



MARCH 2010

# **FITTING** the **PIECES TOGETHER**

**IMPROVING TRANSPORTATION SECURITY PLANNING  
in the DELAWARE VALLEY**





The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals and the public with a common vision of making a great region even greater. Shaping the way we live, work and play, DVRPC builds consensus on improving transportation, promoting smart growth, protecting the environment, and enhancing the economy. We serve a diverse region of nine counties: Bucks, Chester, Delaware, Montgomery and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester and Mercer in New Jersey. DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region — leading the way to a better future.

The symbol in our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.

DVRPC fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. DVRPC's website may be translated into Spanish, Russian and Traditional Chinese online by visiting [www.dvrpc.org](http://www.dvrpc.org). Publications and other public documents can be made available in alternative languages and formats, if requested. For more information, please call (215) 238-2871.

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# Executive Summary

Transportation security planning may bring to mind an image of uniformed officials focused on a tabletop exercise. While this is an element of transportation security planning, it is not the whole story of what it takes to prepare the Delaware Valley transportation system for natural disasters, terrorist or criminal attacks, or major planned events such as a World Series parade. To be prepared for these situations takes professionals in a range of fields working together. A few examples of who could help, in addition to emergency management staff, are:

- ◆ Transportation planners in related areas, such as those figuring out where to install Intelligent Transportation System (ITS) technology and prioritizing transportation investments over the next twenty years;
- ◆ Transportation engineers, who may not have time to get very involved with security planning, and who design projects to meet dozens of needs;
- ◆ Transportation operations staff responding to road and transit system conditions;
- ◆ Emergency response personnel, such as police and firefighters, responding to calls; and
- ◆ Land use planners, who are willing to incorporate transportation security elements in comprehensive and master plans or site designs, but may not be sure where to start.

In recent years, federal regulations have changed to require Delaware Valley Regional Planning Commission (DVRPC) to take more of a role in transportation security planning. This report addresses strengthening coordination across a range of professions. This can be done by fostering communication, more closely linking security planning and long-term transportation planning, supporting a resilient and well-maintained transportation network, and drawing on DVRPC's technical resources. This report is an entryway to help a range of professionals think of known challenging events, like snowstorms or car crashes, and consider how to help the region prepare for something many times more significant.

DVRPC thanks everyone already involved in improving transportation security planning in the nine-county Philadelphia metropolitan area of Pennsylvania and New Jersey. DVRPC will continue to work with all partners to achieve a safe and secure transportation system.



A crash on the NJ Turnpike. Imagine an event many times worse.

Photo courtesy of David Brown, Montgomery County Department of Public Safety. PowerPoint presentation, October 9, 2008.



# What is Transportation Security Planning?

## Working Definition

**Transportation security planning** reduces the negative impacts to our transportation system from major natural or manmade events. Planning for the full range of potential major events is called an **all-hazards approach**. Often these are events that exceed the response capability of a local government. Some examples are listed below:

**Important terms are highlighted throughout this report and gathered in Appendix D.**

- ◆ natural disasters, such as flooding, hurricanes or blizzards;
- ◆ attempts to destroy elements of the regional transportation network, such as blowing up a bridge, to cause disruption;
- ◆ use of an element of the transportation system as a weapon, such as crashing a truck through a wall to deliver explosive materials or taking advantage of a major train station to release biological agents; or
- ◆ large planned events, such as a parade celebrating a World Series victory.

The impacts of major events are reduced by:

- ◆ preventing terrorist or criminal acts when possible;
- ◆ being prepared;
- ◆ expediting responses; and
- ◆ aiding the recovery to normal services.

In addition to preventing, preparing against, expediting responses to, and aiding in recovery from major events, transportation security planning helps keep people and goods moving, protects public health and life safety, supports economic productivity, and minimizes impacts of major events on the environment.

Source: These paragraphs of definition are an amalgam of several agencies' definitions along with discussion at the April 8, 2009 meeting of the DVRPC Regional Safety Task Force (see Appendix C for more information).

There are many definitions of transportation security and related concepts. A resource that may be useful is the independent study course book *Fundamentals of Emergency Management* provided by the [Federal Emergency Management Agency \(FEMA\)](#).

A wide range of agencies have a role to play in transportation security planning, and these roles may differ by type of agency. Certain kinds of agencies may take a stronger or lead role during certain phases, but all agencies should be involved steadily. For example, emergency responders would have a strong role in the response phase of an incident, but the impact of the event will likely be lessened if they have been involved in preventing the incident, preparing the region, and executing recovery from it. Table 1 is a simplified illustration of these points. It is not meant to limit any agency's efforts or to cover all situations.

Table 1: Sample of Agency Involvement by Phase of Event

| <b>Phase of Event</b>   | <b>Prevent</b>  | <b>Prepare</b>  | <b>Respond</b>  | <b>Recover</b>  |
|---|---|---|---|---|
|   | Acting to avoid a major event. Usually pre-incident.  | Developing and sustaining capabilities to prevent or lessen future emergencies. Usually pre-incident, also post-incident.   | Addressing short-term effects of the event and cascading effects. Usually just before and during event.   | Developing and executing service and site restoration plans. Usually after an event.  |
| <b>Sample of Activities</b>   | Heightening surveillance, hardening resources, interconnecting agencies for event, specific outreach or warnings.   | Building relationships, identifying issues, planning, organizing, educating, training, equipping, exercising, evaluating and improving.   | Putting preparedness plans into action: attaining situational awareness, deploying resources, coordinating response actions, communicating with public, demobilizing. | Identifying short- and long-term needs, coordinating, communicating, rebuilding, learning from the event and acting on lessons learned.               |
| <b>Potential Agencies with Stronger Roles</b><br><br>(all agencies should be involved throughout) | Federal, state, and local counter-terrorism and police agencies (including offices of homeland security); implementing agencies (including DOTs and departments of health). | Federal, state and local governments (including emergency management and planning units), agencies involved with infrastructure such as transportation and flood prevention), private and nonprofit groups. | Emergency responders (police, fire fighters, EMS), emergency management, implementing agencies (especially parts involved with communication).                        | Wide range of participants, from volunteers through all appropriate levels of government. Planners may be able to facilitate learning from the event. |

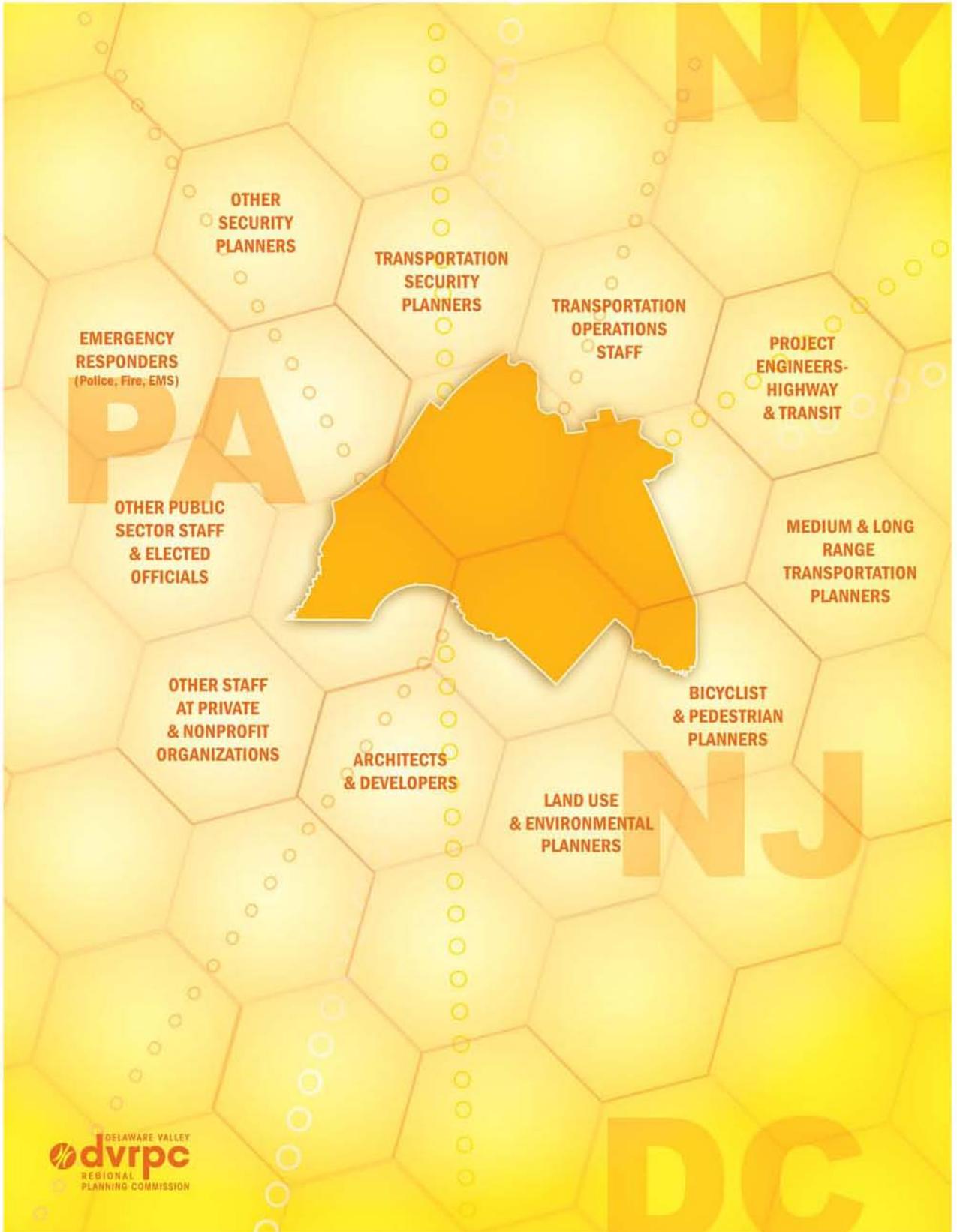
Sources: This table draws on contents of *Fundamentals of Emergency Management - Independent Study 230.a* (Washington DC: FEMA, 2009), available at <http://training.fema.gov/EMIWeb/IS/IS230a.asp>, and the *National Response Framework* (Washington DC: DHS, 2008).

## Purpose of Report

This report is intended to do the following in a brief, understandable manner:

- ◆ Provide an overview of transportation security planning in the Delaware Valley, without revealing sensitive information. This document will provide professionals in related fields (such as other transportation planners, transportation engineers, transportation operations staff, emergency response personnel, and other planners) with the basic concepts of efforts underway, with the result that they are more able to incorporate appropriate elements of security planning in their own efforts.
- ◆ Increase communication about an integrated approach among professionals in transportation security planning throughout the Delaware Valley and with other members of the transportation and planning communities. Increasing communication is a step in enhancing coordination and identifying areas that professionals feel may be aided by follow-through as they see appropriate. Figure 1 on the next page shows some of the range of professionals whose activities relate to each other. It uses honeycomb imagery to convey that these fields are all interconnected.
- ◆ Strengthen DVRPC's work in transportation security planning as required by federal regulations for **Metropolitan Planning Organizations (MPOs)**. This report will start to explore next steps, such as facilitating consideration of transportation security planning in projects as they are added to the Transportation Improvement Program (TIP).

**Figure 1: Pieces that Fit Together for Transportation Security Planning in the Delaware Valley**



# Overview of Federal Approach

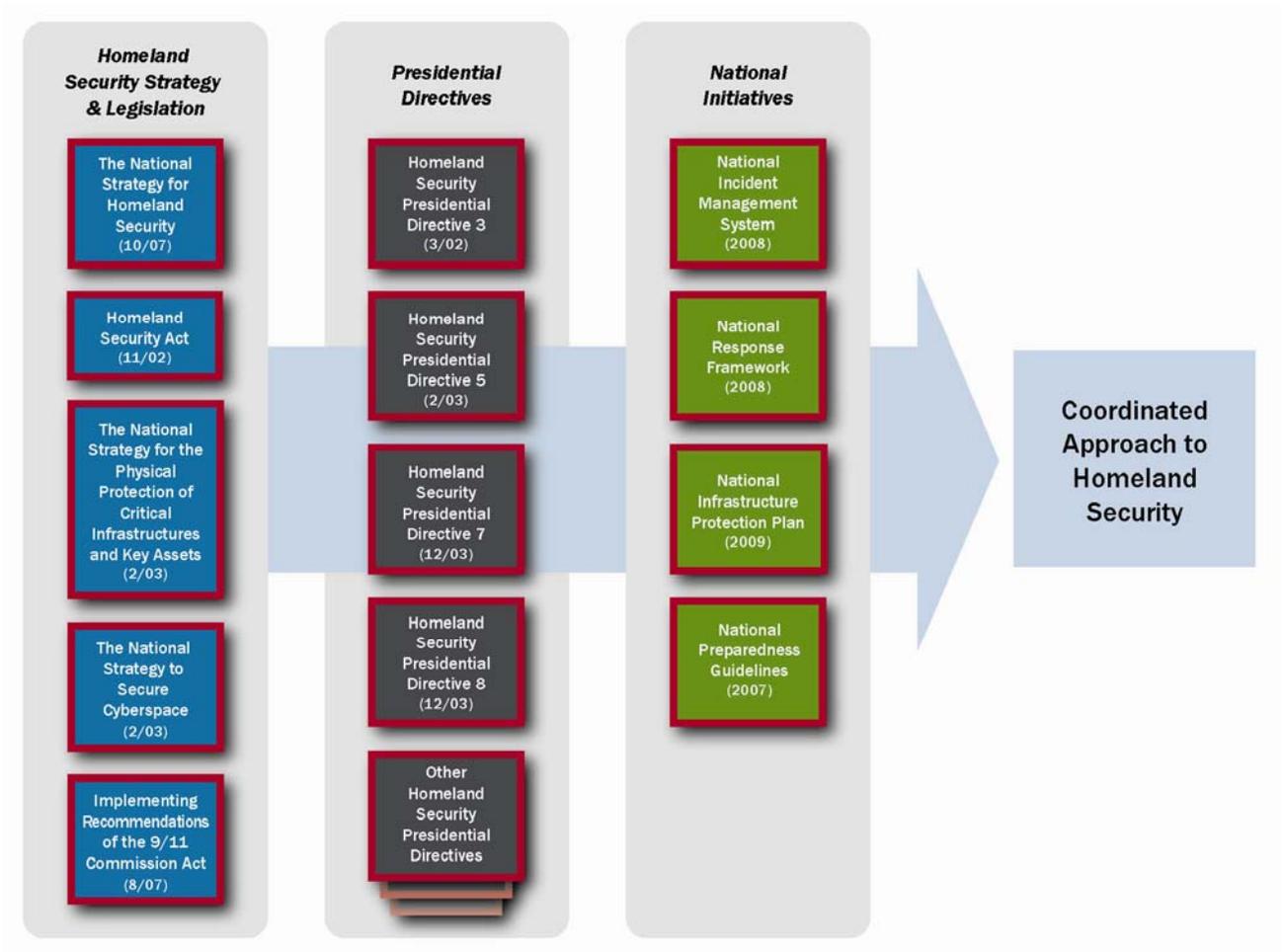
Security planning at the federal level is led by the **Department of Homeland Security (DHS)**. The Homeland Security Act of 2002 created DHS, bringing together many related agencies. It includes entities such as the US Coast Guard, US Secret Service, and FEMA. Many of these agencies have relationships to transportation security planning. DHS is a major source of funding for efforts to improve transportation security through planning, equipment purchase, training, security-related operations, and other efforts that advance the national initiatives.

Acronyms are defined in Appendix D.

Relevant DHS grants are summarized in Appendix A.

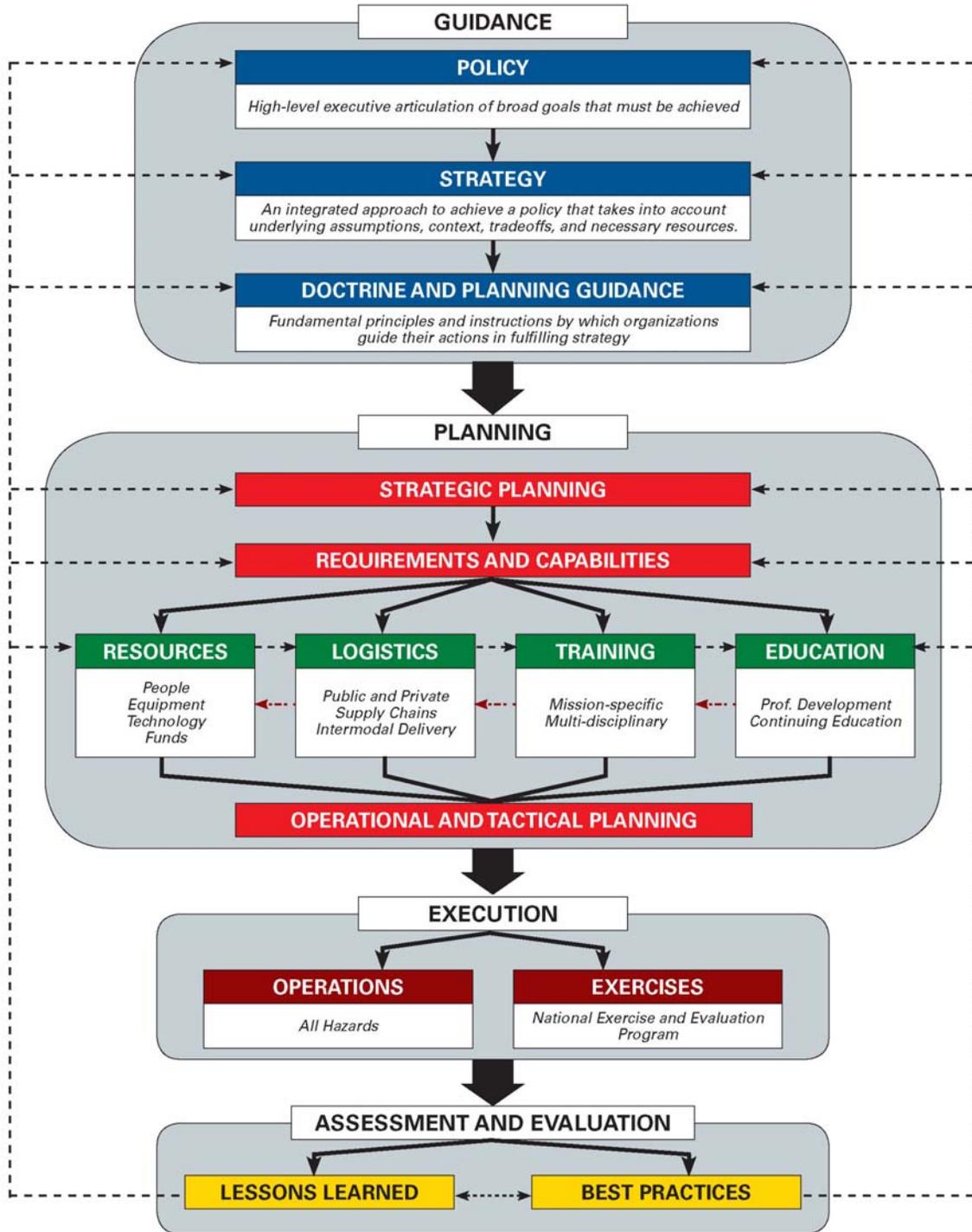
Two ways to understand the big picture of how DHS is increasing security in the United States are outlined in the figures that follow. Figure 2, below, covers the key documents involved and their relationships. The four national initiatives are briefly described on the pages that follow. All the documents are available from [www.dhs.gov](http://www.dhs.gov). Figure 3, on the next page, provides a conceptual overview.

Figure 2: National Framework for Homeland Security



Source: *National Infrastructure Protection Plan* (Washington DC: DHS, 2009), Figure 5-1, p. 72

Figure 3: Homeland Security Management System



Source: National Strategy for Homeland Security (Washington DC: DHS, 2007), Figure 1, p. 44

The four national initiatives shown in Figure 2 are summarized in the paragraphs that follow.

### ***National Preparedness Guidelines (Guidelines)***

The *Guidelines* define the national domestic all-hazards preparedness goal. This document contains the **national preparedness vision**, **national planning scenarios**, **universal task list** based on the planning scenarios, and **target capabilities list**. The target capabilities list defines 37 specific capabilities that communities, the private sector, and all levels of government should collectively possess in order to respond effectively to disasters.

### ***National Incident Management System (NIMS)***

NIMS outlines how governmental, nongovernmental, and private sector entities can effectively manage incidents. This includes working together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. NIMS falls within the preparedness, response, and recovery efforts of DHS, and is managed through FEMA.

### ***National Response Framework (NRF)***

The NRF builds on NIMS. It defines the principles, roles, and structures that organize how we respond as a nation. The NRF includes descriptions of roles for all the federal agencies that may work together for a response in subject-related categories, called **Emergency Support Function (ESF)** annexes. There are 15 ESFs, and transportation is the first one. USDOT is the coordinating agency. The list of supporting agencies and concept of operations is available at [www.fema.gov/pdf/emergency/nrf/nrf-esf-01.pdf](http://www.fema.gov/pdf/emergency/nrf/nrf-esf-01.pdf).

### ***National Infrastructure Protection Plan (NIPP)***

The NIPP focuses on protecting infrastructure and minimizing risk. It protects **Critical Infrastructure and Key Resources (CI/KR)**. It helps with prioritizing where and how to invest to increase safety, security, and resiliency. This is within the counterterrorism efforts of DHS. Infrastructure has been divided into 18 sectors, one of which is transportation. A **Sector-Specific**

#### **Imagining Catastrophic Events**

The national planning scenarios are designed to focus contingency planning for homeland security preparedness work at all levels of government and with the private sector. The scenarios form the basis for coordinated federal planning, training, exercises, and grant investments needed to prepare for emergencies of all types. They are:

- ◆ Improvised Nuclear Device
- ◆ Aerosol Anthrax
- ◆ Pandemic Influenza
- ◆ Plague
- ◆ Blister Agent
- ◆ Toxic Industrial Chemicals
- ◆ Nerve Agent
- ◆ Chlorine Tank Explosion
- ◆ Major Earthquake
- ◆ Major Hurricane
- ◆ Radiological Dispersal Device
- ◆ Improvised Explosive Device
- ◆ Food Contamination
- ◆ Foreign Animal Disease
- ◆ Cyber Attack

Source: *National Preparedness Guidelines* (Washington DC: DHS, 2007), Preface and p. 37, Figure B-1

**Plan (SSP)** has been developed for each one. Each SSP covers how to deter threat, mitigate vulnerabilities, or minimize consequences associated with any kind of incident.

## Maintaining Integration and Communication

As in any major undertaking, it is essential to maintain communication among participants in different efforts to improve security and preparedness. There are various federal efforts to do this. Some of the important subject linkages or interdependencies for transportation security planning are among transportation, energy, and communications.

Communications and information sharing are obviously critical to all subject areas. One way that the importance of communications is addressed is a federal requirement for **Information Sharing and Analysis Centers (ISACs)**. There are ISACs for subject areas and geographies. They are linked by the ISAC Council. Its mission is to advance the physical and cyber security of the critical infrastructures of North America by establishing and maintaining a framework for valuable interaction between and among the ISACs and with government. More information is available at [www.isaccouncil.org](http://www.isaccouncil.org).

## Federal Guidance on the Role of MPOs

Urbanized areas are required to do continuing, cooperative, comprehensive transportation planning to receive federal transportation funds. This work is coordinated by the region's MPO, where all stakeholders in the multimodal transportation system make decisions together.

DVRPC is the MPO for the Philadelphia metropolitan region. The geography of this region is shown in Figure 4. In addition to transportation planning, DVRPC promotes smart growth, helps protect the environment, and enhances the economy of the nine-county, bi-state region.



Figure 4: Delaware Valley Region

Source: DVRPC

In recent years, federal regulations changed to require that MPOs take on a more active role in transportation security planning. The 2005 [Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users \(SAFETEA-LU\)](#) made the security of the transportation system a stand-alone planning factor. This signaled an increase in importance from prior legislation, in which security was coupled with safety in the same planning factor. This requirement must be met prior to MPO and state adoption of transportation plans. The regulations are fairly general, stating:

The metropolitan planning process ... shall provide for consideration of projects and strategies that will ... increase the security of the transportation system for motorized and nonmotorized users.

Source: 23 CFR 134 (h) (C) Scope of Planning Process

Where MPOs have made progress on this requirement, a lesson frequently reported is that it is a challenge to define what would be useful. Another conclusion is that while addressing transportation security planning is important, what is useful varies from one region to another.

**More on how MPOs have addressed transportation security is available in Appendix B.**



## Approaches within the Delaware Valley

### Regional Context

The transportation context of the Delaware Valley is complex. The region has a population of over 5.5 million people and an area of over 3,800 square miles. There are more than 23,000 miles of roadway with almost 4,000 bridges, as well as approximately 350 miles of passenger rail and over 750 miles of freight rail. Cars, trucks, and other vehicles travel over 110 million miles on the road network daily.

Transportation infrastructure in the Delaware Valley is heavily used and is congested in many locations. The interstate highway system, major bridges, and key train stations are vitally important for many travelers, which could potentially make them a target for terrorist acts. The transportation elements are interconnected and relied upon in many ways by individuals, businesses, and others.

The Delaware Valley is within approximately a two-hour drive of both the New York City and the Baltimore/Washington DC metropolitan areas. Both of those areas are feasible targets of terrorism and have large populations to evacuate. If either were to need to evacuate, large numbers of people may come to or through the Philadelphia metropolitan region.

The Philadelphia metropolitan area is near the top in the nation on various statistics for high use of transit. Over a million people ride transit in the Delaware Valley each day. Over 50% of commuters to Center City (Philadelphia) use transit. This high level of reliance on transit is a positive reflection of a region with real transportation options. However, the open and predictable nature of successful transit systems makes them vulnerable to attack. Thorough and coordinated security planning, including preparing for incidents on transit vehicles and keeping transit moving in emergencies, is inherently important.



**An overturned truck (center) on a ramp closed the Ben Franklin Bridge eastbound in 2006**

Source: DVRPC

Approximately 300 million tons of freight move into, out of, and through the Delaware Valley before counting international shipments. This freight was valued at \$317 billion in 2002 with anticipated growth in value of 82% by 2035. There are over 20 marine cargo terminals in the region. The private terminals tend to focus on moving major tonnage of bulk commodities, like oil. The public terminals, which generally involve more jobs and trucks, focus on distributing containers and break-bulk cargo, including a significant percentage of the fresh fruit for the east coast. While much of the goods move by truck, there is also significant rail movement by Norfolk Southern, CSX, Canadian Pacific, and over a dozen shortline railroads.

Aviation planning in the Delaware Valley is conducted for a slightly larger 12-county region, which includes parts of the states of Delaware and Maryland. There are over 20 airports in the region, counting commercial, reliever, and general (recreational) facilities. In addition, there are three public use heliports and an active military airbase. Airports rely on an effective surface transportation network around them, and they affect the surrounding region.

On a broader scale, there are multiple levels of security planning that all need to coordinate, communicate, and learn from each other. In the Delaware Valley, these multiagency, multilevel issues include coordination among:

- ◆ federal government with Pennsylvania and New Jersey;
- ◆ Pennsylvania and New Jersey with each other;
- ◆ states with local governments, MPOs, and other entities within them;
- ◆ regions (such as the Philadelphia and New York City areas) interacting with each other and with surrounding states; and
- ◆ governments interacting with non-profit organizations, businesses and other private sector entities, and citizens.

One way the need for security-related communication among different levels of government and different entities is addressed is through the **Homeland Security Information Network (HSIN)**. It is a comprehensive, secure platform to facilitate **Sensitive But Unclassified (SBU)** information sharing and collaboration between federal, state, local, tribal, private sector, and international partners. Information is provided based on **Communities of Interest (COIs)**. Figure 5 is a summary diagram of the function of the HSIN.

Figure 5: Networked Information-Sharing Approach



Source: *National Infrastructure Protection Plan* (Washington DC: DHS, 2009), Figure 4-2, p. 58

Based on regional characteristics and other criteria, the Philadelphia region qualifies for the **Urban Area Security Initiative (UASI) grant program**. The DHS UASI program allocates funding to enhance regional preparedness capabilities in the highest risk urban areas. In 2009, the Philadelphia Area UASI was reclassified from Tier II to be one of the small set of ten Tier I areas. This change makes the region eligible for more funding. The UASI includes Philadelphia and the four surrounding southeastern Pennsylvania counties. Funding has been provided outside of this geographic area for certain projects, such as interoperable communications. There is coordination with Burlington, Camden, Gloucester, and other New Jersey counties. See Appendix A for more information.

Some specific initiatives to address coordination and communication for the bi-state region of the Delaware Valley and in some cases beyond, include:

- ◆ **Delaware Valley Emergency Management and Homeland Security Coordination Council** was formed by the Southeastern Pennsylvania Regional Task Force. It provides a forum for the emergency management and homeland security officials from the Philadelphia-Camden-Wilmington Metropolitan Statistical Area (MSA). This includes the

counties of Bucks, Chester, Delaware, Montgomery, Philadelphia (Pennsylvania), Burlington, Camden, Gloucester, Salem, and Cumberland (New Jersey; Cumberland is not in the MSA but it is included in task force planning considerations), New Castle (Delaware) and Cecil (Maryland).

- ◆ **Southeast Communications Net (SECOM-Net)** is a four-state, 12-county dedicated, secure microwave system that provides Voice over Internet Protocol (VoIP) between Delaware Valley 911 Operations Centers/EOCs and provides voice radio connectivity, with cross patch capability, for emergency responders. The next phase of this project will integrate Cecil County, the University of Pennsylvania, Temple University, the Delaware River Port Authority (DRPA), Southeastern Pennsylvania Transportation Authority (SEPTA), and the Pennsylvania State Police.
- ◆ **Public Safety Interoperable Communication Project** is a separately funded effort to improve communications within the City of Philadelphia and the surrounding counties in Pennsylvania, New Jersey, Delaware, and Maryland. It includes upgrading the Philadelphia voice radio system and completing the underground element to provide coverage in SEPTA tunnels.
- ◆ **Delaware Valley Intelligence Center (DVIC)** is the proposed fusion center for the four-state, 12-county area. As of early 2010, a managing board has been created, a site selected, and a memorandum of agreement is in force among DRPA, New Jersey, and SEPA RTF. For more information on fusion centers, see the New Jersey section.
- ◆ **Philadelphia Area Regional Transit Security Working Group (PARTSWG)** prepares a five-year strategy to fill gaps in regional transit security planning. It is hosted by the Pennsylvania Emergency Management Agency (PEMA) and chaired by DRPA. It includes Pennsylvania and New Jersey providers of transit. Efforts to identify gaps and act on filling them included running a freight rail exercise in 2009.
- ◆ **Area Maritime Security Committee (AMSC) for the Delaware Bay** is led by the Coast Guard Sector Delaware Bay. It is a partnership of federal, state, and local law enforcement and intelligence organizations; governmental, regulatory, public safety and emergency management agencies; private and public port business organizations; organized labor; recreational waterway users; and public and private sector stakeholders who are committed to improving the security of the maritime transportation system. Committee members assist and advise the Federal Maritime Security Coordinator (FMSC) in the development, review, and update of the Sector's *Area Maritime Security Plan* (AMSP), the *Strategic Risk Management Plan* (SRMP), and the *Maritime Transportation System Recovery Plan* (MTSRP).
- ◆ **Regional Integrated Multi-Modal Information Sharing (RIMIS)** is a web-based information exchange network connecting highway operation centers, transit control centers, and 911 call centers in the Delaware Valley. RIMIS is anticipated to be operating in the summer of 2010. RIMIS shares information and shows mapping of incidents, construction or maintenance activities, and special events. It is oriented to coordination among transportation operators, emergency responders, and other agencies. It is not anticipated to be accessible to the general public in the near future.
- ◆ **I-95 Corridor Travel Time Information** provides information about the broad I-95 corridor from Florida to Maine. It provides real-time traffic information and estimated drive times for roadways in and between metropolitan areas, and may help in the event of a large-scale incident. For more information, see [www.i95coalition.org](http://www.i95coalition.org). In addition, it includes a non-public Information Exchange Network for agencies to provide information and work together in addressing incidents. RIMIS will be integrated into this web site.
- ◆ **511 Traveler Information** is available separately in Pennsylvania and in New Jersey. It provides information on transportation and traffic available by phone, by personalized traveler alerts, or on the internet. It can be used in emergency situations. Each department of transportation coordinates its 511 service. In New Jersey, 511 is managed through the **Statewide Transportation Management Center (STMC)**.

## Pennsylvania

The Commonwealth of Pennsylvania uses the following all-hazards approach to improve security, in a brief overview:

- ◆ Oversight and governance is provided by the **Pennsylvania Emergency Management Agency (PEMA)**.
- ◆ PEMA has three area offices. The Eastern Area Office is located in Hamburg (Berks County). PEMA area offices coordinate with commonwealth agencies, county and municipal government, volunteers, and the private sector. Area offices provide on-site coordinated assistance to emergency management coordinators and others in all 67 counties during times of manmade or natural disasters.
- ◆ Protection-related activities are orchestrated and synchronized by the **Pennsylvania Office of Homeland Security (PA OHS)**. The Director of PA OHS reports to the Director of PEMA in support of emergency preparedness activities, programs, and initiatives.
- ◆ Prevention efforts are led by an array of agencies and organizations including the **Pennsylvania State Police**.
- ◆ Oversight for responding and rebuilding also resides with PEMA. For more information on this bullet and the ones above, see [www.pema.state.pa.us](http://www.pema.state.pa.us).
- ◆ In 2008, Pennsylvania amended the Pennsylvania Emergency Management Services Code to establish a system of intrastate mutual aid between all political subdivisions within the Commonwealth. Previously, it had been one of 15 remaining states without such an agreement.
- ◆ The **Pennsylvania Office of Public Safety Radio Services (PA OPRS)** is located in the Office of Administration (OA) and guided by the Public Safety Communications Council (PSCC). It provides a single body to coordinate the various aspects of public safety communications for Pennsylvania. It develops and operates **StarNET (Statewide Radio Network)** as part of the *Statewide Communications Interoperability Plan* that was issued in 2007 and updated in 2008. OPRS works with SEPA RTF on interoperability projects. For more information, see [www.radio.state.pa.us](http://www.radio.state.pa.us) or [www.outreach.psu.edu/programs/interop/files/Overview.pdf](http://www.outreach.psu.edu/programs/interop/files/Overview.pdf).

A few major Pennsylvania efforts relating to the Philadelphia metropolitan area are:

- ◆ **Southeastern Pennsylvania Regional Task Force (SEPA RTF)**, formerly known as the Southeastern Pennsylvania Counter-Terrorism Task Force, is one of nine related task forces in the Commonwealth. It covers the five Pennsylvania counties of the Delaware Valley. See the previous section on bi-state efforts and the section that follows on specific Pennsylvania efforts for more information on some of its major initiatives.
- ◆ **Philadelphia Office of Emergency Management (Philadelphia OEM)** is responsible for ensuring the readiness of the City of Philadelphia for emergencies of any kind. Its integrated and collaborative program educates the public on how to prepare for emergencies, works with organizations throughout the City to prepare emergency contingencies, mitigates the impact of emergencies, and enables the City to recover from an emergency as quickly as possible. For more information, see [oem.readyphiladelphia.org](http://oem.readyphiladelphia.org). Philadelphia OEM, in partnership with law enforcement and transportation agencies, has:
  - developed emergency evacuation routes for Philadelphia;
  - developed a cross-border evacuation plan for moving evacuees between New Jersey and Philadelphia;

- developed an evacuation plan for high-rise office workers in Center City and University City, Philadelphia;
  - developed an evacuation plan for the Sports Complex;
  - is working with counties in Southeastern Pennsylvania and New Jersey to conduct a survey of residents on their potential actions during an evacuation;
  - started to model traffic for various evacuation scenarios; and
  - coordinated with the New Jersey DVRPC counties of Mercer, Camden, Burlington, and Gloucester. It also coordinates with Cumberland and Salem counties which are outside the DVRPC region.
- ◆ Each county has an **Emergency Operations Center (EOC)**. The Montgomery County Department of Public Safety Emergency Operations Center is especially state-of-the-art. It is part of the Limerick Power Plant Radiological Emergency Preparedness Program. For more information, see [dps.montcopa.org/dps/cwp/view,a,1596,q,53411.asp](http://dps.montcopa.org/dps/cwp/view,a,1596,q,53411.asp).
  - ◆ Also see shared efforts with New Jersey listed at the end of the previous Regional Context section.

Some specific Pennsylvania projects that may be relevant to coordinated planning and enhanced communication across disciplines are as follows:

- ◆ The **Southeastern Pennsylvania Emergency Transportation Plan** was prepared by SEPA RTF. The plan helps better prepare the region for large-scale, unplanned events. With a focus on the transportation network, this plan explores the complexities of county and/or regional evacuation including evacuation-receiving events from neighboring states. The plan includes evacuation maps, which detail evacuation routes, major traffic control points, collection areas, and staging areas. It also includes an Evacuation Routes Feature Guide which includes evacuation route capacities, chokepoints, shelters with capacities, hospitals, flood vulnerabilities, presence of ITS devices, and other features essential to evacuation decision making. This plan will be used as a resource by incident responders to facilitate the safe movement of people and vehicles in the case of an emergency.



Derailed train leaking 10,000 gallons of sulfuric acid in western Pennsylvania in 2006

Photo courtesy of [www.sulphuric-acid.com/TechManual/Plant\\_Safety/safety\\_accidents.htm](http://www.sulphuric-acid.com/TechManual/Plant_Safety/safety_accidents.htm)

- ◆ **ReadyNotifyPA** is a service of SEPA RTF to share information among first responders, emergency managers, and key government officials in the five southeastern Pennsylvania counties, and also Gloucester County, New Jersey. This system is built on the national Roam Secure Alert Network (RSAN). It provides information about incidents and provides an emergency communication network. Anyone may sign up to receive public information about emergencies, severe weather, or major road closures at [www.readynotifypa.org](http://www.readynotifypa.org).

## New Jersey

The State of New Jersey takes an all-hazards approach to being prepared for catastrophic events. Following is brief overview focusing on transportation security planning:

- ◆ Oversight of counter-terrorism and preparedness efforts resides with the **New Jersey Office of Homeland Security and Preparedness (NJ OHSP)**. It is in, but not of, the Department of Law and Public Safety. Policy matters are decided through its New Jersey Domestic Security Preparedness Task Force, a Cabinet-level body. NJ OHSP includes a Division of Operations and a Division of Preparedness. The Division of Preparedness coordinates long-term thinking for security and manages security grants among other duties. Some background about work within the Division of Preparedness relevant for other professionals to understand is:
  - The Planning and Project Management Bureau coordinates activities with Regional Catastrophic Planning Grants and emergency operations plans. They are leading the Non-UASI Planning Project described below.
  - The Critical Infrastructure Protection (CIP) Bureau coordinates activities with the range of critical infrastructure sectors.
  - The transportation sector's security needs are addressed by an office staffed by NJDOT. Within NJ OHSP this office is called the Transportation Branch of the CIP, but it is the same entity as the NJDOT Office of Transportation Security. This office is now located at NJ OHSP and co-managed by the two agencies. Their work includes preparing regional and state multimodal transportation security strategies, coordinating transportation-related DHS Preparedness Grant applications for the State, and managing CI/KR security assessment projects for NJDOT.
- ◆ Response and rebuilding responsibilities primarily reside with the **New Jersey Office of Emergency Management (NJ OEM)**. It is structurally within the Office of the Attorney General and housed in the Division of State Police Headquarters. There are north, central, and south regional offices.
- ◆ State law requires that every municipality have an **Emergency Operations Plan (EOP)**, and appoint a coordinator. Each county's Office of Emergency Management assists its municipalities in developing a plan and keeping it current. These feed upward into the State's EOP. NJ OEM completed an update of the State's EOP in 2006, and has been updating the related ESF annexes.
- ◆ All the New Jersey Delaware Valley counties are participating in an effort led by NJ OHSP and NJ OEM to develop more thorough plans to address large-scale events (the New Jersey Non-UASI Planning Project). Burlington, Camden, and Gloucester counties are participating as part of a Delaware River Region. Mercer County is part of the Northwest Region. Each group of counties has conducted gap analysis based on catastrophic events relevant to its area. These gaps are being translated into project requirements for support in 2010.
- ◆ In 2006, the New Jersey State Police opened the State's first **Regional Operations and Information Center (ROIC)** [commonly pronounced "rock"] and fusion center. It serves as the foundation for the State's homeland security, crime fighting, and emergency response efforts. An overview is available at [www.state.nj.us/njoem/media/pdf/102308\\_oembulletin.pdf](http://www.state.nj.us/njoem/media/pdf/102308_oembulletin.pdf). Responsibilities of seven agencies with staff assigned there are delineated in the State EOP.
- ◆ **Public and Private Sector Working Groups** exist for many of the critical sectors and are being developed for others with leadership by NJ OHSP. There is policy level interaction between private sector and public sector security professionals through the State's Infrastructure Advisory Committee. Other efforts include partnerships on specific

issues, such as working with New Jersey's Class 1 freight rail carriers on regional rail security for key hazardous materials.

Some specific projects that may be relevant to coordinated planning and enhanced communication across disciplines are as follows:

- ◆ Priority Bridges – A methodology was developed to assess the security importance of bridges in New Jersey. It was used to select a set of 100 priority bridges. Strategies to improve the security of each bridge are being developed. An overview is available at [http://ops.fhwa.dot.gov/freight/fpd/talking\\_freight/index.htm](http://ops.fhwa.dot.gov/freight/fpd/talking_freight/index.htm). It may be useful to coordinate with this initiative when making funding decisions, such as in the TIP process.
- ◆ Evacuation Modeling - On behalf of NJ OEM, Rutgers is working on evacuation modeling for the New Jersey counties in the New York City UASI area. The hope is to extend that to a statewide evacuation model in coordination with the travel models of the three New Jersey MPOs.
- ◆ Commuter Rail Safety Planning - A statewide preparedness initiative for the commuter rail systems started in 2008. It will first focus on the 38 most vulnerable rail stations and then develop a template that can be used with other rail stations (source: [www.1strespondernews.com/webpages/news/displaynews.aspx?ID=7386a8f9-37a6-4893-9018-d97e3c0643e5](http://www.1strespondernews.com/webpages/news/displaynews.aspx?ID=7386a8f9-37a6-4893-9018-d97e3c0643e5)). NJ OHSP conducts the NJ Rail Security Strategy. Transit planners and county or municipal officials may wish to coordinate with this planning.
- ◆ Health Emergency Planning – New Jersey Health and Senior Services coordinates with OHSP and OEM, for example by completing a 2009 State Pandemic Flu Plan.
- ◆ Food Distribution Plan – OHSP led development of this plan in 2009 with involvement of NJ OEM. The Rutgers Food Policy Institute and the NJ Food Council were involved.
- ◆ **NJ Alert** provides emergency alerts online, or by electronic alerts to cell phones or e-mail addresses to anyone who registers.
- ◆ Also see shared efforts with Pennsylvania listed at the end of the previous Regional Context section.

At the beginning of the task to prepare this report, less was known about transportation security planning in New Jersey than in Pennsylvania, so interviews were conducted<sup>1</sup>. Following are a few points raised at these interviews:

- ◆ There is considerable work underway, including risk assessment exercises for critical infrastructure sites (public and private) and coordination among authorities, counties, and bodies such as the US Coast Guard.
- ◆ There may be a remaining issue with radio system interoperability among municipalities, counties, and others at least in some areas.
- ◆ Each transit agency has its own police department. State police supports the transit security sector especially in Mercer County because Trenton is the capitol.

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<sup>1</sup> The interviews were with Burlington County Office of Emergency Management; Camden County Chief Critical Infrastructure Coordinator; Camden County Office of Emergency Management; Countermeasures Assessment & Security Experts; Delaware River Port Authority; Gloucester County Office of Emergency Management; James Lee Witt Associates; Mercer County Office of Emergency Management; New Jersey State Police, Homeland Security Branch; Philadelphia Office of Emergency Management (as background)

## Existing Efforts at DVRPC

DVRPC has been involved with transportation security planning for many years. This involvement includes long-standing taskforces that address transportation security planning from various perspectives, including traffic operations, transportation safety, aviation, and goods movement. These task forces include planners, traffic engineers, state police, emergency responders, other agencies, and non-traditional participants such as health and safety organizations and private sector representatives. DVRPC is also involved in technical projects, such as a current contract to model evacuation routes for the Philadelphia OEM. More information on the task forces is available at [www.dvrpc.org/committees](http://www.dvrpc.org/committees).

The DVRPC Office of Transportation Operations Management has been the most involved in transportation security planning. It conducts the following security-related efforts:

- ◆ Enhancing transportation incident management - DVRPC administers five **incident management task forces**. In Pennsylvania, they are I-76/I-476 Crossroads, I-95 in Philadelphia, Delaware County, and US 30 in Chester County. The New Jersey Incident Management Task Force is for the NJ 42/55, I-76/676/295 area. DVRPC coordinates with other incident management task forces throughout the nation and helps develop training opportunities. These task forces bring together a wide range of emergency responders to improve efficiency when there is an incident and stress NIMS-compliance.
- ◆ Assisting with development of transportation evacuation plans and the **Interactive Detour Route Mapping (IDRuM)**, an application that helps responders get online access to information on detour routes.
- ◆ Supporting RIMIS, described in the Regional Context section.
- ◆ More information is available in the 2009 *Transportation Operations Master Plan* (DVRPC Publication 09049) and at [www.dvrpc.org/Operations](http://www.dvrpc.org/Operations).



An event that called for detour routes

This report focuses on security for the surface transportation system as part of meeting **Federal Highway Administration (FHWA)** requirements. However, aviation security planning is too important to leave out. Everyone who flies through commercial airports, including Philadelphia International, interacts with the **Transportation Security Administration (TSA)** of the DHS. TSA does not post staff to the many corporate or general/recreation airports in the region. DVRPC's Office of Aviation Planning prepared an assessment of security at all of the region's general aviation airports with FAA funding in 2004, the *Regional Airport Security Profile Study for General Aviation Airports*. The Office of Aviation Planning was also involved with now-stalled reuse plans for the Willow Grove Naval Air Station in Horsham, Pennsylvania. It supports use of this site as a regional national emergency center. This is an example of how surface

Photo courtesy of David Brown, Montgomery County Department of Public Safety. PowerPoint presentation, October 9, 2008.

transportation (for distribution of supplies in an emergency), aviation, and overall security planning come together.

Beyond the specific efforts described in the preceding paragraphs, DVRPC has over 40 years of experience fostering a very basic element of transportation security: a resilient regional transportation system. A key element in minimizing the effects of natural events and preventing major attacks on the transportation system is having a well-maintained multimodal transportation system with built-in redundancy. Partners in the Delaware Valley have coordinated extensively on developing a robust transportation network, although there is always need for more effort.

DVRPC is interested in helping more with transportation security planning, and is also directed to do so by federal regulations. This report is a first step. The next section outlines some additional actions DVRPC will do or further investigate. It is anticipated that DVRPC's actions and involvement will evolve over time.

## Next Steps

Transportation security planning is a wide and important field. To be prepared, participants should build a range of relationships and shared vocabulary before events occur. While there is a tremendous amount of effort underway in the Delaware Valley, there are still areas where more could be done. While expressing every appreciation for the work underway, DVRPC seeks to participate as part of its mission and to meet federal regulations.

This chapter offers two areas for next steps that build relationships among a range of planning professionals and enhance a shared vocabulary of terms and concepts. The two areas are:

- ◆ steps that DVRPC can take; and
- ◆ considerations for staff in various organizations.

### What DVRPC Can Do to Improve Transportation Security Planning

As relative newcomers to some elements of transportation security planning, DVRPC staff were struck both by how much is underway and how challenging it is to understand a general overview. It seems like transportation security planning goes very deep in various elements, such as how to deal with an explosive device, but not always as wide as might be useful, such as in terms of involving the range of related fields. There are helpful guides for what citizens should do to prepare for emergencies at a variety of sites, from the federal Ready.gov to state and county web sites and publications. Planning for continuity of service in the private sector seems to be in discussion in various places, for example on the Philadelphia OEM website. However, there seems to be opportunity for more to happen in the space between complex planning by security professionals and citizens/businesses preparing themselves. This space includes enhanced coordination among related fields. This conclusion is supported by analysis conducted at the federal, professional organization, and academic levels (see Appendix B for more detail).

The pages that follow focus on how DVRPC can help improve transportation security planning in the Delaware Valley. In summary, this includes by taking steps to:

- ◆ foster communication;
- ◆ more closely link security planning and long-term transportation planning;

- ◆ support planning for a resilient, well-maintained transportation network to increase security; and
- ◆ provide technical support as requested.

## **Foster Communication**

DVRPC can help professionals in a range of related fields further communicate and work together. For example, there may be further opportunities to facilitate discussion among professionals doing security planning, multimodal long-range transportation planning, capital programming, land use and corridor planning, and other fields at various scales of geography.

This report is a first effort by DVRPC to increase communication. In addition to providing an overview of transportation security planning, it defines terms (Appendix D) and provides the latest references (Appendix E). As the MPO for a nine-county bi-state region that interacts with a wide range of organizations on a regular basis, we can do more. Some options are:

- ◆ preparing other overview material—one idea is a five-minute presentation suitable for various meetings;
- ◆ gathering professionals to follow up this report. This meeting could focus on developing a table of actions to improve communication and coordination across disciplines which would become part of future editions of this report;
- ◆ participating in efforts by other organizations and contributing a regional planning view; and
- ◆ reaching out to partners to identify additional ways to help fill gaps and coordinate productively to improve transportation security planning. Some ideas that have been raised are to:
  - help further link the existing critical sector groups in the Delaware Valley, for example by helping maritime planners in the region coordinate with other regional sector groups, such as utilities; and
  - work more with the private sector to help identify and address challenges within freight rail, motor coach, motor truck, and perhaps general aviation security in the region.

## **More Closely Link Security Planning and Long-Term Transportation Planning**

Important parts of what transportation security planners do is monitor threats and coordinate how to respond today, tomorrow, or next year. Other professionals are planning where and how to invest in the entire transportation network over the next four to 20 years. There seems to be an opportunity for DVRPC to help link these two groups of planners more closely on specific efforts so that everyone is more likely to get what they need.

DVRPC will investigate how to better integrate transportation security planning into the development of the four-year capital program of transportation projects. The TIP is developed by regional partners coordinated by DVRPC as the MPO. All projects (highway, transit, or other modes) seeking federal transportation funding must go through this prioritizing process. The TIP also includes regional-scale projects funded in other ways. Integrating transportation security planning and TIP project prioritization is a repeatedly recommended step in the related literature (see Appendix B).

Transportation security planning is likely considered in the development of many of the projects proposed for inclusion in the TIP. DVRPC does not need to know any sensitive details, but could add a question in a form for potential TIP projects that asks if security planning was fully considered. DVRPC could investigate other ways to highlight projects that are important to fund because of their role in regional security. An example would be prioritizing projects along regional evacuation routes.

A specific benefit to transportation security planners of coordinating more closely in TIP development is access to knowledge about federal transportation project funding sources. DVRPC could help to determine if security projects related to the region's transportation infrastructure are eligible for various types of federal transportation funds.

Another step that is underway, but could be strengthened, is increasing communication between professionals who often focus on the short-term (such as some security planning and operations planning) and those focused on the medium- or long-term. This concept draws on the FHWA efforts with Planning for Operations covered at [www.plan4operations.dot.gov](http://www.plan4operations.dot.gov). Some concerns shared between professionals focused on short-term and long-term transportation planning are how to keep bridges well-enough maintained (such as for evacuation routes and everyday use), and how to make major transportation bottlenecks function better. A step could be going to gatherings of security planners to provide information and gather input for the TIP or long-range plan.

## **Support a Resilient, Well-Maintained Transportation Network to Increase Security**

The mission of DVRPC includes building consensus on improving transportation and promoting smart growth. DVRPC could more regularly and more urgently include why improving transportation and land use planning matters for dealing with all types of emergencies, natural or manmade.

The *NIPP* seeks to build a safer, more secure, and more resilient America through protection of critical infrastructure and key resources. It includes deterring attacks (for example, through hardening bridges), devaluing attacks (for example, by having multiple ways to access a city so an event on any one facility has less impact), detecting terrorist activities, and defending when there are attacks.

This approach may not adequately recognize underlying infrastructure needs, for example to keep bridges adequately maintained and transit in a state of good repair. Numerous studies document insufficient maintenance, such as the “D” (or Poor) rating the American Society of Civil Engineers gave the nation’s infrastructure (see [www.asce.org/reportcard](http://www.asce.org/reportcard)).

Further, transportation infrastructure cannot be thought of as any one facility, but rather as a multimodal network. Proponents of this approach included the planners of the Eisenhower National Defense Highway System, who valued a high degree of core capacity, connectivity, flexibility, and redundancy. In the transportation field, two important terms are redundancy and resiliency. A **redundant** transportation network includes more than one way for people and goods to get between places. This creates a network that can deal with events that close or slow one route. It is important to also have a **resilient** transportation network. While related, this focuses on how quickly a transportation network can adapt to changing circumstances and return to its normal state of operation.

Two resources on the importance of transportation maintenance, redundancy and resiliency are:

- ◆ “Infrastructure Resiliency: Do We Have the Focus Right?” (Bob Prieto, Alexandria, Virginia: The Infrastructure Security Partnership, 2009), and
- ◆ “Transport Network Vulnerability - Which Metrics Should We Use?” (Jan Husdal, Molde, Norway: Molde Research Institute, 2006)

In the Delaware Valley, this need to address crumbling infrastructure is documented and addressed in the following reports, all available at [www.dvrpc.org](http://www.dvrpc.org):

- ◆ *DVRPC’s Options for Filling the Region’s Transportation Funding Gap* [Publication #07045] (Philadelphia: DVRPC, 2007)
- ◆ *Making the Land Use Connection: Regional What-if Scenario Analysis* [Publication #08059] (Philadelphia: DVRPC, 2008)
- ◆ *Connections: The Regional Plan for a Sustainable Future* [Publication #09047D] (Philadelphia: DVRPC, 2009) – One of the four key strategies is maximizing mobility and closing the funding gap.

## **Provide Technical Support as Requested**

DVRPC is a data center and has a wide range of areas of technical expertise, including Geographical Information System (GIS) mapping and current traffic counts for many of the region’s roadways. There is some opportunity, depending on resources, to offer support to efforts to improve transportation security in response to requests. Some possibilities based on the future needs section of the SEPA RTF *Emergency Transportation Plan* are:

- ◆ provide help with data or GIS; DVRPC could specifically help with special needs populations mapping for evacuation;

- ◆ assist with developing contracts with service providers that support evacuation and recovery efforts; or
- ◆ assist in the development of policies and legislations (e.g. emergency towing policy).

An element of security planning that has not been addressed in this report is **sheltering-in-place**. In some cases it is the most effective approach to protecting populations, and in other cases it is important to phasing an evacuation. As a regional entity with expertise in housing, data analysis, and transportation, it seems like DVRPC could provide technical assistance to others working on this element of preparing to reduce the negative impacts of major events.

## Strategies for a Wide Range of Organizations

When project managers at DOTs and other organizations are developing transportation projects, presumably there are resources within their agencies to help them consider security aspects, or advise them who in the security community to contact. This section compliments such resources. It continues to build a vocabulary of concepts across a range of people who can help improve transportation security, and ideally will stimulate innovative ideas. While much of this report has been oriented to the public sector, these strategies also relate to the private sector, an important partner in security planning.

Some basic tools to be aware of are transportation security assessments, security planning exercises, and Continuity of Operations Planning (COOP). Descriptions of each follow.

Many public and private sector organizations conduct security **vulnerability assessments**. This may be initiated by the organization for its own use. State and federal agencies also lead them for priority locations and they are a condition for some grants. The assessment will typically include a facility security plan and review of the area around the facility, referred to as **buffer zone protection (BZP)**. Each state identifies locations for assessments, and there is a federal program for a smaller group of locations. Criteria include whether there have been threats to the location, its vulnerability, and the consequences of something happening there.

Beyond vulnerability assessments of specific locations, multi-agency **security exercises** are carried out at various levels and on various topics throughout the region. These include carrying out tabletop exercises and on-site mock exercises. FEMA runs the national training program; information is available at [www.fema.gov/prepared/train.shtm#1](http://www.fema.gov/prepared/train.shtm#1). In New Jersey, resources include the OHSP Training Bureau and NJLearn.

Many public and private agencies already have plans for emergencies. This may be referred to as **Continuity of Operation Plans (COOP)** or Continuity of Government (COG) plans. It is essential that these plans be maintained and practiced. A reference is *Continuity of Operations Planning Guidelines for Transportation Agencies* (TCRP Report 86/NCHRP Report 525, Volume 8. Washington DC: Transportation Research Board, 2005).

Two specific tools which can be downloaded from [www.trb.org](http://www.trb.org) are:

- ◆ *Costing Asset Protection: An All Hazards Guide for Transportation Agencies* (NCHRP Report 525, Volume 15. Washington DC: Transportation Research Board, 2009). This is a model for assessing the risks to a multimodal range of transportation assets using a consequence-based approach; and
- ◆ *Disruption Impact Estimating Tool—Transportation (DIETT): A Tool for Prioritizing High-Value Transportation Choke Points* (NCHRP Report 525, Volume 11. Washington DC: Transportation Research Board, 2006). This tool prioritizes locations based on direct and economic impacts of disrupting transportation at each location.

Some security activities can be incorporated into existing projects and programs. There are also a wide range of grant and assistance programs available to help improve transportation security. A summary of some DHS grants that may be of interest in the Delaware Valley is included as Appendix A.

Some strategies that may be considered in different types of projects are listed in Table 2, starting on the next page. There are many more that can be considered. Project managers are encouraged to work within their organizations and to follow up with appropriate additional sources. Depending on the issue, a source may be the county EOC or OEM, PA OHS or PEMA, or NJ OHSP.

Many of the recommendations in Table 2 draw on general resources and discussions in the security planning field. Some specific resources are referenced as a letter cited in the Sources list after the table. Also see Appendix E: Transportation Security Planning References.

Table 2: Sample of Transportation Security Strategies for Various Types of Projects

| Type of Project   | Sample of Strategies to Consider, if Appropriate   |
|---|--|
| All Types   | <p>Planning and coordinating to prepare for natural or manmade disasters at site-specific and regional levels in terms of physical and electronic infrastructure.</p> <p>Conducting vulnerability assessments and, if appropriate, participating in exercises. (a)</p> <p>Maintaining security during construction or maintenance.</p> <p>Enhancing communication between security planners and other project participants and regional entities.</p> <p>Providing signage and information for the public regarding any specifics of what to do in an emergency. (g)</p>   |
| Road Projects   | <p>Coordinating with security planners, which can include: preventing incidents by limiting access to sensitive areas, planning for redundancy with extra consideration of how to get emergency vehicles to priority sites, and considering evacuation needs and any role the facility might have in recovery efforts such as for freight movement. (a, b)</p> <p>Coordinating with ITS and operations planning, including how the facility would be used for the general public in an emergency. (g)</p> <p>Taking an all-hazards approach to planning for the facility.</p>  |
| Bus and Train Projects (including both passenger trains and freight trains) | <p>Considering a range of security issues in selecting infrastructure, such as rail cars or buses. (d)</p> <p>Continuing to maintain security at sensitive locations for passengers and for operations.</p> <p>Further training a wide range of staff to be ready for an incident on a vehicle or a major event, including the front-line staff who would be at stations and on vehicles. (c)</p> <p>Further coordinating planning of how to help move people and goods in the event of a regional emergency.</p>  |
| Bridges   | <p>Restricting public access to sensitive areas, such as by means of fencing. (a, e)</p> <p>Monitoring access, such as by protective lighting or cameras. (a)</p> <p>Designing for access by various emergency personnel.</p> <p>Coordinated site-specific and regional planning if the bridge may be used as a detour or for evacuation.</p>  |
| ITS and Operations  | <p>Safeguarding infrastructure in disasters, which can include planning for backup power for traffic signals.</p> <p>Integrating various ways to protect information in system (also known as <b>cyber-security</b>) and other recommended information technology security practices.</p> <p>Coordinating how transportation and communications infrastructure can be used in various types of emergencies (g). This may include overcoming matters of who paid for different elements of the ITS system.</p> <p>Participating in traffic management centers that can manage the flow of traffic on highways and provide a coordinated response for emergencies statewide, and training for their use in emergency management situations.</p> <p>Participating in ways to communicate transportation information in emergency situations. This can include how 511 traveler information systems can be used to broadcast information, and encouraging use of subscriber emergency systems and text alert systems that are sent to cell phones and other hand-held devices.</p> |

| Type of Project                   | Sample of Strategies to Consider, if Appropriate  |
|-----------------------------------|---|
| Bicycling and Walking Facilities  | <p>Addressing security as well as crime-prevention techniques, such as lighting and restricting access from paths or other facilities to sensitive infrastructure. (e)</p> <p>Addressing the role of walking or bicycling facilities in the event of a major evacuation. Research indicates that in a major event, such as experienced on 9/11, many people chose to walk even when distances were substantial. (f)</p> <p>Considering how to communicate closures before people have travelled a long way and/or safe directions to proceed in cases of major events. (f, g)</p> |
| Site Design and Buildings         | <p>Applying security elements of <b>Crime Prevention Through Environmental Design (CPTED)</b>, including site design and more usual features such as security lighting. (e)</p> <p>Coordinating with municipal or other security planning for natural or manmade events.</p> <p>Integrating the ability to communicate in an emergency in the design and engineering of sites. This includes how to leave the site (not just the building) and in what directions it may be safe to proceed. (f)</p>  |
| Land Use and Development Planning | <p>Including at least reference to security planning in master plans and other plans; it may be useful to include general contacts or references since this can be a confusing field.</p> <p>Coordinating with security planners on how staging and logistics would work in an emergency so long-term land use and transportation decisions can be coordinated with potential immediate transportation needs during an event.(a, b, d)</p>  |
| Environmental Planning            | <p>Considering manmade and natural event security planning is useful in designing parks and other open facilities, in addition to crime prevention planning. (e)</p> <p>Including hazard mitigation planning, such as preventing mud slides and other proactive approaches.</p> <p>Seeking opportunities for environmental planners and transportation planners to work together on minimizing environmental effects of events on the transportation network.</p>   |
| Economic Development Planning     | <p>In addition to usual planning for continuity at individual private or nonprofit organizations, considering continuity of broader matters such as transportation.</p> <p>Planning by business districts or similar organizations of many entities on how to deal with major events, specifically including transportation elements.</p>   |

Sources (also see Appendix E):

a. *Security 101: A Physical Security Primer for Transportation Agencies* [NCHRP Report 525, Volume 14] (Washington DC: Transportation Research Board, 2009)

b. *Integrating Freight Facilities and Operations with Community Goals* [NCHRP Synthesis 320] (Washington DC: Transportation Research Board, 2003)

c. *Safety Action Plan for the Delaware Valley* (Philadelphia, Pennsylvania: DVRPC, 2009) and *Security-Related Customer Communications and Training for Public Transportation Providers* [TCRP Report 86, Volume 5] (Washington DC: Transportation Research Board, 2004)

d. *Transit Security Update* [TCRP Synthesis 80] (Washington DC: Transportation Research Board, 2009)

e. *Using Crime Prevention Through Environmental Design in Problem-Solving* [US Department of Justice Problem-Oriented Guides for Police Problem-Solving Tools Series No. 8] (Madison: University of Wisconsin Law School Center for Problem-Oriented Policing, 2007)

f. *Managing Pedestrians During Evacuations of Metropolitan Areas* [FHWA-HOP-07-066] (FHWA, Washington DC, 2007)

g. *Communicating with the Public Using ATIS During Disasters: A Guide for Practitioners* [Report # FHWA-HOP-07-068] (FHWA, Washington DC, 2007)

# Appendices





# Appendix A: Available Grants

There are a variety of sources of funding for improving transportation security. This includes funding designated for security, and funding for related efforts that may include elements of security—for example the use of transportation funds for minor elements of a bridge project that also harden it (make it more secure). Funding comes from various levels of government, as well as from nongovernmental sources. Some of the DHS sources are summarized in this appendix to *Fitting the Pieces Together: Improving Transportation Security Planning in the Delaware Valley*.

DHS funds many programs that improve security. Transportation planners probably will want to start with the transportation-related grant programs. FEMA oversees distribution of these grants. TSA is involved in program management, for example, with risk score determinations. Each state has a **State Administrative Agency (SAA)**. In New Jersey it is NJ OHSP. In Pennsylvania it is PEMA. AMSC is responsible for the solicitation, evaluation, and selection of projects to be funded under the Port Security Grant Program. For more information, see the DHS website or contact the appropriate SAA. Information in this appendix is from the DHS website.

A few overall notes for DHS grants are:

- ◆ **Only certain agencies are eligible for certain grants.** For example, not every freight rail company is eligible for the Freight Rail Security Grant Program. See specific grant description for details;
- ◆ All DHS grants have a 36-month performance period;
- ◆ Some, but not all, programs require non-federal matching funds;
- ◆ Some grant programs are on an annual cycle while others are offered on other schedules; and
- ◆ Fiscal Year (FY) refers to federal fiscal year, which is October 1<sup>st</sup> through September 30<sup>th</sup>.

For many of the federal grant programs, the criteria are risk analysis of the location, and the feasibility and effectiveness of the proposed investments. Generally, security funding is moving toward a risk-based allocation approach. In New Jersey, in addition to level of risk, there is review of how the project may be funded, as the State also invests its own funds where there are gaps. NJ OHSP also reviews road information as part of creating a redundant and resilient transportation system that can handle emergencies.

The three relevant categories of DHS programs for this report are Homeland Security, Preparedness (formerly Infrastructure Protection), and Other.

## **Homeland Security Grant Program (HSGP)**

The HSGP includes five sub-programs. They are the State Homeland Security Program, Urban Areas Security Initiative (UASI), Operation Stonegarden, Metropolitan Medical Response System, and Citizen Corps Program. The one discussed in *Fitting the Pieces Together*, UASI, is described below.

### **Urban Areas Security Initiative (UASI)**

The UASI program focuses on enhancing regional preparedness in major metropolitan areas. In FY 2010 there are 54 Tier II areas, and ten highest risk Tier I areas that have access to a higher level of funding. This will be the first year that the Philadelphia area is in Tier I instead of Tier II. Philadelphia, Delaware, Chester, Montgomery, and Bucks counties, along with some related projects in the broader region had access to \$17,950,450 in FY 2009. In FY 2010 there will be access to \$23,335,845.

## **Preparedness (Non-Disaster Planning Grants)**

Some of the recurring grant programs that may be of interest to staff involved in improving transportation security in the Delaware Valley are listed below. These funds may be used for a variety of purposes, including operations (such as policing). Note that there are specific requirements about who may apply and how specific grants may be used. Anyone interested should seek additional information and work with appropriate partners.

### **Buffer Zone Protection Program (BZPP)**

The purpose of the 2010 BZPP is to help state and local governments protect national CI/KRs from terrorist attacks. The program supports the implementation of Buffer Zone Plans (BZPs) by providing the funding to buy equipment and support planning efforts.

The 2010 BZPP provides funding to increase the preparedness capabilities of jurisdictions responsible for the safety and security of communities surrounding high-priority pre-designated Tier 1 and Tier 2 CI/KR assets, including chemical facilities, financial institutions, nuclear and electric power plants, dams, stadiums, and other high-risk/high-consequence facilities, through allowable planning and equipment acquisition.

All BZPP sites have already been selected based on the risk of the individual sites themselves. The total national funding is \$48 million.

### **Freight Rail Security Grant Program (FRSGP)**

The 2010 FRSGP funds freight railroad carriers and owner/offerors of railroad cards to protect critical surface transportation infrastructure from acts of terrorism, major disasters, and other emergencies. For FY 2010, eligible applicants are Class I, II, and III freight railroad carriers that

transport **Rail Security-Sensitive Materials (RSSM)** and owners/offerors of railroad cars that transport **Toxic Inhalation Hazard (TIH)** materials. For the purposes of this grant program, “**offerors**” are entities that lease rail cars in order to ship materials poisonous by inhalation or TIH materials by railroad.

### **Intercity Bus Security Grant Program (IBSGP)**

The 2010 IBSGP provides funds to protect intercity bus systems and the traveling public from terrorism. It assists fixed route and charter bus services.

### **Port Security Grant Program (PSGP)**

The 2010 PSGP funds efforts to protect critical port infrastructure from terrorism. The Delaware Bay Port Area of New Jersey, Pennsylvania, and Delaware has a 2010 target allocation of \$15,949,462.

### **Transit Security Grant Program (TSGP)**

The 2010 TSGP funds efforts to protect critical surface transportation infrastructure and the traveling public from acts of terrorism, major disasters, and other emergencies. In the Philadelphia area, the 2010 target allocation is \$13,042,116. The eligible systems are NJ Transit, PennDOT, DRPA, SEPTA, and Delaware Transit Corporation.

### **Trucking Security Program (TSP)**

Note that in FY 2009 not enough applications were received; of the national allocation of \$7,772,000, under one-third was awarded according to the Frequently Asked Questions file at [www.fema.gov/government/grant/tsp/index.shtm](http://www.fema.gov/government/grant/tsp/index.shtm). FY 2010 information had not been posted online as of December, 2009.

The latest information available, which is for FY 2009, states TSP funding will be awarded to eligible applicants to implement security improvement measures and policies deemed valuable by DHS as indicated in the Security Action Items publication of June 26, 2008. These items are primarily focused on the purchase and installation or enhancement of equipment and systems related to tractor and trailer tracking systems. Additionally, the TSP will provide funding to develop a system for DHS to monitor, collect, and analyze tracking information; and develop plans to improve the effectiveness of transportation and distribution of supplies and commodities during catastrophic events.

## **Other Types of Grants**

### **Urban Areas Security Initiative Nonprofit Security Grant Program (UASI-NSGP)**

FY 2010 information had not been posted online as of December, 2009. The FY 2009 UASI NSGP provides funding support for target-hardening activities to nonprofit organizations that are at high risk of terrorist attack and are located within one of the specific UASI-eligible Urban Areas.

### **Emergency Management Performance Grants (EMPG)**

The purpose of the FY 2010 EMPG is to assist state and local governments in enhancing and sustaining all-hazards emergency management capabilities. In FY 2010, the allocation for New Jersey is \$8,041,432 and the allocation for Pennsylvania is \$10,456,211.

### **Interoperable Emergency Communications Grant Program (IECGP)**

The purpose of the FY 2010 IECGP is to improve interoperable emergency communications, including communications in response to natural disasters, acts of terrorism, and other manmade disasters. In FY 2010, the allocation for New Jersey is \$1,349,000 and the allocation for Pennsylvania is \$1,527,000.

### **Emergency Operations Center Grant Program (EOC)**

The EOC Grant Program is intended to improve emergency management and preparedness capabilities by supporting EOCs with a focus on addressing identified deficiencies and needs.

The FY 2010 EOC Grant Program will provide \$57,600,000 for construction or renovation of a state, local, or tribal government's principal EOC. Of this amount, \$47,442,500 in non-competitive funding has been appropriated for designated EOC projects throughout the nation. The remaining \$10,157,500 shall be allocated competitively to eligible state, local, or tribal government's principal EOCs.

## Appendix B: Security Planning at Other MPOs

In 2005, a study found that not enough is being done by MPOs nationally to meet the expectations of the federal regulations. The *Incorporating Security into the Transportation Planning Process* report concluded:

[S]ecurity has not yet been effectively incorporated into the transportation planning process of major state and metropolitan/local areas as it relates to transportation infrastructure, despite the availability of numerous technical resources available from federal agencies, as noted in the introduction to this report. Limited efforts have been made to include ITS-related items related to the highway mode and surveillance and monitoring equipment related to the public transit mode. However, the current status of security planning for transportation infrastructure at the state and metropolitan/local area level is undeveloped, because of confusion over:

- the definition of security;
- the distinction between security and safety;
- the recent nature of this issue;
- the indefinable and unexpected nature of terrorist threats;
- the absence of funding specifically dedicated for security-enhancement projects; and
- the perceived competition for funding from other critical transportation program and project needs.

Source: *Incorporating Security into the Transportation Planning Process* [NCHRP Report 525, Volume 3] (Washington DC: Transportation Research Board, 2005), p. 47

The above-referenced report used the following definition of security:

Protection from terrorist threats or actions due to acts of extreme violence resulting in significant loss of life, injury, and/or damage or destruction of facilities and infrastructure, whether or not these acts are intended to further political or social objectives. (p. 1)

Over the course of the report, the authors conclude that a definition focused on something with a low frequency, that is relatively unpredictable, and that is hard to measure progress against is part of the problem. They found that when the issue was reframed in terms of more imminent threats, such as hurricanes or fires, it became more relevant (p. 19 and p. 45). This seems to have been a widespread conclusion; in the years since this report was published in 2005 there has been a move toward coordinated all-hazard planning such as is in use by Pennsylvania and New Jersey.

Two broad recommendations of the report are addressing the lack of knowledge or use of available security planning resources, and further investigating how to better incorporate security

planning in the long-term planning processes done by the MPO—especially the TIP and long-range plan. These are addressed in *Fitting the Pieces Together*.

FHWA hosted a peer workshop of MPOs to discuss security planning in 2008. A recurring matter of concern was determining the role of MPOs in security planning. The discussion was summarized as follows:

Many felt that the role of the MPO is to create a forum for collaboration between agencies, but not to impose itself on already well-established security planning functions.... [I]t was suggested that the best place for an MPO to start was by documenting the existing infrastructure and the roles that other agencies are filling, and determining the “gaps” in the network. These gaps would then serve as a starting place for defining the role of the MPO.” (p. 7)

Other issues of common concern at the peer workshop were:

- ◆ Defining partners, for which a recommended action was that MPOs attend local meetings held by related organizations;
- ◆ Defining security – FHWA generally defines it as relating to an event that is beyond the ability of local authorities to handle and respond to. [This is in the report but was not substantiated in web searches;]
- ◆ Prioritizing security – A checkbox on a project application is likely to be inadequate as almost any project could qualify; priority routes or projects relating to high-probability emergency events may be a more credible approach;
- ◆ Security planning resources – MPOs can be valuable as a collaborative forum for sharing data and documents;
- ◆ Addressing needs of transit-dependent populations – This includes how to get emergency information to residents without access to the internet or telephone, and also to tourists and foreign visitors;
- ◆ Coordinating with other agencies – It is essential that MPOs partner with the public, elected officials, and emergency response agencies to facilitate the security planning process;
- ◆ Planning tools and technology – One element should be coordinating with ITS planning efforts already underway; and
- ◆ Response vs. recovery – MPOs may be most effective in the recovery side of emergencies, and can help with a cost-effective planning process that focuses on mobility rather than capacity. MPOs can encourage redundancy in systems to reduce the severity of impacts and speeds response and recovery. (pps. 7-9)

Source: “MPO Peer Workshop on Addressing Security Planning and Natural & Manmade Disasters” (FHWA, 2008, downloaded from [www.fhwa.dot.gov/planning/metro/secumpo.htm](http://www.fhwa.dot.gov/planning/metro/secumpo.htm) on 11/9/09)

In addition to the summaries in this appendix, see the section on Security Planning and MPOs in Appendix E: Transportation Security Planning References.

## Appendix C: Participating Agencies

This appendix lists who participated in developing *Fitting the Pieces Together*. Inclusion in this list reflects having been present at a discussion of the outline at the April 8, 2009 **Regional Safety Task Force (RSTF)** meeting or contributing since then (even if just agreeing to review material); it does not suggest endorsement.

The RSTF has been hosted by DVRPC since 2005. The RSTF brings together a multi-disciplinary group of professionals, including nontraditional participants, to build and maintain effective partnerships with the purpose of reducing the number of crashes and the resultant casualties in the Delaware Valley. The RSTF has been kept informed and has provided input to the development of this transportation security planning report in part because of overlap of its participants with the evolving transportation security planning contact list.

Contacts on DVRPC's transportation security planning contact list received the outline (although some have been added since that time) and draft report for review by e-mail. Contacts will be advised of future transportation security planning work conducted by DVRPC.

| Organization   | Web Site   | Representative(s)   |
|--|--|---|
| American Association of Retired People (AARP)                          | <a href="http://www.aarp.org">www.aarp.org</a>   | Mary Beth Dixon   |
| Burlington County Bridge Police  | <a href="http://www.bcbridges.org">www.bcbridges.org</a>   | Lt. Bruce Herbst  |
| Burlington County Engineer's Office                                    | <a href="http://www.co.burlington.nj.us/departments/engineers/index.htm">www.co.burlington.nj.us/departments/engineers/index.htm</a>             | Carol Ann Thomas  |
| Burlington County Office of Aging                                      | <a href="http://www.co.burlington.nj.us/departments/aging/index.htm">www.co.burlington.nj.us/departments/aging/index.htm</a>                     | Linda Cushing   |
| Camden County Prosecutor's Office                                      | <a href="http://www.camdencounty.com/government/offices/prosecutor/index.html">www.camdencounty.com/government/offices/prosecutor/index.html</a> | Fred Lang   |
| Chester County Council on Addictive Diseases (COAD)                    | <a href="http://www.coadgroup.com">www.coadgroup.com</a>   | Gary Chilutti   |
| Chester County Planning Commission                                     | <a href="http://www.chesco.org/planning">www.chesco.org/planning</a>   | Matthew Anderson  |
| Cross County Connection Transportation Management Association (CCCTMA) | <a href="http://www.driveless.com">www.driveless.com</a>   | Bill Ragozine   |
| CSX Corporation  | <a href="http://www.csx.com">www.csx.com</a>   | Dennis Sweeney  |
| Delaware County Planning Department                                    | <a href="http://www.co.delaware.pa.us/planning">www.co.delaware.pa.us/planning</a>   | Louis Hufnagle  |
| Delaware County Sheriff's Office                                       | <a href="http://www.co.delaware.pa.us/sheriff/index.html">www.co.delaware.pa.us/sheriff/index.html</a>   | Cpl. Brian Snyder   |
| Delaware River Port Authority (DRPA)                                   | <a href="http://www.drpa.org">www.drpa.org</a>   | Linda Hayes, James McQuilkin, Robert Only, Karl Ziemer, Sgt. Joe Zito |

| Organization  | Web Site   | Representative(s)   |
|---|--|---|
| Delaware Valley Regional Planning Commission (DVRPC)                      | <a href="http://www.dvrpc.org">www.dvrpc.org</a>   | Gastonia Anderson, Stacy Bartels, Jesse Buerk, Ted Dahlburg, Chris King, Laurie Matkowski, Roger Moog, Regina Moore, Kevin Murphy, Zoe Neaderland, Stan Platt, John Ward                    |
| DVRPC Goods Movement Task Force   | <a href="http://www.dvrpc.org/Freight/DVGMTF.htm">www.dvrpc.org/Freight/DVGMTF.htm</a>   | Kelvin MacKavanagh  |
| FHWA – New Jersey   | <a href="http://www.fhwa.dot.gov/njdiv">www.fhwa.dot.gov/njdiv</a>   | Ekaraj Phomsavath, Caroline Trueman   |
| FHWA – Pennsylvania   | <a href="http://www.fhwa.dot.gov/padiv">www.fhwa.dot.gov/padiv</a>   | Mike Castellano   |
| Gloucester Township Police  | <a href="http://www.glotwp.com/police">www.glotwp.com/police</a>   | Lt. Edward Bryant   |
| Greater Valley Forge Transportation Management Association (GVFTMA)       | <a href="http://www.gvftma.com">www.gvftma.com</a>   | Shayne Trimbell   |
| Greenwich Terminals   | <a href="http://www.holtlogistics.com">www.holtlogistics.com</a>   | Kurt Ferry  |
| John Balog Transportation Security Consulting Services                    | None available at time of publication  | John Balog  |
| Maritime Exchange for the Delaware River and Bay                          | <a href="http://www.maritimedelriv.com">www.maritimedelriv.com</a>   | Lisa Hember   |
| Montgomery County Planning Commission                                     | <a href="http://www.planning.montcopa.org">www.planning.montcopa.org</a>   | Wesley Ratko  |
| New Jersey Department of Transportation (NJDOT)                           | <a href="http://www.state.nj.us/transportation">www.state.nj.us/transportation</a>   | William Beans, Dave Bowlby  |
| New Jersey Division of Highway Traffic Safety (NJDOTS)                    | <a href="http://www.state.nj.us/lps/hts/index.html">www.state.nj.us/lps/hts/index.html</a>   | Charles Feggans, Violet Marrero, Ray Reeve (co-chair of RSTF)   |
| New Jersey Motor Vehicle Commission                                       | <a href="http://www.state.nj.us/mvc">www.state.nj.us/mvc</a>   | James Clifford  |
| New Jersey Office of Homeland Security & Preparedness (NJ OHSP) and NJDOT | <a href="http://www.state.nj.us/njhomelandsecurity">www.state.nj.us/njhomelandsecurity</a>   | Noreen Cardinali (Critical Infrastructure Protection Bureau-Office of Transportation Security), Susan Winter (Planning & Project Management Bureau)   |
| New Jersey State Police   | <a href="http://www.njsp.org">www.njsp.org</a>   | Mike Augustyniak, Lt. Debra Faiello, Lt. Kevin Fowler, Lt. Stephen Hoptay, SFC Frank Klitchko, Lt. Nick Massa, Major Dennis McNulty, Lt. Lance Oram, Sgt. Aaron Portee, Sgt. Greg Williams, |
| New Jersey Transit Police   | <a href="http://www.njtransit.com/tm/tm_servlet.srv?hdnPageAction=PoliceTo">www.njtransit.com/tm/tm_servlet.srv?hdnPageAction=PoliceTo</a>                               | Robert Gatchell   |
| Pennsylvania Department of Transportation (PennDOT)                       | <a href="http://www.dot.state.pa.us">www.dot.state.pa.us</a>   | Lou Belmonte, Larry Bucci (co-chair of RSTF), Devang Patel  |
| Pennsylvania Emergency Management Agency (PEMA)                           | <a href="http://www.portal.state.pa.us/portal/server.pt/community/pema_home/4463">www.portal.state.pa.us/portal/server.pt/community/pema_home/4463</a>                   | Anthony Camillocci  |
| Pennsylvania Office of Homeland Security (PA OHS)                         | <a href="http://www.portal.state.pa.us/portal/server.pt/community/homeland_security/14251">www.portal.state.pa.us/portal/server.pt/community/homeland_security/14251</a> | Steven Hoffman  |
| Pennsylvania State Police   | <a href="http://www.psp.state.pa.us">www.psp.state.pa.us</a>   | Sgt. Wayne Mason, Sgt. Chris Paris  |

| Organization   | Web Site   | Representative(s)   |
|--|--|---|
| Philadelphia Office of Emergency Management  | <a href="http://oem.readyphiladelphia.org">oem.readyphiladelphia.org</a>             | Liam O'Keefe, MaryAnn Tierney                                     |
| Philadelphia Regional Port Authority   | <a href="http://www.philaport.com">www.philaport.com</a>                             | Nicholas Walsh  |
| Philadelphia Sheriff's Office  | <a href="http://www.phillysheriff.com">www.phillysheriff.com</a>                     | Joe Evans   |
| Philadelphia Streets Department  | <a href="http://www.phila.gov/streets">www.phila.gov/streets</a>                     | Richard Montanez, Jabulani Moyo, Patrice Nuble                    |
| Port Authority Transit Corporation (PATCO)   | <a href="http://www.ridepatco.org">www.ridepatco.org</a>                             | Dave Fullerton  |
| South Jersey Transportation Planning Organization (SJTPO)  | <a href="http://www.sjtpo.org">www.sjtpo.org</a>                                     | Bill Schiavi  |
| Southeastern Pennsylvania Regional Task Force (SEPA RTF)   | Web site address changing; please look online  | Evalyn Fisher; Jennifer Duval, Stan Niemczak (Jacobs Engineering) |
| Transportation Safety Resource Center of the Center for Advanced Infrastructure and Transportation (CAIT) at Rutgers | <a href="http://cait.rutgers.edu/tsrc">cait.rutgers.edu/tsrc</a>                     | Sarah Weissman  |
| US Coast Guard Sector Delaware Bay   | <a href="http://www.uscg.mil/d5/sectDelawarebay">www.uscg.mil/d5/sectDelawarebay</a> | Robert Ward   |

In addition to the people with whom this report has been discussed, a wider array of potential participants were contacted. In some cases these organizations indicated they plan to participate in the future, and in other cases e-mails were sent to people based on recommendations by others and there was no further interaction. The following organizations were provided opportunity to participate in DVRPC's transportation security planning efforts:

- ◆ American Automobile Association (AAA) - Mid-Atlantic
- ◆ American Red Cross Southeastern Pennsylvania Chapter
- ◆ Amtrak (Philadelphia-Wilmington) - Police
- ◆ Atlantic City Expressway - Operations Center
- ◆ Bucks County Emergency Management Agency
- ◆ Bucks County Planning Commission
- ◆ Burlington County Community Emergency Response Team
- ◆ Burlington County Department of Public Safety Services
- ◆ Camden County Community Response Team
- ◆ Camden County Division of Highway Traffic Safety
- ◆ Camden County Office of Emergency Management
- ◆ Chester County Department of Emergency Services
- ◆ Conrail Rail Operations - EOC
- ◆ Countermeasures Assessment & Security Experts
- ◆ Delaware County Local Emergency Planning Committee
- ◆ Delaware River Joint Toll Bridge Commission
- ◆ DVRPC Regional Citizen's Committee (RCC)
- ◆ Federal Motor Carrier Safety Administration

- ◆ Gloucester County Community Emergency Response Team
- ◆ Gloucester County Emergency Medical Services
- ◆ Gloucester County Emergency Response
- ◆ Gloucester County Office of Emergency Management
- ◆ Institute for Strategic Threat Analysis & Response
- ◆ James Lee Witt Associates
- ◆ Mercer County Engineering
- ◆ Mercer County Office of Emergency Management
- ◆ Mercer County Planning Division
- ◆ Montgomery County 911 Center
- ◆ Montgomery County Office of Emergency Preparedness
- ◆ New Jersey Motor Truck Association
- ◆ New Jersey Turnpike Authority
- ◆ Philadelphia City Planning Commission
- ◆ Philadelphia Police - Traffic Unit
- ◆ Philadelphia Public Health Management Corp.
- ◆ Philadelphia School District
- ◆ SEPTA
- ◆ Voorhees Transportation Center

# Appendix D: Acronyms and Terms

Acronyms and terms relevant to transportation security planning in the Delaware Valley are defined in this appendix of *Fitting the Pieces Together*. This appendix is oriented to professionals in various fields incorporating transportation security planning into their work; it is not intended to cover all the acronyms that security planners use.

| Acronym or Term   | Definition   |
|---|--|
| 511 Traveler Information  | Real-time information on transportation and traffic conditions available by phone or web by many states, including Pennsylvania and New Jersey   |
| All-Hazards Approach  | A unified approach to dealing with all types of natural or manmade major emergencies   |
| AMSC  | Area Maritime Security Committee (for the Delaware Bay in this report)   |
| BZP   | Buffer Zone Protection   |
| CI/KR   | Critical Infrastructure and Key Resources  |
| COG   | Continuity of Government   |
| COI   | Community of Interest, such as the groupings used by the HSIN  |
| COOP  | Continuity of Operation Plans  |
| CPTED   | Crime Prevention Through Environmental Design  |
| Cyber-security  | Protection of cyberspace and cyber infrastructure so that electronic and physical resources are not improperly accessed or damaged, also building the system that protects these assets, as is done by the National Cyber Security Division of DHS |
| Delaware Valley Emergency Management and Homeland Security Coordination Council | A forum for emergency management and homeland security officials from the Philadelphia-Camden-Wilmington Metropolitan Statistical Area   |
| DHS   | US Department of Homeland Security   |
| DOT   | Department of Transportation   |
| DVIC  | Delaware Valley Intelligence Center (under development)  |
| DVRPC   | Delaware Valley Regional Planning Commission – MPO for the nine-county bi-state Philadelphia metropolitan region   |
| EMS   | Emergency Medical Services   |
| EOC   | Emergency Operations Center  |
| EOP   | Emergency Operations Plan – In New Jersey, every municipality is required to prepare an EOP that is coordinated through the counties into the State version.   |
| ESF   | Emergency Support Function annexes – These are groups of federal agencies based on subject-related categories with relationships and roles defined in the NRF.   |
| FAA   | Federal Aviation Administration - A division of the USDOT focused on air travel  |
| FEMA  | Federal Emergency Management Agency - An agency within DHS   |
| FHWA  | Federal Highway Administration – A division of the USDOT focused on roadways   |
| FRA   | Federal Railroad Administration - A division of the USDOT focused on railroads   |
| FTA   | Federal Transit Administration - A division of the USDOT focused on public transit   |
| GAO   | The US Government Accountability Office is an independent, nonpartisan agency that works for Congress  |
| HSIN  | Homeland Security Information Network – A platform to facilitate information sharing and collaboration between federal, state, local, tribal, private sector, and international partners   |
| I-95 Corridor Travel Time Information   | A project to provide real-time traffic and other transportation information about the broad I-95 travel corridor from Maine to Florida   |

| Acronym or Term                          | Definition   |
|--|--|
| iDRuM                                    | Interactive Detour Route Mapping   |
| Incident Management                      | Range of strategies to reduce congestion of the transportation network due to non-recurring events such as crashes or inclement weather  |
| Incident Management Task Forces          | Multi-disciplinary task forces to improve incident management, usually in major travel corridors, through coordination and cooperation among emergency responders  |
| ISACs                                    | Information Sharing and Analysis Centers   |
| ITS                                      | Intelligent Transportation Systems – This broad field deals with use of technology to maintain and improve the movement of people and goods in the transportation system.  |
| Long-Range Plan                          | The 20-year plan developed by each MPO for its metropolitan area that includes a financially constrained list of major projects. The current version of this regularly updated plan in the Delaware Valley is <i>Connections</i> which covers the time period to 2035.     |
| MPO                                      | Metropolitan Planning Organization – MPOs coordinate, plan, and program the spending of federal transportation dollars in urbanized areas. All the involved partners work in a continuing, cooperative, comprehensive manner in keeping with federal laws and regulations. |
| National Planning Scenarios              | The <i>National Preparedness Guidelines</i> contains 15 scenarios that form the basis for coordinated federal planning, training, exercises, and grant investments.  |
| National Preparedness Vision             | The <i>National Preparedness Guidelines</i> provides a concise statement of the core preparedness goal for the United States.  |
| NCHRP                                    | National Cooperative Highway Research Program of the TRB, a coordinated project of American Association of State Highway and Transportation Officials (AASHTO) and FHWA  |
| <i>NIMS</i>                              | <i>National Incident Management System</i>   |
| <i>NIPP</i>                              | <i>National Infrastructure Protection Plan</i>   |
| NJ Alert                                 | A New Jersey service that provides emergency alerts online, or by electronic alerts to cell phones or e-mail addresses to anyone who registers, available through <a href="http://www.state.nj.us/njoem">www.state.nj.us/njoem</a>   |
| NJ OEM                                   | New Jersey Office of Emergency Management – The agency responsible for response and rebuilding   |
| NJ OHSP                                  | New Jersey Office of Homeland Security and Preparedness – The agency responsible for oversight of counter-terrorism and preparedness efforts   |
| NRF                                      | <i>National Response Framework</i>   |
| OEM                                      | Office of Emergency Management   |
| Offerors                                 | In the context of this report, an entity that leases rail cars to transport freight  |
| PA OHS                                   | Pennsylvania Office of Homeland Security – The agency responsible for protection in major events   |
| PA OPRS                                  | Pennsylvania Office of Public Safety Radio Services (Pennsylvania)   |
| PARTSWG                                  | Philadelphia Area Regional Transit Security Working Group  |
| PEMA                                     | Pennsylvania Emergency Management Agency - The agency that provides oversight and governance for major events  |
| Philadelphia OEM                         | Philadelphia Office of Emergency Management within the City of Philadelphia Office of the Managing Director  |
| Public and Private Sector Working Groups | Working groups focused on addressing CI/KR sectors; in New Jersey these are organized by NJ OHSP   |

| Acronym or Term  | Definition  |
|--|---|
| Public Safety Interoperable Communication Project              | Project to improve emergency communications within Philadelphia and surrounding counties  |
| ReadyNotifyPA  | A service that shares information among first responders, emergency managers and key government officials in the five southeastern Pennsylvania counties and also Gloucester County, New Jersey. It also provides public information through <a href="http://www.readynotifypa.org">www.readynotifypa.org</a> . |
| Redundant  | In the transportation context, a network with more than one way for people and goods to get from one place to another. This is important and valuable in terms of creating a network that can deal with events that close or slow one route. Also see Resilient.  |
| Resilient  | In the transportation context, this concept includes how quickly a transportation network can adapt to changing circumstances and return to its normal state of operation. Also see Redundant.  |
| RIMIS  | Regional Integrated Multi-Modal Information Sharing – Web-based information exchange network for the Delaware Valley  |
| ROIC   | Regional Operations and Information Center – In the Delaware Valley this usually refers to the New Jersey State Police ROIC and fusion center, which serves as the foundation for the State’s homeland security, crime fighting, and emergency response efforts.  |
| RSSM   | Rail Security-Sensitive Materials   |
| RSTF   | Regional Safety Task Force, staffed by DVRPC  |
| SAA  | State Administrative Agency (for DHS grants)  |
| SAFETEA-LU   | Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users, the 2005 federal transportation act   |
| SBU  | Sensitive But Unclassified information, such as that distributed through the HSIN   |
| SECOM-Net  | Southeast Communications Net, a four-state, 12 county dedicated, secure microwave system used among EOCs and others   |
| Security Exercises   | Opportunities to experience, evaluate, and improve response to events in tabletop or on-the-ground mock scenarios   |
| SEPA RTF   | Southeastern Pennsylvania Regional Task Force   |
| Sheltering-in-Place  | In some cases, the most effective approach to protecting populations is to help people stay where they are while taking steps to increase safety, and in other cases this is part of phasing an evacuation.   |
| <i>Southeastern Pennsylvania Emergency Transportation Plan</i> | A plan exploring county and/or regional evacuation planning prepared by SEPA RTF  |
| SSP  | Sector-Specific Plan, a plan for one of the 18 sectors of infrastructure designated by the <i>NIPP</i>  |
| StarNET  | Pennsylvania Statewide Radio Network, developed by the PA OPRS  |
| STMC   | New Jersey Statewide Transportation Management Center   |
| Target Capabilities List                                       | The <i>National Preparedness Guidelines</i> defines 37 specific capabilities that communities, the private sector, and all levels of government should collectively possess in order to respond effectively to disasters.   |
| TCRB   | Cooperative Transit Research Program a coordinated project of TRB, FTA, and the Transit Development Corporation established by the American Public Transportation Association (APTA)  |
| TIH  | Toxic Inhalation Hazard   |
| TIP  | Transportation Improvement Program – The four-year prioritized listing of transportation projects for federal funding developed by each MPO for its metropolitan area, and regularly updated  |

| Acronym or Term                  | Definition   |
|----------------------------------|--|
| Traffic Operations               | This broad field generally uses data to help keep people and goods moving, often through relatively low-cost strategies such as timing of traffic signals, or more ITS-related approaches such as providing information to travelers that helps them make efficient decisions. |
| Transportation Security Planning | The range of planning approaches to reduce the negative impacts to our transportation system from major natural or manmade events  |
| TRB                              | Transportation Research Board (TRB) of the National Academies  |
| TSA                              | Transportation Security Administration of DHS  |
| UASI                             | Urban Area Security Initiative - FEMA grant program to enhance regional preparedness capabilities in the highest risk urban areas. The Philadelphia metropolitan area qualifies as a UASI area, as does the northern part of New Jersey.                                       |
| Universal Task List              | The <i>National Preparedness Guidelines</i> contains a menu of tasks that support development of essential capabilities among organizations at all levels; they are developed from the National Planning Scenarios.  |
| Vulnerability Assessment         | A process for identifying and prioritizing security vulnerabilities in a site or system  |



# Appendix E: Transportation Security Planning References

Various transportation security planning references are listed in this appendix to help readers of *Fitting the Pieces Together*. It is not an exhaustive list, but does include many of the most recent relevant resources available at the time of publication. In keeping with this approach, references are in date order, most recent first. They are sorted into the following categories:

- ◆ DHS Documents
- ◆ General Security Planning
- ◆ Transit and Freight Rail Security Planning
- ◆ Highway Security Planning
- ◆ Evacuation Planning
- ◆ Delaware Valley Safety and Security Planning
- ◆ Security Planning and MPOs

Internet addresses are provided in this appendix for access to documents or to check for more recent publications. They are listed with the publication, except for web sites that provide many publications. These frequently cited web sites are:

- ◆ Transportation Research Board (TRB) of the National Academies - [pubsindex.trb.org/index.aspx](http://pubsindex.trb.org/index.aspx)
- ◆ US Department of Homeland Security (DHS) - [www.dhs.gov/files/publications/prepresrecovery.shtm](http://www.dhs.gov/files/publications/prepresrecovery.shtm).
- ◆ US Government Accountability Office (GAO) - [www.gao.gov/docsearch/featured/index.html](http://www.gao.gov/docsearch/featured/index.html)

## **DHS Documents**

National Infrastructure Protection Plan (Washington DC: DHS, 2009)

National Incident Management System (Washington DC: DHS, 2008)

*National Response Framework*, including Emergency Support Function Annexes (Washington DC: DHS, 2008) [www.fema.gov/emergency/nrf](http://www.fema.gov/emergency/nrf)

*Homeland Security Strategic Planning: Mission Area Analysis* (Washington, DC: Homeland Security Institute, 2007)  
[www.homelandsecurity.org/hsireports/MAARreportFinal28Mar07public.pdf](http://www.homelandsecurity.org/hsireports/MAARreportFinal28Mar07public.pdf)

National Preparedness Guidelines (Washington DC: DHS, 2007)

National Strategy for Homeland Security (Washington DC: DHS, 2007)

Transportation Systems Critical Infrastructure and Key Resources Sector-Specific Plan, Input to the National Infrastructure Protection Plan (Washington DC: DHS, 2007)

## **General Security Planning**

“Infrastructure Resiliency: Do We Have the Focus Right?” (Bob Prieto, Alexandria, VA: The Infrastructure Security Partnership, 2009)

[www.tisp.org/index.cfm?pid=10261&&stCode=live&preview=yes&cdid=11838](http://www.tisp.org/index.cfm?pid=10261&&stCode=live&preview=yes&cdid=11838) on 11/17/09

*Security 101: A Physical Security Primer for Transportation Agencies* [NCHRP Report 525, Volume 14] (Washington DC: Transportation Research Board, 2009)

*Costing Asset Protection: An All Hazards Guide for Transportation Agencies* [NCHRP Report 525, Volume 15] (Washington DC: Transportation Research Board, 2009)

*Communicating With the Public Using ATIS During Disasters: A Guide for Practitioners*

[Publication #FHWA-HOP-07-068] (Washington, DC: FHWA, 2007)

[ops.fhwa.dot.gov/publications/atis/index.htm](http://ops.fhwa.dot.gov/publications/atis/index.htm)

*Using Crime Prevention Through Environmental Design in Problem-Solving* [US Department of Justice Problem-Oriented Guides for Police Problem-Solving Tools Series No. 8] (Madison: University of Wisconsin Law School Center for Problem-Oriented Policing, 2007)

[www.cops.usdoj.gov](http://www.cops.usdoj.gov) or [www.popcenter.org](http://www.popcenter.org)

Disruption Impact Estimating Tool—Transportation (DIETT): A Tool for Prioritizing High-Value Transportation Choke Points [NCHRP Report 525, Volume 11] (Washington DC: Transportation Research Board, 2006)

“Transport Network Vulnerability - Which Metrics Should We Use?” (Jan Husdal, Molde, Norway: Molde Research Institute, 2006) [www.husdal.com/2006/05/16/transport-network-vulnerability-which-metrics-should-we-use](http://www.husdal.com/2006/05/16/transport-network-vulnerability-which-metrics-should-we-use)

*Continuity of Operations (COOP) Planning Guidelines for Transportation Agencies* [TCRP Report 86/NCHRP Report 525, Volume 8] (Washington DC: Transportation Research Board, 2005)

*Integrating Freight Facilities and Operations with Community Goals* [NCHRP Synthesis 320] (Washington DC: Transportation Research Board, 2003)

“Hazard and Security Activities of the Transportation Research Board: An All Hazards Context for Coordinated, All Modes, Security-Related Research” (Washington DC: Transportation Research

Board, PowerPoint file updated monthly and posted at  
[onlinepubs.trb.org/onlinepubs/dva/SecurityActivities.pdf](http://onlinepubs.trb.org/onlinepubs/dva/SecurityActivities.pdf))

## **Transit and Freight Rail Security Planning**

*Transportation Security: Key Actions Have Been Taken to Enhance Mass Transit and Passenger Rail Security, but Opportunities Exist to Strengthen Federal Strategy and Programs* [GAO Report 09-678] (Washington DC: GAO, June 2009)

*Freight Rail Security: Actions Have Been Taken to Enhance Security, but the Federal Strategy Can Be Strengthened and Security Efforts Better Monitored* [GAO Report 09-243] (Washington DC: GAO, April 2009). [www.gao.gov/docsearch/featured/index.html](http://www.gao.gov/docsearch/featured/index.html)

*Transit Security Update* [TCRP Synthesis 80] (Washington DC: Transportation Research Board, 2009)

*Security-Related Customer Communications and Training for Public Transportation Providers* [TCRP Report 86, Volume 5] (Washington DC: Transportation Research Board, 2004)

## **Highway Security Planning**

*Highway Infrastructure: Federal Efforts to Strengthen Security Should be Better Coordinated and Targeted on the Nation's Most Critical Highway Infrastructure* [GAO Report 09-57] (Washington DC: GAO, January 2009)

*Simplified Guide to the Incident Command System for Transportation Professionals* [FHWA Publication # FHWA-HOP-06-004] (Washington, DC: FHWA, 2006)  
[ops.fhwa.dot.gov/publications/ics\\_guide](http://ops.fhwa.dot.gov/publications/ics_guide)

*A Self-Study Course on Terrorism-Related Risk Management of Highway Infrastructure* [NCHRP Report 525, Volume 4] (Washington, DC: Transportation Research Board, 2005)

## **Evacuation Planning**

*Good Practices in Transportation Evacuation Preparedness and Response* [Publication #FHWA-HOP-09-040] (Washington, DC: FHWA, 2009)  
[ops.fhwa.dot.gov/publications/fhwahop09040/index.htm](http://ops.fhwa.dot.gov/publications/fhwahop09040/index.htm)

*Transportation's Role in Emergency Evacuation and Reentry* [NCHRP Synthesis 392] (Washington DC: Transportation Research Board, 2009)

*Managing Pedestrians During Evacuation of Metropolitan Areas* [Publication #FHWA-HOP-07-066] (Washington, DC: FHWA, 2007) [ops.fhwa.dot.gov/publications/pedevac/index.htm](http://ops.fhwa.dot.gov/publications/pedevac/index.htm)

*Routes to Effective Evacuation Planning Primer: Using Highways for No-Notice Evacuations* [Publication #FHWA-HOP-08-003] (Washington, DC: FHWA, 2007)  
[ops.fhwa.dot.gov/publications/evac\\_primer\\_nn/index.htm](http://ops.fhwa.dot.gov/publications/evac_primer_nn/index.htm)

*Routes to Effective Evacuation Planning Primer: Using Highways During Evacuation Operations for Events with Advance Notice* [Publication #FHWA-HOP-06-109] (Washington, DC: FHWA, 2006) [ops.fhwa.dot.gov/publications/evac\\_primer/primer.pdf](http://ops.fhwa.dot.gov/publications/evac_primer/primer.pdf)

## **Delaware Valley Safety and Security Planning**

“Creating an Emergency Transportation Plan for Southeastern Pennsylvania in the Absence of a Regional Government Structure” (Jennifer Duval and Stanley Niemczak, Washington DC: presented at ITS America Conference, 2009)

*Safety Action Plan for the Delaware Valley* [Publication #09032] (Philadelphia: DVRPC, 2009)  
[www.dvrpc.org/asp/pubs/publicationabstract.asp?pub\\_id=09032](http://www.dvrpc.org/asp/pubs/publicationabstract.asp?pub_id=09032)

## **Security Planning and MPOs**

*Streamlining Cross-linking Transportation and Evacuation Planning: A Resource Guide* [Catalog #09-01] (Washington DC: FHWA, 2009)  
[narc.org/uploads/transportationandevacuationresourceguide\\_final.pdf](http://narc.org/uploads/transportationandevacuationresourceguide_final.pdf)

“MPO Peer Workshop on Addressing Security Planning and Natural & Manmade Disasters” (Washington DC: FHWA, 2008) [www.fhwa.dot.gov/planning/metro/secumpo.htm](http://www.fhwa.dot.gov/planning/metro/secumpo.htm)

*Incorporating Security into the Transportation Planning Process* [NCHRP Report 525, Volume 3] (Washington DC: Transportation Research Board, 2005)

Effective Regional Coordination Can Enhance Emergency Preparedness [GAO Report 04-1009] (Washington DC: GAO, September 2004)

“SAFETEA-LU Planning: Illustrative Examples” (Washington DC: FHWA, no date)  
[www.fhwa.dot.gov/Planning/metro/sftluexamp.htm#a2](http://www.fhwa.dot.gov/Planning/metro/sftluexamp.htm#a2)

“The Role of the Metropolitan Planning Organization (MPO) in Preparing for Security Incidents and Transportation System Response” (Michael Meyer, Atlanta: Georgia Institute of Technology, no date) [www.planning.dot.gov/documents/securitypaper.htm](http://www.planning.dot.gov/documents/securitypaper.htm)



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Key Words: Transportation security planning, all-hazards, terrorism, natural disaster, emergency, evacuation, multimodal, regional, coordination

Abstract: Transportation security planning is essential for the Delaware Valley to prevent, prepare for, expedite response to, and aid in the recovery from major events. The all-hazards approach prepares for any of a range of major natural or manmade events.

This report provides an overview of transportation security planning in the region to facilitate communication and coordination across disciplines. It is relevant for a wide range of professionals in transportation security, operations, and planning; emergency management; emergency response; land use planning and development, and other fields at a variety of geographic levels. This report focuses on how different disciplines can better cooperate, and on the role of DVRPC in this field. Appendices include a summary of grants available and reference list.

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