

# New York City Red Light Camera Program

Program Review 1994 - 2013  
2014 Report



New York City Department of Transportation, 55 Water Street, New York, NY 10041

## PROGRAM OVERVIEW

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In 1988, the New York State Legislature passed a law to allow cities with a population of one million or more to establish a demonstration program to install traffic-control signal photo violation-monitoring systems ("red light cameras"), which captures images of vehicles going through red light signals at traffic intersections (the "Program"). New York City used this authorization to launch the nation's first program in 1994. Since then, over 500 American municipalities have established similar programs, preventing red light running related crashes, injuries and deaths across the country. The State Legislature has extended the duration of the New York City's pilot program six times, with the current program set to expire in December 2014.

New York City supports legislation in Albany to extend the Program to 2019, because it has proven to be an enormously effective traffic safety measure that prevents injuries and the loss of life resulting from red light running crashes.

In 2013, 583,788 violations, or Notices of Liability (NOLs), were issued to the registered owners of vehicles which ran red lights. While this number, standing alone, may appear high, the program's history demonstrates that the extended use of these devices has dramatically reduced the number of such violations. NOLs have declined by as much as 40% to 60% at intersections where red light cameras have been installed. Furthermore, the number of red light running events - which includes all instances where the law appears to have been violated, even if an NOL was not issued - has plummeted from an average of 80.1 identified by each camera on each day in 1994 to 12.3 in 2013 - an 85% decrease.

The success of red light cameras in enhancing public safety throughout the five boroughs has led to the City's continued interest in additional expansion. While the Program has been very effective in reducing unsafe driving on the City's streets, the current limitation of 150 intersections, which is only 1% of the City's 12,700 signalized intersections, prevents the New York City Department of Transportation ("NYC DOT") from implementing a broader application of this important public safety initiative. The Program is effective at deterring red light violations because motorists expect enforcement across the City. Further increasing the total number of red light cameras the City is allowed to use will make this public safety tool even more effective. Accordingly, we look forward to future opportunities to partner with the state government to expand the program.

## HOW THE PROGRAM WORKS

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In 2013 approximately 187 red light cameras were operating each day, 7 days per week and 24 hours per day, at 150 intersections in New York City. When a vehicle runs through a red light, sensors embedded in the roadway trigger a digital camera, which is situated approximately 50 to 100 feet back from the stop bar. The camera captures a series of photographs showing the vehicle before and after it enters the intersection – each photo shows the vehicle, the intersection, and the traffic signal in one frame.

A technician visits each red light camera on a nightly basis to perform maintenance and retrieve the CD ROM, which is brought to a lab for development and quality control inspection. The CD ROMs are then delivered to a specially trained team of NYC DOT Review Technicians who review each and every photograph and determine if the photographs provide adequate evidence to issue an NOL.

An NOL includes three photos: the vehicle before the stop bar when the traffic signal is red, the same vehicle after the stop bar and cross walk while the traffic signal is still red, and a clear and readable enlargement of the vehicle's license plate. In addition, the NOL contains the name and address of the person alleged to be liable as an owner of the vehicle, the registration number of the vehicle involved in the violation, the location where the violation took place, the date and time of the violation, and the identification number of the camera which recorded the violation.

The NOLs are issued to the registered owner of the vehicle. An NOL, much like a parking ticket, obligates the vehicle owner to pay a fine, but does not cause points to be assessed against the driver's license, nor is the violation used for insurance purposes. The red light camera fine is \$50.

## PROGRAM STATISTICS 1994–2013

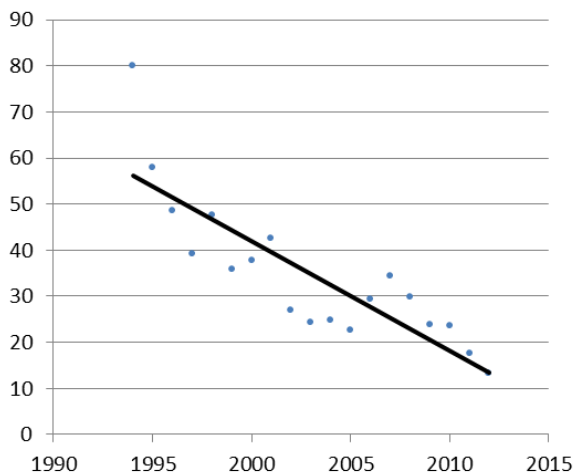
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The purpose of the Program is to encourage all motorists to obey traffic signals. Accordingly, the more successful the Program is, the fewer red light violations we should observe over time. In fact, the number of average red light running events captured on each camera on a daily basis has dropped by 85% percent from 80.1 in 1994 to 12.3 per day in 2013.

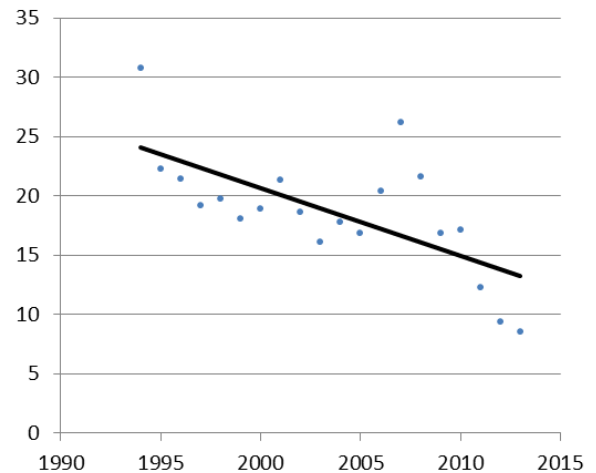
The chart below and the table on the following page represent data collected during the Program's history. The number of NOLs issued annually has gone down from 2012 to 2013, continuing a downward trend in the number of NOLs issued per camera per day over the life of the Program. In the first year of the Program, the average camera issued 30.8 NOLs on a daily basis. In 2013, the average camera issued 8.7 NOLs on a daily basis - a 72% drop. This data indicates that the Program has enhanced public safety by serving as an effective deterrent to red light running. The decline in the number of NOLs issued is an expected result and continues to demonstrate the effectiveness of the Program in reducing red light running.

The reduction in NOLs issued and events observed confirms that the consistent, predictable, citywide enforcement provided by red light cameras deters dangerous red light running.

Average Number of Red Light Running  
Events Detected by Camera Per Day



Average Number of Notices of Liability Issued Per Camera Per Day



The trend line highlights the decline in red light running events recorded and NOLs issued by each camera on a daily basis.

PROGRAM STATISTICS FOR 1994–2013

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Active Cameras	15	18	18	18	30*	30	30	50*	50	50	50	50	100*	100	100	121*
# Events Captured	438,622	381,601	319,720	258,424	417,747	391,693	414,030	453,005	492,678	444,529	455,048	409,489	554,846	1,248,896	1,094,847	1,057,463
Events/Day	1201.7	1045.5	873.6	708	1144.5	1073.1	1131.2	1241.1	1349.8	1217.9	1243.3	1121.9	1520.1	3421.6	2991.4	2897.2
Events/Week	8435.0	7338.5	6148.5	4969.7	8033.6	7532.6	7962.1	8711.6	9474.6	8548.6	8750.9	7874.8	10670.1	24017.2	21054.8	20335.8
Events/Month	36551.8	31800.1	26643.3	21535.3	34812.3	32641.1	34502.5	37750.4	41056.5	37044.1	37920.7	34124.1	46237.2	104074.7	91237.3	88121.9
% Change in Events	NA	-13	-16.22	-19.17	61.65	-6.24	5.7	9.41	8.76	-9.77	2.37	-10.01	35.5	125.09	-12.33	-3.41
Events / Camera / Day	80.11	58.08	48.53	39.33	47.69	35.77	37.71	42.5	27.07	24.42	24.93	22.58	29.41	34.53	29.91	23.91
# NOLs Issued	168,479	146,812	140,751	119,397	215,242	198,324	207,260	226,642	338,572	292,614	325,024	306,117	384,993	947,341	791,734	745,241
NOLs / Camera / Day	30.8	22.3	21.4	19.2	19.7	18.1	18.9	21.3	18.59	16.08	17.81	16.82	20.41	26.19	21.63	16.85
# Hearings Requested	8,103	7,908	7,748	5,968	7,799	7,832	6,967	6,898	9,506	11,323	8,739	8,690	8,376	20,813	22,990	17,824
% Guilty	86%	87%	89%	89%	88%	85%	84%	84%	84%	85%	85%	86%	88%	92%	92%	92%

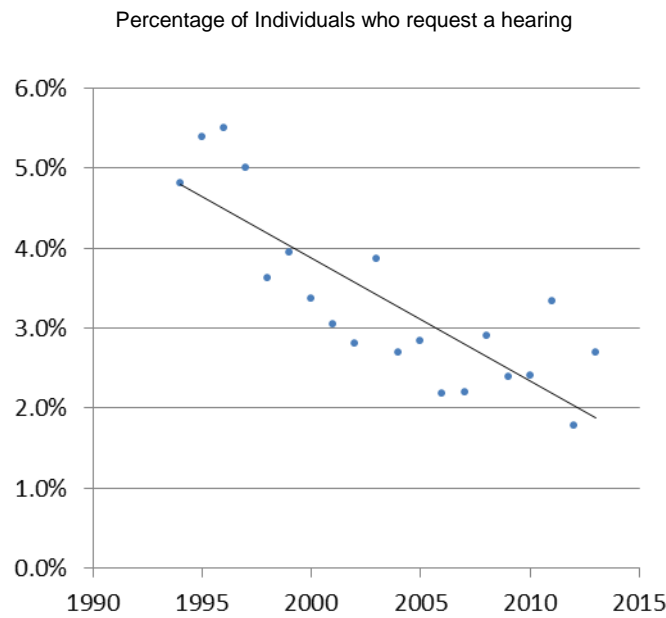
	2010	2011	2012	2013
Active Cameras	169*	188*	186*	187*
# Events Captured	1,455,540	1,167,969	908,801	839,881
Events/Day	3987.8	3199.9	2483.1	2301
Events/Week	27991.2	22460.9	17476.9	16151.6
Events/Month	121295	97330.8	75733.4	69990.1
% Change in Events	37.64	-19.76	-22.1	-7.58
Average Daily Events per Camera	23.62	17.49	13.37	12.49
# NOLs Issued	1,053,268	821,483	634,088	583,778
Average Daily NOLs per Camera	17.08	12.3	9.33	8.68
# Hearings Requested	25,414	27,376	11,266	15,531
% Guilty	96%	94%	94%	89%

\*Represents the average number of cameras active per day. In 1998, 2001, 2006, and 2009 through 2012, the number of active cameras increased throughout the year.



# ADJUDICATION

Each NOL provides information on how an individual may request a hearing by mail or in person to contest the violation if he or she believes the violation was issued in error. The rate of those hearing requests has dropped consistently. For the first five years of the Program, approximately 5% of individuals who received an NOL requested a hearing to contest the violation. In 2013, only 2.7% of individuals who received an NOL requested a hearing; the other 97.3% of individuals declined their opportunity for a hearing and agreed to pay the violation after the NOL was issued.



Pursuant to Section 1111-a of the New York State Vehicle and Traffic Law and Section 19-210 of the New York City Administrative Code, the New York City Department of Finance is authorized to conduct hearings, either by mail or in person, in any of the Department of Finance’s five Borough Business Centers. An Administrative Law Judge (“ALJ”) first reviews the sufficiency of the information on the NOL. Once the ALJ determines the NOL presents a prima facie case (that is, establishes the fundamental elements of a case), the ALJ will conduct a hearing on the merits of any defense presented. ALJs review witness statements, as well as other types of documentary evidence, to afford vehicle owners the opportunity to refute the prima facie case and establish a meritorious defense. ALJs are even permitted to consider hearsay evidence, and other evidence which may not be admissible in a traditional court of law, in order to provide a vehicle owner with the opportunity to refute the NOL.

Eighty-nine percent of the NOLs which are contested in a hearing are upheld. In other words, only 11% of the 2.7% who had asked for a hearing had an NOL which was issued in error.

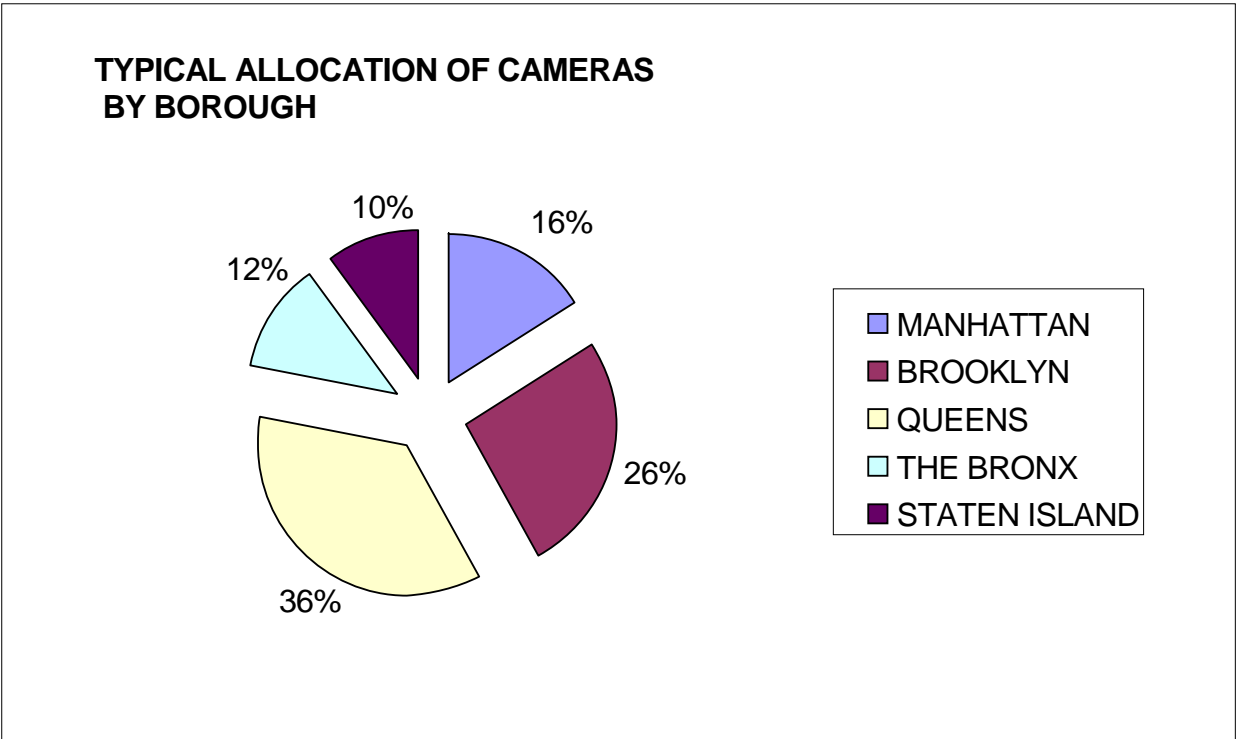
RED LIGHT CAMERA VIOLATION DISPOSITIONS IN 2013	
Hearing Determination	Number of Hearings
NOL Upheld	13,811
NOL Overturned	1,720

## DESCRIPTION OF LOCATIONS

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Since its inception, the Program has grown to include approximately 190 cameras located at 150 key intersections throughout the City's five boroughs. Locations are selected based upon a review of several factors including crash history of the intersection, engineering judgment, and community and elected official requests.

The chart below depicts the typical allocation of red light cameras in operation in each borough. The City has over 200 locations instrumented for cameras, with only about 190 cameras operational at the 150 intersections at any one time. The actual break down by borough varies by day and is dependent on maintenance, construction in the area and other concerns. In addition, as a further deterrent, 200 dummy cameras (non-functional shells) have also been installed throughout the City's five boroughs.





## CRASH DATA

The following tables show the “before” and “after” crash data disaggregated by injury type and severity, for the 189 total cameras used in 2013.

Summary Findings:

After the installation of the cameras, there has been:

- 1) a 33 % decrease in all injuries.
- 2) a 76% decrease in pedestrian injuries
- 3) a 76 % decrease in bicyclist injuries
- 4) a 30 % decrease in vehicle occupant injuries
- 5) a 56% decrease in Type A and Type B injuries
- 6) a 29 % decrease in Type C injuries.

All Injuries:

BOROUGH	NUMBER OF CAMERAS	BEFORE INST. DATE INJURIES	AFTER INST. DATE INJURIES	CHANGE
BRONX	25	192	112	-80
KINGS	59	399	274	-125
MANHATTAN	16	50	21	-29
QUEENS	63	334	208	-126
RICHMOND	26	54	73	19
TOTAL	189	1029	688	-341

Pedestrian Injuries:

BOROUGH	NUMBER OF CAMERAS	BEFORE INST. DATE INJURIES	AFTER INST. DATE INJURIES	CHANGE
BRONX	25	17	5	-12
KINGS	59	32	4	-28
MANHATTAN	16	2	0	-2
QUEENS	63	2	0	-2
RICHMOND	26	1	4	3
TOTAL	189	54	13	-41

**Bicyclist Injuries:**

BOROUGH	NUMBER OF CAMERAS	BEFORE INST. DATE INJURIES	AFTER INST. DATE INJURIES	CHANGE
BRONX	25	5	1	-4
KINGS	59	11	3	-8
MANHATTAN	16	3	0	-3
QUEENS	63	2	0	-2
RICHMOND	26	0	1	1
TOTAL	189	21	5	-16

**Motorist Injuries:**

BOROUGH	NUMBER OF CAMERAS	BEFORE INST. DATE INJURIES	AFTER INST. DATE INJURIES	CHANGE
BRONX	25	170	106	-64
KINGS	59	356	267	-89
MANHATTAN	16	45	21	-24
QUEENS	63	330	208	-122
RICHMOND	26	53	68	15
TOTAL	189	954	670	-284

**Injury Severity:**

BOROUGH	NUMBER OF CAMERAS	BEFORE INST. DATE TYPE A & TYPE B	AFTER INST. DATE TYPE A & TYPE B	CHANGE
BRONX	25	31	9	-22
KINGS	59	45	26	-19
MANHATTAN	16	11	5	-6
QUEENS	63	71	26	-45
RICHMOND	26	9	8	-1
TOTAL	189	167	74	-93

BOROUGH	NUMBER OF CAMERAS	BEFORE INST. DATE TYPE C	AFTER INST. DATE TYPE C	CHANGE
BRONX	25	161	103	-58
KINGS	59	354	248	-106
MANHATTAN	16	39	16	-23
QUEENS	63	263	182	-81
RICHMOND	26	45	65	20
TOTAL	189	862	614	-248

**Definition of injury types:**

"A" Severe injuries include skull fractures, internal injuries, broken or distorted limbs, unconsciousness, severe lacerations, and unable to leave the scene without assistance.

"B" Moderate injuries include visible injuries such as a "lump" on the head, abrasions, and minor lacerations.

"C" Slight injuries include hysteria, nausea, momentary unconsciousness, and complaint of pain without visible signs of injury.

Data Source: NYS Department of Transportation. Analysis: NYCDOT. Classification of injury types: NYS Department of Motor Vehicles.

**RED LIGHT CAMERA REVENUE AND EXPENSES**  
**December 1993 - June 2013**

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Program Costs	\$159,086,601
Capital Costs	\$ 27,194,455
DOT Staffing	\$20,822,031
DOF Staffing	\$6,616,547
Total Expenses	\$213,719,634
Revenues	\$425,830,883
Net Revenues	\$212,111,249