Dallas-Fort Worth High-Speed Transportation Connections Study

Review of Proposed High-Speed Rail Alignments near Downtown Dallas

Prepared by the North Central Texas Council of Governments

March 2024

Contents

Introduction

The purpose of this paper is to review a section of the high-speed rail alignment between the approved Dallas high-speed rail station (just south of I-30) and I-35E in downtown Dallas.

Question Being Asked

Was an alignment on the **west side of the Hyatt Regency** considered?

Was the Alignment Option Studied?

Yes. Several alignments immediately west of the Hyatt Regency were studied as part of the effort to refine design concepts to connect to the approved Dallas high-speed rail station.[1] During Phase 1, over 25 alignment options into downtown Dallas were developed and evaluated (see Figure 1).[2,3]

Figure 1. Dallas Station Connection Concepts

Summary of Analysis

An alignment option west of the Hyatt Regency **is recommended** for further study during Phase 2 of the project, which will include engineering and environmental studies.

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[1] The Dallas to Fort Worth high-speed rail alignment is planned to connect the approved Texas Central Railroad (TCR) Dallas High-Speed Rail Station to provide seamless connectivity to a state-wide high-speed transportation corridor. The location of the station was federally approved in 2020 as part of the Final Environmental Impact Statement for the Dallas to Houston high-speed rail project. The station platform will be approximately 75 feet above the ground and parallel to and west of the Union Pacific Railroad at Cadiz Street.

[2] The full evaluation of the Dallas Station Concepts is available at www.nctcog.org/dfw-hstcs under Project Information, Phase 1 Alternative Analysis Report, Main Report, Section 8.1.4.

[3] Phase 1 of the Dallas-Fort Worth High-Speed Connection Speed was conducted from April 2020 to September 2022. It focused on evaluating alignments and technologies for high-speed passenger transportation alternatives.

Public, Stakeholder, and City Engagement

- Elected official briefings were held July 7, 2020; January 15, 2021; and May 14, 2021.
- The Regional Transportation Council (RTC) was briefed on May 14, 2020; November 12, 2020; March 11, 2021; May 13, 2021, July 8, 2021; February 10, 2022; March 9, 2023; December 14, 2023; and January 11, 2024.
- Fourteen public meetings[4] have been held. All meeting materials were available on the project website to review along with the opportunity to make comments.
  - General alignments and project overview were presented to the public via virtual public meetings held September 23 and 24, 2020.
  - Results of the Level 1 and Level 2 alternative screening and recommendations were presented to the public via virtual public meetings held January 27 and 28, 2021.
  - Results of the Level 3 alternative screening as well as corridor and mode recommendations were presented to the public via virtual public meetings held May 19 and 20, 2021.
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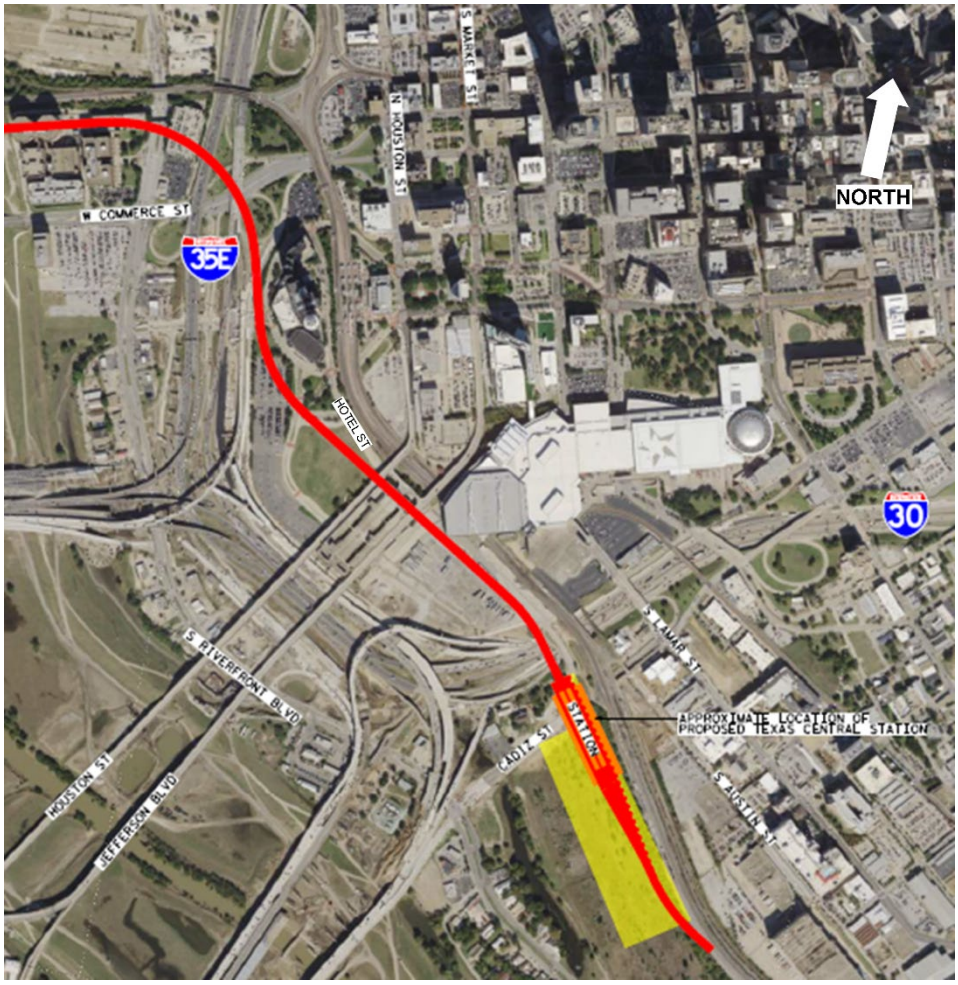
  - Four in-person open houses were held in August/September 2023 in Arlington, Dallas, Fort Worth, and Grand Prairie to show alignment refinement through conceptual engineering and stakeholder input and to solicit input prior to entering the official environmental analysis process.
- The project Technical Work Group met on July 21, 2020; October 16, 2020; November 20, 2020; and December 18, 2020; March 19, 2021; April 23, 2021; and June 4, 2021.
- Throughout the study, meetings have been held with City of Dallas elected officials and staff from various departments including Transportation, Public Works, Economic Development, Dallas Water Utilities, Planning, and Convention Center.
- Regarding the proposed alignments in Dallas, almost 50 meetings have been held with stakeholders including Dallas County, DART, TRE, TxDOT Dallas, US Army Corps of Engineers, Union Pacific Railroad, Hunt Realty, Matthews Southwest, and Trinity Park Conservancy.

Analysis Conducted

Three of the alignment options shown in Figure 1 were immediately west of the Hyatt Regency Hotel. Dallas Urban Connection alignments 4, 4A, and 4B were elevated and crossed over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. Because all three alignment options shared the same alignment between the Hyatt and the approved Dallas high-speed rail station, Figure 2 shows alignment 4B.

[4] Presentations, exhibits, and summaries (including comments) of the public meetings are available at www.nctcog.org/dfw-hstcs under Presentations & Public Outreach Efforts.

Figure 2. Urban Center Connection Dallas 4B Alternative Alignment



As a result of the alignment studies in Phase 1, Dallas Urban Connection alignment 4B was recommended for advancement into environmental studies. However, during meetings with Hunt Realty, they expressed concerns for all the elevated alignments near the hotel, particularly on the west side of the hotel because of the impacts on view to/from the hotel and to future development opportunities to other properties they owned to the south. Refinements were made to alignment 4B to minimize impacts to the Hunt owned properties. Several meetings between May 2022 through June 2023 were held with Hunt Realty representatives to discuss alternatives; however, it was deemed that the elevated alternatives west of the Hyatt would still impact the development potential of the property south of the Hyatt Regency Hotel.

Public Action Taken

- The RTC approved the alignment (I-30 corridor) and mode (high-speed rail and hyperloop) recommendations of Phase 1 and passed RTC Policy P22-01 which continued support for a "one-seat ride" system operation and station locations in downtown Fort Worth, Arlington, and downtown Dallas on July 8, 2021.

- On February 10, 2022, the RTC approved the revised recommendation to advance only high-speed rail along I-30.

Which Alignment Alternatives are to be Studied in NEPA

The high-speed rail alternatives [between the approved Dallas high-speed rail station (just south of I-30) and I-35E in downtown Dallas] to be studied during the National Environmental Policy Act (NEPA) process include:

- Dallas Urban Connection alignments 4B (see Figure 2), which is elevated and crosses over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 7 labeled as 1. Elevated – West of Hyatt Regency.
- A refined version of Dallas Urban Connection alignment 3, which is an elevated alignment that crosses I-35E near Commerce Street and then curves south to follow Hyatt Regency Hotel Drive/Hotel Street to align with the Dallas high-speed rail station platform (see Figure 3). For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 8 labeled as 2A. Elevated – East of Hyatt Regency. This alignment could include enhancements such as:
  - The addition of an elevated pedestrian walkway integrated with the high-speed rail structure (see Figure 4). For additional information, see Dallas City Council Presentation (March 6, 2024) Slides 9 through 11 labeled as 2B. Elevated – East of Hyatt Regency with Pedestrian Lobby.
  - The addition of an elevated pedestrian walkway integrated with the high-speed rail structure and a pedestrian cap over the elevated high-speed rail structure and the existing rail corridor between Eddie Bernice Johnson Union Station and the Hyatt Regency Hotel (see Figure 5). For additional information, see Dallas City Council Presentation (March 6, 2024) Slides 12 and 13 labeled as 2C. Elevated – East of Hyatt Regency with Pedestrian Lobby and Pedestrian Cap.

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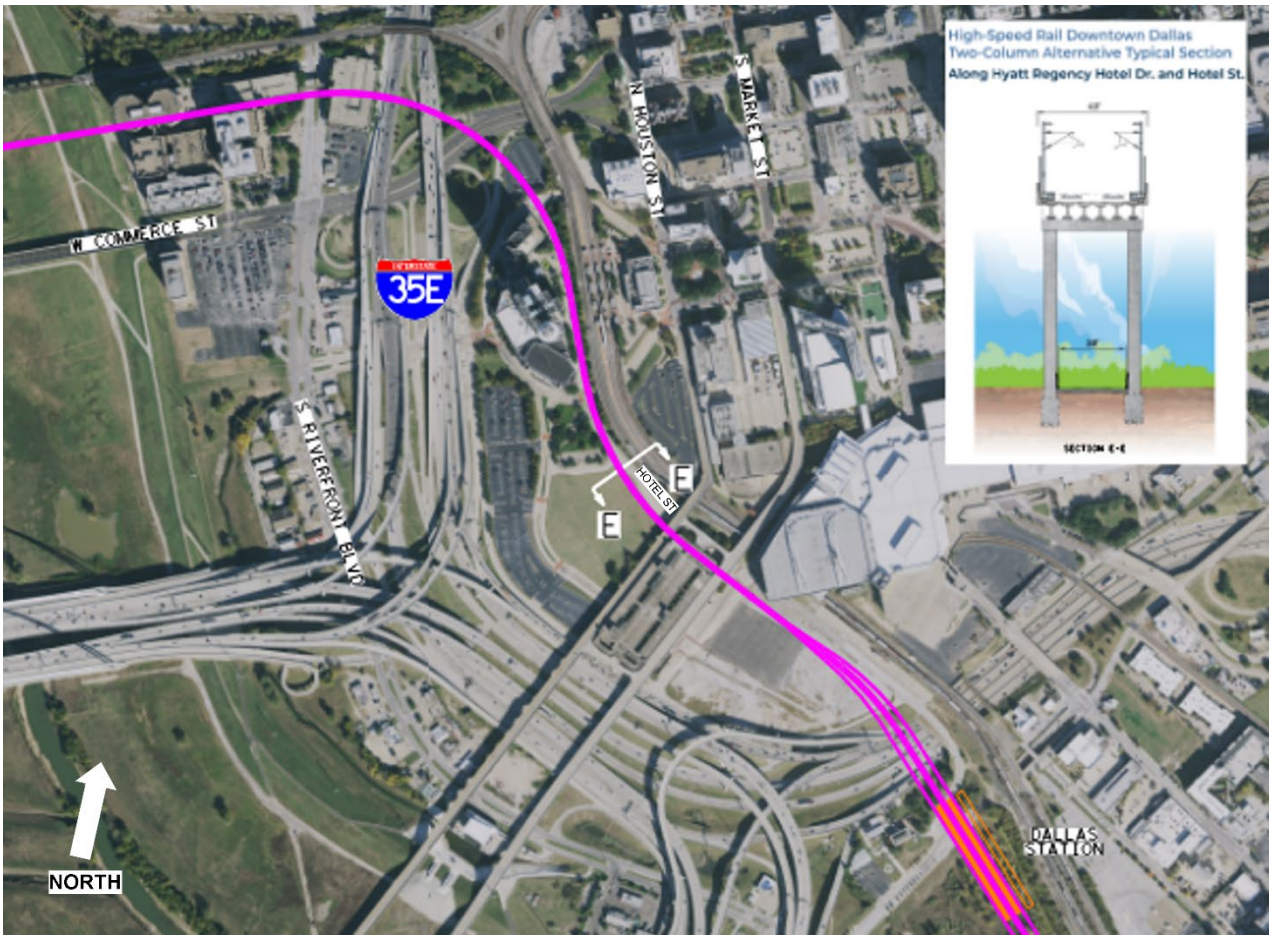

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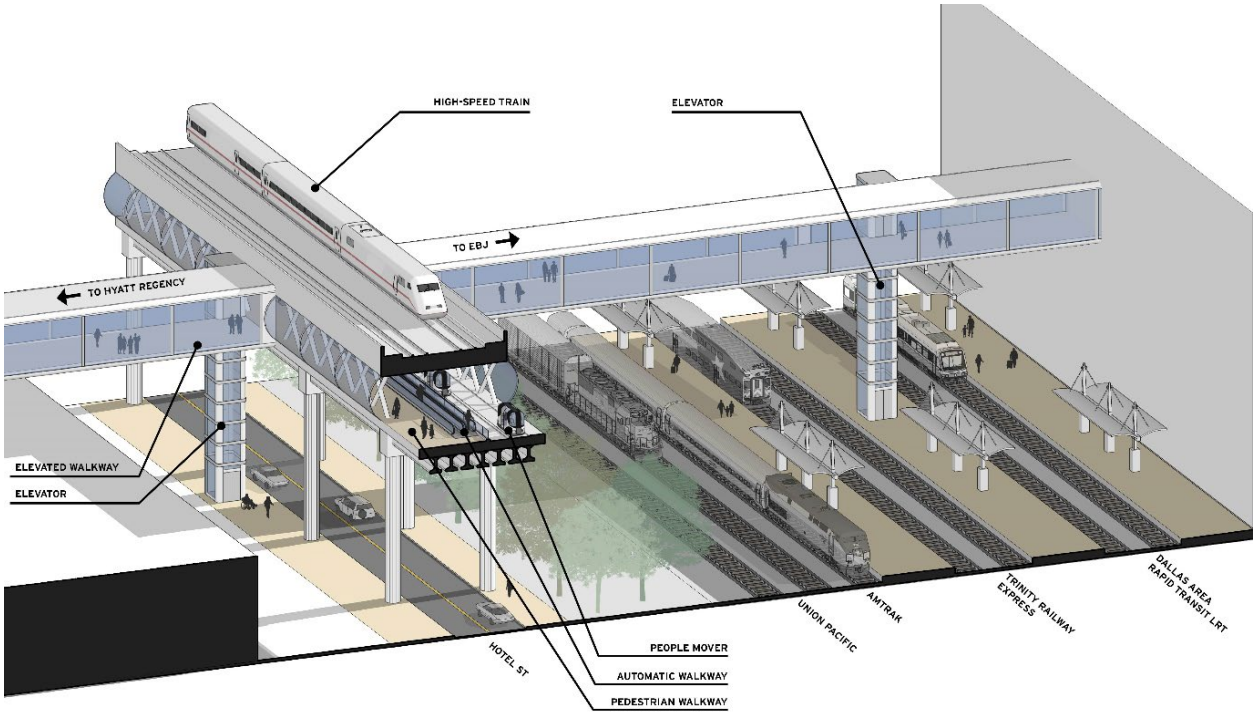
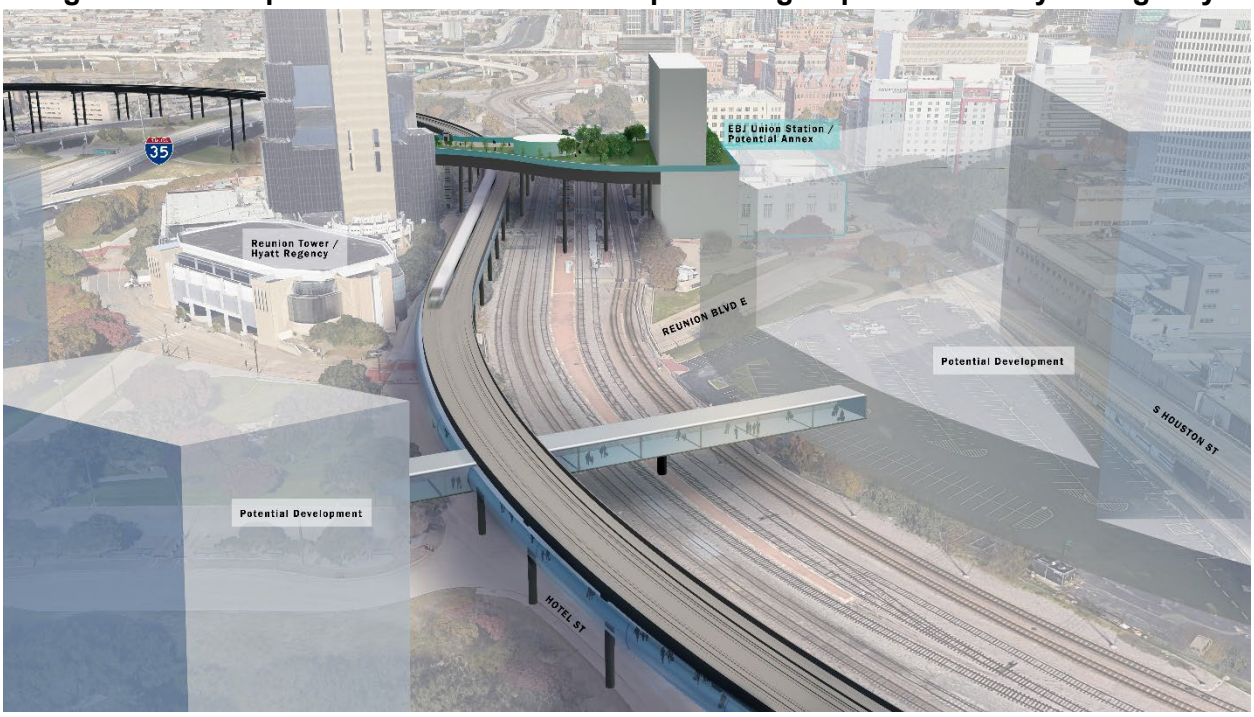


Figure 5. Conceptual View of Pedestrian Cap over High-Speed Rail at Hyatt Regency



Introduction

The purpose of this paper is to review a section of the high-speed rail alignment between the approved Dallas high-speed rail station (just south of I-30) and I-35E in downtown Dallas.

Question Being Asked

Was an alignment on the **east side of the Hyatt Regency** considered?

Was the Alignment Option Studied?

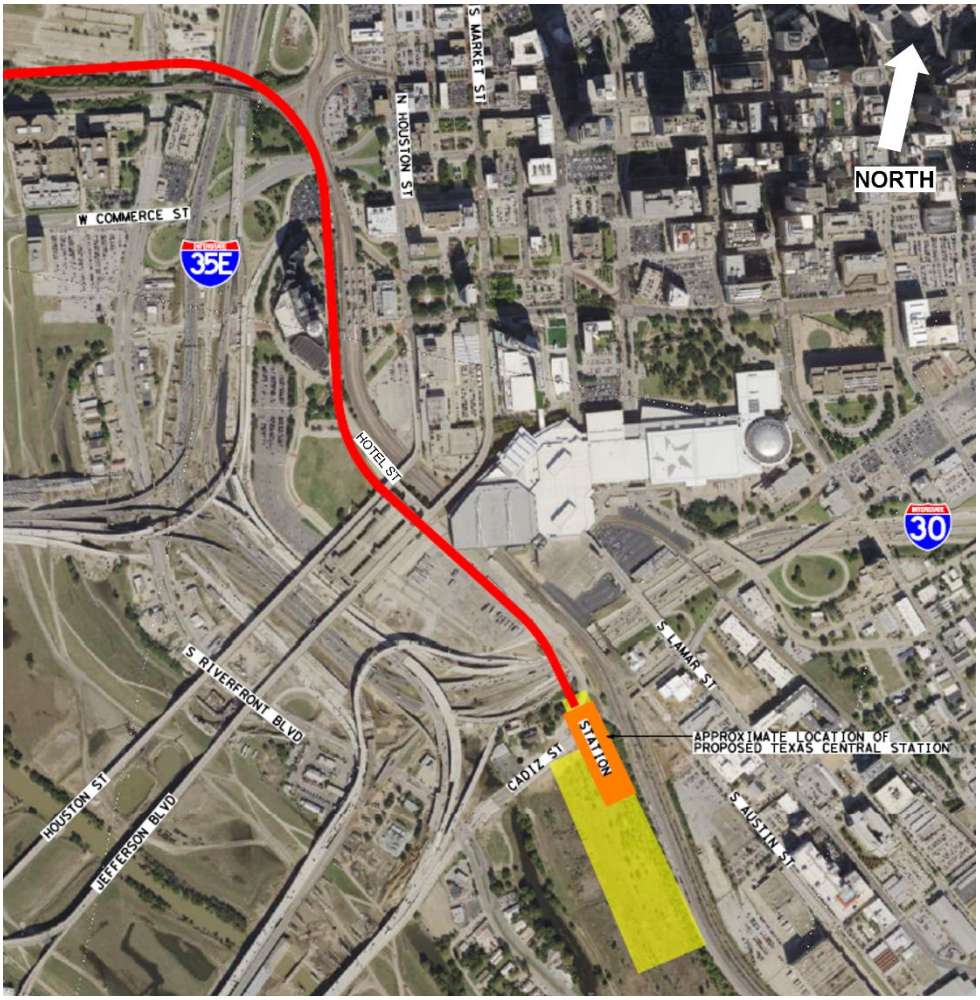
Yes. An alignment immediately east of the Hyatt Regency was studied as part of the effort to refine design concepts to connect to the approved Dallas high-speed rail station.[1] During Phase 1, over 25 alignment options into downtown Dallas were developed and evaluated (see Figure 1).[2,3]

Figure 1. Dallas Station Connection Concepts

One of these alignment options (Dallas Urban Connection alignment 3) was elevated and crossed over I-35E and immediately curved southward on the east side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station (see Figure 2).

[1] The Dallas to Fort Worth high-speed rail alignment is planned to connect the approved Texas Central Railroad (TCR) Dallas High-Speed Rail Station to provide seamless connectivity to a state-wide high-speed transportation corridor. The location of the station was federally approved in 2020 as part of the Final Environmental Impact Statement for the Dallas to Houston high-speed rail project. The station platform will be approximately 75 feet above the ground and parallel to and west of the Union Pacific Railroad at Cadiz Street.
[2] The full evaluation of the Dallas Station Concepts is available at www.nctcog.org/dfw-hstcs under Project Information, Phase 1 Alternative Analysis Report, Main Report, Section 8.1.4.
[3] Phase 1 of the Dallas-Fort Worth High-Speed Connection Speed was conducted from April 2020 to September 2022. It focused on evaluating alignments and technologies for high-speed passenger transportation alternatives.

Figure 2. Urban Center Connection Dallas 3 Alternative Alignment



Summary of Analysis

This option with refinements (modified from Dallas Urban Connection alignment 3) is **recommended** to continue in the Phase 2 analysis and into the environmental documentation study. This option primarily uses/aligns with the right-of-way of existing streets and is adjacent to the multi-track at-grade railroad corridor to minimize impacts to private properties.

Public, Stakeholder, and City Engagement

- Elected official briefings were held July 7, 2020; January 15, 2021; and May 14, 2021.
- The Regional Transportation Council (RTC) was briefed on May 14, 2020; November 12, 2020; March 11, 2021; May 13, 2021, July 8, 2021; February 10, 2022; March 9, 2023; December 14, 2023; and January 11, 2024.
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- Throughout the study, meetings have been held with City of Dallas staff from various departments including Transportation, Public Works, Economic Development, Dallas Water Utilities, Planning, and Convention Center.
- Regarding the proposed alignments in Dallas, almost 50 meetings have been held with stakeholders including Dallas County, DART, TRE, TxDOT Dallas, US Army Corps of Engineers, Union Pacific Railroad, Hunt Realty, Matthews Southwest, and Trinity Park Conservancy.

Additional Analysis Conducted

This alignment was originally not recommended because of its adjacency to the existing railroad corridor and potential impacts to Hyatt Regency Hotel Drive. However, Hunt Realty expressed concerns for the recommended alignment options (Dallas Urban Connection alignment 4B and any refinements) on the west side of the hotel because of the impacts on view to/from the hotel and to future development opportunities to other properties they owned to the south. Based on discussions with Hunt Realty and City of Dallas staff on the convention center plans, in mid-2023, Dallas Urban Connection alignment 3 was modified to address these concerns.

Public Action Taken

- The RTC approved the alignment (I-30 corridor) and mode (high-speed rail and hyperloop) recommendations of Phase 1 and passed RTC Policy P22-01 which continued support for a “one-seat ride” system operation and station locations in downtown Fort Worth, Arlington, and downtown Dallas on July 8, 2021.
- On February 10, 2022, the RTC approved the revised recommendation to advance only high-speed rail along I-30.

Which Alignment Alternatives are to be Studied in NEPA

The high-speed rail alternatives [between the approved Dallas high-speed rail station just south of I-30) and I-35E in downtown Dallas] to be studied during the National Environmental Policy Act (NEPA) process include:

- Dallas Urban Connection alignments 4B (see Figure 3), which is elevated and crosses over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 7 labeled as 1. Elevated – West of Hyatt Regency.
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    - The addition of an elevated pedestrian walkway integrated with the high-speed rail structure (see Figure 5). For additional information, see Dallas City Council Presentation (March 6, 2024) Slides 9 through 11 labeled as 2B. Elevated – East of Hyatt Regency with Pedestrian Lobby.
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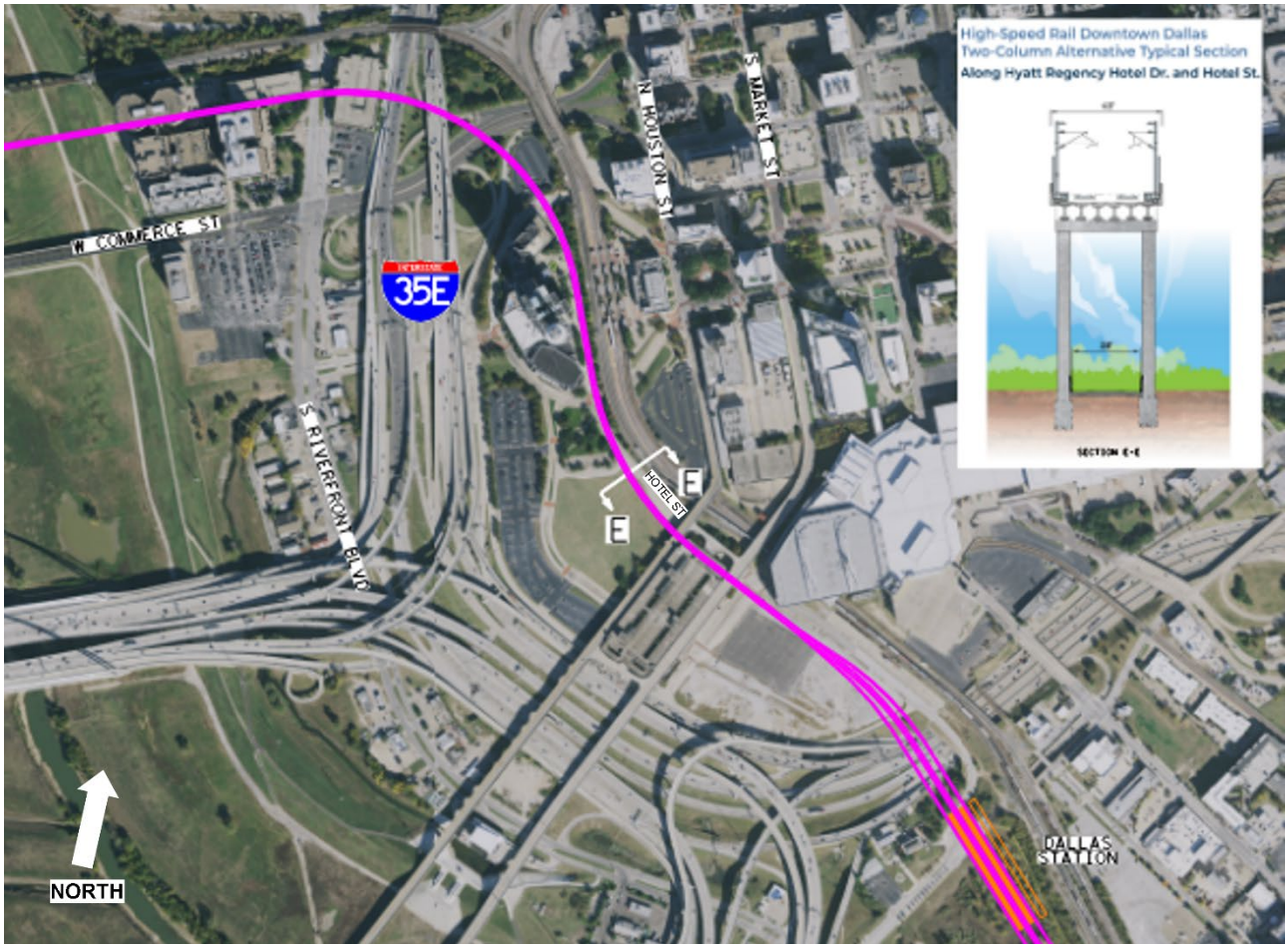
Figure 3. Western Alignment to be Studied in NEPA

Figure 4. Eastern Alignment to be Studied in NEPA



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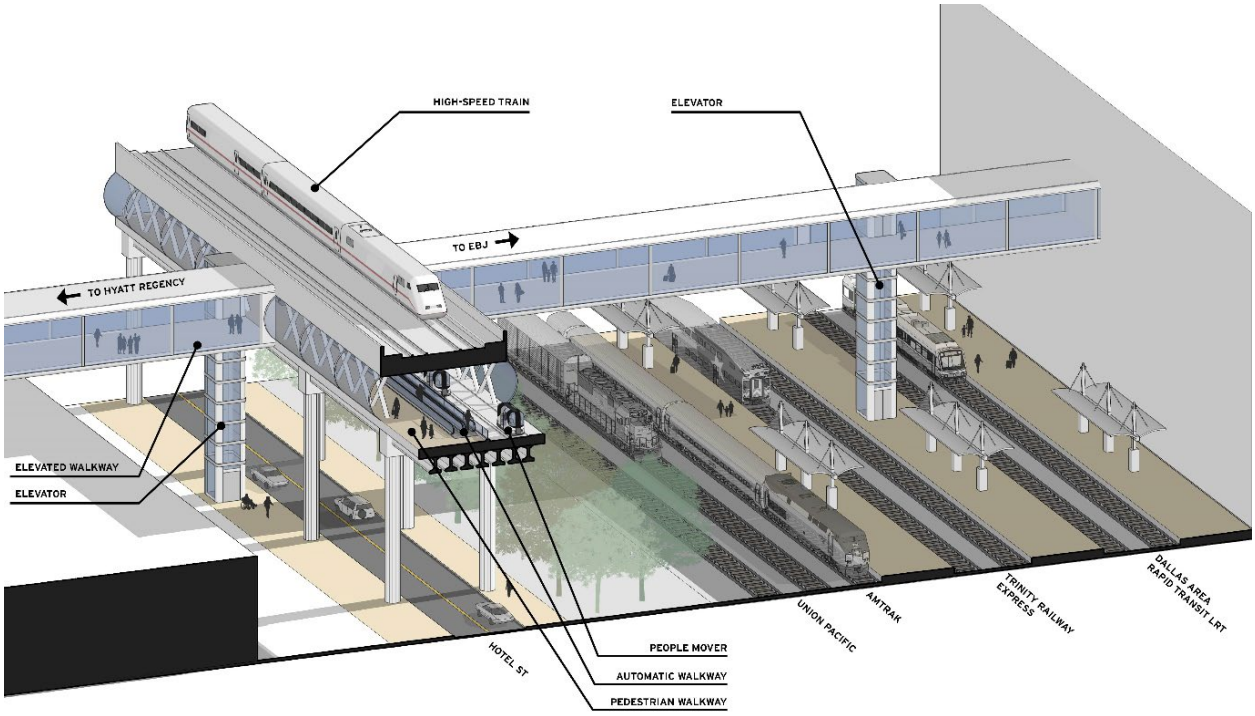

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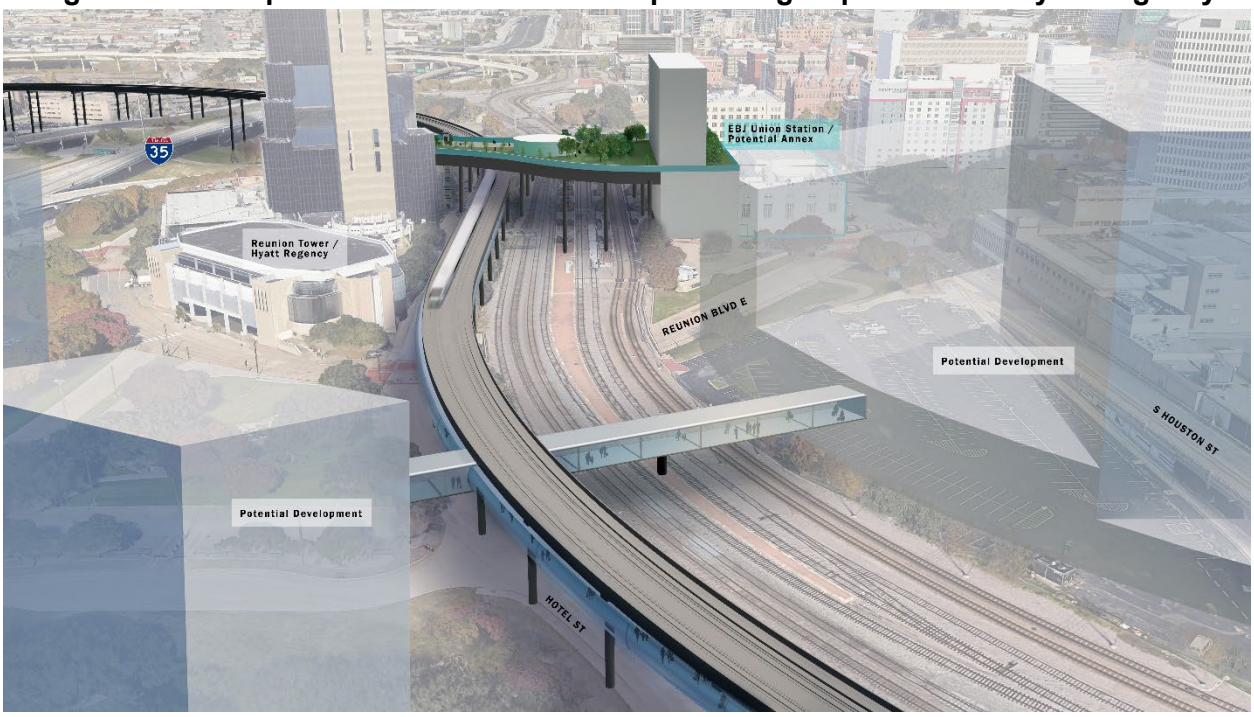

Introduction

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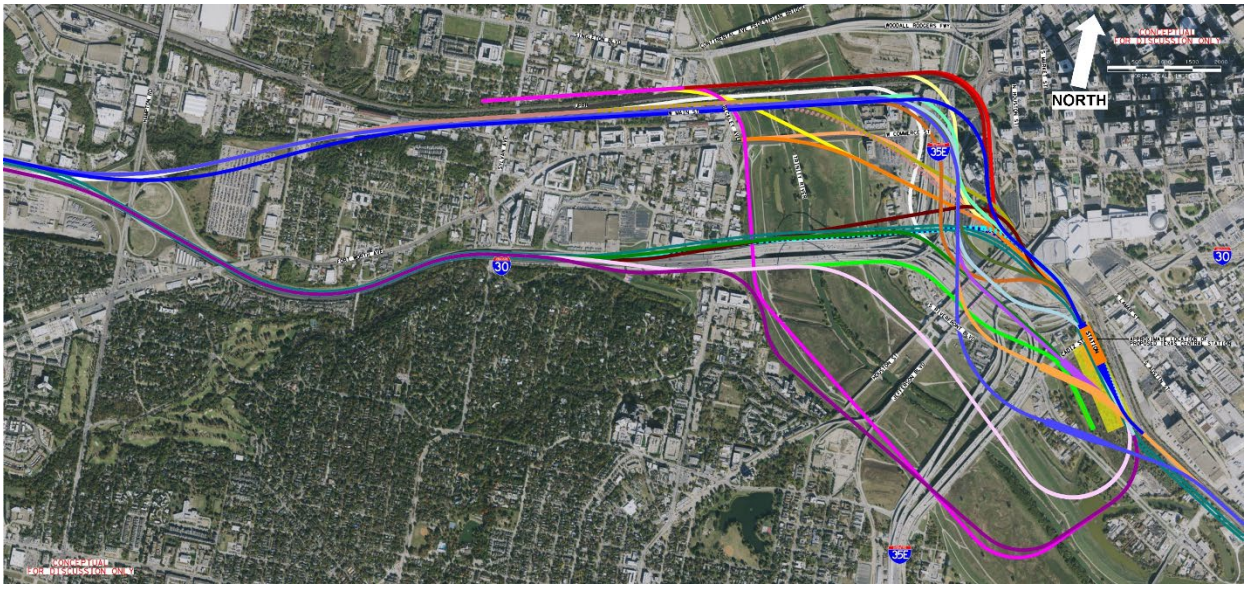
Questions Being Asked

- Was an alignment on the **east side of the Hyatt Regency** considered?
- Can the multi-modal Eddie Bernice Johnson (EBJ) Union Station be better connected to the approved Dallas high-speed rail station?
- Can high-speed rail infrastructure in front of the Hyatt Regency Hotel be integrated into urban landscape?

Was the Alignment Option Studied?

Yes. An alignment immediately east of the Hyatt Regency was studied as part of the effort to refine design concepts to connect to the approved Dallas high-speed rail station.[1] During Phase 1, over 25 alignment options into downtown Dallas were developed and evaluated (see Figure 1).[2,3]

Figure 1. Dallas Station Connection Concepts



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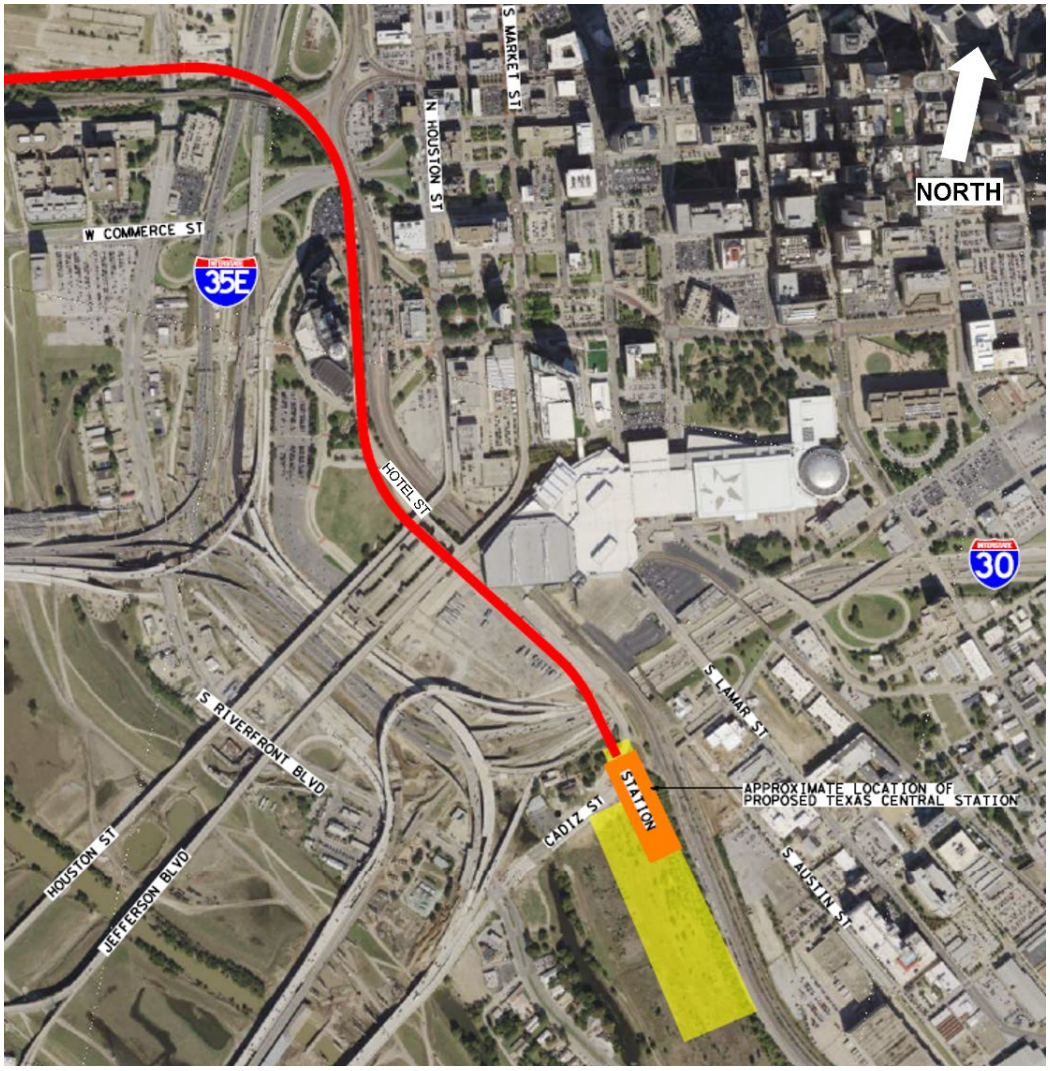
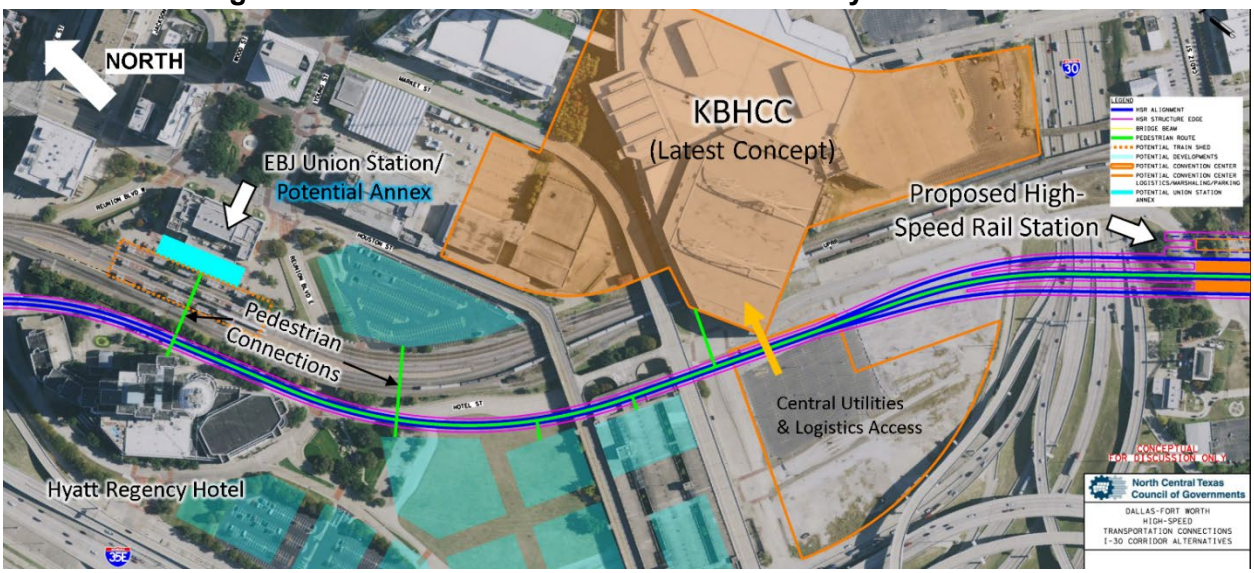


Summary of Analysis

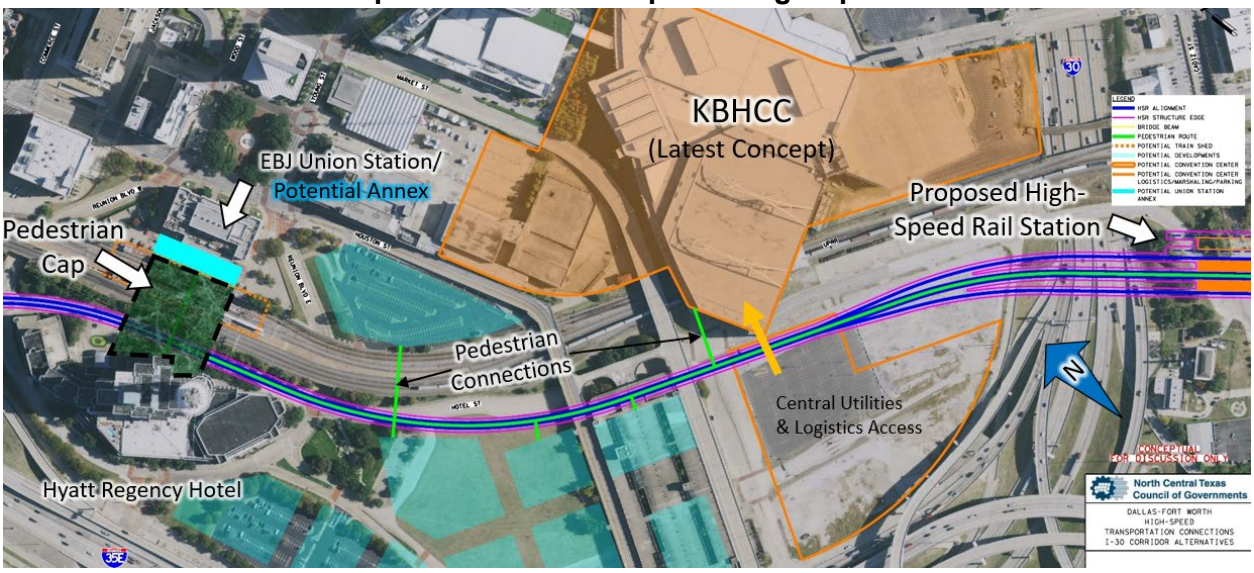
This option with refinements (modified from Dallas Urban Connection alignment 3) is **recommended** to continue in the Phase 2 analysis and into the environmental documentation study. This option primarily uses/aligns with the right-of-way of existing streets and adjacent to the multi-track at-grade railroad corridor to minimize impacts to private properties. A two-column structure is proposed to avoid impacts to street operations and could provide an opportunity for enhanced pedestrian connectivity via an enclosed, elevated walkway from EBJ Union Station, Hyatt Regency Hotel, Kay Bailey Hutchinson Convention Center (KBHCC), and other future buildings to the Dallas high-speed rail station (see Figure 3).

Figure 3. Plan View of Potential Pedestrian Way Connections



Additionally, this option creates the opportunity for a pedestrian cap/deck plaza to span between the Hyatt Regency Hotel and EBJ Union Station over the high-speed rail and existing rail corridor infrastructure (see Figure 4). While improving the viewshed of the corridor from above, this cap could serve as needed recreational space in this part of downtown and a catalyst for nearby developments.

Figure 4. Plan View of Pedestrian Way Connections and Conceptual Pedestrian Cap over High-Speed Rail



Public, Stakeholder, and City Engagement

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Additional Analysis Conducted

This alignment was originally not recommended because of its adjacency to the existing railroad corridor and potential impacts to Hyatt Regency Hotel Drive. However, Hunt Realty expressed concerns for the recommended alignment options (Dallas Urban Connection alignment 4B and any refinements) on the west side of the hotel because of the impacts on view to/from the hotel and to future development opportunities to other properties they owned to the south. Based on discussions with Hunt Realty and City of Dallas staff on the KBHCC plans, in mid-2023, Dallas Urban Connection alignment 3 was modified to address these concerns.

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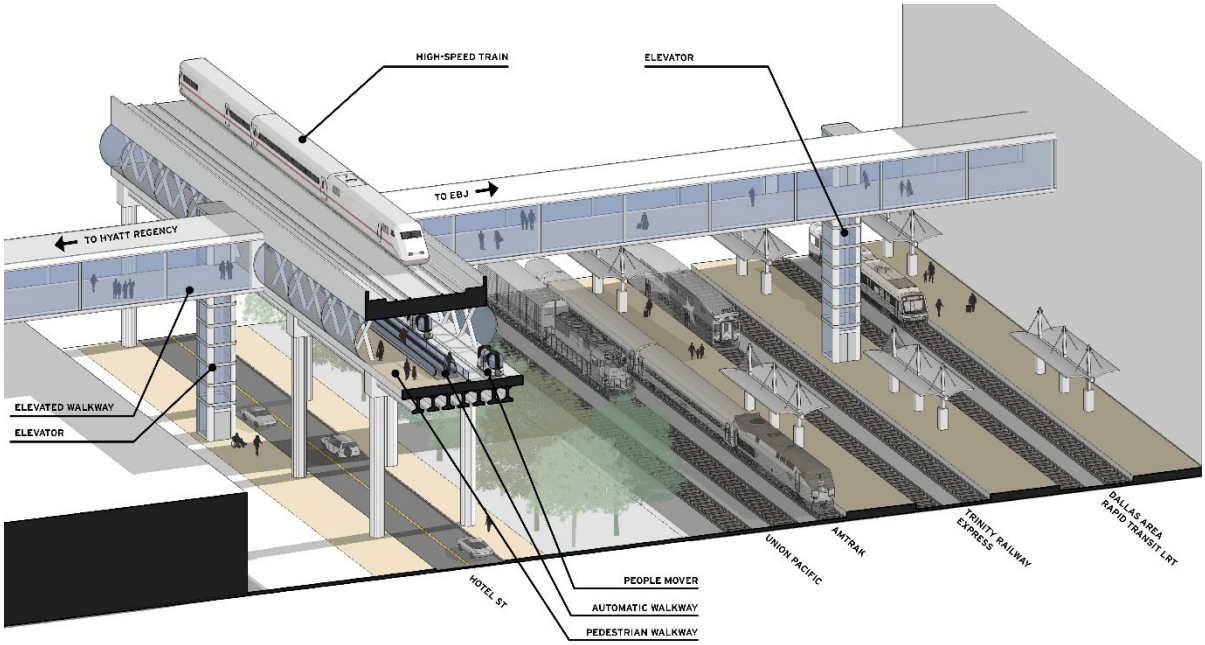
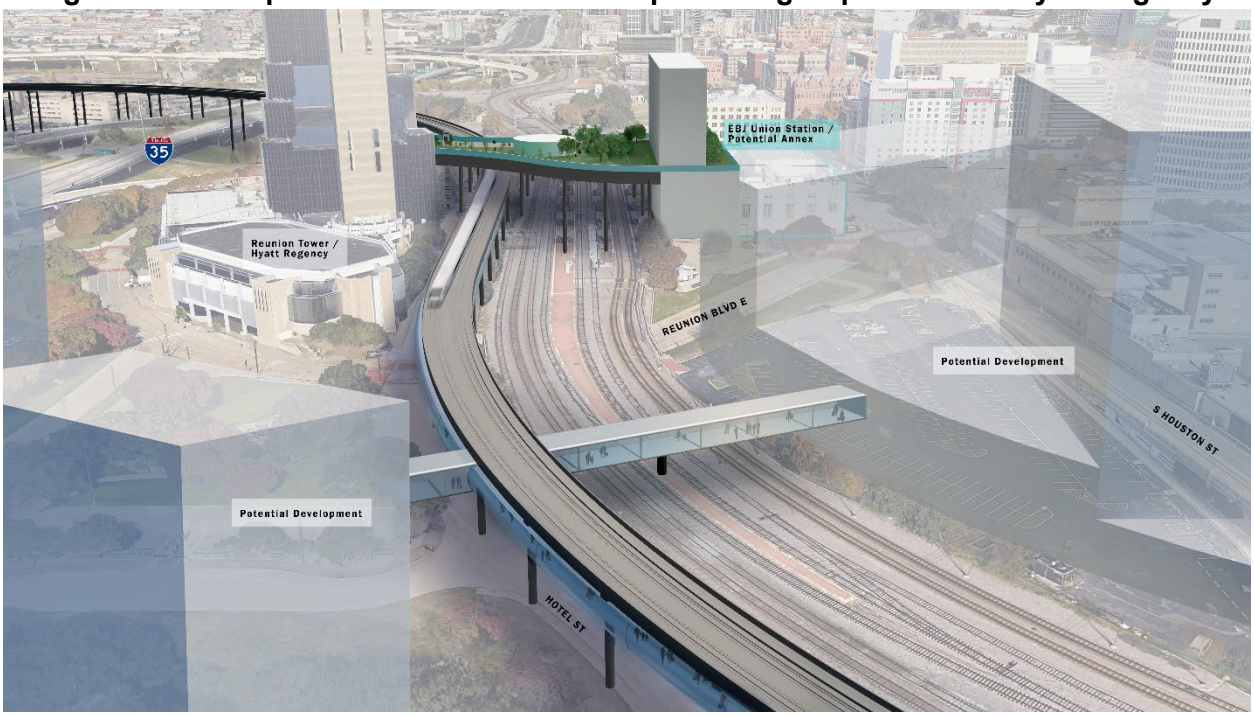
The design for the high-speed rail structure is proposed to straddle Hyatt Regency Hotel Drive and Hotel Street to avoid impacts to street operations. This design could accommodate an elevated pedestrian way underneath the rail line. This would provide an opportunity for enhanced pedestrian connectivity via an enclosed, elevated walkway (see Figures 3 and 5) from EBJ Union Station, Hyatt Regency Hotel, KBHCC, and other future buildings to the Dallas high-speed rail station.

Figure 5. Conceptual High-Speed Rail Structure Integrated with Pedestrian Way



To better integrate the high-speed rail infrastructure directly adjacent to the Hyatt Regency Hotel with pedestrian uses and to improve the viewshed between the hotel and the EBJ Union Station, another alternative was developed through extensive coordination with the City of Dallas. This option places a pedestrian cap/deck plaza on top of the existing rail corridor and elevated high-speed rail infrastructure, between EBJ Union Station and the Hyatt Regency Hotel (see Figures 4 and 6). Providing the opportunity to create an event/recreational space that can directly connect to the hotel if desired, this cap would help minimize the activity of the high-speed rail, freight, and commuter services from above and provide a large canopy for passengers using the EBJ Union Station platforms for DART light rail, Trinity Railway Express, and Amtrak services.

Figure 6. Conceptual View of Pedestrian Cap over High-Speed Rail at Hyatt Regency



Public Action Taken

- The RTC approved the alignment (I-30 corridor) and mode (high-speed rail and hyperloop) recommendations of Phase 1 and passed RTC Policy P22-01 which continued support for a "one-seat ride" system operation and station locations in downtown Fort Worth, Arlington, and downtown Dallas on July 8, 2021.
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Which Alternative Alignments are to be Studied in NEPA

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- Dallas Urban Connection alignments 4B (see Figure 7), which is elevated and crosses over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 7 labeled as 1. Elevated – West of Hyatt Regency.
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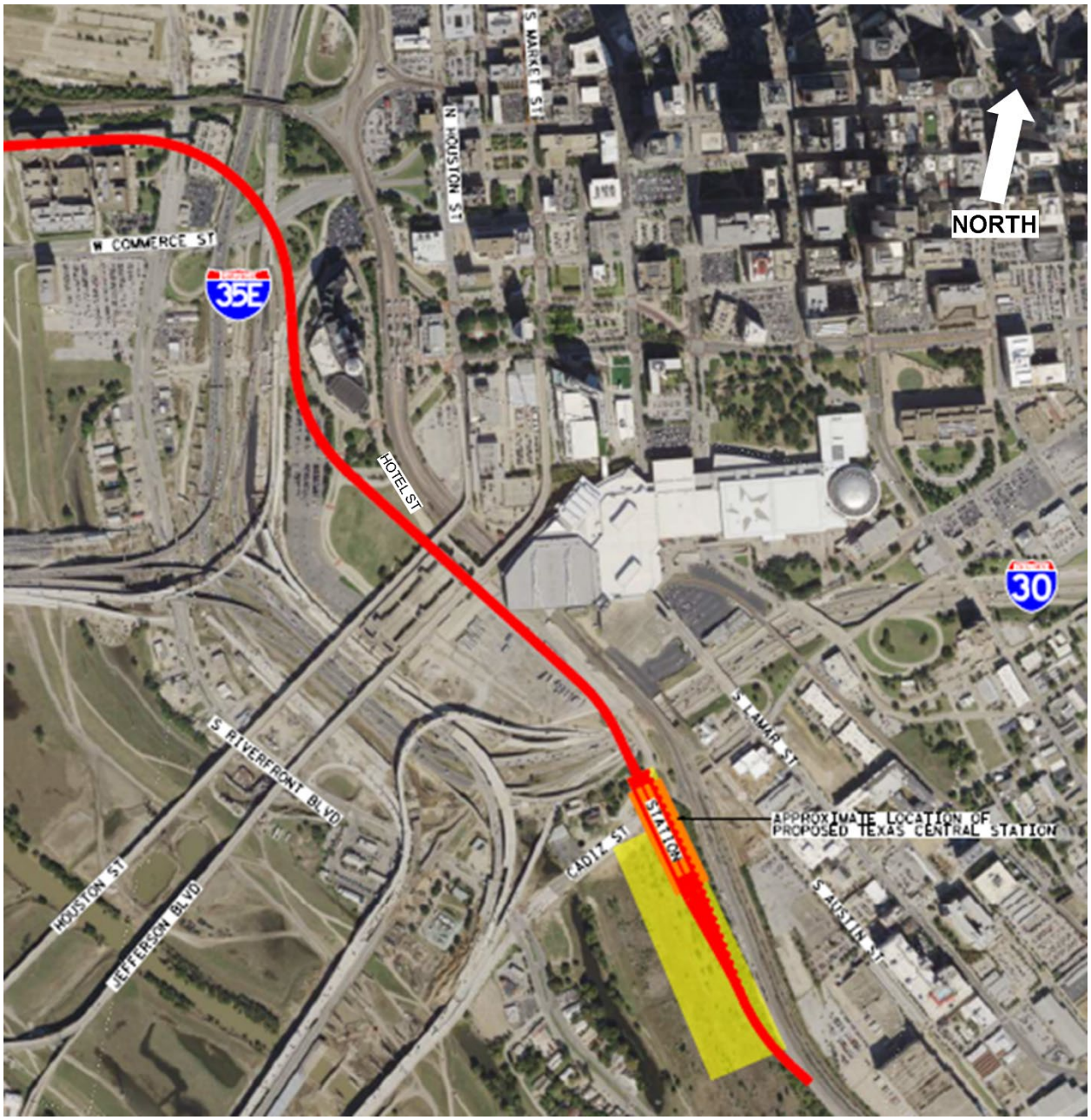
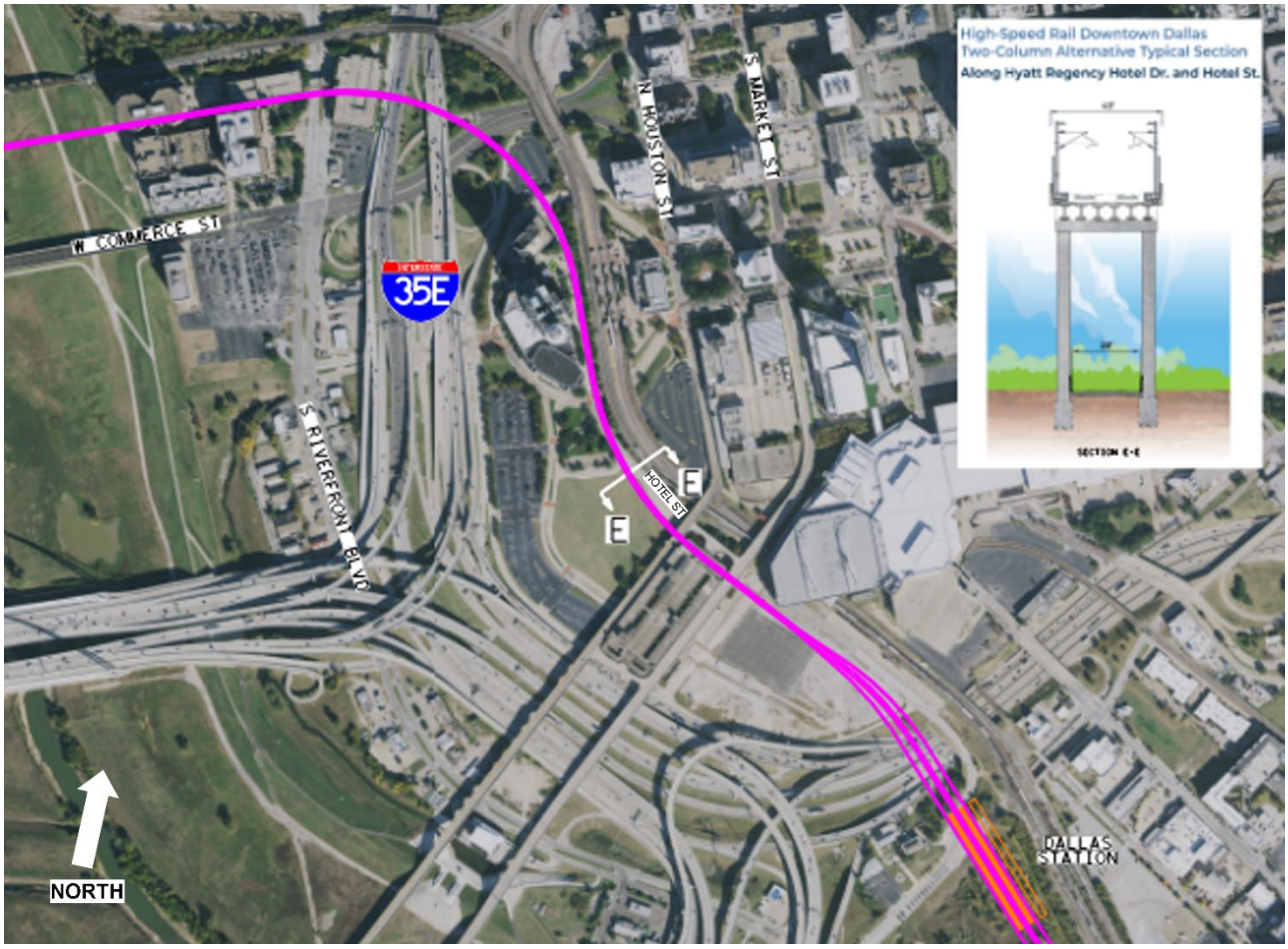


Figure 8. Eastern Alignment to be Studied in NEPA



Introduction

The purpose of this paper is to review a section of the high-speed rail alignment between the approved Dallas high-speed rail station (just south of I-30) and I-35E in downtown Dallas.

Question Being Asked

Was an alignment using the **existing railroad corridor (east of Hotel Street)** considered?

Was the Alignment Option Studied?

Yes. Use of the existing railroad corridor (east of Hotel Street) was studied as part of the effort to refine design concepts to connect to the approved Dallas high-speed rail station.[1] During Phase 1, over 25 alignment options into downtown Dallas were developed and evaluated (see Figure 1).[2,3]

Figure 1. Dallas Station Connection Concepts

Three of these alignment options (Dallas Urban Connection alignments 1, 2, and 5) considered using the existing railroad corridor located east of Hotel Street. All three alignments were elevated and crossed over I-35E and curved southward to generally align with the existing rail corridor and then transitioned onto and followed Hotel Street to the approved Dallas high-speed rail station (see Figure 2 for example).

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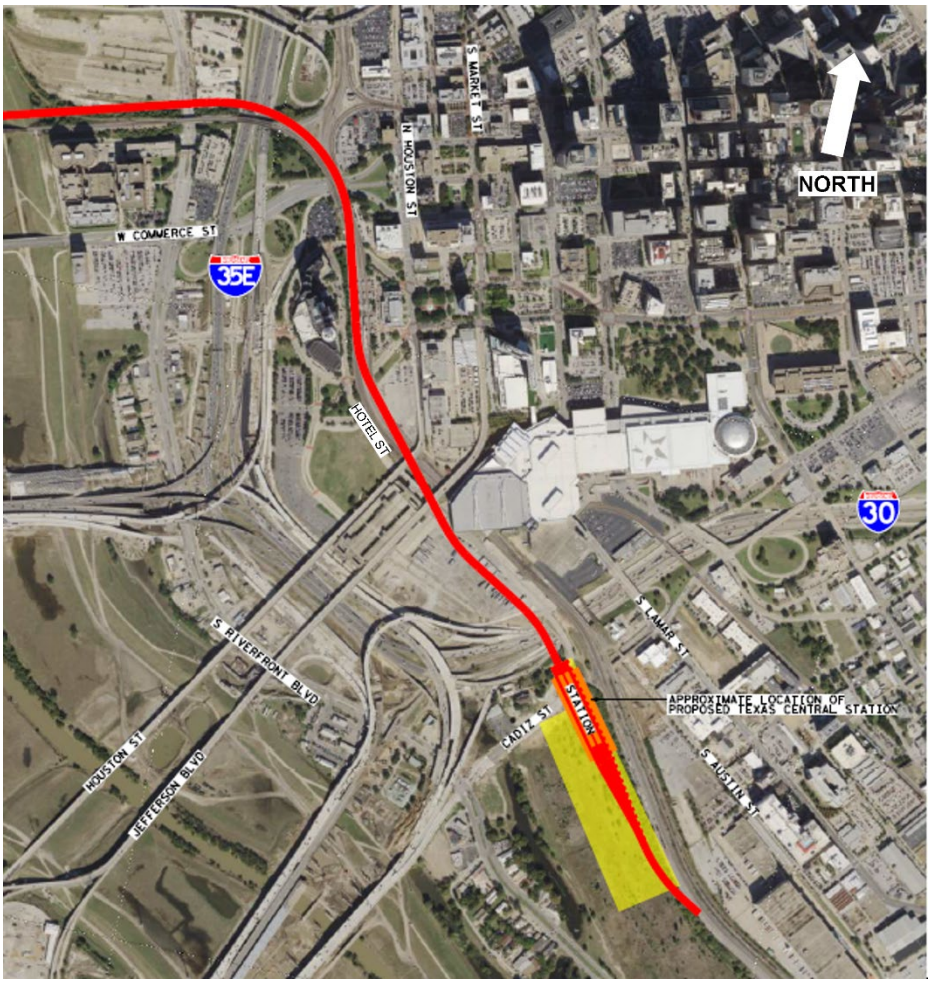
[1] The Dallas to Fort Worth high-speed rail alignment is planned to connect the approved Texas Central Railroad (TCR) Dallas High-Speed Rail Station to provide seamless connectivity to a state-wide high-speed transportation corridor. The location of the station was federally approved in 2020 as part of the Final Environmental Impact Statement for the Dallas to Houston high-speed rail project. The station platform will be approximately 75 feet above the ground and parallel to and west of the Union Pacific Railroad at Cadiz Street.

[2] The full evaluation of the Dallas Station Concepts is available at www.nctcog.org/dfw-hstcs under Project Information, Phase 1 Alternative Analysis Report, Main Report, Section 8.1.4.

[3] Phase 1 of the Dallas-Fort Worth High-Speed Connection Speed was conducted from April 2020 to September 2022. It focused on evaluating alignments and technologies for high-speed passenger transportation alternatives.

Figure 2. Urban Center Connection Dallas 2 Alternative Alignment



Summary of Analysis

These three options (Dallas Urban Connection alignments 1, 2, and 5) were **eliminated** during the review of urban connections into Dallas as part of the Phase 1 study with subsequent refinements **eliminated** following a more detailed analysis requested by the City of Dallas. The main reasons these alignments were eliminated are:

- There is not adequate space to accommodate the columns/structures needed for the high-speed rail alignment. The existing rail corridor includes up to eight tracks at Union Station; two of these tracks are exclusive to DART light rail (Red and Blue lines) with the remaining tracks used by the TRE commuter rail line, Amtrak, Union Pacific Railroad, and BNSF Railway. Furthermore, the rail corridor is not publicly owned property and the Union Pacific Railroad has stated that no high-speed rail facilities can be located on Union Pacific property.
- A pergola structure spanning the entire rail corridor would generate significant engineering challenges and create significant visual impacts and physical barriers for adjoining properties.

- Constructing an alignment within/over the railroad right-of-way would significantly increase costs and would be difficult to construct while maintaining passenger and freight rail operations.

Public, Stakeholder, and City Engagement

- Elected official briefings were held July 7, 2020; January 15, 2021; and May 14, 2021.
- The Regional Transportation Council (RTC) was briefed on May 14, 2020; November 12, 2020; March 11, 2021; May 13, 2021, July 8, 2021; February 10, 2022; March 9, 2023; December 14, 2023; and January 11, 2024.
- Fourteen public meetings[4] have been held. All meeting materials were available on the project website to review with the opportunity to make comments.
  - General alignments and project overview were presented to the public via virtual public meetings held September 23 and 24, 2020.
  - Results of the Level 1 and Level 2 alternative screening and recommendations were presented to the public via virtual public meetings held January 27 and 28, 2021.
  - Results of the Level 3 alternative screening as well as corridor and mode recommendations were presented to the public via virtual public meetings held May 19 and 20, 2021.
  - Four in-person open houses were held in October 2021 at the substantial completion of Phase 1 in Arlington, Dallas, Fort Worth, and Grand Prairie to show the alternative development process as well as alignment and mode recommendations.
  - Four in-person open houses were held in August/September 2023 in Arlington, Dallas, Fort Worth, and Grand Prairie to show alignment refinement through conceptual engineering and stakeholder input and to solicit input prior to entering the official environmental analysis process.
- The project Technical Work Group met on July 21, 2020; October 16, 2020; November 20, 2020; and December 18, 2020; March 19, 2021; April 23, 2021; and June 4, 2021.
- Throughout the study, meetings have been held with City of Dallas staff from various departments including Transportation, Public Works, Economic Development, Dallas Water Utilities, Planning, and Convention Center.
- Regarding the proposed alignments in Dallas, almost 50 meetings have been held with stakeholders including Dallas County, DART, TRE, TxDOT Dallas, US Army Corps of Engineers, Union Pacific Railroad, Hunt Realty, Matthews Southwest, and Trinity Park Conservancy.

Additional Analysis Conducted

Dallas Urban Connection alignments 1, 2, and 5 would introduce significant challenges of co-locating an elevated high-speed rail corridor within an active freight rail corridor. The use of a single-column support structure for high-speed rail within the rail corridor is not possible

[4] Presentations, exhibits, and summaries (including comments) of the public meetings are available at www.nctcog.org/dfw-hstcs under Presentations & Public Outreach Efforts.

because of the lack of available space between the existing railroad tracks. For a single-column structure, the columns are estimated to be a minimum of eight feet in diameter.

Following Phase 1, further conversations with the City of Dallas were had and a modified alignment alternative within the existing rail corridor right-of-way was developed and reviewed. A "pergola" type support structure to span the rail corridor was considered based on designs used for the California high-speed rail project (see Figure 3). While no structural analysis was performed, there is concern a pergola wide enough to span eight tracks may not be possible because of significant engineering challenges. Additionally, the pergola would further sever the Hyatt Regency Hotel and adjoining properties on the west of the existing rail corridor from the rest of downtown, significantly increase project costs, and be difficult to construct while maintaining passenger and freight rail services in the corridor.

Figure 3. High-Speed Pergola Structure over Existing Railroad Corridor

Public Action Taken

- The RTC approved the alignment (I-30 corridor) and mode (high-speed rail and hyperloop) recommendations of Phase 1 and passed RTC Policy P22-01 which continued support for a "one-seat ride" system operation and station locations in downtown Fort Worth, Arlington, and downtown Dallas on July 8, 2021.
- On February 10, 2022, the RTC approved the revised recommendation to advance only high-speed rail along I-30.

Which Alignment Alternatives are to be Studied in NEPA

The high-speed rail alternatives (between the approved Dallas high-speed rail station [just south of I-30) and I-35E in downtown Dallas] to be studied during the National Environmental Policy Act (NEPA) process include:

- Dallas Urban Connection alignments 4B (see Figure 4), which is elevated and crosses over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 7 labeled as 1. Elevated – West of Hyatt Regency.
- A refined version of Dallas Urban Connection alignment 3, which is an elevated alignment that crosses I-35E near Commerce Street and then curves south to follow Hyatt Regency Hotel Drive/Hotel Street to align with the Dallas high-speed rail station platform (see Figure 5). For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 8 labeled as 2A. Elevated – East of Hyatt Regency. This alignment could include enhancements such as:
    - The addition of an elevated pedestrian walkway integrated with the high-speed rail structure (see Figure 6). For additional information, see Dallas City Council Presentation (March 6, 2024) Slides 9 through 11 labeled as 2B. Elevated – East of Hyatt Regency with Pedestrian Lobby.
    - The addition of an elevated pedestrian walkway integrated with the high-speed rail structure and a pedestrian cap over the elevated high-speed rail structure and the existing rail corridor between Eddie Bernice Johnson Union Station and the Hyatt Regency Hotel (see Figure 7). For additional information, see Dallas City Council Presentation (March 6, 2024) Slides 12 and 13 labeled as 2C. Elevated – East of Hyatt Regency with Pedestrian Lobby and Pedestrian Cap.

Figure 4. Western Alignment to be Studied in NEPA

Figure 5. East Alignment Favored for Moving into NEPA

Figure 6. Conceptual High-Speed Rail Structure Integrated with Pedestrian Way

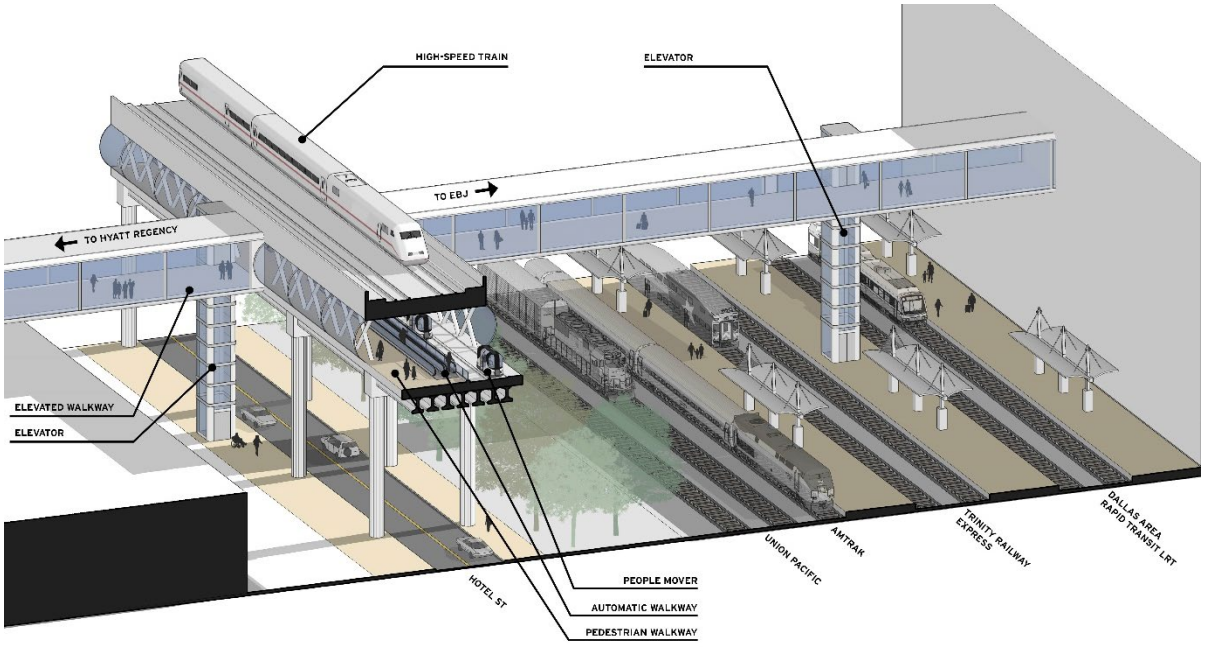
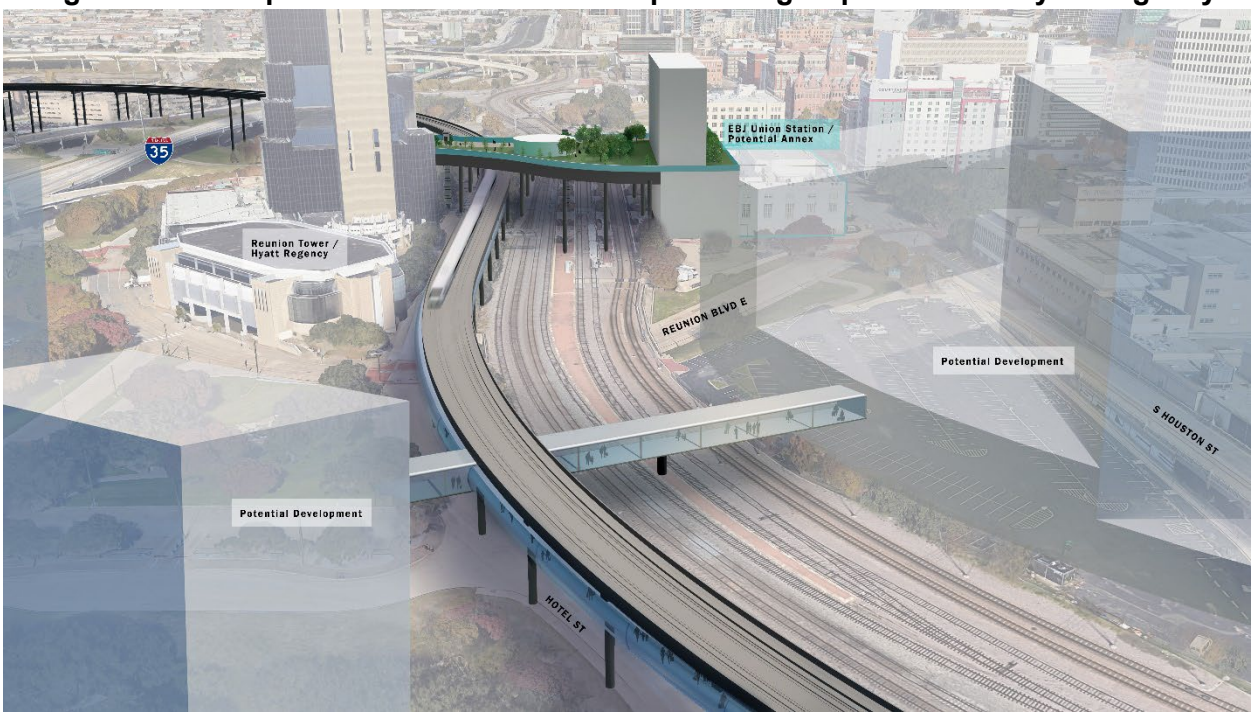


Figure 7. Conceptual View of Pedestrian Cap over High-Speed Rail at Hyatt Regency



Introduction

The purpose of this paper is to review a section of the high-speed rail alignment between the approved Dallas high-speed rail station (just south of I-30) and I-35E in downtown Dallas.

Questions Being Asked

- Was a **subway (tunnel) alignment ending at the approved Dallas high-speed rail station** considered?
- Can the approved Dallas high-speed rail **station be placed in a tunnel**?

Was the Alignment Option Studied?

Yes. Several subway alignments ending at the Dallas high-speed rail station were studied as part of the effort to refine design concepts to connect to the approved Dallas high-speed rail station.[1] During Phase 1, over 25 alignment options into downtown Dallas were developed and evaluated (see Figure 1).[2,3]

Figure 1. Dallas Station Connection Concepts

Dallas Urban Connection alignments 9, 13, 15, 15A, 15B, 15B1, and 15C each considered a subway/tunnel. The alignment variations were predominantly located in west Dallas with all of these alignments going under the Trinity River and curving to the southeast towards the

[1] The Dallas to Fort Worth high-speed rail alignment is planned to connect the approved Texas Central Railroad (TCR) Dallas High-Speed Rail Station to provide seamless connectivity to a state-wide high-speed transportation corridor. The location of the station was federally approved in 2020 as part of the Final Environmental Impact Statement for the Dallas to Houston high-speed rail project. The station platform will be approximately 75 feet above the ground and parallel to and west of the Union Pacific Railroad at Cadiz Street.

[2] The full evaluation of the Dallas Station Concepts is available at www.nctcog.org/dfw-hstcs under Project Information, Phase 1 Alternative Analysis Report, Main Report, Section 8.1.4.

[3] Phase 1 of the Dallas-Fort Worth High-Speed Connection Speed was conducted from April 2020 to September 2022. It focused on evaluating alignments and technologies for high-speed passenger transportation alternatives.

approved Dallas high-speed rail station (see Figure 2 for an example subway, Dallas Urban Connection alignments 15C). A portal for the tunnel would be required in west Dallas.

Figure 2. Urban Center Connection Dallas 15C Alternative Alignment

Summary of Analysis

Subway option in Dallas for the Dallas to Fort Worth alignment were **eliminated** following the Phase 1 study. Subway options would not support the Regional Transportation Council one-seat ride policy and would increase travel time, due to a 20+ minute transfer (equivalent to a 40-minute penalty since time spent waiting is perceived differently by the traveler than time in-transit), which would have a significant negative impact on ridership and the viability of the entire Dallas to Fort Worth corridor. Furthermore, changing the location of the approved Dallas high-speed rail station to be below grade is **not viable** because of previous federal approvals and increased costs.

Public, Stakeholder, and City Engagement

- Elected official briefings were held July 7, 2020; January 15, 2021; and May 14, 2021.
- The Regional Transportation Council (RTC) was briefed on May 14, 2020; November 12, 2020; March 11, 2021; May 13, 2021, July 8, 2021; February 10, 2022; March 9, 2023; December 14, 2023; and January 11, 2024.
- Fourteen public meetings[4] have been held. All meeting materials were available on the project website to review with the opportunity to make comments.

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  - General alignments and project overview were presented to the public via virtual public meetings held September 23 and 24, 2020.
  - Results of the Level 1 and Level 2 alternative screening and recommendations were presented to the public via virtual public meetings held January 27 and 28, 2021.
  - Results of the Level 3 alternative screening as well as corridor and mode recommendations were presented to the public via virtual public meetings held May 19 and 20, 2021.
  - Four in-person open houses were held in October 2021 at the substantial completion of Phase 1 in Arlington, Dallas, Fort Worth, and Grand Prairie to show the alternative development process as well as alignment and mode recommendations.
  - Four in-person open houses were held in August/September 2023 in Arlington, Dallas, Fort Worth, and Grand Prairie to show alignment refinement through conceptual engineering and stakeholder input and to solicit input prior to entering the official environmental analysis process.
- The project Technical Work Group met on July 21, 2020; October 16, 2020; November 20, 2020; and December 18, 2020; March 19, 2021; April 23, 2021; and June 4, 2021.
- Throughout the study, meetings have been held with City of Dallas staff from various departments including Transportation, Public Works, Economic Development, Dallas Water Utilities, Planning, and Convention Center.
- Regarding the proposed alignments in Dallas, almost 50 meetings have been held with stakeholders including Dallas County, DART, TRE, TxDOT Dallas, US Army Corps of Engineers, Union Pacific Railroad, Hunt Realty, Matthews Southwest, and Trinity Park Conservancy.

Additional Analysis Conducted

As a result of the alignment studies in Phase 1, Dallas Urban Connection alignments 4B (aerial) and 15C (tunnel) were both recommended for advancement into environmental studies. Through additional meetings with Hunt Realty and the City of Dallas following Phase 1, refinements to Dallas Urban Connection alignment 15C were considered (including bringing the underground platforms directly underneath the approved Dallas high-speed rail station rather than Lot E of the Kay Bailey Hutchinson Convention Center). Due to clearance requirements under the Trinity River and surrounding transportation infrastructure, all subway options considered would terminate approximately 100+ feet underground and would not be able to tie directly into the approved Dallas high-speed rail platform (approximately 75 feet above the existing ground); therefore, a one-seat ride[5] or cross platform connection is not possible. With a tunnel option directly underneath the approved Dallas high-speed rail station, all thru-passengers (Fort Worth/Arlington to Houston or Houston to Arlington/Fort Worth) would be required to complete a significant vertical transfer of approximately 17 stories via escalators or

[5] One-seat ride. On March 10, 2016, the Regional Transportation Council adopted Mobility 2040, The Metropolitan Transportation Plan for North Central Texas, establishing policy TR3-011: Establish policies fostering high-speed rail system interoperability, resulting in a “one-seat” ride system operation to, through, and within the North Central Texas region.

elevators. It is estimated this transfer (including all de-boarding and boarding movements) would require 20 minutes to complete.

Furthermore, it was discussed if the approved Dallas high-speed rail station could be changed to below grade (subway). The Final Environmental Impact Statement (FEIS), preliminary designs, and Rules of Applicability have been completed by Texas Central Railway and were approved by the Federal Railroad Administration for the Dallas to Houston corridor in 2020; these documents established the Dallas station location, orientation, and elevation. In early 2023, Amtrak announced it was considering a partnership with Texas Central to advance the Dallas to Houston corridor based on these federal approvals. With this new development, the Federal Railroad Administration has indicated they are not open to any reevaluation of the FEIS, which includes the approved Dallas station (see Figure 3). Additionally, a subway station would significantly increase costs for the project.

Figure 3. Rendering of Dallas High-Speed Rail Station

Image credit: Texas Central

Public Action Taken

- The RTC approved the alignment (I-30 corridor) and mode (high-speed rail and hyperloop) recommendations of Phase 1 and passed RTC Policy P22-01 which continued support for a "one-seat ride" system operation and station locations in downtown Fort Worth, Arlington, and downtown Dallas on July 8, 2021.
- On February 10, 2022, the RTC approved the revised recommendation to advance only high-speed rail along I-30.

Which Alignment Alternatives are to be Studied in NEPA

The high-speed rail alternatives (between the approved Dallas high-speed rail station [just south of I-30) and I-35E in downtown Dallas] to be studied during the National Environmental Policy Act (NEPA) process include:

- Dallas Urban Connection alignments 4B (see Figure 4), which is elevated and crosses over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 7 labeled as 1. Elevated – West of Hyatt Regency.
- A refined version of Dallas Urban Connection alignment 3, which is an elevated alignment that crosses I-35E near Commerce Street and then curves south to follow Hyatt Regency Hotel Drive/Hotel Street to align with the Dallas high-speed rail station platform (see Figure 5). For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 8 labeled as 2A. Elevated – East of Hyatt Regency. This alignment could include enhancements such as:
    - The addition of an elevated pedestrian walkway integrated with the high-speed rail structure (see Figure 6). For additional information, see Dallas City Council Presentation (March 6, 2024) Slides 9 through 11 labeled as 2B. Elevated – East of Hyatt Regency with Pedestrian Lobby.
    - The addition of an elevated pedestrian walkway integrated with the high-speed rail structure and a pedestrian cap over the elevated high-speed rail structure and the existing rail corridor between Eddie Bernice Johnson Union Station and the Hyatt Regency Hotel (see Figure 7). For additional information, see Dallas City Council Presentation (March 6, 2024) Slides 12 and 13 labeled as 2C. Elevated – East of Hyatt Regency with Pedestrian Lobby and Pedestrian Cap.

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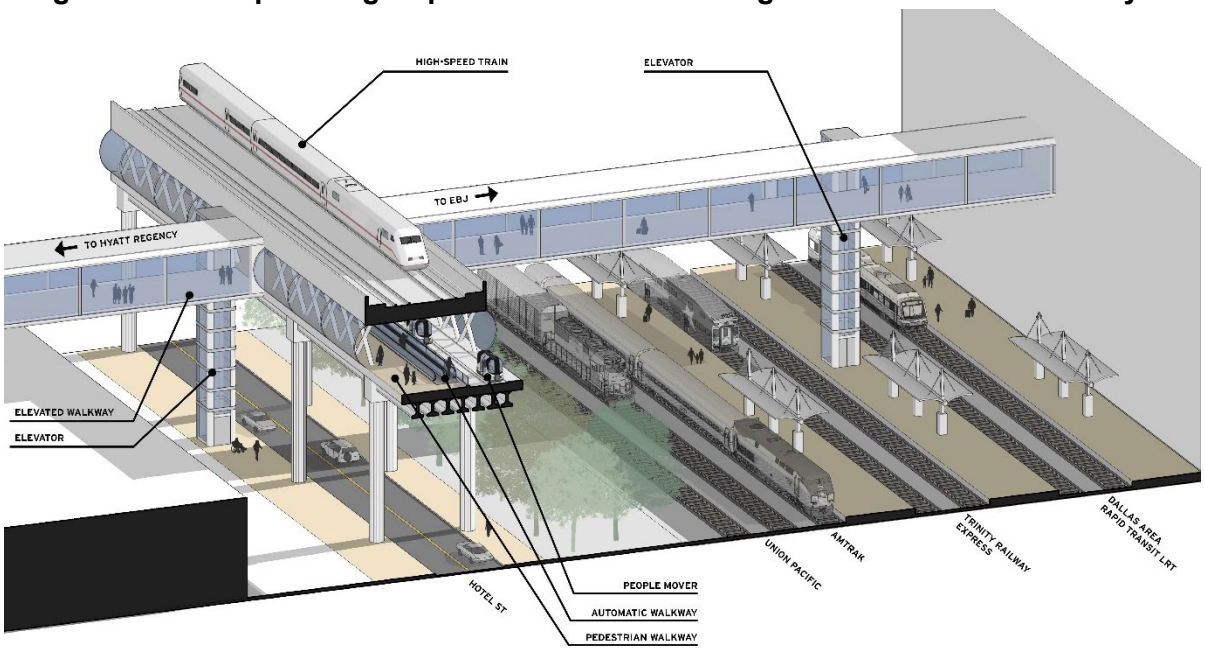

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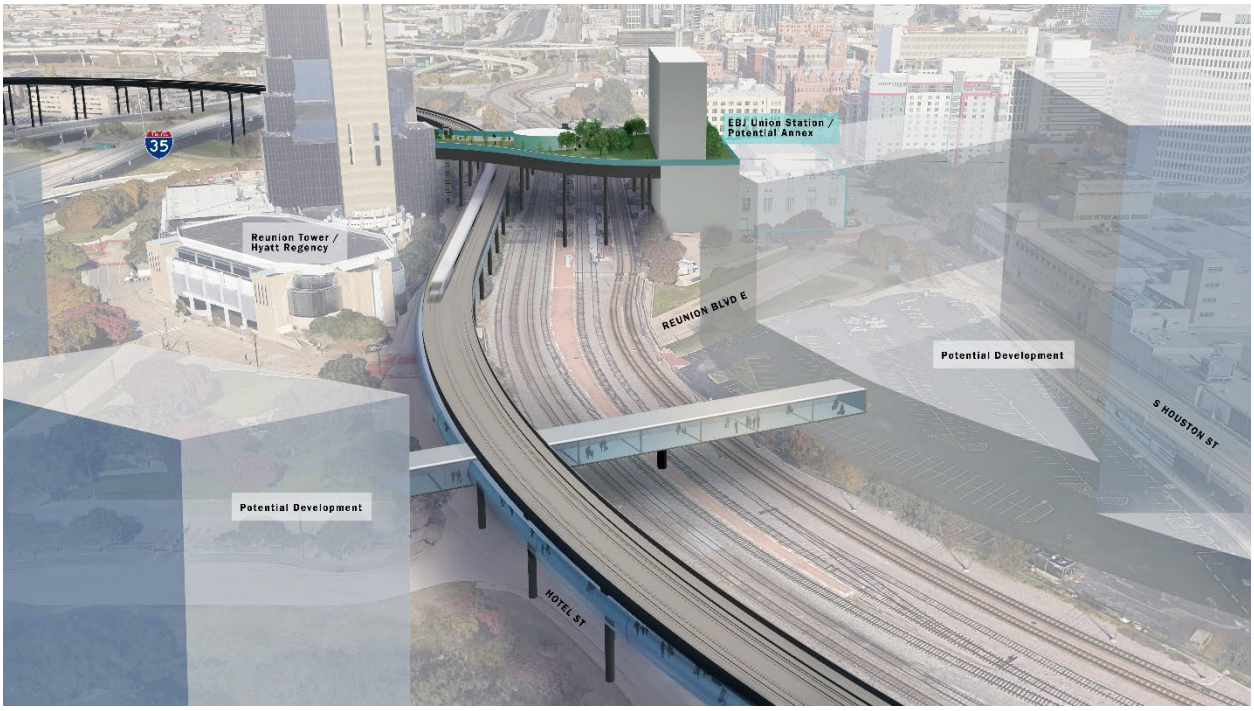


Introduction

The purpose of this paper is to review a section of the high-speed rail alignment between the approved Dallas high-speed rail station (just south of I-30) and I-35E in downtown Dallas.

Question Being Asked

Was a **different station location** (one not ending at the approved Dallas high-speed rail station) considered?

Was the Alignment Option Studied?

Yes. Several alignments with a different station location were studied as part of the effort to refine design concepts into downtown Dallas. During Phase 1, over 25 alignment options were developed and evaluated (see Figure 1).[1,2]

Figure 1. Dallas Station Connection Concepts

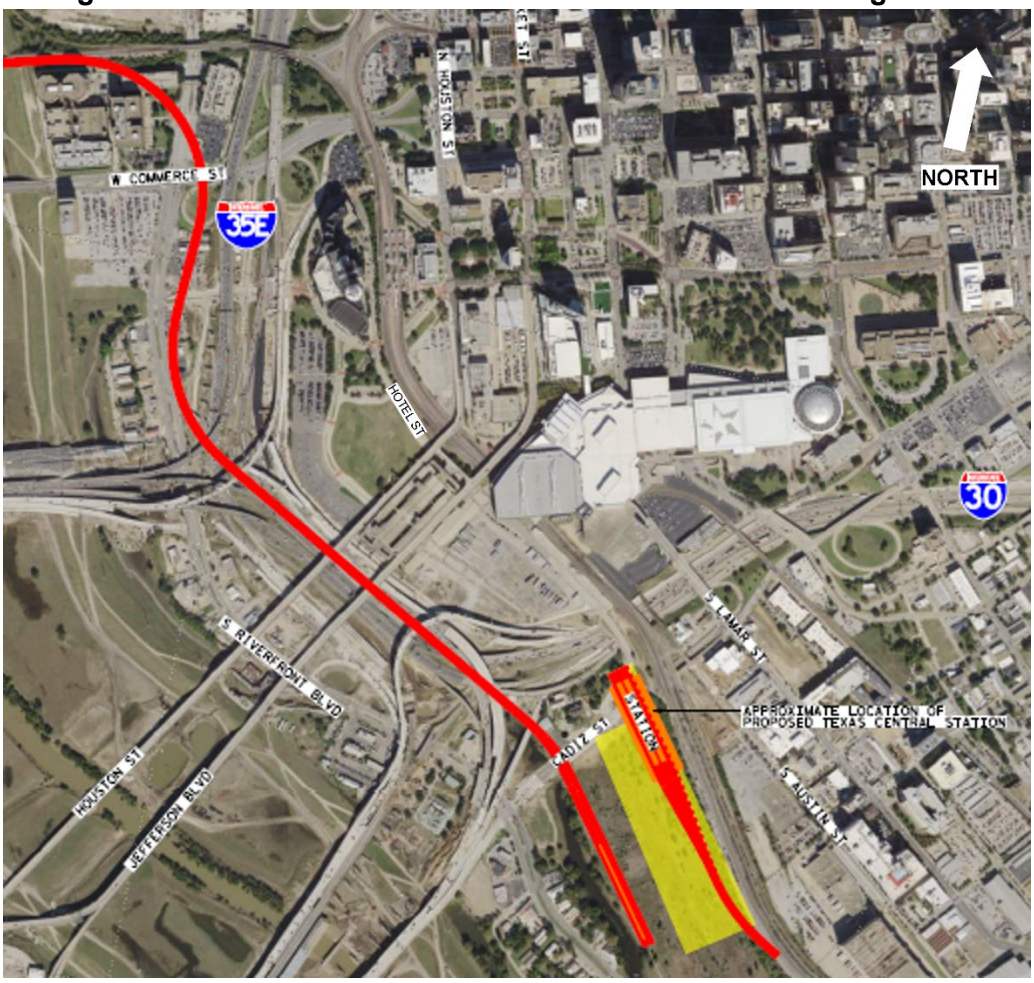
Four elevated Dallas Urban Connection alignments (6, 14, 16, and 17) and two subway Dallas Urban Connection alignments (9 and 15) considered having a station near, but not at, the Dallas high-speed rail station[3] (see Figure 2 for example). Station locations just to the west and immediately north of I-30 were evaluated in the Phase 1 study.

[1] The full evaluation of the Dallas Station Concepts is available at www.nctcog.org/dfw-hstcs under Project Information, Phase 1 Alternative Analysis Report, Main Report, Section 8.1.4.

[2] Phase 1 of the Dallas-Fort Worth High-Speed Connection Speed was conducted from April 2020 to September 2022. It focused on evaluating alignments and technologies for high-speed passenger transportation alternatives.

[3] The Dallas to Fort Worth high-speed rail alignment is planned to connect the approved Texas Central Railroad (TCR) Dallas High-Speed Rail Station to provide seamless connectivity to another state-wide high-speed transportation corridor. The location of the station was federally approved in 2020 as part of the Final Environmental Impact Statement for the Dallas to Houston high-speed rail project. The station platform will be approximately 75 feet above the ground and parallel to and west of the Union Pacific Railroad.

Figure 2. Urban Center Connection Dallas 6 Alternative Alignment



Summary of Analysis

Any option proposing two Dallas high-speed rail stations would require a significant transfer movement between the stations. These options were **eliminated** in Phase 1 because they would not support the Regional Transportation Council (RTC) one-seat ride policy and would increase travel time which would have a negative impact on ridership and the entire viability of the Dallas to Fort Worth corridor. Additionally, any re-orientation of the approved Dallas high-speed rail station was **eliminated** because of previous federal approvals.

Public, Stakeholder, and City Engagement

- Elected official briefings were held July 7, 2020; January 15, 2021; and May 14, 2021.
- The RTC was briefed on May 14, 2020; November 12, 2020; March 11, 2021; May 13, 2021, July 8, 2021; February 10, 2022; March 9, 2023; December 14, 2023; and January 11, 2024.

- Fourteen public meetings[4] have been held. All meeting materials were available on the project website to review with the opportunity to make comments.
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- Regarding the proposed alignments in Dallas, almost 50 meetings have been held with stakeholders including Dallas County, DART, TRE, TxDOT Dallas, US Army Corps of Engineers, Union Pacific Railroad, Hunt Realty, Matthews Southwest, and Trinity Park Conservancy.

Additional Analysis Conducted

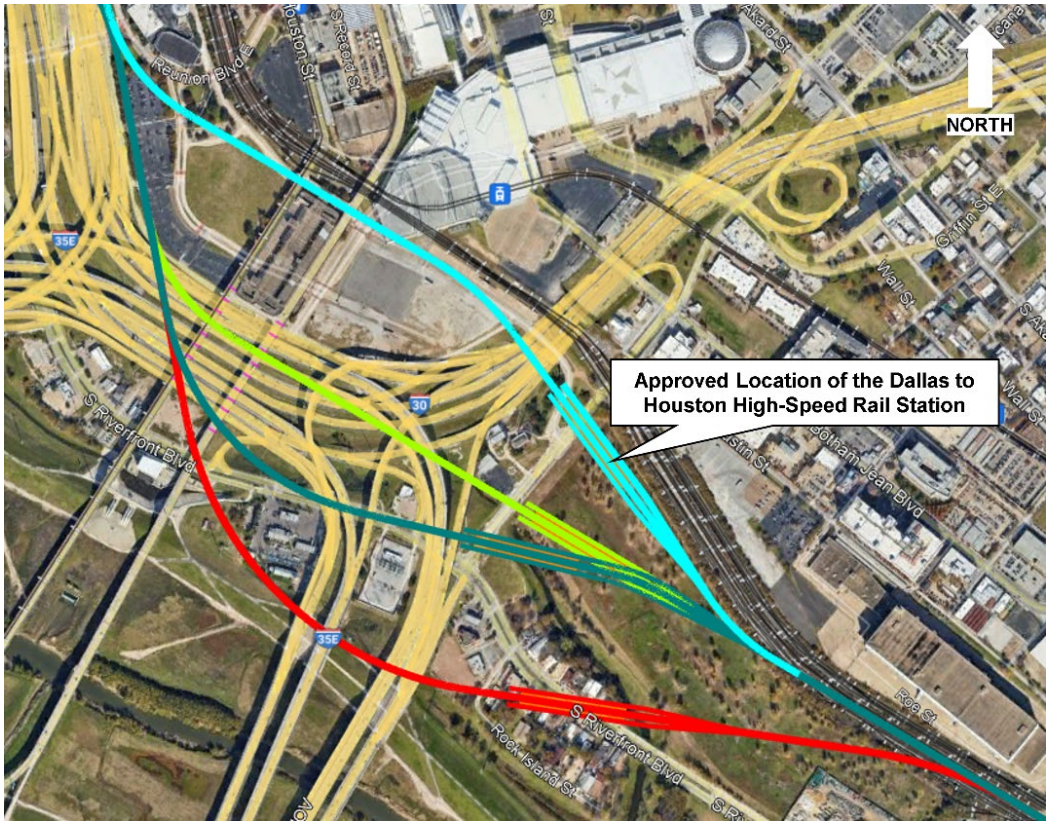
All alignments with different station locations (not ending at the approved Dallas high-speed rail station) were screened out during Phase 1 because they could not provide seamless connectivity with the approved Dallas high-speed rail station through a one-seat ride or cross-platform transfer. During subsequent meetings with Hunt Realty, the possibility of re-orienting the approved Dallas high-speed rail platform was discussed. Design standards require the platform to be located on a straight section of an alignment that is a minimum of 855 feet long.

Additional station locations/re-orientations of the Dallas high-speed rail platform were also evaluated (see Figure 3). The Final Environmental Impact Statement (FEIS), preliminary designs, and Rules of Applicability have been completed by Texas Central Railway and were approved by the Federal Railroad Administration for the Dallas to Houston corridor in 2020; these documents established the Dallas station location, orientation, and elevation. In early 2023, Amtrak announced it was considering a partnership with Texas Central to advance the

[4] Presentations, exhibits, and summaries (including comments) of the public meetings are available at www.nctcog.org/dfw-hstcs under Presentations & Public Outreach Efforts.

Dallas to Houston corridor based on these federal approvals. With this new development, the Federal Railroad Administration has indicated they are not open to any reevaluation of the FEIS, which includes the location of the Dallas station.

Figure 3. Alternate High-Speed Rail Station Locations Evaluated



Whether elevated or in a subway, none of these alignments directly tied into the approved Dallas high-speed rail platform; therefore, a one-seat ride[5] or cross-platform connection would not be possible. All thru-passengers (Fort Worth/Arlington to Houston or Houston to Arlington/Fort Worth) would be required to complete a transfer to another station.

Public Action Taken

- The RTC approved the alignment (I-30 corridor) and mode (high-speed rail and hyperloop) recommendations of Phase 1 and passed RTC Policy P22-01 which continued support for a "one-seat ride" system operation and station locations in downtown Fort Worth, Arlington, and downtown Dallas on July 8, 2021.
- On February 10, 2022, the RTC approved the revised recommendation to advance only high-speed rail along I-30.

[5] One-seat ride. On March 10, 2016, the Regional Transportation Council adopted Mobility 2040, The Metropolitan Transportation Plan for North Central Texas, establishing policy TR3-011: Establish policies fostering high-speed rail system interoperability, resulting in a "one-seat" ride system operation to, through, and within the North Central Texas region.

Which Alignment Alternatives are to be Studied in NEPA

The high-speed rail alternatives [between the approved Dallas high-speed rail station (just south of I-30) and I-35E in downtown Dallas] to be studied during the National Environmental Policy Act (NEPA) process include:

- Dallas Urban Connection alignments 4B (see Figure 4), which is elevated and crosses over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 7 labeled as 1. Elevated – West of Hyatt Regency.
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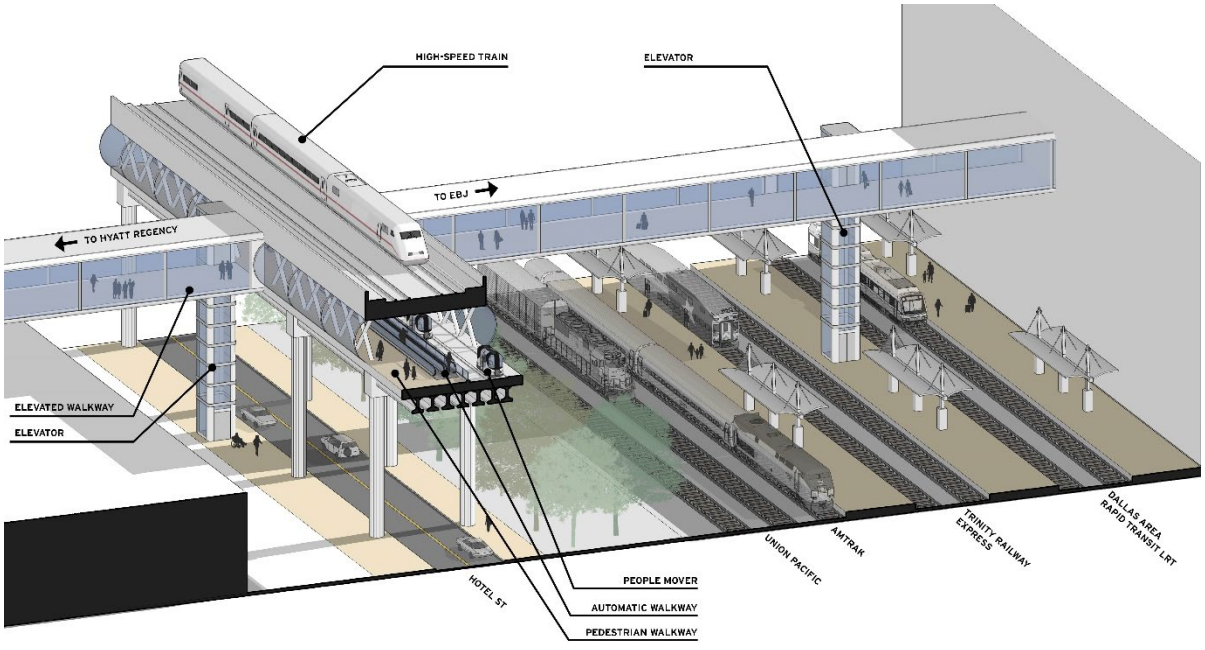

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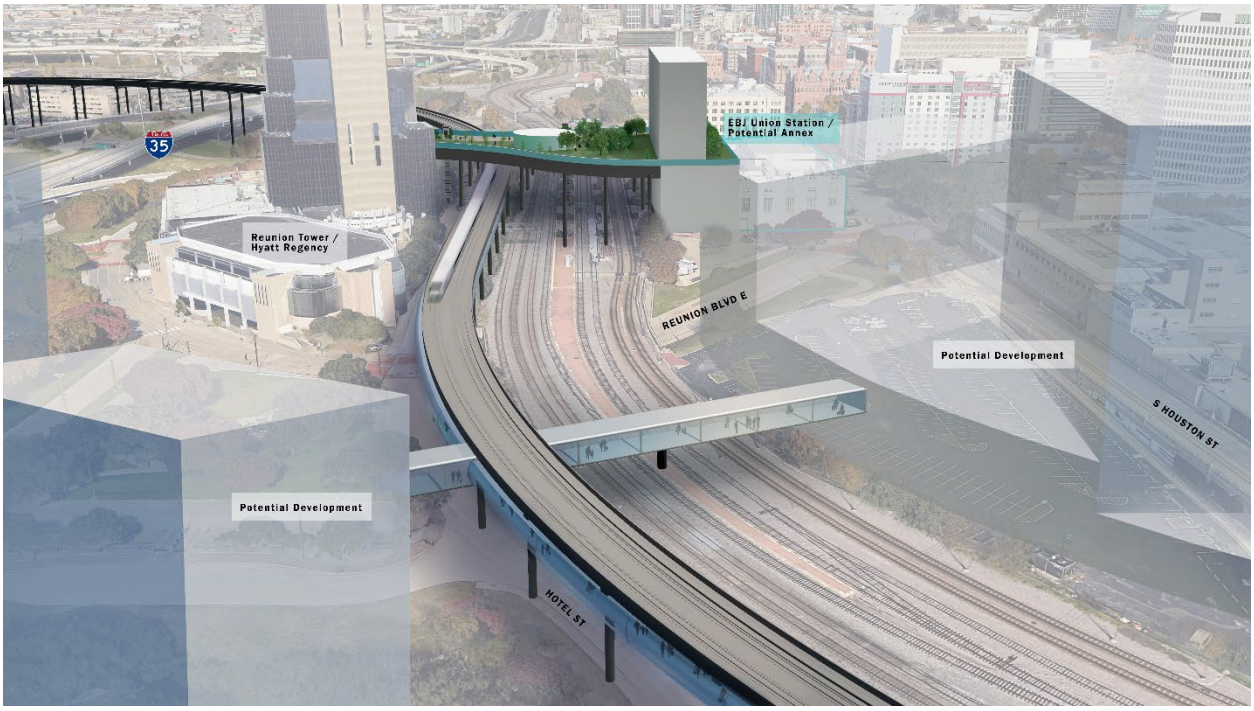

Introduction

The purpose of this paper is to review the use of the existing Trinity Railway Express (TRE) as a high-speed rail alignment between Dallas and Fort Worth.

Question Being Asked

Was an **at-grade TRE** option considered?

Was the Alignment Option Studied?

Yes. Using the TRE corridor was considered during the Level 1 screening in Phase 1 of the Dallas-Fort Worth High-Speed Connections Study.[1]

Summary of Analysis

The TRE corridor was **eliminated** during Level 1 Screening. The analysis found the existing TRE would not meet the travel time goal of 20 minutes because of the geometry (design) of the corridor. Fully dedicated, grade-separated high-speed rail (defined as speeds greater than 125+ miles per hour) infrastructure offers safety and reliability benefits that cannot be matched by traditional at-grade passenger service. The TRE corridor is shared with freight rail and Amtrak which pose serious operational challenges and can limit the ability to add higher-speed passenger service. Furthermore, even if the corridor were upgraded, the TRE would not provide seamless connectivity with the approved Dallas high-speed rail station through a one-seat ride or cross-platform transfer.

Public, Stakeholder, and City Engagement

- Elected official briefings were held July 7, 2020; January 15, 2021; and May 14, 2021.
- The Regional Transportation Council (RTC) was briefed on May 14, 2020; November 12, 2020; March 11, 2021; May 13, 2021, July 8, 2021; February 10, 2022; March 9, 2023; December 14, 2023; and January 11, 2024.
- Fourteen public meetings[2] have been held. All meeting materials were available on the project website to review with the opportunity to make comments.
    - General alignments and project overview were presented to the public via virtual public meetings held September 23 and 24, 2020.
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[1] Phase 1 of the Dallas-Fort Worth High-Speed Connection Speed was conducted from April 2020 to September 2022. It focused on evaluating alignments and technologies for high-speed passenger transportation alternatives.
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  - Four in-person open houses were held in October 2021 at the substantial completion of Phase 1 in Arlington, Dallas, Fort Worth, and Grand Prairie to show the alternative development process as well as alignment and mode recommendations.
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- Throughout the study, meetings have been held with City of Dallas staff from various departments including Transportation, Public Works, Economic Development, Dallas Water Utilities, Planning, and Convention Center.
- Regarding the proposed alignments in Dallas, almost 50 meetings have been held with stakeholders including Dallas County, DART, TRE, TxDOT Dallas, US Army Corps of Engineers, Union Pacific Railroad, Hunt Realty, Matthews Southwest, and Trinity Park Conservancy.

Analysis Conducted

The TRE currently operates as a conventional passenger rail line with a travel time of 61 minutes between Dallas and Fort Worth. Additionally, freight trains and Amtrak also operate in the corridor. The maximum operating speed for TRE vehicles is 83 mph because of the existing geometry and at-grade roadway crossings. TRE has ten stations and is predominately used by local residents commuting to nearby stations, which is why there are many stations only miles apart.

The Level 1 screening set a 20-minute travel time between downtown Dallas and downtown Fort Worth as a goal for the project. Currently, traveling between the city centers by automobile can take 30 minutes (when traffic and roadway conditions are favorable) to more than 60+ minutes. By 2045, these travel times are expected to increase considerably due to forecasted growth in the region. The 20-minute threshold was considered a reasonable improvement in travel time, which would be reliably available any time of day, regardless of traffic conditions, and could encourage people to switch to high-speed transit. A 20-minute travel time between Dallas and Fort Worth cannot be achieved on the existing TRE corridor without significant improvements to the corridor (including need for additional right-of-way causing property impacts), change in operations (i.e., not stopping at any of the eight intermediate stations), and the purchase of new trains.

Using the TRE right-of-way for higher-speed transportation service would create serious operational challenges because of the existing freight and Amtrak passenger rail service currently operating within the corridor. BNSF Railway, Union Pacific Railroad, and regional short-line carriers Fort Worth & Western, and Dallas Garland Northeastern operate freight on the TRE commuter line through agreements with the TRE. Rail traffic on the TRE is bidirectional with an average daily train count of 95 trains, of which approximately 70 are passenger trains and 25 are freight trains.

Public Action Taken

- The RTC approved the alignment (I-30 corridor) and mode (high-speed rail and hyperloop) recommendations of Phase 1 and passed RTC Policy P22-01 which continued support for a "one-seat ride" system operation and station locations in downtown Fort Worth, Arlington, and downtown Dallas on July 8, 2021.
- On February 10, 2022, the Regional Transportation Council approved the revised recommendation to advance only high-speed rail along I-30.

Which Alignment Alternatives are to be Studied in NEPA

The high-speed rail alternatives (between the approved Dallas high-speed rail station [just south of I-30) and I-35E in downtown Dallas] to be studied during the National Environmental Policy Act (NEPA) process include:

- Dallas Urban Connection alignments 4B (see Figure 1), which is elevated and crosses over I-35E and immediately curved southward on the west side of the Hyatt Regency Hotel and then curved to generally align with Hotel Street to the approved Dallas high-speed rail station. For additional information, see Dallas City Council Presentation (March 6, 2024) Slide 7 labeled as 1. Elevated – West of Hyatt Regency.
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Figure 1. Western Alignment to be Studied in NEPA

Figure 2. East Alignment Favored for Moving into NEPA

Figure 3. Conceptual High-Speed Rail Structure Integrated with Pedestrian Way

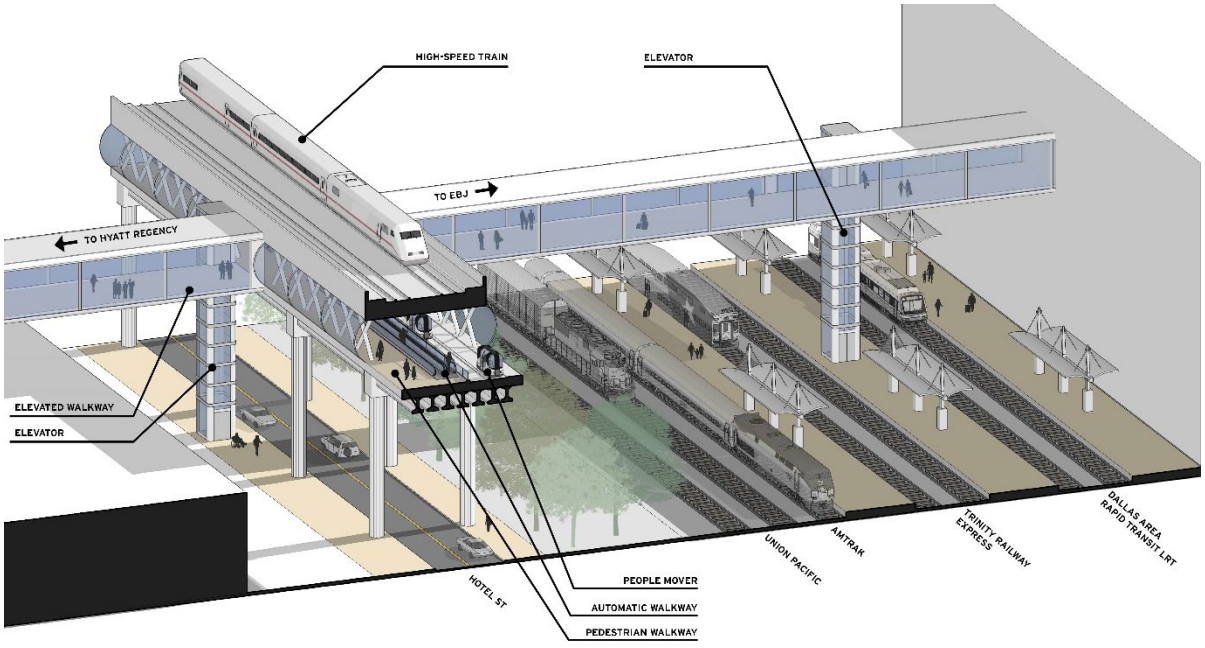
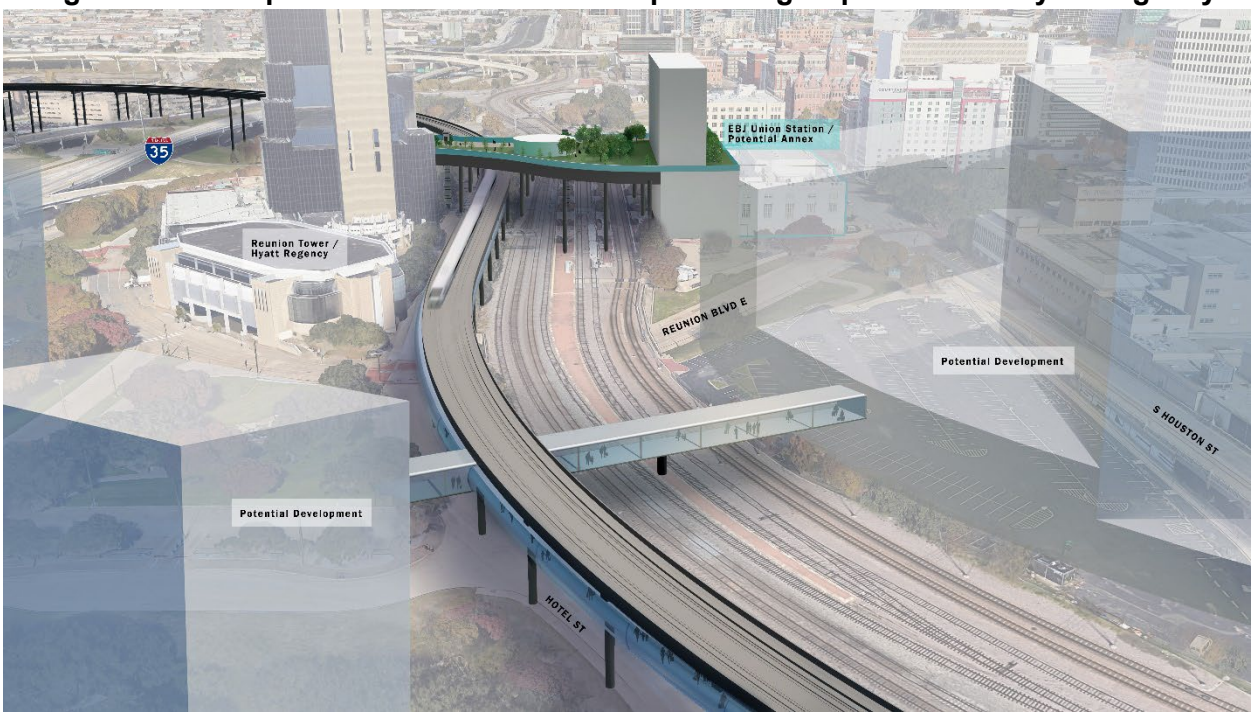


Figure 4. Conceptual View of Pedestrian Cap over High-Speed Rail at Hyatt Regency



Introduction

The purpose of this paper is to review the use of the existing Trinity Railway Express (TRE) as a high-speed rail alignment between Dallas and Fort Worth.

Question Being Asked

Was a **grade-separated TRE** option considered?

Was the Alignment Option Studied?

Yes. Using the TRE corridor was considered during the Level 1 screening in Phase 1 of the Dallas-Fort Worth High-Speed Connections Study.[1]

Summary of Analysis

The TRE corridor was **eliminated** during Level 1 Screening. To improve the travel time/speed along the corridor to meet the travel time goal of 20 minutes, significant improvements (e.g., double tracking, adding bypass tracks at stations or removal of stations, grade-separations at all roadways) would be required in addition to new right-of-way and displacements along significant portions of the corridor. Furthermore, even if the corridor were upgraded, the TRE would not provide seamless connectivity with the approved Dallas high-speed rail station through a one-seat ride or cross-platform transfer.

Public, Stakeholder, and City Engagement

- Elected official briefings were held July 7, 2020; January 15, 2021; and May 14, 2021.
- The Regional Transportation Council (RTC) was briefed on May 14, 2020; November 12, 2020; March 11, 2021; May 13, 2021, July 8, 2021; February 10, 2022; March 9, 2023; December 14, 2023; and January 11, 2024.
- Fourteen public meetings[2] have been held. All meeting materials were available on the project website to review with the opportunity to make comments.
    - General alignments and project overview were presented to the public via virtual public meetings held September 23 and 24, 2020.
    - Results of the Level 1 and Level 2 alternative screening and recommendations were presented to the public via virtual public meetings held January 27 and 28, 2021.
    - Results of the Level 3 alternative screening as well as corridor and mode recommendations were presented to the public via virtual public meetings held May 19 and 20, 2021.
    - Four in-person open houses were held in October 2021 at the substantial completion of Phase 1 in Arlington, Dallas, Fort Worth, and Grand Prairie to show the alternative development process as well as alignment and mode recommendations.

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In accordance with industry design standards, travel speeds over 125 mph require grade-separated track infrastructure with a closed corridor (meaning no at-grade crossings with roadways or railroads and no shared tracks) and new trains capable of achieving speeds of 125 mph and higher. Accommodating a grade-separated high-speed transportation infrastructure while maintaining the at-grade commuter rail/freight infrastructure for at-grade customer connections would require additional right-of-way width and displacements along most of the corridor. The infrastructure upgrades needed would essentially require building a new rail corridor along the existing at-grade tracks as well as new trains.

Repurposing the TRE corridor with a high-speed passenger rail line was also considered. However, this would eliminate service to the current TRE riders using the eight intermediate stations located along the corridor. Additionally, using the TRE right-of-way for high-speed transportation service only would displace existing freight and Amtrak passenger rail service

currently operating within the corridor. BNSF Railway, Union Pacific Railroad, and regional short-line carriers Fort Worth & Western, and Dallas Garland Northeastern operate freight on the TRE commuter line through agreements with the TRE. Rail traffic on the TRE is bidirectional with an average daily train count of 95 trains, of which approximately 70 are passenger trains and 25 are freight trains.

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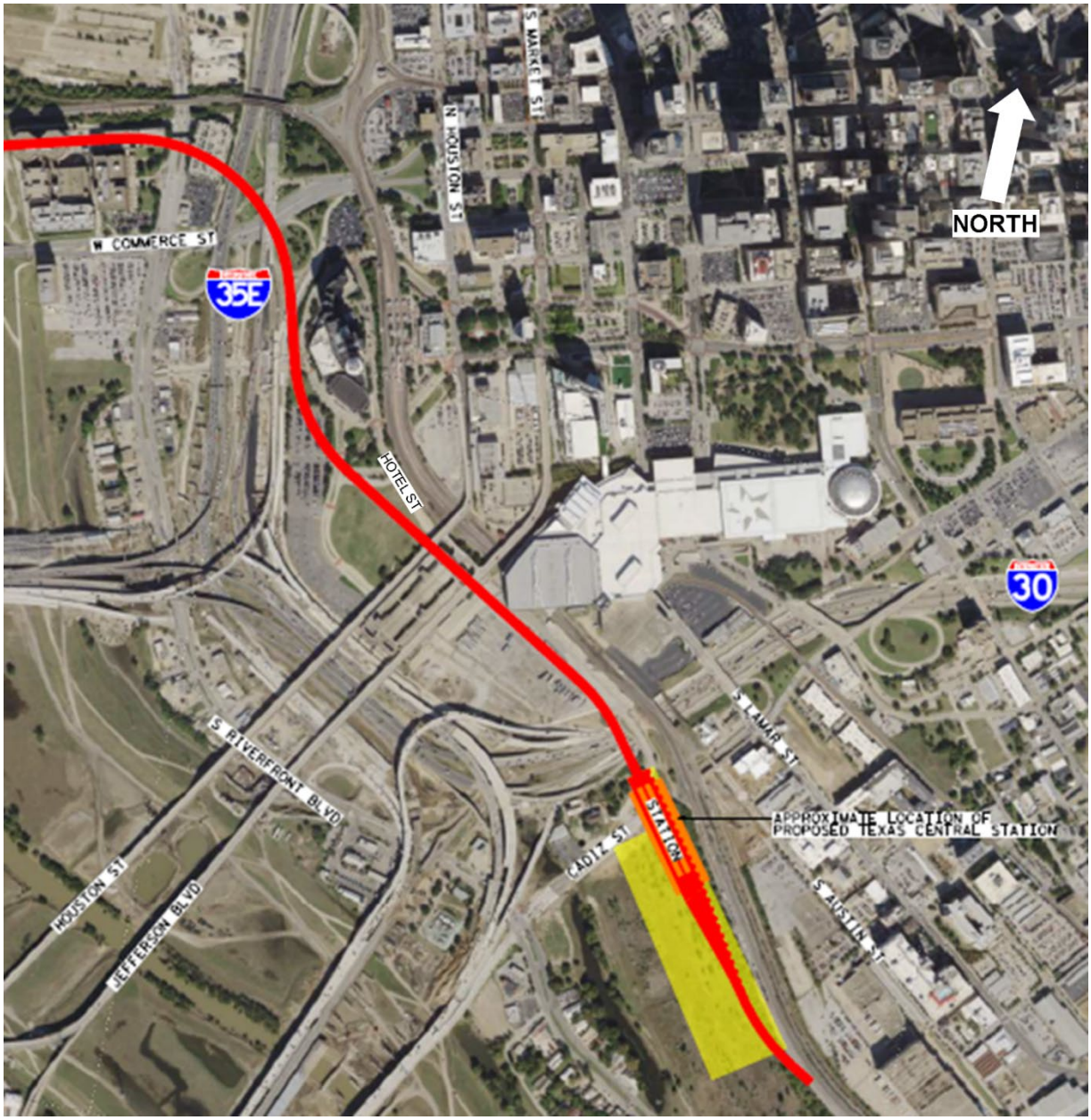

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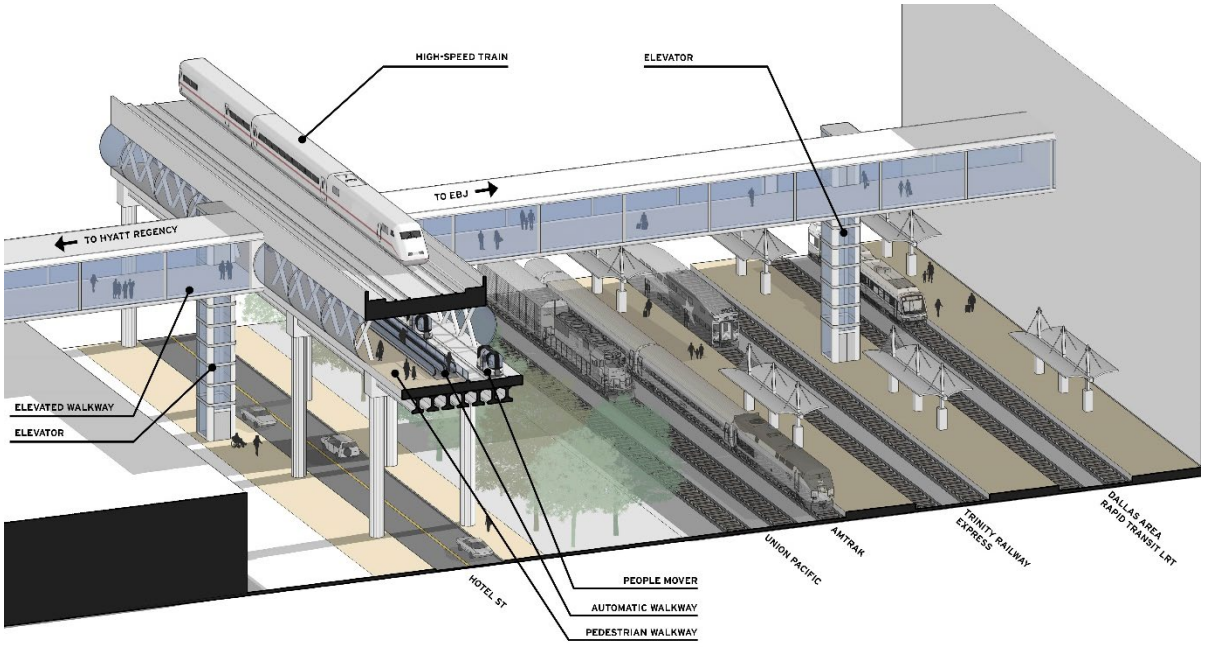

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