

South Brazos Street Multimodal Transportation Study

City of San Antonio – Transportation Department

Improvement Concept
& Strategic Advisory Group
Summary



CITY OF SAN ANTONIO
**TRANSPORTATION
DEPARTMENT**



INTRODUCTION

The purpose of this project is to develop a multimodal concept for a 0.7-mile segment of South Brazos Street (including a portion of Colorado Street) from Alazan Creek (north) to Apache Creek (south) within Council District 5. The final deliverable is intended to help define projects along the South Brazos Street corridor that could be included in proposed CoSA 2022-2027 Bond Program or advanced via other funding opportunities.

OVERVIEW

This document details the improvement concepts proposed by the City of San Antonio and RPS Group as part of the South Brazos Street Multimodal Transportation Study. This document also describes the process and timeline for the stakeholder process (Strategic Advisory Group) that was used to develop the proposed improvements for the South Brazos Street corridor, shown in **Figure 1**.

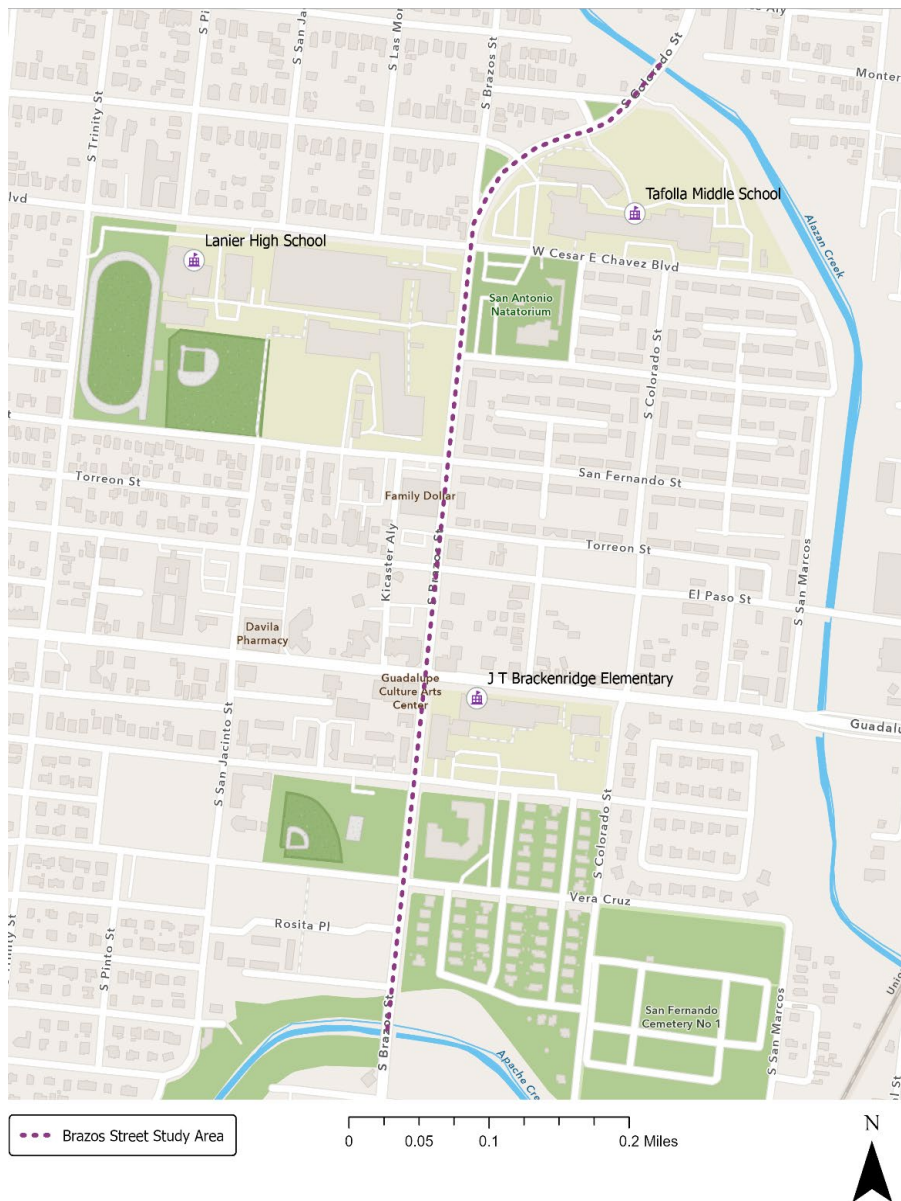


Figure 1: Overview of Study Area

Existing Conditions Atlas & Needs Assessment

The Existing Conditions Atlas & Needs Assessment was completed by the project team in July 2021 for the Brazos Street study area and included several data summaries – socio-economic characteristics of the area surrounding the study corridor, physical characteristics, and transportation conditions. Additionally, the document provided a summary of the Team’s site visit and a review of past and current planning efforts.

Socio-Economic Characteristics

- **City of San Antonio’s Equity Atlas Characteristics:** Race and Ethnicity, Income, Educational Attainment, Language Spoken at Home, Security for Real Estate Investing (Redlining)
 - 96% of the population identifies as people of color; 92% of that population identifies as Hispanic or Latino, which is largely made up of Mexican-Americans
 - Largely Spanish speaking populations
 - Median Annual Household Income between \$11,000-\$25,000
 - Between 33-58% of the population within all four census tracts have less than a high school graduate or equivalency
 - D (hazardous for lending) for Redlining¹
- **Car Access** – How many people living near the corridor have access to a car?
 - 15-54% of households in adjacent block groups do not have access to a car
- **Travel Time to Work** – How long does it take people to get to work?
 - 48.5% travel for less than 30 minutes to work; 51.5% travel for more than 30 minutes to work; largest single group (28% travel between 30-34 minutes for work)
- **Means of Transportation to Work** – How are people getting to work?
 - Over half the population drives alone; almost a quarter carpools; a substantial 12% take the bus (compared to 5% nationally); a combined 4% walk or bike to work

¹ In 1933, the federal government established the Home Owners’ Loan Corporation (HOLC) to assist in refinancing home mortgage loans facing potential foreclosure. Field agents were sent to review the socioeconomic profile of cities to determine how secure different areas of that city would be for lending purposes. Those areas were then mapped in different colors according to their A to D letter-grade rating. The areas rated D by HOLC’s assessment were marked in red and considered the most hazardous areas for mortgage loans, a process which is now known as “Redlining”. The redlined areas were largely composed of neighborhoods with significant minority populations. This process ultimately resulted in discriminatory lending practices based on race that still impacts minority neighborhoods to this day.

Physical Characteristics and Transportation Conditions

- **Land Use** – What are the major land uses surrounding the corridor? What is generating trips/traffic throughout the corridor?
 - Largely residential (mix of single and multi-family residences); there is also a large concentration of commercial locations along Guadalupe; throughout the corridor there are a lot of community resources such as schools, cultural centers, churches, and the Natatorium
- **Floodplains** – Is the study area at risk of flooding? What is the percent chance/frequency of a major event?
 - Areas surrounding both Apache and Alazan Creek are at a higher risk of flooding (100-Year Flood Plain); the rest of the study area is located in the 500-year floodplain
- **Sidewalks** – Are sidewalks present throughout the corridor? Are they in good condition/free of debris? Do they comply with standards set forth by the Americans with Disabilities Act (ADA)?
 - Varying conditions throughout corridor; many sidewalks with utility poles obstructing walkway; several ADA compliancy issues
- **Bike Facilities** – Does the City’s bike network connect to the corridor? Is there enough right-of-way available for future connections to the network?
 - Bike Route & Lane along Guadalupe Street (from Castroville Rd to S. San Jacinto St.); bike Lane along South Trinity Street to west (from W. Houston St. to S. Laredo St.); sharrows on Brazos
 - Future connection between creek trailways under construction, which is being managed by the Westside Creeks Restoration Project in partnership with the San Antonio River Authority
- **Transit Infrastructure, Service, & Ridership** – Are public transportation services available along the corridor? What type of facilities are equipped at stops? How utilized is the service that is currently provided?
 - VIA Routes: 66 and 68 – 15-minute frequency and along Guadalupe & Brazos; 34 bus stops within ¼ mile of corridor; majority of stops have shelters, benches, route information signs, and trash cans
 - Total Boardings/Alightings within the corridor (January 2020): 650
 - Highest activity stops: Guadalupe & San Jacinto, Guadalupe & Brazos, Guadalupe & Richter, and Guadalupe & Trinity
 - Average Daily Boardings/Alightings by Route within ¼ mile of Corridor:
 - Route 66: 115
 - Route 68: 379
- **Crash Records** – Where do crashes occur along the corridor? Are there intersections with a high occurrence of crashes? What type of crashes are common along the corridor? (i.e., Were the crashes fatal? Was a pedestrian involved?)

- 49 pedestrian crashes
 - Most crashes were related to driver inattention (connected to impairment or using a mobile device)
 - 11 pedestrians failed to yield right of way to vehicle; 10 drivers failed to yield the right of way to pedestrians
- 6 cyclist crashes
 - Like pedestrian crashes, the major contributing factors for bicycle crashes (all crashes) were failure to yield right of way at a stop sign and driver inattention
- 16 serious injuries
 - 9 of the serious injuries were linked to a driver under the influence of alcohol
 - 11 were connected to speed control failure or driver inattention
 - 2 were the result of a pedestrian failing to yield the right of way to the vehicle
- Several bike/ped crashes on side streets leading to South Brazos

Site Visit Observations & Existing Roadway

The project team conducted a site visit to the study area (**Figure 1**) on July 1, 2021. This site visit included AM and PM peak period observations of how all modes of travel – pedestrians, bicyclists, transit riders, and drivers – interacted with South Brazos Street. The project team also took measurements of the right-of-way periodically along the corridor to accurately document the existing cross-sections. Additionally, the project team captured GoPro video footage of the corridor, representing the differing perspectives of a pedestrian, cyclist, and driver traveling the corridor.

Some of the key observations made during the site visit included:

- Generally low traffic volumes and minimal queueing
 - During AM and PM peaks, low vehicle volumes were recorded passing through or turning through each intersection and throughout the corridor
 - Very few instances of vehicle queueing – vehicles lined up at a stop light – occurred at the signalized intersections along the corridor
- Varying sidewalk conditions throughout the corridor; several obstructions infringing on Americans with Disabilities Act (ADA) compliancy
 - Sidewalks were present along the entire corridor and throughout most of the side-streets leading up to South Brazos Street
 - The major issues with sidewalks are the obstructions that infringe on the width of the sidewalk or ability to move freely along the sidewalk, such as utility poles, debris, and vegetation overgrowth
- Pedestrians crossing at midblock rather than at marked crosswalks

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- There were many instances where pedestrians were observed crossing in the middle of the street instead of walking to the nearest crosswalk or intersection
- High potential for connection between creek trailways
 - The existing bike route along South Brazos Street serves as a great connection between the trailways being constructed at Alazan Creek and Apache Creek that could be upgraded to a bike lane or path to provide a safer space for cyclists to travel between trailways and connect to the regional bike network
- Posted speed limit is 30 miles per hour (20 miles per hour in school zones)
 - Generally, drivers follow the speed limit; average speed does increase during AM and PM peak travel periods

This information and findings were then presented to the stakeholder advisory group to confirm, reject, or build upon to ensure the assumptions serving as the basis for the proposed improvements and concepts moving forward were accurate.

Strategic Advisory Group Engagement

Throughout the project, stakeholder feedback has been vital in guiding the approach and identifying key issues along and around the project corridor. A Strategic Advisory Group (SAG) comprised of leaders from Westside community organizations, City of San Antonio Staff, and VIA staff was formed to guide the process. By utilizing stakeholder feedback throughout the process, the concept has remained flexible to new ideas, uncovered issues, and changing priorities; introduced community partnerships through shared problems and resources; and ensured the end products will be molded by the community rather than the project team.

Table A3 in the appendix contains a comprehensive list of all SAG members involved throughout the process.

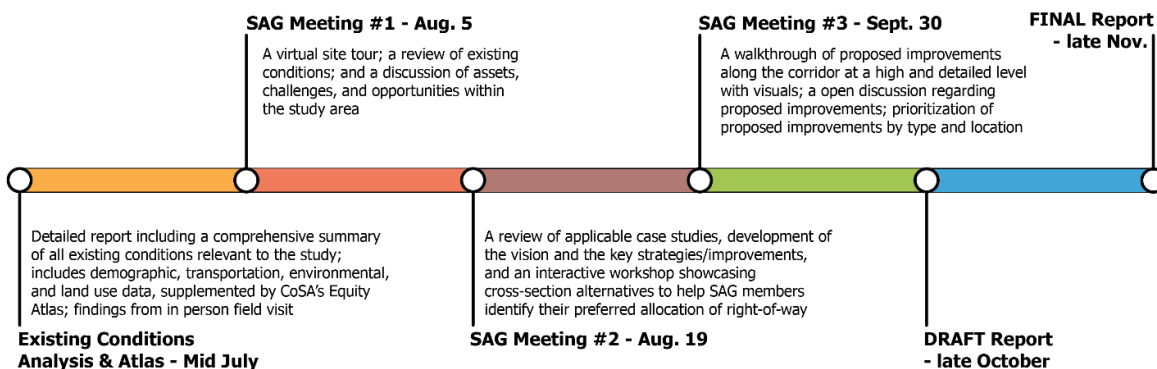


Figure 2: Concise Project Timeline

To collect this type of feedback, the project team hosted three meetings virtually (see **Figure 2** for exact dates) that offered SAG members the opportunity to review existing conditions; learn about case study and best practices in street design; and see their feedback incorporated in the proposed improvements developed

both the conceptual design included in the scope of this project as well as any detailed design work that may occur in the future.

This project envisions a South Brazos Street corridor that...

- *Fosters a **safer environment** for all users*
- *Supports the local **culture and community**, particularly for events*
- *Provides **access/connectivity** for all users*
- *Provides high-quality **public space***
- *Has a **cohesive aesthetic***

Several other goals were suggested by SAG members and determined to be related to components of the vision statement. These goals should also be kept in mind throughout the design process:

- Connect to past and future improvement projects (cohesive aesthetic)
- Extending improvements to nearby communities and ensure that the project can continue both North and South on Brazos Street (cohesive aesthetic; access/connectivity)
- Working with relevant committees and organizations in the community throughout the process to ensure buy-in and continuity (culture and community, cohesive aesthetic)
 - (i.e., Westside Creeks Restoration Oversight Committee)

Multimodal Improvements Toolbox

This section describes several types of improvements that could be applied to the South Brazos Street and provides a supplemental visual of what that improvement might look like according to the best practices from exemplary projects from other cities.

Multi-Use Path

Multi-use paths, also known as shared use paths, create a dedicated space for all non-motorized users (pedestrians, cyclists, strollers, roller skaters, wheelchairs, etc.) to travel. Typically, multi-use paths are introduced in areas that connect recreational areas, such as a trail-to-trail or park-to-park. Multi-use paths allow bi-directional travel (10-foot width preferred) and have a physical separation from the roadway. In places with significant right-of-way constraints, an 8-foot-wide path may be appropriate.



Street Trees

Incorporating street trees into a street design has a variety of benefits, both functionally and aesthetically. Trees provide shade to the surrounding land uses and pedestrians; encourage slower traffic speeds when combined with curb extensions and on-street parking; and mitigate heat island effects, which can be a real issue in many cities in Texas. Street trees also help frame the street in a human scale, naturally make the space more comfortable for pedestrians, and enrich the general aesthetic of the surrounding area.

Widened Sidewalk with Landscape Buffer

Sidewalks should provide an adequate amount of space (usually 5-7-foot of width in residential areas and up to 8-12-foot in commercial areas) that is free of debris and is in good condition so that all pedestrians can easily navigate through the space. Adding a buffer zone between the sidewalk and street gives pedestrian extra space from traveling vehicles and can be utilized for additional amenities such as rain gardens or utility poles.





Median Planter/Refuge Islands

Medians can be utilized to provide refuge for pedestrians and cyclists as they cross the street, creating an island in the center of the street to wait and reduce the width of the crossing as well as reduce the challenge of navigating both directions of traffic at once. As the median reduces the total width of the street, it also functions as a traffic calming device (reduces traffic speeds). In this scenario, the median is also serving as a planter that can provide environmental and aesthetic benefits.

Midblock Crosswalk

When there is a high pedestrian traffic or a pedestrian desire line that isn't typical to the end of the block crossing, there may be a need to install something between intersections to encourage safer crossings of the street. There are many instances along the corridor where pedestrians may be crossing midblock to access a transit stop or business and installing midblock crosswalks can facilitate this trip in a safer manner and support many of the other proposed improvements, such as medians and bump-outs.



Bio-Retention Bump-Out

Bio-retention bump-outs, in their most basic form, are curb extensions with bio-swale treatments. The bio-swale treatments can help relieve pressure on a local stormwater system and prevent spot flooding during storm events by providing a place for stormwater to drain and infiltrate the ground. The curb extension component of this treatment can help narrow the roadway in both a visual and physical sense, increasing the safety of pedestrians at crossings, decreasing the average speed of traffic, and increasing space for amenities such as street trees and lighting.

Transit Bump-Out

Transit bump-outs are curb extensions that create additional space for the bus stop amenities, giving passengers a safer space to board and alight the bus without the bus having to leave the travel lane. This not only increases passenger safety but also helps increase the travel time reliability of the bus service as they can make pickups/drop-offs without needed to wait for gaps to merge back into traffic.



On-Street Parallel Parking

Traditional on-street parallel parking can be leveraged to provide a buffer area between pedestrians and traffic while offering additional room for residents or customers to park their cars. On-street parallel parking has also been shown to reduce the average speed of through traffic, as drivers become more cautious of other cars maneuvering in and out of parking spots.

On-Street Back-In Angled Parking

Back-in angled parking requires the driver to reverse into the stall. Compared to traditional on-street parallel parking, back-in angled parking provide higher visibility when exiting the stall, safer trunk unloading, keeps car doors from opening into traffic or towards the sidewalk, and lets drivers back into empty stalls instead of battling with traffic in the travel lane. On the other hand, back-in angled parking requires a greater width of pavement compared to parallel parking.



Festival Street

Designating a street as a festival street allows the use of the street to be given back to the community for events. The design of a festival street gives pedestrians priority within those extents and requires drivers to yield. The entire streets can be easily closed off for events, and some are reconstructed to bring the roadway up to grade with the sidewalk to eliminate the visual separation between sidewalk and roadway, which makes pedestrians feel safer to navigate the space and makes driver more cautious of observant.



Gateway Feature

The purpose of a gateway feature is to visually mark the beginning or end of a place and/or strengthen the identity of a neighborhood, district, or corridor. Gateway features can vary in size and costs and can be as simple as a welcoming sign or as complex as an archway or custom art installation.

Public Space Enhancement

Opportunities for high quality public space can occur at many scales and take many forms. Examples could include art installations, green or open space, cultural/historical markers, or other public amenities such as a gazebo for shade or waiting area for transit passengers. Specific improvements should be determined in coordination with the public as a project progresses beyond the conceptual design phase.



Proposed Improvements

The proposed multimodal improvements for the South Brazos Corridor are summarized and discussed in the following sections. Using the vision statement, Multimodal Improvements Toolbox, and feedback from the SAG, the Project Team developed maps, representative cross-sections, conceptual intersection layouts, and 3-D photo simulations to illustrate the proposed improvements throughout the corridor. Improvements are divided in five segments from north to south:

1. Alazan Creek Bridge to Cesar E. Chavez Boulevard
2. Cesar E. Chavez Boulevard to San Fernando Street
3. San Fernando Street to Guadalupe Street
4. Guadalupe Street to Vera Cruz
5. Vera Cruz to Apache Creek Bridge

Overview of Corridor

An overview map of improvements for the entire corridor is shown in **Figure 3**. At a high level, the proposed multimodal improvements comprise four different categories:

- **Multi-Use Path/Trail-to-Trail Connection** – A 10-foot path that connects Apache and Alazan Creek Trailways; supports all users; provides a connection to cultural resources and an opportunity for design continuity



- **Public Space Enhancements** – Giving side streets back to the community; street parties/festival streets; art installations; lighting improvements; utilize vacant spaces



IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- **Widened Sidewalks with Street Trees** – Widen sidewalks to improve accessibility for all users; improve mobility for aging population; mitigate heat island affects with street trees



- **Narrower Street that Supports Transit and Drainage** – Bump-outs that provide safer boarding/alighting areas for transit passengers and drivers; retention bump-outs to help filter stormwater runoff and provide environmental benefits as well as pedestrian refuge at crosswalks



IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

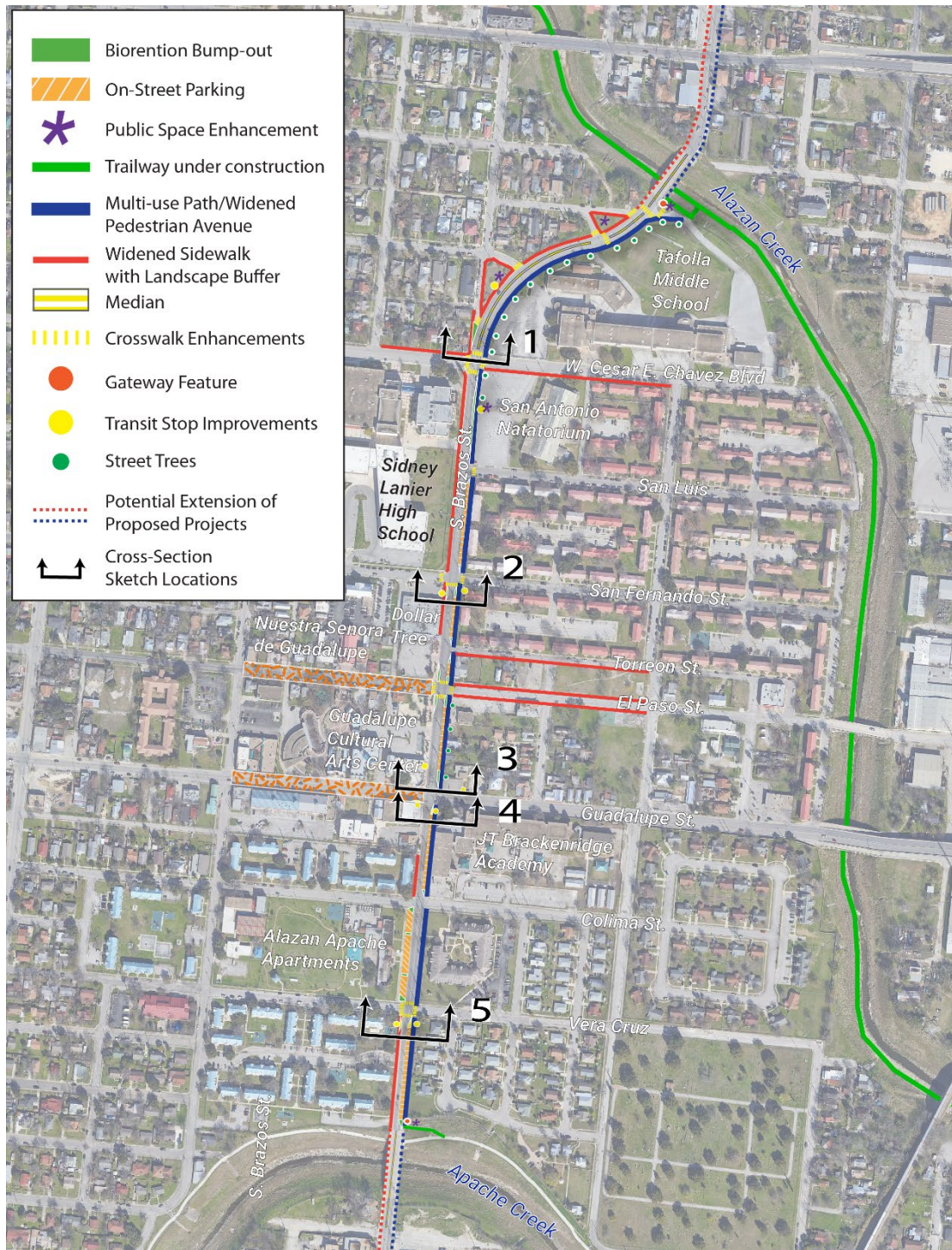


Figure 4: Overview Map of Improvements

Detailed Proposed Improvements

The following sections will detail the proposed improvements in more detail moving from north to south, dividing the study corridor into five segments. A profile has been created for each segment that includes improvement descriptions, strengths, and limitations; a map illustration showing the location of each proposed improvement; and diagrams showing the proposed configuration of major intersections and key cross-sections.

1. Alazan Creek Bridge to Cesar E. Chavez Boulevard

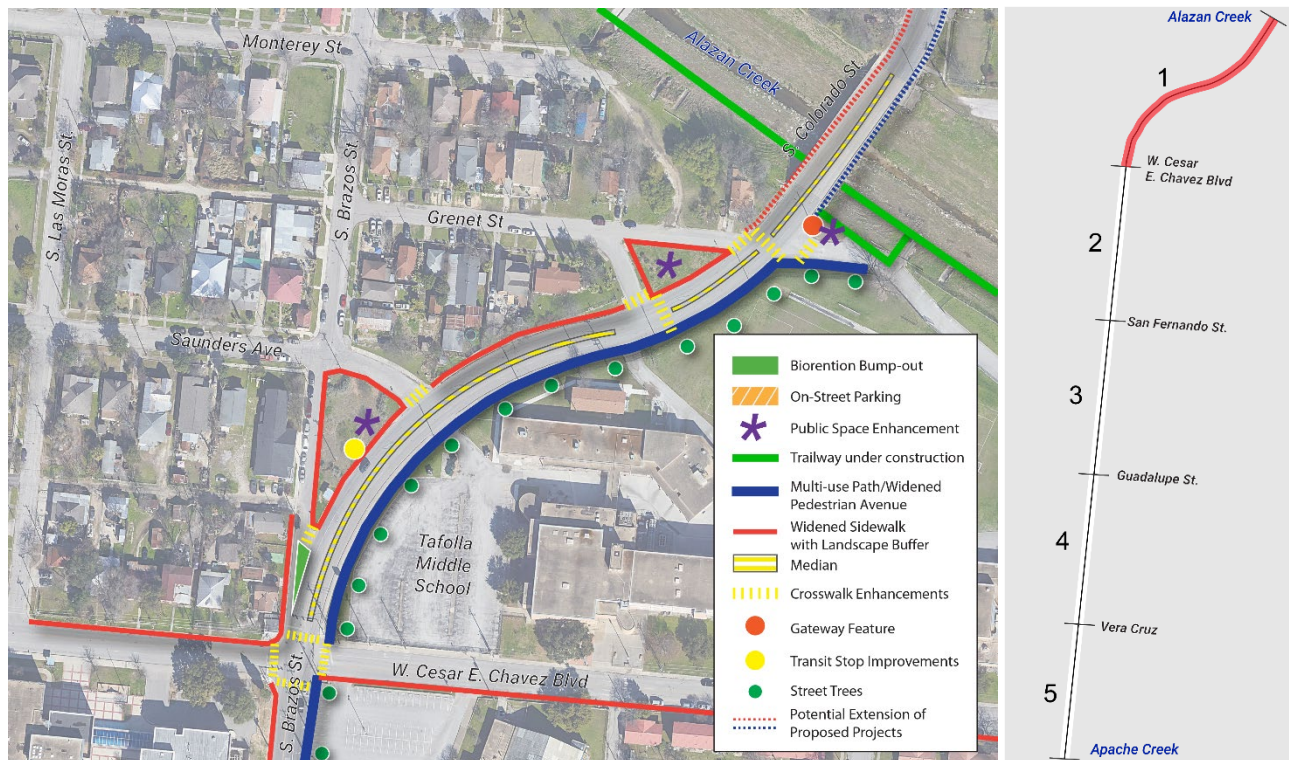


Figure 5: Proposed Improvements - North of Cesar E. Chavez Boulevard

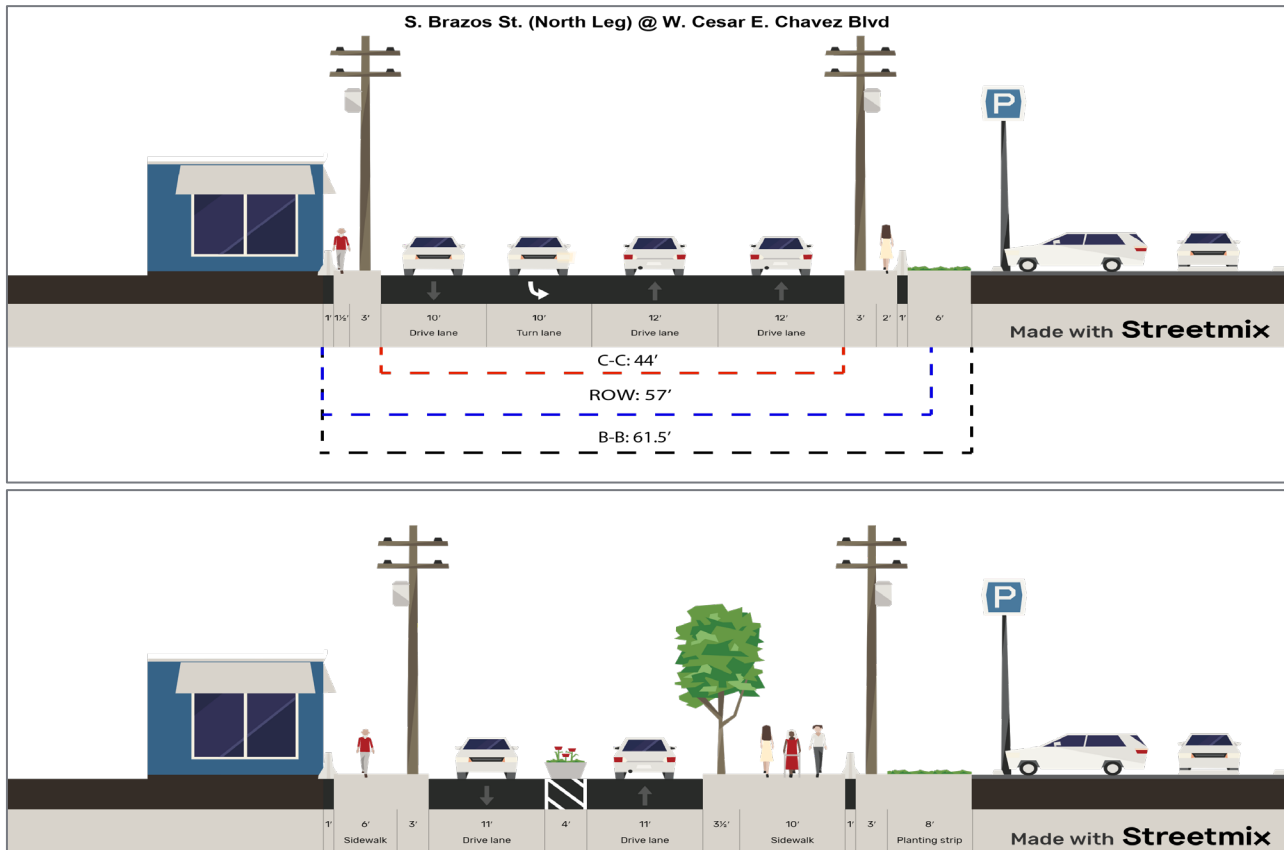


Figure 6: Existing and Proposed Cross-Section - North of Cesar E. Chavez Boulevard

Proposed Improvements:

- An expanded sidewalk on the west side of Brazos Street
- Travel lanes reduced to one lane in each direction and reduced in width to 11-foot
- 2-foot median/buffer added to help narrow road widths
- Street trees added to the east side of Brazos Street to give pedestrians/students shade
- 10-foot multi-use path connecting creek trailways on the east side of the street; a 12 ft path may be possible in some locations, but may need to narrow to 10 ft at pinch points such as
 - The block between Torreon Street and El Paso Street where La Popular Bakery is located
 - The southeast corner of the block between El Paso Street and Guadalupe Street
 - Portions of the block between Guadalupe Street and Colima Street where JT Brackenridge exists

Strengths:

- Widened sidewalk will provide a safer route to the north of the corridor as well as from the north of the corridor to Sidney Lanier High School; will also connect to proposed public space enhancements at vacant lots at Saunders Avenue and Smith Street
- Multi-use path will create a trail-to-trail connection and give students a safer way to get to Tafolla Middle School; Street trees will provide shade for this route where a heat island currently exists
- Removing travel lanes and reducing widths to 11-foot will decrease speeds on the curve north of Tafolla Middle School, which will also improve safety for students and all users; design widens southbound lane for buses to service the stop across from Tafolla Middle School (currently only 10-foot wide)
- Uses underutilized right-of-way on east side of street for multi-use path (planting strip between sidewalk and Tafolla Middle School fence)

Limitations:

- Right-of-way on west side of street is limited; to widen sidewalks, the curb will need to be moved in and take a portion of the existing travel way, which is considered in the **Figure 5** cross-section
- Utility poles within sidewalk create a tough obstacle to overcome to sufficiently provide ADA compliant sidewalks; some poles may need to be relocated in the final design



Figure 7: Photo Simulation - North of Cesar E. Chavez Boulevard

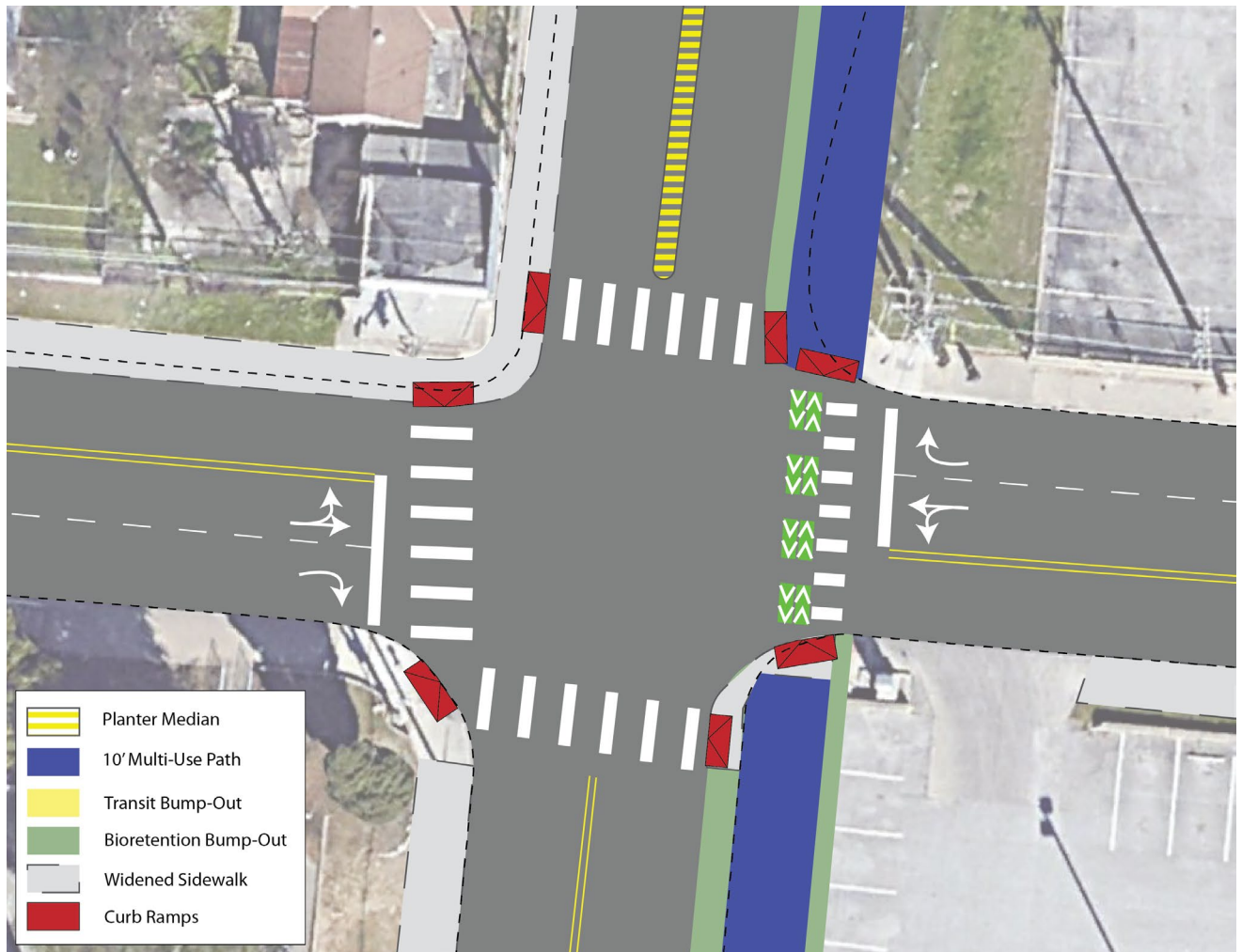


Figure 8: Conceptual Intersection Layout - Brazos Street & Cesar E. Chavez Boulevard

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

2. Cesar E. Chavez Boulevard to San Fernando Street

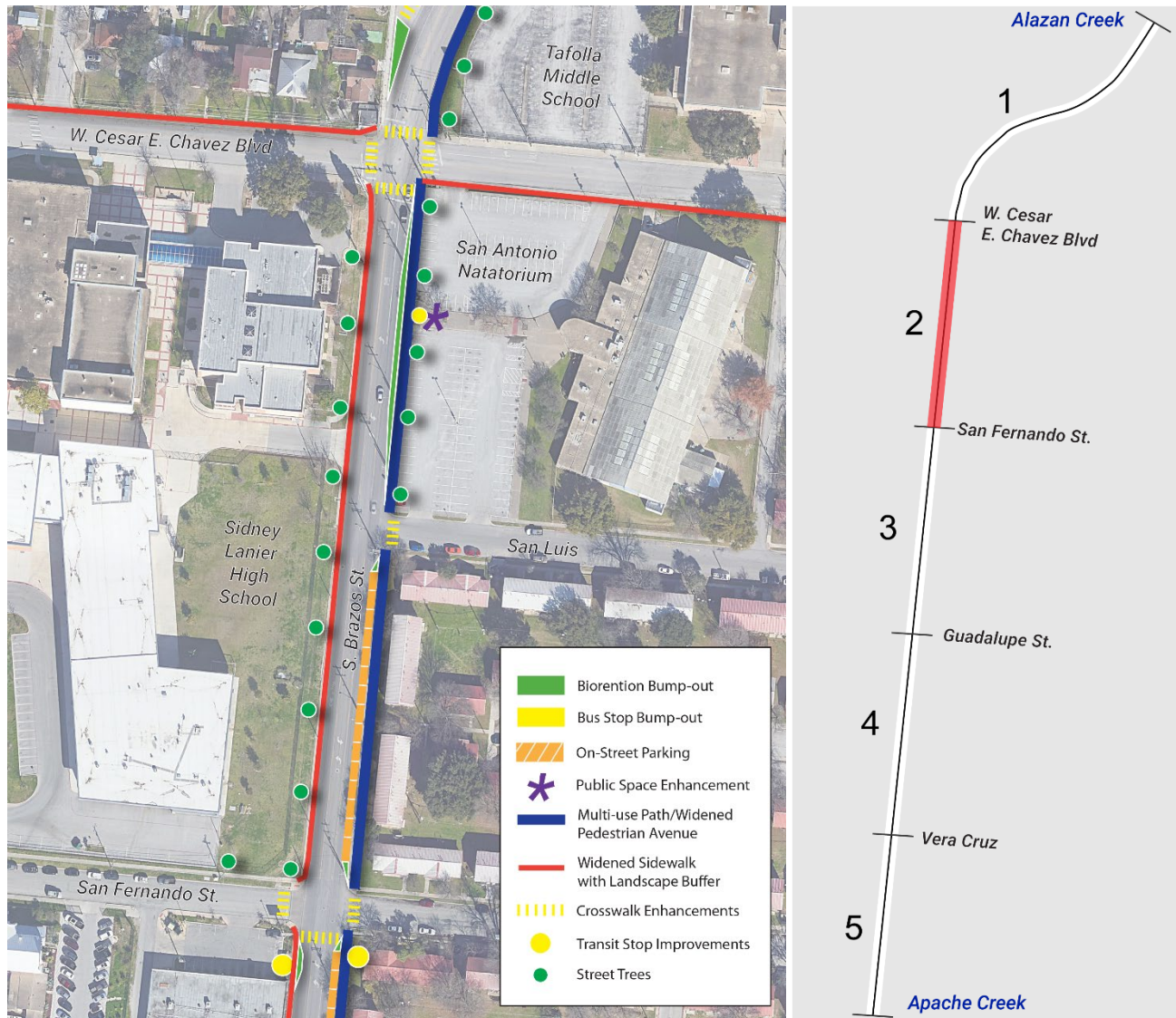


Figure 9: Proposed Improvements - Cesar E. Chavez Boulevard to San Fernando Street

Proposed Improvements:

- Travel lanes reduced in width from 14 feet to 11 feet

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- Turn lane removed; bioretention bump-out west side of Brazos Street near Dollar General added to help narrow road widths and give passengers more space and allow buses more efficient pickups and drop-offs
- 8-foot wide parking lane added to the east side of the street south of San Luis to accommodate residential parking; parking bays would be framed at each end by bioretention bump-outs with neighborhood appropriate plantings
- 10-foot multi-use path connecting creek trailways on the east side of the street

Strengths:

- Widened sidewalk will provide a safe route on the west side of street to Sidney Lanier High School and Dollar Tree
- Uses underutilized right-of-way on west side of street for widened sidewalks (planting strip between sidewalk and Sidney Lanier High School fence)
- Multi-use path will create a trail-to-trail connection and give pedestrians a safer way to get to the Natatorium and the San Antonio Housing Authority apartments; Street trees will provide shade for this route where a heat island currently exists
- Removing turn lane and reducing widths to 11-foot will decrease speeds and improve safety for students and all users (connection to Sidney Lanier High School, Dollar Tree, Natatorium, and residential areas)
- On-street parking lane on east side of street will transition to a bus bump-out to provide refuge for boarding/alighting transit passengers (bus bump-out is mirrored on the west side of street for the same purpose); these are strategically placed to increase safety at the new crosswalks at the San Fernando Street intersection

Limitations:

- Additional space between apartments and ROW on east side of street may need to be acquired; options should be discussed with the San Antonio Housing Authority
- Utility poles within sidewalk create a tough obstacle to overcome to sufficiently provide ADA compliant sidewalks; some poles may need to be relocated in the final design
- Fitting a shared-use path in front of the Natatorium would require either taking a portion of the parking lot or moving the curb to narrow the existing travel way; options should be discussed with the Parks and Recreation Department

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

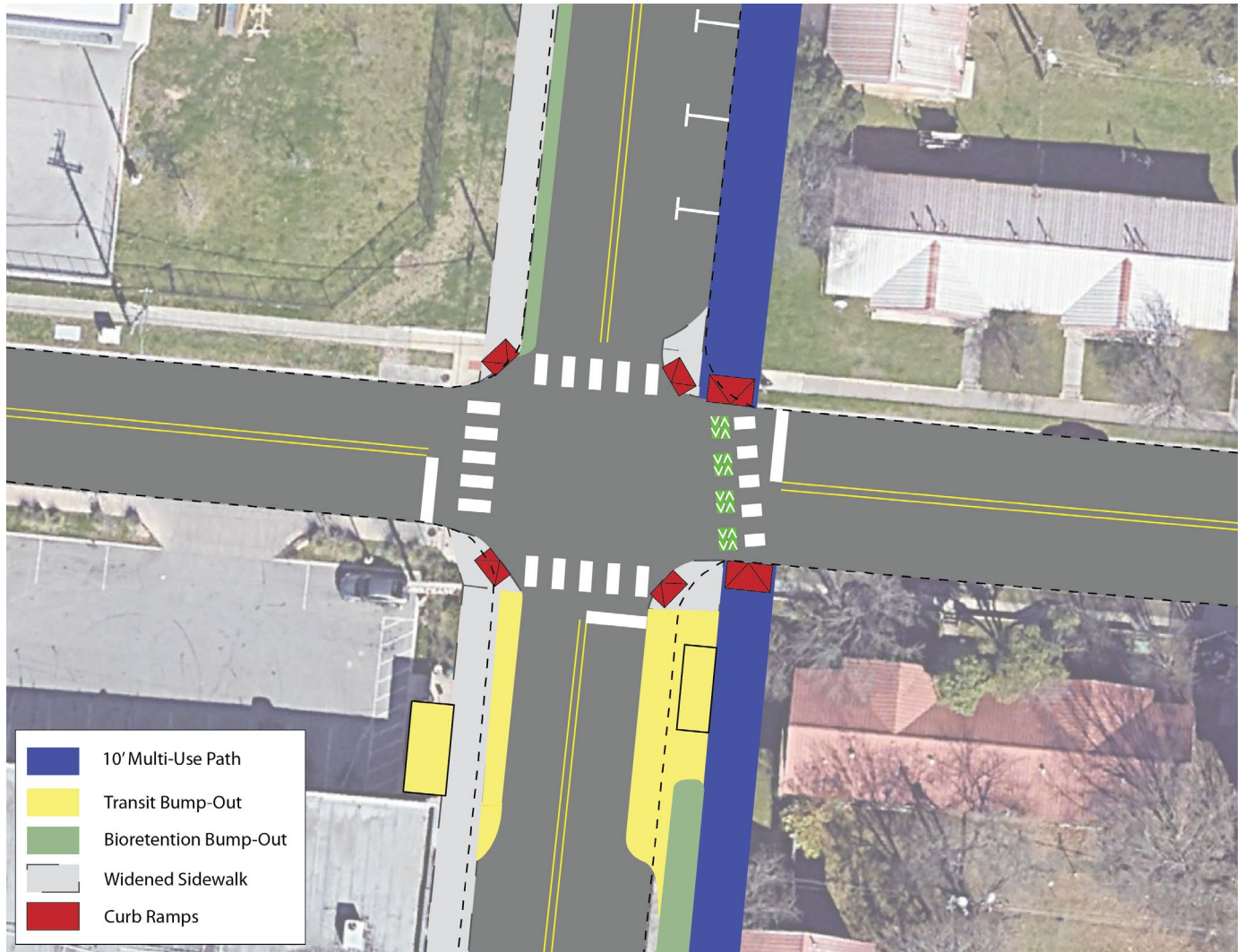


Figure 10: Proposed Intersection Diagram - Brazos & San Fernando

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

3. San Fernando Street to Guadalupe Street

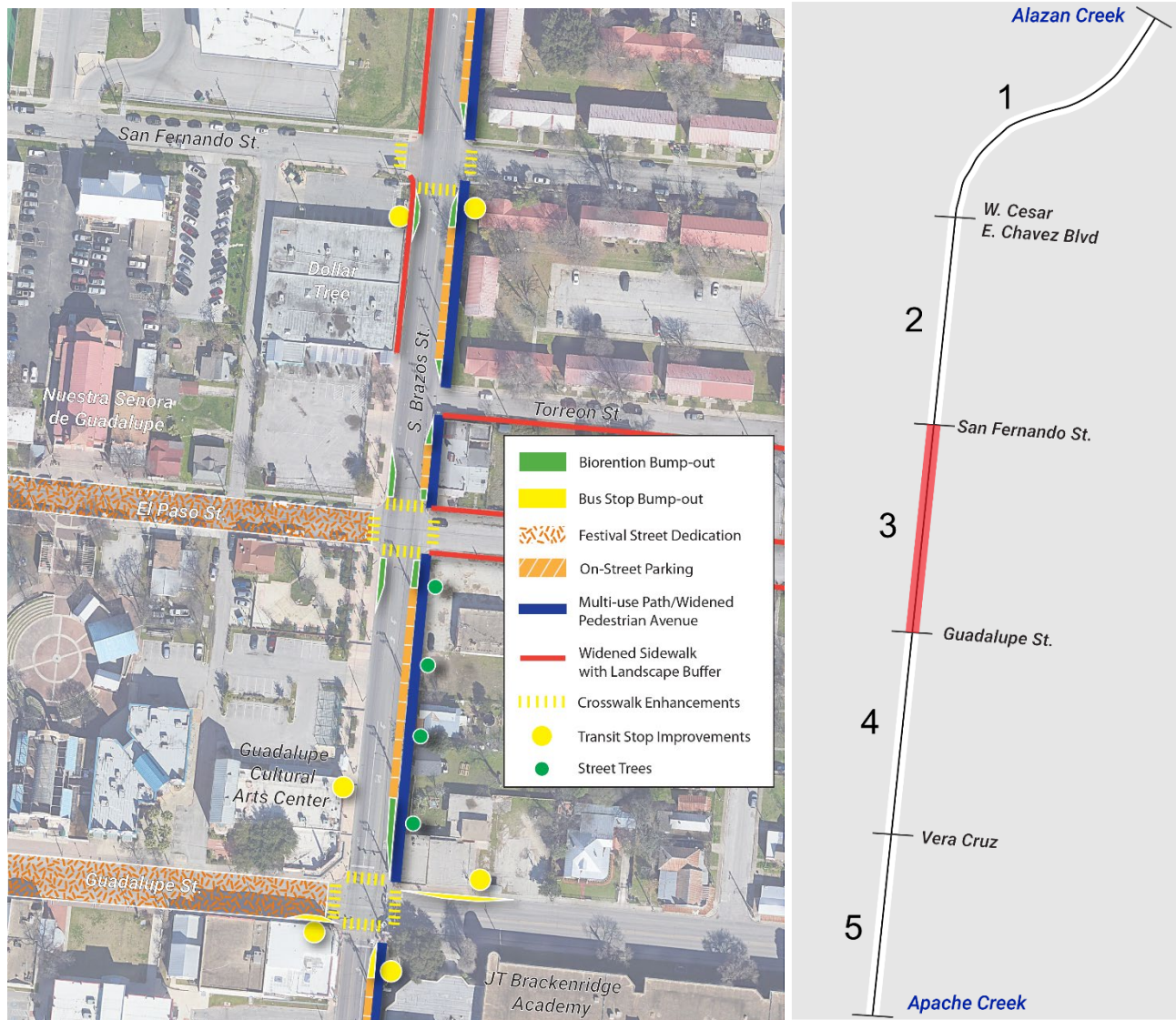


Figure 11: Proposed Improvements - San Fernando to Guadalupe Street

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

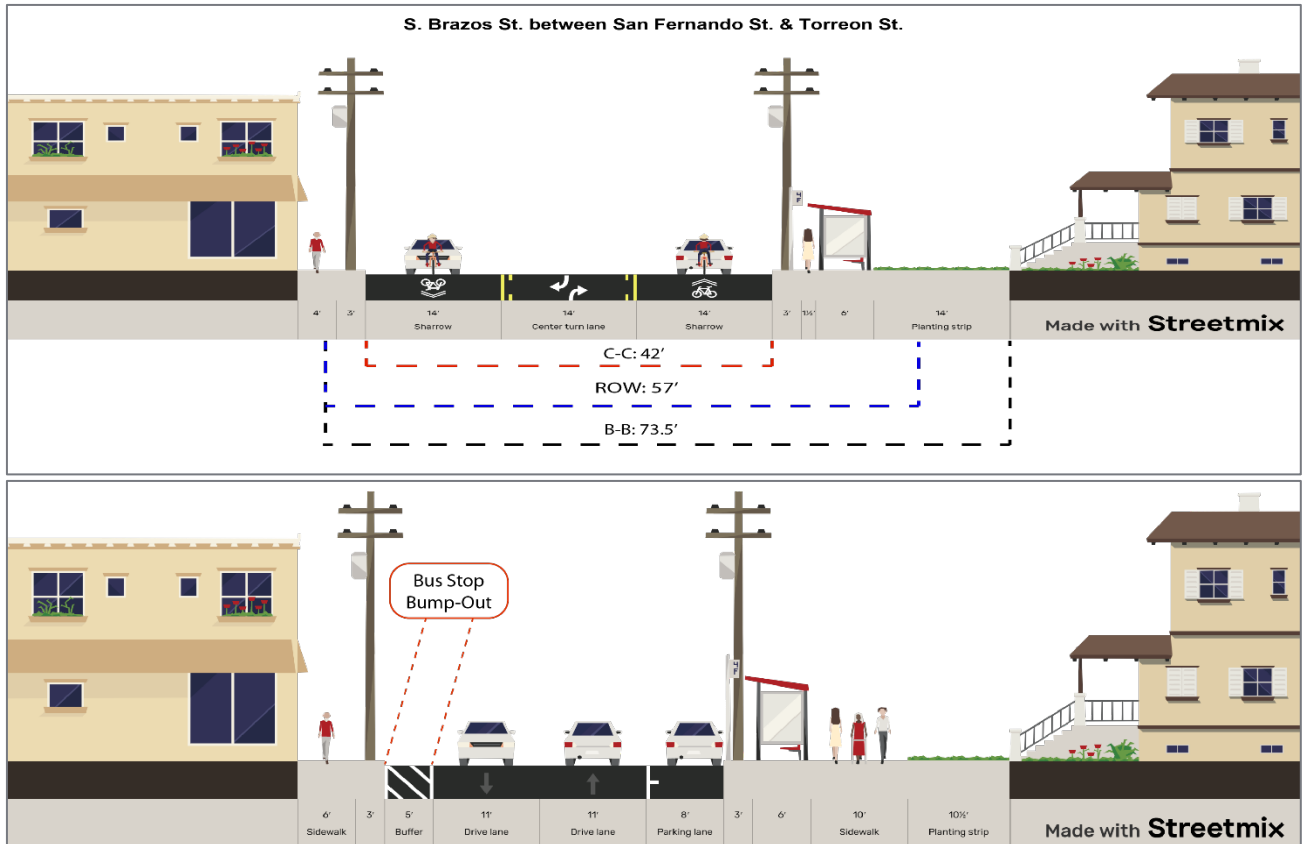


Figure 12: Existing and Proposed Cross-Section - South of San Fernando

Proposed Improvements:

- An expanded sidewalk in front of the Dollar Tree on the west side of Brazos Street and some side streets (Torreon Street and El Paso Street), including landscaped buffers between the curb and sidewalk
- Travel lanes reduced in width from 14 feet to 11 feet
- Turn lane removed (with option to retain a turn-pocket at the intersection with Guadalupe Street); 5-foot transit bump-outs added to bus stop locations at the intersection of Brazos Street and Guadalupe Street to help narrow road widths, give passengers refuge, and provide buses more space for safer pickups; transit bump-out also have the added benefit of decreasing the street crossing distance for pedestrians
- Bioretention bump-outs added to crosswalks at the intersections of San Fernando Street and El Paso Street to narrow unprotected crossing width

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- 8-foot wide parking lane added to the east side of the street to accommodate business and residential parking; parking bays would be framed at each end by bioretention bump-outs with neighborhood appropriate plantings
- 10-foot multi-use path on the east side of the street connecting residential areas
- Exploration of Festival Street designation on both El Paso Street and Guadalupe Street²
 - El Paso Street between Brazos Street and Fite Alley – a festival street design could act as a natural extension of Plaza Guadalupe, connecting it with Our Lady of Guadalupe Church in a contiguous public space; vehicle access would remain, but the design would give pedestrians priority within the space; the space could easily be closed off to traffic for events
 - Guadalupe Street between Brazos Street and San Jacinto Street – this location has a history of being closed for community events; though traffic volumes on this portion of the street are somewhat higher than those on a typical festival street, the potential for a festival street redesign and/or designation is worth exploring due to its historical use for community events

Strengths:

- Widened sidewalk on east side of street will provide a safe route to Sidney Lanier High School, local businesses, and the Guadalupe Cultural Arts Center
- Multi-use path will create a trail-to-trail connection and give pedestrians a safer way to travel for school, shopping, recreation, and other purposes; Street trees between El Paso Street and Guadalupe Street will provide shade for this route where a heat island currently exists
- Removing turn lane and reducing widths to 11-foot will decrease speeds, improving safety for students and all users (connection to Sidney Lanier High School, Dollar Tree, Natatorium, and residential areas)
- On-street parking lane on east side of street will transition to a bioretention bump-out to provide refuge for pedestrians crossing the street; these are strategically placed to increase safety at new crosswalks at intersections of San Fernando Street and El Paso Street
- Consideration of Festival Street designations for streets with a history of public gatherings and events
 - El Paso Street between Brazos Street and Fite Alley – because it is classified as a local street, has relatively low traffic volumes, and is under consideration as a neighborhood greenway, this segment is a good candidate for festival street implementation
 - Guadalupe Street between Brazos Street and San Jacinto Street – this location has a history of being closed for community events and may be the preferred location for future street events

² Additional studies and stakeholder outreach will be required to determine what sort of designs and event management strategies would work on each street.

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Limitations:

- Right-of-way on west side of street is limited; to widen sidewalks space from the roadway will need to be absorbed, which is considered in above the cross-section; additional space between apartments and ROW on east side of street may need to be acquired
- Utility poles within sidewalk create a tough obstacle to overcome to sufficiently provide ADA compliant sidewalks; some poles may need to be relocated in the final design
- Challenges in implementing Festival Streets
 - El Paso Street between Brazos Street and Fite Alley – festival street event closures might cause access challenges for several residences with frontages and driveways on this segment of El Paso Street
 - Guadalupe Street between Brazos Street and San Jacinto Street – traffic volumes on this portion of the street are somewhat higher than those on a typical festival street; the City classification as a minor arterial may restrict certain design elements common for festival streets, such as the roadway being at-grade with the sidewalk and other calming features

Intersection Alternatives at Brazos Street / Guadalupe Street

In many ways, the intersection of Brazos Street / Guadalupe Street can be considered the heart of both the study area and the whole neighborhood. It is the meeting point of important east-west and north-south arterials; it has more vehicle traffic and pedestrian activity than any other intersection in the study area; it is adjacent to several community organizations and event spaces; and it is the transfer point for VIA routes 66 and 68. However, it also has a more history of vehicle-pedestrian crash events than any other intersection in the study area, and members of the Strategic Advisory Group (SAG) have anecdotally shared that near-miss crashes are frequent.

Due to intersection safety needs and the important of the intersection for both vehicle and pedestrian movement, two redesign alternatives were developed for Brazos Street / Guadalupe Street. The two alternatives are detailed in the following sections and include an option to calm traffic and narrow the crossing distance for pedestrian and an option that would generally maintain the existing accommodations for vehicle traffic. There will need to be further study and engagement with stakeholders and the community to determine which alternative is preferred and/or more feasible.

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Brazos Street & Guadalupe Street Intersection Alternative 1



Figure 13: Existing and Proposed Cross-Section - North of Guadalupe Alternative 1

Proposed Improvements – Alternative 1:

- Travel lanes reduced in width to 11-foot
- Turn lane removed; 5-foot-wide transit bump-outs added to bus stops on the east, west, and south approaches to the Brazos Street / Guadalupe Street intersection to help narrow road widths and give passengers refuge and buses more space for safer pickups
- An 8-foot-wide parking lane added to the east side of the street to accommodate business and residential parking; parking bays would be framed at each end by bioretention bump-outs with neighborhood appropriate plantings

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- 10-foot multi-use path on east side of the street, buffered from the street with neighborhood appropriate shade trees

Strengths:

- Removing turn lanes and reducing lane widths to 11 feet will help decrease the occurrence of speeding traffic
- Removing turn lanes, reducing lane widths to 11 feet, and adding transit and bioretention bump-outs will reduce the distance required for pedestrians to cross the street and reduce the amount of time spent in conflict with vehicles, improving safety and comfort for those walking in neighborhood
- People waiting for transit will have a larger, more comfortable space that is separate from the space used for through-movement on the sidewalks
- Reduced lane widths and removed turn lanes may discourage commercial vehicle traffic from using both Brazos Street as a cut-through route

Limitations:

- Because right-of-way is limited, the design will take space currently dedicated to turn pockets on Brazos Street and through lanes on Guadalupe Street (See Figure 14); additional studies will be required to determine if this design can accommodate existing and future traffic demands
- Utility poles on the east side of the street will be in direct conflict with the multi-use path and will need to be relocated to the edge of the new curb; the final design should have the flexibility to accommodate buried utility line at some point in the future

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

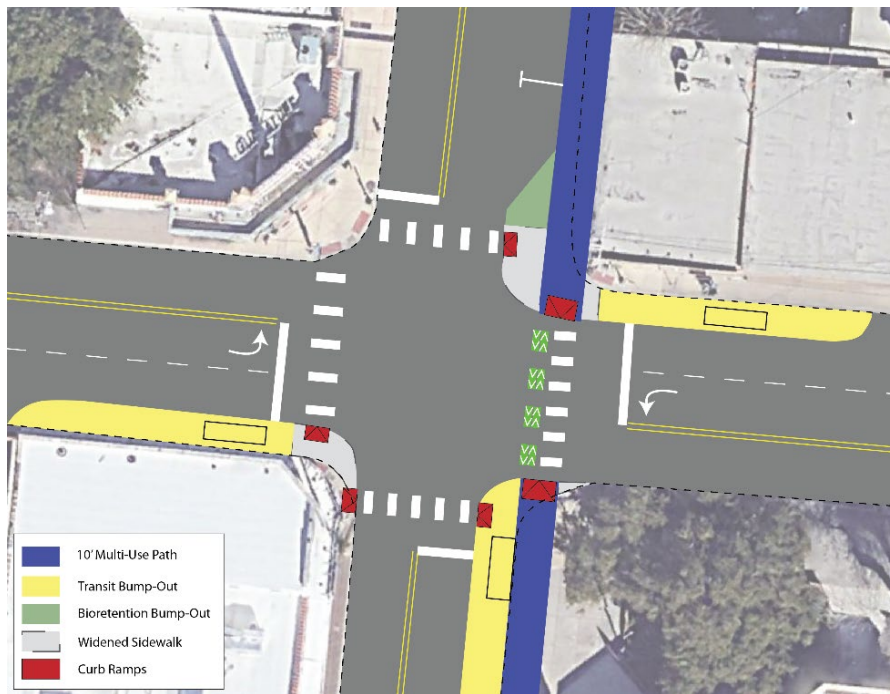


Figure 14: Alternative 1 – Conceptual Intersection Layout at Brazos Street & Guadalupe Street



Figure 15: Alternative 1 – Looking North towards Guadalupe Street

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Brazos Street & Guadalupe Street Alternative 2

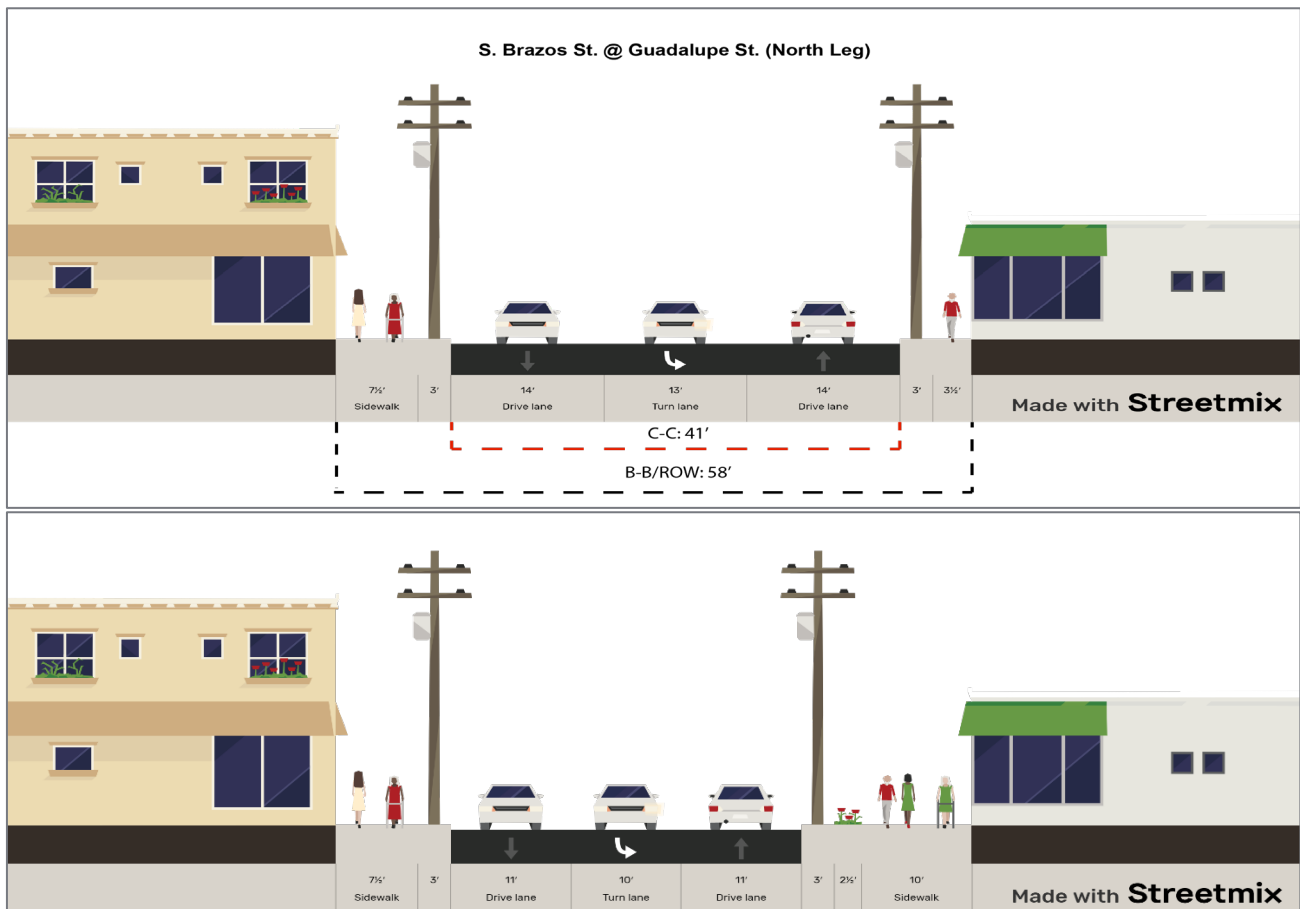


Figure 16: Existing and Proposed Cross-Section - North of Guadalupe Alternative 2

Proposed Improvements – Alternative 2:

- Travel lanes reduced the 11 feet wide; turn lane reduced to 10 feet wide
- Multi-use path on east side of the street with a narrow, planted buffer from the street where possible

Strengths:

- Keeping turn lanes on Brazos Street and through lanes on Guadalupe Street will maintain the existing capacity for vehicle traffic; compared to Alternative 1, less potential for queuing behind vehicles waiting for a safe left-turn from Brazos Street to Guadalupe Street

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- Reconstruction work would not be as extensive as Alternative 1; would need to reclaim some street space on the northeast corner to make room for the multi-use path

Limitations:

- Traffic calming impact (vehicle speed reduction) would not be as extensive as Alternative 1 since all approach lanes would be maintained
- Commercial vehicle cut-through traffic would not change
- Pedestrian crossing safety would be improved between the northwest corner and northeast corner due to the rebuilt and expanded northeast curb; however, pedestrian safety and overall comfort levels would be generally unchanged for the other three crossings
- Due to the limited right-of-way and need for utility poles on the east side of the street, the multi-use path might need to be narrowed to less than 10-foot wide in some locations; if the available horizontal clearance is less than 8-feet in any of these locations, additional right-of-way may need to be purchased to ensure the path can be built to a sufficient width to accommodate all types of users (pedestrian, bicyclists, people using wheelchairs and personal mobility devices, etc.)

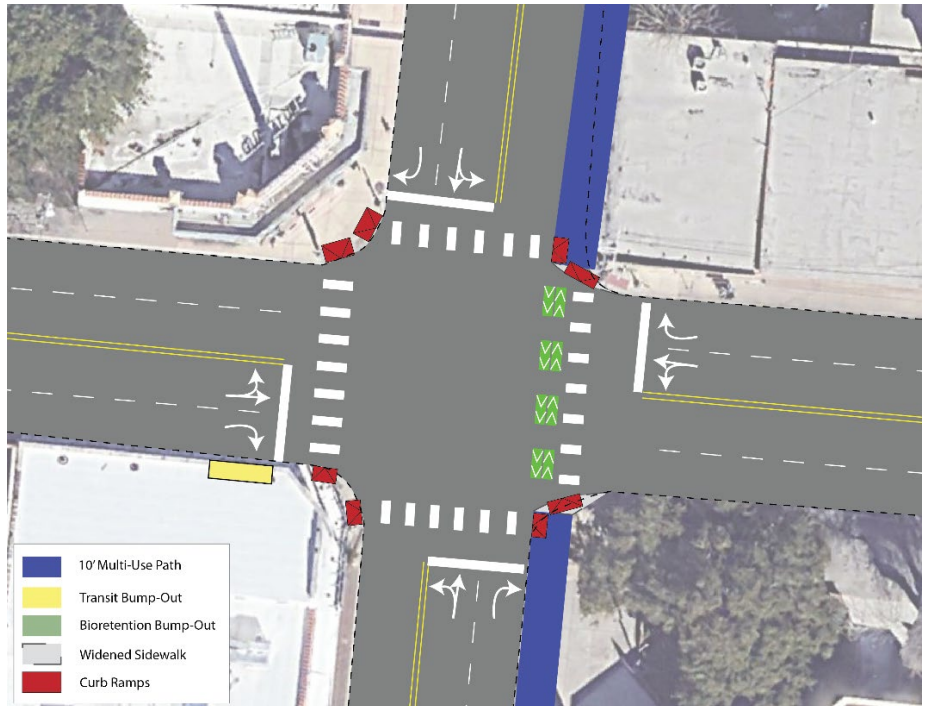


Figure 17: Alternative 2 – Conceptual Intersection Layout at Brazos Street & Guadalupe Street

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

4. Between Guadalupe and Vera Cruz

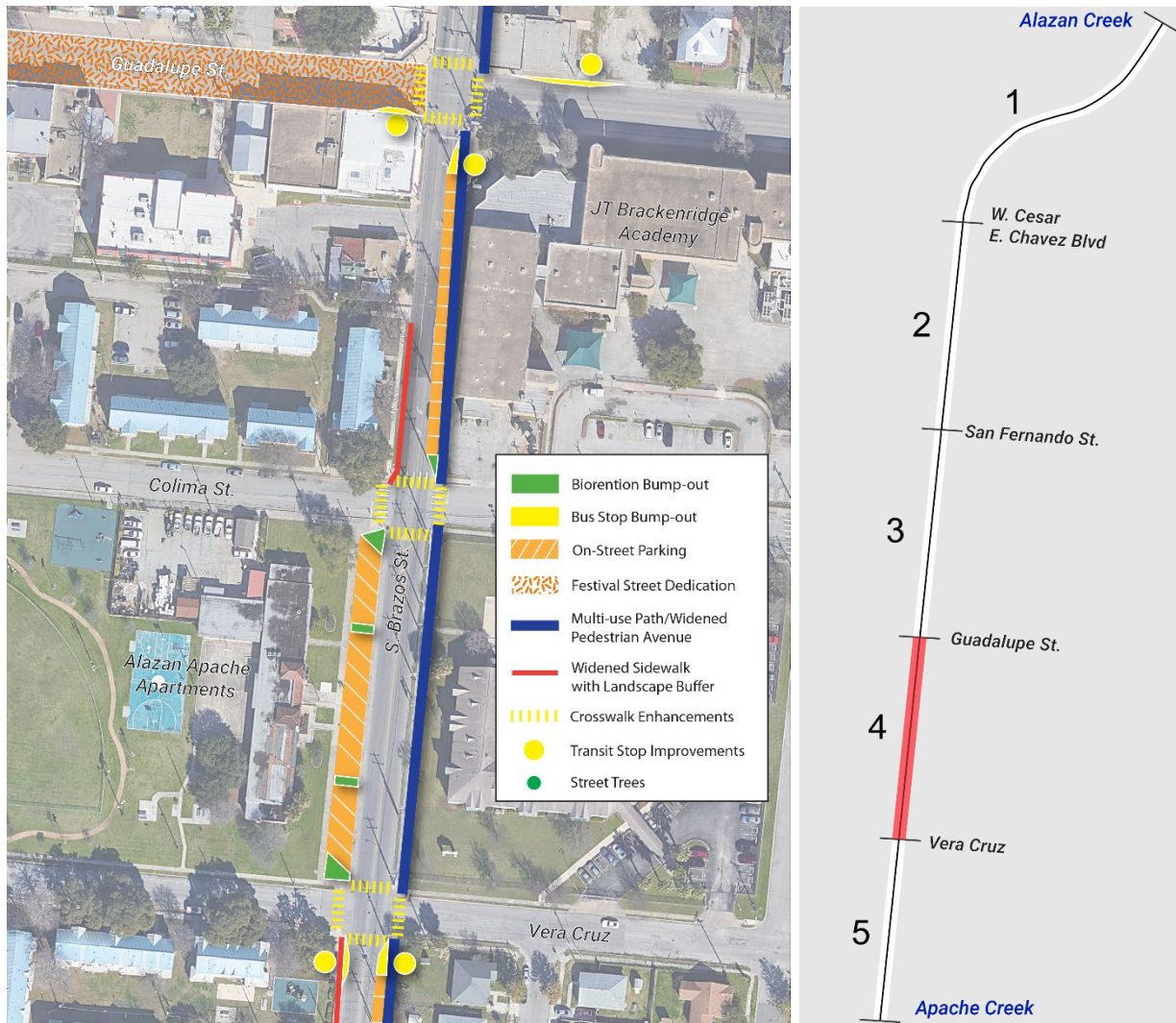


Figure 18: Proposed Improvements - Guadalupe to Vera Cruz

Proposed Improvements:

- 10-foot multi-use path connecting creek trailways on the east side of the street
- An expanded sidewalk on the west side of Brazos from Apache Apartments to Colima Street with a 1.5-foot landscape buffer

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- Travel lanes reduced in width to 11-feet; turn lane removed between Colima Street and Guadalupe Street to make room for business and residential parking
- An 8-foot-wide parking lane added to the east side of the street adjacent to JT Brackenridge Academy to accommodate business and residential parking; parking bays would be framed at each end by bioretention bump-outs with neighborhood appropriate plantings
- Back in on-street parking with bio-retention planters replacing existing parking at Alazan Apache Apartments on west side of street across from Ernest C. Olivares Senior Community Residence
- Potential Festival Street designation on Guadalupe Street

Strengths:

- Widened sidewalks will provide a safe route on the west side of street leading to Alazan Apache Apartments and park amenities
- Multi-use path will create a trail-to-trail connection and give pedestrians a safer way to get to JT Brackenridge Elementary, Ernest C. Olivares Senior Community Residence, and the SAHA apartments to the south
- Removing turn lane and reducing travel lane widths to 11 feet will decrease speeds, improving safety for students and all users (connection to JT Brackenridge Academy, Ernest C. Olivares Senior Community Residence, businesses on Guadalupe, and residential areas)
- Bio-retention bump-out on northeast corner of Colima Street intersection would reduce crossing distance for pedestrians and maintain the ability of school buses to turn left from Brazos Street to Colima Street

Limitations:

- Right-of-way on the east side of the street is limited, especially near JT Brackenridge Academy; to widen sidewalks and create space for multi-use path some space from the roadway will need to be absorbed, which is considered in above the cross-section; additional space between apartments, Ernest C. Olivares Senior Community Residence, and ROW may need to be acquired
- Utility poles within sidewalk create a tough obstacle to overcome to sufficiently provide ADA compliant sidewalks; some poles may need to be relocated in the final design

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

5. Vera Cruz to Apache Creek

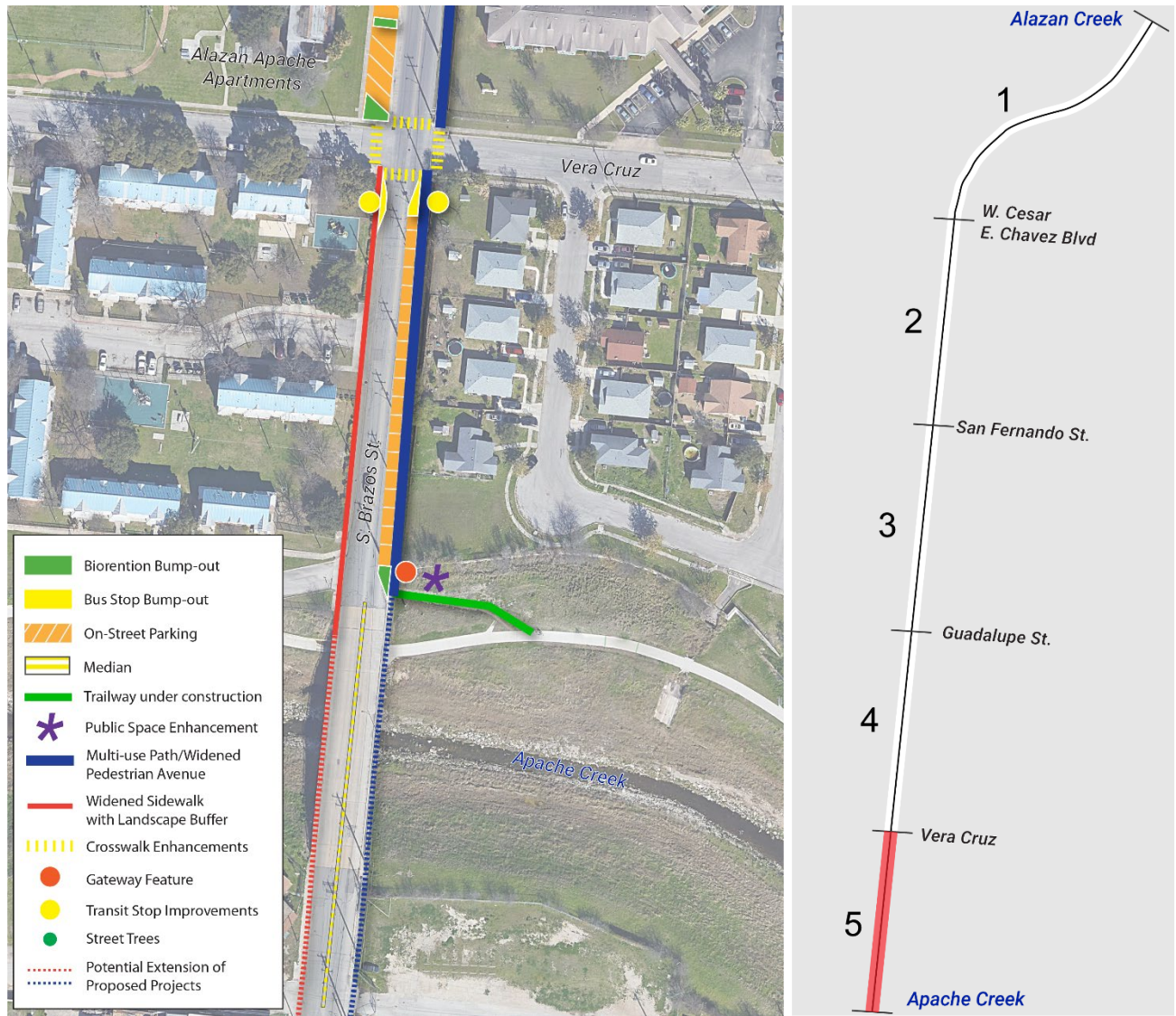


Figure 19: Proposed Improvements - Vera Cruz to Apache Creek

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

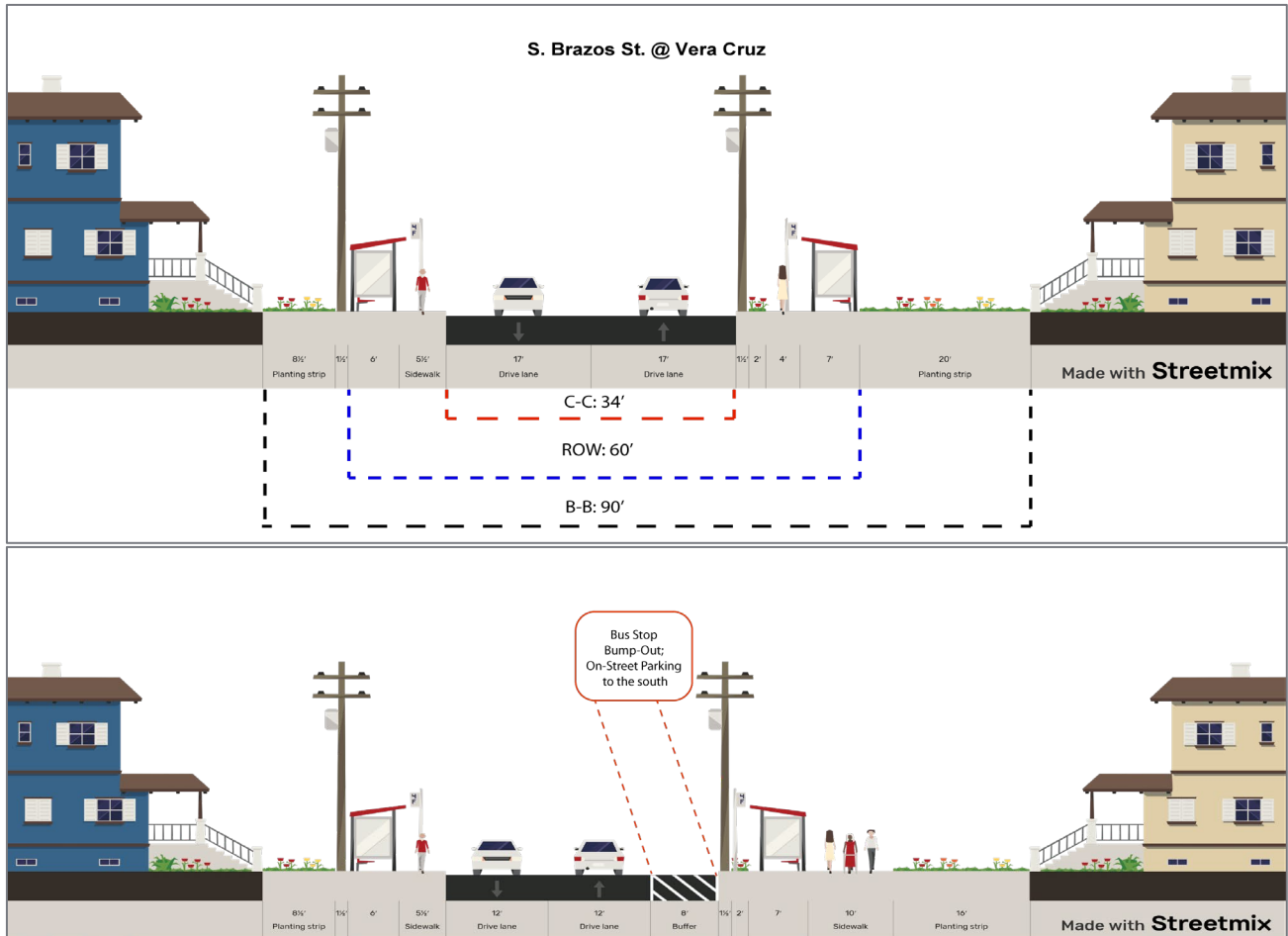


Figure 20: Existing and Proposed Cross-Section - South of Vera Cruz

Proposed Improvements:

- An expanded sidewalk on the west side of Brazos with a 1.5-foot landscape buffer from Vera Cruz to Apache Bridge with possibility of expansion further south
- Travel lanes reduced in width to 12-foot with a 4-foot median on the bridge
- An 8-foot-wide parking lane added to the east side of the street from Vera Cruz to Apache Creek bridge to provide residential parking; parking bays would be framed at north end by a bus bump-out and at the south end by a bioretention bump-out with neighborhood appropriate plantings
- 10-foot multi-use path connecting creek trailways on the east side of the street

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

- Neighborhood gateway feature at the Apache Creek trail connection
- Public space enhancement area at Apache Creek trail connection

Strengths:

- Widened sidewalks will provide a safe route on the west side of street leading to Alazan Apache Apartments and south of the corridor extent
- Multi-use path will create a trail-to-trail connection and give pedestrians a safer way to get to the trail from residential areas to the north
- Removing turn lane and reducing widths to 12-foot and adding median will decrease speeds which will improve safety for and all users, especially those using the trail connection
- On-street parking lane on east side of street from Vera Cruz to Apache Bridge will transition to a bus bump-out to provide refuge for boarding/alighting transit passengers as well as provide more parking for residents in surrounding areas
- Bioretention bump-outs are strategically placed to increase safety at new crosswalks at Vera Cruz intersection
- Public space enhancement area can help give space back to pedestrians and the community; great way to showcase local artists and historic events

Limitations:

- Right-of-way on west side of street is limited, may need to work with SAHA to acquire more space; to widen sidewalks and create space for multi-use path some space from the roadway will need to be absorbed, which is considered in above the cross-section
- Utility poles within sidewalk create a tough obstacle to overcome to sufficiently provide ADA compliant sidewalks; some poles may need to be relocated in the final design



Figure 21: Proposed Intersection Diagram - Brazos & Vera Cruz

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Cost Estimates

Cost estimates for the South Brazos Street improvement concepts were developed based on a combination of knowledge of prior improvement designs for the urban areas in Central Texas and materials provided by the City of San Antonio and the San Antonio River Authority. A cost range for the segments is included in **Table 1** to account for variable cost of certain items proposed, such as gateway features and public space enhancements that may vary greatly depending the final preference of improvements (i.e., a gateway feature could be as simple as a welcoming sign or as complex as a road-spanning archway). The estimate took the 12-month average TxDOT bid prices for the San Antonio district up to September 2021 (12-consecutive month averages) and accounted for the main bulk of items that would go into these improvements.

All items took into account preliminary engineering costs such as traffic control/impact to traffic, safety fencing, erosion and sedimentation control. Due to the concept-level of the improvements and unknown variables such as design material choices, a contingency was applied for the total estimated cost.

Table 1: Proposal Cost Estimates by Segment and Total

Corridor Segment	Estimated Cost
1 – Alazan Creek to César E Chávez Blvd	\$1,200,000– \$1,400,000
2 – Between Cesar Chavez and San Fernando	\$1,200,000
3 – Between San Fernando and Guadalupe – Festival Streets	\$5,750,000– \$8,650,000
3 – Between San Fernando and Guadalupe	\$750,000 – \$1,050,000
4 – Between Guadalupe and Vera Cruz	\$800,000 – \$1,050,000
5 –Vera Cruz to Apache Creek	\$850,000 – \$1,000,000
Total Estimated Cost (includes planning, design, and utility coordination)	\$10,500,000 - \$14,500,000

Dollar amounts represent general estimates of the level of effort required to design and construct the improvements; costs are liable to change after survey and detailed design; any ROW costs are not included.

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Next Steps

This plan will provide a framework for project development by the City of San Antonio Public Works Department as the project moves forward.

During the process, many stakeholders and city staff suggested extending improvements both to the north and south of the study area (Alazan Creek to Apache Creek). Although outside of the scope of this project, this extension should be encouraged and supported by future efforts. Specific suggestions included:

- Extend sidewalk and multi-use path from Alazan Creek bridge north to Buena Vista Street and Commerce Street, tying into existing bike lanes
- Extend sidewalk and multi-use path from Apache Creek bridge south to Laredo Street
- Crosswalk improvements at Tampico Street to provide connectivity to the Say Sí campus

This project garnered continuous support and excitement from the stakeholder group throughout the engagement process. The stakeholder group was very supportive, positive, and engaging throughout the process, which created an environment that was community focused, detail oriented, and helped carry the project forward to the bond process.

APPENDIX

Table A2: Proposed Improvement Cost Estimates, Key Partners, and Potential Champions

Improvement Description	Order of Magnitude Cost Estimate	Key Partners	Potential Champions
Corridor Wide Improvements			
Multi-use path running from Alazan Creek Trailway to Apache Creek Trailway on the east side of the corridor (0.69 miles) (~55 utility poles that may need moved)	\$1,600,000	Parks & Rec; Public Works; SAISD	
North of Cesar Chavez			
Widened select sidewalks with landscape buffers (0.27 miles) (no utility poles that may need moved)	\$450,000	Public Works; SAISD	
Gateway feature at Alazan Creek Trailway	\$60,000-\$200,000	Parks & Rec; Public Works	
Public space enhancement at the Alazan Creek Trailway	\$2,000-30,000	Arts & Culture; Public Works	Guadalupe Cultural Arts Center
Public space enhancement at the triangular lot at Grenet Street & South Colorado Street	\$2,000-30,000	Arts & Culture; Public Works	Guadalupe Cultural Arts Center
Public space enhancement at the triangular with bus stop across from Tafolla Middle School	\$2,000-30,000	Arts & Culture; Public Works; SAISD	Guadalupe Cultural Arts Center
Crosswalks added (x7) at the Alazan Creek Trailway connection, at Grenet Street at South Colorado Street on both the north and south side of triangular lot, on Saunders Ave. at	\$10,000	Public Works	

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

South Colorado Street on north side of triangular lot with bus stop, and on South Brazos Street where it splits into South Colorado Street on the south side of the triangular lot with bus stop

Crosswalk at South Brazos Street where it splits into South Colorado Street on the south side of the triangular lot with bus stop incorporates a bioretention bump-out to provide pedestrian relief	\$100,000	Public Works; VIA
---	------------------	-------------------

Median along South Colorado Street from Cesar Chavez to the north end of the Alazan Creek bridge	\$100,000	Public Works
--	------------------	--------------

Street Trees planted along the east side of the street to provide shade for the multi-use path and students walking to Tafolla Middle School	\$100,000	Public Works; Parks & Rec; SAISD
--	------------------	----------------------------------

Bus stop improvements at stop across from Tafolla Middle School (will require new concrete pad)	\$15,000	VIA; Public Works
---	-----------------	-------------------

Between Cesar Chavez and San Fernando

Widened select sidewalks with landscape buffers (0.21 miles) (~10 utility poles that may need moved)	\$400,000	Public Works; SAISD
--	------------------	---------------------

Public space enhancement at Natatorium bus stop with transit improvements and a bioretention bump-out (Shelter needed at this stop; will require new concrete pad)	\$150,000	Arts & Culture; VIA; Public Works	Guadalupe Cultural Arts Center
--	------------------	-----------------------------------	--------------------------------

On-street parallel parking with bioretention bump-outs on east side of South Brazos	\$150,000	Public Works
---	------------------	--------------

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Street between San Luis and San Fernando Street		
Crosswalks (x4) at San Luis at South Brazos Street and on the east, west, and south legs of the intersection of San Fernando & South Brazos Street	\$10,000	Public Works
Transit improvements at the stops on both the east and west side of San Fernando & South Brazos Street with bus stop bump-outs (Both will require new concrete pads)	\$25,000	VIA; Public Works
Street Trees along the potential multi-use path to provide shade to the Natatorium parking lot and the path; Along the potential widened sidewalk on the west side of South Brazos Street at Sidney Lanier High School	\$100,000	Public Works; Parks & Rec; SAISD

Between San Fernando and Guadalupe

Widened select sidewalks with landscape buffers (0.22 miles) (~12 utility poles that may need moved)	\$400,000	Public Works; SAISD
Festival Street designation at El Paso Street from Brazos Street to San Jacinto Street	\$5,750,000-8,650,000	Public Works; Arts & Culture; Parks & Rec
On-street parallel parking with bioretention bump-outs on east side of South Brazos Street between San Fernando to Guadalupe Street	\$200,000³	Public Works

³ All bioretention bump outs on eastside of Brazos from San Fernando to Guadalupe except for the 4 at El Paso int + the 1 on the westside of Brazos at San Fernando

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Crosswalks on all four legs of the intersection at El Paso & South Brazos Street **\$10,000** Public Works

Bioretention bump-outs along the east and west side of both the north and south legs of the intersection of El Paso Street and South Brazos Street **\$1000,000 (4 bump outs at El Paso int)** Public Works

Transit improvements at stops at South Brazos Street and San Fernando Street on the east and west side of South Brazos Street (Both stops will require new concrete pads); All four stops at Guadalupe Street and South Brazos Street (these stops include bus stop bump-outs; stop at JT Brackenridge will need new concrete pad) **\$150,000** VIA; Public Works

Between Guadalupe and Vera Cruz

Widened select sidewalks with landscape buffers (0.03 miles) (~2 utility poles that may need moved) **\$200,000** Public Works; SAISD Avenida Guadalupe

On-street parallel parking with bioretention bump-outs on east side of South Brazos Street between Guadalupe Street and Colima Street **\$150,000** Public Works

On-street angled back-in parking with bioretention bump-outs and planters on west side of South Brazos Street between Colima Street and Vera Cruz replacing existing parking at Alazan Apache Apartments **\$250,000** Public Works; SAHA

Crosswalks (x4) at all legs of South Brazos Street and Vera Cruz intersection **\$10,000** Public Works

Transit improvements and bus stop bump-outs at the stops on the southeast and southwest **\$100,000** VIA; Public Works

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

side of South Brazos Street at Vera Cruz (both will need new concrete pads)

Between Vera Cruz and Apache

Widened select sidewalks with landscape buffers (0.07 miles) (~no utility poles that may need moved, maybe a fire hydrant)	\$250,000	Public Works	Avenida Guadalupe
Public space enhancement at Apache Creek Trailway connection	\$2,000-30,000	Arts & Culture; Public Works	Guadalupe Cultural Arts Center
Gateway feature at Apache Creek Trailway connection	\$60,000-\$200,000	Arts & Culture; Public Works	
On-street parallel parking with bioretention bump-outs on east side of South Brazos Street between Vera Cruz and Apache Creek Trailway connection	\$150,000	Public Works; Public Works	Avenida Guadalupe
Median along Apache Creek bridge	\$40,000	Public Works	Say Si

Table A3: Strategic Advisory Group Membership

SAG Member	Title	Organization Represented
Ramiro Gonzales	CEO	Prosper West San Antonio
Richard Milk	Director of Policy and Planning	San Antonio Housing Authority
Cristina Balli	Executive Director	Guadalupe Cultural Arts Center
Kristin Flores	Senior Housing Coordinator	Neighborhood & Housing Services Department

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Amelia Valdez	Buena Gente Coordinator	Esperanza Peace and Justice Center
Jeff Price	Principal	San Antonio Independent School District
Jennifer Sanchez	Principal	San Antonio Independent School District
Marco Morales	Principal	San Antonio Independent School District – J.T. Brackenridge
Gabriel Quintero Velasquez	President/CEO	Avenida Guadalupe
Abigail Kinnison	Director of Capital Projects	VIA
Joe Hinojosa	President & Director of Innovation	Say Si
Nicole Amri	Co-Executive Director	Say Si
Karla Campos	Special Projects Manager	Center City Development & Operations Department
Garrett Phillips, AICP	Sustainable Infrastructure Planner	San Antonio River Authority
Karen Bishop	Executive Services Supervisor	San Antonio River Authority
Tomika Monterville	Director	City of San Antonio: Transportation Department
Margarita Hernandez	Special Projects Manager	City of San Antonio: Transportation Department
Jana Wentzel	Senior Transportation Planner	City of San Antonio: Transportation Department

IMPROVEMENT CONCEPT & STRATEGIC ADVISORY GROUP SUMMARY

Melinda Cerda	Parks Administrator	City of San Antonio: Parks Department
Chris Ryerson, AICP	Planning Administrator	City of San Antonio: Planning Department
David McBeth, PE	Assistant City Engineer	City of San Antonio: Public Works Department