Road-Rail Conflict Study Data, User Information

In 2016, the Joint Transportation Committee (JTC) conducted a study to prioritize road-rail conflicts (at-grade crossing locations NOT projects) statewide in Washington State.

The Legislature directed the JTC to:

- Identify prominent road-rail conflicts,
- Recommend a corridor-based prioritization process for addressing the impacts of projected increases in rail traffic, and
- Identify areas of state public policy interest, such as the critical role of freight movement to Washington's economy.

Primary products of the study were an online mapping tool and spreadsheets with data describing the study crossings, measuring impacts at the locations, and scoring the locations. The study was conducted by a consultant team, composed of Transpo Group, Parametrix, and Berk. An Advisory Panel guided the study, meeting four times over a study period that ran from May to December in 2016. All study materials, including the final report, are on the JTC's Road-Rail Conflict study web page:

http://leg.wa.gov/JTC/Pages/Road-Rail-Study.aspx

This document provides basic information about the study data for users who wish to use or view the detailed crossing location data.

How did the JTC's Road-Rail Conflict study prioritize crossing locations?

Starting with all 4,171 crossings in the Utilities and Transportation Commission database, 2,180 study crossings were selected, which are active, public, at-grade crossings.

Step 1 used easily available data (called Level 1 data) to filter the 2,180 study crossings to identify the crossings likely to have the greatest impacts. The result was a list of 302 prominent crossings.

Step 2 ranked the 302 prominent crossings according to more detailed data (called Level 2 data), to prioritize them according to their mobility, safety, and community impacts as measured by data collected for the study.

What data is included in Level 1 and Level 2?
For more information than included here, see data definitions in Appendix A of the Road-Rail Conflict Study report.

Level 1 Data Summary

Table 1. Step 1 Thresholds by Criteria

STEP 1 CRITERIA	THRESHOLD FOR RECEIVING MAXIMUM POINTS	MAXIMUM NUMBER OF POINTS AVAILABLE
MOBILITY GROUP		
Railroad Classification	Class I Railroads	2
Existing Freight Train Volumes (2015)	10 or more Trains per Day	3
Future Freight Train Volumes (2035)	15 or more Trains per Day	3
Existing Passenger Train Volumes (2015)	10 or more Trains per Day	2
Future Passenger Train Volumes (2035)	10 or more Trains per Day	2
Presence of Unit Trains	Yes	2
Existing Vehicle Volumes (2015)	Greater than 8,000 ADT[1]	3
Future Vehicle Volumes (2035)	Greater than 8,000 ADT[1]	3
SAFETY GROUP		
Presence of Alternate Grade-Separated Crossing	No	3
Number of Mainline Tracks	2 or more	3
COMMUNITY GROUP		
Roadway Classification	Major Collector or higher	2
Previously Identified Project Location	Yes	2

Level 2 Data Summary

Table 2. Step 2 Evaluation Criteria and Sources

STEP 2 CRITERIA	SOURCE DESCRIPTION
SAFETY GROUP	
1. Number of Alternate Grade-Separated Crossings	UTC, Parametrix
2. Number of Mainline Tracks	UTC
3. Proximity to Emergency Services	DOH (Hospital and Fire), Wikipedia/ Google Maps (Police), Parametrix
4. Incident History: Total	UTC
5: Incident History: Severity	UTC
6: Level of Protection	UTC (Geometry Issues), Google Maps/ Transpo (Gates/Lights/Medians)
MOBILITY GROUP	
7: Roadway Freight Classification	WSDOT
8: Existing Vehicle Volumes	UTC
9: Future Vehicle Volumes	UTC, WSDOT, Parametrix
10: Network Sensitivity	WSDOT (Roadway Functional Classification), Google Maps/Transpo (Traffic Signals)
11: Crossing Density	UTC, Parametrix
12: Gate Down Time	FRA/WSDOT/DOE (Train Volumes by Type), Parametrix
COMMUNITY GROUP	
13: Employment Density	EPA Smart Location Database, Parametrix
14: First/Last Mile Freight Facilities	WSDOT (Freight Economic Corridors), Parametrix
15: Population Density	EPA Smart Location Database, Parametrix
16: Daily Emissions	Gate Down Time (see above), EPA (emission factors), Transpo
17: Noise: Quiet Zones	UTC
18: Percent Minority	US Census, Parametrix
19: Percent Low-Income	US Census, Parametrix

Where can Level 1 and Level 2 data be found?

Spreadsheets on the JTC website

The JTC's study webpage also includes a link to downloadable, read-only spreadsheets with the Level 1 and Level 2 data. Appendix A to the Final Report provides data definitions and sources.

Filename: contains Level 1 data for the 2,180 study crossings
Filename: contains Level 1 and Level 2 data for the 302 prominent crossings

Note for users who download this data: If you modify the data for your area, please document the changes. The intent of the study was to make this information publicly available. As users make changes to the data, however, the various copies of spreadsheets will no longer be comparable or produce consistent results. By documenting your changes, any statewide update of the data can benefit from your work.

Online Mapping Tool

The online mapping tool helps to visualize the data, and also contains the Level 1 and Level 2 data for viewing.

http://gisdev.transpogroup.com/jtccrossingstudy/

Appendix D to the Final Report contains an Online Tool Guide. Please refer to that document for how to view data for crossings in your area.