

VITAL FEW



Recommendation 1.5 March 2021





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INTRODUCTION AND PURPOSE

The Vital Few is a Florida Department of Transportation (FDOT) management focus on key organizational objectives which among others include improving safety, enhancing mobility, and inspiring innovation. The Vital Few Mobility Team has identified nineteen action items as part of the Vital Few Mobility Implementation Plan. The Traffic Engineering and Operations Office (TEOO) will be responsible for four action items. The mobility implementation plan's recommendation 1.5 refers to enhancing traffic incident management (TIM) strategies and emphasizing integrated corridor management (ICM) with a focus on both limited access facilities and arterial roadways. This specific action item is scheduled to be a near term implementation (timeline: 0-18 months). The purpose of this document is to:

- Identify gaps and implement strategies to optimize incident management efforts on limited-access facilities (including managed lanes and toll roads).
- Establish arterial TIM programs with an emphasis on ICM.
- Update the FDOT Design Manual (FDM) to include requirements of TIM to be considered in the development and implementation of work zone Transportation Management Plans (TMPs).

As a result of more than three decades of investments, the State of Florida has a mature freeway TIM program that is a National model in many respects. The following are examples of the existing core TIM program attributes that continue to be foundational to highway safety, mobility, and future success:

- Technology Regional or Satellite Traffic Management Centers (RTMCs/STMCs) integrate data from Intelligent Transportation System (ITS) field devices, state law enforcement computer-aided dispatch (CAD), and crowdsourced data to detect and verify incidents, coordinate response activities, and provide real-time information to responders and motorists.
- Resources FDOT's safety service patrol program, known as the Road Rangers Service Patrol (RRSP), patrols more than 1,500 centerline miles of freeways proactively detecting incidents, assisting responders with traffic control, and clearing roadways of debris and other obstructions. The Rapid Incident Scene Clearance (RISC) incentive-based heavy-duty wrecker program is available in every District to support quick clearance of major incidents.
- Institutional FDOT is a National leader in providing a well-established structure to support TIM. Guided by a comprehensive TIM Strategic Plan, this structure includes a full-time statewide TIM Program Manager in FDOT's Central Office, TIM Program Managers in each District and multiagency, multidiscipline stakeholder representation in twenty-five (25) active local TIM Teams in all seven FDOT Districts and Florida's Turnpike. TIM training specially focuses on providing responders with a shared understanding of the requirements for responder safety; safe, quick clearance; and prompt, reliable, and interoperable communications.

While FDOT has recognized and reinforced TIM as a critical Transportation Systems Management and Operations (TSM&O) program element, opportunities exist to leverage partnerships, technology, and innovation to further enhance TIM in Florida. The action items identified by the Vital Few Mobility Team will provide an opportunity to expedite certain action items that were part of the current state TIM Strategic Plan (revised 2019) and the plan for deployment is detailed at a high-level in this document.





1.0 OVERVIEW

1.1 Background

Traffic incident management (TIM) is the planned, coordinated, multidisciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM helps in improving the safety of emergency responders, crash victims, and motorists and reduces the duration and impacts of traffic incidents including a reduction in secondary crashes.

The FDOT published the TIM Strategic Plan in January 2019. The plan identifies around 60 TIM Strategic Action Items (or TIM Strat ID) to accelerate the TIM program. The plan is divided into three primary focus areas: strategic, tactical, and support. Under each of these program areas, the subsections address specific topics as shown in Figure 1.



Figure 1 TIM Primary Focus Areas

The Traffic Engineering and Operations Office (TEOO) is implementing several Strategic TIM action items from the 2019 TIM Strategic Plan as listed below:

- **TIM Strat ID 3.0**: Continue promoting and conducting TIM training via the Florida version of the FHWA SHRP2 National TIM Responder training curriculum. Over the past three years, a statewide TIM Working Group is established to facilitate continued collaboration amongst TIM partner organizations.
- TIM Strat ID 2.D: Continue developing and publishing the quarterly TIM newsletter called "<u>TIM Responder</u>" and facilitate collaboration, outreach, in-reach, and public awareness. This newsletter incorporates articles from Districts and local agencies and highlights their efforts in TIM. It also underlines the progress being made in RRSP, RISC, and TIM training as well as recognizes excellent services the Road Rangers are providing to the TIM program. The newsletter has received nationwide recognition and has received positive feedback from other state DOTs.

TIM and its associated partnerships, processes, and strategies continue to be critical to maintaining the safety and efficiency of Florida's roadways, reducing incident clearance times (ICT), roadway clearance times (RCT), road ranger response time, and secondary crashes. Given the criticality of TIM to <u>all</u> highways, a need exists in Florida and nationally to progress TIM to the "next generation" by reinforcing the importance of training, introducing proven technologies, and applying TIM practices beyond limited access facilities, including arterials, local streets, and rural roadways. From the national perspective, the FHWA recently prioritized *Next Generation TIM (NextGen TIM)* in the sixth cycle of their Everyday Counts (EDC-6) program. The FDOT has adopted NextGen TIM as an innovation to





support the TIM Strategic Plan which has common features such as applying emerging technologies, data, and training to improve TIM on all roadways, including arterials, local roads, and rural roads.

1.2 Document Objectives

The objective of this document is to tie the action items of the 2019 TIM Strategic Plan to the Vital Few Mobility Implementation Plan with greater emphasis on integrated corridor management (ICM) and arterial TIM as critical elements of the Transportation Systems Management & Operations (TSM&O) Program. Establishing the objectives for enhancing TIM on express lanes, arterial TIM, and supplementing the TIM plan for the development of Transportation Management Plans (TMPs) are going to be the key aspects of this vital few mobility implementation plan.

• TIM on Limited-Access Facilities

- Continue the existing statewide TIM practices for interstates based on the statewide TIM Strategic Plan
- Develop RRSP Allocation model for express lanes
- Review and revise TIM strategies such as staged tow, safe tow, and crash investigations to enhance express lanes TIM and safety
- Revise training to include the TIM operational practices on express lanes
- Integrated Corridor Management (ICM)
 - o Measure and monitor freeway and arterial network performance and develop dashboards
 - \circ $\;$ Revise training to include the TIM operational practices on both freeway and arterials
 - o Develop statewide efficient detour planning strategies for both freeways
 - \circ and arterials
- Arterial TIM
 - o Develop FDOT TIM response capabilities for significant incidents on arterials
 - Measure and monitor arterial network performance and develop dashboards
 - Revise training to include the TIM operational practices on arterials
- TIM Plan Supplement for Transportation Management Plans (TMPs)
 - Identify TIM strategies and update FDOT Design Manual (FDM) to include requirements for consideration of TIM in the development of the TMP with emphasis on operations, including Section 240.3 Transportation Operations Plan





2.0 TRAFFIC INCIDENT MANAGEMENT ON LIMITED-ACCESS FACILITIES

The limited access facilities include interstate highways, urban expressways, Florida's Turnpike as well as in managed/express lanes on those roadways. The subsections below describe the tasks under each of them.

2.1 Interstate Highways

The FDOT Central Office has been working cooperatively with the Districts to implement the strategies identified in the 2019 TIM Strategic Plan. These strategies are in alignment with the recommendations in Section 1.5 of the Vital Few mobility implementation plan. Strategic Plan action items are tracked as completed, recurring, currently underway or in implementation phase. The plan items that are under implementation phase or are recurring include:

- TIM Performance Measures and Routing Reporting/Sharing through Dashboard TIM Strat ID 5.C (Recurring)
 - o Update dashboard with Districts' TIM data monthly
 - Highlight roadway clearance time, incident clearance time, and number of secondary crashes by District
- Quarterly TIM Performance Measures Report TIM Strat ID 5.E (Recurring)
 - o Develop TIM performance measures summary report quarterly for leadership
- Instant Dispatch Tow *TIM Strat ID 7.4 (Implementation Phase)*
 - o Tow dispatched/requested simultaneously while the law enforcement officer is on the way
 - o Developed Instant Dispatch Tow white paper for Districts to implement
 - o Implemented in District 2 and started seeing benefits of reduced clearance and response times
- Crash Investigations TIM Strat ID 7.8 (Implementation Phase)
 - o Developed Crash Investigation Technical Memorandum for Districts to implement
 - Discussed technologies that are in use as well new emerging technologies for crash investigations such as total stations, three-dimensional (3-D) laser mapping systems, and unmanned aircraft systems (UAS)
 - o Provided to Districts for implementation in their TIM programs
- Designated Incident Response Coordinator (IRC) TIM Strat ID 7.10 (Implementation Phase)
 - Developed guidelines for IRC designation for traffic incidents
 - IRC represents FDOT at the incident scene and is a part of the Incident Command System (ICS)
- TIM Response Procedures/Guidelines TIM Strat ID 8.1 (Implementation Phase)
 - o Developed a procedural document to guide practitioners who respond to roadway incidents
 - Developed guidelines that are consistent with National TIM Responder Training Program
 - o Developed a field guide additionally for better reach to the responders

The TIM action items that are underway/new include:

- Road Ranger Service Patrol (RRSP) Program TIM Strat ID 7.1 (Ongoing)
 - o Designed a new standard statewide Request for Proposal (RFP) boilerplate
 - Included optional value-added services such as Safe Tow and Severe Incident Response Vehicle (SIRV) that Districts can use based on their preferences
- Rapid Incident Scene Clearance (RISC) TIM Strat ID 7.3 (Ongoing)
 - Revise procedure to include clearance time goals and incentives based on Florida's Turnpike Enterprise (FTE) scope.







- Revise procedure to include different arrival time goals for rural and urban areas as well as a tiered approach to clearance time goals.
- Consider funding updates based on increasing RISC events and truck traffic on Florida's interstates.
- Spill Mitigation Guidelines TIM Strat ID 7.7 (Ongoing)
 - Revise/update the Florida Guidelines for the Mitigation of Accidental Discharges of Motor Vehicle Fluids (non-cargo).
 - Continue marketing the guidelines as a resource for incident responders in Florida and adding them as an addendum to the RISC procedure.
- Open Roads Policy Update (New!)
 - Review Open Roads Policy agreement to consider the reduction of the policy goal of 90-minute clearance time.

Table 1 displays the implementation timeline for the new above-mentioned strategies. *Note: This timeline goes into effect once the approval is given from the Executive Leadership.*

Table 1. Implementation	Timeline for TIM Ac	ction Items on Interstate Highways
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TIM Strategic Action Items	Implementation	Roles and	Cost of
(New)	Timeline	Responsibilities	Implementation*
Review Open Roads Policy	6-12 months	Districts, CO	

*\$ - Low Cost, \$\$ - Mid Cost, \$\$\$ - High Cost

2.2 Express Lanes

Express lane facilities (*TIM Strat ID 10.2 – Not Started*) require a different approach to TIM as compared to other limited-access facilities where the deployment of service patrols is typically driven by circulation times, predicted number of incidents, or beat optimization. As a "highway within a highway", express lanes present challenges for operators who must respond quickly to incidents to preserve the higher level of service expected by express lane customers. Limited points of ingress and egress constrain circulation and turnaround, adding a level of complexity to incident response. Depending on the location, strategies that can be implemented on express lanes include:

- **RRSP Scope** Add RFP boilerplate language to the RRSP standard scope template to include express lanes.
- Dedicated Crash Investigation Sites
 - Develop criteria and specifications for site selection.
 - Review strategies for dedicated crash investigation sites to enhance express lanes TIM and safety.
 - Prioritize dedicated sites particularly for locations with constrained right of way and limited shoulder width.
 - Develop a plan including criteria and strategies for selected sites.
- Performance Measures Develop performance measures and dashboards to track the performance of TIM on express lanes.
- Staged Tow Develop statewide guidelines/procedures for a tow capable service patrol vehicle or dedicated tow truck staged at upstream ingress points to reduce response delays. An optimum way is to stage a traditional service patrol vehicle along with a separate flatbed tow vehicle that may take care of both minor and intermediate incidents. Currently, District 6 has implemented this strategy on I-95 Express lanes in Miami and District 2 on I-295 West Beltway Express Lanes in Jacksonville.





- Safe Tow Develop statewide rapid response towing program that relocates incident vehicles from travel lanes or dangerous situations until other arrangements can be made, like an owner-request or FHP rotation tow. Currently, District 2 has implemented this strategy as part of their Road Ranger contract.
- **Training** Develop training materials for TIM best practices on express lanes and conduct training (recurring) with all responders in conjunction with new managed lane project openings.

Table 2 highlights the Districts with express lane facilities currently in operation.

Facility	District	Miles		
295 Express	2	5		
75 Everen	4	12		
75 Express	6	3		
	4	9		
95 Express	6	12		
595 Express	4	10*		
Palmetto Express	6	9		
*Reversible Lanes				

Table 2. Express Lanes Facilities by District

Table 3 displays the implementation timeline for each of the above-mentioned strategies. *Note: This timeline goes into effect once the approval is given from the Executive Leadership.*

Implementation Timeline	Roles and Responsibilities	Cost of Implementation*
1-3 months	CO, Districts	\$
3-9 months	Districts, CO	\$
3-18 months	Districts, CO	\$\$
6-18 months	Districts, CO	\$
3-12 months	Districts, CO	\$
6-18 months	CO, Districts	\$\$
	Timeline1-3 months3-9 months3-18 months6-18 months3-12 months	TimelineResponsibilities1-3 monthsCO, Districts3-9 monthsDistricts, CO3-18 monthsDistricts, CO6-18 monthsDistricts, CO3-12 monthsDistricts, CO

Table 3. Implementation Timeline for TIM Action Items on Express Lanes

*\$ - Low Cost, \$\$ - Mid Cost, \$\$\$ - High Cost





MANAGEMENT

3.0 ARTERIAL TRAFFIC INCIDENT IMPLEMENTATION

The purpose of arterial TIM is to promote safe and efficient travel on arterials by applying current practices deployed on freeways. District Offices will collaborate with local agencies to efficiently implement TIM on arterials. Arterial TIM differs from the freeway TIM in the way that arterial roads have the following, but not limited to:

- Signalized Intersections
- Limited Shoulder Areas
- Pedestrian/Bicyclists
- Bus Stops
- Crosswalks
- Driveways
- Railroad Crossings
- Bridges
- School Zones
- Collector Roads
- High Access Points

FDOT and local agencies are investing in state highway systems (SHS) through ITS, connected automated vehicles (CAVs) for smarter intersection and arterial management. Additional investments are being made in TSM&O strategies such as AAM and ICM as well as through traffic signal retiming and traffic signal maintenance programs. The STAMP addresses ITS infrastructure and communication needs, TIM needs, and O&M needs to support TSM&O strategies on arterials to achieve the throughput, efficient multi-modal operation, reduced travel time, increased traffic and bicycle/pedestrian safety, and increased system uptime outcomes envisioned in the TSM&O Strategic Plan.

The following action items will be incorporated under arterial TIM (TIM Strat ID 10.1):

- Identify resources and funding required to support the implementation of the arterial TIM program.
- Develop and execute **operator signal timing adjustment plan** to support incident response and monitor clearance to restore original time plan. (**Ongoing**)
- Explore the use of *Adaptive or Advanced Signal Timing Adjustment Methodologies* to manage detour traffic or recurring congestion events. (*Ongoing*)
- Develop allocation model for RRSP or SIRV on arterials to determine minimum levels of service and locations for arterial Road Ranger/SIRV deployment. (Not Started)
- **Deploy TIM strategies** such as RISC and RISC LITE to support arterial incident management. (Not Started)
- Develop a *traveler information plan* to quickly disseminate incident information on arterials to the motorists using arterial dynamic message signs (DMS), mapping and navigation providers (Waze, Google Maps, etc.) Florida's Advanced Traveler Information System (FLATIS) (FL511, etc.), and other sources to disseminate incident information on arterials to the motorists. (*Ongoing*)
- *Measure* and *monitor arterial performance* and use data to support a business case for arterial TIM. (*Ongoing*)





- Develop statewide *performance measures dashboard and summary report* for arterial TIM. (Not Started Recurring)
- Establish a programmatic structure for *District arterial TIM program* as part of the Statewide Arterial Management Program (STAMP). *(Not Started)*
- Continue to leverage the *FHWA National TIM Responder Training Program* to properly train local agencies (police, fire, emergency medical services (EMS), transportation, and towing) on arterial TIM. *(Not Started)*

Table 8 displays the implementation timeline for each of the above-mentioned action items. *Note: This timeline goes into effect once the approval is given from the Executive Leadership.*

TIM Strategic Action Items (TIM Strat ID 10.1)	Implementation Timeline	Roles and Responsibilities	Cost of Implementation*
Identify Funding Requirements for Arterial TIM	1-6 months	CO	\$
Develop Signal Timing Adjustments Plan	3-9 months	Districts, CO	\$
Explore Adaptive or Advanced Signal Timing	6-18 months	Districts, CO	\$\$
Adjustment Methodologies for TIM			
Develop and Deploy TIM Strategies Deployment	6-18 months	CO, Districts	\$\$
(RRSP, RISC, SIRV)			
Develop Traveler Information Plan	8-12 months	Districts, CO	\$\$
Measure and Monitor Arterial Performance	6-18 months	Districts, CO	\$
Develop Arterial TIM Dashboard and Summary	3-18 months	CO, Districts	\$\$
Report			
Integrate District Arterial TIM Program with	6-18 months	CO, Districts	\$
STAMP			
Continue FHWA TIM Training	1-18 months	CO, Districts	\$\$

Table 8. Implementation Timeline for TIM action items on Arterials

*\$ - Low Cost, \$\$ - Mid Cost, \$\$\$ - High Cost

Examples of ongoing ICM strategies in districts include:

• Active Arterial Management – AAM (D1)

- Includes arterials in Sarasota and Manatee County leading to I-75.
- Includes signal time adjustments and providing traveler information, especially during special events or construction on I-75 (using DMS, FL511, etc.).
- Coordinates traffic information with counties, cities, transportation management centers (TMCs), and other local agencies within the District.

• Active Arterial Management – AAM (D4)

- Includes arterials in Broward and Palm Beach counties leading to I-95.
- Includes signal retiming and provide advance traveler information using Arterial Dynamic Message Signs (ADMS) to support traffic affected by special events.
- Measures and monitors performance of arterials in Broward and Palm beach counties on monthly basis and generate performance measure reports.
- Monitors and manages arterial operations along major corridors through inter-agency coordination.









4.0 INTEGRATED CORRIDOR MANAGEMENT

ICM increases safety and enhances mobility with innovative strategies that work together with freeway and arterial operations. This section discusses several platforms such as efficient Traffic Rerouting and Agency Coordination (eTRAC), Highway Emergency Link Platform (HELP), and Incident Notifications Systems (INS) that can be useful for efficient and reliable TIM on all roadway facilities. ICM helps major roadway corridors work efficiently with adjacent or affected roadway networks and manage any congestion/diversion caused on a limited access facility due to an incident, enabling smooth traffic flows on the parallel arterials to manage the traffic demand. ICM safety and mobility objectives as they relate to TIM include:

- Reduce secondary incidents and restore traffic flow quickly and efficiently.
- Integrate TIM data for arterials and freeways which allows to make informed decisions on diversion routes and other modes of commute leveraging ICM.
- Involve stakeholders in ICM for broader awareness of potential corridor impacts from planned special events.
- Expedite safer access for public safety and emergency response agencies to victims and communities in need of service.
- Improve traveler information, allowing motorists to understand incident impacts on travel times and make alternate route or modal choices.
- Enhance detour and diversion information to travelers of an incident scene and potentially move that traffic to other facilities or modes.
- Increase awareness and an accurate inventory of available traffic management and transportation operations infrastructure, systems, and assets.

The following action items will be incorporated under ICM for TIM:

- Implement statewide eTRAC application for efficient traffic management and detour strategies for both freeways and arterials. (New!)
- Measure and monitor corridor performance and use data to support a business case for arterial TIM. (New!)
- Develop statewide *performance measures dashboard and summary report* for freeways and arterial TIM. (*New!*)
- Continue to leverage the *FHWA National TIM Responder Training Program* to properly train local agencies (police, fire, emergency medical services (EMS), transportation, and towing) on freeways and arterial TIM. (*Ongoing for freeways. Not Started for arterials (New!*))
- Develop a framework for a *coordinated freeway-arterial TIM* plan utilizing a systems approach to optimize incident management on freeways and key arterials. (*Not Started*)

Table 4 displays the implementation timeline for each of the above-mentioned strategies. *Note: This timeline goes into effect once the approval is given from the Executive Leadership.*





Table 4. Implementation Timeline for TIM Action Items for ICM

TIM Strategic Action Items (TIM Strat ID 10.1)	Implementation Timeline	Roles and Responsibilities	Cost of Implementation*
Implement Statewide eTRAC Application	6-12 months	Districts, CO	\$
Measure and Monitor Freeway and Arterial Performance	6-12 months	CO, Districts	\$
Develop Performance Measures Dashboard and Summary Report	12-18 months	Districts, CO	\$\$
Continue FHWA National TIM Responder Training Program for Arterials	12-18 months	CO, Districts	\$\$
Develop Coordinated Freeway-Arterial TIM Plan Framework	12-18 months	CO, Districts	\$\$

*\$ - Low Cost, \$\$ - Mid Cost, \$\$\$ - High Cost

Examples of ongoing ICM strategies in Districts include:

- Efficient Traffic Rerouting and Agency Coordination eTRAC (D3)
 - Identify and select automatically the approved diversion routes for I-10 in District 3 within the surrounding transportation network (usually on-system arterials) using the eTRAC application.
 - Access traffic control plans showing traffic control devices and traffic signals.
 - Use readily available data to make informed decisions in real-time to develop the ICM environment.
 - Consolidate all available traffic data into one database that is accessible to all FDOT staff and first responders.
- Regional Integrated Corridor Management System software R-ICMS (D5)
 - $_{\odot}$ Implemented ICM approach on the I-4, I-75, and I-95
 - Mitigated the impacts of increased traffic volumes on parallel arterials during construction
 - Included staffing for ICM operations for freeway and AAM personnel working together to ensure an integrated approach in the region.
 - Leveraged strategies such as active traffic management, emergency management, traveler information, incident management, and data management.
 - Collaborated Districts and local agencies with other partners for enabling a multi -modal transportation system with efficient transportation network management and operations.
 - Coordinated with stakeholders allows efficient operational decision making for ICM implementation.

4.1 Highway Emergency Link Platform (HELP) Alerts

Highway Emergency Link Platform (HELP) is an emergency alerting service that alerts motorists approaching major roadway incident areas using a Wireless Emergency Alert (WEA) message. Similar to an Amber Alert, the HELP Alert is targeted specifically at a small geofenced area near a major traffic incident. No mobile app or pre-registration is needed to participate in these alerts which are delivered directly to cellular phones in the small target area to a resolution of 1/10 mile. A secondary component of the HELP Alert allows for the establishment of two-way communication between a TMC and people who may be stranded or in a queue situation as a result of a significant traffic incident or weather emergency.





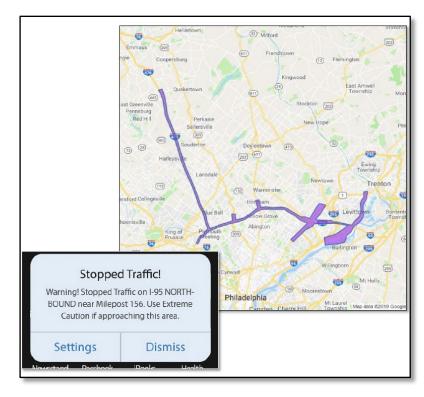


Figure 2 GeoFenced Area for HELP Alert (Source: Information Logistics, Inc.)

The following action items will be implemented under HELP alerts:

- Identify *processes and personnel* that will be used for *selecting Geofencing area* and activating HELP alerts.
- Develop criteria for warranting the activation of HELP alerts.
- Coordinate within the Department and outreach with partner agencies and the public.

Table 5 displays the implementation timeline for each of the above-mentioned action items. *Note: This timeline goes into effect once the approval is given from the Executive Leadership.*

TIM Strategic Action Items	Implementation Timeline	Roles and Responsibilities	Cost of Implementation
Select Personnel and Locations for Geofencing	3-12 months	СО	\$\$
Develop HELP Alerts Activation Criteria	6-18 months	СО	\$

Table 5. Implementation Timeline for HELP Alerts

*\$ - Low Cost, \$\$ - Mid Cost, \$\$\$ - High Cost

4.2 Incident Notification System (INS)

Managing corridors implies a coordinated effort within the FDOT, as well as with external partners and stakeholders. The Incident Notification System will be a new feature integrated within the FL511 application to ensure proper dissemination of information to the appropriate FDOT staff. The Incident Notification System will be an FDOT management tool designed to create situational awareness among all FDOT users who have subscribed to receive





the notifications when major roadway incidents occur. These notifications can be customized based on the user needs. By integrating the notification process using the FL511 application, email notifications can be automated, thereby relieving operators from additional responsibilities.

This would require the implementation of the following action items:

- Develop the list of *intended receivers* for the notification.
- Develop criteria for the activation of Incident Notification System.
- Develop procedure for the incorporation of the Incident Notification System into the FL 511.

Table 6 displays the implementation timeline for each of the above-mentioned action items. *Note: This timeline goes into effect once the approval is given from Executive Leadership.*

TIM Strategic Action Items	Implementation Timeline	Roles and Responsibilities	Cost of Implementation*
Develop Notification Receivers list	1-4 months	CO	\$
Develop Activation Criteria	4-6 months	CO	\$
Integrate with FL 511	6-12 months	CO	\$

Table 6. Implementation Timeline for Emergency Notification Alert System

*\$ - Low Cost, \$\$ - Mid Cost, \$\$\$ - High Cost





5.0 TIM SUPPLEMENT FOR TRANSPORTATION MANAGEMENT PLANS

Roadway construction projects are a sign of progress, but they also impact safety, mobility, and economy. TIM plays a critical role in mitigating many of the negative impacts of roadway construction projects. To make sure that TIM is considered and an integrated early in the project development process, it should be included in TMP. TIM requirements for TMPs (*TIM Strat ID 10.3 – Not Started*), may include the following action item:

 Update FDOT Design Manual (FDM) (including Section 240.3 Transportation Operations Plan) to include requirements for consideration of TIM in the development of the TMPs with emphasis on operations.

Table 9 displays the implementation timeline for each of the above-mentioned action items. *Note: This timeline goes into effect once the approval is given from the Executive Leadership.*

Table 9 Implementation Timeline for TIM Plan Supplement for TMPs

TIM Strategic Action Items	Implementation	Roles and	Cost of
	Timeline	Responsibilities	Implementation*
Update FDOT Design Manual	3-6 months	CO	\$

*\$ - Low Cost, \$\$ - Mid Cost, \$\$\$ - High Cost





6.0 NEXT STEPS

The Vital Few Mobility Implementation Plans highlights prioritization and implementation of various action items identified in the 2019 TIM Strategic Plan. These action items have been derived from identifying specific needs and gaps in TIM. The plan also identifies steps to ensure smooth functioning of both freeway and arterial TIM by implementing a coordinated freeway-arterial TIM plan. Implementation of the action items would support the reinforcement of FHWA's EDC-6 NextGen TIM innovation, adopted by the FDOT. The timeline for the execution of this plan will begin once the approval is given from the Executive Leadership.





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