North Central Texas
Council of Governments

Fort Worth
Rail Crossing Analysis

Mike Johnson | Regional Freight Advisory Committee | 5/09/2023

Railroad Crossing Analysis

Grade Crossings in North Central Texas

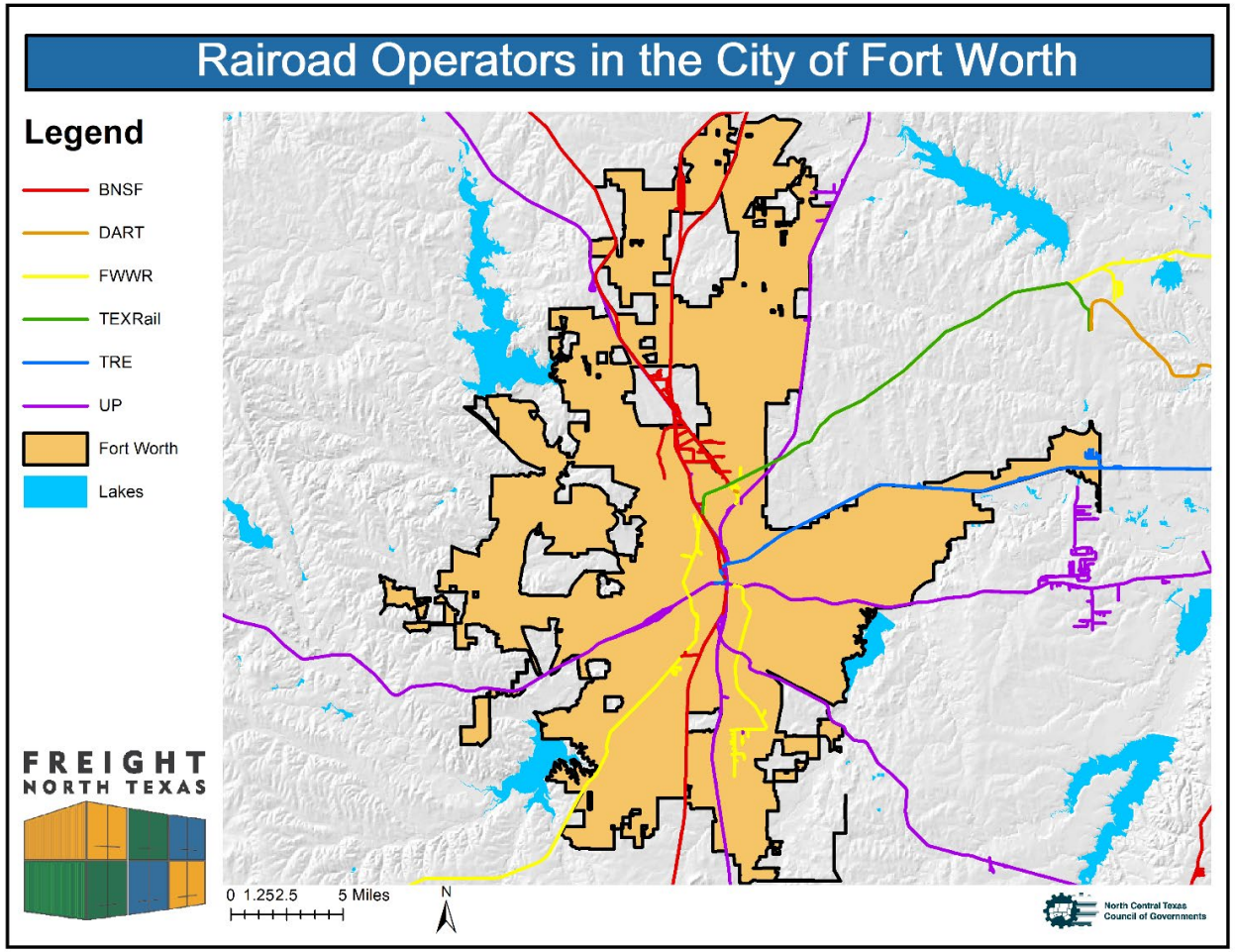
- At grade rail crossings are a major concern across the region.
- This analysis is focused on the City of Fort Worth .
- An analysis was developed to help understand and prioritize rail crossings for potential improvements.

The goal of this analysis is to improve safety and reduce congestion at railroad crossings.

Included in Railroad Crossing Analysis

What is included in the Report?

1) Introduction
2) Data Collection
3) Analysis
    1) Quantitative
    2) Qualitative
    3) Crossing Gaps
4) Recommendations



Source: NCTCOG

Railroad Crossing Analysis

The Process-

1) Identify all public at grade crossings in the City of Fort Worth
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

Building the Database

Some information included in the review – Per FRA

Quantitative:

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 2012-2022 (10 years)

Building the Database

Some information included in the review – Per Site Visits

Qualitative:

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 and bollards, etc.

Observed Conditions: Includes geometry issues and number of roadway lanes, etc.

Quadrant Analysis

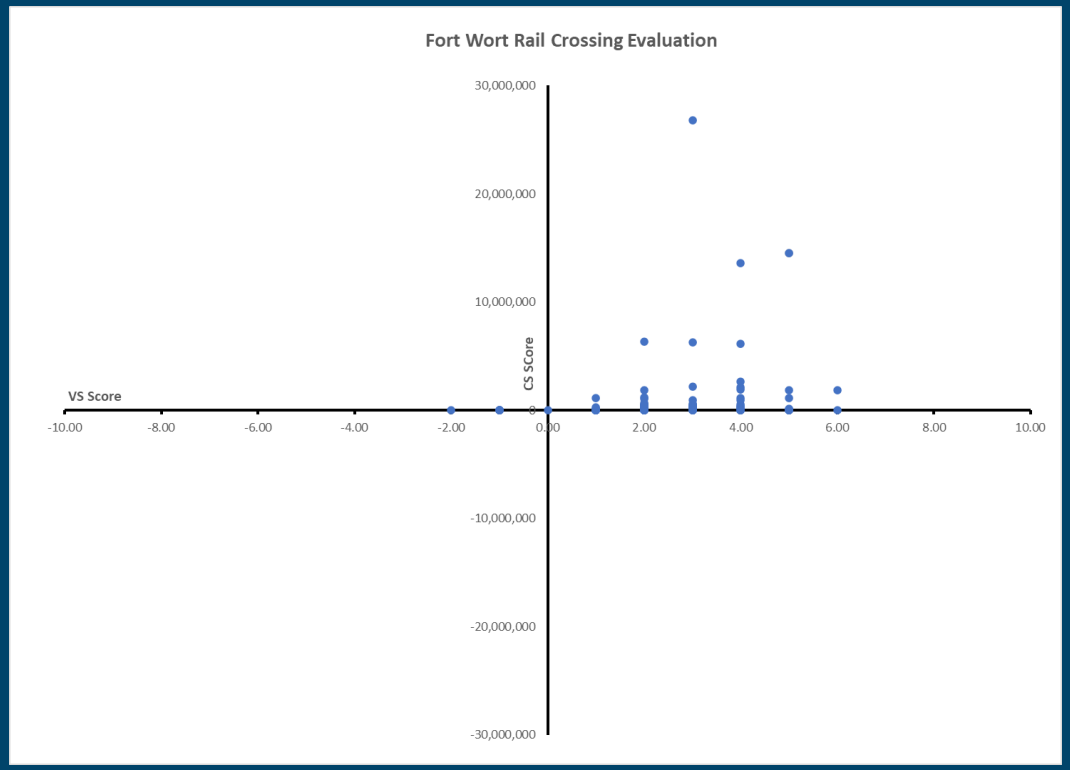
Once the database was completed, the crossings were filtered to focus on mainline crossings only

An initial analysis was completed that focused on quantitative and qualitative results separately

These two datasets were then combined using a quadrant analysis

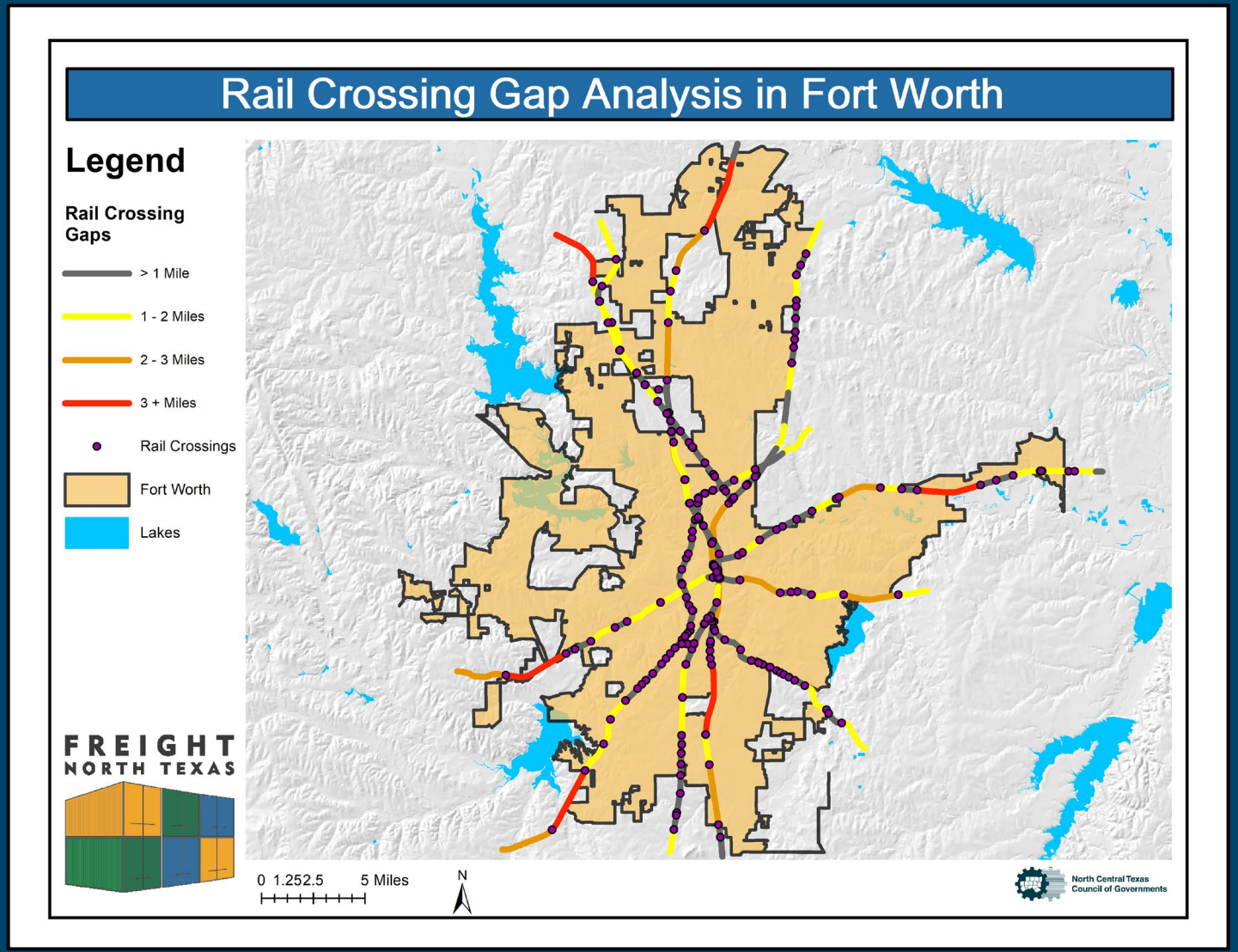
This approach made better use of both quantitative and qualitative data for each crossing

The result of the analysis was a list of high priority crossings



Crossing Gap Analysis

- An analysis was 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 was cross referenced against the list of high priority crossings
- NCTCOG understands there are many factors that determine where a train is held; this analysis was to identify potential locations only



Source: NCTCOG

Recommendations/Next Steps

Recommendations:

- Prioritize potential future grade separations
- To 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 report for City of Fort Worth
- Work with the city to establish funding programs for safety improvements
- NCTCOG plans to do this analysis for multiple cities within the region

Source: NCTCOG

Questions?

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