

To the Honorable Mayor and Councilmembers of Cathedral City,

Safer Streets L.A. is a public policy and research organization dedicated to the adoption of scientifically sound and sensible traffic and transportation practices. Safer Streets L.A. promotes science based solutions to motorist and pedestrian safety issues through the presentation of well researched and verifiable data to elected officials, Commissions and Boards.

Our goal in forwarding the attached analysis of the Cathedral City Red Light Camera Program is to provide additional information on the use of photo enforcement in Cathedral City, California. We hope that this information proves useful in your deliberations as to whether or not to continue the city's photo enforcement program.

If you have any questions or comments about the information we have provided, please do not hesitate to contact us.

Sincerely,

Jay Beeber
Executive Director
Safer Streets L.A.
818-205-4790

Analysis of Cathedral City Red Light Camera Enforcement Program

**By Jay Beeber,
Executive Director, Safer Streets L.A.,
Member ITE**

Background

Safer Streets L.A. is a public policy and research organization dedicated to the adoption of scientifically sound and sensible traffic and transportation practices. Safer Streets L.A. promotes science based solutions to motorist and pedestrian safety issues through the presentation of well researched and verifiable data to elected officials, Commissions and Boards. Safer Streets L.A. provides this information on a voluntary basis and is not paid to interact with elected officials.

Our goal in forwarding the following information is to provide additional information on the use of photo enforcement in Cathedral City, California. We hope that this information proves useful in deliberations as to whether or not to continue the city's photo enforcement program.

About the Author

Jay Beeber is the Executive Director of Safer Streets L.A. and a research fellow with the Reason Foundation concentrating on traffic safety and enforcement. He has served on a number of transportation related working groups including the Subcommittee on Statewide Traffic Signal Timing and the Subcommittee on School Zone Safety for the California Traffic Control Devices Committee, which sets the rules for statewide traffic practices. Mr. Beeber has been deemed an expert witness in court cases involving the proper usage of red light cameras in the State of California. He has authored numerous studies on traffic and pedestrian safety measures.

Introduction

Cathedral City has maintained an Automated Red Light Enforcement System at the intersection of Date Palm Drive and Ramon Road since August 2006 and at the intersections of Vista Chino and Date Palm Drive and Ramon Road and Landau Blvd since February 2009. At the City Council meeting on April 11, 2018, a staff report will be presented with three possible options regarding the red light camera program.

Safer Streets L.A. reviewed the Staff Report and conducted a before and after analysis of collisions at the three photo enforced intersections. All data was compiled from the CHP Statewide Integrated Traffic Records System (SWITRS) database. The SWITRS database serves as a means to collect and process data gathered from collision scenes by multiple police agencies throughout the state. The database contains records from January 2001 through December 2017. Data for 2017 is preliminary and additional collisions may be added for 2017 in the future.

Findings

Our analysis determined the following:

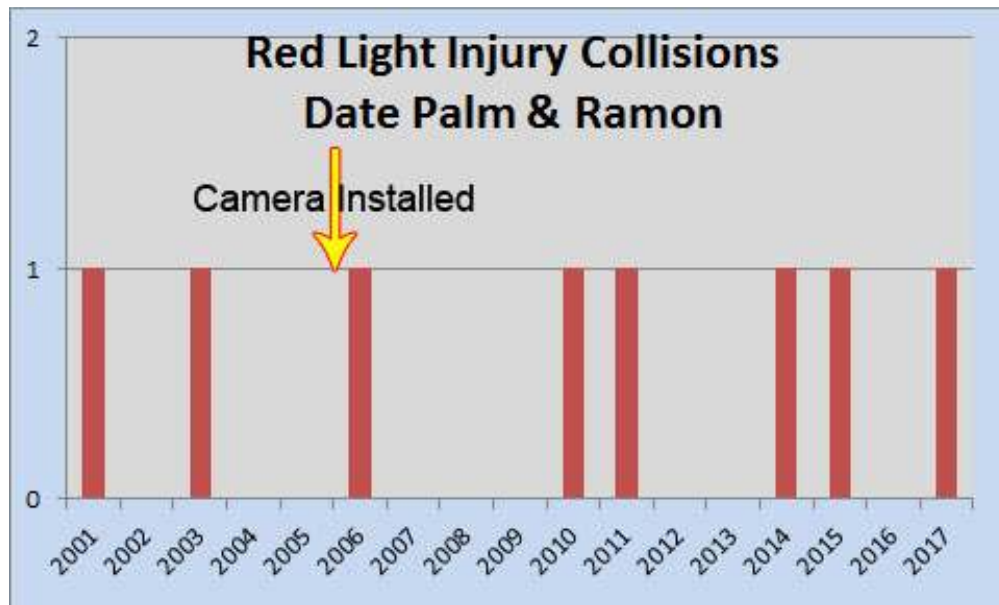
1. Since 2009 when all three camera locations were operational, the city has issued over 25,000 tickets. Approximately 73% of the tickets are for “rolling right turns”. Our analysis of 11 years of statewide collision data shows that rolling-right-turns, while technically impermissible, rarely ever result in collisions involving motor vehicles, bicyclists, or pedestrians. We determined that rolling-right-turns represented just 0.075% (75/1000th of 1%) of all collisions each year in California. Rolling-right-turns involving pedestrians are just 63/10,000th of 1% of all collisions in the state each year and rolling-right-turns involving bicyclists are just 111/10,000th of 1% of all collisions in the state each year. 76% of rolling-right-turn collisions do not involve a pedestrian or bicyclist.
2. Although the staff presentation cites a 75% decrease in collisions at the intersection of Date Palm Drive and Ramon Road, it is unclear what time periods are being used in the comparison. Further the report does not compare collisions caused by red light running, the one type of collision the cameras are meant to curtail. Our analysis consists of a comparison of red light related injury collisions which is a more accurate indication of the efficacy of automated ticketing at these locations.
3. At the intersection of Date Palm Drive and Ramon Road, the rate of red light related injury collisions **increased** after the cameras were installed from .36 injury collisions per year to .52 injury collisions per year. This could be due to an increase in traffic volume. However, it is clear that the presence of the cameras did not improve safety at this location.
4. At the intersection of Vista Chino and Date Palm Drive there was only 1 red light related injury collision in the years prior to camera installation from 2001 through February 2009. It is unclear why this location was chosen for red light camera enforcement as there had not been any red light related injury collisions at this location since July 2004.
5. At the intersection of Ramon Road and Landau Blvd there were no red light related injury collisions in the years prior to camera installation. It is unclear why this location was chosen for red light camera enforcement.
6. Although the city has issued over 25,000 citations since automated ticketing began in 2005 (now over \$500 each), it appears that the Cathedral City red light camera program has had no positive influence on injury collisions caused by red light running.

Detailed Analysis

The Staff Report incorrectly provides an analysis of the red light camera program by comparing the *total* accident rates before and after the cameras were installed rather than the accident rates for red light related injury collisions only. No study has ever shown that red light cameras have an effect on the rates of other categories of collisions not related to red light running, such as unsafe lane changes, failure to yield, unsafe turning, and speed unsafe for conditions. Therefore, the change in red light running injury collisions is the proper criterion for the evaluation of the effectiveness of red light camera systems, as collisions caused by red light running are the only type of collision that can reasonably be expected to be reduced through the use of red light cameras. Red light related collisions are those where the primary collision factor is listed in the SWITRS database as a red light violation (CVC 21453).

Date Palm Drive and Ramon Road

Cameras were installed in August 2006. In our before and after analysis, we therefore used 2001 through July 2006 as the before period and August 2006 through 2017 as the after period.



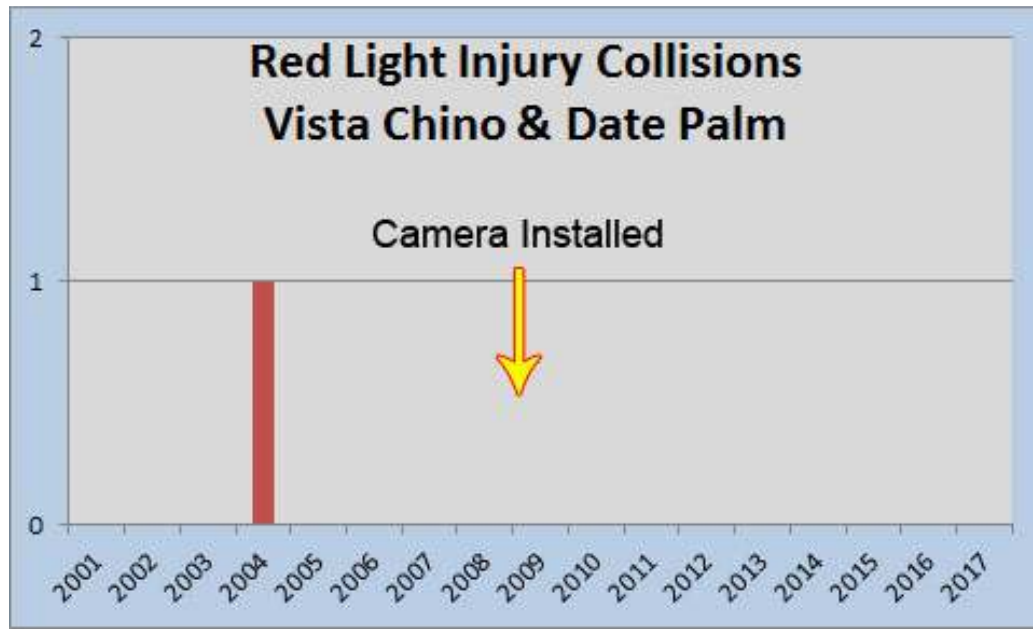
As can be seen from the above graph, there were two red light running injury collisions in the 5 ½ years prior to camera installation. Subsequent to the installation of cameras in August of 2006, there have been six red light running collisions. This averages to a rate of 0.36 injury collisions per year prior to camera installation and a rate of 0.52 injury collisions per year after camera installation. None of the collisions were fatal or severe; all were either minor injuries or complaint of pain only.

At this location there was a 44% increase in the yearly average number of red light running injury collisions. However, due to the small number of overall red light running injury collisions, the increase is not deemed to be statistically significant. Additionally, the increase may be due to other factors such as an increase in traffic volume. Regardless, it is safe to conclude that the presence of red light cameras at this location has had no positive effect on the frequency of injury collisions due to red light running.

In addition, although 65% of the \$500 tickets issued at this location are for failure to come to a complete stop prior to turning right on red, no injury collisions were caused by this violation either before or subsequent to camera installation.

Vista Chino and Date Palm Drive

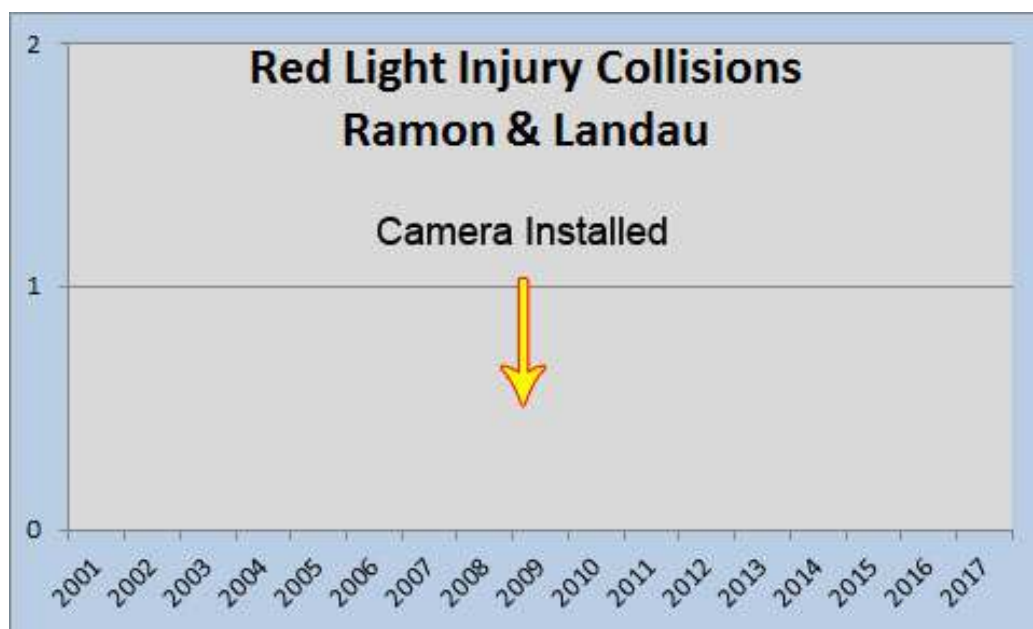
Cameras were installed in February of 2009. In our before and after analysis, we therefore used 2001 through 2008 as the before period and 2009 through 2017 as the after period.



As can be seen from the above graph, there was one red light running injury collision in the 8 years prior to camera installation. This collision occurred in July 2004 and was complaint of pain only with no visible injuries. It is unclear why this location was approved for the installation of red light cameras in February 2009 as no red light running injury collisions had occurred at this intersection for the previous 4 ½ years. Further, this one collision did not result from a failure to stop prior to turning right on red, yet approximately 82% of the \$500 tickets that are issued at this intersection are for this minor violation.

Ramon Road and Landau Blvd

Cameras were installed in February of 2009. In our before and after analysis, we therefore used 2001 through 2008 as the before period and 2009 through 2017 as the after period.



As can be seen from the above graph, there were no red light running injury collisions in the 8 years prior to camera installation. It is unclear why this location was approved for the installation of red light cameras in February 2009 as no red light running injury collisions had occurred at this intersection for at least the previous 8 years. Although there were no red light running injury collisions at this intersection prior to camera installation, this intersection generates almost half of all automated red light tickets issued in Cathedral City. Further, approximately 82% of the \$500 tickets that are issued at this intersection are for the minor violation of failure to stop prior to turning right on red.

Conclusions

Based on our analysis, the Cathedral City's red light camera program appears to have had no positive effect on traffic safety in the city, even after more than fifteen years of enforcement and the issuance of over 25,000 tickets, each of which costs defendants over \$500 per citation. Further, it appears that the cameras were installed in locations that did not have a prior red light running collision problem.

While the implementation of this program was likely well intended by those who initiated it, the program has not achieved the intended results. Additionally, the vast majority of tickets are issued for the technical violation of failure to stop prior to turning right on red, an offence which rarely ever causes a collision or injury to other roadway users, including bicyclists or pedestrians.

Due to the failure of the program to increase traffic safety, the excessive fines imposed by the state, and the economic damage done to both defendants and the city from loss of revenue and damage to the city's reputation, Council Members may wish to consider ending the red light camera program and re-deploy police and other staff resources to other efforts that may result in an improvement in traffic safety in Cathedral City. At the least, staff should re-negotiate the contract to provide for the ability of the city to cancel the program without penalty upon 30 days notice, a provision which commonly appears in contracts of other cities with long term red light camera programs.

Finally, it should be noted that over 80 California cities have chosen to close their red light camera programs in the last ten to fifteen years. Not one of these jurisdictions has found it necessary to reinstate the program due to an increase in red light running collisions after the program ended.

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