Memorandum

CITY OF DALLAS

Date: November 16, 2007

To: Dr. Elba Garcia, Chair
and Members of the Public Safety Committee

Subject: Red Light Camera Enforcement Program Update

The Public Safety Committee will be briefed on the Automated Red Light Camera Enforcement Program and pertinent provisions of the new state law on November 19, 2007.

Ramon F. Miguez, P.E.
Assistant City Manager

Attachments

Red Light Camera Enforcement Program Update

SafeLight
Dallas Stops on Red!

Key Focus Area
Public Safety

Presented to the Public Safety Committee

November 19, 2007

Purpose

- **To provide an overview and update of the program**
- To highlight pertinent provisions of the new state law, including the review of the requirements for:
  - The creation of an Automated Red Light Enforcement commission
  - The designation of the Administrative Adjudication Hearing Officers.

Dallas Safelight Program

Background

- April 06: Ordinance adopted to authorize use of photo enforcement, effective August 2006
- Sept. 06: Contract awarded to install 60 cameras. Completed in June 2007
  - Civil citation is sent to the registered owner of the vehicle - $75 Fine
  - Civil penalty will not impact driver's license or auto insurance
- Sept. 07: Authorized supplemental agreement to add 40 cameras.
  - Installation between Dec. 07 and June 2008.
- Nov. 07: Ordinance amended to conform to state law

The Problem

- **In the U.S., red light runners cause approximately 180,000 injury crashes and nearly 900 fatalities each year**
- In Dallas, more than 28% of accidents at traffic signals were related to red light running in 2006
  - **14 fatalities**
  - **75 serious injuries**
  - **487 minor injuries**

Solution - The 3-"E"s

Engineering

- **Improve Visibility of Signals**
  - Install larger/ brighter signals or place signals over roadway
  - If geometrics require, install warning signs or flashers
- **Update Signal Timings**
  - Determine appropriate duration of yellow time
  - Revise timings to improve progression and minimize congestion
- **Increase Capacity by Adding Lanes**

Solution - The 3-"E"s

Education

Developed a public awareness and education campaign

- **Outreach** through presentations to community
- **Teen Driver Safety** Campaign with Dallas area ISDs
- **TV and Radio Spots** with NASCAR spokesperson and other officials in English and Spanish
- Activities, in conjunction with the **National Campaign to Stop Red Light Running**, during Stop on Red Week in August
- Participate in **Mayor's Back to School Fair**

Solution - The 3-"E"s

Education- Cont'd

- **Link at City's website** www.dallascityhall.com
  - Frequently asked questions and answers
  - Photos and information on the SafeLight press events and activities
  - Information on how to pay on-line
- **Educational brochure** in English and Spanish

Solution - The 3-"E"s

Enforcement

- **Install Automated Enforcement System**
  - Provides the continuous enforcement required to change driver behavior and minimize violations
- **Benefits of Automated Enforcement**
  - **Safety** - Police officers not required to chase vehicle through intersection
  - **Congestion** - No need to block traffic lanes while vehicles are pulled over to issue citation
  - **Free officers to address other community policing issues**

Automated Enforcement – Proven Success

Photo enforcement systems typically reduce right angle crashes at intersections 25 – 30%.

- Washington DC
  - 66% reduction in red light violations
  - 35% reduction in fatalities
- Charlotte, NC
  - 70% reduction in violations
- Wilmington, DE
  - 62% reduction in violations
- Garland, TX
  - 55% reduction in intersection crashes at monitored approaches

These examples are of results obtained after 18-24 months of program implementation

Dallas SafeLight Program—Preliminary Results

Before and After Comparison of Accidents

Total Number of Accidents at 17 Sites

Collision Type	Before Average of six month periods over 3 years	After Six Months	Percent Change
Right Angle or "T" Bone	27.7	7	75% drop
Rear End	4.7	2	57% drop

- Above statistics related to 17 intersections where cameras have been operational for six months
- Due to the random occurrence of accidents, accident studies are typically conducted 18 to 24 months post implementation

Dallas Safelight Program—Preliminary Results

Initial 60 camera installation completed in June 2007

- 165,334 –Number of citations issued to end of October 2007
- Reduced citations
  - 49% - Average reduction in citations issued per location after six-months of operation

See Appendix "A" for specific site results

Dallas Safelight Program

Common Misunderstandings

Myth	Fact
Red Light Program is driven by Revenue	Revenues per camera are going DOWN due to changes in driver behavior, which is the goal of the program. After six months reductions in citations averaged 49%

Dallas Safelight Program

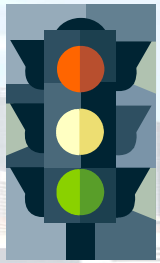
Myth	Fact

Yellow Time has been shortened to increase revenue	▪ The City has NOT reduced the yellow time at traffic signals with red-light cameras.
	▪ Engineers follow formula published by the Institute of Transportation Engineers
	  ▪ Formula accounts for speed and a comfortable deceleration rate
	  ▪ City collected speed data on all approaches to determine 85 percentile speed

Dallas Safelight Program

Myth	Fact

Research Reports Recommend 1 second increase in yellow time	▪ **Research reports do NOT recommend wholesale increases in yellow time** – it will not address the need to change driver behavior
	  ▪ See Appendix "B" – emails from Texas Transportation Institute (TTI) and Institute of Highway Safety
	▪ **Research by the Insurance Institute for Highway Safety studied increases in yellow time at intersections that did not meet the ITE yellow formula**
	  ▪ See Appendix "B" – email from Insurance Institute for Highway Safety



State Law Highlights

Pertinent program changes due to state law

- Installation of photo enforced signs at intersections
- Requirements for initial and annual reporting to the state of the number and type of accident at each location
- Creation of the Automated Red Light Enforcement Commission
- Designation of administrative adjudication hearing officers by City Council from a list of persons recommended by the City Manager
- 50% net revenue sharing provision

Creation of the Automated Red Light Enforcement Commission

Commission Composition and task

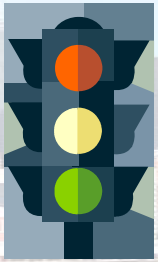
- **Must be created by Ordinance**
- **Must consist of 15 members with one person appointed by <u>each</u> member of the City Council.**
- Purpose of commission is to advise on the installation and operation of the camera systems by:
  - **Reviewing reports of traffic engineering studies required for each camera location.**
  - **Reviewing camera placements to help ensure placement locations are not based on the ethnic or socio-economic characteristics of an area**

Designation of Adjudication Hearing Officers

Officer Responsibilities and Appointments

- Perform adjudication of civil citations:
  - By Mail or through a scheduled hearing
  - Review recorded images during proceeding
  - Enter a finding on liability on contested citations after hearing the defense and evidence presented
- Recommend appointment of current officer staff*

*See Appendix "C" for names and qualifications



Administrative Adjudication Hearing Officers

Minimum Qualifications Required:

- Four year degree in business, public relations, law enforcement, or related area
- Four years experience in legal/administrative fields
- Demonstrates sound judgment and skill in analysis and presentation of cases or complex issues
- Able to relate to and work well with others in stressful situations
- Basic knowledge of law enforcement
- Experience in administrative adjudication process
- Understanding of Dallas City Code and Safelight Program
- Ability to analyze and make a judgment based on the presentation of evidence and application of the law

50% Revenue Sharing Provision

$0 - Amount of shared revenue due to the state for FY06/07

- Revenue sharing effective beginning September 1, 2007
- Expenses for program implementation exceed revenue received during the month of September 2007

Next Steps

- Approve list (Appendix “C”) of recommended Administrative Adjudication Hearing Officers at the December 12, 2007 Council Meeting
- Authorize ordinance amending the City Code for the creation of the Automated Red Light Enforcement Commission.
- Update Public Safety Committee in 6 months

Appendix A

AVERAGE CITATIONS PER CAMERA SITE PER DAY

#	Location	Site In Citations	Jan CITATIONS PER DAY	Feb CITATIONS PER DAY	Mar CITATIONS PER DAY	Apr CITATIONS PER DAY	May CITATIONS PER DAY	Jun CITATIONS PER DAY	Jul CITATIONS PER DAY	Aug CITATIONS PER DAY	FIRST MONTH "OPTIMIZED" TO LAST MONTH COMPARISON
1	Forest Lane EB @ Abrams Rd	01/15/2007	16.53	16.00	18.58	15.17	17.48	16.47	12.26	14.54	-12.04%
2	W. Camp Wisdom Rd WB @ S. Westmoreland Av	01/15/2007	18.82	18.36	17.16	15.57	16.74	15.47	13.94	9.90	-47.41%
3	Abrams Rd SB @ Forest Lane	01/15/2007	7.65	8.89	9.81	8.50	8.29	4.47	2.74	3.68	-51.88%
4	Commerce St. EB @ S. Central Expressway	01/15/2007	27.29	23.00	20.06	18.93	19.84	22.10	14.74	16.03	-41.26%
5	Lemmon Ave SB @ W Mockingbird Ln	01/15/2007	12.76	10.68	11.52	10.03	9.26	6.07	5.35	4.27	-66.53%
6	N.Beckley Ave SB @ W. Colorado Blvd	01/15/2007	34.82	31.71	33.77	26.00	20.10	19.87	20.84	14.87	-57.31%
7	W. Jefferson Blvd EB @ S Tyler St.	01/15/2007	28.82	28.89	25.16	21.13	20.61	20.40	13.13	10.44	-63.76%
8	S Tyler St. NB @ W. Jefferson Blvd	01/15/2007	7.71	7.18	5.55	5.70	5.84	7.23	5.58	4.96	-35.60%
9	Ferguson Rd SB @ Gus Thomasson	01/15/2007	22.53	25.14	17.68	16.53	14.48	12.83	8.65	9.26	-58.91%
10	Miller Rd WB @ Plano Rd	01/15/2007	20.82	21.50	18.55	15.40	15.16	10.07	8.77	8.23	-60.50%
11	Fitzhugh Ave SB (EB) @ Gaston Ave	01/15/2007	8.24	9.96	15.68	10.23	7.19	6.37	4.87	6.55	-20.48%
12	Marsh Ln SB @ Frankford Rd	01/15/2007	0.65	1.07	1.52	1.60	1.52	1.23	1.26	1.35	26.45%
13	Coit Rd NB @ Banner Dr	01/31/2007	17.00	12.50	11.13	5.93	11.48	10.07	8.74	9.53	-43.92%
14	E Mockingbird Ln WB @ Greenville Ave	01/31/2007	5.00	4.71	4.42	3.40	3.16	2.37	3.26	3.39	-32.26%
15	Abrams Rd NB @ E. Mockingbird Ln	01/31/2007	14.00	15.36	12.61	13.67	10.94	6.90	5.97	7.60	-45.71%
16	Greenville Ave NB @ Royal Rd	01/31/2007	23.00	18.43	17.19	12.90	12.52	7.33	4.19	4.06	-82.33%
17	Gaston Ave EB @ Peak Rd	01/31/2007	5.00	4.39	5.45	5.83	5.32	4.60	3.42	2.16	-56.77%
18	Montfort SB @ LBJ (IH 635) WBSR	02/10/2007	N/A	80.89	71.16	63.63	55.10	49.27	38.19	44.59	-44.88%
19	Oak Lawn Ave EB @ Lemmon Ave	02/15/2007	N/A	9.50	9.55	7.27	7.06	3.63	1.68	5.10	-46.32%
20	Graham Blvd EB @ Lindsley Ave	02/17/2007	N/A	12.83	10.00	9.13	8.16	8.23	5.52	4.87	-62.08%
21	LBJ (IH 635) Service Rd WB @ Coit Rd	02/21/2007	N/A	13.38	13.61	13.37	7.61	10.77	10.90	9.48	-29.09%
22	Lemmon Ave NB @ Oak Lawn Ave	02/24/2007	N/A	14.60	14.90	10.87	6.03	7.47	8.52	8.10	-44.54%
23	S. Westmoreland Dr SB @ Illinois Rd	02/27/2007	N/A	7.50	14.94	7.20	8.13	7.97	5.26	5.32	-64.36%
24	I-635 (LBJ) Fwy WB @ Preston Rd	03/03/2007	N/A	N/A	14.14	13.83	13.65	14.10	9.16	9.84	-30.41%
25	I-635 (LBJ) Fwy EB @ Montfort Dr	03/08/2007	N/A	N/A	9.46	7.70	8.29	6.43	5.61	5.55	-41.34%
26	Preston Rd SB @ I-635 (LBJ) Fwy	03/08/2007	N/A	N/A	67.50	56.93	52.71	41.03	36.84	27.74	-58.90%
27	Second Ave SB @ Bruton Rd	03/16/2007	N/A	N/A	4.94	12.50	13.10	8.13	7.42	6.60	-47.20%
28	S. Marsalis Rd SB @ S. RL Thornton Fwy	03/16/2007	N/A	N/A	44.06	52.37	32.94	43.23	18.65	4.71	-89.31%
29	S. RL Thornton Fwy WB @ S. Marsalis Rd	03/16/2007	N/A	N/A	14.38	30.43	20.23	14.07	6.68	7.90	-74.03%
30	S. Buckner Blvd NB @ Bruton Rd	03/16/2007	N/A	N/A	55.75	58.30	52.58	38.80	13.55	14.32	-74.31%
31	Lake June EB @ Buckner Blvd	03/17/2007	N/A	N/A	12.27	11.30	8.94	7.27	4.35	5.84	-52.40%
32	N. Central Expressway NB @ Lemmon Ave	03/27/2007	N/A	N/A	6.80	14.33	16.06	15.53	17.48	10.97	-23.48%
33	Ledbetter EB @ S. Lancaster Rd	03/31/2007	N/A	N/A	90.00	42.17	34.87	27.57	26.00	19.32	-78.53%
34	Woodall Rodgers Fwy WB @ Olive St.	03/31/2007	N/A	N/A	16.00	31.07	26.65	15.93	19.06	15.52	-50.06%
35	Garland SB @ Northwest Hwy	03/31/2007	N/A	N/A	1.00	3.97	3.58	3.17	2.77	2.77	-30.06%
36	Griffin St. W. WB @ St. Paul St.	03/31/2007	N/A	N/A	12.00	9.93	11.39	11.47	5.16	2.35	-80.38%
											-49.22%

Appendix B-1 - Email from Author of Paper Published by Insurance Institute for Highway Safety

From: Richard Retting
To: Ramirez, Elizabeth;
Subject: FW: Story on red light cameras
Date: Friday, November 16, 2007 3:33:45 PM

Beth,

Below is the response our media coordinator sent to Paul Adrian in response to his story. Please let me know if I can be of further assistance.

Richard

Paul,

I'm concerned that the online version of the story about red light cameras in Dallas may lead readers, including policy makers, to the wrong conclusion about the Insurance Institute for Highway Safety's position on yellow light timing. The section about the Institute's Philadelphia study is followed by quote from David Willis which leaves the impression that the Institute recommends in all cases to lengthen yellow lights to reduce red light running. This is emphatically not the case.

The Institute agrees with Dallas traffic engineer, Beth Ramirez, that ITE guidelines are appropriate for urban intersections. Once ITE guidelines are satisfied, there is no evidence additional yellow timing reduces crashes. In fact, excessive yellow timing may increase rear-end crashes because of the elongated decision period in which some drivers stop and others do not. And excessive yellow timing must be taken from other phases of the traffic signal. If taken from the green phase, capacity is reduced. If taken from the all-red phase, safety may be compromised.

The yellow lights in Philadelphia were lengthened at the beginning of our study because the lights at the intersections did not meet ITE guidelines. Once lengthened, they met the guidelines and we did not

recommend lengthening them further.

I would appreciate if this misleading information is clarified.

Thank you for your attention to this.

Sincerely,

Russ Rader
Insurance Institute for Highway Safety
(703) 247-1530

Appendix B-2 - Email from Author of TTI research reports on Red Light Running

From: Bonneson, James
To: Ramirez, Elizabeth;
cc: Seymour, Ed;
Subject: 0-4196 & 0-4027
Date: Wednesday, October 31, 2007 5:26:55 PM

Elizabeth:

The reports and products of research projects FHWA/TX-05/0-4196 and 0-4027 were written for engineering audiences. Readers who do not have this training and experience may not be able to properly interpret the report contents. Some readers have incorrectly interpreted the findings in these reports as recommendations.

The research report FHWA/TX-05/0-4196-P1, “Red-Light-Running Handbook: An Engineer’s Guide to Reducing Red-Light-related Crashes” published by the Texas Transportation Institute, recommends increasing the yellow time as a potential countermeasure only when it has been determined by an engineer that violations/crashes are related to drivers being incapable of stopping. This is illustrated on pages 45-46, Figure 16 and Table 11, under the countermeasures for “Incapable of Stop”. Increasing yellow time should not be used as a countermeasure to address violations/crashes due to: 1) inattentive drivers, 2) unnecessary delays, or 3) congestion/dense traffic.

The kinematic yellow time model recommended by the Institute of Transportation Engineers Technical Council is a well established equation for computing yellow time when the traffic conditions for the specific intersection are consistent with the variables used the equation (i.e. grade adjustment, speed, reaction time, and deceleration rates).

The focus of our research was on engineering solutions to problem intersections. However, we did look at "area-wide" issues and treatments. I should specifically point out our guidance in Table 13 of 0-4196-3 where an area-wide countermeasure is to "bring yellow duration into compliance with policy." Note that we do not suggest that the yellow interval should be increased on an area-wide basis. If an agency were to do this (say, add 1.0 s to all yellow intervals in the city), then drivers will likely adapt and no benefit will be derived. As you know, countermeasures (e.g., increase yellow) are most effective when applied on an intersection-by-intersection, case-by-case basis and based on an engineering evaluation of the conditions present.

Page 4D-16 of the Texas MUTCD (2006) indicates that the yellow interval

duration can range from 3 to 6 s, with larger values in this range used for higher speed conditions. We concur with this recommendation. Nothing in our research indicated that this guidance was inappropriate.

With regard to your specific question about a recommended "range of 3.5 to 5 seconds of yellow time." My review of our conclusions (i.e., 0-4027-2 Chapter 6, p. 6-6; and 0-4196-2 Chapter 6 p. 6-6 indicates that we did not make any recommendation regarding the range of yellow duration. Any commentary in the reports related to findings from our data or a review of previous research (as found in the sections preceding the Conclusions) reflect our observations or those of other researchers. Findings are NOT recommendations.

I hope these thoughts help to better explain the information in our research reports.

Regards,
Jim Bonneson

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James A. Bonneson, Ph.D., P.E.
Texas Transportation Institute
TAMU 3135
College Station, TX 77843
979 845-9906 Fax: 979 845-6254

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Appendix B-3

From: Stockton, Bill
To: Ramirez, Elizabeth;
cc: Seymour, Ed;
Subject: Fox 4 Report on Yellow Light Intervals
Date: Thursday, November 15, 2007 3:14:46 PM
Attachments: Stockton, Bill.vcf

Ms. Ramirez,

You asked me today about the interviews given and material we provided to Paul Adrian at Fox 4. There are three aspects of this issue that I would like to call to your attention. First, and foremost, our research emphasizes that extending the yellow interval is an engineering countermeasure that should be employed when the analysis of the intersection shows that factors such as approach speed, grade or surface make it difficult to stop within the existing yellow interval. If those or other engineering findings show that the yellow interval is too short, then extending it would be appropriate. Our research DID NOT SHOW that extending the yellow interval of an appropriately timed signal would have any benefit.

Our study did not examine the ITE practice, which we have no reason to question. The long and broad experience of our profession with the ITE practice and its use speaks for itself. To my knowledge, no one has documented a superior approach.

Finally, the procedures recommended in our report clearly state that the decision on which countermeasures to employ – engineering or enforcement – can only be made on a case by case basis by the engineer. Once the engineer has determined that the existing yellow interval is appropriate for the relevant conditions, we did not recommend extending the yellow interval. Under those circumstances we did indicate that pursuit of enforcement countermeasures, including cameras, would be an appropriate first action. We provided that information to Mr. Adrian, but it was not included in his story.

If you have further questions about this research or its application, please let me know.

Bill

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Wm. R. Stockton, P.E., Ph.D.

Associate Agency Director

Texas Transportation Institute

Texas A&M University System

979-845-9947

<<Stockton, Bill.vcf>>

Recommended List of Administrative Adjudication Hearing Officers

Appendix "C"

Administrative Adjudication Hearing Officers

Thelma Jones *- Chief Hearing Officer*
Education - Bachelor of Business Administration from University of Martin, Tennessee. Major in Marketing
Experience - **Chief Administrative Adjudication Hearing Officer** for the City of Dallas since 1998. Administrative Adjudication Hearing Officer from 1994-1998

Esther Tripp
Education - Bachelor of Arts from Florida State University, major in Mass Communication, minor in Journalism. Associate Degree in English from Tyler Junior College in Tyler, Texas
Experience - **Administrative Adjudication Hearing Officer** from 1997-2007. Supervisor of Parking Enforcement for the City of Dallas from 1986-1997.

Chuma Ajaegbu
Education - Bachelor Degree from Obafemi Awolowo University in Nigeria. Master Degree in Law from University of Lagos, Nigeria.
Experience - **Administrative Adjudication Hearing Officer** for the City of Dallas since 2006. Practiced law for 17 years.

Terrence Howard
Education - Bachelor of Arts form Tarleton State University. Associate Degree from Tarrant County College.
Experience - **Administrative Adjudication Hearing Officer** for the City of Dallas since 2006. General Manager and HR Manager for AMC Theatres from 1999-2006

Mail Hearing Officers

Mail Hearing Officer Minimum Qualifications*: 2 years of college or equivalent, with course work in Business, Public Administration, law enforcement, quasi-legal or administrative field. Demonstrate ability to interact with public and city staff, research information and make decisions.*

Mary Pagan
Education - Courses toward degree in Business Administration at El Centro College.
Experience - **Mail Hearing Officer** for the City of Dallas since 2003. Office Assistant for the Adjudication Office from 1993-2003.

Betty West
Experience - **Mail Hearing Officer** for the City of Dallas since 2006. Experienced researcher for debt accounts for collection for the City of Dallas Water Utilities Department.