Measure Name	Identify access points for potential trespassers
Definition	Identify locations where trespassers can easily access the railroad tracks to prevent future trespassing.

Tags:

Incident Type	Both trespass and suicide
Location	Both station and right-of-way
Intervention Strategy	Data: application and planning
Measure Group	Risk assessment

Description

Identifying access points that trespassers may take across the railroads right-of-way (ROW) can help prioritize areas for targeting preventive countermeasures before a trespassing problem emerges. Consider the location, layout, and potential function (e.g., shortcut) of a specific access point to understand how to best prevent future trespassing [1]. The number of trespassing incidents can be linked to the types of land usage, mainly occurring in residential or urban areas, as well as the population density, crime rate, and level of poverty in the region [2]. This strategy can be carried out by inspecting the track area, identifying businesses or services nearby, talking with rail crews about their observations, and reviewing Closed Circuit Television (CCTV), including forward-facing cameras mounted on trains. This measure can help prevent potential trespassers from entering the ROW regardless of their intent (suicide or trespass) and deter potential trespass hotspots.

Additional search terms: *clearing, hotspot, opening, path*

Advantages

- This is generally a low-cost effort. The main investment is in the time commitment of staff members or other stakeholders to identify access points and follow-on actions.

- This measure can be implemented with current staff members, and, in some cases, information can be collected during regular operations.

- Identifying the locations where trespassers may access the ROW allows railroads to implement mitigations before incidents occur.

Drawbacks

- Maximum benefits of this strategy are currently unknown, given that there have been no known evaluations of it as of 2024.
- This measure may require coordination with local communities, depending on the physical characteristics of the access points and reasons why individuals would access the tracks in that area, such as being a shortcut to a business or service.

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- Some access points need to be available for emergency services and maintenance.

Notable Practices

- It is important to document the function, location, layout, and frequency of trespassing at a specific access point for future reference [1].

- Monitor the identified access points to assess how effective mitigation strategies are.

- This measure should be used with other mitigation strategies to prevent trespassing at the identified access points.

- Any maintenance access points, and equipment owned by a railroad, or a third party will need to be secured [3].

References

[1] Skladana, Pavlina & Skládaný, Pavel & Tučka, Pavel & Bidovský, Miroslav & Sulíková, Barbora. (2016). Trespassing Railway Property – Typology of Risk Localities. *Transportation Research Procedia*. 14. 2091-2100.

Abstract: Number of train-person crashes in the CR remains constantly very high. Many of these accidents concentrate at localities with frequent occurrence of trespassing. In frame of research project AMELIA (Trespassing railway property – research of situation and proposal of measures for prevention and mitigation of consequences), the localities with high risk of accidents resulting from trespassing were characterized and classified into six basic categories. The typology is supposed to serve as one of the tools facilitating formulation of preventive measures in further stage of the project.

[2] Pennie, D., Ryan, B., & Millis, A. (2021). Motivations for trespass on the GB rail network. *Chartered Institute of Ergonomics & Human Factors.*

This paper reports on an RSSB and Department for Transport funded research project to consider the effectiveness of Trespass Detection and Prevention methodologies. The paper focuses on work to identify the prevalence of trespass, understand why it happens and identify the types of interventions that can be used to try and prevent it from occurring. The work involved a literature review and analysis of trespass data between 2017 and 2020. The output of the work has led to a range of guidance materials, such as how to conduct trespass risk assessment, how to select interventions and then how to measure their effectiveness. This guidance is available on the RSSB website https://www.rssb.co.uk/safety-and-health/improving-safety-health-andwellbeing/trespass/tackling-trespass-risk.

[3] Network Rail. (2015). Network Rail Infrastructure Access Points – Best Practice Design Guide.

Document Excerpt: The purpose of the best practice guide is to identify the relevant design criteria for Network Rail [Road Rail Vehicle] Access Points, which provide the required level of facilities defined by the categorization of the Access Point. [Section 5 of this document provides "Potential solutions for the proposed infrastructure should be designed to provide safe access and operations at Road Rail Access Points."]

Related Measures

- Identify and monitor hotspots
- Identify funding opportunities
- Improved data collection after an incident
- Incident cost estimation
- Planning for events with increased traffic
- Rail corridor risk assessment
- Risk assessment using CCTV
- Station design considerations

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