

# Vision Zero Austin: BAC/PAC Update



November 7, 2022



# Years of Life Lost

# 3,213\*

(Through 10/31/2022)



\* There were 3 fatalities of unknown age

# Vision Zero / Safe Systems Approach



- An ethical approach to safety and mobility - fatalities and serious injuries should not be acceptable
- Human body is vulnerable
- Humans make mistakes
- Separate users in space and time
- Cannot predict where next severe crash happens; we can predict based on conditions where it is likely to occur

# Vision Zero / Safe Systems Approach



# Data and Evaluation

## By Mode

### Fatal Crashes (2022, Jan through Oct\*)

Mode	2022*	%	2021	%
Pedestrians	37	42.0%	30	34.1%
Bicyclists	1	1.1%	3	3.4%
Motorcyclist	16	18.2%	13	14.8%
Motorist	34	38.6%	42	47.7%
	<b>88</b>		<b>88</b>	

### Serious Injury Crashes (2022, Jan through Oct\*)

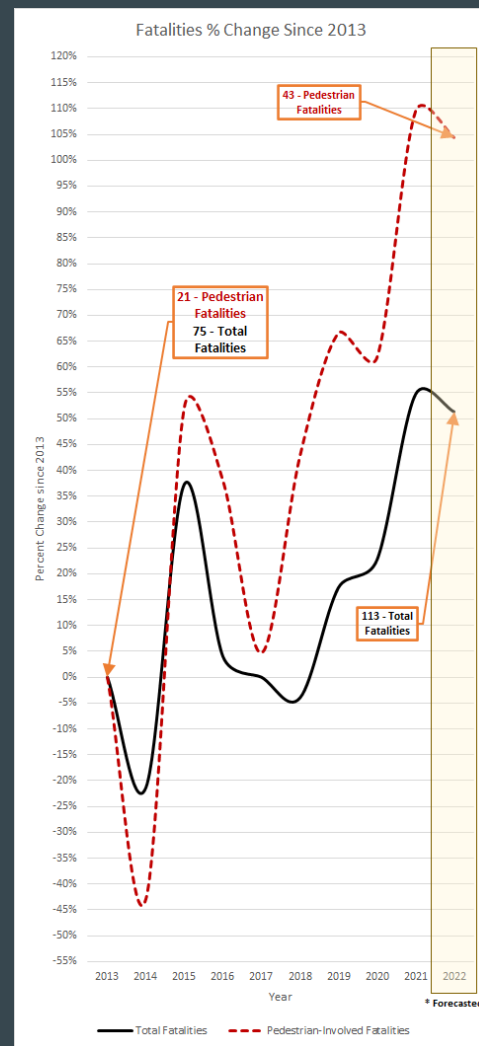
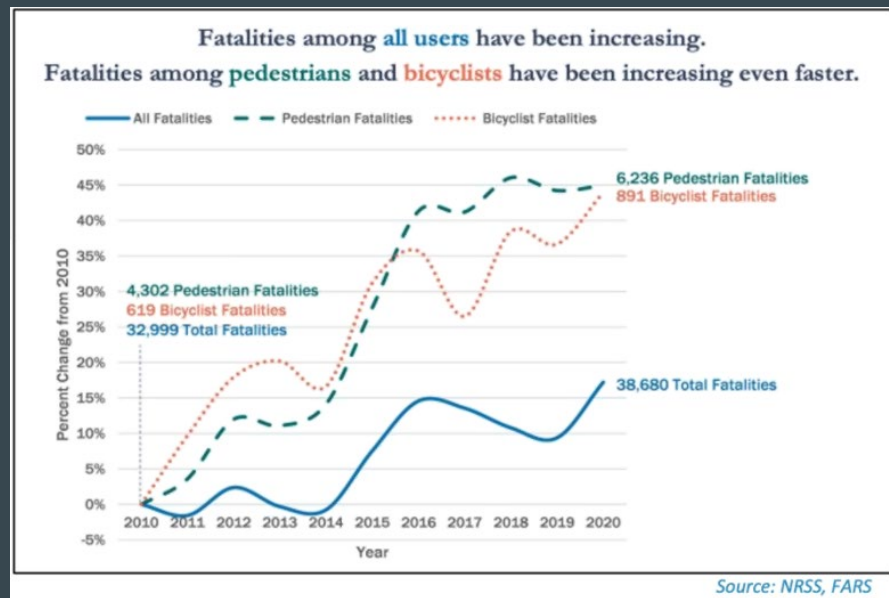
Mode	2022*	%	2021	%
Pedestrians	68	17.1%	60	16.0%
Bicyclists	25	6.3%	24	6.4%
Motorcyclist	71	17.9%	54	14.4%
Motorist	233	58.7%	236	63.1%
	<b>397</b>		<b>374</b>	

\* Data through 10/31/2022

Data disclaimer: Data accessed on 11/03/2022. There may be additional reports filed or changes which may impact these numbers before they are final.

# Austin Data and Trends

## National data (2010-2020)



Austin data  
(2013-2022)

# Austin Data and Trends

## People walking and biking

### Cyclist Crashes from 2015 to October 2022

HOUR BIN	MON	TUE	WED	THU	FRI	SAT	SUN	Total
00:00 to 03:59	9	5	7	9	11	16	17	74
04:00 to 07:59	20	37	28	26	28	9	7	155
08:00 to 11:59	48	70	59	66	52	44	45	384
12:00 to 15:59	54	61	64	72	63	66	40	420
16:00 to 19:59	106	135	123	122	121	71	72	750
20:00 to 23:59	32	41	40	48	53	41	30	285
Total	269	349	321	343	328	247	211	2068



### Cyclist KA Crashes from 2015 to October 2022

HOUR BIN	MON	TUE	WED	THU	FRI	SAT	SUN	Total
00:00 to 03:59	3			1	4	3	5	16
04:00 to 07:59	2	8	1	5	1	3	2	22
08:00 to 11:59	3	9	9	6	2	1	5	35
12:00 to 15:59	8	6	7	5	7	8	2	43
16:00 to 19:59	7	15	15	8	13	10	8	76
20:00 to 23:59	8	7	10	8	5	3	5	46
Total	31	45	42	33	32	28	27	238

### Pedestrian Crashes from 2015 to October 2022

HOUR BIN	MON	TUE	WED	THU	FRI	SAT	SUN	Total
00:00 to 03:59	37	26	30	27	31	84	88	323
04:00 to 07:59	41	51	73	51	47	26	24	313
08:00 to 11:59	70	87	97	72	89	43	26	484
12:00 to 15:59	107	91	103	103	96	64	60	624
16:00 to 19:59	148	144	164	135	130	92	108	921
20:00 to 23:59	90	100	96	101	136	136	82	741
Total	493	499	563	489	529	445	388	3406

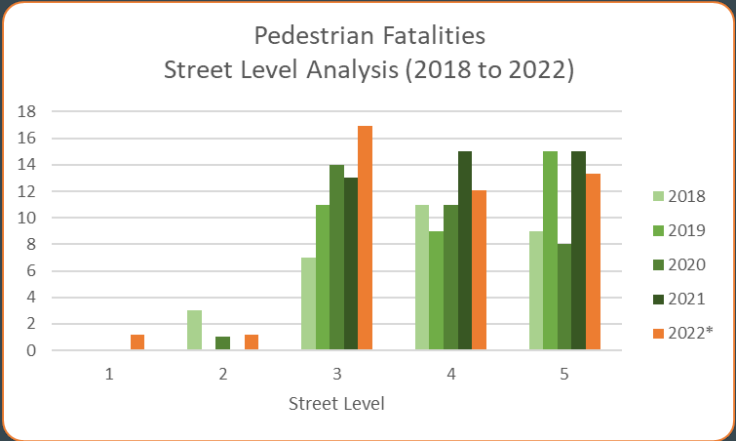
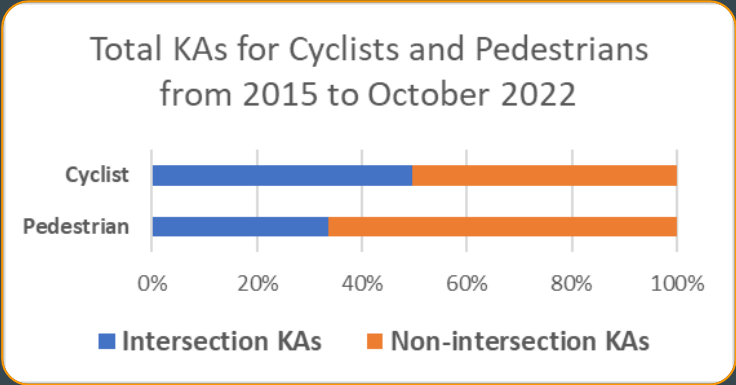
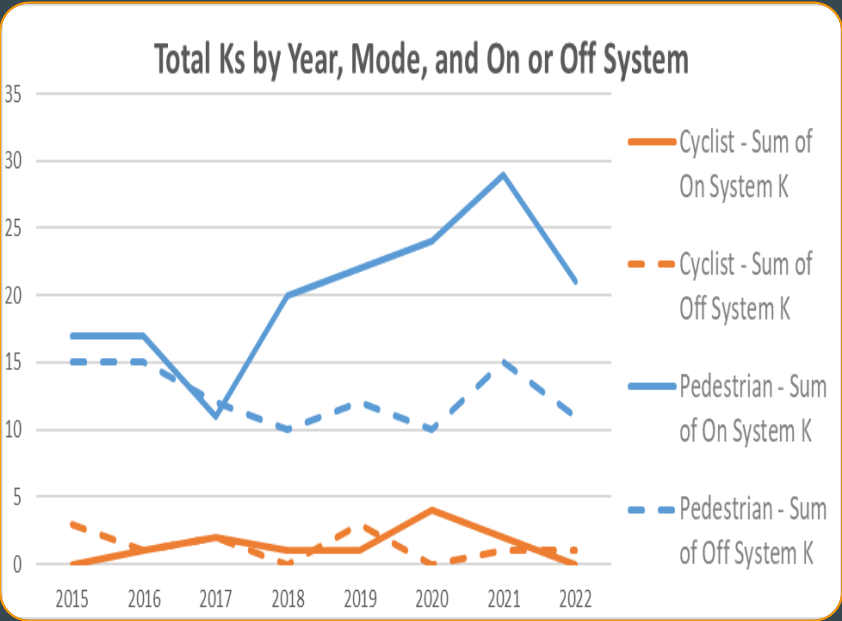


### Pedestrian KA Crashes from 2015 to October 2022

HOUR BIN	MON	TUE	WED	THU	FRI	SAT	SUN	Total
00:00 to 03:59	13	9	16	11	11	37	32	129
04:00 to 07:59	10	13	22	14	15	9	13	96
08:00 to 11:59	10	12	14	16	13	4	7	76
12:00 to 15:59	13	15	16	17	12	10	9	92
16:00 to 19:59	28	35	29	18	28	17	24	179
20:00 to 23:59	31	36	26	31	45	39	30	238
Total	105	120	123	107	124	116	115	810

# Austin Data and Trends

## People walking and biking



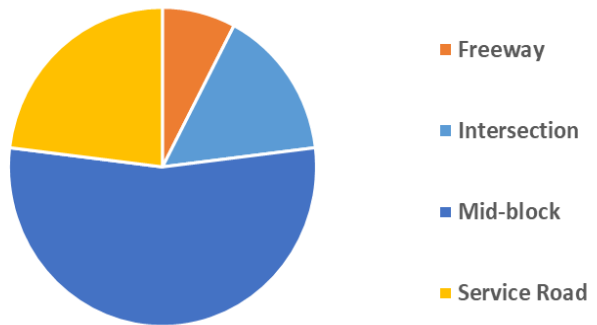
\* 2022 is projected



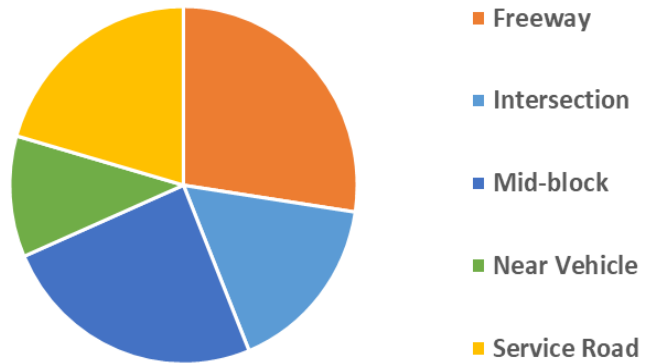
# Austin Data and Trends

## People walking and biking

Cyclist Fatalities by Location from 2021 to October 2022



Pedestrian Fatalities by Location from 2021 to October 2022



Pedestrian Location	Fatalities 2021–2022
On or Crossing Freeway	20
On or Crossing Service Road	15
At or Crossing Intersection	12
Crossing or at Mid-block	18
Near a Vehicle	8



# Data and Evaluation

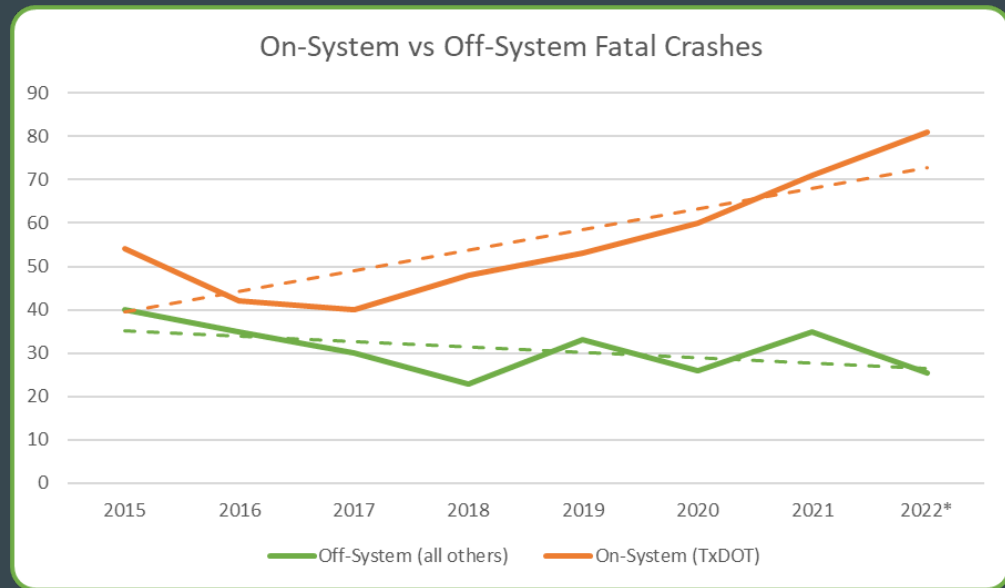
## Additional Fatal Crash Analysis

Year over Year

Year	Off-System Fatal Crash %	On-System Fatal Crash %
2018	33.90%	66.10%
2019	34.29%	65.71%
2020	30.14%	69.86%
2021	30.68%	69.32%
2022*	23.86%	76.14%
	29.87%	70.13%

\* 2022 is projected

Data disclaimer: Data accessed on 11/03/2022. There may be additional reports filed or changes which may impact these numbers before they are final.



# Austin Data and Trends

## Key Takeaways: Comparing 2022 YTD to 2021

1. Combined, the total of fatal and suspected serious injury crashes are **up ~5% in 2022 compared to 2021**
  - Fatal crashes are **the same as compared to last year**; suspected serious injury crashes are **up ~6%**; Total reportable crashes citywide are **up ~2%**.
2. Evening and early morning hours (8PM - 4AM) account for 46 out of the 88 fatal crashes. (33% of day, **~52%** of fatal crashes)
3. Increasing percentage of fatal crashes on on-system roadways
4. Pedestrian fatalities exceeding motorist fatalities

Data disclaimer: Data accessed on 11/03/2022. There may be additional reports filed or changes which may impact these numbers before they are final.

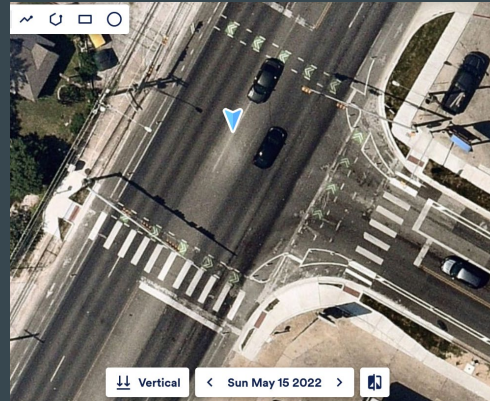
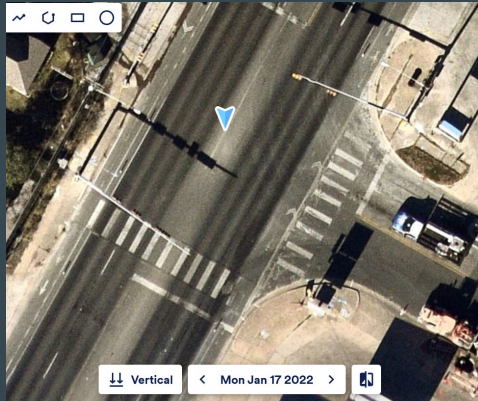


# Engineering

## Bond projects

### 1. Intersection safety:

- a. 4 projects completed this year
- b. 2 projects in construction
- c. 2 projects to begin construction in next few months
- d. 5 projects in detailed design
- e. 20+ locations in scoping or TxDOT approval process



South Congress and Sheraton

# Engineering

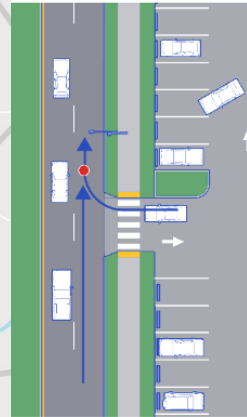
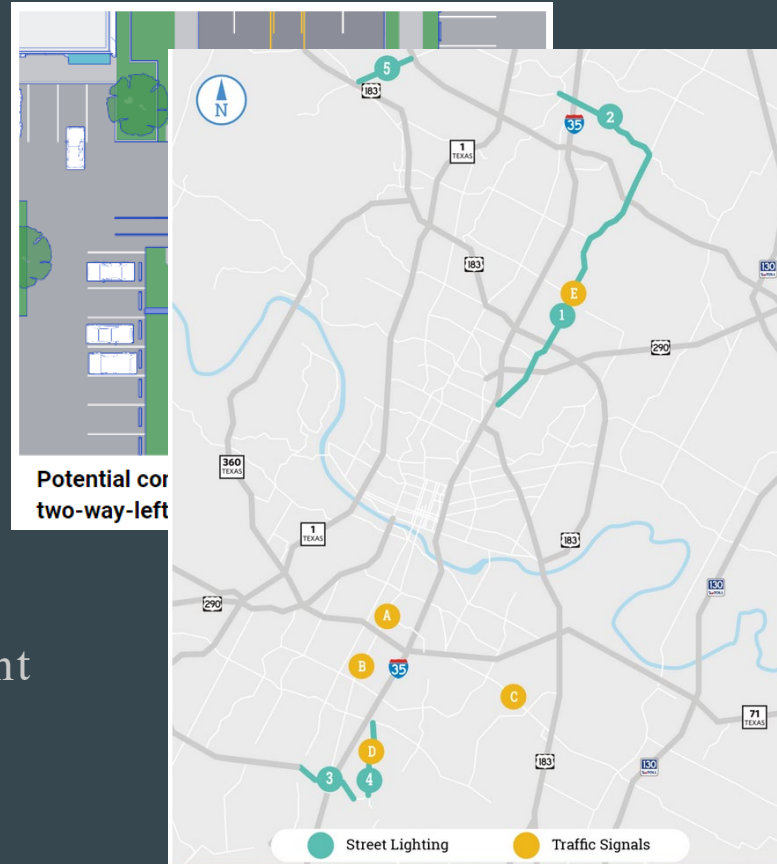
## Bond projects

### 2. Systemic safety

- a. Curves
- b. Access Management (with new standardized approach)
- c. Left turn movements at signals
- d. Pedestrian Crossing Program

### 3. Highway Safety Improvement Program

- a. 5 safety lighting projects
- b. 5 traffic signal projects



four-lane street with a

# Evaluation: Major Intersection Safety

- Funding: 2015 budget; '16/'18/'20 Bonds
- 19 major intersection projects completed
  - 13 with 1+ year of “after” data

Location	Completion date
IH-35 and Martin Luther King, Jr. Blvd	November 2016
US 183 and Cameron Rd. (NE & EB)	December 2016
N. Lamar Blvd.- Rutland Dr. to Rundberg Ln.	June 2017
N. Lamar Blvd. and Parmer Ln.	July 2017
S. Pleasant Valley Rd. and Elmont Dr.	June 2018
S. Congress Ave. and Oltorf St.	July 2018
45th St. and Red River St.	October 2018
Slaughter Ln. and Menchaca Rd.	January 2019
Slaughter Ln. and Cullen Ln.	January 2019
IH-35 and Braker Ln.	July 2019
Slaughter Ln. and S. 1 <sup>st</sup> St.	October 2019
N. Lamar Blvd. and Payton Gin Rd.	January 2021
Lakeline Blvd. and US 183	April 2021
N. Lamar Blvd. and Morrow St.	July 2021
N. Lamar Blvd. and St Johns Ave.	August 2021
Braker Ln. and Stonelake Blvd.	September 2021
Oltorf St. and Parker Ln.	October 2021
Rundberg Ln. and IH-35	January 2022
Cameron Rd. and Ferguson Ln.	May 2022

## Crash reductions seen at Austin's major intersection safety locations



### Summary

New analysis shows that intersections that received engineering treatments as part of Vision Zero's Transportation Safety Improvement Program since the program formed in 2016 have seen a substantial reduction in crashes following project implementation. This includes a 31% reduction in the annual number of serious injury or fatal crashes across these locations. Vision Zero is utilizing the results from this analysis to help inform future intersection safety improvements to most effectively reduce injuries at Austin's top crash intersections.

### Problem Statement

Between 2017 and 2021 approximately 30% of crashes and 37% of serious injury or fatal crashes occurred at signalized intersections in Austin. The concentration of potential conflicts between road users, and thus crashes, at major intersections presents an opportunity to significantly reduce injuries at individual locations by focusing engineering countermeasures on documented crash patterns and risks.

### The Solution

In response to the rising number of people injured or killed in traffic crashes in Austin, City Council allocated \$3.8 million in the 2016 City budget for safety improvements at five of Austin's top crash intersections. That same year, Austin voters approved \$15 million for Vision Zero intersection safety projects as part of the 2016 Mobility Bond. Voters also approved funding for safety investments in Bond referendums in 2018 and 2020.

Austin Transportation Department (ATD) staff developed a methodology to prioritize locations to study for potential safety treatments based on historical crash frequency, crash severity, and prevalence of specific crash patterns that can be addressed through proven safety countermeasures. The methodology has evolved over time and now gives additional weight to locations with more crashes involving pedestrians or bicyclists as well as intersections located in historically underserved communities.

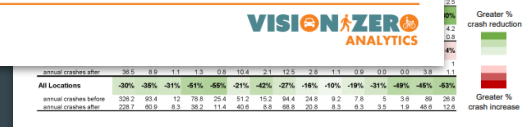
ATD engineers reviewed historical crash data and performed site visits to recommended safety improvements at selected locations. Typical treatments involve a combination of both lower cost interventions such as changes to traffic signal timing or refreshing crosswalk markings, and more substantial treatments such as concrete medians or shared-use paths. As of July 2022, 19 major intersection safety projects have been completed, of which 13 have at least one year of crash data following project completion. Vision Zero staff took a deep dive into the before and after crash data at these 13 locations to better understand how the safety improvements have performed.

\*Learn how Vision Zero is incorporating equity into project prioritization in our "Safe for All" [Seguro para Todos] StoryMap

Table 1. Completed intersection safety projects

Location	Completion date
IH-35 and Martin Luther King, Jr. Blvd	November 2016
US 183 and Cameron Rd. (NE & EB)	December 2016
N. Lamar Blvd.- Rutland Dr. to Rundberg Ln.	June 2017
N. Lamar Blvd. and Parmer Ln.	July 2017
S. Pleasant Valley Rd. and Elmont Dr.	June 2018
S. Congress Ave. and Oltorf St.	July 2018
45th St. and Red River St.	October 2018
Slaughter Ln. and Menchaca Rd.	January 2019
Slaughter Ln. and Cullen Ln.	January 2019
IH-35 and Braker Ln.	July 2019
Slaughter Ln. and S. 1 <sup>st</sup> St.	October 2019
N. Lamar Blvd. and Payton Gin Rd.	January 2021
Lakeline Blvd. and US 183	April 2021
N. Lamar Blvd. and Morrow St.	July 2021
N. Lamar Blvd. and St Johns Ave.	August 2021
Braker Ln. and Stonelake Blvd.	September 2021
Oltorf St. and Parker Ln.	October 2021
Rundberg Ln. and IH-35	January 2022
Cameron Rd. and Ferguson Ln.	May 2022

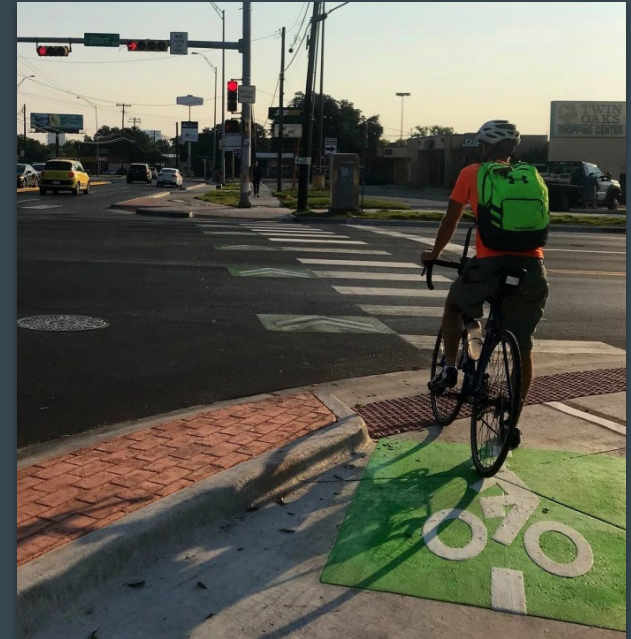
Austin Transportation Department has completed 19 major intersection safety projects since 2016.



# Evaluation: Major Intersection Safety

## Results

- **30% reduction in the crashes** per year following project completion at the 13 study intersections (going from 326 crashes/year to 229 crashes/year)
- **31% reduction in serious injury or fatal crashes** (going from 12.0 to 8.3 per year).
- Over the same time period, combined annual crashes among a citywide control group decreased only 4% and serious injury or fatal crashes *increased 8%*



S. Congress & Oltorf St. (2018)

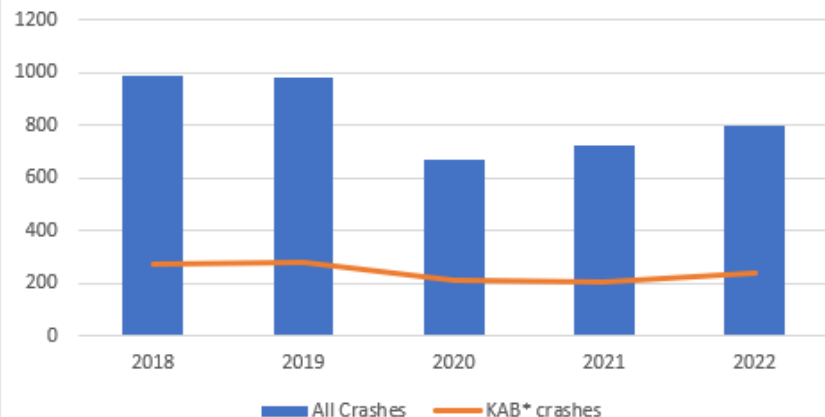
# Evaluation: Left Turns at Signals

## Safety Culture Policy 1

**Prioritize the protection of human life over all else in the planning, design, and operation of Austin's transportation network**

Recognize the safe limits of the human body and use that as the guiding tool when making safety decisions

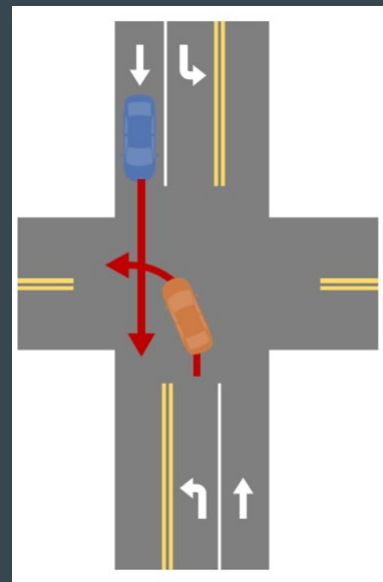
OD-OSOL Crashes



\* KAB: Killed, Seriously Injury, Minor Injury

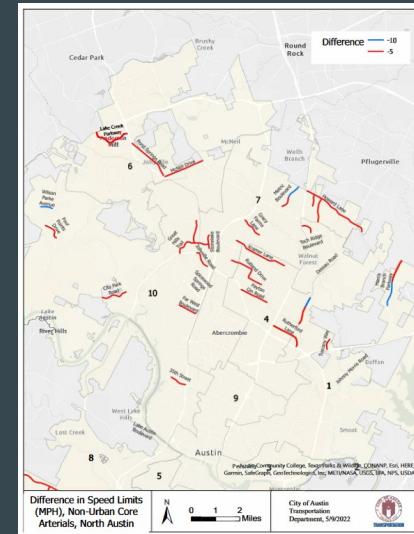
\* 2022 projected with data as of October 1, 2022

Opposite Direction-One Straight,  
One Left crashes at signalized  
intersections



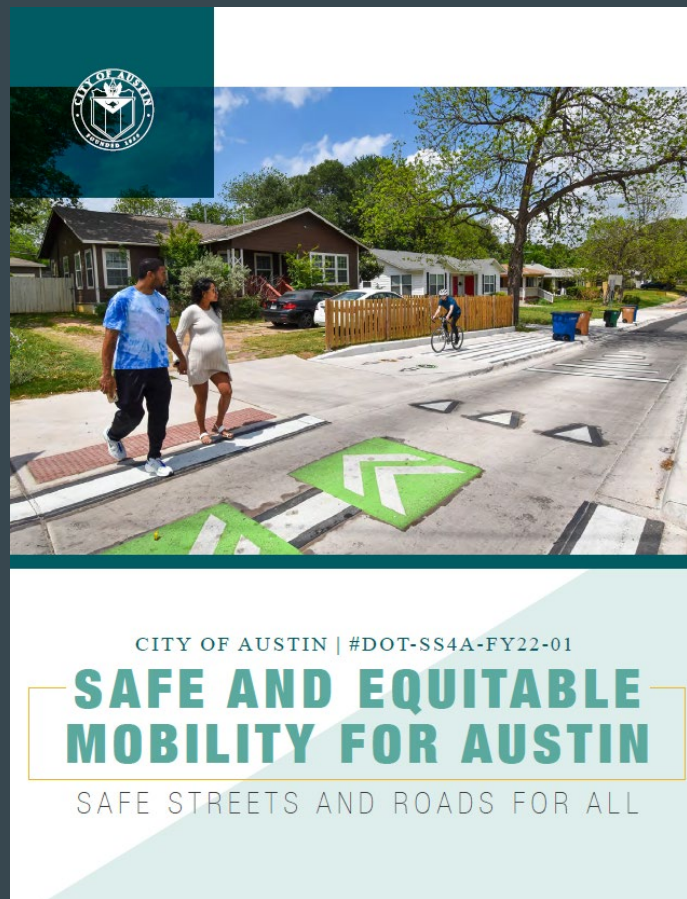
# Policy/Procedures

- Speed Limits
- Access Management standardized approach
- Signal guidelines for left turn movements
- Intersection Control Evaluation/Roundabout Design
- Evaluating Right Turns on Red, Leading Pedestrian Intervals

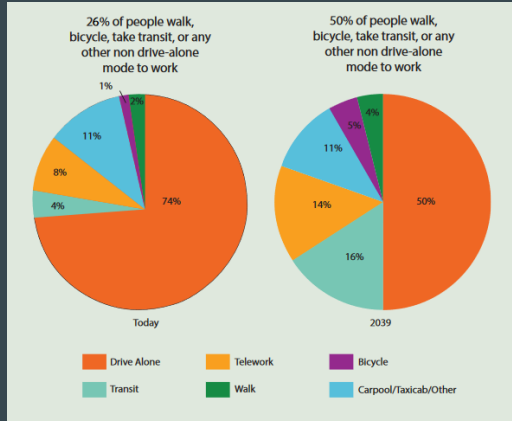


# Funding: Safe Streets for All - Federal Grant

- Aiming for \$28M of project costs
  - 20% would be local match primarily through local bond dollars
- Grant has strong focus on reducing traffic-related fatalities and serious injuries with proven safety countermeasures, equity, ability to deliver within 5 years

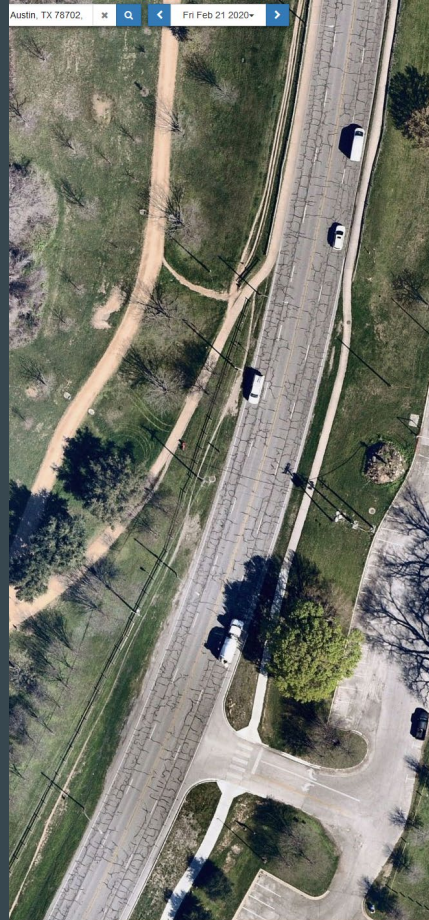


# Achieving Our Policy Goals

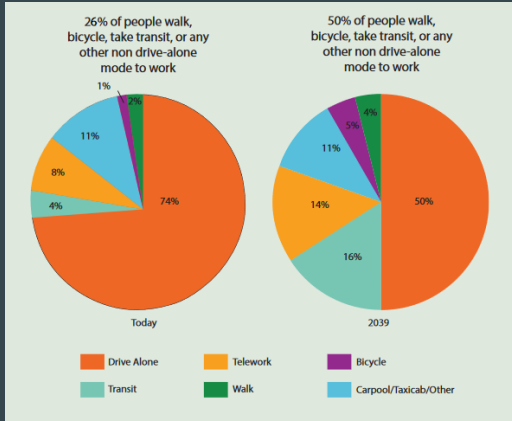


Removing excess  
capacity / geometric  
changes for safer roads  
for all users

S. Pleasant Valley  
and Krieg Fields



# Achieving Our Policy Goals



Roundabouts! They work...

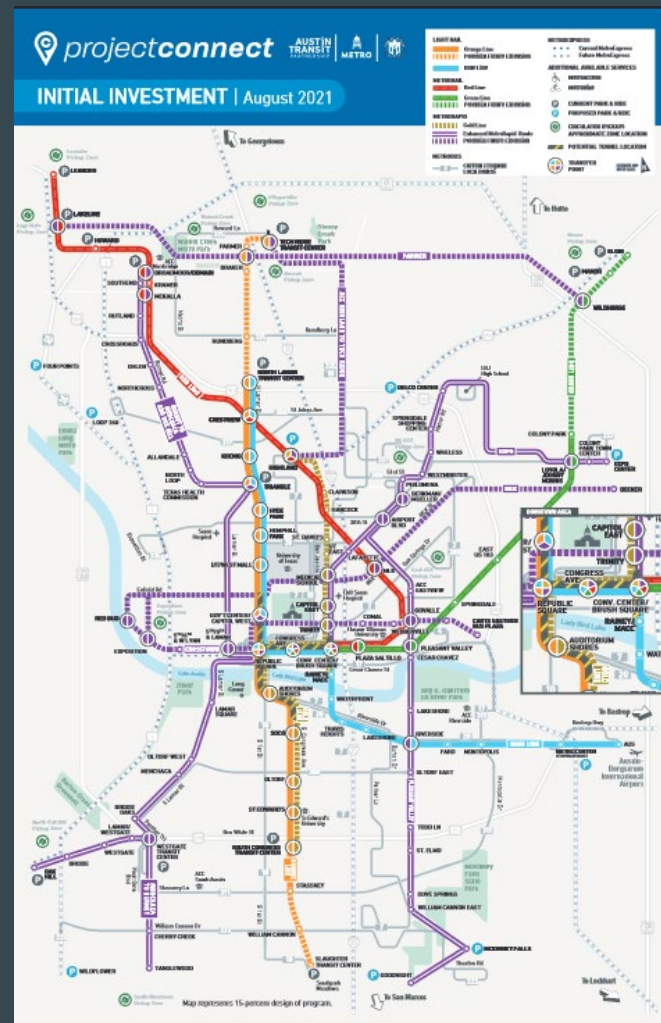
- Against severe crashes - 78% reduction per FHWA when transitioning from signal to roundabout
- 24/7, without regular staff and maintenance needs
- Can help overall throughput too!



Todd Lane and St. Elmo

# Achieving Our Policy Goals

- Scale up Austin's Vision Zero and mobility bond projects and initiatives
  - Safer roadway designs
  - Transportation lighting for all modes
  - Narrowly-focused traffic safety enforcement
- Implementation of Project Connect
- Collaboration with TxDOT
- State and local legislative changes
  - Land use
  - Enforcement/prosecution



Comments, questions, thoughts?

