

# VISION ZERO

STRIVING TO ELIMINATE TRAFFIC  
DEATHS AND SERIOUS INJURIES ON  
SOMERVILLE'S STREETS

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**Mayor Joseph A. Curtatone**

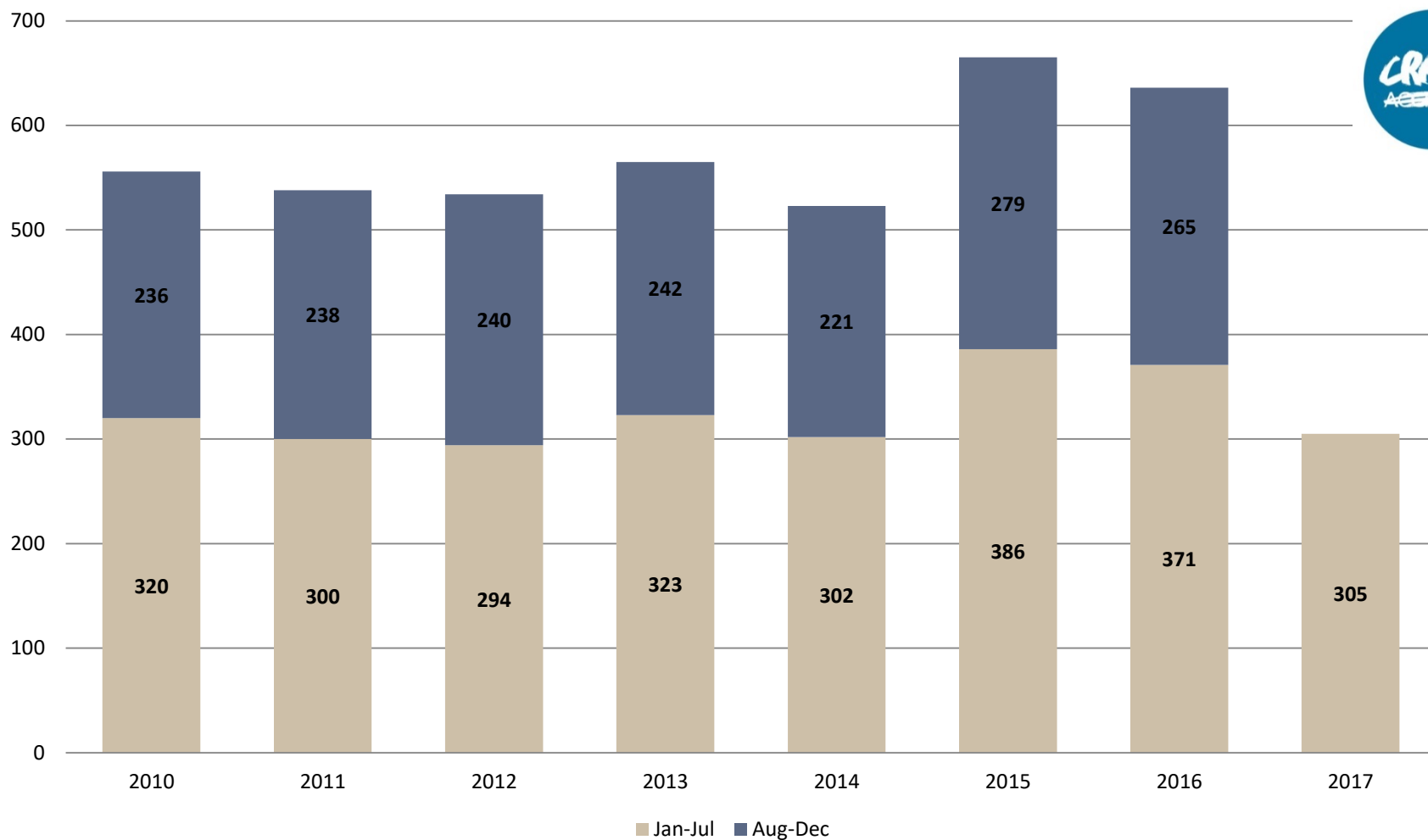
**Brad Rawson**

**Director of Transportation & Infrastructure**

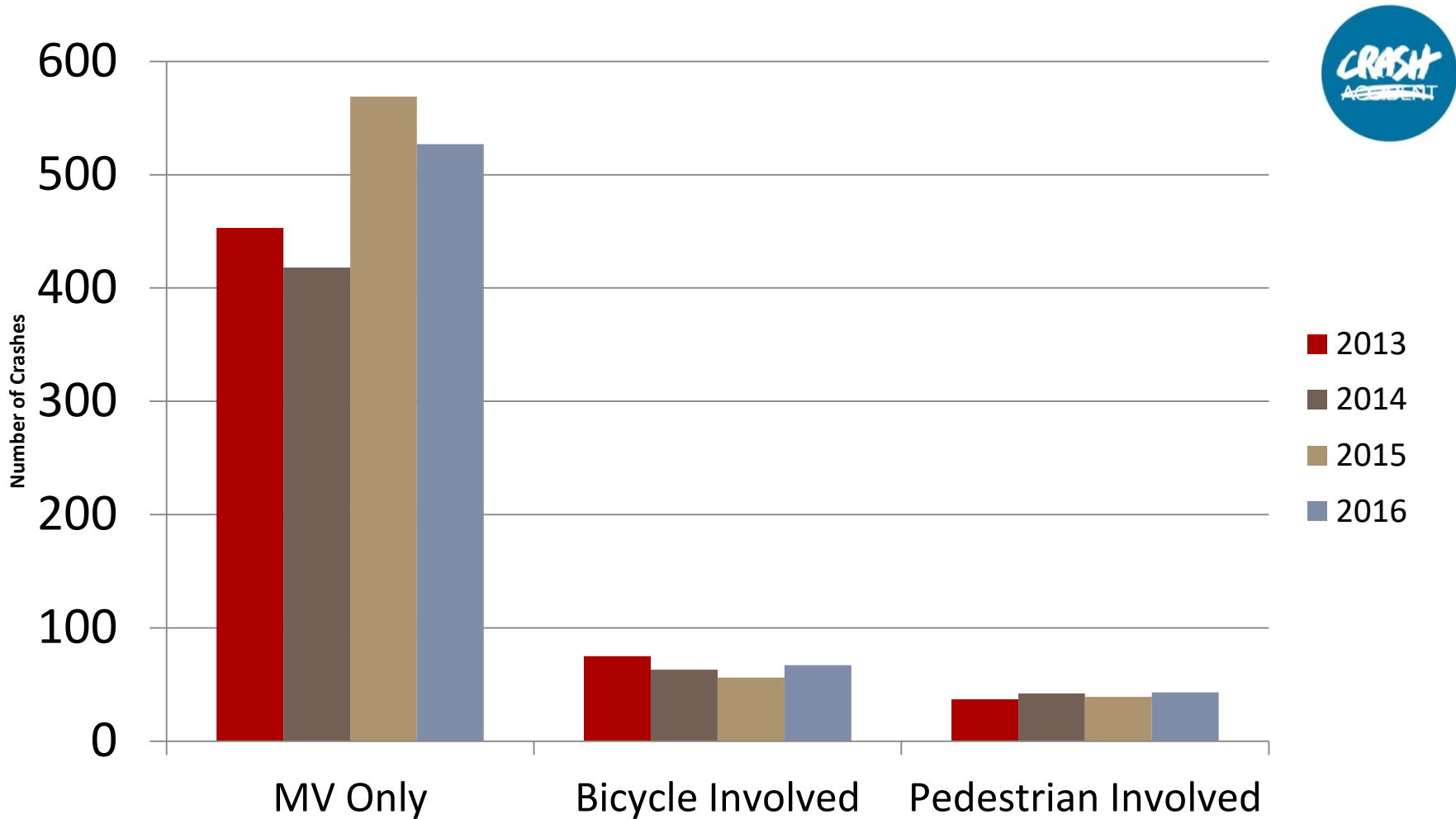
**September 6, 2017**



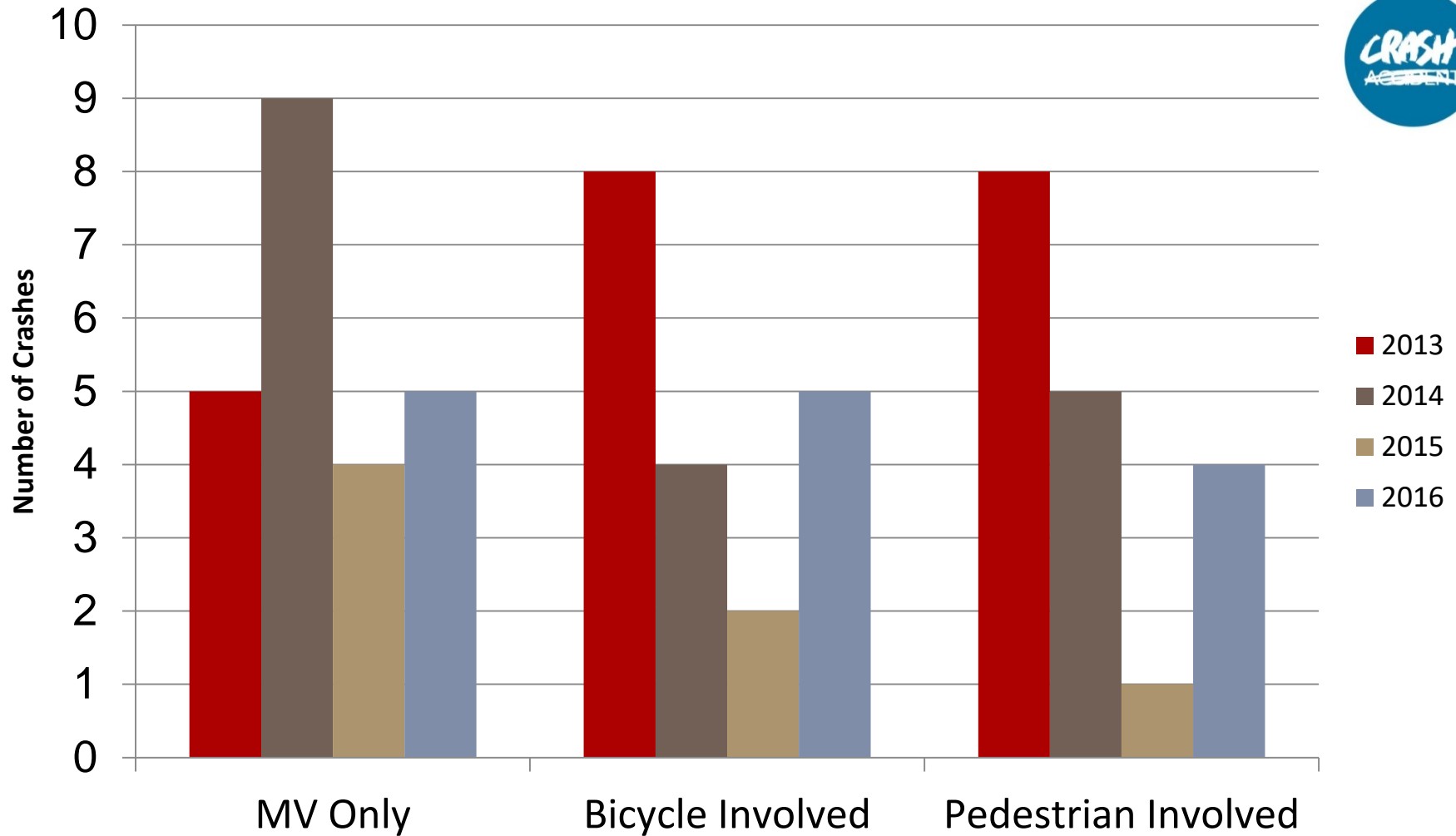
# Crashes Reported on Somerville Streets, 2010-2017



# Crash Trends by Mode

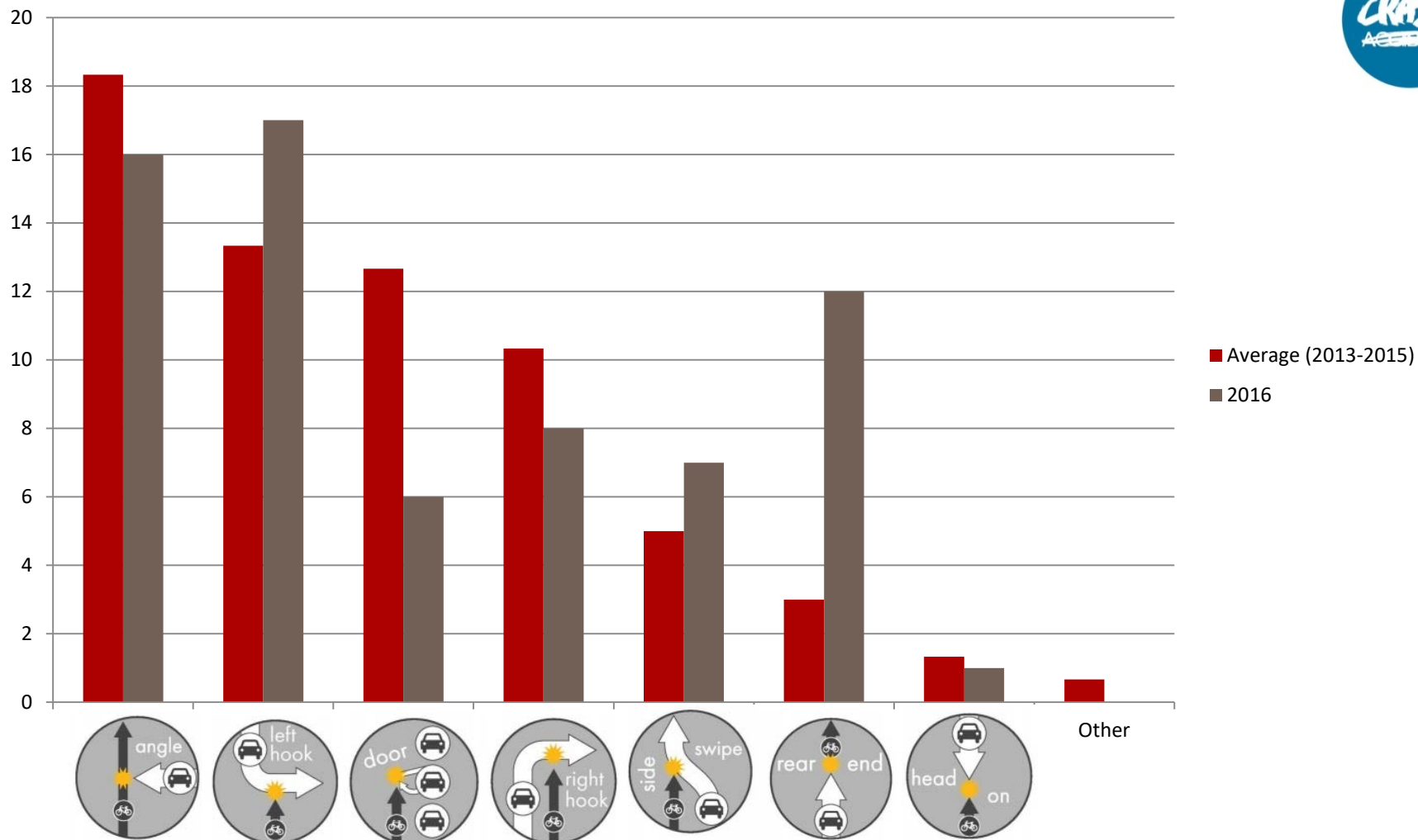


# Serious Injuries by Mode

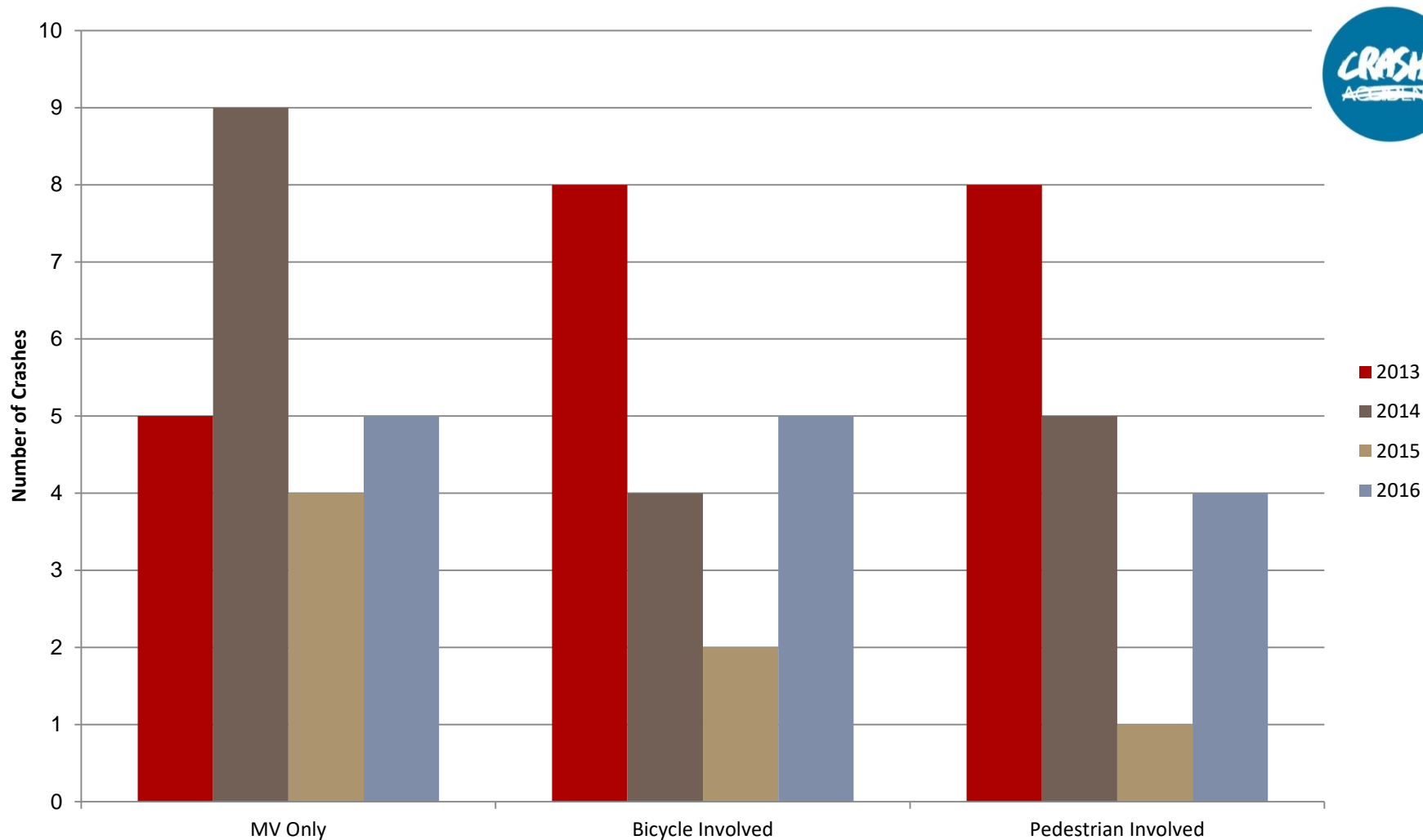


# Crashes Involving People on Bikes in Somerville

## Bicycle-Involved Collision Type



# Serious Injuries by Mode





# Vision Zero Cities

## A Vision Zero City meets the following minimum standards:

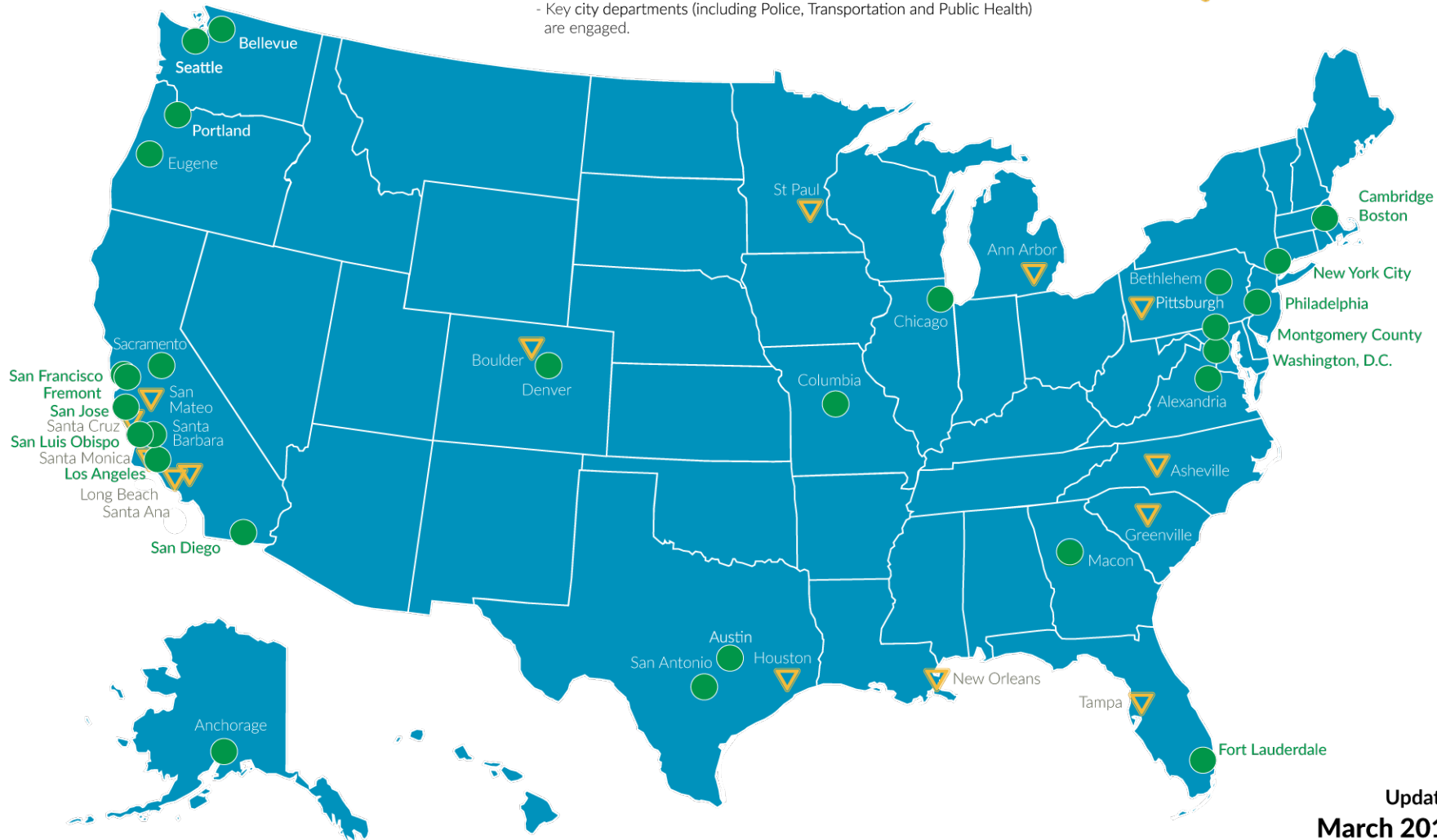
- Sets clear goal of eliminating traffic fatalities and severe injuries
- Mayor has publicly, officially committed to Vision Zero
- Vision Zero plan or strategy is in place, or Mayor has committed to doing so in clear time frame
- Key city departments (including Police, Transportation and Public Health) are engaged.



Vision Zero City



Considering Vision Zero



Updated  
March 2017

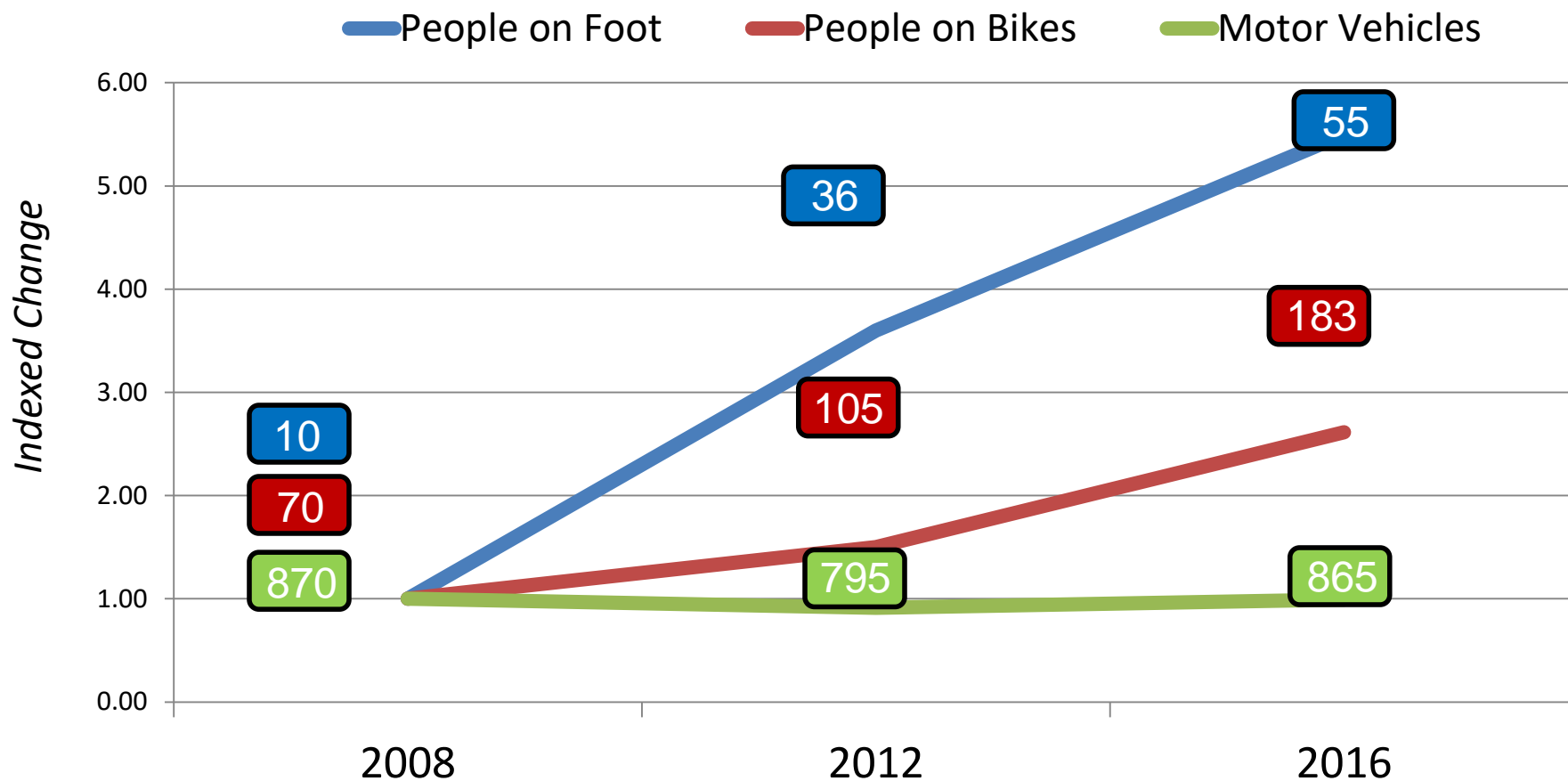


# **Mobility is Changing Rapidly**

# More Commuters are Walking and Biking, While Motor Vehicle Traffic has Remained Steady



*Webster @ Newton: Morning Commute*



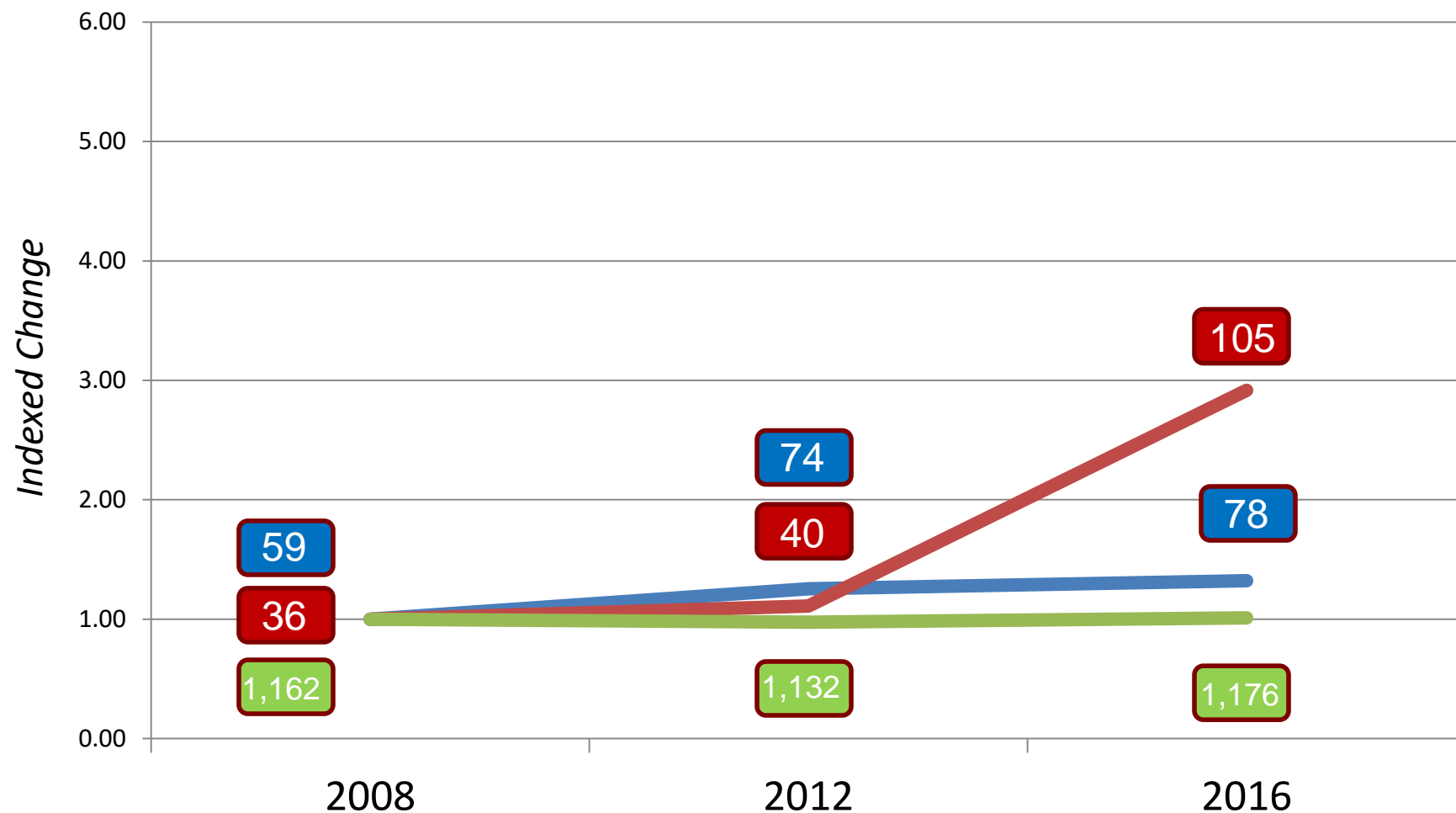
*Source: City-contracted traffic counts performed by licensed engineers*

# Changing Mobility Behavior

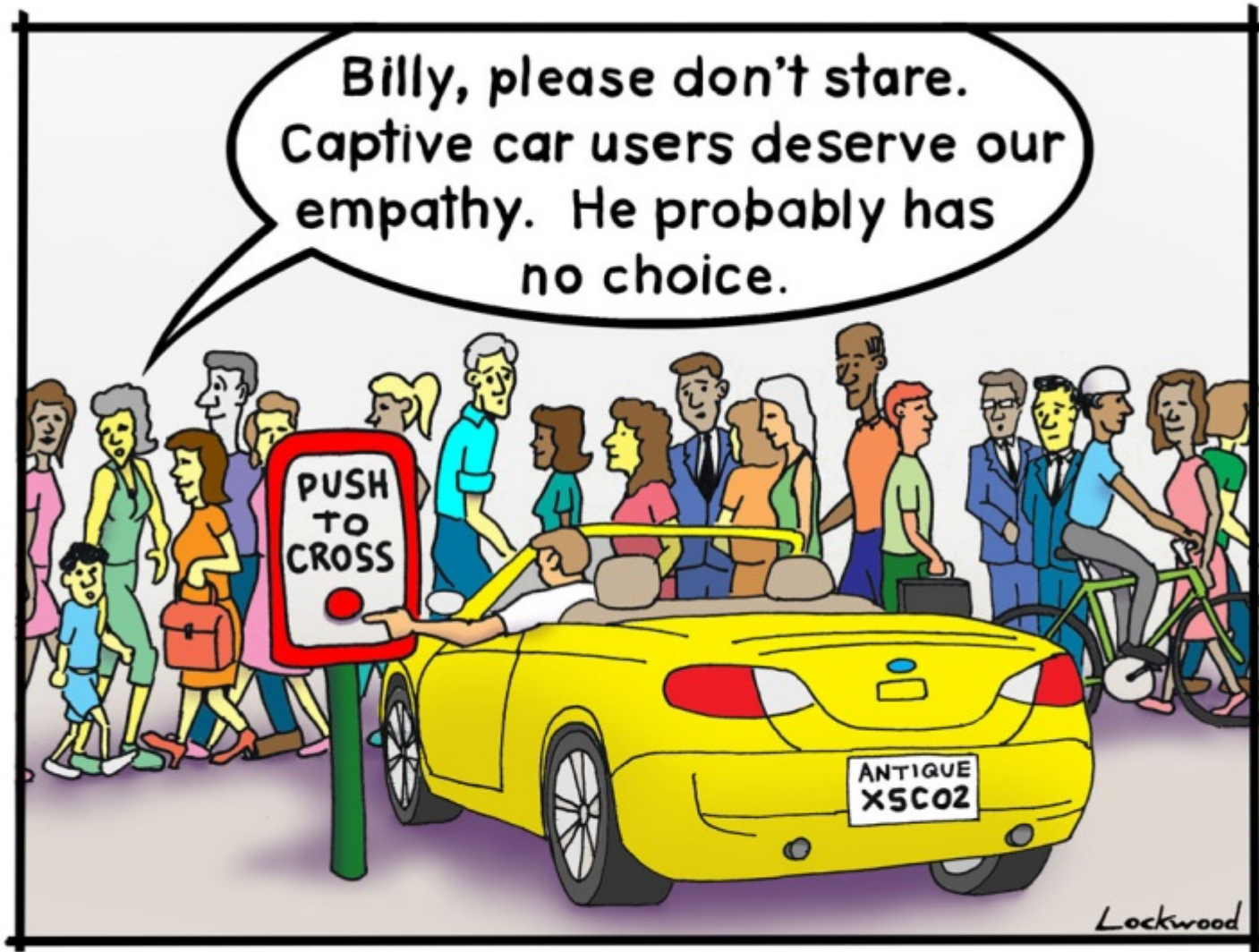
*Prospect @ Somerville:  
Evening Commute*



— People on Foot    — People on Bikes    — Motor Vehicles

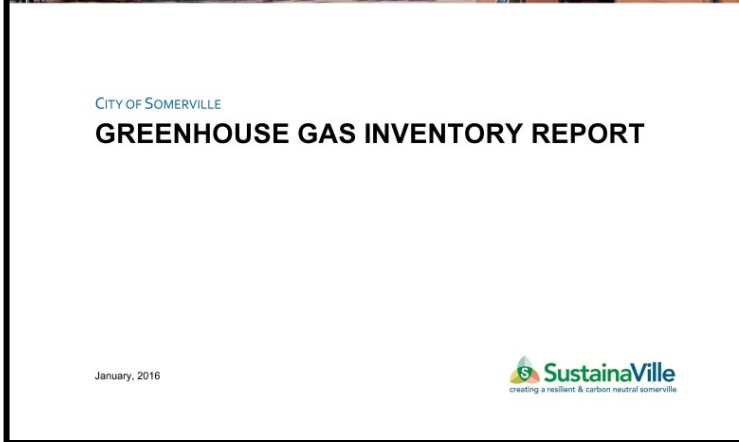


*Source: City-contracted traffic counts performed by licensed engineers*



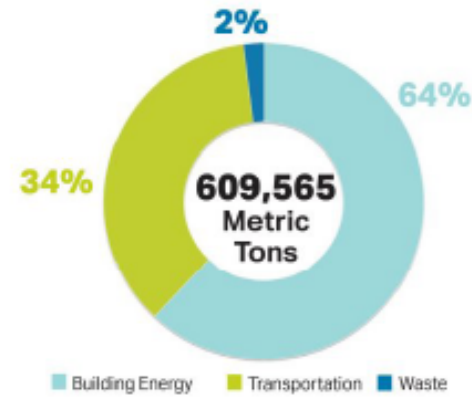
**Your City Fifty Years from Now**

# Systems-based approach to Vision Zero

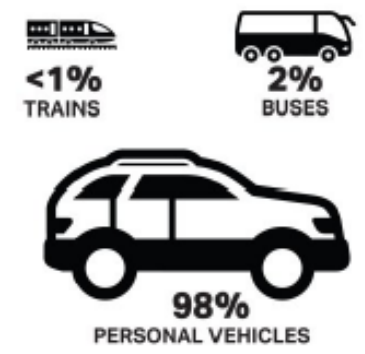


## Community Inventory

### Greenhouse Gas Emissions Profile



### Split of Transportation Emissions



Environmental Sustainability

Public Health & Safety

Social Equity

Economic Activity

# Systems-based approach to Vision Zero



HEALTH IMPACT ASSESSMENT OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MassDOT) GROUNDING McGRATH STUDY



7/1/2013

Massachusetts Department of Public Health  
Bureau of Environmental Health



Environmental  
Sustainability

Public Health  
& Safety

Social  
Equity

Economic  
Activity



# Systems-based approach to Vision Zero



## Maintaining Diversity In America's Transit-Rich Neighborhoods:

*Tools for Equitable Neighborhood Change*



## The Boston Regional Challenge

Examining the Costs and Impacts of Housing and Transportation on Area Residents, their Neighborhoods, and the Environment.

**ULI** Urban Land Institute

Terwilliger Center for Workforce Housing



Dukakis Center for Urban and Regional Policy

Stephanie Pollack  
Barry Bluestone  
Chase Billingham

A Report Prepared by the  
Dukakis Center for Urban and  
Regional Policy at  
Northeastern University

With the Generous Support of  
**THE ROCKEFELLER  
FOUNDATION**

OCTOBER 2010

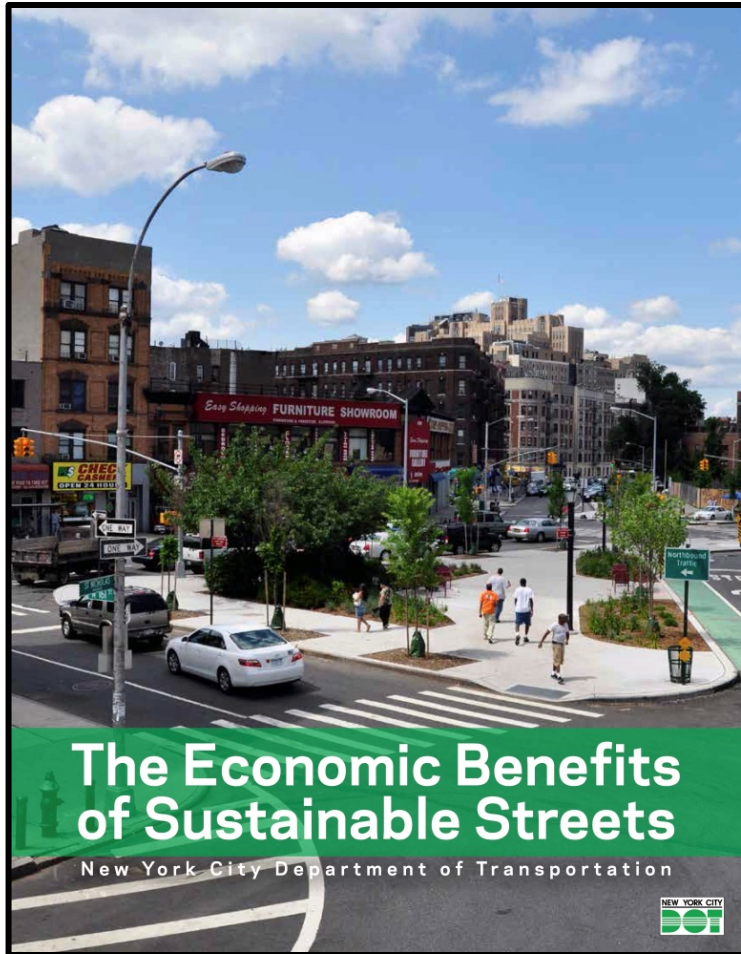
Environmental  
Sustainability

Public Health  
& Safety

Social  
Equity

Economic  
Activity

# Systems-based approach to Vision Zero



Environmental  
Sustainability

Public Health  
& Safety

Social  
Equity

Economic  
Activity



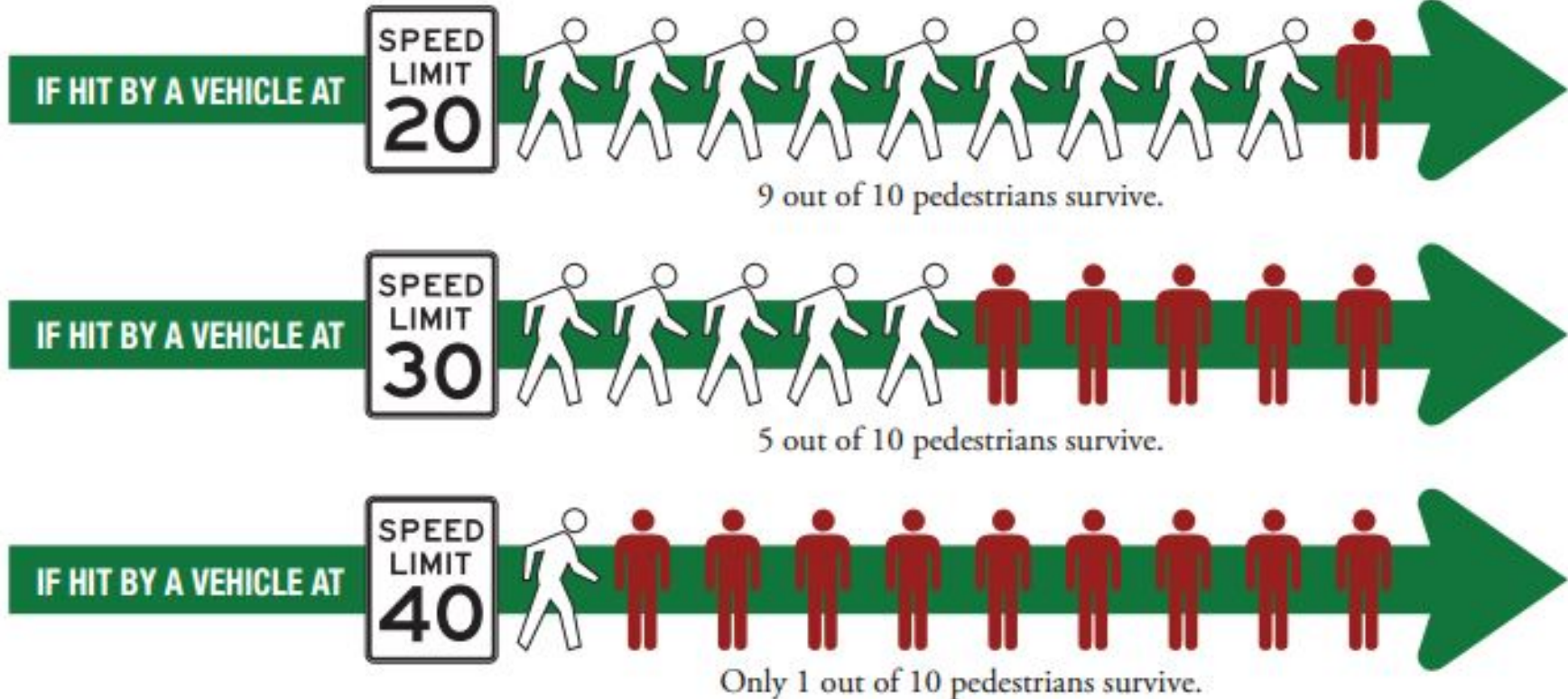


**Speed is the Difference**

# “20 is Plenty” – Why Speed Matters



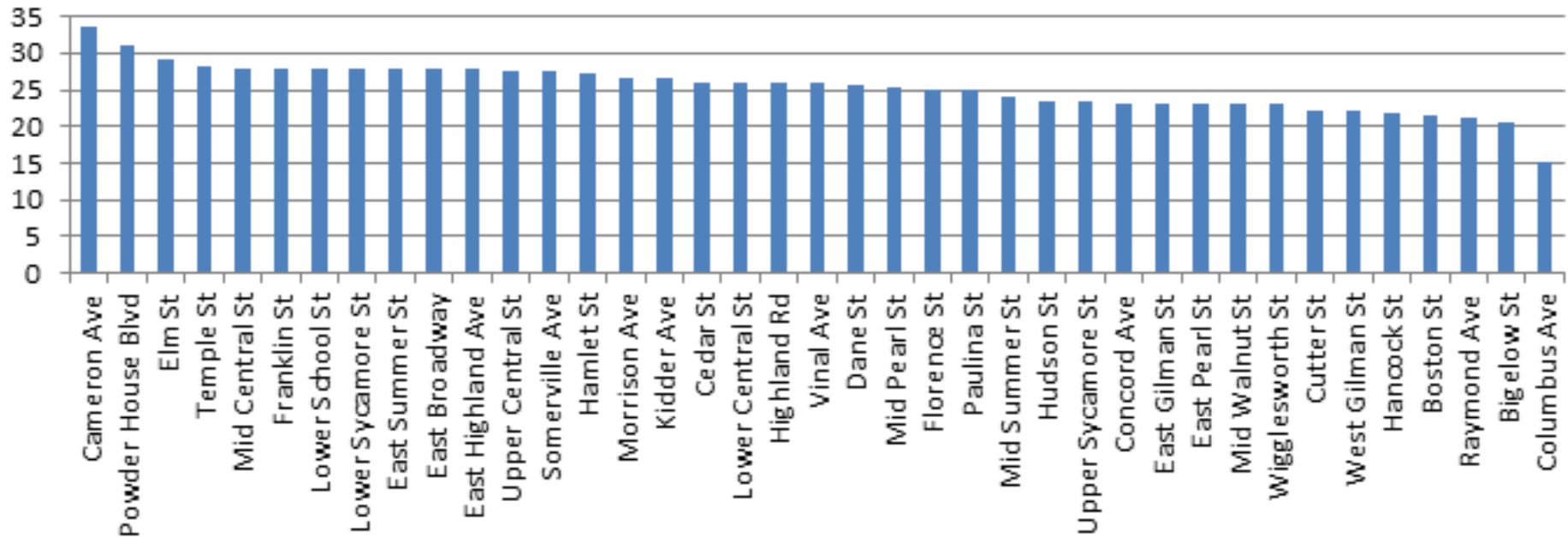
## PEDESTRIAN SURVIVAL PROBABILITY



# We are Building Somerville's First Speed Database



## 85th Percentile Speed on Various Somerville Streets





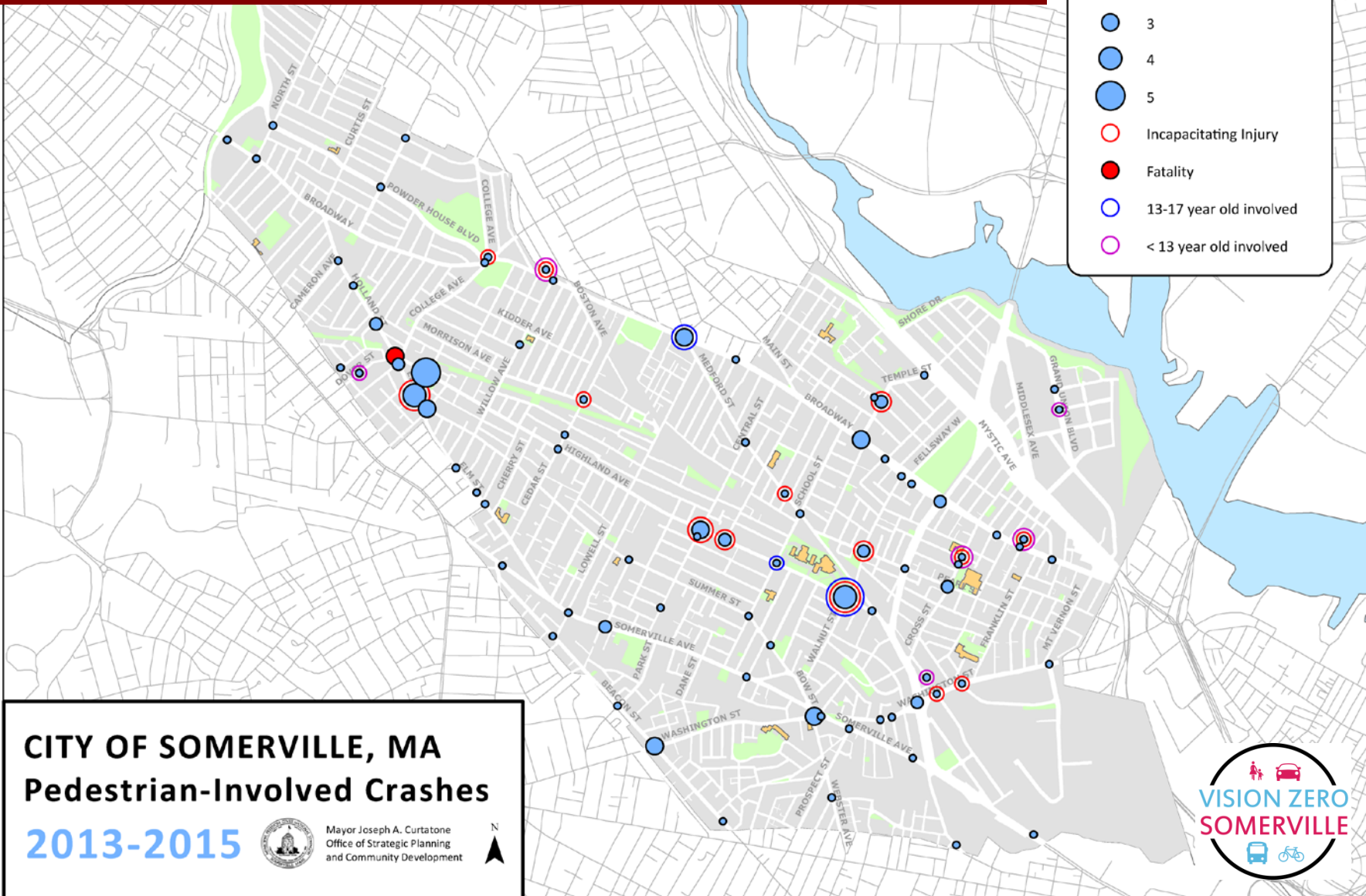
**Enforcement**

Safety Zones

**Engineering**

Traffic Calming

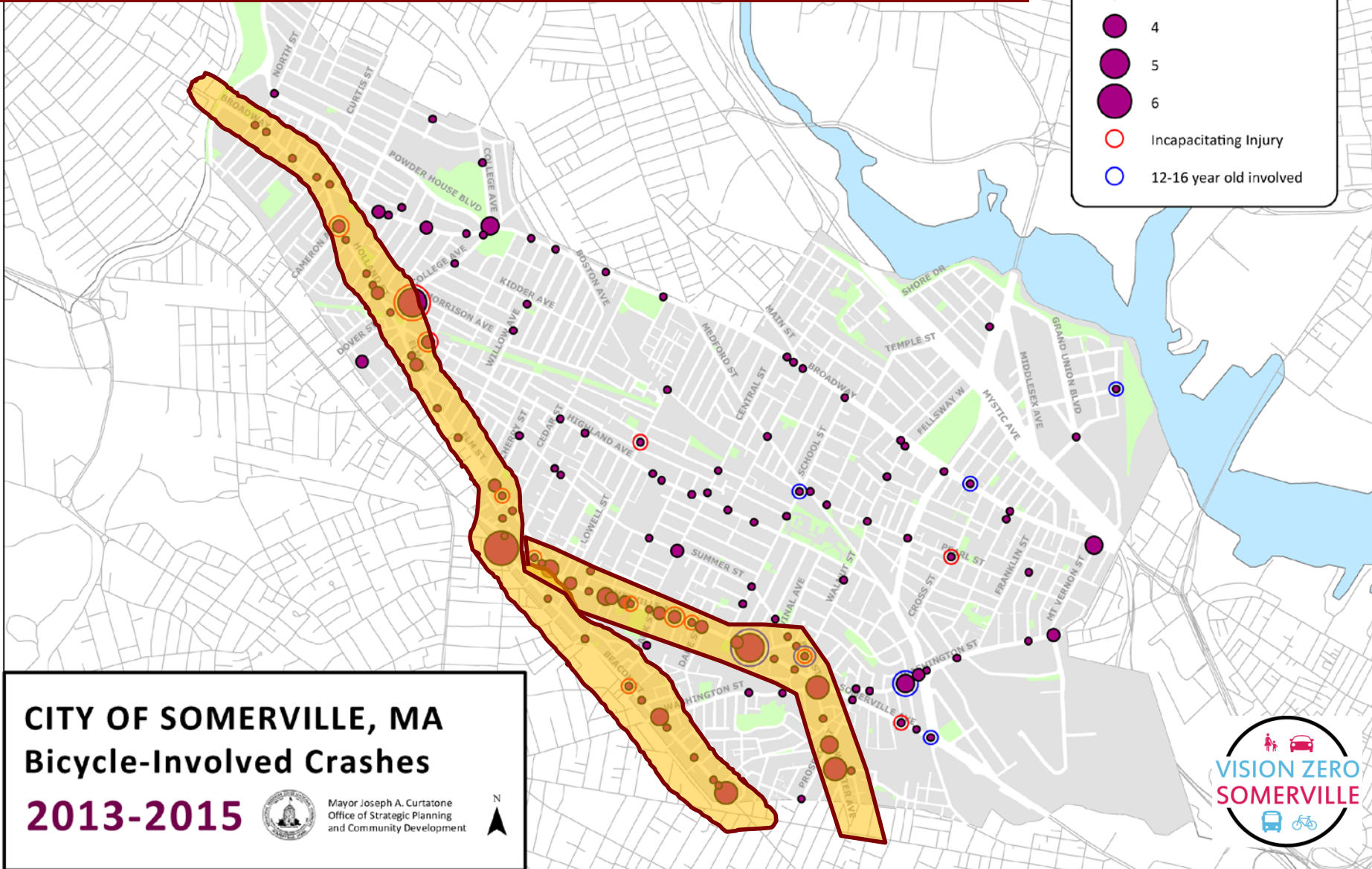
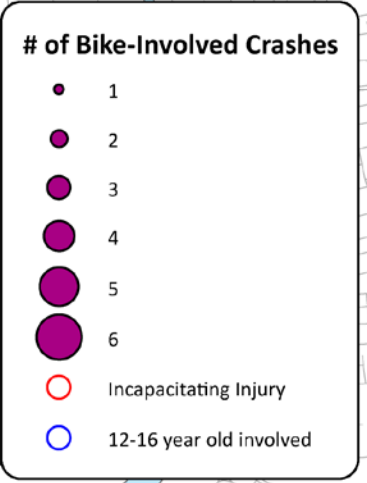
# Pedestrian Involved Crashes Require Intersection-based Intervention




Source: Somerville Police Department crash report database



# Bicycle Planning Requires Thinking About Corridors



**CITY OF SOMERVILLE, MA**  
**Bicycle-Involved Crashes**  
**2013-2015**



Mayor Joseph A. Curtatone  
Office of Strategic Planning  
and Community Development

N



Source: Somerville Police Department crash report database

# Enforcement Toolkit has Changed

Webster Avenue:  
July 2017



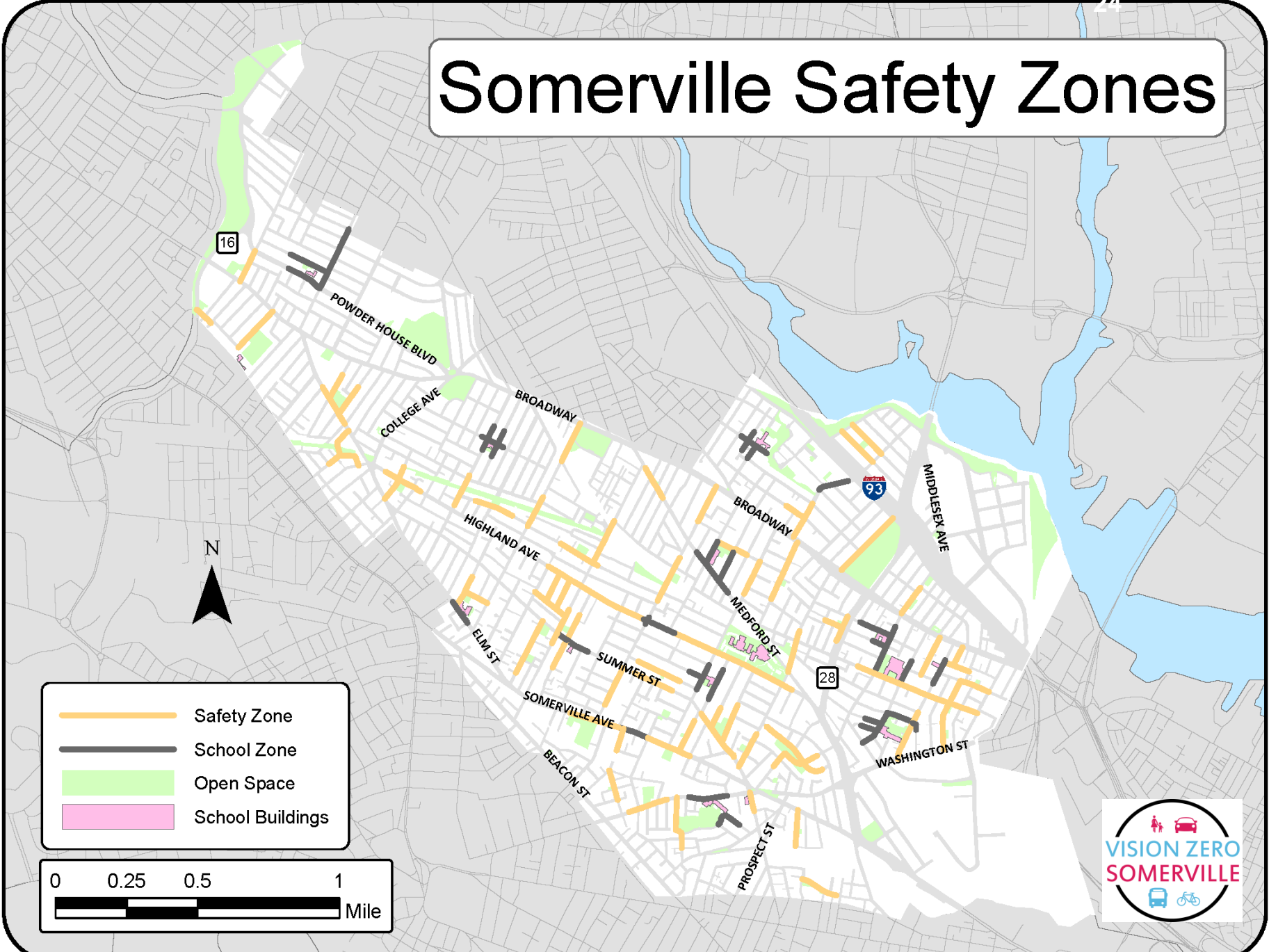
Remove  
School Zone  
20 mph  
Enforceable "when  
children are present"







Install  
Safety Zone  
20 mph  
Enforceable  
24 / 7 / 365



# Somerville Safety Zones



-  Safety Zone
-  School Zone
-  Open Space
-  School Buildings

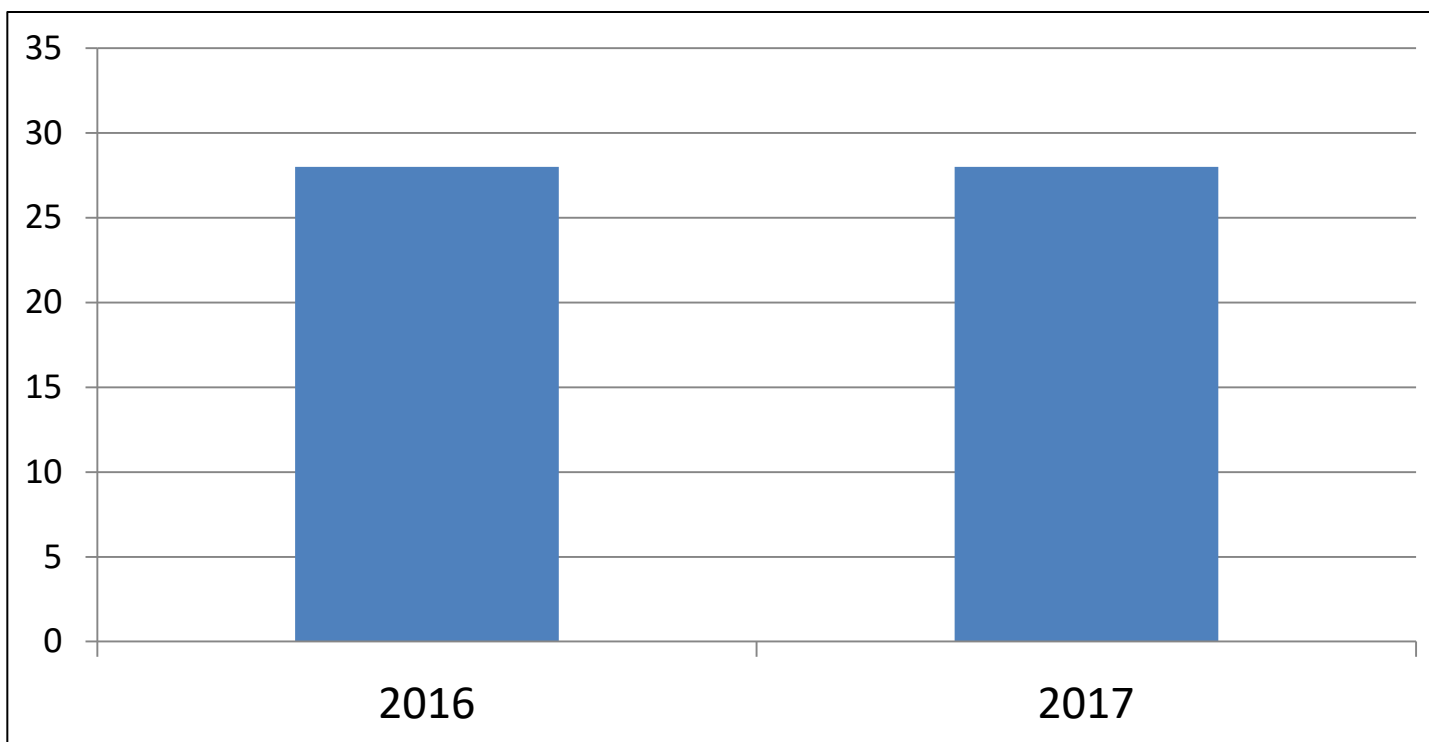




# Evaluation: Have Speeds Changed in Safety Zones?



*Location: Summer Street at Green Street*



# Large Vehicle Safety

Nearly **half of bicyclists** and more than **one-quarter of pedestrians** killed by a large truck first impact the side of a truck.

257

Pedestrian fatalities

139

Bicyclist fatalities

During a recent 5-year period, 556 pedestrians and bicyclists in the U.S. were killed after side-impacts with trucks.

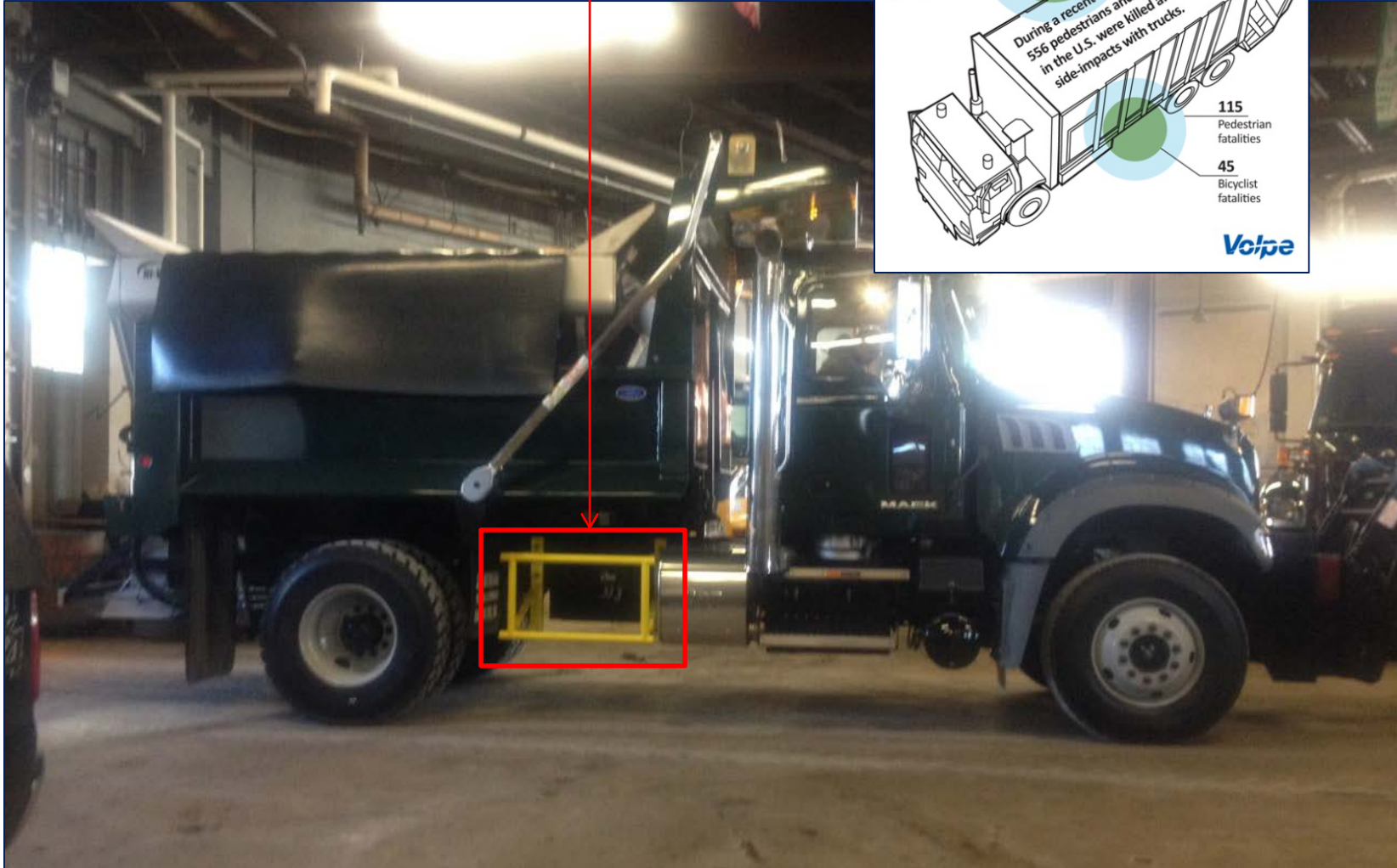
115

Pedestrian fatalities

45

Bicyclist fatalities

Volpe



# Several Traffic Calming Tools in Use Today



**Raised Intersection**



**Curb Extensions**



**Temporary Speed Hump**



**Temporary Chicane**



# Traffic Calming in Union Square



# Parking Protected Bike Facility: New For Somerville

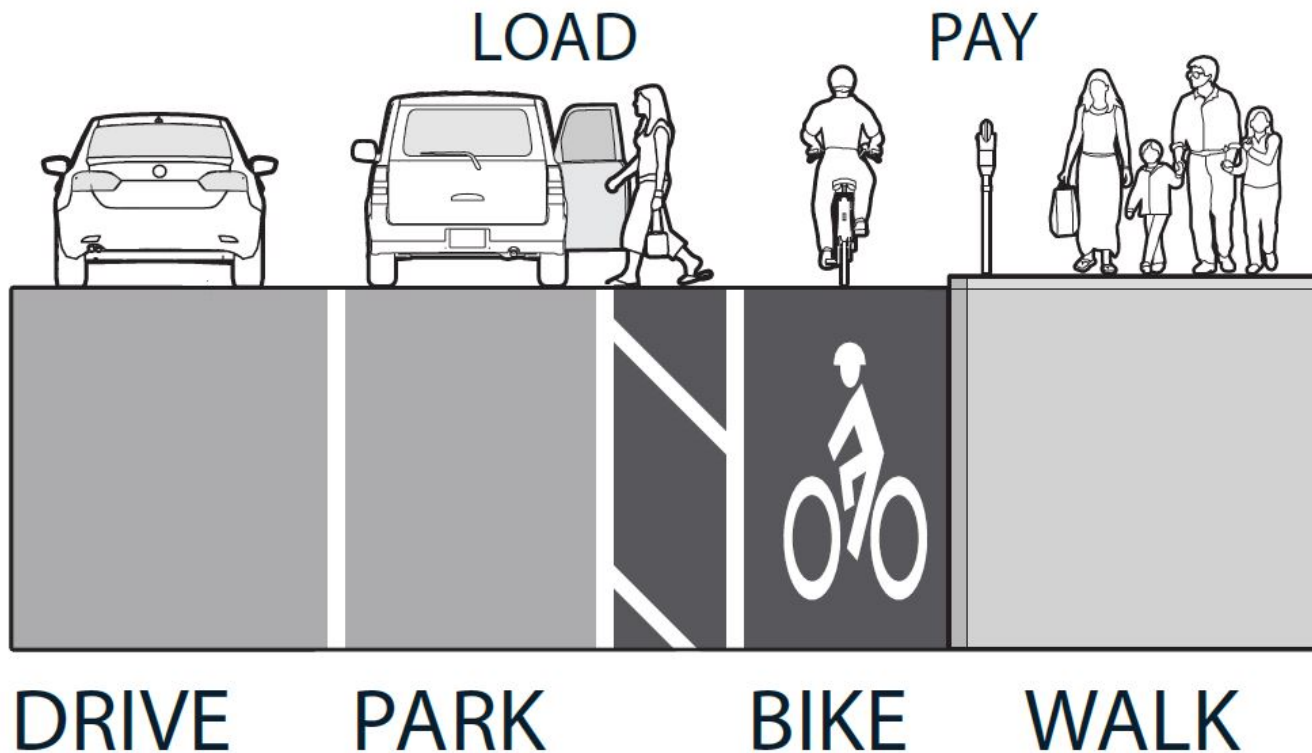




# Parking Protected Bike Facility: New For Somerville



## PROTECTED BIKE LANE



# Low-stress routes are growing





# Action Plan

Coming 2018



# Vision Zero

Challenges to be considered moving forward:

**Results:** Crashes will continue. VZ commitments can create constituent frustration if the numbers and severity remain stubbornly high (San Francisco lesson)

**Proactive vs. reactive policy:** Rapid response is a natural instinct following a terrible crash. VZ commitments can help balance resource allocation between established priorities and emergency response needs (Boston lesson)



# Q&A