
San Antonio Amtrak Improvements Project

Texas Department of Transportation

*FY22 Consolidated Rail Infrastructure and Safety
Improvements (CRISI) Program*

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I. Cover Page

Project Title	San Antonio Amtrak Improvements Project
Applicant	Texas Department of Transportation
Federal Funding Requested Under this NOFO	\$3,192,994.00
Proposed Non-Federal Match	\$1,500,000.00
Does some or all of the proposed Non-Federal Match for the total project cost consist of preliminary engineering costs associated with a Highway-Rail Grade Crossing Improvement Project or a trespassing prevention project incurred before project selection?	No
Other Sources of Federal funding (if applicable)	N/A
Total Project Cost	\$4,692,994.00
Was a Federal Grant Application previously submitted for this Project? If yes, please specify the program, funding year, and project title of the previous application.	No
City(ies), State(s) Where the Project is Located	San Antonio, Bexar County, Texas
Congressional District(s) Where the Project is Located	Texas: 21st and 35th
Is this a project eligible under 49 U.S.C. 22907(c)(2) that supports the development of new intercity passenger rail service routes including alignments for existing routes?	No
Is this a Rural Project? What percentage of the project cost is based in a Rural Area?	No
Is this a project eligible under 49 U.S.C. 22907(c)(11) that supports the development and implementation of measures to prevent trespassing and reduce associated injuries and fatalities?	No
If YES to the previous question, is this project located in a county with the most pedestrian trespasser casualties as identified in the Federal Railroad Administration's National Strategy to Prevent Trespassing on Railroad Property	
Is the application seeking consideration for funding under the Maglev Grants Program?	No
Is the project currently programmed in: State rail plan, State Freight Plan, TIP, STIP, MPO Long Range Transportation Plan, State Long Range Transportation Plan?	TXDOT will add this project to the STIP during the next available amendment cycle.

II. Project Summary

The Texas Department of Transportation (TxDOT) requests \$3,192,994.00 in federal funding from the Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program discretionary grant in partnership with Amtrak and the Union Pacific Railroad (UP) for the San Antonio Amtrak Improvements Project (the Project). The Project addresses current safety and efficiency problems associated with moving Amtrak trains into the San Antonio Station.

The Project includes the following components:

- Switch Replacement: Replacement of the manual switch at Amtrak's San Antonio Station (MP 209.73) with a new, remote-controlled power switch and installation of a split point power derail.
- Wye Connection: A new 4,000 track-foot Wye connection between UP's Del Rio and Austin Subdivisions.
- Siding Installation: A new 10,000 track-foot siding on UP's Austin Subdivision and upgraded centralized traffic control (CTC) signaling on approximately 23 miles between Tower 112 and North Schertz.

TxDOT is seeking funding in two project tracks: Track 2 – PE/NEPA and Track 3 – FD/Construction. Funding for Track 2 will support completion of preliminary engineering and a NEPA document for environmental clearance for all three project components. Track 3 funding will support final design and construction of the switch replacement project.

III. Project Funding

The total estimated project cost is \$4,692,994.00. A cost breakdown of the project components is outlined in Table 1. TxDOT is seeking \$3,192,994.00 in FY2022 Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant funds, or 68.04 percent of the total cost as illustrated in Table 2.

Table 1: Project Components

Project Components			
Component	PE/NEPA (Track 2)	Final Design/ Construction (Track 3)	Total Cost
Switch Replacement	\$90,000.00	\$2,252,994.00	\$2,342,995.00
Wye Connection	\$950,000.00	N/A	\$950,000.00
Siding Installation and CTC Traffic Control	\$1,400,000.00	N/A	\$1,400,000.00
Total Project Cost	\$4,890,000.00	\$2,192,994.00	\$4,692,994.00

The grantee's non-federal contribution is comprised of a cash contribution valued at \$1,500,000.00. The non-federal contribution includes a private sector contribution from Amtrak and Union Pacific. Funding from the project partners will be available immediately upon award of grant funds with no

date restrictions. TxDOT, and its project partners, are committed to delivering a high-quality project on time and on budget utilizing CRISI and private funds.

Funding commitment letters are included in Appendix A.

Table 2: Funding Components and Sources

Funding Components				
Task	Task Name/ Component	Federal Contribution	Non-Federal Contribution	Total Cost
1	Detailed Project Work Plan, Budget, and Schedule	\$0.00	\$0.00	\$0.00
2	Environmental Review	\$499,394.97	\$234,605.03	\$734,000.00
3	Preliminary Engineering and Final Design	\$1,160,719.10	\$545,280.90	\$1,706,000.00
4	Construction	\$1,532,879.93	\$720,114.07	\$2,252,994.00
5	Project Closeout and Administration	\$0.00	\$0.00	\$0.00
Total Project Cost		\$3,192,994.00	\$1,500,000.00	\$4,692,994.00
Funding Sources				
Federal Funds Received from Previous Grant			\$0.00	0.00%
Federal Funding Under this NOFO Request			\$3,192,994.00	68.04%
Non-Federal Funding/Match			\$1,500,000.00	31.96%
Portion of Non-Federal Funding from the Private Sector				
<i>Amtrak</i>			\$1,000,000.00	21.31%
<i>Union Pacific</i>			\$500,000.00	10.65%
Portion of Total Project Costs Spent in a Rural Area			\$0.00	0.00%
Pending Federal Funding Requests			\$0.00	0.00%

IV. Applicant Eligibility

The applicant meets the eligibility criteria defined in the Notice of Funding Opportunity Section C(1)(d). The applicant for this grant is the Texas Department of Transportation, a state government agency. The contact for the application is:

Texas Department of Transportation (TxDOT)

Robin Ayers
Government Affairs Division, Legislative Liaison
125 E. 11th Street
Austin, TX 78701-2483
(512) 463-8345
robin.ayers@txdot.gov

This application is submitted with the full support of Amtrak and Union Pacific Railroad who will be involved in project delivery. As the lead applicant for this CRISI grant, TxDOT will serve as the fiduciary recipient and grant administrator of federal funds on behalf of Amtrak and Union Pacific Railroad.

V. Project Eligibility

The project is eligible under the Notice of Funding Opportunity Section C(3)(a)(4) as a capital project identified by the Secretary as being necessary to reduce congestion and facilitate ridership growth in intercity passenger rail transportation along heavily traveled rail corridors. The project will include eligible components for preliminary engineering, environmental review, final design, construction, and construction administration.

TxDOT is seeking funding in two project tracks: Track 2 – PE/NEPA and Track 3 – FD/Construction. Funding for Track 2 will support completion of preliminary engineering and a NEPA document for environmental clearance for all three project components. Track 3 funding will support final design and construction of the switch replacement project.

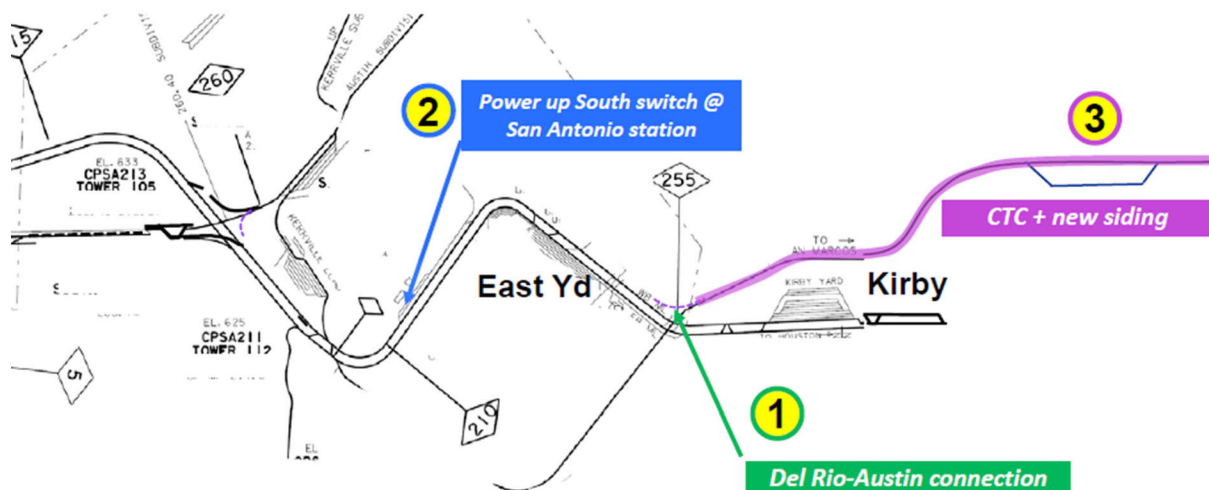
VI. Detailed Project Description

Amtrak serves San Antonio with two train services, the Sunset Limited and Texas Eagle routes, both operated on Union Pacific Railroad's freight rail network. Amtrak and UP have identified and proposed improvements to the network that would improve operations for both passenger and freight rail service within the San Antonio region.

TxDOT, with its project partners at Amtrak and UP, proposes the San Antonio Amtrak Improvements Project to help streamline rail operations within the San Antonio region. The components of the projects are described in detail below. The Project components are illustrated in Figure 1.

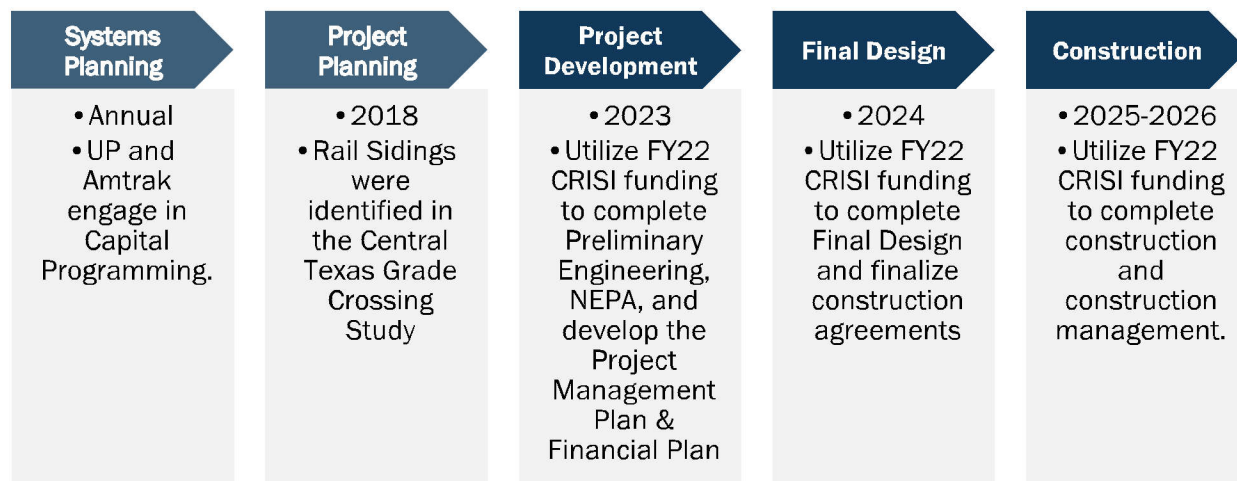
- **Switch Replacement:** Replacement of the No. 10 manual switch at Amtrak's San Antonio Station (MP 209.73) with a new, remote-controlled power switch and installation of a split point power derail (noted with a number 2 in blue on Figure 1).
- **Wye Connection:** A new 4,000 track-foot Wye connection between UP's Del Rio and Austin Subdivisions (noted with a number 1 in green on Figure 1).
- **Siding Installation:** A new 10,000 track-foot siding on UP's Austin Subdivision and upgraded centralized traffic control (CTC) signaling on approximately 23 miles between Tower 112 and North Schertz (noted with a number 3 in purple on Figure 1).

Figure 1: Project Concepts for San Antonio Amtrak Improvements



The project is currently in the Project Development Stage within the Project Lifecycle, as shown in Figure 2.

Figure 2: Project Lifecycle Diagram



Challenges the Project will Address

Safety

Hand throwing the switch at the San Antonio Amtrak Station is labor intensive and poses a safety issue for workers who disembark from the Amtrak train onto railroad right-of-way, throw the switch, and then re-board the train. This laborious activity also causes delay. Replacing the manual hand-thrown switch with a modern, remote-controlled switch will also reduce the risk of mechanical failure.

Expected Outcomes: The Project proposes to replace the manual switch with a powered switch which will be operated remotely. The proposed switch will eliminate all safety risks and injuries related to manually changing the switch's position.

Passenger Rail Delay

Current Amtrak operations for departing Texas Eagle trains entail a back-up movement out of the San Antonio station on UP's Del Rio Subdivision, then a forward movement on UP's Austin 2 Subdivision. With the introduction of a new Wye connection track between these Subdivisions northeast of the passenger rail station, the back-up movement will no longer be needed and the Texas Eagle's route will be about three miles shorter.

Another time-saving improvement is the upgrade of the south switch to the Amtrak station from a manual switch to a powered switch, operated remotely. Operation of a powered switch takes less time, saving not only the time for the worker, but also Amtrak passengers and the rest of the Amtrak on-board crews.

Expected Outcomes: The improvement will reduce travel time for both Amtrak passengers and for Amtrak's on-board crew. The proposed remote-controlled switch at the San Antonio Amtrak Station and Wye track connecting UP's Del Rio and Austin Subdivisions would streamline Amtrak movements out of the San Antonio Amtrak station, reducing travel time for Amtrak passengers. The proposed introduction of CTC for about 23 miles on the Austin 2 Subdivision will help facilitate train meets in this area and allow greater track utilization.

Freight Rail Delay

The greatest benefit calculated by the implementation of this project is the reduction in freight train delays. While the Project is designed to facilitate and streamline Amtrak movements, Amtrak movements occur on UP's freight rail network. Therefore, improving Amtrak's travel time leads to improvements for freight trains as well. Furthermore, some of the improvements, such as a siding on the Austin Subdivision and CTC signaling, would be utilized by freight trains even when Amtrak trains are not present, generating benefits continuously. With project implementation, outbound Amtrak trains will pull forward and cross different roadways, most with lower roadway volumes.

Expected Outcomes: The Project will reduce train delay by two and a half (2.5) hours per day every day of the year. Without the proposed improvements, this delay is expected to grow 0.25 hours annually.

Expected Users and Beneficiaries

There are multiple groups and users that would benefit from the project:

- *Passenger Rail:* The project reduces risk for passenger rail employees and improves travel time savings for the nearly 196,000 annual Amtrak passengers using Texas Eagle and Sunset Limited passenger rail services, including 40,000 annual passengers utilizing the services at San Antonio.
- *Freight Rail:* The project reduces risk and improves delay for the numerous freight trains and their crews operating on the rail network in Texas.
- *Roadway Users:* Roadway users within the state would benefit from reduced delay at at-grade crossings due to re-routing the Amtrak train.

Project Components and Elements

The project components and elements are listed here:

- Preliminary Engineering – all project components
- NEPA document for environmental clearance – all project components
- Final Design – Switch Replacement
- Construction – Switch Replacement
- Railroad Agreements

Switch Replacement

The current switch at the Amtrak San Antonio Station is operated manually. This project will include the Preliminary Engineering, NEPA, Final Design, and Construction for the replacement of the manual switch at Amtrak's San Antonio Station with a new, remote-controlled power switch.

Wye Connection

This project will include the Preliminary Engineering and NEPA for a new wye connection between UP's Del Rio and Austin Subdivisions that includes approximately 4,000 feet of new track.

Siding Installation

This project will include the Preliminary Engineering and NEPA for a new siding track on UP's Austin Subdivision. Approximately 10,000 feet of new track will be constructed between approximately MP 246 and MP 242. In addition to the siding, centralized traffic control signals will be implemented on approximately 23 miles of track, between Tower 112 and North Schertz, including the area of the proposed siding.

Proposed Performance Measures

Once selected for this grant, TxDOT will comply with all FRA reporting, as discussed in the Notice of Funding Opportunity Section F(3)(a, b, c, d) and required in 2 CFR 180.335 and 2 CFR 180.350, including quarterly progress reports, quarterly Federal financial reports, and interim and final performance reports, as well as all applicable auditing, monitoring, and close out requirements.

FRA documents railroad project performance measures in Attachment 5 of the Grant Agreement (see Appendix A). The performance measures most relevant for the Project will determine the success of the project. Table 3 illustrates proposed performance measures.

Table 3: Proposed Performance Measures

Performance Measure	Description of Measure	Measurement	Reporting
Project Component: Switch Replacement Tracks 2 & 3			
Improve operational efficiency at the San Antonio Amtrak Station	Installation of powered, control switch	Pre-Project (Baseline) Performance as of December 1, 2022: Manual, hand-thrown switch	Actual Project Performance After Project Completion: Comparison of actual performance of asset(s) versus the baseline and expected post-project performance.
			Frequency: Confirmation of new switch installation with Final Performance Measure deliverable.
		Expected Post-Project Performance: Powered, control switch	Duration: Until the Project Performance Period end date.
Project Component: Wye Connection, Siding Installation and CTC Traffic Control Track 2			
Completion of NEPA documents/ deliverables	Grantee completes all environmental documentation funded by the Project per the timeframes established in the environmental schedule contained in the Detailed Work Plan.	Pre-Project (Baseline) Performance as of the Grant Award date of December 1, 2022: Not applicable, no documents were completed prior to the Award Date.	Actual Project Performance After Project Completion: Completion of the environmental documents consistent with the environmental schedule.
			Frequency: At applicable milestones, as defined in the environmental schedule.
		Expected Post-Project Performance: Yes; documents completed per the environmental schedule.	Duration: Through completion of the environmental documentation.

Grade Crossing Information

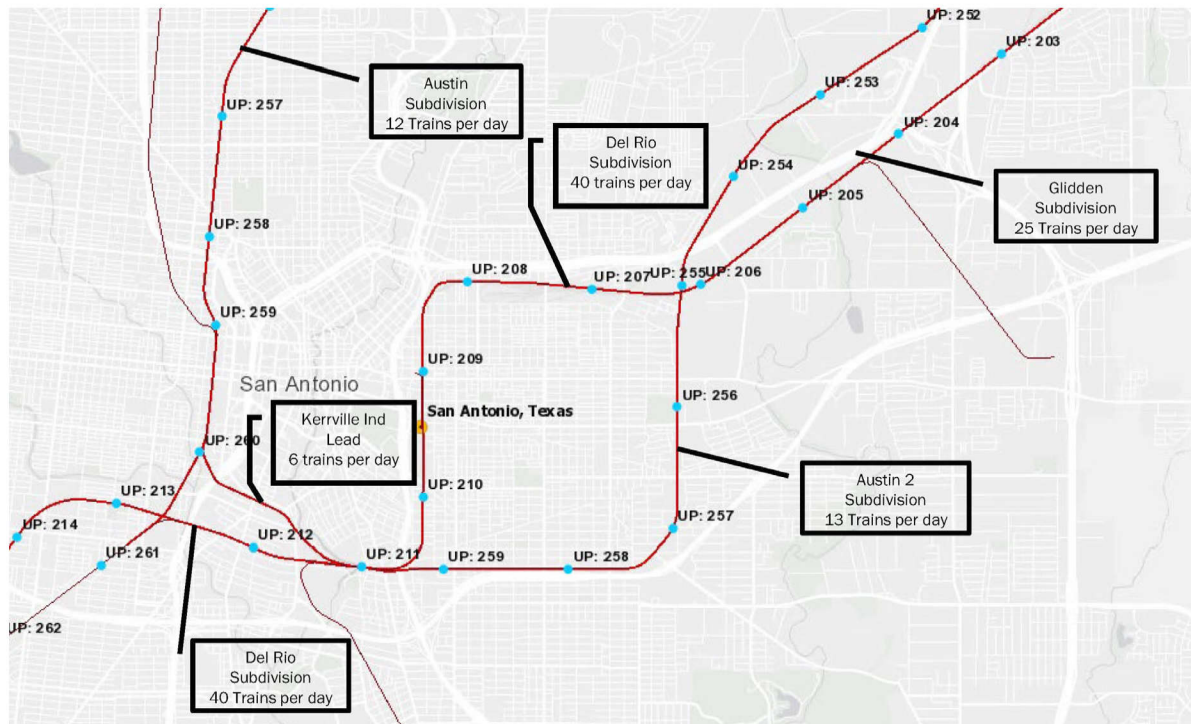
Seven grade crossings will no longer experience extended delays due to the reversing move by Amtrak trains exiting the station and traveling northbound.

Heavily Traveled Rail Corridor Information

The San Antonio Terminal Complex includes several heavily traveled rail corridors on which Amtrak operates passenger rail service. The Austin Subdivision is a southbound directional running, single track corridor with approximately 12 trains per day. The Austin 2 Subdivision is a northbound directional running, single track corridor with approximately 13 trains per day.

The Glidden Subdivision becomes the Del Rio Subdivision as it passes over the Austin 2 Subdivision. There are between 30-40 trains per day on this segment of the rail network. Traveling to the west on the Del Rio Subdivision there are 40 trains per day on this corridor that access the SoSan Yard and the San Antonio Intermodal Terminal. Figure 3 shows the train volumes on the subdivisions in the San Antonio Complex.

Figure 3: Heavily Traveled Rail Corridors in the San Antonio Terminal Complex



PTC Information

The corridor is currently PTC compliant.

Workforce Development and Training Information

TxDOT, in conjunction with the Highway Construction Workforce Partnership (HCWP), recently initiated a pilot program for highway construction training and placement. The initiative increased the number of people trained and hired for construction trades and crafts. TxDOT developed an ethnicity goal for the demographic data of the applicant pool in targeted congressional districts. The program intends to bring appropriate training and numerous job opportunities to the Texas community. This workforce program may be implemented with the construction of this project.

Trespassing Injury and Fatality Prevention and Reduction

This project is not located in a county with the most railroad trespasser casualties as identified in FRA's National Strategy to Prevent Trespassing on Railroad Property.

Emissions Reductions Information

The proposed improvements have the added benefit of reducing emissions.. The proposed siding will increase the rail network's capacity on UP's Austin 2 Subdivision, reducing congestion and ultimately

the reduction of emissions. The proposed remote-controlled switch at the San Antonio Amtrak Station and Wye track connecting UP's Del Rio and Austin Subdivisions will help streamline Amtrak movements out of the San Antonio Amtrak Station, reducing interference with freight trains which will also lead to a reduction in emissions. Finally, the proposed introduction of CTC for about 23 miles on the Austin Subdivision will help facilitate train meets in this area and allow greater track utilization. These factors will all help to reduce delays to freight trains not only when Amtrak trains are present, but continually throughout the day.

Community Emergency Plans

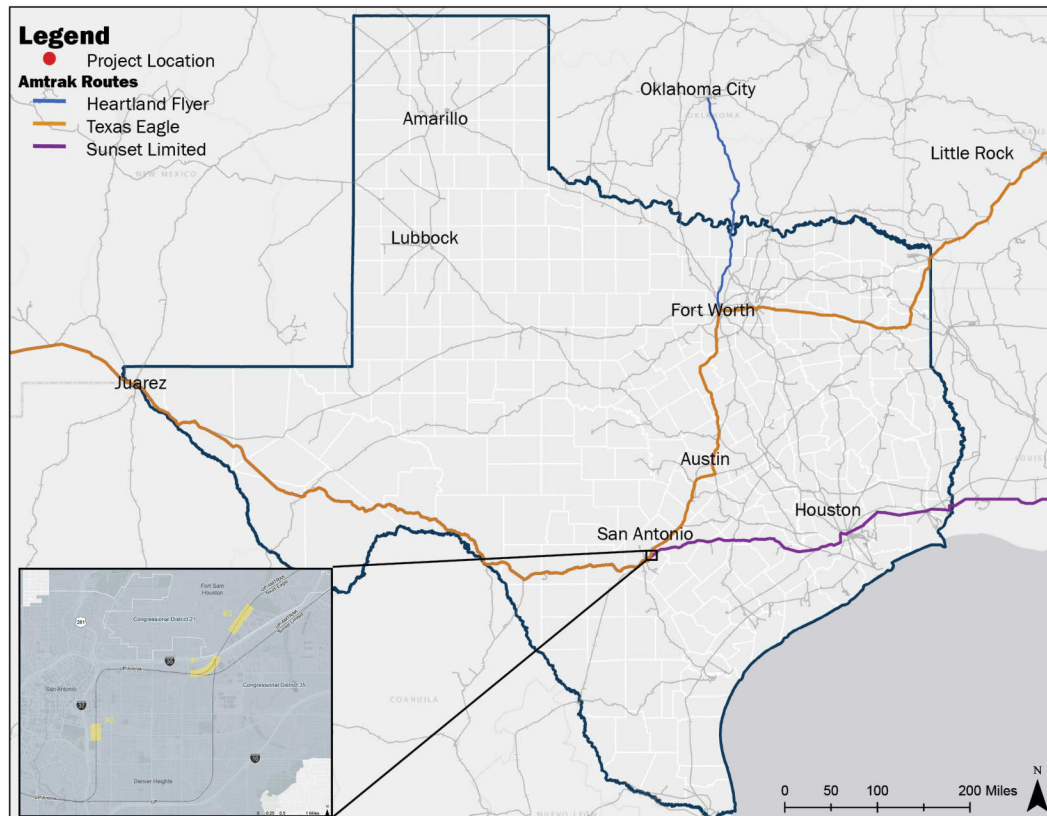
This project does not involve the preparation of emergency plans.

VII. Project Location

The project is located in the City of San Antonio, Bexar County, Texas. San Antonio is the second largest city in the state of Texas with a population of approximately 1.4 million people as of 2020. The project is within the State's 21st and 35th Congressional Districts. The project is within the U.S. Census Bureau's urbanized area (UA) limits for San Antonio, Texas. Figure 4 shows the proposed project location and surrounding key elements in the area. The geographic location in decimal degrees as reported on the U.S. DOT Crossing Inventory Form is:

- Wye Location: latitude 29.261229N and longitude -98.263907W
- Switch Location: latitude 29.251215N and longitude -98.283982W
- Siding Location: latitude 29.273938N and longitude -98.251192W

Figure 4: Project Location Map



VIII. Evaluation and Selection Criteria

Evaluation Criteria

Project Benefits

This Benefit Cost Analysis quantifies and compares the net benefits and costs with and without the Project — the “Build” and “No-Build” scenarios, respectively. The greatest benefit calculated in this analysis is reduction in freight train delays. While the Project is designed to facilitate and streamline Amtrak movements, Amtrak movements occur on UP's freight rail network. The fluidity of Amtrak movements leads to fluidity improvements for freight trains as well. Some of the improvements, such as a siding on the Austin Subdivision and CTC signaling, would be utilized by freight trains even when Amtrak trains are not present, generating continuous benefits. A second significant benefit is the residual value of the infrastructure. Since the track and its components can be expected to last 100 years with ongoing maintenance, about 77 percent of the Project's cost would be retained after the 20-year analysis period. A third major benefit is time savings for Amtrak passengers and crew. Additional benefits include reduced locomotive emissions, reduced vehicular delays and accidents at railroad crossings, reduced fuel consumption by Amtrak, and reduced injuries related to operating a manual switch. This BCA illustrates the benefits of the San Antonio Amtrak Improvements Project compared to the costs over a 20-year analysis period, as summarized in Table 4.

Table 4: Benefit-Cost Analysis Summary (2020 Dollars in Millions)

Description	Estimate	Discounted (7%)*
Net Benefits	\$105.3	\$33.5
Costs	\$32.4	\$22.3
Benefit-Cost Ratio (BCR)		1.50: 1
Net Present Value (NPV)		\$9.65

* Except for CO₂ emissions, discounted at 3 percent, as per USDOT guidelines.

Technical Merit

FRA will evaluate application information for the degree to which:

(A) The tasks and subtasks outlined in the SOW are appropriate to achieve the expected outcomes of the proposed project.

The proposed tasks are appropriate for construction projects of similar size and scope based on TxDOT and Amtrak experience on similar construction projects. The project has and will continue to undergo thorough review of the design and construction by qualified engineers considering relevant design criteria and federal, state, and local regulations.

(B) Applications indicate strong project readiness and meet requirements under the project track(s) designated by the applicant.

TxDOT, UP, and Amtrak have completed studies and capital programing for these projects. Union Pacific prepared capital cost estimates and will provide engineering plans for the switch upgrade to FRA when the grant is announced. The proposed action for the switch upgrade qualifies as a CE under the following CE listed in 23 Part 771.116(c): (9). The proposed action for the wye and siding qualifies as a CE under the following CE listed in 23 Part 771.116(c): (12).

(C) The technical qualifications and experience of key personnel proposed to lead and perform the technical efforts, and the qualifications of the primary and supporting organizations to fully and successfully execute the proposed project within the proposed timeframe and budget are demonstrated.

TxDOT has extensive experience managing and overseeing similar projects outlined in this application. A project management plan will be in place for managing the implementation of the proposed project, including the management and mitigation of project risks. TxDOT is well versed in project delivery from contracting, oversight, and change order management. TxDOT and Amtrak are experienced at procurement and project management targeted at successful and accountable project delivery. TxDOT will let all bids for construction using federally-approved processes.

(D) The proposed project's business plan considers potential private sector participation in the financing, construction, or operation of the proposed project.

The project includes private sector participation in Preliminary Design, NEPA, Final Design, construction, and operation of the proposed project. TxDOT, Amtrak, and Union Pacific Railroad will contribute to the non-Federal matching funds for the replacement of the manual switch with the remote-controlled switch, the new Wye connection, and the CTC and siding.

(E) The applicant has, or will have the legal, financial, and technical capacity to carry out the proposed project; satisfactory continuing control over the use of the equipment or facilities; and the capability and willingness to maintain the equipment or facilities.

TxDOT has the legal, financial, and technical capacity to carry out the proposed project; and UP and Amtrak will have satisfactory continuing control over the use of the facility and the capability and willingness to maintain the facility.

(F) The degree to which the applicant and project deploy innovative technology, encourage innovative approaches to project delivery, and incentivize the use of innovative financing.

The deployment of innovative technology, innovative approaches to project delivery, and the use of innovative financing will be explored further during the Final Design process.

(G) The proposed project is consistent with planning guidance and documents set forth by DOT, including those required by law or State rail plans developed under title 49, United State Code, chapter 227.

The project is consistent with planning guidance and documents set forth by U.S. DOT, including those required by law, including the Texas State Rail Plan (December 2019) developed under Title 49, United State Code, Chapter 227.

Selection Criteria

Project Characteristics

i. FRA will give preference to the following:

(A) A proposed project for which the proposed Federal share of total project costs does not exceed 50 percent;

The proposed federal share for this project is 68.04 percent.

(B) Projects for which the net benefits of the grant funds will be maximized considering the Benefit-Cost Analysis, including anticipated private and public benefits relative to the costs of the proposed project, and factoring in the other considerations in 49 U.S.C. 22907(e)(2).

The benefits of the project (discounted at 7 percent) as calculated in the BCA are \$33.5 M (2020 dollars). The project's Benefit-Cost Ratio is 1.50:1.

(C) For projects eligible under 49 U.S.C. 22907(c)(11), projects for the development and implementation of measures to prevent trespassing and reduce associated injuries and fatalities that are located in the top 25 counties with the most pedestrian casualties. In addition, FRA is strongly interested in applications that incorporate a comprehensive approach to project development such as is described in FRA's Community Trespass Prevention Program, and will prioritize selections for those applications that involve multiple project partners and include infrastructure improvements in combination with a safety program focused on enforcement and outreach.

This project is not located in a county with the most railroad trespasser casualties as identified in FRA's National Strategy to Prevent Trespassing on Railroad Property.

Strategic Goals

Safety

The Project proposes to replace the manual switch with a powered switch which will be operated remotely. The proposed switch will eliminate worker injuries related to changing the switch's position.

Workplace injuries related to the operation of the manual switch were estimated and valued using information previously stated and the following information and assumptions:

- The injury rate, excluding grade-crossing incidents, for railroad workers was 8.80 injuries per one million hours worked in 2021;¹
- The manual switch at the San Antonio Station is currently adjusted four (4) times for each Amtrak Texas Eagle train, twice upon arrival and twice at departure and twice for each Sunset Limited train (either upon arrival or departure);
- Each operation of the manual switch takes about five (5) minutes, or 0.0833 man-hours per operation;²
- Amtrak experienced 27 injuries related to the operation of manual switches throughout the U.S. over the past ten years, all involving bruises, burns, strains, and other non-incapacitating injuries. Accordingly, the BCA assumes all injuries related to the manual switch at the San Antonio station are non-incapacitating injuries, KABCO level B; and
- The operation of the proposed powered, remotely controlled switch will generate no injuries.

Equitable Economic Strength and Improving Core Assets

Long-Term Job Creation and Economic Security: Reliability is critical to move people and goods safely and efficiently. This project will enable Amtrak and the UP to operate in a safe and efficient manner by reducing delay on their facilities. This strengthens the economic security within the state of Texas, which could result in long-term job creation.

Investment in Infrastructure Assets: Investing in this project supports the safe movement of people and goods throughout the region. The project would improve system reliability at the local and regional scale for passenger rail traffic by eliminating inefficient train movements.

The project would also enable Amtrak, as well as two Class I railroads, to effectively manage rail traffic and enhance corridor safety.

Equity and Barriers to Opportunity

Expansion of Transportation Opportunities: The project will reduce barriers to economic opportunity for San Antonio residents, including in two adjacent, targeted census tracts. These projects would enhance the existing transportation system by providing fewer delays in service and better connections between residences, jobs, public services, and local amenities.

Community Engagement: Throughout the final design and construction, community engagement will ensure that stakeholder input is integrated into project implementation. Community engagement efforts will be deliberate in accommodating non-English speakers and community members with a disability.

Expand Workforce and Training: TxDOT, in conjunction with the Highway Construction Workforce Partnership, recently initiated a pilot program for highway construction training and placement. The

¹ BTS, *Fatalities and Injuries of On-Duty Railroad Employees*, <https://www.bts.gov/content/fatalities-and-injuries-duty-railroad-employees>, accessed 11/13/2022.

² UP and Amtrak estimate.

initiative increased the number of people trained and hired for construction trades and crafts. TxDOT developed an ethnicity goal for the demographic data of the applicant pool in targeted congressional districts. The program intends to bring appropriate training and numerous job opportunities to the Texas community. This workforce program may be replicated with the construction of this project.

Climate Change and Sustainability

Reduce Emissions and Promote Energy Efficiency: This project supports reductions in emissions and fuel consumption. The proposed siding will increase the rail network's capacity on UP's Austin 2 Subdivision, reducing congestion and ultimately the reduction of emissions. The proposed remote-controlled switch at the San Antonio Station and Wye track connecting UP's Del Rio and Austin Subdivisions will help streamline Amtrak movements out of the San Antonio Station, reducing interference with freight trains which will also lead to a reduction in emissions. Finally, the proposed introduction of CTC for about 23 miles on the Austin 2 Subdivision will help facilitate train meets in this area and allow greater track utilization. These factors will all help to reduce delays to freight trains, not only when Amtrak trains are present, but continually throughout the day.

Protect Local Ecosystems: Landscaping, drainage enhancements, and construction best practices would support the protection of local ecosystems. Overall, the project would improve the functionality of the transportation system without increasing impermeable surface and minimizing impacts to undeveloped land compared to other considered alternatives. The project will include adequate drainage enhancements and follow best practices for stormwater pollution prevention during construction.

Transformation

Construction of the Project will result in improved rail infrastructure, greater supply chain resilience, and asset management that ensures a state of good repair for years to come. The project components will enhance safety in the corridor and greatly reduce passenger and freight rail delay.

IX. Project Implementation and Management

TxDOT is the lead applicant for this application and Amtrak and Union Pacific Railroad are partners in delivering the Project. TxDOT's vision is to be a "forward-thinking leader delivering mobility, enabling economic opportunity, and enhancing quality of life for all Texans." As of August 2021, TxDOT has over 12,000 employees in 25 districts and its headquarters in Austin. Approximately 40 percent of TxDOT's revenue comes from federal funds.

TxDOT has been awarded several USDOT discretionary grants in recent years. Table 5 summarizes TxDOT awarded USDOT discretionary grants since 2015.

Table 5. Texas Discretionary Grants Awarded from 2015 to Present

USDOT Program	Award Amount	Award Year	Location	Project Type
RAISE	\$25,000,000	2022	Statewide	Active Transportation
RAISE	\$12,000,000	2021	Dallas	Bike and pedestrian
INFRA	\$50,000,000	2021	Gainesville	Roadway improvements
CRISI	\$1,451,250	2020	Hutto	Grade crossing improvements
BUILD	\$25,000,000	2020	Odessa/Midland	Interchange improvements
BUILD	\$25,000,000	2018	Winkler County	Grade separation
BUILD	\$25,000,000	2018	Glasscock and Reagan Counties	Roadway improvements and grade separation
INFRA	\$65,000,000	2018	Tarrant County	Roadway improvements
ATCMTD	\$6,850,000	2018	I-10 Corridor	Truck parking availability system
ATCMTD	\$6,090,221	2017	Statewide	Freight technology
FASTLANE	\$7,000,000	2017	Presidio County	Railroad improvements
ATCMTD	\$8,900,000	2016	Houston	ITS improvements
TIGER	\$20,802,400	2015	Statewide	Transit

TxDOT has experience managing and overseeing a CRISI project for intersection and highway-rail grade crossing improvements. TxDOT will implement and manage this project while working closely to manage funding provided by Amtrak and Union Pacific. A project management plan will be in place for managing the implementation of the proposed project, including the management and mitigation of project risks. TxDOT is well versed in project delivery from contracting, oversight, and change order management.

X. Planning Readiness for Tracks 2 and 3 (Project Development and FD/Construction)

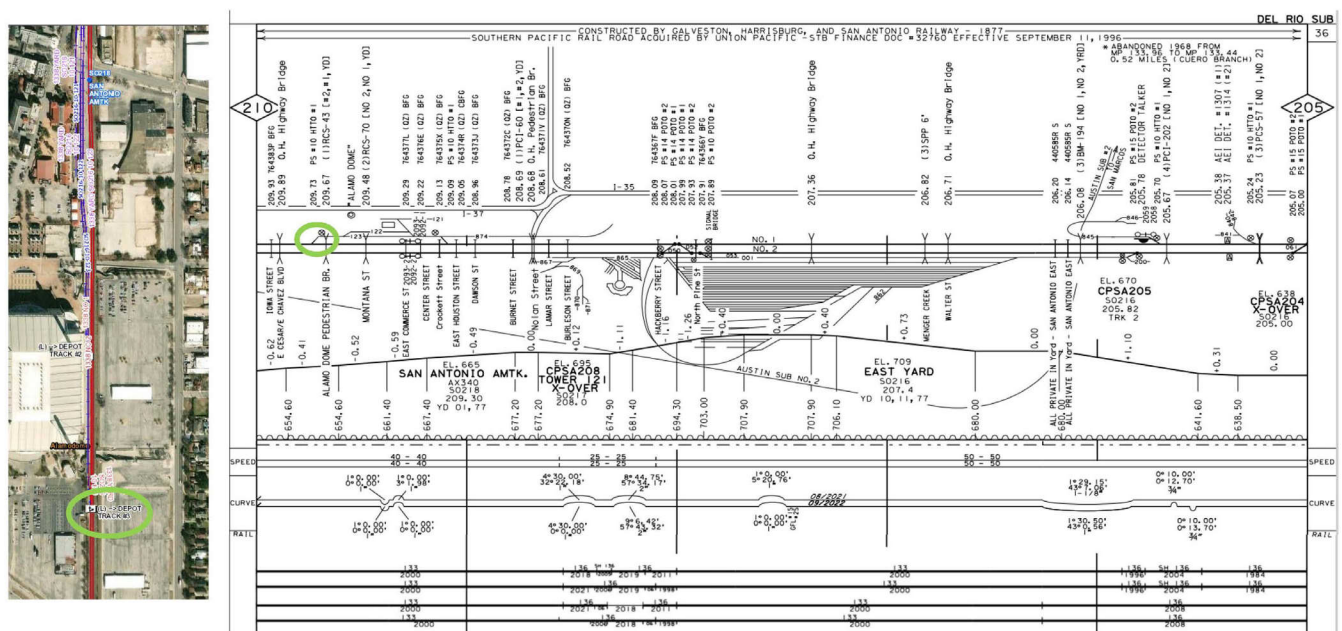
The need for capacity improvements on the rail network in Bexar County is documented in the Central Texas Grade Crossing Study (TxDOT, 2018). The 2018 study was undertaken by TxDOT to identify grade separation opportunities to promote mobility solutions in Central Texas. As part of the study, partners at Union Pacific indicated that improvements on the rail network, including extensions and new sidings, may provide more efficient solutions over grade separations. TxDOT explored opportunities to add sidings on the Austin 2 subdivision that support early planning for the improvements identified for this grant application.

Since that time, Union Pacific and Amtrak have worked collaboratively to identify infrastructure investments on long-distance Amtrak routes in Texas to improve efficiency and safety. This collaboration is on-going and uses internal capital programming to document the projects.

XI. Design Readiness for Track 3 (FD/Construction)

Union Pacific will provide engineering plans for the switch upgrade to FRA when the grant is announced. The detailed capital cost estimate for the switch upgrade is included in Appendix D.

Figure 5: Switch Location on UP Del Rio Subdivision Track Chart



XII. Environmental Readiness for Track 3 (FD/Construction)

The proposed action for the switch upgrade qualifies as a CE under the following CE listed in 23 Part 771.116(c): (9).

Maintenance or repair of existing railroad facilities, where such activities do not change the existing character of the facility, including equipment; track and bridge structures; electrification,

communication, signaling, or security facilities; stations; tunnels; maintenance-of-way and maintenance-of-equipment bases.

The proposed action for the Wye and siding qualifies as a CE under the following CE listed in 23 Part 771.116(c): (12).

Minor rail line additions, including construction of side tracks, passing tracks, crossovers, short connections between existing rail lines, and new tracks within existing rail yards or right-of-way, provided that such additions are not inconsistent with existing zoning, do not involve acquisition of a significant amount of right-of-way, and do not significantly alter the traffic density characteristics of the existing rail lines or rail facilities.

However, due to the need for right-of-way acquisition, the grantee is prepared to complete an Environmental Assessment for this proposed action.

Anticipated Environmental Impacts, Permits, and Consultations: While the project is not likely to be controversial on environmental grounds, the proposed action may affect environmental resources the FRA is required to review. Anticipated environmental impacts are summarized in Table 6. Historic and cultural resources, noise and vibration, air quality, water quality, and prime and unique farmlands are not likely to be impacted.

Table 6. Potential Environmental Impacts

Resource Area	Anticipated Impact
Parks and Recreation Facilities	It is not anticipated that this project would impact any recreational facilities or 4(f) properties.
Hazardous Materials	Potential Hazardous Materials impact will be reviewed and mitigated as required.
Property Acquisition	Right-of-way acquisition or temporary easements may be needed to construct the Wye connection and siding. Property acquisition is not anticipated to result in the relocation of businesses or individuals. Any acquisitions would conform with state and federal requirements.
Community Impacts and Environmental Justice	The project is anticipated to result in positive community impacts. Public outreach will be included in the project scope.
Surface Waters, Floodplains, and Wetlands	Should any of these resources be impacted TxDOT will ensure that required environmental permits or approvals are obtained.
Threatened and Endangered Species	Potential impacts to threatened or endangered species or protected habitats will be reviewed and mitigated as required.

TxDOT is prepared to expeditiously advance completion of the appropriate NEPA document upon execution of the Consolidated Rail Infrastructure and Safety Improvements grant agreement.

XIII. DOT Strategic Goals

Climate Change and Sustainability Impacts: This project supports reduction in emissions through investing in mass transit. This investment along passenger rail corridors represents an investment in transportation options that reduce emissions. Supporting passenger rail will help reduce future emissions by converting vehicle trips to rail trips.

Rail is also the most fuel-efficient way to move people and freight over land, ahead of other modes of surface transportation when it comes to limiting its carbon footprint. According to the American Association of Railroads, moving freight by train instead of truck reduces greenhouse gas emissions by up to 75 percent. Therefore, the project allows Amtrak and two Class I railroads to effectively manage and grow a lower-emissions mode of transportation to support national commerce through the movement of people and goods.

The BCA analysis conducted for the Project provides further data on its anticipated emissions reductions. Locomotive fuel consumption will be lower in the Build scenario due to fewer freight train delays and a shorter route for northbound Texas Eagle trains.

Improve Equity and Reduce Barriers to Opportunity: Residents in this area spend more time traveling and take longer to get where they need to go, especially those living in two key census tracts. These project components would enhance the existing transportation system by providing fewer delays in service and better connections between residences, jobs, public services, and local amenities.

Advance Quality Jobs and Workforce Programs: Texas has a very diverse work force and population, with minorities accounting for over 95 percent of the population growth in Texas. Approximately 40 percent of the Texas population is Hispanic or Latino, and approximately 13 percent of the state population is Black or African American. The project supports existing and growing employers that provide approximately 111,000 jobs within a two-mile radius of the project.

The Highway Construction Workforce Partnership Strategic Workforce Development, a pilot program within Texas, works to increase the capacity and capability of the highway construction workforce. The program intends to bring appropriate training and numerous job opportunities to the Texas community. The San Antonio Amtrak Improvement Project may use this workforce program to ensure proper training and diversity within the project's construction.