Program Evaluation Briefing: Florida Trespass Prevention Research Study

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Office of Research and Development
Washington, DC 20590

Office of the Assistant Secretary for Research and Technology
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Background

- FRA Trespass Prevention Research Study (TPRS)
  - Implemented by Volpe from 2009 – 2013 in West Palm Beach, Florida
  - Purpose: develop national guidelines for community-based trespass prevention (e.g., CARE model) via showing potential benefits, best practices and lessons learned
- FRA R&D Director asked Volpe to evaluate project to
  - Collect lessons-learned from TPRS
  - Inform design of future research
- Evaluation conducted by independent evaluation team
- Evaluation focused on implementation not impact
## CARE Logic Model (Theory of Action)

<table>
<thead>
<tr>
<th>Community</th>
<th>Analyze</th>
<th>Respond</th>
<th>Evaluate</th>
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<tbody>
<tr>
<td>• Describe trespass problem</td>
<td>• Develop data collection and analysis plan</td>
<td>• Identify feasible counter measures</td>
<td>• Assess extent to which response activities in implementation plan were completed as intended</td>
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<td>• Develop stakeholder engagement plan and begin involvement</td>
<td>• Collect trespass data</td>
<td>• Prioritize most feasible counter measures</td>
<td>• Use before and after performance measures check for improvement</td>
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<td>• Organize a problem solving committee with community stakeholders</td>
<td>• Analyze the data collected to determine the root causes of the trespass problem</td>
<td>• Develop counter measures (CM) implementation plan</td>
<td>• Assess extent to which goals are achieved</td>
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<td>• Set the goals of the program</td>
<td>• Implement CM, such as:</td>
<td>• Develop and implement a long term program monitoring plan</td>
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<td>• Identify performance measures and establish baseline</td>
<td>o Education</td>
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<td></td>
<td></td>
<td>o Enforcement</td>
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<td>o Engineering or Environmental Design</td>
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<td>o Other strategies</td>
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Evaluation Questions

Project Design

- What characteristics of design enabled completion as planned? How could design be improved in FOT#2? What methods/viewpoints could HF offer to improve design of FOT#2?

Project Operation

- How did the project’s implementation affect extent goals achieved?
  - **Stakeholder Engagement** – approach to engaging stakeholders?
  - **Site Assessment and Response Planning** – process for assessing risks and designing countermeasures?
  - **Countermeasure Implementation** – What were key factors?

Project Setting

- What characteristics of community and site affected project’s implementation?
Program Evaluation Methodology

- Developed logic model and refined evaluation questions
- Reviewed relevant project source materials
- Interviewed those involved in project implementation
- Reviewed studies of community-based safety interventions
- Compared and contrasted viewpoints expressed among all data sources (e.g., source documents & interview notes)
Evaluation Findings: Benefits

- Fostered relationships among core rail safety stakeholders (SFRTA, FDOT, City of West Palm Beach)
- Stakeholders praised technical rigor and use of train-mounted video to support hazard analysis
- Mobilized core stakeholders to support limited implementation of trespass prevention countermeasures
- Many lessons learned re: challenges of trespass prevention and stakeholder engagement
Evaluation Findings: Project Design

- CARE model was too general to guide specifics of TPRS project’s implementation
- Important to consider lessons-learned from analogous community-based interventions
- Broader range of expertise needed on team to address stakeholder engagement and human factors issues associated with trespassing
Evaluation Finding: Project Operation

- SFRTA locomotive-mounted video data provided reliable dataset for (1) hazard analysis to identify highest trespasser exposure areas; and (2) problem solving on corrective actions
- Trespasser exposure rather than fatalities or near misses are most appropriate safety outcome measure for trespass prevention programs
Evaluation Findings: Project Setting

- Core stakeholders shared FRA’s concerns and remained engaged
- Challenges sustaining broad stakeholder forums;
  - lack of engaged local leadership;
  - jurisdictional complexity; and
  - unrealistic local stakeholder expectations
- Lack of clarity in roles and responsibilities: federal, state, local;
- Confusion re: project’s goals; funding for corrective actions
Community-Based Safety Programs: Findings from Analogous Studies

- The steps outlined in the CARE model are similar to design of other community-based safety interventions.
- Effectiveness of community-based interventions appears highly contingent on site-specific variables.
- Community-based approaches are most effective when:
  - Informed by understanding of community dynamics and capacity and responsive to community conditions, needs, and diversity.
  - Allow community input into issue selection, funding and project design.
  - Use participatory activities and peer-to-peer communications to reach stakeholders.
  - Interventions and funding are sustained for sufficient time period to institutionalize changes (*could mean 5+ years*).
Recommendations for design of future trespass prevention research

- Consider alternative approaches to community-based safety interventions (e.g., grant programs, regulation, best practice studies)

- In designing subsequent trespass prevention studies:
  - Define project goals and success measures more explicitly
  - Establish clear hypotheses, measure baseline, and measure intended outcomes using statistically sensitive indicators
  - Screen and select sites based on: research, issue, funding, “readiness”
  - Clarify roles and funding at onset
  - Pursue more targeted stakeholder engagement strategies