

Evaluation of 2014 Automated Traffic Enforcement Report

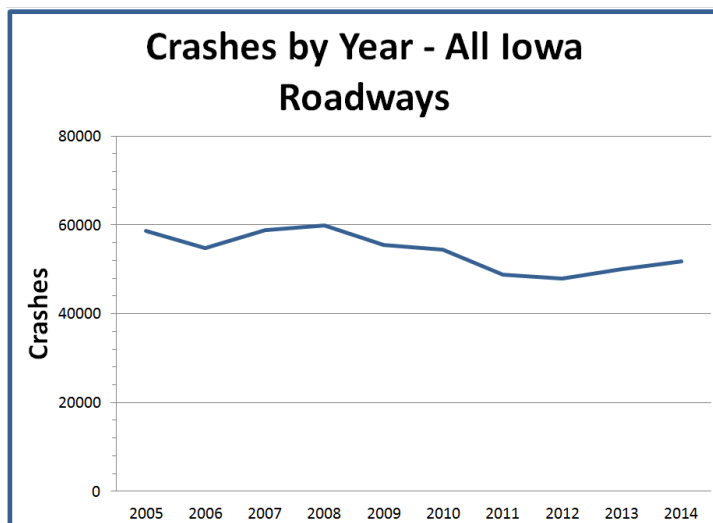
City of Council Bluffs

Introduction:

Automated traffic enforcement (ATE) is one of many safety countermeasures that can be used to enhance roadway safety. Automated enforcement may involve the enforcement of red-light running violations and speed limit violations. The city of Council Bluffs uses ATE systems to enforce red-light running violations at seven signalized intersections on the primary highway system.

In 2012 Iowa State University developed a report titled, "Toolbox of Countermeasures to Reduce Red Light Running". The report documented that at signalized intersections, red-light running crashes make up 24.5% of all crashes and account for 31.7% of all fatal and major injury crashes. This toolbox is to aid practitioners in ways to identify and address red-light crashes at signalized intersections. The report focuses primarily on engineering and enforcement solutions. The report has two main parts; 1.) Guidelines to identify problem intersections and the causes of red-light running, and 2.) Roadway-based and enforcement countermeasures. This second part details 20 potential safety countermeasures that can be used at signalized intersections to address these types of crashes. Automated enforcement is one of those potential countermeasures.

On a statewide basis, crashes in Iowa have been decreasing. Specifically, over a 10 year period, crashes have decreased 11.5% from 58,644 in 2005 to 51,880 in 2014. Below is a chart showing the total number of crashes in Iowa.



Review of Council Bluffs Annual Report:

We have completed our review of your 2014 automated traffic enforcement (ATE) report as required in Iowa Administrative Code 761--144. The following documents were considered by the DOT in connection with this review:

- "2014 Annual Report, Automated Traffic Enforcement for the City of Council Bluffs", April 2015;
- "The Effectiveness of Iowa's Automated Red Light Running Enforcement Programs, Final Report, 2007" by Center for Transportation Research and Education (CTRE) at Iowa State University;
- Intersection crash data obtained by the Iowa DOT using the Iowa crash database (includes all statewide reported crash reports)

Intersection red light cameras:

The city has red-light violation cameras at seven intersections on the primary highway system. DOT's findings and resulting action for these locations are set forth below.

8th Street and West Kanesville Blvd/West Broadway

Findings:

- Cameras activated 2005.
- Eastbound and westbound approaches are subject to traffic camera enforcement.
- Crash data (city provided):
 - 1 in 2004
 - 2 in 2005– red light cameras activated
 - 9 in 2006
 - 20 in 2007
 - 11 in 2008
 - 13 in 2009
 - 13 in 2010
 - 17 in 2011
 - 6 in 2012
 - 18 in 2013
 - 14 in 2014
- Crash data (DOT provided – includes all crashes using 75 feet radius):
 - 17 in 2004
 - 17 in 2005– red light cameras activated
 - 10 in 2006

20 in 2007
12 in 2008
13 in 2009
14 in 2010
17 in 2011
6 in 2012
20 in 2013
14 in 2014

- Total intersection crash data: 19.32 average crashes per year before activation (3 years of data); 10 average crashes per year after activation (1 year of data) – from CTRE/ISU study.

Resulting Action:

- Continue operation of red-light cameras at this location.

16th Street and West Broadway

Findings:

- Cameras activated 2005.
- Eastbound and westbound approaches are subject to traffic camera enforcement.
- Crash data (city provided):
 - 3 in 2004
 - 14 in 2005– red light cameras activated
 - 8 in 2006
 - 10 in 2007
 - 8 in 2008
 - 14 in 2009
 - 7 in 2010
 - 4 in 2011
 - 11 in 2012
 - 15 in 2013
 - 6 in 2014
- Crash data (DOT provided – includes all crashes using 75 feet radius):
 - 18 in 2004
 - 17 in 2005– red light cameras activated
 - 8 in 2006
 - 13 in 2007
 - 9 in 2008
 - 17 in 2009
 - 7 in 2010
 - 4 in 2011
 - 12 in 2012
 - 15 in 2013
 - 6 in 2014
- Total intersection crash data: 16 average crashes per year before activation (3 years of data); 8 average crashes per year after activation (1 year of data) – from CTRE/ISU study.

Resulting Action:

- Continue operation of red-light cameras at this location.

21st Street and West Broadway

Findings:

- Camera activated 2005.
- Westbound approach subject to traffic camera enforcement.
- Crash data (city provided):
 - 5 in 2004
 - 1 in 2005– red light camera activated
 - 3 in 2006
 - 6 in 2007
 - 4 in 2008
 - 4 in 2009
 - 5 in 2010
 - 6 in 2011
 - 3 in 2012
 - 12 in 2013
 - 8 in 2014
- Crash data (DOT provided – includes all crashes using 75 feet radius):
 - 16 in 2004
 - 7 in 2005– red light camera activated
 - 3 in 2006
 - 8 in 2007
 - 4 in 2008
 - 4 in 2009
 - 5 in 2010
 - 6 in 2011
 - 4 in 2012
 - 12 in 2013
 - 8 in 2014
- Total intersection crash data: 9 average crashes per year before activation (3 years of data); 3 average crashes per year after activation (1 year of data) – from CTRE/ISU study.

Resulting Action:

- Continue operation of red-light cameras at this location.

35th Street and West Broadway

Findings:

- Camera activated 2005.
- Eastbound approach subject to traffic camera enforcement.

- Crash data (city provided):
 - 11 in 2004
 - 8 in 2005– red light camera activated
 - 7 in 2006
 - 10 in 2007
 - 13 in 2008
 - 13 in 2009
 - 6 in 2010
 - 9 in 2011
 - 10 in 2012
 - 11 in 2013
 - 12 in 2014
- Crash data (DOT provided – includes all crashes using 75 feet radius):
 - 13 in 2004
 - 9 in 2005– red light camera activated
 - 8 in 2006
 - 11 in 2007
 - 13 in 2008
 - 13 in 2009
 - 6 in 2010
 - 9 in 2011
 - 11 in 2012
 - 11 in 2013
 - 12 in 2014
- Total intersection crash data: 11.32 average crashes per year before activation (3 years of data); 10 average crashes per year after activation (1 year of data) – from CTRE/ISU study.

Resulting Action:

- Continue operation of red-light cameras at this location.

7th Street and Willow Ave

Findings:

- Camera activated 2005.
- Southbound approach subject to traffic camera enforcement.
- Crash data (city provided):
 - 1 in 2004
 - 1 in 2005– red light camera activated
 - 1 in 2006
 - 5 in 2007
 - 3 in 2008
 - 3 in 2009
 - 5 in 2010
 - 3 in 2011
 - 6 in 2012

- 2 in 2013
- 3 in 2014
- Crash data (DOT provided – includes all crashes using 75 feet radius):
 - 1 in 2004
 - 1 in 2005– red light camera activated
 - 2 in 2006
 - 5 in 2007
 - 3 in 2008
 - 3 in 2009
 - 5 in 2010
 - 3 in 2011
 - 6 in 2012
 - 2 in 2013
 - 3 in 2014
- Total intersection crash data: 3.32 average crashes per year before activation (3 years of data); 2 average crashes per year after activation (1 year of data) – from CTRE/ISU study.

Resulting Action:

- Continue operation of red-light cameras at this location.

Harrison Street and East Kanesville Blvd

Findings:

- Cameras activated 2009.
- Eastbound and westbound approaches are subject to traffic camera enforcement.
- Crash data (city provided):
 - 9 in 2007
 - 12 in 2008
 - 5 in 2009 – red light camera activated
 - 8 in 2010
 - 7 in 2011
 - 5 in 2012
 - 11 in 2013
 - 6 in 2014
- Crash data (DOT provided – includes all crashes using 75 feet radius):
 - 2 in 2004
 - 3 in 2005
 - 4 in 2006
 - 10 in 2007
 - 12 in 2008
 - 5 in 2009 – red light camera activated
 - 8 in 2010
 - 7 in 2011
 - 5 in 2012
 - 11 in 2013
 - 7 in 2014

Resulting Action:

- Continue operation of red-light cameras at this location.

25th Street and West Broadway

Findings:

- Cameras activated 2009.
- Eastbound and westbound approaches are subject to traffic camera enforcement.
- Crash data (city provided):
 - 8 in 2007
 - 2 in 2008
 - 7 in 2009 – red light cameras activated
 - 5 in 2010
 - 4 in 2011
 - 4 in 2012
 - 4 in 2013
 - 8 in 2014
- Crash data (DOT provided – includes all crashes using 75 feet radius):
 - 3 in 2004
 - 10 in 2005
 - 2 in 2006
 - 8 in 2007
 - 2 in 2008
 - 7 in 2009 – red light cameras activated
 - 5 in 2010
 - 4 in 2011
 - 4 in 2012
 - 4 in 2013
 - 8 in 2014

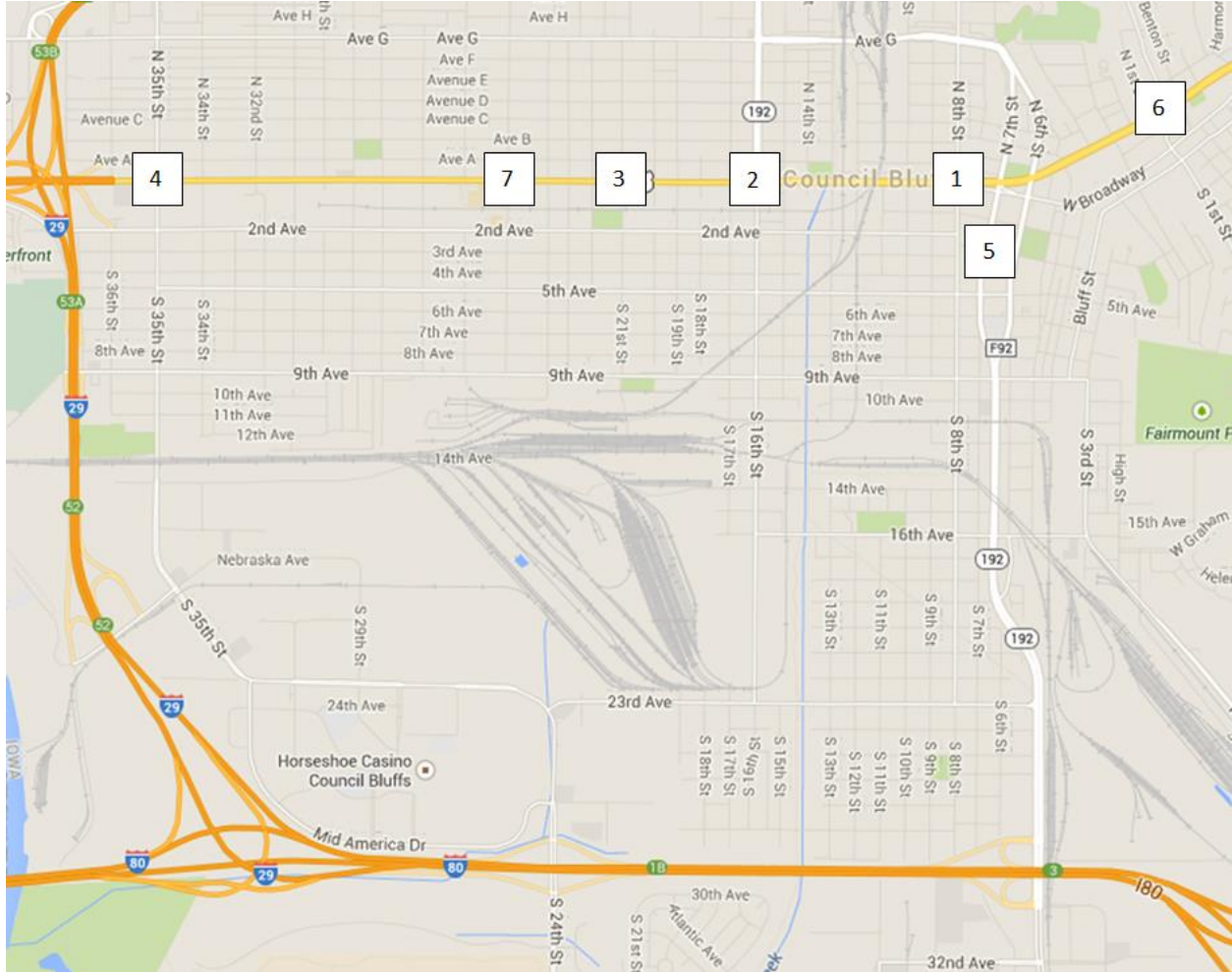
Resulting Action:

- Continue operation of red-light cameras at this location.

Summary:

Based on the results of this review, all of the automated traffic enforcement cameras may continue to be operated in accordance with Iowa Administrative Code 761—144. However, a few of the intersections show marginal safety benefit. Because of the reconstruction of I-80/I-29 through Council Bluffs, the official routes of US 6 and Iowa 192 will be relocated and the City of Council Bluffs will take ownership of the existing roadways. Once this transfer-of-jurisdiction occurs, all of the intersections reviewed in this report will be off the primary highway system and therefore not subject to the requirements of Iowa Administrative Code 761—144. This planned transfer-of-jurisdiction was an important consideration when allowing the cameras to stay in place.

Map of Council Bluffs ATE systems on the primary highway system:



1. 8th St and West Kanesville Blvd/West Broadway
2. 16th St and West Broadway
3. 21st St and West Broadway
4. 35th St and West Broadway
5. 7th St and Willow Ave
6. Harrison St and East Kanesville Blvd
7. 25th St and West Broadway