

## 2.4 Multimodal Transportation Security

### Overview

A strong focus on improving transportation security for people and goods is included in the 2040 LRTP. Good security planning enhances the ability of emergency services to respond to natural disasters and man-made events and requires communication between local, regional, state, and federal agencies. Some of the most common natural events in Erie County are heavy snow and ice that result in the closure of roadways throughout the region. Frequent man-made events include crashes that close roadways and require detours. Since the September 11th terrorism events, there has also been an increased focus on planning and preparation for less frequent but potentially more harmful intentional human acts. Being prepared to handle both the typical, foreseen events, and the unlikely but highly disruptive and harmful acts of terrorism is a key to successful operations and management of the transportation system.

The impacts of these events on the transportation network have the potential to threaten the lives and well being of residents. For example, the recent power outages in San Diego caused severe congestion when most of the region's traffic signals lost power during the afternoon rush hour. Another example of the need for transportation security planning is the "Valentine's Day Snowstorm" that blocked 150 miles of I-78, I-80, and I-80 for days, leaving hundreds of motorists stranded in freezing conditions. Neither event was anticipated, but both highlight the need for good planning and established communication between local, regional, state, and national emergency response partners, as well as an improved system of disseminating information to the public.

With respect to such issues, and based on the specific needs and concerns identified for Erie County, the 2040 LRTP aimed to plan for and prioritize multimodal transportation security improvements by assessing the following:

- Interstate Emergency Detours
- Emergency Response
- Evacuation Planning
- Hazard Mitigation Planning
- Homeland Security

*Within the Erie LRTP, Multimodal Transportation Security overlaps with Federal Planning Factor #3: "Increase Security for transportation system users."*

*At the state level, a focus on safety is inherent in the PA Mobility Plan Goal 1: "Move People Safely and Securely".*



Over the past 20 years, infrastructure and roadway improvements to the interstate emergency detour routes have been incorporated onto Erie County's TIP and implemented with such success that currently only one notable physical restriction remains – a height-restricted bridge underpass along US 6N in Mill Village – and improvements to that location are already planned.



Erie County is one of the few counties in Pennsylvania with an international border, which further emphasizes the need for strong security planning for people and goods.



## ***Baseline Perspectives***

The key agencies involved in Erie County's transportation security include: US Border Patrol, Pennsylvania State Police, local police and fire departments, the Port of Erie, County Emergency Management Agency, Pennsylvania Emergency Management Agency, County Department of Public Safety, and PennDOT.

## **Interstate Emergency Detours**

When crashes or other unexpected incidents occur, accommodating or detouring traffic quickly becomes a critical component of incident management. This is especially true along the county's interstate system where traffic and heavy truck volumes are much higher, where controlled interchange access does not always yield a quick or convenient detour, and where long queues or stoppages along the interstates can greatly increase the risk for secondary crashes to occur. Detouring interstate traffic and heavy truck volumes onto lesser state roads, along busy arterials, or through communities can also be a challenge to accomplish safely and efficiently.

For these reasons, PennDOT and Erie County's public safety agencies have historically placed great emphasis on the proactive establishment and maintenance of color-coded emergency detours for I 79, I 90, and I 86. Their planning has successfully included the development and implementation of infrastructure and roadway improvements, detour maps and manuals, annual coordination meetings, installation of key Intelligent Transportation Systems (ITS) elements such as closed circuit TV cameras and dynamic message signs, emergency sign trailers to aid rapid response, construction of a traffic management center at PennDOT District 1-0 that provides coordinated regional operations with the rest of Western Pennsylvania to ensure 24-hour a day monitoring of the region's ITS elements. A future focus on further improving select intersections, inter-agency communication, motorist information, or operational efficiencies along the detour routes may include:

- Continued infrastructure improvements at key locations.
- Improved traffic signal coordination along priority corridors, including "detour-scenario" signal timing plans
- Expanded ITS capabilities such as dynamic message signs (DMS) or closed-circuit television camera (CCTV) monitoring along the interstates and other key corridors

- Ongoing cooperation between PennDOT and public safety related agencies
- Monitoring and evaluation of changes or special needs related to heavy truck traffic and incident potential

### Emergency Response

Regardless of the specific emergency responder, the reason they are called out, or the scene to which they are traveling, all parties involved are better off when they arrive sooner. Therefore, any infrastructure or roadway improvement that reduces emergency response time can be especially meaningful beyond its benefit to reducing traffic congestion. These benefits can occur with:

- General transportation improvements by way of the congestion, delay, or travel time decreases that accompany interchange, intersection, or corridor-based projects.
- More focused efforts such as coordinated traffic signal improvements, expansion of ITS capabilities like DMS or CCTV monitoring, or special event planning and related incident management efforts.
- Specific efforts such as the maintenance, upgrade, or expansion of emergency vehicle preemption systems through any of the county’s existing signalized intersections.

During outreach and coordination for the 2040 LRTP and the review of the Regional Operations Plan, notable concerns were expressed with regard to the existing emergency vehicle preemption system that is in place at approximately 80% of traffic signals within Erie County. Of the existing signals with preemption technology installed, 155 traffic signals (55% of the installations) have preemption equipment in a state of disrepair which needs maintenance, upgrade, or replacement to function properly. The existing system is a radio-based system that has been in place since the 1960’s and relies on vacuum tube technology. Existing preemption options include: Global Positioning System (GPS) based, optical based, radio based, and audible systems. Of these systems, optical and audible systems are the most commonly installed systems in the country. All systems have benefits and drawbacks that should be considered when the existing system is upgraded in the future. County and municipal officials should develop a plan for the installation and maintenance of an upgraded preemption system.

### Evacuation Planning

Title 35 requires each City, Township, and Borough to have an emergency management program. In addition entities that deal with Extremely Hazardous Substances (EHS), dam operators, hospitals, schools, nursing homes must also have emergency and evacuation plans.

Enhancements to the region’s evacuation and transportation security planning could include improved coordination with transit in evacuation planning to provide mass movement to pre-determined emergency shelters. Emergency planning could also be enhanced by including disaster planning for scenarios related to railroad incidents or large special events in the port area that may require road closures and diversion routes similar to PennDOT’s color-coded interstate detours.

*The success of the plan in improving multimodal security will be measured by ranking projects based upon:*

- *Emergency Detours* – Ability of the project to enhance an identified emergency detour.
- *Emergency Response* – Ability of the project to directly enhance emergency response or improve emergency access.
- *Identified Security Issue* – Ability of the project to address a previously identified security issue or concern.



## Erie County 2011 Hazard Mitigation Plan

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## Hazard Mitigation Plan

The County is in the process of developing the Erie County 2011 Hazard Mitigation Plan (HMP) which outlines the types, frequencies, vulnerabilities, capabilities, and mitigations for various natural and man-made disasters.

## Homeland Security

As an international port for people and freight, the Port of Erie is the region's most significant homeland security concern. To this end, risk management plans for the Port of Erie have recently been completed by PennPORTS. In addition, improving the cargo inspection facilities at the port could help facilitate the processing of cargo containers being delivered through the port.

## *Future Planning Perspectives*

Holding coordination meetings with EMTA, the Port of Erie, railroads, and the County's airports along with the Erie EMA may result in improved emergency response time for people and goods and allow for better coordination during incidents.

Early identification of significant proposed developments such as schools, hospitals, and facilities with EHS's would allow communities to be proactive in developing land use plans, emergency response plans, establishing transport routes, and coordinating training for local emergency responders.

Re-establishing a complete emergency vehicle preemption system will increase safety along the highway network and improve emergency response times. The MPO should coordinate with municipal officials to:

- Identify Priority Emergency Response Corridors
- Select a preferred EVP system
- Establish a sustained funding program to implement the preferred system