

FTA Rail Grade Crossing Safety Webinar

September 17, 2025



U.S. Department of Transportation
Federal Transit Administration



Webinar Overview

This webinar will discuss the importance of making safe choices when driving or walking near transit tracks and trains, highlight available data, discuss the use of photo enforcement technology at rail grade crossings to enhance safety and the integration of Positive Train Control to reduce incidents at intersections, and share new resources and outreach strategies for transit agencies.

Speakers:

- **Isaiah Garcia, Sr. Accident Investigator, FTA**
- **Abdul Zohbi, Senior Systems Safety Manager, LACMTA**
 - **Jacqueline Gonzalez, Director, Rail Safety and Mobility Programs, Arts + Community Enrichment**
 - **Devin Jenkins, Operations Assistant II, Los Angeles Sheriff's Department**
 - **John Greenler, Law Enforcement Technician, Los Angeles Sheriff's Department**
- **Stephen Smith, Director of Safety and Security, Rock Region Metro**
- **Rachel Maleh, Executive Director, Operation Lifesaver, Inc. (OLI)**

State of Rail Safety

From 2018-2024

4,230

**Total Reported
Transit RGX
Collisions**

109

**Transit RGX
Collisions
Resulting in
Fatalities**

783

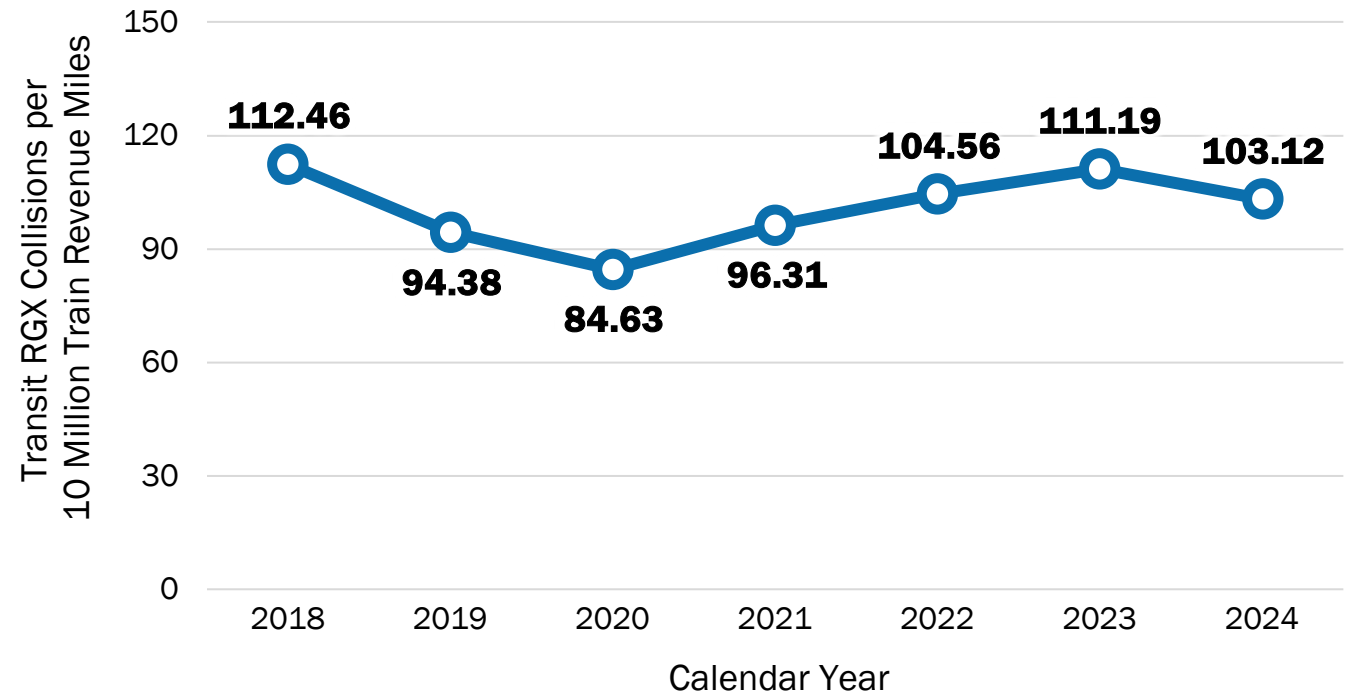
**Transit RGX
Collisions
Resulting in
Injuries**

2024 NTD data are preliminary.
Source: National Transit Database (NTD). Data reflect submissions received through April 1, 2025.

Transit RGX Collision Trends

From 2018-2024

After reaching a low in 2020, the transit RGX collision rate per train revenue mile (TRM) increased each year from 2021 to 2023 then decreased in 2024.



2024 NTD data are preliminary.
Source: National Transit Database (NTD). Data reflect submissions received through April 1, 2025.

Incident and Collisions Data

Transit RGX are often different from conventional RGX due to the inclusion of pedestrians, cars and street traffic. During a recent FTA survey, incidents reported at street intersection crossings were approximately *10 times higher* than at conventional grade crossings.

Seattle DOT RGX Example



Source: [FTA Standards Development Program: Rail Transit Roadway/Pedestrian Grade Crossing Exploratory Report](#) | May 2022.

FTA Resources



Safety Advisory 24-2

Recommends SSOAs direct rail transit agencies to conduct collision risk assessments for street-running rail to improve safety and mitigation efforts



Safety Bulletin 19-03

Outlines safety considerations associated with rail transit grade crossings and includes Federal actions taken, data analysis and resources



Research

FTA Rail Transit Roadway/
Pedestrian Grade
Crossing Exploratory Report



Rail Grade Crossing Resources for Transit Agencies

UPDATED: [Rail Transit Grade Crossing Data Fact Sheet](#)



View [FTA's RGX Safety Page](#)

A screenshot of the Federal Transit Administration (FTA) website. The header features the FTA logo and name, a search bar, and navigation links for 'About', 'Funding', and 'Regulations & Programs'. A left-hand menu lists various safety topics with right-pointing chevrons. The main content area is titled 'Rail Grade Crossing Safety Resources for Transit Agencies' and includes a large photograph of a blue and yellow transit train at a grade crossing with pedestrians. Below the photo is a brief description of the resources and a set of navigation dots.

METRO'S *Rail Safety* PROGRAM⁸

THE THREE E's

- **ENGINEERING**
- **EDUCATION**
- **ENFORCEMENT**



Engineering

Four Quadrant Gates At all Cab-Signal Grade Crossings

Pedestrian Gates and Swing Gates (Calgary Gates) At all Cab-Signal Grade Crossings

Improvements at 27 Grade CROSSINGS on the “A Line” To comply with Metro Rail Design Criteria (MRDC)



FOUR QUADRANT, PED , AND SWING GATES



Education

BEST IN THE NATION !!



Rail Safety Programs

In accordance with the California Public Utilities Commission (CPUC), Metro conducts site-specific light rail training for community sites to create and maintain a safety culture through the Three E's of rail safety – Education, Engineering, and Enforcement.

Rail Safety Programs focuses on communities within a 1.5 miles radius of Metro's At-Grade Light Rail Lines A, E, & K.

Special Requests

- Dorsey High School Outreach Plan created to address concern with pedestrians jumping tracks to access Rancho Cienega Rec Center.



Rail Safety & Mobility Programs

FY25 - July 1, 2024, to June 30, 2025

Monthly Totals	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June
Workshops	511	27	333	455	551	353	357	392	196	1060	179	670
Events	2105	3910	2030	2050	560	2660	1940	770	310	5550	2069	11,090
RSOT	0	0	0	0	100	60	70	85	163	0	179	0
On The Move Riders Program	585	2587	1417	1858	1135	202	531	489	869	811	1916	525
Grand Totals	3201	6524	3780	4363	2346	3275	2898	1736	1538	7421	4343	12285

Quarterly Totals	Q1	Q2	Q3	Q4
Workshops	871	1359	945	1909
Events	8045	5270	3020	18709
RSOT	0	160	318	179
On The Move Riders Program	4589	3195	1889	3252
Grand Totals	13505	9984	6172	24049



Rail Safety Marketing Campaigns

Rail Safety Programs launches educational awareness campaigns annually during September's Rail Safety Month.

Target: Riders (YouthK-12, Adults)

Geo: Zip Codes along A, E, & K Lines

Medium: Social Media, YT, Connected TV, Jr. Posters & Posters

Impressions: Generated over **23.3M** impressions and **2.9M** video view. **66%** targeted **English-speaking** audiences. **34%** targeted **Spanish-speaking** audiences.



Enforcement



(Enforcement) In the Beginning

- **LASD motorcycle deployment**
- **Bicycle patrol unit**
- **Support for safety education**
- **“Officer on the Train” campaign**
- **Participation in youth safety education campaigns**



LASD MOTORCYCLE PATROL



Currently

Photo Enforcement



Cooperation Between



Metro[®] +



Enforcement

METRO'S BIGGEST CHALLENGE

*ILLEGAL LEFT TURNS AT STREET - RUNNING
GRADE CROSSINGS*

Running Grade Crossings



Metro

Running Grade Crossings



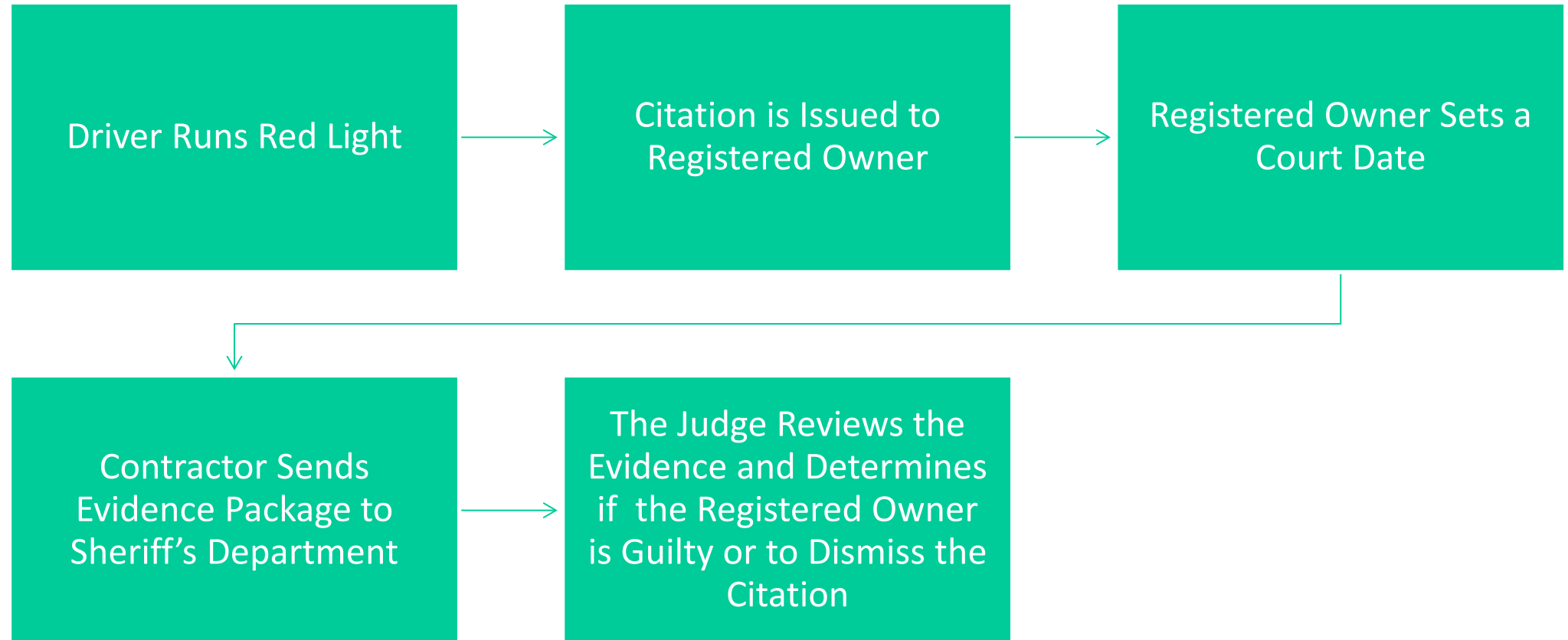
Running Grade Crossings



Metro

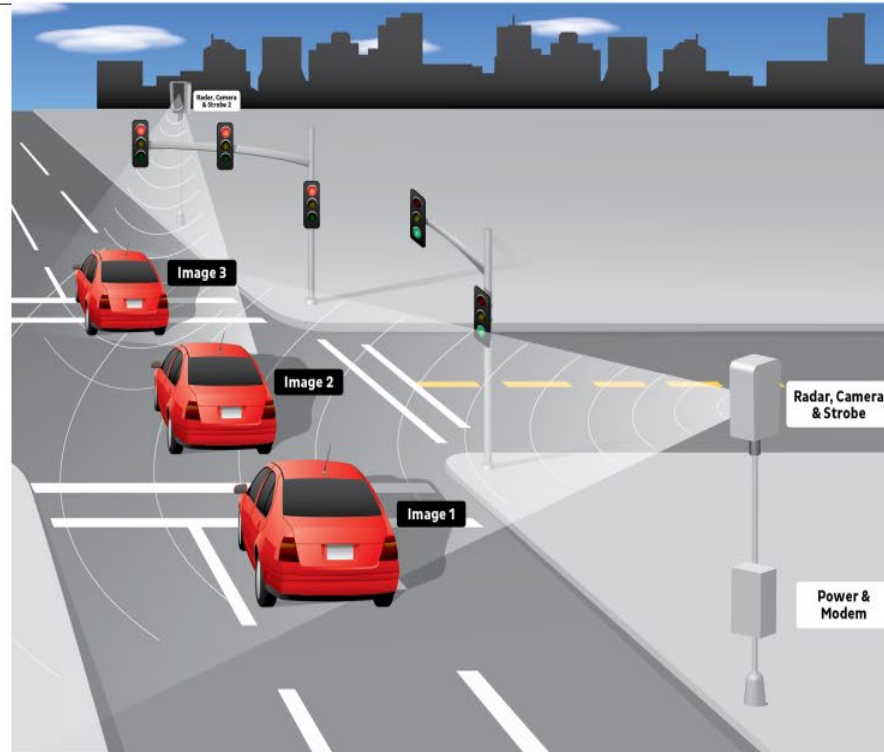
How the Photo Enforcement System Works





HOW IT WORKS: RED-LIGHT SAFETY CAMERA

Red-Light Safety Camera Program



The **1st Image** records the vehicle behind the violation point while the light is red.

The **2nd Image** records the vehicle proceeding through the intersection while the light is red.

The **3rd Image** records the driver of the vehicle.

*pole and equipment structure vary based on intersection design

Step 1: The system activates upon entering the intersection on a red light. The automated safety camera captures multiple images of an alleged violation from the rear and front of the vehicle.

Step 2: The first image shows the vehicle prior to entering the intersection while the light is red.

Step 3: The second image shows the vehicle proceeding through the intersection on a red light.

Step 4: The third image, taken by camera two, identifies the driver of the vehicle.


Step 5: A close-up image of the license plate is also provided with the evidence.

Step 6: Data, including the time, date, and duration of the yellow and red lights, is also recorded.


Step 7: Cameras also record a 12-second digital video of the violation, including six seconds prior to and six seconds after running the red light.

SAMPLE RED-LIGHT EVENT (A SHOT)


Red-Light Safety Camera Program




IMAGES
UP TO 45
MEGAPIXELS




3DHD
TRACKING
RADAR




100+
VEHICLES
TRACKED



LIVE
STREAMING
VIDEO



HD
1280x720
VIDEO



ONE
POLE
SOLUTION

A SHOT




Confidential & Proprietary


8

SAMPLE RED-LIGHT EVENT (B SHOT)


Red-Light Safety Camera Program




IMAGES
UP TO 45
MEGAPIXELS




3DHD
TRACKING
RADAR




100+
VEHICLES
TRACKED



LIVE
STREAMING
VIDEO



HD
1280x720
VIDEO



ONE
POLE
SOLUTION

B SHOT




Confidential & Proprietary


9

SAMPLE RED-LIGHT EVENT (C SHOT) REFORM WOULD REMOVE THIS IMAGE


Red-Light Safety Camera Program




IMAGES
UP TO 45
MEGAPIXELS




3DHD
TRACKING
RADAR




100+
VEHICLES
TRACKED



LIVE
STREAMING
VIDEO



HD
1280x720
VIDEO



ONE
POLE
SOLUTION

C SHOT ←

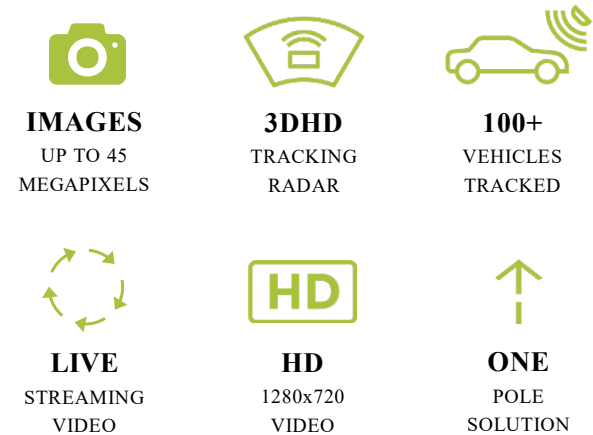


Confidential & Proprietary

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SAMPLE RED-LIGHT EVENT (VIDEO)

Red-Light Safety Camera Program



HD VIDEO ←

CONCLUSION

The three E's of Safety have to be working together in order to have an effective Safety Program aimed at mitigating illegal behavior that leads to violations and accidents

Enhancing Safety at Grade Crossings with Positive Train Control Rock Region METRO's Approach

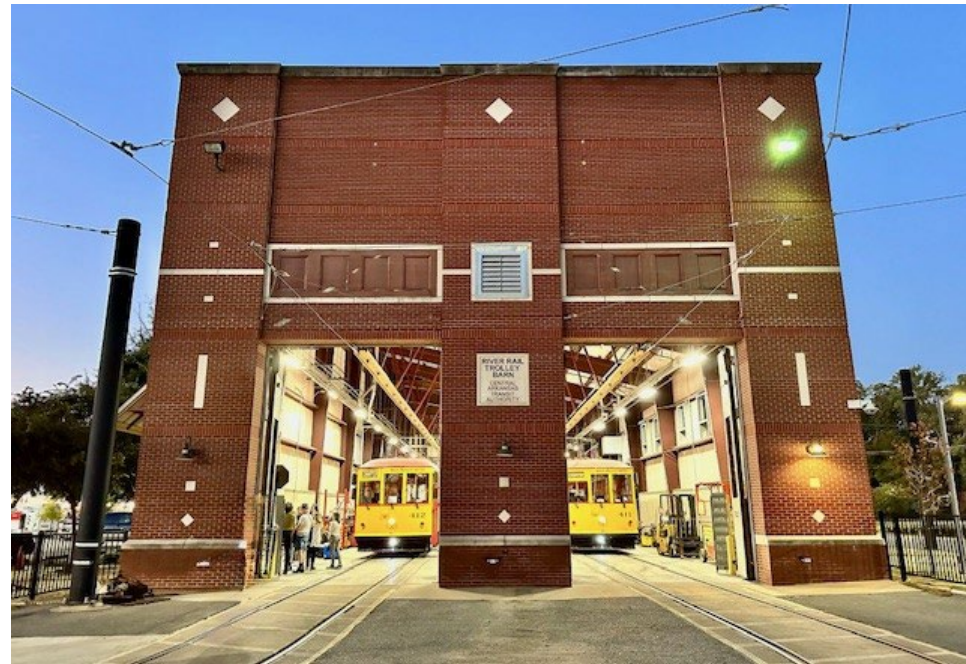


September 14, 2025 | Rail Grade Crossing Safety Seminar

Stephen Smith, Director of Safety and Security, Rock Region METRO

About Rock Region METRO Streetcar

- Operational in 2004
- Vintage GOMACO Birney replicas
- Operates in mixed traffic with standard traffic regulations
- 3.4-mile alignment
- Unique operational constraint: Main Street Bridge
 - 8% significant grade,
 - Dedicated ROW
 - major intersections at both ends



Safety Challenges

Intersections at each end with pedestrian and vehicle cross traffic



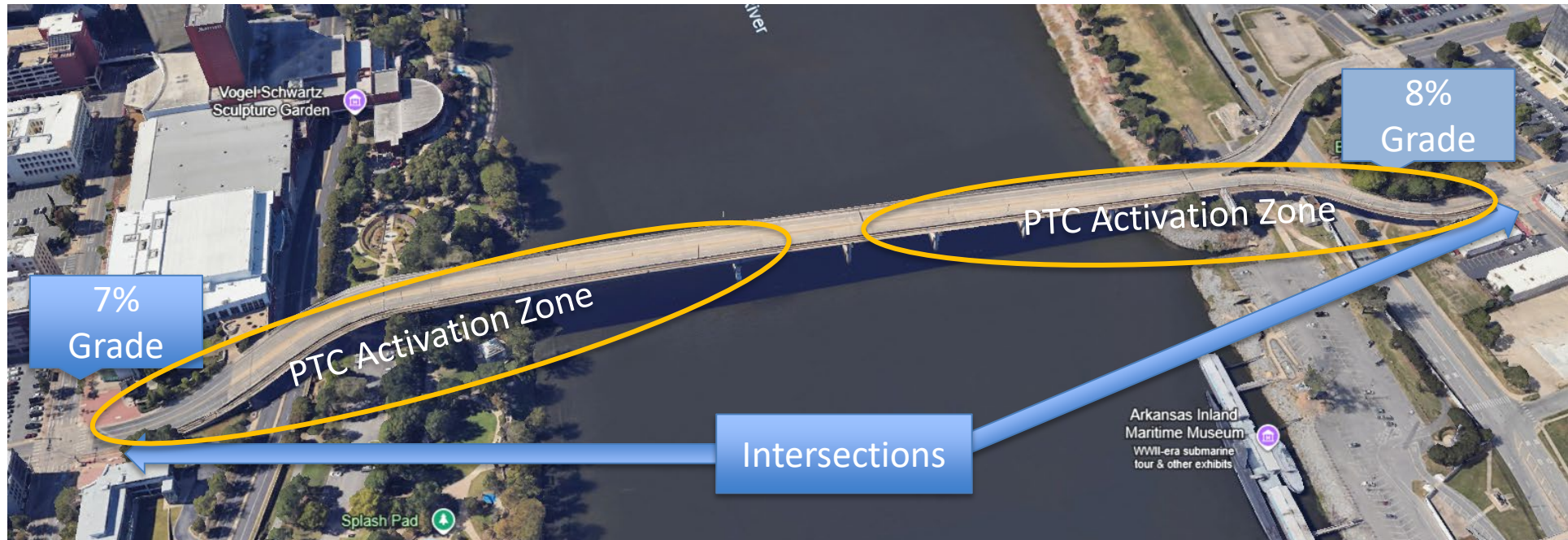
Steep 8% downgrade with limited stopping distance



Runaway streetcar risk descending steep bridge into busy intersections



Goal: Prevent high-speed entries into intersections



Why Positive Train Control?



Grade + intersection
geometry creates
elevated risk

Proximity to vehicle and
pedestrian traffic

Chosen over purely
operator-reliant
mitigation

Supports defense-in-
depth safety approach

How METRO Uses PTC

- Installed only on Main Street Bridge
- Monitors speed – max 8 mph descending
- Audible onboard warning if speed exceeded
- Automatic track brake application if speed not reduced
- Prevents runaway into busy intersections



Integration with Traffic Signal Pre-emption

- Traffic signals stop cross traffic and activate warning signs before streetcar enters intersection
- Pre-emption triggered by streetcar operator
- Layered safety: Operator Control + Signal Pre-emption + PTC

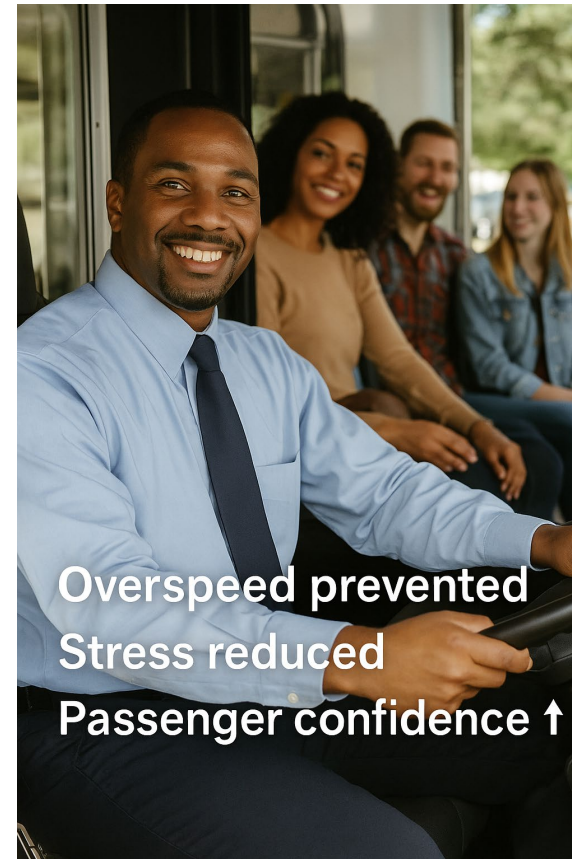
OPERATOR

**SIGNAL
PRE-EMPTION**

PTC

Operational Experience

- Prevented overspeed incidents
- Reduced operator stress on descent
- Improved passenger confidence
- Requires minimal maintenance with periodic calibration



Lessons Learned



**INSTALL PTC WHERE
RISK JUSTIFIES
INVESTMENT**
(RISK-BASED APPLICATION)



**COMBINE WITH
OTHER ENGINEERING
& OPERATIONAL
CONTROLS**



**TRAIN OPERATORS
ON PTC RESPONSE
AND FAILURE MODES**



**DESIGN ALARMS TO
BE CLEAR BUT NOT
DISTRACTING**



Broader Applications

- Applicable to steep grades with crossings
- Vintage or mixed-traffic systems
- Low-speed rail with high-risk segments



Closing & Contact

- Positive Train Control can be scaled for targeted, high-risk areas, even on heritage systems

Stephen Smith, TSSP Bus-Rail, PTSCPT Bus-Rail / Director of Safety and Security

Rock Region METRO

901 Maple Street, North Little Rock, AR 72114

Office: 501.375.6717 x1228

Cell: 501.517.5054

rrmetro.org



Rock Region
METRO

Operation Lifesaver, Inc. Update

2025 FTA Rail Grade Crossing
Safety Webinar – September
2025



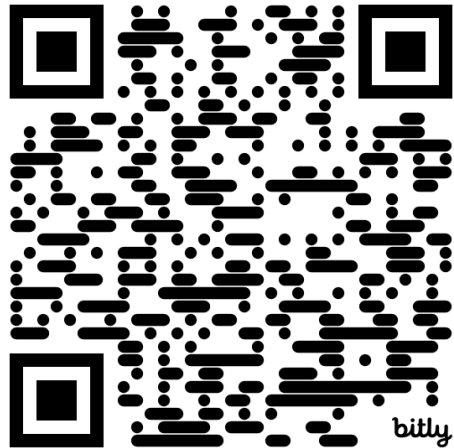
OLI Partners with FTA To Help Transit Agencies

- Provides competitive **Rail Transit Safety Education Grants** to transit agencies.
- Develops **free resources and assets** for use in public safety outreach efforts.
- Materials can be found at **OLI.org**.

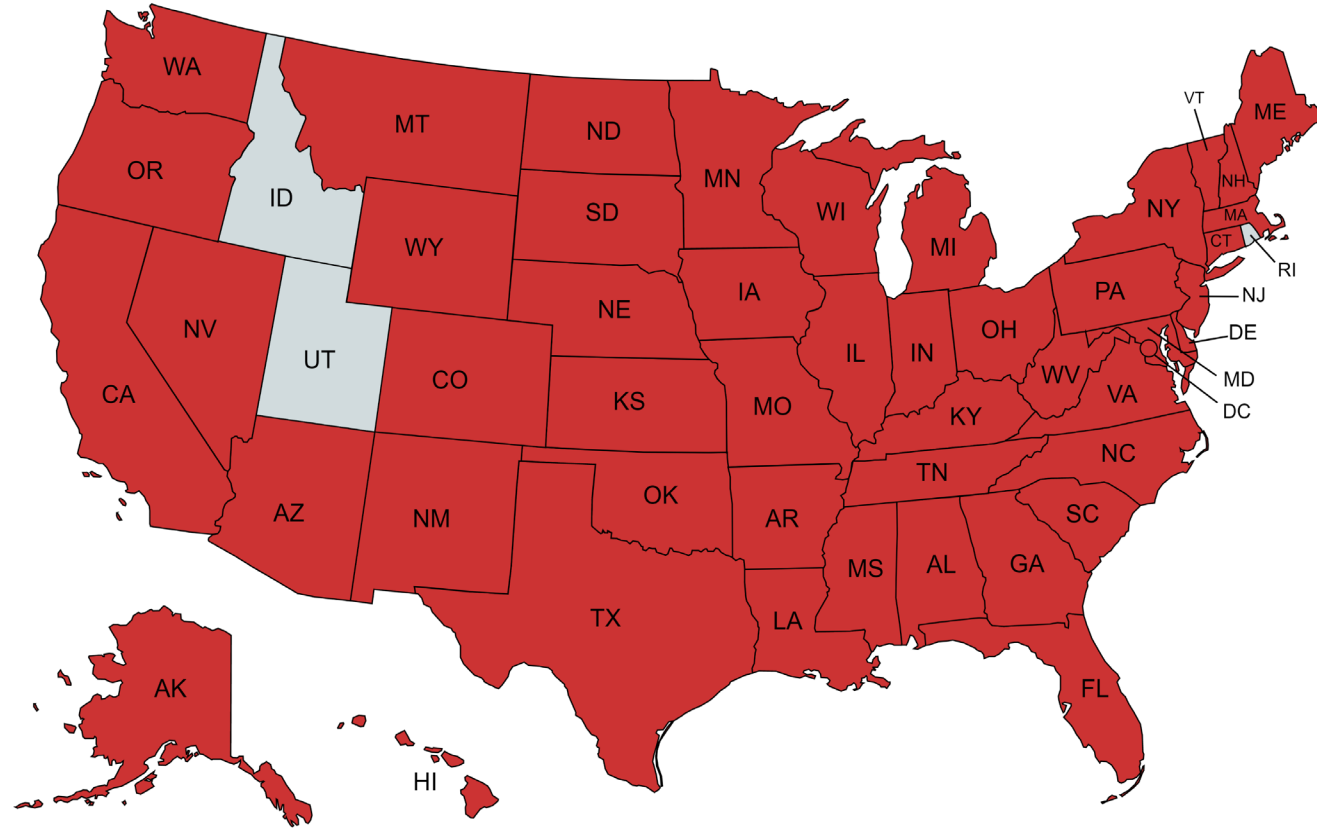


Transit safety brochure
and social media assets

Operation Lifesaver Programs – 47 States and DC



Scan for State Contacts



Partnerships are Key to Operation Lifesaver's Efforts

Federal Partners



Federal Railroad
Administration
Federal Highway
Administration
Federal Transit
Administration

Private Partners



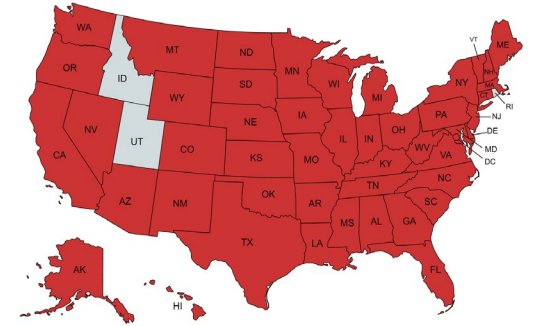
Posner Foundation of
Pittsburgh
Class I Railroads
Amtrak

Board Member Partners



APTA
ASLRRA
AAR
AASHTO
ABA
SLSI

State Partners



OL State Coordinators
State DOTs
State & Local Transit
Agencies

Transit Safety Education Public Awareness Grant Recipients

In partnership with the FTA, these seven (7) transit agencies were **awarded grants for eight projects aimed at promoting public awareness and rail safety education in communities near transit lines.**



Project Spotlight: San Diego MTS



San Diego MTS is using geotargeted audio & targeted digital ads to promote their Think FAST (**F**un **A**nd **S**afe **T**ransit) campaign.

Digital Ads



Project Spotlight: Hampton Roads Transit



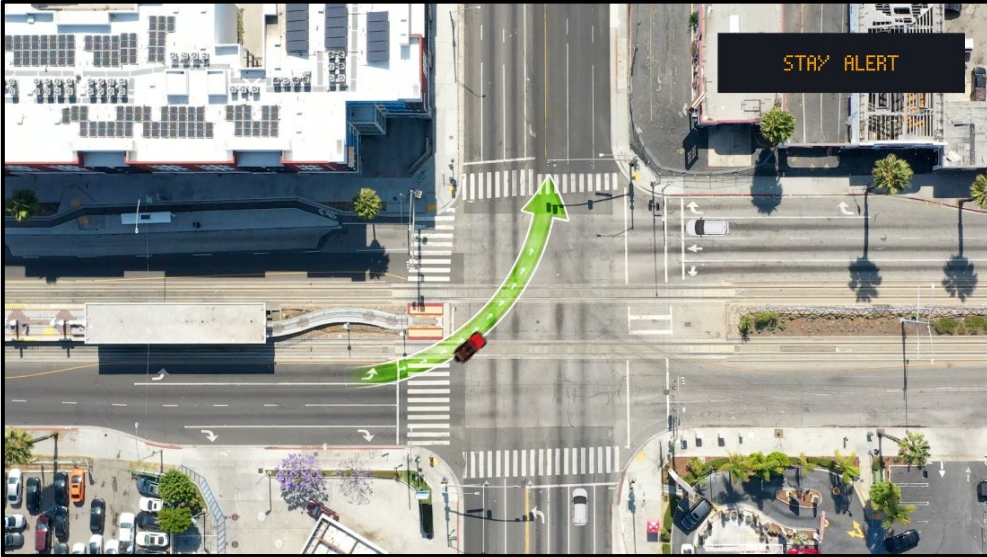
Hampton Roads Transit produced educational materials and attended community events – **like this Norfolk Tides baseball game** – focused on the importance of safe behavior around light rail.

Project Spotlight: SEPTA



SEPTA launched a new public service safety campaign “One Ear Out” raising awareness about the dangers of trespassing and crossing tracks illegally.

NEW: Two PSAs Highlighting Left Hand Turns Around Streetcars, Light Rail and Trolleys

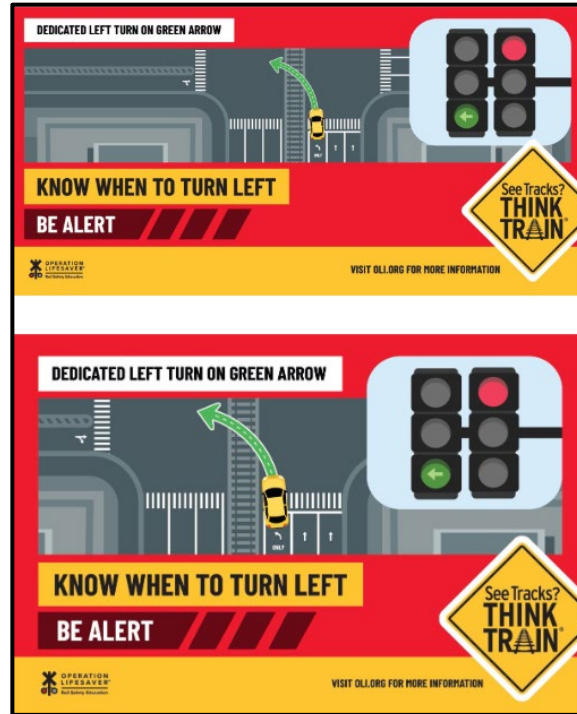


Dedicated Left Turn emphasizes the need to wait for a green arrow when turning left across train tracks and reminds viewers to stay alert and minimize distraction



In-Street Running highlights a common source of confusion in transit-heavy areas and reminds viewers to understand lane designations and always yield to trains

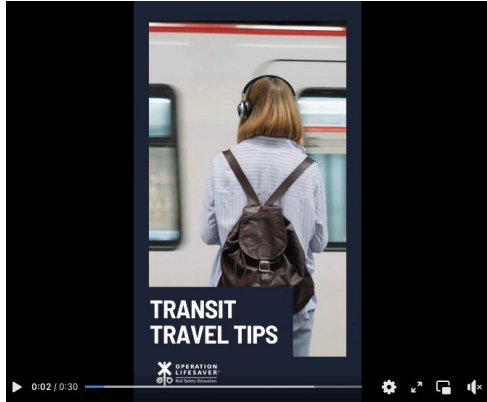
NEW: Left Hand Turn Supplemental Material



- Billboards
- Bumper Stickers
- Posters
- Vinyl Clings
- Visor Cards



Wide Variety of Safety Materials



<https://vimeo.com/738766138>



Social Media.
Videos.
Brochures.



<https://vimeo.com/738767009>

Engage with Operation Lifesaver

Request a **safety presentation.**



Follow OLI on Social Media and **Share!**



Apply to **volunteer.**



Visit OLI.org for more information

Operation Lifesaver, Inc. Staff



Rachel Maleh
Executive Director
D: (703) 739-1065
M: (301) 717-7553
rmaleh@oli.org



Wende Corcoran
Vice President
D: (703) 739-9126
M: (703) 915-6764
wcorcoran@oli.org



Jennifer DeAngelis
Director, Communications
& Marketing
D: (703) 739-0284
M: (202) 815-4340
jdeangelis@oli.org



Moriah Whiteman
Director,
Education, Training &
Volunteer Support
D: (703) 519-4502
M: (703) 915-6624
mwhiteman@oli.org



OLI Staff Contact Page QR Code



Questions?

Isaiah Garcia

Sr. Accident Investigator, FTA
isaiah.garcia@dot.gov

Stephen Smith

Director of Safety and Security, Rock
Region Metro
ssmith@rrmetro.org

Abdul Zohbi,

Sr. Systems Safety Manager,
LACMTA
ZohbiA@metro.net

Rachel Maleh

Executive Director, Operation
Lifesaver, Inc.
rmaleh@oli.org



**OPEN NOW:
WEBINAR SURVEY**



U.S. Department of Transportation
Federal Transit Administration