

City of Muscatine

Automated Traffic Enforcement

Report

The following report has been created in response to a public records request of the Iowa Department of Transportation Primary Highway System ATE guidelines, for the 2017 calendar year.

Background

In 2010, the City of Muscatine awarded the contract for our Automated Traffic Enforcement (ATE) initiative to Gatso USA. Through accident data as well as speed and red light violation surveys we decided that eight (8) approaches at five intersections would receive the equipment. The system was set up to monitor red light violations as well as speed violations at all five (5) intersections. The intersections selected for the ATE equipment were:

Washington St at Park Ave (north and south approaches)

Cleveland St at Park Ave (north and south approaches)

Cedar St at Houser St (east and west approaches)

University Dr at US Hwy 61 (westbound approach)

Mulberry Ave at US Hwy 61 (westbound approach)

The ATE equipment was built and installed by Gatso USA at no cost to the City of Muscatine. The City and Gatso USA submitted engineered construction plans and worked closely with the Iowa Department of Transportation to ensure that the entire construction and sign placements were completed to their requirements. Winter weather delayed the construction process during December and January. Each intersection has speed limit signs and red light signs that clearly advise that photo enforcement equipment is used at those intersections. In addition to those signs, the City elected to put up “traffic laws photo enforced” signs on every corporate limit signs posts on roadways entering Muscatine.

The City developed with Gatso Business Rules. These rules set in writing how all different kinds of violation events should be handled by Gatso. Some examples were: what if an emergency vehicle commits a violation without their flashing lights turned on, and what if a city vehicle commits a violation. The camera/radar system detects violators and passes the violation information to a Gatso employee who applies the Business Rules and verifies that a violation appears to have occurred and then they create a violation package that includes location information, violation information and vehicle information. This event package is

then sent to our department for review. A police officer who attended an organized training class on the system reviews the data and determines if a violation of the city ordinance has actually occurred and if the violation, location and vehicle information matches what is viewed in the photos and video. If everything matches up and a violation has actually occurred then the officer will issue a citation. The officers approval is transmitted back to Gatso who then prints and mails the paper violation.

The ATE equipment not only detects and documents red light and speed violations but also has other capabilities. The system can be set for license plate recognition for Amber Alerts or other major crimes that occur close to these intersections. The video that the system archives has been used multiple times as evidence in court for citation issued due to traffic crashes in the area of the ATE equipment. The system also provides a live video view. This feature allows a city authorized person to look through the camera at the intersection whenever they may need to.

The paper citation the citizen received at their home contains color images of the violation and their license plate. Also contained are easy to read instructions explaining why they received the citations and how to pay it or request an administrative review. The paper citation also contains information on a website where the citizen can view the still photos printed on the paper citations and also a video of the violation. There is also information about paying the citation on-line or requesting an administrative review.

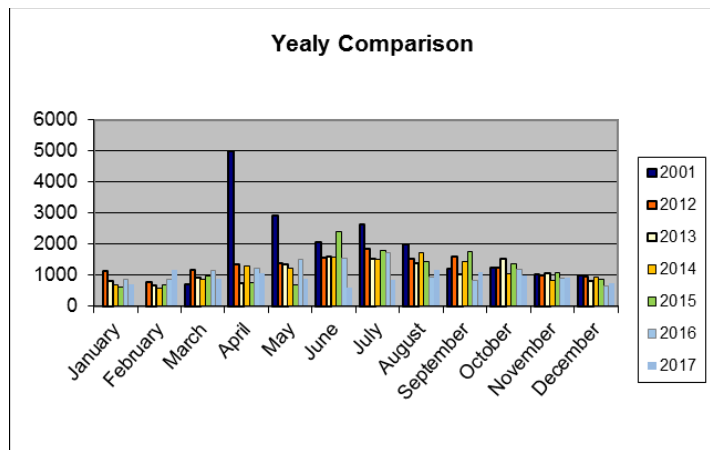
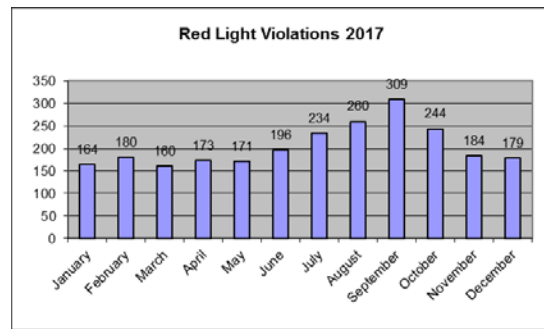
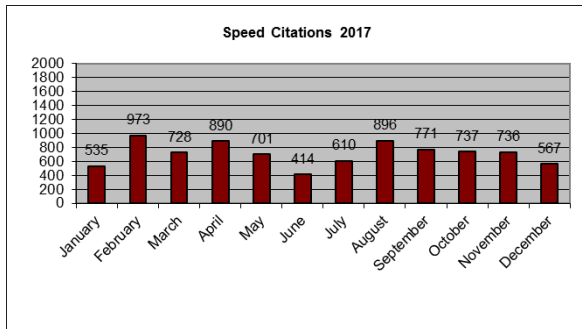
Prior to the implementation of the ATE equipment, public hearings and meetings were held during City Council meetings for at least a year prior to implementation, posters were put up at many locations across the city, informational pamphlets were distributed to the public and information was disseminated via email and the internet.

On March 11, 2011, the Automated Traffic Enforcement equipment was activated at the intersection of Cedar St and Houser St. On March 18, 2011, the Automated Traffic Enforcement equipment was activated at the intersections of US Hwy 61 and Mulberry Ave, US Hwy 61 and University Ave and Park Ave and Cleveland St. Because of property questions and construction delays, the intersection of Washington St and Park Ave wasn't active until May 21, 2011. Each intersection had a warning period of 30 days.

Current Citation and Crash Statistics

During 2017 there were a total of 11,012 citations issued. 2,454 citations were issued for red light violations and 8,558 citations were issued for speed violations. 2,975 speed violations were generated from the mobile speed vehicle (Chevy

Sonic) that was in operation the complete calendar year. Comparing this data to the violations issued in 2016, there was an 18% (2,310) reduction in citations issued for calendar year 2017. A decrease of 608 (8%) red light violations was experienced in 2017. Speed violations decreased by 1,701 (17%) violations compared to 2016.



At the end of April, following the judge’s ruling, the approach on Hwy 61 at University was deactivated as mentioned in a prior paragraph. The first four months of the year we saw a reduction of 970 (47%) violations at this approach. Historically, in the 8 months this approach was active in 2011 there were 12,857 speed violations. By 2016 the number of speed violations dropped to 5,999! That was a **54%** reduction of speeding vehicles through that approach. Please remember that this approach was chosen for the speeding vehicle issue and not for the crash rate. This is a big detail that the Iowa DOT completely ignores.

Following the highly publicized deactivation of the ATE equipment at this approach we found a HUGE increase in speeding incidents. During the period from May through the end of November there were 18,578 vehicles recorded traveling 11 mph or more through that intersection. From past experience we have found that 20 – 30 % of these events would translate into enforceable violations. That equates to 13,003 to 14,862 violations during that 7 month period! This area

is a growing business district and development is planned for additional housing. It is beyond comprehension how the Iowa DOT can say with a straight face that this program and equipment has not been effective.

2017 will be the first full year we have been running the mobile speed vehicle. This is a Chevy Sonic. The mobile ATE vehicle has been deployed on city streets that are not primary roadways where the Iowa DOT has influence. The locations for the vehicle to be set up are determined by citizen complaints/request, input from agency employees about high speed locations and from city staff. The Sonic is typically deployed for a 24 hour period. After each deployment it needs to be recharged for a similar timeframe. The Sonic is also used for data collection for Public Works and the city's traffic committee. The mobile speed vehicle is not used on any primary roadways where the Iowa DOT has shared authority with the City.

The department has received approximately 65 citizen requests for locations of the mobile speed vehicle in 2017. During 2017 there were 2,975 speed violations issued from the events captured by this system.

Since 2011 we have seen a reduction in crashes each year at each intersection where ATE equipment is operating. The chart below lists crashes since 2010 at the intersections where ATE equipment is installed.

Year	Total	PI	PD
2010	34	9	25
2011	28	9	19
2012	26	6	20
2013	19	4	15
2014	25	2	23
2015	19	2	17
2016	28	4	24
2017	21	3	18

In 2017 we saw a decrease in the crash rate of 25% from 2016. This is still a reduction from the pre-ATE era. The injury crashes remained very low with only 3 personal injury (PI) crashes at these intersections!

Confirmation of the calibration of the fixed ATE locations continues to be conducted by the Muscatine Police Department on a quarterly basis.

In conclusion: Are the traffic cameras having any effect on the driving habits of area drivers? After looking at the statistics for citations and crashes for the time the ATE systems have been installed and running we believe they are. We continue to have less crashes (39% less) at these intersections then the year prior to

implementation. We have less red light and speed violations then the prior year. There is also the glaring evidence with the deactivation since May of the approach at Hwy 61 and University Dr.

University Dr at US Hwy 61

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued	
2009	5	PI - 1 PD - 4	NA	NA	
2010	5	PI - 1 PD - 4	NA	NA	
2011	7	PI - 4 PD - 3	83	12851	8 month period
2012	6	PI - 1 PD - 5	126	8992	
2013	5	PI - 1 PD - 4	102	7638	
2014	5	PI - 1 PD - 4	124	8018	
2015	4	PI - 1 PD - 3	148	7554	
2016	7	PI - 1 PD - 6	137	5999	
2017	9	PI - 0 PD - 9	66	1134	18,578 speeders May - November

Mulberry Ave at US Hwy 61

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued	
2009	5	PI - 0 PD - 5	NA	NA	
2010	10	PI - 4 PD - 6	NA	NA	
2011	10	PI - 3 PD - 7	214	2600	8 month period
2012	8	PI - 4 PD - 4	192	1551	
2013	4	PI - 1 PD - 3	227	868	
2014	3	PI - 0 PD - 3	168	1086	
2015	4	PI - 0 PD - 4	239	1332	
2016	6	PI - 0 PD - 6	340	1621	
2017	5	PI - 1 PD - 4	199	1470	

Cleveland and Park Ave (Business Hwy 61)

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued
2009	8	PI - 1 PD - 7	NA	NA
2010	5	PI - 2 PD - 3	NA	NA
2011	6	PI - 0 PD - 6	812	1904
2012	4	PI - 0 PD - 4	1102	1709
2013	5	PI - 2 PD - 3	824	1582
2014	8	PI - 0 PD - 8	994	1872
2015	2	PI - 0 PD - 2	971	2086
2016	6	PI - 2 PD - 4	1237	1917
2017	2	PI - 1 PD - 1	985	2260

8 month period

Washington and Park Ave (Business Hwy 61)

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued
2009	10	PI - 4 PD - 6	NA	NA
2010	5	PI - 1 PD - 4	NA	NA
2011	3	PI - 1 PD - 2	305	336
2012	3	PI - 1 PD - 2	763	422
2013	4	PI - 0 PD - 4	681	589
2014	3	PI - 1 PD - 2	723	425
2015	7	PI - 1 PD - 6	710	511
2016	4	PI - 0 PD - 4	782	626
2017	3	PI - 1 PD - 2	675	641

7 month period

Cedar St at Houser St

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued
2009	6	PI - 2 PD - 4	NA	NA
2010	9	PI - 1 PD - 8	NA	NA
2011	2	PI - 1 PD - 1	513	131
2012	5	PI - 0 PD - 5	493	112
2013	1	PI - 0 PD - 1	713	145
2014	6	PI - 0 PD - 6	231	35
2015	2	PI - 0 PD - 2	799	93
2016	5	PI - 1 PD - 4	466	80
2017	2	PI - 0 PD - 2	529	78

8 month period