182 public at-grade crossings in the city

Fort Worth RR Safety Program:
- Railroad Signal Installation - TxDOT
- Quiet Zone Program
- Crossing Surface Improvement Program
- Signs and Pavement Markings Program
- Battery Backup Project
- Railroad ITS Applications
- Traffic Signal Preemption Program
- Channelization Program
Railroad Signal Installations

TxDOT Federal Signal Program ($30M/yr)

- TxDOT call for projects November each year
- Priority Index Formula (ADT, Trains/day, Collisions)

TX Public Crossings = 10,045
TX Public Crossings w/ Gates: 48%
CFW Public Crossings w/Gates: 77%

Railroad Signal Installations

Installation of gates and lights alone does NOT create a safe crossing!

45% of all collisions and fatalities occur at crossings with gates and lights.
Quiet Zone Program

Federal Railroad Administration Data:
• 343 Quiet Zones (3072 Crossings)
• 189 Pre Rule and 154 New QZ
• Collisions at New QZ = 46 (after 37)

20% Reduction in Collisions

Quiet Zones In Fort Worth

<table>
<thead>
<tr>
<th></th>
<th>Street Closure</th>
<th>Median Barrier</th>
<th>Wayside Horn System</th>
<th>4-Quadrant Gate System</th>
<th>One-Way Street Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Planned</td>
<td>10</td>
<td>16</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>20</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>
## Crossing Surface Improvement Program

<table>
<thead>
<tr>
<th>Program</th>
<th>Amount</th>
<th>Crossings</th>
<th>Crossings</th>
<th>Tracks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>$113,000</td>
<td>6</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>2009</td>
<td>$192,000</td>
<td>15</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$305,000</td>
<td>21</td>
<td>14</td>
<td>9</td>
</tr>
</tbody>
</table>

UPRR Gate and Dickson Street

UP and Dickson Street
Channelization Program

- Add centerline median or channelization material to prevent gate “drive-arounds”
- Other geometric improvements
Safety Issues:
1. Gate Location
2. Parking
3. City Bus
4. Gate Operations
5. Drive Arounds

Fort Worth Preemption Program

Phase 1 – General Field Investigation
Phase 2 – Detailed Field Investigation
Phase 3 – Final Report and Recommendations
Phase 4 – Develop City Policy, Training & Inspection Program
Phase 5 – System Upgrade, Standardization, and Modernization
PHASE I – RESULTS
INSPECT AND FIELD TEST PREEMPTION

18 Preempted Crossings
• 8 Sites required adjustments.

➢ Three Constant Warning Time Adjustment
➢ Two Track Clearance Green Adjustments
➢ Three Locations not working at all

HXP3 Settings:
WT = 30 sec
TWT = 31 sec

Design:
WT = 25 sec
APT = 15 sec
TWT = 48 sec

Vehicle Starts to Move
Gates Are Down!

Simultaneous Versus Advanced Preemption
Do you have Preemption? Or The appearance of preemption?

MAINTENANCE ISSUES

Traffic Signal Maintainer’s Trouble Report:

Intersection locked in Preemption.
Found Preemption switch in **test** position.

Turned it OFF.

“WORKING FINE”

!!!
Laminated Card in Traffic Signal and Railroad Cabinets

!! WARNING !!

This location has an Interconnection to the Highway Traffic Controller from the Railroad Grade Crossing Signal system.

BNSF & Intermodal Pkwy       DOT# 020 644G

This interconnection provides 19 seconds of ADVANCED PREEMPTION.

RAILROAD, DO NOT MODIFY the Warning Time as designed for the Crossing Signals or Advanced Preemption time.

CITY, DO NOT MODIFY any Railroad Preemption Data as designed in the Traffic Signal Controller.

If preemption is disabled or not working, notify the railroad dispatch immediately at the number provided below.

The following personnel must be notified and authority received before any changes are made.

City:  Dispatch  817-392-8100  Tim Oster  817-944-0864  Russ Wiles  817-999-7915

Railroad:  Dispatch  800-861-3657  817-772-5328

FRA Collision Report

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Collisions</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>10</td>
<td>11</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Website Items:

• RR Program Overview
• Guideline for Project Selection
• QZ Establishment Process
• Sample NOI & NOE
Signs and Pavement Markings

TRE & Calloway Cemetery Road

Accidents before installation = 5
Accidents after installation = 0