ROAD INTERSECTIONS NEAR LEVEL CROSSINGS

2014 GLCX Symposium

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Summary of Presentation

- Snapshot of Railroad-Highway Crossings in State of Texas
- Texas DOT role in Railroad Highway crossing safety
- Overview of Texas Highway-Rail Grade Crossing Safety Action Plan
- Overview of Preemption, different programs we are using to address the Action Plan

Texas Rail-Highway Grade Crossing Summary

- 16,906 railroad-highway crossings in State
  - 9,731 Public
  - 4,799 Private
- For Public Crossings:
  - 6,069 Active (Train Activated lights, gates)
  - 3,662 Passive (signage only)
  - 2,376 Grade Separated
- 10,384 Miles of Rail
- 301,796 Miles of TxDOT managed Roadways
- 67 Accidents from January 1 thru March 31, 2014

TxDOT Rail Safety Section Organization

- Rail Safety Section is part of Traffic Operations Division
- Rail Safety Section is divided into Rail Safety Inspection Branch and Rail Highway Safety Branch
  - Rail Safety Inspectors perform rail inspection and respond to reports of railroad accidents and complaints of unsafe/hazardous railroad conditions
  - Rail Highway Safety Branch (RHS) is responsible for following:
    - Railroad-Highway crossing Inventory
    - Management of Federal Railroad-Highway Safety Program
    - Management of State crossing maintenance funds
    - Obtaining Agreements for Railroad-Highway crossing projects

2011 Texas Highway-Rail Grade Crossing Safety Action Plan

Texas Highway-Rail Grade Crossing
Safety Action Plan

August 2011

Texas
Department
of Transportation

Summary of 2003-2007 Crash Data

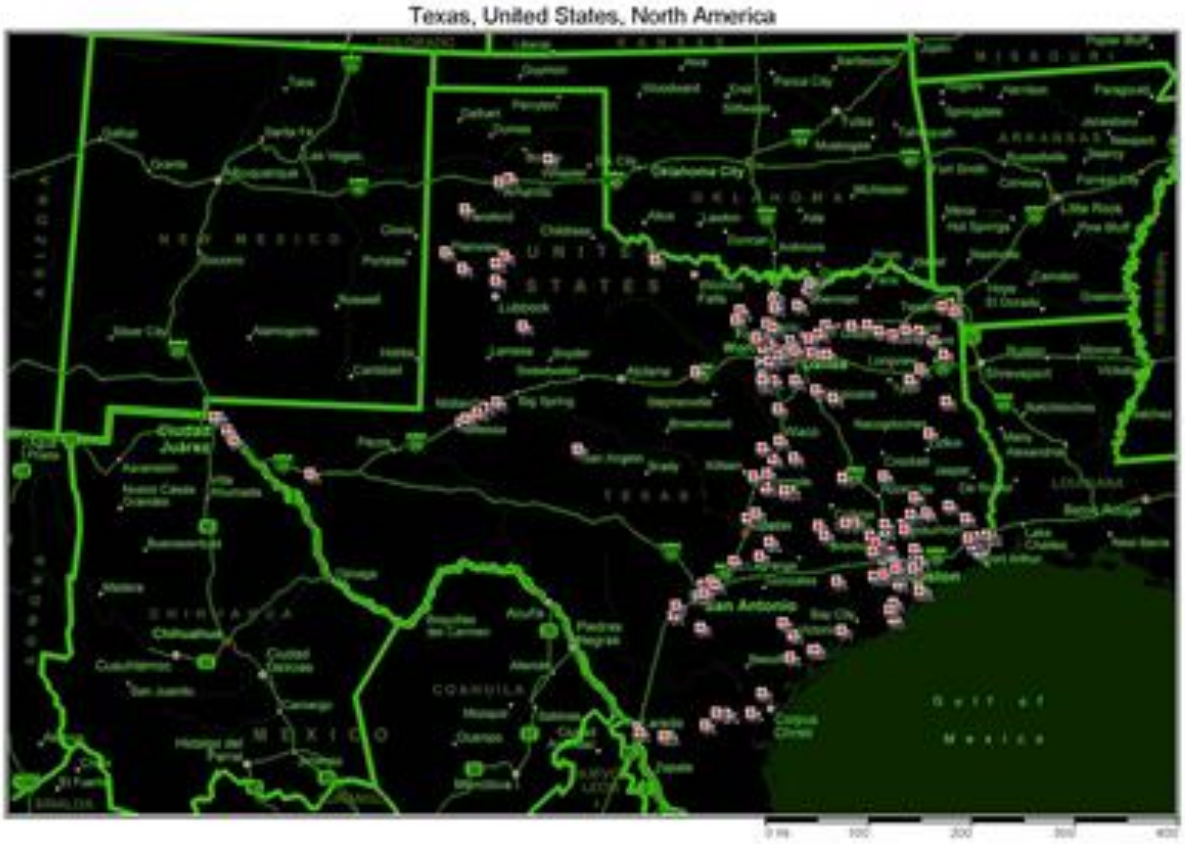
- Data used to Create the Rail Grade Crossing Safety Action Plan
- 1,328 train-vehicle collisions at 1,044 crossings during 2003-2007
  - 61% occurred at active railroad crossings
  - 35% occurred at multiple-collision crossings
    - 80 % occurred at crossings located within close proximity of a nearby Highway intersection
    - All bus collision and > 40% of semi-truck involved accidents were at multiple collision crossings
  - -42% of the 1,328 collisions occurred at crossings located less than 75 feet from traffic intersection

See Page 8, Overview of Significant findings

Texas Highway-Rail Grade Crossing Safety Action Plan

- Texas is in the top 10 most rail-highway accidents Nationwide
- Plan was initiated in 2009
- Highlights of the Railroad Crossing Action Safety Plan
  - Revised Section 130 project selection to look at multi-crash locations
  - Use Section 130 funding to encourage crossing closure
  - Update Preemption at Interconnected Crossings
  - Focus of Crossing Corridor Safety Upgrade Projects
  - Encourage local participation in Stop-Yield sign upgrades for passive crossings
  - Identify Passive crossing with limited Sight Distance for Signal upgrade or Closure
  - Work with Railroads for cost participation at these crossings

Summary Map of Multi-Crash Locations



Traffic Signal Preemption

- Traffic Signal preempted by Railroad crossing equipment
- Similar to Emergency Vehicle preemption of a traffic light
- Goal of Railroad Preemption is to clear any vehicles queued across a railroad crossing before the train arrives.
  - Advanced Preemption allows for the traffic signal to change before the railroad crossing signals activate.
  - Simultaneous Preemption has the traffic signal be preempted at the same time the railroad crossing signals activate
  - Simultaneous Preemption can also be used for train activated signs and/or photo enforcement
  - Pre-signal & Queue cutter- Traffic signal controls that can stop traffic before a railroad crossing.
  - NO indication that the Railroad has preempted the crossing

Federal Railroad-Highway Safety Program

- Called FSP and Section 130
- Federal Highway Safety funds dedicated to improving safety of public railroad-highway at-grade crossings
- Funds are used on both TxDOT and local agency managed roads
- Approximately $15 Million Authorized each year
- Projects involve both Active or Passive crossings
- TxDOT uses data driven approach for preliminary project selection
  - crossing inventory, accident information(FRA, not CRIS), TxDOT District, Local Agency and Railroad input
- New Emphasis is on Multiple-crash locations
- Typical 3 years from project selection to new improvements in service

Crossing Consolidation and/or closure

- Crossing Closure & Consolidation
  - Federal and Railroad funds are available to assist in closing the crossing
  - Funds can be used by the local agency to mitigate the closures
  - Federal funds are managed by RHS
  - Requests made by Local Agency to TxDOT District or RHS
  - 7 Closures to date under this program (average 2/year)
  - Other Options include grade separation under other program funding

Corridor Projects

- May need to look at overall picture
- Modifying train signal detection at 1 crossing may overlap into adjacent crossings
- Corridor approach allows Diagnostic team to look at non-rated crossings that affect the rated crossing
- Allow for common driver expectation

QUESTIONS???

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