

NEW BRAUNFELS AVENUE

New Braunfels Road Corridor Overview

CONTEXT

The New Braunfels Corridor connects two major non-residential activity centers. Fort Sam Houston at the north end is one of the major employers in the region. Brooks City Base at the south end is a growing employment, medical, retail and residential center that will shape a major portion of the southeast part of the city. In between the two major centers, New Braunfels is largely residential with established neighborhoods and neighborhood-scale commercial development. Topography is hilly with the road following the contours of the land. Intersecting east-west streets, such as Houston and Commerce provide convenient access to downtown.

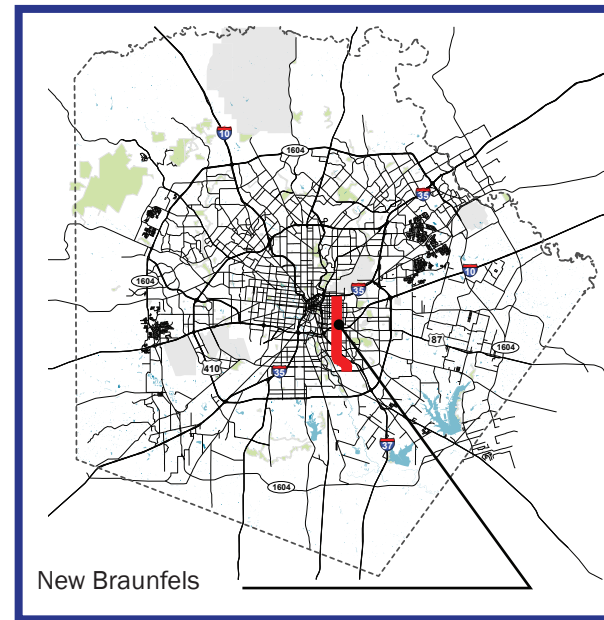
Most of the corridor is very narrow. Growing demand will overload its already strained capacity unless actions are taken to widen the road or provide alternative capacity enhancements. Actions could include improved transit services or restructured traffic control practices. Widening the road will have a major effect on adjacent properties, in some sections this cannot be accomplished without impacts to historic and cultural resources. Streamlining traffic flow through access management and signal operation improvements can be effective, but will have a noticeable impact on properties. These improvements include the consolidation of driveways, the realignment of offset intersections and the closing of left turns into

driveways during peak times. These measures will serve to expedite commuter traffic within the corridor. However, the road has a number of residential and school driveways that take access directly from New Braunfels, presenting challenges to an access management approach. Modifications will require considerations of both residential access needs and the improvement of corridor performance.

Most of the New Braunfels Corridor has closely-spaced intersections of cross-streets that demand an ongoing safety focus. Narrow four-lane sections where travel lanes are immediately adjacent to sidewalks make main street traffic difficult to see from approaching cross-streets. Improving visibility is essential to improving safety on the facility.

Many sidewalks are discontinuous and too narrow to accommodate pedestrians comfortably. Sidewalks should be widened to a minimum of 4 feet and free of obstructions in order to comply with ADA standards. These measures will also impact a number of adjacent properties. Reducing the number of lanes to accommodate multimodal facilities will exacerbate traffic congestion.

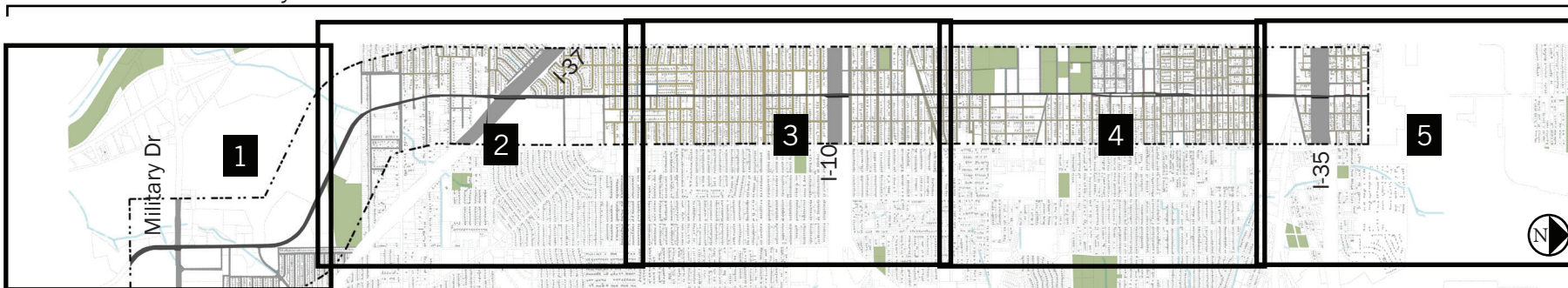
Bicycle use on New Braunfels is not advisable under current conditions. The corridor is hilly, narrow and lacks designated bicycle facilities. High traffic volumes also discourage bicycle use during



peak periods. An active transportation network that offers users a choice of travel options must be developed to support mobility in the New Braunfels corridor. While the preferred practice is to locate the complementary network within the main corridor facility (i.e., New Braunfels), this is not a desirable option unless the roadway is widened. If not on New Braunfels, future facilities should be located within close proximity to the corridor to serve the same travel market.

New Braunfels Sheet Set Key

6.4 Miles



Observations, Challenges & Vision

Vision

New Braunfels will maintain a neighborhood focus and protect the connections it has to employment centers. A phased multimodal configuration of the roadway will expand choices for travel in the corridor.

Future

- **2040 Volumes** – Daily volumes on New Braunfels will double by year 2040 with the heaviest projected volumes (49,000 to 55,000 vehicles per day) located near SE Military and Southcross Blvd.
- **Growth Rate** – the annual growth rate along New Braunfels Avenue is projected to be about 2% per year based on data in the Alamo Area MPO model.
- **Future LOS** – The results of the traffic analysis performed from Southcross to SE Military shows that the intersection at Pecan Valley Drive will function at a LOS F in year 2040 during both peak hours and the intersection at SE Military will function at a LOS E during the PM peak hour. Today both intersections operate at LOS D or better.

Policy & Guidance

Dynamic Access Management

Control left turn movements during peak periods where improved intersection treatments are not viable.

Land Use Planning – Encourage redevelopment of underused parcels to create a multimodal system that can help manage growth in the region. The City should explore the establishment of a longterm plan to acquire ROW along the corridor as redevelopment occurs to widen sidewalks.

Zoning – Create an overlay district to guide development and redevelopment opportunities consistent with multimodal corridor plans.



Gateway Sign North



Rail Yards Near IH-35



Historic Fort Sam Houston Entrance



Facility Near Brooks City Base



Government Hill Historic District



Street Median at Houston St.



Bike Lane Along Iowa



McCreless Mall



Street Median at Houston St.

Policy & Guidance Continued

Vision Zero – Focus on safety for all modes of travel in this corridor, choosing improvements that incorporate design features that protect people biking and walking from vehicular traffic.

Issues

Roadway – Because of the narrow ROW, the undivided four-lane sections of the road require confining through movements to a single lane at intersections to accommodate left turns. Broader use of a three-lane configuration may be worth evaluating if conditions allow it, though bus movements could influence its viability.

Transit – High capacity transit will be limited to mixed flow operation unless major modifications of the roadway cross-section incorporate other modes.

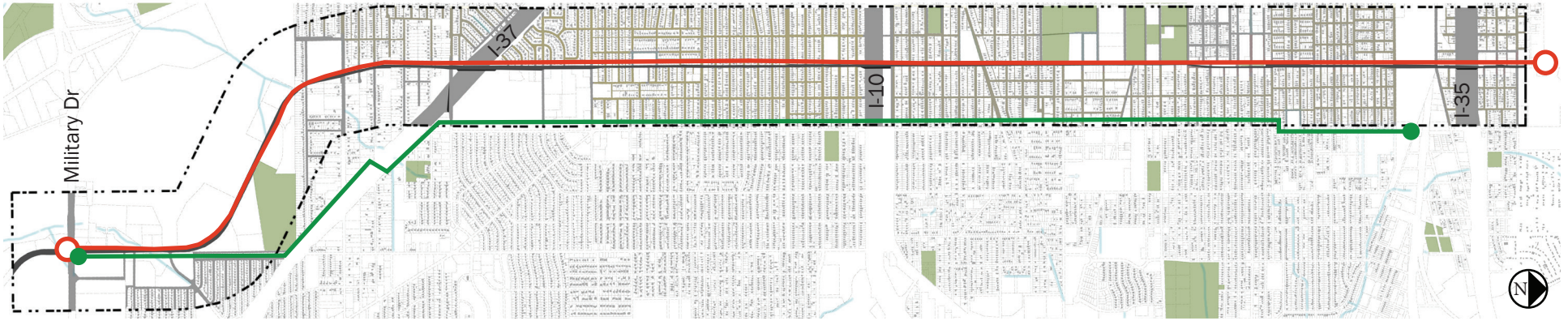
Bicycles – The lack of bicycle facilities along the corridor is an impediment to multimodal options. Bike facilities may need to be located on parallel streets, but they must be integrated into the corridor context to establish a complementary toehold for multimodal options. In addition, bike and pedestrian infrastructure under Interstate 10 needs to be improved.

Pedestrian – As in other corridors, the narrow ROW in some portions of the corridor allow for only very narrow sidewalks. Because many of these are not ADA compliant, they will need to be corrected over time. The pedestrian network is a key component of the overall multimodal treatment of the corridor. As mentioned above, bike and pedestrian infrastructure under Interstate 10 needs to be improved.

Land Use – Most of the neighborhoods along New Braunfels have a well-defined history and identity. As traffic volumes grow over time, land uses fronting the roadway may evolve to something more compatible with a major transportation corridor. This could benefit redevelopment interests and is an opportunity to enhance multimodal access along the corridor.

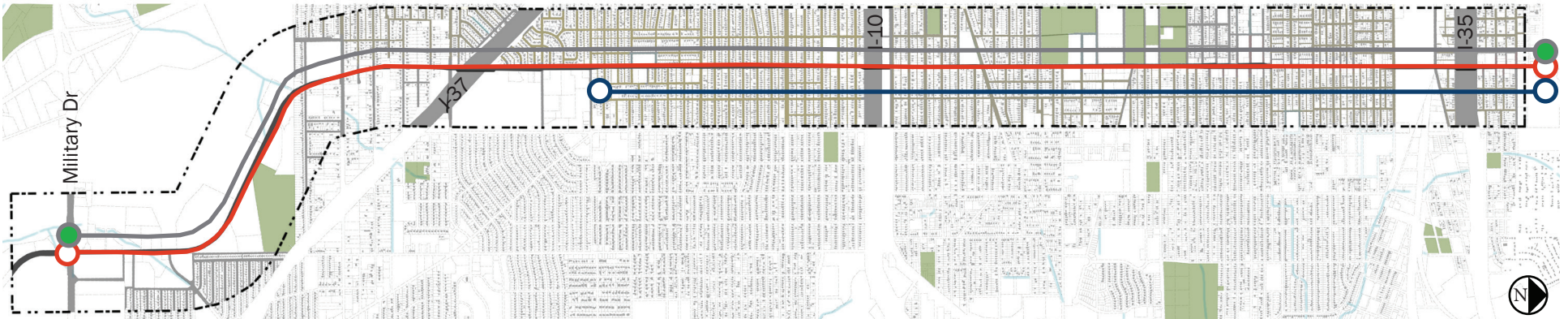
Long Term Multimodal Options

Future Option 1: Mixed Flow Bus Rapid Transit



- Strategies**
- Implement mixed flow BRT service between Fort Sam Houston and City Base employment centers connecting to east-west transit services.
 - Widen or modify intersections wherever beneficial for placement of BRT stations and to improve traffic operations and transit services within the corridor and at key transfer points.
 - Enhance local transit service by reducing headways, adding TSP to corridor operation and ensure good transfer opportunities at Houston and Commerce for downtown access.
 - Place bicycle facility along Gevers as a parallel route with easy access to transit service on New Braunfels.
 - Strengthen the linkage between the bike system and venues/activities locally and to the transit network for longer trips.

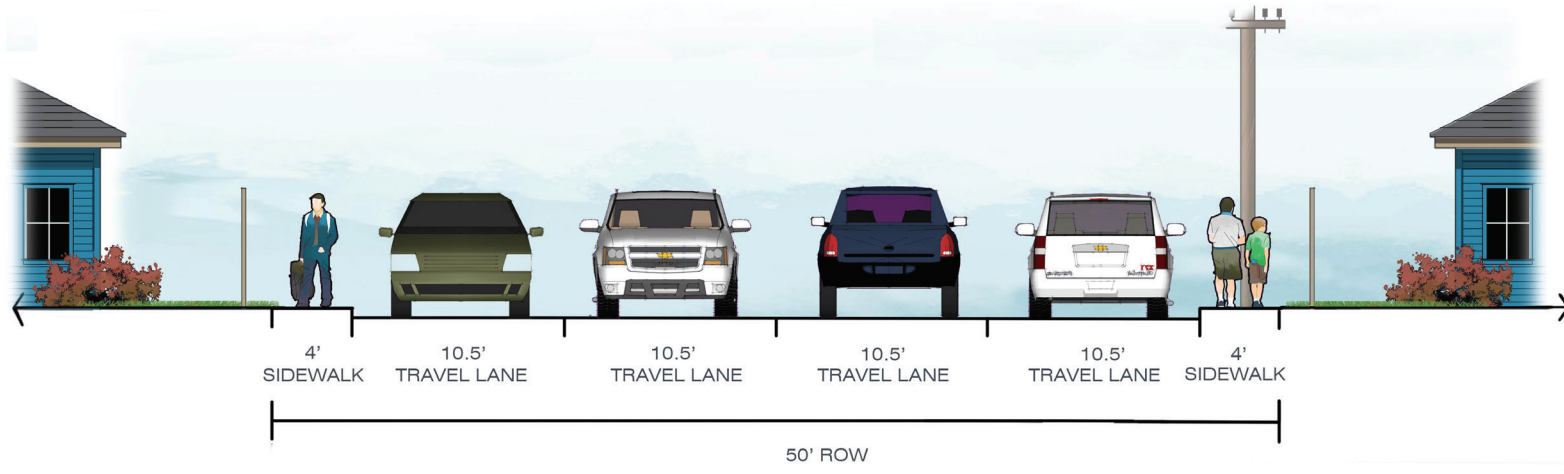
Future Option 2: Dedicated Bus Rapid Transit + Exclusive Transit Corridor



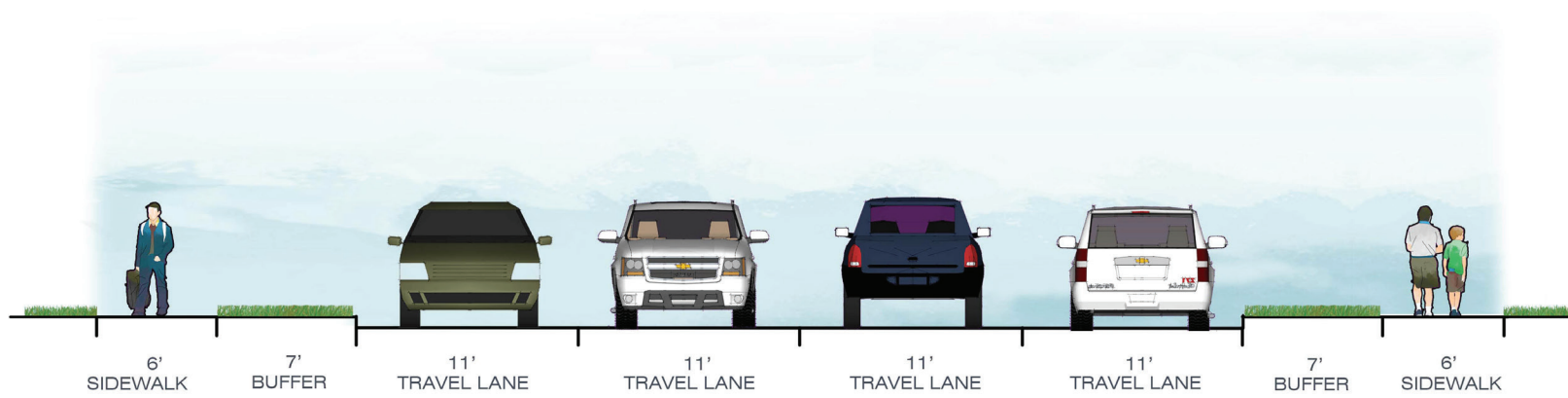
- Strategies**
- Modify corridor to accommodate dedicated center-running BRT.
 - Place bike lanes and wide sidewalks within street to complement transit service.
 - Use pedestrian and street enhancements connecting the neighborhood and the corridor to help strengthen and celebrate its cultural character.
 - Strengthen pedestrian and bike connections to community uses and amenities.
 - Eliminate cars from New Braunfels north of Fair Avenue as part of BRT introduction.

Long Term Multimodal Options: Existing Cross Sections

50' Cross Section: I-35 to Hot Wells
70' Cross Section: Hot Wells to Military Dr



SECTION: NEW BRAUNFELS: I-35 TO HOT WELLS

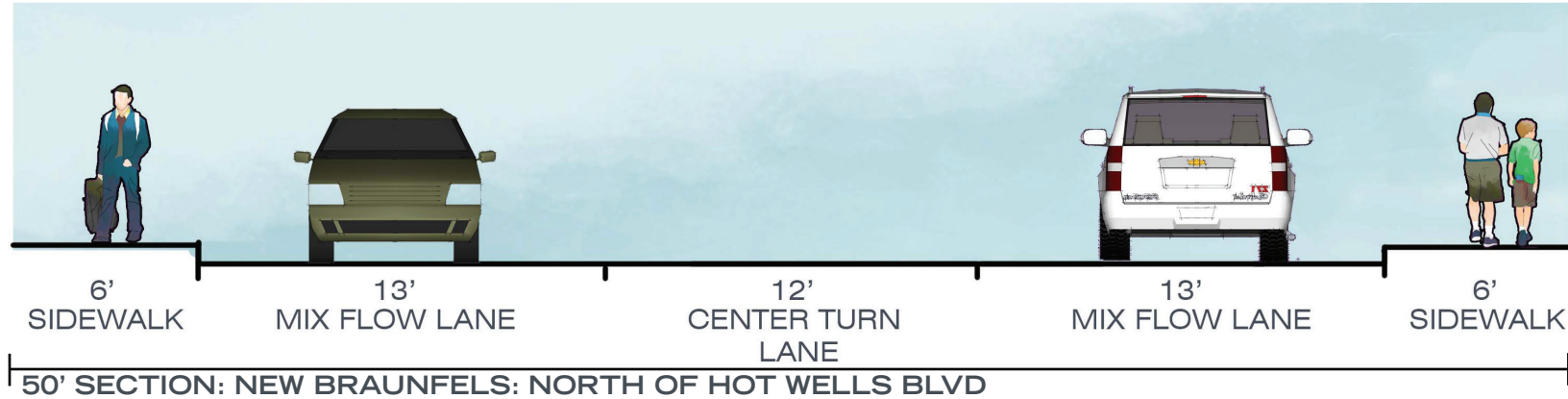


SECTION: NEW BRAUNFELS: HOT WELLS TO MILITARY

Long Term Multimodal Options Multimodal Opportunities

New Braunfels connects Fort Sam Houston with Brooks City Base and is midway between downtown and the AT&T Center. The connection between employment, education, retail and entertainment districts with extensive residential development make it a key north-south corridor in San Antonio. As a result, it is also a very heavily used transit corridor. VIA Route 20 already carries high ridership and, as the region grows, can be expected to carry a lot more.

Future Option 1: Mixed Flow Bus Rapid Transit



**The 50' cross section shows the narrowest ROW available on this section of the corridor and reflects a cross section that could be constructed without ROW acquisition. A detailed ROW survey will be needed to identify actual ROW.*

Description:

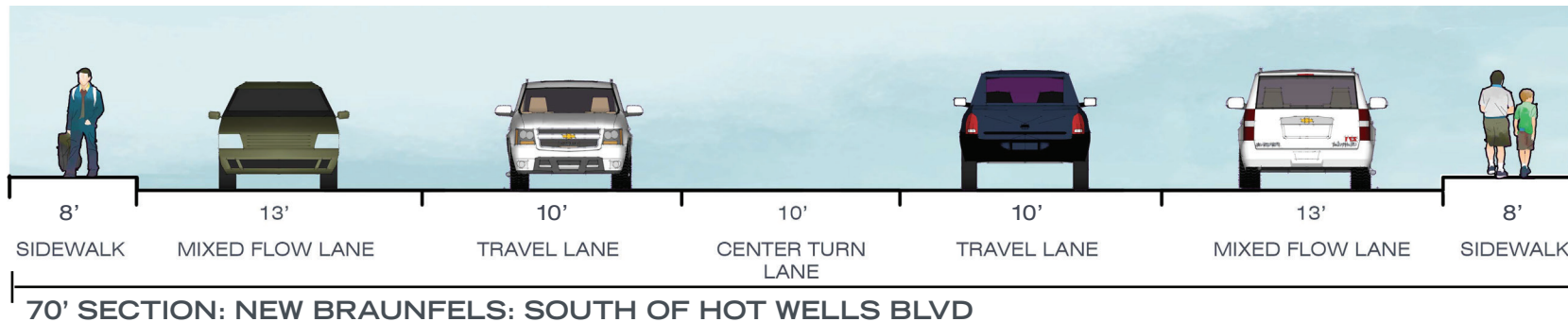
VIA has identified New Braunfels as a potential future Primo Plus corridor because of very high projected ridership. In the short or midterm, because the ROW of much of the corridor is very narrow, it is likely service will require buses, even Primo buses in limited stop operation, to travel in mixed flow. Service can be improved with an emphasis on enhanced stations and improved transit signal responsiveness. The cross-section for this type of service may be able to accommodate the BRT service with relatively minor changes to the existing configuration, but will require a substantial improvement to the bicycle and pedestrian elements in the corridor to effectively feed the enhanced bus services. These aspects of the corridor suggest a substantial review of the land use layout in the corridor to strengthen its transit support and allow more pedestrian-friendly development.

Opportunities:

- High transit ridership is a strong foundation upon which to implement high capacity service.
- The street network grid provides access to parallel streets that can enhance the multimodal options (i.e., bike and pedestrian) in the corridor.
- Residential and employment in the corridor are clearly linked and can encourage transit usage.

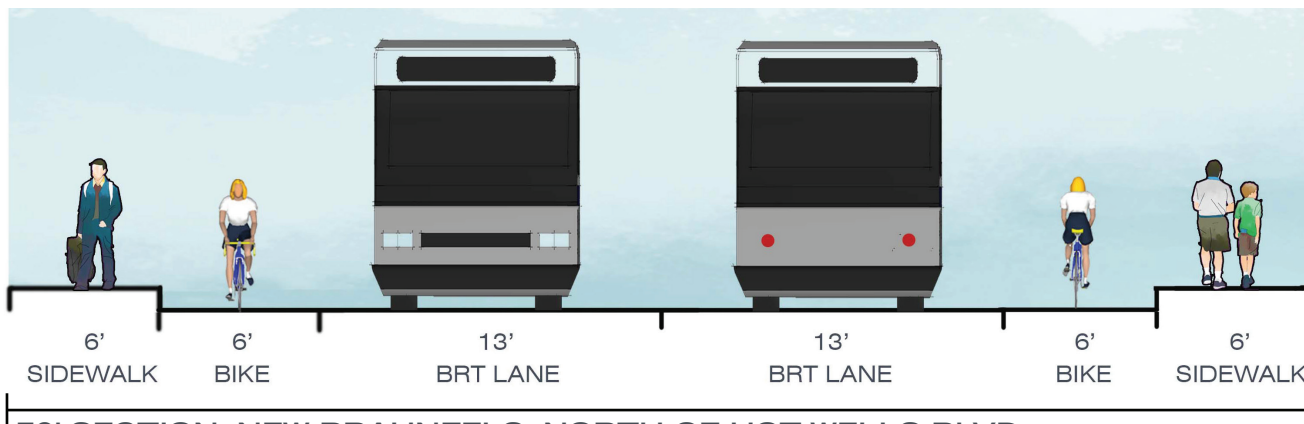
Challenges:

- Narrow ROW make changes to the roadway cross-section difficult or can have major impacts on adjacent properties.
- Some properties along the corridor include sensitive cultural or historic resources.
- In 2040, New Braunfels will reach or exceed capacity with higher traffic flows.



**The 70' cross section shows the narrowest ROW available on this section of the corridor and reflects a cross section that could be constructed without ROW acquisition. A comprehensive survey will be needed to identify actual ROW.*

Future Option 2: Dedicated Bus Rapid Transit - Exclusive Transit Corridor



50' SECTION: NEW BRAUNFELS: NORTH OF HOT WELLS BLVD

Description:

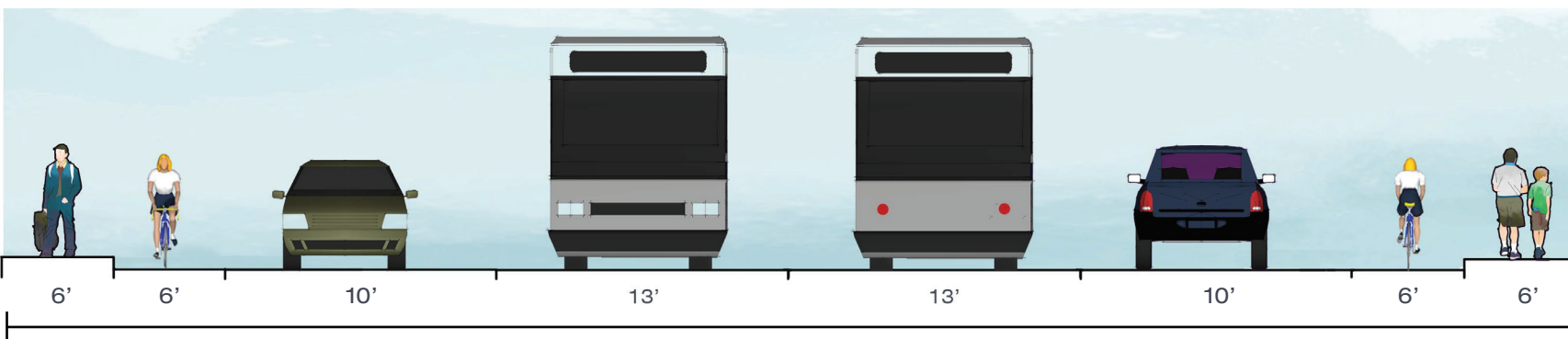
VIA's long term Vision 2040 plan identifies New Braunfels as a Primo Plus Corridor with dedicated BRT or LRT on the strength of its existing and forecast high ridership. The physical limitations within the corridor will require significant decisions regarding the best way to introduce such a high level service. Without widening, the cross-section of the roadway will need to be modified to remove two lanes of general purpose traffic to fit the guideway for BRT or LRT. A commitment to transit in the corridor would also place supporting bicycle and pedestrian improvements on the roadway to the possible exclusion of automobile traffic. These changes would clearly need to be introduced over time with a long term commitment from the City to build transit ridership as a primary basis for transportation as the region adds population.

Opportunities:

- High ridership on the route.
- High capacity transit service can significantly move more people through the corridor than single occupant vehicles.
- The ability to move more people will attract and encourage higher density development.






Challenges:

- Major changes to the roadway cross-section will require a major adjustment in the perception of the purpose of the corridor.
- Traffic displaced by introducing a transit-only concept will find another route to travel with concomitant implications.



70' SECTION: NEW BRAUNFELS: SOUTH OF HOT WELLS BLVD

Corridor Options

					Recommendations	Benefits
					Relocate or bury overhead utilities.	Relocating utilities outside of the New Braunfels ROW or burying utilities along with a robust sidewalk network will improve the pedestrian environment.
					Add medians and dedicated left turn	The addition of medians and left turn lanes will help control turning movements. Reducing the number of modal conflicts points.
					Establish an access management program and consolidate driveways.	Eliminating and consolidating driveways will improve the performance of the roadway. A comprehensive approach for driveways consolidation should be developed as congestion levels grow.
					Provide continuous sidewalk on both sides of the street and update sidewalks and ramps to comply with ADA standards.	A continuous sidewalk provides access to businesses and transit for pedestrians and persons with disabilities. Sidewalks and associated amenities can help spur the redevelopment of vacant land. Facilities should be updated to ADA standards.
					Improve bus stops to include seating and shelter.	Improve bus stop locations, including seating and shelter will make transit more accessible to users. Visually attractive bus stops will help win transit advocates among land owners on the corridor.
					Introduce corridor-wide traffic signal coordination and add transit signal priority (TSP) when Primo service begins.	Accommodating transit through signal priority will aid in moving transit services within the corridor efficiently, increasing transit ridership.
					Improve sight distances at driveways and side streets.	Obstacles and vegetation near driveways prevent motorists from safely pulling out without entering the sidewalk, bike lane, or roadway first. Removing obstacles will improve safety for all users.
					Develop striping maintenance plan for New Braunfels.	Striping is not always clear to the motorist. Define a consistent striping plan for New Braunfels and maintain striping at good visibility levels.
					Prohibit left turn movements during peak periods.	At locations that cannot accommodate a protected left turn lane (and possibly a dedicated signal phase), prohibit left turns without impacting through movement capacity.
					Identify the best opportunity to locate a corridor-wide bicycle route.	Develop a bike route that can provide ready access to corridor destinations and transit services, in some cases this route maybe best located on streets parallel to the corridor.



Transit Improvements



Pedestrian Improvements



Bicycle Improvements



Vehicular Improvements

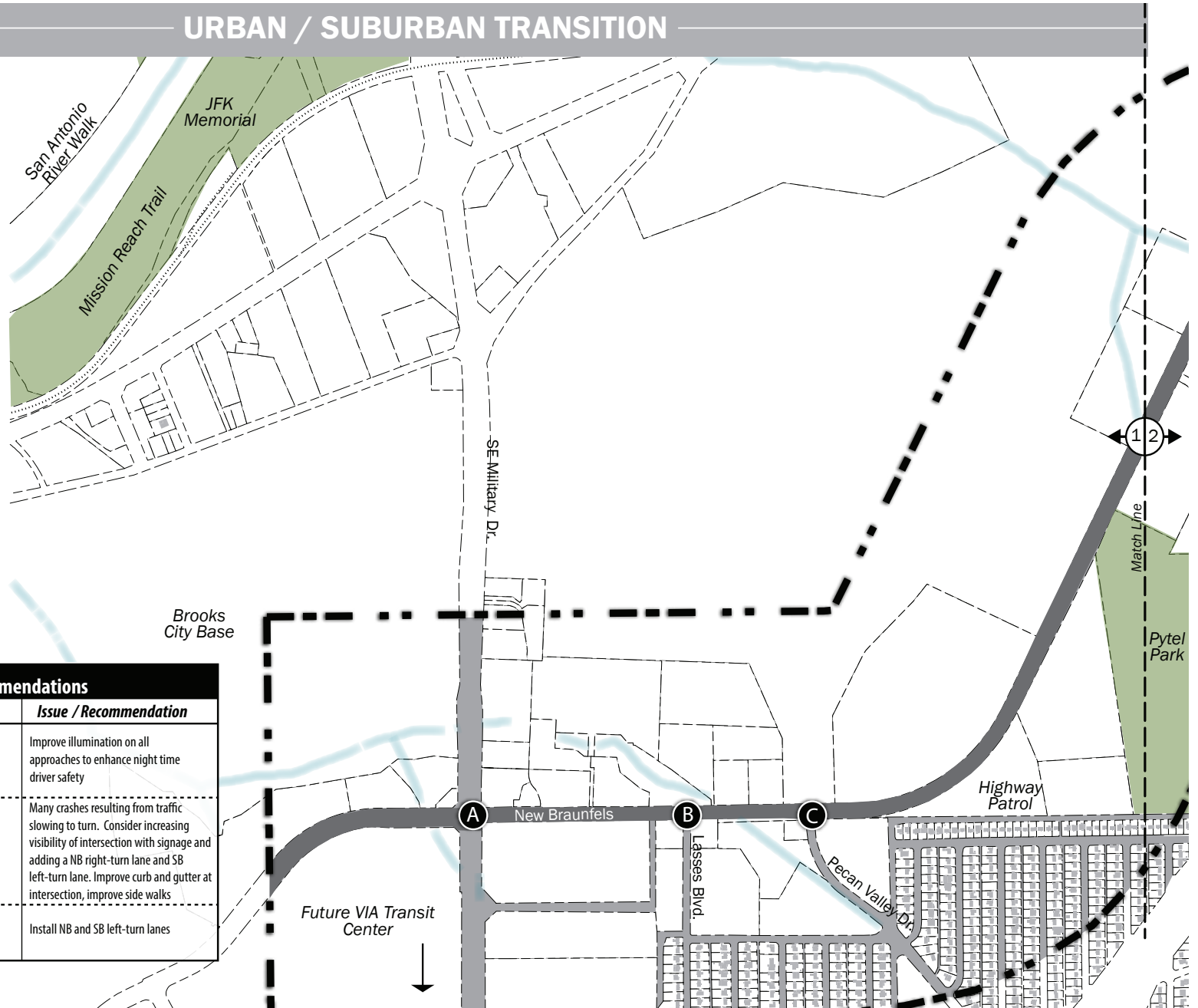


Land Use Improvements

URBAN / SUBURBAN TRANSITION

SHEET #1

Short-term Recommendations	
	Issue / Recommendation
A	Improve illumination on all approaches to enhance night time driver safety
B	Many crashes resulting from traffic slowing to turn. Consider increasing visibility of intersection with signage and adding a NB right-turn lane and SB left-turn lane. Improve curb and gutter at intersection, improve side walks
C	Install NB and SB left-turn lanes



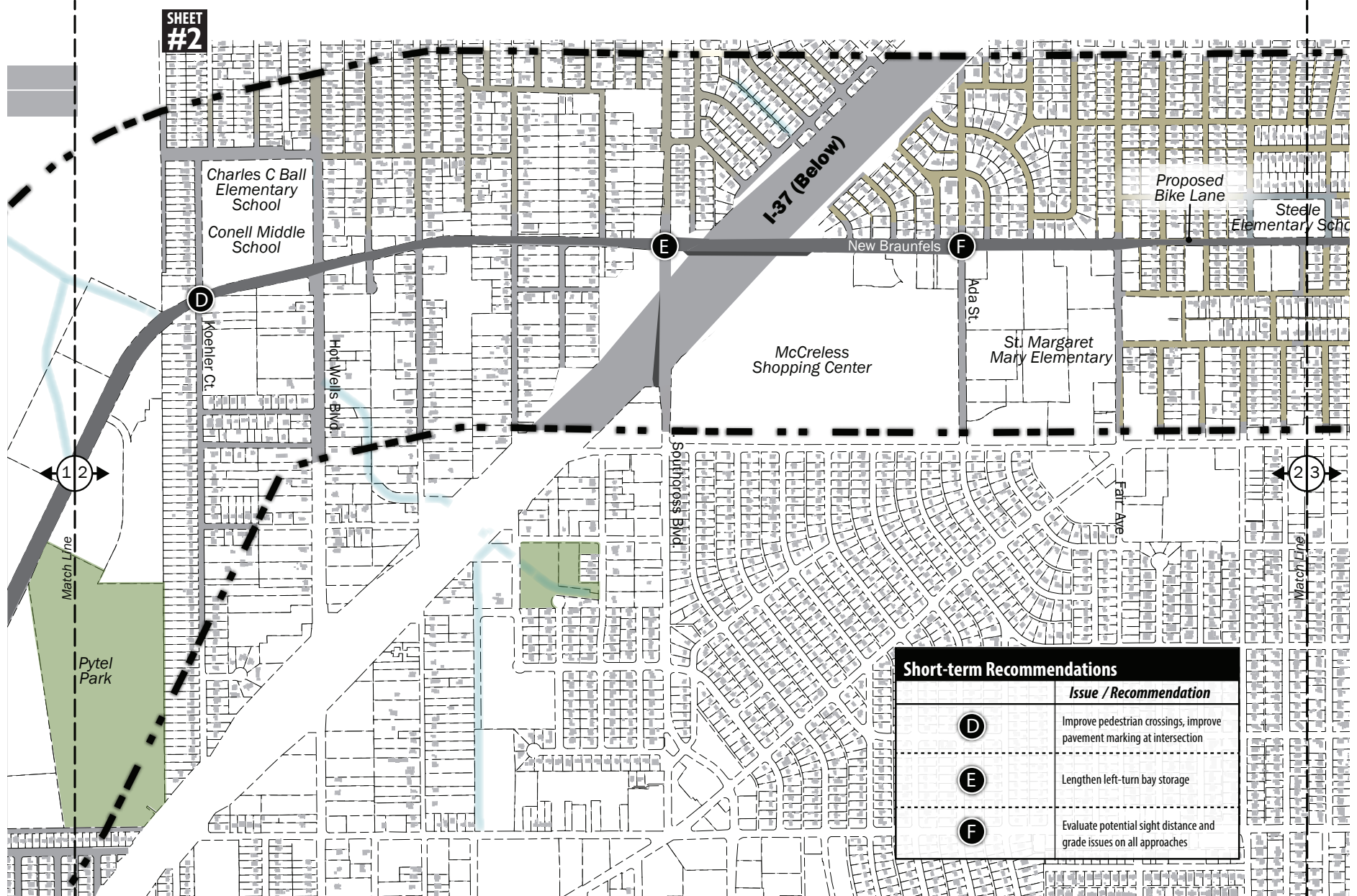
New Braunfels Corridor Analysis: Sheet 1 Short Term Recommendations

Open Space
Study Area



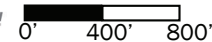
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URBAN / SUBURBAN TRANSITION



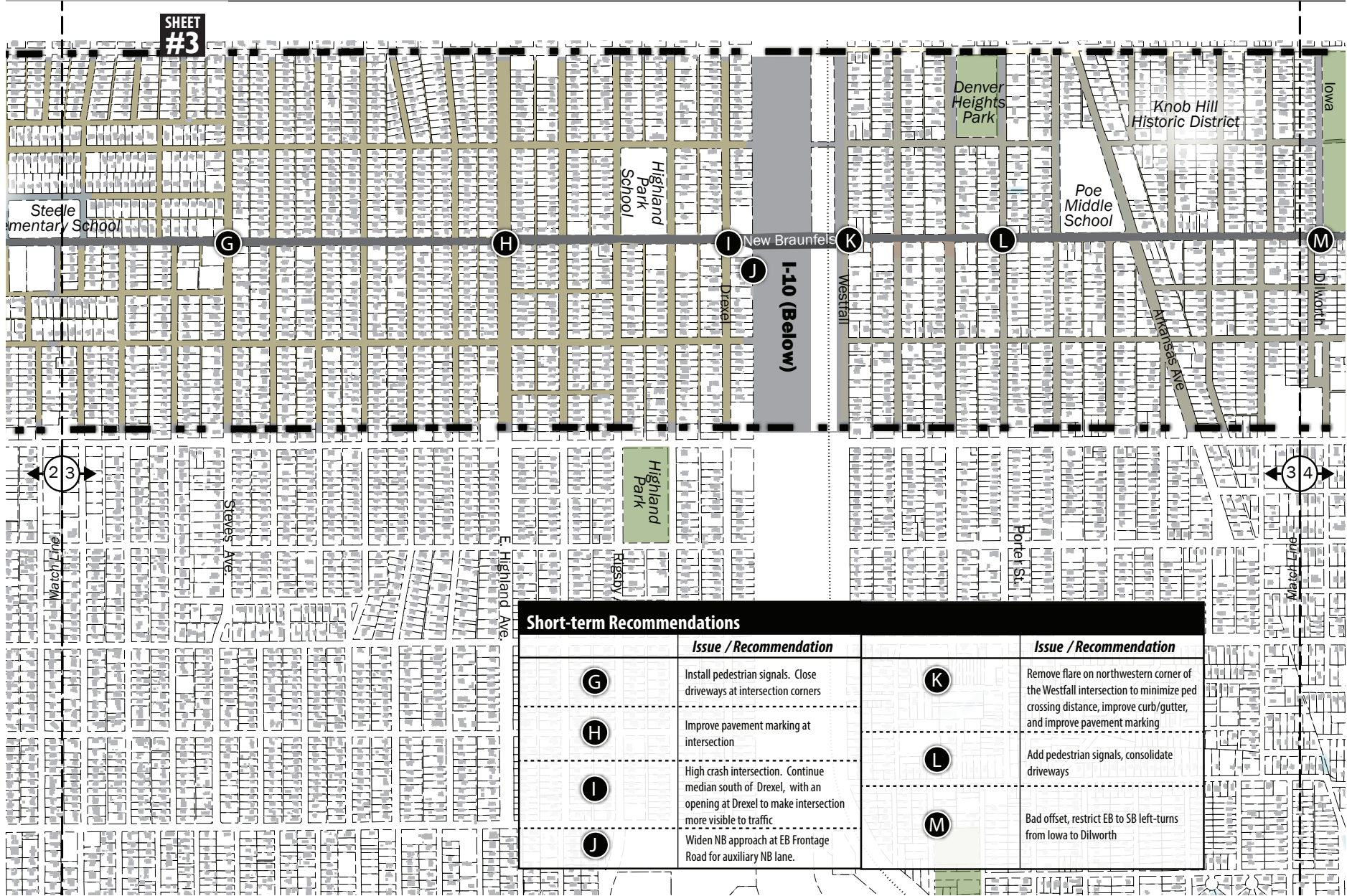
New Braunfels Corridor Analysis: Sheet 2 Short Term Recommendations

■ Open Space
 Study Area



URBAN

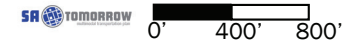
SHEET #3



Short-term Recommendations			
	Issue / Recommendation		Issue / Recommendation
G	Install pedestrian signals. Close driveways at intersection corners	K	Remove flare on northwestern corner of the Westfall intersection to minimize ped crossing distance, improve curb/gutter, and improve pavement marking
H	Improve pavement marking at intersection	L	Add pedestrian signals, consolidate driveways
I	High crash intersection. Continue median south of Drexel, with an opening at Drexel to make intersection more visible to traffic	M	Bad offset, restrict EB to SB left-turns from Iowa to Dilworth
J	Widen NB approach at EB Frontage Road for auxiliary NB lane.		

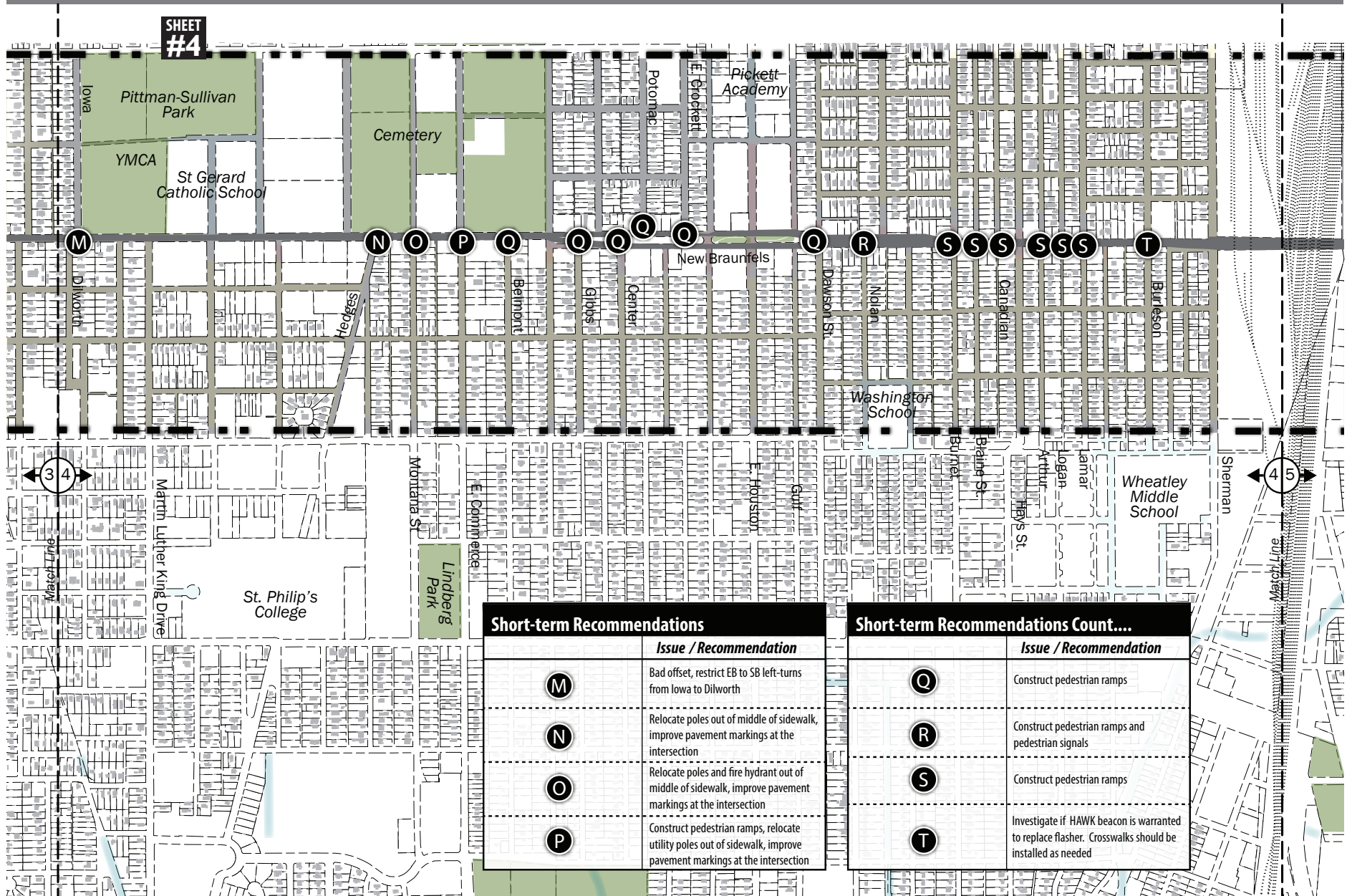
New Braunfels Corridor Analysis: Sheet 3 Short Term Recommendations

- Open Space
- Study Area



URBAN

SHEET #4



Short-term Recommendations	
	Issue / Recommendation
M	Bad offset, restrict EB to SB left-turns from Iowa to Dilworth
N	Relocate poles out of middle of sidewalk, improve pavement markings at the intersection
O	Relocate poles and fire hydrant out of middle of sidewalk, improve pavement markings at the intersection
P	Construct pedestrian ramps, relocate utility poles out of sidewalk, improve pavement markings at the intersection

Short-term Recommendations Count....	
	Issue / Recommendation
Q	Construct pedestrian ramps
R	Construct pedestrian ramps and pedestrian signals
S	Construct pedestrian ramps
T	Investigate if HAWK beacon is warranted to replace flasher. Crosswalks should be installed as needed

New Braunfels Corridor Analysis: Sheet 4 Short Term Recommendations

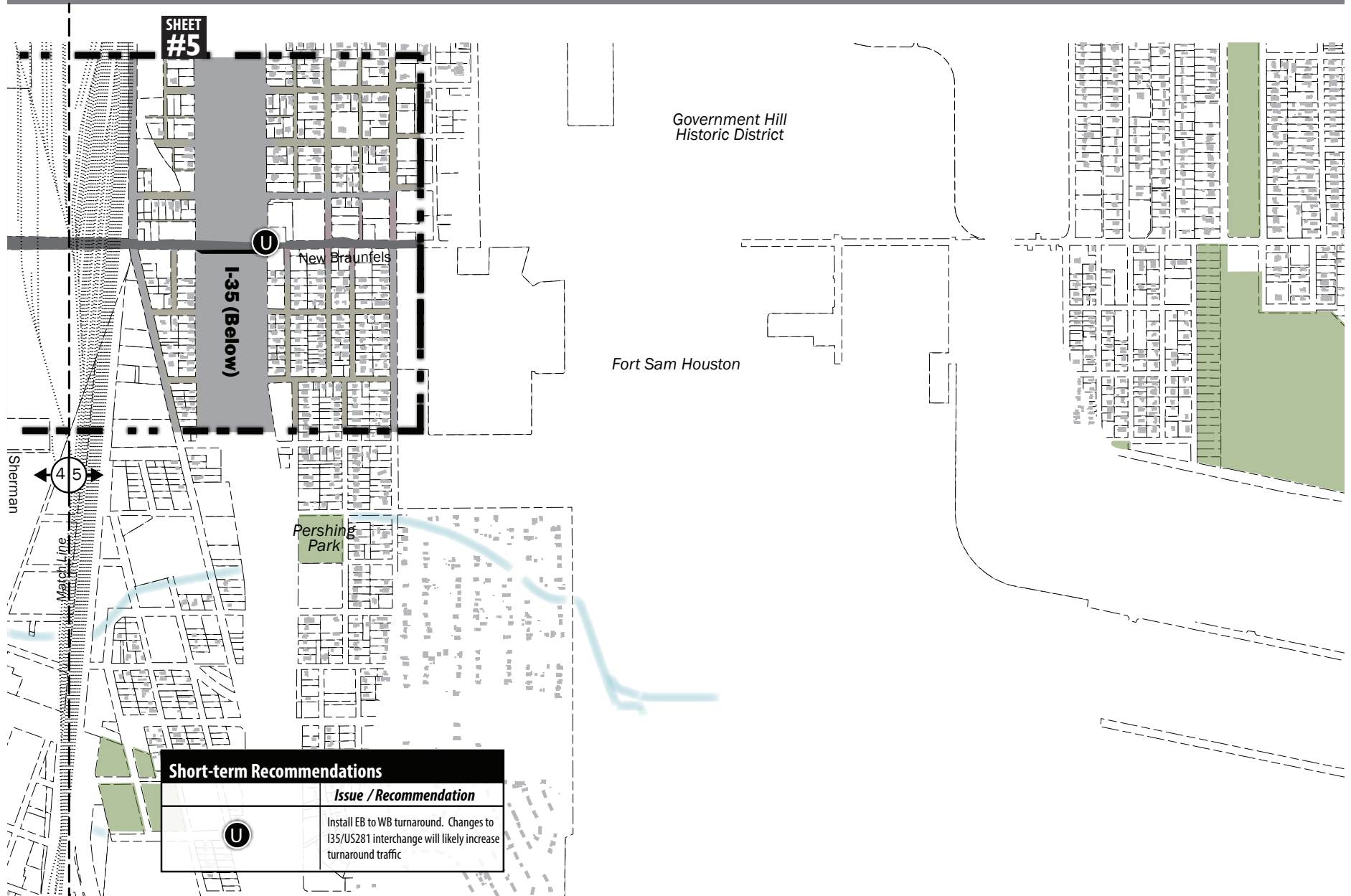
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Open Space
Study Area



URBAN



New Braunfels Corridor Analysis: Sheet 5 Short Term Recommendations

-  Open Space
-  Study Area

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