The use of automated enforcement systems for signalized intersections, more commonly known as red light cameras, has generated substantial debate among law enforcement officials, public policy makers, and residents of the communities where these systems are in use. In some cases, the debate has proceeded without the benefit of reliable data regarding whether the systems have accomplished their intended purpose of reducing crash frequency. The Center for Transportation Safety is working to meet this information need through careful and extensive analysis, with the intent to provide objective, factual information to help guide decisions regarding the use of red light cameras.

TTI researchers analyzed information from crash records for 275 intersections maintained in the TxDOT Crash Records Information System (CRIS) data base. Researchers compared crash activity before camera installation to crash activity one, two and three years after installation.

- In the one-year group, crashes declined from 290 to 223, a 23 percent reduction.
- In the two-year group, crashes declined from 1,373 to 1,002, a 27 percent reduction.
- In the three-year group, crashes declined from 1,066 to 838, a 21 percent reduction.

Based upon the findings of this investigation there is evidence that suggests automated traffic enforcement systems are effective countermeasures in reducing the overall number of crashes events at signalized intersections. In addition to reducing the overall number of crash events, there is strong evidence that suggests that automated traffic enforcement systems are effective at reducing the overall number of crashes on different roadway system types.

While rear end collisions did appear to rise, the majority of those type crashes were not related to red light violations. In those cases where a greater number of rear end collisions occurred, the majority were found to be a result of the “following” driver traveling too closely to the vehicle ahead, or failing to control speed. Evidence suggests that rear end crashes are not a result of the lead vehicle braking hard to avoid running a red signal and being struck from the rear.