

**Automated Red Light Running (RLR) Camera
Traffic Enforcement Systems**

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1. INTRODUCTION

Public Act 94-0795, which was signed on May 22, 2006 and took effect upon signature of the Governor, provides that a governmental agency in a municipality or county may establish an automated traffic law enforcement system that produces a recorded image of a motor vehicle entering an intersection against a red signal indication and is designed to obtain a clear recorded image of the vehicle and the vehicle's license plate. The installation of RLR Camera Systems may be established in the counties of Cook, DuPage, Kane, Lake, Madison, McHenry, St. Clair, and Will Counties and in municipalities located within those counties only.

This document has been prepared by the Lake County Division of Transportation (LCDOT) to assist local jurisdictions in the procedures required for the installation of automated traffic law enforcement systems by LCDOT Permit. A permit will be required for all RLR Camera Systems where work is proposed within a county highway right-of-way at any county signalized approach or signalized intersection under LCDOT jurisdiction. The permit and fees will be processed under the most current edition of the Lake County Utility and Facility Placement Ordinance and the requirements of this policy.

If work is planned at an IDOT or local agency intersection where LCDOT has maintenance of the traffic signal by way of an agreement, LCDOT shall be allowed to review the proposed work in accordance with the agreement; a permit from LCDOT will not be required.

2. OVERVIEW

Enhanced traffic safety is the principal aim of the Automated Traffic Law Enforcement Systems Program. RLR Camera Systems shall be installed only where a safety problem with red light running has been documented and alternative countermeasures have been implemented and documented.

The Permit Applicant is the local municipality requesting authorization to install and operate a RLR Camera System within a county highway right-of-way on any county signalized approach or signalized intersection under LCDOT jurisdiction.

3. RLR CAMERA SYSTEM DESCRIPTION

RLR Cameras monitor the movement of traffic at designated traffic signal locations and the status (or color) of the traffic signal indication on the approach. Movement detectors check for the passage of vehicles into the intersection and, if the traffic signal phase condition is red, cause pole mounted cameras to record images of the vehicle and the vehicle's license plate.

RLR Camera Systems shall differentiate between vehicles stopping slightly beyond the designated stop bar, vehicles making a legal right turn on red after stopping and those vehicles running a red light.

4. ELIGIBLE LOCATIONS FOR RLR CAMERA SYSTEMS

Signalized intersections that are eligible for RLR Camera Systems include all the following characteristics:

- Crashes attributable to red light violations.
- Documented history of red light violations where corrective actions have been previously implemented and have proved to be ineffective.
- Traffic signal heads have 12-inch displays with LED optics. (Signals that do not have 12-inch LED displays must be brought up to current LCDOT standards by the Permit Applicant.)
- Mast arm poles are used to mount signal heads on far side of each approach leg that will be monitored.
- A minimum of 3 signal displays exists for through movements and 2 signal displays for left turning movements.
- Signal indication sight distance meets Manual on Uniform Traffic Control Devices (MUTCD) minimums.

5. RESTRICTED LOCATIONS

Signalized intersections that are ineligible for RLR Cameras may include the following characteristics:

- Traffic signal is interconnected to railroad crossing devices.
- Installation of RLR Camera equipment that would reduce the existing sight distance of traffic signal devices, signage, or adversely impacts pedestrian facilities.
- Where installation of RLR Camera equipment cannot meet LCDOT or IDOT roadway set-back minimums or other LCDOT or IDOT construction requirements.

Additional restrictions may be identified at a later date. LCDOT may notify the Permit Applicant of changes that may affect them.

6. JUSTIFICATION

The Permit Applicant shall prepare a RLR Camera System Justification Report for the locations where the municipality wishes to establish a RLR Camera System. The Justification Report at a minimum shall include the following:

- Intersection location, including street names, county route numbers, state route numbers, municipality, and county.
- Brief geometric description of the intersection with a condition diagram showing land usage and intersection geometric data.
- Crash data, crash reports and collision diagrams, for the most recent three (3) year period. Crash data shall include crash type, specifically *left turn*, *angle* and *rear end* crashes.
- Average daily and peak period traffic volumes.

- Approach speeds to include the average speed, 10 mph pace speed, 15th, 50th, 85th and 95th percentile speeds and the current speed limit, and the 10 mile per hour violation rate.
- Existing traffic control devices, including signal head displays, location, phasing, if the traffic signal is part of a central system, closed loop system or interconnected to adjacent railroad crossing control devices.
- Information concerning bicycle and pedestrian conditions at the intersection.
- A letter of concurrence for the use of RLR Cameras from a representative of the roadway authority having jurisdiction of the approaching roadway if other than the Permit Applicant and if other than the county.
- A letter from the chief of the municipal law enforcement agency certifying that the intersections proposed for RLR Camera Systems have experienced red light violations, prior steps used to reduce red light running violations, and crashes have resulted from red light running violations. This letter shall also include a statement of concurrence for the use of automated RLR Camera Systems.
- The report shall include a comparison of crashes/injuries of all signalized intersections within the community. Only those locations, which have significantly higher crash or injury rates correctable crashes, will be considered for applicable candidates for Automated RLR Camera Traffic Enforcement System installation.

7. SUBMITTAL REQUIREMENTS FOR APPROVED RLR CAMERA SYSTEM INSTALLATION

The Permit Applicant shall submit to the LCDOT the following items for consideration:

- The Justification Report for RLR Camera System Installation.
- Detailed construction plans showing all proposed RLR Camera System and existing traffic signal equipment, as outlined in the LCDOT and IDOT Traffic Signal Design Guidelines.
- Signing plans must include existing and proposed signing in accordance with the MUTCD standards.
- Manufacturer literature and wiring diagrams.
- Description of how the RLR Camera System will be operated and maintained.
- A signed Municipal Utility/Facility Acceptance on the most current County Highway form (an illustration of the standard LCDOT form is attached as **Exhibit A**). All of the General Conditions outlined on the Municipal Acceptance form are made part of the permit.
- Detailed information on how the municipality will conduct the Public Information Campaign.

The traffic signal clearance intervals shall meet or exceed the minimums set by the MUTCD. The LCDOT will verify clearance intervals upon request for signals under the jurisdiction of Lake County. The yellow change and all-red interval timings are determined and set by LCDOT and are subject to change as warranted by LCDOT without notice to the Permit Applicant.

8. SIGNING REQUIREMENTS

The “Red Light Photo Enforced” signs (R10-I104, 36” x 36”) shall be posted in advance of affected intersection approach, and within the RLR enforcement intersection, typically on the far right traffic signal pole or mast arm, indicating the presence of RLR Cameras at the intersection. The Permit Applicant shall provide, install, and maintain the signs to LCDOT and MUTCD standards and requirements. If the permitted signs are found not to comply with the LCDOT or MUTCD requirements, they shall be promptly replaced or the system operation shall be suspended until such signs are replaced. The Permit Applicant shall coordinate with the LCDOT prior to any sign installation. The R10-I104 “Red Light Photo Enforced” signs shall be installed at or before the scheduled activation of the RLR Camera System. The sign installations shall have orange warning flags attached for the first 30 days of actual enforcement operation of the RLR Camera System.

9. OPERATIONAL REQUIREMENTS

To minimize the impact on the county highway system, RLR Camera Systems shall not interfere or affect the operation of any traffic control device. The following items shall be required:

- Electrical service for the RLR Camera System shall come from the local electrical utility company, not from the traffic signal, other state, or county facilities.
- To obtain status of the traffic signals, miniature current transformers may be installed on yellow and red signal circuits. RLR Camera System circuitry shall not be interconnected to any traffic signal by cutting, splicing, sharing terminations or other means. No other RLR circuitry shall be allowed in the traffic signal facilities, including but not limited to the traffic signal cabinet, associated electrical conduit, junction boxes, handholes, mast arm poles and traffic signal post.
- RLR vehicle detection shall use video or laser technology. Detector loops may be considered on a location by location basis, subject to the approval by the LCDOT. Consideration will be based on pavement type and condition, existing and preferred traffic signal detection methods and designs, and consideration of potential countermeasures for saw cutting such as milling and resurfacing.
- All work inside the LCDOT traffic signal controller cabinet or other LCDOT facilities shall be done by an IDOT approved contractor. The IDOT approved contractor shall take maintenance of the intersection prior to any work being started. The procedures for taking maintenance of the intersection are found in the LCDOT Traffic Signal Special Provisions.
- All RLR Camera System settings shall be reviewed and approved by LCDOT prior to the scheduled activation. Post activation adjustments may be necessary and shall be monitored and approved by LCDOT prior to implementation. It is the intent of the LCDOT to ensure that there is no

adverse impact to the operations of the county's traffic signals or county approaches at county/state intersections.

- The RLR Camera System shall be able to recognize vehicles making a legal right turn on red and tickets shall not be issued to any vehicle making a legal right turn on red.
- The Permit Applicant shall certify that the system is operating correctly and shall make any and all adjustments necessary to ensure it operates correctly in a timely manner and does not negatively impact the traffic operations of the intersection.

10. COST AND MAINTENANCE

All cost for the materials, installation, operation, maintenance, repair and removal of the RLR Camera System shall be the responsibility of the Permit Applicant. All RLR Camera System materials shall be reviewed and approved by LCDOT prior to installation. RLR Camera System equipment installed on LCDOT highway approaches at county/state (IDOT) traffic signals and LCDOT traffic signal equipment shall be completed in accordance with the appropriate state and county electrical maintenance policies and specifications. If the county improves the intersection where a RLR Camera System is installed, all cost associated with the removal and reinstallation shall be the responsibility of the Permit Applicant and shall be completed within 30 calendar days of receipt of the request. The RLR Camera System shall be inspected and activated as detailed in the County's Traffic Signal Specifications.

11. PUBLIC INFORMATION CAMPAIGN

The Permit Applicant shall hold well-publicized kickoff events and issue periodic press releases about the proposed locations and effectiveness of RLR Camera enforcement within their jurisdictions. This campaign shall provide information and data that defines the red light running problem, explains why red light running is dangerous, and identifies the actions that were used prior to the installation of the RLR Camera System to reduce the incidence of red light running. The Permit Applicant shall take measures to bring attention to the intersections where the RLR Camera Systems are in use. At a minimum, an orange flag shall be attached to the RLR signs. The Permit Applicant shall also have a "grace period" where the issuance of warning tickets to likely violators for a limited period, not less than 14 and not more than 30 calendar days. The Permit Applicant shall publicize the date on which warning citations will be halted and actual enforcement citations will begin. For the first thirty (30) days of live RLR Camera enforcement, the Permit Applicant shall continue to take measures to bring attention to the intersections where the RLR Camera Systems are in use. The 30-day use of warning flags or other warning devices shall commence when actual enforcement citations begin to be issued.

12. FOLLOW UP EVALUATION

An Evaluation Report shall be prepared by the Permit Applicant one year after the installation and shall be prepared every three years thereafter. The Evaluation Report shall include the following:

- Intersection Location(s).
- Date of implementation.
- RLR Camera System manufacturer and contractor name.
- Crash data specific to the RLR location(s) for the 3-year period prior to and for the period post RLR Camera installation. The crash data shall include yearly collision diagrams of the intersection(s).
- An analysis of the crash data, including a summary of any increases or decreases in crash types.
- Signal timings and other settings before and after RLR Camera installation.
- Traffic volumes before and after RLR Camera System installation. The traffic volumes shall include both Average Daily and Peak Period traffic.
- Recommendations to further reduce red light violations and severe crashes and to improve the operation of the intersection(s).
- Summary of adjudication experience and results.
- Financial Report identifying the number citations issued, cost associated with the RLR Camera System, and fees collected.

13. PERMIT REVOCATION

The permit may be revoked during the annual review or at any time where LCDOT determines it is in the best interest of the motoring public or Lake County. The permit may also be revoked if the RLR Camera System is having a detrimental effect on the operations of the existing traffic signal system. Lake County also reserves the right to revoke the permit and install its own RLR Camera System on any county approach to a county/state intersection or at a county-maintained intersection. When a permit is revoked, the Permit Applicant shall promptly, within 30 calendar days, remove all RLR Camera equipment from the county approach or intersection and return the traffic signal to its pre-RLR Camera System installation condition. This work shall be at the Permit Applicant's expense.

Permit Number / Date _____



600 W. Winchester Road
Libertyville, IL 60048
847-362-3950

MUNICIPAL UTILITY/FACILITY ACCEPTANCE ON A COUNTY HIGHWAY

(Please print or type)

APPLICANT (Name and address): _____
_____ Telephone Number: _____

I, _____, being a municipal corporation in the State of Illinois, County of Lake, hereby requests permission from the County Engineer of Lake County to locate and maintain the below described Municipal Utility/Facility within the right-of-way limits of a County Highway in accordance with the Lake County Highway Utility and Facility Placement Ordinance, as amended. This Municipal Utility/Facility is described as follows:

1. **Name of County Highway:** _____

2. **Location** (distance from nearest intersection, which side of road, etc.): _____

3. **Type of Municipal Utility/Facility** (watermain, sidewalk, etc.): _____

4. **Utility/Facility to be constructed by:** Municipal Crews (contact person): _____
 Contractor (name, address, telephone): _____

 Developer (name, address, telephone): _____

 Other (name, address, telephone): _____

5. **Comments** (if needed): _____

**NOTE: This Acceptance is subject to the General Conditions as printed on the reverse side of this form.
The Application is only valid when an original signature is provided on page 2.**

**GENERAL CONDITIONS FOR MUNICIPAL UTILITY/FACILITY ACCEPTANCE
ON A COUNTY HIGHWAY**

1. In submitting this Acceptance, the Municipality agrees to comply with the various policies, conditions and requirements of the Lake County Division of Transportation, whether written or verbal and the Lake County Highway Utility and Facility Placement Ordinance, as amended.
2. The Municipality shall supply, at its expense, such information or submittals as may be required for review and to make such changes or revisions as required by the Lake County Division of Transportation.
3. Lack of an immediate response to this application form or any information or submittals supplied for review and/or comment shall not be construed as approval or acceptance by the County Engineer or the Lake County Division of Transportation, nor shall they be held responsible for any costs or delays due to the processing time required.
4. The review of the Municipal Utility/Facility shall be based on the primary use of the County Highway right-of-way for the safe and efficient movement of vehicular traffic and the maintenance and improvements needed to support such primary use.
5. The Lake County Division of Transportation shall not be responsible for providing room within the County Highway right-of-way for the Municipal Utility/Facility.
6. This Acceptance does not relieve the Municipality from complying with any statutes, regulations, ordinances or administrative orders of the Federal, State or County Governments or any political subdivision or administrative agencies that may apply to the Municipal Utility/Facility.
7. The Municipality shall obtain permission from the legal property owner of the County Highway right-of-way where the Municipal Utility/Facility will be located.
8. Unless otherwise stated in the issued Highway Permit, the Municipality and its successors and assigns shall be responsible for the following:
 - a. The operation and maintenance of the Municipal Facility within the County Highway right-of-way. Such operation and maintenance shall include keeping the Municipal Facility in a safe condition for use by the Public, not creating any hazardous conditions, providing any special maintenance such as cleaning ice and snow from sidewalks or bikepaths or additional mowing of adjacent turf areas, making changes or revisions to the Municipal Facility needed because of the maintenance operations of the Lake County Division of Transportation or use of the County Highway right-of-way by the General Public and restoring portions of the County Highway right-of-way disturbed by repairs, maintenance, extensions, service connections, and/or other work done to the Municipal Facility without a Highway Permit being issued.
 - b. Any additional costs to the County of Lake and/or its Division of Transportation for road improvements and/or maintenance work due to the location and/or use of the Municipal Facility within the County Highway right-of-way. Such costs can include adjustments needed to the Municipal Facility to accommodate said road improvements and/or maintenance work and/or damage to County Property and/or equipment.
 - c. For indemnifying, defending and holding harmless the County of Lake and the Lake County Division of Transportation including their elected and duly appointed officials, agents, employees and representatives from and against any and all claims, suits, actions, losses, expenses, damages, injuries, deaths, judgments and demands arising from and relating to the location and/or use of the Municipal Facility within the County Highway right-of-way regardless of any limitations of insurance coverage.
 - d. Other items as specified in the Lake County Highway Utility and Facility Placement Ordinance, as amended.

If a separate application is made by an Applicant other than the Municipality to construct the Utility/Facility, then the Municipality, by submitting this Acceptance form, hereby acknowledges that it will become the successor or assign of this Applicant for the said Utility/Facility.

ATTEST:

FOR THE MUNICIPALITY:

Municipal Clerk

By: _____
Municipal Mayor/President

Date: _____