

Implementing Vision Zero Treatments

Fremont's "Vision Zero 2020" Program



Alameda CTC Safety Workshop
May 9, 2019

Vision Zero Approach

- Traffic deaths are **unacceptable**
- **Safety** takes priority over speed; Speed is a fundamental predictor of crash survival

TRADITIONAL APPROACH

Traffic deaths are **INEVITABLE**

PERFECT human behavior

Prevent **COLLISIONS**

INDIVIDUAL responsibility

Saving lives is **EXPENSIVE**

VS

VISION ZERO

Traffic deaths are **PREVENTABLE**

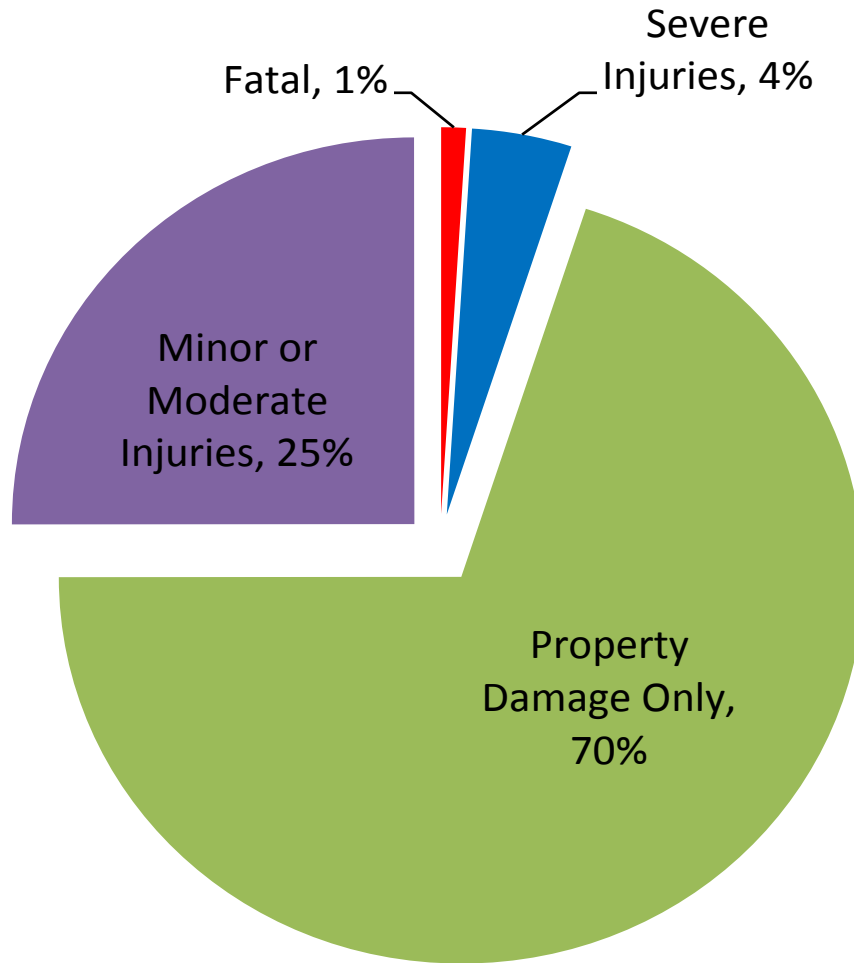
Integrate **HUMAN FAILING** in approach

Prevent **FATAL AND SEVERE CRASHES**

SYSTEMS approach

Saving lives is **NOT EXPENSIVE**

Focus on “Major Crashes”



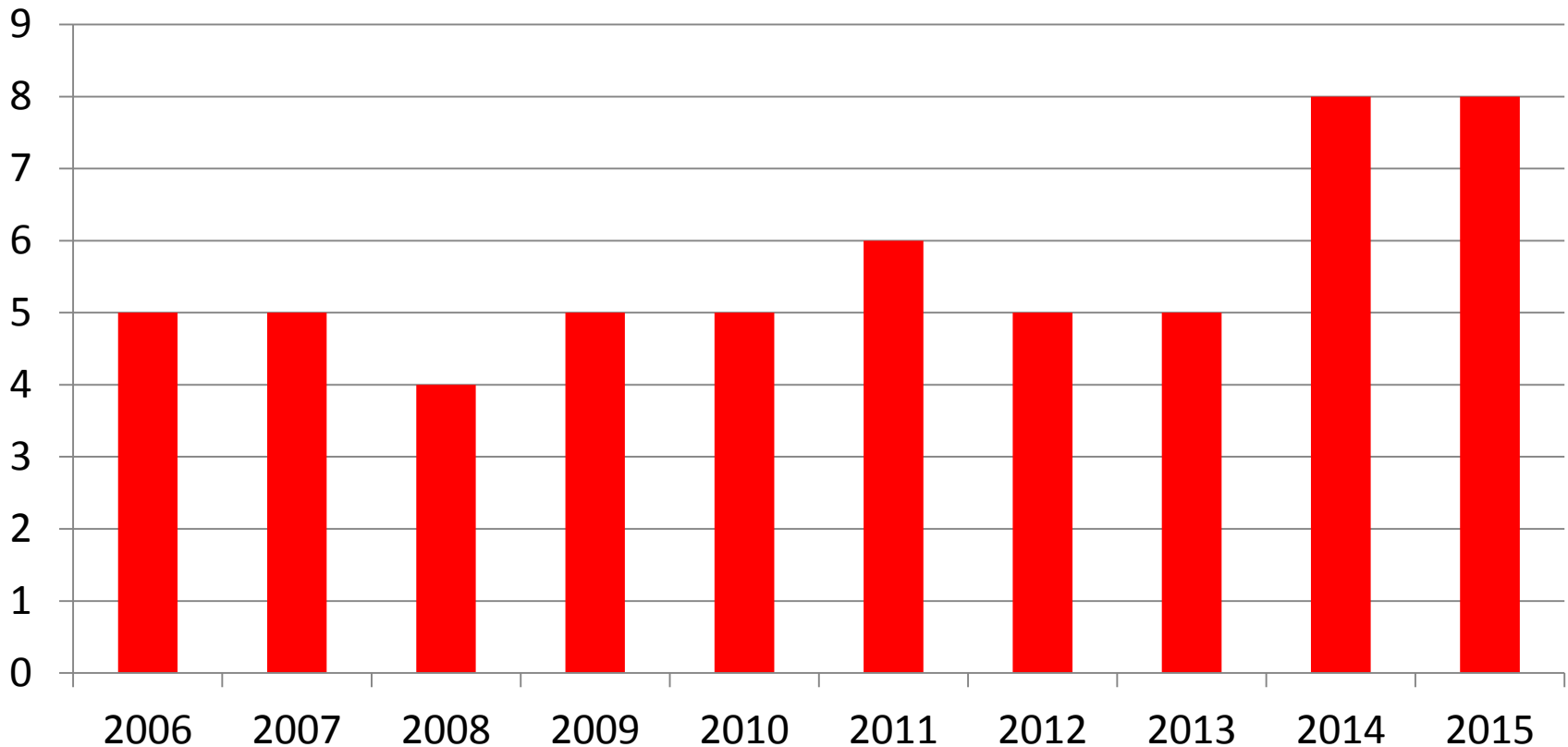
**“Protecting
bodies, not
bumpers”**

Traffic Crashes in Fremont

Fatalities in 2014 and 2015 Were Up Significantly



Fremont Fatal Traffic Crash Trends



Vision Zero in Fremont

Initiated by City Council in July 2015; Policy Adopted in September 2015

■ Vision Zero Action Plan

(Adopted March 2016)

- Safer People — “Enforcement, Education”
- Safer Streets — “Engineering”
- Safer Vehicles

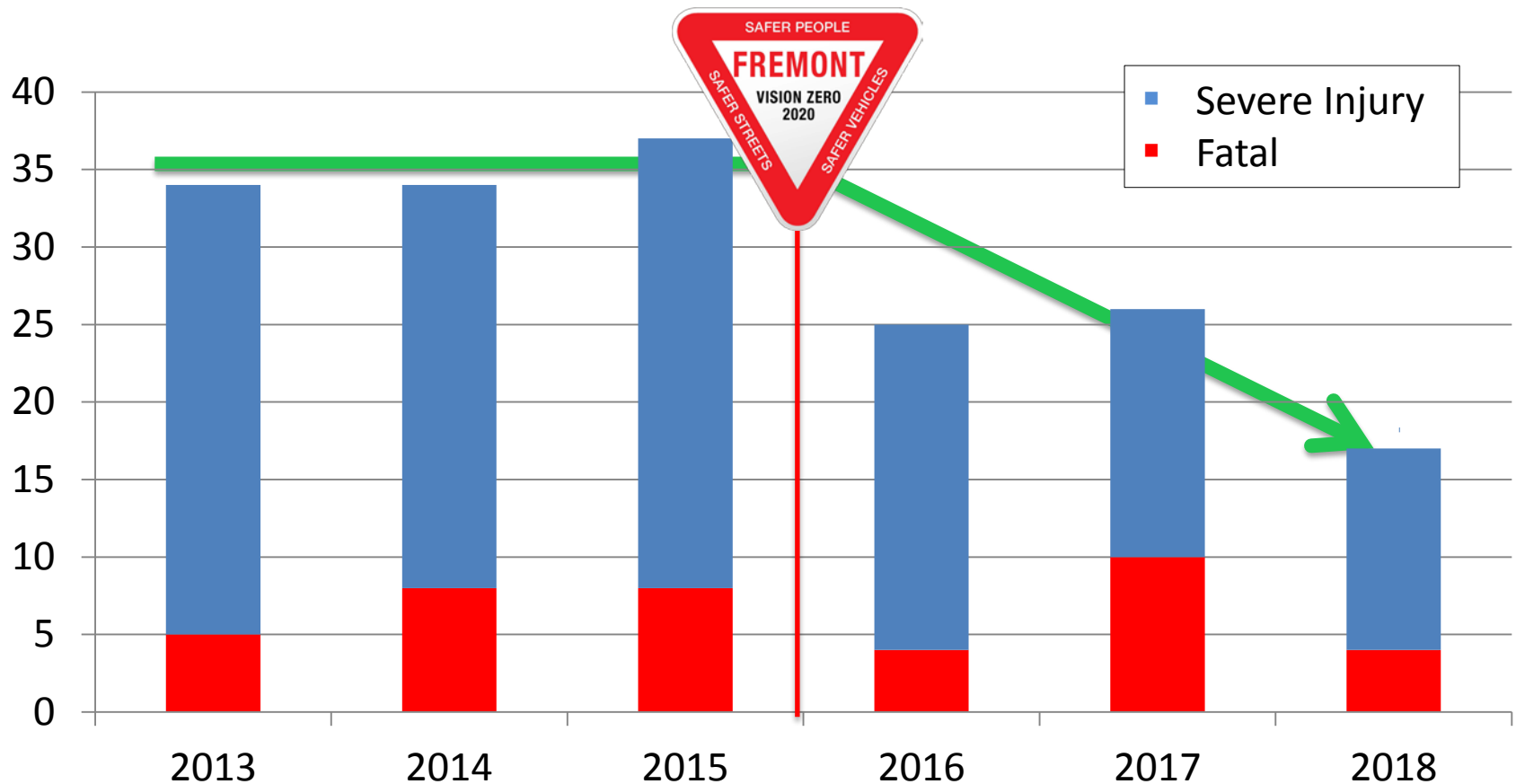
■ 7th U.S. City to Adopt Vision Zero Plan

1. New York City (2014),
2. San Francisco,
3. Seattle,
4. San Jose,
5. Boston,
6. Washington DC,
7. Fremont



Fremont Major Traffic Crash Trends

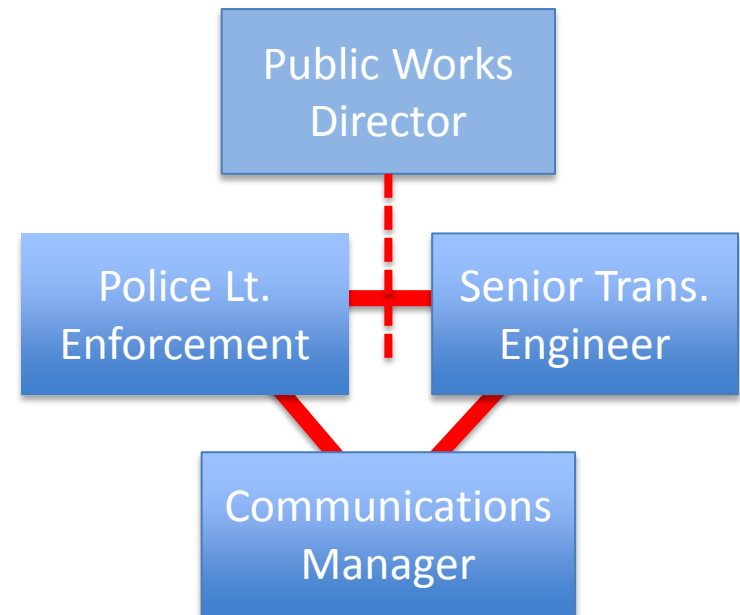
Since start of Vision Zero program, major traffic crashes are down over 50%



Fremont's Safety Success Recipe

"Just Do It" ... No new budget, staff, consultants, or committees

- **Rigorous Evaluation of Safety Data** (by internal staff)
- **Align Transportation Engineering Investment Toward Safety** (repurposed \$2 million from CIP)
- **Proactive Engagement by Police Department**
- **Integrate Traffic Safety Into Public Communication**
- **Encourage Community to Participate**



Safety Priority Streets

10% of Streets - Have 90% of Fatalities and 67% of Severe Injuries

2013 to 2015
Major Crash Locations
- Fatalities (Red)
- Severe Injury (Blue)



Spot vs Systemic Issues

2013 to 2015
Major Crash Locations
- Fatalities (Red)
- Severe Injury (Blue)



Grimmer Curve

“The Miracle of 10-foot Travel Lanes”



Civic Center Drive “Road Diet”



“Safe and Complete” Street Design

10-Foot Vehicle Travel Lanes, Buffered Bike Lanes, Road Diets

Before

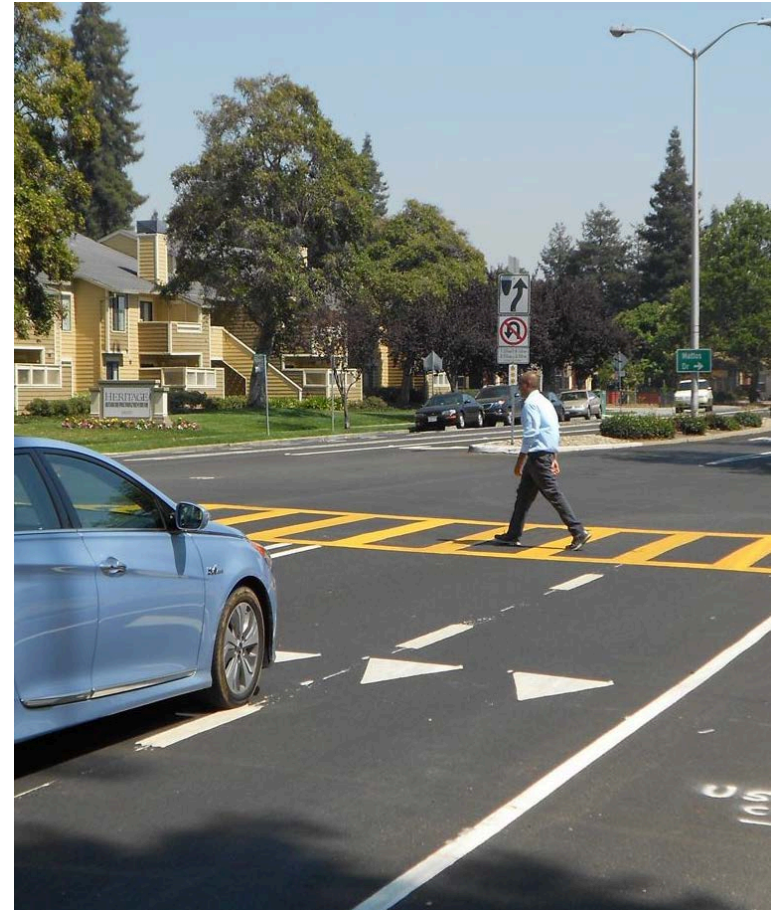


After



“Complete street” conversions incorporated into annual pavement maintenance program.

Enhanced Street Crossings



Updated Pedestrian Master Plan identified 40 locations for street crossings improvements

Countdown Pedestrian Signals

- Increased from 50 locations to all 220 traffic signal locations Citywide



In 2015, two senior pedestrians were struck and killed in signalized crosswalks; possibly due to lack of awareness of available crossing time.

Brighter Street Lighting



Fully converted all Fremont streetlights to brighter LED lights (16,000 lights)

Enforcement

Increased Traffic Safety Discussion from Quarterly to Weekly



Enforcement

Priority on visibility and education ... not tickets and fines

- Focused on High Risk Locations/Behaviors
 - Safety Priority Streets
 - Speeding and DUI
- Expanded Resources by Cross-Training
 - 11 traffic officers; 93 patrol officers
 - Purchased more speed detection equipment
- Tripled Number of Speeding “Stops”
 - From 1,231 (2015) to 4,258 (2016)
- Saturation Patrols for DUI
 - 2 officers dedicated to DUI patrol 20 days a year
 - Safety visits with bartenders



Education and Engagement

Stickers, Newsletters, Events, Social Media, Commissions, Youth Service Projects



Three, Two, One ... Fremont is Set to Launch 'Vision Zero'

A Plan to Improve Traffic Safety and Reduce Traffic Fatalities to Zero

In September 2015, the City Council approved



Neighborhood Traffic Calming



Increased speed lump locations from approximately 200 to 250

School Safety Plans

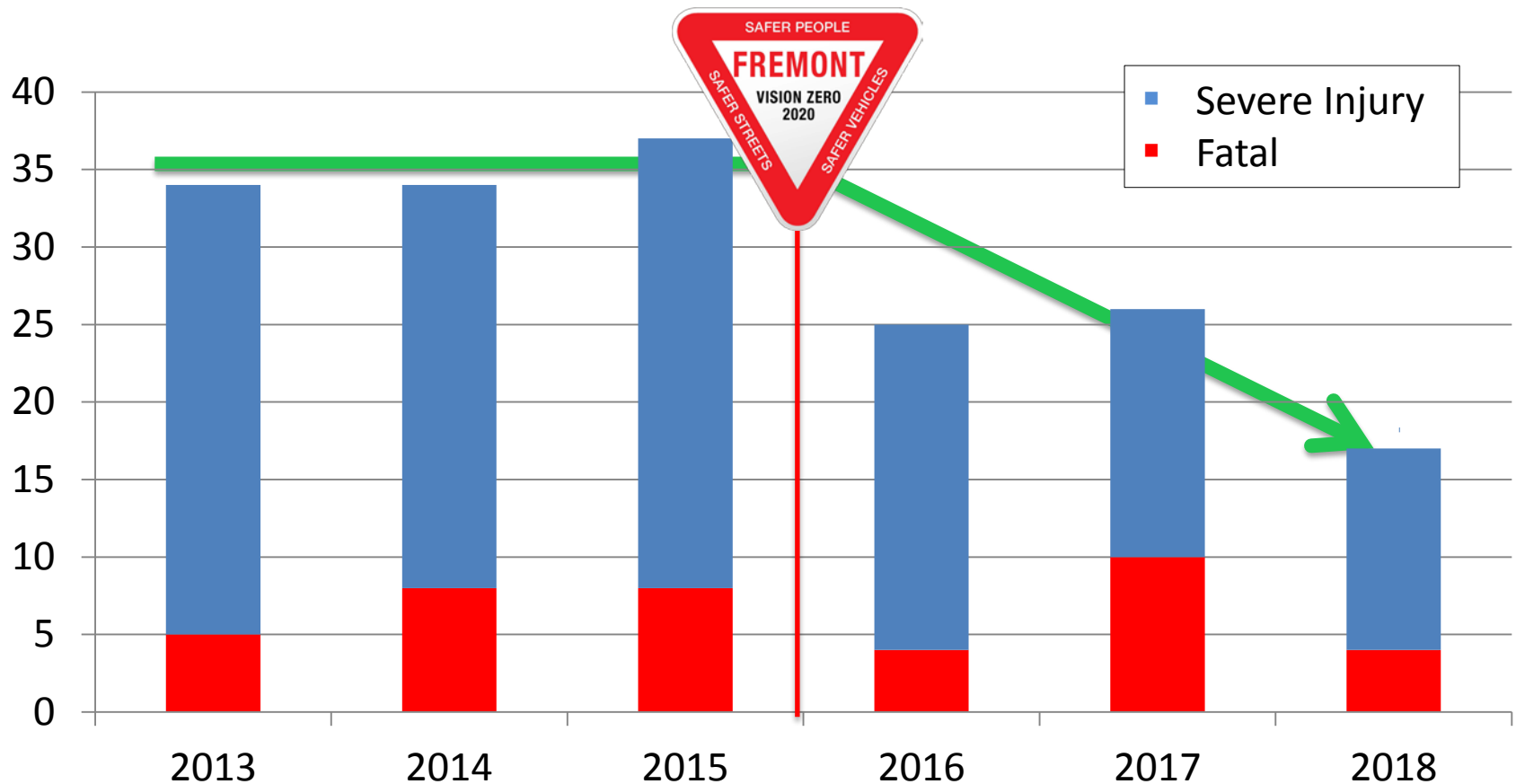
Partnership with Fremont Unified School District



School area traffic safety site assessment plans were prepared for all 42 public schools

Fremont Major Traffic Crash Trends

Since start of Vision Zero program, major traffic crashes are down over 50%



Yield Markers

Placed between lanes at uncontrolled multi-lane crossings



Installed at 25 locations in 2018

Painted Islands Between Lanes

Prevents lane changes near crosswalks



Grind and Replace Lane Lines

Accelerates “safe and complete street” conversions



“Quick-Build” Projects

Protecting Pedestrians with Paint and Plastic



400 “quick build” projects to be completed in school zones by 2019.

Intersection Narrowing



Protected Intersections



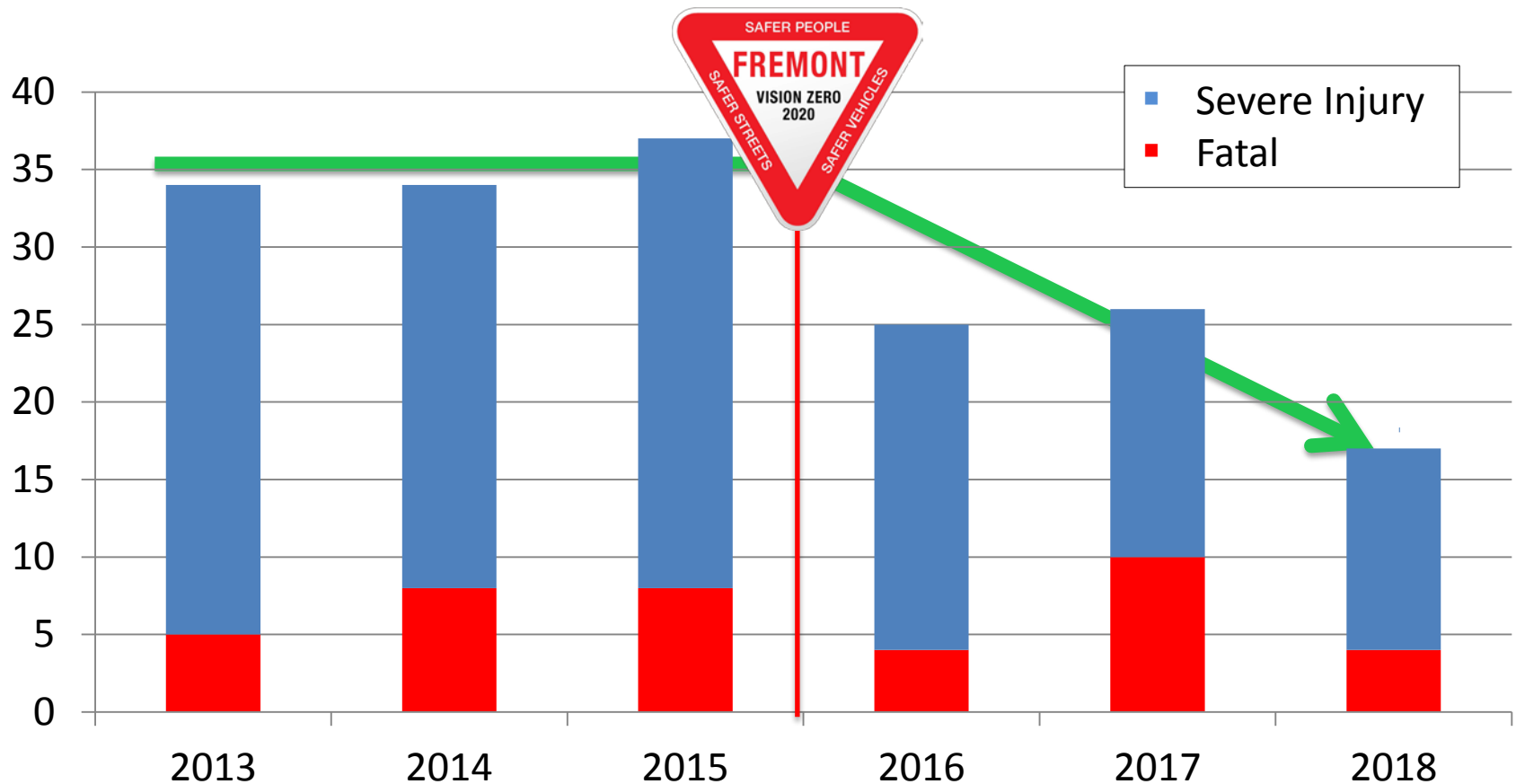
What's Next for VZ in Fremont?

- Continue What's Working
 - Complete street conversions
 - Targeted enforcement
- Update Speed Surveys
 - Lower speed limits
- Enhanced Pedestrian Crossings
 - 4 new pedestrian signals
 - 8 new pedestrian beacons
 - 10 protected intersections
- Traffic Safety Education Banners
 - Grant from Kaiser Permanente
- Citywide Systemic Safety Study



Fremont Major Traffic Crash Trends

Since start of Vision Zero program, major traffic crashes are down over 50%



Fremont Vision Zero Results

Comparing Factors in Major Crashes Before and After Vision Zero

	Before VZ (2013-2015)	After VZ (2016-2018)	Change
Major Crashes	104	68	Down 35%
- Fatal	24	18	Down 14%
- Severe Injury	83	50	Down 40%
Travel Mode			
- Walking	34	21	Down 38%
- Bicycling	13	8	Down 38%
- Motorcycle	12	12	No Change
- Driving	45	27	Down 40%
Dark*	47	36	Down 23%

*Pedestrian Involved Crashes in Dark Dropped from 10 (2015) to 4 (2018); Down 60%

Fremont Vision Zero Results

Comparing Factors in Major Crashes Before and After Vision Zero

	Before VZ (2013- 2015)	After VZ (2016-2018)	Change
Speed Limit			
- 40 mph or more (11% of streets)	61	29	Down 52%
DUI	15	10	Down 33%
Age Groups			
- Under 16	12	1	Down 92%
- 16 to 29	29	24	Down 17%
- 30 to 49	32	20	Down 38%
- 50 to 64	24	15	Down 38%
- 65 and over	18	10	Down 44%

Fremont Vision Zero Results

Comparing 2015 to 2018

	Before VZ (2015)	After VZ (2018)	Change
Major Crashes	36	17	Down 53%
- Fatalities	8	4	Down 50%
- Severe Injury	28	13	Down 57%
Walk/Bike	21	10	Down 59%
Speed Limit			
- 40 mph or more	25	10	Down 60%
DUI	5	1	Down 80%
Age Under 16	3	0	Down 100%

Implementation Efforts/Challenges

- **Efficient Implementation**
 - Pavement Maintenance Program (“Smooth, Safe and Complete”)
 - Street Maintenance Crews
- **Staff Training and Engagement**
 - NACTO Conferences and Design Standards
- **Internal Stakeholder Coordination**
 - Police Partnership (Timely Crash Reports and Enforcement)
 - Fire Department Coordination (Street Design Standards)
- **Managing the Politics**
 - Community Opposition (Narrow Travel Lanes, “Empty” Bike Lanes)
 - Treat “Safe and Complete Streets” like ADA
 - Have a “Balanced” Transportation Program (Congestion, Schools)
 - Regular Council Communication

What Can Get Us to Zero?

- Safer Vehicle Technology
 - 60% of fatal crashes would likely have been prevented with “pedestrian detection and forward emergency braking”
- Automated Speed Enforcement
 - 35% of fatal crashes may have been prevented if drivers knew that they would get mailed a ticket for exceeding the speed limit
- Use of “Old Technology”
 - 15% of fatal crashes would likely have been prevented by using a newer vehicle equipped with air bags

Safer Vehicles

New Crash Avoidance Technology Can Offset Human Errors/Limitations



Automatic Emergency Braking is planned for all new vehicles by 2022

Recommendations for ACTC

- Regional Traffic Safety Campaign
- Policy Advocacy
 - Reform CA Process for Setting Speed Limits
 - Enable Automated Speed Enforcement in CA
- Get Caltrans “On Board”
 - Freeway interchanges and local State Highways need to be upgraded to accommodate safe walking and bicycling

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