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GOVERNOR

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
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SHERRI H. LEBAS, P.E
SECRETARY

August 24, 2011

Ms. Jo Strang
Associate Administrator for Office of Safety
U. S. Department of Transportation
Federal Railroad Administration
1200 New Jersey Ave., SE.
Washington, DC 20590

Subject: Louisiana Highway/Rail Grade Crossing Safety Action Plan – FY 2012-2016

Dear Ms. Strang:

Louisiana Department of Transportation and Development (DOTD), Highway/Rail Safety Unit, in cooperation with other DOTD sections and FHWA and FRA Division personnel, has revised the previous Highway/Rail Safety Action Plan (AP) to continue to improve safety at our highway/rail grade crossings.

In compliance with Title 49, Part 234, Subpart B, we are respectfully submitting the report and hereby requesting your review and approval. The AP identifies specific solutions for improving safety, including closures and grade separations, focuses on multiple crash and high risk crash sites, and covers a five year time period.

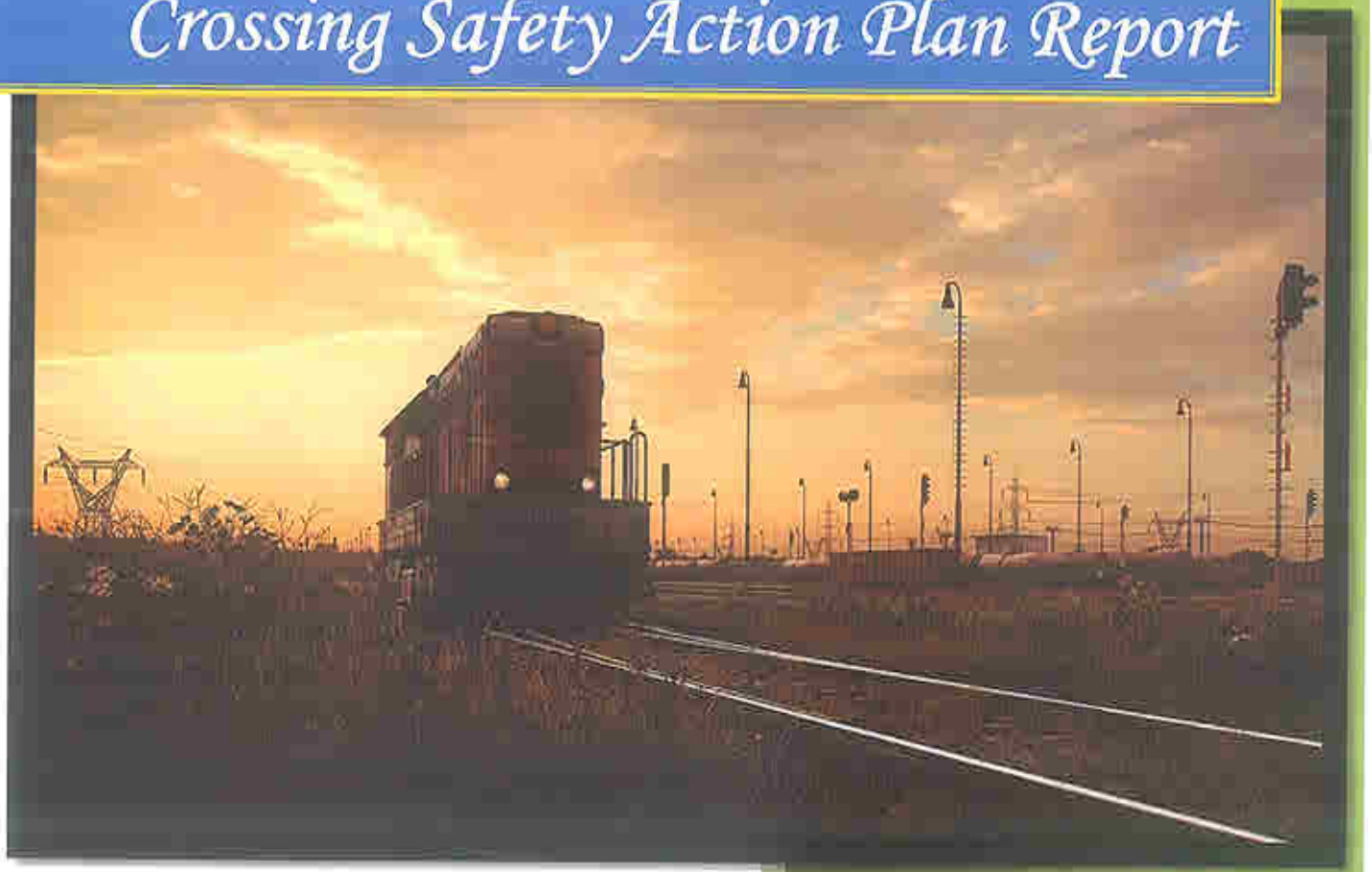
Should you have any questions or need additional information, please contact Simone Ardoin, Assistant Road Design Engineer Administrator, at (225)-379-1951 or Mr. Bill Shrewsberry, Highway/Rail Safety Engineer, at (225) 379-1543.

Sincerely,

for Sherri H. LeBas, P.E.
Secretary

SAA
Attachments
pc: Mr. Charles W. Bolinger, FHWA Division Administrator (w/2 att.)
Ms. Carolyn Cook, FRA Regional Manager (w/att.)
Mr. Richard Savoie
Ms. Janice Williams
Mr. Chad Winchester

Crossing Safety Action Plan Report



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LADOTD

August 2011

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Louisiana Highway/Rail Grade Crossing Safety Action Plan – FY 2012-2016
Executive Summary

The State of Louisiana's Department of Transportation and Development (LADOTD) is hereby submitting the "Louisiana Highway/Rail Grade Crossing Safety Action Plan – FY 2012-2016" (Action Plan) to the Federal Railroad Administration as required by the Rail Safety Improvement Act of October 2008 and detailed in the Federal Railroad Administration's final rule in Part 234 of the Code of Federal Regulations (Title: 49 Transportation). The"Action Plan" submitted herein is the result of updates to a living document which has been continually revised and updated over the past five years and has guided "Education, Engineering and Enforcement" efforts for improving crossing safety in Louisiana. The original "State of Louisiana Highway-Rail Grade Crossing Safety Plan of March 2006" was developed over a 17 month period from August 2004 through March 2006 and was submitted to the Federal Railroad Administration in April of 2006.

Background

The U.S. Department of Transportation's Office of Inspector General issued a report on grade crossing safety in June, 2004 and suggested state safety action plans should be initiated by the six states with continued high frequency of multiple-incident collision locations. At the request of both Federal Highway Administration (FHWA) and Federal Railroad Administration (FRA), the State of Louisiana's Department of Transportation and Development (LADOTD) agreed to pilot the development of a "Highway-Rail Grade Crossing Safety Action Plan." The LADOTD worked with no additional funding to develop a plan and worked in cooperation with Louisiana Operation Lifesaver (LAOL), Louisiana Highway Safety Commission (LHSC), Louisiana State Police (LSP), the Louisiana Technology Assistance Program (LTAP) and the Class I railroads. Technical assistance for development of the plan was provided by FHWA and FRA.

Summary of the "Action Plan"

As required by the FRA rule for developing "State Action Plans" (CFR Part 234), this plan maintains the original plan's focus that addresses (1) mitigating collisions at multiple-incident locations, (2) development of a crossing consolidation program (originated in the original plan) and (3) the initiation of a "Grade Separation Program." A five year data report (2005-2009) summarizing collisions for all public crossings, as well as those collisions at multiple-incident locations, is included in Appendix C. The original "Action Plan- FY 2006-2011," with its six year data analysis (1999-2004), conclusions and "action items" is also included because the new plan builds upon the original plan (see Appendices A & B). A newly updated "Action Plan", with a five year implementation timeline, has been developed by LADOTD with assistance from LAOL, LTAP, FHWA and FRA. The new "Action Plan" will be included in the state's Highway Safety Improvement Plan as was the original plan and its updates since 2006.

The new "Action Plan" details the proposed action items and outlines (1) what the desired outcomes are, (2) who will lead those efforts, and (3) timelines with measurable progress. The new "Action Plan" also has detailed action items for the following areas: Annual FRA Report and Data Review, Review of Multi-Collision Locations Reviews, Highway/Rail Safety Program Documentation, Crossing Inventory, Grade Crossing Closure and Consolidation Policy and Project List, Crossing Signal Preemption, Crossbuck Assembly Program, Operation Lifesaver Enforcement Education Programming, Outreach to Local Road Authorities, Railroad Safety Conference, Creation of a Statewide Railroad Operations Coordinator Position, Field Testing of Innovative Technology, and Railroad Grade Separation Program. Please see the last section of this report for the new "Action Plan".

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Multiple-Collisions: Comparison of Data Reports:

The data analysis, performed by LADOTD, for the original plan (March 2006) looked at a six year period of collision data (1999-2004). The data report for the new "Action Plan" (FY 2012-2016) looked at a five year period of data (2005-2009) and was provided by FRA (see Appendix C). The new data report contains a more extensive analysis of the data than did the previous report. Analysis for the 1999-2004 data report indicated that a total of 521 statewide collisions occurred during this six year period. During the five year period analyzed in the new report (2005-2009), 509 total statewide collisions occurred and while this is a slightly higher rate of collisions, the new report shows that the number of multiple-incident locations has declined from 50 percent of total collisions (1999-2004) to 44 percent (see Table 1 of the new report in Appendix C). The total number of collisions which occurred at crossings without gates fell from 85 percent (1999 to 2004) to 79 percent (2005 to 2009). The number of total collisions at crossings within 75 feet of an adjacent intersection also fell from 78 (1999 to 2004) to 58 percent for statewide collisions (2005 to 2009) and from 97 percent (1999 to 2004) to 50 percent (2005 to 2009) for multi-incident collisions. The total number of multiple-incident collisions declined from 432 (1999 to 2004) to 223 (2005 to 2009) and the number of multiple-incident collision locations fell from 177 locations (1999 to 2004) to 85 (2005 to 2009).

There is some data available in the new tables that were not as thoroughly examined in the original data report (1999-2004); such as data found in Table 6a, Table 7 and Table 8. Table 7 shows collision data reported by the railroads (FRA form 6180.57 report) which indicates that an "active" device was also interconnected with a nearby traffic signal for 22 of the statewide collisions and that 14 of them (63.64 percent) occurred at "multiple-incident" locations. Table 8 shows that a high number of collisions at crossings located within 75 feet of an adjacent intersection were among the collisions at multiple-incident locations. For example, of the 16 statewide collisions where an active warning device was "interconnected" with a nearby traffic device, 81.25 percent of them were multiple-incident collisions. Table 8 also shows that for the 216 collisions, with only passive devices installed, 50 percent of them were multiple-incident collisions. It should be noted that Table 6b and Table 8 (2005-2009) included collision reports linked to the FRA Grade Crossing Inventory and therefore the data is not complete due to the problem of incomplete data in the FRA Inventory.

A comparison of the two data reports (1999 to 2004 versus 2005 to 2009) shows that Louisiana has made improvements since the original "Action Plan – FY2006-2010." The more recent analysis (2005-2009) shows that a focus on multiple-incident collision locations is still reasonable and this was the decision reached at the recent stakeholders meeting in Baton Rouge (May 16, 2011). Therefore, the new "Action Plan" continues to focus on "action items" which will help reduce multiple-incident collisions and improve the overall quality of programming efforts for crossing improvements.

Crossing Consolidation Program

In 2006, LADOTD was given statutory authority to close grade crossings through administrative procedure. LADOTD considered use of this authority to be an "action item" which was included in the original "Action Plan – FY 2006-2010." The state has not used this authority to date but has begun the process in Ascension and Rapides Parishes to make the local communities aware of the need to close redundant crossings. The new "Action Plan" will follow LADOTD's "Highway/Railroad Grade Crossing Consolidation and Closure Procedures" as guidelines for using the state's authority. The new goal will be to initiate proceedings to close two crossings per year for each of the "Action Plan's" years.

Grade Separation Program

In 2010 LADOTD began a new program dedicated to constructing grade separations at existing crossings. This program will focus on Louisiana State Routes for the initial years. This Program is meant to eliminate at-grade highway/railroad crossings, which are resulting in collision incidents and roadway and railway delays, and replace with grade-separated crossings. This Program is meant to improve the transporting of Louisiana's people, goods and services by starting with localized issues that will impact the transportation system on a grander scale.

This program's process will be documented according to federal requirements as it is a new LADOTD program. This program will also incorporate input from local LADOTD district personnel, the Louisiana Metropolitan Planning Organizations (MPOs), any railroads actively operating in Louisiana, the local government officials, local traffic

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engineers, local police agencies, and local citizen inputs provided to LADOTD through the Public Information/Customer Service Section's efforts.

The State of Louisiana Highway/Rail Grade Crossing Safety Action Plan – FY 2012-2016

Item No.	Action Item *(what)*	Desired Outcome *(why)*	Lead Agency/Person(s) *(who)*	Timeline/Progress/Comments *(when)*
1	**FRA REPORT & DATA REVIEW** • FRA will annually issue a report on the last five years of Louisiana highway/rail crossing collisions for review by DOTD and the RR Safety Committee.	• To serve as a cross reference between the RR Safety program and the FRA data and effective planning of safety funding. • Annually DOTD will check for inconsistencies between FRA and DOTD data.	FRA / DOTD Carolyn Cook/ Bill Shrewsberry/ Ben Valmoria	• FRA will provide LA DOTD their five year collision report by May 31, of each year. • This annual report will be reviewed by DOTD, FRA, FHWA & appropriate RR's. • Any recommendations or changes to the State's RR Safety Program list due to this report will be submitted to the RR Safety Program Committee prior to the annual selection committee meeting.
1a	**MULTI-COLLISION LOCATIONS - PRELIMINARY REVIEWS** • Conduct data and preliminary field reviews of multi-collision Hwy/Rail crossings locations over the past 5 years, based on FRA report, to determine which locations should be considered for the program.	• To perform data and preliminary field reviews for multi- collision crossings and document the crossings' recommended actions; warnings, enforcement, closures, etc.	DOTD Bill Shrewsberry	• Complete data and preliminary field reviews of multi-collision crossings, as applicable, and add locations for closure or upgrade to the State RR Safety Program list in accordance with Action Items 1b, 3 & 4. • The State's RR Safety Program list contains many of these multi-collision crossings already programmed with Diagnostic Reviews (DR). • All projects selected for the State RR Safety Program will have formal DRs performed prior to construction. • This process will repeat every year after receipt of FRA data.
1b	**HIGHWAY/RAIL SAFETY PROGRAM DOCUMENTATION** • Review, update, and document the Highway/Rail Safety Program project selection and prioritization process	• All procedures are documented	DOTD Bill Shrewsberry	• Documentation for crossing upgrades and consolidation/closures project selection and prioritization is complete by June 30, 2012. • Documentation for Preemption and Innovative Technology project selection and prioritization is complete by December 2012.
2	**CROSSING INVENTORY** • Enter into and maintain a contract to develop a RR inventory solution compliant with RSIA and which interfaces with FRA data for public and private crossings.	• To better provide safety summaries of Hwy/Rail crossing data and allow for transfer of new FRA data info between the individual RR's and FRA in accordance with new federal RSIA law. • To accommodate the resumption and "syncing" of inventory data once again between DOTD and the FRA.	DOTD Bill Shrewsberry	• Contract in place October, 2011. • Report inventory to FRA prior to September 30, 2012, and annually thereafter. • This contract will have a three year time line. This RR inventory item will be kept and revised as needed for our five year AP.
3	**CLOSURE/CONSOLIDATION POLICY** • Develop and refine DOTD policy for closures/consolidations using the state law (RS 48:390. 1).	• To have formal documents supporting DOTD's recommendations for closures/consolidations on State and local roadways.	DOTD Simone Ardoin	• Finalize Closure/Consolidation Documents and have approved by DOTD Chief Engineer by December 2011. • Continue to review and refine procedures based on "lessons learned" in applying the processes.

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Item No.	Action Item *(what)*	Desired Outcome *(why)*	Lead Agency/Person(s) *(who)*	Timeline/Progress/Comments *(when)*
4	**CLOSURE/CONSOLIDATION PROJECT LIST** • Develop list of candidate closures/consolidations and implement DOTD Policy and state law (RS 48:390. 1).	• To include list of strong closure candidates. • To close redundant and unnecessary Hwy/Rail crossings and improve public safety statewide.	DOTD Bill Shrewsberry	• Prepare recommended closure candidate list each year as part of the process. • Present Closure List to RR Safety Program Committee in accordance with Action Item 1b. • Initiate a minimum of two proceedings each year.
5	**SIGNAL PREEMPTION** • Identify and prioritize crossings needing preemption or improvements to existing preemption. • Program the improvements at these locations utilizing safety funds.	• Develop a list of projects for the Program • Develop a list of locations with existing preemption	DOTD Bill Shrewsberry	• Present Preemption List to RR Safety Program Committee in accordance with Action Item 1b. • Allow Rail/Safety Engineer to attend NCUTCD meetings to remain involved in the Preemption process and position LA DOTD to address national issues with other states. • Define procedures for Traffic Engineers' Reporting on RR and TSI for the future. • Review preemption within DOTD Traffic Signal Design Manual and recommend modifications as necessary. • Present information at DTOE meetings. • Hold new training course by December 2012.
6	**Crossbuck Assembly Program** • Develop Crossbuck Assembly (CBA) Projects for Louisiana public crossings. (Crossbuck with stop or yield sign)	• To coordinate with each railroad company and local governing authority, to install CBAs at the approaches of each of their passive public Hwy/Rail crossings in the interest of public safety. • All public passive crossings to be updated with new CBAs.	DOTD Bill Shrewsberry	• DOTD will Work Order at least five CBA projects by June 30, each year. • CBA Projects to have new proposed MUTCD compliant Crossbuck Assemblies installed at all state, Parish, and City passive public crossings by June 30, 2016.
7	**ENFORCEMENT & EDUCATION** • Continue to partner with Operation Lifesaver (LAOL) and Louisiana State Police (LSP) to target areas needing enforcement and education.	• To determine per historical record, prioritized collision parishes or corridors most in need of targeted education and enforcement. • To improve our partnerships in promoting highway/rail safety and getting help with safety awareness through education and enforcement. • To consider the location of crossings near highway intersections where Hwy/Rail collisions have occurred for potential enforcement.	DOTD / FRA LAOL / LSP / RR's Bill Shrewsberry/ Carolyn Cook/ Pat Edwards/James Anderson /Allen Pepper	• Review FRA data (see Action Item No. 1) and RR's reports with RR Inventory (see Action Item No. 2) and share information and submit report for LAOL and LSP overview by October 31, each year. This report will provide suggested areas to target education and enforcement efforts. This will allow for a special report to be given to LAOL for their fiscal year, October to September, to help focus LAOL efforts. • DOTD to provide LAOL a quarterly program status report in a single page format to help in LAOL discussions and planning. • The RR inventory (see Action Item No. 2) will have GIS coordinates to aid LAOL and LSP in identifying locations.

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Item No.	Action Item (what)	Desired Outcome (why)	Lead Agency/Person(s) (who)	Timeline/Progress/Comments (when)
8	LOCAL OUTREACH TO ROADWAY OFFICIALS • Continue to partner with Louisiana Local Training Assistance Program (LTAP) in promoting education and awareness to local authorities on highway/rail safety issues.	• To encourage modification of LTAP's existing training of the MUTCD to emphasize signs, markings, signals at Hwy/Rail crossings. • To promote local agency responsibilities for inspection and maintenance at all Hwy/Rail grade crossings in appropriate LTAP training courses. • Coordinate with LMA and Police Jury Assoc. to educate toward Hwy/Rail safety and develop partnerships for training and presentations.	DOTD / LTAP Bill Shrewsberry/ Marie Walsh	• Present at a minimum of one meeting sponsored by LTAP per year.
9	RR SAFETY CONFERENCE • Host bi-annual (every other year) Railroad Safety Conference in conjunction with bi-annual Traffic Safety Summit, with Railroad companies on planning committee.	• To involve all relevant stakeholders in Hwy/Rail Safety planning and foster a closer working relationship between all stakeholders involved	DOTD Karla Courtade/ Simone Ardoin	• March 2012 • March 2014 • March 2016
10	**STATEWIDE RR COORDINATOR** • Establish a new statewide operations position for Railroad Coordination	• To discuss Hwy/Rail grade crossing issues and share best practices • To help DOTD+ Districts and Headquarters manage Hwy/Rail grade crossing issues. • To foster communication between DOTD Districts and Headquarters	DOTD Simone Ardoin / Rhett Deselle	• Establish position by December 2011
11	**INNOVATIVE TECHNOLOGY** • Document issues and criteria to be used when selecting specific innovative solutions at multi-collisions locations or corridors.	• To test and maintain "cutting edge" technology in Hwy/Rail safety	DOTD Bill Shrewsberry	• Develop list of projects in accordance with Action Item 1b. • Submit status report on "Innovative and 'Cutting Edge' Technology at Highway/Rail Grade Crossings" by May 31 of each year and include in HSIP annual report. • Document procedures and revise as needed to include "lessons learned" and best practices for public relations.
12	**RR GRADE SEPARATION PROGRAM** • Implement new Railroad Grade Separation Program on State Highway System Roadways for existing grade crossings.	• Develop written criteria and process for selecting locations and obtaining funding for grade separation projects.	DOTD Kay Courtier	• Complete documentation of project selection and prioritization process. • Develop a list of projects approved by the Project Selection Committee. • Begin preliminary engineering for several projects by July 2012. • Program sufficient number of projects to utilize all available funding each year.

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Appendix A
Original Highway-Rail Grade Crossing Safety Action Plan (March 2006)

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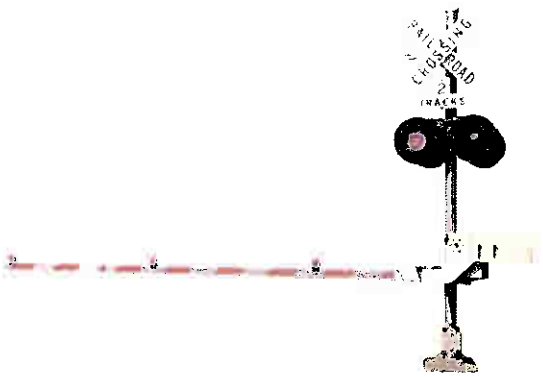

State of Louisiana
Highway-Rail Grade Crossing
Safety Action Plan

January 2006

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STATE OF LOUISIANA
HIGHWAY-RAIL GRADE CROSSING SAFETY ACTION PLAN

DRAFT – December 28, 2005

Section 1: Introduction

Louisiana has the regrettable distinction of being in the top five states in the nation for the number of highway-rail grade crossing collisions and fatalities according to Federal Railroad Administration statistics. This ranking exists in spite of the fact that for the last two years, Louisiana has spent more than three times its annual allocation under the Federal Section 130 Railroad Safety Funding Program for highway-rail grade crossing improvements. Factors that contribute to Louisiana's highway-rail grade crossing safety record include:

1. Six (6) Class 1 railroads and numerous short-line railroads operating in LA;
2. Increases in Class 1 train speeds;
3. Community resistance to closing redundant highway-rail grade crossings;
4. Year-round dense vegetation growth and track curvature due to paralleling meandering waterways, both of which impede driver's line of sight at crossings;
5. Inconsistent enforcement and prosecution of highway-rail grade crossing offenders;
6. Insufficient funding for all needed safety improvements.
7. Highway users not obeying warnings posted at the highway-rail grade crossings.

This Action Plan is intended to analyze and systematically address for resolution the varied issues affecting Louisiana's highway-rail safety. It is a living document that will be updated annually. This plan was initiated for several purposes:

- To provide a response to the U.S. Department of Transportation Office of the Inspector General (OIG) report dated June 2004;
- To be the highway-rail grade crossing portion of the new Louisiana Strategic Highway Safety Plan;
- To focus and organize safety efforts to reduce the number of collisions and improve safety at highway-rail grade crossings in Louisiana

This plan was developed with input from state, federal, local and private stakeholders of the highway-rail grade crossing safety program. Special review was given to the public highway-rail grade crossings where multiple collisions have occurred within the last six years.

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Section 2: Analysis of Existing Highway-rail Grade Crossings and Collision Data

For this initial Louisiana Railroad Safety Action Plan, the data used to analyze the highway-rail grade crossings in Louisiana was taken from the Federal Railroad Administration (FRA) collision reports and national grade crossing inventory. The FRA data was used because the OIG used this same data in its recent national review of highway-rail grade crossing safety and in making their conclusion that a greater national focus should be given to highway-rail grade crossings where multiple collisions (2 or more) have occurred. For consistency purposes, the FRA data was used to enable Louisiana to respond to the OIG review. The State of Louisiana maintains its own highway-rail grade crossing database that is somewhat different from the FRA data. This issue of differing data will be addressed in action items and as this Action Plan is updated in the future, the Louisiana data will be used.

In Louisiana, railroads operate in 57 of the 64 parishes. There were 52 parishes in which a total of 862 highway-rail collisions occurred at public crossings during the period of 1999-2004. FRA data shows that Louisiana has 3,435 public at-grade vehicle crossings and 3,133 private at-grade vehicle crossings and approximately 3000 rail miles. Having twice as many crossings as rail miles statewide had already been determined by both the State of Louisiana and the U.S. Department of Transportation as a major factor in why Louisiana ranks so high in the number of collisions and fatalities each year. Appropriate closing of redundant highway-rail grade crossings has been and remains a focus for both agencies.

For the purpose of developing this Action Plan in Louisiana, further study of the state's highway-rail grade crossing safety issues began with a data review of the state's highway-rail grade crossings that have had two or more collisions within the 6-year interval (1999 through 2004). This review was completed to address the OIG's focus on "multi collision" crossings. Pertinent highway-rail grade crossing data was compiled from FRA collision reports (FRA Form 6180.57) for the six-year period of 1999 through 2004 and FRA grade crossing inventory information for Louisiana.

Initially, FRA data indicated that there were 193 public crossings that had two or more collisions during the period of 1999 through 2004. Additional review determined that 16 of these crossings were actually private crossings. There were 55 collisions at these 16 private crossings. For the purposes of this Action Plan, only the actual 177 public highway-rail grade crossings and the 432 collisions that occurred at these public crossings were included in this analysis as the "multi-collision" crossings. Per public law SAFETEA-LU SECTION 1401 Section 148 (d) (1) (A)), federal safety funds can only be used on highway safety improvement projects on public roads or publicly owned bicycle or pedestrian pathways or trails. Therefore, only public crossings are eligible for federally-funded highway-rail grade crossing safety projects. A public highway-rail grade crossing is defined as a crossing where the roadway across the railroad track is part of the general system of public streets and highways, is open to the general traveling public, and where both roadway approaches leading up to the crossing are

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maintained by a public authority.

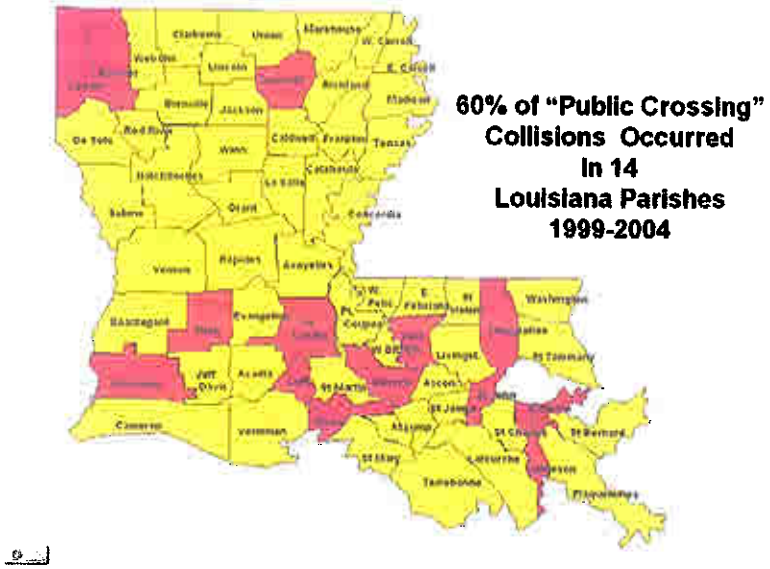
The "multi-collision" crossings data was then compared to statewide highway-rail grade crossing collisions and inventory information to determine trends and look for areas of possible safety improvement. A complete summary of the analysis comparing the two groups of collision data – all public/statewide crossings and the 177 "multi-collision" crossings (for the period of 1999-2004) - is found in the Appendix following the Action Plan (see Tables 1 through 10).

Several facts that can be seen from the statewide data, the "multi-collision data, and a comparison of the 2 groups of collision data are:

- Sixty percent of all statewide collisions (521 collisions) occurred in only 14 parishes - each experienced more than 20 collisions during this 6-year period.
- Sixty-eight percent of the "multi-collision" incidents occurred in just 15 of the parishes - each experienced more than 10 highway-rail collisions.
- Two parishes accounted for 16% of the "multi-collision" incidents. These two parishes, East Baton Rouge (38 collisions) and Caddo (31 collisions) are both highly populated urban areas and are the parishes ranked the highest for all collisions during 1999-2004 (East Baton Rouge – 70 collisions and Caddo – 51 collisions).

The two maps below give a graphical view, by Parish, of where the majority of highway-rail collisions are occurring in Louisiana:

- Purple Parishes in the first map are Parishes that have 20 or more total collisions from 1999 to 2004
- Red Parishes in the second map are Parishes with more than 10 of the "multi collision" incidents from 1999 to 2004.



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68% of "Multi-Collision" Incidents Occurred In 15 Louisiana Parishes 1999-2004

The majority of the Parishes with higher number of highway-rail collisions are in both the statewide and "multi-collision" groups. Madison and Acadia Parish are are the only two parishes in the "multi-collision" group that are not also in the statewide group. Jefferson Parish is the only parish in the statewide group that is not also in the "multi-collision" group.

Other facts that can be seen from the statewide data, the "multi-collision data, and a comparison of the 2 groups of collision data are:

- The 177 "multi-collision" crossings comprise only 5% of the public crossings in the state, yet were the location for 50% of the collisions - see Table 1.

- Fifty-three percent of the fatal collisions and 58 percent of the injury collisions occurred at the "multi-collision" locations - see Table 1.

- Overall, over 85% of the collisions occurred at crossings without gates. Only 14% of collisions statewide and 12% of collisions at "multi-collision" crossings occurred at crossings with gates and flashing light signals - see Table 2.

- For both the statewide and "multi-collision" data, over 80 % of the collisions involved the train hitting the highway user - see Table 3.

- Analysis of reports of the "Highway-user Action Prior to the Collision" (see Table 3) shows that in 85% of the collisions statewide and at "multi-collision" crossings, it was reported that the highway-user "Did Not Stop" at the crossing prior to the collision or "Stopped on the Crossing", thus, in the majority of the collisions, the Highway-users did not heed the passive or active warning devices at the crossings.

- The majority of the time it was reported that the highway-user's position was

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"Moving over the Crossing" prior to the collision (70 percent for both groups) – see Table 4.

- More than 53 percent of the statewide collisions compared with 50 percent of the collisions at "multi-crossing" locations involved an automobile or a van - see Table 5.

- According to the FRA Inventory, a high percentage of the collisions occurred at grade crossings that are near an adjacent highway intersection (statewide = 78% and "multi-collision" locations = 97%.) Highway intersection in this case refers to all types of intersections of two roadways, including non-controlled, stop sign controlled and traffic signal controlled. For both data sets, a small percentage (3%) of the collisions occurred at crossings where the highway-rail grade crossing active warning device was reported to FRA as "interconnected with a nearby traffic signal" - see Table 6. There are discrepancies between FRA's and Louisiana's database information concerning interconnection of highway-rail grade crossing active warning devices and nearby traffic signals. This issue is addressed in the Action items.

- Most of the collisions in Louisiana (statewide = 80%; "multi-collision" crossings = 79%) involved the Union Pacific Railroad, Kansas City Southern Railway, and the Canadian National/Illinois Central Railroad. Amtrak was involved in 35 collisions during this 6 year period and 21 of those (60 percent) occurred at the "multi-collision" locations - see Table 7.

- Over 90% of the collisions for both groups occurred on mainline track – see Table 9.

- In general, train speeds were reported to be slightly higher at the time of the collisions occurring at the "multi-collision" locations than for all statewide collisions - see Table 9. The average train speed was 29 m.p.h. for all statewide collisions and an average of 31 m.p.h. for the "multi-collision" locations.

- The data below shows that most of the collisions occurred in the ranges of 10-20 mph and 36-49 mph. This pattern is consistent in both data sets – see Table 9.

- The majority of highway-users in both groups were males (statewide = 69%; "multi-collision" locations = 68%).

Upon completion of this study of available data, it is apparent that the "multi-collision" crossing locations in Louisiana have no statistically significant difference (greater than 5%) in collision and inventory data from the statewide crossings where all collisions have occurred from 1999-2004, **with one exception**:

Collisions at highway-rail grade crossings located near highway intersections make up 78% of the total statewide collisions, but make up a much higher percentage (97%) of the collisions at "multi-collision" crossings.

This issue of crossings located near highway intersections will be a major focus of this

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Action Plan, beginning with the "multi-collision" locations and the Parishes with the most collisions.

Significant similarities found in the data from all collisions at statewide and "multi-collision" crossings that dictate further focused actions are:

- The majority of highway-rail grade crossing collisions are located in only 16 of Louisiana's 64 Parishes.
- In the majority of collisions, the highway user was male.
- In 85% of the collisions, the Highway-users did not heed the passive or active warning devices at the crossings.
- Over 85% of the collisions were at highway-rail grade crossings without gates.

Section 3: Current Status of 177 "Multi-Collision" Public Crossings in Louisiana

Engineering improvements have been made or are underway at many of the 177 "multi-collision" highway-rail grade crossings in Louisiana. A summary of actions already taken is as follows:

- Four of the 177 crossings have been permanently closed and another 5 are closure candidates.
- Since 1999, 50 of the 177 have been equipped with gates.
- Since 1999, 61 of the 177 were equipped with either standard mast or cantilever flashing light signals.
- During the next program year, 15 of the crossings are scheduled for upgrading.
- Forty of the 177 crossings are still under engineering review for additional improvements.

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Section 4: Highway-Rail Grade Crossing Safety Goals and Action Items

Goal: The initial goal of the Louisiana Railroad Safety Action Plan is to reduce the number of highway-rail grade crossing collisions at public crossings in Louisiana by 30 collisions per year by calendar year-end 2007.

Immediate Action Items: Determine the data and information that Louisiana needs to better manage the Highway-Rail Safety program with a more systematic, data driven approach.

1. Coordinate with Louisiana State Police (LSP) and local law enforcement agencies to improve reporting of motor vehicle crashes at highway-rail grade crossings and improve the quality of the data obtained from the motor vehicle crash reports.

   Target Date: Initiate discussions by February 2006
   Lead Persons Assigned:
   - ***LADOTD - Dan Magri and Kim Brunty***
   - ***LSP - Ralph Mitchell***
   - ***FHWA - Seve Serna***

2. Develop framework/conventions/system for a Geographic Information System (GIS) base map & layer maps that will contain all Louisiana highway-rail grade crossing information (i.e. location, inventory, crash data, train speeds and movements from Railroads, GPS coordinates of crossings, Louisiana Operation Lifesaver presenter and location information).

   Target Date: Initiate by March, 2006 with Quarterly Updates
   Lead Persons Assigned:
   - ***LADOTD - Gary Milligan, Jason Dunlap, and Tom Richardson***
   - ***FHWA – Seve Serna***

3. Complete a Diagnostic Review of the highway-rail grade crossings near highway intersections where collisions have occurred (including reviewing the highway crash data at the highway intersection) to determine the causes and relationships of the collisions and safety improvement recommendations. The "multi-collision" crossing locations will be the first sub-set of public crossings to be reviewed as well as the 16 Parishes with the most collisions.

   Target Date: "Multi-Collision" crossings reviews completed by March 2006, and a plan documented to review other crossings on a quarterly basis by April 2006.
   Lead Persons Assigned:
   - ***LADOTD - Bill Shrewsberry and Carlton Bell***
   - ***Federal Highway Administration (FHWA) - Seve Serna***

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4. Convene a working group of stakeholders to work with the Louisiana Department of Transportation and Development (LADOTD) to improve the process through which the state obtains, manages and updates information for the Louisiana Highway-Rail Grade Crossing Inventory and Collision database. This will include making recommendations to resolve the issue of differing collision and inventory information between the State of Louisiana and the Federal Railroad Administration (FRA.)

   Target Date: Meet by May 2006 – At the meeting's conclusion, the actual tasks will be assigned to complete the process.
   Lead Persons Assigned:
   - ***LADOTD - Bill Shrewsberry***
   - ***FHWA - Mary Stringfellow***

Short Term Action Items (within 6 months)

1. Implement recently passed legislation providing LADOTD the legal authorization to close crossings in the interest of public safety (under SB 353)

   The LADOTD worked with the Governor's office and the Louisiana Attorney General's office to draft proposed legislation for the 2005 legislative session authorizing LADOTD to close highway-rail grade crossings in the interest of public safety. Louisiana Senator Lentini sponsored the bill, it passed the legislative process and has recently been signed by the Governor. It is now Louisiana law. Actions are presently underway to implement the process for crossing closures according to this new Louisiana Law, Act 347. LA DOTD has identified an initial list of ten highway-rail grade crossings that can be closed under this state law.

   Target Date: Law has passed; Enrolled August 2005.
   Lead Persons Assigned:
   - ***DOTD - Bill Shrewsberry, Carlton Bell, Gary Milligan, and Kim Brunty***
   - ***FHWA – Seve Serna***

2. Implementing Innovations and New Technology

   a. Develop a LADOTD preemption policy based on the Manual on Uniform Traffic Control Devices (MUTCD) standards, national best practices, and the latest available technology, including:
      i. Identify/categorize crossings that are candidates for preemption in accordance with the MUTCD standards;
      ii. Convene a working group to draft a new LADOTD preemption policy; host a preemption workshop for the task group prior to

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drafting the policy to provide a thorough understanding of railroad and highway signal systems and how the two systems must function as a single system, and new technology available to better perform preemption;

iii. Present the draft LADOTD preemption policy to railroad companies and other appropriate stakeholders for review and comment. Revise as needed and finalize policy;

iv. Host preemption training based on new approved LADOTD preemption policy;
    1) LADOTD in-service – for LADOTD grade crossing designers and technicians, highway traffic signal designers and technicians, FHWA and FRA personnel.
    2) Regional workshops for local jurisdictions through Louisiana Technology Assistance Program (LTAP) center beginning in the 16 parishes with the majority of statewide collisions and "multi-collision" locations;

v. Prepare changes to traffic signal controller procurement specifications as needed to support new preemption technology;

vi. Pilot two highway-rail crossing installations with preemption based on new policy guidelines and latest available technology – edit policy as needed;

vii. Review/update this policy on a bi-annual (every 2 years) basis, if needed, as technology advances.

Target Date: June 2006 (Initial preemption meeting and training was held August 16-17, 2005)
Lead Persons Assigned:

- ***LADOTD - Bill Shrewsberry, Paul Hsu, Peter Allain, and David Backstedt,***
- ***FHWA - John Broemmelsiek and Seve Serna***

b. Yield/Stop signs at Railroad Crossings

i. Develop a program to install Yield or Stop signs per the MUTCD at appropriate passive crossings beginning in early 2006.

ii. Draft a legislative request for a resolution requiring all municipal governments and parish jurisdictions to identify and report all public crossings to the LADOTD.

Target Date: February 2006
Lead Persons Assigned:

- ***LADOTD - Bill Shrewsberry, Gary Milligan, and Peter Allain***
- ***FHWA – Seve Serna***
- ***Louisiana Highway Safety Commission (LHSC) – Jim Champagne***

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- ***LA Operation Lifesaver – Betsey Tramonte and Bryant Laiche***

c. Continue to investigate innovations for highway-rail grade crossing safety improvements, where appropriate, such as alternative (extendable or small foundation) gates, channelization, rumble strips, LED powered solar crossing signs and others. The "multi-collision" locations with active devices will continue to be reviewed under this process.

Target Date: June 2006
Lead Persons Assigned:
- ***LADOTD - Bill Shrewsberry and Carlton Bell***
- ***FHWA - Seve Serna***

3. Operation Lifesaver

a. Locate by GIS mapping where Operation Lifesaver (OL) has trained presenters and where OL presentations have been made in the past 6 years and compare against where collisions are occurring;
b. Evaluate and prioritize areas, such as the 16 parishes where the highest percentage of statewide collisions and collisions at "multi-collision" locations have occurred, plus focusing on male drivers, to target for increased OL education/presentations;
c. Increase Operation Lifesaver presenters trained in these targeted areas;
d. Increase OL presentations at local High Schools and to other appropriate groups in these targeted areas.

Target Date: June 2005
Lead Persons Assigned:
- ***LA Operation Life Saver - Betsey Tramonte and Bryant Laiche***
- ***LADOTD - Karla Schiro, Gary Milligan, and Kim Brunty***

4. Enforcement – Focused Enforcement of Highway/Rail Crossing Laws

a. Locate by GIS analysis, crossing locations where highway-rail collisions have occurred – specifically identifying those near highway intersections;
b. Prioritize areas with a high highway-rail grade crossing collision history over time by parish and/or corridors to target for focused enforcement;
c. Work with law enforcement agencies in identified target areas to increase enforcement on a routine basis. (for example - enforcing "Do Not Stop on Tracks" and increasing Officer-on-the-Train program);
d. Partner with Louisiana State Police (LSP), local law enforcement agencies and railroad police departments to support legislation and implement a "CARE" (crossing accident reduction enforcement) Program to increase enforcement of traffic laws regarding vehicle operation at highway-rail

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grade crossings. This program is intended to utilize railroad police officers to supplement state and local police officers in enforcement of traffic laws at highway-rail grade crossings.

e. Partner with Louisiana Highway Safety Commission (LHSC), Louisiana State Police (LSP), and each railroad law enforcement department to support legislation to allow the use of video surveillance/enforcement at crossings and on corridors with high collision history.

Target Date: June 2006
Lead Persons Assigned:

- ***LADOTD - Gary Milligan and Kim Brunty***
- ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***
- ***LSP – Ralph Mitchell***

5. Partner with Louisiana Local Technical Assistance Program (LTAP) Center to:

a. Modify the LTAP Center's existing training on the Manual on Uniform Traffic Control Devices (MUTCD) to include emphasis on signs, markings and signals at highway-rail grade crossings;
b. Incorporate information on local agency responsibilities for inspection and maintenance at the highway-rail grade crossings in all appropriate LTAP Center training courses;
c. Work with the Louisiana Municipal Association and Police Jury Association through the LTAP Center to increase education concerning local agency responsibilities at highway-rail grade crossings. Develop partnerships for training and presentations on this topic.

Target Date: June 2005
Lead Persons Assigned:

- ***LADOTD - Bill Shrewsberry***
- ***FHWA - Mary Stringfellow***
- ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***
- ***LA LTAP Center - Marie Walsh***

6. Distribute comments from Louisiana Railroad Safety Summit Held in March of 2005.

Target Date: Completed – Comments were e-mailed to participants in August 2005
Lead Persons Assigned:

- ***LADOTD - Shawn Wilson and Bill Shrewsberry***

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7. Public Information & Education Regarding Train Speeds

a. Partner with railroads to create a process to improve notification of train speed increases to affected cities/towns/parishes through the LADOTD.

Target Date: June 2006
Lead Persons Assigned:
- ***LADOTD - Bill Shrewsberry, Mark Lambert, and Karla Schiro***

8. Improve Driver Education Regarding Highway-Rail Grade Crossing Safety

b. Produce a Louisiana-specific driver education video with emphasis on highway-rail grade crossing safety. Focus will be given to an educational message to reach male drivers.
c. Develop a plan to distribute the video to appropriate training organizations/agencies in Louisiana.

Target Date: Initiate by February 2006
Lead Persons Assigned:
- ***LADOTD - Karla Schiro, Kim Brunty, and Gary Milligan***
- ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***

9. Continue Systematic Diagnostic Review Program to Review, Verify, and Document (in writing and with photos) the Conditions at Public Highway-Rail Grade Crossings Pertaining to:

a. Sight distance (issues with buildings, vegetation, track curvature etc.);
b. Condition and location of warning signs;
c. Crossing surface condition;
d. Number and type of highway-users;
e. Train speed, number of trains and other pertinent inventory information;
f. Number and severity of collisions;
g. Adjacent intersection information and traffic control in place
h. Traffic signal – validation of traffic signal preemption operation, if appropriate;
i. Provide an annual summary, in the Highway Safety Improvement Program (HSIP) report to FHWA, of the number of field, diagnostic, and/or traffic signal preemption reviews completed on highway-rail grade crossings.

Target Date: June 2006
Lead Persons Assigned:
- ***LADOTD - Bill Shrewsberry, Gary Milligan, Carlton Bell, Kim Brunty, and Gordon Nelson***
- ***FHWA - Seve Serna***

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Long Term Action Items (beyond 6 months)

1. Education - Institutionalize highway-rail safety information for all driver education courses in Louisiana.

   Target Date: Ongoing
   Lead Persons Assigned:
   - ***LADOTD - Karla Schiro and Kim Brunty***
   - ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***

2. Enforcement - Continue to work with law enforcement agencies in Louisiana to increase focused enforcement of motor vehicle codes for highway-rail grade crossings on a routine basis.

   Target Date: Ongoing
   Lead Persons Assigned:
   - ***LADOTD - Kim Brunty***
   - ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***
   - ***LSP - Ralph Mitchell***

3. Host an annual Railroad Safety Conference in conjunction with annual Traffic Safety Summit - include railroad companies on the conference planning committee.

   Target Date: Annual
   Lead Persons Assigned:
   - ***LADOTD - Dan Magri, Bill Shrewsberry, and Karla Schiro***
   - ***FHWA - Mary Stringfellow***
   - ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***
   - ***LA LTAP Center - Marie Walsh***

4. Increase level of funding for LADOTD Railroad Safety Program

   a. Identify and prioritize funding needs for improving highway-rail grade crossing safety
   b. Evaluate increasing the funding level, after passing of new federal transportation law and in the future.
   c. Partner with railroad companies for joint funding of corridor safety projects in conformance with House Resolution 185.

   Target Date: August 2006 and ongoing

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Lead Persons Assigned:

- ***LADOTD - Bill Shrewsberry, Dan Magri, Carlton Bell, and Gary Milligan***
- ***FHWA – Seve Serna***

5. Develop an outreach program for increased legal awareness of highway-rail grade crossing safety issues

   Target Date: September 2006
   Lead Persons Assigned:
   - ***LADOTD - Bill Shrewsberry***
   - ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***
   - ***LA Attorney General's Office - Will Crawford***
   - ***LSP - Ralph Mitchell***

6. Foster a closer working relationship between LADOTD Headquarters Rail Program staff and all District Railroad coordinators and HQ/District Traffic Operations staff:

   a. Host annual meetings to discuss highway-rail grade crossing issues and share best practices
   b. Provide improved tools and communication to help Districts better handle highway-rail grade crossing issues.

   Target Date: September 2006 and ongoing
   Lead Persons Assigned:
   - ***LADOTD - Bill Shrewsberry, Kim Brunty, Gordon Nelson, and Peter Allain***

7. Evaluate the pros/cons and feasibility of hiring a consultant to augment LADOTD efforts for implementation of this Highway-rail grade crossing safety Action Plan.

   Target Date: September 2006
   Lead Persons Assigned:
   - ***LADOTD - Bill Shrewsberry and Dan Magri***
   - ***FHWA - Mary Stringfellow***

8. Develop a long-term prioritized program focused on installing passive signing and pavement markings for public crossings, with special focus on major highway routes near the prominent railroad corridors.

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Target Date: December 2006
Lead Persons Assigned:

- ***LADOTD - Bill Shrewsberry, Carlton Bell, Kim Brunty, Dan Magri and Peter Allain***
- ***FHWA - Seve Serna and John Broemmelsiek***

9. Develop a comprehensive highway-rail grade crossing closure awareness program based on new Louisiana highway-rail grade crossing closure law:

   a. Develop outreach plan and support materials.
   b. Develop a State policy to limit the proximity of new public crossings to existing public crossings
   c. Work with LADOTD's Access Management Task Force to develop policies to address the proliferation of private highway-rail grade crossings and transitioning to public crossings
   d. Partner with the LHSC, the LSP, and each railroad law enforcement department to support legislation to address the closing of private highway-rail grade crossings.

   Target Date: December 2006
   Lead Persons Assigned:

   - ***LADOTD - Bill Shrewsberry, Carlton Bell, Dan Magri, Scott Wimmer, Tony Dorsa, and Dawn Young***
   - ***LA Attorney General's Office – Will Crawford***
   - ***FHWA - Mary Stringfellow and John Broemmelsiek***
   - ***LA Operation Lifesaver - Betsey Tramonte and Bryant Laiche***
   - ***LA LTAP Center - Marie Walsh***

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APPENDIX

State of Louisiana Public Crossings
1999-2004
Comparing Collisions at All Statewide Public Crossings with Collisions at Public "Multi-Collision" Crossings
Using Federal Railroad Administration Data

Table 1 – Public Crossings and Collision Summary

The data below shows that approximately 50% of the state's collisions at public crossings occurred at 5% of all the state crossings (i.e. the multi-collision crossings). The data also shows that over 50% (b/a) of the total fatal and injury collisions occurred at 5% of all the state crossings (i.e. the multi-collision crossings). The same pattern (a/862, b/432) of fatalities and injuries occurred statewide and at the multi-collision crossings.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
	(a)		(b)		(b/a)
Total Public Highway-rail grade crossings	3,435		177		5%
Total Collisions at Public Crossings	**862**		**432**		**50%**
Collision Breakdown	(a)	(a/862)	(b)	(b/432)	(b/a)
Total Fatal Collision Events	83	10%	44	10%	53%
Total Injury Collision Events	267	31%	153	35%	58%
Amtrak Involved Collision Events	37	4%	16	4%	43%
Others Collisions (No fatalities or injuries)	475	55%	219	51%	43%
Total	**862**		**432**		**50%**
Total Fatalities from Events	92		54		59%
Total Injuries from Events	371		217		58%

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Table 2 – Public Crossing Collisions by Warning Device

The data below shows that most (over 85%) of the collisions occurred at crossings without gates, only 14% and 12% occurred at crossing with gates and flashing light signals. The distribution for type of warning device at the crossing was about the same for all statewide collisions as it was for collisions at multi-collision crossings.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Warning Devices	(a)	(a/862)	(b)	(b/432)	(b/a)
Gates and Flashing light signals	122	14%	53	12%	43%
Standard or Cantilever Flashing Light Signals	245	28%	129	30%	53%
Traffic Signals/Wig-wags	12	1%	5	1%	42%
Stop Sign with Crossbuck	114	13%	60	14%	53%
Crossbuck Only	359	41%	185	43%	52%
Flagged by Train Crew or Watchman	9	1%	-	-	-
None	1	0%	-	-	-
Total	**862**	**98%**	**432**	**100%**	**-**

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Table 3 – Public Crossing Collisions by Circumstance and Highway-User Action (at collision)

The data below shows that over 80% of collisions involved the train hitting the highway-user. The trend is similar for both data sets. The data also shows that almost 60% (58% & 59%) of the highway-users "did not stop" prior to the collision and approximately 25% "stopped on the crossing" prior to the collision. Similar patterns of highway-user action were reported for collisions in both data groups (statewide and multi-collision crossings). When "Did not Stop" and "Stopped on Crossing" data are added together, over 80% of the collisions occurred when Highway-Users did not heed the passive or active warning devices at the crossings.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – Circumstance	(a)	(a/862)	(b)	(b/432)	(b/a)
Train Hit Highway-User	705	80%	360	84%	51%
Highway-User Hit Train	157	18%	72	17%	46%
Total	**862**		**432**		-
Collisions – by Highway-User Action Prior to Collision	(a)	(a/862)	(b)	(b/432)	(b/a)
Drove Around or Through Gates	29	3%	8	2%	28%
Stopped and then Proceeded	64	7%	37	9%	58%
Did not Stop	501	58%	256	59%	50%
Stopped on Crossing	215	25%	105	24%	47%
Other	53	6%	26	6%	49%
Total	**862**		**432**		-

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Table 4 – Public Crossing Collisions by Highway-User Position Prior to Collision

The data below shows that most of the highway-users were "Moving Over the Crossing" prior to the collision (see Table 3 indicating very few (7% & 9%) of them "Stopped and then Proceeded"). 25% of the highway-users had "Stopped on the Crossing" prior to the collision. The same pattern exists in both data groups (statewide and multi-collision crossings). Note that a high percentage (69%) of the collisions reporting "Trapped on Crossing" are among the "multi-collision" locations.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Position of Highway User at Time of Collision	(a)	(a/862)	(b)	(b/432)	(b/a)
Stalled on crossing	30	3%	12	3%	4%
Stopped on crossing	214	25%	108	25%	49%
Moving over Crossing	602	70%	301	70%	49%
Trapped on Crossing	16	2%	11	3%	69%
Total	**862**		**432**		---

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Table 5 – Public Crossing Collisions by Type of Highway-User/Vehicle

The data below shows that over 50% of the collisions involved automobiles/vans, with the same pattern existing in both groups (state wide and multi-collision crossings).

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Type of Vehicle/ Highway User	(a)	(a/862)	(b)	(b/432)	(b/a)
Automobile/Van	443	53%	216	50%	13%
Pick-up Truck	160	18%	74	17%	46%
Truck	119	13%	63	15%	53%
Truck-Trailer	104	12%	62	14%	60%
School Bus	1	0%	0	0%	0%
Bus	1	0%	0	0%	0%
Motor Cycle	2	0%	1	0%	0%
Other Motor Vehicle	9	1%	5	1%	56%
Pedestrian at crossing	6	1%	0	0%	0%
Other Highway User	17	2%	4	1%	25%
Other	-	-	7	2%	25%
Total	**862**		**432**		-

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Table 6 – Public Crossing Collisions by Adjacent Intersection and Traffic Signal/Crossing Signal Interconnection

The data below shows that 78% of the collisions at crossings statewide occur near a highway intersection. This percentage is even higher (97%) at the "multi-collision" crossing locations. Highway intersection, in this case, refers to all types of intersections, from non-controlled, stop sign controlled and traffic signal controlled. For both data sets, a small percent (3%) of the collisions occurred at crossings where the highway-rail grade crossing warning device is interconnected with a nearby intersection traffic signal.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Adjacent Intersection and Interconnection	(a)	(a/862)	(b)	(b/432)	(b/a)
Railroad Crossings Near Intersection (per FRA Inventory)	672	78%	417	97%	62%
Warning Device Interconnected with a Nearby Intersection Traffic Signal (Per FRA Collision Data)	29	3%	15	3%	52%
Unknown Interconnection Requirement (Per FRA Collision Data)	161	19%	-	-	-
Total	**862**		**432**		-

Note: The FRA crossing inventory data initially made no distinction between "railroad crossings near intersections with no traffic signal" and "railroad crossings near intersections with traffic signal". Although FRA has added this distinction to their database, from a cursory review of the FRA website this data has not been fully integrated into the FRA database. Thus the statewide data that was derived from the FRA data does not fully reflect a true evaluation of the field conditions relative to interconnection of the railroad signal with the traffic signal. This is work that needs to be completed and is listed in the action items.

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Table 7 – Public Crossing Collisions by Railroad

The table below shows that most of the collisions in both data sets involved the Union Pacific Railroad, Kansas City Southern Railway, and the Canadian National/Illinois Central Railroad.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Railroads	(a)	(a/862)	(b)	(b/432)	(b/a)
Union Pacific Railroad (operating 1,136 track miles)	301	34%	145	34%	48%
Kansas City Southern Railway (operating 917 track miles)	264	30%	131	30%	50%
Canadian National (Illinois Central) (operating 263 track miles)	141	16%	66	15%	47%
BNSF Railway (operating 347 track miles)	55	6%	30	7%	55%
Norfolk Southern (operating 82 track miles)	39	4%	26	6%	67%
CSX (operating 35 track miles)	2	0%	0	-	
Amtrak (operating >300 track miles)	35	4%	21	5%	60%
Louisiana & Delta River Railroad (operating 120 track miles)	19	2%	7	2%	37%
Arkansas, Louisiana & Mississippi Railroad (operating 45 track miles)	6	1%	4	1%	67%
Louisiana & North Western (operating 38 track miles)	2	0%	1	0%	100%
New Orleans Gulf Coast (operating 28 track miles)	11	1%	2	0%	18%
Acadiana Railway Co. (operating 63 track miles)	4	0%	0	-	-
New Orleans Public Belt	5	1%	0	-	
Total * * Note: some duplicate counts due to reporting from two railroads sharing trackage rights	**884***		**434***		

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Contact the LADOTD Railroad Unit at 225-379-1573 before releasing any information.

Table 8 – Public Crossing Collisions by Type of Track

The table below shows that most (over 90%) of the collisions in both groups occurred at grade crossings on mainline track. A high percentage of the yard track collisions occurred at the collisions at "multi-collision" locations.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Track Type	(a)	(a/862)	(b)	(b/432)	(b/a)
Mainline	776	90%	399	92%	50%
Industry	50	6%	16	4%	32%
Yard	34	4%	17	4%	50%
Siding	2	0%		-	-
Total	**862**		**432**		

Table 9 – Public Crossing Collisions by Train Speed

In general, train speeds were reported to be slightly higher at the time of the collisions occurring at the "multi-collision" locations than for all statewide collisions (see Table 9). The average train speed was 29 m.p.h. for all statewide collisions and an average of 31 m.p.h. for the "multi-collision" locations. The data below shows that most of the collisions occurred in the ranges of 10-20 mph and 36-49 mph. This pattern is consistent in both data sets.

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Train Speed (mph)	(a)	(a/862)	(b)	(b/432)	(b/a)
Avg. Train Speed at time of collision	29		31		
Unknown Train Speed	19	2%	11	3%	58%
Less than 10 mph	-	0%	51	12%	-
10 to 20 mph	357	41%	102	24%	28%
21 to 35 mph	155	18%	83	19%	52%
36 to 49 mph	212	25%	112	26%	51%
50 to 60mph	102	12%	62	14%	60%
Over 60mph	17	2%	11	3%	65%
Total	**862**		**432**		

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Table 10 – Public Crossing Collisions by Driver Age and Gender

The following table is a summary of the age and gender of the driver/operator reported for all statewide collisions and for the collisions at "multi-collision" locations. It show that the majority of collisions for both statewide and "multi-collision" crossings are male (69% & 68%).

Data Category	At Statewide Public Highway-rail grade crossings		At Public "Multi-Collision" Crossings		% of "Multi Collision" vs. Statewide
Collisions – by Age and Gender of Highway-user	(a)	(a/862)	(b)	(b/432)	(b/a)
Unknown Age/Gender	1	<1%	5	1%	-
Total Male	612	69%	296	68%	48%
Male Ages 12-26	139	16%	74	17%	53%
Male Ages 27-39	154	17%	72	17%	47%
Male Ages 40-55	147	17%	60	14%	41%
Male Ages 56-69	72	8%	35	8%	47%
Male Ages 70 +	41	5%	25	6%	61%
Male Age Unknown	56	6%	30	7%	-
Total Female	249	28%	131	30%	52%
Female Ages 12-26	75	8%	43	10%	57%
Female Ages 27-39	67	8%	42	10%	63%
Female Ages 40-55	46	5%	19	4%	41%
Female Ages 56-69	25	3%	9	2%	36%
Female Ages 70 +	17	2%	7	2%	41%
Female Age Unknown	16	2%	11	3%	-

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Appendix B
Amended 2006 Action Plan

CONFIDENTIAL INFORMATION: This document is based on information compiled or collected pursuant to 23 U.S.C. §§130 and 148 and other federal safety programs and is exempt from discovery or admission under 23 U.S.C. §§ 402 and 409. Contact the LADOTD Railroad Safety Unit at 225-379-1543 before releasing any information.

Louisiana Highway/Rail Grade Crossing Safety Action Plan

(Amended from March 2006 Action Plan) August 2011

Item No.	Action Item *(what)*	Desired Outcome *(why)*	Lead Agency/Person(s) *(who)*	Progress/Comments *(when)* *Expected Outcomes and Accomplishments*
1	• Report annually on the comparison of the highway/rail crossing collisions on the LA CRASH and FRA databases.	• To serve as a cross reference between the LA CRASH database and the FRA data and promote more complete data reporting. • Annual data check for consistencies between data with an analysis of the data discrepancies.	DOTD / LSU Karla Courtade/ Dr. Sneider/ Bill Shrewsberry	• DOTD compared FRA data vs. LA CRASH data for first two years. • DOTD determined FRA data is more accurate and consistent and will be used for data analysis for future Acton Plan.
2	• Enter into contract to develop inventory solution, for DOTD to be able to interface with.	• To better provide safety summaries of Hwy/Rail crossing data and allow for transfer of new FRA data info between the individual RR's and FRA in accordance with new federal RSIA law.	DOTD Bill Shrewsberry	• DOTD received approval for "Request for Proposals" and advertised for consultant services in July 2011. Should have contract by October 2011. • This item will be kept and revised for our 2012 to 2016 AP.
3	• Conduct an annual review of multi-collision Hwy/Rail crossing crashes over the past 5 years. Complete Diagnostic Reviews (DR) on 25% on those crossings per SFY.	• To determine common causes and relationships between the referenced crossings and to improve the process for remedy.	DOTD Hwy/Rail Safety Unit	• The initial action plan dated March 2006, focused on public crossings with multiple collisions based on FRA data from 1999 – 2004. Of this initial list of multi-collision crossings, 90% have been addressed (DR performed) through an upgrade or closure or reviewed and determined to be a low priority. Of these initial crossings, 15 remain on the priority list and are in discussion with the individual railroad carrier and/or local governing authority. DOTD and FRA continue to review the five year multi-collision data and use this information to present to the RR Safety Program Selection Committee. • DOTD will modify for 2012 to 2016 AP.
4	• Ensure compliance with the Rail Safety Improvement Act, by being able to transfer inventory data with FRA as required.	• To accommodate the resumption and "syncing" of inventory data once again between DOTD and the FRA.	DOTD / FHWA / FRA Hwy/Rail Safety Unit	• See Action Item No. 2.
5	• Develop DOTD policy for closures using the state law (RS 48:390. 1).	• To include formal plan for determining/listing closure candidates. • To close redundant and unnecessary Hwy/Rail crossings and improve public safety statewide.	DOTD Simone Ardoin	• DOTD has developed a draft "Highway/Railroad Grade Crossing Consolidation and Closure Procedures" document. • RR Unit has picked two state highway crossings to close under the state law and have scheduled public meetings for August and September 2011. • DOTD will modify for 2012 to 2016 AP.
6	• Review of RR preemption status and monitor with each District. Each District should have a report prepared on their traffic signals near RR active warning and update it annually. • Review of DOTD Traffic Signal Design Manual continued to support its use; however, it is recommended that sufficient training be given to Districts and others partners associated with RR preemption. • Identify and categorize crossings where is needed or changes are desired and make this part of the Annual RR Priority Plan statewide.	• To provide a standardized preemption and to promote safe and efficient interconnections of Hwy/Rail signals with nearby affected highway traffic signals statewide in accordance with the MUTCD. • To monitor installation methodologies statewide and keep key personnel trained.	DOTD Bill Shrewsberry	• After much discussion and research, DOTD has determined that standardizing pre-emption is problematic and should be handled on case-by-case basis. General guidelines will be developed in next AP. • DOTD has developed a preliminary list of crossings which will be refined in next Action Plan. • DOTD has developed draft flow chart to better coordinate between Traffic Services, Traffic Engineers, Operations and Railroads. • DOTD will modify for 2012 to 2016 AP.

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Item No.	Action Item *(what)*	Desired Outcome *(why)*	Lead Agency/Person(s) *(who)*	Progress/Comments *(when)* *Expected Outcomes and Accomplishments*
7	• Develop 3 Statewide Crossbuck Enhancement Projects.	• To coordinate with each railroad company operating within the State of Louisiana, to install supplemental Yield (default) or Stop signs at the approaches of each of their passive public Hwy/Rail crossings in the interest of public safety. • Cooperation of passive crossing identification by local governments would significantly expedite completion of the Statewide Crossbuck Enhancement Project. • Statewide Crossbuck Enhancement Project to have new proposed MUTCD compliant Crossbuck Assemblies installed at all state, Parish, and City passive public crossings by June 30, 2014.	DOTD Bill Shrewsberry	• DOTD has funded Crossbuck Enhancement projects on BNSF, KCS, LNW, NOGC, NS and UP passive crossings. This is a total of over 800 passive crossings upgraded or to be upgraded. • DOTD will modify for 2012 to 2016 AP.
8	• Ensure that our software solution for the inventory will be able to have GIS capabilities and also be able to be shared with outside agencies such as LaOL and State Police. • Submit an annual report to LSP on suggested areas to target enforcement.	• To locate by mapping analysis specifically those locations near highway intersections where Hwy/Rail collisions have occurred • To determine per historical record, prioritized collision parishes or corridors most in need of targeted enforcement • Our goal is to improve our partnerships in promoting highway/rail safety and getting help with enforcement and awareness.	DOTD /FRA LHSC/ LAOL / RR Bill Shrewsberry	• See Action Item 2. • Coordinated with LSP and OL, and used 2006 AP to assist OL and partners to focus on key Parishes for education and enforcement. • DOTD will modify for 2012 to 2016 AP.
9	• Continue to partner with (LTAP) Louisiana Local Training Assistance Program in promoting education and awareness on highway/rail safety issues.	• To encourage modification of LTAP's existing training of the MUTCD to emphasize signs, markings, signals at Hwy/Rail crossings. • To promote local agency responsibilities for inspection and maintenance at all Hwy/Rail grade crossings in appropriate LTAP's training courses. • Coordinate with LMA and Police Jury Assoc. to educate them toward Hwy/Rail safety and develop partnerships with them for training and presentations.	DOTD / LTAP / LAOL / RR Co.s Marie Walsh	• DOTD Highway/Rail Safety Unit made presentations relative to highway/rail safety at several Parish Engineers and Supervisors meetings to educate and obtain local engineering feedback in 2009, 2010 and 2011. • DOTD will modify for 2012 to 2016 AP.
10	• Host bi-annual (every other year) Railroad Safety Conference in conjunction with bi-annual Traffic Safety Summit, with Railroad companies on planning committee.	• To involve all relevant parties in Hwy/Rail Safety planning and foster a closer working relationship between all parties involved	DOTD/ Karla Courtade/ Simone Ardoin	• DATES OF CONFERENCES: March 2008 & 2010 • DOTD will modify for 2012 to 2016 AP.
11	• Host bi-annual (every other year) meeting for DOTD personnel to help improve communication, exchange ideas, and promote highway/rail safety and awareness.	• To discuss Hwy/Rail grade crossing issues and share best practices • To help Districts better handle Hwy/Rail grade crossing issues.	DOTD Simone Ardoin	• Meetings were held at the Railroad Safety Conference (See Action Item 10) or at the DOTD Engineering Conferences in the years the Railroad Safety Conference was not held. • DOTD will replace this item in 2012 to 2016 AP.
12	• Develop a procedure to set aside a percentage of yearly budget partition for RR Safety Projects to test innovative solutions for Hwy/Rail Crossings. • Be able to submit an annual report on test cases attempted.	• To test and maintain "cutting edge" technology in Hwy/Rail safety	DOTD Bill Shrewsberry	• DOTD has prepared annual reports of 'alternate innovation' for highway/rail safety projects. This information is included in the HSIP annual report. • Types of innovations include special surfaces and LED lighting on stop signs. Video enforcement is also being reviewed for possible use. • DOTD will modify for 2012 to 2016 AP.

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Appendix C
New Data Report (2005-2009)

CONFIDENTIAL INFORMATION: This document is based on information compiled or collected pursuant to 23 U.S.C. §§130 and 148 and other federal safety programs and is exempt from discovery or admission under 23 U.S.C. §§ 402 and 409. Contact the LADOTD Railroad Safety Unit at 225-379-1543 before releasing any information.

State of Louisiana Highway-Rail Grade Crossing Safety Action Plan
Total Public Highway-Rail Grade Crossing Collisions
and Collisions at Single-Incident and Multiple-Incident Collision Locations
Calendar Years 2005 to 2009
Tables 1 to 20

Table 1 –Public Crossing Collisions - 2005 to 2009
Collision Summary and Casualty Summary

Collision Summary and Casualty Summary	Total No. Highway Rail Crossing Collisions: 509		Total Single-Incident Collisions: 286	Total Multiple-Incident Collisions: 223	% of Total Collisions at Multiple-Incident Collision Locations NOTE: this column is multi-collision as % of row totals*
	Total No.	% of Incidents	Total No.	Total No.	
Non-Casualty Collisions	305	60%	177	128	42%
Injury Only Collisions	155	30%	81	74	48%
Fatal Collisions	49	10%	28	21	43%
Total Collisions	509	100%	286	223	44%
Casualty Summary	Total No.		Total No.	Total No.	
Highway-User Fatalities	63		38	25	40%
Rail Employee Fatalities	0		0	0	0%
Total Fatalities	63		38	25	40%
Highway-User Injuries	196		105	91	46%
Rail Employee Injuries	26		18	8	31%
Total Injuries	222		123	99	45%
Total Casualties	285		161	124	44%

Table 2 – Public Crossing Collisions - 2005 to 2009
Grade Crossing Inventory Counts for Collision Locations

Public Highway-Rail Grade Crossings	Total Grade Crossing Locations for 509 collisions:	Single-Incident Collision Locations for 286 collisions	Multiple-Incident Collision Locations for 223	Multiple-Incident Collision Locations as % of Total Grade Crossings:
Crossing Inventory Count - Grade Crossing Collision Locations	353	282 (4 crossing did not have inventory records)	85	24.08%

Table 3 –Public Crossing Collisions - 2005 to 2009
Total and Average Vehicle Occupants/Highway-Users by Collisions

Vehicle Occupants and Collision Summary	Total No. Collisions: 509	Total Single-Incident Collisions: 286	Total Multiple-Incident Collisions: 223	% of Total Multiple-Incident Collision Occupants as % of Total Occupants
Total Vehicle Occupants	668	365	303	45%
Average Occupants per Collision	1.31	1.276	0.787	

Table 4 – Public Crossing Collisions – 2005 to 2009
Type of Warning Device (Active and Passive Devices) in Place at Time of Collision

Data Category (FRA variable name)	Total No. Highway-Rail Crossing Collisions Total: 509		No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Collision Locations *
Type of Warning Devices (*crossing)	Total No.	% of Incidents	Total No.	Total No.	
Active Devices					
Gates only	4	1%	4	0	0%
Standard Flashing Lights only	60	12%	34	26	5%
Cantilever Flashing Lights only	2	0%	2	0	0%
Audible	1	0%	0	1	0%
Wig Wags only	0	0%	0	0	0%
Highway Traffic Signals	0	0%	0	0	0%
Flagged by crew	0	0%	0	0	0%
Gates and Flashing Lights	79	16%	58	21	4%
Gates with Cantilever Lights	24	5%	14	10	2%
Cantilever Lights with NO Gates	44	9%	27	17	3%
Active Unknown	0	0%	0	0	0%
Total Active Devices	214	42%	139	75	15%
Passive Devices					
Traffic Signals No other devices reported	0	0%	0	0	0%
Crossbucks Only	211	41%	114	97	19%
Crossbuck with Flagging reported	65	13%	23	42	8%
Stop signs only	5	1%	2	3	1%
Stop Signs with Crossbuck	0	0%	0	0	0%
Crossbucks and other devices	13	3%	7	6	1%
Other	0	0%	0	0	0%
None	1	0%	1	0	0%
Total Passive Devices	295	58%	147	148	29%
Total Active and Passive	509	100%	286	223	44%

Table 5 – Public Crossing Collisions - 2005 – 2009
Active or Passive Devices and Warning Time for Active Warning Devices

Data Category (*FRA variable name)	Total No. Highway-Rail Crossing Collisions Total: 509		No. Collisions at Crossings with Single-incidents Total: 286	No. Collisions at Crossings with Multiple-incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations *
Active or Passive Device (*signal)	Total No.	% of Incidents	Total No.	Total No.	
1. Collisions with Active Device	214	41.96%	139	75	35.05%
2. Collisions with Passive Devices	295	57.84%	147	148	50.17%
Total Collisions	509	99.80%	286	223	43.81%
Active Device Warning Time (*signal = 1-7)	Total No.	% of Incidents with Active Devices	Total No.	Total No.	
1. Min. 20 second warning	198	38.90%	128	70	35.35%
2. Alleged > 60 sec. warn.	4	0.79%	1	3	75.00%
3. Alleged < 20 sec. warn.	1	0.20%	1	0	0.00%
4. Alleged - no warning	2	0.39%	2	0	0.00%
5. Confirmed > 60 sec.	1	0.20%	0	1	100.00%
6. Confirmed < 20 sec.	0	0.00%	0	0	0.00%
7. Confirmed - no warning	8	1.57%	7	1	12.50%
8. Field left blank	295	57.96%	147	148	50.17%
Total Active Devices	509	100.00%	286	223	43.81%

Table 6a – Public Crossing Collisions – 2005 to 2009
Proximity to Nearby Highway Intersection by Active and Passive Crossings

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Timing of Signal (*signal field)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
1. Provided minimum 20-sec warning	198 / 0	198	38.90%	128 / 0	128	70 / 0	70	35.35%
2. Alleged warning time greater than 60 sec	4 / 0	4	0.79%	1 / 0	1	3 / 0	3	75.00%
3. Alleged warning time less than 20 sec	1 / 0	1	0.20%	1 / 0	1	0 / 0	0	0.00%
4. Alleged no warning	2 / 0	2	0.39%	2 / 0	2	0 / 0	0	0.00%
5. Confirmed warning time greater than 60 sec	1 / 0	1	0.20%	0/ 0	0	1 / 0	1	100.00%
6. Confirmed warning time less than 20 sec	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
7. Confirmed no warning	8 / 0	8	1.57%	7/ 0	7	1 / 0	1	12.50%
8. Field left blank	0 / 295	295	57.96%	0 / 147	147	0 / 148	148	50.17%
TOTAL	214 / 295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

NOTE: Proximity information on Tables 6 and 8 is from the FRA Grade Crossing Inventory and is not available through FRA Form 6180.57 grade crossing collision reports.

Table 6b – Public Crossing Collisions – 2005 to 2009
Proximity to Nearby Highway Intersection by Active and Passive Crossings

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 486 (*total change due to accidents with no inventory records)			No. Collisions at Crossings with Single-Incidents Total: 271		No. Collisions at Crossings with Multiple-Incidents Total: 215		% of Total Collisions at Multiple-Incident Collision Locations *
Nearby Highway Intersection	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
1. Less than 75 Feet	113 / 168	281	57.82%	64 / 78	142	49 / 90	139	49.47%
2. 75 to 200 Feet	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
3. 200 to 500 Feet	2 / 0	2	0.41%	2 / 0	2	0 / 0	0	0.00%
4. N/A	87 / 116	203	41.77%	67 / 60	127	20 / 56	76	37.44%
5. Field Left Blank	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
TOTAL	214 / 295	486	100.00%	133 / 138	271	69 / 146	215	44.24%

Table 7 – Public Crossing Collisions – 2005 to 2009
Active Warning Device Interconnection with Traffic Signals at Nearby Highway Intersection and Passive Devices Without Interconnection

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509		No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations *
Interconnected with traffic signals at nearby intersection	Total No - Active Crossings	% of Incidents	Total No - Active Crossings	Total No - Active Crossings	
1. Interconnected with traffic signal at nearby intersection	22	4.32%	8	14	63.64%
2. Not interconnected with traffic signal at nearby intersection	135	26.52%	94	41	30.37%
3. Unknow	49	9.63%	32	17	34.69%
4. Field left blank	8	1.57%	5	3	37.50%
SUBTOTAL	214	42.04%	139	75	35.05%
PASSIVE INFORMATION					
1. Interconnected with traffic signal at nearby intersection	1	0.20%	1	0	0.00%
2. Not interconnected with traffic signal at nearby intersection	258	50.69%	128	130	50.39%
3. Unknow	14	2.75%	4	10	71.43%
4. Field left blank	22	4.32%	14	8	36.36%
SUBTOTAL	295	5.77%	147	148	50.17%
TOTAL	509	100.00%	286	223	43.81%

Table 8 – Public Crossing Collisions – 2005 to 2009
Warning Device Interconnection with Highway Signal by Proximity to Nearby Highway by Active and Passive Device

Data Category (*FRA Variable Name)	Total No. Highway-Rail Crossing Collisions Total: 486				No. Collisions at Crossings with Single-Incidents Total: 271		No. Collisions at Crossings with Multiple-Incidents Total: 215		% of Total Collisions at Multiple-Incident Collision Locations*
1. Yes - Warning Device IS Interconnected with highway signal (*warnsig = 1)	Active/ Passive	Total No.	% of Sub-total Incidents	% of All Incidents	Active / Passive	Total No.	Active / Passive	Total No.	
Proximity to Nearby Highway									
1. < 75 Ft.	16 / 0	16	80.00%	3.29%	3 / 0	3	13 / 0	13	81.25%
2. 75 to 150 Ft.	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
3. > 200 Ft.	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
4. Not Available	3 / 1	4	20.00%	0.82%	3 / 1	4	0 / 0	0	0.00%
5. Field left blank	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
Sub-total	19 / 1	20	100.00%	4.12%	6 / 1	7	13 / 0	13	65.00%
2. No - Warning Device NOT Interconnected w/highway signal (*warnsig = 2)									
Proximity to Nearby Highway									
1. < 75 Ft.	64 / 152	216	57.29%	44.44%	39 / 69	108	25 / 83	108	50.00%
2. 75 to 150 Ft.	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
3. > 200 Ft.	1 / 0	1	0.27%	0.21%	1 / 0	1	0 / 0	0	0.00%
4. Not Available	65 / 95	160	42.44%	32.92%	51 / 50	101	14 / 45	59	36.88%
5. Field left blank	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	#DIV/0!
Sub-total	130 / 247	377	100.00%	77.57%	91 / 119	210	39 / 128	167	44.30%

Table 8 – Public Crossing Collisions – 2005 to 2009
Warning Device Interconnection with Highway Signal by Proximity to Nearby Highway by Active and Passive Device
Continued

Data Category (*FRA Variable Name)	Total No. Highway-Rail Crossing Collisions Total: 486				No. Collisions at Crossings with Single-Incidents Total: 271		No. Collisions at Crossings with Multiple-Incidents Total: 215		% of Total Collisions at Multiple-Incident Collision Locations*
3. Unknown Connection (*warnsig = 3)									
Proximity to Nearby Highway									
1. < 75 Ft.	29 / 5	34	57.63%	7.00%	20 / 0	20	9 / 5	14	41.18%
2. 75 to 150 Ft.	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
3. > 200 Ft.	1 / 0	1	1.69%	0.21%	1 / 0	1	0 / 0	0	0.00%
4. Not Available	15 / 9	24	40.68%	4.94%	10 / 4	14	5 / 5	10	41.67%
5. Field left blank	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
Sub-total	45 / 14	59	100.00%	12.14%	31 / 4	35	14 / 10	24	40.68%
4. Field left blank (*warnsig = ' ')									
Proximity to Nearby Highway									
1. < 75 Ft.	4 / 11	15	50.00%	3.09%	2 / 9	11	2 / 2	4	26.67%
2. 75 to 150 Ft.	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
3. > 200 Ft.	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
4. Not Available	4 / 11	15	50.00%	3.09%	3 / 5	8	1 / 6	7	46.67%
5. Field left blank	0 / 0	0	0.00%	0.00%	0 / 0	0	0 / 0	0	0.00%
Sub-total	8 / 22	30	100.00%	6.17%	5 / 14	19	3 / 8	11	36.67%
TOTAL	214 / 295	486		100.00%	167 / 185	271	47 / 110	215	44.24%

Table 9 – Public Crossing Collisions – 2005 to 2009
Type of Train Involved by Active or Passive Devices at Crossing

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Type of Train Involved (*typeq)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
1. Freight train	148 / 233	381	74.85%	96 / 119	215	52 / 114	166	43.57%
2. Passenger train	11 / 18	29	5.70%	8 / 4	12	3 / 14	17	58.62%
3. Commuter train	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
4. Work train	0 / 2	2	0.39%	0 / 2	2	0 / 0	0	0.00%
5. Single rail car	2 / 1	3	0.59%	0 / 1	1	2 / 0	2	66.67%
6. Cut of rail cars	0 / 2	2	0.39%	0 / 1	1	0 / 1	1	50.00%
7. Yard/switching engine	26 / 16	42	8.25%	15 / 6	21	11 / 10	21	50.00%
8. Light locomotives	12 / 14	26	5.11%	8 / 7	15	4 / 7	11	42.31%
9. Maintenance/ Inspection Railcar	13 / 3	16	3.14%	11 / 2	13	2 / 1	3	18.75%
A. Special M-O-W equipment	2 / 6	8	1.57%	1 / 5	6	1 / 1	2	25.00%
Total	214 / 295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Table 10 – Public Crossing Collisions – 2005 to 2009
Type of Track and Class of Track

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
TRACK TYPE (*typtrk)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
Main	179/275	454	89.19%	119 / 139	258	60 / 136	196	43.17%
Yard	12/5	17	3.34%	8 / 1	9	4 / 4	8	47.06%
Siding	1/1	2	0.39%	0 / 0	0	1 / 1	2	100.00%
Industry	22/14	36	7.07%	12 / 7	19	10 / 7	17	47.22%
TOTAL	214/295	509	100.00%	139 / 147	286	75 / 148	223	43.81%
Track Class (*trkclas) 49 CFR - 213.9 - max. authorized speed - (freight/passenger)	Active/Passive	Total No.	% of Incidents	Active/Passive (freight/passenger only)	Total No. (freight / passenger only)	Active/ Passive (freight / passenger only)	Total No. (freight / passenger only)	
Class 1 (10/15 mph)	42/41	83	16.31%	26 / 19	45	16 / 22	38	45.78%
Class 2 (25/30 mph)	18/9	27	5.30%	11 / 8	19	7 / 1	8	29.63%
Class 3 (40/60 mph)	46/64	110	21.61%	26 / 25	51	20 / 39	59	53.64%
Class 4 (60/80 mph	99 / 171	270	53.05%	69 / 92	161	30 / 79	109	40.37%
Class 5 (80/90 mph)	6 / 7	13	2.55%	5 / 2	7	1 / 5	6	46.15%
Class 6 (110 mph)	0/0	0	0.00%	0/0	0	0/0	0	0.00%
Class X Excepted (10 mph/none)	3/3	6	1.18%	2 / 1	3	1 / 2	3	50.00%
Left Blank	0/0	0	0.00%	0/0	0	0/0	0	0.00%
TOTAL	214/295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Table 11 – Public Crossing Collisions – 2005 to 2009
Train Speed at Time of Collision

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Train Speed (mph) (*trnspd)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
a. Less than 10 mph	58/40	98	19.25%	39 / 19	58	19 / 21	40	40.82%
b. 10 to 20 mph	15/9	24	4.72%	6 / 6	12	9 / 3	12	50.00%
c. 21 to 35 mph	1/0	1	0.20%	1/0	1	0/0	0	0.00%
d. 36 to 49 mph	1/9	10	1.96%	1 / 4	5	0 / 5	5	50.00%
e. 50 to 60 mph	9/9	18	3.54%	8 / 8	16	1 / 1	2	11.11%
f. Over 60 mph	6/17	23	4.52%	4 / 3	7	2 / 14	16	69.57%
Left Blank	124/211	335	65.82%	80 / 107	187	44 / 104	148	44.18%
TOTAL	214/295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Table 12 – Public Crossing Collisions – 2005 to 2009
Class 1 Railroads, Passenger and Commuter Rail and Shortline Railroads

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509		No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations *
Class I Railroads	Total No.	% of Incidents	Total No.	Total No.	
BNSF ON BNSF	28	5.50%	18	10	35.71%
BNSF ON OTHER RR	6	1.18%	2	4	66.67%
CN ON OTHER RR	91	17.88%	42	49	53.85%
CSX ON CSX	4	0.79%	2	2	50.00%
CSX ON OTHER RR	1	0.20%	1	0	0.00%
KCS ON KCS	126	24.75%	73	53	42.06%
KCS ON OTHER RR	2	0.39%	0	2	100.00%
NS ON NS	16	3.14%	10	6	37.50%
NS ON OTHER RR	1	0.20%	1	0	0.00%
UP ON UP	146	28.68%	89	57	39.04%
UP ON OTHER RR	25	4.91%	14	11	44.00%
SUB-TOTAL CLASS 1'S	446	87.62%	252	194	43.50%
Passenger/Commuter Rail					
ATK	28	5.50%	11	17	60.71%
Sub-total Passenger/Commuter Rail	28	5.50%	11	17	60.71%

Table 12 – Public Crossing Collisions – 2005 to 2009
Class 1 Railroads, Passenger and Commuter Rail and Shortline Railroads
Continued

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509		No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations *
	Total No.	% of Incidents	Total No.	Total No.	
Other Railroads					
AKDN	1	0.20%	1	0	0.00%
ALM	4	0.79%	4	0	0.00%
LAS	9	1.77%	7	2	22.22%
LDRR	11	2.16%	6	5	45.45%
NOGC	8	1.57%	3	5	62.50%
NOPB	1	0.20%	1	0	0.00%
RASX	1	0.20%	1	0	0.00%
Sub-total Other Railroads	35	6.88%	23	12	34.29%
GRAND TOTAL	509	100.00%	286	223	43.81%

Table 13 – Public Crossing Collisions – 2005 to 2009
Type of Highway-User/Vehicle

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Tyep of Highway User/Vehicle (*typveh)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
Car	102 / 137	239	46.95%	66 / 68	134	36 / 69	105	43.93%
Truck	15 / 27	42	8.25%	9 / 14	23	6 / 13	19	45.24%
Trk & Trail	26 / 46	72	14.15%	20 / 24	44	6 / 22	28	38.89%
Pickup Trk	43 / 51	94	18.47%	29 / 22	51	14 / 29	43	45.74%
Van	9 / 8	17	3.34%	5 / 4	9	4 / 4	8	47.06%
Bus	1 / 1	2	0.39%	1 / 0	1	0 / 1	1	50.00%
School Bus	0 / 1	1	0.20%	0 / 0	0	0 / 1	1	100.00%
Motorcycle	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
Oth Mtr. V.	15 / 19	34	6.68%	7 / 13	20	8 / 6	14	41.18%
Pedestrian	2 / 2	4	0.79%	2 / 1	3	0 / 1	1	25.00%
Other	1 / 3	4	0.79%	0 / 1	1	1 / 2	3	75.00%
TOTAL	214 / 295	509	100.00%	139 / 147	286	34 / 66	223	43.81%

Table 14 – Public Crossing Collisions – 2005 to 2009
Position of Highway-User at Time of Collision and Highway-User Action Prior to Collision

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Position of Highway User at Time of Collision (*position)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
1. Stalled	8 / 4	12	2.36%	6 / 3	9	2 / 1	3	25.00%
2. Stopped	71 / 73	144	28.29%	42 / 36	78	29 / 37	66	45.83%
3. Moving over	131 / 215	346	67.98%	87 / 108	195	44 / 107	151	43.64%
4. Trapped	4 / 3	7	1.38%	4 / 0	4	0 / 3	3	42.86%
TOTAL	214 / 295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Highway-User Action Prior to Collision (*motorist)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
1. Drove around	37 / 0	37	7.27%	27 / 0	27	10 / 0	10	27.03%
2. Stopped then proceeded	18 / 22	40	7.86%	13 / 8	21	5 / 14	19	47.50%
3. Did not stop	69 / 189	258	50.69%	41 / 98	139	28 / 91	119	46.12%
4. Stopped on Crossing	68 / 77	145	28.49%	41 / 38	79	27 / 39	66	45.52%
5. Other	21 / 5	26	5.11%	16 / 2	18	5 / 3	8	30.77%
6. Unknown	1 / 2	3	0.59%	1 / 1	2	0 / 1	1	33.33%
TOTAL	214 / 295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Table 15 - Public Crossing Collisions - 2005 to 2009
Weather Condition and Frequency of Collisions by Time Period

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Weather Condition (*weather)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
1. Clear	164 / 229	393	77.21%	102 / 111	213	62 / 118	180	45.80%
2. Cloudy	35 / 56	91	17.88%	24 / 31	55	11 / 25	36	39.56%
3. Rain	12 / 9	21	4.13%	11 / 4	15	1 / 5	6	28.57%
4. Fog	3 / 1	4	0.79%	2 / 1	3	1 / 0	1	25.00%
5. Sleet	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
6. Snow	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
TOTAL	214 / 295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Time Period (*timehr/timemin/ampm)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
6:00 a.m. - 8:59 a.m.	19 / 31	50	9.82%	11 / 16	27	8 / 15	23	46.00%
9:00 a.m. - 11:59 a.m.	35 / 68	103	20.24%	20 / 35	55	15 / 33	48	46.60%
12:00 a.m. - 12:59 a.m.	5 / 2	7	1.38%	3 / 1	4	2 / 1	3	42.86%
1:00 a.m. - 5:59 a.m.	34 / 11	45	8.84%	23 / 5	28	11 / 6	17	37.78%
12:00 p.m. - 1:59 p.m.	23 / 38	61	11.98%	12 / 20	32	11 / 18	29	47.54%
2:00 p.m. - 3:59 p.m.	26 / 46	72	14.15%	16 / 21	37	10 / 25	35	48.61%
4:00 p.m. - 6:59 p.m.	38 / 52	90	17.68%	25 / 30	55	13 / 22	35	38.89%
7:00 p.m. - 11:59 p.m.	34 / 47	81	15.91%	29 / 19	48	5 / 28	33	40.74%
TOTAL	214 / 295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Table 16 – Public Crossing Collisions – 2005 – 2009
Visibility by Time of Day at Active/Passive Devices and Crossing Illumination/Street Lights at Crossings

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509				No. Collisions at Crossings with Single-Incidents Total: 286				No. Collisions at Crossings with Multiple-Incidents Total: 223			
Active Devices	Crossing Illumination Street Lights (*lights)				Crossing Illumination Street Lights (*lights)				Crossing Illumination Street Lights (*lights)			
Visibility by time of day (*visibility)	Lights	No lights	N/A	Total No.	Lights	No lights	N/A	Total No.	Lights	No Lights	N/A	Total No.
1. Dawn	1	0	2	3	1	0	1	2	0	0	1	1
2. Day	30	49	48	127	18	32	23	73	12	17	25	54
3. Dusk	4	2	2	8	3	2	2	7	1	0	0	1
4. Dark	37	22	16	75	28	15	13	56	9	7	3	19
No Entry	1	0	0	1	1	0	0	1	0	0	0	0
Toal Active Devices	73	73	68	214	51	49	39	139	22	24	29	75
Passive Devices	Crossing Illumination Street Lights (*lights)				Crossing Illumination Street Lights (*lights)				Crossing Illumination Street Lights (*lights)			
Visibility by time of day (*visibility)	Lights	No lights	N/A	Total No.	Lights	No lights	N/A	Total No.	Lights	No Lights	N/A	Total No.
1. Dawn	1	1	2	4	1	0	2	3	0	1	0	1
2. Day	25	123	72	220	8	67	33	108	17	56	39	112
3. Dusk	2	6	2	10	0	5	2	7	2	1	0	3
4. Dark	16	32	13	61	3	19	7	29	13	13	6	32
Toal Passive Devices	44	162	89	295	12	91	44	147	32	71	45	148
Grand Total	117	235	157	509	63	140	83	286	54	95	74	223

Table 17 – Public Crossing Collisions – 2005 to 2009
Highway-Users by Age and Gender

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509		No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations*
Age and Gender of Highway-user (*drivage) and (*drivgen)	Total No.	% of Incidents	Total No.	Total No.	
Unknown Gender					
Unknown -Unknown Age	12	2.36%	7	5	41.67%
Sub-Total Unknown	12	2.36%	7	5	41.67%
Male Highway-Users					
Male Age 0 - 11	0	0.00%	0	0	0.00%
Male Age 12 - 26	80	15.72%	46	34	42.50%
Male Age 27 - 39	84	16.50%	44	40	47.62%
Male Age 40 - 55	98	19.25%	57	41	41.84%
Male Age 56 - 69	51	10.02%	25	26	50.98%
Male Age 70 - 79	9	1.77%	4	5	55.56%
Male Age 80 - 99	5	0.98%	5	0	0.00%
Male Age - Unknown	34	6.68%	18	16	47.06%
Sub-Total Male	361	70.92%	199	162	44.88%
Female Highway-User					
Female Ages 12 - 26	41	8.06%	17	24	58.54%
Female Ages 27 - 39	29	5.70%	17	12	41.38%
Female Ages 40 - 55	42	8.25%	29	13	30.95%
Female Ages 56 - 69	11	2.16%	9	2	18.18%
Female Ages 70 - 79	6	1.18%	2	4	66.67%
Female Ages 80 - 99	3	0.59%	3	0	0.00%
Female Age Unknown	4	0.79%	3	1	25.00%
Sub-Total Female	136	26.72%	80	56	41.18%
Grand-Total	509	100.00%	286	223	43.81%

Table 18 – Public Crossing Collisions – 2005 to 2009
Highway-Users View of Track Obscured by Visual Obstruction

Data Category (*FRA Variable Name_)	Total No. Highway-Rail Crossing Collisions Total: 509			No. Collisions at Crossings with Single-Incidents Total: 286		No. Collisions at Crossings with Multiple-Incidents Total: 223		% of Total Collisions at Multiple-Incident Collision Locations *
Highway-Users View Obscured by *(view)	Active / Passive	Total No.	% of Incidents	Active/Passive	Total No.	Active/Passive	Total No.	
1. Permanent Structure	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
2. Standing Railroad Equipment	1 / 1	2	0.39%	0 / 0	0	1 / 1	2	100.00%
3. Passing Train	0 / 1	1	0.20%	0 / 1	1	0 / 0	0	0.00%
4. Topography	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
5. Vegetation	1 / 0	1	0.20%	1 / 0	1	0 / 0	0	0.00%
6. Highway Vehicles	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
7. Other	1 / 1	2	0.39%	1 / 1	2	0 / 0	0	0.00%
8. Not Obstructed	211 / 292	503	98.82%	137 / 145	282	74 / 147	221	43.94%
9 . Field left blank	0 / 0	0	0.00%	0 / 0	0	0 / 0	0	0.00%
TOTAL	214 / 295	509	100.00%	139 / 147	286	75 / 148	223	43.81%

Table 19 – Public Crossing Collisions - 2005 to 2009
Collisions by County Location

Collisions by County Locations	Total No. Collisions: 509	% of Total incidents	No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations *
ACADIA	12	2.36%	5	7	58.33%
ALLEN	24	4.72%	8	16	66.67%
ASCENSION	3	0.59%	3	0	0.00%
AVOYELLES	5	0.98%	2	3	60.00%
BEAUREGARD	3	0.59%	3	0	0.00%
BIENVILLE	7	1.38%	2	5	71.43%
BOSSIER	16	3.14%	11	5	31.25%
CADDO	22	4.32%	16	6	27.27%
CALCASIEU	30	5.89%	12	18	60.00%
CALDWELL	7	1.38%	3	4	57.14%
DE SOTO	14	2.75%	4	10	71.43%
EAST BATON RO	37	7.27%	18	19	51.35%
EVANGELINE	3	0.59%	1	2	66.67%
GRANT	1	0.20%	1	0	0.00%
IBERIA	19	3.73%	13	6	31.58%
IBERVILLE	13	2.55%	7	6	46.15%
JACKSON	1	0.20%	1	0	0.00%
JEFFERSON	27	5.30%	9	18	66.67%
JEFFERSON DAV	6	1.18%	4	2	33.33%
LA SALLE	1	0.20%	1	0	0.00%
LAFAYETTE	10	1.96%	8	2	20.00%
LAFOURCHE	1	0.20%	1	0	0.00%
LINCOLN	7	1.38%	4	3	42.86%

Table 19 – Public Crossing Collisions - 2005 to 2009
Collisions by County Location
Continued

Collisions by County Locations	Total No. Collisions: 509	% of Total incidents	No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations *
LIVINGSTON	13	2.55%	7	6	46.15%
MADISON	7	1.38%	5	2	28.57%
MOREHOUSE	7	1.38%	7	0	0.00%
NATCHITOCHES	6	1.18%	6	0	0.00%
ORLEANS	10	1.96%	5	5	50.00%
OUACHITA	24	4.72%	10	14	58.33%
PLAQUEMINES	1	0.20%	1	0	0.00%
POINTE COUPEE	5	0.98%	5	0	0.00%
RAPIDES	9	1.77%	5	4	44.44%
RED RIVER	3	0.59%	3	0	0.00%
RICHLAND	5	0.98%	5	0	0.00%
SABINE	9	1.77%	5	4	44.44%
ST BERNARD	4	0.79%	4	0	0.00%
ST CHARLES	4	0.79%	4	0	0.00%
ST JAMES	14	2.75%	9	5	35.71%
ST JOHN THE B	27	5.30%	9	18	66.67%
ST LANDRY	18	3.54%	16	2	11.11%
ST MARTIN	5	0.98%	3	2	40.00%
ST MARY	6	1.18%	3	3	50.00%
ST TAMMANY	9	1.77%	7	2	22.22%
TANGIPAHOA	23	4.52%	9	14	60.87%
TERREBONNE	2	0.39%	2	0	0.00%
VERNON	3	0.59%	3	0	0.00%
WASHINGTON	2	0.39%	2	0	0.00%
WEBSTER	3	0.59%	3	0	0.00%

Table 19 – Public Crossing Collisions - 2005 to 2009
Collisions by County Location
continued

Collisions by County Locations	Total No. Collisions: 509	% of Total incidents	No. Collisions at Crossings with Single-Incidents Total: 286	No. Collisions at Crossings with Multiple-Incidents Total: 223	% of Total Collisions at Multiple-Incident Collision Locations *
WEST BATON RO	16	3.14%	8	8	50.00%
WINN	5	0.98%	3	2	40.00%
TOTAL	509	100.00%	286	223	43.81%

Table 20 – Public Crossing Collisions – 2005 to 2009
Collisions at Multiple-Incident Collision Locations by County by Date of Collision

Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
1	ACADIA	767842T	6/1/2005	LLAMA ROAD	LAFAYETTE	Car	Crossbucks and flagging	UP	2005	Gated 3/19/07
2	ALLEN	447790V	5/31/2005	LAUDERDALE YARD ROAD	OBERLIN	Trk& Trail	Crossbucks and flagging	UP	2005	Gated 6/17/08
3	ALLEN	447787M	7/10/2005	BOTLEY CEMETARY	KINDER	Bus	Crossbucks only	UP	2005	To be reviewed
4	ALLEN	447790V	8/9/2005	LAUDERDALE ROAD	OBERLIN	Pickup Trk	Crossbucks only	UP	2005	Gated 6/17/08
5	ALLEN	447715J	10/31/2005	7TH AVENUE	OAKDALE	Trk& Trail	Crossbucks and flagging	UP	2005	Gated 3/14/07
6	ALLEN	447723B	11/30/2005	PAWNEE ROAD	OAKDALE	Trk& Trail	Crossbucks only	UP	2005	Gated 6/15/07
7	ALLEN	447790V	12/8/2005	LAUDERDALE YARD ROAD	OBERLIN	Trk& Trail	Crossbucks and flagging	UP	2005	Gated 6/17/08
8	AVOYELLES	427833G	4/20/2005	DRY BAYOU ROAD	BUNKIE	Van	Crossbucks only	UP	2005	Closure target
9	BIENVILLE	855706K	4/4/2005	LA HWY 4	HODGE	Trk& Trail	Crossbucks only	KCS	2005	F/I's added 4/6/07
10	BIENVILLE	855706K	8/6/2005	HWY4	HODGE	Pickup Trk	Crossbucks only	KCS	2005	F/I's added 4/6/07
11	BOSSIER	302641S	5/17/2005	AIRLINE DRIVE	BOSSIER CITY	Oth Mtr V.	Gates and Cantilever Lights	KCS	2005	Gated already
12	CALCASIEU	768084W	3/31/2005	LA-108	WESTLAKE	Trk& Trail	Cantilever Lights and No Gates	UP	2005	Reviewing Enforcement
13	CALCASIEU	768103Y	4/6/2005	LA 108		Trk& Trail	Cantilever Lights and No Gates	UP	2005	Reviewing Enforcement
14	CALCASIEU	768136L	7/22/2005	EDDY ST		Pickup Trk	Crossbucks and flagging	BNSF	2005	Gated 3/12/09
15	CALCASIEU	768119V	10/30/2005	HUNTINGTON STREET	SULPHUR	Pickup Trk	Standard FI	UP	2005	Gated 7/28/08

Table 20 – Public Crossing Collisions – 2005 to 2009
Collisions at Multiple-Incident Collision Locations by County by Date of Collision
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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
16	CALCASIEU	768099L	10/31/2005	LA 108	WESTLAKE	Pickup Trk	Cantilever Lights and No Gates	UP	2005	Reviewing Enforcement
17	DE SOTO	755973M	12/1/2005	MCMILLON ROAD	LONGSTREET	Trk& Trail	Crossbucks only	UP	2005	To discuss w/Parish
18	EAST BATON ROUGE	302898C	1/16/2005	PROGRESS ROAD	SCOTLANDVILLE	Car	Crossbucks only	IC	2005	Lower train speed
19	EAST BATON ROUGE	303236F	2/22/2005	AIRLINE HIGHWAY	BATON ROUGE	Car	Standard Fl	IC	2005	LEDs added 11/18/08
20	EAST BATON ROUGE	303230P	3/6/2005	NO. ARDENWOOD DRIVE	BATON ROUGE	Car	Standard Fl	IC	2005	Baton Rouge to do new TS
21	EAST BATON ROUGE	303239B	8/12/2005	MONTERRY BOULEVARD	BATON ROUGE	Van	Gates and Flashing Lights	IC	2005	Gated already
22	EAST BATON ROUGE	335338M	10/24/2005	ELMBER AVE	SCOTLANDVILLE	Pickup Trk	Crossbucks only	KCS	2005	Lower train speed
23	IBERIA	767649G	9/6/2005	PRAIRIE AVE	NEW IBERIA	Car	Crossbucks and flagging	LDRR	2005	Closure target
24	JEFFERSON	300238J	4/9/2005	CENTRAL AVENUE	METAIRIE	Car	Gates and Flashing Lights	UP	2005	Gated already
25	JEFFERSON	725713M	8/9/2005	METARIE RD		Car	Gates and Flashing Lights	NS	2005	To get 4-quad gates
26	JEFFERSON	300233A	11/3/2005	TAYLOR ST	KENNER	Car	Crossbucks and flagging	ATK	2005	To be gated
27	JEFFERSON	300231L	12/14/2005	WEBSTER ST	KENNER	Pickup Trk	Crossbucks only	ATK	2005	To be gated
28	LAFAYETTE	762938R	1/18/2005	SOUTHPARK RD		Pickup Trk	Gates and Flashing Lights	BNSF	2005	Gated already
29	ORLEANS	725180E	6/29/2005	ST CLAUDE AVE	NEW ORLEANS	Car	Cantilever Lights and No Gates	NS	2005	Reviewed w/NS & FRA
30	ORLEANS	725180E	12/28/2005	ST CLAUDE AVE	NEW ORLEANS	Truck	Standard Fl	NS	2005	Reviewed w/NS & FRA

Table 20 – Public Crossing Collisions – 2005 to 2009
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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
31	OUACHITA	302497C	7/19/2005	KANSAS STREET	MONROE	Car	Gates and Cantilever Lights	KCS	2005	Gated already
32	OUACHITA	302497C	12/14/2005	KANSAS LANE	MONROE	Car	Gates and Cantilever Lights	KCS	2005	Gated already
33	SABINE	329243R	1/9/2005	WEST FRONT STREET	FLORIEN	Car	Crossbucks only	KCS	2005	Gated 4/11/11
34	SABINE	329243R	4/28/2005	W FRONT STREET	FLORIEN	Truck	Crossbucks only	KCS	2005	Gated 4/11/11
35	ST JAMES	303096F	1/21/2005	WEILL STREET	LUTCHER	Car	Crossbucks only	IC	2005	To be reviewed
36	ST JAMES	303096F	7/22/2005	WEILL STREET	LUTCHER	Car	Crossbucks only	IC	2005	To be reviewed
37	ST JOHN THE BAPTIST	303165L	7/4/2005	CARDINAL STREET	LAPLACE	Car	Crossbucks and flagging	IC	2005	Closure target
38	ST JOHN THE BAPTIST	335545G	8/19/2005	HOMEWOOD PLACE	RESERVE	Car	Crossbucks only	KCS	2005	Gated 10/28/09
39	ST JOHN THE BAPTIST	303120E	12/27/2005	NO. CYRESS STREET	GARYVILLE	Car	Crossbucks and flagging	IC	2005	Proposed corridor
40	ST LANDRY	432774S	11/2/2005	PITRE ROAD	LAWTELL	Trk& Trail	Crossbucks only	UP	2005	Gated 8/10/07
41	ST TAMMANY	725154P	6/13/2005	GAUSE RD	SLIDELL	Car	Gates and Cantilever Lights	NS	2005	Gated already
42	TANGIPAHOA	300175G	1/20/2005	RT	INDEPENDENCE	Van	Crossbucks only	ATK	2005	Gated 2/12/07
43	TANGIPAHOA	300182S	1/24/2005	RT		Car	Crossbucks only	ATK	2005	Gated 4/27/07
44	TANGIPAHOA	300175G	6/11/2005	VELMA ROAD	INDEPENDENCE	Car	Crossbucks and other devices	ATK	2005	Gated 2/12/07
45	TANGIPAHOA	300182S	10/18/2005	MAGIO ROAD	INDEPENDENCE	Pickup Trk	Crossbucks and flagging	IC	2005	Gated 4/27/07

Table 20 – Public Crossing Collisions – 2005 to 2009
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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
46	TANGIPAHOA	300139L	11/1/2005	BABB	TANGIPAHOA	Other	Crossbucks and flagging	ATK	2005	Closure target
47	TANGIPAHOA	300186U	11/16/2005	BUCKLES LANE		Car	Crossbucks and flagging	ATK	2005	Gated 2/17/11
48	WEST BATON ROUGE	447282F	7/23/2005	MYHAND STREET	ADDIS	Car	Crossbucks and flagging	UP	2005	Proposed corridor
49	ACADIA	767907J	4/28/2006	RT ; THIRTEENTH	MERMENTAU	Trk& Trail	Crossbucks only	ATK	2006	Gated 2/15/07
50	ACADIA	767857H	7/17/2006	ELEANOR ROAD	CROWLEY	Car	Crossbucks and flagging	UP	2006	Gated 4/24/08
51	ACADIA	767842T	7/24/2006	LLAMA RD		Car	Crossbucks and flagging	ATK	2006	Gated 3/19/07
52	ACADIA	767857H	9/7/2006	ELENOR RD		Oth Mtr V.	Crossbucks and flagging	BNSF	2006	Gated 4/24/08
53	ACADIA	767857H	9/14/2006	ELENOR RD		Car	Crossbucks and flagging	BNSF	2006	Gated 4/24/08
54	ACADIA	767907J	9/25/2006	SOUTH 13TH STREET	MERMENTAU	Pickup Trk	Crossbucks and flagging	UP	2006	Gated 2/15/07
55	ALLEN	447715J	2/19/2006	7TH AVENUE	OAKDALE	Car	Crossbucks and flagging	UP	2006	Gated 3/14/07
56	ALLEN	447723B	4/21/2006	PAWNEE ROAD	OAKDALE	Car	Crossbucks only	UP	2006	Gated 6/15/07
57	ALLEN	447715J	8/4/2006	7TH AVENUE	OAKDALE	Car	Crossbucks and flagging	UP	2006	Gated 3/14/07
58	ALLEN	447716R	8/15/2006	TALAMBAS DRIVE	OAKDALE	Car	Crossbucks and flagging	UP	2006	Gated 3/3/10
59	ALLEN	447716R	8/29/2006	TALAMBAS DRIVE	OAKDALE	Pickup Trk	Crossbucks and flagging	UP	2006	Gated 3/3/10
60	ALLEN	447716R	11/4/2006	TALAMBAS STREET	OAKDALE	Car	Crossbucks and flagging	UP	2006	Gated 3/3/10

Table 20 – Public Crossing Collisions – 2005 to 2009
Collisions at Multiple-Incident Collision Locations by County by Date of Collision continued

Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
61	ALLEN	447709F	12/16/2006	PELICAN HWY	OAKDALE	Pickup Trk	Crossbucks and flagging	UP	2006	Gated 3/3/10
62	AVOYELLES	427833G	3/8/2006	DRY BAYOU ROAD	BUNKIE	Pickup Trk	Crossbucks only	UP	2006	Closure target
63	BIENVILLE	302603H	7/1/2006	BLACK LAKE ROAD	GIBSLAND	Trk& Trail	Crossbucks only	KCS	2006	Gated 8/28/08
64	CADDO	331402V	1/11/2006	DAUGHERTY AVE	BLANCHARD	Car	Standard Fl	KCS	2006	Gated 4/26/07
65	CADDO	758207D	1/26/2006	70TH AT / LA 511	SHREVEPORT	Oth Mtr V.	Gates and Flashing Lights	UP	2006	Gated already
66	CADDO	331402V	11/26/2006	BLANCHARD FURRH	BLANCHARD	Truck	Standard Fl	KCS	2006	Gated 4/26/07
67	CADDO	794390G	12/4/2006	JEWELLA ROAD	SHREVEPORT	Car	Crossbucks and other devices	UP	2006	Wrong DOT No., but reviewed w/City & UP
68	CADDO	794390G	12/21/2006	JEWELLA ROAD	SHREVEPORT	Pickup Trk	Crossbucks and other devices	UP	2006	Wrong DOT No., but reviewed w/City & UP
69	CALCASIEU	768119V	1/1/2006	RT ; HUNTINGTON	SULPHUR	Pickup Trk	Standard Fl	ATK	2006	Gated 7/28/08
70	CALCASIEU	768084W	1/29/2006	LA - 108	WESTLAKE	Car	Standard Fl	UP	2006	Reviewing Enforcement
71	CALCASIEU	768119V	5/2/2006	HUNTINGTON ST.	SULPHUR	Truck	Standard Fl	BNSF	2006	Gated 7/28/08
72	CALCASIEU	768119V	5/17/2006	HUNTINGTON STREET	SULPHUR	Trk& Trail	Standard Fl	UP	2006	Gated 7/28/08
73	CALCASIEU	768099L	9/23/2006	LA-108	WESTLAKE	Pickup Trk	Cantilever Lights and No Gates	UP	2006	Reviewing Enforcement
74	CALCASIEU	768119V	12/23/2006	HUNTINGTON ST.	SULPHUR	Car	Standard Fl	BNSF	2006	Gated 7/28/08
75	CALCASIEU	768136L	12/29/2006	EDDY ST	VINTON	Car	Audible	ATK	2006	Gated 3/12/09

Table 20 – Public Crossing Collisions – 2005 to 2009
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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
76	CALDWELL	426230F	7/3/2006	LA 126/CENTER	GRAYSON	Car	Gates and Flashing Lights	UP	2006	Gated already
77	DE SOTO	329202L	4/11/2006	CATUNA ROAD	BENSON	Car	Crossbucks only	KCS	2006	To be gated
78	DE SOTO	329166T	7/8/2006	LA 5 KINGSTON	FRIERSON	Trk& Trail	Crossbucks only	KCS	2006	Gated 12/13/07
79	EAST BATON ROUGE	302898C	5/23/2006	PROGRESS ROAD	SCOTLANDVILLE	Car	Crossbucks only	IC	2006	Lower train speed
80	EAST BATON ROUGE	303227G	6/21/2006	NO. FOSTER DRIVE	BATON ROUGE	Truck	Standard Fl	IC	2006	Baton Rouge to do new TS
81	EAST BATON ROUGE	303236F	6/30/2006	AIRLINE HIGHWAY	BATON ROUGE	Car	Standard Fl	IC	2006	LEDs added 11/18/08
82	EAST BATON ROUGE	303227G	7/12/2006	NO. FOSTER DRIVE	BATON ROUGE	Car	Standard Fl	IC	2006	Baton Rouge to do new TS
83	EAST BATON ROUGE	303227G	8/16/2006	NO. FOSTER DRIVE	BATON ROUGE	Car	Standard Fl	IC	2006	Baton Rouge to do new TS
84	EAST BATON ROUGE	335338M	11/28/2006	ELMER STREET	SCOTLANDVILLE	Car	Crossbucks only	KCS	2006	Lower train speed
85	JEFFERSON	300233A	1/15/2006	TAYLOR STREET	KENNER	Car	Crossbucks only	IC	2006	To be gated
86	JEFFERSON	855615E	6/9/2006	FAIRFIELD AVENUE	GRETNA	Pickup Trk	Crossbucks only	NOGC	2006	F/I's added 2/27/11
87	JEFFERSON	300233A	6/29/2006	TAYLOR STREET	KENNER	Pickup Trk	Crossbucks only	IC	2006	To be gated
88	JEFFERSON	300233A	10/22/2006	TAYLOR	KENNER	Car	Crossbucks only	KCS	2006	To be gated
89	JEFFERSON	725713M	10/29/2006	METARIE RD	NEW ORLEANS	Oth Mtr V.	Gates and Cantilever Lights	UP	2006	To get 4-quad gates
90	LINCOLN	302553G	6/13/2006	MAPLE STREET	RUSTON	Car	Standard Fl	KCS	2006	Gated 4/3/08

Table 20 – Public Crossing Collisions – 2005 to 2009
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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
91	LINCOLN	302553G	12/1/2006	MAPLE STREET	RUSTON	Oth Mtr V.	Standard FI	KCS	2006	Gated 4/3/08
92	LIVINGSTON	309526J	8/18/2006	HWY 190 E SUNLAND		Car	Crossbucks only	IC	2006	Gates proposed
93	ORLEANS	341067X	2/23/2006	ALMONASTER	NEW ORLEANS	Car	Crossbucks only	CSX	2006	No longer in use
94	ORLEANS	341067X	8/1/2006	ALMONASTER	NEW ORLEANS	Car	Crossbucks only	CSX	2006	No longer in use
95	ORLEANS	725180E	10/24/2006	ST CLAUDE AVE	NEW ORLEANS	Pickup Trk	Cantilever Lights and No Gates	NS	2006	Reviewed w/FRA
96	OUACHITA	302523P	6/21/2006	CHENIERE STATION RD	CALHOUN	Pickup Trk	Crossbucks only	KCS	2006	Gated 5/18/08
97	OUACHITA	302523P	6/22/2006	CHENIERE STATION	CALHOUN	Pickup Trk	Crossbucks only	KCS	2006	Gated 5/18/08
98	OUACHITA	302502W	11/22/2006	BOOTH STREET	MONROE	Truck	Crossbucks only	KCS	2006	Closed 10/7/09
99	OUACHITA	302500H	12/11/2006	SERVICE ROAD	MONROE	Car	Gates and Flashing Lights	KCS	2006	Gated already
100	RAPIDES	794121P	7/12/2006	LA .1 (LEAD TRK.)	ALEXANDRIA	Car	Crossbucks only	UP	2006	F/I's added 2/1/07
101	RAPIDES	794146K	10/24/2006	LA-1	BOYCE	Pickup Trk	Cantilever Lights and No Gates	UP	2006	To be upgraded
102	RAPIDES	794121P	12/4/2006	LA. 1 (LEAD TRK.)	ALEXANDRIA	Pickup Trk	Crossbucks and other devices	UP	2006	F/I's added 2/1/07
103	SABINE	329237M	11/19/2006	MCDONALD DRIVE	MANY	Car	Crossbucks only	KCS	2006	Gated 4/13/11
104	ST JAMES	303105C	12/6/2006	MILLET AVENUE	GRAMERCY	Car	Crossbucks only	IC	2006	To be reviewed
105	ST JOHN THE BAPTIST	303120E	1/14/2006	NO. CYPRESS STREET	GARYVILLE	Car	Crossbucks only	IC	2006	Proposed corridor

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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
106	ST JOHN THE BAPTIST	335561R	4/15/2006	HEMLOCK ST	LAPLACE	Pickup Trk	Cantilever Lights and No Gates	KCS	2006	Gated 9/23/2009
107	ST JOHN THE BAPTIST	335545G	6/14/2006	HOMEWOOD DR	RESERVE	Car	Crossbucks only	KCS	2006	Gated 10/28/09
108	ST JOHN THE BAPTIST	303165L	11/1/2006	CARDINAL STREET	LAPLACE	Car	Crossbucks and flagging	IC	2006	Closure target
109	ST JOHN THE BAPTIST	335561R	11/8/2006	LA 3224 HEMLOCK ST	LAPLACE	Pickup Trk	Cantilever Lights and No Gates	KCS	2006	Gated 9/23/2009
110	ST JOHN THE BAPTIST	303120E	11/28/2006	NO. CYPRESS STREET	GARYVILLE	Car	Crossbucks only	IC	2006	Proposed corridor
111	ST MARY	767551D	11/28/2006	ORPHAN HOME ROAD	BALDWIN	School Bus	Crossbucks only	UP	2006	Proposed corridor
112	ST TAMMANY	725154P	11/13/2006	GAUSE RD	SLIDELL	Car	Gates and Cantilever Lights	NS	2006	Gated already
113	TANGIPAHOA	300139L	3/11/2006	BABB STREET	TANGIPAHOA	Car	Crossbucks and flagging	IC	2006	Closure target
114	WEST BATON ROUGE	447280S	5/11/2006	SID RICHARDSON ROAD	ADDIS	Trk& Trail	Crossbucks only	UP	2006	Gated 11/11/08
115	WEST BATON ROUGE	867267M	7/13/2006	S WINTERVILLE ROAD	ERWINVILLE	Trk& Trail	Crossbucks only	UP	2006	Reviewed w/Parish & FRA
116	BIENVILLE	302603H	3/22/2007	BLACK LAKE ROAD	GIBSLAND	Car	Crossbucks only	KCS	2007	Gated 8/28/08
117	BOSSIER	335375P	8/6/2007	GOLDEN MEADOW	BOSSIER CITY	Car	Cantilever Lights and No Gates	KCS	2007	Gated 6/3/08
118	CADDO	758207D	12/7/2007	70TH ST / LA 511	SHREVEPORT	Oth Mtr V.	Gates and Flashing Lights	UP	2007	Gated already
119	CALCASIEU	328978V	2/10/2007	ANTHONY FERRY	WESTLAKE	Pickup Trk	Crossbucks only	KCS	2007	No longer in use
120	CALCASIEU	328978V	3/19/2007	ANTHONY FERRY ROAD	WESTLAKE	Car	Crossbucks and other devices	KCS	2007	No longer in use

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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
121	CALCASIEU	768084W	7/20/2007	LA 108	WESTLAKE	Car	Standard FI	UP	2007	Reviewing Enforcement
122	CALCASIEU	768119V	8/12/2007	HUNTINGTON STREET	SULPHUR	Pickup Trk	Standard FI	UP	2007	Gated 7/28/08
123	CALDWELL	425087U	3/11/2007	RIVERTON CAMP ROAD	RIVERTON	Car	Crossbucks only	UP	2007	To be reviewed
124	DE SOTO	329164E	1/10/2007	GRAVEL POINT ROAD	FRIERSON	Oth Mtr V.	Crossbucks only	KCS	2007	Gated 7/29/09
125	DE SOTO	755973M	8/14/2007	MCMILLON R		Trk& Trail	Crossbucks and flagging	BNSF	2007	To discuss w/Parish
126	DE SOTO	329164E	8/15/2007	GRAVEL POINT ROAD	FRIERSON	Truck	Crossbucks only	KCS	2007	Gated 7/29/09
127	DE SOTO	329166T	10/21/2007	LA 5	FRIERSON	Trk& Trail	Crossbucks only	KCS	2007	Gated 12/13/07
128	EAST BATON ROUGE	303217B	2/17/2007	SCENIC HIGHWAY	BATON ROUGE	Car	Standard FI	IC	2007	Baton Rouge to do new TS
129	EAST BATON ROUGE	303217B	4/2/2007	SCENIC HIGHWAY	BATON ROUGE	Car	Standard FI	IC	2007	Baton Rouge to do new TS
130	EAST BATON ROUGE	303227G	5/16/2007	NO. FOSTER DRIVE	BATON ROUGE	Car	Standard FI	IC	2007	Baton Rouge to do new TS
131	IBERVILLE	447274N	8/30/2007	LA 77	PLAQUEMINE	Car	Gates and Flashing Lights	UP	2007	TBR
132	IBERVILLE	447275V	10/6/2007	WEST STREET	PLAQUEMINE	Car	Crossbucks only	UP	2007	Closure target
133	JEFFERSON	300233A	3/31/2007	TAYLOR STREET	KENNER	Pickup Trk	Crossbucks only	KCS	2007	To be gated
134	JEFFERSON	744536L	6/22/2007	HUEY P LONG AVENUE	GRETNA	Truck	Crossbucks and flagging	NOGC	2007	Special LED CBA added
135	JEFFERSON	300231L	9/26/2007	WEBSTER ST	KENNER	Car	Crossbucks and flagging	ATK	2007	To be gated

Table 20 – Public Crossing Collisions – 2005 to 2009
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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
136	JEFFERSON	855615E	12/9/2007	FAIRFIELD AVE	GRETNA	Car	Crossbucks only	NOGC	2007	F/I's added 2/27/11
137	LINCOLN	302553G	6/25/2007	MAPLE STREET	RUSTON	Car	Standard FI	KCS	2007	Gated 4/3/08
138	LIVINGSTON	303270M	3/14/2007	SUNSET LANE	WALKER	Car	Crossbucks only	IC	2007	Closure target
139	LIVINGSTON	303270M	6/10/2007	SUNSET LANE	WALKER	Pickup Trk	Crossbucks only	IC	2007	Closure target
140	LIVINGSTON	303256S	10/30/2007	SUMMERS STREET	DENHAM SPRINGS	Truck	Crossbucks and flagging	IC	2007	Proposed corridor
141	MADISON	302419V	3/15/2007	KIMBROUGH DR	TALLULAH	Car	Gates and Flashing Lights	KCS	2007	Gated already
142	MADISON	302419V	6/2/2007	KIMBROUGH DRIVE	TALLULAH	Pickup Trk	Gates and Flashing Lights	KCS	2007	Gated already
143	OUACHITA	302502W	1/5/2007	BOOTH STREET	MONROE	Car	Crossbucks only	KCS	2007	Closed 10/7/09
144	OUACHITA	302500H	1/20/2007	SERVICE ROAD	MONROE	Car	Gates and Flashing Lights	KCS	2007	Gated already
145	RAPIDES	794146K	9/2/2007	LA-1	BOYCE	Oth Mtr V.	Cantilever Lights and No Gates	UP	2007	To be upgraded
146	ST JOHN THE BAPTIST	303165L	1/31/2007	CARDINAL STREET	LAPLACE	Car	Crossbucks and flagging	IC	2007	Closure target
147	ST JOHN THE BAPTIST	303165L	5/26/2007	CARDINAL STREET	LAPLACE	Car	Crossbucks and flagging	IC	2007	Closure target
148	ST JOHN THE BAPTIST	335545G	6/22/2007	HOMEWOOD ST	RESERVE	Oth Mtr V.	Crossbucks only	KCS	2007	Gated 10/28/09
149	ST JOHN THE BAPTIST	335545G	11/12/2007	HOMEWOOD PLACE	RESERVE	Car	Crossbucks only	KCS	2007	Gated 10/28/09
150	ST JOHN THE BAPTIST	303165L	12/18/2007	CARDINAL STREET	LAPLACE	Truck	Crossbucks and flagging	IC	2007	Closure target

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Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
151	ST MARTIN	767694B	8/1/2007	SH LA 92		Pickup Trk	Gates and Flashing Lights	BNSF	2007	Gated already
152	ST MARY	767551D	8/19/2007	ORPHANS HOME RD	BALDWIN	Car	Crossbucks only	BNSF	2007	Proposed corridor
153	ST MARY	767551D	8/26/2007	ORPHANS HOME RD	BALDWIN	Car	Crossbucks only	BNSF	2007	Proposed corridor
154	TANGIPAHOA	300186U	5/5/2007	RT 444 ; BUCKLES LAN		Pickup Trk	Crossbucks only	ATK	2007	Gated 2/17/11
155	TANGIPAHOA	300139L	11/7/2007	BABB ST	TANGIPAHOA	Truck	Crossbucks only	ATK	2007	Closure target
156	WEST BATON ROUGE	867267M	7/17/2007	SOUTH WINTERVILLE RD	ERWINVILLE	Trk& Trail	Crossbucks only	UP	2007	Reviewed w/Parish & FRA
157	ALLEN	447716R	6/19/2008	TALAMBAS DRIVE	OAKDALE	Car	Crossbucks and flagging	UP	2008	Gated 5/3/10
158	ALLEN	447787M	8/18/2008	BOTLEY CEMETERY ROAD	KINDER	Car	Crossbucks only	UP	2008	To be reviewed
159	ALLEN	447709F	8/29/2008	PELICAN HIGHWAY	OAKDALE	Pickup Trk	Crossbucks and flagging	UP	2008	Gated 3/3/10
160	AVOYELLES	427833G	8/30/2008	DRY BAYOU ROAD	BUNKIE	Oth Mtr V.	Crossbucks only	UP	2008	Closure target
161	BIENVILLE	302603H	6/23/2008	BLACK LAKE ROAD	GIBSLAND	Trk& Trail	Crossbucks only	KCS	2008	Gated 8/28/08
162	BOSSIER	335375P	1/17/2008	GOLDEN MEADOWS	BOSSIER CITY	Car	Cantilever Lights and No Gates	KCS	2008	Gated 6/3/08
163	BOSSIER	302641S	11/22/2008	AIRLINE DRIVE	BOSSIER CITY	Other	Gates and Cantilever Lights	KCS	2008	Gated already
164	BOSSIER	302641S	12/10/2008	LA 3105, AIRLINE DRI	BOSSIER CITY	Car	Gates and Cantilever Lights	KCS	2008	Gated already
165	CALCASIEU	768103Y	4/14/2008	LA 108		Van	Cantilever Lights and No Gates	UP	2008	Reviewing Enforcement

Table 20 – Public Crossing Collisions – 2005 to 2009
Collisions at Multiple-Incident Collision Locations by County by Date of Collision
continued

Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
166	CALDWELL	426230F	9/30/2008	LA 126/CENTER	GRAYSON	Pickup Trk	Gates and Flashing Lights	UP	2008	Gated already
167	DE SOTO	329164E	7/15/2008	GRAVEL POINT ROAD	FRIERSON	Trk& Trail	Crossbucks only	KCS	2008	Gated 7/29/09
168	DE SOTO	329164E	8/3/2008	GRAVEL POINT ROAD	FRIERSON	Other	Crossbucks only	KCS	2008	Gated 7/29/09
169	EAST BATON ROUGE	303217B	1/7/2008	SCENIC HIGHWAY	BATON ROUGE	Pickup Trk	Standard Fl	IC	2008	Baton Rouge to do new TS
170	EAST BATON ROUGE	303217B	2/15/2008	SCENIC HIGHWAY	BATON ROUGE	Car	Cantilever Lights and No Gates	IC	2008	Baton Rouge to do new TS
171	EAST BATON ROUGE	303239B	3/8/2008	MONTERRY BOULEVARD	BATON ROUGE	Truck	Gates and Cantilever Lights	IC	2008	Gated already
172	EAST BATON ROUGE	303230P	5/22/2008	N. ARDENWOOD DRIVE	BATON ROUGE	Car	Cantilever Lights and No Gates	IC	2008	Baton Rouge to do new TS
173	IBERIA	755679P	1/25/2008	LA HWY 677	NEW IBERIA	Car	Crossbucks only	LDRR	2008	Wrong DOT No., reviewed w/LDRR
174	IBERIA	767653W	3/16/2008	JULIA AND WIASHN	NEW IBERIA	Oth Mtr V.	Standard Fl	LDRR	2008	Proposed corridor
175	IBERIA	767653W	10/20/2008	S. JULIA ST.	NEW IBERIA	Oth Mtr V.	Standard Fl	BNSF	2008	Proposed corridor
176	IBERIA	767649G	11/19/2008	PRAIRIE AVENUE	NEW IBERIA	Car	Crossbucks and flagging	UP	2008	Closure target
177	IBERVILLE	447274N	10/27/2008	LA 77	PLAQUEMINE	Van	Gates and Flashing Lights	UP	2008	To be reviewed
178	JEFFERSON	725713M	4/18/2008	METARIE RD		Car	Gates and Flashing Lights	BNSF	2008	To get 4-quad gates
179	JEFFERSON	300238J	7/21/2008	LA ; CENTRAL AVE		Van	Gates and Cantilever Lights	ATK	2008	Gated already
180	JEFFERSON	744536L	10/1/2008	MAINLINE	GRETNA	Pickup Trk	Stop signs	NOGC	2008	Special LED CBA added

Table 20 – Public Crossing Collisions – 2005 to 2009
Collisions at Multiple-Incident Collision Locations by County by Date of Collision
continued

Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
181	JEFFERSON DAVIS	767914U	6/6/2008	E RACCA RD		Pickup Trk	Crossbucks only	BNSF	2008	CBA in 3/09/09
182	LAFAYETTE	762938R	10/29/2008	SOUTHPARK RD		Trk& Trail	Gates and Flashing Lights	BNSF	2008	Gated already
183	LIVINGSTON	309526J	6/9/2008	LA 449 / SUNNYLAND R		Trk& Trail	Crossbucks only	IC	2008	Gates proposed
184	OUACHITA	302502W	3/9/2008	BOOTH STREET	MONROE	Van	Crossbucks only	KCS	2008	Closed 10/7/09
185	OUACHITA	302502W	5/23/2008	BOOTH STREET	MONROE	Truck	Crossbucks only	KCS	2008	Closed 10/7/09
186	OUACHITA	302502W	8/19/2008	BOOTH STREET	MONROE	Car	Crossbucks only	KCS	2008	Closed 10/7/09
187	SABINE	329237M	3/27/2008	MCDONALD DRIVE	MANY	Trk& Trail	Crossbucks only	KCS	2008	Gated 4/13/11
188	ST JAMES	303105C	8/2/2008	MILLET AVENUE	GRAMERCY	Truck	Crossbucks only	IC	2008	To be reviewed
189	ST JAMES	303096F	8/9/2008	WELL STREET		Truck	Crossbucks only	IC	2008	TBR
190	ST JOHN THE BAPTIST	303160C	4/4/2008	APRICOT	LAPLACE	Truck	Crossbucks only	IC	2008	Proposed corridor
191	ST JOHN THE BAPTIST	303160C	7/6/2008	N. N #32		Car	Crossbucks and flagging	IC	2008	Proposed corridor
192	ST JOHN THE BAPTIST	303165L	7/7/2008	CARDINAL STREET	LAPLACE	Truck	Crossbucks only	IC	2008	Closure target
193	ST JOHN THE BAPTIST	303165L	10/5/2008	CARDINAL STREET	LAPLACE	Truck	Crossbucks only	IC	2008	Closure target
194	ST MARTIN	767694B	10/13/2008	HWY 92	CADE	Car	Gates and Flashing Lights	LDRR	2008	Gated already
195	TANGIPAHOA	300176N	3/31/2008	RT ; PUBLIC ROAD	INDEPENDENCE	Car	Crossbucks and flagging	ATK	2008	Closure target

Table 20 – Public Crossing Collisions – 2005 to 2009
Collisions at Multiple-Incident Collision Locations by County by Date of Collision
continued

Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
196	TANGIPAHOA	300176N	3/31/2008	CAPACE STREET	INDEPENDENCE	Car	Crossbucks and flagging	IC	2008	Closure target
197	TANGIPAHOA	300178C	6/4/2008	THIRD STREET / HWY 4	INDEPENDENCE	Car	Gates and Flashing Lights	IC	2008	Gated already
198	TANGIPAHOA	300139L	9/20/2008	BABB STREET	TANGIPAHOA	Car	Crossbucks and flagging	IC	2008	Closure target
199	WEST BATON ROUGE	867267M	7/9/2008	S. WINTERVILLE ROAD	ERWINVILLE	Pickup Trk	Crossbucks only	UP	2008	Reviewed w/Parish & FRA
200	WEST BATON ROUGE	447280S	9/14/2008	SID RICHARDSON ROAD		Trk& Trail	Crossbucks only	UP	2008	Gated 11/11/08
201	WINN	597901X	1/2/2008	LA 1231-2 HORSHOE RO	WINNFIELD	Trk& Trail	Crossbucks only	LAS	2008	To be reviewed
202	CALCASIEU	768099L	3/4/2009	LA-108	WESTLAKE	Trk& Trail	Cantilever Lights and No Gates	UP	2009	Reviewing Enforcement
203	CALDWELL	425087U	7/19/2009	RIVERTON CAMP ROAD		Oth Mtr V.	Crossbucks only	UP	2009	To be reviewed
204	DE SOTO	329202L	1/14/2009	Catuna Road	BENSON	Pickup Trk	Crossbucks only	KCS	2009	To be gated
205	EAST BATON ROUGE	303227G	4/19/2009	NO. FOSTER DRIVER	BATON ROUGE	Truck	Cantilever Lights and No Gates	IC	2009	Baton Rouge to do new TS
206	EVANGELINE	435821H	3/2/2009	MAGNOLIA STREET	BASILE	Pickup Trk	Crossbucks only	UP	2009	Corridor potential
207	EVANGELINE	435821H	5/22/2009	MAGNOLIA STREET	BASILE	Car	Crossbucks only	UP	2009	Corridor potential
208	IBERIA	755679P	12/18/2009	LANDRY DRIVE	NEW IBERIA	Car	Crossbucks and other devices	LDRR	2009	Wrong DOT No., reviewed w/LDRR
209	IBERVILLE	448955U	2/4/2009	LA CROIX STRRET	WHITE CASTLE	Pickup Trk	Crossbucks only	UP	2009	UP discussing w/Parish
210	IBERVILLE	448955U	5/23/2009	LA CROIX STREET	WHITE CASTLE	Oth Mtr V.	Crossbucks only	UP	2009	UP discussing w/Parish

Table 20 – Public Crossing Collisions – 2005 to 2009
Collisions at Multiple-Incident Collision Locations by County by Date of Collision
continued

Obs	COUNTY	GXID	DATE	HIGHWAY	CITY	TYPE * VEHICLE	DEVICE	RR	YEAR	Upgrades
211	IBERVILLE	447275V	6/28/2009	WEST STREET	PLAQUEMINE	Car	Crossbucks only	UP	2009	Closure target
212	JEFFERSON	300233A	7/25/2009	TAYLOR STREET	KENNER	Pedestrian	Crossbucks only	IC	2009	To be gated
213	JEFFERSON	744536L	12/10/2009	4TH STREET	GRETNA	Trk& Trail	Stop signs	NOGC	2009	Special LED CBA added
214	JEFFERSON DAVIS	767914U	1/16/2009	E RACCA RD		Pickup Trk	Stop signs	ATK	2009	CBA in 3/09/09
215	LIVINGSTON	303256S	3/15/2009	SUMMERS STREET	DENHAM SPRINGS	Car	Crossbucks only	IC	2009	Proposed corridor
216	OUACHITA	302502W	3/14/2009	Booth Street	MONROE	Van	Crossbucks only	KCS	2009	Closed 10/7/09
217	OUACHITA	302502W	5/22/2009	Booth Street	MONROE	Car	Crossbucks only	KCS	2009	Closed 10/7/09
218	OUACHITA	302502W	6/9/2009	Booth Street	MONROE	Pickup Trk	Crossbucks only	KCS	2009	Closed 10/7/09
219	ST LANDRY	432774S	9/19/2009	PITRE ROAD		Trk& Trail	Gates and Flashing Lights	UP	2009	Gated already
220	TANGIPAHOA	300178C	6/25/2009	E.THIRD STREET/HWY40	INDEPENDENCE	Car	Gates and Flashing Lights	IC	2009	Gated already
221	WEST BATON ROUGE	447282F	8/23/2009	MYHAND STREET	ADDIS	Car	Crossbucks and flagging	UP	2009	Proposed corridor
222	WEST BATON ROUGE	447282F	11/13/2009	MYHAND STREET	ADDIS	Car	Crossbucks and flagging	UP	2009	Proposed corridor
223	WINN	597901X	1/26/2009	LA 1231-2 HORSHOE RD	WINNFIELD	Car	Crossbucks only	LAS	2009	To be reviewed

Appendix D
2010 LADOTD Highway/Rail Safety Report

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Louisiana DOTD Highway/Rail Grade Crossing Safety Report
HSIP State Fiscal Year 2010 (July '09 through June '10)

I. Introduction

Improving highway/rail safety is a primary goal for the Louisiana Department of Transportation and Development's (DOTD) Highway/Rail Safety Unit. DOTD does this by developing projects to upgrade or install active warning devices to current technology, working with local governments and communities to try to consolidate crossings through effective corridor projects, and working with railroads to upgrade passive crossings to current recommendations, specifically adding yield or stop signs.

DOTD manages an annual Railroad Safety Program of over $8 million of highway/rail crossing safety projects. DOTD only receives approximately $4 million of FHWA funding specifically earmarked for highway/rail crossing safety, but as the issue of highway/rail safety is so important to Louisiana, DOTD also obligates an additional $4 million of federal/state funds for an overall Railroad Safety Program of t $8 million.

DOTD partners with the Louisiana Highway Safety Commission, Louisiana State Police, Louisiana Operation Lifesaver, individual railroads, and others to coordinate and enhance highway/rail safety via all available methods and to promote the recognized three "E's" (Education, Enforcement, and Engineering) of highway/rail safety. These areas are addressed in our Highway/Rail Safety Action Plan.

II. General Program

a. Summary of the Program – DOTD initially analyzes the public crossings with a rating index derived from our inventory data. Input is collected from the following sources: engineers, local government, law enforcement, and the public. Due to increases in train volumes and/or speeds, several major Class I corridors have merited particular attention. The majority of DOTD's focus is on corridor projects where there are multiple crossings evaluated for improvement within a specified area.

b. Number of public grade crossings: 3,214 (see the below Table for 2009 data comparisons to 2010) The chart below offers a comparison of 2009 vs. 2010. The 2010 numbers were collected from DOTD's statewide railroad inventory database as of June 2010. The total number of public crossings remained the same from 2009 to 2010 because along with several closures, there were new crossings added and some 'private' crossings have revised to 'public.' However, there are more grade separations and crossings with active warning devices.

Year	Total crossings	Active (signals)	Passive (signs)	Grade Separations
2010	3,214	1,406	1,445	363
2009	3,214	1,379	1,476	359

c. State's assessment of overall highway/rail safety program

- Assessment of time frame – Louisiana's State Fiscal Year 2010 (SFY 10). The specific timeframe of SFY 10 is July 1, 2009 through June 30, 2010.

- Summary of projects – DOTD obligated and issued work orders of over $8 Million for their Railroad Safety Program in SFY 10 (July 09- June 10). These projects are as follows:
  - (32) thirty-two projects for gates,
  - (11) eleven projects for new surfaces,
  - (2) two projects for flashing light without gates
  - Approximately 360 new crossbuck assemblies using a metal pole as a standard, about 50 of these are with the New Orleans & Gulf Coast Railroad (NOGC) and the remainder with Kansas City Southern (KCS), and
  - (3) three crossings were negotiated for closure directly related to crossings/projects that were work ordered in SFY 10. Two of these have been closed this fiscal year. One crossing is set to be closed in SFY 2011.

  Note: See the attached Table 1 for a summary of SFY 10's highway/rail safety projects.
- DOTD also conducts highway/rail crossing safety improvements when DOTD regular road construction projects require it. These construction projects amounted to an additional $2.2 million obligated and issued work orders for highway-rail crossing projects in SFY 10. These projects are as follows:
  - (5) five projects gates,
  - (6) six projects for new surfaces,
  - (2) two projects for flashing lights without gates, and
  - (8) eight crossings minor railroad signal connections where simultaneous preemption was negotiated for LA 23 traffic signals adjacent to NOGC as a result of our LA 23 construction project in Jefferson and Plaquemines Parishes.

  Note: These projects are not shown on the attached Table 1, but the information is being provided to further illustrate DOTD's commitment to highway/rail safety.
- Trend in grade crossing closures – (2) Two of Louisiana's public highway/rail grade crossings were physically closed in SFY 10 as direct result of projects that are part of DOTD's railroad Safety Program. These (2) two closed crossings are as follows: Market Street (US 71) and Hearne Street in Shreveport. One to be closed is directly associated with the gating of Front Street that was work ordered in SFY 10 and DOTD's Highway/Rail Safety Unit has laid the groundwork for many corridor projects across the state and foresee significant potential improvement in highway/rail safety over the next five to ten years. There have been on going meetings with the City of New Iberia discussing consolidations. The proposed consolidations in Tangipahoa Parish were discussed with public officials and more meetings are set for SFY11. The individual railroads and DOTD are committed to pursuing the labor intensive process of closing highway-rail crossings with local governments for improved public safety.

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- Reduction in crashes and fatalities – DOTD has tracked its safety program since the Highway Safety Act in the 1970's and the creation of the federal DOT No. system for tracking crossing data. Louisiana's collisions and injuries, as well as the fatalities, have been significantly reduced since 1975. Based on our rough approximation, the data supports both collisions, injuries and fatalities have been reduced by at least two thirds in this period. See the attached graphs on pages 7 and 8.

d. Annual grade crossing safety improvement funding
   - Louisiana's allocation of Section 130 funding – Louisiana has an annual federal apportionment of $4 million specifically for Section 130 highway/rail safety.
   - Other sources of funding for grade crossing improvements – DOTD's Railroad Safety Program goal is to authorize over $8 million in highway-rail projects each state fiscal year. To meet this goal, in addition to the $4 million of Section 130 funds, DOTD must use other federal/state safety funds each state fiscal year to meet this State Program goal of $8 million. For DOTD's Railroad Safety Program this state fiscal year, the actual funding breakdown is as follows: $3.0 million of 130 funds, $4.8 million of other HSIP federal funds and $500,000 of state funding. Also, DOTD uses federal/state construction funds when upgrading a highway/rail crossing that is tied directly to a DOTD road construction project. BNSF Railway, Kansas City Southern Railway and Union Pacific Railroad contributed to specific highway/rail safety projects or used their funds independently to assist the DOTD Railroad Safety Program. The City of Morgan City assisted by negotiating with a local business for a guardrail improvement, altering a nearby street movements for safety and doing paving and curb work in the area of several crossings.

e. Program emphasis areas and changes from previous years' programs. The Railroad Safety Action Plan has been approved by both FHWA and FRA and is a dynamic document. The most recent Railroad Safety Action Plan consists of twelve Action Items for on going discussions with our safety partners (FHWA, FRA, Louisiana State Police, Louisiana Highway Safety Commission, Louisiana Technology Transfer, and Louisiana Operation Lifesaver). On new safety projects begun this year, the new diagnostic review form was used. DOTD continues to focus on corridors as a primary means to enhance highway/rail safety. DOTD added new Crossbuck Assembly (Crossbucks combined with a Stop or Yield Sign) projects with both KCS and NOGC this year. These Crossbuck Assembly projects, which were authorized for construction, will add about 360 Crossbuck Assemblies through out the state. These Crossbuck Assembly projects were modeled after the BNSF Crossbuck Assembly Program for Louisiana. The Crossbuck Assembly metal post standard is being reviewed by other railroads for possible safety projects.

III. Data

a. Status of grade crossing inventory
   - Updates – The DOTD Highway/Rail Safety Unit maintains DOTD's crossing inventory database. All updates to individual crossing data are

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made daily for major changes in the warning devices or notification of closures. Crossings on DOTD's state maintained highway system have their estimated traffic volume updated annually. FRA Collisions have recently been updated into DOTD's inventory. DOTD conducts numerous field reviews with the railroad and local governments on the Class I mainlines for significant corridor projects. Although DOTD works hard to maintain quality data in our inventory, we do not regularly update the FRA's data due to our existing mainframe inventory system. We are working to update this database.

- Estimated accuracy, currency – DOTD has a very high level of confidence in the data on the Class I mainlines because of our ongoing efforts with the Class I railroads in Louisiana. Data provided for shortlines, branchlines, industrial leads, and private crossings only have a moderate level of confidence due to less routine and ongoing interaction with DOTD.
- Dollar amount of Section 130 funds spent on inventory – DOTD did not spend any 130 funds on inventory upgrades in SFY 10.

b. Limitations

- Description of limitations – Although crossings on DOTD's state maintained highway system are updated annually for their traffic volume estimates, those public crossings not on DOTD's state maintained highway system are not easily cross referenced to other traffic count estimate sources.
- Plans for upgrades and expected costs – DOTD planned on incorporating its existing data into a new software analysis tool. This was not able to be done, but DOTD is reviewing its options and still maintaining its inventory. DOTD hopes to a new plan for modifying of inventory to assist better interaction with the FRA and railroads. See Updates comments in IIIa above. DOTD's goal is to have a contract for this inventory process executed by December 31, 2010. The initial cost estimate is projected to be less than $50,000.

IV. Project Selection

a. Methodology for assessing grade crossings
DOTD has a numerical rating based on our crossing inventory information and recent the collision history for public crossings. The collision history, the physical geometry of the crossing, coupled with local and railroad input are reviewed with this rating to develop our crossing list. This list is presented to our highway rail safety committee for approval yearly.

b. Procedure for prioritizing/selecting projects
DOTD's overall highway/rail safety crossing list has been developed over years of review with the individual railroads, local DOTD Districts and local governments to be divided into three safety categories, 1) Individual Crossings, 2) Corridors, and 3) Shortlines, with our primary focus on Major Class I corridor projects. The Corridor category is the largest because once an individual crossing is selected for review by our highway rail safety committee the actual field review with the railroad and locals often produces a need or decision to review adjacent crossings too. Once a decision is made to review more than one crossing, DOTD

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combines and organizes the associated work into the Corridor category for our project tracking purposes.

V. Current Fiscal Year Projects
   a. Summary – See the attached Table 1.
   b. Additional fiscal year program information
      - Percentage of Section 130 funds spent on protective devices – DOTD spent over 90% of our Railroad Safety Program funds on warning devices.
      - Innovative strategies used – Based on joint reviews with NOGC and the City of Gretna, Crossbuck Assemblies with 24/7 LED flashing lights were funded for installation on NOGC crossings along LA 18 in Gretna. These installations may be the first authorized at public crossings in the country. Also, a special crossing surface with longer field panels outside the rails is to be installed early in SFY 2011 at a shortline crossing of US 79 in Homer where the crossing's skew and high truck traffic have contributed to crossing surface problems.
      - Education and enforcement strategies used – DOTD continues to be proactive by partnering with the Louisiana Highway Safety Commission, Louisiana State Police, Louisiana Operation Lifesaver, local officials and the railroads. DOTD helped host the national Highway/Rail Safety Conference with the Texas Transportation Institute in New Orleans in November 2009. Approximately 200 people attended and discussed the latest in the field of highway-rail safety. DOTD hosted the bi-annual Louisiana Highway/Rail Safety Conference in Baton Rouge in March 2010 with over 200 people in attendance. DOTD observed five railroad law enforcement "Officer on the Train" events, in which local law enforcement officials ticketed drivers for failure to obey traffic laws at highway-rail crossings and attended several railroad safety meetings.
   c. Description of individual projects – See the attached Table 1.

VI. Evaluation of Previous Projects
   a. Methodology for assessing effectiveness of improvement projects – DOTD tracks the effectiveness of our highway/rail safety program by comparing the differences in the crossings' collisions, injuries, and fatalities. These differences extend before, and after, the improvements at the individual crossing, using the same time frame.
   b. Summary of the assessment results of the effectiveness of previous projects – See Table 2. This is a table of DOTD's highway/rail safety projects that were completed in SFY 07 (July 2006 through June 2007). The table summarizes the projects and compares collisions, injuries, and fatalities in the three years before, and after, these improvements. This shows that DOTD's highway/rail safety efforts for SFY 07 reduced the number of collisions from 45 to 5, reduced the number of injuries from 23 to 0, and reduced the number of fatalities from 8 to 0 at the crossings where improvements were made.

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VII. Conclusions

a. Recommendation for future implementation of Section 130, i.e. Railroad Safety Program – DOTD proposes to:

- Be proactive in funding for railroad safety by supplementing the earmarked highway/rail safety with additional funding sources
- Work with our safety partners: FHWA, FRA, Louisiana State Police, Louisiana Highway Safety Commission, Louisiana Local Technical Assistance Program and Louisiana Operation Lifesaver and the local governments
- Evaluate the new highway-rail crossing priority process as a way to track the time it takes for planning and delivery of highway/rail safety projects. The priority process will also reflect the current progress of those same projects.
- Use the new diagnostic review form
- Had railroad safety committee meeting
- Update the Action Plan and have two railroad Action Plan committee meetings a year
- Purchase new software for the railroad inventory
- Authorize additional Crossbuck Assembly jobs for passive public crossings
- Have ongoing railroad preemption discussions with the railroads in accordance with funding and safety
- Focus on effective corridor projects with local governments
- Have several projects demonstrating new or innovative technologies funded this coming year

b. Additional comments – DOTD hopes that the continuation of these corridor projects will show a growing number of closures and enhanced safety areas. It is hoped that these new procedures will both help educate and encourage the local governments and produce the dialogue needed to promote safer corridors to further reduce highway/rail collisions and tragedies in Louisiana.

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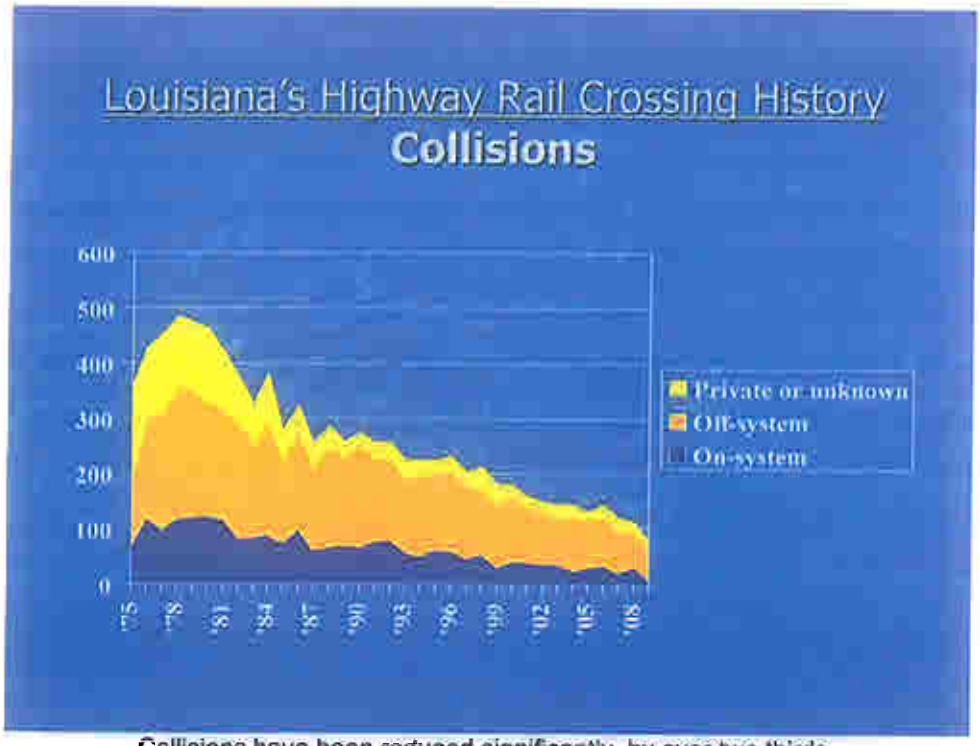
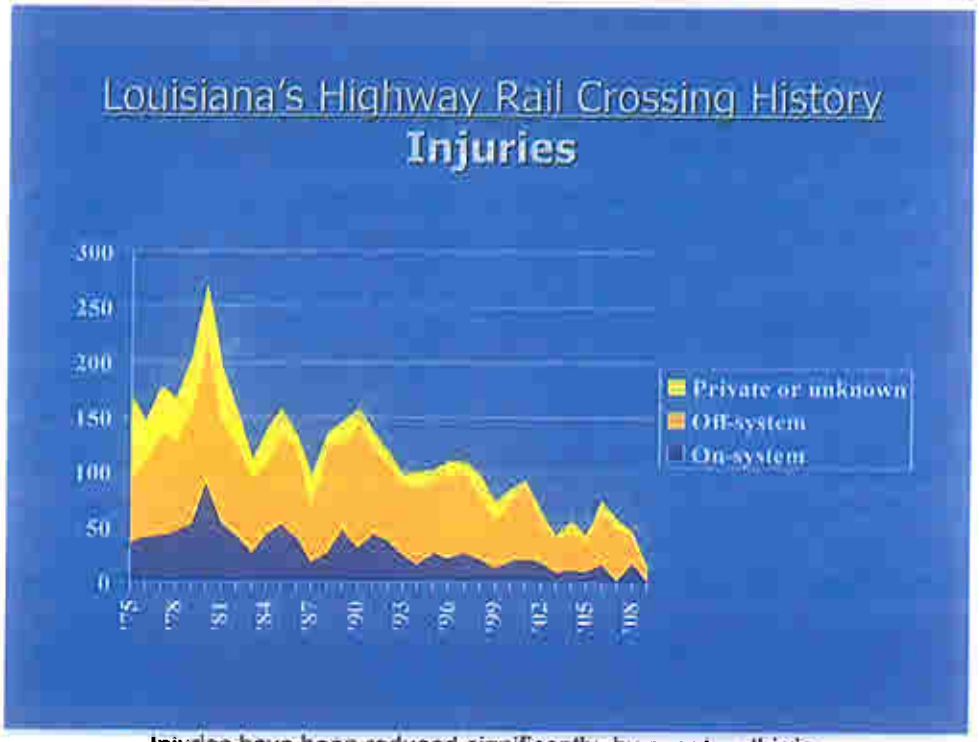
Louisiana Highway/Rail Collision History Graphs



Collisions have been reduced significantly, by over two thirds.



Injuries have been reduced significantly, by **over two** thirds.

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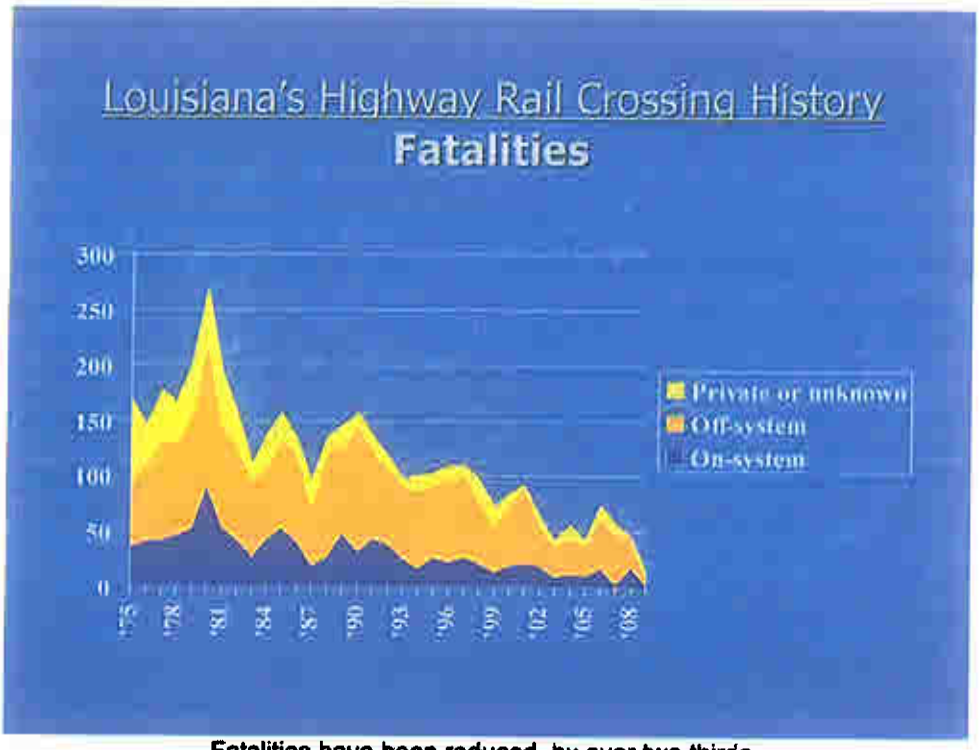

Fatalities have been reduced, by over two thirds.

Although highway/rail fatalities are random, Louisiana's last eight years of highway/rail crossing fatalities number as follows:

Year	# of fatalities
2002	12
2003	15
2004	21
2005	20
2006	8
2007	14
2008	15
2009	11

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TABLE 1

Louisiana Highway/Rail Grade Crossing Safety Program for SFY 10

Cost	State Proj. No.	RR	Parish	Name	Est. Cost	Type of work S-signal C-Surface E-Closure CBA-Crossbucks	HzE/ PD	Veh	Act/Pass	Func. Class
Low	853-99-0014	IC	Tangipahoa	LA 1064	$12,332	S	HE	V	A	Collector
	714-99-0015	BNSF	Lafayette	Austria Street	$20,000	C	HE	V	A	Local
	714-38-0020	NOGC	Orleans	Several CBA job	$22,500	CBA	PD	V	P	Local
	714-28-0010	BNSF	Lafayette	Alfred Street	$24,000	C	HE	V	A	Local
	714-28-0010	BNSF	Lafayette	St Mary Street	$24,000	C	HE	V	A	Collector
	714-99-0015	BNSF	Jefferson Davis	Main Street	$24,000	C	HE	V	A	Collector
	714-99-0015	BNSF	Lafayette	Apollo Road	$24,000	C	HE	V	A	Arterial
	714-23-0106	BNSF	Iberia	Washington Street	$29,520	C	HE	V	A	Local
	714-28-0010	BNSF	Lafayette	Johnston Street	$36,000	C	HE	V	A	Arterial
	714-26-0131	NOGC	Jefferson	Several CBA job	$39,825	CBA	PD	V	p	Local
	714-28-0010	BNSF	Lafayette	Cameron Street	$44,000	C	HE	V	A	Collector
	714-99-0015	BNSF	Iberia	Hopkins Street	$46,000	C	HE	V	A	Collector
	714-51-0013	BNSF	St. Mary	Myrtle Street	$48,008	S	PD	V	A	Local
	714-26-0132	NOGC	Jefferson	Several CBA job	$56,650	CBA	PD	V	P	Local
	424-02-0093	LDRR	Lafayette	Evangeline Thruway	$61,500	C	HE	V	A	Arterial
	714-38-0006	NOGC	Plaquemines	Several CBA job	$73,600	CBA	PD	V	P	Local
	216-03-0039	BNSF	Lafayette	South Park Road	$80,000	C	HE	V	A	Collector
	027-06-0035	LNW	Claiborne	Main Street	$89,489	C	HE	V	A	Arterial
	714-26-0128	NOGC	Jefferson	Several CBA job	$122,850	CBA	PD	V	P	Local
	714-26-0121	NOGC	Jefferson	Robinson Avenue	$148,841	S	PD	V	A	Local
	011-01-0058	UP	Caddo	Market Street	$154,384	E	HE	V	P	Arterial
	011-01-0059	UP	Caddo	Hearne Street	$0	E	HE	V	P	Collector
	034-05-0032	UP	Natchitoches	College Avenue	$159,924	S	PD	V	A	Collector
	714-53-0118	IC	Tangipahoa	Bickham Chapel Rd	$168,007	S	PD	V	A	Local
	714-35-0005	UP	Natchitoches	Bossier Street	$170,370	S	PD	V	A	Local
	714-35-0007	UP	Natchitoches	Trudeau Street	$172,324	S	PD	V	A	Local
	714-26-0121	NOGC	Jefferson	Marrero Road	$179,542	S	PD	V	A	Local
Medium	714-51-0011	BNSF	St. Mary	Rhoda Street	$188,571	S	PD	V	A	Local
	714-53-0119	IC	Tangipahoa	Storey Road	$190,964	S	PD	V	A	Local
	714-26-0129	NOGC	Jefferson	Fairfield Avenue	$193,582	S	PD	V	A	Local
	835-17-0006	UP	Natchitoches	North By Pass	$206,803	S	PD	V	A	Collector
	714-35-0004	UP	Natchitoches	Second Street	$213,852	S	PD	V	A	Local
	714-09-0130	KCS	Caddo	Ward 2 Ind Park	$215,792	S	PD	V	A	Local
	714-09-0136	KCS	Caddo	Barnette Road	$220,659	S	PD	V	A	Local
	714-43-0110	KCS	Sabine	Front Street	$221,412	S	PD	V	A	Local
	714-43-0110	KCS	Sabine	Grace Avenue	$0	E	HE	V	P	Local
	714-49-0107	UP	St. Landry	Hudspeth Lane	$222,369	S	PD	V	A	Local
	714-26-0130	NOGC	Jefferson	Klein Street	$225,122	S	PD	V	A	Local
	714-26-0119	IC	Jefferson	Taylor Street	$231,598	S	PD	V	A	Collector
	714-26-0120	IC	Jefferson	Webster Street	$231,598	S	PD	V	A	Local
	714-02-0115	UP	Allen	Legnon Street	$233,636	S	PD	V	A	Local
	843-03-0011	KCS	Sabine	Main Street	$249,637	S	PD	V	A	Collector
	714-35-0008	UP	Natchitoches	Rowena Street	$249,783	S	PD	V	A	Local

This table does not include RR projects done as part of the DOTD construction program

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TABLE 1

Louisiana Highway/Rail Grade Crossing Safety Program for SFY 10

Cost	State Proj. No.	RR	Parish	Name	Est. Cost	Type of work S-Signal C-Surface E-Closure CBA-Crossbucks	HzE/ PD	Veh	Act/Pass	Func. Class
	714-36-0006	UP	Natchitoches	Jefferson Street	$250,812	S	PD	V	A	Local
	714-53-0117	IC	Tangipahoa	Buckles Lane	$255,335	S	PD	V	A	Local
	714-43-0108	KCS	Sabine	McGarrahan Road	$256,480	S	PD	V	A	Local
	714-02-0113	UP	Allen	Lyles Street	$260,995	S	PD	V	A	Local
	714-40-0012	UP	Rapides	Ryan Street	$263,123	S	PD	V	A	Local
High	714-43-0109	KCS	Sabine	McDonald Drive	$271,516	S	PD	V	A	Local
	714-36-0016	NS	Orleans	Chartres Street	$273,823	S	PD	V	A	Local
	714-99-0006	KCS	Statewide	Several CBA job	$274,068	CBA	PD	V	A	Local
	714-58-0005	KCS	Vernon	Pinewood Road	$330,673	S	PD	V	A	Local
	714-51-0012	BNSF	St. Mary	Fourth Street	$448,250	S	PD	V	A	Local
	714-51-0012	BNSF	St. Mary	Federal Avenue	$0	S	PD	V	A	Local
	714-51-0012	BNSF	St. Mary	Third Street	$0	S	PD	V	A	Local
	Total estimated cost of 'RR Safety' jobs Work Ordered in SFY 09				$8,214,119					

This table does not include RR projects done as part of the DOTD construction program

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Table 2

Highway-Rail Crossing Projects Metrics
24 USC 130
LOUISIANA

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State Proj #	S-State System / N-Off System	DOT No.	FUNC CLASS	S - Signal; C - Cantilever; Closed	Active / Passive	Type Crossing	Approx. Cost	Funding Safety or Construction	Before Crash Data (~3 years)				After Crash Data (~3 years)			
									Fatal	Injury	PDO	Collisions	Fatal	Injury	PDO	Collisions
012-04-0031	S	329-346R	Arterial	S	A	Public	$181,529	SAFETY	0	0	2	2				
012-04-0033	S	329-356W	Arterial	S	A	Public	$171,937	SAFETY								
014-04-0036	S	447-710A	Arterial	C	A	Public	$68,407	SAFETY								
019-01-0035	S	303-217B	Collector	S	A	Public	$141,600	CONST					0	0	2	2
021-03-0034	S	329-182C	Arterial	S	A	Public	$246,822	SAFETY								
023-04-0021	S	295-934A	Arterial	S	A	Public	$221,811	CONST								
025-03-0032	S	329-642C	Arterial	S	A	Public	$158,954	SAFETY								
025-03-0033	S	329-642C	Arterial	C	A	Public	$75,989	SAFETY								
051-04-0020	S	302-447Y	Arterial	C	A	Public	$80,000	SAFETY								
053-01-0027	S	794-121P	Arterial	S	A	Public	$0	SAFETY								
055-07-0071	S	744-183B	Arterial	S	A	Public	$45,000	SAFETY								
060-01-0034	S	303-221R	Arterial	S	A	Public	$125,940	CONST	0	0	1	1				
067-04-0022	S	855-706K	Collector	S	A	Public	$54,977	SAFETY	0	1	2	3				
067-04-0023	S	855-709F	Collector	S	A	Public	$52,801	SAFETY	0	0	1	1				
078-03-0017	S	329-011B	Collector	S	A	Public	$248,569	SAFETY	0	1	0	1				
205-03-0015	S	434-747C	Collector	S	A	Public	$134,299	SAFETY								
258-01-0042	S	335-479W	Arterial	C	A	Public	$60,457	SAFETY								
260-07-0020	S	303-325X	Collector	S	A	Public	$131,520	SAFETY	0	0	1	1				
262-02-0034	S	303-254D	Arterial	C	A	Public	$33,900	CONST	0	0	1	1				
262-02-0034	S	303-255K	Arterial	C	A	Public	$27,400	CONST								
273-03-0023	S	303-265R	Collector	S	A	Public	$116,480	SAFETY	0	0	1	1				
300-04-0029	S	329-184R	Collector	S	A	Public	$383,524	SAFETY								
305-30-0008	S	334-886W	Collector	S	A	Public	$186,051	SAFETY								
424-05-0120	S	767-508X	Local	E	P	Closed	$45,000	SAFETY								
454-04-0061	S	725-149T	Local	C	A	Public	$34,000	CONST	0	0	1	1				
714-01-0108	N	767-907J	Local	S	A	Public	$131,813	SAFETY	0	2	0	1				
714-01-0109	N	767-842T	Local	S	A	Public	$237,934	SAFETY	0	2	1	2				
714-02-0103	N	447-715J	Local	S	A	Public	$133,535	SAFETY	0	4	3	5				
714-05-0107	N	335-090D	Local	S	A	Public	$254,576	SAFETY								
714-05-0107	N	335-092S	Local	S	A	Public	$186,715	SAFETY	0	1	1	2				
714-07-0005	N	302-585M	Local	S	A	Public	$168,180	CONST								
714-09-0118	N	329-012H	Local	S	A	Public	$176,613	SAFETY	3	1	0	1				
714-09-0119	N	329-015D	Local	S	A	Public	$245,269	SAFETY	0	0	1	1				
714-09-0131	N	331-402V	Local	S	A	Public	$183,703	SAFETY	0	1	0	1				
714-09-0132	N	331-406L	Local	S	A	Public	$174,903	SAFETY								
714-16-0005	N	329-181V	Local	S	A	Public	$174,095	SAFETY	1	0	0	1				
714-16-0007	N	329-183J	Local	S	A	Public	$143,737	SAFETY								
714-17-0116	N	303-230P	Local	S	A	Public	$149,536	SAFETY	0	0	1	1	0	0	1	1
714-17-0126	N	302-891E	Local	S	A	Public	$167,976	CONST	0	0	1	1				
714-37-0102	N	302-509U	Local	E	P	Closed	$0	SAFETY								
714-37-0102	N	302-510N	Local	S	A	Public	$307,106	SAFETY							0	1
714-37-0102	N	302-511V	Local	S	A	Public	$159,606	SAFETY								
714-37-0103	N	302-507F	Local	S	A	Public	$166,843	SAFETY	0	0	1	1				
714-37-0103	N	302-508M	Local	E	A	Closed	$0	SAFETY	0	0	1	1				
714-37-0104	N	302-506Y	Local	S	A	Public	$162,743	SAFETY								
714-37-0105	N	302-505S	Local	S	A	Public	$180,123	SAFETY								
714-43-0103	N	329-224L	Local	S	A	Public	$135,943	SAFETY	0	3	3	4				

Highway-Rail Crossing Projects Metrics
24 USC 130
LOUISIANA

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State Proj #	S-State System / N-Off System	DOT No.	FUNC CLASS	E - Signal; C - Surface; Closed	Active / Passive	Type Crossing	Approx. Cost	Funding Safety or Construction	Before Crash Data (~3 years)				After Crash Data (~3 years)			
									Fatal	Injury	PDO	Collisions	Fatal	Injury	PDO	Collisions
714-52-0012	N	725-148L	Local	S	A	Public	$74,800	SAFETY								
714-52-0012	N	725-153H	Local	S	A	Public	$0	SAFETY							0	1
714-52-0012	N	725-154P	Local	S	A	Public	$0	SAFETY	0	0	2	2				
714-53-0108	N	300-162F	Local	E	P	Closed	$0	SAFETY								
714-53-0111	N	300-152A	Local	S	A	Public	$119,528	SAFETY	4	0	0	1				
714-53-0113	N	300-177V	Local	S	A	Public	$111,009	SAFETY	0	1	0	1				
714-53-0114	N	300-132N	Local	S	A	Public	$125,729	SAFETY	0	1	0	1				
714-53-0115	N	300-182S	Local	S	A	Public	$120,954	SAFETY	0	1	3	4				
714-53-0116	N	300-175G	Local	S	A	Public	$133,404	SAFETY	0	4	0	2				
809-14-0001	S	329-013P	Local	S	A	Public	$186,513	SAFETY								
826-13-0019	S	797-855B	Collector	S	A	Public	$166,568	SAFETY								
838-03-0021	S	855-664B	Arterial	S	A	Public	$179,978	SAFETY								
849-38-0010	S	427-971V	Collector	C	A	Public	$125,981	SAFETY								

* Due to limited numbers of highway-rail collisions and randomness, Effectiveness is determined as follows (# collisions after - # collisions before) / # collisions before

		Before				After				Effectiveness* (as %)
		Fatal	Injury	PDO	Coll	Fatal	Injury	PDO	Coll	
Costs	$7,911,571	8	23	28	45	0	0	3	5	-89%
Totals										