Safety of Vulnerable Road Users (VRU's) in Light-Rail Transit (LRT) Environment Dataset

Dataset available at: https://digitalcommons.lsu.edu/transet_data/121

(This dataset supports report **Safety of Vulnerable Road Users (VRU's) in Light-Rail Transit (LRT) Environment**)

This U.S. Department of Transportation-funded dataset is preserved by the Transportation Consortium of South-Central States (TRAN-SET) in the LSU Digital Commons Repository (https://digitalcommons.lsu.edu), and is available at https://digitalcommons.lsu.edu/transet_data/121

The related final report **Safety of Vulnerable Road Users (VRU's) in Light-Rail Transit (LRT) Environment**, is available from the National Transportation Library's Digital Repository at https://rosap.ntl.bts.gov/view/dot/61770.

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Abstract: Light-rail transit (LRT), which includes modern streetcars, trolleys, and heritage trolleys, is one of the fastest growing modes of public transportation in the United States. To reduce the cost and complexity of construction, most LRT systems have their tracks placed on city streets, in medians, or in separate at-grade rights-of-way with at-grade crossings. Operating light-rail vehicles (LRVs) along these alignments introduces new conflicts and increases the risk of collisions with vulnerable road users (VRUs) including pedestrians, bicyclists, and electric scooter riders. This study has two main objectives: (1) to review and evaluate the existing body of knowledge and the state of practice regarding safety of VRUs in LRT environments; and (2) to synthesize this information and package the results in a "Best Practices Resource Guide" and a companion "PowerPoint Presentation" for use in improving the safety of VRUs in existing LRT systems and advancing the professional capacity of transit workforce. Metropolitan Planning Organizations and State DOTs should also benefit from this resource information in the planning and design of new LRT systems. This report presents a wide range of physical, educational, and enforcement treatments for improving the safety of VRUs in LRT environments. The selection of a particular treatment for use at an LRT grade crossing or station should be based on an engineering study whose scope and complexity depend on local conditions. Factors that should be considered during device selection include 1) pedestrian-LRV collision experience, 2) pedestrian volumes and peak flow rates, 3) train speeds, frequency of trains, number of tracks, and railroad traffic patterns, 4) sight distances available to pedestrians and LRV operators approaching the crossing, and 5) skew angle, if any, of the crossing relative to the LRT tracks.

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Dataset description:
This dataset contains 1 file collection, described below.

Oregon_Collisions___Annual.zip:
- Oregon Collisions - Annual.xls
- Number of Rail Systems Chart.xlsx
- New Microsoft Excel Worksheet.xlsx
- LRLethality Breakout.xls
- LRCollisionswithPersons.xls
- Houston Rail Accident Logs.xls

File Type Descriptions:
- The .xlsx and .xls file types are Microsoft Excel files, which can be opened with Excel, and other free available software, such as OpenRefine.

National Transportation Library (NTL) Curation Note:
As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (https://ntl.bts.gov/public-access) Section 7.4.2 Data, the NTL staff has performed ***NO*** additional curation actions on this dataset. NTL staff last accessed this dataset at https://digitalcommons.lsu.edu/transet_data/121 on 2022-05-24. If, in the future, you have trouble accessing this dataset at the host repository, please email NTLDataCurator@dot.gov describing your problem. NTL staff will do its best to assist you at that time.