Freeway ramp intersection study
Supporting Vision Zero: Zero traffic deaths in San Francisco by 2024

**Study Goals:**

**Primary**
- Improve Safety
- Improve Accessibility

**Secondary**
- Provide Efficient Circulation
- Accommodate Growth
- Ensure Compatibility with Planned Projects
- Develop Feasible Improvements

**Intersection Selection:**
- Traffic Collision Patterns
- Other Planned Project Locations
- Proactive Approach to Improving Safety

**Study Partners:**
- San Francisco County Transportation Authority
- San Francisco Municipal Transportation Agency
- Technical Consultant – Parisi Transportation Consulting
- Technical Advisors – Caltrans, SF Public Works, and SF Planning

**Funding:**
- Caltrans Planning Grant + Prop K half-cent transportation sales tax
# Examples of Improvements

<table>
<thead>
<tr>
<th>Curb Bulb-out</th>
<th>Median Refuge</th>
<th>Bike Lane</th>
<th>New Crosswalk</th>
<th>Other Ideas?</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Curb Bulb-out" /></td>
<td><img src="image" alt="Median Refuge" /></td>
<td><img src="image" alt="Bike Lane" /></td>
<td><img src="image" alt="New Crosswalk" /></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Sidewalk</th>
<th>Signage</th>
<th>Overhead Signage</th>
<th>Leading Pedestrian Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="New Sidewalk" /></td>
<td><img src="image" alt="Signage" /></td>
<td><img src="image" alt="Overhead Signage" /></td>
<td><img src="image" alt="Leading Pedestrian Interval" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Signal</th>
<th>Bike Signal</th>
<th>Flashing Beacon</th>
<th>No Right Turn On Red Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="New Signal" /></td>
<td><img src="image" alt="Bike Signal" /></td>
<td><img src="image" alt="Flashing Beacon" /></td>
<td><img src="image" alt="No Right Turn On Red Sign" /></td>
</tr>
</tbody>
</table>
Mission, Otis, Duboce, & 13th streets

2012-2016
35 collisions

What do you think?
- Curb bulb-outs
- Signal update + signage
- Bike lanes
- Median refuges
- Other ideas?

Market Street Hub Project Improvements
- Protected cycle track on 13th Street
- Two-way Otis Street. Modify Mission St. medians to accommodate traffic to Otis St.

Vision Zero Ramps Study Proposals
- Bulb-outs and curb ramps
- Median refuge islands for people crossing Duboce and 13th Street
- Pedestrian and traffic signal upgrades
- Brighter lighting under the bridge
- Crosswalk flashing beacons and signage on unsignalized off-ramp to Mission Street
- New crosswalk striping
- Bus-only lanes on Mission St. approaching the intersection
South Van Ness Avenue & 13th Street

2012-2016

32 collisions

What do you think?

Pedestrian refuges

New sidewalk and crosswalk

New traffic signal

Bike lanes

Curb bulb-outs

Other ideas?

**Market Street Hub Project Improvements**
- Protected cycle track on 13th Street

**Vision Zero Ramps Study Proposals**
- Bulb-outs and curb ramps
- Median refuge islands across 13th Street
- Pedestrian and traffic signal upgrades
- Brighter lighting under the bridge
- New sidewalk on west side of S Van Ness Ave.
- Realign the US-101 SB freeway on-ramp and construct a new pedestrian crossing with a new traffic signal.
8th Street between Bryant & Harrison

2012-2016

0 collisions

What do you think?

Curb bulb-out

Signage/flashin beacon

Bike lane

Other ideas?

SFMTA 8th Street Safety Project Improvements
- Transit boarding island
- Protected bike lane

Vision Zero Ramps Study Proposals
- Bulb-outs and curb ramps
- Crosswalk flashing beacons and signage
- Crosswalk striping and yield line upgrades
8th Street & Bryant Street

2012-2016
19 collisions

HARRISON ST
8TH ST
7TH ST
BRYANT ST
I-80

What do you think?
- Curb bulb-outs
- Median refuge
- Overhead signage
- Bike lane
- New crosswalks
- New sidewalk
- Other ideas?
- New traffic signal

SFMTA 8th Street Safety Project Phase 2 Project Improvements
- Protected bike lane on 8th Street (partially constructed)
- Transit boarding island

Vision Zero Ramps Study Proposals
- New crosswalk across Bryant Street with protected signal phase
- New sidewalk along north side of Bryant St., new crosswalk across on-ramp with new traffic signal
- Bulb-outs and curb ramps
- Median refuge island
- Crosswalk striping upgrades
- Overhead lane assignment signs

New crosswalks
New sidewalk
7th Street & Harrison Street

2012-2016
14 collisions

Caltrans I-80 On-Ramp Project Improvements
- New pedestrian signal at crosswalk across the I-80 on-ramp
- Upgraded traffic signals

SFMTA 7th Street Bikeway Project Improvements
- Protected bike lane on 7th Street
- Transit boarding island

Vision Zero Ramps Study Proposals
- New crosswalk across Harrison Street
- Median refuge islands across 7th Street
- Bulb-outs and curb ramps
- Bus bulb
- Realigned crosswalk striping
- Additional traffic signal upgrades

What do you think?

- Curb bulb-outs
- Leading pedestrian signal
- Bike lane
- Other ideas?
7th Street between Bryant & Harrison

What do you think?
- Curb bulb-outs
- Signage/flash beacon
- Bike lane
- Other ideas?

SFMTA 7th Street Bike Lane Project Improvements
- Protected bike lane on 7th Street
- Transit boarding island

Vision Zero Ramps Study Proposals
- Lane reduction at the I-80 off-ramp approach
- Bulb-outs and curb ramps
- Crosswalk flashing beacons and signage
- Crosswalk striping and yield line upgrades

2012-2016
5 collisions
7th Street & Bryant Street

2012-2016

8 collisions

HARRISON ST
8TH ST
7TH ST
BRYANT ST

What do you think?

- Curb bulb-outs
- Median refuge
- Leading pedestrian signal
- Signal upgrade
- Bike lane
- Other ideas?

SFMTA 7th Street Bike Lane Project Improvements
- Protected bike lane on 7th Street

Vision Zero Ramps Study Proposals
- Lane reduction from three to two on the I-80 off-ramp approach
- Bulb-outs and curb ramps
- Crosswalk striping upgrades
- Bus bulb
- Traffic signal upgrades
6th Street & Brannan Street

2012-2016
13 collisions

What do you think?
- Curb bulb-outs
- Pedestrian refuge
- Signage
- New crosswalk
- Other ideas?

SFMTA 6th and Brannan Road Diet Project Improvements
- Road diet and bike lanes on Brannan Street

SF Flower Mart Improvements
- Potential sidewalk widening on 6th Street
- Potential bike lane or cycle track on westbound Brannan Street

Vision Zero Ramps Study Proposals
- Bulb-outs, curb ramps and median refuge islands
- New crosswalk and median refuge island across the I-280 approach
- Protected signal phase for Brannan crosswalk on east side of intersection
- Crosswalk striping upgrades
- Traffic signal upgrades
Fremont between Howard & Folsom

New intersection; collision data N/A

What do you think?
- New crosswalk
- New median island
- Signage
- Other ideas?

Vision Zero Ramps Study Proposals
- New crosswalk across Fremont Street
- Crosswalk striping and curb ramp upgrades
- Raised traffic splitter island
Harrison Street & Essex Street

2012-2016
10 collisions

What do you think?
- Curb bulb-outs
- Signal visibility upgrade
- New crosswalks
- Other ideas?

Improvements by Others
- Ramp Park project
- Bulb-outs on Harrison Street by adjacent developments

Vision Zero Ramps Study Proposals
- New crosswalks across Harrison Street and I-80 On-Ramp
- Bulb-outs and curb ramps
- Additional traffic signal upgrades
# Study Timeline and Next Steps

<table>
<thead>
<tr>
<th>Project Tasks</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop Study Goals &amp; Select Intersections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze Collisions &amp; Draft Design Proposals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open House to Share Draft Proposals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorporate Feedback, Complete Technical Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize Improvements &amp; Develop Cost Estimate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing Funding and Implementation Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share Final Recommendations with Community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adopt Final Report</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Image of pedestrians and cars at an intersection]
OPEN HOUSE
SoMa freeway ramp intersection study