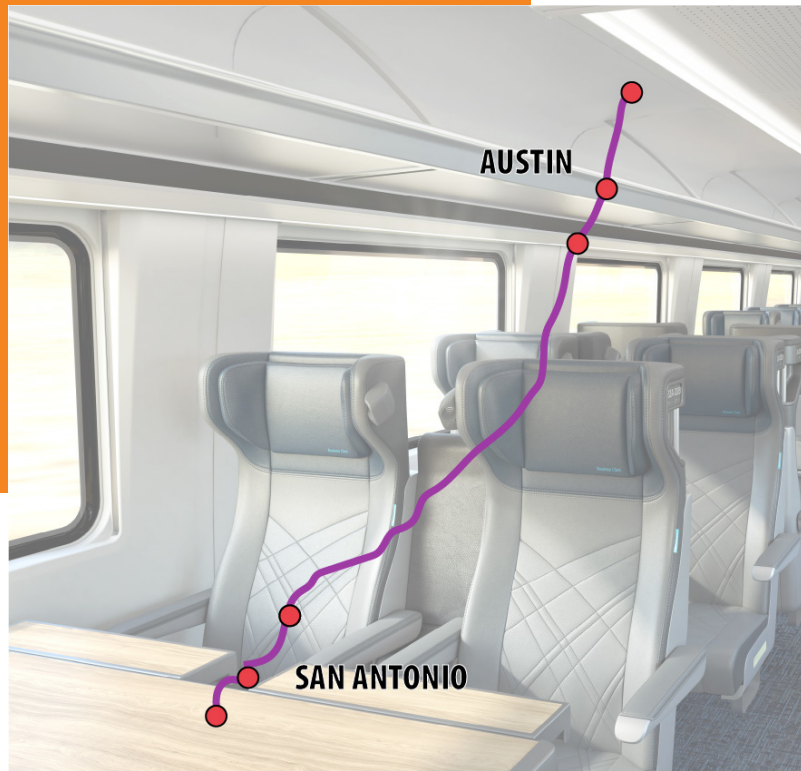


San Antonio - Austin Regional Rail: A Staged Approach



A proposal for rapidly
implementable, cost-effective
regional rail in three stages



By Jesse Harasta, PhD and Jack Lloyd-Reilley
Approved by the San Antonians for Rail Transit Board 6/20/24

Ten Immediate Actions for Lone Star Rail for San Antonio Leaders

- 1) Launch the path to Minimal Viable Service by requesting mobility and feasibility studies through UTSA (see page 13)
- 2) Call for open and formal discussions on a future operator of the service with partners in Austin through the Texas Passenger Rail Advisory Committee (see page 4)
- 3) Study a re-routing of VIA Bus and the future Silver ART line to better serve rail passengers (see page 11)
- 4) Study the future use of the city-owned lot at 298 Cherry St. for rail parking and, long term, mixed use transit oriented development (see page 12)
- 5) Install B-Cycles and Bicycle Lockers at Sunset Station (see page 10)
- 6) Integrate study of rail crossings and a pedestrian bridge into ongoing East Side-Downtown federal connectivity study (see page 12)
- 7) Build a relationship between the city and San Antonio Rail Heritage Museum to restore the #794 Steam Locomotive and bring volunteer-run heritage rail to Sunset Station (see page 14)
- 8) Install “instagrammable” art in the boarding areas of Sunset Station (see page 13)
- 9) Implement improved wayfinding connecting Sunset Station to Downtown (page 12)
- 10) Set up the “Chili Queen” all-night taco truck celebrating our culinary heritage and serving late-night rail passengers (see page 13)



Executive Summary

The Lone Star Rail – a proposed regional rail system connecting San Antonio and Austin – faces the same political, logistical and financial challenges that have stymied other rail projects in the region in the past. This proposal seeks to chart a path that is cost effective, politically sound, rapid to implement and gives a depth of service not previously seen in the region.

At the core of this proposal is the division of the project into three stages, each of which builds upon the previous not only infrastructurally, but also politically.

- **Stage One:** Focuses upon upgrades to San Antonio Station, the current Amtrak station, using entirely small local dollars, greatly improving local service and linking the city to its station (and vice versa) in innovative ways.
- **Stage Two:** Concentrates on achieving “**minimum viable service**,” which means multiple daily trips between San Antonio and Austin at comparable speeds to driving at absolute minimum cost using only a single trainset. By constructing it using three stations in each of the two cities, it also serves as a rudimentary single-line metro, providing intra-city connections. This service, along with other improvements in this stage create the constituencies and necessary political willpower to continue
- **Stage Three:** Completes the system with a full “**regular service**,” including both local and express trains that link not only the two primary cities but also suburban communities and destinations within. Stage three involves the complete reconstruction and reclamation of Sunset Station or the creation of a new San Antonio Station to provide necessary links between Lone Star Rail and Amtrak’s planned service expansions to the region.

Throughout this document, each stage is broken down into separate projects that are divided between the “Core” (those required for success in the stage’s principal outcomes) and “Additional” (those that give additional functionality and increase project success). For instance, in stage one, the recommended Core projects include station improvements such as bicycle infrastructure, improved bus connections, better wayfinding (signage) and the addition of parking (which the station currently totally lacks), while additional projects include a food truck celebrating San Antonio’s culinary heritage, public art, and an all-volunteer heritage rail service.

This document also explores the question of what institutions will be the “manager” (setting strategic goals and overseeing funding and planning) and the “operator” (running the day-to-day train service). After exploring the various options, it suggests Amtrak as the preferred operator, giving multiple reasons, such as Amtrak’s already existing maintenance and training facilities, ability to call on additional resources during a crisis, and unparalleled depth of experience managing regional rail.

Finally, for each stage, funding and resources are examined and a series of both local and national grant options are discussed. This project recognizes the difficulties posed by TxDOT’s lack of funding for matched rail grants and suggests, at each step, practical solutions for resolving that challenge.

Contents

Threading the Needle: Cost, Timescales and Needs.....	1
The Three Stages: A Basic Layout.....	1
Stage One.....	2
Stage Two.....	2
Stage Three.....	3
Funding Sources.....	3
Choosing an Operator.....	4
Types of Operators.....	5
Fully Private Service.....	5
Public Service with Private Contractor.....	5
Public Service with a Transit Authority.....	5
Public Service with Amtrak.....	6
Reasons to Consider Amtrak as the Preferred Operator.....	6
Institutional Depth and Experience.....	6
Existing Operations and Infrastructure.....	6
Unique Legal Position and Powers.....	7
Experience in Operating Regional Rail on	
Tracks owned by Third Parties.....	7
Federal Funding is Currently Available.....	7
Standing Operating Relationship with Union Pacific.....	8
Other Expansion in Texas.....	8
Amtrak – Long Term View.....	8
Stage One - In Depth Discussion.....	8
Outcomes.....	9
Projects (Core and Additional).....	9
Bicycle Lockers or Racks (Core).....	10
Better Bus Connections (Core).....	11
Better Wayfinding (Core).....	12
Parking (Core).....	12
Research and Planning (Core).....	13
The “Chili Queen” Food Truck (Additional).....	13
Public Art (Additional).....	13
Volunteer Heritage Rail (Additional).....	14
Resources.....	14
Actors.....	14

Stage Two – In Depth Discussion	15
Outcomes.....	15
Projects (Core and Additional).....	18
New Stations in San Antonio and Austin.....	18
The New Trainset (Core).....	21
Special Event Service (Core).....	22
Track Improvements for Speed and Efficiency (Core).....	22
Sunset Station Upgrades: Platforms, Parking, Pedestrian Bridge, Etc. (Core).....	23
Night Trains (Additional).....	25
Mission Express (Additional).....	25
Resources.....	26
Actors.....	27
Stage Three – In Depth Discussion	27
Outcomes.....	27
Projects (Core and Additional).....	28
Grade separation of nearby road-rail crossings (Core).....	28
New Stations for Suburban Service (Core).....	29
A New Central Station for San Antonio (Core)...	29
Intra-city Rail in San Antonio (Additional)...	30
Inter-city Rail in San Antonio (Additional)...	30
Resources.....	31
Actors.....	31
Conclusion	31

For More information on San Antonians for Rail Transit

Visit our webpage: www.railforsanantonio.com

Or contact us at contact@railforsanantonio.com

Threading the Needle: Cost, Timescales and Needs

Central Texas is booming, with a seemingly ever-growing population, economic impact and sprawl across the landscape. The cities of San Antonio and Austin, as well as Buda, Kyle and San Marcos, are becoming America's newest multi-city megalopolis. Unfortunately, transportation options have not grown with this city, and the route between the two city centers, in particular Interstate 35, has become infamous for bumper-to-bumper traffic. What's more, according to TxDOT's own plans, the current expansion to double deck major segments of I-35, will be maxing out the limit of possible lane expansions.

In recent years, the region has seen widespread interest from municipal and county governments in creating a regular regional rail service. This would allow people to easily move between the two city centers and stops along the way without using the highway, hopefully diverting thousands of automobiles off of I-35 and creating a more sustainable, vibrant region. However, this interest is tempered with considerable caution because previous attempts to achieve this, and other rail services, have either failed or been deeply contentious and costly. There is worry about costly boondoggles, and the price of future failures.

Drawing inspiration from San Antonio's exceptional Greenway Trail system, which was built piece by piece using a complex mosaic of funders and supporters, this report proposes the construction of a rail system in three carefully planned steps that each generate tangible benefits to the community. This document seeks to thread four challenging needles, as the service needs to simultaneously be:

- (a) able to be quickly implemented;
- (b) cost effective;
- (c) able to meet the current transportation need; and
- (d) prepared for future growth.

This is a San Antonio-focused document, though the basic structure of the three stages would be applicable to all of the communities along the route. Other communities along the route are strongly encouraged to engage in similar introspection about local improvements.

The Three Stages: A Basic Layout

In order to achieve proper timescales and allow various institutional actors to work as quickly and effectively as possible, this report has divided the proposal into three distinct stages. These outcomes are divided between "Core Outcomes" – those goals that are central to the functioning of the stage and the ability to move to the next – and "Additional Outcomes" – which are peripheral to the success of the core project but would create significant added value if the resources can be found to include them.

Stage One

Stage one involves upgrades, mostly to the current San Antonio Amtrak Station and its environs, that could be undertaken immediately by the City, VIA or other local entities without needing the input or negotiation with other entities. Similar upgrades would also be sought for Amtrak's existing Austin and San Marcos Stations through local consultation.

- **Core Outcomes:** Connect the community of San Antonio to its train station and encourage current rail passengers on layover to enter San Antonio. Upgrade the station and surroundings to prepare for future improvements.
- **Additional Outcomes:** The addition of food service and art to San Antonio station to celebrate the city's unique heritage and encourage visitors to the Station. Leverage local non-profit organizations and outside grants to provide heritage and excursion rail out of San Antonio Station at no cost to local taxpayers.

Stage Two

Stage two would see the introduction of the first increase in rail service between San Antonio and Austin. This step will involve upgrades to the existing rail infrastructure and service, and would require outside (likely federal) funding and would involve negotiations with Union Pacific and Amtrak, as well as other potential outside entities. This would involve significant upgrades to current stations, the construction of new stations, and minor improvements to tracks, which would reduce travel times between the downtowns of San Antonio and Austin to one hour and twenty two minutes, from a current three hours and twenty six minutes. The goal of these changes would be creating a daily service with two round trips in addition to Amtrak's current *Texas Eagle* service. This service, which would require the use of only a single train, would also have extended intra-city service in San Antonio, becoming in effect a basic, one-line metro system with four round trips per day between the northern and southern ends regions of the city.

This level of frequency, connectivity, and timing, which is referred to as "Minimum Viable Service," would allow for travel between cities and within San Antonio at the start and end of the workday. Workday commuter traffic within Austin could be achieved near the end of this stage, as funding and service levels begin to approach stage three. It would also be important to develop Special Event service to alleviate traffic in downtown San Antonio after sporting events, concerts and similar activities.

- **Core Outcomes:** Achieve Minimum Viable Service and special event service between the two cities through a single, short trainset minimizing cost. Decrease traffic surrounding major downtown events. Make stations modern and ADA compliant. Bring train travel times down to approximately automobile travel times.
- **Additional Outcomes:** The institution of overnight train service to Dallas/Fort Worth, and expansion of volunteer heritage rail to include a Missions Express service to the San Antonio Missions National Park.

Stage Three

The completion of this period will be marked by full service local and express trains between the two cities. Stage three improvements are designed around significant infrastructure improvements including a new central intermodal terminal in San Antonio, the construction of multiple additional stops along the route, and significant track improvements including potentially grade separation of tracks and roads. This would require significant outside funding and negotiations with multiple outside stakeholders, most notably Union Pacific Railroad (UP). These improvements would be designed to achieve “Regular Daily Service,” which is defined as 8-24 daily round trips to Austin, as well as planned Amtrak service improvements including a daily *Sunset Limited*, and possible new routes to Laredo and Minneapolis (proposed by the FRA).

- **Core Outcomes:** Achieve Regular Daily Service with both local and express trains. Improve safety and speed at crossings. Create a new station appropriate for a city San Antonio's size. Prepare for improved long-distance service to the region.
- **Additional Outcomes:** Creation of intra-city rail to the northwest and southeast of San Antonio using currently under-utilized freight lines. Additional intercity service within the ‘Texas Triangle’ and beyond.

Funding Sources

Like those in the rest of the state, rail projects in the San Antonio-Austin corridor face unnecessary, but currently unavoidable difficulties due to the fact that TxDOT is largely not legally permitted to put up matching funding for the application of Federal grants for now. This means that the traditional large sums that projects in other states are able to access are simply not available here. This has led some to assume that private funding is an inevitable necessity. However, the only privately funded passenger train in recent Texas history – the Texas Central high-speed line connecting Houston and Dallas – failed and has since been bailed out by Amtrak. Digging deeper into history to the proposed privately developed “Texas TGV” of the 1990s, one finds a second example of the fallacy of assuming that private capital will necessarily lead to a different outcome for passenger rail in Texas.

This staged plan is specifically designed to accommodate this challenging reality. Taking inspiration from the city’s Greenway trails, which have been built piece by piece over many years, this plan breaks down the process of constructing a regional rail system into small, achievable projects that can be funded independently and brought together, step by step, into a larger system. In particular, stage one is designed to be funded from municipal and county discretionary budgetary spending and stage two to require absolute minimum financial input, using mostly pre-existing stations and a single, short trainset to provide a new regional rail service.

Because of the low-cost nature of stage two, the hope is that local governments will be able to up front the cost of the matching funds needed for Federal grants without needing to turn to time consuming, expensive and uncertain bond elections for support. By providing Minimum

We Need it Regardless: Why San Antonio Should Upgrade its Station

The only reason that San Antonio’s woefully inadequate train station has not become a major problem is because we also suffer from woefully inadequate train service. At the moment, we have daily service from Chicago on the *Texas Eagle* and three-times-weekly service on the east-west *Sunset Limited*. What’s more, passengers come and go long before peak rush hours.

However, that is currently changing. In 2023, the Federal Railroad Administration examined long-distance rail across the US and mandated an expansion, including daily service on the *Sunset Limited* and a new northbound service originating in San Antonio and ending in Minneapolis.

These developments are occurring whether we build the LSRD or not, and they will overwhelm our station’s capacities, which currently has the highest level of use in Texas.

Local authorities can capitalize on these national trends to create a station that services both local and long-distance needs.

Viable Service, this stage will be designed to provide the basics of usable rail travel to the entire city, while simultaneously building the necessary political constituency and will to push towards bond votes in stage three, which is where the largest local funding inputs will be needed to match Federal dollars.

The mosaic character of this project also means that the community may be able to creatively seek funding from various sources that may not traditionally support transit. For instance, if historic stations are restored to use, then numerous public and private historic preservation grants are available. In each stage, these options are explored, and include projects that might appeal to institutions like the San Antonio River Authority, the Convention and Visitor’s Bureau, Centro, and VIA Transit.

Choosing an Operator

One of the most important decisions that rail planners will eventually need to make is to consider who will operate the trains. There are a number of significant complicating factors involved here, including access to public and private capital, institutional experience, and the operator’s own strategic goals. The report will briefly outline the general categories of operators and give examples of these systems in operation. Finally, it will explain why SART believes a public service with Amtrak as the provider is the best option for the Lone Star system.

This report differentiates between a train’s “Manager” and its “Operator.” The Manager is the entity which oversees the strategic planning, institutional coordination, and funding of the rail service. The Operator, on the other hand, maintains and operates the rolling stock (trains), stations, ticketing and day-to-day operations of the train. In many cases, a single institution fills both roles – for instance, in Central Texas today Amtrak is both manager and operator of the Texas Eagle long distance train – but this is not a requirement and other arrangements can be more effective in particular contexts.

It is also important to note that regardless of who is the manager or operator, the tracks themselves may be owned by another entity altogether; in Central Texas, all relevant tracks are owned by Union Pacific. Currently, the “Lone Star Rail District” (LSRD) exists as a legal framework for this service in Texas state law. The proposal below assumes that the LSRD will continue to exist and serve as the legal institution coordinating planning and funding, but that operations will be contracted out – though other arrangements are possible.

Types of Operators

At times, the provision of rail service can seem to involve a simple question between a private firm and a public one, but there are in fact a number of gradations and combinations between these, each with contextually important pros and cons.

Within the context of Central Texas, some of the relevant contextual complications include (1) the existence of the LSRD as a legal entity in Texas law; (2) the inclusion of the territories of two Metropolitan Planning Organizations; (3) the relative paucity of state funds for rail service in Texas; (3) the ownership of the rail tracks and rights of way by a single third-party entity, Union Pacific Railroad.

Fully Private Service

A fully private service is one that is both managed and operated by a private, for-profit entity. In a fully private service, public entities may contract with the private firm to provide subsidized rates or coordinate service, but ultimate decision-making power is in the hands of the private firm. In this context, decisions are primarily made with the for-profit bottom line as the ultimate bar of the enterprise’s success or failure. In both of the examples below, the private firm in question directly owns the tracks the line is operating on.

- **Examples:** Brightline Rail operating between Miami and Orlando; several Metra commuter lines in Chicago are operated by BNSF, a major freight railroad comparable to UP.

Public Service with Private Contractor

In this example, a public entity manages the service and contracts with a private, for-profit entity to operate the trains. In these cases, the private manager varies depending on the state but can include autonomous bodies similar to the Lone Star Rail District, such as the Joint Powers Board that manages Caltrain. There are a limited number of private firms that provide this service.

- **Examples:** The New Mexico RailRunner Express is managed by the New Mexico DOT but operations are contracted to Herzog Transit Services; Caltrain in the Bay Area of California is managed by the Peninsula Corridor Joint Powers Board and operated by TransitAmerica Services.

Public Service with a Transit Authority

This is a form of fully public service where the services are both managed and operated by a public, non-profit entity. This is widespread in many transit services and operates similarly to the way that San Antonio’s VIA both manages and operates its own bus service.

- **Example:** The Frontrunner in Utah is operated and managed by the Utah Transit Authority.

Public Service with Amtrak

Amtrak, the National Railroad Passenger Corporation, is a unique public corporation owned and managed by the Federal Government. Currently in Texas, Amtrak operates only as a provider of long-distance rail service with trains that connect to other states. However, in other areas of the country, Amtrak provides frequent regional rail service as an operator working with a contract for a local public entity that manages the service. This system has still allowed for significant local control and even innovation – the Downeaster, for instance, was the first intercity train with Wifi service.

- **Examples:** The Downeaster in Maine is managed by Northern New England Passenger Rail Authority; before 2012 Amtrak operated Caltrain; the Colorado DOT recently announced that their Front Range Passenger Rail would be operated by Amtrak.

Reasons to Consider Amtrak as the Preferred Operator

San Antonians for Rail Transit believes that having a Public Service with Amtrak as the operator is the best option for Lone Star Rail and the proposals below are all centered around utilizing Amtrak as the train operator for the emerging rail district (though they can be retailored for other arrangements). Amtrak has many advantages as an operator for the LSRD including:

Institutional Depth and Experience

Amtrak has institutional depth to draw upon, including specialized in-house technical and legal services. Amtrak already operates physical support facilities including maintenance shops, specialized employee training centers and the like. While additional facilities may eventually be needed in Central Texas, the system could be established without building them beforehand.

In a time of crisis, Amtrak would uniquely be able to utilize resources that only a national provider can tap into. For instance, it could bring additional locomotives or rolling stock through a rail network owned by multiple other stakeholders relatively easily to support local needs.

For these reasons alone, Amtrak would be able to establish the cheapest up-front cost for establishing service and quickest turnaround time from planning to implementation.

Existing Operations and Infrastructure

Amtrak currently uses the route in question for its daily *Texas Eagle* service, giving it a distinctive head start on any other provider. This means that they have a relationship with the track owner and operator, agreements on signaling and usage and their equipment is able to operate without any upgrades or changes. Additionally, it has a legal mandate to operate service on this route under the Federal Railroad Administration, eliminating potential legal challenges and administrative hurdles.

Amtrak is the only entity that currently operates stations in San Antonio and San Marcos, and is the only inter-city operator to have a station in Austin. While Amtrak does not own these stations – San Antonio's is owned by VIA Transit, Austin by UP and San Marcos by the Capital Area Rural Transportation System – it does have exclusive leases to operate out of them. Any

new service provider would need to either build new station platforms or negotiate with Amtrak or other entities to rent space. This would require additional time and cost before any service could begin. While new stations and major upgrades to existing stations are absolutely needed along the route, Amtrak could begin upgrading service without needing to build first.

Unique Legal Position and Powers

Amtrak was created in 1971 at the behest of the nation's rail companies. These companies had previously in the 19th century worked out an agreement that allowed them monopoly status and certain privileges like eminent domain, but in return they were (among other things) mandated to provide passenger service. With the creation of Amtrak, these legal requirements were transferred to the new public entity¹ and Amtrak was afforded certain unique rights.

The most important of these rights is that Amtrak does not have to negotiate access to track from third-party owners, but instead can present a case for the necessity of passenger service to the Surface Transportation Board and the Federal Railroad Administration. These entities can require the third-party track owners to grant Amtrak access and can set the compensation amounts for that access.

In practice, this ability is rarely used (though ongoing court cases before the STB may extend this right, and potentially increase its use) and SART believes that it would by far be preferable to achieve this service through negotiation between willing parties. However, the mere fact that Amtrak has this capacity and can potentially require a track owner, in this case Union Pacific, to comply gives it a uniquely strong negotiating position in developing new service with resistant parties. Moreover, while not preferred, a grudging mandated service is better than no service at all. Given that Union Pacific has previously resisted the institution of the Lone Star service, the use of Amtrak as an operator strengthens the likelihood that service will be instituted.

Experience in Operating Regional Rail on Tracks owned by Third Parties

There is no rail operator in North America with the same depth of experience and know-how around operating intercity rail as Amtrak. In particular, it manages the Northeast Corridor, one of the busiest passenger rail corridors in the country. Amtrak knows how to move its trains around freight operators, a necessity given the busy nature of freight service in Central Texas.

Federal Funding is Currently Available

Because of the Bipartisan Infrastructure Law and the Inflation Reduction Act, Amtrak currently has access to unprecedented funds. While some of these funds require matching grants, others are direct funding to Amtrak. There are multiple possibilities for funding, and in stage one and stage two, it is possible that local funding needs will be minimal and not require a municipal bond vote.

¹ For more information see Amtrak White Paper “The Public Bargain” available at <https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/position-papers/white-paper-amtrak-and-freight-railroads.pdf>

Standing Operating Relationship with Union Pacific

Amtrak already has a standing relationship with Union Pacific, including operating similar services on UP-owned tracks in other regions of the country. Amtrak could leverage these existing relationships and contracts to serve as the basis for this additional service. Any new provider would need to negotiate all of these agreements from scratch, delaying or even stopping service expansion.

Other Expansion in Texas

Recently, Amtrak announced an agreement with the mostly moribund Texas Central Partners to build and operate high speed service between Dallas and Houston. This is Amtrak's first expansion into Texas since the addition of the (since removed) Houston branch of the *Texas Eagle* in 1988. The organization has openly stated an interest in improving its service in the Texas Triangle (Houston-San Antonio-Dallas) and Amtrak service expansion between San Antonio and Austin at the southwest vertex of the triangle fits within their overall institutional goals.

Amtrak – Long Term View

Many of these benefits are short term in nature: they are based upon the fact that Amtrak could provide Minimum Viable Service potentially years ahead of and millions of dollars cheaper than any other provider. However, there is a long-term reason for choosing Amtrak as a provider. Ideally, the LSRD is merely the first leg of an expanded Texas Triangle service where the cities of San Antonio, Austin, Fort Worth, Dallas, and Houston are linked by a continuous network of conventional and high-speed rail services. Amtrak is the only passenger rail operator with a legal mandate to provide this type of service. What's more, Amtrak has already made active inroads into the region with its direct involvement in the moribund Texas Central high-speed line from Houston to Dallas. No other provider has thus far been directly involved in establishing service and investing funds into Texas rail.

Stage One - In Depth Discussion

Much of this section is drawn from an official SART Report "San Antonio Inter-City Station Upgrade and Expansion Options" by Jack Lloyd-Reilley available at www.railforsanantonio.com.

Stage one is based around the ways that rail service can be improved in San Antonio using only local funds and decisionmakers – this stage principally involves the improvement of service at and around San Antonio Station, the city's current Amtrak station, which is owned by VIA Metropolitan Transit, the region's mass transit agency. These proposals will allow local leaders in the City, Bexar County and VIA to potentially make swift, substantive improvements without the need for Federal or State funds or prolonged negotiation with outside stakeholders like Union Pacific or Amtrak.

Outcomes

The principal goals of stage one are threefold. First, it aims to provide a more hospitable, accessible, passenger-friendly gateway for Amtrak passengers. Currently, the station is poorly connected: it has no long- or short-term parking, no bus service, no bicycle infrastructure and not even signs directing pedestrians. At the same time, it is the single busiest station in Amtrak’s Texas network, largely because it serves as a layover destination for two long distance routes: the *Sunset Limited*, which travels between New Orleans and Los Angeles, and the *Texas Eagle*, which originates in Chicago and joins with the *Sunset* at San Antonio. This means that in addition to local customers, an indeterminate number of passengers remain on board the *Eagle* for a roughly four-and-a-half-hour layover. Currently the *Sunset* only travels three days a week, but current plans by Amtrak and the FRA to expand this service to daily will mean that current numbers will only grow.

Second, these improvements will help to draw the attention of San Antonians to the existence of their station, which currently falls under the radar for many. By increasing the community’s knowledge of, and even pride in, this station, San Antonio leadership can lay the groundwork for a wider acceptance of rail transit as a viable alternative in further stages.

Finally, these improvements will prepare San Antonio Station for further improvements in stages two and three as service improves. Each stage in this plan builds upon the previous, allowing expansion of service to happen quickly. In addition to these material improvements, stage one will also entail the formal planning and preparation for the institution of further service developments on later stages.

Projects (Core and Additional)

San Antonio Station is deficient in many areas and needs significant upgrades to meet modern standards. However, not all of these improvements are necessary for the preliminary stage. Stage two will entail a significant rebuild of the platforms, train hall, and tracks leading to the station. However, these improvements will likely involve outside funding mechanisms and longer turnover times for planning. The proposed projects in this stage are divided between core projects, which are necessary for the success of the stage, and additional projects, which enhance the objectives but are not required for success.

San Antonio Station or Sunset Station?

There is sometimes confusion as to the name of San Antonio’s current train station. Historically, it was referred to as “**Sunset Station**,” and was the source of the name of the legendary *Sunset Limited* transcontinental train that today connects New Orleans to the Pacific.

That historic building still stands in St Paul Square, but it is not the current train station. The current station, **San Antonio Station**, is a newer, humbler building in a similar style adjacent to Sunset.

For the purposes of this report, “San Antonio Station” is used in stage one and “Sunset Station” for stages two and three, as all of the existing stations will be renamed in stage two.

Bicycle Lockers or Racks (Core)

Bicycling is much faster than walking and, given the shortcomings in parking and public transportation at San Antonio Station addressed later in this report, is one of the best ways to access the Station. However, San Antonio Station currently has no bicycle parking at all, although there are a few U racks at nearby businesses and the Alamodome. A few racks at nearby venues is obviously woefully inadequate for a train station that sees over a hundred passengers a day, many of whom will occupy a rack for several days if they choose to ride a bicycle, and U racks are not secure for long duration. They are also intended for patrons of those venues, not Amtrak passengers. Furthermore, they are not evident to anyone not already very familiar with the area.

To remedy this, bicycle racks and lockers should be built at San Antonio Station itself. The station is accessible to many more San Antonians by bicycle than it is on foot, and as will be discussed in other points, it is not easily accessible by other transportation means either, so bicycle accommodation is one of the quickest ways to make the station accessible to more people.

San Antonio has several bicycle rental options, but none are present at San Antonio Station. Electric scooters are usually available for rent nearby, but are of limited use accessing the station since they are generally not available outside of the immediate downtown core. Therefore, a bike-share dock at the station would also be useful, albeit not as useful as bike lockers.



Figure 1: Dero Bicycle Lockers (www.dero.com)

Multiple vendors sell bicycle lockers, and they come in a range of options. For instance, Dero sells an automatic bike locker that is accessed and paid for using their Bikeep app; some of its lockers incorporate charging for e-bikes (Figure 1). Ameribike sells a very similar product using their AmeriBike app. Because of the app's ability to charge money to use the locker, these can potentially pay for themselves. Numerous vendors also sell padlock and keypad lockers, which cost \$2,500 – \$3,000 per locker, although these require some form of human attendant if they are to be operated for revenue. If operated as a free public service, then no attendant is required as cyclists can simply bring their own lock, but the opportunity to monetize the lockers and pay off the original cost that way is lost.

Better Bus Connections (Core)

All trains at San Antonio Station depart early in the morning and arrive late at night. However, VIA bus connections only begin running on most routes around 5 a.m. Given the need to travel across the city to access the station, currently it is impossible for many city residents to reach the station by bus before the train leaves, even if they take the first bus of the day. Extending the night bus network hours to 24 hours would be a good start; running the #25 bus earlier and at a higher frequency in the morning would also help.

The bus also does not directly serve the station (see Figure 2). The nearest bus, #25, actually only stops about two blocks north of the station. If a bus route could be run into the Robert Thompson transit station (located immediately adjacent to San Antonio Station but normally closed and without regular service), then transit access would be more convenient. The new ART Silver line is currently planned to also run on Commerce street without accessing the Robert Thompson transit station. Bus #28 currently runs past this station but does not stop.

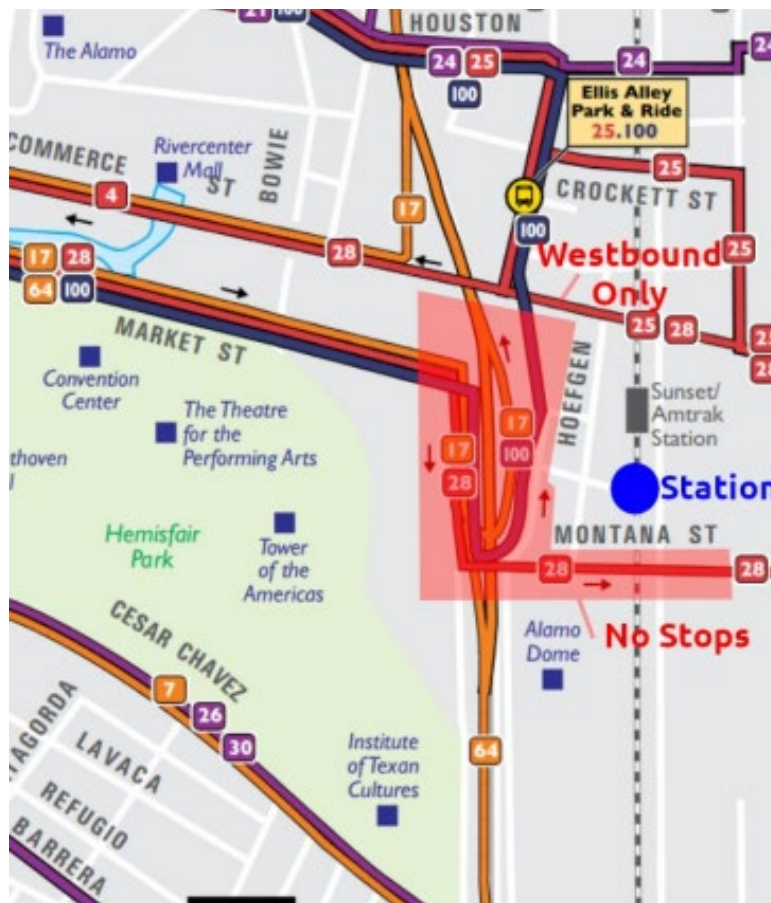


Figure 2: Bus network around San Antonio Station, illustrating poor connections despite several bus lines that appear to serve the station. Image taken from VIA's 2022 system map.

Better Wayfinding (Core)

Other than highway signs indicating what exit to take, and the sign at the Amtrak station denoting it as such (Figure 3), there are no signs or supplementary information instructing riders when trains arrive or what transportation options are available around the station. Posting maps of San Antonio and its surroundings, the local public transportation system, and the arrival and departure times of trains, would all help travelers find their way to and from the station and points of interest that they may need or want to visit while in San Antonio. This will become especially valuable after the construction of the ART Silver line, which is currently planned to run north of the station on Commerce street, deviating north to Houston street a block east. The line will become the closest and most convenient way to access San Antonio Station and the Alamodome via public transportation, but its location will be mostly out of sight from the station and any travelers not already familiar with San Antonio's bus system will not know where to go to access it without signage.

Parking (Core)

Although driving is not a preferred transit mode for rail advocates, it is by far the dominant mode of transportation in San Antonio. San Antonio Station has no dedicated parking; the adjacent Hoefgen Avenue parking is unmarked, leased to the nearby Staybridge Suites hotel, and used as employee and general parking by locals, but it is unclear if long-term parking for the train is permitted. As it is located by the Alamodome, it is sometimes blocked off or full. There is no other parking near San Antonio Station. However, on the other side of the railroad tracks is an entire block of private parking, which is only open for Alamodome events. This could be converted to San Antonio Station and Alamodome public parking, possibly with a garage and pedestrian bridge over the tracks during stage two (Figure 4). Ideally, this garage could include mixed-use development along Cherry Street as well, and the use of some levels for Alamodome



Figure 3: (above) The only signage at San Antonio Station

Figure 4: (below) Empty lot across the tracks from San Antonio Station. This is proposed as the location of a new parking structure and development.

parking could open up the Alamodome B and C lots for similar redevelopment. Regardless, some spaces should be reserved for long term Amtrak parking.

Research and Planning (Core)

While this project lays out a broad structure to the proposal, considerably more research is needed to move forward with even stage two. In particular, this project needs mobility, displacement impact and value capture studies to determine the best placement of stations in stages two and three, and frequency of service. These are also required for National Environmental Policy Act (NEPA) compliance, which is a necessity for most federal funds. Luckily, the City of San Antonio has a standing agreement with UTSA to provide precisely this type of study and the university has the necessary in-house expertise. Such studies can be requested by the Transportation Department, the City Council or the Mayor and funded through existing budget lines dedicated to that purpose or specially allocated funds.

The “Chili Queen” Food Truck (Additional)

The implementation of the improvements outlined above will go a long way toward achieving the goals for stage one. However, with additional local energy and funds, there are several additional improvements that could be made during this stage that could build upon the basic improvements and serve to create the best possible station for the city.

San Antonio is a city famous for its food, being recognized by UNESCO as a “City of Gastronomy.” However, for rail passengers – especially those on long layovers at San Antonio Station – this heritage is not easily accessible. In later stages of this plan, the expansion of food service within the Train Hall and on-board café cars, will help to bring San Antonio’s rich culinary heritage to rail travelers, but in the short term, the addition of a food truck in the public areas outside the station but visible from the tracks and platforms would help invite these short-term visitors to engage with the city. Given the trucks’ strategic location near the Alamodome and St Paul Square, it could be a profitable permanent location. This truck could be privately operated as a concession, or could be a branch of the nearby Convention Center’s food service operated by the municipal Convention & Visitor’s Bureau.

Public Art (Additional)

Currently there is no art at San Antonio Station. Art can be a draw for tourists and locals alike, drawing inspiration in Austin’s popular Willie, a bronze sculpture of Willie Nelson (Figure 7). Similar results could be had with a statue of country music legend Johnny Cash, commemorating his reference to train service to the city in “Folsom Prison



Figure 5: Willie by Clete Shields in Austin. Image from Wikimedia

Blues”, or of blues great Robert Johnson, who recorded his first and most famous album in the city, or both. This art could be funded through Centro’s Art Everywhere initiative, municipal public art funds or private funding. The goal would be to create an “instagramable” location that draws the community in and showcases our history.

Volunteer Heritage Rail (Additional)

Currently, the only obvious public marker of the presence of the Station in St Paul Square is the presence of the #794, an inoperable locomotive parked on a siding near the historic San Antonio Station. Locomotive #794 is owned by the San Antonio Heritage Railroad Museum (SAHRM), a voluntary organization based out of Elmendorf which is actively working to restore the necessary train cars to operate heritage excursion rail. The most significant hurdle to SAHRM’s work is the high cost to restore this locomotive – estimated at \$1 million, potentially fundable through donations and private grants for museums and historic sites. With this financial and, potentially, technical assistance, SAHRM could begin operating excursion rail out of San Antonio Station with no additional cost to the taxpayer. This would increase the usage of the station, create a new attraction for tourists and locals alike (heritage services like dinner trains, or Thomas the Tank Engine- or Polar Express-themed events are often as popular with locals) and build a community of support around future rail improvements.

Resources

The most important resource for the implementation of stage one is San Antonio Station itself. It is part of a complex of buildings that make up the historic Sunset Station and is owned by VIA Metropolitan Transit while an additional property, slated for the parking area, is owned by the City of San Antonio.

Funding for the projects can potentially come from a number of different sources. The most likely funding for station upgrades would be from general funds of the City of San Antonio, Bexar County or VIA Metropolitan Transit. However, specific pieces may have additional funding sources. The food truck, for instance, as a project promoting local culinary heritage tourism, could be a project of the Convention and Visitor’s Bureau and the public art displays could be funded through Centro’s Art Everywhere initiative. Federal funds for the new cycling infrastructure could be acquired through the USDOT Transportation Alternatives Set-Aside Program.

Actors

At this stage, the principal actors involved are local to San Antonio. Necessarily, stage one will involve VIA Metropolitan Transit which is the owner of the San Antonio Station and the City of San Antonio municipal government, in particular its Transit Department. VIA must also be involved in the shifting of any bus services. Bexar County is also an important player, especially as the proposed rail lines will cross through areas of the county not within San Antonio and impact the metropolitan area more broadly.

Additional projects will draw in relevant partners, especially the San Antonio Heritage Railroad Museum and potentially Centro and the Convention and Visitor’s Bureau.

Stage Two – In Depth Discussion

This section draws upon an unpublished study “Lone Star Rail District Minimum Viable Service” by Jack Lloyd-Reilley. Additional material is drawn from several SART Reports, including: “San Antonio Inter-City Station Upgrade and Expansion Options” by Jack Lloyd-Reilley and “The Missions Express: A New Vision for Connecting the San Antonio Missions and the River” by Jesse Harasta. Both are publicly available at www.railforsanantonio.com.

The overall goal of stage two is to achieve “Minimum Viable Service,” allowing for a basic form of regional rail to begin operation between San Antonio and Austin in the shortest period possible. Currently, San Antonians do not have a strong attachment to rail – most are not aware of existing Amtrak service, and historically previous efforts to build rail in San Antonio have failed. San Antonians are often suspicious of government projects and planners ignore this reality at their peril.

Recognizing the political and cultural challenge that is presented by the shallow, near non-existent train culture in San Antonio, stage two seeks to achieve a basic service at the lowest possible financial and political cost and in the shortest time scale. This service would be understood to be temporary and insufficient in the long term, but would hopefully create a new constituency of supporters of rail as people come to see it as viable, enjoyable and a useful addition to their transportation options.

Stage two’s success is ultimately predicated on the ability to decrease travel times between the two cities to that of automobile transportation.

Outcomes

The central goal of stage two is the achievement of **Minimum Viable Service (MVS)**. Based upon the concept of Minimum Viable Product developed to encourage tech innovation, it is defined as the lowest level of investment that will consistently fill trains and demonstrate value to the community and taxpayers. MVS has the following components:

1. Provide service between San Antonio and Austin more than once per day to permit daytrips and allow one to live in one city and work in the other (“supercommuting”).
2. Provide a city-to-city travel time that is competitive with driving.
3. Provide local service within communities to ensure riders can reach their final destinations with these sprawling metropolitan areas.

In addition to being a vital service in itself, MVS would also serve as a proof of concept, building political and economic support for further developments. Viability here is not merely defined by time or frequency, but the basic ability to get from one point in one city to another point in another when one needs to. For this reason, the plan includes three stations in each city. A common complaint people make when SART suggests building a train from San Antonio to Austin is “how would you get around when you get there?”, and these other stations are the answer to that. They effectively let the train double as a rudimentary subway line in each city. The more stations within each city the line has, the more effectively it does this. The minimum

SAN ANTONIO – AUSTIN REGIONAL RAIL: A STAGED APPROACH

number is three – one at the center and on each end – and so that is all that MVS contains. However, future stages would increase this number with infill stations, line extensions and branch lines. That, coupled with the morning and evening timing of trains in San Antonio to facilitate commuting, is at the core of viability.

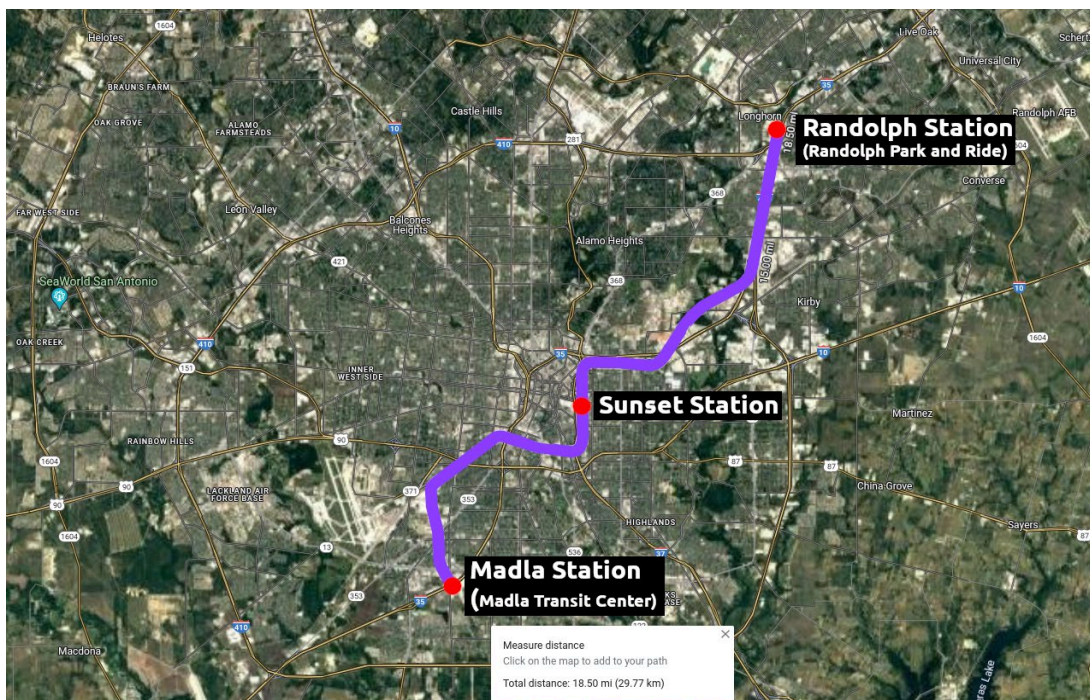
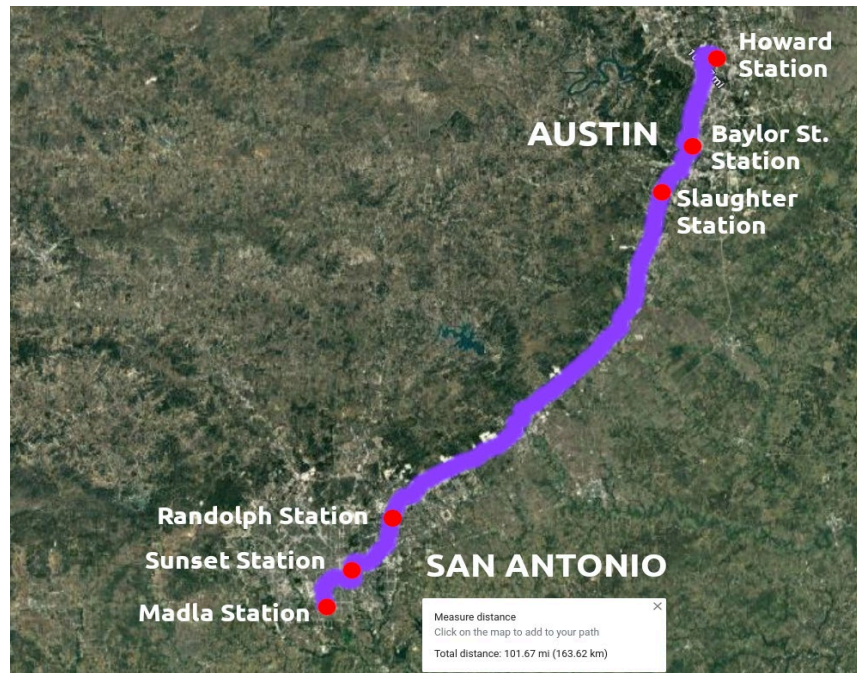


Figure 7 (above): Proposed route map. Red dots are stage two stations.

Figure 8 (below): The Lone Star Route Through San Antonio

SAN ANTONIO – AUSTIN REGIONAL RAIL: A STAGED APPROACH

This plan assumes that service improvements will be driven by San Antonio based interests and funds, since Austin is currently engaged in a multi-billion dollar light rail project that is likely to consume all available funds and political capital for the foreseeable future. What's more, San Antonio currently does not have any rail-based transit. Because the MVS is based around a single trainset, it is designed to have that train remain in San Antonio during rush hour service, providing additional mobility within San Antonio in a manner similar to Cap Metro's system in Austin. The service could be much expanded, particularly to Austin, with a second train set, but this is beyond the scope of the MVS system and is developed in stage three where suburban infill stations are added, along with both a local express service, and significantly more frequency of service at all stations.

Southbound					
Howard		10:55:00 AM	02:41:00 PM		07:22:00 PM
Baylor		11:13:00 AM	02:59:00 PM	6:30 PM (TXE)	07:40:00 PM
Slaughter		11:25:00 AM	03:10:00 PM		07:51:00 PM
Randolph	08:05:00 AM	12:20:00 PM	04:03:00 PM	04:53:00 PM	08:45:00 PM
Sunset	08:21:00 AM	12:35:00 PM	04:15:00 PM	05:15:00 PM	7:45 PM (TXE) 08:58:00 PM
Madla	08:33:00 AM	12:48:00 PM	04:28:00 PM	05:27:00 PM	
Northbound					
Madla	08:33:00 AM	12:48:00 PM	04:28:00 PM	05:27:00 PM	
Sunset	7:30 AM (TXE)	08:45:00 AM	01:00:00 PM	04:40:00 PM	05:40:00 PM 08:58:00 PM
Randolph		09:00:00 AM	01:14:00 PM	04:53:00 PM	05:55:00 PM 09:10:00 PM
Slaughter		09:55:00 AM	02:10:00 PM		06:50:00 PM
Baylor	8:50 AM (TXE)	10:07:00 AM	02:22:00 PM		07:02:00 PM
Howard		10:23:00 AM	02:38:00 PM		07:20:00 PM

Key
San Antonio Service Only
Optional Extension
 Amtrak Texas Eagle (TXE)

Figure 6: Potential MVS Timetable

The sample timetable (Figure 6) lays out how this would operate. The table shows departure times from each station; a dwell time of 2-3 minutes for loading at each station is not shown, but immediately precedes each departure except when longer layovers are required. The last time of each trip is an arrival time only (i.e. the 4:15 arrival at Sunset and the 5:55 or 9:10 arrivals at Randolph). Additionally, adjusted Texas Eagle departure times are shown, as they supplement the service, and an optional extended hours service is shown in light gray. Departures that operate solely within San Antonio, and do not go to Austin, are underlined.

The train would begin in Randolph Station in northeast San Antonio at 8:00 am and travel to its southern terminus of Madla Station in the city's southwest, stopping at Sunset downtown, providing a morning commute for residents of northeast and southwest San Antonio. It would then reverse (the trainset allows bi-directional travel with no need to turn the trains around) at 8:30 (a few minutes after arriving at Madla station), heading north and passing through Randolph at 9:00 a.m. It would then proceed onward to Austin, arriving in Slaughter station in south Austin around 10:00 a.m., stopping at Baylor station downtown (currently Austin Amtrak

Station) before meeting the Cap Metro line at Howard around 10:20, thereby providing a midmorning trip to Austin, after the early morning train provided by Amtrak's existing *Texas Eagle*. After a brief pause to facilitate transfers to and from Austin's CapMetro Red Line, it would reverse the journey, leaving Howard just before 11 (shortly after departure of the southbound CapMetro train), and arriving at its southern terminus, Madla Station, around 12:45. It would reverse course immediately, making the whole trip again and arriving at the Howard station again at 2:38. Another southbound trip would commence, arriving at Sunset around 4:15.

The most minimal version of this plan would end intercity service here, waiting until 5:15 for the evening commute in San Antonio; however, there is an optional extension of the service out to Madla at 4:28 and making another run through San Antonio before 5:00, arriving at Randolph at 4:53, then returning to Sunset at 5:05 to set up for the evening commute. Whether this optional trip is made or not, the train would depart Sunset at 5:15 (providing 15 minutes for commuters to reach the station) to arrive at Madla at 5:27 and again heading north to Randolph at 5:55 where, under the most minimal plan, it would finish out the day.

An additional optional service could provide an early evening train to Austin, running onward to Howard, arriving at 7:20 p.m., reversing course to reach Sunset shortly before 9:00 p.m. and return to end the night at Randolph Station at 9:10 p.m. The added optional services would give much greater depth to the functionality of the overall service making trips after work possible, but might conflict with Special Event services (see below).

It is assumed that Union Pacific track would be used, with only minor construction of additional sidings and spurs. Therefore, limited inter-city service is assumed to reduce the impact on Union Pacific's operations and thereby facilitate obtaining their consent to the new service. Unlike the previous stage, the improvements needed to achieve Minimum Viable Service require outside funding and the negotiation with non-local stakeholders, in particular Union Pacific Rail Road. Rail service planners must work closely with UP, but there is precedence for such work as both Amtrak and other public providers have created such agreements in the past.

Projects (Core and Additional)

New Stations in San Antonio and Austin

There are six stations on the system, three in San Antonio and three in Austin. All were selected because they offer good connection to other local public transportation services and have existing facilities (except for the Slaughter Lane station), and because they offer good coverage of the span of their cities along the existing rail right of way.

From south to north, the six stations are Madla Station (currently VIA Madla transit center), Sunset Station (Amtrak's station in downtown San Antonio), Randolph Station (currently VIA's Randolph park and ride), Slaughter Station (the only new build), Baylor St. Station (currently Austin Amtrak Station; the rename is due to the addition of new service which renders "Austin Amtrak Station" a misnomer), and Howard Station (an existing station on the Cap Metro Red Line).

All of these stations lie on or near the Union Pacific owned old Missouri-Pacific railroad line, but two will need to be built or relocated – Slaughter, which is new, and Randolph, which will be moved from its current location east of Interstate 35 to a location immediately west of its current location, on the west side of Interstate 35, which allows it to be located by the railroad track.

It is anticipated that, in order to begin service as quickly as possible, these stations can be built in two stages. The first, temporary stage would involve simply a platform, sun canopy, signage and potentially automated ticket vending (alternatively, or in concert, the system may use digital ticket vending). Amtrak has experience building such stations as stopgaps during the planning and construction of more permanent station; in 2024, it was announced that just such a platform would be built in Mobile, Alabama, to temporarily accommodate restored service. This would give communities time to plan, fund and build appropriate permanent stations (potentially one at a time as funding becomes available) without the need to wait to begin service.

- **Madla Station:** This is an expansion upon the current VIA Madla Transit Center. Madla Transit center is already located beside the railroad tracks, so all that will need to be constructed is a track siding and a station platform. The preferred length for these station platforms should accommodate six rail cars (e.g. 510 feet if six bombardier bilevel cars are used). As discussed in the rolling stock section, the preferred trainset for initial service will be three cars; however, to accommodate future expansion, the station length accommodating six is preferred wherever new platforms must be constructed (most stations).

Madla Transit Center is served by two buses, VIA 51 and 103, but is immediately adjacent to 102 as well. Both 102 and 103 are high-frequency Primo buses. Additionally, Madla is a VIA Link zone and has a park and ride, so riders may drive to the station. This is likely to be the majority of inter-city riders, but a minority of commuters.

- **Sunset Station:** Expansions on Sunset Station are expanded upon in greater depth in their own section, below.
- **Randolph Station:** The current Randolph park and ride is located east of interstate 35 and does not border the railroad tracks. As such, it is not useable as a train station in its current location. Immediately across the highway, bordering the tracks, is an Adult Megaplex, empty lots, and two motels. One of these locations will need to be acquired and converted into a new Randolph Station, and a new siding and station platform built. The current bus facilities at Randolph park and ride and VIA Link zone will be moved to the new location; however, relocation of the parking may be omitted in favor of building a pedestrian walkway if this is found to be more affordable or desirable to the local community. The distance from the parking lot to the tracks is roughly 1,000 feet - similar to the distance from the back of the Alamodome parking lot to the entrance. Relocating the park and ride also offers the opportunity to redevelop the current park and ride site as a transit-oriented development.

- **Austin Area Stations:** As in San Antonio, Minimum Viable Service in Austin will involve three stations. The first, Slaughter Station, will provide much-needed access to South Austin. A station at Slaughter Lane will require the only completely new build for the system. Baylor Street is the new name for the current Austin Amtrak Station, which will be renamed in recognition of the existence of the new inter-city stations. Howard Station is a currently existing station on the Cap Metro Red Line and can be used without modification, giving Cap Metro passengers easy access to the Lone Star. Austin-area stations will be elaborated in greater depth in a future report.

Cycling, Hiking and Trains – the Potential for Randolph Station

One of the exciting synergies possible with the establishment of Minimum Viable Service is that some of the proposed station locations dovetail nicely into existing or planned multi-use trails. The best example of this is the proposed Randolph Station on San Antonio's northeast side.

The City's Greenway trail system plans include a proposed extension to connect the Salado Creek north trail at Lady Bird Johnson Park to the existing trail at Beitel Creek / Morgan's Wonderland; the right of way for this proposed trail will run alongside the proposed new station (though separated from it by the highway in the current orientation).

Longer term, the Great Springs Project – an organization creating a hike/bike trail linking San Antonio and Austin – has one of its potential routes utilizing this planned Greenway extension. This means that rail passengers could easily access the city's wide network of trails or even begin or end a journey at Randolph. Likewise, with the addition of bike lockers, Randolph could be a convenient place for cycle commuters from San Antonio, as well as nearby cities like Cibolo or Universal City, to access to the rail system.

In many parts of the world, it is not uncommon for long distance hikers and cyclists to use rail systems for one direction of their journey. Rather than double-back or plan circular routes, they simply board a train at their end point and ride the rails back home, not needing to leave a car ahead of time or plan for a pick up.

In addition to Randolph Station, Austin's downtown station (here called "Baylor Street Station") is adjacent to the riverside Ann and Roy Butler Hike and Bike Trail, which links to a wider cycling network of the city and to the northern terminus of the proposed Great Springs Trail. Similarly, San Antonio's Sunset Station is close to the Riverwalk trail system and the city's Greenway Network beyond and Slaughter Station is less than a half mile from the Slaughter Creek Greenbelt.

The New Trainset (Core)

Train service requires not only tracks and stations but, of course, also trains. Minimum Viable Service is based upon around the use of a single trainset (a ‘trainset’, also called a ‘consist,’ refers to a grouping of locomotive and cars used in a particular service) consisting of a locomotive and three bi-level cars.

There are two potential ways that these vehicles can be made available: either as part of an agreement with a rail operator or through direct purchase. If Amtrak is the chosen operator, it is likely that they will bring their new Siemens Venture line of passenger cars - this will bring additional savings to the Lone Star system, as the system will be able to participate in economies of scale in parts and maintenance. However, depending on the operator and arrangement, it may also be advantageous to purchase the trainset directly. The remainder of this section explores which trains might be purchased and what service they would provide.

It is recommended that LSRD should acquire two MPI MP36 diesel locomotives (or similar) and four Bombardier Bi-Level coaches (see figure 9). Each car would have seating for 136-162 seated (depending on interior arrangement) and 276 standing passengers for a total capacity of 408-486 seated and 828 standing (1236-1314 combined) across the entirety of the train.

Alternatively, Amtrak is currently in the process of upgrading its fleet. Therefore, in the coming years, many of its existing locomotives and coaches will become surplus and likely be auctioned. A set of Amtrak’s GE Genesis locomotives and Superliner II cars would provide most of the capability of the MP36 and Bombardier Bi-Level trainset (though with some alterations to scheduling due to acceleration and loading times), but an alternative solution would need to be found for the cab car, as there are no cab-car Superliner II’s and turning the trains at the end of the line would add considerable time to the schedule.



Figure 9: UTA Frontrunner train with MPI locomotive and 3 Bombardier bilevel coaches. Image from Wikipedia.

The rolling stock is based on the proven trainsets used by commuter railroads such as the Utah Transit Authority in Salt Lake City and GO transit in Toronto, Canada. Since these trainsets are in use with many existing transportation authorities, they may be purchased used to further reduce cost. The active trainset consists of a single locomotive and three coaches. One locomotive and one coach are also reserved as spares.

Special Event Service (Core)

In addition to this regular service, there would need to be provision made for Special Event Service. Events in Downtown San Antonio can lead to particularly challenging traffic; for instance, traffic jams after a 2023 Elton John concert trapped some concertgoers for hours. Providing this service could help to ease not only traffic, but also incidents of DUIs and associated accidents. The planned Sunset Station location could easily serve crowds at events in the Alamodome and surrounding annual Fiesta celebrations. It would likely be necessary to build additional platforms at the Frost Bank Center and possibly a future potential basketball arena Downtown, but this would not be difficult as the current planned Lone Star route passes both of these locations. This service would be similar to the new Austin CapMetro Red Line service to Q2 Stadium at McKalla station, which was so popular CapMetro has had to extend the number of cars to meet demand.

This service would not displace the MVS, but be supplemental to it. As these events typically occur in the evening, after the end of normal MVS daytime service, they would involve a disruption only of the optional additional evening service. The additional platforms at Frost Bank Center and other venues would be used only during Special Event Service and would likely remain rudimentary at first. The importance of Special Event Service would be rooted in its usefulness in promoting the effectiveness of rail transit to populations that might not otherwise use it for commuting or daytime service, and in the cost savings to the city in terms of traffic control and policing during events. New rail constituencies could be acquired and a wider acceptance of rail as an alternative transportation form could be achieved.

Track Improvements for Speed and Efficiency (Core)

The route that Amtrak's *Texas Eagle* currently takes to approach San Antonio Station has a substantial delaying impact on its trip times and by extension devalues the rail service at the station. Currently the northbound trains back up out of the station to change to the northbound track, adding fifteen minutes to the northbound journey. The southbound trains take a circuitous route around the west side of downtown San Antonio on a very low speed track, adding almost an hour to the southbound journey. Constructing turnouts at the track junctions just east of the Union Pacific Eastside Railyard and south of the station just north of I-10 would allow both north and southbound trains to use the same track, and would eliminate the backup.

These track improvements would primarily serve the Amtrak *Texas Eagle* which must turn around in San Antonio. For the Lone Star service, trains with a cab at both ends which can run in either direction will be used, allowing for a directly linear service avoiding turnarounds. However, the improvements east of the Eastside Railyard will still be necessary to access the station from the north without a lengthy circumnavigation of the east side (see Figure 10).

Additionally, Howard Station in Austin will require about 3,000 feet of new track to connect the Union Pacific track to Cap Metro's Red Line. The tracks meet at this location just north of a gravel pit; the junction can be located either just north of the pit or just south of it. The northern route requires less track to be constructed but the southern route is slightly shorter by about half a mile. The northern route is preferred due to lower presumed cost and minimal schedule benefits from the shorter southern route, as discussed in the schedule section.



Figure 10: Track Improvements in Downtown San Antonio for improved Texas Eagle Service (Red and Purple) and Lone Star Rail (Red only)

Sunset Station Upgrades: Platforms, Parking, Pedestrian Bridge, Etc. (Core)

San Antonio Station will be renamed “Sunset Station,” restoring its historic name and recognizing that, like in Austin, the city will now have several stations. The improvements made to this station during stage two will complement the improvements made previously in stage one (e.g. cycling, wayfinding, parking, art, etc.) and will potentially prepare the way for continued improvements in stage three.

- Platforms and Awnings:** Sunset Station currently has no platforms. Instead Amtrak employees have to put down a small set of stairs or a ramp for handicapped passengers. This inhibits accessibility and makes boarding the train more inconvenient. It takes a small amount of time to do, albeit usually not long. On occasion, a conductor is not available, and there can be a delay, usually resolved when passengers simply decide to stop waiting and jump down, which is not allowed according to procedure. Elevating these platforms is necessary for efficient, ADA-compliant service, especially with increased train frequencies.

Similarly, the current setup has an incomplete shade awning only covering the northern end of the platforms. This means that many passengers embark and disembark without cover from the elements. The construction of a full awning along with necessary furniture (benches, etc.) is an important part of the upgrades during stage two.



Figure 11: The current platform, visible are the low floor requiring steps and the end of the awning.

- Parking Structure and Pedestrian Bridges:** Montana Street passes under the railroad tracks and pedestrians can cross here, at the south end of the station. However, at the north end, around Commerce street, there is no crossing, and pedestrians must walk across the tracks. The closest street to the station – Idaho street – does not cross the tracks at all. In addition to being somewhat of a safety hazard, these crossing issues can substantially delay a traveler if they become stuck behind a freight train (which also use these tracks quite frequently, including during boarding and departure of Amtrak trains). A grade separated pedestrian crossing here would substantially improve access. Even better would be to separate the tracks and the roadway, permitting rail, automobile and pedestrian traffic to move unimpeded. Removing the crossing would also speed up the bus on Commerce street, as buses stop at all rail crossings regardless of whether there is a train coming.

We suggest the construction of a mixed-use transit-oriented development on the parking lot from stage one (See figure 12), involving street-level commercial properties and a secure parking structure above, along with pedestrian bridges connecting to both the Station and the Alamodome. The city of San Antonio was recently awarded a Federal grant to explore how to better connect the city's Downtown and Eastside, and this development could be part of the general strategy for improving connectivity.



Figure 12: Conceptual location of parking structure and mixed-use development, with pedestrian bridges to Alamodome and Sunset Station

Night Trains (Additional)

In many parts of the world, night trains are of increasing popularity. These trains depart in the evening, serving dinner and drinks to clientele before providing them with sleeping accommodations. The train arrives at its destination, giving passengers a chance to eat breakfast before they arrive, refreshed and ready for the day. This type of service requires cities that are far enough apart to justify the overnight trip but close enough to allow for early morning arrivals. This service is possible between San Antonio and Dallas/Fort Worth (with a stop in Austin), and could be added to stage two with two additional trainsets (one departing each night from each end of the line), fitting into the schedule at Sunset Station after the end of daytime service. An advantage of implementing this type of train at this stage is that speed is less critical for these trains as passengers expect to arrive after a minimum of eight hours, and so track improvements are not necessary and the Dallas Night Train could run on the route currently used by the *Texas Eagle*.

Mission Express (Additional)

Amtrak or other rail providers and the National Park Service (NPS) have long had a fruitful relationship in many areas of the country. There is direct rail service to multiple parks, including Cuyahoga Valley, the Grand Canyon, New River Gorge, and Glacier National Parks and the two Federal agencies have long collaborated on a Trails & Rails partnership where NPS interpreters board Amtrak trains.

The lightly-used Rockport Subdivision rail line closely follows the San Antonio River and could become the basis for a new heritage service, linking the San Antonio Missions National Historic Park directly to downtown (see figure 13). The continuation of this service to Elmendorf would allow for links to the San Antonio Heritage Railroad Museum.

Resources

The most important resource coming into play at this stage is the existing network of rail trackage, which is owned by UP. With the exception of a handful of turnouts and similar extensions, the current track can be used without need for major improvements. This eliminates the need for costly and politically fraught land purchases or eminent domain seizures, or the time-consuming process of construction which has bedeviled projects like the California High Speed Rail.

Currently existing publicly owned stations and bus park and rides are another important resource, and help to tie the system into already-existing bus networks. Their use as train stations allows for the start of service with minimal construction.

If the system is operated by Amtrak, as suggested, the national provider's network of maintenance, training and similar support facilities are also an important resource.

The proposed heritage rail builds upon the city's deep heritage resources, including the World Heritage Site San Antonio Missions National Park, the recently-constructed Hot Wells Park and the resources of the San Antonio Rail Heritage Museum, based in Elmendorf. Funding is another crucial resource, especially as this stage assumes that (a) outside Federal funds will be required; and (b) bond votes are time consuming and uncertain, especially given the tax source for repaying these bonds is unclear. This means that matching funds (typically 20% of total) will need to come from municipal, county or MPO sources. However, these total grants can be quite small (for instance as low as \$5 million), meaning that local governments may be able to institute the ultra-low cost Minimum Viable Service without the need for State DOT assistance. Some possible grants include:

- **Surface Transportation Block Grant:** Provided by the Federal Transit Authority, they are often used for the improvement of rail tracks and service.
- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE):** This fund includes a significant portion earmarked for passenger rail infrastructure.

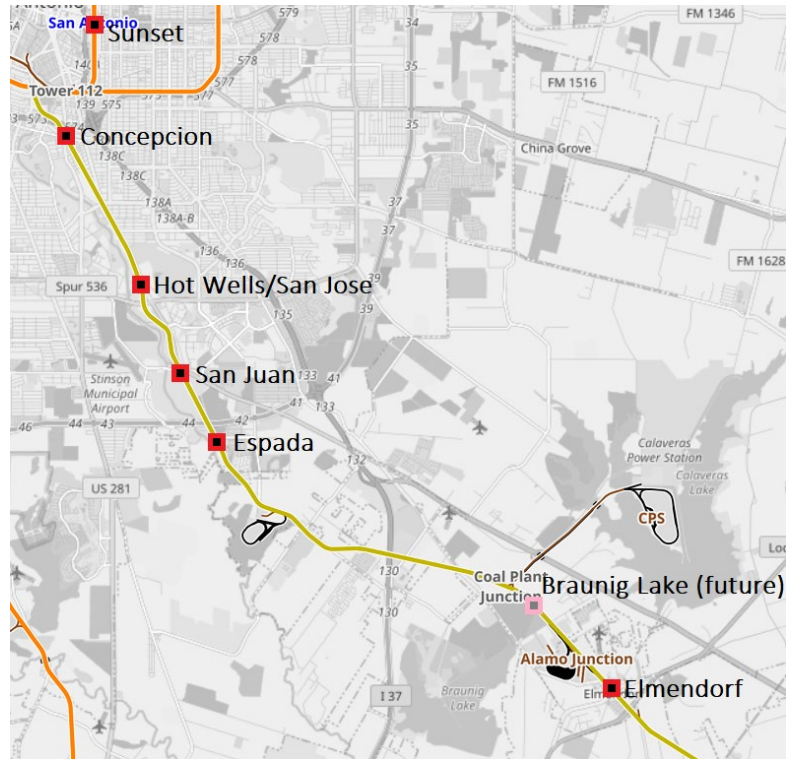


Figure 13: Map of potential stations for the Missions Express Heritage Rail. Includes potential stage three expansion to a new southside lakeside park on CPS-owned land.

- **Congestion Mitigation and Air Quality Improvement Program (CMAQ):** The grant is specifically designed for projects that improve air quality by decreasing demand during peak hours.
- **Community Block Development Grants:** The funds will be particularly useful when the application is tied to community economic development, including potentially rail heritage tourism.

As in the previous step, specialized funding may be found for particular pieces, such as historic restoration grants for Sunset Station or provision of heritage rail, or Federal assistance to provide greater ADA-compliant access to the San Antonio Missions for the Missions Express. USDOT Transportation Alternatives Set-Aside Program grants could also be used to help link the incipient Missions Express rail service to the existing network of multiuse trails associated with the San Antonio River and its tributary creeks. The new mixed use development near Sunset Station could potentially attract private investment.

Actors

In addition to the important actors from stage one (municipal and county governments, VIA transit, SAHRM heritage museum, etc.), two central actors will come into play at this stage: Union Pacific Railroad and Amtrak or the other rail operator. As the owner of the tracks, UP is an indispensable player – even if Amtrak utilizes its statutory power to mandate use for passenger rail (described above in “Reasons to Consider Amtrak...”), Union Pacific will still be involved as not only the track’s owner, but also the controller of signaling.

Whoever is the operator of the rail – whether Amtrak or another firm - will also need to come into the picture here, as they will need to oversee operations of the Minimum Viable Service.

Stage Three – In Depth Discussion

It is in stage three that the links between San Antonio and Austin finally mature into a full regional rail system. Like the previous stage, this one requires significant outside funding – including Federal dollars – and collaboration between local players, the rail operator (likely Amtrak) and Union Pacific Railroad.

Unlike in stage two, the creation of stage three service will not be rolled out as quickly as possible, but instead carefully expanded through a process of adding stations, trainsets and service until there is full “Regular” service.

Outcomes

This stage upgrades from “Minimum Viable Service” to “Regular Service”, which will include two new formats for SAT-AUS regional trains: local and express. Regular service implies a full rail system with multiple stops at intermediate locations and trains every hour or less – in contrast to the bare-bones nature of Minimum Viable Service – where individuals are able to travel back and forth whenever they want to, with convenience for varying schedules of work and play. While considerable work will need to be done to determine exactly how many trains

on which days of the week are necessary, it is likely that this service will be considered complete somewhere between 8 and 24 round trip trains a day – though as the cities continue to grow and their rail culture matures, that will likely increase. This may require upgrades step by step towards regular service rather than a single massive upgrade, i.e. adding a second train for intra-city service in Austin, adding infill stations one at a time as they are built, and so on.

This greater frequency of trains will allow for the operation of two schedules: Express and Local service. Express service will run between the two metropolitan centers with no or minimal stops between, allowing for speed and efficiency. Local service, on the other hand, will stop at every station along the line, providing important transit connections to suburban areas.

This differentiation is common among rail services worldwide. There will be some stations passengers frequently travel between – for instance, this will likely include the two Downtown stations – and for their needs, a train will be provided that does not stop at any other stations (the “Express” service). Other stations will have lower levels of use, and fewer passengers who are dedicated to regular travel between them. For these stations the Local train, which stops at all stations, will be provided. In some cities, there can be multiple gradations and mixtures between these two extremes, and the details of such service can be determined based upon mobility studies and technical feasibility.

Projects (Core and Additional)

Stage three will involve the most dramatic and expensive upgrades: grade separations lifting trains away from automobiles and pedestrians in city centers, many new stations and significant upgrades to San Antonio’s central station.

Grade separation of nearby road-rail crossings (Core)

There are eight grade-level crossings between Sunset Station and the Union Pacific yard to the north. The locations of these crossings, plus the six grade-level crossings south of the station, are shown in Figure 14.

Currently, only the Sunset Limited runs along the tracks with the eight northern crossings, but if the East Yard Turnout project is completed as proposed in stage two, then the *Texas Eagle* would also run along this route, saving approximately fifteen minutes on the trip to Austin. This is also

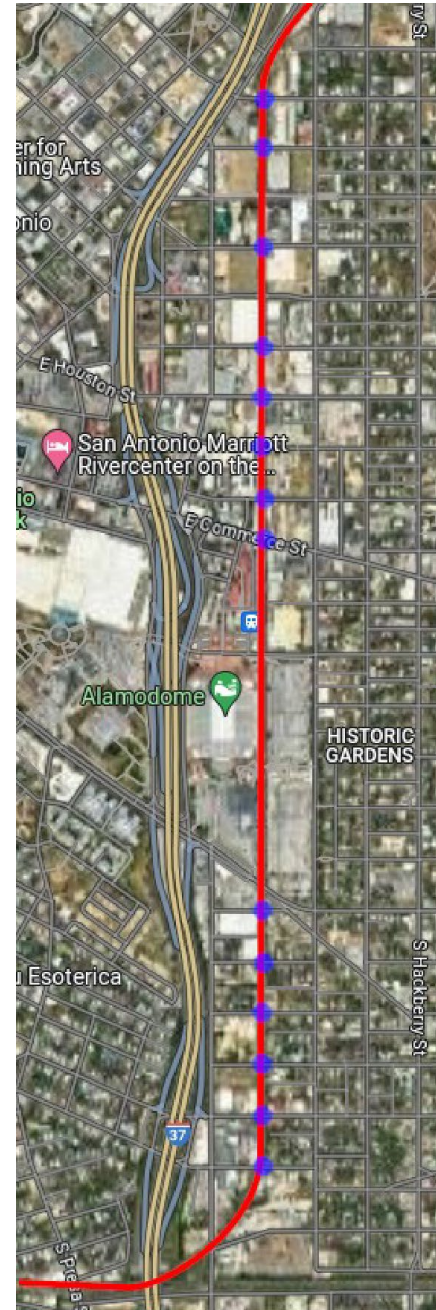


Figure 14: Lone Star route north and south of Sunset Station. All road crossings are marked with blue dots

SAN ANTONIO – AUSTIN REGIONAL RAIL: A STAGED APPROACH

part of the planned route for the Lone Star Rail District. Grade separating these crossings would allow the train to move more rapidly along this track, perhaps saving another five to ten minutes. This would also benefit freight trains and local auto and pedestrian traffic, as they would no longer be delayed by train crossings. This will become increasingly important as more and more trains per day begin running along this route.

Other grade separations would likely be strategically chosen at various points along the route to improve rail speeds, decrease the frequency of accidents and improve the efficiency of automobile movement.

New Stations for Suburban Service (Core)

The development of a Local Service with multiple stops will allow for the Lone Star Rail system to serve smaller cities between San Antonio and Austin. Maps developed prior to 2016 for the Lone Star Rail District proposed stations starting north of San Antonio and including: Georgetown, Round Rock, Kyle/Buda, San Marcos, New Braunfels, and Schertz.

While planners for stage three will need to discuss appropriate locations for efficient service,

it is likely that a similar layout of suburban stations will be developed. Each of these locations will need a process of planning and constructing their stations, along with supplemental infrastructure, like park and ride capabilities.



Figure 15: Proposed Lone Star route and stations from 2016. Suburban stations are likely sites of future infill stations in stage three.

A New Central Station for San Antonio (Core)

Ultimately, the current framework for Sunset Station is limited due to the lack of space for significant improvements. This means that as frequencies increase and passengers along with them, San Antonio will outgrow the current station. The ticketing and waiting areas, as well as administrative needs of Regular Service, simply cannot be accommodated at Sunset, much less a growing number of Amtrak trains that will hopefully serve the city as the Federal Railroad Administration's

national expansion plans are unrolled.

There are several options available for the city at this point. One is to engage in a major upgrade and expansion to Sunset Station. This will likely require the restoration of the historic ticketing and waiting hall (currently used as a nightclub) to its original use and potentially the purchase of additional property around the station. More tracks will be needed to accommodate multiple trains at once, along with support facilities including administrative structures to operate the Regular Service.

Alternatively, an entirely new central station might be built in a different location, with Sunset becoming the de-facto neighborhood station for inner east San Antonio and tourist-oriented heritage rail, but with long distance service arriving and departing elsewhere. There are a number of possible locations for this station, but one of the more probable is in the lands north of the Lone Star Brewery redevelopment site.

Intra-city Rail in San Antonio (Additional)

There are several under-used freight lines running through San Antonio which might be able to carry an intra-city hybrid heavy rail system, operating alongside freight operations. The Rockport Subdivision was already mentioned in stage two as a potential site for heritage rail serving the Missions National Park. In this stage, that service might be instituted or expanded to also serve the more general transportation needs of the south side. An additional station might be opened at CPS Energy-owned Braunig Lake to create access to swimming and a new park on the lakeshore, giving San Antonians access to the lake on weekends.

Perhaps even more exciting are the opportunities presented by the Kerrville Subdivision, which leaves the main line just north of the Lone Star Brewery site, and passes roughly parallel to Vance Jackson and I-10 north past the Medical Center before terminating in the Rim shopping center. This route passes through one of the city's densest populated areas and a short expansion to the west could connect to Six Flags, La Cantera and the main campus of UTSA. A passenger service along this line would link downtown to all of these regions, along with the Lone Star service and other Amtrak services.

Inter-city Rail in San Antonio (Additional)

There are currently a number of plans to expand Amtrak long distance rail service through the region. The Federal Railroad Administration has proposed expanding the number of weekly trains on the *Sunset Limited* from three a week to daily, and also the addition of a new service connecting San Antonio - Dallas – Tulsa – Kansas City – Des Moines – Minneapolis/St Paul. There are also exciting opportunities to the south with the possibility of restored service to Laredo and Corpus Christi. With the Mexican Government potentially restoring their own service to Nuevo Laredo, there is a real possibility for trains that transfer passengers and routes that continue on to Monterrey and Mexico City.

All of this requires the necessary infrastructure to support it, including not only a new central station, but also administrative infrastructure as well. The city would potentially become a crucial node in a growing national rail network.

Resources

Barring significant changes in the management and funding of TxDOT, it is at this point that it becomes unlikely that local governments can produce the necessary matching funds for Federal grants without a dedicated local bond issue. A major goal of stage two is to help to build that political constituency by demonstrating how effective rail service can be. Without this constituency, the fate of any bond issue is tenuous. Even then, this plan does not anticipate the need for record-breaking bond funds like those needed to build the Project Connect rail system in Austin, as the Lone Star is designed to be low cost and built by multiple actors over time.

For instance, it is also at this point that the smaller suburban cities come into play, and it should be expected that each one will provide the necessary funding for stations and potentially a “buy-in” in the form of contributions to the purchase of additional trainsets. It is likely that these communities will do so with a mixture of funds. Historic preservation funds (like the ‘Save America’s Treasures’ grants) could be accessed to upgrade historic stations for modern reuse, local bonds could provide core funds, and creative planning could allow for access to additional sources, such as the Clean Water State Revolving Fund (CWSRF) for station projects involving permeable parking lots, bioswales and similar green water-protecting infrastructure.

The potential *Missions Express* service to the national park would also have access to a different potential set of funds, including those dedicated to the improvement of the National Parks, but also local funds such as recreational access funds from the San Antonio River Authority.

Actors

As in stage two, the important actors from the previous stages continue to play a crucial role here, including the cities of San Antonio and Austin, county-level governments, MPOs and transit agencies, Amtrak (or another operator), Union Pacific, and SAHRM, the heritage operator. As other cities enter the picture, it will be necessary to negotiate with their municipal governments who will often be the owners of the stations and necessary interlocutors for the success of suburban service.

At this stage there is greater role for Federal actors, including the various funding agencies, the Federal Railroad Administration, the Surface Transportation Board and the Department of Transportation. Because the Lone Star will become increasingly integrated into a national system where the Texas Triangle is a crucial node, planning at various levels of scale simultaneously will be necessary.

Conclusion

The development of rail service between San Antonio and Austin is a project with immense importance, for as our cities have grown, and grown together, we have become increasingly hampered by an automobile-only system of passenger transportation. Ever poorer traffic, worsening air quality, an epidemic of DUIs and related accidents, and disturbing growth in road rage incidents all point to a problem that cannot be resolved with business as usual. Yet, we

seem trapped within the structures and limitations of our current situation, unable to countenance any solution but expansion of the existing transportation methods. Moving beyond the highway seems impossible, with the complete lack of state funding and institutional support for anything else being the single biggest barrier.

We take inspiration from our friends at the San Antonio Railroad Heritage Museum in Elmendorf. Frustrated by the lack of rail service for our city, they decided to build a train with their own knowledge and resources. This all-volunteer effort has had spectacular success; for instance, in 2022 they acquired a battered shell of an old Southern Pacific RR dining car and proceeded to rebuild it entirely (see Figure 16). When they needed new tracks to connect their property to the main rail lines, they called up a crew to build one. But there is only so much even the most dedicated volunteers can do, they need to combine their enthusiasm with well-crafted public policy and strategic municipal decisionmaking.

Luckily, our cities are innovators in municipal public policy. From Austin's dramatic plans to "cap and stitch" I-35 to San Antonio's clever use of its own wastewaters to preserve delicate coastal estuaries hundreds of miles away, our city governments are able to think and act outside the box. In San Antonio, we envision our path as similar to the construction of the city's extensive Greenway trails – a bold vision of uniting our community which has been delivered through a series of small, incremental steps, each getting us closer to the final outcome, rather than a single colossal paroxysm of spending and construction.

This plan seeks to continue these traditions of innovation, bold vision and hard-headed pragmatism to create what many think is impossible: a rail service linking our cities and our neighborhoods to each other in ways that serve the needs of the widest population possible along a path that recognizes our financial, political and infrastructural challenges.



Figure 16: The San Antonio Rail Heritage Museum's restoration by hand of the historic dining car "Alamo" is an example of the creative, resourceful spirit that will bring regional rail to our city. We hope to board it at Sunset Station soon.

Ten Immediate Actions for Lone Star Rail for San Antonio Leaders

- 1) Launch the path to Minimal Viable Service by requesting mobility and feasibility studies through UTSA (see page 13)
- 2) Call for open and formal discussions on a future operator of the service with partners in Austin through the Texas Passenger Rail Advisory Committee (see page 4)
- 3) Study a re-routing of VIA Bus and the future Silver ART line to better serve rail passengers (see page 11)
- 4) Study the future use of the city-owned lot at 298 Cherry St. for rail parking and, long term, mixed use transit oriented development (see page 12)
- 5) Install B-Cycles and Bicycle Lockers at Sunset Station (see page 10)
- 6) Integrate study of rail crossings and a pedestrian bridge into ongoing East Side-Downtown federal connectivity study (see page 12)
- 7) Build a relationship between the city and San Antonio Rail Heritage Museum to restore the #794 Steam Locomotive and bring volunteer-run heritage rail to Sunset Station (see page 14)
- 8) Install “instagrammable” art in the boarding areas of Sunset Station (see page 13)
- 9) Implement improved wayfinding connecting Sunset Station to Downtown (page 12)
- 10) Set up the “Chili Queen” all-night taco truck celebrating our culinary heritage and serving late-night rail passengers (see page 13)

