



## CHAPTER 7

# ACTIVE TRANSPORTATION PLAN



# 7. TEMPLE ACTIVE TRANSPORTATION PLAN

The Temple Active Transportation Plan facilitates the creation of a citywide approach to active transportation planning in the City of Temple while recognizing the characteristics of each neighborhood that make it unique. This Plan provides Temple staff and local planning partners with a guide and source of information to continue to grow a supportive culture of walking and biking, and to expand the City's network of active transportation facilities.

## 7.1 What is Active Transportation?

Active transportation is walking or biking as a sustainable transportation option for daily commutes. While walking and bicycling are the typical modes that come to mind when discussing active transportation, it can also include any form of non-motorized, human-generated mode of transportation such as skateboarding, scooters, and rollerblading. Taking advantage of active forms of transportation can improve community health and wellness while reducing travel costs and expanding transportation networks to residents who do not own a vehicle.

In recent years, the City has experienced growth among both aging and younger populations. These age groups play a key factor in the City's effort to provide more active transportation options for mobility. Walkable communities are a key ingredient in independent living and promoting physical activity for young and aging adults. For example, Safe routes to school increase the number of children walking and biking. Although most Texans rely on automobiles to get to work, run errands, and travel around town, more and more residents have been turning to active modes of transportation to complete these trips as communities invest in sidewalks, bike lanes, and hike & bike trails.



## 7.2 The Active Vision

Temple's vision for the active network is a safe, comfortable, inclusive, and equitable system of modern active transportation facilities that accommodates users of all ages and abilities and supports increased public health, excellent connectivity to transit and key destinations, and has simple and clear wayfinding. MMP goals and objectives associated with the Active Transportation Plan include the items shown in the following list.



### Safety First:

- Reduce bike/ped fatal and serious injury crash rate



### Choices:

- Reduce Single Occupancy Vehicle trips
- Increase bike/ped facility usage



### Connections:

- Increase mode choices to residence or place of employment.
- Close gaps in the sidewalk/bicycle network
- Expand sidewalk/bicycle facility network



### Prosperity:

- Incorporate elements of the Comprehensive Plan to identify strategies to reduce housing and transportation costs (Social Vulnerability Index).



### Mobility:

- Achieve a reliable primary system.



### Quality of Place:

- Design a context sensitive system that promotes neighborhood integrity and property values
- Protect the natural environment (air quality; water quality; wetlands and flood plain)



### Fund and Implement:

- Provide development plans that support strategic initiatives that improve funding for transit and active transportation.



7.3 Public and Stakeholder Feedback

As discussed in Chapter 3, public and stakeholder feedback was solicited at key points in the planning process and was accepted through an on-going basis through digital platforms. What we heard from the public and stakeholders:

- 47% of respondents identified barriers to walking and biking as primarily being a lack of sidewalks or bike lanes.
- Safe and connected pedestrian and bike facilities was the most significant mobility challenge in Temple, followed closely by transit options and accessibility and maintenance of existing roads.
- Expand bike trails and sidewalk network.
- Connect areas of the City, such as east Temple to the Industrial Park.
- Sidewalks needed throughout the City.

7.4 Key Principles

From this Vision stem three key principles used to develop the Active Transportation Plan. This coalition of principles prioritizes improving connectivity, accessibility, and community health while planning for a comprehensive active transportation system.

Connectivity:

Increasing mobility across active transportation modes, while creating an integrated regional transportation network.

Accessibility:

Establishing a comprehensive system of transportation options and allowing users of all ages and abilities to access resources across the region

Community Health:

Promoting active transportation modes that improve public health and support local economies.

7.5 Who Are We Planning For?

Temple is a diverse, multicultural community made up of all ages. Using community feedback taken from the public engagement effort, user profiles were developed to showcase the wide array of typical user experiences that need to be considered when developing an Active Transportation Plan. This Plan is designed to provide benefits to everyone in the community. The following profiles provide examples of people you may find using the active transportation network.

A vital component in developing an active network for Temple is understanding that user profiles are simply a guide, and that user experience can vary from person to person. Trends identified in the data review and the community feedback provided insight into developing baseline recommendations. The City currently lacks the infrastructure to support a connected, ADA-compliant network. The community would like to see safe and seamless accessibility to all basic needs. The Active Transportation Plan aims to address these needs by providing a high-level review of the existing system, a toolbox for facility selection, project and policy recommendations, and context-level solutions that can carry forward into future project planning.



School Bus Users:

These users ride the bus to school. While the bus system works, they feel it could be more efficient and easier to access.



Walkers:

These users have lived in the community for many years. They like to walk to the local grocery store and use transit where available. They would like more benches and safer sidewalks.



Experienced Rider:

Bicycle riders who would like to explore the City and surrounding areas. They would like more regional connections to the hike and bike network.



Visitors:

Users who would like to explore the city more but are unfamiliar with the bicycle system. They would like more signage and wayfinding.



Families

These users are casual riders and families that walk their children to parks, schools, and other places of recreation and entertainment. They noticed the need for safer crossings at large intersections.



Retirees:

Recent retirees who enjoy walking around the neighborhood in the morning and evening. They would like more signage and shade on their walks.



Everyday Needs:

Individuals without access to vehicles. They would like more designated areas for walking, biking and last mile connections to transit.

7.6 Existing Facilities

Active transportation infrastructure is an important component of a balanced transportation system that supports mobility. Pedestrian and bicycle-supportive infrastructure helps provide facilities that enable travelers to choose non-motorized travel throughout the study area and provides key accessibility connections to people with mobility challenges. Accessibility and connectivity for people who walk and bike or use other active transportation modes are primary goals of the Temple Comprehensive Plan 2020 and play a major role in the Temple MMP. Additional information on existing active transportation facilities can be found in Chapter 4 and the Appendices.

The City’s existing sidewalk network is predominantly in the central core of Temple east of I-35 to SH 363. The street network in this area is gridded with relatively short block lengths. A well-connected street network can promote increased walking trips if paired with a sidewalk network in good condition.

Within the study area, there are nearly 40 miles of off-street hike & bike trails, including both paved and non-paved trails. Currently, there are limited designated on-street bicycle facilities, such as bike lanes or protected bike lanes, within the City.

Existing sidewalks and hike & bike trails within the study area are shown in Figure 7.2.

TABLE 7.1: SIDEWALK COVERAGE IN THE CITY OF TEMPLE

Sidewalk Status	Miles of Sidewalk	% of Potential Sidewalk
Existing Sidewalk	173	15.4%
Missing Sidewalk	949	84.6%
Total Potential Sidewalk	1,122	100%

Figure 7.1: Sidewalk Condition in the City of Temple

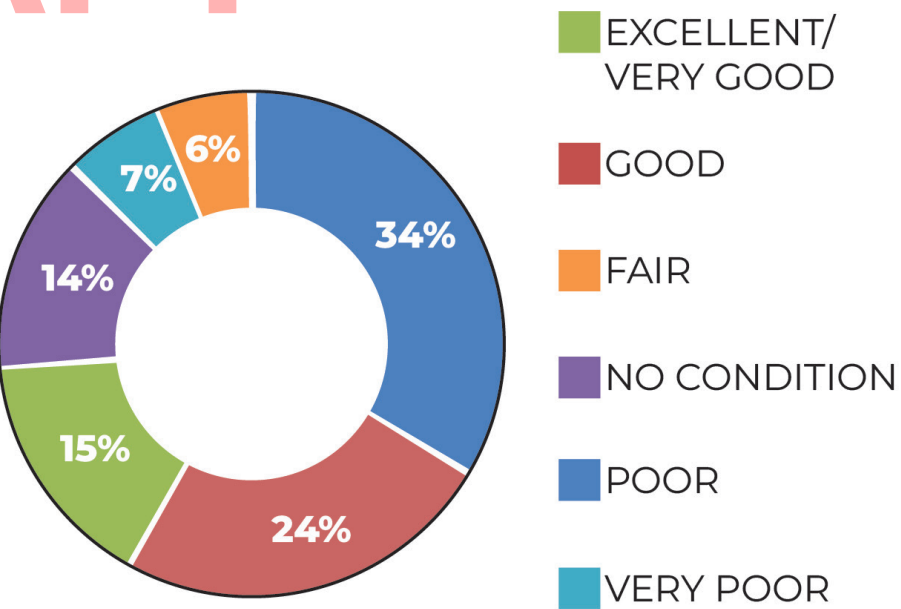
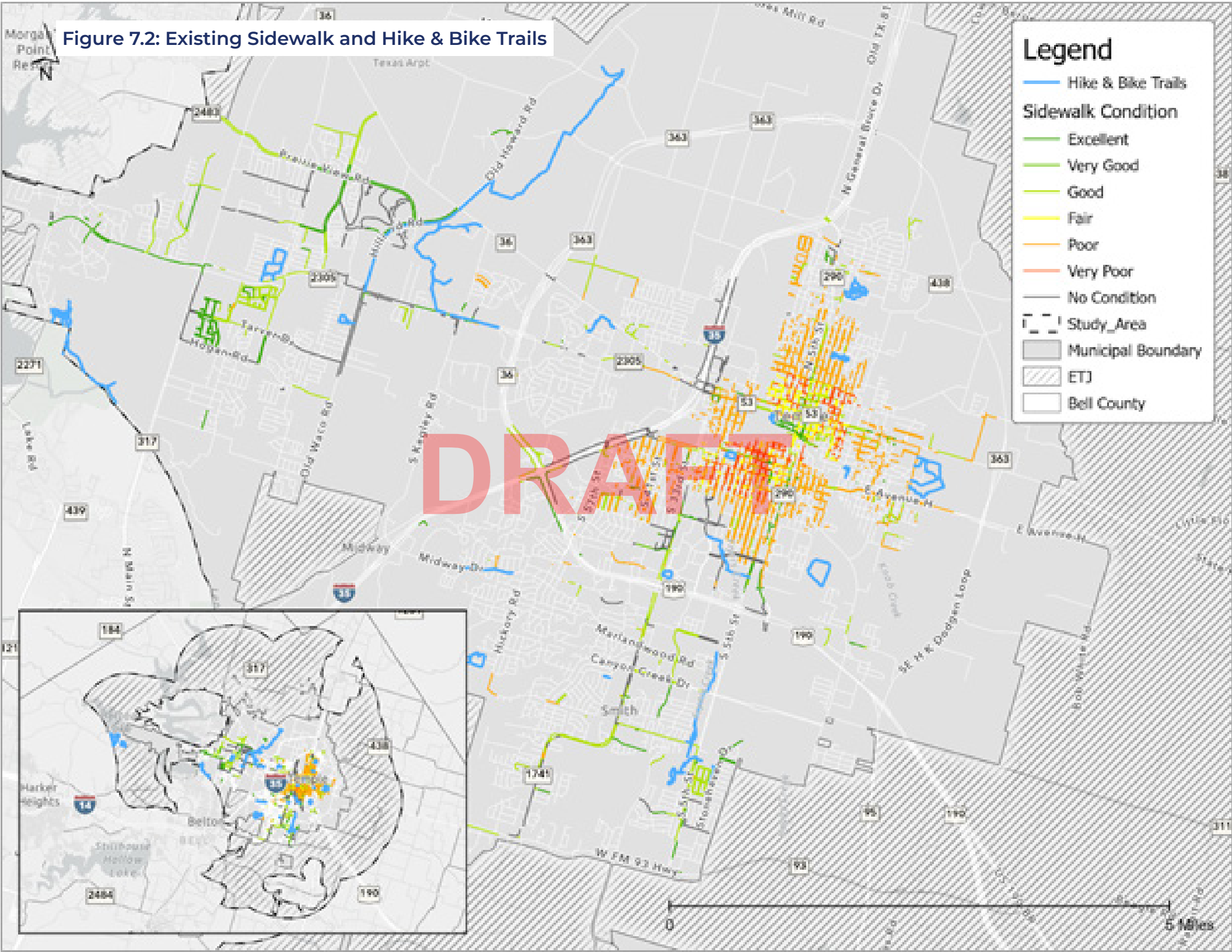


Figure 7.2: Existing Sidewalk and Hike & Bike Trails



7.7 Integrating Parks and Trails Plan with Transportation System

It is important for the community to have safe, comfortable, and convenient access to the City’s parks network. The development of the active transportation recommendations proposed in this MMP are intended to compliment and build upon the locations of existing and proposed parks identified in the Parks and Trails Master Plan (PTMP), which was completed by the City in 2019.

The PTMP was an update to a 2014 document that led to a \$27.6 million bond program that has already built many park and trail improvements throughout the City. The adoption of these plans highlights the commitment from City leaders to provide recreational opportunities for the community. Integrating the Parks and Trails Plan recommendations into the MMP is essential to the creation of a cohesive network.

The PTMP included recommended actions to improve Temple’s parks system in three major categories including Greenway Trails, Thoroughfare Connector Trails, Neighborhood Connector Trails. The following sections briefly describe each of these categories and provides a sample cross-section graphic.

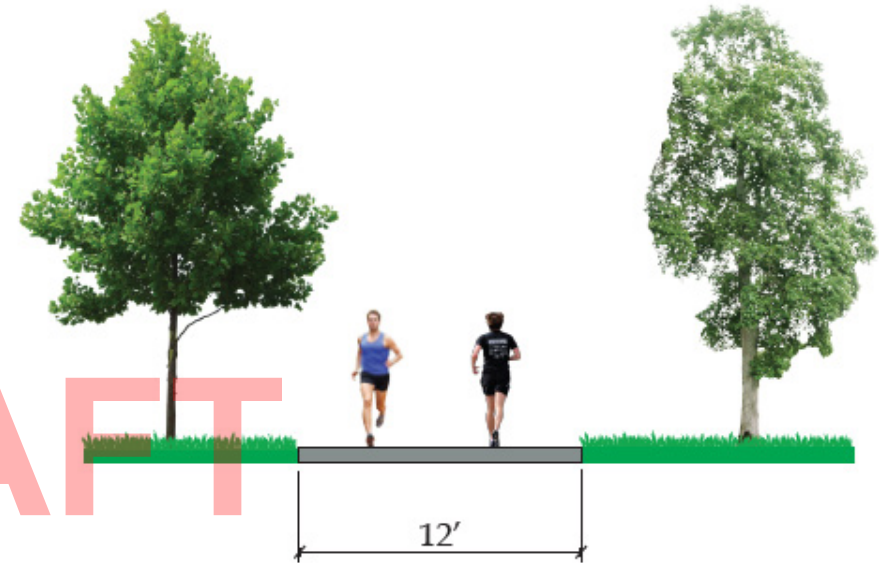
Parks and Trails Master Plan 2020 called for recommendations in the following categories:



7.7.1 Greenway Trails

Off-street greenways, often located in parks for recreation. Figure 7.3 displays the typical cross section of a greenway trail as presented in the Parks and Trails Master Plan.

Figure 7.3: Greenway Trail Typical Cross Section

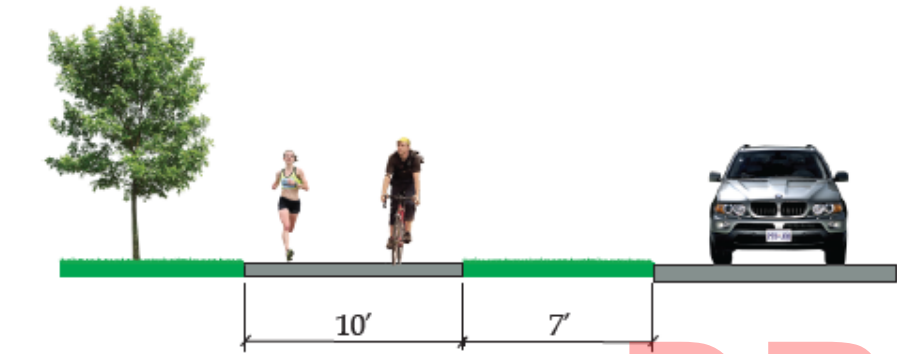


Source: Parks & Trails Master Plan 2020

7.7.2 Thoroughfare Connector Trails

Corridors on the street intended to connect people from point A to point B. Figure 7.4 displays the typical cross section of a thoroughfare connector trail as presented in the Parks and Trails Master Plan.

Figure 7.4: Thoroughfare Connector Trails Typical Cross Section

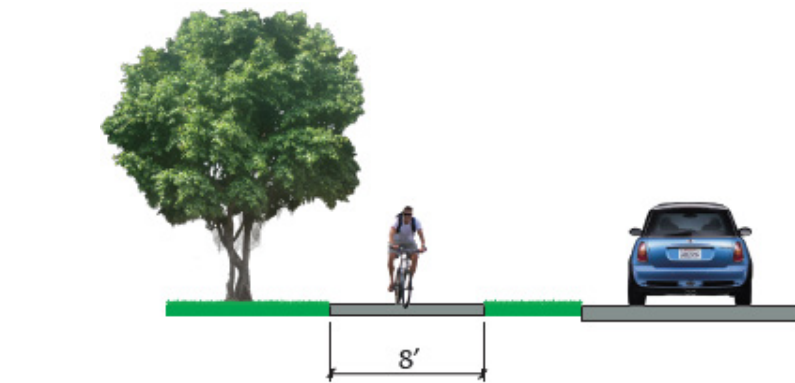


Source: Parks & Trails Master Plan 2020

7.7.3 Neighborhood Connector Trails

On-street and off-street trail connections. Figure 7.5 displays the typical cross section of a neighborhood connector trail as presented in the Parks and Trails Master Plan.

Figure 7.5: Neighborhood Connector Trail Typical Cross Section



Source: Parks & Trails Master Plan 2020

7.7.4 Priority Trails

The following 13 trails were identified as priority trails:

- 1. Georgetown Railroad Trail #1
- 2. Georgetown Railroad Trail #2
- 3. Georgetown Railroad Trail #3
- 4. Gateway Trail
- 5. Hog Pen Creek Trail
- 6. Veteran’s Trail
- 7. Friar’s Creek Trail Extension
- 8. Lake Terrace Trail
- 9. Ferguson Trail
- 10. FM 2305 Trail Extension
- 11. Bird Creek Interceptor Trail
- 12. Pepper Creek Trail Extension
- 13. Leon River / Belton Trail

The recommendations from Parks and Trails Master Plan described above were incorporated into the development of the bicycle network and overall active transportation plan. Expanding on these recommendations will promote the connectivity of trails and greenbelt throughout the city, increasing options for regional connectivity and access for recreational, service, and daily needs.



7.8 Neighborhood Plan Recommendations

The Active Transportation Plan incorporates recommendations outlined in the neighborhood plans being developed by the City under the ‘Love Where You Live Initiative’. These neighborhood plans include recommendations for pedestrian connectors and bicycle boulevards. Pedestrian connectors are corridors intended to act as feeder routes from the local streets to collectors and arterials. Key characteristics of these streets include:

- Improving sidewalks on both sides of the street
- Prioritizing sidewalks over planting strips
- Lighting for pedestrian use, rather than vehicle use

Bicycle boulevards are intended for streets with relatively low vehicle traffic and are designated by street markings and signage

to help alert vehicles to the presence of bicyclist. Key characteristics of these streets include:

- No delineation of a designated bike lane
- Low vehicle traffic
- Clear and visible markings and signage

These recommendations are intended to complement the individual neighborhood plans and allow the City to use the plans to inform decisions on future project implementation. Figure 7.6 and Figure 7.7 provide an example of a pedestrian connector and bicycle boulevard cross-section from the Downtown Neighborhood Plan.

Figure 7.6: Neighborhood Plan - Pedestrian Connector Example

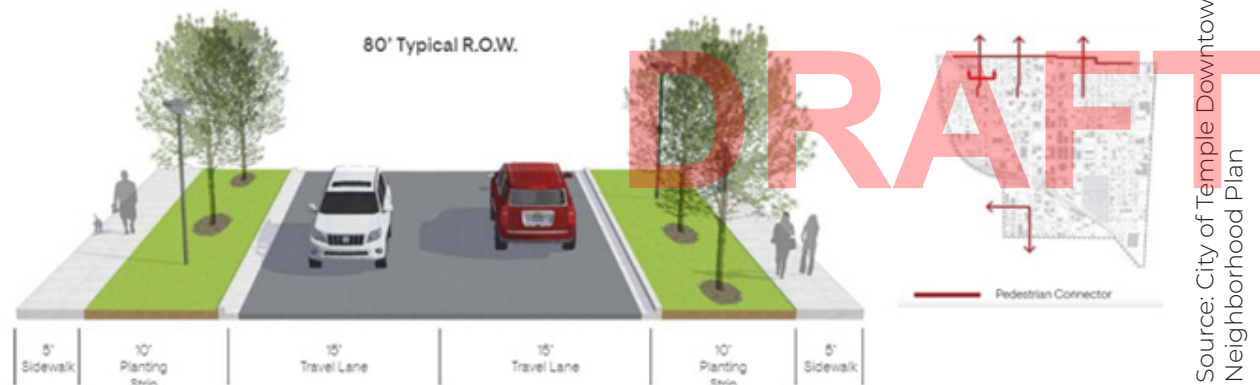
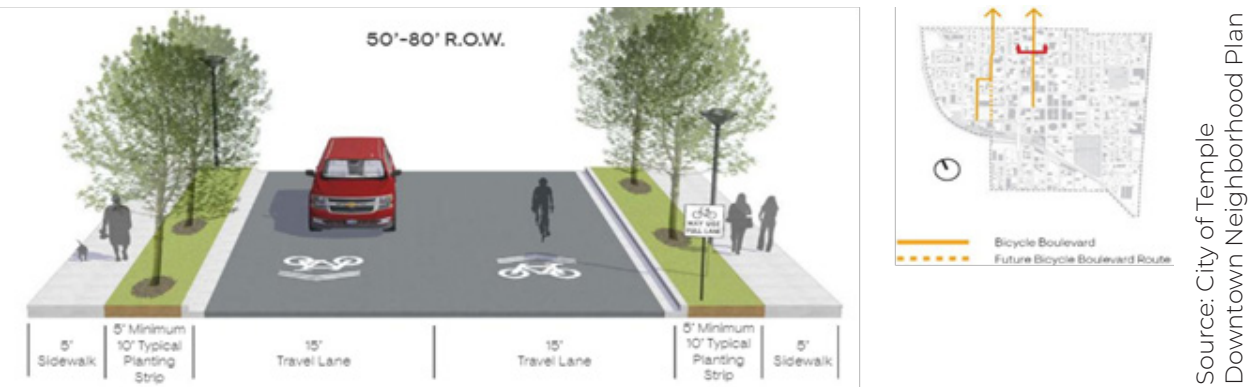


Figure 7.7: Neighborhood Plan - Bicycle Boulevard Example



7.9 Network Development and Recommendations







Preliminary recommendations are provided in this section for advancement of the local active transportation network. Recommendations are based upon the needs discovered in the comprehensive system assessment, information learned from public engagement, previous planning efforts by KTMPO, Parks and Trails Master Plan, and the local neighborhood plans. This is not a comprehensive list of recommendations that is meant to satisfy all connections but a bank of improvements that were highlighted by analyzing demand and community feedback. The proposed routes and locations for projects are intended to provide the City with key corridors and locations to destinations. The City’s local knowledge and the tools provided in this Plan will be used to determine the most appropriate facilities.


7.9.1 Bicycle and Pedestrian Toolbox

A collection of bicycle and pedestrian design options are compiled in the following toolbox (Table 7.2) for the City to reference as a guide for development of active transportation improvements. Each mode of active transportation has different needs for design, context, and user. This range may necessitate that the City plan for a variety of different contexts that users may experience while using the network. The following sections outline options the City can explore when planning for bicycle and pedestrian improvements.






TABLE 7.2: BICYCLE AND PEDESTRIAN TOOLBOX

Facility	Facility Type	Example	Comfort Level	Relative Cost
Bicycle	<b>Bicycle Boulevard:</b> A route designated for bicycle travel through signage and/or markings		Low	\$
	<b>Bike Lane</b> A lane designated specifically for bicycle travel		Low	\$
	<b>Protected Bike Lane</b> On-street bike lanes with physical separation from sidewalks and/or motor vehicle traffic		High	\$\$
Bicycle and Pedestrian	<b>Hike and Bike Path</b> Off-street path designated for both bicycle and pedestrian travel		High	\$\$\$
Pedestrian	<b>Side path</b> Off-street path without markings or dedicated signage		Low	\$\$\$
	<b>Sidewalk</b> Designated space for people to walk or use wheelchairs		Low-High	\$\$\$

Facility	Facility Type	Example	Comfort Level	Relative Cost
CROSSING FACILITIES				
Pedestrian	<b>Signalized Intersection Pedestrian Buttons</b> Allow pedestrians to request additional crossing time		Low	\$\$\$
	<b>High Visibility Crosswalk</b> Marked locations for pedestrian crossing at intersections		Low	\$\$
	<b>Mid-Block Crossing</b> Marked crossings between intersections		Medium	\$\$\$
	<b>Crossing Island</b> Raised islands placed in the center of the roadway for pedestrian refuge during crossing		Medium	\$\$\$\$
	<b>Rapid Flashing Beacon</b> Pedestrian actuated signals used in combination with crosswalks		Medium-High	\$\$\$\$
	<b>Pedestrian Hybrid Beacon</b> A traffic control device actuated by pedestrians		High	\$\$\$\$\$



Facility	Facility Type	Example	Comfort Level	Relative Cost
CROSSING FACILITIES				
Bicycle	Grade Separated Crossing Elevated or below surface roadway crossings		High	\$\$\$\$\$
	Bike Pavement Markings Marked locations for bicycle designated lanes		Low	\$\$\$
	Bike Signal Intersection crossing signal dedicated for bicyclist		Medium	\$\$\$

7.9.2 Bike Route or Shared-Use Path Network Map

The on-street and off-street bicycle network development for the City followed a four step process. The first step gathered input from the community on their daily needs for a bike network. The second step analyzed the data on existing levels of stress and future potential demand for bicycle use, utilizing Strava data. Third considered existing planning efforts from the Parks and Trails Master Plan, local neighborhood plans and the KTMO Regional Multimodal Plan for incorporation. The information from the first three steps guided the final step of developing the base All Ages and Abilities (AAA) and Secondary Bicycle Network for the City. Figure 7.8 displays the process followed in developing the Temple MMP bicycle network recommendations.

Figure 7.8: Bicycle Network Four-Step Process

Step 1 – Public Feedback



Step 2 – Level of Stress and Future Demand



Step 3 – Parks and Trails Plan, Neighborhood Plans, KTMO Planned Network



Step 4 – AAA and Secondary NAAA





**Bicycle Network**

The All Ages and Abilities and secondary network will serve as a key baseline for an integrated active transportation network. The All Ages and Abilities network is intended to be the “backbone” of the system that facilitates longer travel options along corridors for all ages and abilities to use. This would require facilities that provide the comfort level for all users from a very young to old age, such as protected bike lanes or off-street hike and bike trails. The All Ages and Abilities network provides direct and convenient access for travelers that minimizes detours to connect local and city-wide destinations. The secondary networks will act more as a feeder into the All Ages and Abilities network and existing neighborhood streets. These facilities are intended to be geared more toward less-defined biking options such as signage, enforcement, and pavement striping.

Figure 7.9 highlights the different type of facilities appropriate for the proposed networks.

**Facility Type Decision Tree**

The decision tree shown in Figure 7.10 can be used to help identify the bicycle facility type recommended for the network. The proposed facility types are not intended to be the final recommendation for implementation. Rather, it is recommended the selection occur after further engineering evaluation of the available roadway widths, traffic speeds, and volumes, which is why the decision tree is associated with the functional classification from the Thoroughfare Plan. The contextual guidance decision tree is recommended to help the City determine the proposed All Ages and Abilities and secondary bicycle network.

Figure 7.9: Bike Network Facility Examples

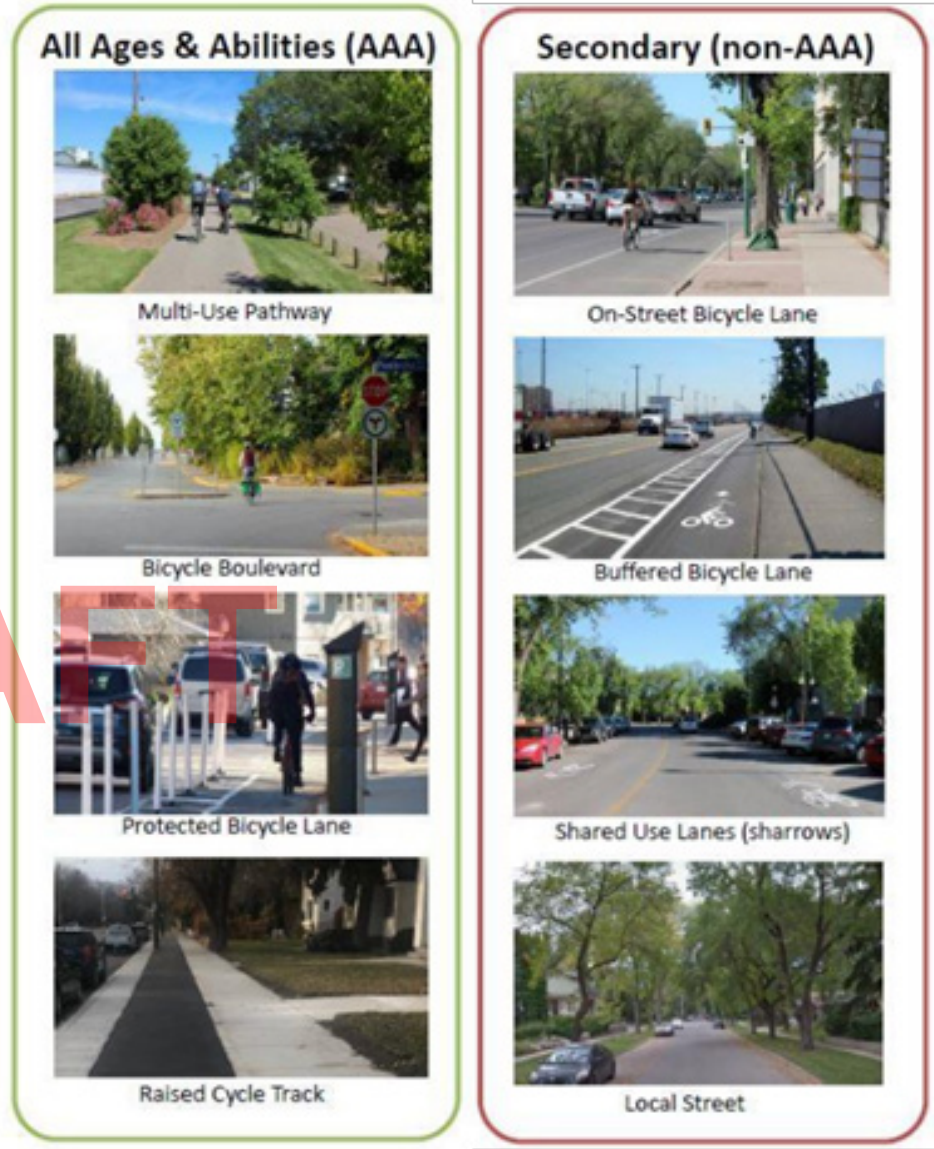
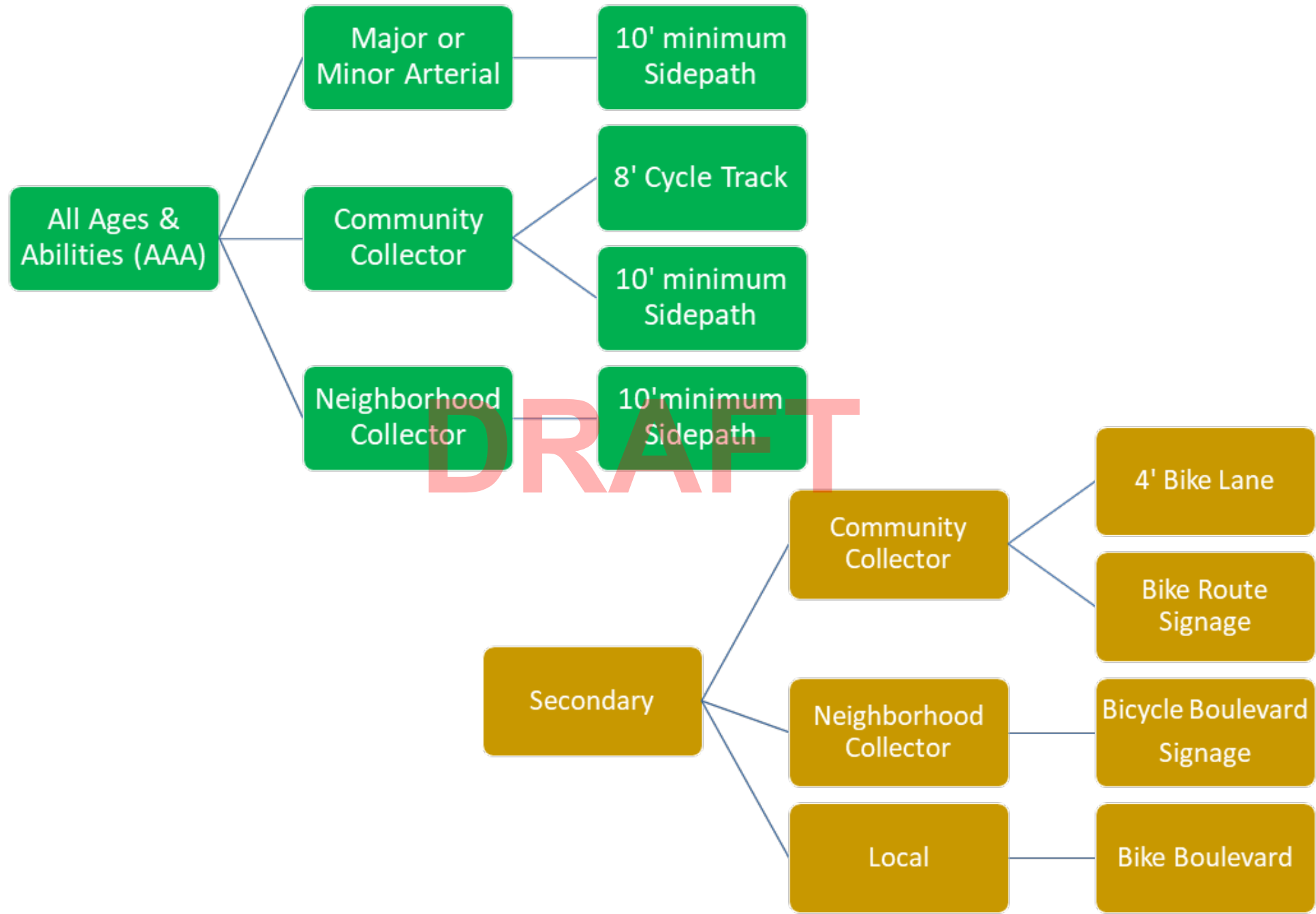


Figure 7.10: Decision Tree for the All Ages and Abilities and Secondary Bicycle Network





7.9.2.3 Proposed All Ages and Abilities and Secondary Network

The resulting bicycle system includes a proposed All Ages and Abilities and Secondary Bicycle Network that the city can build on as a guide to connected active transportation network. The Selection of All Ages and Abilities network is intended for roadways that will mostly serve as a high mobility function in the network, while the roadways for the secondary network are intended for roads with lower speeds within local neighborhoods. Identification of the All Ages and Abilities and secondary network is a step in the process that will lead to an integrated bicycle system for users of all ages and Temple neighborhoods.

It's recommended the selection of facility type is done collectively by using the bicycle toolbox and the decision tree in coordination with the roadway classification system. Figure 7.11 displays the five layers that make up the proposed bicycle network. Figure 7.12 displays the proposed All Ages and Abilities and secondary (Non-AAA) network for Temple. Table 7.3 details the associated proposed project list.

Figure 7.11: Proposed Bicycle Network Development Layers



Figure 7.12: Proposed All Ages and Abilities and Secondary Bicycle Network

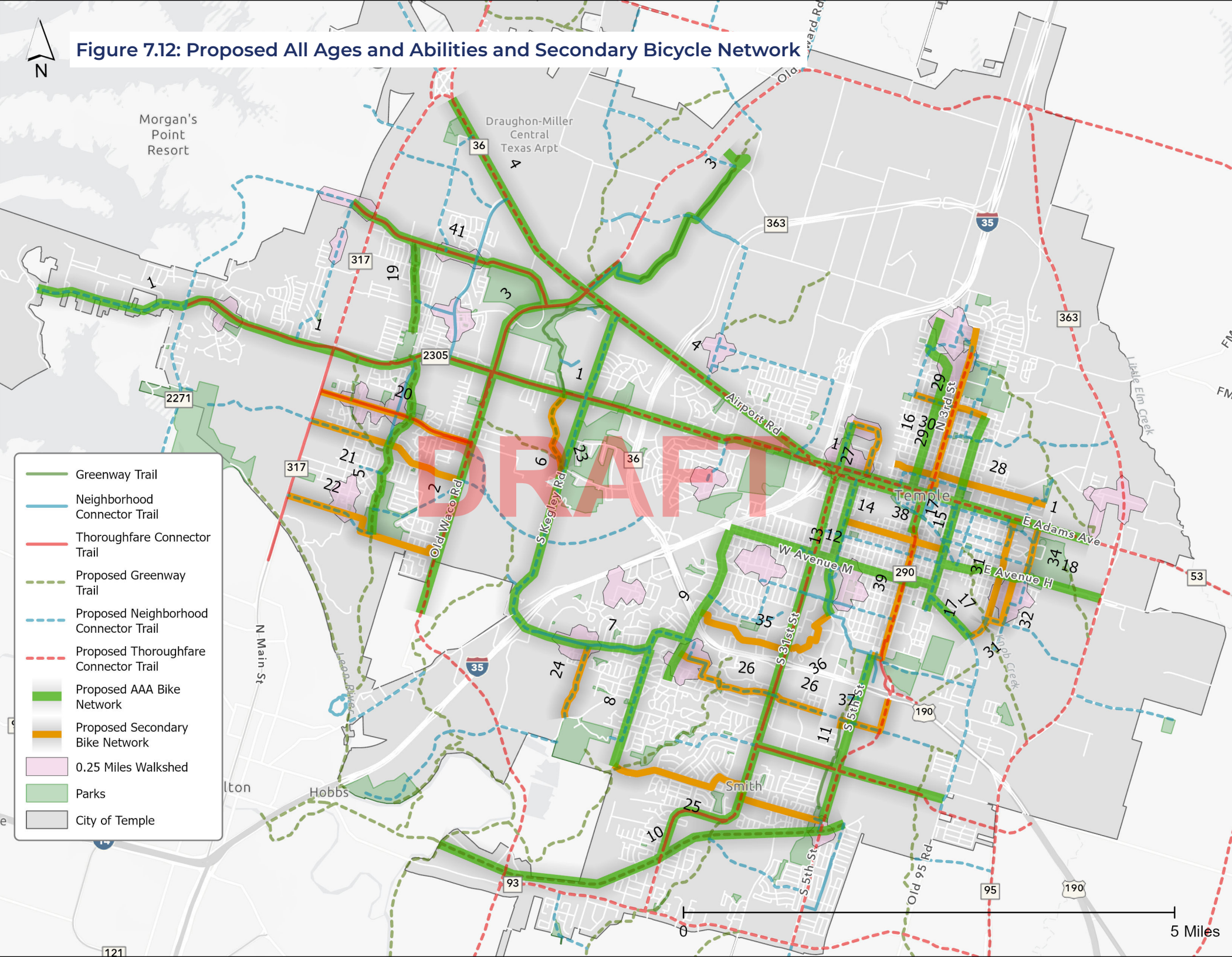




TABLE 7.3: ALL AGES AND ABILITIES AND SECONDARY BICYCLE NETWORK PROJECT LIST

Map ID	Network	Roadway	From	To	Estimated Length (ft)	Comfort Level
1	AAA	FM 2305 (Adams Ave)	N. 50th St	Belton Lake	70,000	Lowest
2	AAA	Old Waco Rd	FM 2305	North of S. Pea Ridge Road	21,000	Low
3	AAA	Hilliard Rd	FM 2305	Wendlands Farm Lake	25,000	Low
4	AAA	SH 36	SH 317	I-35	35,000	Lowest
5	AAA	Hog Pen Creek Trail	FM 2305	Poison Oak	12,000	Highest
6	AAA	S. Kegley Rd	SH 36	I-35	20,000	Low
7	AAA	Midway Dr	I-35	S. 57th St.	10,000	Low
8	AAA	Hickory Rd	Midway Dr	Stratford Dr	7,600	Medium
9	AAA	S. 57th St	West Avenue L	Forest Trail	2,500	Low
10	AAA	Georgetown RR Trail 1, 2, 3	Stonehaven Dr	Leon River	26,500	Highest
11	AAA	S. 5th St	South of W Avenue U	Canyon Creek Dr	7,500	Lowest
12	AAA	W. Avenue L	S. 57th St	S. 8th St	13,500	Highest
	AAA	Teague PL	S. Martin Luther King Jr. Dr	E. Marvin R Felder Dr	3,700	N/A
	AAA	S. 2nd St	E. Avenue L	E. Avenue K	1,100	Highest
13	AAA	South 25th St	Adams Ave	West Avenue T	9,200	Low
14	AAA	SH 53	SH 290	I-35	6,500	Lowest
15	AAA	3rd St	Adams Ave	W. Avenue E	2,200	Low

Map ID	Network	Roadway	From	To	Estimated Length (ft)	Comfort Level
16	AAA	N. 7th St	Mayborn Dr	Adams Ave	8,000	High
	AAA	Mayborn Dr	N. 15th St	N. 7th St	1,500	High
	AAA	N. 15th St	Industrial Boulevard	Mayborn Dr	2,500	Low
17	AAA	Martin Luther King Jr. Dr	E. Nugent Ave	Road 5	13,000	High
	AAA	Martin Luther King Jr. Dr	S. Martin Luther King Jr. Dr	S. 24th St	3,500	Low
18	AAA	East Avenue H	S. Martin Luther King Jr. Dr	Dodgen Loop	12,000	Lowest
19	AAA	Lake Terrace Trail	Prairie View Rd	Connecticut Ave	6,000	Highest
20	Secondary	Tarver Dr	Old Waco Rd	SH 317	10,000	Low
21	Secondary	Hogan Rd	Old Waco Rd	SH 317	10,000	Medium
22	Secondary	Poison Oak Rd	Old Waco Rd	SH 317	11,000	High
23	Secondary	Pepper Creek Trail Ext	FM 2305	S. Kegley Rd	5,500	Highest
24	Secondary	Bird Creek Interceptor Trail	Midway Dr	Shallow Ford Rd	5,000	Highest
25	Secondary	Stratford Dr	Hickory Rd	Waterbury Dr	3,000	Medium
	Secondary	Waterbury Dr	Stratford Dr	Winchester Dr	1,100	Highest
	Secondary	Winchester Dr	Waterbury Dr	S. 31st St	1,700	Low
	Secondary	S. 31st St	Winchester Dr	Waters Dairy Rd	900	Lowest
	Secondary	Waters Dairy Rd	S. 31st St	S. 5th St	5,500	Low

Map ID	Network	Roadway	From	To	Estimated Length (ft)	Comfort Level
26	Secondary	Cottonwood Ln	Oakdale Ln	Oakview Dr	1,800	Low
	Secondary	Oakview Dr	Cottonwood Ln	Azalea Dr	1,000	Highest
	Secondary	Azalea Dr	Oakview Dr	East of Lowes Dr	8,000	High
27	Secondary	N. 23rd St	Adams Ave	W. Houston Ave	900	High
	Secondary	W. Houston Ave	N. 23rd St	N. 31st St	500	High
28	Secondary	W. Downs Ave	N. 15th St	N. 1st St	780	Highest
	Secondary	N. 1st St	W. Downs Ave	E. Downs Ave	50	High
	Secondary	E. Downs Ave	N. 1st St	E. Calhoun Ave	2,200	High
29	Secondary	N. 1st St	W. Adams	W. Barton Ave	500	High
	Secondary	W. Barton Ave	N. 1st St	Mid-block N. 1st and N. Main St	200	High
	Secondary	Mid-block N. 1st and N. Main St	W. Barton Ave	W. Calhoun Ave	500	High
	Secondary	W. Calhoun Ave	Mid-block N. 1st and N. Main St	N. 1st St	200	High
	Secondary	N. 1st St	W. Calhoun Ave	W. Upshaw Ave	10,000	High
30	Secondary	E. Nugent Ave	N. 15th St	N. 8th St	1,500	High
31	Secondary	S. 24th St	SH 53	Martin Luther King Jr. Dr	11,000	Medium
32	Secondary	S. 30th St	E. H Avenue	Avenue N	3,000	Medium
33	Secondary	Avenue N	S. 30th St	S. 24th St	900	High
34	Secondary	S. 34th St	E. H Avenue	SH 53	3,400	Highest

Map ID	Network	Roadway	From	To	Estimated Length (ft)	Comfort Level
35	Secondary	Avenue Z	57th St	S. 55th St	150	Highest
	Secondary	S. 55th St	W. Avenue Z	Skyline Dr	120	Highest
	Secondary	Skyline Dr/Everton Dr	S. 55th St	S. 31st St	2,100	Highest
36	Secondary	East Loop	Scott and White Blvd	North Loop	350	N/A
	Secondary	North Loop	East Loop	Inner Loop	100	N/A
	Secondary	Inner Loop	North Loop	Utility Dr	250	N/A
	Secondary	Utility Dr	Inner Loop	Emergency Dr	100	N/A
	Secondary	Emergency Dr	Utility Dr	S. 31st St	600	N/A
37	Secondary	S. 1st St	SH 190	Fryers Creek	5,000	N/A
38	Secondary	W. Avenue F	S. 25th St	S. Martin Luther King Jr Dr	2,000	Highest
39	Secondary	S. 1st St	W. Avenue D	W. Avenue V	9,300	Lowest
40	AAA	31st St	W. Houston Ave	Georgetown Trail	40,000	Lowest
41	AAA	Prairie View Rd	Starlight Dr	Hilliard Rd	15,000	High
42	AAA	Canyon Creek Dr	S. 31st St	Old 95 Rd	12,900	Medium



7.9.3 Pedestrian Recommendations

The City is working to improve the pedestrian experience throughout the community and make Temple a better place to live by providing residents with options for comfortable walking. Pedestrian recommendations should follow a systemic approach where new projects or improvements can be coordinated in other initiatives such as street improvements, maintenance projects and program funding opportunities.

Prioritization of Improving Sidewalk Condition

Temple desires to improve the present sidewalk network to an ADA compliant network that connects the community. This effort promotes equality and accessibility for all ages while strengthening the basic unit of mobility within the overall transportation system. The existing sidewalk inventory was used to locate areas with the greatest need of improvement based on sidewalks in poor or very poor conditions and a set of criteria based on three tiers of priority Equity, Transit and Schools and Parks. Table 7.4 displays the criteria used.

TABLE 7.4: SIDEWALK PRIORITIZATION CRITERIA

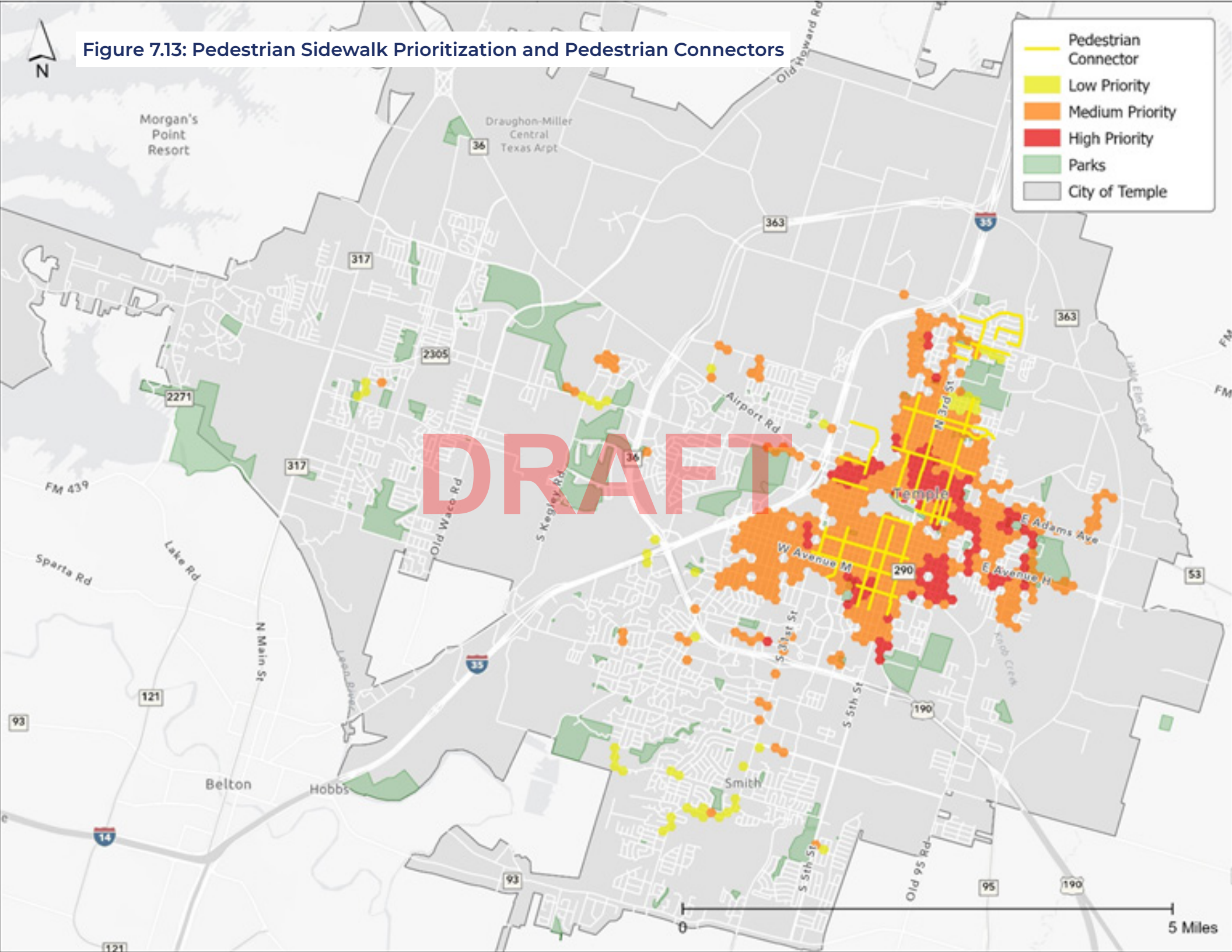
Criteria		Description	Pts
Equity			4
1. Poverty		Block group's average poverty is higher than the average for the whole city	1
2. Disability		Block group's average disability is higher than the average for the whole city	1
3. Minority		Block group's average minority population is higher than the average for the whole city	1
4. Property Values		Parcel's property value is less than the average property value for the whole city, but higher than \$50,000	1
Transit			1
5. Transit		¼ mile from a transit stop	1
School and Parks			2
6. Schools		¼ mile from a school	1
7. Parks		¼ mile from a park	1

Prioritization rankings are intended as a tool to allocate limited City sidewalk resources. If a sidewalk is ranked as a lower priority, it does not mean it is not a necessary component of a complete pedestrian network.

Pedestrian Connectors

It's recommended the City carry forward the integration of locations identified as pedestrian connectors in the neighborhood plans. These facilities will improve overall connectivity into the active transportation network and build on the existing sidewalk infrastructure. Consideration for these locations should be incorporated while prioritizing sidewalk improvements.

Figure 7.13 highlights the prioritization of sidewalks by the criteria established and the location of the pedestrian connectors.





**Safe Routes to Schools**

Promoting walking and biking to school through infrastructure improvements will provide a health benefit to the Temple community and promote active living for the younger generation during their everyday routine. Safe Routes to School (SRTS) promotes safe, convenient, and fun travel options for children and families to bicycle to school and other destinations.

The SRTS programs are implemented at both local and regional levels. Locations were evaluated throughout the City to determine if they could benefit from these types of programs. This analysis reviewed sidewalk density within a ¼ mile walking distance (walkshed) of public schools in Temple. Locations with low sidewalk density were prioritized for future new or improved sidewalk projects. Figure 7.14 highlights the location of 22 public schools and their sidewalk density. Table 7.5 lists the potential future project locations for the City to consider for new or improved sidewalks.



Figure 7.14: Safe Routes to School Sidewalk Density

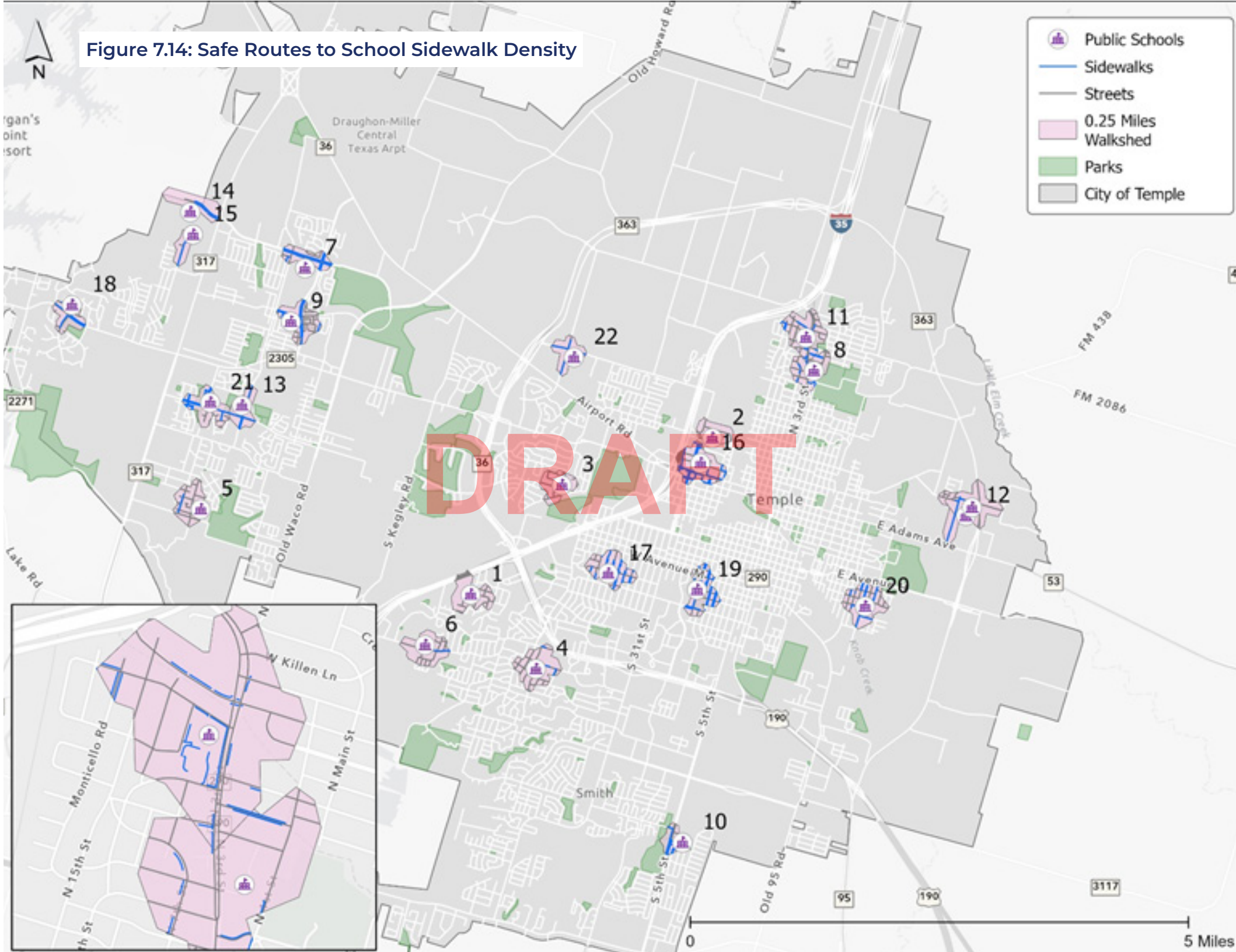




TABLE 7.5: TEMPLE PUBLIC SCHOOL SIDEWALK DENSITY

Map ID	Sidewalk Density*	Sidewalks (ft)	Road Length (ft)	Sidewalk Density
	Sidewalk Length/Road Length			
1	Cater Elementary School	-	5,005	0.00
2	Temple High School - Sidewalks in Progress*	-	2,477	0.00
3	Western Hills Elementary School	-	4,931	0.00
4	Thornton Elementary	416	8,887	0.05
5	Charter Oak Elementary	859	7,822	0.11
6	Bonham Middle School	1,320	6,221	0.21
7	North Belton Middle School	1,484	6,264	0.24
8	Lamar Middle School	2,282	9,531	0.24
9	Tarver Elementary School	2,905	10,670	0.27
10	Raye Allen Elementary	1,039	3,682	0.28
11	Jefferson Elementary	4,121	13,782	0.30
12	Hector P Garcia Elementary	4,400	10,950	0.40
13	Pirtle Elementary School	1,166	2,898	0.40
14	Lake Belton High School	792	1,633	0.49
15	High Point Elementary	628	1,091	0.58
16	Edwards Academy Temple High School	6,868	10,886	0.63
17	Scott Elementary School	5,542	8,179	0.68
18	Lakewood Ranch Elementary	2,396	2,903	0.83
19	Travis Middle School	7,419	8,649	0.86
20	Meredith-Dunbar Elementary	10,976	10,984	1.00
21	Lake Belton Middle School	5,913	5,670	1.04
22	Kennedy-Powell Elementary School	3,378	3,018	1.12

Source: 2015 Community-wide Sidewalk Inventory; \*Data may not reflect current conditions

Sidewalk and Trail Project Review

A set of preliminary project locations within the study area resulted from the comprehensive system assessment and feedback from the public. These locations can be reviewed for future analysis and potential implementation. Locations were analyzed for high-level recommendations based on national best practices.

The demand analysis completed in the comprehensive system assessment highlighted areas in Temple where the demand scores are high and there are very few continuous North/South and East/West connections across the grid. The railroad is a significant barrier in this area and is likely forcing additional traffic to the few streets that go through. This reinforces the need for a balanced roadway approach to make sure active transportation modes are accommodated on the through streets. Table 7.6 and Table 7.7 displays planning level review of potential connections to close these gaps.

TABLE 7.6: ACTIVE TRANSPORTATION GAPS AND POTENTIAL CONNECTIONS

Street	From	To	Notes
S 24th St	Adams Ave/53	E Avenue N / MLK	Railroad overpass to MLK/North 8th St.
S MLK Jr Dr / N. 8th Street	E Avenue E	King Circle or Trail Crossing	
W Avenue F	S MLK Jr Dr	S 25th St	
S 25th St	W H Ave	W Avenue E	Includes RR crossing
W Avenue E	S 25th St	S 31 St	Tie into trail or side path on S 31 St
Stratford Dr	Hickory Rd	Waterford Park	
S 5th St	Friars Creek Trail	Temple College	Pedestrian bridge over LP 363/US 190
W Adams Ave	Hillard Rd	N Kegley Rd	Safety Improvements to upgrade from sidewalk to trail - with signage and crossings
W Adams Ave	Morgan’s Point Rd	317	Safety Improvements to upgrade from sidewalk to trail - with signage and crossings
E. Avenue H	MLK	Henderson Rd	Expand southwest and add bike lanes at the overpass to HB trail

TABLE 7.7: TRAIL CROSSING GAPS AND POTENTIAL CONNECTIONS

Location	Notes
Trail crossing across 1st Street at Temple College	Signalized, but could benefit from high visibility features, traffic calming or other safety improvements.
Friar’s Creek Trail crossing across Canyon Creek Dr	Marked, but could benefit from high visibility features.
Hickory Rd and Midway Dr	Signalized, but could benefit from high visibility features.

Active Transportation Advisory Committee

It’s recommended the City establish an Active Transportation Advisory Committee to help improve the coordination between city departments to implement active transportation projects. This will include recommending integration of bicycle and pedestrian infrastructure improvements while other city projects are being constructed. For example, during a street reconstruction project the advisory committee will coordinate the recommendations for the construction of sidewalks or possibly bike lanes during the street reconstruction project.

7.9.4 Active Transportation Policy Recommendations

External Outreach Program: Meet with local landowners, employers, and stakeholders to address Critical Site Connectivity Gaps

There is a gap in site connectivity from the roadway network and planned trail network to key employment centers and community facilities like the VA, Temple College and Baylor Scott and White Medical Center. The bicycle and pedestrian facilities stop at the edge, making the last hundred-foot connection to the 'front door' less comfortable for access. These segments are possibly private roadways. Nonetheless, multimodal connections are critical for successful connectivity. Coordination and collaboration between the City and these stakeholders will be necessary to reach the mobility plan goals.

Signage and Wayfinding Plan

While not a physical gap, it is also important to make sure there is not a knowledge gap of the on-street and off-street bicycle network and where it connects. It will be important for Temple to coordinate between Transportation and Parks and Recreation to create a signage and wayfinding system to clearly sign, mark, and map the linkages between the two systems for seamless integration.

Bicycle Riding on Sidewalks

The current Temple policy for bicycle riding on sidewalks defines prohibitions for certain types of conveyances in specified areas of the City.

Sec. 37-10. Riding on sidewalks. (a) It is unlawful for any person to ride or propel a bicycle or skate upon a skateboard upon any sidewalk in any area of the City zoned Central Area. (b) Subsection (a) does not apply to a sidewalk that is 8 feet or larger in width. (c) Any person riding or propelling a bicycle or skating upon a skateboard on any sidewalk in the City, must yield the right-of-way to any pedestrian on the sidewalk.

This language is currently being amended. It is recommended that the definition of what type of mobility is being ridden along sidewalks be expanded beyond bicycles to a broader category of micro-mobility devices. Section 37-10 (c) should be expanded so that all forms of sidewalk users yield to slower, more vulnerable users, not just specifying pedestrians, bicyclists, and individuals

upon a skateboard. Finally, the issue of parking these devices should also be addressed to protect the pedestrian right-of-way and ADA accessibility.

Wide Sidewalk and Bike Paths Safety Evaluation

One of the biggest safety considerations for sidewalk riding is the access and egress of motor vehicles at driveways along the sidewalk combined with the higher traveling speed of the individual riding a bicycle or micro-mobility device along the sidewalk. Frequently, drivers are not conditioned to look for sidewalk users moving at a speed faster than a typical pedestrian. The sidewalk is often not engineered for faster speeds beyond a pedestrian. These potential conflict points need to be mitigated with limited driveway crossings, longer sightlines, and general engineering of the sidewalk for higher speed use. Areas within the city with wide sidewalks that are considered bicycle trails or paths frequently used by cyclists should be evaluated for safety.

Adopt Multi-Modal Typical Cross-Sections

Adopting an expanded set of typical cross-sections to include bicycle and sidewalk facilities can help make implementing bicycle and pedestrian facilities more routine. Example: Dallas Street Design Manual

Development Code Amendment: Future Development Active Transportation Connectivity

To ensure that the city ordinances support active transportation connectivity, the Unified Development Code should be revised to include requirements for adequate access from all neighborhoods to the proposed mobility plan network and promote the connectivity of the trail network to community destinations. Subdivisions should demonstrate connectivity for pedestrians and bicyclists to adjacent trail or bicycle facilities and between adjacent neighborhoods. Either as cul-de-sac easements or connected streets. Developments should provide an internal circulation plan that considers bicycle and pedestrian

connectivity. Streets should be designed with appropriate bicycle and pedestrian accommodations to convey people throughout the neighborhood and city. Example: Recommendation in the Fort Worth Active Transportation Plan

Active Transportation Design Implementation

Implementing active transportation facilities is only as successful as the perceived safety for people using the resulting facilities. To reach a broader community of potential active transportation travelers, these facilities must be designed for all ages and abilities. The All Ages & Abilities criteria is a national and international best practice that should be adopted for all bicycle facility design and network implementation; lesser accommodation should require additional justification.

Remove Parking Minimums

The removal of parking minimums can support an active transportation network by allowing developers to design less vehicle-dominated spaces and ultimately allow cities and places to be designed for people rather than cars where the market allows.

Support Speed Limit Reduction

Additionally, city staff and elected official support for reducing speed limits when a neighborhood requests a change or indicates a reduction in the neighborhood plan moves a city further towards a friendly environment for active transportation. Texas state law currently sets a neighborhood city street speed limit at 30 mph, unless otherwise marked and it is a significant expense for the city to individually assign each street they wish to be lowered. However, select streets may warrant a lower limit due to parks, schools or other amenities along that street, or because of neighborhood interest.



**Design Standards**

Developing citywide design standards that integrate active transportation facilities into the overall transportation network will be a key component of the success of the Active Transportation Plan. These design standards will be incorporated into municipal roadway design manuals or similar documents. Reference the proposed design standards and policy associated with bicycle facilities in Chapter 7: Thoroughfare Plan.

**Safe Routes to School**

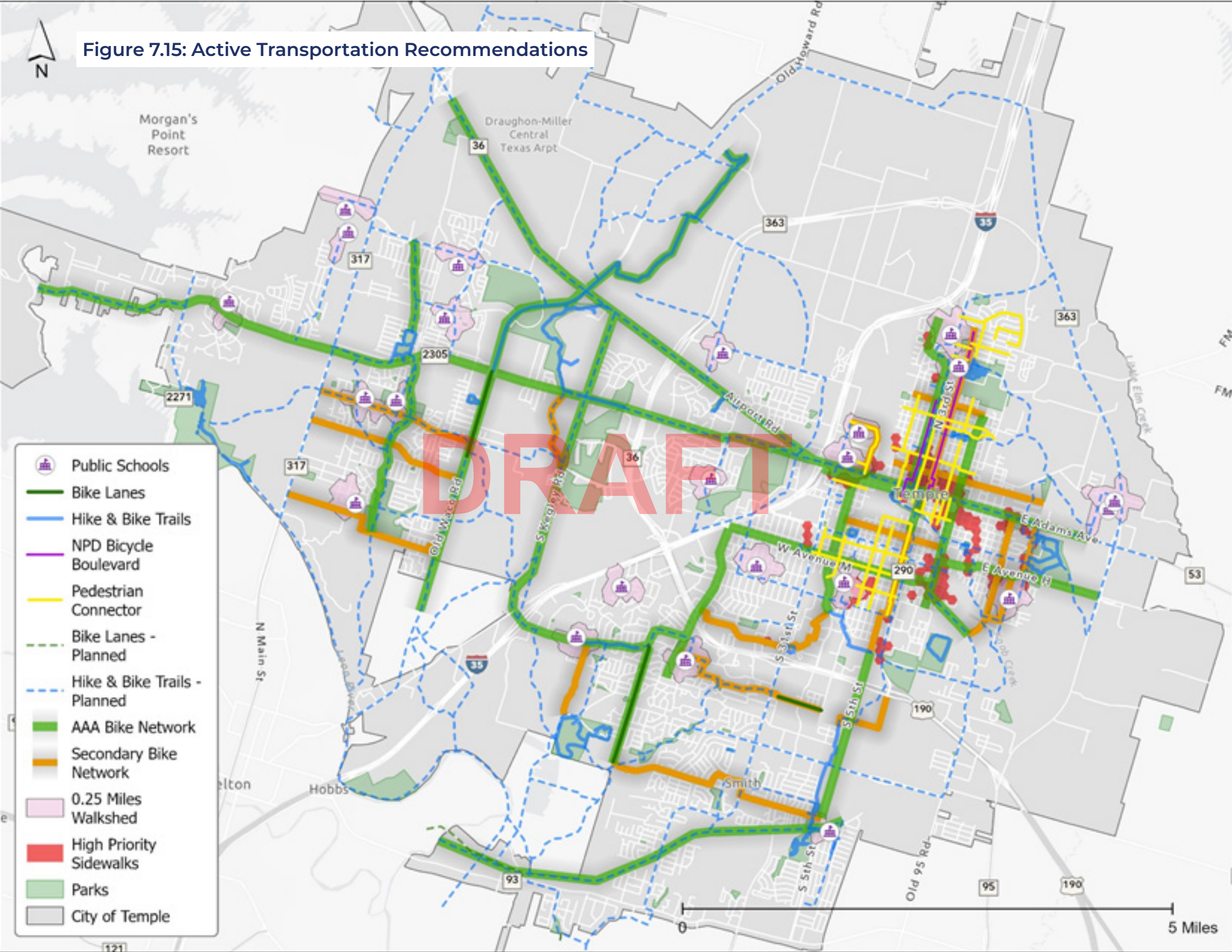
This federal program was created to fund and support communities to provide safer walking and bike trips to and from school. The focus is on safe infrastructure development connecting schools to neighborhoods and transit. The program is funded at both a state and regional level, which encourages coordination among multiple agencies.

**7.10 Active Transportation Plan Map**

The resulting recommendations for the Active Transportation Plan can be viewed in Figure 7.15. Included are the proposed All Ages and Abilities and secondary bicycle network, the planned KTMOPO hike and bike facilities, the neighborhood plan recommendations, and recommendations from the Parks and Trails Master Plan.

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Figure 7.15: Active Transportation Recommendations



7.11 Action Plan

The action plan is meant to highlight next steps in implementing the recommendations presented in the Active Transportation Plan. The actions are highlighted in two sections which includes using the context solutions described in Chapter 6: Scenario Analysis to implement based on a context level approach, and an action summary table describing key actions from this Active Transportation Plan recommendations.

7.11.1 Context Solutions

Context can have a major impact on the design of a facility and the end user. Evaluating context can become a tedious process as the character and priorities of a community can differ between neighborhoods. To simplify this process, the MMP takes into consideration two overarching contexts that define the area and use them to inform active transportation improvements.

**Context A: Connecting People to Place** prioritizes the connection of neighborhoods to important daily needs such as schools, public amenities, transit stations, parks, and major retail & employment areas. Context A focuses on connecting the community to places they visit most often. While many people use personal vehicles to travel to and from their destinations, others may prefer, need, or desire to use other methods to reach their destination. Investment in this type of infrastructure yields many benefits to the community such as efficient transportation, improved air quality, and improved livability.

**Context B: Key Corridors and Off-Street Connectivity** focuses on corridor improvements that will provide connectivity across the City and will integrate improvements to the on-street system with the use of off-street trails. This context also focuses on reducing significant barriers to crossing busy and wide streets by improving the design and frequency of crossing locations.

Efficient modes of transportation are built on a network with a strong backbone that provides quick, efficient, and convenient connections. For example, vehicular traffic could use an arterial as core east/west and north/south connectors. These streets

are wide, have turning lanes in most locations, and prioritize travel along the corridor more than the streets intersecting them. A transit system might also have core routes running more frequently that provide convenient service in the highest demand locations. Similarly, the walking and biking network should contain key routes that provide comfortable, safe, and convenient connections throughout Temple.









































Example case studies that applied this methodology for analyzing context solution-based recommendations can be found in Chapter 6: Scenario Analyses.

As the City works toward implementing future active transportation projects, the context solutions can be used to focus efforts and define priority levels of improvements.

7.11.2 Active Transportation Action Plan Summary Table

Table 7.8 provides a summary of the action plan for active transportation recommendations.

TABLE 7.8: ACTIVE TRANSPORTATION ACTION PLAN

Action	Summary	MMP Goal Achieved
Designate an All Ages and Abilities and Secondary (Non-AAA) Bicycle Network	Utilize the project recommendations provided to properly designate facilities based on the All Ages and Abilities and Secondary (Non-AAA) bicycle corridors.	     
Establish prioritization zones for new sidewalk construction, repair, or replacement	Utilize the sidewalk prioritization locations provided to determine potential prioritization zones for coordinated efforts for new, repair, or replacement options.	      
Coordinate with KTMPO and TxDOT on Safe Routes to School (SRTS) funding for new sidewalk constructions, repair, or replacement	Utilize the sidewalk density analysis provided to identify locations within City of Temple public schools for project selection.	      
Update City Policy to encourage Active Transportation in the City of Temple	Review policy recommendations for potential revisions or new policies promoting the use of active transportation	     
Integrate Recommendations from the Parks and Trails Master Plan	Carry forward recommendations from the plan and integrate project locations to connect to the parks and trails network	      
Establish an Active Transportation Advisory Committee	It's recommended the City establish an Active Transportation Advisory Committee to help improve the coordination between city departments to implement active transportation projects.	      



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