



## COMMONWEALTH of VIRGINIA

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April 24, 2019

The Honorable Ralph S. Northam  
Governor, Commonwealth of Virginia  
1111 Broad Street, Richmond, Virginia 23219

Re: 2018 Annual Status Report on Rail Fixed Guideway State Safety Oversight Program  
Performance in the Commonwealth of Virginia

Dear Governor Northam:

The Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) and 49 CFR Part 674.13 (a) (7) mandates that "at least once a year, the State Safety Oversight Agency reports the status of the safety of each rail fixed guideway public transportation system to the Governor." As such, the Virginia Department of Rail and Public Transportation (DRPT) submits this annual report of rail transit state safety oversight program activities for the period January 1, 2018, through December 31, 2018.

The attached report outlines the program's mission and describes its current activities while detailing ongoing efforts to comply with the federal regulation on State Safety Oversight of Rail Fixed Guideway Systems.

Please do not hesitate to contact the DRPT Transit Rail Safety and Emergency Management Administrator, Andrew Ennis ([andrew.ennis@drpt.virginia.gov](mailto:andrew.ennis@drpt.virginia.gov), 703-786-3434) should you or your staff have questions or wish to discuss the program.

Sincerely,

A handwritten signature in black ink that reads "Jennifer L. Mitchell".

Jennifer L. Mitchell

cc: Shannon Valentine, Secretary of Transportation  
Andrew Ennis, Transit Rail Safety & Emergency Management Administrator

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## 2018 Annual Status Report

### Rail Fixed Guideway State Safety Oversight Program Performance

Commonwealth of Virginia

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## Program Background and Overview

In 1996, the Federal Transit Administration (FTA) issued the Rail Fixed Guideway Systems State Safety Oversight rule, 49 CFR Part 659. Under this rule, each state, with rail fixed guideway systems that are not subject to the regulatory authority of the Federal Railroad Administration, is responsible for overseeing the safety and security program implementation of these systems. In the Commonwealth of Virginia, authorized under subdivision 16 of § 33.2-285 of the Code of Virginia, the designated Rail State Safety Oversight Agency (SSOA) is the Virginia Department of Rail and Public Transportation (DRPT). The rail fixed guideway system overseen by DRPT is the Hampton Roads Transit (HRT) Tide light rail system in Norfolk, VA.

A new State Safety Oversight rule issued in March 2016, 49 CFR Part 674, directed eligible states to significantly strengthen their authority to oversee and enforce safety requirements to prevent and mitigate accidents and incidents on rail fixed guideway systems. Additionally, this new regulation mandated eligible states to demonstrate legal and financial independence from the rail transit systems they oversee, as well as the financial and human resources for overseeing the number, size, and complexity of rail transit systems within their jurisdictions. DRPT's State Safety Oversight program was certified under 49 CFR Part 674 on April 4, 2018. While the new regulation does not mandate oversight of security practices at the rail transit system, DRPT maintains this authority over HRT security as authorized under the Code of Virginia.

This report will address state safety oversight as it pertains to the HRT Tide light rail system only. An interstate compact was enacted on August 22, 2017, creating the Washington Metrorail Safety Commission. Effective March 18, 2019, the Washington Metrorail Safety Commission is the designated State Safety Oversight Agency for WMATA Metrorail, as certified by FTA. The District of Columbia, the State of Maryland and the Commonwealth of Virginia (led by DRPT officials) worked diligently to support the mobilization and certification activities of the Washington Metrorail Safety Commission. The state safety oversight activities detailed in this report and discharged by DRPT are separate and distinct from any program activities associated with WMATA Metrorail, the Washington Metrorail Safety Commission, or the Tri State Oversight Committee.

For the purpose of this report, "rail transit agency" and "rail fixed guideway system" are used interchangeably. Both these terms refer to Hampton Roads Transit light rail system. "State" and "state safety oversight agency" are used interchangeably in this report. Both these terms refer to DRPT.

## State Safety Oversight Responsibilities

DRPT's Rail State Safety Oversight activities are intended to ensure that the rail transit agency places safety considerations over operational expediency in all decision making.

An important distinction should be made in delineating the role of the state safety oversight agency versus the role of the rail transit agency in maintaining and improving rail safety. The role of the state oversight agency is that of the regulator ensuring that all of the mechanisms in place at the rail transit agency to preserve the highest levels of safety are sound and unconditionally applied. The state does not perform day-to-day functions at the rail transit

agency. Alternatively, the role of the rail transit agency is to perform all necessary programmatic, procedural, technical, engineering and operational activities that the rail transit agency has formally adopted in order to maintain safety in rail operations.

The core of the state safety oversight agency's mission is the continuous verification that the rail transit agency is carrying out its documented programs that are in place to ensure the safety of its passengers and its employees. The state's Rail State Safety Oversight efforts are conducted so that they are fully transparent to HRT. All of the state's Rail State Safety Oversight actions, including those that denote various deficiencies at HRT, are communicated objectively with the goal of improving HRT's rail safety posture, and not to assign fault. HRT's Safety and Security Department is the custodian of HRT's safety program. However, the entire HRT organization, including its senior executives, middle managers, supervisors, and front line personnel, is empowered and responsible for upholding its safety goals.

The entirety of this state safety oversight effort is called the "Program". The activities of the DRPT Rail State Safety Oversight program are described in a document titled the Safety and Security Program Standard (SSPS). This is a document mandated by federal regulation containing a description of DRPT's organizational structure and lines of authority that support the oversight program as well as DRPT's protocols in conducting a federally compliant Rail State Safety Oversight program. The SSPS is a dynamic document that undergoes annual review and updates to reflect enhancements to the program. This document and the practices it represents are subject to FTA review.

## Key Program Activities

DRPT state safety oversight key program activities include:

- Regular work sessions with HRT rail safety, security, operations and maintenance personnel;
- Conducting audits, inspections and special assessments of HRT's light rail operations;
- Review and approval of primary HRT rail safety, security, and emergency preparedness plans;
- Review, approval and adoption of rail investigations of accidents, incidents, and hazards occurring on the HRT light rail system; and
- Tracking and verification of HRT's progress in correcting safety and security gaps on its light rail system.

## Staffing

DRPT's Rail State Safety Oversight program experienced significant staff changes in 2018. At the start of 2018, DRPT's Rail State Safety Oversight responsibilities were performed by a team of three full-time staff. There was one dedicated Rail State Safety Oversight Manager performing safety oversight for each of the rail fixed guideway systems (HRT and WMATA) in the Commonwealth with programmatic decision-making and supervisory tasks being performed by the Rail Transit Safety Programs Administrator. By the end of August 2018, with the transition of SSO duties from DRPT to the Washington Metrorail Safety Commission underway, DRPT employs one Transit Rail Safety and Emergency Management Administrator that reports directly

to the DRPT Director. All programmatic decision making and supervisory tasks are performed by the Transit Rail Safety and Emergency Management Administrator with the support of contracted consultant staff. The contracted consultants include subject matter experts in the fields of train signaling, civil engineering, track and structures, rail vehicles and rail operations. These consultant resources are fully trained and qualified to conduct the full range of program activities and responsibilities outlined in the SPSS.

The DRPT Transit Rail Safety and Emergency Management Administrator, Andrew Ennis, is fully trained in all of the currently mandated certifications and training. One of the changes enacted through the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) and 49 CFR Part 674 was a more standardized approach to certification and training of designated state personnel who conduct rail safety reviews and examinations with direct rail safety oversight responsibility. With these new regulations, there is a greater emphasis on Rail State Safety Oversight staff having certain certifications and competencies as well as a specific knowledge base of the rail system they oversee. For the purposes of this report, the Transit Rail Safety and Emergency Management Administrator will be referred to as the Administrator or the DRPT Rail State Safety Oversight Administrator.

## Budget/Funding

Since MAP-21's passage, the USDOT and the FTA has provided a dedicated source of formula grant funding to states with Rail State Safety Oversight responsibilities. This formula funding is based on the number of rail modes overseen by the state agency, and the scale of the rail transit agency's operation – such as track miles, passenger trips and revenue miles. These FTA formula grant funds can be utilized for Rail State Safety Oversight staff salaries, FTA mandated training, consultant services, and equipment purchases. In 2018, the DRPT State Safety Oversight Program budget was \$324,300. FTA formula grant funds were \$259,500 matched with \$64,800 from DRPT administrative funds. DRPT utilized this funding for various eligible purposes. These include paying staff salaries; hiring consultants that assist in conducting accident investigations, audits, inspections and routine state safety program activities; securing staff training at the National Transportation Safety Board (NTSB) institute and universities with nationally recognized rail standards courses; and purchasing equipment.

## Program Highlights from 2018

Each of the following program components commands equal significance. These program components are designed to be symbiotic with information and intelligence gathered in one program element informing the other. For instance, information gathered in a triennial review might inform an accident investigation. In the same manner, a finding of cause discovered during an accident investigation might spur closer scrutiny of a certain practice at the rail agency prompting frequent inspections by the State Safety Oversight staff.

### Triennial Audits

One of the mechanisms the DRPT Rail State Safety Oversight program utilizes to assess the ongoing health of HRT's rail safety performance is the triennial audit process. Triennial audits gauge the level to which safety is integrated into rail operations, maintenance, training, human resources, procurement, engineering, quality assurance departments and management structure.

All of these separate departments and the organization as a whole support the safe operation of the rail system. The methodology associated with the triennial audits is the continuous and robust assessment of all of these departments and the associated documented efforts at ensuring safety of HRT's passengers and employees. Instead of a single audit of the entire program being conducted once every three years, DRPT conducts this audit on a continual three-year cycle. During these audits, if the DRPT Rail State Safety Oversight concludes that any aspects of HRT's documented programs related to rail safety are not being executed as officially described, DRPT will record these as findings.

Findings are classified as either Findings of Non-Compliance (FNC) or Findings of Compliance with Recommendations (FCR). FNC generally relate to those areas where the rail transit agency is not following its own established plans, policies, procedures, or where they are non-existent. FCR are deficiencies where the rail transit agency practices or plans that do not rise to the level of non-compliance with established policies, procedures, or industry standards; and they are a pre-emptive attempt at preventing a low hazard condition from progressing to a situation where it could result in a non-compliance/safety critical issue if kept unchecked. HRT is required to address such findings through corrective action plans. These corrective action plans either take the form of re-calibrating a program to better match the practical applications of such a program, re-instruction, instituting procedures or programs, anew, or in some cases completely overhauling a program or practice. The DRPT Rail State Safety Oversight Administrator reviews and approves all such corrective action plans proposed by HRT, and then monitors these corrective action plans to ensure completion within established timeframes.

DRPT conducted two safety triennial audits of HRT in March and September of 2018. The March 2018 triennial audit assessed HRT's performance in its System Safety Program Plan Policy Statement; Goals and Objectives; Management Structure; Implementation; System Modification; Safety Certification; Safety Data Collection and Analysis; Configuration Management; Local, State, and Federal Requirements; Hazardous Materials Program; and Procurement. The March 2018 triennial audit resulted in the following FNC and FCR:

1. FNC-1: HRT's configuration management and system modification procedures are not comprehensive and HRT is not complying with the procedures in place.
2. FNC-2: HRT does not maintain Safety Data Sheets for all hazardous materials in use containing accurate manufacture information.
3. FCR-1: The goals included in Section 2 of HRT's System Safety Program Plan are not quantitative and, therefore, HRT cannot evaluate progress towards these goals through the collection and analysis of safety data.
4. FCR-2: HRT does not have a formalized review and approval process for contractor safety programs and plans.

The September 2018 triennial audit focused on HRT's rules compliance program, training and certification, drug and alcohol program, and fitness for duty program. The September 2018 triennial audit resulted in the following FNC and FCR:

1. FNC-1: HRT did not conduct any documented Line Instructor training from 2016 to date.
2. FCR-1: HRT does not have a quality control process in place for Controller/Supervisor efficiency checks of Operators.

DRPT's Rail State Safety Oversight program approved corrective action plans for all of the findings listed above. One of the requirements for a corrective action plan is the rail transit agency must provide an estimated completion date that is both realistic and practical. The estimated completion date should be based on the severity and complexity of the finding the corrective action plan is designed to address. Because of this, it is understood that some corrective action plans may have a short estimated completion date while others may have estimated completion plans that could span several months or years. Corrective action plans with long-term estimated completion dates are acceptable as long as they are accompanied with regular milestones and updates to the DRPT Rail State Safety Oversight Administrator. A final completion date is assigned when a corrective action plan is verified by the state safety oversight program as ready for closure. As of the end of 2018, FNC-2 and FCR-1 from the March audit and FNC-1 from the September 2018 audit were closed. The remaining corrective actions are open and are actively monitored and tracked by the state safety oversight program.

#### Accident Notification and Investigation

Federal regulation requires rail transit agencies subject to state safety oversight authority to notify the state safety oversight agency of events such as accidents and incidents that meet certain criteria. Collisions, rail system damage that compromise the structural integrity of rail infrastructure or impacts rail service, derailments, fatalities and injuries to employees or passengers or rule violations by employees on the rail system all require notification to DRPT's Rail State Safety Oversight Administrator. Subsequently, DRPT is required to investigate all such accidents and incidents. In conducting these investigations, DRPT may authorize HRT to conduct an investigation on its behalf, or DRPT can conduct its own independent investigation. In the event the National Transportation Safety Board launches an investigation into a HRT light rail accident, DRPT can participate in the investigative process. DRPT Rail State Safety Oversight staff closely scrutinizes the conduct of any accident investigation carried out by HRT, evaluates all of the investigation reports prepared by HRT for completeness and accuracy, and approves and adopts each report as its own official investigative report.

During the period covered by this annual report there were six collisions involving Tide light rail vehicles, one derailment of a light rail vehicle due to weather, and several rule violations by rail operators. The investigations into each of these accidents concluded:

- Investigations of the collisions found that two collisions were the fault of drivers in privately owned vehicles, and four collisions were with objects either in the operating right-of-way or in the light rail vehicle maintenance shop and the result of HRT personnel rule violations;
- The derailment occurred during a December snowstorm that brought heavy snow accumulation and ice buildup on the rail causing the derailment. HRT personnel responded immediately to re-rail the light rail vehicle and assess for damages.
- The operator rule violations were addressed through re-instruction and training.

All investigation reports and identified corrective actions were reviewed and adopted by DRPT's Rail State Safety Oversight Administrator.

#### Approval of Program Documents

Federal regulation mandates that the Rail State Safety Oversight agency annually reviews and approves the key documents associated with safety and security at the rail transit system it



oversees. Accordingly, the DRPT Rail State Safety Oversight program reviewed and approved HRT's Security and Emergency Preparedness Plan, Accident Investigation Policy and Procedures and Continuity of Operations Plan in 2018. These plans describe HRT's approach and commitments to safety and security of the Tide light rail system. In doing so, DRPT has the ability to scrutinize annual changes, and to prevent any degradation of safety and security programs that impact the Tide light rail system. HRT was unable to submit their draft System Safety Program Plan for review and approval by the end of 2018, per DRPT Rail State Safety Oversight program requirements, and DRPT Rail State Safety Oversight Administrator subsequently issued HRT a formal Non-Compliance for failing to comply with this program requirement. HRT was able to submit a draft System Safety Program Plan for approval in early 2019. The approval of this plan will be reflected in the 2019 Annual Report.

#### Technical Assistance and Field Observations

In addition to the above standardized portions of the DRPT's state safety oversight work program, the DRPT Rail State Safety Oversight provides technical assistance and monitors all aspects of HRT's Tide light rail activities. DRPT's Rail State Safety Oversight Administrator and consultant staff have the training and the certifications required to observe various maintenance activities within the rail right of way. The DRPT Rail State Safety Oversight Administrator is frequently on site at HRT either providing technical assistance, participating in work sessions with HRT staff, accompanying employees who are conducting inspections or maintenance activities on the light rail system, or participating in various HRT committees and work groups. All of these efforts combined to promote a very collaborative environment that encourages HRT to be open and transparent about both its accomplishments and its challenges concerning rail system safety. Additionally, after achieving FTA certification under 49 CFR 674, DRPT's Rail State Safety Oversight Administrator hosted several workshops in May and July 2018 with HRT personnel. The May 2018 workshop focused on HRT's Safety and Security department personnel while the July 2018 workshop focused on HRT's Senior Executive Team, light rail Operations, Light Rail Vehicle Maintenance, Systems Maintenance and Facilities and Engineering departments. The purpose of these workshops was to introduce the newly certified DRPT Rail State Safety Oversight program and provide the opportunity for discussion and clarification of program requirements.

#### Norfolk Consolidated Courts Complex Project

In late 2017, HRT's Safety department notified DRPT Rail State Safety Oversight of construction activities being conducted at Civic Plaza by the City of Norfolk as part of the "Norfolk Consolidated Courts Complex project." The construction activities impacted areas directly adjacent to the Tide's east and westbound Civic Plaza station platforms and introduced several safety hazards. DRPT Rail State Safety Oversight required HRT to implement their safety certification process and conduct an Operational Hazard Analysis (OHA), which was completed and approved in March 2018. The resulting report and hazard log outlined the identified safety hazards the project introduced and proposed corrective actions. Many of the corrective actions identified in the OHA required City of Norfolk input and resources for implementation because they are on City of Norfolk property. By the end of December, HRT and the City of Norfolk were scheduling coordination meetings to strategize on implementation of the corrective actions. At the time of this report, there has been progress on corrective actions related to the project. Progress on those corrective actions will be detailed in the 2019 Annual Report.

### Virginia Department of Transportation (VDOT) I-64/I-264 Interchange Improvement Project

In late 2017, work on VDOT's I-64/I-264 Interchange Improvement Project reached the eastern end of the Tide light rail system. The project involves the expansion of the interstate highway system over top of the Tide Light Rail system at Curlew Drive. Phase one of the Interchange Improvement Project included the construction of two new highway support piers, a crash wall and highway span adjacent to the Tide. Phase one exposed project personnel to an electrocution hazard with the Tide Overhead Catenary power system, which carries 750 volts DC electrical power. Phase two is the jack and bore installation of a new culvert system for drainage and flood control. This phase of the project requires boring under the Tide light rail tracks and right-of-way, which can result in shifting and settling of the track. Similar to the Norfolk Consolidated Courts Complex Project, DRPT Rail State Safety Oversight required HRT to implement their safety certification process and conduct a preliminary hazard analysis, which was completed and submitted to DRPT Rail State Safety Oversight in January of 2018. HRT partnered with VDOT early in the project to coordinate monitoring, safety training and partial system shutdowns throughout 2018. By the end of 2018, phase one had been completed and hazards identified in the PHA have been addressed. Phase two will begin in early 2019 and will be detailed in the 2019 Annual Report.

### Federal and State Legislative Changes

MAP-21 has numerous implications for Rail State Safety Oversight agencies and rail transit agency safety programs. As mentioned earlier in this report, the DRPT Rail State Safety Oversight program was certified under the new state Safety Oversight rule, 49 CFR Part 674, on April 4, 2018.

In July 2018, FTA published two additional rules under the MAP-21 requirements. The Public Transportation Safety Certification Training Program Final Rule, 49 CFR 672, establishes a uniform curriculum for safety training that consists of minimum requirements to enhance the technical proficiency of rail transit safety personnel. The Public Transportation Agency Safety Plan (PTASP) Final Rule, 49 CFR 673, requires certain operators of public transportation systems that receive federal funds to develop safety plans that include the processes and procedures to implement Safety Management Systems (SMS). The PTASP rule is effective July 19, 2019. The plan must include safety performance targets. Transit operators must certify they have a safety plan in place meeting the requirements of the rule by July 20, 2020. The PTASP must be certified and approved by the State Safety Oversight agency. Once approved by the State Safety Oversight agency, the PTASP will replace the System Safety Program Plan.

DRPT Rail State Safety Oversight has taken steps to assist HRT in the process of complying with these new rules. DRPT Rail State Safety Oversight has updated its SSPS to reflect the requirements of both the Safety Training rule and the PTASP rule. DRPT Rail State Safety Oversight has requested HRT submit an implementation plan for the PTASP and SMS transition. The implementation plan must detail how HRT plans to draft and implement the PTASP and SMS by the compliance date of July 20, 2020. This plan will provide DRPT Rail State Safety Oversight a clearer understanding of how HRT will draft and implement the PTASP and how DRPT Rail State Safety Oversight can provide technical assistance to aid the transition. Details



of this plan and implementation efforts throughout 2019 will be provided in the 2019 Annual Report.