North Central Texas Council of Governments

Dallas Rail Crossing Analysis

Regional Freight Advisory Committee

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Railroad Crossing Analysis Background

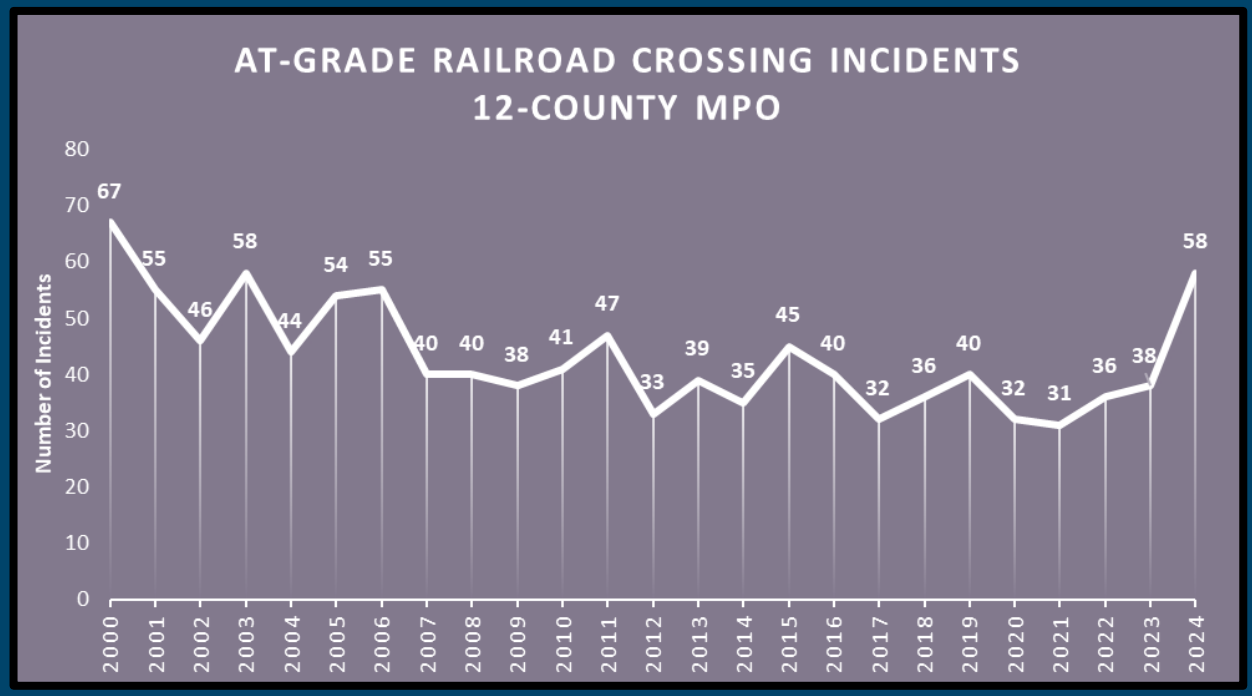
- At-grade rail crossings are a major concern across the region and NCTCOG continues to recognize rail safety as a crucial issue needing to be addressed within our region.
- The first analysis focused on the city of Fort Worth and was completed in 2023.
- Each analysis will be developed to help understand and prioritize rail crossings for potential improvements.
- NCTCOG has identified Dallas as the next location for this analysis.
- The goal of all current and future analysis is to improve safety and reduce congestion at railroad crossings.

Courtesy of NCTCOG

Safety Statistics

Rail Safety

- There were 58 crossing incidents in 2024.
- This increase was primarily in Dallas County, which experienced a rise from 9 to 26 incidents from 2023 to 2024.
- The city of Dallas had 9 total crossing incidents out of the total 26 incidents within Dallas County.



Courtesy of NCTCOG

Rail Crossing Analysis

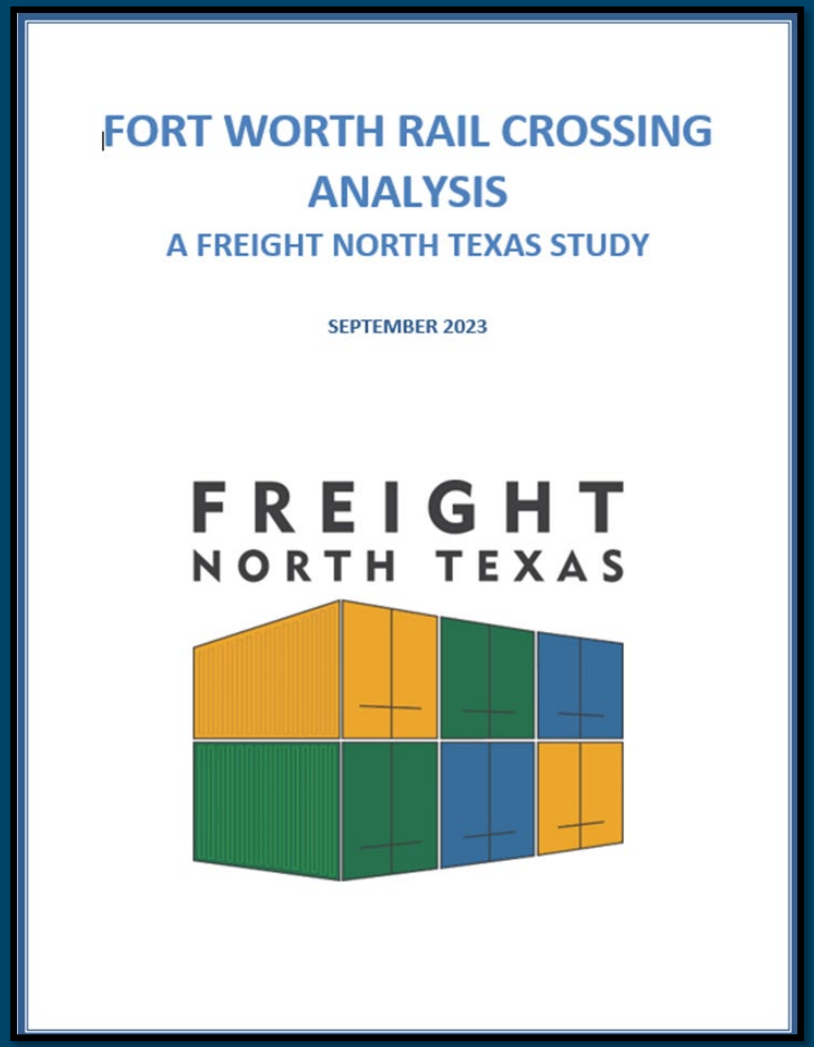
The Process

1) Identify all public at-grade crossings in the city of Dallas
2) Build a database with both quantitative and qualitative information about each crossing
3) Conduct site visits
4) Complete database
5) Develop formulas to prioritize crossings
6) Identify priority rail crossings for recommended improvements

Courtesy of NCTCOG

Rail Crossing Analysis Report

1) Introduction
2) Data Collection
3) Analysis
    a) Quantitative
    b) Qualitative
    c) Crossing Gaps
4) Recommendations
    a) Crossings that would benefit from grade separation
    b) Crossing that would benefit from safety improvements



Courtesy of NCTCOG

Building the Database

Quantitative information included in the review (from FRA)

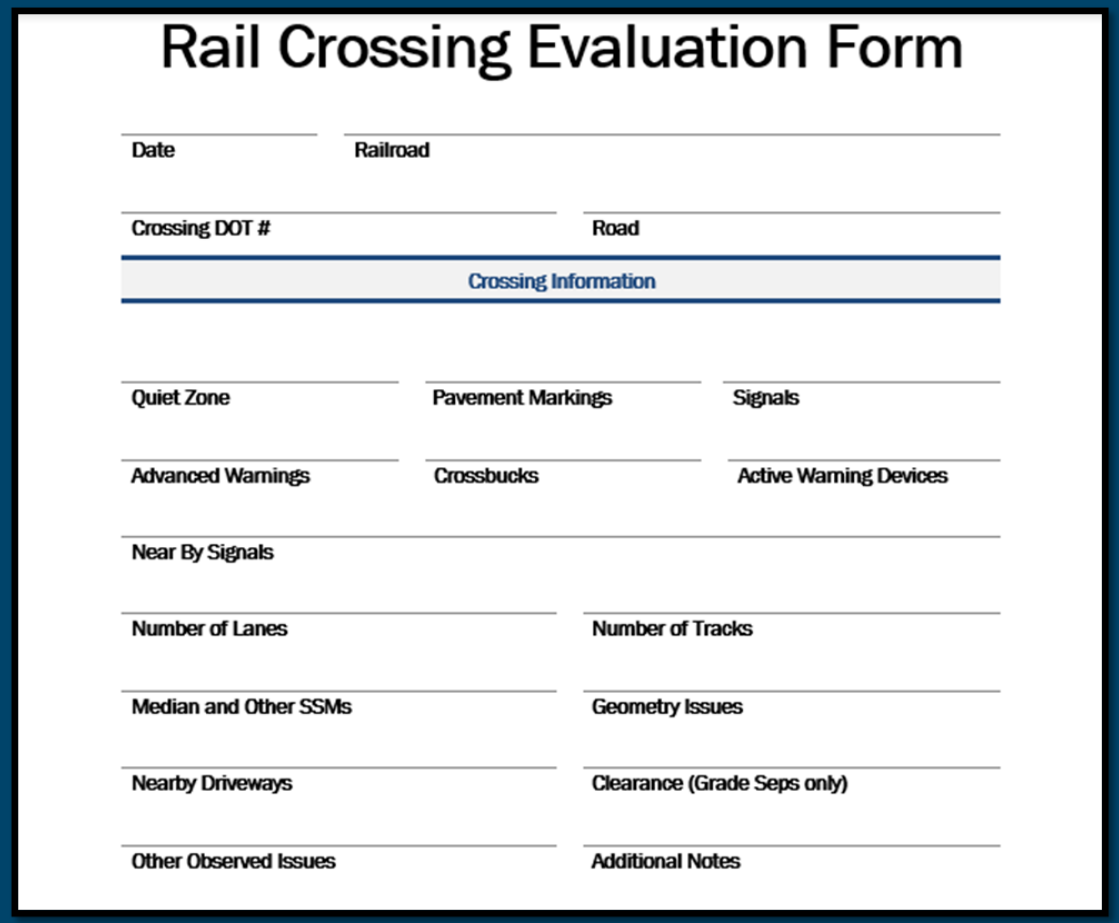
- Number of vehicles a day: Average Annual Daily Traffic (AADT).
- Trains per day: Number of trains that pass through the crossing each day.
- Train speed: Speed of the train when it passes through the crossing.
- Crossing Incidents: Number of accidents at the crossing from 2014-2024 (10 years).

Courtesy of NCTCOG

Building the Database

Qualitative information included in the review (from site visits)

- Active Warning Devices: Includes gates and lights that activate when a train approaches the crossing.
- Static Warning Devices: Includes pavement marking and standard signage such as crossbucks.
- Supplemental Safety Measures: Includes medians, supplemental signage, etc.
- Observed Conditions: Includes geometry issues and number of roadway lanes, etc.



Rail Crossing Evaluation Form

Date | Railroad

Crossing DOT # | Road

Crossing Information

Quiet Zone | Pavement Markings | Signals

Advanced Warnings | Crossbucks | Active Warning Devices

Near By Signals

Number of Lanes | Number of Tracks

Median and Other SSMs | Geometry Issues

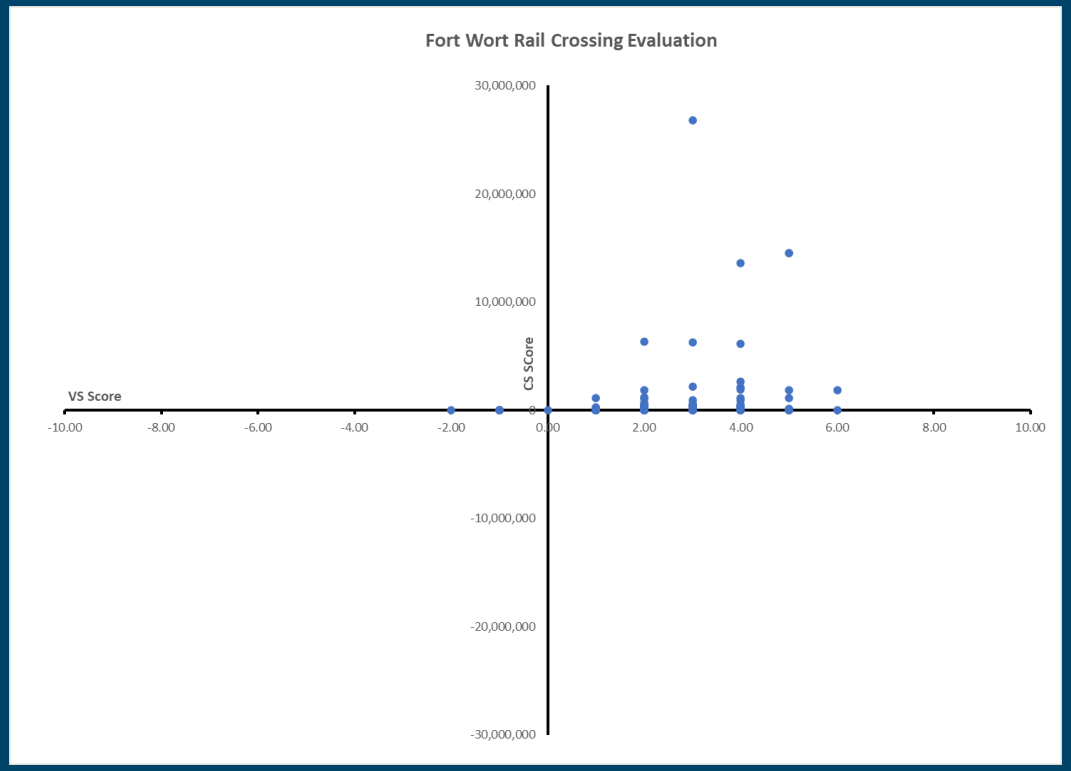
Nearby Driveways | Clearance (Grade Seps only)

Other Observed Issues | Additional Notes

Courtesy of NCTCOG

Quadrant Analysis

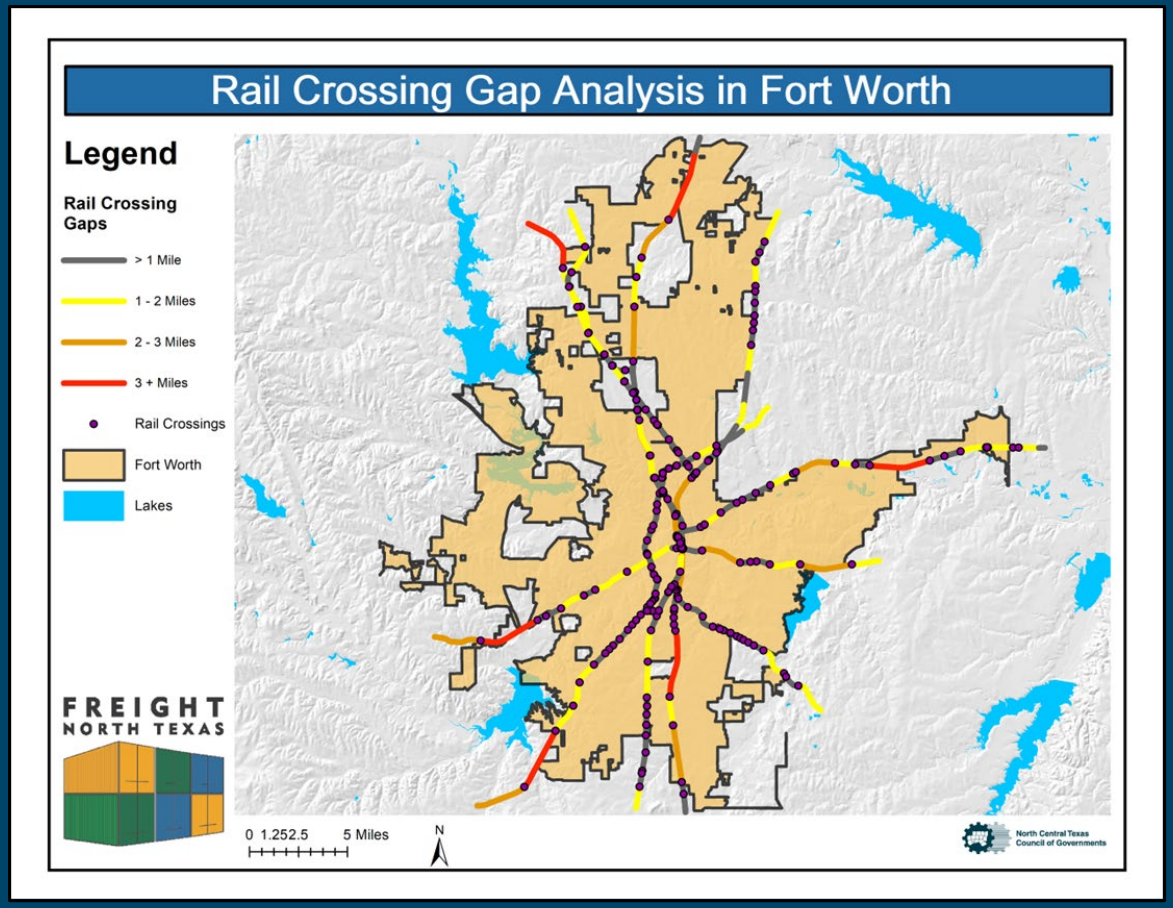
- Once the database is completed, the crossings will be filtered to focus on mainline crossings only.
- An initial analysis will focus on the quantitative and qualitative results separately.
- These two datasets will then be combined using a quadrant analysis.
- This approach will make better use of both quantitative and qualitative data for each crossing.
- The result of the analysis will be a list of high priority crossings.



Courtesy of NCTCOG

Crossing Gap Analysis

- An analysis will be completed to identify where there is enough space to hold a 1-mile, 2-mile, or 3-mile-long train without occupying a crossing.
- This will be cross-referenced against the list of high priority crossings.
- NCTCOG understands there are many factors that determine where a train is held; this analysis will be used to identify potential locations only.



Courtesy of NCTCOG

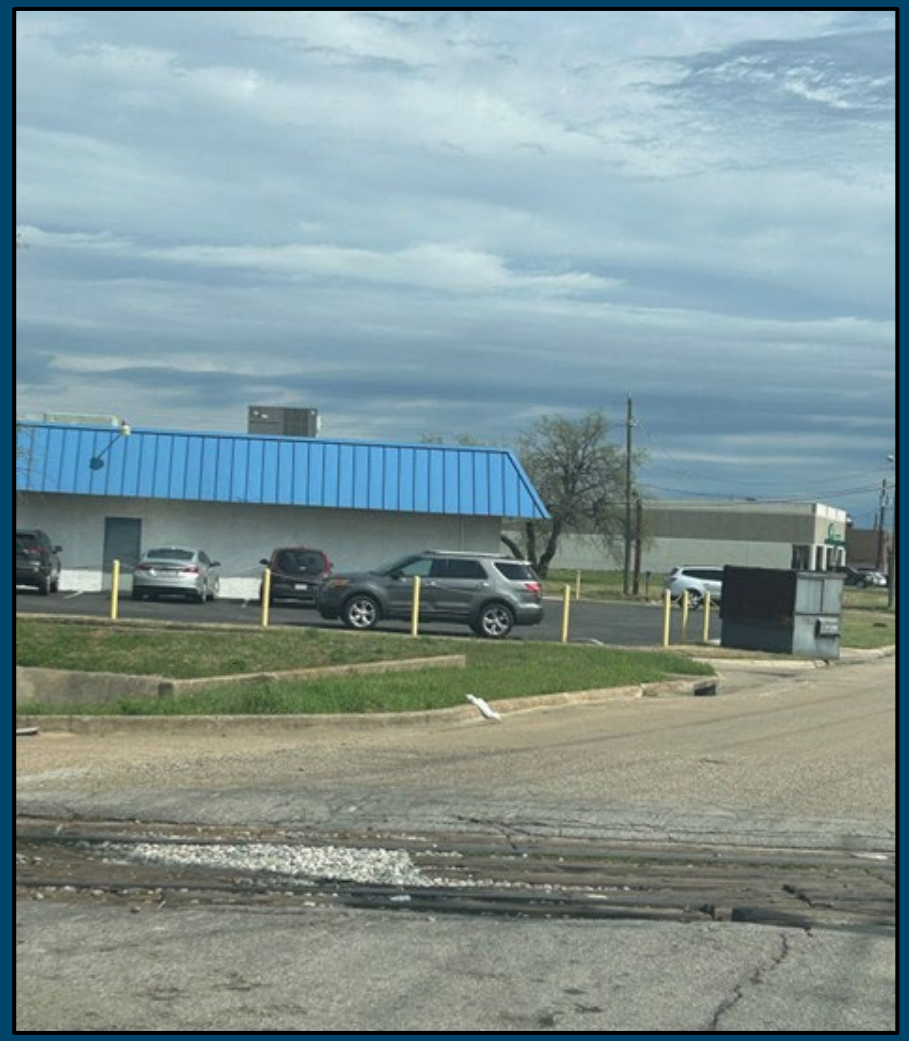
Recommendations/Next Steps

Recommendations:

- Prioritize potential future grade separations
- Assist in future discussions with railroads and cities to avoid blocked crossings
- Possible recommendations for safety improvements at crossings (ex. update pavement markings, working signals, etc.)

Next Steps:

- Complete the Dallas Rail Crossing Analysis Report
- Continue this analysis for other cities within the region



Courtesy of NCTCOG

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