PEDESTRIAN & BICYCLE RECOMMENDATION
FOR THE CITY OF NEW BRAUNFELS
# Pedestrian & Bicycle Recommendation for the City of New Braunfels

## Table of Contents

### Volume 1
**Alamo Area Regional Summary Report**

1. **Introduction** .......................................................... 1-5
2. **The Need for Bicycling & Walking** .......................... 1-13
3. **Planning Process** .................................................. 1-19
4. **Summary of Recommendations** .............................. 1-25

### Volume 2
**San Antonio Pedestrian Study**

1. **Introduction** .......................................................... 2-5

#### Area One
- **Introduction** .......................................................... 2-16

#### Area Two
- **Introduction** .......................................................... 2-25

#### Area Three
- **Introduction** .......................................................... 2-30

#### Area Four
- **Introduction** .......................................................... 2-35

#### Area Five
- **Introduction** .......................................................... 2-42

#### Area Six
- **Introduction** .......................................................... 2-49

#### Area Seven
- **Introduction** .......................................................... 2-54

#### Area Eight
- **Introduction** .......................................................... 2-61

#### Area Nine
- **Introduction** .......................................................... 2-66

#### Area Ten
- **Introduction** .......................................................... 2-73

### Volume 3
**Mission Trail Access Study**

1. **Making Community Connections** ......................... 3-5

### Volume 4
**City of Boerne**

1. **Introduction** .......................................................... 4-5

#### 4.2 Existing Conditions
- **Introduction** .......................................................... 4-15

#### 4.3 Recommendations
- **Introduction** .......................................................... 4-25

#### 4.4 Implementation
- **Introduction** .......................................................... 4-47

### Volume 5
**City of New Braunfels**

5.1 **Introduction** .......................................................... 5-5

#### 5.2 Existing Conditions
- **Introduction** .......................................................... 5-17

#### 5.3 Recommendations
- **Introduction** .......................................................... 5-29

#### 5.4 Implementation
- **Introduction** .......................................................... 5-61

### Volume 6
**City of Seguin**

6.1 **Introduction** .......................................................... 6-5

#### 6.2 Existing Conditions
- **Introduction** .......................................................... 6-17

#### 6.3 Recommendations
- **Introduction** .......................................................... 6-27

#### 6.4 Implementation
- **Introduction** .......................................................... 6-49

### Appendix A
**Bicycle & Pedestrian Planning Toolkit**

- **Introduction** .......................................................... A-5
- **Active Transportation Facility Matrix** ..................... A-7
- **Active Transportation Design Challenges** ............... A-16
- **Network Support Facilities** .................................. A-21
The Walnut Avenue sidepath creates an attractive and comfortable protected corridor for both pedestrians and bicycle riders, and is a model for other Alamo Area MPO cities.
New Braunfels is one of the fastest growing cities in the Alamo Area MPO’s region. Located approximately 35 miles northeast of downtown San Antonio along IH-35, the City has grown from a tourist destination to the largest area community outside of San Antonio. The community’s long range vision is that New Braunfels will be a great community in which to live and work, and the City’s comprehensive plan update identifies a need to encourage pedestrian and bicycle transportation to achieve this vision.

In order to improve alternative modes of transportation such as walking and bicycling, the City of New Braunfels has partnered with the Alamo Area MPO to develop this pedestrian and bicycle plan. This plan is intended as a supplement to approved bicycle, park, trail and special district plans that the City already has. It aims to improve the environment for walking and bicycling, resulting in increases in walking and biking by making both a more viable and attractive mode of travel for residents of New Braunfels and visitors.

The City of New Braunfels represents one of five focus areas within the Alamo Area MPO Regional Bicycle and Pedestrian Study (above left). The New Braunfels component of the study evaluates the active transportation network within the City’s municipal limits and extraterritorial jurisdiction areas (above right).
Demographics & Commuting Characteristics in New Braunfels

With 59,620 people in 2013, New Braunfels is one of the fastest growing communities near San Antonio. Between 2010 and 2013, the City captured nearly 4% of the growth of the entire Alamo Area region.

New Braunfels is home to an economically diverse population. Households include the affluent well-to-do families as well as those with more modest incomes, and everywhere in between. There’s also a significant retiree population in New Braunfels as well as a growing sector of young and established families. The workforce includes skilled professionals who likely commute to San Antonio or Austin as well as those who work in local professional and service-oriented positions.

The median income for households in New Braunfels is 10% higher than that of the state. The median age of those living in the City, at 34.3 years is slightly above the state median age of 33.8, and school age children account for nearly 20% of New Braunfels’ population.

As the community has grown, so has the local economy and job opportunities within New Braunfels. Now considered an urban center in the San Antonio-New Braunfels Metropolitan Statistical Area, New Braunfels is home to major employers (non-governmental) such as Schlitterbahn, Walmart Distribution Center, Christus Santa Rosa hospital, HEB, Hunter Industries, and many others who contribute to the local employment base.

As the local employment base grows, more residents can choose to live near their job and avoid long commutes to work. According to the U.S. Census Bureau, 56% of the City’s workforce works within the City, yet 92.2% of commuters drive to their job. Very few said they took transit, rode a bike, or walked to work.

Growth projections anticipate that New Braunfels will have a population of over 108,000 by 2040, a 82% growth over the population today. As the City continues to grow, not only will the demand on the City’s transportation infrastructure increase, but preferences for transportation alternatives will emerge and grow.

REGIONAL SURVEY HIGHLIGHTS

Data from the U.S. Census Bureau about travel patterns is limited to commuting to work. Additional data about biking and walking was collected by the AAMPO as part of this study. That survey reveals a significant interest in more transportation options, including walking and bicycling. While nearly all respondents said they use their car on a daily basis, a majority reported that they’d like to walk and bike more and rely on their car less.
5.1 Introduction

Age of Population

Understanding the age of New Braunfels’ population can help the city plan for proper transportation facilities to serve the varying needs of these populations.

Almost 20 percent of the population of New Braunfels travels to primary or secondary school, and of that population, 81 percent of them are not driving age and rely on another form of transportation.

New Braunfels’ workforce population is approximately 28,217 people, which is 47 percent of the total population of the city. This is the number of people who need to get to their job somehow.

Approximately 14 percent of New Braunfels’ population is 65 years or older. Many of these people are retired, and trips to shopping, places of worship, or other errands dominate their travel destinations. Additionally, some in this segment of the population cannot drive themselves and rely on other forms of transportation.

Household Economics

Often driving is not an option for a certain segment of the population simply because of economic hardships.

Of the households in New Braunfels, 43 percent make less than the state median household income* and nearly 12 percent are below the federal poverty level. As income decreases, the cost of owning a vehicle becomes more burdensome. Approximately 3.9 percent of New Braunfels’ households don’t own a vehicle, and another 33 percent only own one vehicle.

Whether by preference or necessity, a significant portion of New Braunfels’ population may utilize alternative forms of transportation other than a personal vehicle and could benefit from facilities that enable walking and bicycling.

*Median Household Income for the State of Texas is $51,900.

Journey to Work

Travel to work characteristics can help identify opportunities to encourage walking or bicycling for work-related trips.

Fifty-six percent of New Braunfels’ workforce works within the city, yet over 92 percent of the workforce in New Braunfels drove to work, either alone or in a carpool. Approximately 1.2 percent of the workforce walked to work, 0.2 percent rode their bicycle, and 0.1 percent took public transit.

The average commute time among the workforce in New Braunfels is 23.9 minutes, and 34.5 percent of the workforce has a commute longer than the regional average of 25 minutes, including 6.2 percent who have a commute longer than an hour.

92.2%

Percent of residents of New Braunfels who work within the city.

56%

Average travel time to work among New Braunfels workforce.

35%

Percent of workforce whose commute is more than 25 minutes.
Relation to Other Plans

This Bicycle and Pedestrian Study for the City of New Braunfels supports and builds on existing City plans, policies, and initiatives. Future efforts should also support these goals in order to facilitate implementation. Together these plans and initiatives strengthen efforts for walking and bicycling and help implement the broader regional vision for a more sustainable and efficient transportation system. Other related plans include:

Mobility 2040
The Alamo Area long range regional transportation plan, Mobility 2040, is used to frame regional transportation efforts. The plan recognizes the importance of bicycle and pedestrian transportation in establishing a safe, sustainable, efficient, and accessible transportation network.

New Braunfels Comprehensive Plan, 2006 Update
The City’s comprehensive plan guides City leaders in decisions about future growth policies, programs, and initiatives. The goals of the comprehensive plan aim to achieve the vision of making New Braunfels a great community in which to live and work. This pedestrian and bicycle plan supports and even implements many goals and objectives identified in the comprehensive plan.

Encourage pedestrian and bicycle transportation including provision of safe transportation facilities for pedestrian and bicycles.

- Goal 25 of the New Braunfels Comprehensive Plan Update

The comprehensive plan has other goals that will be supported and implemented by increased walking and bicycling, such as promoting the mixing of land uses to shorten trips to everyday destinations, utilizing trails and greenbelts to connect neighborhoods to local destinations, and improving pedestrian linkages in and around downtown New Braunfels.

Strategic Parks and Recreation Master Plan, Trail Component, 2010
Chapter 5 of the City’s Strategic Parks and Recreation Master Plan identifies a plan for building a network of trails throughout the City. The document recognizes that trails play an important role in providing a means for residents to travel to destinations such as schools, shopping areas, or work. The plan not only identifies a network of multi-use trails but also a network of on-street bicycle facilities.

Downtown Implementation Plan, 2010
The Downtown Implementation Plan identifies opportunities to improve walkability and pedestrian circulation within and into downtown New Braunfels from surrounding neighborhoods. Other urban design elements of the plan can be mutually supportive of pedestrian and bicycle goals.
Regional Transportation Plan, 2012
The City's Regional Transportation Plan identifies the plan for the City's thoroughfare network (collectors, arterials, and highways), including proposed roadways. This document identifies opportunities for integrating new pedestrian and bicycle facilities in conjunction with new or improved roadway projects.

Other Plans
Other trail, corridor, and area plans provide a context for recommendations in this plan. They can help identify specific needs for improvements for walking and bicycling in these areas. Those that were consulted include:

- **Westside Pedestrian Improvements Project** is approximately 2.6 miles of sidewalks, pedestrian improvements, and associated signage in this neighborhood. With funding administered by the Alamo Region MPO, the project closes gaps in the sidewalk system, enhances crossings near Lone Star Elementary School, and connects residents to neighborhood destinations.

Development Code
The development code regulates development in the City and (to some extent) the extraterritorial jurisdiction. The code can influence the built environment to be more bicycle-friendly and walkable. This might include regulations for street design and pedestrian connectivity, parkland dedication for trails, and building and site design that include bicycle parking and internal pedestrian pathways.

Surrounding Jurisdictions
This effort is part of a larger planning effort to develop a regional bicycle and pedestrian system. It is important to be aware of the transportation networks and plans of adjacent jurisdictions and to coordinate with these entities to ultimately build a true regional network. Adjacent cities include San Marcos and Hays County to the north, Seguin to the east, and Schertz and Cibolo to the south. Comal and Guadalupe Counties, as well as the Guadalupe Blanco River Authority, are other entities that ultimately may develop facilities that can link to corridors in new Braunfels.

The 2012 Regional Transportation Plan included recommendations for active transportation alternatives.
Why Plan for Walking & Bicycling in New Braunfels?

Increasing walking and bicycling levels in the City can have significant mobility, environmental, health, and economic benefits, which in turn can improve the overall quality of life in New Braunfels.

**Helps Meet Goals set by the Comprehensive Plan**
- This plan will help meet goals of New Braunfels’ comprehensive plan, such as encouraging pedestrian and bicycle transportation; mixing land uses to shorten trips; using trails and greenbelts to connect destinations; and improving pedestrian linkages.

**Accommodating Growth**
- New Braunfels is currently home to nearly 60,000 people and has grown rapidly over the last decade. Recent growth has been east of I.H. 35, but now is also occurring to the north of the City near Creekside, and west of Loop 337. The master plan for Veramendi, a 4,000 acre + mixed use development along Loop 337, will attract significant new growth on the west side of the City. This new growth in all parts of the City provides an opportunity to integrate bicycling and sidewalk facilities into these new areas from the very beginning.

With the potential to almost double in size again within 25 years, the City’s transportation system will continue to face significantly higher demands. Providing alternative transportation modes can help to alleviate a portion of that future demand.

**Improving Quality of Life**
- Increasingly, highly ranked communities across the nation are recognizing that providing comfortable pedestrian and bicycling facilities makes them more attractive for relocating businesses and new residents alike.

**Promoting Active Lifestyles and Health Benefits**
- the availability of comfortable sidewalks and bicycling facilities can help encourage higher amounts of walking and riding. If promoted from a young age, healthy lifestyles can become more ingrained in youth and continue into adulthood.

**Principles for Walking and Bicycling**

Recommended goals and principles that should guide the development of facilities for walking and bicycling in the City are shown on the following page. These principles are discussed in greater detail in the recommendations section of this report.

The Guadalupe River is one of the most scenic features in New Braunfels; it creates both challenges and opportunities to walking and bicycling in the City.
Recommended Principles for Walking and Bicycling in New Braunfels

**Infrastructure**

1. Develop a comprehensive network of on- and off-street bicycle facilities. Develop new facilities with an eye towards ultimately achieving significant connectivity throughout all of New Braunfels.
2. Prioritize improvements that address gaps or that resolve significant barriers such as I.H. 35. Target facility segments that greatly increase connectivity and the usefulness of the network if they are resolved.
3. As much as is feasible, develop facilities that are comfortable for all levels of experience. Create new pedestrian and bicycling facilities that most New Braunfels residents would feel comfortable using. Be flexible in older areas of the City.

**Support Facilities**

1. Incorporate adequate support facilities into every new facility that is built. As is feasible, plan for and include elements such as bicycle parking, access from surrounding areas, drinking fountains, wayfinding, shade and adequate levels of markings and signage into every project.

**Programs**

1. Allocate resources to develop encouragement programs and events that promote higher levels of walking and riding in New Braunfels. Actively work with community health partners, schools, recreation, fitness and local businesses to develop programs and events that highlight the benefits of walking and riding, and that encourage New Braunfels residents to walk or ride.
2. Create incentives to encourage higher levels of walking and bicycling. Along with area partners, identify ways for employers and other area organizations to incentivize higher levels of walking and riding.

**Implementation**

1. Identify stable funding sources that can help create measurable levels of improvement. Identify funding sources that are reliable and that can develop measurable improvement over the next decade.
2. Actively seek partnerships to develop portions of the pedestrian and bicycle network. Identify partnerships whether private or public, to help implement pedestrian and bicycling improvements throughout the City.
3. Work with new development, whether commercial or residential, to develop high quality portions of the pedestrian and bicycle network. Create standards that facilitate or even mandate the inclusion of high quality bicycling and pedestrian facilities in new developments as they occur.
Who Are We Planning For?
The underlying goal for walking and bicycling in New Braunfels goes far beyond a desire for making a better community. It means ensuring the City has a viable transportation system that provides a variety of travel choices for everyone. This can take on different meanings for different users.

For some populations, walking and bicycling is a choice; for others it’s a necessity. For children and the elderly, the ability to travel by walking and bicycling is an important component of independence. Some walk or bike because of the economic benefits, others because of the health or environmental benefits. People may choose to walk or bike as their sole mode of transport to work or school, while others just choose to for certain destinations like eating out or going to the park.

Ultimately, the pedestrian and bicycle networks should be accessible to people of all ages, means, abilities, and purposes: the young and old, the rich and poor, the able and the disabled, the commuter and the recreationist. It’s important to consider all the users and purposes for walking and bicycling when implementing this plan.
Destinations in New Braunfels

For the majority of those walking or riding a bicycle, whether in New Braunfels or elsewhere, the average trip is typically between 1/4 to 1 mile in length for pedestrians and between 2 to 3 miles for bicyclists. Identifying common destinations throughout the City helps to ensure that facility recommendations and priorities are in line with where residents of New Braunfels are trying to get to.

Trip origins are frequently residential neighborhoods in all parts of the City. Local destinations are those that serve the local community, such as parks, schools, employment areas, and shopping areas with “everyday” destinations. In addition, regional destinations should also be considered, such as downtown New Braunfels, Landa Park, or Historic Gruene. These destinations are unique and movement to and within these areas are specific to the larger destination.

Active Transportation Network: Destinations (New Braunfels)

- Downtown New Braunfels
- Historic Gruene
- Landa Park, Prince Solm Park and Hinman Island
- Schlitterbahn (in two locations)
- The Comal County Fairgrounds
- The Comal River
- Fisher Park

- Creekside Retail Area
- HEB and associated retail areas
- Area high schools, including New Braunfels High, Canyon High and Premier High School of New Braunfels
- Area employment centers such as the Walmart Distribution Center and manufacturing facilities along FM 306
Destinations and Barriers in New Braunfels

Figures 5.A and 5.B, *Active Transportation Opportunities and Barriers*, illustrate that many of the key destinations within New Braunfels that attract daily trips (i.e. schools, parks, shopping, etc.) are within close proximity to many of New Braunfel’s residential areas. This is particularly true for traffic generators and destinations north of IH-10.

Figure 5.A below illustrates a 1/4 mile walking radius around key community destinations in New Braunfels.

That distance typically takes 5 to 10 minutes to easily walk (a time/distance relationship that is seen as the margin within which a traveler may choose to walk rather than drive a car). A bicyclist can extend up to three (3) miles in a 15 minute+- period. Figure 5.B on the following page illustrates a 2-mile bicycling radius around key destinations. As illustrated, many destinations in the City can easily be reached via walking or riding a bicycle.

Interstate 35 and the Guadalupe River create the two largest barriers to walking and riding extensive distances in New Braunfels. **Interstate 35** bisects the City from...
north to south and creates the single most challenging barrier by far. Crossings are limited in number and are far apart - they also have high amounts of vehicular usage, making them even more challenging for pedestrians and bicycle riders.

Other key barriers in New Braunfels include the Guadalupe River. The few crossings of the river will ultimately need to accommodate bicycles and pedestrians, but also provide some of the most scenic locations in the City. The Comal River, which is much shorter in length, creates a barrier but is mitigated by trails and park roads which allow walking and riding parallel to the river. Finally, the Union Pacific rail corridor parallels Interstate 35 and also only has limited crossing points.

FIGURE 5.B: ACTIVE TRANSPORTATION OPPORTUNITIES AND BARRIERS (BICYCLE)
A New Braunfels resident riding towards Downtown along Comal Avenue which has long had well used bicycle lanes.
General Characteristics

For the past two decades, a stronger focus on pedestrian and bicycle infrastructure has prevailed in New Braunfels. As a result, newer areas of the City are beginning to see well developed sidewalk networks and in some cases bicycle lanes incorporated as developments go in.

The core downtown area has a developed sidewalk system that facilitates pedestrian activity in the this area. However, most of the older neighborhoods inside of Loop 337, and indeed many neighborhoods east of I.H. 35 do not include sidewalks along local streets. Major streets with strong pedestrian potential such as San Antonio Street and Seguin Street have older sidewalk systems with some gaps and differences in width. The area around Schlitterbahn, long a major tourist destination, has some gaps in connectivity between its two major sites. New residential areas now have sidewalks incorporated and stress connectivity to local destinations such as schools.

The increased focus on bicycling infrastructure has resulted in a growing system of bicycle lanes which are gradually connecting to the City’s trails. Some, like the recent wide shared use path corridor/linear park along North Walnut Avenue between Elliot Knox Boulevard and Landa Street (as shown below) are excellent facilities that should be emulated by other cities in the region. On-street bicycle lanes along South Walnut Lane are also prototypes that demonstrate how good bicycling and pedestrian infrastructure can be included side by side with vehicular accommodations. New Braunfels also has high-quality walking and bicycling facilities that parallel the Comal River, connecting Landa Park to Prince Solms Park. The County Line Memorial Trail between South Seguin Boulevard and West County Line Road is also an excellent “spine” facility for the eastern areas of New Braunfels. Gaps do exist however between the various developed on and off-street facilities in the City, and eliminating those gaps should be one of the City’s highest priorities.
Attitudes Regarding Active Transportation in New Braunfels

Generally, most residents of New Braunfels view bicycling as a purely recreational activity, and are not used to viewing bicycling as a transportation alternative. Similarly, walking to nearby destinations is typically not viewed as the preferred way to move about the City.

To determine how these attitudes could be informed and changed in the future, an online regional survey was prepared asking residents and property owners to identify challenges to bicycling and walking in the Alamo Area MPO region, and within the City of New Braunfels. The survey was accessible from November 2014 through the late Spring of 2015, and included questions regarding perceptions of current facilities in relation to their community, and barriers that inhibit bicycling and walking in the City. Almost 400 New Braunfels residents participated in the survey. Responses from that survey are shown on pages 5-20 and 5-21.

Attitudes about Bicycling in New Braunfels

More than two-thirds of New Braunfels survey respondents generally rated bicycling as “average” (37%) or “poor/very poor” (37%) in their neighborhoods. Similar to respondents in other cities in the study, bicycling as an activity was often perceived as “dangerous” or “unsafe.” Frequently cited barriers to bicycling include too few facilities (i.e. bike lanes or paths), safety, weather, distance between destinations and lack of bicycle ownership. These key findings are summarized in Figure 5.C, Challenges to Bicycling (page 5-20).

As in Boerne and Seguin, weather as a factor inhibiting bicycling cannot be controlled. Others however, such as the availability of on and off-street bicycle infrastructure and improving safety for bicycling are related, and can be improved with further enhancement of the network of bicycle facilities, as well as increased education and awareness of bicyclists.

Attitudes about Walking in New Braunfels

Residents of New Braunfels rated walking conditions in their community significantly higher than bicycling. 76% of the respondents felt that walking in their neighborhood was average or better, and 16% rated walking in their area as “excellent.” Words used to describe walking in New Braunfels ranged from “dangerous” to “unsafe” and “disconnected.” Frequently cited barriers to walking include a lack of available facilities and their condition (i.e. sidewalks) and the distance between destinations. These key findings are summarized in Figure 5.D, Challenges to Walking (page 5-21).

Connectivity was also cited frequently, especially in terms of addressing gaps in existing sidewalks. Residents were also interested in the placement of facilities closer together. A higher emphasis on creating sidewalks that are wider and more removed from traffic may help to encourage the frequency and volume of walking activity in the City. As in other cities in this study, greater separation between new sidewalks and streets, and intersection design enhancements incorporated into City ordinances or design guidelines can reduce survey respondents’ prevalent assertion that they “do not feel safe.”
Public Participation

Meetings were held during the planning process with City staff to discuss opportunities and constraints in the City and to evaluate proposed options as they were explored.

A Citywide public workshop was held in January 2015 at the Landa Haus in Landa Park. Over 80 attendees participated in the meeting, and these included residents of New Braunfels and nearby areas, City staff, the planning team, and representatives from the Alamo Region MPO. The meeting started with a brief introductory presentation, followed by small group discussions. A total of 10 smaller groups were formed, and each group addressed questions related to current opportunities, constraints challenges to walking and bicycling in the City, as well as outlining key destinations and potential routes on maps of New Braunfels.

Key comments included focusing on using routes along major drainage corridors, creeks and rivers in the City, such as Dry Comal Creek, Comal and Guadalupe River. Attendees were also greatly concerned about making it easier to get through the barrier that Interstate Highway 35 and the Guadalupe River create. Improvements to walking in Downtown New Braunfels were also mentioned frequently.

Residents, City staff, and members of the Alamo Region MPO provided valuable input throughout the planning process.
challenges to bicycling

In the regional survey, residents of New Braunfels rated bicycling in their neighborhood as **Below Average**. When asked what prevents them from bicycling more, the top answer was the **Lack of Bike Lanes, Trails, or Paths**.

**How do you rate bicycling in your neighborhood?**

- **Excellent**: 8%
- **Good**: 18%
- **Average**: 37%
- **Poor**: 26%
- **Very Poor**: 11%

**Top Five Barriers to Bicycling**

1. **There are no bike lanes, trails, or paths.**

2. **I do not feel safe.**

3. **Weather.**

4. **No connections to transit.**

5. **Destinations are too far.**

**What one word describes bicycling in New Braunfels today?**

- **Unsafe**
- **Dangerous**
- **Limited**
- **Hilly**
- **Inconsistent**

**Over 27%** of the respondents to this question used the word “dangerous” to describe bicycling in New Braunfels.

**Over 80%** of survey respondents from New Braunfels said that the lack of bike lanes, trails, or paths prevents them from bicycling more than they currently do. This was followed by 60% of respondents who are concerned about safety, 40% who say weather is a factor, 35% who require a bicycle connection to transit, and nearly 27% of the respondents don’t ride their bike more because destinations are too far.
In the regional survey, residents of New Braunfels rated walking in their neighborhood as **ABOVE AVERAGE**, with over 41% saying it’s either excellent or good. When asked what prevents them from walking more, the top answer was the **LACK OF CONNECTED SIDEWALKS**.

**FIGURE 5.D:**

### Top Five Barriers to Walking

1. **There are no sidewalks.**
2. **Existing sidewalks are in poor condition.**
3. **Destinations are too far.**
4. **I do not feel safe.**
5. **Weather.**

**About 17%** of the respondents to this question used the word “dangerous” or “unsafe” to describe walking in New Braunfels.

**Nearly 78%** of survey respondents from New Braunfels said that the lack of a connected sidewalk network prevents them from walking more than they currently do. This was followed by 58% of respondents saying the level of comfort or condition of the sidewalks was a deterrent, nearly 48% say that destinations are too far, 46% are concerned about safety, and nearly 44% of the respondents don’t walk more because of the weather.
Existing Facilities for Bicycling and Walking in New Braunfels

A summary of New Braunfels’ existing active transportation network is provided in Table 5.1, *New Braunfels Active Transportation Network (2015)*. The table distinguishes between on-street bicycle facilities, on-street pedestrian facilities, and shared use facilities. These three facility categories are described in more detail in the introductory volume of this study and in Appendix A, *Bicycle and Pedestrian Toolkit*, of this study.

Table 5.1 presents the cumulative length of all of New Braunfels’ sidepaths and shared use paths. The cumulative length of sidewalk segments referenced in the table includes only those located on collector and arterial streets. Only those sidewalk segments situated on local streets that provide important pedestrian interconnectivity are included in Table 5.1.

The distribution of New Braunfels’ sidepaths, shared use paths, and key sidewalk segments is illustrated on Maps 5.1A through 5.1E, *Existing New Braunfels Active Transportation Network* (pages 5-23 and 5-27). Consistent with Table 5.1, Maps 5.1A through 5.1E do not represent a comprehensive inventory of all of the existing sidewalks in the City. Sidewalks illustrated on the maps are largely limited to those on collector and arterial streets, and those on key local street segments.

### Table 5.1 New Braunfels Active Transportation Network (2015)

<table>
<thead>
<tr>
<th>Facility Category*</th>
<th>Facility Type*</th>
<th>Length (Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>On-Street Bicycle Facilities</strong></td>
<td>Bicycle Lanes</td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td>Buffered Bicycle Lanes</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Protected Bicycle Lanes</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Shared Lane Markings</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Bicycle Route</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>Wide Shoulder</td>
<td>23.9</td>
</tr>
<tr>
<td></td>
<td>Traffic Calming</td>
<td>0</td>
</tr>
<tr>
<td><strong>On-Street Pedestrian Facilities</strong></td>
<td>Sidewalks</td>
<td>37.1**</td>
</tr>
<tr>
<td><strong>Shared Use Facilities</strong></td>
<td>Shared Use Trails (Off-street)</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Sidepaths (On-street)</td>
<td>6.0</td>
</tr>
</tbody>
</table>

*Facility categories and type defined in Appendix A: *Bicycle and Pedestrian Toolkit*.  
**Excludes most local street segments within subdivisions.*
4.2 Existing Conditions

MAP 5.1A: EXISTING NEW BRAUNFELS ACTIVE TRANSPORTATION NETWORK

- Sidewalk, Existing
- Trail, Existing
- Bike Lane, Existing
- Bike Route, Existing
- Wide Shoulder, Existing
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination
MAP 5.1C: EXISTING NEW BRAUNFELS ACTIVE TRANSPORTATION NETWORK

LEGEND
- Sidewalk, Existing
- Trail, Existing
- Bike Lane, Existing
- Bike Route, Existing
- Wide Shoulder, Existing
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

0 1/4 1/2 1
Miles

CITY OF NEW BRAUNFELS

EXISTING NEW BRAUNFELS ACTIVE TRANSPORTATION NETWORK

4.2 Existing Conditions
4.2 Existing Conditions

LEGEND
- Sidewalk, Existing
- Trail, Existing
- Bike Lane, Existing
- Bike Route, Existing
- Wide Shoulder, Existing
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

MAP 5.1E: EXISTING NEW BRAUNFELS ACTIVE TRANSPORTATION NETWORK

Miles

0 1/4 1/2 1

3. 2. 1. 5. 4.
Providing comfortable crossings under I.H. 35 is one of the key needs to promoting increased walking and bicycling all over New Braunfels.
Recommendations to improve the environment for walking and bicycling in New Braunfels are outlined in this section. These recommendations work towards meeting the City’s goals for alternative modes of transportation (and especially by bicycle) noted in the Comprehensive Plan and the Thoroughfare Plan. In particular, these recommendations seek to:

**Increase connectivity throughout the City, especially from a bicycle network standpoint.** This connectivity is for both short trips (less than 3 miles) in every part of the City, as well as across the City between the fast growing areas east of IH 35 to the Downtown and Landa Park areas.

**Creating facilities with as high degree a comfort as is possible, such as buffered bicycle lanes, cycle tracks (protected bicycle lanes) and off-street shared use paths.** This may also mean emphasizing routes that serve as alternatives to high traffic volume streets such as using Comal and Casteel Streets as alternatives to Seguin Street.

**Emphasizing facilities that can be developed cost-effectively, such as on-street routes.** These may be feasible in some parts of the City, but may not be feasible in areas with high traffic volumes.

**Emphasizing connectivity to schools throughout the City,** so as to encourage students to walk and ride to school and develop a greater lifelong interest in staying fit.

**Thinking both short term and long term,** so that facilities that can be put in place today help work towards a Citywide network in the future.

**Emphasizing the connection to health benefits,** so that New Braunfels’ efforts to get more residents riding is shown to potentially yield great dividends in terms of community health.

**Emphasizing the need for parallel encouragement efforts,** including end trip, promotional and education efforts that encourage New Braunfels residents to get out and ride more frequently. These are discussed at the end of this chapter.

### Elements Used to Select Recommendations

Corridors were evaluated in each section of the City using the following key elements:

- **Citizen feedback** - Neighborhood desires for pedestrian and bicycle facilities or concerns over specific corridors is considered as a key component of the evaluation.

- **Relationship to area homes** - Occasionally a preferred...
corridor is along easements adjacent to residential backyards. Preference is given to corridors that allow greater separation from fences, and where the facility would be level with backyards to maintain the existing degree of privacy.

**Connectivity** - Potential corridors are evaluated as to their potential to connect to schools, area parks, employers, retail destinations, civic buildings, and other on or off-street routes in the area.

**Availability of the corridor** - Preference is given to corridors that are controlled by the City of New Braunfels or other government entities. This ensures that acquisition or permission to use the corridor is at least possible.

**Potential use** - Actual current use of the corridor, even without any facilities in place, is considered as a factor in determining whether to consider a corridor or not. If a corridor is currently used, or can be used with minimal improvement, then potential development of a facility is easier.

**Network Recommendations**

This section summarizes recommendations by the following categories:

- On-street bicycle facility recommendations (including bicycle lanes, shared lane markings, bicycle routes, wide shoulders, and separated facilities (cycle-tracks)).
- Shared Use Network which includes sidepaths and shared use paths (trails).
- Key Pedestrian Corridors
- Key barrier resolution recommendations

Maps 5.2A through 5.4E on the following pages illustrate recommendations for the entire City. Tables regarding each facility type accompany the maps.
5.3 Recommendations

facility
level of
comfort

- 93% would experience a high level of comfort on a shared use path.
- 54% would experience a normal level of comfort on a neighborhood street.
- 44% would experience a low level of comfort on a street with shared lane markings.
- 91% would experience a high level of comfort on a cycle track.

Survey respondents identified how important or unimportant they felt several possible improvements would be to improving walking and bicycling in their city. Here are the top five most improvements that are considered most important in New Braunfels*.

1. SAFER INTERSECTIONS
   Make crossing intersections safer for pedestrians and bicyclists.

2. SIDEWALKS
   Add sidewalks and fill in missing gaps.

3. WIDER TRAILS
   Add wider multi-use trails for pedestrians and bicyclists.

4. BIKE LANES
   Add bike lanes and fill in missing gaps.

5. PROTECTED BIKE LANES
   Add more protected bike lanes such as a painted buffer or plastic bollards.

*In order by the sum of both very important and important responses.

Survey respondents were asked to identify destinations that they would be interested in walking or bicycling to. Top answers for both included for leisure or recreation, parks, and surrounding neighborhoods, downtown, and restaurants. The graphic below shows those destinations that at least 50% of the respondents indicated they were interested or very interested in walking or bicycling to.
On-Street Bicycle Facilities

The on-street bicycle network has the greatest potential immediate benefit to New Braunfels. Many of the on-street segments can be developed quickly and cost effectively, and can help rapidly build a connected network throughout the City. Maps 5.2A through 5.2E illustrate on-street bicycle facilities.

Key on-street segments include:

**Walnut Avenue Gap (from San Antonio Street north of I.H. 35 to Gardenia Drive south of I.H. 35)** - closing this gap links the Walnut Avenue Trail to the existing bicycle lanes along Walnut Avenue, two of the most developed bicycle facilities in the City. It also can help create a much more comfortable crossing under I.H. 35. Walnut Avenue in this area has high volumes of traffic and turning movements, and is currently acceptable for use only by very experienced bicycle riders.

An alternate route that goes behind the existing retail in the area is suggested in this plan and shown in the maps in this section (see detail on page 5-51). More detailed analysis and development of that route is recommended as a very high plan priority.

**Landa Avenue (from Loop 337 to Fredericksburg)** - bicycle lanes along Landa Avenue that connect the Walnut Avenue separated pathway to Landa Park and the downtown area are recommended as a high priority.

**Mill Street quiet street (from Barwood to Market Street)** - already designated as a bicycle route, further improvements include island bulb-outs to slow vehicular traffic, shared lane markings, and additional signage designating this corridor as a location for slower vehicular traffic and bicycles.

**Common Street (from North Liberty to Gruene Road)** - this segment is a major bicycle route for the NE sector of the City, and includes the only crossing of the Guadalupe River and Loop 337 in this area. High volumes of traffic at Loop 337 make it a challenging crossing, but Common is the most direct route to Gruene and the fast growing FM 306 corridor. Portions may not currently have the pavement width to accommodate buffered bicycle lanes and may have to be installed when the street is renovated.

**North Houston Avenue bicycle lanes or quiet street treatment (from West Lincoln to East Torrey)** - this route parallels Union Avenue, and provides a more comfortable route through the area. Where feasible, on-street parking should be maintained.

**West San Antonio Street (from Loop 337 to Barwood)** - bicycle lanes along this street will create a connection

The expansion of the existing on-street bicycle network has the greatest potential immediate benefit for the City.
from the West side of the City to the Mill Street and the Walnut Avenue corridor. Consideration should be given to removing on-street parking from one side of the roadway to create adequate width for bicycle lanes.

**Spur Street (from West San Antonio Street to Schmidt Avenue)** - links areas north and south of I.H. 35 to a lower traffic volume and more comfortable crossing.

**North Business 35 (from Hwy. 46 to I.H. 35)** - creates a bicycle connection to one of the best crossings under I.H. 35, and ultimately could connect the core area of the City to the fast growing Creekside area.

**F.M. 1101 (from Hwy. 46 to F. M. 483)** - provides a longer term connection to the Creekside area.

### TABLE 5.2 PROPOSED ON-STREET BICYCLE NETWORK PRIORITIES

<table>
<thead>
<tr>
<th>Facility Category*</th>
<th>Facility Type*</th>
<th>Priority</th>
<th>Length (Miles)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Street Facilities</td>
<td>Bicycle Lanes</td>
<td>Tier 1</td>
<td>21.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>38.6</td>
</tr>
<tr>
<td></td>
<td>Buffered Bicycle Lanes</td>
<td>Tier 1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Protected Bicycle Lanes</td>
<td>Tier 1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Shared Lane Markings</td>
<td>Tier 1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Bicycle Route</td>
<td>Tier 1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Wide Shoulder</td>
<td>Tier 1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td>Traffic Calming</td>
<td>Tier 1</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>2.1</td>
</tr>
</tbody>
</table>

**ON-STREET BICYCLE FACILITIES (Cumulative Length)**  

72.2 Miles

*Facility categories and type defined in Appendix A: Bicycle and Pedestrian Toolkit.

** Single segment length - with facility striping and/or signage located on both sides of the street.
5.3 Recommendations

Proposed Creek Crossing
Proposed Intersection Enhancement
Sidewalk, First Priority
Sidewalk, Second Priority
Sidewalk, Existing
Trail, First Priority
Trail, Second Priority
Trail, Existing
Sidepath, First Priority
Sidepath, Second Priority
Sidepath, Existing
Bike Lane, First Priority
Bike Lane, Second Priority
Bike Lane, Existing
Bike Route, First Priority
Bike Route, Second Priority
Bike Route, Existing
Wide Shoulder, First Priority
Wide Shoulder, Second Priority
Wide Shoulder, Existing
Traffic Calming, First Priority
Traffic Calming, Second Priority

LEGEND

1. Proposed Creek Crossing
2. Proposed Intersection Enhancement
3. Sidewalk, First Priority
4. Sidewalk, Second Priority
5. Sidewalk, Existing
6. Trail, First Priority
7. Trail, Second Priority
8. Trail, Existing
9. Sidepath, First Priority
10. Sidepath, Second Priority
11. Sidepath, Existing
12. Bike Lane, First Priority
13. Bike Lane, Second Priority
14. Bike Lane, Existing
15. Bike Route, First Priority
16. Bike Route, Second Priority
17. Bike Route, Existing
18. Wide Shoulder, First Priority
19. Wide Shoulder, Second Priority
20. Wide Shoulder, Existing
21. Traffic Calming, First Priority
22. Traffic Calming, Second Priority

School Properties
Parks
Waterways
Railroad
City Boundary

School
Hospital
Library
Civic Destination
Destination

NEW BRAUNFELS ON-STREET BIKE FACILITIES

MAP 5.2A: NEW BRAUNFELS ON-STREET BIKE FACILITIES

LEGEND
5.3 Recommendations

Proposed Creek Crossing
Proposed Intersection Enhancement
Sidewalk, First Priority
Sidewalk, Second Priority
Sidewalk, Existing
Trail, First Priority
Trail, Second Priority
Trail, Existing
Sidewalk, First Priority
Sidewalk, Second Priority
Trail, First Priority
Trail, Second Priority
Trail, Existing
Sidewalk, Existing
Trail, Existing
Sidewalk, Existing
Trail, Existing
Bike Lane, First Priority
Bike Lane, Second Priority
Bike Lane, Existing
Bike Route, First Priority
Bike Route, Second Priority
Bike Route, Existing
Wide Shoulder, First Priority
Wide Shoulder, Second Priority
Wide Shoulder, Existing
Traffic Calming, First Priority
Traffic Calming, Second Priority

Legend:
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

NEW BRAUNFELS ON-STREET BICYCLE FACILITIES

MAP 5.2C:
5.3 Recommendations

- Proposed Creek Crossing
- Proposed Intersection Enhancement
- Sidewalk, First Priority
- Sidewalk, Second Priority
- Sidewalk, Existing
- Trail, First Priority
- Trail, Second Priority
- Trail, Existing
- Sidepath, First Priority
- Sidepath, Second Priority
- Sidepath, Existing
- Bike Lane, First Priority
- Bike Lane, Second Priority
- Bike Lane, Existing
- Bike Route, First Priority
- Bike Route, Second Priority
- Bike Route, Existing
- Wide Shoulder, First Priority
- Wide Shoulder, Second Priority
- Wide Shoulder, Existing
- Traffic Calming, First Priority
- Traffic Calming, Second Priority

Legend:
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

NEW BRAUNFELS ON-STREET BICYCLE FACILITIES

MAP 5.2E
Key Pedestrian Facilities

Areas for near term focus to improve pedestrian connectivity are more closely focused around key nodes such as Downtown New Braunfels and the West side. Maps 5.3A through 5.3E illustrate on-street and shared-use pedestrian facilities.

Key pedestrian areas of focus include:

- **West end sidewalk projects** - already ongoing, these sidewalks will fill out gaps in existing walks in the far west end of the City.
- **Gaps and improvements to the Downtown sidewalk network** - sidewalk improvements identified in the Downtown Implementation Plan should continue to be prioritized.
- **Seguin Avenue to North Business 35** - gaps along Seguin Avenue should be addressed to create a high quality walking zoning between downtown, the Civic Center and the new pedestrian walkways at the railroad bridge near Business 35.
- **Gaps along San Antonio Street (from downtown to Spur Street)** - San Antonio Street also has the potential to be a major pedestrian corridor. Gaps should be filled and older sidewalks should be reinstalled or upgraded.
- **North Liberty/Union Ave. Pathway** - a wide pedestrian corridor connecting major tourism destinations in the area has been frequently discussed, and improvements have been made in some areas. Creation of a pedestrian friendly walkway, similar in context to the Walnut Avenue linear trail, would not only create a safer corridor for visitors during the three summer months, but would create a very attractive walking environment for City residents the remaining nine months of the year.
- **Sidewalks along North and South Business 35 (from Hwy. 46 to Wright Avenue, and from Seguin Avenue to Spur Avenue)** - the majority of this corridor has no sidewalks, but does have adjacent neighborhoods and extensive commercial and retail destinations. Comfortable sidewalks set back from traffic could provide walking routes for area residents and help connect the retail centers along Walnut Avenue.
- **Landa Street (from Downtown to Mission Drive)** - this corridor would connect neighborhoods around Landa Park to the park, Hinman Island and Prince Solms Park, as well as to Downtown New Braunfels.

Portions of South Seguin Avenue where sidewalk and pedestrian zone improvements could create a more inviting walking environment.

### TABLE 5.3 PROPOSED ON-STREET PEDESTRIAN NETWORK PRIORITIES

<table>
<thead>
<tr>
<th>Facility Category*</th>
<th>Facility Type*</th>
<th>Priority</th>
<th>Length (Miles)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Street Facilities</td>
<td>Sidewalks</td>
<td>Tier 1</td>
<td>30.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tier 2</td>
<td>58.3</td>
</tr>
<tr>
<td>Shared Use Paths (See Table 5.7, Proposed Shared Use Network Facilities)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalks (See Table 5.7, Proposed Shared Use Network Facilities)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ON-STREET PEDESTRIAN FACILITIES (Sidewalks Only - Cumulative Length):</strong></td>
<td></td>
<td></td>
<td>88.7 Miles</td>
</tr>
</tbody>
</table>

*Facility categories and type defined in Appendix A: Bicycle and Pedestrian Toolkit.

** Single segment length - with facility striping and/or signage located on both sides of the street.
5.3 Recommendations

1. Proposed Creek Crossing
2. Proposed Intersection Enhancement
3. Sidewalk, First Priority
4. Sidewalk, Second Priority
5. Sidewalk, Existing
6. Trail, First Priority
7. Trail, Second Priority
8. Trail, Existing
9. Sidewalk, First Priority
10. Sidewalk, Second Priority
11. Bike Lane, First Priority
12. Bike Lane, Second Priority
13. Bike Lane, Existing
14. Bike Route, First Priority
15. Bike Route, Second Priority
16. Bike Route, Existing
17. Wide Shoulder, First Priority
18. Wide Shoulder, Second Priority
19. Wide Shoulder, Existing
20. Traffic Calming, First Priority
21. Traffic Calming, Second Priority
22. Traffic Calming, Existing
23. School Properties
24. Parks
25. Waterways
26. Railroad
27. City Boundary
28. School
29. Hospital
30. Library
31. Civic Destination
32. Destination

MAP 5.3A: NEW BRAUNFELS PEDESTRIAN FACILITIES (ON-STREET & SHARED USE)
5.3 Recommendations

- Proposed Creek Crossing
- Proposed Intersection Enhancement
- Sidewalk, First Priority
- Sidewalk, Second Priority
- Sidewalk, Existing
- Trail, First Priority
- Trail, Second Priority
- Trail, Existing
- Sidepath, First Priority
- Sidepath, Second Priority
- Bike Lane, First Priority
- Bike Lane, Second Priority
- Bike Lane, Existing
- Bike Route, First Priority
- Bike Route, Second Priority
- Bike Route, Existing
- Wide Shoulder, First Priority
- Wide Shoulder, Second Priority
- Wide Shoulder, Existing
- Traffic Calming, First Priority
- Traffic Calming, Second Priority
- Traffic Calming, Existing

LEGEND

- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

NEW BRAUNFELS PEDESTRIAN FACILITIES (ON-STREET & SHARED USE)
5.3 Recommendations

- Proposed Creek Crossing
- Proposed Intersection Enhancement
- Sidewalk, First Priority
- Sidewalk, Second Priority
- Sidewalk, Existing
- Trail, First Priority
- Trail, Second Priority
- Trail, Existing
- Sidepath, First Priority
- Sidepath, Second Priority
- Sidepath, Existing
- Bike Lane, First Priority
- Bike Lane, Second Priority
- Bike Lane, Existing
- Bike Route, First Priority
- Bike Route, Second Priority
- Bike Route, Existing
- Wide Shoulder, First Priority
- Wide Shoulder, Second Priority
- Wide Shoulder, Existing
- Traffic Calming, First Priority
- Traffic Calming, Second Priority

LEGEND:
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

MAP 5.3E: NEW BRAUNFELS PEDESTRIAN FACILITIES (ON-STREET & SHARED USE)
Key Shared Use Path (Trail) Facilities

Shared use paths are typically the most comfortable location for most of us to ride on. New Braunfels already has excellent trails in the Landa Park/Prince Solms Park area, as well as the County Line Memorial Trail. Maps 5.4A through 5.4E illustrate off-street shared-use facilities.

Other key trail segments that will help promote active transportation in the City include:

- **Dry Comal Creek Trail (from Landa Park to Loop 337)** - long planned, this trail segment will connect the Walnut Avenue linear park corridor to Landa Park and near downtown areas.
- **Guadalupe River Trail** - from North Street and the Comal County Fairgrounds to Cypress Bend Park, and potentially to the Faust Street Bridge (with property owner consent).

<table>
<thead>
<tr>
<th>Table 5.4 Proposed Shared-Use Network Priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Category*</td>
</tr>
<tr>
<td>Shared-Use Facilities</td>
</tr>
<tr>
<td>Shared Use Trails</td>
</tr>
<tr>
<td>Shared Use Trails</td>
</tr>
<tr>
<td>Sidewalks</td>
</tr>
<tr>
<td>Sidewalks</td>
</tr>
<tr>
<td><strong>Shared-Use Facilities (Cumulative Length)</strong></td>
</tr>
</tbody>
</table>

*Facility categories and type defined in Appendix A: Bicycle and Pedestrian Toolkit.
** Single segment length - with facility striping and/or signage located on both sides of the street.
5.3 Recommendations

1. Proposed Creek Crossing
2. Proposed Intersection Enhancement
3. Sidewalk, First Priority
4. Sidewalk, Second Priority
5. Sidewalk, Existing
6. Trail, First Priority
7. Trail, Second Priority
8. Trail, Existing
9. Sidepath, First Priority
10. Sidepath, Second Priority
11. Sidepath, Existing
12. Bike Lane, First Priority
13. Bike Lane, Second Priority
14. Bike Lane, Existing
15. Bike Route, First Priority
16. Bike Route, Second Priority
17. Bike Route, Existing
18. Wide Shoulder, First Priority
19. Wide Shoulder, Second Priority
20. Wide Shoulder, Existing
21. Traffic Calming, First Priority
22. Traffic Calming, Second Priority
23. School Properties
24. Parks
25. Waterways
26. Railroad
27. City Boundary
28. School
29. Hospital
30. Library
31. Civic Destination
32. Destination

MAP 5.4A: NEW BRAUNFELS SHARED-USE FACILITIES

LEGEND

- Proposed Creek Crossing
- Proposed Intersection Enhancement
- Sidewalk, First Priority
- Sidewalk, Second Priority
- Sidewalk, Existing
- Trail, First Priority
- Trail, Second Priority
- Trail, Existing
- Sidepath, First Priority
- Sidepath, Second Priority
- Sidepath, Existing
- Bike Lane, First Priority
- Bike Lane, Second Priority
- Bike Lane, Existing
- Bike Route, First Priority
- Bike Route, Second Priority
- Bike Route, Existing
- Wide Shoulder, First Priority
- Wide Shoulder, Second Priority
- Wide Shoulder, Existing
- Traffic Calming, First Priority
- Traffic Calming, Second Priority

- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

NEW BRAUNFELS

SHARED-USE FACILITIES

MAP 5.4A:

N

W

E

0 1/8 1/4 1/2

Miles

NEW BRAUNFELS

SHARED-USE FACILITIES

MAP 5.4A:
REGIONAL BICYCLE & PEDESTRIAN PLANNING STUDY

MAP 5.4B: NEW BRAUNFELS SHARED-USE FACILITIES

LEGEND
- Proposed Creek Crossing
- Proposed Intersection Enhancement
- Sidewalk, First Priority
- Sidewalk, Second Priority
- Sidewalk, Existing
- Trail, First Priority
- Trail, Second Priority
- Trail, Existing
- Sidepath, First Priority
- Sidepath, Second Priority
- Sidepath, Existing
- Bike Lane, First Priority
- Bike Lane, Second Priority
- Bike Lane, Existing
- Bike Route, First Priority
- Bike Route, Second Priority
- Bike Route, Existing
- Wide Shoulder, First Priority
- Wide Shoulder, Second Priority
- Wide Shoulder, Existing
- Traffic Calming, First Priority
- Traffic Calming, Second Priority

- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

NEW BRAUNFELS
MAP 5.4B: OPEN
5.3 Recommendations

1. Proposed Creek Crossing
2. Proposed Intersection Enhancement
3. Sidewalk, First Priority
4. Sidewalk, Second Priority
5. Sidewalk, Existing
6. Trail, First Priority
7. Trail, Second Priority
8. Trail, Existing
9. Sidepath, First Priority
10. Sidepath, Second Priority
11. Sidepath, Existing
12. Bike Lane, First Priority
13. Bike Lane, Second Priority
14. Bike Lane, Existing
15. Bike Route, First Priority
16. Bike Route, Second Priority
17. Bike Route, Existing
18. Wide Shoulder, First Priority
19. Wide Shoulder, Second Priority
20. Wide Shoulder, Existing
21. Traffic Calming, First Priority
22. Traffic Calming, Second Priority
23. School Properties
24. Parks
25. Waterways
26. Railroad
27. City Boundary
28. School
29. Hospital
30. Library
31. Civic Destination
32. Destination
REGIONAL BICYCLE & PEDESTRIAN PLANNING STUDY

MAP 5.4D: NEW BRAUNFELS SHARED-USE FACILITIES

LEGEND
- Proposed Creek Crossing
- Proposed Intersection Enhancement
- Sidewalk, First Priority
- Sidewalk, Second Priority
- Sidewalk, Existing
- Trail, First Priority
- Trail, Second Priority
- Trail, Existing
- Sidepath, First Priority
- Sidepath, Second Priority
- Sidepath, Existing
- Bike Lane, First Priority
- Bike Lane, Second Priority
- Bike Lane, Existing
- Bike Route, First Priority
- Bike Route, Second Priority
- Bike Route, Existing
- Wide Shoulder, First Priority
- Wide Shoulder, Second Priority
- Wide Shoulder, Existing
- Traffic Calming, First Priority
- Traffic Calming, Second Priority
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

NEW BRAUNFELS

SHARED-USE FACILITIES

MAP 5.4D: OPEN
5.3 Recommendations

- Proposed Creek Crossing
- Proposed Intersection Enhancement
- Sidewalk, First Priority
- Sidewalk, Second Priority
- Sidewalk, Existing
- Trail, First Priority
- Trail, Second Priority
- Trail, Existing
- Sidepath, First Priority
- Sidepath, Second Priority
- Sidepath, Existing
- Bike Lane, First Priority
- Bike Lane, Second Priority
- Bike Lane, Existing
- Bike Route, First Priority
- Bike Route, Second Priority
- Bike Route, Existing
- Wide Shoulder, First Priority
- Wide Shoulder, Second Priority
- Wide Shoulder, Existing
- Traffic Calming, First Priority
- Traffic Calming, Second Priority

Legend:
- School Properties
- Parks
- Waterways
- Railroad
- City Boundary
- School
- Hospital
- Library
- Civic Destination
- Destination

NEW BRAUNFELS SHARED-USE FACILITIES

MAP 5.4E: NEW BRAUNFELS SHARED-USE FACILITIES
Key Priority Intersections

Key intersections that are vital to increasing walking in the City are identified on the pedestrian recommendations map. Two intersection types are considered:

**Pedestrian crossings at major roadways.** Such as the intersection of Walnut Avenue and Loop 337. For these, highly visible crosswalks, median refuge islands and adequate crossing times are vital to insure pedestrian safety and comfort and should be considered wherever not already in place.

**In-town intersections in more walkable areas of the City.** Exemplified by the intersection of Union and Commons, these intersections require a comfortable and adequately spaced landing for pedestrians, adequate crossing time, and highly visible crosswalks. In some cases right turns on red should be prohibited.

Barrier Recommendations

Many of the connections and facility improvements mentioned above are vital, but they will need more comfortable crossings under I.H. 35 to create complete connectivity. I.H 35 has nine (9) intersections with area roadways in New Braunfels, ranging from Kohlenberg Road to the north to Solms Road to the south and west. All of the nine crossings are important as future pedestrian and bicycle corridors, but five have been identified as most critical to the immediate success of the walking and bicycling network in the City. Key areas requiring barrier solutions include:

**Walnut Avenue at I.H. 35 (Image A)** - Previously mentioned, the heavy volumes of traffic in the area, combined with the multiple turning movements make this area a challenging route for most bicyclists and pedestrians. The detail shown on this page illustrates a parallel route that is somewhat indirect but that avoids much of the retail traffic. This route combines on-street buffered bicycle lanes with off-street trails, and may require permission to traverse some areas. A detailed study of this route is recommended to connect the Walnut Avenue linear park to bicycle lanes east of I.H. 35.

**Guadalupe River/IH 35 Trail (at Kuelher Avenue)** (Image B) - This short trail segment can provide a completely separated crossing under IH 35, but will require a potentially costly structural solution. Its proximity to the Comal Street bicycle lanes and the Faust Street Pedestrian Bridge make this an attractive location to consider a crossing. A more detailed feasibility and engineering evaluation in conjunction with TxDOT should be conducted in the near future.

**North Business 35 (Image C)** - This crossing is perhaps the best under I.H. 35 in New Braunfels, and
helps connect the fast-growing Creekside area to the core area of the City. Wide pedestrian areas between traffic lanes and each U-turn lane may be considered for pedestrian and bicycle paths.

**Spur Street/Schmidt Avenue Crossing (Image D)** - with lower traffic volumes and less commercial uses in the area, the Spur Street intersection under IH 35 lacks bicycle lanes but has adequate sidewalk space. This crossing is along somewhat removed from the core areas of New Braunfels, but can provide an alternative route at a lower cost. As in the North Business 35 intersection, the wide pedestrian areas between traffic lanes and each U-turn lane may be re-purposed as pedestrian and bicycle paths.

**F.M. 306 (not pictured)** - F.M. 306 connects the 306 corridor to the fast growing Creekside area as well as new residential communities between New Braunfels and San Marcos.

In the near term, the Walnut Avenue corridor is the strongest potential route connecting both sides of I.H. 35. A “back door” bicycle route similar to that shown above should be considered. While not nearly as direct as preferred, it combines on-street lanes and shared use paths to maneuver behind the congestion, high traffic volume, and turning movements along Walnut Avenue. In the long run, it may be more readily achievable but more expensive than the suggested ultimate configuration.

Ultimately, on-street protected lanes should be configured through the intersection for bicycle riders. For pedestrians, walkways that capture the spirit of the best practices image on this page should be added.

An alternative may be the development of a protected shared use pathway on the east (preferred) or west side of Walnut Avenue. This would maintain the continuity to the existing Walnut Avenue shared use path, but would require additional space in the HEB parking lot.
New Braunfels - Education and Encouragement Recommendations

The investment in better shared use paths and on-street bicycle lanes can reach its fullest potential in New Braunfels only if educational and promotional efforts are also implemented. These efforts will be key to the creation of a more accepted “culture” of bicycling in the City. They include increased education of both existing and new riders, stepping up promotional efforts, and incorporating safety efforts to enforce existing laws. Recommendations for New Braunfels are as follows:

1. Implement/expand bicycle education programs

Education is a crucial component of increasing walking and bicycling while maintaining a safe environment for all users. Everyone in New Braunfels, including motor vehicle operators, should understand their rules, rights, and responsibilities. Educational efforts should be targeted:

- **To educate school-age children.** School-age children in New Braunfels are an important population to target for teaching and encouraging bicycling and walking. Though half of U.S. school-age children live within two miles of their schools, three-quarters of the households questioned in a 2009 National Household Travel Survey take their children to school in a private vehicle - a huge increase from the 15% that were driven in 1969. In New Braunfels, many children do not live that far from the schools they attend and could walk or ride to school.

- **To educate adults on bicycle riding.** The City of New Braunfels should increase the availability of opportunities to improve the road safety education of both bicyclists and drivers in the City.

Specific efforts that the City of New Braunfels can take to improve walking and bicycle safety education include:

a. **Distribute information on the proper use of bicycle facilities.** The City should provide residents with information about the purpose of new bicycle facility treatments (e.g. bicycle lanes, shared lane markings, sidepaths, etc.) and safe behaviors for using these facilities as they are being designed and installed. Provide links to web pages that include information about each facility type. The pages should provide as many graphics and visuals as possible, including videos (where appropriate) to describe safe maneuvers. Entities such as Bike Texas can help provide this information.

b. **Promote Safe Routes to School efforts at all primary schools in New Braunfels.** Most children start to ride bicycles at a young age. For adolescents, bicycles offer independence and self-reliance. Therefore it is important to teach students safe bicycle skills as early as possible and reinforce that message as they approach driving age. Bicycle “Rodeos” are a fun way to help youth expand their bicycle riding skills.

Promote the philosophical goals and principles of Safe Routes to School (SRTS), which educates children of the proper safety procedures when walking or biking, to encourage children to walk and bike to school where they are not currently doing so, and to improve facilities where students are already walking and biking.

In conjunction with area schools, help organize “walking school buses” or “bike trains” where groups of parents actively help students walk or ride to nearby schools.

The City should support the local school district’s efforts to provide walking and bicycle education for all students. To reach young students, conduct regular bicycle “rodeo” or half day training sessions given to all students at a certain grade level.

A student at a Bicycle “Rodeo” practices his maneuvering skills around tennis ball obstacles.
5.3 Recommendations

CITY OF NEW BRAUNFELS

3. Expand youth and adult bicycle education opportunities. Private groups in New Braunfels could provide bicycle safety skills courses taught by League of American Bicyclists certified instructors. These courses are sometimes offered free of charge (where subsidized) or are offered at a reasonable charge (to compensate the instructors). The City of New Braunfels should partner with or support area advocacy groups and certified instructors to provide a central information source and marketing for area bicycle education events, and if necessary provide a location on City property to conduct the training sessions.

The City could also provide a way for people to sign up for classes held by various groups around the region and possibly offer discounted rates for City residents, such as for online classes offered by the League of American Bicyclists. Target audiences may include area college students where bicycle safety courses could be offered as part of orientation programs held at the beginning of each school year. Incentives could also be offered to area employers to have employees become certified instructors and regularly offer classes to their employees. The more confident people are in their bicycling abilities and safety knowledge, the more likely they are to substitute some short car trips for ones on bikes.

d. Provide information to promote safe walking. Pamphlets and online information generated by many national and state entities can be distributed to New Braunfels residents to help promote safe walking habits.

2. Expand encouragement efforts and programs

Encouragement and promotion are extremely important components of an effort to get New Braunfels residents to walk and bike more frequently. Suggestions to encourage more walking and bicycling include the following. Many others can be used - the intent should be to have a consistent and vocal message that walking and riding more is good for New Braunfels in many ways.

a. Encourage walking and bicycling commuting by City leaders, local employees, local students and area employers.

Conduct biannual “open streets” events. In addition to being fun and well attended, these events draw significant attention to the benefits of walking and riding more in New Braunfels.

City staff, elected officials, and City business leaders should spearhead efforts to increase bicycling and walking. Encourage these leaders to attend walking and bicycling events, participate in public campaigns about walking and biking in New Braunfels.

“Walking school buses” can provide an alternate to traditional school transportation programs.
Create a central location to serve as the “heart” of bicycling and walking efforts in New Braunfels. Such a facility could be associated with the Parks Department, but should focus exclusively on all aspects of educating and encouraging greater amounts of walking and riding in New Braunfels. A central and highly visible location is critical.

Encourage and incentivize local businesses that encourage their employees to commute by walking or biking. Offer discounts to City facilities, recognition at City events, promotion on the City’s cable access channel or other incentives.

Encourage bicycle commuting by making available information about economic benefits, health benefits, and potential commuting routes to employers and employees.

Promote Bike-to-Work and Bike/Walk-to-School Day. This encourages area employees, as well as children, to walk or bicycle to work or school by demonstrating how it can be done regularly. Many communities choose to build on Bike-to-Work Day and Bike/Walk-to-School Day and use it as the centerpiece of a larger community event focused on the local bicycling community.

The City of New Braunfels and other area public agencies should serve as an example by providing showers and lockers for employees so they can ride or walk to work. Another element of this strategy is to require all new and existing public buildings owned and operated by the City to include facilities for bicycle commuters, such as showers and bicycle parking.

Work with local bicycling groups to provide “bicycle mentors” to demonstrate to residents who have always driven to work how it may be possible to bicycle to work.

Educate employers on federal tax benefits for bicycle commuting by hosting workshops on a regular basis. Through the Federal Commuter Tax Benefit (Section 132(f) of the Internal Revenue Code reauthorized in 2013), employees can receive up to $20 per month tax free from their employer for expenses related to commuting to work via bicycle.

Recognize local employers who actively encourage their employees to walk, ride or take transit to work with an annual awards program. Recognizing local employers for their efforts to encourage bicycle commuting promotes the awareness of bicycling and also showcases the efforts of leading examples. Employers get the benefit of the positive press, and the City benefits from the increase in bicycling.

Further support efforts to provide low cost or free bicycles and repairs to New Braunfels residents. Encourage the donation of used bicycles and parts, and heavily promote the availability of bicycles when residents volunteer their time to repair and build bicycles.

As feasible, acquire and provide helmets, lights and other safety equipment at low cost or no cost to New Braunfels residents in need. Seek sponsors and grants to continue to provide equipment to promote safe riding habits.

b. Encourage Walking. In concert with bicycle encouragement efforts, the City of New Braunfels should also target a greater amount of walking in

Provision of information and commuting routes can help encourage commuters to choose biking as a viable option.
the City. Types of efforts specifically devoted to walking may include:

Publicize key events, such as National Trails Day.

Develop inexpensive temporary signs that can alert residents to easy walking opportunities, such as “5 minute walk to a local restaurant.”

Develop specific “walk scores” for schools and other key destinations in the City. The application quickly rates a destination in terms of its access via walking, and can help publicize how accessible many destinations in New Braunfels are. It is available at walkscore.com.

Provide information on how to organize and encourage walking groups or clubs. The City and partners can help encourage neighbors to create groups that walk on a regular basis.

c. **Conduct a detailed school by school analysis to improve walking and bicycling routes to that school as part of any future Safe Routes to School Plan.** In partnership with area schools, and using each school’s attendance zone, continue to develop a detailed list of smaller improvements that can create more attractive walking and riding routes to each school as part of any future citywide Safe Routes to School strategy. Detailed Safe Routes to School plans would focus specifically on connecting the residences of enrolled school children to their school via a safe walking or bicycling route.

d. **Develop and distribute a route facility map.** To increase the citizens’ knowledge of existing walking and bicycling facilities and destinations in New Braunfels and to encourage the use of those facilities, the City should develop a brochure type route map that can be printed and distributed and posted on-line. Longer term, investigate the possibility of developing a “map app” in coordination with other regional partners.

e. **Increase citywide availability of bicycle parking.** To quickly expand the relatively small amount of bicycle parking available at key destinations in New Braunfels, the City should consider purchasing bicycle racks in bulk and selling them at cost for installation at key destinations throughout the City. The City may also partner with local advocacy organizations to support this type of program. For example, the advocacy group/organization could purchase the bike racks and administer the program of which businesses receives them, while the City can store the racks and possibly install them through the Public Works Department.

f. **Pursue “Bicycle Friendly Community” designation.** The League of American Bicyclists’ Bicycle Friendly America Program recognizes
communities, businesses, and college campuses for their active support in providing safe bicycling facilities and encouraging citizens to bicycle more frequently. New Braunfels should strive to be named a bicycle friendly community in the future. The award is based on the following criteria:

• Physical infrastructure and hardware to support cycling.
• Programs that ensure the safety, comfort and convenience of cyclists and fellow road users.
• Incentives, promotions and opportunities that inspire and enable people to ride.
• Equitable laws and programs that ensure motorists and cyclists are held accountable.
• Processes that demonstrate a commitment to measuring results and planning for the future.

By implementing the majority of the recommendations in this master plan, the City of New Braunfels should qualify as a bicycle-friendly community.

Enforcement Recommendations

It is important to remind New Braunfels residents that bicyclists are legally entitled to use the road, but are also required to obey the same rules and regulations that apply to vehicles. Enforcement should reinforce the right of each roadway user in New Braunfels. The New Braunfels Police Department should actively enforce traffic laws for both motorists and bicyclists.

To be effective, the enforcement program should be accompanied by awareness and education. The Police Department may elect to start with warnings and utilize citations only if necessary. Enforcement alone does not usually achieve long-term effects; rather, it should be combined with strong education and encouragement efforts as well as physical improvements to facilities.

Another important aspect of a successful enforcement program is to recognize the nature of the problem. Where a significant number of users practice unsafe behavior, the physical design may need to be modified. More detailed changes beyond those recommended in this master plan should be made to the infrastructure.

a. **The City of New Braunfels should continue to monitor crash data.** If warranted by a high number of incidents, then the New Braunfels Police Department and the Planning and Public Works Departments should work together to study how best to reduce bicycle and motor vehicle crashes. The approach should focus on improving the behaviors of both bicyclists and motorists.

b. **As needed, and in focused areas of the City where applicable, increase enforcement of bicycling related infractions.**

Targeted motorist behaviors include:

• Turning left and right in front of bicyclists
• Passing too close to bicyclists
• Speeding
• Parking in bicycle lanes where signage prohibits parking
• Rolling through stop signs or disobeying traffic signals
• Harassment or assault of bicyclists
• Targeted bicyclist behaviors include:
• Ignoring traffic control (traffic signals and stop signs)
• Riding the wrong way or against traffic on a street
• Riding with no lights at night

c. **Encourage the use of helmets by young bicyclists in New Braunfels.** Parallel efforts to provide free or low cost helmets for some youth.
5.3 Recommendations

should be conducted.

d. Work with local advocacy groups to encourage a volunteer bicycle fleet to offer periodic group rides. Enforcement efforts do not need to necessarily come from police officers. Safe bicycle behavior can be established with good examples. Local bicycle retail stores and bicycle advocacy groups could organize group rides to help people learn safe bicycling skills and responsibilities. These can be especially helpful for those venturing out on the road for the first time. Having several bicyclists riding together also reminds motorists of the presence of bicyclists and encourages courteous sharing of the road. Group rides can also help people confidently ride in the evening and night hours. Each group ride may begin with a review of safe bicycling laws and tips. Gently reminding riders of safe behavior along the ride helps new riders test the waters in a safe and welcoming environment.

e. Implement regular training for police officers on road safety for all roadway users. Bicycle transportation safety laws are a part of every patrol officer’s training. However, if on-road bicycle use is not yet part of the mainstream, it is not surprising that some officers are not as familiar with laws that pertain to bicycles as compared to vehicles, which they no doubt interact with regularly.

Unfortunately, what likely happens in these cases is that unsafe behavior by bicyclists and motorists goes uncorrected. It is the City’s responsibility to emphasize the need for bicycle safety law enforcement. To do this, the City should provide regular training on traffic safety laws as they pertain to bicyclists and motorists.

As bicycling in the City increases, it will be important for all officers to be prepared for potential conflicts and incorrect behavior. The National Highway Traffic Safety Administration (NHTSA) has several resources that can be inserted into regular trainings to keep the message fresh and engaging for officers.

The Police Department should offer educational training to officers about bicyclist rights and responsibilities as well as aggressive motor vehicle behavior toward bicyclists. For example, the Maryland Office of Highway Safety organizes safety training events for officers to raise awareness about rights, rules, and appropriate responses to incidents involving conflicts between motor vehicles, bicycles and pedestrians. The Federal Highway Administration offers a DVD that is an excellent training tool.

Young bicyclists should be encouraged to wear helmets. Consider providing free or low cost helmets to some youth.
Creating more comfortable bicycling infrastructure can encourage greater participation by riders of all types.
Implementation Program

Chapter 3 of the *New Braunfels Bicycle and Pedestrian Study* contains bicycle and pedestrian infrastructure and initiative recommendations with which the City can build a comprehensive active transportation program. Successful implementation however, requires the identification of clear processes.

This chapter provides strategies for New Braunfels to establish an active transportation implementation program. To that end, the chapter identifies methods of facility and initiative prioritization, identification of funding, defining the roles of responsible parties, and program monitoring. This chapter is also written under the assumption that the New Braunfels staff and elected officials will move forward in implementing the recommendations of this study.

Network Design and Construction

There are significant opportunities to expand the active transportation network in New Braunfels. Some opportunities can be implemented as part of new development, street construction projects, or as stand-alone projects.

Efforts should be focused on bicycle lanes, sidewalk segments and corridors that provide the most significant beneficial impact, and that truly begin to create a linked network. Chapter 3 recommends important facilities to be built - these key projects were selected to meet the goals identified by the City and to reflect citizen comments and desires received during the public input process.

The implementation of each specific active transportation network facility should coordinate with the following steps:

- **Preliminary items.** Environmental analysis (if needed), detailed property easement or right of way needs analysis (if needed), detailed feasibility/concept design, and identification of funding for each project should be obtained before proceeding.

- **Permits.** As needed by the City of New Braunfels, possibly Kendall County and all involved corridor owners, e.g. TxDOT, utility companies and railroad companies. Responsibility for the project permitting will typically rest with the City of New Braunfels.

- **Partnerships and Supplemental Funding.** Research for necessary grant qualification, Council approval to apply for grant pursuits or other funding sources, and completion of right of way acquisition (if needed) should be settled at this point.

- **Design.** Preparation of engineering and construction documents, specifications and cost estimates, followed by bid documents and bidding procedures after permits and funding are clarified. Even if for bicycle lane striping and internally prepared, schematic engineering of the route and intersections is recommended, since each corridor has unique characteristics and design challenges.

- **Physical project construction or implementation.**

*implement* (im’pla mant), v. 4. to fulfill; perform; carry out. 5. to put into effect according to or by means of a definite plan or procedure.
Funding Active Transportation

Funding for pedestrian and bicycle facility development in New Braunfels can come from a variety of sources, including local sources, from the State of Texas, and from federal sources. Private development can also help establish many of the future facilities throughout the City.

Each segment will have unique funding opportunities, based on the neighborhoods around it and the specific characteristics of the corridor.

If possible, funding should be continuous and steady. Annual designation of funds for pedestrian and bicycle development will result in a steady growth in the City’s network, and will allow the citizens of New Braunfels to see a continuous flow of new facilities every year, rather than in sporadic bursts.

Sources of Funding

In many plans over the past decade, New Braunfels residents have demonstrated that they are interested in and value pedestrian and bicycle facilities. Therefore, funding for these facilities should be treated as a key item in both annual and longer term budgeting. As noted above, regular steady funding is recommended so that the network is added to on a continuous basis. A broad range of funding mechanisms, from both the public and private sectors should be considered. These include:

**General obligation bond funds.** Bond funds are typically the primary source of significant development efforts. Larger capacity of these funding sources allows for more development to occur.

**CIP funds.** Allocations in the City’s Capital Improvement Program (CIP) can be used to fund pedestrian and bicycle improvements. These funds can also be leveraged as a match for state and federal grants if those become available.

**Funding as part of other projects.** Both on-street and off-street bicycling facilities, as well as sidewalks, can be efficiently funded as part of other larger City projects, such as new roads. However, separate trail and bicycle funding should not be added to road projects to help supplement roadway funding that is inadequate.

**Parkland dedication funds.** Funds generated by new development can be used to help develop nearby trails. Cities may elect to accrue these funds in lieu of parkland.

**Special district funding.** Funding from special districts, other new public improvement areas, or tax increment financing areas can be used to help develop pedestrian and bicycle facilities.

**Sales tax revenues.** 4B Sales Tax may use funds for a wide range of uses intended to give communities an opportunity to undertake quality of life improvements, including sidewalks, trails, and bicycle facilities.

**Grants from a variety of sources.** Grants that can be used for pedestrian and bicycle facility development are available from a variety of sources. Given the compelling local issues of traffic congestion and air quality, as well as a large local population that supports alternative transportation methods, local pursuit of grants could be successful and should be aggressively pursued. Major grant types include:

- **Texas Parks and Wildlife Department grants.** Through its outdoor recreation and community trail development grants, these matching grants can provide from $50,000 dollars to $500,000 dollars in grant assistance.

- **Federal funds.** Federal dollars allocated to pay for non-motorized transportation improvements can be used to fund pedestrian and bicycling in New Braunfels. These funds are administered by the Texas Department of Transportation and local metropolitan planning organizations such as the AAMPO, and as such must conform to federal guidelines for safety and construction procurement.
Implementation Roles

The City of New Braunfels is the primary implementing agency of this study. Should the City choose to adopt the study, it would be acknowledging its role and responsibility to take the lead in pursuing the plan’s goals and objectives. Implementation actions by the City include actual construction of bicycle and pedestrian facilities and supporting programs to educate and encourage new users.

Multiple City departments may have a role in implementing and operating the facilities envisioned in this master plan. These include the following:

- **The Planning & Community Development Department** will have major roles in implementing study recommendations. Responsibilities will include developing and overseeing efforts to improve walking and bicycling, proposing pedestrian and bicycle facilities, scoping of education, encouragement and enforcement events, and coordinating among the various departments and agencies that have a role in implementing this study.

  The department also enforces the City’s development ordinances. This department is responsible for ensuring that infrastructure built through private development conforms to the City’s codes. The department may also update the City’s codes to establish new standards for projects identified in this study.

  Finally, the department can assist in applying for grants to help construct pedestrian and bicycle facilities, as described in this study.

- **The Parks and Recreation Department** will have a role in education and promotion programs, as well as overall implementation of some sidepaths or shared use paths recommended by this study.

- **The Public Works Department** may lead facility development and day-to-day operations and maintenance of the City’s roads and sidepaths, including signage and striping, where much of the on-street infrastructure may be built. The department will also participate in the design and construction of bicycle and pedestrian infrastructure.
Monitoring Program Implementation

The New Braunfels Bicycle and Pedestrian Study is a living document and should be updated periodically to assess progress, identify new opportunities, and re-evaluate goals and priorities. An action plan should continually be updated for the following year and included in the annual Capital Improvements Program (CIP).

Should the City move forward in implementing this study, it is important to involve area stakeholders, residents and businesses located along any proposed network routes. Public engagement and input is a critical component of any design process involving new pedestrian and bicycle facilities, and is also vital when updating, changing or re-prioritizing any recommendations.

The City should initiate and maintain an annually updated Capital Improvement Project (CIP) list of short- and long-term bicycle and pedestrian facility improvements based on this study. This CIP should be annually updated to reflect the highest priority projects for each fiscal year into the future.

To measure the successful implementation of the recommendations of this study, a series of benchmarks and periodic measures should be used to monitor implementation.

Monitoring measures can include:

- User bicycle and pedestrian counts along key segments both before implementation and after to track changes.
- Identify key locations for benchmark counts and conduct on a periodic basis.
- Review periodic American Community Survey data provided by the US Census on commuting mode share.
- Quantifying the percentage of the system that is developed.
- Quantifying education and encouragement efforts by counting the distribution of route maps, the number of classes and participants enrolled in safety programs, etc.

Scenic routes such as the Faust Street Bridge over the Guadalupe River help overcome barriers but also can become significant visitor attractions.
• Quantifying end trip facilities provided at businesses and destinations within the City.

As the City’s network grows and additional facilities are installed, other measures may be added that further gauge the success of New Braunfels’s bicycling and pedestrian efforts. If the City so desires, this information could be provided on the City’s website so that citizens can track the progress of study implementation.

Citywide bike route signage helps to guide bicycle riders and promote safety.
References


