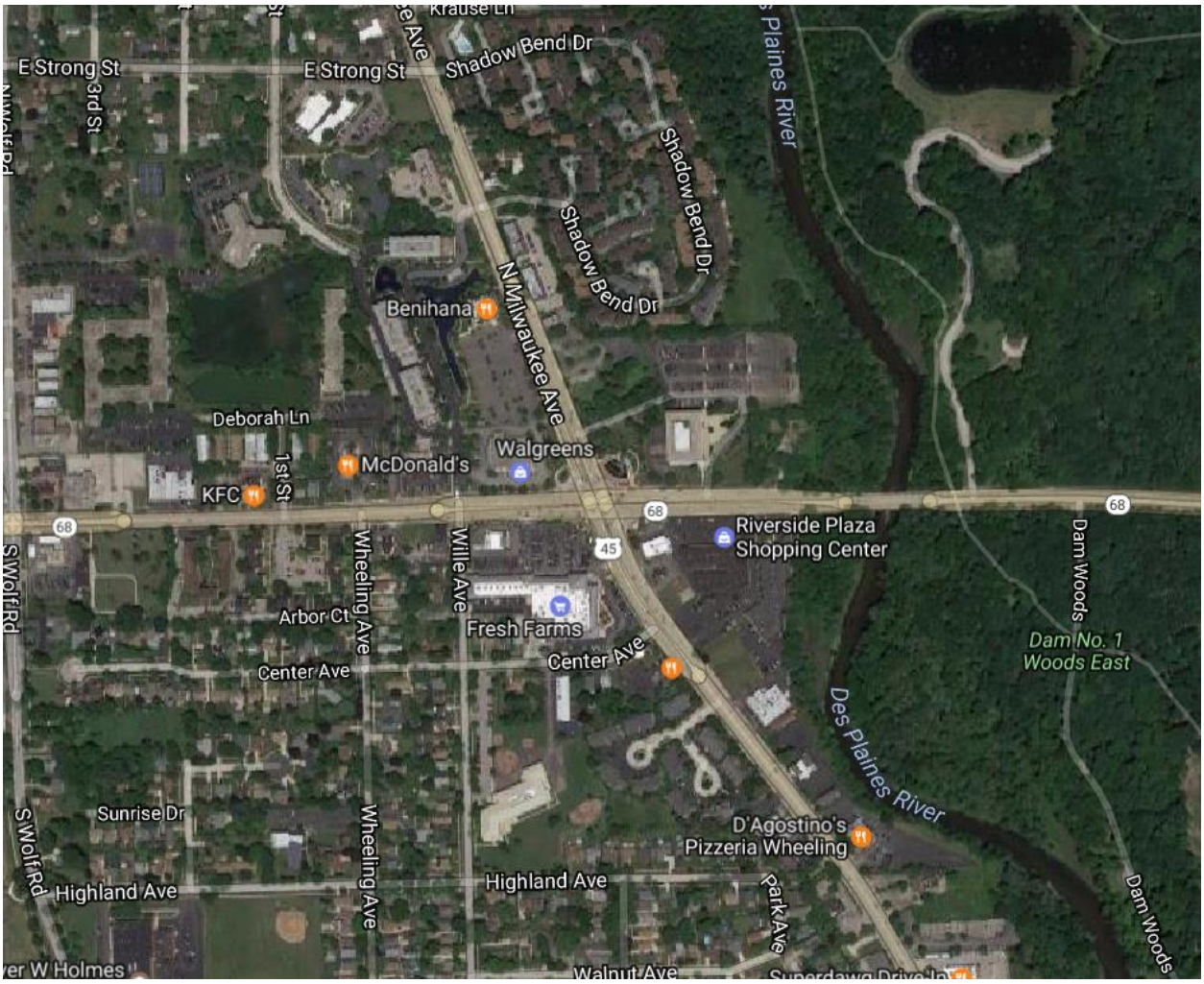
Per the Illinois Compiled Statutes, 625 ILCS 5/11-208.6 Automated Traffic Law Enforcement System:

*(k-7) A municipality or county operating an automated traffic law enforcement system shall conduct a statistical analysis to assess the safety impact of each automated traffic law enforcement system at an intersection following installation of the system. The statistical analysis shall be based upon the best available crash traffic and other date, and shall cover a period of time before and after installation of the system sufficient to provide a statistically valid comparison of safety impact. The statistical analysis shall be consistent with professional judgment and acceptable industry practice. The statistical analysis also shall be consistent with the data required for valid comparisons of before and after conditions and shall be conducted within a reasonable period following the installation of the automated traffic law enforcement system. The statistical analysis required by this subsection (k-7) shall be made available to the public and shall be published on the website of the municipality or county. If the statistical analysis for the 36-month period following installation of the system indicates that there has been an increase in the rate of accidents at the approach to the intersection monitored by the system, the municipality or county shall undertake additional studies to determine the cause and severity of the accidents, and may take any action that it determines is necessary or appropriate to reduce the number or severity of the accidents at that intersection.*

A Red Light Running (RLR) Photo Enforcement System was installed at the intersection of Milwaukee Avenue and Dundee Road on April 1, 2009, after finding limited success with other attempted measures to promote safer driving and improve compliance with traffic laws. The following statistical analysis was performed through 2015. Calendar year 2016 was not included as the Illinois Department of Transportation (IDOT) has not yet completed collecting all data. The statistical analysis will be updated annually, as collected data becomes available from IDOT.

## Milwaukee Ave. & Dundee Rd.
## Wheeling, IL

- RLR Photo Enforcement System monitors violations occurring on the northbound and westbound approaches of the intersection
- RLR Photo Enforcement System installed: April 1, 2009

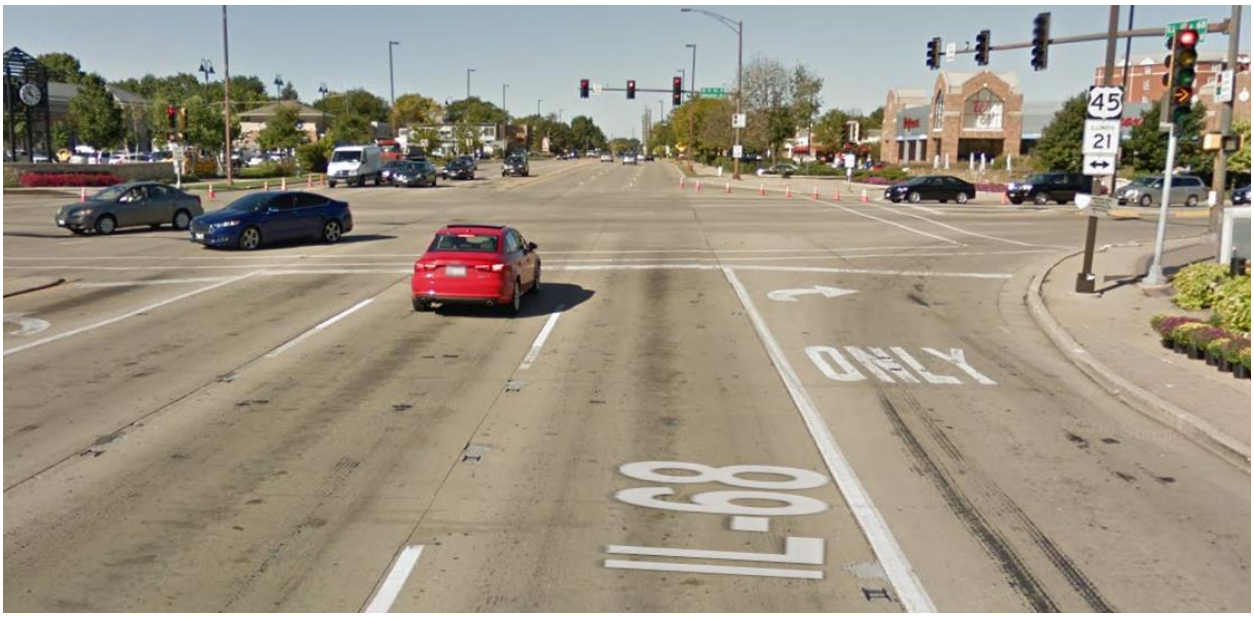


**Milwaukee Ave. & Dundee Rd. - Northbound Approach**

**Milwaukee Ave. & Dundee Rd. - Southbound Approach**

**Milwaukee Ave. & Dundee Rd. - Eastbound Approach**

**Milwaukee Ave. & Dundee Rd. - Westbound Approach**

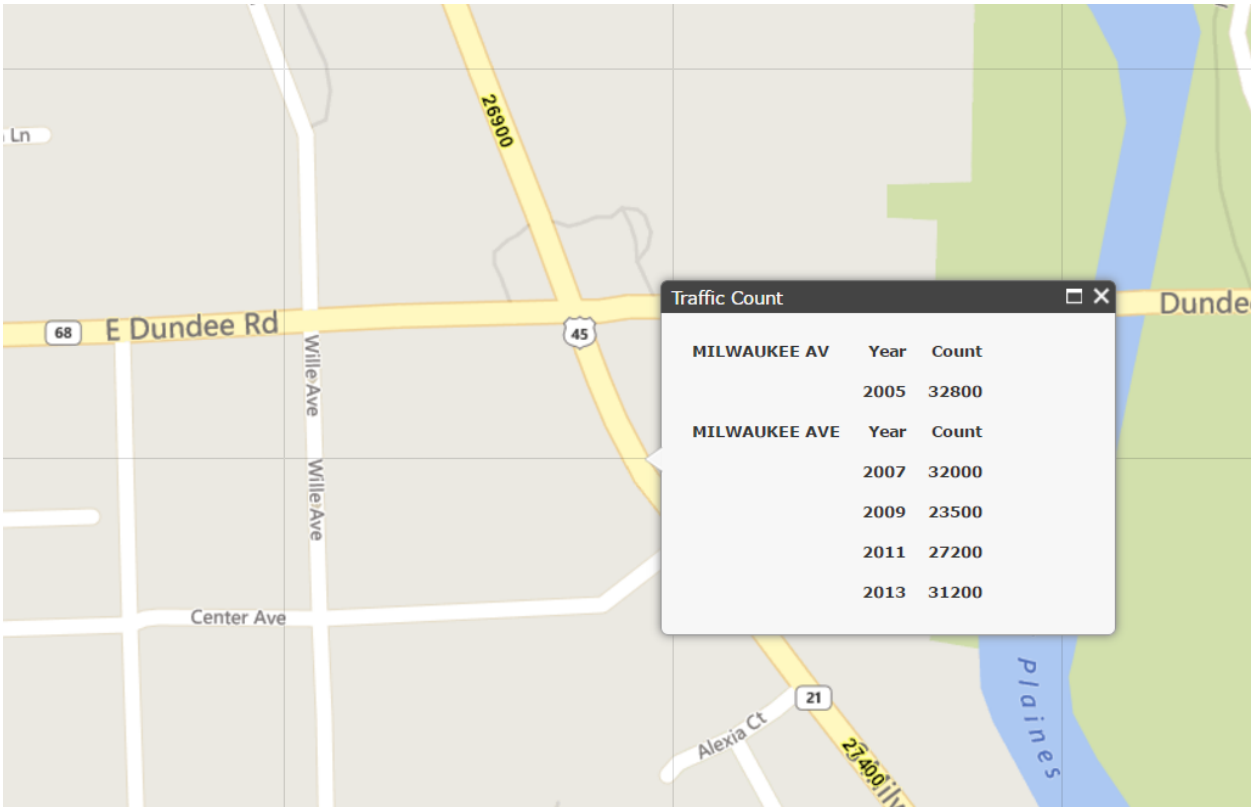


## Average Daily Traffic

Data was obtained from the Illinois Department of Transportation's website www.gettingaroundillinois.com.

Milwaukee Ave. & Dundee Rd. (Northbound)

- 32,800 (2005)
- 32,000 (2007)
- 23,500 (2009)
- 27,200 (2011)
- 31,200 (2013)

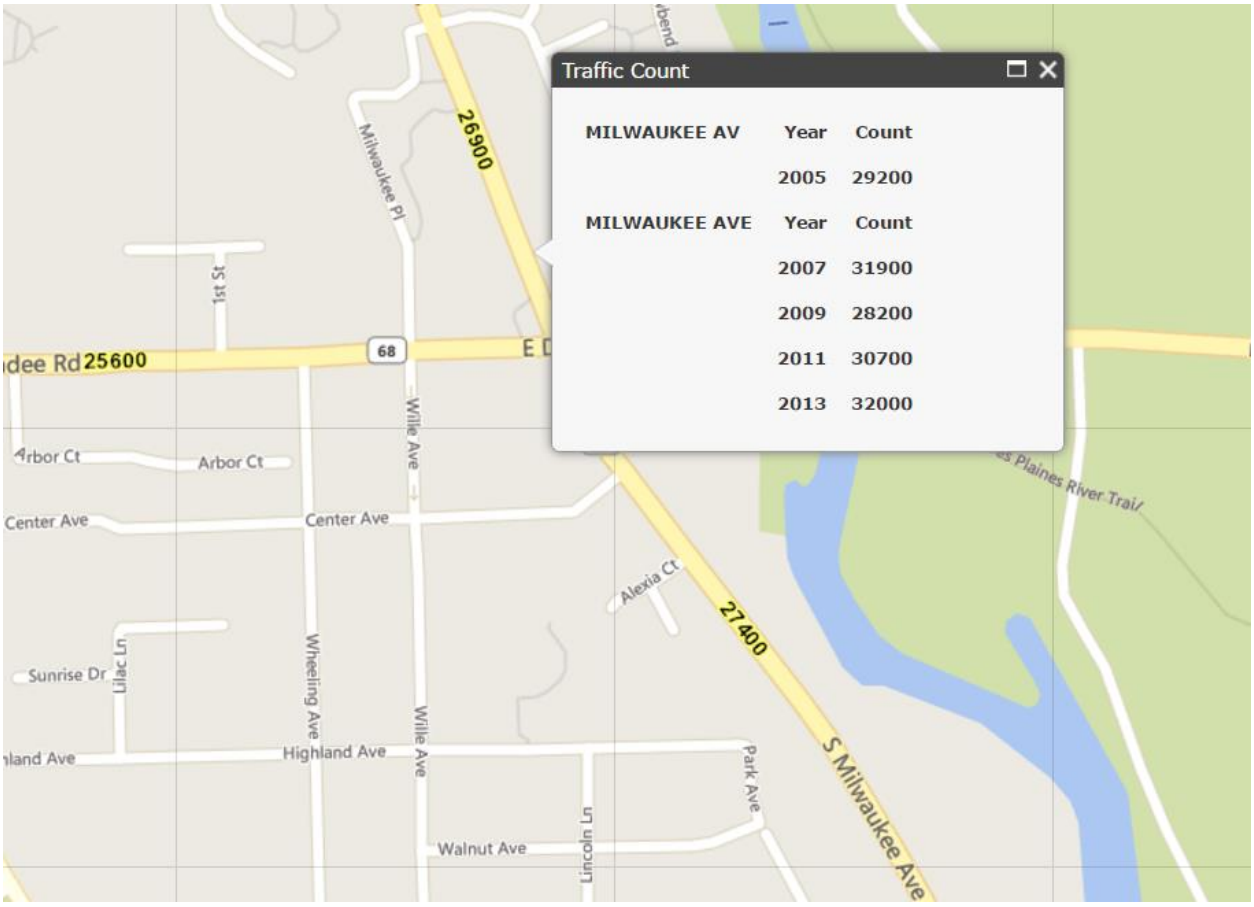


## Average Daily Traffic Cont'd

Data was obtained from the Illinois Department of Transportation's website www.gettingaroundillinois.com.

Milwaukee Ave. & Dundee Rd. (Southbound)

- 29,200 (2005)
- 31,900 (2007)
- 28,200 (2009)
- 30,700 (2011)
- 32,000 (2013)

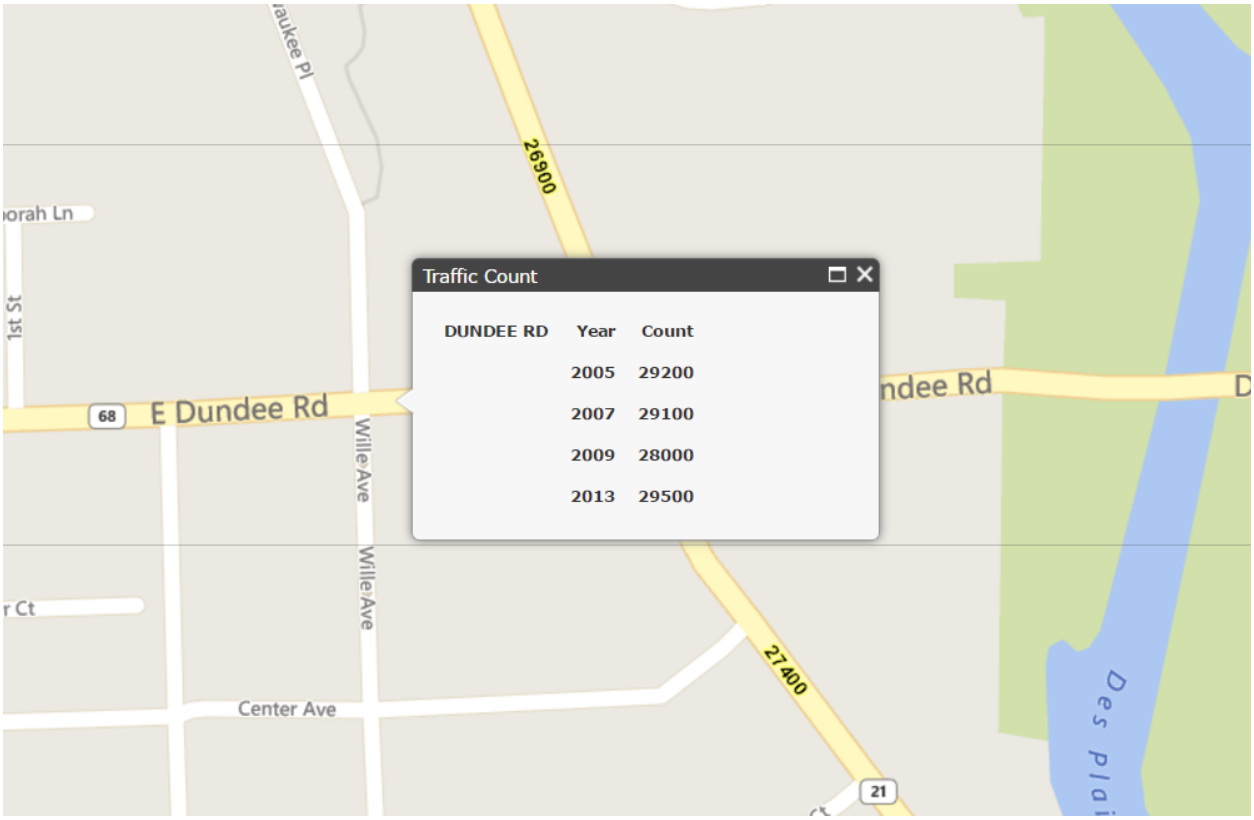


## Average Daily Traffic Cont'd

Data was obtained from the Illinois Department of Transportation's website www.gettingaroundillinois.com.

Milwaukee Ave. & Dundee Rd. (Eastbound)

- 29,200 (2005)
- 29,100 (2007)
- 28,000 (2009)
- 29,500 (2013)

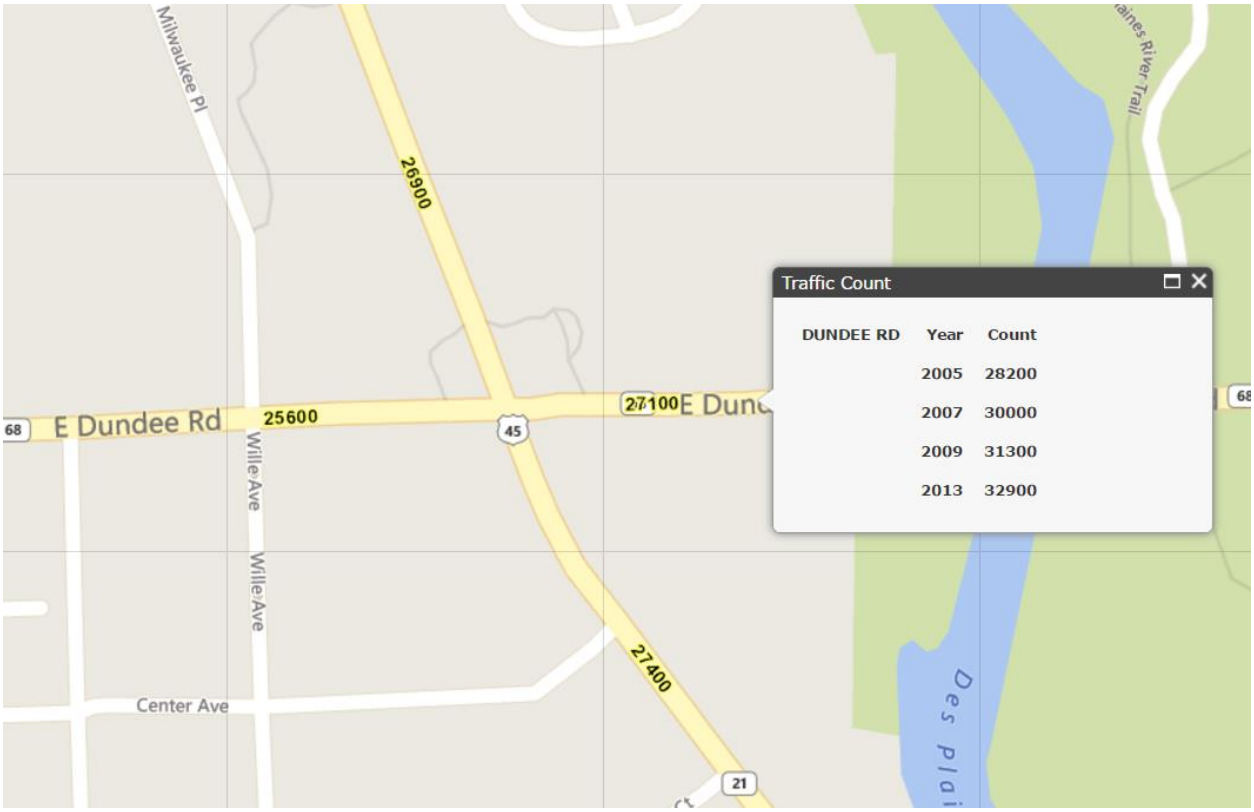


## Average Daily Traffic Cont'd

Data was obtained from the Illinois Department of Transportation's website www.gettingaroundillinois.com.

Milwaukee Ave. & Dundee Rd. (Westbound)

- 28,200 (2005)
- 30,000 (2007)
- 31,300 (2009)
- 32,900 (2013)



## Crash History and Analysis

- Table 1 includes crash data obtained from the Illinois Department of Transportation, detailing angle, turning, rear-end, and other type crashes occurring at the intersection pre/post RLR Photo Enforcement System installation.

### ALL INTERSECTION APPROACHES

| | Crashes | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Rear-End (% of Total) | | Angle (% of Total) | | Turning (% of Total) | | Other (% of Total) | | Total |
| 2006 | 19 | 67.8% | 0 | 00.0% | 5 | 17.9% | 4 | 14.3% | 28 |
| 2007 | 19 | 61.3% | 2 | 06.4% | 6 | 19.4% | 4 | 12.9% | 31 |
| 2008 | 17 | 63.0% | 0 | 00.0% | 5 | 18.5% | 5 | 18.5% | 27 |
| Total | 55 | 63.9% | 2 | 02.3% | 16 | 18.6% | 13 | 15.1% | 86 |
| 2006-2008 Average | 18.3 | | 0.7 | | 5.3 | | 4.3 | | 28.7 |
| RLR Camera Installation 04/01/2009 | | | | | | | | | |
| 2009 | 11 | 68.7% | 0 | 00.0% | 4 | 25.0% | 1 | 06.3% | 16 |
| | | | | | | | | | |
| 2010 | 7 | 63.6% | 0 | 00.0% | 3 | 27.3% | 1 | 09.1% | 11 |
| 2011 | 11 | 68.7% | 0 | 00.0% | 5 | 31.3% | 0 | 00.0% | 16 |
| 2012 | 14 | 70.0% | 0 | 00.0% | 3 | 15.0% | 3 | 15.0% | 20 |
| 2013 | 11 | 73.3% | 0 | 00.0% | 2 | 13.3% | 2 | 13.3% | 15 |
| 2014 | 15 | 75.0% | 2 | 10.0% | 3 | 15.0% | 0 | 00.0% | 20 |
| 2015 | 12 | 85.7% | 0 | 00.0% | 2 | 14.3% | 0 | 00.0% | 14 |
| Total | 70 | 72.9% | 2 | 02.1% | 18 | 18.7% | 6 | 06.2% | 96 |
| 2010-2015 Average | 11.7 | | 0.3 | | 3.0 | | 1.0 | | 16.0 |

- Other indicates the following: Pedestrian, Pedal Cyclist, Fixed Object, Sideswipe, Head-On and Unknown

Table 1

DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation, based upon information derived from multiple sources. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in prior years, since the data prior to 2015 was physically located by bureau personnel. Given the subjective nature of the reporting process, the modifications in the incident locating protocols and the changes to the crash reporting thresholds effective 2009, the Village of Wheeling acknowledges the potential for discrepancies in the final conclusions drawn.

## Crash History and Analysis (continued)

- Table 2 includes crash data obtained from the Illinois Department of Transportation, detailing angle, turning, rear-end, and other-type crashes occurring at the intersection on the northbound and westbound approaches only, pre/post RLR Photo Enforcement System installation.

**NORTHBOUND AND WESTBOUND APPROACHES ONLY (PHOTO ENFORCED APPROACHES)**

| | Crashes | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Rear-End (% of Total) | | Angle (% of Total) | | Turning (% of Total) | | Other (% of Total) | | Total |
| 2006 | 13 | 65.0% | 0 | 00.0% | 4 | 20.0% | 3 | 15.0% | 20 |
| 2007 | 15 | 68.2% | 1 | 04.5% | 5 | 22.7% | 1 | 04.5% | 22 |
| 2008 | 11 | 57.9% | 0 | 00.0% | 5 | 26.3% | 3 | 15.8% | 19 |
| Total | 39 | 63.9% | 1 | 01.6% | 14 | 22.9% | 7 | 11.5% | 61 |
| 2006-2008 Average | 13.0 | | 0.3 | | 4.7 | | 2.3 | | 20.3 |
| RLR Camera Installation 04/01/2009 | | | | | | | | | |
| 2009 | 4 | 50.0% | 0 | 00.0% | 3 | 37.5% | 1 | 12.5% | 8 |
| | | | | | | | | | |
| 2010 | 6 | 66.7% | 0 | 00.0% | 2 | 22.2% | 1 | 11.1% | 9 |
| 2011 | 7 | 63.6% | 0 | 00.0% | 4 | 36.4% | 0 | 00.0% | 11 |
| 2012 | 9 | 64.3% | 0 | 00.0% | 3 | 21.4% | 2 | 14.3% | 14 |
| 2013 | 4 | 50.0% | 0 | 00.0% | 2 | 25.0% | 2 | 25.0% | 8 |
| 2014 | 9 | 64.3% | 2 | 14.3% | 3 | 21.4% | 0 | 00.0% | 14 |
| 2015 | 6 | 85.7% | 0 | 00.0% | 1 | 14.3% | 0 | 00.0% | 7 |
| Total | 41 | 65.1% | 2 | 03.2% | 15 | 23.8% | 5 | 07.9% | 63 |
| 2010-2015 Average | 6.8 | | 0.3 | | 2.5 | | 0.8 | | 10.5 |

- Other indicates the following: Pedestrian, Pedal Cyclist, Fixed Object, Sideswipe, Head-On and Unknown

Table 2

DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation, based upon information derived from multiple sources. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in prior years, since the data prior to 2015 was physically located by bureau personnel. Given the subjective nature of the reporting process, the modifications in the incident locating protocols and the changes to the crash reporting thresholds effective 2009, the Village of Wheeling acknowledges the potential for discrepancies in the final conclusions drawn.

Comparison of annual averages shows the total number of crashes decreasing by 44% at the intersection for all approaches and by 48% on the northbound and westbound (photo enforced) approaches post-camera installation.

The US Department of Transportation Project Development and Design Manual states that turning, angle or head-on crashes have a number of probable crash causes, to include:

- Large volumes of left /right turns
- Large total intersection volume
- Excessive speed on approaches
- Inadequate traffic control devices
- Poor visibility of signals

While red light cameras cannot truly decrease the volume of cars entering the intersection, speed and proximity of vehicles entering an intersection or the amount of turning traffic volume, red light cameras and red light camera photo enforcement warning signs have the ability to reduce traffic crashes and improve compliance with traffic control devices.

## Adjudication Experience

RLR camera violations are contested and adjudicated through an administrative hearing conducted each month. Adjudication data for the Village's Automated Enforcement Program is shown below in Table 3.

| VILLAGE OF WHEELING ADJUDICATION FOR AUTOMATED PHOTO ENFORCEMENT PROGRAM* | | |
|---|---|---|
| **YEAR /TOTALS** | **LIABLE** | **NOT LIABLE** |
| 2009 | 804 | 83 |
| 2010 | 602 | 78 |
| 2011 | 357 | 50 |
| 2012 | 348 | 46 |
| 2013 | 340 | 45 |
| 2014 | 342 | 42 |
| 2015 | 463 | 46 |
| 2016 | 385 | 43 |
| 2017** | 118 | 6 |
| **TOTAL:** | **3,759** | **439** |

**Adjudication totals include contested violations for entire program (all RLR cameras).*
***2017 totals through April 2017.*

Table 3

The high quality video footage and photographic evidence produced by the enforcement system is a contributing factor in a majority of the contested RLR violations being upheld by the Hearing Officer. The police officers assigned to review and approve/reject potential violations are vigilant in applying the same officer discretion and criteria they would if issuing an in-person citation, resulting in only highly prosecutable violations being mailed out.