other major metro areas within the state. These different transportation options are complementary and serve different markets.

ECONOMY

How would the project impact the economy? Would the project bring jobs to the DFW region?

The construction of large infrastructure projects creates jobs and promotes economic development near the stations. Both short- and long-term jobs would be created in many sectors including construction,

security, and maintenance. Enhanced economic development near stations would also be expected. High-speed rail stations are more akin to airport terminals than standard light rail or commuter rail stations because they are typically centered within high-density, mixed-use developments. Additionally, state-of-the-art transportation options are recognized as differentiators for companies and employees considering relocation to the region.

To further evaluate the economic impact the project would have, the City of Dallas is conducting an economic impact analysis for the proposed alignment along the existing I-30 corridor. The study is anticipated to be completed in Spring 2025.

What are the construction impacts?

Until the NEPA process and engineering designs advance further, the specific construction impacts are not known. Like all transportation projects, minimizing impacts to the natural and built environment is essential.

Would businesses be inconvenienced due to construction of this project?

During construction, efforts will be made to work with nearby businesses to mitigate any major inconveniences. The I-30 alignment was chosen, in part, because it presents fewer major disruptions to neighbors and businesses than other previously proposed alignments since it is located predominantly within the existing I-30 right-of-way.

FUNDING

What is the Corridor ID Program?

The Corridor Identification and Development (Corridor ID) Program is a comprehensive intercity passenger rail planning and development program helping guide intercity passenger rail development throughout the U.S., creating a pipeline of intercity passenger rail projects that are ready for final design and construction. The program was created by the Bipartisan Infrastructure Law and is administered by the FRA, with each selected corridor project receiving an initial \$500,000 grant.

In 2023, NCTCOG applied for and received a grant from the Corridor ID Program to study the combination of the two Texas high-speed rail corridors: Fort Worth to Dallas and Dallas to Houston. The grant provides NCTCOG additional funding to develop a plan to integrate both proposed high-speed rail alignments at a shared station in Dallas, investigate the potential effects of not building a high-speed rail line (the "no-build alternative"), and to conduct a large-scale analysis of comprehensive ridership and traffic estimates.

Amtrak and Texas Central submitted a joint application to the Corridor ID Program to advance the Dallas to Houston high-speed rail corridor and position it for future federal funding opportunities.

How is the study being funded?

NCTCOG has allocated up to \$13.8 million using Surface Transportation Block Grant (STBG) funding and \$3.7 million of local funding to conduct this study.

NCTCOG was also awarded a \$500,000 grant through the FRA Corridor ID Program to develop a scope, schedule and fee estimate to create a service development plan for the DFWHSTC project. Successfully navigating FRA's Corridor ID Program positions the corridor for future federal funding opportunities.

How much would the project cost to build?

Preliminary construction costs will be developed as part of the NEPA process this year. Final costs will remain undetermined until an implementing agency and operator are identified.

How would construction be funded?

Construction funding sources have not been identified at this time. However, construction of the project is anticipated to be funded through a public-private partnership. Moreover, DFWHSTCS was recently admitted into FTA's Corridor ID program. Successful completion of this program puts the DFWHSTCS project in the pipeline for future federal funding opportunities.

Would the HSR project be publicly or privately owned?

An ownership structure and operator are both undetermined at this time, however, a public-private partnership is anticipated for construction, using a mix of private and federal funds.

STATIONS

Why are there so few proposed stations?

High-speed rail operations and its purpose differ from traditional commuter rail or light rail systems. High-speed rail is designed to move people as quickly as possible between the largest population centers along a corridor. High-speed rail facilities focus on speed over a large number of stations/access, whereas light rail and commuter rail facilities focus on access by users over speed. The services are complementary. For example, the existing TRE train between Fort Worth and Dallas has ten stops along the route, providing greater access to activity centers along the corridor but at the expense of speed and travel time (end-to-end travel time on the TRE is approximately one hour). The proposed DFWHSTCS project would provide end-to-end travel times between Fort Worth and Dallas of approximately 20–25 minutes, which is only possible due to the limited number of stations and increased speeds.

How would people access the high-speed rail stations?

Access to stations is being further refined as part of the NEPA process in coordination with local authorities. However, station access is anticipated to be multimodal and include opportunities for vehicular, bus, rail, bicycle, and pedestrian connections.

The <u>Long-Range Transportation Plan</u> identifies transportation projects that will support future population and employment growth in the 12-county North Texas metropolitan area. The plan is routinely updated to incorporate multimodal transportation services supporting access to projects such as DFWHSTC.

How would people get from the high-speed rail stations to their final destination?

The DFWHSTC team identified station sites in collaboration with local municipal and jurisdictional authorities. The authorities are aware of the importance of first/last-mile connections between station areas and final passenger destinations and are committed to developing connectivity solutions as this project becomes a reality. Opportunities for potential first/last-mile connections include enhanced bicycle and pedestrian facilities as well as potential automated transportation systems. Accommodations for rideshare services like Uber and Lyft would also be developed.

TRE

Why can't the TRE corridor be used for high-speed rail?

The TRE terminates in downtown Fort Worth and downtown Dallas. Due to limited right-of-way width, the current TRE corridor could not support parallel TRE tracks and high-speed rail tracks. Replacing the TRE with high-speed rail would eliminate TRE service to midpoint stations, which 95% of TRE riders use, cutting off access for thousands who currently rely on the service. The curves of the current corridor alignment would also drop the maximum speed of high-speed rail to approximately 120 mph, even without midpoint stations.

For TRE and high-speed rail to coexist on the same alignment, completely new tracking would have to be built and significant amounts of right-of-way would have to be acquired, ultimately equating to the time and cost commitments of constructing an entirely new rail corridor. High-speed rail along the TRE corridor would not provide direct access to the Arlington Entertainment District or be co-terminus with the federally approved Dallas high-speed rail station, eliminating the benefits of the "one-seat ride" from Fort Worth to Houston.



RESILIENCY

How would high-speed rail handle extreme weather in North Texas?

The predominant resiliency challenges faced by passenger rail services from extreme weather conditions are:

- 1) Effects of temperature on systems elements,
- 2) Rail expansion/contraction,
- 3) Loss of traction power due to ice build-up, and
- 4) Vehicle performance in freezing conditions.

Current high-speed rail technology includes features that address most of these resiliency challenges and recently developed products are used to enhance performance during extreme weather operations.

- 1) Effects of temperature on system elements. Legacy rail transit signals, communications, and traction power devices can experience operating restrictions during extreme temperatures. Modern system components and climate-controlled equipment are being updated on existing systems in North Texas to improve the resiliency of equipment from temperature extremes.
- **2) Rail expansion/contraction**. High-speed rail track infrastructure is designed and constructed to a higher standard of tolerances than infrastructure for trains traveling at lower speeds, resulting in trackwork with a higher resistance to movement during extreme weather conditions, such as extreme heat and cold.
- **3)** Loss of traction power due to ice build-up. Ice on overhead catenary wires can prevent the consistent electrification of rail vehicles and interrupt service. Current technology allows for contact wire heaters to reduce or eliminate ice build-up along the overhead system. Ice scrapers and gel applicators are designed to provide the same overall effect.
- **4) Vehicle performance in freezing conditions**. Most vehicle performance challenges in freezing conditions result from frozen condensation in compressed air systems, hindered pneumatic device performance, and inadequate defrosting of windows and mirrors. New high-speed rail trains inherently address these challenges through improved compressed air system drainage, electric devices, and modern heating and defrosting technology in strategic locations.

PUBLIC INVOLVEMENT

How can I stay informed about the study and provide input?

Project and study information is frequently updated on the NCTCOG website at www.nctcog.org/dfw-hstcs. You may sign up to receive updates about the study and meeting notices. Provide your comments by completing the online comment form or by participating in public meetings.