

School Zone Camera Fund Annual Report

Due to Council March 1st, 2015 per Ordinance 124230

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Background

As part of the **School Road Safety Initiative**, 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 mph 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, and 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 age 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, Seattle City Council passed and the Mayor signed [Ordinance 124230](#), which creates the School Zone Camera 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.

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 2015. Two key measures of success were reported: vehicle speed changes and recidivism rate.

Chart 1



Since the school zone speed program began, the average speed of violation in miles per hour above the posted speed limit has decreased by 4 percent from December 2012 to December 2014, as shown in Chart 1.

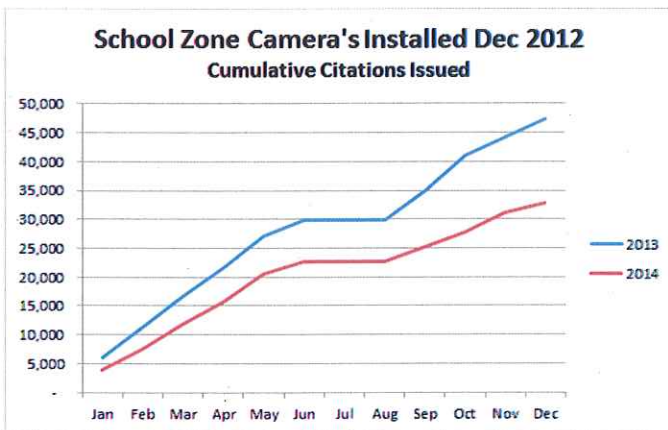
Chart 2

Data from the vendor suggest that the School Zone Speed Safety Camera program is changing driver behavior. The community's recidivism rate is 10 percent, which means 90 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

Chart 3



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. Chart 3 shows the cumulative number of citations each month.

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.

Existing Locations

The current school zone fixed automated camera program is located around nine Seattle schools with 17 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 Name	Beacon/Camera Locations	Cameras	Installed
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

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	Q2 2015
Cumulative # of Cameras –	8	8	8	8	8	8	17	17	17	29 (planned)
Cumulative # of School Zones –	4	4	4	4	4	4	9	9	9	15 (planned)

SDOT and SPD are currently working on phase 3 of the deployment schedule. 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.

Cameras in phase 3 are scheduled to be installed in the second quarter of 2015, which is behind the initial schedule (first quarter of 2015) due to a two and a half month vendor delay in completing the necessary location studies. Locations will be finalized by the end of February, at which point Council will be asked to review and approve them. Once locations are approved, design and implementation can go forward. This normally takes 6 months, but SDOT is working closely with the vendor to reduce that time to 1 to 3 months.

As part of Seattle’s education campaign around newly installed school zone cameras, SPD issues warnings to violators for one month before issuing citations. The majority of cameras should be installed during March and April 2015, with citations being issued in May and June before summer break. Any locations that prove to be more complex will be delayed until September.

Following phase 3 deployment, the initiative will enter 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. Having installed photo enforcement cameras at the selected locations, SDOT will be able to put together a more thorough and proactive program to monitor speeds and safety concerns on arterial streets adjacent to all schools in Seattle.

Total Revenues

	2014	2015	2016
Adopted Revenues	\$8.6M	\$8.3M	\$8.5M
Revised Revenue Estimates	\$6.0M	-	-
Actual Revenues	\$5.1M	-	-

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.
- Driver's 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 roughly stabilize over a couple of years.

Impact of implementation schedule delays on 2014 revenue:

- In 2014, earlier projections were for the nine new cameras (phase 2 deployment) at five new school zones to be activated in the early spring of 2014. These new school zones were not activated until September 2014 with actual citations not being issued until October, which delayed revenue generation and reduced the total estimate for 2014. The 2015 revenue estimates annualizes the 2014 cameras and includes a decreasing factor for the revenue as drivers adjust their behavior.
- For 2015, the revenue estimate takes a conservative approach and assumes the 12 cameras as part of the phase 3 rollout will not be made operational until the beginning of the 2015-2016 school year in 3rd Quarter 2015.

Expenditures

SDOT budgeted and actual expenditures are detailed in the tables below.

SDOT Capital TC367170 "PMP – School Safety" TC367600 "PMP – New Sidewalks" (Dollars in millions)			
	2014*	2015	2016
Adopted SZCF Budget	\$6.6	\$7.3	\$5.0
Revised SZCF Budget	\$2.0	-	-
Actual Expenditures	\$2.0	-	-

*The 2014 Revised budget reflects the expected reduction in revenues due to delayed camera installation.

SDOT Operations & Maintenance (Dollars in millions)			
	2014	2015^	2016^
Adopted SZCF Budget	\$0.5	\$1.2	\$1.2
Actual Expenditures	\$0.5	-	-

^The 2015 Adopted and 2016 Endorsed budgets increase to \$1.2 million as a result of adding \$243,000 for an ADA Strategic Advisor position and \$500,000 to develop an ADA transition plan.

Additionally, per [Ordinance 124346](#), the Seattle Police Department and the Seattle Municipal Court receive reimbursement for all direct expenses from this fund for directly attributable expenses:

- Seattle Police Department (SPD) receives \$135,000 per year for program management and \$257,750 for three officers to perform citation review functions. SPD holds the purchase order/contract with the vendor, for which the 2015 budget includes \$1.7 million for 29 cameras.
- Seattle Municipal Court (SMC) receives \$109,037 for staffing to process the school zone camera citations, schedule hearings and collect payment. In addition, SMC is budgeted \$55,000 for the citation data collection cost.

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

	2014 Actuals (Dollars in millions)	2015 Adopted (Dollars in millions)	2016 Endorsed (Dollars in millions)
Revenue	\$5.1	\$8.3	\$8.5
SDOT Capital	\$2.0	\$7.3	\$5.0
SDOT Operations & Maintenance	\$0.5	\$1.2	\$1.2
SPD and SMC Camera Operations, Administration, and Enforcement	\$1.1	\$2.2	\$2.2
Total Expenditures	\$3.6	\$10.8	\$8.5

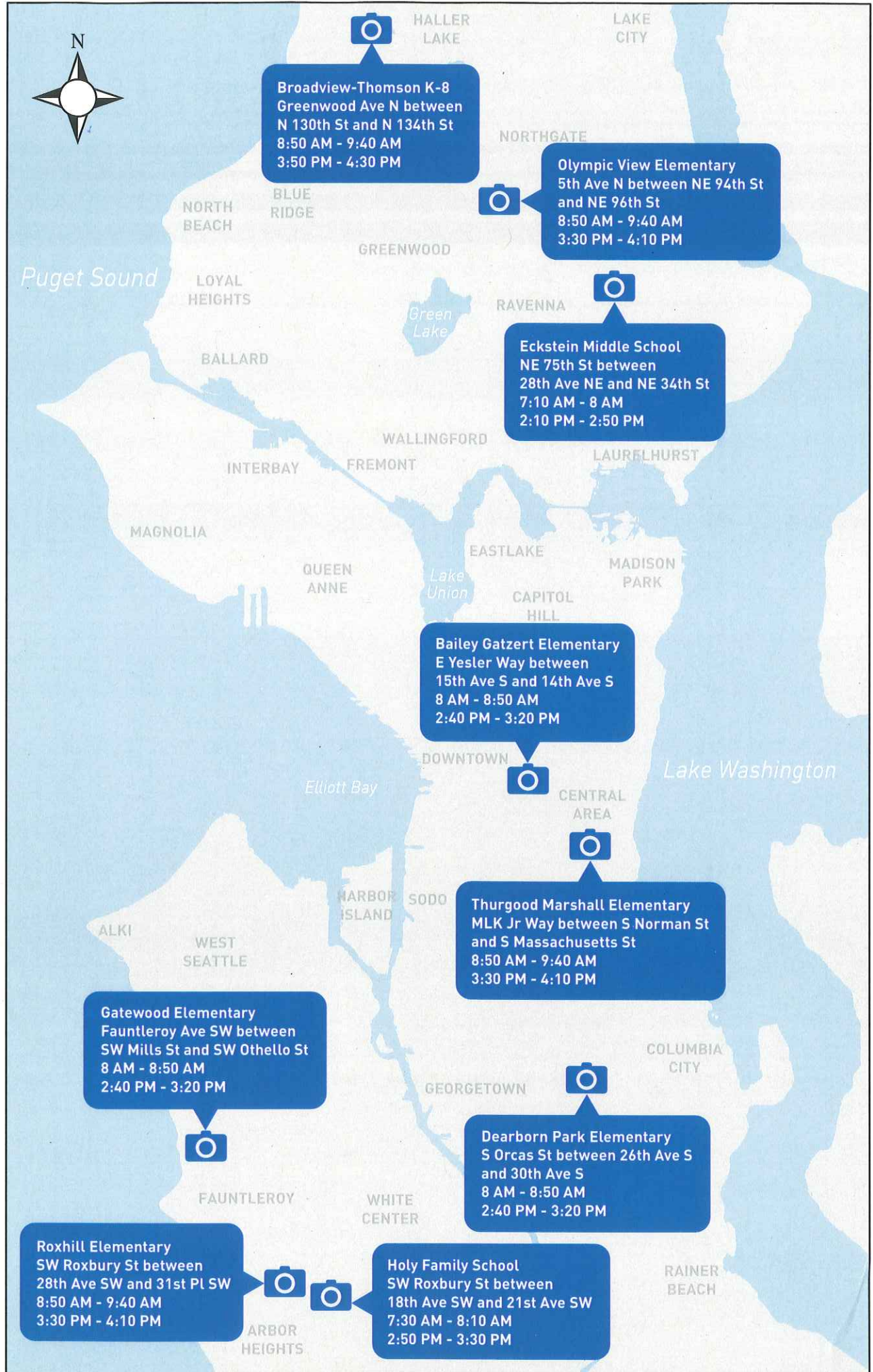
Safety Improvements in 2014

Revenue from the speed cameras goes directly into safety improvements around schools. Some highlights from 2014 include:

School	Location	Safety Improvement
Citywide	Various	609 high visibility sign post covers on school crosswalk signs
Citywide	Various	New school speed zone flashing lights at nine schools
Citywide	Various	44 existing school speed zone flashing lights upgraded and maintained
Citywide	Various	124 school crosswalks remarked
Citywide	Various	58 pedestrian countdown signals installed at signalized school crosswalks
Olympic Hills Elementary	NE 130th Street	New sidewalk between 25th Avenue NE & 28th Avenue NE
Roxhill Elementary	30th Avenue SW	New sidewalk between SW Roxbury Street & SW 97th Street
Roxhill Elementary	30th Avenue SW and SW Cambridge St	New school crosswalk, curb bulbs, ramps, street trees

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Greenwood Elementary	Fremont Avenue N & N 81 st Street	Curb ramps
Martin Luther King Jr. Elementary	S Graham Street & 44th Avenue S	Curb bulb and ramps at the school crosswalk
McDonald Elementary	1st Avenue NE and NE 55 th Street, and 1st Ave NE and NE 54th Street	Curb ramps at school crosswalks
Bryant Elementary	NE 60th Street & 33rd Avenue NE	Curb ramps at school crosswalk
Explorer Middle School	30th Avenue SW	Speed humps
Eckstein Middle School	30th Avenue NE	Speed humps
Thurgood Marshall	S Irving Street	Speed humps
Thornton Creek K-8	NE 80th Street	Speed humps
Emerson Elementary	60th Avenue S	Speed humps
Olympic Hills Elementary	N 130 th Street	Speed humps
Hamilton Middle School	Stone Way N & N 41st Street	Pedestrian-activated flashing lights at school crosswalk
Queen Anne Elementary	Boston Street & 4th Avenue N	Pedestrian-activated flashing lights at school crosswalk
Fairmount Park Elementary	Fauntleroy Way SW	Sidewalk repair
North Beach Elementary	NW 95th Street	New stairway between 24th Avenue NW and 20th Avenue NW
Bailey Gatzert Elementary	10 th Avenue S	New stairway between S Jackson and S Main St



Broadview-Thomson K-8
Greenwood Ave N between
N 130th St and N 134th St
8:50 AM - 9:40 AM
3:50 PM - 4:30 PM

Olympic View Elementary
5th Ave N between NE 94th St
and NE 96th St
8:50 AM - 9:40 AM
3:30 PM - 4:10 PM

Eckstein Middle School
NE 75th St between
28th Ave NE and NE 34th St
7:10 AM - 8 AM
2:10 PM - 2:50 PM

Bailey Gatzert Elementary
E Yesler Way between
15th Ave S and 14th Ave S
8 AM - 8:50 AM
2:40 PM - 3:20 PM

Thurgood Marshall Elementary
MLK Jr Way between S Norman St
and S Massachusetts St
8:50 AM - 9:40 AM
3:30 PM - 4:10 PM

Gatewood Elementary
Fauntleroy Ave SW between
SW Mills St and SW Othello St
8 AM - 8:50 AM
2:40 PM - 3:20 PM

Dearborn Park Elementary
S Orcas St between 26th Ave S
and 30th Ave S
8 AM - 8:50 AM
2:40 PM - 3:20 PM

Roxhill Elementary
SW Roxbury St between
28th Ave SW and 31st Pl SW
8:50 AM - 9:40 AM
3:30 PM - 4:10 PM

Holy Family School
SW Roxbury St between
18th Ave SW and 21st Ave SW
7:30 AM - 8:10 AM
2:50 PM - 3:30 PM