



John R. Riley, Jr.  
County Administrator

540/665-5666

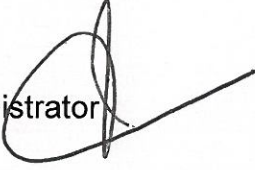
Fax 540/667-0370

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## MEMORANDUM

**TO:** Code & Ordinance Committee  
Public Safety Committee

**FROM:** John R. Riley, Jr., County Administrator 

**DATE:** September 26, 2014

**RE:** Joint Meeting of Code & Ordinance and Public Safety Committees

There will be a joint meeting of the Code & Ordinance Committee and Public Safety Committee on **Friday, October 3, 2014, 8:30 A.M., First Floor Conference Room**, County Administration Building, 107 North Kent Street. The following will be discussed:

1. Discussion of Photo Red Enforcement System.

**Attachments are as Follows:**

**Correspondence and Draft Ordinance from County Attorney  
Copy of Presentation by School Government Service Learning**

Red Flex to be in Attendance to Give Presentation.

2. Such other business as may come before the committee.

JRR/tjp

**Attachments**

cc: Kris C. Tierney, Assistant County Administrator  
Board of Supervisors  
WINC  
Winchester Star  
Northern Virginia Daily

U:\TJP\agendas\CodeOrdinance\Code&Ordinance&PublicSafetyAgenda(100314).docx



COUNTY OF FREDERICK

**Roderick B. Williams**  
County Attorney

540/722-8383  
Fax 540/667-0370  
E-mail:  
rwillia@fcva.us

### MEMORANDUM

TO: Code and Ordinance Committee  
Public Safety Committee

FROM: Roderick B. Williams  
County Attorney

DATE: September 25, 2014

RE: Draft Ordinance re: Photo-Red Enforcement System

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In conjunction with the presentation to the committee on photo red light enforcement, attached please find a draft ordinance that would be appropriate for the implementation of a photo-red enforcement system in the County, if the Board wishes to adopt a photo-red enforcement system. The draft ordinance largely tracks the provisions of Section 15.2-968.1 of the Code of Virginia, the section that provides the enabling authority for local photo-red enforcement systems.

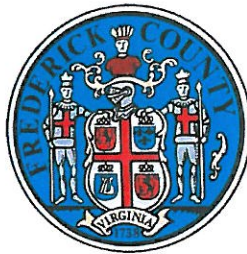
Key points of the draft ordinance include:

- The County may install the system at no more than one intersection per 10,000 residents; therefore, the County may install the system at no more than 7 intersections.
- A vehicle owner may rebut the presumption of having operated the vehicle in violation of the ordinance by filing an appropriate affidavit with the General District Court. A vehicle owner also has the option of rebutting the presumption by giving live testimony in the General District Court.
- The summons for a violation of the ordinance must include a notice informing the recipient that the recipient may file the rebuttal affidavit. The summons must also include instructions for filing the affidavit. This appears to mean that the summons may also include a copy of the affidavit form.

- An offense under the ordinance is not a moving violation and does not result in the assessment of any “points” against the owner, lessee, or renter of the vehicle. The legal effect of an offense under the ordinance is no different than that of a parking ticket.
- The maximum fine that may be imposed under the ordinance is \$50.00. State law prohibits the collection of any court costs in addition to a fine under such an ordinance. By way of comparison, the maximum fine for a red light violation cited in person by a law enforcement officer is \$100.00, plus court costs.
- The County must destroy information collected on a violation of the ordinance within 60 days of collection of the penalty and, as to information collected but for which no violation is charged within 10 business days of its collection, the County must destroy the information within two business days thereafter.
- Any private contractor engaged by the County to install and/or operate the system may not be compensated based on the number of violations or monetary penalties imposed.
- The system must include a 0.5 second grace period between the time the signal at an intersection turns red and the time the first violation at that intersection is recorded.
- The County must place notification signs at all intersections where the system is in operation.
- The County must conduct a public awareness program concerning the system prior to or coincident with implementation or expansion of the system.

Also attached please find a copy of the state enabling legislation.

Attachments



**ORDINANCE**  
**[date]**

The Board of Supervisors of Frederick County, Virginia hereby ordains that Article I (General Provisions) of Chapter 158 (Vehicles and Traffic) of the Code of Frederick County, Virginia be, and the same hereby is, amended by enacting a new § 158-3.1, to read as follows and to take effect immediately:

**CHAPTER 158 ARTICLE I General Provisions**

**§ 158-3.1. Use of photo-monitoring systems to enforce traffic light signals; penalty.**

- A. The County Administrator or County Administrator's designee may install and operate traffic light signal violation monitoring systems at no more than one intersection in the County for every 10,000 residents within the County, for the purpose of imposing monetary liability on the operator of a motor vehicle for failure to comply with traffic light signals in the County in accordance with the provisions of this section.
- B. The operator of a vehicle shall be liable for a monetary penalty imposed pursuant to this section if such vehicle is found, as evidenced by information obtained from a traffic light signal violation monitoring system, to have failed to comply with a traffic light signal within the County.
- C. Proof of a violation of this section shall be evidenced by information obtained from a traffic light signal violation monitoring system authorized pursuant to this section. A certificate, sworn to or affirmed by the sheriff or a deputy sheriff of the County, or a facsimile thereof, based upon inspection of photographs, microphotographs, videotape, or other recorded images produced by a traffic light signal violation monitoring system, shall be prima facie evidence of the facts contained therein. Any photographs, microphotographs, videotape, or other recorded images evidencing such a violation shall be available for inspection in any proceeding to adjudicate the liability for such violation pursuant to this section.
- D. In the prosecution of an offense established under this section, prima facie evidence that the vehicle described in the summons issued pursuant to

subsection D above was operated in violation of this section, together with proof that the defendant was at the time of such violation the owner, lessee, or renter of the vehicle, shall constitute in evidence a rebuttable presumption that such owner, lessee, or renter of the vehicle was the person who committed the violation. Such presumption shall be rebutted if the owner, lessee, or renter of the vehicle (i) files an affidavit by first-class mail with the Clerk of the General District Court for Frederick County that he or she was not the operator of the vehicle at the time of the alleged violation or (ii) testifies in the General District Court for Frederick County, under oath that he or she was not the operator of the vehicle at the time of the alleged violation. Such presumption shall also be rebutted if a certified copy of a police report, showing that the vehicle had been reported to the police as stolen prior to the time of the alleged violation of this section, is presented, prior to the return date established on the summons issued pursuant to this section, to the General District Court for Frederick County.

- E. For purposes of this section, “owner” means the registered owner of a vehicle on record with the department of motor vehicles. “Traffic light signal violation monitoring system” means a vehicle sensor installed to work in conjunction with a traffic light that automatically produces two or more photographs, two or more microphotographs, video, or other recorded images of each vehicle at the time that the operator of the vehicle fails to stop or remain stopped at a steady red traffic light signal in violation of §§ 46.2-833, 46.2-835, or 46.2-836 of the Code of Virginia, 1950, as amended. For each such vehicle, at least one recorded image shall be of the vehicle before it has illegally entered the intersection, and at least one recorded image shall be of the same vehicle after it has illegally entered that intersection.
- F. Imposition of a penalty pursuant to this section shall not be deemed a conviction as an operator and shall not be made a part of the operating record of the person upon whom such liability is imposed, nor shall it be used for insurance purposes in the provision of motor vehicle insurance coverage. No monetary penalty imposed pursuant to this section shall exceed \$50.00, nor shall it include court costs.
- G. A summons for a violation of this section may be executed pursuant to § 19.2-76.2 of the Code of Virginia, 1950, as amended. Notwithstanding the provisions of § 19.2-76.2 of the Code of Virginia, 1950, as amended, the summons for a violation of this section may be executed by mailing by first-class mail a copy thereof to the address of the owner, lessee, or renter of the vehicle as shown, in the case of vehicle owners, in the records of the department of motor vehicles or, in the case of the vehicle lessees or renters, in the records of the lessor or renter. Every such mailing shall include, in addition to the summons, a notice of (i) the summoned person’s ability to rebut the presumption that he or she was the operator of the vehicle at the time of the alleged violation through the filing of an affidavit as provided in

subsection D and (ii) instructions for filing such affidavit, including the address to which the affidavit is to be sent. If the summoned person fails to appear on the date of return set out in the summons mailed pursuant to this section, the summons shall be executed in the manner set out in § 19.2-76.3 of the Code of Virginia, 1950, as amended. No proceedings for contempt or arrest of a person summoned by mailing shall be instituted for failure to appear on the return date of the summons. Any summons executed for a violation of this section shall provide to the person summoned at least 60 business days from the mailing of the summons to inspect information collected by a traffic light signal violation monitoring system in connection with the violation.

- H. Information collected by a traffic light signal violation monitoring system installed and operated pursuant to this section shall be limited exclusively to that information that is necessary for the enforcement of traffic light violations. On behalf of the County, a private entity that operates a traffic light signal violation monitoring system may enter into an agreement with the Department of Motor Vehicles, in accordance with the provisions of subdivision B 21 of § 46.2-208 of the Code of Virginia, 1950, as amended, to obtain vehicle owner information regarding the registered owners of vehicles that fail to comply with a traffic light signal. Information provided to the operator of a traffic light signal violation monitoring system shall be protected in a database with security comparable to that of the Department of Motor Vehicles' system, and used only for enforcement against individuals who violate the provisions of this section. Notwithstanding any other provision of law, all photographs, microphotographs, electronic images, or other personal information collected by a traffic light signal violation monitoring system shall be used exclusively for enforcing traffic light violations and shall not (i) be open to the public; (ii) be sold or used for sales, solicitation, or marketing purposes; (iii) be disclosed to any other entity except as may be necessary for the enforcement of a traffic light violation or to a vehicle owner or operator as part of a challenge to the violation; or (iv) be used in a court in a pending action or proceeding unless the action or proceeding relates to a violation of §§ 46.2-833, 46.2-835, or 46.2-836 of the Code of Virginia, 1950, as amended, or is requested upon order from a court of competent jurisdiction. Information collected under this section pertaining to a specific violation shall be purged and not retained later than 60 days after the collection of any civil penalties. If the County does not execute a summons for a violation of this section within ten business days, all information collected pertaining to that suspected violation shall be purged within two business days thereafter. The County shall annually certify compliance with this section and make all records pertaining to such system available for inspection and audit by the commonwealth transportation commissioner or the commissioner of the department of motor vehicles or his or her designee. Any person who discloses personal information in violation of the provisions of this subsection shall be subject to a civil penalty of \$1,000.00 per disclosure. Any unauthorized use or disclosure of such personal information shall be grounds for termination of the agreement

between the Department of Motor Vehicles and the private entity.

- I. A private entity may enter into an agreement with the County to be compensated for providing the traffic light signal violation monitoring system or equipment, and all related support services, to include consulting, operations, and administration. However, only a law enforcement officer employed by the County may swear to or affirm the certificate required by subsection C. The County shall not enter into an agreement for compensation based on the number of violations or monetary penalties imposed.
- J. When selecting potential intersections for a traffic light signal violation monitoring system, the County shall consider factors such as (i) the accident rate for the intersection, (ii) the rate of red light violations occurring at the intersection (number of violations per number of vehicles), (iii) the difficulty experienced by law enforcement officers in patrol cars or on foot in apprehending violators, and (iv) the ability of law enforcement officers to apprehend violators safely within a reasonable distance from the violation. The County may consider the risk to pedestrians as a factor, if applicable.
- K. Before the implementation of a traffic light signal violation monitoring system at an intersection, the County shall complete an engineering safety analysis that addresses signal timing and other location-specific safety features. The length of the yellow phase shall be established based on the recommended methodology of the Institute of Transportation Engineers. No traffic light signal violation monitoring system shall be implemented or utilized for a traffic signal having a yellow signal phase length of less than three seconds. All traffic light signal violation monitoring systems shall provide a minimum 0.5-second grace period between the time the signal turns red at an intersection and the time the first violation is recorded at that intersection. If recommended by the engineering safety analysis, the County shall make reasonable location-specific safety improvements, including signs and pavement markings.
- L. The County shall evaluate the traffic light signal violation monitoring system on a monthly basis to ensure all cameras and traffic signals are functioning properly. Evaluation results shall be made available to the public.
- M. The County shall place conspicuous signs within 500 feet of the intersection approach at which a traffic light signal violation monitoring system is used. There shall be a rebuttable presumption that such signs were in place at the time of the commission of the traffic light signal violation.

- N. Prior to or coincident with the implementation or expansion of a traffic light signal violation monitoring system, the County shall conduct a public awareness program, advising the public that the County is implementing or expanding a traffic light signal violation monitoring system.
- O. Notwithstanding any other provision of this section, if a vehicle depicted in images recorded by a traffic light signal photo-monitoring system is owned, leased, or rented by a county, city, or town, then the county, city, or town may access and use the recorded images and associated information for employee disciplinary purposes.

Enacted this \_\_\_\_ day of \_\_\_\_\_, 201\_.

Richard C. Shickle, Chairman \_\_\_\_\_

Gary A. Lofton \_\_\_\_\_

Robert A. Hess \_\_\_\_\_

Robert W. Wells \_\_\_\_\_

Christopher E. Collins \_\_\_\_\_

Gene E. Fisher \_\_\_\_\_

Charles S. DeHaven, Jr. \_\_\_\_\_

A COPY ATTEST

\_\_\_\_\_  
 John R. Riley, Jr.  
 Frederick County Administrator



Text in effect from and after July 1, 2014

Title 15.2 Counties, Cities and Towns  
Chap. 9 General Powers of Local Governments, §§ 15.2-900 — 15.2-981  
Art. 5 Additional Powers, §§ 15.2-950 — 15.2-982

**§ 15.2-968.1. Use of photo-monitoring systems to enforce traffic light signals. —**

A. The governing body of any county, city, or town may provide by ordinance for the establishment of a traffic signal enforcement program imposing monetary liability on the operator of a motor vehicle for failure to comply with traffic light signals in such locality in accordance with the provisions of this section. Each such locality may install and operate traffic light signal photo-monitoring systems at no more than one intersection for every 10,000 residents within each county, city, or town at any one time, provided, however, that within planning District 8, each such locality may install and operate traffic light signal photo-monitoring systems at no more than 10 intersections, or at no more than one intersection for every 10,000 residents within each county, city, or town, whichever is greater, at any one time.

B. The operator of a vehicle shall be liable for a monetary penalty imposed pursuant to this section if such vehicle is found, as evidenced by information obtained from a traffic light signal violation monitoring system, to have failed to comply with a traffic light signal within such locality.

C. Proof of a violation of this section shall be evidenced by information obtained from a traffic light signal violation monitoring system authorized pursuant to this section. A certificate, sworn to or affirmed by a law-enforcement officer employed by a locality authorized to impose penalties pursuant to this section, or a facsimile thereof, based upon inspection of photographs, microphotographs, videotape, or other recorded images produced by a traffic light signal violation monitoring system, shall be prima facie evidence of the facts contained therein. Any photographs, microphotographs, videotape, or other recorded images evidencing such a violation shall be available for inspection in any proceeding to adjudicate the liability for such violation pursuant to an ordinance adopted pursuant to this section.

D. In the prosecution for a violation of any local ordinance adopted as provided in this section, prima facie evidence that the vehicle described in the summons issued pursuant to this section was operated in violation of such ordinance, together with proof that the defendant was at the time of such violation the owner, lessee, or renter of the vehicle, shall constitute in evidence a rebuttable presumption that such owner, lessee, or renter of the vehicle was the person who committed the violation. Such presumption shall be rebutted if the owner, lessee, or renter of the vehicle (i) files an affidavit by regular mail with the clerk of the general district court that he was not the operator of the vehicle at the time of the alleged violation or (ii) testifies in open court under oath that he was not the operator of the vehicle at the time of the alleged violation. Such presumption shall also be rebutted if a certified copy of a police report, showing that the vehicle had been reported to the police as stolen prior to the time of the alleged violation of this section, is presented, prior to the return date established on the summons issued pursuant to this section, to the court adjudicating the alleged violation.

E. For purposes of this section, "owner" means the registered owner of such vehicle on record with the Department of Motor Vehicles. For purposes of this section, "traffic light signal violation monitoring system" means a vehicle sensor installed to work in conjunction with a traffic light that automatically produces two or more photographs, two or more microphotographs, video, or other recorded images of each vehicle at the time it is used or operated in violation of § 46.2-833, 46.2-835, or 46.2-836. For each such vehicle, at least one recorded image shall be of the vehicle before it has illegally entered the intersection, and at least one recorded image shall be of the same vehicle after it has illegally entered that intersection.

F. Imposition of a penalty pursuant to this section shall not be deemed a conviction as an operator and shall not be made part of the operating record of the person upon whom such liability is imposed, nor shall it be used for insurance purposes in the provision of motor vehicle insurance coverage. No monetary penalty imposed under this section shall exceed \$50, nor shall it include court costs.

G. A summons for a violation of this section may be executed pursuant to § 19.2-76.2. Notwithstanding the provisions of § 19.2-76, a summons for a violation of this section may be executed by mailing by first class mail a copy thereof to the owner, lessee, or renter of the vehicle. In the case of a vehicle owner, the copy shall be mailed to the address contained in the records of the Department of Motor Vehicles; in the case of a vehicle lessee or renter, the copy shall be mailed to the address contained in the records of the lessor or renter. Every such mailing shall include, in addition to the summons, a notice of (i) the summoned person's ability to rebut the presumption that he was the operator of the vehicle at the time of the alleged violation through the filing of an affidavit as provided in subsection D and (ii) instructions for filing such affidavit, including the address to which the affidavit is to be sent. If the summoned person fails to appear on the date of return set out in the summons mailed pursuant to this section, the summons shall be executed in the manner set out in § 19.2-76.3. No proceedings for contempt or arrest of a person summoned by mailing shall be instituted for failure to appear on the return date of the summons. Any summons executed for a violation of this section shall provide to the person summoned at least 30 business days from the mailing of the summons to inspect information collected by a traffic light signal violation monitoring system in connection with the violation.

H. Information collected by a traffic light signal violation monitoring system installed and operated pursuant to subsection A shall be limited exclusively to that information that is necessary for the enforcement of traffic light violations. On behalf of a locality, a private entity that operates a traffic light signal violation monitoring system may enter into an agreement with the Department of Motor Vehicles, in accordance with the provisions of subdivision B 21 of § 46.2-208, to obtain vehicle owner information regarding the registered owners of vehicles that fail to comply with a traffic light signal. Information provided to the operator of a traffic light signal violation monitoring system shall be protected in a database with security comparable to that of the Department of Motor Vehicles' system, and used only for enforcement against individuals who violate the provisions of this section. Notwithstanding any other provision of law, all photographs, microphotographs, electronic images, or other personal information collected by a traffic light signal violation monitoring system shall be used exclusively for enforcing traffic light violations and shall not (i) be open to the public; (ii) be sold or used for sales, solicitation, or marketing purposes; (iii) be disclosed to any other entity except as may be necessary for the enforcement of a traffic light violation or to a vehicle owner or operator as part of a challenge to the violation; or (iv) be used in a court in a pending action or proceeding unless the action or proceeding relates to a violation of § 46.2-833, 46.2-835, or 46.2-836 or requested upon order from a court of competent jurisdiction. Information collected under this section pertaining to a specific violation shall be purged and not retained later than 60 days after the collection of any civil penalties. If a locality does not execute a summons for a violation of this section within 10 business days, all information collected pertaining to that suspected violation shall be purged within two business days. Any locality operating a traffic light signal violation monitoring system shall annually certify compliance with this section and make all records pertaining to such system available for inspection and audit by the Commissioner of Highways or the Commissioner of the Department of Motor Vehicles or his designee. Any person who discloses personal information in violation of the provisions of this subsection shall be subject to a civil penalty of \$1,000 per disclosure. Any unauthorized use or disclosure of such personal information shall be grounds for termination of the agreement between the Department of Motor Vehicles and the private entity.

I. A private entity may enter into an agreement with a locality to be compensated for providing the traffic light signal violation monitoring system or equipment, and all related support services, to include consulting, operations and administration. However, only a law-enforcement officer employed by a locality may swear to or affirm the certificate required by subsection C. No locality shall enter into an agreement for compensation based on the number of violations or monetary penalties imposed.

J. When selecting potential intersections for a traffic light signal violation monitoring system, a locality shall consider factors such as (i) the accident rate for the intersection, (ii) the rate of red light violations occurring at the intersection (number of violations per number of vehicles), (iii) the difficulty experienced by law-enforcement officers in patrol cars or on foot in apprehending violators, and (iv) the ability of law-enforcement officers to apprehend violators safely within a reasonable distance from the violation. Localities may consider the risk to pedestrians as a factor, if applicable.

K. Before the implementation of a traffic light signal violation monitoring system at an intersection, the locality shall complete an engineering safety analysis that addresses signal timing and other location-specific safety features. The length of the yellow phase shall be established based on the recommended methodology of the Institute of Transportation Engineers. No traffic light signal violation monitoring system shall be implemented or utilized for a traffic signal having a yellow signal phase length of less than three seconds. All traffic light signal violation monitoring systems shall provide a minimum 0.5-second grace period between the time the signal turns red and the time the first violation is recorded. If recommended by the engineering safety analysis, the locality shall make reasonable location-specific safety improvements, including signs and pavement markings.

L. Any locality that uses a traffic light signal violation monitoring system shall evaluate the system on a monthly basis to ensure all cameras and traffic signals are functioning properly. Evaluation results shall be made available to the public.

M. Any locality that uses a traffic light signal violation monitoring system to enforce traffic light signals shall place conspicuous signs within 500 feet of the intersection approach at which a traffic light signal violation monitoring system is used. There shall be a rebuttable presumption that such signs were in place at the time of the commission of the traffic light signal violation.

N. Prior to or coincident with the implementation or expansion of a traffic light signal violation monitoring system, a locality shall conduct a public awareness program, advising the public that the locality is implementing or expanding a traffic light signal violation monitoring system.

O. Notwithstanding any other provision of this section, if a vehicle depicted in images recorded by a traffic light signal photo-monitoring system is owned, leased, or rented by a county, city, or town, then the county, city, or town may access and use the recorded images and associated information for employee disciplinary purposes. (2007, cc. 836, 903; 2010, c. 175; 2012, cc. 805, 836; 2014, c. 163.)

History

# Caught by the Red Lights

*Sherando High School Service Learning Government*

*The Frederick County Sheriff's Department*

by Eric Pfeifer, Chelsey Benitez, Haley Ziese, and  
Kayla Hard

# FCSO & Traffic Safety

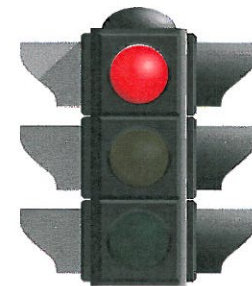
-One of the most important roles of any the sheriff's office is to ensure the safety of roads

*~The most documented collisions in Frederick County occur at intersections in which one party fails to come to a stop at a red light*

**- 638 citations issued for red light violations in 2014**

# Red Light Cameras in Frederick County

- The Frederick County Sheriff's Office is interested in the potential benefits of implementing red light cameras as a tool of *safety enhancement* - **not** revenue generation
- Previously brought up for debate in 2009
  - ~Tabled due to an insufficiency of funds, lack of research, and overall controversy



# Red Light Cameras

-Red light cameras are a modern and widely-used instrument to ensure intersection safety across the United States

~Virginia Code: 1 intersection per 10,000 citizens

~Flat rate charged by third party operator

~Photographic and video evidence is reviewed by three (3) entities



Location: NAK-DEST-02 Westbound Delancy and Stockton Street Newark, NJ (v4.12.18.0)  
Date: Friday 03 February 2012 Time: 07:51:23 Frame: 7 SpeedLimit: 25 MPH  
Lane: 1 Vehicle Speed: 25 MPH RED : 0.21 Elapsed Time: 0.00



Location: NAK-DEST-02 Westbound Delancy and Stockton Street Newark, NJ (v4.12.18.0)  
Date: Friday 03 February 2012 Time: 07:51:24 Frame: 7 SpeedLimit: 25 MPH  
Lane: 1 Vehicle Speed: 25 MPH RED : 1.33 Elapsed Time: 1.11





# Our Task

- Research the pros and cons of implementing red light cameras in Frederick County
  - Only interested in cameras to increase safety, not as a tool to generate revenue
- Research drawn from interviews with other counties in Virginia that have used red light cameras as well as statistical analysis

# Research

*-Six jurisdictions in Virginia are currently utilizing red-light cameras*

- **Albemarle County**
- **Arlington County (4 red-light cameras)**
- **City of Vienna**
- **City of Alexandria**
- **City of Falls Church**
- **City of Virginia Beach**

# The Interview Process

-A series of interviews were conducted with counties implementing red-light cameras to determine their purpose, efficiency, and potential success in Frederick County

*~Unbiased questions*

-Interview with RedFlex, the largest service provide of red light cameras in the United States



# Red Light Camera Effectiveness (Continued)

## **Customer satisfaction & expanding traffic systems**

Counties in Virginia, have been satisfied with red light camera effectiveness and are expanding their systems:

-The City of Fairfax has expanded its program to six intersections since its conception in 1997

*“I believe we have been successful at changing driver behavior, and it shows because the violations at the existing intersections have slowed down.”*

- Police Chief Rick Rappaport, Fairfax City

# Interview Questions

How long have cameras been implemented?

How many cameras have been implemented?

How was it decided where to implement the cameras?

What administrative processes does running the cameras entail?

What private company runs the cameras?

~Financial policies

~Customer support



# Data Analysis

- In addition to interviews, collision statistics were analyzed at specific intersection *before* and *after* the red light cameras were implemented
  - ~Decrease in overall collisions would suggest camera effectiveness
  - ~Potential increase in rear-end collisions - *supported or myth?*

# Red Light Violations in 2013: 5,899

Not Applicable	5	1	9	28	32	34	39	552	457	387	131	5,110	6,785
Other	32	55	710	1,256	1,487	1,608	1,507	15,461	7,860	5,566	2,661	771	38,974
<b>Ran Traffic Control</b>	<b>15</b>	<b>6</b>	<b>79</b>	<b>145</b>	<b>169</b>	<b>212</b>	<b>223</b>	<b>1,962</b>	<b>1,223</b>	<b>1,025</b>	<b>746</b>	<b>94</b>	<b>5,899</b>
Speed To Fast	3	8	126	204	238	234	230	2,086	905	570	147	124	4,875
Lights Not On	0	1	4	2	1	5	3	37	14	9	5	2	63
Avoiding Other Vehicle	0	0	23	57	55	76	70	733	477	333	104	23	1,951
Avoiding Pedestrian	0	0	1	3	3	0	1	25	18	14	7	6	79
Illegal or Improper Parking	0	0	4	11	7	6	8	110	75	64	25	37	347
<b>Total</b>	<b>129</b>	<b>194</b>	<b>2,594</b>	<b>4,869</b>	<b>5,624</b>	<b>6,281</b>	<b>6,360</b>	<b>75,070</b>	<b>52,678</b>	<b>40,012</b>	<b>17,398</b>	<b>11,630</b>	<b>222,839</b>

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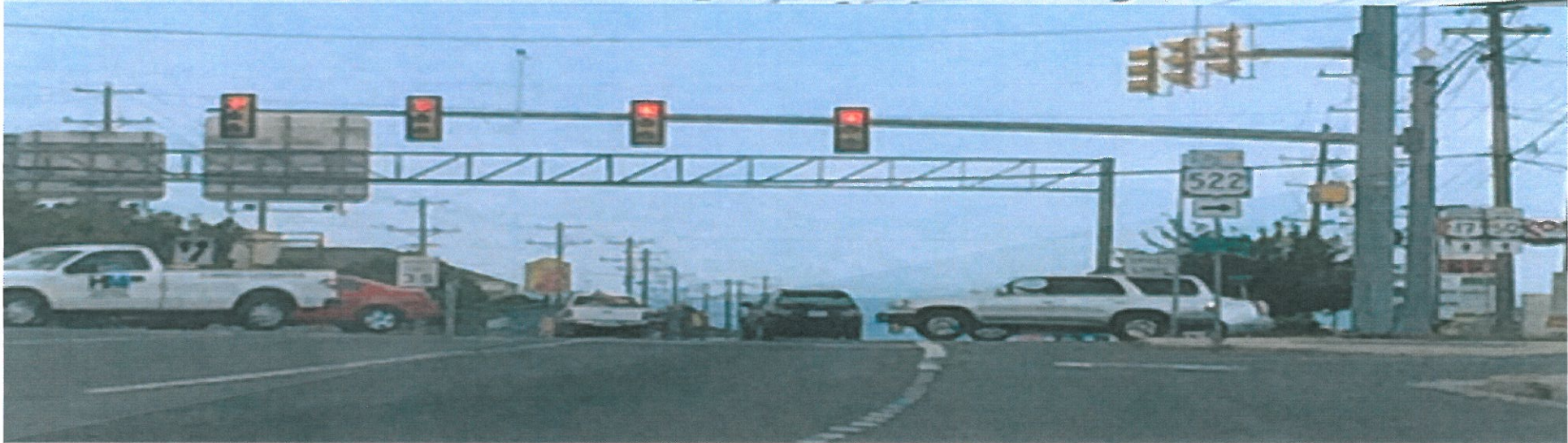
Page 1 of 1

# In 2014: 638

Left of Center - Not Passing	0	0	4	1	4	4	6	61	44	33	23	3	103
Not Applicable	0	0	2	2	5	3	3	60	57	45	15	429	621
<b>Ran Traffic Control</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>26</b>	<b>15</b>	<b>18</b>	<b>20</b>	<b>203</b>	<b>138</b>	<b>114</b>	<b>92</b>	<b>2</b>	<b>638</b>
Speed To Fast	0	0	23	43	58	54	65	548	255	160	37	3	1,246
Improper Passing	0	0	0	2	1	4	5	42	27	29	13	3	126
Lights Not On	0	0	0	1	0	0	0	5	1	2	0	0	9
Avoiding Pedestrian	0	0	0	0	0	0	0	0	2	5	1	1	9
<b>Total</b>	<b>2</b>	<b>13</b>	<b>305</b>	<b>635</b>	<b>721</b>	<b>719</b>	<b>696</b>	<b>8,728</b>	<b>6,493</b>	<b>5,103</b>	<b>2,158</b>	<b>775</b>	<b>26,348</b>

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Page 1 of 1





# RedFlex Survey of Rt. 50 and Rt. 522

## Frederick County, VA 05/15/14

12 hour survey

City	Date	Cross Street	Approach	LT	Through	RT	Total	Comment
Frederick County VA	5/8/2014	RT 522 S -T EC	WB	2	8	10	20	7 hr survey
		RT 522 S -T EC	EB	32	16	0	33	Sur glare or LT light
		RT 522 S -T EC	WB	0	21	51	72	Sur glare or LT light

Total: 129 red light traffic violations

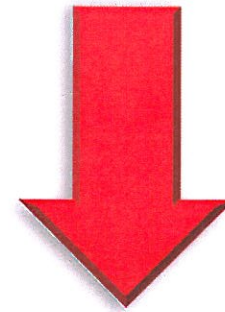
# Red Light Camera Effectiveness

## - Improving safety and modifying driver behavior

Study by the New Jersey Department of Transportation

-After implementing red light cameras...

- ~ Right angle crashes down 86%
- ~ Rear-end crashes down 58%
- ~ Total crashes down 72%



# Special Thanks

- Sheriff Robert Williamson
- Mrs. Tara Woolever
- Mrs. Jennifer McKannan
- Mr. John Nelson
- Ms. Doreen Pauley