



**APTA SS-SEM-S-014-20**

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APTA Security Emergency Management  
Working Group

# Transit Agency Emergency Management Program

**Abstract:** This standard provides a framework for transit agencies to use in the development and implementation of an integrated emergency management program.

**Keywords:** emergency management program (EMP), Emergency Operations Plan (EOP), operations, security, threat and vulnerability assessment (TVA)

**Summary:** This standard follows a systematic approach to emergency management program development and implementation that ensures that each component is integrated as part of the whole system. A comprehensive emergency management program should consist of the four phases of emergency management, which are preparedness, response, recovery and mitigation in an all-hazards approach.

**Scope and purpose:** This document contains numerous references to other APTA standards (see “Related APTA standards” at the end of this document), which cover in more detail those specific areas of emergency management. This document serves as the main overview piece that establishes the framework for an emergency management program.

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 this is a conflict or contradiction between an applicable law or regulation and this document, consult with a legal advisor to determine which document takes precedence.

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## Introduction

*This introduction is not part of APTA SS-SEM-S-014-19, “Transit Agency Emergency Management Program.”*

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).

# Transit Agency Emergency Management Program

## 1. Overview

This standard follows a systematic approach to program development and implementation that ensures that each component is integrated and validated as part of the whole system. A systematic approach to the development of an emergency management program for a transit agency shall be consistent with guidance from the Department of Homeland Security (including the Federal Emergency Management Agency and the Transportation Security Administration), the National Incident Management System, and the Federal Transit Administration. This will ensure that the agency's security and emergency management elements are developed in a manner that results in an integrated, implementable and sustainable program.

### 1.1 Small-scale emergencies

Small-scale emergencies are daily situations faced by transit agency and local emergency services personnel. An EMS response to a passenger in need of medical attention is an example of a small-scale emergency. EMS manages the medical emergency on scene, while the transit agency coordinates the response to the service interruption. This type of emergency is common and usually well-coordinated between the first responders and the transit agency and results in minimum impact to service delivery.

### 1.2 Large-scale emergencies

Large-scale emergencies can have a significant impact on a transit agency. Whether the event is a no-notice event (e.g., earthquake, terrorism) or a notice event (e.g., winter storm, civil unrest, hurricane), transit agencies need to have a plan in place to address the agency's needs and understanding of the local and state expectations of the agency. When large-scale emergencies occur, coordination between the transit agency, local government and other stakeholders is necessary. Identifying the expectations for the agency and clarifying the capabilities it can provide during emergencies can help reduce the time needed to make critical decisions.

Providing overall pre-emergency planning and other components, such as training and exercises for notice and no-notice events, are the first line of defense in coordinating large-scale emergencies to ensure an effective response and recovery from such events.

## 2. What is an emergency management program?

A transit emergency management program seeks to promote safer, less vulnerable transit agencies with a capacity to cope with all hazards and disasters.

To be successful, transit agencies must recognize that emergency management requires upper management support. The chief executive sets the tone by supporting all aspects of the emergency management program by

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directing senior management to get involved. Some of the positive benefits of a successful emergency management program include the following:

- It helps the transit agency fulfill its responsibility to protect employees, service delivery to the community and preservation of the environment.
- It facilitates compliance with regulatory requirements of federal, state and local agencies.
- It enhances the agency's ability to recover from financial losses, regulatory fines and damages to equipment.
- It reduces exposure to civil, political and criminal liability in the event of an incident.
- It enhances the agency's image and credibility with employees, customers, suppliers and the community.
- It may reduce insurance costs.
- It aligns the transit agency's emergency planning with local, state and regional partners.

## **2.1 The four phases of emergency management**

There are four phases to an effective emergency management program: preparedness, response, recovery and mitigation. These phases have no beginning or end; therefore, activities in one phase may overlap those in the previous one.

### **2.1.1 Preparedness**

The first phase of emergency management is preparedness. The preparedness phase includes developing plans for what to do, where to go or whom to call for help before an event occurs—actions that will improve the transit agency's ability to successfully manage an emergency. A transit agency must have a response plan, trained personnel and adequate resources to be effective during an emergency. The local government and other stakeholders may request resources from the transit agency to aid in disaster response; therefore, planning is critical. Preparedness activities include the following:

- Establish an Emergency Operations Center (EOC) and supporting standard operating procedures (SOPs).
- Develop and maintain emergency communications plans and systems (refer to APTA SS-SEM-RP-009-09, "Communication Strategies for Transit Agencies").
- Establish an alert and warning notification system for passengers and employees.
- Develop a training and exercise program (refer to APTA SS-SEM-RP-004-09, "General Guidance on Transit Incidents Drill and Exercises").
- Develop relationships with local, state and regional emergency responders, to include emergency management agencies.
- Inform senior management of emergency preparedness activities.
- Incorporate the NIMS/ICS response framework.
- Incorporate first responder familiarization training with local responders (refer to APTA SS-SEM-RP-002-08, "Guidelines for First Responder Familiarization of Transit Systems").
- Determine the agency's ability to assist during an emergency (e.g., with evacuations) before one occurs, and communicate those capabilities with the local and state emergency management agencies.
- Develop a list of agency resources that could be used in a disaster (e.g., generators, buses, heavy equipment).

### **2.1.2 Response**

The response phase covers activities that address the short-term direct effects of an event and is the period during and immediately following an emergency. During this phase, transit officials and local responders provide emergency assistance to victims. While providing transportation services to the agency's passengers

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is the primary focus of transit agencies, they also provide support to local and regional responders during emergencies to the best of their abilities. Response activities include the following:

- Implement activities intended to limit loss of life, personal injury, property damage, environmental impacts and service degradation.
- Use ICS/Unified Command response framework.
- Coordinate with local emergency management agencies.
- Activate the transit agency EOC (where applicable).
- Provide emergency assistance in accordance with mutual aid agreements or requests for support.

### **2.1.3 Recovery**

In the recovery phase, the transit agency initiates service restoration as quickly and safely as possible. It continues until all systems return to normal or near-normal operation. Short-term recovery restores transit operations to minimum operating conditions. Long-term recovery may go on for months—even years—until the affected area returns to its previous condition. Recovery activities include the following:

- Evaluate the incident to identify lessons learned, and track them in a Corrective Action Plan (CAP) and After Action Report (AAR).
- Provide Employee Assistance Plan (EAP) resources to employees who may need care and treatment.
- Rebuild, repair or procure equipment and supplies for transit operations and services.
- Determine facility restoration needs, such as repair or long-term capital improvements.

### **2.1.4 Mitigation**

Mitigation includes activities that eliminate or reduce the chance of a disaster occurring or the effects of a disaster. Pre-disaster mitigation programs have shown that communities can do a lot to prevent major emergencies or disasters from affecting them negatively. For example, requiring roof reinforcements will reduce damage from hurricane winds. Preventing new construction in floodplains or placing structures on columns in those areas can reduce the chance of flooded homes. If transit agencies cannot prevent disasters, then they can at least help to reduce the damaging impact. Mitigation activities include the following:

- Conduct a threat and vulnerability analysis (TVA) and hazard analysis of the agency.
- Align the mitigation plan with state, local and regional partners to reduce hazards.
- Assist local government departments and community organizations in developing and organizing emergency expectations and capabilities of the transit agency.
- Help in the development of evacuation plans and transit-related capabilities supporting local government plans.
- Identify resource shortfalls, and work with appropriate officials on ways to correct them.
- Inventory equipment, personnel and material resources from the transit agency, local responders, local government and the private sector that may be available in emergency.
- Establish mutual aid agreements to get necessary services, equipment and other resources during an emergency.

## **3. Components of a sustainable emergency management program**

With threats, hazards and vulnerabilities evolving over time, a dynamic and flexible emergency management program will allow and encourage a continuous cycle of renewed assessments, planning and evaluation. Transit agencies shall integrate program elements, including TVAs, mitigation planning, emergency operations plans, SOPs, training and exercises to create an implementable, sustainable and complete emergency management program.

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An emergency management program identifies relevant natural, technological and human-caused threats and hazards and profiles their potential risk to the critical assets of a transit agency through TVAs. After this assessment, transit agencies shall adopt mitigation measures to address the identified vulnerabilities. These actions will feed into the development of emergency management and operations plans that detail roles and responsibilities during an emergency. Specific actions and procedures shall be subsequently detailed in the form of SOPs. Transit agency personnel shall be trained on the plans and procedures, and the various program elements shall then be finally tested and evaluated using exercises and drills. Transit agencies shall use the results to fine-tune or improve the emergency preparedness program, the steps of which shall be a continuous cycle, with each iteration adding robustness and ensuring that it is up to date.

### **3.1 Identifying and evaluating threats**

Before the threats, hazards and vulnerabilities faced by each transit agency can be addressed, they must be identified and evaluated as to how they may affect transit agency employees, passengers, tracks, stations, vehicles and yards. Agencies shall use an all-hazards approach, which means considering and, if warranted, addressing hazards that are human-caused (terrorism, crime, disgruntled employees, cyber-attacks, etc.); natural (weather, earthquakes, flooding, etc.); and technological (utility outages, hazardous materials, computer network outages, etc.).

Transit agencies should identify the key assets that may be at risk, analyze their functions and criticality, and finally assign an asset value rating to each. Transit agencies should consider working with local governments and other stakeholders during this process so that efforts can be coordinated consistently and expertise can be shared.

### **3.2 Emergency Operations Plan (EOP)**

Each transit agency should develop a formal emergency operations plan (EOP) that provides an operational framework for how the agency will plan for, respond to and recover from an emergency.

An EOP is a clear and concise document that provides information and procedures relevant to emergencies. A typical EOP outlines the roles and responsibilities for each of the departments within an organization through a concept of operations (ConOps), which delineates the sequence of actions that the agency will follow during an emergency.

A well-executed EOP does the following:

- Describes how various emergency preparedness, response and recovery plans are integrated.
- Provides an overarching plan that aligns the transit agency with the state and local emergency plans.
- Provides guidance for the various functions and services within the transit agency with a general concept of potential emergency assignments before, during and after emergency situations.
- Details the expected response by local, state and federal government, as well as provides guidelines and establishing organizational priorities necessary to ensure a successful and coordinated effort.

For additional information on other types of emergency management procedures, please see the related APTA standards listed at the end of this document.

### **3.3 Training**

Training of both transit agency employees and first response agency personnel is a crucial step in the successful implementation of emergency preparedness programs. Training is vital to ensuring that plans and procedures can be performed during emergency conditions. Training helps to reinforce the specific action-based processes that transit agency personnel need to follow when responding to and recovering from an



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emergency. Also, training on the overall EOP helps transit personnel understand the agency's philosophy and how their own actions impact other departments during an emergency.

Additionally, there is specific security and emergency preparedness training that transit agencies may want their personnel to have. This includes various training modules like terrorism awareness training, tunnel evacuation training, fire life-safety training, facility training, and weather-based event training, among other system specific emergency action training including passenger evacuation and management during emergencies. These training modules and/or initiatives shall be coordinated through an overall transit agency emergency management training plan.

This training plan shall consider the following points:

- personnel training needs based upon assigned duties
- in-house training vs. use of consultant(s)
- scope and duration of the training required, including any prerequisites
- objectives to be covered by the training
- review of training effectiveness
- consistent and current training materials
- training schedule, including initial and refresher training
- employee training documentation
- consistency with the NIMS training program as provided by FEMA

Transit agencies shall also identify joint training sessions or materials they can use with partner and first responder agencies to ensure a safe and effective response to emergencies. This includes facility, tunnel and equipment familiarization tours and workshops that provide local responders insight into the unique operating conditions of transit systems. For more information on this type of joint training, see APTA SS-SEM-RP-002-08, "Guidelines for First Responder Familiarization of Transit Systems."

The transit agency shall regularly conduct drills and exercises. These serve not only as useful practice in the event of an actual emergency, but also to evaluate the state of the emergency management program and its components. Transit agencies shall tie exercises and drills into the overall emergency management program as an integral and recurring element, rather than treating them as an isolated or separate activity. For detailed guidelines on drills and exercises, see APTA SS-SEM-RP-004-09, "General Guidance on Transit Incidents Drills and Exercises." The industry standard for creating and conducting exercises is the Homeland Security Exercise and Evaluation Program (HSEEP). For more information about HSEEP, visit [www.fema.gov/media-library/assets/documents/32326](http://www.fema.gov/media-library/assets/documents/32326).

The scope and type of exercise will depend on the general exercise objectives and the resources available to design and conduct it. There are two categories of exercises, discussion-based and operations-based, each with varying degrees of complexity.

### **3.3.1 Discussion-based exercises**

Discussion-based exercises familiarize participants with current plans, policies, agreements and procedures, or may be used to develop new plans, policies, agreements and procedures. Types include the following:

- seminars
- workshops
- tabletop exercises (TTXs)
- games

### **3.3.2 Operations-based exercises**

Operations-based exercises validate plans, policies, agreements and procedures; clarify roles and responsibilities; and identify resource gaps in an operational environment. Types include the following:

- systems testing
- drills
- functional exercises (FEs)
- full-scale exercises (FSEs)

The transit agency shall note difficulties, confusion and inconsistencies discovered during system tests, drills and exercises. These, along with suggested improvement actions derived from them, are incorporated into an After Action Report and Corrective Action Plan, which shall be presented to and discussed by key participants and transit agency officials.

Lessons learned from exercises and drills shall be used to improve the transit agency's emergency management program. As corrective actions are implemented, subsequent drills and exercises will yield improvements or identify issues that need to be addressed.

For more guidance on designing, conducting or evaluating a drill or exercise, see APTA SS-SEM-RP-004-09, "General Guidance on Transit Incidents Drills and Exercises."

## **3.4 Emergency management program personnel**

It is recommended that each transit agency have at least one person who is solely or partially dedicated to all aspects of emergency preparedness. At large transit agencies, a full-time position for emergency management is appropriate to ensure that all components of the transit agency are properly prepared for an emergency and how best to respond and recover from it when it occurs. At small transit agencies with resource limitations, a part-time position combined with security, safety or risk management is appropriate.

## **3.5 Program funding**

As with any new or existing program, developing an emergency management program requires funding. This is especially important for emergency management, as it is not usually considered part of operational or capital funding. Therefore, transit agencies need to be creative and search for and use available funding in a coordinated and systematic way.

### **3.5.1 Funding planning**

Transit agencies shall determine their needs and, as appropriate, complete grant applications to support these emergency management and security goals. This may require the involvement of a transit agency's Finance and Procurement departments, board of directors, and others. It is recommended that once areas are identified, transit agencies concentrate their efforts in explaining how the grant funding will help them develop/revise and implement a systematic program. Clear plans that show integrated planning components help transit agencies demonstrate funding needs and clear objectives that they will use the funding to support.

### **3.5.2 Funding and technical assistance**

Since the terrorist attacks of Sept. 11, 2001, funding for security and emergency preparedness planning activities has increased significantly. Additionally, technical assistance and reference materials from industry sources such as APTA have been made available to transit agencies.

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DHS provides funding for emergency preparedness functions such as drills and exercises, COOP planning, and security/control center situational awareness tools. There may be other funding streams available through local, state or federal agencies.

### **3.5.3 Grants/program funding**

More specific information regarding these various programs can be found on the following websites:

#### **American Public Transportation Association**

- Transit Security Grants: <https://www.fema.gov/media-library/assets/documents/185921>

#### **Federal Transit Administration**

- Grants and financing overview: <https://www.transit.dot.gov/funding/funding-finance-resources/funding-finance-resources>
- Grant programs: <https://www.transit.dot.gov/grants>

#### **Federal Railroad Administration**

- Grant program: <https://www.fra.dot.gov/Page/P0994>

#### **Transportation Security Administration**

- Grant opportunities overview: <https://www.grants.gov/learn-grants/grant-making-agencies/department-of-homeland-security.html>
- Transit security grants: <https://www.fema.gov/transit-security-grant-program>

#### **Department of Homeland Security**

- Grants: <http://www.dhs.gov/xopnbiz/grants/index.shtm>

#### **Transportation Research Board (TRB)**

- TCRP research funding: <http://www.trb.org/CRP/TCRP/TCRP.asp>

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## **Related APTA standards**

**APTA SS-SEM-RP-001-08**, “Creating a Continuity of Operations Plan”

**APTA SS-SEM-S-005-09, Rev. 1**, “Establishing a Contagious Virus”

**APTA SS-SEM-RP-007-09**, “Establishing an Alternate/Backup OCC”

**APTA SS-SEM-RP-004-09**, “General Guidance on Transit Incidents Drills and Exercises”

**APTA SS-SEM-RP-002-08**, “Guidelines for First Responder Familiarization of Transit Systems”

**APTA SS-SEM-RP-009-09**, “Communication Strategies for Transit Agencies”

**APTA SEM-SS-RP-008-09**, “Safe Mail and Package Handling”

**APTA-SS-SEM-S-003-08 Rev. 2**, “Security and Emergency Management Aspects of Special Event Service”

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<https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/EPGForElderlyDisabled.pdf>

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**Definitions**

**all hazards:** Any natural or human-caused phenomena that impact the operations of a transit agency and/or its employees, ridership, first responders, etc.

**Abbreviations and acronyms**

- AAR/CAP** After Action Report/Corrective Action Plan
- ConOps** concept of operations
- COOP** continuity of operations plan
- DHS** Department of Homeland Security
- EAP** Employee Assistance Plan
- EMP** Emergency Management Plan
- EMS** emergency medical services
- EOC** Emergency Operations Center
- EOP** Emergency Operations Plan
- FE** functional exercise
- FEMA** Federal Emergency Management Agency
- FSE** full-scale exercise
- FTA** Federal Transit Administration
- HSEEP** Homeland Security Exercise and Evaluation Program
- ICS** Incident Command System
- NATSA** North American Transportation Services Association
- NFPA** National Fire Protection Association
- NIMS** National Incident Management System
- OCC** Operations Control Center
- SOP** standard operating procedure
- TCRP** Transit Cooperative Research Program
- TRB** Transportation Research Board
- TSA** Transportation Security Administration
- TTX** tabletop exercise
- TVA** threat and vulnerability assessment
- UMTA** Urban Mass Transit Administration

**Document history**

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