



# Rail Service & Safety

## Enforcement-Engineering-Education

Board of Directors  
April 2, 2015  
Agenda Item 8



## Enforcement

- **Transit Police Training**
- **Current Rail Safety Enforcement**
- **Railway Safety**





## Transit Police Training

### Crisis Intervention Training (C.I.T)

- Education
- Increased Safety & Diversion
- Community Confidence & Collaboration

### High-Intensity Strategic Enforcement Program

- High Visibility (more than 350 citations given, 2014)
- Target grade crossings where citizens engage in unsafe behavior



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## Current Rail Safety Enforcement

- **Transit Police removed more than 350 trespassers from Caltrain property**
- **Transit Police prevented 40 possible suicide attempts by taking the persons into protective custody and transporting them to an emergency treatment facility**
- **Transit Police provides education to individuals who were found illegally accessing Caltrain property**



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## Railway Safety

- Crisis Notification/Speed Restriction
- Reduce right of way access
- High Visibility



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## Engineering

- Grade Separation / Pedestrian Crossings
- Holdout Rule Station Remodels
- Grade Crossing Safety Improvements
- Fencing/Signage
- Technology

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## Grade Separations

### Eliminated crossings

- 1999 – Ralston, Holly & Harbor – 3  
– Pedestrian underpass at Arroyo Avenue
- 1999 – Jefferson Avenue - 1
- 2014 – San Bruno, San Mateo & Angus – 3  
– Pedestrian underpasses

### Street Closures

- King Street – San Francisco
- South Lane – Burlingame
- Stockton Ave. – San Jose
- Lenzen Street – San Jose

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## Holdout Station Remodels

### Eliminated Holdout Rule at 17 stations

- Paul Avenue & Bay Meadows – closed (2)
- Bayshore, San Bruno, Millbrae, Burlingame, San Mateo, Hayward Park, Hillsdale, Belmont, San Carlos, Redwood City, California Avenue, Mountain View, Sunnyvale, Lawrence, Santa Clara – remodeled (15)
- Four holdout stations remain on SF-SJ line:  
South San Francisco, Broadway, Atherton, College Park

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## Holdout Remodel

### Center Track Fence at Hayward Park



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## Grade Crossing Safety Improvement

- Several years ago JPB conducted grade crossing hazard analysis with CPUC, Caltrans, and local communities
- Several key projects were designed and delivered:
  - Vehicular grade crossing safety improvements (quad gates pilot, vehicle lane median dividers, crossing gate design, signage)
  - Signal pre-emption project – increased train approach warning (time) for 5 locations
  - At-grade pedestrian safety improvements – warning lights, signage, gates, emergency exit gates

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## Grade Crossing Safety Improvement

- **Recently completed Grade Crossing Hazard Analysis with CPUC, Caltrans, local cities and counties**
  - **Prioritized crossings**
  - **Identified potential railroad and street/traffic safety improvements specific to each location**
  - **JPB Staff working on potential capital project to implement highest priorities**

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## Fencing

- **When JPB purchased right of way, large sections of system were not fenced**
- **Primary fencing consisted of private property fencing and limited railroad chain link fencing**
- **JPB fencing goals/priorities:**
  - **Eliminate frequent short-cutting opportunities**
  - **Identify high risk/traffic areas for new fencing**
  - **Long-term goal – ensure continuous fencing is in place on at least one side of the corridor with combination of railroad and private property fencing**
  - **Curb access/homeless encampments**

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## Fencing

- **Maintain critical access to right of way for maintenance, repair, emergency response**
- **Seek external funding to support multi-year fencing program**
- **Continually assess fencing effectiveness and adjust program**

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## Fencing

- **Completed Safety & Security Fence Assessment in 2010 with input from rail operator and JPB**
- **Assessment feeds into fencing program annual priorities given limited capital funds available**
- **Since 2005, JPB installed approximately 18 miles of various types of fencing along the right of way**

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## Fencing Installed & Budget

- Since 2005, JPB has spent nearly \$9 million on fence installations under four capital projects
- Primary source of funds for fencing – external Safety & Security grants
- Current fencing contract/funding is coming to a close
- Develop a new four-year contract for fence installation, advertise late fall 2015; includes vegetation removal

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## Welded Wire Installation (Millbrae)



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## Restrict Access Under Structures



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## Access & Vehicle Gates



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## Fencing

Vegetation removal continues to be a hindrance in getting fencing installed in some locations



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## Signage



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## Technology

- **Positive Train Control – PTC**
  - Eliminate red signal/routing violations
  - Enforce track speed limits
  - Prevent train-to-train collisions
  - Improve roadway worker safety
- **Grade Crossing Occupancy Sensors**
  - Technology exists, not widely applied in North America
  - Future – could it be tied into PTC/train control

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## Technology

### Right of way cameras/sensors/warnings

- Technology has been applied to secure facilities (ex: airport tarmac) using analytics to predict potential criminal/unusual behavior
- Technology has not yet been applied to open railroad corridor
- JPB staff has scheduled meeting with one potential technology provider to better understand how it may be applied
- Application has to be “scalable” to Caltrain corridor and suitable for actual/live operation
- Key issues – resources and operational procedures needed to derive value from any system

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## Education

**“It is unlikely that the suicides were caused by factors specifically associated with the railroad.”**

*-- Suicide on Commuter Rail in California: Possible Patterns – A Case Study, Mineta Transportation Institute, December 2010*

- **Caltrain is part of a community that has been plagued in recent years with deaths by suicide.**
- **As part of that community, we are committed to being part of the effort to address this complex and challenging problem.**

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## A Community-wide Concern

- **Average number of deaths by suicide per year, 2010-2012**
  - **San Mateo County: 68**
  - **Santa Clara County: 151**
  - **San Francisco County: 88**
- **Total, Caltrain Service Area: 307**
- **Average number of deaths by suicide on the Caltrain tracks per year, 2010-2012: 12**

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## Deaths on Caltrain Tracks

- Number of fatalities, 2004-2013: 131
  - Average per year: 13
- Average number of deaths by suicide per year, 2004-2013: 10
- Average number of unintended deaths per year, 2004-2013: 2.3

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## 2015 Caltrain Right of Way Fatalities

|             | Total             |                |                   |                 |
|-------------|-------------------|----------------|-------------------|-----------------|
| <u>Year</u> | <u>Fatalities</u> | <u>Suicide</u> | <u>Unintended</u> | <u>Pending*</u> |
| 2015        | 10                | --             | --                | 10              |
| 2014        | 10                | 6              | 1                 | 3               |
| 2013        | 13                | 11             | 2                 | 0               |

\* Final determination of the cause of death is the responsibility of the county coroner in cooperation with investigations by local law enforcement and Transit Police. In virtually all cases, a preliminary, informal indication is that the individuals have intentionally placed themselves in the path of a train.

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## Community Outreach

- Outreach, suicide prevention activities since 2006: Project Safety Net, San Mateo County Suicide Prevention Committee, Santa Clara County Suicide Prevention Task Force
- Operation Lifesaver, Don't Shortcut Life campaign
- Out of the Darkness
- Annual Rail Safety events, suicide prevention focus

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## Community Reaction

- Slow the trains
- Electrify the fence
- Cameras
- Air bags/blowers
- Lights
- Guards
- FAQ

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## 2015 Caltrain Right of Way Fatalities

| Date     | Time     | Fatality Location                             | Mile Post* | Suicide/Unintended | CT/U P | Comments                               |
|----------|----------|-----------------------------------------------|------------|--------------------|--------|----------------------------------------|
| Jan. 10  | 9:07 AM  | 8/10 mile south of Millbrae station           | 14.1S      | Pending            | CT     | 15-year-old boy                        |
| Jan. 25  | 12:45 PM | Charleston Rd., Palo Alto                     | 33.4S      | Pending            | CT     | 64-year-old man                        |
| Jan.29   | 4:26 PM  | Mt. View station                              | 36.1S      | Pending            | CT     | 28-year old man                        |
| Feb. 12  | 6:37 AM  | Emado Ave., San Jose                          | 60.2N      | Pending            | CT     | Adult man                              |
| Feb. 23  | 4:44 PM  | Ravenswood Ave., Menlo Park                   | 29S        | Pending            | CT     | 30-year-old female driver of a vehicle |
| Feb. 23  | 9:09 PM  | Tunnel #1, San Francisco                      | 1.5S       | Pending            | CT     | Deadhead equipment, adult male         |
| March 2  | 5:09 PM  | Between Blossom Hill and Morgan Hill stations | 59.5S      | Pending            | CT     | Adult male                             |
| March 9  | 6:21 AM  | 1/10 mile south of Churchill Ave., Palo Alto  | 31.1N      | Pending            | CT     | 15-year-old boy                        |
| March 17 | 4:39 PM  | San Antonio station, Mountain View            | 34.1N      | Pending            | CT     | Adult male                             |
| March 29 | 11:40 AM | North of Mary Ave., Sunnyvale                 | 37.9S      | Pending            | CT     | 20-year-old male                       |

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## Eliminate the Means

- Don't run trains
- Block off streets
- Grade separate the railroad

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## News Media Impacts

“The media affords the opportunity for indirect transmission of suicide contagion, the process by which one suicide becomes a compelling model for successive suicides.”

-- *Suicide and the Media*, by Madelyn S. Gould of Columbia University

“Education of the media regarding appropriate reporting of suicides can limit imitation effects and thereby reduce suicide rates.”

-- *National Institute of Medicines 2002 book, “Reducing Suicides: A National Imperative.”*

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## News Media Guidelines

The Society for Professional Journalists revised their Code of Ethics last September, and for the first time proposed including language about covering suicides.

“For the first time, the code speaks to the ethical handling of suicides when it happens to a public person or in a public place. The policy has been widely accepted by professional journalists, but this explains it to others, including the general public.”

-- *SPJ Ethics Code Revision Project*

Proposed language: “Be cautious about reporting suicides that do not involve a public person or a public place.”

The revision is still under consideration.

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## News Media Outreach

### Suicide Reporting Guidelines:

- **National Suicide Prevention Lifeline:**  
“Risk of additional suicides increases when the story explicitly describes the suicide method.”
- **Suicide Prevention Resource Center:**  
“Avoid detailed description of the suicide, including specifics of method and location.”

Media editors meeting, 2010

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## Summary

Caltrain’s program of the three E’s has been and continues to be a prominent activity by the railroad in addressing deaths on the right of way.

- **Enforcement** – An active and effective collaborative program led by Transit Police resulting in many saves.
- **Engineering** – A continuing a program to install additional fencing, to upgrade and improve safety at grade crossings and to investigate technological options available and feasible.
- **Education** – Participation in a range of suicide prevention and mental health awareness activities and organizations and an affirmative role in distributing information about the availability of resources and lifting the stigma of seeking help.

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