2014 AUSTIN BICYCLE PLAN

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City of Austin

Austin Transportation Department

Active Transportation Program

November 2014

Adopted by the Austin City Council November 6th, 2014

City of Austin
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January 6, 2015

Dear Friends:

Today is a great day to be out riding your bike in Austin, Texas.

Of course, as a car-free bike commuter, I feel that way every day. But for anyone who ever gets on a bike – and for anyone who *might* ever get on a bike – the conditions in Austin are better now than they've ever been. And they're about to get even better.

In 2009, when we last updated our Bicycle Plan, we set some aggressive goals for improving our bike infrastructure and getting more people on bikes. Since then our bicycle network has grown from 126 miles to 210 miles--a 70 % expansion in only five years.

And the network isn't just getting bigger; it's getting better. The City has completed dozens of new signature projects, and removed a number of barriers to cycling. We have new bike lanes on South Congress, South Lamar, Guadalupe, Cameron Road, and St. Johns. We have new protected lanes on Barton Springs Road, Guadalupe, Rio Grande, and Pedernales. On Furness Drive in northeast Austin, new protected lanes connect Hart Elementary to a new bicycle-pedestrian bridge over Little Walnut Creek.

A growing number of Austinites are making good use of this infrastructure. Within the 32 square miles of central Austin, some 5.5 % of commuters are regularly getting to work by bike. In some census tracts, the percentage of bike commuters is as high as 13 %.

And with this update of the 2009 plan, there's every reason to expect the numbers of Austinites on bikes to continue to grow.

At the heart of this plan is an "all ages and abilities" bicycle network: a system that can be enjoyed comfortably and safely by anyone, whether they're a beginner or experienced, whether they're 8 or 80 years old. This network will feature protected bike lanes, urban trails, and quiet streets – all integrated seamlessly, complete with wayfinding, providing safe and easy connections all across the city.

This vision is in step with a national “Green Lane” movement that’s building on best practices from the U.S. and abroad. It’s also well aligned with the Imagine Austin Comprehensive Plan, adopted in 2012.

With this plan, our city will be far better connected. We’ll have more people on bikes, and fewer vehicle miles traveled in cars. We’ll have lower carbon emissions. The roads will be safer for all, including bicyclists. And far more Austinites will be getting the exercise they need.

On behalf of the Mayor and the whole City Council, I want to thank you for taking an interest in this plan. I also want to thank all the staff and community members who worked hard to develop this plan, and all those involved in implementing it. We’ll be enjoying the benefits for years to come.

Have a great ride!

Very truly yours,

Chris Riley

ACKNOWLEDGEMENTS

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- Austin Resource Recovery
- Austin Transportation Department
- Austin Water Utility
- Capital Planning Office
- Economic Development Department
- Emergency Medical Services Department
- Austin Fire Department
- Health and Human Services Department
- Law Department
- Neighborhood Housing and Community Development
- Office of Sustainability
- Planning and Development Review Department
- Parks and Recreation Department
- Public Works Department
- Watershed Protection Department
- Partner Agencies
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2009 Bicycle Master Plan
The 2014 Plan updated and borrowed significant groundwork from the 2009 Plan and recognizes its many contributors:
- Bicycle Program Staff
- Halff Associates, Inc / Bowman-Melton
- Street Smarts Task Force

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Rio Grande, a complete street in West Campus, promotes active use.

(All photos courtesy of the City of Austin unless otherwise noted).

EXECUTIVE SUMMARY

VISION

Austin is a place where people of all ages and abilities bicycle comfortably and safely for transportation, fitness and enjoyment. Bicycling brings benefits not just to people who bicycle, but to the whole community by helping to activate the Imagine Austin Comprehensive Plan for our shared sustainable future.

ACHIEVEMENTS SINCE 2009 BIKE MASTER PLAN

The City of Austin Bicycle Master Plan 2014 (the Plan) reflects today's best practices in municipal planning for bicycling at a national and international level. An update of the 2009 Bicycle Master Plan, this 2014 Plan reflects the latest innovation in approaches and sets a goal of creating an "all ages and abilities" bicycle network. The "8-80" framework is a good test for all ages and abilities where an 8-year-old or an 80-year-old should be able to navigate by bicycle comfortably and safely. The 2009 Plan set the stage for a significant expansion of the bicycle network, primarily through painted bicycle lanes, resulting in a substantial increase in bicycling throughout Austin.

- ☐ Austin's bicycle network grew from 126 miles to 210 miles since 2009, a 70 % expansion in only five years.
- ☐ The expanded bicycle network resulted in a citywide bicycle mode share of 2 % in 2011, nearly doubling rates from 2009. (Mode share indicates people who primarily commute to work by bicycle, at least three days per week.)
- ☐ Within the 32 square miles of central Austin, the mode share reported was 5.5 % and as high as 13 % in certain census tracts in 2012. This 5-13% mode share is already taking a significant load off the congested motor vehicle travel lanes in Central Austin.

- ☐ The City of Austin completed dozens of new signature projects and removed barriers to cycling. Some of these projects included creating new bicycle lanes on South Congress Avenue, Barton Springs Road, Cameron Road, South Lamar Boulevard and Guadalupe Street. Existing bicycle lanes were and continue to be routinely made safer and more comfortable by widening or buffering lanes and by addressing parking concerns in the bicycle lane. Many more projects are in construction or in design and restriping projects are often coordinated with street resurfacing, in order to create work efficiencies.

SHIFTS IN BEST PRACTICE BICYCLE PLANNING

PROTECTED BICYCLE LANES

In order to make bicycling feel safe for most people, it is necessary to physically protect bicycle lanes; painted single lines are simply not enough of an incentive to encourage bicycle riding. National studies have found about half of the population fits into the category of "interested but concerned" - they are interested in bicycling for transportation, but concerned about their safety on the roads. In Austin, only 15 % of people on bicycles will ride in a painted bicycle lane on a busy road while 40 % of bicyclists would feel comfortable riding in a protected bicycle lane, but not a painted one. A statistically valid phone survey conducted in 2013 by the City of Austin shows protected lanes would attract 55 % of Austin's population.

Austin was selected as one of six U.S. cities to participate in the Green Lane Project to catalyze implementation of protected bicycle lanes based on programs in bike-friendly European countries. The Green Lane Project provided resources and technical assistance to help Austin implement quality bicycle infrastructure. Austin officials also participated in key study trips to the Netherlands and Denmark, which included a city council member, the city manager, the public works director, the city traffic engineer, and an assistant director of the planning department. During Austin's two-year participation with the Green Lane Project, the city increased the number of buffered or protected bicycle lanes from 5 miles to 20 miles. Examples of completed protected bicycle lane projects include Barton Springs Road, Guadalupe Street, Bluebonnet Lane and Rio Grande Street. Numerous other protected bicycle lanes are currently in the planning and design stages.

CAPTURING SHORT TRIPS

Shifting short motor vehicle trips to bicycle trips is another best practice aimed at increasing bicycling. Most trips Americans take are short, usually less than 3 miles. Short trips, or trips that consist of less than three miles, are the most likely motor vehicle trips to convert to bicycle or walking trips. Implementation of protected bicycle lanes should be focused where short trips most frequently occur to maximize return on investment.

As a result, the 2014 Plan focuses on routes with high concentrations of existing short trips, most notably within the central Austin area but also to neighborhood destinations throughout the city such as schools, parks, business and shopping districts. To serve mid-length trips in the 3-9 mile range that are still good candidates for bicycle trips, the plan focuses on key routes to central Austin from outlying areas. To serve longer trips, the 2014 Plan focuses on linking short bicycle trips with longer transit trips by providing protected bicycle lanes to major transit stations and secure bicycle parking at the station. Significant bike share systems, such as an expanded Austin's B-Cycle, are a powerful and flexible tool to connect transit users to their destinations solving the "last mile" problem (the last mile problem refers to the difficulty in getting people using transit to their final destination).

BUILDING A COMPLETE BICYCLE NETWORK

There is an international focus on the importance of creating complete networks that serve people of all ages and abilities. Protected bicycle lanes are a great tool, but unless there is a network that serves the variety of trips that a user desires to take, the increase in bicycling will be limited. The most notable bicycle network success story is from Seville, Spain, where an 87-mile network of protected bicycle lanes was installed, resulting in an increased bicycle mode share from 0.5 to 7 % in just three years. By comparison, it took Portland, Oregon, one of the country's most bike-friendly cities, 20 years to create a network that resulted in a comparable shift in behavior.

ACTIVATING IMAGINE AUSTIN

In 2012, the City of Austin adopted Imagine Austin, the first citywide comprehensive plan in 35 years. It captures the community's collective vision for how residents want Austin to grow and flourish. The 2014 Bicycle Plan is shaped by Imagine Austin and will serve as a tool for implementing the comprehensive plan's policies and eight priority programs, including key support for compact and connected, affordable, healthy, workforce-related programs. Imagine Austin establishes big-picture, long-range goals; the 2014 Plan addresses specific projects and programs to activate the comprehensive plan's principles over the next five years.

THE IMAGINE AUSTIN PLAN, ADOPTED IN 2012, GUIDES THE VISION FOR THE FUTURE OF AUSTIN.

BICYCLE PLAN GOALS

- ☐ **Connectivity:** Create a bicycle network that serves people of all ages and abilities, providing direct and comfortable connections to where people live, work and play
- ☐ **Increase Ridership:** Achieve a significant increase in ridership, especially transportation cycling, and a corollary reduction in motor vehicle miles traveled and/or prevented traffic congestion
- ☐ **Improve Safety:** Reduce bicycle deaths and injuries by implementing safety measures for all roadway users, including bicyclists.
- ☐ **Equity:** Provide equal bicycling access for all; through public engagement, program delivery, and capital investment.
- ☐ **Support Imagine Austin:** Realize the potential of bicycling to support and achieve multiple goals of the Imagine Austin Comprehensive Plan

CHAPTER 2: BICYCLE SYSTEM

The City's "bicycle system" refers to our physical bicycle network, as well as supporting infrastructure elements such as end-of-trip facilities (bike racks, bike storage, showers, etc.), transit integration, and an expanded bike share system. The most important element of the bicycle system and the highest priority recommendation of the Plan is to fund and implement an all ages and abilities bicycle network. Supporting bicycle infrastructure elements and the ongoing maintenance of the system are also priorities of the Plan.

CREATING AN ALL AGES AND ABILITIES BICYCLE NETWORK

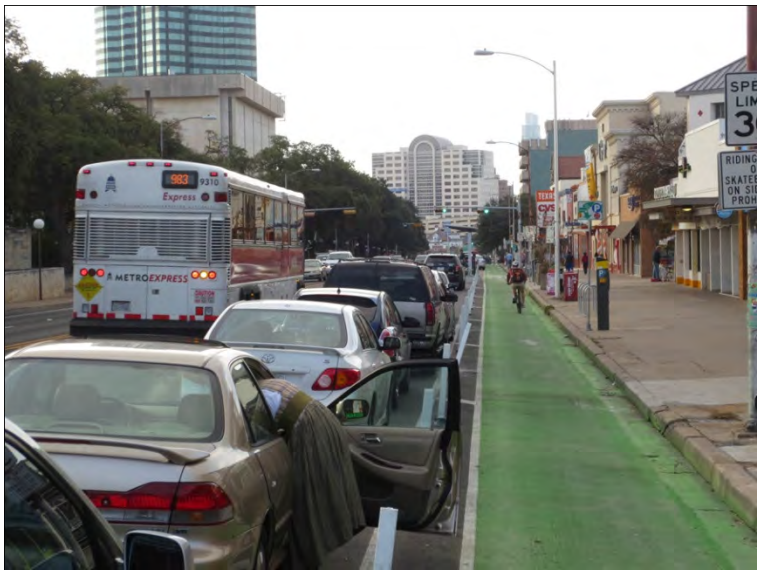
To create a network of all ages and abilities bicycle facilities, City staff analyzed our existing streets to determine the most cost-effective means of implementing this network. The result is a proposed network that is compatible with existing motor vehicle volumes and parking needs, not requiring costly street reconstruction, and focused on capturing short trips.

Protected Bike Lanes

Protected bicycle lanes include a physical barrier between motor vehicle traffic and separation from pedestrian traffic. Protected bicycle lanes are a tool to make high-volume or high-speed streets comfortable for users of all ages and abilities.

All ages and abilities network elements include:

- ☐ **Protected Bike Lanes**
  Protected bicycle lanes include a physical barrier between motor vehicle traffic and separation from pedestrian traffic. Protected bicycle lanes are a tool to make high-volume or high-speed streets comfortable for users of all ages and abilities.



PARKING PROTECTED BICYCLE LANES ON GUADALUPE STREET.

☐ **Urban Trails**

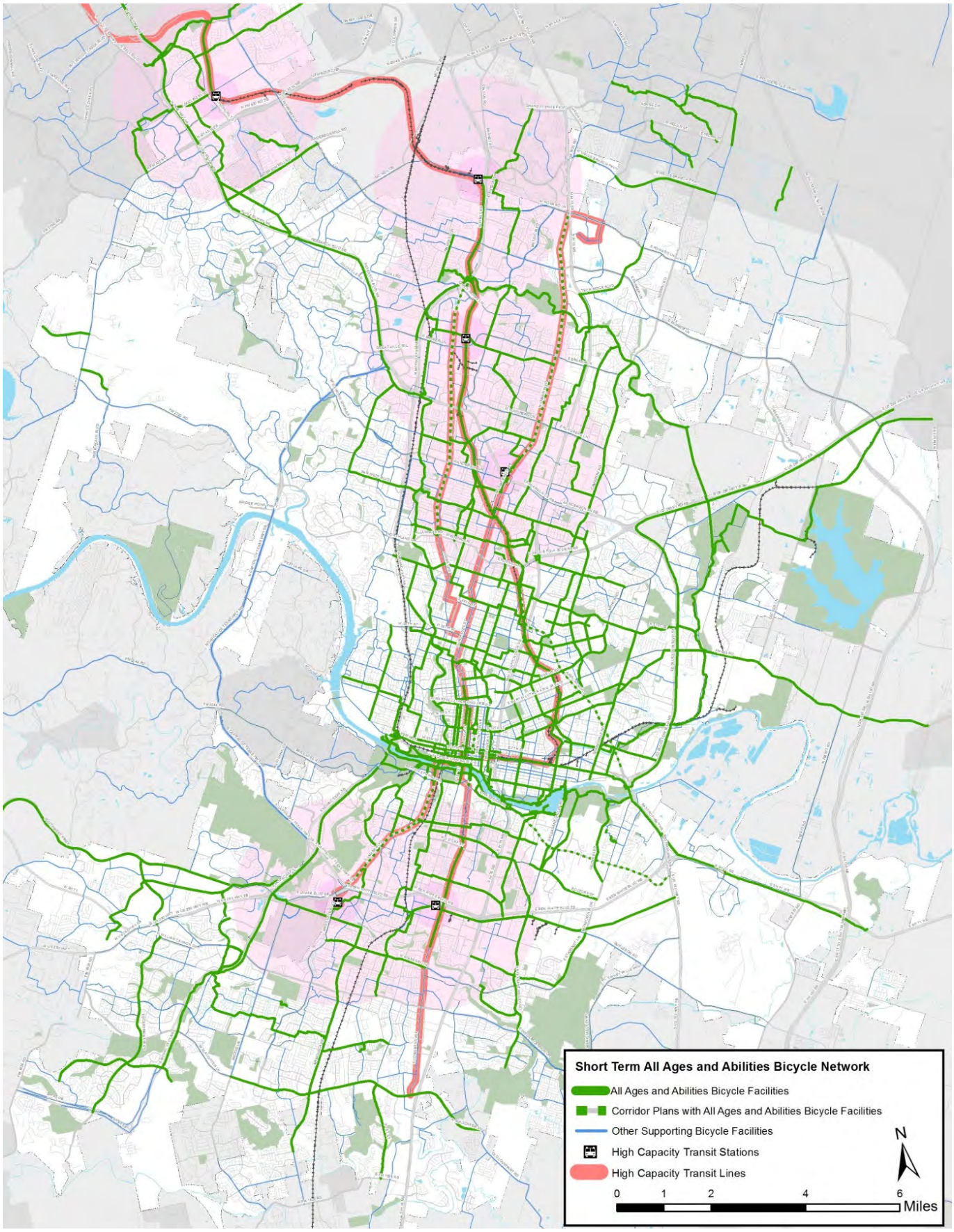
Urban Trails are hard-surface trails designed for use by pedestrians, bicycling and other non-motorized forms of transportation for both transportation and recreational use. Urban Trail priorities are set by the Urban Trails Program and guided by the Urban Trails Master Plan.

DUAL TRACK URBAN TRAIL SEPARATING WHEELED AND ON-FOOT USERS.

☐ **Quiet Streets**

Local neighborhood streets offer bicycling routes that are inherently safer and more pleasant than busy major roads. Physical improvements to optimize designated "quiet streets" for bicyclists, and integrate them into the bicycle network, will include traffic calming devices for motor vehicles and wayfinding signage for people on bikes.

QUIET STREET ON RIO GRANDE STREET IN AUSTIN.

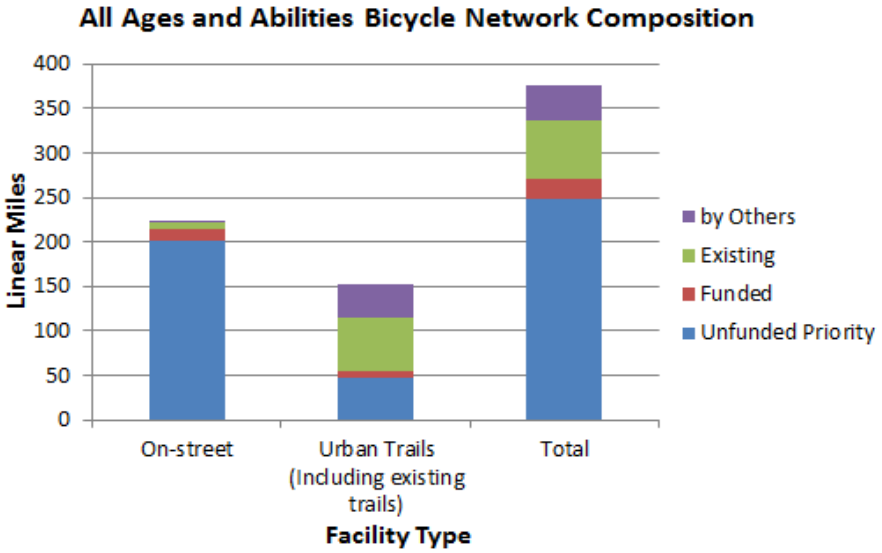


MAP OF RECOMMENDED ALL AGES AND ABILITIES BICYCLE NETWORK

The planning level cost estimate for the all ages and abilities bicycle network is $151 million, and leverages many existing and already funded bicycle facilities. The cost of priority unfunded investments includes 200 new miles of on-street facilities for $58 million, at an average cost of $290,000 per mile. The cost per mile for on-street facilities varies greatly upon the type of treatment and is accounted for in the estimate. The estimate also includes 47 new miles of Urban Trails at $93 million at an average cost of $2 million per mile. As funding for portions of the network become available, an implementation plan would be developed, detailing the most strategic facility investments that would be pursued at that time.

It is important to note that the Tier 1 trails recommended in the Urban Trails Master Plan, adopted by City Council in September of 2014, are identical to the recommended urban trails in the Bicycle Plan's all ages and abilities bicycle network. Costs for these Tier 1 trails are included in the Bicycle Plan as these urban trails are critical links in the bicycle network, and without them the all ages and abilities bicycle network would be fragmented. In terms of cost of the all ages and abilities bicycle network, urban trails account for the majority of the cost at $93 million of the total $151 million. The network planning and cost-benefit analysis assumes that the investment in the on-street and off-street (urban trail) networks are made in parallel to create one seamless all ages and abilities bicycle network.

ALL AGES AND ABILITIES BICYCLE NETWORK COMPOSITION



The proposed all ages and abilities bicycle network is composed of 220 miles of on-street facilities and 150 miles of off-street facilities, largely urban trails and existing unpaved trails. The chart shows the composition of the complete network including priority investments, existing facilities, and those already funded by the City of Austin or partner agencies.

RETURNS ON INVESTMENT

City staff conducted an analysis to determine the multidimensional benefits that we would expect to receive from the full investment in the recommended all ages and abilities network. Benefits were conservatively calculated by forecasting the increase in bicycle use and associated decrease in motor vehicle use. The analysis draws on data from other cities that have completed all ages and abilities bicycle networks, and accounts for higher capture rates for short trips.

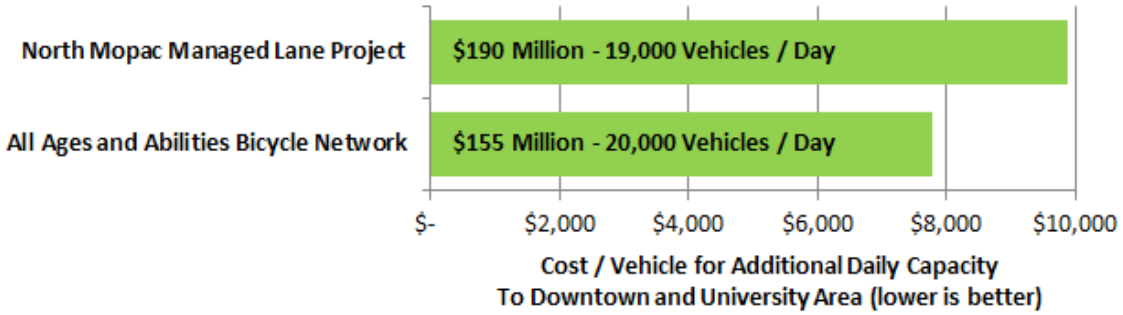
Calculated returns include:

- **Reduced motor vehicle trips to downtown**
  Of the 300,000 motor vehicle trips bound to the central business district and university area daily, there is an estimated reduction of 20,000 trips (7 %) as a result of the all ages and abilities bicycle network.

- **Reduced citywide motor vehicle trips**
  For citywide trips, not just those bound to the downtown area, there is an estimated reduction of 170,000 daily driving trips, equating to 460,000 miles traveled daily.

- **Regional mobility and congestion management**
  The 20,000 additional bicycle trips to central Austin as a result of the $151 million all ages and abilities bicycle network results in the same increased motor vehicle capacity as the MoPac Improvement Project, a $190 million 11-mile urban freeway project adding a single managed lane in each direction. This demonstrates that the investment in the all ages and abilities bicycle network is on par with other large mobility projects in managing regional congestion.

Comparison of Regional Mobility Projects



Source: City of Austin

- ☐ **Boost affordability**
  By offering people a viable low-cost transportation option, the bicycle network can help families significantly cut the household expense of owning and operating a motor vehicle. Due to decreased vehicle miles traveled, Austin residents can collectively save $170 million in direct driving costs annually.

- ☐ **Public health benefits**
  Increasing the percentage of travelers who regularly bicycle for transportation directly correlates to improved public health. The increased physical activity associated with shifting short trips to bicycle trips would equate to 130,000 people or 15 % of Austinites meeting their daily minimum physical activity.

- ☐ **Environmental benefits**
  By reducing vehicle trips, bicycling reduces the pollution from motor vehicles. The reduction in motor vehicle miles traveled would result in a reduction of 84,000 metric tons of carbon per year, the equivalent of the carbon generated by the driving habits of Austinites over 11 days.

BARRIER REMOVAL

There is an existing and extensive network of painted bicycle lanes throughout the city that is still incomplete. While not offering the same quality as protected bicycle lanes, these lanes can often be installed in locations where protected lanes are not feasible. This will extend the reach of the all ages and abilities bicycle network. The Plan prioritizes the funding and removal of barriers in the painted bicycle lane network, estimated at a cost of $10 million.

CHAPTER 3: PROGRAMS

The City of Austin seeks to help people of all ages and abilities realize the full potential of Austin's investment in the bicycle system through support of broad and diversified education, encouragement and enforcement programs.

Education and encouragement programs are recommended to raise awareness, communicate the benefits of bicycling, promote the use of the bicycle network, and help people learn how to bike safely. These programs should target all demographic groups. The Plan recommends programs directed toward both students, during their formative years to create changes in lifelong transportation habits,

and adults, to ensure the entire population has access to the information they need to expand their transportation choices. The Plan recommends that the City partner with other transportation providers to create a Smart Trips program - a proven multimodal education and encouragement model program designed to reduce drive-alone trips.

The City of Portland's investment in a Smart Trips program resulted in a 9 to 13 % reduction in drive-alone trips for each neighborhood it served each year for a decade.

In coordination with the Austin Police Department, the 2014 Plan calls for consistent enforcement of the rules of the road in order to improve safety for all travelers. Law enforcement officers and the bicycle community alike must understand and apply the laws in order to build a cooperative relationship and safer streets.

CHAPTER 4: IMPLEMENTATION

The Imagine Austin plan sets forth a five-point implementation framework to ensure broad and lasting impact to the community. The 2014 Bicycle Plan will follow this same framework in order to fully align its implementation efforts with those of the City's comprehensive plan. The 2014 Bicycle Plan's five-points implementation program is as follows:

- ☐ **Education and Engagement**
  For successful implementation it is necessary to raise awareness, understanding and support for the Plan and its alignment with Imagine Austin goals and elements. The Plan recommends partnering with other transportation providers to provide systematic education and encouragement.

- ☐ **Internal Alignment**
  Implementing the Plan will require the City of Austin to take a collaborative, cross-departmental approach to execution. It requires aligning City department planning efforts, long-range and short-term capital investments, major initiatives and work programs, and long-range budgets.

- ☐ **Regulations**
  City code and regulations should support creation of an all ages and abilities bicycle network and help produce a built comfortable environment for bicycling. The Land Development Code and Transportation Criteria Manual currently are being revised to help create a more compact and connected city. The jurisdiction of the Plan is the City of Austin, including its extraterritorial jurisdiction.

- **Public Investment**
  The Plan defines an overall need for approximately $161 million in capital investments for both the all ages and abilities bicycle network ($151 million) and bicycle lane barrier removal ($10 million). In addition to capital costs (to construct protected bike lanes, paved trails and other infrastructure), the City and its partners must budget appropriately for operating costs (program staff, education programs, operations and maintenance). Active Transportation Program staff under the Austin Transportation Department, responsible for the implementation of the Plan, also needs to be expanded to deliver the recommended priority infrastructure and programs. For an investment strategy, the plan recommends accelerated investment in our bicycle system to deliver a regional impact. Central to delivering a regional impact is making an investment large enough to be able to create a complete bicycle network for people of all ages and abilities, rather than isolated facilities. It recommends a multi-pronged, diverse and creative funding strategy. Traditional funding sources include the City general fund, transportation fund, voter-approved bonds and federal grants. Other innovative funding approaches and partnerships should also be developed.

- **Partnerships**
  Numerous partners could support the plan's implementation, as the benefits of bicycling are communitywide and help advance all aspects of the community's Imagine Austin vision. Implementing the plan requires the coordination of all City of Austin departments, partner agencies and organizations, and the general public. By integrating bicycling as a tool to meet the goals of groups outside the City government, a broad coalition can be built that will significantly accelerate the realization of the plan.

CHAPTER 5: MEASURING SUCCESS

Ongoing monitoring and evaluation are important for assessing whether the plan is meeting its goals over time. Measuring real outcomes through the regular collection of data from bicycle facility use, ridership counts, surveys, mode splits and other metrics used to track the growth of bicycling over time, along with qualitatively evaluating the user experience is vital. While progress will be assessed over the long-term, data should be collected on a regular basis to help track success of implementation efforts. This information will allow for adjustments to improve implementation efforts toward the Plan goal.

A family riding to the first day of school at Zilker Elementary in a new protected bicycle lane.

CHAPTER ONE | INTRODUCTION

The 2014 Austin Bicycle Plan (the Plan) reflects today's best practices in municipal planning for bicycling at a national and international level. The Plan is an update of the 2009 Bicycle Master Plan and reflects the latest innovation in approaches.

The 2009 Plan kick-started a significant expansion of the bicycle network, the creation of supportive bicycle policies and a strong increase in bicycle ridership. Since the publication of the 2009 Plan, bicycling has become increasingly recognized as a mainstream solution to everything from traffic congestion to air quality to obesity to a key factor in creating vibrant cities.

The City of Austin has been on the forefront of this bicycling resurgence. In April 2012, Austin was selected as one of six Green Lane Project cities by the People for Bikes organization. The Green Lane Project catalyzes the installation of protected bicycle lanes as a strategic opportunity to advance bicycling in the United States. Both local and national studies have shown the majority of the population does not feel comfortable riding in a painted bicycle lane on a busy street, but would feel safe in a protected bicycle lane. This understanding is the foundation of the 2014 Bicycle Master Plan. Building on this foundation, the Plan set a goal of creating an all ages and abilities bicycle network.

VISION

The 2009 Plan focused on what the City of Austin should do to support bicycling. The 2014 Plan focuses on how bicycling can support the goals of Imagine Austin, the city's comprehensive plan.

> **Help people in Austin of all ages and abilities bicycle comfortably and safely for transportation, fitness and enjoyment. Encourage bicycling in ways that benefit not just people who bicycle, but the whole community, by helping to activate the Imagine Austin Comprehensive Plan for our shared sustainable future.**
>
> **- Vision of the City of Austin 2014 Bicycle Plan**

PURPOSE

The purpose of the Plan is to inform and educate the general public, government staff, and elected officials of the potential of bicycling to help realize Imagine Austin goals and build support for the implementation of this plan. The Plan also guides and provides strategies for the implementation of bicycle infrastructure, policies and programs for all City departments, partner public agencies and the private development community.

JURISDICTION

The Austin 2009 Bicycle Plan covers the City of Austin, including its extraterritorial jurisdiction. The 2014 Plan updates the 2009 Bicycle Master Plan and, as an appendix to the Austin Metropolitan Area Transportation Plan (AMATP), serves as the regulatory document for the provision of bicycle programs and facilities for the City of Austin. The Plan also encourages the City of Austin and surrounding areas to coordinate their efforts to ensure a strong local bicycle network and fulfillment of a well-connected and comprehensive, regional bicycle network.

PROJECT HIGHLIGHTS

Guadalupe/Lavaca Transit and Bicycle Accommodations:

In 2014, Capital Metro launched MetroRapid, a faster, more convenient transit service which includes signal prioritization, real-time arrival information and transit priority lanes through Downtown Austin along the Guadalupe and Lavaca Street corridors. These transit priority lanes are paired with buffered bicycle lanes and sharrows throughout Downtown Austin. In addition to separated bicycle facilities throughout Downtown Austin, this project also allowed the City of Austin to upgrade the existing bicycle lane on Guadalupe near the University of Texas campus (referred to as, “the Drag”). The Drag includes the first green-colored bicycle facility physically separated from motor vehicles by parked cars, planters and pedestrian refuge areas.

The Pfluger Bridge:

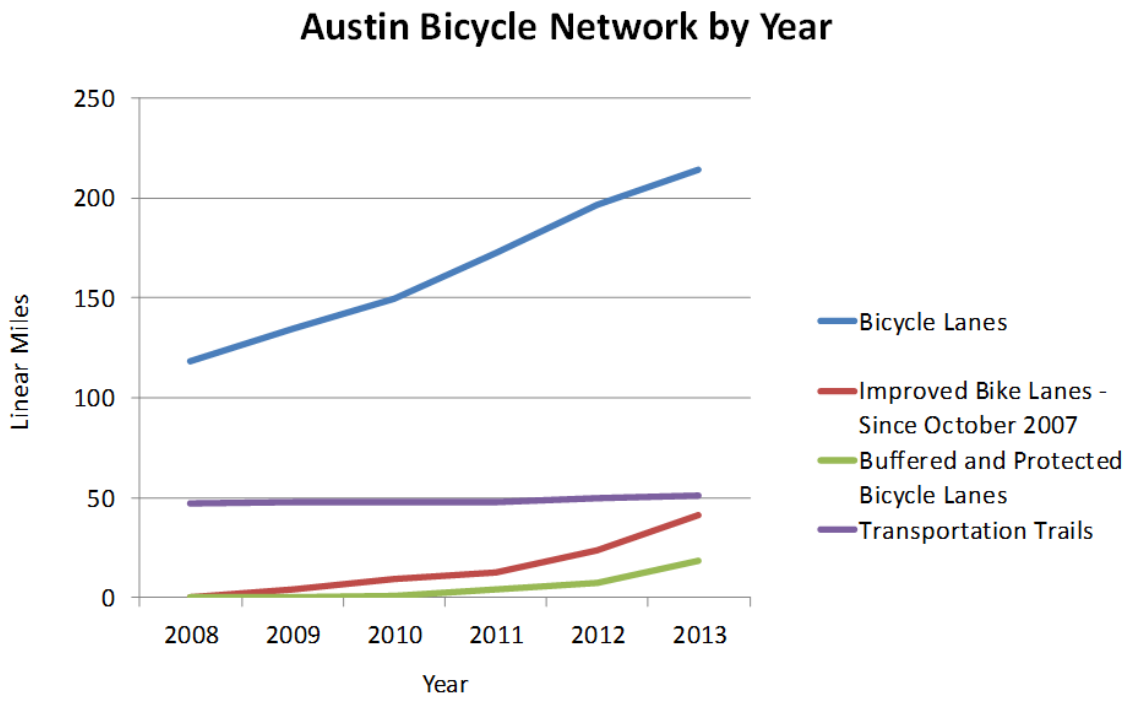
The Pfluger Bridge and its “Extension” span Lady Bird Lake from 2nd Street to Riverside Drive and parallel Lamar Boulevard. This bridge serves not only as an alternative, non-motorized crossing of Lady Bird Lake, but also a public space for activities.

ACHIEVEMENTS SINCE 2009 BIKE MASTER PLAN

The 2009 Bicycle Master Plan set the stage for a significant expansion of the bicycle network, primarily through painted bicycle lanes, resulting in a subsequent increase in bicycling.

EXPANSION OF THE BICYCLE NETWORK

Since 2009, Austin's bicycle lane network grew from 126 miles to 210 miles, a 70 % expansion in just five years. The City of Austin completed dozens of new signature projects and removed numerous barriers to bicycling. Project examples include new bicycle lanes on South Congress Avenue, Barton Springs Road, Cameron Road, South Lamar Boulevard and Guadalupe Street. Additionally, existing bicycle lanes are routinely made safer and more comfortable by widening or buffering the bicycle lane, and by addressing parking in the bicycle lane. Many more projects are in construction or in design and restriping projects are often coordinated with street resurfacing, in order to create work efficiencies.



EXPANSION OF BICYCLE NETWORK OVER TIME. THE BICYCLE NETWORK HAS NEARLY DOUBLED SINCE 2009, WHILE SIGNIFICANTLY INCREASING THE QUALITY OF EXISTING FACILITIES. "BICYCLE LANES" REFERS TO PAINTED BICYCLE LANES.

INCREASE IN BICYCLING

As a result of the significant expansion of the bicycle network the number of people riding bicycles has significantly increased, particularly in Central Austin. The U.S. Census Bureau and the American Community Survey are primary sources to measure changes in percent of people who ride bicycles to work.

- ☐ The expanded bicycle network resulted in a citywide bicycle mode share of 2 % in 2011, nearly doubling rates from 2009. Mode share indicates people who primarily commute to work by bicycle, at least three days per week.

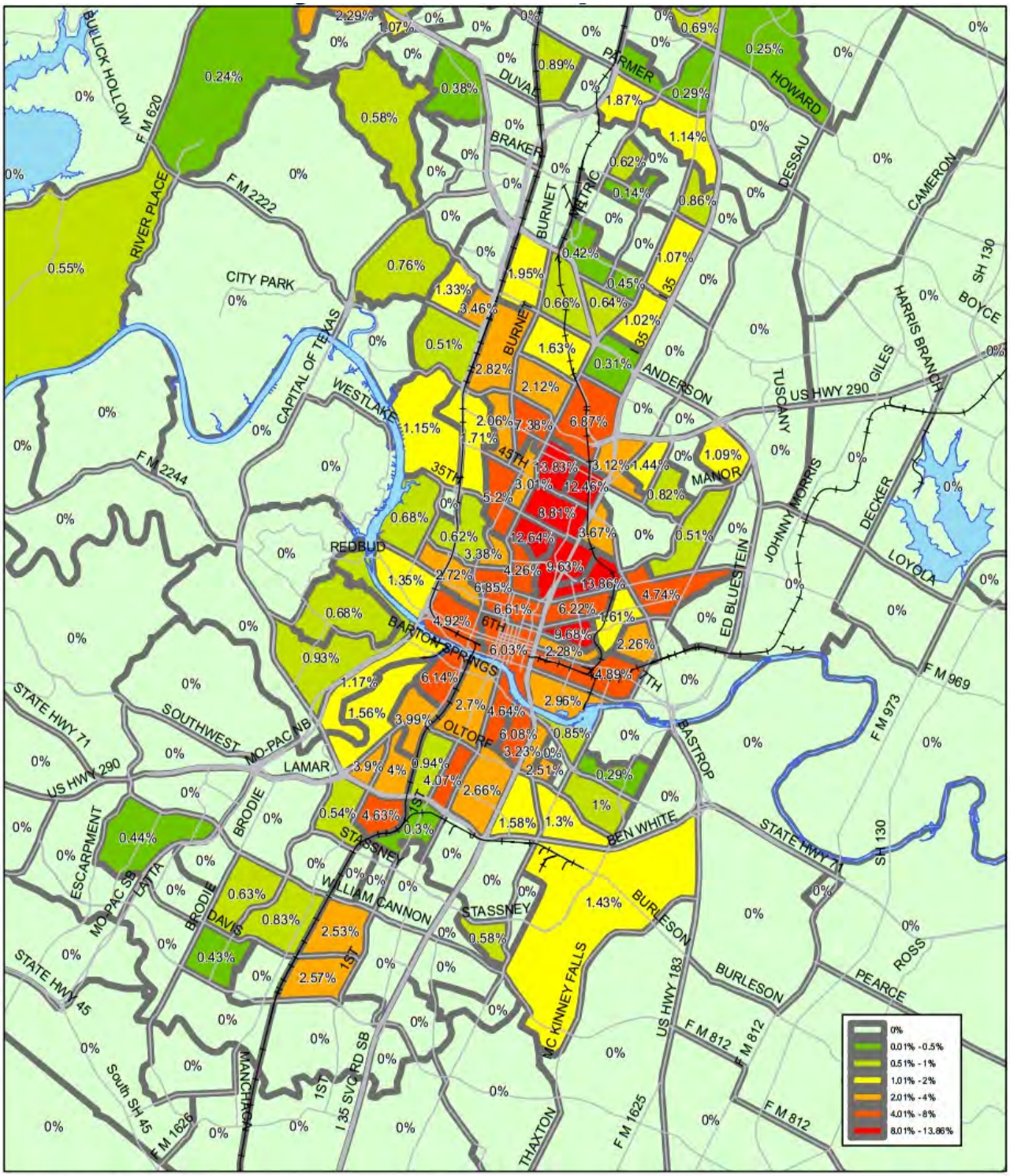
- ☐ Within the 32 square miles of Central Austin, the mode share reported was 5.5 %, and as high as 13 % in certain census tracts in 2012.

The map of Austin's *Bicycle Mode Share to Work from 2011* on the next page illustrates bicycle commuter mode share by census tract. It shows the distribution of bicycle commuters in Austin while also indicating areas in Austin where bicycle commuting is not a common mode of transportation.

The census data captures only the commute trip to work, and does not reflect bicycle trips for non-work purposes, such as going to school, shopping, social or other leisure trips. According to the 2001 National Household Travel Survey, only 11 % of bicycle trips are commute trips, indicating that 89 % of bicycle trips are not being represented by the census data (City of Seattle, 2007, p. iii). Considering mode share to work is a useful tool in measuring changes in some bicycling use, but it does not reflect a complete picture of bicycle travel behavior.

Still, Austinites face many challenges to bicycling. Gaps in the network caused by freeways, intersections and disconnected facilities, as well as a lack of awareness and acceptance of bicyclists, have created barriers. Many people have stated in surveys they would enjoy biking to work, but have serious concerns about real and perceived safety problems. Better, protected bicycle facilities and complete networks are necessary to create a significant increase in bicycling.

CITY OF AUSTIN BICYCLE MODE SHARE TO WORK FROM 2011. EXISTING BICYCLING IS CONCENTRATED IN CENTRAL AUSTIN WHERE THERE IS A HIGH PORTION OF SHORT TRIPS AND MIX OF USES.



Data source: American Community Survey, 2007--11 5-year composite dataset, Table B08006, census tracts. US Census Bureau.

Map produced by Eric Dusza, Neighborhood Connectivity Division, Public Works Department, City of Austin, August 2013

SHIFTS IN BEST PRACTICE BICYCLE PLANNING

Best practices in bicycle planning have changed significantly since 2009. The following are national shifts in bicycle planning that form the primary building blocks for the 2014 Plan. These best practices and their application to Austin's bicycle network will be discussed more in Chapter 2: Bicycle System.

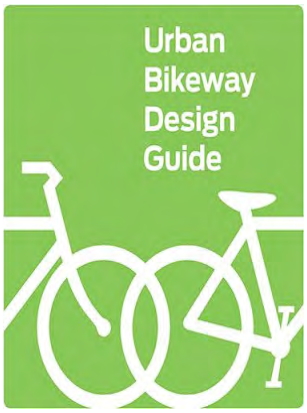
PROTECTED BICYCLE LANES

National studies have found approximately half of the population is "interested but concerned" – they are interested in bicycling for transportation, but concerned about their safety on the roads. As part of this planning effort, a statistically valid phone survey was conducted in Austin that shows about 40 % of people fall into this category meaning those surveyed would ride in protected bicycle lanes, but not a painted bicycle lane. Only 15 % of Austinites will ride in a painted bicycle lane on a busy road. In contrast, protected lanes would attract 55 % of Austin's population.

This discovery has challenged the City of Austin's Active Transportation Division to use the "interested but concerned" group as its design bicyclists and will serve as a basis for the development of an all ages and abilities network presented in the Plan.

NACTO URBAN BIKEWAY DESIGN GUIDE

In 2011, the National Association of City Transportation Officials (NACTO) released the Urban Bikeway Design Guide (NACTO Guide). This guide provides Austin and other U.S. cities with the tools and design guidance to begin implementing protected bicycle lanes and other innovative bicycle infrastructure. While these approaches were common for decades on an international level, the NACTO Guide offered direction in a North American context focused on urban areas and provided an alternative to the Guide for the Development of Bicycle Facilities from the American Association of State Highway and Transportation Officials (AASHTO), also released in 2011.



THE URBAN BIKEWAY DESIGN GUIDE, RELEASED BY THE NATIONAL ASSOCIATION OF CITY TRANSPORTATION OFFICIALS (NACTO) IN 2011, OFFERS GUIDANCE TO CITIES INTERESTED IN IMPLEMENTING BICYCLE INFRASTRUCTURE THAT SERVES PEOPLE OF ALL AGES AND ABILITIES.

In August of 2011, the Austin City Council passed a resolution in support of the NACTO guide for bikeway design in Austin. In August 2013, the Federal Highway Administration endorsed the use of the NACTO Urban Bikeway Design Guide. The City of Austin incorporated the NACTO Urban Bikeway Design Guide as a reference in its Transportation Criteria Manual in April 2014.

CAPTURING SHORT TRIPS

Bicycling, like walking, is human powered, meaning there is a finite amount of energy a person will expend to make a trip. As a result, short driving trips of less than three miles are most easily able to convert to bicycle trips. To maximize the benefit of the investment in protected bicycle lanes, implementation should be focused where short trips most frequently occur.

BUILDING A COMPLETE BICYCLE NETWORK

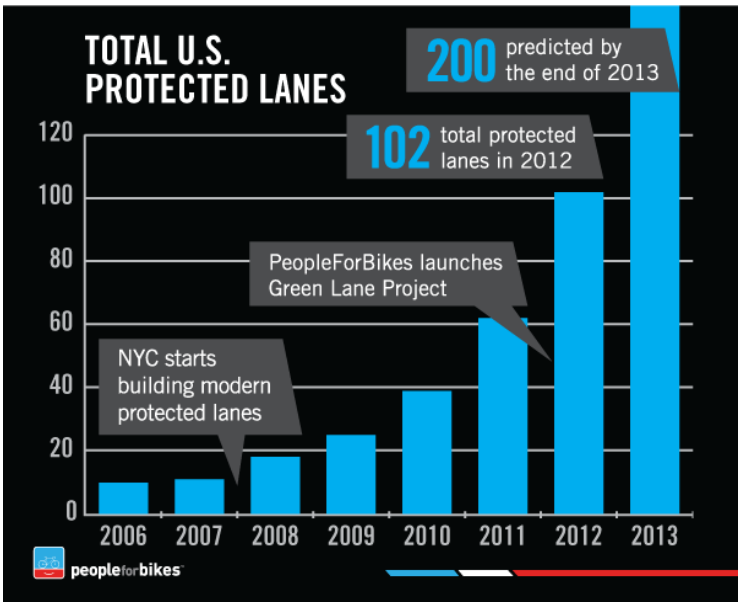
There is an international focus on the importance of complete networks that serve people of all ages and abilities. In Seville, Spain, an 87-mile network of protected bicycle lanes was installed, resulting in an increased bicycle mode share from 0.5 to 7 % in just three years. It took Portland, Oregon, a leading U.S. bicycle city, 20 years to accomplish this same shift in behavior. Leading cities across the U.S. are now investing in networks of protected bicycle lanes. New York City now has more than 45 miles of protected bicycle lanes and Chicago is expected to complete 100 miles of protected bicycle lanes by the end of 2014.

MOVING FORWARD WITH PROTECTED LANES IN AUSTIN

In line with national and international advancements in best practices, the City of Austin has taken significant steps to implementing buffered and protected bicycle lanes.

GREEN LANE PROJECT

As one of six U.S. cities selected for the Green Lane Project in 2012, the Austin bicycling community ramped up efforts to implement protected lanes within the city. The Green Lane Project provided study trips to Denmark and Copenhagen, extensive training, peer support, research and other resources. Project participants included the City Manager, the City Traffic Engineer, a City Council Member, the Public Works Director and other City leadership. Since the launch of the Green Lane Project, implementation of protected bicycle lanes is rapidly spreading throughout the U.S.



SINCE THE LAUNCH OF THE GREEN LANE PROJECT, PROTECTED BICYCLE LANES IN THE U.S. HAVE BEEN RAPIDLY INCREASING (PEOPLE FOR BIKES, 2014).

A $20,000 grant from the Green Lane Project partially funded the City's 2014 Bicycle Master Plan.

Think Bike Event

Building upon the Green Lane Project, the City of Austin held a Think Bike event in November 2012. The event brought a team of world-leading Dutch planners,

PROTECTED BIKE LANES

Bluebonnet Cycle Track: When Bluebonnet Lane was identified as a roadway in need of maintenance, the City of Austin Bicycle Program partnered with the City of Austin Child Safety Program to improve the needs of the staff and students at Zilker Elementary (located on Bluebonnet Lane). The school principal agreed to remove parking on one side of the street, in favor of creating a two-way bicycle facility on the other side of the street. This collaborative effort saw daily bicycle riders to Zilker Elementary increase from 4 students a day, to nearly 50 students a day.

Barton Springs Road: Barton Springs Road, a major east/west route in Austin, previously lacked bicycle facilities creating a barrier for bicyclists. The project, which was constructed for approximately $750,000 using 2010 Mobility Bond Funding, now boasts a westbound off-street path and an eastbound wide buffered bicycle lane.

Mueller Development Bicycle Facilities: The former site of the Austin Mueller Airport was redeveloped into an infill mixed-development community, consisting of residents of diverse ages, backgrounds and income levels. This site is the perfect community for an all ages and abilities network. The developers and designers of the Mueller neighborhood have embraced separated facilities and are using them to connect the neighborhood to businesses and schools.

designers and policy makers to Austin to share experiences in a three-day workshop. The results of this workshop included the framework for the all ages and abilities bicycle network and a re-envisioned South Lamar Boulevard, a key bicycle corridor. The workshop also engaged several citywide stakeholders including the Austin Independent School District, Texas Department of Transportation and Capital Area Metropolitan Transit Authority.

NACTO CITIES FOR CYCLING ROADSHOW

In November 2013, Austin hosted representatives from Portland, New York City and Chicago, and the NACTO Cities for Cycling program. The focus of this workshop was to share the success and experience other U.S. cities have found with protected bicycle facilities. The NACTO Roadshow coincided with the kickoff of the public input open houses for the Plan.

NEW PROTECTED LANES

In the two years since Austin's involvement with the Green Lane Project, Austin's buffered or protected bicycle lanes increased from 6 to 20 miles. Examples of completed protected bicycle lane projects include Barton Springs Road, Guadalupe Street, Bluebonnet Lane and Rio Grande Boulevard. Numerous protected bicycle lanes are currently in the planning and design stages.

NEW PROTECTED BICYCLE LANES ON BERKMAN DRIVE AS PART OF THE MUELLER REDEVELOPMENT PROJECT

(PHOTO COURTESY OF GREG GRIFFIN).

THE PLANNING FRAMEWORK

The 2014 Bicycle Master Plan is one of many plans that work together to shape our community and create the place Austinites have envisioned. The Plan, as an appendix to the Austin Metropolitan Area Transportation Plan (AMATP), serves as the regulatory document for the provision of bicycle programs and facilities for the City of Austin. The following gives an overview of the planning framework that surrounds the Plan.

ACTIVATING IMAGINE AUSTIN

THE IMAGINE AUSTIN PLAN, ADOPTED IN 2012, GUIDES THE VISION FOR THE FUTURE OF AUSTIN.

In 2012, the City of Austin adopted Imagine Austin, the first citywide comprehensive plan in 35 years. It captures the community's collective vision for how residents want to shape the city as it grows.

The Plan is shaped by Imagine Austin and will serve as a tool for implementing Imagine Austin policies and eight priority programs. The comprehensive plan establishes big-picture, long-range goals; the 2014 Plan addresses specific projects and programs to activate its principles over the next five years.

IMAGINE AUSTIN GUIDING PRINCIPLES	LINKS TO BICYCLE MASTER PLAN
1. Grow as a compact and connected city	☐ Compact places are interconnected by a bicycle network that is accessible by people of all ages and abilities. ☐ Bicycling becomes a choice mode for short trips and encourages short trips, helping Austin evolve to a more compact city.
2. Integrate nature into the city	☐ Trails and bikeways bring people on bikes to and through parks and natural areas, without the impacts of motor vehicles.
3. Provide paths to prosperity for all	☐ Austin offers an attractive bicycle network, which helps to retain and attract both employees and employers.
4. Develop as an affordable and healthy community	☐ Bicycling for transportation integrates physical activity into daily life, which helps people stay healthy. ☐ Bicycles offer a dramatically lower-cost alternative to vehicle ownership, or the need for a second family vehicle. ☐ Bicycling helps to lower transportation costs which now consume an average 20 % of the typical household budget in metropolitan areas and a disproportionate 30 % for low income families earning $20,000 to $50,000 a year. (Lipman, *A Heavy Load, Center for Housing Policy, October 2006)*
5. Sustainably manage water, energy and our environmental resources	☐ Bicycling provides a non-polluting, energy-efficient, carbon neutral, and low-impact form of transportation.
6. Think creatively and work together	☐ Creativity and collaboration will yield low-cost, low-impact solutions to achieving many Imagine Austin goals.

CREATING COMPLETE STREETS

In June 2014, the City of Austin adopted a Complete Streets Policy. The guiding principles include:

- ☐ Serving people of all users and modes. This includes people walking, bicycling, taking transit and driving. This also includes people of all ages and abilities.
- ☐ Creating connected travel networks.
- ☐ Utilizing best-practice design criteria and context-sensitive approaches.
- ☐ Protecting Austin's environment and promoting its sustainability.
- ☐ Coordinating between all City of Austin departments.
- ☐ Applies to all roadways and all projects and phases.

The Plan unequivocally supports the vision of complete streets through the shift to provide bicycle facilities for people of all ages and abilities.

RELATIONSHIP TO OTHER PLANS, POLICIES, AND REGULATIONS

Many plans, policies and regulations must align to support the implementation of the Plan. If they are not aligned, an incomplete system will result, and the Plan's goals may not be fully realized. Through action items in the Plan, these documents should be amended as necessary to achieve excellence in bicycle facility planning, design and operation.

Amendments to local and regional documents should consider impacts to bicycle facility planning and design. National and state documents should consider the impact of their regulations and guidelines on bicycle facility planning. Notable documents or plans that relate to the Plan include the following:

Citywide Plans, Policies and Regulations:

- ☐ The Imagine Austin Comprehensive Plan
- ☐ 2014 Austin Strategic Mobility Plan
- ☐ Complete Streets Policy
- ☐ Austin Urban Trails Master Plan

- ☐ TXDOT Austin District and State Wide Bicycle Plans (under development)
- ☐ Code Next, Land Development Code update (under development)
- ☐ Austin Transportation Criteria Manual (under development)
- ☐ Austin Metropolitan Area Transportation Plan
- ☐ Capital Area Metropolitan Planning Organization (CAMPO) Mobility 2035 Plan

Area and Corridor Plans, Policies, and Regulations:

- ☐ Downtown Austin Plan
- ☐ Great Streets Plan
- ☐ Neighborhood Plans
- ☐ Transit Station Area Plans/Transit Oriented Development Plans
- ☐ Corridor Plans
- ☐ Capital Metropolitan Transit Authority Rails with Trails Plan

Bikeway and Road Design Guidance, Manuals and Codes:

- ☐ National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
- ☐ American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities
- ☐ U.S. Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD)
- ☐ Texas Department of Transportation Manual on Uniform Traffic Control Devices (TMUTCD)
- ☐ Texas Transportation Code

The City of Austin is currently working on revising the Land Development Code with the CodeNEXT effort, revising the Transportation Criteria Manual (TCM) to ensure that land development and roadway design include accommodations for all modes.

DEVELOPMENT OF THE 2014 BICYCLE PLAN

In August 2012, the Green Lane Project awarded a $20,000 grant to the City of Austin to update its Bicycle Master Plan to include protected bicycle lanes. On behalf of the City of Austin, the Green Lane Project contracted with McCann Adams Studio assist with the creation of the Plan. Due to the limited scope of the grant, City staff took the lead in developing the plan update, supported by the staff at McCann Adams Studio.

At the same time, the Public Works Department was also working to produce the first Urban Trails Master Plan. City staff recognized an all ages and abilities bicycle network was necessary to fully integrate on-street and off-street bicycle facilities. As a result, outreach for both the Bicycle Master Plan and the Urban Trails Master Plan was fully integrated under the joint effort entitled "Your Path to Austin."

Timeline for the Development of the 2014 Bicycle Master Plan

Aug 2012	Awarded grant from the Green Lane Project
November 2012 - September 2013	Early plan development and data gathering
October 2013 - November 2013	First round of citywide public input
November 2013 - February 2013	Initial plan review
February 2014	Second round of public input
April 2014 - October 2014	Boards and Commissions
November 2014	City Council

From October 2013 to June 2014, City staff and consultants sought public feedback on general concepts of the plan, proposed routes, changes to bicycle programming and more. This feedback was collected through statistically significant telephone surveys, surveys from trail users, online public surveys, open houses, focus groups, citizen advisory groups, technical advisory groups, feedback from local organizations, participation in local events, and finally through presentations to City boards and commissions (See Appendix B for more information).

THE KICKOFF FOR THE PUBLIC OPEN HOUSES FOR "YOUR PATH TO AUSTIN" FEATURED LEADERS IN BICYCLE PLANNING FROM PORTLAND, NEW YORK CITY AND CHICAGO AS PART OF THE NACTO CITIES FOR CYCLING ROADSHOW.

AUSTIN ENVIRONMENT

Austin is a dynamic and thriving city experiencing one of the highest growth rates of any city in the United States. A net of approximately 110 people move to the Austin area every day. With this growth comes growing pains and other changes that set the stage for areas of opportunity to increase bicycling in Austin.

INFILL DEVELOPMENT AND TRANSFORMING CENTRAL AUSTIN

One of the primary strategies to accommodate the population growth in Austin has been to support mixed-use infill development patterns. This development pattern was enabled through the adoption of the Commercial Design Standards. Infill development supports diverting short driving trips to walking and bicycle trips. Major redevelopment is occurring in central east, central north and south Austin.

MANAGING CONGESTION

Austin's growing pains are most noticeable during rush hour. Avoiding traffic congestion and finding parking is a strong incentive for seeking alternative modes of transportation. Combining bicycle with transit is an appealing option for many traveling to and from downtown Austin. Those that choose to use a bicycle as a mode of transportation enjoy the economic, health and lifestyle benefits of not sitting in traffic.

MANAGING AFFORDABILITY

Another significant issue related to Austin's growth is challenges with affordability. Housing prices have been rising steadily for decades but have recently seen significant increases. Particularly troubling is the decline in affordable housing in the central parts of the City where, due to the high potential for short trips, bicycling, walking and transit are the most viable. While this raises questions about the equity of our housing and transportation available in Austin, bicycling provides a viable avenue to significantly reduce transportation costs, the second highest costs in household budgets.

EXPANDING MENU OF TRANSPORTATION CHOICES

Just five years ago, transportation choices for Austinites were primarily limited to driving personal vehicles, taking the bus, bicycling and walking. Improved infrastructure and dense live, work, and shop areas have made walking and bicycling more viable transportation choices. Capital Metro's transit service has also improved with both rapid bus and commuter rail options offering high speed and more comfortable service.

B-Cycle, Austin's bike share system, was completed in early 2014. As of July 2014, it includes nearly 400 bicycles and 45 stations. On Friday, March 14, 2014, the system set a U.S. record of 2,774 checkouts for an average of 10.1 checkouts per bike/day, besting the previous record in September 2013 of 7.2 checkouts per bike/day, set by New York City's bike share program, Citi Bike. In August of 2014, after only 9 months of operation, the system reached the milestone of 100,000 trips taken.

There have also been a number of new mobility choices that provide flexibility in assisting people with transportation. Car-sharing companies have established themselves in the Austin market and transportation networking companies have also shown a high interest in offering their services in the Austin area. But perhaps the most noteworthy alternative is Austin's bike share program.

INTEREST IN A HEALTHY AUSTIN

In 2012 and 2013 the City and Travis County conducted a Community Health Assessment followed by a Community Health Improvement Plan (CHIP). The CHIP works to implement Imagine Austin's Healthy Austin objectives related to food access, transportation, the built environment, obesity, and access to healthcare. A five year implementation process for the CHIP is now underway and bicycling and generally changes to the built environment that support active transportation are key avenues to implement recommended prevention strategies.

Austin also has a reputation of being one of the fittest cities in the country. A wide spectrum of rides are hosted by organizations every year including casual recreational rides to competitive bicycling races. This interest in a healthy lifestyle will help create an increase in bicycle use for transportation as well as recreation and fitness.

New buffered bicycle lanes on the South 1st Street Bridge provide a safe and refreshing alternative to the frustrations of congested roadways.

CHAPTER TWO | BICYCLE SYSTEM

Providing a bicycle system that serves people of all ages and abilities is the most fundamental element to increase bicycle use. The facilities that create this system include an integrated on-street and off-street bicycle network, as well as support facilities such as parking, showers and wayfinding.

This Plan identifies five elements of a strong, comprehensive bicycle system:

The Bicycle Network **Objective 2.1: Create an All Ages and Abilities Bicycle Network**
Providing a network of safe and comfortable bicycle facilities for people of all ages and abilities is the first step toward encouraging bicycle use. This Plan outlines how the bicycle network and the various facility treatments should be identified, prioritized, designed and ultimately built. The three primary focus areas for the bicycle network are: 1)Creating an all ages and abilities bicycle network, 2)removing barriers in the existing bicycle lane network, and 3)resolving issues with parking in bicycle lanes.

End-of-Trip Facilities **Objective 2.2: Provide Comprehensive End-of-Trip Facilities**
Support facilities, such as secure bicycle parking or storage and shower facilities at the end of the trip are tools to better integrate bicycling into our transportation system. Other supporting facilities include wayfinding and signage along the route to help guide bicyclists to their destination. Providing these items promotes bicycling as easy and convenient for transportation and recreation.

Integration of Cycling with Transit **Objective 2.3: Fully Integrate Cycling with Transit Services**
Bicycling has the potential to significantly improve transit service by providing a solution for the first and last mile. The 2 to 3 mile range of a reasonable bicycle trip, compared to a half-mile walk will significantly increase the potential market for transit. Safe and secure high capacity bicycle parking at key transit stops for regular transit, rapid bus, and rail should be coordinated and implemented. Additionally, bicycle accommodation on all bus, rail transit and van pool vehicles should be provided.

Bike Share System **Objective 2.4: Maintain and Expand the Bike Share System**

Modern bike share systems are one of the most catalytic tools cities have to significantly increase bike trips. Bike share systems also add value to the mobility market by providing low cost, on demand, non-ownership based transportation. Because bike share is non-ownership based it broadens the audience for bicycling. Bike share is a great solution to meet short trip mobility demand within the operating area of the system.

Bicycle Facility Maintenance **Objective 2.5: Provide Superior Bicycle Facility Maintenance**

Maintenance of the bicycle network and supporting facilities will ensure a comfortable and predictable bicycle trip. Bicycles are more sensitive to pavement irregularities and road debris than vehicles due to thin tires and lack of suspension. Roadway features that cause minor discomfort to motorists, such as potholes and improper drain grates, can cause serious problems for cyclists. New equipment, such as narrow street sweepers, are necessary to effectively maintain the physically protected bicycle network.

The following are major themes that evolved from the public input regarding the existing network:

- ☐ There is a great demand for more bike lanes throughout the city. Central Austin seems to be well connected by bike lanes, although gaps in the network remain in the outlying areas.
- ☐ The most requested corridors for improved bicycle facilities were on Lamar Boulevard, MoPac Expressway, HW 183, Congress Avenue, IH35, HW360, Burnet Road, East Riverside, South 1st Street, Airport Boulevard and 45th Street.
- ☐ There are gaps in the network that need to be connected. It was often noted that bike lanes on major roads such as South Lamar and South Congress finish abruptly.
- ☐ There is a desire for connections to Central Austin, across major highways, to urban trails, schools, and work.

Support for protected bicycle lanes was another significant theme found through the public input process.

- ☐ In general, input shows the public is more interested in the installation of protected bicycle lanes than conventional bike lanes.
- ☐ There is a desire for protected bicycle lanes throughout the city. There was also a strong support for protected bicycle lanes to schools, often referencing the success of the Bluebonnet protected lanes serving Zilker Elementary School.
- ☐ Protected bicycle lanes are seen as a way to allow families to bike together to destinations including: shopping areas, libraries, parks and schools.

EVALUATION OF EXISTING BICYCLE INFRASTRUCTURE

Since the adoption of the 2009 Plan, the Austin region has seen a significant expansion of the bicycle network. The network currently consists of a variety of facilities, including protected bicycle lanes, bicycle lanes, shoulders, wide curb lanes, signed bicycle routes and multi-use paths. As of April 2014, the Austin region had a total 57.6 miles of urban trails (shared-use paths), 2.6 miles of protected bicycle lanes, 17.8 miles of buffered bicycle lanes and 210 miles of bicycle lanes. Even with a shift in focus to protected bicycle facilities, only 36 % of Austin's arterial streets have traditional painted bicycle lanes.

The first step in identifying the needs and goals for the bicycle system is to evaluate the existing system. This analysis, which includes public input as well as detailed field research, identifies the barriers in the system and guides recommendations for new facilities throughout the city.

A key issue raised during the planning process involved barriers along existing routes throughout the city. This includes concern through the public input process that bicycle lanes often end suddenly and that areas outside the center of the city are often disconnected from the existing bicycle network.

These barriers often make routes unattractive to most people. Through the process of drafting the Plan, City staff conduced a comprehensive review of prominent barriers in the existing bicycle lane network, updating the work done by the Street Smarts Task Force (SSTF) for the 2009 Plan. This barrier analysis identified 95 top physical barriers in the bicycle network discussed more in the section below.

The 2009 Plan was largely focused on bicycle lanes and barriers in the bicycle network. Over the last three years, there has been a national and local movement to look beyond bicycle lanes and create more comfortable and protected facilities. Austin currently has 20 miles of buffered bicycle lanes and 3 miles of protected lanes. An additional 30 miles of buffered or protected lanes is in the planning, design or construction stage.

The latest bicycle infrastructure development has been the implementation of a bike share system. Bike share is an on-demand point to point mobility solution available at a very low cost to users. Bike share systems have been shown as one of the most significant catalysts to increased bicycling. By removing the barrier of bicycle ownership, bike share systems significantly expand the audience for bicycling and allow casual spontaneous use. Bike sharing is also a powerful tool to bolster transit by expanding the typical "first and last mile" and making transfers between lines more flexible. A local non-profit organization handles the day-to-day operations of Austin's bike sharing system, including maintenance of the bicycles, marketing the system, and securing station sponsorships (For more information on Bike Share System see Objective 2.4).

THE BICYCLE NETWORK

☐ **Objective 2.1a: Create an All Ages and Abilities Bicycle Network**

☐ **Objective 2.1b: Remove Barriers in the Bicycle Network**

The lack of streets that safely and comfortably accommodate people on bikes of all ages and abilities is frequently cited as the top barrier to bicycling in Austin. If Austin is going to embrace the full potential of bicycles as a mode of transportation, serious efforts to implement a robust bicycle network will be necessary.

BEST PRACTICE BICYCLE NETWORK PLANNING

Cities and countries that have more than 20 % bicycle mode share have one thing in common: complete bicycle networks that accommodate people on bikes of all ages and abilities. One of the primary tools to create this network is the use of protected bicycle facilities on streets with high motor vehicle traffic levels. Where networks of these facilities are implemented and where there are high levels of short trips, significant mode shift will result. The following is an overview of the planning principles behind the current state of the practice for high quality bicycle networks targeted to achieve significant ridership.

ATTRACTING THE 'INTERESTED BUT CONCERNED' BICYCLIST AND IMPLEMENTING PROTECTED BICYCLE LANES

A framework developed by the City of Portland's bicycle coordinator, Roger Geller, classifies four types of bicyclists in any given population to help us better understand who is served by different types of bicycle facilities (paraphrased from: http://www.portlandoregon.gov/transportation/article/158497).

1. The "Strong and the Fearless" will ride regardless of roadway conditions. They are 'bicyclists;' riding is a strong part of their identity and they are generally undeterred by roadway conditions. In Austin, this group accounts for 1 to 2 % of the population.
2. The "Enthused and Confident" are comfortable sharing the roadway with automotive traffic, but they prefer to do so operating on their own facilities. They are attracted to riding on streets that have been redesigned to make them work well for bicycling. They appreciate bicycle lanes on busy streets. In Austin this group accounts for 15 % of the population, among which compose most of

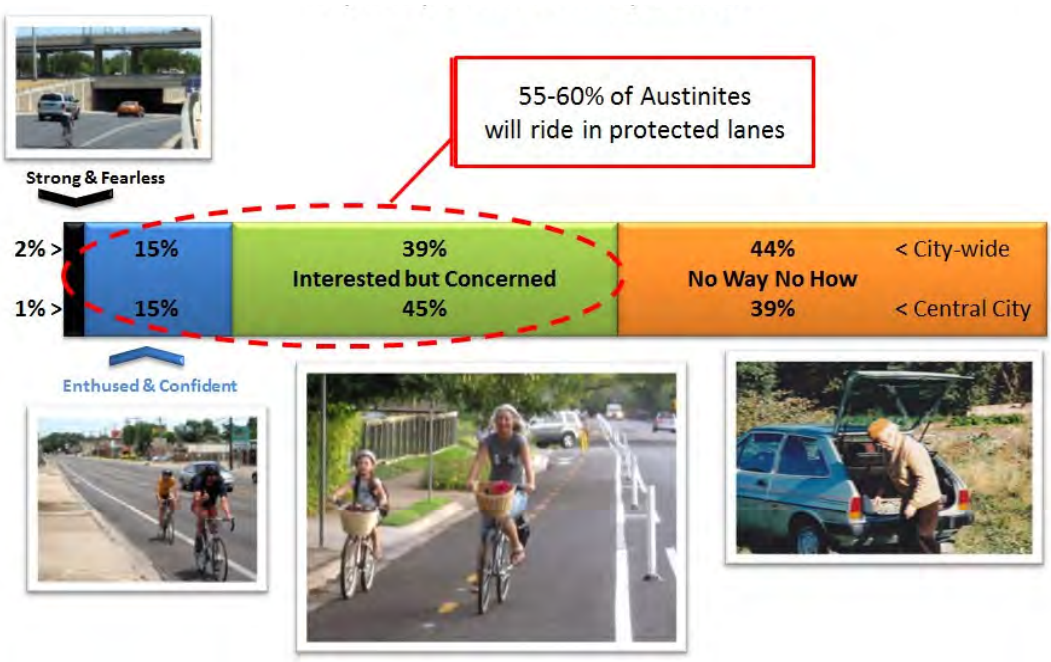
the cyclists who are supported by Austin's current bicycle network.

3. The "Interested but Concerned" is the largest demographic and are those who are curious about bicycling but concerned about their safety due to motor vehicle traffic on busy streets. They like riding a bicycle, remembering back to their youth, or a recent ride, and they would like to ride more. But, they are afraid to ride. They don't like the cars speeding down their streets. They get nervous thinking about what would happen to them on a bicycle when a driver runs a red light, or guns their cars around them, or passes too closely and too fast. Very few of these people regularly ride bicycles, perhaps through their neighborhoods to the local park or coffee shop, but will not venture out onto the arterial to the major commercial and employment destinations they frequent. They would ride if they felt safer on the roadways—if cars were slower and less frequent, and if there were more quiet streets with few cars and paths without any cars at all. In Austin, this group represents 39 to 45 % of the population.
4. The "No Way, No How" group is not interested in bicycling at all, for reasons of topography, inability, or simply a complete and utter lack of interest. In Austin, this accounts for 39 to 44 % of the population. It is unlikely that this group will convert a substantial portion of their trips to bicycle trips and this is okay. Even this group receives substantial societal benefits from bicycle trips made by the other three groups.

Geller notes the separation between these four broad groups is not generally as clear-cut as described here. There is likely quite a bit of blurring between the "enthused," the "interested," and those not at all interested, but this has proven to be a reasonable way to understand the city's existing and potential cyclists.

Geller's framework was later studied by Portland State University researcher Jennifer Dill, whose work ultimately supported Geller's findings. As part of this plan update, the City of Austin conducted a statistically significant and demographically representative phone survey to determine the portion of Austin's residents that falls into each category. Portions of the population that fall into each of these four categories are summarized for citywide as well as Central Austin. The population of Central Austin, defined as the area bounded by Oltorf Street to the south, Hwy. 2222 to the north, MoPac to the west and US 183 to the east, is slightly more inclined to ride a bicycle.

Four Types of Transportation Cyclists in Austin - by Proportion of Population



Source: City of Austin 2013 Statistically Valid Telephone Survey

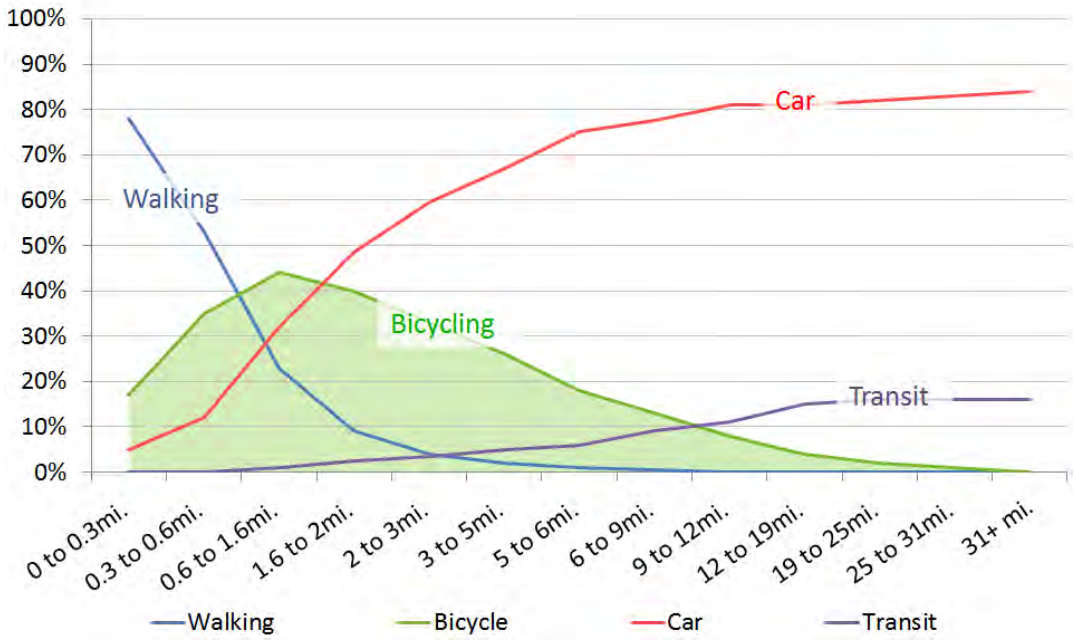
The data strongly suggests that if Austin continues to build a network using primarily painted bicycle lanes on busy roadways, about 17 % of the population would feel safe bicycling on our roadways. Other barriers such as long-trip distances and lack of end-of-use facilities will further limit our ability to reach even this portion of the population.

The data also demonstrates that if the City were able to implement an all ages and abilities bicycle network, using tools such as protected bicycle lanes and urban trails, then 55 to 60 % of the population would feel safe enough to bicycle on our roadways. Therefore, an all ages and abilities approach represents a nearly four times potential to increase bicycling compared to our existing bicycle network approach.

CAPTURING SHORT TRIPS

Because bicycling, like walking, is a human-powered form of transportation, it is inherent that there is a finite amount of energy that a person can expend to make a trip. The primary result of this fact is a practical limit on typical bicycle trip lengths. The figure below shows mode splits between walking, bicycling, transit and vehicle use at a range of trip distances.

Mode Share by Trip Length Where Safe Facilities for All Modes Are Present



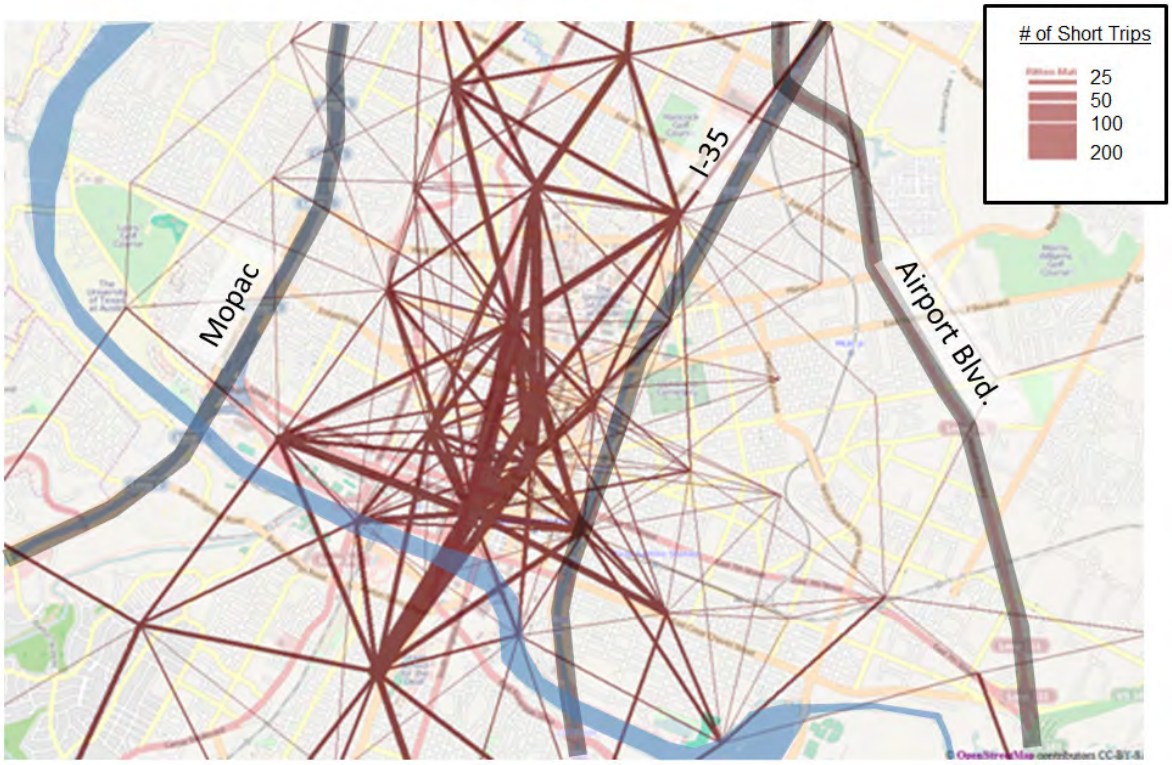
Source: Nationwide Dutch travel data 2005, RWS/AVV/MON

The vast majority of very short trips are made by walking, while longer trips are made by vehicle or transit. One very important note about this data is that the trends shown can only be obtained from a place where there are very safe walking, bicycling, transit and automobile networks. If this data were collected in a place with an unsafe bicycle and walking network (no sidewalks or bicycle lanes), you would see a very different trend that reflects a bias towards motor vehicle trips across all trip lengths. In many U.S. cities, it is common that even short trips are taken by automobile for this very reason. Data shown above is nationwide Dutch travel data including both urban and rural areas.

There is range of trip distances where the bicycle is the preferred mode of travel because it has a greater range than walking and is faster and more flexible than car or transit for many shorter trips.

During Austin's Think Bike event, where Dutch design and policy experts conducted a 3-day workshop and audit of Austin's bicycle planning, Dutch experts stressed the importance of capturing short trips. First, they showed the data above regarding mode selection by distance. Then they stressed that to achieve a maximum increase in bicycle mode shift, a network of all ages and abilities bicycle facilities should be targeted in areas with the highest concentrations of short trips. They also demonstrated how to use Austin's regional origin and destination data from the Capital Area Metropolitan Planning Organization air quality model to map out short trips. Not surprisingly, short trips are concentrated around the central city as seen in the map below.

Concentration of Short Trips in Central Austin



Source: Capital Area Metropolitan Planning Organization Origin and Destination Data, 2010

Dutch experts also stressed the importance of capturing short trips around high-capacity transit stations such as those on Austin's MetroRail line. This provides an opportunity to serve longer trips through linking transit trips with a bicycle trips.

In some areas hilly terrain may also be a significant factor towards energy limits of the rider. Whether to overcome adverse terrain or to increase trip distances, electric-assisted bicycles are increasingly seen as a supplementary tool to increasing bicycle mode share.

BUILDING A COMPLETE BICYCLE NETWORK

One of the most important focus areas is the creation of a network of bicycle facilities, not just isolated facilities. Recent research by Mekuria, Furth, and Nixon classified streets by their level of traffic stress. The research analyzed streets in San Jose, California and found that while most streets on the network were suitable for most adult cyclists (defined as Level of Traffic Stress 2-LTS2), this network was fragmented by busy, high-stress streets. The research showed that if the right streets could be improved, the islands of low stress streets could form a robust and connected network (Mekuria, Furth, and Nixon 2012, Low Stress Bicycling and Network Connectivity).

To demonstrate the power of creating an all ages and abilities bicycle network targeted where short trips exist, we can look at the lessons learned from two well know cities that have made significant advances in bicycle infrastructure: Portland, Oregon and Seville, Spain.

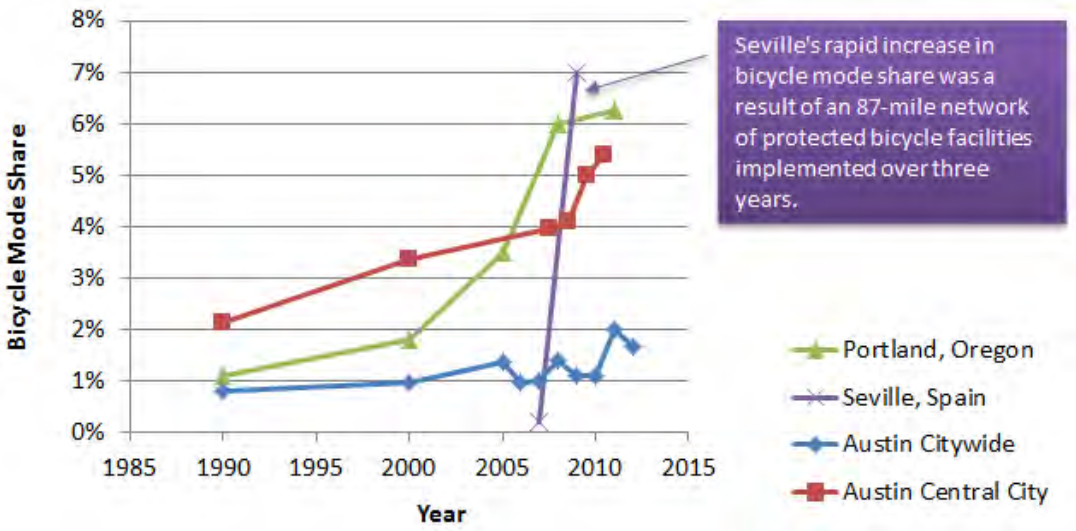
Portland, the leading large bicycle friendly city in the US, has a bicycle mode share at just over 6 % as of the 2013 American Community Survey. Portland has been working to create a bicycle network in earnest since the mid-1990's when their bicycle mode share was around 1 %. The primary tools used over this time period were bicycle lanes

PROTECTED BICYCLE FACILITIES IN SEVILLE, SPAIN (PHOTO COURTESY OF THE GREEN LANE PROJECT)

on busy streets and bicycle boulevards on underutilized streets in their grid. Only very recently have they started to implement protected bicycle facilities on busy streets. In almost 20 years, Portland has increased their citywide bicycle mode share from 1 % to 7 %.

Seville, Spain on the other hand began making improvements to their bicycle network decades later and took a very different approach. Between 2007 and 2009 they implemented an 87-mile network of Dutch inspired protected facilities for $43 million, coupled with a moderate-sized bike share system. The network was designed to be cohesive and ensure that users are clearly and safely guided through intersections. Their design target was a 65-year-old woman with groceries. Instead of taking 20 years to reach the 7 % mode share mark, Seville accomplished this in only four years. Unlike Holland, Spain had no legacy of bicycle transportation, with Seville having only a 0.2 % mode share in the year 2000.

The chart shows both Austin citywide and our Central City mode share change over time since 1990. Due to the recent expansion of the Austin's bicycle network, the Central City bicycle mode share is on an upward trend much like that of Portland in the mid-2000s. The chart suggests that by shifting to a new approach in Austin and implementing a strategically focused all ages and abilities bicycle network, a dramatic increase in bicycling and related benefits is possible in a very short time.



RISE OF CYCLING OVER TIME IN PORTLAND, SEVILLE, AND AUSTIN

Source: City of Austin

BICYCLE FACILITY TOOLBOX

Many types of bicycle facilities will be used throughout Austin to create a robust bicycle network. The bicycle facilities described below are grouped into two categories: tools to create an all ages and abilities network and other supporting bicycle facilities.

ALL AGES AND ABILITIES BICYCLE NETWORK TOOLBOX

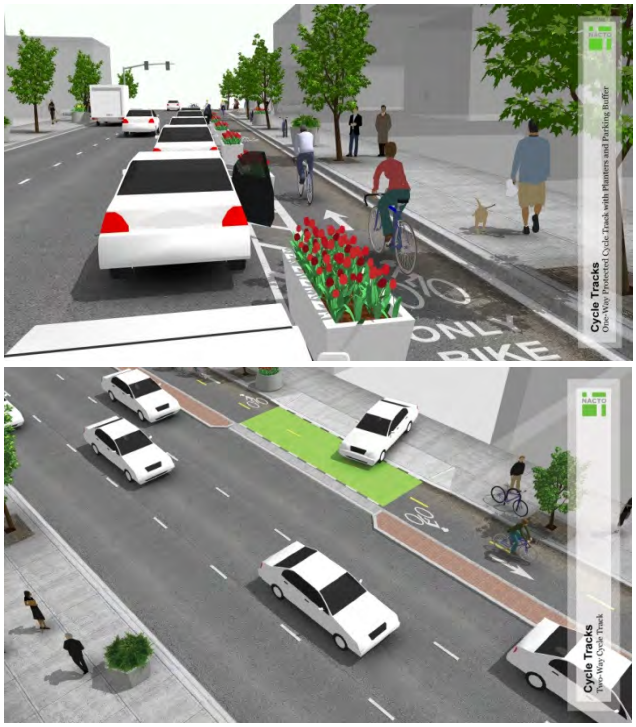
In order to provide a safe, all ages and abilities bicycle network, the following bicycle facility types must be connected to complete a cohesive network: protected bicycle lanes on major streets, urban trails, bicycle boulevards on calmed or quiet streets. Nearly all cities will use a combination of these facility types to retrofit streets with a robust, low-stress network, though the weight given to each element will vary, as each will have unique constraints and opportunities. The following descriptions provide an overview of these tools.

Protected Bicycle Lanes

A protected bicycle lane is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A protected bicycle lane is physically separated from motor vehicle traffic and distinct from the sidewalk. Protected bicycle lanes have different forms, but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed protected bicycle lanes are located to the curb-side of the parking (in contrast to bike lanes).

Protected bicycle lanes may be one-way or two-way, and may be at street level, at sidewalk level, or at an intermediate height. If at sidewalk level, a curb or median separates these lanes from motor vehicle traffic, while different pavement color/texture separates the protected bicycle lane from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking, bollards, or other physical barriers. By separating cyclists from motor vehicle traffic, protected bicycle lanes can offer a higher level of security than bike lanes and are attractive to a wider spectrum of the public. (NACTO, Urban Bikeway Design Guide, 2014)

One-way and two-way protected bicycle lanes as shown in the NACTO Urban Bikeway Design guide (Graphic courtesy of NACTO, Urban Bikeway Design Guide)



On-street protected bicycle lanes often require more on street or right-of-way (ROW) width than painted bicycle lanes to provide the barrier and sufficient width for passing. Opportunities for protected bicycle lanes will exist where streets or rights of ways are wide enough to accommodate protected bicycle lanes among the other competing interests for the space.

Urban Trails and Dedicated Bikeways

Urban trails and dedicated bikeways are paths physically separated from motorized vehicular traffic by an open space or barrier and are located either within the road right-of-way, within an independent right-of-way, or accommodated in another way, such as parkland. Urban trails are shared by multiple users including, but not limited to, pedestrians, skaters, wheelchair users and bicyclists, while dedicated bikeways are designated for exclusive use by bicycles. For all weather operation, most trails will have a smooth hard surface.

URBAN TRAIL WITH SEPARATE PATHS FOR BICYCLES AND PEDESTRIANS

Quiet Streets

RIO GRANDE BOULEVARD

Quiet streets, otherwise known as bicycle boulevards or neighborhood greenways, are streets with low motorized traffic volumes and speeds that are designated and designed to give bicycle travel priority. Bicycle boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets (NACTO Urban Bikeway Design Guide, 2014).

Traffic calming elements of quiet streets are also excellent opportunities to integrate green infrastructure to meet several community goals in one project.

Intersection Treatments

For the crossing of major street barriers in the low-stress network, intersection treatments can be used to make the crossings safer and more comfortable. Tools include, but are not limited to bicycle signals, hybrid beacons that give indication to cyclists, median refuge islands, two-way protected bicycle lane connections at offset intersections, and intersection crossing markings.

OTHER SUPPORTING BICYCLE FACILITIES

The following bicycle facility types are not the primary tools used to create an all ages and abilities network, but will be used to enhance the bicycle network and address barriers in the system.

Bicycle Lane, Buffered Bicycle Lane

A bicycle lane, or a bike lane, is defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use by bicyclists. Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions and facilitate predictable behavior and interactions between bicyclists and motorists. A bike lane is distinguished from a protected bicycle lane in that it has no physical barrier (bollards, medians, raised curbs, etc.) that restrict the encroachment of motorized traffic. Conventional bike lanes are located curbside when no parking is present and between parking and motor vehicle traffic when it is present. Bike lanes are traditionally located on the right-hand side of the street but can be located on the left-hand side of the street in specific situations. Bike lanes typically run in the same direction as traffic, though they may be configured in the contra-flow direction on low-traffic corridors necessary for the connectivity of a particular bicycle route.

The configuration of a bike lane requires a thorough consideration of existing traffic volumes and behaviors, adequate safety buffers to protect bicyclists from parked and moving vehicles, and enforcement to prohibit motorized vehicle encroachment and double-parking. Bike Lanes may be distinguished using color, lane markings, signage, and intersection treatments (NACTO Urban Bikeway Design Guide, 2014).

Shoulder

A shoulder is defined by the American Association of State Highway and Transportation Officials (AASHTO) as “the portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of the sub-base, and surface courses” (AASHTO, 2011). A shoulder can accommodate bicyclists if it is adequate in width and

pavement surface and has few driveways or other crossings. Minimum width shoulders are not preferred even on lower speed roadways. Shoulders on higher speed roadways should be even wider to provide adequate separation. Texas legal code allows continuous use of the shoulder only by bicycles, emergency vehicles and maintenance crews. At conflict areas and intersections, shoulders should be transitioned to bicycle lanes so explicit guidance can be given to roadway users. On roadways with shoulders, as with all bicycle facilities, continuity is critical for the safety and comfort of cyclists. Shoulders that end abruptly, just like bicycle lanes are often a significant hazard and deterrent for people on bicycles.

Traffic Calming

Traffic calming devices are used to reduce motorized vehicle speeds or volumes and thus improve the real and perceived safety for roadway users, especially non-motorized users of a roadway. The City of Austin utilizes a variety of traffic calming devices including: speed cushions, traffic circles, chicanes, semi-diverters, roundabouts, bulb-outs, center islands and median barriers.

According to the Pedestrian and Bicycle Information Center, bicyclists are concerned that some traditional traffic calming techniques (narrowing streets and speed cushions) have a negative impact on bicyclists. However, a report written by Andrew Clarke and Michael Dornfeld in 1994 as part of the National Bicycling and Walking Study, concluded that “the experience from Europe clearly shows that bicycle use has been encouraged by traffic calming” (PBIC, Traffic Calming). If designed and implemented properly, with consideration for the impacts on bicyclists, traffic calming devices can have beneficial impacts for bicyclists and pedestrians.

Traffic calming infrastructure is an excellent opportunity to integrate green infrastructure and meet multiple goals in one project.

BICYCLE NETWORK DESIGN PRINCIPLES, NETWORK PERFORMANCE CRITERIA, AND FACILITY CRITERIA

To achieve the goal of creating an all ages and abilities network, the following design principles, network performance criteria, and facility criteria should be applied.

BICYCLE NETWORK DESIGN PRINCIPLES

Five design principles have been identified by Dutch bicycle experts as the primary requirements for a successful, high-quality bicycle network. If any one of these five elements is not adequately addressed the street or bicycle facility should be reevaluated for improvement.

1. **Cohesion**

   The bicycle network will be a cohesive whole with complete routes that are easily understandable. Wayfinding, intersection markings, coloring and other treatments will be used to provide intuitive guidance to cyclists. The need for cohesion led to the feasibility analysis of a network of seamless connected, low-stress bicycle facilities that could be implemented in the short term.

2. **Directness (and Travel Efficiency)**

   As mode choice is primarily made on a time-competitive basis, every effort will be taken to minimize delay for bicyclists in the network. Safe bicycle facilities on direct routes will be prioritized. Travel efficiencies to minimize time delay are encouraged, including tactics such as green signal waves timed to bicycle speeds and orientation of traffic controls that reduce the number of full stops cyclists have to make.

3. **Safety**

   Safe conditions are the single largest barrier that keep people from bicycling. Austin streets should be made safe for people on bicycles of all ages and abilities.

4. **Attractiveness**

   Effort will be made to provide an enjoyable trip that allows users to ride socially (side-by-side), separated from the stress of traffic, and in built environments that are human-scaled and hospitable.

5. **Comfort**

   The comfort of the user experience will be maximized by providing adequate separation from traffic, minimizing flow interruptions, and providing smooth surfaces, shade and comprehensibility, along routes.

NETWORK PERFORMANCE CRITERIA

To create a high-quality bicycle network, the following performance criteria will be adhered to accomplish this goal.

Network Density

The goal will be to provide a bicycle network density with routes spaced every half to quarter of a mile. This will provide acceptable access to residences, businesses and employment. This spacing provides a distance to the nearest bicycle route that provides convenient access without long detours.

For the short term, all ages and abilities network, this density was applied in Central Austin in an approximately gridded pattern. Around major transit stations, transit-oriented developments and Imagine Austin centers, network density is applied radially to provide access to surrounding areas.

Austin is dominated by suburban development patterns with separated uses and a largely disconnected street network that is dependent on arterial roadways. The Imagine Austin Plan calls for compact and connected development patterns including complete streets with smaller interconnected blocks. Where roadway connections are not possible, bicycle and pedestrian connections should be made at a minimum.

Safety Performance Target

Both streets and bicycle networks will be held to the "8-80" test, aimed at creating a network in which both 8-year-olds and 80-year-olds can move about safely and enjoyably. This is the level of quality the Plan aspires to for the all ages and abilities bicycle network and more generally our efforts to create complete streets.

Austin's low-stress network will be designed to perform at a level that accommodates the "Interested but Concerned" portion of the population that tolerates a Level of Traffic Stress 2 (LTS2) (See Chapter 2, Best Practices in Bicycle Network Planning, Building a Complete Bicycle Network to read more about low stress bicycle networks

and LTS categories). Where possible, the network will be enhanced to accommodate children by providing a Level of Traffic Stress 1 (LTS1).

Design Cyclist

Bicycle planning and design must be done from the cyclist point of view. Designs must account for differences in age, gender, physical abilities, bicycle types, and reasons for cycling. The following are the parameters that will be used in the design of Austin's bicycle network:

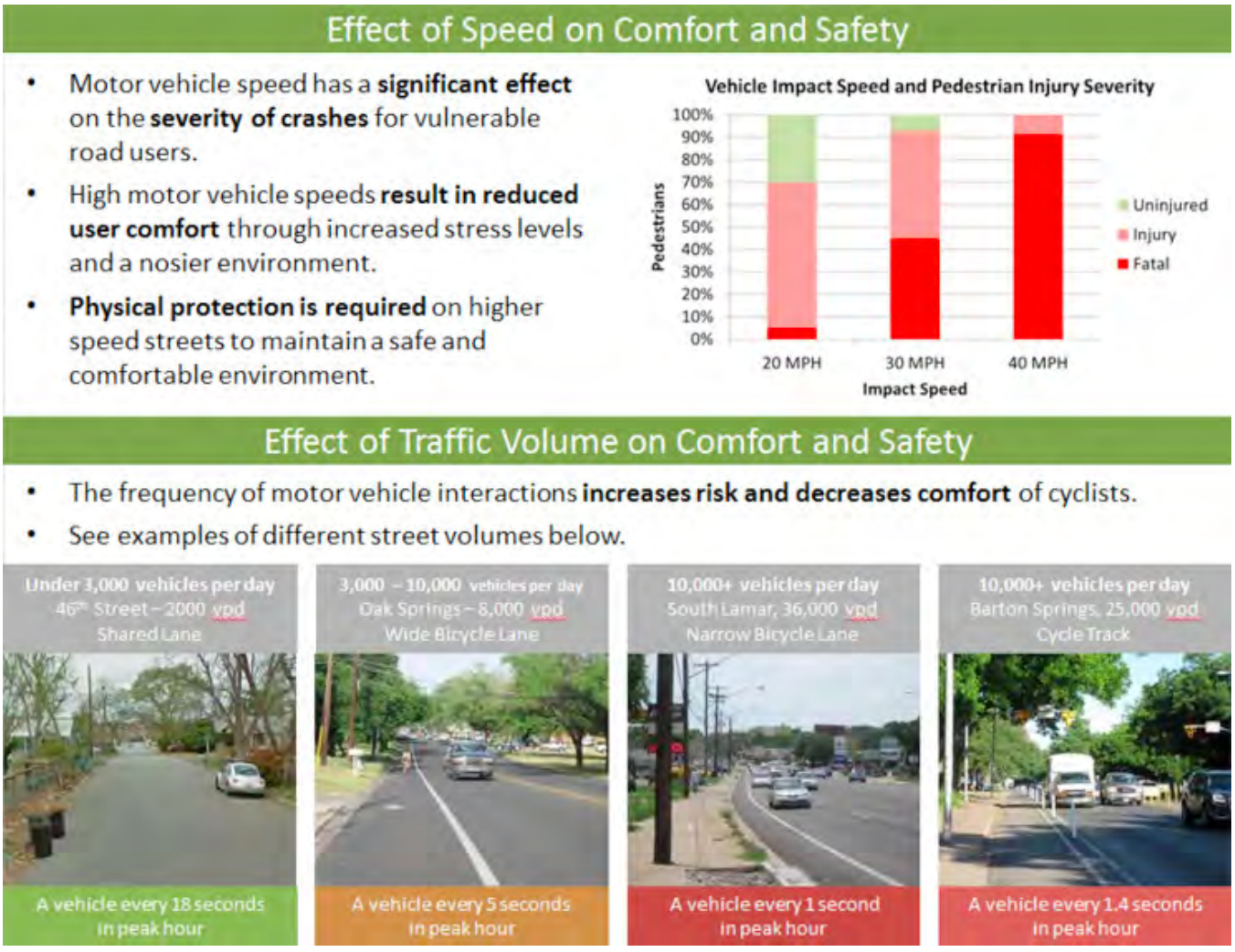
- ☐ **Design Person:** Austin's bicycle network will be designed for people of all ages and all abilities.
- ☐ **Design Speed:** The design speed of the network will generally be optimized for a commuter cyclist traveling 10 to 15 mph. In certain contexts, design speeds of 5 to 20 mph will be used.
- ☐ **Design Width:** The width of bicycle facilities is important for the safety, comfort, operation and maintenance of bicycle facilities. Bicycle facilities should be designed to allow passing, side-by-side riding where possible. Bicycle facilities should also be wide enough to be swept by Austin's street sweeping fleet. The acquisition of narrower sweepers could allow narrower bicycle facilities in constrained locations. Additionally, extra width provides additional capacity for the facility as bicycle traffic does not necessarily flow in a single file like a motor vehicle lane. Therefore, the minimum recommended width for one-way protected facilities is 8 feet. The minimum recommended width for two-way facility is 10 feet. If high bicycle volumes are anticipated, even in a decade-long horizon, serious consideration should be given to wider facilities.
- ☐ **Crossing Time:** Crossing timings will account for children and the elderly.
- ☐ **Design Bicycle:** Designs will accommodate trail-a-bikes, trailers, tandems and cargo bikes.

ON-STREET BICYCLE FACILITY CRITERIA

The following table shows the criteria used for facility selection and design to create all ages and abilities bicycle facilities.

Criteria for Physical Protection

Streets with high speed and volume should have physically protected bicycle facilities: protected bicycle lanes or urban trails. Higher motor vehicle speeds have a significant negative safety impact on the safety of all roadway users. Higher motor vehicle volume along streets significantly increase the risk and decrease comfort for people on bicycles.



Source: Graphic by City of Austin, Speed vs Pedestrian Severity Data from Pasanen, 1992

At higher speeds and volumes, physical separation is necessary to achieve conditions that are safe for people of all ages and abilities. The follow table shows the criteria used to develop the recommended bicycle facility at various combinations of speed and volume.

Bicycle Facility Recommendations by Speed and Volume

The following is contextual guidance for the selection of appropriate bicycle facilities developed by the City of Austin. The guidance replaces recommendations based on the 1992 Federal Highway Administration document "Selecting Roadway Design Treatments to Accommodate Bicycles" that did not recommend facilities with greater physical protection than a bicycle lane, even on high speed and volume multilane roadways. The Plan's recommendations developed by City of Austin correct this shortcoming and provide recommendations based on the speed volume that range from shared lanes on low speed and volume streets to protected bicycle lanes on higher speed and volume roadways.

		Average Annual Daily Traffic (vehicle per day)		
		Less than 3,000	3,000-9,999	10,000+
85th Percentile Speed (MPH) Meaured or Projected	< or =30	Shared*	Bike Lane	Buffered
	31-40	Bike Lane	Buffered	Protected
	41-50	Buffered	Protected	Protected
	> 50	Protected	Protected	Protected

*Local streets that are important for the all ages and abilities network with less than 3,000 vpd and 30 MPH should be treated as necessary to meet the performance guidelines for Quiet Streets.

:

Source: City of Austin

In addition to speed and volume criteria for physical protection, special consideration will be given to other factors including but not limited to curbside activity, on-street double parking pressures, parking frequency, delivery activity, multiple travel lanes, transit service, and route continuity such as completing gaps in off-street urban trails.

The City of Austin developed bicycle facility section contextual guidance as an interim measure until contextual guidance by NACTO is released. The NACTO guidance is expected to be the first U.S. based contextual guidance to include protected bicycle lanes and will set the new national best practice. The Plan recommends adopting NACTO recommendations for bicycle facilities as soon this new guidance is available.

Performance Criteria for Quiet Streets (Bicycle Boulevards) in the Low-Stress Network

Quiet Streets in the low-stress bikeway network should adhere to the most current guidance in the NACTO Urban Bikeway Design Guide for Bicycle Boulevards. At the time of adoption the following are the recommended speed and volume targets (2014):

Speeds: The 85th percentile speed should be managed to be at 25 mph or less, with 20 mph as the preferred speed.

Volumes: Motor vehicle volumes should be managed to be under 1,500 vehicles per day, with up to 3,000 vehicles per day allowed in limited sections of the corridor.

PLANNING AUSTIN'S BICYCLE NETWORK

The long-term goal of this plan is to ensure all streets in Austin are accessible by bicycle for people of all ages and abilities. Physically protected bicycle lanes will be necessary on busy streets before this goal is met. Even after decades of working toward a complete bicycle lane network only 36 % of arterial streets have a bicycle lane so the full build-out of our city streets will be a long term pursuit. This plan documents a complete set of bicycle facility recommendations for all streets in the bicycle network. While all of the complete set of recommendations are not of the same priority, they provide guidance that complies with this Plan and Austin's Complete Streets policy at the time that there is an opportunity to reconfigure the roadway.

The only way to create an all ages and abilities bicycle network in Austin within a short-term time frame is to use a combination of bicycle facility types where opportunities exist to form a cohesive network. The Plan recommends a priority short-term all ages and abilities bicycle network that will capture the the benefits that bicycling can bring to Austin. The short-term network was strategically cost optimized to deliver the highest public value for the investment.

The planning recommendations for the creation of a bicycle network suitable for people on bicycles of all ages and abilities are thus twofold:

1. **Short-Term, All Ages and Abilities Network Recommendations:** Analysis was conducted to develop an all ages and abilities network that could be achieved in the short term, defined as the next five years, within the context of existing traffic volumes, on-street parking demands and construction/feasibility.

2. **Complete Bicycle Facility Recommendations:** Recommendations for all streets in the plan, not filtered by near term feasibility and may take many decades to realize. Recommendations are based on speed, volume criteria and other contextual factors.

Additional sections address other important aspects of creating a complete bicycle network. These include addressing barriers in the existing bicycle lane network, removing on-street parking in bicycle lanes, and how to handle the unique opportunities presented by TxDOT-managed roadways.

PLANNING FOR A SHORT-TERM ALL AGES AND ABILITIES NETWORK

As cities throughout the United States and abroad work toward all ages and abilities networks, differences between opportunities and constraints will determine the best approach to create these networks. The following examples illustrate differences between approaches in several U.S. cities.

- Portland, Oregon has been able to implement a robust and high-quality network of bicycle boulevards due to redundancies in their largely complete street grid network. This network has been a significant factor in achieving the highest bicycle mode share of a large city.
- Davis, California has integrated off-street trail into their developments since the 1970s and as a result has created a robust network of off-street facilities. Bicycle mode share in Davis is one of the highest of any city in the U.S.
- New York City, New York is retrofitting wide, one-way avenues to have protected bicycle lanes without affecting and often improving motor vehicle level of service and safety. The transformations of NYC's major streets have resulted in incredible increases in bicycle use in the last five years.

Because Austin does not have the same opportunities as the example cities listed above, the approach here will have to be different. Austin will have to create a low-stress network using a combination of protected bicycle lanes, urban trails, and quiet streets where opportunities exist. The following section gives more details about Austin's approach in using each of the following bicycle facility types to form a cohesive all ages and abilities network.

Opportunities to Create a Short Term All Ages and Abilities Network

Protected Bicycle Lanes

THE PEDERNALES PROTECTED BICYCLE LANE CONNECTS THE BOGGY CREEK TRAIL TO THE BUTLER TRAIL (RENDERING COURTESY OF MCCANN ADAMS STUDIO).

In Austin, some streets will be able to be converted to protected bicycle lanes within existing curb lines or in the right of way without major reconstruction in the short-term. In the long-term, protected bicycle lanes could be created with large capital projects or by upgrading existing bicycle lanes as private development occurs. The following are strategies to use this tool in Austin to create a low stress network:

- ☐ Provide protected bicycle lanes where current street space allows on streets that meet speed and volume criteria and other contextual factors.
- ☐ Use protected bicycle lanes to connect urban trails and bicycle boulevards to form a cohesive all ages and abilities bicycle network. Where these connections are not possible due to constraints, the connection should be made with bicycle lanes or other appropriate facilities so the network remains cohesive.
- ☐ Leverage private development and capital projects to implement recommended protected bicycle lanes.

Urban Trails

Austin has a number of opportunities for urban trails, though potential corridors are often fragmented and do not follow travel desire lines. One of the most significant urban trail assets is the Butler trail system around Lady Bird Lake that is an ideal central hub for the all ages and abilities network. There are also a number of spoke trails off this backbone that connect to adjacent neighborhoods, though in some cases private property limits their reach. Outside of the existing hub and spoke system there are some additional potential corridors for urban trails, though many of these opportunities are limited and will need on-street connections to create a network. Opportunities and existing assets include the Mueller Trail system, Boggy Creek Trail, utility/rail corridors and TxDOT ROWs along controlled access highways.

An Urban Trail Master Plan is being created in parallel with the 2014 Bicycle Master Plan. The Urban Trails Master Plan will include recommendations for a comprehensive network of urban trails and develop prioritization for potential trails. This plan looks at urban trails as a tool to supplement on-street connections. Potential urban trails are acknowledged in the long-term recommendations in this plan. The prioritized short-term recommendations in this plan include urban trails that are an integral part of the all ages and abilities bicycle network.

THE BOARDWALK TRAIL COMPLETED IN 2014 AND PICTURED ON OPENING DAY, COMPLETES THE BUTLER TRAIL LOOP AND PROVIDES BICYCLE ACCESS TO EAST RIVERSIDE AREA.

The following are strategies to use urban trails in Austin to create an all ages and abilities network:

- ☐ Find opportunities to extend the existing Butler Trail system, extending routes up Shoal Creek, Waller Creek, Johnson Creek, Robert E. Lee/Bluebonnet and other corridor opportunities.
- ☐ Build urban trails to bridge significant gaps in the on-street bicycle network.
- ☐ Connect urban trails using protected bicycle lanes and bicycle boulevards to create a cohesive low-stress network.
- ☐ Improve cohesion of on-street and off-street networks by making transitions between on-street and off-street urban trails seamless. This includes design that brings urban trails to intersect directly with streets and makes street crossings safe; provides trail-head treatments that are highly visible, consistent, easily recognizable; and includes wayfinding signage along the urban trails.
- ☐ Design trails with transportation cyclists in mind as recommended in the Urban Trails Master Plan. This includes providing hard, smooth surfaces and separate trails for pedestrians and wheeled users (bicyclists, rollerbladers, skateboarders, mobility impaired, etc.) where space allows. This will create a safer and more accessible trail system for all users.

<u>Quiet Streets</u>

Much of Austin lacks the comprehensive grid street network that creates ideal conditions for quiet streets, also known also as bicycle boulevards or neighborhood greenways among bicycle planning professionals. In Austin, based on predominately suburban era development patterns, collector streets are often the lowest street classification that has significant connectivity. These streets are not appropriate for volume diversion due to their importance to the motor vehicle network. Given Austin's street typology, the use of quiet streets will largely be limited to making connections between other low-stress facility types on streets that are not critical to the motor vehicle network. Often times, these quiet street routes are obstructed by major street crossings and physical barriers such as creeks. These barriers will have to be overcome for quiet streets to provide useful connections to the all ages and abilities network. The following are strategies to use this tool in Austin:

- ☐ Evaluate opportunities for quiet streets where there is a street grid that offers redundancy and best practice speed and volume performance targets can be achieved.

- ☐ Use quiet streets to provide connections to urban trails and protected bicycle lanes to form an all ages and abilities network.
- ☐ Connect quiet streets across barriers to create contiguous routes.

The City of Austin Watershed Protection Department is always searching for opportunities to reduce impervious cover and add green infrastructure, while increasing comfort and safety for pedestrians and bicyclists. This is an excellent opportunity to combine multi-department City objectives to save money and deliver higher value to the public.

The Traffic Calming Program will work closely with the Bicycle Program regarding the application of traffic calming devices on bicycle routes in this Plan to ensure that goals of the bicycle plan are being met.

Intersection Treatments

Intersection treatments should be used to cross barriers created by busy streets to bring the previous three facility types into a network.

Focus Areas for Short-term All Ages and Abilities Network

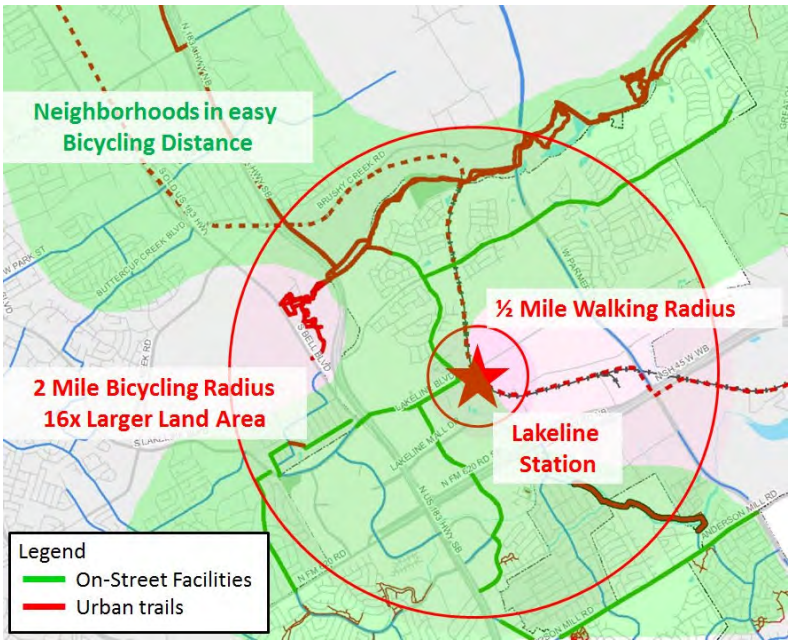
One of the most important shifts in focus for this update is to provide a safe bicycle network where short trips can be shifted from motor vehicle to bicycle trips, as discussed previously. The following locations in the City are those that have the highest potential for short trips and where this plan recommends the strategic implementation of all ages and abilities bicycle facilities

Central City

The central city has the highest concentration of short trips because there are high density, mixed-use properties that are in close proximity to the region's primary employment center. The short trips in the central city present the most significant opportunity to reduce drive alone trips by substituting them with bicycle trips. As regional traffic issues are concentrated in the central city, the conversion trips to bicycle in this area represent a significant opportunity to address regional congestion while offering mode choice to those interested in traveling by bicycle.

Major Transit Stations and Transit Oriented Development Areas

Generally, longer trips originating from outlying areas are less likely to attract a significant number of people riding bicycles. So the prioritization of an all ages and abilities bicycle network in these areas can divert resources from areas that would have more impact. An exception to this rule is in areas around major transit stations that provide an opportunity to link a transit trip with a bicycle trip to cover greater distances and increase the flexibility of transit. If all ages and abilities bicycle facilities are provided, radiating from major transit stations to nearby destinations, bicycle trips less than 5 miles to and from the station are reasonable and have the potential to significantly increase transit ridership and decrease parking requirements around stations.



PROPOSED ALL AGES AND ABILITIES NETWORK FEEDING THE LAKELINE STATION *Source: City of Austin*

A perfect example of this are neighborhoods near Capital Metro Red Line stations that are within convenient bicycling distance of the stations. Currently these neighborhoods do not have all ages and abilities bicycle facilities connecting to the stations, but once they do, people could take a short bicycle trip to the station where they can take a high-speed transit to the downtown employment center. Combining transit and bicycle trips makes it possible for those who have even relatively long trips or commutes to benefit from an active bicycle commute linked with a high quality transit experience free from the stresses of driving in traffic.

The map looks at the proposed all ages and abilities bicycle network to get people to the Capital Metro Red Line Lakeline Station. Compared to the typical half-mile walking

radius, a 2-mile bicycling radius reaches a 16 times greater land area.

The City of Austin, Capital Metro and other regional partners have developed a regional high capacity transit framework called Project Connect. This transit framework plans for many significant transit stations in outlying areas and is an excellent opportunity to significantly increase the market for transit and convert drive alone trips to transit/bicycle trips, generating regional traffic improvements.

Bike Share Operating Area

Bike Share systems also play a significant role in extending the reach and viability of transit trips. Access to first and last mile connections or flexible transfers between transit lines can be made without requiring a private bicycle. Providing an all ages and abilities network within the operating area of bike share will significantly expand the number of people comfortable using the system. Austin's bicycle share system is currently located in the downtown area and for the foreseeable future will be contained within central Austin. Areas where bike share system is expanded should be analyzed for the potential for all ages and abilities bicycle facilities and become a focus area of the short-term bicycle network.

Imagine Austin Centers and Corridors

Another focus area for the all ages and abilities bicycle network is in and around Imagine Austin Centers. The Imagine Austin plan designated regional centers, town centers, neighborhood centers, activity corridors and activity centers as places where there is a desire to create a dense mix of uses to encourage walkable, bikeable, and transit friendly areas. There is a potential for a significant concentration of short trips around these centers. These centers are a focus area of the all ages and abilities bicycle network, both within the center and providing connections to surrounding areas. By providing safe bicycle connections to and through the centers, trips by bicycle will help to support the creation and viability of centers as envisioned in Imagine Austin.

Key Feeder Routes to Central City

While the most significant opportunity to catch short trips is in the 0-3 mile range, there is also potential to catch slightly longer trips in the 3-9 mile range. Input received during the planning process supports connecting outlying areas to the central city with protected bicycle facilities. The all ages and abilities bicycle network includes routes in all directions from the center of the city

- Northwest: Shoal Creek / HW 183
- North: North Lamar
- Northeast:
    - Berkman / Cameron
    - 290 Toll
    - Southern Walnut Creek and Austin to Manor Trail
- East: FM 969
- Southeast:
    - Bergstrom Expressway / HW71
    - Pleasant Valley
- South: South Congress
- Southwest: South Mopac, Violet Crown, and YBC
- West: HW 360 and connections to core

Access to Schools

Focusing all ages and abilities bicycle facilities around schools provides an opportunity to encourage bicycling to school and physical activity for students.

PROTECTED BICYCLE LANES ON BLUEBONNET LANE, SERVING ZILKER ELEMENTARY.

One of the significant barriers to bicycling to school is traffic generated by the high volume of families that drive their children to school. The challenge is that traffic is heaviest immediately surrounding the school making these locations the most important to have all ages and abilities bicycle and walking infrastructure. The traffic volumes and driving habits create a vicious cycle that causes more and more families to feel uncomfortable letting their kids walk or bicycle to school.

One way to reverse this cycle is to provide safe places to walk and bicycle to school. Safe routes to school have been a focus for many years including receiving federal funding to

build sidewalks. Unfortunately sidewalks often do not result in safe and comfortable places to ride to school due to inadequate sight distance for bicyclists and crowding near schools. In the last two years the City of Austin has been approached by principals at several schools to help provide protected bicycle facilities to the front door of the school. Protected bicycle lanes on Bluebonnet Lane installed in 2012 resulted in an increase from single digit to 40 children riding to Zilker Elementary after only one year. Another new protected bicycle lane and bridge serving Hart Elementary, in coordination with a kids earn a bicycle program resulted in an increase from nearly zero to over 80 children riding to school after only one month. Protected bicycle lanes to several other schools are currently planned and will be implemented over the next year and are an exciting opportunity to get more children and their parents riding.

The Plan does not include detailed recommendations for all ages and abilities bicycle facilities to schools. Recommendations are instead handled on a broad policy level, due to the complex management of pick-up and drop-off operations, governed by both the school administration and Campus Advisory Groups. Streets surrounding schools have the added complication of having high traffic volumes during pick-up and drop-off times only, likely less than an hour a day for the 180 school days a year. Justifying a bicycle facility on such a limited basis will have to be a community conversation that best balances getting kids safely to school in an active and healthy way as well as other community needs such as on-street parking.

This plan recommends working with stakeholders from schools and the surrounding community to assess the feasibility of all ages and abilities facilities to provide students with safe access to campus. This includes the potential for new bicycle facilities, changes to existing on-street parking, and operational changes, such as conversion to one-way streets. All streets around a particular school should be holistically addressed including streets that are not specifically named in the Plan due to the fact that the plan typically only makes explicit bicycle facility recommendations on streets that serve citywide commuter routes. The bicycle facilities implemented should ideally be protected bicycle facilities, separate from both motor vehicle and pedestrian traffic. To provide the highest level of service possible, the bicycle facility should continue directly to the bicycle parking which should be located as close as possible to the main entrances to the schools.

Access to Parks

All Ages and Abilities bicycle facilities to and through parks provide a great way for people to both access and experience these special public spaces. Often times the primary form of access to an within parks is by motor vehicle which degrades park lands both by requiring large areas for the movement and storage of these vehicles and by the nuisance of noise created. Safe protected bicycle facilities allow people to experience our parks in a much less invasive way, preserving more of park land for its intended purpose. High quality non-motorized connectivity, in the forms of protected bicycle lanes and urban trails, serves not only people on bicycles but people of all ages on razor scooters, roller blades, roller skates, skate boards and wheelchairs. Because these facilities serve such a wide audience and can access areas where motor vehicle access is undesired or infeasible, they have the potential to activate areas deep within parks that are currently underutilized, bring our parks to life.

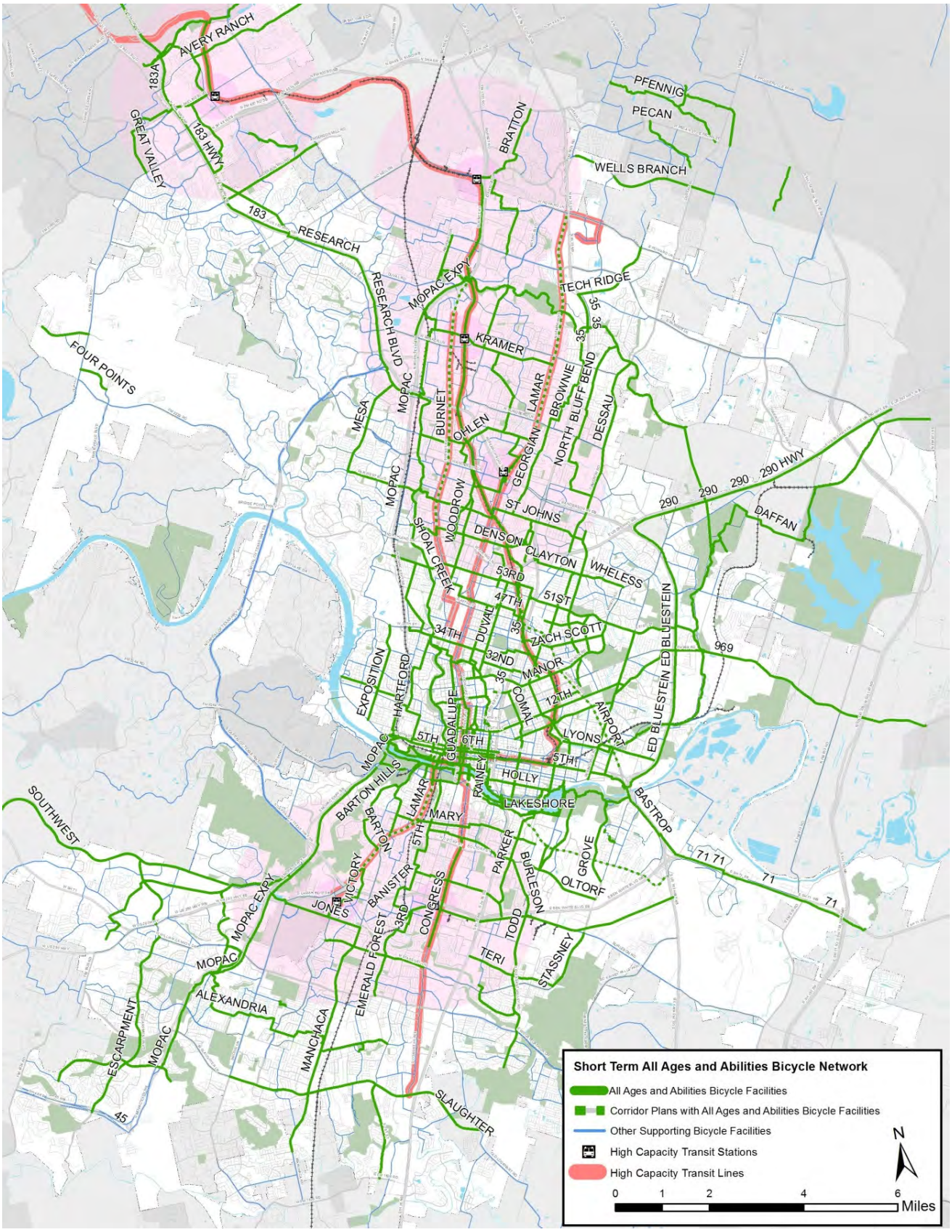
Neighborhood Feeder Routes and Destinations

In some neighborhoods improved bicycle facilities may be necessary to provide safe access from neighborhood areas to the all ages and abilities bicycle network or other local destinations. Improved bicycle facilities and traffic calming techniques should be evaluated in partnership with local residents or neighborhood association to remove barriers to bicycle travel even if the streets is not designated as part of the citywide bicycle network.

All Ages and Abilities Bicycle Network Recommendations

The all ages and abilities bicycle network is a set of facility recommendations developed to deliver the highest cost/benefit on the investment. The network would result in a significant increase in bicycle use and help the City meet its goals as set out in the Imagine Austin Plan. The recommendations are such that they would be feasible to be implemented in a short time frame, the next five years, if the investment was funded. Near-term feasibility accounted for existing parking demand and traffic volumes, and the ability to implement without costly street reconstructions. Most of these facility recommendations would be achieved by optimizing the existing street space to improve conditions for bicycling while still meeting the other needs of the street.

The following maps show the recommended all ages and abilities bicycle network. See Appendix A for a complete table of recommended bicycle facilities.


AVERY RANCH
183A
GREAT VALLEY
183 HWY
183
RESEARCH
RESEARCH BLVD
MOPAC EXPY
BRATTON
PFENNIG
PECAN
WELLS BRANCH
TECH RIDGE
35
KRAMER
FOUR POINTS
MESA
MOPAC
BURNET
OHLEN
LAMAR
BROWNIE
NORTH BLUFF BEND
DESSAU
GEORGIAN
WOODROW
ST JOHNS
DENSON
CLAYTON
WHELESS
290
290 HWY
DAFFAN
SHOAL CREEK
53RD
51ST
47TH
34TH
DUVAL
ZACH SCOTT
32ND
MANOR
969
ED BLUESTEIN
EXPOSITION
HARTFORD
COMAL
12TH
AIRPORT
LYONS
GUADALUPE
5TH
6TH
RAINEY
HOLLY
LAKESHOREE
BARTON HILLS
BARTON
MARY
BASTROP
SOUTHWEST
PARKER
BURLESON
GROVE
OLTORF
71
VICTORY
BANISTER
JONES
CONGRESS
3RD
TODD
TERI
STASSNEY
MOPAC EXPY
MOPAC
ALEXANDRIA
EMERALD FOREST
MANCHACA
ESCARPMENT
SLAUGHTER
45
Short Term All Ages and Abilities Bicycle Network
All Ages and Abilities Bicycle Facilities
Corridor Plans with All Ages and Abilities Bicycle Facilities
Other Supporting Bicycle Facilities
High Capacity Transit Stations
High Capacity Transit Lines
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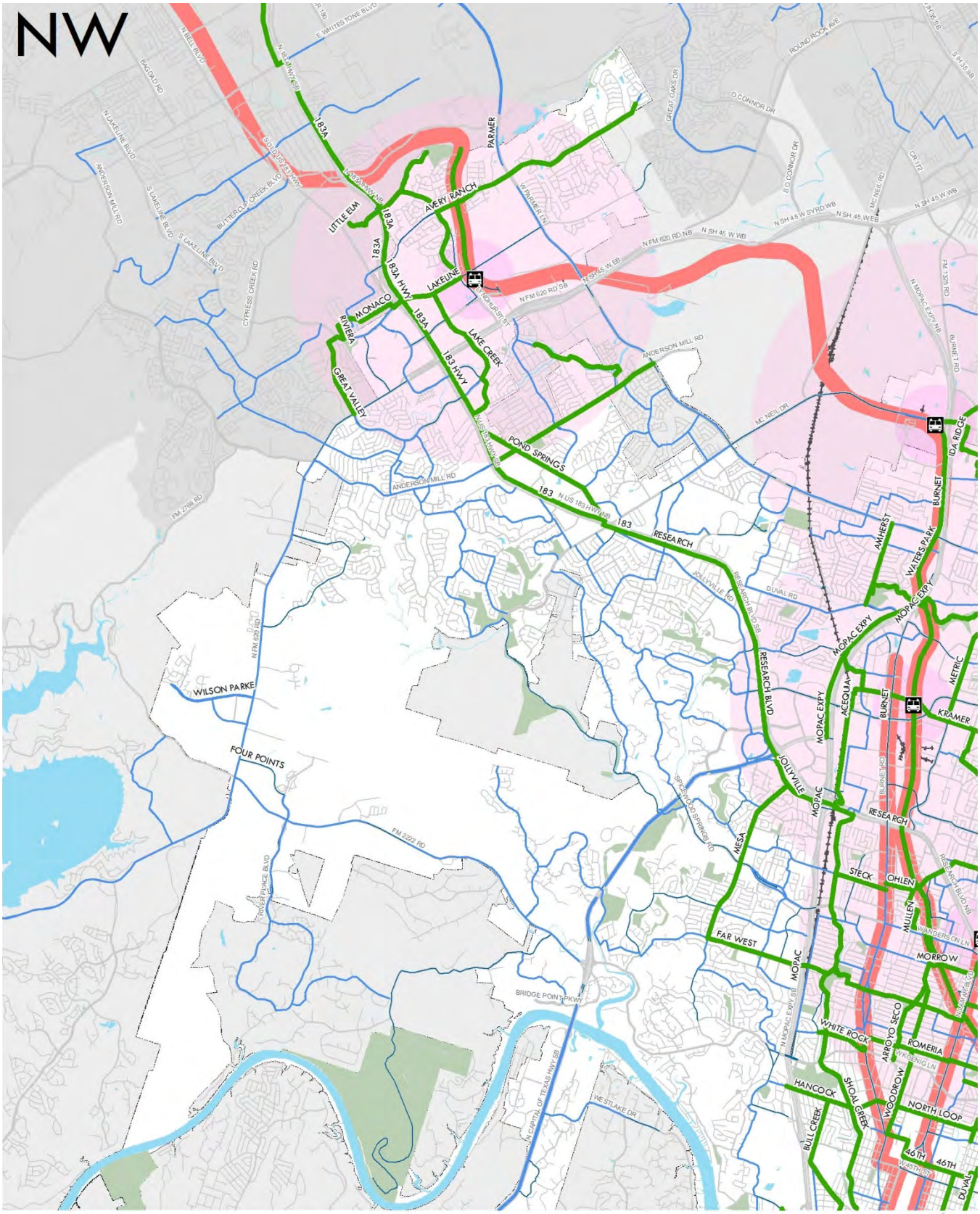
0 1 2 4 6
Miles


NW
183A
PARMER
AVERY RANCH
LITTLE ELM
183A
183A HWY
LAKELINE
MONACO
RIVIERA
GREAT VALLEY
LAKE CREEK
183 HWY
POND SPRINGS
183
RESEARCH
WILSON PARKE
FOUR POINTS
RESEARCH BLVD
MOPAC EXPY
JOLLYVILLE
MESA
STECK
OHLEN
FAR WEST
MORROW
WHITE ROCK
ROMERIA
HANCOCK
SHOAL CREEK
WOODROW
NORTH LOOP
BULL CREEK
46TH
BURNET
KRAMER
METRIC
ACEQUIA
AMHERST
WATERS PARK
IDA RIDGE
MULLEN
ARROYO SECO
BRIDGE POINT PKWY
Short Term All Ages and Abilities Bicycle Network
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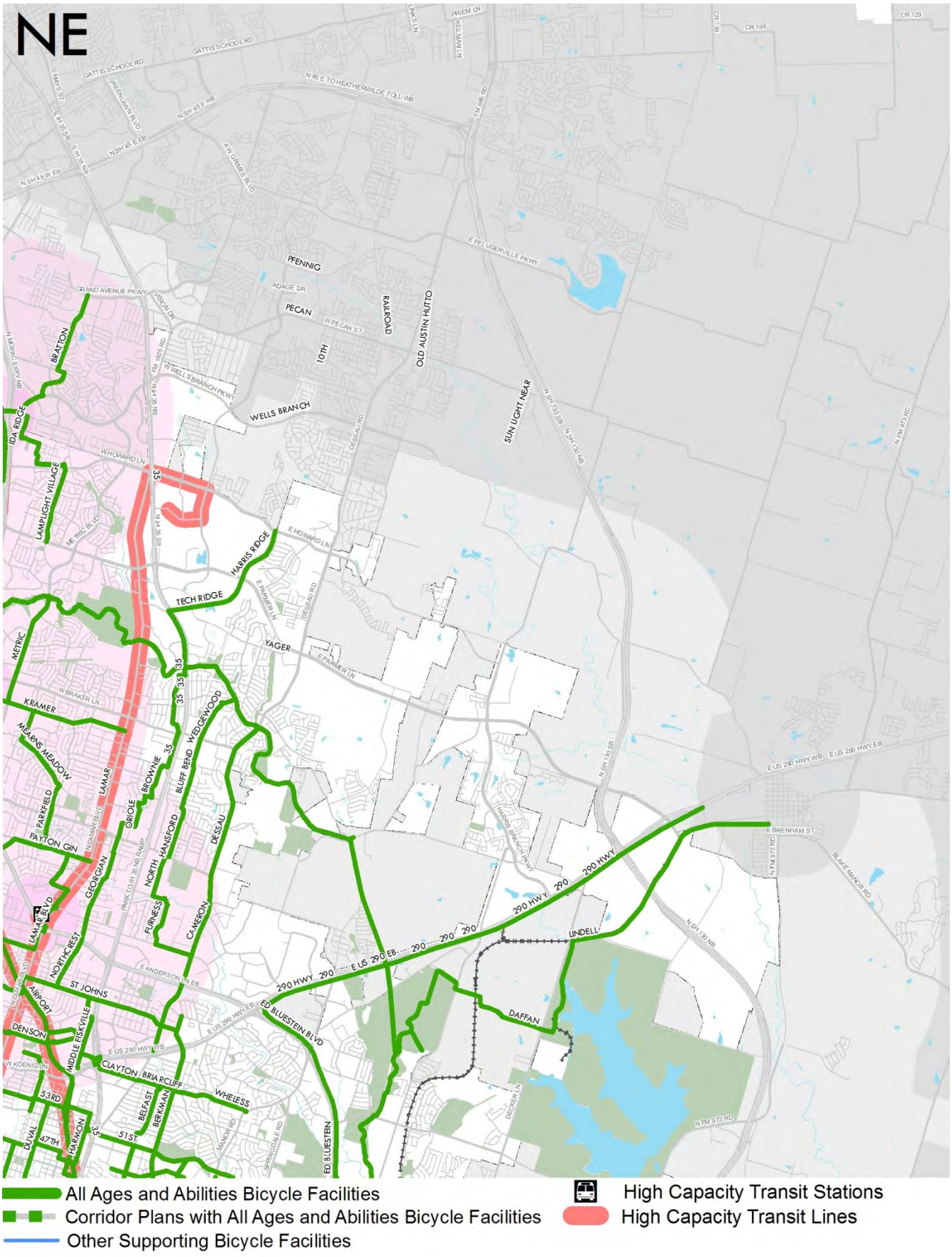
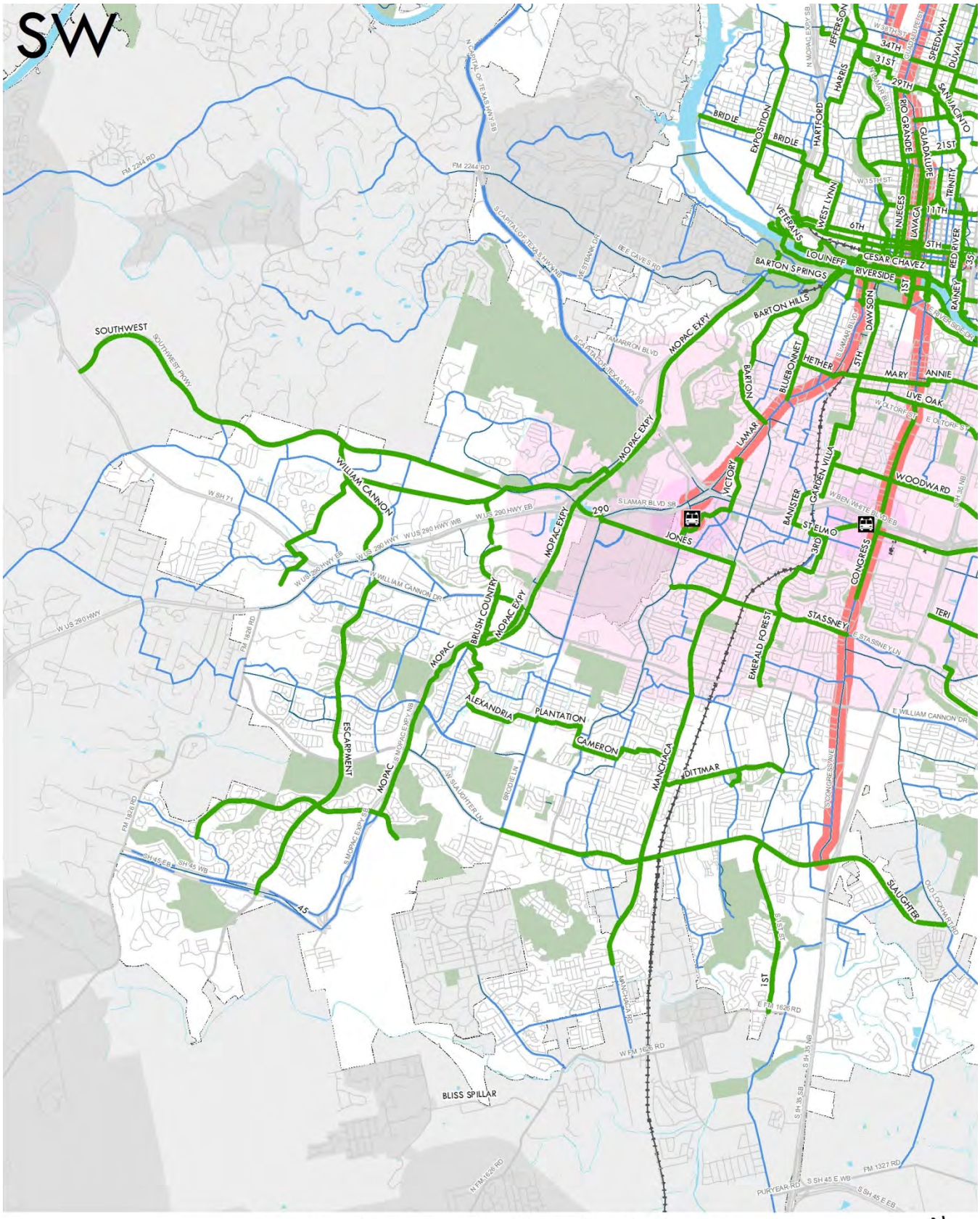
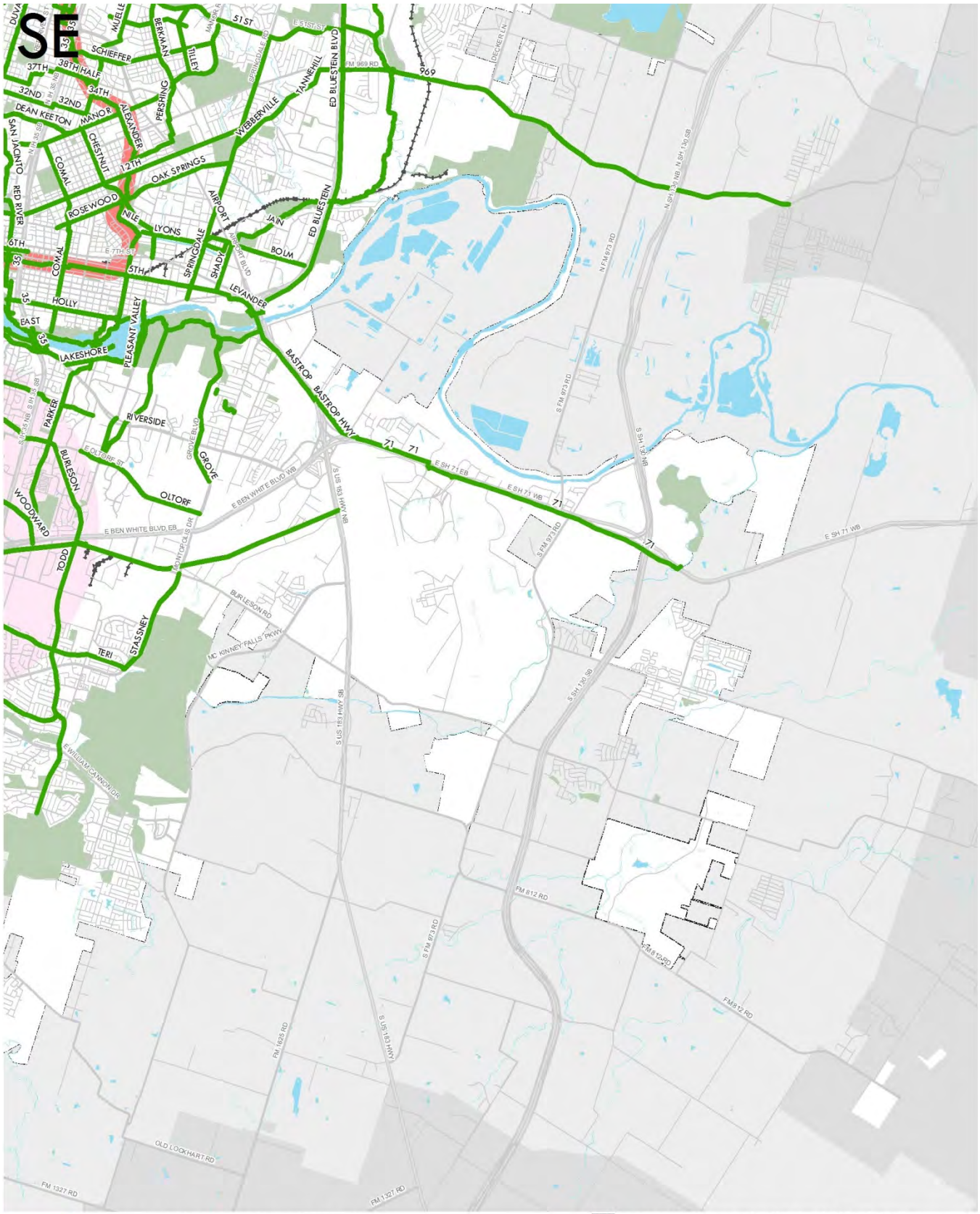

NE
All Ages and Abilities Bicycle Facilities
Corridor Plans with All Ages and Abilities Bicycle Facilities
Other Supporting Bicycle Facilities
High Capacity Transit Stations
High Capacity Transit Lines



Short Term All Ages and Abilities Bicycle Network

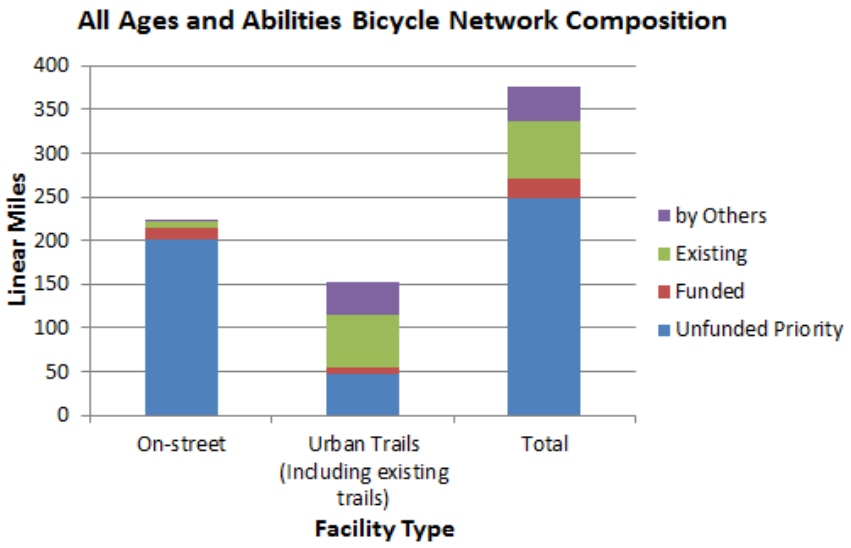

SE
All Ages and Abilities Bicycle Facilities
Corridor Plans with All Ages and Abilities Bicycle Facilities
Other Supporting Bicycle Facilities
High Capacity Transit Stations
High Capacity Transit Lines

COST OF THE ALL AGES AND ABILITIES BICYCLE NETWORK

The planning level cost estimate for the all ages and abilities bicycle network is $151 million, and leverages many existing and already funded bicycle facilities. The cost of priority unfunded investments includes 200 new miles of on-street facilities for $58 million, at an average cost of $290,000 per mile. The cost per mile for on-street facilities varies greatly upon the type of treatment. The estimate also includes 47 new miles of Urban Trails at $93 million at an average cost of $2 million per mile. As funding for portions of the network become available, an implementation plan would be developed, detailing the most strategic facility investments that would be pursued at that time.

It is important to note that the Tier 1 trails recommended in the Urban Trails Master Plan, adopted by City Council in September of 2014, are identical to the recommended urban trails in the Bicycle Plan's all ages and abilities bicycle network. Costs for these Tier 1 trails are included in the Bicycle Plan as these urban trails are critical links in the bicycle network, and without them the all ages and abilities bicycle network would be fragmented. In terms of cost of the all ages and abilities bicycle network, urban trails account for the majority of the cost at $93 million of the total $151 million. The network planning and cost-benefit analysis assumes that the investment in the on-street and off-street (urban trail) networks are made in parallel to create one seamless all ages and abilities bicycle network.

All Ages and Abilities Bicycle Network Composition



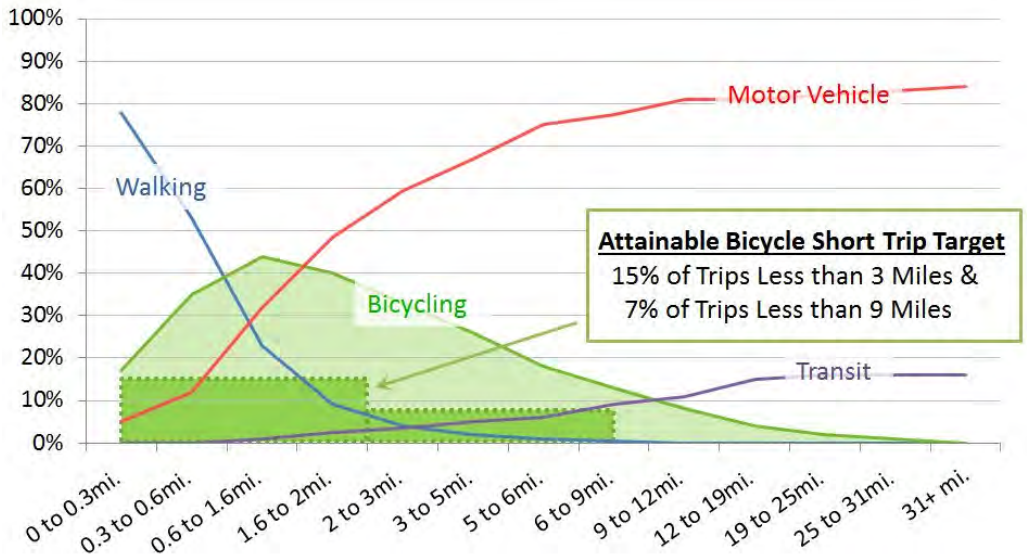
Source: City of Austin

The chart shows the composition of the 370 total miles of facilities that make up the all ages and abilities bicycle network. On-street facilities account for 220 miles of the network and off-street facilities, largely urban trails and existing unpaved trails, account for 150 miles. The chart shows the composition of the complete network including priority investments, existing facilities, and those already funded by the City of Austin or partner agencies. The sections below will look at the community wide benefits we can expect from this investment through increased bicycle and decreased motor vehicle use.

QUANTIFYING INCREASE IN BICYCLE USE

The first step in quantifying benefits of bicycling to the City and region is to estimate the increase in bicycle use. This plan update represents a significant step forward in our abilities to quantity both the magnitude and areas where this behavior change is likely to occur. As discussed in the best practices section, existing short trips are the most likely candidates to be converted to bicycle trips and network investments should be targeted in these areas.

This plan update sets the following attainable short trips capture targets for areas where existing travel demand is served by the all-ages and abilities network investment. The following estimated reduction in number of motor vehicle trips and miles are based on the full build-out of the all ages and abilities bicycle network.



AUSTIN'S BICYCLE SHORT TRIP CAPTURE TARGETS COMPARED WITH DUTCH NATIONAL TRENDS

Source: City of Austin and Nationwide Dutch travel data 2005, RWS/AVV/MON

Trip Type	Bicycle Trip Capture Targets by Length of Trip	
Bicycle Only Trips		
Trip distance	0-3 Miles	3-9 Miles
Bicycle trip capture target	15% of All Trips	7% of All Trips
Bicycle and Transit Combo Trips		
Trip distance to station	0-2 Miles	2-5 Miles
Bicycle + transit trip capture target	15% of All Trips	7% of All Trips

BICYCLE SHORT TRIP CAPTURE TARGETS BY LENGTH OF TRIP *SOURCE: CITY OF AUSTIN*

The bicycle trip capture targets were then applied to the Metropolitan Planning Organization's origin and destination matrix used for the air quality model. The origin and destination data describes the mobility demand from 1,400 traffic analysis zones to each of the other 1,400 traffic analysis zones by the number of trips between each zone. With this data travel demand that is served by the all ages and abilities network can be determined. Where this demand is served by the network, the trip capture targets are applied to calculate the resulting increase in bicycle trips and corollary reduction in motor vehicle trips.

The trip capture targets are well below known possible limits obtained from Dutch national data shown in the graph above. The trip capture targets for Austin's urbanized area were set at approximately one-third of the level of bicycle use found across the entire Dutch nation including both their urban and non-urban areas. The origin and destination travel data used for Austin is from from 2010. Future increased infill in the central Austin and around transit stations should result in the availability of more short trips. Additionally, the move to more mixed use development patterns should also result in shorter trip length patterns.

COST/BENEFITS OF SHORT TERM NETWORK

One of the significant advances of this plan is the application of trip capture targets for the purposes of quantifying the benefits of the full build-out of the recommended all ages and abilities bicycle network investment to the City of Austin. The proceeding section describes the methods used to forecast increased bicycle use, and the corollary reduction in motor vehicle use. The estimated changes in mode from motor vehicle to bicycle were then applied to estimate the benefits of other measurable outcomes.

As demonstrated below, the recommended all ages and abilities bicycle network investment should be considered an investment of regional reach and scale as the

benefits are on the order of magnitude of other regional investments being made to address the issues, and directly forward the goals of Imagine Austin.

Benefit to Congestion and Mobility

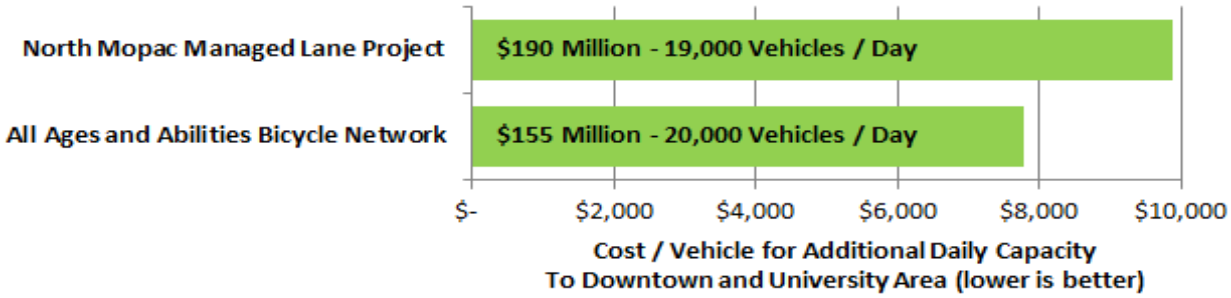
A significant portion of our regional congestion is caused by local trips on our region's roadways. These trips are concentrated in the central city, to get into the central business district, the Capital Complex, and University of Texas campus. The boundary for this area has been locally termed the "ring of congestion" as the roadway network has a limited ability to allow additional motor vehicle access during peak periods.

A recent and nationally published study of the notoriously congested I-35 corridor by the Texas Transportation Institute found that of all possible improvements to the corridor, including widening and tolling, the only solution that would significantly improve operations along the corridor included a necessary 40% reduction in local traffic demand. The study suggests that teleworking, transit, bicycling, and walking are all strategies to meet this target reduction.

AUSTIN'S "RING OF CONGESTION" - THE CENTRAL BUSINESS DISTRICT, CAPITAL COMPLEX, AND UNIVERSITY AREA.

The following are highlights of the benefits of the network investment to congestion and mobility:

- Reduced car trips to downtown. This investment is anticipated to convert 7 % of the 300,000 daily passenger vehicle trips to the central business district and university area in Austin to bicycle trips.
- Reduced citywide motor vehicle trips. Citywide, a reduction of 170,000 daily driving trips, equating to 460,000 daily miles traveled is projected if the all ages and abilities bicycle network is constructed.
- Regional mobility and congestion management. The 20,000 additional bicycle trips to central Austin as a result of the $151 million all ages and abilities bicycle network results in the same increased motor vehicle capacity as the MoPac Improvement Project, a $190 million 11-mile urban freeway project adding a single managed lane in each direction. This demonstrates that the investment in the all ages and abilities bicycle network is on par with other large mobility projects in managing regional congestion.



COMPARISON OF REGIONAL MOBILITY PROJECTS

Source: City of Austin

Boost Affordability

By offering people a viable low-cost transportation option, the bicycle network can help families significantly cut the household expense of owning and operating a vehicle. Due to decreased vehicle miles traveled, individuals can save $170 million in direct driving costs annually.

Public Health Benefits

Increasing the percentage of travelers who regularly bicycle for transportation directly correlates to improved public health. The increased physical activity associated with shifting short trips to bicycle trips would equate to 130,000 people or 15 % of Austinites meeting their daily minimum physical activity. Savings from avoidance of disease associated with sedentary lifestyle per person is estimated at $128 per person, for a total benefit of $16.6 million per year.

Environmental Benefits

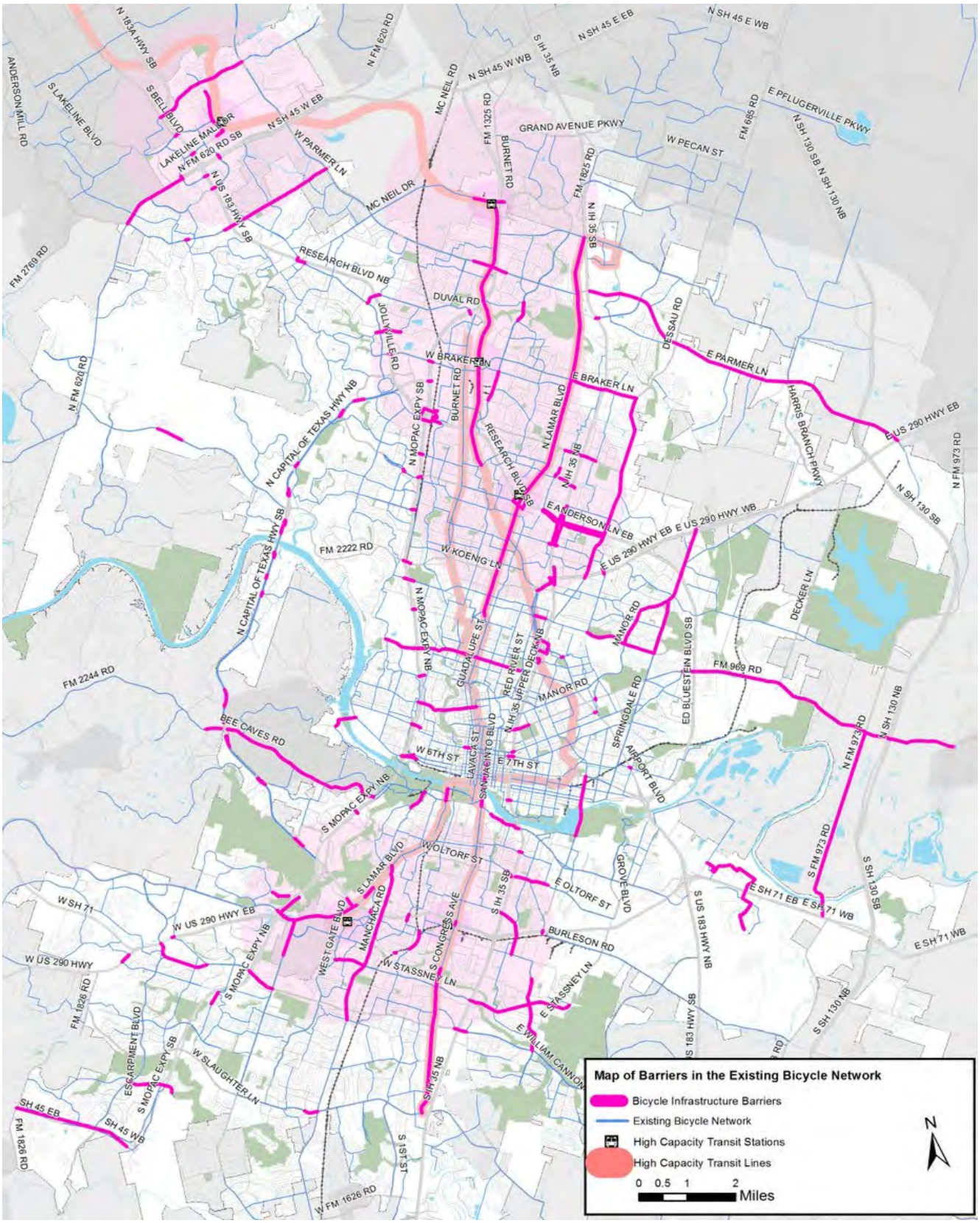
By reducing vehicle trips, bicycling reduces the pollution from motor vehicles. This, in turn, reduces the costs to mitigate environmental damage and public health impacts from air pollution that vehicles create. For example, the estimated reduction in miles traveled would result in a reduction of 84,000 metric tons of carbon per year, the equivalent of the carbon generated by the driving habits of Austinites over 11 days.

BARRIER REMOVAL

Another strategic focus to complement the all ages and abilities network is to plan for and prioritize the removal of barriers in the supporting bicycle network largely composed of bicycle lanes. Barriers exist where bicycle lanes end or geographic barriers prevent connectivity. If possible, resolving a barrier with an all ages and abilities facility is ideal though there is still significant value to providing the connection with only striped bicycle lanes where this is not possible. Removing these barriers will provide a spectrum of options for people on bikes, providing both an all ages and abilities network backbone for those "interested but concerned" and a more pervasive accessibility for those that are "enthused and confident" (for more information on the 4 types of cyclists see Ch 2 section Attracting the 'Interested but Concerned' Bicyclist and Protected Bicycle Lanes).

Barriers include gaps in the bicycle lane network, controlled access highways with few crossing streets, low angle railroad track crossings, and intersections without guidance for people on bikes. The 2009 plan identified 101 gaps in the bicycle network and many of these have now been or are in the process of being resolved. Bicycle program staff have completed a comprehensive survey of barriers to bicycling as our network has changed significantly over the last 5 years. This plan identifies 95 barriers that are recommended as a high priority to be resolved. The following map shows these barriers along with the location of existing facilities.

Roughly 70 % of these barriers will be resolved through minor re-striping or construction work at an estimated cost of $10 million. The other 30 % of the barriers will need further study and likely capital work to resolve. Costs and potential solutions for addressing the barriers were performed by the City's Bicycle Program staff and will be used to create future project packages for funding opportunities. Implementation phasing of this list will depend on opportunity, such as street resurfacing, public interest, or acute need. Addressing the barriers throughout the city is one of the highest infrastructure actions of the Plan.


Map of Barriers in the Existing Bicycle Network
Bicycle Infrastructure Barriers
Existing Bicycle Network
High Capacity Transit Stations
High Capacity Transit Lines
0 0.5 1 2
Miles
N
N 183A HWY SB
S LAKELINE BLVD
ANDERSON MILL RD
S BELL BLVD
LAKELINE MALL DR
N FM 620 RD SB
N SH 45 W EB
N FM 620 RD
MC NEIL RD
N SH 45 W WB
S IH 35 NB
N SH 45 E EB
N SH 45 E WB
FM 1325 RD
BURNET RD
GRAND AVENUE PKWY
W PECAN ST
FM 685 RD
E PFLUGERVILLE PKWY
N SH 130 SB N SH 130 NB
W PARMER LN
N US 183 HWY SB
MC NEIL DR
FM 1825 RD
N IH 35 SB
FM 2769 RD
RESEARCH BLVD NB
DUVAL RD
JOLLYVILLE RD
W BRAKER LN
E BRAKER LN
DESSAU RD
E PARMER LN
HARRIS BRANCH PKWY
E US 290 HWY EB
N FM 973 RD
N FM 620 RD
N CAPITAL OF TEXAS HWY NB
N MOPAC EXPY SB
BURNET RD
RESEARCH BLVD SB
N LAMAR BLVD
N IH 35 NB
E ANDERSON LN EB
E US 290 HWY WB
N SH 130 SB
N CAPITAL OF TEXAS HWY SB
FM 2222 RD
W KOENIG LN
E US 290 HWY EB
N MOPAC EXPY NB
GUADALUPE ST
RED RIVER ST
N IH 35 UPPER DECK NB
MANOR RD
ED BLUESTEIN BLVD SB
DECKER LN
FM 969 RD
FM 2244 RD
BEE CAVES RD
MANOR RD
SPRINGDALE RD
N SH 130 NB
W 6TH ST
LAVACA ST
SAN JACINTO BLVD
E 7TH ST
AIRPORT BLVD
N FM 973 RD
S MOPAC EXPY NB
W OLTORF ST
S LAMAR BLVD
S IH 35 SB
GROVE BLVD
E OLTORF ST
S FM 973 RD
S SH 130 SB
E SH 71 EB E SH 71 WB
W SH 71
W US 290 HWY EB
WEST GATE BLVD
MANCHACA RD
S CONGRESS AVE
BURLESON RD
S US 183 HWY NB
E SH 71 WB
W US 290 HWY
S MOPAC EXPY NB
W STASSNEY LN
E STASSNEY LN
FM 1826 RD
ESCARPMENT BLVD
S MOPAC EXPY SB
W SLAUGHTER LN
E WILLIAM CANNON
S IH 35 NB
S 183 HWY SB
S SH 130 NB
SH 45 EB
SH 45 WB
FM 1826 RD
S 1ST ST
W FM 1626 RD

PARKING AND BICYCLE LANES

A roadway's primary functions are to provide for the mobility and to serve as great public places, storing stationary vehicles is tertiary. While on-street parking is an often desired and useful component on urban roadways, it can be dangerous to bicyclists. When an on-street vehicle parks in a bicycle lane, it creates a dangerous situation requiring people on bicycles to merge into a traffic lane to get around the vehicle. Therefore parking should not be permitted in bicycle lanes.

The Transportation Department will evaluate existing and proposed bike lanes, to determine, with stakeholder input, if parking or bicycle facilities has greatest priority. To the extent possible, the evaluation of parking in bicycle lanes should be considered on a corridor basis and not block-by-block.

Since the 2009 Plan, 27 miles of parking within bicycle lanes has been addressed. Currently 27 miles, or 13 %, of existing bicycle lanes with unrestricted motor-vehicle parking remain, compared to 54 miles, or 35 %, in 2009. In the next five years, it is expect the work to remove parking from bicycle lanes will be substantially complete.

In 2008, the City of Austin Bicycle Program established guidelines to address removing parking from within bicycle lanes. This document, *On-Street Parking Modification Guidelines*, discusses research, the evaluation of and process for modifying on-street parking resulting in several possible outcomes. Since 2008, this process has been used successfully on 39 miles of projects of new and existing bicycle lanes. The On-Street Parking Modification Guidelines are kept within the City of Austin Bicycle Program.

Bicycle Lanes And Diagonal Parking

Vehicular movement in and out of head-in diagonal parking presents a danger to bicyclists and therefore bicycle lanes are not advisable where this condition exists. Where diagonal parking is necessary, back-in angle parking should be used. This requires motorists to pull in front of a parking space and reverse into it, as is done with parallel parking. Back-in angle parking provides motorists clear visibility behind them where a person on a bicycle might be approaching before crossing the bicycle lane. It also improves the motorists' visibility of oncoming bicycle and motor traffic when exiting the parking space.

CITY OF AUSTIN RECOMMENDATIONS FOR TXDOT ROADWAYS

Texas Department of Transportation (TxDOT) roadways play a critical role in the bicycle network as they are often high speed and volume roadways, that are barriers to people on bikes. TxDOT roadways include, highways, urban arterials, and controlled access freeways with limited crossings. For the purposes of this document, they will all be referred to as TxDOT roadways whether they are operated by TxDOT or by others, such as the Central Texas Regional Mobility Authority (CTRMA) . One of the fundamental goals of this Plan is to implement bicycle facilities that are accessible to people on bicycles of all ages and abilities. For Austin's bicycle network to be whole this approach will have to be extended to TxDOT roadways and crossings as there are many destinations and mobility demands both along and across the TxDOT corridors. Many TxDOT owned and operated roadways within this plan are within the City of Austin extraterritorial jurisdiction.

Recommendations for TxDOT roadways will require special consideration.

- ☐ TxDOT roadways are often relatively high speed environments and necessitate physical separation from motor vehicle traffic. Travel speeds on frontage roads, highways, and suburban arterials are often in the 45-60 mph range, making even confident cyclists very uncomfortable to be in an on-street unprotected environment. Along with the high speeds are heavy traffic volumes that also suggest that a protected environment is best.

- ☐ Controlled access freeways allow only limited crossings. This results in each crossing, potentially spaced at a half-mile to 2 miles apart, critical to being a safe all ages and abilities network so people on bicycles have a seamless experience crossing the TxDOT roadway. The other effect of limited access combined with one-way frontage roads is the potential to generate significant route delay if two-way facilities are not provided on each side of the street.

Special Considerations for TxDOT Roadways

Recommendations in this plan on TxDOT roadways warrant special consideration. While many of these roadways are within the City of Austin or the extraterritorial jurisdiction and in the jurisdiction of this plan, the roadways are owned and operated by TxDOT or partner agencies. It is important to clearly state how this plan affects the planning, scope and delivery of TxDOT projects.

The intentions of the recommendations in this plan are as follows:

- ☐ To document best practice in accommodating people on bicycles of all ages and abilities on Austin's roadway network, including TxDOT roadways.
- ☐ For the recommendations to be a resource during the development of projects along TxDOT roadways while not mandating a particular outcome.
- ☐ The Plan acknowledges that TxDOT and City of Austin have different design standards, internal processes and public processes. This plan recommends working together to achieve the highest quality bicycle network to the extent practicable.
- ☐ The Plan acknowledges that each project on a TxDOT roadway will have different context, constraints, scopes, available funding, timeline and public process and recommends the City of Austin and TxDOT work together to achieve the highest quality bicycle facility on each project to the extent practicable.

Recommended Approach for 2014 Bicycle Plan

Over the last five years, there has been a significant evolution in thought related to providing bicycle accommodations among TxDOT staff, bicycle program staff and bicycle stakeholders groups. The most significant change has been an awareness that we have a responsibility to make our roadways accessible for all modes and people of all ages and abilities. This includes travel along, across, and to and from destinations along the corridor. In special cases, parallel facilities may be a solution where rights of way are constrained, and where nearby high-quality, parallel facilities exist. The subsequent question becomes what types of facilities can meet this goal on TxDOT roadways. Feedback over the last five years shows wide curb lanes are not a safe or comfortable accommodation on high-speed roadways even for experienced people on bicycles. Additionally, a much stronger collaborative relationship and strategic partnership between TxDOT and the City of Austin on a range of issues including regional mobility and improved pedestrian and bicycle accommodations now exists. This Plan represents a significant opportunity to find common ground with TxDOT as an agency partner to better align our approach to bicycle facilities, conforming to national best practice.

This Plan recommends four different approaches for bicycle facility types on TxDOT roadways, dependent on the context of the roadway. Streets with higher speeds and volumes should include protected bicycle facilities. Shared-use paths recommendations appear in the Urban Trails Master Plan. This Plan recommends the following bicycle facilities along each TxDOT roadway type:

1. **Controlled Access Freeways and Frontage Roads with Limited Access:** As noted, because of the limited crossing opportunities, the one-way nature of frontage roads and main lanes, and the presence of destinations on both sides of the facility, it is important to provide two-way access to pedestrians and cyclists on both sides of the corridor due to their high sensitivity to longer trip distances. Due to high speeds and volumes of these roadways protected bicycle facilities are recommended. These roadways often have a low to medium density of driveways and intersections that reduce conflict points and improve the safety and operations of bidirectional off-street bicycle facilities. Pedestrian densities along these corridors are typically low to medium except for roadways in the central city, which result in acceptable operations along shared use paths where people walking and bicycling share the space. Along controlled access freeways with limited access this plan recommends two-way shared use paths along both sides of the roadway. When this is not possible, a sidewalk on one side can provide two-way local access to destinations on one side complimented by a high quality shared use path that provides a high level of service for travel along the corridor on the other side. The photo on the left shows a shared-use path along the 183 A toll road in Northwest Austin. Examples are shared use paths that are proposed in the scope of both the Bergstrom Expressway and 71 Expressway projects.

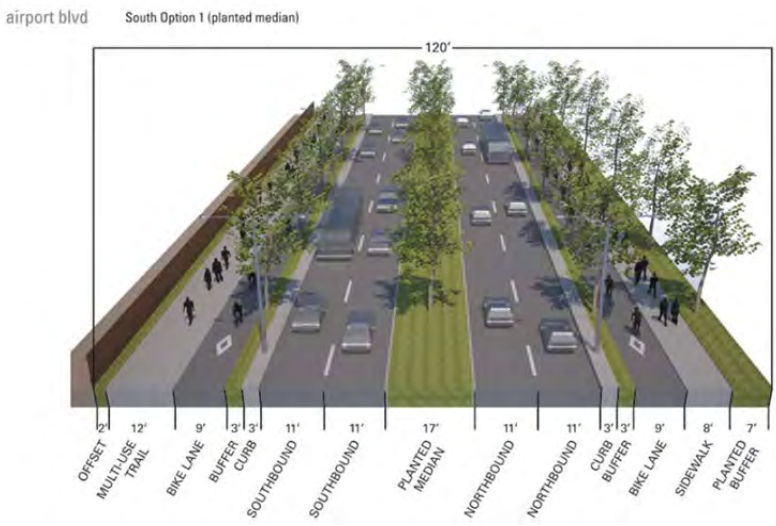
2. **Major Highways:** While highways are also high speed and high volume roadways that should have protected bicycle facilities, intersection and crossing opportunities are generally more closely spaced. These roadways often have moderate number of driveway, intersection, and pedestrian densities making protected off-street bicycle facilities preferable to on-street protected facilities. Since these roadways offer more frequent crossing opportunities this plan recommends two-way shared use path along one side of the roadway and either a sidewalk or shared use path on the other side of the roadway to provide local access to destinations. The photo on the right shows a shared use path along a multilane highway. Examples are recommended for shared use paths in the plan along FM 969 and Parmer Lane.

A SHARED USE PATH ALONG 183A TOLL ROAD IN NORTHWEST AUSTIN

3. **Urban Arterials and Frontage Roads Without Limited Access:** The Plan recommends almost all city arterials have protected bicycle lanes in urban areas. These high speed and volume roadways warrant physical protection but have moderate to high numbers of driveways, intersections, and pedestrian levels that increase complexity and risk of an off-street bidirectional shared use path. The Plan recommends providing one-way protected bicycle lanes on each side of the street, in addition to adjacent sidewalks. This recommendation also applies to frontage roads with a high number of driveways, intersections, or are expected to have substantial pedestrian volumes. Examples include the sections of the I-35 frontage road in the central city and Airport Boulevard, a TxDOT maintained urban arterial. The photo to the left shows proposed protected bicycle lanes in the City of Austin's Airport Boulevard Corridor Plan, currently a TxDOT roadway.

A SHARED USE PATH ALONG THE UNDIVIDED HIGHWAY 89 IN GRAND TETON PARK (PHOTO COURTESY OF U.S. DOT).

4. **Minor / Rural Highways:** In outlying areas, there are a number of TxDOT roadways that have moderate to low speeds and volumes or have limited short trip travel demand. While it is important to provide bicycle accessibility on all roadways, in these cases a shoulder can be a safe and comfortable bicycle facility. This Plan recommends providing bicycle lanes or shoulders of an adequate width based on the speed and volume of the roadway. At higher speeds and volumes minimum, AASHTO shoulder dimensions are not desired. The photo to the right shows a context in which a shoulder is an appropriate bicycle facility. FM 973 is an example of this type of roadway.



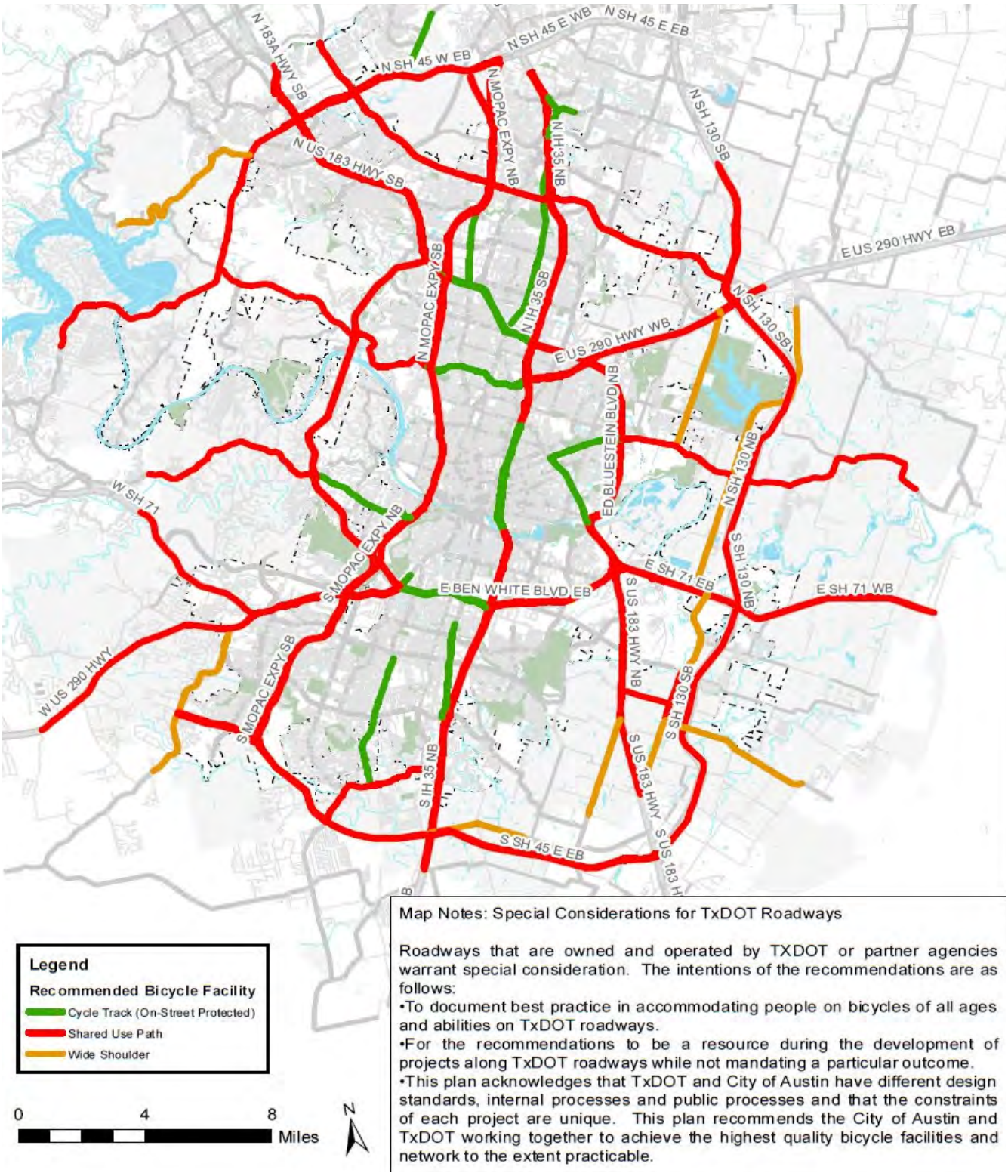
RECOMMENDED CROSS SECTION OF AIRPORT BOULEVARD THAT INCLUDES PROTECTED BICYCLE LANES FROM THE AIRPORT BOULEVARD CORRIDOR PLAN.

Recommended Facilities on TxDOT Roadways

The following map shows the roadways where shared use paths (urban trails), protected bicycle lanes (protected), and bicycle lanes/shoulders are recommended.

BIKE TOURERS ON HIGHWAY 90 IN WEST TEXAS WITH A COMFORTABLY WIDE SHOULDER GIVEN LOW TRAFFIC VOLUMES (PHOTO COURTESY OF DOUG WILLIAMS).

CITY OF AUSTIN BICYCLE FACILITY RECOMMENDATIONS FOR TXDOT ROADWAYS



Map Notes: Special Considerations for TxDOT Roadways

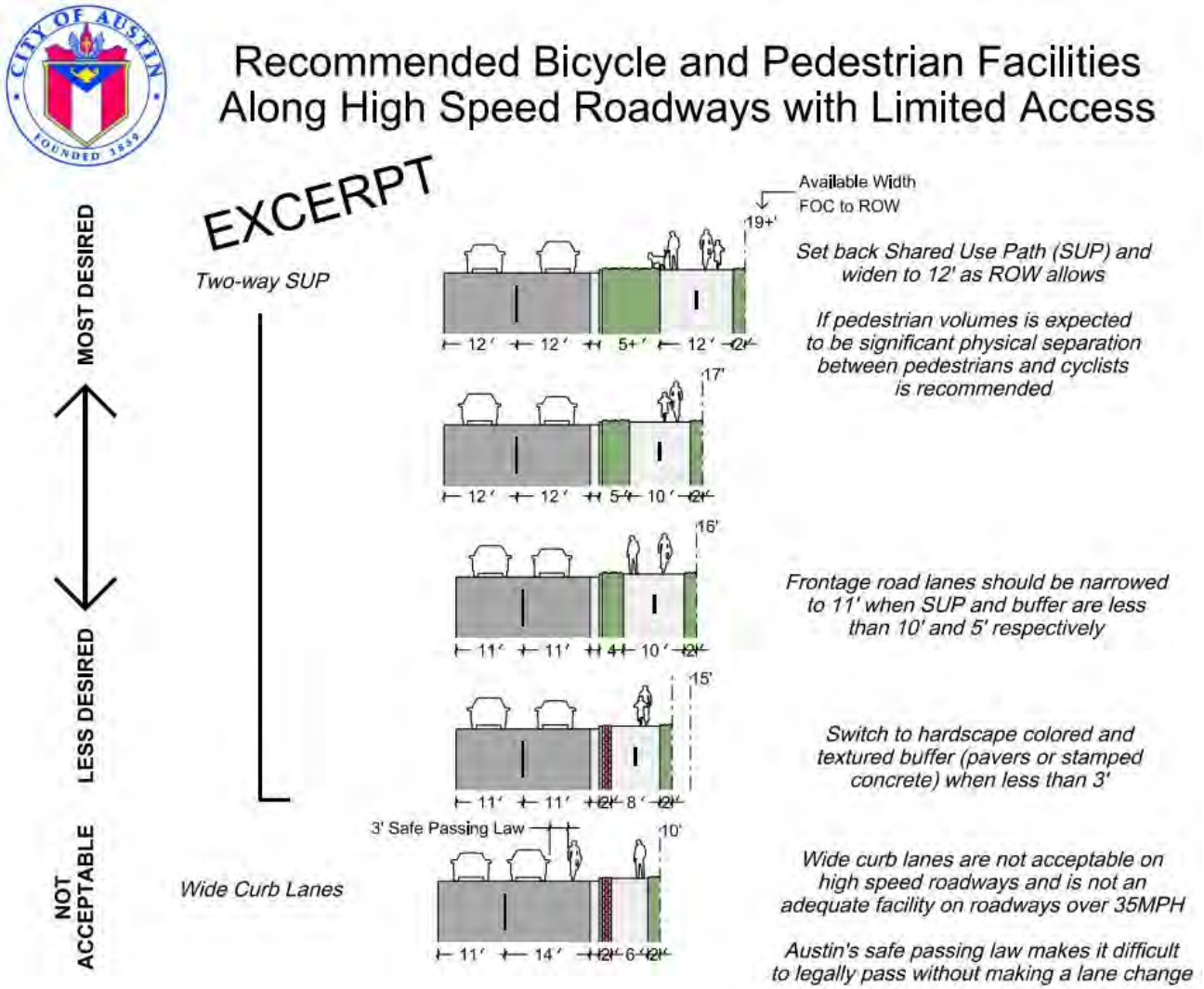
Roadways that are owned and operated by TXDOT or partner agencies warrant special consideration. The intentions of the recommendations are as follows:

- To document best practice in accommodating people on bicycles of all ages and abilities on TxDOT roadways.
- For the recommendations to be a resource during the development of projects along TxDOT roadways while not mandating a particular outcome.
- This plan acknowledges that TxDOT and City of Austin have different design standards, internal processes and public processes and that the constraints of each project are unique. This plan recommends the City of Austin and TxDOT working together to achieve the highest quality bicycle facilities and network to the extent practicable.

Design Flexibility

In August 2013, the Federal Highway Administration issued a memo in support of design flexibility for bicycle and pedestrian facilities. This memo offers the use of the *NACTO Urban Bikeway Design Guide* and the ITE *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach.* This document provides options to further develop non-motorized transportation networks, particularly in urban areas. It also lays the groundwork for Austin to create tailored recommendations on how to best provide bicycle facilities on these types of roadways in a way that could be supported by City staff, TxDOT, project consulting teams, bicycle community stakeholders and the Federal Highway Administration.

Stakeholders are working to develop recommendations for bicycle facilities along high speed roadways with limited access (excerpt from draft guidance shown below). The recommendations offer proposed shared-use path configurations at various widths representing varying rights of way constraints. It includes recommendations for two-way paths that are as narrow as 8 feet wide with a 2 feet colored and textured hardscaped buffer to the roadway edge. The proposed buffer offers a compact means of providing separation from traffic, addressing maintenance concerns of narrow planted areas, and allowing a rideable and walkable surface in the event of passing movements. Narrower options are offered in less than 8 feet shared use path widths for the most constrained conditions that can certainly be defended as one way facilities. The intent of using design flexibility in developing these recommendations is to expand the toolbox for providing quality bicycle facilities in constrained conditions.



EXCERPT FROM FULL GUIDANCE ON RECOMMENDED BICYCLE AND PEDESTRIAN FACILITIES ALONG HIGH SPEED ROADWAYS WITH LIMITED ACCESS DEVELOPED BY THE CITY OF AUSTIN IN COORDINATION WITH THE TXDOT AUSTIN DISTRICT.

Austin's bicycle advisory council reviewed the attached guidance in their February 18, 2014 meeting and passed the following resolution:

> *"THE BICYCLE ADVISORY COUNCIL ENDORSES THE PRESENTED 'GUIDANCE FOR BICYCLE FACILITY RECOMMENDATIONS ALONG HIGH-SPEED ROADWAYS WITH LIMITED ACCESS' AS VASTLY SUPERIOR TO A WIDE CURB LANES WITH THE FOLLOWING DISCUSSION POINTS INCORPORATED: INCLUDING TEXT FOR HIGH PEDESTRIAN DENSITIES AND WHEN THE PATH IS BELOW 8 FEET CONSIDER THE OPTION OF A BICYCLE LANE."*

This Plan recommends City staff, TxDOT, project consulting teams, bicycle community stakeholders, and the Federal Highway Administration continue developing flexible design approaches and a toolbox to better accommodate people on bicycles of all ages and abilities in constrained conditions.

TxDOT Barriers Analysis and TxDOT Austin District Bicycle Plan

There are two developments on which the City of Austin is working with TxDOT to improve bicycle access. City staff has developed a barriers list of TxDOT roadways categorized by implementation complexity and priority. This is a significant step forward as TxDOT and the City continue to develop a pipeline of projects to remove barriers on the bicycle network in Austin. Also, TxDOT is set to kick off a process to create an Austin district bicycle plan. The barriers analysis will serve as a foundation as the City works with TxDOT to complete this process.

COMPLETE BICYCLE FACILITY NETWORK RECOMMENDATIONS

Bicycle facility recommendations include two layers: a set of recommendations to form an all ages and abilities bicycle network in the short term and a complete set of bicycle facility recommendations that would result in streets safe for people of all ages and abilities. Unlike the short-term recommendations, complete recommendations are not limited by near-term feasibility. To be realized, these recommendations will often require reconstruction of streets or private development support.

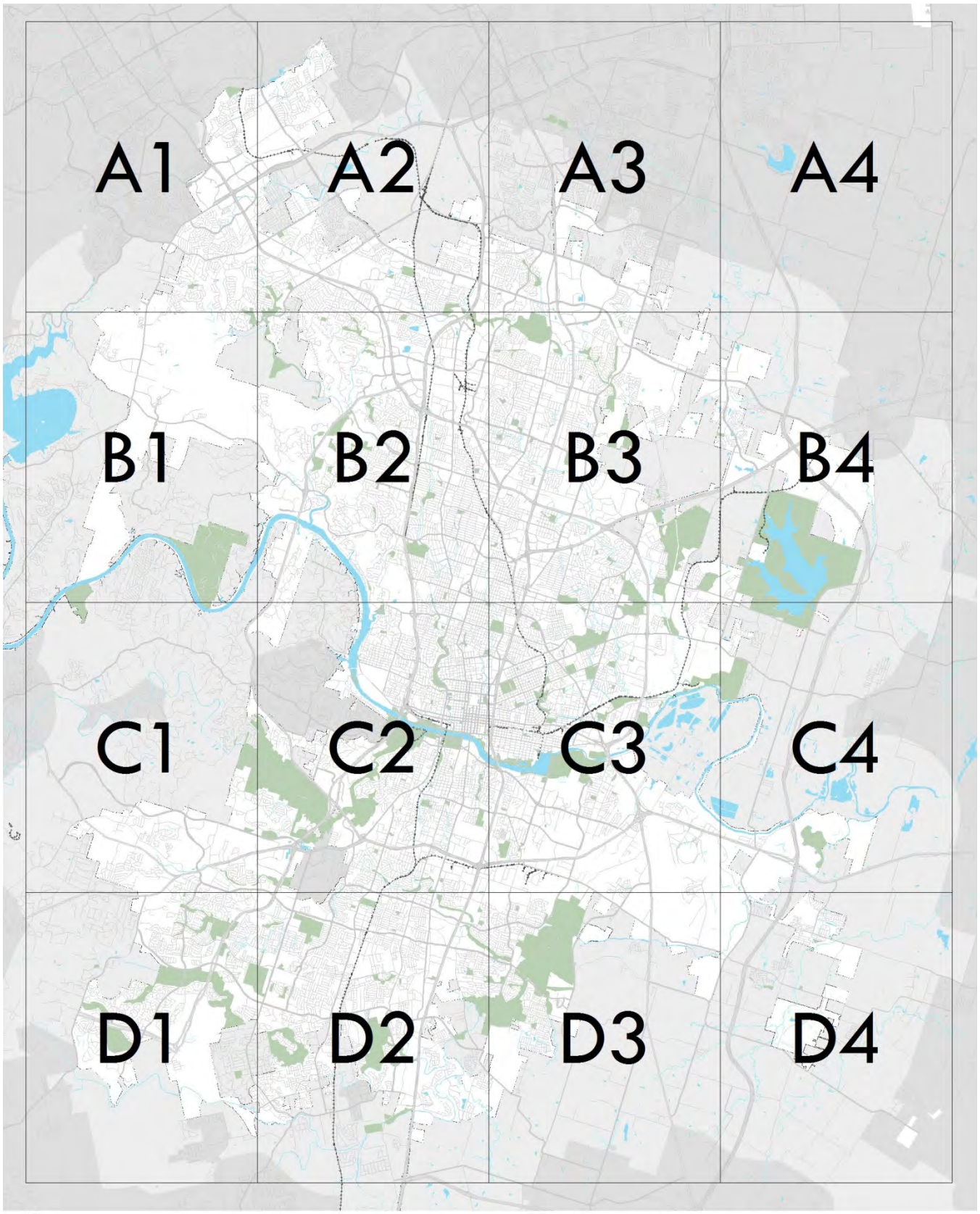
The complete set of recommendations were largely generated by the on-street bicycle facility criteria based on speed and volume of the roadway shown in chapter 2 section “On-Street Bicycle Facility Criteria”. Other factors that influenced the recommendation include public input, specific amendments to the 2009 Plan that are a result of project delivery since its adoption, special approaches for bicycle facilities in TxDOT rights of way, and inclusion of streets in the short-term all ages and abilities bicycle network.

Recommendations reflect the current state of the practice in design of bicycle-friendly roadways and should be tested and refined over time. It is anticipated that this section of the plan will be revised, under the direction of the Bicycle Program, to reflect the

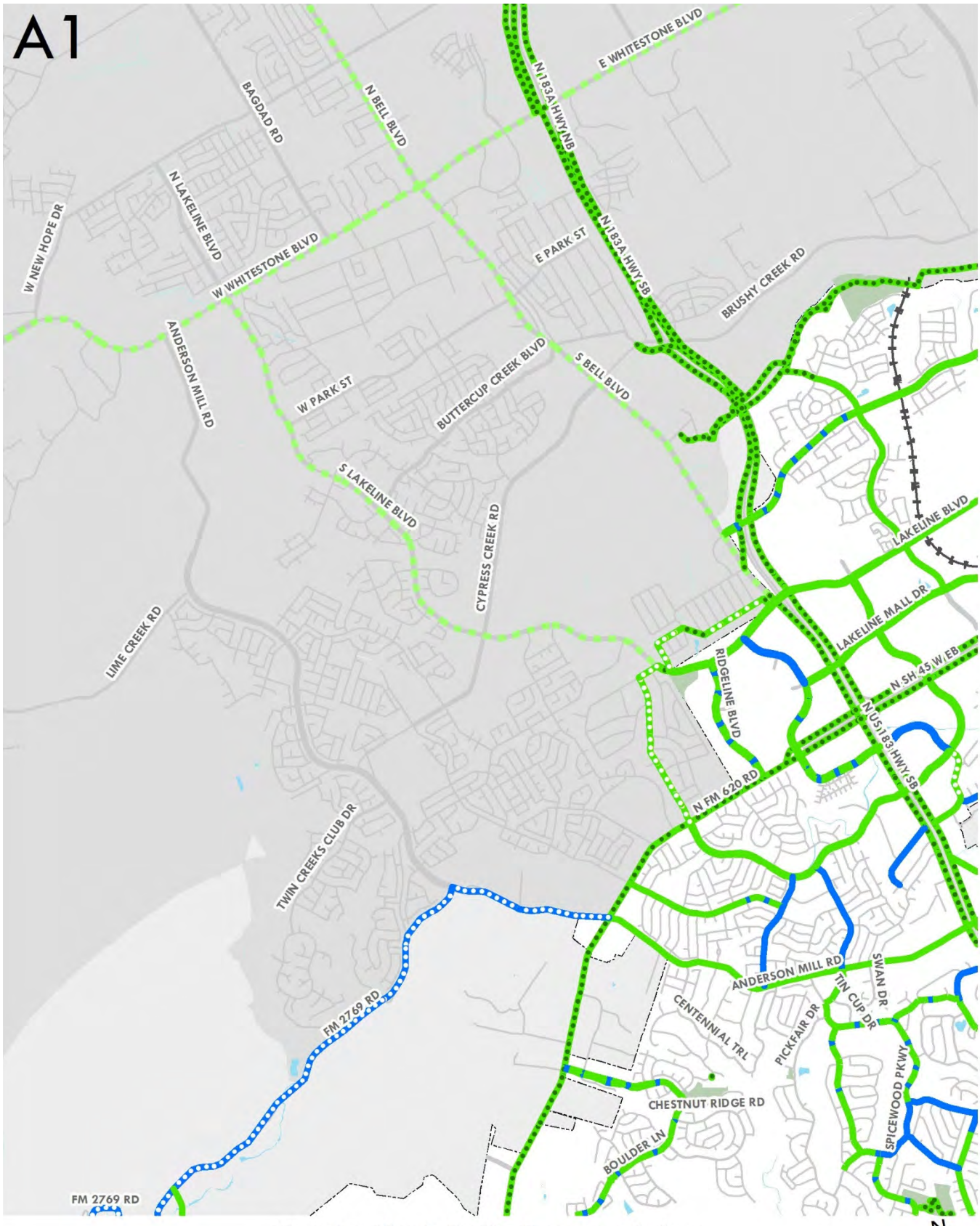
continuing evolution of the national and international state of the practice. Selected design treatments will ultimately rely on good planning and engineering judgment with the goal of making bicycling safe and accessible for all citizens of Austin regardless of age and ability.

Because the existing network often provides only limited mobility for bicyclists and the complete streets policy goal is to accommodate people of all ages and abilities on all streets, the deletion of any roadway from the network should be done with the utmost care and only if alternative facilities can be provided. For this reason engineer-only approved "deviations" should not be allowed. Changes to the recommended network facilities should require input from the City Bicycle Program and ultimately be the responsibility of the City's Transportation Department Director. See Appendix D - Amendment Process.

The full recommendations also encompass the recommendations for the short-term all ages and abilities bicycle network and are shown in the maps below. Complete bicycle facility recommendations are listed by street name in Appendix A.



Complete Bicycle Facility Recommendations - Map Index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N 183A HWY NB
N 183A HWY SB
N LAKELINE BLVD
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W WHITESTONE BLVD
E PARK ST
BRUSHY CREEK RD
ANDERSON MILL RD
W PARK ST
BUTTERCUP CREEK BLVD
S BELL BLVD
S LAKELINE BLVD
CYPRESS CREEK RD
LAKELINE BLVD
LAKELINE MALL DR
LIME CREEK RD
RIDGELINE BLVD
N SH 45 W EB
N US 183 HWY SB
N FM 620 RD
TWIN CREEKS CLUB DR
ANDERSON MILL RD
SWAN DR
TIN CUP DR
CENTENNIAL TRL
PICKFAIR DR
FM 2769 RD
CHESTNUT RIDGE RD
SPICEWOOD PKWY
BOULDER LN
FM 2769 RD
Complete Bicycle Facility Recommendations
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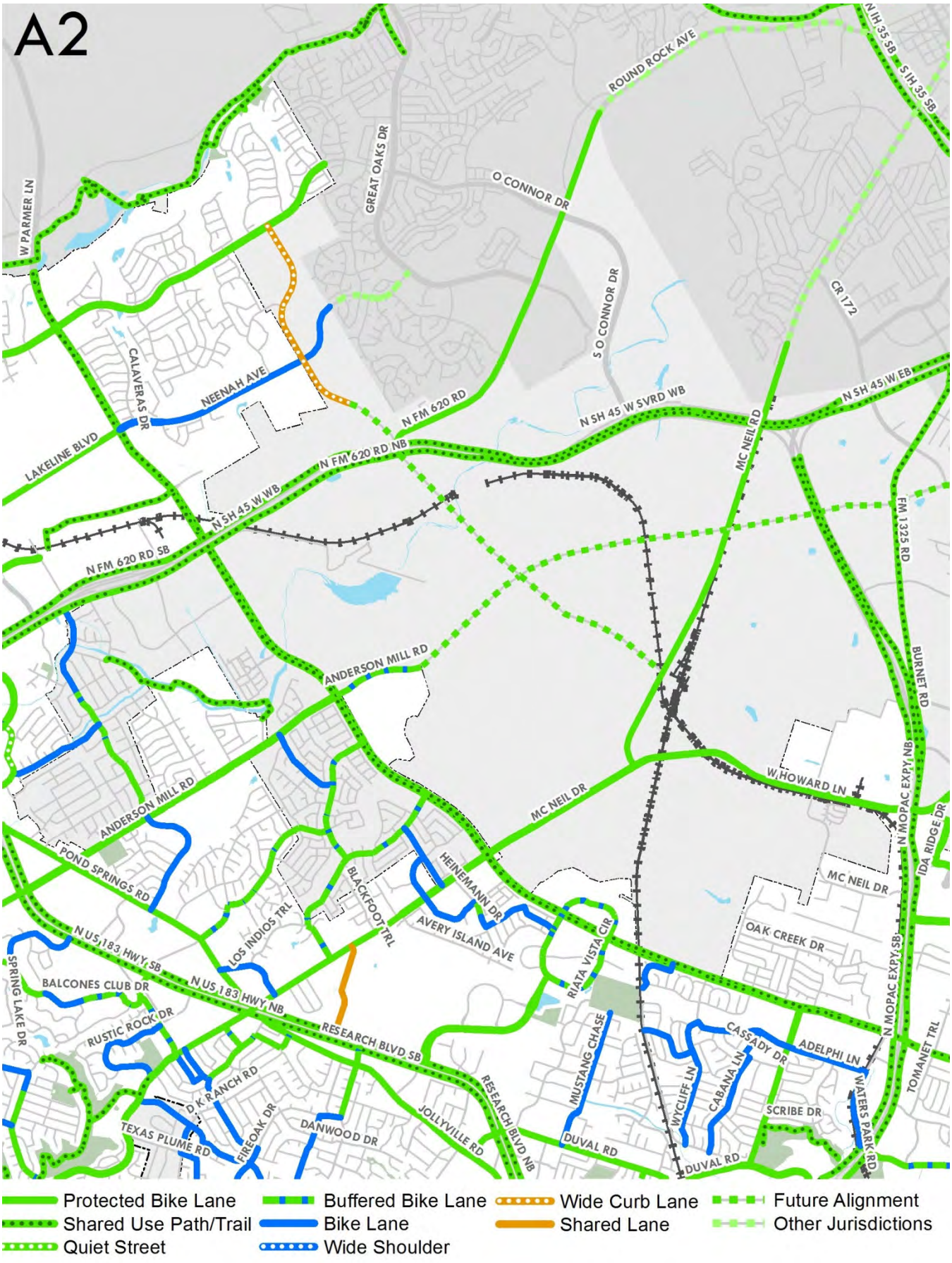
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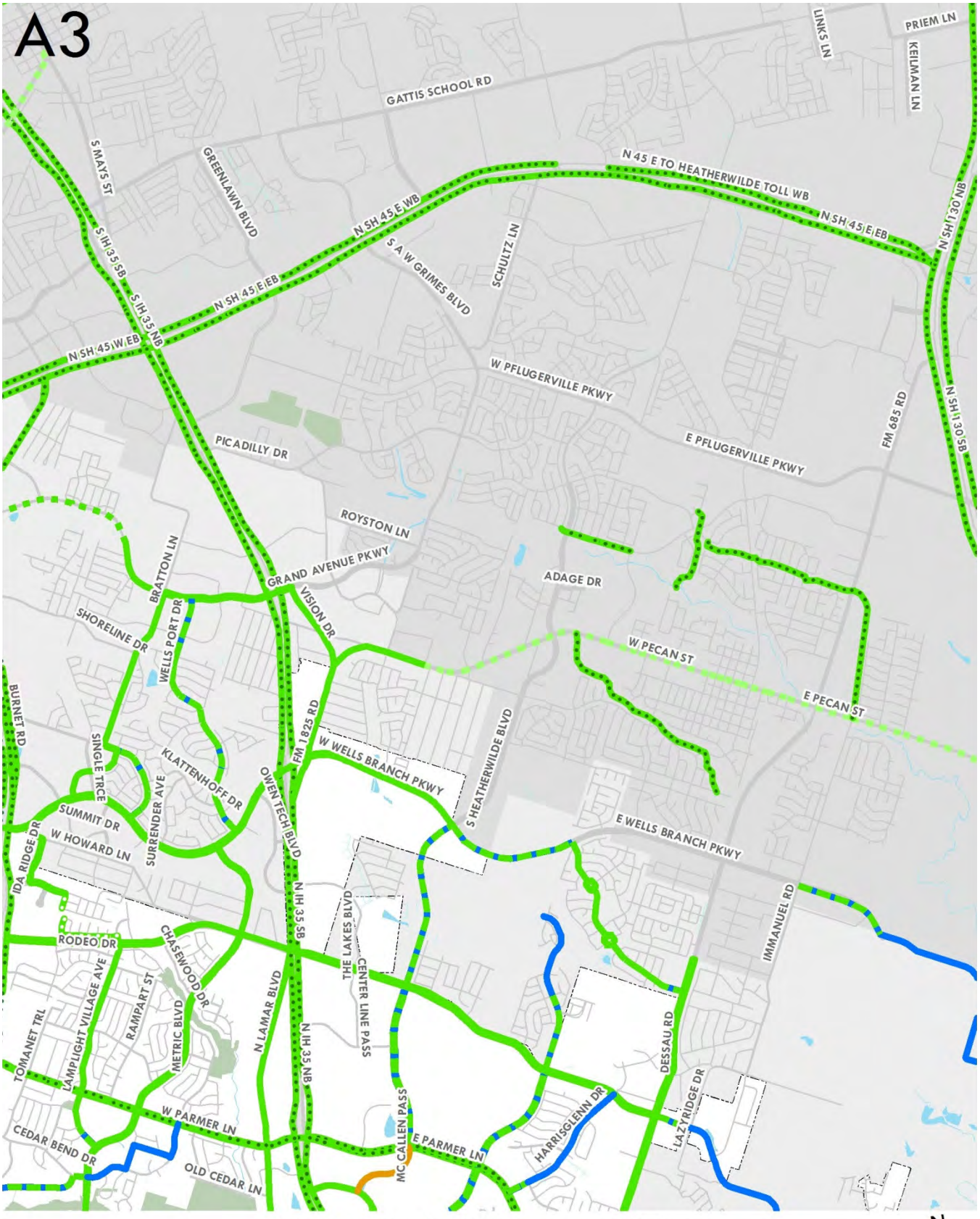
ROUND ROCK AVE
S IH 35 SB
N IH 35 SB
GREAT OAKS DR
O CONNOR DR
S O CONNOR DR
CR 172
W PARMER LN
CALAVERAS DR
NEENAH AVE
N FM 620 RD
N SH 45 W SVRD WB
N SH 45 W EB
MC NEIL RD
LAKELINE BLVD
N FM 620 RD NB
N SH 45 W WB
N FM 620 RD SB
FM 1325 RD
BURNET RD
ANDERSON MILL RD
W HOWARD LN
N MOPAC EXPY NB
IDA RIDGE DR
MC NEIL DR
POND SPRINGS RD
HEINEMANN DR
BLACKFOOT TRL
LOS INDIOS TRL
AVERY ISLAND AVE
OAK CREEK DR
N MOPAC EXPY SB
N US 183 HWY SB
SPRING LAKE DR
BALCONES CLUB DR
N US 183 HWY NB
RIATA VISTA CIR
RUSTIC ROCK DR
RESEARCH BLVD SB
MUSTANG CHASE
CASSADY DR
ADELPHI LN
TOMANET TRL
D K RANCH RD
WYCLIFF LN
CABANA LN
SCRIBE DR
WATERS PARK RD
TEXAS PLUME RD
FIREOAK DR
DANWOOD DR
JOLLYVILLE RD
RESEARCH BLVD NB
DUVAL RD
DUVAL RD
Protected Bike Lane
Shared Use Path/Trail
Quiet Street
Buffered Bike Lane
Bike Lane
Wide Shoulder
Wide Curb Lane
Shared Lane
Future Alignment
Other Jurisdictions



Complete Bicycle Facility Recommendations

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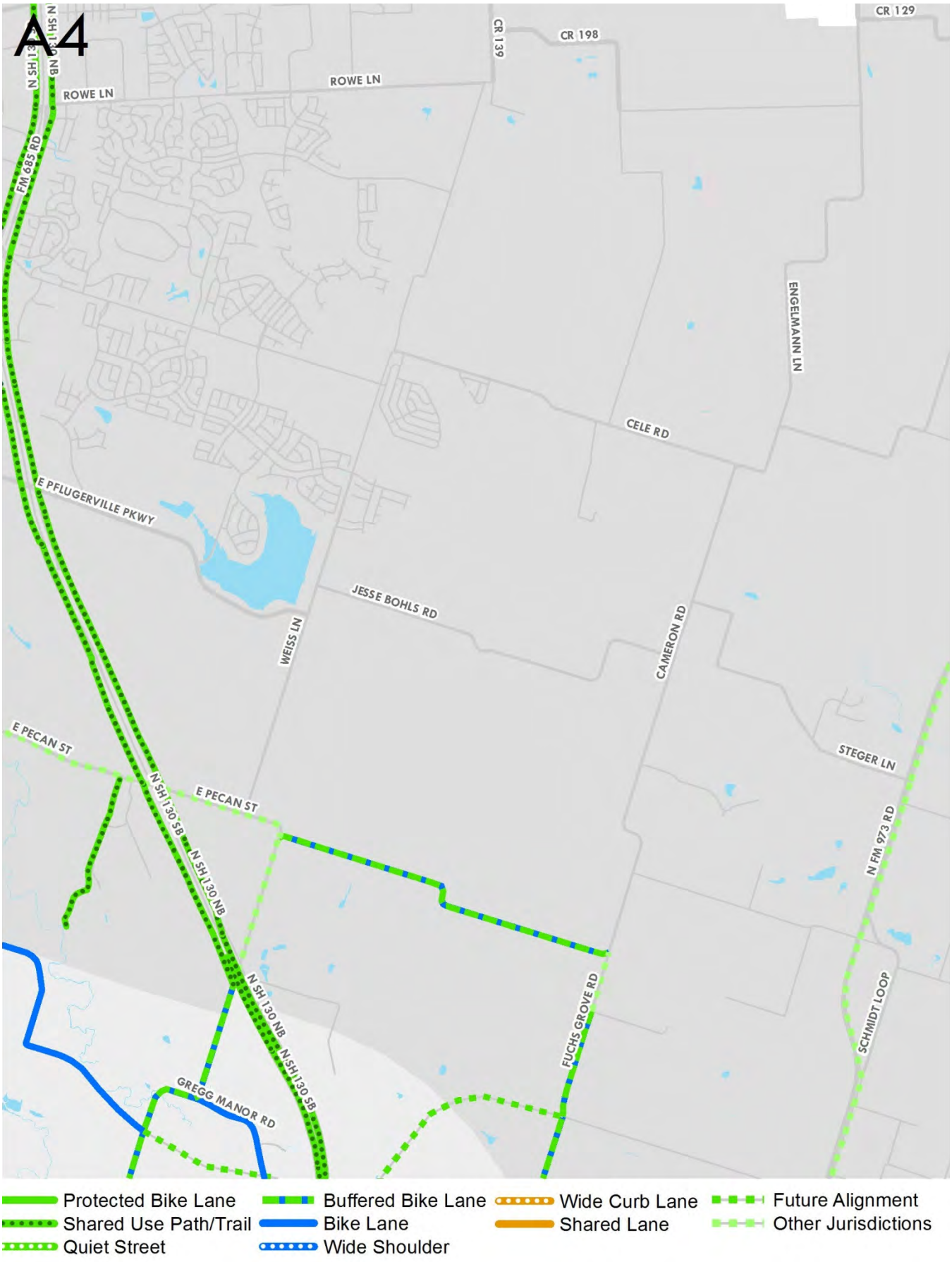
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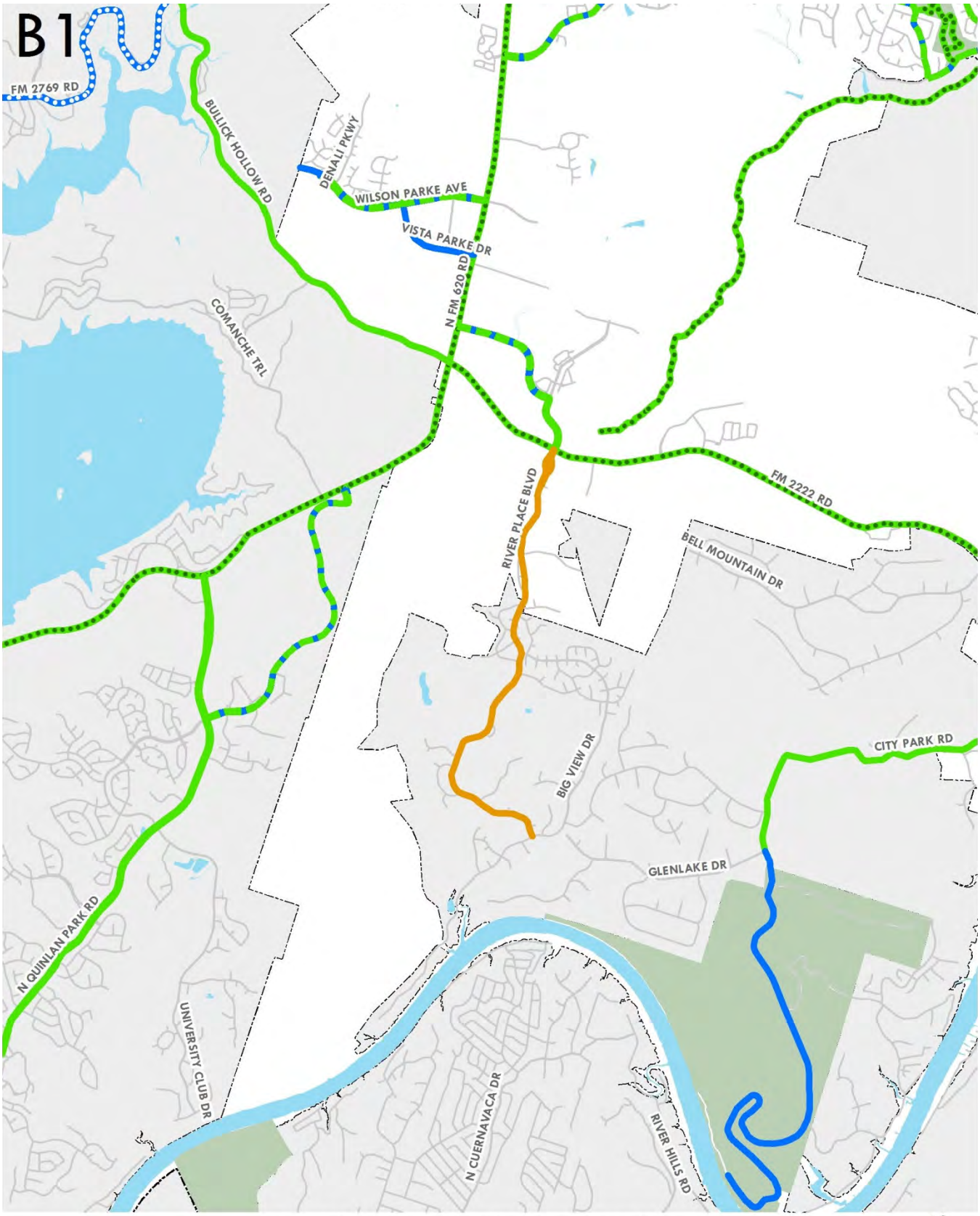
ROWE LN
ROWE LN
CR 139
CR 198
CR 129
FM 685 RD
ENGELMANN LN
CELE RD
E PFLUGERVILLE PKWY
JESSE BOHLS RD
WEISS LN
CAMERON RD
E PECAN ST
E PECAN ST
STEGER LN
N SH 130 SB
N SH 130 NB
N FM 973 RD
N SH 130 NB
N SH 130 SB
FUCHS GROVE RD
SCHMIDT LOOP
GREGG MANOR RD
Protected Bike Lane
Shared Use Path/Trail
Quiet Street
Buffered Bike Lane
Bike Lane
Wide Shoulder
Wide Curb Lane
Shared Lane
Future Alignment
Other Jurisdictions



Complete Bicycle Facility Recommendations

0 1 2 Miles

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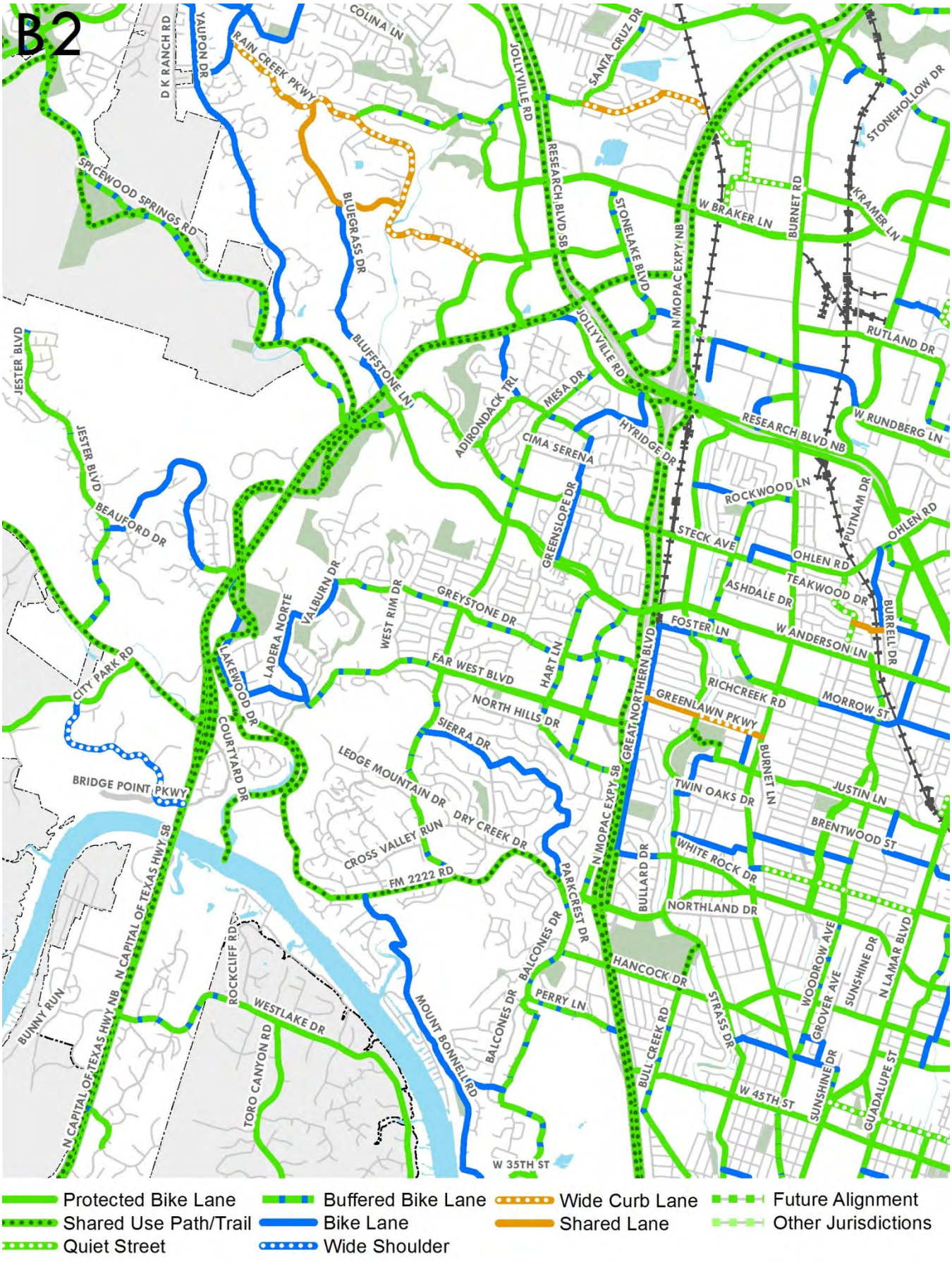
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SANTA CRUZ DR
STONEHOLLOW DR
SPICEWOOD SPRINGS RD
BLUEGRASS DR
RESEARCH BLVD SB
STONELAKE BLVD
N MOPAC EXPY NB
W BRAKER LN
BURNET RD
KRAMER LN
JESTER BLVD
BLUFFSTONE LN
JOLLYVILLE RD
RUTLAND DR
ADIRONDACK TRL
MESA DR
HYRIDGE DR
RESEARCH BLVD NB
W RUNDBERG LN
CIMA SERENA
ROCKWOOD LN
PUTNAM DR
OHLEN RD
BEAUFORD DR
GREENSLOPE DR
STECK AVE
OHLEN RD
ASHDALE DR
TEAKWOOD DR
VALBURN DR
WEST RIM DR
GREYSTONE DR
FOSTER LN
W ANDERSON LN
BURRELL DR
CITY PARK RD
LADERA NORTE
LAKEWOOD DR
FAR WEST BLVD
HART LN
GREAT NORTHERN BLVD
RICHCREEK RD
MORROW ST
NORTH HILLS DR
GREENLAWN PKWY
SIERRA DR
COURTYARD DR
BURNET LN
LEDGE MOUNTAIN DR
JUSTIN LN
BRIDGE POINT PKWY
TWIN OAKS DR
DRY CREEK DR
BRENTWOOD ST
CROSS VALLEY RUN
N MOPAC EXPY SB
WHITE ROCK DR
FM 2222 RD
PARKCREST DR
BULLARD DR
NORTHLAND DR
N CAPITAL OF TEXAS HWY SB
BALCONES DR
HANCOCK DR
N LAMAR BLVD
ROCKCLIFF RD
WOODROW AVE
SUNSHINE DR
BUNNY RUN
WESTLAKE DR
PERRY LN
GROVER AVE
STRASS DR
N CAPITAL OF TEXAS HWY NB
MOUNT BONNELL RD
BULL CREEK RD
TORO CANYON RD
W 45TH ST
SUNSHINE DR
GUADALUPE ST
W 35TH ST
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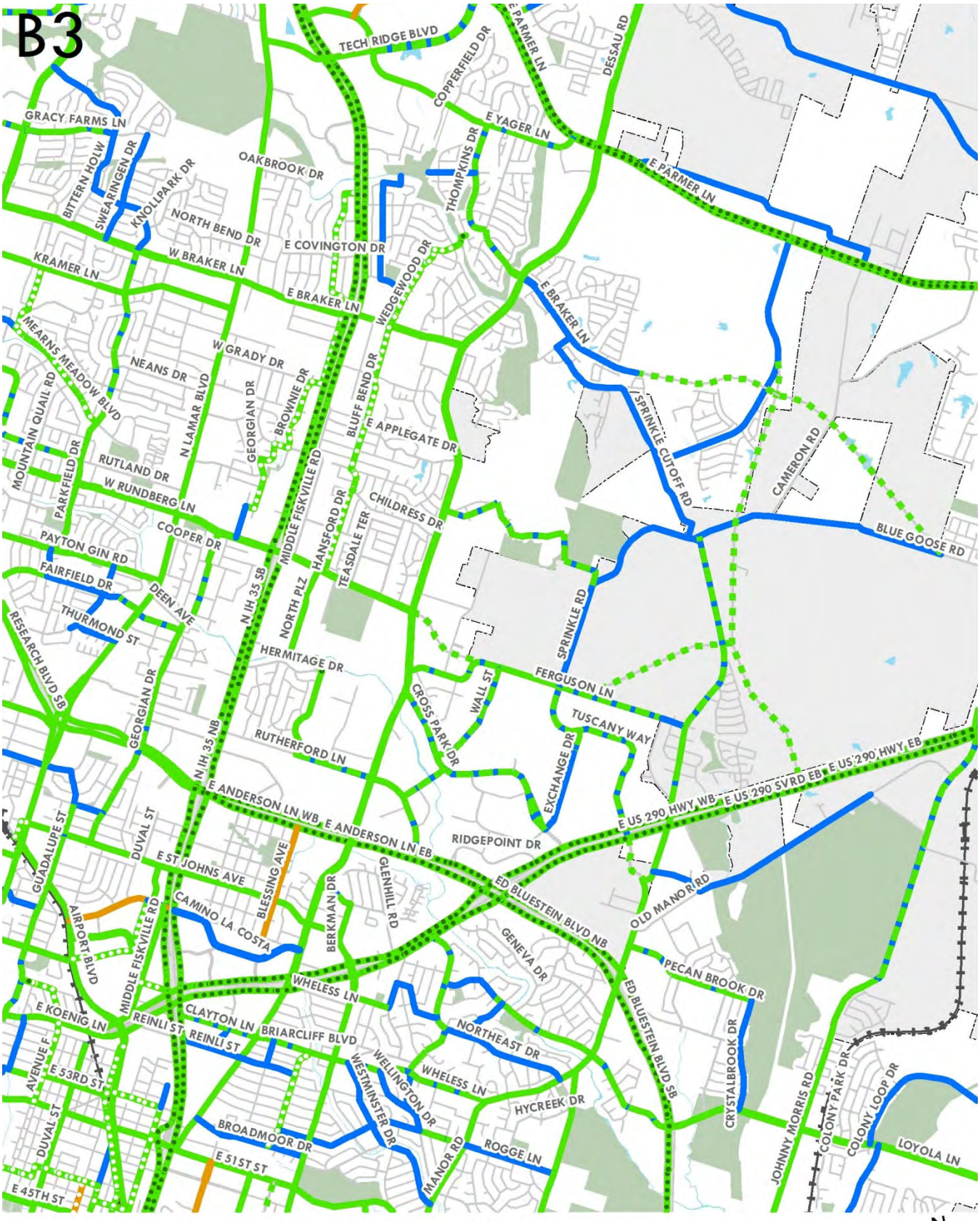
Shared Use Path/Trail
Quiet Street
Buffered Bike Lane
Bike Lane
Wide Shoulder
Wide Curb Lane
Shared Lane
Future Alignment
Other Jurisdictions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BITTERN HOLW
SWEARINGEN DR
KNOLLPARK DR
NORTH BEND DR
E COVINGTON DR
W BRAKER LN
KRAMER LN
E BRAKER LN
WEDGEWOOD DR
MEARNS MEADOW BLVD
W GRADY DR
NEANS DR
MOUNTAIN QUAIL RD
N LAMAR BLVD
GEORGIAN DR
BROWNIE DR
BLUFF BEND DR
E APPLEGATE DR
PARKFIELD DR
RUTLAND DR
W RUNDBERG LN
MIDDLE FISKVILLE RD
CHILDRESS DR
HANSFORD DR
TEASDALE TER
SPRINKLE CUTOFF RD
CAMERON RD
COOPER DR
BLUE GOOSE RD
PAYTON GIN RD
FAIRFIELD DR
DEEN AVE
N IH 35 SB
NORTH PLZ
THURMOND ST
SPRINKLE RD
RESEARCH BLVD SB
HERMITAGE DR
FERGUSON LN
WALL ST
CROSS PARK DR
GEORGIAN DR
TUSCANY WAY
N IH 35 NB
RUTHERFORD LN
EXCHANGE DR
E US 290 HWY EB
E US 290 SVRD EB
E US 290 HWY WB
E ANDERSON LN WB
E ANDERSON LN EB
RIDGEPOINT DR
GUADALUPE ST
DUVAL ST
E ST JOHNS AVE
BLESSING AVE
GLENHILL RD
ED BLUESTEIN BLVD NB
OLD MANOR RD
AIRPORT BLVD
CAMINO LA COSTA
BERKMAN DR
MIDDLE FISKVILLE RD
GENEVA DR
PECAN BROOK DR
WHELESS LN
E KOENIG LN
REINLI ST
CLAYTON LN
BRIARCLIFF BLVD
NORTHEAST DR
ED BLUESTEIN BLVD SB
CRYSTALBROOK DR
AVENUE F
E 53RD ST
WELLINGTON DR
WESTMINSTER DR
WHELESS LN
HYCREEK DR
JOHNNY MORRIS RD
COLONY PARK DR
COLONY LOOP DR
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ROGGE LN
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Complete Bicycle Facility Recommendations
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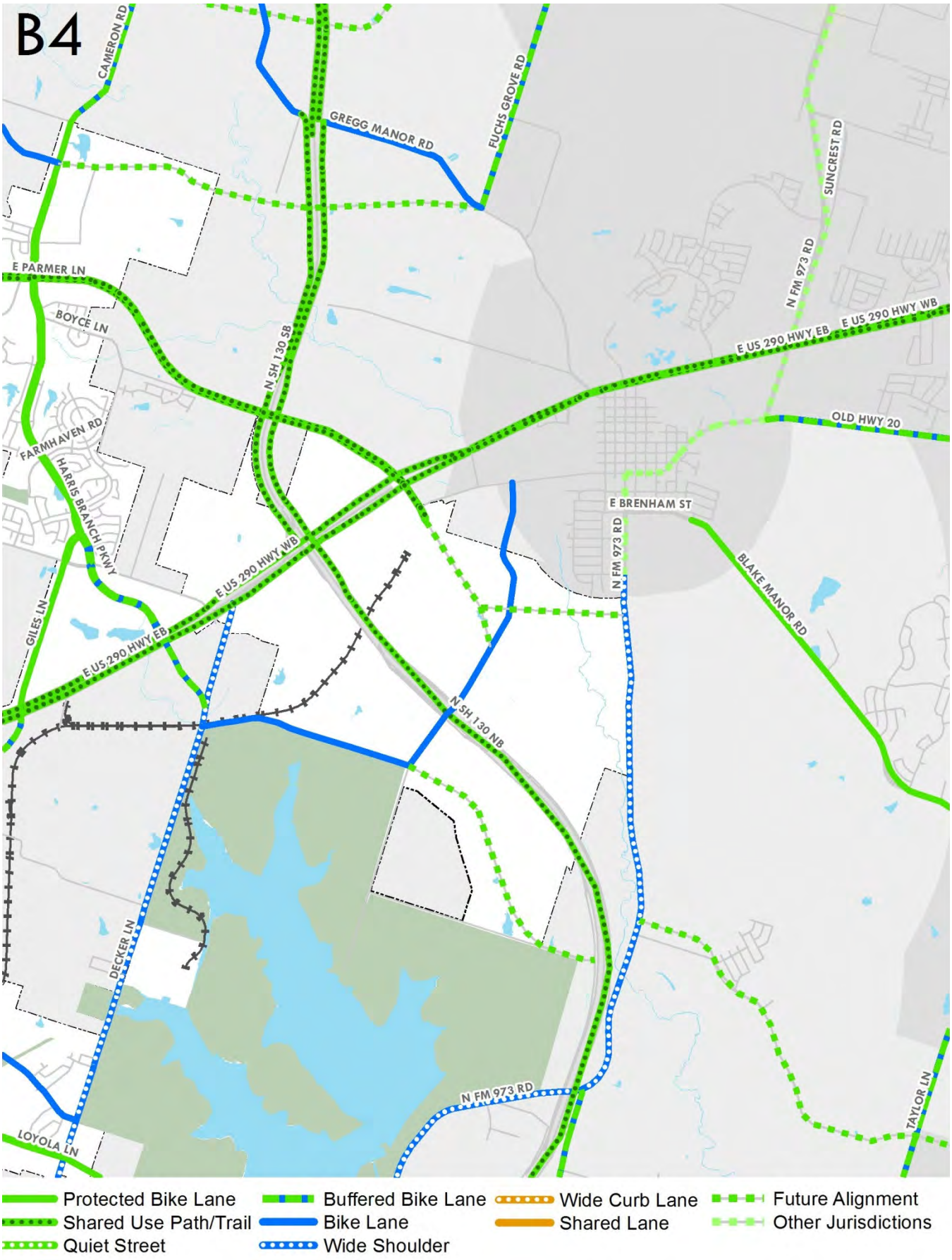
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OLD HWY 20
FARMHAVEN RD
HARRIS BRANCH PKWY
E BRENHAM ST
N FM 973 RD
BLAKE MANOR RD
E US 290 HWY WB
GILES LN
E US 290 HWY EB
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DECKER LN
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Shared Lane
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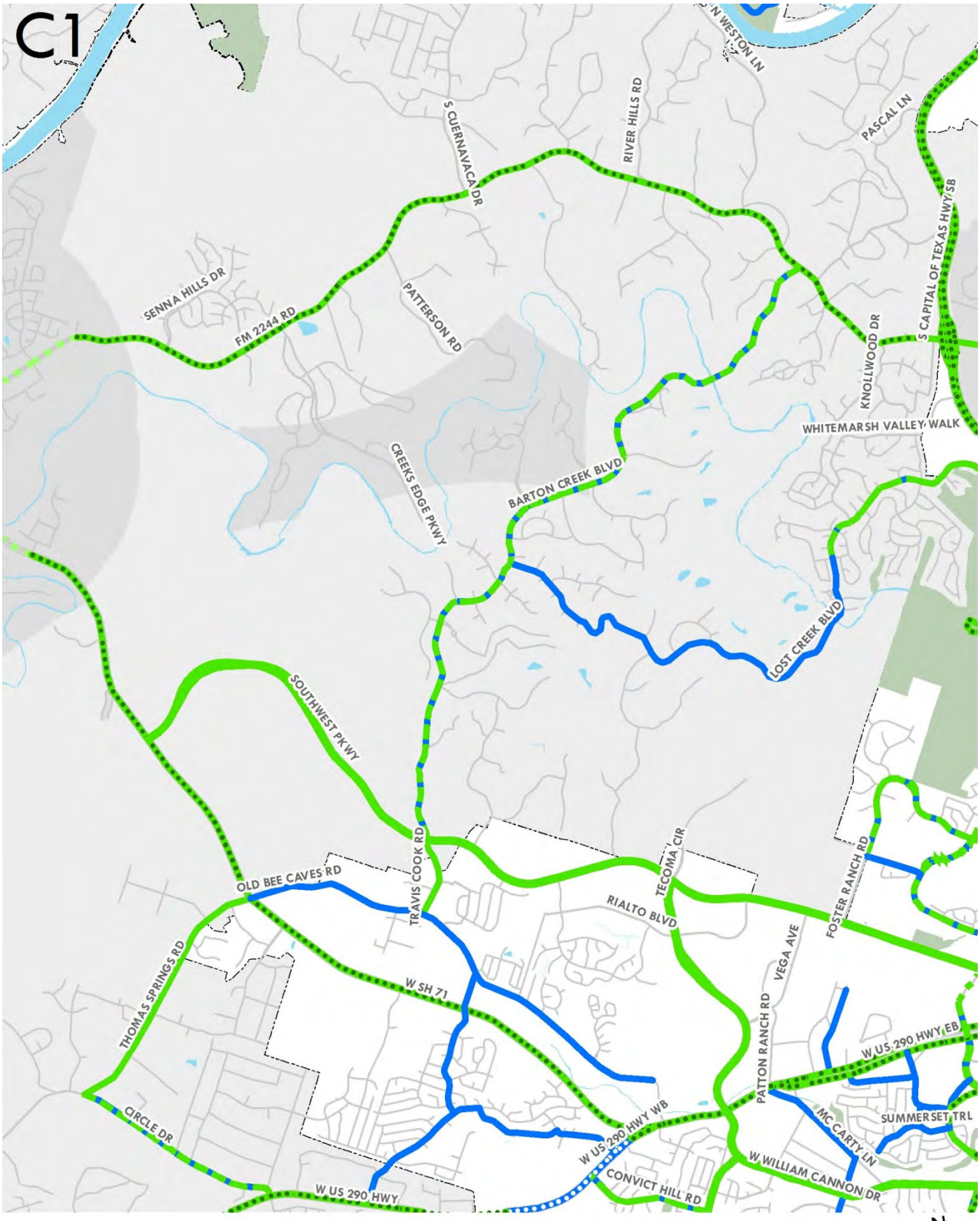
Other Jurisdictions



Complete Bicycle Facility Recommendations

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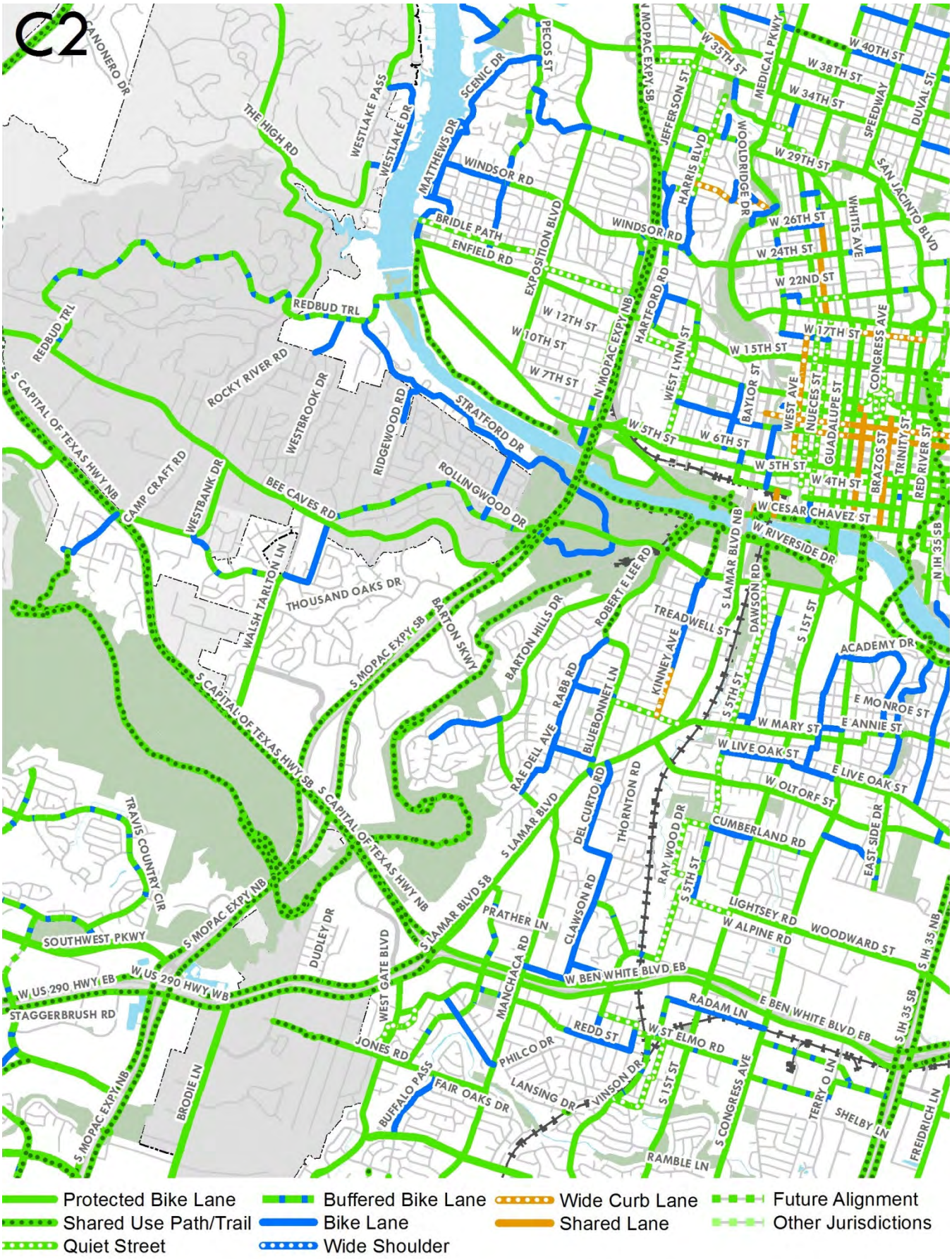
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CANONERO DR
THE HIGH RD
WESTLAKE PASS
WESTLAKE DR
SCENIC DR
PECOS ST
MOPAC EXPY SB
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MEDICAL PKWY
W 40TH ST
W 38TH ST
W 34TH ST
SPEEDWAY
DUVAL ST
JEFFERSON ST
MATTHEWS DR
WINDSOR RD
HARRIS BLVD
WOODRIDGE DR
W 29TH ST
SAN JACINTO BLVD
BRIDLE PATH
ENFIELD RD
EXPOSITION BLVD
WINDSOR RD
W 26TH ST
WHITIS AVE
W 24TH ST
W 22ND ST
REDBUD TRL
REDBUD TRL
W 12TH ST
W 10TH ST
W 7TH ST
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CONGRESS AVE
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BAYLOR ST
ROCKY RIVER RD
WESTBROOK DR
RIDGEWOOD RD
STRATFORD DR
WEST AVE
NUECES ST
GUADALUPE ST
W 5TH ST
W 6TH ST
TRINITY ST
BRAZOS ST
RED RIVER ST
S CAPITAL OF TEXAS HWY NB
CAMP CRAFT RD
WESTBANK DR
BEE CAVES RD
ROLLINGWOOD DR
W 5TH ST
W 4TH ST
W CESAR CHAVEZ ST
W RIVERSIDE DR
N IH 35 SB
WALSH TARLTON LN
THOUSAND OAKS DR
S MOPAC EXPY SB
BARTON SKWY
BARTON HILLS DR
ROBERT E LEE RD
S LAMAR BLVD NB
DAWSON RD
TREADWELL ST
S 1ST ST
ACADEMY DR
KINNEY AVE
S 5TH ST
E MONROE ST
E ANNIE ST
W MARY ST
RABB RD
BLUEBONNET LN
RAE DELL AVE
W LIVE OAK ST
E LIVE OAK ST
W OLTORF ST
S CAPITAL OF TEXAS HWY SB
S CAPITAL OF TEXAS HWY NB
TRAVIS COUNTRY CIR
S LAMAR BLVD
DEL CURTO RD
THORNTON RD
RAY WOOD DR
CUMBERLAND RD
EAST SIDE DR
S 5TH ST
LIGHTSEY RD
W ALPINE RD
WOODWARD ST
S IH 35 NB
PRATHER LN
CLAWSON RD
S MOPAC EXPY NB
SOUTHWEST PKWY
DUDLEY DR
S LAMAR BLVD SB
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W US 290 HWY EB
W US 290 HWY WB
WEST GATE BLVD
MANCHACA RD
RADAM LN
E BEN WHITE BLVD EB
S IH 35 SB
STAGGERBRUSH RD
REDD ST
W ST ELMO RD
JONES RD
PHILCO DR
BRODIE LN
BUFFALO PASS
FAIR OAKS DR
LANSING DR
VINSON DR
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SHELBY LN
FREIDRICH LN
S MOPAC EXPY NB
RAMBLE LN
Protected Bike Lane
Shared Use Path/Trail
Quiet Street
Buffered Bike Lane
Bike Lane
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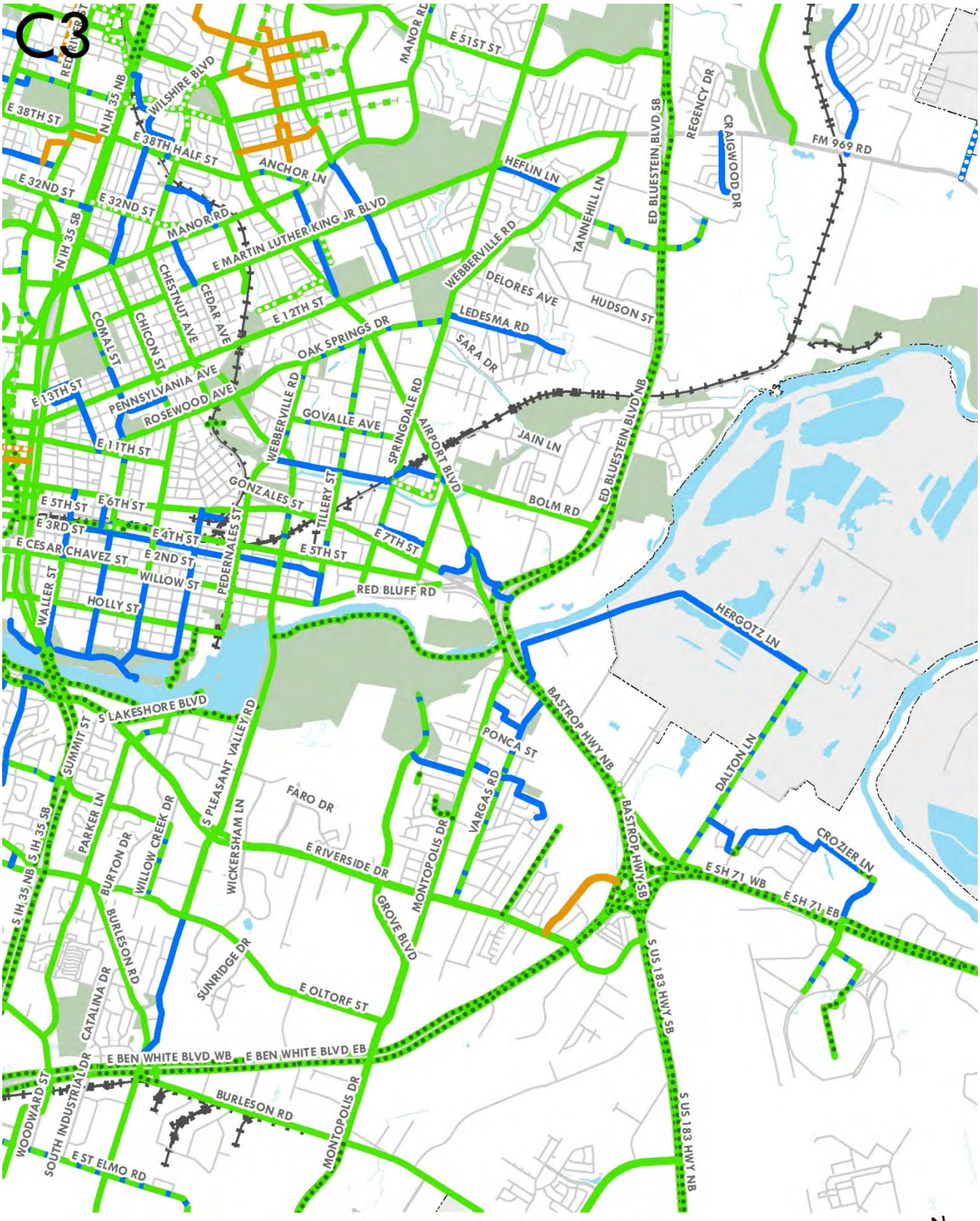
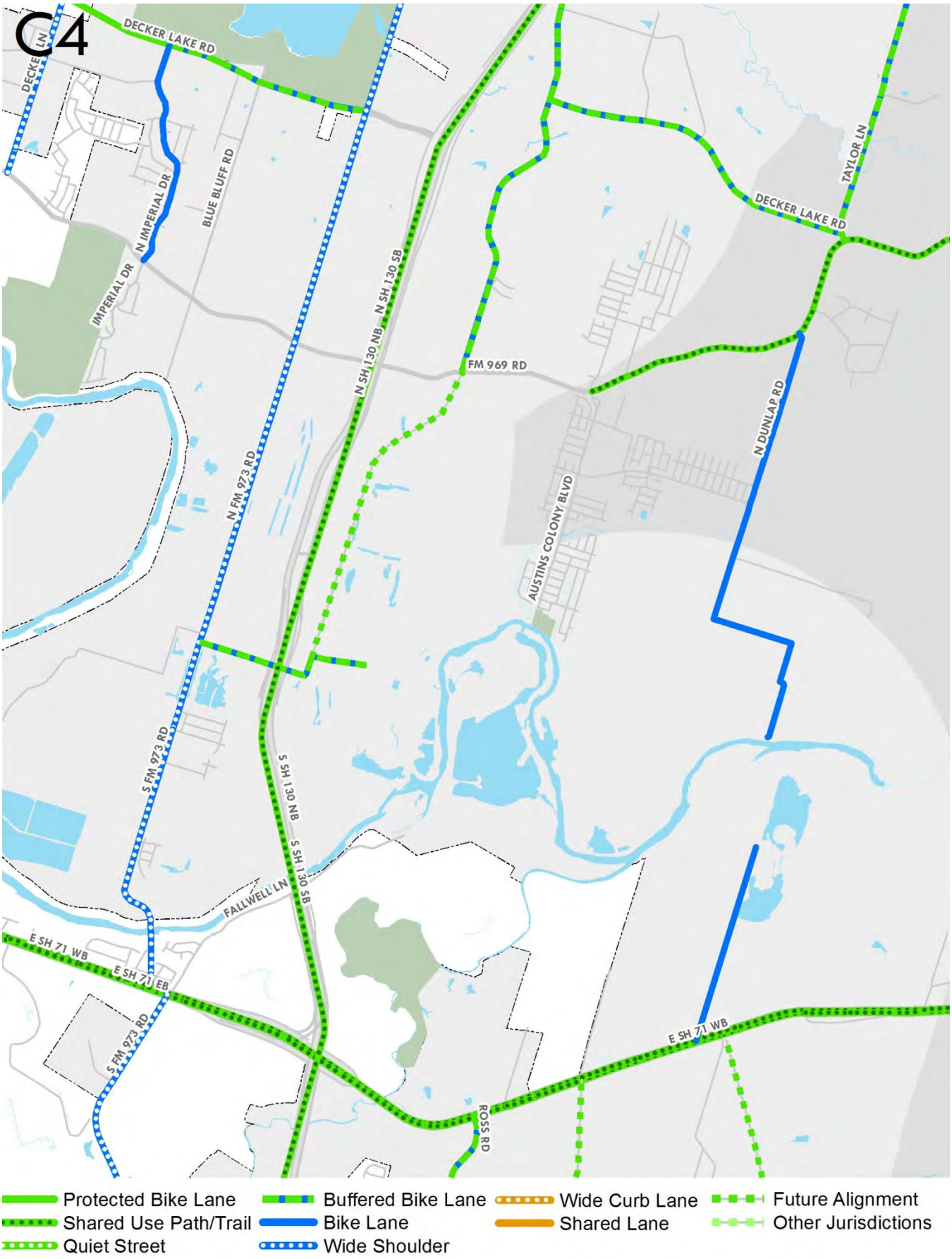
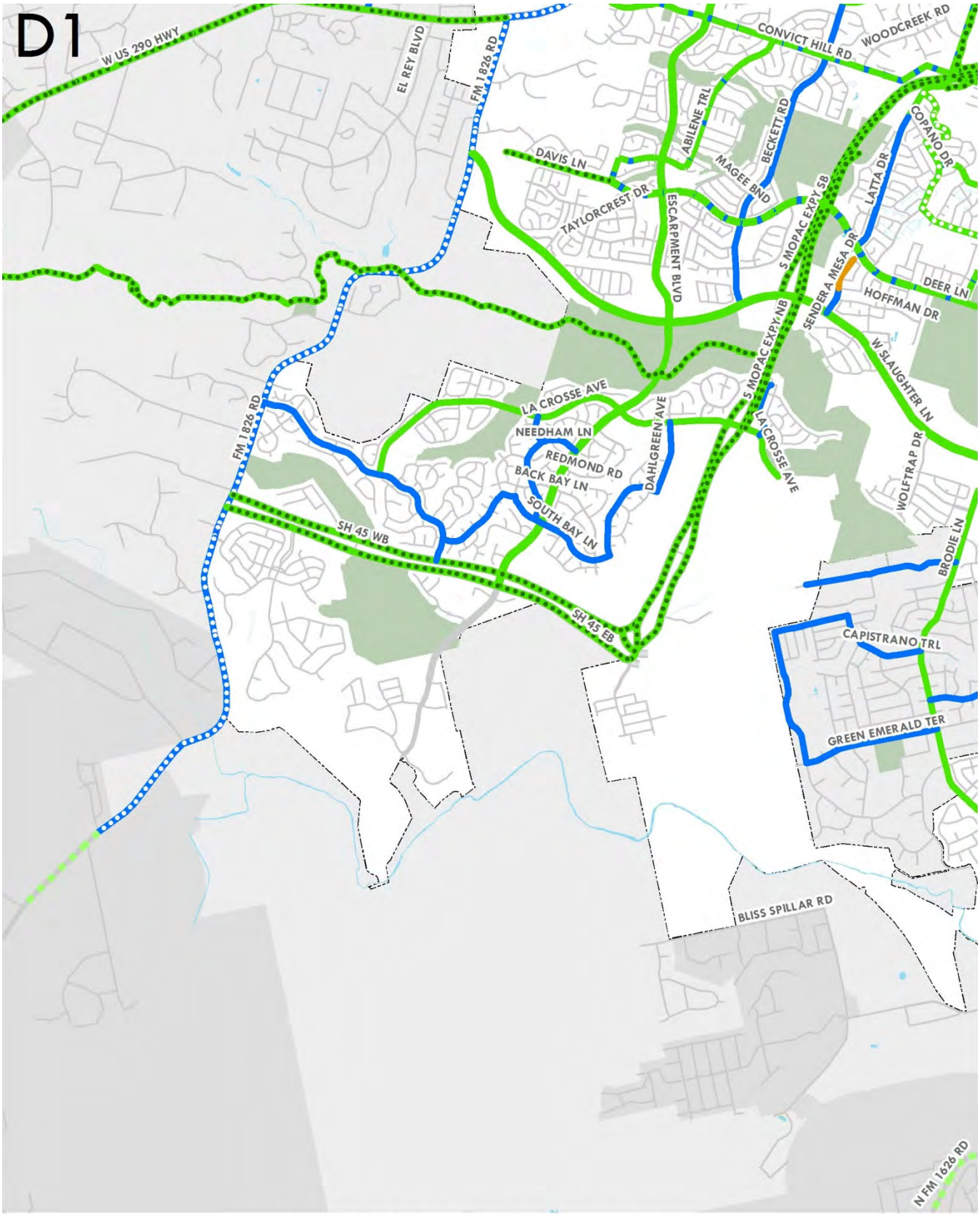
Shared Lane
Future Alignment
Other Jurisdictions


C3
E 51ST ST
MANOR RD
WILSHIRE BLVD
N IH 35 NB
E 38TH ST
E 38TH HALF ST
ANCHOR LN
HEFLIN LN
REGENCY DR
CRAIGWOOD DR
FM 969 RD
ED BLUESTEIN BLVD SB
TANNEHILL LN
E 32ND ST
MANOR RD
E MARTIN LUTHER KING JR BLVD
N IH 35 SB
CHESTNUT AVE
CEDAR AVE
WEBBERVILLE RD
DELORES AVE
HUDSON ST
COMAL ST
CHICON ST
E 12TH ST
LEDESMA RD
SARA DR
OAK SPRINGS DR
E 13TH ST
PENNSYLVANIA AVE
ROSEWOOD AVE
GOVALLE AVE
SPRINGDALE RD
AIRPORT BLVD
JAIN LN
ED BLUESTEIN BLVD NB
E 11TH ST
GONZALES ST
TILLERY ST
BOLM RD
E 5TH ST
E 6TH ST
E 3RD ST
E 4TH ST
E 7TH ST
E CESAR CHAVEZ ST
E 2ND ST
PEDERNALES ST
WILLOW ST
RED BLUFF RD
HOLLY ST
WALLER ST
HERGOTZ LN
S LAKESHORE BLVD
SUMMIT ST
S PLEASANT VALLEY RD
PONCA ST
BASTROP HWY NB
DALTON LN
FARO DR
VARGAS RD
PARKER LN
S IH 35 SB
WILLOW CREEK DR
BURTON DR
E RIVERSIDE DR
MONTOPOLIS DR
BASTROP HWY SB
CROZIER LN
E SH 71 WB
E SH 71 EB
S IH 35 NB
WICKERSHAM LN
GROVE BLVD
BURLESON RD
SUNRIDGE DR
S US 183 HWY SB
E OLTORF ST
CATALINA DR
E BEN WHITE BLVD WB
E BEN WHITE BLVD EB
WOODWARD ST
SOUTH INDUSTRIAL DR
BURLESON RD
MONTOPOLIS DR
S US 183 HWY NB
E ST ELMO RD
Complete Bicycle Facility Recommendations
0
1
2
Miles
N

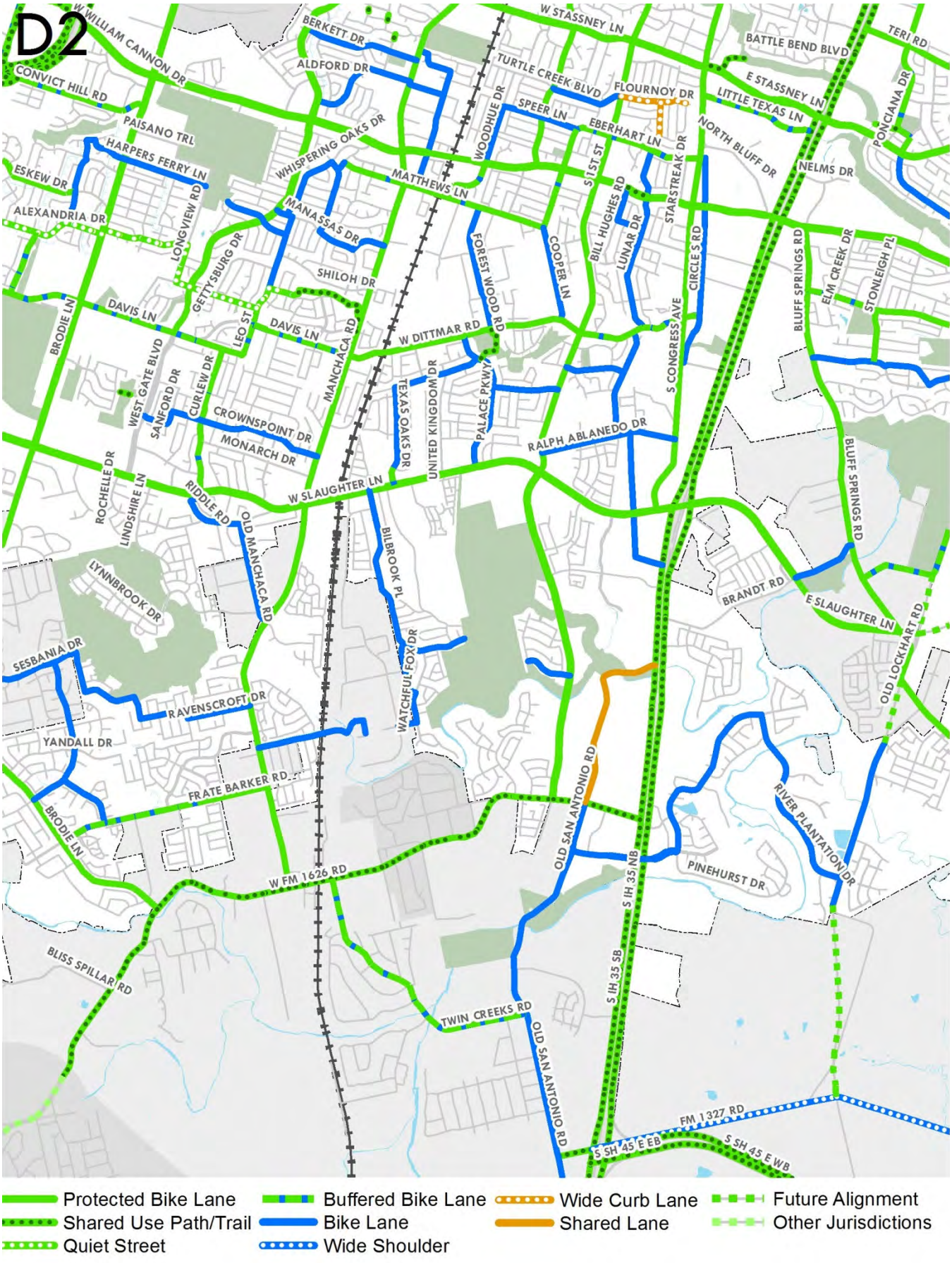

C4
DECKER LAKE RD
DECKER LN
N IMPERIAL DR
BLUE BLUFF RD
IMPERIAL DR
N SH 130 SB
N SH 130 NB
FM 969 RD
TAYLOR LN
DECKER LAKE RD
N DUNLAP RD
N FM 973 RD
AUSTINS COLONY BLVD
S FM 973 RD
S SH 130 NB
S SH 130 SB
FALLWELL LN
E SH 71 WB
E SH 71 EB
S FM 973 RD
E SH 71 WB
ROSS RD
Protected Bike Lane
Buffered Bike Lane
Wide Curb Lane
Future Alignment
Shared Use Path/Trail
Bike Lane
Shared Lane
Other Jurisdictions
Quiet Street
Wide Shoulder



Complete Bicycle Facility Recommendations

0 1 2 Miles

N


D2
W WILLIAM CANNON DR
CONVICT HILL RD
PAISANO TRL
HARPERS FERRY LN
ESKEW DR
ALEXANDRIA DR
LONGVIEW RD
GETTYSBURG DR
BRODIE LN
DAVIS LN
LEO ST
WEST GATE BLVD
SANFORD DR
CURLEW DR
CROWNSPOINT DR
MONARCH DR
ROCHELLE DR
LINDSHIRE LN
RIDDLE RD
LYNNBROOK DR
SESBANIA DR
RAVENSCROFT DR
YANDALL DR
FRATE BARKER RD
BRODIE LN
W FM 1626 RD
BLISS SPILLAR RD
BERKETT DR
ALDFORD DR
WHISPERING OAKS DR
MANASSAS DR
SHILOH DR
MANCHACA RD
OLD MANCHACA RD
BILBROOK PL
WATCHFUL FOX DR
TWIN CREEKS RD
W STASSNEY LN
TURTLE CREEK BLVD
WOODHUE DR
SPEER LN
MATTHEWS LN
FOREST WOOD RD
COOPER LN
W DITTMAR RD
TEXAS OAKS DR
UNITED KINGDOM DR
PALACE PKWY
W SLAUGHTER LN
OLD SAN ANTONIO RD
S IH 35 NB
S IH 35 SB
FLOURNOY DR
EBERHART LN
S 1ST ST
BILL HUGHES RD
LUNAR DR
STARSTREAK DR
S CONGRESS AVE
CIRCLE S RD
RALPH ABLANEDO DR
BATTLE BEND BLVD
E STASSNEY LN
LITTLE TEXAS LN
NORTH BLUFF DR
NELMS DR
TERI RD
PONCIANA DR
BLUFF SPRINGS RD
ELM CREEK DR
STONLEIGH PL
BLUFF SPRINGS RD
BRANDT RD
E SLAUGHTER LN
OLD LOCKHART RD
RIVER PLANTATION DR
PINEHURST DR
FM 1327 RD
S SH 45 E EB
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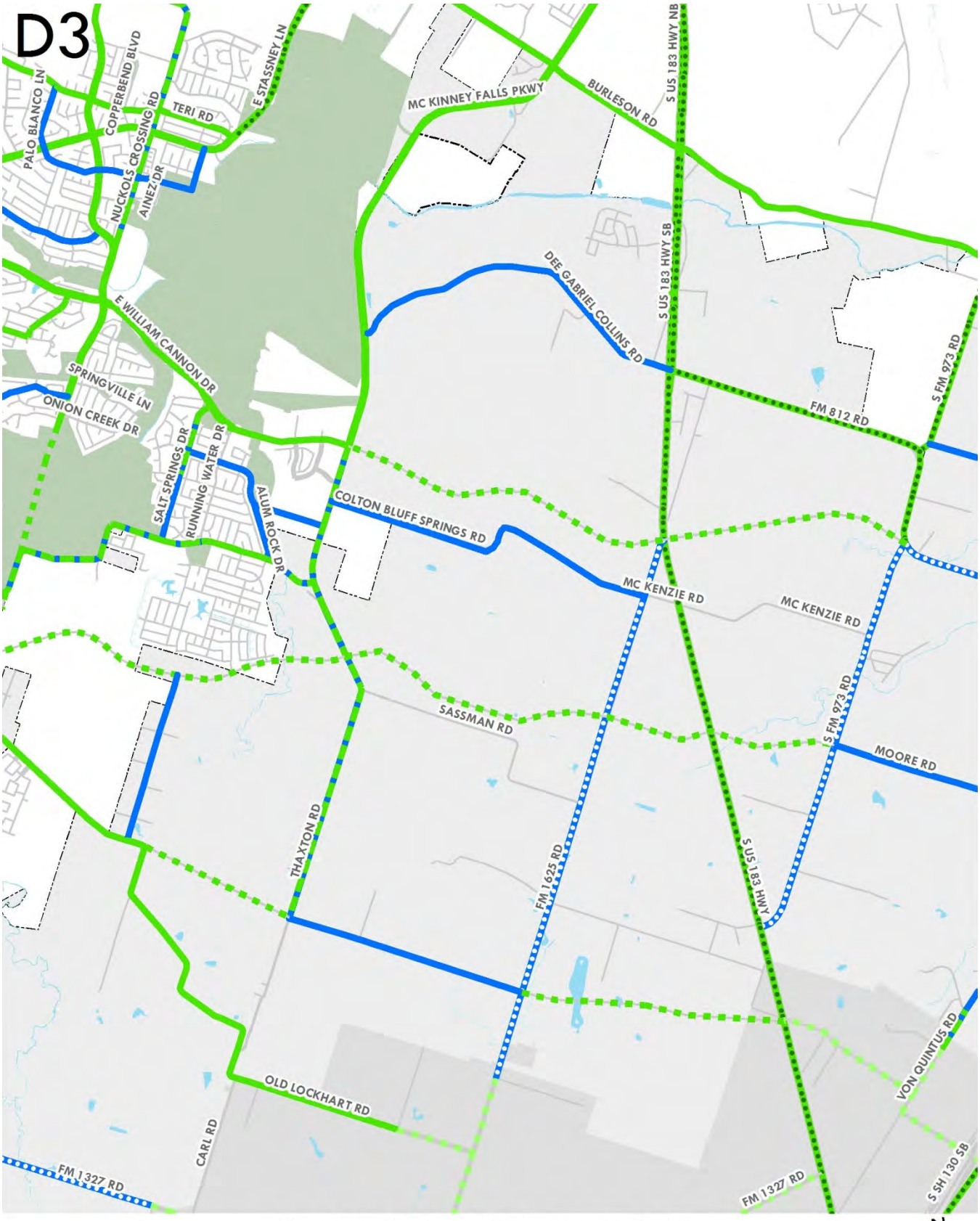
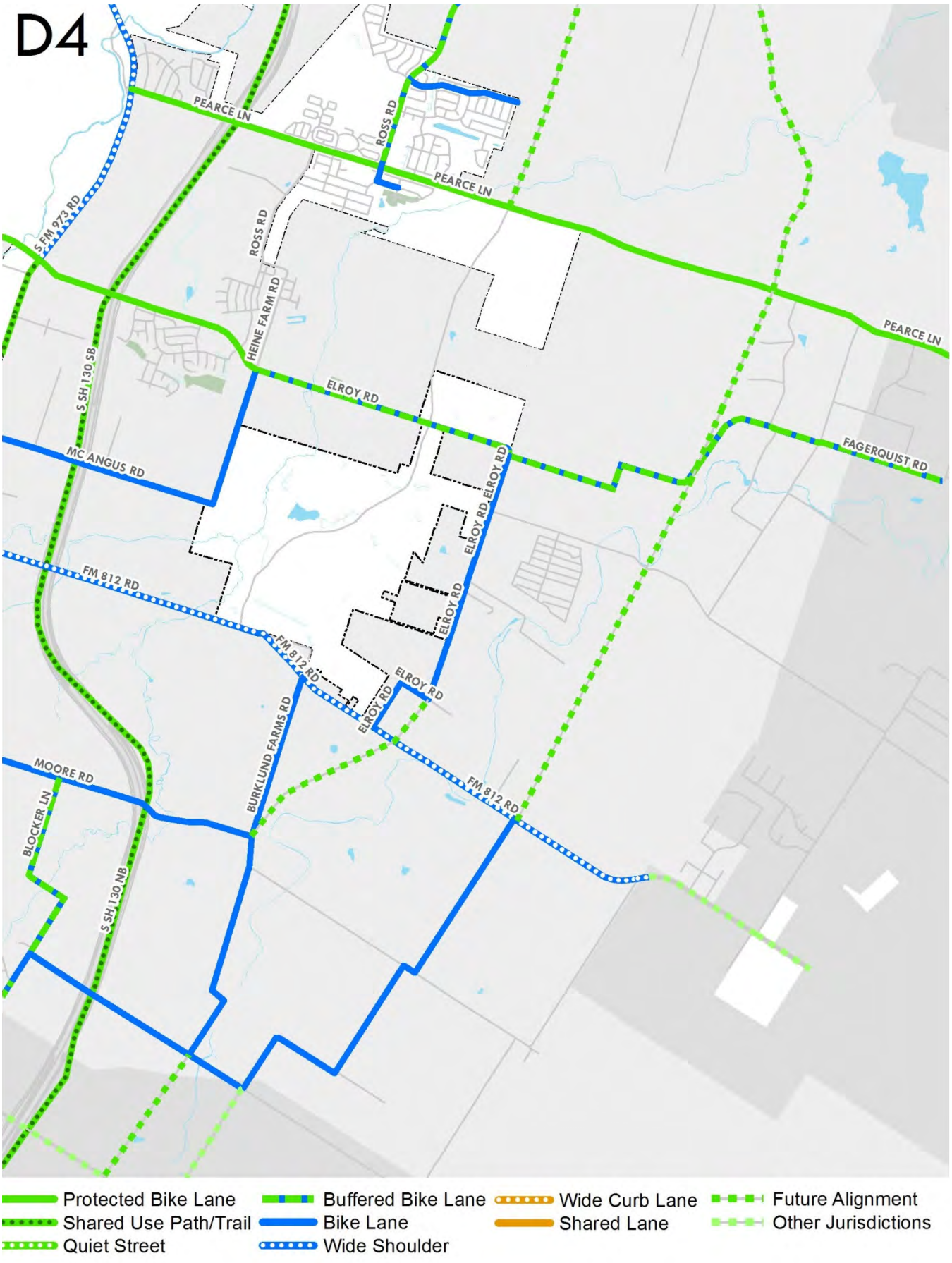
Protected Bike Lane
Shared Use Path/Trail
Quiet Street
Buffered Bike Lane
Bike Lane
Wide Shoulder
Wide Curb Lane
Shared Lane
Future Alignment
Other Jurisdictions



Complete Bicycle Facility Recommendations

0 1 2 Miles

N


D4
PEARCE LN
ROSS RD
PEARCE LN
S FM 973 RD
ROSS RD
HEINE FARM RD
PEARCE LN
S SH 130 SB
ELROY RD
MC ANGUS RD
FAGERQUIST RD
ELROY RD
ELROY RD
FM 812 RD
ELROY RD
FM 812 RD
ELROY RD
ELROY RD
BURKLUND FARMS RD
MOORE RD
FM 812 RD
BLOCKER LN
S SH 130 NB
Protected Bike Lane
Buffered Bike Lane
Wide Curb Lane
Future Alignment
Shared Use Path/Trail
Bike Lane
Shared Lane
Other Jurisdictions
Quiet Street
Wide Shoulder

OPERATIONS AND MAINTENANCE CONSIDERATIONS FOR PROTECTED BICYCLE LANES

Protected bicycle lanes have a number of complexities. Traditional painted bicycle lanes are effectively part of the roadway and traditional approaches to maintenance and operations are generally unaffected by the addition of the painted stripe. Since protected bicycle lanes have an element of physical protection, maintenance and operations can be affected.

For the successful implementation of protected bicycle lanes, it is necessary to take a context sensitive approaches to providing the barrier, that best balance all needs for the street. As part of this planning process, a robust toolbox of barrier types has been developed to assist with decision making.

	Striped Buffer	Flexible Bollards	Large Bumps	Parked Cars	Planters	Cast in Place Barrier Curb
						
Cost/Benefit						
Cost per Foot of Barrier (per side of street) *Costs double for barriers on both sides	$1.50-3/ft. $8k-16k/mi.	$3-6/ft. $15k-30k/mi.	$4-8/ft. $20k-40k/mi.	$15-60/ft. $80k-300k/mi.	$15-75/ft. $80k-400k/mi.	$20-40/ft. $100k-200k/mi.
Cost	★★★★	★★★	★★★	★★	★★	★★
Cyclist Perceived Safety	★	★★★	★★★★	★★★★	★★★★	★★★★
Other Considerations						
Durability / Maintenance	★★	★	★★★	★★★★	★	★★★★
Sweeping	★★★★	Depends on Width	Depends on Width	★★★	Depends on Width	Depends on Width
Trash Collection	★★★★	★	★	Depends on Time of Day	★	★★★★
Storm Water	★★★★	★★★	★★★	★★★★	★★	★★
Traffic Compatibility (Motor vehicle / barrier interactions)	★★★★	★★★★	★★	★★★	★★★	★★★★
Aesthetics (factoring in damage over time)	★★	★	★★★	★★	★★★★	★★★
Construction Impacts	★★★★	★★★	★★★	★★★★	★★★	★★
Width Required	1.5'	1.5'	1.5'	8' if not existing	3'	1'

EXCERPT OF CHART SHOWING FACTORS REQUIRING SPECIAL CONSIDERATION WHEN SELECTING THE APPROACH FOR A PHYSICAL BARRIER. SOURCE: CITY OF AUSTIN.

BICYCLE NETWORK IMPLEMENTATION STRATEGIES

The following are common strategies to implement bicycle facilities within constrained retrofit environments.

NARROWING EXISTING LANES

Existing lane widths are often wider than necessary to provide for safe operations. This extra space can be allocated to other uses and travel modes, including bicycle facilities without adverse impact on operations.

LANE CONVERSIONS (RIGHT SIZING ROADWAYS)

Lane conversion or right sizing projects are where travel lanes, typically streets with excess capacity and after data collection and analysis, are removed from a roadway and the space is utilized for other uses and travel modes. Lane conversions have other benefits beyond improving the bicycling safety and comfort of a street. According to the *Road Diet Handbook: Setting Trends for Livable Streets*, "the resulting benefits [of a road diet] include reduced vehicle speeds; improved mobility and access; reduced collisions and injuries; and improved livability and quality of life" (Rosales, 2006, p. 3). Potential lane conversion projects should be evaluated on a case-by-case basis. The City of Austin has successfully right sized streets including Walsh Tarlton, Manor Road, St. Johns Avenue.

STREET RECONSTRUCTION

Street reconstruction projects are an opportunity to reuse the space within the rights of way through a rebuild of the street in whole or part. While these projects are very expensive and few and far between, they present the most flexible opportunity to make the street complete including providing bicycle facilities that are safe for people of all ages and abilities.

PRIVATE DEVELOPMENT

Private development projects present an opportunity to provide safe all ages and abilities bicycle facilities. These projects also present a risk that bicycle facilities will be precluded. The later is due to the fact that the City of Austin's Commercial Design Standards often require the placement of street trees, furniture, and sidewalks and

building faces to be close to the street to create a pedestrian oriented environment. While creating compact and connected walkable places benefit bicycling, if this sidewalk infrastructure is built immediately behind the existing curb it may preclude the appropriate bicycle facility adding width to the street is necessary. The following figure illustrates the opportunity to widen existing bicycle lanes to protected bicycle lanes at time of redevelopment.

Redevelopment Scenarios that Either Create or Preclude Recommended Bicycle Facilities

Like enhanced sidewalks, protected bicycle lanes on major streets provide a significant benefit to the development. Utilizing this method as each development happens along a corridor would result in a bicycle facility that most of the population was comfortable riding in on a busy street. As more of the street is developed, more of the existing bicycle lane would be converted to protected bicycle lanes similar to our approach in upgrading sidewalks at time of development. This strategy significantly improves bicycle mobility along congested corridors as density is added, enhancing the value of the project to the public. The chart below shows the potential mobility benefit, measured in expansion of vehicle capacity (both motor vehicle and bicycle), of South Lamar due to

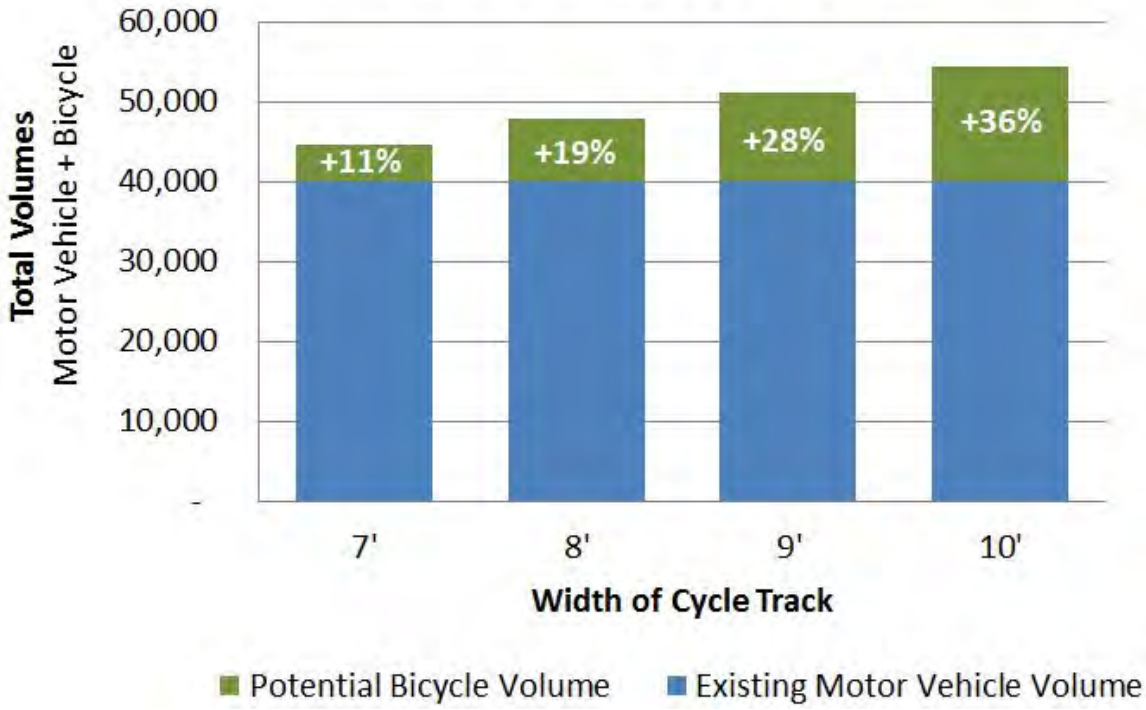
protected bicycle lanes. Depending on the width of the protected bicycle lane (not including the buffer) the expected increase in vehicle capacity ranges between 11% to 36% (Source: City of Austin / Dutch Design Manual for Bicycle Traffic - CROW).

Potential Increase in South Lamar's Mobility with All Ages and Abilities Bicycle Facilities

This plan recommends City staff work with stakeholder groups to develop policy that requires providing protected bicycle facilities at the time of development. The upgrade of a bicycle lane to protected bicycle lane is estimated at $50,000 per block face as compared to $200,000 to $400,000 per block for required sidewalk infrastructure. City staff met with diverse stakeholders including Planning and Development Review department staff, CodeNEXT (Land Development Code) consultants, the Real Estate Council of Austin, developers, site plan engineers, land use attorneys and retailers to determine how best to incorporate this cost into private development projects. The following are findings of the stakeholder group toward these policy changes:

- ☐ This stakeholder group noted the value in the addition of protected bicycle lanes at time of development.
- ☐ It was recommended that there be some benefit to the developer for upgrading the bicycle facility to offset the additional cost for the upgraded bicycle facility.
- ☐ A potential package of added benefit to the developer could include counting the protected lane towards a portion of required parkland dedication fees or reduced on-site parking requirements.

The use of parkland dedication requirements could be justified on the basis of providing a bicycle facility to both the public and residents of the site that provides all ages and abilities access by bicycle to nearby parkland. If the protected bicycle facility were not built, access to nearby parks, may become more motor vehicle dependent, with a potential result of greater parking needs that ultimately degrade these parks. One issue with parkland dedication requirements is obtaining land for parks instead of fee in lieu. In developing the proposed policy changes it will be important to preserve the principal intent of parkland dedication requirements for obtaining land for parks.



ADDITIONAL CORRIDOR VEHICLE CAPACITY ON SOUTH LAMAR WITH ADDED CYCLE TRACKS OF VARYING WIDTHS. SOURCE: CITY OF AUSTIN.

Reduced parking requirements could also be justified as protected bicycle lanes would make bicycling to the site viable for the majority of the population. Reduced parking requirements were seen as a greater benefit in the near term for smaller projects that have a harder time of meeting their parking requirement. For the time being larger sites may generally be over parked based on requirements from their financiers, though a reduction in parking requirements would give another degree of flexibility to make projects work. In the long run, as demand for on-site parking reduces, a parking reduction could be a benefit even to large projects.

The Plan also requires that the development of large land parcels provide bicycle facility connections within the parcels and to the nearby bicycle network, both existing or planned.

INCORPORATING BICYCLE FACILITIES WITH ALL PROJECTS

Incorporating accommodations for bicycles in new public and private development projects greatly increases the chances for superior bicycle infrastructure. Accommodating bicycles after construction often requires costly retrofitting, sometimes resulting in a non-standard and inferior design solution. In order to create this network,

bicycle facilities shall be included in all reconstruction of arterials and collectors in already developed areas of Austin and all new roadway construction in areas under development (City of Austin, 2002, City Council Resolution #20020418-40.). Additionally complete streets that serve all modes and people of all ages and abilities should be included in all projects and phases (City of Austin, 2014, Complete Streets Policy).

Because roadways are often built in phases, this Plan requires the interim version of all new or improved roadways also include adequate bicycle access, as approved by the Austin Transportation Department. Designing the facilities in coordination with those who maintain them can reduce expensive maintenance in the future and assure a design which will better assure the intended use.

Inconsistency across construction documents presents a challenge to providing uniform quality in bicycle facilities. Some design standards are unique to the particular authority involved. Other standards, handicapped access for example, are applied to all projects by federal regulation.

STANDALONE BICYCLE PROJECTS

In addition to implementing bicycle facilities in coordination with other transportation projects, the City should be also develop the bicycle system through standalone bicycle projects. The reality is that streets are not rebuilt often enough to keep up with the demand for bicycle facilities. If implementation relies solely on other transportation projects, then the bicycle system will not be completed in the timeline outlined in the Plan.

BICYCLE NETWORK PRIORITIES IN REVIEW

The following section reviews the highest priorities for the development of the bicycle network.

Bicycle Network Objective 2.1a) Create an All Ages and Abilities Bicycle Network

The first infrastructure recommendation will be the build-out of an all ages and abilities bicycle network. The network includes facility recommendations that would serve the majority of the population including those who are interested in riding a bicycle but concerned about safety due to motor vehicle traffic. Investment in these facilities would be targeted towards capturing short trips on the travel network to maximize return on investment. As funding for portions of the network become available, an implementation plan would be developed, detailing the most strategic facility investments that would be pursued at that time.

Total Estimated Cost: $151 Million

Benchmark: Complete 20 % of the short-term all ages and abilities network by 2017; 50 % by 2020; and 80 % by 2025.

Bicycle Network Objective 2.1b) Remove Barriers in the Bicycle Network

The second infrastructure recommendation is to continue to prioritize the removal of barriers in the existing bicycle lane network. Removal of these barriers will provide improved access to destinations where all ages and abilities facilities are not feasible.

Total Estimated Cost: $10 Million

Benchmark: Remove 30% of barriers list by 2015 and 75% by 2020.

Objective 2.1 Benchmarks

- ☐ Complete 20 % of the short-term all ages and abilities network by 2017; 50 % by 2020; and 80 % by 2025.
- ☐ Remove 30 % of barriers listed in Plan by 2015; and 75 % by 2020.
- ☐ Complete 25 % of the complete bicycle facility network recommendations by 2020; 50 % by 2025; and 75 % by 2035.
- ☐ Annually contact adjacent jurisdictions to discuss bicycle system and connectivity improvements needed to realize our proposed system.
- ☐ Address issues of parking in all bicycle lanes by 2020.
- ☐ Establish a citywide ordinance prohibiting parking in bicycle lanes by 2020.

Objective 2.1 Action Items

2.1.1 Fund and implement the all-ages and abilities bicycle network as a top priority including both on-street bike ways and off-street urban trails.

2.1.2 Eliminate gaps in the existing bicycle network to allow continuous bicycle travel in the Austin area.

2.1.2a Coordinate bicycle transportation into all roadway and park land design, planning, and construction manuals, standards documents, and projects.

2.1.2b New development that abuts or includes existing or planned City of Austin bicycle routes shall provide continuity of that route (and existing or planned bicycle facility) through or along the property, or seek an appropriate amendment to the Bicycle Plan as defined in this Plan (See Appendix D).

2.1.2c Annually contact adjacent jurisdictions to discuss bicycle system and connectivity improvements needed to realize our proposed system.

2.1.2d Install "Share the Road" signs on all streets that are gaps without retrofit options in the bicycle network by 2015.

2.1.3 The Bicycle Program Manager will work on a case-by-case basis with residents, neighborhood associations, and the bicycle community to determine local needs for parking and bicycle lanes. The Bicycle Program Manager will work to accommodate both the local needs and the needs of area bicyclists.

2.1.4 Require interim, first phase of roadway construction to provide bicycle facilities.

2.1.5 Make key operational improvements to the existing and recommended bicycle network.

2.1.5a Explore new technologies or techniques to detect bicycles at traffic signals – retrofit signals as appropriate with pavement markings instructing bicyclists where to stop to activate detection.

2.1.5b Improve bicycle accommodations on bridges.

2.1.5c Improve intersections to facilitate bicycle safety and comfort.

2.1.5d Utilize innovative options to implement this plan, such as protected intersections, bicycle signals, colored bicycle lanes, advanced stop lines/bike boxes, lane diets, road diets, etc.

2.1.6 Amend Land Development Code and Subdivision Regulations to reflect goals and objectives of this Plan.

2.1.6a Establish more detailed criteria for providing bicycling facilities on new streets,

including driveways where the driveway serves as a continuation of an existing or planned bicycle route.

2.1.6b Continue development of code changes with a diverse group of stakeholders including development stakeholders, site engineers, business owners, and bicycle organizations for implementation of protected bicycle lanes on key corridors along with private development.

2.1.6c Ensure that implementation of protected bicycle lanes on key corridors by private developments are met through the development process.

2.1.6d Establish and provide incentives and / or requirements for bicycle network facilities and end-use facilities in private developments.

2.1.7 Use consistent standards to identify and design bicycle facilities.

2.1.7a Amend Transportation Criteria Manual and Land Development Code as necessary as it pertains to street design to accommodate bicycle use in the Austin region.

2.1.7b Use both national and international best practice bicycle facility planning and design guidance.

2.1.8 Coordinate with other city departments and public agencies to implement recommended bicycle network

2.1.8a Coordinate with Public Works Urban Trails Program, Parks and Recreation Department, and other relevant departments, public agencies and non-profits to integrate on and off-street networks and prioritize connections that meet the goals of this plan.

2.1.8b Work with all departments and partners agencies to support the implementation of the 2014 Complete Streets Policy.

2.1.8c Authorize City Bicycle Program Manager to review all City and applicable private development plans (zoning, subdivisions, site plan, etc.) that add to or affect the operation of the bicycle network. Include Bicycle Program Manager in the review process for applications to vacate rights-of-way and exceptions or variances to these.

2.1.9d Coordinate with Texas Department of Transportation, Capital Area Metropolitan Planning Organization, Travis, Williamson, and Hays Counties and other jurisdictions and agencies to ensure appropriate bicycle connections are planned, constructed, and maintained, where feasible, to promote a

regional on-and off-street bicycle network.

2.1.9e Coordinate with Austin Energy to incorporate bicycle facilities in utility rights-of-way and in conjunction with the installation of utilities, where feasible.

2.1.9f Coordinate with The University of Texas and other higher education institutions on improving bicycle access to, from, and within campuses and other major properties owned by those institutions.

2.1.10 Establish standards for bicycle detours in the event of construction or street closures that impact bicycle facilities.

2.1.11 Evaluate opportunities to allow bicycle access where currently prohibited including right turn only lanes, dead ends, *and one way streets* to ensure that bicycle travel is as convenient and direct as possible.

2.1.12 Use contextual guidance for the selection of bicycle facilities from NACTO for facility selection as soon as it is available.

END-OF-TRIP FACILITIES

Objective 2.2: Provide Comprehensive End-of-Trip Facilities

The availability of end-of-trip facilities has the power to influence an individual's decision of whether or not to commute by bicycle. A review of best practices indicates that among other things, lack of facilities including bicycle parking, showers, and locker rooms at work significantly deters bicycle commuting. While the quality of on-street and off-street bicycle facilities tend to be the most significant factor in a person's choice to make a trip by bicycle, end-of-use facilities also play a significant role.

Additional end-of-trip facilities include changing facilities, car-sharing, and repair services and are all elements that improve the overall system and make bicycling easier and attractive for more people. City Code requirements should be reviewed and amended to facilitate the accommodation of bicycle end-use facilities.

Austin Bicycle Rack Program

Originally funded in the early 1990's through an Intermodal Surface Transportation Efficiency Act (ISTEA) grant, the City of Austin created a Bicycle Rack Program whereby Class III bicycle racks were installed free of charge in the public right of way and given to private businesses and public agencies for installation and use. The program serves to retro-install bicycle parking serving businesses and buildings built prior to the City Code bicycle parking requirement. To date approximately 4,000 bicycle racks have been installed throughout the City of Austin.

BICYCLE PARKING

Bicycle parking is an integral part of comprehensive bicycle planning. It's not enough to develop and maintain a bicycle-friendly road system. People can't be expected to use their bicycles for transportation unless secure bicycle parking facilities exist at their destinations. Bicycle parking facilities can help reduce bicycle thefts, legitimize bicycle use, and often times provide protection from the elements.

Chapter 25-6 of the City Code describes off-street parking requirements for bicycles. Bicycle parking requirements are based on land use classification and the number of motor vehicle spaces required. (See § 25-6-476, § 25-6-477, and Appendix A of Chapter 25-6, Article 7.) Bicycle parking design standards are a component of the Austin Transportation Criteria Manual.

Long-term parking is meant to accommodate cyclists who are expected to park for longer than two hours, such as employees, students, residents, and commuters. Long term parking is typically located at schools, high density residential areas, employment centers, airports, and transit hubs.

Safety from theft and vandalism, protection from the elements and accessibility are key issues for long term parking. A place to store accessories is also highly desired. Employers should consider providing showers and changing rooms in addition to secure parking.

The best type of parking facilities for long-term parking are either inside a building, office, guarded enclosure, or bicycle lockers. Bicycle lockers can be installed indoors or out. They are best provided on a user-application or lease basis to ensure appropriate use. Bicycle rooms are another solution, and can be created from any locked room. In locations without available indoor storage areas, or room for lockers, bicycle cages may be constructed by enclosing bicycle racks and aisle space with heavy gauge fencing and controlling access by lock.

Methods of Providing Long-Term Bicycle Parking

- ☐ Install in a covered, highly visible location
- ☐ Allow bicycles inside office buildings
- ☐ Provide bicycle storage room inside building

Short-term parking is meant to accommodate visitors who are expected to depart within two hours. Short-term parking is typically found at retail shops and public buildings (libraries, clinics, etc.). Visibility and accessibility are key issues.

Short-term parking racks should support the bicycle at two or more points above and on either side of the bicycles center of gravity. The best types of parking facilities for short-term storage are simple inverted-U racks. The inverted "U" rack is a single piece of heavy gauge steel bent to form a U. Pipe ends are either installed in a concrete base or have welded mounting flanges bolted directly to a solid, flat surface. Each of

BICYCLE LOCKER PRACTICES

Bicycle lockers are desirable for users who would like to have a sheltered space that secures the entire bicycle for protection from the weather as well as theft. They are especially useful for all-day or multiple-day users.

Transit and airport centers are likely places for long-term bicycle storage. While many airports have bicycle parking, Oakland International Airport in Oakland, CA is the only airport in the U.S. with bicycle lockers. The New York State Metropolitan Transit Authority, TriMet in the Portland, OR region, Metro Area Transit Authority in the Washington, DC area, and Bay Area Rapid Transit in the San Francisco area, among other transportation authorities, provide bicycle lockers at train and/or bus park and ride stations.

The cost of installing bicycle lockers is favorable compared to car parking spaces, but significantly more than installing bicycle racks. Therefore, it is important to place them in locations where they will be available to the highest number of users. Bicycle lockers at bus stations, park and ride and transit centers would serve daily commuters as well as persons traveling to the airport via the Airport Flyer.

these racks holds two bicycles and are available commercially or easily manufactured by fence shops. Areas without space for racks can provide parking through rings holding a bicycle against a vertical wall. These rings should be attached at a height 20" above ground. Alternatively, bars may be bolted to a secure wall where conflicts with pedestrian traffic can be avoided.

Bicycle Parking in Mixed Use Developments. The environment of a mixed-use development presents an opportunity for transportation planners to plan for alternative modes, such as bicycling. With a higher propensity to use alternative modes of transportation comes the importance of implementation of supporting facilities to ensure their use. For this reason, extra attention to bicycle facilities, including the bicycle network as well as parking and other end-trip facilities is imperative to well designed mixed-use development.

On-street bicycle parking corrals are another tool to provide high quality and visibility bicycle parking. Where on-street parking is present, a parking space can be converted to park 14 bicycles. For business owners are interested in getting more people to their business, bicycle corrals can be a great alternative to depending solely on motor vehicle parking. To date there are 11 bicycle corrals installed throughout Austin.

SHOWER AND CHANGING FACILITIES

Showers and changing rooms in employment centers are important for bicycle transportation. These facilities benefit not only commuting cyclists, but other fitness minded employees who can exercise during lunch hours. The combination of shower and bicycle parking facilities is usually less expensive than construction and maintenance of auto parking, and therefore should be considered during project planning.

There are very few publicly accessible (even for a fee) shower and changing facilities for bicyclists in the City. Gyms currently offer the most common and flexible option to bicyclists as they are located throughout the city. However, membership costs typically cover many more services than a bicyclists simply looking for a shower and place to change is willing to pay for. The City should consider communication with area gyms and other work-out types of facilities in an effort to create bicycle commuter memberships.

Several individual efforts have been made among public agencies and private developments to incorporate shower and changing facilities into developments to facilitate bicycling among their employees. The City of Austin has been active in incorporating showers and changing facilities for City employees, with nine of the City's buildings having shower and changing facilities. Additionally, incentives exist through City administered processes such as Green Building and

the site development process. The City of Austin should continue to develop improved incentive programs and requirements for shower and changing facilities in future new developments.

BIKE STATIONS

Across the United States, particularly in the West Coast, bike stations are emerging offering several services to commuters and bicyclists to support bicycling as a primary mode of transportation. While services differ at individual bike stations, typical service includes all or a combination of the following: long-term bicycle parking, bicycle repair, shower facilities and bicycle rentals. Bike stations are typically located near public transit and where demand for bicycle services is high, such as in high density areas or university campuses. These stations offer convenience to bicyclists, making it easier to choose bicycling as a primary mode of transportation.

The Puget Sound Regional Commission has created site selection criteria for locating bike stations in the Seattle area, including:

- ☐ Visibility
- ☐ Cost and feasibility of construction
- ☐ Cost of obtaining approvals
- ☐ Existing infrastructure
- ☐ Long-term viability timing
- ☐ Safe and convenient for bicycles

Source: Alta Transportation Consulting, et. al., 2002, p. 5.

An ideal location for bike stations would be Downtown Austin, where the major employment hub and an increasing residential population base exists to support use of a bike station. Convenience to the University of Texas - Austin might also be a consideration in site selection. The last stop on Capital Metro's MetroRail is also located downtown, another component that would influence use of a downtown bike station.

Objective 2.2 Benchmarks

☐ Reinstate a bicycle rack program or fund a public/private partnership to provide 500 new short-term bicycle parking spaces per year installed on the right-of-way or private property serving existing developments.

☐ Provide long-term bicycle parking at Austin Bergstrom International Airport by 2015.

☐ Establish incentives for showers and secure ground accessible bike parking rooms in residential and office uses by 2015.

Objective 2.2 Actions

2.2.1 Increase bicycle parking throughout city.

2.2.1a Establish a methodology for determining bicycle parking demand.

2.2.1b Provide or increase short term bicycle parking at all City of Austin buildings, parks, and libraries.

2.2.1c Provide or increase appropriate type of bicycle parking at all existing developments, employment centers, schools, parks and recreational areas, and government offices.

2.2.1d Review, and if necessary, enhance requirements or incentives for bicycle parking in all private or public parking structures.

2.2.1e Work with stakeholders to determine how bicycle parking can be improved in the downtown area and make improvements.

2.2.1f Develop criteria for consistent interpretation of City Code section 25-6-477 related to the required location of bicycle parking.

2.2.2 Reinstate a bicycle rack program or fund a public/private partnership to install short-term bicycle parking in the right-of-way or on private property serving existing developments until demand ceases.

2.2.3 Require that special events expecting over 1,000 attendees provide secure, affordable, and convenient bicycle parking.

2.2.4 Require shower, locker facilities and ground floor secure long-term bicycle parking in new office developments or redevelopments.

2.2.5 Create further and/or improved incentives to encourage developers to provide showers, changing facilities, lockers, and bicycle parking above any existing or proposed minimum requirements.

2.2.5a Coordinate *with Austin Energy, or other relevant Department(s), to provide rebates to commercial property owners to install shower and locker facilities in existing buildings having none.*

2.2.6 Work with local gyms and similar types of facilities to provide shower and locker facilities to bicyclists, at a reduced charge.

2.2.7 Establish incentives to encourage the development of additional end of trip bike stations at key locations throughout the City of Austin.

2.2.8 Explore possibilities to work with parking garage operators to allow overnight automobile parking for multiple consecutive days.

INTEGRATION OF BICYCLING WITH TRANSIT SERVICES

Objective 2.3: Fully Integrate Cycling with Transit Services

Bicycles can increase the effective service area of transit; similarly, transit can reduce travel times and energy requirements for riding bicycles longer distances. Among the barriers that deter bicyclists from bicycle commuting, one of the most common is distance, even among experienced bicyclists. Trip distance can be overcome by readily linking transit and cycling as a mode choice.

SPOTLIGHT ON CAPITAL METRO

Capital Metro supports the integration of bicycling and transit services in many ways.

Capital Metro provides comprehensive training to their bus operators on sharing the road safely with cyclists. Capital Metro's training program is the most widely recognized program in the nation. Innovative components to the training, such as bike-safety education, have resulted in multiple awards. Capital Metro's program is the national model according to the National Transit Institute and the American Public Transportation Association. Capital Metro will continue to improve upon our bike safety training element as future safety developments are made.

Capital Metro has recently installed high capacity bicycle parking shelters, branded as MetroBike at seven major rail and bus transfer stations. They have also increased the capacity on their bus racks from two bikes to three providing more reliable transport of bicycles, especially during peak periods.

Capital Metro recently completed a mile long urban trail between their Crestview and Highland stations. This trail is a great first step in providing bicycle facilities for people of all ages and abilities to major transit stations.

PUBLIC TRANSIT

Public transit services are highly sensitive to the distance between user's residences and the nearest transit stop. And, lower density developments have traditionally been considered poor candidates for transit services because of the increased distance to transit stops (this is commonly referred to as the "first and last mile problem"). Bicycles can effectively increase the service area for either end of a transit trip. Commuters can cycle two to five miles from their homes to a bus or rail stop to finish their trip. This two to five mile radius of service around each transit stop is a considerable increase in area served compared to walking distances, which is usually estimated to be closer to one-quarter to one-half mile. There are additional benefits to be gained from joining bicycles with transit which each mode alone cannot provide: transit enables the bicyclist to take longer trips; transit enables the bicyclist to pass over or through topographical barriers; and bicyclists can increase transit ridership during surplus capacity periods such as weekends and midday (Doolittle, 1994, p. 1).

To maximize the potential integration of bicycle and transit modes the priority strategy will be to provide safe all ages and abilities routes to major transit stations as discussed in depth in the bicycle network section above. High capacity and secure bicycle parking should be provided at transit stops so bicycles can be parked and not take valuable space on transit vehicles during peak periods. Strategies to get more bikes on transit vehicles such as racks on buses that hold three bikes should be pursued to all for more flexible trips. Bike share is a great tool to flexibly make the "last mile" connection and is discussed more in the Bike Share System section below.

CAR SHARE PROGRAMS

With the hassle and expense of owning a motor vehicle today, car sharing has become a popular alternative to owning a motor vehicle instead shifting use cost on a per trip basis. Car sharing programs offer the convenience of having a motor vehicle to use without the hassle of payments and maintenance and provides a tool for people to become less car dependant.

This concept is also beneficial to bicycle commuters as they can use a motor vehicle to run an errand or go to a meeting in the middle of the day, even if they ride their bicycle to work. Even if a bicyclists owns a motor vehicle, the choice of driving versus bicycling to work may depend on needing a motor vehicle in the middle of the day. The ability to

car share gives access to an automobile in the middle of the day that could solve that dilemma.

Another opportunity for car share is the possibility of having bicycle racks so people with bicycles can make one-way trips. This would be particularly useful for long trips, trips in the heat of the day or when there is not enough time to bicycle to the destination but it is still desired to have a bicycle when one gets there. This could also expand the effective range of car sharing programs as the last couple of miles to a destination could easily be biked. The Plan recommends that the City work with car share providers to provide easy to deploy bicycle racks integrated into their vehicle fleet.

Car sharing has taken off in dense cities that have policies to promote alternative modes of transportation to the automobile. Austin currently has two car share providers: Car2Go and Zipcar.

Objective 2.3 Benchmarks

- ☐ Where safe, all (100 %) Capital Metro buses, rail cars, and van pools will be able to accommodate three (3) bicycles by 2020.
- ☐ Include short and long term bicycle parking at 100 % of locations meeting transit stop bicycle parking criteria by 2015.

Objective 2.3 Actions

2.3.1 Coordinate with Capital Metro to provide secure and high capacity bicycle parking (including short and long-term parking and/or covered parking, lockers, covered attended rooms) at all major transit stations, existing and future park-and-ride lots, and rail stations as they are developed.

2.3.2 Coordinate with Capital Metro to establish criteria to identify transit stops needing short and long-term bicycle parking.

2.3.3 Coordinate with Capital Metro to coordinate bicycle and public transportation infrastructure and services.

2.3.3a Continue to coordinate with officials and planners of Capital Metro to ensure that all buses, commuter rail, light rail, and streetcars are connected to the bicycle network, equipped with bicycle racks, and accommodate bicycles.

2.3.3b Require the highest level of security (Type I bicycle lockers or security guard or locked rooms) or bicycle parking spaces at large scale public transportation facilities.

2.3.3c Coordinate with Capital Metro on grant and other funding opportunities to

implement Rails with Trails projects to improve bicycle access to transit stops and stations

2.3.4 Coordinate with Capital Metro to establish system for counting bicycles on transit ridership.

2.3.4a Establish a system to count the number of bicycles on board transit vehicles to help assess demand for long term bicycle parking at stations.

2.3.4b Coordinate with Capital Metro to identify ways to safely accommodate three bicycles on all or select Capital Metro buses, streetcars, and rail cars.

2.3.5 Publicize the bicycle-transit link through events, media, and other marketing methods.

2.3.6 Coordinate with Capital Metro to integrate bicycle route information into transit route maps and signs.

2.3.6a Integrate bicycle route information into Capital Metro transit route maps and signs.

2.3.6b Integrate Capital Metro transit information into City of Austin bicycle route maps.

2.3.7 Assure the safety and efficiency of bicycles and bus transit coexistence.

2.3.7a Continue to coordinate with Capital Metro to educate Capital Metro bus drivers about operating buses around bicycles.

2.3.7b Educate bicyclists about proper riding techniques around buses.

2.3.7c Consider transit/bicycle interaction in all roadway designs.

2.3.8 Work with car share providers to provide easy to deploy bicycle racks integrated into their vehicle fleet.

BIKE SHARE SYSTEM

Objective 2.4: Maintain and Expand Austin's Bike Share System

Bike share systems allow users to check out public bikes to use for trips. Pricing structures often, including in Austin, require a membership (yearly, weekly, or daily) to gain access to the system. After gaining access, trips are free for the first thirty minutes with increasing use fees for additional time. The fee structure provides both a low cost mobility option for short trips and also encourages keeping the bicycle in circulation for the next user.

Bike share programs complement public transit, private vehicular transportation, and pedestrian activity by increasing mobility options available. Bike share systems are among the type of solutions that shift from dependency on private vehicle for transportation and towards more flexible and sustainable solutions. Bike sharing can also promote exercise without requiring significant lifestyle changes.

Bike share programs also sustain public access in an increasingly congested environment by bridging the gap between distances best served by vehicular and foot transportation. Bicycles provide on-demand transport that allows the user to reach locations not easily or efficiently accessible by other forms of transportation. In urban environments, bikes are often the best way to move around, especially if you are short on time and money (Tech Bikes, 2004).

Best Practices

- ☐ Collaborate with departments to dedicate space for bike share station on city right of way.
- ☐ Provide opportunities for public outreach to suggest bike share location.
- ☐ Use the bicycle network to support locations of bike share stations. Connectivity is key in attracting users beyond the typical cycling communities and make cycling more viable, visible and comfortable .
- ☐ Make bike share visible and locate bike share stations 200 to 300 meters from each other. Visibility provides security that more than one bike share station is close by in case the preferred one is full.
- ☐ Locate in high employment and populated areas
- ☐ Locate bike share near recreation, event and retail corridors, and large employers.
- ☐ Collaborate with public transit to connect the first and last mile to destinations.
- ☐ Provide clear way-finding to locate bike share station and preferred and overall routes.

The bike share system's future is bright. Bike share growth will continue to provide opportunity for users to travel throughout Austin. The direction of bike share growth will depend on space availability, future development, user demand, sponsorship and funding.

Objective 2.4 Benchmarks

- ☐ Expand Austin's bike share system from 40 stations to 100 stations by 2015 and to 300 stations by 2017.

Objective 2.4 Actions

2.4.1 Seek and support partnerships for the expansion of the bike share system including both capital and operations costs with the University of Texas, Austin Community College, State of Texas Complex, Capital Metro Transportation Authority, private developers, and area employers.

2.4.2 Seek grants for the expansion of the bike share system.

BICYCLE FACILITY MAINTENANCE

Objective 2.5: Provide Superior Bicycle Facility Maintenance

Maintenance of bicycle facilities is critical to keeping them safe and usable through their life cycle. Designing bikeways to reduce maintenance needs, giving attention to sweeping the sides of streets where bicyclists ride, and ensuring that riding surfaces are relatively smooth are all requisites in attracting more of the general public to bicycling.

Maintenance of the bicycle network is typically done through regular roadway and park maintenance, depending on the facility. The primary on-street roadway maintenance activities include road resurfacing, street sweeping, maintenance of barriers on protected bicycle lanes, the treatment of bicycles through temporary road conditions and the operations of the signal system are elements. Urban Trails, are maintained either by the Public Works or Parks and Recreation Departments.

Maintaining Protected Bicycle Facilities

Protected bicycle lanes introduce a number of maintenance challenges. New barriers in the rights of ways must be maintained and should not obstruct City services such as street sweeping and recycling and waste collection services. New approaches to

operations and design criteria will ensure that protected bicycle lanes are properly maintained.

The physical barriers used to protect bicycle lanes will also need maintenance. Some barrier solutions will last longer than others but all will have a life cycle and need repair or replacement. Coordination between Public Works and Transportation and budgeting for ongoing maintenance is essential in providing high quality facilities through their lifespan.

Pavement Surface

Bicycles are more sensitive to irregularities and road debris than cars due to their smaller and lighter weight tires and lack of suspension. Roadway features that cause minor discomfort to motorists, such as potholes and improper drain grates, can cause serious problems for cyclists.

Even some "normal" features of road design can cause an inconvenience or danger for cyclists. "Safety features" like large, closely spaced rumble strips designed to alert motorists leaving the roadway create barriers and hazards for cyclists. All operational applications to roadways which serve as bicycle routes should be reviewed for the best application assuming bicyclists will be on the roadway.

Bicyclists and other road users can file maintenance requests and complaints through the City's 3-1-1 system. Calls into the 3-1-1 system typically regard debris in bicycle lanes and parking in bicycle lanes. Depending on the issue, typically either the Public Works Department, Solid Waste Services Department, Watershed Protection and Development Review, or the Parks and Recreation Department will work to resolve the issue.

Another routine street maintenance activity that can be bothersome to bicyclists is preventive maintenance surface treatments. Preventive maintenance is the most cost-effective way for the City to assure long lasting streets. Asphalt gets more brittle over time with aging and oxidation, which allow the surface to crack more easily. Preventive maintenance surface treatments can reduce these effects by shielding and protecting the pavement surface and sealing cracks that would allow water to weaken the pavement structure. There are a number of pavement surface techniques used by the City: Hot mix paving, microsurfacing or slurry seal, and sealcoat (chip seal).

Streets that are sealcoated often generate complaints from cyclists due to lose

aggregate that last a month or two after application. Seal coat is applied in two stages, first an asphalt emulsion is applied and then loose rocks are distributed on top. Over time the aggregates settle into the asphalt emulsion which cures and the street hardens. Until the emulsion hardens rocks are able to come loose and will accumulate on street corners and near gutters requiring sweeping until all loose rocks are removed. The pavement surface is initially rough until the aggregate has time to sink in. While the other street maintenance treatments are better for cyclists initially since they don't have a curing period, sealcoat is a very cost effective method and gives the City the opportunity to improve conditions for bicycling. Staff in the Bicycle Program annually review of the sealcoat street maintenance program for the upcoming year and determine which streets can have new or improved bicycle lanes, including protected lanes.

Slurry seal is textured, skid resistant, flexible, waterproof, and has good cohesion, which allows it to be an economic and hard wearing surface. The process adds no structural strength to the pavement section, but does result in an extended service life – about seven years - depending on the volume of traffic. Slurry seal is a great preventive maintenance treatment for streets that are still in good condition with very little cracking. Microsurfacing has the same texture and finish as slurry, but is a little stronger, creates a more level surface, and is consequently more expensive. Microsurfacing is more stable and longer lasting under heavier traffic and is most often used on arterial and collector streets.

Thin surface treatments are planned for summer and early fall. Warm, dry weather is required for this type of work to be successful. Fortunately, this work is relatively quick and the roadway is returned to normal traffic use within hours.

Public Works intends to reduce the number of bicycle routes which will receive the rougher sealcoat texture. The Bicycle Program will take the list of roads scheduled to receive a thin surface treatment and highlight the key bicycle routes. The Street and Bridge Pavement Management staff will then determine the condition of each of the key bicycle routes. Street and Bridge will then use slurry or microsurfacing on all key bicycle routes in fair or better condition. Only bicycle route streets with excessive cracking or those in "poor" condition will receive a standard sealcoat if nothing else is planned in the foreseeable future.

Public Works will be prioritizing asphalt overlays or reconstruction for the rehabilitation of streets in the poorest condition; however, there are hundreds of neighborhood

streets in this category. A sealcoat is often used in this case to "buy time" by preserving whatever value is left in these old pavements. This means that some bicycle routes will still receive a sealcoat. There are still quite a few older streets that we cannot afford to overlay or reconstruct within current budgets. Unfortunately, not every street in the City can be accommodated for cyclist use at the same time, but City staff is working hard to balance the needs of all of street users against available resources.

Street Sweeping

Street sweeping and bicycle lane sweeping is another routine maintenance that is very beneficial to bicyclists when done correctly. Currently, bicycle lane sweeping is a component of street sweeping. However, sweeping of bicycle lanes should be integrated into the traditional street sweeping schedule as a stand alone item. Upon implementation of the Austin Bicycle Plan since 1998, sweeping bicycle lanes follows the traditional thoroughfare and residential street schedule. Ways to increase focus of street sweeping to allow more focus on bicycle lanes should be explored and implemented.

One major issue is street sweeping to keep protected bicycle lanes free of debris such as gravel and glass. As street and ROW space is limited it is not feasible to provide the 8.5 feet clear width required to operate our existing sweepers. In order to provide protected bicycle lanes in most cases it will be necessary to have the capability to sweep spaces as narrow is 7 feet wide. The plan recommends that narrow sweeping equipment or services be acquired as soon as possible to enable the expansion of the protected bicycle network.

Signal Detection

One maintenance issue with the bicycle network is traffic signals that detect automobiles fail to respond to cyclists. As a result people on bicycles choose to disregard red lights and even worse the behavior may transfer over to a disregard for all traffic controls. The Plan recommends that the bicycle system, including traffic signals shall accommodate cyclists like all other road users.

Temporary Traffic Controls and Construction Activities

Temporary construction along bikeways can create a big obstacle to bicyclists when an excess of debris is in the roadway and bikeway. When streets are completely closed off, bicyclists are forced to find an alternative route. Barricades for construction often obstruct bicycle travel. Steel plates over excavations are very hazardous to cyclists. Roadway construction often reduces roadway space, increasing the difficulty for motorists and bicyclists to share the road. Roadway construction should include steps to prevent added risk to cyclists from debris and reduced roadway space. It is often assumed that any barrier or alternative route provided for motor vehicles is also adequate for bicyclists. This is not always the case. Simple improvements to temporary construction closures can ensure continued and safe bicycle use in the area. Additionally, the Texas Manual on Traffic Control Devices (TMUTCD) requires that bicycles be safely accommodated during temporary traffic control on bicycle routes.

Objective 2.5 Benchmarks

☐ Include bicycle lane and protected bicycle lane installation and maintenance within the operating budget of the departments of Transportation and Public Works by FY 2015, and continue on an ongoing basis.

☐ Partner with Public Works to maintain protected bicycle lane barriers at good or acceptable condition.

☐ Work with Austin Resource Recovery to acquire narrow street sweeping equipment or services to address sweeping of protected bicycle lanes by 2015.

Objective 2.5 Actions

2.5.1 Provide ongoing and regular maintenance for all bicycle facilities.

2.5.1a Sweep all bicycle lanes regularly to remove glass and debris that endanger or inconvenience cyclists.

2.5.1b Maintain all bicycle route signs and markings.

2.5.2 Work with Austin Resource Recovery to acquire narrower street sweeping equipment to address sweeping of protected bicycle lanes by 2015.

2.5.3 Train 311 call takers regarding bicycle related calls and ensure proper routing of calls.

2.5.4 Establish Bicycle Program performance measures that require tracking of 311 maintenance calls for assurance of responsiveness.

Austin City Council Member Chris Riley
at Viva Streets, Austin, May 2012

CHAPTER THREE | PROGRAMS

While an all ages and abilities bicycle network is the foundation for increasing bicycle use and creating safer streets, programming is necessary to make highest use of the infrastructure. Programs that deliver education, encouragement and enforcement are all integral parts to create a safer environment for all transportation users and obtain the most use of the investment in infrastructure.

Bicycle programs should broadly reach the general population and also recognize that there are many different audiences that should be specifically tailored to. Programs will have to effectively reach children, adults, motorists, commuter bicyclists, recreational bicyclists, university students, people of different cultures, business stakeholders, employers and employees. The following sections describe the broad groups of programs that support bicycle use.

BICYCLING AND SAFETY EDUCATION

Objective 3.1: Develop and execute programs to improve bicycle safety and roadway behavior.

Educations programs are a great tool to create safer conditions for all roadway users. While people who bicycle can benefit from learning how to more safely ride, people who drive, walk, and take transit should understand how to interact with people on bicycles to improve the safety and coexistence on the roads, sidewalks, and trails. Education programs are delivered through two primary means: public outreach and education classes.

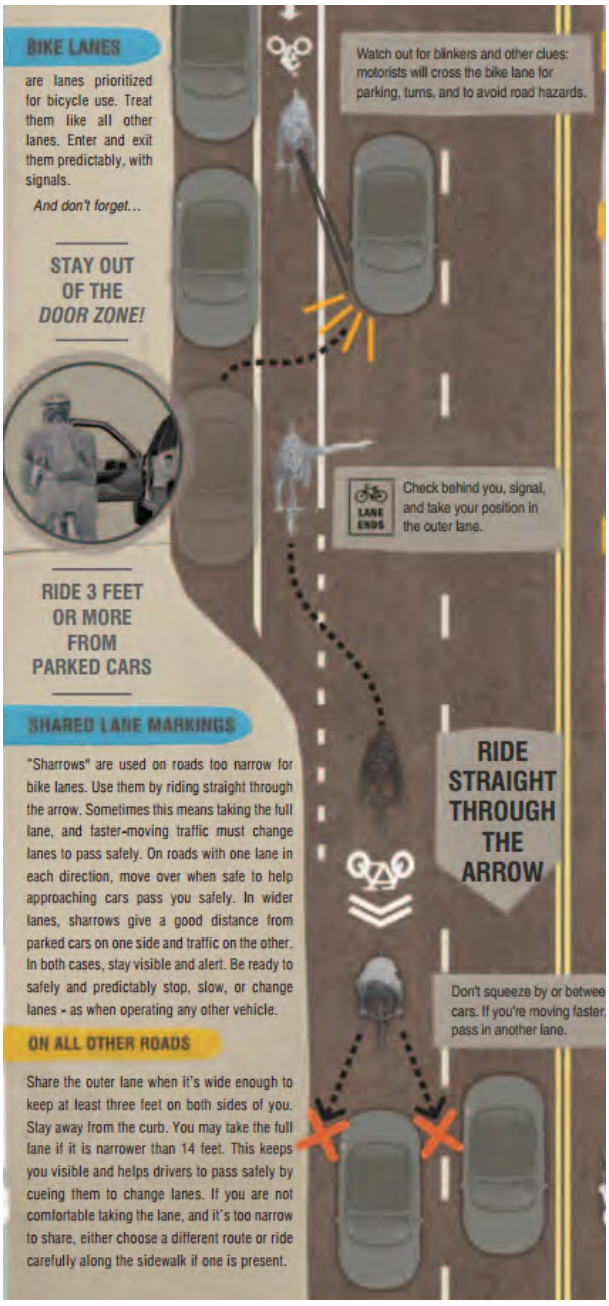
The City of Austin distributes a bicycle route map to the public that contains basic tips on how to safely ride in traffic and the rules of the road. It is also a great tool to educate people on the safest bicycle routes and give them the confidence to start taking trips by bicycle.

Just as we provide training for drivers of motor vehicles, we must inform bicyclists of their rights on the road and how to ride in a safe manner. While many

bicyclists know how to ride a bicycle, they do not necessarily know how to ride in traffic. Bicycle skills courses can give bicyclists the confidence and tools to ride safely.

Providing bicycle education for young children is key because they have little to no experience making decisions in traffic, they depend on bikes for transportation, and because in teaching children, we have the potential to affect the behavior of parents. The City of Austin educates school-aged children on bicycling and walking to school through the Public Works Department's Child Safety Program and the Health and Human Services Department's Safe Routes to School Program. These programs are discussed in more detail in Objective 3.3.

It is also important to educate motor vehicle drivers of the needs and rights of bicyclists as they differ considerably from other road users. Integrating bicycle perspectives and content in general road safety training is traditionally underrepresented, but is important to encourage more positive interactions between bicyclists and motor vehicle drivers on the road.



EDUCATIONAL MATERIAL ON THE CITY OF AUSTIN BICYCLE ROUTE MAP.

For the general public, there is a market of bicycle safety courses taught by both businesses and non-profits. Unfortunately the cost of these classes keep exposure to the general population limited. To advance education goals, the Plan recommends providing low cost or free educational classes to the public through City programming or partnerships with organizations. Bicycle education classes can also be offered through employers such as the City of Austin's Health PLUS Wellness Program and PE Program that offers bicycle safety courses.

Objective 3.1 Benchmarks

- ☐ Distribute 5,000 Austin Bicycle Map Brochures to motorists and bicyclists per year.
- ☐ Educate 1,000 adult bicyclists and motorists about bicycle and motorist safety each year.

Objective 3.1 Actions

3.1.1 Partner with community organizations and bicycle advocacy groups to offer educational classes.

3.1.1a Coordinate community requests for bicycle education with experienced bicycle educators in the community.

3.1.1b Encourage community organizations and school programs to offer on-bicycle training as part of their curriculum.

3.1.1c Offer bicycle education and safety courses free to City employees.

3.1.2 Create and provide educational programs targeting youth cyclists.

3.1.2a Cooperate with Child Safety Program to write a "Child Safety Plan." Include options for funding education and infrastructure improvements and strengthen relationships with local school districts.

3.1.2b Support the Safe Routes to School Program.

3.1.2c Work with Parks and Recreation Department and Health and Human Services to educate children on the health benefits of bicycling.

3.1.2d Develop a bicycle safety component of high school driver-education programs.

3.1.2e Provide bicycle safety and bicycle rider training to schools served by a new bicycle facility installation.

3.1.3 Create and provide educational programs targeting adult cyclists.

3.1.3a Provide or partner to provide bicycle-related classes such as repair and maintenance, effective bicycling skills, rules of the road, etc, such as "Traffic Skills 101" at a low cost to the public.

3.1.3b Support efforts among other city departments, public agencies, and bicycle organizations to offer bicycle related classes.

3.1.4 Create and provide educational programs targeting motorists.

3.1.4a Create and distribute informational material targeting motorists regarding bicyclists' rights and how to safely share the road with cyclists.

3.1.4b Provide information related to updating the Texas drivers' manual to strengthen the bicycle section and exam questions.

3.1.4c Include motorist-bicyclist safety information in City required defensive driving courses.

3.1.4d Train/educate drivers of commercial vehicles about bicycle safety and sharing the road with bicyclists.

3.1.5 Create partnerships to conduct educational campaigns

3.1.5a Utilize a variety of methods to distribute and market educational information more effectively and at a lower cost. This includes various advertising means, partnerships, and presence at events.

3.1.5b Strengthen the "Share the Road" and develop a "Share the Trail" public awareness campaign.

3.1.5c Encourage the use of helmets through educational programming and campaigns.

3.1.6 Expand Distribution of Austin's Bicycle Map and provide wayfinding guidance along the bicycle network.

3.1.6a Regularly update and widely distribute the Austin Bicycle Map.

3.1.6b Improve and expand upon a comprehensive citywide signing system to clearly indicate bicycle routes and multi-use paths.

3.1.6c Display bicycle route system maps and information at key locations / destinations like downtown, activity centers, and transit stations.

3.1.6d Partner to create an interactive route finding system online.

3.1.6e Publish GIS bicycle map and facility information to promote 3rd party solutions.

3.1.6.f Provide wayfinding guidance along bicycle network.

3.1.7 Develop measures to reduce bicycle theft.

3.1.7a Educate citizens on techniques that can help recover stolen bicycles.

3.1.7b Educate bicyclists on proper locking techniques.

3.1.8 Coordinate educational efforts with Austin Police Department

3.1.8a Further promote safety and traffic laws through Enforcement. (See Safety and Enforcement, Objective 3.5)

3.1.8b Develop legal, uniform minimum bicycle safety recommendations and guidelines for use in local education and enforcement programs by law enforcement agencies, bicycling groups, and bicycle educators and planners.

3.1.8c Require the participation of Austin Police Department in annual Bike to Work Day events to educate bicyclists on bicycle safety and to establish a working relationship between bicyclists and law enforcement.

3.1.9 Encourage and promote the use of the City 311 system specific to bicyclists' issues.

3.1.10 Hire staff to specifically focus on educational and promotional programs.

ENCOURAGEMENT AND PROMOTION

Objective 3.2a: Develop and execute encouragement programs to promote bicycling and increase awareness of bicycling among the general public.

Objective 3.2b: Partner to create citywide multi-modal encouragement and educational programs targeting reduction in drive alone trips.

Encouraging and promoting bicycle riding are necessary for getting people over personal psychological barriers and excited about bicycling. Local data suggests that up to 17 % of Austinites are currently interested in riding a bicycle, given the conditions on our roadways, yet bicycling accounts for only 2 % of trips to work. Encouragement programs can get people the information and nudge they need to break deeply seeded habits that keep them from trying a trip by bicycle for the first time.

Austin is in the middle of a rapid expansion of the mobility market and would benefit from a multi-modal encouragement program such as a Smart Trips Program. A partnership between the City of Austin, Capital Metro, Movablity Austin, Car2go, Zipcar, B-cycle, Carma ride sharing and other mobility providers has the potential to significantly increase use of rail, bus, bike sharing, bicycling, walking, car sharing, car pooling and other mobility options. The success of this type of program in increasing bicycling lies in its ability to help people find bicycle routes and discuss parking, showers and changing facilities to alleviate apprehensions about bicycling. The confidence building personal touch that this program gives results in successful behavior change.

Promotion aims to increase bicycling through marketing, advertising and incentives. Currently, the City of Austin provides minimal programming to promote bicycling. The majority of efforts are done by non-City groups on a limited basis. It is strongly recommended that the City increase resources and partnerships to promote bicycling and other modes of transportation.

Smart Trips has been a program in Portland, Oregon since 2004 focused on reducing drive alone trips. The program works by focusing on a neighborhood and assessing which individuals and households are interested in learning about how to get around using alternative transportation such as bus, bicycle, walking and other mobility options. A program staff member then schedules a one-on-one appointment with residents and answers questions about mobility options. The program organizes events such as bicycle rides in the neighborhood so residents can become more familiar and comfortable getting around the neighborhood using alternative transportation.

Ciclovia events (called Viva Streets in Austin), where miles of road are made car free for the day are incredible means of promoting the transformation of public space, walking, bicycling, and active healthy living. Austin has now hosted two limited ciclovia events in 2012 and 2013 and is planning its third for the fall of 2014. The plan recommends that these events are expanded in frequency, geographic diversity and total length of street closure in order to extend the reach and effectiveness of these events in Austin.

Other events are also a great way to promote bicycling. The City of Austin partners with groups to promote National Bike Month and associated activities. Other events such as Social Rides, "Longhorn Bike Day" or "Bike to your Neighborhood Pool Day" are other examples of effective promotional events.

Promotion increases awareness of the benefits of bicycling to the public at large. They can also target particular audiences. For example, a person who commutes to work from 20 miles away may not be encouraged to commute by bicycle, but may be encouraged to start bicycling for recreational purposes to improve health, or to make short trips on the weekend or evening by bicycle. Partnering with other public agencies, non-profit groups, and/or private sector groups will result in more diverse, lower cost, and effective promotional efforts.

Promoting bicycling to work is a common practice as commuting is a daily trip, driving contributes to congestion and bicycling is an opportunity to integrate physical activity into a busy workday. Events such as bike to work day and programs such as commuter cash incentives are effective ways to increase bicycling to work.

The City of Austin promotes bicycling among its employees. As the work of City of Austin employees touch all areas of City life it is important that bicycling be embraced among this

BEST PRACTICES: BOGOTÁ, COLUMBIA

Every Sunday in Bogota, Columbia, the city closes down over 70 miles of roadway to cars to make way for bicyclists.

This event, known as Ciclovia, which is Spanish for bike path, is being picked up by cities around the World.

El Paso had a Ciclovia every Sunday during the month of May 2007. The event is now called Scenic Sundays, and occurs every Sunday from April through August, two miles of street is closed (City of El Paso, 2007).

Portland holds 5 "Sunday Parkway" events a year, with 5-10 miles of streets closed to traffic (Portland Bureau of Transportation, 2014).

Chicago is planning its first two "Sunday Parkways" for two Sundays in October (Chicagoland Bicycle Federation, 2008).

New York City closed 6.9 miles of streets to automobiles on three Saturdays in August 2008 (Neuman & Santos, 2008).

group. Also, as one of largest employers, the City of Austin has an opportunity to set an example to promote bicycling among its workforce to other employers and public agencies. Examples include hosting bicycle classes though its Physical Education (PE) Program and stand alone safety classes, providing secure bicycle parking rooms and hosting annual department director led rides to celebrate new bicycle infrastructure.

Objective 3.2 Benchmarks

- ☐ Reach 20,000 households a year through a Smart Trips type program.
- ☐ Reduce drive alone trips by 10% in areas after deployment of Smart Trips program.
- ☐ Create partnerships with other public agencies, and/or non-profit groups and advocacy groups to reach tens of thousands of people per year with promotional programs.
- ☐ Host 5 Viva Streets (Ciclovia) events a year serving geographically diverse parts of the City by 2015.
- ☐ Increase the number of recipients of the Bicycle Program social media and email communications by 15% per year.
- ☐ Notify the public of and engage citizens in all phases of new infrastructure projects and programs through the City's website and other communication means.
- ☐ Increase number of media pieces to 75 annual occurrences by 2015, then continue to increase by 10% per year.
- ☐ Increase number of Bike to Work Day participants by 10% each year.
- ☐ Increase number of City of Austin employees who commute to central city locations by bicycle to 7% by 2015 and 10% by 2020.

Objective 3.2 Actions

3.2.1 Implement a Smart Trips Program

3.2.1a Reach 20,000 households a year through a pilot Smart Trips type program.

3.2.1b Conduct ongoing evaluation of the program, and if successful, expand with a goal of strategically scaling the program to optimal levels considering demand and opportunity areas.

3.2.2 Partner with community groups, the private sector, and other City departments and agencies to provide citywide events and campaigns, such as National Bike Month.

3.2.3 Expand the Viva Streets (Ciclovía) program 5 events a year serving geographically diverse parts of the City by 2015.

3.2.4 Utilize a variety of methods to distribute and market promotional information.

3.2.5 Partner with local celebrities and organizations to promote bicycling through public service announcements and other means.

3.2.6 Bicycle Program staff should host a regular TV, radio, and/or print section, preferably for a mainstream channel or publication regarding bicycling promotion and education.

3.2.7 Work with local retail bicycle dealers to create a "Take your bike to the shop today" program offering special incentives to get bikes out of the garage and ready to ride safely.

3.2.8 Promote a pilot "Bicycle Ambassador" program that utilizes a volunteer force to conduct promotional outreach at events and other forums.

3.2.9 Promote bicycling to work.

3.2.9a Develop and deploy incentive programs to encourage individuals to commute to work by bicycle.

3.2.9b Work with employers to promote bicycling as a means of commuting to work.

3.2.9c Promote Bike to Work Day and Bike Month in May.

3.2.9d Support Bicycle Commuter Services and Escorted Commute Rides offered by local bicycle shops and bicycle advocacy groups.

3.2.10 Promote bicycle use for employees who work for the City to serve as a model program for other Austin employers including public agencies.

3.2.10a All City-owned buildings should be retrofitted with showers, changing rooms, lockers, and secure bicycle parking to facilitate bicycle use among employees.

3.2.10b Switch to a parking payout program to give cash incentive to employees to commute by means other than the private car.

PROMOTION OF BICYCLING TO SCHOOL

Objective 3.3: Promote bicycling to school (elementary through high school).

Safety education and encouragement programs for school aged kids is particularly important as many students are in need of outlets for daily physical activity and giving them the skills to bicycle will help them form lifelong habits creating the next generation of people on bicycles. Additionally, school related traffic is a significant source of congestion on our roadways and creates unsafe conditions around schools. To break the cycle of concern for walking and bicycling safety around schools, a deliberate program of infrastructure, education and encouragement effort needs to be put in place.

STUDENTS AT BRYKER WOODS ELEMENTARY PARTICIPATING IN THE BOLTAGE PROGRAM (PHOTO COURTESY OF CORD DOVER).

There is much opportunity to further promote bicycling to all school age children. Students, families and school staff all need more resources to increase bicycling use at schools. High schools are particularly under-served at this time and need attention. These educational and promotional efforts will support the City's investment in an all ages and abilities network. The combined infrastructure and program efforts will result in significantly increased ridership to school and healthier and more engaged students who will become the next generation of Austin's workforce and citizen body.

Several successful programs are already in place and should be supported and expanded. The City of Austin's Safe Routes to School Program, formerly the Child Safety Program, creates a safe environment for students as they travel to and from school. The program includes over 200 crossing guards at 91 elementary schools in seven school districts within the City. Training staff educates over 50,000 students in safe street crossing procedures for walking and bicycling. In class, the bike training for students teaches the rules of the road for our young bike riders. The students then practice what they have learned in the classroom at hands-on training events, called "bike rodeos," after school or on weekends. The program works closely with the schools' community and neighborhood groups to encourage use of active transportation options to travel to and from school instead of using motor vehicles.

Another successful program is the Boltage Program, which offers an incentive to students to ride to school on a daily basis. The program was sponsored by the Bicycle Sport Shop and has been in place since 2011 at several local area schools. The program utilizes a sensor near the school bike rack that detects a transmitter located in the child's helmet recording how many days kids ride to school. Prizes are given out at the end of the year for participants who ride a certain number of days throughout the year which at Doss Elementary was 70 of the 180 days of the year. At Doss and Bryker Woods Elementary Schools the Boltage Program resulted in a significant growth in Bicycling.

	Daily Students Bicycling to School		
School	Before	After	Yearly Trips
Doss Elementary School	10-15	100	18,000
Bryker Woods Elementary School	5-10	52	9,394

Source: City of Austin

NCREASED BICYCLE RIDERSHIP TO ELEMENTARY SCHOOLS AS A RESULT OF THE BOLTAGE PROGRAMS (AS OF NOVEMBER, 2014).

Objective 3.3 Benchmarks

- ☐ Increase bicycle mode share of children commuting to school to 25% by 2020.
- ☐ Provide bicycle education and encouragement programs to 90% of children before high-school.
- ☐ Conduct safe biking and safe walking encouragement & messaging to school-aged children.
- ☐ Provide encouragement and education outreach to all students, parents, and staff at schools served by new or improved bicycle facilities.

Objective 3.3 Actions

3.3.1 Continue and expand safety and encouragement programs for school aged children to increase walking and bicycling to school.

3.3.2 Install supporting bicycle infrastructure that extends the All Ages and Abilities Bicycle Network to schools.

3.3.3 Partner to create ride-to-school encouragement programs, such as "Bicycle to School Day.

3.3.4 Support and encourage high school bicycling clubs that include activities for both utilitarian and recreational/competitive bicyclists.

3.3.5 Support innovative and new programs and/or events which aim to increase bicycling to school.

EQUITY AND ACCESS

Objective 3.4 Promote and support access to all through public engagement, program delivery, and capital investment

In working to increase access to and promote bicycle transportation it is important to take an approach that works towards equitable access to all. As supported by Austin's Complete Streets policy, all streets should generally have safe facilities for all modes for users of all ages and abilities. Certainly this will take many years to achieve, though through the process of implementation it is important to carefully evaluate the equitability of transportation options, and orient infrastructure and programs accordingly.

The development of the all ages and abilities bicycle network, while prioritizing where short trips could be captured, also carefully considered where additional access was needed in under-served areas where populations have little or no current access to safe bicycling. Geographically this is challenging as areas in the outer limits of the city have low densities, incomplete road networks, and few inexpensive retrofit options to provide bicycle access. The Plan prioritizes providing access to these areas and programming support to encourage bicycling once infrastructure is put in place.

One significant challenge is that the older, more connected, and central parts of the city are more conducive to bicycling, largely due to the high concentration of short trips. Affordability of living in the central part of the city, have become a major concern, and current trends erode the equity of access to bicycling for lower income families who increasingly cannot afford to live in the central part of the city. If Austin is to provide equitable access to bicycling and

SPOTLIGHT: M STATION

M Station is a project by Foundation Communities, a leading provider of affordable housing in Austin. The M Station project is 150 unit affordable housing project 2.5 miles from downtown and is the first affordable housing project to be located in Austin's new Transit Oriented Developments (TODs). M Station currently has good access to bicycling and walking and will be served by funded future expansions of the all ages and abilities bicycle network.

SPOTLIGHT: COLONY PARK MASTER PLAN

The Colony Park Sustainable Community Initiative (CPSCI) is a 3-year Community Planning Process that will culminate in a Master Plan for 208-acres of publicly-owned land in Northeast Austin, in addition to 93 acres of parkland, on Loyola Lane between Johnny Morris Road and Decker Lane. The proposed project will support and furthers the U.S. Department of Housing and Urban Development's six "livability principles": provide more transportation choices; promote equitable, affordable housing; enhance economic competitiveness; support existing communities; coordinate policies and leverage investment; and value communities and neighborhoods. Not only does the Colony Park plan include all ages and abilities within the site, but also includes access to the city wide network.

walking, it is therefore utterly important, that structural solutions that address access to affordable housing be put in place, particularly in the central city. Other tools to provide affordable access to bicycling will be the move to distributed centers (of concentrated employment, shopping, and housing) throughout the region. While this strategy reduces dependence on the center part of the city where market forces put the most pressure, the challenge is that many centers have poor and incomplete street systems that will need much investment to support bicycling and walking.

Objective 3.4 Benchmarks

- ☐ Provide equal bicycling access for all; through public engagement, program delivery, and capital investment.
- ☐ Create programs with organizations, neighborhood groups, and community leaders to encourage short trips and bicycling commuting throughout the City.
- ☐ Create and support neighborhood events to promote education and safety about bicycling throughout the City.

Objective 3.4 Actions

3.4.1 Ensure that bicycle transportation is accessible to all citizens of Austin.

3.4.1a Provide access to safe bicycle routes throughout all of Austin.

3.4.1b Ensure that affordable housing is available throughout Austin, especially in the Central City and near high capacity transit stations where the potential for short trips and the potential for bicycling are most present.

3.4.2 Create bicycle educational and safety informational material in Spanish, as well as in any other language deemed appropriate.

3.4.3 Partner with other departments and local organizations to develop education and encouragement programs for populations historically underrepresented in bicycling, including youth, older adults, women, economically disadvantaged, and people of color.

3.4.4 Continue to partner with Austin Bike Share to promote the bike share system and focus on safety for new riders, encouragement programs and wayfinding.

3.4.5 Collaborate with community leaders, neighborhood groups and other partners who want to promote and improve bicycling and bicycle safely through neighborhoods and city events.

BICYCLE LAWS AND ENFORCEMENT

Enforcement is a tool to both reinforce and educate the public about the rules of the road and promote safer behavior. Enforcement of traffic laws for all users is a key element in developing cooperative behavior among bicyclists and motorists. Bicycles are legal vehicles in the State of Texas, and persons riding a bicycle are required to follow all the rules and regulations applicable to all vehicles, with only minor differences.

STRENGTHENING ENFORCEMENT

Objective 3.5 - Strengthen efforts to enforce proper motorist and bicyclist behavior and reduce bicyclist-motorist collisions.

There is a perception that bicyclists do not obey traffic laws. While some bicyclists run red lights and stop signs, travel the wrong way down the street, or switch unpredictably from the sidewalk to the street, this represents only a small portion of people riding bicycles. This behavior does put these bicyclists at risk and increases conflicts with pedestrians and motorists. This unlawful behavior also leaves a negative impression on motorists and contributes to the antagonism between bicyclists (even those who do obey the law) and motorists.

The lack of adequate bicycle facilities may also contribute to unlawful actions by bicyclists and must be taken into account by law enforcement agencies. Often times traffic signals fail to detect and change for bicyclists, resulting in bicyclists running the red light. In many situations, bicyclists operating on inadequate facilities face harassment and intimidation from inconsiderate and uneducated motorists who do not understand the needs of bicyclists or how to properly share the road.

Similarly, some motorists drive in a manner that is dangerous to bicyclists and other roadway users. Bicyclists report that car drivers sometimes go out of their way to intimidate them by driving too close, throwing objects, blowing their horns, and generally harassing them. Motorists also roll through stop signs, speed, run red lights, fail to signal turns or lane changes, and exhibit other unlawful behaviors that are dangerous to bicyclists and other roadway users. The numerous stories of hit and runs where the person on a bicycle is left for dead by a negligent motorist also contribute to the antagonism between bicyclists and motorists. Certainly, the bad behavior of all road users should be strictly enforced to create a safe and predictable environment.

Bicyclist and motorists both have common behaviors that are illegal and dangerous to both road users. The table below illustrates common dangerous behaviors for each.

TABLE 4.1 COMMON DANGEROUS BEHAVIOR BY ROAD USERS

	Failure to have a red light during dark hours.	Speeding. Driving in a bicycle lane.
	Running red lights.	Rolling through stop signs at high speeds.
	Rolling through stop signs at high speeds.	Parking in a bicycle lane.
	Passing on the right.	Failure to yield right-of-way.
	Riding the wrong way on a roadway.	Speeding. Driving in a bicycle lane.

The highest priorities to provide safer conditions for people on bicycles is enforcing laws related to driver speed, distraction, and impairment. Speed is often thought of as a law to be mildly disregarded, but if Austin is going to become a safe place to walk and bicycle then the enforcement of excessive speed of motor vehicles will have to be taken seriously. Higher speeds are a leading contributor to dangerous outcomes and give less room for human error. Distraction and impairment are often what make speed dangerous and deadly. Austin already has ordinances banning texting while driving, which should be enforced with a no tolerance policy. Lastly, drug and alcohol impairment needs to be taken more seriously both through enforcement and the consequences of being caught driving. Enforcement and publicity of stings of the safe passing law and impaired driving are great opportunities to educate drivers to the needs of cyclists and pedestrians.

APD PATROL CAR WITH EDUCATIONAL MESSAGE USED IN THE SAFE PASSING LAW CAMPAIGN.

In 2001, the City of Austin Transportation Division analyzed pedestrian and bicycle accidents that occurred on public roadways. The analysis of these accidents did not reveal any "patterns or common cause factors... and don't indicate a specific type of problem that would lead to a logical prevention strategy" (City of Austin, 2001, p. 1). It concluded that the common factor in all the accidents was a "failure to exercise caution and observe right-of-way rules [among] motorists, pedestrians, and bicyclists" (City of Austin, 2001, p. 1). The findings in this study support the comprehensive approach of this Plan to address bicycle safety. The promotion of bicycling on adequate facilities with all users following applicable laws will result in the safest environment for all roadway users.

Additionally, Chapter 525 of the Texas Transportation Code requires that the Department of Public Safety include bicycle awareness information in any edition of the Texas drivers' handbook (Texas Transportation Code, Statute 525.001). Chapter 9 of the Texas Drivers' Handbook addresses vehicular sharing of the road with bicycles; Chapter 13 addresses bicycle vehicle laws and safety; and Chapter 15 addresses safe passing of bicycles by commercial vehicles. Continuing to revise the Texas Drivers' Handbook with the most current and best practices of bicycle safety will ensure consistent education of motorists and bicyclists, enforcement of these laws, and improvement for safety of bicyclists on the road.

Strategies to implement this Objective include increasing enforcement of traffic laws and increasing education of traffic laws in driving instruction and defensive driving courses. With the Austin Police Department, the Bicycle Program will establish enforcement priorities to target the most dangerous behaviors.

A great example of enforcement improving public safety is the Austin Police Department's (APD) enforcement of the Safe Passing Law. The campaign consisted of media outreach and press coverage, undercover sting, and publicity of sting. The program resulted in 39 citations, 78 warnings to motorists braking the safe passing law and tens of thousands of people reached through media coverage.

Objective 3.5 Benchmarks

- ☐ Increase compliance each year in the general public with speeding, distraction and impairment laws through integrated enforcement and publicity campaigns.
- ☐ Increase compliance each year in the general public with the safe passing law through integrated enforcement and publicity campaigns.

Objective 3.5 Actions

3.5.1 Increase enforcement of traffic laws for bicyclist and motorist behavior through citations and/or warnings.

3.5.2 Increase enforcement in areas with high crash rates, high levels of complaints, and where new infrastructure has been installed.

3.5.3 Forgive bicycle equipment violators if they can show evidence of properly equipping their bicycle within a reasonable amount of time from citation.

3.5.4 Coordinate with the Bicycle Program to continue the Bright Lights program that gives warnings along with lights for violation of the law.

3.5.5 Support and monitor efforts to update the State drivers' manual to strengthen bicycle section and exam questions.

3.5.6 Amend City of Austin Defensive Driving Course curriculum to include motorist-bicyclist safety information and support any State or other agency efforts to do the same.

3.5.7 Expand a bicycle education course for bicyclists cited for traffic violations, to take in lieu of a fine, or offer defensive driver courses revised to include bicycle use in traffic instead of a new course.

3.5.8 Partner to create a mandatory cyclists awareness educational course for motorists that receive citations involving cyclists.

3.5.9 Increase enforcement of traffic laws of motorist violations in bicycle facilities.

3.5.10 Find means of providing responsive citywide enforcement of parking in bicycle lanes.

3.5.11 Further promote safety and traffic laws through education. (See Education & Promotion, Objective 1).

3.5.12 The City of Austin Bicycle Program shall be afforded the opportunity to participate in task forces and/or collaborations between the Austin Police Department and the community which aim to address traffic safety.

BEST PRACTICE BICYCLE REGULATIONS AND CONSISTENCY IN ENFORCEMENT

Objective 3.6a: Ensure best practice bicycle related laws are in place.

Objective 3.6b: Ensure consistent interpretation and enforcement of bicycle related laws by Austin Police Department.

It is important to have both best practice bicycle laws and consistent enforcement to create a culture of safe and respectful interactions between road users. This alignment will also create a partnership and mutual respect between bicyclists and law enforcement agencies.

Regular evaluation of current laws will ensure that they are in-line with best practice and are effective in improving safety, road conduct, and increasing ridership. Bicycle friendly laws that have been implemented in other cities include stiff penalties for negligently opening a car door into the path of a cyclist.

Enforcement should be consistently and fairly applied to all roadway users. This goal can be achieved through reviewing law enforcement policies and data reporting while maintaining an ongoing dialogue and partnership with the bicycle community. Local laws should be interpreted consistently so that neither law enforcers nor users of the road (motorists and bicyclists) will be confused on what is legal behavior. Educational materials should be consistent with state and local traffic laws, which should also reflect the best practice regulations around the country. Ultimately, Austin's law enforcement and the bicycle community want the same thing, safe conditions on Austin's roadways for all users that allowing travelers to choose the best travel mode for their trip.

Currently, the Austin Police Department (APD) includes bicycle law enforcement training in the Cadet Academy. Continuing to train law enforcement officers on bicycling issues will help ensure consistent enforcement of the laws protecting bicyclists. The City of Austin Bicycle Program will work with APD to unify traffic laws and enforcement policies and ensure consistent interpretation of bicycle traffic law enforcement.

Objective 3.6 Benchmarks

- ☐ Evaluate bicycle laws every 2 years and work with APD and City prosecutors to bring them up to national best practice.
- ☐ Train 100% of APD law enforcement officers in bicyclist and motorist behavior laws and bicycle issues in conjunction with the City Bicycle Program.

Objective 3.6 Actions

3.6.1 Clarify and increase enforcement of state laws and the City of Austin's traffic codes where necessary to improve safety for bicyclists, and amend the City Traffic Code as needed to support bicycling as a mode of transportation.

3.6.1a Clarify legal status of bicycles as vehicles, with all rights to use the roadway.

3.6.1b Clarify riding position on the roadway, riding abreast, riding on sidewalks, etc.

3.6.1c Evaluate bicycle laws every 2 years and work with APD and City prosecutors to bring them up to national best practice

3.6.1d Amend local ordinances as necessary to reflect national best practices regarding safe behavior for bicyclists and motorists.

3.6.2 Coordinate with APD to monitor and support bicycle safety efforts.

3.6.3 The City of Austin Bicycle Program should coordinate with APD to compile an annual report outlining data for bicycle-related citations, 311 calls on aggressive driving, crashes, injuries, and other enforcement/safety issues to help identify specific trouble spots or behaviors by motorists and/or bicyclists that need to be corrected.

3.6.4 Review APD Uniform Traffic & Tolerance Policy to make recommendations of changes as necessary regarding bicycle specific issues.

3.6.5 Provide bicycle educational training for all law enforcement personnel in the Austin metropolitan area.

3.6.5a Enhance bicycling issue education within Police Training Academy curriculum.

3.6.5b Provide that all law enforcement officers receive an annual review on bicycle behavior laws and safety issues and the current Traffic and Tolerance Policies related to bicycling.

3.6.5c Require all law enforcement officers to pass at least a Road I, League of American Bicyclists certified (or equivalent) training course.

3.6.6 Develop legal, uniform minimum bicycle safety recommendations and guidelines for use in local education and enforcement programs by law enforcement agencies, bicycling groups, and bicycle educators and planners.

3.6.7 Request that any selective enforcement targeted to bicyclists is executed at the same time as selective enforcement of motor vehicles and is coordinated with the City Bicycle Program.

City bicycle design staff checking on construction of a protected intersection and a planted median separated two-way protected bicycle lanes on Tilley Street in the Mueller Redevelopment.

CHAPTER FOUR | IMPLEMENTATION

INTRODUCTION

Over the past five years, Austin has significantly expanded and improved the quality of the bicycle network and implemented many of the policies recommended in the 2009 Bicycle Plan. Because of these efforts, there exists a safer bicycle environment and bicycle ridership has nearly doubled to exceed the goals set in the 2009 Plan. A strategic implementation program is laid out in the 2014 Plan and is critical to ensure rapid progress towards implementation. The 2014 Bicycle Plan is the first citywide master plan to align its implementation framework with Imagine Austin's five-points implementation approach.

PROJECT LEVEL IMPLEMENTATION

The Bicycle Master Plan includes recommendations based on high level planning principles such as roadway speed, volume and desired network connectivity. The recommendations tabulated in the Plan create a starting place in the process to create Complete Streets that meet the intent of the City's newly adopted policy and serve people on bicycles of all ages and abilities.

At the time of project implementation on a specific corridor, recommendations in this master plan are tested through preliminary design, data collection, alternatives analysis, and appropriate public process. Not all recommendations in the plan will be feasible and lower level bicycle facilities or a no build scenario may be the final outcome. Public processes will be conducted for projects that have significant impacts to the public such as the modification of on-street parking, number of vehicle travel lanes, or traffic calming devices. Stakeholder groups that are affected by the proposed project will be engaged such as property owners, residents, and businesses along the corridor; adjacent neighborhood associations; and the traveling public.

There are currently proven processes in place that govern the implementation of parking modification, lane modification, and traffic calming projects. At the time of writing the parking modification process has been conducted on over 75 projects totaling 45 miles of roadways and lane modification process have been used for more than 10 projects. It is critical to the ongoing implementation of the infrastructure recommendations in the Plan to deliver projects through a consistent, transparent and context sensitive process that is responsive to the many needs of the public and yields successful projects.

FIVE-POINT IMPLEMENTATION PROGRAM

Objective 4.1: Strengthen and diversify implementation efforts through a five-point implementation program to fulfill goals and objectives of the 2014 Plan.

The five-point framework ensures a well-rounded implementation approach and sets the stage for a broader and longer lasting impact. The five-points of the implementation program are as follows:

- ☐ Education and Engagement
- ☐ Internal Alignment
- ☐ Regulations
- ☐ Public Investment
- ☐ Partnerships

One of the broad themes of the five-points implementation program is to broaden the support base for bicycling. Implementing the 2014 Plan requires the coordination of all City of Austin departments, partner agencies and organizations, and the public at large. By integrating bicycling as a tool to meet the goals of groups outside of the bicycle program, a broad coalition can be built that will significantly accelerate the realization of the Plan.

The five-point implementation program also brings focus to the broad range of avenues to implement the plan. While the highest priority of the plan is to implement an all ages and abilities bicycle network, the realization of this goal will require more than public investment and ultimately requires actions touching each of the five points. The same holds true for the other program and bicycle system goals in the Plan.

This section will reference objectives and action items from previous chapters and demonstrate how they align with the five-points implementation program. It will also spotlight implementation approaches for key objectives.

Objective 4.1 Benchmarks

- ☐ Evaluate efforts towards the implementation of the Plan every year and include in an annual report.

EDUCATION AND ENGAGEMENT

Objective 4.2: Educate and engage all relevant internal and external stakeholders to support the goals and implementation of the Plan.

The Plan update represents a significant shift in approach from the 2009 Plan and establishes a vision to maximize the contribution of cycling in realizing our shared goals as set forth in the Imagine Austin Comprehensive Plan. Due to this shift, education and engagement of the public, City staff, City leadership, partner agencies, and other organizations are a top priority. This collaboration will ultimately lead to successful implementation of the plan by raising awareness, understanding, and support.

Multiple types of programs and communication will be utilized to convey the public benefit of bicycling and to highlight success stories. This will build confidence both in the plan's vision and also in the City's dedication to achieving that vision.

Objective 4.2 Benchmarks

- ☐ Evaluate education and engagement efforts towards the implementation of the Plan every year and include in an annual report.

Objective 4.2 Actions

4.2.1 Educate the public about the benefits of bicycling and developments in project and programs through the following outlets:

- ☐ Program communications through website, social media, email distribution list
- ☐ Partner communications
- ☐ Event outreach
- ☐ News outlets
- ☐ Annual Reports: Bicycle Program, Austin Transportation Department, Imagine Austin, partner agency reports.
- ☐ Presentations to civic groups: neighborhood and business associations, schools, non-profit organizations, etc.

- ☐ Bicycle Advisory Council
- ☐ Community engagement upon project delivery: mailings (email and paper notices) to stakeholders, public meetings.

4.2.2 Continue to support and receive input and guidance from the Bicycle Advisory Council (BAC). The BAC shall consist of City of Austin citizens and function like a neighborhood association in that it shall have by-laws, elected officers, and hold regular meetings open to its members and to the public.

4.2.3 Implement education and encouragement programs described in Chapter 3 including the following: Smart Trips program and Regular Viva Streets (ciclovia) events.

4.2.4 Provide or partner to provide training to appropriate City staff, partner agency or organization staff, and private consultants.

4.2.4a Provide training on best practice bicycle planning and facility design

4.2.4b Train and educate transportation engineers and planners at the local, regional, and state levels about the needs of bicyclists.

4.2.4c Train relevant City of Austin staff about implementation of this Plan.

4.2.4d Develop and provide training for various parties responsible for carrying out any part of this Plan.

4.2.4e Train transit operators on bicycle safety and how to operate buses and other transit modes around bicyclists. (See Infrastructure Objective 2.3)

The City of Austin has provided or engaged the following training outlets since the adoption of the 2009 Plan, accelerating the implementation of the plan:

- ☐ Webinars and on-site trainings through Institute of Transportation Engineers, Association of Pedestrian and Bicycle Professionals, and the National Association of City Transportation Officials.
- ☐ National and international study tours through the Green Lane Project and NACTO.
- ☐ National and international workshops hosted locally including ThinkBike and NACTO Roadshow.
- ☐ City of Austin Compact and Connected Training, an Imagine Austin training program.
- ☐ Conferences: Velo-city international, ProWalk ProBike conference, National Bike Summit, CNU Conferences, state level conferences.

INTERNAL ALIGNMENT

Objective 4.3: Create internal alignment across all departments to support the goals and implementation of the Plan.

Fulfilling the vision of the Plan will require the City of Austin to take a more collaborative, cross-departmental approach to major initiatives. As outlined below, the execution of this plan is the work of all departments. City staff will develop ways to better integrate department work programs, decision-making, and long-range budgets to align with the goals of the Plan. This effort to align internal operations will involve a gradual shift over time as older projects are completed and new ones are planned.

Each City department and community partner has expertise to contribute, and each can learn from others. The vision of the Plan will not be realized by departments or nonprofits working in isolation but rather will require a more holistic approach.

The following is a list of all City Departments and opportunities to align their work to best support the goals of this plan. The perfect time to align the work of Departments is during annual departmental business planning.

- ☐ **Austin 3-1-1** - Provide information on bicycling and streamline resolution of bicycle issues
- ☐ **Austin Convention Center** - Support infrastructure and promotional efforts to solutions for mass mobility during large events. Support and expansion of bike share will make Austin a more attractive convention destination.
- ☐ **Austin Energy** - Support the creation of accessible, comfortable, and attractive street environments for people walking and bicycling through system-wide assessment of the placement of overhead infrastructure and opportunities to provide shade.
- ☐ **Austin Public Libraries** - Promote programming and events that support bicycling.
- ☐ **Austin Resource Recovery (formerly Solid Waste Services)** - Work with designers of protected bicycle infrastructure to find ways to create better bicycle facilities while continuing to provide essential services. Obtain street sweeping equipment that can sweep narrow protected bicycle lanes.
- ☐ **Austin Water Utility** - Align design standards to support protected bicycle infrastructure, helping to balance the many competing needs in the ROW.

☐ **Austin-Bergstrom International Airport** - Support bicycle connectivity from downtown and East Riverside to the Airport to create a gateway for travelers visiting Austin and provide a first taste of our bicycle culture. Bicycle connections to the Airport will also support healthy mobility options for employees. Provide long term secure and covered bicycle parking near terminal.

The Aviation Department played a critical role in providing an urban trail connecting downtown, the airport, and Del Valle as part of future TXDOT and CTRMA toll road projects. This will provide connections for both travelers and employees.

☐ **Austin/Travis County Emergency Medical Services** - Support safer streets as a foundational prevention program. Support innovative and pervasive traffic calming solutions that increase safety while maintaining necessary access for emergency vehicles.

☐ **Austin/Travis County Health and Human Services** - Promote complete streets and bicycle use as a means to support physical activity and positive health outcomes.

☐ **Capital Planning Office –** Include Bicycle Master Plan recommendations in Long-range CIP Strategic Plan; assure the role of bicycle infrastructure is balanced among all CIP infrastructure needs. Facilitate analysis related to innovative funding sources across the CIP.

☐ **City Council** - Stay educated on how bicycling can help achieve the goals of the city. Integrate bicycling as a tool into initiatives such as transportation and affordability. Support the bicycle investment outlined in this Plan and seek innovative funding opportunities for implementation.

☐ **City Manager** - Oversee the support for and integration of bicycling infrastructure and programs into citywide service delivery. Evaluate and support bicycle infrastructure, programs, and staffing needs as a means of implementing the 8 priority programs of Imagine Austin. Seek innovative funding opportunities for implementation.

☐ **Code Compliance Department -** Proactively address maintenance for private vegetation that is encroaching into the bicycle lane**.**

☐ **Communications and Public Information Office** - Assist with both city wide communications and those targeted to affected registered organizations regarding implementation of projects and policies. Utilize the Office of Innovation to find innovative means to implement the Plan.

☐ **Communications and Technology Management** - Assist with tool development for better project outreach, public input, tracking, and implementation.

- ☐ **Community Court** - Support Plan implementation through court ordered service such as providing litter pickup and graffiti abatement along bicycle routes and trails to keep them attractive and comfortable environments. Another opportunity is sweeping narrow bicycle facilities that cannot be maintained by large equipment.

- ☐ **Contract Management** - Ensure that the contract procurement process for both professional and construction services have the expertise, scope, and tools necessary to achieve state of the practice bicycle friendly designs.

- ☐ **Economic Development Department** - Integrate the economics of bicycling in all studies and programs. Promote and support bicycle initiatives on their merits as an economic development tool both to create vibrant commercial districts and as a way to attract and retain talented employees and employers. Through the Small Business Program educate small business owners on the ways that bicycling is beneficial for small business.

- ☐ **Financial Services** – Handle the annual preparation of capital and operating budget; budget analysts review of department submittals for appropriation of funds (both capital and operating) requested for the implementation of the Plan; Support and facilitate annual reporting of performance measures that best represent the progress in Plan implementation.

- ☐ **Homeland Security and Emergency Management** - Support bicycle infrastructure and programs as a way to cultivate bicycling skills and confidence among citizens. This will allow for bicycle use as a tool to create resiliency in emergency situations.

- ☐ **Law Department** - Provide innovative legal support (for example expertise in public-private partnerships) for the implementation of bicycle infrastructure, programs and policies to meet the goals of the Plan.

- ☐ **Municipal Court** - Work with the Bicycle Program, City Law Department and Police Department to align policies, laws, enforcement and court processes to promote safer road behavior and accountability for and mutual respect between all road users in order to create an environment for increased bicycle use.

Bicycles played a critical role in the aftermath of Hurricane Sandy in New York City in 2012. In the days after bicycling increased by 2 to 4 times even though most people were not working. This increase was due to the failure of other transportation systems.

Source: Hiebert, Paul. "How Hurricane Sandy Changed Biking in New York City", Flavorwire, December 11, 2012.

☐ **Neighborhood Housing and Community Development** - Support bicycling as an effective means of creating household affordability through reduction of transportation budgets and align programs to realize this opportunity.

☐ **Office of Real Estate Services** - Strategically evaluate and facilitate the procurement of land or access rights and the re-purposing of existing public lands to support the first priority program of Imagine Austin to create a compact and connected Austin.

☐ **Office of Sustainability** - Evaluate and support increased bicycling and complement reduction in vehicle miles traveled as a cost effective means of meeting sustainability objectives aligned with Imagine Austin and to meet the goals of the Climate Protection Program

☐ **Office of the Police Monitor** - Work hand in hand with the Police Department and the Bicycle Program to ensure uniform enforcement for roadway users, appropriate and safe driving behavior for officers in non-emergency situations, and the treatment of cyclists involved in crashes with motor vehicles with respect and dignity.

☐ **Parks and Recreation** - Work with the Transportation and Public Works Departments to create seamless public spaces, utilizing both street right-of-way and parklands, to create both a compact and connected Austin and to integrate Nature into the City, especially for people walking and bicycling.

☐ **Planning and Development Review** - Align all plans, regulations, and site plan review processes and interpretations of code to the goals of Imagine Austin and the Bicycle Master Plan facilitating the creation of a compact and connected Austin.

☐ **Police Department** - Collaborate with internal and external stakeholders to execute best practice enforcement efforts to promote safer road behavior and accountability for and mutual respect between all road users in order to create an environment for increased bicycle use.

☐ **Public Works** - Facilitate the creation of a more compact and connected Austin and meet the goals of the Plan through all stages of project implementation, maintenance operations, and stewardship of the right of way. Align the Street Resurfacing program to support the build out of the bicycle network. Work to develop innovative barriers for cycle tracks.

☐ **Small and Minority Business Resources** - Work with the Bicycle Program to provide training opportunities for multi-modal infrastructure design to allow small and minority owned businesses to better compete for solicitations.

- ☐ **Transportation** - Champion the execution of the Plan and build partnerships for a regional investment in bicycle infrastructure, programs and expansion of staff resources.
- ☐ **Watershed Protection** - Support bicycle infrastructure and programs as a means to improve water quality and implement green street infrastructure both through the use of watershed lands and programs. Seek innovative means of retrofitting streets to have physically protected bicycle facilities while accommodating stormwater flow.

JJ Seabrook project - what started as a stream bank restoration and water quality project expanded into a cross departmental project that created a ½ mile trail and reduced an oversized road to bring a park back together. The project includes a paved trail, rain gardens, removing culverts along the creek and replacing with a bicycle / pedestrian bridge, and park improvements.

Objective 4.3 Benchmarks

- ☐ Evaluate the extent of internal alignment across all departments towards the implementation of the Plan every year and include in an annual report.

Objective 4.3 Actions

4.3.1 Coordinate all City departments when necessary to implement the Plan.

4.3.1a Develop ownership in all departments for the success that encouraging bicycling can bring to meet their own goals.

4.3.1b Integrate bicycling into the planning, priorities and operations of all departments on their merits to meet citywide goals.

4.3.1c Coordinate to integrate and activate Austin's public spaces through the creation of a bicycle network, particularly in parks and street spaces.

Opportunity to treat public spaces as one - The Parks and Recreation Department, Transportation Department, and Public Works Department can work to create continuity between parks and street right of way. Linear parks are one of the most requested park improvements and safe multi-modal greened streets are one of the most requested street improvements and both desires can be accomplished in this holistic strategy. The result of this effort would be that people of all ages and abilities could move seamlessly throughout the city by walking or bicycling. This will activate and bring more people to Austin's parks and streets, creating great public spaces.

4.3.2 Integrate bicycle planning and facilities in all CIP projects.

4.3.2a Review all roadway projects and plans for impact on bicycle access and/or creation of barriers to continuous bicycle travel.

4.3.2b Review traffic studies, development applications, subsequent ordinances, and Plans that restrict through automobile traffic for impact on bicycle access and/or creation of barriers to continuous bicycle travel.

4.3.2c Per City Council Resolution No: 20020418-40, the City of Austin shall include in all planning and project estimates, as well as actual construction costs, an appropriate amount of funding for bicycle facilities (including end-use facilities where appropriate). All City projects shall be included unless excluded by approval from the Directors of the Transportation Department and Public Works Department.

4.3.2c Per City Council Resolution No: 20140612-119, the City of Austin streets shall serve people of all modes and all ages and abilities in all project phases.

4.3.3 Integrate bicycle facility planning into the private development process.

4.3.4 Require that all private development applications which contain streets within this Bicycle Plan are reviewed for compliance with the plan by the appropriate entity within the City (Bicycle Program, Planning and Development Review staff, etc.).

4.3.5 Require approval by the City Transportation Department Director for all developments containing phased plans (affecting roadway construction). Construction of initial phases of major roadway (having collector or arterial characteristics) construction shall accommodate people of all ages and abilities on bicycles.

4.3.6 Notify the Urban Transportation Commission (UTC) on an annual basis when project proposals are inconsistent with the Bicycle Master Plan and potential amendments to the Plan.

REGULATIONS

Objective 4.4: Update necessary regulations to support the goals and implementation of the Plan.

Numerous City regulations affect the Plan's implementation, it is important to align these regulations to support the creation of an environment that is hospitable to bicycling and meets the goals of the Plan.

One of the most significant opportunities to support the goals of the Plan is an effort the City began in 2012 to align land-use regulations with Imagine Austin. Imagine Austin envisions a shift in the development patterns of our city towards a compact and connected city of complete communities. These code revisions that support compact land uses and mixed destinations coupled with connected safe bicycle facilities are critical since bicycling is best for short trips. Currently, many of Austin's land-use regulations, dating from an era when suburban standards were in favor, shape development in ways that work against this goal. To address this, Imagine Austin includes Priority Program 8: Revise Austin's development regulations and processes to promote a compact and connected city.

Another regulatory document which governs the form of streets, particularly newly constructed streets, is the Transportation Criteria Manual (TCM). Revising the TCM is critical to meeting the goals of the Plan as it currently favors suburban style street design. While most of the opportunities for bicycle facilities are in retrofits in existing areas, it is important that new streets also support bicycling.

Regulations also affect issues such as rules of the road and the implementation of end of trip facilities like showers and bicycle parking, all of which effect the implementation of the Plan. The City's regulations should be regularly evaluated to ensure that the goals of the Plan are realized.

Objective 4.4 Benchmarks

- ☐ Evaluate relevant regulations on the extent of their alignment in support of the implementation of the Plan every year and include in an annual report.

Objectives 4.4 Actions

4.4.1 Integrate the recommendations in this Plan into other city ordinances, plans, and guidelines.

4.4.2 Revise the Land Development Code (LDC) to support the creation of compact and connected places.

4.4.2a Revise the LDC and associated regulations to implement infrastructure recommendations in the Plan through all development processes (zoning, subdivision, site plan, building permit, etc). Provide code incentives and or regulations for connectivity. An example is upgrading bicycle lanes to cycle tracks and trails at time of development (See Chapter 2: Bicycle Network

Implementation Strategies).

4.4.2b Revise the LDC to support the increase of densities near transit stations where all ages and abilities bicycle facilities are provided, outside of typical walking range for Transit Oriented Developments

4.4.2c Revise the LDC to support end of use facilities such as showers and long term bicycle parking as well as expansion of the bicycle share system.

4.4.2d Periodically review interpretation and application of Land Development Code and the Transportation Criteria Manual regulations as necessary to meet the goals of the Plan.

4.4.3 Regularly evaluate and update traffic regulations that affect bicycling and safe road behavior to ensure that they support the goals of the Plan.

PUBLIC INVESTMENT

Objective 4.5: Identify and secure public investment to support the goals and implementation of the Plan.

Consistent public investment will continue to be a critical factor in the success of the implementation of the Plan. Public investment supports capital (infrastructure) and operating (programs, maintenance, and staff) needs. Without regular sources of funding the goals of the Plan will not be realized and opportunities will be missed.

Since the adoption of Imagine Austin, operations and capital funding for all departments is being evaluated on the alignment with the Imagine Austin Plan.

From the Imagine Austin Annual Report:

> *In 2012-2013, the Imagine Austin Comprehensive Plan has been actively used to guide the City's capital investment priorities City management has required department leadership to assess their operations, priorities, and budgets and adjust them as needed to support and align with the plan. This assessment was formalized during the annual departmental business planning process in fall 2012. It required each department to summarize how it currently supports the comprehensive plan and/or how it plans to modify goals, performance measures, and programs to better align with it.*
>
> *As City departments continue with budgeting and capital planning for the upcoming*

fiscal year and longer horizons, new requests for both operating and capital funding are being reviewed against the plan's vision, policies, and priority programs. Cross-departmental cooperation has been and will continue to be encouraged in these budgeting and planning efforts.

Insofar as the Plan is effective in fulfilling the vision, policies, and priority programs of Imagine Austin, public investment for the implementation of the Plan should be evaluated through the Imagine Austin framework and supported on its merits.

It is the responsibility of the Bicycle Program to identify short and long term program and Plan implementation funding needs, exercise judgment on appropriate funding sources for the diverse action items in this Plan, and request budget accordingly. It is the responsibility of upper City management and the City Council to respectively recommend and approve the City's budget each year. Lastly, it is the responsibly of the citizens of Austin to be knowledgeable of the City's budget process and to be involved with the City's budget as well as any other special budget items each year.

Funding for bicycle facilities and programs comes from a variety of sources, including local resources such as tax revenue, transportation user fees (funds the Transportation Fund), and voter and non-voter-approved bonds; federal transportation and non-transportation funds; and other innovative funding sources. This section discusses various funding priorities, and potential sources for implementation of the Bicycle Plan.

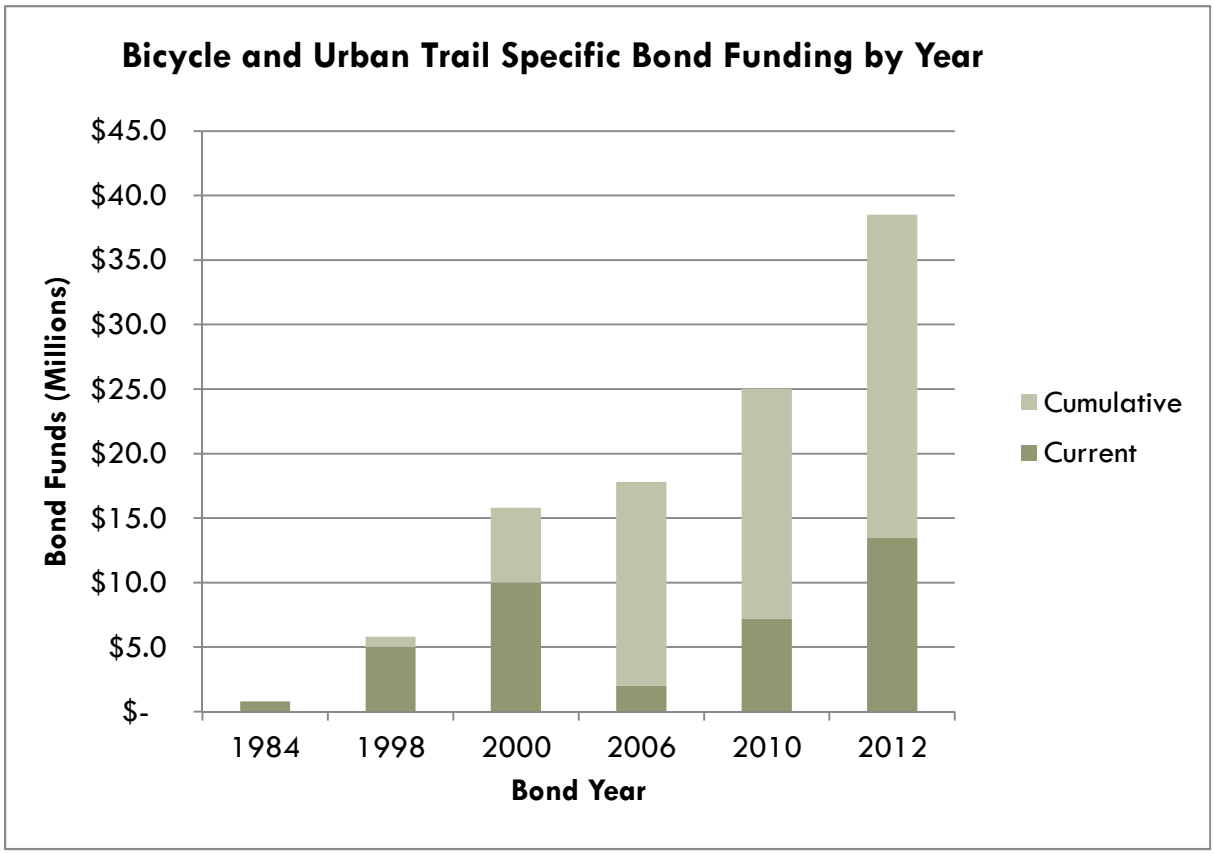
PUBLIC FUNDING HISTORY

The City of Austin has been funding bicycle improvements in earnest since 1998 in conjunction with the adoption of the City's first bicycle plan. These funds have traditionally been in the form of voter-approved bond, grant, and operating funds.

Significant bond funding for bicycles was approved by voters in the 1998 and 2000 bonds after the approval of the 1998 and 2000 Bicycle Master Plans, but remained largely unspent for many years. From 2006 - 2013, under the leadership of Annick Beaudet, the next generation of the Bicycle Program formed and was successful in turning stale voter-approved bond funds into signature projects and garnering both additional bond and leveraging these local funds to obtain federal funds. Successful project delivery and the momentum behind the adoption of the 2009 Bicycle Master Plan were catalysts in garnering this additional funding.

The following chart shows an overview of voter approved bond funds for bicycle

improvements. Both Bicycle and Urban Trail funding is shown together as these two programs and funding were co-mingled until late 2013. As of July 2014 all of this funding is either spent, encumbered, or publicly committed to projects that are in progress.



BICYCLE AND URBAN TRAIL SPECIFIC BOND FUNDING BY YEAR

Source: City of Austin

Since the 2009 Plan the City has also been successful at garnering state, federal, and grant funding as demonstrated in the following examples:

- ☐ In 2009 the City of Austin received Transportation Enhancement funding available through SAFTEA-LU in the amount of $350,000 for a Safe Bicycling and Walking Promotional Campaign, and almost $500,000 for the installation of bicycle lanes throughout the city.

- ☐ In 2012, the City was awarded Surface Transportation Metropolitan Mobility funding, also available through SAFTEA-LU, in the amount of $2m for the implementation of a public bike share program and $2 million for the construction of a bridge over Loop 360 at Mopac. At the same time, TXDOT had a

funding call for Proposition 12 funding. This funding was directly tied to mitigating congestion. The Bicycle Program, in collaboration with TXDOT identified the Mopac corridor over Barton Creek as one that would fit the requirements of the Proposition 12 funding. Therefore, TXDOT and the City worked together to re-design Mopac in such a way as to remove the shoulder on the bridge over Barton Creek (often used by cyclists) in favor of creating a completely separated bicycle and pedestrian bridge under the existing bridge. The Proposition 12 funding provided $10m for the construction of the Mopac Bicycle Bridge. Additional contingency funding for the bridge in the amount of $3m was procured with the 2012 Transportation Bond.

- ☐ In 2012, the City again received $250,000 of Transportation Enhancement Funding for the purposes of using bicycle specific signals at up to 12 intersections and improving bicycle signal detection at up to 20 intersections.

FUNDING PRIORITIES

This section outlines the highest priority public investments for the implementation of this plan. This collection of investments are the most significant opportunities to increase levels and safety of bicycling, meet the goals of the Plan, and ultimately support the implementation of Imagine Austin. The highest priority public investments are the following:

- ☐ Bicycle network investments
- ☐ Build-out of the all ages and abilities bicycle network
- ☐ Removal of top barriers in the supporting bicycle network (bicycle lane network)
- ☐ Expansion of the bicycle share system
- ☐ Creation of a Smart Trips program (an educational and encouragement program to reduce drive alone trips).
- ☐ Expansion of Active Transportation Program staffing

Build-out of the All Ages and Abilities Bicycle Network

Planning level cost estimates have been prepared for the build-out of the all ages and abilities bicycle network. The All Ages and Abilities Network is a collection of existing, retrofit and new bicycle facilities that are compatible with existing traffic volumes and on-street parking demand, is construction feasible, and could be implemented in the next 5 years. The planning level cost estimate is $151 million. This sum is composed of

$58 million for on-street facilities and $93 million for the Tier 1 urban trails recommended in the Council adopted Urban Trails Master Plan.

The cost-benefit of this investment was evaluated from several perspectives and suggests that the network improvement is a regional investment both in scale and in terms of benefits. The benefits of this investment were quantified using a conservative methodology to estimate the number of driving trips that would be converted to bicycling trips as a result of the investment. Highlights from all ages and abilities bicycle network investment cost-benefit analysis are the following:

- ☐ From a mobility perspective, this investment is of a regional scale and offers a cost competitive solution (compared to other regional projects) in getting people to Austin's congested downtown area.
- ☐ The savings to individuals through direct driving costs per year exceed the cost of the network investment, reducing household travel budgets supporting affordability.
- ☐ The change in trip behavior creates significant and lasting public health and environmental benefits.

The cost benefit analysis suggests that an investment in the all ages and abilities bicycle network will result in a package of far reaching benefits that is cost competitive with other strategies the City is contemplating to meet the goals of Imagine Austin. As such the Plan recommends that this investment be 20 % funded and completed by 2017, 50 % by 2020, and 80 % by 2025. Details on the all ages and abilities bicycle network investment and cost-benefit analysis can be found in Chapter 2.

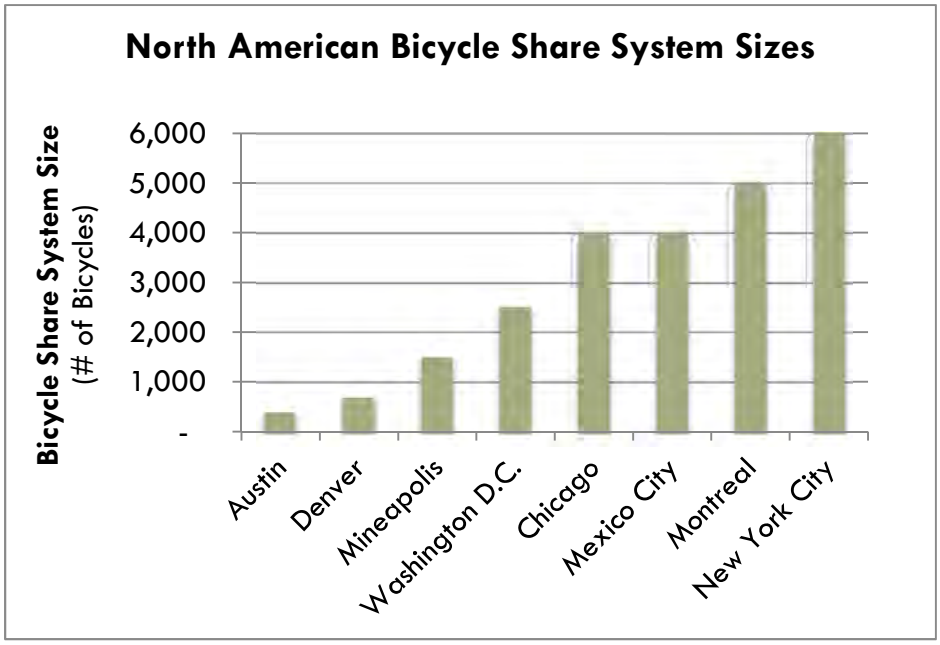
Removal top Barriers in the Supporting Bicycle Network (bicycle lane network)

Planning level cost estimates have been prepared for the removal of 75% of the top barriers in the existing bicycle lane network. The removal of barriers will result in a much more complete and continuous bicycle network and significantly increase bicycle use. The Plan recommends addressing 75% of all barriers identified at a cost of $10 million by 2020. Details on the removal of top barriers can be found in Chapter 2.

Expansion of the Bicycle Share System

The expansion of the bicycle share system from the current 40 stations and 400 bicycles to roughly 5 times its current size is a priority of the Plan. A large and effective bicycle

share system coupled with an all ages and abilities bicycle network are the foundation for rapid increases in bicycle use. Bicycle share systems are one of the most effective entry points for people to bicycling as it removes the barrier of having access to a bicycle at the moment an individual is determining how to best make a trip. The bicycle share system is discussed in detail in chapter 2.



BICYCLE SHARE SYSTEM SIZES IN NORTH AMERICAN CITIES ***SOURCE: CITY OF AUSTIN***

A number of funding and partnership opportunities exist to expand the system. Securing public investment through either the City of Austin, partner agencies, or private funding to leverage federal funds is a high priority. A planning level estimate for requisite funds for the local match for an 80% federal and 20% locally funded expansion of the system to 2,000 bicycles would require $2M in local funds. Given Austin B-cycle's current use trends per bicycle the expanded system could result in 8,000 trips per day. When compared to the 7,000 total bicycle commuters in the City of Austin from the 2012 American Community Survey, this represents a strategic and cost effective means of dramatically increasing bicycle use.

Creation of a Smart Trips Program

The Plan recommends that the City of Austin invest in and partner to create a program similar to Smart Trips to reduce drive alone trips and increase walking, bicycling, and transit trips.

Smart Trips is a Portland based best practice education and encouragement program that works to reduce the number of drive alone trips in targeted geographic areas. The program reaches out to individuals soliciting interest in learning more about getting around by walking, bicycling, transit, car sharing and other mobility options. Typically 30% of the population of the target area expresses interest, requests additional information and attend events oriented to get participants acquainted and comfortable with these new mobility options. Program details are discussed in chapter 3.

The Smart Trips program in Portland is budgeted to reach 20,000 households or 57,000 people each year within a geographic area. The program results in an impressive 9-13% reduction in drive alone trips for the target area each year. The cost of the program is approximately $10 per person in the Smart Trips area with a total cost of $570,000 per year. This cost includes four full time staff and most materials and services. The program's website states that "area residents submit annually an average of 1,000 comments praising the program, some describing how it prompted them to change the way they get around and how much they love living in Portland because of programs like SmartTrips. These kudos help make it a popular program with politicians, agency staff, and neighborhood leaders."

A potential partner to deliver this program is Capital Metro as an increase in walking bicycling and transit use is to their direct benefit. Other entities such as foundations interested in health outcomes, Austin B-cycle, car share programs, and the metropolitan planning organization are also potential partners.

The Plan recommends a public investment or partnership to deploy an ongoing Smart Trips program to reach 20,000 households per year as a cost effective means of reducing drive alone trips. As 20,000 households a year will have a limited reach, the Plan recommends ongoing evaluation of the program, and if successful, expansion with a goal of strategically scaling the program to optimal levels considering demand and opportunity areas.

Expansion of Active Transportation Program Staffing

Lastly, the Plan envisions a significant increase in responsibilities of the Active Transportation Program beyond overseeing construction of bicycle facilities, to include: expanding current design and planning capabilities, coordination of the regional bicycle infrastructure, partnership building, significantly increasing education and promotional efforts, data collection, and progress monitoring. To efficiently perform the tasks related

to implementing The Plan, additional staff resources are necessary. To defer the expansion of staff dedicated to implementing the Plan is to defer the benefits of bicycling towards implementing Imagine Austin and will result in missed opportunities as we align to this new community vision. Additional staff will be part of the newly formed Active Transportation Program in the Austin Transportation Department focusing on bicycle, pedestrian and complete streets programs.

City	Bicycle Staff	Population	Staff per 100k Population	Bicycle Friendly Community Status
Portland	16	603,000	2.6	Platnium
Seattle	13	621,000	2.1	Gold
Austin	10	842,000	1.2	Silver

BICYCLE RELATED STAFF SIZE IN PEER CITIES ***SOURCE: CITY OF AUSTIN***

COMPARISON OF PUBLIC FUNDING TO OTHER CITIES

Analysis of public funding in peer cities shows that Austin spends less per capita than other leading bicycle cities in all categories: Network improvements, parking & end of trip facilities, bicycle-transit integration, education, and encouragement. The cities surveyed include Portland, Minneapolis, New York City, and Copenhagen to show a broad range of spending in leading cities. Infrastructure investment is low in Austin, between 25 and 50 % per capita of these cities. Also, spending in Austin is heavily weighted towards infrastructure largely ignoring education and encouragement programs. The plan recommends significantly increasing funding across all categories to levels comparable to peer cities, particularly in the education and encouragement areas.

Strategy	Total Cycling Investment (%) per Year		Investment ($) per Capita per Year	
	Peer Cities	Austin	Peer Cities	Austin
Network Improvements	72% - 98%	98%	$25 - $50	$12
Parking & end of trip facilities	0.3% - 5%	0.3%	$0.15 - $2.00	$0.0
Bicycle-transit integration	0.4% - 4%	1.0%	$0.20 - $1.50	$0.1
Education	0.5% - 17%	0.3%	$0.25 - $6.00	$0.0
Encouragement	0.5% - 4%	0.3%	$0.25 - $1.25	$0.0

SUMMARY OF BICYCLE STRATEGY INVESTMENT RANGES - PORTLAND, MINNEAPOLIS, NEW YORK CITY, AND COPENHAGEN

Source: Adapted by City of Austin from Translink Regional Cycling Strategy Implementation Plan

POTENTIAL FUNDING SOURCES

The following is an overview of funding sources available to implement the goals of the Plan. Each funding source has different purposes, strengths and restrictions, and thus appropriate funding sources will need to be found for each area of implementation. The Plan recommends a multi-pronged, diverse and creative funding strategy. Traditional funding sources include the City general fund, Transportation Fund, voter-approved bonds and federal grants. Other innovative funding approaches and partnerships should also be developed.

General Fund

The General Fund typically funds public safety (fire, police, and other public services), human services, urban growth management, public recreation and culture, and other city services such as street lighting or the municipal court (City of Austin, 2008d).

Currently, the majority of Bicycle program funding supports infrastructure improvements; while minimal funding goes towards promotional and educational programs. The Smart Trips program and other education, encouragement, and enforcement programs are good matches for the general fund.

Bonds

Bonds are either voter or non-voter-approved general obligation debt to be used for a particular project. Bonds are also useful when a municipality needs to spend a considerable amount of funding upfront to construct a project. Bonds are typically used for Capital Improvement Projects, which are those projects that have a life of several years and are considered an investment in the future of the city (examples of bond funded CIP projects include libraries, affordable housing, bicycle transportation projects and parks and recreation facilities). Bond funds can also pay for staff time for project delivery. Bond funds are an excellent candidate for capital expenditures recommended in the Plan, including the Short Term All Ages and Abilities Bicycle Network, barrier removal in the supporting bicycle network, and expansion of the bike share system.

Transportation Fund

The City of Austin Transportation Fund is an enterprise fund, which is a type of fund that is primarily supported by user fees. The Transportation Fund is funded by transportation fees that were established in 1991. The Transportation Fund is used to maintain and

enhance the transportation system and covers street maintenance, traffic control, and enhancements (City of Austin, 2008d).

Traditionally, the majority of funding for the implementation of the infrastructure portion of the Plan comes from voter-approved bonds including the cost for restriping of streets at time of maintenance to include bicycle lanes and staff time to complete the design. Since 2012 there has been an acknowledgement that this activity is an appropriate activity of the Transportation Fund and by 2015 it is expected that no bond funding will be needed to supplement this restriping activity. As of 2014 all Active Transportation Program staff are fully funded by either the Transportation Fund or General Fund.

Federal and State Funding Sources

The City has been able to successfully leverage their bicycle funding by matching federal and state funds. In 1992 the federal government passed the Intermodal Surface Transportation Efficiency Act (ISTEA), which expanded transportation funds to become available for bicycle and pedestrian facilities, planning, safety, and promotion programs. Since then, the effort has been strengthened and is now funded by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Under SAFETEA-LU there are more opportunities for the use of federal matching funds for bicycle projects than under previous acts. Signed into law in August 2005, it authorizes 244.1 billion in federal gas-tax revenue and other federal funds for all modes of surface transportation, including bicycling.

Federal and State funds are available to implement infrastructure projects and programs. The primary conduit for these funds is the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 is the federal reauthorization of the surface transportation program and was signed into law in 2012. To be eligible to receive federal funds for any transportation projects, the local community is responsible for setting transportation priorities through its local metropolitan planning organization, which for Austin is CAMPO. Typically in order to utilize federal funds matching local funds are required.

The CAMPO board approved financial forecast estimating the regional funding available by source shown for bicycle and pedestrian projects from 2015-2040:

- ☐ Surface Transportation Program - $217 million (Assumes 15% of STP funds, CAMPO 2035 Regional Transportation Plan, Policy 4)
- ☐ Transportation Alternatives - $181 million - Includes 10 eligible categories

Grants

A grant is a financial assistance award that can come from the federal or state government or a private entity to assist the recipient in carrying out a specific project identified by the grant. This is typically a public purpose or stimulation authorized by U.S. law.

Objective 4.5 Benchmarks

- ☐ Fund and partner to complete 50 % of the "all ages and abilities network" by 2020 and 100 % by 2025
- ☐ Fund and partner to complete the removal of 75 % of the top barriers in the bicycle lane network by 2020
- ☐ Expand the bicycle share system to 800 bicycles by 2015 and 2,000 bicycles by 2017 through means including partnerships and public funding.
- ☐ Fund and partner to create a Smart Trips program, an educational and encouragement program to reduce drive alone trips, that reaches 20,000 households a year.
- ☐ Submit grant applications for applicable opportunities towards the implementation of the Plan
- ☐ Evaluate both local and outside funding towards the implementation of the Plan every year and include in an annual report.
- ☐ Expand Active Transportation Program staff to meet needs of Bicycle Plan.

Objective 4.5 Actions

4.5.1 Fund the top bicycle network priorities

4.5.1a Fund and partner to complete 50 % of the "all ages and abilities network" by 2020 and 100 % by 2025.

4.5.1b Fund and partner to complete the removal of 75 % of the top barriers in the bicycle lane network by 2020.

4.5.2 Expand the bicycle share system to 800 bicycles by 2015 and 2,000 bicycles by 2017 through means including partnerships and public funding.

4.5.3 Fund and partner to create a Smart Trips program, an educational and encouragement program to reduce drive alone trips, that reaches 20,000 households a year.

4.5.4 Seek diverse funding sources to implement the Plan

4.5.4a Acquire maximum available funding from state and federal sources.

4.5.4b Establish a grant match reserve fund to be available to rapidly match federal and state highway grants.

4.5.4c The City of Austin will propose bond elections at appropriate times to provide needed matching funds to obtain funding from these sources and to provide for projects not funded otherwise.

4.5.5 Provide consistent and on-going funding for the maintenance of bicycle transportation, such as cycle track and bicycle lane sweeping and bicycle lane sign and marking maintenance. Funding for this should be within the City's operating budget.

4.5.6 Increase Active Transportation Program staff.

4.5.6a Maintain the Active Transportation Program/Bicycle Program Manager position at a level of responsibility capable of interacting with all City departments, public and private agencies, and City, County, and State officials.

4.5.6b Expand Active Transportation Program staff to meet needs of Bicycle Plan, specifically, project implementation, network planning, and public outreach/promotion and education.

PARTNERSHIPS

Objective 4.7: Create partnerships to support the goals and implementation of the Plan.

The recommendations of the Plan are far reaching and extend well beyond what the City of Austin can do as a single entity. Partnerships are critical to realizing both the goals of the Plan and the full potential for support of Imagine Austin.

One of the overarching goals of this bicycle plan update is to broaden the support base for bicycling. While partnerships supporting bicycling in Austin have been limited in the past, the rate at which bicycling is becoming mainstream offers a catalyst to expand the support base. Additionally, since bicycling complements the diverse priorities of Imagine Austin as well as the goals of many other public and private organizations, partnerships have incredible potential to both broaden the support base for bicycling and further the implementation of the Plan.

There are a number of opportunities for partnership identified during this planning process that could further the implementation of the Plan. The following are spotlight examples:

- ☐ **Short Term All Ages and Abilities Bicycle Network** - While most of the network discussed in detail in chapter 2 and in the public investment section above will be within the City of Austin and built by the City of Austin, transportation users do not think about jurisdictions. Partnering with neighboring jurisdictions, including city, county, and state public entities, will be necessary to create this network, limiting barriers to travel. Principal partners in building this network will be TXDOT and the CTRMA, as some of both the most significant barriers and opportunities are crossing or traveling along their facilities. Great examples of past partnership with TXDOT and CTRMA have been to include shared use paths (Urban Trails) in the project plans for the Mopac Improvement Project, 183A Toll Road, 290 East Manor Expressway, Bergstrom Expressway, and 71 Expressway. These connections are helping create the backbone of the forming All Ages and Abilities Network. Another partner is Capital Metro that has an interest in providing safe bicycle connections to transit. They have already received grants to construct both an Urban Trail to connect to their stations and secure bicycle parking shelters along their Red Line and other bus transfer centers.

- ☐ **Smart Trips** - As discussed in the Chapter 3 and public investment section above, this model educational and encouragement program geared to reduce drive alone trips is a perfect opportunity for partnership. Potential partners include: City of Austin; Capital Metro; Movablity Austin; bicycle, walking, and transit advocacy groups; Car2go; Zipcar; Austin B-cycle; Carma ride sharing; and other mobility providers. Local partners could leverage federal funding to expand the program.

- ☐ **Viva Streets** - Known as Ciclovias or Open Streets in other cities, as discussed in the programs chapter, these events close down streets to motor vehicle traffic for public use at off peak days and times to encourage activity and engagement with public spaces. In the most successful cities, millions participate every weekend by walking, bicycling, roller blading, or participating in one of the classes offered such as aerobics or yoga. These are transformational events that can help people to start to get active, get over a fear of traffic, and experience getting around by bicycle for the first time. Potential partners include: the City of Austin; organizations and foundations focused on health, public space, community development, bicycling and walking; business districts; and employers interested in reducing health care costs.

- ☐ **Bike Share** - As discussed in the bicycle system chapter and public investment section above, bike share systems are a new form of public transportation that provide flexible point-to-point on-demand affordable mobility. It fills the space in the mobility market between walking and taking transit and enhances the capabilities of both modes. Expansion of the existing bike share system is identified as a top goal of this plan as it has incredible potential to attract new people

to bicycling and catalyze a general increase in bicycling. Principal potential partners for the expansion are Capital Metro and the University of Texas. For Capital Metro, bike share has the potential to match the effectiveness of circulator connectors within the operating area to both provide the last mile (or two) connection to destinations or to enhance connections between transit lines. For the University of Texas, there is the potential to link the campus with student housing areas outside of a comfortable walking distance to both improve quality of life for students and alleviate the need for parking structures on their land locked campus. In addition, businesses, developers, employers who want stations and potential sponsors present opportunities to partner to expand the system.

- ☐ **Household Affordability Programs** - There is an opportunity to take an integrated approach in affordable housing programs to look at bicycling as a means to improve household affordability. Giving people the lifelong tools to learn to get around by bicycle has the potential to augment the definition of affordable housing. Potential partners include the Housing Authority of the City of Austin, Foundation Communities and other affordable housing providers and affordability advocacy groups.

Objective 4.7 Benchmarks

- ☐ Create and execute a Bicycle Plan Implementation Charter by 2015 to be signed by all partner public, private, and non-profit organizations that take a stake in the realization and implementation of this Plan.
- ☐ Review and update the charter and signatories every two years.

Objective 4.7 Actions

4.7.1 Engage in public-private and public-public partnerships with agencies and organizations to implement the Plan. This includes, but is not limited to:

- ☐ Texas Department of Transportation
- ☐ Central Texas Regional Mobility Authority
- ☐ Capital Metropolitan Transportation Authority
- ☐ The University of Texas
- ☐ Capital Area Metropolitan Planning Organization
- ☐ Capital Area Council of Governments

- ☐ Bicycle advocacy organizations: local, state, national, and international
- ☐ Downtown Austin Alliance
- ☐ Envision Central Texas
- ☐ Bicycle shops
- ☐ Health agencies
- ☐ Community organizations
- ☐ Neighborhood Associations

4.7.2 Partner to complete the bicycle network

4.7.2a Coordinate bicycle system improvements with City, County, State, and privately funded roadway and trail improvements.

4.7.2b Partner with TXDOT and CTRMA to facilitate the implementation of this Plan on State roadways.

4.7.3 Partner to expand the bicycle share system

4.7.4 Partner to expand programs

4.7.4a Partner to create a Smart Trips program

4.7.4b Partner to expand the Viva Streets program

4.7.4c Partner to enhance household affordability programs

4.7.5 Encourage and support efforts made by the bicycling community to unify existing organizations, groups, and non-profits.

Thousands of bicycles at the entrance to Austin City Limits Music Festival.

CHAPTER FIVE | MEASURING SUCCESS

Objective 5.1a: Periodically monitor implementation progress and update Plan on a regular basis.

Objective 5.1b: Monitor Austin's progress among peer cities. The Plan is a living document. It should be updated periodically to assess progress, identify new opportunities, and re-evaluate vision, goals, subgoals, objectives and actions.

A thorough plan evaluation investigates the achievement of objectives using quantifiable measures, reviews the effectiveness of particular interventions and policies, monitors public opinion, and then reassesses the specific program plan. As a result, specific program actions can be modified to strengthen implementation of the plan.

One component of evaluating progress is to establish benchmarks and report measures periodically. While it is the goal of the Austin 2014 Bicycle Plan to reach the established benchmarks on the timeline outlined, data should be collected, reported and evaluated more frequently to assess ongoing progress and to test the quality and effectiveness of the benchmarks.

An annual report should document current benchmark levels towards plan goals as well as opportunities and priorities for implementation of the plan. This will help educate and coordinate all levels of City government and the public on the next direction forward. Annual evaluations should be published to the general public and provided to senior management, the Imagine Austin priority program teams, relevant boards and commissions, and Council.

Facility types, projects and programs should be evaluated for their effectiveness in implementing the goals of the Plan. This includes the need to include regular collection of data from ridership counts, surveys and mode splits to track the growth of cycling on both facilities and the network over time and qualitatively evaluate the user experience. These evaluations will help guide decisions on future use of those facilities or programs.

The Plan aspires to achieve success as compared with peer cities nationally. The plan sets the goal of achieving gold level Bicycle Friendly Community designation by the League of American Bicyclists by

2015 and platinum level by 2020. To achieve gold and platinum levels, Austin will have to significantly increase the bicycle mode share. Primary means of increasing bicycle mode share is implementation of the all ages and abilities bicycle network, and expansion of encouragement programs to increase levels of bicycling.

Lastly, while being recognized as a national leader is attractive, the benchmarks in the Plan are ultimately oriented towards measuring the contribution of bicycling in realizing our shared goals as set forth in the Imagine Austin Comprehensive Plan.

Objective 5.1 Benchmarks

- ☐ Evaluate benchmarks annually, and report them to appropriate City Boards, Commissions, and Council.
- ☐ Complete 10 % of action items by 2015, 40 % by 2020 and 80 % by 2030.
- ☐ Update the Bicycle Plan at least every 10 years, with interim updates every five years.
- ☐ Achieve gold level Bicycle Friendly Community designation by the League of American Bicyclists by 2015 and platinum level by 2021 (applications are accepted every 3 years).

Objective 5.1 Actions

5.1.1 In 2015, the Bicycle Program will establish baseline measures for each benchmark in the Austin 2009 Bicycle Plan.

5.1.1a If necessary, coordinate with appropriate City departments or public agencies to collect data for measures.

5.1.2 Regularly collect and maintain local bicycling data, including monitored bicycle counts and bicycle-related traffic violations and accidents.

Best Practices: Measuring Progress Based on Benchmarks

Cities with successful bicycle programs have a tradition of establishing and accurately measuring benchmarks that show progress toward their goals. For example, Portland and Seattle both conduct manual bicycle counts rather than rely solely on the Decennial Census travel mode to work counts. Portland also counts bicycle use of the bridges over the Willamette River, into downtown, which is a strong indicator of work-related trips into the employment center. These cities also collect data for their benchmarks regularly to measure interim progress toward Plan goals. In order to ensure implementation of the Bicycle Plan, the City of Austin should strengthen its efforts in data collection to better monitor progress toward the goals and objectives of the 2014 Bicycle Plan Update.

5.1.2a Coordinate with appropriate agencies and/or City departments to include bicycles in all traffic counts, traffic models and transportation surveys in the area.

5.1.2b Coordinate with the Austin Police Department, Travis County Sheriff's Department, University of Texas Police Department and Texas Department of Public Safety to establish and/or improve reporting methods for bicycle-related accidents and citations.

5.1.3 Continue to use and expand use of public surveys to evaluate public opinions of facilities, programs and Plan implementation.

5.1.4 Hold an annual meeting with the bicycling community stakeholders to solicit feedback on bicycling issues, maintenance and facilities. This meeting may be combined with other agencies seeking the same goal.

5.1.5 Provide an annual report to document current benchmarked levels towards plan goals as well as opportunities and priorities for implementation of the plan.

5.1.6 Evaluate new facility treatments, and pilot projects and programs.

5.1.7 Update the Austin Bicycle Plan every 10 years. For this Plan, the interim update shall begin by December 31, 2019, and a major update by December 31, 2024.

Summary Table: Goals, Objectives, and Benchmarks

GOALS	METRIC/BENCHMARK (SUBJECT TO FUNDING ALLOCATION)
Ridership - Significantly increase bicycle use across the City of Austin for all trip purposes.	Increase citywide workforce commuter bicycle mode to 3% by 2015 and to 5% by 2020. Increase central city workforce commuter bicycle mode to 10% by 2015 and to 15% by 2020.
Safety - Reduce bicycle deaths and injuries by implementing safety measures for all roadway users, including bicyclists.	Reduce bicycle fatalities by 50% from 2009 levels by 2015 and eliminate bicycle fatalities completely by 2020. Reduce the crash rate (number of work-age (16+) bicycle-related crashes as share of bicycle commuters per US Census Bureau journey to work estimates) by 1% every 5 years starting with 5% in 2015 as a baseline year.
Connectivity - Create a bicycle network that provides connectivity for people of all ages and abilities, providing direct and comfortable connections to where they live work and play.	Complete 50% of the "all ages and abilities network" and removal of bicycle lane network barriers by 2020 and 100% by 2025.
Equity - Provide equal bicycling access for all through public engagement, program delivery and capital investment.	Provide an all ages and abilities bicycle route within ½ mile of all 50% of households, workplaces, and destinations by 2020. Provide an all ages and abilities bicycle route within ½ mile of all 100% of households, workplaces, and destinations by 2035.
Support Imagine Austin - Realize the potential of bicycling to support and achieve multiple goals of the Imagine Austin Comprehensive Plan.	Monitor contribution of bicycling in advancing the goals of Imagine Austin and include in an annual report.
Ridership - Significantly increase bicycle use across the City of Austin for all trip purposes.	Increase citywide workforce commuter bicycle mode to 3% by 2015 and to 5% by 2020. Increase central city workforce commuter bicycle mode to 10% by 2015 and to 15% by 2020.

SUB GOAL	OBJECTIVE	BENCHMARK (SUBJECT TO FUNDING ALLOCATION)
BICYCLE SYSTEM Provide and maintain a comprehensive bicycle system that serves all residents and neighborhoods of Austin, providing safe and comfortable bicycle facilities for people of all ages and abilities.	Create an all ages and abilities bicycle network	Complete 20% of the short-term all ages and abilities network by 2017, 50% by 2020 and 80% by 2025. 25% of the complete bicycle facility network recommendations by 2020, 50% by 2025 and 75% by 2035. Annually contact adjacent jurisdictions to discuss bicycle system and connectivity improvements needed to realize our proposed system.
	Remove barriers in the bicycle network.	Remove 30% of barriers list by 2015 and 75% by 2020. Address issues of parking in all bicycle lanes by 2020. Establish a citywide ordinance prohibiting parking in bicycle lanes by 2020.
	Provide comprehensive end-of-trip facilities	Reinstate a bicycle rack program or fund a public/private partnership to provide 500 new short-term bicycle parking spaces per year installed on the right-of-way or private property serving existing developments. Provide long-term bicycle parking at Austin Bergstrom International Airport by 2015. Establish incentives for showers and secure ground accessible bike parking rooms in residential and office uses by 2015.
	Fully integrate bicycling with transit services	Coordinate with Capital Metro to equip all Capital Metro buses, rail cars, and van pools with bicycle racks that accommodate three bicycles by 2020, where safe. Include short and long term bicycle parking at 100% of locations meeting transit stop bicycle parking criteria by 2015.
	Maintain and expand the bike share system	Expand Austin's bike share system from 40 stations to 100 stations by 2016 and to 300 stations by 2017.
	Provide superior bicycle facility maintenance	Include bicycle lane installation and maintenance within the operating budget of Public Works and Transportation by FY 2015, and continue on an ongoing basis. Partner with Public Works to maintain protected bicycle lane barriers at good or acceptable conditions. Address sweeping of physically protected bicycle facilities by 2015

SUB GOAL	OBJECTIVE	BENCHMARK (SUBJECT TO FUNDING ALLOCATION)
PROGRAMS Increase bicycle safety and use through education programs	Develop and execute programs to improve bicycle safety and roadway behavior	Distribute 5,000 Austin bicycle maps each year. Educate 1,000 adult bicyclists and motorists about bicycle and motorist safety each year.
PROGRAMS Increase bicycle use through encouragement programs	Develop and execute encouragement programs to promote bicycling and increase awareness of bicycling among the general public	Create partnerships with other public agencies, and/or non-profit groups and advocacy groups to reach tens of thousands of people per year with promotional programs. Host 5 Ciclovia events per year serving geographically diverse parts of the City by 2015 and 20 a year by 2020. Increase the number of bicycle program email subscribers by 15% per year. Notify the public of and engage citizens in all phases of new infrastructure projects and programs through the City's website and other communication channels. Increase number of media pieces to 75 annual occurrences by 2015, then continue to increase by 10% per year. Increase number of Bike to Work Day participants by 10% each year. Increase number of City of Austin employees who commute to central city locations by bicycle to 7% by 2015 and 10% by 2020.
	Partner to create citywide multi-modal encouragement and educational programs targeting reduction in drive alone trips.	Implement a Smart Trips program, resourced to reach each Austinite every 10 years. Reduce drive alone trips by 10% in areas after deployment of Smart Trips program.

SUB GOAL	OBJECTIVE	BENCHMARK (SUBJECT TO FUNDING ALLOCATION)
PROGRAMS Increase bicycle use through encouragement programs. (continued)	Promote bicycling to school (elementary through high school).	Increase bicycle mode share of children commuting to school to 25% by 2020. Educate 90% of school-aged children about bicycle safety each year. Conduct safe biking and safe walking encouragement & messaging to school-aged children. Provide encouragement and education outreach to all students, parents, and staff at schools served by new or improved bicycle facilities.
PROGRAMS Improve safety for all road users through targeted enforcement / educational campaigns	Strengthen efforts to enforce proper motorist and bicyclist behavior and reduce bicyclist-motorist collisions.	Increase compliance each year in the general public with speeding, distraction and impairment laws through integrated enforcement and publicity campaigns. Increase compliance each year in the general public with the safe passing law through integrated enforcement and publicity campaigns.
	Ensure best practice bicycle-related laws are in place.	Evaluate bicycle laws every two years and work with APD and City prosecutors to bring them up to national best practice.
	Ensure consistent interpretation and enforcement of bicycle related laws by Austin Police Department	Train 100% of APD law enforcement officers in bicyclist and motorist behavior, laws and bicycle issues in conjunction with the City Bicycle Program.

SUB GOAL	OBJECTIVE	BENCHMARK (SUBJECT TO FUNDING ALLOCATION)
IMPLEMENTATION Strengthen implementation efforts through a five-point implementation program to fulfill goals and objectives of this Plan.	Strengthen and diversify implementation efforts through a five-point implementation program to fulfill goals and objectives of the 2014 Plan.	Evaluate efforts towards the implementation of the Plan every year and include in an annual report.
	Educate and engage all relevant internal and external stakeholders to support the goals and implementation of the Plan.	Evaluate education and engagement efforts towards the implementation of the Plan every year and include in an annual report.
	Create internal alignment across all departments to support the goals and implementation of the Plan.	Evaluate the extent of internal alignment across all departments towards the implementation of the Plan every year and include in an annual report.
	Update necessary regulations to support the goals and implementation of the Plan.	Evaluate relevant regulations on the extent of their alignment in support of the implementation of the Plan every year and include in an annual report.

SUB GOAL	OBJECTIVE	BENCHMARK (SUBJECT TO FUNDING ALLOCATION)
IMPLEMENTATION Strengthen implementation efforts through a five-point implementation program to fulfill goals and objectives of this Plan.	Identify and secure public investment to support the goals and implementation of the Plan.	Fund and partner to complete 50% of the all ages and abilities network by 2020 and 100% by 2025. Fund and partner to complete the removal of 75% of the top barriers in the bicycle lane network by 2020. Expand the bicycle share system to 800 bicycles by 2015 and 2,000 bicycles by 2017 through means including partnerships and public funding. Fund and partner to create a Smart Trips program, an educational and encouragement program to reduce drive alone trips, that reaches 20,000 households a year. Submit grant applications for all applicable opportunities towards the implementation of the Plan Evaluate both local and outside funding towards the implementation of the Plan every year and include in an annual report. Expand Active Transportation engineering and planning staff to meet needs of Bicycle Plan.
	Create partnerships to support the goals and implementation of the Plan.	Create and execute a Bicycle Plan Implementation Charter by 2015 to be signed by all partner public, private, and non-profit organizations that take a stake in the realization and implementation of this Plan. Review and update the charter and signatories every two years.

SUB GOAL	OBJECTIVE	BENCHMARK (SUBJECT TO FUNDING ALLOCATION)
MEASURING SUCCESS	Periodically monitor implementation progress and update Plan on a regular basis.	Evaluate benchmarks annually, and report them to appropriate City Boards and Commissions. Complete 10% of Action Items by 2015, 40% by 2020, and 80% by 2030. Update the Bicycle Plan at least every ten years, with interim updates every five years.
	Monitor Austin's progress among peer cities.	Achieve gold level Bicycle Friendly Community designation by the League of American Bicyclists by 2015 and platinum level by 2021.

APPENDICES

APPENDIX A: COMPLETE BICYCLE FACILITY RECOMMENDATIONS

This table includes street-based facilities only. Off-street urban trails can be found in the Urban Trails Master Plan.

*A portion of this segment is in the all ages and abilities network.

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
10TH ST	N LAMAR BLVD	LAVACA ST	Wide Curb Lane	Wide Curb Lane	
10TH ST	LAVACA ST	TRINITY ST	Shared Lane	Shared Lane	
10TH ST	TRINITY ST	N IH 35 SVRD SB	Wide Curb Lane	Wide Curb Lane	
11TH ST	SHOAL CREEK BLVD	RIO GRANDE ST	Wide Curb Lane	Buffered BL	
11TH ST	RIO GRANDE ST	GUADALUPE ST	Shared Lane with Sharrows	Buffered BL	
11TH ST	GUADALUPE ST	SABINE ST	Bike Lane	Protected BL	
11TH ST	SABINE ST	N IH 35 SVRD SB	Shared Lane	Protected BL	
11TH ST	N IH 35 SVRD SB	N IH 35 SVRD NB	Wide Curb Lane	Protected BL	
11TH ST	N IH 35 SVRD NB	ROSEWOOD AVE	Bike Lane	Protected BL	
11TH ST	ROSEWOOD AVE	CHICON ST	Wide Curb Lane	Buffered BL	
12TH ST	WEST LYNN ST	N LAMAR BLVD	Wide Curb Lane	Buffered BL	
12TH ST	N LAMAR BLVD	COLORADO ST	Shared Lane	Protected BL	Yes*
12TH ST	BRAZOS ST	SAN JACINTO BLVD	Wide Curb Lane	Quiet Street	Yes
12TH ST	SAN JACINTO BLVD	TRINITY ST	Shared Lane	Protected BL	Yes
12TH ST	TRINITY ST	N IH 35 SVRD SB	Wide Curb Lane	Protected BL	Yes
12TH ST	N IH 35 SVRD SB	N IH 35 SVRD NB	Shared Lane	Protected BL	Yes
12TH ST	N IH 35 SVRD NB	WEBBERVILLE RD	Bike Lane	Protected BL	Yes
13TH ST	OLANDER ST	NAVASOTA ST	Wide Curb Lane	Bike Lane	
14TH HALF ST	E 14TH ST	AIRPORT BLVD	Shared Lane	Quiet Street	Yes
14TH ST	PALMA PLZ	WEST LYNN ST	Wide Curb Lane	Quiet Street	Yes
14TH ST	TRINITY ST	RED RIVER ST	No Road	Protected BL	Yes
14TH ST	N IH 35 SVRD NB	NAVASOTA ST	Wide Curb Lane	Bike Lane	
14TH ST	ALEXANDER AVE	E 14TH HALF ST	Shared Lane	Quiet Street	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
15TH ST	ENFIELD RD	N IH 35 SVRD SB	Shared Lane	Protected BL	
17TH ST	SAN GABRIEL ST	NUECES ST	Wide Curb Lane	Bike Lane	
183 A	183A NB AT CR 181 TRN	N 183A HWY SB	Wide Shoulder	Urban Trail	
183 A	N 183A HWY SB	E WHITESTONE BLVD	Shared Lane	Urban Trail	
183 A	E WHITESTONE BLVD	N 183A HWY SB	Wide Curb Lane	Urban Trail	
183 A	N 183A HWY SB	N 183A HWY SB	Wide Shoulder	Urban Trail	
183 A	N 183A HWY SB	BRUSHY CREEK RD	Wide Curb Lane	Urban Trail	
183 A	E CYPRESS CREEK RD	N 183A HWY NB	Shared Lane	Urban Trail	
183 A	N 183A HWY NB	N 183A HWY NB	Wide Shoulder	Urban Trail	Yes
183 A	N 183A HWY NB	N 183A HWY SVRD NB	Shared Lane	Urban Trail	Yes
18TH ST	RIO GRANDE ST	NUECES ST	Wide Curb Lane	Quiet Street	Yes
18TH ST	NUECES ST	GUADALUPE ST	Wide Curb Lane	Wide Curb Lane	
18TH ST	GUADALUPE ST	LAVACA ST	Wide Curb Lane	Protected BL	Yes
18TH ST	LAVACA ST	TRINITY ST	Wide Curb Lane	Wide Curb Lane	
21ST ST	SAN GABRIEL ST	PEARL ST	Shared Lane	Bike Lane	
21ST ST	PEARL ST	RIO GRANDE ST	Wide Curb Lane	Buffered BL	
21ST ST	RIO GRANDE ST	GUADALUPE ST	Bike Lane	Quiet Street	Yes
21ST ST	GUADALUPE ST	SAN JACINTO BLVD	Wide Curb Lane	Buffered BL	Yes
23RD ST	SAN JACINTO BLVD	ROBERT DEDMAN DR	Wide Curb Lane	Buffered BL	
24TH ST	WINDSOR RD	GUADALUPE ST	Shared Lane	Protected BL	
24TH ST	GUADALUPE ST	WHITIS AVE	Wide Curb Lane	Buffered BL	
24TH ST	WHITIS AVE	SPEEDWAY	Wide Curb Lane	Bike Lane	
26TH ST	SAN GABRIEL ST	SAN PEDRO ST	Wide Curb Lane	Buffered BL	
26TH ST	SAN PEDRO ST	NUECES ST	Wide Curb Lane	Bike Lane	
27TH ST	NUECES ST	GUADALUPE ST	Wide Curb Lane	Buffered BL	
27TH ST	GUADALUPE ST	WHITIS AVE	Shared Lane	Buffered BL	
27TH ST	WHITIS AVE	SPEEDWAY	Wide Curb Lane	Buffered BL	
28TH ST	RIO GRANDE ST	NUECES ST	Wide Curb Lane	Bike Lane	
29TH ST	JEFFERSON ST	N LAMAR BLVD	Bike LanePK	Buffered BL	
29TH ST	N LAMAR BLVD	SAN GABRIEL ST	Bike Lane	Buffered BL	
29TH ST	SAN GABRIEL ST	EAST DR	Bike Lane	Protected BL	Yes
30TH ST	WEST AVE	RIO GRANDE ST	Wide Curb Lane	Quiet Street	Yes
30TH ST	WEST DR	EAST DR	Shared Lane	Protected BL	Yes
30TH ST	EAST DR	SPEEDWAY	Bike Lane	Protected BL	Yes
30TH ST	SPEEDWAY	DUVAL ST	Shared Lane	Buffered BL	
31ST ST	SHOAL CREEK BLVD	N LAMAR BLVD	Bike Lane	Protected BL	Yes
31ST ST	N LAMAR BLVD	WEST AVE	Shared Lane	Quiet Street	Yes
31ST ST	UNIVERSITY AVE	WALLING DR	Bike Lane	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
32ND ST	DUVAL ST	RED RIVER ST	Bike Lane	Buffered BL	Yes
32ND ST	RED RIVER ST	N IH 35 SVRD SB	Wide Curb Lane	Buffered BL	Yes
32ND ST	N IH 35 SVRD SB	N IH 35 SVRD NB	Shared Lane	Bike Lane	Yes
32ND ST	N IH 35 SVRD NB	WALNUT AVE	Shared Lane	Quiet Street	Yes
34TH ST	HAPPY HOLLOW LN	W 35TH ST	Shared Lane	Quiet Street	Yes
34TH ST	W 35TH ST	SHOAL CREEK BLVD	Shared Lane	Protected BL	Yes
34TH ST	SHOAL CREEK BLVD	N LAMAR BLVD	Wide Curb Lane	Protected BL	Yes
34TH ST	N LAMAR BLVD	WEST AVE	Bike Lane	Protected BL	Yes
34TH ST	WEST AVE	GUADALUPE ST	Wide Curb Lane	Protected BL	Yes
34TH ST	GUADALUPE ST	SPEEDWAY	Shared Lane	Protected BL	Yes
34TH ST	SPEEDWAY	DUVAL ST	Wide Curb Lane	Protected BL	Yes
34TH ST	CHERRYWOOD RD	LARRY LN	Wide Curb Lane	Bike Lane	
35TH ST	END OF ROAD	MOUNT BONNELL RD	Wide Curb Lane	Bike Lane	
35TH ST	MOUNT BONNELL RD	FOOTHILL DR	Wide Curb Lane	Buffered BL	
35TH ST	FOOTHILL DR	BALCONES DR	Shared Lane	Buffered BL	
35TH ST	BALCONES DR	W 38TH ST	Shared Lane	Protected BL	
37TH ST	HAMPTON RD	RED RIVER ST	Shared Lane	Shared Lane	Yes
38TH HALF ST	E 38TH ST	N IH 35 SVRD SB	Shared Lane	Protected BL	Yes*
38TH HALF ST	N IH 35 SVRD SB	ROBINSON AVE	Wide Curb Lane	Protected BL	Yes
38TH HALF ST	ROBINSON AVE	CHERRYWOOD RD	Shared Lane	Protected BL	Yes
38TH HALF ST	CHERRYWOOD RD	AIRPORT BLVD	Bike Lane	Protected BL	
38TH HALF ST	AIRPORT BLVD	MANORWOOD RD	Bike Lane	Buffered BL	
38TH ST	JEFFERSON ST	W 35TH ST	Shared Lane	Shared Lane	
38TH ST	W 35TH ST	GUADALUPE ST	Shared Lane	Protected BL	
38TH ST	GUADALUPE ST	DUVAL ST	Wide Curb Lane	Protected BL	
38TH ST	DUVAL ST	E 38TH HALF ST	Shared Lane	Protected BL	
38TH ST	RED RIVER ST	HARMON AVE	Shared Lane	Shared Lane	Yes
3RD ST	BAYLOR ST	N LAMAR BLVD SVRD SB	Bike Lane	Protected BL	Yes
3RD ST	N LAMAR BLVD SVRD NB	BOWIE ST	Shared Lane	Protected BL	Yes
3RD ST	BOWIE ST	WEST AVE	Wide Curb Lane	Protected BL	Yes
3RD ST	SHOAL CREEK TRAIL	NUECES ST	Bike Lane	Protected BL	Yes
3RD ST	NUECES ST	BRAZOS ST	Shared Lane	Protected BL	Yes
3RD ST	BRAZOS ST	SAN JACINTO BLVD	Protected BL	Protected BL	Yes
3RD ST	SAN JACINTO BLVD	TRINITY ST	Shared Lane	Protected BL	Yes
40TH ST	SHOAL CREEK BLVD	MEDICAL PKWY	Shared Lane	Bike Lane	
40TH ST	MARATHON BLVD	N LAMAR BLVD	Wide Curb Lane	Bike Lane	
40TH ST	GUADALUPE ST	SPEEDWAY	Wide Curb Lane	Bike Lane	
40TH ST	SPEEDWAY	DUVAL ST	Shared Lane	Bike Lane	
40TH ST	DUVAL ST	PECK AVE	Shared Lane	Bike Lane	
41ST ST	DUVAL ST	PECK AVE	Wide Curb Lane	Buffered BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
41ST ST	PECK AVE	RED RIVER ST	Shared Lane	Buffered BL	
41ST ST	RED RIVER ST	N IH 35 SVRD SB	Wide Curb Lane	Buffered BL	
43RD ST	GUADALUPE ST	DUVAL ST	Wide Curb Lane	Bike Lane	
45TH ST	HIGHLAND TER	AIRPORT BLVD	Shared Lane	Protected BL	
46TH ST	SUNSHINE DR	N LAMAR BLVD	No Road	Bicycle Refuge Isl	Yes
46TH ST	N LAMAR BLVD	W GUADALUPE ST	Shared Lane	Quiet Street	Yes
46TH ST	W GUADALUPE ST	GUADALUPE ST	Shared Lane	PHB / Protected BL	Yes
46TH ST	GUADALUPE ST	SPEEDWAY	Shared Lane	Quiet Street	Yes
46TH ST	SPEEDWAY	AVENUE H	Wide Curb Lane	Quiet Street	Yes
46TH ST	RED RIVER ST	HARMON AVE	Wide Curb Lane	Quiet Street	Yes
47TH ST	AVENUE H	CASWELL AVE	Wide Curb Lane	Quiet Street	Yes
47TH ST	CASWELL AVE	RED RIVER ST	Shared Lane	Quiet Street	Yes
49TH ST	SHOAL CREEK BLVD	WOODROW AVE	Wide Curb Lane	Bike Lane	
49TH ST	WOODROW AVE	GROVER AVE	Shared Lane	Bike Lane	Yes
49TH ST	GROVER AVE	SUNSHINE DR	Wide Curb Lane	Bike Lane	Yes
4TH ST	SAN JACINTO BLVD	TRINITY ST	Wide Curb Lane	Bike Lane	
4TH ST	TRINITY ST	SABINE ST	Protected BL	Protected BL	Yes
4TH ST	SABINE ST	N IH 35 SVRD SB	Unpaved Shared Use Path	Protected BL	Yes
4TH ST	N IH 35 SVRD NB	WALLER ST	Wide Curb Lane	Protected BL	Yes
4TH ST	WALLER ST	ROBERT T MARTINEZ JR ST	Wide Curb Lane	Bike Lane	
4TH ST	PEDERNALES ST	TILLERY ST	Wide Curb Lane	Bike Lane	
51ST ST	WOODROW AVE	GROVER AVE	Wide Curb Lane	Bike Lane	
51ST ST	N LAMAR BLVD	GUADALUPE ST	Shared Lane	Protected BL	
51ST ST	GUADALUPE ST	AIRPORT BLVD	Bike Lane	Protected BL	
51ST ST	AIRPORT BLVD	HARMON AVE	Shared Lane with Sharrows	Protected BL	
51ST ST	HARMON AVE	N IH 35 SVRD SB	Shared Lane	Protected BL	Yes
51ST ST	N IH 35 SVRD SB	CAMERON RD	Buffered BL	Protected BL	Yes
51ST ST	CAMERON RD	COTTONWOOD CIR	Bike Lane	Protected BL	Yes
51ST ST	COTTONWOOD CIR	SPRINGDALE RD	Shared Lane with Sharrows	Protected BL	Yes
51ST ST	SPRINGDALE RD	ED BLUESTEIN BLVD NB	Shared Lane	Protected BL	Yes
53RD HALF ST	BRUNING AVE	HARMON AVE	Wide Curb Lane	Quiet Street	Yes
53RD ST	AVENUE F	BRUNING AVE	Bike Lane	Protected BL	Yes
5TH ST	MOPAC	WEST LYNN ST	Bike Lane	Protected BL	Yes
5TH ST	WEST LYNN ST	BAYLOR ST	Buffered BL	Protected BL	Yes
5TH ST	BAYLOR ST	N LAMAR BLVD SVRD NB	Bike Lane	Protected BL	Yes
5TH ST	N LAMAR BLVD SVRD NB	N IH 35 SVRD SB	Shared Lane	Protected BL	Yes
5TH ST	COMAL ST	CHICON ST	Shared Lane	Buffered BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
5TH ST	CHICON ST	SAN SABA ST	Shared Lane	Protected BL	Yes
5TH ST	SAN SABA ST	SPRINGDALE RD	Bike Lane	Protected BL	Yes
5TH ST	SPRINGDALE RD	SHADY LN	Shared Lane	Protected BL	Yes
6TH ST	MOPAC	PATTERSON AVE	Wide Curb Lane	Protected BL	
6TH ST	PATTERSON AVE	N LAMAR BLVD	Bike Lane	Protected BL	Yes
6TH ST	N LAMAR BLVD	RED RIVER ST	Shared Lane	Protected BL	Yes
6TH ST	RED RIVER ST	BRUSHY ST	Wide Curb Lane	Protected BL	Yes
7TH ST	WEST AVE	NUECES ST	Shared Lane	Buffered BL	
7TH ST	RED RIVER ST	NAVASOTA ST	Shared Lane	Protected BL	
7TH ST	NAVASOTA ST	CHICON ST	Bike Lane	Protected BL	
7TH ST	CHICON ST	N PLEASANT VALLEY RD	Shared Lane	Protected BL	
7TH ST	N PLEASANT VALLEY RD	SPRINGDALE RD	Bike Lane	Protected BL	
7TH ST	SPRINGDALE RD	LEVANDER LOOP	Urban Trail	Protected BL	
9TH ST	WEST LYNN ST	BLANCO ST	Wide Curb Lane	Bike Lane	
9TH ST	BLANCO ST	N LAMAR BLVD	Shared Lane	Bike Lane	
9TH ST	N LAMAR BLVD	NUECES ST	Wide Curb Lane	Buffered BL	
9TH ST	NUECES ST	LAVACA ST	Wide Curb Lane	Wide Curb Lane	
9TH ST	LAVACA ST	SAN JACINTO BLVD	Shared Lane	Shared Lane	
9TH ST	SAN JACINTO BLVD	TRINITY ST	CLOSEDRD	Shared Lane	
9TH ST	TRINITY ST	N IH 35 SVRD SB	Shared Lane	Shared Lane	
ABERDEEN DR	VINSON DR	ENGLEWOOD DR	Shared Lane	Quiet Street	Yes
ABILENE TRL	CONVICT HILL RD	CLAIRMONT DR	Wide Curb Lane	Buffered BL	
ACADEMY DR	CONGRESS AVE	NEWNING AVE	Wide Curb Lane	Bike Lane	
ACEQUIA PASS	AMY DONOVAN PLZ	W BRAKER LN	Shared Lane	Quiet Street	Yes
ADELPHI LN	WYCLIFF LN	WATERS PARK RD	Wide Curb Lane	Bike Lane	
ADIRONDACK TRL	SPICEWOOD SPRINGS RD	HYRIDGE DR	Wide Curb Lane	Buffered BL	
AIRPORT BLVD	N LAMAR BLVD	E KOENIG LN SVRD WB	Bike Lane	Protected BL	Yes
AIRPORT BLVD	E KOENIG LN SVRD WB	MIDDLE FISKVILLE RD	Shared Lane	Protected BL	Yes
AIRPORT BLVD	MIDDLE FISKVILLE RD	E 45TH ST	Climbing Lane	Protected BL	Yes
AIRPORT BLVD	E 45TH ST	MANOR RD	Shared Lane	Protected BL	Yes
AIRPORT BLVD	MANOR RD	SHADY LN	Wide Shoulder	Protected BL	Yes
AIRPORT BLVD	SHADY LN	US 183	Shared Lane	Protected BL	Yes
AIRPORT COMMERCE DR	E RIVERSIDE DR	US 183 TRAIL	Shared Lane	Shared Lane	
ALAMEDA DR	E RIVERSIDE DR	SUNSET LN	Shared Lane	Bike Lane	
ALDRICH ST	E 51ST ST	MC BEE ST	No Road	Future Alignment	
ALDRICH ST	MC BEE ST	MUELLER BLVD	Shared Lane	Shared Lane	
ALDRICH ST	MUELLER BLVD	AIRPORT BLVD	Bike Lane	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
ALEXANDER AVE	MANOR RD	E 17TH ST	NONE	Protected BL	Yes
ALEXANDRIA DR	COPANO DR	BRODIE LN	Shared Lane	Quiet Street	Yes
ALLANDALE RD	SHOAL CREEK BLVD	BURNET RD	Shared Lane	Protected BL	
ALLEN RD	WESTBANK DR	PINNACLE RD	Shared Lane	Bike Lane	
ALSATIA DR	BELLOWS FALLS AVE	CURRIN LN	Wide Curb Lane	Bike Lane	
ALUM ROCK DR	COLTON BLUFF SPRINGS RD	THAXTON RD	Wide Curb Lane	Bike Lane	
AMARILLO AVE	DALLAS DR	MC NEIL DR	Wide Curb Lane	Bike Lane	
AMASIA DR	ANDERSON MILL RD	TAMAYO DR	Wide Curb Lane	Bike Lane	
AMHERST DR	W PARMER LN	CASSADY DR	Buffered BL	Protected BL	Yes
AMHERST DR	CASSADY DR	DUVAL RD	Bike Lane	Protected BL	Yes
AMY DONOVAN PLZ	ACEQUIA PASS	RETAIL WAY	Shared Lane	Quiet Street	Yes
ANAROSA LOOP	WOODS OF CENTURY PARK CONNECTOR	EQUESTRIAN TRL	Shared Lane	Quiet Street	Yes
ANCHOR LN	E 38TH HALF ST	MANOR RD	Bike Lane	Buffered BL	
ANDERSON LN	SPICEWOOD SPRINGS RD	BURNET RD	Shared Lane	Protected BL	
ANDERSON LN	BURNET RD	ANDERSON SQ	Bike Lane	Protected BL	
ANDERSON LN	ANDERSON SQ	N LAMAR BLVD SVRD SB	Shared Lane	Protected BL	
ANDERSON MILL RD	FM 2769 RD	N FM 620 RD	Shared Lane	Wide Shoulder	
ANDERSON MILL RD	N FM 620 RD	N US 183 HWY SVRD SB	Bike Lane	Protected BL	
ANDERSON MILL RD	N US 183 HWY SVRD SB	POND SPRINGS RD	Shared Lane	Protected BL	Yes
ANDERSON MILL RD	POND SPRINGS RD	W PARMER LN	Wide Curb Lane	Protected BL	Yes
ANDERSON MILL RD	W PARMER LN	END OF ROAD	Shared Lane	Buffered BL	
ANDERSON MILL RD	END OF ROAD	GRAND AVENUE PKWY	No Road	Future Alignment	
ANDREW ZILKER RD	S MOPAC EXPY SVRD SB	S MOPAC EXPY SVRD NB	Wide Curb Lane	Bike Lane	
ANDREW ZILKER RD	S MOPAC EXPY SVRD NB	STRATFORD DR	Shared Lane	Bike Lane	
ANGELINA ST	HACKBERRY ST	ROSEWOOD AVE	Wide Curb Lane	Bike Lane	Yes
ANGELINA ST	ROSEWOOD AVE	E 11TH ST	Wide Curb Lane	Quiet Street	Yes
ANNIE ST	S 5TH ST	BOULDIN AVE	Shared Lane	Bike Lane	
ANNIE ST	NEWTON ST	S CONGRESS AVE	Wide Curb Lane	Bike Lane	
ANNIE ST	BRACKENRIDGE ST	WOODLAND AVE	Bike LanePK	Buffered BL	Yes
ANTONE ST	AIRPORT BLVD	BERKMAN DR	Shared Lane	Shared Lane	
ARBORETUM BLVD	JOLLYVILLE RD	N CAPITAL OF TEXAS HWY SB	Bike Lane	Protected BL	
ARBORSIDE DR	DESSAU RD	BADEN LN	No Road	Buffered BL	
ARBORSIDE LN	BADEN LN	CRISWELL RD	No Road	Buffered BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
ARDATH ST	Far West to Justin Trail Connector	PEGRAM AVE	Shared Lane	Protected BL	Yes
ARDENWOOD RD	N IH 35 SVRD NB	BRADWOOD RD	Wide Curb Lane	Bike Lane	
ARPDALE ST	RAE DELL AVE	BLUEBONNET LN	Wide Curb Lane	Bike Lane	
ARROYO SECO	WOODROW AVE	W KOENIG LN	Shared Lane	Protected BL	Yes
ARTERIAL A (TRAVIS COUNTY)	SAMSUNG BLVD	E US 290 ARTERIAL A RAMP	No Road	Future Alignment	
ASHTON RIDGE	SPICEWOOD PKWY	SCOTLAND WELL DR	Wide Shoulder	Bike Lane	
ASHWOOD RD	WRIGHTWOOD RD	MAPLEWOOD AVE	Wide Curb Lane	Bike Lane	
ATLANTA ST	WINSTED LN	LAKE AUSTIN BLVD	Shared Lane	Buffered BL	
ATLANTA ST	LAKE AUSTIN BLVD	FOSTER AVE	Wide Curb Lane	Bike Lane	
ATLANTA ST	FOSTER AVE	VETERANS DR	Shared Lane	Bike Lane	
AVENUE F	E SKYVIEW RD	E 51ST ST	Shared Lane	Quiet Street	Yes
AVENUE H	E 47TH ST	E 46TH ST	Wide Curb Lane	Quiet Street	Yes
AVERY RANCH BLVD	S BELL BLVD	STAKED PLAINS DR	Shared Lane	Buffered BL	
AVERY RANCH BLVD	STAKED PLAINS DR	MEYRICK PARK TRL	Bike Lane	Protected BL	Yes
AVERY RANCH BLVD	MEYRICK PARK TRL	CITY LIMITS	Shared Lane	Protected BL	
BACKTRAIL DR	LEMONWOOD DR	LADERA NORTE	Shared Lane	Bike Lane	
BADEN LN	ARBORSIDE DR	ARBORSIDE LN	No Road	Buffered BL	
BALCONES CLUB DR	N US 183 HWY SVRD SB	CEDAR CREST DR	Wide Curb Lane	Bike Lane	
BALCONES CLUB DR	CEDAR CREST DR	BROOKWOOD RD	Wide Curb Lane	Buffered BL	
BALCONES CLUB DR	BROOKWOOD RD	CREST RIDGE CIR	Wide Curb Lane	Bike Lane	
BALCONES CLUB DR	CREST RIDGE CIR	OCEANAIRE BLVD	Wide Curb Lane	Buffered BL	
BALCONES DR	N MOPAC EXPY SVRD SB	PARKCREST DR	Shared Lane	Buffered BL	
BALCONES DR	PARKCREST DR	HANCOCK DR	Shared Lane	Protected BL	
BALCONES DR	HANCOCK DR	PERRY LN	Shared Lane	Buffered BL	
BALCONES DR	EDGEMONT DR	W 35TH ST	Shared Lane	Buffered BL	
BALCONES WOODS DR	JOLLYVILLE RD	RESEARCH BLVD SVRD SB	Shared Lane	Buffered BL	
BALCONES WOODS DR	RESEARCH BLVD SVRD SB	SANTA CRUZ DR	Wide Curb Lane	Buffered BL	
BALCONES WOODS DR	SANTA CRUZ DR	CALLE VERDE DR	Wide Curb Lane	Wide Curb Lane	
BANISTER LN	REDD ST	CASEY ST	Wide Curb Lane	Bike Lane	
BANISTER LN	CASEY ST	MORGAN LN	Shared Lane	Buffered BL	Yes
BANISTER LN	MORGAN LN	GARDEN VILLA LN	Bike Lane	Buffered BL	Yes
BARRINGTON WAY	CHARING CROSS RD	SHAKESPEAREAN WAY	Wide Curb Lane	Buffered BL	
BARRINGTON WAY	SHAKESPEAREAN WAY	FIREOAK DR	Wide Curb Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
BARTON CREEK BLVD	FM 2244 RD	LOST CREEK BLVD	Wide Curb Lane	Buffered BL	
BARTON CREEK BLVD	LOST CREEK BLVD	SOUTHWEST PKWY	Shared Lane	Buffered BL	
BARTON HILLS DR	ROBERT E LEE RD	HOLLOW CREEK DR	Bike Lane	Protected BL	Yes
BARTON HILLS DR	HOLLOW CREEK DR	BARTON SKWY	Bike LanePK	Protected BL	Yes
BARTON HILLS DR	BARTON SKWY	FARNSWOOD CIR	Bike LanePK	Bike Lane	
BARTON HILLS DR	FARNSWOOD CIR	BARTON HILLS DR	Wide Curb Lane	Bike Lane	
BARTON SKYWAY	BARTON HILLS DR	S LAMAR BLVD	Bike LanePK	Protected BL	Yes
BARTON SKYWAY	RAY WOOD DR	GARDEN VILLA LN	Wide Curb Lane	Quiet Street	Yes
BARTON SPRINGS RD	S MOPAC EXPY SVRD SB	S MOPAC EXPY SVRD NB	Bike Lane	Protected BL	
BARTON SPRINGS RD	S MOPAC EXPY SVRD NB	LOU NEFF RD	Buffered BL	Protected BL	Yes
BARTON SPRINGS RD	LOU NEFF RD	LAMAR BLVD	Bike Lane	Protected BL	
BARTON SPRINGS RD	LAMAR BLVD	S 1ST ST	Protected BL	Protected BL	Yes
BARTON SPRINGS RD	S 1ST ST	S CONGRESS AVE	Bike Lane	Protected BL	
BASTROP HWY SVRD	JET LN	BASTROP CROSSOVER HWY	Shared Lane	Quiet Street	Yes
BASTROP HWY SVRD	BASTROP CROSSOVER HWY	E SH 71 WB	Wide Shoulder	Protected BL	Yes
BAYLOR ST	W 6TH ST	W 5TH ST	Wide Curb Lane	Bike Lane	Yes
BAYLOR ST	W 5TH ST	W 3RD ST	Wide Curb Lane	Protected BL	Yes
BEAUFORD DR	GUAVA CV	LAKEWOOD DR	Wide Curb Lane	Bike Lane	
BECKER LN	MAHA LOOP RD	HOKANSON RD	Shared Lane	Bike Lane	
BECKETT RD	MC CARTY LN	W WILLIAM CANNON DR	Shared Lane	Bike Lane	
BECKETT RD	W WILLIAM CANNON DR	CONVICT HILL RD	Bike Lane	Bike Lane	
BECKETT RD	CONVICT HILL RD	DAVIS LN	Buffered BL	Bike Lane	
BECKETT RD	DAVIS LN	W SLAUGHTER LN	Bike Lane	Bike Lane	
BECKETT ST	KROMER ST	LAZY LN	Wide Curb Lane	Buffered BL	
BEE CAVES RD	CAPITAL OF TEXAS HWY	MOPAC	Shared Lane	Protected BL	
BELFAST DR	BRIARCLIFF BLVD	BROADMOOR DR	Wide Curb Lane	Quiet Street	Yes
BELLOWS FALLS AVE	SESBANIA DR	ALSATIA DR	Wide Curb Lane	Bike Lane	
BEN WHITE BLVD	S LAMAR BLVD	IH 35	Shared Lane	Protected BL	
BENNETT AVE	E 47TH ST	ELLINGSON LN	Shared Lane	Quiet Street	Yes
BERKELEY AVE	WEST GATE BLVD	MANCHACA RD	Bike LanePK	Bike Lane	
BERKELEY AVE	MANCHACA RD	CANNONLEAGUE DR	Wide Curb Lane	Bike Lane	
BERKETT DR	WEST GATE BLVD	MANCHACA RD	Wide Curb Lane	Bike Lane	
BERKMAN DR	CORONADO HILLS DR	BRIARCLIFF BLVD	Bike LanePK	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
BERKMAN DR	BRIARCLIFF BLVD	E 51ST ST	Bike Lane	Protected BL	Yes
BERKMAN DR	E 51ST ST	SIMOND AVE	Protected BL	Protected BL	Yes
BERKMAN DR	SIMOND AVE	PERSHING DR	Shared Lane	Protected BL	Yes
BERRYWOOD DR	WEDGEWOOD DR	RIVER OAKS TRL	Shared Lane	Quiet Street	Yes
BILBROOK PL	SUGARBERRY LN	NORTH PLATT RIVER DR	Bike Lane	Bike Lane	
BILBROOK PL	NORTH PLATT RIVER DR	END OF ROAD	Shared Lane	Bike Lane	
BILL HUGHES RD	W WILLIAM CANNON DR	THELMA DR	Wide Curb Lane	Bike Lane	
BITTERN HOLW	METRIC BLVD	PARKFIELD DR	Wide Curb Lane	Bike Lane	
BLAKE MANOR RD	HAMILTON POINT CIR	BRIARCREEK LOOP	Wide Curb Lane	Protected BL	
BLAKE MANOR RD	BRIARCREEK LOOP	TAYLOR LN	Wide Curb Lane	Protected BL	
BLAKE MANOR RD	TAYLOR LN	UNION LEE CHURCH RD	Shared Lane	Bike Lane	
BLANCO ST	W 12TH ST	W 6TH ST	Wide Curb Lane	Bike Lane	
BLESSING AVE	E ANDERSON LN SVRD EB	ATKINSON RD	Shared Lane	Shared Lane	
BLOCKER LN	MOORE RD	VON QUINTUS RD	Shared Lane	Buffered BL	
BLUE BLUFF RD	OLD HWY 20	LINDELL LN	Wide Curb Lane	Bike Lane	
BLUE GOOSE RD	CAMERON RD	KIRKOSWALD RD	Shared Lane	Bike Lane	
BLUE MEADOW DR	BLUFF SPRINGS RD	MISTY SLOPE LN	Wide Curb Lane	Buffered BL	
BLUEBONNET LN	MELRIDGE PL	RABB GLEN ST	Protected BL	Protected BL	Yes
BLUEBONNET LN	RABB GLEN ST	S LAMAR BLVD	Bike Lane	Protected BL	Yes
BLUEBONNET LN	S LAMAR BLVD	DEL CURTO RD	Shared Lane	Bike Lane	
BLUEGRASS DR	LOST HORIZON DR	BLUFFSTONE LN	Wide Shoulder	Bike Lane	
BLUESTAR DR	LUVORA CV	SUNDROP VALLEY DR	Wide Curb Lane	Bike Lane	
BLUFF BEND DR	E BRAKER LN	CHILDRESS DR	Shared Lane	Quiet Street	Yes
BLUFF SPRINGS RD	E WILLIAM CANNON DR	OLD LOCKHART RD	Shared Lane	Protected BL	
BLUFFSTONE LN	BLUEGRASS DR	N CAPITAL OF TEXAS HWY	Bike Lane	Bike Lane	
BOLM RD	SPRINGDALE RD	AIRPORT BLVD	Bike Lane	Bike Lane	Yes
BOLM RD	AIRPORT BLVD	SHADY LN	Wide Curb Lane	Bike Lane	Yes
BOLM RD	SHADY LN	ED BLUESTEIN BLVD SVRD SB	Wide Curb Lane	Protected BL	Yes
BOULDER LN	N FM 620 RD	CROSSLAND DR	Shared Lane	Buffered BL	
BOULDER LN	CROSSLAND DR	DONA VILLA DR	Wide Curb Lane	Buffered BL	
BOULDER LN	DONA VILLA DR	N FM 620 RD	Shared Lane	Buffered BL	
BOULDIN AVE	BARTON SPRINGS RD	RETAMA ST	Shared Lane	Buffered BL	
BOULDIN AVE	RETAMA ST	W ANNIE ST	Shared Lane	Bike Lane	
BOULDIN AVE	W ANNIE ST	W MARY ST	Shared Lane	Bike Lane	
BOWIE ST	W 6TH ST	W 5TH ST	Shared Lane	Bike Lane	
BOWIE ST	W 5TH ST	W 3RD ST	Wide Curb Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
BOYER BLVD	METRIC BLVD	MEARNS MEADOW BLVD	Wide Curb Lane	Bike Lane	
BRACKENRIDGE ST	E ANNIE ST	E MARY ST	Shared Lane	Buffered BL	Yes
BRADSHAW RD	OLD LOCKHART RD	KLEBERG TRL	No Road	Future Alignment	
BRADSHAW RD	KLEBERG TRL	EXISTING BRADSHAW RD	None	Bike Lane	
BRADSHAW RD	EXISTING BRADSHAW RD	N TURNERSVILLE RD	No Road	Future Alignment	
BRADWOOD RD	ARDENWOOD RD	WRIGHTWOOD RD	Wide Curb Lane	Bike Lane	
BRAKER LN	JOLLYVILLE RD	N MOPAC EXPY SVRD NB	Shared Lane	Protected BL	
BRAKER LN	N MOPAC EXPY SVRD NB	KRAMER LN	Bike Lane	Protected BL	
BRAKER LN	KRAMER LN	PARKFIELD DR	Shared Lane	Protected BL	
BRAKER LN	PARKFIELD DR	N LAMAR BLVD	Bike Lane	Protected BL	
BRAKER LN	N LAMAR BLVD	DESSAU RD	Shared Lane	Protected BL	
BRAKER LN	DESSAU RD	PILGRIMAGE DR	Bike Lane	Bike Lane	
BRAKER LN	PILGRIMAGE DR	BLUE GOOSE RD	No Road	Future Alignment	
BRAKER LN	LINDELL LN	N SH 130 SVRD SB	No Road	Future Alignment	
BRAKER LN	N FM 973 RD	BURLESON MANOR RD	No Road	Future Alignment	
BRANDT DR	EVENING SHADOWS DR	PRINGLE TO CARSON CREEK TRIB 2 CONNECTOR	Wide Curb Lane	Bike Lane	
BRANDT RD	E SLAUGHTER LN	BLUFF SPRINGS RD	Shared Lane	Bike Lane	
BRATTON LN	GRAND AVENUE PKWY	MERRILLTOWN DR	Shared Lane	Protected BL	Yes
BRAZOS ST	E 11TH ST	E CESAR CHAVEZ ST	Shared Lane	Shared Lane	
BRENTWOOD ST	GROVER AVE	GUADALUPE ST	Wide Curb Lane	Bike Lane	
BRIARCLIFF BLVD	CAMERON RD	BERKMAN DR	Shared Lane	Buffered BL	Yes
BRIARCLIFF BLVD	BERKMAN DR	WESTMINSTER DR	Bike Lane	Buffered BL	Yes
BRIDLE PATH	SCENIC DR	EXPOSITION BLVD	Wide Curb Lane	Quiet Street	Yes
BRIDLE PATH	EXPOSITION BLVD	SHARON LN	Shared Lane	Quiet Street	Yes
BRISBANE RD	WEST GATE BLVD	SEMINARY RIDGE DR	Shared Lane	Bike Lane	
BROADMEADE AVE	N FM 620 RD NB	KENSINGTON ST	Shared Lane	Bike Lane	
BROADMEADE AVE	KENSINGTON ST	ANDERSON MILL RD	Shared Lane	Buffered BL	
BROADMOOR DR	CAMERON RD	BERKMAN DR	Wide Curb Lane	Bike Lane	
BRODIE LN	W US 290 HWY SVRD EB	WILLIAMSON CREEK	Shared Lane	Protected BL	
BRODIE LN	WILLIAMSON CREEK	W SLAUGHTER LN	Bike Lane	Protected BL	
BRODIE LN	W SLAUGHTER LN	TWILIGHT TRL	Wide Curb Lane	Protected BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
BRODIE LN	TWILIGHT TRL	YANDALL DR	Bike Lane	Protected BL	
BRODIE LN	YANDALL DR	FRATE BARKER RD	Wide Curb Lane	Protected BL	
BRODIE LN	FRATE BARKER RD	W FM 1626 RD	Bike Lane	Protected BL	
BROWNIE DR	E GRADY DR	DIAMONDBACK TRL	Shared Lane	Quiet Street	Yes
BRUNING AVE	E 53RD ST	MIDDLE FISKVILLE RD	Bike Lane	Protected BL	Yes
BRUNING AVE	MIDDLE FISKVILLE RD	E 53RD HALF ST	Wide Curb Lane	Protected BL	Yes
BRUSH COUNTRY RD	MONTEREY OAKS BLVD	SUMMERSET TRL	No Road	Bike Lane	Yes
BRUSH COUNTRY RD	SUMMERSET TRL	W WILLIAM CANNON DR	Bike Lane	Protected BL	Yes
BRUSH COUNTRY RD	W WILLIAM CANNON DR	LATTA DR	Shared Lane	Buffered BL	
BRUSHY ST	E 7TH ST	E 6TH ST	Wide Curb Lane	Buffered BL	
BUCK LN	END OF ROAD	E SH 71 EB	Shared Lane	Bike Lane	
BUCKINGHAM GATE RD	GATLING GUN LN	FRATE BARKER RD	Wide Curb Lane	Bike Lane	
BUELL AVE	STILLWOOD LN	BURNET RD	Wide Curb Lane	Bike Lane	
BUENOS AIRES PKWY	LOS CIELOS BLVD	NIGHT SKY WAY	Wide Curb Lane	Bike Lane	
BUFFALO PASS	JONES RD	W STASSNEY LN	Wide Curb Lane	Bike Lane	
BULL CREEK RD	HANCOCK DR	W 45TH ST	Wide Curb Lane	Buffered BL	Yes
BULL CREEK RD	W 45TH ST	W 38TH ST	Bike LanePK	Buffered BL	Yes
BULLICK HOLLOW RD	FM 2769 RD	N FM 620 RD	Shared Lane	Protected BL	
BURKLUND FARMS RD	PILAND TRIANGLE	VON QUINTUS RD	Shared Lane	Bike Lane	
BURLESON MANOR RD	BLAKE MANOR RD	FM 969 RD	Wide Shoulder	Bike Lane	
BURLESON MANOR RD	FM 969 RD	BUCK LN	No Road	Future Alignment	
BURLESON RD	E OLTORF ST	E BEN WHITE BLVD SVRD WB	Buffered BL	Protected BL	Yes
BURLESON RD	E BEN WHITE BLVD SVRD WB	DROSSETT DR	Wide Curb Lane	Protected BL	
BURLESON RD	DROSSETT DR	S US 183 HWY SB	Bike Lane	Protected BL	
BURLESON RD	S US 183 HWY SB	ELROY RD	Wide Shoulder	Protected BL	
BURNET LN	PAYNE AVE	BURNET RD	Wide Curb Lane	Protected BL	
BURNET RD	N MOPAC EXPY SVRD NB	RESEARCH BLVD SVRD SB	Shared Lane	Protected BL	Yes
BURNET RD	RESEARCH BLVD SVRD SB	WHITE HORSE TRL	Bike Lane	Protected BL	Yes
BURNET RD	WHITE HORSE TRL	W 45TH ST	Shared Lane	Protected BL	
BURNET RD	W 45TH ST	MEDICAL PKWY	Bike Lane	Buffered BL	
BURRELL DR	OHLEN RD	WOOTEN DR	Wide Curb Lane	Bike Lane	
BUSINESS PARK DR	JOLLYVILLE RD	TALLWOOD DR	Wide Curb Lane	Bike Lane	
CABANA LN	CASSADY DR	DORSETT RD	Wide Curb Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
CACTUS BLOSSOM DR	DASHWOOD CREEK DR	N HEATHERWILDE BLVD	Sidewalk	Trail	Yes
CAMERON LOOP	LONGVIEW RD	SEMINARY RIDGE DR	Shared Lane	Quiet Street	Yes
CAMERON RD	E PECAN ST	FUCHS GROVE RD	Shared Lane	Buffered BL	
CAMERON RD	N SH 130 SVRD SB	GREGG MANOR RD	Shared Lane	Buffered BL	
CAMERON RD	GREGG MANOR RD	HARRIS BRANCH PKWY	Wide Curb Lane	Buffered BL	
CAMERON RD	BLUE GOOSE RD	SPRINKLE RD	Shared Lane	Bike Lane	
CAMERON RD	E RUNDBERG LN	E US 290 HWY SVRD EB	Shared Lane	Protected BL	Yes
CAMERON RD	E US 290 HWY SVRD EB	E 53RD ST	Bike Lane	Protected BL	
CAMERON RD	E 53RD ST	E 51ST ST	Shared Lane	Protected BL	
CAMINO LA COSTA	N IH 35 SVRD NB	CAMERON RD	Shared Lane	Bike Lane	
CAMP CRAFT RD	BARCLAY DR	SCOTTISH WOODS TRL	Shared Lane	Bike Lane	
CAMPERDOWN ELM DR	GRIZZLY OAK DR	S 1ST ST	Wide Curb Lane	Bike Lane	
CANNONLEAGUE DR	CANNONWOOD LN	BISSEL LN	Shared Lane	Bike Lane	
CANNONLEAGUE DR	BISSEL LN	MATTHEWS LN	Wide Curb Lane	Bike Lane	
CANNONWOOD LN	PARKSIDE LN	CANNONLEAGUE DR	Shared Lane	Bike Lane	
CANYON RIDGE DR	N IH 35 SVRD NB	TECH RIDGE BLVD	Shared Lane	Protected BL	
CAPISTRANO TRL	REYNOSA DR	TREADSOFT CV	Wide Curb Lane	Bike Lane	
CAPITAL OF TEXAS HWY	N MOPAC EXPY SVRD NB	RESEARCH BLVD SVRD SB	Shared Lane	Urban Trail	
CAPITAL OF TEXAS HWY	RESEARCH BLVD SVRD SB	S LAMAR BLVD	Wide Shoulder	Urban Trail	
CAPITOL GROUND STREETS	CAPITOL GROUNDS		Wide Curb Lane	Quiet Street	Yes
CAPITOL VIEW DR	E SLAUGHTER LN	END OF ROAD	No Road	Bike Lane	
CAPITOL VIEW DR	END OF ROAD	OLD LOCKHART RD	Shared Lane	Bike Lane	
CARDINAL LN	GARDEN VILLA LN	S 1ST ST	Shared Lane	Quiet Street	Yes
CARSON CREEK BLVD	EVENING SHADOWS DR	THORNBERRY RD	Wide Curb Lane	Bike Lane	
CASEY ST	BANISTER LN	MOUNT VERNON DR	Shared Lane	Quiet Street	Yes
CASSADY DR	CORONET ST	CABANA LN	Wide Curb Lane	Bike Lane	
CASWELL AVE	E 47TH ST	PARK BLVD	Wide Curb Lane	Wide Curb Lane	
CEDAR AVE	STAFFORD ST	E MARTIN LUTHER KING JR BLVD	Wide Curb Lane	Bike Lane	
CEDAR BEND DR	PARK BEND DR	METRIC BLVD	Wide Curb Lane	Buffered BL	
CEDAR BEND DR	METRIC BLVD	RUNNING BIRD LN	Wide Curb Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
CEDAR CREST DR	SPICEWOOD PKWY	BALCONES CLUB DR	Wide Curb Lane	Buffered BL	
CENTRE CREEK DR	RUTHERFORD LN	CROSS PARK DR	Wide Curb Lane	Buffered BL	
CENTURY PARK BLVD	IDA RIDGE DR	WILLIAM KENNEDY DR	Shared Lane	Protected BL	Yes
CESAR CHAVEZ ST	MOPAC	SANDRA MURAIDA WAY	Shared Lane	Protected BL	
CESAR CHAVEZ ST	SANDRA MURAIDA WAY	SAN ANTONIO ST	Wide Curb Lane	Protected BL	
CESAR CHAVEZ ST	SAN ANTONIO ST	BRUSHY ST	Shared Lane	Protected BL	
CESAR CHAVEZ ST	BRUSHY ST	N PLEASANT VALLEY RD	Wide Curb Lane	Protected BL	
CESAR CHAVEZ ST	N PLEASANT VALLEY RD	E 5TH ST	Shared Lane	Protected BL	
CHAPPELL LN	MANCHACA RD	UP RAILROAD	Shared Lane	Bike Lane	
CHAPPELL LN	UP RAILROAD	CHAPPEL TO SLAUGHTER CONNECTOR	None	Bike Lane	
CHAPPELL LN	SLAUGHTER CREEK DR	WATCHFUL FOX DR	Shared Lane	Bike Lane	
CHARING CROSS RD	BARRINGTON WAY	COMMONWEALTH WAY	Shared Lane	Buffered BL	
CHERRY LN	SCENIC DR	ROCKMOOR AVE	Wide Curb Lane	Bike Lane	
CHERRYWOOD RD	WILSHIRE BLVD	E 38TH HALF ST	Wide Curb Lane	Quiet Street	Yes
CHERRYWOOD RD	E 38TH HALF ST	E 32ND ST	Climbing Lane	Protected BL	Yes
CHERRYWOOD RD	E 32ND ST	MANOR RD	Shared Lane with Sharrows	Protected BL	Yes
CHESTERFIELD AVE	W KOENIG LN	W NORTH LOOP BLVD	Wide Curb Lane	Bike Lane	
CHESTNUT AVE	MANOR RD	E 12TH ST	Bike Lane	Protected BL	Yes
CHESTNUT AVE	N PLEASANT VALLEY RD	ROSEWOOD AVE	Wide Curb Lane	Buffered BL	
CHICON ST	MANOR RD	E 7TH ST	Bike Lane	Protected BL	
CHICON ST	E 7TH ST	E 4TH ST	Shared Lane	Protected BL	
CHICON ST	E 4TH ST	E CESAR CHAVEZ ST	Bike Lane	Protected BL	
CHICON ST	E CESAR CHAVEZ ST	NASH HERNANDEZ SR RD	Bike Lane	Bike Lane	
CHILDRESS DR	BLUFF BEND DR	HANSFORD DR	Wide Curb Lane	Quiet Street	Yes
CIRCLE DR	THOMAS SPRINGS RD	W US 290 HWY	Shared Lane	Buffered BL	
CIRCLE S RD	S CONGRESS AVE	E DITTMAR RD	Wide Curb Lane	Bike Lane	
CIRCLE S RD	E DITTMAR RD	FOREMOST DR	Shared Lane	Bike Lane	
CITY PARK RD	FM 2222 RD	CITY LIMITS	Shared Lane	Protected BL	
CITY PARK RD	CITY LIMITS	GLENLAKE DR	Shared Lane	Protected BL	
CITY PARK RD	GLENLAKE DR	END OF ROAD	Shared Lane	Bike Lane	
CLAIRE AVE	WOOLDRIDGE DR	GASTON AVE	Wide Curb Lane	Bike Lane	
CLAIRMONT DR	ABILENE TRL	DAVIS LN	Shared Lane	Buffered BL	
CLARKSON AVE	E 53RD ST	E 47TH ST	Shared Lane	Quiet Street	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
CLARKSON AVE	ELLINGSON LN	E 43RD ST	Shared Lane	Quiet Street	Yes
CLARKSON AVE	E 34TH ST	RANDOLPH RD	Wide Curb Lane	Bike Lane	
CLARNO DR	COPANO DR	ISLANDER DR	Shared Lane	Quiet Street	Yes
CLAWSON RD	LIGHTSEY RD	SOUTHRIDGE DR	Wide Curb Lane	Bike Lane	
CLAWSON RD	SOUTHRIDGE DR	FORT VIEW RD	Shared Lane	Bike Lane	
CLAYTON LN	N IH 35 SVRD NB	CAMERON RD	Shared Lane	Buffered BL	Yes
CLYDE LITTLEFIELD DR	ROBERT DEDMAN DR	N IH 35 SVRD SB	Shared Lane	Protected BL	Yes
COASTAL DR	ALEXANDRIA DR	DEER LN	Wide Curb Lane	Buffered BL	
COLGATE LN	COLUMBIA DR	NORTHEAST DR	Wide Curb Lane	Bike Lane	
COLONY LOOP DR	LOYOLA LN	DECKER LN	Wide Curb Lane	Bike Lane	
COLORADO ST	W 12TH ST	W 11TH ST	Shared Lane	Shared Lane	
COLORADO ST	W 11TH ST	W 10TH ST	Wide Curb Lane	Shared Lane	
COLORADO ST	W 10TH ST	W CESAR CHAVEZ ST	Shared Lane	Shared Lane	
COLTON BLUFF SPRINGS RD	SALT SPRINGS DR	SPRINGTIME TRL	Wide Curb Lane	Bike Lane	
COLTON BLUFF SPRINGS RD	SPRINGTIME TRL	MC KINNEY FALLS PKWY	Shared Lane	Bike Lane	
COLTON BLUFF SPRINGS RD	MC KINNEY FALLS PKWY	FM 1625 RD	Shared Lane	Bike Lane	
COLUMBIA DR	MARQUETTE LN	COLGATE LN	Wide Curb Lane	Bike Lane	
COMAL ST	MANOR RD	E 14TH ST	Wide Curb Lane	Buffered BL	Yes
COMAL ST	E 14TH ST	HACKBERRY ST	Wide Curb Lane	Bike Lane	Yes
COMAL ST	E 11TH ST	E 7TH ST	Shared Lane	Buffered BL	Yes
COMAL ST	E 7TH ST	E 5TH ST	Wide Curb Lane	Buffered BL	Yes
COMAL ST	E 5TH ST	E 4TH ST	Wide Curb Lane	Bike Lane	Yes
COMAL ST	E 4TH ST	NASH HERNANDEZ SR RD	Shared Lane	Bike Lane	Yes
COMMERCIAL PARK DR	SPRINGDALE RD	OLD MANOR RD	Wide Curb Lane	Bike Lane	
COMMONWEALTH WAY	CHARING CROSS RD	JOLLYVILLE RD	Shared Lane	Buffered BL	
CONGRESS AVE	W MARTIN LUTHER KING JR BLVD	W 15TH ST	Wide Curb Lane	Protected BL	Yes
CONGRESS AVE	W 11TH ST	W RIVERSIDE DR	Shared Lane	Protected BL	Yes
CONGRESS AVE	W RIVERSIDE DR	W LIVE OAK ST	Bike Lane	Protected BL	
CONGRESS AVE	W LIVE OAK ST	E BEN WHITE BLVD SVRD WB	Buffered BL	Protected BL	Yes
CONGRESS AVE	E BEN WHITE BLVD SVRD WB	E BEN WHITE BLVD SVRD EB	Shared Lane	Protected BL	Yes
CONGRESS AVE	E BEN WHITE BLVD SVRD EB	WASSON RD	Buffered BL	Protected BL	Yes
CONGRESS AVE	WASSON RD	RAMBLE LN	Wide Shoulder	Protected BL	
CONGRESS AVE	RAMBLE LN	EBERHART LN	Shared Lane	Protected BL	
CONGRESS AVE	EBERHART LN	RALPH ABLANEDO DR	Wide Shoulder	Protected BL	

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CONGRESS AVE	RALPH ABLANEDO DR	W SLAUGHTER LN	Shared Lane	Protected BL	
CONTOUR DR	OHLEN RD	FAIRFIELD DR	Shared Lane	Buffered BL	
CONVICT HILL RD	W US 290 HWY	WOODCREEK RD	Bike Lane	Buffered BL	
CONVICT HILL RD	WOODCREEK RD	KANDY DR	Shared Lane	Buffered BL	
CONVICT HILL RD	KANDY DR	BRODIE LN	Wide Curb Lane	Buffered BL	
COOPER LN	SPEER LN	W WILLIAM CANNON DR	Shared Lane	Buffered BL	
COOPER LN	W WILLIAM CANNON DR	MATTHEWS LN	Wide Curb Lane	Buffered BL	
COOPER LN	MATTHEWS LN	W DITTMAR RD	Shared Lane	Bike Lane	
COPANO DR	CLARNO DR	ALEXANDRIA DR	Wide Curb Lane	Quiet Street	Yes
CORONADO HILLS DR	MC KIE DR	BERKMAN DR	Wide Curb Lane	Buffered BL	
CORONET ST	ADELPHI LN	CASSADY DR	Wide Curb Lane	Bike Lane	
CORPUS CHRISTI DR	AMARILLO AVE	MC NEIL DR	Wide Curb Lane	Bike Lane	
COULVER RD	OLD LOCKHART RD	THAXTON RD	No Road	Future Alignment	
COULVER RD	THAXTON RD	FM 1625 RD	Shared Lane	Bike Lane	
COULVER RD	FM 1625 RD	S US 183 HWY	No Road	Future Alignment	
CRAIGWOOD DR	FM 969 RD	CRAIGWOOD TO TRACOR CONNECTOR	Wide Curb Lane	Bike Lane	
CRESTLAND DR	GUADALUPE ST	NORTHCREST BLVD	Wide Curb Lane	Bike Lane	
CRISWELL RD	ARBORSIDE LN	SPRINKLE RD	No Road	Buffered BL	
CROFTWOOD DR	WORDHAM DR	ALEXANDRIA DR	Wide Curb Lane	Bike Lane	
CROSS PARK DR	CAMERON RD	EXCHANGE DR	Shared Lane	Buffered BL	
CROSSCREEK DR	SHOAL CREEK BLVD	ROCKWOOD LN	Wide Curb Lane	Bike Lane	
CROWNSPOINT DR	SANFORD DR	MANCHACA RD	Wide Curb Lane	Bike Lane	
CROZIER LN	THORNBERRY RD	CROZIER TO HILLCREST FARMS CONNECTOR	Shared Lane	Bike Lane	
CRYSTALBROOK DR	PECAN BROOK DR	LOYOLA LN	Wide Curb Lane	Bike Lane	
CULLEN LN	RALPH ABLANEDO DR	TURK LN	Shared Lane	Bike Lane	
CUMBERLAND RD	RAY WOOD DR	S 5TH ST	Wide Curb Lane	Quiet Street	Yes
CUMBERLAND RD	S 5TH ST	S 1ST ST	Shared Lane	Bike Lane	
CUMBERLAND RD	S 1ST ST	S CONGRESS AVE	Wide Curb Lane	Buffered BL	
CURLEW DR	GUIDEPOST TRL	CROWNSPOINT DR	Wide Curb Lane	Buffered BL	
CURLEW DR	CROWNSPOINT DR	W SLAUGHTER LN	Shared Lane	Buffered BL	
CURLEW DR	W SLAUGHTER LN	HOWELLWOOD WAY	Shared Lane	Bike Lane	
CURRIN LN	ALSATIA DR	MASON DELLS LN	Wide Curb Lane	Bike Lane	
D K RANCH RD	YAUPON DR	TEXAS PLUME RD	Shared Lane	Bike Lane	

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DAHLGREEN AVE	LA CROSSE AVE	GORHAM GLEN LN	Wide Curb Lane	Bike Lane	
DALLAS DR	LOS INDIOS TRL	W PARMER LN	Wide Curb Lane	Buffered BL	
DALTON LN	HERGOTZ LN	SHERMAN RD	Wide Curb Lane	Buffered BL	
DALTON LN	SHERMAN RD	BASTROP HWY SVRD	Shared Lane	Buffered BL	
DAUGHERTY ST	GREENLAWN PKWY	PEGRAM AVE	Shared Lane	Bike Lane	
DAVIS LN	FM 1826 TO DAVIS LANE CONNECTOR	CLAIRMONT DR	NONE	Urban Trail	
DAVIS LN	CLAIRMONT DR	AMPEZO TRL	Bike Lane	Buffered BL	
DAVIS LN	AMPEZO TRL	COASTAL DR	Wide Curb Lane	Buffered BL	
DAVIS LN	COASTAL DR	BRODIE LN	Bike Lane	Buffered BL	
DAVIS LN	BRODIE LN	GUIDEPOST TRL	Shared Lane	Buffered BL	
DAVIS LN	LEO ST	MANCHACA RD	Shared Lane	Buffered BL	
DAVIS ST	RED RIVER ST	RAINEY ST	Wide Curb Lane	Quiet Street	Yes
DAWSON RD	BARTON SPRINGS RD	RAMONA ST	Shared Lane	Quiet Street	Yes
DEAN KEETON ST	GUADALUPE ST	WHITIS AVE	Shared Lane	Protected BL	Yes
DEAN KEETON ST	WHITIS AVE	SPEEDWAY	Climbing Lane	Protected BL	Yes
DEAN KEETON ST	SPEEDWAY	SAN JACINTO BLVD	Shared Lane with Sharrows	Protected BL	Yes
DEAN KEETON ST	SAN JACINTO BLVD	RED RIVER ST	Bike Lane	Protected BL	Yes
DEAN KEETON ST	RED RIVER ST	DANCY ST	Buffered BL	Protected BL	Yes
DEAN KEETON ST	DANCY ST	MANOR RD	Bike Lane	Protected BL	Yes
DECKER LAKE RD	LOYOLA LN	N IMPERIAL DR	Shared Lane	Protected BL	
DECKER LAKE RD	N IMPERIAL DR	N FM 973 RD	Shared Lane	Buffered BL	
DECKER LAKE RD	GILBERT RD	TAYLOR LN	Shared Lane	Buffered BL	
DECKER LN	E US 290 HWY SVRD EB	VALLEYFIELD DR	Shared Lane	Wide Shoulder	
DECKER LN	VALLEYFIELD DR	FM 969 RD	Wide Shoulder	Wide Shoulder	
DEE GABRIEL COLLINS RD	MC KINNEY FALLS PKWY	S US 183 HWY SB	Shared Lane	Bike Lane	
DEL CURTO RD	S LAMAR BLVD	BLUEBONNET LN	Wide Curb Lane	Bike Lane	
DEL CURTO RD	BLUEBONNET LN	LIGHTSEY RD	Shared Lane	Bike Lane	
DENSON DR	N LAMAR BLVD	AIRPORT BLVD	Wide Curb Lane	Protected BL	Yes
DESSAU RD	CITY LIMITS	E RUNDBERG LN	Shared Lane	Protected BL	Yes*
DIAMONDBACK TRL	E GARRETT RUN	BROWNIE DR	Shared Lane	Quiet Street	Yes
DITTMAR RD	MANCHACA RD	S 1ST ST	Bike Lane	Protected BL	Yes
DITTMAR RD	S 1ST ST	LUNAR DR	Wide Curb Lane	Buffered BL	
DITTMAR RD	LUNAR DR	CIRCLE S RD	Shared Lane	Buffered BL	
DOC REEVES ST	ROBERT BROWNING ST	TILLEY ST	No Road	Future Alignment	
DOMAIN DR	ESPERANZA XING	KRAMER LN	Shared Lane	Quiet Street	Yes
DOUBLE FILE TRL	TOWN HILL DR	W WELLS BRANCH PKWY	Shared Lane	Protected BL	Yes
DOVE SPRINGS DR	E STASSNEY LN	S PLEASANT VALLEY RD	Wide Curb Lane	Bike Lane	Yes

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DRIFTWOOD DR	LAKEWOOD DR	SPRUCEWOOD DR	Shared Lane	Bike Lane	
DUNLAP RD	FM 969 RD	COLORADO RIVER TRAIL	Shared Lane	Bike Lane	
DUVAL RD	JOLLYVILLE RD	WEST COW PATH	Shared Lane	Protected BL	
DUVAL RD	WEST COW PATH	ASPENDALE DR	Bike Lane	Protected BL	
DUVAL RD	ASPENDALE DR	BURNET RD	Shared Lane	Protected BL	
DUVAL ST	E 56TH ST	E 51ST ST	Wide Curb Lane	Buffered BL	
DUVAL ST	E 51ST ST	SAN JACINTO BLVD	Bike Lane	Protected BL	Yes
E M FRANKLIN AVE	PERSHING DR	E 12TH ST	Wide Curb Lane	Bike Lane	
EAST AVE	CUMMINGS ST	N IH 35 SVRD SB	Shared Lane	Bike Lane	
EAST DR	W 29TH ST	W 30TH ST	Bike Lane	Protected BL	Yes
EAST SIDE DR	SUNSET LN	LELAND ST	Shared Lane	Bike Lane	
EAST SIDE DR	LELAND ST	E OLTORF ST	Shared Lane	Buffered BL	
EAST SIDE DR	E OLTORF ST	ST EDWARDS DR	Wide Curb Lane	Buffered BL	
EASY WIND DR	W ST JOHNS AVE	CRESTVIEW STATION	Shared Lane	Quiet Street	Yes
EBERHART LN	SPEER LN	S CONGRESS AVE	Bike Lane	Buffered BL	
EDGECLIFF TER	PARK PL	E RIVERSIDE DR	Shared Lane	Bike Lane	
EDGEMONT DR	GLEN ROSE DR	BALCONES DR	Shared Lane	Buffered BL	
EL MIRANDO ST	MONTOPOLIS DR	THRASHER LN	Shared Lane	Bike Lane	
EL SALIDO PKWY	N FM 620 RD	PECAN CREEK PKWY	Wide Shoulder	Buffered BL	
ELKHORN MOUNTAIN TRL	HUNTERS CHASE DR	TAMAYO DR	Wide Curb Lane	Buffered BL	
ELLINGSON LN	BENNETT AVE	CLARKSON AVE	Shared Lane	Quiet Street	Yes
ELLIOTT ST	N LAMAR BLVD	LITTLE WALNUT DR	Shared Lane	Buffered BL	
ELROY RD	S FM 973 RD	HEINE FARM RD	Shared Lane	Protected BL	
ELROY RD	HEINE FARM RD	FAGERQUIST RD	Shared Lane	Buffered BL	
ELROY RD	FAGERQUIST RD	FM 812 RD	Wide Curb Lane	Bike Lane	
EMERALD FOREST DR	VINSON DR	W WILLIAM CANNON DR	Bike Lane	Protected BL	Yes
EMPLOYEE AVE	HOTEL DR	PRESIDENTIAL BLVD	Wide Curb Lane	Buffered BL	
ENFIELD RD	LAKE AUSTIN BLVD	EXPOSITION BLVD	Wide Shoulder	Protected BL	
ENFIELD RD	EXPOSITION BLVD	W 15TH ST	Shared Lane	Protected BL	
ENGLEWOOD DR	ABERDEEN DR	ORLAND BLVD	Wide Curb Lane	Quiet Street	Yes
ENGLEWOOD DR	ORLAND BLVD	PHILCO DR	Shared Lane	Quiet Street	Yes
EQUESTRIAN TRL	ANAROSA LOOP	LAMPLIGHT VILLAGE AVE	Shared Lane	Quiet Street	Yes
ESCARPMENT BLVD	W WILLIAM CANNON DR	OLIVER LOVING TRL	Bike Lane	Protected BL	Yes
ESCARPMENT BLVD	OLIVER LOVING TRL	W SLAUGHTER LN	Buffered BL	Protected BL	Yes
ESCARPMENT BLVD	W SLAUGHTER LN	LA CROSSE AVE	Bike Lane	Protected BL	Yes
ESCARPMENT BLVD	LA CROSSE AVE	SH 45 WB	Buffered BL	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
ESCARPMENT BLVD	SH 45 WB	SH 45 EB	Bike Lane	Protected BL	Yes
ESKEW DR	COPANO DR	CROFTWOOD DR	Wide Curb Lane	Buffered BL	
ESPERANZA XING	N MOPAC EXPY SVRD NB	DOMAIN DR	Shared Lane	Quiet Street	Yes
ETHRIDGE AVE	HARTFORD RD	HARRIS BLVD	Shared Lane	Quiet Street	Yes
EUROPA LN	W PARMER LN	GANYMEDE DR	Shared Lane	Bike Lane	
EXCHANGE DR	TUSCANY WAY	PROFIT CENTRE DR	Shared Lane	Buffered BL	
EXCHANGE DR	PROFIT CENTRE DR	CROSS PARK DR	Shared Lane	Bike Lane	
EXPOSITION BLVD	W 35TH ST	LAKE AUSTIN BLVD	Bike Lane	Protected BL	Yes
FAGERQUIST RD	ELROY RD	WOLF LN	Shared Lane	Buffered BL	
FAIRFIELD DR	CONTOUR DR	RESEARCH BLVD SVRD SB	Shared Lane	Buffered BL	
FAIRFIELD DR	RESEARCH BLVD SVRD SB	RESEARCH BLVD SVRD NB	Wide Curb Lane	Buffered BL	
FAIRFIELD DR	RESEARCH BLVD SVRD NB	PARKFIELD DR	Bike Lane	Buffered BL	
FAIRFIELD DR	PARKFIELD DR	BRIDGEPORT DR	Bike Lane	Bike Lane	
FAIRFIELD DR	BRIDGEPORT DR	N LAMAR BLVD	Bike Lane	Buffered BL	
FAR WEST BLVD	LADERA NORTE	NORTH HILLS DR	Climbing Lane	Buffered BL	
FAR WEST BLVD	NORTH HILLS DR	MESA DR	Bike Lane	Buffered BL	
FAR WEST BLVD	MESA DR	CHIMNEY CORNERS	Bike Lane	Protected BL	Yes
FAR WEST BLVD	CHIMNEY CORNERS	HART LN	Bike LanePK	Protected BL	Yes
FAR WEST BLVD	HART LN	N MOPAC EXPY SVRD NB	Shared Lane	Protected BL	Yes
FELIX AVE	MONTOPOLIS DR	VASQUEZ ST	Shared Lane	Bike Lane	
FERGUSON LN	CAMERON RD	WALL ST	Shared Lane	Buffered BL	
FERGUSON LN	WALL ST	TUSCANY WAY	Shared Lane	Protected BL	
FERGUSON LN	TUSCANY WAY	SANSOM RD	Shared Lane	Buffered BL	
FERGUSON LN	SANSOM RD	SPRINGDALE RD	Shared Lane	Bike Lane	
FIREOAK DR	YAUPON DR	BARRINGTON WAY	Wide Curb Lane	Bike Lane	
FIREOAK DR	OAK VIEW DR	OAK KNOLL DR	Wide Curb Lane	Bike Lane	
FLETCHER LN	CEDAR ELM TRL	SILVERMINE DR	Shared Lane	Bike Lane	
FLORAL PARK DR	RAIN CREEK PKWY	JOLLYVILLE RD	Bike LanePK	Buffered BL	
FLOURNOY DR	S 1ST ST	IDLEWOOD CV	Wide Curb Lane	Wide Curb Lane	
FM 1325 RD	W LOUIS HENNA BLVD EB	BURNET RD	Shared Lane	Urban Trail	
FM 1327 RD	S IH 35 SVRD SB	PALMER RD	Wide Shoulder	Wide Shoulder	
FM 1625 RD	S US 183 HWY	CLIFFBROOK DR	Shared Lane	Wide Shoulder	
FM 1626 RD	CITY LIMITS	S IH 35 SVRD SB	Shared Lane	Urban Trail	
FM 1825 RD	VISION DR	W WELLS BRANCH PKWY	Wide Shoulder	Protected BL	
FM 1825 RD	W WELLS BRANCH PKWY	N IH 35 SVRD NB	Shared Lane	Protected BL	

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FM 1826 RD	W US 290 HWY	KEMP HILLS DR	Shared Lane	Wide Shoulder	
FM 2222 RD	BULLICK HOLLOW RD	CAPITAL OF TX HWY N	Wide Shoulder	Urban Trail	
FM 2222 RD	CAPITAL OF TX HWY N	NORTHLAND DR	Shared Lane	Urban Trail	
FM 2244 RD	ASHLEY WORTH BLVD	S CAPITAL OF TEXAS HWY	Wide Shoulder	Urban Trail	
FM 2769 RD	MACKS CANYON DR	ANDERSON MILL RD	Shared Lane	Wide Shoulder	
FM 620 RD	OAK GROVE BLVD	VISTA PARKE DR	Wide Shoulder	Urban Trail	
FM 620 RD	VISTA PARKE DR	CONCORDIA UNIVERSITY DR	Bike Lane	Urban Trail	
FM 620 RD	CONCORDIA UNIVERSITY DR	N SH 45 W	Wide Shoulder	Urban Trail	
FM 620 RD	N SH 45 W	WYOMING SPRINGS DR	Wide Shoulder	Protected BL	
FM 812 RD	S US 183 HWY SB	FM 812 RD	Shared Lane	Urban Trail	
FM 812 RD	FM 812 RD	DOYLE RD	Wide Shoulder	Wide Shoulder	
FM 969 RD	DELTA POST DR	BURLESON MANOR RD	Wide Curb Lane	Urban Trail	
FM 969 RD	BURLESON MANOR RD	VILLAGE OF WEBBERVILLE	Shared Lane	Urban Trail	
FM 973 RD	MURCHISON ST	E SH 71	Shared Lane	Wide Shoulder	
FM 973 RD	E SH 71	ELROY RD	Shared Lane	Wide Shoulder	
FM 973 RD	ELROY RD	FM 812 RD	Shared Lane	Urban Trail	
FM 973 RD	FM 812 RD	S US 183 HWY	Shared Lane	Wide Shoulder	
FOREST VIEW DR	CITY LIMITS	REDBUD TRL	Wide Curb Lane	Bike Lane	
FOREST WOOD RD	MATTHEWS LN	W DITTMAR RD	Shared Lane	Bike Lane	
FORT VIEW RD	MANCHACA RD	CLAWSON RD	Wide Curb Lane	Bike Lane	
FOSTER LN	GREAT NORTHERN BLVD	SHOAL CREEK BLVD	Bike Lane	Bike Lane	
FOSTER LN	SHOAL CREEK BLVD	NORTHCROSS DR	Bike Lane	Buffered BL	
FOUR DAUGHTERS RD	E SH 71	FM 812 RD	No Road	Future Alignment	
FOUR IRON DR	BALCONES CLUB DR	SPICEWOOD SPRINGS RD	Wide Curb Lane	Buffered BL	
FOUR POINTS DR	N FM 620 RD	RIVER PLACE BLVD	Shared Lane	Buffered BL	Yes
FRATE BARKER RD	BRODIE LN	JIM THORPE LN	Shared Lane	Buffered BL	
FRATE BARKER RD	JIM THORPE LN	MANCHACA RD	Shared Lane	Protected BL	
FREIDRICH LN	WOODWARD ST	E ST ELMO RD	Wide Curb Lane	Protected BL	
FREIDRICH LN	E ST ELMO RD	TERI RD	Bike Lane	Protected BL	
FREIDRICH LN	TERI RD	PONCIANA DR	Shared Lane	Protected BL	
FRUTH ST	WEST DR	W 29TH ST	Shared Lane	Protected BL	Yes
FUCHS GROVE RD	BENNETT POKORNEY LN	GREGG MANOR RD	Shared Lane	Buffered BL	
FURNESS DR	HERMITAGE DR	RUTHERFORD LN	Wide Curb Lane	Protected BL	Yes
GANYMEDE DR	PLUTO LN	EUROPA LN	Shared Lane	Bike Lane	
GARDEN VILLA LN	BARTON SKWY	BANISTER LN	Wide Curb Lane	Quiet Street	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
GARFIELD LN	SHREVEPORT DR	RIATA VISTA CIR	Wide Curb Lane	Bike Lane	
GARRETT RUN	ORIOLE DR	DIAMONDBACK TRL	Shared Lane	Quiet Street	Yes
GASTON AVE	HARRIS BLVD	SHOAL CREEK BLVD	Wide Curb Lane	Wide Curb Lane	
GASTON PLACE DR	WESTMINSTER DR	WHELESS LN	Bike Lane	Buffered BL	Yes
GATLING GUN LN	SESBANIA DR	BRODIE LN	Wide Curb Lane	Bike Lane	
GEORGE ST	E STASSNEY LN	END OF ROAD	Wide Curb Lane	Bike Lane	
GEORGE ST	END OF ROAD	PALO BLANCO LN EXTENSION	No Road	Bike Lane	
GEORGIAN DR	W RUNDBERG LN	W FAWNRIDGE DR	Bike Lane	Buffered BL	Yes
GEORGIAN DR	W FAWNRIDGE DR	W ANDERSON LN WB	Bike Lane	Buffered BL	Yes
GEORGIAN OAKS DR	SPRUCE CANYON DR	WAY LN	Wide Curb Lane	Bike Lane	
GILBERT RD	HOG EYE RD	NEZ PERCE TRCE	Wide Curb Lane	Buffered BL	
GILBERT RD	NEZ PERCE TRCE	DECKER LAKE RD	Shared Lane	Buffered BL	
GILBERT RD	DECKER LAKE RD	END OF ROAD	No Road	Buffered BL	
GILBERT RD	END OF ROAD	FM 969 RD	Wide Curb Lane	Buffered BL	
GILBERT RD	FM 969 RD	HAROLD GREEN RD	No Road	Future Alignment	
GILES LN	HARRIS BRANCH PKWY	E US 290 HWY SVRD WB	Shared Lane	Protected BL	
GILWELL DR	ROSS RD	END OF ROAD	Wide Curb Lane	Bike Lane	
GLEN ROSE DR	MADRONA DR	EDGEMONT DR	Shared Lane	Buffered BL	
GOLDBRIDGE DR	CONNECTOR THROUGH LONGVIEW PARK	WEST GATE BLVD	Wide Curb Lane	Bike Lane	
GONZALES ST	SPRINGDALE RD	SHADY LN	Wide Curb Lane	Bike Lane	
GORHAM GLEN LN	SOUTH BAY LN	DAHLGREEN AVE	Wide Curb Lane	Bike Lane	
GOVALLE AVE	WEBBERVILLE RD	SPRINGDALE RD	Wide Curb Lane	Buffered BL	
GRACY FARMS LN	N MOPAC EXPY SVRD NB	HOBBY HORSE CT	Shared Lane	Protected BL	
GRACY FARMS LN	HOBBY HORSE CT	METRIC BLVD	Shared Lane	Buffered BL	
GRACY FARMS LN	METRIC BLVD	MEADOWFIRE DR	Bike Lane	Buffered BL	
GRACY FARMS LN	MEADOWFIRE DR	BITTERN HOLW	Bike Lane	Bike Lane	
GRADY DR	BROWNIE DR	MIDDLE FISKVILLE RD	Shared Lane	Quiet Street	Yes
GRAND AVENUE PKWY	END OF ROAD	BRATTON LN	No Road	Protected BL	
GRAND AVENUE PKWY	BRATTON LN	VISION DR	Shared Lane	Protected BL	
GREAT BRITAIN BLVD	PALACE PKWY	S 1ST ST	Wide Curb Lane	Bike Lane	
GREAT HILLS TRL	N CAPITAL OF TEXAS HWY SB	STONELAKE BLVD	Shared Lane	Protected BL	
GREAT NORTHERN BLVD	FOSTER LN	WHITE ROCK DR	Bike Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
GREAT NORTHERN BLVD	WHITE ROCK DR	END OF ROAD	No Road	Urban Trail	Yes
GREAT VALLEY DR	SHENANDOAH DR	N FM 620 RD	Shared Lane	Quiet Street	Yes
GREEN EMERALD TER	LOST OASIS HOLW	BRODIE LN	Wide Curb Lane	Bike Lane	
GREENLAWN PKWY	GREAT NORTHERN BLVD	SHOAL CREEK BLVD	Shared Lane	Shared Lane	
GREENLAWN PKWY	SHOAL CREEK BLVD	DAUGHERTY ST	Wide Curb Lane	Wide Curb Lane	
GREENLAWN PKWY	DAUGHERTY ST	BURNET RD	Shared Lane	Shared Lane	
GREENSLOPE DR	ROBBIE DR	SPICEWOOD SPRINGS RD WB	Wide Curb Lane	Bike Lane	
GREENWICH MERIDIAN	HEATHROW DR	SHAKESPEAREAN WAY	Wide Curb Lane	Bike Lane	
GREGG LN	CAMERON RD	FUCHS GROVE RD	No Road	Future Alignment	
GREGG MANOR RD	CAMERON RD	N SH 130 SVRD SB	Wide Curb Lane	Bike Lane	
GREGG MANOR RD	N SH 130 SVRD NB	FUCHS GROVE RD	Wide Curb Lane	Bike Lane	
GREYSTONE DR	VALBURN DR	MESA DR	Wide Curb Lane	Buffered BL	
GREYSTONE DR	MESA DR	N MOPAC EXPY SVRD SB	Bike Lane	Buffered BL	
GROVE BLVD	COLORADO RIVER PARK	HOGAN AVE	Shared Lane	Buffered BL	Yes
GROVE BLVD	HOGAN AVE	E RIVERSIDE DR	Bike Lane	Protected BL	Yes
GROVE BLVD	E RIVERSIDE DR	MONTOPOLIS DR	Shared Lane	Protected BL	Yes
GROVER AVE	JUSTIN LN	BRENTWOOD ST	Wide Curb Lane	Bike Lane	
GROVER AVE	W 51ST ST	W 49TH ST	Wide Curb Lane	Bike Lane	
GUADALUPE ST	MORROW ST	W CRESTLAND DR	Bike Lane	Bike Lane	
GUADALUPE ST	W CRESTLAND DR	W ST JOHNS AVE	Bike Lane	Buffered BL	
GUADALUPE ST	W ST JOHNS AVE	KENNISTON DR	Bike LanePK	Buffered BL	
GUADALUPE ST	KENNISTON DR	CANION ST	Bike Lane	Buffered BL	
GUADALUPE ST	CANION ST	W KOENIG LN	Bike LanePK	Buffered BL	
GUADALUPE ST	W KOENIG LN	W 51ST ST	Bike Lane	Buffered BL	
GUADALUPE ST	W 51ST ST	W 46TH ST	Bike Lane	Protected BL	
GUADALUPE ST	W 46TH ST	W GUADALUPE ST	Wide Curb Lane	Protected BL	
GUADALUPE ST	W GUADALUPE ST	NUECES ST	Bike Lane	Protected BL	
GUADALUPE ST	NUECES ST	HEMPHILL PARK	Shared Lane with Sharrows	Protected BL	
GUADALUPE ST	HEMPHILL PARK	W 24TH ST	Climbing Lane	Protected BL	
GUADALUPE ST	W 24TH ST	W MARTIN LUTHER KING JR BLVD	Protected BL	Protected BL	Yes
GUADALUPE ST	W MARTIN LUTHER KING JR BLVD	S 1ST ST	Buffered BL	Protected BL	Yes
GUIDEPOST TRL	DAVIS LN	LEO ST	Shared Lane	Buffered BL	
GULLETT ST	BOLM RD	LYONS RD	Shared Lane	Quiet Street	Yes
HAMPTON RD	E 37TH ST	HARRIS AVE	Shared Lane	Shared Lane	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
HANCOCK DR	BALCONES DR	VALLEY OAK DR	Bike Lane	Buffered BL	
HANCOCK DR	VALLEY OAK DR	WEST FRANCES PL	Wide Shoulder	Protected BL	Yes
HANCOCK DR	WEST FRANCES PL	BURNET RD	Bike Lane	Protected BL	Yes*
HANSFORD DR	CHILDRESS DR	E RUNDBERG LN	Wide Curb Lane	Quiet Street	Yes
HAPPY HOLLOW LN	34TH TO 35TH BIKE PED CONNECTION	W 34TH ST	Shared Lane	Urban Trail	Yes
HARMON AVE	E 55TH ST	E 53RD HALF ST	Wide Curb Lane	Bike Lane	
HARMON AVE	E 53RD HALF ST	E 51ST ST	Wide Curb Lane	Quiet Street	Yes
HARMON AVE	E 51ST ST	E 46TH ST	Shared Lane	Quiet Street	Yes
HARMON AVE	E 38TH HALF ST	E 38TH ST	Shared Lane	Shared Lane	Yes
HAROLD GREEN RD	S FM 973 RD	END OF ROAD	Wide Curb Lane	Buffered BL	
HARPERS FERRY LN	HOLT DR	BRODIE LN	Shared Lane	Bike Lane	
HARPERS FERRY LN	BRODIE LN	LONGVIEW RD	Wide Curb Lane	Bike Lane	
HARRIS AVE	DUVAL ST	RED RIVER ST	Wide Curb Lane	Bike Lane	Yes
HARRIS BLVD	W 32ND ST	ETHRIDGE AVE	Wide Curb Lane	Quiet Street	Yes
HARRIS BLVD	ETHRIDGE AVE	WINDSOR RD	Wide Curb Lane	Bike Lane	
HARRIS BRANCH PKWY	GREGG LN	GILES LN	Shared Lane	Protected BL	
HARRIS BRANCH PKWY	GILES LN	DECKER LN	Shared Lane	Buffered BL	
HARRIS RIDGE BLVD	END OF ROAD	CAMBOURNE DR	Wide Curb Lane	Bike Lane	
HARRIS RIDGE BLVD	CAMBOURNE DR	E HOWARD LN	Wide Curb Lane	Buffered BL	
HARRIS RIDGE BLVD	E HOWARD LN	E PARMER LN	Buffered BL	Buffered BL	Yes
HARRISGLENN DR	E HOWARD LN	BRADBURY LN	Wide Curb Lane	Bike Lane	
HARRISGLENN DR	BRADBURY LN	E PARMER LN	Wide Curb Lane	Buffered BL	
HART LN	SPICEWOOD SPRINGS RD EB	FAR WEST BLVD	Bike Lane	Buffered BL	
HART LN	FAR WEST BLVD	NORTH HILLS DR	Shared Lane	Buffered BL	
HARTFORD RD	JEFFERSON ST	WINDSOR RD	Wide Curb Lane	Bike Lane	Yes
HARTFORD RD	WINDSOR RD	WATCHHILL RD	Wide Curb Lane	Buffered BL	Yes
HARTFORD RD	WATCHHILL RD	NILES RD	Wide Curb Lane	Bike Lane	Yes
HARTFORD RD	NILES RD	ENFIELD RD	Shared Lane	Bike Lane	Yes
HARTFORD RD	ENFIELD RD	PALMA PLZ	Wide Curb Lane	Quiet Street	Yes
HAWKHAVEN LN	DORSETT RD	WYCLIFF LN	Shared Lane	Bike Lane	
HAWKINS LN	DALTON LN	HYMAN LN	Shared Lane	Bike Lane	
HEATHERWILDE BLVD	E WELLS BRANCH PKWY	HOWARD LN W	No Road	Buffered BL	
HEATHROW DR	SPICEWOOD SPRINGS RD	GREENWICH MERIDIAN	Shared Lane	Bike Lane	
HEFLIN LN	SPRINGDALE RD	WEBBERVILLE RD	Wide Curb Lane	Bike Lane	
HEINEMANN DR	MELROSE TRL	KEVIN KELLY PL	Wide Curb Lane	Buffered BL	
HEINEMANN DR	KEVIN KELLY PL	SHREVEPORT DR	Wide Curb Lane	Bike Lane	
HENDERSON ST	W 9TH ST	W 6TH ST	Wide Curb Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
HERGOTZ LN	BASTROP HWY NB	HERRERA ST	Wide Curb Lane	Bike Lane	
HERGOTZ LN	HERRERA ST	DALTON LN	Shared Lane	Bike Lane	
HETHER ST	BLUEBONNET LN	S LAMAR BLVD	Shared Lane	Quiet Street	Yes
HIDALGO ST	ROBERT T MARTINEZ JR ST	NORTHWESTERN AVE	Wide Curb Lane	Bike Lane	
HIGHLAND HILLS CIR	FM 2222 RD	HIGHLAND HILLS DR	Shared Lane	Bike Lane	
HIGHLAND HILLS DR	SIERRA DR	HIGHLAND HILLS CIR	Shared Lane	Bike Lane	
Highland Local Street Connections	AIRPORT BLVD	E HUNTLAND DR	No Road	Quiet Street	Yes
HIGHLAND MALL BLVD	AIRPORT BLVD	MIDDLE FISKVILLE RD	Shared Lane	Protected BL	Yes
HILL FOREST DR	WESTCREEK DR	SUMMERSET TRL	Shared Lane	Bike Lane	
HILLCREST FARMS RD	SPIRIT OF TEXAS DR	GROZIER TO HILLCREST FARMS CONNECTOR	No Road	Bike Lane	
HILLVIEW RD	HILLVIEW GREEN LN	EXPOSITION BLVD	Wide Curb Lane	Bike Lane	
HOBBY HORSE CT	GAULT LN	GRACY FARMS LN	Wide Curb Lane	Bike Lane	
HOG EYE RD	N FM 973 RD	GILBERT RD	Wide Shoulder	Buffered BL	
HOGAN AVE	GROVE BLVD	MONTOPOLIS DR	Wide Curb Lane	Bike Lane	
HOKANSON RD	BECKER LN	PETERSON RD	Shared Lane	Bike Lane	
HOLLY ST	RIVER ST	END OF ROAD	Wide Curb Lane	Protected BL	Yes
HOLLY ST	END OF ROAD	ROY AND ANN BUTLER TRAIL	Shared Lane	Protected BL	Yes
HOLT DR	WORDHAM DR	HARPERS FERRY LN	Shared Lane	Bike Lane	
HOTEL DR	SPIRIT OF TEXAS DR	EMPLOYEE AVE	Wide Curb Lane	Buffered BL	
HOWARD LN	N FM 620 RD NB	MC NEIL RD	No Road	Future Alignment	
HOWARD LN	MC NEIL RD	MC NEIL MERRILLTOWN RD	Shared Lane	Protected BL	
HOWARD LN	MC NEIL MERRILLTOWN RD	N MOPAC EXPY SVRD SB	Bike Lane	Protected BL	Yes*
HOWARD LN	N MOPAC EXPY SVRD SB	W WELLS BRANCH PKWY	Shared Lane	Protected BL	Yes
HOWARD LN	W WELLS BRANCH PKWY	IDA RIDGE DR	Shared Lane	Protected BL	Yes
HOWARD LN	SCOFIELD RIDGE PKWY	N IH 35 SVRD SB	Shared Lane	Protected BL	
HOWARD LN	N IH 35 SVRD SB	DESSAU RD	Wide Curb Lane	Protected BL	
HOWARD LN	DESSAU RD	LAZYRIDGE DR	Bike Lane	Buffered BL	
HOWARD LN	LAZYRIDGE DR	HARRIS BRANCH PKWY	Bike Lane	Bike Lane	
HOWARD LN	HARRIS BRANCH PKWY	GREGG MANOR RD	No Road	Future Alignment	
HOWELLWOOD WAY	RIDDLE RD	CURLEW DR	Shared Lane	Bike Lane	
HUNTERS CHASE DR	POND SPRINGS RD	ELKHORN MOUNTAIN TRL	Wide Curb Lane	Buffered BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
HUNTLAND DR	AIRPORT BLVD	Highland Local Street Connections	Shared Lane	Shared Lane	
HUNTLAND DR	Highland Local Street Connections	MIDDLE FISKVILLE RD	Shared Lane	Bike Lane	Yes
HUNTLAND DR	MIDDLE FISKVILLE RD	N IH 35 SVRD SB	Shared Lane	Shared Lane	
HYMAN LN	HAWKINS LN	PRINGLE CIR	Shared Lane	Bike Lane	
HYMEADOW DR	PECAN PARK BLVD	MEADOWHEATH DR	Shared Lane	Quiet Street	Yes
HYMEADOW DR	MEADOWHEATH DR	N US 183 HWY SVRD NB	Shared Lane	Protected BL	Yes
HYMEADOW DR	N US 183 HWY SVRD SB	HIDDEN MEADOW DR	Shared Lane	Bike Lane	
HYRIDGE DR	ADIRONDACK TRL	ROBBIE DR	Wide Curb Lane	Buffered BL	
IDA RIDGE DR	W HOWARD LN	CENTURY PARK BLVD	Shared Lane	Protected BL	Yes
IH 35	CITY LIMITS	AIRPORT BLVD	Shared Lane	Urban Trail	
IH 35	AIRPORT BLVD	LADY BIRD LAKE	Shared Lane	Protected BL	
IH 35	LADY BIRD LAKE	CITY LIMITS	Shared Lane	Urban Trail	
IMPERIAL DR	DECKER LAKE RD	FM 969 RD	Wide Shoulder	Bike Lane	
INDUSTRIAL BLVD	S CONGRESS AVE	E ST ELMO RD	Wide Curb Lane	Buffered BL	
INDUSTRIAL OAKS BLVD	SOUTHWEST PKWY	END OF ROAD	No Road	Future Alignment	Yes
INDUSTRIAL OAKS BLVD	END OF ROAD	W US 290 HWY SVRD WB	Wide Curb Lane	Buffered BL	Yes
ISLANDER DR	LATTA DR	CLARNO DR	Shared Lane	Quiet Street	Yes
JACARANDA DR	LEMON DR	E STASSNEY LN	Wide Curb Lane	Buffered BL	Yes
JAMES CASEY ST	RADAM LN	W ST ELMO RD	Wide Curb Lane	Buffered BL	
JAMESTOWN DR	PAYTON GIN RD	BANGOR BND	Wide Curb Lane	Bike Lane	Yes
JEFFERSON ST	W 38TH ST	W 35TH ST	Bike LanePK	Buffered BL	Yes
JEFFERSON ST	W 35TH ST	GASTON AVE	Shared Lane	Buffered BL	
JEFFERSON ST	GASTON AVE	HARTFORD RD	Wide Curb Lane	Bike Lane	
JESSE E SEGOVIA ST	CHICON ST	ROBERT T MARTINEZ JR ST	Wide Curb Lane	Bike Lane	
JESTER BLVD	ARTERIAL 8	HALBERT DR	Bike Lane	Buffered BL	
JESTER BLVD	HALBERT DR	FM 2222 RD	Wide Curb Lane	Buffered BL	
JET LN	PATTON AVE	BASTROP HWY SVRD	Shared Lane	Quiet Street	Yes
JOHANNA ST	WILSON ST	NEWTON ST	Wide Curb Lane	Bike Lane	
JOHNNY MORRIS RD	E US 290 HWY SVRD WB	BREEZY HILL DR	Wide Shoulder	Buffered BL	
JOHNNY MORRIS RD	BREEZY HILL DR	POINT NORTH DR	Wide Shoulder	Protected BL	
JOHNNY MORRIS RD	POINT NORTH DR	FM 969 RD	Wide Curb Lane	Protected BL	
JOLLYVILLE RD	BARRINGTON WAY	ARBORETUM BLVD	Bike Lane	Protected BL	
JOLLYVILLE RD	N CAPITAL OF TEXAS HWY NB	JOLLYVILLE 360 CONNECTOR	Shared Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
JOLLYVILLE RD	JOLLYVILLE 360 CONNECTOR	N MOPAC EXPY SVRD SB	Shared Lane	Protected BL	Yes
JONES RD	ERNEST ROBLES WAY	PILLOW RD	Unpaved Shared Use Path	Trail	Yes
JONES RD	PILLOW RD	MANCHACA RD	Shared Lane	Protected BL	Yes
JUSTIN LN	BURNET RD	N LAMAR BLVD	Bike LanePK	Protected BL	Yes
KELLAM RD	E SH 71 EB	PEARCE LN	No Road	Future Alignment	
KENNELWOOD RD	SCENIC DR	ROCKMOOR AVE	Wide Curb Lane	Bike Lane	
KILLINGSWORTH LN	E WELLS BRANCH PKWY	CAMERON RD	Shared Lane	Bike Lane	
KINGSGATE DR	MASON DELLS LN	RAVENSCROFT DR	Wide Curb Lane	Bike Lane	
KINNEY AVE	BARTON SPRINGS RD	VIRGINIA AVE	Climbing Lane	Bike Lane	
KINNEY AVE	VIRGINIA AVE	ASHBY AVE	Wide Curb Lane	Bike Lane	
KINNEY AVE	ASHBY AVE	HETHER ST	Wide Curb Lane	Wide Curb Lane	
KOENIG LN	BURNET RD	N IH 35 SVRD NB	Shared Lane	Protected BL	
KRAMER LN	RETAIL WAY	DOMAIN DR	Shared Lane	Quiet Street	Yes
KRAMER LN	DOMAIN DR	BURNET RD	Shared Lane with Sharrows	Quiet Street	Yes
KRAMER LN	BURNET RD	N LAMAR BLVD	Bike Lane	Protected BL	Yes
KROMER ST	FAIRFIELD DR	BECKETT ST	Wide Curb Lane	Buffered BL	
LA CROSSE AVE	SPRUCE CANYON DR	ESCARPMENT BLVD	Bike LanePK	Protected BL	Yes
LA CROSSE AVE	ESCARPMENT BLVD	END OF ROAD	Wide Curb Lane	Protected BL	Yes
LADERA NORTE	VALBURN DR	BACKTRAIL DR	Shared Lane	Bike Lane	
LADERA NORTE	BACKTRAIL DR	FAR WEST BLVD	Wide Curb Lane	Bike Lane	
LAFAYETTE AVE	E 38TH HALF ST	E DEAN KEETON ST	Wide Curb Lane	Bike Lane	
LAFAYETTE AVE	E DEAN KEETON ST	MANOR RD	Shared Lane	Bike Lane	
LAKE AUSTIN BLVD	ENFIELD RD	ATLANTA ST	Bike Lane	Protected BL	
LAKE CREEK PKWY	N FM 620 RD	SCHOOL HOUSE LN	Bike Lane	Protected BL	
LAKE CREEK PKWY	SCHOOL HOUSE LN	N US 183 HWY	Shared Lane with Sharrows	Protected BL	
LAKE CREEK PKWY	N US 183 HWY	N FM 620 RD NB	Bike Lane	Protected BL	Yes*
LAKELINE BLVD	SHENANDOAH DR	W RIVIERA CIR	Shared Lane	Urban Trail	Yes
LAKELINE BLVD	W RIVIERA CIR	WEST OF LYNDHURST ST	Bike Lane	Protected BL	Yes*
LAKELINE BLVD	WEST OF LYNDHURST ST	STAKED PLAINS DR	Shared Lane	Protected BL	Yes
LAKELINE BLVD	STAKED PLAINS DR	WEST OF PARMER LN	Wide Curb Lane	Protected BL	
LAKELINE BLVD	WEST OF PARMER LN	PARMER LN	Shared Lane	Protected BL	
LAKELINE MALL DR	PECAN PARK BLVD	RUTLEDGE SPUR	Bike Lane	Protected BL	
LAKESHORE BLVD	E RIVERSIDE DR	S PLEASANT VALLEY RD	Wide Curb Lane	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
LAKEWOOD DR	BEAUFORD DR	COACHWHIP HOLW	Wide Curb Lane	Bike Lane	
LAKEWOOD DR	COACHWHIP HOLW	N CAPITAL OF TEXAS HWY SB	Wide Curb Lane	Buffered BL	
LAKEWOOD DR	N CAPITAL OF TEXAS HWY SB	DRIFTWOOD DR	Wide Curb Lane	Bike Lane	
LAMAR BLVD	N IH 35 SVRD SB	PAYTON GIN RD	Shared Lane	Protected BL	Yes
LAMAR BLVD	PAYTON GIN RD	FAIRFIELD DR	Wide Curb Lane	Protected BL	Yes
LAMAR BLVD	FAIRFIELD DR	W POWELL LN	Shared Lane	Protected BL	Yes
LAMAR BLVD	W POWELL LN	RESEARCH BLVD SVRD SB	Wide Shoulder	Protected BL	Yes
LAMAR BLVD	RESEARCH BLVD SVRD SB	W MARTIN LUTHER KING JR BLVD	Shared Lane	Protected BL	
LAMAR BLVD	W RIVERSIDE DR	BARTON SPRINGS RD	Shared Lane	Protected BL	Yes
LAMAR BLVD	BARTON SPRINGS RD	TREADWELL ST	Climbing Lane	Protected BL	Yes
LAMAR BLVD	TREADWELL ST	MANCHACA RD	Bike Lane	Protected BL	Yes
LAMAR BLVD	MANCHACA RD	S CAPITAL OF TEXAS HWY SVRD NB	Shared Lane	Protected BL	Yes
LAMPLIGHT VILLAGE AVE	EQUESTRIAN TRL	LAMPLIGHT VILLAGE CIR	Shared Lane	Protected BL	Yes
LAMPLIGHT VILLAGE AVE	LAMPLIGHT VILLAGE CIR	W PARMER LN	Bike Lane	Protected BL	Yes
LAMPLIGHT VILLAGE AVE	W PARMER LN	METRIC BLVD	Bike Lane	Buffered BL	
LANCASTER DR	E 51ST ST	BARBARA JORDAN BLVD	Bike Lane	Shared Lane	
LANCASTER DR	BARBARA JORDAN BLVD	PHILOMENA ST	Shared Lane	Shared Lane	
LATTA DR	CONVICT HILL RD	ISLANDER DR	Bike Lane	Protected BL	Yes
LATTA DR	ISLANDER DR	COPANO DR	Bike Lane	Buffered BL	
LATTA DR	COPANO DR	DAVIS LN	Bike Lane	Bike Lane	
LAVACA ST	W MARTIN LUTHER KING JR BLVD	S 1ST ST	Buffered BL	Protected BL	Yes
LAZY LN	BECKETT ST	WOOTEN DR	Wide Curb Lane	Buffered BL	
LEDESMA RD	SPRINGDALE RD	TERRY DR	Wide Curb Lane	Bike Lane	
LEGENDARY DR	RIATA VISTA CIR N	RIATA VISTA CIR S	Bike Lane	Buffered BL	
LEMON DR	PONCIANA DR	JACARANDA DR	Wide Curb Lane	Buffered BL	Yes
LEMONWOOD DR	SPRUCEWOOD DR	BACKTRAIL DR	Wide Curb Lane	Bike Lane	
LEO ST	CAMERON LOOP	DAVIS LN	Wide Curb Lane	Buffered BL	
LEO ST	DAVIS LN	GUIDEPOST TRL	Shared Lane	Buffered BL	
LERALYNN ST	W NORTH LOOP BLVD	W 51ST ST	Wide Curb Lane	Bike Lane	
LEVANDER LOOP	E 7TH ST	US 183 S	Shared Lane	Bike Lane	
LIGHTSEY RD	DEL CURTO RD	CLAWSON RD	Shared Lane	Bike Lane	
LIGHTSEY RD	S 1ST ST	S CONGRESS AVE	Bike LanePK	Protected BL	Yes
LINDELL LN	DECKER LN	BLUE BLUFF RD	Shared Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
LITTIG RD	KIMBRO RD	PARSONS RD	Wide Curb Lane	Bike Lane	
LITTLE TEXAS LN	S CONGRESS AVE	S IH 35 SVRD SB	Shared Lane	Buffered BL	
LIVE OAK ST	S 5TH ST	S CONGRESS AVE	Wide Curb Lane	Bike Lane	Yes
LIVE OAK ST	S CONGRESS AVE	POST RD	Wide Curb Lane	Protected BL	Yes
LIVE OAK ST	POST RD	EAST SIDE DR	Shared Lane	Protected BL	Yes
LIVE OAK ST	EAST SIDE DR	SCHRIBER ST	Bike LanePK	Protected BL	Yes
LIVE OAK ST	SCHRIBER ST	S IH 35 SVRD SB	Protected BL	Protected BL	Yes
LOCKWOOD RD	TAYLOR LN	LAKE MICHIGAN DR	Shared Lane	Bike Lane	
LONG BOW LN	S CONGRESS AVE	EAST SIDE DR	Wide Curb Lane	Bike Lane	
LONGHORN BLVD	N MOPAC EXPY SVRD SB	NEILS THOMPSON DR	No Road	Future Alignment	
LONGHORN BLVD	NEILS THOMPSON DR	BUSINESS DR	Wide Curb Lane	Bike Lane	
LONGHORN BLVD	BUSINESS DR	BURNET RD	Wide Curb Lane	Buffered BL	
LONGVIEW RD	PLANTATION RD	CAMERON LOOP	Shared Lane	Quiet Street	Yes
LORETO DR	E MARTIN LUTHER KING JR BLVD	E 17TH ST	Shared Lane	Quiet Street	Yes
LOS CIELOS BLVD	PEARCE LN	BUENOS AIRES PKWY	Wide Curb Lane	Bike Lane	
LOS INDIOS TRL	DALLAS DR	MC NEIL DR	Wide Curb Lane	Buffered BL	
LOST CREEK BLVD	BARTON CREEK BLVD	BEND OF THE RIVER DR	Shared Lane	Bike Lane	
LOST CREEK BLVD	BEND OF THE RIVER DR	MAUNA KEA DR	Bike LanePK	Bike Lane	
LOST CREEK BLVD	MAUNA KEA DR	QUAKER RIDGE DR	Bike LanePK	Buffered BL	
LOST CREEK BLVD	QUAKER RIDGE DR	S CAPITAL OF TEXAS HWY SB	Bike LanePK	Protected BL	
LOST HORIZON DR	RAIN CREEK PKWY	RAIN CREEK PKWY	Wide Shoulder	Shared Lane	
LOST OASIS HOLW	REYNOSA DR	GREEN EMERALD TER	Wide Curb Lane	Bike Lane	
LOYOLA LN	NORTHEAST DR	MILLIKIN CV	Wide Curb Lane	Bike Lane	
LOYOLA LN	MILLIKIN CV	ED BLUESTEIN BLVD NB	Wide Curb Lane	Buffered BL	
LOYOLA LN	ED BLUESTEIN BLVD NB	DECKER LAKE RD	Bike Lane	Protected BL	
LUNAR DR	W WILLIAM CANNON DR	W DITTMAR RD	Wide Curb Lane	Bike Lane	
LYNCH LN	THRASHER LN	VARGAS RD	Shared Lane	Bike Lane	
LYNDHURST ST	LAKELINE BLVD	LAKELINE MALL DR	Shared Lane	Protected BL	
LYONS RD	WEBBERVILLE RD	SPRINGDALE RD	Wide Curb Lane	Bike Lane	Yes
LYONS RD	SPRINGDALE RD	GULLETT ST	Shared Lane	Quiet Street	Yes
MACMORA RD	TOPPERWEIN DR	MEARNS MEADOW BLVD	Shared Lane	Quiet Street	Yes
MADRONA DR	PERRY LN	GLEN ROSE DR	Shared Lane	Buffered BL	
MAHA LOOP RD	MARTIN LN	BURKLUND FARMS RD	No Road	Future Alignment	
MAHA LOOP RD	BURKLUND FARMS RD	EILERS RD	Shared Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
MAHA LOOP RD	BURKLUND FARMS RD	EXISTING MAHA LOOP RD	No Road	Future Alignment	
MAIRO ST	S 1ST ST	PEACEFUL HILL LN	Wide Curb Lane	Bike Lane	
MALVERN HILL DR	MANASSAS DR	MANCHACA RD	Wide Curb Lane	Bike Lane	
MANASSAS DR	WEST GATE BLVD	SEMINARY RIDGE DR	Wide Curb Lane	Bike Lane	
MANASSAS DR	WHISPERING WINDS DR	MALVERN HILL DR	Wide Curb Lane	Bike Lane	
MANCHACA RD	S LAMAR BLVD	MATTHEWS LN	Shared Lane	Protected BL	Yes*
MANCHACA RD	MATTHEWS LN	RAVENSCROFT DR	Wide Shoulder	Protected BL	Yes
MANCHACA RD	RAVENSCROFT DR	W FM 1626 RD	Wide Curb Lane	Protected BL	
MANOR RD	CLYDE LITTLEFIELD DR	N IH 35 SVRD NB	Shared Lane	Protected BL	Yes
MANOR RD	N IH 35 SVRD NB	POQUITO ST	Shared Lane with Sharrows	Protected BL	Yes
MANOR RD	POQUITO ST	PERSHING DR	Bike Lane	Protected BL	Yes
MANOR RD	PERSHING DR	LOVELL DR	Buffered BL	Protected BL	Yes
MANOR RD	LOVELL DR	MANOR CIR	Bike Lane	Protected BL	Yes
MANOR RD	MANOR CIR	SPRINGDALE RD	Shared Lane	Protected BL	
MAPLEWOOD AVE	ASHWOOD RD	E 38TH HALF ST	Wide Curb Lane	Bike Lane	
MARIA ANNA RD	NORTHWOOD RD	HILLVIEW GREEN LN	Wide Curb Lane	Bike Lane	
MARQUETTE LN	MIRA LOMA LN	COLUMBIA DR	Wide Curb Lane	Bike Lane	
MARTIN LUTHER KING JR BLVD	N LAMAR BLVD	PEARL ST	Climbing Lane	Protected BL	Yes
MARTIN LUTHER KING JR BLVD	PEARL ST	RED RIVER ST	Bike Lane	Protected BL	Yes*
MARTIN LUTHER KING JR BLVD	RED RIVER ST	TANNEHILL LN	Shared Lane	Protected BL	
MARY ST	S LAMAR BLVD	S CONGRESS AVE	Bike Lane	Protected BL	Yes
MARY ST	S CONGRESS AVE	BRACKENRIDGE ST	Bike LanePK	Buffered BL	Yes
MASON DELLS LN	CURRIN LN	KINGSGATE DR	Wide Curb Lane	Bike Lane	
MATTHEWS DR	SCENIC DR	WINDSOR RD	Shared Lane	Bike Lane	
MATTHEWS DR	WINDSOR RD	STEVENSON AVE	Wide Curb Lane	Bike Lane	
MATTHEWS DR	STEVENSON AVE	KENNELWOOD RD	Shared Lane	Bike Lane	
MATTHEWS LN	TWISTED OAKS DR	MANCHACA RD	Shared Lane	Buffered BL	
MATTHEWS LN	MANCHACA RD	WOODHUE DR	Wide Curb Lane	Buffered BL	
MATTHEWS LN	WOODHUE DR	FOREST WOOD RD	Shared Lane	Buffered BL	
MATTHEWS LN	FOREST WOOD RD	COOPER LN	Wide Curb Lane	Buffered BL	
MATTIE ST	PHILOMENA ST	SIMOND AVE	Shared Lane	Shared Lane	
MATTIE ST	SIMOND AVE	MC CLOSKEY ST	Shared Lane	Shared Lane	
MATTIE ST	ANTONE ST	TOM MILLER ST	Shared Lane	Shared Lane	
MC ANGUS RD	S FM 973 RD	HEINE FARM RD	Shared Lane	Bike Lane	
MC CALLEN PASS	W HOWARD LN	E PARMER LN	Wide Curb Lane	Buffered BL	
MC CALLEN PASS	E PARMER LN	CANYON RIDGE DR	Shared Lane	Shared Lane	
MC CARTY LN	W US 290 HWY	BECKETT RD	Shared Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
MC CLOSKEY ST	PINCKNEY ST	MENDEZ ST	Shared Lane	Shared Lane	
MC KINNEY FALLS PKWY	S US 183 HWY SB	E WILLIAM CANNON DR	Shared Lane	Protected BL	
MC KINNEY FALLS PKWY	E WILLIAM CANNON DR	THAXTON RD	Shared Lane	Buffered BL	
MC NEIL DR	N US 183 HWY SVRD SB	TECHNOLOGY BLVD	Shared Lane	Protected BL	
MC NEIL DR	TECHNOLOGY BLVD	W PARMER LN	Bike Lane	Protected BL	
MC NEIL DR	W PARMER LN	MC NEIL RD	Shared Lane	Protected BL	
MC NEIL RD	W MESSICK LOOP	N SH 45 W SVRD WB	Shared Lane	Protected BL	
MC NEIL RD	N SH 45 W SVRD WB	MC NEIL DR	Wide Shoulder	Protected BL	
MEADOW LAKE BLVD	E WILLIAM CANNON DR	MISTY SLOPE LN	Wide Curb Lane	Buffered BL	
MEADOWHEATH DR	HYMEADOW DR	BROADMEADE AVE	Shared Lane	Bike Lane	
MEARNS MEADOW BLVD	BOYER BLVD	MACMORA RD	Wide Curb Lane	Bike Lane	
MEARNS MEADOW BLVD	MACMORA RD	PARKFIELD DR	Wide Curb Lane	Quiet Street	Yes
MEDICAL ARTS ST	RED RIVER ST	E DEAN KEETON ST	Shared Lane	Protected BL	Yes
MEDICAL PKWY	BURNET RD	W 34TH ST	Bike Lane	Buffered BL	
MELRIDGE PL	ROBERT E LEE RD	BLUEBONNET LN	Protected BL	Protected BL	Yes
MELROSE TRL	CORPUS CHRISTI DR	HEINEMANN DR	Wide Curb Lane	Bike Lane	
MENDEZ ST	MC CLOSKEY ST	ANTONE ST	Shared Lane	Shared Lane	
MERRILLTOWN DR	BRATTON LN	TOWN HILL DR	Bike LanePK	Protected BL	Yes
MERRILLTOWN DR	TOWN HILL DR	W WELLS BRANCH PKWY	Bike LanePK	Buffered BL	
MERRIWOOD DR	FLOURNOY DR	EBERHART LN	Wide Curb Lane	Wide Curb Lane	
MESA DR	JOLLYVILLE RD	SPICEWOOD SPRINGS RD	Bike LanePK	Buffered BL	Yes
MESA DR	SPICEWOOD SPRINGS RD	GREYSTONE DR	Bike LanePK	Protected BL	Yes
MESA DR	GREYSTONE DR	CROSS VALLEY RUN	Bike LanePK	Buffered BL	
MESA DR	CROSS VALLEY RUN	FM 2222 RD	Shared Lane	Buffered BL	
METRIC BLVD	W HOWARD LN	CEDAR BEND DR	Bike Lane	Protected BL	
METRIC BLVD	CEDAR BEND DR	BITTERN HOLW	Shared Lane	Protected BL	Yes*
METRIC BLVD	BITTERN HOLW	KRAMER LN	Bike Lane	Protected BL	Yes
METRIC BLVD	KRAMER LN	RUTLAND DR	Shared Lane	Protected BL	
METRIC BLVD	RUTLAND DR	RESEARCH BLVD SVRD NB	Bike Lane	Protected BL	
MIDDLE FISKVILLE RD	E BRAKER LN	E GRADY DR	Shared Lane	Quiet Street	Yes
MIDDLE FISKVILLE RD	E HUNTLAND DR	E KOENIG LN SVRD WB	Shared Lane	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
MIDDLE FISKVILLE RD	AIRPORT BLVD	BRUNING AVE	Shared Lane	Quiet Street	Yes
MILLWRIGHT PKWY	LAKE CREEK PKWY	ANDERSON MILL RD	Bike Lane	Bike Lane	
MIRA LOMA LN	MARQUETTE LN	PATTON LN	Wide Curb Lane	Bike Lane	
MISSION OAKS BLVD	REPUBLIC OF TEXAS BLVD	SOUTHWEST PKWY	Wide Curb Lane	Buffered BL	
MISTING FALLS TRL	FLORAL PARK DR	MORADO CIR	Wide Curb Lane	Buffered BL	
MONACO DR	Trail Connection (Riviera to Monaco)	Trail Connection (Monaco to Lakeline)	Shared Lane	Quiet Street	Yes
MONITOR DR	SEMINARY RIDGE DR	Manchaca to Monitor Trail	Shared Lane	Quiet Street	Yes
MONTEREY OAKS BLVD	W US 290 HWY SVRD WB	W US 290 HWY SVRD EB	Wide Curb Lane	Buffered BL	Yes
MONTEREY OAKS BLVD	W US 290 HWY SVRD EB	BRUSH COUNTRY RD	Shared Lane	Buffered BL	Yes
MONTEREY OAKS BLVD	BRUSH COUNTRY RD	S MOPAC EXPY SVRD SB	Shared Lane	Protected BL	
MONTOPOLIS DR	BASTROP HWY SVRD SB	E STASSNEY LN	Shared Lane	Protected BL	
MOORE RD	S FM 973 RD	BURKLUND FARMS RD	Wide Curb Lane	Bike Lane	
MOPAC	N MOPAC EXPY SB	N MOPAC EXPY SVRD SB	Shared Lane	Urban Trail	
MOPAC	N MOPAC EXPY SVRD SB	N MOPAC EXPY SVRD SB	Shared Lane	Urban Trail	
MOPAC	N MOPAC EXPY SVRD SB	N MOPAC EXPY SB	Wide Shoulder	Urban Trail	
MOPAC	S MOPAC EXPY NB	S MOPAC EXPY NB	Shared Lane	Urban Trail	
MOPAC	S MOPAC EXPY NB	S MOPAC EXPY SVRD NB	Bike Lane	Urban Trail	
MOPAC	S MOPAC EXPY SVRD NB	S CAPITAL OF TEXAS HWY NB	Shared Lane	Urban Trail	
MOPAC	S CAPITAL OF TEXAS HWY NB	W US 290 HWY SVRD WB	Wide Shoulder	Urban Trail	
MOPAC	W US 290 HWY SVRD WB	S MOPAC EXPY SVRD NB	Wide Curb Lane	Urban Trail	Yes
MOPAC	S MOPAC EXPY SVRD NB	ARCHELETA BLVD	Wide Shoulder	Urban Trail	Yes*
MORADO CIR	MISTING FALLS TRL	JOLLYVILLE RD	Shared Lane	Protected BL	
MORGAN LN	CLAWSON RD	BANISTER LN	Shared Lane	Bike Lane	
MORROW ST	HARDY DR	TISDALE DR	Wide Curb Lane	Bike Lane	
MORROW ST	TISDALE DR	N LAMAR BLVD NB	Shared Lane	Bike Lane	Yes
MORROW ST	N LAMAR BLVD NB	GUADALUPE ST	Bike Lane	Bike Lane	
MOUNT BONNELL DR	MOUNT BONNELL RD	EDGEMONT DR	Wide Curb Lane	Bike Lane	
MOUNT BONNELL RD	FM 2222 RD	TORTUGA TRL	Wide Curb Lane	Bike Lane	
MOUNT BONNELL RD	TORTUGA TRL	FALL TRL	Wide Shoulder	Bike Lane	

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MOUNT BONNELL RD	FALL TRL	W 35TH ST	Wide Curb Lane	Bike Lane	
MOUNT VERNON DR	CASEY ST	W ST ELMO RD	Shared Lane	Quiet Street	Yes
MOUNT VERNON DR	W ST ELMO RD	REDD ST	Wide Curb Lane	Bike Lane	
MOUNTAIN RIDGE DR	N CAPITAL OF TEXAS HWY NB	HYRIDGE DR	Wide Curb Lane	Bike Lane	
MUELLER BLVD	E 51ST ST	BARBARA JORDAN BLVD	Protected BL	Protected BL	Yes
MUELLER BLVD	BARBARA JORDAN BLVD	ALDRICH ST	Shared Lane	Protected BL	Yes
MULLEN DR	TEAKWOOD DR	WOOTEN PARK DR	Wide Curb Lane	Quiet Street	Yes
MUSTANG CHASE	YETT CREEK TRAIL	DUVAL RD	Shared Lane	Bike Lane	
NASH HERNANDEZ SR RD	EAST AVE	CHICON ST	Wide Curb Lane	Bike Lane	
NASH HERNANDEZ SR RD	CHICON ST	ROY AND ANN BUTLER TRAIL	Shared Lane	Bike Lane	
NASSAU DR	BRIARCLIFF BLVD	NORTHRIDGE DR	Wide Curb Lane	Bike Lane	
NATICK LN	LA CROSSE AVE	NEEDHAM LN	Wide Curb Lane	Bike Lane	
NAVASOTA ST	E 14TH ST	E 11TH ST	Wide Curb Lane	Bike Lane	
NEEDHAM LN	ESCARPMENT BLVD	SOUTH BAY LN	Shared Lane	Bike Lane	
NEENAH AVE	W PARMER LN	OLIVE HILL DR	Shared Lane	Bike Lane	
NEENAH AVE	OLIVE HILL DR	END OF ROAD	Wide Curb Lane	Bike Lane	
NEENAH AVE	END OF ROAD	CITY LIMITS	No Road	Bike Lane	
NEILS THOMPSON DR	LONGHORN BLVD	INDUSTRIAL TER	Wide Curb Lane	Bike Lane	
NEILS THOMPSON DR	INDUSTRIAL TER	UT PICKLE CONNECTOR	Wide Curb Lane	Bike Lane	
NELLIE ST	NEWTON ST	S CONGRESS AVE	Wide Curb Lane	Bike Lane	
NESBIT DR	WEST GATE BLVD	SANFORD DR	Wide Curb Lane	Bike Lane	
New Bridge at Lady Bird Lake	TO BE DETERMINED		No Road	Bridge	Yes
NEWNING AVE	ACADEMY DR	E ANNIE ST	Shared Lane	Bike Lane	
NEWTON ST	NELLIE ST	W JOHANNA ST	Wide Curb Lane	Bike Lane	
NILES RD	HARTFORD RD	PEASE RD	Wide Curb Lane	Bike Lane	
NILES RD	PEASE RD	WEST LYNN ST	Wide Curb Lane	Buffered BL	
NORTH CREEK DR	ROCK HOLLOW LN	E RUNDBERG LN	Shared Lane	Bike Lane	
NORTH HAMPTON DR	NORTHEAST DR	WHELESS LN	Wide Curb Lane	Buffered BL	
NORTH HAMPTON DR	WHELESS LN	WELLINGTON DR	Shared Lane	Bike Lane	
NORTH HILLS DR	HART LN	N MOPAC EXPY SVRD SB	Wide Curb Lane	Buffered BL	
NORTH LAKE CREEK PKWY	LAKELINE BLVD	N FM 620 RD NB	Bike Lane	Protected BL	Yes
NORTH LOOP BLVD	HANCOCK DR	N LAMAR BLVD	Bike Lane	Protected BL	Yes
NORTH LOOP BLVD	N LAMAR BLVD	GUADALUPE ST	Buffered BL	Protected BL	Yes

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NORTH LOOP BLVD	GUADALUPE ST	AVENUE F	Bike Lane	Protected BL	Yes
NORTH PLATT RIVER DR	BILBROOK PL	WATCHFUL FOX DR	Wide Curb Lane	Bike Lane	
NORTH PLZ	E RUNDBERG LN	PARK PLZ	Wide Curb Lane	Protected BL	Yes
NORTHCREST BLVD	W ANDERSON LN WB	PRINCE DR	Wide Curb Lane	Buffered BL	Yes
NORTHCREST BLVD	PRINCE DR	W CRESTLAND DR	Bike LanePK	Buffered BL	Yes
NORTHCREST BLVD	W CRESTLAND DR	W ST JOHNS AVE	Shared Lane	Buffered BL	Yes
NORTHCROSS DR	FOSTER LN	BURNET RD	Shared Lane	Buffered BL	
NORTHEAST DR	E US 290 HWY SVRD EB	NORTH HAMPTON DR	Wide Curb Lane	Buffered BL	
NORTHEAST DR	NORTH HAMPTON DR	BETTY COOK DR	Bike LanePK	Bike Lane	
NORTHEAST DR	BETTY COOK DR	MANOR RD	Wide Curb Lane	Bike Lane	
NORTHLAND DR	PARKCREST DR	BALCONES DR	Shared Lane	Urban Trail	
NORTHLAND DR	BALCONES DR	SHOAL CREEK BLVD	Shared Lane	Protected BL	
NORTHRIDGE DR	REINLI ST	NASSAU DR	Shared Lane	Bike Lane	
NORTHRIDGE DR	NASSAU DR	BELFAST DR	Wide Curb Lane	Bike Lane	
NORTHWOOD RD	WADE AVE	MARIA ANNA RD	Wide Curb Lane	Bike Lane	
NORTHWOOD RD	N MOPAC EXPY	JEFFERSON ST	Bike Lane	Buffered BL	
NORTHWOOD RD	JEFFERSON ST	HARRIS BLVD	Wide Curb Lane	Buffered BL	
NORWOOD LN	END OF ROAD	E SH 71 EB	Wide Curb Lane	Bike Lane	
NUCKOLS CROSSING RD	E ST ELMO RD	S PLEASANT VALLEY RD	Shared Lane	Buffered BL	
NUCKOLS CROSSING RD	THAXTON RD	OLD LOCKHART RD	Shared Lane	Buffered BL	
NUECES ST	GUADALUPE ST	W 26TH ST	Bike Lane	Buffered BL	
NUECES ST	W 26TH ST	W 24TH ST	Bike Lane	Shared Lane	
NUECES ST	W 24TH ST	W MARTIN LUTHER KING JR BLVD	Bike Lane	Shared Lane	
NUECES ST	W MARTIN LUTHER KING JR BLVD	W 6TH ST	Shared Lane	Quiet Street	Yes
NUECES ST	W 6TH ST	W 4TH ST	Wide Curb Lane	Quiet Street	Yes
NUECES ST	W 4TH ST	W 3RD ST	Shared Lane	Quiet Street	Yes
NUECES ST	W 3RD ST	W 2ND ST	Shared Lane	Bike Lane	
NUECES ST	W 2ND ST	W CESAR CHAVEZ ST	No Road	Bike Lane	
OAK KNOLL DR	RESEARCH BLVD SVRD NB	FIREOAK DR	Wide Curb Lane	Buffered BL	
OAK MEADOW DR	SOUTH BROOK DR	W US 290 HWY EB	Wide Curb Lane	Bike Lane	
OAK SPRINGS DR	WEBBERVILLE RD	SPRINGDALE RD	Bike Lane	Buffered BL	Yes
OAK TRL	WALNUT CREEK DR	PLAZA DR	Shared Lane	Bike Lane	
OAK VIEW DR	YAUPON DR	FIREOAK DR	Wide Curb Lane	Bike Lane	

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OAKCLAIRE DR	FLATROCK LN	W US 290 HWY SVRD WB	Wide Curb Lane	Bike Lane	
OAKHURST AVE	BELMONT PKWY	W 29TH ST	Wide Curb Lane	Bike Lane	
OCEANAIRE BLVD	BALCONES CLUB DR	N US 183 HWY SVRD SB	Shared Lane	Buffered BL	
OHLEN RD	BURNET RD	RESEARCH BLVD SVRD SB	Bike Lane	Buffered BL	Yes
OHLEN RD	RESEARCH BLVD SVRD SB	PAYTON GIN RD	Bike Lane	Protected BL	Yes
OLANDER ST	E 14TH ST	E 13TH ST	Shared Lane	Bike Lane	
OLD BEE CAVES RD	THOMAS SPRINGS RD	BEE CAVES TO WILLIAM CANNON CONNECTOR	Wide Curb Lane	Bike Lane	
OLD FREDERICKSBURG RD	W US 290 HWY SVRD EB	VALIANT CIR	Wide Curb Lane	Bike Lane	
OLD FREDERICKSBURG RD	VALIANT CIR	SMITH OAK TRL	Shared Lane	Bike Lane	
OLD FREDERICKSBURG RD	SMITH OAK TRL	WESTCREEK DR	Wide Curb Lane	Bike Lane	
OLD HWY 20	N FM 973 RD	KIMBRO RD	Wide Curb Lane	Buffered BL	
OLD LAMPASAS TRL	TALLEYRAN DR	SPICEWOOD SPRINGS RD	Shared Lane	Buffered BL	
OLD LAMPASAS TRL	SPICEWOOD SPRINGS RD	SCOTLAND WELL DR	Shared Lane	Protected BL	
OLD LOCKHART RD	NUCKOLS CROSSING RD	CECIL ROSETTA CT	Shared Lane	Protected BL	
OLD MANCHACA RD	RIDDLE RD	MANCHACA RD	Shared Lane	Bike Lane	
OLD MANOR RD	COMMERCIAL PARK DR	DAFFAN LN	Wide Curb Lane	Bike Lane	
OLD SAN ANTONIO RD	S IH 35 SVRD SB	E FM 1626 RD	Shared Lane	Shared Lane	
OLD SAN ANTONIO RD	E FM 1626 RD	PURYEAR RD	Shared Lane	Bike Lane	
OLD SAN ANTONIO RD	PURYEAR RD	MANCHACA SPRINGS RD	Wide Curb Lane	Bike Lane	
OLD SPICEWOOD SPRINGS RD	SPICEWOOD SPRINGS RD	ADIRONDACK TRL	Wide Curb Lane	Buffered BL	
OLD WALSH TARLTON	BEE CAVES RD	WILDERNESS DR	Shared Lane	Bike Lane	
OLMOS DR	NORTHERN WALNUT CREEK TRAIL	WALNUT CREEK DR	Shared Lane	Bike Lane	
OLSON DR	ANDERSON MILL RD	SPICEWOOD PKWY	Wide Curb Lane	Buffered BL	
OLTORF ST	S LAMAR BLVD	S IH 35 SVRD SB	Shared Lane	Protected BL	
OLTORF ST	S IH 35 SVRD SB	S IH 35 SVRD NB	Bike Lane	Protected BL	Yes
OLTORF ST	S IH 35 SVRD NB	BURLESON RD	Shared Lane	Protected BL	
OLTORF ST	BURLESON RD	MONTOPOLIS DR	Bike Lane	Protected BL	Yes

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OLTORF ST	WILLOW CREEK DR	MONTOPOLIS DR	Bike Lane	Protected BL	Yes
ONION CREEK PKWY	OLD SAN ANTONIO RD	S IH 35 SVRD SB	No Road	Bike Lane	
ONION CREEK PKWY	S IH 35 SVRD SB	S IH 35 SVRD NB	Shared Lane	Bike Lane	
ONION CREEK PKWY	S IH 35 SVRD NB	PINEHURST DR	Wide Curb Lane	Bike Lane	
ONION ST	E 7TH ST	E 5TH ST	Wide Curb Lane	Bike Lane	
ONION ST	E 5TH ST	END OF ROAD	No Road	Bike Lane	
ONION ST	END OF ROAD	E 4TH ST	Wide Curb Lane	Bike Lane	
ORIOLE DR	E GARRETT RUN	ROCK HOLLOW LN	Shared Lane	Quiet Street	Yes
PACK SADDLE PASS	JONES RD	WESTERN TRAILS BLVD	Wide Curb Lane	Buffered BL	
PACK SADDLE PASS	WESTERN TRAILS BLVD	W BEN WHITE BLVD SVRD WB	Shared Lane	Buffered BL	Yes
PAIGE DR	STRATFORD DR	RILEY RD	Shared Lane	Bike Lane	
PALACE PKWY	W DITTMAR RD	W SLAUGHTER LN	Wide Curb Lane	Bike Lane	
PALMA PLZ	HARTFORD RD	W 14TH ST	Wide Curb Lane	Quiet Street	Yes
PALO BLANCO LN	TERI RD	AINEZ DR	Wide Curb Lane	Bike Lane	
PALO BLANCO LN	AINEZ DR	GEORGE ST EXTENSION	No Road	Bike Lane	
PANTHER TRL	S LAMAR BLVD NB	VICTORY DR	Wide Curb Lane	Buffered BL	Yes
PARK BEND DR	N MOPAC EXPY SVRD SB	RENFERT WAY	Wide Curb Lane	Protected BL	
PARK BEND DR	RENFERT WAY	CEDAR BEND DR	Wide Curb Lane	Buffered BL	
PARK BLVD	DUVAL ST	RED RIVER ST	Wide Curb Lane	Bike Lane	
PARK PLZ	NORTH PLZ	NORTH ACRES BRDIGE	Wide Curb Lane	Protected BL	Yes
PARKCREST DR	NORTHLAND DR	BALCONES DR	Shared Lane	Buffered BL	
PARKER LN	E RIVERSIDE DR	GLEN SPRINGS WAY	Bike LanePK	Protected BL	Yes
PARKER LN	GLEN SPRINGS WAY	ROYAL HILL DR	Wide Curb Lane	Protected BL	Yes
PARKER LN	ROYAL HILL DR	WOODWARD ST	Bike Lane	Protected BL	Yes
PARKFIELD DR	BITTERN HOLW	W BRAKER LN	Bike Lane	Bike Lane	
PARKFIELD DR	W BRAKER LN	MEARNS MEADOW BLVD	Bike Lane	Buffered BL	
PARKFIELD DR	MEARNS MEADOW BLVD	PAYTON GIN RD	Bike Lane	Protected BL	Yes
PARKFIELD DR	PAYTON GIN RD	FAIRFIELD DR	Bike Lane	Bike Lane	
PARKSIDE LN	MANCHACA RD	CANNONWOOD LN	Wide Curb Lane	Bike Lane	
PARLIAMENT PL	SPICEWOOD SPRINGS RD	BARRINGTON WAY	Wide Curb Lane	Buffered BL	
PARMER LN	CITY LIMITS	SPECTRUM DR	Wide Shoulder	Urban Trail	
PARMER LN	SPECTRUM DR	N FM 620 RD SB	Bike Lane	Urban Trail	
PARMER LN	N FM 620 RD NB	AMBERGLEN BLVD	Bike Lane	Urban Trail	
PARMER LN	AMBERGLEN BLVD	DALLAS DR	Bike Lane	Urban Trail	

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PARMER LN	DALLAS DR	CORPUS CHRISTI DR	Wide Shoulder	Urban Trail	
PARMER LN	CORPUS CHRISTI DR	MELROSE TRL	Bike Lane	Urban Trail	
PARMER LN	MELROSE TRL	LEGENDARY DR N	Wide Shoulder	Urban Trail	
PARMER LN	LEGENDARY DR N	LEGENDARY DR S	Bike Lane	Urban Trail	
PARMER LN	LEGENDARY DR S	SILVER CREEK DR	Wide Shoulder	Urban Trail	
PARMER LN	SILVER CREEK DR	AMHERST DR	Bike Lane	Urban Trail	
PARMER LN	AMHERST DR	N IH 35 SVRD NB	Wide Shoulder	Urban Trail	
PARMER LN	N IH 35 SVRD NB	E YAGER LN	Shared Lane	Urban Trail	
PARMER LN	E YAGER LN	END OF ROAD	Wide Curb Lane	Urban Trail	
PARMER LN	END OF ROAD	BLUE BLUFF RD	No Road	Future Alignment	
PARSONS RD	LITTIG RD	LAKE HURON DR	No Road	Bike Lane	
PATTON LN	BERKMAN DR	MIRA LOMA LN	Wide Curb Lane	Buffered BL	
PAYNE AVE	BURNET LN	WOODROW AVE	Wide Curb Lane	Bike Lane	
PAYTON GIN RD	RESEARCH BLVD SVRD NB	GALEWOOD DR	Shared Lane	Protected BL	
PAYTON GIN RD	GALEWOOD DR	N LAMAR BLVD	Bike Lane	Protected BL	Yes*
PEACEFUL HILL LN	W DITTMAR RD	RALPH ABLANEDO DR	Wide Curb Lane	Bike Lane	
PEARCE LN	S FM 973 RD	STONY POINT DR	Wide Curb Lane	Protected BL	
PEARL ST	W 21ST ST	W 21ST ST	Wide Curb Lane	Bike Lane	
PEARSON RANCH RD	AVERY RANCH BLVD	END OF ROAD	Sidewalk	Wide Curb Lane	
PEARSON RANCH RD	END OF ROAD	N FM 620 RD SB	No Road	Future Alignment	
PECAN BROOK DR	MANOR RD	CRYSTALBROOK DR	Wide Curb Lane	Buffered BL	
PECAN CREEK PKWY	LAKE CREEK PKWY	ANDERSON MILL RD	Wide Curb Lane	Bike Lane	
PECAN PARK BLVD	S LAKELINE BLVD	LAKELINE MALL DR	Bike Lane	Bike Lane	
PECAN PARK BLVD	LAKELINE MALL DR	N US 183 HWY SVRD NB	Bike Lane	Buffered BL	
PECAN PARK BLVD	N US 183 HWY SVRD NB	N US 183 HWY SVRD SB	Shared Lane with Sharrows	Buffered BL	
PECAN PARK BLVD	N US 183 HWY SVRD NB	EAST OF N US 183 HWY SVRD NB	Bike Lane	Bike Lane	
PECAN PARK BLVD	EAST OF N US 183 HWY SVRD NB	LAKE CREEK PKWY	Shared Lane with Sharrows	Bike Lane	
PECAN ST	VISION DR	FOOTHILL FARMS LOOP	Wide Shoulder	Protected BL	
PECK AVE	E 41ST ST	E 40TH ST	Wide Curb Lane	Bike Lane	
PECOS ST	W 35TH ST	RIVER RD	Bike LanePK	Buffered BL	
PECOS ST	RIVER RD	TANGLEWOOD TRL	Wide Curb Lane	Buffered BL	
PECOS ST	TANGLEWOOD TRL	ENFIELD RD	Wide Curb Lane	Bike Lane	
PEDERNALES ST	WEBBERVILLE RD	GONZALES ST	Protected BL	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
PEDERNALES ST	GONZALES ST	ROY AND ANN BUTLER TRAIL	NONE	Protected BL	Yes
PEGGOTTY PL	COPPERFIELD TRAIL CONNECTOR	THOMPKINS DR	Wide Curb Lane	Bike Lane	
PEGRAM AVE	VINE ST	ARDATH ST	Wide Curb Lane	Bike Lane	
PEGRAM AVE	ARDATH ST	DAUGHERTY ST	Wide Curb Lane	Protected BL	Yes
PEGRAM AVE	DAUGHERTY ST	BURNET RD	Shared Lane	Protected BL	Yes
PENNSYLVANIA AVE	COMAL ST	CHICON ST	Wide Curb Lane	Bike Lane	
PERRY LN	MADRONA DR	HORSESHOE BND	Shared Lane	Buffered BL	
PERRY LN	HORSESHOE BND	END OF ROAD	Shared Lane	Bike Lane	
PERSHING DR	MANOR RD	E M FRANKLIN AVE	Shared Lane	Bike Lane	
PETERSON RD	FM 812 RD	HOKANSON RD	Shared Lane	Bike Lane	
PFENNIG LN	N HEATHERWILDE BLVD	SWENSON FARMS BLVD	Sidewalk	Trail	Yes
PHILCO DR	ENGLEWOOD DR	S 3RD ST	Shared Lane	Quiet Street	Yes
PHILOMENA ST	LANCASTER DR	MUELLER BLVD	Shared Lane	Shared Lane	
PHILOMENA ST	MUELLER BLVD	DOC REEVES ST	No Road	Shared Lane	
PINCKNEY ST	MC CLOSKEY ST	ANTONE ST	Shared Lane	Shared Lane	
PINEHURST DR	RIVER PLANTATION DR	ONION CREEK PKWY	Wide Curb Lane	Bike Lane	
PINNACLE RD	ALLEN RD	SILVER HILL DR	Shared Lane	Bike Lane	
PINNACLE RD	SILVER HILL DR	DUSKY THRUSH TRL	Bike LanePK	Buffered BL	
PINNACLE RD	DUSKY THRUSH TRL	WALSH TARLTON LN	Shared Lane	Buffered BL	
PIONEER FARMS DR	SPRINKLE CUTOFF RD	E BRAKER LN	Wide Shoulder	Bike Lane	
PLANTATION RD	BRODIE LN	LONGVIEW RD	Shared Lane	Quiet Street	Yes
PLAZA DR	OAK TRL	WEDGEWOOD DR	Wide Curb Lane	Bike Lane	
PLEASANT VALLEY RD	E 12TH ST	NILE ST	Buffered BL	Protected BL	Yes
PLEASANT VALLEY RD	NILE ST	E 7TH ST	Bike Lane	Protected BL	Yes
PLEASANT VALLEY RD	E 7TH ST	E 2ND ST	Shared Lane	Buffered BL	
PLEASANT VALLEY RD	E 2ND ST	S LAKESHORE BLVD	Shared Lane	Protected BL	Yes
PLEASANT VALLEY RD	S LAKESHORE BLVD	E RIVERSIDE DR	Bike Lane	Protected BL	
PLEASANT VALLEY RD	E RIVERSIDE DR	E OLTORF ST	Buffered BL	Protected BL	Yes
PLEASANT VALLEY RD	E OLTORF ST	END OF ROAD	Shared Lane	Bike Lane	
PLEASANT VALLEY RD	END OF ROAD	BURLESON RD	No Road	Bike Lane	
PLEASANT VALLEY RD	E ST ELMO RD	REVERE RD	Bike Lane	Protected BL	Yes
PLEASANT VALLEY RD	REVERE RD	ONION CREEK DR	Shared Lane	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
PLEASANT VALLEY RD	ONION CREEK DR	END OF ROAD	No Road	Protected BL	Yes
PLEASANT VALLEY RD	END OF ROAD	NUCKOLS CROSSING RD	No Road	Future Alignment	
PLEASANT VALLEY RD	NUCKOLS CROSSING RD	E SLAUGHTER LN	No Road	Future Alignment	
PLUTO LN	END OF ROAD	GANYMEDE DR	Shared Lane	Bike Lane	
POLLYANNA AVE	WREN AVE	WHITE WING AVE	Shared Lane	Quiet Street	Yes
POLLYANNA AVE	THRUSH AVE	E BRAKER LN	Shared Lane	Quiet Street	Yes
PONCIANA DR	FREIDRICH LN	LEMON DR	Wide Curb Lane	Buffered BL	
POND SPRINGS RD	N US 183 HWY SVRD NB	N US 183 HWY SVRD NB	Bike Lane	Protected BL	Yes
PRINGLE CIR	HYMAN LN	BRANDT DR	Shared Lane	Bike Lane	
PURYEAR RD	OLD SAN ANTONIO RD	S IH 35 SVRD SB	Shared Lane	Urban Trail	
QUICKSILVER BLVD	BLUFF SPRINGS RD	SILVERSTONE DR	Wide Curb Lane	Bike Lane	
QUICKSILVER BLVD	SILVERSTONE DR	S PLEASANT VALLEY RD	Wide Curb Lane	Bike Lane	
QUINLAN PARK RD	N FM 620 RD	END OF ROAD	Wide Curb Lane	Protected BL	
RABB RD	ROBERT E LEE RD	RAE DELL AVE	Wide Curb Lane	Bike Lane	
RADAM LN	JAMES CASEY ST	S CONGRESS AVE	Shared Lane	Bike Lane	
RAE DELL AVE	RABB RD	BARTON SKWY	Shared Lane	Bike Lane	
RAIN CREEK PKWY	FIREOAK DR	GREAT HILLS TRL	Wide Curb Lane	Wide Curb Lane	
RAINEY ST	DRISKILL ST	RIVER ST	Wide Curb Lane	Protected BL	Yes
RAINEY ST	RIVER ST	CUMMINGS ST	Shared Lane	Protected BL	Yes
RALPH ABLANEDO DR	S 1ST ST	PEACEFUL HILL LN	Wide Curb Lane	Bike Lane	
RALPH ABLANEDO DR	PEACEFUL HILL LN	S CONGRESS AVE	Shared Lane	Bike Lane	
RANDOLPH RD	CLARKSON AVE	MANOR RD	Wide Curb Lane	Bike Lane	
RAVENSCROFT DR	KINGSGATE DR	MANCHACA RD	Wide Curb Lane	Bike Lane	
RAY WOOD DR	CUMBERLAND RD	BARTON SKWY	Wide Curb Lane	Quiet Street	Yes
RED RIVER ST	CLARKSON AVE	E 47TH ST	Shared Lane	Bike Lane	
RED RIVER ST	E 47TH ST	E 46TH ST	Shared Lane	Quiet Street	Yes
RED RIVER ST	E 46TH ST	E 45TH ST	Shared Lane	Buffered BL	
RED RIVER ST	E 45TH ST	PARK BLVD	Bike Lane	Protected BL	
RED RIVER ST	PARK BLVD	E 38TH ST	Shared Lane with Sharrows	Protected BL	
RED RIVER ST	E 38TH ST	KEITH LN	Climbing Lane	Protected BL	
RED RIVER ST	KEITH LN	E MARTIN LUTHER KING JR BLVD	Bike Lane	Protected BL	
RED RIVER ST	E MARTIN LUTHER KING JR BLVD	E 12TH ST	Shared Lane	Protected BL	Yes
RED RIVER ST	E 12TH ST	E 3RD ST	Shared Lane	Protected BL	Yes
RED RIVER ST	E 3RD ST	DAVIS ST	Wide Curb Lane	Protected BL	Yes
REDBUD TRL	BEE CAVES RD	FOREST VIEW DR	Shared Lane	Buffered BL	
REDBUD TRL	FOREST VIEW DR	STRATFORD DR	Wide Curb Lane	Buffered BL	

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REDBUD TRL	STRATFORD DR	LAKE AUSTIN BLVD	Shared Lane	Buffered BL	
REDD ST	PACK SADDLE PASS	MANCHACA RD	Shared Lane	Buffered BL	
REDD ST	MANCHACA RD	DIANE DR	Wide Curb Lane	Buffered BL	
REDD ST	DIANE DR	BANISTER LN	Wide Curb Lane	Bike Lane	
REDD ST	BANISTER LN	MOUNT VERNON DR	Shared Lane	Bike Lane	
REINLI ST	N IH 35 SVRD NB	CAMERON RD	Wide Curb Lane	Bike Lane	
REPUBLIC OF TEXAS BLVD	SENDERO DR	TRAVIS COUNTRY CIR	Bike Lane	Buffered BL	
REPUBLIC OF TEXAS BLVD	TRAVIS COUNTRY CIR	TRAVIS COUNTRY CIR	Wide Curb Lane	Buffered BL	
REPUBLIC OF TEXAS BLVD	TRAVIS COUNTRY CIR	SOUTHWEST PKWY	Shared Lane	Buffered BL	
RETAIL WAY	KRAMER LN	AMY DONOVAN PLZ	Shared Lane	Quiet Street	Yes
REYNOSA DR	LOST OASIS HOLW	CAPISTRANO TRL	Wide Curb Lane	Bike Lane	
RIATA TRACE PKWY	RESEARCH BLVD SVRD NB	RIATA VISTA CIR	Shared Lane	Protected BL	
RIATA VISTA CIR	LEGENDARY DR	LEGENDARY DR	Shared Lane	Buffered BL	
RIDDLE RD	HOWELLWOOD WAY	OLD MANCHACA RD	Shared Lane	Bike Lane	
RIDGELINE BLVD	S LAKELINE BLVD	N FM 620 RD	Shared Lane	Buffered BL	
RIDGEWOOD RD	STRATFORD DR	HATLEY DR	Wide Curb Lane	Bike Lane	
RILEY RD	PAIGE DR	ROLLINGWOOD DR	Shared Lane	Bike Lane	
RIO GRANDE ST	W 30TH ST	W 29TH ST	Shared Lane	Quiet Street	Yes
RIO GRANDE ST	W 29TH ST	W 24TH ST	Bike Lane	Protected BL	Yes
RIO GRANDE ST	W 24TH ST	W MARTIN LUTHER KING JR BLVD	Protected BL	Protected BL	Yes
RIO GRANDE ST	W MARTIN LUTHER KING JR BLVD	W 18TH ST	Shared Lane	Quiet Street	Yes
RIO GRANDE ST	W 18TH ST	W 17TH ST	Wide Curb Lane	Quiet Street	Yes
RIO GRANDE ST	W 17TH ST	W 4TH ST	Shared Lane	Quiet Street	Yes
RIVER PLACE BLVD	FOUR POINTS DR	FM 2222 RD	Bike Lane	Protected BL	
RIVER PLACE BLVD	FM 2222 RD	BIG VIEW DR	Shared Lane	Shared Lane	
RIVER PLANTATION DR	PINEHURST DR	BRADSHAW RD	Wide Curb Lane	Bike Lane	
RIVER ST	BIERCE ST	HOLLY ST	Wide Curb Lane	Protected BL	Yes
RIVERSIDE DR	S LAMAR BLVD NB	METRO CENTER DR	Shared Lane	Protected BL	Yes*
RIVERSIDE DR	METRO CENTER DR	S US 183 HWY SB	Wide Curb Lane	Protected BL	Yes
RIVIERA CIR	Trail Connection (Monaco to Riviera)	S LAKELINE BLVD	Shared Lane	Quiet Street	Yes
ROBBIE DR	HYRIDGE DR	GREENSLOPE DR	Wide Curb Lane	Bike Lane	
ROBERT BROWNING ST	MATTIE ST	BERKMAN DR	Shared Lane	Shared Lane	
ROBERT BROWNING ST	BERKMAN DR	DOC REEVES ST	No Road	Shared Lane	
ROBERT DEDMAN DR	E DEAN KEETON ST	E 23RD ST	Shared Lane	Buffered BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
ROBERT DEDMAN DR	E 23RD ST	RED RIVER ST	Wide Curb Lane	Buffered BL	Yes
ROBERT E LEE RD	BARTON SPRINGS RD	BARTON HILLS DR	Shared Lane	Protected BL	
ROBERT E LEE RD	BARTON HILLS DR	RABB RD	Climbing Lane	Urban Trail	Yes
ROBERT T MARTINEZ JR ST	E 7TH ST	JESSE E SEGOVIA ST	Wide Curb Lane	Bike Lane	
ROCK HOLLOW LN	NORTH CREEK DR	ORIOLE DR	Shared Lane	Quiet Street	Yes
ROCKMOOR AVE	KENNELWOOD RD	CHERRY LN	Wide Curb Lane	Bike Lane	
ROCKWOOD LN	BURNET RD	CROSSCREEK DR	Wide Curb Lane	Buffered BL	
ROCKWOOD LN	CROSSCREEK DR	FOSTER LN	Shared Lane	Buffered BL	
ROGGE LN	SUFFOLK DR	RIDGEMONT DR	Bike Lane	Bike Lane	
ROGGE LN	RIDGEMONT DR	WELLINGTON DR	Bike LanePK	Bike Lane	
ROGGE LN	WELLINGTON DR	MANOR RD	Bike LanePK	Buffered BL	
ROGGE LN	MANOR RD	PRESWYCK DR	Bike LanePK	Bike Lane	
ROGGE LN	PRESWYCK DR	SPRINGDALE RD	Shared Lane	Bike Lane	
ROLAND JOHNSON DR	E ST JOHNS AVE	E HUNTLAND DR	Shared Lane	Protected BL	Yes
ROLLINGWOOD DR	BEE CAVES RD	S MOPAC EXPY SVRD SB	Wide Curb Lane	Buffered BL	
ROMERIA DR	BURNET RD	LAIRD DR	Shared Lane	Bike Lane	Yes
ROMERIA DR	LAIRD DR	ARROYO SECO	Shared Lane	Quiet Street	Yes
ROMERIA DR	ARROYO SECO	WOODROW AVE	Shared Lane	Quiet Street	Yes
ROMERIA DR	WOODROW AVE	N LAMAR BLVD	Wide Curb Lane	Quiet Street	Yes
ROSEWOOD AVE	E 11TH ST	WEBBERVILLE RD	Bike Lane	Protected BL	Yes
ROSS RD	E SH 71 EB	PEARCE LN	Wide Curb Lane	Buffered BL	
ROUNDUP TRL	WESTERN TRAILS BLVD	MANCHACA RD	Shared Lane	Bike Lane	
RUIZ ST	ALDRICH ST	PHILOMENA ST	No Road	Shared Lane	
RUNDBERG LN	BURNET RD	END OF ROAD	No Road	Bike Lane	
RUNDBERG LN	END OF ROAD	METRIC BLVD	Shared Lane	Bike Lane	
RUNDBERG LN	METRIC BLVD	N IH 35 SVRD NB	Shared Lane	Protected BL	
RUNDBERG LN	N IH 35 SVRD NB	DESSAU RD	Shared Lane with Sharrows	Protected BL	
RUNDBERG LN	DESSAU RD	FERGUSON LN	No Road	Future Alignment	
RUNDELL PL	RABB RD	BLUEBONNET LN	Shared Lane	Bike Lane	
RUNNING BIRD LN	SHAG BARK TRL	CEDAR BEND DR	Shared Lane	Bike Lane	
RUSTIC ROCK DR	FOUR IRON DR	SPICEWOOD SPRINGS RD	Bike LanePK	Bike Lane	
RUTHERFORD LN	FURNESS DR	CAMERON RD	Bike Lane	Buffered BL	Yes
RUTHERFORD LN	CAMERON RD	CENTRE CREEK DR	Shared Lane	Protected BL	
RUTHERFORD LN	CENTRE CREEK DR	E ANDERSON LN SVRD WB	Shared Lane	Buffered BL	
RUTLAND DR	BURNET RD	LEDGEWOOD DR	Shared Lane	Protected BL	
RUTLAND DR	LEDGEWOOD DR	PARKFIELD DR	Shared Lane	Buffered BL	

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S 1ST ST	CESAR CHAVEZ ST	BARTON SPRINGS RD	Buffered BL	Protected BL	Yes
S 1ST ST	BARTON SPRINGS RD	LIGHTSEY RD	Shared Lane	Protected BL	
S 1ST ST	LIGHTSEY RD	CARDINAL LN	Shared Lane	PHB / Protected BL	Yes
S 1ST ST	CARDINAL LN	RALPH ABLANEDO DR	Shared Lane	Protected BL	
S 1ST ST	RALPH ABLANEDO DR	W SLAUGHTER LN	Bike Lane	Protected BL	
S 1ST ST	W SLAUGHTER LN	E FM 1626 RD	Shared Lane	Protected BL	Yes
S 3RD ST	W ST ELMO RD	PHILCO DR	Shared Lane	Quiet Street	Yes
S 5TH ST	RAMONA ST	W ANNIE ST	Wide Curb Lane	Quiet Street	Yes
S 5TH ST	W ANNIE ST	CUMBERLAND RD	Shared Lane	Quiet Street	Yes
S 5TH ST	CUMBERLAND RD	BARTON SKWY	Wide Curb Lane	Buffered BL	
S 5TH ST	BARTON SKWY	CARDINAL LN	Wide Curb Lane	Bike Lane	
SAGEBRUSH TRL	WEST GATE BLVD	WESTERN TRAILS BLVD	Shared Lane	Quiet Street	Yes
SALT SPRINGS DR	E WILLIAM CANNON DR	TARA DR	Bike Lane	Buffered BL	
SALT SPRINGS DR	TARA DR	THAXTON RD	Bike Lane	Bike Lane	
SALTILLO LANCE ARMSTRONG BIKEWAY	ONION ST	CONCHO ST	No Road	Quiet Street	Yes
SAMSUNG BLVD	E PARMER LN	SPRINKLE CUTOFF RD	Bike Lane	Bike Lane	
SAMUEL HUSTON AVE	WEBBERVILLE RD	TECHNI CENTER DR	Wide Curb Lane	Buffered BL	
SAN FELIPE BLVD	POND SPRINGS RD	MC NEIL DR	Wide Curb Lane	Bike Lane	
SAN GABRIEL ST	W 26TH ST	W 25TH HALF ST	Wide Curb Lane	Buffered BL	
SAN GABRIEL ST	W 25TH HALF ST	W 24TH ST	Shared Lane	Bike Lane	
SAN GABRIEL ST	W 24TH ST	W 17TH ST	Wide Curb Lane	Buffered BL	
SAN JACINTO BLVD	E 30TH ST	E DEAN KEETON ST	Bike Lane	Protected BL	Yes
SAN JACINTO BLVD	E DEAN KEETON ST	E MARTIN LUTHER KING JR BLVD	Wide Curb Lane	Protected BL	Yes
SAN JACINTO BLVD	E MARTIN LUTHER KING JR BLVD	E CESAR CHAVEZ ST	Bike Lane	Protected BL	
SANDRA MURAIDA WAY	W CESAR CHAVEZ ST	WALTER SEAHOLM DR	NONE	Shared Lane	
SANFORD DR	CROWNSPOINT DR	NESBIT DR	Wide Curb Lane	Bike Lane	
SANTA CRUZ DR	DUVAL RD	BALCONES WOODS DR	Bike LanePK	Buffered BL	
SANTA MARIA ST	ROBERT T MARTINEZ JR ST	PEDERNALES ST	Wide Curb Lane	Bike Lane	
SCENIC BROOK DR	W US 290 HWY	SOUTH BROOK DR	Wide Curb Lane	Bike Lane	
SCENIC DR	PECOS ST	MATTHEWS DR	Wide Curb Lane	Bike Lane	
SCENIC DR	MATTHEWS DR	STEVENSON AVE	Shared Lane	Bike Lane	
SCENIC DR	STEVENSON AVE	KENNELWOOD RD	Wide Curb Lane	Bike Lane	
SCENIC DR	CHERRY LN	BRIDLE PATH	Wide Curb Lane	Bike Lane	

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SCENIC DR	BRIDLE PATH	LAKE AUSTIN BLVD	Shared Lane	Bike Lane	
SCHIEFFER AVE	WILSHIRE BLVD	ZACH SCOTT ST	Shared Lane	Quiet Street	Yes
SCHRIBER ST	E LIVE OAK ST	E OLTORF ST	Wide Curb Lane	Bike Lane	
SCOFIELD FARMS DR	W PARMER LN	SHAG BARK TRL	Shared Lane	Bike Lane	
SCOFIELD RIDGE PKWY	BURNET RD	CAMPESINA DR	Bike Lane	Protected BL	
SCOFIELD RIDGE PKWY	CAMPESINA DR	UTAH FLATS DR	Shared Lane	Protected BL	
SCOFIELD RIDGE PKWY	UTAH FLATS DR	W HOWARD LN	Bike Lane	Protected BL	
SCOTLAND WELL DR	TOPRIDGE DR	WESTERKIRK DR	Wide Curb Lane	Bike Lane	
SCOTLAND WELL DR	WESTERKIRK DR	SPICEWOOD SPRINGS RD	Wide Curb Lane	Buffered BL	
SCOTTISH WOODS TRL	CAMP CRAFT RD	S CAPITAL OF TEXAS HWY	Wide Curb Lane	Bike Lane	
SEMINARY RIDGE DR	MANASSAS DR	MONITOR DR	Wide Curb Lane	Bike Lane	
SEMINARY RIDGE DR	MONITOR DR	CAMERON LOOP	Wide Curb Lane	Quiet Street	Yes
SENDERA MESA DR	LANNA BLUFF LOOP	RAMIES RUN	Shared Lane	Shared Lane	
SENDERA MESA DR	RAMIES RUN	W SLAUGHTER LN	Shared Lane	Bike Lane	
SENDERO HILLS PKWY	LOYOLA LN	FM 969 RD	Wide Curb Lane	Bike Lane	
SESBANIA DR	BRODIE LN	BELLOWS FALLS AVE	Wide Curb Lane	Bike Lane	
SH 130	US 79	US 183	Wide Shoulder	Urban Trail	
SH 45	SH 45 EB	ARCHELETA BLVD	Wide Shoulder	Urban Trail	Yes*
SH 45	S SH 45 E WB	S SH 45 E SVRD WB	NONE	Urban Trail	
SH 45	N FM 620 RD NB	N SH 45 E SVRD WB	Wide Shoulder	Urban Trail	
SH 45	S SH 45 E SVRD WB	S SH 45 E SVRD WB	NONE	Urban Trail	
SH 45	S SH 45 E SVRD WB	S SH 45 E WB	NONE	Urban Trail	
SH 71	STUDY BOUNDARY	W US 290 HWY	Wide Shoulder	Urban Trail	
SH 71	S IH 35	SPIRIT OF TEXAS DR	Shared Lane	Urban Trail	
SH 71	SPIRIT OF TEXAS DR	STUDY BOUNDARY	Wide Shoulder	Urban Trail	
SHADOWOOD DR	OHLEN RD	TEAKWOOD DR	Wide Curb Lane	Quiet Street	Yes
SHADY LN	BOLM RD	GONZALES ST	Shared Lane	Protected BL	Yes
SHADY LN	GONZALES ST	E 5TH ST	Wide Curb Lane	Protected BL	Yes
SHAG BARK TRL	RUNNING BIRD LN	SCOFIELD FARMS DR	Wide Curb Lane	Bike Lane	
SHAKESPEAREAN WAY	SPICEWOOD SPRINGS RD	BARRINGTON WAY	Shared Lane	Bike Lane	
SHENANDOAH DR	GREAT VALLEY DR	S LAKELINE BLVD	Shared Lane	Quiet Street	Yes

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SHERIDAN AVE	REINLI ST	CLAYTON LN	Wide Curb Lane	Bike Lane	
SHOAL CREEK BLVD	RESEARCH BLVD SVRD SB	STECK AVE	Buffered BL	Protected BL	Yes
SHOAL CREEK BLVD	STECK AVE	FOSTER LN	Bike Lane	Protected BL	Yes
SHOAL CREEK BLVD	FOSTER LN	W 40TH ST	Shared Lane	Protected BL	Yes
SHOAL CREEK BLVD	W 40TH ST	W 38TH ST	Bike Lane	Protected BL	Yes
SHOAL CREEK BLVD	W 34TH ST	W 31ST ST	Bike Lane	Bike Lane	
SHOAL CREEK BLVD	N LAMAR BLVD	N LAMAR BLVD	Shared Lane	Bike Lane	
SHORE DISTRICT DR	E RIVERSIDE DR	TOWN CREEK DR	Wide Curb Lane	Buffered BL	Yes
SHREVEPORT DR	HEINEMANN DR	GARFIELD LN	Shared Lane	Bike Lane	
SHROPSHIRE BLVD	THOMPKINS DR	DESSAU RD	Wide Curb Lane	Buffered BL	
SIERRA DR	MESA DR	MOUNTAINCLIMB DR	Shared Lane	Bike Lane	
SILVERMINE DR	W SH 71	SCENIC BROOK DR	Wide Curb Lane	Bike Lane	
SILVERSTONE DR	QUICKSILVER BLVD	QUICKSILVER BLVD	Wide Curb Lane	Bike Lane	
SIMOND AVE	ALDRICH ST	BERKMAN DR	Shared Lane	Shared Lane	
SIMOND AVE	BERKMAN DR	TILLEY ST	No Road	Future Alignment	
SKYVIEW RD	GUADALUPE ST	CHESTERFIELD AVE	Sidewalk and Bridge	Quiet Street	Yes
SKYVIEW RD	CHESTERFIELD AVE	AVENUE F	Shared Lane	Quiet Street	Yes
SLAUGHTER LN	FM 1826 RD	BRODIE LN	Shared Lane	Protected BL	
SLAUGHTER LN	BRODIE LN	S IH 35 SVRD SB	Bike Lane	Protected BL	Yes
SLAUGHTER LN	S IH 35 SVRD SB	OLD LOCKHART RD	Shared Lane	Protected BL	Yes
SLAUGHTER LN	OLD LOCKHART RD	S FM 973 RD	No Road	Future Alignment	
SORIN ST	BERKMAN DR	MUELLER TRAIL	No Road	Future Alignment	
SOUTH BAY LN	WAY LN	GORHAM GLEN LN	Wide Curb Lane	Bike Lane	
SOUTH BROOK DR	DUNKIRK DR	OAK MEADOW DR	Shared Lane	Bike Lane	
SOUTHRIDGE DR	CLAWSON RD	BANISTER LN	Bike Lane	Buffered BL	
SOUTHWEST PKWY	W SH 71	S MOPAC EXPY SVRD SB	Wide Shoulder	Protected BL	Yes*
SPECTRUM DR	END OF ROAD	W PARMER LN	Shared Lane	Urban Trail	
SPEEDWAY	W 46TH ST	W 45TH ST	Shared Lane	Protected BL	Yes
SPEEDWAY	W 45TH ST	W 31ST ST	Bike Lane	Protected BL	Yes
SPEEDWAY	E 31ST ST	E 30TH ST	Bike Lane	Protected BL	Yes
SPEEDWAY	E 30TH ST	E 27TH ST	Shared Lane	Protected BL	Yes
SPEEDWAY	E 27TH ST	E DEAN KEETON ST	Wide Curb Lane	Protected BL	Yes
SPEEDWAY	E DEAN KEETON ST	E 21ST ST	Shared Lane	Protected BL	
SPEEDWAY	E 21ST ST	JESTER CIR	Wide Curb Lane	Protected BL	
SPEEDWAY	JESTER CIR	CONGRESS AVE	Sidewalk	Protected BL	Yes

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SPEER LN	WOODHUE DR	EMERALD FOREST DR	Wide Curb Lane	Bike Lane	
SPEER LN	EMERALD FOREST DR	EBERHART LN	Bike Lane	Bike Lane	
SPICEWOOD CLUB DR	SPICEWOOD PKWY	SPICEWOOD PKWY	Shared Lane	Buffered BL	
SPICEWOOD PKWY	OLSON DR	TOPRIDGE DR	Shared Lane	Buffered BL	
SPICEWOOD PKWY	TOPRIDGE DR	TALLEYRAN DR	Bike LanePK	Bike Lane	
SPICEWOOD PKWY	TALLEYRAN DR	VISTA VIEW DR	Bike LanePK	Buffered BL	
SPICEWOOD SPRINGS RD	N US 183 HWY SVRD SB	PARLIAMENT PL	Shared Lane	Protected BL	
SPICEWOOD SPRINGS RD	PARLIAMENT PL	WEXFORD DR	Wide Curb Lane	Protected BL	
SPICEWOOD SPRINGS RD	WEXFORD DR	SCOTLAND WELL DR	Shared Lane	Protected BL	
SPICEWOOD SPRINGS RD	OLD LAMPASAS TRL	N CAPITAL OF TEXAS HWY SB	Shared Lane	Buffered BL	
SPICEWOOD SPRINGS RD	N CAPITAL OF TEXAS HWY SB	WEST OF MESA DR	Climbing Lane	Protected BL	
SPICEWOOD SPRINGS RD	WEST OF MESA DR	SPICEWOOD LN	Shared Lane	Protected BL	
SPICEWOOD SPRINGS RD	SPICEWOOD LN	N MOPAC EXPY SVRD SB	Bike Lane	Protected BL	
SPICEWOOD SPRINGS RD	N MOPAC EXPY SVRD SB	W ANDERSON LN	Shared Lane	Protected BL	
SPIRIT OF TEXAS DR	HILLCREST FARMS RD	E SH 71 SVRD WB	Shared Lane	Bike Lane	
SPIRIT OF TEXAS DR	E SH 71 SVRD WB	E SH 71 SVRD EB	Wide Curb Lane	Protected BL	
SPIRIT OF TEXAS DR	E SH 71 SVRD EB	FREIGHT LN	Shared Lane	Protected BL	
SPIRIT OF TEXAS DR	FREIGHT LN	RENTAL CAR LN	Shared Lane	Buffered BL	
SPRINGDALE RD	CAMERON RD	E US 290	Shared Lane	Buffered BL	
SPRINGDALE RD	E US 290	OLD MANOR RD	Shared Lane	Protected BL	
SPRINGDALE RD	MANOR RD	E 51ST ST	Shared Lane	Protected BL	
SPRINGDALE RD	E 51ST ST	E CESAR CHAVEZ ST	Bike Lane	Protected BL	Yes
SPRINKLE CUTOFF RD	PIONEER FARMS DR	SPRINKLE RD	Shared Lane	Bike Lane	
SPRINKLE RD	SPRINGDALE RD	FERGUSON LN	Shared Lane	Bike Lane	
SPRUCE CANYON DR	FM 1826 RD	LA CROSSE AVE	Bike Lane	Bike Lane	
SPRUCE CANYON DR	LA CROSSE AVE	SH 45 WB	Bike Lane	Bike Lane	
SPRUCEWOOD DR	DRIFTWOOD DR	LEMONWOOD DR	Shared Lane	Bike Lane	
ST ELMO RD	MOUNT VERNON DR	S 3RD ST	Shared Lane	Quiet Street	Yes
ST ELMO RD	S 3RD ST	S 1ST ST	Wide Curb Lane	Buffered BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
ST ELMO RD	S 1ST ST	S CONGRESS AVE	Bike Lane	Buffered BL	
ST ELMO RD	S CONGRESS AVE	TERRY O LN	Shared Lane	Buffered BL	
ST ELMO RD	TERRY O LN	S IH 35 SVRD SB	Wide Curb Lane	Buffered BL	
ST ELMO RD	S IH 35 SVRD NB	NUCKOLS CROSSING RD	Shared Lane	Buffered BL	
ST JOHNS AVE	EASY WIND DR	N LAMAR BLVD	Shared Lane	Quiet Street	Yes
ST JOHNS AVE	N LAMAR BLVD	CAMERON RD	Shared Lane	Protected BL	Yes
ST JOHNS AVE	CAMERON RD	BERKMAN DR	Buffered BL	Protected BL	Yes
ST JOSEPH BLVD	BURNET RD	HARDY DR	Wide Curb Lane	Buffered BL	
STA AFD HQ TO ED BLUESTEIN	ED BLUESTEIN BLVD NB	TRACOR LN	Shared Lane	Buffered BL	
STAFFORD ST	MANOR RD	ROGERS AVE	Wide Curb Lane	Bike Lane	
STAKED PLAINS DR	STAKED PLAINS LOOP	AVERY RANCH BLVD	Shared Lane	Protected BL	Yes
STAKED PLAINS DR	AVERY RANCH BLVD	LAKELINE BLVD	Wide Curb Lane	Protected BL	Yes
STASSNEY LN	WEST GATE BLVD	MANCHACA RD	Shared Lane	Protected BL	Yes
STASSNEY LN	MANCHACA RD	ROSE HILL CIR	Bike Lane	Protected BL	Yes
STASSNEY LN	ROSE HILL CIR	S CONGRESS AVE	Buffered BL	Protected BL	Yes
STASSNEY LN	S CONGRESS AVE	S IH 35 SVRD SB	Bike Lane	Protected BL	
STASSNEY LN	S IH 35 SVRD SB	TERI RD	Shared Lane	Protected BL	
STASSNEY LN	TERI RD	MONTOPOLIS DR	Shared Lane	Urban Trail	Yes
STECK AVE	ADIRONDACK TRL	MESA DR	Bike Lane	Buffered BL	
STECK AVE	MESA DR	BENT TREE RD	Bike Lane	Protected BL	
STECK AVE	BENT TREE RD	N MOPAC EXPY SVRD SB	Shared Lane	Protected BL	
STECK AVE	N MOPAC EXPY SVRD SB	BURNET RD	Bike Lane	Protected BL	Yes*
STEINER RANCH BLVD	N FM 620 RD	N QUINLAN PARK RD	Wide Curb Lane	Buffered BL	
STEPHEN F AUSTIN DR	VETERANS DR	CESAR CHAVEZ AT STEPHEN F TRN	Bike Lane	Protected BL	Yes
STEVENSON AVE	SCENIC DR	MATTHEWS DR	Wide Curb Lane	Bike Lane	
STILLWOOD LN	BUELL AVE	STECK AVE	Wide Curb Lane	Bike Lane	
STONELAKE BLVD	W BRAKER LN	RESEARCH BLVD SVRD NB	Shared Lane	Buffered BL	
STONLEIGH PL	BLUE MEADOW DR	QUICKSILVER BLVD	Wide Curb Lane	Buffered BL	
STRATFORD DR	REDBUD TRL	RIDGEWOOD RD	Wide Curb Lane	Bike Lane	
STRATFORD DR	RIDGEWOOD RD	BARTON SPRINGS RD	Shared Lane	Bike Lane	
STRATFORD DR	BARTON SPRINGS RD	ANDREW ZILKER RD	Shared Lane	Bike Lane	
STRICKLAND DR	TEXAS OAKS DR	PALACE PKWY	Shared Lane	Bike Lane	
SUFFOLK DR	BELFAST DR	BERKMAN DR	Wide Curb Lane	Bike Lane	
SUMMERSET TRL	FAIR VALLEY TRL	BRUSH COUNTRY RD	Shared Lane	Bike Lane	
SUNDROP VALLEY DR	LA CROSSE AVE	BLUESTAR DR	Shared Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
SUNSET LN	EAST SIDE DR	ALAMEDA DR	Shared Lane	Bike Lane	
SUNSHINE DR	W 49TH ST	N LAMAR BLVD	Bike Lane	Buffered BL	Yes
SUNSTRIP DR	EBERHART LN	W WILLIAM CANNON DR	Wide Curb Lane	Bike Lane	
SWEARINGEN DR	GRACY FARMS LN	W BRAKER LN	Wide Curb Lane	Bike Lane	
TALLEYRAN DR	SPICEWOOD PKWY	OLD LAMPASAS TRL	Wide Curb Lane	Buffered BL	
TALLWOOD DR	HYRIDGE DR	BUSINESS PARK DR	Wide Curb Lane	Bike Lane	
TAMAYO DR	W PARMER LN	DALLAS DR	Wide Curb Lane	Buffered BL	
TANNEHILL LN	E MARTIN LUTHER KING JR BLVD	WEBBERVILLE RD	Bike Lane	Protected BL	Yes
TAYLOR LN	LAKE HURON DR	LAKE MICHIGAN DR	No Road	Bike Lane	
TAYLOR LN	LOCKWOOD RD	FM 969 RD	Wide Shoulder	Buffered BL	
TEAKWOOD DR	SHADOWOOD DR	MULLEN DR	Wide Curb Lane	Quiet Street	Yes
TECH RIDGE BLVD	N IH 35 SVRD SB	CANYON RIDGE DR	Bike Lane	Protected BL	Yes
TECH RIDGE BLVD	CANYON RIDGE DR	E PARMER LN	Bike Lane	Buffered BL	Yes
TECHNI CENTER DR	SAMUEL HUSTON AVE	ED BLUESTEIN BLVD NB	Wide Curb Lane	Buffered BL	
TECHNOLOGY BLVD	MC NEIL DR	RESEARCH BLVD SVRD NB	Bike Lane	Shared Lane	
TERI RD	S IH 35 SVRD NB	E STASSNEY LN	Wide Curb Lane	Protected BL	Yes
TERRY O LN	E ST ELMO RD	E ST ELMO RD	Wide Curb Lane	Buffered BL	
TEXAS OAKS DR	STRICKLAND DR	INDEPENDENCE LOOP	Wide Curb Lane	Bike Lane	
TEXAS OAKS DR	INDEPENDENCE LOOP	W SLAUGHTER LN	Wide Curb Lane	Buffered BL	
TEXAS PLUME RD	D K RANCH RD	YAUPON DR	Wide Curb Lane	Bike Lane	
THAXTON RD	NUCKOLS CROSSING RD	MC KINNEY FALLS PKWY	Wide Curb Lane	Buffered BL	
THAXTON RD	MC KINNEY FALLS PKWY	COULVER RD	Wide Curb Lane	Buffered BL	
THE HIGH RD	TORO CANYON RD	WESTLAKE DR	Shared Lane	Protected BL	
THELMA DR	BILL HUGHES RD	LUNAR DR	Wide Curb Lane	Bike Lane	
THERMAL DR	W WELLS BRANCH PKWY	BENCH MARK DR	Shared Lane	Protected BL	
THERMAL DR	BENCH MARK DR	METRIC BLVD	Wide Curb Lane	Protected BL	
THOMAS SPRINGS RD	CIRCLE DR	W SH 71	Shared Lane	Protected BL	
THOMPKINS DR	E YAGER LN	SHROPSHIRE BLVD	Wide Curb Lane	Buffered BL	
THORNBERRY RD	CARSON CREEK BLVD	CROZIER LN	Shared Lane	Bike Lane	
THRASHER LN	EL MIRANDO ST	LYNCH LN	Shared Lane	Bike Lane	
THRUSH AVE	WHITE WING AVE	POLLYANNA AVE	Shared Lane	Quiet Street	Yes
THURMOND ST	JAMESTOWN DR	N LAMAR BLVD	Shared Lane	Bike Lane	Yes
TILLERY ST	MANOR RD	AIRPORT BLVD	Wide Curb Lane	Bike Lane	
TILLERY ST	OAK SPRINGS DR	E 4TH ST	Bike Lane	Buffered BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
TILLERY ST	E 4TH ST	E CESAR CHAVEZ ST	Bike Lane	Bike Lane	
TILLEY ST	E 51ST ST	MANOR RD	No Road	Protected BL	Yes
TIRADO ST	MIDDLE FISKVILLE RD	N 35 SVRD SB	Shared Lane	Quiet Street	Yes
TISDALE DR	WOOTEN DR	MORROW ST	Wide Curb Lane	Bike Lane	
TODD LN	E BEN WHITE BLVD SVRD WB	E BEN WHITE BLVD SVRD EB	Wide Curb Lane	Protected BL	Yes
TODD LN	E BEN WHITE BLVD SVRD EB	E ST ELMO RD	Shared Lane	Protected BL	Yes
TOPPERWEIN DR	KRAMER LN	MACMORA RD	Shared Lane	Quiet Street	Yes
TOPRIDGE DR	SPICEWOOD PKWY	SCOTLAND WELL DR	Wide Shoulder	Bike Lane	
TORO CANYON RD	WESTLAKE DR	THE HIGH RD	Shared Lane	Protected BL	
TOWN CREEK DR	S LAKESHORE BLVD	SHORE DISTRICT DR	Wide Curb Lane	Protected BL	Yes
TOWN HILL DR	SINGLE TRCE	MERRILLTOWN DR	Shared Lane	Protected BL	Yes
TRAVIS COOK RD	SOUTHWEST PKWY	OLD BEE CAVES RD	Shared Lane	Protected BL	
TRAVIS COUNTRY CIR	TRAVIS GREEN LN	TRAIL WEST DR	Bike Lane	Buffered BL	
TRAVIS COUNTRY CIR	TRAIL WEST DR	REPUBLIC OF TEXAS BLVD	Wide Curb Lane	Buffered BL	
TRAVIS GREEN LN	FOSTER RANCH RD	REPUBLIC OF TEXAS BLVD	Shared Lane	Bike Lane	
TRAVIS HEIGHTS BLVD	E RIVERSIDE DR	E LIVE OAK ST	Wide Curb Lane	Bike Lane	
TRINITY ST	SAN JACINTO BLVD	E MARTIN LUTHER KING JR BLVD	Wide Curb Lane	Protected BL	Yes
TRINITY ST	E MARTIN LUTHER KING JR BLVD	E 12TH ST	Bike Lane	Protected BL	Yes*
TRINITY ST	E 12TH ST	E 5TH ST	Bike Lane	Buffered BL	
TRINITY ST	E 5TH ST	E 4TH ST	Wide Curb Lane	Buffered BL	
TRINITY ST	E 4TH ST	TRINITY TO I35 TRAIL	Wide Curb Lane	Protected BL	Yes
TUDOR HOUSE RD	E WELLS BRANCH PKWY	DESSAU RD	Wide Curb Lane	Buffered BL	
TURK LN	CULLEN LN	S IH 35 SVRD SB	Shared Lane	Bike Lane	
TURTLE CREEK BLVD	EMERALD FOREST DR	S 1ST ST	Wide Curb Lane	Bike Lane	
TURTLE ROCK RD	ANDERSON MILL RD	POND SPRINGS RD	Shared Lane	Bike Lane	
TUSCANY WAY	FERGUSON LN	EXCHANGE DR	Shared Lane	Buffered BL	
TUSCANY WAY	EXCHANGE DR	E US 290 HWY SVRD WB	Wide Curb Lane	Buffered BL	
TUSCANY WAY	E US 290 HWY SVRD WB	E US 290 SVRD EB	Wide Curb Lane	Bike Lane	
TUSCANY WAY	E US 290 SVRD EB	SPRINGDALE RD	No Road	Future Alignment	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
TWIN CREEKS RD	W FM 1626 RD	OLD SAN ANTONIO RD	Shared Lane	Buffered BL	
TWIN OAKS DR	SHOAL CREEK BLVD	VINE ST	Shared Lane	Bike Lane	
TWISTED OAKS DR	WHISPERING WINDS DR	MATTHEWS LN	Shared Lane	Bike Lane	
UNIVERSITY AVE	W 31ST ST	W 30TH ST	Shared Lane	Protected BL	Yes
US 183	LAKELINE BLVD	N MOPAC EXPY	Shared Lane	Urban Trail	
US 183	N MOPAC EXPY	N IH 35	Shared Lane	Protected BL	
US 183	N IH 35	STUDY BOUNDARY	Shared Lane	Urban Trail	
US 290	W US 290 HWY	W US 290 HWY	Shared Lane	Urban Trail	
US 290	W US 290 HWY	W US 290 HWY	NONE	Urban Trail	
US 290	W US 290 HWY	W US 290 HWY EB	Shared Lane	Wide Shoulder	
US 290	W US 290 HWY EB	S LAMAR BLVD SVRD NB	Shared Lane	Urban Trail	
US 290	E US 290 HWY SVRD WB	ED BLUESTEIN BLVD SVRD SB	Shared Lane	Urban Trail	
US 290	ED BLUESTEIN BLVD SVRD SB	ED BLUESTEIN BLVD SVRD NB	Wide Shoulder	Urban Trail	
US 290	ED BLUESTEIN BLVD SVRD NB	E US 290 SVRD EB AT SH 130 TRN	Shared Lane	Urban Trail	
US 290	E US 290 SVRD EB AT SH 130 TRN	E US 290 SVRD WB AT SH 130 TRN	Wide Shoulder	Urban Trail	
US 290	E US 290 SVRD WB AT SH 130 TRN	E US 290 HWY WB	Shared Lane	Urban Trail	
US 290	E US 290 HWY WB	STUDY BOUNDARY	Wide Shoulder	Urban Trail	
VALBURN DR	LADERA NORTE	GREYSTONE DR	Shared Lane	Bike Lane	
VARGAS RD	BASTROP HWY	PONCA ST	Wide Curb Lane	Bike Lane	
VARGAS RD	PONCA ST	E RIVERSIDE DR	Wide Curb Lane	Buffered BL	
VASQUEZ ST	FELIX AVE	VILLITA AVENIDA	Shared Lane	Bike Lane	
VETERANS DR	LAKE AUSTIN BLVD	STEPHEN F AUSTIN DR	Climbing Lane	Protected BL	Yes
VICTORY DR	PANTHER TRL	W BEN WHITE BLVD SVRD WB	Bike Lane	Buffered BL	Yes
VILLITA AVENIDA	VASQUEZ ST	VILLITA CV	Wide Curb Lane	Bike Lane	
VINE ST	PEGRAM AVE	TWIN OAKS DR	Wide Curb Lane	Bike Lane	
VINSON DR	W ST ELMO RD	ABERDEEN DR	Wide Curb Lane	Buffered BL	
VINSON DR	ABERDEEN DR	CARDIFF DR	Bike Lane	Protected BL	Yes
VISION DR	GRAND AVENUE PKWY	W PECAN ST	Wide Curb Lane	Protected BL	
VISTA PARKE DR	WILSON PARKE AVE	N FM 620 RD	Bike Lane	Bike Lane	
VON QUINTUS RD	TIFFANY TRL	SUNFLOWER DR	Shared Lane	Buffered BL	
VON QUINTUS RD	SUNFLOWER DR	BURKLUND FARMS RD	Shared Lane	Bike Lane	
W GUADALUPE ST	N LAMAR BLVD	W 47TH ST	Shared Lane	Protected BL	
W GUADALUPE ST	W 47TH ST	W 46TH ST	Bike Lane	Protected BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
W GUADALUPE ST	W 46TH ST	W 46TH ST	Bike Lane	PHB / Protected BL	Yes
W GUADALUPE ST	W 46TH ST	GUADALUPE ST	Bike Lane	Protected BL	
WALL ST	FERGUSON LN	CROSS PARK DR	Shared Lane	Buffered BL	
WALLER ST	E 7TH ST	E 4TH ST	Wide Curb Lane	Bike Lane	
WALLER ST	E 4TH ST	E CESAR CHAVEZ ST	Bike LanePK	Bike Lane	
WALLER ST	E CESAR CHAVEZ ST	HOLLY ST	Bike LanePK	Buffered BL	
WALLER ST	HOLLY ST	NASH HERNANDEZ SR RD	Wide Curb Lane	Bike Lane	
WALNUT AVE	E 32ND ST	MANOR RD	Shared Lane	Quiet Street	Yes
WALNUT CREEK DR	OAK TRL	OLMOS DR	Shared Lane	Bike Lane	
WALSH TARLTON LN	WILDERNESS DR	PINNACLE RD	Shared Lane	Protected BL	
WALSH TARLTON LN	PINNACLE RD	WATKINS WAY	Bike Lane	Protected BL	
WALSH TARLTON LN	WATKINS WAY	S CAPITAL OF TEXAS HWY SB	Shared Lane	Protected BL	
WALTER SEAHOLM DR	W 3RD ST	W CESAR CHAVEZ ST	No Road	Shared Lane	
WATCHFUL FOX DR	NORTH PLATT RIVER DR	CHAPPELL LN	Wide Curb Lane	Bike Lane	
WATERFORD CENTRE BLVD	RESEARCH BLVD SVRD NB	REID DR	Shared Lane	Bike Lane	
WATERFORD CENTRE BLVD	REID DR	BURNET RD	Shared Lane	Buffered BL	
WATERS PARK RD	ADELPHI LN	N MOPAC EXPY SVRD SB	Shared Lane	Bike Lane	
WAY LN	GEORGIAN OAKS DR	SOUTH BAY LN	Wide Curb Lane	Bike Lane	
WAYMAKER WAY	N CAPITAL OF TEXAS HWY SB	CANONERO DR	Wide Curb Lane	Buffered BL	
WEBBERVILLE RD	TANNEHILL LN	SPRINGDALE RD	Bike Lane	Protected BL	Yes
WEBBERVILLE RD	ROSEWOOD AVE	ZARAGOSA ST	Wide Curb Lane	Buffered BL	
WEBBERVILLE RD	ZARAGOSA ST	PEDERNALES ST	Wide Curb Lane	Protected BL	Yes
WEBBERVILLE RD	PEDERNALES ST	NORTHWESTERN AVE	Wide Curb Lane	Bike Lane	
WEDGEWOOD DR	BERRYWOOD DR	PLAZA DR	Shared Lane	Quiet Street	Yes
WEDGEWOOD DR	PLAZA DR	E BRAKER LN	Wide Curb Lane	Quiet Street	Yes
WELLINGTON DR	GASTON PLACE DR	ROGGE LN	Bike LanePK	Bike Lane	
WELLS BRANCH PKWY	BURNET RD	N IH 35 SVRD SB	Shared Lane	Protected BL	Yes*
WELLS BRANCH PKWY	N IH 35 SVRD NB	EAST OF FM 1825 RD	Bike Lane	Protected BL	Yes
WELLS BRANCH PKWY	EAST OF FM 1825 RD	DRUSILLAS DR	Buffered BL	Protected BL	Yes
WELLS BRANCH PKWY	DRUSILLAS DR	S HEATHERWILDE BLVD	Bike Lane	Protected BL	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
WELLS BRANCH PKWY	S HEATHERWILDE BLVD	TUDOR HOUSE RD	Bike Lane	Buffered BL	
WELLS BRANCH PKWY	IMMANUEL RD	KILLINGSWORTH LN	Wide Curb Lane	Buffered BL	
WELLS PORT DR	GRAND AVENUE PKWY	EMMETT PKWY	Shared Lane	Buffered BL	
WELLS PORT DR	EMMETT PKWY	GAYLORD DR	Bike LanePK	Buffered BL	
WELLS PORT DR	GAYLORD DR	W WELLS BRANCH PKWY	Shared Lane	Buffered BL	
WEST AVE	W 34TH ST	W 31ST ST	Wide Curb Lane	Bike Lane	
WEST AVE	W 31ST ST	W 30TH ST	Wide Curb Lane	Quiet Street	Yes
WEST AVE	W 17TH ST	W 7TH ST	Wide Curb Lane	Wide Curb Lane	
WEST COURTYARD DR	CITY PARK RD	N CAPITAL OF TEXAS HWY	Shared Lane	Wide Shoulder	
WEST DR	FRUTH ST	W 30TH ST	Bike Lane	Protected BL	Yes
WEST GATE BLVD	S LAMAR BLVD SVRD NB	CAMERON LOOP	Shared Lane	Protected BL	
WEST GATE BLVD	CAMERON LOOP	DAVIS LN	Bike Lane	Protected BL	
WEST LYNN ST	NILES RD	W 14TH ST	Wide Curb Lane	Buffered BL	
WEST LYNN ST	W 14TH ST	W 5TH ST	Shared Lane	Quiet Street	Yes
WEST WIND TRL	JONES RD	WEST GATE BLVD	Shared Lane	Quiet Street	Yes
WESTBANK DR	S CAPITAL OF TEXAS HWY	ALLEN RD	Bike LanePK	Protected BL	
WESTBANK DR	ALLEN RD	BEE CAVES RD	Wide Curb Lane	Protected BL	
WESTCREEK DR	W US 290 HWY SVRD EB	BRUSH COUNTRY TRAIL EXTENSION	Shared Lane	Bike Lane	
WESTERN TRAILS BLVD	WEST GATE BLVD	PACK SADDLE PASS	Shared Lane	Protected BL	Yes
WESTLAKE DR	N CAPITAL OF TEXAS HWY SB	RAVINE RIDGE TRL	Wide Curb Lane	Buffered BL	
WESTLAKE DR	RAVINE RIDGE TRL	WESTLAKE PASS	Shared Lane	Protected BL	
WESTLAKE DR	WESTLAKE PASS	WESTLAKE PASS	Shared Lane	Bike Lane	
WESTLAKE DR	WESTLAKE PASS	REDBUD TRL	Shared Lane	Protected BL	
WESTMINSTER DR	GASTON PLACE DR	MANOR RD	Bike LanePK	Bike Lane	
WESTOVER RD	EXPOSITION BLVD	NORTHWOOD RD	Wide Curb Lane	Buffered BL	
WHELESS LN	NORTH HAMPTON DR	MANOR RD	Shared Lane	Buffered BL	Yes
WHISPERING OAKS DR	MANASSAS DR	WHISPERING WINDS DR	Wide Curb Lane	Bike Lane	
WHISPERING WINDS DR	WHISPERING OAKS DR	MANASSAS DR	Shared Lane	Bike Lane	
WHITE HORSE TRL	SHOAL CREEK BLVD	BURNET RD	Wide Curb Lane	Bike Lane	
WHITE ROCK DR	GREAT NORTHERN BLVD	BULLARD DR	Wide Curb Lane	Bike Lane	
WHITE ROCK DR	BULLARD DR	ALLANDALE RD	Wide Curb Lane	Protected BL	Yes
WHITE WING AVE	POLLYANNA AVE	THRUSH AVE	Shared Lane	Quiet Street	Yes
WILDERNESS DR	WALSH TARLTON LN	OLD WALSH TARLTON	Shared Lane	Bike Lane	

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
WILDHORSE	E PARMER LN	N FM 973 RD	No Road	Future Alignment	
WILLAMETTE DR	NORTHEAST DR	LOYOLA LN	Shared Lane	Bike Lane	
WILLIAM CANNON DR	SOUTHWEST PKWY	MC CARTY LN	Shared Lane	Protected BL	Yes*
WILLIAM CANNON DR	MC CARTY LN	S MOPAC EXPY SVRD SB	Bike Lane	Protected BL	
WILLIAM CANNON DR	S MOPAC EXPY SVRD SB	S IH 35 SVRD NB	Shared Lane	Protected BL	
WILLIAM CANNON DR	S IH 35 SVRD NB	MC KINNEY FALLS PKWY	Bike Lane	Protected BL	
WILLIAM CANNON DR	MC KINNEY FALLS PKWY	FM 812 RD	No Road	Future Alignment	
WILLIAM KENNEDY DR	CENTURY PARK BLVD	LOU JOHN ST	Shared Lane	Quiet Street	Yes
WILLOW CREEK DR	WOODLAND AVE	E OLTORF ST	Bike LanePK	Buffered BL	
WILSHIRE BLVD	N IH 35 SVRD NB	BROOKVIEW RD	Wide Curb Lane	Quiet Street	Yes
WILSHIRE BLVD	BROOKVIEW RD	AIRPORT BLVD	Wide Curb Lane	PHB	Yes
WILSON PARKE AVE	END OF ROAD	MUIR PARKE PASS	Shared Lane	Bike Lane	
WILSON PARKE AVE	MUIR PARKE PASS	N FM 620 RD	Buffered BL	Buffered BL	Yes
WILSON ST	W JOHANNA ST	W LIVE OAK ST	Wide Curb Lane	Bike Lane	
WINDSOR RD	MATTHEWS DR	PECOS ST	Shared Lane	Bike Lane	
WINDSOR RD	PECOS ST	EXPOSITION BLVD	Shared Lane	Buffered BL	
WINDSOR RD	EXPOSITION BLVD	SPRING LN	Shared Lane	Protected BL	
WINDSOR RD	SPRING LN	SHARON LN	Bike LanePK	Protected BL	
WINDSOR RD	SHARON LN	HARTFORD RD	Bike Lane	Protected BL	
WINDSOR RD	HARTFORD RD	W 24TH ST	Shared Lane	Protected BL	
WINSTED LN	WINDSOR RD	W 7TH ST	Shared Lane	Buffered BL	
WOLF LN	E SH 71 EB	MEURER LN	Shared Lane	Bike Lane	
WOLF LN	MEURER LN	PEARCE LN	Wide Shoulder	Bike Lane	
WOOD HOLLOW DR	SPICEWOOD SPRINGS RD	FAR WEST BLVD	Shared Lane	Buffered BL	
WOOD HOLLOW DR	FAR WEST BLVD	NORTH HILLS DR	Wide Curb Lane	Buffered BL	
WOODHUE DR	SPEER LN	W WILLIAM CANNON DR	Wide Curb Lane	Bike Lane	
WOODHUE DR	W WILLIAM CANNON DR	MATTHEWS LN	Wide Curb Lane	Buffered BL	
WOODLAND AVE	EAST SIDE DR	S IH 35 SVRD NB	Bike LanePK	Buffered BL	Yes
WOODLAND AVE	S IH 35 SVRD NB	WILLOW CREEK DR	Bike LanePK	Protected BL	Yes
WOODROW AVE	WOOTEN PARK DR	W KOENIG LN	Bike Lane	Buffered BL	Yes
WOODROW AVE	W KOENIG LN	W 49TH ST	Wide Curb Lane	Buffered BL	Yes
WOODWARD ST	S CONGRESS AVE	S IH 35 SVRD NB	Bike Lane	Protected BL	Yes
WOODWARD ST	S IH 35 SVRD NB	E BEN WHITE BLVD SVRD WB	NONE	Protected BL	Yes

Street Name	From	To	Existing Facility	Recommended Facility	All Ages and Abilities Network
WOODWARD ST	E BEN WHITE BLVD SVRD WB	FREIDRICH LN	Wide Curb Lane	Protected BL	
WOOLDRIDGE DR	HARRIS BLVD	NEEDS FOLLOW UP	Wide Curb Lane	Bike Lane	
WOOLDRIDGE DR	GASTON AVE	CLAIRE AVE	Wide Curb Lane	Bike Lane	
WOOTEN DR	MULLEN DR	BURRELL DR	Shared Lane	Shared Lane	
WOOTEN DR	BURRELL DR	TISDALE DR	Wide Curb Lane	Bike Lane	
WOOTEN PARK DR	MULLEN DR	W ANDERSON LN	Shared Lane	Buffered BL	Yes
WORDHAM DR	HOLT DR	CROFTWOOD DR	Wide Curb Lane	Bike Lane	
WREN AVE	POLLYANNA AVE	N IH 35 SVRD SB	Shared Lane	Quiet Street	Yes
WRIGHTWOOD RD	BRADWOOD RD	ASHWOOD RD	Wide Curb Lane	Bike Lane	
WYCLIFF LN	ADELPHI LN	DORSETT RD	Wide Curb Lane	Bike Lane	
WYLDWOOD RD	VIOLET CROWN TRAIL	BRODIE LN	Shared Lane	Bike Lane	
YAGER LN	N LAMAR BLVD	N IH 35 SVRD SB	Shared Lane	Protected BL	
YAGER LN	TECH RIDGE BLVD	THOMPKINS DR	Bike Lane	Protected BL	
YAGER LN	THOMPKINS DR	E PARMER LN	Bike Lane	Buffered BL	
YAGER LN	E PARMER LN	E PARMER LN	Shared Lane	Bike Lane	
YAUPON DR	SPICEWOOD SPRINGS RD	OAK VIEW DR	Shared Lane	Bike Lane	
YAUPON DR	TEXAS PLUME RD	SPICEWOOD SPRINGS RD	Wide Curb Lane	Bike Lane	
YORK BLVD	STONELAKE BLVD	N MOPAC EXPY SVRD SB	Shared Lane	Bike Lane	
ZACH SCOTT ST	AIRPORT BLVD	BERKMAN DR	Bike Lane	Protected BL	Yes
ZACH SCOTT ST	BERKMAN DR	MANOR RD	No Road	Protected BL	Yes

APPENDIX B: PUBLIC INPUT

PUBLIC INPUT PROCESS AND FINDINGS

The City of Austin 2014 Bicycle Plan was created between August 2012 and November of 2014, with input from hundreds of residents through public meetings, presentations, in-person surveys, online surveys, a technical advisory group and a citizen advisory group. The purpose of the public process was to engage as much of the community as possible in the update of the plan.

Public Process

In August 2012, the Green Lane Project awarded the City of Austin a $20,000 grant to update the Bicycle Master Plan. Upon award of the grant, the Green Lane Project contracted with McCann Adams Studio, on behalf of the City, to work toward completion of the update. At the same time, the Public Works Department was working to produce the City's first Urban Trails Master Plan. City staff recognized that an all ages and abilities bicycle network would need to coordinate and link on-street and off-street bicycle facilities. This allowed an opportunity for public information and outreach efforts for both the Bicycle Master Plan and the Urban Trails Master Plan to occur concurrently. The effort, "Your Path to Austin," occurred from October 2013 to April 2014. The City of Austin, in collaboration with Halff and Associations and Civic Collaborations, the consultants working on the Urban Trails Master Plan, sought public feedback on the general concepts of the plans, proposed routes, changes to bicycle programming and more. This feedback was collected using several methods, including but not limited to: a statistically valid telephone survey, surveys from trail users, online public surveys, open houses, focus groups, citizen advisory groups, technical advisory groups, feedback from local organizations and participation in local events.

Technical Advisory Group

Prior to engaging the public, city staff and the consultant teams worked with internal stakeholders through a technical advisory group comprised of representatives of the following City of Austin departments:

- ☐ Austin Fire
- ☐ Austin-Travis County Emergency Services
- ☐ Watershed Protection
- ☐ Austin Police
- ☐ Planning and Development Review
- ☐ Aviation
- ☐ Austin Transportation
- ☐ Austin Resource Recovery
- ☐ Public Works

Citizen Advisory Group

The City created a citizens advisory group to provide citizen feedback on the plan at all stages of development. This group included representatives from the following organizations:

- ☐ The Real Estate Council of Austin
- ☐ The Sierra Club, Austin
- ☐ Austin Chamber of Commerce
- ☐ Heritage Tree Foundation
- ☐ Movability Austin
- ☐ The University of Texas at Austin
- ☐ Downtown Austin Alliance
- ☐ Reconnect Austin
- ☐ Bike Austin
- ☐ Families with Children Task Force
- ☐ Austin B-Cycle
- ☐ Representatives of the bicycling industry

Community-Based Organizations

In addition, multiple groups received presentations and updates regarding the development of these plans. These groups include, but are not limited to, the following:

- ☐ Austin Chamber of Commerce
- ☐ The Real Estate Council of Austin
- ☐ The Trail Foundation
- ☐ Austin Parks Foundation
- ☐ Bicycle Advisory Council
- ☐ Pedestrian Advisory Council
- ☐ Austin Neighborhoods Council, East Chapter

Telephone Survey: 603 respondents

In the fall of 2013, a statistically valid telephone survey was conducted. The survey received feedback from residents in every Austin ZIP code and reflected the same demographics as the City of Austin. 603 people participated in the survey. As discussed in Chapter 2, the survey showed that 2% of Austinites are characterized as 'strong and fearless' cyclists, 15% are considered 'enthused and confident', 39% of participants are described as 'interested but concerned' and 44% are not interested in bicycling at all. The survey demonstrates that more than 55% of Austinites would ride if protected bicycle infrastructure were available.

Austin Urban Trail User Intercept Survey: 189 respondents

During the fall of 2013, City staff conducted trail intercept surveys of trail users. Throughout the week and at various times, City staff approached users on the Shoal Creek, Waller Creek, Johnson Creek, and Roy and Ann Butler trails and requested they complete an online survey.

Online Survey: 2,392 respondents

Additionally, City staff distributed the survey online through email notifications, social media channels including Facebook and Twitter, and other outreach methods. A total of 2,392 responses were received through these efforts. There were 1,400 free response comments coded from our surveys that are summarized in the following section on findings.

Public Hearings

City staff also hosted public hearings at seven public events before the plans were taken to boards and commissions for review. During the public meetings, 86 participants completed a paper questionnaire and 58 completed the same questions offered in an online survey.

Public Meetings for the Development of the 2014 Bicycle Master Plan

DATE	LOCATION	TIME
11/12/13	St. David's Episcopal Church, 301 E. 8th Street	5:30-8:30 p.m.
11/13/13	Lanier High School, 1201 Payton Gin Road	5:30-8:30 p.m.
11/14/13	First Evangelical Free Church, 4220 Monterey Oaks Boulevard	5:30-8:30 p.m.
2/1/14	Millennium Youth Complex, 1156 Hargrave Street	1:30-3:30 p.m.
2/22/14	Rosewood Recreation Center, 2300 Rosewood Avenue	10:00 a.m.-12:00 p.m.
2/22/14	African American Cultural Heritage Festival, Huston-Tillotson, 900 Chicon Street	12:30-4:00 p.m.
4/2/14	One Texas Center, 505 Barton Springs Road	5:30-7:30 p.m.

The first three meetings occurred in November of 2013 and were concurrent with a three-day workshop facilitated by the National Association of City Transportation Officials (NACTO) Cities for Cycling working group. Approximately 100 people attended (88 people signed an attendance sheet). The NACTO delegation consisted of New York City - Department of Transportation Policy Director Jon Orcutt, New York City - Department of Transportation Bike Share Program Director Kate Fillin-Yeh, Portland Bicycle Coordinator Roger Geller, Chicago Senior Transportation Engineer Nathan Roseberry and NACTO Designing Cities Initiative Director David Vega-Barachowitz. The kick-off presentation was centrally located and included an hour-long panel presentation and discussion about best practices and lessons learned from New York City, Portland and Chicago. The November 13th and 14th meetings were held in North and South Austin locations. A summary of these meetings is provided in the Findings section.

On February 1, 2014, staff presented the plans at a town hall meeting in Central East Austin at the Millennium Youth Complex. The event included a children's bicycle rodeo and free bicycle mechanical services as well as safety information from Capital Metro. Attendees were invited to participate in an upcoming event geared to engage families in East Austin in the planning process. Afterwards, City staff attended an African American Cultural Heritage event held annually at Huston-Tillotson University and provided additional outreach and information.

After this preliminary round of public meetings, City staff worked to incorporate the feedback and comments received. On April 3, 2014 staff held an informational meeting at the One Texas Center to provide a summary of the feedback received and to discuss the next steps in the planning process.

Virtual Open House

Those that could not make a public event were encouraged to review the material via a virtual open house hosted online. Sixty-six people who reviewed the material online responded to an online survey with feedback and comments on plan development.

Boards and Commissions

In April 2014, staff attended multiple Austin Boards and Commissions to prepare for Council action in May 2014.

Boards, Commissions, and Council Briefings and Approvals for 2014 Bicycle Master Plan

DATE	MEETING	ACTION
3/3/14	City of Austin and TxDOT Bicycle and Trails Meeting	Briefing
3/10/14	Comprehensive Planning Committee - Planning Commission	Briefing
4/7/14	Pedestrian Advisory Council	Briefing
4/8/14	Urban Transportation Commission	Approved
4/15/14	Bicycle Advisory Council	Briefing
4/16/14	Urban Forestry Board	Approved
4/16/14	Environmental Board	Approved
5/19/14	Parks: Land, Facilities, and Programs Committee	Approved
5/27/14	Parks Board	Approved
6/2/14	City Council Comprehensive Planning & Transportation Committee (CPTC)	Briefing
6/17/14	Codes and Ordinances Subcommittee of Planning Commission	Briefing
6/24/14	Planning Commission (First Hearing)	No Approval
9/16/14	Bicycle Advisory Council - Executive Summary Feedback	Briefing
9/18/14	Urban Transportation Commission (Second Briefing)	Briefing
10/14/14	Planning Commission (Second Hearing)	Approved
10/22/14	City Council - Public Hearing Set	Procedural
11/6/14	City Council - Public Hearing Conducted	Approved

Public Findings

Bike Riding Behavior

- ☐ 41% of adults over 18 years old ride bicycles, even if just seldom.
- ☐ 3% of Austin adults report riding their bicycles on a daily basis.
- ☐ The average distance per ride is 6 miles with men's average distance (at 6.7 miles) significantly higher than women's (4.9 miles). Trip length ranges from less than a mile to 40 miles per ride.

Infrastructure Overview

- ☐ Gaps in the network need to be connected.
- ☐ Desire for protected bicycle lanes throughout the city.
- ☐ Requests for connections to the central city, trails, schools, work and across major highways.
- ☐ Protected bike lanes viewed as a way to allow families to bike together.

Connecting the network

- ☐ Stakeholders consistently called for including safe routes across and along the following roads: Lamar Boulevard, MoPAC (Loop 1), US 183, Congress Avenue, IH-35, SH 360, Burnet Road, East Riverside Drive, South 1st Street, Airport Boulevard, 45th Street.
- ☐ There is also a strong desire to connect trail networks with on-street infrastructure, such as bicycle lanes and protected bicycle lanes.
- ☐ In general, the survey shows that the public is more interested in the installation of protected bicycle lanes than conventional bicycle lanes.

Education

- ☐ The community is interested in increased educational campaigns aimed at cyclists, pedestrians, and drivers on the rules of the road and how new protected bicycle lanes function, particularly the one on Guadalupe Street.
- ☐ More and improved signage, along with increased information available on safe routes, would help novice cyclists better navigate the city. The community also wants to see increased information available about the benefits of cycling on health and traffic congestions.
- ☐ More education will lead to better cyclists, pedestrians and driver behavior, which will lead to safer conditions across town. Calls for increased education often go hand in hand with calls for enforcement and policy.

Policy

- ☐ Comments on policy often overlapped with comments on education and enforcement. Comments on policy centered on creating incentive programs, cyclists' rights on the road, reducing the speed

limits, requiring for bikeways to be built through new apartment complexes, drivers' education and the allocation of licensing fees and taxpayer money.

Enforcement

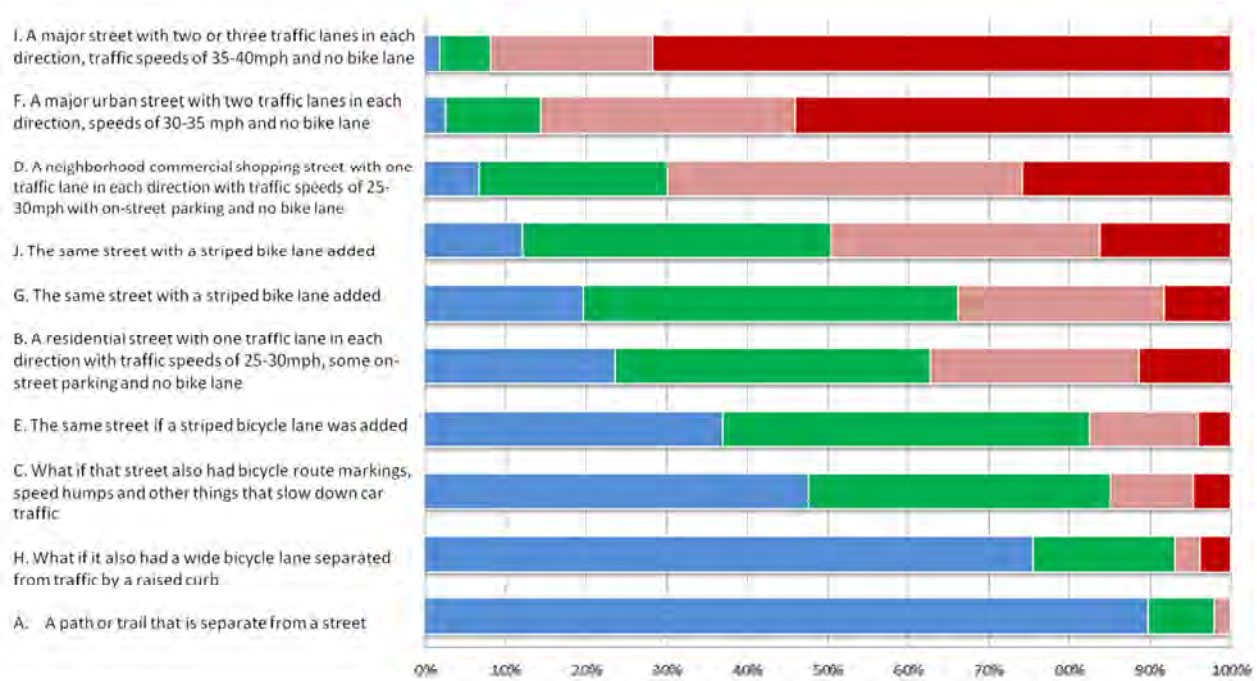
- ☐ There is demand for increased enforcement of the rules of the road on the part of drivers, cyclists, and pedestrians. Calls for enforcement often accompany comments about education and policy.
- ☐ Although there is a call for enforcement of no parking in bike lanes throughout the city, there is a special interest in enforcing this rule, as well as rules that keep pedestrians out of protected bicycle lanes, particularly the newly installed protected bicycle lane on Guadalupe.

Maintenance

- ☐ Lack of maintenance of existing infrastructure is seen as a deterrent to cycling throughout the city because debris or vegetation can force cyclists out of a bicycle lane and into traffic.

User Comfort by Type of Bicycle Facility

Respondents were asked how comfortable they would feel riding a bicycle in a variety of conditions. Responses are summarized in the following table, where red is very uncomfortable, pink is somewhat comfortable, green is comfortable and blue is very comfortable.



Source: City of Austin online survey (structured question with 2,392 respondents)

APPENDIX C: DEFINITIONS

DEFINITIONS

2009 Bicycle Master Plan, the 2009 Plan: Names used to refer to the previous 2009 Bicycle Master Plan.

2014 Bicycle Master Plan, the 2014 Plan, The Plan: Names used throughout the document to refer to this plan.

All ages and abilities bicycle network: A bicycle network that would appeal to people of all ages and abilities, such as the very young and very old. The network is composed of protected bicycle lanes, quiet streets, and urban trails. Reference to the 'short-term' all ages and abilities bicycle network refers to a network of these three types of facilities that could be realistically and cost effectively implemented within the next five years and within the context of existing traffic volumes, on-street parking demands and construction feasibility.

Bicycle: A device that a person may ride and that is propelled by human power and has two tandem wheels at least one of which is more than 14 inches in diameter. (Texas Transportation Code, Chapter 541. Definitions, Subchapter C)

Bicycle boulevard: See Quiet Street.

Bicycle friendly (bikeable): Descriptive term that describes policies, places and practices which provide safe, comfortable, and convenient opportunities for people of all ages and abilities to ride bicycles.

Bicycle lane (conventional bicycle lane, bike lane): An area within the roadway specifically designated for the use of bicycles which is delineated from motor vehicle traffic lanes by a painted line.

Bicycle network: A network of bicycle routes, including protected bicycle lanes, urban trails (multi-use

paths), bikeways, quiet streets (bicycle boulevards), buffered bicycle lanes, bicycle lanes, wide shoulders, designated wide curb lanes, and designated shared lanes.

Bicycle plan implementation charter: A document issued by the Bicycle Program/Active Transportation Program that formally authorizes the existence of the Bicycle Plan and provides the Bicycle Program/Active Transportation Program Manager with the authority to apply organizational resources to project activities. A charter will be produced for each city department outlining the action items in this Bicycle Plan which rely on resources from that department.

Bicycle route: A segment of the bicycle network with appropriate directional and informational markers as designated by the appropriate jurisdiction. These markers specify bicycle route numbers.

Bicycle system: The combination of the bicycle network, integrated transit, and end-of-trip or support facilities, such as bicycle parking, showers and changing facilities.

Bicyclist (cyclist): A person operating a bicycle, often phrased as a person on a bicycle or a person riding a bicycle.

Bikeway (bicycle path, separated bikeway): An area not within the roadway specifically designated for the use of bicycles.

Central City: Area defined by the Bicycle Program/Active Transportation Program, bound roughly by Oltorf Street to the south, Pleasant Valley Road to the east, FM 2222 to the north, and MoPac to the west. Includes the 2000 Travis County Census Tracts 1.01, 2.01, 2.03, 2.04, 3.01, 3.02, 4.01, 4.02, 5.00, 6.01, 6.03, 6.04, 7.00, 8.01, 8.02, 8.03, 8.04, 9.01, 9.02, 10.00, 11.00, 12.00,13.03 , 13.04, 13.05, 14.01, 14.02, 14.03, 16.02, 16.03, 16.04, 16.05, 16.06, 19.01, 19.11, 23.04, 23.15, 23.16

Climbing lane: An area within the roadway specifically designated for the use of bicycles (a bicycle lane) only on the uphill direction of a roadway.

Complete bicycle facility recommendations: Recommendations for all streets in the plan, not filtered by near term feasibility. These recommendations may take many decades to realize and some may never be realized. Recommendations are based on speed, volume criteria and other contextual factors.

Complete street: A street that is designed and operated to enable safe access for users of all ages and abilities and all modes, including, but not limited to people travelling by foot, bicycle, transit and motor vehicle. All users should be able to safely move along and across a complete street.

Electric bicycle: A bicycle that

(a) is designed to be propelled by an electric motor, exclusively or in combination with the application of human power;

(b) cannot attain a speed of more than 20 miles per hour without the application of human power; and

(c) does not exceed a weight of 100 pounds.

(Texas Transportation Code, Chapter 541. Definitions, Subchapter C)

End-of-trip facilities: Supportive facilities for bicycling, such as bicycle parking or shower and changing facilities.

Lane reconfiguration (lane conversion, road diet, lane diet or rightsizing project) A type of roadway conversion project where the number or type of travel lanes are reconfigured. Lane reconfigurations are most commonly performed to improve but are also used to provide turn accommodations or to provide/improve bicycle, pedestrian, or transit facilities.

Motorist: A person operating a motor vehicle.

Multi-use path: See shared use path.

Quiet street (neighborhood greenway, bicycle boulevard): A street on which bicycling and walking are prioritized through techniques including, but not limited to, traffic calming, motor vehicle traffic diversion, reconfiguration of stop signs to favor the corridor, placemaking and crossing improvements at busy cross streets.

Pedestrian: A person on foot (Texas Transportation Code, Chapter 541. Definitions, Subchapter A).

Protected bike lane (protected lane, cycle track): A protected bicycle lane is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A protected bicycle lane is physically separated from motorized traffic and distinct from the sidewalk. Protected bicycle lanes have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed protected bicycle lane are located to the curb-side of the parking (in contrast to conventional bicycle lanes).

Road diet: See lane reconfiguration.

Shared lane: Any travel lane that is 14 feet wide or less that may be legally used by bicycles regardless of whether such facility is specifically designated as a bicycle route. The lane width is measured from the lane stripe to the edge of the gutter pan.

Shared lane marking (sharrow): A marking on the roadway that indicates where within a shared lane or wide curb lane a bicyclist should be positioned.

Shared use path (multi-use path): Shared use paths are either hard-surface or loose-surface trails designed for the use of pedestrians, bicyclists and people using other non-motorized forms of transportation for both transportation and recreational use.

Traffic calming: The combination of mainly physical measures that reduce motor vehicle speeds and potentially volumes to improve conditions for all street users.

Wide curb lane: A right-most through traffic lane that is greater than 14 feet wide, measured from the lane stripe to the edge of the gutter pan. A person on a bicycle and motor vehicle may potentially share the lane side by side (if in accordance with the City of Austin's Vulnerable Road Users Law, § 12-1-35).

Wide shoulder: Shoulders that are the width of a motor vehicle or greater, often on rural highways, that improve emergency vehicle access, improve roadway safety and provide for non-motorized use such as bicycle travel.

Urban Trail: Urban Trails are hard-surface trails designed for use by pedestrians, bicyclists and other non-motorized forms of transportation for both transportation and recreational use. Urban Trail priorities are set by the Urban Trails Program and guided by the Urban Trails Master Plan.

APPENDIX D: AMENDMENT PROCESS

AMENDMENTS TO THE AUSTIN 2014 BICYCLE PLAN BIKEWAY ELEMENT

A. Procedure for Amendments.

1. Proposed amendments to the Bicycle Element for any Bicycle Routes on the State roadway system shall be submitted directly to the Capital Area Metropolitan Planning Organization (CAMPO) for consideration by the Metropolitan Planning Organization's (MPO) governing board. The City of Austin will consider proposed amendments for remaining bicycle routes in the Bicycle Element that are within the City's five-mile extraterritorial jurisdiction.
2. City Council approval of an amendment to the Bicycle Element is necessary if:
    a. A new bicycle route is to be added;
    b. A bicycle route or portion of a bicycle route is to be deleted, or extended beyond its current limits;
    c. The classification, rights-of-way, or cross-section of a road or portion of a road in the Austin 2014 Bicycle Plan is to be changed;
    d. The alignment of a road in the Austin 2014 Bicycle Plan is to be moved in excess of 1500 feet; or
    e. Per objective 1.0.2b of this Plan, a development or redevelopment seeks to not provide continuity of an existing or planned route through or within their property.
3. Proposed City Council amendments to the Bicycle Element are processed in batches approximately three times per year, concurrent with amendments to the Roadway Element of the AMATP, unless otherwise directed by the City Council.
4. Applicants submit all requests to amend the Bicycle Element to the Austin Transportation Department, Active Transportation Program by submitting six copies of the following and the appropriate filing fee, with the exception of administrative amendment which only require one (1) copy.
    a. Letter of Request;
    b. A map and cross-section showing the proposed change and modification; and

c. Documentation of justification for amendment (refer to B. Justification for Amendment). All amendment requests are assigned a Case number: Example: BPA-86-01. "BPA" stands for "Bicycle Plan Amendment"; "86" represents the year the amendment was requested; "01" identifies the sequence number of the amendment for that year. A meeting with the appropriate staff and the applicant should be scheduled by the applicant to determine the scope of documentation information that is needed (refer to B. Justification for Amendment) to review the proposed amendment.

5. The proposed amendment is reviewed by affected departments and agencies.
6. City Council amendments are scheduled for consideration by the Environmental Board, The Urban Transportation Commission, and the Planning Commission.
7. Public hearing notices for Planning Commission (when a City Council required amendment) consideration are mailed to affected public officials, property owners, neighborhood associations, and interested citizens.
8. After action by the Planning Commission (when there is a City Council required amendment), the proposed amendments and recommendations are scheduled for a public hearing before the City Council.
9. An official public notice is printed in the Austin American-Statesman newspaper on the Sunday and Monday before the public hearing scheduled by the City Council.
10. City Council takes action on the proposed amendments.
11. Results of City Council action are provided to CAMPO.

B. Justification for Amendment.

1. All amendment requests shall include the following information: The existing or currently-adopted alignments and the proposed alignments on City of Austin topographic maps, or USGS maps (1 inch = 2000 feet);
2. A drawing or sketch of the existing or currently-adopted cross-section and the proposed cross-section consistent with current City of Austin street design standards (including rights-of-way), if it is proposed to be changed;
3. Locations of existing structures, historic and/or archaeological sites, all known significant and/or sensitive environmental features, steep slopes (proposed grades in excess of 6 % identified), areas of significant topographic/engineering constraints (sight-distance, intersection geometrics, cut/fill sections, bridges and other physical structures) and extent of 100-year floodplain;

4. Copies of any relevant traffic or transportation studies, such as traffic impact analyses or travel demand forecasts;
5. Names and addresses of adjacent property owners and affected neighborhood associations;
6. Maps to identify property ownership (tax plats) to ensure proper notification; and
7. A report that evaluates the following:
    a. The need for the proposed amendment and the problem it will solve;
    b. The compatibility of the proposed amendment with the Austin Metropolitan Area Transportation Plan Roadway and Bicycle Elements (which policies will be reinforced and/or in conflict);
    c. The effect of the proposed amendment on economic development (including positive and negative economic impacts), the effect of the proposed amendment on tax revenues and public expenditures and the probable source of project financing;
    d. The environmental impacts of the proposed amendment on air quality, noise pollution, water quality, threatened or endangered species, fauna and flora, and any other significant geologic or topographic constraints;
    e. Any changes in neighborhoods (positive and negative social impacts) associated with the proposed amendment, potential changes in travel patterns and accessibility (all modes of travel), potential impacts on major public and private facilities, and potential relocation impacts if necessary;
    f. Measures of traffic mobility and safety with and without the proposed amendment (such as, but not limited to, level of service, vehicle hours of delay, vehicle miles of travel, intersection delay, accident data, cyclist and pedestrian safety, compatibility with existing and proposed transit service); and
    g. The compatibility of the amendment with any other relevant City adopted plans.

APPENDIX E: COST ESTIMATE

ALL AGES AND ABILITIES BICYCLE NETWORK COST ESTIMATE

This appendix gives details on the parameters used to develop the cost estimate for the All Ages and Abilities Bicycle Network. The estimate is broken down into the categories of on-street and Urban Trails as well as totals for the network as a whole.

The first step for this cost estimate required determining the length of each facility type for four different funding categories: unfunded, funded, existing, and facilities to be built by others. Only the unfunded priorities require new capital investment for full network build-out. Leveraging the already existing and funded assets significantly reduces the cost of delivering a high quality network. In other words, the unfunded priority projects comprise a cost competitive investment to meet community needs (mobility, affordability, health, etc.).

All Ages and Abilities Bicycle Network Funding Status by Facility Type

Facility Type	Unfunded Priority (miles)	Funded (miles)	Existing (miles)	by Others (miles)	Total (miles)
On-Street					
Bicycle Refuge Island	0.0	-	-	-	0.0
Bike Lane	9.0	0.3	1.3	-	10.7
Bike Lane - Buffered	22.1	0.5	1.1	-	23.7
Bridge	0.05	-	0.1	0.3	0.5
Facilities with Cost Overrides	0.7	-	-	-	0.7
Protected BL One-way	99.8	6.3	2.3	0.3	108.6
Protected BL Two-way	29.1	4.3	1.4	0.7	35.4
Quiet Street	37.3	2.9	-	-	40.1
Signal / PHB	0.2	-	-	-	0.2
Signal / PHB with Protected BL	0.2	-	-	-	0.2
Suggested Bicycle Lanes	2.3	-	-	-	2.3
Traffic Calming Modification	0.1	-	-	-	0.1
Widening	0.1	-	-	-	0.1
Urban Trails					
Trail	-	0.9	23.1	-	24.0
Urban Trail	46.6	7.5	37.0	37.8	128.9
Network Totals					
Facility Type	**Unfunded Priority**	**Funded**	**Existing**	**by Others**	**Total**
On-street	200.9	14.2	6.2	1.3	222.7
Urban Trails (Including existing trails)	46.6	8.5	60.1	37.8	153.0
Total All Ages and Abilities Bicycle Network	247.5	22.6	66.3	39.2	375.7

The second step was to assign unit costs to the components of the network. Unit costs are based on experience implementing these facility types in Austin. Unit costs for protected bicycle lanes account for high quality physical separation and ancillary costs associated with special design features that often accompany protected bicycle lanes (ADA parking, transit stops, valet/loading zones, etc.). When implementing an on-street facility, the street resurfacing required to remove previously existing striping is a significant cost associated with implementation. These cost estimates include the cost of resurfacing using a thin surface treatment to ensure that, if funded, this network could be implemented without waiting for the next scheduled routine street maintenance. Continued coordination and prioritization of the street resurfacing program represents a significant opportunity to reduce the overall cost of this network investment.

All Ages and Abilities Bicycle Network Cost Estimate by Facility Type

Network Element	Quantity	Unit	Unit Cost Coordinated with Resurfacing	Cost Coordinated with Resurfacing	Cost of Resurfacing	Total Uncoordinated Cost
On-Street						
Bicycle Refuge Island	1	EA	$ 20,000	$ 20,000		$ 20,000
Bike Lane	9.0	Linear Miles	$ 15,000	$ 140,000	$ 1,350,000	$ 1,490,000
Bike Lane - Buffered	22.1	Linear Miles	$ 20,000	$ 440,000	$ 3,320,000	$ 3,760,000
Bridge	251	Feet	$ 3,200	$ 800,000		$ 800,000
Facilities with Cost Overrides				$ -		$ -
Pleasant Valley / Longhorn Dam (Pleasant Valley to Lakeshore)	0.7	Linear Miles	NA	$ 15,000,000		$ 15,000,000
Protected BL One-way	99.8	Linear Miles	$ 100,000	$ 9,980,000	$ 14,970,000	$ 24,950,000
Protected BL Two-way	29.1	Linear Miles	$ 100,000	$ 2,910,000	$ 4,360,000	$ 7,270,000
Quiet Streets	37.3	Linear Miles	$ 100,000	$ 3,730,000		$ 3,730,000
Signal / PHB	5	EA	$ 100,000	$ 500,000		$ 500,000
Signal / PHB with Protected BL	4	EA	$ 200,000	$ 800,000		$ 800,000
Suggested Bicycle Lanes	2.3	Linear Miles	$ 15,000	$ 30,000		$ 30,000
Traffic Calming Modification	1	EA	$ 20,000	$ 20,000		$ 20,000
Widening	5,760	Square Foot Ft	$ 25	$ 140,000		$ 140,000
Urban Trails						
Urban Trail	46.6	Linear Miles	$ 2,000,000	$ 93,190,000		$ 93,190,000

All Ages and Abilities Bicycle Network Cost Estimate

Network Cost Total	Miles of Facilities		Cost Coordinated with Resurfacing	Cost of Resurfacing	Total Uncoordinated Cost	Average Cost Per Mile
On-street Cost	200.9		$ 34,510,000	$ 24,000,000	$ 58,510,000	$ 290,000
Urban Trail Cost	46.6		$ 93,190,000		$ 93,190,000	$ 2,000,000
Total All Ages and Abilities Bicycle Network	247.5				$ 151,700,000	$ 610,000

Lastly, the estimates in the table below show the annual costs for full network build-out spread over 5 or 10 years.

All Ages and Abilities Bicycle Network - Annual Implementation Cost for Full Build-Out

		Cost per Year	
Network Cost Total	Total Uncoordinated Cost	5 Years to Complete	10 Years to Complete
On-street Cost	$ 58,510,000	$ 11,700,000	$ 5,850,000
Urban Trail Cost	$ 93,190,000	$ 18,640,000	$ 9,320,000
Total All Ages and Abilities Bicycle Network	$ 151,700,000	$ 30,340,000	$ 15,170,000