Executive Summary

This report meets the Federal requirement of 49 United States Code (U.S.C.) Section 5329(e)(4)(A)(vii) for an annual status report on the safety of the rail fixed guideway transportation systems (FGTS) the state safety oversight agency (SSOA) oversees. The Florida Department of Transportation (FDOT) serves as the State of Florida’s SSOA. Specifically, the Florida State Safety Oversight (SSO) Program is housed within the FDOT Office of Freight, Logistics, and Passenger Operations in the FDOT Central Office. This report provides a retrospective summary of FDOT SSO Program 2017 activities. The FDOT SSO Program serves a critical role in overseeing that minimum safety and security requirements are met by the FGTS. The FDOT SSO Program’s diligence in delivering technical assistance and ensuring that each FGTS meets minimum requirements and provides safe and secure public transit systems.

This report addresses only those FGTSs that are subject to the requirements of both 49 U.S.C. Section 5329, 49 Code of Federal Regulations Part 659 (Part 659), as well as state regulations (Section 341.061(1), Florida Statutes and Rule 14-15.017, Florida Administrative Code):

- The Hillsborough Area Regional Transit Authority (HART) TECO Line Streetcar;
- The Jacksonville Transportation Authority (JTA) Automated Skyway Express (Skyway);
- The Miami-Dade Department of Transportation and Public Works (DTPW) Metromover and Metrorail; and
- The Wave Streetcar in Ft. Lauderdale.

Part I of this report describes existing regulations authorizing the FDOT SSO Program and its activities, and identifies FDOT SSO Program personnel and contact information. It also includes a brief description of each FGTS and the FDOT SSO Program’s contacts at each system.

Part II summarizes how the FDOT SSO Program is working to transition to meet new Federal regulations. In 2012, the Federal government adopted new statutory requirements governing state safety oversight. Since then, the Federal Transit Administration (FTA) proposed and issued rules to implement the statute. FDOT is working closely with the FTA and each FGTS to enhance the existing program and to meet the new requirements.

Part III of this report describes the specific activities that the FDOT SSO Program undertook in 2017 to meet its regulatory responsibilities, including conducting regular site visits and teleconferences with the FGTSs, providing technical assistance, monitoring hazard management, event investigations and corrective action plans, and reviewing and submitting certifications. This section includes data on reportable events, injuries and fatalities, and hazards at each FGTS over a five-year period, and highlights state safety oversight activities at each agency.
For questions and/or comments on this report, please contact John Lanham, Transit Safety Programs Manager at FDOT, by phone at 850-414-4525, or by email at John.Lanham@dot.state.fl.us.
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Acronyms

CAP: Corrective Action Plan
CFR: Code of Federal Regulations
DMS: Document Management System
DTPW: Miami-Dade Department of Transportation and Public Works
F.A.C.: Florida Administrative Code
FAST Act: Fixing America’s Surface Transportation Act
FDOT: Florida Department of Transportation
FGTS: Fixed Guideway Transportation System
FRA: Federal Railroad Administration
F.S.: Florida Statutes
FTA: Federal Transit Administration
HART: Hillsborough Area Regional Transit
ISTEA: Intermodal Surface Transportation Efficiency Act of 1991
JTA: Jacksonville Transportation Authority
MAP-21: Moving Ahead for Progress in the 21st Century Act
NPRM: Notice of Proposed Rulemaking
PTASP: Public Transportation Agency Safety Plan
SME: Subject Matter Expert
SMS: Safety Management Systems
SPP: Security Program Plan
SSO: State Safety Oversight
SSOA: State Safety Oversight Agency
SSPP: System Safety Program Plan
TECO: Tampa Electric Company
TRA: Transportation Resource Associates, Inc.
TTP: Technical Training Plan
Part I. Existing Regulations and Program Structure

Federal Authority

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) required the Federal Transit Administration (FTA) to create a state-managed oversight program to improve rail transit safety and security (49 U.S.C. § 5330). On December 27, 1995, the FTA published “Rail Fixed Guideway Systems; State Safety Oversight; Final Rule” (codified at 49 CFR Part 659), (Part 659). This rule governs light, heavy, or rapid rail, monorail, inclined plane, funicular, trolley or automated guideway systems that receive specific funding and are not regulated by the Federal Railroad Administration (FRA.)

On July 6, 2012, the new transportation authorization, Moving Ahead for Progress in the 21st Century (MAP-21) became law. MAP-21 grants the FTA the authority to establish and enforce a new comprehensive framework to oversee the safety of public transportation throughout the United States. MAP-21, under 49 U.S.C. Section 5329(e), requires that each state with fixed guideway transportation systems that receive certain Federal funding and are not regulated by the FRA to implement an SSO program that:

1) Assumes responsibility for overseeing rail fixed guideway public transportation safety;

2) Adopts and enforces Federal and relevant state laws on rail fixed guideway transportation safety;

3) Establishes an SSOA;

4) Determines in consultation with the FTA an appropriate staffing level for the SSOA that is commensurate with the number, size, and complexity of the rail fixed guideway public transportation in the state;

5) Requires that employees and other designated personnel of the SSOA who are responsible for rail fixed guideway public transportation state safety oversight are qualified to perform such functions through appropriate training, including successful completion of the public transportation safety certification training program; and

6) Prohibits any public transportation agency from providing funds to the SSOA.

Each eligible state, including the State of Florida, must establish an SSOA that:

- Is financially and legally independent from any public transportation entity that the SSOA oversees;
- Does not directly provide public transportation services in an area with a rail fixed guideway public transportation system subject to the requirements of this section;
• Does not employ any individual who is also responsible for the administration of rail fixed guideway public transportation programs subject to the requirements of this section;
• Has the authority to review, approve, oversee, and enforce the implementation by the rail fixed guideway public transportation agency of the public transportation agency safety plan required under subsection (d);
• Has investigative and enforcement authority with respect to the safety of rail fixed guideway public transportation systems of the eligible State;
• Audits, at least once triennially, the compliance of the rail fixed guideway public transportation systems in the eligible State subject to this subsection with the public transportation agency safety plan required under subsection (d); and
• Provides, at least once annually, a status report on the safety of the rail fixed guideway public transportation systems the SSOA oversees to the FTA; the Governor of the State; and the board of directors of the transit agencies or equivalent.

In December 2015, the *Fixing America’s Surface Transportation (FAST) Act* became law. The FAST Act authorizes the FTA to administer an SSO program when it is determined that current conditions are inadequate to ensure the enforcement of Federal safety regulation, or is incapable of providing adequate safety oversight consistent with the prevention of substantial risk of death or personal injury. The FTA is administering such a program in Washington, DC for the Washington Metropolitan Area Transit Authority. The FDOT SSO Program team monitors developments from this program in order to learn about the FTA’s expectations for enhanced state safety oversight programs.

**State Authority**

*Section 341.061(1), Florida Statutes (F.S.),* designates FDOT as the SSOA with the responsibility for the implementation and the enforcement of safety standards for FGTSs. *Section 341.061(1), F.S.,* requires that FDOT establish minimum safety standards for all governmentally owned FGTSs and privately owned or operated FGTSs operating in the State of Florida which are financed wholly or partly by state funds. The statute provides the authority for the *Safety and Security Oversight (SSO) Program Standards Manual for Fixed Guideway Transportation Systems* (SSO Manual). The SSO Manual is incorporated by reference into *Rule 14-15.017, Florida Administrative Code (F.A.C.)* and incorporated into the Rules of the Department (Standards Manual number 725-030-014).

The SSO Manual establishes system safety and security criteria for FGTSs operating in Florida. It describes FGTS and FDOT responsibilities to implement Section 341.061(1) F.S., and ensures ongoing communication between the FDOT SSO Program, each FGTS in Florida, and the FTA, including annual and periodic submissions.
The FDOT SSO Manual distinguishes between each FGTS that is subject to both Federal and state safety oversight (Part 659 and Section 341.061(1), F.S. requirements), and FGTSs that are subject only to state safety oversight (Section 341.061(1), F.S. requirements). More detail on the FGTS can be found on page 14.

In 2017, the SSO program drafted a revised program standard to meet new Federal requirements. The new standard will be adopted by rule in 2018 (see page 17 for more information on the certification process).
The FDOT SSO Program is housed within FDOT’s Central Office in the Office of Freight, Logistics and Passenger Operations in Tallahassee, FL.

Table 1 depicts the FDOT SSO Program contacts, and organization charts are provided on the following pages.

**Table 1. FDOT SSO Program Contacts**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ed Coven</strong></td>
<td>State Transit Manager/FDOT SSO Program Alternate</td>
<td>850-414-4522</td>
</tr>
<tr>
<td><strong>Robert Westbrook</strong></td>
<td>Transit Operations and Safety Administrator/FDOT SSO Program Alternate</td>
<td>850-414-4533</td>
</tr>
<tr>
<td><strong>John Lanham</strong></td>
<td>State Transit Safety Manager/FDOT SSO Program Manager</td>
<td>850-414-4525</td>
</tr>
</tbody>
</table>
FDOT Organization Chart
FDOT SSO Program Support Team

FDOT contracts with Transportation Resource Associates, Inc. (TRA) to provide support services related to safety and security oversight for Florida FGTSs that are subject to both Part 659 and Section 341.061(1), F.S. Additionally, TRA employs an in-house consultant at the FDOT Central Office to directly assist the State Transit Safety Manager with the implementation of the MAP-21 requirements, reports, training, and various other SSO activities.

TRA is a professional consulting firm established in 1990 to serve clients in the public and private passenger transportation sectors. TRA’s personnel provide technical and management consulting services in the areas of system safety; security and emergency preparedness; accident and incident investigation; transit and railway operations; maintenance and operations analysis; transportation legislation and standards; transportation planning; labor relations/human resources; and alternative transit services. TRA offers professional services to SSO programs, transportation agencies, industry advocacy groups, engineering and planning consultants, regulatory bodies, law enforcement organizations, and others. For more information, please visit TRA’s website at [www.traonline.com](http://www.traonline.com).

Table 2 lists TRA personnel who worked with the FDOT SSO Program in 2017. The contract authorizes a range of specialists to participate in oversight activities, including former law enforcement officers, and subject matter experts in track, transit agency operations, vehicle maintenance, and fire and life safety practices.

**Table 2. Contractor Support Team**

<table>
<thead>
<tr>
<th>Consultant and Phone Number</th>
<th>Summary of Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Wallgren, Vice President, Project Principal- TRA Project Lead 212-300-4287</td>
<td>Provides SSO program and policy development technical assistance to FDOT; provides technical assistance to the FGTS; provides analysis of accidents and incidents at the FGTS; reviews and tracks corrective actions taken by FGTS; ensures that the FGTS comply with reporting requirements; review updates to the FGTS system safety program and security plans; review internal safety review assessments; performs onsite audits of the FGTS; hold reoccurring teleconferences and onsite visits with the FGTS and FDOT.</td>
</tr>
<tr>
<td>Anthony Ferraro, Project Manager 813-513-4335</td>
<td>Provides SSO program and policy development technical assistance to FDOT; provides technical assistance to the FGTS; provides analysis of accidents and incidents at the FGTS; reviews and tracks corrective actions taken by FGTS; ensures that the FGTS comply with reporting requirements; review updates to the FGTS system safety program and security plans; review internal safety review assessments; performs onsite audits of the FGTS; hold reoccurring teleconferences and onsite visits with the FGTS and FDOT.</td>
</tr>
<tr>
<td>Consultant and Phone Number</td>
<td>Summary of Responsibilities</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Ashley Porter</strong>, In-House Consultant 850-414-4070</td>
<td>Assists with the collection, reviewing, and analyzing of relevant data, issues and state and Federal regulations to develop policy recommendations as the FDOT SSO Program implements new provisions consistent with Federal requirements; communicates the new requirements; and develops training related to new requirements.</td>
</tr>
<tr>
<td><strong>TRA Subject Matter Experts</strong></td>
<td></td>
</tr>
</tbody>
</table>
| David Barber  
Michael Crowther  
Daniel Hauber  
James Hill  
William Matthews  
John Weisgerber  
James Young  
Steven Zike | Assist in the performance of on-site audits and reviews; lead evaluations of policies, plans, and procedures; evaluate compliance with FDOT requirements, American Public Transportation Association (APTA) Standards, and other relevant guidance; provide technical assistance; and assist in developing findings and evaluating corrective actions taken by the FGTS.  
Expertise in all technical areas including: vehicles, signals, train control systems, communications systems, track, structures, substance abuse programs; operations, maintenance; hazardous materials; training; and other requirements of the FDOT SSO program. |
| **TRA Project Analysts** | |
| Stephanie Malin, Lead Analyst  
Zach Billet  
Angel Jacome  
Samuel Korach | Assist in conducting on-site audits and reviews; provided compliance audits of agency documentation; support SME audits and reviews; conduct detailed data gathering and analysis; support and develop investigations and evaluations; and provide technical guidance to agency personnel. |
Florida’s FGTSs

FGTSs subject to regulation under Part 659 include systems that:

- Are light, heavy, or rapid rail, monorail, inclined plane, funicular, trolley or automated guideway that are not regulated by the FRA, and
- Are included in the FTA’s calculation of fixed guideway route miles; or
- Receive funding under FTA’s formula program for urbanized areas, or
- Have submitted documentation to the FTA indicating the intent to be included in the FTA’s calculation of fixed guideway route miles to receive funding under the FTA’s formula program for urbanized areas.

Additionally, pursuant to Section 341.061(1), F.S., FGTSs that are governmentally or privately owned and operated and are financed wholly or partly by state funds are subject to state safety standards established within the statute and the SSO Manual.

The State of Florida is home to the following FGTSs subject to both Part 659, Section 341.061(1), F.S., and the FDOT SSO Manual.

The HART TECO Line Streetcar in Tampa: The TECO Line Streetcar consists of a 2.7-mile single-track route with eleven stations throughout Ybor City, Channelside, Water Street, and downtown Tampa.

The JTA Skyway: The JTA Skyway operates on 2.5 miles of elevated track through downtown Jacksonville. It currently serves eight stations through two routes: the Northbank and Southbank lines.

The Miami-Dade DTPW Metromover and Metrorail: In February 2016, Miami-Dade County reorganized its departments to join Miami-Dade Transit and Miami-Dade Public Works into the new Department of Transportation and Public Works (DTPW.) DTPW operates two separate FGTS modes: the Metromover and the Metrorail. The Metromover operates throughout downtown Miami on 4.4 miles of elevated guideway through the Omni, Inner, and Brickell Loops. Metrorail operates across central Miami-Dade County along 25 miles of dual, elevated and at-grade track from Miami International Airport through Kendall, South Miami, Coral Gables, Brickell, downtown Miami, the Civic Center/ Jackson Memorial Hospital area, Brownsville, Liberty City, Hialeah, Medley. Metromover currently serves 21 stations and Metrorail serves 23 stations.

The Wave Streetcar in Ft. Lauderdale: In 2017 this project was in the design phase. In 2018, Broward County and Ft. Lauderdale declined to continue supporting the project. However, because the FDOT SSO Program worked with Broward County during the development and design process throughout 2017, this information is included in this report.
Additional Florida FGTSs subject ONLY to State requirements outlined in Section 341.061(1), F.S. and the FDOT SSO Manual, but not Part 659, include the South Florida Regional Transportation Authority Tri-Rail and Central Florida SunRail commuter trains; the Hillsborough County Aviation Authority automated guideway systems at Tampa International Airport; the Miami-Dade Aviation Department automated people mover systems at Miami International Airport; and the Greater Orlando Aviation Authority automated guideway systems at Orlando International Airport.

For more information on FDOT’s responsibilities associated with state safety oversight of systems not subject to Federal requirements, please contact the Transit Safety Programs Manager at FDOT.

**Program Funding**

The FTA funding formula for the FDOT SSO Program requires a 20 percent state match and is divided into three factors: Base Tier, Service Tier, and Modal Factors. The formula grants an equal base amount to each state, and then takes into account Service Tier factors, which include fixed guideway vehicle revenue miles, fixed guideway route miles, and fixed guideway vehicle passenger miles attributable to all FGTSs not regulated by the FRA within each eligible state. The Modal Tier considers the number of separate FGTS modes subject to state safety oversight. Based on this formula, Florida received $779,948 for fiscal year (FY) 2017 (Table 3).

<table>
<thead>
<tr>
<th>Year</th>
<th>Base Tier (20%)</th>
<th>Modal Tier (20%)</th>
<th>Passenger Miles Traveled (15%)</th>
<th>Vehicle Revenue Miles (15%)</th>
<th>Directional Route Miles (30%)</th>
<th>Total FTA Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2013</td>
<td>$151,350</td>
<td>$304,802</td>
<td>$56,844</td>
<td>$70,557</td>
<td>$154,970</td>
<td>$738,523</td>
</tr>
<tr>
<td>FY 2014</td>
<td>$153,746</td>
<td>$309,628</td>
<td>$56,926</td>
<td>$74,366</td>
<td>$165,616</td>
<td>$760,282</td>
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<tr>
<td>FY 2015</td>
<td>$153,746</td>
<td>$309,628</td>
<td>$61,715</td>
<td>$81,771</td>
<td>$159,957</td>
<td>$766,817</td>
</tr>
<tr>
<td>FY 2016</td>
<td>$156,514</td>
<td>$315,202</td>
<td>$64,238</td>
<td>$82,985</td>
<td>$160,355</td>
<td>$779,294</td>
</tr>
<tr>
<td>FY 2017</td>
<td>$154,323</td>
<td>$317,102</td>
<td>$66,911</td>
<td>$82,188</td>
<td>$159,424</td>
<td>$779,948</td>
</tr>
</tbody>
</table>

Source: FTA: [https://www.transit.dot.gov/funding/apportionments/archived-apportionments](https://www.transit.dot.gov/funding/apportionments/archived-apportionments)

The funding must be used to strengthen the FDOT SSO Program so that Florida will meet the MAP-21 requirements. FTA provides examples of how the funding may be used at the website: [http://www.fta.dot.gov/tso_15862.html#how-can-states-use](http://www.fta.dot.gov/tso_15862.html#how-can-states-use). The examples include: additional audits and inspections, the tracking and verification of corrective action plans, supplemental training and peer exchanges, wages for FDOT SSO Program personnel, travel costs, equipment, office supplies, and web-based information management. FDOT uses this funding for technical assistance; including monthly teleconferences with all the FGTSs, onsite compliance monitoring activities, audits, training, and other consultant services, including
hazard management programs, safety certification, safety inspections, incident investigation support, and so on.
Part II. ADDRESSING CHANGES IN FEDERAL LAW

Currently, the FDOT SSO Program is transitioning to meet the MAP-21 requirements described earlier in this report. The following section describes the new FTA requirements and FDOT’s efforts to address them in 2017.

Federal State Safety Oversight Rule

On March 16, 2016 the FTA published its final rule related to SSO for FGTSs, 49 Code of Regulations Part 674 (Part 674.) The rule requires states assume greater responsibility for overseeing the safety of rail FGTSs. The rule provides requirements related to accident and incident notification, reporting, and investigations; staffing and qualifications of SSO personnel; triennial audits of agency safety plans; and SSO review of corrective action plans. The rule requires FTA to review and approve state SSO program standards to ensure compliance. The rule provides that Part 659 will be repealed three years after Part 674’s effective date.

Federal Financial Withholding for Noncompliance with SSO Rule

Part 674.21 provides that if a state fails to establish a compliant SSO program by April 15, 2019 the FTA is prohibited from obligating any Federal financial assistance to any entity in the state that is otherwise eligible to receive funding through any of the FTA’s programs authorized by 49 U.S.C. Chapter 5338. This includes funding for public transportation agencies, designated recipients, sub-recipients, and Metropolitan Planning Organizations. It is therefore of utmost importance that the FDOT SSO Program continues to work closely with the FTA to fully address the new requirements and achieve certification.
Part 674 Certification Process

FTA developed a certification process to ensure states comply with Part 674. The application includes six parts:

- SSO Program Independence;
- General Program Requirements;
- Enforcement Authority;
- Investigations and Audits;
- Staffing and Qualifications of SSO Personnel and Contractors; and
- Program Standard

In May 2017, FDOT submitted a partial certification application to the FTA. The application included correspondence between the FTA and FDOT establishing FDOT’s financial and legal independence, Florida Statutes establishing FDOT as the SSO program, a technical training plan, a workload assessment, the contract between FDOT and TRA for SSO program services, resumes, and job descriptions. FTA confirmed receipt of the documents via email on June 23, 2017. In 2018, FDOT will submit a completed application to the FTA, which will include the revised FDOT SSO Program Manual.

FTA’s Public Transportation Safety Program

On August 11, 2016, the Federal Register published the final Public Transportation Safety Program Rule, 49 Code of Federal Regulations Part 670 (Part 670). This rule provides the framework for the FTA to monitor, oversee, and enforce transit system safety based on a Safety Management Systems (SMS) framework. It also establishes rules for FTA administration of the comprehensive safety program, and it describes the content of the National Public Transportation Safety Plan.

The FTA published the National Public Transportation Safety Plan in January 2017. The purpose of the plan is to guide the national effort to manage safety risks and safety hazards within public transportation systems.

The FDOT SSO Program team reviewed the adopted plan, and is working with the Florida FGTSs to ensure they implement the SMS approach. The SMS approach is defined by the Plan as, “a formal, top-down, data-driven, organization-wide approach to managing safety risks and assuring the effectiveness of safety risk mitigations.” It emphasizes effective collection, analysis, and sharing of safety data; and active, accurate, and routine safety performance measurement. The SMS approach consists of four components: safety management policy; safety risk management; safety assurance; and safety promotion.

In addition to defining the SMS framework, the plan includes:

- Safety performance criteria for all modes of public transportation
• Definition for “state of good repair”
• Minimum safety performance standards for vehicles in revenue operations
• Minimum performance standards for public transportation operations
• A Safety Certification Training Program

**FTA Public Transportation Safety Certification Training Program**

Compliance with the Interim Provisions was a grant condition for recipients of Federal transit funding in 2017. These provisions applied to Federal and SSOA personnel and contractors who conduct safety audits and examinations of public transportation systems not otherwise regulated by another Federal agency, and FGTS staff who are directly responsible for safety oversight (“covered personnel.”) Each FGTS must designate its covered personnel who are directly responsible for safety oversight of its rail transit system, and at a minimum, covered personnel should include the Chief Safety Officer and the primary staff directly responsible for safety oversight of the FGTS. The Interim Provisions define “directly responsible” as “safety staff who participate in the development, implementation, or maintenance of the requirements of the oversight agency’s program standard.” The Interim Provisions required SSOAs to prepare and submit a technical training plan (TTP) to the FTA. The FDOT SSO Program submitted the first TTP in 2015 and submitted an updated version in May 2017 as part of the partial certification application.

On July 19, 2018, the Federal Register published the final Public Transportation Certification Training Rule. The FDOT SSO Program continues to attend available training courses. All FDOT SSO Program personnel subject to the requirements will achieve the required training by the established deadlines (within three years of the effective date of the interim training requirements, or within three years of the employee’s hiring date.)

**FTA Public Transportation Agency Safety Plan Rule**

The Federal Register published the Public Transportation Agency Safety Plan (PTASP) rule on July 19, 2018. This rule requires public transportation systems that receive funding under the FTA’s Urbanized Area Formula Grants to develop a safety plan by July 20, 2020. The plan must implement the SMS approach. In 2018 and 2019, the FDOT SSO Program will work closely with each FGTS in Florida to develop a compliant PTASP in advance of the 2020 deadline.

**FTA Operator Assault Rule**

Part III. IMPLEMENTATION OF THE FDOT SSO PROGRAM

While working to adopt the new MAP-21 requirements within the three-year deadline post the adoption of Federal Rule 674, the FDOT SSO Program continues to administer the current program pursuant to Part 659 and Section 341.061, F.S., with increased resources devoted to technical assistance, event investigation support, hazard tracking and investigation oversight, and corrective action plan monitoring and verification. Additionally, the SSO program conducts unannounced inspections in addition to regularly-scheduled on-site reviews and audits throughout the year at all the agencies.

The following are key performance areas of the FDOT SSO Program’s safety and security oversight functions.

Reportable Events Oversight

The FDOT SSO Program provides ongoing investigation reviews associated with accidents, incidents, and hazards. The FDOT SSO Program Manual requires each FGTS to notify FDOT when one or more of the following occurs:

- A fatality at the scene; or where an individual is confirmed dead within 30 calendar days of a transit-related incident;
- Injuries requiring immediate medical attention away from the scene for two or more individuals;
- Property damage to FGTS vehicles, non-FGTS vehicles, other FGTS property or facilities, and non-FGTS property that equals or exceeds $25,000;
- An evacuation due to life safety reasons;
- A collision at a grade crossing;
- A main-line derailment;
The FDOT SSO Program maintains an online document management system (DMS), which allows the FGTS to complete formal event notification reports. When a reportable event occurs, the FGTS must notify the FDOT SSO Program within two hours of the occurrence and complete an online Reportable Event Initial Notification form. The FDOT SSO Program reviews and provides comments on all initial notifications of events. Following the initial notification, the FDOT SSO Program contacts the FGTS to request additional information and to provide a follow-up on any immediate corrective actions.

**Historic Perspective of Reportable Events**

The FDOT SSO Program tracks reportable events through the online DMS and interactive databases shared monthly with each FGTS. FDOT also compiles an annual certification report to the FTA. (For additional details regarding the annual certification process, please refer to page 29.) The following section provides data on reportable events that occurred since 2013.

### Table 7. Number of Reportable Events: 2013-2017

<table>
<thead>
<tr>
<th>Agency</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>HART</td>
<td>6</td>
<td>12</td>
<td>14</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>JTA</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1*</td>
</tr>
<tr>
<td>DTPW</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>20**</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>17</strong></td>
<td><strong>19</strong></td>
<td><strong>21</strong></td>
<td><strong>23</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

* This JTA event involved an evacuation of passengers onto the guideway. FDOT requires that agencies report all evacuations of passengers onto a guideway, even though it is not required under Part 659.

**DTPW 2017 event notes as follows:**
- Twenty-five percent of the DTPW reportable events were various forms of derailments.
- Twenty percent of the DTPW events were patron deaths discovered on transit property. FDOT requires the FGTS to report deaths through the formal incident reporting system, even in the event of natural causes.
- Twenty percent of the events reported by DTPW were caused by outside factors and did not directly involved DTPW personnel. In three of these instances, outside contractors performed unauthorized work that resulted in the accident, including one fatality and damage to DTPW assets.

There were two evacuation events at DTPW in 2017. Both occurred on Metromover, and overall, four passengers were involved. This represents a decline in passenger evacuations from previous years. FDOT requires that agencies report all evacuations of passengers onto a guideway, even though Part 659 does not require this. FDOT worked with DTPW to ensure...
responses to in-service train delays and disruptions are properly managed with appropriate communications to discourage passengers from self-evacuating in situations that are simply a delay. DTPW continues to pursue maintenance and capital upgrade programs on the Metromover to improve overall reliability.

DTPW experienced a significant increase in the number of derailments and unusual occurrences, which were mostly confined to the maintenance yard in 2017. The events included four derailments and two low-speed collisions. FDOT required DTPW to begin investigating the series of yard derailments as potentially linked, and a rail repair plan with monthly reporting was also required by FDOT. Additionally, FDOT deployed an investigation team, including two subject matter experts, to DTPW in response to the derailments to conduct emergency on-site review activities in July 2017. FDOT provided technical assistance to DTPW in developing the track repair and upgrade plan. DTPW developed a prioritized schedule for track repairs, and since the completion of those repairs, no derailments have occurred in the prioritized areas.

HART continues to initiate efforts to mitigate risks at grade crossings and street intersections, which are the locations where most reportable events take place. The reduction in incidents at HART in 2017 reflects the result of physical mitigations, operator training, and operational modifications.

Table 8. Fatalities: 2013-2017

<table>
<thead>
<tr>
<th>Agency</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>HART</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>JTA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>DTPW</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5***</td>
</tr>
<tr>
<td>**TOTAL</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

*** Four of the five fatalities reported by DTPW were deceased patrons discovered on transit property. The fifth fatality was an adjacent construction worker who did not have proper authorization to be conducting work within the dynamic envelop of the Metromover.

Table 9. Injuries 2013-2017

<table>
<thead>
<tr>
<th>Agency</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>HART</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>JTA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>DTPW</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>**TOTAL</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
Hazards Tracking Oversight

The SSO Manual requires the FGTS agencies to identify and resolve hazards. Hazards are defined in the SSO Manual as any real or potential condition (as defined in the FGTS's hazard management process) that can cause injury, illness, or death; damage to or loss of a system, equipment or property; or damage to the environment. Each hazard that the FGTS agency identifies must be documented. If an agency determines that the hazard is unacceptable, the agency must notify the FDOT SSO Program within 24 hours. Within seven days of the hazard being reported, the FGTS agency must submit an initial investigation report to the FDOT SSO Program. Until the investigation is completed, the FGTS must submit monthly updates. Once the agency completes the hazard investigation, the FDOT SSO Program must review and approve the final investigation report within 30 days of submittal.

Each FGTS submitted its hazard log to FDOT on a monthly basis, and FDOT evaluated all open hazard investigations through closure. FDOT personnel analyzed hazards via on-site review activities and off-site phone calls and document submittals.

Corrective Action Plans

The FGTS are required to prepare a corrective action plan (CAP) when an investigation identifies causal factors that require corrective action, or when hazards or deficiencies are identified in safety or security audits and reviews. CAPs must identify the hazard or deficiency, planned activities or actions to resolve the hazard or deficiency, the FGTS department(s) responsible for implementing the actions, and a schedule for implementing the plan.

Once an FGTS prepares a CAP, the FDOT SSO Program engages a three-step process to fulfill its responsibilities:

1. The FDOT SSO Program reviews proposed CAPs and determines if they are acceptable within 15 days of receipt;
2. Once a proposed CAP is approved, the FDOT SSO Program tracks the progress of implementation and provides technical assistance to the FGTS, as necessary; and
3. The FDOT SSO Program reviews documentation for completed CAPs, verifies that this information demonstrates appropriate actions to correct deficiencies, and closes the CAP.

The FGTS must maintain a Corrective Action Monitoring log and provide the FDOT SSO Program with monthly updates until the CAP is closed.

Each FGTS submitted its Corrective Action Monitoring Log to FDOT on a monthly basis. Each FGTS also provided appropriate documentation necessary to demonstrate closure of CAPs. FDOT monitored the status of all open CAPs and met regularly with FGTS personnel via phone.
and in person to review and accept all final CAP materials required for CAP closure. In many cases, FDOT personnel performed on-site verification of mitigations described in the CAPs.

**Internal Safety Review Assessments**

Each FGTS is required to maintain a System Safety Program Plan (SSPP) and Security Program Plan (SPP). The SSO Manual requires the SSPP to contain 21 elements to provide the basis for the FGTS safety programs, and the SPP to contain 20 elements. Each FGTS is required to review and update these plans over a three-year period. Typically, each FGTS reviews one-third of the elements of each plan annually. The FGTSs must develop appropriate internal audit checklists and provide them to the FDOT SSO Program for review and approval at least 30 days prior to conducting the reviews. At the conclusion of the FGTSs’ reviews, the FGTS must submit the results of the review to the FDOT SSO Program. They must describe their findings, recommendations, and status of corrective actions. Any deficiencies must go through the CAP process.

**Regularly Scheduled Meetings and On-Site Assistance**

The FDOT SSO Program is on-call for all safety and security issues involving the FGTS. The agencies may contact the Transit Safety Program Manager and the support team at any time with information requests, requests for best practices analyses, assistance with reporting requirements, or to address any other concerns. In addition to this on-call availability, the SSO support team establishes and carries out a schedule of teleconferences and site visits to provide technical assistance, conduct SSPP compliance reviews, monitor FGTS safety activities, perform audits, and compile applicable data. In 2016, the FDOT SSO Program also began unannounced site visits, which continued in 2017.

During each on-site review, the FDOT SSO Program met with FGTS safety, operations, and maintenance personnel. Each on-site review included a regular progress meeting with safety managers, targeted field review activities, and verification of CAP implementations to ensure that intended and required actions were administered according to the accepted plan. Additionally, during each on-site review the FDOT SSO Program team conducted independent audits of rules and procedure compliance, inspected equipment and infrastructure, and ensured that the agencies are complying with the provisions of the FDOT SSO Program Manual and the FGTS SSPP and Security Program Plan. The FDOT SSO Program develops an agenda for each on-site review and issues a summary memo to the FGTS, which includes findings and areas for the FGTS to address.

In months with no on-site review, the FDOT SSO Program support team held a comprehensive teleconference with the transit agency. Each teleconference is scheduled to afford essential managers from the FGTS the opportunity to discuss and provide updates regarding current and emerging safety and security concerns and hazards, open safety and security investigations and CAPs, safety and security submittals, and other safety- and/or
security-related operations and maintenance issues, as necessary. FDOT developed an agenda for each teleconference, which is organized in a standardized format to address all of the aforementioned issues and to ensure that all relevant subjects are appropriately monitored and addressed.

On February 21, 2017, the FDOT SSO Program hosted a statewide SSO program overview webinar. Each FGTS participated, and the webinar included a discussion forum for each of the agencies to discuss questions or concerns as a group. The webinar also covered a 2016 year-end review, new Federal requirements, Part 674 certification, new on-site visit protocols and enhanced documentation efforts, safety key performance indicators, the FTA’s general directive 17-1, the FTA triennial audit of FDOT’s SSO Program, and “hot topics” from each of the agencies.

Table 11. 2017 FDOT SSO Program Activities

<table>
<thead>
<tr>
<th>Month</th>
<th>DTPW</th>
<th>JTA</th>
<th>HART</th>
<th>Wave</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Teleconference</td>
<td>Teleconference</td>
<td>Teleconference</td>
<td>Teleconference</td>
</tr>
<tr>
<td>February</td>
<td>On-site</td>
<td>On-site</td>
<td>On-site</td>
<td>On-Site</td>
</tr>
<tr>
<td>March</td>
<td>Teleconference</td>
<td>On-site</td>
<td>On-site</td>
<td>Teleconference</td>
</tr>
<tr>
<td>April</td>
<td>On-site</td>
<td>Teleconference</td>
<td>Teleconference &amp; On-site</td>
<td>Teleconference</td>
</tr>
<tr>
<td>May</td>
<td>Teleconference</td>
<td>Teleconference &amp; Unannounced On-site</td>
<td>Teleconference</td>
<td>Teleconference</td>
</tr>
<tr>
<td>June</td>
<td>On-site (scheduled visit and unscheduled, post-incident response visit)</td>
<td>On-site</td>
<td>On-site</td>
<td>Teleconference</td>
</tr>
<tr>
<td>July</td>
<td>Unannounced On-site</td>
<td>Teleconference</td>
<td>Teleconference &amp; Unannounced On-site</td>
<td>Teleconference</td>
</tr>
<tr>
<td>August</td>
<td>On-site</td>
<td>Teleconference</td>
<td>Teleconference &amp; On-site</td>
<td>Teleconference</td>
</tr>
<tr>
<td>September</td>
<td>Teleconference</td>
<td>Teleconference</td>
<td>Teleconference &amp; On-site</td>
<td>Teleconference</td>
</tr>
<tr>
<td>October</td>
<td>On-site</td>
<td>On-site</td>
<td>On-site</td>
<td>Teleconference</td>
</tr>
<tr>
<td>November</td>
<td>Two on-site visits (one unannounced, one special response)</td>
<td>Unannounced On-site</td>
<td>Unannounced On-site</td>
<td>Unannounced On-site</td>
</tr>
</tbody>
</table>
Selected FDOT SSO Program Support Activities 2017

HART

- FDOT monitored infrastructure enhancements at HART, many of which must be addressed by the City of Tampa, because Tampa owns the right-of-way. Examples of these projects include track repairs, tie replacement, sinkhole mitigation, and drainage improvements along the alignment.
- The FDOT SSO Program worked with HART to ensure a comprehensive adjacent construction monitoring program was implemented. FDOT monitored HART’s efforts to establish and maintain frequent communication with the City of Tampa regarding construction efforts, which expanded across the streetcar alignment in 2017.
- The FDOT SSO Program monitored HART efforts to develop and implement a contractor safety training program. Where necessary, FDOT provided review and technical support to HART related to this effort. FDOT also reviewed the program and materials to ensure compliance with industry best practices and FDOT requirements. HART provides the training to all contractors who perform work in the maintenance facility and/or along the streetcar right-of-way.
- FDOT continued to work with HART regarding grade-crossing and intersection improvements along the streetcar alignment. FDOT and HART documented problematic areas, especially deteriorated pavement markings and signage at locations where the streetcar tracks cross public roadways. The maintenance of these areas is the responsibility of the City of Tampa. FDOT worked with HART to establish, maintain, and enhance regular communications with the City. FDOT also participated in a system walk-through with HART and representatives from the City.

JTA

- In 2017, JTA developed its modernization project, the Ultimate Urban Connector (U²C). The project proposes to utilize the existing Skyway infrastructure for autonomous vehicles. FDOT offered safety oversight support on the project’s risk analysis and the test track design process.
- FDOT provided technical support and recommended monitoring activities related to the JTA Jacksonville Regional Transportation Center (JRTC) construction, which impacts Skyway. FDOT reviewed the station shut-down plan for Convention Center
and Jefferson stations, and monitored the adjacent construction hazard analysis performed by JTA. Further, FDOT reviewed JTA’s station opening process prior to the re-opening of Jefferson Station.

- The FDOT SSO Program provided review and support to Skyway for its drills and exercise activities in 2017, and FDOT also reviewed training program enhancements at JTA Skyway as full-time staff were brought on board.
- Upon request, the FDOT SSO Program conducted an in-depth review of Skyway maintenance records to ensure compliance with preventive maintenance activities as JTA transitioned between tracking methods for inspection intervals.

DTPW

- In 2017, FDOT began monitoring the delivery, testing, and certification of new Metrorail vehicles. The first new vehicles entered into revenue service in November, with continuing periodic deliveries expected to occur through 2020. FDOT support activities include on-site data review, site visits to the local vehicle assembly facility, monitoring of maintenance activities, and verifying that all necessary and required maintenance plans are developed and implemented.
- Throughout the year, FDOT worked with DTPW on addressing safety hazards posed by construction projects adjacent to the rail systems. This effort includes projects adjacent to both the Metromover and Metrorail systems. Hazards monitored included debris falling to the guideways, adjacent work activities completed by personnel using man-lifts and cranes, and excavation activities that damaged underground train control and traction power equipment. FDOT verified that DTPW implemented and maintained a monitoring program, which deploys staff to observe each tower crane at every construction site and to maintain direct communication with construction personnel and the DTPW operations control center facility.
- In response to a series of derailments and other reportable events, FDOT conducted supplemental site visits to provide technical assistance. Specifically, as the DTPW track equipment (including the running rail and switches) ages, normal wear in curves and other areas has been found to impact normal train operations. Most of the priority locations were found to be in the maintenance yard. The FDOT SSO Program monitored corrective actions and the work plan implemented by DTPW to address priority areas.
- FDOT responded to the reported hazard of concrete spalling from Metromover structures. FDOT reviewed DTPW’s inspection plan and monitored repair efforts throughout the system.
**Triennial Audits of FGTS**

Every three years the FDOT SSO Program performs a triennial audit of each FGTS’ compliance with their SSPPs, Security Program Plans, and the requirements established in the SSO Manual and Part 659. The triennial audit is an intensive multi-day audit of safety in all applicable FGTS operations, maintenance, training, and administration.

In 2017, the FDOT SSO program did not audit any agencies. In 2016, FDOT audited JTA and HART. Throughout 2017, the SSO Program monitored open corrective actions. In October, the FDOT SSO Program conducted a CAP workshop with JTA personnel, which resulted in closing out all but one of the CAPs from the triennial audit.

In 2017, FDOT prepared for the triennial audit of DTPW, taking place in February 2018. Preparations included establishing a calendar, an audit team consisting of subject matter experts, and briefing DTPW staff on the preparations.

**FTA Triennial Audit of FDOT’s SSO Program**

On May 2, 2017, the FTA provided a letter stating that all findings from the 2013 triennial audit of the SSO program had been formally resolved. On July 10-13, 2017, the FTA performed the on-site portion of their triennial audit of the SSO Program in Tallahassee and in Miami. Representatives from HART and JTA attended the Tallahassee portion of the on-site audit. DTPW personnel hosted and participated in the Miami portion of the audit. As of this publication, FDOT has not received the FTA audit report or been made aware of any formal findings generated as a result of the audit.

**2017 Hurricane Season**

On September 4, Governor Scott issued a State of Emergency for the entire state in response to the approach of Hurricane Irma. The following day, the FDOT SSO Program issued a memo to the safety directors of HART, JTA, and DTPW requesting daily updates regarding the status of service provision, a description of how the agencies would assess storm damage, and how the agencies would determine when service could resume.
All three FGTSs commenced emergency operations. The FDOT SSO Program support team worked with the agencies to compile the daily updates and offered technical assistance, as necessary. FDOT remained aware of the local emergency operations center responsibilities of FGTS staff, and no requests for information interfered with the primary response efforts engaged at each FGTS. None of the rail systems sustained major damage; however, due to an issue with an unstable, partially collapsed crane from an adjacent construction project, the DTPW Metromover system did not resume operations until September 18, 2017, at which time the crane was re-secured, and DTPW verified that no risks to operational safety were present.

**FTA Proposed General Directive 17-1**

Consistent with the Public Transportation Safety Program Rule (49 CFR Part 670), on January 17, 2017, FTA issued proposed General Directive 17-1 regarding stop signal overruns. A stop signal overrun occurs when a rail transit vehicle does not stop at a stop signal or other indicator. The directive required the FDOT SSO Program and each FGTS to identify and evaluate the frequency and severity of stop signal overruns (if any), and to monitor the implementation and effectiveness of mitigations to reduce associated risks (where applicable.) This directive was published after the FTA reviewed the responses solicited by its Safety Advisory 16-1.

**Annual Reporting Requirements**

By March 15 of every year, the FTA requires the FDOT SSO Program to submit a report that certifies annual compliance with Part 659, and summarizes the oversight activities for the preceding year. Due to delays in creating a reporting template and issues with its online reporting system, the FTA extended the deadline for the 2016 certification report. FDOT submitted its report on April 11, 2017, prior to the FTA’s extended deadline. In November 2017, FTA personnel required FDOT SSO Program staff to reconcile differences between the Annual SSO Report and the FGTS National Transit Database (NTD) reporting results for 2016. The FDOT SSO Program team explained the differences to FTA, which were related to different reporting thresholds between the FDOT SSO program and the NTD. The FDOT SSO Program requires that each FGTS formally reports all evacuations of vehicles, all grade-crossing collisions, all deaths that occur on transit property, and all derailments; whereas the NTD maintains narrower thresholds.
FOR MORE INFORMATION

Visit our Transit Fixed Guideway Safety and Security website:

Visit our Florida Transportation Safety and Operations Network website and join our listserv:

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