Resilience, Environment and Sustainability Update

Lisa Colmenares, AICP Program Development Manager October 12, 2018





AGENDA

- MAP 21 and FAST Act Planning Factors
- Resiliency, Environment, Sustainability, Livability and Climate Change Considerations in the 2045 LRTP
- Strategies to Reduce Vulnerability of Transportation Infrastructure to Natural Disasters
- Resiliency Efforts
- Next Steps



2 0 4 5 L R T P Resilience, Environment and Sustainability Update

Federal and State Planning Requirements and Expectations

United States Code

MAP-21/FAST Act

Federal Planning Factors

Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency:

Increase the safety of the transportation system for motorized and nonmotorized users;

Increase the security of the transportation system for motorized and nonmotorized users;

Increase the accessibility and mobility of people and for

Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development

Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

Promote efficient system management and operation;

Emphasize the preservation of the existing transportation

Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation; and **

Enhance travel and to urism. **

** New Planning Factors established under the FAST Act. [23 USC 134(h)(1)]

MAP-21 National Goals

Safety - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Infrastructure Condition - To maintain the highway infrastructure asset system in a state of good repair

Congestion Reduction - To achieve a significant reduction in congestion on the National Highway System

System Reliability - To improve the efficiency of the surface transportation system

Freight Movement and Economic Vitality - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development

Environmental Sustainability - To enhance the performance of the transportation system while protecting and enhancing the natural environment.

Reduced Project Delivery Delays - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

[23 USC 150(b)]

Code of Federal Regulations

USDOT

National Performance Management Measures

Safety Performance Measures

- 1. No. of Fatalities
- 2. Fatality Rate per 100 million VMT
- 3. Na. of Serious Injuries
- 4. Serious Injury Rate per 100 million VMT
- 5. No. of Combined Non-Motorized Fatalities and Serious Injuries

Infrastructure Performance Measures

- 1. % of Interstate System Pavement in Good Condition
- 2. % of Interstate System Pavement in Poor Condition
- 3. % of Non-Interstate NHS Pavement in Good Condition
- 4. % of Non-Interstate NHS Pavement in Poor Condition
- 5. % of NHS Bridge Deck Area in Good Condition
- 6. % of NHS Bridge Deck Area in Poor Condition

System Performance Measures

- 1. % Person-Miles Traveled on the Interstate that are Reliable 2. % Person-Miles Traveled on the Non-Interstate NHS that are
- 3. % Change in Tailpipe CO2 (greenhouse gas) Emissions on the NHS Compared to the Calendar Year 2017 Level***
- 4. Truck Travel Time Reliability (TTTR) Index
- 5. Annual Hours of Peak Hour Excessive Delay Per Capita
- 6. % Non-SOV Travel
- 7. Total Emissions Reduction
- *** The GHG measure was repealed on May 31, 2018, effective July 2, 2018

[23 CFR §924, 23 CFR § 490]

USDOT

FHWA Expectations Letter

Requirements and Emerging Issues A new Expectations Letter was released on January 10, 2018.

FHWA/FTA- Federal Planning Emphasis Areas 2015

- 1. MAP-21 Implementation: Transition to Performance-based Planning and Programming
- 2. Regional Models of Cooperation: Ensure a Regional Approach to Transportation Planning by Promoting Cooperation and Coordination across Transit Agency, MPO and State Boundaries
- 3. Ladders of Opportunity: Access to Essential Services

Florida Statutory Requirements

LRTP required elements include:

- 1. Innovative Financing Techniques
- 2. Planning For Future Technologies
- 3. Indicate Proposed Transportation **Enhancement Activities**

[339.175(7), F.S.]

FDOT

Florida Planning Emphasis Areas 2018

- 1. Rural Transportation Planning
- 2. Transportation Performance Measures
- ACES (Automated/Connected/Electric/ Shared-use) Vehicles



2045 LRTP Goals

GOAL 1

Improve System And Travel

- Reduce Congestion Enhance mobility for
- people and freight • Promote system reliability and fill transit services gaps

GOAL 2

Increase Safety

- Reduce Crashes • Improve Facilities'
- safety Provide safe and
- easy pedestrian and non-motorized travel

GOAL 3

Increase Security

- Enhance evacuation corridors
- Ensure emergency evacuation options
- Ensure security ports, airports, and multi-modal centers

GOAL 4

Support economic vitality

- •Increase employment site access
- Enhance efficient movement of freight and goods
- Support economic development

GOAL 5

Protect/Preserve **Environment and** Quality of Life

- Support livable communities
- Minimize to established areas
- Minimize impact on air and water quality

GOAL 6

Enhance Connectivity

- Improve connectivity to intermodal facilities
- Maintain consistency with Local Government
- Improve movement of goods via intermodal access & connectivity

GOAL 7

Optimize Sound investment Strategies

- Maximize funding
- Maintain consistency with Local Government
- Strong linkage with Southeast Florida

GOAL 8

Preserve Existing System

- Maintain existing infrastructure
- Improve existing system with new tech
- Reserve corridors for future facilities and services



Considerations in the 2045 LRTP

- Resiliency
- Environment
- Sustainability
- Livability
- Climate Change





Resiliency Efforts

- Resiliency Plan, Comprehensive Plan and Other Plans
- **Adaptation Action Areas**
- Water and Wastewater Utility
- Stormwater & Flood Control
- Collaborative & Regional Efforts
- **Energy Resiliency**

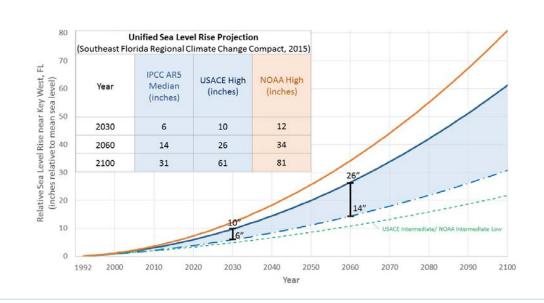


Photo: City of Miami and Miami Beach: 2018 Champion City Mayor Bloomberg's Challenge



Existing Studies and Plans

- GIS Screening of State Highways Impacted by the Design High Water and Based Clearance Requirements in Miami-Dade County, FL, Florida Department of Transportation, District 6
- Southeast Florida Regional Climate Change Compact: Climate Action Plan & Unified Sea Level Rise Projections
- Greater Miami and the Beaches Resiliency Strategy Report
- Miami-Dade County GreenPrint
- Local Plans and Action Areas





GIS Screening of State Highways Impacted by the Design High Water and Based Clearance Requirements in Miami-Dade County, FL, FDOT, District 6

- FDOT evaluated the impacts of increasing the Design High Water (DHW) elevation due to SLR on the roadway base clearance.
- The study area limited to State Roads under the jurisdiction of District Six located east of the Salinity Control Line (SCL) in Miami-Dade County.
- Of the 144.6 miles of state roadways in Miami-Dade County that were east of the Salinity Control Line, 24.8 miles (17.1%) were identified by the GIS screening analysis for being at-risk of failing the Base Clearance criteria at a DHW elevation of 1.0 foot NAVD.
- Surveyed spot elevations at the edge of pavement along all state roads should be collected during Phase II to provide the higher accuracy elevation data needed to refine the analysis.



GIS Screening of State Highways Impacted by the Design High Water and Base Clearance Requirements in Miami-Dade County, FL

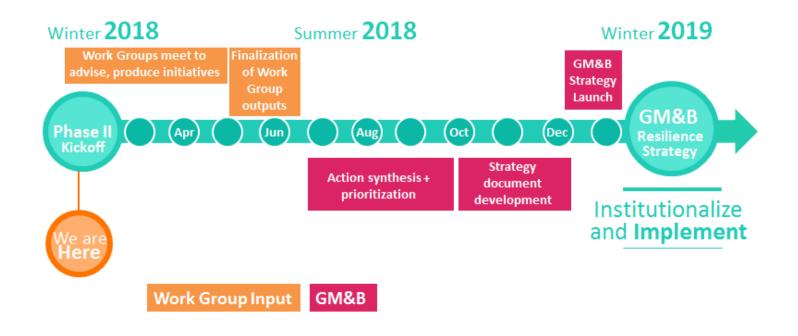
Contract No. C-9D86

TWO #19. FPID No. 250759-3

Florida Department of Transportation, District Six November 2, 2016

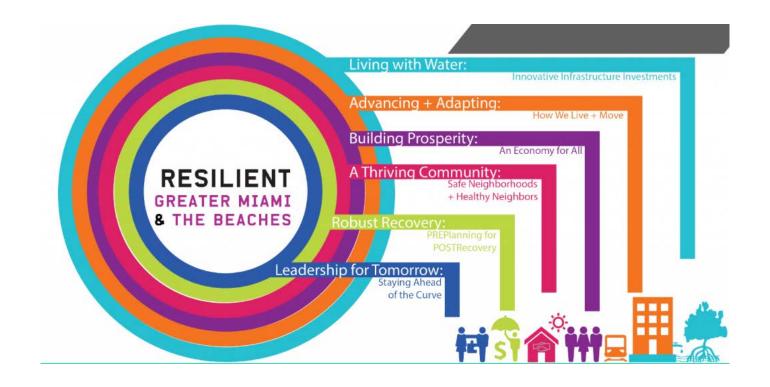


Greater Miami and the Beaches Resiliency Strategy Report





Greater Miami and the Beaches Resiliency Strategy Report: Discovery Areas





2045 LRTP Steering Committee Next Steps

- Provide a copy of your plans and studies
- Follow-up teleconferences and/or meetings with key leading agencies
- Presentation to update Steering Committee on Goals and Strategies



Questions?

Lisa Colmenares, AICP Program Development Manager

Lisa.colmenares@mdtpo.org 305-375-1738

