Valdosta-Lowndes Metropolitan Planning Organization

Freight Movement Study Report Series

Report #3, Prepared by the Southern Georgia Regional Commission - August 2012

Commercial Vehicle Crashes in Lowndes County

With more than 3,200 crashes per year in Lowndes County over the past ten years, commercial vehicle crashes account for an average of 5.3% of all crashes. In recent years this number has been as low as 2.7%. So why should we look at crash data when we want to talk about freight movement? Most freight to, from, and through Lowndes County and Valdosta is by truck, and the local transportation infrastructure needs to be safe and able to handle the growing number of truck and commercial vehicle traffic as economic development occurs in our community.

Report #1 from this series (*Lowndes County Location Quotient and Shift-Share Analysis*) found that three of the emerging industries in this community are transportation dependent: transportation and warehousing, wholesale trade and agriculture/forestry. These growing industries in Valdosta and Lowndes County rely on a dependable, efficient and safe transportation infrastructure to move goods. The key component this report examines is the safety of our transportation infrastructure, specifically as it relates to freight transportation. The data presented in this report will focus on crashes that involved a commercial vehicle in some fashion (either the causal or secondary vehicle in a crash).

From 2000 to 2009, there were a total of 1,909 crashes in Lowndes County that involved a commercial vehicle (as defined by Georgia Uniform Motor Vehicle Accident Report), equally about 5.4% of all crashes during that period. During this time period there where 23 fatalities and 500 injury crashes (the remaining were PDO, or Property Damage Only). Not surprising was the gender of the driver in the crashes. Traditionally most commercial truck drivers are male, and those statistics held true

in the data as well, with less than 20% of drivers involved in a commercial vehicle crash being female (when looking at all crashes the rate is nearly 50/50).

Tractor-trailer rigs were the causal and secondary vehicle in more than 1,400 of the commercial vehicle crashes studied. Passenger cars were the second most frequent vehicle involved in a commercial vehicle crash. The tag and license data was also examined for each vehicle and driver. Georgia and Florida were the top two states in each category for vehicles and drivers involved in a commercial vehicle crash in Lowndes County. After these two states, other states from the Southeast and Midwest were involved in the most commercial vehicle crashes. The Midwest states likely show up as a result of I-75 and deliveries being made locally, and travelling to and from destinations north and south of Valdosta and to ports in Georgia and Florida.

To better understand the circumstances of a crash and how infrastructure improvements might be implemented to prevent or mitigate future crashes, data is collected at the scene to be analyzed later. This data can show trends in crashes at a particular location or throughout a community.

The most common types of commercial vehicle crashes are angle crashes, followed by rear-end, same-direction sideswipe and collisions with something other than a vehicle. Interestingly about half of the angle and rear-end crashes occur at intersections, while the other crash types are twice as likely not to occur at intersections.

The two maps below show the change in the location density of commercial vehicle crashes over this ten year period. In both Lowndes County and Valdosta the pattern of increasing and decreasing commercial vehicle crashes follows the same pattern as that of all vehicles (see VLMPO 2012 Crash Report). Areas of particular note that have increased for commercial vehicle crashes are commercial/retail areas near St. Augustine Road, new distribution centers south of Valdosta and in Lake Park. Other areas of increased crashes of commercial vehicles are near industrial parks and exit ramps on I-75. All of these areas are not surprising because we see commercial vehicles in these areas all of the time.

Crashes on I-75 are unique because of the lack of intersections. Thirty-nine percent of the commercial crashes during the ten-year study period were on I-75. 31% of those crashes were same-direction sideswipe crashes, and 28% were rear-end crashes. Both of these manners of collision are indicative of traffic travelling together in the same direction and merging at varying speeds on and off the roadway. The top contributing factors of crashes on I-75 were following too closely and changing lanes improperly, both leading factors in sideswipe and rear-end crashes.

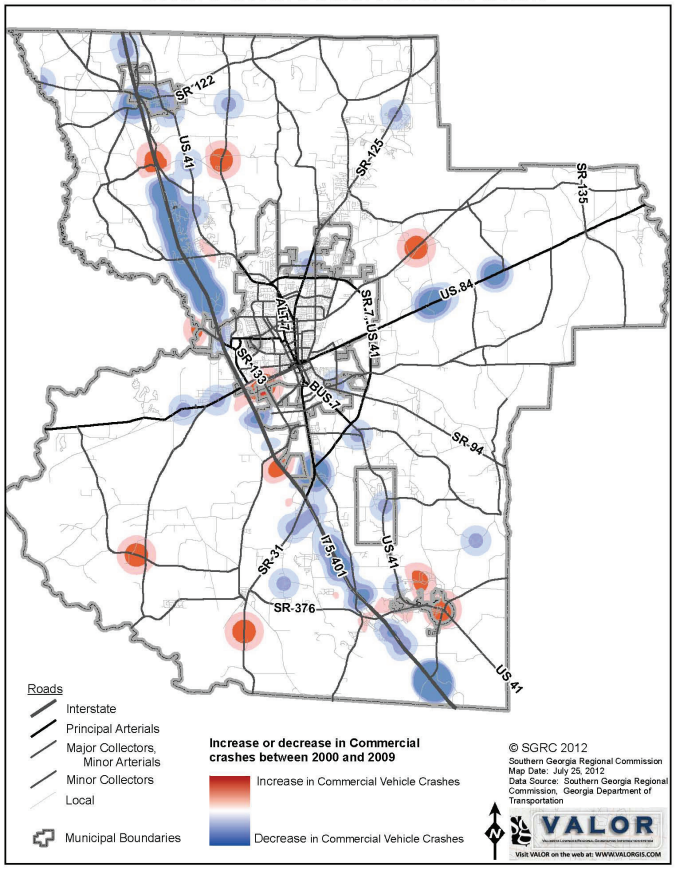
An analysis of commercial vehicle crashes shows that the intersections (includes crashes within 100 feet of an intersection) with the highest crash locations tends to be on the south side of Valdosta and Lowndes County, mostly south of US 84. The top ten locations for crashes (2000-2009) in Lowndes County involving commercial vehicles are (includes crashes and improvements identified in VLMPO 2035 Transportation Plan or FY2013-2016 Transportation Improvement Program):

17	St. Augustine Road	at Hill Avenue	Intersection Improvement
17	I-75	at Exit 2	Interchange Improvement
16	Inner Perimeter Rd	at US 84	None
15	Oak Street	at Hill Avenue	None
13	Patterson Street	at Patterson St	None
12	I-75	at Exit 18	Interchange Improvement
11	Norman Drive	at Hill Avenue	None
11	Hill Avenue	at NS Railroad	Grade Separation
11	Clay Road	at Hill Avenue	Intersection Improvement
10	Briarwood Road	at Hill Avenue	None
10	Inner Perimeter Rd	at US 41 S	None
10	I-75	at Exit 11	Interchange Improvement

The VLMPO 2035 Transportation Plan identified many projects that would improve freight movement throughout the region. These projects range from a railroad overpass on US 84/Hill

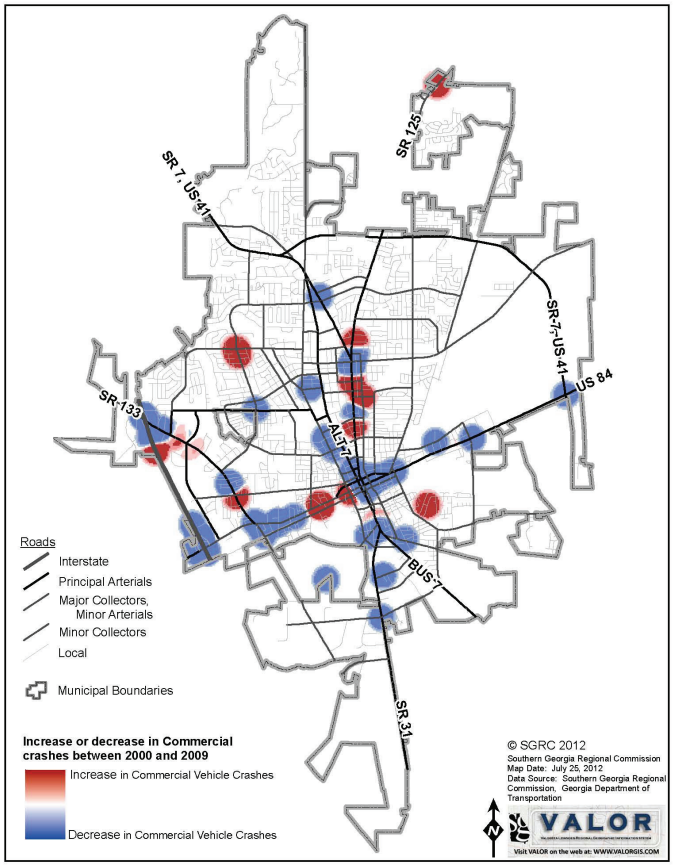
Comparison of Commercial Vehicle Crashes - Lowndes Co., GA

Increase or decrease in crashes between 2000 and 2009



Comparison of Commercial Vehicle Crashes - Valdosta, GA

Increase or decrease in crashes between 2000 and 2009



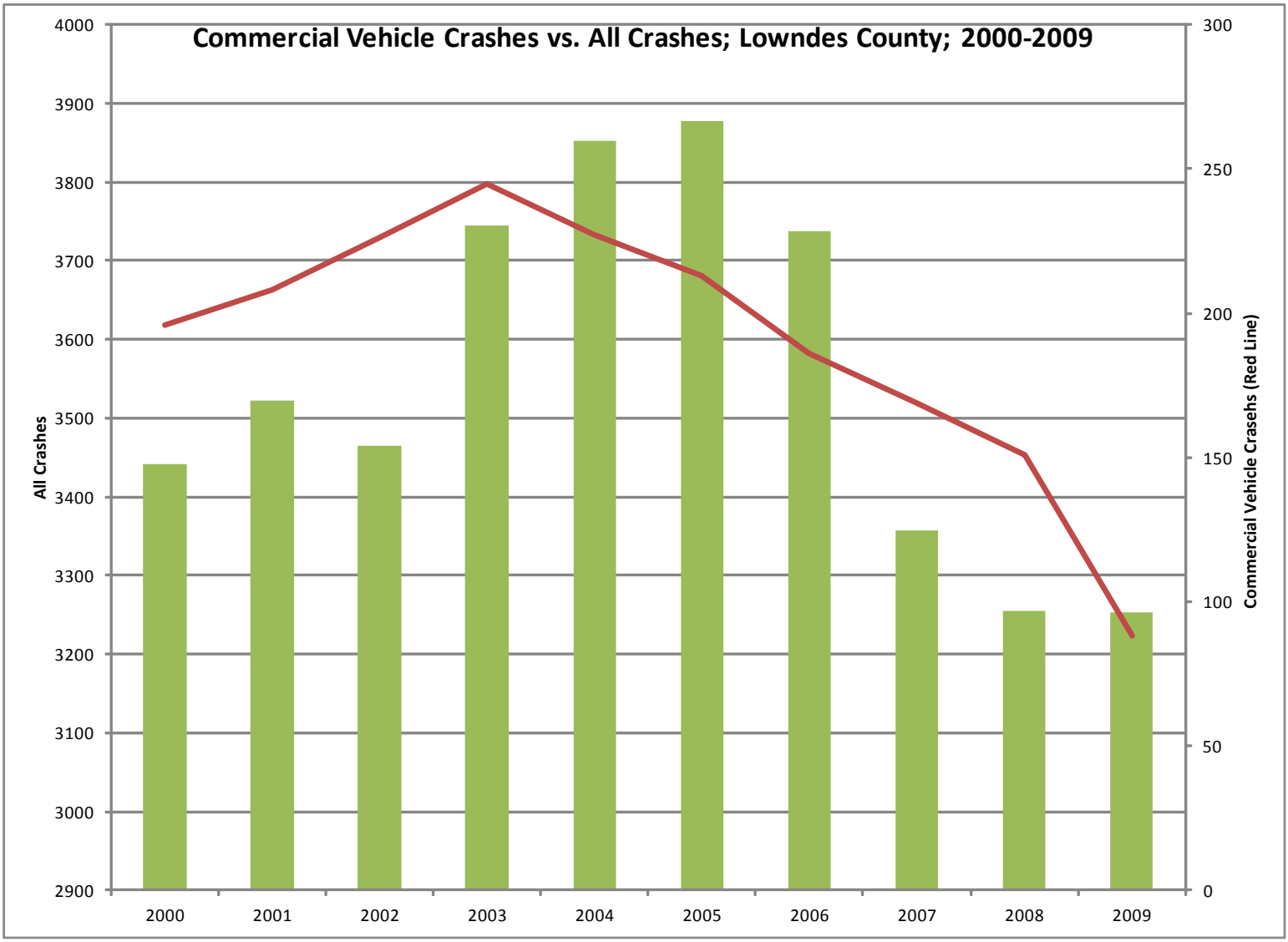
Avenue, to widening of Lake Park-Bellville Road and the Exit 2 interchange on I-75 to improve the infrastructure for the warehousing and distribution companies locating in this part of the community. Based on this report analysis, the education of drivers continues to be an important factor, especially since the primary contributing factors for commercial vehicle crashes is following too closely and failure to yield. Very little can be done to infrastructure to reduce these types of crashes.

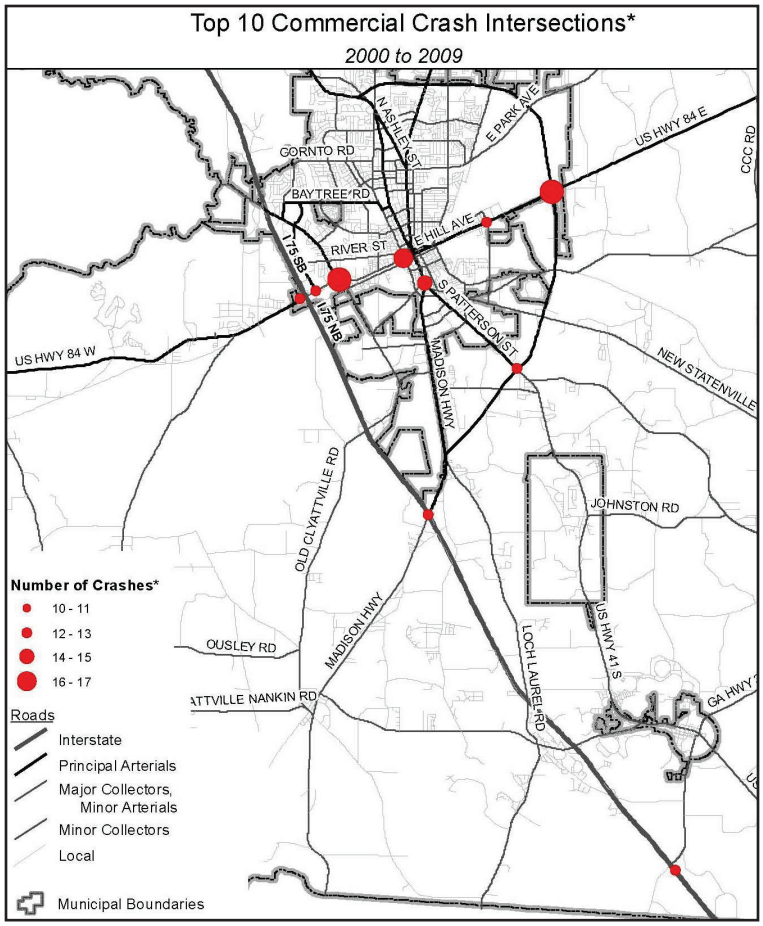
18 of the 47 projects included in the Valdosta-Lowndes MPO 2035 Transportation Plan are identified as being significant to freight transportation. Several of these projects were identified earlier as the top locations for crashes. Every project included in the 2035 Transportation Plan will improve the safety of the intersections or corridors for all motorists, not just commercial vehicles. Other projects in the 2035 Transportation Plan that have a significant freight impact but do not have a high number of crash locations include Lake Park-Bellville Road, Five Points Intersection, I-75 Exits 22 and 29, and Old Clyattville Road near the industrial areas on the south side of Valdosta.

The locations identified in this report will be analyzed for

improvement by local and state traffic engineers and possibly included in the next update to the long range transportation plans for Valdosta and Lowndes County.

For several years the VLMPO has been looking at how to better manage access to arterial roadways and how this can improve safety and the flow of traffic at the same time. This effort is





ongoing as we continue to look at how to best manage roadway access while protecting property rights.

Because following too closely and failure to yield are the two most frequent contributing factors to commercial vehicle crashes ways of reducing crashes caused by following to closely and failure to yield include:

Ways to reduce crashes caused by following too closely:

- Improved signage (advanced street signs)
- Improved intersection geometry and design
- Install left- and right-turn lanes
- Install bike lanes
- Install pavement stop-ahead pavement markings
- Improve/Implement signal timing and coordination

Ways to reduce crashes caused by failing to yield:

- Install bike lanes
- Install left- and right-turn lanes
- Convert signals to stop control
- Improve signage at intersections

This report shows that while commercial vehicle crashes have a serious impact on the Valdosta and Lowndes County community, education of drivers is one of the most important ways of reducing crashes. Following too closely is seen over and over again as the top contributing factor to crashes, and even some deaths in Valdosta and Lowndes County.

Source: The data used in this report is from the Georgia Department of Transportation and is analyzed using the CARE 9 software from the University of Alabama. Crash reduction factors from Crash Modification Factors Clearinghouse. Maps by VALOR GIS. All photos courtesy of the Valdosta Daily Times.

The VLMPO Freight Movement Study Overview

Transportation is not just about the movement of people from one point to another, it is also about the movement of goods and services from one point to another. Increasing imports and the shipment of goods across the nation are impacting freight movements on a massive scale, requiring more transport of imports and exports to their final markets. The weight of total freight movement is expected to nearly double in the next 30 years according to the Georgia Statewide Freight Plan.

In South Georgia, freight movement is a big concern. Valdosta, originally founded as a railroad town, has been a hub for freight transportation since 1860. Today, South Georgia is quickly becoming a regional warehousing and logistics hub for the Southeast United States. Manufacturers and warehousers continue to locate in South Georgia because of the easy access to major transportation corridors located in the region. Key transportation corridors in the region include: I-75, I-10, both Norfolk Southern and CSX Railroads, US 84, the Ports of Georgia in Savannah and Brunswick, and ports in Florida.

The VLMPO Freight Movement Study assesses freight movement in all of Lowndes County and its surrounding region to determine how the movement of goods impacts the local transportation network.

In order to provide public input on the perception of freight movement in Lowndes County, a survey of businesses was conducted as part of the Freight Movement Study. The VLMPO partnered with the Valdosta-Lowndes Chamber of Commerce to distribute the survey to the Chambers' 1,500 members.

The report goes on to examine the existing freight movement in South Georgia and consider future economic development and land use plans to build a profile of goods movement in the region. Although some areas of concern are highlighted in the Freight Movement Study, it has been primarily used to supplement an updated 2035 Transportation Plan for Lowndes County.

The full 2009 Freight Movement Study can be found online at www.sgrc.us/transportation, click on Data and Resources.