BERKELEY VISION ZERO

ALAMEDA COUNTY TRANSPORTATION COMMISSION

BICYCLE AND PEDESTRIAN SAFETY WORKSHOP

May 9, 2019
PRESENTATION AGENDA

1. Background: Bicycle and Pedestrian Planning
2. Berkeley Vision Zero Action Plan
3. Berkeley Pedestrian Plan Update
4. Vision Zero Next Steps
NUMBER OF BICYCLE-INVOLVED COLLISIONS, 2001 to 2012

- 1 - 3
- 4 - 6
- 7 - 10
- 11 - 14
- 15 - 22
Traffic stress is the perceived sense of danger associated with riding in or adjacent to vehicle traffic.
INTRODUCTION
The City of Berkeley (City) has many planning and policy documents and projects that aim to increase pedestrian safety and improve the overall connectivity and sustainability of the transportation system. Examples include the General Plan, Berkeley Strategic Transportation Plan, Berkeley Resilience Strategy, Climate Action Plan, and John Muir Elementary School Safe Routes to School Project. Additionally, the City recently adopted the update to the Bicycle Master Plan and is likely to adopt a Vision Zero policy within the next year.

For this Pedestrian Master Plan Update (Plan) to be most effective, it will need to work in concert with other Citywide programs and policies and establish a clear relationship with regional and countywide transportation and transit planning efforts led by Alameda County Transportation Commission (Alameda CTC) and Alameda-Contra Costa Transit District (AC Transit). In doing so, this Plan will help set the City up to pursue and win discretionary funds and effectively implement pedestrian improvements across the City.

Our approach to this scope of work reflects the importance of building on prior planning efforts to create a plan that is:

- Data-driven and information-based
- Safety-focused
- Inclusive and intersectional
- Implementation-ready

The goal of this scope of work is three-fold:

1. To assess and amend the City's policies affecting pedestrian circulation.

TEAM + ROLES

Kittelson and Associates, Inc. (Kittelson)

As Prime, Kittelson is responsible for the overall successful execution and completion of the update. Our project manager, Amanda Lashly, AICP, will lead communications with the City and direct the team’s activities to fulfill the work plan on schedule and budget as well as in a manner that supports the City in continuing to strengthen their rapport and collaboration with community members and partner agencies.

Toole Design Group (TDG)

TDG will provide support to Kittelson throughout the project, bringing expertise to key activities such as public involvement, safe routes to school, and project prioritization. We plan to conduct the work collaboratively, providing the fullest benefits of our team's experience to the City.

2) To reflect current existing conditions and review the progress made toward implementation of the prior plan.

3) To prioritize a set of projects and programs and identify associated funding sources to leverage to further enhance pedestrian conditions in the City.

This project will use the City of Berkeley's 2010 Pedestrian Master Plan (2010 Plan) and 2012 Update as its starting point, preserving the basic structure of the document while making substantive
All Pedestrian/Vehicle Injury Collisions, 1997-2004 (SWITRS)
Pedestrian volume model: Forecasted mid-day peak movement levels.
All Pedestrian/Vehicle Injury Collisions, 1997-2004 (SWITRS)
Now therefore, be it resolved that the Berkeley City Council adopts the Vision Zero goal of eliminating traffic deaths and severe injuries by 2028.

Berkeley City Council Resolution No. 68,371-N.S. March 27, 2018
VISION ZERO DEFINED
Vision Zero Overview

VISION ZERO...

- Is a data-driven strategy to eliminate all traffic fatalities and severe injuries

- Is founded on a Safe Systems approach that recognizes humans will make mistakes and roadway systems should be designed to protect them

- Road safety goals are accomplished through a combination of engineering, education, and enforcement measures

Source: Vision Zero Network

BERKELEY VISION ZERO
VISION ZERO CORE ELEMENTS
What Makes a Vision Zero City

- Leadership and Commitment
- Safe Roadways and Safe Speeds
- Data-driven Approach, Transparency, and Accountability
- Complementary Goals: Climate Change, Livability, Public Health, Economic Vitality

CORE ELEMENTS FOR VISION ZERO COMMUNITIES

Leadership and Commitment
1. Public, High-Level, and Ongoing Commitment. The Mayor and key elected officials and leaders within public agencies, including transportation, public health, and police, commit to a goal of eliminating traffic fatalities and serious injuries within a specific timeframe. Leadership across these agencies consistently engages in prioritizing safety via a collaborative working group and other resource-sharing efforts.

2. Authentic Engagement. Meaningful and accessible community engagement toward Vision Zero strategy and implementation is employed, with a focus on equity.

3. Strategic Planning. A Vision Zero Action Plan is developed, approved, and used to guide work. The Plan includes explicit goals and measurable strategies with clear timelines, and it identifies responsible stakeholders.

4. Project Delivery. Decision makers and system designers advance projects and policies for safe, equitable multimodal travel by securing funding and implementing projects, prioritizing roadways with the most pressing safety issues.

Safe Roadways and Safe Speeds

5. Complete Streets for All. Complete Streets concepts are integrated into communitywide plans and implemented through projects to encourage a safe, well-connected transportation network for people using all modes of transportation. This prioritizes safe travel of people over expeditions of travel of motor vehicles.

6. Context-Appropriate Speeds. Travel speeds are set and managed to achieve safe conditions for the specific roadway context and to protect all roadway users, particularly those most at risk in crashes. Proven speed management policies and practices are prioritized to reach this goal.

Data-driven Approach, Transparency, and Accountability

7. Equity-Focused Analysis and Programs. Commitment is made to an equitable approach and outcomes, including prioritizing engagement and investments in traditionally underserved communities and adopting equitable traffic enforcement practices.

8. Proactive, Systemic Planning. A proactive, systems-based approach to safety is used to identify and address top risk factors and mitigate potential crashes and crash severity.

9. Responsive, Hot Spot Planning. A map of the community’s fatal and serious injury crash locations is developed, regularly updated, and used to guide priority actions and funding.


Source: Vision Zero Network
IMPORTANCE OF VISION ZERO

Vision Zero Nationwide

TRAFFIC DEATHS IN US

- US records close to 40,000 roadway and highway deaths per year

- US crash death rate more than twice the average of other high-income countries

Motor vehicle crash deaths in 10 comparison high-income countries, 2013

- United States: 10.3
- New Zealand: 5.6
- Canada: 5.4
- France: 5.1
- Japan: 4.5
- Germany: 4.0
- Spain: 3.6
- Switzerland: 3.3
- United Kingdom: 2.8
- Sweden: 2.7

Deaths per 100,000 people
Between 2013 and 2017...

- Approximately two people were killed and 22 people were severely injured each year in traffic collision on Berkeley streets.

- Pedestrians and bicyclists were involved in only 50% of all crashes but represented over 70% of all traffic fatalities.

- High vehicle speeds, violation of pedestrian right of way, and violation of auto right of way were the primary causes of severe and fatal collisions.
COLLISION DATA

- From UC Berkeley SafeTREC Transportation Injury Mapping System (TIMS)
- 2013-2017 data (2016 and 2017 are provisional)
- Includes all collisions resulting in an injury (ranging from Complaint of Pain to Fatal)
- Does not include collisions resulting only in property damage
- Does not include freeway collisions (I-80, I-580)
Transportation Injury Mapping System (TIMS)

The Transportation Injury Mapping System (TIMS) has been developed by SafeTREC’s GIS Program team to provide quick, easy and free access to California crash data that has been geo-coded to make it easy to map out crashes and even view the locations in Google Street View.

The following tools are currently available on TIMS:

- SWITRS Query & Map
- SWITRS GIS Map
- California Safety PM Target Setting
- Collision Diagram
- SRTS Map Viewer
- ATP Maps & Summary Data
- Motorcycle Collision Map
ALL COLLISIONS
2013-2017, City of Berkeley

111 collisions with victims killed or severely injured (KSI) between 2013 and 2017

KSI       non-KSI
CROSSFIRE BY MODE
2013-2017, City of Berkeley

ALL TRIPS
- Vehicle: 52%
- Bike: 30%
- Walk: 10%
- Transit: 8%

ALL INJURY COLLISIONS
- Vehicle: 51%
- Bike: 28%
- Walk: 21%
- Transit: 10%

KSI COLLISIONS
- Vehicle: 39%
- Bike: 37%
- Walk: 24%
- Transit: 24%

All trips source: California Household Travel Survey for City of Berkeley, 2012
KSI COLLISIONS BY MODE
2013-2017, City of Berkeley

VEHICLE KSI COLLISIONS
5-6 per year

BICYCLE KSI COLLISIONS
4-12 per year

PED KSI COLLISIONS
4-12 per year

BERKELEY VISION ZERO
VICTIMS BY AGE
2013-2017, City of Berkeley

ALL RESIDENTS
- 65% 19 and under
- 21% 20-64
- 14% 65+

VICTIMS IN ALL COLLISIONS
- 72% 19 and under
- 17% 20-64
- 11% 65+

VICTIMS IN KSI COLLISIONS
- 75% 19 and under
- 8% 20-64
- 17% 65+

All residents source: American Community Survey 2017 5-year estimates, City of Berkeley

BERKELEY VISION ZERO
KSI PEDESTRIAN ACTION
2013-2017, City of Berkeley

- Crossing in crosswalk: 73%
- Crossing outside of crosswalk: 15%
- Other: 12%

Other includes In Road, Including Shoulder and Not In Road.

BERKELEY VISION ZERO
KSI TOP VIOLATIONS
2013-2017, City of Berkeley

UNSAFE SPEEDS

Was one of the top three primary collision factors for pedestrian-, bike-, and vehicle-related KSI collisions

BERKELEY VISION ZERO
Speed Matters Most
Key Principles for Vision Zero in Berkeley

High speeds are more deadly

Hit by a vehicle traveling at 20 MPH
9 out of 10 pedestrians survive.

Hit by a vehicle traveling at 30 MPH
5 out of 10 pedestrians survive.

Hit by a vehicle traveling at 40 MPH
only 1 out of 10 pedestrians survives.

Source: Vision Zero Network
14% of Berkeley's street miles account for 92% of all traffic fatalities & severe injuries.
PED PLAN - FOCUS ON SEVERITY
Consistent with Vision Zero approach

Pedestrian Collisions, 2008-2017
- Fatalities
- Severe Injuries
PEDESTRIAN HIGH INJURY STREETS

Pedestrian Collisions, 2008-2017
- Fatalities
- Severe Injuries

High Injury Corridors

14% of Berkeley's street miles account for 93% of pedestrian fatalities & severe injuries.
Who is most affected?

Pedestrian Race

Pedestrian Age

- Share of Berkeley Residents
- Share of Pedestrians Involved in Collisions

Berkeley Vision Zero
<table>
<thead>
<tr>
<th>FACTOR</th>
<th>CRITERIA</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>Safety</td>
<td>Concentration of fatal and severe collisions</td>
<td>Captures locations with a high concentration of pedestrian fatalities, injuries, and collisions, as noted City priority. The high injury street analysis was completed in Task 2 of the Plan.</td>
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<tr>
<td>Equity</td>
<td>Locations in traditionally underserved neighborhoods</td>
<td>Uses historic redlining maps with adjustments based on most recent (2010) Census data, current property values, and locations of community centers serving historically redlined neighborhoods.</td>
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<td>Connectivity</td>
<td>Pedestrian Demand: Land uses attracting most pedestrian trips including BART and Amtrak stations (High Demand Intersections)</td>
<td>Uses pedestrian demand model from Task 2 of the Plan to identify where pedestrians are walking. Top 30% of intersections will be used, with each top 10% intersection group by demand receiving a different weight.</td>
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<td></td>
<td>Transit Access: Proximity to major bus stops</td>
<td>Uses distance of 0.25-mile from major bus stops. Major bus stops are defined as bus stops with the highest ridership.</td>
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<td>Existing Plan</td>
<td>Carried over from 2010 Pedestrian Master Plan</td>
<td>Recognizes existing work from the 2010 Berkeley Pedestrian Master Plan.</td>
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VISION ZERO NEXT STEPS

NEAR-TERM
- Hire a Vision Zero Coordinator
- Complete and begin implementation of the Vision Zero Action Plan
- Complete the Pedestrian Plan Update & Pedestrian Vision Zero Strategy

LONGER-TERM
- Update the Berkeley Bicycle Plan with a Bicycle Vision Zero Strategy

SAFE. COMFORTABLE. ENJOYABLE. ACCESSIBLE.

CITY OF BERKELEY
PEDESTRIAN MASTER PLAN
THANK YOU

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