

FRA Grade Crossing Toolkit: Safety patrols to deter grade crossing violations

Measure Name: Safety patrols to deter grade crossing violations

Definition: Safety patrols by rail staff, volunteers, or law enforcement with the goal of deterring unsafe behaviors at grade crossings.

Tags:

Type of Incident:

- ☐ Non-Motorized Users Only
- ☐ Motor Vehicles Only
- ☒ Both

Intervention Strategy:

- ☐ Data: application and planning
- ☐ Education: outreach and messaging
- ☒ Enforcement: policy development and rulemaking
- ☐ Engineering: technological and physical deterrents

Type of Problem:

- ☒ Non-Motorized Users Violating Warning Devices
- ☒ Motor Vehicles Violating Warning Devices
- ☐ Vehicle ROW Incursion
- ☐ Vehicle Congestion
- ☐ Blocked Crossing
- ☐ Vehicle Hang-up

Measure Category:

- ☐ Risk Assessment
- ☒ Policy and Enforcement
- ☒ Collaboration, Training, and Education
- ☐ Public Communication
- ☐ Physical Barriers
- ☐ Detection and Lighting
- ☐ Infrastructure Modification
- ☐ Post-Incident Management
- ☐ Warning Devices

Description

The presence of highly visible safety personnel can deter individuals and motorists from violating traffic laws at grade crossings and can be an effective way to identify and remove those at risk for suicide. Safety personnel can include rail staff, rail police and other law enforcement, or community volunteers. These patrols promote safety through increased physical presence at grade crossings, by issuing citations or rail safety information to individuals and drivers who violate grade crossing warning devices. Crossings where trespass or suicide risk is high or crossings adjacent to train stations are ideal for safety patrols. The presence of individuals in clearly marked safety vests or patrol cars may dissuade potential violators, regardless of intent (suicidal or not), by making them aware of the danger and illegality of violating crossing warning devices. Safety patrols can provide information about rail safety to individuals or motorists at the grade crossings.

Rail employees may already be familiar with trespassing behaviors at grade crossing but can still benefit from further training on what to do if they see an unsafe behavior at a crossing, including those at risk for suicide. Volunteers may require a higher level of training than rail employees, as they may be less familiar with trespassing behaviors at crossing, laws, and procedures for interacting with trespassers. Members of law enforcement, including rail police, are likely to be experienced with identifying potential trespassers and be familiar with what actions should be taken. Officers can also enforce traffic laws at grade crossings through citations and fines, which have been shown to reduce grade crossing violations, with the biggest impact to pedestrian behavior [1].

Additional search terms: *deterrent, police, security, education, enforcement*

Advantages

- Research supports the effectiveness of safety patrols in reducing grade crossing warning device violations. [1]
 - Safety patrols can increase knowledge about rail safety for individuals who are unaware of the legal and safety risks associated with violating grade crossing warning devices.
 - The presence of visible patrols (e.g., wearing a uniform or orange reflective vests) may deter potential motorists and individuals (including suicidal individuals) from violating traffic laws at grade crossings.
 - Safety patrols help connect suicidal individuals with support services, which may be especially beneficial for individuals who have not yet sought help on their own.
 - Training can be provided to current rail staff and/or community volunteers as part of a safety patrol initiative.
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Drawbacks

- It may be difficult for safety personnel to detect unauthorized activity at a crossing at night when there is limited visibility. Lighting and detection technology may assist with monitoring of

known hotspots, and the addition of audible alerts may help to deter trespassing activity at night.

- Crossing safety laws can vary from state to state and county to county making it difficult to enforce.
- Railroad police authority can vary from state to state, “some states give railroad police the same enforcement authority as state police, other states only give enforcement authority on railroad property. A few States do not recognize railroad police at all”. [2]

Notable Practices

- Safety personnel should be highly visible and identifiable to deter unsafe behaviors in the track area.
- In addition to, or in lieu of, any fines and citations issued to those who are violating traffic laws at grade crossing, provide individuals with information on safe behaviors in the rail environment [3]. For example, California’s High Intensity Safety Enforcement Program (HISEP) assists local police in regularly patrolling areas with known safety issues. These patrols issued citations to trespassers and distributed flyers with rail safety information [3]. HISEP’s implementation coincided with a reduction in incidents, particularly for trespassing (non-suicide) incidents.
- It is critical to provide a comprehensive training program to community volunteers participating in the patrols. For example, a local sheriff’s office in Reno, NV provided training to a group of volunteers on how to monitor and report any unauthorized activity without entering the track area. [4]
- Training for safety patrols can include how to approach individuals and notify the appropriate authorities when needed.
- Consider including crisis intervention training for safety patrol members to assist individuals at risk for suicide.
- Enforcement activities at crossings are most successful and most likely to continue when there is buy-in from the judicial system and citation are upheld. [2]
- Aligning enforcement activities with larger safety events, such as International Level Crossing Awareness Day can receive additional support and attention. [2]
- Ensure that various railroad, law enforcement agencies and other stakeholders coordinate information and enforcement activities. [2]

References

[1] Sposato, S., Bien-Aime, P., & Chaudhary, M. (2006). [Public Education and Enforcement Research Study](#). Technical Report No. DOT/FRA/ORD-06/27. Washington, DC: U.S. Department of Transportation, Federal Railroad Administration.

Abstract: The Public Education and Enforcement Research Study (PEERS) was a collaborative effort between the Federal Railroad Administration, the Illinois Commerce Commission, and local communities in the State of Illinois. The purpose of the project was to promote safety at highway-rail intersections by reducing incidents, injuries, and fatalities through new technologies and methodologies. The role of the

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John A. Volpe National Transportation Systems Center was to monitor and evaluate highway-rail intersections in Illinois communities using video data collection while the communities conducted education and enforcement campaigns. The data collection and analysis efforts focused on three highway-rail intersections in Arlington Heights, IL. The effectiveness of the programs was determined by counting the number of motorists and pedestrians that violated the crossing warning devices during three project phases. These violations were divided into three types based on highway-user assumed risk. The crossings in Arlington Heights saw an overall reduction in violations from the pre-test to the post-test of 30.7 percent. The largest reduction, 71.4 percent, occurred in the most risky type of violation, type III. Pedestrians most often committed these types of violations. At the crossing with an adjacent commuter rail station, a reduction of 76.3 percent occurred in the most risky pedestrian violations. Overall, highway-user behavior changed for the safer during the study, and pedestrians, especially commuters, were the most affected by the PEERS programs.

[2] Thompson, A., & Horton, S. (2019). [Law Enforcement Strategies for Mitigating Highway-Rail Grade Crossing Risk Factors](#). Technical Report No. DOT/FRA/ORD-19/24. Washington, DC: U.S. Department of Transportation, Federal Railroad Administration.

Abstract: There has been heightened awareness of and re-commitment to highway-rail grade crossing safety. Both the U.S. Department of Transportation and the Federal Railroad Administration have pledged to show a greater presence at grade crossings and to adopt a new, multi-faceted campaign aimed at strengthening enforcement and safety awareness at grade crossings. The Law Enforcement Strategies for Improving Highway Rail Grade Crossing Safety Working Group convened with the goal to engage representatives from law enforcement agencies to solicit examples of innovative strategies, success stories, challenges, and lessons learned. Successful law enforcement initiatives shared certain themes: coordination in and among various organizations, alignment with major events, judiciary commitment, and officer education.

[3] Adduci, B., Mottley, F., & Haines, M. (2009). [ROW Fatality and Trespass Reduction Workshop 2008–Summary of Results](#). Technical Report No. DOT/FRA/ORS-09/001. Washington, DC: U.S. Department of Transportation, Federal Railroad Administration.

Abstract: This report documents the activities and results of the first Right-of-Way (ROW) Fatality and Trespass Prevention Workshop which was held April 1 & 2, 2008 at the Caltrain headquarters in San Carlos, California. The workshop was sponsored by the Federal Railroad Administration (FRA) Office of Safety and the Federal Transit Administration (FTA); hosted by Caltrain; and organized by the U.S. DOT's Volpe National Transportation Systems Center.

[4] Gabree, S. H., Hiltunen, D., & Ranalli, E. (2019). [Railroad Implemented Countermeasures to Prevent Suicide: Review of Public Information](#). Technical Report No. DOT/FRA/ORD-19/04. Washington, DC: U.S. Department of Transportation, Federal Railroad Administration.

Abstract: The public discussion of railroad safety initiatives can help to improve safety, either directly with the public through an increased awareness, or by encouraging other carriers to consider similar safety efforts. Rail carriers are often quick to promote trespass and crossing safety efforts, however, efforts to mitigate rail suicide are often not discussed. Suicide is unique from other rail safety topics in that it requires more precise language when discussing publicly. Responsible discussion of suicide prevention can increase the availability of information on how to get help, while limiting the dramatization of these events, thereby reducing the likelihood of copycat events. In this report, the authors conducted web-based searches to identify rail-specific efforts to mitigate suicide that have been publicly discussed, either by the carrier themselves or through the media. Generally, there is limited discussion of suicide-specific prevention efforts being undertaken by rail carriers, and the level of detail provided about these efforts

varies. In total, 14 carriers and a range of strategies were identified including fencing, signage, detection and monitoring, training of employees and authorities, public and industry events, websites, and media guidelines. Partnerships with suicide prevention groups, both local and national, were most often discussed.

Additional Resources

The following webpage provides an example of community volunteer safety patrols.

- Washoe County Sheriff's Office. [Rail Auxiliary Team \(RAT Pack\)](#).

The following resource provides information on high-visibility enforcement that can be applied to the rail environment.

- National Highway Traffic Safety Administration. [High Visibility Enforcement \(HVE\) Toolkit](#).

The following news articles describe law enforcement efforts to enforce crossing laws in the US.

- Antinori, S. (August 27, 2012). [Police Issue Citations During Railroad Enforcement](#)
- Fitzgerald, J. (March 30, 2015). [Police Ramp Up Rail-Crossing Citations After Recent Crashes](#).
- Searles, M. (August 18, 2015). [Hinsdale Police Riding BNSF Trains to Enforce Crossing Laws](#).
- Union Pacific. (July 29, 2005). [Union Pacific Railroad Police and Local Law Enforcement Issue 93 Citations at Railroad Crossings](#).

Crossing safety laws vary between states in the US and can be found on the FRA's website: [Compilation of State Laws and Regulations Affecting Highway-Rail Grade Crossings – Seventh Edition](#).

Related Measures

- Collaboration with local government and communities
 - Enforcement
 - Identify and monitor hotspots
 - Planning for events with increased traffic
 - Refuse or delay boarding to discourage grade crossing violations
 - Photo enforcement
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Images



*Figure 1. Example of law enforcement official enforcing traffic laws at a grade crossing
Image Credit: Volpe Center*



*Figure 2. Example of law enforcement presence at a grade crossing
Image Credit: Volpe Center*

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*Figure 3. Example of law enforcement officials enforcing traffic laws at a grade crossing
Image Credit: Volpe Center*



*Figure 4. Law enforcement official talking to individual violating crossing warning devices
Image Credit: Volpe Center*



*Figure 5. Example of law enforcement official enforcing traffic laws at a grade crossing
Image Credit: Volpe Center*



*Figure 6. Example of law enforcement presence at a grade crossing
Image Credit: Volpe Center*



*Figure 7. Example of law enforcement official enforcing traffic laws at a grade crossing
Image Credit: Volpe Center*