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**APTA Security and Emergency
Management Working Group**

First Responder Familiarization of Transit Systems

Abstract: This recommended practice establishes a standard that transit agencies familiarize first responder organizations and personnel with essential information about transit system facilities, equipment, vehicles and operational procedures.

Keywords: first responders, operations, vehicles, exercises

Summary: This document provides guidance to transit systems to partner with first responder agencies to provide first responders transit system familiarization and training to enable effective response during an emergency. This document provides typical transit system assets and processes that first responders need to understand in order to properly respond to incidents.



Foreword

The American Public Transportation Association is a standards development organization in North America. The process of developing standards is managed by the APTA Standards Program's Standards Development Oversight Council (SDOC). These activities are carried out through several standards policy and planning committees that have been established to address specific transportation modes, safety and security requirements, interoperability, and other topics.

APTA used a consensus-based process to develop this document and its continued maintenance, which is detailed in the [manual for the APTA Standards Program](#). This document was drafted in accordance with the approval criteria and editorial policy as described. Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

This document was prepared by the APTA Security and Emergency Management Working Group (SEMWG) as directed by the APTA Security Standards Policy and Planning (SSPP) Committee.

This document represents a common viewpoint of those parties concerned with its provisions, namely transit operating/planning agencies, manufacturers, consultants, engineers and general interest groups. APTA standards are mandatory to the extent incorporated by an applicable statute or regulation. In some cases, federal and/or state regulations govern portions of a transit system's operations. In cases where there is a conflict or contradiction between an applicable law or regulation and this document, consult with a legal adviser to determine which document takes precedence.

This is a revised document. This document supersedes APTA SS-SEM-RP-002-08, Rev. 1, which has been revised. Below is a summary of changes from the previous document version:

- Section 1:
 - Makes various clarifications
 - Adds information on sensitive security information
- Section 2:
 - Reorganizes and makes various clarifications
- Sections 3-5:
 - Reorganizes and makes various clarifications
 - Notes risks involved in moving transit vehicles
- Sections 6-7:
 - Makes various clarifications
- Makes updates to references, definitions and abbreviations



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Introduction

This introduction is not part of APTA-SS-SEM-RP-002-08, “First Responder Familiarization of Transit Systems.”

APTA recommends the use of this document by:

- individuals or organizations that operate rail transit systems;
- individuals or organizations that contract with others for the operation of rail transit systems; and
- individuals or organizations that influence how rail transit systems are operated (including but not limited to consultants, designers and contractors).

Scope and purpose

The purpose of an emergency response personnel familiarization program is to offer emergency responders familiarization, information and hands-on training on transit system facilities, equipment, vehicles and operational procedures. Familiarization programming provides emergency response personnel with an improved understanding of the transit system and facilitates stronger coordination, relationships and a unified response to transit-related emergencies.

Familiarization training will vary depending on the function of the response agency and the complexity of the transit facilities, equipment, vehicles and operational procedures. Training should be structured to focus on access to transit vehicles and facilities for rescue and medical attention and should include familiarization with potential system hazards such as alternative fuels, third rails or overhead power sources. Transit assets addressed in this document are representative of more common elements and are not all-inclusive; transit agencies should tailor their training to include unique assets.

First Responder Familiarization of Transit Systems

1. Familiarization training benefits and requirements

Incidents and experience across the country prove the mutual benefits of having first responders knowledgeable about local transit system environments. Awareness of transit systems strengthens the effectiveness and timeliness of emergency response, mitigating the impact of emergencies on transit systems and their passengers and employees. Meanwhile, awareness of transit systems is also necessary for first responders' safety, especially where there are inherent transit hazards such as high-voltage rail equipment and alternative fuel vehicles. Familiarization also provides opportunities to strengthen relationships among transit agency and first responder personnel.

1.1 Audience

The target audience for first responder familiarization typically includes law enforcement (patrol and specialized units), fire, and emergency medical service personnel. Others, such as National Guard civil support teams, volunteer organizations, and public works agencies, may also be considered first responders by local jurisdictions.

Transit agencies may have their own first responders (e.g., transit security) that require familiarization training. However, this standard emphasizes external first responder personnel because they are not working in the transit system environment on a daily basis like transit system employees.

1.2 Organization

For the purpose of this document, transit system elements are categorized into four groups: facilities, equipment, vehicles and operational procedures. Familiarity with transit facilities, equipment and vehicles is a prerequisite for implementing effective operational procedures, and the execution of operational procedures often has a significant impact on an incident's outcome. First responder training should cover all four elements in a level commensurate with an agency's hazards and complexities.

1.3 NIMS and ICS

The National Incident Management System (NIMS) and Incident Command System (ICS) are federally mandated programs that all first responders, including transit system first responders, should know and practice. As practical during familiarization training, transit agencies should address the application of unified command processes in the transit environment, unless covered elsewhere. Unified command is particularly relevant for incidents requiring response from multiple first responder agencies.

1.4 Sensitive security information

Transit agencies must ensure the control and protection of any sensitive security information (SSI) used or uncovered during familiarization training, including SSI shared with or by external agencies. See APTA SS-ISS-RP-003-23, "Sensitive Security Information Policy," for additional details about protecting SSI.

2. Familiarization training

2.1 Hands-on training, classroom training and exercises

First responder familiarization offerings may differ among transit agencies, but training typically includes hands-on training, classroom sessions and exercises. Familiarization training should provide responders with knowledge about the capabilities, limitations, hazards and failure modes associated with a transit agency's facilities, equipment and vehicles (e.g., buses and trains, train control, and power and communications systems). An example hazard and specification that agencies may address is that activating an emergency trip station on a rail line de-energizes the powered overhead catenary wire or third rail but does not immediately stop an oncoming train, which can continue to coast for some time.

Hands-on training typically involves a field demonstration of transit system facilities, equipment or vehicles to provide first responders with the “look and feel” of the actual system in the field. Many first responders find this type of training more effective, as it provides interactive, hands-on training. For example, hands-on training may include onboard familiarization of transit vehicles to include inspection of externally operated equipment such as door releases, valves and power shutoff functions. Hands-on training of this nature is typically provided by a transit system employee who is knowledgeable about the involved equipment.

Classroom training may include lectures, discussions, presentations and demonstrations covering facilities, equipment, vehicles and operational procedures. Classroom training may introduce scale models of equipment with more details than those typically provided during field training. A core benefit of classroom training is that it can be conducted without any impact to revenue service operations. Classroom training may also offer more time for in-depth discussions.

Finally, transit agencies and first responders should conduct exercises to assess operational responses to various potential scenarios that may occur on the transit system. Typically conducted after completing hands-on and classroom training, these exercises allow both transit and first responder personnel to practice, evaluate and improve preparedness activities and coordination in advance of an incident. During exercise planning and prerequisite activities, transit systems should include hands-on familiarization or “walking tours” of transit vehicles, facilities, and key system components and structures, highlighting critical features and physical configurations (e.g., the location of a subway system's ventilation shafts so that first responders do not establish command posts nearby). See APTA SS-SEM-S-004-09, “Transit Exercises,” for additional details about conducting and evaluating in the transit environment.

2.2 Familiarization training tools

Transit systems may provide documentation to first responders to help them better understand and retain information about transit system elements. Providing documentation enables first responder agencies to learn more about the transit system on their own time and schedule, and facilitates dissemination of information to other employees more easily. Transit agencies may also provide train-the-trainer sessions for first responder training personnel.

2.3 Familiarization training programs

Transit agencies should provide a comprehensive familiarization program that includes both initial and refresher training. Transit agencies should provide refresher training at a sufficient cadence to ensure that first responders maintain adequate awareness and understanding of the transit system in case of an incident. Initial and refresher training should be regularly updated to reflect changes to procedures or equipment, which may include system modifications, additions or eliminations.

Refresher training frequency is contingent on the complexity of the system elements, the number of locations involved, the turnover rate of responders and the extent of hazards. Transit agencies should regularly review

training frequency with first responders to ensure adequate training. They should also maintain documentation associated with offered and completed training.

Transit and first responder agencies can initiate new familiarization training to address safety, security and emergency management issues. Triggers for new training may include but are not limited to the following:

- new equipment
- new vehicles
- new or renovated facilities
- new lines or extensions
- new software or systems
- transit system complexities (e.g., third rail, catenary, alternative fuel vehicles and fueling systems)
- first responder turnover
- recent real-world incidents or accidents
- new or revised operating procedures

3. Facilities

The facility elements that transit agencies should consider addressing in first responder familiarization training include those listed in this section.

3.1 General

- physical address of transit facilities
- staging areas for all facilities
- transit headquarters and other administrative and operational locations

3.2 Rail, bus and ferry stations/terminals and structures

- station/terminal overview
- access and egress components
- street-level ventilation grates
- fire department connections
- fire hydrants/standpipes
- fire suppression systems
- ancillary equipment rooms
- emergency key boxes
- emergency equipment rooms
- access to trackway/docks
- rail and bus vehicle storage yards and maintenance facilities
- fueling and defueling islands
- fueling shutoff locations
- surveillance camera locations and access
- alarm systems
- ventilation structures and systems
- power sources and systems, and backup power systems
- emergency exits
- tunnels and tunnel cross-passages
- bridges and aerial structures

3.3 Vehicle and vessel facilities

- power (third rail, overhead power, hybrid, compressed natural gas, lithium batteries, hydrogen and any other alternative fuel systems)
- power shutoffs, fuel shutoffs
- emergency access/egress of vehicles/vessels
- fire suppression systems
- rail and bus right-of-way alignment
- right-of-way access and egress points
- emergency alarms

4. Equipment

Equipment elements transit agencies should consider addressing in first responder familiarization training include but are not limited to the following:

- emergency ventilation fans and controls
- emergency or local control panels
- rail traction power shutoff systems
- fire detection and suppression systems
- hazardous gas/chemical detection systems
- surveillance systems
- communications systems (interoperable systems, radio systems, automatic vehicle location [GPS], etc.)

5. Vehicles

Vehicle elements transit agencies should consider addressing in first responder familiarization training include but are not limited to the following:

- passenger rail cars, buses, road-rail/hi-rail/high-rail vehicles, paratransit vans, and ferries
- access/egress
- emergency alarms
- fire suppression equipment or systems
- emergency shutdown
- power isolation
- emergency lighting
- connection for remote viewing

Transit agencies should consider training first responders to conduct basic vehicle operations if needed. Transit agencies should also address the dangers, risks and restrictions involved in moving transit vehicles, including those that may have been damaged in an incident. If transit and first responder agencies want to authorize first responder personnel to move vehicles, then first responders should be trained to an appropriate standard for the vehicle, such as CDL certification or an agency-acceptable alternative.

6. Operational procedures

Transit systems typically present a complex and unique response environment. To help first responders respond to transit incidents effectively and understand processes for equipment they may encounter, transit agencies should address operational procedures in familiarization training. For example, first responders may need to know the correct process to shut off power to a high-voltage third rail and whom to contact at the transit agency during the process.

Procedural elements that transit agencies should consider addressing in first responder familiarization training include but are not limited to:

- evacuation plans and procedures for facilities and vehicles
- access into transit system and right-of-way
- power removal and operational consequences on trains
- vehicle and vessel operations
- hand signals directing vehicle operation
- single-track train operation
- bus bridges
- safety procedures/protocols
- partial or full loss of communication systems
- power and fuel shutoff on vehicles and vessels
- emergency access into/onto vehicles and vessels
- other procedures unique to a transit system

7. Dedicated training facilities

Transit agencies should consider procuring a dedicated training facility to conduct transit agency and first responder training. A core benefit of dedicated training facilities is the ability to flexibly schedule training without affecting and coordinating with normal transit operations. Additionally, dedicated training facilities may allow agencies to tailor the environment and location of transit vehicles to reflect threats, hazards and scenarios most pertinent to the agency. While most transit systems accomplish their training needs without such a facility, this option is included as a long-range capital planning project.

Related APTA standards

APTA SS-ISS-RP-003-23, “Sensitive Security Information Policy”

APTA SS-SEM-S-004-09, “Transit Exercises”

References

U.S. Department of Transportation, Connecting Communities Public Transportation Workshops.

<https://www.transportation.gov/civil-rights/emergency-preparedness/emergency-prep-workshops>

Federal Emergency Management Agency, Homeland Security Exercise and Evaluation Program.

<https://www.fema.gov/emergency-managers/national-preparedness/exercises/hseep>

Definitions

first responders: Individuals responsible for the protection and preservation of life, property, evidence and the environment in the early stages of an incident.

Abbreviations and acronyms

GPS	Global Positioning System
ICS	Incident Command System
NIMS	National Incident Management System
SSI	Sensitive Security Information

Document history

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