



Sp. Bicycle Pedestrian Commission
Agenda Item #2
March 28, 2024

Vision Zero Project Feedback

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Chair, Bicycle and Pedestrian Commission
City of Cupertino
March 28th, 2024



Vision Zero is a solid start in order to identify opportunities to save lives

- Recognizes the need to prioritize projects to save as many lives as possible quickly and efficiently
- Used a data-based approach to identify some of the corridors and intersections that are the most prone to collisions
- Lists some of the measures that we -as pedestrians and cyclists- have recognized and experienced as the most effective to prevent collisions



While an encouraging plan to reduce fatalities, many aspects must be improved

Areas of coverage

- The project to improve Wolfe Rd fails to include Miller Ave - **include Miller Ave**
- **Add a page analyzing Blaney Avenue**
- **Do specific analyses of intersections with unusually high pedestrian or cyclist traffic** such as Stelling/De Anza and Homestead/Kennewick, Blaney/Regnart Creek Trail

Methodology

- The checkmarks regarding the ongoing City projects are misleading
 - **provide checkmarks with more granular assessment** R= Recommended (no city plans), F= feasibility/concept funded, D=design funded, C=construction funded.
 - **indicate coverage of the area by Vision Zero report** (complete or partial)
- Efficacy ratings seem counterintuitive
 - **Remove efficacy ratings**



The following actions could be undertaken to achieve maximum efficiency

City Staff	City Council	KPIs
<ul style="list-style-type: none">- Add speed reduction measures that apply to all target streets- Add quick build protected bike lanes (bollards) wherever possible (ex.: buffered bike lanes)- Restrict right turn on red and add pedestrian refuge islands to all major intersections with high pedestrian or cyclist traffic- Schools-specific measures	<ul style="list-style-type: none">- Adopt a Complete Streets ordinance- Adopt an ordinance reducing speeds on major thoroughfares and within a certain proximity to schools or senior residential facilities- Add an easy one-button process for non-emergency code enforcement to report accidents and near misses, bike lane obstructions, and other pedestrian and cycling infrastructure problems.	<ul style="list-style-type: none">- Recommend a process for gathering feedback from pedestrians and cyclists with targeted outreach as pedestrian and cyclist counts do not provide a complete picture- Use the code enforcement app information as a measure of safety improvements- Use the actual car speed as KPI

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CITY OF CUPERTINO VISION ZERO ACTION PLAN

BICYCLE PEDESTRIAN COMMISSION

MARCH 28, 2024



PURPOSE OF TODAY'S MEETING

- What is Vision Zero?
- Vision Zero Process
- Focusing on Fatalities and Severe Injuries
- Countermeasures, Collision Profiles & Projects
- Action Plan
- Vision Zero Programs, Partnerships, Data Collection
- Open Discussion



WHAT IS VISION ZERO?

- Vision Zero combines a belief in **zero traffic fatalities with proactive strategies** for safer roads.
- It stems from a deep belief **that no one should endure death or severe injury on our streets**, extending that value to all individuals.
- Vision Zero's comprehensive strategy aims to **eliminate fatal and severe injury crashes, promoting safe, equitable mobility for everyone.**
- This approach prioritizes safety and **inclusivity in road planning** and design, regardless of age, ability, identity, or mode of travel.
- Originating in Sweden, Vision Zero has seen success in Europe and is **gaining momentum in various U.S. jurisdictions.**

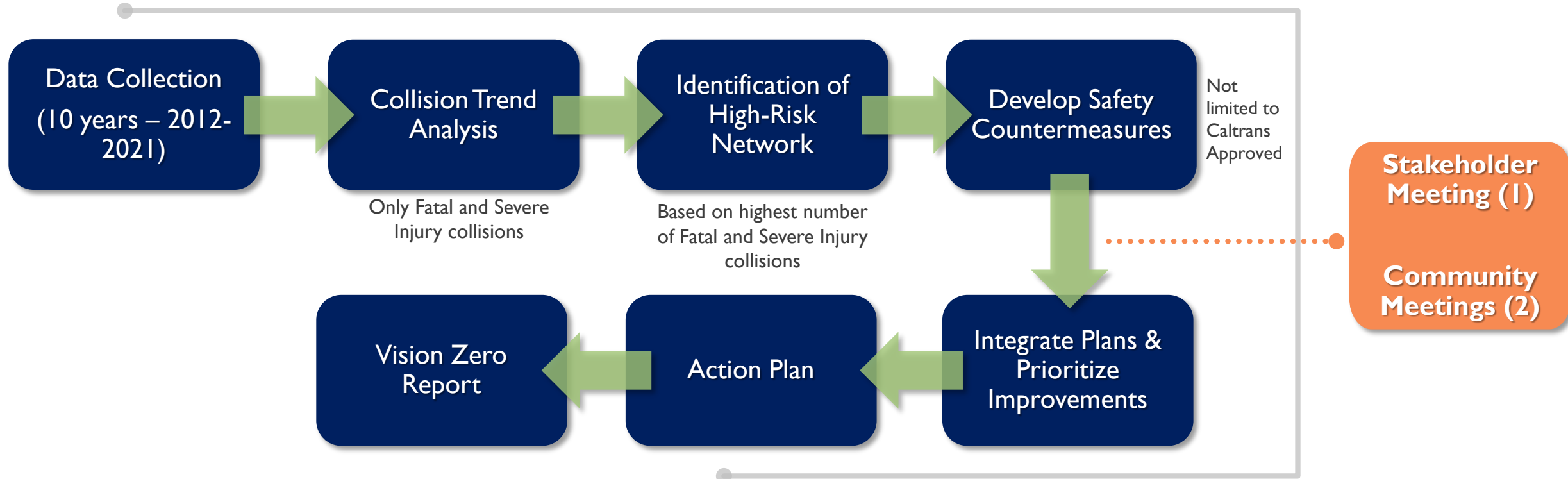
PRINCIPLES

- **Deaths and serious injuries are unacceptable**
- **Humans make mistakes**
- **Humans are vulnerable**
- **Responsibility is shared**
- **Safety is proactive**
- **Redundancy is crucial**

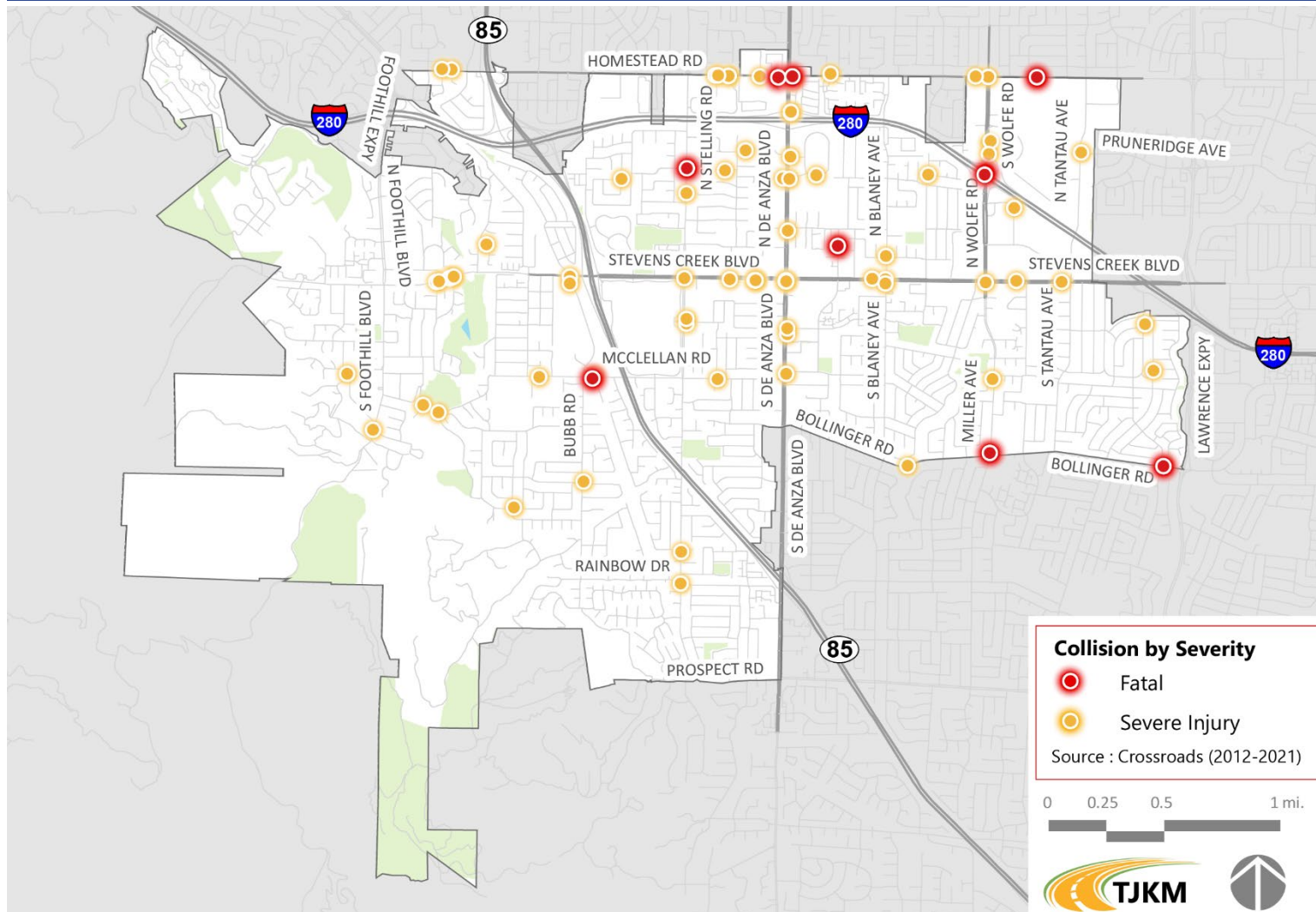
BENEFITS

- ✓ Data driven approach to identify, analyze, and **prioritize** roadway safety improvements
- ✓ Considers **stakeholder and community feedback** to identify additional traffic safety related concerns
- ✓ Allows the City to implement a **systemic approach** to address collisions
- ✓ Tailored to the City's and **Community specific traffic safety needs** – based on the data
- ✓ **Implementation: City is eligible to apply for grants (OBAG and Safe Streets for All (SS4A))**

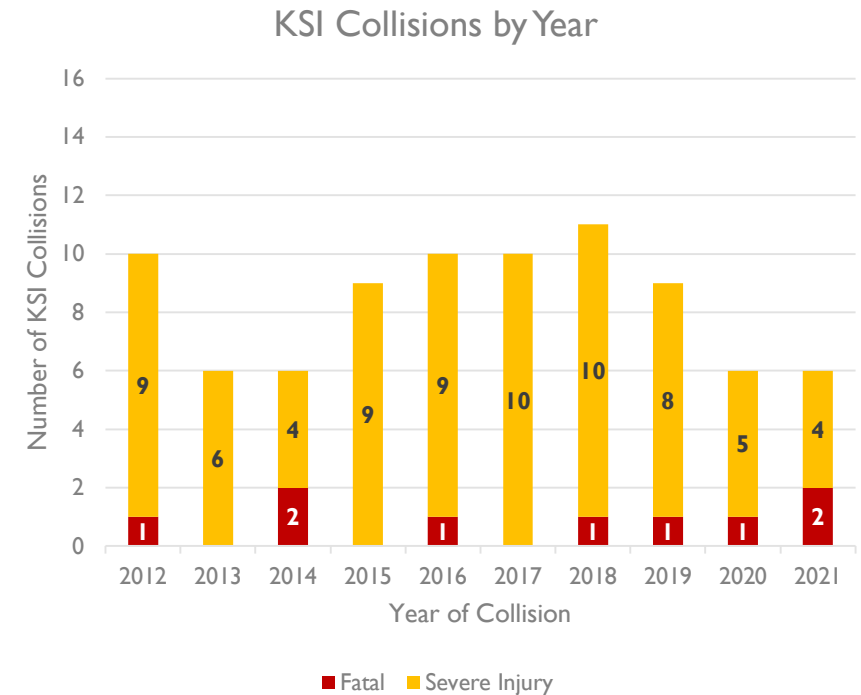
VISION ZERO PROCESS



FOCUSING ON FATALITIES AND SEVERE INJURIES



All Killed and Severe Injury Collisions (2012-2021)



- Between 2012 and 2021 there were **nine** fatalities and **74** severe injuries reported.

HIGH-INJURY CORRIDORS (2012-2021)

CORRIDORS

- Stevens Creek Boulevard
- Homestead Road
- McClellan Road
- De Anza Boulevard
- Stelling Road
- Wolfe Road
- Bollinger Road

INTERSECTIONS

- De Anza Boulevard & Homestead Road.
- Bandley Drive & Stevens Creek Boulevard
- Cupertino Road & Stevens Creek Boulevard
- Stevens Creek Boulevard & De Anza Boulevard
- Blaney Avenue & Stevens Creek Boulevard
- De Anza Boulevard & Mariani Avenue
- De Anza Boulevard & Rodrigues Avenue

COUNTERMEASURE TOOLBOX



ROADWAY DESIGN



**PEDESTRIAN
SAFETY**



BICYCLIST SAFETY



**OPERATIONS AND
SIGNAL TIMING**



SPEED MANAGEMENT



SIGNAGE AND MARKING



**EDUCATION AND
PUBLIC AWARENESS**



ENFORCEMENT

COLLISION PROFILES



PROFILE 1:
Pedestrian &
bicyclist are most
vulnerable



PROFILE 2:
Unsafe speeds



PROFILE 3:
Improve intersection
safety for all



PROFILE 4:
Pedestrian code
violation



PROFILE 5:
Majority of bicycle
collisions are
broadside collisions



PROFILE 6:
Teenagers biking
near schools and
parks



PROFILE 7:
Driving under
influence

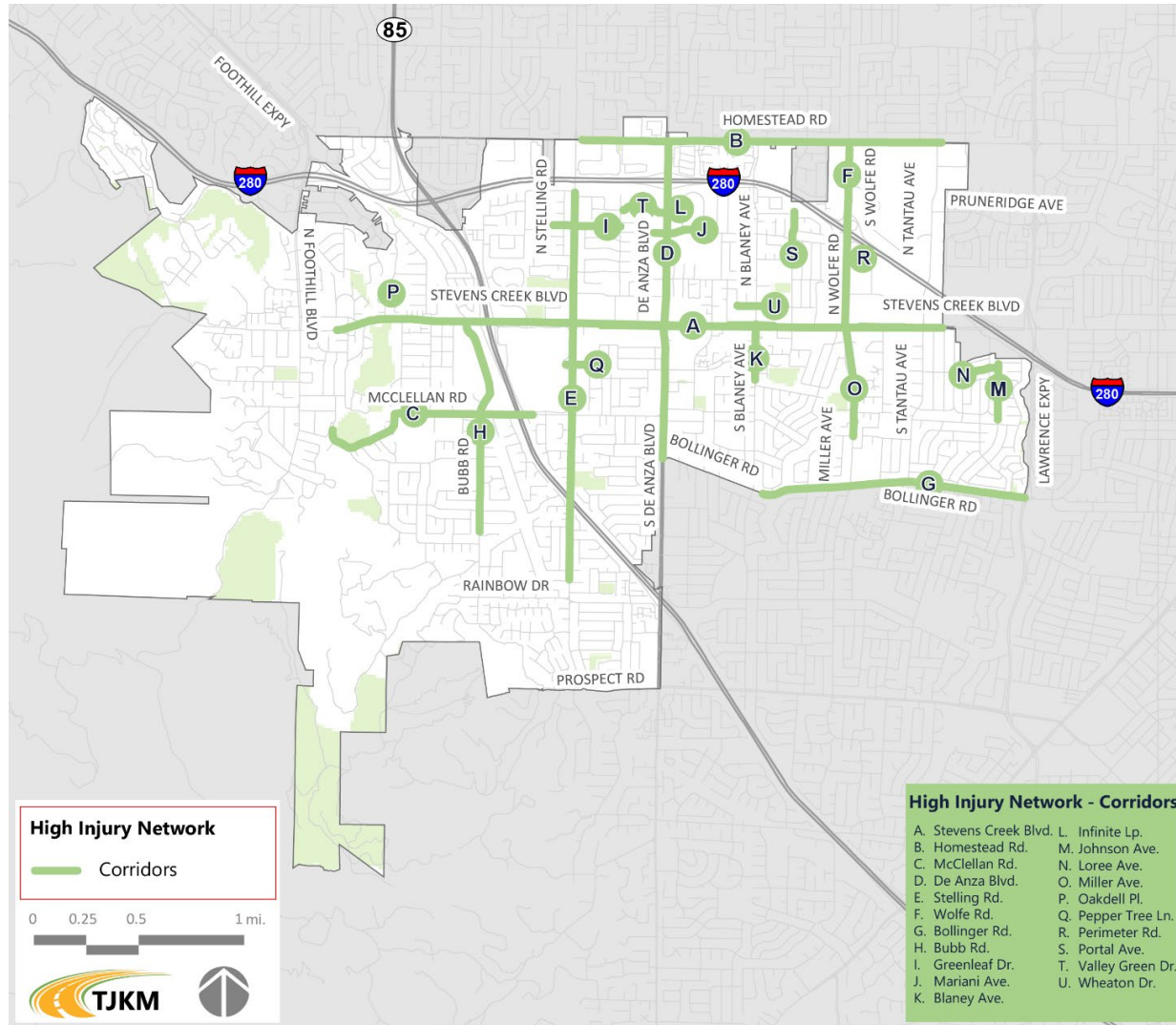


PROFILE 8:
Bicycle collisions and
automobile
right-of-way violation



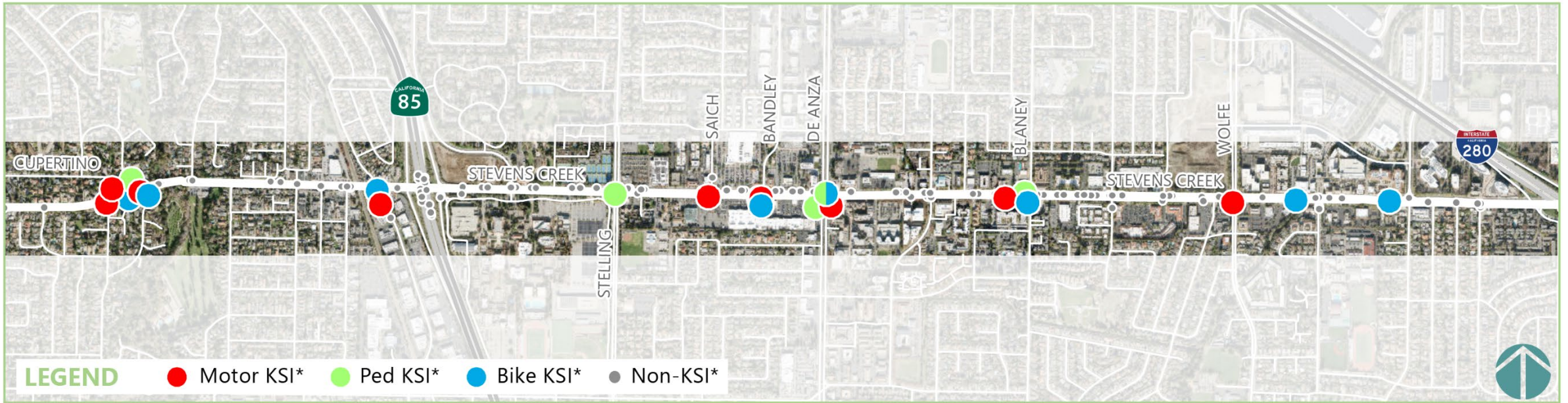
PROFILE 9:
Collisions near
transit stops

RECOMMENDED PROJECTS



- Stevens Creek Boulevard
- Homestead Road
- McClellan Road
- De Anza Boulevard
- Stelling Road
- Wolfe Road
- Bollinger Road

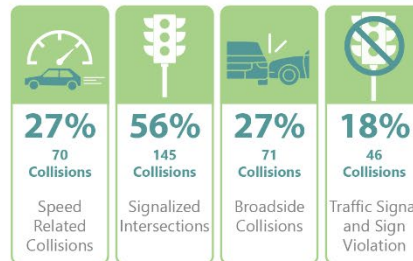
STEVENS CREEK BOULEVARD



COLLISION STATISTICS (2012 - 2021)



COLLISION TRENDS



RECOMMENDATIONS

INTERSECTION IMPROVEMENTS

- Leading Pedestrian Intervals (LPI)
- Signal Head and Equipment Upgrades
- Improve Signal Timing
- Pedestrian Refuge Island
- No Right on Red
- Advanced Dilemma Zone for High Speed Approaches
- Convert Pedestal Mounted Signal to Mast Arm
- Install Raised Pavement Markers and Striping

SPEED SAFETY IMPROVEMENTS

- Dynamic/Variable Speed Warning Signs
- Pavement Friction Improvement using High Friction Surface Treatment (HFST)

BICYCLE SAFETY IMPROVEMENTS

- Class IV Separated Bicycle Facility
- Bike Boxes
- Bicycle Signal
- Bike Detection Systems
- Green Pavement Marking in Conflict Zone

SIGNAGE IMPROVEMENTS

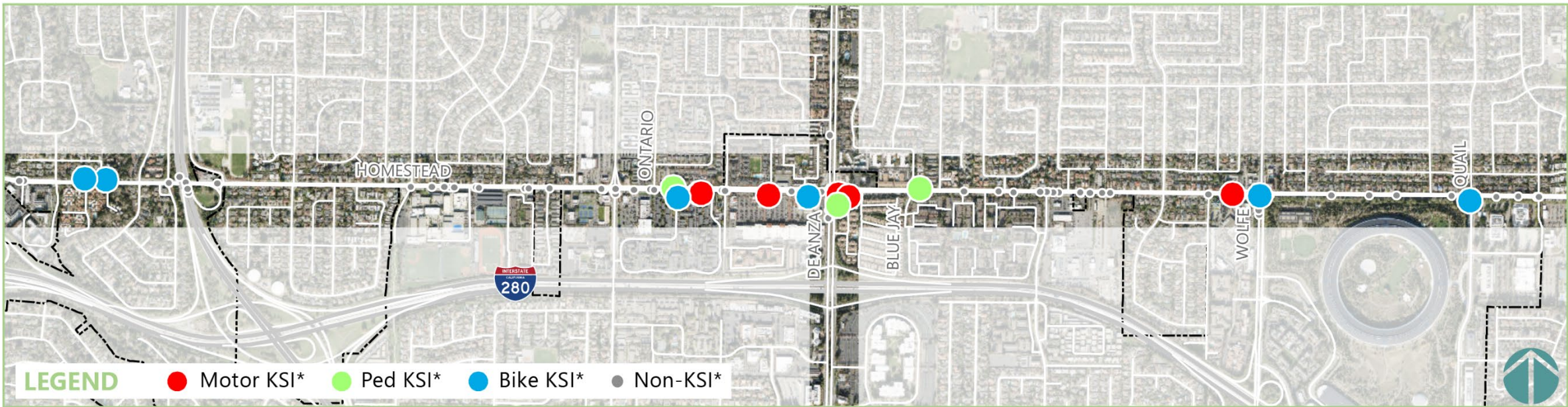
- Increase Size and Reflectivity of Signs
- Back-Plates With Retroreflective Borders

OTHER

- Median Fencing
- Transit Islands

City of Cupertino - Projects in Concept, Planning, Design or Construction Phase

* Killed or Severely Injured

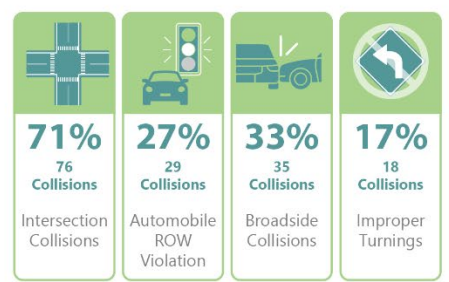


HOMESTEAD ROAD

COLLISION STATISTICS (2012 - 2021)



COLLISION TRENDS



RECOMMENDATIONS

- ### INTERSECTION IMPROVEMENTS

 - Leading Pedestrian Intervals (LPI)
 - Signal Head and Equipment Upgrades
 - Improve Signal Timing
 - No Right on Red
 - Reconfiguring Intersections
 - High Visibility Crosswalk
 - Signalization of Intersections (Fallen Leaf Dr.)
 - Advanced Dilemma Zone for High Speed Approaches
 - Convert Pedestal Mounted Signal to Mast Arm
 - Install Raised Pavement Markers and Striping
- ### BICYCLE SAFETY IMPROVEMENTS

 - Class IV Separated Bicycle Facility
 - Bike Boxes
 - Bicycle Signal
 - Bike Detection Systems
 - Green Pavement Marking in Conflict Zone
- ### SIGNAGE IMPROVEMENTS

 - Increase Size and Reflectivity of Signs
 - Back-Plates With Retroreflective Borders
- ### SPEED SAFETY IMPROVEMENTS

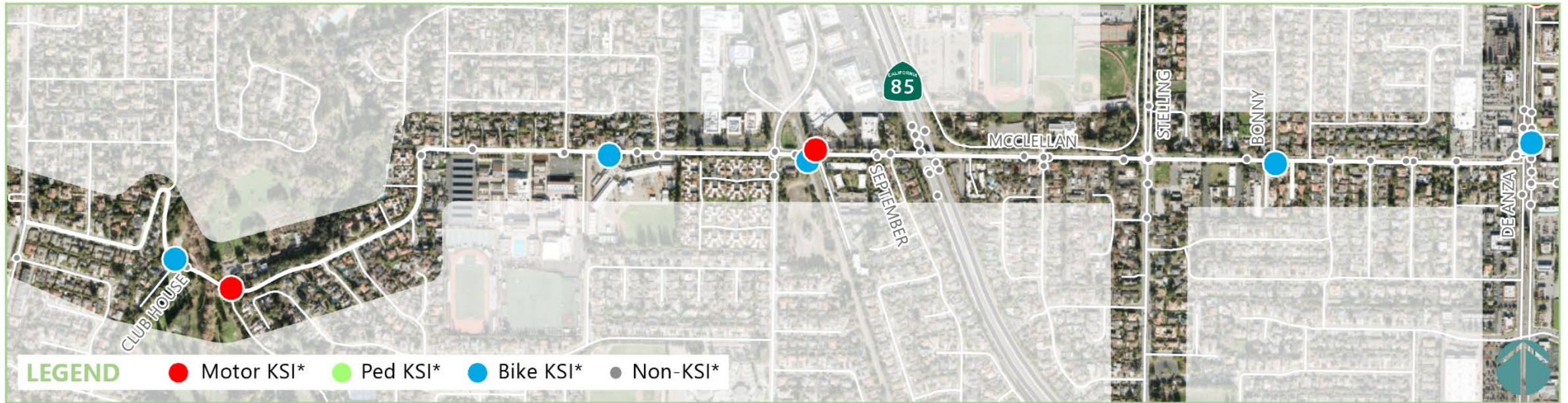
 - Dynamic/Variable Speed Warning Signs
 - Pavement Friction Improvement using High Friction Surface Treatment (HFST)
- ### OTHER

 - Widening Sidewalks and Closing Gaps
 - Installing ADA Compliant Ramps

City of Cupertino - Projects in Concept, Planning, Design or Construction Phase

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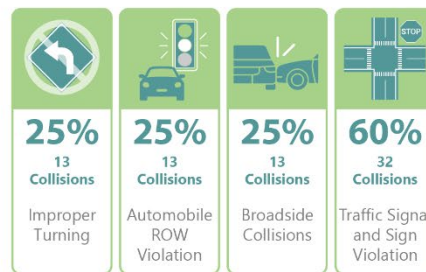
MCCLELLAN ROAD



COLLISION STATISTICS (2012 - 2021)



COLLISION TRENDS



RECOMMENDATIONS



INTERSECTION IMPROVEMENTS

- Leading Pedestrian Intervals (LPI)
- Signal Head and Equipment Upgrades
- Pedestrian Refuge Island
- No Right on Red



BICYCLE SAFETY IMPROVEMENTS

- Class IV Separated Bicycle Facility
- Bike Boxes
- Bicycle Signal
- Bike Detection Systems
- Green Pavement Marking in Conflict Zone



SPEED SAFETY IMPROVEMENTS

- Dynamic/Variable Speed Warning Signs
- Pavement Friction Improvement using High Friction Surface Treatment (HFST)



SIGNAGE IMPROVEMENTS

- Increase Size and Reflectivity of Signs
- Back-Plates With Retroreflective Borders

OTHER

- Consistently monitor the effectiveness of the implemented safety measures, serving as a model for other comparable streets within the city.

City of Cupertino - Projects in Concept, Planning, Design or Construction Phase

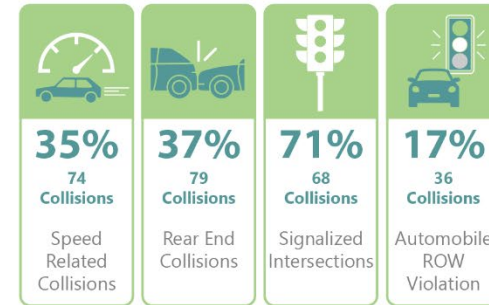
* Killed or Severely Injured

DE ANZA BOULEVARD

COLLISION STATISTICS (2012 - 2021)



COLLISION TRENDS



RECOMMENDATIONS



INTERSECTION IMPROVEMENTS

- Leading Pedestrian Intervals (LPI)
- Signal Head and Equipment Upgrades
- Improve Signal Timing
- Reconfiguring Intersections
- High Visibility Crosswalk
- Advanced Dilemma Zone for High Speed Approaches
- Convert Pedestal Mounted Signal to Mast Arm
- Install Raised Pavement Markers and Striping



BICYCLE SAFETY IMPROVEMENTS

- Class IV Separated Bicycle Facility
- Bike Boxes
- Bicycle Signal
- Bike Detection Systems
- ✓ Green Pavement Marking in Conflict Zone



SPEED SAFETY IMPROVEMENTS

- ✓ Dynamic/Variable Speed Warning Signs
- ✓ Pavement Friction Improvement using High Friction Surface Treatment (HFST)



SIGNAGE IMPROVEMENTS

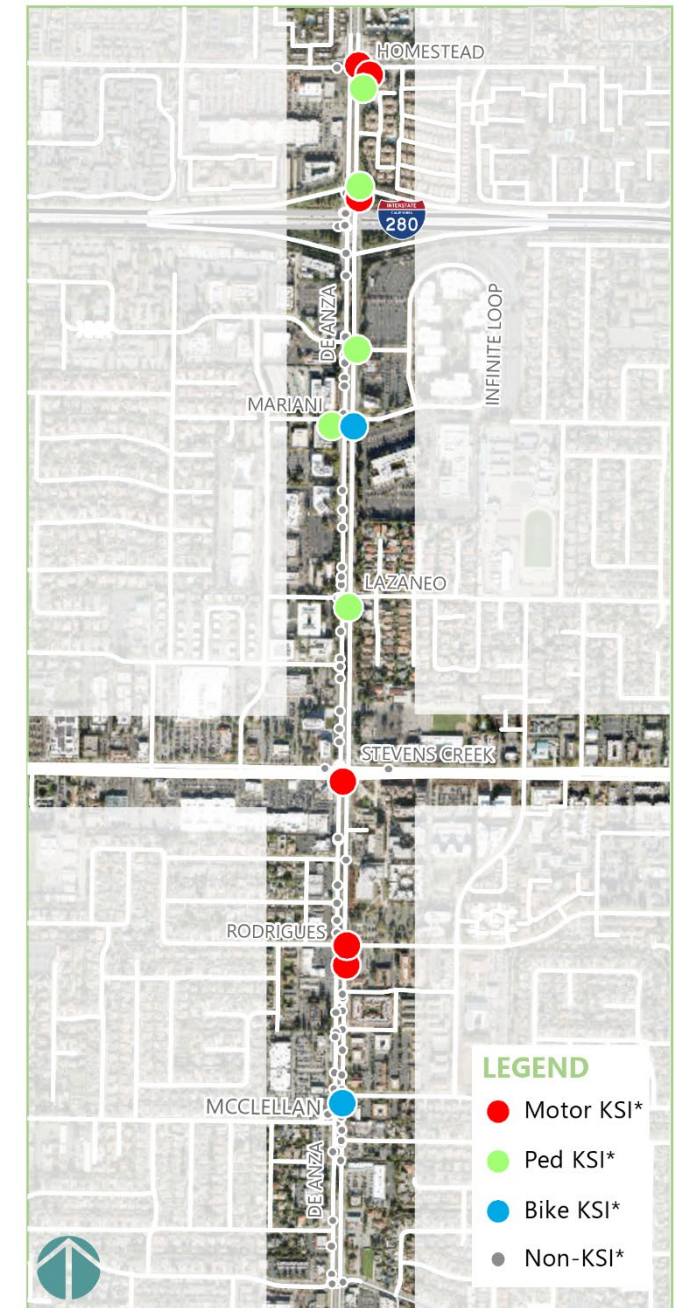
- Increase Size and Reflectivity of Signs
- Back-Plates With Retroreflective Borders

OTHER

- Transit Islands
- Study Potential Lane Narrowing or Reduction

✓ City of Cupertino - Projects in Concept, Planning, Design or Construction Phase

* Killed or Severely Injured



CITY OF CUPERTINO

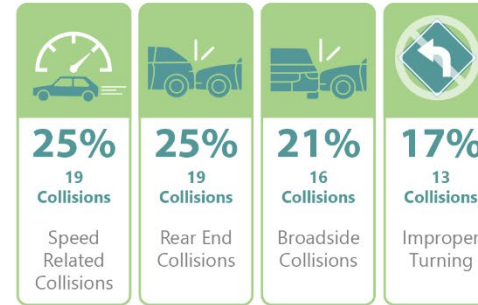


STELLING ROAD

COLLISION STATISTICS (2012 - 2021)



COLLISION TRENDS



RECOMMENDATIONS



INTERSECTION IMPROVEMENTS

- Leading Pedestrian Intervals (LPI)
- Signal Head and Equipment Upgrades
- Improve Signal Timing
- Free-Right Turn Removal
- Reconfiguring Intersections
- High Visibility Crosswalk



BICYCLE SAFETY IMPROVEMENTS

- Class IV Separated Bicycle Facility
- Bike Boxes
- Bicycle Signal
- Bike Detection Systems
- Green Pavement Marking in Conflict Zone



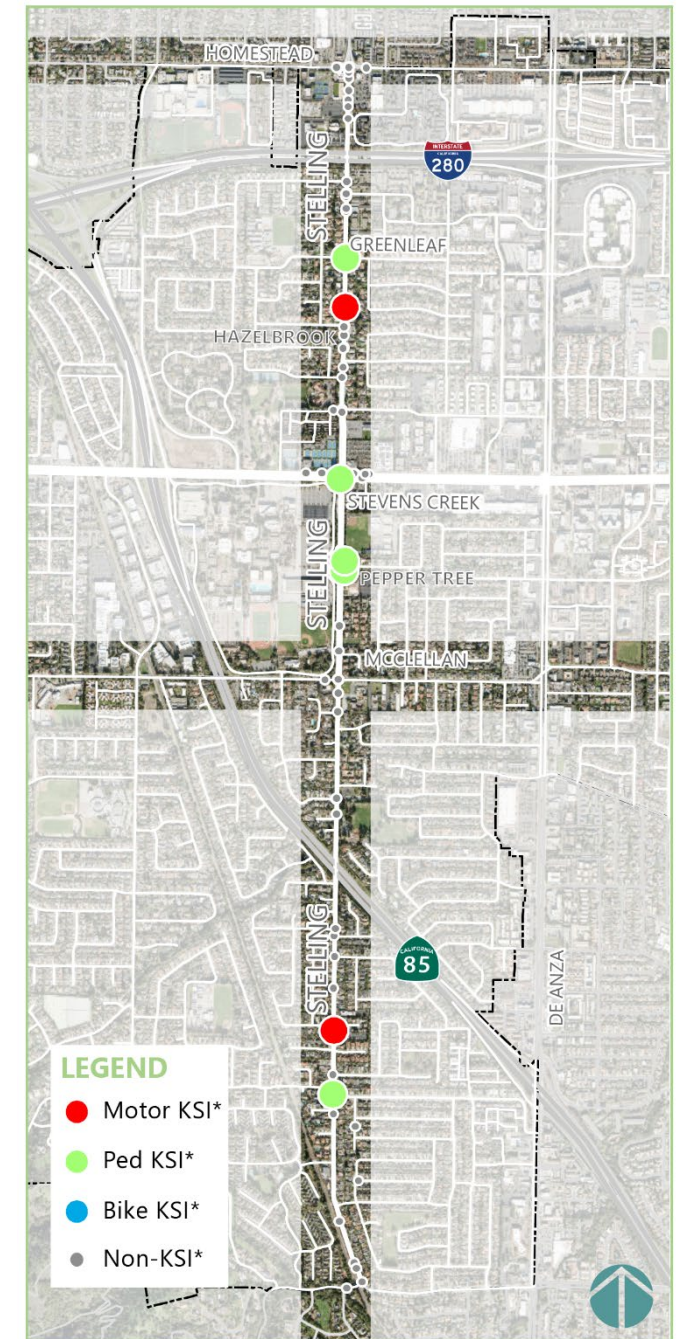
SPEED SAFETY IMPROVEMENTS

- ✓ Dynamic/Variable Speed Warning Signs
- ✓ Pavement Friction Improvement using High Friction Surface Treatment (HFST)



SIGNAGE IMPROVEMENTS

- Increase Size and Reflectivity of Signs
- Back-Plates With Retroreflective Borders



✓ City of Cupertino - Projects in Concept, Planning, Design or Construction Phase

* Killed or Severely Injured



CITY OF
CUPERTINO

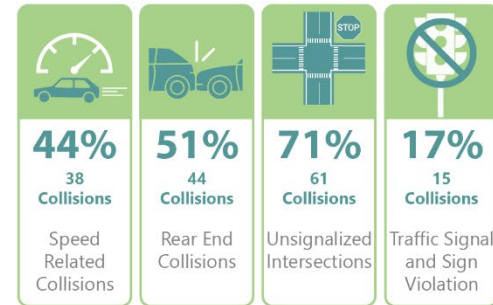


WOLFE ROAD

COLLISION STATISTICS (2012 - 2021)



COLLISION TRENDS



RECOMMENDATIONS



INTERSECTION IMPROVEMENTS

- Leading Pedestrian Intervals (LPI)
- ✓ Signal Head and Equipment Upgrades
- Improve Signal Timing
- ✓ Free-Right Turn Removal
- ✓ High Visibility Crosswalk



BICYCLE SAFETY IMPROVEMENTS

- ✓ Class IV Separated Bicycle Facility
 - Bike Boxes
 - Bicycle Signal
- ✓ Bike Detection Systems
- ✓ Green Pavement Marking in Conflict Zone



SPEED SAFETY IMPROVEMENTS

- ✓ Dynamic/Variable Speed Warning Signs
- ✓ Pavement Friction Improvement using High Friction Surface Treatment (HFST)



SIGNAGE IMPROVEMENTS

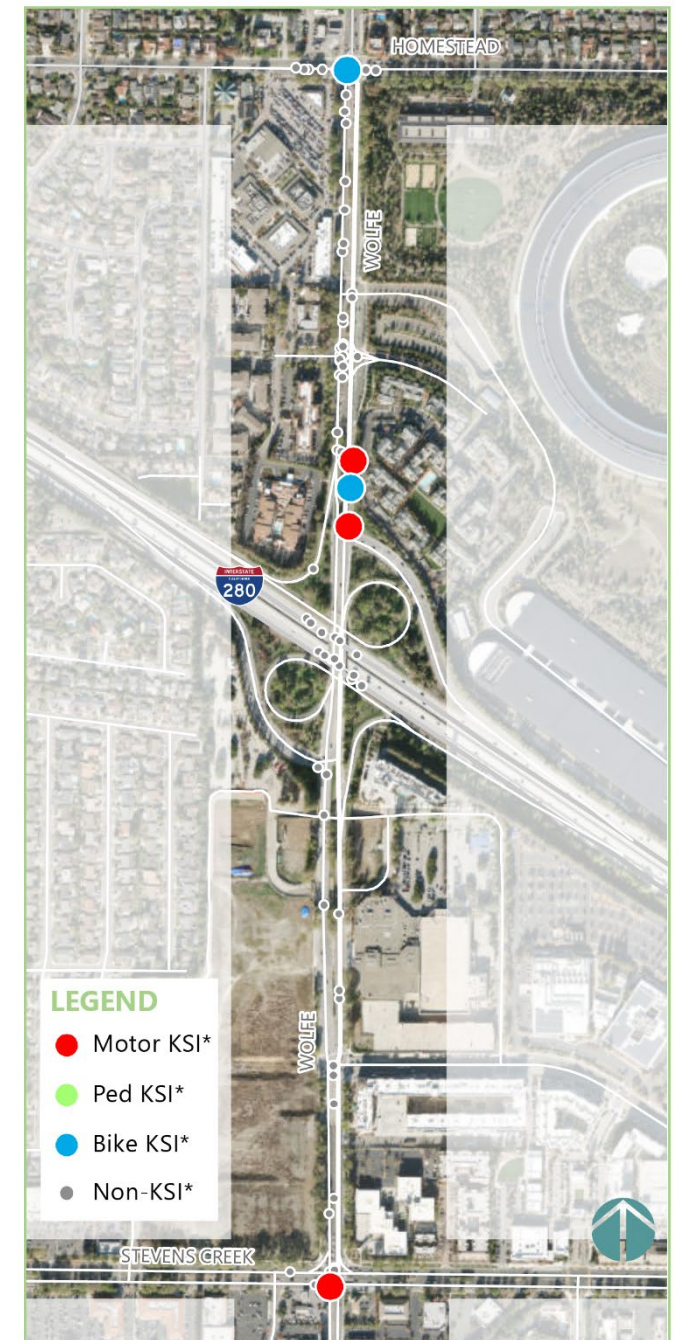
- Increase Size and Reflectivity of Signs
- Back-Plates With Retroreflective Borders
- Upgrading and Installing Additional Signage for Trap Lanes
- Consider Delimiters for Trap Lanes

OTHER

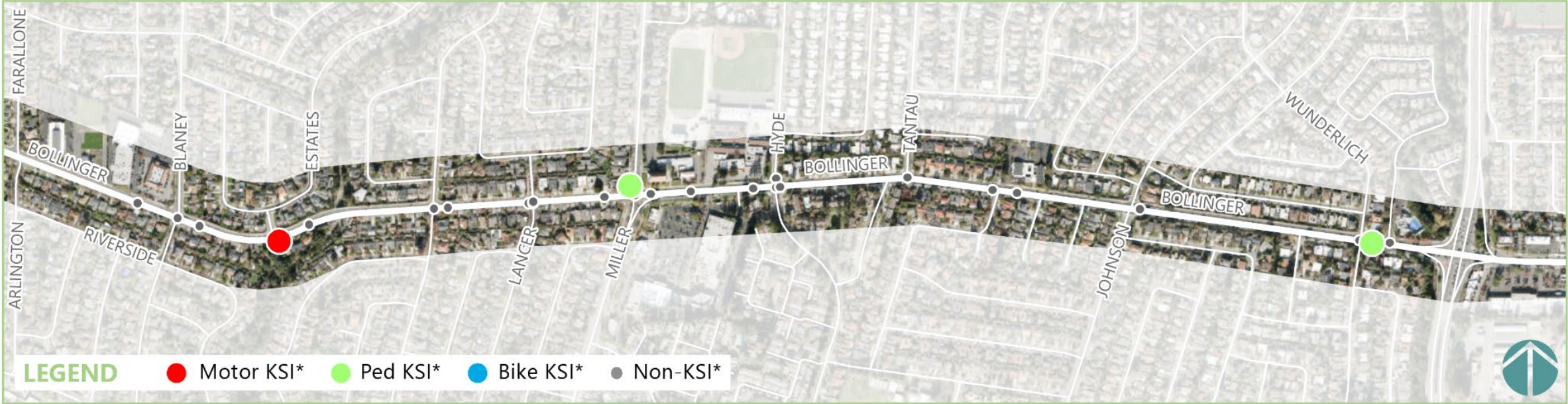
- Consider overhead mast arm with signs to inform drivers of what lanes they should be in ahead of approaches

✓ City of Cupertino - Projects in Concept, Planning, Design or Construction Phase

* Killed or Severely Injured



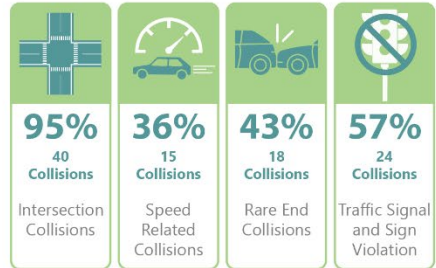
BOLLINGER ROAD



COLLISION STATISTICS (2012 - 2021)



COLLISION TRENDS



RECOMMENDATIONS

INTERSECTION IMPROVEMENTS

- ✓ Leading Pedestrian Intervals (LPI)
 - Signal Head and Equipment Upgrades
 - Improve Signal Timing
- ✓ Curb Radii and Free-Right Turn Removal
- ✓ Reconfiguring Intersections
- ✓ High Visibility Crosswalk
- ✓ Rectangular Rapid Flashing Beacons (RRFB)
 - Signalization

BICYCLE SAFETY IMPROVEMENTS

- ✓ Class IV Separated Bicycle Facility
- ✓ Bike Boxes
 - Bicycle Signal
- ✓ Bike Detection Systems
- ✓ Two-Stage Turn Queue Boxes

SPEED SAFETY IMPROVEMENTS

- ✓ Dynamic/Variable Speed Warning Signs
- ✓ Pavement Friction Improvement using High Friction Surface Treatment (HFST)

SIGNAGE IMPROVEMENTS

- Increase Size and Reflectivity of Signs
- Back-Plates With Retroreflective Borders

OTHER

- ✓ Transit Islands

✓ City of Cupertino - Projects in Concept, Planning, Design or Construction Phase

* Killed or Severely Injured

ACTION PLAN

VISION ZERO PROGRAM: STRATEGIES AND ASSESSMENT

No.	Safety Strategy	Timeline	City Resources
Vision Zero Program Initiative			
A.1	Vision Zero Task Force	Short-term	Low
A.2	Dedicated and Permanent Funding	Short-term	Medium to High
A.3	Media Workshop	Short-term	Low
Promotion and Integration			
A.4	Public Meeting	Short-Term	Low
A.5	Online Collision Map	Medium-Term	Medium
A.6	Future Plans	Continuous	Low
Data Collection & Program Evaluation			
A.7	Program Monitoring	Medium-Term	Medium
A.8	Collision Report Training	Long-Term	Low
A.9	Data Completeness	Medium-Term	Low
A.10	Bicycle and Pedestrian Count Data	Medium-Term	Medium

ACTION PLAN

ENHANCING STREET LAYOUT AND MANAGEMENT

No	Safety Strategy	Timeline	City Resources
High Injury Network Infrastructure			
B.1	Priority Location	Medium-Term	High
B.2	List Prioritized Project	Medium-Term	Medium
B.3	Low-Cost Improvements	Medium-Term	Medium
B.4	Stakeholder Engagement	Medium-Term	Low
Operations and Technology			
B.5	Signal Timing Updates	Short-Term	Medium
B.6	Intelligent Transportation Systems (ITS)	Long-Term	High
Policies and Design			
B.7	Design Review	Long-Term	Low
B.8	Complete Streets	Medium-Term	Low

ACTION PLAN

CULTIVATING A POSITIVE ROAD USER BEHAVIOR

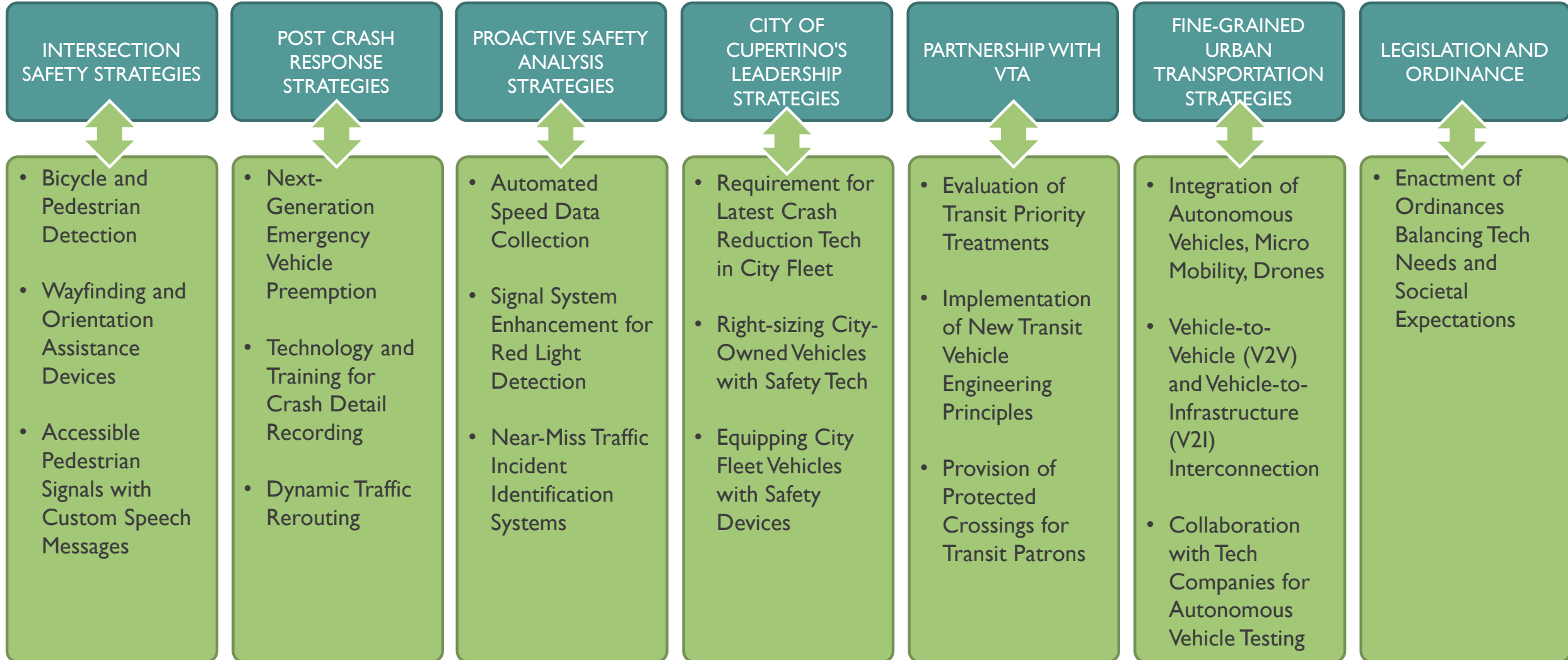
No	Safety Strategy	Timeline	City Resources
Education and Outreach			
C.1	Education Campaign	Medium-Term	High
C.2	Speed Feedback Signs	Medium-Term	Medium
C.3	Targeted Outreach	Medium-Term	Medium
Enforcement			
C.4	Police Academy	Short-Term	Low
Providing Alternatives to Driving			
C.5	Subsidized Transit	Medium-Term	Medium
C.6	Late-Night Options	Long-Term	Medium
C.7	Curbside Management	Medium-Term	Medium

ACTION PLAN

VULNERABLE ROAD USERS

No	Safety Strategy	Timeline	City Resources
Bicyclist and Pedestrian			
D.1	Bicycle Network	Ongoing	High
D.2	Pedestrian Crossing	Medium-Term	High
D.3	Turning Vehicles	Long-Term	High
Children and Seniors			
D.4	High-Visibility Crosswalk	Medium-Term	Medium
D.5	Senior Awareness	Medium-Term	Medium
D.6	Traffic Education for Safe Routes to School	Medium-Term	Medium

TRANSPORTATION TECHNOLOGY



EDUCATIONAL PROGRAMS

- Safe routes to school
- Americans with disabilities act engagement
- Walking/cycling/transit field days
- Community walking audits
- Medical services providers
- Improving access to transit

SafeRoutes



CUPERTINO
SAFE ROUTES
TO SCHOOL



TRAFFIC ENFORCEMENT PROGRAMS

- High visibility enforcement
- Traffic violators school
- Red light violation cameras
- Traffic safety diversion program
- Publicized sobriety checkpoints
- High visibility saturation patrols



PARTNERSHIP

- Collaboration with nearby cities
- Public health and medical institution
- Private sector engagement
- Advocacy for safer delivery vehicles
- Traffic safety education in schools
- Community and school ambassador programs



CONTINUOUS DATA COLLECTION

- Annual collision analysis and reporting
- Online dashboard platform
- High injury network map
- Complete injury and fatality reporting



HOW TO GET INVOLVED

- Task a driving education class
- Pledge to not text
- Install anti-texting software on phone
- Observe rules of road when driving
- Bicycling etiquette
- Be an alert pedestrian
- Safe routes for all



OPEN DISCUSSION



THANK YOU !

CITY OF CUPERTINO