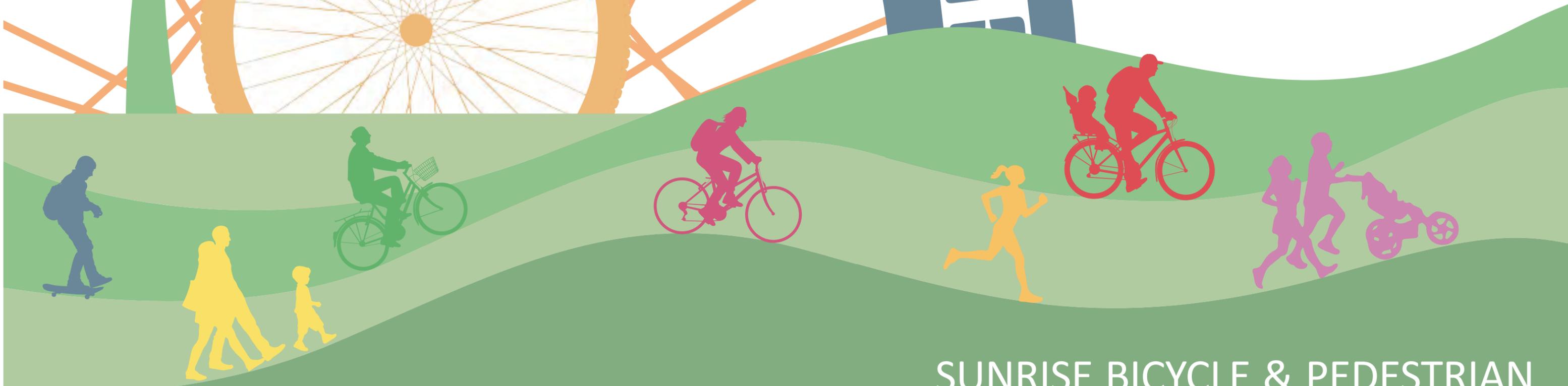


CITY OF SUNRISE



November 25, 2014
CRANEN THOMPSON



& ASSOCIATES INC.



SUNRISE BICYCLE & PEDESTRIAN
GREENWAYS & TRAILS MASTER PLAN
S U N R I S E • F L O R I D A

Acknowledgements



City of Sunrise

Mayor - Michael J Ryan

Sunrise City Commission

Deputy Mayor - Lawrence A. Sofield

Assistant Deputy Mayor - Donald K. Rosen

Commissioner - Joseph A. Scutto

Commissioner - Neil C. Kerch

Bicycle and Pedestrian

Advisory Board

Sean Dinneen

Steven Dacres

Chad Dashnaw

Mark Douglas

Marcus Griffin

Diane Rubinstein

Brian Sherman

Ainsworth Thompson

Karoline Correa

David Gueits

R Scott Repinski

Steering Committee

Beth Zickar - Sunrise Leisure Services

Josie Sesodia - Sunrise Community Development

Bob Romeo - Sunrise Capital Projects

Design Team

Joseph Handley - Craven Thompson & Associates

Doug Schultz - Craven Thompson & Associates

Caleb Rothenberger - Craven Thompson & Associates

John Cock - Alta Planning and Design

Brad Davis - Alta Planning and Design

Oliver Seabolt - Alta Planning and Design

Fire and Police

Fire Chief - Thomas J. DiBernardo

Police Chief - John E. Brooks

Broward County

Mark Horowitz

Broward MPO

Peter Geis

Data Resources

City of Sunrise

East Sunrise Resident's Assoc.

Central Sunrise Resident's Assoc.

Broward County

Broward County MPO

Florida Signal Four Analytics

City of Plantation

City of Weston

City of Tamarac

City of Lauderhill

Town of Davie

Broward County Transit

NACTO

AASHTO

Table of Contents



Introduction

Overview	7
Vision	8
Goals	9
Who is This Plan For?	10
Planning Process	11
Community Input	12



Needs Analysis

Overview	19
Community Profile	20
Walking and Biking Trends	22
Existing Facilities	23
On-Street Bikeways, Multi Use Trails and Sidewalks	24
Transit Service	26
Crash and Safety Analysis	27
Connectivity Analysis with Adjacent Municipalities	36
Bicycle Friendly & Walk Friendly Community Assessment	37



Recommendations

Overview	41
Master Plan Overview	42
Priority Connections	43
On-Street Bikeway Recommendations	54
Greenway Recommendations	66
Pedestrian & Transit Recommendations	73
Support Facilities	84
Programs and Policies	88



Implementation

Overview	97
Roles for Implementation	98
Action Steps	99
Funding Strategy	100
Key Action Steps	102
Infrastructure Implementation Strategies	105

Appendix

EXHIBIT	EXHIBIT NAME	Page
1	City of Sunrise Comprehensive Plan	110
2	Sunrise Leisure Services Needs Assessment (2009-2010)	111
3	Sunrise Leisure Services Master Plan (2013)	111
4	Midtown Plantation and Southwest Sunrise Livability Study	112
5	Broward MPO 2035 Long Range Transportation Plan	112
6	Broward County Parks and Recreation Needs Assessment (2012)	113
7	Broward County Greenways Master Plan	113
8	Broward County Complete Streets Guidelines	114
9	Florida Pedestrian and Bicycle Strategic Safety Plan (PBSSP) (2013)	114
10	Florida Greenways and Trails System Plan 2013-2017	114
11	Study Area Base Map	118
12	2009 Average Annual Daily Traffic Counts	119
13	Broward MPO Bicycle Suitability Map	120
14	Pedestrian and Bicycle Crash Locations	121
15	Bicycle Crash Densities	122
16	Bicycle Network Gaps	123
17	Existing Bicycle Infrastructure	124
18	Existing Pedestrian Infrastructure	125
19	Pedestrian Crash Densities	126
20	Pedestrian Network Gaps	127

OVERVIEW

In the summer of 2014, the City of Sunrise, led by the Leisure Services and Community Development Department along with the Bicycle and Pedestrian Advisory Board, began developing a bicycle and pedestrian greenways and trails plan for the City. The purpose of the Plan is to provide a clear framework for the development of new facilities, renovations to existing infrastructure, programs and policies that will support safe and convenient walking, biking and access to transit service.

The plan is organized into the following sections:

Introduction •

Provides an overview of the project as well as the vision, goals and summary of the public planning process.

Needs Analysis •

Documents existing conditions and analysis.

Recommendations •

Presents recommendations for bicycles, greenways, pedestrians, transit, support facilities, programs and policies.

Implementation •

Summarizes the responsibilities, action steps and strategies to achieve the vision and goals established by this Plan.

Plan Quick Facts

- 46.2 Miles of Proposed On-Street Bikeways (0.9 miles currently in City of Sunrise)
- 33.2 miles of Proposed Multi-Use Paths (3.2 miles currently in City of Sunrise)

Major Goals

- Achieve Bicycle Friendly Community designation by 2016
- Achieve Walk Friendly Community designation by 2016



VISION

Walking, riding a bike and taking transit in Sunrise is a comfortable and integral part of daily life for people of all ages and abilities. This is the future envisioned by the *City of Sunrise Bicycle and Pedestrian - Greenways and Trails Master Plan*, and it signifies an evolution in the way Sunrise accommodates people who will be riding a bicycle, walking or taking transit for any trip purpose.

A connected network of on and off-street bikeways, walkways and transit stops will provide safe and convenient access between neighborhoods, parks, job centers, tourist attractions, shops, schools, places of work and other daily destinations for a wide variety of people, trip purposes and abilities. This Plan establishes the City's reputation as a destination for enjoying walking and bicycling as forms of transportation and recreation, as a community that considerably shares its roadways, and as a healthy place to live.



GOALS

Develop a network, facility, policy and program recommendations for Sunrise focused on the types of cyclists and pedestrians that should be accommodated with new investments in infrastructure and programs. The Bicycle and Pedestrian Advisory Board, along with the public, developed the following goals.



1. Achieve Bicycle Friendly Community designation by 2016.
2. Achieve Walk Friendly Community designation by 2016.
3. Double the combined walking, biking and transit commute mode share within 5 years (currently 2.7% for walking, biking and transit).
4. Reduce the rate of annual bicycle and pedestrian crash injuries by half within 5 years (currently 9% of all roadway injuries in Sunrise).
5. Reduce the rate of annual bicycle and pedestrian crash fatalities by half within 5 years (currently 46% of all roadway fatalities in Sunrise).
6. Ensure all parks in Sunrise are connected to sidewalk and bike lane or trail within 5 years.
7. Ensure all schools in Sunrise are connected to a sidewalk and bike lane or trail within 5 years.

WHO IS THIS PLAN FOR?

This Plan is developed for the citizens of Sunrise to enhance the connectivity through multi-modal facilities. Specific user groups include:

- ✓ All ages and abilities
- ✓ Future generations
- ✓ Students going to school
- ✓ People walking and biking for or to recreation
- ✓ Families
- ✓ Seniors
- ✓ Workers
- ✓ Visitors

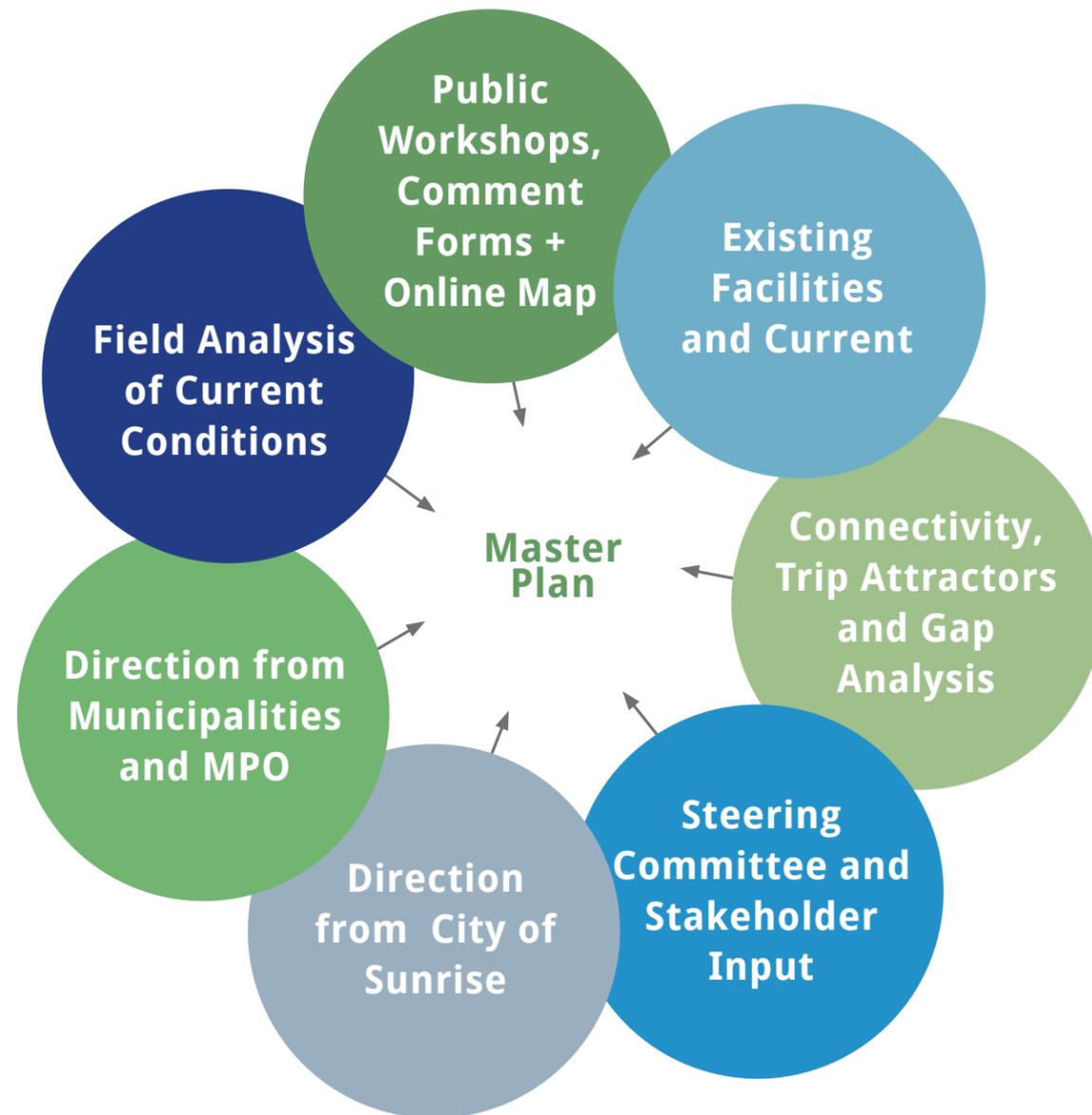


Who should be considered when designing new infrastructure or developing outreach programs to educate, encourage and enforce walking and biking?



Several key themes are embedded in these criteria, including comfort, daily life and all ages and abilities. The idea that walking and biking should be “comfortable” suggests it is safe, convenient and attractive travel option for a large number of people. “Daily life” means that walking and biking is not a niche activity, but is instead desirable for a wide variety of people and trip purposes. “All ages and abilities” means that the emphasis is on planning, designing and building walking and biking facilities that will be used by a broad range of people throughout the city. These themes and the design criteria above were used as guides to develop the recommendations for this Plan.

PLANNING PROCESS



RESEARCH & DATA GATHERING

CTA/APD examined available relevant plans, practices, policies, standards and designs relating to the existing bicycle and pedestrian environment in Sunrise, neighboring cities and Broward County. This included existing bicycle, pedestrian, park, recreation, open space, greenway and trail plans that have been completed in the study area. See working papers in Appendix A.

BASE DATA, INVENTORY AND ANALYSIS

The design team analyzed the existing data and maps collected; and created inventory maps (see Needs Analysis Section) that depict current parks, open space, sidewalks, greenways, and trails throughout the study area to establish a safer biking and walking network. See maps and tables throughout the Needs Analysis section.

COMMUNITY INPUT

CTA/APD, along with the City of Sunrise, held community workshops and design sessions where input was gathered from the citizens of Sunrise on what their needs/wants are for a more walk and bike-friendly city.

PLAN DEVELOPMENT RECOMMENDATIONS AND IMPLEMENTATION

The recommendations and implementation strategies will help the City of Sunrise improve existing infrastructure for pedestrians and bicyclists; and enhance walking and biking connectivity to transit, parks, schools, shopping, places of worship and recreation. Priority intersections and typical cross-sections were developed to support the implementation of the master plan.

COMMUNITY INPUT

Community design workshops were held by the team at three different locations in Sunrise. CTA/APD presented the master plan objectives at a public workshop held at the City Commission Chambers, to the Central Sunrise Residents Association and the East Sunrise Residents Association. The design team also worked closely with the Bicycle and Pedestrian Advisory Board to gather public input about current needs of the biking and walking facilities in Sunrise.

The workshops were organized as open forums and the residents provided beneficial insight, ideas, wants and needs for the bicycle and walkability of their community. Community members were asked to vote on a variety of infrastructure changes or programs that could improve walking and biking in Sunrise. Interactive posters were available at each meeting and also on display at the Sunrise Civic Center and the Sunrise Community Development Department, for one month in September for additional public input.

The master plan team created a website where the public can go online and map areas throughout Sunrise and post their comments and concerns about needs and conflict areas.

KICKOFF MEETING

A project kickoff meeting with the Bicycle and Pedestrian Advisory Board and the Environmental Sustainability Board was held on July 9, 2014.



PUBLIC WORKSHOPS

Public workshops were held at City Hall, Central Sunrise Resident's Association meeting and East Sunrise Resident's between September 10 to 18, 2014.

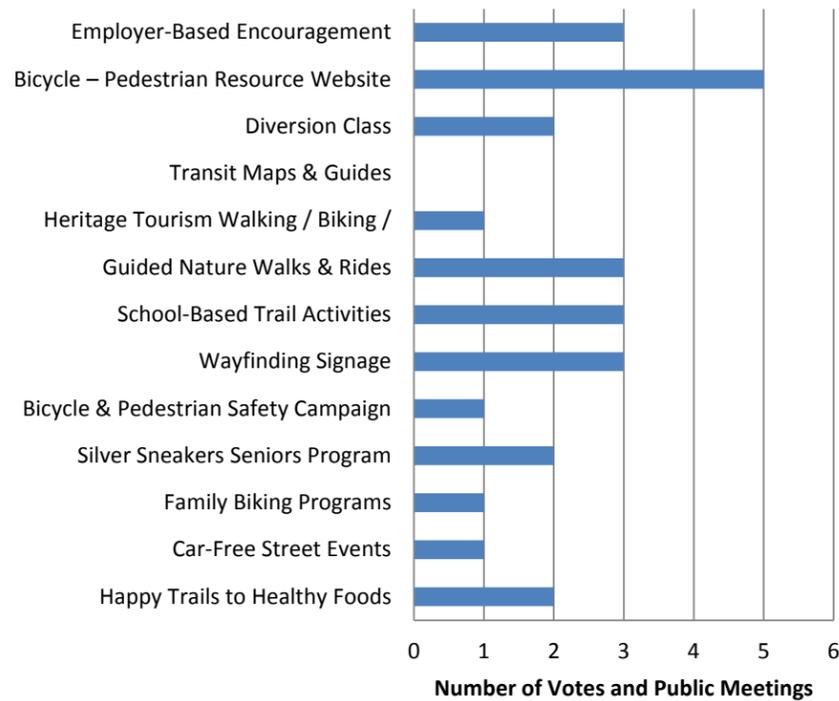


The following pages include the posters and results of the community input.

- [Education, Encouragement and Enforcement Poster](#)
- [Pedestrian and Bicycle Infrastructure](#)
- [Interactive Online Mapping Website](#)



Education, Encouragement and Enforcement Programs



WHAT NEW PROGRAMS (OR EXPANSION OF EXISTING PROGRAMS) WOULD HAVE THE GREATEST IMPACT ON TRANSIT, WALKING, AND BICYCLING IN SUNRISE? (Spend your dots! You have 3 dots to vote for programs you think would provide the greatest benefit to Sunrise.)

TRAIL USER ETIQUETTE CAMPAIGN

Shared-use greenways and trails are available for use by bicyclists, walkers, runners, skateboarders, rollerbladers, parents with strollers, dogs, children, and, in some cases, equestrians, as well as other modes. A campaign for trail user etiquette works to ensure that all users safely and responsibly share the trail. The campaign may include media advertisements, trail signage, brochures, an "ambassador" program, etc.

0 VOTES

SILVER SNEAKERS SENIORS PROGRAM

Interested agencies, nonprofits, health departments and senior centers can partner to develop an active lifestyles program for senior citizens utilizing the bicycle, pedestrian, and greenways network. Activities could include adult tricycle or bicycle rides, nature walks, walks to lunch, and safety education.

2 VOTES

WAYFINDING SIGNAGE

The connectivity of a trail network is contingent upon physically linking bicycle, pedestrian, and transit infrastructure, as well as communicating to trail users the connections available. Wayfinding signs direct users along the trail, bikeway, and walkway network and to community destinations. These signs can also include mileage, estimated travel time, and even calories burned. The signs also provide an opportunity for recognition of trail partners and sponsors, where applicable.

3 VOTES

GUIDED NATURE WALKS & RIDES

Naturalists are a significant user group of a trail and greenway network. Unique natural resources, such as the Broad River, can attract significant eco-tourism opportunities. Guided nature walks and bicycle rides could be led by trained volunteers or interested partners, such as a college extension service.

3 VOTES

BICYCLE - PEDESTRIAN RESOURCE WEBSITE

The City currently offers a webpage with information about the Bike Pedestrian Advisory Committee. This resource should be expanded to become a one-stop-shop for bicyclists, pedestrians, and transit users of all types. Information could include tips for commuters, route planning services, message boards, and more.

5 VOTES

HAPPY TRAILS TO HEALTHY FOODS

Many communities are recognizing the role that both physical activity and healthy eating play in improving overall public health and wellness. This important link can be highlighted in a fun and interactive manner through promoting healthy food outlets along the bicycle, pedestrian, greenway, and transit network and partnering with health food providers to identify safe routes for active transportation to their locations.

2 VOTES

OUTDOOR PUBLIC ART

Public art along a bicycle, pedestrian, greenway, and transit network can bring attention to the network, encourage usage of it, and attract newcomers to bicycling, walking, and transit. By combining art and greenway facilities, the community is creating a unique interactive amenity for both residents and visitors. Such programs also attract new partners, promoters, and sponsors of the active transportation network.

0 VOTES

SCHOOL-BASED TRAIL ACTIVITIES

In partnership with existing Safe Routes to School efforts, local schools can capitalize on segments of the proposed bicycle, pedestrian, and greenway network that intersect their campus. Activities along the greenway network could include Bike and Walk to School Day routes, outdoor classrooms for science curriculum, educational afterschool walks and bike rides, and programs for physical education curriculum.

3 VOTES

HERITAGE TOURISM WALKING/BIKING/TRANSIT MAPS & GUIDES

Walking, biking, and transit guides can capitalize on and promote Sunrise's rich history. The guides would be targeted to a variety of ages and abilities, offering varying routes for families, touring cyclists, and others.

1 VOTE

EMPLOYER-BASED ENCOURAGEMENT

Companies that establish a bicycling, walking and transit incentive program for employees increase the number of employees who commute to work, meetings, or lunch by biking, walking, or transit. Such programs can highlight health benefits, increased productivity, and cost-savings related to parking costs.

3 VOTES

CAR-FREE STREET EVENTS

Car-free street events involve periodic street "openings" that create a temporary park that is open to the public for walking, bicycling, dancing, etc. The purpose of the event is to encourage biking and other forms of physical activity to the general public by providing a fun, welcoming environment for activity. Car-free street events have been very successful internationally and are rapidly becoming popular in the U.S..

1 VOTE

INTERPRETIVE SIGNAGE

Interpretive signage along a trail and greenway network serves as an education tool. Information related to the history of an area, its cultural significance, or natural features is provided on a graphically appealing sign. Topics could range from native species of plants to river currents to famous historical figures.

0 VOTES

PERSONAL TRAVEL ENCOURAGEMENT PROGRAM

PTE programs are proven to reduce drive-alone trips by approximately 10% and increase bicycling, walking and transit use within a target area. The program:

- Delivers customized travel information packets
- Hosts fun events such as guided rides, walks and classes, and
- Sends trained outreach staff to farmer's markets and other community events

0 VOTES

DIVERSION CLASS

A diversion class is offered to first-time offenders of certain bicycle-related traffic violations, such as running a stop sign on a bike. It can be aimed just at bicyclists or at bicyclists, motorists and pedestrians. In lieu of a citation and/or fine, individuals can take a one-time, free or inexpensive class.

2 VOTES

LAUNCH PARTIES FOR NEW BIKEWAYS

The City should partner with local advocacy groups to generate media attention and engage local citizens in each incremental expansion of the bikeway network. Popular launch parties in other cities have included bicycle-handling workshops, free bike mechanic services, live music, bicycle giveaways, and other activities.

0 VOTES

FAMILY BIKING PROGRAMS

Family bicycling programs help parents figure out how to safely transport children by bicycle and help children learn bicycling skills. Activities may include bicycle safety checks, a group ride or parade, "freedom from training wheels" clinics, and opportunities to try out different ways to transport children (e.g. trailers, cargo bicycles, kid seats, etc.).

1 VOTE

BICYCLE & PEDESTRIAN SAFETY CAMPAIGN

A high-profile marketing campaign is an effective strategy for highlighting the importance of respect and shared responsibility on the road between bicyclists, motorists, and pedestrians. This type of campaign is particularly effective when launched in conjunction with other events such as Walk to School Day or National Bike Month.

1 VOTE

KEY QUESTION: ARE THERE OTHER PROGRAM IDEAS YOU WOULD LIKE TO SEE IN THE SUNRISE?

(write your thoughts or place a dot beside an existing idea to show your support)

-Heard about proposal for events around mall and BB&T. Sounds exciting & resident friendly.

PEDESTRIAN AND BICYCLE INFRASTRUCTURE



What would you most like to see in Sunrise? (vote with 6 stickers)

CYCLE TRACKS



A cycle track 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 cycle track is physically separated from motor traffic and distinct from the sidewalk (NACTO).

11 VOTES

BICYCLE LANES/BUFFERED BICYCLE LANES



38 VOTES

-add physical barrier

SHARED LANE MARKINGS (SHARROWS)



11 VOTES

PAVED SHOULDERS



17 VOTES

BICYCLE BOULEVARDS



Bicycle boulevards are streets with low motorized traffic volumes and speeds, 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).

8 VOTES

BICYCLE-FRIENDLY INTERSECTIONS



32 VOTES

SHARED-USE PATHS



13 VOTES

SHARED-USE SIDE PATHS ALONG ROADWAYS



27 VOTES

RAISED MEDIANS/CROSSING ISLANDS



13 VOTES

IMPROVED ADA ACCESSIBILITY



19 VOTES

NEW SIDEWALKS



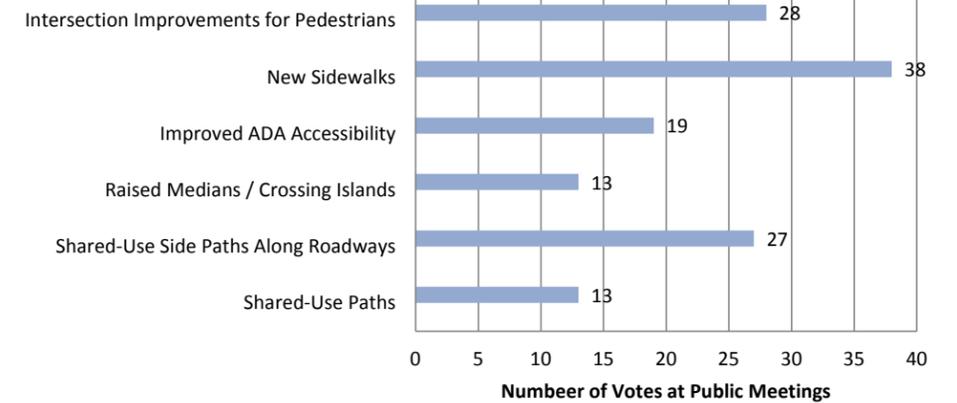
38 VOTES

INTERSECTION IMPROVEMENTS FOR PEDESTRIANS

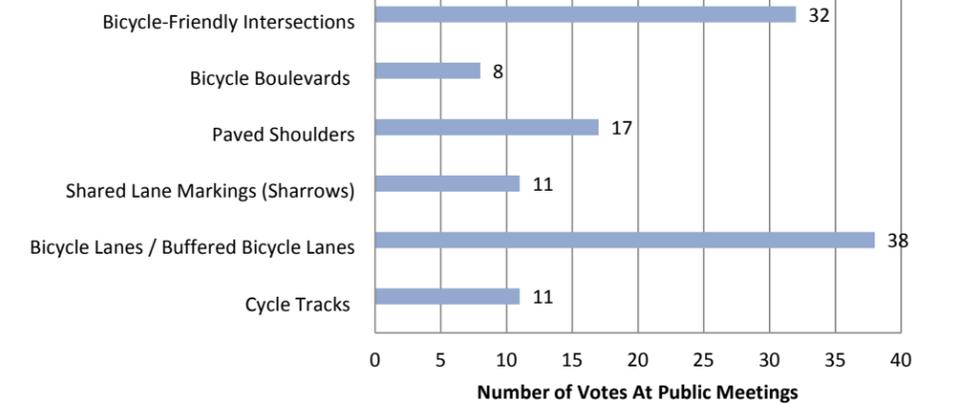


28 VOTES
-access from neighborhood to mall

Pedestrian Infrastructure



Bicycle Infrastructure



NEEDS ASSESSMENT

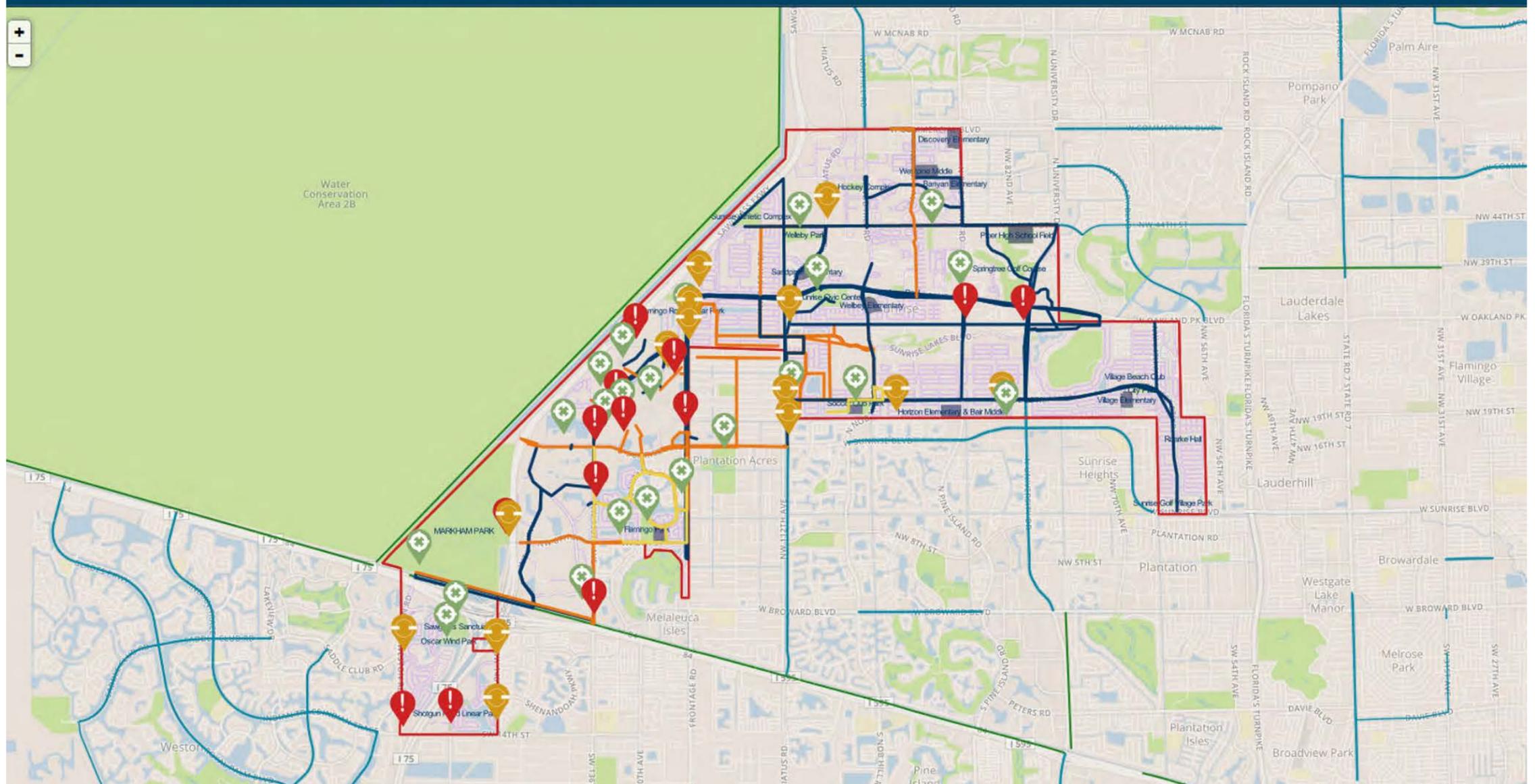
Use the map below to **DRAW ROUTE** lines and **PLACE POINTS** to share your thoughts about the existing bicycling environment in the region. Share where you live (home point) and places you would like to go (destination point) on your bike.



EXISTING	— Bike Lane	ROUTES	— Route I like and currently use	POINTS	Home
	— Multi Use Path		— Route I use but could be improved		Destination
	— Sidewalk		— Route I want to use, but currently do not		Conflict Intersection or Crossing
	— City Limits				Gap

Please use the comment section to indicate why or why not a route feels safe, what facility you think would be appropriate, and why a route or area presents a problem for bicycling.

About & Help Routes Points Photo Stream



The map above shows the areas that were designated by the public as needing attention. Icons at the top of page indicate the type of issue/need required. The photos on the following pages are those submitted online with captions explaining the issue/need at those locations.





Image 1 / 13 Markham park side entrance (at NW 8th St) ALWAYS closed. By opening this up it would be easier for more residents to access via walking and or biking here. The main entrance to the park is far from the community of Residences at Sawgrass. - [Go to feature]



Image 11 / 13 Hiatus Rd has no sidewalk along the vacant parcels on either side of the street north of 44th St. I understand that the parcels will get sidewalks if they are ever developed, but that may take a VERY long time, if it ever happens. (I believe the northeast corner is actually CITY owned property!) Sidewalks should be required in the meantime, or at least, some path that pedestrians can use that is not on the street. The city should require a path for all vacant parcels to be maintained where no sidewalk is provided. - [Go to feature]



Image 13 / 13 missing bike/ped path connecting oakland park blvd and flamingo rd - [Go to feature]



Image 10 / 13 Hiatus Rd has no sidewalk along the vacant parcels on either side of the street north of 44th St. I understand that the parcels will get sidewalks if they are ever developed, but that may take a VERY long time, if it ever happens. (I believe the northeast corner is actually CITY owned property!) Sidewalks should be required in the meantime, or at least, some path that pedestrians can use that is not on the street. The city should require a path for all vacant parcels to be maintained where no sidewalk is provided. - [Go to feature] ⏪ ⏩



Image 12 / 13 Where crosswalks do exist, motorists often do not stop or yield to pedestrians, especially drivers turning right-on-red (they are looking to the left with the traffic they will merge with, not to the right, where the crosswalks are located), or right-on green, (they approach the turn without slowing much, and make the turn without yielding to pedestrians who have a signal to cross), and even those drivers who are turning left (and wait in the middle of an intersection looking toward oncoming traffic for a gap big enough to turn through, instead of looking for slower-moving pedestrians). Major intersections could benefit from signs and lights (especially when a pedestrian is in or waiting to use a crosswalk) to alert them of their need to wait. - [Go to feature] ⏪ ⏩

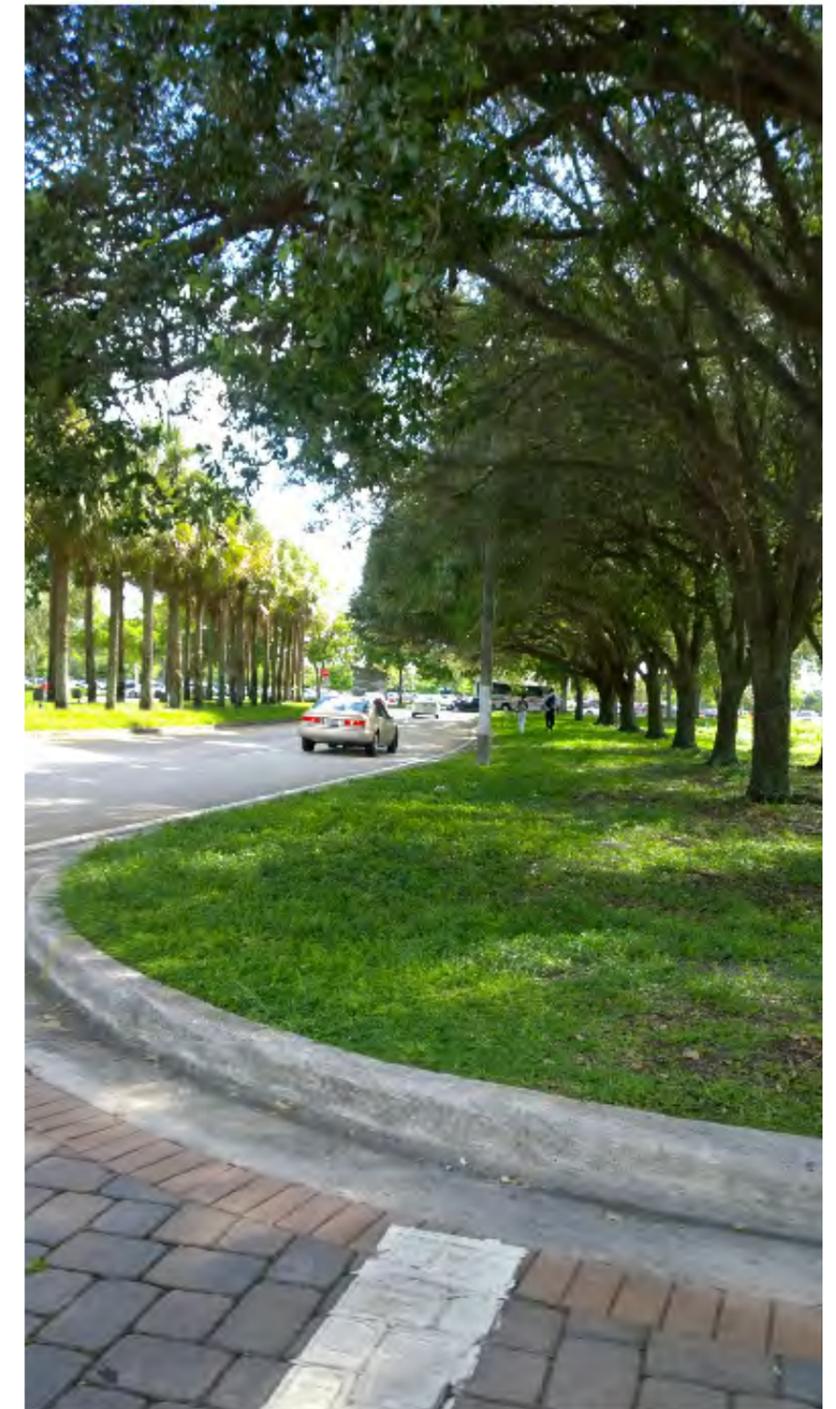


Image 8 / 13 No safe crossing for Tao residents to Target, mall - [Go to feature] ⏪ ⏩

