



LOUISIANA DEPARTMENT OF  
TRANSPORTATION & DEVELOPMENT

# Guidelines for Conducting a Crash Data Analysis using the Number-Rate Method and Overrepresented Determination

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## **PREFACE**

These guidelines are for use by Louisiana Department of Transportation and Development (LADOTD) employees, consultants, metropolitan planning organizations (MPOs), and local jurisdictions conducting safety studies and preparing reports. This document is not intended to establish standards or requirements.

These guidelines will be available on LADOTD's website at [http://www.dotd.la.gov/planning/highway\\_safety](http://www.dotd.la.gov/planning/highway_safety). The Highway Safety Section will maintain and update these guidelines as needed. If you need more information, please contact the Highway Safety Section at [DOTD-HighwaySafety@la.gov](mailto:DOTD-HighwaySafety@la.gov).

## **I. INTRODUCTION**

These guidelines are intended to aid transportation professionals in the assessment and management of safety performance of their road projects on the state highway system. Understanding safety performance is critical to developing effective projects that provide for safety, mobility, and quality in maintaining, rehabilitating, and rebuilding the state's highways.

One of the key components of understanding safety performance is recognizing any pre-existing safety issues and safety implications of potential construction approaches. To identify any pre-existing safety issues, the LADOTD currently uses a descriptive method that utilizes historical crash data for determining patterns or trends in crashes in order to direct resources to locations that may require mitigation.

## II. METHODOLOGY

Historical crash data within the project vicinity should be collected for a minimum of three years (five years is desired if there have been no significant changes). Where practical, the crash data should be analyzed by the number, rate, severity, and type of crashes in order to adequately assess current safety performance.

### A. Number-Rate Method

Using the historical crash data, calculate the crash rate for each segment and/or intersection. LADOTD uses the term “abnormal location” which is calculated as part of the LADOTD Highway Safety Section’s network screening process. Abnormal listings are developed annually using statewide average crash rates for each classification. The statewide average crash rates for segments, intersections, and spots are calculated annually based on a 3 year running average (see Appendix A).

- 1. For roadway segments:** When calculating crash rates for segments, non-intersection crashes only are to be considered in the crash data analysis.

$$VMT = L \times AADT \times 365$$

$$R_{seg} = (C \times 10^6) / (T \times VMT)$$

Whereas: VMT = vehicle miles traveled

L = length of segment

AADT = annual average daily traffic

$R_{seg}$  = crash rate

C = total number of crashes

T = number of analysis years

When calculating segment crash rates, it is recommended to divide the impact area into homogenous segments by control section log-mile based on functional classification and ADT, as shown in the example Table 1 below. The Surface-Type Log File on LADOTD’s intranet (<http://engrapps/hwyinfo/tahiwstl/tahiwstl.asp>) contains functional classification and ADT for each subsection.

**Table 1: Project Limits by Control Section Log-Mile**

| control section | begin log mile | end log mile | functional class | urban rural | adt    |
|-----------------|----------------|--------------|------------------|-------------|--------|
| 450-08          | 0              | 8.52         | 1-Inter          | R           | 40,800 |
| 450-08          | 8.52           | 11.37        | 1-Inter          | U           | 40,800 |
| 450-08          | 11.37          | 12.1         | 1-Inter          | U           | 59,300 |

(Source: LADOTD's Surface-Type Log File)

- 2. For intersections:** When calculating crash rates for intersections, crashes that are coded by the police officer as intersection crashes (intersection from report) are to be considered in the crash data analysis. See crash data quality section for more information.

$$\text{Million Entering Vehicles (MEV)} = \text{ADT} \times 365 / 1,000,000$$

$$\text{Crash Rate (crashes per MEV)} = \text{Crashes} / \text{MEV}$$

It is recommended to identify the intersection using the "intersection ID" from the Crash 1 program (section 3) when downloading intersection crashes. Another option is to identify the intersection by control section log-mile for each of the intersecting routes. Obtain a latitude/longitude from a GPS and convert it to control section log-mile using <http://engrapps/latlong/latlong.asp>.)

A feature of the Crash 1 program is the "Intersection (from report)" selection button under section 5. Toggling this button to "no" would eliminate intersection crashes of the intersection identified in section 3. (Disclaimer: This is no substitute for reviewing the crash reports and assigning crashes appropriately to the roadway segment or intersection. Appendix A.2.3 in the Highway Safety Manual provides appropriate methods to assign crashes to individual roadway segments and intersections.)

## **B. Severity**

Using the historical crash data, calculate the severity distribution for total crashes and compare it to the statewide average severity distribution by roadway classification (see Appendix A).

## **C. Location**

The crash data should be sorted by log-mile to identify any location with a concentration of crashes. Mapping of the crashes in conjunction with the project limits may be useful during plan development.

#### **D. Overrepresentation**

The crash data should be sorted by type of collision to identify any crash type(s) that may be overrepresented, or proportionally larger than the statewide average for that type of crash and highway classification. Statewide average percentages are calculated using a three year running average for intersection only crashes, non-intersection only crashes, and total crashes (see Appendix A). The analyst should exercise engineering judgment when interpreting comparison charts and account for statistical significance. (For example, if there are 5 right turn crashes out of 2000 total crashes on mainline interstate, the 5 right turn crashes may be discarded even if it may be “overrepresented” based on the percentages. The law enforcement officer working the crash may have inaccurately coded the crash report.)

The crash data should also be screened for overrepresentation in other categories, such as nighttime, run off the road (ROR), or wet weather.

Inevitably, every crash data analysis will include overrepresentation of certain crash type(s). The overrepresentation analysis is one source of information and is to be used in conjunction with other available information in determining if and where a problem exists.

### III. INDICATIONS AND COUNTERMEASURES

The crash data analysis is intended to be a resource during plan development. Engineering judgment should be used and all factors should be considered when selecting an alternative.

The crash data analysis may provide insight to driver behavior and may consideration of additional countermeasures. The following table provides possible causes and countermeasures related to certain crash types.

**Table 1: Possible Causes and Countermeasures by Crash Type**

| Crash Type     | Possible Cause                   | Countermeasure   |
|----------------|----------------------------------|--|
| Access-related | Left-turning vehicles            | Install median<br>Install/lengthen left turn lanes   |
|                | Improperly located driveway      | Move driveway to side street<br>Install channelizing islands to define driveway location<br>Consolidate adjacent driveways |
|                | Right-turning vehicles           | Provide right turn lanes<br>Increase width of driveways<br>Widen through lanes<br>Increase curb radii                      |
|                | Large volume of through traffic  | Move driveway to side street<br>Construct a local service road   |
|                | Large volume of driveway traffic | Signalize driveway<br>Provide accel/decel lanes<br>Channelize driveway   |
|                | Restricted sight distance        | Remove obstruction   |
|                | Inadequate lighting              | Install lighting   |
| Bridges        | Alignment                        | Realign bridge/roadway<br>Install advance warning signs<br>Improve delineation   |
|                | Narrow roadway                   | Widen structure<br>Improve delineation<br>Install signing/signals  |
|                | Visibility                       | Remove obstruction<br>Install advance warning signs<br>Improve delineation   |
|                | Vertical clearance               | Rebuild structure/adjust roadway grade<br>Install advance warning signs<br>Improve delineation                             |

|                      |   |  |
|----------------------|---|--|
|                      | Slippery surface                                    | Provide height restriction/warning<br>Resurface deck<br>Improve skid resistance<br>Improve drainage  |
|                      | Rough surface                                       | Enhance signing<br>Resurface deck<br>Rehabilitate joints   |
|                      | Inadequate barrier system                           | Regrade approaches<br>Upgrade guardrail<br>Upgrade approach rail/terminals<br>Upgrade bridge - approach rail connections<br>Remove hazardous curb<br>Improve delineation   |
| Intersection-related | Large volume of left/right turns (from side street) | Widen road<br>Channelize intersection<br>Install STOP signs<br>Install signal/roundabout<br>Increase curb radii  |
|                      | Restricted sight distance                           | Remove sight obstructions<br>Provide adequate channelization<br>Provide left/right turn lanes<br>Install warning signs<br>Install STOP signs<br>Install signal/roundabout<br>Install advance markings to supplement signs<br>Install STOP bars |
|                      | Slippery surface                                    | Improve skid resistance<br>Improve drainage  |
|                      | Large volume of turning vehicles                    | Provide left/right turn lanes<br>Increase curb radii<br>Install signal/roundabout  |
|                      | Inadequate lighting                                 | Install lighting   |
|                      | Lack of adequate gaps                               | Install signal/roundabout<br>Install STOP signs  |
|                      | Crossing pedestrians                                | Install/improve ped signing/markings<br>Install signal   |
|                      | Large total intersection volume                     | Install signal<br>Add traffic lane   |

|                    |  |   |
|--------------------|--|---|
|                    | Excessive vehicle speed on approaches<br>Inadequate traffic control devices<br><br>Poor visibility of signals<br><br><br><br>Unwarranted signals<br><br>Inadequate signal timing | Install rumble strips in travel lane<br><br>Upgrade traffic control devices<br>Install/enhance advance warning signs<br>Install overhead signals<br>Install 12" LED signal lenses<br>Install visors/backplates<br>Relocate signals to far side of intersection<br>Remove sight obstructions<br>Add illuminated/retroreflectorized signs<br>Remove signals<br>Upgrade signal system timing/phasing |
| Nighttime          | Poor visibility  | Install/enhance advance warning signs<br>Install/enhance pavement markings<br>Install lighting  |
| Overturn           | Roadside features<br><br><br><br><br>Inadequate shoulder<br><br><br>Pavement   | Flatten slopes/ditches<br>Relocate drainage facilities<br>Extend culverts<br>Provide traversable culvert end treatments<br>Install/improve traffic barriers<br>Widen shoulder<br>Upgrade shoulder surface<br>Remove curb/obstruction<br>Eliminate edge drop-off<br>Improve  |
| Pedestrian/Bicycle | Poor visibility  | Remove sight obstructions<br>Install pedestrian crossing signs and pavement markings<br>Install median for refuge<br>Add "WALK" phase<br>Install lighting<br>Install advance warning signs<br>Reduce speed limit<br>Install/Improve sidewalks/bicycle paths   |
| Railroad           | Restricted sight distance  | Install/enhance advance warning   |

|  |   |  |
|--|---|--|
|  |   | <ul style="list-style-type: none"> <li>signs</li> <li>Install/enhance pavement markings</li> <li>Remove sight obstructions</li> <li>Provide preemption</li> <li>Install gates</li> <li>Install lighting</li> </ul>   |
| Rear End                                   | <ul style="list-style-type: none"> <li>Slippery pavement</li> <li>Driver inattention</li> </ul>                                     | <ul style="list-style-type: none"> <li>Improve pavement condition</li> <li>Install high friction surface treatment</li> <li>Provide advance warning signs</li> <li>Eliminate unnecessary signing</li> <li>Install transverse rumble strips</li> </ul>  |
| Right Angle (at Unsignalized Intersection) | Restricted sight distance   | <ul style="list-style-type: none"> <li>Install warning signs</li> <li>Install STOP signs</li> <li>Install yield signs</li> <li>Remove sight obstructions</li> <li>Install signal/roundabout</li> <li>Install lighting</li> </ul>   |
| Right Angle (at Signalized Intersection)   | <ul style="list-style-type: none"> <li>Poor visibility of signals</li> <li>Inadequate signal timing</li> </ul>                      | <ul style="list-style-type: none"> <li>Install advance warning signs</li> <li>Install back plates</li> <li>Remove sight obstructions</li> <li>Add signal heads</li> <li>Upgrade to 12" LED heads</li> <li>Provide protected only left turn phase</li> <li>Adjust amber phase</li> <li>Provide all-red clearance interval</li> <li>Install detection</li> <li>Improve coordination</li> </ul> |
| Run off the Road                           | <ul style="list-style-type: none"> <li>Slippery pavement/ponded water</li> <li>Inadequate road design and/or maintenance</li> </ul> | <ul style="list-style-type: none"> <li>Improve pavement condition/skid resistance</li> <li>Improve drainage</li> <li>Improve superelevation</li> <li>Improve shoulders</li> <li>Eliminate shoulder drop-off</li> <li>Install/improve traffic barriers</li> <li>Enhance signing</li> <li>Widen lanes</li> <li>Flatten slopes/ditches</li> <li>Improve alignment/grade</li> </ul>              |

|                       |   |   |
|-----------------------|---|---|
|                       | Poor delineation                          | Remove/Reduce/Delineate roadside hazards<br>Install roadside delineators<br>Install advance warning signs   |
|                       | Poor visibility                           | Improve/install pavement markings<br>Increase sign size<br>Install lighting<br>Evaluate sight distance  |
| Side Swipe or Head-On | Inadequate road design and/or maintenance | Perform necessary road surface repairs<br>Install median or guardrail<br>Reevaluate no passing zones<br>Provide roadside delineators<br>Improve alignment/grade<br>Widen lanes<br>Provide passing lanes<br>Improve shoulders<br>Install rumble strips |
|                       | Excessive vehicle speed                   | Set speed limit based on speed study<br>Install/improve centerlines, lane lanes, edge lines   |
|                       | Inadequate pavement markings              | Install reflectorized markers<br>Provide advance direction and warning signs  |
|                       | Inadequate signing                        | Add illuminated street name signs   |
|                       | Superfluous signing                       | Limit signs to meet standards   |
| Wet Weather           | Slippery pavement                         | Improve pavement condition<br>Install high friction surface treatment<br>Improve drainage   |
|                       | Poor visibility                           | Install raised pavement markers   |

## **IV. CRASH DATA QUALITY**

Crash data is traffic incident information recorded by various police agencies throughout the State and uploaded to a statewide database, which is maintained by the Louisiana Department of Transportation and Development in conjunction with the Louisiana State University Highway Safety Research Group (LSU HSRG). Crash data listings are available through Crash 1, a user interface developed for easier access of the crash database. In most cases, a crash listing will provide sufficient information to complete a crash data analysis. However, in some cases it may be necessary to review each individual crash report. LADOTD has been using GPS coordinates to locate crashes to our base map. Before 2008, LADOTD used the control section log mile referencing system.

The crash data file for a given year is open to change until it is officially closed by the LADOTD Highway Safety Section, which is typically one year later. For example, the crash data file for 2008 was not closed until December 31, 2009. This timeframe allows for quality control measures and to allow law enforcement agencies to submit any outstanding crash reports. It is important to note that not all crashes that occur are reported and the crashes that are reported may be reported inadequately. Communication with law enforcement can help identify apparent safety concerns that are not indicated by the crash data. If a project is located within city limits, the local law enforcement agency should be contacted to gather input and support. The Highway Safety Section at LADOTD can assist in contacting the appropriate law enforcement personnel.

### **A. Data Sampling Size**

Because less severe crashes are less likely to appear in crash databases, there is a potential problem of underreporting. Data generated from a small sampling can be misleading because they can be significantly influenced by small variances. A limited amount of data makes this descriptive method of analysis difficult. It is important to exercise engineering judgment when identifying crash patterns. Consultation of a statistician may be beneficial.

### **B. Confounding Effects**

When evaluating the effectiveness of implemented countermeasures, it is often tempting to develop a simplified model with few explanatory variables (for example, using traffic flow as the only explanatory variable in the model). However, as with all traditional statistical estimation methods, leaving out important explanatory variables results in biased parameter estimates that can produce erroneous inferences. This would especially be the case if the omitted variable is correlated with variables included in the specification, which is often the case. For example, if multiple countermeasures were implemented it would be difficult to isolate the effectiveness of one of those countermeasures due to interaction with others.

### **C. Behavior Elements**

Data elements associated with fatal motor vehicle crash reports are usually of very high quality with relatively few missing values. Fatal crashes require investigation of behavioral elements, including but not limited to seatbelt use, speeding, distractions, impairments, etc.

Data elements associated with non-fatal motor vehicle crash reports are usually of lesser quality and behavioral elements are often omitted from the crash report. This leads to underreporting of contributing factors.

### **D. Intersection Crashes**

Law enforcement officers are continuously trained on how to properly fill out a crash report according to their investigation. The level of training for law enforcement personnel varies throughout the state so the interpretation of the uniform crash report may differ across jurisdictions. It is important to note that not all crashes that occur as a result of the intersection will be included within the "Intersection (from report)" option and not all crashes within this option occurred as a result of the intersection. However, for consistency purposes it is recommended to use the "Intersection (from report)" option.

# APPENDIX A: STATEWIDE AVERAGE SAFETY PERFORMANCE

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**Statewide Average Crash Rates, Segments (2012-2014)**

| Highway Class           | Number of Sections | Number Crashes Per Year | Total Miles     | Total Mvm Per Year | Crashes Per Mile Per Year | Crashes per Mvm | Number Of Fatalities Per Year | Number Of Injuries Per Year |
|-------------------------|--------------------|-------------------------|-----------------|--------------------|---------------------------|-----------------|-------------------------------|-----------------------------|
| Rural 2-Lane            | 4423               | 8925.0                  | 11829.74        | 9026.45            | 0.75                      | 0.99            | 189.0                         | 5420.0                      |
| Rural 4-Lane            | 154                | 190.3                   | 135.03          | 312.84             | 1.41                      | 0.61            | 5.0                           | 104.0                       |
| Rural 4-Lane Divided    | 281                | 1188.7                  | 562.27          | 2159.56            | 2.11                      | 0.55            | 21.7                          | 713.7                       |
| Rural 4-Lane Interstate | 167                | 2597.7                  | 502.42          | 5299.00            | 5.17                      | 0.49            | 37.3                          | 1405.7                      |
| Urban 2-Lane            | 1825               | 12657.3                 | 1983.15         | 5263.31            | 6.38                      | 2.40            | 96.0                          | 6384.7                      |
| Urban 4-Lane            | 429                | 5382.3                  | 234.34          | 1267.11            | 22.97                     | 4.25            | 13.0                          | 2413.0                      |
| Urban 4-Lane Divided    | 568                | 9477.0                  | 521.11          | 4043.01            | 18.19                     | 2.34            | 25.0                          | 4256.7                      |
| Urban 4-Lane Interstate | 201                | 4957.0                  | 272.38          | 4954.41            | 18.20                     | 1.00            | 36.3                          | 2288.0                      |
| Rural 2-Lane Cont Turn  | 15                 | 14.7                    | 10.55           | 18.08              | 1.39                      | 0.81            | 0.0                           | 9.3                         |
| Urban 2-Lane Cont Turn  | 49                 | 378.3                   | 30.52           | 115.58             | 12.40                     | 3.27            | 0.7                           | 174.7                       |
| Rural 4-Lane Cont Turn  | 64                 | 141.7                   | 61.58           | 249.53             | 2.30                      | 0.57            | 2.3                           | 77.0                        |
| Urban 4-Lane Cont Turn  | 265                | 5903.0                  | 207.14          | 1523.97            | 28.50                     | 3.87            | 13.0                          | 2645.3                      |
| Rural 6-Lane            | 6                  | 4.0                     | 1.14            | 2.35               | 3.51                      | 1.70            | 0.0                           | 1.3                         |
| Urban 6-Lane            | 132                | 3015.3                  | 73.23           | 904.82             | 41.18                     | 3.33            | 5.7                           | 1224.3                      |
| Rural 6-Lane Interstate | 9                  | 268.7                   | 30.41           | 545.74             | 8.83                      | 0.49            | 6.0                           | 159.3                       |
| Urban 6-Lane Interstate | 92                 | 4951.0                  | 89.58           | 2909.53            | 55.27                     | 1.70            | 16.7                          | 2503.7                      |
| Urban Other Freeways    | 36                 | 2249.3                  | 49.40           | 848.31             | 45.53                     | 2.65            | 3.0                           | 969.7                       |
| <b>Total</b>            | <b>8716</b>        | <b>62301.3</b>          | <b>16593.99</b> | <b>39443.60</b>    | <b>3.75</b>               | <b>1.58</b>     | <b>470.7</b>                  | <b>30750.4</b>              |

(Source: LADOTD Highway Safety Section)

**Statewide Average Crash Rates, Signalized Intersections (2012-2014)**

| Highway Class        | Number Of Locations | Number Of Crashes | Million Vehicles | Crashes Per Location | Crashes per MV | Number Of Fatalities | Number Of Injuries |
|----------------------|---------------------|-------------------|------------------|----------------------|----------------|----------------------|--------------------|
| Rural 2-Lane         | 34                  | 124.3             | 164.44           | 3.66                 | 0.76           | 0                    | 63                 |
| Rural 4-Lane         | 9                   | 26                | 36.72            | 2.89                 | 0.71           | 0                    | 15.7               |
| Rural 4-Lane Divided | 20                  | 123               | 168.75           | 6.15                 | 0.73           | 0.7                  | 79.7               |
| Urban 2-Lane         | 323                 | 1712              | 2692.2           | 5.3                  | 0.64           | 1                    | 859                |
| Urban 4-Lane         | 441                 | 2974.3            | 4393.93          | 6.74                 | 0.68           | 3                    | 1608.7             |
| Urban 4-Lane Divided | 412                 | 3942.7            | 5682.26          | 9.57                 | 0.69           | 5.7                  | 2047.7             |

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409

|                               |      |         |          |       |      |      |        |
|-------------------------------|------|---------|----------|-------|------|------|--------|
| <b>Rural 2-Lane Cont Turn</b> | 2    | 6.3     | 5.31     | 3.17  | 1.19 | 0    | 2.3    |
| <b>Urban 2-Lane Cont Turn</b> | 35   | 294.3   | 272.75   | 8.41  | 1.08 | 0.7  | 162    |
| <b>Rural 4-Lane Cont Turn</b> | 6    | 18.7    | 48.51    | 3.11  | 0.38 | 0    | 12.7   |
| <b>Urban 4-Lane Cont Turn</b> | 273  | 2575.7  | 3629.19  | 9.43  | 0.71 | 2.7  | 1114.7 |
| <b>Urban 6-Lane</b>           | 194  | 1775    | 3315.57  | 9.15  | 0.54 | 2    | 931.3  |
| <b>Urban Other Freeways</b>   | 48   | 632.7   | 2138.75  | 13.18 | 0.3  | 0.3  | 276    |
| <b>Rural Interstate Exit</b>  | 1    | 8.7     | 7.26     | 8.67  | 1.19 | 0    | 10.3   |
| <b>Urban Interstate Exit</b>  | 182  | 3505.7  | 2220.28  | 19.26 | 1.58 | 4.7  | 1511.3 |
| <b>Total</b>                  | 1980 | 17719.4 | 24775.92 | 8.95  | 0.72 | 20.8 | 8694.4 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Crash Rates, Non-Signalized Intersections (2012-2014)**

| Highway Class                 | Number Of Locations | Number Of Crashes | Million Vehicles | Crashes Per Location | Crashes per MV | Number Of Fatalities | Number Of Injuries |
|-------------------------------|---------------------|-------------------|------------------|----------------------|----------------|----------------------|--------------------|
| <b>Rural 2-Lane</b>           | 126                 | 353.3             | 442.82           | 2.8                  | 0.8            | 3.3                  | 285                |
| <b>Rural 4-Lane</b>           | 12                  | 38.7              | 65.19            | 3.22                 | 0.59           | 0.7                  | 37.7               |
| <b>Rural 4-Lane Divided</b>   | 32                  | 128.7             | 216.45           | 4.02                 | 0.59           | 1.7                  | 111.3              |
| <b>Urban 2-Lane</b>           | 482                 | 1746.3            | 3061.01          | 3.62                 | 0.57           | 5                    | 897.7              |
| <b>Urban 4-Lane</b>           | 343                 | 1161              | 3375.89          | 3.38                 | 0.34           | 2.3                  | 711                |
| <b>Urban 4-Lane Divided</b>   | 376                 | 1610.7            | 4722.9           | 4.28                 | 0.34           | 9                    | 959.3              |
| <b>Rural 2-Lane Cont Turn</b> | 1                   | 2                 | 1.2              | 2                    | 1.67           | 0                    | 1                  |
| <b>Urban 2-Lane Cont Turn</b> | 20                  | 79.3              | 129.38           | 3.97                 | 0.61           | 0.3                  | 42.7               |
| <b>Rural 4-Lane Cont Turn</b> | 8                   | 28                | 44.24            | 3.5                  | 0.63           | 0                    | 23.3               |
| <b>Urban 4-Lane Cont Turn</b> | 227                 | 836.7             | 3074.17          | 3.69                 | 0.27           | 2.3                  | 418.3              |
| <b>Urban 6-Lane</b>           | 203                 | 872               | 3792.84          | 4.3                  | 0.23           | 3.7                  | 496.3              |
| <b>Urban Other Freeways</b>   | 44                  | 193               | 1388.78          | 4.39                 | 0.14           | 0                    | 109.7              |
| <b>Rural Interstate Exit</b>  | 17                  | 79.3              | 94.05            | 4.67                 | 0.84           | 0                    | 48                 |
| <b>Urban Interstate Exit</b>  | 221                 | 1626              | 2567.11          | 7.36                 | 0.63           | 4.3                  | 763                |
| <b>Total</b>                  | 2112                | 8755              | 22976.03         | 4.15                 | 0.38           | 32.6                 | 4904.3             |

(Source: LADOTD Highway Safety Section)

**Statewide Average Crash Rates, Spots (2012-2014)**

| Highway Class                  | Number Of Locations | Number Of Crashes | Million Vehicles | Crashes Per Location | Crashes per MV | Number Of Fatalities | Number Of Injuries |
|--------------------------------|---------------------|-------------------|------------------|----------------------|----------------|----------------------|--------------------|
| <b>Rural 2-Lane</b>            | 135                 | 361.3             | 396.02           | 2.68                 | 0.91           | 3.3                  | 187.3              |
| <b>Rural 4-Lane</b>            | 6                   | 12.7              | 26.1             | 2.11                 | 0.49           | 0                    | 4.7                |
| <b>Rural 4-Lane Divided</b>    | 70                  | 195.7             | 520.86           | 2.8                  | 0.38           | 2                    | 105                |
| <b>Rural 4-Lane Interstate</b> | 224                 | 571               | 3820.56          | 2.55                 | 0.15           | 5.3                  | 313.7              |
| <b>Urban 2-Lane</b>            | 1612                | 6071.3            | 8490.72          | 3.77                 | 0.72           | 16                   | 2638               |
| <b>Urban 4-Lane</b>            | 919                 | 4363.7            | 6615.95          | 4.75                 | 0.66           | 7.7                  | 1894               |
| <b>Urban 4-Lane Divided</b>    | 1488                | 7418.3            | 16681.34         | 4.99                 | 0.44           | 12.7                 | 3188.7             |
| <b>Urban 4-Lane Interstate</b> | 794                 | 3518.3            | 18726.36         | 4.43                 | 0.19           | 19.3                 | 1571.7             |
| <b>Rural 2-Lane Cont Turn</b>  | 56                  | 245.3             | 289.12           | 4.38                 | 0.85           | 0.3                  | 106                |
| <b>Urban 2-Lane Cont Turn</b>  | 10                  | 25.7              | 77.38            | 2.57                 | 0.33           | 0                    | 7.7                |
| <b>Rural 4-Lane Cont Turn</b>  | 819                 | 5148              | 8019.78          | 6.29                 | 0.64           | 8                    | 2235.3             |
| <b>Urban 4-Lane Cont Turn</b>  | 432                 | 2756.7            | 5753.2           | 6.38                 | 0.48           | 4.7                  | 1107.7             |
| <b>Rural 6-Lane</b>            | 40                  | 105.7             | 761.94           | 2.64                 | 0.14           | 4.3                  | 53                 |
| <b>Urban 6-Lane</b>            | 593                 | 4699.7            | 21395.13         | 7.93                 | 0.22           | 14                   | 2383.3             |
| <b>Rural 6-Lane Interstate</b> | 170                 | 2054              | 4920.89          | 12.08                | 0.42           | 2                    | 875.3              |
| <b>Urban 6-Lane Interstate</b> | 30                  | 100.3             | 179.51           | 3.34                 | 0.56           | 0.3                  | 47.7               |
| <b>Urban Other Freeways</b>    | 31                  | 118.7             | 162.28           | 3.83                 | 0.73           | 0                    | 48.7               |
| <b>Total</b>                   | 7429                | 37766.4           | 96837.14         | 5.08                 | 0.39           | 99.9                 | 16767.8            |

*(Source: LADOTD Highway Safety Section)*

**Statewide Average Severities, All Crashes**

| Severity      | Rural 2-Lane | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
|---------------|--------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
| Fatal (A)     | 1.73%        | 1.27%        | 1.31%                | 1.20%                   | 0.55%        | 0.20%        | 0.27%                | 0.60%                   | 0.00%                  | 0.12%                  | 0.91%                  | 0.19%                  | 0.00%        | 0.20%        | 1.98%                   | 0.33%                   | 0.18%                |
| Severe (B)    | 0.95%        | 2.45%        | 0.99%                | 0.50%                   | 0.68%        | 0.67%        | 0.63%                | 0.72%                   | 0.00%                  | 0.69%                  | 0.91%                  | 0.54%                  | 6.25%        | 0.88%        | 0.99%                   | 0.90%                   | 0.74%                |
| Moderate (C)  | 9.69%        | 7.75%        | 8.98%                | 5.63%                   | 5.62%        | 5.94%        | 5.93%                | 5.72%                   | 5.33%                  | 5.31%                  | 7.91%                  | 5.65%                  | 0.00%        | 4.77%        | 6.91%                   | 6.05%                   | 4.07%                |
| Complaint (D) | 28.53%       | 26.08%       | 27.70%               | 24.36%                  | 25.17%       | 23.36%       | 23.42%               | 21.27%                  | 24.00%                 | 24.75%                 | 24.66%                 | 21.96%                 | 15.63%       | 22.51%       | 26.54%                  | 23.49%                  | 23.17%               |
| PDO (E)       | 59.11%       | 62.45%       | 61.02%               | 68.31%                  | 67.99%       | 69.82%       | 69.74%               | 71.69%                  | 70.67%                 | 69.13%                 | 65.60%                 | 71.66%                 | 78.13%       | 71.65%       | 63.58%                  | 69.23%                  | 71.84%               |
| Total crashes | 33111        | 1020         | 4733                 | 7653                    | 57637        | 31150        | 48054                | 15355                   | 75                     | 1733                   | 657                    | 29536                  | 32           | 16894        | 810                     | 16189                   | 6244                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Severities, Segment Crashes**

| Severity      | Rural 2-Lane | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
|---------------|--------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
| Fatal (A)     | 1.91%        | 1.75%        | 1.46%                | 1.22%                   | 0.68%        | 0.22%        | 0.25%                | 0.68%                   | 0.00%                  | 0.18%                  | 1.18%                  | 0.21%                  | 0.00%        | 0.17%        | 2.04%                   | 0.33%                   | 0.15%                |
| Severe (B)    | 1.00%        | 1.58%        | 0.85%                | 0.50%                   | 0.70%        | 0.61%        | 0.57%                | 0.72%                   | 0.00%                  | 0.44%                  | 0.71%                  | 0.49%                  | 0.00%        | 0.69%        | 0.89%                   | 0.84%                   | 0.67%                |
| Moderate (C)  | 9.90%        | 6.67%        | 8.44%                | 5.70%                   | 5.49%        | 4.60%        | 4.93%                | 5.94%                   | 9.09%                  | 5.30%                  | 6.59%                  | 4.96%                  | 0.00%        | 3.63%        | 6.63%                   | 6.19%                   | 3.85%                |
| Complaint (D) | 28.15%       | 22.98%       | 26.80%               | 24.50%                  | 25.26%       | 21.92%       | 22.35%               | 21.52%                  | 27.27%                 | 23.21%                 | 23.06%                 | 22.06%                 | 16.67%       | 20.76%       | 26.15%                  | 23.92%                  | 23.00%               |
| PDO (E)       | 59.03%       | 67.02%       | 62.46%               | 68.08%                  | 67.88%       | 72.64%       | 71.89%               | 71.13%                  | 63.64%                 | 70.87%                 | 68.47%                 | 72.28%                 | 83.33%       | 74.75%       | 64.29%                  | 68.71%                  | 72.34%               |
| Total crashes | 26764        | 570          | 3426                 | 7437                    | 38206        | 16099        | 27248                | 12280                   | 44                     | 1133                   | 425                    | 17693                  | 12           | 8836         | 784                     | 12321                   | 4801                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Severities, All-Intersection Crashes**

| Severity      | Rural 2-Lane | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
|---------------|--------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
| Fatal (A)     | 0.96%        | 0.80%        | 0.87%                | 0.47%                   | 0.29%        | 0.16%        | 0.29%                | 0.25%                   | 0.00%                  | 0.00%                  | 0.45%                  | 0.17%                  | 0.00%        | 0.24%        | 0.00%                   | 0.35%                   | 0.28%                |
| Severe (B)    | 0.73%        | 3.21%        | 1.59%                | 0.47%                   | 0.65%        | 0.70%        | 0.74%                | 0.74%                   | 0.00%                  | 1.17%                  | 1.34%                  | 0.63%                  | 11.76%       | 1.08%        | 4.00%                   | 1.09%                   | 0.91%                |
| Moderate (C)  | 8.78%        | 10.43%       | 10.04%               | 3.26%                   | 5.85%        | 7.55%        | 7.18%                | 4.68%                   | 0.00%                  | 5.33%                  | 10.71%                 | 6.69%                  | 0.00%        | 5.97%        | 16.00%                  | 5.81%                   | 4.81%                |
| Complaint (D) | 30.13%       | 30.21%       | 30.06%               | 19.53%                  | 25.03%       | 24.41%       | 25.08%               | 20.22%                  | 19.35%                 | 27.67%                 | 26.79%                 | 21.75%                 | 17.65%       | 24.39%       | 36.00%                  | 22.27%                  | 23.76%               |
| PDO (E)       | 59.40%       | 55.35%       | 57.44%               | 76.28%                  | 68.18%       | 67.18%       | 66.72%               | 74.11%                  | 80.65%                 | 65.83%                 | 60.71%                 | 70.77%                 | 70.59%       | 68.34%       | 44.00%                  | 70.48%                  | 70.24%               |
| Total crashes | 6342         | 374          | 1384                 | 215                     | 19518        | 12473        | 23712                | 3245                    | 31                     | 600                    | 224                    | 11815                  | 17           | 7611         | 25                      | 3686                    | 1435                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Severities, Non-Signalized Intersection Crashes**

| Severity      | Rural 2-Lane | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
|---------------|--------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
| Fatal (A)     | 1.04%        | 1.21%        | 1.02%                | 0.48%                   | 0.39%        | 0.23%        | 0.47%                | 0.37%                   | 0.00%                  | 0.00%                  | 0.67%                  | 0.25%                  | 0.00%        | 0.40%        | 0.00%                   | 0.55%                   | 0.36%                |
| Severe (B)    | 0.69%        | 3.24%        | 1.73%                | 0.48%                   | 0.79%        | 0.80%        | 0.75%                | 0.86%                   | 0.00%                  | 1.06%                  | 1.33%                  | 0.54%                  | 16.67%       | 1.32%        | 4.00%                   | 0.96%                   | 0.54%                |
| Moderate (C)  | 9.06%        | 11.34%       | 10.96%               | 3.33%                   | 6.46%        | 7.99%        | 7.84%                | 5.18%                   | 0.00%                  | 7.42%                  | 11.33%                 | 7.03%                  | 0.00%        | 6.08%        | 16.00%                  | 6.21%                   | 4.68%                |
| Complaint (D) | 30.83%       | 30.36%       | 30.96%               | 19.52%                  | 25.82%       | 25.25%       | 25.95%               | 20.90%                  | 16.67%                 | 28.98%                 | 28.00%                 | 22.22%                 | 33.33%       | 23.78%       | 36.00%                  | 21.63%                  | 25.72%               |
| PDO (E)       | 58.39%       | 53.85%       | 55.33%               | 76.19%                  | 66.54%       | 65.73%       | 64.99%               | 72.69%                  | 83.33%                 | 62.54%                 | 58.67%                 | 69.95%                 | 50.00%       | 68.42%       | 44.00%                  | 70.65%                  | 68.71%               |
| Total crashes | 5797         | 247          | 985                  | 210                     | 12697        | 5255         | 9753                 | 1622                    | 18                     | 283                    | 150                    | 4423                   | 6            | 3024         | 25                      | 2191                    | 556                  |

(Source: LADOTD Highway Safety Section)

**Statewide Average Severities, Signalized Intersection Crashes**

| Severity      | Rural 2-Lane | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
|---------------|--------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
| Fatal (A)     | 0.18%        | 0.00%        | 0.50%                | 0.00%                   | 0.09%        | 0.11%        | 0.16%                | 0.12%                   | 0.00%                  | 0.00%                  | 0.00%                  | 0.12%                  | 0.00%        | 0.13%        | 0.00%                   | 0.07%                   | 0.23%                |
| Severe (B)    | 1.10%        | 3.15%        | 1.25%                | 0.00%                   | 0.40%        | 0.62%        | 0.73%                | 0.62%                   | 0.00%                  | 1.26%                  | 1.35%                  | 0.68%                  | 9.09%        | 0.92%        | 0.00%                   | 1.27%                   | 1.14%                |
| Moderate (C)  | 5.87%        | 8.66%        | 7.77%                | 0.00%                   | 4.72%        | 7.23%        | 6.71%                | 4.19%                   | 0.00%                  | 3.47%                  | 9.46%                  | 6.48%                  | 0.00%        | 5.89%        | 0.00%                   | 5.22%                   | 4.89%                |
| Complaint (D) | 22.75%       | 29.92%       | 27.82%               | 20.00%                  | 23.56%       | 23.80%       | 24.46%               | 19.53%                  | 23.08%                 | 26.50%                 | 24.32%                 | 21.47%                 | 9.09%        | 24.79%       | 0.00%                   | 23.21%                  | 22.53%               |
| PDO (E)       | 70.09%       | 58.27%       | 62.66%               | 80.00%                  | 71.24%       | 68.23%       | 67.93%               | 75.54%                  | 76.92%                 | 68.77%                 | 64.86%                 | 71.25%                 | 81.82%       | 68.28%       | 0.00%                   | 70.23%                  | 71.22%               |
| Total crashes | 545          | 127          | 399                  | 5                       | 6821         | 7218         | 13959                | 1623                    | 13                     | 317                    | 74                     | 7392                   | 11           | 4587         | 0                       | 1495                    | 879                  |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Manner of Collision, All Crashes**

| Manner of Collision    | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|------------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                        | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| A: Non-collision w/ MV | 52.90%                 | 20.29%       | 32.20%               | 46.53%                  | 16.90%       | 4.70%        | 6.82%                | 24.85%                  | 16.00%                 | 7.85%                  | 17.81%                 | 3.46%                  | 0.00%        | 4.37%        | 44.94%                  | 14.49%                  | 14.14%               |
| B: Rear-end            | 18.35%                 | 24.51%       | 28.59%               | 30.59%                  | 43.49%       | 40.15%       | 47.47%               | 47.11%                  | 28.00%                 | 49.86%                 | 35.92%                 | 46.57%                 | 40.63%       | 37.94%       | 24.20%                  | 50.87%                  | 49.36%               |
| C: Head-on             | 1.80%                  | 1.18%        | 0.72%                | 0.51%                   | 1.77%        | 1.05%        | 0.76%                | 0.50%                   | 2.67%                  | 1.38%                  | 1.07%                  | 1.30%                  | 0.00%        | 0.66%        | 0.49%                   | 0.54%                   | 0.45%                |
| D: Right angle         | 7.68%                  | 15.20%       | 12.51%               | 1.10%                   | 13.24%       | 18.17%       | 14.15%               | 1.17%                   | 14.67%                 | 15.64%                 | 13.39%                 | 15.64%                 | 12.50%       | 15.86%       | 1.85%                   | 1.12%                   | 4.79%                |
| E: Left turn Angle     | 2.99%                  | 4.12%        | 1.46%                | 0.17%                   | 2.46%        | 3.44%        | 1.51%                | 0.13%                   | 4.00%                  | 2.37%                  | 1.83%                  | 1.93%                  | 3.13%        | 3.78%        | 0.49%                   | 0.10%                   | 0.69%                |
| F: Left turn Opp Dir   | 2.27%                  | 6.18%        | 3.70%                | 0.03%                   | 5.05%        | 6.59%        | 5.65%                | 0.28%                   | 5.33%                  | 5.02%                  | 3.81%                  | 6.34%                  | 0.00%        | 3.41%        | 0.00%                   | 0.15%                   | 0.45%                |
| G: Left turn Same Dir  | 1.31%                  | 2.65%        | 2.26%                | 0.05%                   | 2.37%        | 2.41%        | 2.29%                | 0.19%                   | 2.67%                  | 2.77%                  | 2.59%                  | 2.35%                  | 9.38%        | 2.47%        | 0.12%                   | 0.19%                   | 1.25%                |
| H: Right turn Angle    | 0.62%                  | 1.76%        | 0.93%                | 0.03%                   | 1.57%        | 2.23%        | 2.11%                | 0.18%                   | 5.33%                  | 1.33%                  | 2.89%                  | 2.60%                  | 0.00%        | 2.10%        | 0.25%                   | 0.22%                   | 1.22%                |
| I: Right turn Opp Dir  | 0.37%                  | 0.39%        | 0.19%                | 0.01%                   | 0.56%        | 0.38%        | 0.29%                | 0.02%                   | 0.00%                  | 0.63%                  | 0.30%                  | 0.45%                  | 0.00%        | 0.25%        | 0.00%                   | 0.03%                   | 0.13%                |
| J: Side swipe Same Dir | 3.05%                  | 12.25%       | 10.94%               | 16.83%                  | 5.47%        | 14.20%       | 12.73%               | 19.52%                  | 9.33%                  | 6.29%                  | 12.63%                 | 13.23%                 | 18.75%       | 21.12%       | 19.14%                  | 22.72%                  | 22.44%               |
| K: Side swipe Opp Dir  | 3.45%                  | 0.59%        | 0.59%                | 0.41%                   | 2.21%        | 0.92%        | 0.63%                | 0.25%                   | 1.33%                  | 1.85%                  | 0.46%                  | 0.80%                  | 3.13%        | 0.43%        | 0.37%                   | 0.17%                   | 0.24%                |
| Z: Other               | 5.14%                  | 10.69%       | 5.89%                | 3.74%                   | 4.85%        | 5.66%        | 5.53%                | 5.76%                   | 10.67%                 | 4.90%                  | 7.31%                  | 5.33%                  | 12.50%       | 7.92%        | 8.15%                   | 9.36%                   | 4.80%                |
| Total crashes:         | 33111                  | 1020         | 4733                 | 7653                    | 57637        | 31150        | 48054                | 15355                   | 75                     | 1733                   | 657                    | 29536                  | 32           | 16894        | 810                     | 16189                   | 6244                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Manner of Collision, Segment Crashes**

| Manner of Collision    | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|------------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                        | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| A: Non-collision w/ MV | 60.29%                 | 31.58%       | 40.63%               | 46.71%                  | 21.57%       | 6.18%        | 9.19%                | 27.57%                  | 22.73%                 | 9.62%                  | 24.71%                 | 3.84%                  | 0.00%        | 5.49%        | 45.41%                  | 15.77%                  | 16.20%               |
| B: Rear-end            | 16.67%                 | 25.61%       | 29.77%               | 30.33%                  | 46.04%       | 48.22%       | 55.23%               | 44.63%                  | 25.00%                 | 55.25%                 | 39.06%                 | 50.14%                 | 50.00%       | 49.84%       | 23.60%                  | 51.35%                  | 50.91%               |
| C: Head-on             | 1.82%                  | 1.23%        | 0.82%                | 0.51%                   | 1.83%        | 1.12%        | 0.67%                | 0.51%                   | 4.55%                  | 1.68%                  | 1.41%                  | 1.28%                  | 0.00%        | 0.71%        | 0.51%                   | 0.55%                   | 0.50%                |
| D: Right angle         | 3.95%                  | 5.96%        | 4.79%                | 1.12%                   | 8.66%        | 10.68%       | 7.17%                | 0.87%                   | 13.64%                 | 10.94%                 | 5.41%                  | 13.60%                 | 8.33%        | 5.00%        | 1.91%                   | 0.79%                   | 1.94%                |
| E: Left turn Angle     | 2.63%                  | 2.46%        | 0.99%                | 0.17%                   | 2.22%        | 2.50%        | 1.01%                | 0.09%                   | 4.55%                  | 2.47%                  | 1.41%                  | 1.69%                  | 0.00%        | 1.39%        | 0.51%                   | 0.06%                   | 0.19%                |
| F: Left turn Opp Dir   | 1.59%                  | 2.98%        | 1.37%                | 0.03%                   | 3.16%        | 2.64%        | 2.04%                | 0.04%                   | 4.55%                  | 3.53%                  | 1.65%                  | 3.98%                  | 0.00%        | 1.24%        | 0.00%                   | 0.04%                   | 0.08%                |
| G: Left turn Same Dir  | 0.80%                  | 2.81%        | 1.40%                | 0.01%                   | 1.83%        | 1.94%        | 1.71%                | 0.16%                   | 0.00%                  | 1.94%                  | 1.18%                  | 2.20%                  | 0.00%        | 1.45%        | 0.13%                   | 0.11%                   | 0.90%                |
| H: Right turn Angle    | 0.33%                  | 0.88%        | 0.73%                | 0.03%                   | 1.09%        | 1.81%        | 1.70%                | 0.12%                   | 2.27%                  | 0.71%                  | 2.12%                  | 2.07%                  | 0.00%        | 1.67%        | 0.13%                   | 0.14%                   | 0.83%                |
| I: Right turn Opp Dir  | 0.21%                  | 0.35%        | 0.15%                | 0.01%                   | 0.36%        | 0.28%        | 0.19%                | 0.02%                   | 0.00%                  | 0.44%                  | 0.24%                  | 0.34%                  | 0.00%        | 0.19%        | 0.00%                   | 0.02%                   | 0.08%                |
| J: Side swipe Same Dir | 3.09%                  | 16.14%       | 12.61%               | 16.93%                  | 5.85%        | 18.36%       | 15.66%               | 20.27%                  | 11.36%                 | 6.44%                  | 16.00%                 | 15.57%                 | 25.00%       | 26.17%       | 19.64%                  | 22.52%                  | 24.22%               |
| K: Side swipe Opp Dir  | 3.81%                  | 0.70%        | 0.64%                | 0.40%                   | 2.71%        | 1.04%        | 0.60%                | 0.27%                   | 2.27%                  | 1.85%                  | 0.47%                  | 0.90%                  | 8.33%        | 0.36%        | 0.38%                   | 0.15%                   | 0.23%                |
| Z: Other               | 4.78%                  | 9.30%        | 6.07%                | 3.72%                   | 4.65%        | 5.18%        | 4.79%                | 5.42%                   | 9.09%                  | 4.94%                  | 6.35%                  | 4.37%                  | 8.33%        | 6.46%        | 7.78%                   | 8.47%                   | 3.90%                |
| Total crashes:         | 26764                  | 570          | 3426                 | 7437                    | 38206        | 16099        | 27248                | 12280                   | 44                     | 1133                   | 425                    | 17693                  | 12           | 8836         | 784                     | 12321                   | 4801                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Manner of Collision, All-Intersection Crashes**

| Manner of Collision    | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|------------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                        | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| A: Non-collision w/ MV | 21.68%                 | 6.95%        | 9.97%                | 40.00%                  | 7.69%        | 3.13%        | 3.64%                | 13.44%                  | 6.45%                  | 4.50%                  | 4.46%                  | 2.88%                  | 0.00%        | 3.17%        | 32.00%                  | 10.77%                  | 7.32%                |
| B: Rear-end            | 25.40%                 | 25.40%       | 24.71%               | 39.53%                  | 38.46%       | 33.80%       | 35.21%               | 57.63%                  | 32.26%                 | 39.67%                 | 30.80%                 | 41.24%                 | 35.29%       | 25.07%       | 44.00%                  | 48.48%                  | 44.11%               |
| C: Head-on             | 1.77%                  | 1.07%        | 0.43%                | 0.47%                   | 1.63%        | 1.11%        | 0.82%                | 0.46%                   | 0.00%                  | 0.83%                  | 0.45%                  | 1.32%                  | 0.00%        | 0.58%        | 0.00%                   | 0.52%                   | 0.28%                |
| D: Right angle         | 23.43%                 | 28.07%       | 32.01%               | 0.47%                   | 22.32%       | 24.21%       | 24.63%               | 2.19%                   | 16.13%                 | 24.50%                 | 27.68%                 | 18.66%                 | 17.65%       | 27.95%       | 0.00%                   | 2.28%                   | 14.22%               |
| E: Left turn Angle     | 4.51%                  | 3.74%        | 3.54%                | 0.00%                   | 2.91%        | 2.89%        | 3.38%                | 0.31%                   | 3.23%                  | 2.17%                  | 2.68%                  | 2.29%                  | 5.88%        | 6.29%        | 0.00%                   | 0.19%                   | 2.37%                |
| F: Left turn Opp Dir   | 5.14%                  | 11.50%       | 9.54%                | 0.00%                   | 8.77%        | 12.30%       | 9.51%                | 1.20%                   | 6.45%                  | 7.83%                  | 7.59%                  | 9.86%                  | 0.00%        | 5.16%        | 0.00%                   | 0.52%                   | 1.67%                |
| G: Left turn Same Dir  | 3.52%                  | 2.41%        | 4.41%                | 1.40%                   | 3.43%        | 2.61%        | 3.21%                | 0.31%                   | 6.45%                  | 4.33%                  | 5.36%                  | 2.56%                  | 11.76%       | 3.60%        | 0.00%                   | 0.43%                   | 2.44%                |
| H: Right turn Angle    | 1.89%                  | 2.94%        | 1.45%                | 0.00%                   | 2.49%        | 2.79%        | 2.62%                | 0.43%                   | 9.68%                  | 2.50%                  | 4.02%                  | 3.39%                  | 0.00%        | 2.54%        | 0.00%                   | 0.49%                   | 2.51%                |
| I: Right turn Opp Dir  | 1.04%                  | 0.27%        | 0.29%                | 0.00%                   | 0.98%        | 0.48%        | 0.42%                | 0.06%                   | 0.00%                  | 1.00%                  | 0.45%                  | 0.62%                  | 0.00%        | 0.32%        | 0.00%                   | 0.03%                   | 0.28%                |
| J: Side swipe Same Dir | 2.85%                  | 7.22%        | 6.58%                | 13.49%                  | 4.69%        | 9.40%        | 9.25%                | 16.39%                  | 6.45%                  | 6.00%                  | 6.70%                  | 9.78%                  | 17.65%       | 15.81%       | 4.00%                   | 23.74%                  | 16.52%               |
| K: Side swipe Opp Dir  | 1.91%                  | 0.53%        | 0.43%                | 0.47%                   | 1.24%        | 0.86%        | 0.63%                | 0.18%                   | 0.00%                  | 1.83%                  | 0.45%                  | 0.65%                  | 0.00%        | 0.51%        | 0.00%                   | 0.27%                   | 0.28%                |
| Z: Other               | 6.72%                  | 9.36%        | 6.65%                | 4.19%                   | 5.32%        | 6.30%        | 6.60%                | 7.37%                   | 12.90%                 | 4.83%                  | 9.38%                  | 6.75%                  | 11.76%       | 8.93%        | 20.00%                  | 12.29%                  | 7.87%                |
| Total crashes:         | 6342                   | 374          | 1384                 | 215                     | 19518        | 12473        | 23712                | 3245                    | 31                     | 600                    | 224                    | 11815                  | 17           | 7611         | 25                      | 3686                    | 1435                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Manner of Collision, Non-Signalized Intersection Crashes**

| Manner of Collision    | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|------------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                        | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| A: Non-collision w/ MV | 23.37%                 | 8.50%        | 11.98%               | 40.95%                  | 10.00%       | 3.94%        | 5.11%                | 20.28%                  | 5.56%                  | 6.71%                  | 6.00%                  | 3.51%                  | 0.00%        | 4.07%        | 32.00%                  | 11.18%                  | 9.37%                |
| B: Rear-end            | 23.94%                 | 23.08%       | 19.29%               | 38.57%                  | 35.70%       | 31.06%       | 28.01%               | 47.16%                  | 33.33%                 | 28.62%                 | 20.00%                 | 32.99%                 | 16.67%       | 21.28%       | 44.00%                  | 47.19%                  | 41.44%               |
| C: Head-on             | 1.76%                  | 1.21%        | 0.41%                | 0.48%                   | 1.66%        | 1.16%        | 0.86%                | 0.62%                   | 0.00%                  | 0.71%                  | 0.67%                  | 1.45%                  | 0.00%        | 0.63%        | 0.00%                   | 0.55%                   | 0.18%                |
| D: Right angle         | 24.08%                 | 34.41%       | 37.46%               | 0.48%                   | 24.34%       | 27.02%       | 30.94%               | 1.66%                   | 16.67%                 | 30.04%                 | 33.33%                 | 25.67%                 | 33.33%       | 31.88%       | 0.00%                   | 1.23%                   | 15.68%               |
| E: Left turn Angle     | 4.73%                  | 4.45%        | 3.65%                | 0.00%                   | 3.22%        | 3.28%        | 4.05%                | 0.18%                   | 5.56%                  | 1.77%                  | 2.67%                  | 2.67%                  | 0.00%        | 6.89%        | 0.00%                   | 0.05%                   | 1.62%                |
| F: Left turn Opp Dir   | 4.82%                  | 8.50%        | 6.50%                | 0.00%                   | 6.42%        | 9.68%        | 6.40%                | 0.43%                   | 0.00%                  | 4.95%                  | 7.33%                  | 6.67%                  | 0.00%        | 4.73%        | 0.00%                   | 0.05%                   | 1.26%                |
| G: Left turn Same Dir  | 3.56%                  | 2.83%        | 5.28%                | 1.43%                   | 4.09%        | 3.43%        | 4.39%                | 0.31%                   | 5.56%                  | 7.42%                  | 6.67%                  | 3.28%                  | 16.67%       | 4.30%        | 0.00%                   | 0.23%                   | 2.52%                |
| H: Right turn Angle    | 1.69%                  | 2.83%        | 1.42%                | 0.00%                   | 2.31%        | 3.14%        | 2.85%                | 0.43%                   | 11.11%                 | 2.83%                  | 5.33%                  | 3.96%                  | 0.00%        | 2.09%        | 0.00%                   | 0.46%                   | 3.60%                |
| I: Right turn Opp Dir  | 0.97%                  | 0.40%        | 0.20%                | 0.00%                   | 1.02%        | 0.67%        | 0.44%                | 0.12%                   | 0.00%                  | 1.41%                  | 0.67%                  | 0.75%                  | 0.00%        | 0.17%        | 0.00%                   | 0.00%                   | 0.54%                |
| J: Side swipe Same Dir | 2.64%                  | 5.67%        | 6.90%                | 13.81%                  | 4.00%        | 9.01%        | 9.11%                | 20.96%                  | 0.00%                  | 6.36%                  | 7.33%                  | 10.49%                 | 16.67%       | 15.06%       | 4.00%                   | 26.56%                  | 15.32%               |
| K: Side swipe Opp Dir  | 1.93%                  | 0.00%        | 0.41%                | 0.48%                   | 1.34%        | 1.01%        | 1.02%                | 0.31%                   | 0.00%                  | 1.77%                  | 0.00%                  | 0.95%                  | 0.00%        | 0.76%        | 0.00%                   | 0.41%                   | 0.54%                |
| Z: Other               | 6.51%                  | 8.10%        | 6.50%                | 3.81%                   | 5.90%        | 6.59%        | 6.82%                | 7.52%                   | 22.22%                 | 7.42%                  | 10.00%                 | 7.62%                  | 16.67%       | 8.14%        | 20.00%                  | 12.09%                  | 7.93%                |
| Total crashes:         | 5790                   | 247          | 985                  | 210                     | 12688        | 5248         | 9740                 | 1622                    | 18                     | 283                    | 150                    | 4422                   | 6            | 3021         | 25                      | 2191                    | 555                  |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Manner of Collision, Signalized Intersection Crashes**

| Manner of Collision<br>Signalized Intersection<br>Crashes | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|---|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|   | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| A: Non-collision w/ MV                                    | 4.05%                  | 4.00%        | 5.01%                | 0.00%                   | 3.40%        | 2.54%        | 2.61%                | 6.60%                   | 7.69%                  | 2.52%                  | 1.35%                  | 2.50%                  | 0.00%        | 2.57%        | 0.00%                   | 10.17%                  | 6.04%                |
| B: Rear-end   | 41.44%                 | 30.40%       | 38.10%               | 80.00%                  | 43.66%       | 35.87%       | 40.29%               | 68.13%                  | 30.77%                 | 49.53%                 | 52.70%                 | 46.18%                 | 45.45%       | 27.60%       | 0.00%                   | 50.37%                  | 45.90%               |
| C: Head-on  | 1.84%                  | 0.80%        | 0.50%                | 0.00%                   | 1.57%        | 1.07%        | 0.79%                | 0.31%                   | 0.00%                  | 0.95%                  | 0.00%                  | 1.24%                  | 0.00%        | 0.55%        | 0.00%                   | 0.47%                   | 0.34%                |
| D: Right angle  | 16.94%                 | 16.00%       | 18.55%               | 0.00%                   | 18.62%       | 22.22%       | 20.26%               | 2.71%                   | 15.38%                 | 19.56%                 | 16.22%                 | 14.48%                 | 9.09%        | 25.39%       | 0.00%                   | 3.81%                   | 13.33%               |
| E: Left turn Angle  | 2.21%                  | 2.40%        | 3.26%                | 0.00%                   | 2.33%        | 2.61%        | 2.92%                | 0.43%                   | 0.00%                  | 2.52%                  | 2.70%                  | 2.06%                  | 9.09%        | 5.91%        | 0.00%                   | 0.40%                   | 2.85%                |
| F: Left turn Opp Dir                                      | 8.66%                  | 17.60%       | 17.04%               | 0.00%                   | 13.16%       | 14.23%       | 11.70%               | 1.97%                   | 15.38%                 | 10.41%                 | 8.11%                  | 11.77%                 | 0.00%        | 5.45%        | 0.00%                   | 1.20%                   | 1.94%                |
| G: Left turn Same Dir                                     | 3.13%                  | 1.60%        | 2.26%                | 0.00%                   | 2.22%        | 2.03%        | 2.38%                | 0.31%                   | 7.69%                  | 1.58%                  | 2.70%                  | 2.12%                  | 9.09%        | 3.14%        | 0.00%                   | 0.74%                   | 2.39%                |
| H: Right turn Angle                                       | 4.05%                  | 3.20%        | 1.50%                | 0.00%                   | 2.83%        | 2.54%        | 2.47%                | 0.43%                   | 7.69%                  | 2.21%                  | 1.35%                  | 3.06%                  | 0.00%        | 2.84%        | 0.00%                   | 0.54%                   | 1.82%                |
| I: Right turn Opp Dir                                     | 1.84%                  | 0.00%        | 0.50%                | 0.00%                   | 0.91%        | 0.35%        | 0.41%                | 0.00%                   | 0.00%                  | 0.63%                  | 0.00%                  | 0.54%                  | 0.00%        | 0.41%        | 0.00%                   | 0.07%                   | 0.11%                |
| J: Side swipe Same Dir                                    | 5.16%                  | 10.40%       | 5.76%                | 0.00%                   | 5.99%        | 9.70%        | 9.36%                | 11.84%                  | 15.38%                 | 5.68%                  | 5.41%                  | 9.35%                  | 18.18%       | 16.32%       | 0.00%                   | 19.60%                  | 17.31%               |
| K: Side swipe Opp Dir                                     | 1.66%                  | 1.60%        | 0.50%                | 0.00%                   | 1.06%        | 0.75%        | 0.37%                | 0.06%                   | 0.00%                  | 1.89%                  | 1.35%                  | 0.47%                  | 0.00%        | 0.35%        | 0.00%                   | 0.07%                   | 0.11%                |
| Z: Other  | 9.02%                  | 12.00%       | 7.02%                | 20.00%                  | 4.25%        | 6.10%        | 6.46%                | 7.21%                   | 0.00%                  | 2.52%                  | 8.11%                  | 6.22%                  | 9.09%        | 9.47%        | 0.00%                   | 12.58%                  | 7.86%                |
| Total crashes:  | 543                    | 125          | 399                  | 5                       | 6816         | 7209         | 13952                | 1622                    | 13                     | 317                    | 74                     | 7391                   | 11           | 4584         | 0                       | 1495                    | 878                  |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Type of Crash, All Crashes**

| Type of Crash     | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|-------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                   | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| Roadway Departure | 57.12%                 | 23.43%       | 36.34%               | 49.52%                  | 19.34%       | 5.81%        | 8.46%                | 27.33%                  | 17.33%                 | 9.41%                  | 20.40%                 | 4.36%                  | 12.50%       | 6.01%        | 48.40%                  | 17.66%                  | 14.29%               |
| Night crashes     | 37.36%                 | 24.41%       | 31.59%               | 34.69%                  | 24.23%       | 19.47%       | 21.98%               | 26.28%                  | 22.67%                 | 20.08%                 | 25.27%                 | 18.68%                 | 12.50%       | 21.85%       | 32.96%                  | 27.86%                  | 24.60%               |
| Alcohol involved  | 10.02%                 | 4.90%        | 6.28%                | 5.08%                   | 5.19%        | 2.79%        | 3.28%                | 3.32%                   | 2.67%                  | 4.39%                  | 6.24%                  | 2.47%                  | 0.00%        | 2.76%        | 5.43%                   | 2.75%                   | 2.98%                |
| Wet surface       | 17.95%                 | 14.31%       | 17.64%               | 27.36%                  | 15.97%       | 13.67%       | 14.86%               | 19.67%                  | 13.33%                 | 16.96%                 | 16.13%                 | 13.43%                 | 9.38%        | 12.97%       | 37.04%                  | 18.67%                  | 15.05%               |
| Total crashes:    | 33111                  | 1020         | 4733                 | 7653                    | 57637        | 31150        | 48054                | 15355                   | 75                     | 1733                   | 657                    | 29536                  | 32           | 16894        | 810                     | 16189                   | 6244                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Type of Crash, Segment Crashes**

| Type of Crash     | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|-------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                   | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| Roadway Departure | 64.73%                 | 36.14%       | 45.33%               | 49.78%                  | 24.47%       | 7.31%        | 11.15%               | 29.94%                  | 25.00%                 | 11.03%                 | 27.06%                 | 4.71%                  | 16.67%       | 7.34%        | 48.72%                  | 18.61%                  | 15.87%               |
| Night crashes     | 39.74%                 | 32.11%       | 33.95%               | 34.64%                  | 25.15%       | 18.19%       | 21.74%               | 27.62%                  | 29.55%                 | 20.48%                 | 28.47%                 | 17.77%                 | 8.33%        | 20.36%       | 33.55%                  | 28.89%                  | 24.81%               |
| Alcohol involved  | 10.69%                 | 5.44%        | 7.09%                | 5.12%                   | 5.87%        | 3.05%        | 3.53%                | 3.60%                   | 2.27%                  | 4.59%                  | 7.29%                  | 2.39%                  | 0.00%        | 2.89%        | 5.61%                   | 2.91%                   | 3.10%                |
| Wet surface       | 18.73%                 | 17.37%       | 18.91%               | 27.44%                  | 16.47%       | 13.47%       | 15.18%               | 20.20%                  | 11.36%                 | 18.71%                 | 20.24%                 | 13.30%                 | 8.33%        | 12.83%       | 37.63%                  | 19.37%                  | 15.48%               |
| Total crashes:    | 26764                  | 570          | 3426                 | 7437                    | 38206        | 16099        | 27248                | 12280                   | 44                     | 1133                   | 425                    | 17693                  | 12           | 8836         | 784                     | 12321                   | 4801                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Type of Crash, All-Intersection Crashes**

| Type of Crash     | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|-------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                   | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| Roadway Departure | 24.98%                 | 8.56%        | 12.43%               | 40.47%                  | 9.25%        | 4.25%        | 4.84%                | 16.39%                  | 6.45%                  | 6.33%                  | 7.59%                  | 3.82%                  | 11.76%       | 4.53%        | 40.00%                  | 15.00%                  | 9.06%                |
| Night crashes     | 19.35%                 | 4.81%        | 13.22%               | 27.44%                  | 6.32%        | 1.24%        | 2.74%                | 5.42%                   | 3.23%                  | 2.17%                  | 4.91%                  | 1.50%                  | 0.00%        | 0.87%        | 12.00%                  | 2.79%                   | 1.81%                |
| Alcohol involved  | 7.14%                  | 4.55%        | 4.19%                | 3.72%                   | 3.83%        | 2.55%        | 2.91%                | 2.13%                   | 3.23%                  | 4.00%                  | 4.02%                  | 2.60%                  | 0.00%        | 2.61%        | 0.00%                   | 2.31%                   | 2.58%                |
| Wet surface       | 14.36%                 | 10.96%       | 12.93%               | 20.93%                  | 14.85%       | 14.14%       | 13.83%               | 15.87%                  | 16.13%                 | 13.50%                 | 8.93%                  | 13.44%                 | 5.88%        | 12.97%       | 16.00%                  | 15.74%                  | 13.31%               |
| Total crashes:    | 6342                   | 374          | 1384                 | 215                     | 19518        | 12473        | 23712                | 3245                    | 31                     | 600                    | 224                    | 11815                  | 17           | 7611         | 25                      | 3686                    | 1435                 |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Type of Crash, Non-Signalized Intersection Crashes**

| Type of Crash     | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|-------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                   | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| Roadway Departure | 26.93%                 | 9.72%        | 14.72%               | 41.43%                  | 11.99%       | 5.20%        | 6.54%                | 23.30%                  | 5.56%                  | 8.83%                  | 10.00%                 | 4.91%                  | 16.67%       | 5.16%        | 40.00%                  | 16.16%                  | 11.87%               |
| Night crashes     | 20.72%                 | 6.48%        | 15.43%               | 27.62%                  | 7.43%        | 1.08%        | 3.18%                | 8.20%                   | 5.56%                  | 2.47%                  | 7.33%                  | 1.79%                  | 0.00%        | 1.03%        | 12.00%                  | 2.97%                   | 2.52%                |
| Alcohol involved  | 7.43%                  | 4.86%        | 3.96%                | 3.33%                   | 4.10%        | 2.65%        | 2.70%                | 2.10%                   | 0.00%                  | 3.89%                  | 4.67%                  | 2.71%                  | 0.00%        | 2.08%        | 0.00%                   | 2.10%                   | 3.60%                |
| Wet surface       | 14.32%                 | 11.74%       | 13.10%               | 20.95%                  | 15.67%       | 13.78%       | 13.55%               | 18.87%                  | 11.11%                 | 14.49%                 | 8.67%                  | 13.38%                 | 16.67%       | 12.04%       | 16.00%                  | 16.70%                  | 13.85%               |
| Total crashes:    | 5797                   | 247          | 985                  | 210                     | 12697        | 5255         | 9753                 | 1622                    | 18                     | 283                    | 150                    | 4423                   | 6            | 3024         | 25                      | 2191                    | 556                  |

(Source: LADOTD Highway Safety Section)

**Statewide Average Percentages by Type of Crash, Signalized Intersection Crashes**

| Type of Crash     | Highway Classification |              |                      |                         |              |              |                      |                         |                        |                        |                        |                        |              |              |                         |                         |                      |
|-------------------|------------------------|--------------|----------------------|-------------------------|--------------|--------------|----------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|--------------|--------------|-------------------------|-------------------------|----------------------|
|                   | Rural 2-Lane           | Rural 4-Lane | Rural 4-Lane Divided | Rural 4-Lane Interstate | Urban 2-Lane | Urban 4-Lane | Urban 4-Lane Divided | Urban 4-Lane Interstate | Rural 2-Lane Cont Turn | Urban 2-Lane Cont Turn | Rural 4-Lane Cont Turn | Urban 4-Lane Cont Turn | Rural 6-Lane | Urban 6-Lane | Rural 6-Lane Interstate | Urban 6-Lane Interstate | Urban Other Freeways |
| Roadway Departure | 4.22%                  | 6.30%        | 6.77%                | 0.00%                   | 4.15%        | 3.56%        | 3.65%                | 9.49%                   | 7.69%                  | 4.10%                  | 2.70%                  | 3.17%                  | 9.09%        | 4.12%        | 0.00%                   | 13.31%                  | 7.28%                |
| Night crashes     | 4.77%                  | 1.57%        | 7.77%                | 20.00%                  | 4.25%        | 1.36%        | 2.44%                | 2.65%                   | 0.00%                  | 1.89%                  | 0.00%                  | 1.33%                  | 0.00%        | 0.76%        | 0.00%                   | 2.54%                   | 1.37%                |
| Alcohol involved  | 4.04%                  | 3.94%        | 4.76%                | 20.00%                  | 3.33%        | 2.48%        | 3.06%                | 2.16%                   | 7.69%                  | 4.10%                  | 2.70%                  | 2.53%                  | 0.00%        | 2.96%        | 0.00%                   | 2.61%                   | 1.93%                |
| Wet surface       | 14.86%                 | 9.45%        | 12.53%               | 20.00%                  | 13.31%       | 14.41%       | 14.02%               | 12.88%                  | 23.08%                 | 12.62%                 | 9.46%                  | 13.47%                 | 0.00%        | 13.58%       | 0.00%                   | 14.31%                  | 12.97%               |
| Total crashes:    | 545                    | 127          | 399                  | 5                       | 6821         | 7218         | 13959                | 1623                    | 13                     | 317                    | 74                     | 7392                   | 11           | 4587         | 0                       | 1495                    | 879                  |

*(Source: LADOTD Highway Safety Section)*

CONFIDENTIAL INFORMATION  
 This information is exempt from discovery or admission under 23 U.S.C. 409.  
 Contact the LADOTD Traffic Safety Office at (225) 379-1871 before releasing any information.

# APPENDIX B: EXAMPLES

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**Federal Aid Project No. 6108(503)**

**State Project No. 450-08-0057**

**I-10 (Iberville Parish Line - W. End MS River Bridge)**

**Control Section 450-08 (Beg Log Mi 0.00, End Log Mi 12.10)**

**Transportation Management Plan – Safety**

**Analysis Years 2005 - 2009**

This safety analysis is prepared for the Transportation Management Plan (TMP) for State Project No. 450-08-0057. This analysis was conducted by the LADOTD Highway Safety Office with guidance from the FHWA Office of Safety – Louisiana Division.

The Limits of Construction

Initially, the crash data for the limits of construction was collectively analyzed as three data sets based on functional classification and ADT, as shown in Table 1.

*Table 1: Functional Classification and AADT*

| control section | begin log mile | end log mile | functional class | urban rural | adt    |
|-----------------|----------------|--------------|------------------|-------------|--------|
| 450-08          | 0              | 8.52         | 1-Inter          | R           | 40,800 |
| 450-08          | 8.52           | 11.37        | 1-Inter          | U           | 40,800 |
| 450-08          | 11.37          | 12.1         | 1-Inter          | U           | 59,300 |

*(Source: Highway Needs File)*

The crash rates were calculated for each segment and compared to statewide averages to identify any abnormal locations. An abnormal location is defined as a location having at least five crashes and twice the statewide average crash rate for its functional classification. As shown in Table 2, there were no abnormal sections within the project limits.

*Table 2: Identification of Abnormal Locations*

| begin log mile | end log mile | length | classification | ADT   | VMT         | Crash Rate | 2x State Avg |
|----------------|--------------|--------|----------------|-------|-------------|------------|--------------|
| 0              | 8.52         | 8.52   | Rural          | 40800 | 126,879,840 | 0.93       | 1.16         |
| 8.53           | 11.37        | 2.84   | Urban          | 40800 | 42,293,280  | 1.94       | 2.78         |
| 11.38          | 12.1         | 0.72   | Urban          | 59300 | 15,584,040  | 1.42       | 2.78         |

*(Source: LADOTD Crash 1 Program)*

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The crash data was then categorized by type of crash, including nighttime, in order to identify any areas with potential for improvement. The crash data indicated that nighttime crashes are slightly overrepresented with respect to the statewide average proportion of nighttime crashes to total crashes as shown in Table 3. A nighttime crash is defined as a crash that occurred under dark lighting conditions and is open to interpretation by law enforcement personnel working the crash.

*Table 3: Percent Nighttime Crashes of Total Crashes*

| rural         |                    | urban         |                    |
|---------------|--------------------|---------------|--------------------|
| state average | lm 0.00 to lm 8.52 | state average | lm 8.53 to lm 12.1 |
| 35.03%        | 36.22%             | 27.52%        | 33.51%             |

*(Source: LADOTD Crash 1 Program)*

Due to overrepresentation of nighttime crashes, the crash data was compiled by time of day and only the crash data corresponding to the work hour restrictions was reviewed. The work hour restrictions as determined from the queue analysis are proposed to be Monday through Friday from 9:00 pm to 5:00 am and Saturday through Sunday from 9:00 pm to 9:00 am. Further investigation of nighttime crashes indicated that non-collision crashes (which includes roadway departure crashes) represented 58.6% of total crashes.

*Table 4: Crash data for restricted work hours, by type of collision*

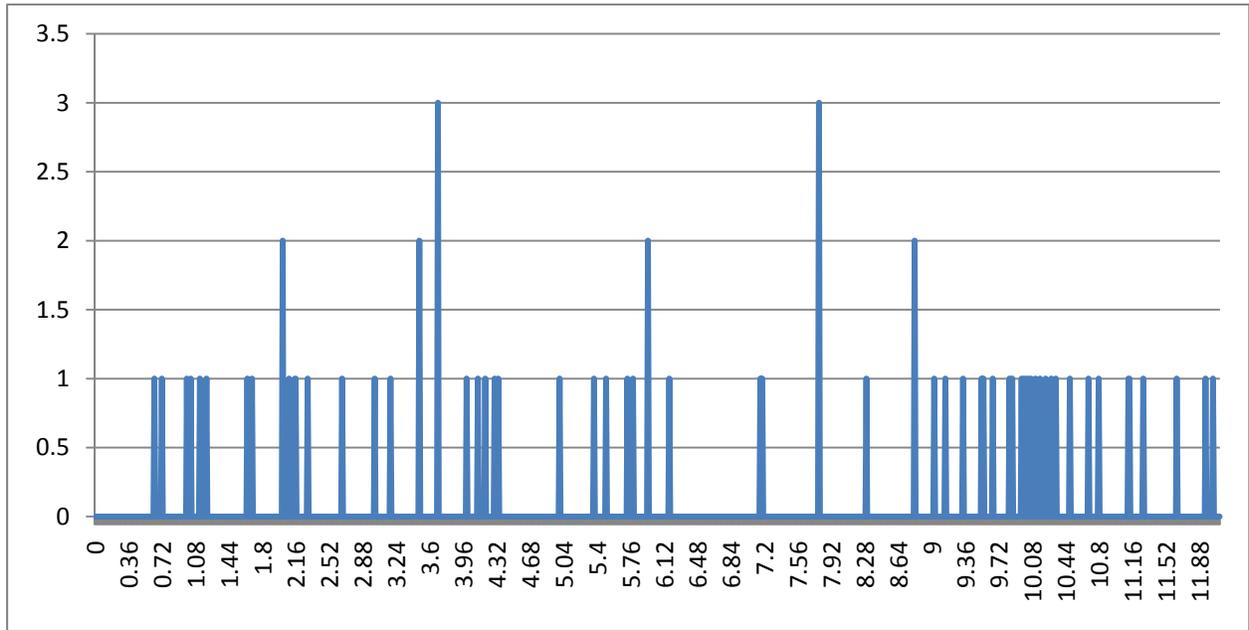
| type of collision | lm 0.00 to lm 8.52 |            |                     | lm 8.53 to lm 12.10 |            |                     |
|-------------------|--------------------|------------|---------------------|---------------------|------------|---------------------|
|                   | number of crashes  | % of total | rural state average | number of crashes   | % of total | urban state average |
| Non Coll          | 92                 | 68.66%     | 48.72%              | 54                  | 46.96%     | 21.19%              |
| Rear End          | 22                 | 16.42%     | 26.60%              | 26                  | 22.61%     | 47.40%              |
| S Swipe (sd)      | 15                 | 11.19%     | 16.25%              | 17                  | 14.78%     | 19.06%              |
| Head on           | 0                  | 0.00       | 0.56                | 1                   | 0.87%      | 0.56%               |
| Other             | 4                  | 2.99%      | 50.70%              | 12                  | 10.43%     | 9.48%               |
| Total             | 134                |            |                     | 115                 |            |                     |

*(Source: LADOTD Crash 1 Program)*

The non-collision crashes that occurred during the work hour restriction time period from 2005 to 2009 within the limits of construction were sorted by logmile to identify any locations with frequent crash occurrences. There were 146 non-collision crashes during this time period. As shown in Figures 1 and 2, there were no locations with a significant crash frequency.

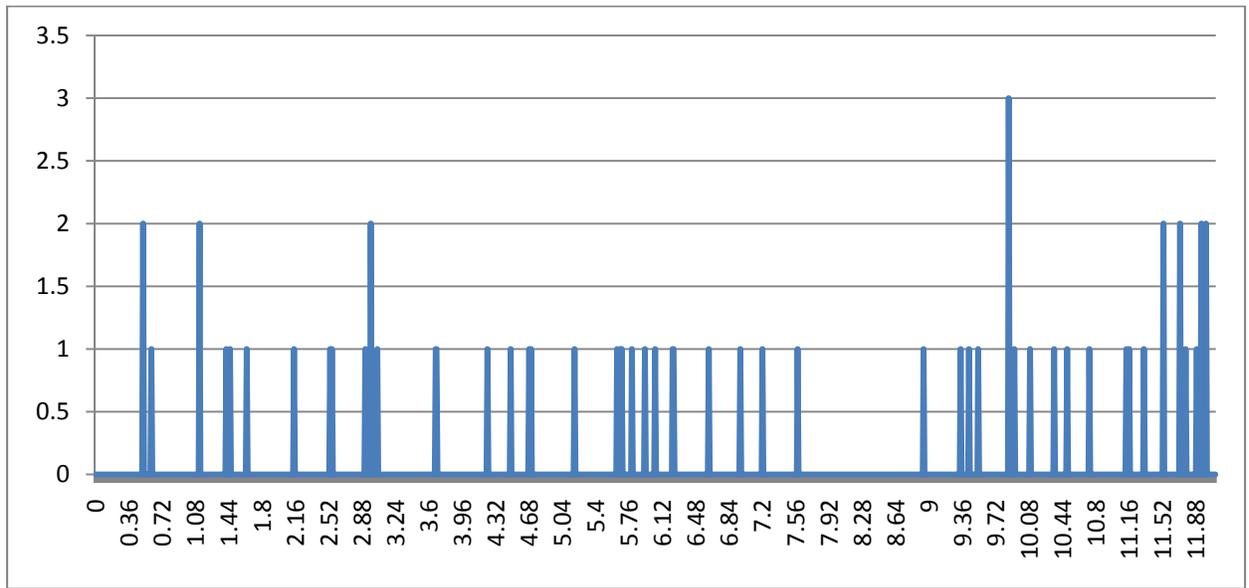
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**Figure 1: Monday through Friday non-collision crashes by logmile**



*(Source: LADOTD Crash 1 Program)*

**Figure 2: Saturday through Sunday non-collision crashes by logmile**



*(Source: LADOTD Crash 1 Program)*

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## Impact Area

The impact area is considered to be the area beyond the limits of construction that experiences impacts from the construction project. This may be where the temporary traffic control begins or where the maximum expected queue ends.

The impact area for eastbound I-10 is defined by the end of the maximum queue which is 1.98 miles west of the limits of construction. From 2005 to 2009, 4 total crashes occurred within the impact area during the weekday restricted work hours and 6 total crashes occurred within the impact area during the weekend restricted work hours.

The impact area for westbound I-10 is defined by the I-10/I-110 split to the limits of construction. The impact area for westbound I-10 was analyzed as three separate sections: west approach of the Mississippi River Bridge, main span, and east approach.

For the west approach from 2005 to 2009, 24 total crashes occurred during the weekday restricted work hours and 11 total crashes occurred during the weekend restricted work hours. Of the 24 crashes occurring during the weekday restricted work hours, 19 were rear end crashes. As indicated in Figure 3, crashes generally tend to occur near the diverge point at the LA 1 exit.

**Figure 3: Crash diagram for westbound I-10, west approach, total crashes**



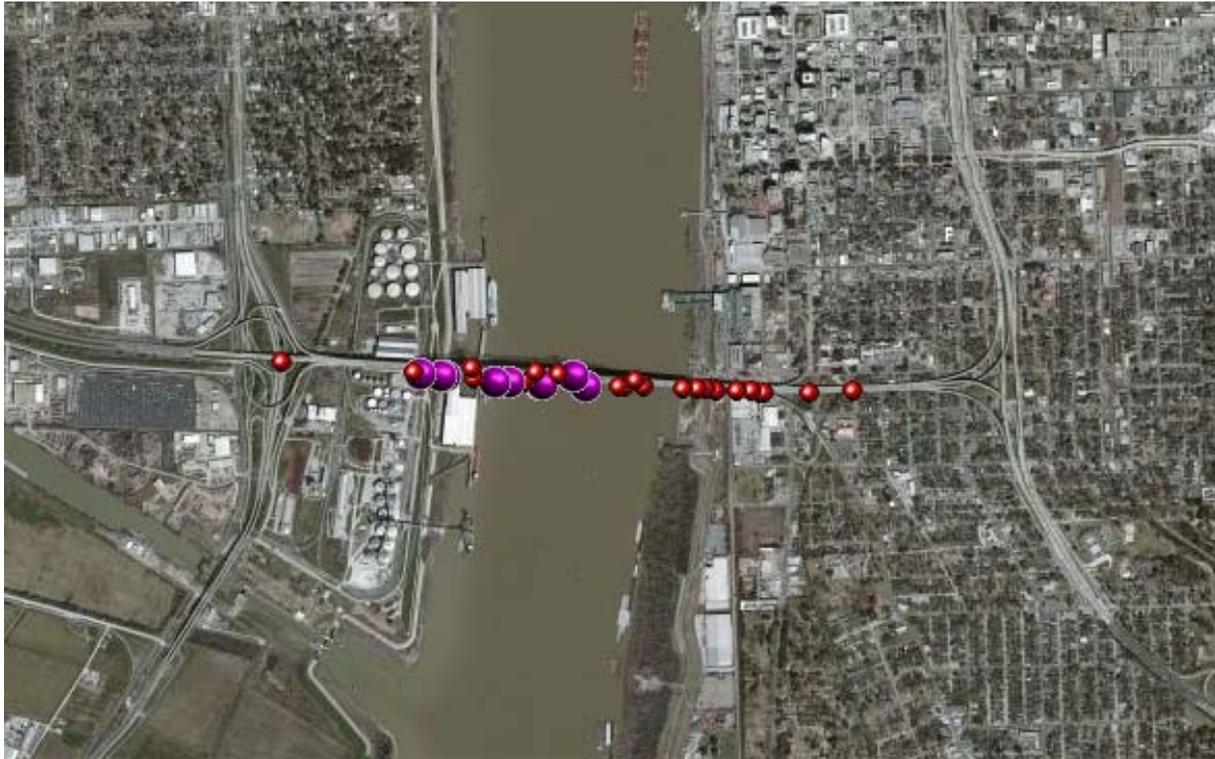
*(Source: LADOTD Crash 1 program)*

The pavement markings at the LA 1 exit will be modified with a plan change under state project no. 737-96-0087 which has already been let and is expected to be completed before construction begins.

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For the main span from 2005 to 2009, 11 total crashes occurred during the weekday restricted work hours and 5 total crashes occurred during the weekend restricted work hours. Of the 11 crashes occurring during the weekday restricted work hours, 7 were rear end crashes. As indicated in Figure 4, crashes generally tend to occur on the downgrade approaching the LA 1 exit.

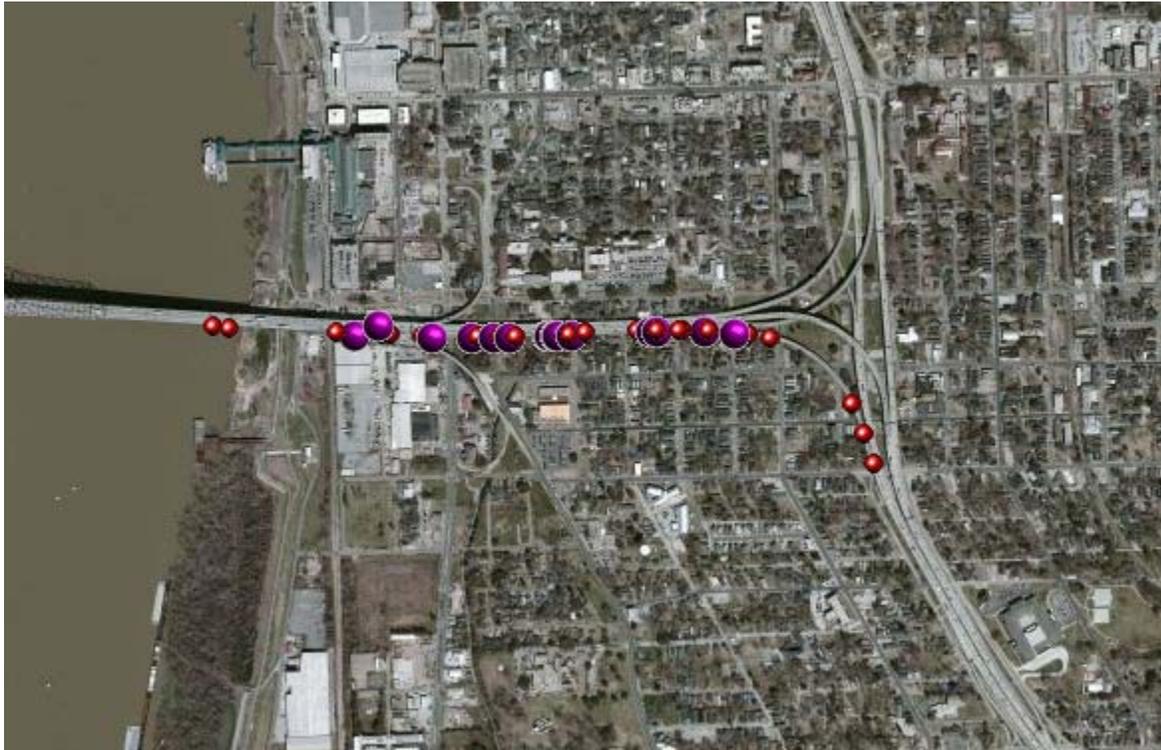
**Figure 4: Crash diagram for westbound I-10, main span, total crashes**



*(Source: LADOTD Crash 1 program)*

For the east approach from 2005 to 2009, 18 total crashes occurred during the weekday restricted work hours and 14 total crashes occurred during the weekend restricted work hours. Of the 18 crashes occurring during the weekday restricted work hours, 9 were rear end crashes. As indicated in Figure 5, the crashes generally tend to occur along the upgrade with no discernible pattern.

**Figure 5: Crash diagram for westbound I-10, east approach, total crashes**



*(Source: LADOTD Crash 1 program)*



Table 1: Identification of Abnormal Locations

| control section | begin log mile | end log mile | length | urban rural | adt    | level of service | crashes | MVMT     | crash rate | 2 x state avg |
|-----------------|----------------|--------------|--------|-------------|--------|------------------|---------|----------|------------|---------------|
| 454-02          | 7.1            | 7.66         | 0.56   | U           | 52,600 | D-poor           | 63      | 10.75144 | 1.953227   | 2.78          |
| 454-02          | 7.66           | 8.2          | 0.54   | U           | 48,400 | D-poor           | 30      | 9.53964  | 1.048258   | 2.78          |
| 454-02          | 8.2            | 8.7          | 0.5    | U           | 48,400 | D-poor           | 16      | 8.833    | 0.603796   | 2.78          |
| 454-02          | 8.7            | 9.15         | 0.45   | U           | 48,400 | D-poor           | 11      | 7.9497   | 0.461233   | 2.78          |
| 454-02          | 9.15           | 9.65         | 0.5    | R           | 47,100 | D-poor           | 23      | 8.59575  | 0.891914   | 1.16          |
| 454-02          | 9.65           | 10.15        | 0.5    | R           | 47,100 | D-poor           | 9       | 8.59575  | 0.34901    | 1.16          |
| 454-02          | 10.15          | 10.65        | 0.5    | R           | 47,100 | D-poor           | 3       | 8.59575  | 0.116337   | 1.16          |
| 454-02          | 10.65          | 11.15        | 0.5    | R           | 47,100 | D-poor           | 15      | 8.59575  | 0.581683   | 1.16          |
| 454-02          | 11.15          | 11.65        | 0.5    | R           | 47,100 | D-poor           | 24      | 8.59575  | 0.930692   | 1.16          |
| 454-02          | 11.65          | 12.15        | 0.5    | R           | 47,100 | D-poor           | 22      | 8.59575  | 0.853135   | 1.16          |
| 454-02          | 12.15          | 12.65        | 0.5    | R           | 47,100 | D-poor           | 12      | 8.59575  | 0.465346   | 1.16          |
| 454-02          | 12.65          | 13.15        | 0.5    | R           | 47,100 | D-poor           | 9       | 8.59575  | 0.34901    | 1.16          |
| 454-02          | 13.15          | 13.67        | 0.52   | R           | 47,100 | D-poor           | 15      | 8.93958  | 0.55931    | 1.16          |
| 454-02          | 13.67          | 14.2         | 0.53   | R           | 44,600 | C-avg            | 16      | 8.62787  | 0.618152   | 1.16          |
| 454-02          | 14.2           | 14.7         | 0.5    | R           | 44,600 | C-avg            | 17      | 8.1395   | 0.696193   | 1.16          |
| 454-02          | 14.7           | 15.2         | 0.5    | R           | 44,600 | C-avg            | 4       | 8.1395   | 0.16381    | 1.16          |
| 454-02          | 15.2           | 15.7         | 0.5    | R           | 44,600 | C-avg            | 5       | 8.1395   | 0.204763   | 1.16          |
| 454-02          | 15.7           | 16.2         | 0.5    | R           | 44,600 | C-avg            | 7       | 8.1395   | 0.286668   | 1.16          |
| 454-02          | 16.2           | 16.7         | 0.5    | R           | 44,600 | C-avg            | 20      | 8.1395   | 0.819051   | 1.16          |
| 454-02          | 16.7           | 17.2         | 0.5    | R           | 44,600 | C-avg            | 11      | 8.1395   | 0.450478   | 1.16          |
| 454-02          | 17.2           | 17.7         | 0.5    | R           | 44,600 | C-avg            | 22      | 8.1395   | 0.900956   | 1.16          |
| 454-02          | 17.7           | 18.2         | 0.5    | R           | 44,600 | C-avg            | 12      | 8.1395   | 0.491431   | 1.16          |
| 454-02          | 18.2           | 18.7         | 0.5    | R           | 44,600 | C-avg            | 6       | 8.1395   | 0.245715   | 1.16          |
| 454-02          | 18.7           | 19.2         | 0.5    | R           | 44,600 | C-avg            | 11      | 8.1395   | 0.450478   | 1.16          |
| 454-02          | 19.2           | 19.7         | 0.5    | R           | 44,600 | C-avg            | 5       | 8.1395   | 0.204763   | 1.16          |
| 454-02          | 19.7           | 20.2         | 0.5    | R           | 44,600 | C-avg            | 6       | 8.1395   | 0.245715   | 1.16          |
| 454-02          | 20.2           | 20.7         | 0.5    | R           | 44,600 | C-avg            | 9       | 8.1395   | 0.368573   | 1.16          |
| 454-02          | 20.7           | 21.2         | 0.5    | R           | 44,600 | C-avg            | 26      | 8.1395   | 1.064766   | 1.16          |
| 454-02          | 21.2           | 21.7         | 0.5    | R           | 44,600 | C-avg            | 13      | 8.1395   | 0.532383   | 1.16          |
| 454-02          | 21.7           | 22.2         | 0.5    | R           | 44,600 | C-avg            | 8       | 8.1395   | 0.32762    | 1.16          |
| 454-02          | 22.2           | 22.7         | 0.5    | R           | 44,600 | C-avg            | 14      | 8.1395   | 0.573336   | 1.16          |
| 454-02          | 22.7           | 23.2         | 0.5    | R           | 44,600 | C-avg            | 6       | 8.1395   | 0.245715   | 1.16          |
| 454-02          | 23.2           | 23.7         | 0.5    | R           | 44,600 | C-avg            | 18      | 8.1395   | 0.737146   | 1.16          |
| 454-02          | 23.7           | 24.2         | 0.5    | R           | 44,600 | C-avg            | 9       | 8.1395   | 0.368573   | 1.16          |
| 454-02          | 24.2           | 24.7         | 0.5    | R           | 44,600 | C-avg            | 10      | 8.1395   | 0.409526   | 1.16          |
| 454-02          | 24.7           | 25.1         | 0.4    | R           | 44,600 | C-avg            | 13      | 6.5116   | 0.665479   | 1.16          |

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**Crash Data and Safety Analysis**

**I-10 High Rise Bridge Rail Modifications**

**State Project No. H.009211**

**Control Section 450-90 (Begin Log Mi 8.506, End Log Mi 9.788)**

**Transportation Management Plan – Safety**

**Analysis Years 2008 – 2010**

This safety analysis is prepared for the Transportation Management Plan (TMP) for State Project No. H.009211, and conducted by the LADOTD District 02 Traffic Operations Section with guidance from the LADOTD Highway Safety Section.

Initially, the crash data for the areas covered by SP H.009211 was analyzed as two separate data sets as shown in Table 1. The crash data used in the analysis were based on records obtained from the State Police database. This database contains information on crashes investigated by State Police and also electronic submissions of other crashes handled by the agency with jurisdiction in the area. Through an agreement with State Police, the crashes are typically investigated by NOPD through this project area and the actual crash reports themselves were not available in any significant amount from the database.

**Table 1: Functional Classification and AADT**

| Control Section | Begin log mile | End log mile | Functional Class | Urban/Rural | Number of Lanes | ADT     |
|-----------------|----------------|--------------|------------------|-------------|-----------------|---------|
| 450-90          | 8.14           | 8.57         | 1-Inter          | U           | 8               | 122,700 |
| 450-90          | 8.57           | 9.86         | 1-inter          | U           | 6               | 122,700 |

*(Source: Highway Needs File)*

The crash rate was calculated for each segment within the project limits, from log mile 8.51 to log mile 9.79, and compared to the statewide average for the same highway functional class to identify if it is classified as an abnormal location. An abnormal location is defined as a location having at least five crashes and twice the statewide average crash rate for its functional classification. As shown in Table 2, there were no abnormal sections within the project limits.

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**Table 2: Identification of Abnormal Location within Project Limits**

| Begin log mile | End log mile | Length (mile) | Classification | ADT     | VMT     | Total Crashes | Crash Rate | 2x State Avg |
|----------------|--------------|---------------|----------------|---------|---------|---------------|------------|--------------|
| 8.51           | 8.57         | 0.06          | Urban          | 122,700 | 7,362   | 8             | 0.99       | 2.78         |
| 8.58           | 9.79         | 1.2           | Urban          | 122,700 | 148,467 | 362           | 2.23       | 2.78         |

(Source: LADOTD Crash 1 Program)

The crash data was then categorized by type of crash, including nighttime, in order to identify any areas with potential for improvement. The crash data indicated that nighttime and wet surface crashes are overrepresented with respect to their statewide average proportion of crash type to total crashes, as shown in Table 3. A nighttime crash is defined as a crash that occurred under dark lighting conditions and is open to interpretation by law enforcement personnel working the crash.

**Table 3: Percent Crash by Crash Type**

| I-10 Between Log Mile 8.51 and 9.79 |               |                  |                       |
|-------------------------------------|---------------|------------------|-----------------------|
| Type of Crash                       | Total Crashes | Crash Percentage | State Average (Urban) |
| Roadway Departure                   | 4             | 1.81%            | 16.24%                |
| Nighttime Crashes                   | 107           | <b>28.92%</b>    | 27.52%                |
| Wet Surface                         | 75            | <b>20.27%</b>    | 17.77%                |

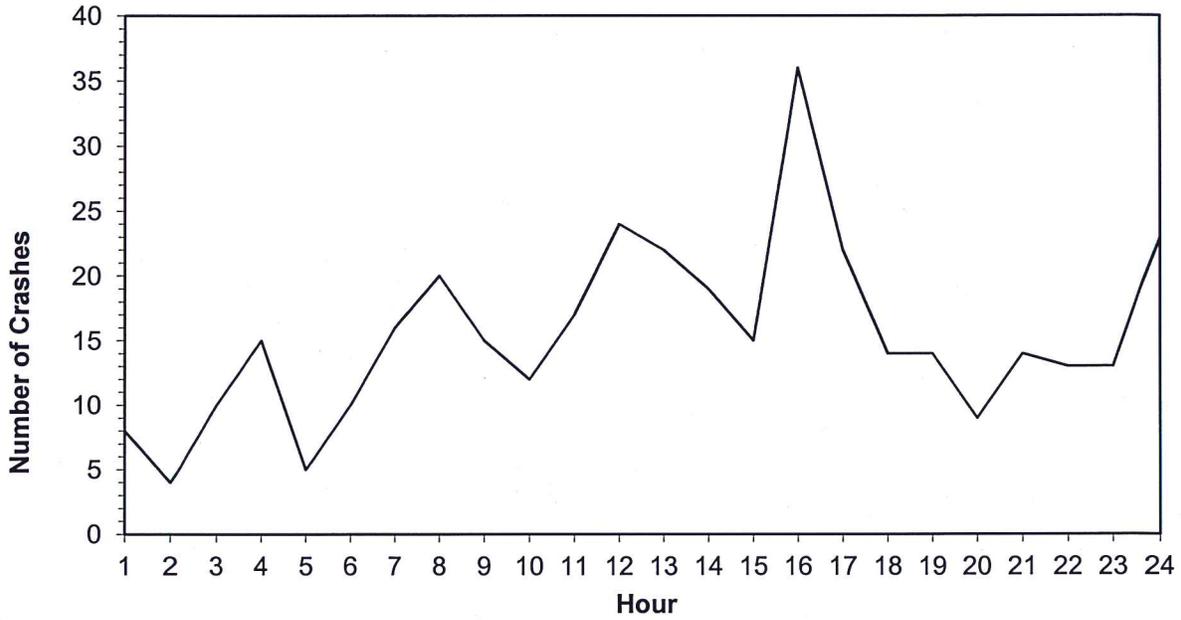
(Source: LADOTD Crash 1 Program)

Within the same limits of study (log mile 8.51 to 9.79), the crashes were analyzed by time of day. The crash frequency gradually increases throughout the day with the peak number of occurrences occurring between the hours of 3:30 PM – 4:30 PM as shown in Figure 1. The crashes were also sorted by travel direction and are shown in Figure 2.

Due to overrepresentation of nighttime and wet surface crashes, the crash data was compiled by time of day and only the crash data corresponding to the allowable work hours was reviewed as listed in Table 4. The allowable work hours as determined from the queue analysis are proposed to be, for the eastbound travel direction, Sunday through Thursday nights from 10:00 PM to 6:15 AM, Friday night from 12:00 AM to 7:00 AM Saturday, and Saturday night from 12:00 AM to 9:00 AM Sunday. The allowable work hours for the westbound travel direction are Sunday through Thursday nights from 7:30 PM to 5:30 AM, Friday night from 9:00 PM to 7:30 AM Saturday, and Saturday nights from 9:00 PM to 9:30 AM on Sunday.

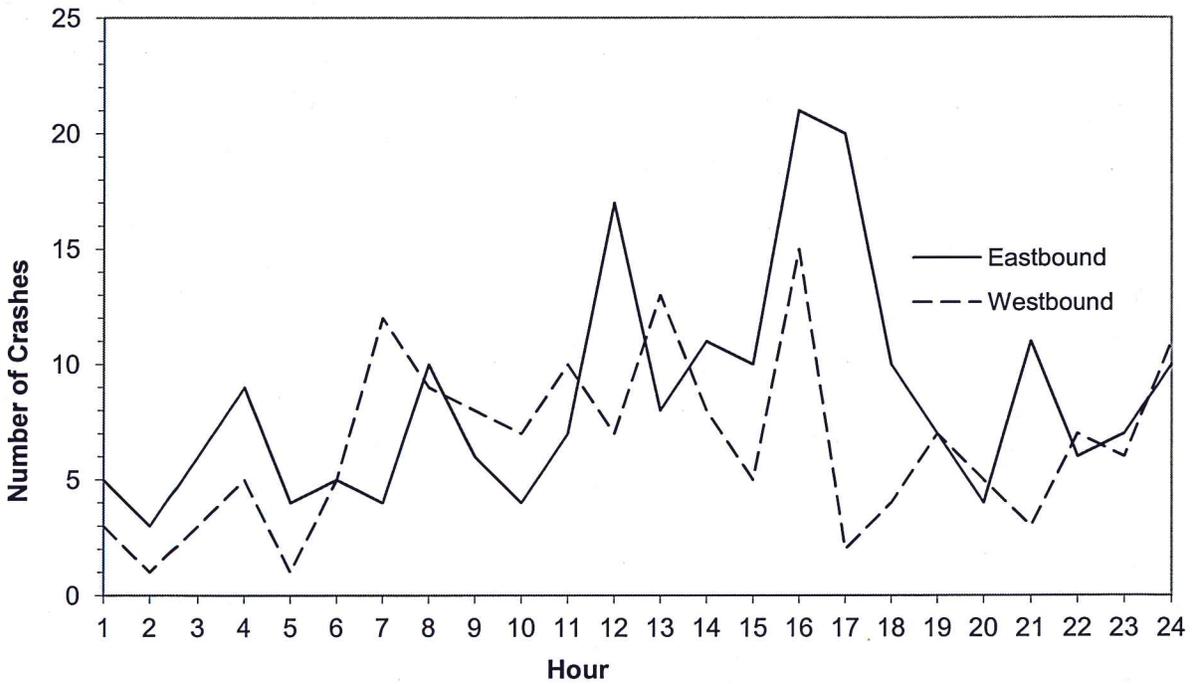
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Figure 1: Total Crashes by Hour



(Source: LADOTD Crash 1 Program)

Figure 2: Total Crashes per Hour by Travel Direction



(Source: LADOTD Crash 1 Program)

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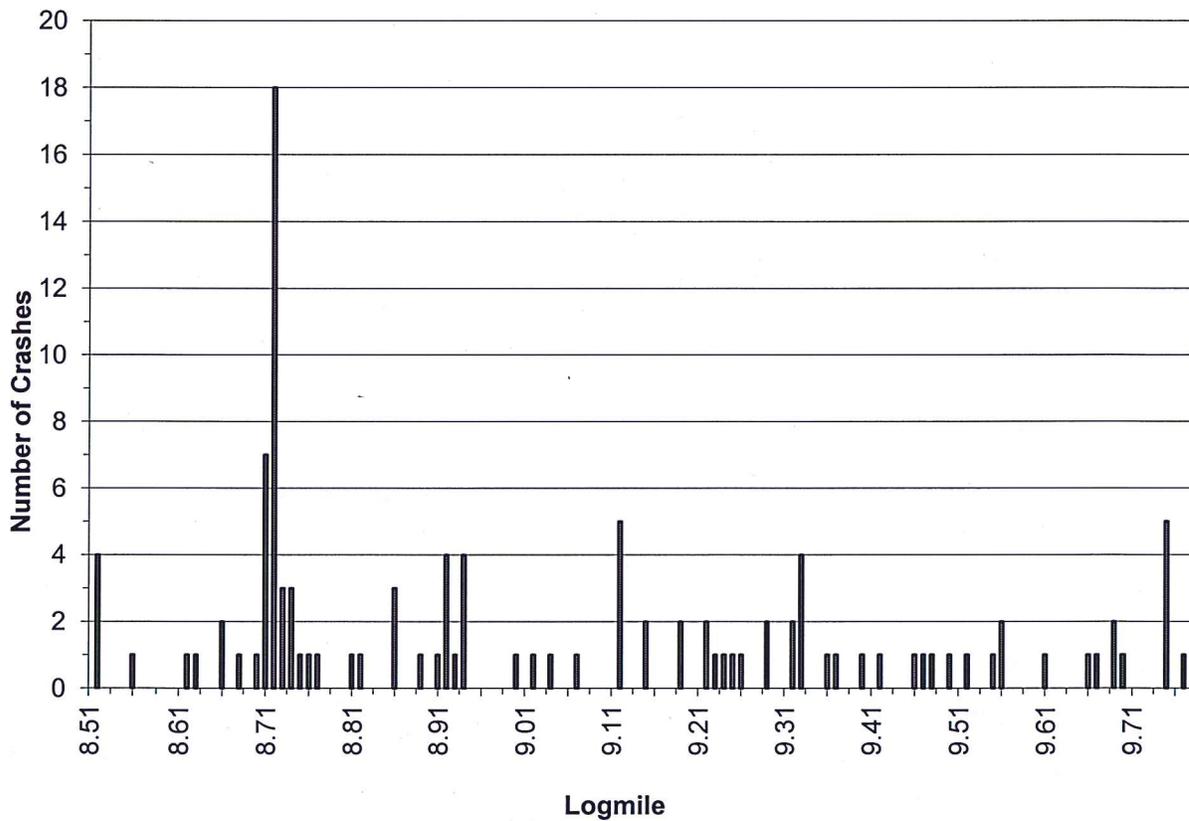
Further investigation of the crash data indicated that rear end and side swipe (same direction) crashes were higher than the state average for a urban interstate facility. The rear end and side swipe (same direction) crashes were sorted by logmile to identify locations with frequent crash occurrences. Figures 3 and 4 show graphical representations of the rear end and side swipe (same direction) crashes by log mile within the project limits.

**Table 4: Crash Data for allowable work hours, by Type of Collision**

| I-10 Between Logmile 8.51 and 9.79 |               |                  |                     |
|------------------------------------|---------------|------------------|---------------------|
| Type of Collision                  | Total Crashes | Crash Percentage | Urban State Average |
| Non Collision                      | 24            | 12.83%           | 21.19%              |
| Rear End                           | 90            | 48.12%           | 47.40%              |
| Side Swipe (Same Direction)        | 37            | 19.79%           | 19.06%              |

(Source: LADOTD Crash 1 Program)

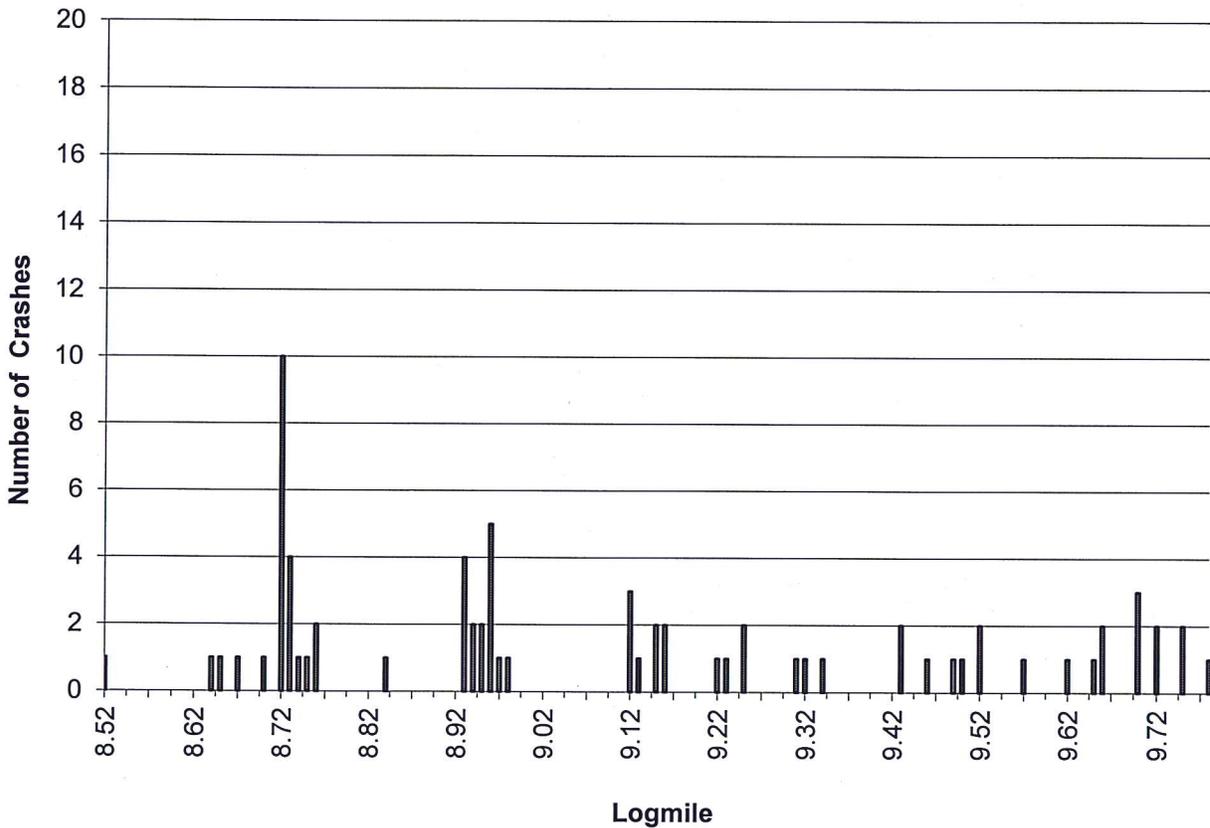
**Figure 3: Sunday through Thursday Rear end and Side Swipe Crashes by Logmile**



(Source: LADOTD Crash 1 Program)

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Figure 4: Friday through Saturday Rear End and Side Swipe crashes by Logmile



(Source: LADOTD Crash 1 Program)

Although the crash data are well distributed across the project segment, there appears to be a significant concentration of rear end and sideswipe (same direction) crashes occurring near Logmile 8.72 as shown in Figures 3 and 4. An in depth review of available crash reports and site conditions at this location revealed that the majority of the crashes are in the eastbound travel direction at the base of the high rise bridge. Drivers were generally either trying to change lanes to pass up a slow or stalled vehicle when they crashed their vehicle. Vehicle speed differentials may be a contributing factor in many of the crashes as the high rise bridge has a fairly steep grade upon which drivers have difficulty maintaining their vehicle speeds up the bridge compared to the high approach speed to the bridge.

For the purpose of further identifying any other potential safety concerns regarding crashes which may affect the project work zone, additional analyses were performed on a one mile segment entering the project from the east and west approaches. As shown in Table 5, the crash rate for a mile segment in either direction is below the average for what would be considered an abnormal location. Table 6 shows a summary of the percent crash by crash type and also by type of collision. Figures 5 and 6 show the total crashes by log mile, one mile before the beginning of the project in each direction.

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**Table 5: Identification of Abnormal Locations – Beyond Project Limits**

| Begin log mile | End log mile | Travel Direction | Number of Crashes (2007-2010) | Crash Rate | 2x State Avg |
|----------------|--------------|------------------|-------------------------------|------------|--------------|
| 7.51           | 8.51         | Eastbound        | 165                           | 1.23       | 2.78         |
| 9.79           | 10.79        | Westbound        | 69                            | 0.39       | 2.78         |

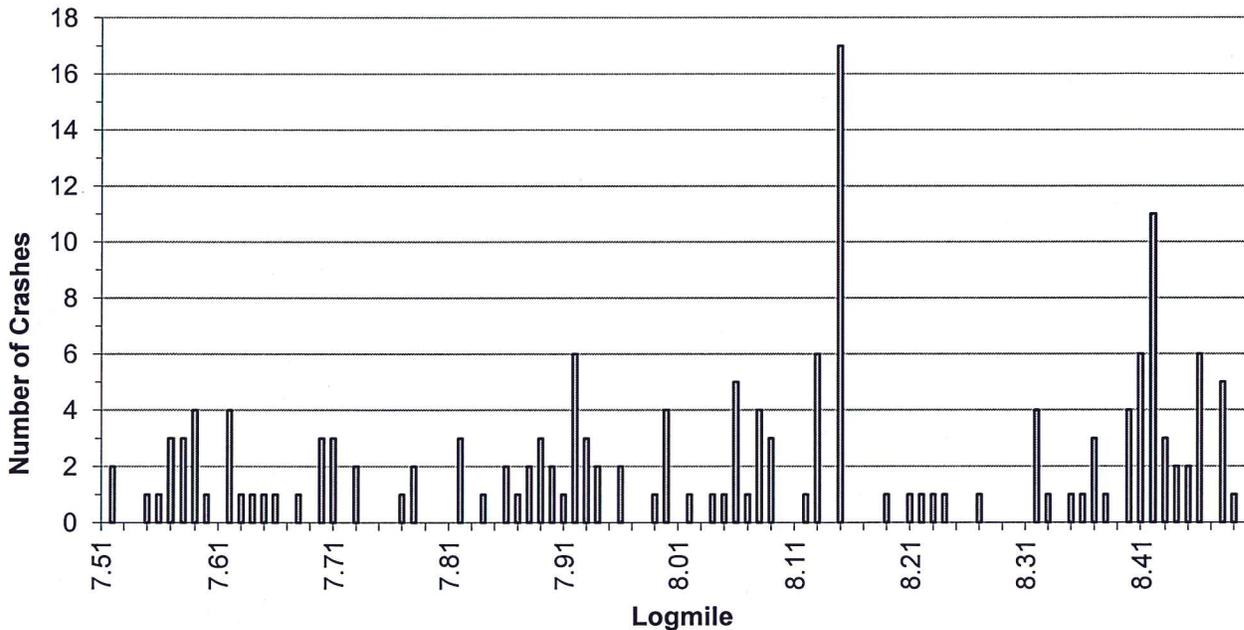
(Source: LADOTD Crash 1 Program)

**Table 6: Percent Crash by Crash Type and Type of Collision – Beyond Project Limits**

| Type of Crash / Collision   | Logmile 7.51 to 8.51           |                  | Logmile 9.79 to 10.79          |                  | Urban State Average |
|-----------------------------|--------------------------------|------------------|--------------------------------|------------------|---------------------|
|                             | Total Crashes (Eastbound Only) | Crash Percentage | Total Crashes (Westbound Only) | Crash Percentage |                     |
| Roadway Departure Crash     | 0                              | 0.00%            | 1                              | 1.45%            | 16.24%              |
| Nighttime Crash             | 57                             | <b>34.55%</b>    | 15                             | 21.74%           | 27.52%              |
| Wet Surface Crash           | 45                             | <b>27.27%</b>    | 15                             | 21.74%           | 27.60%              |
| Non Collision               | 25                             | 15.15%           | 7                              | 10.14%           | 21.19%              |
| Rear End                    | 71                             | 43.03%           | 31                             | 44.93%           | 47.40%              |
| Side Swipe (Same Direction) | 32                             | <b>19.39%</b>    | 11                             | 15.94%           | 19.06%              |

(Source: LADOTD Crash 1 Program)

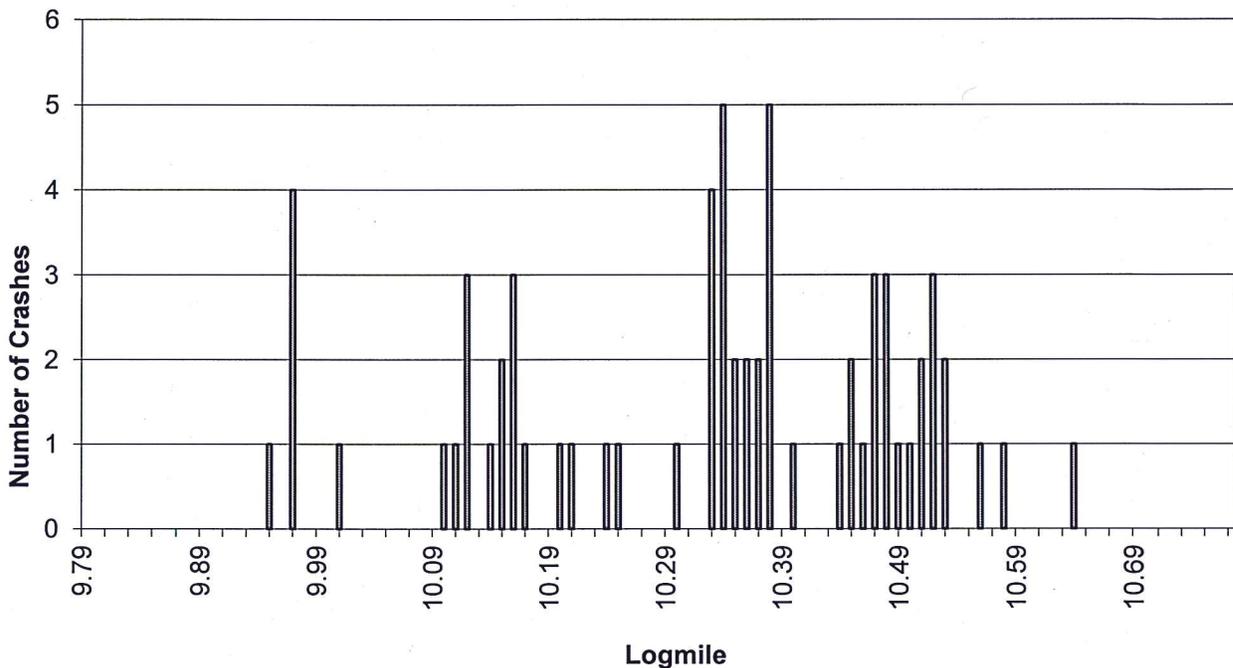
**Figure 5: Total Crashes Eastbound by Log mile (7.51 – 8.51)**



(Source: LADOTD Crash 1 Program)

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

Figure 5: Total Crashes Westbound by Log mile (9.79 – 10.79)



(Source: LADOTD Crash 1 Program)

**Data Analysis Summary and Conclusions**

The maps on Pages 8 through 13 provide details of the locations of crashes within, and on the approaches to, the work zone. Rear end collisions and side swipe (same direction) crashes are the most common type of collisions with the majority occurring in the eastbound travel direction. The crashes are well distributed across the length of the project; however, a particular area of concern would be at the base of the high rise bridge where there is a high concentration of crashes. It should be noted that the graphical representation does not indicate direction of travel based on the lateral plotting of the crashes

Based on the safety analysis and the resulting focus on nighttime rear end and sideswipe (same direction) crashes, especially during project work hours, it is recommended that project personnel actively manage the maintenance of the temporary traffic control devices to ensure that they are in proper working condition and also provide adequate lighting at the immediate work area as required by the Special Provisions. Police presence should also be included to monitor the back of queue on the jobsite approaches to provide motorists adequate warning. Additional factors which can contribute to safer operation during the project will be the use of MAP Patrols, Portable Message signs, and having a tow truck available on-site to provide assistance in cases of vehicle breakdowns on the bridge.

**SCS/BQL**  
**10/11/2011**

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

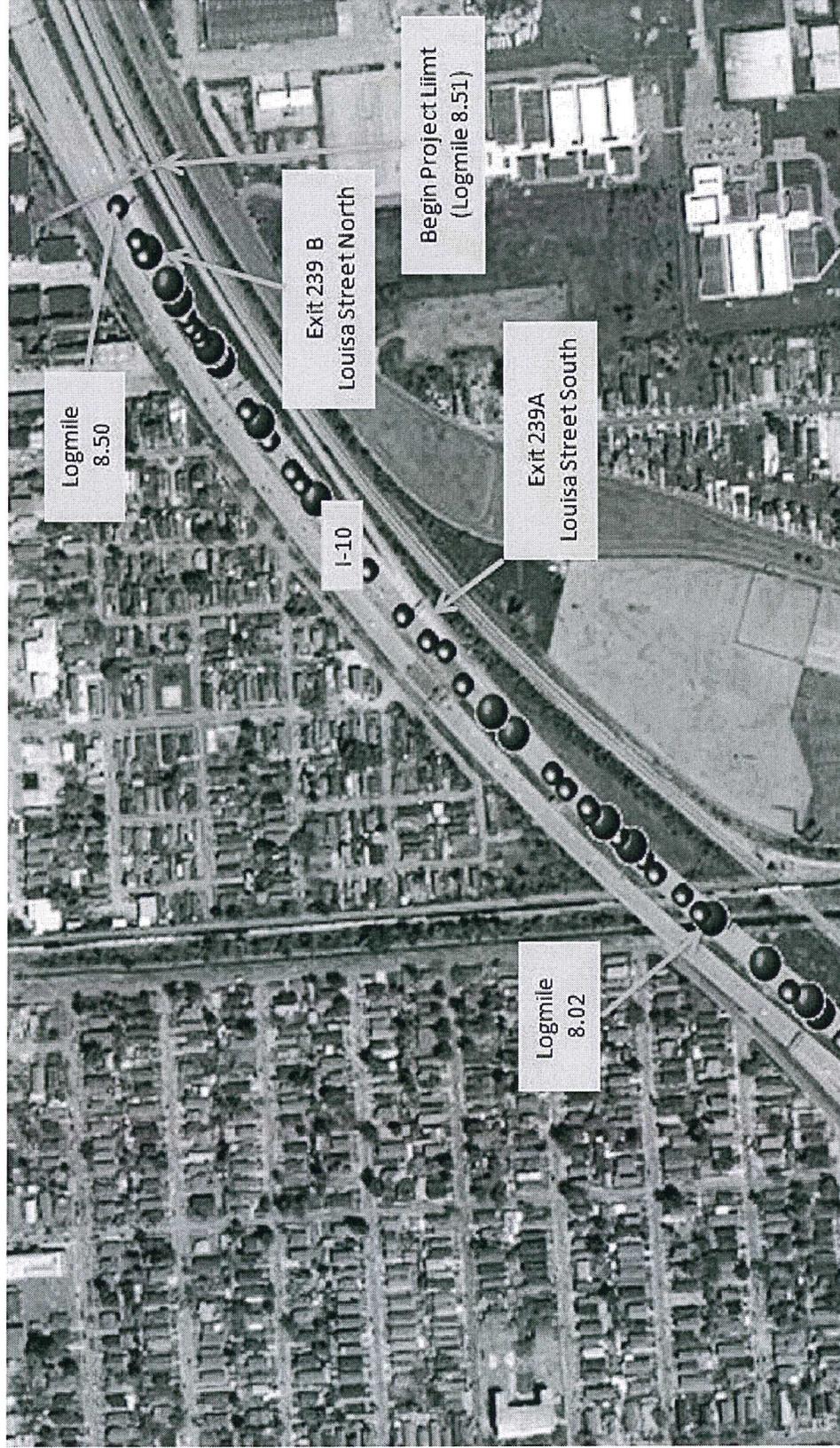
### I-10 (Log mile 7.51 – 7.99)



**LEGEND:** ● Single crash location      ● Multiple crash location

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

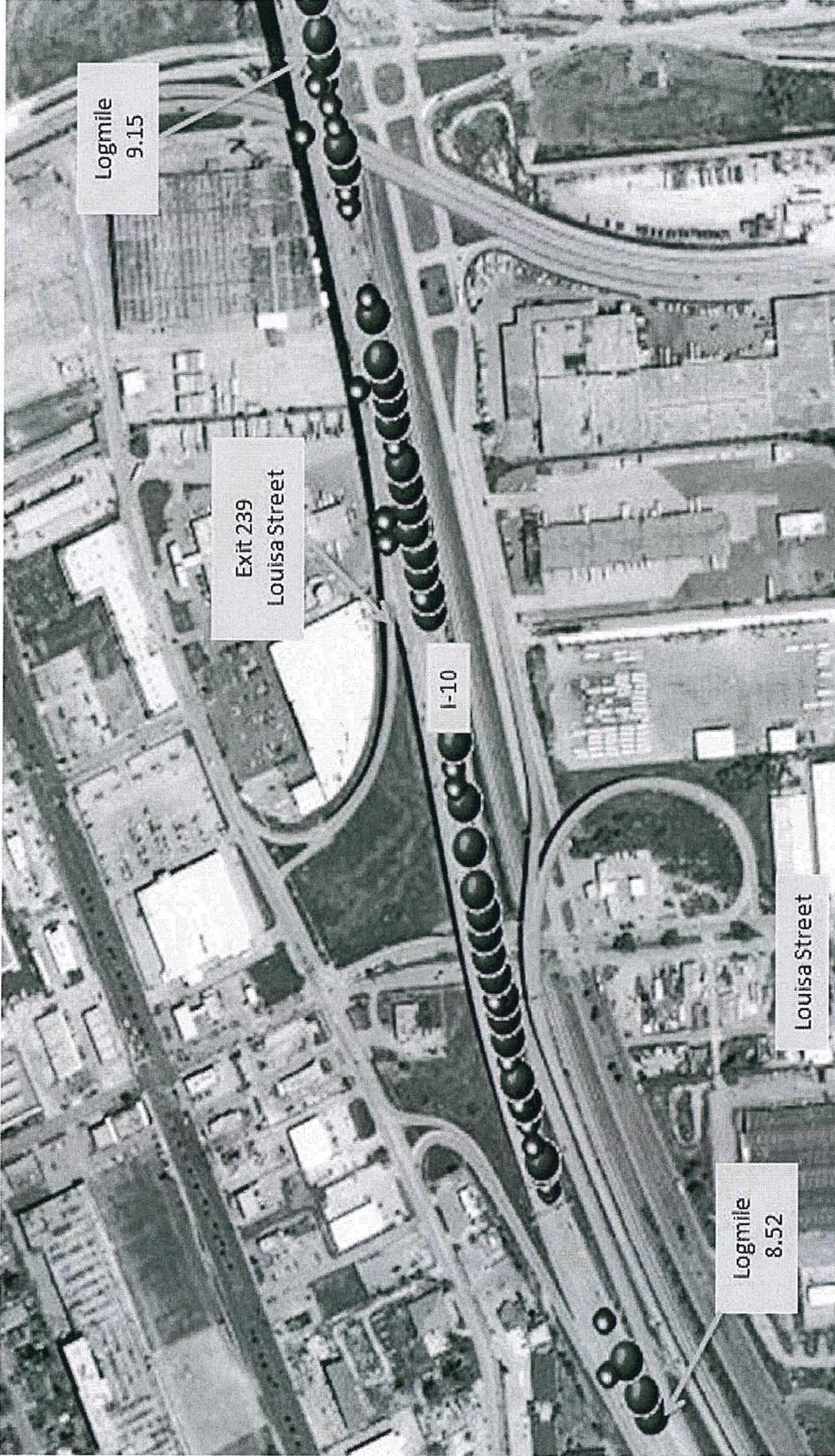
### I-10 (Log mile 8.00 – 8.51)



**LEGEND:** ● Single crash location      ● Multiple crash location

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

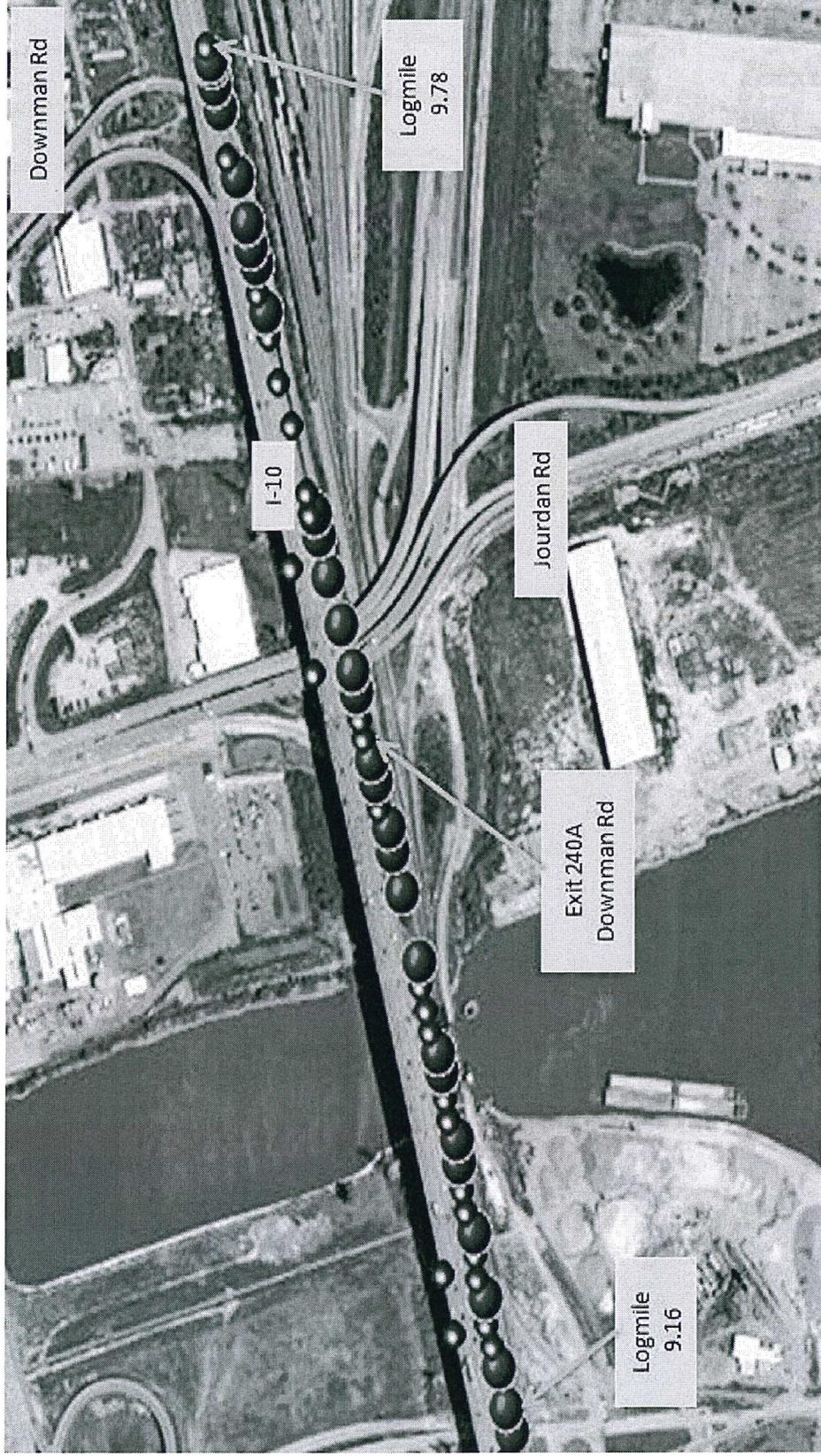
### I-10 (Log mile 8.52 – 9.15)



**LEGEND:** ● Single crash location      ● Multiple crash location

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

### I-10 (Log mile 9.16 – 9.78)

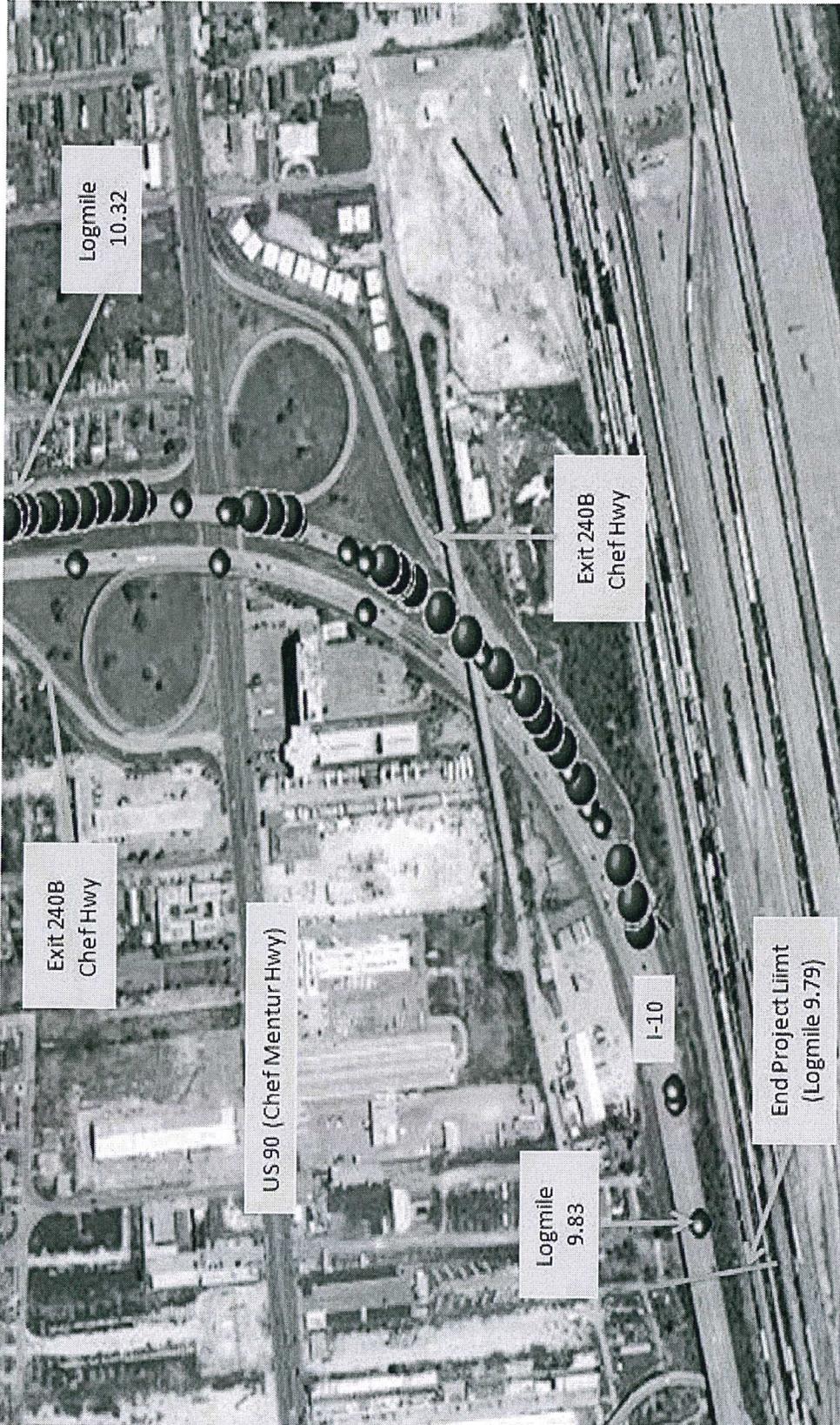


**LEGEND:** ● Single crash location    ● Multiple crash location

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

State Project H.009211 Crash Data and Safety Analysis

**I-10 (Log mile 9.79 – 10.32)**



**LEGEND:** ● Single crash location    ● Multiple crash location

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

### I-10 (Log mile 10.32 – 10.79)



**LEGEND:** ● Single crash location      ● Multiple crash location

This report is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads; and is therefore exempt from discovery or admission under 23 U.S.C. 409.

# APPENDIX C: THINKSTREAM USER'S MANUAL

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2012

# THINKSTREAM LSP Crash Report Images

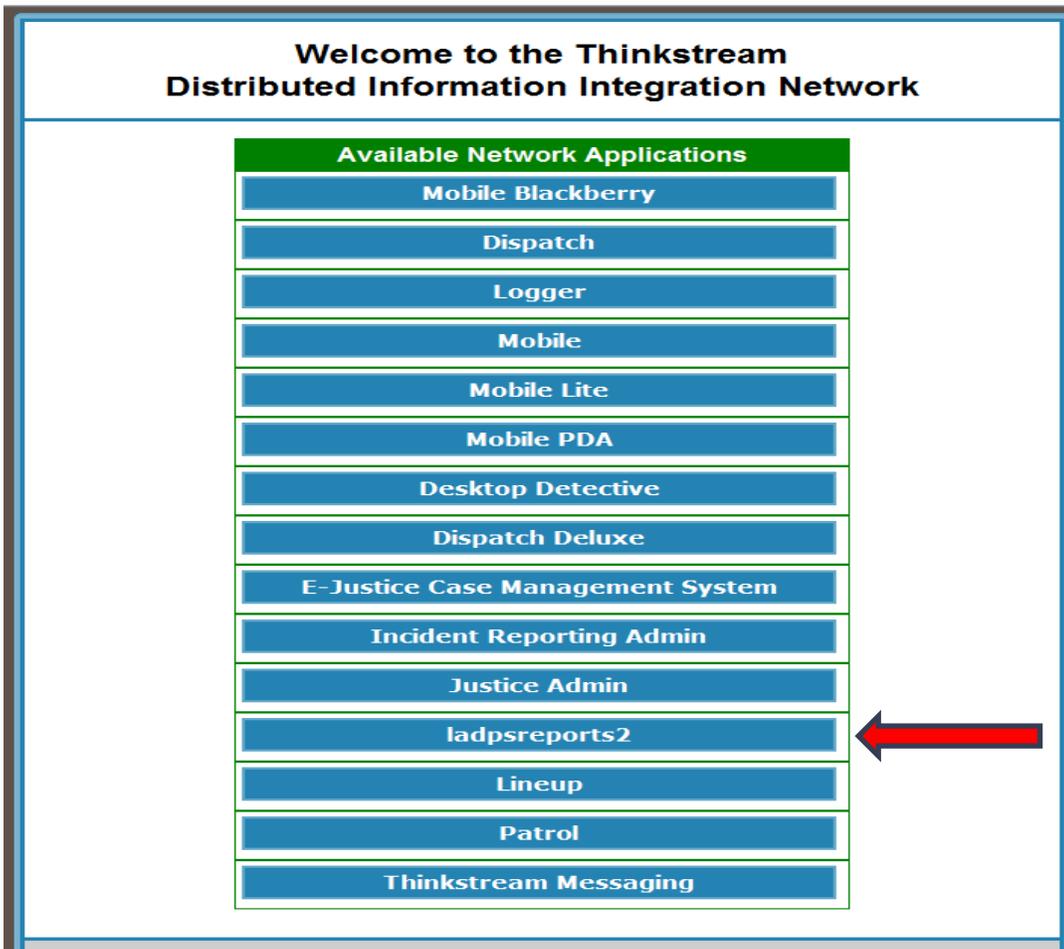
---

<https://icjis.dps.louisiana.gov/apps.html>

This application is used to print or save a copy of crash reports that are written by LSP, Louisiana State Police, Troops statewide both on/off state maintained highways.



## 1) INITIAL SCREEN:



- This page will be displayed after going to the web site, <https://icjis.dps.louisiana.gov/app.html>, mentioned on the first page.
- Select **ladpsreports2** from the selections given.

## 2) LOG IN SCREEN:

THINKSTREAM 4071

Login

Welcome to the LADPS Reports Application. Please log in.

User Name:

Password:

Login

Forgot your password? Click [here](#) to reset your password.

POWERED BY THINKSTREAM

- This is the log on screen where you will enter your **User Name** and **Password**.
- If you don't have log on credentials you can contact our office and we will submit a request to have one issued.
- If you have forgotten your log on credentials or get locked out, **after three attempts**, you can call one of the following numbers and tell them that you need your **Thinkstream Account** reset.  
**\*\*\*\*\* LA DPS help desk (225-925-6233) or Thinkstream Support at (225-291-5992). \*\*\*\*\***

### 3) CHANGE PASSWORD SCREEN:

THINKSTREAM 4071

Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Login

Change password:  
**Your password has expired. You must change it before logging in.**

Password:

New Password:

Confirm New Password:

Login

Forgot your password? Click [here](#) to reset your password.

POWERED BY THINKSTREAM

- Like most programs that we use at the DOTD this one also has, **roughly 30 days**, a password that expires and you must change it before logging in.
- After your password is changed you will get the following screen to start your search for a crash report that is written by LSP, Louisiana State Police.

THINKSTREAM Logged in as Michael Connors 4071

Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish: --select--

Crash Report Number:

Start Date:

End Date:

Clear Search

POWERED BY THINKSTREAM

#### 4) CRASH REPORT LOOK UP SCREEN:

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish: --select--

Crash Report Number: 20110038117

Start Date:

End Date:

Clear Search

POWERED BY THINKSTREAM

- Select your crash report number.
- Enter crash report number into the **Crash Report Number** field.
- Either hit the **Search Button**, lower right corner, or **Enter Button** on your computer to start search engine.

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form Results

Searching...

Records: 0

| Report # | Date | Vehicles | Drivers | Downloads |
|----------|------|----------|---------|-----------|
|----------|------|----------|---------|-----------|

Cancel Search

POWERED BY THINKSTREAM

- **Green Box** indicates that the program is searching the database for the crash report that you have entered.

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences  
Crash Report Search Shopping Cart DPS Fund Collection System

Form Results

Searching...

Records: 1

| Report # ^  | Date                | Vehicles           | Drivers               | Downloads                    |                             |
|-------------|---------------------|--------------------|-----------------------|------------------------------|-----------------------------|
| 20110038117 | 12/26/2011 16:19:00 | 2002 Nissan Xterra | Courtney F. Smith III | <a href="#">Crash Report</a> | <a href="#">Add To Cart</a> |

POWERED BY THINKSTREAM

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences  
Crash Report Search Shopping Cart DPS Fund Collection System

Form Results

Records: 1

| Report # ^  | Date                | Vehicles           | Drivers               | Downloads                    |                             |
|-------------|---------------------|--------------------|-----------------------|------------------------------|-----------------------------|
| 20110038117 | 12/26/2011 16:19:00 | 2002 Nissan Xterra | Courtney F. Smith III | <a href="#">Crash Report</a> | <a href="#">Add To Cart</a> |

POWERED BY THINKSTREAM

- This screen shows the results of your search.
- Click on **Crash Report** to review your selection.

20110038117

**STATE OF LOUISIANA**  
**UNIFORM MOTOR VEHICLE TRAFFIC CRASH REPORT**

TOTAL NUMBER OF VEHICLES INVOLVED: **1**

DATE OF CRASH: 12262011    TIME (0000): 1619    DISTRICT:    TROOP: G    PAGE #: 01

PARISH: De Soto    PARISH CODE: 16    LAT.: 32.21713    LONG.: -93.84487

CITY OR TOWN:    CITY CODE:    Quadrant:    Service Road:

CRASH OCCURRED ON: **D**    HIGHWAY #:    MILEPOST:    ROADWAY NAME: Dixie Swim Club Rd

STREET/HIGHWAY: US 171    AT INTERSECTION:  NOT AT INTERSECTION

CONTRIBUTING FACTORS AND CONDITIONS:

|                               |                    |                 |           |                |
|-------------------------------|--------------------|-----------------|-----------|----------------|
| ROAD SURFACE (ONE PER COLUMN) | ROADWAY CONDITIONS | TYPE OF ROADWAY | ALIGNMENT | PRIMARY FACTOR |
|                               | A                  | D               | A         | A              |

- If you float your mouse over the bottom middle of the screen, then a **Message Box** will appear.
- This message box will allow you to either **Print** or **Save** your crash report.

**FREQUENTLY ASKED QUESTION:**

- What happens if I click the **Add To Cart** button?

THINKSTREAM    Logged in as Michael Connors    4071

Logout    Preferences

Crash Report Search    Shopping Cart    DPS Fund Collection System

Form    Results

Records: 1

| Report #    | Date                | Vehicles           | Drivers               | Downloads                    |                             |
|-------------|---------------------|--------------------|-----------------------|------------------------------|-----------------------------|
| 20110038117 | 12/26/2011 16:19:00 | 2002 Nissan Xterra | Courtney F. Smith III | <a href="#">Crash Report</a> | <a href="#">Add To Cart</a> |

POWERED BY THINKSTREAM

- Never select **Add To Cart** feature. This is for internal, DPS, selling of crash reports on-line.

## 5) NAME LOOK UP:

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish:

Crash Report Number:

Start Date:

End Date:

Search

POWERED BY THINKSTREAM

- Enter the **First Name** in the appropriate box.
- Enter the **Last Name** in the appropriate box.
- Either hit the **Search Button**, lower right corner or **Enter Button** on your computer to start search engine.
- Click on **Crash Report** to review your selection.
- Any **Supplements**, additional crash information, that are available will be shown as an additional selection.
- Then you can either **Print** or **Save** your crash report.

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

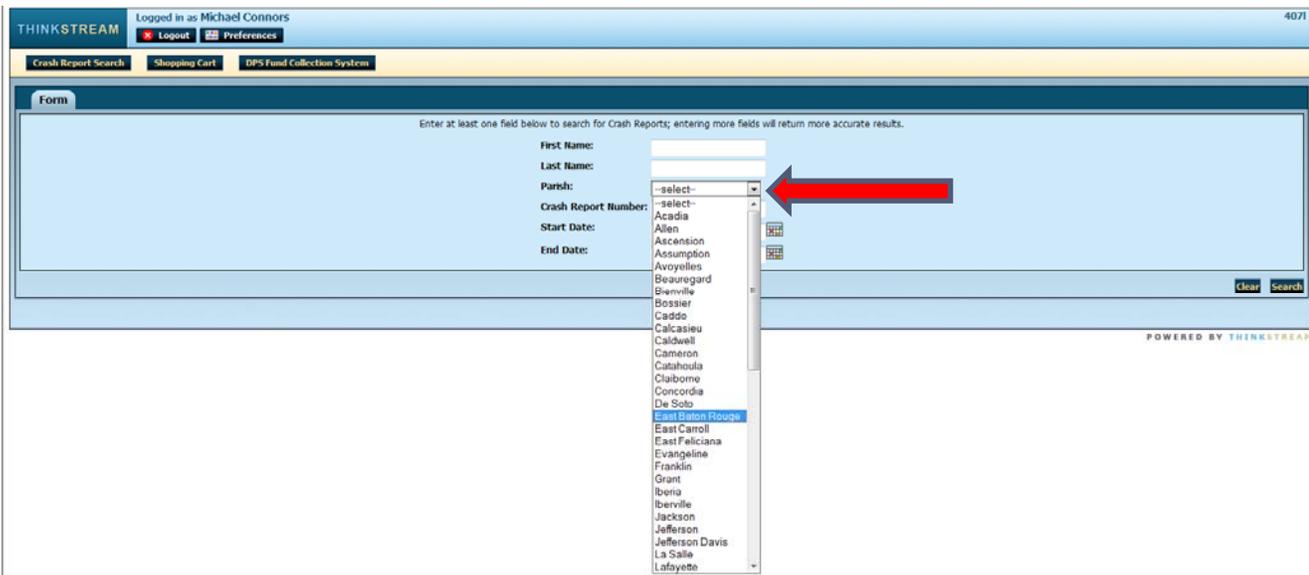
Form Results

Records: 1

| Report # ▲  | Date                | Vehicles                   | Drivers          | Downloads   |                             |
|-------------|---------------------|----------------------------|------------------|---|-----------------------------|
| 20110040630 | 12/16/2011 19:45:00 | 2004 Chevrolet TrailBlazer | Donny R. Tullier | <a href="#">Crash Report</a><br><a href="#">Fatal Narrative, Diagram, Statement</a> | <a href="#">Add To Cart</a> |

POWERED BY THINKSTREAM

## 6) PARISH AND DATE LOOK UP:



THINKSTREAM Logged in as Michael Connors 4071

Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish:

Crash Report Number:

Start Date:

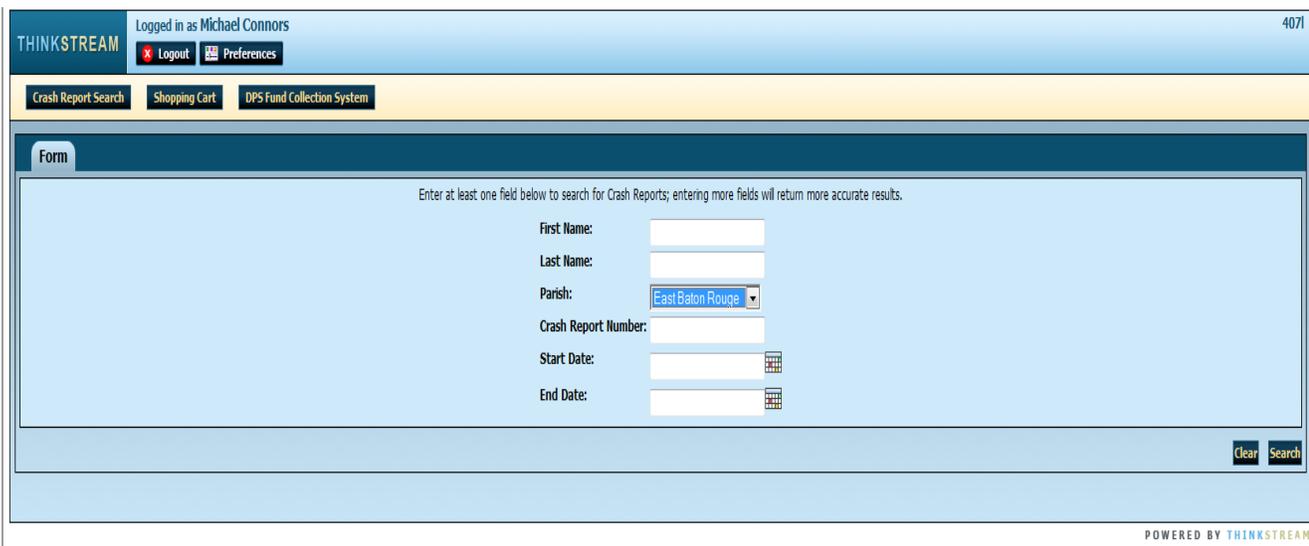
End Date:

Clear Search

POWERED BY THINKSTREAM

Parish dropdown menu items: --select--, Acadia, Allen, Ascension, Assumption, Avoyelles, Beauregard, Bienville, Bossier, Caddo, Calcasieu, Caldwell, Cameron, Catahoula, Claiborne, Concordia, De Soto, **East Baton Rouge**, East Carroll, East Feliciana, Evangeline, Franklin, Grant, Iberia, Iberville, Jackson, Jefferson Davis, La Salle, Lafayette

- Select a **Parish** from the drop down menu.



THINKSTREAM Logged in as Michael Connors 4071

Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish:

Crash Report Number:

Start Date:

End Date:

Clear Search

POWERED BY THINKSTREAM

- Then select a **Start Date** from the pop out window.

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish: --select--

Crash Report Number:

Start Date:

End Date:

January, 2012

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 8   | 9   | 10  | 11  | 12  | 13  | 14  |
| 15  | 16  | 17  | 18  | 19  | 20  | 21  |
| 22  | 23  | 24  | 25  | 26  | 27  | 28  |
| 29  | 30  | 31  |     |     |     |     |

Clear Search

POWERED BY THINKSTREAM

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish: --select--

Crash Report Number:

Start Date: 20120101

End Date:

Clear Search

POWERED BY THINKSTREAM

- Then select an **End Date** from the pop out window.

THINKSTREAM Logged in as Michael Connors 4071  
Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish: --select--

Crash Report Number:

Start Date: 20120101

End Date:

January, 2012

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 8   | 9   | 10  | 11  | 12  | 13  | 14  |
| 15  | 16  | 17  | 18  | 19  | 20  | 21  |
| 22  | 23  | 24  | 25  | 26  | 27  | 28  |
| 29  | 30  | 31  |     |     |     |     |

Clear Search

POWERED BY THINKSTREAM

THINKSTREAM Logged in as Michael Connors 4071  
 Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form

Enter at least one field below to search for Crash Reports; entering more fields will return more accurate results.

First Name:

Last Name:

Parish: East Baton Rouge

Crash Report Number:

Start Date: 20120101

End Date: 20120101

 Search

POWERED BY THINKSTREAM

- The query is ready to run.
- Either hit the **Search Button**, lower right corner or **Enter Button** on your computer to start search engine.
- Click on the **Crash Report** you are searching for from one of the selections.
- Then you can either **Print** or **Save** your crash report.

THINKSTREAM Logged in as Michael Connors 4071  
 Logout Preferences

Crash Report Search Shopping Cart DPS Fund Collection System

Form Results

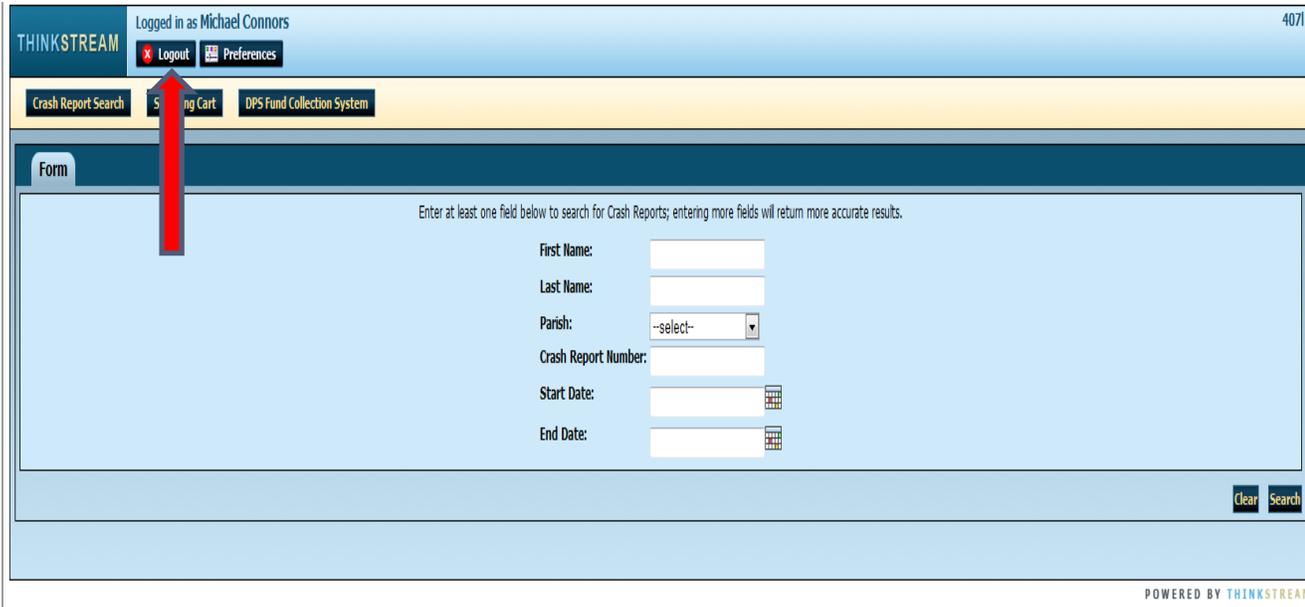
Records: 5

| Report # ^  | Date                | Vehicles                                | Drivers                                  | Downloads   |
|-------------|---------------------|---|--|---|
| 2012000022  | 01/01/2012 23:00:00 | 1998 FORD F-150                         | Paul Howard Orton                        | <a href="#">Crash Report</a><br><a href="#">Tax Results</a>       |
| 20120000701 | 01/01/2012 09:10:00 | 1991 CHEV LUM; 1997 OLDS ACH            | William E Womack; Bertie L Thomas        | <a href="#">Crash Report</a><br><a href="#">Witness Statement</a> |
| 20120000851 | 01/01/2012 07:55:00 | TOYOTA UNK; 2010 LEXUS RX350            | UNK; Donald J Hall                       | <a href="#">Crash Report</a>                                      |
| 20120001011 | 01/01/2012 16:00:00 | 2011 TOYOTA COROLLA; 1996 HONDA ACCORD  | Angela Marie Jones; Marc Jonathan Sobers | <a href="#">Witness Statement</a><br><a href="#">Crash Report</a> |
| 20120001311 | 01/01/2012 18:24:00 | 2001 FORD FOCUS; 2006 CHEVROLET EQUINOX | ELJE NYEMBO; DAVID A BENEDICT            | <a href="#">Crash Report</a><br><a href="#">Witness Statement</a> |

POWERED BY THINKSTREAM

## 7) LOGOUT PROCESS:

- After completing your search for a crash report, you must logout of the system.
- Click the **Logout** button in the top left corner, thus returning you to the main screen.



The screenshot displays the THINKSTREAM web application interface. At the top, the user is logged in as Michael Connors. The navigation bar includes buttons for "Crash Report Search", "Shopping Cart", and "DPS Fund Collection System". A red arrow points to the "Logout" button in the top left corner. Below the navigation bar is a search form with the following fields:

- First Name:
- Last Name:
- Parish:
- Crash Report Number:
- Start Date:
- End Date:

At the bottom right of the form, there are "Clear" and "Search" buttons. The footer of the page reads "POWERED BY THINKSTREAM".

If at any time during the process you have a question or need assistance, please don't hesitate to contact my office.

Contact Information:

Michael Connors

[Michael.Connors@LA.GOV](mailto:Michael.Connors@LA.GOV)

Work #: (225) 379-1451

# APPENDIX D: CONTENT MANAGER USER'S MANUAL

---

2012

# CONTENT MANAGER

## Crash Report Images

---

This application is used to print out or save a copy of crash reports that are written by police departments or local sheriff offices statewide both on/off state maintained highways.



# 1) INITIAL SCREEN:

**Administration**

- Compliance Programs
- Empl Satisfaction Survey
- Grievance/Complaint Process
- QCIP
- Satisfaction Survey Report
- Fall 2011 State of DOTD**
- 2010 Survey Results

**Department Wide**

- Content Manager**
- Daily News Articles
- Dept Policies/Manuals
- EDSMs
- EIS - Position Information
- LEO (now LaGov)
- Org. Chart
- Project/Highway Information

**GIS**

- Benchmarks
- LA DOTD GIS
- Proposed / Active Construction Projects
- NEW! - Training**

**Resource Center**

- Business Cards
- DOTD Letterhead
- DOTD Interdepartmental
- DOTD Image Gallery
- Federal Authorization Funding Request
- Federal Funding Grandfather List
- Project Delivery Manual
- Project Number Request Forms

**Miscellaneous**

- Sunrise/Sunset
- Credit Unions
- Calendars
- Lunch Menu

**DOTD's Mission**

To deliver transportation and public works systems that enhance quality of life and facilitate economic growth.

**LaGov Information**

- DOTD's LaGov Information Site
- LaGov Portal (login)
- LaGov Help / How To Documents
- DOTD's Business Processes

**Bulletin Board Announcements**

Last 5 | Carpools | Causes | Notices | Promot... | Retire... | Events | Surplus

**Last 5 Announcements Added**

- 2/17/2012 - Central Warehouse Closure for 2012 Inventory
- 2/17/2012 - Holden Family Donations
- 2/14/2012 - Design the T-Shirt contest winner - order yo...
- 2/9/2012 - 2011 Visidata District File locations
- 2/9/2012 - Transportation Safety Summit

**Office of Engineering**

- Environmental Section
- Trns-Port Pre-Construction

**Construction**

- Construction Home Page

**Contract Services**

- Consultant Contracts Services
- Contracts & Specifications
- Plans and Proposals
- Project Control

**LTRC**

- Employee Training Records (ETRN)
- LTRC (internet page)
- LTRC Training Opportunities
- Materials Lab
- Material Testing System Queries

**Public Works**

- Dam Safety Program
- Statewide Flood Control Program
- Public Works & Water Resources
- Water Well Registration Data File

**Project Development**

- Bridge Design Section
- CADD
- Design Programs & Documents
  - ProjectWise Request Forms
- Example Title Sheets with H Numbers**
- Real Estate Section
- Road Design Section

**Project Management**

- Project Management Section
- PPMS - Program & Project Management System
- PPMS/ETS - Environmental Tracking System
- PPMS/URTS - Utilities Relocation Tracking System
- PPMS/AARS - Appraisal, Acquisition, & Relocation System

**Traffic Engineering**

- Traffic Control Device Database
- Traffic Engineering

**Systems Engineering**

- Systems Preservation
- Utilities Relocation

**I.T. Help (225) 379-1690**

- Create a "Service Request".
- Outlook General Help
- Single Sign-On QuickStart Guide
- Client Services
- (225) 379-1690** or 3-1690
- Workdays 7:45 am - 4:15 pm
- Change a Password
- Hardware/Software Procurement

**Management & Finance**

- NEW!** - Business Conference 2012
- Administrative Manual
- Asset Management
- Audit & Quality Control
- NEW!** - Budget Request Form
- Business Services
- Financial Services
- Human Resources
- Information Technology
- Procurement
- Project Finance

**Multimodal Planning**

- Aviation
- Demo Fact Sheets
- Highway Functional Classification
- Highway Safety
- Intermodal Transportation
- Marine & Rail
- Ozone Action Program
- Pavement Management
- Port Priority Program
- Stage 0 Studies

**Operations**

- 511 Entry (CARS3)
- 511 Entry (CARS4)
- District DA/ADA Phone List
- Emergency Operations
- Equipment Information
- Ferry or Moveable Bridge Status
- HQ Maintenance Work Order
- HQ Rental Car

- Go to our **INTRANET** page.
- Click on the **Content Manager Button** on the left, under the Department Wide section.

## 2) LOG IN SCREEN:

Content Manager eClient Logon - Windows Internet Explorer

DB2 Content Manager eClient

Log in

User ID :

Password :

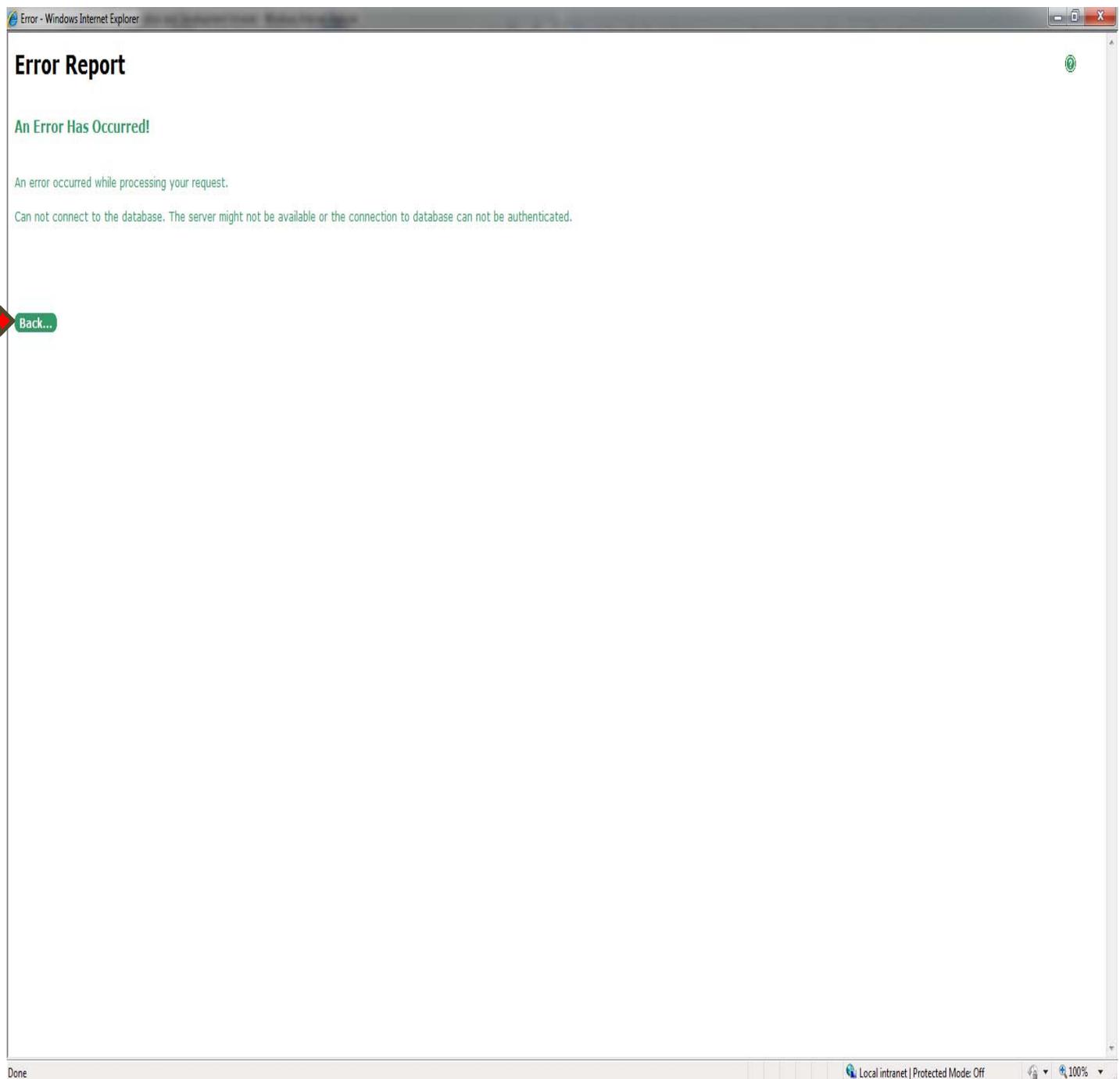
Server : LDTMDB2C - CM8

Change Password Log in Reset

Local intranet | Protected Mode: Off 100%

- This is the log on screen where you will enter your **User ID (D #)** and **Password (Mainframe)**.
- Everyone has access to Content Manager but you will have to contact our office to be granted access to our file, **Crash Reports**, which is in the database.

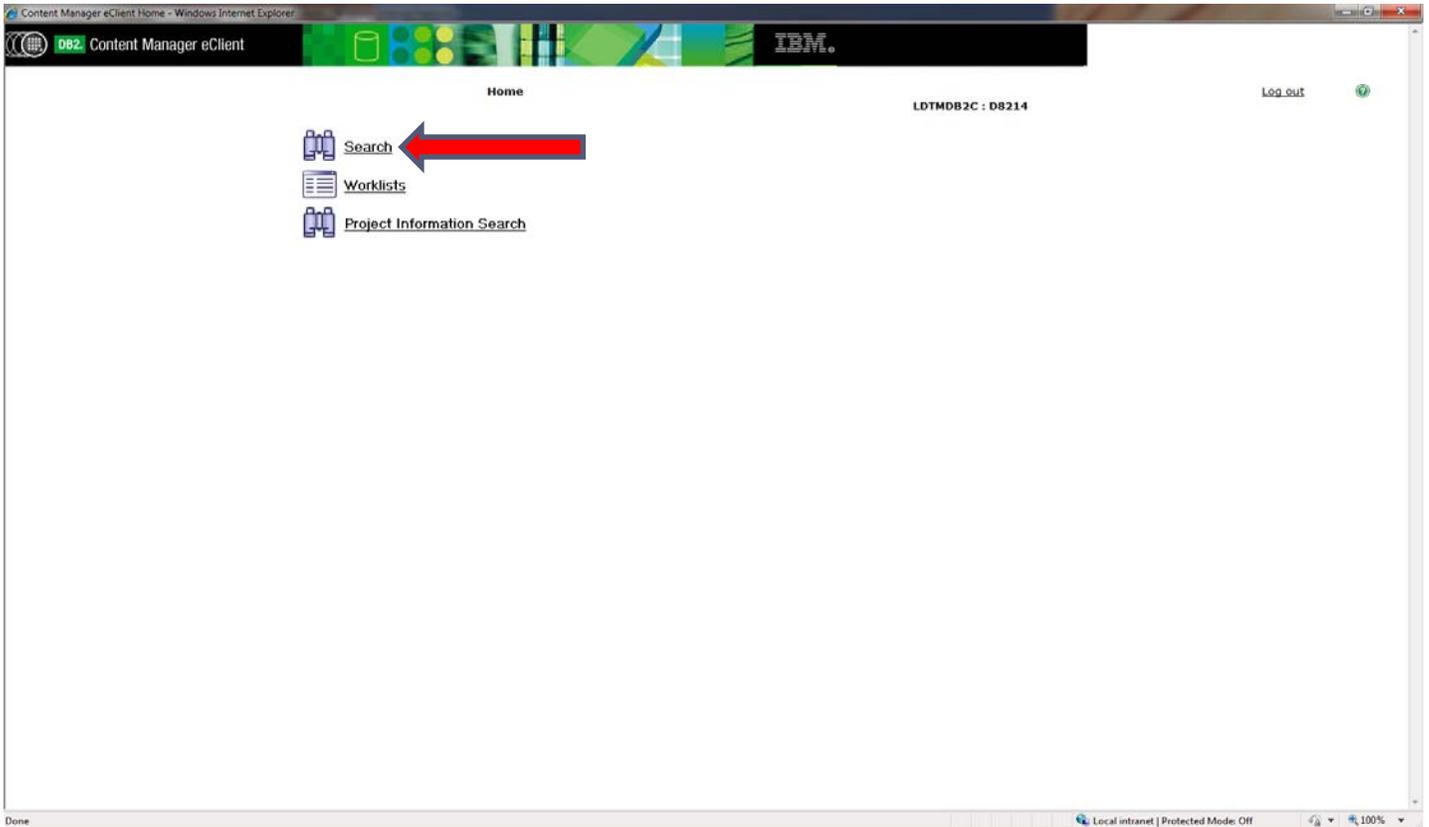
### 3) CHANGE PASSWORD SCREEN:



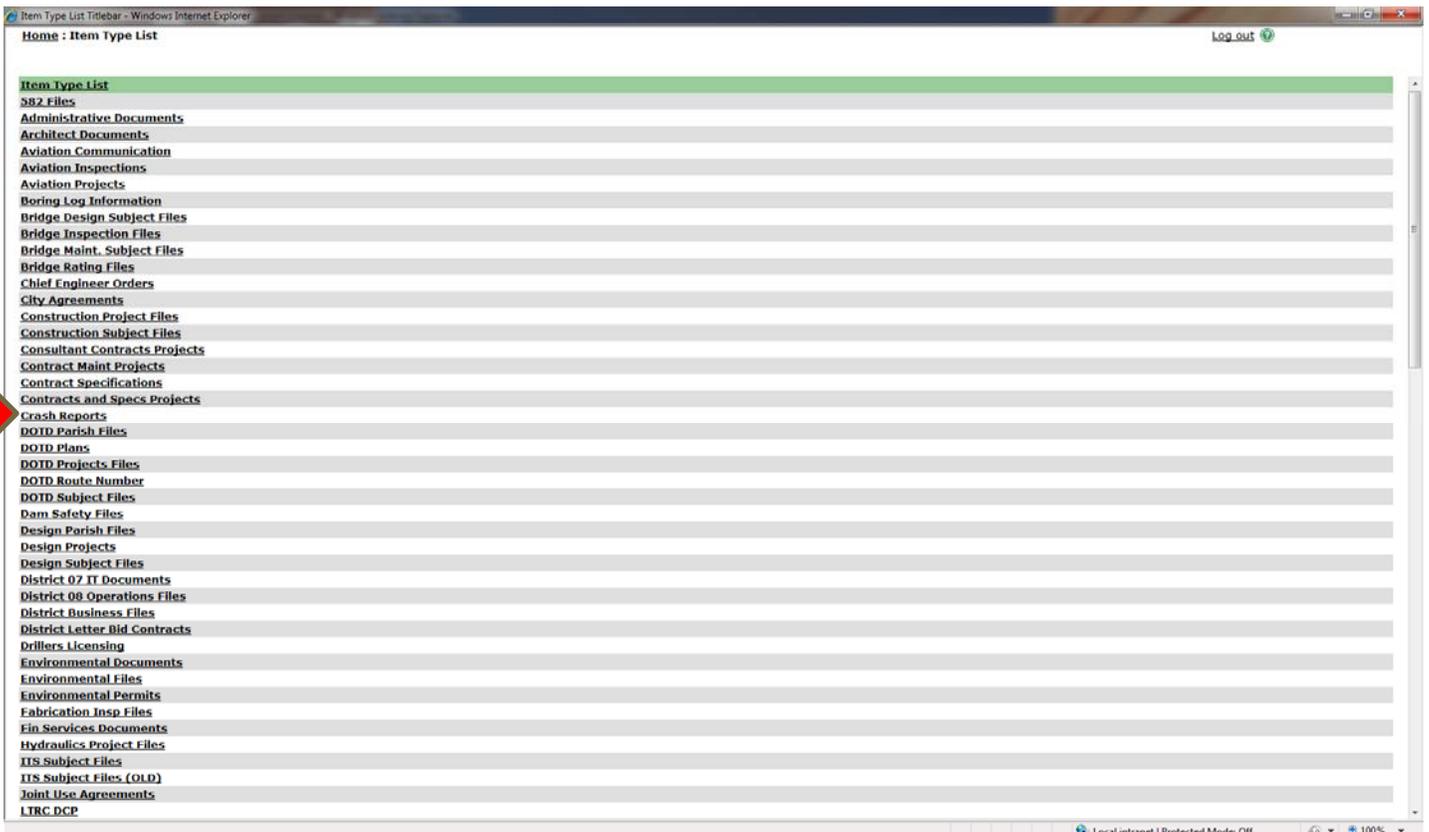
- Like most programs that we use at the DOTD this one also has, **roughly 30 days**, a password that expires and you must change it before logging in.
- You can reset your **Mainframe Password** by four different ways: through the change password in Content Manager, through Mainframe, through the change password button on our Intranet page or by creating a "Service Request" ticket.
- After your password has been changed go back to the original log on screen, in Content Manager, and re-enter your User ID and new Password.

#### 4) CRASH REPORT LOOK UP SCREEN:

- Click **Search** button from list.



- Click **Crash Reports** from list.



- You will get the following screen to start your search for crash reports that are written by Police Departments, Investigating Agency Code “B”, or local Sheriff Offices, Investigating Agency Code “C”.
- You need to remember that State Police, Investigating Agency Code “A”, reports are found in the Thinkstream database.

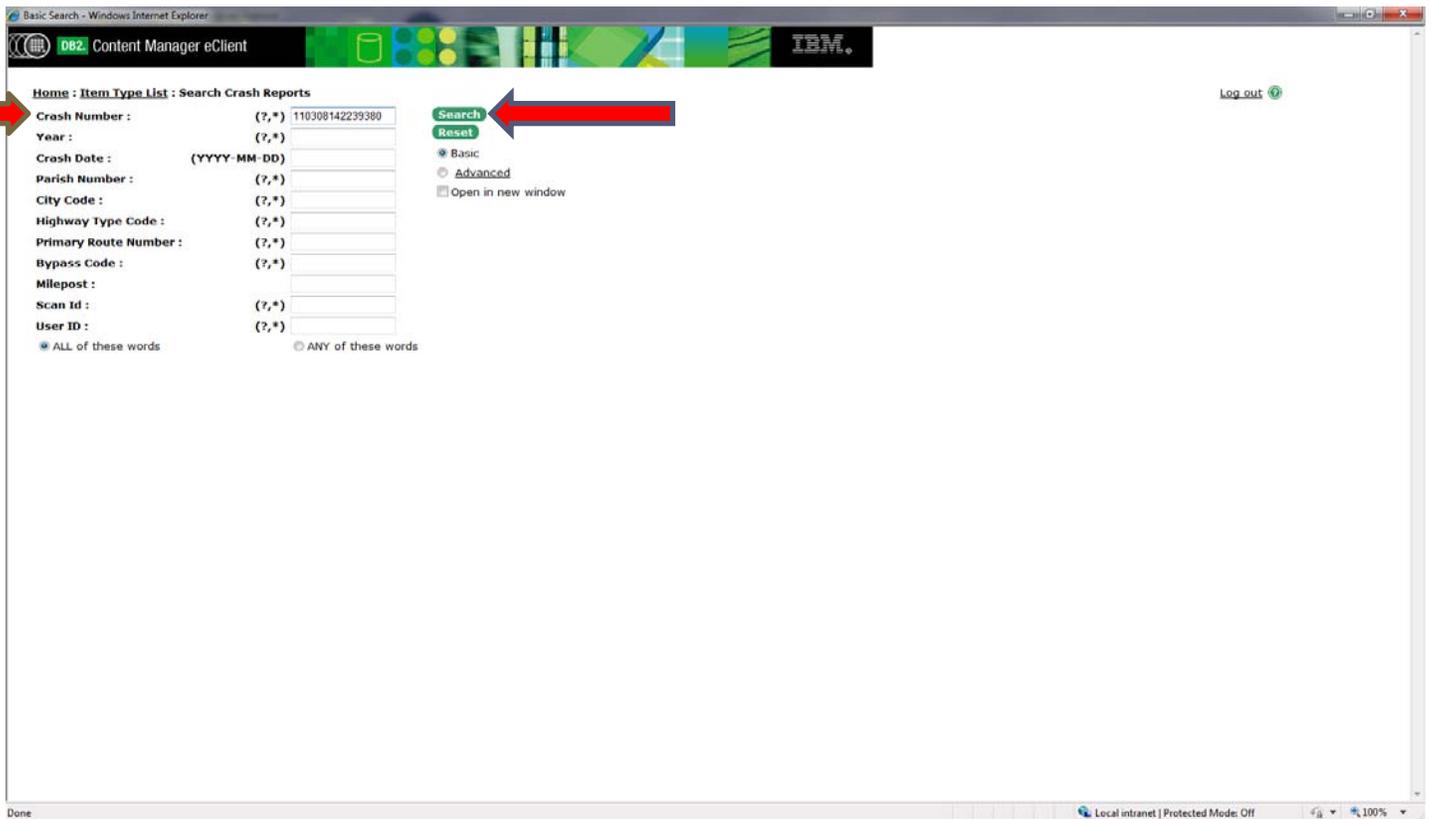
The screenshot shows a web browser window titled "Basic Search - Windows Internet Explorer" displaying the "DB2 Content Manager eClient" interface. The page has a header with the DB2 logo and a navigation bar. The main content area is titled "Home : [Item Type List](#) : Search Crash Reports" and includes a "Log out" link. The search form contains the following fields and controls:

- Crash Number : (?,\*)
- Year : (?,\*)
- Crash Date : (YYYY-MM-DD)
- Parish Number : (?,\*)
- City Code : (?,\*)
- Highway Type Code : (?,\*)
- Primary Route Number : (?,\*)
- Bypass Code : (?,\*)
- Milepost :
- Scan Id : (?,\*)
- User ID : (?,\*)

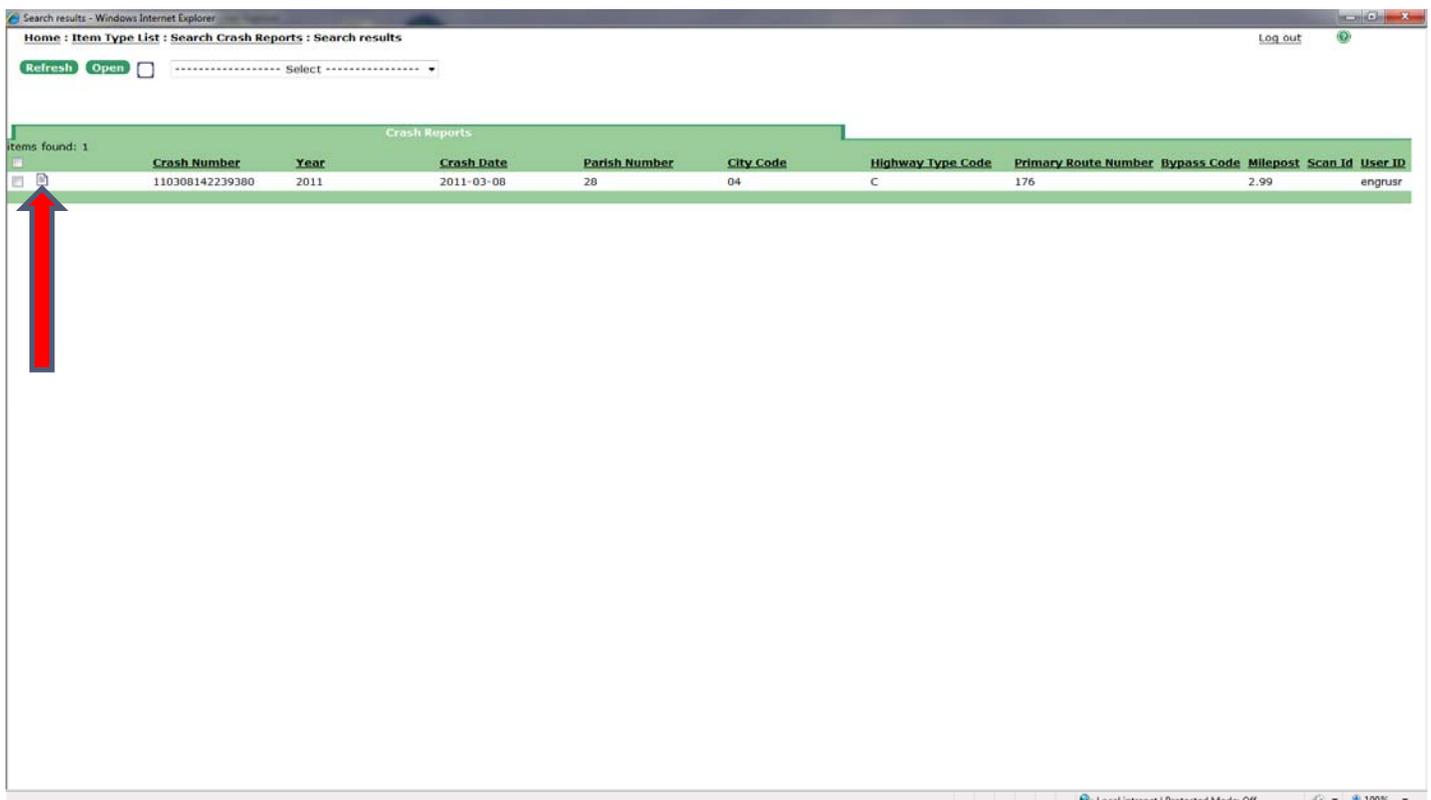
Search controls include "Search" and "Reset" buttons, radio buttons for "Basic" (selected) and "Advanced", and a checkbox for "Open in new window". At the bottom, there are radio buttons for "ALL of these words" (selected) and "ANY of these words".

You can search the database by one of the following criteria or create a query for a specific location by entering several of the options given. If you don't know all of the particular field(s) you are looking for you can enter what you have or know followed by an "\*" symbol, except for the "Crash Date" and "Milepost" fields. For example, 123\* will return everything that begins with 123.

- Crash Number:
- Year:
- Crash Date (must be entered in the form of YYYY-MM-DD):
- Parish Number:
- City Code (we have a list of city codes that we can give you upon request to our office):
- Highway Type Code(A = Interstate, B = US Highways, C = Louisiana Routes):
- Primary Route Number:
- Bypass Code (B, X, Y or Z = Business, S = Spurs, LA 611-9):
- Milepost:
- Scan Id (Internal Use):
- User ID (Internal Use):



- Select the crash report number that you are searching for.
- Enter the crash report number into the **Crash Number** field.
- Hit the **Search Button** to start search engine.
- This screen shows the results of your search.
- Click on the **Folded Piece of Paper** in the upper left corner to review your selection.



Original Locked Report

STATE OF LOUISIANA  
UNIFORM MOTOR VEHICLE TRAFFIC CRASH REPORT

110308142239380

TOTAL NUMBER OF VEHICLES INVOLVED: 1

DATE OF CRASH: 03082011 TIME (HHMM): 1408 DISTRICT: 004 TROOP: 004 PAGE #: 01

FRESH: LAFYT PARISH CODE: 28 LAFAYETTE CITY CODE: 04

CITY OR TOWN: LAFAYETTE ROADWAY NAME: 728-13 3751 MOSS ST

COAST OCCURRED ON: 728-13 3751 MOSS ST

DATE OF CRASH: 03082011 TIME (HHMM): 1408 DISTRICT: 004 TROOP: 004

STREET OR HIGHWAY: 500 E PONT DES MO

STREET OR HIGHWAY: NI-49

WRITE APPROPRIATE LETTER IN BLOCK

ROAD SURFACE (ONE PER COLUMN)

ROADWAY CONDITIONS

TYPE OF ROADWAY

ALIGNMENT

PRIMARY FACTOR

SECONDARY FACTOR

WEATHER

KIND OF LOCATION

RELATION TO ROADWAY

ACCESS CONTROL

LIGHTING

VEHICLE CONFIGURATION

CARGO BODY TYPE

EMERGENCY SERVICES

AMBULANCE SERVICE

NAME OF AGENCY: LAFAYETTE CITY POLICE

TIME OF NOTIFICATION: 1408

TIME OF ARRIVAL: 1408

TIME ALL LINES OPENED: 1457

INVESTIGATION COMPLETE: [X]

INVESTIGATING OFFICER'S NAME (PRINT): FRANCIS, JARED

INVESTIGATING OFFICER'S SIGNATURE: FRANCIS, JARED

DATE REPORT COMPLETED: 03082011

REPORT COMPLETED BY: FRANCIS, JARED

OFFICIAL STATE OF LOUISIANA

- If you float your mouse over the bottom middle of the screen, then a **Message Box** will appear.
- This message box will allow you to either **Print** or **Save** your crash report.
- Then you can **"X"** out from viewing the report.



Original Locked Report

STATE OF LOUISIANA  
UNIFORM MOTOR VEHICLE TRAFFIC CRASH REPORT

110308142239380

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DATE REPORT COMPLETED: 03082011

REPORT COMPLETED BY: FRANCIS, JARED

OFFICIAL STATE OF LOUISIANA



## 5) TO SEARCH FOR ANOTHER CRASH REPORT:

- Click on **Search Crash Reports** to return to main search window.

Search results - Windows Internet Explorer

Home : Item Type List : Search Crash Reports : Search results

Refresh Open  Select

Items found: 1

| Crash Number    | Year | Crash Date | Parish Number | City Code | Highway Type Code | Primary Route Number | Bypass Code | Milepost | Scan Id | User ID |
|-----------------|------|------------|---------------|-----------|-------------------|----------------------|-------------|----------|---------|---------|
| 110308142239380 | 2011 | 2011-03-08 | 28            | 04        | C                 | 176                  |             | 2.99     |         | engusr  |

Local intranet | Protected Mode: Off

- Thus starting the process over.

Basic Search - Windows Internet Explorer

DB2 Content Manager eClient IBM

Home : Item Type List : Search Crash Reports

Crash Number : (?,\*)  
Year : (?,\*)  
Crash Date : (YYYY-MM-DD)  
Parish Number : (?,\*)  
City Code : (?,\*)  
Highway Type Code : (?,\*)  
Primary Route Number : (?,\*)  
Bypass Code : (?,\*)  
Milepost :  
Scan Id : (?,\*)  
User ID : (?,\*)

Search  
Reset  
 Basic  
 Advanced  
 Open in new window

ALL of these words  ANY of these words

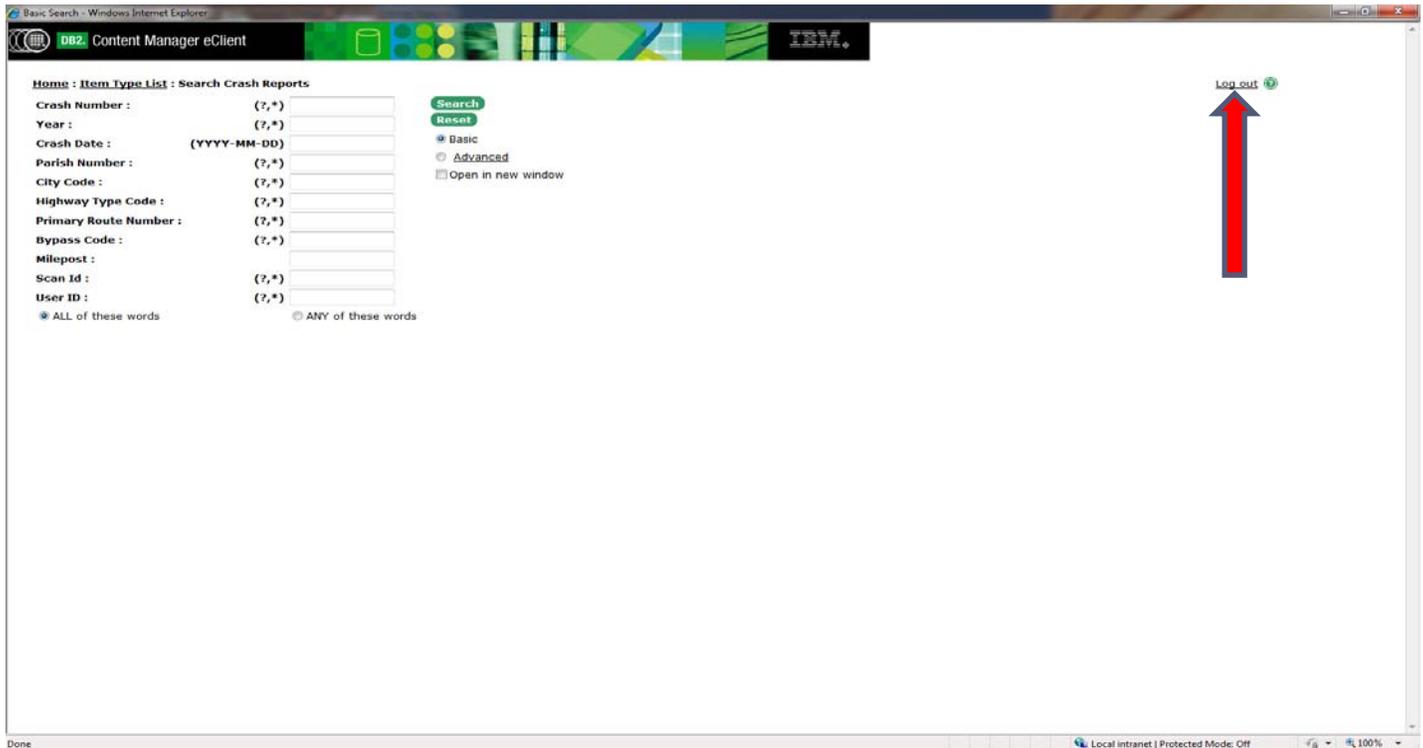
Log out

Done

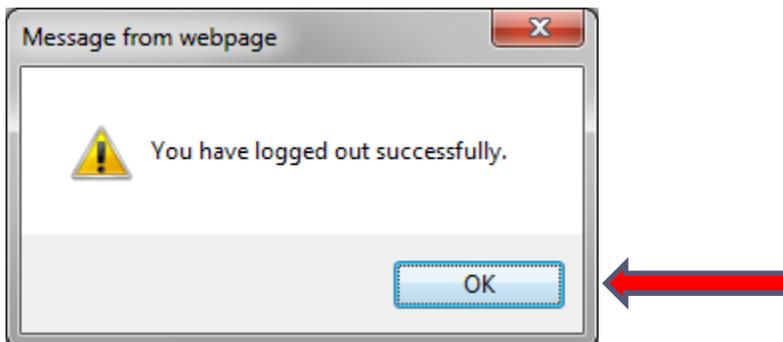
Local intranet | Protected Mode: Off

## 6) LOGOUT PROCESS:

- After completing your search for a crash report, you must logout of the system.
- Click the **Logout** button in the top right corner, thus receiving the following pop up window.



- Just click **OK** and it will return you to the home screen thus you can exit out of the program.



If at any time during the process you have a question or need assistance, please don't hesitate to contact my office.

Contact Information:

Michael Connors

[Michael.Connors@LA.GOV](mailto:Michael.Connors@LA.GOV)

Work #: (225) 379-1451