

AGENDA

Planning and Zoning Board



Comprehensive Plan Citizen Board Workshop
City of St. Augustine, Florida

Tuesday, June 18, 2019
1:00 pm - 4:00 pm

Alcazar Room
City Hall

- 1. Roll Call**
- 2. General Public Comments for Items Not on the Agenda**
- 3. Discussion and Public Comment Related to Mobility Planning and Transportation Issues**
 - Update from Jonathan Paul, Consultant with NUE URBAN CONCEPTS on proposed Mobility Plan concepts.
- 4. Discussion and Public Comment Related to the Draft Transportation and Mobility Element of the Comprehensive Plan including Draft Goals, Objectives and Policies**
 - Introduction to the Transportation and Mobility Element
 - Key Issues and Assumptions
 - Introduction of Goals, Objectives and Policies
- 5. Discussion and Public Comment Related to the Draft Recreation and Open Space Element of the Comprehensive Plan including Draft Goals, Objectives and Policies**
 - Introduction to the Recreation and Open Space Element
 - Key Issues and Assumptions
 - Introduction of Goals, Objectives and Policies
- 6. Adjournment**

Notices: In accordance with Florida Statute 286.0105: "If any person decides to appeal any decision made by the Planning and Zoning Board with respect to any matter considered at this scheduled meeting or hearing, the person will need a record of the proceedings, and for such purpose the person may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based."

In accordance with the Americans with Disabilities Act, persons needing a special accommodation to participate in this proceeding should contact the individual or agency sending notice not later than seven days prior to the proceeding at the address given on the notice. Telephone: (904) 825-1007; 1-800-955-8771 (TDD) or 1-800-955-8770 (V), via Florida Relay Service.

CITY OF ST. AUGUSTINE

MEMORANDUM

TO: Planning and Zoning Board

DATE: June 18, 2019

RE: **Item 3**
Discussion and Public Comment Related to Mobility Planning and Transportation Issues

Please find attached a copy of the power point presentation that will be discussed at the meeting, and several graphics illustrating configuration options for your consideration and discussion. These cross-sections are illustrations that represent options for roads to move forward with a mobility plan. The options address safety issues related to the "Vision Zero" concept of no fatalities on roadways, as well as, slowing vehicle traffic down overall, and encouraging other modes of transportation.

Jonathan Paul with NUE URBAN CONCEPTS will be at the meeting to continue the discussion of mobility planning for the City.

If you have any questions or require additional information please contact myself or David Birchim at our office by calling (904) 825-1065 or by email at either askinner@citystaug.com or dbirchim@citystaug.com or Reuben Franklin, Mobility Manager at rfranklin@citystaug.com.



Amy McClure Skinner, AICP
Deputy Director

NUE URBAN CONCEPTS



Creatively Integrating Mobility & Land Use

www.nueurbanconcepts.com

City of St. Augustine Draft Mobility Plan

Planning & Zoning Board
Workshop # 2

June 12th, 2019

Presented by:
Jonathan B. Paul, AICP, MA²

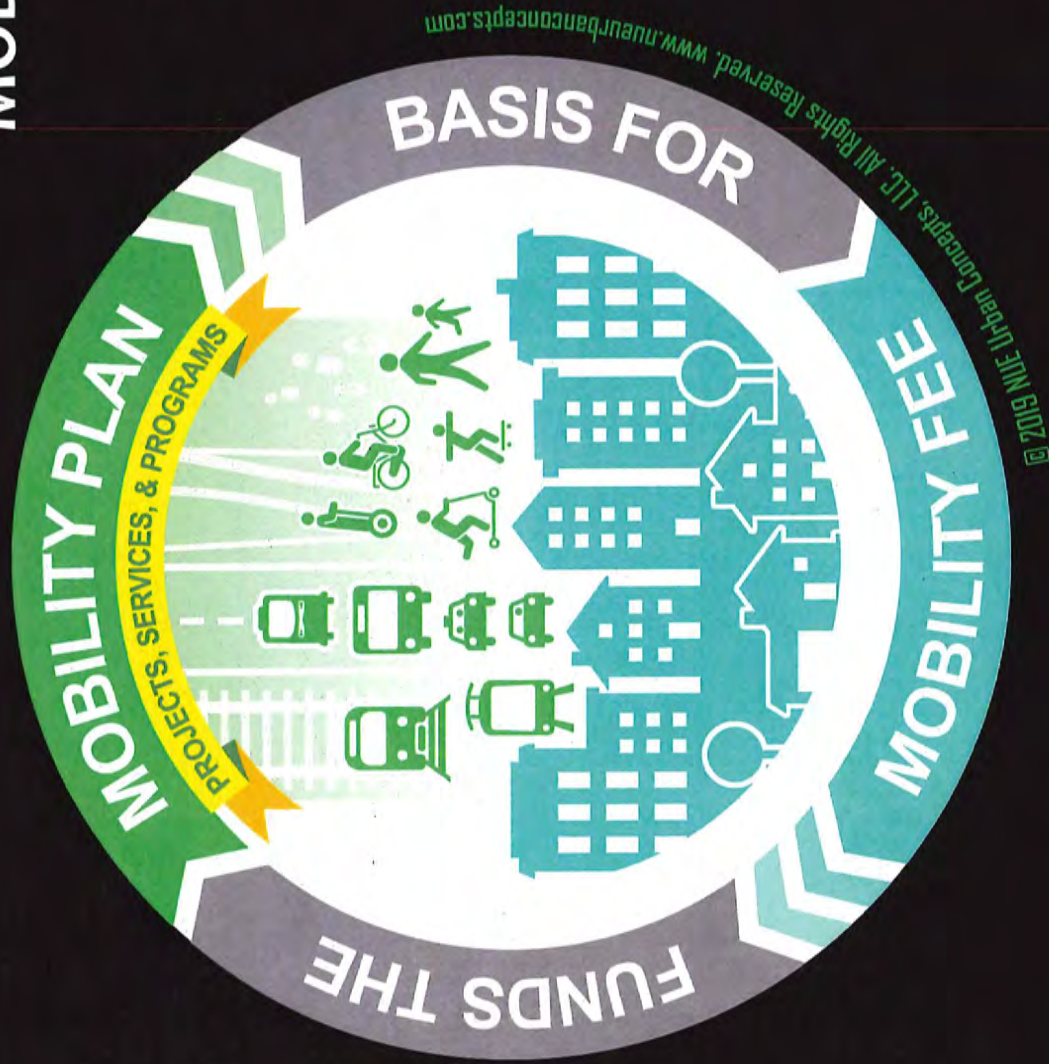
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The draft 2040 St. Augustine Mobility Plan is focused on: (1) making it safer and more convenient for people to walk and bicycle, (2) creating a park once environment within the multimodal district for visitors, students, and employees, and (3) developing innovative parking management strategies that improve access to local businesses and reduce the impact of non-resident traffic on residential streets.

MOBILITY PLAN & MOBILITY FEE

Develop a Plan for Mobility
over the next 20 years
within St. Augustine

Develop a Fee paid by
new development to
offset its impact to the
transportation system





STEPS TO IMPELEMENT A FEE

1st : Comprehensive Plan Update

2nd : Develop a Mobility Plan

3nd : Develop a Mobility Fee

4th : Develop an Ordinance

5th, 6th & 7th Steps are future efforts

Added Step: Update Parking Land Development Regulations

POTENTIAL FUTURE EFFORTS

- Develop Innovative Parking Management Strategies
- Develop a Vision Zero Plan
- Develop projects for retrofitting local streets
- Develop Curbside Management Program
- Develop Complete Street Design Standards
- Design Mobility Plan Projects
- Develop Site Access Assessment Requirements
- Ongoing Coordination & Permitting with County and State
- Micromobility Program

Complete Streets

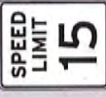
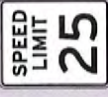
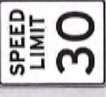


CONCEPTUAL

Vision Zero (Concept Speed Limits)

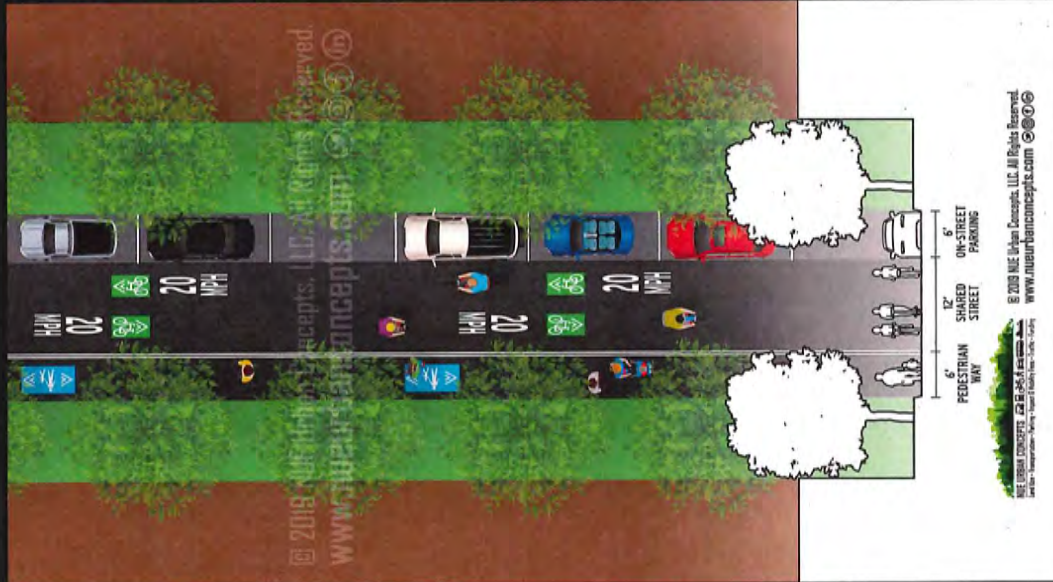
VISION ZERO SPEED LIMITS

CITY OF ST. AUGUSTINE

Europe (kph)	U.S. (mph)	Applicable Locations	Europe (kph)	U.S. (mph)	Applicable Locations
		Main Streets City Centres Square/Plaza/Promenade(s)			Residential Streets Main Streets
	  	Woonerf (pl. woonerven) Living/Shared Streets Alleyways Residential Streets			Residential Streets Main Streets Collectors
					Major Collectors Minor Arterials
					Principal Arterials

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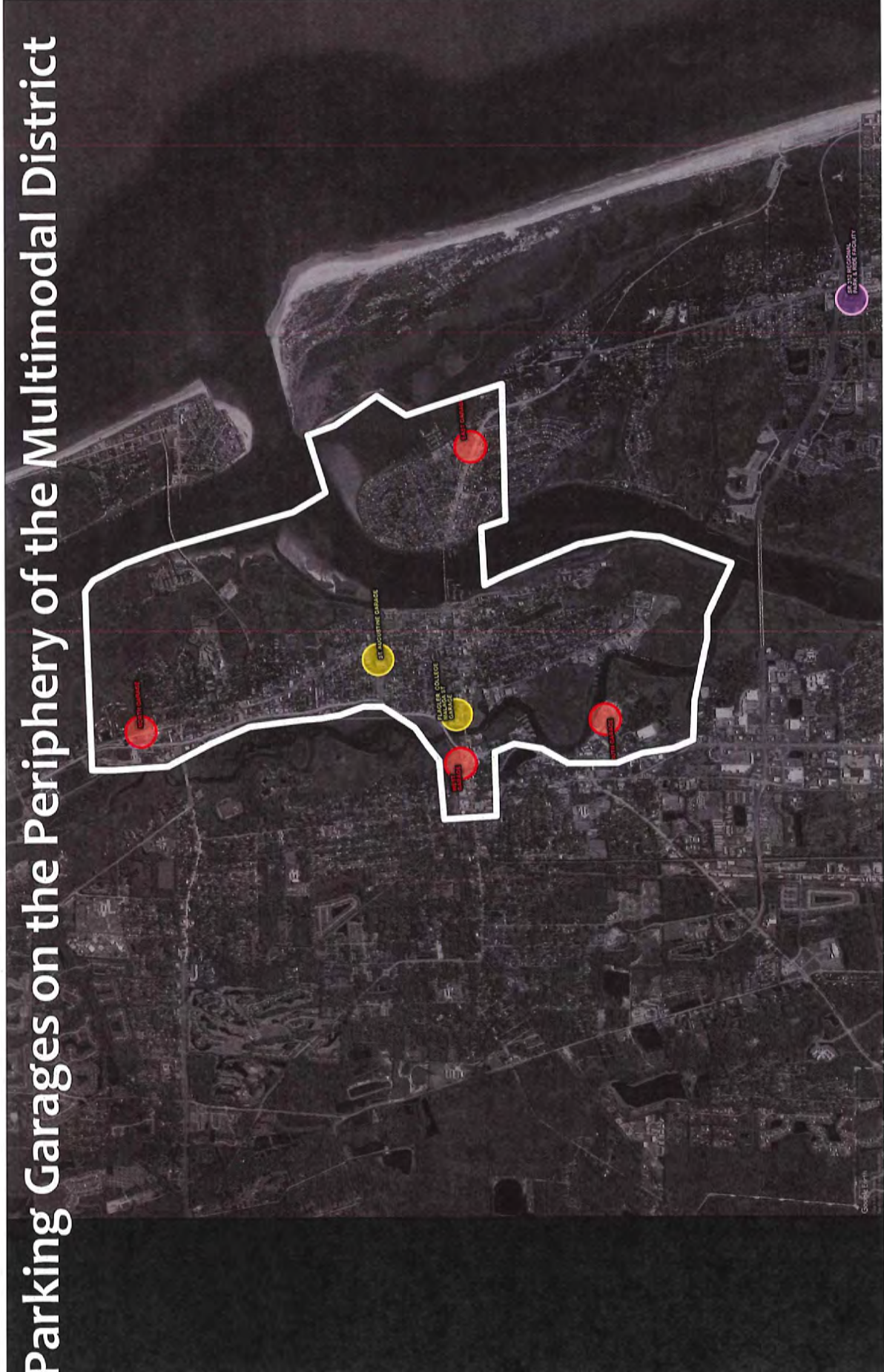
Vision Zero & Residential Streets



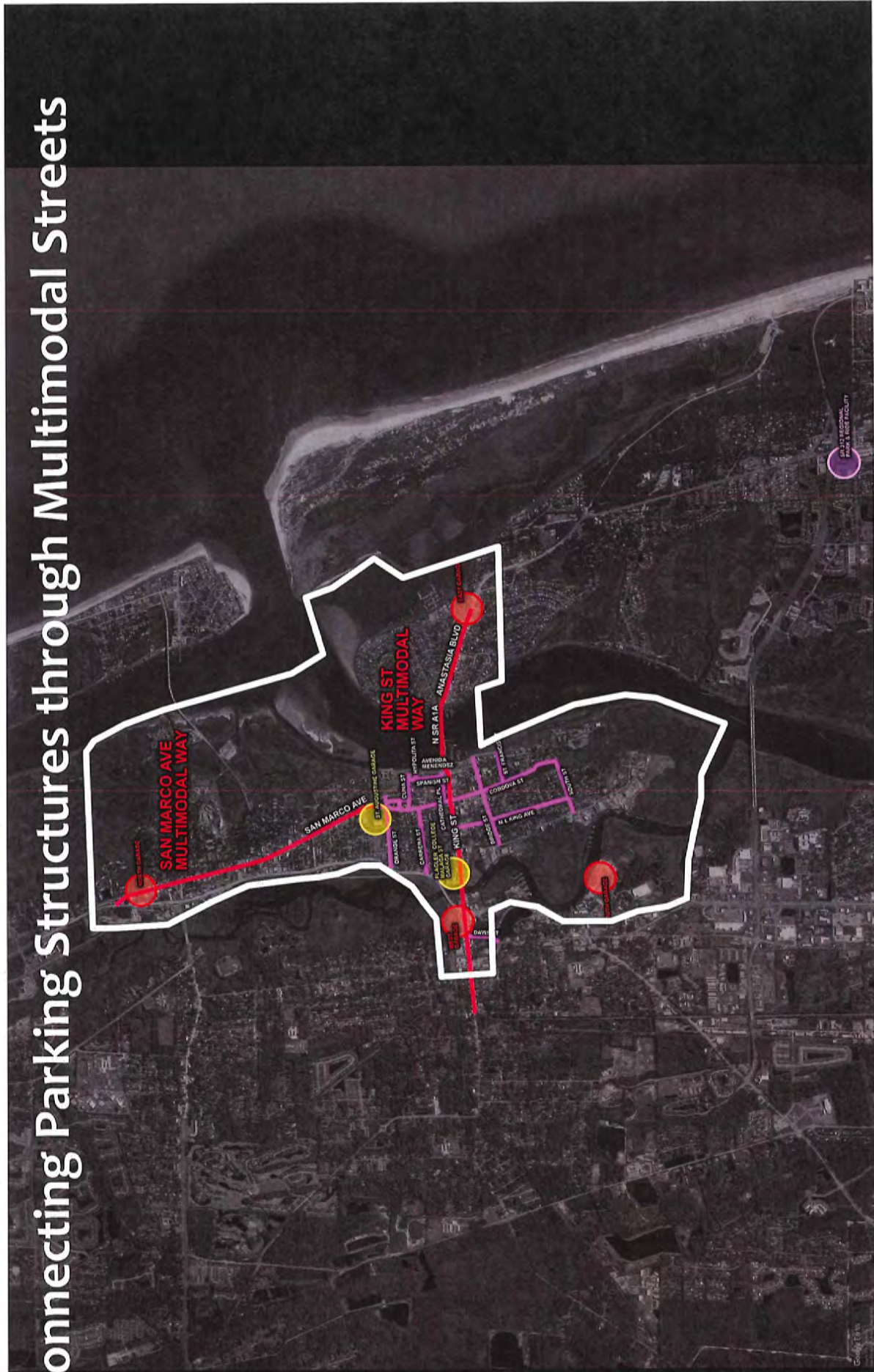
CITY OF
ST AUGUSTINE
— EST. 1565 —



Parking Garages on the Periphery of the Multimodal District



Connecting Parking Structures through Multimodal Streets



Further Connectivity – Water Taxi, Riverwalk & Trails



Expanding the Multimodal Network

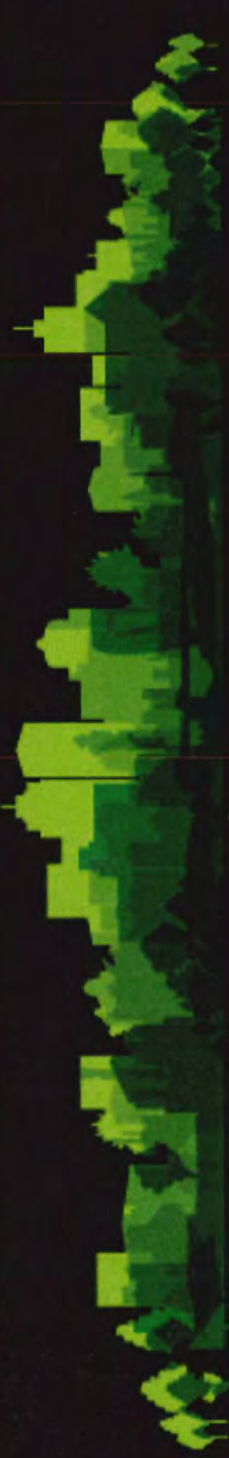


Mobility Plan



Jonathan B. Paul, AICP

NUE URBAN CONCEPTS



Land Use - Transportation - Parking - Impact & Mobility Fees - Traffic - Funding

www.nueurbanconcepts.com nueurbanconcepts@gmail.com

Protected Bike Lane Examples (Subject to Modification)

Raised Bike Lane



Raised Bike Lane w/ buffers



Raised Bike Lane w/ raised island



Cross-sections for discussion and illustration purposes. Subject to change.

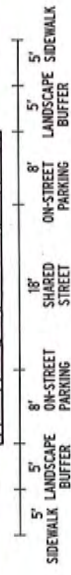
14' Cartway Option



18' Cartway Option



18' Cartway Option



Cross-sections for discussion and illustration purposes. Subject to change.

Collector – no on-street parking On-Street Bike Lanes & 16' Cartway



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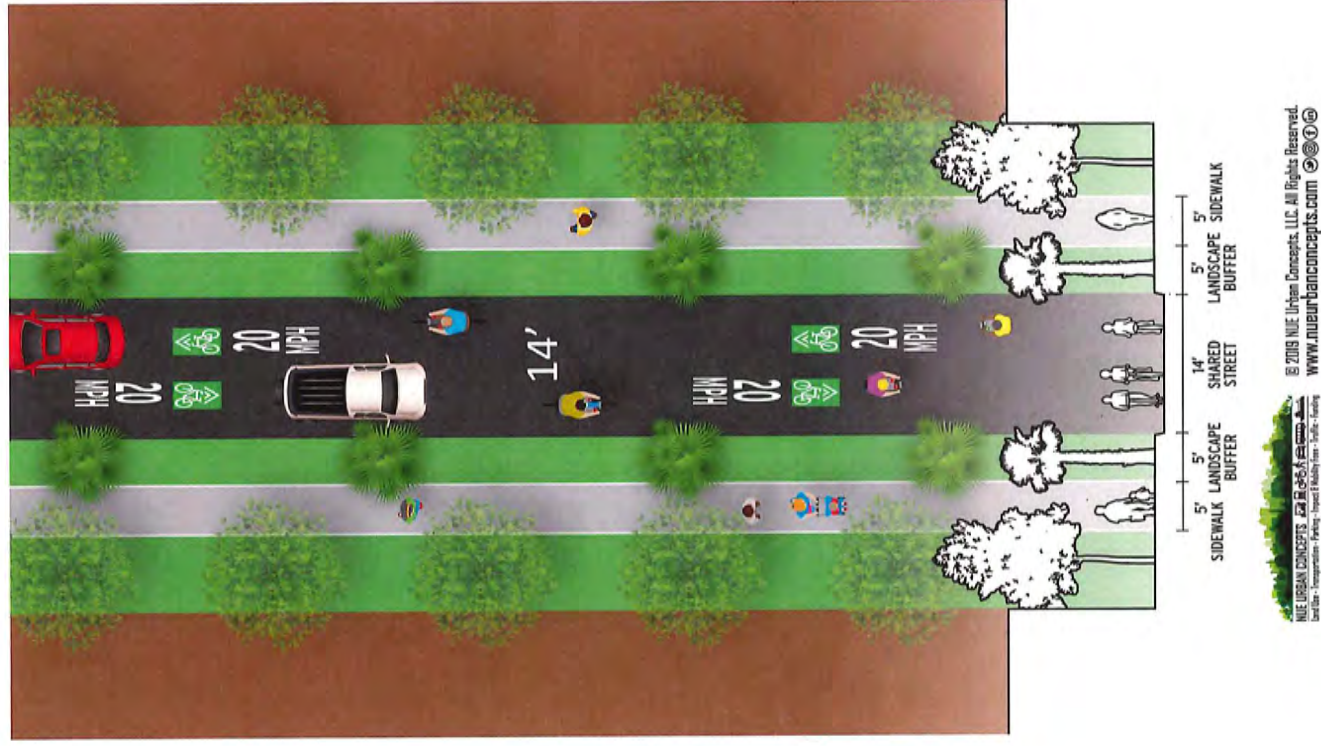
Major Collector – on on-street parking On-Street Bike Lanes & 9' Travel Lanes



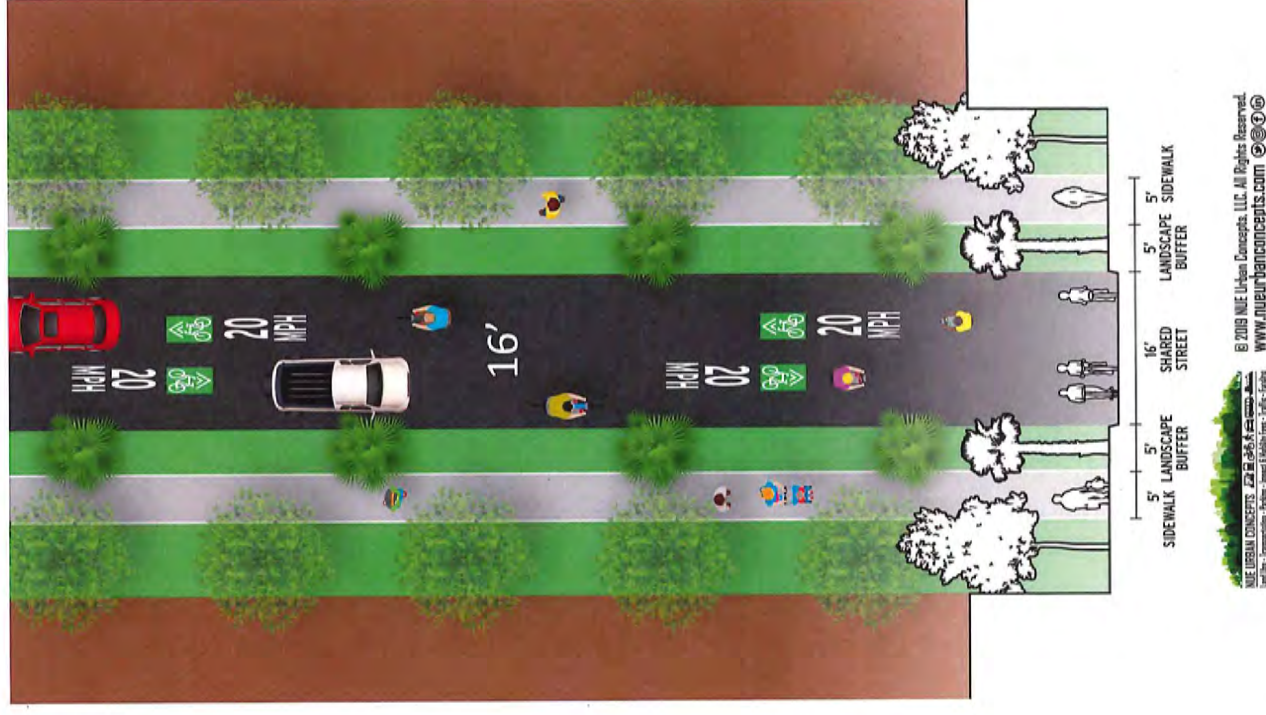
Cross-sections for discussion and illustration purposes. Subject to change.

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Local Street 14' Cartway No On-Street Parking



Local Street Cross-section Options No On-Street Parking Narrow Lanes to discourage on-street parking



Cross-sections for discussion and illustration purposes. Subject to change.

Retrofit Existing Local Streets

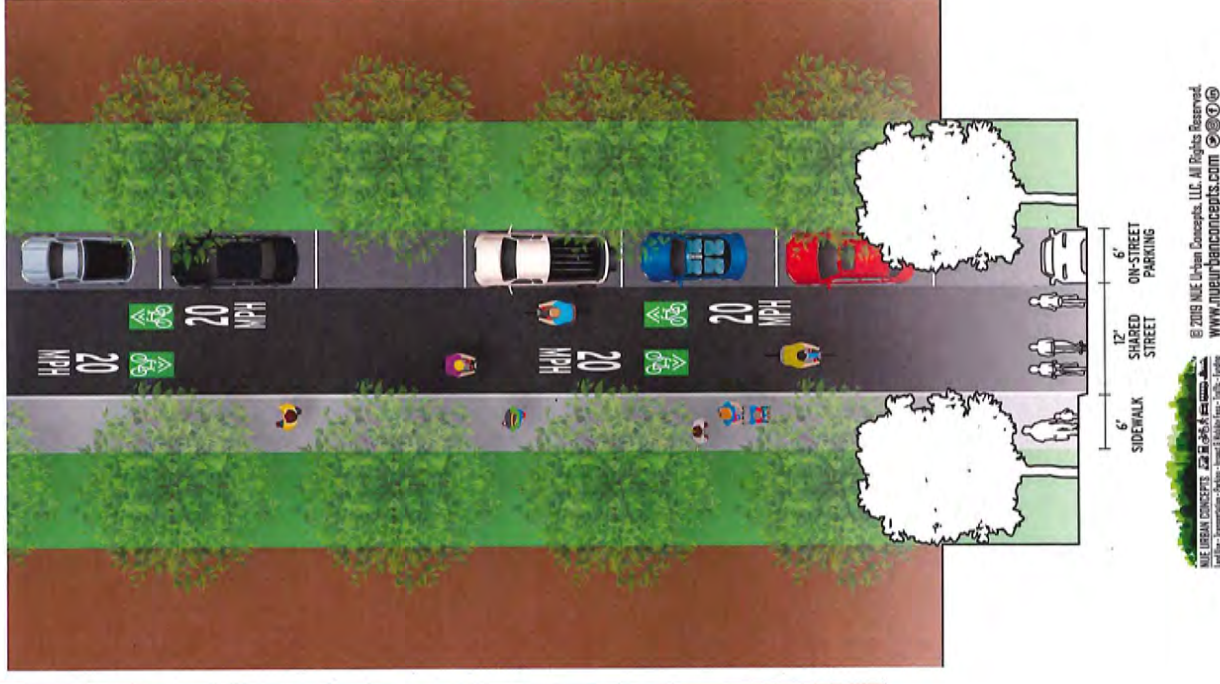
Retrofit Existing 24' Street
6' on-street parking – 12' cartway



Retrofit Existing 24' Street
6' on-street parking – 12' cartway
6' marked sidewalk

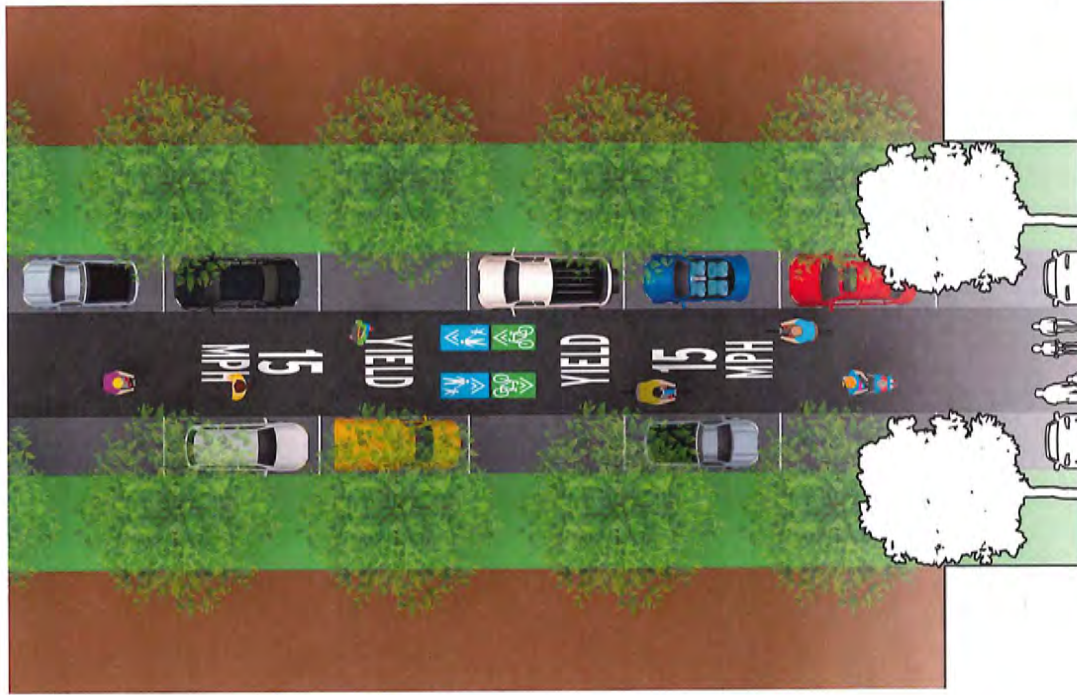


Retrofit Existing 24' Street
6' on-street parking – 12' cartway
6' concrete sidewalk



Cross-sections for discussion and illustration purposes. Subject to change.

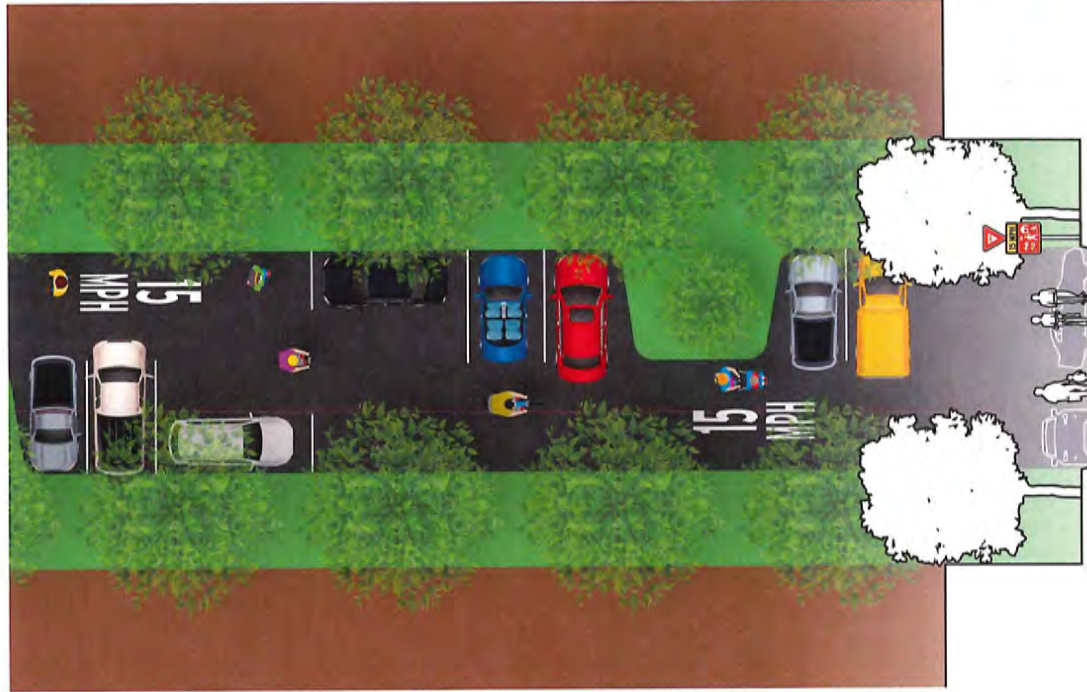
Retrofit Existing 24' Street True Shared Street



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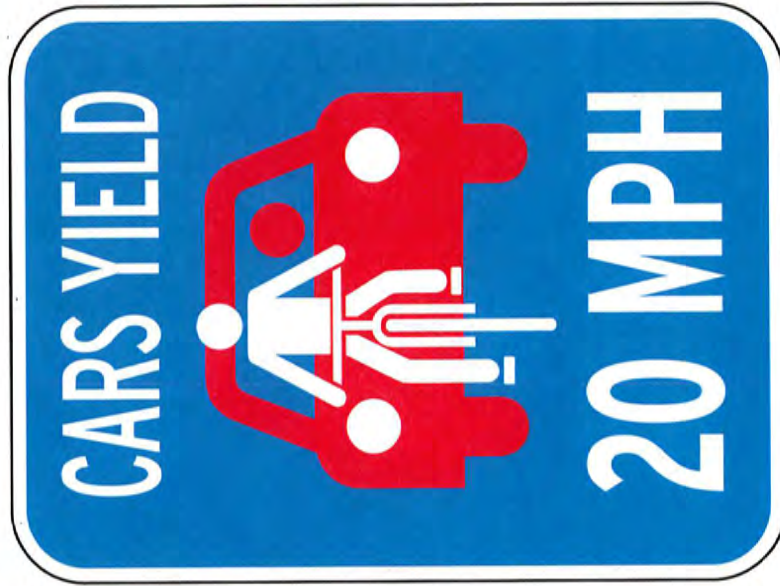
Retrofit Existing Local Streets

Retrofit Existing 24' Street True Shared Street



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Concept – Cars Yield



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CITY OF ST. AUGUSTINE

MEMORANDUM

TO: Planning and Zoning Board

DATE: June 18, 2019

RE: **Item 4**
Discussion and Public Comment Related to the Draft Transportation and Mobility Element of the Comprehensive Plan including Draft Goals, Objectives and Policies

The new Transportation and Mobility Element of the Comprehensive Plan is a required element. The element is the chapter of the Comprehensive Plan that establishes the overall plan and framework for a long term transportation network, addressing impacts of traffic volumes, and establishing a program to encourage alternative modes of transportation for the City. It is the element that outlines all of the important issues to try to address traffic, livability, tourist volume, and a potential balance of modern transportation needs in an ancient city.

Attached is a summary of the Transportation Element requirements, a Florida Department of Transportation (FDOT) information guide for Multimodal Mobility, the 2060 Florida Transportation Plan, and the beginnings of **Draft** Goals, Objectives and Policies.

The purpose in providing this information is to provide the PZB and the public an opportunity to review the information, and discuss priorities as staff works with the consultant to move forward with a proposed Mobility Plan, and updated Transportation Element. The comments, and the direction provided by the PZB will help to set the direction for additional conversations.

The Evaluation and Appraisal process in 2018 identified several issues outlined below related to the Transportation Element. The update is an attempt to address these issues, as well as, update the element through 2040.

- Question of parking and traffic related to infill development
- Traffic – visitors parking outside of the city
- Mass transit – parking vs living city
- Mobility/transportation
- Limited area, limited infrastructure
- “carrying capacity”
- Include pedestrian improvements – safer, wider, “complete streets” concept
- Encourage waterway transportation – outstanding questions include access and shore based parking availability/facilities

- Concerns related to freight delivery/heavy vehicles – safety, hours, loading zones, it was noted that the City is working on this issue
- Encourage bicycling as an alternative mode of transportation including bike infrastructure, rails to trails, and regional connections
- Public parking is a priority, organize alternatives, parking locations and associated transportation issues
- Support alternative modes of transportation/allow “decision making” sooner than later, include shuttles/circulators
- Consider traffic modeling downtown/alternatives downtown

As noted in the Evaluation Summary there are crossover issues with other Elements and the land development code.

If you have any questions or require additional information please contact myself or David Birchim at our office by calling (904) 825-1065 or by email at either askinner@citystaug.com or dbirchim@citystaug.com or Reuben Franklin, Mobility Manager at rfranklin@citystaug.com.

Amy McClure Skinner, AICP
Deputy Director
Planning and Building Department

Transportation and Mobility Element

Key Issues and Assumptions

The updated Data and Analysis follows the statutory requirements.

The City desires to move toward a safer multimodal transportation system.

The Mobility Plan will include “Vision Zero” and park once concepts.

These issues are also related to the future land use plan, infrastructure, sustainability, housing and recreation.

Transportation Element Requirements

The City is required to include a Transportation Element in our Comprehensive Plan.

- Transportation and mobility planning is required;
- Plans must focus on providing multimodal transportation, and encourage economic development through flexible transportation and mobility options for Florida communities;

In general a Transportation Element:

- Contains policies that create a well-connected multi-modal transportation network;
- Support increased residential densities and commercial intensity;
- Help walking to become more practical;
- Support bicycling;
- Improve transit;
- Conserve energy;
- Reduce greenhouse gas emissions and air pollution;
- Maintain vehicular access and circulation;

Multimodal Transportation:

- A system that recognizes the importance of providing mobility options, such as, bus, rail bicycle, automobile or foot
- A multimodal transportation network minimizes impacts to the environment, and enhances livability of neighborhoods by increasing transportation options, expanding access and increasing connectivity;
- An efficient transportation network creates a sustainable development pattern that contributes to livability, prosperity, enhances transportation efficiency, and is healthier for the environment;
- Multimodal strategies include: an interconnected grid network of streets, connectors, arterials, and sidewalks; established land use patterns that support a mix of residential, commercial uses, such as, retail, office and restaurants. Multimodal strategies also include denser populations and urban intensities; increased viability of pedestrian and bicycle travel; land use plans that create communities with transportation choices, and accommodate the flow of freight;
- Land use plans that support multi-modal strategies also can include: transit-oriented developments, mixed use land use categories, traditional neighborhoods, and they encourage urban infill and redevelopment;

Definitions/concepts

- **Transit-oriented development:** A growing trend in creating vibrant, livable, sustainable communities. Also known as TOD, it's the creation of compact, walkable, pedestrian-oriented, mixed-use communities usually centered around high quality train systems. Transit oriented development is regional planning, city revitalization, suburban renewal, and walkable neighborhoods combined. Transit oriented development is also considered a solution to the problems of climate change and global energy security by creating dense, walkable communities that greatly reduce the need for driving and energy consumption.
- **Traditional neighborhoods:** A Traditional Neighborhood Development, or TND, also known as a village-style development, includes a variety of housing types, a mixture of land uses, an active center, a walkable design and often a transit option within a compact neighborhood scale area.
- **Mixed-use:** Mixed-use development is a type of urban development that blends residential, commercial, cultural, institutional, or entertainment uses, where those functions are physically and functionally integrated, and that provides pedestrian connections.
- **Infill development:** Infill development is the process of developing vacant or under-used parcels within existing urban areas that are already largely developed. Most communities have significant vacant land within city limits, which, for various reasons, has been passed over in the normal course of urbanization.
- **Redevelopment:** Variations on redevelopment include: Urban infill on vacant parcels that have no existing activity but were previously developed, especially on Brownfield land, such as the redevelopment of an industrial site into a mixed-use development. Constructing with a denser land usage, such as the redevelopment of a block of townhouses into a large apartment building. Adaptive reuse, where older structures are converted for improved current market use, such as an industrial mill into housing lofts. Redevelopment projects can be small or large ranging from a single building to entire new neighborhoods or "new town in town" projects.
- **Complete streets:** a strategy to develop interconnected networks of streets that are safe and accessible for all users, including integrating all forms of mobility, such as transit; cars, bikes, and pedestrians;
- **Context sensitive:** match the design and operation of that street to the context within the community in order to determine what design features and operational characteristics are appropriate for the streets in a location;

Transportation Concurrency

- A system that assesses landowners the costs of maintaining specified levels of service for components of the transportation system when projected impacts of their development would adversely impact the system;
- Transportation concurrency is now optional (as of June 2011) a local government may eliminate the concurrency provisions, and is encouraged to adopt a mobility fee based plan;
- Regardless a local government is required to retain level of service standards for its roadways for capital improvements planning;
- Required capital improvements for roadways must be included in the 5-year schedule of capital improvements;

Mobility Fee Based Plans

- If a local government repeals concurrency it is “encouraged” to adopt an alternative mobility funding system;
- Tools that can be included in an adopted “alternative mobility funding system” include: long-term strategies to facilitate development patterns that support multimodal solutions (urban design, mixed land uses, increased intensity and density), adoption of an area wide level of service not dependent on any single road segment, exempting or discounting impacts of locally desired development, prioritizing pedestrian and transit improvements, establishing multimodal levels of service where the community can support it;
- Reducing impact fees or local access fees to promote development within urban areas, multimodal districts, and a balance of mixed-use development in certain areas or for affordable or workforce housing.



Systems Implementation Office

Systems Implementation Office / Programs & Services / Multimodal Mobility Review

Multimodal Mobility Review



About

The objective of the mobility review guide and companion checklist is to provide the Florida Department of Transportation (FDOT) with a proposed framework for review of local government "land use and transportation strategies to support and fund mobility" submitted through the Comprehensive Plan review process as they relate to the function of the state transportation system. The guide and checklist, with applicable modifications, may also be useful for reviewing proposed SIS mitigation plans or corridor management plans for major highway corridors.

In addition, local governments may find the guide and checklist a useful resource in developing effective land use and transportation strategies. This proposed framework depicts options that are considered best practices for transportation and land use (mobility) planning, rather than specific statute and rule requirements. These options could be used in planning and implementing viable strategies to advance mobility objectives for the SIS and other major highway corridors, while supporting growth management efforts to increase use of alternative modes, reduce vehicle miles of travel (VMT), and enhance the multimodal environment. FDOT's role in the review of CPAs is defined in statute and subject to change from time to time.

[Mobility Review Guide](#)
[Mobility Review Checklist](#)

For further information contact **Gary Sokolow** or phone (850) 414-4912

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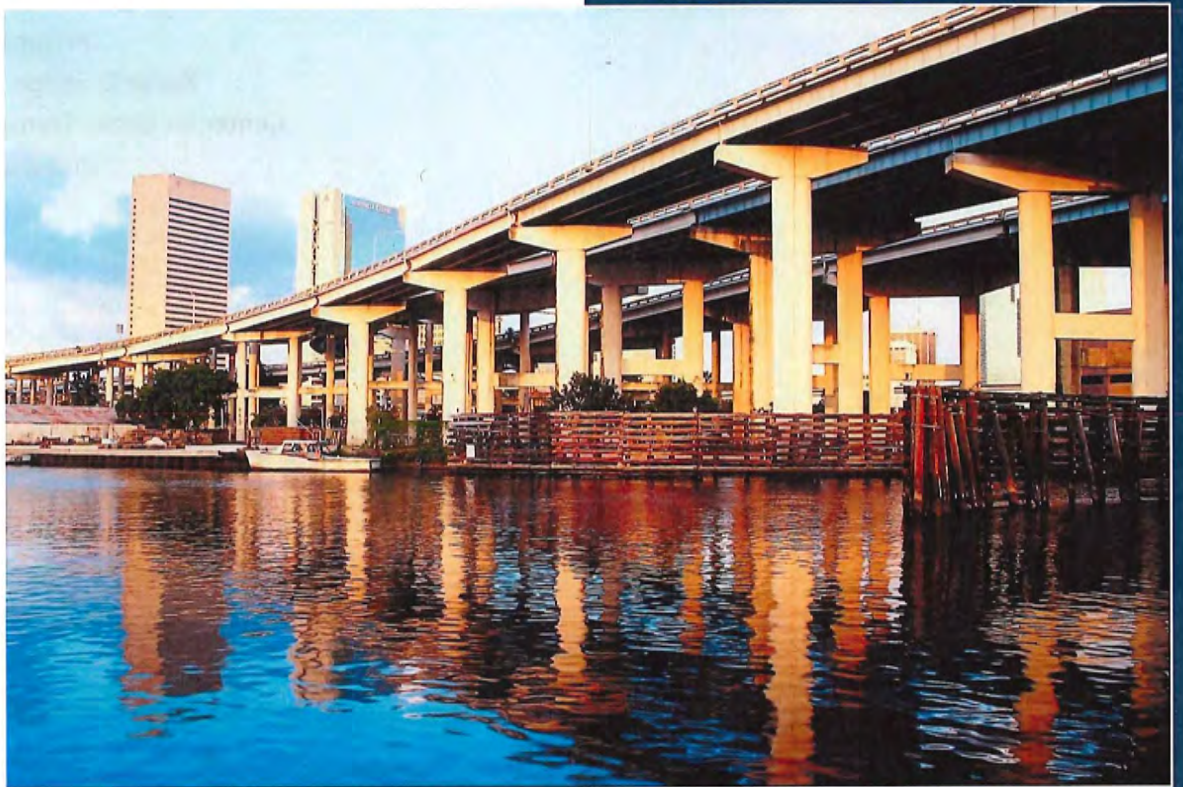
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Florida Department of Transportation
Innovative, Efficient and Exceptional

Mobility Review Guide



FDOT Systems Planning
Task Work Order #931-08

Prepared for:
Florida Department of Transportation



Updated March 2015

Mobility Review Guide

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The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the State of Florida Department of Transportation or the U.S. Department of Transportation.

Prepared in cooperation with the State of Florida Department of Transportation and the U.S. Department of Transportation.

Acknowledgements

The authors would like to acknowledge the Comprehensive Transportation Review Scorecard for Developments of Regional Impact, developed by Glatting Jackson Kercher and Anglin (now AECOM) for the Georgia Regional Transportation Authority, which inspired us to prepare this checklist. The authors also acknowledge Domenico Pontoriero, graduate student researcher, and Melissa McCarville, Research Support Specialist, for their contributions to this guide.

Foreword

This guide and the accompanying checklist were developed by the Center for Urban Transportation Research under a grant from the Florida Department of Transportation (FDOT), Systems Planning Office. They are intended for use by FDOT District staff in their review of local government comprehensive plan amendments in relation to the state transportation system, and by local government planners in the preparation of multimodal transportation plans and strategies. This proposed guidance sets forth a voluntary practice and represents one of several tools that may be used by FDOT for this purpose. The checklist is designed to be adapted by the user to reflect the needs and characteristics of a particular community or region. FDOT staff and local governments should also refer to FDOT Procedure Topic No. 525-010-101-d: *Review of Local Government Comprehensive Plans*, as well as applicable sections of Chapter 163, Florida Statutes, and related guidance from the Florida Department of Economic Opportunity, Division of Community Development (State Land Planning Agency) to ensure that all State of Florida requirements regarding comprehensive plan amendments are met.

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1 Introduction

Many local governments in Florida are seeking to amend their comprehensive plans to increase the relative emphasis on walking, bicycling and transit use and to integrate these strategies with future land use plans. Examples include corridor management plans that integrate bus rapid transit (BRT) with transit oriented development, and systemwide bicycle and pedestrian network enhancements. Some areas have enacted multimodal mobility plans and fees, while others have adopted “complete streets” policies or guidelines to increase attention to non-auto modes of transportation in roadway planning and design.

These trends are transforming how local governments plan for transportation and land use, with corresponding implications for state agency review of comprehensive plans. Through its role in the comprehensive plan amendment (CPA) review process, the Florida Department of Transportation (FDOT) must assess the impact of proposed CPAs on the Strategic Intermodal System (SIS) and other state transportation facilities. FDOT may suggest measures to eliminate, reduce, or mitigate potential adverse impacts of CPAs and may provide technical assistance to local governments on effective multimodal transportation planning strategies.

One issue that often arises in this review process is the difficulty of measuring the value of corridor management and multimodal strategies for improving or maintaining mobility on applicable portions of the state highway system. Some local governments also lack the technical expertise or resources to prepare effective multimodal transportation plans. Guidance regarding what may constitute effective corridor management and multimodal transportation planning will support FDOT CPA review and technical assistance efforts. This Guide and checklist was developed for that purpose.

1.1 Objective of the Guide

The objective of this Guide and Checklist is to provide the Florida Department of Transportation (FDOT) with a framework for review of local government multimodal transportation strategies submitted through the CPA review process as they relate to the function of the state transportation system. The Guide and Checklist, with appropriate modifications, may also be useful for reviewing proposed SIS mitigation plans or corridor management plans for major highway corridors. In addition, local governments may find the Guide and Checklist a useful resource in developing effective multimodal transportation strategies for improved local and regional mobility.

This Guide is not a required practice. It is proposed as a framework for use by District staff in the CPA review and technical assistance process. The framework offers a systematic way to identify effective strategies among those proposed, as well as to uncover potential strategies that may have been overlooked and to point local staff to professionally accepted resources for further information. Additional technical support could be offered by FDOT staff on specific topics of interest.

The proposed framework depicts options that are considered best practices for multimodal (mobility) planning, rather than specific statute and rule requirements. These options could be used by local governments to advance mobility objectives for the SIS and other major highway corridors, while

supporting growth management efforts to increase use of non-automobile modes, reduce vehicle miles of travel (VMT), and enhance the multimodal environment. FDOT's role in the review of CPAs is defined in statute and by FDOT procedure and subject to change from time to time.

In addition, opportunities for FDOT staff to develop corridor management plans for the state highway system in cooperation with local governments continue to arise throughout the state. Such plans may form the basis for Strategic Intermodal System mitigation agreements and may also be a prominent component of local transportation plans. Additional guidance on the review of local government corridor access management plans and policies is provided in [Guide for Analysis of Corridor Management Plans and Policies](#).

1.2 Issues in Evaluating Multimodal Strategies

Although it may not be difficult to determine if mitigation is needed, it is difficult to determine if mitigation is adequate. Traditional traffic modeling may not show system relief due to the tendency of the transportation models to draw traffic to facilities with the most capacity. In addition, merely offering alternative modes to transportation system users does not necessarily result in changes in travel behavior. Measuring that mode change is even more difficult. Jurisdictions that have chosen to promote alternatives to the automobile as mitigation for system impacts often do so based on planning and policy objectives, rather than a one-to-one trade-off of trips.

The relationship between land use measures and transportation outcomes is complex and still not well understood. Studies are sometimes contradictory and use a variety of measures and approaches, making it difficult to generalize findings to a specific strategy or feature. This is particularly true for small scale strategies, such as sidewalks, parking lot connectivity, and bicycle racks.¹ A number of studies indicate that there are transportation system benefits to providing multimodal facilities and to compact urban forms, such as transit-oriented or traditional neighborhood development, particularly in advancing non-auto modes of transportation. This benefit is not always easy to quantify, however, as it varies considerably based on a range of variables, such as the size of the developed area, the compatibility of the land use mix, the degree of connectivity in the built environment, location and accessibility of the development, socioeconomic characteristics of the affected population, and the density or intensity of uses.

TRB Special Report 298 summarized dimensions of the built environment thought to influence travel demand (aka the five "Ds"), as follows:²

1. *Density*: population and employment by geographic unit (e.g., per square mile, per developed acre).

¹ Impact Fee Credits for Livable Communities Improvements. Technical Memorandum #1, Literature Review and Alternative Approaches. Center for Urban Transportation Research. January 2005

² *TRB Special Report 298: Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions*, Prepared by the Committee for the Study on the Relationships Among Development Patterns, Vehicle Miles Traveled, and Energy Consumption, National Research Council of the National Academies, 2009, p. 52.

2. *Diversity*: mix of land uses, typically residential and commercial development, and the degree to which they are balanced in an area (e.g., jobs–housing balance).
3. *Design*: neighborhood layout and street characteristics, particularly connectivity, presence of sidewalks, and other design features (e.g., shade, scenery, presence of attractive homes and stores) that enhance the pedestrian- and bicycle-friendliness of an area.
4. *Destination accessibility*: ease or convenience of trip destinations from point of origin, often measured at the zonal level in terms of distance from the central business district or other major centers.
5. *Distance to transit*: ease of access to transit from home or work (e.g., bus or rail stop within ¼ to ½ mile of trip origin).

Although the specific relationship between trip making and land use characteristics or site design features varies by the context, some conclusions can be drawn. These are as follows:³

- providing a mix of uses can increase internal capture and reinforce alternative modes, but these impacts are highly dependent on context and other factors, such as land use compatibility and network connectivity;
- connectivity of local street networks can reduce local trips on arterials;
- vehicle miles traveled (VMT) is most strongly related to measures of accessibility to destinations and secondarily to street network design variables;
- walking is most strongly related to measures of land use diversity, intersection density, and the number of destinations within walking distance;
- bus and train use are equally related to proximity to transit and street network design variables, with land use diversity a secondary factor; and
- improving transit, pedestrian, and bicycle facility quality of service, including the frequency and hours of operation of transit service, attracts more users.

Given the many variables that influence results and the variation in existing study findings, most communities do not have specific data to support their plans and policy incentives aimed at advancing non-auto modes. Instead, observation, community desire for increased livability, and the fact that research to date indicates a trend toward multimodal benefits, have become the basis for policy changes. Communities are adopting multimodal quality of service and other performance measures so they may monitor the actual results of their mobility planning strategies and adapt their plans accordingly.

FDOT's chief responsibility is to maintain mobility on the state transportation system.

NOTE: *Florida's growth management process continues to evolve and new legislation may result in additional changes to agency roles and planning requirements. Local governments are encouraged to contact the State Land Planning Agency to ensure that all pertinent requirements have been met prior to plan submittal.*

³ R. Ewing and R. Cervero, "Travel and The Built Environment: A Meta Analysis," *Journal of the American Planning Association*, Vol. 76, Issue 3, 2010, pp. 265-294.

Therefore, this practice proposes that FDOT CPA review staff should assess and offer technical assistance comments on local government multimodal transportation and corridor management strategies as they pertain to mobility on the state system. A comprehensive menu of possible criteria is provided to assess and gauge the adequacy of proposed local strategies and to aid the user in identifying additional strategies that could strengthen the effectiveness of multimodal plans.

1.3 Methodology

The criteria included in this Guide and Checklist are based on planning strategies relevant to mobility. The selected criteria embody transportation and land use planning best practices that support the use of non-automobile modes, advance corridor management objectives for major highway corridors, reduce vehicle miles of travel (VMT), and enhance the multimodal environment. The criteria were selected through a comprehensive review of the literature and current practice in multimodal planning and corridor management, as well as relevant findings from previous research and a review of Florida transportation and growth management legislation. A technical working group of knowledgeable persons in the public and private sector was also assembled to guide the project.

The resulting criteria were grouped into the following general categories by topic as illustrated in Figure 1:

- Supporting Plans and Guidelines,
- Multimodal Environment,
- Network Improvement,
- Operations and Safety, and
- Implementation.

Each category contains specific elements and criteria that relate to the category. For example, the Network Improvement Category includes the following Elements: Major Roadway Network, Local Street Network, Bicycle and Pedestrian Networks, and Transit Network. The Categories, Elements, and Criteria are summarized in the accompanying Checklist to aid users in analyzing the range and depth of multimodal and corridor management strategies contained in a proposed comprehensive plan amendment.



Figure 1: Key categories of criteria in the review of mobility or corridor management plans.

The Mobility Review Guide and Checklist may be used in the review process to highlight Categories and Elements that are effectively addressed and those that would benefit from additional or more complete strategies. These resources guide the agency reviewer in the assessment process and may also be used to guide local governments in developing effective strategies. Application of the Mobility Review Guide and Checklist acknowledges the value of such strategies to increased mobility on the SIS and other state transportation facilities and the difficulty of measuring the benefit of certain land use and transportation best practices known to increase mobility and/or reduce VMT.

2 Using the Checklist

This Mobility Review Guide is a user guide that accompanies the Mobility Review Checklist. This Guide includes important details about the criteria in the Checklist and must be consulted in concert with the Checklist during the review and assessment process. Keep in mind that this is a proposed practice and not an official procedure; criteria depict transportation and land use planning best practices that may be used in accomplishing improved mobility, rather than specific statutory requirements. Local governments are referred to the applicable sections of Chapter 163, F.S. and related guidance from the State Land Planning Agency to ensure that all state requirements regarding the comprehensive plan amendments are met. In addition, the [FDOT Transportation Site Impact Handbook](#) contains specific guidance for determining the potential impacts of local government comprehensive plan amendments on the state transportation system.

The Checklist combines the suggested land use and transportation review criteria into the following broad Categories: Supporting Plans and Guidelines, Multimodal Environment, Network Improvement, Operations and Safety, and Implementation. Figure 2 is an example. It is recommended that local governments include appropriate performance measures for proposed strategies so progress may be tracked. Keep in mind that individual criteria as well as locally proposed strategies may relate to more than one Criterion in more than one Element or Category. For example, street network connectivity strategies and criteria also have implications relative to the pedestrian network, as well as to access management and the multimodal environment.

Mobility Review Checklist				Plan Name: _____ Review Number: _____ Jurisdiction: _____ Date of Review: _____			
This spreadsheet checklist should be used with the accompanying user guide, Checklist for Reviewing Mobility Measures. It contains important guidance on the meaning of selected criteria in the checklist and must be consulted in concert with the checklist during the review and assessment process. Keep in mind that this is a proposed practice and not an official procedure.							
Category	Elements	Criteria Code	Criteria	Addressed	Not Addressed	Not Applicable	Comments
Supporting Plans and Guidelines - SP -	State, Regional, Local - SP1 -	SP1.1	Supports the Florida Transportation Plan, the Strategic Intermodal System Plan, and other applicable state plans and guidelines.				
		SP1.2	Consistent with adopted regional mobility plan or vision, such as that established through a regional collaborative, including the MPO Long Range Transportation Plan and adopted Transit Development Plan (TDP).				
		SP1.3	Coordinates with transportation, corridor management, and mobility plans of adjacent local governments and transportation planning agencies.				
			Consistent with local government comprehensive plan objectives and policies as well as				

Figure 2: Mobility Review Checklist.

Proposed comprehensive plan amendments containing strategies that correspond to Criteria within each of the Categories are those with the greatest potential to advance the following general mobility objectives: 1) improve operations and safety of the major highway system, 2) increase opportunities for walking, bicycling, and transit use, and 3) promote a built environment conducive to use of non-automobile transportation modes. The combined application of strategies found in the Mobility Review

Guide criteria may over time help to reduce dependence on single occupant vehicle travel and the corresponding energy use and greenhouse gas emissions attributable to transportation. The following sections discuss how to use the Mobility Review Guide and Checklist and interpret the results.

2.1 Suggested Review and Submittal Process

As part of the general transportation planning process, local governments typically conduct an analysis of existing land use and transportation conditions that affect mobility. Ideally, results of this existing conditions analysis will be used as supporting documentation and in developing appropriate multimodal strategies, as well as in determining applicability of the Mobility Review Checklist Criteria. This will help focus the review process on those issues most important within the local context. Appendix A includes a sample outline based on the Checklist that may be useful for documenting results of the existing conditions analysis.

By completing the checklist, District staff will be well positioned to identify measures the local government may take to eliminate, reduce, or mitigate any identified adverse impacts of the CPA and to highlight potential strategies that may have been overlooked, as well as to identify professionally accepted resources for further information. Additional technical support could then be offered on specific topics of interest.

Before submitting a comprehensive plan amendment for FDOT review, local governments are encouraged to complete a self review of their proposed comprehensive plan amendment using this Guide and Checklist. This will help highlight strengths and potential shortcomings of proposed multimodal and corridor management strategies in light of current best practices. If specific Criteria, Elements, and Categories are not addressed, then strategies to address them should be considered and included, unless they are deemed not applicable in the given context. It is important to include strategies within each Mobility Review Element and Category to maximize the potential effectiveness of the plan in accomplishing mobility objectives.

Prior to beginning their review, FDOT District staff should coordinate with State Land Planning Agency (SLPA) regional staff in tailoring the Review Checklist to the local context. This Checklist should be provided to the local government as early as possible so it may be used both in their planning and self-review process. Local governments are advised to submit their final self review to the FDOT District along with their comprehensive plan amendment. In doing so, local governments should note specific policies or other information in the Comments column of the Checklist to aid FDOT staff reviewers in identifying local strategies that relate to specific Criteria when reviewing the proposed comprehensive plan amendment. Where differences in assessments occur, FDOT staff could discuss these items with the local government and determine if additional information is available that may be pertinent to the assessment. For example, some Criteria may already be addressed in the adopted local comprehensive plan and, therefore, not appear in the proposed amendment. If so, these items could be identified as such in the Comments column.

Checklist users must apply reasonable discretion in determining whether Checklist Criteria are applicable or not in the given context. For example, major urban areas have extensive multimodal needs

involving a diversity of modes and strategies. Needs and strategies in small towns without transit may focus more on highway access management, local street connectivity, gaps in the sidewalk network, and ridesharing programs. In addition, FDOT reviewers should understand that while their expertise and scope of review lies in the state transportation system realm, land use strategies are often inextricably connected to transportation. Therefore, reviewers should assess both land use and transportation strategies in close coordination with SLPA regional staff. Although needs and methods to advance the Criteria may differ, every local government should be encouraged to seek all opportunities to connect land use and transportation planning objectives and address as many Criteria as possible.

2.2 Checklist Directions

The Mobility Review Checklist contains specific Criteria within Categories and Elements to be reviewed along with columns for input specific to the plan under review. A copy of the Checklist is provided in Appendix B. The contents of each column may be described as follows:

1. *Category* - indicates the overall Category that best describes the supporting Elements and Criteria. (e.g. "Network Improvements" relates to Elements and Criteria for improving the multimodal transportation network)
2. *Elements* - breaks down each Category into core elements that relate to the Category (e.g. Local Street Network is one element in the Category "Network Improvement.")
3. *Criteria Code* – a code number for each Criterion to aid in cross referencing.
4. *Criteria* – states selected Criteria that reflect planning strategies relevant to that Category and Element (e.g. "Includes network-enhancing local and minor collector street projects" is a criterion in the Local Street Network element of the Network Improvement Category).
5. Columns 5 – 8 provide space for the reviewer to indicate the extent which each Criterion has been addressed by proposed strategies, using the terms noted below. Double-clicking in each column produces an "X" in the space.
 - *Addressed* - a strategy or strategies addresses the Criterion; in some cases, more detailed strategies would provide greater benefit and the reviewer should indicate this in the "Comments" column.
 - *Not addressed* – no strategies address the Criterion.
 - *Not applicable* – the criterion is not applicable within the local context.
6. *Comments* – for staff comments related to the Criteria.

Below is an explanation of the Categories, Elements, and Criteria contained in the Checklist to guide both plan preparers and reviewers. The "Notes" located adjacent to each Criterion in the following tables describe how the Criterion may be addressed and/or pertinent considerations and resources.

NOTE: *Transportation system and land use strategies should be evaluated relative to the criteria on this checklist. While all criteria may not be desirable for each community, it is important to seek all opportunities to connect land use and transportation planning objectives. Items not relevant to local government objectives may be designated "not applicable."*

2.3 Category SP: Supporting Plans and Guidelines

2.3.1 Element SP: State, Regional, Local

As partners in maintaining regional mobility, local government multimodal and corridor management strategies should be coordinated and consistent to the extent feasible with adopted plans of adjacent local governments, as well as with state and regional plans. The same is true for proposed mitigation strategies and corridor management plans. Where local governments have previously established corridor management policies and mitigation plans for SIS facilities, such policies and programs should be incorporated into the overall comprehensive plan. Table 1 illustrates criteria for consideration in the review and development of proposed multimodal plans, as well as corridor management plans.

The efficiency of local and regional transportation systems and the effectiveness of growth management efforts are directly influenced by the degree of coordination in state, regional, and local government planning. Urbanized areas designated for additional growth and urban infrastructure/services (e.g., within urban service boundaries) in regional vision plans, MPO long range transportation plans, transit development plans, and local comprehensive plans are more conducive to development because infrastructure and services are already in place or planned. Locating development and transportation projects in these areas improves the ability of government agencies to provide cost-effective and efficient transportation service. Such location may also reinforce multimodal strategies resulting in a reduction in vehicle miles of travel.

Table 1: Supporting Plans and Guidelines (SP1) Criteria

CRITERIA	NOTES
SP1.1 Supports the Florida Transportation Plan, the Strategic Intermodal System Plan, and other applicable state plans and guidelines.	Ensure the proposed plan is consistent to the extent feasible with adopted state transportation plans including the Florida Transportation Plan , Transit 2020, and the 2010 Strategic Intermodal Plan . Identify specific strategies aimed at advancing state transportation plans.
SP1.2 Consistent with adopted regional mobility plan or vision, such as that established through a regional collaborative, including the MPO Long Range Transportation Plan and adopted Transit Development Plan (TDP).	Identify applicable regional, MPO, and transit agency plans. Identify (possibly with an asterisk or other simple indicator) plan policies and strategies that advance applicable regional plans. These plans will vary according to location.
SP1.3 Coordinates with transportation, corridor management, and mobility plans of adjacent local governments and transportation planning agencies.	Identify how planned projects and policies are consistent with and coordinate with transportation and mobility plans of adjacent local governments and transportation planning agencies. Identify any sub-area studies that may be located in whole or in part within the mobility or mitigation planning area and how those plans are incorporated.
SP1.4 Consistent with local government comprehensive plan objectives and policies as well as specialized plans.	Identify applicable plans. Identify comprehensive plan policies supported and advanced by the proposed plan amendment. Again, a simple, yet unique, indicator may be used.

2.4 Category ME: Multimodal Environment

The multimodal environment relates to the organization and location of land uses, the land use mix, the density and intensity of development, and related multimodal policies. The FDOT 2014 Trends and Conditions Report on [Impact of Transportation: Transportation and Land Use](#) describes land use trends and conditions in Florida and the implications for transportation and the environment. The Criteria in this Category relate to these issues and are interdependent with the Major Roadway, Local Street, Transit, and Bicycle and Pedestrian Network Improvement Criteria later in this Guide. Carefully promoting these Criteria through planning will contribute to an environment conducive to walking, bicycling, and transit use. This may also help to reduce vehicle miles of travel (VMT) and the need to use major arterials for short local trips.

Figure 1 illustrates the relationship between network, land use mix, and trip making on major roadways. The top example reveals how separate, stand alone land uses require use of the arterial for even short local trips due to the absence of network connections. This increases the need to drive among uses, rather than walk or bike, due to longer local travel distances. The bottom example shows how land uses can be organized on a connected network to create an environment that supports non-automobile modes, reduces VMT, and internalizes local trips.

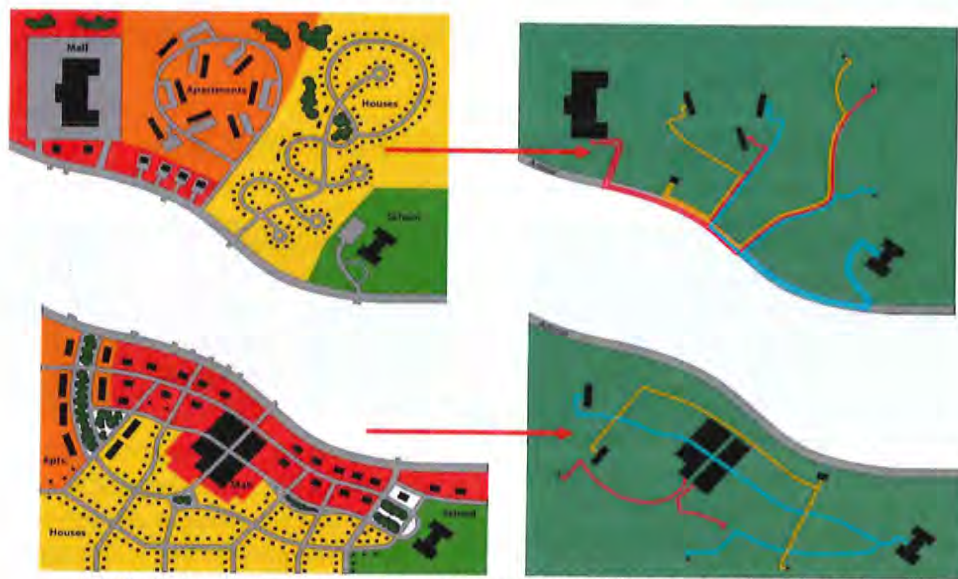


Figure 1: Land use organization, network connectivity and arterial traffic.

A challenge in mobility and corridor management planning is how to promote a multimodal environment appropriate to the context and level of urbanization. This is particularly true in counties that may have a variety of urban, suburban, and rural environments. The transect concept, as applied to human settlements, is described by the town planning firm Duany Plater-Zyberk & Co: “The Transect arranges in useful order the elements of urbanism by classifying them from rural to urban. Every urban element finds a place within its continuum. For example, a street is more urban than a road, a curb more urban than a swale, a brick wall more urban than a wooden one, and an allee of trees more urban than a cluster...” The [Center for Applied Transect Studies](#) elaborates, “The six Transect Zones ... provide the

basis for real neighborhood structure, which requires walkable streets, mixed use, transportation options, and housing diversity.”

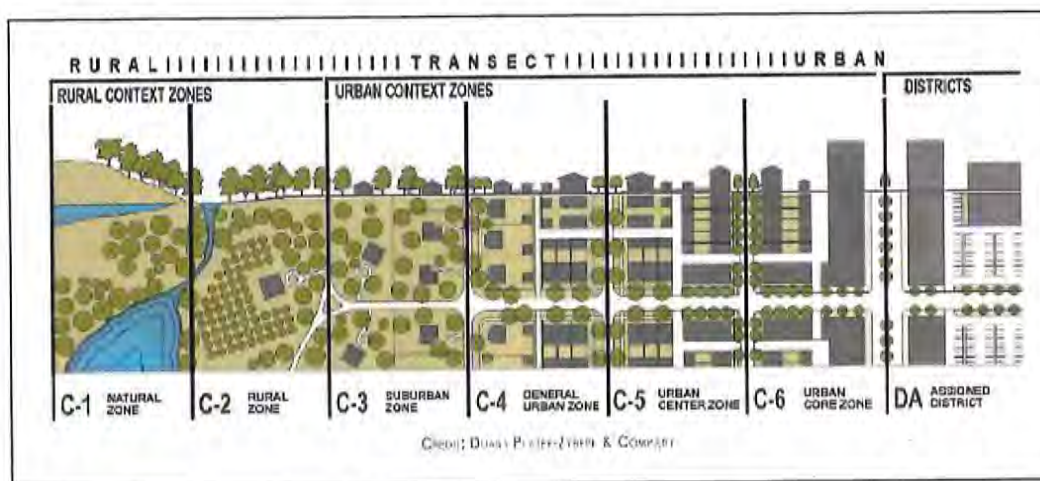


Figure 2: Corridor transect

Source: Duany Plater-Zyberk and Company

The transect concept is discussed in terms of “Context Zones” in [Designing Walkable Urban Thoroughfares: A Context Sensitive Approach](#) (ITE 2010) where it provides the transect illustration (Figure 2) and a table of characteristics for each context zone to aid users in establishing appropriate sets of land use and transportation strategies across varying levels of urbanization. This recommended practice discusses features that create context including land use, site design and urban form, and building design.

Marlon G. Bournet explores transportation investments that may provide alternatives to automobile travel in his research and article, “[Transportation Infrastructure and Sustainable Development](#).”⁴ His research suggests that it is important to focus on establishing livable urban cores and activity centers through both land use mix and walkability.

Available resources that address transportation and land use include FHWA’s [Livability in Transportation Guidebook](#) and FDOT’s [A Framework for Transit Oriented Development in Florida](#). In addition, many publications are available on the market that address transportation and land use as the elements that determine community livability. These include New Urbanism: Comprehensive Report and Best Practices Guide, SmartCode, Sprawl Repair Manual, and Sustainable Urbanism.

Rather than establish specific parameters for the multimodal environment, this Guide invites the reviewer to work with individual local governments to determine what may be right for each community in concert with guidance provided in the various resources. The following sections provide specific details regarding Elements of the Multimodal Environment Category.

⁴ M. Boarnet, “Transportation Infrastructure and Sustainable Development: New Planning Approaches for Urban Growth,” *Access*, No. 33, Fall 2008, pp. 27-33.

2.4.1 Element ME1: Organization and Location

The organization and location of land uses directly affects local and regional mobility and the efficiency of non-automobile modes. Focusing non-residential development into activity centers, rather than in strips along major roadways, creates destinations that can be more efficiently served by transit, cycling, and walking. An activity center may be generally defined as a compact node of development containing uses and activities which are supportive of and have a functional relationship with the social, economic, and institutional needs of the surrounding area.

Proximity of shopping, services, and employment centers to each other and to the surrounding residential uses facilitates walking, bicycling, and transit use and reduces the number and length of auto trips. This same principle can be translated on a smaller scale to a neighborhood level. Neighborhoods that include a greater mix of land uses within reasonable proximity not only have greater choice of travel alternatives, they also afford residents greater convenience in meeting daily needs.

“Transit complementary land use decisions are one way to build transit ridership and ultimately improve service, without the risk and uncertainty of major capital outlays.”

- FDOT, *Impact of Transportation: Transportation and Land Use*, 2014

Table 2: Multimodal Environment (ME1) Organization and Location Criteria

CRITERIA	NOTES
ME1.1 Designates and reinforces strong urban core(s) and urban activity centers of varying sizes and compositions.	Focuses on reducing VMT through strong urban cores and activity centers. Plans should focus employment and commercial activities into such cores and centers surrounded by relatively high density and intensity residential development. Networks should provide high connectivity of the residential areas with the activity centers (see NI). Larger cities and counties may also have regional activity centers outside of this core. Locate smaller employment centers and commercial/service nodes of varying sizes in proximity to residential neighborhoods.
ME1.2 Transit-compatible land uses are defined and required to locate on existing or planned transit corridors with direct access to transit. This should include but is not limited to transit-oriented developments (TOD).	A detailed description of transit compatible land uses is contained in Model Regulations and Plan Amendments for Multimodal Transportation Districts . See also the FDOT Framework for Transit Oriented Development in Florida for detailed guidelines on varying types of TOD depending on context (e.g. urban core, urban general, suburban, and rural). The report Mixed Income Housing Near Transit offers strategies for increasing the affordable housing supply as part of transit oriented developments to offset the tendency to cater only to high income markets in these locations.
ME1.3 Ensures that industrial and other freight-related uses locate in proximity to and have direct access to major transportation routes and intermodal stations or other freight transfer locations.	Proper location and direct access to and between major transportation routes and/or ports and airports help reduce impacts on the surface street system and increase the speed of freight movement.

When activity centers and other major land uses that generate transit ridership are located along existing transit routes, then route productivity increases and transit service may potentially be increased. Conversely, locating such land uses outside an existing transit service area may result in the need to alter or extend routes leading to longer headways and less convenient service. Locating large residential subdivisions at the urban fringe and focusing goods and services onto strips along arterial roadways requires residents to make more auto trips, longer trips, and focuses these local trips onto the arterial system. These development patterns preclude transit and walking, increase VMT, and increase travel demand for single occupant vehicles on the arterial system.

2.4.2 Element ME2: Mix

Transit use, walking, and bicycling are more feasible modes of transportation in communities with a diverse mix of land uses and services on an interconnected street system (*see also* **N12**). Core areas and urban activity centers should contain a complementary mix of office, retail, government, residential, entertainment, restaurants, grocery stores, and related uses that promote activity, during both peak and non-peak hours. Mixing uses vertically in multi-story buildings encourages walking by providing more activities at the street level (e.g. office, parking, or residential above retail/service uses, etc.). The goal is a mixed use environment that attracts people and allows them to walk and interact with their environment outside of an automobile.

Table 3: Multimodal Environment (ME2) Mix Criteria

CRITERIA	NOTES
ME2.1 Provides for a complementary mix of retail, services, residential, institutional, cultural, recreational, and employment opportunities within urban cores and major activity centers.	Sample objectives and policies for achieving a complementary land use mix in varying types of activity centers or service nodes are contained in Model Regulations and Plan Amendments for Multimodal Transportation Districts (pp. 18-20). An additional resource is New Urbanism: Comprehensive Report & Best Practices Guide (Steuteville, et.al.). This criterion also encompasses strategies such as workforce housing in proximity to employment. Providing a mix of uses can increase internal capture and reinforce non-automobile modes. However, these benefits are highly dependent on context and factors such as land use compatibility and network connectivity as indicated in the FDOT Community Capture Methodology .
ME2.2 Provides for a vertical mix of uses within urban cores and major activity centers to encourage active uses at the street level.	Avoiding long vacant or blank block fronts contributes to pedestrian-friendliness. An example policy might require at least 50% of the ground-floor street frontage, excluding driveway entrances and elevators, to accommodate pedestrian-oriented uses such as retail or neighborhood services. For example policies and regulations, see Section 9.3 of Model Regulations and Plan Amendments for Multimodal Transportation Districts . This Criterion is most appropriate for high-intensity urban cores and major activity centers.
ME2.3 Provides for compatible food, education, retail and service uses on a neighborhood level within or in close proximity to residential areas.	Strict separation of residential and other uses into large single use areas increases auto dependence. Policies should provide opportunities to integrate service centers within existing single-use residential neighborhoods.

2.4.3 Element ME3: Density

Future land use plans and zoning ordinances typically establish only maximum development densities using dwelling units per acre or floor area ratios (FAR). The resulting densities in Florida cities are often far less than the maximum allowed – particularly in commercial centers or along corridors where higher densities are desirable. In addition, efforts to increase density in established areas are often opposed by neighborhood residents due to concerns over motor vehicle traffic impacts. However, establishing minimum density and intensity policies may be necessary in some areas to achieve optimal densities for economically vibrant urban cores and major activity centers. As noted by the Victoria Transport Policy Institute: “Commercial centers should be medium- to high-density, with multi-story buildings. Densities of 50 employees or more per gross acre are desirable.”⁵

It is essential that efforts to increase density in designated areas be combined with urban design criteria aimed at ensuring a livable, walkable environment. For example, Miami adopted a citywide form-based code in 2009 based on the transect concept ([Miami 21](#)) in an effort to better integrate infill and redevelopment into the existing urban context and enhance the character and livability of urban neighborhoods.

Table 4: Multimodal Environment (ME3) Density/Intensity Criteria

CRITERIA		NOTES
ME3.1	Establishes minimum density and intensity requirements for urban core and major activity center areas.	Minimum density and intensity should be established for development in urban cores, major activity centers, and along corridors to ensure a dense built environment that supports non-auto travel. Policy examples may be found in some form-based codes that include a combination of minimum and maximum building height and number of stories.
ME3.2	Establishes appropriate densities and intensities within walking distance of transit stops.	Densities needed to support transit in various environments (e.g. urban core, urban general, suburban, rural) are identified in FDOT Framework for Transit Oriented Development in Florida.
ME3.3	Establishes urban design criteria for urban cores and major activity centers to preserve or improve livability.	Plans should include policies relative to adoption or refinement of urban design criteria. Urban design standards and/or form based codes enhance the character of activity centers and compatibility of infill development with surrounding land uses.

2.4.4 Element ME4: Multimodal Policy (other)

Improving the multimodal environment in urban cores, activity centers, and along designated corridors requires a shift in transportation and development policy. Greater emphasis must be placed on improving the pedestrian and bicycle environment and promoting a diverse, compatible mix of land uses to support transit service in these areas.

⁵ Victoria Transport Policy Institute, “[Strong Commercial Centers](#),” TDM Online Encyclopedia, January 25, 2010.

Table 5: Multimodal Environment (ME4) Multimodal Policy Criteria

CRITERIA	NOTES
ME4.1 Establishes priority on enhancing bicycle and pedestrian mobility within existing and proposed activity centers, including urban core areas.	Plans should identify centers with the greatest potential to accommodate non-automobile modes and focus investment on enhancing the multimodal environment for those centers. Policies, regulations and funding mechanisms should reflect the higher priority on enhancing the multimodal environment in these areas. Strategies may include connecting gaps in the network and full accommodations for bicycle and pedestrian access and movement, including shaded sidewalks, benches, water fountains, enhanced crossings, and bicycle parking.
ME4.2 Includes automobile parking management strategies for urban cores, activity centers and transit corridors to reduce surface area parking and promote non-automobile travel.	Large parking lots are generally unattractive and uninviting to pedestrians. In addition, parking lots increase the overall length of a pedestrian trip thereby discouraging walking as a non-automobile mode. Parking management includes strategies such as parking maximums, shared use parking, increasing capacity of existing parking facilities, remote parking/shuttle services, pricing and other strategies. For more information see <i>Parking Management Best Practices</i> (T. Littman, ©American Planning Association, 2006.)
ME4.3 Provides for, and requires new development to contribute to, pedestrian-friendly amenities on the public streetscape.	An attractive street environment with trees and other amenities increases the willingness of people to walk to their destination. Examples include benches, lighting, street trees, covered walkways, trash cans, and pedestrian entrances and windows at the street level. For one example, see Policy 12 of Model Regulations and Plan Amendments for Multimodal Transportation Districts.
ME4.4 Provides for, and requires new development to contribute to, amenities at existing and proposed transit stations and stops including covered shelters, trash receptacles, benches, landing pads, lighting, and bicycle parking.	Transit station amenities can be determinants of transit use. For example, a potential user may be more likely to use transit if the station provides shelter from the sun and rain, is clean and is well lit to increase safety. See the resources above for detailed guidance regarding transit station and stop amenities.
ME4.5 Transportation impact assessment procedures are in place that address development impacts on all modes of transportation and minimize vehicular, transit, bicycle, and pedestrian conflicts.	See the multimodal transportation impact assessment (TIA) methodology in the Florida Department of Community Affairs, Transportation Concurrency Best Practices Guide and Montgomery County, Maryland's Local Area Transportation Review and Policy Area Mobility Review Guidelines for ideas on procedures and requirements for multimodal TIAs.

This Element assesses the degree to which local governments have enacted the necessary multimodal transportation and development policies in the comprehensive plan. In addition, it looks at whether

transportation impact assessment procedures have been expanded to address three basic concerns: can people travel to and from a proposed development conveniently and safely on foot, by public transportation, and by car. The Florida Department of Transportation has enacted multimodal level of service analysis tools and is increasingly assessing the ability to serve developments by transit. For further information, see the 2013 FDOT Quality/Level of Service Handbook at www.dot.state.fl.us/planning/systems/programs/SM/los/pdfs/2013%20QLOS%20Handbook.pdf.

Many resources containing design guidelines and policy examples for non-automobile modes are available including, but not limited to, the following:

- [The Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highway \(The Florida Greenbook\)](#), FDOT
- [Manual on Uniform Traffic Control Devices](#), FHWA
- [Designing Walkable Urban Thoroughfares: A Context Sensitive Approach](#) (ITE 2010)
- Guide for the Planning, Design and Operation of Pedestrian Facilities, AASHTO
- Guide for the Development of Bicycle Facilities, AASHTO
- [Accessing Transit Design Handbook for Florida Bus Passenger Facilities](#) (statewide)
- [LYNX Central Florida Mobility Design Manual](#)
- [LYNX Central Florida Customer Amenities Manual](#)
- [FDOT District I and 7 Transit Facility Handbook](#)
- [FDOT District 4 Transit Facilities Guidelines](#)
- [Palm Tran Transit Design Manual](#)

2.5 Category NI: Network Improvement

This Category involves a range of strategies for improving the balance, connectivity, and capacity of the multimodal transportation network. Balance is considered in relation to the availability of local, collector, and arterial roadway networks, as well as networks for transit and bicycle and pedestrian travel. Connectivity is addressed through Criteria in each Element as a means of increasing mobility as well as system capacity by providing multiple alternative routes for all modes.

The existing conditions analysis discussed in Section 2.1 above and Appendix A forms the basis for network planning. [Designing Walkable Urban Thoroughfares: A Context Sensitive Approach](#) (ITE 2010) discusses planning urban transportation networks. “The thoroughfare network should be planned to support the needs generated by the planned land uses (including intensity) while at the same time being compatible with the characteristics of the resulting neighborhoods and community—areas that may have widely varying needs, features and activity levels.” In addition, the resource addresses street connectivity and spacing, indices for connectivity and accessibility, and performance measures.

2.5.1 Element NI1: Major Roadway Network

The Criteria in this Element address the adequacy of local mobility planning for the major roadway network, including those that are part of the SIS. Considerations include whether plans are in place to preserve and manage future rights of way for major roadway corridors, the availability of relievers and

Table 6: Network Improvement (NI1) Major Roadway Network Criteria

CRITERIA	NOTES
NI1.1 Transportation corridors requiring additional right of way and/or corridor management are designated for preservation and management as provided in §337.273, F.S.	Florida law requires local governments to designate transportation corridors in their comprehensive plan prior to adopting corridor management ordinances. See Managing Corridor Development: A Municipal Handbook for further information. See also Model Corridor Management Plan Amendments .
NI1.2 Includes transportation corridor management policies to preserve right-of-way needed for all transportation modes and provides for dedication of land or conveyance of easements to local governments for planned transportation projects as provided in §337.273(6), F.S.	See Corridor Preservation Best Practices for details on how local governments in Florida are preserving and managing transportation right-of-way in the context of Florida law. Methods include thoroughfare right-of-way needs maps and regulations. Ensure that sufficient right-of-way is reserved to accommodate future cross-section needs for all modes and utilities. See also Model Ordinance for Corridor Protection and Rights of Way .
NI1.3 Provides for construction of parallel relievers or service roads along major highway corridors or within interstate interchange quadrants.	These roads may be established through designation of a corridor and adoption of a corridor management plan as provided in NI1.1&1.2. Parallel relievers or service roads along congested highways tend to attract motor vehicle traffic and may require more than one travel lane in each direction. Service roads within interchange quadrants provide alternative access, while enhancing the ability to accommodate development near interchanges.
NI1.4 Provides for construction of new interstate highway overpass crossings to connect local street networks.	New interstate overpasses increase local roadway connectivity and may relieve congestion at interstate interchanges by providing additional routes for all modes to cross interstate highways.
NI1.5 Includes grade separated intersections.	This strategy was used on US Highway 19 to recapture system capacity that had been lost due in part to inadequate access management.
NI1.6 Provides for construction of additional travel lanes and/or turn lanes to address existing or anticipated motor vehicle traffic volume where appropriate.	Plans should note the location of planned roadway lanes and turn lanes. FDOT access management guidelines for right- and left-turn lanes into driveways are provided in the FDOT Driveway Information Guide . Note that adding new lanes can serve as a barrier to bicycle and pedestrian mobility and should therefore always be evaluated in relation to other modal needs.
NI1.7 Includes new arterial or major collector roadways to relieve motor vehicle traffic congestion and increase network connectivity.	Many urban areas in Florida lack a balanced network of arterial, collector and local streets. Potential strategies include master street plans with right-of-way policies, street network standards, and limiting right-of-way vacation and/or requiring replacement of those proposed for abandonment. See also NI2.1. Network connectivity is addressed in Designing Walkable Urban Thoroughfares: A Context Sensitive Approach (ITE 2010).
NI1.8 Includes design elements to increase bicycle and pedestrian safety and mobility.	This should include safe crossings at roadway intersections and appropriate mid-block locations. See Designing Walkable Urban Thoroughfares: A Context Sensitive Approach (ITE 2010).
NI1.9 Includes network enhancements and design elements in support of managed lanes.	Managed lanes involve the application of one or more of the following: tolling, technology, express transit, and telecommuting. New or reconstructed lanes, and possibly off highway improvements may be needed to support the strategy. FDOT is increasing use of this strategy on congested freeways, expressways, and freight routes and port access. See also OS1.

alternate routes, methods to address bottlenecks, and addition of new lanes. Note that in the absence of adequate and connected supporting networks, the capacity from adding new lanes may be counteracted by excessively long signal cycles and delay at major intersections. Long signal cycles at intersections indicate a need for other corrective actions such as grade separations, rerouting left turns or improving the density, and connectivity of the secondary street system to reduce arterial left-turn volumes.

Major roadway network projects listed in the FDOT Five-Year Work Program, as well as those in the applicable MPO LRTP and Transportation Improvement Program (TIP), should also be included in a mobility or corridor plan. FDOT provides guidance for roadway facilities in the [FDOT Plans Preparation Manual](#) (PPM), [FDOT Design Standards](#), and the [Florida Traffic Engineering Manual](#) (TEM).

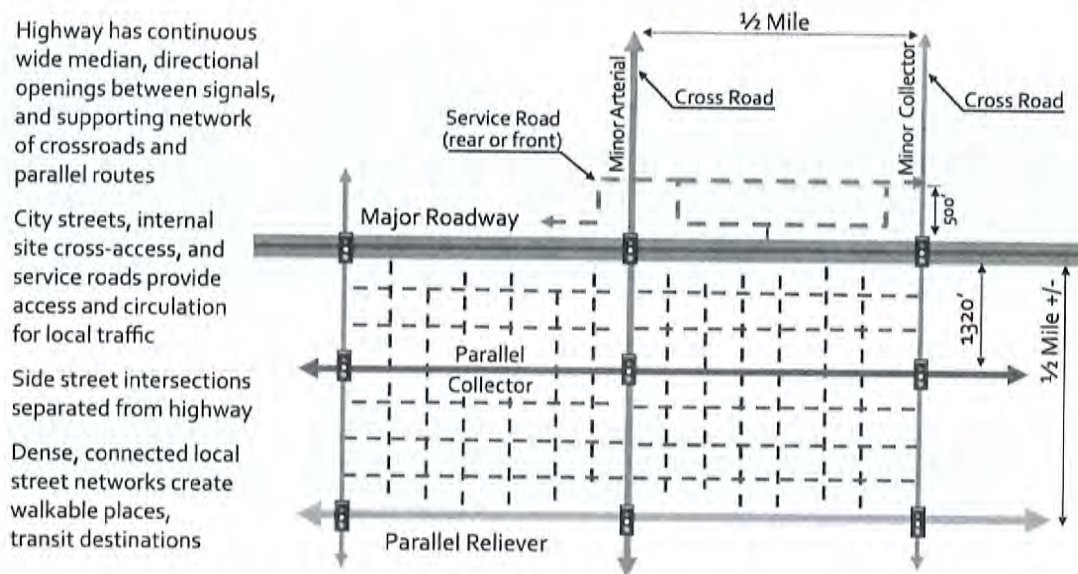


Figure 3: Corridor network and access management concepts

2.5.2 Element NI2: Local Street Network

Local network density and connectivity is a primary determinant of the quality of the multimodal environment. People can walk and bike more easily where streets provide relatively short blocks and multiple connections to shops and services from the surrounding residential areas. Enhancing street network connectivity can be applied as a technique to provide highway system users alternatives to major roadways, particularly for short trips. Local and collector street networks are often underdeveloped and major highways such as SIS facilities are used as the only means of access to and from many land uses. Fragmented local street systems also increase the number and length of automobile trips and also impede emergency access. A connected road network advances the following mobility objectives:

- fewer vehicle miles traveled;
- decreased congestion;
- alternative routes for short, local trips;
- improved accessibility of developed areas;

- facilitation of walking, bicycling, and use of transit;
- reduced demand on major thoroughfares;
- more environmentally sensitive layout of streets and lots;
- interconnected neighborhoods foster a sense of community;
- safer school bus routes; and
- safer walking and bicycling routes to schools.⁶

Figures 3 and 4 provide network development concepts and strategies for both the major roadway network and the local street network. In addition, arterial congestion in many areas of Florida is exacerbated by sparse and discontinuous supporting local and collector street networks. This Element includes Criteria aimed at improving the connectivity and availability of local and collector street networks and promoting increased connection of activity centers to surrounding neighborhoods to enhance local mobility and reduce local trips on major roadways.

Table 7: Network Improvement (NI2) Local Street Network Criteria

CRITERIA	NOTES
NI2.1 Includes network-enhancing local and minor collector street projects.	Such projects are designed to address gaps in the street network, increase network connectivity, and provide alternate routes to reduce congestion on arterials.
NI2.2 Promotes direct connections between activity centers and surrounding residential areas.	See Section 4.3.1 of the Guide for Analysis of Corridor Management Policies and Practices for sample policies and regulations. The intent is to reduce vehicular trips on major roadways.
NI2.3 Includes policies and strategies to increase street network connectivity.	Pertinent policies and strategies may include the continuation of existing streets, limits on cul-de-sacs, and connectivity indices. See sidebar entitled <i>Network Connectivity Measures</i> for sample connectivity indices. See Section 4.3 of the Guide for Analysis of Corridor Management Policies and Practices for sample street network plans and regulations and Appendix A & B of Implementing Multimodal Transportation Districts: Connectivity, and the FHHS for numerous examples of street network policies and standards across the U.S.

⁶ Safe Routes to School. http://www.dot.state.fl.us/research-center/Completed_Proj/Summary_PL/FDOT_BD545_32_rpt.pdf

Network Connectivity Measures

Establishing a connectivity index in the land development code is one method of increasing local network density and connectivity. The Victoria Transport Policy Institute (www.vtpi.org) provides the following succinct description of various types of connectivity indices. (Another method, not noted below is to establish maximum block perimeter standards. An example of this method may be found in the Alachua County Mobility Plan.)

"A Connectivity Index can be used to quantify how well a roadway network connects destinations. Indices can be measured separately for motorized and non-motorized travel. Several methods can be used:

1. The number of roadway links divided by the number of roadway nodes or intersections (Ewing, 1996). A higher index that travelers have increased route choice, allowing more direct connections for access between any two locations.
2. The ratio of intersections divided by the sum of intersections and dead ends, expressed on scale from zero to 1.0 (USEPA, 2002). The closer the index is to 1.0, the more connected the network.
3. The number of surface street intersections within a given area, such as a square mile, a measure of intersection density. The more intersections, the greater the degree of connectivity.
4. An Accessibility Index as the ratio of direct travel distances to actual travel distances. Well connected streets result in a high index. Less connected streets with large blocks result in a lower index."

The most common connectivity index in Florida is #1 above - the number of links divided by nodes. It is typically set at a desirable index of 1.4 links to nodes. Another approach is to evaluate "polygons per square mile" as suggested in the FDOT Multimodal Handbook. The desirable index using this approach is a system of interconnected and direct routes with a connectivity index of 50 or more polygons per square mile.

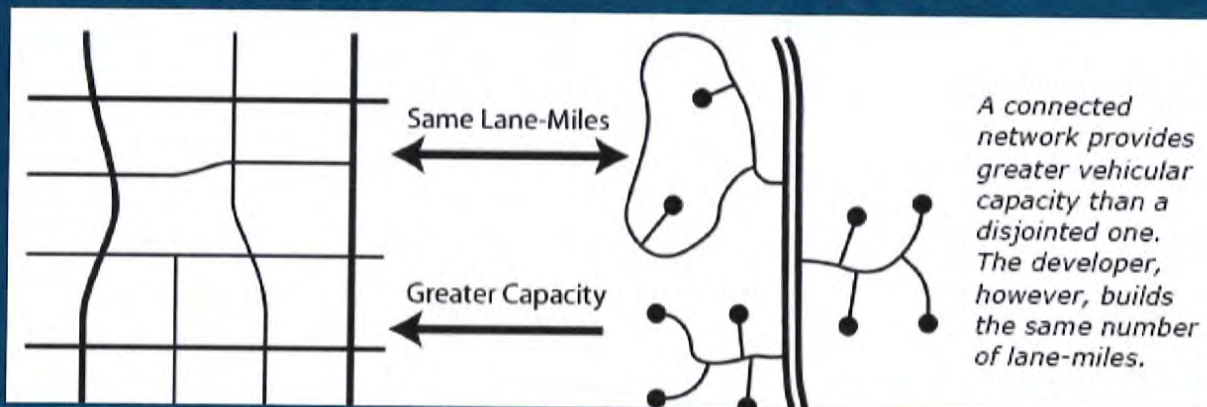


Figure 4: Network connectivity and system capacity

Source: Georgia Regional Transportation Authority DRI Review Checklist Users Guide

2.5.3 Element N13: Bicycle and Pedestrian Network

Creating bicycle and pedestrian-friendly environments is key to encouraging choice of these modes over the automobile, particularly for short-distance trips. Bicyclists are capable of traveling greater distances; however, sidewalks are essential to pedestrian travel within urban cores and activity centers. Those not using motor vehicles should be able to circulate throughout the planning area and access land uses. Ample bicycle and pedestrian connections within and between residential areas and supporting community facilities and services, such as shopping areas, employment centers, transit stops, neighborhood parks, and schools provide for this circulation. Such connections may be sidewalks, bicycle facilities, and/or shared use paths provided throughout and extended beyond the planning area creating tangible non-automobile mode choices.

A bicycle and pedestrian network comprised of a system of interconnected and direct routes can be measured by a connectivity index. Missing links or gaps in the bicycle and pedestrian network should be identified and eliminated where appropriate through the development process. Missing links may include locations between cul-de-sacs, through walls or fences, mid-block where block length exceeds 660 feet, or where bicycle pedestrian routes would otherwise be “excessively” circuitous. Highest priority for improvements should be given to locations with high concentrations of pedestrian activity and where connections are needed to ensure easy access between transportation modes, with particular attention to bicycle and pedestrian access to schools, transit stops and regional greenway or trail systems. Model comprehensive plan amendment and land development regulation language can be found in [Model Regulations and Plan Amendments for Multimodal Transportation Districts](#).

FDOT provides guidance for bicycle and pedestrian facilities in the [FDOT Plans Preparation Manual](#) (PPM), [FDOT Design Standards](#), and the [Florida Traffic Engineering Manual](#) (TEM). The [Florida Pedestrian Facilities Planning and Design Handbook](#) is available as an aid to the FDOT guidelines.

Additional resources include:

- [The Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highway \(The Florida Greenbook\)](#), FDOT
- Guide for the Planning, Design and Operation of Pedestrian Facilities, AASHTO
- Guide for the Development of Bicycle Facilities, AASHTO

Bicycle boulevards are another option. These are bicycle priority streets where people can feel safe bicycling, even if they do not feel comfortable bicycling adjacent to motor vehicle traffic on ordinary streets. They are intended to have low motor vehicle traffic volumes and speeds and contain clear signage indicating that priority is given to bicycle traffic. The existing conditions analysis performed as a precursor to developing land use and transportation strategies to support mobility should include analyses of bicycle and pedestrian facility connectivity. A number of tools have also recently been developed to analyze the quality and level of service of these facilities.

Table 8: Network Improvement (NI3) Bicycle/Pedestrian Network Criteria

CRITERIA	NOTES
NI3.1 Requires bicycle lanes and sidewalks of appropriate width on or near all new or reconstructed major collector and arterial routes where appropriate.	Such policies encourage bicycle use as a non-automobile mode. The American Association of State Highway and Transportation Officials (AASHTO) developed the Guide for the Development of Bicycle Facilities. In addition, the Florida DOT provides guidance in the Florida Bicycle Facilities Planning and Design Handbook and Florida Pedestrian Facilities Planning and Design Handbook.
NI3.2 Includes planned projects to address bicycle and pedestrian network connectivity.	Mobility planning efforts should include bicycle and pedestrian networks and strategies. Projects should be programmed to address network gaps. New network needs should be identified for preservation on the local transportation right of way needs or thoroughfare map. (Right of way preservation for transportation corridors is addressed in NI1.1) Options may include multi-use paths to provide for bicycle and pedestrian circulation between neighborhoods to reduce need for automobile travel on arterials.
NI3.3 Addresses the continuation of, or establishes new, shared use paths.	Shared use paths that shorten the distance between two uses encourage non-automobile mode travel in addition to facilitating active recreation. Pedestrian connections should be more convenient and direct than those provided for motor vehicles, particularly on transit corridors or in activity centers.
NI3.4 Requires new development to maintain continuous pedestrian networks, including connections to transit stops, adjacent lots, and between building entrances and the internal and external sidewalk network.	Example policies may be found in Model Regulations and Plan Amendments for Multimodal Transportation Districts (pp. 11-13). Additional information may be found at the Pedestrian and Bicycle Information Center. Strategies may also seek commitments from existing development to retrofit or provide new pedestrian infrastructure.
NI3.5 Requires new development to maintain continuous bicycle networks, including connections to transit stops and adjacent properties, and to provide bicycle parking at all non-residential uses, multi-family uses and other key destinations.	A complete network and abundant parking encourages bicycle use. Guidance on policies and regulations may be found in Model Regulations and Plan Amendments for Multimodal Transportation Districts (pp. 29-31). Additional information may be found at the Pedestrian and Bicycle Information Center. Strategies may also seek commitments from existing development to retrofit or provide new bicycle infrastructure.

Local governments are encouraged to develop a bicycle and pedestrian circulation plan and use this as the basis for their capital improvement program for bicycle and pedestrian infrastructure. Adopting a long-term plan will allow the community to prioritize and fund projects in well-defined increments, rather than relying on an ad hoc approach. A system approach with a clearly defined plan will also set the stage for proportionate fair share negotiations and other mitigation actions.

2.5.4 Element NI4: Transit Network

This Element addresses modifications to the transit network and is interrelated with Section 3.6.3: Transit Operations and Safety. The transit network is integral to the major roadway and local network, yet has specific Criteria that should be addressed.

The term transit is synonymous with public transportation and mass transportation. It refers to transportation by bus, rail, or other conveyance, either publicly or privately owned, providing general or special service to the public on a regular and continuing basis. Transit includes various modes for air, water, and ground transportation (e.g. air craft, ferries, water taxis, high speed rail, trolleys/streetcars, light rail, subways, commuter rail, monorail, buses, bus rapid transit, jitneys, van pool services, paratransit services, etc.).⁷ Figure 5 provides a comparison of transit modes commonly integrated into mobility plans including bus, bus rapid transit (BRT), streetcar, light rail, commuter rail, and heavy, high speed rail. Each type of transit is assessed regarding travel market, economic development impact, speed, right of way, and construction disruption.

	Bus	BRT	Streetcar	Light Rail	Commuter Rail	Heavy Rail/ High Speed Rail
Criteria						
Travel Market (Trip market served)	Local/ Commuter	Local/ Commuter	Local	Local/ Commuter	Commuter	Long Distance (Intercity)
Economic Development (Impact on business)	Minimal	Moderate	Significant	Significant	Significant	Significant
Speed (Operating speed in MPH)	10 - 25	20 - 50	7 - 15	20 - 30	30 - 50	30 - 70
Right of Way (Shared/dedicated)	Shared	Dedicated	Shared/ Dedicated	Dedicated	Dedicated	Dedicated
Construction Disruption (Impact on traffic and business during construction)	Minimal	Minimal	Minimal	Significant	Significant	Significant
- Density is a critical concern in transit planning – min 7 dwelling units per acre or 50-60 employees per acre are required to support 30 min bus headway - Rail investment is generally more capital intensive as compared to bus investment						

Figure 5: Comparison of transit modes

Source: HDR, "Public Transportation Resource Guidebook," June 2007, slide overview.

Rail transit provides a sense of permanency for its riders as well as for real estate developers. The construction of transit rails and supporting stations anchors transit service within a community. Supporting land development regulations establish an environment for new development to occur near the stations. Bus transit is important for mobility, but may have less impact on land development. Developers tend to be less aggressive in developing along bus routes given that service could move from that location due to changing ridership or budget demands.

Detailed transit plans may be found in regional transportation/transit authority plans or local transit development plans (TDPs) and transportation disadvantaged service plans (TDSPs). Any transit system projects appearing in such adopted plans should be a part of mobility or mitigation plans. Users are

⁷ HDR, "Public Transportation Resource Guidebook," June 2007, slide overview.

http://www.cfgis.org/trafficdata/files/Resource/D5_Public_Transportation_Resource_Guidebook.pdf

referred to the District 5 [Public Transportation Resource Guidebook](#) for further information. Additional resources for transit planning are available at:

- National Center for Transit Research, <http://www.nctr.usf.edu>
- National Bus Rapid Transit Institute, <http://www.nbti.org>

Table 9: Network Improvement (NI4) Transit Network Criteria

CRITERIA	NOTES
NI4.1 Addresses statewide and regional transit traveling through or with endpoints within plan boundaries.	Identifies corridors with existing and/or planned regional transit service including high speed rail and commuter rail or light rail and transit system modifications addressed in regional transit authority plans and MPO long range transportation plans. Addresses local bus and shuttle services and circulators at existing and planned rails stations.
NI4.2 Addresses express transit service.	Identifies new and/or expands existing express bus routes, bus rapid transit (BRT) routes or express rail routes on existing or specialized travel lanes, including managed lanes. May include other modes, such as ferries or streetcars.
NI4.3 Addresses existing and planned local transit within plan boundaries, including route locations, headways and infrastructure.	Identifies new local bus and shuttle routes and services and expands existing routes and service. Establishes measures to achieve shorter bus headways, increased frequency, extended service hours. May include other modes, such as ferries or streetcars

2.6 Category OS: Operations and Safety

Key to the performance of the existing transportation system is the relief of congestion along with the safe movement of goods and people. This Category includes a variety of strategies known to improve transportation system operations and safety. Such strategies can maintain or improve travel time reliability, provide viable options to improve mobility on congested corridors, and reduce the potential for crashes. The Criteria are organized in relation to demand management, roadway access management, and bicycle and pedestrian strategies. Congestion management projects and strategies identified through the MPO federally-mandated congestion management process should be included in a local mobility plan.

The 2006 FDOT Strategic Highway Safety Plan (SHSP) established the emphasis areas of aggressive driving, intersection crashes, vulnerable road users, and lane departure crashes and provided a comprehensive framework for addressing each area. Strategies to improve safety may include engineering, education, enforcement, and emergency services.

2.6.1 Element OS1: Demand Management

Demand management strategies foster increased efficiency of the transportation system by influencing travel behavior by mode, time of day, frequency, trip length, regulation, route, or cost. Such strategies include but are not limited to public transit services, carpooling and vanpooling, compressed work weeks, telecommuting, limited parking, and provision of bike and locker facilities by employers. A

strategy that is gaining popularity to improve mobility on limited access freeways is the use of managed lanes.

Another set of strategies for managing demand and improving operations falls under the heading of intelligent transportation systems (ITS). Examples include advanced public transportation systems, advanced traveler information systems, advanced crash avoidance systems, automated vehicle location, machine vision, and electronic toll and traffic management systems. For example, the communication of key information through a variable message board allows drivers to select a less congested route. Transit signal priority increases the travel time reliability of the transit system thereby encouraging ridership.

Table 10: Operations and Safety (OS1) Demand Management Criteria

CRITERIA		NOTES
OS1.1	Provides for high quality transit service and/or managed lanes.	Includes express bus, bus rapid transit (BRT), light rail as well as alternative travel routes. This option may include operation of transit on hard shoulder or bus rapid transit (BRT) lanes. Availability of transit service outside of peak travel hours.
OS1.2	Incorporates intelligent transportation systems (ITS) strategies.	Includes a wide range of tools for managing motor vehicle traffic and providing services for travelers including signal coordination systems, commercial vehicle operations, advanced public transportation systems (e.g. transit signal priority, queue jumpers), advanced motor vehicle traffic management systems, advanced traveler information systems, advanced crash avoidance systems, automatic vehicle location.
OS1.3	Establishes institutional strategies.	These may include, but are not limited to, transportation management organizations (TMOs) and TDM programs or policies (e.g. carsharing, ridesharing, vanpooling, telecommuting, and/or compressed work week and non-peak hour work hours).
OS1.4	Establishes commuter financial incentives.	These may include, but are not limited to, parking cash out, travel allowance, or transit and rideshare benefits.
OS1.5	Provides infrastructure designed to encourage alternatives to single occupant vehicle travel.	Includes high-occupancy vehicle (HOV) facilities, special use lanes, park-and-ride facilities, and vehicle-free zones.
OS1.6	Establishes pricing strategies.	This may include congestion pricing measures (e.g., variably priced lanes, variable tolls, cordon charges, and area-wide charges).
OS1.7	Provides for safer travel for all modes.	Includes safety in planning and design, particularly in crash locations, coordination with other agencies, and safety education and training.

Managed lanes are another demand management strategy. This strategy is actively advanced by the Florida Department of Transportation. Managed lanes are defined by FDOT as “highway facilities or sets of lanes within an existing highway facility where operational strategies are proactively implemented and managed in response to changing conditions with a combination of tools. These tools may include accessibility, vehicle eligibility, pricing, or a combination thereof.”⁸ FDOT considers managed lanes as part of all added capacity improvement projects on highways, and seeks to ensure that the potential for managed lanes not be precluded in the planning and project development process.

Effective demand management involves selecting the right set of complementary strategies based on analysis of local conditions. Detailed information about TDM strategies and existing programs can be found at the [National TDM and Telework Clearinghouse](#) and the [Victoria Policy Institute Online TDM Encyclopedia](#).

2.6.2 Element OS2: Access Management

Access management involves the coordinated planning, regulation, and design of access between roadways and land development. Limiting access along major roadway corridors reduces traffic conflicts and flow interruptions, while improving safety for drivers, pedestrians, and bicyclists. This Element addresses policies and strategies that local governments can apply to advance access management objectives for major roadways and around freeway interchanges. Some access management strategies, such as supporting street networks and auxiliary lanes, are included in the Network Improvement Category.

Local governments should assess existing access characteristics on state highway corridors in the planning area in relation to the FDOT access classification and spacing standards. Discussions with FDOT District planning and access permitting staff are also suggested to obtain a clear picture of the challenges and opportunities for managing development and access on planning area corridors. See [Guide for Analysis of Corridor Management Policies and Practices](#) for details on assessing and upgrading local corridor management policies and practices. Additional resources are available at the [TRB Access Management Committee Website](#).

“Access management is the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. It also involves roadway design applications, such as median treatments and auxiliary lanes, and the appropriate spacing of traffic signals.”

-TRB Access Management Manual. 2003

⁸ Florida Department of Transportation, “Managed Lanes.” *Transportation System Management and Operations*, (undated). Web. March 5, 2013. <<http://floridamanagedlanes.com/>>.

Table 11: Operations and Safety (OS2) Access Management Criteria

CRITERIA	NOTES
OS2.1 Includes policies and strategies to provide alternative access to development on arterial roadways.	Examples include service roads, parking lot cross access, joint driveways, unified access and circulation plans, outparcel regulations, lot split controls and overlay requirements. See Model Land Development and Subdivision Regulations that Support Access Management for sample local regulations and policies for alternative access. Promote connection of as many properties and interests as possible to traffic signals via internal cross access or service roads.
OS2.2 Includes policies and strategies to close excessive or unsafe driveway connections or to redesign overly-wide or poorly designed connections.	For sample policy language, see Section 13 of Model Land Development and Subdivision Regulations that Support Access Management. See also the FDOT Driveway Information Guide.
OS2.3 Includes policies and strategies to replace continuous two-way left turn lanes with medians on multi-lane arterials.	Medians increase safety by organizing the left turn movement and reducing traffic conflicts. See the FDOT Median Handbook for further information on the safety implications of medians versus TWLTLs and for FDOT's median policy in Section 2.2.2.
OS2.4 Requires conformance of new signals with signal coordination plans and FDOT signal spacing standards for the state highway system.	Poor signal location and placement creates motor vehicle traffic congestion that cannot be solved by signal coordination systems. The goal of signal spacing is to limit signals to locations where the progressive movement of motor vehicle traffic will not be impeded and to maintain the "window" for motor vehicle traffic progression at desired speeds.
OS2.5 Restricts access in the functional area of freeway interchanges.	Signalized intersections too close to ramp termini can cause heavy volumes of weaving motor vehicle traffic, complex traffic signal operations, crashes, congestion, and motor vehicle traffic backing up the ramps on to the freeway. Driveway access and median openings near ramp termini further compound these problems. See Land Development and Access Management Strategies for Florida Interchange Areas and Access Management on Crossroads in the Vicinity of Interchanges for policies and strategies.
OS2.6 Restricts access in the functional area of roadway intersections.	Driveways too close to roadway intersections create a variety of safety and operational problems. Strategies include requiring access at the edge of property lines, placing limits on site access traffic volumes or development intensity of corner sites, and promoting shared and cross access with adjacent sites.
OS2.7 Requires adequate, uninterrupted throat length for driveways and frontage roads that connect to arterial roadways.	Inadequate throat length produces a complex pattern of closely spaced traffic conflicts, causing high collision potential and low capacity. See Chapter 6 of the FDOT Driveway Information Guide.
OS2.8 Includes measures to close or redesign inadequately designed median openings.	Directional median openings have far fewer conflicts and much lower crash potential than full movement median openings. See the FDOT Median Handbook for guidance and strategies.

2.6.3 Element OS3: Pedestrian and Bicycle Operations and Safety

The operation and safety transportation facilities in light of pedestrians and bicyclists should be addressed in mobility and mitigation plans. Pedestrian safety is of great concern, particularly in Florida where pedestrian-related crashes are among the highest in the nation. While continuous pedestrian and bicycle networks (previously addressed in this Guide) are important to safety, safe roadway crossings are essential. In addition, obstructions within the roadway pose safety concerns for bicycles.

The Florida DOT provides guidance for safe bicycle and pedestrian facilities in the [FDOT Plans Preparation Manual](#) (PPM), [FDOT Design Standards](#), and the [Florida Traffic Engineering Manual](#) (TEM). The [Florida Pedestrian Facilities Planning and Design Handbook](#) is available as an aid to the FDOT guidelines. Florida has taken additional precautions to provide safe pedestrian travel to schools through its [Safe Routes to School Program](#). Targeted pedestrian safety actions may be developed using the [FHWA Pedestrian Safety Action Plan](#) or [A Technical Guide for Conducting Pedestrian Safety Assessments from the University of California Berkeley](#). Safe and pedestrian-oriented intersections encourage pedestrian usage of sidewalks along roadway corridors. Additional resources include a Federal Highway Administration (FHWA) on [Tools to Diagnose and Solve the Problem](#) as well as the following:

- [The Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highway \(The Florida Greenbook\)](#), FDOT
- [Manual on Uniform Traffic Control Devices](#), FHWA
- Guide for the Planning, Design and Operation of Pedestrian Facilities, AASHTO
- Guide for the Development of Bicycle Facilities, AASHTO

Table 12: Operations and Safety (OS3) Pedestrian and Bicycle Operations and Safety Criteria

CRITERIA		NOTES
OS3.1	Includes measures to increase pedestrian safety at intersections and mid-block crossings, and while walking along the road.	Identifies high crash locations for pedestrians and addresses these proactively, while increasing overall pedestrian safety through countermeasures such as provision of sidewalks, lighting, marked roadway crossings, curb extensions, median refuges, raised crosswalks, and pedestrian actuation devices. Provides for mid-block pedestrian crossings where block lengths are long and pedestrian volumes are high. Gives special consideration to pedestrian safety in areas with concentrations of students, seniors, low-income families, or persons with disabilities. May also include motor vehicle traffic calming measures.
OS3.2	Includes measures to increase bicycle safety.	Identifies high crash locations for bicyclists and addresses these proactively, while increasing overall bicycle safety through modifications to existing bicycle lanes, new bicycle lanes, signing and pavement striping changes, modifications at crossings and off road facilities. May include bicycle safety education or similar measures to increase public awareness.
OS3.3	Includes measures to provide safe routes to schools.	The FDOT Safe Routes to School Program suggests a number of measures that may be appropriate. http://www.dot.state.fl.us/Safety/SRTS_files/SRTS.shtm

2.7 Category IM: Implementation

The best laid plans are of little value unless they are implemented. Implementation strategies specific to a given Element are addressed throughout the Mobility Review Guide and Checklist. This Category addresses whether the basic funding and other key implementation strategies are included in the mobility plan.

2.7.1 Element IM1: Coordination

It is in the interest of local governments, FDOT, and other transportation agencies to support mobility and recognize that transportation facilities and impacts on those facilities do not end at jurisdictional boundaries. Building relationships and partnerships among agencies and regular communication create an environment where agencies can work together to meet mobility needs. In the absence of such efforts, the separation of planning functions and compartmentalized funding will impede the ability to achieve lasting mobility solutions. Therefore, the importance of this element cannot be overstated.

Table 13: Implementation (IM1) Intergovernmental Coordination Criteria

	CRITERIA	NOTES
IM1.1	Includes strategies to forge partnerships and effectively coordinate with modal providers, state and regional agencies, and other local governments in mobility planning and project development.	Describe strategies, specific agencies affected and their involvement in planning and project development. See A New Vision of Mobility: Guidance to Foster Collaborative Multimodal Decision Making . See Intergovernmental Coordination in Access Management for a review of issues and strategies relative to FDOT and local coordination in access management and permitting. See also Effective Strategies for Comprehensive Corridor Management .
IM1.2	Includes policies and strategies for coordinating with FDOT in access management and permitting on the state highway system.	

This Mobility Review Guide and Checklist can complement intergovernmental coordination by providing FDOT, the SLPA and local government agencies with a common set of planning strategies for consideration. Early guidance to local governments from the FDOT District on state highway corridor conditions is another useful step toward greater coordination in mobility and mitigation planning and transportation corridor management. Below are a few coordination strategies that may be considered.

1. *Host a mobility management workshop with area agencies and jurisdictions.* The workshop would provide an opportunity for the District to engage area jurisdictions and modal agencies in a dialogue on mobility conditions relative to the SIS and other state highway corridors and potential strategies for addressing those conditions. Such a workshop would be a logical first step to preparing a state of the system report and identifying possible strategic areas for improvement.⁹
2. *Perform a "state of the system" review for each jurisdiction within the District.* The review would determine existing and anticipated deficiencies on SIS and TRIP-funded facilities and other major roadways based on anticipated motor vehicle traffic growth, approved development trips, adopted QLOS standards, and committed projects. Participants could identify strategic areas for additional

⁹ K. Seggerman, et al., "Documenting Improved Mobility Techniques on SIS and TRIP Facilities," *FDOT LOS Issue Paper 13*, CUTR, 2007, p. 49.

projects including multimodal alternatives to new roadway capacity for addressing anticipated deficiencies. A summary report of the review would 1) identify potential multimodal strategies for further exploration; 2) identify corridors that would benefit from a corridor management and/or mitigation plan; and/or 3) set forth informal guidelines for development of local plans relative to these corridors. The report could then serve as an informational resource for local governments and the District.

3. *Prepare a District-wide Mobility Management Plan.* Consider establishing a District-wide plan to help guide local and regional planning efforts as they relate to SIS corridors. The plan would identify strategic focus areas, address the system from a multimodal perspective, and advance comprehensive corridor management strategies. The workshop and state of the system report could serve as intermediary steps in that direction.

2.7.2 Element IM2: Incentives

Infill costs in urban areas can be an impediment to accomplishing the density and mix of uses necessary for a successful multimodal environment. Local governments can help reduce the cost of urban infill and redevelopment through financial incentives, such as reduced impact fees (*see also* Section 3.7.3 Funding) or offsets based on reduced vehicle miles of travel generated by locating development in these areas and/or meeting certain multimodal criteria (e.g. transit oriented development on transit lines, network connectivity, etc.).

Other incentives that can be explored include expedited development application procedures for development that advance multimodal objectives, community redevelopment areas and tax increment financing (TIF) districts and publicly funded infrastructure and streetscape projects. For example, the Cities of Chicago, Illinois, and Portland, Oregon have used tax increment financing extensively to support redevelopment in and around transit station areas, as well as for streetscape and sidewalk projects. The City of Portland designated a tax increment financing district for the purpose of revitalizing neighborhoods affected by the new Interstate MAX light rail line and developed a direct TIF loan program to assist new and existing small businesses in designated areas to finance gaps that occur between project costs and private financing.¹⁰

Table 14: Implementation (IM2) Incentives Criteria

CRITERIA	NOTES
IM2.1 Provides incentives to achieve the desired results.	Examples of incentives include expedited review and approval for desired types and intensities of development (e.g. TOD on transit corridors), and targeted public infrastructure investments.

2.7.3 Element IM3: Monitoring

Performance measures provide indicators of progress toward the completion of an objective or objectives to accomplish a goal. Because they can steer the actions taken to complete an objective (i.e., what gets measured is what gets accomplished), measures must be carefully selected. Performance

¹⁰ Portland Direct TIF Loan Program. Available online: http://www.pdc.us/bus_serv/finance-pgms-detail/direct-tif.asp

measures may be applied to evaluate a process, on-going long-range planning, or a particular program with a discrete end time and may also reflect priorities established through a political process. To measure performance, baseline conditions must be established to determine a starting point followed by a means to track progress. The ability to use performance measures is often tied to the availability of appropriate data and analysis methods. Because it takes time, effort, and resources to monitor performance, actual measures should be limited to the most useful measures. Guidance and examples for use by agencies in selecting measures appropriate to their multimodal transportation goals and resources are provided in [Expanded Transportation Performance Measures to Supplement Level of Service \(LOS\) for Growth Management and Transportation Impact Analysis](#).

This Category also acknowledges the importance of estimating the potential effectiveness of mobility planning efforts (**OS1.1**). Current measures of service levels include quality of service (QOS) and level of service (LOS). QOS is measured using traveler perception of facility operation while LOS is measured quantitatively using volume to capacity ratios. The [2009 FDOT Quality/Level of Service \(QLOS\) Handbook](#) “provides tools to quantify multimodal transportation service inside the roadway environment (essentially inside the right-of-way).”¹¹ These tools measure the QLOS of each mode but do not measure the diversion of trips from one mode to another. Travel demand modeling for future years may be performed using the Florida Standard Urban Transportation Model Structure (FSUTMS).

Another tool for estimating plan effectiveness is TRIMMS© - a spreadsheet application that estimates the impacts of a broad range of transportation demand management (TDM) initiatives in terms of emission reduction, crash reduction, congestion reduction, excess fuel consumption, and adverse global climate change impacts. The model also assesses program cost-effectiveness in relation to Federal Highway Administration Congestion and Air Quality (CMAQ) Improvement Program requirements for program effectiveness assessment and benchmarking. The TRIMMS© model and supporting guidance are available at <http://www.nctr.usf.edu/abstracts/abs77805.htm>.

Table 15: Implementation (IM3) Monitoring Criteria

CRITERIA	NOTES
IM3.1 Includes policies for adoption of regulations, including design criteria, into appropriate land development regulations by a specified date.	A specific policy (not to exceed two years) should be established for implementing regulations.
IM3.2 Includes a performance measurement system.	Quality/level of service for all modes may be evaluated using the 2009 FDOT Quality/Level of Service (QLOS) Handbook . For example, plan amendments may specify QLOS for both vehicular and non-vehicular modes as well as non-SOV mode share/split goals. Travel demand modeling may performed using FSUTMS through the appropriate metropolitan planning organization, a professional consultant, or FDOT.

2.7.4 Element IM4: Funding

Perhaps the most crucial implementation element is funding. Funding should be appropriately addressed in a financially feasible capital improvement element (CIE). Local governments and FDOT

¹¹ “2009 Quality/Level of Service (QLOS) Handbook,” Florida Department of Transportation, 2009. Web. 03 Feb. 2010.

reviewers should obtain specific guidance on funding and related CIE requirements from their SLPA representative.

The scarcity of transportation funding in Florida has resulted in the use of a variety of funding mechanisms to fund transportation systems strategies and projects. They include:

Motor Fuel Tax Options

- Federal Gas Tax
- State Gas Tax
- Constitutional Gas Tax
- County Gas Tax
- 1st Local Option Gas Tax
- 2nd Local Option Gas Tax
- Ninth Cent Motor Fuel Tax

Other Tax Options

- Local Government Infrastructure Surtax
- Local Option Sales Tax
- Ad Valorem Tax
- Municipal Services Benefit District (MSBU)
- Municipal Services Taxing Unit (MSTU)
- Tax Increment Financing (TIF)

Other Options

- Tolls
- Public/Private Partnerships
- Transportation Regional Incentive Program (TRIP): The TRIP provides matching funds for regionally significant facilities (Section 339.2819, F.S.) included in regional transportation plans. To qualify, the facilities must be developed within regional transportation areas established by interlocal agreement (Section 339.155[5], F.S.) and subsequently included in participating local government comprehensive plans. Eligible projects must support transportation facilities that serve national, statewide, or regional functions, be included in the capital improvements element, be consistent with the SIS goals, and have a commitment for local, regional, or private matching funds. Priority will be given to projects that, among other things, provide connectivity to the SIS, support economic development and the movement of goods in rural areas of critical economic concern, and are subject to corridor management regulations.
- Site-Related Mitigation: Local governments may require developers to make certain “site-related” transportation system modifications as a condition of development approval, based on adopted land development regulations and design standards. Such modifications may include provision of right-turn lanes, changes needed to bring existing roads up to current design standards, dedication of easements for parking lot cross access, and dedication of right-of-way for construction of local service roads. Other projects may focus on site-related modifications for non-automobile modes of transportation including sidewalks, bicycle parking, and transit stops.

- Transportation Concurrency and Proportionate Share Mitigation: Local governments in Florida may choose to adopt transportation concurrency requirements as part of their comprehensive plan. Mitigation and proportionate share agreements that result from these requirements are another opportunity for implementing mobility through the development process. For example, where a development would cause transportation facilities to operate below locally adopted level of service standards, then the applicant could be required to mitigate those impacts as a condition of development approval. The projects identified in an adopted corridor management or mobility plan could form the basis for mitigation and proportionate share agreements. The Florida Department of Economic Opportunity provides guidance on the proper application of concurrency on its website [Transportation Planning](#). For example, if a local government elects to maintain transportation concurrency, then it must adhere to the following requirements:
 - Studies and techniques must be professionally accepted when evaluating potential impacts of a proposed development.
 - Consult with the Florida Department of Transportation when proposed amendments affect the Strategic Intermodal System.
 - Exempt public transit facilities from concurrency.
 - Allow an applicant for a Development of Regional Impact development order, rezoning, or other development permit to satisfy transportation concurrency and Development of Regional Impact review requirements, when applicable, if the applicant enters into a binding agreement to pay for or construct its proportionate share of required improvements.
- Transportation Development Authorities: Local governments may establish a transportation development authority to plan, finance and implement transportation projects for transportation facilities designed to relieve transportation deficiencies within the authority's jurisdiction. Transportation projects may include transportation facilities that provide for alternative modes of travel including sidewalks, bikeways, and mass transit which are related to a deficient transportation facility. Each transportation development authority must adopt a transportation sufficiency plan as a part of the local government comprehensive plan within 6 months after the creation of the authority. The plan must identify deficient facilities, prioritize improvements, and establish a financing and construction schedule for adoption in the comprehensive plan. The authority may then establish a trust fund to be funded by a portion of the increased tax revenue in the designated area (i.e. tax increment financing). The authorities may also issue bonds, backed by trust fund revenues.
- Transportation Impact Fees: Local governments may assess an impact fee on new development for its share of the costs of constructing or expanding off-site transportation infrastructure necessitated by and benefitting the new development. Fees are based on standardized formulas and may be satisfied by cash payments, in-kind contributions (e.g., right-of-way, construction of needed infrastructure), or some combination.
- Mobility Fees: A mobility fee on new development is a variation of the traditional transportation impact fee with some unique characteristics. These characteristics include sensitivity to

development location and vehicle miles of travel (VMT) generated by a development and the ability to use the fee for all transportation modes as well as system operations and transportation demand management projects. Further information on mobility fees is available at [Florida Joint Report on the Mobility Fee Methodology Study](#).

Table 16: Implementation (IM₄) Funding Criteria

	CRITERIA	NOTES
IM _{4.1}	Capital improvement program addresses all modes of transportation.	Include the itemized capital improvement program.
IM _{4.2}	Clearly identifies committed and anticipated funding sources for the capital improvement program and reasonably anticipated funding for future years.	Local governments should maximize use of available local funding options, fees, and development agreements.

3 Summarize and Apply Findings

Upon initial completion of the Mobility Review Checklist, the FDOT reviewer will have an understanding of the relative strengths and potential shortcomings of the comprehensive plan amendment (CPA) as it relates to the transportation system. As noted in Section 2.1, it is also suggested that local governments be advised to complete a self review and provide this along with their CPA submittal for FDOT staff review. FDOT staff are strongly encouraged to discuss the results of their review with the appropriate local government contact prior to completing the final staff report. This will ensure accuracy of the assessment and offer the opportunity for FDOT to provide technical assistance to local governments.

3.1 Complete Staff Report

Using the results of the Checklist, the FDOT or other agency reviewers may identify the need for specific strategies to be more clearly defined or the need for additional planning measures. District staff should meet with the appropriate local government representatives and/or share their Checklist results in advance of completing the staff report to identify concerns relative to specific Categories, Elements or Strategies. Reviewers should identify perceived deficiencies of the plan based on the Checklist and ask local governments to revise the plan amendment, SIS mitigation, or corridor plan with a strengthened approach as to how specific Elements will be accomplished. Resources and technical assistance for accomplishing these measures should be identified or provided. The FDOT reviewer should also work with the submitting local government and other agencies to lend support in implementation of the plan. Support may include technical support, expedited programming of state funded projects, and so on.

3.2 A Final Word on the Guide and Checklist

This report represents a proposed practice for use by FDOT and other reviewing agencies in the review of proposed land use and transportation strategies to support and fund mobility submitted through the CPA review process as they relate to the function of the state transportation system. The Mobility Review Guide and Checklist may also be used in the review of proposed SIS mitigation plans or corridor management plans for major highway corridors. This practice is not an official policy, procedure. It is suggested as a technical assistance tool for use by FDOT reviewers and local governments.

Appendix A: Sample Mobility Analysis & Plan Report Contents

PART 1 – Existing Conditions Analysis

- I. Introduction
- II. Existing Conditions Analysis
 - A. Study area boundaries
 - B. Review supporting state, regional, and adjacent local plans and guidelines
 - 1. Identify areas of inconsistency
 - C. Analysis of Multimodal Environment
 - 1. Land use organization/location efficiency (e.g., jobs to population ratio, land use separations)
 - 2. Land use mix/balance (e.g., significant land uses, land use ratios)
 - 3. Density/intensity (e.g., residential, employment density)
 - 4. Multimodal policy (e.g., identify where to place priority on non-automobile modes)
 - D. Network Analysis
 - 1. Major roadway network (e.g., balance, ROW policy, level of service, intermodal connections)
 - 2. Local street network (e.g., connectivity index, continuation of streets, etc.)
 - 3. Bicycle/pedestrian network (e.g., quality of service, connectivity index, availability, width, etc.)
 - 4. Transit network (i.e., types of service, quality of service, network coverage, mode split, convenience of modal connections)
 - E. Operations/Safety Analysis
 - 1. Roadway operations and safety (e.g., bottlenecks, high crash locations)
 - 2. Demand management programs/policy
 - 3. Access management (e.g., spacing, alternative access, design, retrofit)
 - 4. Pedestrian and bicycle operations and safety (e.g., crash locations, crossings)
- III. Principal Findings/Strategic Areas of Improvement
 - A. Supporting Plans and Guidelines Review
 - B. Multimodal Environment
 - C. Network Improvement
 - D. Operations and Safety

PART 2 – Mobility/Mitigation Plan

- IV. Proposed Mobility/Mitigation Strategies (policy, capital, and systems/corridor management)
 - A. Supporting Plans and Guidelines
 - B. Multimodal Environment
 - C. Network Improvement
 - D. Operations and Safety
- V. Projected Results
 - A. Increased use of modal alternatives and reduced VMT
 - B. Reduced congestion and delay
 - C. Improved safety
- VI. Funding and Implementation Strategies
 - A. CIP
 - B. Policy/Ordinance Updates (e.g., land development regulations)
 - C. Intergovernmental Agreements
 - D. Other

Appendix B: Mobility Plan Assessment Checklist

Mobility Review Checklist

This spreadsheet checklist should be used with the accompanying user guide, Checklist for Reviewing Mobility Measures. It contains important guidance on the meaning of selected criteria in the checklist and must be consulted in concert with the checklist during the review and assessment process. Keep in mind that this is a proposed practice and not an official procedure.

Plan Name:
Review Number:
Jurisdiction:
Date of Review:

Category	Elements	Criteria Code	Criteria	Addressed	Not Addressed	Not Applicable	Comments
Supporting Plans and Guide Lines - SP -	State, Regional, Local - SP1 -	SP1.1	Supports the Florida Transportation Plan, the Strategic Intermodal System Plan, and other applicable state plans and guidelines.				
		SP1.2	Consistent with adopted regional mobility plan or vision, such as that established through a regional collaborative, including the MPO Long Range Transportation Plan and adopted Transit Development Plan (TDP).				
		SP1.3	Coordinates with transportation, corridor management, and mobility plans of adjacent local governments and transportation planning agencies.				
		SP1.4	Consistent with local government comprehensive plan objectives and policies as well as specialized plans.				
Multi/Modal Environment - ME -	Organization & Location - ME1 -	ME1.1	Designates and reinforces strong urban core(s) and urban activity centers of varying sizes and compositions.				
		ME1.2	Transit-compatible land uses are defined and required to locate on existing or planned transit corridors with direct access to transit. This should include but is not limited to transit-oriented developments (TOD).				
		ME1.3	Ensures that industrial and other freight-related uses locate in proximity to and have direct access to major transportation routes and intermodal stations or other freight transfer locations.				
	Mix - ME2 -	ME2.1	Provides for a complementary mix of retail, services, residential, institutional, cultural, recreational, and employment opportunities within urban cores and major activity centers.				
		ME2.2	Provides for a vertical mix of uses within urban cores and major activity centers to encourage active uses at the street level.				
		ME2.3	Provides for compatible food, education, retail and service uses on a neighborhood level within or in close proximity to residential areas.				
	Density and Intensity - ME3 -	ME3.1	Establishes minimum density and intensity requirements for urban core and major activity center areas.				
		ME3.2	Establishes appropriate densities and intensities within walking distance of transit stops.				
		ME3.3	Establishes urban design criteria for urban cores and major activity centers to preserve or improve livability.				

Multimodal Policy - ME4 -	ME4.1	Establishes priority on enhancing bicycle and pedestrian mobility within existing and proposed activity centers, including urban core areas.				
	ME4.2	Includes automobile parking management strategies for urban cores, activity centers and transit corridors to reduce surface area parking and promote non-automobile travel.				
	ME4.3	Provides for, and requires new development to contribute to, pedestrian-friendly amenities on the public streetscape.				
	ME4.4	Provides for, and requires new development to contribute to, amenities at existing and proposed transit stations and stops including covered shelters, trash receptacles, benches, landing pads, lighting, and bicycle parking.				
	ME4.5	Transportation impact assessment procedures are in place that address development impacts on all modes of transportation and minimize vehicular, transit, bicycle, and pedestrian conflicts.				
Major Roadway Network - NI1 -	NI1.1	Transportation corridors requiring additional right of way and/or corridor management are designated for preservation and management as provided in §337.273, F.S.				
	NI1.2	Includes transportation corridor management policies to preserve right-of-way needed for all transportation modes and provides for dedication of land or conveyance of easements to local governments for planned transportation projects as provided in §337.273(6), F.S.				
	NI1.3	Provides for construction of parallel relievers or service roads along major highway corridors or within interstate interchange quadrants.				
	NI1.4	Provides for construction of new interstate highway overpass crossings to connect local street networks.				
	NI1.5	Includes grade separated intersections.				
	NI1.6	Provides for construction of additional travel lanes and/or turn lanes to address existing or anticipated motor vehicle traffic volume where appropriate.				
	NI1.7	Includes new arterial or major collector roadways to relieve motor vehicle traffic congestion and increase network connectivity.				
	NI1.8	Includes design elements to increase bicycle and pedestrian safety and mobility.				
	NI1.9	Includes network enhancements and design elements in support of managed lanes.				
	NI2.1	Includes network-enhancing local and minor collector street projects.				
Local Street Network - NI2 -	NI2.2	Promotes direct connections between activity centers and surrounding residential areas.				
	NI2.3	Includes policies and strategies to increase street network connectivity.				

Operations and Safety - OS -	Bicycle and Pedestrian Network - NI3 -	NI3.1	Requires bicycle lanes and sidewalks of appropriate width on or near all new or reconstructed major collector and arterial routes where appropriate.					
		NI3.2	Includes planned projects to address bicycle and pedestrian network connectivity.					
		NI3.3	Addresses the continuation of, or establishes new, shared use paths.					
		NI3.4	Requires new development to maintain continuous pedestrian networks, including connections to transit stops, adjacent lots, and between building entrances and the internal and external sidewalk network.					
		NI3.5	Requires new development to maintain continuous bicycle networks, including connections to transit stops and adjacent properties, and to provide bicycle parking at all non-residential uses, multi-family uses and other key destinations.					
	Transit Network - NI4 -	NI4.1	Addresses statewide and regional transit traveling through or with endpoints within plan boundaries.					
		NI4.2	Addresses express transit service.					
		NI4.3	Addresses existing and planned local transit within plan boundaries, including route locations, headways and infrastructure.					
	Demand Management - OS1 -	OS1.1	Provides for high quality transit service and/or managed lanes.					
		OS1.2	Incorporates intelligent transportation systems (ITS) strategies.					
		OS1.3	Establishes institutional strategies (e.g. TDM programs).					
		OS1.4	Establishes commuter financial incentives.					
		OS1.5	Provides infrastructure designed to encourage alternatives to single occupant vehicle travel.					
		OS1.6	Establishes pricing strategies.					
		OS1.7	Provides for safer travel for all modes.					
	Access Management - OS2 -	OS2.1	Includes policies and strategies to provide alternative access to development on arterial roadways.					
		OS2.2	Includes policies and strategies to close excessive or unsafe driveway connections or to redesign overly-wide or poorly designed connections.					
		OS2.3	Includes policies and strategies to replace continuous two-way left turn lanes with medians on multi-lane arterials.					
		OS2.4	Requires conformance of new signals with signal coordination plans and FDOT signal spacing standards for the state highway system.					
		OS2.5	Restricts access in the functional area of freeway interchanges.					
		OS2.6	Restricts access in the functional area of roadway intersections.					
		OS2.7	Requires adequate, uninterrupted throat length for driveways and frontage roads that connect to arterial roadways.					
		OS2.8	Includes measures to close or redesign inadequately designed median openings.					

Ped and Bicycle Operations and Safety - OS3	OS3.1	Includes measures to increase pedestrian safety at intersections and mid-block crossings, and while walking along the road.				
	OS3.2	Includes measures to increase bicycle safety.				
	OS3.3	Includes measures to provide safe routes to schools.				
Implementation - IM	IM1.1	Includes strategies to forge partnerships and effectively coordinate with modal providers, state and regional agencies, and other local governments in mobility planning and project development.				
	IM1.2	Includes policies and strategies to coordinate with FDOT in access management and permitting on the state highway system.				
	IM2.1	Provides incentives to achieve the desired results.				
	IM3.1	Includes policies for adoption of regulations, including design criteria, into appropriate land development regulations by a specified date.				
	IM3.2	Includes a performance measurement system.				
	IM4.1	Capital improvement program addresses all modes of transportation.				
	IM4.2	Clearly identifies committed and anticipated funding sources for the capital improvement program and reasonably anticipated funding for future years.				

Supporting Plans and Guidelines	0	0	0	0
Multimodal Environment	0	0	0	0
Network Improvement	0	0	0	0
Operations and Safety	0	0	0	0
Implementation	0	0	0	0
Total	0	0	0	0

2060 Florida Transportation Plan



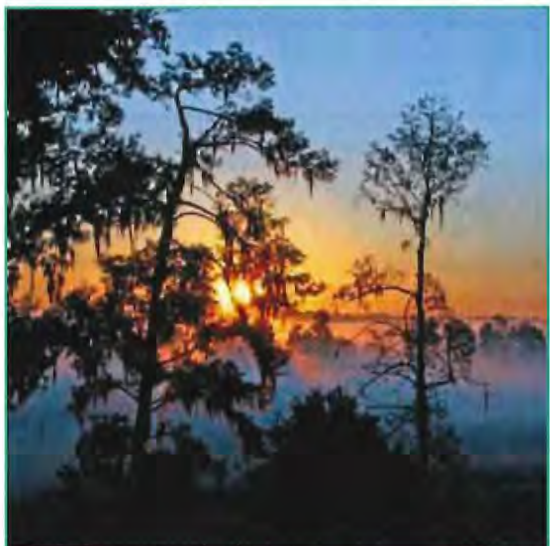
 **HORIZON**
2060

a new era for transportation in florida

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Executive Summary



Florida's transportation system must continue to evolve over the next 50 years to support the transformation of Florida's economy and communities: a larger and more diverse population, an economy based on global markets and innovation, development patterns focused in high density urban centers and rural employment centers, a revolution in technology, and increasing pressure on the state's unique environment. Florida's transportation system must move more people and freight, provide more travel options, connect more places, be safer, and be more efficient and more reliable – all with increasingly constrained resources.

The 2060 Florida Transportation Plan (FTP) marks a new era of transportation in Florida and calls for a fundamental change in how and where Florida invests in transportation. The FTP defines transportation goals, objectives, and strategies to make our economy more competitive, our communities more livable, and our environment more sustainable for future generations.

Florida's transportation system in 2060 will be as profoundly different as today's system is from the one 50 years ago, including:

- A statewide, multimodal transportation system which supports Florida's economic and livability goals by providing better connectivity to both urban and rural areas;
- Greater reliance on public transportation systems for moving people, including a statewide passenger rail network and enhanced transit systems in Florida's major urban areas;
- A statewide, multimodal system of trade gateways, logistics centers, and transportation corridors to position Florida as a global hub for commerce and investment;
- An evolving air and space transportation system enabling Florida to remain a global leader for moving people and cargo between Florida and destinations in other states, nations, and orbit; and
- A new generation of infrastructure, vehicles, fuels, and technologies to enable travel with fewer crashes, reduced delay, and fewer emissions.

How Florida's transportation partners make planning and investment decisions also must transform over the next 50 years:

- Major investment decisions made in the context of statewide and regional visions for Florida's future;
- Transportation agencies and decision making processes reinvented to strengthen regional coordination, reduce fragmentation, eliminate duplication, and increase efficiency; and
- Transportation investment strategies reformed to systematically identify investment needs across all modes, to pursue reliable revenue sources for maintaining and expanding the transportation system, and to accomplish targeted investment priorities.

Florida's transportation partners will implement the 2060 FTP by aligning plans and policies, coordinating activities, and measuring and reporting progress toward achievement of the 2060 FTP goals and objectives. Florida's Governor, Legislature, and public and private transportation partners have the opportunity and responsibility to energize FTP implementation and to advance critical priorities. Together, this partnership will move Florida forward through the 21st century.

2060 FTP Goals

- Invest in transportation systems to support a prosperous, globally competitive economy
- Make transportation decisions to support and enhance livable communities
- Make transportation decisions to promote responsible environmental stewardship
- Provide a safe and secure transportation system for all users
- Maintain and operate Florida's transportation system proactively
- Improve mobility and connectivity for people and freight

A Transportation Vision for 2060

The state of Florida in 2060

- A globally competitive economy serving as a hub for international and domestic trade and investment, and attracting and retaining skilled workers.
- Vibrant urban and rural communities where Floridians have greater choices about where to live, work, learn, play, and shop.
- A healthy environment with improved air and water quality, as well as conservation of critical lands, waters, wildlife, habitats, energy, and other natural resources.

Florida's transportation system in 2060

- Safe and secure travel, as Florida moves toward eliminating fatalities on the transportation system.
- A reliable, efficient, and well maintained transportation system.
- Multiple options for moving people and freight within and among Florida's urban and rural areas, working together as an integrated transportation system.
- Enhanced stewardship of transportation resources through effective planning, efficient decision making, wise investments, proper accountability, and rigorous performance measurement and reporting.



Introduction



The 2060 Florida Transportation Plan (FTP) is a plan for all of Florida. The plan defines Florida's future transportation vision and identifies goals, objectives, and strategies to guide transportation decisions over the next 50 years. The FTP addresses how our transportation system can meet the needs of a growing population, while helping make our economy globally competitive, our communities more livable, and our environment more sustainable for future generations.

The 2060 FTP is the first statewide transportation plan for Florida to cover a 50 year period. This longer horizon enables all transportation partners to work toward a future transportation vision addressing both today's challenges and tomorrow's opportunities.

A committee of 29 people worked together throughout 2010 to develop the 2060 FTP. The committee members represented all levels of government, multiple modes of transportation, business and economic development organizations, community and environmental interests, the military, and private citizens. The committee was supported by four advisory groups, which involved 74 additional people in developing this plan. A statewide summit, two statewide webinars, 12 regional workshops, nearly 300 briefings at regularly scheduled meetings of transportation partners, and an interactive website helped gather input and feedback from more than 10,000 additional Floridians throughout this process.

The FTP establishes the policy framework for expenditure of state and federal transportation funds flowing through the work program of the Florida Department of Transportation (FDOT). The 2060

FTP goals and objectives also provide guidance to all other transportation partners as they develop and implement future policies, plans, and projects. Working together toward a common vision will ensure Florida's future transportation system supports the state's economic, community, and environmental goals.

The 2060 FTP is organized into three major sections:

- Key trends, issues, and opportunities shaping Florida's transportation past and future;
- Six long range goals to guide Florida's transportation decisions, along with objectives, strategies, and indicators to support each goal; and
- Key actions to implement the 2060 FTP, with emphasis on transportation decision making, funding and finance, and progress tracking and reporting.

Like any dynamic plan, the FTP will be revised and updated to respond to new ideas, as well as changes in social, economic, environmental, and technological factors affecting our transportation system and travel needs.

A Look Back



Coral Gables Rapid Transit Corporation Trolley Cars
Miami, Florida - 1926



Eastern Airlines' Lockheed Electra Airplane
Miami, Florida - 1930s



United Bus Terminal
Miami, Florida - 1931



Seaboard Airline Engine Number 5
Fort Basinger, Florida - 1940s



Jacksonville Dock
Jacksonville, Florida - 1946

Florida's transportation system has developed over the years as the needs of its residents and businesses have evolved. Florida has a long history of rural lifestyles related to resource industries such as agriculture, fishing, forestry, and mining. Early development created centers of commerce like Pensacola, Jacksonville, and Tampa on harbors and rivers. Later, foot trails connecting former colonial towns, Native American villages, and Spanish missions were replaced with a patchwork of roads. By the late 1800s entrepreneurs such as Henry Flagler and Henry B. Plant snaked rail lines down the coasts and over the rivers to connect Jacksonville to Southeast Florida and Tampa. Streetcar systems operated in many large cities in the early 1900s, but ended service over the next few decades as car ownership became more widespread. Florida's road system expanded through the years into a network of state highways and local roads.



Cape Canaveral's First Rocket Launch
Titusville, Florida - 1955



Florida's Turnpike
Golden Glades, Florida - 1957

Nearly 50 years ago, the opening of the first segments of Florida's Turnpike and the national Interstate Highway System helped propel Florida into six decades of economic expansion and uninterrupted population growth. The state began converting its legacy of World War II military airfields into commercial use to serve a booming tourist industry – and Cape Canaveral became the nation's gateway to space. In subsequent years, Florida's seaports expanded in response to increasing global trade and the rapid growth in passenger cruises.

Florida's transportation system, which historically has comprised many different forms of transportation, relies on even more modal options today. The state's first commuter rail system has operated in Southeast Florida for more than two decades, and 28 agencies operate urban fixed route transit systems. Florida now has 14 deepwater seaports, 21 commercial service airports, the nation's largest spaceport, and dozens of other passenger and freight terminals. The Interstate Highway System was completed in the early 1990s, and over time the state developed an extensive network of limited and controlled access highways connecting its major cities. In 2003, the Governor

and Legislature created Florida's Strategic Intermodal System, which brings together the state's most significant airports, spaceports, seaports, waterways, railways, passenger and freight terminals, and highways into an integrated system.

These transportation investments have shaped – and have been shaped by – Florida's economy and development patterns. Population increased rapidly, from about five million residents in 1960 to 18.8 million in 2010; Florida is now the fourth largest state in the nation. While large portions of Florida's land area remain rural or undeveloped, the state has become more urbanized. About 84 percent of Floridians lived in urbanized areas in 2010, an increase from 54 percent in 1960. In recent years urban development has tended to occur at the fringe of existing urbanized areas along transportation corridors.

Employment increased even more rapidly than population, from 1.3 million jobs in 1960 to 7.2 million jobs in 2010. The number of visitors increased as well, from 11 million in 1960 to 83 million in 2010. The transportation system has accommodated strong growth in demand, with transit ridership doubling since 1985; seaport tonnage more than doubling since 1970; highway vehicle miles traveled increasing more than 400 percent since 1970; and air revenue passengers up a stunning 1,000 percent since 1960.

A Look Forward

What Will Florida Look Like in 2060?

Florida's population and economic growth are expected to resume as the current recession ends, though not at the pace of previous decades. Florida will likely continue to exceed national growth due to retirement and migration of the baby boomers and strong international immigration and domestic migration of workers in search of economic opportunities and livable communities. State forecasts anticipate a near doubling of both population and employment by 2060, to perhaps 34 million residents and 14 million jobs.

Even as we grow, several key trends suggest Florida in 2060 may be very different from today:

Diverse population. Florida is leading the nation in two important demographic changes – the aging and increasing diversity of our population. By 2030, 26 percent of Floridians will be over the age of 65, compared with about 20 percent nationally. The number of students, visitors, disabled persons, and others with specific mobility needs will continue to grow.

Innovation economy. Florida's economy is increasingly driven by innovation. While traditional strengths in agriculture and tourism remain, Florida's future economy will rely on emerging industries such as aerospace, clean energy, life sciences, and creative industries. These industries tend to develop in clusters around vibrant communities, universities, and research laboratories, where they can gain access to skilled workers.

Global markets. Markets for Florida businesses are shifting from local and regional to global. Global trade patterns will shift following widening of the Panama Canal and anticipated increases in trade from Asia, Latin America, and other markets – positioning Florida as a crossroads for both north-south and east-west trade. Florida's ability to connect to global markets and tap into this trade flow will be a critical driver of future prosperity, yet Florida must compete with other states aggressively pursuing this opportunity.



Emerging megaregions. The key unit of economic competition is shifting from metropolitan areas to megaregions – networks of urban and rural areas connected through economic relationships and infrastructure. The Florida peninsula may be one of about 10 megaregions driving U.S. growth in the global economy – and the connections between Miami and Jacksonville or Orlando and Tampa, for example, may become more important than differences between them. Northwest Florida could become part of this megaregion or may become more integrated with the western Gulf Coast from Alabama to Texas.

Shifting development patterns. The sprawling development pattern of the past 50 years may give way to higher density development focused in urban centers. Florida's diverse population desires a range of choices for where to live – vibrant cities, quiet suburbs, small towns, and rural places – but with distinctive characteristics and easy access from homes to jobs, schools, shopping, and services. Higher density, mixed use urban development and rural employment centers – connected with multimodal transportation corridors and separated by open spaces – will be a key emphasis of development over the next 50 years.

Technological revolution. Rapidly changing technologies will reshape the way Floridians live,

work, and travel. Communication technologies will reduce the need for some trips to work, meetings, shopping, and schools – but at the same time, they may increase the number of small packages moving throughout the state on a daily basis. New vehicle technologies – including small electric vehicles, smart cars and trucks, new large aircraft, high speed railways, enhanced transit systems, mega containerships, and next generation launch vehicles and spacecraft – will reshape existing travel options and provide new options for moving people and freight.

Environmental stewardship. Florida's environment will be under increasing pressure if urban development fragments, encroaches on, or replaces important natural lands, agricultural lands, and open spaces; if population growth strains water supplies; and if growth in travel and industry impacts air and water quality. A changing global climate may impact Florida more than any other state due to its many miles of coastline and its low elevation. How Florida responds to these environmental challenges will be a key determinant of its future quality of life and economic competitiveness.

Changing role of the public and private sectors. Florida's public agencies will redefine their roles to meet the challenges of the next 50 years, while also trying to meet public requirements and expectations with increasingly constrained revenue sources. The private sector will continue to expand its role as a leader or partner with the public sector in accomplishing specific priorities.

What Are Florida's Future Transportation Challenges?

Can Florida's transportation system carry the state forward into the next 50 years as it has over the past 50 years? The answer lies in Florida's response to the following challenges:

- Florida must address the increased demand for moving people and freight, including more specialized mobility options for groups such as older residents and disabled persons. Investments will also be needed to support key industry clusters and to provide more options for workers.
- Florida's role as a global hub requires efficient and reliable connectivity for trade and visitors. Florida's seaports must deepen channels and expand terminals to accommodate growth in freight and cruise passenger activity. Air passengers and cargo travel may exceed available capacity at the state's airports within the next 50 years, unless significant investments in new capacity are made. Florida's spaceports must modernize to maintain the state's historic civil and military strengths and to expand its role in rapidly evolving commercial markets. Each hub must connect efficiently to surface transportation corridors to move people and goods from origin to destination.
- The development of Florida's megaregions requires connectivity between its economic regions. There are few choices for moving people or freight between many of Florida's regions today; highways often are the only option available. If current trends continue, most urban and inter-regional highway corridors will likely be heavily congested during peak periods by 2035, even after planned investments are made. Available rail capacity may not be sufficient for a significant increase in both passenger and freight demand.
- Providing more choices for where Floridians can live requires more effective transportation options. In many urban areas, residents have few choices for traveling to jobs, schools, shop-



ping, or community resources. Many rural areas may not be sustainable in their current form due to limited economic opportunities and poor connectivity to employment centers or markets in surrounding regions. Transportation investments must support sustainable development patterns as envisioned by the residents of each region of the state.

- Florida's transportation system must evolve to accommodate new types of vehicles, fuels, and logistics practices.
- The sustainability of Florida's environment requires a continued emphasis on making responsible decisions about where transportation facilities are located and how Floridians travel – particularly the impacts of transportation on air quality, energy, climate, water, wildlife, habitat, and land use.
- With nearly 2,600 people losing their lives on Florida roads in 2009, transportation safety remains a concern in all parts of the state. The ability to respond effectively to incidents as well as hurricanes, emergencies, and other disasters also must remain a priority.
- The current fragmentation of decision making responsibilities, particularly at the regional level, may impede progress toward addressing many of these challenges. Florida's economy increas-

ingly functions at a regional, statewide, and global scale, but most transportation decision making processes are organized at a local level. There is no statewide vision to relate transportation to other statewide priorities, and to integrate economic, social, and environmental decisions to create a sustainable Florida.

- Available funding will not be sufficient to pay for needed improvements to the transportation system – and the funding gap is likely to grow as travel demand increases, new initiatives are launched, and the value of the motor fuel tax erodes.
- Leadership and public priorities may change as we make progress toward a 50 year vision. Numerous surveys demonstrate the public does not view transportation as important compared to other issues. It is important to ensure the public continues to view transportation as a benefit to their quality of life, and businesses view transportation as an asset for Florida's economic future. The long term nature of transportation decisions does not match political or business cycles. Significant change in Florida's transportation system will require more information to enhance citizen involvement as well as sustained leadership from the Governor, Legislature, Cabinet, and a wide range of partners.



Statewide and Regional Visioning

Florida should make its most significant transportation decisions – those involving new facilities or services, or major expansion or transformation of existing ones – in the context of long range visions about the future growth and development of Florida's regions and, ideally, the state as a whole.



A vision describes the desired future for an area, ranging in size from a neighborhood to a nation. A vision aligns separate planning processes, so transportation and other investment decisions can be made in concert with land use, economic development, environmental stewardship, and community livability goals. A vision also explores issues and opportunities extending beyond traditional planning horizons and scopes. A vision must reflect extensive citizen input and must demonstrate consensus from a broad circle of elected officials and business and civic leaders.

The 2025 FTP, together with other statewide initiatives, called for greater emphasis on regional visions. Today, most regions of Florida are participating in regional visioning processes. Visioning processes in Central Florida and Tampa Bay, for example, have helped accelerate transformative investments, including plans to introduce high speed rail, commuter rail, and light rail.

In addition to ongoing community visioning efforts, Florida should develop, implement, and maintain visions at regional and statewide levels:

- Regional visions should be developed for large geographic areas sharing common economic, environmental, or cultural ties. Elements of regional visions pertaining to public sector policies and investments should be implemented through changes to strategic regional policy plans, local government comprehensive plans, long range transportation plans, resource agency plans, economic development plans, and other plans. As regional visioning matures, regions should develop new approaches to governance and decision making to help move desired outcomes from concept to implementation in a timely and efficient manner.
- A statewide vision should guide decisions about major state investments. However, a comprehensive statewide vision does not exist today. The FTP provides a statewide transportation vision and goals and is developed within the context of the State Comprehensive Plan. To ensure success, the FTP should be a priority of each successive Florida Governor and Legislature. Integrating the FTP with Florida's Strategic Plan for Economic Development and other public and private statewide plans will provide a unified vision for Florida's future. By providing a geographic perspective on desired development patterns, economic opportunities, and environmental stewardship, a statewide vision can guide the location, type, and character of future state investments, including those involving transportation. A statewide vision should not only integrate the results of regional visions, but also reflect statewide goals and priorities. Elements of the statewide vision pertaining to public sector policies and investments must be implemented through changes to state agency plans.

Long Range Goals and Objectives

A New Era for Transportation in Florida

Transportation partners must work together toward six goals over the next 50 years. Three goals focus on how transportation supports Florida's future prosperity and quality of life and three goals focus on the performance of the transportation system itself. The 2060 FTP goal areas are:

- Economic Competitiveness
- Community Livability
- Environmental Stewardship
- Safety and Security
- Maintenance and Operations
- Mobility and Connectivity

The goals are related and mutually supportive; indeed, all goals must be accomplished to meet the challenges and opportunities Florida will face over the next 50 years. Florida's economic competitiveness depends heavily on the ability of the state's communities and environment to attract and retain businesses and skilled workers and to attract visitors. A healthy economy, in turn, provides job opportunities, boosts incomes, and provides public and private resources to invest in transportation as well as environmental and community resources. Transportation investments and decisions which accomplish multiple economic, community, and environmental goals are particularly important to Florida's future. A safe, secure, efficient, and well maintained transportation system can help accomplish all of these goals.

Transportation investments, particularly at the local level, should help build strong communities. Transportation investments at the regional and state levels should be oriented toward mobility



and economic competitiveness needs, while supporting sustainable land use and development patterns and responsible environmental stewardship. In many cases, it will be important to balance multiple perspectives – for example, to determine how best to move freight through congested urban areas or around residential areas, or how to better connect two regions without encroaching on sensitive environmental areas. Such transportation decisions should be made in the context of broader long range statewide and regional visions about future growth and development (see page 9).

The 2060 Florida Transportation Plan (FTP) defines 23 objectives to guide transportation partners toward these six goals. The FTP also identifies responsibilities and strategies for implementing the goals and objectives. Many of these strategies are for immediate action. The FTP also suggests potential indicators to track long term progress as well as short and medium term implementation targets.



GOAL Invest in transportation systems to support a prosperous, globally competitive economy

Florida's economic competitiveness is closely related to the state's ability to provide connectivity and mobility for both people and freight. Transportation investments will help lead Florida's economy out of the recession and will be a key contributor to statewide economic growth and diversification over the next 50 years.

Efficient and reliable connectivity to global markets helps Florida businesses sell goods and services worldwide, and brings business travelers and visitors to the state. Connectivity between Florida's diverse regions strengthens supply chains, distribution networks, and business relationships within Florida and knits Florida together as a megaregion able to compete with other world economies. Connectivity within regions helps build strong clusters of related industries by linking businesses, universities, attractions, and other economic assets.

A diverse, globally competitive, and knowledge based economy requires a multimodal transportation system able to move both people and freight efficiently and reliably. A critical priority is to improve the efficiency and reliability of goods movement, especially from international markets, to serve Florida's consumers and businesses and to enable Florida to expand its role as a hub for trade, logistics, and manufacturing. Targeted investments also should connect established and emerging regional employment centers and should support lands whose greatest economic

value is derived from rural uses such as agriculture and other resource based industries, recreation and tourism, renewable energy, military, and related research and development activities.

Long Range Objectives

- Maximize Florida's position as a strategic hub for international and domestic trade, visitors, and investment by developing, enhancing, and funding Florida's Strategic Intermodal System (SIS).
- Improve transportation connectivity for people and freight to established and emerging regional employment centers in rural and urban areas.
- Plan and develop transportation systems to provide adequate connectivity to economically productive rural lands.
- Invest in transportation capacity improvements to meet future demand for moving people and freight.
- Be a worldwide leader in development and implementation of innovative transportation technologies and systems.

Implementation Strategies

State, regional, and local transportation agencies should give greater emphasis to the role of transportation supporting Florida's economic prosperity. They must work closely with economic development organizations to better align future economic and transportation strategies. Carriers, shippers, tourist attractions, and other transportation dependent businesses, as well as major landowners and developers, can play a critical role identifying future mobility and connectivity needs, and in some cases partnering on potential solutions.

- Maximize Florida's ability to handle its own imports and exports through targeted investments in seaports, airports, and other hubs as well as regional distribution networks.
- Support the development of Florida as a major international trade hub with targeted investments in the capacity of and connectivity among

SIS hubs and corridors, such as airports, seaports, rail terminals, integrated logistics centers, highways (some with exclusive truck lanes), rail lines, and coastal and inland waterways.

- Improve the efficiency and connectivity of the supply chain serving Florida's businesses.
- Adopt a proactive process to identify established and emerging regional employment centers based on statewide and regional visions and plans and to identify transportation investments serving these targeted centers.
- Identify transportation investments to improve connectivity to rural employment centers and economically productive rural lands, consistent with statewide and regional visions and plans.
- Include economic development opportunities as a key factor in setting priorities for transportation

investment on the SIS and regionally significant facilities.

- Promote transportation projects needed to help advance critical economic development opportunities through targeted funding and quick response planning for SIS and other investments.

Potential Indicators

- Access from businesses to employees, customers, and suppliers within reasonable travel time
- Transportation costs as a percentage of household income or gross state product
- Jobs, income, and gross state product created by transportation investments



GOAL Make transportation decisions to support and enhance livable communities

In a state as large and diverse as Florida, livability means many things to different people. Vibrant cities, family oriented suburbs, unique small towns and villages, rural areas, and open space all appeal to different groups of Floridians. Yet the most livable communities – whether cities, towns, or villages – often share several qualities:

- A variety of places for people to live, work, learn, shop, and play;
- A vibrant economy with a mix of job opportunities;

- An affordable cost of living, including housing, transportation, and consumer goods and services;
- A sense of safety, security, health, and well being for residents of all ages and abilities;
- Distinctive and accessible cultural, historic, and environmental resources;
- Well organized land uses which group together the assets most attractive to residents and encourage mixed uses, while industrial or other related activities are separated from but well connected to residential areas; and
- A mix of transportation options including driving, riding buses and passenger rail, bicycling, and walking.

Transportation alone cannot make a community livable, but effective transportation planning and investment can support many of the qualities desired in a community.

Over the next 50 years, building and sustaining livable communities must be a primary focus of Florida's transportation partners. Transportation decisions should reflect community characteristics and values with a strong emphasis on engaging citizens

in shaping these future choices. Transportation decisions should be made in the context of broader community, regional, and statewide visions and in coordination with other public and private investments and plans. In particular, transportation and land use decisions must be integrated to support sustainable development patterns in both urban and rural areas.

Long Range Objectives

- Develop transportation plans and make investments to support the goals of the FTP and other statewide plans, as well as regional and community visions and plans.
- Coordinate transportation investments with other public and private decisions to foster livable communities.
- Coordinate transportation and land use decisions to support livable rural and urban communities.

Implementation Strategies

Reflecting the many aspects of livability, accomplishing these objectives will be the responsibility of a wide range of transportation partners, including FDOT, metropolitan planning organizations, local governments, and modal providers. They will work in partnership with entities responsible for community and regional visioning, land use, housing, economic development, public health and safety, education, arts and culture, historic resources, parks and recreation, environmental protection, and other community resources.

- Develop transportation plans and make investments reflecting community values and desired characteristics defined in regional and community visions and plans.
- Provide incentives to local governments and regional agencies for transportation investments supporting regional and community visions.
- Identify, evaluate, and set priorities among transportation needs based on a broad set of factors reflecting mobility, land use, economic

competitiveness and development, community, public health, education, and environmental and climate impacts.

- Design, build, maintain, and operate the entire roadway corridor to reflect the character and values of the community and, where appropriate, to accommodate the mobility needs of all users including drivers, bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities.
- Plan and develop transportation facilities to enhance and protect historic, cultural, recreational, and natural resources and other features important to each community.
- Plan and develop transportation systems to support higher density, mixed use development and urban infill and redevelopment at locations identified in regional and community visions and plans.
- Coordinate and co-locate transportation facilities with existing and new utilities and other infrastructure investments to help focus growth in areas targeted for future development and redevelopment in regional and community visions and plans.

Potential Indicators

- Number of counties participating in development and implementation of regional visions
- Community polling on livability issues including satisfaction with public transportation and other mobility options
- Combined cost of housing and transportation as percentage of household income
- Travel time
- Walkability indicators



GOAL Make transportation decisions to promote responsible environmental stewardship

As Florida grows and develops, an important priority must be to ensure Florida's environment is sustainable for future generations. A sustainable environment should have the following characteristics:

- Preservation of critical lands, waters, and habitats;
- Flourishing flora and wildlife populations with well connected habitats;
- Improvements in air and water quality; and
- Conservation of water, energy, and other natural resources for the future.

All of these factors must be considered in making decisions about how to meet mobility and connectivity needs. Transportation planning must be integrated with land use, water, and natural resource planning and management to support statewide goals for protecting critical habitats, lands, and waters. The identification of a full range of environmental concerns and potential mitigation strategies should occur early in the transportation planning and project development process, so viable solutions to mobility and connectivity needs can be identified and implemented in a timely manner.

A critical issue is reducing transportation's impact on energy consumption and associated emissions of air pollutants and greenhouse gases. Several parts of Florida are at risk of not meeting changing federal air quality standards, partly the result

of mobile emissions from transportation sources. Transportation accounted for about 36 percent of greenhouse gas emissions statewide based on recent estimates, second only to the energy sector. Over the next 50 years, Florida's transportation system will continue shifting to more energy efficient modes, vehicles, and technologies.

Long Range Objectives

- Plan and develop transportation systems and facilities in a manner which protects and, where feasible, restores the function and character of the natural environment and avoids or minimizes adverse environmental impacts.
- Plan and develop transportation systems to reduce energy consumption, improve air quality, and reduce greenhouse gas emissions.

Implementation Strategies

All public and private entities who plan, develop, or operate transportation facilities share responsibility for ensuring transportation decisions promote responsible environmental stewardship. Coordination of transportation and resource planning and management is the responsibility of federal, state, regional, and local transportation and environmental resource agencies, working through well established partnerships. Addressing energy, air and water quality, and greenhouse gas reduction goals involves additional partners at the federal, state, regional, and local levels, as well as the private sector.

- Plan and develop transportation systems and facilities in a manner consistent with the protection and management of surrounding natural resources, including those identified in conservation plans established collaboratively by resource agencies, private land owners, and other partners.
- Provide connectivity using appropriate transportation modes to recreational areas and other natural lands intended for public access.

- Plan, develop, and maintain transportation facilities in a manner which avoids and minimizes fragmentation and sustains the ecological value and functions of wildlife habitats, other natural areas, and agricultural lands.
- Promote greater use of renewable and low emission fuels for transportation.
- Promote more energy efficient transportation infrastructure, vehicles, modes, and technologies for moving both people and freight.
- Strengthen coordination of transportation, land use, and development decisions to reduce trip lengths, increase motor vehicle occupancies, and increase public transportation and non-motorized trips.
- Encourage transportation agencies and partners to demonstrate leadership through increased use of and public education about energy efficient and low emission vehicles, recyclable materials, and renewable energy sources.

Potential Indicators

- Critical lands, waters, and habitats enhanced and negative impacts avoided by transportation investments
- Energy consumption for transportation uses (total and per capita)
- Transportation related air quality pollutants and greenhouse gas emissions (total and per capita)
- Areas meeting federal air quality standards



GOAL Provide a safe and secure transportation system for all users

Nearly 2,600 people lost their lives on Florida's roads in 2009. This represented a rate of 1.3 fatalities per 100 million vehicle miles traveled - the lowest fatality rate in the 40 years this statistic has been recorded. The fatality rate has declined for four consecutive years, but any fatality is too many. Significant safety issues include protecting pedestrians, bicyclists, motorcyclists, and elder and younger drivers; mitigating high risk areas such as intersections; and addressing safety belt use and aggressive, impaired, or distracted driving. Public transportation safety also must be a priority as

Florida provides more options for moving people and freight. Key emphasis areas will include locations where modes intersect, such as at-grade rail crossings, and where transportation corridors are used by both people and freight.

Hurricanes, wildfires, and other natural disasters in Florida have highlighted the importance of effective emergency response and the vulnerability of the transportation system to major disruption. Florida's location and large number of military installations create a unique role in America's response to conflicts and natural disasters throughout the Western Hemisphere and the globe. The transportation system must function effectively during these emergencies, whether to evacuate residents, to bring response personnel and equipment on site, or to send military and humanitarian aid around the globe. Florida also must remain vigilant about protecting the security of its transportation system without impeding the mobility of people or freight.

While specific strategies for safety, security, and emergency management are unique, several common approaches exist. Success requires collaboration among multiple partners; comprehensive strategies combining both preventative

and responsive measures; sound data to inform decisions and guide investments; and innovative use of new technologies and approaches – all working together to meet the high expectations of Florida’s residents, visitors, and businesses for a safe and secure transportation system.

Long Range Objectives

- Eliminate fatalities and minimize injuries on the transportation system.
- Improve the security of Florida’s transportation system.
- Improve Florida’s ability to use the transportation system to respond to emergencies and security risks.

Implementation Strategies

Transportation safety, security, and emergency management require collaboration among multiple entities at the federal, state, regional, and local levels, including some agencies whose primary focus is not transportation. Close coordination, effective working relationships and information exchange, and adequate management and staff support are needed at all levels.

- Implement a comprehensive approach to safety improvement across all modes, emphasizing engineering, education, enforcement, and emergency response.
- Improve safety and security data systems, analysis tools, and performance measures to focus resources on significant opportunities for safety and security improvement.
- Regularly update and implement Florida’s multi agency Strategic Highway Safety Plan to promote safety improvements on all roads and develop comparable safety plans for other modes.
- Include a safety and security improvement component in all statewide, regional, and local transportation plans.

- Incorporate transportation user and worker safety and security for all modes in all phases of transportation planning and implementation.
- Implement a comprehensive approach for enhancing transportation security and emergency management through development and regular update of statewide and regional emergency response plans to define roles and strategies related to preparedness, prevention, detection, protection, response, recovery, and mitigation.
- Support emergency evacuation, response, and post-disaster recovery activities through transportation planning and management decisions.
- Increase the use of technology to improve transportation safety, security, and emergency management, including public sector actions to develop standards and adapt infrastructure to facilitate vehicle, communications, and related technology investments.
- Provide transportation connectivity to Florida’s military facilities to support their national security and emergency management functions.

Potential Indicators

- Incidents or crashes by mode (total and rates)
- Fatalities and injuries by mode (total and rates)
- Security incidents involving the transportation system
- Percentage of transportation facilities meeting federal or state security standards (where defined) by mode
- Emergency response and management measures (such as emergency response and planned evacuation times)



GOAL Maintain and operate Florida's transportation system proactively

Florida's transportation system represents an investment of billions of dollars. Maintaining these assets requires both routine activities, such as filling potholes, removing litter, and inspecting vehicles, and major preservation activities, such as resurfacing roadways and runways, maintaining channel depths, and rehabilitating rail lines, bridges, and bulkheads at seaports. Proactive maintenance helps transportation facilities operate efficiently, helps ensure people and freight can travel safely and reliably, and delays the need for costly reconstruction or replacement by keeping transportation assets in a state of good repair.

The physical condition of Florida's state highways and bridges is among the best in the nation, reflecting decades of ongoing maintenance. The excellent condition of state transportation facilities will be increasingly difficult to maintain over the next 50 years due to increased travel, rising costs, funding constraints, and aging infrastructure. Less information is available on the physical condition of local roads and public transportation facilities and on privately owned facilities, but funding constraints have made even routine maintenance a challenge for many local governments and other partners.

System maintenance must remain an important foundation of Florida's transportation plan over the next 50 years, although the function of some facilities may change during this period. If the primary use of a corridor or hub changes over time

– from moving primarily people to moving primarily freight or from long distance travel to local traffic – the maintenance standards for that facility may change as well. System owners also will give more attention to identifying where the risk and impact of service interruptions is greatest, including but not limited to risks resulting from the impacts of climate trends.

Florida must optimize the use of its transportation system so each component of the system can function as intended. Efficient operation and management of transportation facilities can help ensure travel on these facilities remains safe and reliable. Key strategies include rapid response to and clearance of crashes and other incidents; improved traffic signal timing; more efficient management of seaport, rail, and other freight terminals; and real time traffic management.

Long Range Objectives

- Achieve and maintain a state of good repair for transportation assets for all modes.
- Reduce the vulnerability and increase the resilience of critical infrastructure to the impacts of climate trends and events.
- Minimize damage to infrastructure from transportation vehicles.
- Optimize the efficiency of the transportation system for all modes.

Implementation Strategies

Florida's transportation system comprises many modes of transportation owned and operated by various levels of government and the private sector. To the extent possible, these owners are responsible for the maintenance and operations to keep these transportation facilities in working order. Strong collaborative relationships are needed to pursue targeted strategies such as improving regulatory enforcement, operating transportation facilities on a real time basis, and deploying and using technology to monitor and manage the system.

- Monitor the physical condition, operational performance, and use of Florida's transportation system and use these data to inform investment decisions.
- Include risk of service interruption as a factor in identifying and setting priorities among major infrastructure maintenance needs.
- Research, develop, and deploy state-of-the-art materials, technology, and methodologies to improve the physical condition and operational performance of transportation infrastructure.
- Leverage public and private partnerships and innovative contracting to maximize the benefits achievable from maintenance and operations investments.
- Design, develop, and maintain transportation infrastructure able to accommodate changing demands and regulations, including larger or heavier loads.
- Minimize damage to transportation infrastructure from transportation vehicles by establishing and enforcing appropriate safety, usage, and other regulations for each mode.
- Develop refined data and decision making tools to better integrate climate trends and their potential impacts into decisions about designing, constructing, maintaining, and operating transportation infrastructure.
- Plan for and deploy a network of sensors and communications infrastructure, along with supporting databases and models, to monitor and manage the performance of critical infrastructure on all modes on a real time basis.
- Emphasize transportation systems management and operations strategies to optimize performance of existing facilities.

Potential Indicators

- Physical condition of infrastructure and equipment by mode (such as percent meeting standards)
- Capacity utilization by mode



GOAL Improve mobility and connectivity for people and freight

The most fundamental purpose of transportation is mobility and connectivity – linking people to jobs and services, businesses to suppliers and customers, visitors to destinations, and students to schools. Florida's transportation system must

provide connectivity and mobility for three types of trips:

- Trips between Florida regions, and between Florida and other states and nations. The primary network for providing this connectivity for both people and freight is Florida's Strategic Intermodal System (SIS).
- Trips between communities within Florida's regions.
- Trips within local communities.

The first two categories of trips are important for Florida's economic competitiveness because they link Florida's businesses to markets around the state and worldwide. The local and regional trips contribute to the livability of communities by linking residents to jobs, schools, services, and other amenities.

Florida's transportation system today heavily relies on roads to move both people and freight. Under current travel and growth patterns, highway vehicle miles traveled are projected to increase 70 percent between 2008 and 2035. The volume of freight moving to, from, and within Florida is projected to increase 91 percent between 2002 and 2035. Based on existing data, population and employment both are projected to as much as double by 2060. Therefore the 50 year increase in travel demand could be even greater.

Florida should provide residents, visitors, and businesses with more choices among transportation modes. All modes must function together as an integrated transportation system.

Long Range Objectives

- Expand transportation options for residents, visitors, and businesses.
- Reinforce and transform Florida's Strategic Intermodal System facilities to provide multimodal options for moving people and freight.
- Develop and operate a statewide high speed and intercity passenger rail system connecting all regions of the state and linking to public transportation systems in rural and urban areas.
- Expand and integrate regional public transit systems in Florida's urban areas.
- Increase the efficiency and reliability of travel for people and freight.
- Integrate modal infrastructure, technologies, and payment systems to provide seamless connectivity for passenger and freight trips from origin to destination.

Implementation Strategies

Numerous agencies at the federal, state, regional, and local levels are responsible for meeting connectivity and mobility needs for both people and freight. Transportation planning and investment responsibilities have shifted from the agencies owning or operating individual facilities to partner-

ships at the statewide, regional, or local levels to meet the specific needs for mobility and connectivity at each scale. FDOT is the lead agency for mobility and connectivity between regions and between Florida and other states and nations. Regional entities play the lead role on mobility and connectivity between communities within a region, and local governments have the primary responsibility for identifying and addressing local mobility needs. The private sector owns and operates key elements of the transportation system such as freight rail systems, and increasingly partners with the public sector to design, build, operate, and maintain transportation facilities and services.

- Continue to prioritize investment in SIS hubs, corridors, and connectors, including identifying opportunities to transform existing SIS facilities and create new SIS facilities.
- Coordinate with other states to improve connectivity on multistate highway, rail, and waterway corridors connecting Florida to the rest of the United States.
- Coordinate the efforts of the Florida Rail Enterprise with regional and local partners and the private sector to develop and operate the statewide high speed and intercity passenger rail system and to link this system with public transportation systems.
- Increase the capacity and connectivity of urban public transit systems.
- Provide appropriate public transit services and other transportation options in rural areas.
- Work with regional and local partners to develop regional systems of bicycling and pedestrian facilities and integrate these facilities with the road network, transit systems, and enhanced support services.
- Increase access to housing, jobs, schools, services, and amenities through convenient and affordable transportation choices for residents and visitors.
- Increase access to the global supply chain and distribution networks for businesses.

- Provide reliable transportation options to meet the unique mobility needs of persons with disabilities, older adults, low income persons, and others without ready access to automobiles.
- Deploy integrated real time information systems to share transportation information across jurisdictions, modes, and agencies, including development of a statewide electronic payment and scheduling system encompassing tolls, transit and rail fares, public parking systems, and other related payments.
- Encourage the development and use of telecommuting, distance education, virtual meeting, and other communications technologies.

Potential Indicators

- Person miles traveled
- Highway vehicle miles traveled
- Percentage of travel using each mode for people and freight
- Accessibility to public transportation facilities
- Person and freight hours of delay
- Reliability of travel and delivery (such as on time arrival or variability of travel times)





Florida cannot achieve the 2060 FTP goals and objectives without the commitment of transportation partners to:

- Implement a 21st century governance model to reduce fragmentation and improve the quality and efficiency of transportation decision making;
- Implement a strategic approach to transportation investment to provide reliable funding for statewide, regional, and local priorities; and
- Identify specific short term actions to begin implementation of the 2060 FTP goals and objectives, and measure and report progress toward implementation.

21st Century Governance Model

The current fragmentation in transportation decision making responsibilities and processes is one of the most significant challenges to implementing the 2060 FTP. A large number of government entities are responsible for planning and funding decisions affecting Florida's transportation system (see box for a partial listing). Planning and funding processes generally are organized by transportation mode and jurisdiction, which impedes cooperation across modes or at a regional or statewide scale. Differences in plan update schedules, horizon years, assumptions, and prioritization processes across agencies and jurisdictions further complicate decision making.

Examples: Entities with Transportation Decision Making Responsibilities

- 411 municipalities
- 67 counties
- 26 metropolitan planning organizations
- 28 fixed route transit system operators
- 11 regional planning councils
- 11 transportation authorities under oversight of the Florida Transportation Commission
- 7 FDOT Districts
- 2 FDOT Enterprises

Today's transportation governance system must be reinvented to achieve the goals of the next 50 years. A new approach to transportation governance and decision making should reflect six key characteristics (see box on page 22).

Florida's transportation governance and decision making processes should mirror the three types of trips defined as part of the 2060 FTP Mobility and Connectivity goal, with effective structures at the state, regional, and local levels. Local processes are well established to support local mobility decisions, but critical reforms are needed at the state and regional levels.

Statewide Vision

Florida has multiple visions and plans addressing transportation, land use, economic development, environmental stewardship, and related issues. Florida needs an integrated statewide vision or strategic plan for coordinating the 2060 FTP and other visions and plans and for providing a unified view over a 50 year period. A statewide vision would provide a framework for linking regional visions and priorities to accomplish statewide goals and build Florida's megaregions. The statewide vision should provide a geographic perspective on desired development patterns, economic opportunities, and environmental stewardship to influence decisions about the location and character of transportation and other investments.

Florida's transportation partners stand ready to participate in developing such a vision. The statewide vision should be developed under the authority of the Governor and Legislature and implemented through coordinated actions of all state and regional agencies. As the state's chief planning officer, the Governor has the unique ability to champion a statewide vision and reinforce its implementation through agency heads. There is an opportunity to integrate strategic visioning frameworks which currently exist or are being developed by statewide organizations and commissions.

Regional Decision Making

Florida has more metropolitan planning organizations (MPOs) than any other state, and a relatively large number of fixed route transit system operators, airports, seaports, and toll authorities. Most of these entities operate at a county scale. Florida's economy increasingly functions at a regional scale, but few organizations are able to coordinate regional transportation priorities today. Improved regional decision making will require restructuring existing institutions and processes, including consolidation of transportation entities to reflect urbanized area growth trends, commuting patterns, funding mechanisms, and other economic relationships. Key strategies include:

- Transition Florida's MPO structure to focus on regional and metropolitan scale transportation issues. This transition may require restructuring of existing MPOs to become independent organizations not housed by a single local government; stronger coordination among MPOs within common urbanized areas or reflecting broader economic relationships, such as building on existing MPO alliances; and long term consolidation of MPOs within urbanized areas or broader regions. Federal and state

21st Century Transportation Governance

- Collaborative and sustained leadership from the government, private, and civic sectors
- Clearly defined roles to avoid duplication of effort and to leverage overlapping expertise
- Inclusive, accountable, cost effective, and timely decision making processes
- Flexible plans and programs to adapt to rapidly evolving needs and opportunities
- Integration of transportation decisions with land use, economic, environmental, community, public health and safety, security, and related considerations
- Defragmentation of decision making using logical and consistent boundaries at the state, regional, and local levels

law provides an opportunity to examine potential MPO restructuring following each decennial census.

- Strengthen regional transportation planning and priority setting in rural areas. Building on existing processes, Florida's rural regions each should identify an agency responsible for developing a regional transportation plan to define regional priorities for state funding as well as other funding sources. Together with the MPOs, these agencies would provide a comprehensive system for long range regional transportation planning for all of Florida.
- Develop a governance structure to promote integrated regional transit throughout Florida, including potential consolidation of existing transit agencies or creation of regional transit agencies. Some regions may determine regional transit needs are best addressed through a broad organization which also covers planning and implementation for other modes.
- Strengthen regional planning and coordination among seaports, airports, spaceports, railroads, and other modal partners.
- Strengthen cooperation among operating agencies, local governments, law enforcement, and emergency response agencies on regional transportation safety, security, and operational issues.
- Provide financial incentives and technical assistance to help Florida's MPOs, transit agencies, and other entities transition to this regional model.

Process Changes

Statewide and regional coordination should be further enhanced by efforts to:

- Document desired outcomes at the state, regional, and local levels and clearly define decision making roles, processes, and milestones for achieving these outcomes;
- Identify necessary statutory changes and interagency agreements to codify and implement this governance framework;
- Continue to strengthen public outreach and in-



volvement activities to enable the full range of stakeholders and the public to provide input on key decisions;

- Improve interagency data sharing and coordination, including expanding the use of the Efficient Transportation Decision Making process to include all types of transportation investments and migrating to a common data platform and tools across agencies;
- Coordinate among partners to track progress of mutual commitments for supportive transportation, land use, economic development, and environmental policies as well as related investments;
- Provide incentives and remove disincentives or barriers to public-private partnerships; and
- Develop future transportation leaders and champions at the state, regional, and local levels and encourage statesmanship, stewardship, and innovation among these leaders.

Strategic Approach to Transportation Investment

Transportation is an investment in Florida's future. Continued growth in travel demand and the associated cost of transportation improvements have exceeded Florida's ability to provide acceptable service and access for person and freight trips. Estimates available from FDOT, MPOs, and other partners all point to significant funding shortfalls. The most recent estimate of unfunded needs as-



sociated with the Strategic Intermodal System (SIS) alone is more than \$53 billion, expressed in 2006 dollars; a new estimate to be published in early 2011 is expected to be much higher. The SIS unfunded needs address the state's largest and most significant space-ports, airports, seaports, waterways, freight and passenger rail systems, and highways; they do not include estimates for most state highways, nor locally owned roads, all local transit systems, small aviation facilities, and small seaports and local waterways.

This gap is likely to grow as improved fuel efficiency, new technologies, and increased

public transportation use and non-motorized travel reduce the long term viability of motor fuel taxes as the primary state and federal revenue source for transportation improvements. There is little consensus regarding restructuring existing or adding revenue sources at the federal or state level. The future structure and level of federal transportation funding may change in upcoming federal authorizations. State transportation revenues have been reduced significantly during the recession and in recent years a portion of state transportation revenues from user fees have been diverted for non-transportation uses. Most counties have not fully exercised the local option taxes available to them for transportation improvements. Expanded public transportation systems may not be possible without developing a long term solution for funding operations and maintenance of these systems.

Transportation funding is provided by federal, state, and local government and private sector sources. This fragmentation has led to competing

and often conflicting priorities, silos of funds not easily transferrable to other purposes, and an absence of consensus regarding how funding shortfalls should be addressed.

It will be impossible to achieve the 2060 FTP goals without major reforms in transportation finance and funding. A new 21st century investment framework must include the following:

- Systematically identify transportation needs, revenues, and shortfalls across all modes. Current estimates of transportation needs, particularly for additional capacity, reflect a range of goals and assumptions regarding population and economic growth, development and travel patterns, and desirable transportation service levels. FDOT, MPOs, modal operators, and other partners should update and integrate estimates of long term investment needs using consistent time horizons and assumptions.
- Pursue greater choices and flexibility for raising and investing sustainable local, regional, and state transportation resources, including but not limited to:
 - Identify a sustainable replacement for or supplement to the motor fuel tax as a revenue source, considering factors such as evolving technologies and energy policy;
 - Aggressively pursue a greater return of federal transportation taxes and the flexibility to use those funds consistent with state, regional, and local priorities;
 - Develop a strategic approach, consistent with competitive federal transportation funding initiatives, to position Florida to receive additional federal funds;
 - Establish funding sources and incentives for projects of regional significance, including long term operation and maintenance of urban transit and passenger rail systems;
 - Encourage the use of tolls, user fees, and market choices such as express lanes, express buses, and innovative transportation options; and

- Continue to add to and make use of financing tools such as public-private partnerships, joint funding, and the prudent use of debt to implement projects which cannot be funded using traditional sources.
- Establish clear priorities for future transportation investments to continue the high priority for safety and maintenance, while also maximizing funding for moving people and freight. State, regional, and metropolitan investment priorities for capacity enhancements should recognize the importance of the SIS (including statewide passenger rail systems), urban and regional public transit, and other regionally significant facilities.
- Reduce the cost of providing and operating transportation facilities.
- Develop and carry out a public education program to demonstrate the positive impact of transportation improvements on economic competitiveness and community livability and to enable a better understanding of how transportation funds are collected and used.



Implementing, Measuring, and Tracking Progress

The 2060 FTP will be achieved through specific actions by government, private, and civic partners at the state, regional, and local levels. State law requires FDOT to implement its responsibilities under the FTP, and to use the FTP as a framework to guide its investment decisions. For other partners, the FTP provides guidance but no specific requirements. The 2060 FTP calls on all transportation partners to voluntarily commit to:

- Align other statewide, regional, and local transportation and related plans to reflect the 2060 FTP goals, objectives, and strategies, including those related to governance and investment. The 2060 FTP provides the basis for updating the SIS Strategic Plan and the statewide plans for aviation, spaceports, seaports, waterways, rail, and transit. The FTP also can inform future updates of the MPO long range transportation plans as well as related state, regional, and local plans.
- Establish short range objectives and actions. Each partner should develop measurable objectives for meeting its responsibilities over the next five to ten years, and use these objectives as input to investment decisions.
- Review and update processes and guidelines to make sure we achieve desired results. In addition to the FTP and other adopted plans, transportation decisions are guided by a wide variety of policies, standards, procedures, and guidelines developed by FDOT, MPOs, local governments, modal operators, and others. Each partner should refine and, where needed, update or replace existing processes and guidelines for consistency with the FTP goals.
- Expand the use of consistent performance measures and indicators, based on FTP goals and objectives, to monitor system performance, guide investment decisions, and demonstrate progress in achieving these goals and objectives.
- Improve available data and tools to evaluate performance and progress.
- Document and report progress on specific commitments made by each partner toward FTP implementation.
- Develop and regularly update a statewide transportation scorecard to share system performance information and report progress toward 2060 FTP implementation with partners and the public.
- Under FDOT's leadership, periodically convene partners to review progress in implementing the 2060 FTP and address emerging or outstanding issues.

Conclusion



Implementation of the 2060 FTP will help Florida enjoy:

- A globally competitive economy serving as a hub for international and domestic trade and investment, and attracting and retaining skilled workers;
- Vibrant urban and rural communities where Floridians have greater choices about where to live, work, learn, play, and shop;
- A healthy environment with improved air and water quality, as well as conservation of critical lands, waters, wildlife, habitats, energy, and other natural resources;
- Safe and secure travel, as Florida moves toward eliminating fatalities on the transportation system;
- A reliable, efficient, and well maintained transportation system;
- Multiple options for moving people and freight within and among Florida's urban and rural areas, working together as an integrated transportation system; and
- Enhanced stewardship of transportation resources through effective planning, efficient decision making, wise investments, proper accountability, and rigorous performance measurement and reporting.

By moving forward together, Florida's transportation partners can accomplish the goals and objectives of the 2060 FTP, improving Florida's economic competitiveness and ensuring quality of life for future generations.

Climate trends – Trends reflecting changes in the statistical distribution of weather over periods of decades or longer (e.g., rainfall, flooding [hundred year storm], storm surge, and mean high water).

Community – A geographic grouping of people who typically share economic and social relationships. A community refers to a smaller area within a larger context (e.g., neighborhood, town, and city).

Connectivity, transportation – The ease with which destinations may be reached because the locations are well connected and more accessible.

Economic competitiveness – A state or region's ability to compete in global markets, as evidenced in the attraction of new businesses and the expansion of existing businesses.

Economic development – Sustained increase in the economic standard of living of the population of a country (or any other defined geographic region), normally accomplished by increasing its stocks of physical and human capital and improving its technology.

Efficient Transportation Decision Making (ETDM) – A FDOT initiative to improve and streamline the environmental review and project development process by involving resource agencies, concerned communities, and other stakeholders from the first step of planning. Agency interaction continues throughout the life of the project, leading to better quality decisions and an improved linkage of transportation decisions with social, land use, and environmental preservation decisions.

Emergency management and response – Actions taken to prepare for, respond to, and recover from an incident threatening life, property, operations, or the environment (natural and manmade hazards).

Environmental stewardship – Protecting and responsibly managing all of our resources for present and future ecological and human uses.

Integrated – Having different forms of transportation with different infrastructure, information systems and payment structures combined to form a single, unified transportation system.

Intermodal – Denotes the seamless movement of people or cargo between transport modes.

Hub, trade – A place where cargo is exchanged between vehicles or transport modes, as well as

moves through value added activities (logistics, manufacturing, assembly).

Livability – The combined factors which together contribute to the unique context of a community's quality of life – including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment, and recreational choices.

Local government comprehensive plan – A plan to guide future growth and development in each of Florida's counties and municipalities, required by Chapter 163, Florida Statutes. The plan must be developed and adopted by every county and municipality in Florida and include chapters or elements that address future land use, housing, transportation, infrastructure, coastal management, conservation, recreation and open space, intergovernmental coordination, and capital improvements.

Long range transportation plan – A long range (at least 20 years) policy, strategy, or capital improvement program developed to guide the effective investment of public funds in transportation facilities. The plan is updated at least every five years, and may be amended as a result of changes in projected federal, state, and local funding; major improvement studies; congestion management system plans; interstate interchange justification studies; and environmental impact studies.

Maintenance – Activities undertaken to keep the state's transportation infrastructure and equipment operating as intended, to eliminate deficiencies, and to extend or achieve the expected life of facilities before reconstruction is needed. These include routine or day-to-day activities (e.g., pothole patching, mowing, litter removal, guardrail repair and striping, routine bus inspection and maintenance, and periodic dredging of channels) and periodic major projects (e.g., resurfacing roadways and runways, and rehabilitating bridges and bulkheads at seaports).

Megaregion – Large networks of metropolitan regions. The five major categories of relationships that define megaregions are: environmental systems and topography; infrastructure systems; economic linkages; settlement patterns and land use; and shared culture and history.

Metropolitan planning organization (MPO) – An organization made up of local elected and appointed officials responsible for developing, in cooperation with the state, transportation plans and

programs in metropolitan areas containing 50,000 or more residents. MPOs are responsible for the planning of transportation facilities functioning as an intermodal transportation system and the coordination of transportation planning and funding decisions.

Mobility – The degree to which the demand for the movement of people and goods can be satisfied. Mobility is measured in Florida by the quantity, quality, accessibility, and utilization of transportation facilities and services.

Mode – Any one of the following means of moving people or goods: aviation, bicycle, highway, paratransit, pedestrian, pipeline, rail (commuter, intercity passenger and freight), transit, space, and water.

Multimodal – The option for the use of at least two transportation modes for moving people or freight on a trip.

Natural environment – The surroundings not made by humans within which the transportation system operates. This includes natural upland and wetland ecosystems such as wildlife and fisheries habitats, water resources, and listed wildlife and plant species.

Region – An area of distinctive communities, cities, and counties where residents share: a geographic identity and are socially, economically, and culturally interdependent; a capacity for planning and function; and a capacity to create competitive advantage.

Regional planning council (RPC) – An organization promoting communication, coordination, and collaboration among local governments, metropolitan planning organizations, and other local regional authorities on a broad range of regional issues, including transportation and land use planning. The entire State of Florida is covered by the boundaries of the 11 RPCs.

Reliability – The degree of certainty and predictability in travel times on the transportation system. Reliable transportation systems offer some assurance of attaining a given destination within a reasonable range of expected time. An unreliable transportation system is subject to unexpected delays, increasing costs for system users.

Security – Actions taken to protect system users and workers, critical infrastructure, cargo and other assets, and communities from terrorism and crime related to the transportation system.

State of good repair – A condition where all asset life cycle investment needs (e.g., preventative

maintenance, rehabilitation, and replacement) have been addressed and no capital asset exceeds its useful life.

Strategic Intermodal System (SIS) – A transportation system composed of facilities and services of statewide and interregional significance, including appropriate components of all modes.

Strategic regional policy plan – A long range policy guide for the physical, economic, and social development of a region through the identification of regional goals and policies. At a minimum, the plan must address affordable housing, economic development, emergency preparedness, natural resources of regional significance, and regional transportation.

Sustainability – Meeting the needs of the present without compromising the ability to meet the needs of the future, from a social, economic, and environmental perspective.

Transportation corridor – Any land area designated by the state, a county, or a municipality which is between two geographic points and which is used or is suitable for the movement of people and goods by one or more modes of transportation (aviation, bicycle, highway, paratransit, pedestrian, pipeline, rail [commuter, intercity passenger, and freight], transit, space, and water), including areas necessary for management of access and securing applicable approvals and permits.

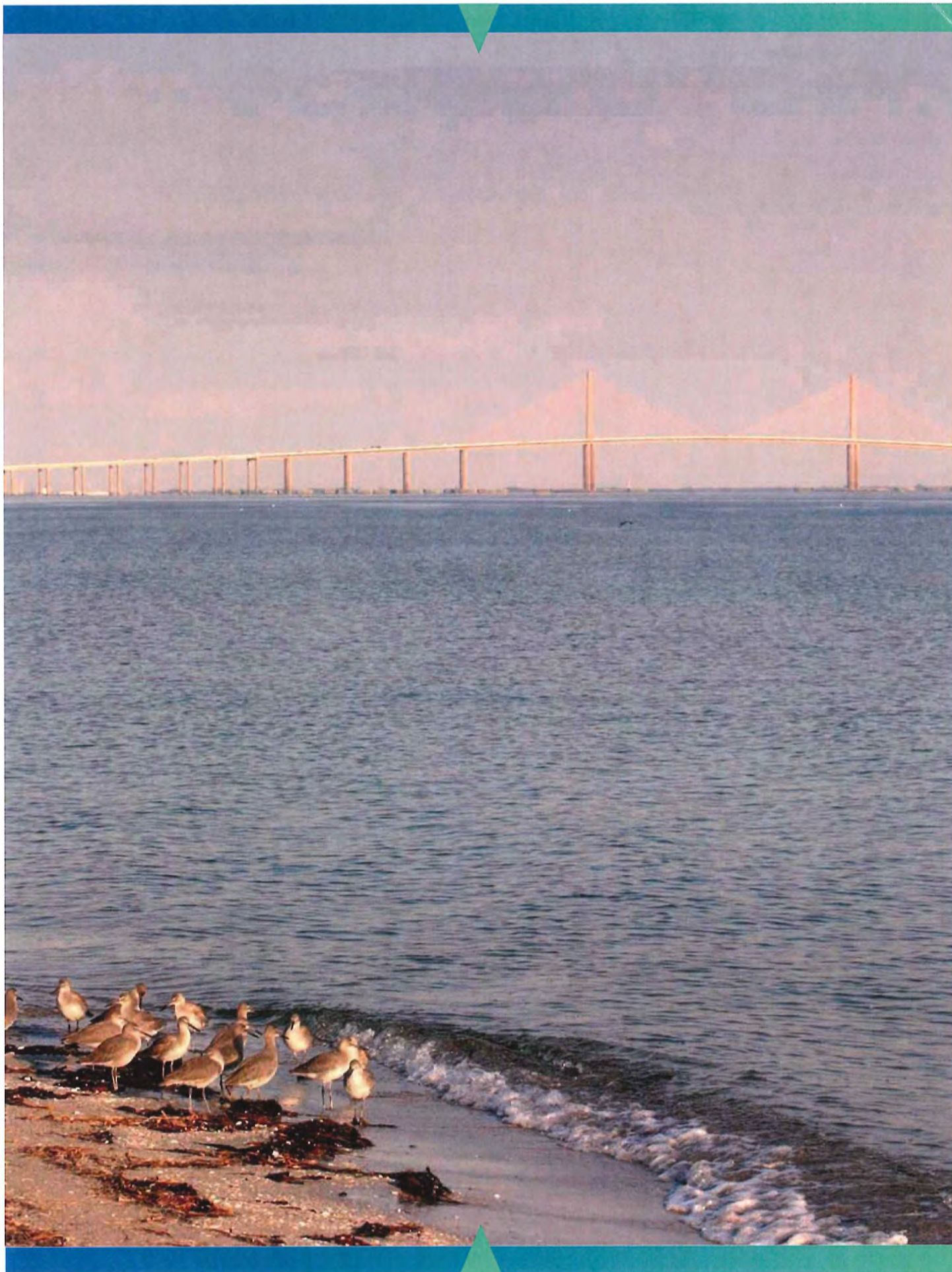
Transportation infrastructure – Capital assets that convey or move people, freight, or vehicles (included but not limited to roads, highways, railways, waterways, seaports, airports, spaceports, transit systems, bicycle paths, pedestrian walkways, and ferries).

Transportation operations – Strategies and programs to optimize the performance of existing multimodal infrastructure to reduce delay and improve the security, safety, and reliability of the transportation system. These strategies typically involve measuring performance and actively managing a defined network of the transportation system to achieve performance objectives.

Transportation system – Individual facilities, services, forms of transportation (modes), and connectors combined into a single, integrated transportation network.

Transportation vehicle – Any means in or by which someone travels or something is carried or conveyed; a means of conveyance or transport.

Vision – A long term, shared framework for decision making to achieve a desired future for a state, region, community, or other geographic area.



TRANSPORTATION MOBILITY ELEMENT

City of St. Augustine Comprehensive Plan
EAR-Based Amendments
Proposed by NUE

Transportation Mobility Element

TME Goal

To maintain a coordinated multimodal transportation system which provides for the safe, efficient, and economical movement of people, goods, and services, which is consistent with the Future Land Use Plan, conserves energy, and protects the City's natural, cultural, and historical resources.

TME Objective 1.1

The City shall provide a safe, convenient, connected, visible, and efficient multimodal ~~motorized and non-motorized~~ transportation system. The measurable targets for this objective are: (1) the establishment of areawide level of service standards for roadways, (2) the establishment of design speed thresholds and roadway quality of service standards that move the City towards Vision Zero, and (3) the establishment of multimodal quality of service standards for people walking, bicycling and riding transit. require promote the continued enforcement of development regulations related to on-site parking and maneuvering. ; and (2) the continued maintenance of adopted levels of service standards for roadways in the city.

TME Policy 1.1.1

The establishment of level and quality of service standards shall be used to periodically measure the level of mobility provided within the City.

TME Policy 1.1.2

The level and quality of service standards shall be used for multimodal transportation planning to identify needed improvements for future updates of the Mobility Plan.

TME Policy 1.1.3

The level and quality of service standards shall also be used to develop multimodal capacities for projects included in the Mobility Plan that will serve as the basis for development of a Mobility Fee to be paid by new development and redevelopment with an increase in person travel demand.

TME Policy 1.1.4

The established quality of service standards maybe used for Complete Street Design and maybe used to establish requirements for new development and redevelopment to achieve for multimodal facilities internal to the project and along external on-site property boundaries.

TME Policy 1.1.5

The City adopts the following areawide roadway level service standards for roadways. Areawide standards recognize the benefit of a gridded network of streets and are based upon the sum of vehicle miles of travel divided by vehicle miles of capacity, at the roadway level of service standard, for all roadways within an established area. The areawide level of service standard would also apply to intersections within an established area.

Area	Areawide Level of Service Standard
Multimodal District	E
Outside the Multimodal District	D

Facility	Average Daily Traffic	Peak Hour
Local roadway	D	D
Collector	D	D
Minor Arterial	D	E
Principal Arterial	C	D

The City hereby adopts the following Level of Service for State, SIS and FIHS facilities:

	SIS AND FIHS FACILITIES		TRIP FUNDED FACILITIES AND OTHER STATE ROADS	
	Limited Access Highway (Freeway)	Controlled Access Highway	Other Multilane	Two Lane
Rural Areas	B	B	B	C
Transitioning — Urbanized Areas, Urban Areas, or Communities	C	C	C	C
Urbanized Areas Under 500,000	C(D)	C	D	D
Urbanized Areas Over 500,000	D(E)	D	D	D
Roadways Parallel to Exclusive Transit Facilities	E	E	E	E
Inside TCMA's	D(E)	E	—	—
Inside TCEAs ² and MMTDs ²	—	—	—	—

NOTES:

1. Level of service standards inside of parentheses apply to general use lanes only when exclusive through lanes exist.
2. For rural two-lane facilities, the standard is C.
3. FDOT must be consulted as provided by Section 163.3180(5), (7), or (15), Florida Statutes, regarding level of service standards set on SIS or TRIP facilities impacted by TCMA's, MMTDs, or TCEAs respectively.
4. The level of service standards for non-TRIP facilities may be set by local governments in accordance with Rule 9J-5.0055, F.A.C.
5. It is recognized that certain roadways (i.e., constrained roadways) will not be expanded by the addition of through lanes for physical, environmental, or policy reasons. In such instances, a variance to the level of service may be sought pursuant to Section 120.542, Florida Statutes.
7. Level of service letter designations are defined in the Department's 2009 Quality/Level of Service Handbook.

TME Policy 1.1.6

The City adopts the following quality of service standards are established for roadway with design speeds that promote Vision Zero, encourage slower vehicle speeds and create a safer environment for people to walk, bicycle and access transit.

Roadway Design Speed	Roadway Quality of Service Standard
15 MPH or less	A
20 MPH	B
25 MPH	C
30 MPH	D
35 MPH or greater	E

TME Policy 1.1.7

The City adopts the following quality of service standards for sidewalks, paths and trails that accommodate travel demand for people walking, jogging, running, skating, riding a bicycle, scooter or micromobility device based on the width of the facility and the type of physical separation from motor vehicle travel lanes. The land development regulations shall further define the types of physical separation.

Facility Type	Limited Separation	Street Trees	On-Street Parking	Landscape Buffer
Trail 12' or wider	B	A	A	A
Path 10'	C	B	B	B
Path 8'	D	C	C	C
Sidewalk 7' or less	E	D	D	D

The presence of two or more physical separation features, such as on-street parking and street trees would result in an increase in one letter grade. For example, a 10' wide path with street trees and on-street parking would achieve a quality of service of "A", a 5' wide sidewalk with street trees and a landscape buffer would achieve a quality of service of "C"

TME Policy 1.1.8

The City adopts the following quality of service standards for bike lanes that accommodate travel demand for people skating, riding a bicycle, scooter, skateboard, or micromobility device based on the width of the facility and either the level of physical separation from motor vehicle travel lanes, the visibility of the facility or the posted speed limit. The land development regulations shall further define the types of physical separation and pavement markings.

Facility Type	Limited Separation	Protected	Buffered	Green Lane	Speed Limit
Bike lane 6' or more	B	A	A	A	30 mph – A
Bike lane 5'	C	A	B	B	25 mph – B
Bike lane 4'	D	A	B	C	20 mph – C
Paved Shoulder	E	B	C	D	20 mph – D
The presence of a physical separation features, along with pavement markings and posted speed limits would result in an increase in one letter grade.					

TME Policy 1.1.9

The City adopts the following quality of service standards for transit based upon frequency of service. The service standards are only for roadways or corridors that feature transit service. The City may elect to establish target transit quality of service standards for public / private partnership proposals and during the annual capital improvements planning process.

Frequency of Service	Trolley	Bus	Streetcar	Aerial Tram
10 minutes or less	A	A	A	A
15 minutes	B	B	B	B
30 minutes	C	C	C	C
45 minutes	D	D	D	D
60 minutes	E	E	E	E

TE Policy 1.1.2

~~The minimum acceptable level of service on any State road operating under conditions as of in a backlogged condition on October 1, 1991, shall be 10% below the traffic volume existing at that time. The minimum acceptable level of service on any constrained roads shall be 11.5% below the volume existing on October 1, 1991. The minimum acceptable level of service on constrained roads within historical corridors shall be 15.5% below the volume existing on October 1, 1991.~~

TE Policy 1.1

~~The City shall continue to use FDOT counts on all state facilities, and work with St. Johns County to collect traffic count data for County roadways within the City limits. These counts will focus first on constrained facilities, then on segments nearing maximum level of service, and then on other roadways. The studies will be conducted using the methodology from the most recent version of FDOT Quality/Level of Service Handbook.~~

TME Objective 1.2

To develop and implement a 2040 Mobility Plan focused on the movement of people, the provision of multiple multimodal transportation options to move about the community, the pursuit of a park once environment for travel within the City's multimodal district, and the development of a Mobility Fee, based upon the projects identified in the Mobility Plan, that allows for new development and redevelopment to equitably mitigate its impact to the multimodal transportation system.

TME Policy 1.2.1

The City will promote an interconnected, multimodal transportation system that transitions from a system focused on quickly moving motor vehicles toward a system that emphasizes the movement of people of all ages and abilities, whether those people choose to walk, bicycle, ride transit, drive a motor vehicle or use a new transportation mobility technology.

TME Policy 1.2.2

The Mobility Plan shall identify multimodal projects that include improvements, services and programs for people walking, bicycling, riding transit, driving motor vehicles and utilizing new mobility technologies. The projects identified in the Mobility Plan shall be based upon existing demand and projected increases in personal travel demand by 2040, the mobility plan horizon year, from new development, redevelopment, tourism and the growing population in northeast Florida.

TME Policy 1.2.3

Mobility Plan projects within the City's multimodal district shall prioritize walking and bicycling and the provision of safe, visible, connected and convenient ADA compliant facilities to encourage people walking and bicycling.

TME Policy 1.2.4

The Mobility Plan shall promote a park once environment with parking structures and lots located outside of the multimodal district. The Mobility Plan shall include transit projects and water taxi service and docks that connect the parking structures and lots to destinations within the multimodal district.

TME Policy 1.2.5

The City shall evaluate opportunities to partner with private transit providers to provide services and shall also consider water taxi services, and new transit technology including autonomous microtransit vehicles and aerial tramways. The City shall maintain and expand programs to license transit

providers and water taxi services, along with paratransit services. The City shall continue to work with the Sunshine Bus Company and other transit providers to determine service routes that can provide enhanced mobility.

TME Policy 1.2.6

The addition of motor vehicle capacity, turn lanes, or upgrades to enhance the flow of vehicles within the multimodal district shall be discouraged, except for access improvements from US 1 to the Historic Downtown Parking Garage. Mobility Plan projects for motor vehicles shall be focused on the diversion of cut-through and regional traffic away from the multimodal district and onto US 1, SR 207, SR 312, and SR 16, with an emphasis on further diversion of trips away from US 1 and SR 207 once the SR 313 extension is completed.

TME Policy 1.2.7

The Mobility Plan projects shall further the areawide roadway level of service, roadway quality of service, and the multimodal quality of service standards established in TME Objective 1.1

TME Policy 1.2.8

The Mobility Plan projects may include, but are not limited to, sidewalks, paths, trails, bike lanes, protected bike lanes, buffered bike lanes, bicycle boulevards, bicycle racks, shared streets, speed reduction programs, shared-use multimodal lanes, flexible lanes, dedicated transit lanes, high-occupancy vehicle lanes, mobility hubs, pavement markings, traffic control devices, enhanced crosswalks, advanced warning systems, streetscape, hardscape, landscape, turn lanes, intersection improvements, safety improvements, roundabouts, bridges, transit stops, shelters, stations and pull-out bays, transit vehicles, and new motor vehicle travel lanes.

TME Policy 1.2.9

The Mobility Plan projects may include repurposing existing right-of-way from motor vehicle travel lanes to lanes for shared streets, dedicated transit facilities, high-occupancy lanes, protected bicycle facilities, flexible 15 MPH lanes, shared-use multimodal lanes, expansion of sidewalks, trails and paths, and the integration of green infrastructure.

TME Policy 1.2.10

The objectives and subsequent policies in the Transportation Mobility Element related to Complete Streets, Vision Zero and parking management are components of the overall Mobility Plan. Multimodal projects include those identified in the Mobility Plan and future multimodal projects developed under Complete Streets, Vision Zero and parking management programs.

TME Policy 1.2.11 1.1.9

The City establishes the following priorities for multimodal projects: traffic- and roadway improvement projects:

- 1st priority projects which are needed to protect the public health and safety;
- 2nd priority projects which are needed to preserve or achieve full use of existing facilities, to promote efficient use of existing facilities, or to prevent or reduce future maintenance or improvement costs;
- 3rd priority projects which are needed to promote infill development and redevelopment; and
- 4th priority projects which are needed to provide facilities and services to new developments.

TME Policy 1.2.21

Utility providers shall coordinate repairs, replacements and upgrade of utilities within public rights-of-way and publically accessible easements with the City to identify opportunities to incorporate Mobility Plan, Complete Street, Vision Zero and parking management multimodal projects into the utility projects.

TME Policy 1.2.13

Right-of-way use permits issued, renewed, or extended by the City shall include requirements that all utility projects within right-of-ways and easements be coordinated with the City to identify opportunities to incorporate Mobility Plan, Complete Street, Vision Zero and parking management multimodal projects.

TME Policy 1.2.14

The City shall coordinate resurface, restoration, and rehabilitation, collectively known as (3R) projects, with the County and the State to identify opportunities to incorporate Mobility Plan, Complete Street, Vision Zero and parking management multimodal projects with 3R projects.

TME Policy 1.2.15

The City shall require that all right-of-way use and access connection permits issued to new development and redevelopment of any land use include an evaluation of impacts to and opportunities to coordinate with Mobility Plan, Complete Street, Vision Zero and parking management multimodal projects with 3R projects.

TME Policy 1.2.16

The City shall coordinate with the County and the State on driveway and access connection permits to evaluate the impacts to and opportunities to coordinate with Mobility Plan, Complete Street, Vision Zero and parking management multimodal projects with 3R projects.

TME Policy 1.2.17

The City shall require all Comprehensive Plan Amendments, Rezoning, final development engineering plans and changes of land uses evaluate the impacts to and opportunities to coordinate with Mobility Plan, Complete Street, Vision Zero and parking management multimodal projects.

TME Policy 1.2.18

The City shall consider opportunities for public / private partnerships and for agreements with third parties and other local government entities to advance Mobility Plan, Complete Street, Vision Zero and parking management projects; including the consideration of both front ending and reimbursement agreements, from lawfully available revenue sources, to advance multimodal projects.

TME Policy 1.2.19

A Mobility Fee is one source of revenue to fund the projects identified in the Mobility Plan. Gas, property and sales tax, CRA, County, State and Federal grants and funds, special assessments, higher education student fees, user fees, private party contributions, and parking revenues are all additional sources of revenue that are available to fund projects identified in the Mobility Plan. The City should consider opportunities to combine revenue sources, to the extent permissible, to advance Mobility Plan, Complete Street, Vision Zero and parking management multimodal projects.

TME Policy 1.2.20

The Mobility Plan projects shall serve as the basis for development of a mobility fee. The Mobility Fee shall be a one-time assessment on new development or redevelopment that results in an increase in person travel demand. The Mobility Fee shall be required to meet the dual rational nexus test and shall be reasonably attributable to the person travel demand of new development, infill and redevelopment. Multimodal capacities based upon quality of service standards shall be established to ensure fees are reasonably assignable to the impacts of new development or redevelopment.

TME Policy 1.2.21

The Mobility Fee, consistent with Florida Statute, is intended to replace transportation concurrency and proportionate fair-share contributions, and would be provide in place of a road impact fee.

TME Policy 1.2.22

The Mobility Fee may include provisions to encourage and incentivize new development, infill and redevelopment within the multimodal district and targeted areas of the City. The Mobility Fee may also include provisions to encourage affordable, workforce housing, mixed-use, multi-modal supportive development and desired land uses that increase employment and attract economic development.

TME Policy 1.2.23

The Mobility Plan and Fee shall be re-evaluated and updated every five years. The Mobility Fee shall be indexed and adjusted for inflation on an annual basis.

TME Objective 1.3

The City shall develop context sensitive Complete Street policies within its Land Development Regulations. Complete Streets are designed to accommodate all users, including, but not limited to motorists, cyclists, pedestrians, transit riders, and mobility impaired individuals. The quality of service standards established under Objective 1.1 maybe utilized in the development of Complete Street design requirements.

TME Policy 1.3.1

Complete Street policies shall require that pedestrian, bicycle, transit, motorist and other anticipated users of a multimodal street are included in evaluation and design of street cross-section based upon anticipated mobility and accessibility needs.

TME Policy 1.3.2

Complete Street policies shall address both travel along the street, as well as crossing the street mid-block and at intersections. The Complete Street policies shall address the need for more high visibility mid-block crosswalks that reduce crossing distances for people walking and bicycling and the use of advanced warning devices such as rectangular rapid reflective beacons (RRFB).

TME Policy 1.3.3

Complete Street policies shall be developed with the flexibility to ensure streets are designed in context sensitive manner, based upon the existing and future environment in which the street is located.

TME Policy 1.3.4

Complete Street design requirements shall be based upon the premise that each street is unique in form and function and should avoid establishing standardized one-size fits all design requirements.

TME Policy 1.3.5

The Complete Street policies shall include street cross-sections that reduce travel lane widths and allow for innovative cross-sections such as shared streets, yield streets, bicycle priority streets and low speed local streets. Complete Street designs should minimize the width of motor vehicle travel lanes to the greatest extent feasible, while still providing access for emergency response and sanitation vehicles.

TME Policy 1.3.6

The Complete Street policies shall include allowances for reimagining and repurposing right-of-way from the movement of motor vehicles to the movement of people through the development of innovative concepts such as shared streets, bicycle priority streets, dedicated transit lanes, high-occupancy vehicles lanes, shared-use multimodal lanes 15 MPH Flex Lanes, adding on-street parking and widening facilities for people walking, and for people bicycling where on-street facilities are not available.

TME Policy 1.3.7

Complete Street policies shall prioritize the provision of areas for people walking in the design of local streets through use of separated facilities where right-of-way is available. Where right-of-way is limited, shared streets or the use of pavement markings, signage, and vertical barriers where feasible, shall be prioritized to provide safe places for people to walk. Policies for facilities for people walking on collector and arterial roads shall emphasize the physical separation from motor vehicle travel lanes and the incorporation of streetscape, hardscape and landscape within that physical separation.

TME Policy 1.3.8

Complete Street policies for people bicycling should focus on innovative use of speed limits, pavement markings and signage to create safe and comfortable spaces for people bicycling on local streets in a mixed traffic environment. Policies for collector and arterial streets shall first evaluate the provision of protected, physically separated facilities for people on bicycles and allow for innovative use of vertical barriers to separate people on bikes from motor vehicle travel lanes. Where physical barriers are not feasible on collector and arterial roads, the buffering of facilities for people riding on bicycles shall be provided to the maximum extent feasible. For restricted right-of-way along collector and arterials, high visibility pavement markings shall be used on facilities for people bicycling where protected or buffered facilities cannot be provided. Sharrows for bicycles shall be prohibited from use on any road with a speed

limit greater than 25 MPH. Where safe and visible facilities for people bicycling cannot be provided, sidewalk, paths or trails shall be designed to accommodate bicycles with high visibility crossings or a level, continuous facility treatment across driveways and intersecting roads and streets.

TME Policy 1.3.9

The Complete Street policies shall incorporate streetscape, hardscape, landscape, street trees, street lights and the integration of architectural features and art work within street and road right-of-way. The provision of shade for people walking and bicycling shall be incorporated into cross-sections to the maximum extent feasible.

TME Policy 1.3.10

Complete Street policies shall incorporate on-street parking once safe, connected, visible and convenient facilities for people walking and bicycling have been provided within the right-of-way. On-street parking should be provided on both sides of all streets and roads with speed limits of 35 MPH or slower where right-of-way is available and spaces have been provided for people walking and bicycling. The width of on-street parking may vary and the use of drop curbs, pavers, brick or other treatments other than asphalt is encouraged to visually delineate on-street parking areas and motor vehicle travel lanes.

TE Policy 1.1.6

~~The City shall continue to provide signage and traffic signals on City streets which conform with the Manual on Uniform Traffic Control Devices standards. The City shall continue to support both the St. Johns County and FDOT practice of providing signage and traffic signals on State and County roadways in the City which conform with the Manual on Uniform Traffic Control Devices standards.~~

TME Objective 1.4

The City will seek to reduce the number of traffic fatalities and severe injuries collisions for all users of the transportation system to zero on City streets, and County and State Roads within the City by 2040.

TME Policy 1.4.1

The City supports a multi-disciplinary approach to achieve Vision Zero that includes engineers, planner, law enforcement, fire rescue, public health representatives and other community stakeholder.

TME Policy 1.4.2

The City, in coordination with FDOT, St. Johns County and the North Florida Transportation Planning Organization shall identify high collision locations, and

identify appropriate operational and safety improvements for all users of the transportation system, with priority given to improvements for people walking, bicycling and riding transit.

TME Policy 1.4.3

The City shall consider development of a Vision Zero Plan that integrates components of Engineering, Enforcement, Encouragement, Equity and Evaluation.

TME Policy 1.4.4

The City shall consider a neighborhood speed limit program that reduces posted speed limits on local residential streets to 15 MPH and 20 MPH, collector streets to 20 MPH and 25 MPH depending upon the context, design and street network and innovative traffic calming techniques to encourage lower motor vehicle speeds and provide a safer environment for people to walk and bicycle through share streets and bicycle priority streets.

TME Policy 1.4.5

The City shall consider a speed limit program for Historic Districts that reduces posted speed limits on streets to 15 MPH, 20 MPH and a maximum of 25 MPH on collector and arterial roads, depending upon the context, design and land uses adjacent to the street network and the reduction in travel lane widths, the extension of curbs, the addition of high visibility enhanced crosswalks, greater allowance of on-street parking and the development of shared streets and bicycle priority streets.

TME Objective 1.5

The City shall develop parking management strategies in the Land Development Regulations that encourage park once environments, protect residential neighborhoods and provide sufficient on-site parking and maneuvering to meet the travel demands of land-use for which on-site parking is provided.

TME Policy 1.5.1.

The City will establish parking requirements for new development and redevelopment based on industry standards and the latest edition of the Institute of Transportation Engineers Trip Generation Manual.

TME Policy 1.5.2

The City will establish policies that allow for a private development to conduct a shared parking plan and program for mixed-use development and redevelopment.

TME Policy 1.5.3

The City shall encourage on-street parking on all residential streets, collectors and arterials, where adequate right-of-way exist, to slow down traffic, provide greater separation between sidewalks and travel lanes, encourage infill and redevelopment, and accommodate new growth.

TME Policy 1.5.4

The City shall continue to acquire and require smaller emergency vehicles and sanitation vehicles to service residential neighborhoods to better navigate neighborhood streets with on-street parking on one or both sides of the street.

TME Policy 1.5.5

The City shall establish a program that permits a development to make a payment to in-lieu-of fee to the City instead of providing on-site parking once parking garages or parking lots have been constructed that provide adequate parking to accommodate a fee in-lieu of program.

TME Policy 1.5.6

The City shall establish policies in the Land Development Regulations that encourage park once environments within the multimodal district and mixed-use developments.

TME Policy 1.5.7

The City shall explore the acquisition of underutilized retail parcels to establish high turn-over parking lots with maximum time limits to serve commercial businesses within historic districts that are not able to provide on-street parking or where on-street parking is removed on San Marco, Anastasia Blvd and King Street. The parking lots shall employ dynamic parking technology to ensure the spaces are reserved to provide quick turnover to serve local business.

TME Policy 1.5.8

The City shall establish landscape requirements and green infrastructure requirements to address heat island impacts and stormwater run-off for private developments that construct parking lots that serve an attraction or a transit or tram service or for lease or fee payment parking.

TME Policy 1.5.9

The City shall establish access, design, circulation, landscape, buffering, screening, lighting, pavement, pervious pavement, and stormwater management design standards. The standards shall allow for innovations such as tandem parking, podium parking, compact parking and efficient drive aisle width requirements.

TME Policy 1.5.10

The City shall establish bicycle parking requirements for development and redevelopment. The City shall consider establishing of scooter, moped and motorcycle parking requirements. The City may consider allowances for parking reductions for developments that provide bicycle, scooter and car sharing programs.

TME Policy 1.5.11

The City shall consider establishing drop-off, pick-up and loading requirements for deliveries, ride hailing services, shared mobility services and transit.

TME Policy 1.5.12

The City shall establish a dynamic parking management program within historic districts that charges higher rates for events and peak season parking demands to encourage parking once in either the Historic Parking Garage and in peripheral parking structures and lots identified in the Mobility Plan. The program shall employ variable message technology on major corridors entering the Historic District that provides real time information on the availability of parking and indicates the price for on-street parking and parking in the Historic Parking Garage. On-street parking shall charge the highest hourly rate during events and peak season to discourage visitors from congestion streets searching for parking.

TME Policy 1.5.13

The City shall establish a residential parking permit program that only allows on-street parking in certain neighborhoods to residents of the neighborhood. The maximum number of permits for residential unit shall be limited. The program may provide a program where temporary visitor permits maybe purchased. Visitors and short term rental visitors will be encouraged to parking in garages and in periphery parking structures and lots.

TME Policy 1.5.14

All parking structures, public and private, shall be directly served by a four-lane divided road that provides direct access to US 1, SR 207 and Anastasia Blvd. Four lane divided roads included on the Mobility Plan and programmed in the Capital Improvements Program shall meet the requirement that the parking structure are directly accessed by a four-lane divided road. No development order approvals shall be approved for a parking structure that does not have direct access to a four-lane divided road or where a four-lane divided road is included on the Mobility Plan and fully funded in the Capital Improvements Program.

TME Policy 1.5.15

The City shall consider the development of mobility hubs that help create park once environments and provide shared parking spaces for a variety of land uses that may

not have available land to provide on-site parking to encourage infill, redevelopment and increased residential densities. Mobility hubs also serve as locations to provide pick-up and drop-off locations for transit, carpool and ride-hailing services and centralized areas to provide shared mobility programs such as car sharing, bicycles, electric bicycles and electric scooters. The City will evaluate multiple funding sources including the leasing of spaces by private development, federal and state grants, CRA funds, mobility fees and fees assessed on shared mobility programs.

Objective 1.6

The City will establish access management, cross-access, and curbside management standards in the Land Development Regulations.

TME Policy 1.6.1

The City shall develop land development regulations for access management, driveway access reductions and design, cross-access connections that account for redevelopment and infill development of adjacent properties, internal vehicle circulation, vehicle queue storage and multimodal access to adjacent developments and existing roads and streets.

TME Policy 1.6.2

The City shall evaluate developing land development regulations for curbside management that includes drop-off and pick-up areas for ride hailing services, car / van pools and requirements for areas designated for bike share and car share, including provisions for electric charging of bikes, cars, and other new mobility technologies.

TME Policy 1.6.3

The City may consider the development of criteria for development to conduct site impact assessments to address access connections to the existing transportation system and connectivity between developments.

Objective 1.7

The City shall evaluate the establishment of requirements to regulate new mobility technologies, including rental vehicle services, ride hailing services, transportation network companies (TNC), mobility as a service (MaaS) providers, and car, bike and mobility sharing services as well as any existing or new mobility technology, system, program or service that operates within the City on publicly owned right-of-way and publicly accessible easements.

TME Policy 1.7.1

The City shall have the right to license, permit, and regulate the operations for mobility technology providers, systems and programs.

TME Policy 1.7.2

The City shall have the right to require data from mobility technology providers, systems and programs.

TME Policy 1.7.3

The City shall have the right to establish fees on mobility technology providers, systems and programs to offset the capital, operation and maintenance of the transportation system, including transit operations and mobility services and programs within the City that are utilized by such mobility technology providers, systems and programs.

TME Policy 1.7.4

The City shall evaluate the establishment of land development regulations and mobility strategies to regulate and control the curb of public and private right-of-way for drop-off and pick-up of users, deliveries and packages, parking, docking requirements, accessibility requirements, maintenance and operations, and dockless e-mobility transport devices, such as bicycles and scooters.

TE Policy 1.1.4

~~Continue to implement provisions of the Downtown Area Traffic Master Plan related to traffic circulation (one-way and two-way streets), satellite parking areas, public transportation, and on-street parking.~~

TE Policy 1.1.5

~~Continue to maintain programs to license trams and other forms of paratransit. Continue to work with the Sunshine Bus Company and other providers to determine service routes that can provide enhanced mobility as an alternative to the single-occupant automobile.~~

TE Policy 1.1.6

~~The City shall continue to provide signage and traffic signals on City streets which conform with the Manual on Uniform Traffic Control Devices standards. The City shall continue to support both the St. Johns County and FDOT practice of providing signage and traffic signals on State and County roadways in the City which conform with the Manual on Uniform Traffic Control Devices standards.~~

TE Policy 1.1.7

~~The City shall continue to consider the development of bicycle and pedestrian routes taking into consideration roadway widths, traffic volumes and accident rates, with the safety of the cyclists being the primary concern.~~

TE Policy 1.1.8

~~The following minimum pavement widths shall apply to all new public and~~

private roadways. — This belongs in the land development code, not the Comp Plan

One way, one traffic lane:

no on-street parking — 12 feet

parking on one side — 18 feet

parking on both sides — 26 feet

One way, two traffic lanes:

no on-street parking — 18 feet

parking on one side — 26 feet

parking on both sides — 34 feet

Two way, two traffic lanes:

no on-street parking — 20 feet

parking on one side — 28 feet

parking on both sides — 36 feet

Two way, four traffic lanes:

no on-street parking — 38 feet

parking on one side — 48 feet

parking on both sides — 56 feet

OR

Residential development:

marginal access — 20 feet

minor street — 20 feet

collector — 24 feet

Commercial or Industrial development:

marginal access — 20 feet

minor street — 24 feet

collector — 28 feet

TE Policy 1.1.9

The City establishes the following priorities for traffic and roadway improvement projects:

1st priority — projects which are needed to protect the public health and safety;

2nd priority projects which are needed to preserve or achieve full use of existing facilities, to promote efficient use of existing facilities, or to prevent or reduce future maintenance or improvement costs;

3rd priority — projects which are needed to promote infill development and redevelopment; and

4th priority — projects which are needed to provide facilities and services to new developments.

Objective 1.8 ~~1.2~~

Protect existing and future rights-of-way from building encroachment, through the continued enforcement of the subdivision regulations, right-of-way permitting regulations and development regulations.

TME Policy 1.8.1 ~~1.2.1~~

The City shall continue to enforce Chapter 23 of the City Code (subdivisions) which requires that all subdivisions platted in the future designate permanent rights-of-way providing access to each lot or parcel in the subdivision on the subdivision plat. The City shall continue to enforce the Right-of-Way permitting process established in Chapter 22 (streets, sidewalks, parks and miscellaneous public places) of the City Code which regulates connections and access points of driveways to roadways, the installation, repair or replacement of utilities and prohibits the construction of any buildings or structures in any public right-of-way. Connections to City roadways shall be regulated according to local standards. Connections to state roadways shall be regulated by FDOT standards. The City shall continue to enforce Chapter 28 of the City Code (zoning and on-site parking) which requires all structures and buildings to be constructed on private property, and which also establishes minimum required yards (setbacks) in the zoning districts associated with each land use classification.

TME Policy 1.8.1 ~~1.2.2~~

For all new subdivisions and new developments requiring or providing public or private roadways, rights-of-way of sufficient width shall be provided for adequate stormwater management and utilities facilities, and to accommodate the Complete Street design standards ~~minimum pavement widths established in the Land Development Regulations~~

TME Objective ~~1.9-1.3~~ (FLUE POLICY- NOT TME??)

The Transportation Element system shall be consistent with and support the Future Land Use Plan as depicted on the Future Land Use Map series and all subsequent amendments. ~~The measurable target for this objective is that development shall only be permitted as intended by the Future Land Use Plan and that adopted levels of service for such development shall be maintained.~~

~~TE Policy 1.9.1 1.3.1-~~

~~The City shall continue to implement the adopted comprehensive plan by including all land development regulations governing the use of land in the City Code. All applications for development shall be subject to site plan review by the City. Site plan review shall consist of review of the development proposal for compliance with all applicable chapters of the City Code including but not limited to: Chapter 28 (zoning and on-site parking); Chapter 11 (environmental protection and conservation overlay zones); Chapter 21 (concurrency management and for on-site storm drainage); Chapter 3 (signs); Chapter 25 (landscaping); Chapter 23 (subdivisions); Chapter 8 (building code); Chapter 26 (utilities - potable water, sanitary sewer, solid waste and city storm sewer); Chapter 6 (archaeology); and Chapter 13 (flood control). All subdivisions shall be reviewed, platted and recorded as required by Chapter 23 of the City Code prior to a building permit being issued. Building permits shall not be issued which result in a reduction of the level of service for the affected public facilities below the adopted levels of service standards. Ordinances amending the City Code shall be codified at least annually. The City Code shall be on display for the public in the City Clerk's office.~~

~~TE Policy 1.3.2~~

~~The City shall continue to maintain or improve existing pedestrian facilities by: repairing and replacing sidewalks as needed, including handicap accessible curb cuts at crosswalks; continuing to provide benches for public seating in the Plaza, along the bayfront and other areas; and~~

~~continuing to provide signs and maps directing pedestrians in the downtown area to public restrooms and other points of interest.~~

TME Objective 1.10 ~~1.4~~

Coordinate the City's Transportation Element plan with the plans and programs of the Florida Department of Transportation and St. Johns County. ~~This objective is implemented by TE Policy 4.2.1. The measurable target for this objective is that levels of service standards for all roads inside the city limits shall be maintained for future development.~~

TME Policy 1.10.1 ~~1.4.1~~

The City shall continue to maintain staff level communication with the FDOT Regional Office to keep informed of FDOT regulations, plans, schedules and activities concerning traffic signs and signals, roads, bridges and access management related to the state highway system in the City limits. The City shall continue to maintain staff level communication with St. Johns County to keep informed of County regulations, plans, schedules and activities concerning traffic signs and signals, roads, bridges and access management related to County roads in the City limits. ~~This policy implements TE Objective 1.4.~~

TME Policy 1.10.2 ~~1.4.2~~

Continue to improve the aesthetic appearance of the gateways into the City, such as West Castillo Drive through installation and maintenance of landscaping, street lighting and other appurtenances. ~~This policy implements TE Objective 1.4.~~

TME Policy 1.10.3 ~~1.4.3~~

Maintain the present street pattern and restore colonial street widths where practical in the area bounded by Orange, Cordova, and St. Francis Streets and the bay front. ~~This policy implements TE Objective 1.4.~~

TME Policy 1.10.4 ~~1.4.4~~

The City shall work with FDOT to limit the use of roadways other than King Street, Avenida Menendez and the Bridge of Lions in the area of the City of St. Augustine National Register District as arterials in the State highway system. ~~This policy implements TE Objective 1.4.~~

TME Policy 1.10.5 ~~1.4.5~~

All traffic control signs, traffic signals, transformers, switching gear and related accessory equipment to be installed in the public right-of-way in locally designated historic preservation zoning districts shall be approved by the Historic Architectural Review Board. ~~This policy implements TE Objective 1.4.~~

TE OBJECTIVE 1.5

~~The City recognizes that the use of gasoline creates a large portion of the green house gas emissions and shall incorporate transportation strategies to address the reduction of these green house gas emissions.~~

~~The City shall identify and pursue strategies to reduce the vehicle miles traveled.~~

- ~~A) — Establish locations for compact mixed use development.~~
- ~~B) — Increase opportunities for job creation proximate to higher density residential.~~
- ~~C) — Facilitate future opportunities for transit-oriented developments~~
- ~~D) — The City shall encourage existing and new developments to be connected by roadways, bikeways, and pedestrian systems that encourage travel between neighborhoods and access to transit without requiring use of the major thoroughfare system.~~

TE Policy 1.5.1

~~The City shall employ Transportation System Management Strategies to protect the right-of-way, improve efficiency and enhance safety.~~

- ~~A) — The City will continue efforts to coordinate and participate in, when feasible, in regional transportation studies which encourage and promote transit initiatives. The County will continue to work with JTA, North Florida TPO, NEFRC and FDOT and other transportation agencies to educate and encourage transit in the region.~~

CITY OF ST. AUGUSTINE

MEMORANDUM

TO: Planning and Zoning Board

DATE: June 18, 2019

RE: **Item 5**
Discussion and Public Comment Related to the Draft Recreation and Open Space Element of the Comprehensive Plan including Draft Goals, Objectives and Policies

The Recreation and Open Space Element of the Comprehensive Plan is a required element. The element is the chapter of the Comprehensive Plan that establishes the overall plan and framework to include standards for recreation needs and recognize open space as an important aspect to quality of life for the City. It is the element that recognizes the important issues of encouraging recreation, appreciating the environment, and establishing the importance of open space and environmentally sensitive areas.

Attached is a **Draft** updated Data and Analysis for the Recreation and Open Space Element, and draft Goals, Objectives and Policies related to the element.

The Evaluation and Appraisal process in 2018 identified several issues outlined below related to the Recreation and Open Space Element. The update is an attempt to address these issues, as well as, update the element through 2040.

- Encourage public/private partnerships, for example the City Marina
- Include discussion related to the larger context of impacts from tourism and growth in the County on the City park assets and resources
- Address safety related to parks including access, and safe entrances to and from recreational sites
- Encourage pocket parks in all neighborhoods and areas of the City

As noted in the Evaluation Summary there are crossover issues with other Elements and the land development code.

If you have any questions or require additional information please contact myself or David Birchim at our office by calling (904) 825-1065 or by email at either askinner@citystaug.com or dbirchim@citystaug.com.



Amy McClure Skinner, AICP
Deputy Director

Recreation and Open Space Element

Introduction to the Recreation and Open Space Element

Providing recreational opportunities and open space is a foundation of strong neighborhoods, communities, and regions. The Recreation and Open Space Element identifies the recreation sites within the City that are available to the public and discusses private resources as well. The City of St. Augustine currently includes approximately 757 acres of parkland. In addition, St. Augustine is fortunate to have significant riverine and marsh environments associated with the Tolomato, San Sebastian and Matanzas rivers, Salt Run and Anastasia State Park. These areas border the uplands of the City and contribute to the unique character of the city. The surrounding area including the city also provides recreational and economic opportunities for tourism, fishing, sailing, boating and enjoying the outdoors.

As a tourist destination the city is unique in its appeal to visitors, regional and county residents, and its own citizen quality of life.

The Recreation and Open Space Element must indicate a comprehensive system of public and private sites for recreation. This may include natural reservations, parks, playgrounds, parkways, open spaces, waterways, and other recreational facilities. The Recreation and Open Space Element must also include level of service standards for the amount of recreation available as development occurs. The Recreation and Open Space Element serves as a guide for the development and use of public land within the City of St. Augustine and recognizes private resources. This includes creating an efficient pattern and location of recreational opportunities designed to serve all sectors of the population. The Recreation and Open Space Element contains goals, objectives and policies to maintain and expand the existing recreation network.

Key Issues and Assumptions

The updated Data and Analysis follows the statutory requirements.

The City has an abundance of parks and recreation opportunities, including environmentally sensitive areas.

The City is a tourist destination that contributes to its appeal as a recreation destination.

These issues are also related to conservation and coastal management, mobility and transportation issues, community resiliency and sustainability.

Recreation & Open Space Element **Draft Goals, Objectives and Policies**

Prepared by:

**Planning and Building Department
City of St. Augustine
75 King Street
St. Augustine, Florida 32084**

June 18, 2019

Recreation & Open Space Element Goals, Objectives and Policies

163.3177(6)(e)

ROS Overall Goal

To provide open space, recreation sites and recreation facilities which meet the needs of residents and visitors, support City conservation efforts and provide a healthy and aesthetically pleasing environment.

Level of Service Standards for Parks

ROS Objective 1.1

Coordinate private and public resources to adequately provide recreation sites and facilities at the adopted level of service standards.

ROS Policy 1.1.1

To ensure that park facilities keep pace with the impacts of sustained growth and to plan for future parks and open space facilities, the City adopts the following level of service standards (LOS):

- Neighborhood Parks: LOS standard 0.80 acres per 1,000 people
- Community Parks: LOS standard 1 acre per 1,000 people
- Regional Parks: LOS standard of 5 acres per 1,000 people

ROS Policy ~~1.2~~ 1.1.2

The City shall make an effort to incorporate documented historic and archaeological sites into park areas whenever possible to address both recreation and preservation needs.

ROS Policy ~~1.3~~ 1.1.3

The City will coordinate the development of the projects which are listed in the Capital Improvements Element as projects secured with private funding.

ROS Objective ~~2~~ 1.2

The City shall ensure safe public access to the recreation sites and facilities. The measurable target for this objective is public access to the identified recreation sites and facilities.

ROS Policy ~~2.1~~ 1.2.1

Although the only beaches in the City are in the Anastasia State Recreation Area and are therefore not subject to the City's development regulations, the City shall continue to support the policy of the State Division of Parks and Recreation in permitting public access to those beaches. The City shall continue to provide access to shores and waterways depicted on the Future Land Use Map by: (1) continuing to enforce the Future Land Use Plan which allows water-dependent or water related uses as permitted uses in every land use classification; and (2) continuing to operate the municipal marina.

ROS Policy ~~2.2~~ 1.2.2

The City shall correct park and recreation facility deficiencies and provide future parks and recreation facilities according to the following priorities:

1. maintenance, repair and replacement of existing facilities located on existing recreation sites.
2. development of new facilities, located on existing recreation sites, to correct existing deficiencies.
3. acquisition of new recreation sites to correct existing deficiencies.
4. development of new facilities, to be located on new recreation sites, to correct existing deficiencies.
5. development of new facilities, located on existing recreation sites, to provide for future needs.
6. acquisition of new recreation sites to provide for future needs.
7. development of new facilities, located on new recreation sites, to provide for future needs.

ROS Policy 1.2.3

The City of St. Augustine shall utilize the National Recreation and Parks Association (NRPA) guidelines outlined in the Data and Analysis to determine the type and location of parklands.

ROS Policy 1.2.4

The Land Development Code shall address standards for park development and improvements, which shall include buffering, landscaping, parking and siting facilities.

ROS Policy 1.2.5

The City shall utilize the State Comprehensive Outdoor Recreation Plan (SCORP) as a guideline to assist in the evaluation of existing facilities and siting new parks and improvements.

Natural Areas and Open Space

ROS Objective 4 2.1

Public agencies and private developments shall provide open space as defined in this element.

ROS Policy 4.1

~~The following Level of Service Standards shall be provided for all development: Regional Parks 5.0 acres per 1,000 persons Community Parks 1.0 acre per 1,000 persons Neighborhood Parks 0.8 acres per 1,000 persons All residential development of twenty five (25) units or more must provide, at a minimum, contiguous parkland or open space meeting the level of service standard for neighborhood parks for the projected number of residents based on the average household size from the most recent census. For development of twenty five (25) to ninety nine (99) units, this parkland or open space must provide at least passive recreational activity. For development of one hundred (100) or more units, this parkland or open space must provide at least one (1) active recreational facility (preferably one determined to be deficient in the particular planning sector) and one (1) passive recreational facility, per one hundred (100) units. Level of Service standards for Regional Parks shall be continually coordinated with the State Division of Parks and Recreation. The Level of Service standards for Community and Neighborhood Parks not located inside the City limits, but providing services to City residents shall be continually coordinated with St. Johns County. This policy implements ROS Objectives 1 and 4.~~

ROS Policy 4.2 2.1.1

The City shall continue to enforce the Future Land Use Plan and the development regulations contained in the City Code to preserve open space.

ROS Policy 4.2 2.1.2

The Recreation and Open Space classification is intended to designate parks, natural reservations and active recreation sites.

ROS Policy 4.2 2.1.3

The newly created Open Land (Conservation) classification is intended to designate open space. Additionally, open space is determined on a site specific basis during site plan review and through the conservation overlay zone development process. Open space so determined is defined as being marshland, swamp, natural or manmade bodies of water, and environmentally sensitive lands where local, state or federal regulations prohibit development including land under conservation easement, conservatorship or other permanent protection.

ROS Policy 4.2 2.1.4

The City shall continue to investigate and utilize local, state and federal funding programs to enhance, acquire and expand recreation and open space facilities and natural reservations.

ROS Policy 4.3 2.1.5

The City Code shall continue to contain and implement open space definitions and standards established in the Future Land Use Plan and in the Conservation Overlay Zone Development section of the Conservation and Coastal Management Element.

ROS Policy 4.4 2.1.6

The City shall coordinate with the county and adjacent jurisdictions to acquire lands to be used as conservation and open space for the purpose of creating a system of resource based recreational trails. To enhance such a trail system, priority shall be given to lands that are adjacent to or by some other means are connected to other lands dedicated for such purposes, especially where such acquisitions create new or enhanced access to water bodies and shorelines.

ROS Policy 2.1.7

The City shall encourage greenways and a recreational trail system that provide extensions or connections to existing adjacent municipality, county and state trails. This can include paddling.

Natural Areas, Open Space and Sustainability

Park Maintenance and Joint Use of Facilities

ROS Objective 3.1

The City shall maintain and improve all City parks in a manner that is consistent with the recreation needs of City residents and shall maximize the potential of the individual facilities.

ROS Policy 3.1.1

The City's parks and recreational facilities shall be renovated and/or upgraded consistent with the Capital Improvements Plan (CIP) to provide improved recreational opportunities.

ROS Policy 3.1.2

The City shall maintain an inventory of the location, size, condition, and amenities available at each public park.

ROS Objective 3.2

The City shall continue to coordinate with the public and private sector to avoid duplication of recreation facilities. This shall include provisions for joint use of school board or other public agencies' recreation facilities to meet the recreation demands of the City's citizens.

ROS Policy 3.2.1

The City shall coordinate with private developers to provide public recreation facilities within their development.

ROS Policy 3.2.2

The City shall utilize the LOS standards to recommend recreation improvements located within private developments.

Accessibility

ROS Objective 4.1

Within the planning timeframe, all recreation and open space areas shall be evaluated as to their accessibility to all St. Augustine residents regardless of physical condition, age or economic condition as outlined in the uniform federal accessibility standards.

ROS Policy 4.1.1

All City parks and open space shall provide unobstructed access, when reasonably possible, through the following procedures:

- Existing facilities shall be evaluated and improved, if necessary, within the planning timeframe.
- Any new roadway or sidewalk construction required to access future sites shall be improved to engineering standards established in the Land Development Code.
- Appropriate safety improvements for the safe ingress and egress to and from recreational sites shall be considered.

ROS Policy 4.1.2

Any park undergoing renovation shall incorporate wheelchair and bicycle access.

ROS Policy 4.1.3

Within the planning timeframe, bicycle racks and park benches shall be provided at all recreational sites.

Historic Preservation and Tourism

Recreation & Open Space Element **Draft Data & Analysis**

Prepared by:

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June 18, 2019

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Recreation & Open Space Element

163.3177(6)(e)

Introduction

Providing recreational opportunities and open space is a foundation of strong neighborhoods, communities, and regions. The Recreation and Open Space Element identifies the recreation sites within the City that are available to the public and discusses private resources as well. The City of St. Augustine currently includes approximately 757 acres of parkland. In addition, St. Augustine is fortunate to have significant riverine and marsh environments associated with the Tolomato, San Sebastian and Matanzas rivers, Salt Run and Anastasia State Park. These areas border the uplands of the City and contribute to the unique character of the city. The surrounding area including the city also provides recreational and economic opportunities for tourism, fishing, sailing, boating and enjoying the outdoors.

As a tourist destination the city is unique in its appeal to visitors, regional and county residents, and its own citizen quality of life.

Purpose

The Recreation and Open Space Element is a required comprehensive plan element under Florida's Local Government Comprehensive Planning and Land Development Regulation Act (Chapter 163, Florida Statutes). The Recreation and Open Space Element must indicate a comprehensive system of public and private sites for recreation. This may include natural reservations, parks, playgrounds, parkways, open spaces, waterways, and other recreational facilities. The Recreation and Open Space Element must also include level of service standards for the amount of recreation available as development occurs. The Recreation and Open Space Element serves as a guide for the development and use of public land within the City of St. Augustine and recognizes private resources. This includes creating an efficient pattern and location of recreational opportunities designed to serve all sectors of the population. The Recreation and Open Space Element contains goals, objectives and policies to maintain and expand the existing recreation network.

Inventory of Existing Recreation & Open Space Facilities

Park Classifications

Parks can be classified in a number of ways and serve a variety of functions, from providing open space in urban areas to large athletic complexes. The size of the park, the population served, the service area, and the types of activities within the park generally determine its classification. Park activities can be active, such as soccer fields and basketball courts; or passive, such as picnicking or birdwatching. In addition to the type of activity, parks can be classified as resource-based and activity-based. A resource-based park is located near a specific natural feature, such as a river, forest or lake, or a cultural resource such as a historic building.

Activity-based parks rely less on the natural landscape and more on improvements for specific uses such as baseball fields, tennis courts, or pools. Active and passive recreational activities can occur in both resource- and activity-based parks.

Parks can be further classified by park type. In general, these designations are neighborhood, community, and regional. A neighborhood park is intended to serve a small area, typically within walking distance. A community park might serve several neighborhoods. Visitors to a community park might walk, bike, or drive. A regional park will serve an entire city or county and requires significantly more parking, as most guests must drive to visit the park.

Overview of Recreation Standards & Guidelines

The National Recreation and Parks Association (NRPA) establishes general standards for parks by type. Standards relate primarily to size, service area, and improvements. The following is an outline of NRPA guidelines.

Neighborhood Parks

Neighborhood parks are generally used by the immediate community and are not designed for extensive programmed activities. They could be next to a public school and may incorporate practice areas, green spaces, and multi-purpose courts. In more urbanized areas these parks should ideally be accessible by foot or bicycle. In suburban areas neighborhood parks should be accessible by bicycle or a short drive. Some characteristics of neighborhood parks are:

- 1 to 10 acres
- 1 acre per 1,000 people
- ¼ to ½ mile service area
- Located in or adjacent to neighborhoods
- Compatible with the character of the surrounding area
- Accessible by walking, bicycling, or driving
- Casual atmosphere with very few organized activities
- Balance of open areas and improvements such as playgrounds, multi-purpose courts, picnic areas, walkways, and benches/pavilions

Community Parks

A community park serves a broader area and provides a wide range of athletic opportunities, organized team sports, and cultural programs. It is the primary location for typical recreation programs and activities in a larger community context. A community park could be located next to a public school or other municipal complex. These parks are intended to provide a community gathering place and should be designed with enough flexibility to accommodate a variety of recreation and cultural services.

Identifying characteristics of community parks are:

- 5 to 20 acres
- 3 acres per 1,000 people
- Up to 3 mile service radius in urban areas
- Up to 6 mile service radius in rural areas
- Accessible by walking, bicycling, or driving; most often driving
- Usually located near a major collector or arterial road
- Developed more intensely than neighborhood parks
- Primarily activity-based
- Serves the needs of several neighborhoods
- May include more significant improvements such as sport-specific fields, swimming pools, and indoor recreation centers
- Natural areas will be incorporated into overall activity-based design
- May be home to other community services such as law enforcement substations or libraries

Regional Parks

A regional park is generally resource-based and focused around a lake, river, or other naturally occurring feature. These parks are usually very large and provide activities such as camping, canoeing, fishing, or equestrian activities. Regional parks are often coupled with other environmentally sensitive land for enhanced protection. Generally, regional parks serve all or part of several counties. The following characteristics are common to regional parks:

- Greater than 50 acres
- 30 acres per 1,000 people
- Improvements and programs similar to a community park, but on a larger scale
- Service area up to a 60 minute drive
- Access is primarily by car, public transportation, or bicycle trails

Open Space

Open space is a key component of a community's recreation system. Open space is usually defined as undeveloped land used for passive recreation and/or conservation areas. There are three classifications for open space: utilitarian, environmentally sensitive, and corridors/greenways. Utilitarian open space provides resource, based recreation and protects natural resources and/or aesthetic features. Environmentally sensitive open space is usually not suitable for development due to ecological value. Recreation in environmentally sensitive open space is usually limited to activities that will preserve the land and result in little to no impact on the resource. Greenways are linear open spaces located along natural corridors including rivers, creeks, shorelines, or scenic roads. Greenways are often used to connect other parks or open space areas.

Inventory of Federal, State, County & Municipal Parks Serving St. Augustine

The following Table X outlines the City's parks by type. There are 10 neighborhood parks, 18 community parks, 1 regional and eight (8) specialty type parks within the city limits. This is a total of 757 acres of designated parkland within the city. The inventory also includes very, unique tourist attractions including the Plaza de la Constitucion, Spanish colonial redoubt reconstruction, Fort Mose, the Castillo de San Marcos, and the Lighthouse, and the Lighthouse Keepers restored residential structure.

These resources are historic, and unique features attracting tourists and visitors to the city.

Table X: City of St. Augustine Parks

	Acreage	City	St. Johns County	State	Federal	Facilities
Neighborhood Parks (10)						
Davenport Park	0.74	X				Playground, picnic, carousel
Oglethorpe Park	0.64	X				Marker, benches
Twine Park	0.15	X				Benches
Hamilton Upchurch	2.29	X				Scateboard, benches
Nelmar Terrace	0.13	X				Marker, benches
Railway Park	0.49	X				Passive
Gary Lee Park	0.09	X				Passive
Maria Sanchez Lake	10.00	X				Passive, benches
Fullerwood Park	0.54	X				Playground, community garden
RB Hunt School fields	3.75		X			Soccer, multiuse fields
Neighborhood sub-total	15.07					
Community Parks (18)						
Plaza	1.21	X				Passive, Gazebo/bandshell
Government yard	0.42	X				Passive, benches
Anderson Circle	0.44	X				Passive
Santo Domingo redoubt	0.17	X				Historic
Redoubt Wall Park	0.48	X				Historic

						reconstruction
Parque de Menendez	0.89	X				Historic
Joe Pomar Jr Park	51.09	X				Ballfields, dog park, conservation access, restrooms, concessions
Eddie Vickers Park	12.30	X				Playground, ballfields, walking path, restrooms
Galimore Center	2.26	X				Community Center, pool
Swing Park	0.57	X				Playground, picnic tables
St. Augustine Carpet Golf	0.41	X				Historic, carpet golf
Gibbs Park	1.24	X				Passive
Zora Neale Hurston Memorial Park	0.36	X				Passive
Dr. Robert B. Hayling Freedom Park	13.54	X				Passive, walking trail
Inlet Park	0.30	X				Passive, open space
Davis Shores Park	0.41	X				Passive
230 Charlotte Street	0.07	X				Passive
Cordova Street	0.11	X				Passive
Community sub-total	86.27					
Regional Parks (1)						
Anastasia State	566 within the city, 1,499 total			X		Regional recreation beach (approximately 5,314 linear feet within the city), picnic, camping, pavilions, concession, boardwalk, water access
Regional sub-total	566					

Water Access (3)						
Vilano Boat Ramp	6.18		X			Boat ramp, pavilion, bait shop, parking
Municipal Marina	4.22	X				Full marina services
J Edward "Red" Cox Recreation Area	6.55	X				Boat ramp, playground, parking
Water Access sub-total	16.95					
Special Purpose (5)						
Ketterlinus Gym	0.63		X			Indoor gym, weight room, outdoor basketball courts
Fort Mose State Park	43.42			X		Historic, nature trail, pavilion, restrooms, museum
Castillo de San Marcos	17.72				X	Historic
Francis Field	7.17	X				All, purpose event field, tennis courts
Lighthouse Park	0.51					Historic, museum, concession, tennis courts
Special Purpose sub-total	69.45					
Grand Total	757.49	(30)	(3)	(2)	(1)	

Source: City of St. Augustine, 2019

In addition, facilities that could be listed include the City Gates, Hispanic Gardens, San Augustin Government House, Doctor Peck House Museum, Lightner Museum, the Mission Nombre de Dios Museum, St. Augustine Historical Society, and Ximenez Fatio House Museum, and many other historic nonprofit attractions.

The city, limits, includes approximately 168,574 acres of water as part of the environmental landscape attracting tourists, visitors, and outdoor sports enthusiasts to the area. The St. Augustine Inlet provides direct access to the Atlantic Ocean beyond the beaches and barrier islands.

Recreation & Open Space Standards & Guidelines

Park Acreage Standards

The following standards are adopted as the level of service guidelines for parks and recreation for the City of St. Augustine.

Table X: Park Acreage Standards

Park Type	Area per 1,000 people
Regional Park	5 acres
Community Park	1 acres
Neighborhood Park	0.80 acres

Source: City of St. Augustine Comprehensive Plan

Guidelines for Resources & Facilities

The State of Florida establishes service standards for common recreation facilities as part of the Statewide Comprehensive Outdoor Recreation Plan (SCORP). The guidelines assist the City in evaluating existing facilities and siting new parks and improvements. The SCORP standards are not intended to be binding and instead should be used to locate deficiencies and opportunities.

Table X: Resource and Facility Guidelines

Activity	Resource/Facility	Population Served
Camping (tent)	1 acre of camp area	6,750
Fishing	800 feet of dock/jetty	5,000
Hiking	One mile of trail	6,750
Baseball	1 field	6,000
Softball	1 field	3,500
Basketball	1 court	5,000
Football/Soccer/Rugby	1 field	6,000
General play	1 play area	15,000
Golf	1 public course	70,000
Racquetball/handball	1 court	10,000
Tennis	1 court	2,500
Volleyball	1 court	6,000

Source: State of Florida 2005 Statewide Comprehensive Outdoor Recreation Plan

Park Acreage & Population

By 2040, St. Augustine's population is projected to reach 19,330 people. This is based on the methodology used in the Future Land Use Element of the Comprehensive Plan. Table X extrapolates the projected population over the planning horizon using the Bureau of Economic and Business Research (BEBR) 2015 medium projections.

**Table X: City of St. Augustine Population Projections,
2015-2040**

	Census 2010	2015	2020	2025	2030	2040
St. Augustine	12,975	13,590	14,042	14,790	16,480	19,330
St. Johns County	190,039	213,566	255,300	295,800	329,600	386,600

Sources: 2015 BEBR Statistical Abstract, Florida Department of Economic Opportunity (DEO)

Table X shows the level of service for available recreation facilities based on these accepted populations projections.

Table X: Level of Service Analysis

Park Type	Area per 1,000 people	Needed Acres (2010-2040 Horizon)	Existing Acres
Regional Park	5 acres	96.65	566.00
Community Park	1 acres	19.33	86.27
Neighborhood Parks	0.80 acres	15.46	18.82
Water access facilities			16.95
Special purpose			69.45
Total park acres			757.49
Total wetland acres			3857.78

Source: State of Florida 2013 Statewide Comprehensive Outdoor Recreation Plan, FDEP Florida Recreation and Parks Inventory, St. Johns River Water Management District (SJRWMD) 2014 Land Cover and City of St. Augustine GIS, 2019

Based on the adopted Level of Service analysis, the City demonstrates an abundance of recreational acreage.

Recreational Programs & Facilities

Strategies for Improvements & Expansions

St. Augustine is adequately served based on current level of service standards for recreation. However, the City recognizes the potential need for neighborhood parks within the planning timeframe and will explore options for creating new opportunities within the city limits in order to maintain and expand the existing recreation facilities. One strategy the City may implement is to require new developments to provide recreational facilities as part of their overall site plan. The category and amount of recreational area provided would correlate to the type and intensity of development. For instance, a residential development may be required to dedicate acreage to serve as a neighborhood or community park. The park may have more improvements and program related facilities. Alternately, it may be more appropriate for a commercial or industrial development to dedicate an area for a community or regional park focusing on natural features or conservation.

For example, as part of the Antigua development, 10 acres have been dedicated as recreation.

St. Augustine will also continue to work with adjacent jurisdictions and state agencies to encourage the preservation of open land and accessibility to parkland resources near or adjacent to the city. The Future Land Use and Conservation and Coastal Management Elements will encourage the preservation of environmentally sensitive lands through a mix of land development policies and incentives. These lands may be used for recreational purposes, although their ultimate use could be determined by the terms of the easement or protection mechanism and the agency responsible for management of the site.

Funding Sources

Funding for park improvements and acquisitions will most likely come from grants. The City has used FRDAP grants in the past for the Joe Pomar Jr. Park, Eddie Vickers, and the Lighthouse Park and J Edward “Red” Cox Recreation facilities.

Intergovernmental Coordination

The city regularly coordinates with the National Park Service, the State, and the County regarding needs related to providing and maintaining park facilities within the City. The City anticipates continued coordination with any proposed trail system, bicycle or pedestrian improvements and associated events in and through the city. A greenway and trail system including paddling can be utilized to encourage connections between recreational sites, open spaces, historic sites, and the beaches.

Protect, Enhance & Expand Open Spaces

The City continues to protect open spaces through its conservation overlay zone development process. This process limits development in environmentally sensitive areas and requires development waterward of the most restrictive jurisdictional line or in environmentally sensitive areas to be reviewed by the City Planning and Zoning Board. Proposed development landward and within 100 feet of a jurisdictional line requires additional development considerations and/or review by the Planning and Zoning Board. Lastly, there are also detailed requirements and considerations for removing trees and potentially impacting tree canopy within the city as part of the three (3) types of conservation overlay zone development review.

Additionally, as part of the update to the Comprehensive Plan the city is creating an Open Land (Conservation) land use category to designate and recognize undevelopable marshlands as a conservation type category separate from uplands designated as Open Land which are potentially developable. This new category would designate the approximately 3,858 acres of wetlands in the city, and any other areas deemed undevelopable by legal instrument for permanent protection as conservation area.

The city has also created a definition and assigned property as “undeveloped conservation parklands”. The adopted definition refers to property that shall remain in a natural, undeveloped state in order to preserve and protect the natural resources of the property for the benefits of wildlife, the ecosystem and for future generations to appreciate and study.

It is difficult to expand open spaces in an area that is mostly built out, but the city's recognition and emphasis on protecting open spaces, view sheds, environmentally sensitive lands, trees and tree canopy, as well as, potential corridors and greenways linking these areas is a long-standing priority.

Historic Resources

As the oldest continuously occupied European settlement in the United States, St Augustine is a unique blend of old, world charm, history, Florida land boom, post war, and mid-century Florida beach tourism. It appeals to all types of tourists, international, as well as, from across the States, region and local areas. The Colonial Town Plan, on the National Register creates a pedestrian friendly area adjacent to the Old Fort.

There are several private and nonprofit potential destinations that are listed in the State Florida Outdoor Recreation Inventory that contribute to recreation options as well. They include: the Conch House Marina Resort, Oyster Creek, Florida School for the Deaf and the Blind, St. Augustine Alligator Farm, Fountain of Youth Museum and Park, Ripley's Believe-it-or-not Museum, Zorayda Castle Museum, Oldest Store Museum, Oasis Marine Services, State Park Campground, Old Sugar Mill Museum, Old Jail Museum, Oldest Wooden School House Museum, St. Augustine YMCA, and Flagler College.

These entities contribute to the character of the city and work to maintain these older structures through adaptive reuse and allowing the public access to these resources and properties.

Availability of Recreational Programs & Facilities

Existing Programs

As discussed, there are several recreational and open space facilities of all sizes available to the citizens of St. Augustine. In addition to local parks and natural areas, St. Johns County Parks and Recreation Department, as well as, other organizations offer an extensive array of organized sports programs. These programs are offered for all age groups throughout the year and include:

- Soccer
- Volleyball
- Wrestling
- Basketball
- Baseball/Little League
- Flag Football
- Track and field
- Lacrosse
- Cheerleading
- Softball
- Tennis
- Swimming

The County offers several youth programs that are partnerships with other local and/or non-profit agencies such as the Boys and Girls Club, the YMCA or the Police Athletic League (PAL), Ancient City Soccer, St. Johns Little League, Pop Warner and other providers.

Opportunities for Improvements

Pedestrian and Bicycle Access

Through its Mobility Planning the city is encouraging safer pedestrian and bicycle opportunities and options. If the City can continue to encourage the use of alternative forms of transportation, and a “park once” experience the stress and pressures of visiting St. Augustine should be reduced. This may also reduce the stress on the City’s infrastructure, as well as, the residents.

Expansion and Improvements to Existing Facilities

The City will continue to pursue function and maintenance improvements regarding existing recreation facilities, as well as potential expansion opportunities for the City and County residents to utilize. This includes encouraging and improving access to facilities and providing safe entrances and exits to and from recreational sites.

Tourism

Improving the tourist experience, which is a large part of the local economy will help to sustain that aspect, but it may also reduce the impacts of tourism on the city itself, and the residents who live here.

According to the St. Johns County Tourist Development Council (TDC) over 6 million visitors came to St. Johns County to visit the area. Almost 96% said they walked the City’s downtown historic district. In 2017 almost 877,000 visitors toured the Old Fort, on average 73,000 per month.

The entire city is impacted by tourism, site seeing and recreation.

Conclusion

The City of St. Augustine has ample recreation opportunities available to its citizens and functions as a major attraction to the area as a whole. The continued maintenance, and the City’s ability to offer the maximum recreational opportunities for existing facilities, as well as, requiring new developments to preserve, protect and provide recreation and open space provide the citizens a valuable, asset.

Figures

Comparing Regional Levels of Service to Statewide Median*

● Level of Service **Above** Statewide Median ○ Level of Service **Below** Statewide Median

Resource-Based Activities	Region							
	NW	NC	NE	CW	C	CE	SW	SE
Saltwater Beach Activities	●	○	●	○	NA	●	●	○
Freshwater Beach Activities	●	●	○	○	○	●	○	●
Saltwater Fishing Non-boat	●	○	○	○	NA	●	●	●
Freshwater Fishing Non-boat	○	●	○	●	●	○	●	○
Saltwater Boat Ramp	●	●	○	○	NA	●	●	○
Freshwater Boat Ramp	●	●	●	○	○	●	○	○
Bicycling Paved	○	●	○	●	○	●	●	○
Bicycling Unpaved	○	●	●	○	○	●	●	○
Hiking	●	●	○	○	○	●	●	○
Horseback Riding	○	●	●	○	○	●	●	○
Off-Highway Vehicle Driving	●	●	○	○	○	●	●	○
Nature Study	●	●	●	○	○	●	○	○
Picnicking	○	●	○	○	○	●	●	●
Visiting Historical or Archaeological Sites	○	●	●	○	○	●	●	○
Tent Camping	●	●	●	○	○	○	●	○
RV or Trailer Camping	○	●	○	●	○	●	●	○
Hunting	●	●	○	○	○	○	●	●

User-Oriented Activities	Region							
	NW	NC	NE	CW	C	CE	SW	SE
Swimming in Public Outdoor Pool	○	●	○	○	○	●	●	●
Baseball or Softball	●	●	●	○	○	●	○	○
Outdoor Basketball	○	●	●	●	○	●	○	○
Outdoor Tennis	○	●	○	○	○	●	●	●
Soccer	●	●	●	○	○	●	○	○
Football	●	●	●	○	○	●	○	○
Golf	○	○	●	○	○	●	●	●

* Table shows SCORP planning regions as either above or below the statewide median level of service, per activity. See Appendix G for regional level of service calculations per activity.

Table 4.1

CONCLUSION

The purpose of this chapter is to identify regional and statewide patterns of outdoor recreation supply and demand, offering a reasonably sound understanding of regions with the greatest needs to support the demands of their population. Regions with dense populations, such as the Northeast, Central West, Central and Southeast regions tend to have the greatest needs, a trend which will likely continue if these needs are not adequately addressed.

The steady rise of Florida's population will lead to an increasing demand in all regions, calling for a continuing need for the provision of outdoor recreation facilities and the conservation of natural and cultural resources. It is critical to ensure that these resources and facilities enjoyed by the over 100 million residents and tourists today are there for those in the future.

Chapter Five - Outdoor Recreation Issues and Recommendations

Understanding outdoor recreation issues and anticipating emerging trends is an important element of the state's outdoor recreation plan. Florida is among the largest and most dynamic states in the nation. Changes in the state's social, economic, and environmental systems will affect many aspects of people's lives, including how they recreate. Although these considerations do not lend themselves readily to quantitative analysis, it is nonetheless important that they be well understood in future decision making. This chapter discusses issues affecting outdoor recreation in Florida, and outlines recommendations for implementing the state's outdoor recreation plan. The issues and recommendations outlined in this chapter are the product of a variety of methods for input, including: the SCORP workgroup, meetings with outdoor recreation stakeholders, research of nationwide trends and issues, the 2011 Outdoor Recreation Participation Survey, public workshops and online questionnaires.

A SYSTEM OF LANDS

Florida's diverse public and private outdoor recreation lands, facilities, programs and managing agencies are bound together by a universally common trait – their ability to provide public recreational opportunities of one type or another. These various areas and the users they serve can be viewed together as an interconnected system. While tremendous progress has been made in acquiring the needed lands and providing the facilities and programs to support public use of the lands, relatively little has been done to integrate the efforts of the providers. The following statement is intended to describe an ideal, but as yet unrealized, recreation system for the state.

Florida's ideal outdoor recreation system will be a diverse, connected and balanced system of outdoor recreation resources, facilities and programs that provides the state's residents and visitors with a full



An online questionnaire regarding outdoor recreation issues in Florida yielded nearly 4,000 responses. The word map above is an abstract representation of input received in an open response item of the questionnaire, with the size of the word reflecting frequency of mention.

range of outdoor recreation opportunities, regardless of their age, gender, ethnic background, economic status, physical or mental ability, or location within the state. The system will be coordinated at the state level with all agencies and suppliers working in tandem, and with ample opportunity for the public to participate in decision making. It will further the public's understanding and appreciation of Florida's environment and outdoor recreation resources.

ISSUES, GOALS AND STRATEGIES: A METHOD FOR IMPLEMENTATION

Three overarching issue areas have been identified as impacting recreation in Florida. In this chapter, each issue is broken down by related topics. A discussion of each topic is followed by specific goals and strategies to address the issues and implement the plan.

ISSUE 1: Raising awareness of the values and benefits of outdoor recreation

- **Goal 1-1:** Highlight the economic impact of outdoor recreation
- **Goal 1-2:** Emphasize outdoor recreation's impact on health and quality of life
- **Goal 1-3:** Ensure and identify future resources for programs essential to recreation

ISSUE 2: Improving public access through agency coordination

- **Goal 2-1:** Maintain and manage adequate availability of resources for a growing population
- **Goal 2-2:** Coordinate recreation providers to better connect lands and opportunities
- **Goal 2-3:** Increase and improve universal accessibility
- **Goal 2-4:** Protect Florida's waters while providing adequate public access

ISSUE 3: Reconnecting people to the outdoors

- **Goal 3-1:** Improve urban recreation opportunities
- **Goal 3-2:** Connect all people to the outdoors

- **Goal 3-3:** Facilitate participation through accessible information
- **Goal 3-4:** Encourage volunteerism, stewardship, and advocacy

Issue One: Raising awareness of the value and benefits of outdoor recreation

Summary: Educating the public on the benefits of outdoor recreation to individuals and communities is integral in maintaining support for recreation programs.

The Economic Impact of Outdoor Recreation

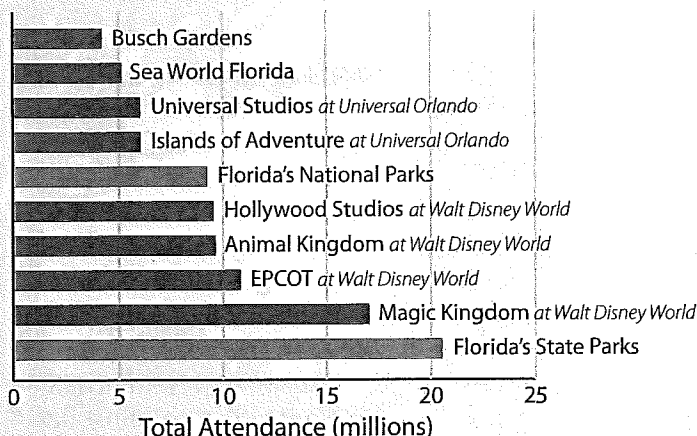
For residents and tourists alike, outdoor recreation is an important part of everyday life. Florida's temperate climate, combined with outstanding cultural and natural resources, allows for recreation participation year round. Outdoor recreation stimulates the economy through the purchase of equipment necessary for participation, with money spent on trips and travel and through a host of direct and indirect ways.

Tourism: An Economic Driver

Florida has long been a destination for domestic and international travelers, and outdoor recreation is a major contributor to the state's tourism market. According to VISIT FLORIDA, Florida's tourism rates have seen a steady rise since 2009, leading to an estimated 87.3 million visitors in 2011. In 2011, recreation and/or leisure was the primary reason for more than 88 percent of domestic visits, 81 percent of Canadian visits, and 68.5 percent of international visits, showing the strong link between recreation and tourism. While relaxing and enjoying the outstanding natural and cultural resources that Florida has to offer, visitors are also making a significant contribution to Florida's economy. Total tourism spending was calculated at \$67.2 billion in 2011, creating more than one million jobs to support the industry.

A recent study by the Outdoor Industry Association, *The Outdoor Recreation Economy*, determined that each year

2010 Attendance



Source: Florida State Parks, National Parks Service, and *The Global Attractions Attendance Report* (2010) from the Themed Entertainment Association.

Tourism & Resource-Based Recreation in Florida

While many associate Florida tourism with theme parks, the state's natural resources are immensely popular with visitors. The graph at left, based on information provided by the Florida Department of Economic Opportunity, compares 2010 attendance at the state's major theme parks with Florida's state and national parks. Combined attendance at Florida's state parks outpaced any other attraction.

more than \$38 billion is spent on outdoor recreation in Florida, supporting 329,000 jobs across the state. In comparison, the Division of Recreation and Parks reports state parks provide a direct economic impact of \$1 billion to local economies each year, while generating 19,347 jobs.

Nature-based tourism is an important component of the tourism industry. Fishing, hunting, boating, paddling and wildlife viewing are among the more popular examples of activities associated with this type of tourism. These activities have a huge impact on the state's economy. According to the Florida Fish and Wildlife Conservation Commission (FWC), wildlife viewing, hunting, boating and fishing provide a total economic effect of \$3.2 billion, creating more than 34,000 jobs. Wildlife festivals, ideal for generating interest, educating the public and distributing information, also provide great boosts to local economies. One example, the 2009 Space Coast Birding and Wildlife Festival had an impact of almost \$1 million in Brevard County alone.

Quick Fact

Every 85 visitors creates one Florida job.

- VISIT FLORIDA®



Weeki Wachee Springs State Park

Recreation, Real Estate and Business Relocation

Parks and open space have been tied to an increase in property values since the 19th Century, and studies have consistently shown connections between property values and proximity to parks, trails and open spaces. Parks and trails are often a central piece in revitalization efforts of towns and neighborhoods, offering sustainable and appealing infrastructure which draws residents to areas previously considered undesirable. This increase in property value

provides additional property tax revenues to further the positive growth of a community.

Parks are also a contributing factor when seeking business relocation. Industry today is increasingly based on high-technology and service-sector companies, where information and knowledge are the main sources of economic growth and wealth. Companies in this industry are extremely mobile and can be more selective in the location of their businesses, and are interested in areas that will retain and attract talent. Quality of life in a community is a considerable contributing factor when making these decisions, with the availability of outdoor recreation opportunities playing a large role.

Raising Awareness

Multiple studies and reports highlight the significant impact of outdoor recreation on the economy. However, these reports are often agency or activity specific and utilize a variety of methods when determining the impact. Recreation providers and advocates could benefit from a comprehensive analysis of the total impact recreation has on Florida's economy, the report serving as a universal platform for educating the public on the importance of outdoor recreation. The Florida Department of Economic Opportunity (DEO) has contributed to this effort with a website titled The Economic Benefit of Eco-tourism, which compiles economic impact information from various state and federal programs onto one page. State agencies, in coordination with DEO, should look to further this effort. The following strategies will help recreation providers and stakeholders educate the public on the benefits of outdoor recreation to the economy.

Goal 1-1: Highlight the economic impact of recreation.

Strategies:

- 1) DEP and relevant state agencies, in coordination with all recreation providers, should produce a report on the overall economic impact of outdoor recreation in Florida.
- 2) Local recreation providers should work with local economic development councils to promote Florida's recreation opportunities as a means to attract businesses.
- 3) Recreation providers should communicate with private developers on the connection between property values and availability of natural landscapes and recreation opportunities.

Quality of Life

Active lifestyles and time spent outdoors are major contributors to a person's health and overall quality of life, as the connection between good health and physical activity is widely recognized. Public lands and waters provide opportunities for healthy exercise and physical activity, relaxation and solitude, and challenge and risk. Providing and facilitating access to public lands through high quality systems of parks, greenways and other natural areas is a major step towards creating and maintaining active, healthy communities. Even so, more must be done to ensure that the public understands and is receiving the full benefits recreation has to offer. A 2011 report by the Trust for America's Health and the Robert Wood Johnson Foundation determined Florida's adult obesity rate to be 26.1 percent, an 80 percent increase over the past 15 years. These striking figures illustrate either the lack of awareness of recreation's

Rising Obesity Rates

Adult Obesity Rates in Florida

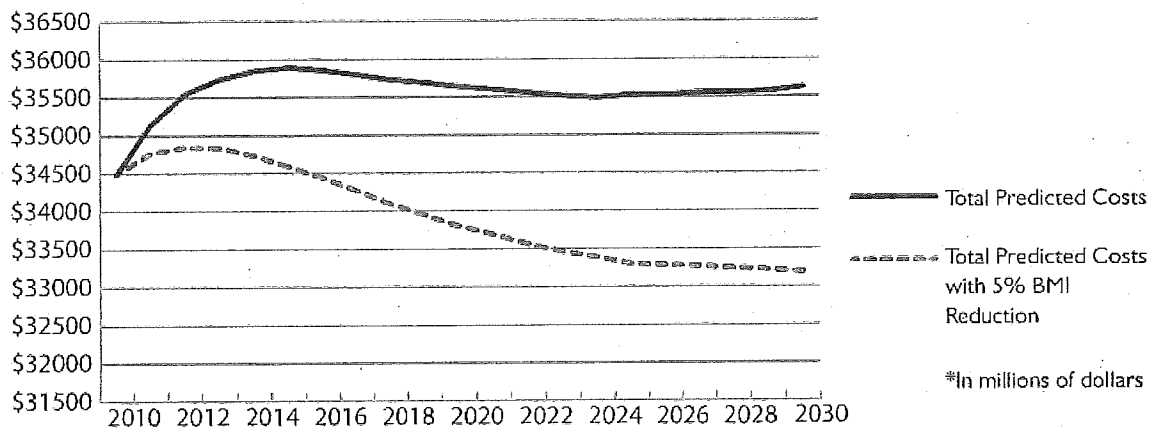
Obesity Rate in 1995	Obesity Rate in 2011	Projected Obesity Rate in 2030 based on current trajectory*	Projected Obesity Rate in 2030 if BMI Decreased by 5%*
14.3%	26.6%	58.6%	51.1%

*All ages, all genders, adjusted for self-reporting bias. BMI: Body Mass Index

Source: Trust for America's Health

Rising Costs Related to Obesity

PROJECTIONS FOR ANNUAL OBESITY-RELATED HEALTH SPENDING IN FLORIDA, 2010-2030



Source: Trust for America's Health

impact on health and quality of life or a lack of motivation to get active. Both of these can be addressed by strengthening ties between recreation providers, public health departments and health care providers.

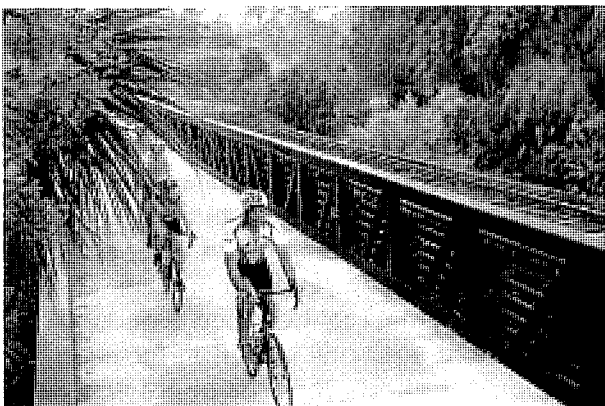
The outdoor recreation and public health communities, through different approaches,

ultimately seek a similar result: active and healthy communities. The Florida Department of Health's State Health Improvement Plan recognizes this connection, and includes many recreation-related objectives in achieving their overall goal of improving public health in Florida. At the local level, recreation providers are linking up with health care providers to promote spending time outdoors through efforts such as the Whole Child Leon "95210" program, which works with local health care providers to "prescribe" patients a plan for achieving a "happy, healthy life." Working with health care providers and local health departments also provides different avenues for funding by including recreation as part of a greater community-based health initiative. One example is the Community Transformation Grant, a program managed by the Centers for Disease Control and Prevention, which encourages community-level efforts to fight chronic disease by promoting healthy lifestyles, of which recreation plays a significant role. The following strategies for federal, state and local agencies will help raise public awareness of and support for recreation as a means to enhance health and quality of life.

Quick Fact

Every \$1 spent on biking trails and walking paths could save approximately \$3 in medical expenses.

- American Heart Association



Bikers on the Florida Legacy Trail
credit: Darcy Kiefel/The Trust for Public Land

Goal 1-2: Emphasize the impact of recreation on health and quality of life.

Strategies:

- 1) Public recreation providers should partner with county health departments and local health care providers to promote active, healthy lifestyles through community-level health improvement initiatives.
- 2) DEP should assist DOH in implementing recreation-related objectives in the State Health Improvement Plan.
- 3) DOH and county health departments should determine ways to further incorporate outdoor recreation opportunities into community health assessments, utilizing tools such as the Florida Outdoor Recreation Inventory to determine existing opportunities and measure their impact on community health.

Program Support

Continued support for outdoor recreation is an extremely important issue for Florida residents and recreation providers, as increasing population raises the demand for new facilities. Today, recreation providers are exploring a variety of alternatives to supplement traditional state and federal funding sources to support their programs. During the economic downturn, providers at all levels encountered budget limitations which affected parks and recreation services. This led to the development of new strategies for maintaining and improving recreation services, such as increasing the role of the private sector in public recreation areas and creating innovative public-private partnerships. Now, as the economy continues its recovery, these support models are bolstering recreation providers' abilities to meet the needs of the public.

Recreation management agencies should focus on using existing funds with maximum efficiency to ensure the highest needs and priorities are being met. Alternative funding sources, such as private sponsorships should be expanded at all levels of public recreation.

Goal 1-3: Ensure and identify alternative funding for programs essential to Florida's recreation program.

Strategies:

- 1) Recreation providers should seek partnerships with private sector companies that share the common vision of creating healthy, active and livable communities.
- 2) Recreation providers should work with stakeholders and the general public to advocate the provision of adequate funding for existing land and water conservation programs.
- 3) DEP should coordinate with DEO in working with local governments to identify sources of public and private grant funding to meet recreational programming and park development needs.
- 4) The Florida Recreation and Park Association, the Trust for Public Land, The Nature Conservancy and other organizations should continue to provide technical assistance to local governments and citizen groups for identifying alternative sources of funding and enacting local land acquisition programs.

Issue Two: Improving public access through agency coordination

Recreation in Florida can be greatly improved through continued agency coordination in acquisition, management, and programming of public lands.

Access

Access to Florida's existing public lands continues to be an issue with the public. There is a perception that the land is "locked up" after purchase, that access which existed before acquisition is reduced or eliminated once the land comes into public ownership. Most public land is available for some type of public access, but not enough priority has always been given to opening land for appropriate recreational use. Given current economic realities, however, land management agencies are often focusing development efforts towards improving and enhancing existing access points. By focusing on existing infrastructure, limited funds can

be best used to improve and expand existing facilities.

Involving Local Communities

Public land managers can improve access to their lands and water by better involving local communities. Outfitters, guide companies, and other businesses can directly provide supplemental services on public lands, expanding business opportunities while providing better public access. Through effective communication, land management agencies can provide information to help inform communities how they can benefit from public lands, and in return access to these lands can be improved. The following recommendations have been established to help continue to provide public recreational access in Florida.

Goal 2-1: Maintain and manage adequate availability of resources for a growing population.

Strategies:

- 1) Given Florida's current economic situation, public land management agencies should focus efforts on enhancing existing access points and facilities, as present resources allow.
- 2) By working with local business communities, land management agencies should work closely with local recreation suppliers and outfitters on how they can benefit from nearby public lands to stimulate local economies, create jobs and facilitate public recreational access.
- 3) Agencies should ensure that all public lands are open for appropriate public access as soon as possible after acquisition, without compromising the agencies' mission or the resources of the land.
- 4) Resource management and restoration activities on public lands should be greatly expanded. Activities such as prescribed burning, exotic species removal and hydrological restoration are vital to providing and maintaining the natural and cultural resources that support resource-based recreation.



St. George Island State Park

Connecting Opportunities: Agency Coordination

A recurring theme from the public input process was the need to better connect existing recreational opportunities in order to improve the overall quality and availability of recreation opportunities. Improving communication and coordination with community planners, transportation departments, and adjacent land management agencies at all levels of government can result in better-connected opportunities. Proper coordination can also reduce unnecessary duplication of resources or facilities while avoiding any deficits. At a community scale, such coordination can result in better distributed and connected parks and green spaces, as well as linked trail systems providing alternative methods of transportation. A well planned and coordinated park system facilitates recreation participation, providing healthier and more vibrant communities.

Florida Greenways and Trails System Plan

With connection of opportunities, discussion often revolves around trails. A well planned trail system can connect public lands, lengthen and enhance experiences, and provide a viable source for alternative transportation within and between communities. The Division of Recreation and Parks, through the Office of Greenways and Trails, provides a statewide vision for Florida's greenways and trails through the Florida Greenways

and Trails System Plan. This plan determines existing resources, identifies trail gaps, and offers a focused vision on connecting Florida's greenway and trail system. The fulfillment of this plan depends on coordination and collaboration of funding and resources from public, private and non-profit entities.

Goal 2-2: Coordinate recreation providers to better connect lands and opportunities.

Strategies:

- 1) State agencies should work cooperatively with VISIT FLORIDA to create a single, coordinated data source for accessing public information about outdoor recreation opportunities on Florida's public lands.
- 2) DEP, in cooperation with other groups, should continue to strengthen state agency coordination in conjunction with SCORP planning. This will keep open lines of communication on statewide recreation issues and trends and methods of addressing them.
- 3) DEP should pursue efforts to conduct a statewide forum on outdoor recreation to enhance the coordination of efforts among public and private suppliers.
- 4) Recreation agencies should continue sharing information for the SCORP outdoor recreation inventory and periodic assessments of demand to minimize unnecessary duplication of efforts and ensure a single data source that is kept accurate and up to date.

Universal Accessibility

Florida's public lands exist for the benefit and enjoyment of all people. Great efforts have been made by recreation providers across the board in compliance with the Americans with Disabilities Act, but equality of access to public lands and the opportunities they provide still remains an issue. Along with the removal of physical barriers, the act also requires all reasonable efforts be made to ensure that facilities, programs and services are accessible.

The distribution of information is very



Hikers at the Miccosukee Greenway in Leon County, a green space coordinated between multiple agencies

important in providing universal accessibility. Programs and facilities designed for people with disabilities do little good if adequate and accessible information is not made available. Agencies should ensure that accessibility information regarding their parks or natural areas can be easily obtained through a variety of ways,

Agency Coordination in Action: Get Outdoors Florida!

Get Outdoors Florida! is a coalition of public and private stakeholders in outdoor recreation, including federal and state land managers, state conservation, health, and education agencies, educators, healthcare providers, non-profits, and businesses.

The mission of Get Outdoors Florida! is:

"Engaging communities, families and individuals in outdoor experiences to achieve healthier lifestyles and sustain Florida's natural resources."

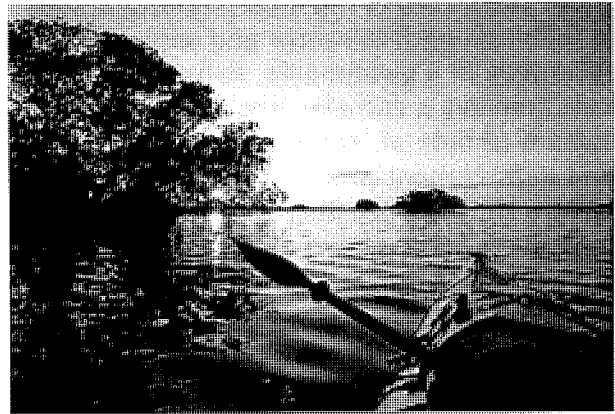


For more information, visit getoutdoorsflorida.com

Goal 2-3: All recreation providers should seek to increase universal accessibility.

Strategies:

- 1) State land management agencies should partner with organizations such as the Florida Disabled Outdoors Association to establish specific programs for visitors with disabilities to be uniformly available throughout the state.
- 2) Outdoor recreation providers should develop and implement schedules for identifying and eliminating architectural barriers in existing facilities under their management.
- 3) Upon construction or renovation of trails, agencies should complete UTAP trail assessments and provide trail accessibility information to the public.
- 4) All recreation providers should stay current on information technology, following best practices for distribution of information to the public.
- 5) Outdoor recreation providers should develop and strengthen partnerships with the Agency for Persons with Disabilities and organizations such as Florida Disabled Outdoors Association to educate themselves and the public, and to provide recreation activities and programs for people of all ages and abilities.



*Kayaking Card Sound Biscayne Bay Aquatic Preserve
Credit: Paul Marcellini*

and should consider establishing outreach programs to encourage participation if they have not already done so.

Programs such as the Universal Trail Assessment Process (UTAP) provide guidelines for assessing and reporting trail conditions – like slope, distance, grade and width – which may limit one's ability to participate. These objective reports provide information that allows potential users to decide if the trail is accessible to them and meets their needs and abilities.

Florida's Waters

Much of Florida's recreation participation is centered around water, and preserving these opportunities is essential to the state's recreation program. Protection of



Credit: FDOA

Florida Disabled Outdoors Association (FDOA)

Miracle Sports Program

The Florida Disabled Outdoors Association is a non-profit organization that seeks to provide access for all through the coordination of six unique programs and by providing accessibility consultation with agencies around the state.

Miracle Sports, an FDOA program in Tallahassee since 2008, provides access to athletics for everyone. The program takes place on a barrier-free field developed through a partnership with the City of Tallahassee, and has logged over 4,200 team sport recreation hours since its inception.

water resources is the most important step in maintaining freshwater and saltwater resources in a swimmable, fishable condition. This involves a complex and science-based system of federal, state, and local regulatory and enforcement programs, which must ensure that the greatest efforts are taken towards protecting and improving the quality of Florida's water resources. Florida's springs, a unique and very popular resource, continue to be threatened by nutrient pollution from sources such as excess fertilizer use, septic systems, and stormwater runoff. Community-based programs which combine regulation and enforcement with education and stewardship opportunities are necessary to ensure Florida's springs remain healthy and available for public use and enjoyment.

Access to Florida's waters faces increased pressure from shoreline development as populations continue to rise. A combined effort by federal, state, and local governments is needed to ensure funding for acquisition of land to provide public recreational access to waters. While the regional analysis of demand and need in this plan is not intended to identify local needs, it is certain that needs remain in the areas of developing additional boat ramps, canoe launches, docks, catwalks and piers, as well as support facilities such as parking areas and restrooms.

Quick Fact

Florida has 1,350 miles of coastline, 12,650 miles of rivers and streams, and 7,700 lakes within its boundaries.

- Florida Department of Environmental Protection



Honeymoon Island State Park, credit Kristin Crawford

Protecting water resources is a central theme in the America's Great Outdoors initiative. This nationwide initiative strives to connect Americans to the outdoors, with a focus on grassroots and community level conservation and restoration efforts. America's Great Outdoors has identified water resources as



Suwannee River State Park

essential to making these connections. Florida has made great strides in protecting and promoting its waterways, notably in efforts such as the Suwannee River Wilderness Trail and the Florida Circumnavigation Saltwater Paddling Trail, which were established through multi-agency coordination and dependent on community involvement and support. Continued community-level promotion, stewardship and support of Florida's key water features will help ensure the preservation of these important resources. The following recommendations are made for protecting water resources and improving public access to Florida's waters.

Goal 2-4: Protect water resources while providing adequate public access.

Strategies:

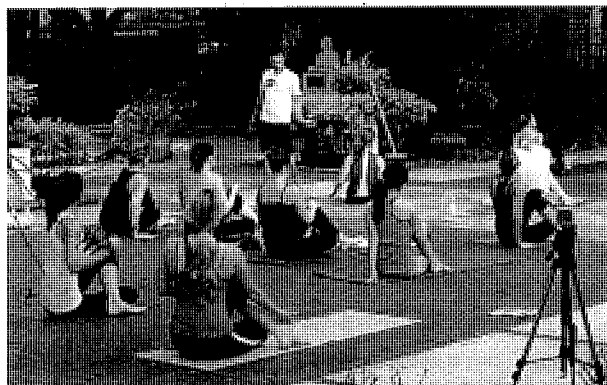
- 1) All levels of government, working with the private sector, should identify alternative means of meeting public demand for water through developing alternative water supplies such as brackish surface and groundwater, stormwater and reclaimed wastewater.
- 2) DEP should continue to provide funding to support construction of public recreational facilities in springs, monitor spring water quality, and oversee other restoration activities to help ensure that springs remain available for public use.
- 3) DEO should continue to provide planning assistance to local governments protecting Florida's springs, consistent with reports "Protecting Florida's Springs: Land Use Planning Strategies and Best Management Practices" and "Protecting Florida's Springs: An Implementation Guidebook."
- 4) Funding should continue to be made available through the Florida Forever program to acquire land or conservation easements and fund capital improvements for increased public access, to conserve the state's natural and cultural heritage, including working waterfronts, and for environmental restoration, and water resource protection and supply.
- 5) Federal, state and local governments should work to reduce the amount of nutrient pollution that enters Florida's waters through programs that teach the public about where nutrients come from and what they can do to help.
- 6) Public agencies and private organizations should continue clean-up and rehabilitation efforts for specific water bodies, such as Lake Okeechobee, the St. Lucie and Caloosahatchee Rivers, the Everglades and the waters surrounding the Florida Keys.
- 7) Local governments should maximize the use of local comprehensive planning processes to increase public access to Florida's waters by preserving recreational and commercial working waterfronts and identifying sites for public and private recreation.
- 8) Public recreation providers should identify water areas under their jurisdictions where inadequate recreational access exists or where existing water access can be improved, and give priority to making the needed improvements.

Issue Three: Reconnecting people to the outdoors and enhancing stewardship

Strengthening appreciation and participation in outdoor recreation requires both education and better connections to natural landscapes.

Urban Recreation

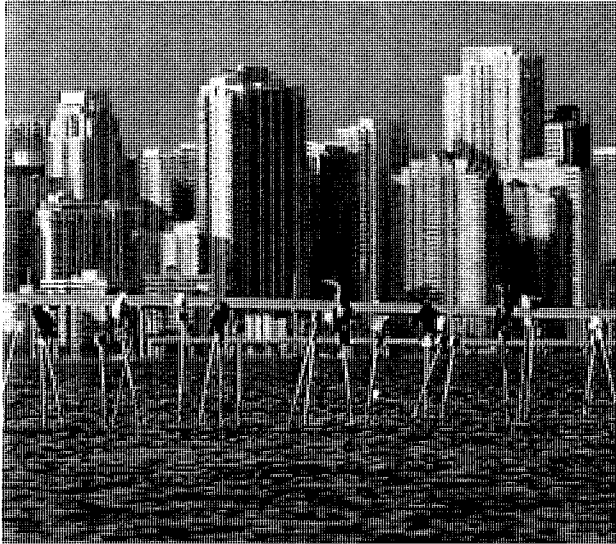
Providing recreation opportunities in urban areas is one of the most difficult but also most important issues in connecting people to the outdoors. With approximately 90



Outdoor yoga at the Ybor City Museum State Park

Nearly 90 percent of Floridians reside in urban areas.

- Florida Department of Health



Biscayne Bay Aquatic Preserve, credit Dr. D'Alessandro

percent of Floridians living in or near cities, accessing and experiencing the outdoors is heavily dependent on the availability of nearby opportunities. Urban parks and open spaces are vital in providing people opportunities for recreation and solitude, and to generally improve their quality of life. Parks are also important in preserving significant historic or cultural landmarks.

Urban recreation is key to providing an initial connection with natural landscapes. Local green spaces, parks and cultural sites often provide the stepping stone into the great outdoors, and local governments should ensure that these opportunities are provided. The provision of these opportunities cannot rest solely on local governments, however. Support for urban recreation should continue through programs like the Florida Recreation Development and Assistance Program (FRDAP) and the LWCF grant program.

By blending the built and natural environments, urban communities can facilitate and encourage participation in outdoor recreation, while reaping all the community benefits of a thriving, well-

connected system of parks and open spaces. The following recommendations will help urban communities provide stronger connections to the outdoors.

Goal 3-1: Improve urban recreation opportunities.

Strategies:

- 1) Municipal planning and recreation departments, along with FDOT, should continue to incorporate walking and biking into transportation plans, with a focus on safe and connected opportunities.
- 2) Public recreation providers should continue and strengthen all federal, state and local initiatives which support the creation, enhancement and expansion of urban parks and open spaces.
- 3) Cities should create central, cornerstone parks to revitalize their communities and facilitate active, healthy living.
- 4) Communities should attempt to restore abandoned commercial developments, particularly sites of environmental concern, back to their natural state.

Connecting People and the Outdoors

Physical activity is essential to health and quality of life. However, time, competing priorities, and lack of motivation appear to be furthering an ongoing trend of disconnection between people and the outdoors. Recreation providers are always searching for innovative approaches to motivate people to take time to get outdoors through programming, the use of technology, marketing, and similar measures.

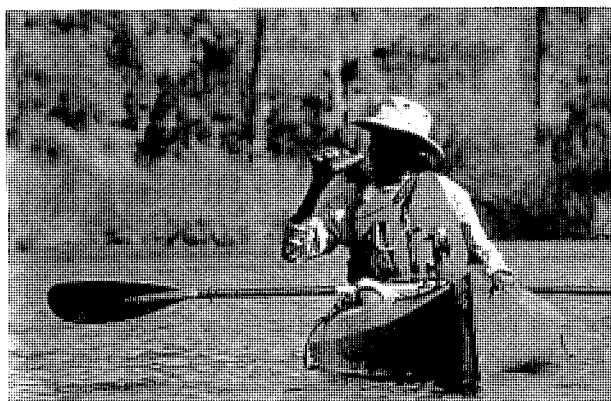
Youth

Children are notably susceptible to health-related problems due to sedentary lifestyles, yet many children continue to lack physical activity. According to the Center for Disease Control and Prevention, obesity prevalence among the nation's youth and adolescents has almost tripled since 1980. High obesity rates and inactivity are prompted by a de-emphasis of play time, physical education and outdoor activities in public schools combined with the

popularity of extra curricular activities such as playing video games, watching television and using home computers. Offering programs which reach youth both through schools and outside of school is essential to creating and strengthening ties to the outdoors.

Environmental Education

Environmental education increases public awareness and knowledge about environmental issues and provides the participants in its programs the skills necessary to make informed environmental decisions and to take responsible actions. It involves lifelong learning; its audiences are of all age groups, from very young children through senior citizens. National trends associated with environmental education including climate change, invasive species and sea level rise, are factors that will affect outdoor recreation and thus are trends for the public to be aware of. One of the best ways to connect children to the outdoors is through education-based environmental programs, particularly through the school system. However, budget constraints and a shift in focus have eliminated many programs which once provided children with outlets to structured and unstructured time outdoors. Budgets for field trips are almost non-existent in many cases, and both school boards and



Enjoying the Wacissa River, credit FWC

public recreation agencies must determine new ways to connect children to the outdoors and promote active, outdoor lifestyles. Federal environmental education initiatives include the "More Kids in the Woods" program through the U.S. Forest Service, the "Let's Go Outside" program through the U.S. Fish and Wildlife Service, the National Park Services Jr. Ranger and Teacher-Ranger-Teacher program, and the Hands-on-the-Land Network, which seeks to coordinate education on public lands. Statewide environmental education initiatives include the Department of Environmental Protection's Learning in Florida's Environment (LIFE) program, the Florida Fish and Wildlife Conservation Commission's Florida Youth Conservation Centers Network, the Get Outdoors Florida! Coalition, and 4-H programs. Various private and non-profit programs also exist around the state.

The Department of Environmental Protection's Learning in Florida's Environment (LIFE) program is an excellent example of partnering nearby natural resources with local schools to integrate environmental education into everyday learning. The LIFE program strives to reach a more diverse audience by engaging youth through their schools and connecting outdoor recreation with learning to build stewardship for the resource. Once DEP grants expire, programs at these sites continue through alternative funding sources such as private sponsorships, other grants or funding from local school boards. Service Learning is a component of the program, where students can participate in activities

Quick Fact

Sixty minutes of daily unstructured free play is essential to children's physical and mental health.

- American Academy of Pediatrics



At play on Dr. Julian G. Bruce St. George Island State Park

which apply their learning and allows for students to participate in environmental events such as International Coastal Cleanup Day, Environmental Education Week, Earth Day, National Public Lands Day, World Water Monitoring Day and others. Service Learning can expand into citizen science efforts including LAKEWATCH and other programs, where environmental observations collected by the public can become data useful to land managers and scientists.

Working with the school system is only one of many ways to connect youth to the outdoors. Time away from school is similarly influential on a child's development, and programs which offer enriching outdoor activities to fill this time are important. Recently, the Florida Fish and Wildlife Conservation Commission, in partnership with the Wildlife Foundation of Florida, established the Florida Youth Conservation Centers Network. This program employs a hub-and-spoke system of Wild Outdoor Centers (hubs) located within 45 minutes of major urban areas, and Near Outdoor Centers (spokes) which offer outdoor experiences closer to home. This concept of building skills and relationships with nature through a convenient, close to home setting while providing opportunities to experience nature at a grander scale is a good approach to getting children outdoors.

These programs are examples of the many environmental education programs that have been initiated by government, non-profit, and private entities. Funding for these programs is often difficult to obtain, and many programs have been successful in reaching outside the public sector for support. It is also important that outdoor connections are not solely focused on the youth, as family-centered programming will help unite different generations with a common sense of stewardship.

Addressing a Changing Population

Florida continues to see a steady rise in population, and the demographic composition is ever-changing. Two of the fastest growing demographics in the state are people of

Emerging Activities: Stand-Up Paddleboarding

Stand-up paddleboarding (SUP) is rapidly becoming a popular activity on Florida's rivers, lakes, and oceans. Stand-up paddleboards are larger and more buoyant than surfboards, incorporating long paddles which allow participants to stand and glide along the water. People are taking to SUP for a variety of uses like fishing, exercising, wildlife viewing and even yoga. The Outdoor Industry Association estimated that 1.24 million people nationwide participated in SUP in 2011, an 18 percent increase from 2010. Sales of stand-up paddleboards doubled between those same years, and many outfitters have begun renting the boards.



SUP in Walton County, credit: waltonoutdoors.com

Hispanic origin and people over the age of 65. Recreation providers must do their best in meeting the needs of these populations in an effort to provide adequate access for all. Like with any demographic, it is important not to generalize a certain population, but instead, to gather input and information regarding this demographic at a local level to make better informed plans and decisions.

The Hispanic population is Florida's fastest growing segment of the population. Census data shows that the Hispanic population in Florida rose 57.4 percent between 2000 and 2010, compared to Florida's overall population increase of 17.6 percent. A majority of Hispanics in the state, approximately 55 percent, live in the Southeast counties of Miami-Dade, Palm Beach, Monroe and Broward. It is important that public recreation providers seek a better understanding of the

trends and barriers of outdoor recreation participation within the Hispanic population when developing future recreation plans.

Another important subset of Florida's population is the 65 and older population. The baby boomer generation, which marked the sharpest period of population growth in our nation's history, is beginning to settle into retirement. Active lifestyles are equally as important for this age group as they are for youth, and ways must be found to keep people active and healthy. In order to do this, adequate and appropriate facilities and programs should be made available to all.

Goal 3-2: Connect all people to the outdoors.

Strategies:

- 1) All public recreation providers should encourage family-centered programming that appeals to both youth and adults. This multi-generational approach will join all ages in a shared appreciation for natural resources.
- 2) Public schools in Florida, in partnerships with Department of Education, should continue to integrate environmental education throughout their curricula to increase awareness of the benefits of and threats to Florida's natural systems. Schools should seek funding through grants, partnerships and sponsorships with public and private entities to fund environmental education-based activities such modeled after best practices identified by the Learning in Florida's Environment (LIFE) Program.
- 3) Agencies should establish and promote packaged interest programs, which harness interest in natural and cultural resource-based recreational, interpretive or educational activities to stimulate interest and lead participants to greater participation in the outdoors.
- 4) Recreation providers should adapt recreation programs and facilities to meet the needs of a changing population, particularly the needs of Hispanics and seniors.

Technology and Information

Technology is rapidly advancing and changing

the way we live, learn and even recreate. Today, the typical participant is equipped with some electronic device when recreating. It is important that recreation providers recognize how technology is used and can be used more in a recreation setting, and then apply this knowledge as one way to better connect with the population.

The advancement and prevalence of smart phones and applications is enormous, and it is important that recreation providers find ways to utilize this technology to enhance, but not replace, outdoor recreation experiences. Smartphone applications, simply called apps, are one of many viable ways to distribute information and education to visitors, and these types of apps should continue to be developed. As of mid- 2012, 13 states, from Wyoming to Delaware, had developed PocketRanger mobile apps for their state park systems. These apps provide information such as park locations, available activities,



Parks by Nature, PocketRanger Mobile App

and wildlife education and are very beneficial in providing quick, accessible information. Technology like this is especially beneficial in connecting with the younger generation.

Following a recommendation from the 2008 SCORP, the Division of Recreation and Parks developed one-stop, comprehensive website for all recreation opportunities in Florida. The site provides an interactive map which features all recreation opportunities entered into the Florida Outdoor Recreation Inventory. The map can be searched by activity, location or agency. Continual development of the site to make it more user friendly, along with the contribution of timely and accurate updates from recreation providers, will make this tool even more beneficial to both the public and recreation planners. The following recommendations are proposed to help ensure recreation providers continue to incorporate technology into facilitating participation.

Goal 3-3: Facilitate participation in outdoor recreation through easily-accessible information and technological advancements.

Strategies:

- 1) DEP should continue to develop and enhance the Florida Outdoor Recreation Inventory website centralizing comprehensive information about outdoor recreation opportunities in Florida.
- 2) Recreation providers should continue to incorporate technological advancements as means to facilitate and encourage outdoor recreation participation, such as smartphone applications and interactive maps online.
- 3) Recreation providers should offer technology-driven programs and events, blending technology with traditional outdoor recreation activities.

Stewardship and Advocacy

Participation in outdoor recreation and enjoyment of natural resources is only one link in fully connecting people to the outdoors. A strong sense of stewardship, volunteerism and advocacy for recreation opportunities and

conservation brings the participant full circle as they not only enjoy the resources, but help preserve them for future generations. User groups, non-profit organizations and citizen support organizations are some of the strongest advocates for recreation and conservation, and given appropriate tools and education, can provide tremendous help in securing support and resources. Volunteerism is another outstanding resource for public programs, as volunteer programs help improve natural areas while connecting people with the resources, and providing a significant financial boost to recreation programs. For example, in Fiscal Year (FY) 2011-2012, 1.4 million volunteer hours, equivalent to 625 full time employees, contributed an effort valued at \$27.8 million to the Division of Recreation and Parks. Volunteers for the Florida Forest Service contributed 58,400 hours in FY 2011-12. By providing meaningful and enjoyable experiences, recreation providers can gather and retain volunteers, an incredible resource during tough economic times:

Goal 3-4: Encourage volunteers, stewardship, and advocacy.

Strategies:

- 1) All park and recreation agencies should maximize the use of volunteers and citizen-based support organizations to supplement their existing resources and personnel. Agencies should develop new, innovative and enjoyable volunteer opportunities that engage all generations and retain volunteers for future projects.
- 2) Agencies should coordinate the distribution of information regarding volunteer opportunities to potential volunteer groups.
- 3) Recreation providers should work with organizations such as FRPA, the Trust for Public Land, and other recreation groups and businesses to educate the public about the benefits of volunteerism on public lands and encourage expanded opportunities for the public to participate in volunteer programs.

Outdoor Recreation in Florida 2013

A Comprehensive Program for Meeting Florida's Outdoor Recreation Needs

Appendices



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EXERCISE/PARCOURSE - Course designed generally for jogging, but which may or may not have exercise stations.

MULTIPURPOSE, MULTI-USE OR SHARED - Trail used for more than one of the above activities.

URBAN AREA - An area of, or for development, characterized by social, economic and institutional activities which are predominantly based on the manufacture, production, distribution or provision of goods and services in a setting which typically includes residential and nonresidential development uses other than those which are characteristic of rural areas.

URBAN SPRAWL - Urban development or uses which are located in predominantly rural areas, or rural areas interspersed with generally low-intensity or low-density urban uses, and which are characterized by one or more of the following conditions: (a) The premature or poorly planned conversion of rural land to other uses; (b) The creation of areas of urban development or uses which are not functionally related to land uses which predominate the adjacent area; or (c) The creation of areas of urban development or uses which fail to maximize the use of existing public facilities or the use of areas within which public services are currently provided. Urban sprawl is typically manifested in one or more of the following land use or development patterns: Leapfrog or scattered development; ribbon or strip commercial or other development; or large expanses of predominantly low-intensity, low-density, or single-use development.

USER-ORIENTED OUTDOOR RECREATION - Types of outdoor recreation that can be placed at the convenience of the user to take advantage of proximity to population centers. For this plan, these activities include golf, tennis, baseball/softball, football/soccer, handball/racquetball, shuffleboard, basketball, volleyball and outdoor pool swimming. Land areas for space is usually the only consideration dealing with the natural resource base. Some types of outdoor recreation may be either "user-oriented" or "resource-based" depending on the setting they utilize and the conjunctive values involved, as with the case of swimming, bicycling, picnicking, camping, etc.

USER-PREFERENCE - The exercise of choice of outdoor recreation activities by a potential participant. The total impact of user-preference is the determination of activity distribution in outdoor recreation demand.

USER-SATISFACTION - The measure of the extent to which an outdoor recreation experience satisfies the desires of the participant. Also sometimes referred to as user-enjoyment.

WETLANDS - Areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and [that] under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas.

WILDERNESS - An undeveloped area of land which has essentially retained its primeval character and influence without permanent alteration.

WILDLIFE - Animals such as birds, fish, insects, mammals, amphibians and reptiles that are living in natural or wild environments. Wildlife does not include animals living in aquariums, zoos and other artificial surroundings, or domestic animals such as pets and livestock.

RESOURCE TYPE - A class of outdoor recreation resource which can be specifically identified, such as a freshwater lake, an ocean beach, a hardwood forest, etc.

RURAL AREAS - Low density areas characterized by social, economic and institutional activities which may be largely based on agricultural uses or the extraction of natural resources in unprocessed form, or areas containing large proportions of undeveloped, unimproved or low density property.

SERVICE AREA - The surrounding land area from which an outdoor recreation resource, area, site or facility draws its participants.

SHORELINE OR SHORE - The interface of land and water, as used in the coastal management element requirements, and is limited to oceanic and estuarine interfaces.

SINGLE-PURPOSE FACILITY - (As contrasted to "multi-purpose.") A specialized type of outdoor recreation facility which is designed for one recreational activity, e.g. tennis court.

SPECTATOR ACTIVITIES - Those outdoor recreation activities which are carried on primarily for the visual benefit of others rather than for the direct enjoyment of the active participants, such as stadium sports, horse races, etc.

STAKEHOLDER - Group or individual who can affect, or is affected by, the achievement of the organization or program's mission. Examples include managers, employees, policy makers, suppliers, vendors, citizens and community groups.

STEWARDSHIP - Sense of responsibility for, desire to participate in, or taking charge of the protection and management of land and water resources.

SUITABILITY - The degree to which the existing characteristics and limitations of land and water are compatible with a proposed use or development.

SYSTEMS PLANNING - The process of assessing the park, recreation, open space and greenway facility needs of a community and translating that information into a framework for meeting the physical, spatial and facility requirements to satisfy those needs.

OUTDOOR RECREATION USE - The involvement of outdoor recreation areas, resources or facilities in the purpose for which they were intended.

PUBLIC RECREATION SITES - Sites owned or leased on a long-term basis by a federal, state, regional or local government agency for purposes of recreational use.

TRAIL - Linear corridor and any adjacent support parcels on land or water providing public access for recreation or authorized alternative modes of transportation.

Trail Types:

HIKING - Path used solely for backpacking or long distance hiking.

BICYCLE - Designated trail or system of trails used primarily for bicycling.

INTERPRETATIVE/NATURE - Trail designed or marked for nature interpretation and study.

HORSEBACK - Improved or unimproved trail designated and used primarily for horseback riding.

CANOE AND KAYAK- Distance along most commonly used route on a designated or undesignated waterway used for canoeing.

OUTDOOR RECREATION SYSTEM - A purposeful assemblage of physical units or elements made up of recreation areas, resources and facilities designed to meet the demands of a given segment of the public.

OUTDOOR RECREATION USE - The involvement of outdoor recreation areas, resources or facilities in the purpose for which they were intended.

OUTDOOR RECREATION USER - One who uses outdoor recreation areas, resources or facilities.

PARTICIPANT ACTIVITIES - Those outdoor recreation activities which involve direct participation, either active (as in the case of swimming) or passive (as in the case of nature study), by the individual. See "spectator activities."

PARTICIPANTS-PER-FACILITY RATIO - A need methodology that compares the number of one time activity users per unit of supply.

PER CAPITA PARTICIPATION RATE - The rate at which a person participates in a particular outdoor recreation activity, expressed in number of times per year.

PLAYGROUND - A recreation area with play apparatus.

PRIORITY - The ranking or order of precedence assigned to each project or need to establish its place with respect to all others under consideration at any given time.

PRIVATE RECREATION SITES - Sites owned by private, commercial or non-profit entities available to the public for purposes of recreational use.

PROJECTION - An extrapolation or extension of known data to derive comparable working data for selected target dates.

PUBLIC ACCESS - The ability of the public to physically reach, enter or use recreation sites including beaches and shores.

PUBLIC LANDS - Any lands in the state which are owned by, leased by or otherwise assigned to the state or any of its agencies and which are used by the general public for recreational purposes.

PUBLIC RECREATION SITES - Sites owned or leased on a long-term basis by a federal, state, regional or local government agency for purposes of recreational use.

RECREATION - The infinite variety of activities which people elect to occupy their leisure time and satisfy their need for diversion.

REGIONAL PARK - A park which is designed to serve two or more communities.

RESOURCE-BASED OUTDOOR RECREATION - Types of outdoor recreation activities dependent on natural and cultural resources, contrasted with "user-oriented" outdoor recreation. For this plan, activities include saltwater beach activities, bicycle riding, boating, camping, fishing, hiking, horseback riding, hunting, nature study, off-highway vehicle riding, picnicking, freshwater swimming and visiting archaeological and historical sites.

RESOURCE/FACILITY REQUIREMENTS - The total amount of outdoor recreation resources/facilities necessary to accommodate the total outdoor recreation demand at any given time.

balanced outdoor recreation opportunities for potential and actual users.

OUTDOOR RECREATION PROGRAM - An ongoing series of related and coordinated efforts designed to further a common outdoor recreation purpose.

OUTDOOR RECREATION RESOURCE AND FACILITY REQUIREMENTS - The total amount of actual outdoor recreation resources and facilities necessary to supply a specified amount of outdoor recreation demand at a given time.

OUTDOOR RECREATION RESOURCE AND FACILITY GUIDELINE - Hypothetical measures of outdoor recreation opportunities expressed as park, resource or facility units which are intended to represent conditions of use and optimum levels of supply for the individual user, a given population of residents or a specific service area within a city or county.

USE GUIDELINE (OR USE STANDARD) - A hypothetical measure of use conditions for outdoor recreation resources and facilities, e.g. the number of hikers per unit of trail, the number of bathers per unit of beach, etc. Use guidelines are used to translate outdoor recreation supply (expressed in physical units of measure) into outdoor recreation demand (expressed in user-occasions).

POPULATION GUIDELINE - An optimum ratio of a given quantity of resources and facilities to a hypothetical number of people, e.g. one tennis court per 2,000 population. Population guidelines are provided for both resource-based and user-oriented activities and are used primarily by local government and private development agencies.

SITE GUIDELINE - An estimate of local park and recreation area acreage proposed for serving various specific service areas or particular populations residing within a given radius, e.g. two acres of neighborhood park per 1,000 population, serving not more than 5,000 people and a population residing within 1/4 to 1/2 mile of the park.

OUTDOOR RECREATION RESOURCES - Those natural resources used for the support of outdoor recreation, such as land, water, wildlife, natural scenery, etc. A special case is made where historical and archaeological remains are concerned. Although not natural resources, they are included because of their limited, non-renewable character.

OUTDOOR RECREATION SITE - An outdoor recreation area of relatively small size.

OUTDOOR RECREATION SUPPLIER - An agency, organization, group or individual, either public or private, with a broad area of responsibility for providing public outdoor recreation, distinguished on the basis of both the nature of the supplier and the nature of the outdoor recreation supplied. Six categories of outdoor recreation suppliers have been defined: federal and state government, county and municipal government, private commercial enterprise, private non-profit, private club and private un-inventoried.

OUTDOOR RECREATION SUPPLY - The total amount of potential outdoor recreation afforded at any given time by an outdoor recreation system.

OUTDOOR RECREATION SUPPLY CAPACITY - The amount of outdoor recreation which a given outdoor recreation area, resource, facility or site can accommodate or provide at any given time under a specified measure of use conditions.

OUTDOOR RECREATION SUPPLY POTENTIAL - The amount of potential outdoor recreation afforded in the future by any outdoor recreation system.

MULTI-PURPOSE OUTDOOR RECREATION FACILITY - (As contrasted to a "single purpose facility.") An outdoor recreation facility which is designed for more than one activity use, e.g. athletic field or racquetball/handball court.

MULTIPLE USE - A land management objective seeking to coordinate several environmental, recreational, economic, historic, cultural and/or social values in the same geographic area in a compatible and sustainable manner.

NEIGHBORHOOD PARK - A park which serves the population of a neighborhood and is generally accessible by bicycle or pedestrian walkways.

OPEN SPACE - Undeveloped lands suitable for some types of recreation activities or conservation uses.

OUTDOOR RECREATION - The pursuit of leisure-time activities which occur in an outdoor setting. For clarification on types of outdoor recreation, see "resource-based outdoor recreation" and "user-oriented outdoor recreation."

OUTDOOR RECREATION ACTIVITY - A specific, individual type of outdoor recreation. Activities are divided into two categories: active activities are those which involve some direct and specialized physical manipulation by the participant such as swimming, hiking, boating, etc. and passive activities are those which are more mental than physical, such as sightseeing, nature study, scenic appreciation, etc.

OUTDOOR RECREATION AREA - Generally, any expanse of real estate, of no particular size, used for outdoor recreation. Used in the plural it is all-inclusive, although in specific usage it would be contrasted with an "outdoor recreation site" by being larger and broader in purpose.

OUTDOOR RECREATION DEMAND - The quantity of outdoor recreation necessary to satisfy all prospective participants during any given time period. Demand is not strictly a matter of desire, but rather of desire tempered by such limiting factors as opportunity, awareness, financial ability, physical ability, and competing uses of available time.

OUTDOOR RECREATION FACILITIES - Those improvements or artificially installed accessories which facilitate the use of an area or a resource for outdoor recreation. Facilities are divided into two categories, primary facilities are those that are essential or extremely desirable for conducting a particular outdoor recreation activity, such as launching ramps for boating, trails for cycling, roads for access to areas, etc. and secondary facilities are those that are desirable as a further enhancement of the recreational experience but are still dispensable, such as outdoor grills for picnicking and camping, docks for boating, etc.

OUTDOOR RECREATION INVENTORY - The sum of all public and private outdoor recreation areas, resources and facilities making up a complete outdoor recreation system. Also, the process of assembling and cataloging information on such a system.

OUTDOOR RECREATION NEED - The amount by which outdoor recreation demand exceeds available outdoor recreation supply in a given area. Used in the plural, "needs" usually refers to the actual resources and facilities which comprise "need."

OUTDOOR RECREATION OPPORTUNITY - The availability of a preferred type of outdoor recreation to a potential user or participant. Used in a collective sense, it refers to the total amount of potential outdoor recreation available at any given time.

OUTDOOR RECREATION PLAN - An overall framework for the planning and provision of

HABITAT FRAGMENTATION - Human activity such as agriculture, road building and suburb and city development, resulting in the creation of small isolated areas that are poorly suited to maintaining ecological function and support smaller populations of remaining species. Two components of habitat fragmentation which may result in extinction include the reduction in total habitat area, resulting in reduction in population sizes and redistribution of the remaining area into distinct fragments, affecting dispersal and immigration rates.

HISTORIC RESOURCES - All areas, districts or sites containing properties listed on the Florida Master Site File, the National Register of Historic Places or designated by a local government as historically, architecturally or archaeologically significant.

INFRASTRUCTURE - Man-made structures which serve the common needs of the population, such as sewage disposal systems, potable water systems, potable water wells serving a system, solid waste disposal sites or retention areas, stormwater systems, utilities, piers, docks, wharves, breakwaters, bulkheads, seawalls, bulwarks, revetments, causeways, marinas, navigation channels, bridges or roadways.

INTENSITY - An objective measurement of the extent to which land may be developed or used, including the consumption or use of the space above, on or below ground, the measurement of the use of or demand on natural resources, and the measurement of the use of or demand on facilities and services.

INTENSIVE USE - (As contrasted with "extensive use.") Use of an outdoor recreation area for outdoor recreation activities which requires a relatively low "land/man" ratio or small amount of resource per user served, e.g. swimming, picnicking, sightseeing, etc.

LAND ACQUISITION - Obtaining land and related resources for public outdoor recreation by various means.

LAND PURCHASE - The acquisition of land and related resources in which title to the property is obtained by transaction involving payment to the grantor.

LANDSCAPE ECOLOGY - The study of native landscape structure, function and change at the scale of entire landscapes, as well as the application of the results to the design and management of both natural and human-dominated areas.

LEVEL OF SERVICE - An indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. Level of service shall indicate the capacity per unit of demand for each public facility.

MANAGEMENT AREA - An area devoted to specialized management for either game (wildlife management area) or sport fish (fish management area) and declared to be such by the Florida Fish and Wildlife Conservation Commission.

MARINE WETLANDS - Areas with a water regime determined primarily by tides and the dominant vegetation is salt tolerant plant species.

MITIGATION BANKING - Preserving, restoring or enhancing wetland areas for the purpose of setting them aside to compensate for future conversions of wetlands for development activities. A wetland bank may be created when a government agency, corporation or nonprofit organization undertakes such activities under a formal agreement with a regulatory agency. The value of a bank is determined by quantifying the wetland values restored or created in terms of "credits."

CULTURAL RESOURCES - Archaeological and historical sites and properties. The significance of these resources is derived not only from individual artifacts but also from the spatial arrangement of the artifacts in both horizontal and vertical planes.

DEMAND - See "OUTDOOR RECREATION DEMAND."

DENSITY - An objective measurement of the number of people or residential units allowed per unit of land, such as residents or employees per acre.

DEVELOPMENT - The act of physically altering an area, site or resource to increase its ability or capacity to serve outdoor recreation purposes; also a representative result of such improvement. Development usually implies improvement by degrees and pertains primarily to the process of opening up, landscaping, erecting structures and facilities, etc. It is a more comprehensive term than "improvement."

ECOSYSTEM MANAGEMENT - An integrated approach to the management of Florida's green infrastructure of native landscapes and communities recognizing the biological, physical and chemical elements of discrete environments conducted through the use of tools such as planning, land acquisition, environmental education, regulation and pollution prevention designed to maintain, protect and improve the state's natural managed and human communities.

ECOTOURISM - Tourism based principally upon natural and archaeological/historical resources that involves traveling to relatively undisturbed or uncontaminated natural areas with the specific object of admiring, studying and enjoying the scenery and its wild plants and animals, as well as any existing cultural features (both past and present) found in these areas.

EXTENSIVE USE - (As contrasted with "intensive use.") Use of an outdoor recreation area for outdoor recreation activities which require a relatively high "land/man" ratio or large amount of resource per user served, e.g. hunting, wilderness camping, etc.

FLORIDA GREENWAYS AND TRAILS SYSTEM - Statewide system proposed to link natural areas, open spaces and trails in Florida, consisting of large or medium-sized hubs, smaller sites and extensive to small connective landscape features.

FLORIDA SCENIC HIGHWAY - Any public road on the State Highway System that is designated by the Department of Transportation pursuant to Section 335.093, F.S.

FUNDING ASSISTANCE - The awarding of funds for assistance in financing the acquisition and development of an outdoor recreation project.

COST SHARING - The awarding of funds for financial assistance in the acquisition and development of an outdoor recreation project which is matched in varying amounts by the project's sponsor.

MATCHING BASIS - The awarding of funds for financial assistance in the acquisition and development of an outdoor recreation project which is matched equally by the project's sponsor.

GREENWAY - A linear open space established along either a natural corridor, such as a riverfront, stream valley or ridgeline, or over land along a railroad right-of-way converted to recreational use, a canal, a scenic road or other route; any natural or landscaped course for pedestrian or bicycle passage; an open space connector linking parks, nature reserves, cultural features or historic sites with each other and populated areas; or a local strip or linear park designated as a parkway or greenbelt.

Appendix A - Terms and Definitions

ARCHAEOLOGICAL RESOURCES - The physical evidence or remains of known historic or prehistoric human life, activity or culture. Significant ruins, artifacts, inscriptions, structural and/or human remains may be considered archaeological resources.

BEACH - The zone of unconsolidated material that extends landward from the mean low water line to the place where there is marked change in material or physiographic form, or to the line of permanent vegetation, usually the effective limit of storm waves. "Beach," as used in the coastal management element requirements is limited to oceanic and estuarine shorelines.

BICYCLE AND PEDESTRIAN WAYS - Any road, path or way which is open to bicycle travel and traffic afoot and from which motor vehicles are excluded.

BUFFER AREA - An area or space separating an outdoor recreation area from influences which would tend to depreciate essential recreational values of the outdoor recreation area. Especially needed in cases such as wilderness areas where the values involved are fragile or volatile or where the outside influences are of a particularly harsh and incompatible nature, as in urban or industrial areas, or along a busy highway.

CARRYING CAPACITY - The amount of outdoor recreation which a given outdoor recreation area, resource or facility can actually accommodate or provide at any given time under existing conditions.

COMMUNITY PARK - A park located near major roadways and designed to serve the needs of more than one neighborhood.

COMPATIBLE OUTDOOR RECREATION ACTIVITIES - Outdoor recreational activities conducted on the same resource base without interfering with each other and which are not harmful to the environment.

COMPREHENSIVE PLAN - Plan that meets the requirements of Section. 163.3177 and 163.3178, F.S., and thus contains the guidelines, principles and standards for the orderly, coordinated and balanced future economic, social, physical, environmental and fiscal development of the area.

CONCURRENCY - The necessary public facilities and services to maintain the adopted level of service standards are available when the impacts of development occur.

CONSERVATION AND RECREATION LANDS (CARL) - Land acquisition program administered by the Florida Department of Environmental Protection (DEP) to acquire property from willing property owners to protect environmentally endangered lands for state parks, forest, wildlife management areas, beaches and recreation areas which are sensitive due to the presence of unique or rare habitats, endangered or threatened species, or unique historical, archaeological or geological features.

CONSERVATION USES - Activities or conditions within land areas designated for the purpose of conserving or protecting natural resources or environmental quality, including areas designated for flood control and floodplain management, and the protection of quality or quantity of ground or surface water, commercial or recreational fish and shellfish habitat, or vegetative communities or wildlife habitats.

Appendix B - Acronyms

CAMA	Office of Coastal and Aquatic Managed Areas
CARL	Conservation and Recreation Lands
CERP	Comprehensive Everglades Restoration Plan
DEO	Florida Department of Economic Opportunity
DEP	Florida Department of Environmental Protection
DFFM	Division of Freshwater Fisheries Management
DHGM	Division of Hunting and Game Management
DHR	Division of Historical Resources
DLE	Division of Law Enforcement
DMFM	Division of Marine Fisheries Management
DOS	Florida Department of State
DOT	Florida Department of Transportation
DRP	Division of Recreation and Parks
DSL	Division of State Lands
DWRM	Division of Water Resource Management
FCT	Florida Communities Trust
FDOA	Florida Disabled Outdoors Association
FFS	Florida Forest Service
FGTS	Florida Greenways and Trails System
FHWA	Federal Highway Administration
FIND	Florida Inland Navigation District
FRDAP	Florida Recreation Development Assistance Program
FWC	Florida Fish and Wildlife Conservation Commission
LATF	Land Acquisition Trust Fund
LIFE	Learning in Florida's Environment
LWCF	Land and Water Conservation Fund
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NWFWMD	Northwest Florida Water Management District
OGT	Office of Greenways and Trails
PAWV	Office of Public Access and Wildlife Viewing
RTP	Recreational Trails Program
SFWMD	South Florida Water Management District
SJRWMD	St. Johns River Water Management District
SRWMD	Suwannee River Water Management District
SWFWMD	Southwest Florida Water Management District
USACE	United States Army Corps of Engineers
USDOD	United States Department of Defense
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
UTAP	Universal Trail Assessment Process
WCIND	West Coast Inland Navigation District

Appendix C - Florida Greenways and Trails System (FGTS) Maps

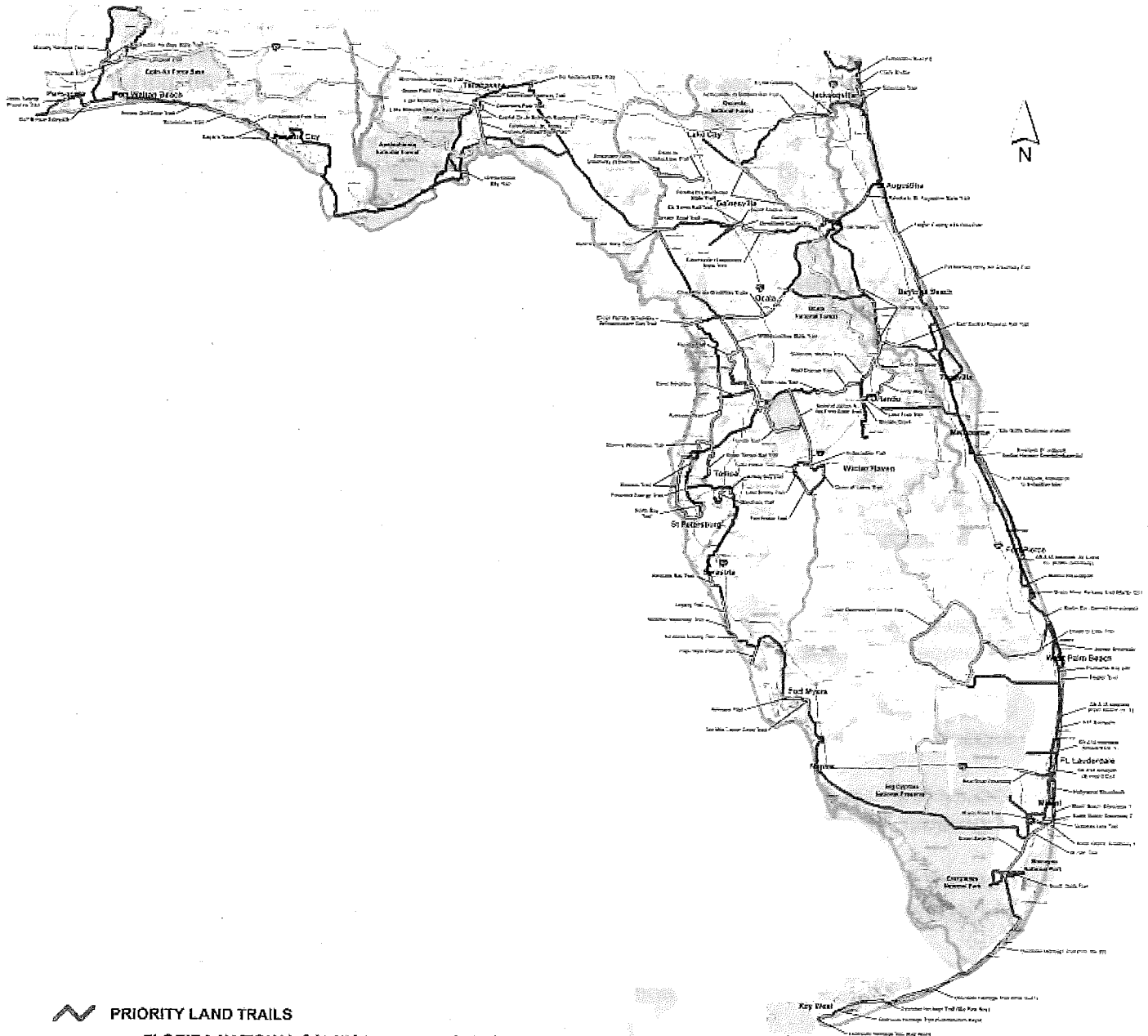
The Office of Greenways and Trails oversees the FGTS trail maps which include the following:

The Land Trails Opportunity Map represents the existing, planned and conceptual non-motorized trails that form a land-based trail network of state and regional importance. This map is a synthesis of trail planning efforts being conducted by cities, counties, transportation planning organizations, and other agencies and non-profits throughout Florida. This map does not include all existing, proposed and conceptual trails in Florida, but focuses on linear trails of state and regional significance to form a comprehensive connected system of multiple and single-use trails to accommodate uses such as: walking, hiking, bicycling, mountain biking, horseback riding, skating, and wildlife viewing.

The Paddling Trails Opportunity Map represents the vision for a comprehensive water-based trails system, this map includes waterways that are designated as part of the FGTS or are appropriate for future designation. Because water trails are not consistently captured in local and regional planning efforts like land trails typically are, it is important to establish basic criteria for inclusion. Therefore, to be included in the Paddling Trails Opportunity Map, a waterway shall: represent an existing or potential destination trail that reaches beyond the local area due to its scenic qualities and diversity of experiences; be at least three miles in length, preferably longer; and be navigable during the majority of months in an average year. The Priority Trails Map encompasses the most important corridors and connections within the FGTS Land Trails Opportunity Map and Paddling Trails Opportunity Map. To the greatest extent possible, the corridors and connections within the Priority Trails Map:

- 1) Support and further national, state or regional trail projects, plans and initiatives that encompass multiple counties.
- 2) Include existing and planned long-distance trails and trail loops that serve as destinations to support nature-based tourism and economic development.
- 3) Include the State Trails, the Cross Florida Greenway and other major connecting trails of greatest length (five miles or longer).
- 4) Connect major population centers to provide access for the greatest number of Floridians.
- 5) Build on past and programmed state and federal investment in trails, particularly when matched by funding from local and private sources.
- 6) Coincide with transportation, utility and canal corridors that facilitate major connections.
- 7) Coincide with the Florida Ecological Greenways Network.
- 8) Connect natural, recreational, cultural and historical sites providing a range of experiences.
- 9) Provide a safe, accessible and high quality experience for users.

PRIORITY TRAILS



-  **PRIORITY LAND TRAILS**
-  **FLORIDA NATIONAL SCENIC TRAIL - PRIORITY**
-  **PRIORITY PADDLING TRAILS**
-  **Existing Trails in Priority Network**
-  **Conservation Lands**

The Priority Trails Map encompasses the most important corridors and connections within the FGS Land Trails and Water Trails Opportunity Maps. Following completion of this map in late 2012, the gaps will be identified and prioritized in 2013. The Florida National Scenic Trail (FNST) corridor included on this Priority Trails Map reflects the route currently proposed for designation by the US Forest Service. Whatever FNST route results from the current designation process will be included on the Priority Trails Map.

Florida
Greenways & Trails
System
Plan

LAND TRAILS OPPORTUNITY MAP



* 2012 LAND TRAILS OPPORTUNITY



FLORIDA NATIONAL SCENIC TRAIL OPPORTUNITY



CONSERVATION LANDS

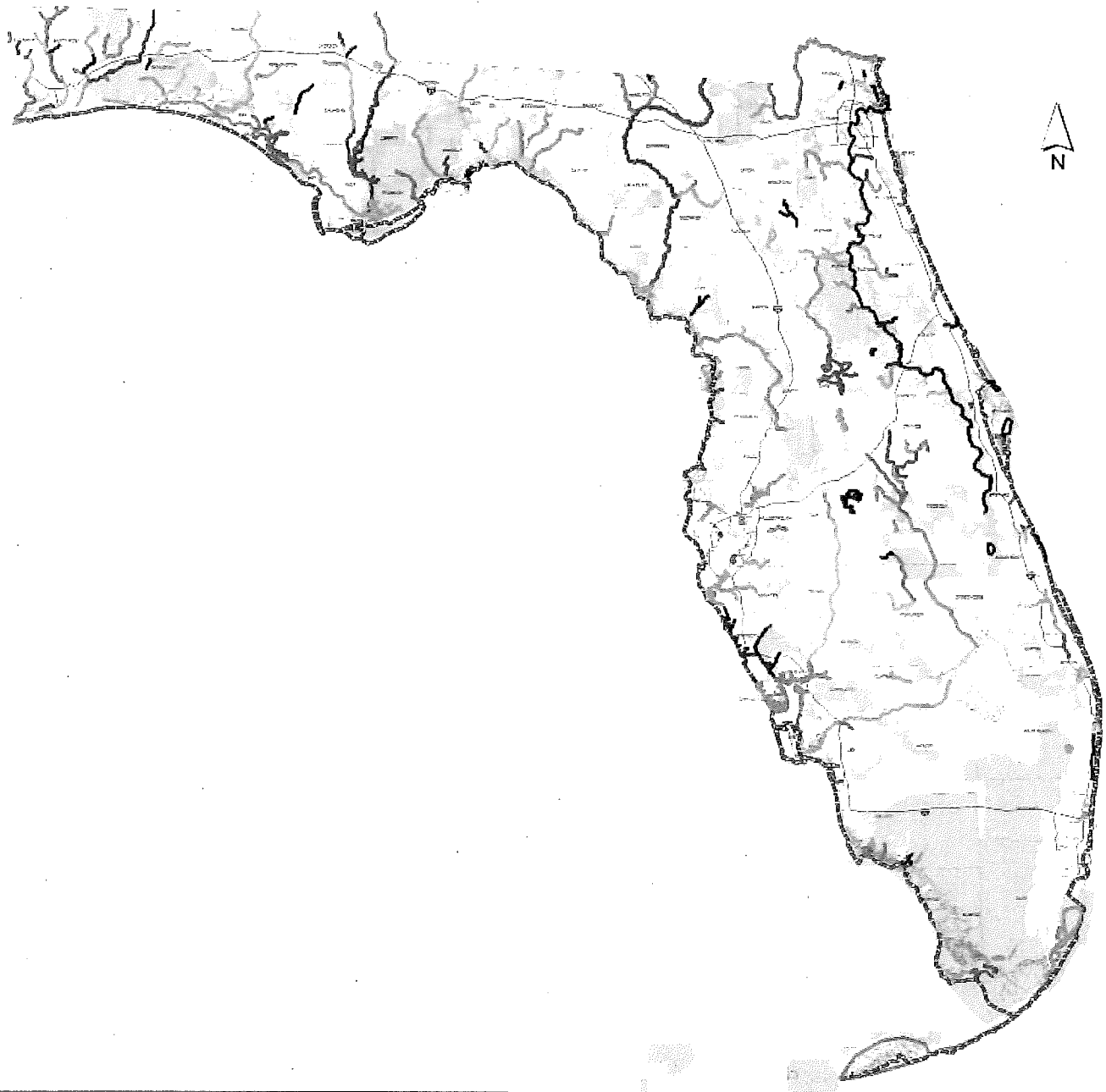
* The different colors of the Land Trails represent the beginning and ending points of individual agencies

Scale: 1:100,000



Florida
Greenways & Trails
System
Plan

PADDLING TRAILS OPPORTUNITY MAP



 • 2012 PADDLING TRAILS OPPORTUNITY

 FLORIDA NAVIGATIONAL SALTWATER PADDLING TRAIL

 CONSERVATION LANDS

* The reference points of the trail that are indicated in the map are only for reference and do not represent a guarantee.

Map Date: 10/1/12



Florida
Greenways & Trails
System
Plan

TOP TEN RECOMMENDATIONS OF THE CONSERVATION TASK FORCE

1 Take a leadership role in the community to promote conservation.

Park and recreation agencies have a unique opportunity to bring governmental agencies, nonprofit organizations, community leaders, and the public together for the cause of working on community-wide conservation objectives—clean water, wildlife habitat preservation, reducing energy use, and improving environmental quality. Park and recreation agencies must lead the way in promoting conservation to diverse and underserved audiences.

2 Lead by example in employing best management conservation practices in parks.

Park and recreation agencies should become the catalyst in the community for conservation by showing how best practices can be adopted—not mowing what doesn't need to be mowed, stopping wasteful energy consumption, and reducing pesticide use, for example. Show the public how conservation practices can benefit everyone.

3 Protect natural resources in parks and in the community.

A core mission of public parks is to protect land and water resources and to be stewards of natural resources. This means committing personnel and resources to protect natural and cultural resources and creating sustainable long-term methods of funding this conservation mission. Parks and recreation agencies are entrusted with some of the most important public assets of a community and the conservation and long-term protection of this public trust is and should be a core component of every parks and recreation agency's mission.

4 Forge partnerships that foster the mission of conservation.

The greatest and most

beneficial conservation successes most often occur as a result of collaboration. Park and recreation agencies should partner with nonprofit and community service organizations, universities and colleges, school systems, other governmental agencies, and non-traditional partners for conservation outcomes. Promote health, education, green jobs, and other goals while working toward a common mission of conservation.

5 Create sustainable landscapes that demonstrate principles of conservation.

Use sustainable landscapes to save taxpayer funds, to measurably improve conservation benefits, and to educate the public about conservation. For example, agencies can reduce turf grass and mowing frequency, replace turf with native plants, manage floodplains for multiple uses including conservation and public recreation, enhance wetlands for water filtration and groundwater recharge, plant model landscapes of drought-tolerant native plants adapted to climate and culture, and promote parks as food sources through edible landscapes and community gardens.

6 Engage youth in conservation.

Get kids and teens outdoors and enjoying their parks. The experience of nature is inherently rewarding for youth. Set as a goal connecting kids in the community to nature and the outdoors. Conservation should be embedded in every aspect of recreation planning. Children and youth will be fascinated by nature and will develop a lifelong affinity, as well as a conservation ethic, if they have early opportunities to enjoy nature and recreate outdoors.

7 Involve volunteers in conservation and stewardship.

Create a sense of belonging

and stewardship for parks by creating a personal sense of ownership and value. Enable people to identify with their parks and natural resources, and to care about their future. Sustain stewardship by creating meaningful public participation in implementation of conservation principles and practices.

8 Establish a strategic land acquisition strategy based on knowledge and awareness of significant natural and cultural resources (watershed protection, unique ecological characteristics, and sensitive natural areas deserving protection). As the largest owners of public land in most communities, park and recreation agencies should lead the way in developing a strategic vision for preserving open space and conserving important landscapes and natural features.

9 Conserve energy in all ways.

Park and recreation agencies must lead by example, showing the public how and why they should adopt practices that they can see demonstrated in parks and recreation facilities. Park and recreation agencies should adopt energy conservation measures that make sense and save public taxpayer funds.

10 Utilize technology to promote conservation.

Park and recreation agencies need to embrace technology to promote conservation. This is not only in applications such as GIS, but in utilizing social media to engage the public, especially youth. Technology is not to be feared as something that detracts from the conservation mission of parks agencies, but rather it is to be accepted as a means of sharing knowledge and connecting people to conservation and stewardship.

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Role of Parks and Recreation in Conservation

Parks are key to ensuring the health of our environment because they play a critical role in maintaining healthy ecosystems, providing clean water and clean air, and enabling conservation of natural resources.

The mission of public parks and recreation at all levels should support the conservation and stewardship of land, water, and natural resources.

Parks and public lands serve an essential role in preserving natural resources and wildlife habitat, protecting clean water and clean air, and providing open space for current and future generations. Parks provide an essential connection for Americans of all ages and abilities to the life-enhancing benefits of nature and the outdoors.

As the largest source of open space land in the country, parks and public lands are critical to the quality of life for all Americans. The quality of life for every person in every community is improved by clean, green, and accessible parks and open space.

Parks are key to ensuring the health of our environment because they play a critical role in maintaining healthy ecosystems, providing clean water and clean air, and enabling conservation of natural resources. Park and recreation professionals should become leaders in protecting open space for the common good, and actively lead in sustainably managing and developing land and resources for public use and environmental conservation for the benefit of the public and the resources. In addition, park and recreation professionals should provide education and interpretation of the value of conservation to the public, connect children and youth to nature and the outdoors, and coordinate environmental stewardship with other public and nonprofit entities.

The benefits of conservation and environmental stewardship are many, including:

- Providing carbon-reducing sustainable landscapes that cleanse air and water, replenish aquifers, reduce storm water runoff, and protect wildlife habitat;
- Offering the public access to safe, affordable, and healthy ways to experience and appreciate nature; and
- Contributing significantly to the economic well-being of communities through energy and resources conservation and providing many economic benefits to communities derived from outdoor recreation.

The National Recreation and Park Association's goal is to place public parks and recreation at the forefront of conservation and environmental stewardship nationally by facilitating and promoting conservation leadership in every community. NRPA believes that park and recreation agencies should be leaders in conservation within their communities through planning, stewardship, and public engagement.

Supporting Points

The following support the critical role of public parks and recreation in conservation.

- The annual economic value of outdoor recreation to the nation is estimated at \$730 billion, according to the Outdoor Industry Association.
- The return on investment from protecting open space for public benefit from ecosystem services of water filtration, climate change protection, and other aspects of conserving public open space is estimated to be 100 to 1, according to a study by the Gund Institute for Ecological Economies at the University of Vermont.
- The number of Denver residents in 1980 who said they would pay more to live near a greenbelt or park: 16 percent. The number in 1990: 48 percent.
- The estimated gross increase in residential property value resulting from proximity to San Francisco's Golden Gate Park is \$500 million to \$1 billion.
- In Pima County, Arizona, wildlife viewing in one year amounted to an estimated \$173.5 million in direct spending; \$90.7 million in salaries and wages associated with 3,196 jobs; and about \$9.9 million in state sales and fuel tax revenue, according to the Arizona Department of Fish and Game.
- Public support for land conservation and open space protection ballot measures has remained above 70 percent passage over the past decade, even during times of economic downturns and recessions.

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News Stories

5.30.19

Top Story

Calif. aquarium opens environmentally conscious wing •

5.30.19

Around The Country

Is hosting the Grand Prix at a park a good idea? •

5.30.19

Around The Country

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Climate Resilient Parks



Parks are key community stakeholders when it comes to addressing the effects of climate change. From protecting water resources via green infrastructure practices, to reducing urban heat island effect through city wide forest restoration - parks play a critical role in building climate resilient communities.

With limited resources, it can be a heavy lift for park and recreation agencies to incorporate principles of climate resiliency into their operations, programs and management. NRPA remains committed to supporting park and recreation agencies in meeting this challenge. Beginning spring 2017, NRPA kicked off a multiyear effort to examine and elevate the critical role that park and recreation agencies play in

building healthy and vibrant, climate resilient communities. The following resources are intended to help agencies address the impacts of climate change on parks:

Climate and Health Solutions

NRPA is increasing the number of high performing public green spaces that address climate resilience, improve community health conditions, and advance equity within communities across the country. Through the *Creating Healthy Communities through GSI in Parks* initiative, NRPA will equip park and recreation professionals with tools and knowledge to inform decision making and plan for climate adaptation projects in parks that aim to improve community health and address social determinants of health.

NRPA will release a communications toolkit in November 2019 highlighting powerful evidence for municipal agencies and community partners to make the case for integrating health outcomes into GSI

projects. NRPA will also release a Green Infrastructure and Health Policy Action Framework in June 2020 providing practical policy solutions and case studies that support park staff and advocates, decision makers, planners and others in promoting green infrastructure in parks that advance health outcomes.

NRPA Report: Park and Recreation Sustainability Practices



To gain an understanding of the sustainability practices currently implemented by park and recreation agencies and of how agencies are contributing to sustainability in their communities, NRPA surveyed nearly 400 park and recreation agencies around the country. This report's findings should inspire agencies to implement more sustainable practices at their parks and give all agencies a sense of pride to be a part of a large network of park and recreation agencies striving to create healthy, resilient and thriving communities through parks.

[Read The Report](#)

Resources for Climate Resilient Parks

Great Urban Parks Campaign

NRPA created the Great Urban Parks Campaign to improve environmental and social outcomes in underserved communities through promoting and advancing green infrastructure stormwater management projects within parks.

Tools and Resources

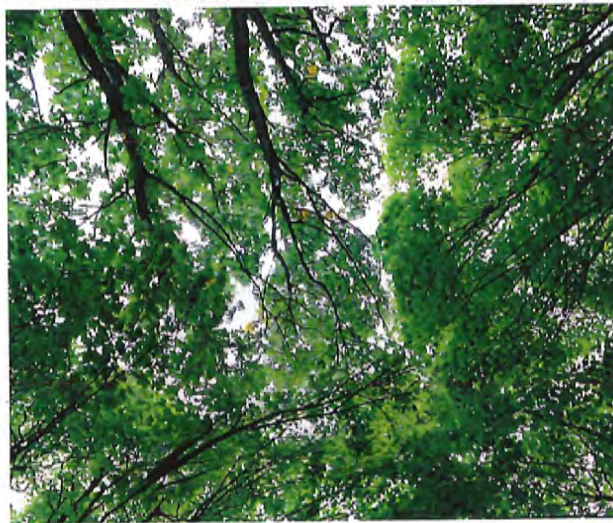
- NRPA Park Pulse: Prioritizing Environmental Initiatives
- Identify Climate Hazards and Solutions (Naturally Resilient Communities)
- National Green Infrastructure Certification Program

News Stories

5.30.19

Top Story

Calif. aquarium opens environmentally conscious wing ▶



PARK AND RECREATION SUSTAINABILITY PRACTICES

A SUMMARY OF RESULTS FROM
AN NRPA MEMBER SURVEY



www.nrpa.org

CLIMATE RESILIENT PARKS

Parks are key community stakeholders when it comes to addressing the effects of climate change. From protecting water resources via green infrastructure practices, to reducing urban heat island effect through city wide forest restoration - parks play a critical role in ensuring that our communities successfully adapt and thrive in light of a rapidly changing planet.

TOP 5 WAYS PARKS AND RECREATION IS TAKING ACTION ON CLIMATE CHANGE



77%

OFFER TRANSPORTATION
ALTERNATIVES THAT REDUCE
CARBON FOOTPRINT



70%

PROTECT WATERSHEDS BY
ADOPTING NATURAL RESOURCE
MANAGEMENT PRACTICES



53%

IMPROVE AIR QUALITY BY
INCREASING TREE CANOPY



52%

EDUCATE THE PUBLIC ON
SUSTAINABILITY ACTIONS



51%

REDUCE STORMWATER
RUNOFF AND FLOODING THROUGH
GREEN INFRASTRUCTURE

Percentages are based on a survey of nearly 400 park and recreation agencies.

www.nrpa.org/Climate-Resiliency

INTRODUCTION

What is sustainability? Sustainability is a broad term most often defined as “meeting the needs of the present without compromising the ability of future generations to meet their needs” (Bruntland Report for the World Commission on Environment and Development 1992). Increasingly, as we compete for space and resources, incorporating sustainability principles into our work is no longer something nice to strive for but something we must strive for the benefit of future generations. Sustainability is one piece of the puzzle as communities seek to be more resilient to climate change.

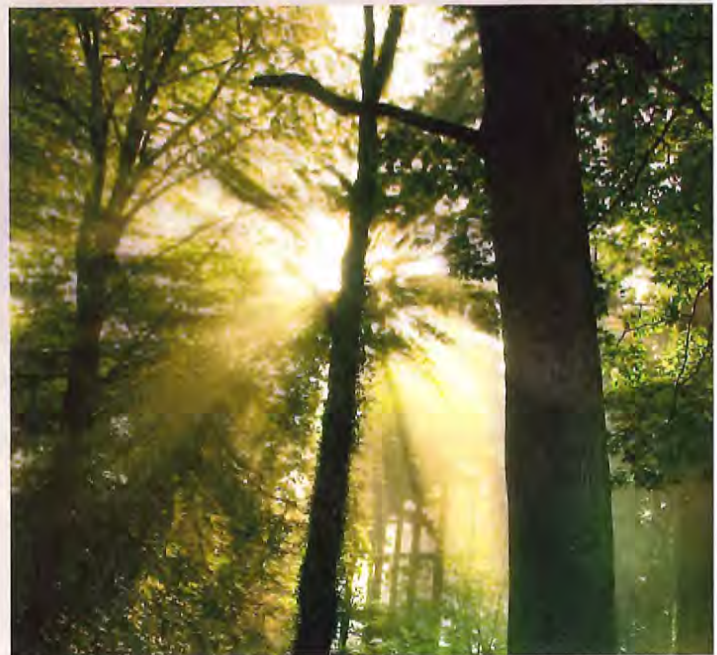
Park and recreation agencies are on the front line of a multitude of issues within and outside of the communities they serve. From matters of health and wellness to social equity, conservation and sustainability, critical topics such as these are addressed daily by park and recreation agencies across the country. Sustainability weaves itself through all those facets. Increasing foot and bike trail access benefits a population's health and wellness while cutting down on the need for driving. Increasing tree canopy and green space in otherwise urban landscapes provide underserved communities with direct access to the physical and mental benefits of nature. Taking measures to mitigate the effects of natural disasters through the use of water diversion tactics or shelter accessibility catapults park and recreation agencies from simple areas of play and relaxation to major agents of change in a community. Sustainable actions and activities make all these and countless other instances possible.

With limited resources, it can be a heavy lift for park and recreation agencies to incorporate principles of sustainability into their operations, programs and management. NRPA remains committed to supporting park and recreation agencies in meeting this challenge. As part of its three-year strategic plan, NRPA is encouraging park and recreation agencies to engage 1,000 communities in the implementation of sustainable practices.

The NRPA Research team worked closely with the association's conservation team to develop a survey to gain an understanding of the sustainability practices currently implemented by park and recreation agencies and of how agencies are contributing to sustainability in their communities. The survey generated responses from 377 park and recreation agencies, resulting in a 12 percent response rate. The key findings from the survey are the basis of this report.

KEY SURVEY HIGHLIGHTS INCLUDE:

- Park and recreation agencies' sustainability activities ***not only focus on environmental benefits but also on public education and cost savings.***
- Even though virtually all park and recreation agencies have implemented many sustainability measures, ***most agencies do not have a documented sustainability plan.***
- Most park and recreation agencies ***do not closely track the cost savings*** that sustainable actions may generate.
- Barriers that keep agencies from implementing more sustainability measures include a ***lack of funding, a lack of dedicated staff and limited expertise on practices.***

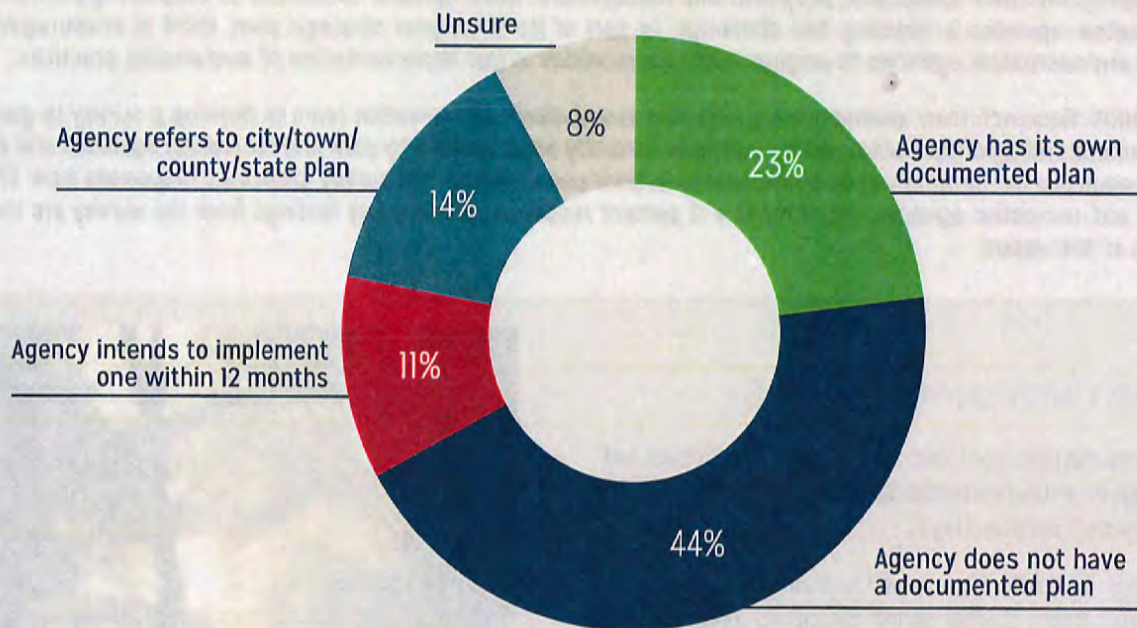


AGENCY SUSTAINABILITY PLANS

In their role as stewards of the environment, virtually all park and recreation agencies support activities that improve sustainability in their communities. These activities can span from educating and connecting the public with nature to reducing negative impacts on the environment.

However, park and recreation agencies less frequently have a formally documented plan that outlines a strategy for preserving natural resources and promoting good conservation and sustainability practices. In fact, of the surveyed park and recreation agencies, just 23 percent currently have a documented sustainability plan, although another 11 percent of agencies intend to put into place a formalized sustainability plan within the next year. In some cases, where the agency does not have its own sustainability plan, it follows the strategies and tactics dictated by the city/town, county or state plan (14 percent). But, in many other cases, park and recreation agencies do not have a plan at the agency level or elsewhere that guides the sustainability activities for the agency (44 percent).

AGENCIES WITH A DOCUMENTED SUSTAINABILITY PLAN
(PERCENT DISTRIBUTION)



Regardless of whether they have a formally documented plan, park and recreation agencies invest in sustainability practices with many goals in mind. Naturally, the most widely cited goal is the environmental benefits that these activities and practices can generate (84 percent of agencies). These may include improving the air and water quality in the community and reducing the agency's impact on the environment (e.g., using fuel-efficient vehicles, reducing the use of pesticides).

84 percent of agencies invest in sustainability activities and practices for the environmental benefits.

Beyond environmental benefits, sustainability activities generate other benefits valued by both the agency and the community. Other widely cited goals of park and recreation agency sustainability activities include:

EDUCATION



COST SAVINGS



PUBLIC SUPPORT



MEETING THE
AGENCY'S MISSION



REGULATORY
OBLIGATION



PUBLIC
RECOGNITION

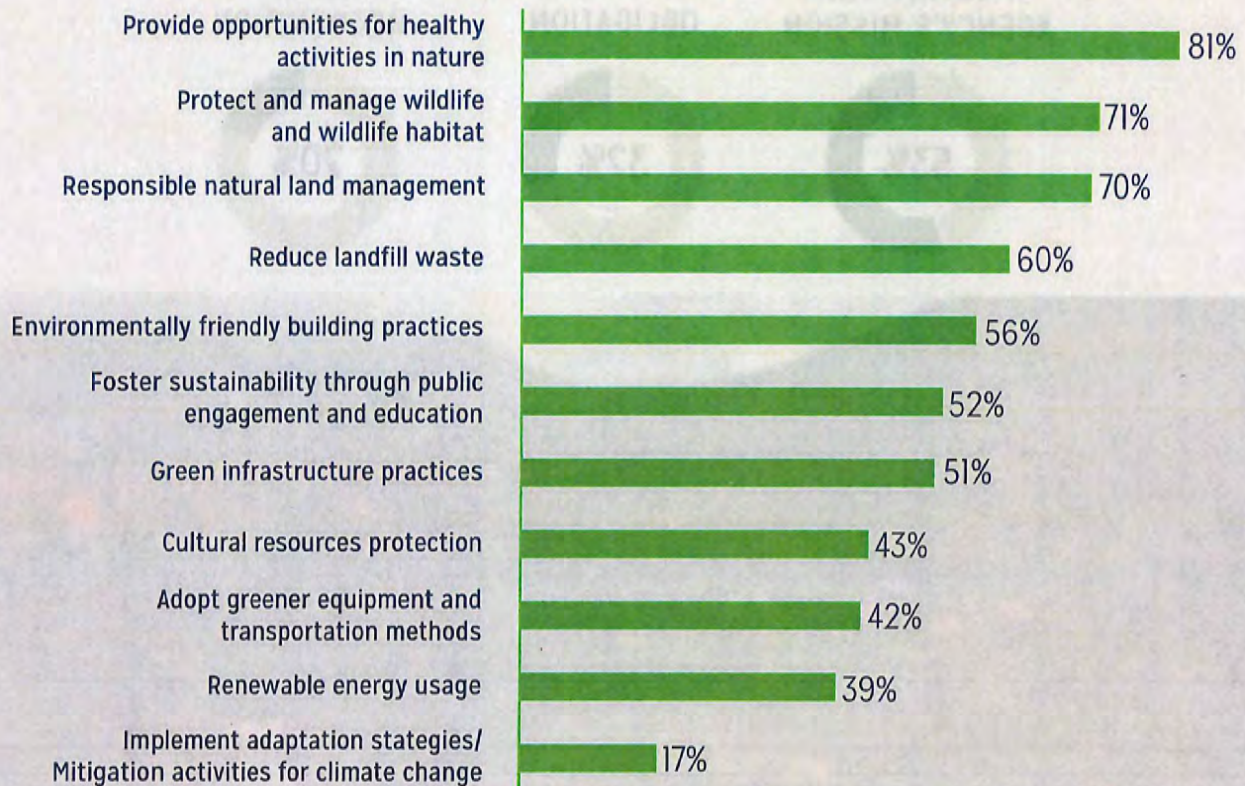


SUSTAINABILITY ACTIVITIES

Park and recreation agencies implement a wide variety of sustainable practices in their communities. Widely cited sustainability activities implemented by park and recreation agencies include:

- Providing opportunities for healthy activity in nature (81 percent of agencies)
- Protecting and managing wildlife and wildlife habitats (71 percent)
- Natural land management (70 percent)
- Reducing landfill waste (60 percent)
- Following environmentally friendly building practices (56 percent)
- Fostering public engagement and education (52 percent)
- Implementing green infrastructure practices (51 percent)

PARK AND RECREATION AGENCIES' SUSTAINABILITY ACTIVITIES (PERCENT OF AGENCIES)



To meet their sustainability goals, park and recreation agencies implement a wide variety of activities, policies and strategies. Some of these actions involve altering purchasing policies for more environmentally friendly goods and services. Other tactics involve a greater investment in infrastructure, education and strategic vision. All of these activities have a wide range of benefits.

PROMOTING HEALTHY ACTIVITIES IN NATURE

Promoting healthy activities in nature not only benefits the population physically and mentally but also contributes to a healthier environment. Research shows that people who are exposed to nature and have experiences in nature are more likely to act responsibly toward it.

Park and recreation agencies providing opportunities for healthy activities in nature indicated implementing the following:

95%

Increasing the accessibility to and the opportunities for walking, biking, public transit

92%

Conserving and maintaining trail systems

62%

Establishing and promoting community gardening opportunities

People who are exposed to nature and have experiences in nature are more likely to act responsibly toward it.

PROTECTING AND MANAGING WILDLIFE AND WILDLIFE HABITAT

Park and recreation agencies provide valuable habitat for wildlife across the country. Many agencies are committed to protecting and managing wildlife and wildlife habitat through various strategies and activities. Even small urban areas can be restored to provide functional habitats for a variety of wildlife and plants. This is especially important for threatened species.

Park and recreation agencies aiming to protect and manage wildlife and wildlife habitats indicated implementing the following:

88%

Controlling and managing invasive species

79%

Promoting activities that lead to the creation and conservation of habitat

50%

Managing human-wildlife interaction while fostering human-wildlife coexistence

44%

Protecting species in need of conservation

39%

Conducting regular inventories of species, habitats and communities

RESPONSIBLE NATURAL LAND MANAGEMENT

A majority of the surveyed park and recreation agencies practice responsible natural land management by conserving and enhancing the integrity of natural lands and natural processes and minimizing the use of harmful treatments.

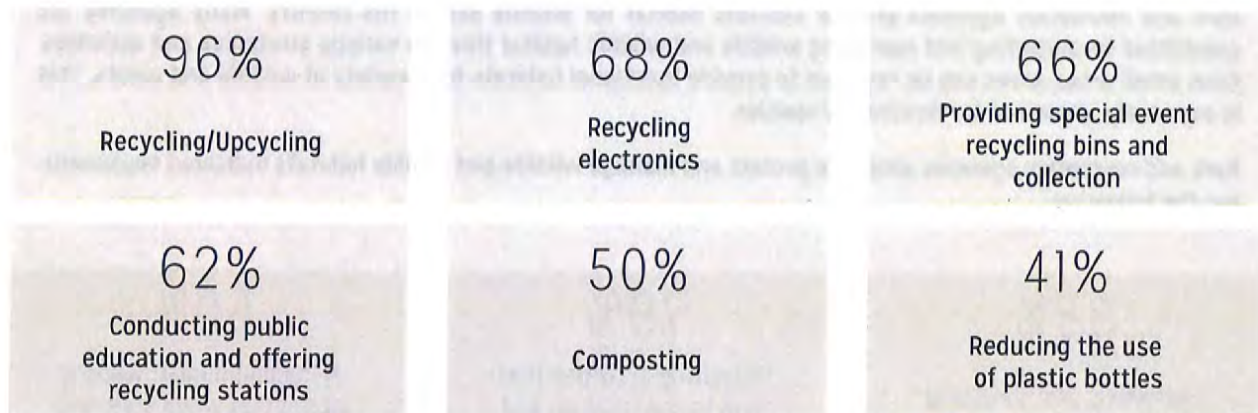
Park and recreation agencies following these practices indicated implementing the following:



REDUCING LANDFILL WASTE

Reducing landfill waste has a compounding effect on the environment. The benefits from reducing landfill waste are multifold, including the reduction of energy-intensive transportation of waste to landfills and the elimination of hazardous and toxic chemicals leaching into surrounding soil and groundwater.

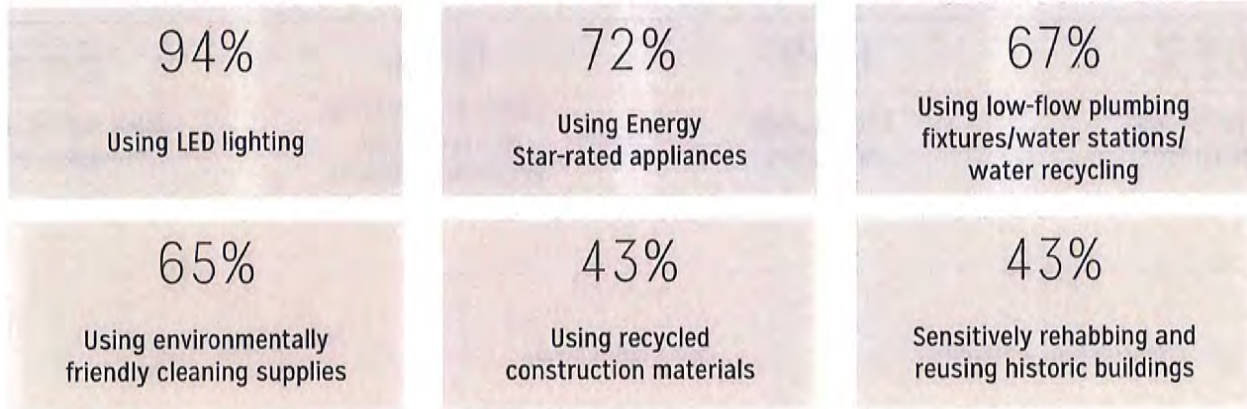
Park and recreation agencies aiming to reduce their contributions to landfills indicated implementing the following:



ENVIRONMENTALLY FRIENDLY BUILDING PRACTICES

Environmentally friendly building practices, including the construction of green and sustainable infrastructure, refer to the use of environmentally responsible and resource-efficient construction processes and materials that minimize the ecological impact of a structure for its entire life.

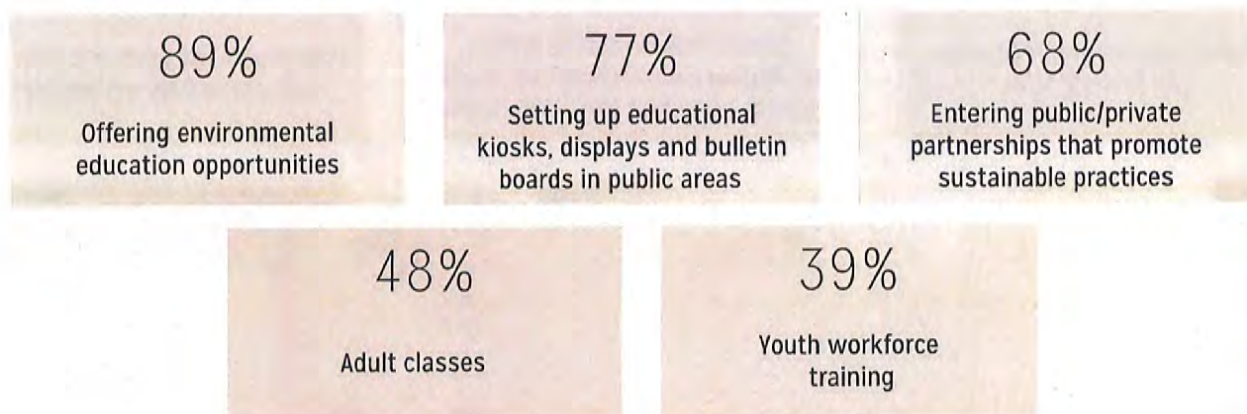
Park and recreation agencies following these practices indicated implementing the following:



PUBLIC ENGAGEMENT AND EDUCATION ACTIVITIES

A vast majority of surveyed park and recreation agencies foster sustainability through public engagement and education activities focused on sustainable topics, greatly expanding their overall impact by influencing the behavior of the general public.

Park and recreation agencies that seek to increase their impact through engaging the public indicated implementing the following:



GREEN INFRASTRUCTURE

Green infrastructure is a resilient approach to managing stormwater runoff and reducing flooding. Vegetation, soils and other elements can be used to increase the capacity of permeable surfaces to naturally filter water and mitigate the effects caused by impermeable services.

Park and recreation agencies that make green infrastructure part of their sustainability efforts indicated implementing the following:

62%

Constructing
rain gardens

60%

Constructing
bioswales

60%

Conserving existing
and increasing
permeable surfaces

56%

Using natural systems
to reduce erosion

56%

Constructing wetlands

38%

Using rain barrels

23%

Installing green roofs on
agency buildings

CULTURAL RESOURCES

Some park and recreation agencies with cultural resources on their land are actively working to safeguard these resources from vandalism, development and weathering.

Park and recreation agencies charged with managing cultural resources indicated implementing the following:

96%

Protecting cultural resources
and historic sites

70%

Committing resources and/or
developing partnerships that enable
cultural education and conservation

47%

Following a management plan for
cultural resource protection



GREEN EQUIPMENT AND TRANSPORTATION METHODS

Green equipment and transportation methods reduce emissions released into the air and the quantity of fossil fuels consumed.

Park and recreation agencies that have adopted these methods indicated implementing the following:

91%

Purchasing fuel-efficient
vehicles

62%

Following anti-idling
practices

59%

Purchasing fuel-efficient
machinery

RENEWABLE ENERGY SOURCES

As owners and operators of a significant number of buildings and infrastructure, park and recreation agencies can promote sustainability by increasing their use of renewable energy sources. Naturally, these energy sources reduce the carbon footprint of the agency while educating the public on the availability of cleaner energy sources.

Park and recreation agencies that use renewable energy sources indicated that they purchase or even generate energy derived from:

85%

Solar

32%

Geothermal

12%

Wind

8%

Biomass

ADAPTING STRATEGIES AND MITIGATION ACTIVITIES FOR CLIMATE CHANGE CONDITIONS

Some park and recreation agencies are adapting strategies and mitigation activities for climate change conditions. In many cases, agencies are changing practices, such as altering plantings and infrastructure, that will help the community mitigate changes resulting from climate change.

Park and recreation agencies indicated implementing the following:

76%

Implementing adaption
strategies for climate
change conditions

47%

Mitigating actions for sea-level
rise, extreme weather events,
flooding, etc.

24%

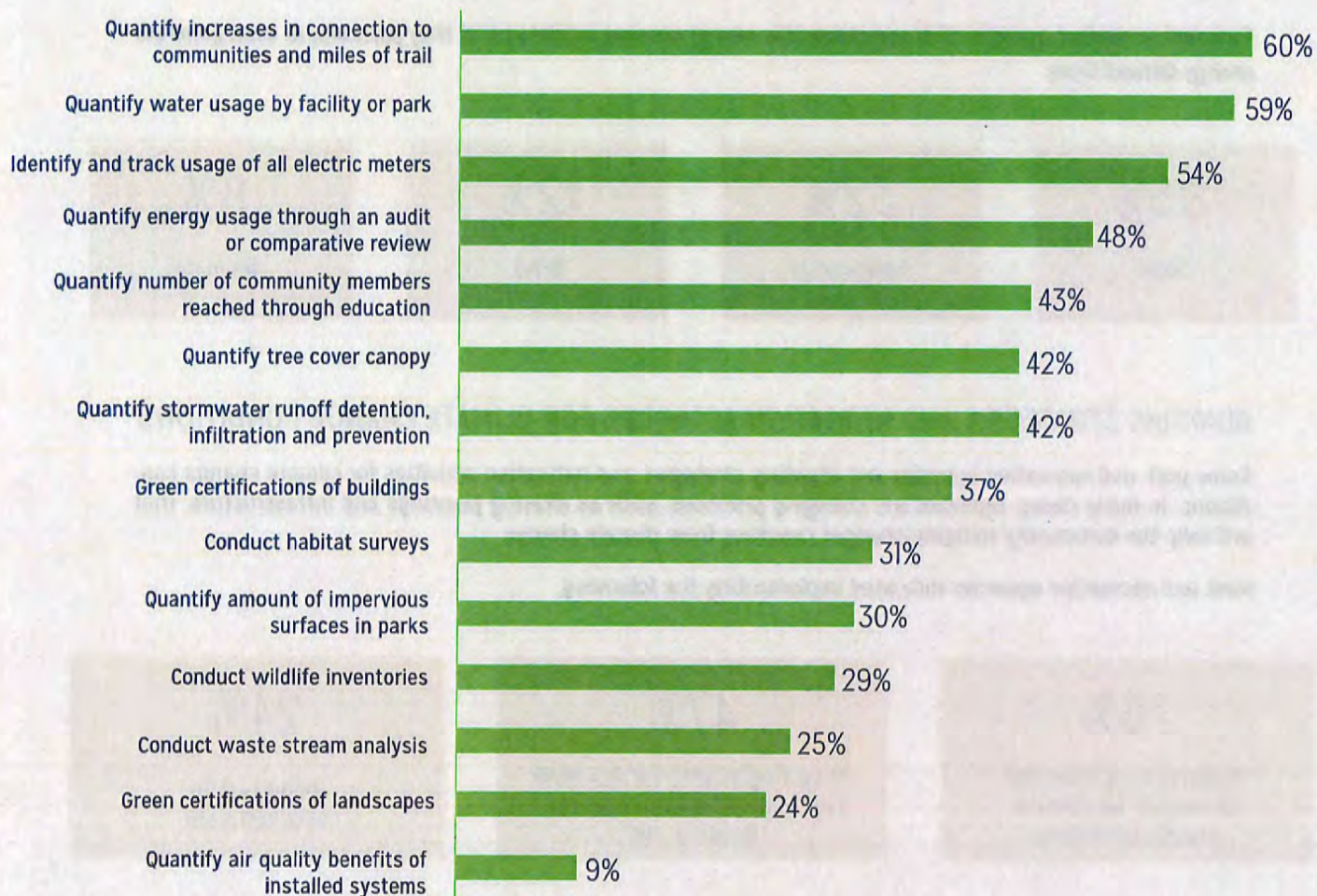
Using carbon
sequestration

MEASURES OF SUSTAINABILITY ACTIVITIES

The saying goes that if you cannot measure it, you cannot manage it. This holds true for park and recreation agencies that operate with limited financial resources. As a result, most park and recreation agencies link investments and activities with desired sustainability outcomes. Seventy-two percent of park and recreation agencies have defined specific measures that gauge the success of their sustainability activities.

An agency's sustainability outcomes can vary greatly, including counting the agency's activities, quantifying protected resources and measuring actual improvements to the environment. Among agencies that measure their sustainability practices, top measures include:

KEY MEASURES OF PARK AND RECREATION AGENCIES' SUSTAINABILITY PRACTICES (PERCENT OF AGENCIES)

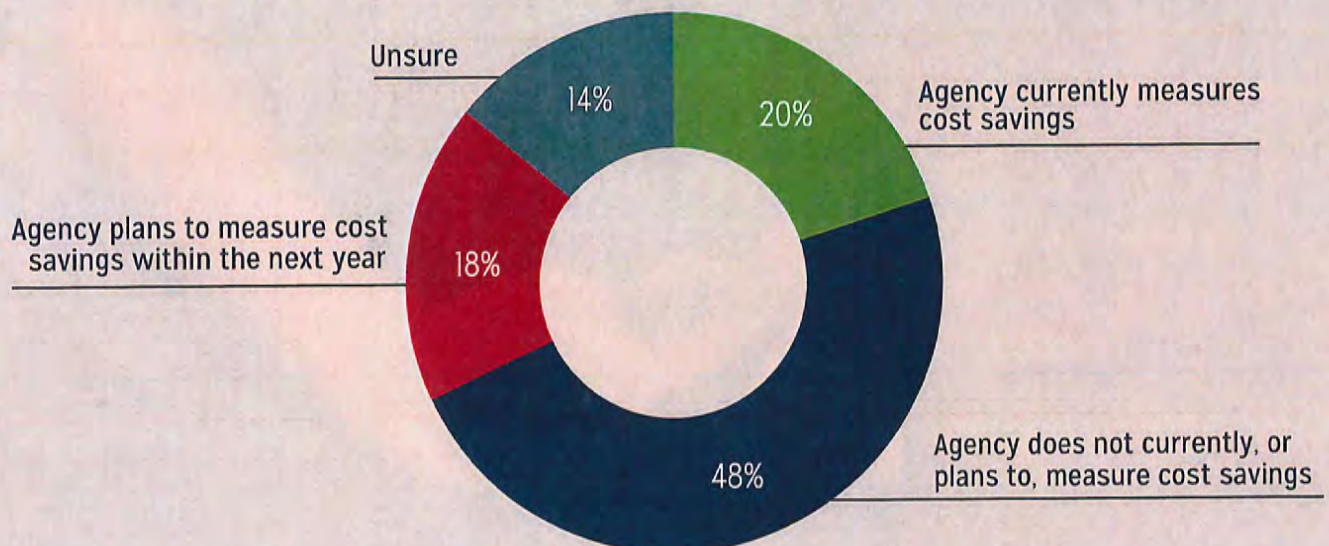




Whereas two in three park and recreation agencies indicate cost savings are a driver for their sustainability activities, most agencies do not measure the financial impact of these investments. Knowing the financial impact of sustainability efforts, along with the environmental benefits and potential health, safety and overall well-being benefits to the community, provide a strong story to key stakeholders and leaders for continued investment in these activities.

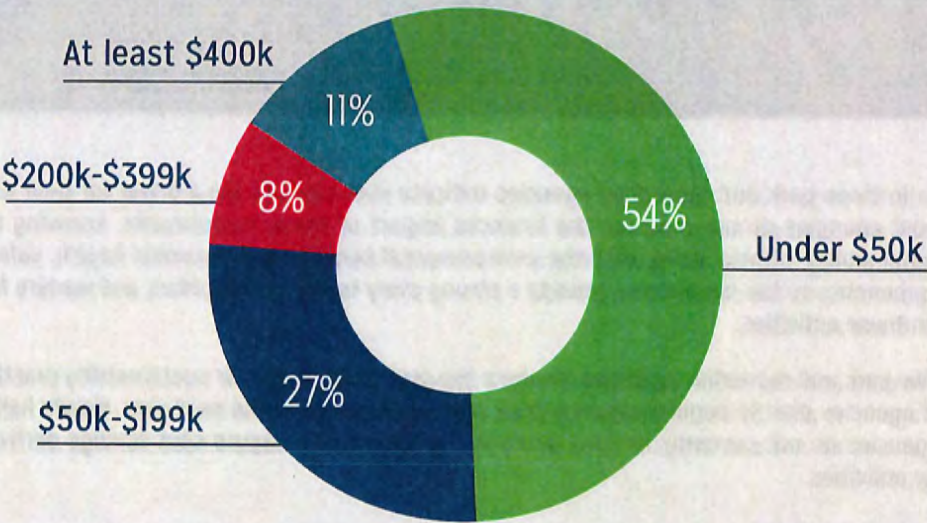
Only one in five park and recreation agencies measure the cost savings of their sustainability practices. Another 18 percent of agencies plan to begin measuring their cost savings within the next year. Nearly half of park and recreation agencies do not currently, or have plans in the future, to measure cost savings derived from their sustainability activities.

PARK AND RECREATION AGENCIES MEASURING SUSTAINABILITY PRACTICES' COST SAVINGS (PERCENTAGE DISTRIBUTION)



At least among park and recreation agencies currently measuring the cost savings derived from their sustainability activities, the financial benefits tend to be relatively modest. A majority of agencies measuring the financial impact of their sustainability activities experienced cost savings of less than \$50,000 in the past year (54 percent). Another quarter of agencies generated annual cost savings of between \$50,000 and \$199,999, while 19 percent of agencies derived at least \$200,000 in cost savings from sustainability activities during the past year.

COST SAVINGS GENERATED
FROM SUSTAINABILITY ACTIVITIES
(PERCENT OF AGENCIES MEASURING COST BENEFIT)



BARRIERS PREVENTING GREATER IMPLEMENTATION OF SUSTAINABILITY ACTIVITIES

The implementation and promotion of sustainability practices are a natural role for park and recreation agencies. Nevertheless, most agencies face some barriers that prevent their ability to expand these efforts. These barriers may include a lack of resources, whether it be funding (61 percent) or staff dedicated to sustainability activities (40 percent). Another challenge for agencies is a general lack of expertise tied to either sustainability measures (39 percent) or practices (31 percent). Far less frequently, agencies do not implement sustainability activities because the city/county political leadership, agency leadership and agency staff do not see these as agency priorities.

Park and recreation agencies across the country have a duty to protect the environment through the implementation and promotion of sustainable practices. While many park and recreation agencies have a documented sustainability strategy (or follow their community's strategy), many more agencies carry out their sustainability measures without official guidance or tracked results. Park and recreation agencies must continue their mission through the use of sustainable practices to ensure lasting benefits to nature, wildlife and the population as a whole. No more than ever, it is important for park and recreation agencies to lead the way in sustainable activities, including reducing landfill waste, implementing the use of renewable energy and fuel-efficient vehicles, and educating the public on the steps they can take to help the world around them.

BARRIERS THAT PREVENT PARK AND RECREATION AGENCIES FROM IMPLEMENTING SUSTAINABILITY MEASURES



CONCLUSION

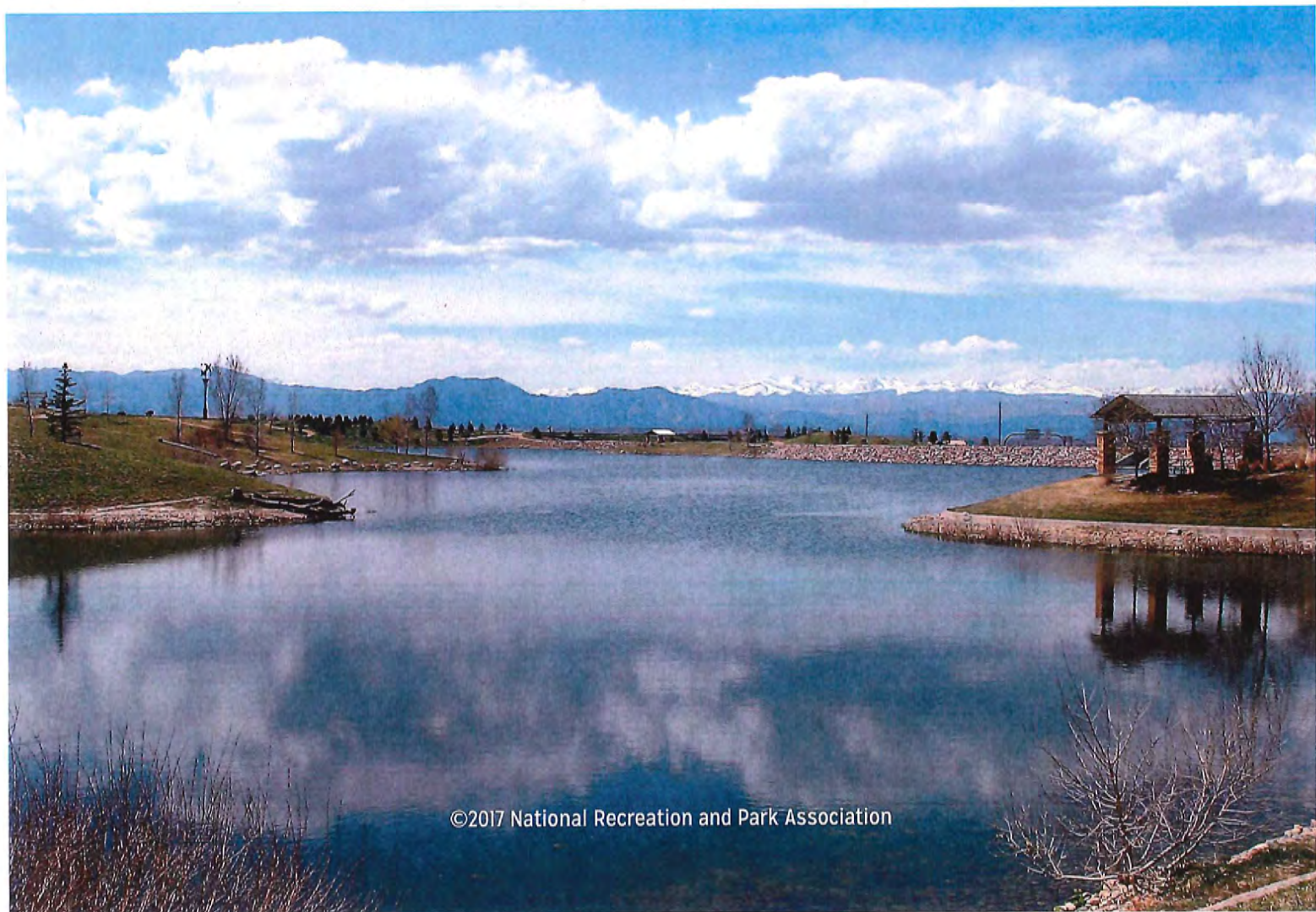
These survey results highlight the wide range of sustainability practices park and recreation agencies can and do implement. Some agencies are clearly leaders in their communities for certain sustainable practices, but it is important to acknowledge the very real barriers for some agencies and strive to move past them. This report's findings should inspire agencies to implement more sustainable practices at their parks and give all agencies a sense of pride to be a part of a large network of park and recreation agencies striving to create sustainable communities through parks. To achieve these goals, park and recreation professionals must employ a whole systems approach, acknowledge that our resources are finite, implement sustainable practices and build community resilience. Incorporating sustainable practices into our field is critical, now more than ever, to ensure our cities and towns are more climate resilient that, in turn, promises a more healthy future for our parks and communities.

To learn more about NRPA's climate resiliency efforts visit www.nrpa.org/Climate-Resiliency





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Ashburn, VA 20148
800.626.NRPA (6772)
www.nrpa.org



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- | | |
|-----------------------------------|---|
| 1 Bioswale | 6 Protected habitat |
| 2 Stormwater trees | 7 Native trees |
| 3 Permeable pavement parking lot | 8 Retention pond/
Constructed wetlands |
| 4 Porous asphalt basketball court | 9 Cistern |
| 5 Rain garden | 10 Green roof |

Green stormwater infrastructure (like the features highlighted here) in local parks is an efficient way to reduce flooding; improve water quality and wildlife habitat; provide opportunities for education and employment; increase biodiversity; access to nature and green space, and community resiliency; and much more. For more information and for an interactive version of this poster visit www.nrpa.org/greeninfrastructure.

Managing Stormwater Naturally!

Public Recreational Parks, Sites & Venues Within St. Johns County



It Starts In Parks!

The St. Johns County Board of County Commissioners believes in a thriving local park system. The opportunity to enjoy healthy, active lifestyles and the preservation of the natural beauty of our county are evident in the parks, community centers, and venues available.

St. Johns County,
Where Everybody Plays!

Parks & Recreation Dept
www.sjcfl.us/Recreation
904-209-0333

St. Johns County Venues
www.SJCvenues.com
904-209-0367

Map Created: 4/17/2018



ST. JOHNS COUNTY SCHOOLS 2018 - 2019 SCHOOL YEAR

St. Johns County School District
Tim Forson, Superintendent
40 Orange Street
St. Augustine, FL 32084
Ph. (904) 547-7500
www.stjohns.k12.fl.us



0 1 2 4
Miles

ATLANTIC
OCEAN

- 1 - Alice B. Landrum Middle School
- 2 - Allen D. Nease High School
- 3 - Bartram Trail High School
- 4 - Bethune-Cookman College (Spuds Campus)
- 5 - Creekside High School
- 6 - Cunningham Creek Elementary School
- 7 - Durbin Creek Elementary School
- 8 - First Coast Technical College
- 9 - St. Johns Technical High School
- 10 - Flagler College
- 11 - Florida School for the Deaf and Blind
- 12 - Freedom Crossing Academy
- 13 - Fruit Cove Middle School
- 14 - Gaines Alternative Center at the Evelyn Hamblen Center
- 15 - Gamble Rogers Middle School
- 16 - Hastings Youth Academy
- 17 - Hickory Creek Elementary School
- 18 - John A. Crookshank Elementary School
- 19 - Julington Creek Elementary School
- 20 - Ketterlinus Elementary School
- 21 - Liberty Pines Academy
- 22 - Mill Creek Academy
- 23 - Ocean Palms Elementary School
- 24 - Osceola Elementary School
- 25 - Otis A. Mason Elementary School
- 26 - Pacetti Bay Middle School
- 27 - Palencia Elementary School
- 28 - Palm Valley Academy
- 29 - Patriot Oaks Academy
- 30 - Pedro Menendez High School
- 31 - Picolata Crossing Elementary School
- 32 - Ponte Vedra High School
- 33 - PV-PV \ Rawlings Elementary School
- 34 - R.B. Hunt Elementary School
- 35 - R.J. Murray Middle School
- 36 - St. Augustine High School
- 37 - St. Johns Regional Juvenile Detention Center and St. Johns Residential Facility
- 38 - St. Johns River State College
- 39 - Sebastian Middle School
- 40 - South Woods Elementary School
- 41 - Switzerland Point Middle School
- 42 - Timberlin Creek Elementary School
- 43 - W.D. Hartley Elementary School
- 44 - Wards Creek Elementary School
- 45 - The Webster School
- 46 - University of St. Augustine
- 47 - Valley Ridge Academy



2014 Land Cover

LEGEND

 City Limits

LCCODE

 Urban

 Agriculture

 Upland nonforested

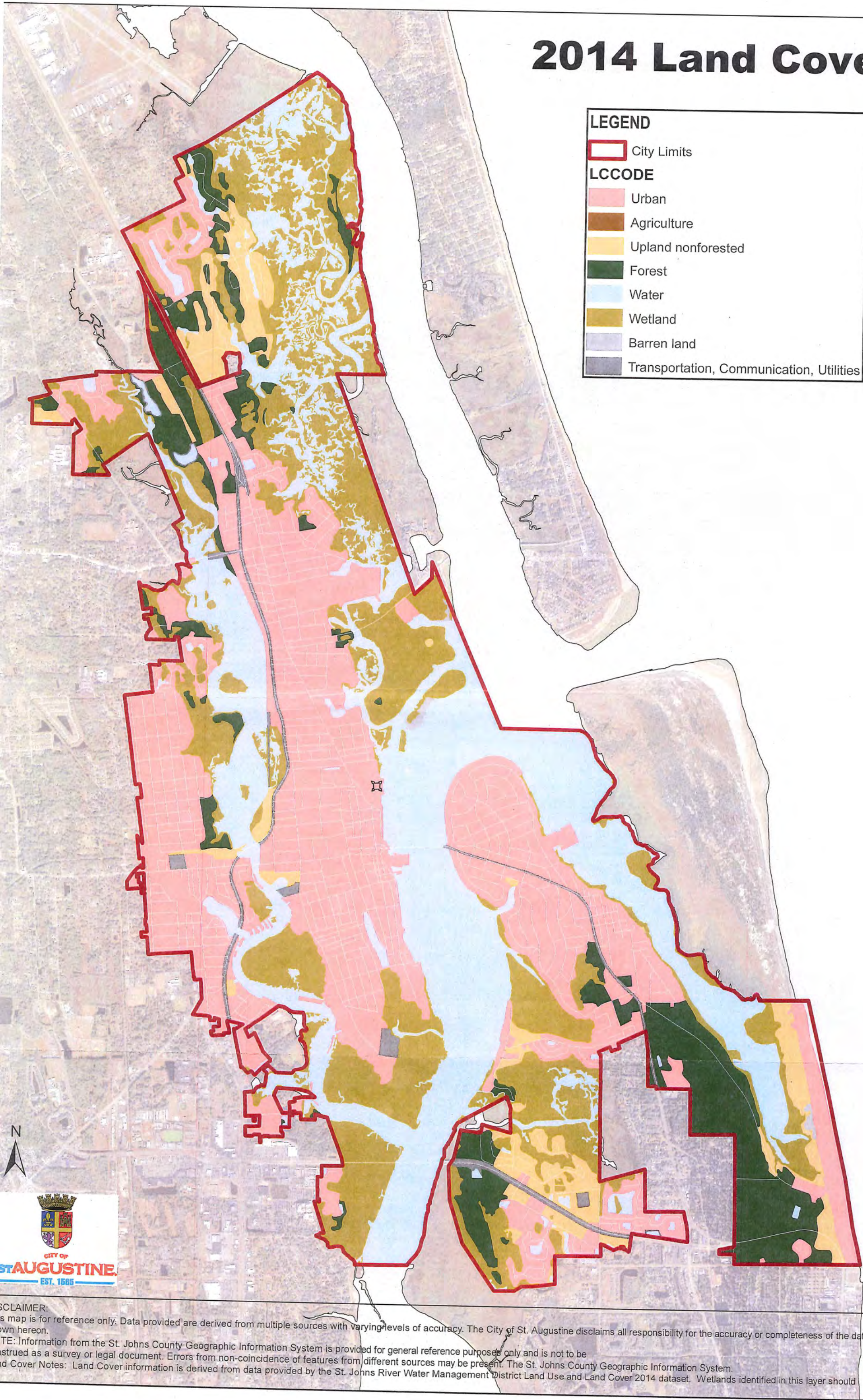
 Forest

 Water

 Wetland

 Barren land

 Transportation, Communication, Utilities



DISCLAIMER:
This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. The City of St. Augustine disclaims all responsibility for the accuracy or completeness of the data shown hereon.

NOTE: Information from the St. Johns County Geographic Information System is provided for general reference purposes only and is not to be construed as a survey or legal document. Errors from non-coincidence of features from different sources may be present. The St. Johns County Geographic Information System.

Land Cover Notes: Land Cover information is derived from data provided by the St. Johns River Water Management District Land Use and Land Cover 2014 dataset. Wetlands identified in this layer should