

2015 School Zone Camera Fund Annual Report

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Required per Ordinance 124230

CITY CLERK

Background

As part of the **School Road Safety Initiative**, the Seattle Department of Transportation (SDOT) has partnered with the Seattle Police Department (SPD) to install and operate speed cameras in school zones to enforce the 20 mile-per-hour speed limit in effect while school zone beacons are flashing.

Creating a safe environment for pedestrians is the first goal of the Pedestrian Master Plan. It is also critical to the City's commitment to **Vision Zero**—the goal of ending traffic deaths and serious injuries by 2030. People walking and biking are involved in vehicular collisions daily. Each year, more than 150 people sustain life-changing serious injuries and approximately 20 people die on our streets. Traffic collisions are a leading cause of death for Seattle residents aged 5-24.

The School Road Safety Initiative aims to increase safety on streets near schools through a combination of education, street improvements, encouragement, enforcement, and evaluation.

Vision Zero

The core of the worldwide Vision Zero movement is the belief that death and injury on city streets is preventable; collisions are often the result of poor behaviors and unforgiving roadway designs.

Vision Zero integrates our safety efforts by combining physical improvements with targeted enforcement patrols and educational outreach to address behavioral issues.

Speed cameras are an educational and enforcement tool aimed at changing driver behavior and reducing traffic speeds, thereby decreasing the number and the severity of collisions. Speed cameras enforce the law indiscriminately and allow police officers more time for other crime prevention activities.

In July 2013, the Seattle City Council passed Ordinance 124230, which created the School Zone Fixed Automated Cameras Fund to separately account for the revenues generated by the cameras, adopts financial policies to ensure that monies received are spent on school safety projects, and requires a year-end report to be sent to Council by March 1 each year. The report must provide the school zone fixed automated camera revenue receipts, appropriations, and expenditures for

the prior year. In addition to the required items, this report details the metrics by which SDOT measures the program's success, locations of existing cameras, a schedule for future deployments, and a list of school safety improvements made with the school zone camera revenue.

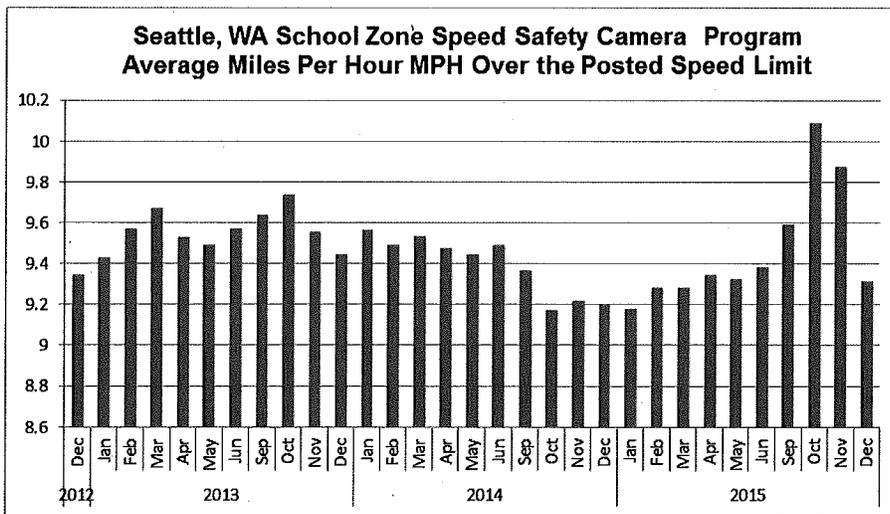
In November 2015, the Seattle City Council passed Ordinance 124907, which changes the name of the fund from the School Zone Fixed Automated Cameras Fund to the School Safety Traffic and Pedestrian

Improvement Fund (SSTPI) and requires that ten percent of revenue generated from automated traffic safety cameras (also known as red light cameras) be directed to the fund. This change is effective for the 2016 budget and will be reflected in the report to Council due March 1, 2017.

Success Metrics

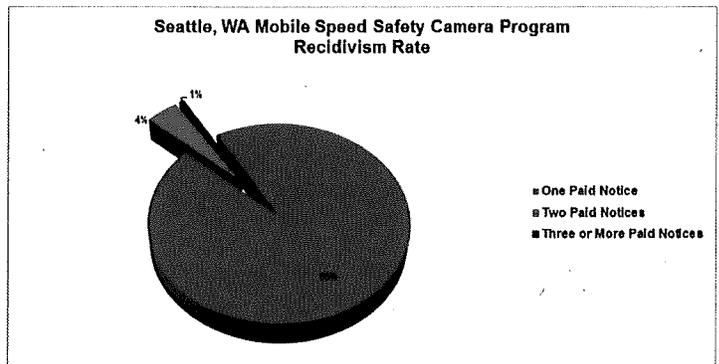
Safety is SDOT's primary goal. The success of the school speed zone cameras is measured by an overall reduction in vehicle speeds and speeding violations in the school zones. A speed reduction analysis was completed by American Traffic Solutions (ATS), the vendor who supplies and operates the cameras, and delivered to SDOT in February 2016. Two key measures of success were reported: vehicle speed changes and recidivism rate. The graphic below tracks the change in speed (miles per hour) per month over time. Average speed over the posted limit appears to increase when new cameras are installed (see October 2015) and gradually decreases over time as drivers adjust their speed as a result of automated enforcement.

Chart 1



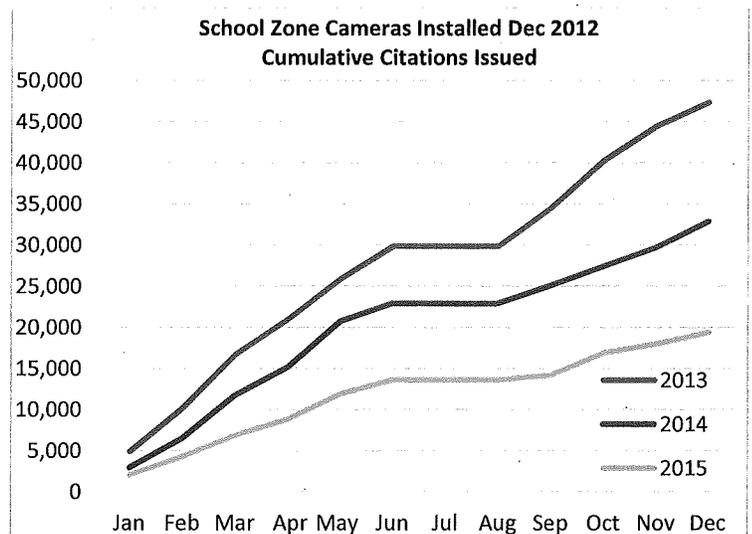
Data from the vendor suggests that the School Zone Speed Safety Camera program is changing driver behavior. The community's recidivism rate is 5 percent, which means 95 percent of all violators who receive a ticket and pay it do not pay for another such violation. This suggests that the cameras are having the intended educational impact.

Chart 2



Additionally, success can be measured by looking at citation trends. For the four school zones (eight cameras in total) equipped with cameras since December of 2012, citations decreased 30.6 percent year over year, from 47,348 citations issued in 2013 to 32,855 citations issued in 2014. Furthermore, citations decreased an additional 41 percent between 2014 and 2015 with 19,358 citations issued in 2015. Chart 3 shows the cumulative number of citations each month.

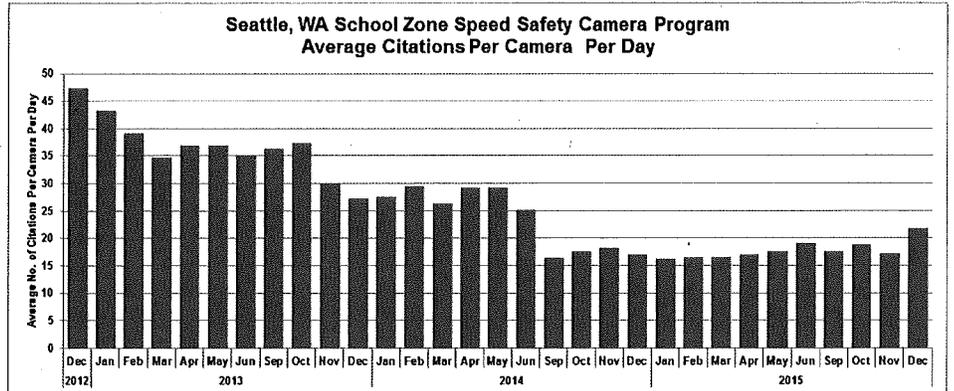
Chart 3



SDOT is not studying reduction in pedestrian crashes, as the number of incidents is low. Crashes with pedestrians, bicyclists, and motorcyclists make up less than 5 percent of total crashes city-wide, but unfortunately, make up nearly 50 percent of the fatalities. Consequently, SDOT has focused on speed reduction as a measure of success. Studies done by Harborview Medical Center indicate a 90 percent survival rate if a pedestrian is hit by a vehicle traveling at 20 miles an hour, compared to a 50 percent survival rate if a pedestrian is hit at 30 miles per hour. School zone cameras are intended to reduce the speed of vehicles in an effort to reduce the possibility of a collision, as well as the severity if there is a collision. The data suggest that the school zone camera program is having the intended effect of reducing traffic speeds in the targeted school zones.

Chart 4

Since program inception, the average number of traffic violations per camera per day has decreased by 53 percent when comparing December 2012 to December 2015.



Existing Locations

The current school zone fixed automated camera program is located around 14 Seattle schools with 28 cameras. Below is a list of the schools, the camera and beacon locations, the number of cameras, and the month the cameras were installed. A map of the school zone cameras is located in Appendix A.

Phase	School	Location	Number of cameras	Camera installation
Phase 1	Olympic View Elementary	5 th Ave NE at NE 94 th St and NE 95 th St	2	Nov 2012
	Broadview-Thompson K-8	Greenwood Ave N at N 130 th St and N 133 rd St	2	Nov 2012
	Thurgood Marshal Elementary	MLK Jr Way at S Elmwood Pl and Mountains to Sound Trail	2	Nov 2012
	Gatewood Elementary	Fauntleroy Way SW at SW Frontenac St and SW Myrtle St	2	Nov 2012
Phase 2	Eckstein Middle School	NE 7 th St at 30 th Ave NE and 33 rd Ave NE	2	Sept 2014
	Bailey Gatzert Elementary	E Yesler Way at 15 th Ave	1	Sept 2014
	Dearborn Elementary	S Orcas St at 26 th Ave S and 28 th Ave S	2	Sept 2014
	Roxhill Elementary	SW Roxbury St at 28 th Ave SW and 30 th Ave SW	2	Sept 2014
	Holy Family Elementary	SW Roxbury St at 18 th Ave SW and 21 st Ave SW	2	Sept 2014
Phase 3	Bailey Gatzert Elementary	E Yesler Way and S. Main St	2	Sept 2015
	Northgate Elementary	1 st Ave NE at N 120 th St and N 117 th St	1	Sept 2015
	Montlake Elementary	24 th Ave at E Calhoun St & E Lynn St	2	Sept 2015
	Mercer Middle School	15 th Ave S and S Nevada St & S Columbian Way & S Snoqualmie St	2	Sept 2015
	K-5 STEM & Arbor Heights Elementary	Delridge Way SW at SW Juneau St and 22 nd Ave SW	2	Sept 2015
	Rainier View Elementary	Beacon Ave S at S Moore St and 56 th Ave S	2	Sept 2015

Deployment Schedule

	Phase 1				Phase 2		Phase 3			
	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q3 2015
Cumulative # of Cameras	8	8	8	8	8	8	17	17	17	28
Cumulative # of School Zones	4	4	4	4	4	4	9	9	9	14

Phase 1 installed eight cameras at four schools in 2012. The City reviewed the results of this pilot project in 2013. Phase 2 installed nine cameras at five schools at the beginning of the 2014-2015 academic year. Phase 3 installed nine cameras at five new schools and an additional two cameras at Bailey Gatzert at the beginning of the 2015-2016 academic year.

Cameras in phase 3 were installed in the third quarter of 2015, which was behind the initial schedule (first quarter of 2015). One reason for this is that upon further review some phase 3 sites were deemed not viable options from an installation standpoint. The installation phase is at least a three-month process after final site selection. In the future, installations will be planned for the summer break and timed to “go live” at the start of a school year, with an additional one-month delay before citations are issued. This will minimize construction impacts to the school, maximize parent notification, and give departments time to determine if the locations are viable.

The initiative has now entered a period of monitoring. There are 170 public and private schools in Seattle, and many of them abut an arterial street. Of those schools that are near an arterial street, less than half have a current speed study on file.

SDOT does not plan to install any new cameras during 2016. To establish a more thorough and proactive program to monitor speeds and safety concerns on arterial streets adjacent to all schools in Seattle, SDOT has commissioned speed studies at 130 schools (all public school zones, and a large percentage of private school zones, on arterials), including those where cameras are already present. The speed study effort will wrap up in late spring 2016; it will enable the City to make data-driven decisions about the placement of additional cameras or the relocation of existing cameras for future expansion.

Total Revenues

	2014	2015	2016
Adopted Revenues	\$8.6M	\$8.3M	\$8.6M
Revised Revenue Estimates	\$6.0M	\$6.6M	-
Actual Revenues	\$5.1M	\$6.9M	-

Factors influencing the revenue forecast:

- Citation volumes vary by location, in large part related to the volume of traffic on the monitored street. As locations are finalized, the revenue forecast can be adjusted to build in a more accurate expectation based on traffic volumes.
- Drivers' behavior will change over time in response to the cameras; therefore, after initial months of high citations, the number of citations will decrease and then are expected to stabilize over a few years.
- The 2016 Adopted Revenue amount of \$8.6 million includes \$410,000 in red light camera revenues.

Impact of implementation schedule delays on 2015 revenue:

- The 2015 revenue projection was made in August 2014. At that time, the assumption was that 12 cameras would be installed, operational and generating citations at the beginning of the year, therefore generating revenue for the entire 2015 calendar year. As mentioned above, due to siting complications, one camera at one location could not be installed; thus, only 11 cameras were deployed during 2015. Moreover, those cameras did not generate revenue until October 2015, thus reducing the number of revenue generating months from 10 (January – June and September – December) to 3 (October – December).

Expenditures and Financial Plan

The complete financial plan, comparing revenues and expenditures, is detailed in the table below.

	2015 Adopted (Dollars in millions)	2015 Revised (Dollars in millions)	2015 Actuals (Dollars in millions)	2016 Adopted (Dollars in millions)
Revenues	\$8.3	\$6.6	\$6.8	\$8.6*
Expenditures				
SDOT Capital	\$7.3	\$5.5	\$4.4	\$5.4
SDOT Operations and Maintenance	\$1.2	\$1.2	\$1.1	\$1.2
SPD and SMC Camera Operations, Administration, and Enforcement	\$2.2	\$1.8	\$1.8	\$2.2
Total Expenditures	\$10.8	\$8.5	\$7.3	\$8.8
*In addition to these revenues, the 2016 Adopted Budget also includes use of \$269,000 of fund balance.				

Safety Improvements in 2015

Revenue from the speed cameras goes directly into safety improvements around schools. Some highlights from 2015 include:

School	Location	Safety Improvement
Beacon Hill	Beacon Ave S and 14th Ave S	Curb bulb, raised crosswalk, curb ramps, marked crosswalks
Gatewood	Fauntleroy SW and SW Myrtle St	Curb bulb
Salmon Bay K-8	NW 65th St and 18th Ave NW	Curb bulbs, ramps and marked crosswalks
O'Dea High School	Columbia St and Terry Ave	Curb ramps
Wedgwood	NE 85th Street between 30th Ave NE and 28th Ave NE; 28th Ave NE between NE 85th and NE 83rd St	New sidewalk
Thornton Creek	NE 77th St from 39th to 40th Ave NE	New sidewalk
Greenwood	NW 80th St and 1st Ave NW	Curb bulb, crosswalk flashing lights, marked crosswalks
Sacajawea	20th Ave NE from 95th to 92nd	New sidewalk
Viewlands	3rd Ave NW from 105th to 107th	New sidewalk
Roxhill	SW Roxbury Street from 35th Ave SW to 16th Ave SW	Crosswalk improvements
Highland Park	SW Cloverdale St and 12th Ave SW	Curb ramps
K-8 STEM at Boren	Delridge Way between SW Juneau St and SW Graham St	Curb bulbs, ramps and marked crosswalks
Lowell	12th Avenue E and E Mercer St	Curb bulbs, ramps and marked crosswalks