

Building a Successful Speed Safety Camera Program

ITE Western District



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Agenda

- 01 Setting the Stage
- 02 SFMTA
- 03 City of Bellevue
- 04 City of Kenmore
- 05 Panel
- 06 Q&A Breakouts
- 07 Wrap Up

INTRODUCTIONS

Meet the Panelists



**Taylor
Whitaker**

Fehr & Peers



**Franz
Loewenherz**

City of Bellevue



**Jarrett
Hornbostel**

SFMTA



**Tobin
Bennett-Gold**

City of Kenmore

SECTION 01

Setting the Stage

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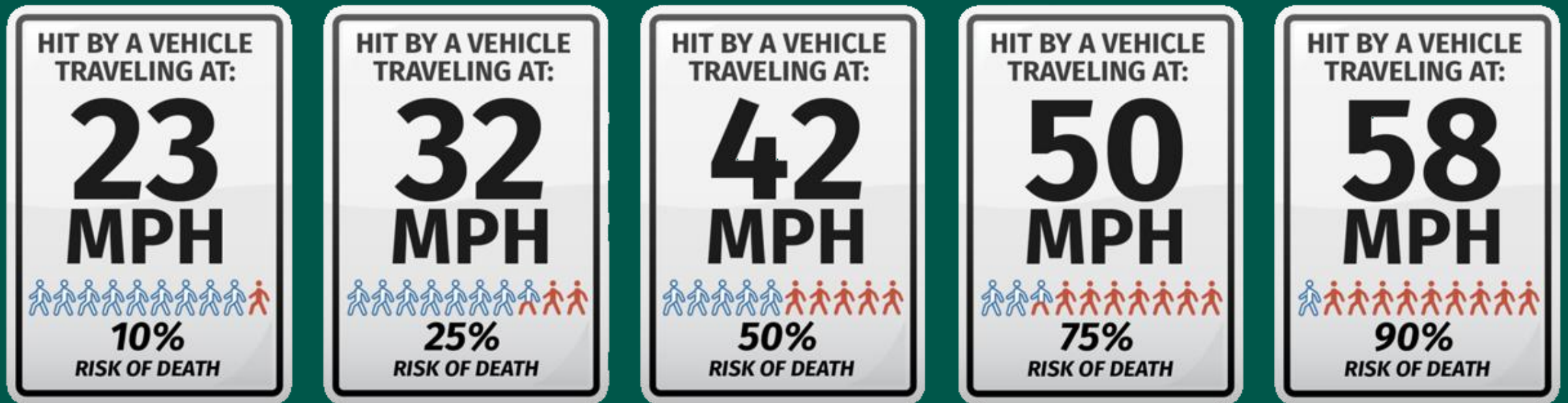
Safe System Approach

Speed safety cameras support the Safe System Approach by addressing one of the key contributors to fatal and serious injury crashes: **speeding**.



Washington State Strategic Highway Safety Plan

Fatality Risk Increases with Vehicle Speed



Why speed cameras?

NYC DOT's Speed Cameras Achieved a 94 Percent Reduction in Speeding in Locations Where They Are Installed

Speeding Contributes to One in Four Traffic Deaths; New Report Shows 14% Fewer Traffic Injuries and Deaths at Speed Camera Locations Installed in 2022



Accident Analysis & Prevention

Volume 82, September 2015, Pages 263-269



Safety effects of fixed speed cameras—An empirical Bayes evaluation

Alena Hoyer

Highlights

- Safety effects of 223 speed cameras were evaluated with control for regression to the mean.
- Speed cameras reduces injury crashes by 22% on the first kilometer downstream of the speed cameras.
- Crash effects decrease with increasing distance from the speed cameras.
- More recent speed cameras had more favorable effects.

Safety Benefits:
Fixed units can reduce crashes on urban principal arterials up to:

54% for all crashes.⁴

48% for injury crashes.⁴

P2P units can reduce crashes on urban expressways, freeways, and principal arterials up to:

37% for fatal and injury crashes.²

Mobile units can reduce crashes on urban principal arterials up to:

20% for fatal and injury crashes.⁵

In New York City, fixed units reduced speeding in school zones up to 63% during school hours.⁶

For more information on this and other FHWA Proven Safety Countermeasures, please reference the: [Speed Safety Camera Program Planning and Operations Guide](#).

The contents of this Fact Sheet do not have the force and effect of law and are not meant to bind the public in any way. This Fact Sheet is intended only to provide clarity regarding existing requirements under the law or agency policies.

FHWA-SA-21-070

Washington Legislation

Automated traffic safety cameras may be used to detect speed violations in the following locations:

- Hospital speed zones
- School speed zones
- Public park speed zones
- School walk zones

Priority locations with excessive vehicle speeds allowed **one traffic camera per 10,000 residents.**

California Legislation

- Authorized six California cities to establish Automated Speed Enforcement (ASE)
- Established a **5-year pilot** through January 1, 2032
- Vehicle must be **traveling at least 11 mph over the speed limit** to receive a citation
- The number of cameras is limited based on the city's population:
San Francisco has 33 cameras

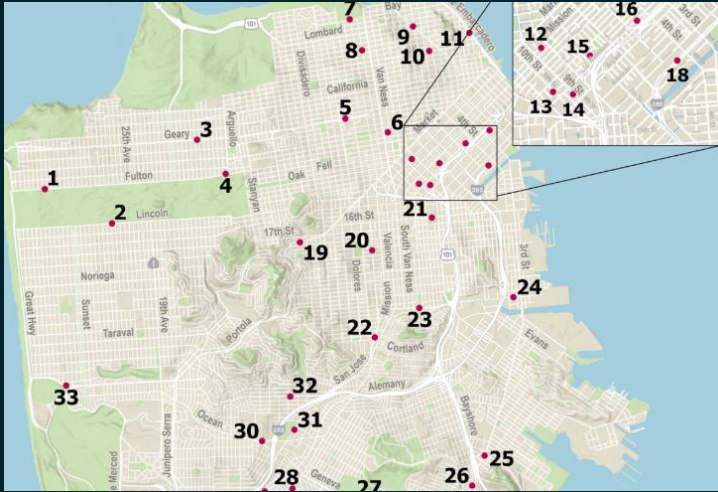


California Legislation



Consistent Standards	
Speed Penalties	- 11-15 mph over: \$50 - 16-25 mph over: \$100 - 26+ mph over: \$200 - Over 100 mph: \$500
Type Of Penalty	- Civil penalty (not moving violation)
Penalty Issued To	- Owner of vehicle (not driver)
Warning Period	- First 60 days: no-fee warnings
Eligible Locations	- High-injury street - School zone street - Street with documented speed racing

Who are we hearing from?

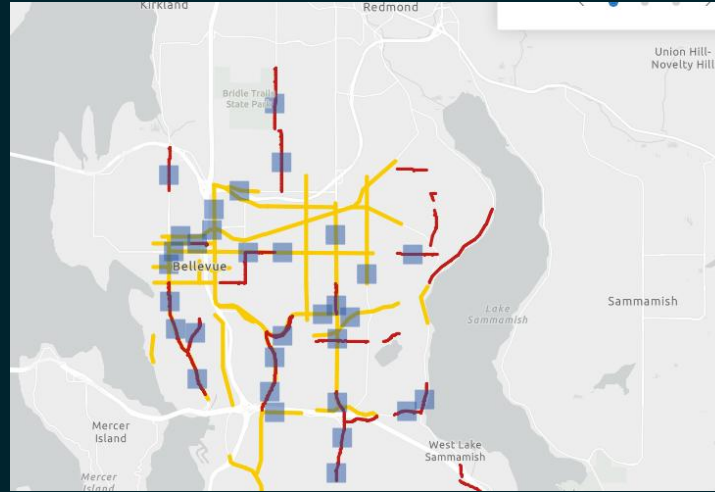


SFMTA (CA)

826,000 people | 748,000 jobs

33 Citywide speed cameras since March 20, 2025

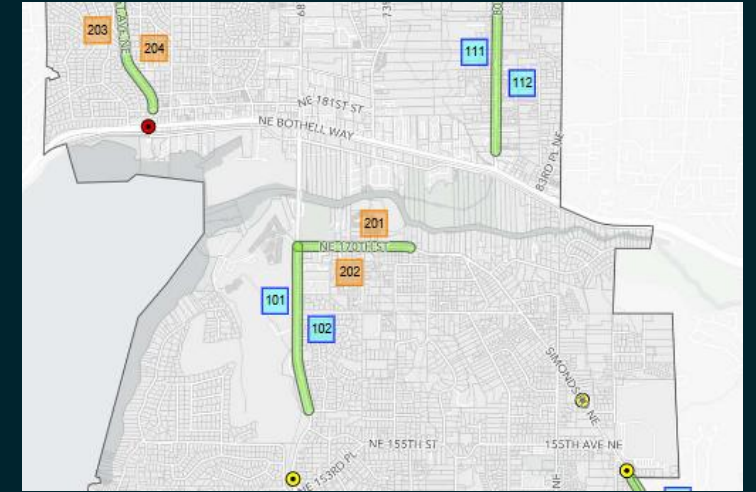
Red light cameras since 1996



City of Bellevue (WA)

158,000 residents | 160,000 jobs

School Zone and red light cameras since 2009



City of Kenmore (WA)

24,260 residents | 4,583 jobs

School zone cameras and red light cameras since 2023

Jarrett Hornbostel

SFMTA

Background

State Law Specification	San Francisco's Response
Cameras to be located on a high-injury street, a school zone, or a street with documented speeding	All cameras were located on the high-injury network, where vehicle speeding is a known issue
Cameras cannot be located on state highways, freeways, or expressways	All cameras were located on city streets
Cameras should be located in areas that are "geographically and socioeconomically diverse"	At least 2 cameras in each supervisory district, with locations to reflect the full diversity of socioeconomic backgrounds in the city
All locations of speed cameras must be identified on "the municipality's internet website"	The SFMTA website (sfmta.com/speedcameras) is kept consistently updated with the locations of the 33 cameras and their status

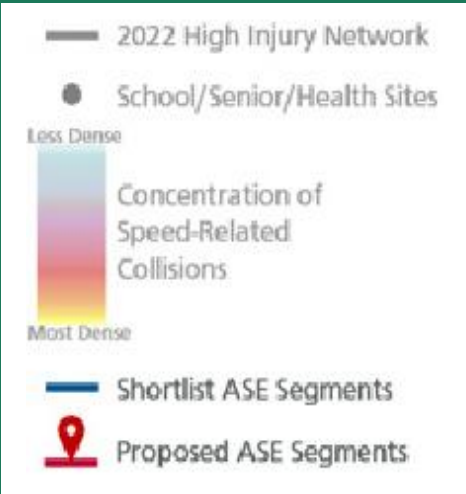
SECTION 01

Data-Driven Approach

Candidate Locations

Screening Criteria

Camera locations should be “geographically and socioeconomically diverse”



**Streets with Speeding Vehicles
(10 MPH Over Limit)**
Based on speed studies or volume counts

**Streets with Speed-related
Collision History**
Based on geo-located historical collision & injury data



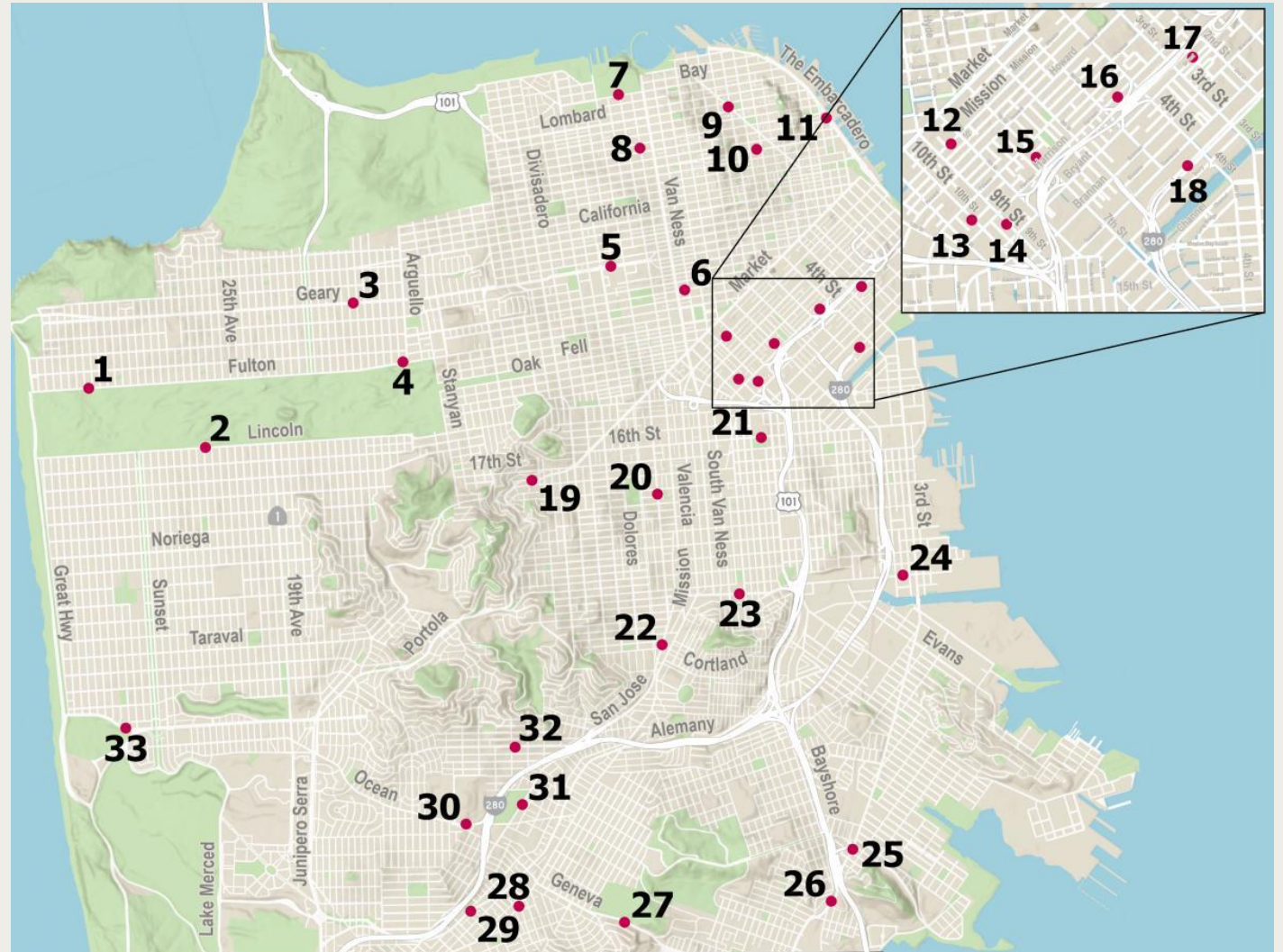
**Neighborhoods with Vulnerable
Road Users**
Near schools, senior centers, parks, commercial areas, etc.

**Streets with Higher Infrastructure
Risk**
Including uncontrolled crosswalks, wide roadways, etc.



Streets Where Speeding Persists
Measured by post-implementation vehicle speeds where engineering tools haven't reduced speeds

Final Camera Locations



SECTION 02

Engagement

30-Day Public Education Campaign

- Began outreach **two months before camera activation**
- Conducted multilingual engagement in **four languages**
- Generated an estimated **40 million impressions** between January and April
- Created **community-informed artwork and messaging**



Paglalagay Speed Safety Camera

Maaring gawing mas ligtas ng mga kamera ang ating mga kalye sa pamamagitan ng pagpapabagal sa bilis ng pagmamaneho. Narito ang ilang mga halimbawa kung saan maaaring ilagay ng SFMTA ang mga kamera:



Multi-Platform Paid Media Campaign



- **Billboards** near camera locations
- **Transit and print advertising** including bus shelters, newspaper stands, and in-language media
- **In-language digital advertising** to reach non-English-speaking audiences
- **Streaming video advertising** targeting younger male drivers
- **Social media campaigns** on Facebook and Instagram

Earned Media

14 stories

between January and March 2025 discussing San Francisco's adoption of speed safety cameras

- Reached audience of **19.3 million**
- **96,000** complete views

NBC Bay Area News at 5 PM - Mon, 27 Jan 2025 17:00:00...

to transportation officials. That's why one of the city's new **speed safety cameras**...

The Ten O'Clock News on KTVU Fox 2 - Mon, 27 Jan...

are coming. **Shannon Hake** manages San enforcement cameras are coming....

San Francisco's new speed cameras to automatically issu...

's coming to San Francisco," the agency said on its website. **Shannon Hake**, the...

KRON 4 News at 6am - Tue, 28 Jan 2025 06:43:25 -0800

ON CAMERA MORE OFTEN IN SAN FRANCISCO AND FIND THE **SFMTA** IS INSTALLING SOME NEW **SPEED SAFETY CAMERAS** A...

The new 'automated' speed cameras need humans to check their work

competitive process," **SFMTA** spokesperson Michael Roccaforte said. "Verra Mobility scored the highest through this process." The...

SF's Speed Cameras Are Now Coming In March, But Ad Campaign For Them Already Gearing Up

don't want this to take anyone by surprise," **SFMTA's** Speed Safety Camera Program manager **Shannon Hake** told the Chronicle. "We...

NBC Bay Area News at 6 PM - Mon, 27 Jan 2025 18:00:00...

San Francisco will soon become the first city in the state to have **speed safety**...

SF's Speed Cameras Are Coming in March. Will They H...

that I think drives our public a little nuts," Mandelman asked **Shannon Hake**, the...

Speeding in San Francisco? 'Say cheese' for cameras at 3...

one step closer to automatically sending drivers speeding tickets. **Speed safety**...

KTVU FOX 2 News at Noon - Tue, 28 Jan 2025 12:00:00 -0800

. **Shannon Hake** know that speed enforcement cameras are coming. **Shannon Hake** manages San Francisco Municipal cameras are...

Hey San Francisco, Speed Safety Cameras are Coming

tulong para sa wikang Filipino Copyright © 2013-2024 San Francisco Municipal Transportation Agency (**SFMTA**). All rights reserved. Credits

KTVU Fox 2 News at 6pm - Mon, 27 Jan 2025 18:00:00...

. **Shannon Hake** manages that speed enforcement cameras are coming....

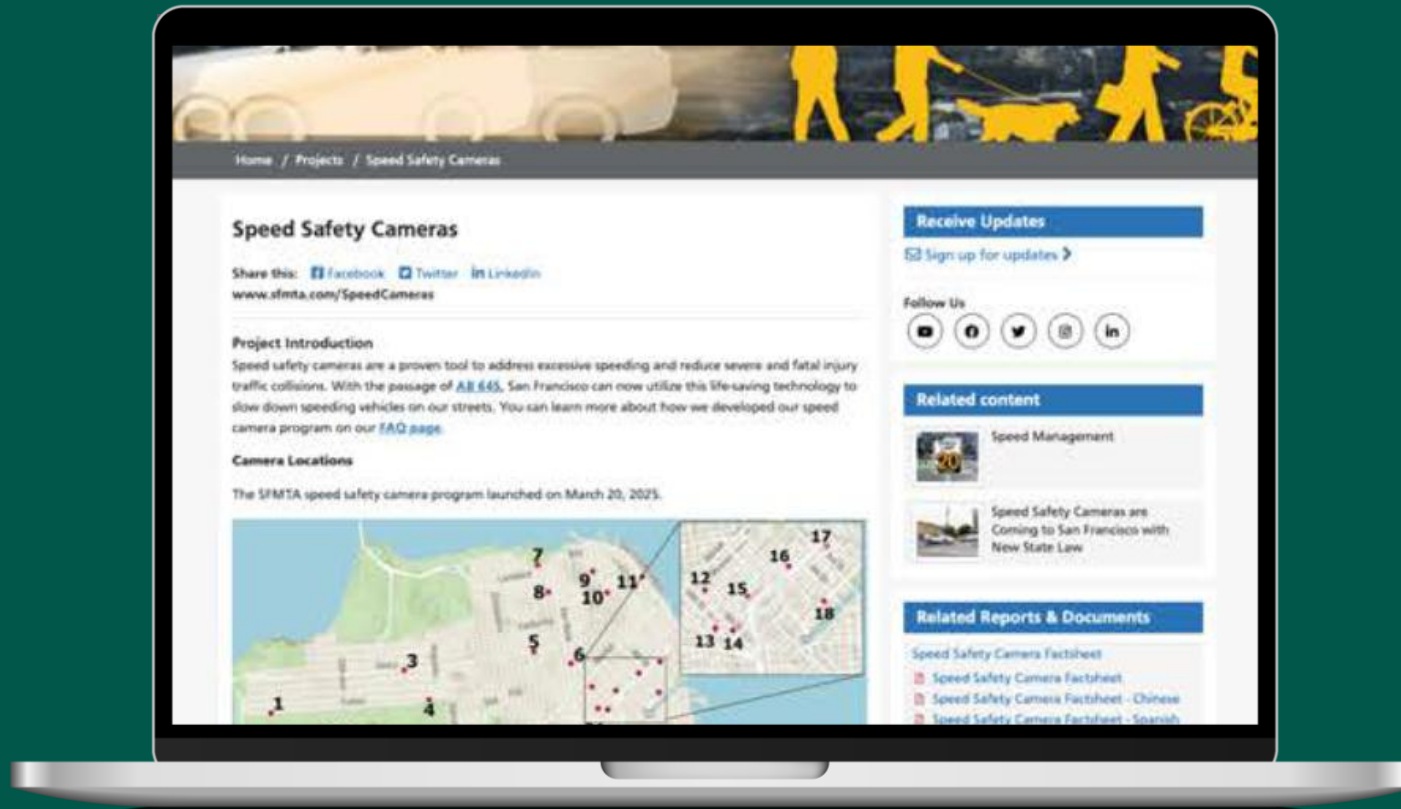
SF prepares for speed enforcement cameras

warning drivers that speed cameras are coming to the city. **Shannon Hake** manag...

SF speed cameras now in use; warnings to be given out for 2...

hit your wallet hard. **SFMTA** has a map of the locations and details from each locati...

Web Traffic



Speed Safety Cameras Program Website

- **1600% increase** in average daily website users
- **1700% increase** in average daily pageviews
- **52% of visitors** arrived through **Google search**

Warning Notice Inserts

500,000+

warning notices included educational inserts

(Used warning notices as educational tools)



San Francisco Bay Area Families for Safe Streets is a group made up of traffic crash survivors and the loved ones of people who have been killed or injured in traffic crashes.

SFMTA prioritizes traffic safety and has implemented the speed safety program. Speed is the leading cause of death and serious injury on San Francisco's streets, and this dangerous behavior needs to stop.

The speed safety program works to change driver behavior and slow traffic. By reducing vehicle speeds to safer levels, we can all make a positive impact on the community.

Slow down – Save lives

Learn more about the San Francisco Bay Area chapter at walksf.org/fss

Speed kills – dangerous driving behavior affects our community and those we love



Sheria Musyoka,
Age 26

Sheria was on a morning run on Lake Merced Boulevard when he was hit and killed by a speeding driver, leaving behind his partner Hannah and their three-year-old son Theo. Sheria loved many things: soccer, languages (he spoke five fluently), good food, and his family. After graduating top of his class at Dartmouth, Sheria moved to San Francisco for a new job. He had a brilliant mind and big dreams for changing the world.



Judy Szeto Yuen Man 司徒婉文, Age 60

Judy was hit by a speeding driver while crossing Park Presidio Boulevard. She suffered a ruptured spleen, collapsed lung, multiple fractures, and a severe traumatic brain injury. She lives today with significant cognitive impairment, PTSD, and suicidal tendencies. Judy loved her role as a mom and a grandma more than anything. Judy's favorite way to show love to her family was hosting and feeding everyone at home, with her husband Eddie as the chef. Judy and Eddie were almost always together.

Slow down. Save lives.

SECTION 03

Program Build Out

Implementation Timeline



System Planning

Oct '23 – Mar '24

- Location Screening & Identification
- Speed Safety System Use Policy & Impact Report



System Design

Apr – Dec '24

- Contract Legislation
- Vendor Selection
- Design & Installation of Roadside Equipment



Implementation

Jan – Jun '25

- 30-Day Public Education Campaign
- 33 Cameras Deployed
- 60-Day Warning Period



Evaluation

2026 – 2031

- Quarterly data collection and evaluation
- 18-Month Assessment
- Final Report to Legislature

Why SFMTA Chose A DBOM Contract

Design-Build-Operate-Maintain



Cost Savings



Time Savings



Enhanced Quality Assurance



Efficiency in Delivery



Proactive Maintenance Planning



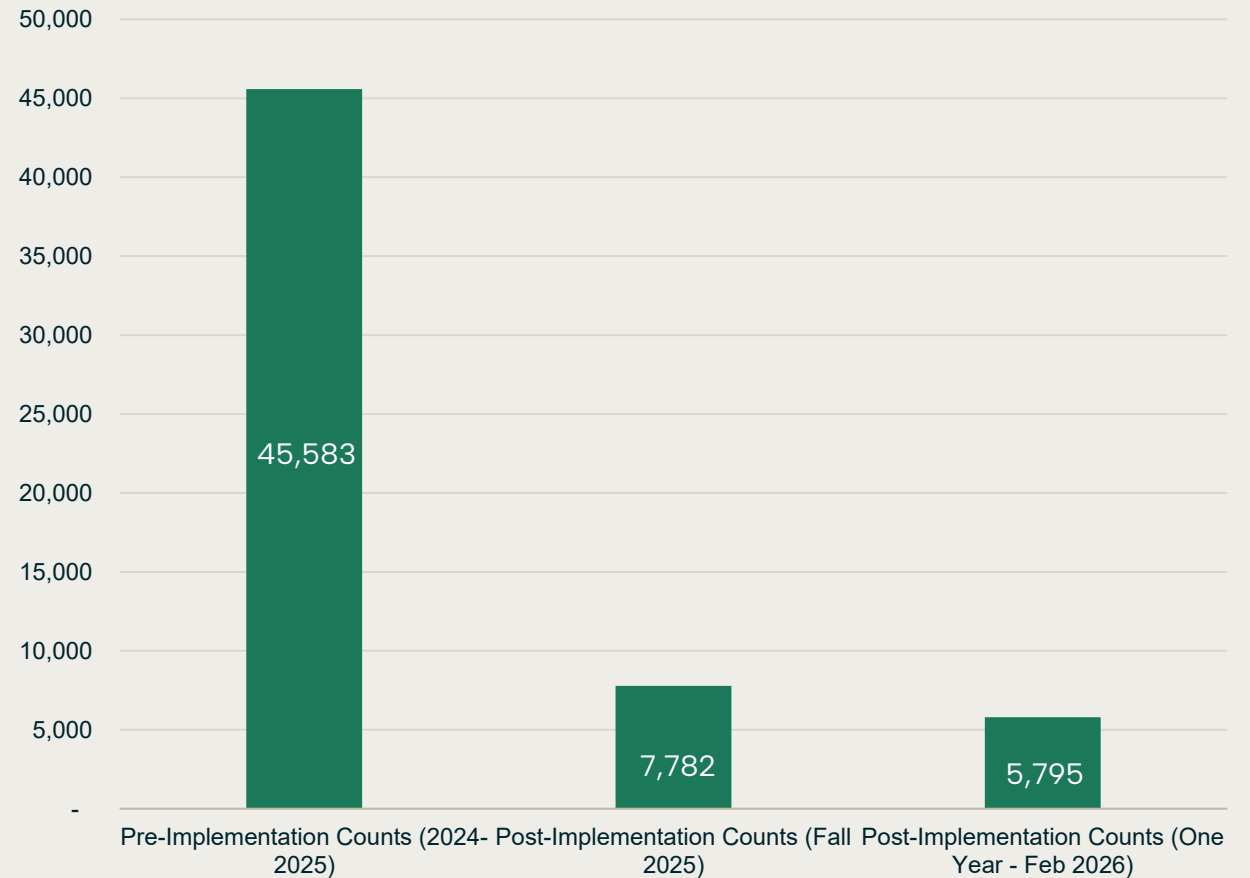
Behavior Trends

Speed Study

Nearly **80% fewer**
drivers speeding 10 mph
or more over the speed
limit in San Francisco

~40,000 fewer
speeding events per day

Number of Vehicles Speeding 10+ MPH Over the Speed Limit

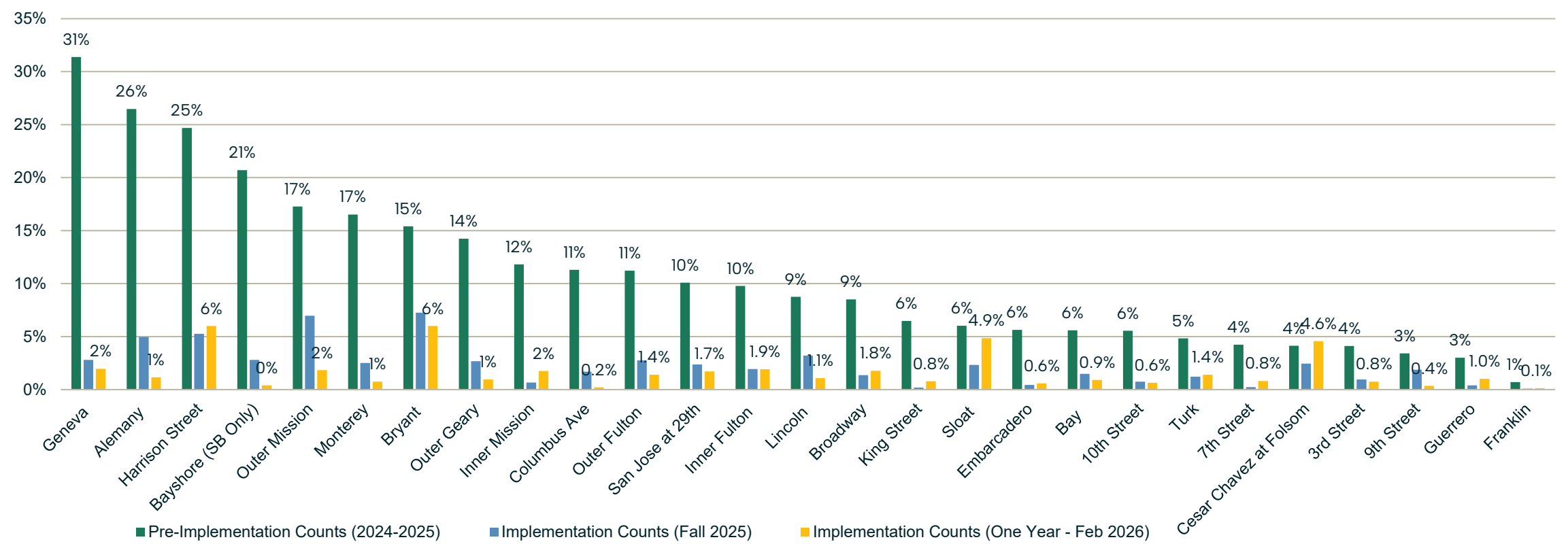


Behavior Trends

Speed Study

By fall 2025 and winter 2026, just 2% of drivers were traveling 10 MPH or more over the speed limit.

Share of Vehicles Speeding 10 MPH+ Over Speed Limit



Violation Trends Following Program Launch

As the technology is fine-tuned, it does a better job identifying the remaining speeders, even though fewer people are speeding overall.

The absolute number of tickets issued increased by 10 percent last quarter, largely due to higher vehicle volumes associated with major city events and ongoing technology improvements.

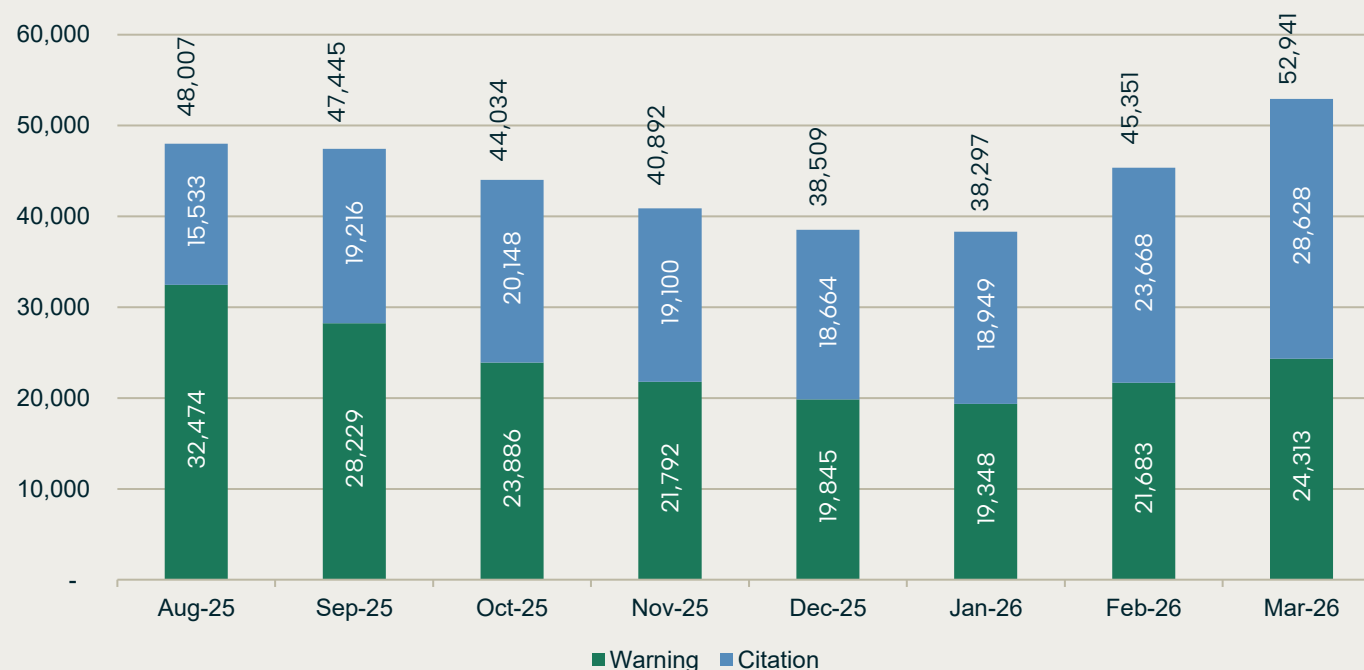
Program Activity:

362,047 startup warnings

191,570 post-launch warnings

163,906 notices of violation

Speed Safety Camera Citations and Warnings Issued by Month

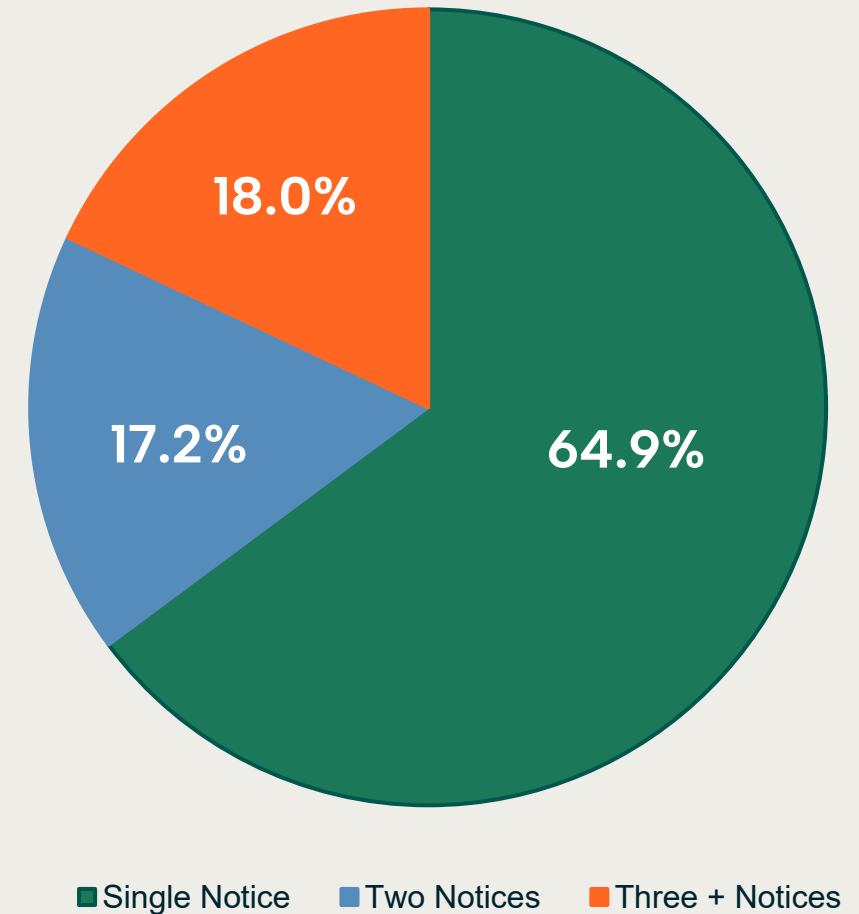


Note: Citation counts are influenced by traffic volumes, major events, operational factors, and ongoing technology refinements.

Issued Violation Trends

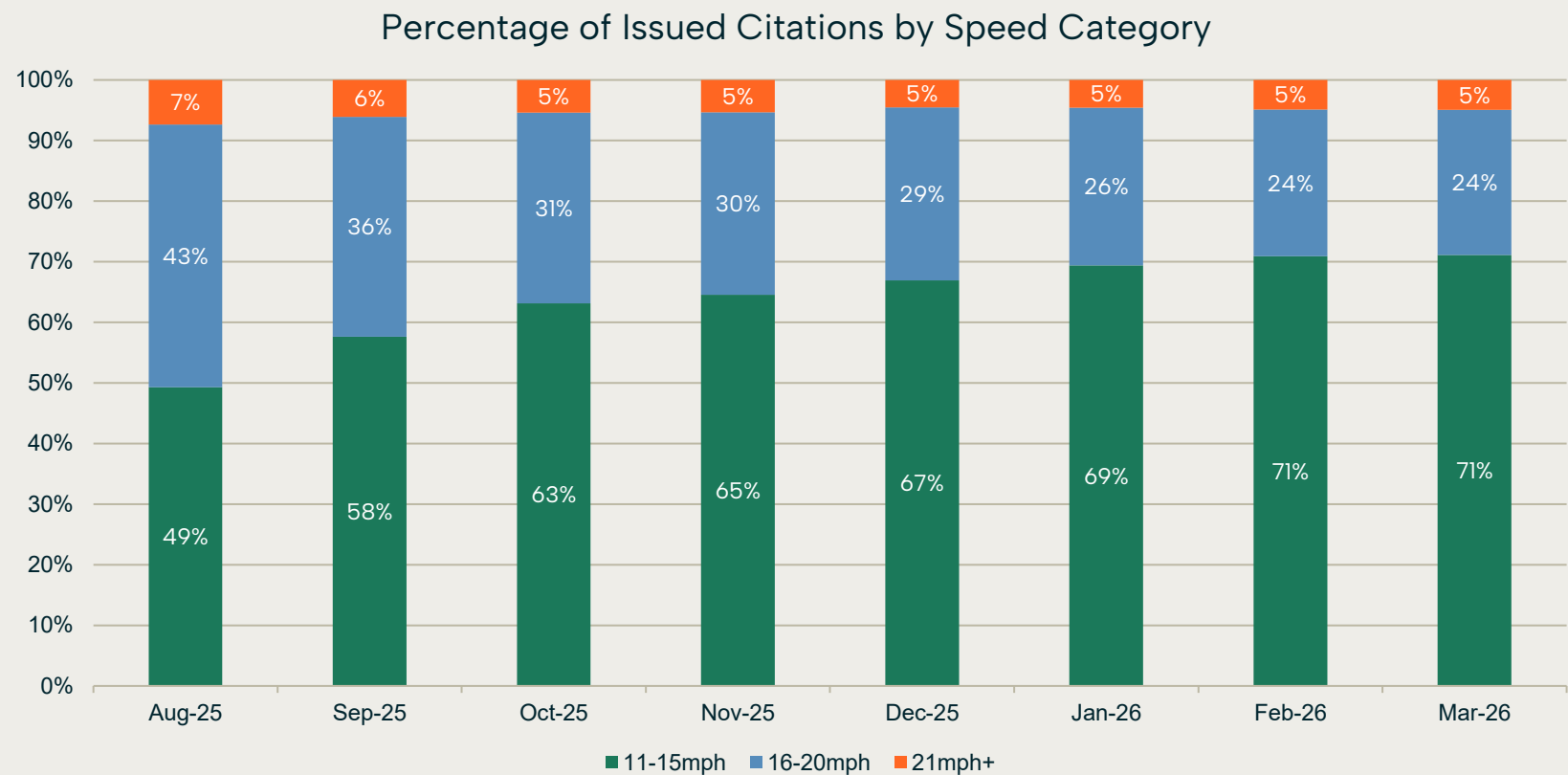
Early data shows strong compliance and shifting driver behavior.

- **65%** of owners who receive a warning or citation **do not receive a second**
- **82%** of recipients receive **two or fewer** notices



Trends Show Fewer High-Speed Violators

16+ mph over the speed limit violations fell from **over 50%** to **less than 30%** today.



Lessons Learned

Plan For A Longer Implementation Timeline

Contracting and permitting often take longer than expected

Deploy Cameras In Phases

Smaller initial deployments help identify issues before scaling

Communicate Frequently With Vendors

Small issues can quickly become major impacts, set realistic targets for implementation and check in daily

Expect Hiccups

Equipment, registration, mailing, and software issues are part of implementation

Staff Early

Warning periods can generate far more review events than anticipated

Next Steps for the Program

Monitor Performance

- Publish program data quarterly on DataSF (www.data.sfgov.org)
- Conduct 18-month effectiveness evaluation (September 2026)

Evaluate System Effectiveness

- Reduction in 85th percentile speed
- 20% reduction in speeding vehicles
- 20% reduction in repeat offenders

Plan for the Future

- Coordinate with other California pilot cities
- Advocate for policy changes for supporting expansion and long-term financial feasibility
- Submit final report to Legislature at the end of the 5-year pilot

Franz Loewenherz

City of Bellevue

Safe System Policies, Programs, and Projects

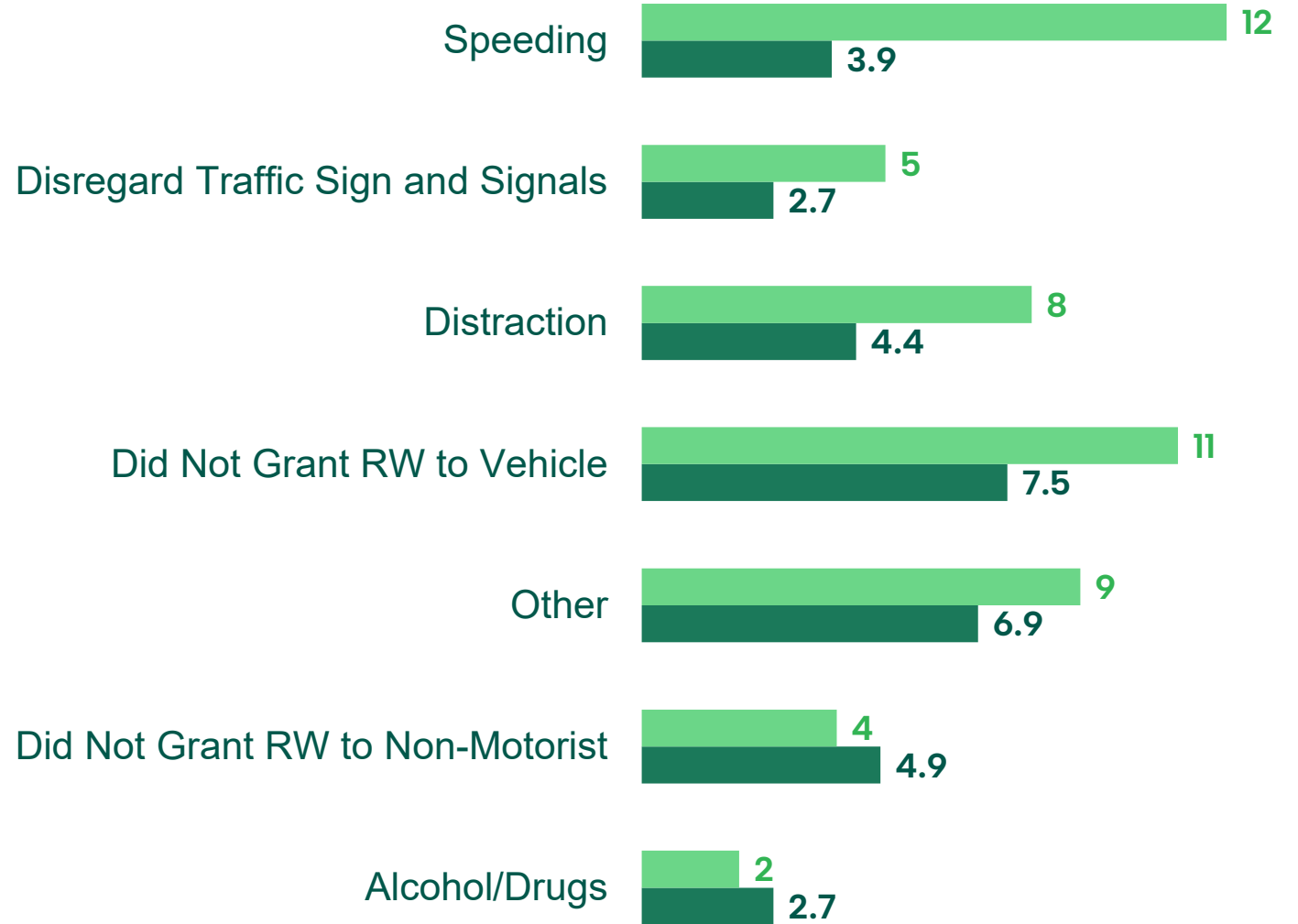


Safe System –
Council Resolution
(2020)



Contributing Factors in Fatal and Serious Injury (FSI) Crashes

■ 2025 ■ 2015-2024 Avg.



Program Background

2009

Program launched

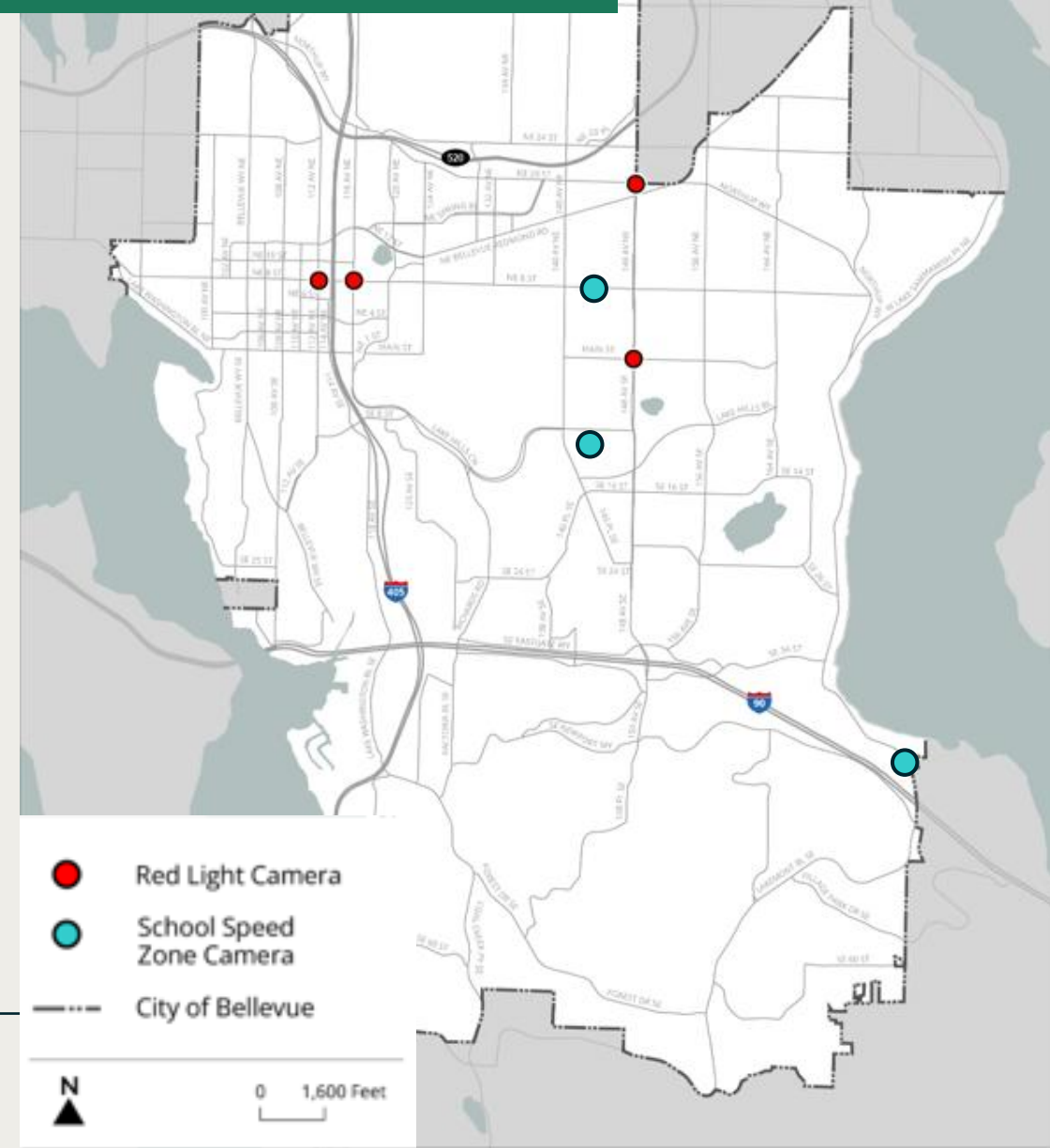
2014

Program expanded

Today

- Three school-zone cameras ●
- Operate only during school arrival and dismissal periods

Stevenson Elementary School (NE 8th Street)
Lake Hills Elementary School (SE 8th Street)
Sunset Elementary School (WLSP)

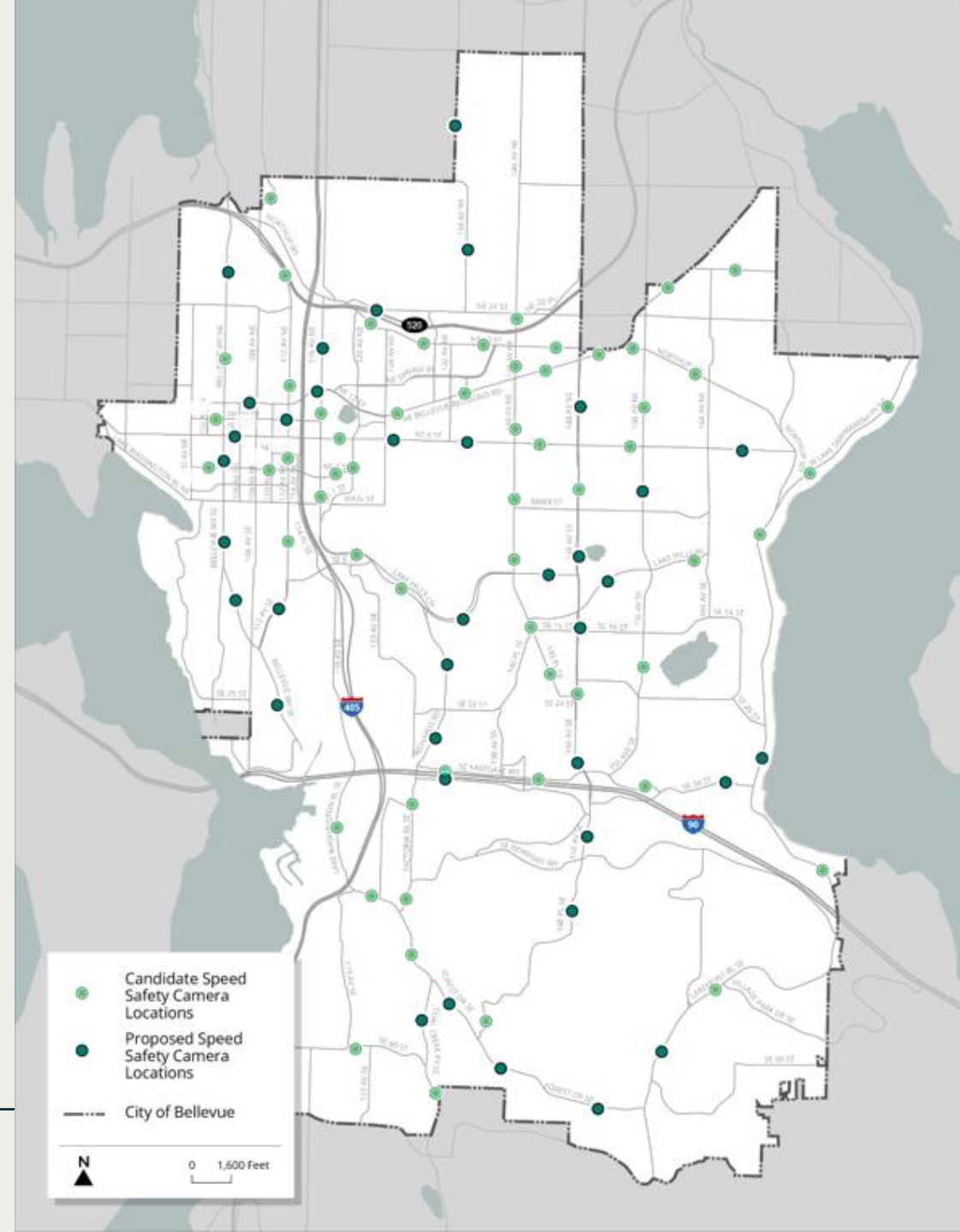


SECTION 01

Data-Driven Approach

Candidate Camera Locations

- **95 candidate locations** evaluated, all allowed under state law
- **Point-based evaluation system** applied to assess safety risk
- **37 highest scoring locations** identified as proposed sites



System Level Analysis

High-Speeding Crash Network (up to 40 pts)



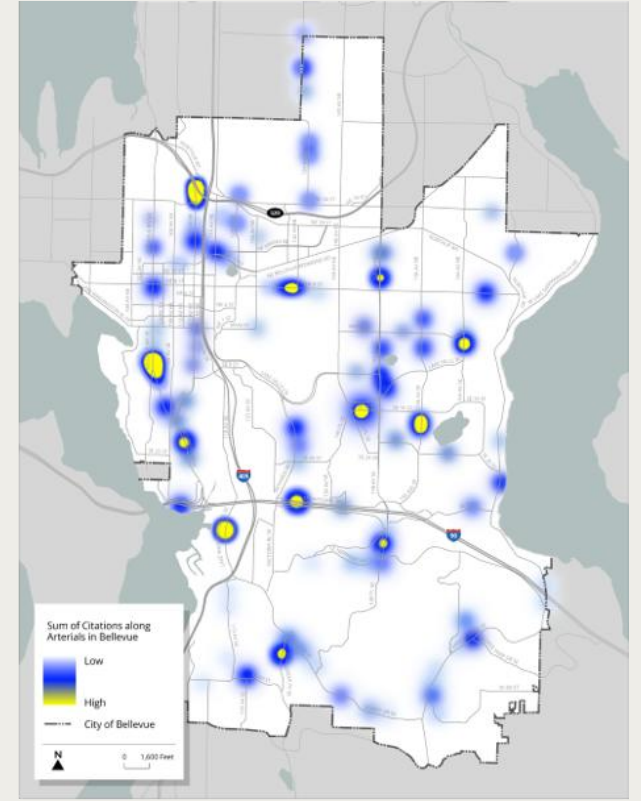
10% of streets account for 88% of severe speeding crashes
(WSDOT, 2015–2024)

Speeding Risk Network (up to 40 pts)



15%+ of weekday drivers exceed speed limit by 6+ mph
(Iteris ClearGuide, Jan–Mar 2024)

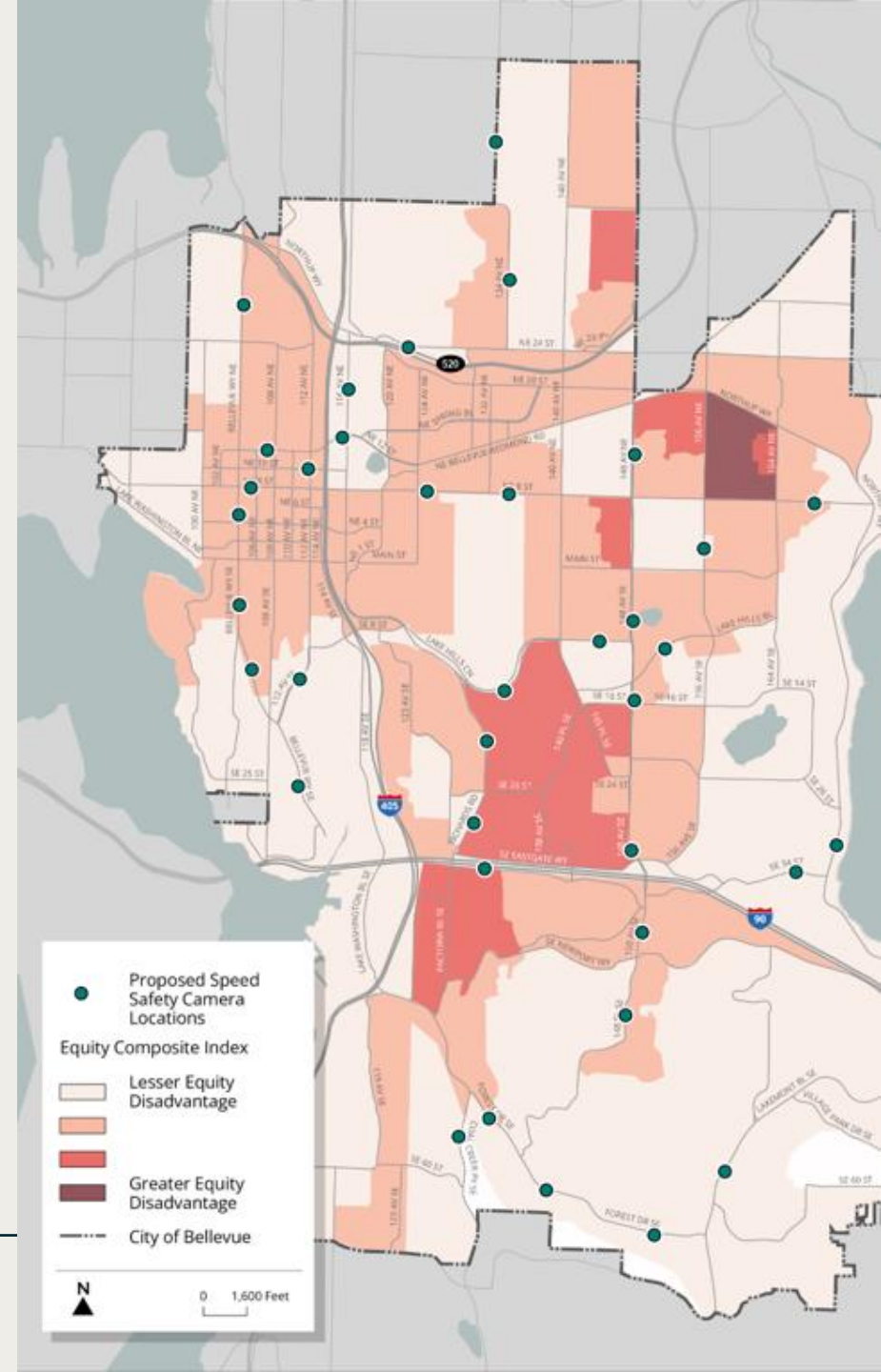
Police Department Citations (up to 20 pts)



Streets with the highest speeding citation rates per mile per year
(BPD citation data, 2018–2025)

System-Level Equity Analysis

- **Balanced camera placement** across neighborhoods
- **Activate only when speeding is detected;** faces are not recorded
- **Reduce financial hardship** with lower fines than police-issued tickets
- **Provide a 50% fine reduction** for eligible public assistance recipients
- **Prevent secondary impacts** by excluding citations from driving records and insurance rates



SECTION 02

Engagement

Engagement Tactics

Pre-launch	Launch	Post Launch
• Survey tools • Summer tabling • Candidate locations map • Community workshops	• Corridor mailers and signage • Educational tools (infographic, video segment) • Advertising and stakeholder notifications	• Report on first year metrics • Develop continuous feedback channels

Understand
community priorities



Inform
public of new policy



Build trust
through reporting

Pre-Launch Outreach

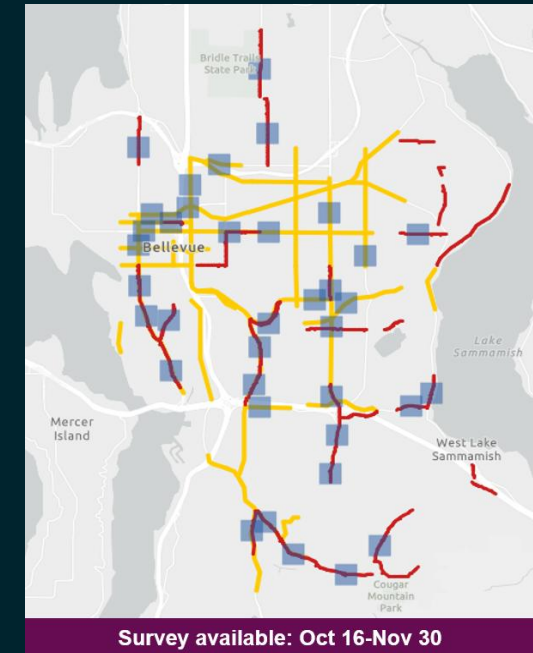
Project page and flyer



Tabling events and CBO presentations



Multiple questionnaires and an online location survey



Community Perspectives and Priorities

Speeding is a serious safety concern

- Cameras are viewed as an effective countermeasure

Priority locations

- Streets with severe crashes
- Street-racing hot spots
- School zones

Program expectations

- Accurate and effective enforcement
- Protection of personal privacy



SECTION 03

Program Build Out

Initial 2026 Deployment Strategy



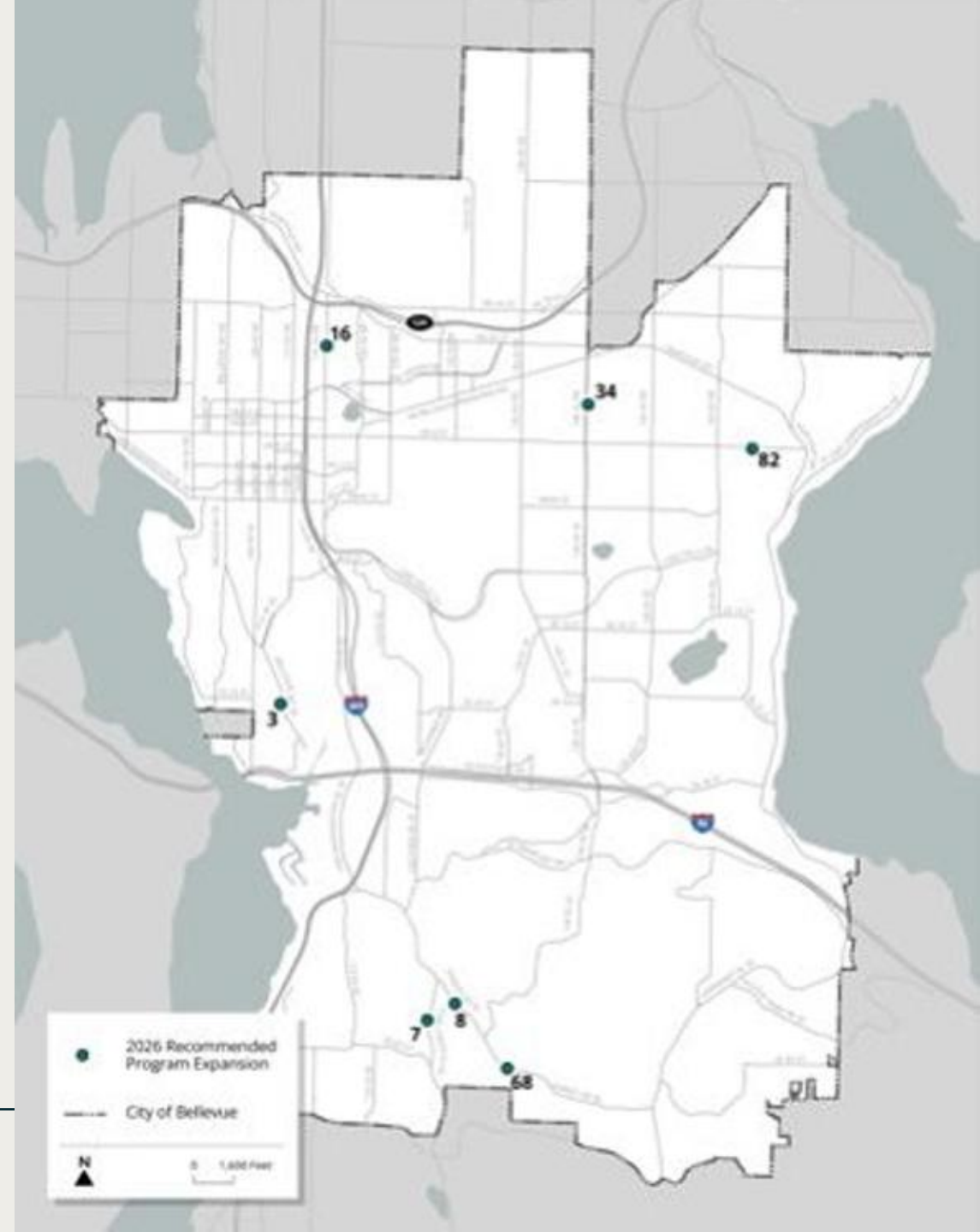
WARNING PERIOD
BEGINS
AUGUST 14, 2026



CITATIONS BEGIN
SEPTEMBER 14, 2025
(PHASE ONE LOCATIONS)

Considerations:

- Geographic distribution across Bellevue
- Staffing capacity
- Ease of deployment
- Speed limit stability



Future Deployments

Future camera locations will be selected and evaluated through a repeatable six-step process.

- Identifies where risk is concentrated
- Applies enforcement consistently and legally
- Ensures equity and transparency
- Refines itself continuously based on outcomes

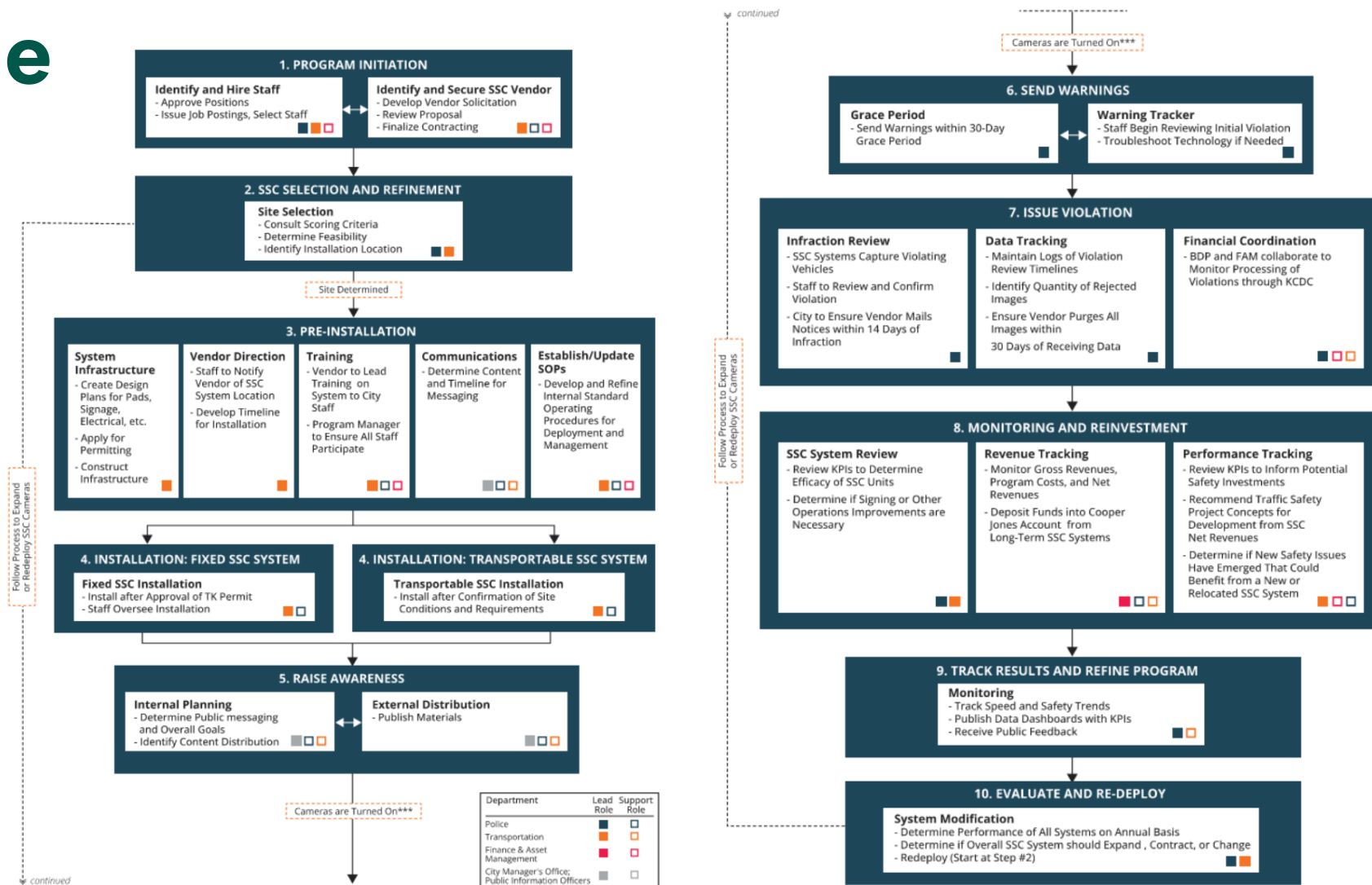


One City Collaboration

Successful implementation requires coordination **across departments.**

TRANSPORTATION	POLICE	FINANCE & ASSET MANAGEMENT	CITY MANAGER'S OFFICE
• Overall Program Management • Vendor Selection and Management • Site Selection and Management • Site Design and Infrastructure Construction • Site Selection (Collaboration with Police) • Data Tracking and Dashboard Publishing • Capital Planning for Safety Projects from SSC Net Revenues • Collaborating with Vendor On-Site for Technical Issues	• Site Selection (Collaboration with Transportation) • Infraction Review and Ticket Issuance • Coordinating Staff Training on Vendor System	• Financial Tracking of SSC Program • Ensuring Payments to Cooper Jones Fund • Providing Quarterly Estimates to SSC Program Team	• Overseeing Agreements with KCDC on Adjudication • Overseeing Public Communication Protocols and Timelines • Managing Program Webpages • Fielding Questions from Elected Officials • Tracking Updates to State and Local Laws that May Impact SSC Program

Operating and Managing the Program



Takeaways

Bellevue's program
is built on:

01

Legal and Procedural Integrity

Grounded in state law, local code, privacy protections, and due process are met

02

Data-driven Targeting

Focused high-speeding and high-injury corridors

03

Robust Community Engagement

Ensuring transparency, maintaining dialogue to use public input for site selection, program design, and program evolution

04

System Integration

Connects engineering, enforcement, equity, operations, and evaluation into a single coordinated Safe System framework

Tobin Bennett-Gold

City of Kenmore

Background

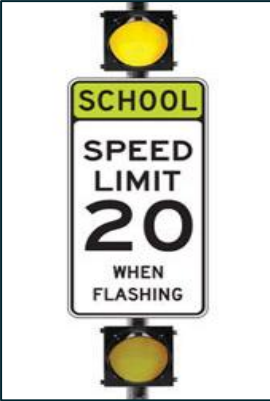
School Zone (SZ) Cameras:

- Arrowhead Elementary School Zone on Juanita Drive
- Kenmore Elementary School Zone on 73rd Avenue
- Inglemoor High School Zone on Simonds Rd

Red Light Safety Camera:

- 61st Avenue & Bothell Way intersection

Motivating Results

		Baseline	School Zone Enforcement	Regulatory Enforcement
	SZ 6+ mph Violation Rate	95%	1.5%	0.86%
	SZ Avg Speed	31 mph	21 mph	16 mph
	Reg 6+ mph Violation Rate	30%	20%	0.96%
	Reg Avg Speed	35 mph	31 mph	25 mph

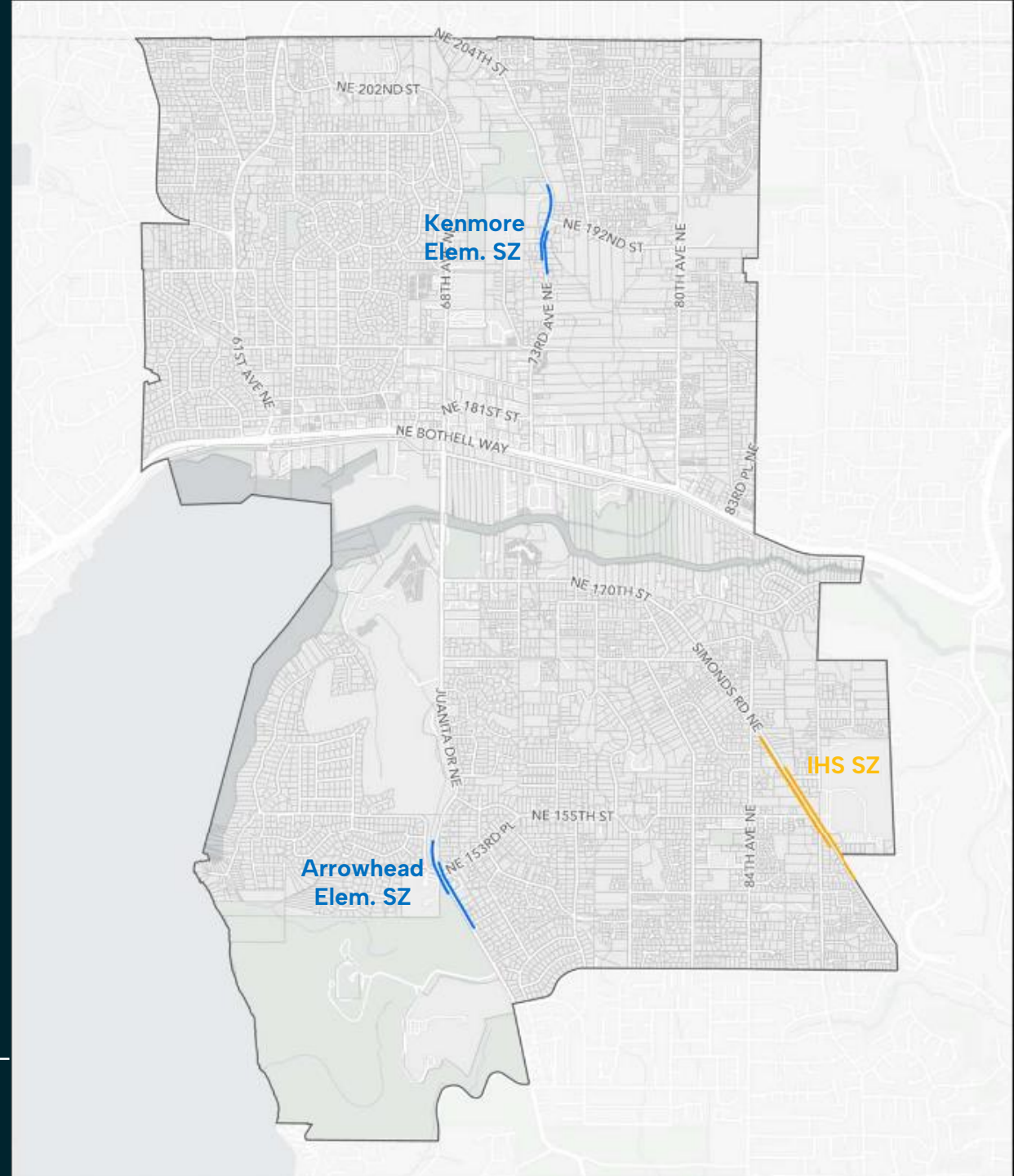
SECTION 01

Data-Driven Approach

Priority Kenmore Automated Enforcement (KAPE) Locations

School Zone Cameras

- Kenmore Elementary
- Arrowhead Elementary
- Inglemoor High School (IHS)



Location Identification

Criteria and Prioritization

Location identification is broken out into criteria and prioritization.

Criteria:



85th percentile speed exceeds speed limit by 5 MPH or more

Vulnerable road users mix with motor vehicle traffic



No speed limit changes or speed management interventions in the past 6 months at least

Other speed management interventions not expected to be adequately effective or are infeasible



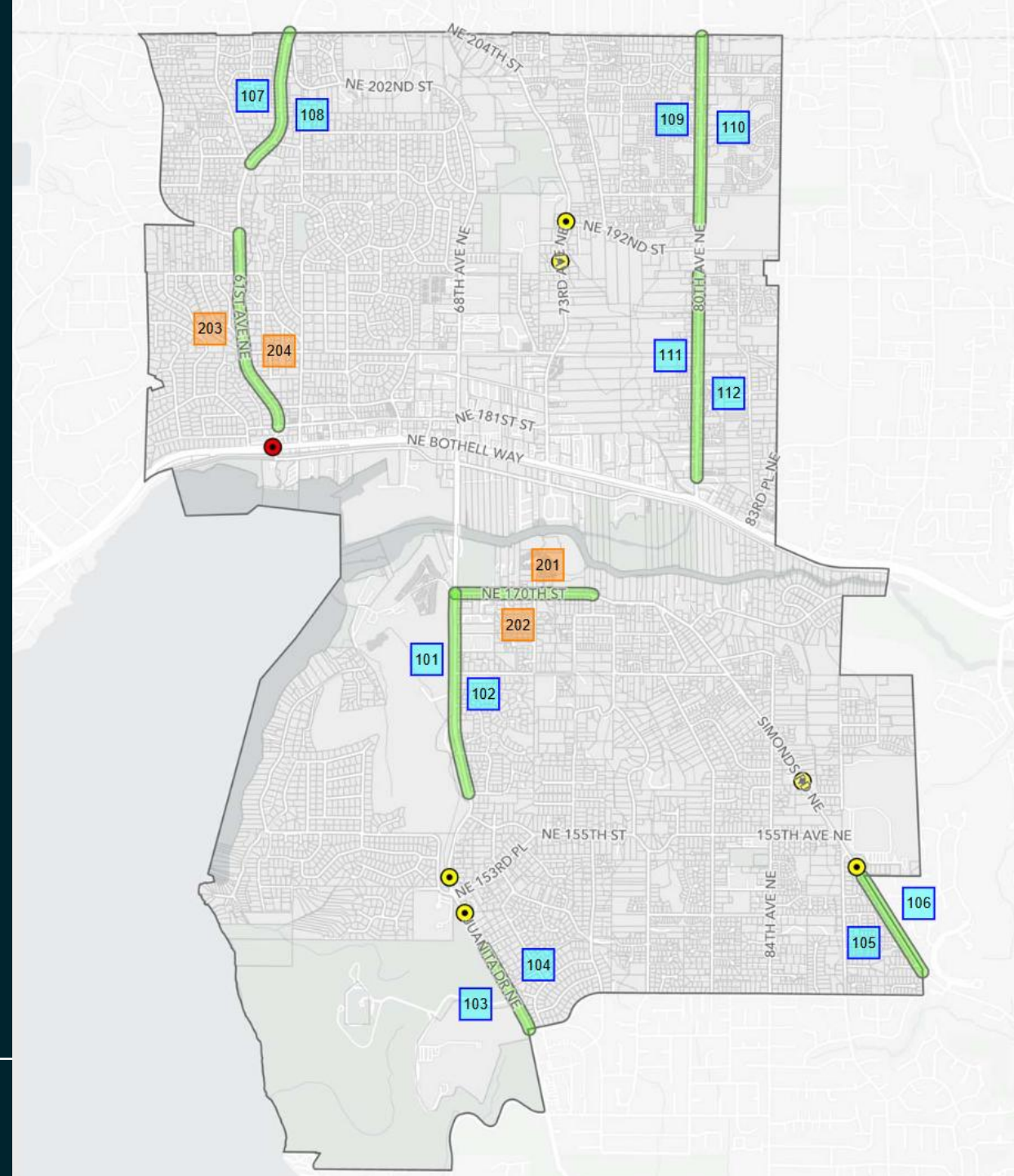
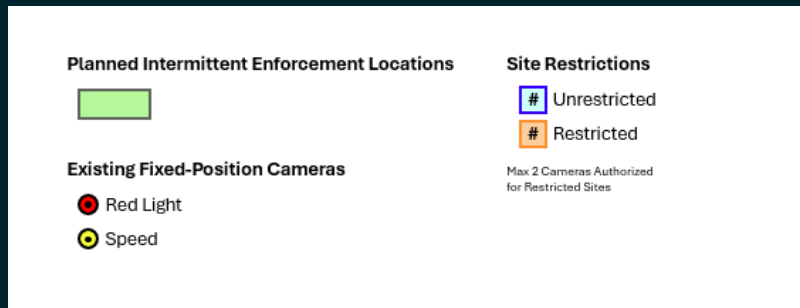
Prioritization:



Frequency of speed violations

Planned Intermittent Enforcement Locations

Planned KAPE Expansion



SECTION 02

Engagement

Foundational Values

- Last Resort: Invest in non-enforcement interventions whenever feasible
- 5 mph grace window for speeding violation
- Speed feedback signs allow drivers to self-correct
- Enforcement areas are conspicuous and not exploitative

Fair

Equitable

Transparent

Safe

Foundational Values

- Low burden for drivers who are financially vulnerable
- Does not disproportionately impact disadvantaged groups
- Reduces need for police stops for speed enforcement

Fair

Equitable

Transparent

Safe

Foundational Values

- Extensive outreach and education for all program changes
- All practices are public-facing and available on program website
- Annual reporting includes safety impact, program revenue and expenses, and infraction outcomes

Fair

Equitable

Transparent

Safe

Foundational Values

- Target areas with high opportunity for safety impact
- Net safety must be positive for all enforcement applications
- All revenue re-invested in safety projects and programs

Fair

Equitable

Transparent

Safe

Revenue



Use of 2023 / 2024 Revenue \$300k+ Invested in Safety

\$250,000 contributed to Capital Projects

- New Bicycle and Pedestrian Facilities
- Bicycle and Pedestrian Safety Improvements
- Speed Management
- Pavement Overlay
- Signal Upgrades

\$55,000 in School Zone Improvements

- Improved device reliability
- New school zone flashers and speed feedback signs

Planned Use of 2025 / 2026 Revenue \$2.5M+ Budgeted for Safety

\$1,725,000 to Capital Projects

- New Bicycle and Pedestrian Facilities
- Bicycle and Pedestrian Safety Improvements
- Speed Management
- Pavement Overlays

\$250,000 for Narrow Street Sweeper

\$550,000 for Pavement Management

- Pavement Seals
- Channelization Improvements
- Systemic Safety Investment

\$170,000 for Other Traffic Safety Investment

- Traffic Count Program
- Traffic Calming Program
- Local Road Safety Plan Projects

SECTION 03

Program Build Out

Program Build Out

Phased Scaling

01

School Zone Enforcement

- Earn trust with effective and responsible program practices
- Greatly reduce scale of impact (10% of annual traffic)

02

Regulatory Speed Limit Enforcement

- Leverage existing investments made in enforcement sites
- Expand safety benefit to 100% of traffic
- High safety investment potential
- Improve safety and quality of life at enforcement locations

03

Wide Area Intermittent Enforcement

- Broad coverage offers higher potential for systemic safety benefit
- Large scale deployment increases the need to mitigate negative impact
- Wider range of enforcement and non-enforcement strategies

Travel Speed Reduction

Risk Reduction

Reduced fatality risk by

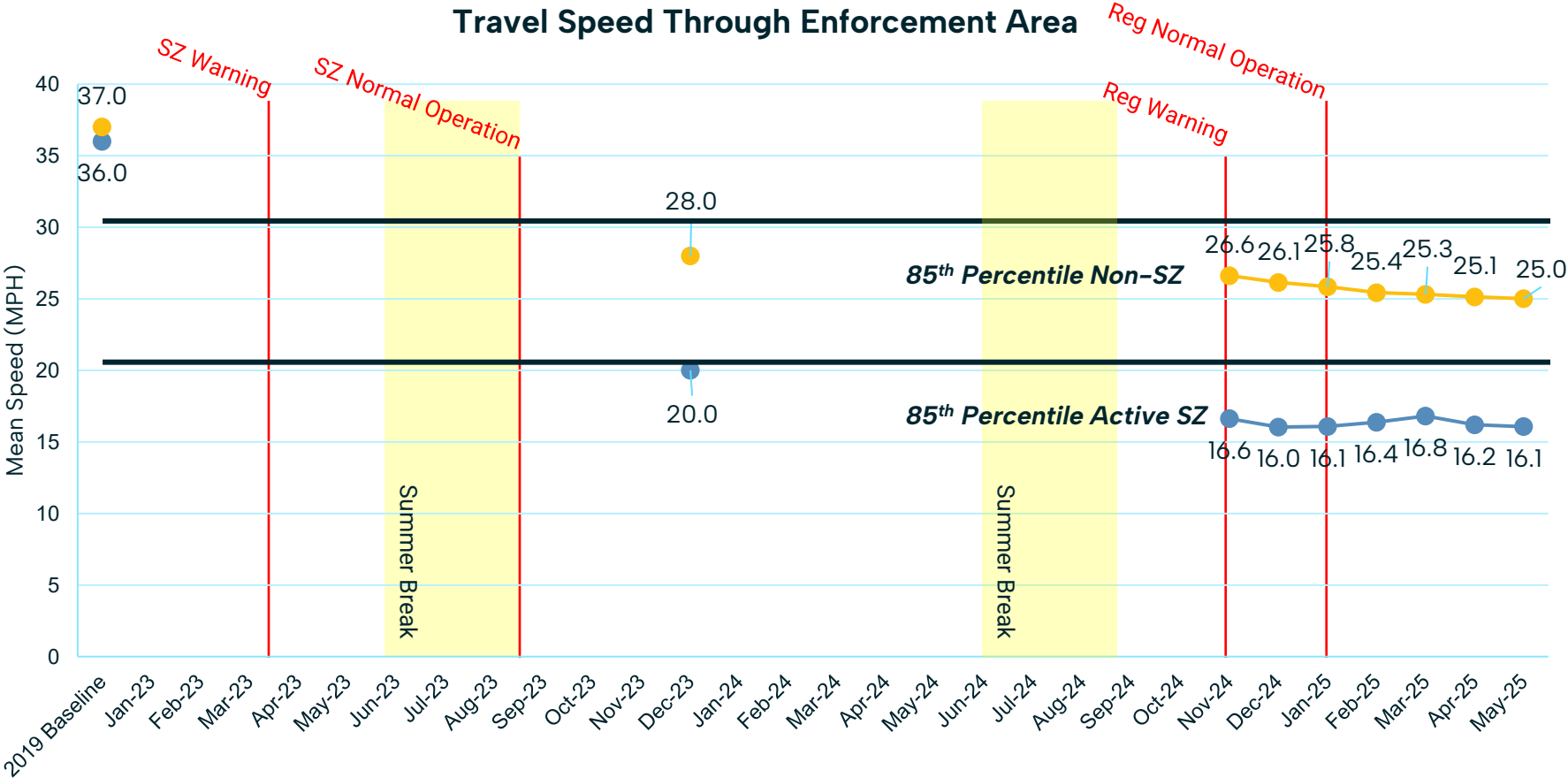
94%

Reduced injury risk by

79%

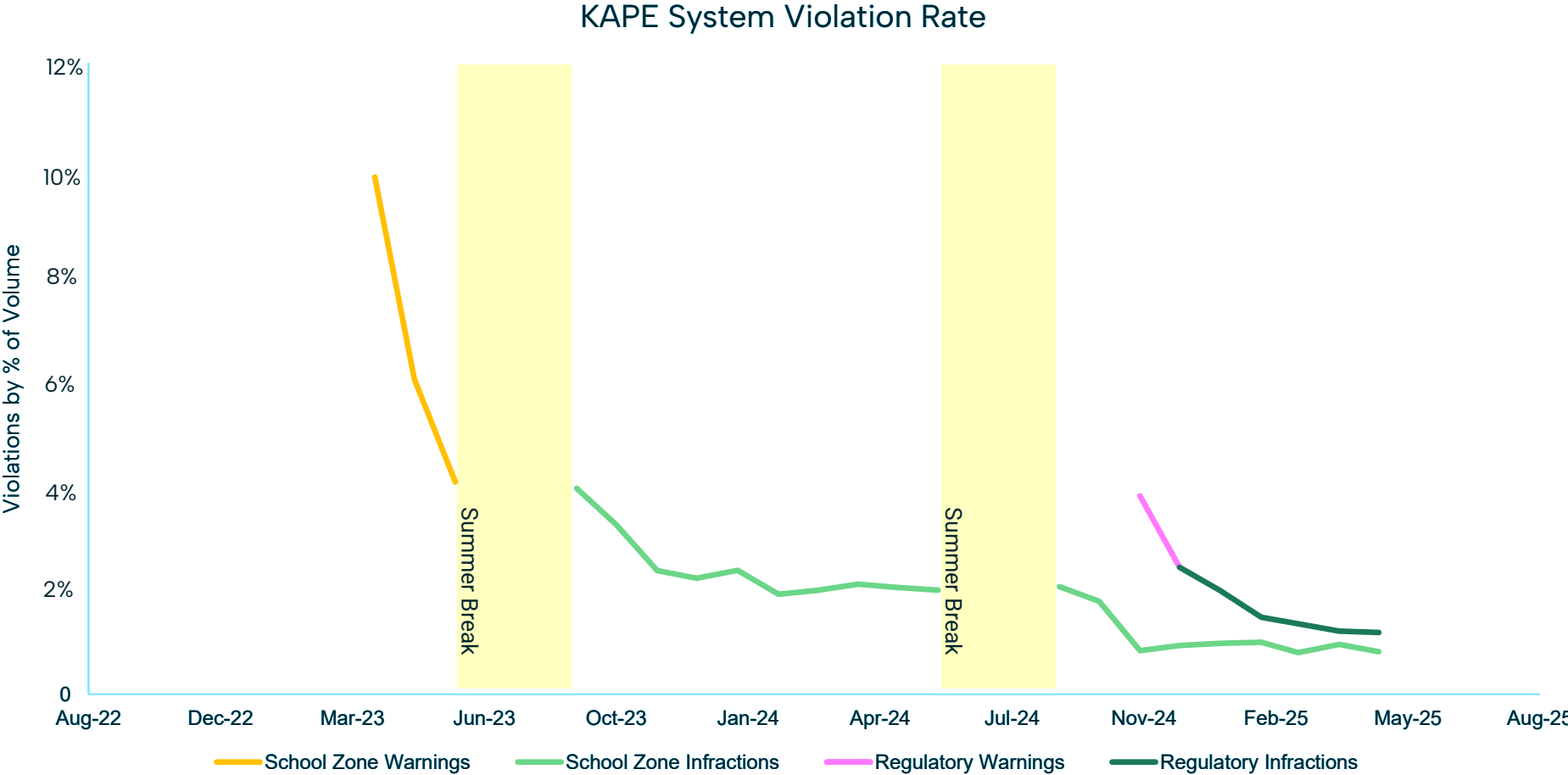
Reduced crash risk by

45%

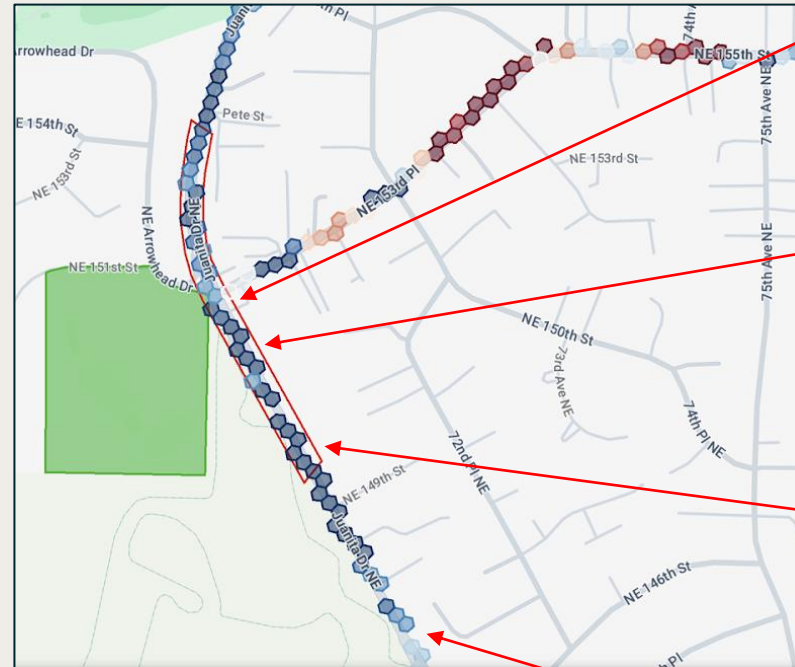


Violation Trends

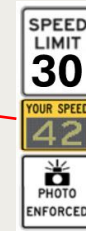
Violation Rate



Conducted by Cambridge Mobile Telematics



Transition from School Zone-only to 24/7 enforcement showed **wide-reaching speed reduction** beyond just the school zone.



**Speed
Reduction**

No Change

Speed Increase

Lessons Learned

01 Courts

Courts have proven to be our biggest obstacle to scaling – even with a good relationship, they’re still an external partner, and a separate branch of government at that.

02 Buy-In

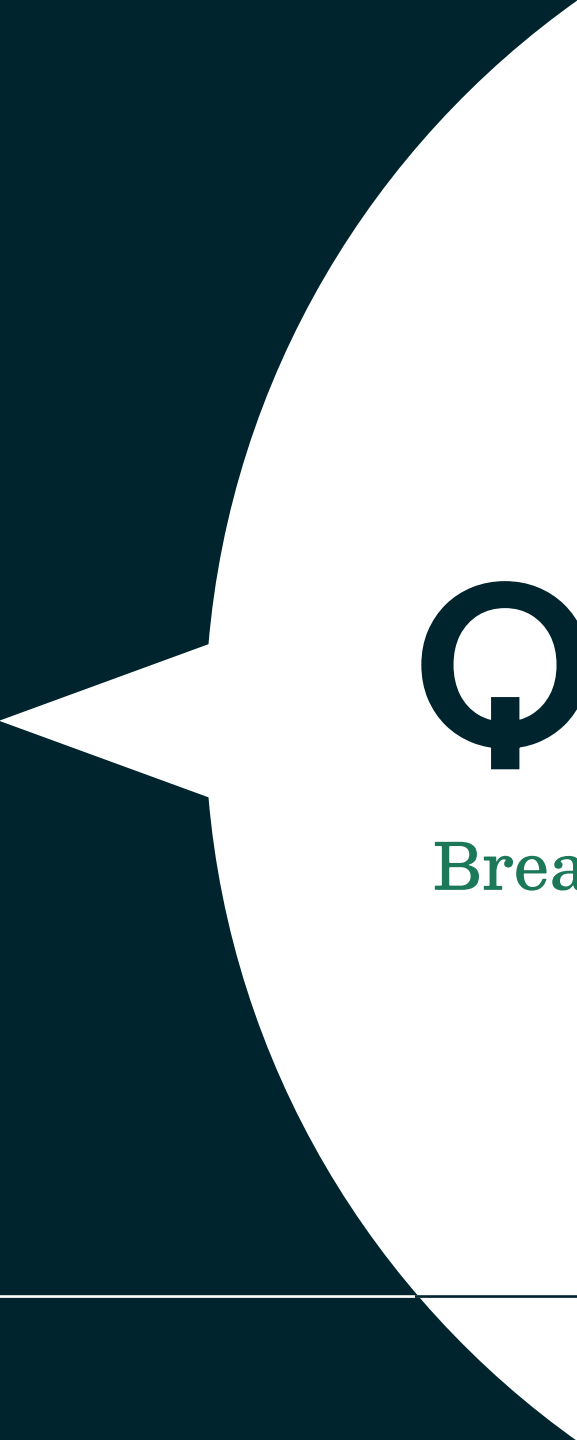
The program has sustained strong public buy-in; we credit this either to effective proactive communication and transparency, or dumb luck.

03 Support Devices

Support devices (advanced warning signs, school-zone flashers, speed feedback signs, etc.) are critical to site design and must remain visible and well-maintained to support photo enforcement.

04 Due Diligence

Agency validation and due diligence is critical to aligning contractor and agency outcomes.



Questions

Breakout Groups/Wrap Up

Thank you!

Building a Successful Speed Safety Camera Program Panel

