

# Automated Red Light Enforcement Program Update

Council Briefing  
November 15, 2006

# Overview

- Benefits of Red Light Enforcement
- Contract requirements
- System Acceptance Test Requirements
- Site selection process and listing of potential camera sites
- Implementation Schedule

# Benefits

- The Federal Highway Administration reports that intersections nationwide average a 25% reduction in right-angle crashes after installing photo enforcement systems.
- Provides continual enforcement at high-accident locations.
- Reduces potential for congestion and secondary crashes.
- Photo evidence reduces the number of contested tickets and time spent in municipal court.

# ACS Contract Terms

- Total contract amount **\$13,291,083**
- 5 year term with one 5 year option to renew
- \$3,799 flat monthly fee for each camera
  - fee includes providing equipment, citation processing and collections regardless of number of violations per month
- Installation of 60 cameras by end of April 2007
- \$30.00 delinquent collection fee
  - collection process begins 45 days after default on 2 late notices
- Public Awareness Campaign at no additional cost

# Termination Plans

- **Termination plan for non-appropriation of funds**
  - No cancellation fees, City pays for services provided to date of termination
  - City may not obtain similar services from another vendor for one year following termination for non-appropriation
- **Termination plan for convenience**
  - Cancellation fee
    - Payment of a calculated amount based on a pro-rata percentage of the unamortized costs (based on the 60-month contract term) for each installed red light camera
    - Payment obligations limited to 90% of the actual gross collections from the program, if 90% does not cover costs, then ACS has right to oversee City's removal of cameras and equipment

# Termination Plans

- **Termination plan due to legislative changes**
  - Changes that result in the City being unable to use cameras in the enforcement of red light violations or cause program to experience a negative revenue flow
  - No cancellation fees
  - ACS has right to oversee City's removal of cameras and equipment
  - Parties may mutually agree to revise terms of contract to resolve negative revenue flows
- **Under all termination plans**
  - City pays services required to complete outstanding citations/collections

# Other Contract Terms

- **Camera Maintenance Requirements**

- Liquidated damages for defective equipment not replaced or repaired within 72 hours of notification
  - \$100/day for up to 5 days, \$500/day after the initial 5 days, and \$1000/day for each day past the 10<sup>th</sup> day

- **Collections Warranty**

- 70% minimum collection rate for all tickets issued

- **Installation Penalties and Credits**

- Penalty per camera per day for calendar days each camera is installed late at the fault of ACS
  - \$200/day for 1<sup>st</sup> 30 days, \$400/day thereafter
- Per day credits for early delivery can be used in exchange for late delivery at other camera sites

# Acceptance Test Plan

## System Testing

- Based on specifications required in RFCSP
- Only conducted on first 2 sites to verify all aspects of the system perform to specifications
- Data analysis, image and video capturing, issuance rate, image transfer, citation generation and disbursement testing for a period of 30 days



# Acceptance Test Plan

## System Testing

- **Image and Video Capturing**
  - Monitor up to 4 lanes simultaneously traveling in the same direction, including turn lanes
  - Capture 2 color digital images per violating vehicle under various speed thresholds (5, 10 and 15 MPH)
  - Capture 12 seconds of recorded video per violation
  - Include in each image a data bar that depicts the following violation data:
    - Date and time of the violation
    - Length of time between Image 1 and Image 2 of a violating vehicle
    - Duration of red light phase
  - Capture one clear and legible image of the vehicle license plate

# Acceptance Test Plan

## System Testing

- **Issuance Rate**

- Demonstrate an overall Issuance Rate of 80% of the total possible/controllable violations through ACS' initial review process for a minimum of 15 calendar days of the entire test period

- **Image Transfer**

- Violation images, video, and data captured within a day are successfully transferred throughout the day or at the end of the day
- Violations images, video, and data are removed after the successful transfer

# Acceptance Test Plan

## System Testing

- **Citation Generation and Disbursement**
  - A citation was generated for every violation issued by the Police or other designated CLIENT personnel
  - The citation includes all required data, including one set of images and a license plate image
  - All images have date and time stamps of the violation
  - All issued citations are mailed within 7 days of the violation event date

# Acceptance Test Plan



ACS camera system at Centerville and Northwest in Garland Texas.  
**Cabinet**, **Camera**, **Speed detectors** and **Camera flasher**.

## Site Activation Testing

- Conducted at all camera sites prior to start of operations for the approach.
  - Equipment operates in accordance w/ manufacturer specifications
  - Communications link transfers data without errors
  - Poles, conduit, and electrical work meet city codes

# Dallas Site Selection Process

- **Identified High Crash Intersections**
  - Intersections with red-light related crash trends
    - Reviewed police reports for past two years
    - Constructed crash diagrams to identify trends
  - Intersections with high violation rates
    - History of citations issued by police
    - Typically high volume and congested intersections
    - “Last” signals tend to show bad driver behavior
      - Last signal before before freeway on-ramp
      - Last signal in congested corridor
  - Improvements measured by reductions in crashes and violations at the intersection

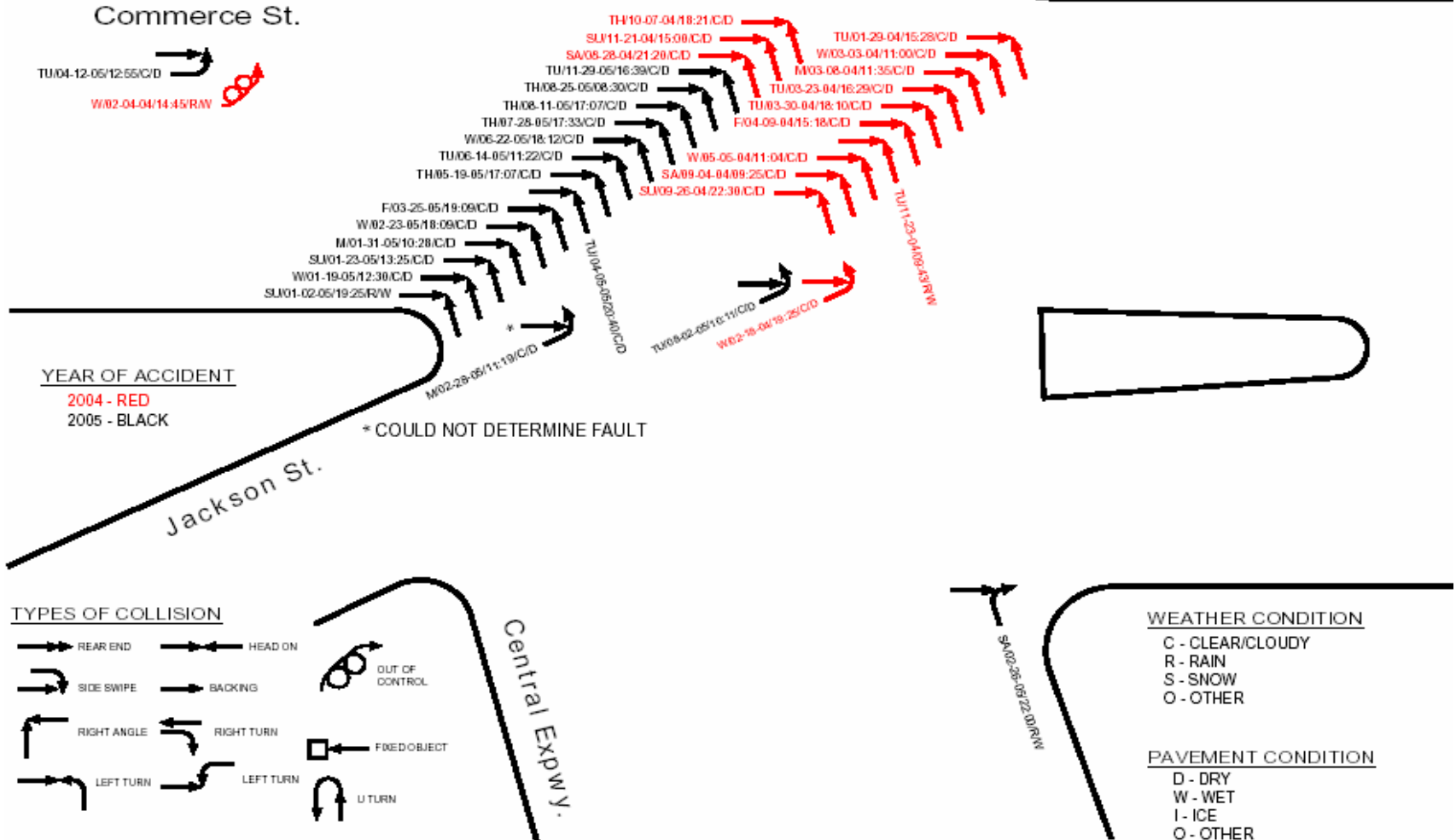
# Example of crash diagram used to identify red light crash trends

## DESCRIPTION

D/MN-DD-YR/HH:MN/W/P  
 D - DAY OF WEEK  
 MN - MONTH  
 YR - YEAR  
 DD - DAY OF MONTH  
 HH - HOUR (24 HOUR TIME)  
 MN - MINUTE  
 W - WEATHER CONDITION  
 P - PAVEMENT CONDITION

## DAY OF THE WEEK CODE

SU - SUNDAY  
 M - MONDAY  
 T - TUESDAY  
 W - WEDNESDAY  
 TH - THURSDAY  
 F - FRIDAY  
 SA - SATURDAY



**30 red light related crashes over a two year period.**

# Dallas Site Selection Process

- **Identified Behavior Modification Intersections**
  - Other cities found camera sites have a “halo” affect on surrounding intersections
  - Sites selected to balance placement geographically, maximize public awareness and change driver behavior city-wide
  - Improvements will be measured by cumulative reductions in red-light related crashes and violations within the surrounding area

# Dallas Site Selection Process

- **Potential Site List**

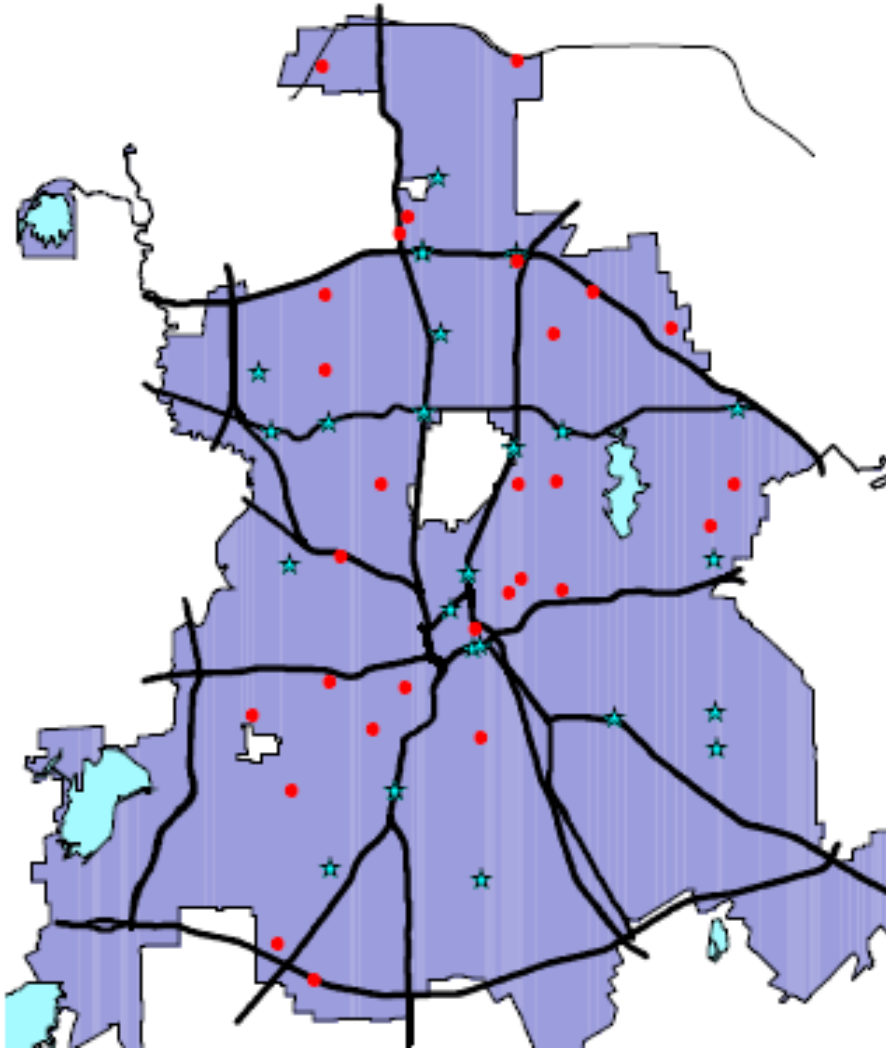
- List will not be finalized until December
  - Potential sites require constructability review by contractor
  - Potential sites located on the state highway system require review and authorization by TxDOT
    - Existing Municipal Maintenance Agreement (MMA) defines City and TxDOT maintenance responsibilities on state highways within the Dallas City limits
    - Existing MMA will be amended to authorize red light camera operation at authorized intersections
- More than 60 camera sites identified
  - High crash intersections may require multiple cameras
  - Some sites may be eliminated due to construction issues (i.e. underground utilities, driveways, sidewalk clearances)



# Potential Sites For Cameras

## Traffic Signal Site Legend:

- OFF SYSTEM
- ★ ON SYSTEM



## ON SYSTEM LOCATIONS

ABRAMS @ NORTHWEST  
 BELT LINE @ PRESTON  
 BRUTON @ BUCKNER  
 BRUTON @ SECOND  
 BUCKNER @ JOHN WEST  
 BUCKNER @ LAKE JUNE  
 CENTRAL @ COMMERCE  
 CENTRAL @ LEMMON  
 CENTRAL @ LOVERS  
 COCKRELL HILL @ DAVIS  
 COIT @ L B J  
 DALLAS N TOLLWAY @ NORTHWEST  
 GARLAND @ NORTHWEST  
 HAMPTON @ LEDBETTER  
 HARRY HINES @ NORTHWEST  
 HARRY HINES @ WALNUT HILL  
 HARWOOD @ R L THORNTON  
 ILLINOIS @ R L THORNTON  
 INWOOD @ L B J  
 INWOOD @ STEMMONS  
 IRVING @ MOCKINGBIRD  
 L B J @ MONTFORT  
 L B J @ PRESTON  
 LANCASTER @ LEDBETTER  
 LEMMON @ NORTHWEST  
 MARSALIS @ R L THORNTON  
 MUNGER @ R L THORNTON  
 NORTHWEST @ WALTON WALKER  
 OLIVE @ WOODALL RODGERS  
 PRESTON @ ROYAL

## OFF-SYSTEM LOCATIONS

ABRAMS @ FOREST  
 ABRAMS @ MOCKINGBIRD  
 ALPHA @ DALLAS  
 BANNER @ COIT  
 BECKLEY @ COLORADO  
 CAMP WISDOM @ WESTMORELAND  
 CEDAR CREST @ KIEST  
 COIT @ FRANKFORD  
 FERGUSON @ GUS THOMASSON  
 FERGUSON @ PEAVY  
 FITZHUGH @ GASTON  
 FOREST @ MARSH  
 FORT WORTH @ HAMPTON  
 FRANKFORD @ MARSH  
 GASTON @ PEAK  
 GRAHAM @ LINDSLEY  
 GREENVILLE @ MOCKINGBIRD  
 GREENVILLE @ ROYAL  
 GRIFFIN @ ST PAUL  
 ILLINOIS @ WESTMORELAND  
 IRVING @ INWOOD  
 JEFFERSON @ TYLER  
 LEMMON @ MOCKINGBIRD  
 MARSH @ WALNUT HILL  
 MILLER @ PLANO  
 NOEL @ SPRING VALLEY  
 OLD HICKORY @ WHEATLAND

# Other Site Considerations

- **“Dummy” camera sites**
  - Contract includes ability to install dummy cameras
  - Deploy after results of 60 camera system determined
- **Moving or rotating camera sites**
  - Contract includes price agreement to move or rotate camera
  - Public awareness campaign will make public aware that sites can be rotated
  - Contributes to further reductions citywide because drivers will assume cameras could be anywhere

# Implementation Schedule

## Camera System

October 31	Notice to proceed issued
November 17	Public awareness campaign plan submitted for City approval
December 6	<ul style="list-style-type: none"><li>- 4 sites installed</li><li>- 30-day test period begins</li><li>- Warnings issued</li></ul>
January 9	<ul style="list-style-type: none"><li>- Kickoff program</li><li>- 15 camera sites operational</li><li>- City begins issuing citations</li></ul>
April 27	60 camera sites operational

# Implementation Schedule

## Staffing

- Oct 23      Positions advertised
- 1 Manager
  - 4 Police Officers
  - 5 Adjudication Hearing Officers
  - 2 Office Assistants
- Nov 20      Interviews begin
- Dec 16      Back office operation setup and staff training

Office reconfiguration plans in progress to accommodate additional staff

# Site Selection Schedule

- Nov 3      Submitted initial list of sites to ACS for constructability review
- Nov 10      - List of off-system locations finalized  
- List of on-system locations sent to TxDOT for approval
- Nov 24      TxDOT completes on-system authorizations
- Dec 13      Request Council approval to amend existing Municipal Maintenance Agreement with TxDOT to include operation of Red Light Cameras at authorized sites