



GREATER MIAMI EXPRESSWAY AGENCY

Effective Solutions to Mitigate Congestion through Technology

FAV

November 2025



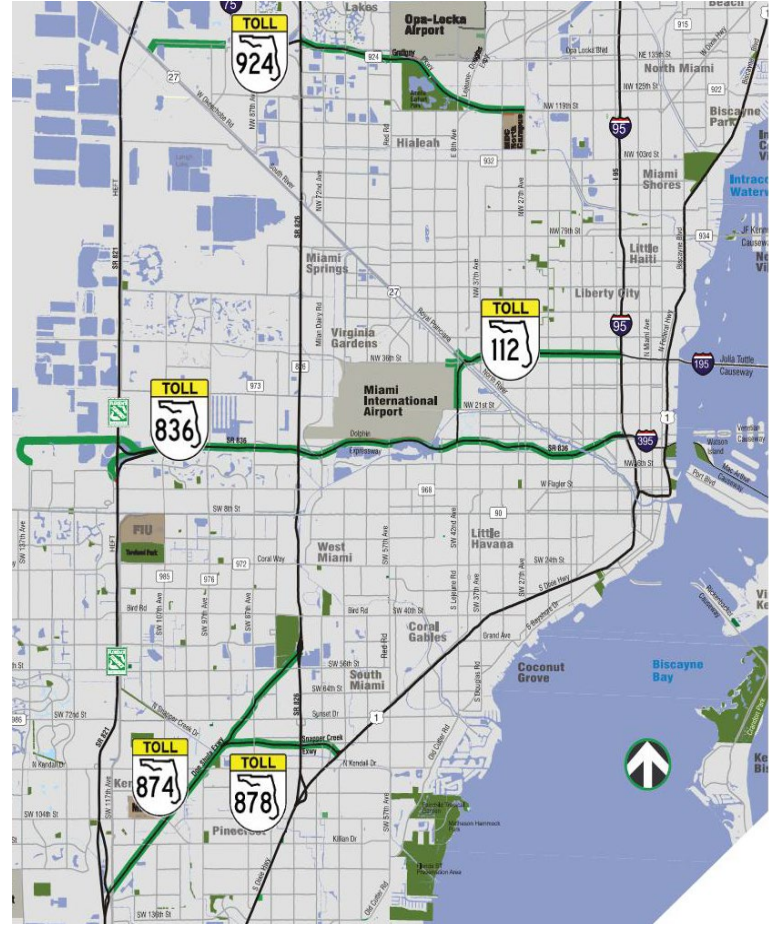
About GMX

GMX was created by the Florida Legislature –
July 1, 2023

Maintains, operates and improves the following roadways:

- State Road 924 – Gratigny Parkway
- State Road 878 – Snapper Creek Expressway
- State Road 874 – Don Shula Expressway
- State Road 112 – Airport Expressway
- State Road 836 – Dolphin Expressway
- NW 138th Street
- County Road 94 (Monroe County)

*100% of all tolls collected on the GMX system remain and
are invested in Miami-Dade County and Monroe County*



GMX's Role in the Local Economy



A New Vision & Mission

Our Vision

We strive to plan and deliver a safe, fiscally sustainable, and integrated transportation system that seamlessly moves people and goods across South Florida with the goal of relieving congestion on our roads.

Our Mission

We Will:

- Provide a safe, well-maintained & aesthetically pleasing expressway system
- Maximize mobility and congestion relief options for our customers
- Protect our toll payers and bondholders through fiscal responsibility
- Empower our employees to make sound decisions and support small businesses
- Reinvest revenues back into the community
- Partner with stakeholders to deliver innovative technology solutions that support the region's transportation needs



Work Program Priorities

CORE AGENCY FUNCTIONS

Safety

Primary goal to improve vehicle and pedestrian safety on all roadways

System Improvements & Preservation

Includes projects related to capacity improvements projects, operational/safety improvements, emergency repairs, drainage improvements, etc.

Mobility Improvements & Congestion Relief

Primary goal of improving movement of people and goods on all roadways

Transportation Technology

Includes projects related to traffic safety enhancements, field devices, traffic monitoring, IT servers and cutting-edge innovation to improve user satisfaction and operational efficiencies

Existing GMX ITS Infrastructure

1. ITS Incident Management HD Cameras CCTV: **71**
2. DMS- Walk-In: **17**
3. ADMS and DMS- Front Access: **20**
4. DMS & ADMS Verification HD Cameras: **37**
5. ITS MVDS Sensors: **144**
6. ITS Electronic Cabinets: **128**
7. IM & MVDS UPS (Libert -Vertiv UPS): **95**
8. DMS UPS (Alpha UPS): **37**
9. (UPS Trip-Light): **11**



CCTV:
104

**DMS/
ADMS:**
37

MVDS:
144

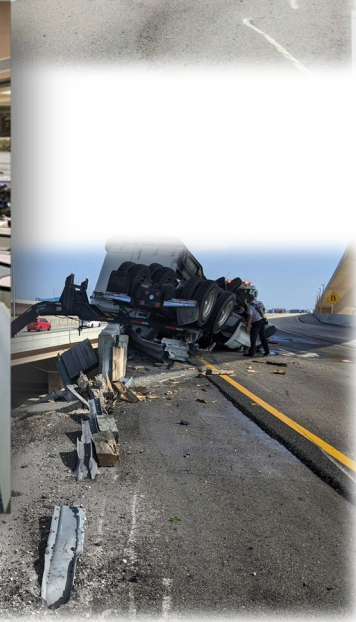
**Electronic
Cabinets:**
128

UPS:
144

Existing GMX ITS Operations

Traffic Management Center (TMC)

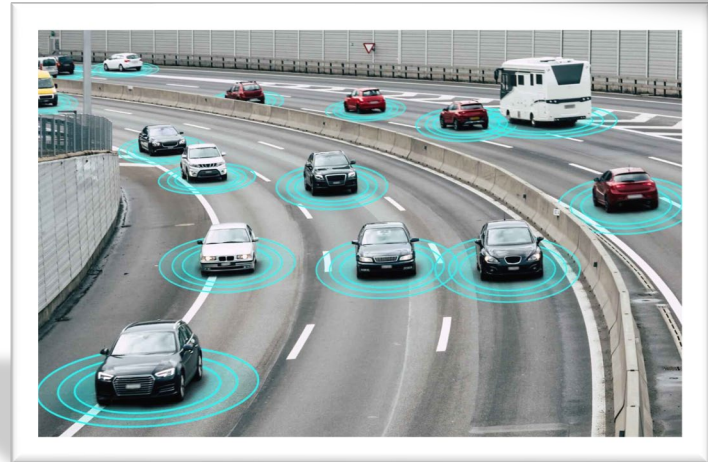
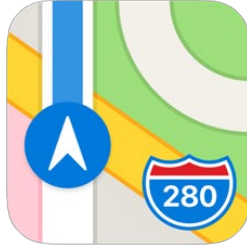
- 3 workstations/10 monitors each
 - Staff: 14
- 2024 in review:
 - Total number of events: 21,932
 - Lane blockage: 8,074
 - Fatalities: 3
- Device availability:
 - CCTV: 96.64%
 - MVDS: 91.83%
 - DMS 97.45%
 - Sunguide Software: 94.67%



Existing GMX ITS Operations

Traffic Management Center (TMC)

- Providing navigational service providers with live traffic information
- Deployment of connected vehicle messaging
- Alerting drivers of incidents
- Alerting drivers of unusual congestion



A New Mission

Our Goals

Use Technology to Provide a Seamless Connectivity and Exceptional Customer Driving Experience

- Prepare GMX for Increased Adoption of Automated, Connected, Electric and Shared Vehicles (ACES)
- Collaborate and Partner with Regional Agencies and share technology resources
- Engage with Private Technology Based Industry



Final

Technology Plan

July 2023



Harmonization with Other Plans

Strategy	Scope	Benefits (1)		Costs (1)	
		Safety	Mobility	Implementation	Operations & Maintenance
TSM&O Mainstreaming	Statewide and Regional: Includes incorporation of TSM&O elements into all transportation projects from planning through design and work zone traffic management.	M - H	H	L - H	L - H
Arterial Management	Regional: Includes strategies such as regular retiming and coordination, ASCT, ICM, AAM and SPM. Depending on regional priorities, this could include TSM&O strategies identified in other FDOT strategic plans such as pedestrians, freight, transit, and freight. See Section II for more information.	M	H	H	H
Connected Vehicles	Statewide and Regional: Includes DSRC for V2I communication, SPaT, Basic Safety Messages (BSM), transit, pedestrian, freight and emergency vehicle priority. Realization of CV benefits are expected to begin within the next five to ten years.	H	H	M	M
Express Lanes	Regional and Interregional: Includes dynamic pricing, and reversible lanes. Includes enhanced operations, enforcement, and incident management. Depending on local priorities, express lane planning and implementation could involve other routes as well as other modes.	M	H	H	M
Freeway Management	Statewide: Includes proven and emerging strategies such as RM, HSR, and ICM and legacy strategies such as SunGuide®, FL511, RTMC operations, TIM, RISC, Severe Incident Response Vehicles (SIRV), and RRSP. Effective freeway management benefits all modes using the freeway network.	H	H	H	M
Information Systems	Statewide: Includes SunGuide® Software, FL511, DIVAS, data archival systems, and performance assessment tools.	H (2)	H (2)	L	L

Table Notes: (1) Benefits and costs will relate to how well TSM&O is integrated within other programs.

H = High M = Moderate L = Low

(2) Information system will enable data collection, data sharing, data archival and data analysis to support the entire TSM&O program as well as other FDOT programs to measure and report system performance.

Implementation of GMX Technology Plan

Technology Solution:

- IT
- TSM&O/ICM
- ITS Infrastructure

Priority:

- Immediate
(< 1 year)
- Immediate to Short Term
(1-2 Years)
- Short Term
(2 – 3 Years)
- Mid Term to Long Term
(4 – 5 Years)
- Long Term
(Beyond 5 Years)

No.	Priority	Technology Solution	Technology Plan Recommendation
1	Immediate to Short Term (1 -2 Years)	ITS Infrastructure	Deploy additional CCTV camera coverage to support the GMX TMC operations with faster incident management response. Benefits: The anticipated benefit of this initiative is to provide the GMX TMC operators with 100% camera coverage of GMX expressways including all mainline lanes and ramps. This additional CCTV camera coverage will support faster incident detection and thereby improve the incident management response. Having good CCTV camera coverage on the ramps will also support GMX TMC Operations staff to verify and respond to wrong-way driving-related incidents. Finally, additional CCTV camera coverage supports the overall traffic management and surveillance of GMX corridors.
2	Immediate to Short Term (1 -2 Years)	ITS Infrastructure	Deploy additional DMS systemwide to support the GMX TMC operations with increased coverage of traveler information dissemination. Benefits: The anticipated benefit of this initiative is to provide the GMX TMC operators with expanded DMS coverage on GMX expressways and connecting arterials. This expanded DMS coverage will support faster traveler information dissemination and thereby improving customer service and GMX branding. Other benefits include travel times messages, special events related messages, safety messages, amber and silver alert messages and other GMX customer outreach messages.
3	Immediate to Short Term (1 -2 Years)	TSM&O/ Part Time Shoulder Use (PTSU)	Deploy static cameras with video analytics and a combination of lane use-control signals, blank-out signs and small DMS to monitor Bus-on-the-Shoulder violations along SR 836 and improve operations. Benefits: The anticipated benefits of this initiative include reducing the Bus-on-shoulder use violations and improving the safety of the corridor.
4	Immediate to Short Term (1 -2 Years)	Sustainability and Resiliency	Deploy an electric power distribution system that provides back-up power during power outages to ITS devices, Toll Sites and Traffic Signals adjacent to the GMX expressway ramps. Benefits: The anticipated benefits of this initiative include the ITS and traffic signal systems to continue to operate during power outages, especially during hurricanes. It helps to increase the resiliency of GMX expressways. The signal system components being operational during extended power outages ensure uninterrupted traffic flow in and out of the GMX ramps.
5	Short Term (2 -3 Years)	Electric Vehicles	Deploy Direct Current Fast Charging (DCFC/Level III) Stations at GMX facilities to provide electric vehicle charging capabilities. Benefits: With this initiative, GMX will be providing opportunities to lower the total cost of electric vehicle ownership per household and thereby enhance transportation equity for all residents of Miami-Dade County.

Part-Time Shoulder Use – Bus Lane

Shoulders open to only authorized buses (MDT)

- Close coordination with FHWA
- Future deployment of ITS technology consisting of fixed cameras with video analytics and a combination of lane use-control signs and small DMS for operations and monitoring



Thank You!

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