

Vision Zero

Work Plan

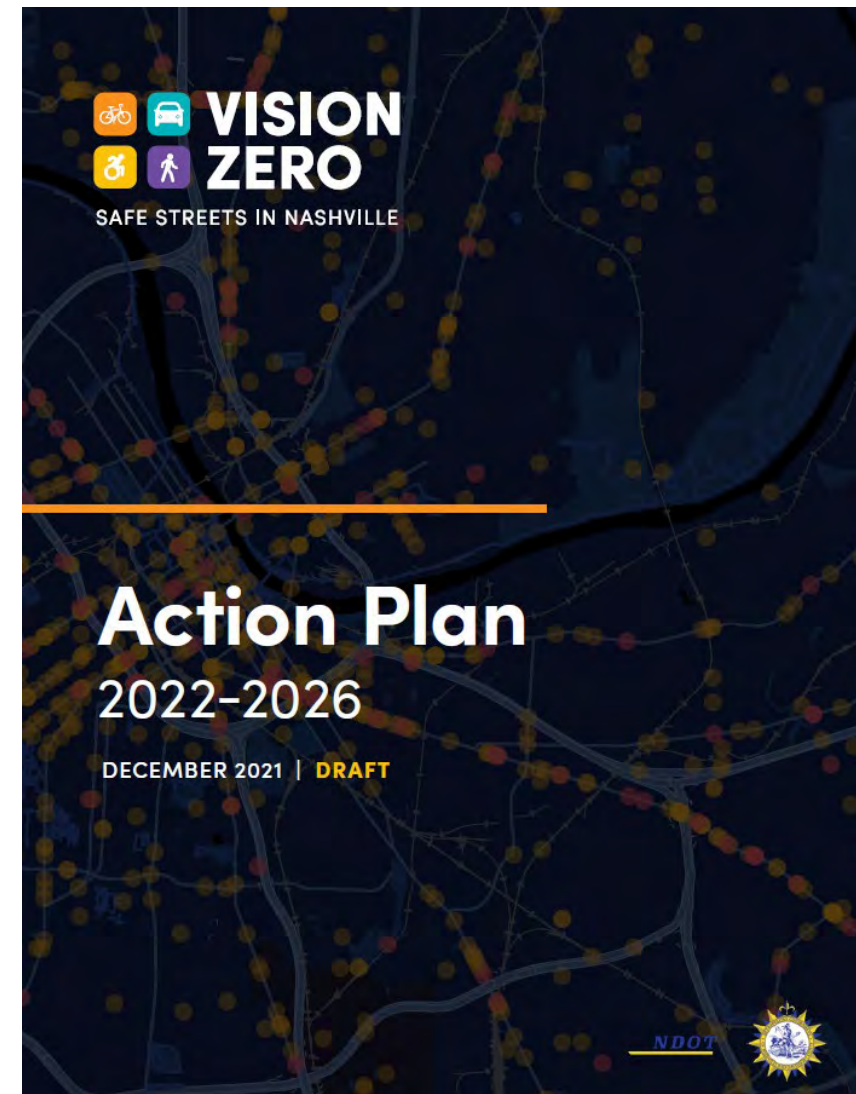
Wednesday, January 26, 2022





Today's Agenda

- › **Welcome Remarks**
Diana Alarcon, Nashville DOT
- › **Work Plan Overview**
Jennifer Baldwin, Alta
- › **National Vision Zero Trends**
Leah Shahum, Vision Zero Network
- › **Lessons Learned from Austin, Tx**
Lewis Leff, City of Austin





Welcome Remarks from

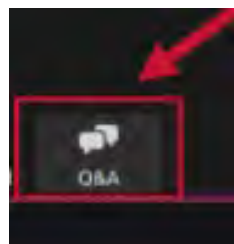
Diana Alarcon – NDOT Director

Email: Diana.Alarcon@nashville.gov

Phone: (615) 862-8706



Submit Your Questions!



Question and Answer

Welcome

Feel free to ask the host and panelists questions

What came first, the chicken or the egg?

Send anonymously

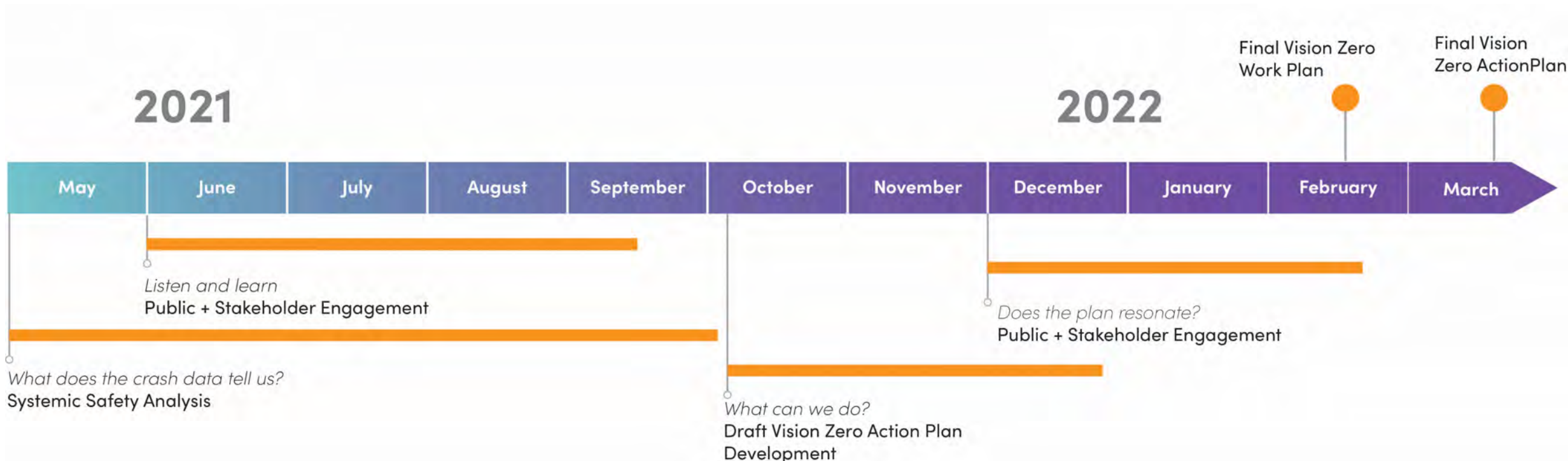
Cancel Send



Work Plan Overview



A Work in Progress





Intercept Survey

Along Nolensville Pike
Among People Experiencing
Homelessness



Interactive Map

181 Public Comments



Targeted Focus Groups

African American Focus
Latinx/Hispanic Focus
Kurdish Focus



Stakeholder Meetings

Advocacy Groups
Hospitals and Universities



Online Public Survey

1,646 surveys completed



Additional Leveraged Engagement

WalknBike Update
Murfreesboro Pike Study
Metro Transportation Plan

Public Engagement Efforts



What we Learned

“Sometimes it feels like an obstacle course like, can I make it [to my destination] alive, walking in Nashville?”

“I have almost been run over in crosswalks by inattentive drivers more times than I can count.”

“I would build sidewalks, plant trees along those sidewalks, add crosswalks and bike lanes so that pedestrians would stand a fighting chance in Nashville.”

- People do not feel safe on Nashville’s streets.
- Many Nashville residents feel as if there is a discrepancy between how alternative modes of transportation are encouraged and how they are supported through infrastructure and enforcement.
- Near misses are not reported.



Our Analysis Approach



What is happening? Who is impacted?
Systemic Safety Analysis



Where are the most dangerous areas?
High Injury Network



How can we Prevent?
Collision Profiles + Countermeasures

Guiding Principles



Traffic deaths are preventable and unacceptable.



Traffic safety improvements should reflect community needs.



Human life and safety take priority over moving cars.



Quality data and transparent evaluation is needed at all levels of government.



Street design should account for human error and be predictable.



Effective prevention requires urgency and an integrated approach.



Managing vehicle speed is fundamental to saving lives.



Network connectivity is critical to ensure people can safely access key destinations.



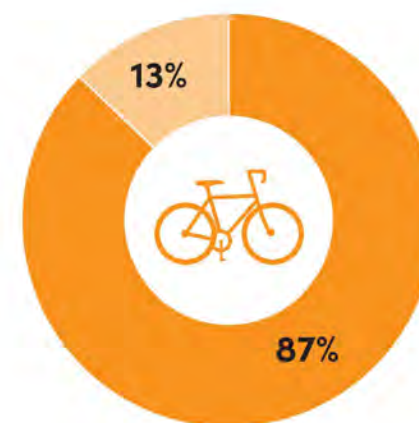
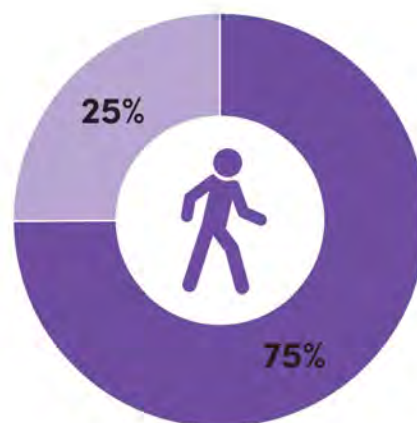
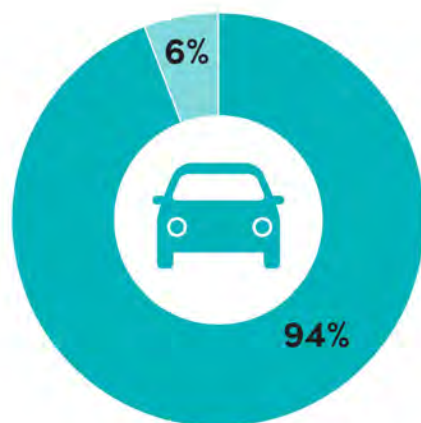
How does Nashville Compare?

For every 100,00 collisions, nearly 6 more people in Nashville are killed in traffic than in peer cities.




Fatality rate per 100,000 people



Who is impacted?



   Minor Injury

   Killed or Severely Injured



How do we define Vulnerable Areas

- Adapted from the Greater Nashville Regional Council methodology, adjusting for just Davidson County.

Equity Inputs

Active Transportation Users
(workers that use transit, walk, or bike to work)

Carless Households
(no vehicles available)

Disabled Population

Educational Level
(less than High School)

Females

Housing Cost-Burdened Households

Limited English Proficient Households

People of Color
(non-white and/or Hispanic/Latinx)

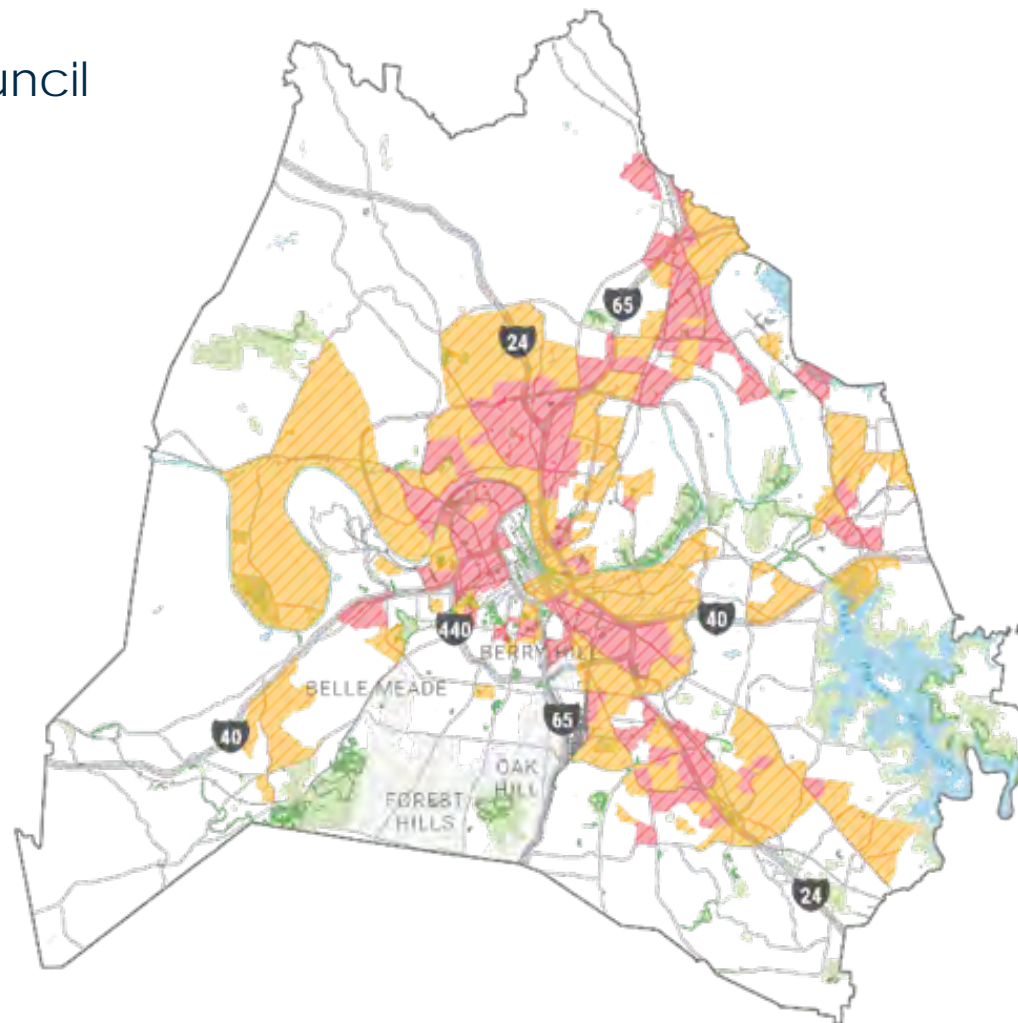
Poverty

Renters vs. Owners

Seniors (65+)

Unemployment Rate

Youth (under 18)





Speed is a risk for everyone.



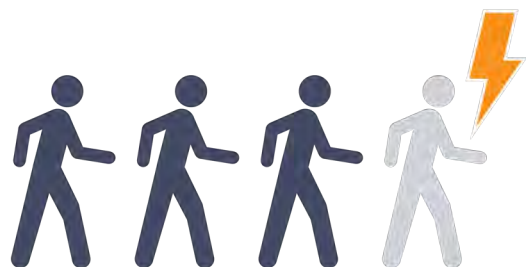
ROADS WITH MULTIPLE TRAVEL LANES
and a speed limit of
35+ mph have a higher
collision rate for all modes



Collisions happen at
disproportionately higher rates
in **COMMERCIAL AREAS AND ON**
ARTERIALS (the pikes).



Pedestrian lives are most at risk!



1 IN 4 pedestrian collisions result in a person being **KILLED OR SEVERELY INJURED**



67% of pedestrian collisions occurred **AFTER DARK**

51 % occur on streets with lighting

15 % occur on streets without lighting

Pedestrian hit-and-runs are increasing at an alarming rate.



This year alone (as of August) there have been **24** pedestrians died or were severely injured in a **HIT-AND-RUN WHILE WALKING**



30% of all pedestrian collisions are **HIT-AND-RUNS**



50% of all pedestrian hit-and-runs occur **AFTER DARK**



Almost 50% of all pedestrian hit-and runs occur **ON ROADS WITH 35+ MILE PER HOUR OR GREATER SPEED LIMITS**

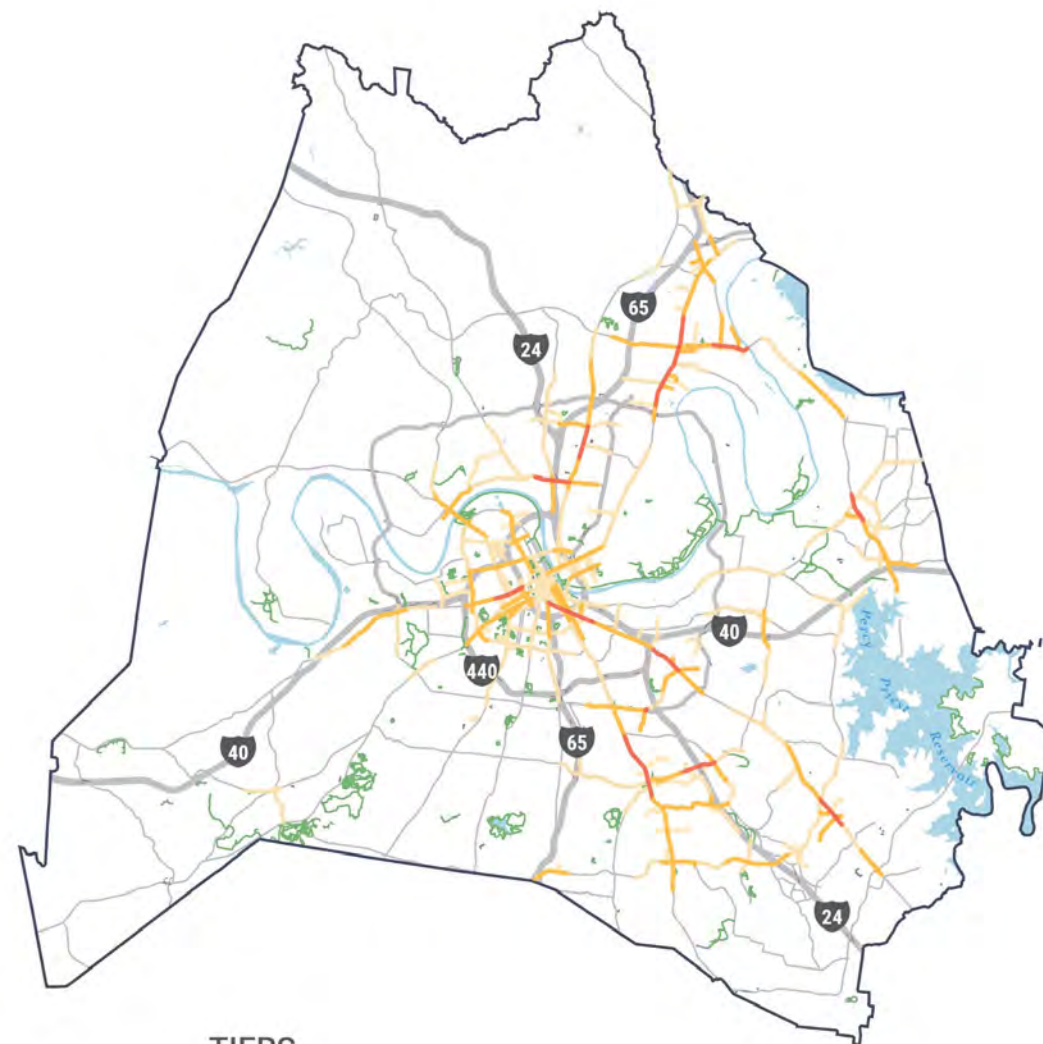


High Injury Network



6%
OF STREETS
account for

59% of all
TRAFFIC DEATHS
AND SERIOUS
INJURIES for all
modes



TIERS
— LOW
— MEDIUM
— HIGH



0 4 8 MILES



Planning Framework

Guiding Principles

Themes

Strategies

Action Items

- › Create Safe Streets for Everybody
- › Prioritize Equity
- › Promote a Culture of Safety
- › Increase Collaboration + Transparency
- › Improve Data Quality



Immediate Steps for 5-Year Action Plan

- › Staff Capacity
- › Vision Zero Task Force
- › Education Campaign
- › Quick Build Policy
- › Pedestrian Crossing Policy
- › Fatal Crash Investigative Team
- › High Injury Network Improvements
- › High Injury Intersection Improvements
- › Safe Access to Transit
- › Equitable Engagement
- › Design standards
- › Annual Vision Zero Report



Interactive Dashboard

< > Data Dashboard Equity High Injury Network Travel Mode Crashes by Severity

NASHVILLE VISION ZERO DATA DASHBOARD

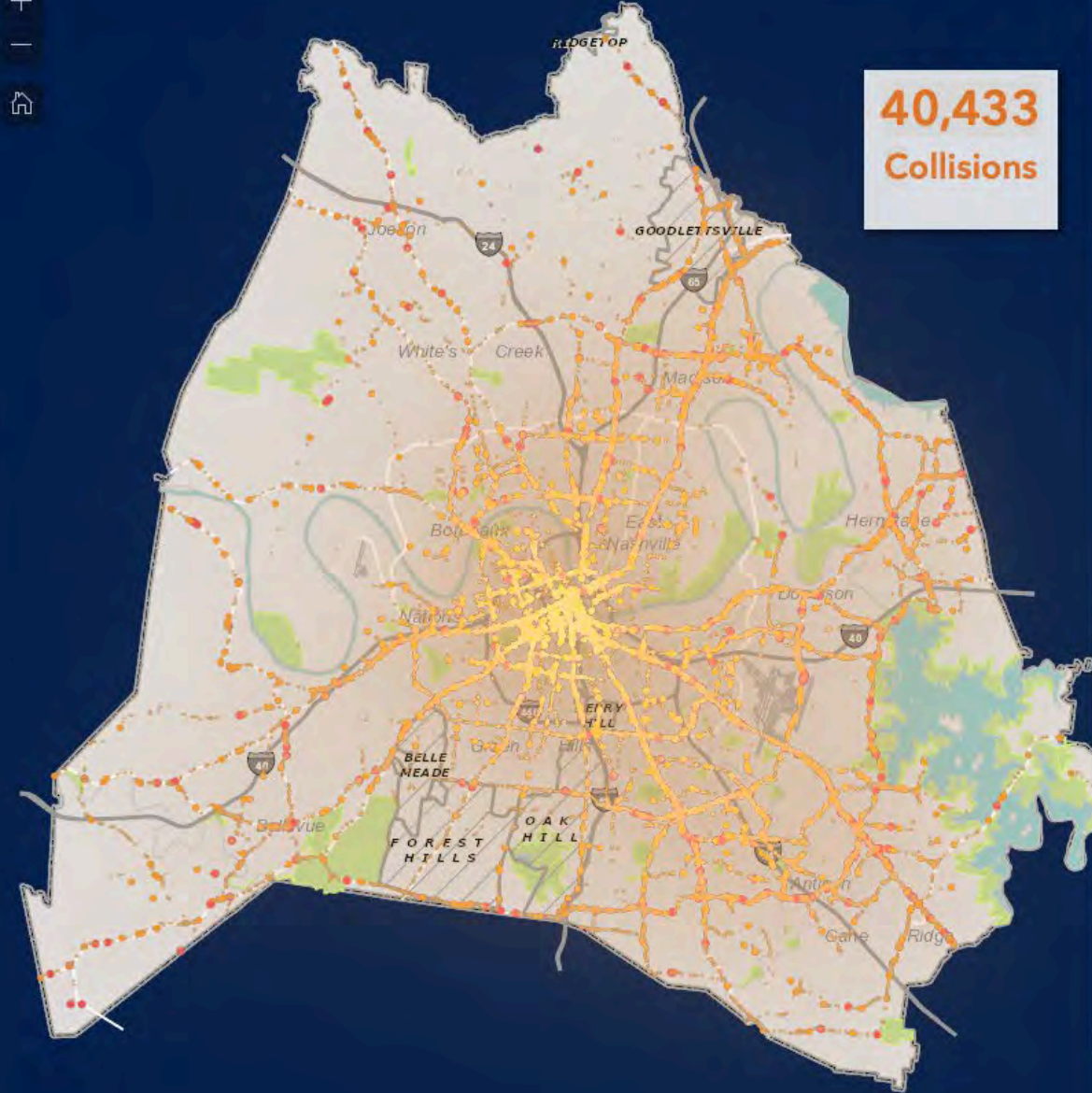
Nashville Department of Transportation
December, 2021

How to use the dashboard

The data dashboard presents crash trends from an examination of crashes in Nashville involving a minor injury, severe injury, or fatal injury between January 2014 and August 2021. Crashes on federally controlled interstates are not included. Explore the crash data using the buttons in the top left and clicking on the interactive elements.



40,433
Collisions



NASHVILLE CRASH FACTORS

Three important trends that occur in a majority of crashes in Nashville are roads with high speeds, proximity to transit stops, and pedestrian-involved hit-and-runs. These factors show up in the majority of crashes where somebody is killed or severely injured.

Near Frequent Transit



High Speed Roadways



Pedestrian Involved Hit-and-runs





Data Dashboard

Equity

High Injury Network

Travel Mode

Crashes by Severity

Crash Factors

Hit-and-Runs



NASHVILLE CRASHES BY MODE AND SEVERITY

Use the buttons below to explore the collision data by travel mode: people walking, biking or driving, and the collisions by severity. The map on the right can be moved or zoomed in to examine an area of interest.

Fatal Injury

Severe Injury

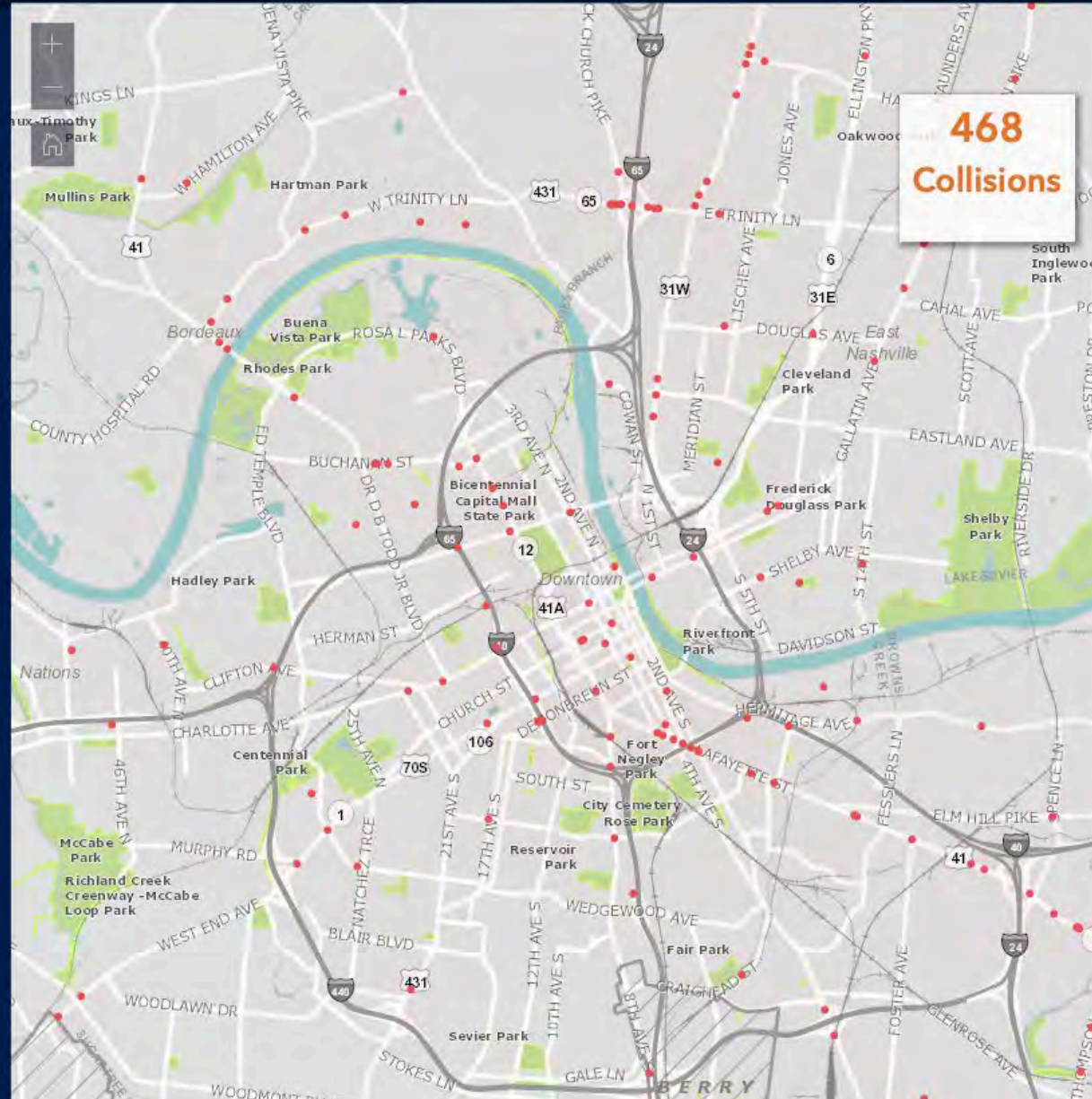
Minor Injury

People Walking

People Biking

People Driving a Car

If all filters are turned off, the map will show the total number of collisions.





Want More Information?

- › Visionzero.Nashville.gov:
 - › Full Draft Vision Zero Plan & Appendices
 - › Dashboard – Interactive Tool
- › Submit your comments by February 4, 2022
- › VisionZero@Nashville.gov

The screenshot shows the Metro Nashville Vision Zero website. The header includes the Nashville.gov logo, the text 'Metropolitan Government of Nashville & Davidson County', and navigation links for 'Services', 'Government', and 'Jobs'. There is also a search bar and a 'Translate' button. The main heading is 'Metro Nashville Vision Zero', with a breadcrumb trail: 'Home > Departments > Transportation > Plans and Programs'. Below this is the section 'Vision Zero Action Plan'. A text block states: 'Nashville's Draft Vision Zero Action Plan is now live! This is a data driven document to guide Metro's investment in traffic safety improvements over the next five years. With the launch of the Vision Zero Action Plan, Nashville joins dozens of cities who have made the commitment to change the status quo and prioritize traffic safety for everyone. The action plan is just the start of Nashville's commitment to build strong partnerships, ensure transparency and accountability, and work with urgency to reduce the number of people killed and injured while traveling in Nashville.' Below the text are two links: 'Draft Nashville Vision Zero Action Plan' and 'Draft Nashville Vision Zero Action Plan Appendices'. A public comment section is also visible, stating: 'Public comment on the draft plan is open through February 4, 2022. Email VisionZero@Nashville.gov to share your thoughts on Vision Zero in Nashville.' The bottom section is titled 'Explore the Crash Data and Trends' and describes a data dashboard. At the very bottom, there is a dark blue banner with a white exclamation mark icon, the text 'Explore the crash data and findings from the Vision Zero planning process.', and a red button that says 'Explore crash data and findings'.



National Vision Zero Trends

Vision Zero: Shifting the Paradigm for Safety

Nashville, January 26, 2022



VISION ZERO NETWORK



42,060 people were killed in preventable traffic crashes in the U.S. in 2020.

National Safety Council estimate

LUCIEN MERRYWEATHER, 9
ALLISON LIAO, 3
KIKO SHAO, 5
RENEE THOMPSON, 16
SAMUEL COHEN ECKSTEIN, 12
LUIS BRAVO, 18

LUCIEN MERRYWEATHER, 9
ALLISON LIAO, 3
KIKO SHAO, 5
RENEE THOMPSON, 16
SAMUEL COHEN ECKSTEIN, 12
LUIS BRAVO, 18
TENZIN DRUDAK, 16
OLVIN YHAR FIGUERO, 3
PURAN THAPA, 7
SARA KISHIK, 15

PEOPLE LIVE HERE!

Drive Safe

1

Some are suffering more than others

Traffic deaths are the *leading* cause of deaths among youth (ages 1-19)

New England Journal of Medicine, 2018

VISION4KIDNETWORK

①

People walking in low-income communities are ~3X more likely to be killed by drivers than in high-income areas.

Smart Growth America, 2021



VISION 44:0 NETWORK



Black people are ~80% more likely to be killed by drivers while walking than White, non-Hispanic Americans.

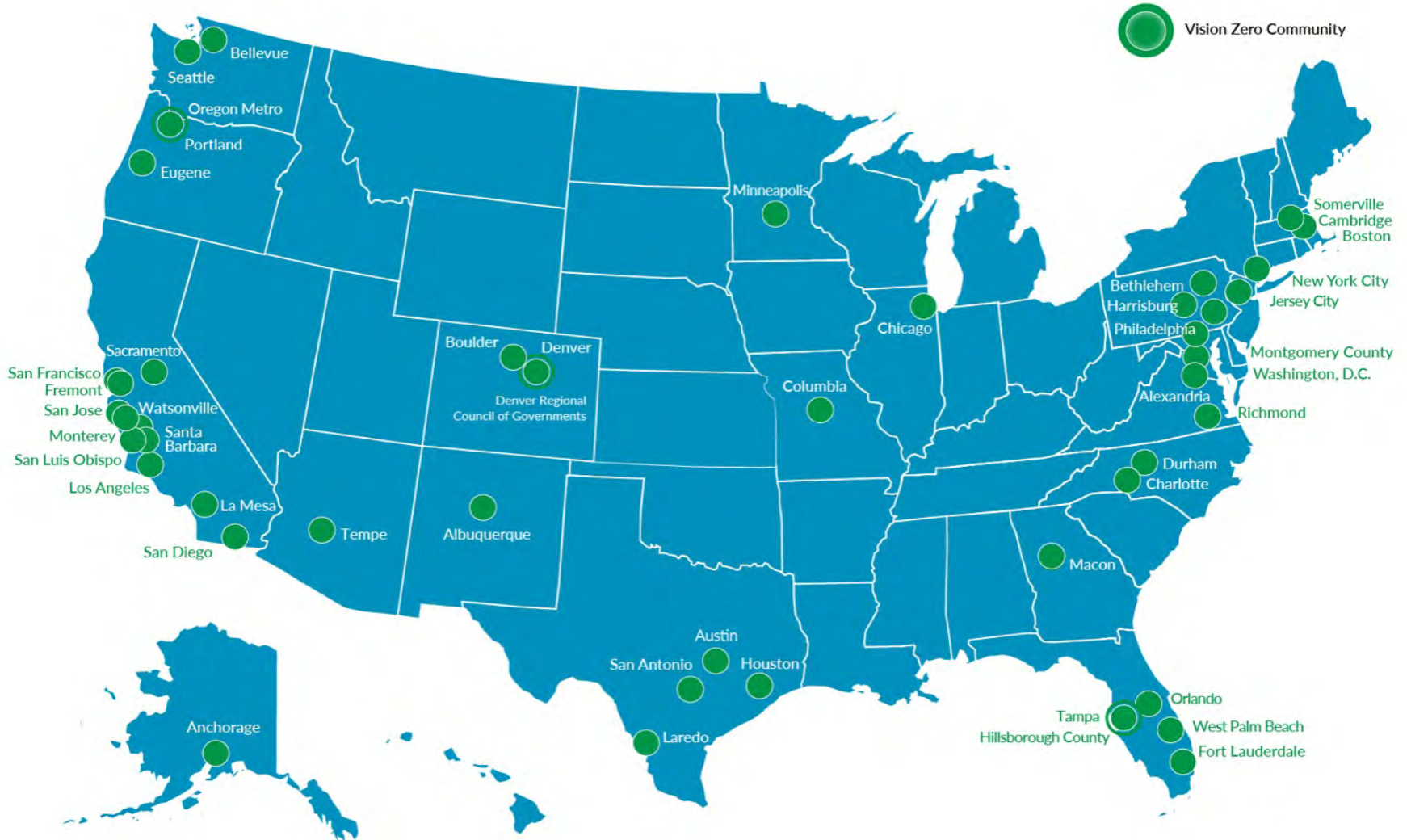
Smart Growth America, 2021

VISION 4:0 NETWORK

We can make change.

VISION 4 H:O NETWORK

Vision Zero Communities



If something doesn't work, let's do it differently

TRADITIONAL APPROACH

Traffic deaths are **INEVITABLE**

PERFECT human behavior

Prevent **COLLISIONS**

INDIVIDUAL responsibility

Saving lives is **EXPENSIVE**

VS

VISION ZERO

Traffic deaths are **PREVENTABLE**

Integrate **HUMAN FAILING** in approach

Prevent **FATAL AND SEVERE CRASHES**

SYSTEMS approach

Saving lives is **NOT EXPENSIVE**

VISION 4:0 NETWORK



CRASH

ACCIDENT

VISION4HONETWORK

Systems Approach to Safety



Safe Systems = Safe Mobility



System Planners & Policy Makers

Responsible for prioritizing safety in designs, policies



If road users make mistakes

Designs & policies analyzed for safety improvements



Individual Road Users

Responsible for following rules

Managing Speed for Safety



Designing Complete Streets, Slow Streets

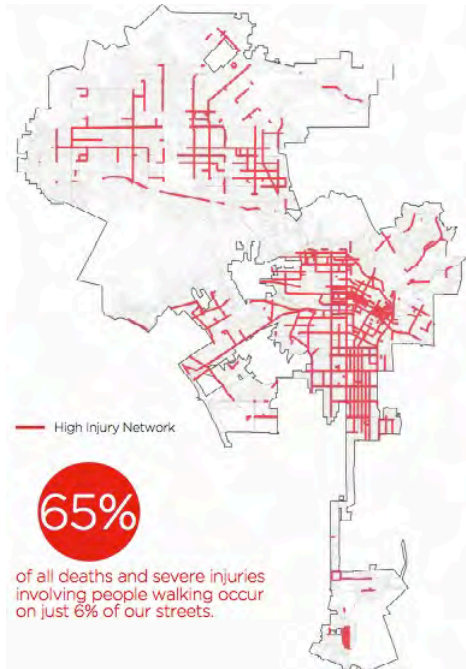


VISION 4:0 NETWORK

Data: Death and serious injury concentrated on small % streets

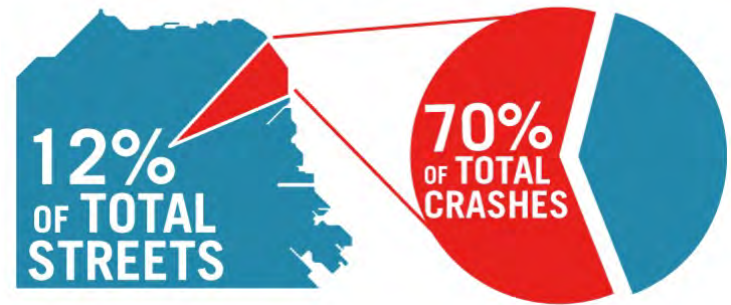
Los Angeles

6%



San Francisco

HIGH-INJURY STREETS



Denver

50% of Denver's traffic fatalities occur on just 5% of our streets.

VISION 4:0 NETWORK



SAFE SYSTEM

APPROACH

Zero is our goal. A Safe System is how we get there.



SAFE SYSTEM PRINCIPLES



Death/Serious Injury is Unacceptable

While no crashes are desirable, the Safe System approach prioritizes crashes that result in death and serious injuries, since no one should experience either when using the transportation system.



Humans Make Mistakes

People will inevitably make mistakes that can lead to crashes, but the transportation system can be designed and operated to accommodate human mistakes and injury tolerances and avoid death and serious injuries.



Humans Are Vulnerable

People have limits for tolerating crash forces before death and serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates human vulnerabilities.



Responsibility is Shared

All stakeholders (transportation system users and managers, vehicle manufacturers, etc.) must ensure that crashes don't lead to fatal or serious injuries.



Safety is Proactive

Proactive tools should be used to identify and mitigate latent risks in the transportation system, rather than waiting for crashes to occur and reacting afterwards.



Redundancy is Crucial

Reducing risks requires that all parts of the transportation system are strengthened, so that if one part fails, the other parts still protect people.



U.S. Department of Transportation
Federal Highway Administration

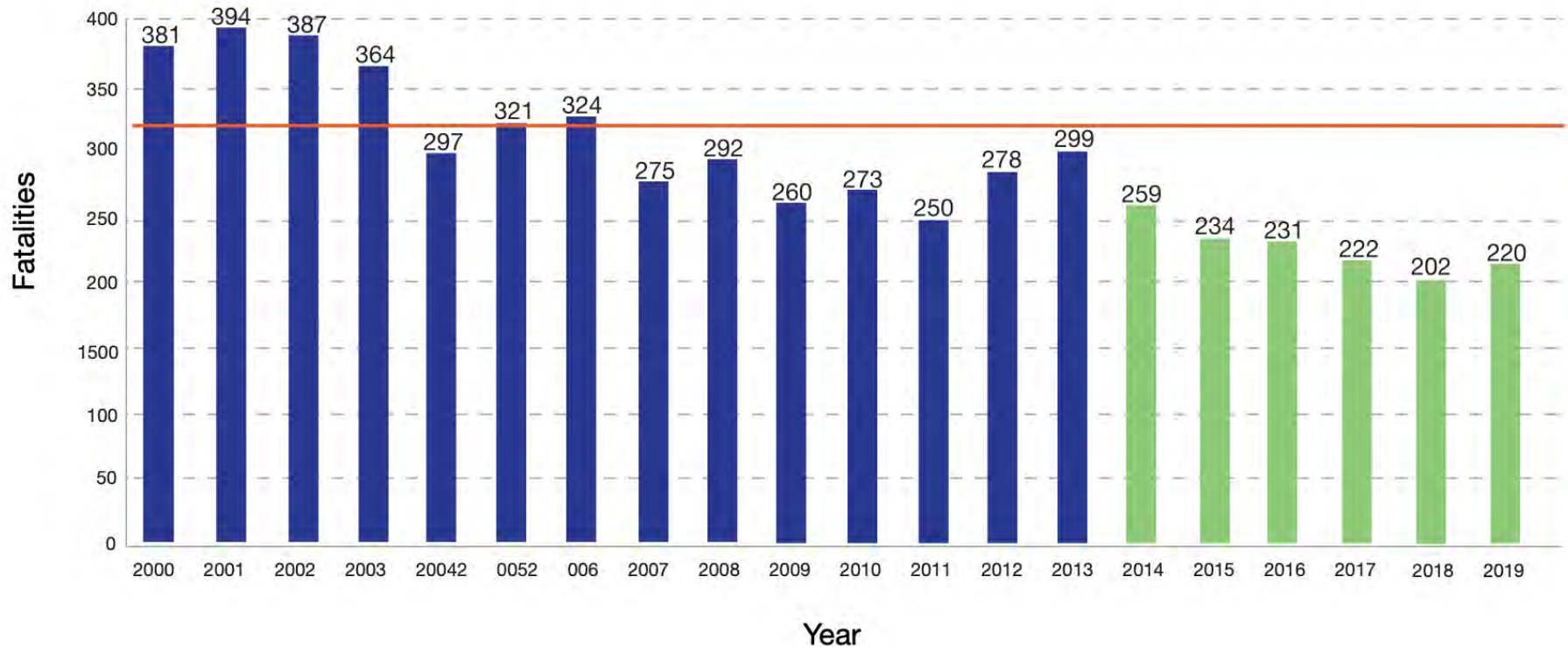
FHWA-SA-20-015



VISION 4 I-10 NETWORK

How it Works: New York City

■ Before Vision Zero ■ Vision Zero — 2000-2013 average prior to Vision Zero



VISION 4:0 NETWORK

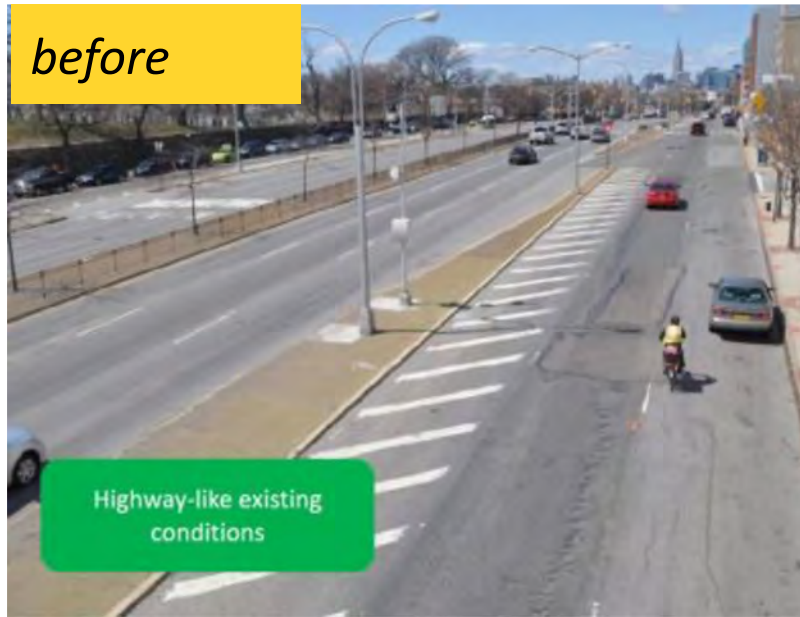


NYC



VISION FROM NETWORK

NYC, Queens Boulevard



BEFORE

300+ crashes each year

65+ crashes with injuries each year

AFTER

Pedestrian injuries ↓ 49%

Bicyclist injuries ↓ 42%

Injury crashes ↓ 4%

Safe Systems approach: NYC

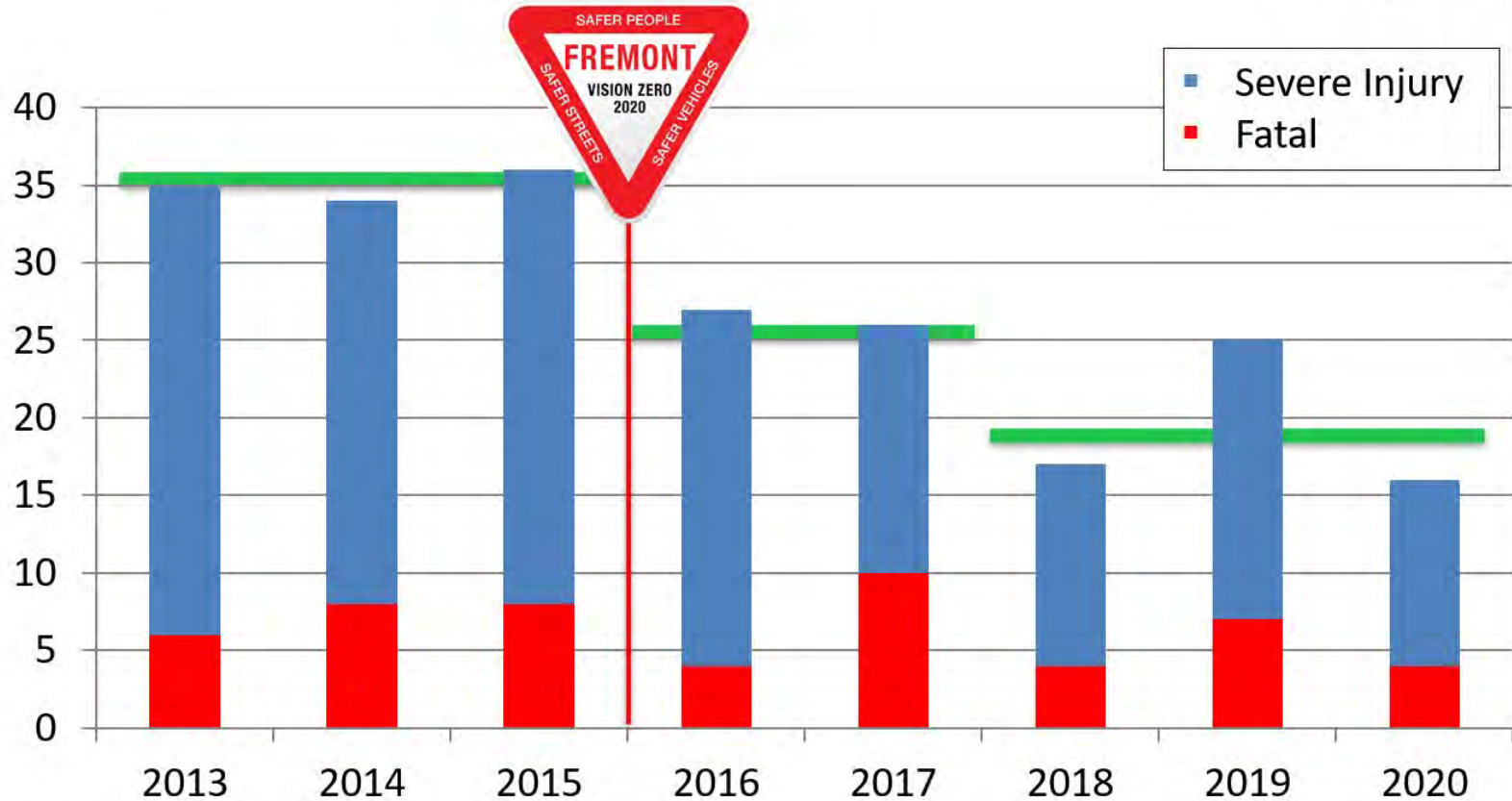


VISION 4:0 NETWORK

Fremont Major Traffic Crash Trends

Since start of Vision Zero program, major traffic crashes are down by 45%*

* Three-year rolling average



Fremont, CA



Fremont, CA



Get State Legislation for Safer Speeds

1. Enable Speed Safety Cameras
2. Allow Lower Speed Limits



Continue Local Actions for Safer Streets

3. Manage Speeds with Signal Timing & Speed Feedback
4. Enhance Pedestrian Crosswalks
5. Improve Intersection Safety for Everyone
6. Restripe Major Streets to be "Safe & Complete Streets"
7. Build Better Bikeways

FVZ 2025 Action Plan Graphic



Encourage Support from Regional Partners

8. Make State Highways & Interchanges Safer
9. Promote Safer Vehicles & Drivers
10. Foster a Bay Area Culture of Safety & Equity

Charlotte, NC



SAFER STREETS FOR CHARLOTTE

As a community, it's our responsibility to eliminate traffic deaths and serious injuries for all who share Charlotte streets by 2030.

- Vision Zero Commitment

**Get ready for lower speed limits, more speed humps
and more stop signs in Charlotte**

VISION ZERO NETWORK

Portland, OR



VISION ZERO NETWORK

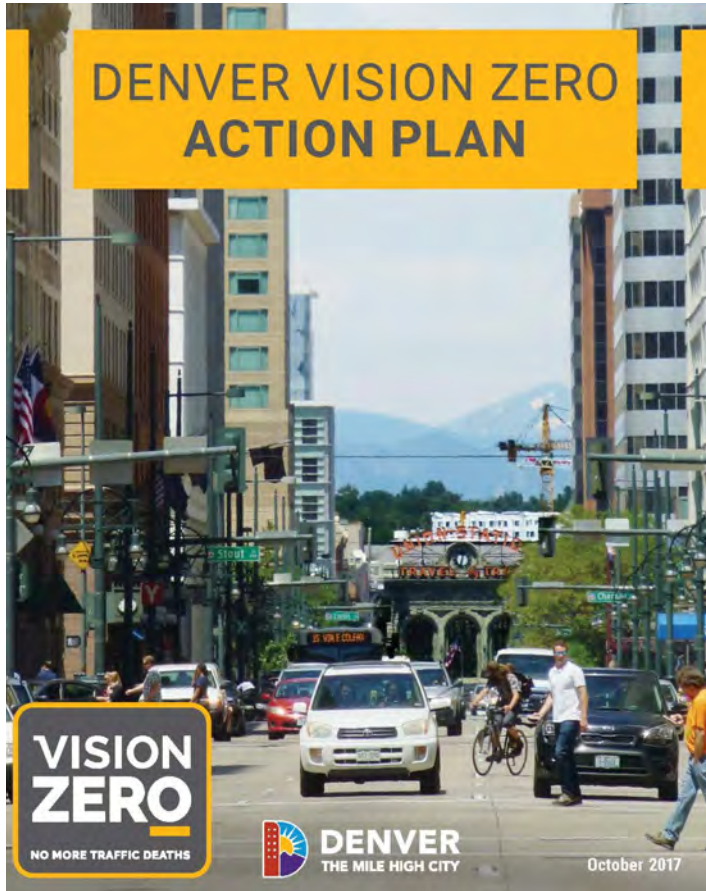
Macon, GA



VISION4ACTIONNETWORK

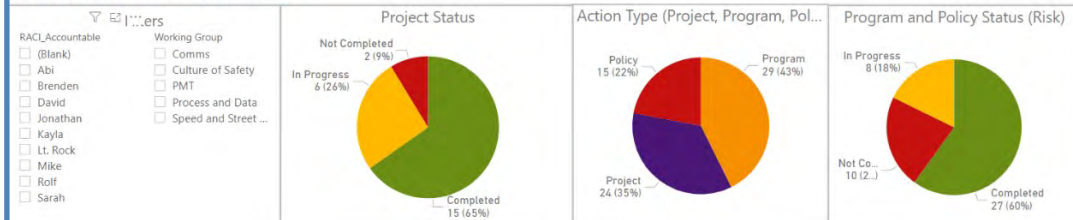
Denver, Co

Denver city council votes to lower residential speed limits from 25 to 20



Tracking all 67 Action Items

Vision Zero Action Plan



CONNECT WITH US 311 | POCKETGOV | DENVERGOV.ORG | DENVER 8 TV

VISION4IRONETWORK

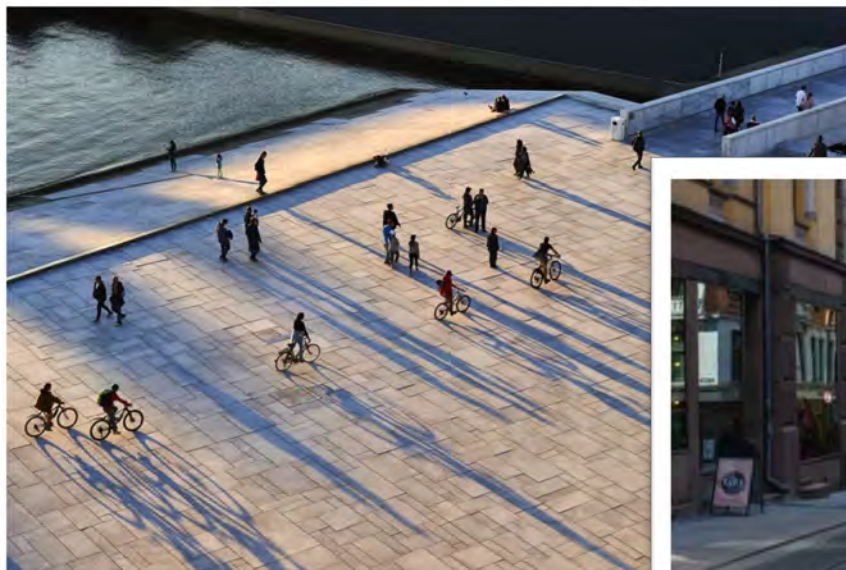
Denver's Vision Zero Action Plan

Action	0-2 Years	3-5 Years	Partners*
Establish a Vision Zero program within the City			
Establish a permanent, dedicated funding source for Vision Zero implementation and coordination. Continue to create a Vision Zero program with dedicated staff.	\$2M/year; 1.5 FTE/year	\$3M/year; 2 FTE/year	DPW, Mayor's Office, DPD, DEH, CDOT
Coordinate existing funding already going to Vision Zero projects or that could be applied to such projects.	Complete action		DPW, BMO, CDOT
Institutionalize Vision Zero as the City's approach to its transportation system			
Convene regular meetings of safety stakeholders to review traffic safety performance and determine strategies for improvement.	6 meetings/ year	6 meetings/ year	DPW or Mayor's Office, DPD, DEH, others
Convene regular meetings of executive-level departmental representatives to coordinate Vision Zero efforts.	4 meetings/ year	4 meetings/ year	Mayor's Office, Xcel Energy, DPW, DPD, DEH, others
Ensure that Denver Vision Zero staff are represented at CDOT Region 1/City and County of Denver coordination meetings.	Ongoing action	Ongoing action	DPW, CDOT
Make the City and County of Denver a model Vision Zero adopter, including possible fleet modifications, operational changes, and training.	Ongoing action	Ongoing action	DPW

Oslo saw zero pedestrian and cyclist deaths in 2019. Here's how the city did it.

Reducing the number of cars reduced the number of traffic fatalities

By **Alissa Walker** | @awalkerinLA | Jan 3, 2020, 1:50pm EST



How Helsinki and Oslo cut pedestrian deaths to zero

After years of committed action, neither city recorded a single pedestrian fatality in 2019

Vision Zero is about *MORE*...

ZERO ^{IS} _{ES} MORE MÁS 零更多 ししょうしゃゼロ 제로는 더 많다
ANG WALA AY MAS MARAMI BIRTHDAYS CUMPLEAÑOS 생일
学习 LEARNING 学び APRENDIZAJE 배움 WONDER ASOMBRO
CELEBRATIONS 庆祝活动 MGA PAGDIRIWANG幸せ HAPPINESS
MORE MÁS 更多 もっと 더 LIFE VIDA

VISION4H2O NETWORK



Thank you!

Leah Shahum

leah@visionzeronetwork.org

visionzeronetwork.org

VISION ZERO NETWORK

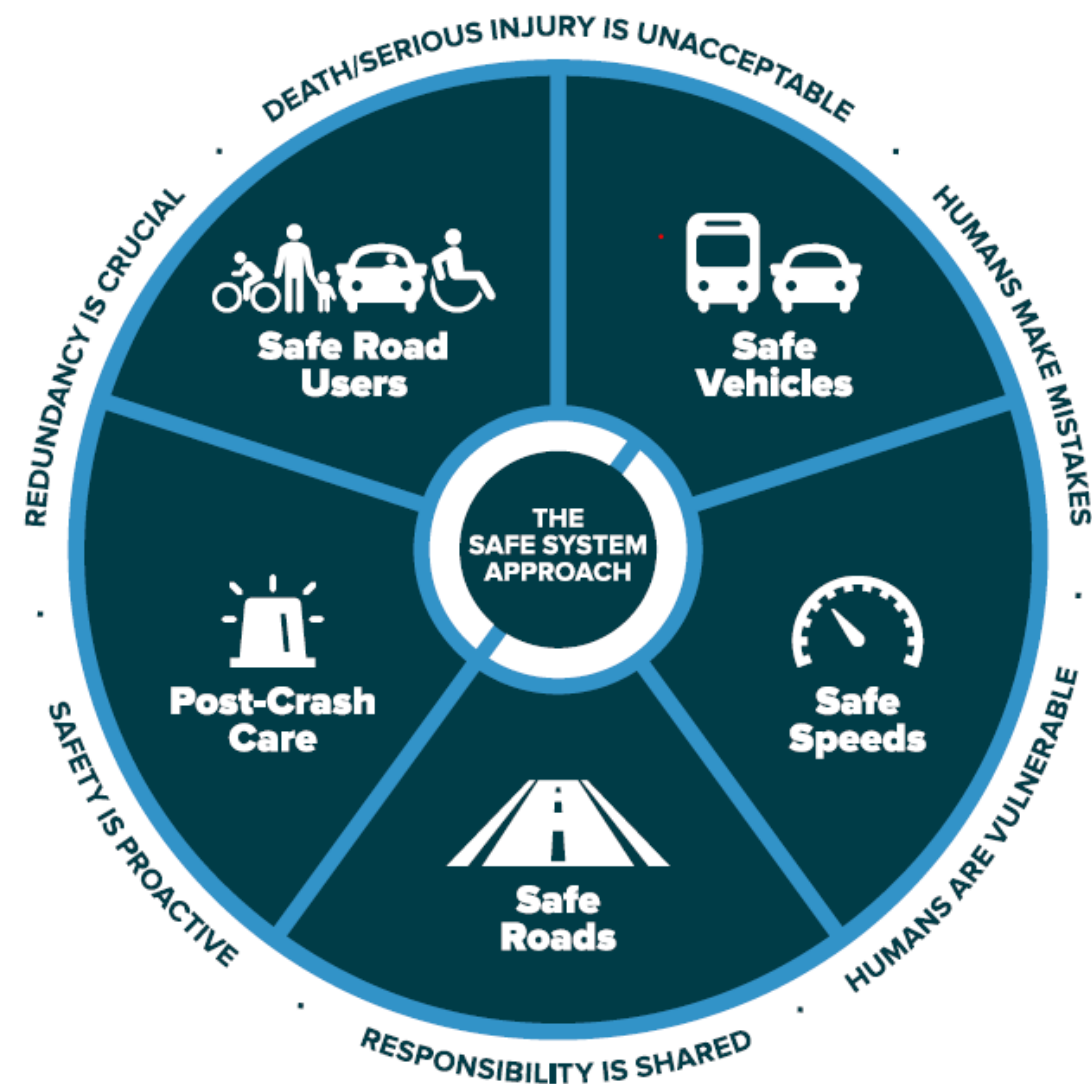


Lessons Learned from Austin, Tx

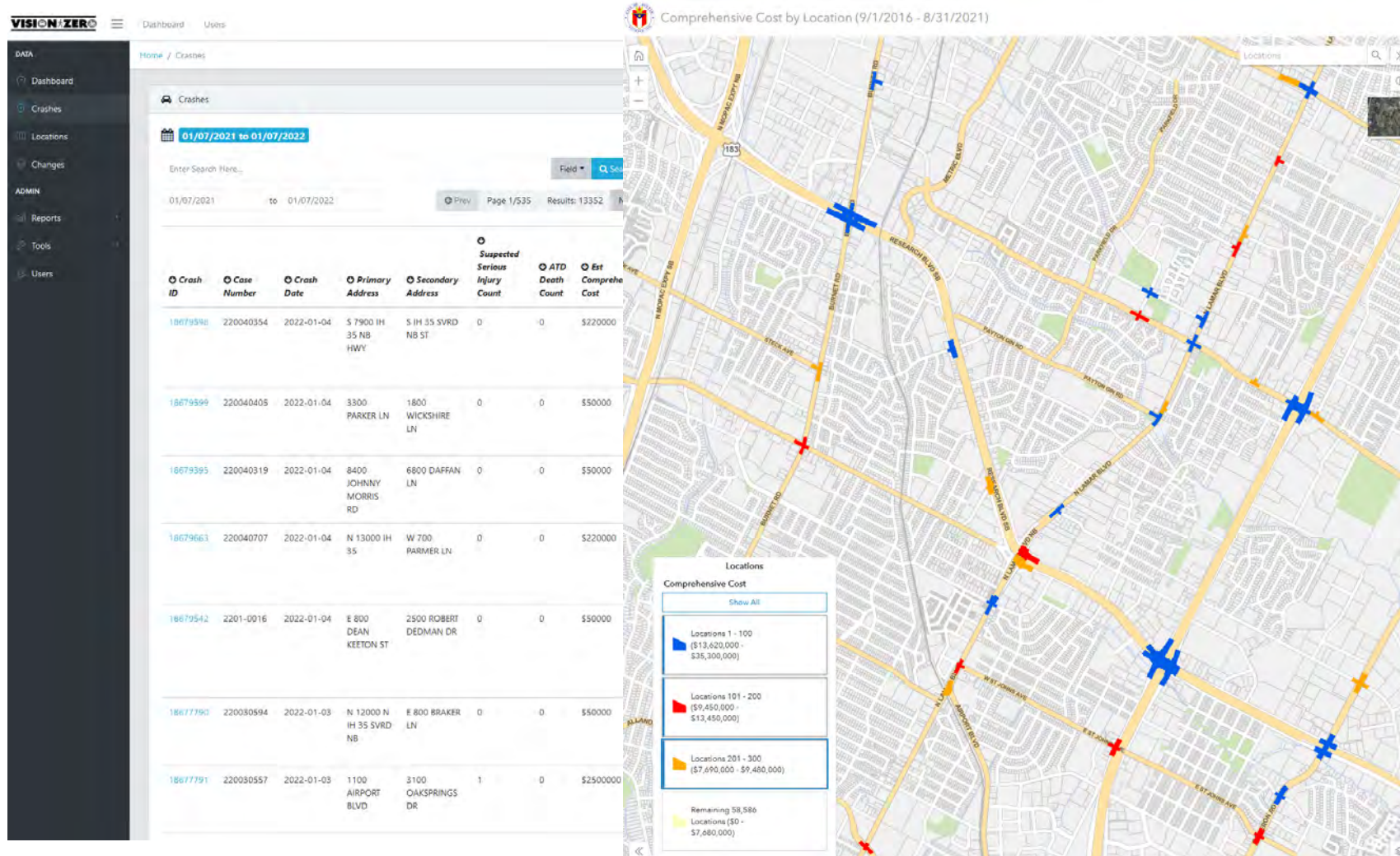


Lessons from Austin: Culture of Safety

- How government designs and operates the system is critical
- Responsibility is shared, but not equally
- Separate users in time and space, minimize conflicts, lower speeds



Lessons from Austin: Data → Insights → Action



Lessons from Austin: Capital Investments



Hot spot

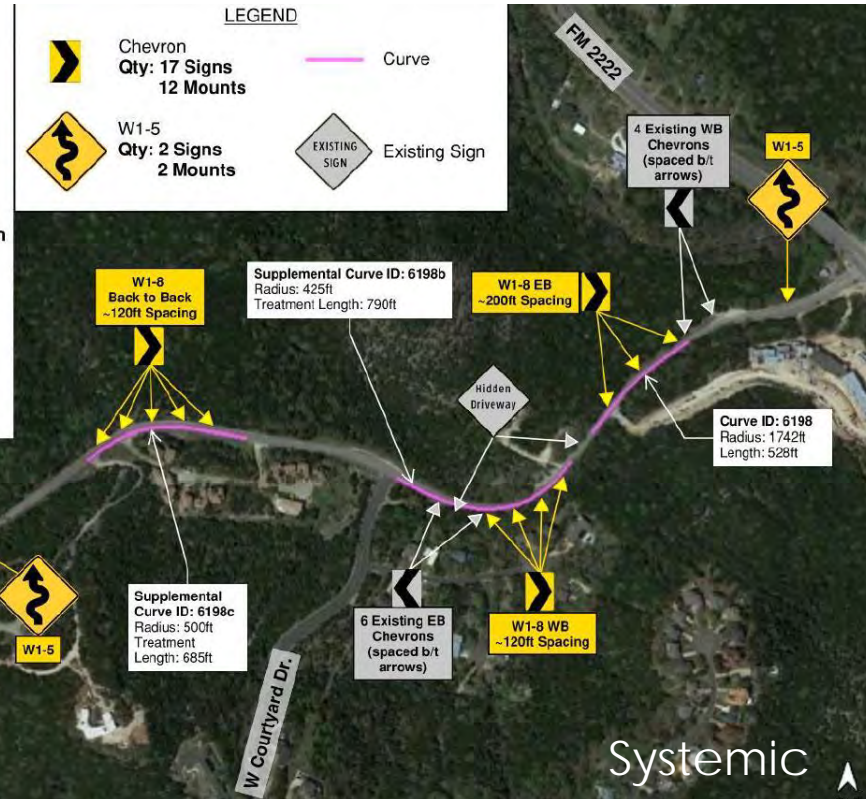


City Park Rd.

Coronado Hills Dr.

Curve ID: 6198
Supplemental Curve: 6198b
, 6198c

Recommend:
 • Install proposed signs
 • Complete ball bank study in both directions, implement speed advisory signs on curve warning signs if warranted.





Lessons from Austin: Evaluation

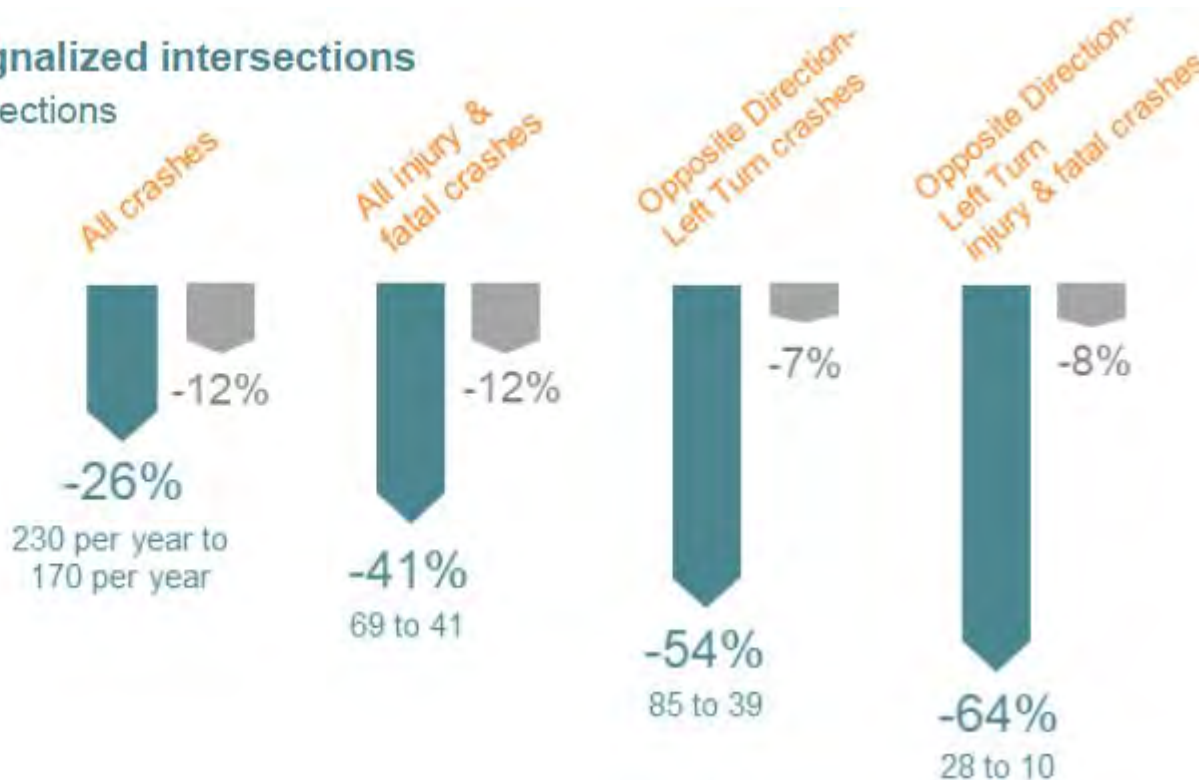
➤ Collision type analysis: Opposite direction - One Straight, One Left

Annualized crash reduction at signalized intersections

Treated intersections vs all other intersections

Intersections with signal safety treatments (n=18)

All other signalized intersections (n=1,021)



Lessons from Austin: Evaluation



High Injury Roadways



FOCUSED VISION ZERO INITIATIVE IS REDUCING SEVERE CRASHES

The City of Austin has identified 13 sections of street as High-Injury Roadways (HIRs). These are areas with some of the highest crash volumes in the city, where 350 people have died in traffic crashes in the last five years. Six of those 13 sections have received safety improvements so far.

FATAL & SERIOUS INJURY CRASHES

Substantially complete High Injury Roadways

17% decrease

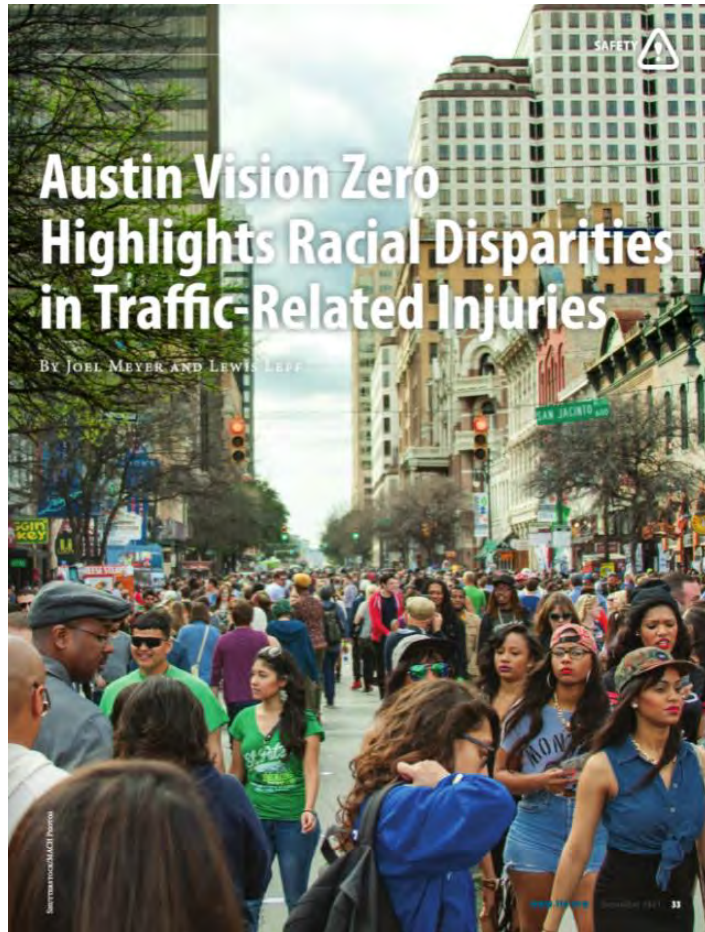
All other city arterials

1% decrease



Source: Austin Transportation Department Vision Zero

Lessons from Austin: Equity



ITE Journal, Dec. 2021

VISION ZERO Safe for All

Safe for All

Vision Zero's role in advancing racial equity in Austin

Created by Austin Vision Zero
May 16, 2021

[Executive summary](#) [How we got here](#) [What we found](#) [What we're doing](#) [Our next steps](#) [Get involved](#)

Based on available data, we know that the Black / African American community makes up a disproportionate share of severe crash victims and that the Hispanic or Latino community makes up an increasing share of severe crash victims in Austin. Black / African American people, for example, account for over 16% of people killed or seriously injured in crashes despite making up less than 8% of the Austin population; this disparity is most pronounced in motor vehicle and pedestrian crashes.*

www.austintexas.gov/visionzero



Lessons from Austin: Review

- Address high opportunity hot spots, but consider benefits and costs
- And think about proactive systemic safety opportunities
- Cities with rapid growth experience rapid context changes - don't get tied into a set list of locations for 5+ years
- Initiatives with resources get things done
- Zero: It's ambitious, it's audacious, and it's still the only correct answer

Thank You!

WEBSITE:

visionzero.nashville.gov

