TODAY → 2030 → 2045

PATH FORWARD

Advancing our region with innovation to enhance mobility.

Technical Report
Goals, Objectives and Measures

Prepared for
North Florida Transportation Planning Organization

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Path Forward 2045 Goals, Objectives, and Policies

It is North Florida Transportation Planning Organization's (TPO's) mission is to provide a regional forum for developing a transportation system that moves people and goods safely, economically and efficiently while maintaining a high quality of life in North Florida. The TPO's vision is to promote the regional optimization of mobility consistent with the values of local communities through the Long Range Transportation Plan (LRTP). The LRTP indicates the transportation improvements necessary for optimal movement of people and goods, based on current needs and forecasted future growth. The recommended transportation improvement projects in the plan are guided by defined goals, objectives, and performance measures.

Specifically, the LRTP goals and objectives are to enhance the following:

- Economic Competitiveness
- Livability
- Safety
- Mobility and Accessibility
- Equity in Decision Making
- System Preservation
- Resilient Multimodal Infrastructure
- Tourism Transport Management

The goals, objectives, and performance measures proposed are based on the transportation user's point of view as explained in the document below. The order of the goals and objectives do not indicate priority.

GOAL 1: INVEST IN PROJECTS THAT ENHANCE ECONOMIC COMPETITIVENESS

Investing in projects that enhance economic competitiveness focusing on improving the following: travel time reliability (the most important factor for freight operators), enhance access to jobs, and maximizing return on investment.

The objectives associated with this enhancing economic competitiveness are listed below.

- **OBJECTIVE 1.1:** Improve travel reliability on major freight routes.

Performance Measure		Benchmark
1.1.1	Truck Travel Time Reliability The sum of maximum Truck Travel Time Reliability (TTTR) for each reporting segment, divided by the total Interstate System miles	Maintain or improve Truck Travel Time Reliability Calculation is only available on corridors with Blue Toad devices (I-10, I-95, SR 10, SR 21, SR 200, US 17, US 90, SR 13, I-295, US 1) Existing values are reported in the Congestion Management Process.

- **OBJECTIVE 1.2:** Enhance access to jobs, services, and retail for all.

Performance Measure		Benchmark
1.2.1	Jobs within a half mile of a major arterial	Maintain or improve access to jobs Existing value is reported in the Congestion Management Process.
1.2.2	Projects that enhance access to jobs through transit	Evaluation of projects/scenarios

- **OBJECTIVE 1.3:** Maximize return on investment.

Performance Measure		Benchmark
1.3.1	Benefit/Cost ratio	Rank benefit to cost ratio in evaluation of projects/scenarios
1.3.2	Return on Investment	Rank return on investment in evaluation of projects/scenarios

GOAL 2: INVEST IN LIVABLE AND SUSTAINABLE COMMUNITIES

There is no single definition of what constitutes a "livable" or "sustainable" transportation system. However, the North Florida TPO has adopted the following definition of a sustainable transportation system endorsed by the Transportation Research Board Sustainable Transportation Indicators Subcommittee:

> *Allows the **basic access** and development needs of individuals, companies, and society to be met **safely** and in a manner consistent with **human and ecosystem health** and **promotes equity** within and between successive generations.*
>
> *Is **affordable**, operates fairly and **efficiently**, offers a **choice of transportation modes**, and supports a **competitive economy**, as well as **balanced regional development**.*

Limits air, water, noise emissions, waste and resource use. *Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise.*

The goals associated with livability and sustainability are listed below.

- **OBJECTIVE 2.1:** Enhance transit accessibility.

Performance Measure		Benchmark
2.1.1	Percent of Population within a quarter mile walk of a transit stop	Maintain or improve the percent of population within a quarter mile walk of a transit stop. Existing value is reported in the Congestion Management Process.
2.1.2	Population within 5 miles of park and ride lots	Maintain or improve the population within 5 miles of park and ride lots. Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 2.2:** Enhance transit ridership.

Performance Measure		Benchmark
2.2.1	Passengers per vehicle revenue mile	Maintain or improve passengers per revenue mile. Existing value is reported in the Congestion Management Process.
2.2.2	Passengers per vehicle revenue hour	Maintain or improve passengers per revenue hour. Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 2.3:** Enhance bicycle and pedestrian quality of service.

Performance Measure		Benchmark
2.3.1	Lane miles with bicycle and pedestrian facilities	Maintain or improve lane miles with bicycle and pedestrian facilities. Existing values are reported in the Congestion Management Process.

- **OBJECTIVE 2.4:** Reduce the cost of congestion per capita.

Performance Measure		Benchmark
2.4.1	Cost of congestion	Maintain or reduce the cost of congestion. Existing value is reported in the Congestion Management Process.
2.4.2	Congestion cost per capita	Maintain or reduce congestion cost per capita. Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 2.5:** Reduce the impacts of investments on the natural environment.

Performance Measure		Benchmark
2.5.1	Environmental screening and mitigation	Apply Efficient Transportation Decision Making Process to all projects in LRTP.

- **OBJECTIVE 2.6:** Reduce emissions from automobiles.

Performance Measure		Benchmark
2.6.1	Carbon dioxide, nitrous oxides, and volatile organic compound emissions due to reduced delay.	Estimate emission reduction due to reduced delay in the evaluation of projects/scenarios. Existing value is reported in the Congestion Management Process.
2.6.2	Emissions due to vehicle electrification	Estimate emission reduction due to electrification of the vehicle fleet.[1]

[1]The TPO has an Alternative Fuels Master Plan and a Clean Fuels Program promoting alternative fuels and alternative fuel vehicles.

- **OBJECTIVE 2.7:** Ensure consistency with land use planning.

Performance Measure		Benchmark
2.7.1	Includes active transportation design principles in context sensitive solutions	Include walkability standards in context sensitive solutions.
2.7.2	Land Use scenarios are consistent with county comprehensive plans	Ensure consistency with comprehensive plans.

- **OBJECTIVE 2.8:** Support regional evacuation needs.

Performance Measure		Benchmark
2.8.1	Projects that improve evacuation routes.	Evaluation of projects/scenarios.

- **OBJECTIVE 2.9:** Support micro transit, mobility as a service (MaaS) and other new and innovative transit options

GOAL 3: ENCOURAGE SAFE AND SECURE TRAVEL

Investing in projects that enhance safety will lead to reduced crashes and lower crash severity for all modes.

- **OBJECTIVE 3.1:** Reduce crashes for all modes.

Performance Measure		Benchmark
3.1.1	Number of vehicle crashes	Reduce the number of vehicle crashes. Existing value is reported in the Congestion Management Process.
3.1.2	Crash rate per million vehicle miles	Reduce the crashes rate. Existing value is reported in the Congestion Management Process.
3.1.3	Number of serious injuries	Reduce the crashes rate. Existing value is reported in the Congestion Management Process.
3.1.4	Rate of serious injuries per million vehicle miles	Reduce the number of serious injuries. Existing value is reported in the Congestion Management Process.
3.1.5	Number of non-motorized fatalities and non-motorized serious injuries	Reduce the number of non-motorized fatalities and non-motorized serious injuries. Existing value is reported in the Congestion Management Process.
3.1.6	Number of bicycle crashes	Reduce the number of bicycle crashes. Existing value is reported in the Congestion Management Process.
3.1.7	Number of pedestrian crashes	Reduce the number of pedestrian crashes. Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 3.2:** Reduce fatal crashes for all modes.

Performance Measure		Benchmark
3.2.1	Number of fatalities	Reduce the number of fatalities. Existing value is reported in the Congestion Management Process.
3.2.2	Fatality rate per million vehicle miles	Reduce the fatality rate. Existing value is reported in the Congestion Management Process.
3.2.3	Number of bicycle fatalities	Reduce the number of bicycle fatalities. Existing value is reported in the Congestion Management Process.
3.2.4	Number of pedestrian fatalities	Reduce the number of pedestrian fatalities. Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 3.3:** Promote the implementation of safety and security improvements in the design or retrofit of all transportation systems.

Performance Measure		
3.3.1	Implemented safety measures on high crash corridors identified in the Regional Strategic Safety Plan.	Reported in the Regional Strategic Safety Plan.

- **OBJECTIVE 3.4:** Enhance security for all modes through the appropriate use of authorized access, surveillance systems and Intelligent Transportation Systems (ITS).

Performance Measure		
3.4.1	All transit projects are required to have a Threat and Vulnerability Assessment.	A Threat and Vulnerability Assessment considers the full spectrum of threats (natural, criminal, terrorist, accidental, etc) for a given facility/location as well as the vulnerability of the facility/location to an attack.

GOAL 4: ENHANCE MOBILITY AND ACCESSIBILITY

Enhancing mobility includes addressing the four dimensions of mobility – quantity of travel, quality of travel, system accessibility and system utilization. Several of these measures also support other goals and objectives (such as livability and sustainability).

Mobility is about more than increasing the volume of persons served and managing congestion. Users want a less stressful commute, but they also want improved reliability of their travel, more choices including transit, walking, and bicycling and to ensure we optimize system operations before we invest in new infrastructure. Understanding the trade-offs of these goals in the context of each corridor being considered is an essential element to identifying the right mobility solution for any project.

- **OBJECTIVE 4.1:** Optimize the quantity of travel.

Performance Measure		Benchmark
4.1.1	Vehicle-miles traveled	Generally, increases in the quantity traveled (throughout) are preferred. However, consistent with livability and sustainability goals, one objective is to reduce the amount of travel needed. Therefore, no benchmarks are proposed, but monitoring is recommended. Existing values are reported in the Congestion Management Process.
4.1.2	Person-miles traveled	
4.1.3	Truck-miles traveled	
4.1.4	Vehicle Occupancy	
4.1.5	Transit ridership	Increase transit ridership Existing values are reported in the Congestion Management Process.

- **OBJECTIVE 4.2:** Optimize the quality of travel.

Performance Measure		Benchmark
4.2.1	Average Travel Speed	Maintain or improve the average travel speed Existing value is reported in the Congestion Management Process.
4.2.2	Average Vehicle Delay	Maintain or reduce the average vehicle delay Existing value is reported in the Congestion Management Process.
4.2.3	Average Commute Time	Maintain or reduce the average commute time Existing value is reported in the Congestion Management Process.

Performance Measure		Benchmark
4.2.4	Interstate Level of Travel Time Reliability - Percent of person-miles traveled on the Interstate that are Reliable	Maintain or improve the Interstate Level of Travel Time Reliability. Calculation is only available on corridors with Blue Toad devices (I-10, I-95, I-295) Existing values are reported in the Congestion Management Process.
4.2.5	Non-Interstate Level of Travel Time Reliability - Percent of person-miles traveled on the Non-Interstate that are Reliable	Maintain or improve the Non-Interstate Level of Travel Time Reliability. Calculation is only available on corridors with Blue Toad devices (SR 10, SR 21, SR 200, US 17, US 90, SR 13, US 1) Existing values are reported in the Congestion Management Process.
4.2.5	Level of service on rural facilities	Maintain the level of service standard (FDOT standard for Strategic Intermodal System facilities and local government standards for other facilities) Existing values are reported in the Congestion Management Process.

- **OBJECTIVE 4.3:** Improve the accessibility to mode choices.

Performance Measure		Benchmark
4.3.1	Percent of system miles with bicycle accommodations	Maintain or improve the percent of system miles with bicycle accommodations. Existing value is reported in the Congestion Management Process.
4.3.2	Percent of system miles with pedestrian accommodations	Maintain or improve the percent of system miles with pedestrian accommodations. Existing value is reported in the Congestion Management Process.
4.3.3	Transit coverage – Percent of population within quarter mile of a transit route	Increase the percent of population within quarter mile of a transit route. Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 4.4:** Optimize the utilization of the system.

Performance Measure		Benchmark
4.4.1	Percent of system heavily congested	Maintain or reduce the percent of system heavily congested. Existing value is reported in the Congestion Management Process.
4.4.2	Percent of travel heavily congested	Maintain or reduce the percent of travel heavily congested. Existing value is reported in the Congestion Management Process.
4.4.3	Vehicles per lane mile	Optimize the vehicles per lane mile for a desired LOS Existing value is reported in the Congestion Management Process.
4.4.4	Duration of congestion	Maintain or reduce the duration of congestion Existing value is reported in the Congestion Management Process.
4.4.5	Transit average load (Passengers per transit vehicle)	Optimize the transit average load for a desired quality of service Existing value is reported in the Congestion Management Process.

GOAL 5: ENHANCE EQUITY IN DECISION MAKING

Enhancing equity in decision making emphasizes the principle of 'Environmental Justice'. The United States Environmental Protection Agency (EPA) defines Environmental Justice as follows.

> *Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation [sic]. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.*

Additionally, the United States Department of Transportation defines three fundamental Environmental Justice principles for the Federal Highway Administration and the Federal Transit Administration as follows:

1. *To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.*

2. *To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.*

3. *To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.*

To address these goals, these three principles are adopted as objectives for this LRTP listed below. The performance measures associated with each objective are less quantifiable than the objectives associated with other goals and are more process oriented. These three factors will be considered as part of the Needs Plan and Cost Feasible Plan and will be implemented using Geographic Information Systems techniques to identify the minority and low-income populations and by designing outreach programs to involve minority and low-income populations.

- **OBJECTIVE 5.1:** Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects (including social and economic effects) on minority and low-income populations.

The performance of this objective is qualitative.

- **OBJECTIVE 5.2**: Ensure full and fair participation by all potentially affected communities in the transportation decision-making process.

Performance Measure	
5.2.1	Adherence to the Public Involvement Plan

- **OBJECTIVE 5.3**: Prevent the denial of, reduction in, or significant delay of the receipt of benefits by minority and low-income populations.

Performance Measure		Benchmark
5.3.1	Number of projects in low income and minority census tracts	Evaluation of projects/scenario

- **OBJECTIVE 5.4**: Provide Ladders of Opportunity.

Performance Measure		Benchmark
5.4.1	Number of projects in low income and minority census tracts	Evaluation of projects/scenario
5.4.2	Jobs within a half mile of a state road	Maintain or improve access to jobs Existing value is reported in the Congestion Management Process.
5.4.3	Projects that enhance access to jobs through transit	Evaluation of projects/scenarios

GOAL 6: PRESERVE AND MAINTAIN OUR EXISTING SYSTEM

Preserving and maintaining the existing system is integral to the optimization of mobility. The Federal Highway Administration (FHWA) and Florida Department of Transportation (FDOT) established formal goals and objectives for systems preservation that are proposed for adoption as part of this LRTP. They include:

1. Have 95 percent of the Strategic Intermodal System in good or better condition.
2. Have 85 percent of other arterials in good or better condition.
3. Strengthen bridges that are either (1) structurally deficient or (2) posted for weight restriction within six years on FDOT facilities.
4. Replace bridges that require structural repair and are more cost effective to replace within nine years on FDOT facilities.
5. Satisfy FDOT's off system bridge replacement goals.
6. Maintain signing and pavement markings to accommodate all users including automated vehicles.
7. Maintain technology/infrastructure introduced to accommodate connected vehicles.

In addition, the objective of the systems preservation and maintenance goal is to provide a transit fleet that meets Federal Transit Administration's (FTA's) requirements for system preservation, vehicle age and maintenance.

The objectives for preserving and maintaining the existing system are listed below.

- **OBJECTIVE 6.1:** Maintain and update roadways to current standards.

Performance Measure		Benchmark
6.1.1	Percent of Interstate Pavement in Good Condition	Maintain or improve Existing value is reported in the Congestion Management Process.
6.1.2	Percent of Interstate Pavement in Poor Condition	Maintain or reduce Existing value is reported in the Congestion Management Process.
6.1.3	Percent of Non-Interstate Pavement in Good Condition	Maintain or improve Existing value is reported in the Congestion Management Process.
6.1.4	Percent of Non-Interstate Pavement in Poor Condition	Maintain or reduce Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 6.2:** Maintain and update bridges to current standards

Performance Measure		Benchmark
6.2.1	Percent of National Highway System Bridges in Good Condition	Maintain or improve Existing value is reported in the Congestion Management Process.
6.2.2	Percent of National Highway System Bridges in Poor Condition	Maintain or reduce Existing value is reported in the Congestion Management Process.
6.2.3	Percent of State Highway Bridges in Good Condition	Maintain or improve Existing value is reported in the Congestion Management Process.
6.2.4	Percent of State Highway Bridges in Poor Condition	Maintain or reduce Existing value is reported in the Congestion Management Process.
6.2.5	Percent of Non-State Highway Bridges in Good Condition	Maintain or improve Existing value is reported in the Congestion Management Process.
6.2.6	Percent of Non-State Highway Bridges in Poor Condition	Maintain or reduce Existing value is reported in the Congestion Management Process.

- **OBJECTIVE 6.3:** Maintain and update transit systems to current standards

Performance Measure		Benchmark
6.3.1	Average Age of Vehicles	Maintain or reduce Existing value is reported in the Congestion Management Process.
6.3.2	Average Rating of Facilities on TERM Scale	Maintain or improve Fall below 3.0

GOAL 7: CREATE RELIABLE AND RESILIENT MULTIMODAL INFRASTRUCTURE

A reliable and resilient multimodal transportation infrastructure provides accessible and diverse transportation options that ensure mobility, system preservation, supports evacuation needs, and addresses social equity.

The objectives for reliable and resilient multimodal infrastructure are listed below.

- **OBJECTIVE 7.1:** Incorporate climate risk in project planning, system preservation and maintenance and determine appropriate measures to mitigate risk or repurpose threatened facilities.

Performance Measure		Benchmark
7.1.1	Consideration for vulnerable, at-risk facilities	Evaluation of projects/scenarios

- **OBJECTIVE 7.2:** Provide reliable mobility access and minimize impact of disruptions to regional mobility.

The performance of this objective is qualitative.

- **OBJECTIVE 7.3:** Support regional evacuation needs as reflected in municipal Emergency Management Plans.

Performance Measure		Benchmark
7.3.1	Number of projects on an evacuation route	Evaluation of projects/scenarios

- **OBJECTIVE 7.4:** Address social equity in adaptation/resilience strategy implementation.

Performance Measure		Benchmark
7.4.1	Number of projects in low income census tracts	Evaluation of projects/scenarios

GOAL 8: ENHANCE TOURISM TRANSPORT MANAGEMENT

Tourism Transport Management involves improving transportation options for recreational, event, and general tourism travel to enhance the overall transportation system while improving mobility and transportation options.

The objectives for tourism transport management are listed below.

- **OBJECTIVE 8.1:** Develop a Regional Tourism Transport Management Program.

Performance Measure	
8.1.1	Complete Regional Tourism Transport Management Plan

- **OBJECTIVE 8.2:** Improve and provide diverse tourism transportation options.

Performance Measure		Benchmark
8.2.1	Number of projects in high tourism areas	Evaluation of projects/scenarios

- **OBJECTIVE 8.3:** Encourage the integration of alternative transportation into tourist activities.

Performance Measure	
8.3.1	County comprehensive plans include alternative transportation for tourists

GOAL 9: ENSURE NORTH FLORIDA IS READY FOR CONNECTED AND AUTONOMOUS VEHICLES AND INTERNET OF THINGS (IOT) TECHNOLOGIES THAT SUPPORT TRANSPORTATION

The North Florida Region will continue to embrace emerging technologies, including connected and automated vehicles, Internet of Things (IoT) components and advanced data management and analytics, preparing the transportation infrastructure in the region for these advances in transportation technology.

FDOT's Office of Policy Planning has recently developed "Guidance for Assessing Planning Impacts and Opportunities of Automated, Connected, Electric and Shared-Use (ACES) Vehicles" that outlines 33 elements that Transportation Planning Organizations (TPO's) in Florida should consider in their short, medium and long-range planning. These elements should be adopted by the TPO in future work efforts.

The objectives to ensure North Florida is ready for Connected and Autonomous Vehicles (CAV) and IoT technologies are listed below.

- **OBJECTIVE 9.1:** Deploy a regional data exchange

Performance Measure	
9.1.1	Complete Phase 1 of the data exchange
9.1.2	Develop a CV module for CV data storage and analytics

- **OBJECTIVE 9.2:** Prepare infrastructure for connected and automated vehicles

Performance Measure		Benchmark
9.2.1	Miles of vehicle to infrastructure (V2I) technology (DSRC, C-V2X, or 5G)	Increase miles of V2I technology
9.2.2	Miles of fiber optic cable	Increase miles of fiber optic cable

- **OBJECTIVE 9.3:** Implement cybersecurity measures and best practices throughout the system to protect user privacy and data and to ensure safe operations.

Performance Measure	
9.3.1	Complete Cybersecurity Plan
9.3.2	Develop and Implement Strategy for Security Credential Management Plan (SCMS)

- **OBJECTIVE 9.4**: Develop and implement policies that support connected and automated vehicles

Performance Measure	
9.4.1	Complete a Connected and Autonomous Vehicle Policy Plan

- **OBJECTIVE 9.5:** Deploy strategies to support First Mile/Last Mile travel options.

Performance Measure	
9.5.1	Complete First Mile/Last Mile Plan

- **OBJECTIVE 9.6**: Incorporate CAV into the North Florida Travel Demand Model.

Performance Measure	
9.6.1	CAV included in the North Florida Travel Demand Model

- **OBJECTIVE 9.7**: Implement scenario planning activities surrounding Connected, Automated, Electric and Shared vehicles to determine the impacts on network usage, funding and other performance measures.

Performance Measure	
9.7.1	Develop scenarios surrounding ACES
9.7.2	Develop scenario planning methodology to determine impacts on the network usage, funding, and other performance measures

- **OBJECTIVE 9.8**: Consider Autonomous Vehicle only lanes or zones to support enhanced mobility opportunities resulting from automated vehicles.

Performance Measure	
9.8.1	Complete a study on autonomous vehicle only lanes or zones