
2014 AUSTIN BICYCLE PLAN

City of Austin



Austin Transportation Department
Active Transportation Program

November 2014

Adopted by the Austin City Council November 6th, 2014



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 (ciclovía) 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.

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- 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.

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- **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.

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- 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.

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- **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.

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.*

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.

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 responsibility 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.

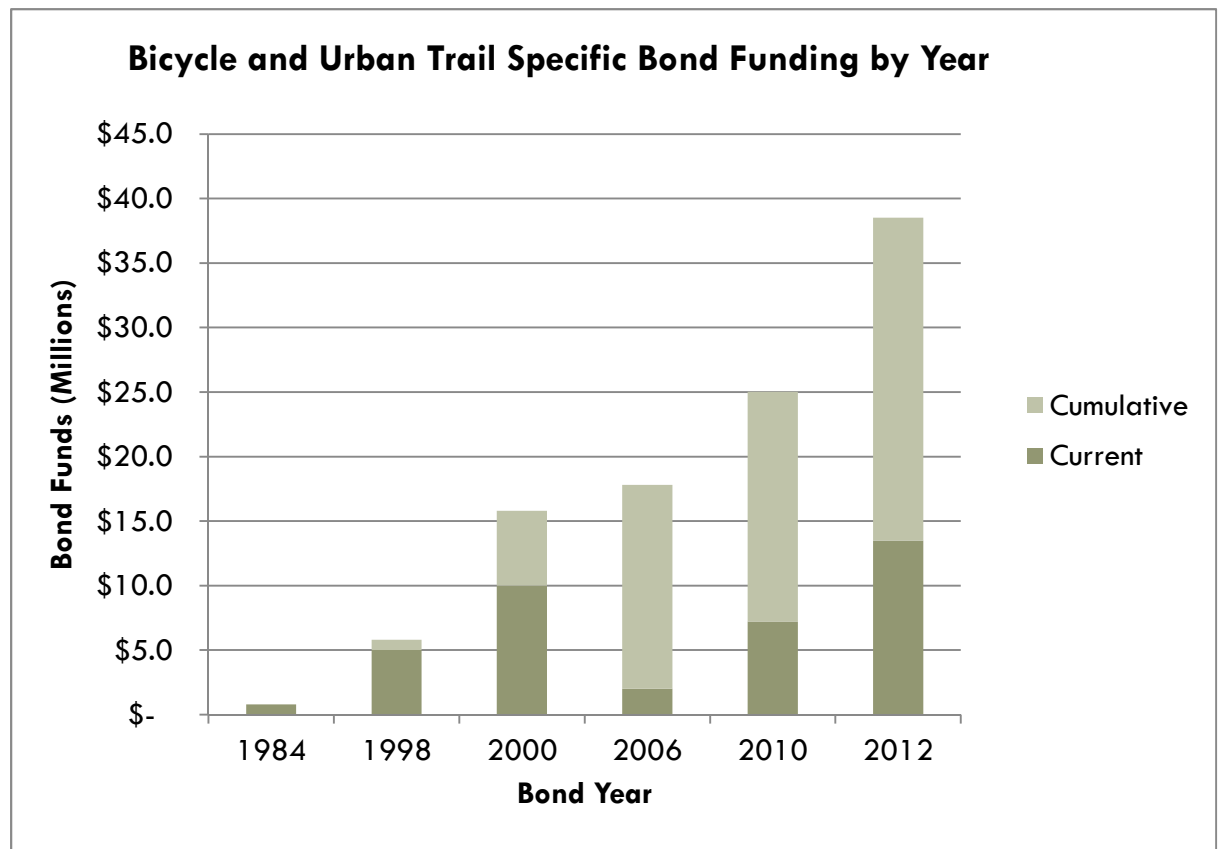
PUBLIC FUNDING HISTORY

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.

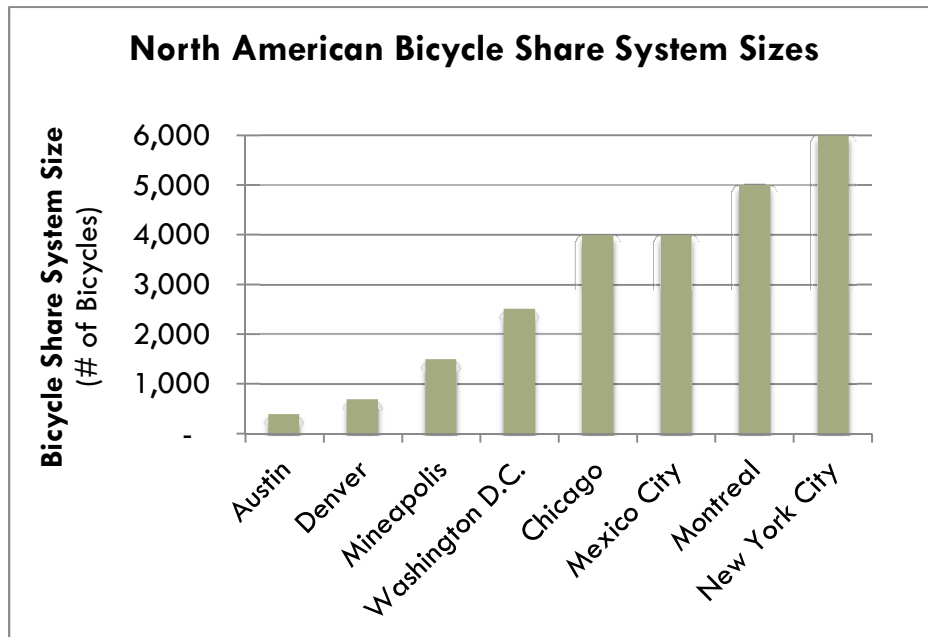
Removal top Barriers in the Supporting Bicycle Network (bicycle lane network)

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	Platinum
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.

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- 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; Movability 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

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- 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.