Denver Vision Zero
Current Program and Beyond

Denver Moves Transit Task Force
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Rachael Bronson
Denver Public Works Transportation & Mobility
WHAT IS VISION ZERO?
Last year, more than 40,000 people were killed travelling on our streets in the US; estimated $62B cost.

We have referred to these incidents as “accidents.”

Traditional approach: limited data & resources, partners not at table.
Vision Zero views traffic fatalities as *unacceptable* and *preventable*

Measurable goals and strategies

Data-driven, systems-level, transparent & multidisciplinary
Focus on **equity**

Recognize that people will make mistakes and build a transportation system that minimizes the consequences of human error.

Speed is fundamental to reducing injury and fatal crash frequency.
Vision Zero in Sweden

1997

“No one shall be killed or seriously injured within the road traffic system.”
Vision Zero in Sweden

Number of deaths
Traffic volume


Swedish Road Administration
• Since 2014, 27 US Cities have committed to Vision Zero

<table>
<thead>
<tr>
<th>City</th>
<th>VZ plan year</th>
<th>Metro population</th>
<th>Percent of commuters that drive or carpool to work</th>
<th>Zero goal year</th>
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</thead>
<tbody>
<tr>
<td>New York City, NY</td>
<td>2014</td>
<td>20.2 million</td>
<td>60%</td>
<td>2024</td>
</tr>
<tr>
<td>Los Angeles, CA</td>
<td>2015</td>
<td>13.3 million</td>
<td>89%</td>
<td>2025</td>
</tr>
<tr>
<td>Washington, D.C.</td>
<td>2015</td>
<td>6.1 million</td>
<td>80%</td>
<td>2024</td>
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<tr>
<td>Boston, MA</td>
<td>2016</td>
<td>4.8 million</td>
<td>80%</td>
<td>2030</td>
</tr>
<tr>
<td>San Francisco, CA</td>
<td>2015</td>
<td>4.7 million</td>
<td>75%</td>
<td>2024</td>
</tr>
<tr>
<td>Seattle, WA</td>
<td>2015</td>
<td>3.7 million</td>
<td>85%</td>
<td>2030</td>
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<td>Denver, CO</td>
<td>2017</td>
<td>2.8 million</td>
<td>91%</td>
<td>2030</td>
</tr>
<tr>
<td>Portland, OR</td>
<td>2016</td>
<td>2.4 million</td>
<td>86%</td>
<td>2025</td>
</tr>
<tr>
<td>Austin, TX</td>
<td>2016</td>
<td>2.0 million</td>
<td>93%</td>
<td>2025</td>
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</table>
DENVER’S VISION ZERO PROGRESS
Denver’s evolving safety program

Annual program: all modes, data-driven

Deep dive: Bicycle Crash Analysis

Deep dive: Pedestrian Safety Study

Vision Zero
• February 17, 2016
• City’s formal commitment to eliminate traffic related deaths and serious injuries
• Coalition building
  – Technical Advisory Committee
  – Vision Zero Network
• Initiate development of Action Plan
• Infrastructure improvements
  – Initiate bike/ped safety projects
  – Pedestrian signal upgrades
• Marketing, branding and website
Data Analysis & Best Practice Review

- Intensive data analysis
- Similar Vision Zero Plans
- Proven countermeasures
- City policies

Partner Discussions

- Working Group meetings:
  - Speed & Street Design Impairment
  - Safety Culture
  - Stakeholder meetings

Public Surveys

- Online Map
- Intercept surveys

Thousands reached
• Deaths are unacceptable and preventable.
• In Colorado, motor vehicle crashes account for more than twice the number of deaths as homicides.
• Traffic deaths have risen over time, and our crash rate is much higher than most of our peer cities.
In Denver, compared to a motorist:

- Pedestrians are approximately **30 times** more likely to die in a crash
- Motorcyclists are nearly **13 times** more likely to die in a crash
- Bicyclists are **6.5 times** more likely to die in a crash

Denver traffic modes versus traffic deaths:

- **79%** (cars)
- **15%** (motorcycles)
- **5%** (bicycles)
- **7%** (other)

Traffic deaths:
- **42%** (cars)
- **38%** (pedestrians)
- **5%** (bicycles)
Behaviors:

• Seatbelts were not used in nearly one-third of motor vehicle fatalities
• In over half of motorcyclist fatalities, the rider was not wearing a helmet
• Other behaviors such as failure to yield, careless/reckless driving, impairment, hit and runs

Context:

• Most fatal crashes occurred at mid-block locations
• The majority of pedestrian and bicyclist fatalities occurred in unlit conditions
• 50% of fatalities on 5% of street network
• April 2017
• 4 locations, nearly 200 responses
• Biggest concerns: speeding, distracted driving, and crossing times
• Top wish for City action: build safe streets for everyone
>2800 responses

Biggest concerns: speeding, failure to yield, and other

Most people responded as: pedestrian taking work commute trips

Hotspots & citywide issues
This is a five-year Action Plan for eliminating traffic deaths by 2030.

Someone loses their life every six days while traveling in our city. We do not have to accept this as inevitable.
1. Enhance Processes and Collaboration
2. Build Safe Streets for Everyone
3. Create Safe Speeds
4. Promote a Culture of Safety
5. Improve Data and Be Transparent
• Avoiding actions that have unintended consequences
• Prioritizing efforts towards Communities of Concern
• Choosing the right benchmarks
Focusing efforts on the most dangerous streets and in the most vulnerable communities is a responsible use of limited City resources.
123 miles
Around 5% of Denver’s street network
~ 50% of fatalities
Communities of Concern (CoC)

- 30% of Denver
- 38% all traffic deaths
- 44% of pedestrian deaths
OTHER EFFORTS
• Vision Zero Summit, March 8, 2017
• Community outreach
Team meets following a fatal crash

Purpose:
- To understand circumstances of crash
- Observe existing traveler behavior
- Assess existing conditions
- Identify potential action items & improvement ideas

Membership: DPW, DPD, DEH, DVZ, CDOT, RTD
Rapid Response
Bike/Ped Safety Projects

• 5 areas citywide
• Highest concentration of bicycle and pedestrian crashes
• Extensive data collection
• Identify short- and long-term implementable projects
Bike/Ped Safety Projects

FEDERAL BOULEVARD & KENTUCKY AVENUE - EXISTING CONDITIONS
Vision Zero: Intersection Improvement Designs

EXISTING CONDITIONS

1. 24 HR Recorded Speeds:
   - Southbound: 37 MPH
   - Northbound: 38 MPH
   - Speed Limit: 40 MPH
   * Recorded Tuesday, 1/10/17 (85th percentile)

2. Castro Elementary, Jepson Legacy Middle School, and the Boys and Girls Club to the west of Federal Boulevard generate a high volume of children walking and biking across Federal Boulevard.

3. Surface parking lots and properties with large building setbacks create an unfriendly pedestrian environment, narrowing drivers' field of vision and encouraging high speeds.

4. Pedestrian desire lines and existing land use, combined with a long wait time to cross with the signal at the intersection (1min27s), encourages midblock pedestrian crossings and pedestrians crossing against the signal.

ISSUES

- 6-8 lanes of traffic lengthen crossing distances for pedestrian and bicyclists and increase exposure
- Large curb radii increase turning speeds
- Large building setbacks with parking, fronting the street on all corners and numerous curb cuts create a challenging and unfriendly pedestrian environment

OPPORTUNITIES

- As proposed in the Federal Boulevard Corridor Plan, the Southbound right turn lane and northbound deceleration lane could be removed to reduce crossing distance
- Opportunity to implement school zone speed enforcement measures
- Potential for flashing left turn arrows or LPUs on the Kentucky Avenue phase

PEDESTRIAN & BICYCLE CRASH MAP

VIEW A:
View looking east along Kentucky Avenue of the long pedestrian crossing distance

VIEW B:
View looking east along Kentucky Avenue of the sidewalk conditions leading up to the intersection
Bike/Ped Safety Projects

Federal/Kentucky example
WHAT'S NEXT
• 2018 Budget
  – Outreach and education $500,000
  – Infrastructure implementation $1M
  – Staff expansion
    • Engineer
    • Data Analyst
• One Federal Blvd
Rachael Bronson
Rachael.bronson@denvergov.org
720-865-2658
www.denvergov.org/visionzero