



CITY OF BUFFALO
COMMON COUNCIL

Independent Review: The City of Buffalo School Zone Safety Program

Presented to the Legislation Committee of the City of Buffalo Common Council

Peter C. Rizzo, AICP, CFE, CGAP

February 9, 2021

Review Objective

Review Objective

- City of Buffalo officials maintain that the School Zone Safety Program's only purpose is “**to reduce School Zone vehicle crashes.**”
- It was the objective of this review to determine whether the City has taken reasonable and responsible steps to achieve the stated purpose of its School Zone Safety Program.



Review Methodology

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- This *fact-* and *evidence-based* review relied on best available data and independent field verification.
 - Crash and violation data were obtained from the City of Buffalo Police Department, Parking Violations Bureau, and the Institute for Traffic Safety Management & Research.
 - Traffic data were acquired from the Greater Buffalo Niagara Regional Transportation Council.
 - Demographics, income, and poverty data were obtained from the U.S. Census Bureau.
- Transportation professionals were consulted from the Cornell University Local Roads Program.

Review Findings

Review Findings

- **FINDING 1:** Half of the City's speed camera sites have among the **lowest** School Zone crash rates in Buffalo.
- **FINDING 2:** Nearly all City speed camera sites have among the **highest** School Zone traffic rates in Buffalo.
- **FINDING 3:** The City has **disproportionately** targeted high-poverty, minority neighborhoods for speed cameras.



Review Findings (cont.)

- **FINDING 4:** Persons living nearest to Buffalo's speed cameras receive the **most** violations.
- **FINDING 5:** The City's School Zone signage **violates** City and State laws and Federal regulations.
- **FINDING 6:** Speed is **not** a leading cause of weekday daytime pedestrian crashes in Buffalo.
- **FINDING 7:** The City has **failed** to take basic, non-punitive action to improve child safety under the School Zone Safety Program.



Finding 1:

*Half of the City of Buffalo's speed camera sites have among the **lowest** School Zone crash rates in Buffalo.*

Finding 1: Crash Rates

- *Half of the City's speed camera sites have among the **lowest** School Zone crash rates in Buffalo.*
- Considering average annual injurious vehicle crashes on school days within each of the City's 20 speed camera School Zones:
 - **50%** have among the **lowest** crash rates in Buffalo (School Zones with fewer than 8 average crashes per year).
 - **6** experience an average of about **5 or fewer crashes** per year.
 - **1** experiences an average of **2 crashes** per year.

Finding 1: Crash Rates (cont.)

Average Annual School Day Vehicle Crashes with Injuries within ¼-mile of a School with Speed Cameras in Buffalo, NY, 2015-18

#	School Zones with Speed Cameras	Average Annual Crashes w/in School Zone*	Rank Among 75 School Zones**
1	PS 304 Hutchinson Central Technical High School; PS 76 Badillo Bilingual Academy	19.25	1 / 75
2	PS 3 D'Youville Porter School; PS 212 da Vinci High School; PS 198 International Preparatory School	18.75	2 / 75
3	Westminster Community Charter School; Buffalo Promise Neighborhood Children's Academy	18.00	3 / 75
4	PS 156 Frederick Law Olmstead	13.50	6 / 75
5	PS 42 Occupational Training Center; PS 54 Blackman School of Excellence	13.25	7 / 75
6	PS 61 Arthur Eve School of Distinction	13.00	8 / 75
7	St. Joseph University School	12.50	11 / 75
8	PS 94 West Hertel Academy; PS 79 Grabiarz School of Excellence	10.75	16 / 75
9	PS 99 Stanley M. Makowski Early Childhood Center	10.25	17 / 75
10	PS 305 McKinley High School	9.75	20 / 75
11	PS 192 Buffalo Academy for Visual & Performing Arts	7.75	28 / 75
12	PS 335 Middle Early College High School; Buffalo United Charter School	6.75	34 / 75
13	PS 17 Early Childhood Center	6.75	35 / 75
14	PS 97 Harvey Austin School	6.75	36 / 75
15	PS 69 Houghton Academy	5.25	43 / 75
16	Canisius High School; Catholic Academy of West Buffalo	4.50	46 / 75
17	Nichols School	4.50	47 / 75
18	PS 67 Discovery School; Notre Dame Academy	3.75	52 / 75
19	PS 131 The Academy School	2.25	61 / 75
20	PS 32 Bennett Park Montessori	2.00	65 / 75

*Figures represent a 4-year average of all injurious crashes within corresponding School Zone reported to Buffalo Police via 911 on days when Buffalo Public Schools were in session. The data set included figures for 75 School Zones, but does not specify whether a child was involved in a particular crash.

**In cases of ties among Average Annual Crashes w/in School Zone, School Zones were ranked in order of traffic volume, greatest to least.

Source: City of Buffalo Police Department, 911 call records for injurious crashes within 1,320 feet of a school in Buffalo, NY, 2015-2018



Finding 1: Crash Rates (cont.)

- Speed cameras **must** target high-crash locations to achieve optimal crash reductions.
- Speed cameras can **only** detect violators within a limited range.
- Drivers **know** the range limitations of speed cameras and many increase speed before and after driving through speed camera enforcement range.

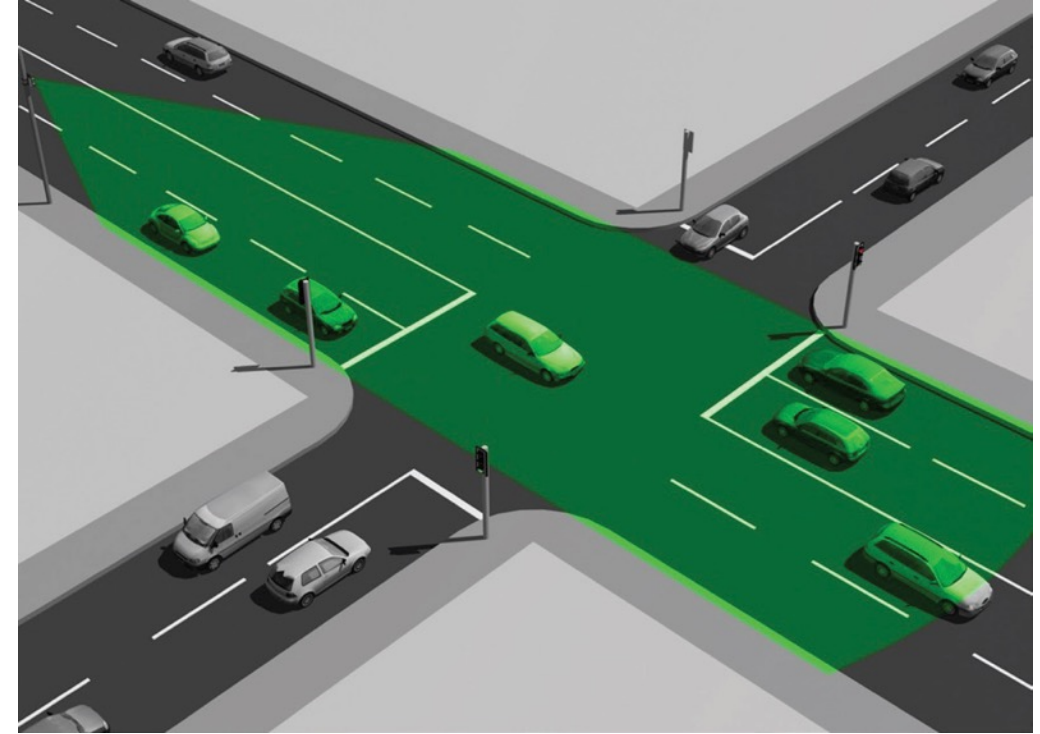


Image from a Sensys Gatso publication illustrating the limited range of its T-Series speed cameras (in green), which are installed in Buffalo.

Source: ARRB Group Project Team, Evaluation of the Fixed Digital Speed Camera Program in NSW, New South Wales, Australia, Roads and Traffic Authority (2005). <https://bit.ly/36egv4G>

Finding 2:

*Nearly all City speed camera sites have among the **highest** School Zone traffic rates in Buffalo.*

Finding 2: Traffic Counts

- *Nearly all speed camera sites have among the **highest** School Zone traffic rates in Buffalo.*
- **85%** of schools with speed cameras have among the **highest** daily School Zone traffic counts in Buffalo.
 - This condition indicates that the City placed more emphasis on traffic volume than actual vehicle crashes when selecting speed camera sites.



Finding 2: Traffic Counts (cont.)

Latest Available Average Annual Daily Traffic Counts on Segments of Roads Abutting Schools in Buffalo, NY

#	School Zone	Average Daily Traffic Count on Road Abutting School	Rank Among 57 School Zones*
1	St. Joseph University School	26,745	1 / 57
2	PS 305 McKinley High School	23,950	2 / 57
3	PS 335 Middle Early College High School; Buffalo United Charter School	17,875	3 / 57
4	PS 42 Occupational Training Center; PS 54 Blackman School of Excellence	17,715	4 / 57
5	Westminster Community Charter School; Buffalo Promise Neighborhood Children's Academy	17,380	7 / 57
6	Canisius High School; Catholic Academy of West Buffalo	16,816	8 / 57
7	PS 94 West Hertel Academy; PS 79 Grabiarz School of Excellence	15,455	9 / 57
8	PS 67 Discovery School; Notre Dame Academy	13,113	10 / 57
9	PS 61 Arthur Eve School of Distinction	12,441	11 / 57
10	Nichols School	12,091	12 / 57
11	PS 17 Early Childhood Center	10,991	14 / 57
12	PS 69 Houghton Academy	10,150	16 / 57
13	PS 304 Hutchinson Central Technical High School; PS 76 Badillo Bilingual Academy	9,065	18 / 57
14	PS 3 D'Youville Porter School; PS 212 da Vinci High School; PS 198 International Preparatory School	8,208	19 / 57
15	PS 156 Frederick Law Olmstead	7,996	20 / 57
16	PS 99 Stanley M. Makowski Early Childhood Center	7,042	25 / 57
17	PS 192 Buffalo Academy for Visual & Performing Arts	6,080	29 / 57
18	PS 131 The Academy School	4,524	36 / 57
19	PS 97 Harvey Austin School	3,730	38 / 57
20	PS 32 Bennett Park Montessori	3,107	45 / 57

*18 of the 75 School Zones considered in this review, no daily traffic counts were available for any roads that abut a schools. Therefore, only 57 School Zones were considered here. The absence of traffic data likely indicate insignificant traffic volumes immediately surrounding a school.

Source: Greater Buffalo Niagara Regional Transportation Council, Transportation Data Management System (<https://bit.ly/36pkHyr>).



Finding 3:

*The City of Buffalo has **disproportionately** targeted high-poverty, minority neighborhoods with speed cameras.*

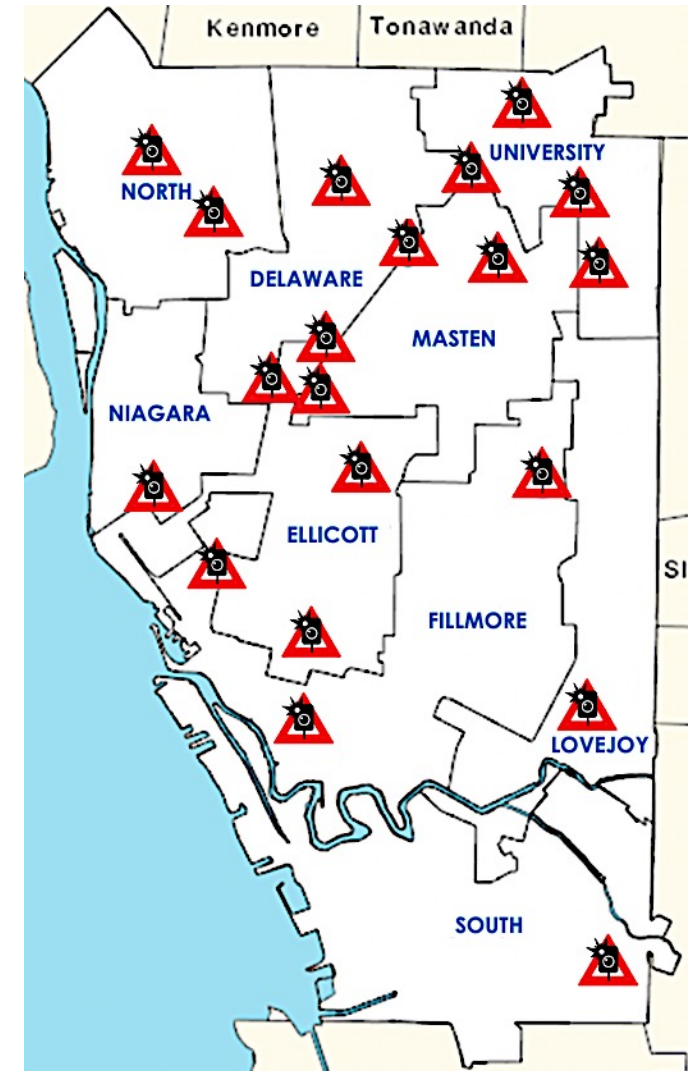
Finding 3: Disparate Impacts

- *The City has **disproportionately** targeted high-poverty, minority neighborhoods with speed cameras.*
 - **70%** of School Zones with speed cameras are in **high-poverty** census tracts.
 - **65%** of School Zones with speed cameras are in census tracts where **Minority** residents outnumber White residents.
 - Worse yet, the City has posted speed cameras in low-income, minority School Zones with **low vehicle crash rates**.

Finding 3: Disparate Impacts (cont.)

- School Zones with speed cameras by Council District:
 - **Delaware District: 5***
 - **Ellicott District: 5***
 - **Masten District: 5***
 - **University District: 4***
 - **Fillmore District: 3***
 - **North District: 2**
 - **Niagara District: 1**
 - **Lovejoy District: 1**
 - **South District: 1**

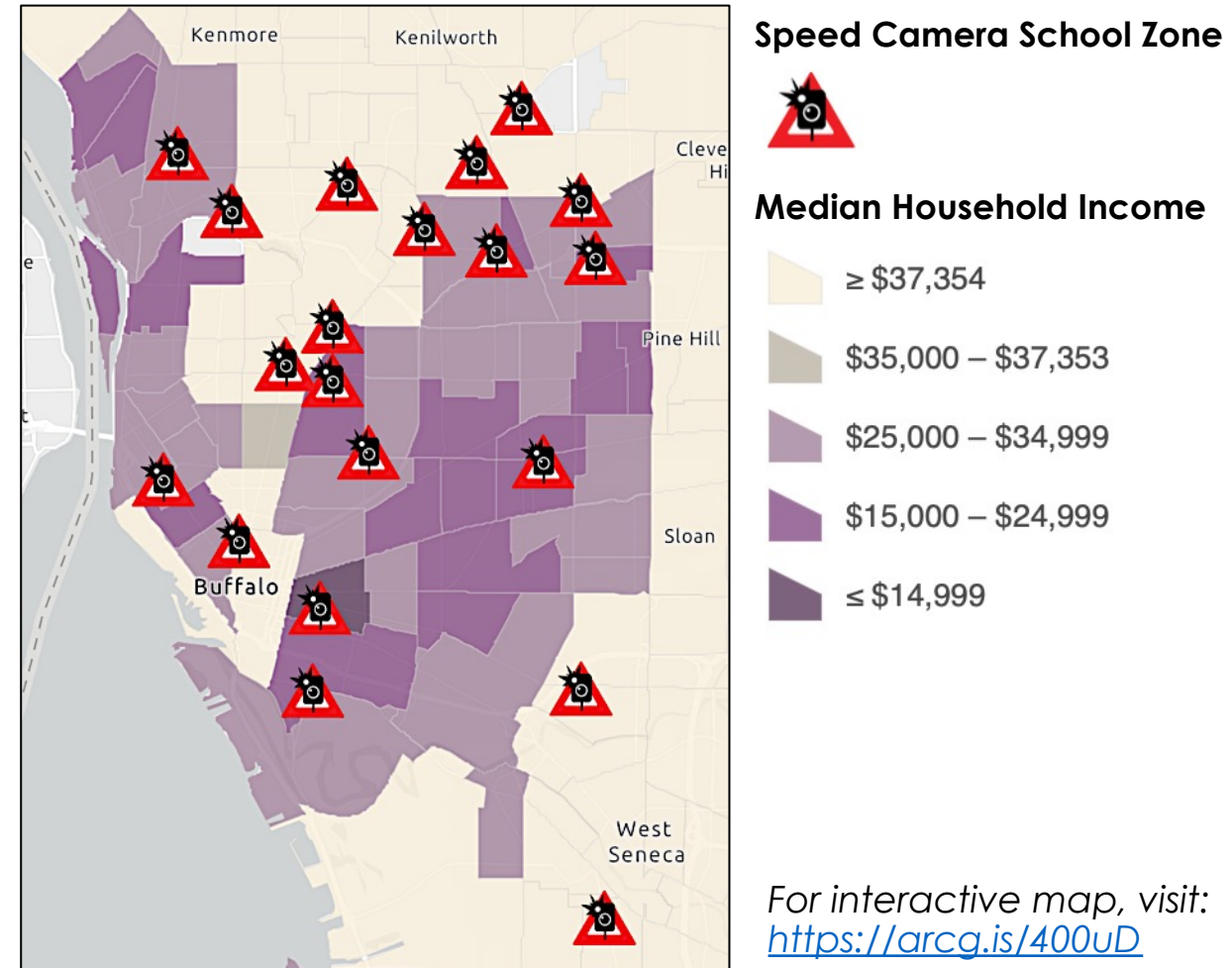
**Indicates that boundary of at least one speed camera School Zone overlaps a District boundary.*



Finding 3: Disparate Impacts (cont.)

- **Income Analysis** – Buffalo's median household income is \$37,354. Of the 20 speed camera School Zones:
 - **13** are in census tracts where the median household income is **below the City's median household income** level.
 - **5** are in census tracts where the median household income is **below \$25,000**.
 - **1** is in a census tract where the median household income is **\$13,253** (Bennett Park Montessori).

Median Household Income by Census Tract, Buffalo, NY

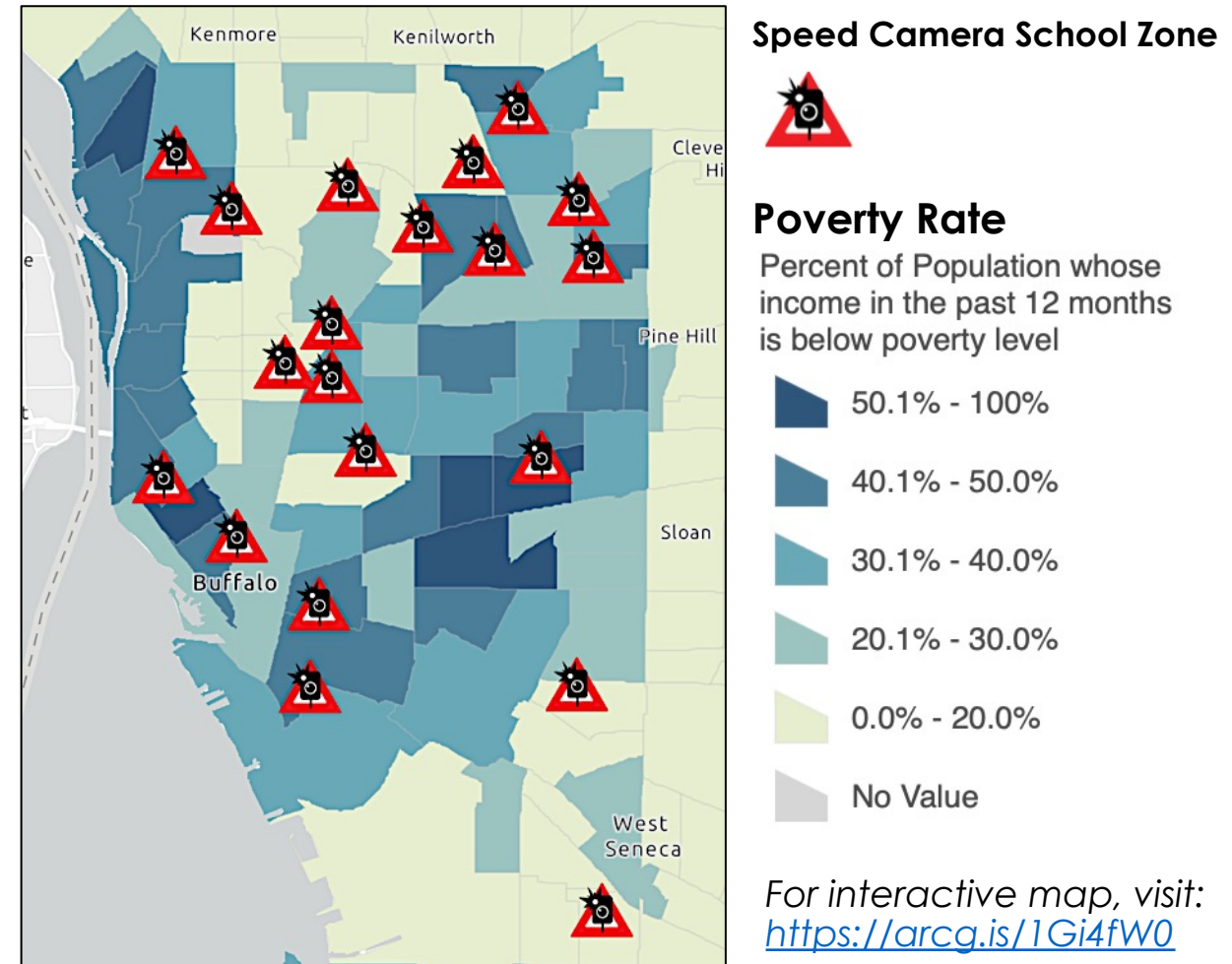


Source: U.S. Census Bureau, American Community Survey, Median Household Income in Past 12 Months, Erie County, NY (2021, January 14).

Finding 3: Disparate Impacts (cont.)

- **Poverty Analysis** – Of the 20 speed camera School Zones:
 - **14** are in census tracts where over **30% of residents** live below the poverty line.
 - **9** are in census tracts where over **40% of residents** live below the poverty line.
 - **1** is in a census tract where over **50% of residents** live below the poverty line (*Harvey Austin School at 1405 Sycamore St.*).

Poverty Rate by Census Tract, Buffalo, NY

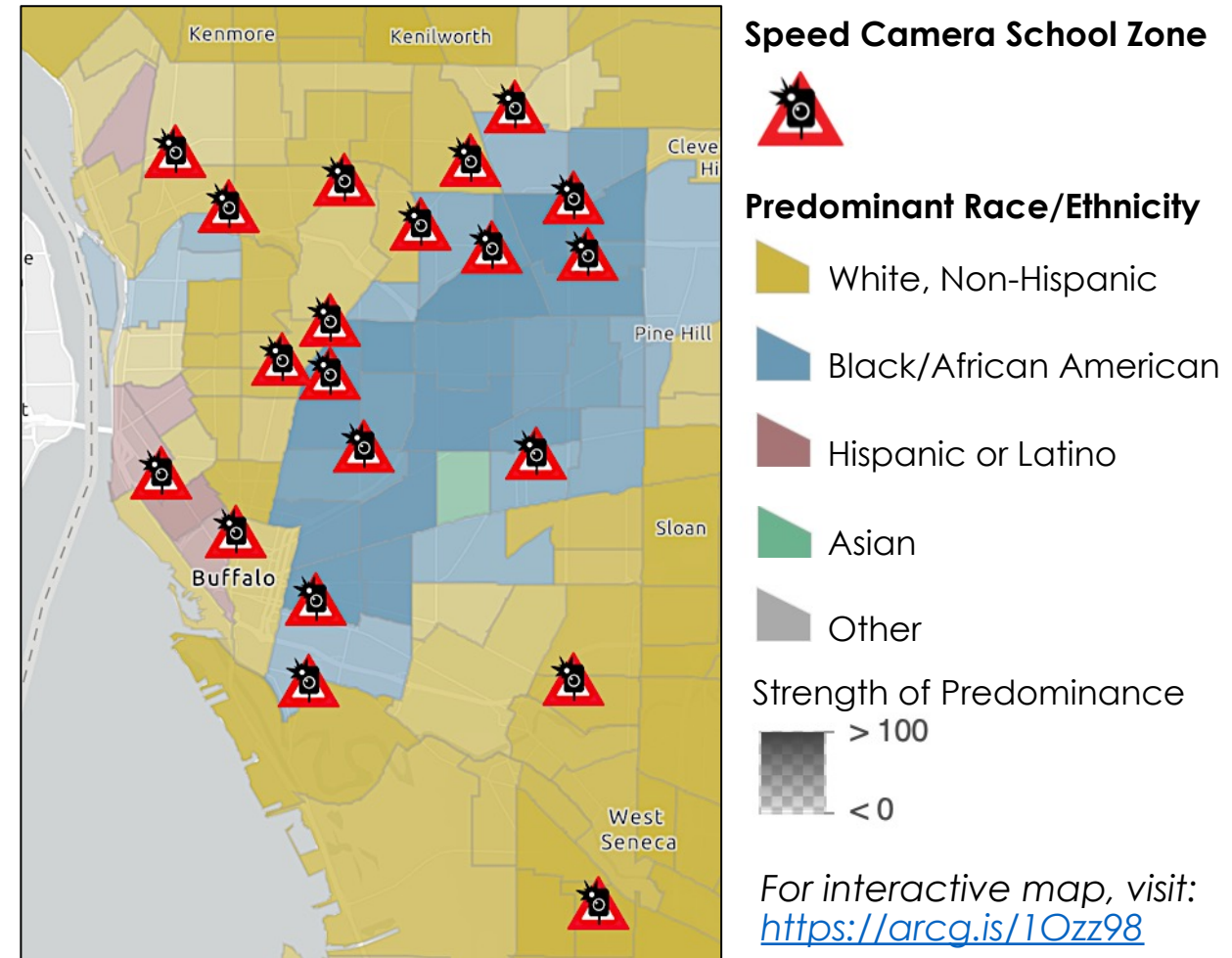


Source: U.S. Census Bureau, American Community Survey, Poverty Status Variables, Erie County, NY (2021, January 14).

Finding 3: Disparate Impacts (cont.)

- **Race/Ethnicity Analysis** – Of the 20 speed camera School Zones:
 - **13** are in census tracts where **Minority** residents outnumber non-Hispanic White residents.
 - **8** are in census tracts with predominantly **Black or African American** populations.
 - **2** are in census tracts with predominantly **Hispanic or Latino** populations.

Predominant Race/Ethnicity by Census Tract, Buffalo, NY



Source: U.S. Census Bureau, American Community Survey, Race and Hispanic Origin Variables, Erie County, NY (2020, December 16).

Finding 3: Disparate Impacts (cont.)

- **Example:** The City has installed speed cameras outside Bennett Park Montessori (342 Clinton St.). This School Zone experiences an average of just **2** school day injurious vehicle crashes (*among the lowest in the City*). Below are additional neighborhood facts:

- Poverty rate: **45.4%**
- Median household income: **\$13,253**
- Black/African American population: **67%**



Finding 4:

*Persons living nearest to Buffalo's speed cameras receive the **most** violations.*

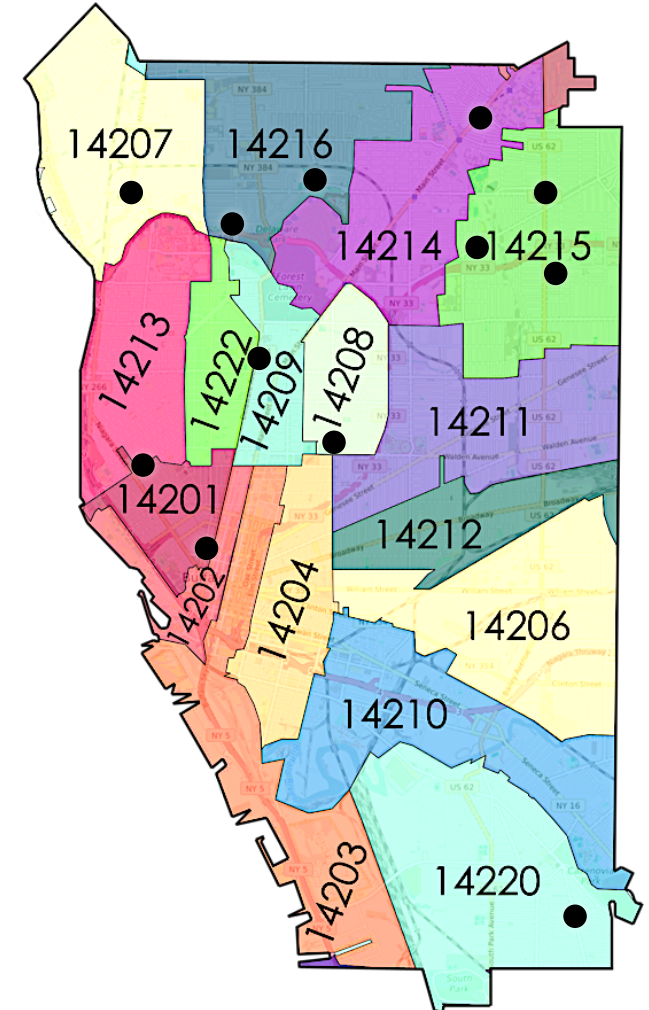
Finding 4: Violation Recipients

- *Persons living nearest to Buffalo's speed cameras receive the **most** violations.*
 - **44,606** speed camera violations totaling **\$2.23 million** have been issued to vehicle owners in Buffalo zip codes (Mar. 11, 2020 to Jan. 31, 2021).
 - **23.7%** to vehicle owners in **one** zip code: 14215 (3 speed cameras).
 - **71.2%** to vehicle owners in **high-poverty** zip codes.
 - **51.7%** to vehicle owners in zip codes where the median household income is **below Buffalo's median household income**.
 - **61.7%** to vehicle owners in predominantly **minority** zip codes.

Finding 4: Violation Recipients (cont.)

Speed Camera Violations Issued to Vehicle Owners in Buffalo Zip Codes, March 11, 2020 to January 31, 2021

Zip Code	Violations Issued	White Population %	Minority Population %	Median HH Income	Poverty Rate
14215	10,588	14.8%	85.2%	\$33,788	29.8%
14214	6,541	51.2%	48.8%	\$47,122	29.4%
14216	5,791	42.8%	57.2%	\$59,346	17.1%
14211	3,399	15.1%	84.9%	\$26,739	35.7%
14220	2,800	90.2%	9.8%	\$58,671	12.4%
14222	2,225	71.8%	28.2%	\$58,957	11.1%
14213	1,958	45.1%	54.9%	\$36,471	37.8%
14208	1,875	13.3%	86.7%	\$29,292	31.4%
14209	1,641	52.1%	47.9%	\$39,447	29.4%
14207	1,542	50.8%	49.2%	\$29,250	37.8%
14206	1,237	76.3%	23.7%	\$40,751	21.6%
14210	1,114	80.5%	19.5%	\$37,380	26.6%
14204	1,055	22.1%	77.9%	\$22,500	38.9%
14201	985	49.6%	50.4%	\$29,554	44.0%
14212	886	43.2%	56.8%	\$23,882	43.7%
14202	585	66.7%	33.3%	\$49,954	20.0%
14203	384	39.6%	60.4%	\$43,173	30.2%



Source: City of Buffalo Parking Violations Bureau, Zip Code of Every Vehicle Owner Who Received a Speed Camera Citation, March 11, 2020 to January 31, 2021; U.S. Census Bureau, American Community Survey Demographics Data, Median Income Data, and Poverty Rates by Zip Code (2019).

Finding 4: Violation Recipients (cont.)

- **Case Study:** On December 1, 2016, Mayor Lovely Warren and the Rochester Common Council terminated their city's red light camera program.

"I cannot, in good conscience, wage a fight against poverty while also imposing burdensome fines that have a disproportionate impact on people living in poverty."

—Lovely A. Warren, Mayor of Rochester, NY



Finding 5:

*The City of Buffalo's School Zone signage **violates** City and State laws and Federal regulations.*

Finding 5: School Zone Signage

- *The City of Buffalo's School Zone signage **violates** City and State laws and Federal regulations.*
 - The City has **failed** to post 15-mph speed limit signs beginning 1,320 ft. (1/4-mile) from schools for traffic entering School Zones.
 - All initial 15-mph speed limit signs are **excessively close** to schools.
 - In some instances, School Zones terminate **farther** from schools than they begin, based on signage placement.

Finding 5: School Zone Signage (cont.)

- City Code Ch. 479-14.4.B states, “For designated school zones, the speed limit shall be 15 miles per hour **covering a distance of one thousand three hundred twenty (1,320) feet** from a school building, entrance or exit of a school abutting a highway.”
- NYS Vehicle & Traffic Law § 1180-D(2) requires the City to post School Zone speed limit signage per the Federal Highway Administration’s ***National Manual on Uniform Traffic Control Devices for Streets and Highways***.
- The *Manual* states: “Speed Limit signs [...] shall be located at the **points of change** from one speed limit to another” (Sec. 2B.13.03).

Finding 5: School Zone Signage (cont.)

- **Example 1:** The Nichols School (1250 Amherst St.) School Zone is equipped with speed cameras.
 - The first 15-mph speed limit sign for Colvin Ave. southbound traffic is **540 ft.** from the nearest school building (less than half the required distance) and **365 ft.** from the southbound-facing speed camera.
 - The westbound Amherst St. “END SCHOOL SPEED LIMIT” sign is **1,100 ft.** from the nearest Nichols’ building (560 ft. farther from the school than the aforementioned speed limit sign).



“END SCHOOL SPEED LIMIT” sign for Nichols’ School Zone (facing westbound traffic on Amherst St. at New Amsterdam Ave.

Finding 5: School Zone Signage (cont.)

- **Example 2:** The School Zone for Buffalo Promise Neighborhood Children's Academy and Westminster Community Charter School (Bailey & Westminster Aves.) is equipped with speed cameras.
 - The first 15-mph speed limit sign for Bailey Ave. northbound traffic is **275 ft.** from the Westminster school building and **400 ft.** from the northbound-facing speed camera.
 - The "END SCHOOL SPEED LIMIT" sign is **200 ft.** from the Buffalo Promise Neighborhood Children's Academy building.



Buffalo Promise Neighborhood Children's Academy on Bailey Ave. This is a daycare facility.

Finding 6:

*Speed is **not** a leading cause of weekday daytime pedestrian crashes in the City of Buffalo.*

Finding 6: Crash Causes

- *Speed is not a leading cause of weekday daytime pedestrian crashes in the City of Buffalo.*
 - City-wide, **speed** is a contributing factor in **4.2** pedestrian crashes annually on weekdays, 6:00am-5:59pm in Buffalo. Far more pedestrian crashes result from other factors:
 - **29.2** result from **Driver Inattention/Distraction**
 - **17.0** result from a driver's **Failure to Yield Right-of-Way**
 - **15.4** result from **Pedestrian Confusion**



Finding 6: Crash Causes (cont.)

Top 10 most frequently reported contributing factors to weekday (Mon.-Fri.) daytime (6:00am-5:59pm) pedestrian crashes city-wide in Buffalo, NY, 2015-2019

Rank	Contributing Factors	5-YEAR TOTALS			ANNUAL AVERAGES		
		Injury	Fatal	TOTAL	Injury	Fatal	TOTAL
1	Driver Inattention/Distraction	146	0	146	29.2	0.0	29.2
2	Failure to Yield Right-of-Way	85	0	85	17.0	0.0	17.0
3	Pedestrian Error/Confusion	77	0	77	15.4	0.0	15.4
4	Glare	29	0	29	5.8	0.0	5.8
5	Traffic Control Device Disregarded	23	0	23	4.6	0.0	4.6
6	Aggressive Driving/Road Rage	22	0	22	4.4	0.0	4.4
7	Obstructed/Limited View	21	0	21	4.2	0.0	4.2
8	Unsafe Speed	21	0	21	4.2	0.0	4.2
9	Backing-up Unsafely	20	0	20	4.0	0.0	4.0
10	Pavement Slippery	14	0	14	2.8	0.0	2.8

Source: City of Buffalo Police Department, as reported to The Institute for Traffic Safety Management and Research of the University at Albany. <https://www.itsmr.org>

Finding 7:

*The City of Buffalo has **failed** to take basic, non-punitive action to improve child safety under the School Zone Safety Program.*

Finding 7: Safety Improvements

- *The City of Buffalo has **failed** to take basic, non-punitive action to improve child safety under the School Zone Safety Program.*
 - Speed cameras are the **only** safety feature of the School Zone Safety Program.
 - **Many** City of Buffalo School Zones are without visible crosswalks, including those with speed cameras.
 - Basic, low-cost, non-punitive safety measures have **not** been taken to improve the safety of children under the School Zone Safety Program.

Finding 7: Safety Improvements (cont.)



Missing/faded crosswalks at Hutchinson Central Technical High School, intersection of S. Elmwood Avenue and W. Chippewa Street.



Missing/faded crosswalks at Nichols School, intersection of Colvin Avenue and Tillinghast Place. Note flashing speed camera warning beacons.

Finding 7: Safety Improvements (cont.)



Finding 7: Safety Improvements (cont.)



Conclusions

Conclusions

- Actions taken by the City of Buffalo to implement its School Zone Safety Program indicate the following:
 1. Child safety is **not** an evident priority of the Program.
 2. Crash reduction is **not** an evident priority of the Program.
 3. The Program represents a **social injustice**.
 4. The Program represents a **discriminatory enforcement initiative**.
 5. The Program represents “**political and security theater**.”
 6. The highest Program priority is **maximum citation production**.
- **The City’s speed camera demonstration program is failing the citizens of Buffalo.** The Common Council has a duty to act.



Recommendations

Recommendations

- It is recommended that the Common Council act as follows:
 1. **Terminate the speed camera “demonstration program”** via an amendment to the City Code that as of a certain date, “photo speed violation monitoring systems” shall no longer be used to enforce School Zones speed limits.
 2. **Direct all funds generated through the School Zone Safety Program be invested in *Just Streets* improvements.**
 3. **Amend City Code’s definition of “School Zone”** to incorporate school speed limits recommendations of the Cornell University Local Roads Program (<https://bit.ly/36K1EyS>, pp. 67-68).
 4. **Require implementation of non-punitive traffic calming measures** in School Zones to responsibly enhance safety.

Recommendations (cont.)

5. **Require annual inspection and restriping, as necessary, of all City crosswalks.**
6. **Request State Legislature amend NYS VTL §1643 to allow the City speed limit to be reduced to 25-mph** on roads other than certain main thoroughfares.
7. **Request formal audit by the State Comptroller's Office** into the abundance of Program failures and legal violations.
8. **Request formal investigation by the State Attorney General** to determine whether nefarious intent is behind the targeting of speed cameras in high-poverty, minority neighborhoods and/or the misplacement of School Zone speed limit signs.





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