

# Design Features to Mitigate Trespassing

Kurt Wilkinson

Manager, Safety Risk

Assessment/Construction Safety

Tri-County Metropolitan District of  
Oregon





# Design Features to Mitigate Trespass

- Typical Types of Intrusions in the Right of Way
  - Trespassing persons
  - Autos in the right of way from street running to exclusive right of way
  - Vandals
  - Homeless Camps
  - Thieves

# Design Features Mitigation Selection

- Factors that play into selection of proper trespass mitigations:
  - Type of intrusion anticipated
  - Type of operating environment
  - Speed of train
  - Sightlines
  - Operating Rules/Procedures
  - Previous trespassing history



# Mitigation Measures

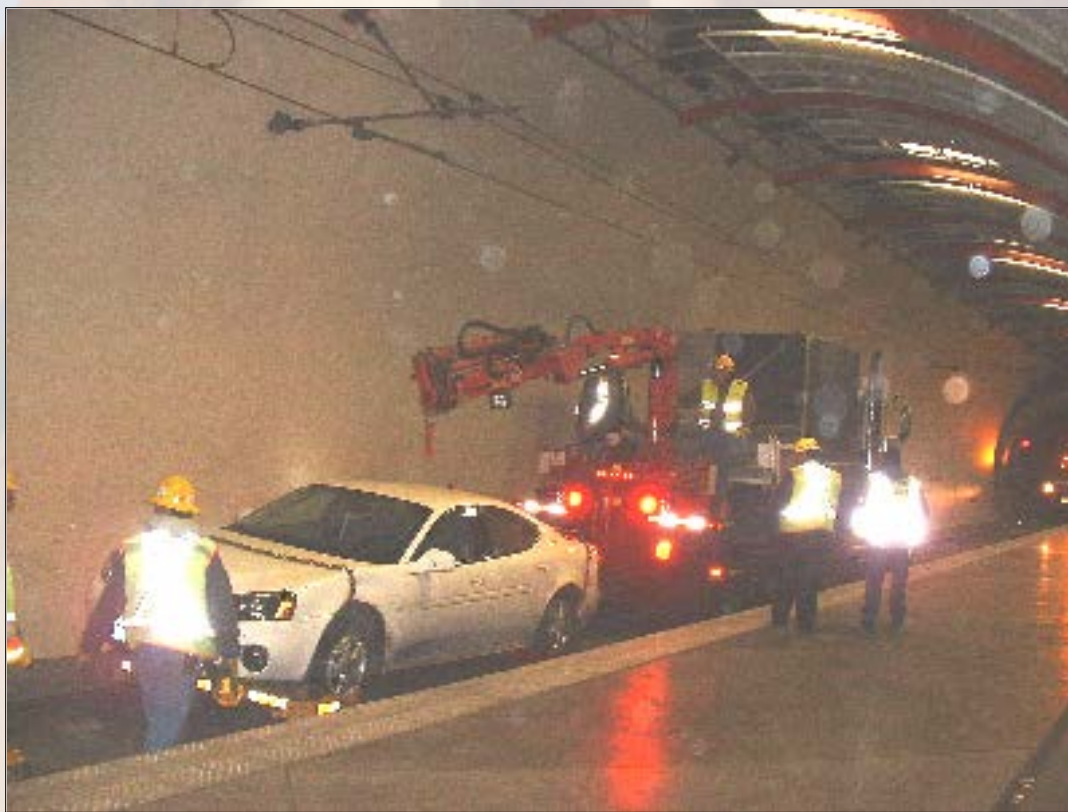
- Active systems:
  - intrusion detection and video analytics
- Passive systems:
  - barriers, signage, channelization, lighting, and designed crossings at desired locations
- Education outreach of the public/groups effected by the rail system
  - Schools, community groups, churches

# Auto in Tunnel



# Auto in Tunnel

## Feb 2008





# Auto Trespass Deterrent





# Trespass Deterrent



# Barrier – In Street Running





# Designed Pedestrian Crossing with Passive Treatments





# Barrier to Deter Unauthorized Pedestrian Crossing of ROW



# Alignment Investigation for Installation of Mitigations





# Retrofitted Barriers







# Passive and Active Warning Devices Installed at High Speed Crossing





# Public Outreach/Education





# Learning from Experience

- As your system grows, re-evaluation of the current protective measures needs to take place
- Technological advances in electronic monitoring
  - Intrusion detection and video analytics

# Revitalized Station with channeling, active, and passive treatments





# Welded Wire Fencing





# Video Analytics for Critical Structures



# Portland's Most Famous Trespasser!!

