

# CRASH REDUCTIONS CONTINUE AT AUSTIN'S MAJOR INTERSECTION SAFETY PROJECT LOCATIONS

— June 2024 —

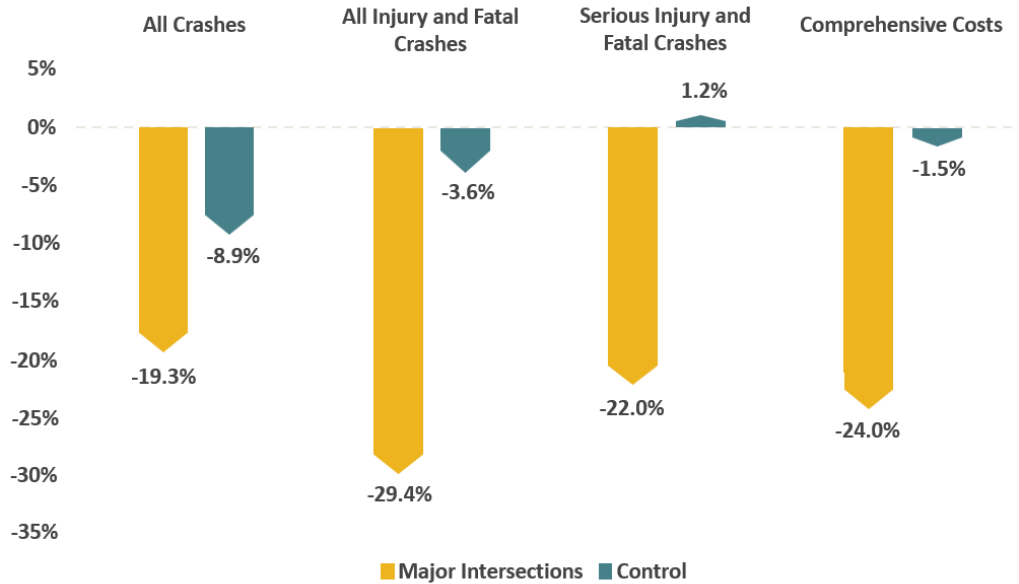
## SUMMARY

In July 2022, Austin's Vision Zero program published a [report](#) on the crash reductions seen at 13 completed major intersection safety project locations. Since then, Vision Zero has continued to collect data on the safety performance of these 13 sites plus another nine [Intersection Safety Projects](#) completed over the past few years.

**Vision Zero's latest analysis of these 22 intersection safety project locations shows a 22% reduction in fatal and serious injury crashes at these locations, compared to a 1% increase in fatal and serious injury crashes for a comparison group of all other signalized intersections in Austin.**

Vision Zero is utilizing the results from this analysis to help inform future intersection safety improvements to reduce injuries and fatalities most effectively at Austin's top crash intersections.

**Major Intersection Safety Projects:  
Annualized Percent Changes in Crashes and Comprehensive Costs**



## PROBLEM STATEMENTS AND SOLUTIONS

Between 2019 and 2023 approximately 32% of crashes and 37% of serious injury or fatal crashes in Austin occurred at signalized intersections, even though these locations reflect a relatively small percentage of the transportation network. By focusing engineering countermeasures at these locations, the City can make progress towards its Vision Zero goal by addressing historical crash patterns at the City's most dangerous intersections. This approach, when combined with more systemic strategies that focus on proactively lowering crash risks across the transportation network, is at the core of Austin's [Safe System](#) approach to designing safer streets.

Since 2016 Vision Zero has completed 27 major intersection safety projects funded primarily through voter-approved mobility bonds in 2016, 2018 and 2020. Project locations are selected based on historical crash frequency, crash severity and the prevalence of specific crash patterns that can be addressed through proven safety countermeasures. The methodology gives additional weight to locations with more crashes involving pedestrians or bicyclists, as well as intersections located in historically underserved communities.

## METHODOLOGY AND UPDATED FINDINGS

Of the 27 completed intersection safety projects, 22 have at least one year of crash data available after construction and are the focus of this report. Vision Zero compared annualized collision rates before and after treatments, calculating differences for a variety of crash types and injury severities. Staff also created a control group, comparing crash trends at all other signalized intersections in Austin to trends at the 22 project sites. This comparison group shows the annualized differences between a historical, five-year period (2017 to 2021) to a recent, two-year period (2022 to 2023).

As shown in Table 1 below, the updated results show that major intersection safety projects saw sustained reductions in crashes and most importantly, crashes resulting in injuries and fatalities since we last reported on their safety performance. The updated data show that **crashes resulting in a serious injury or fatality fell from 18.4 per year before the interventions to 14.3 per year after, a 22.0% reduction**. For all injury and fatal crashes (i.e. including minor injuries), there was a decrease from 135.5 per year to 95.6 per year, a 29.4% reduction. In contrast, the control group saw serious injury and fatal crashes *rise* by 1.2% and saw all injury and fatal crashes fall by only 3.6%.

At the treatment intersections, the annualized comprehensive costs of crashes occurring at these locations fell by approximately 24.0% or \$28.46 million, compared to the citywide control group decrease of only 1.5%. Construction costs for the 22 intersections totaled about \$18.48 million, meaning that these safety projects have generated an annual return on investment of 1.54 times the total cost.

Other findings from the before-and-after analysis of major intersections include the following:

- **All crashes:** Crashes of any severity fell from 966.5 per year to 780.3 per year, a 19.3% reduction, compared to an 8.9% reduction in the control group.
- **Left turn across path crashes:** Crashes of any severity fell by 37.8% and injury or fatal crashes fell by 44.7%.
- **Angle crashes (typically red light running):** Crashes of any severity fell by 18.3% and injury or fatal crashes fell by 36.2%.
- **Rear end crashes:** Crashes of any severity fell by 28.4% and injury or fatal crashes fell by 18.5%.
- **Pedestrian involved crashes:** Crashes of any severity fell by 20.7% and injury or fatal crashes fell by 28.4%.
- **Bicycle-involved crashes:** Crashes of any severity fell by 33.8% and injury or fatal crashes fell by 21.6%.
- **Access-related (i.e. driveways or median openings) crashes:** Crashes of any severity fell by 61.8% and injury or fatal crashes fell by 69.1%.

## DISCUSSION AND NEXT STEPS

While these results are positive, it is critically important that we continuously learn from both the successes and challenges associated with these projects. Notably there were two locations that saw an increase in total crashes, five locations that saw an increase in all injury and fatal crashes and eight locations that saw an increase in fatal or serious injury crashes. Although much of this variability can be attributed to small sample sizes (both in terms of the number of crashes at individual locations and the length of time after construction), we are monitoring these locations to determine if additional safety treatments are needed to address recurring crash patterns.

At US 183 and Cameron Road, for example, annual rates for both total crashes and injury and fatal crashes have increased since intersection safety improvements were completed in 2016. A closer review of the “after” data shows that 64% of fatal and serious injury crashes since project completion have involved red light running as a factor, which is a collision type that can be difficult to address.

Given the increase in crashes at this location, however, TPW has recommended additional safety treatments, including shared use paths, geometric changes to slow down turning vehicles, concrete islands to better protect pedestrians and access management, with construction expected in late 2024 or early 2025. In the past couple of years, TPW has also added new traffic signal heads, retroreflective backplates and upgraded lane markings. Vision Zero is actively monitoring other intersections as well and will continue to apply appropriate engineering countermeasures.

The results from this report are consistent with findings from our 2022 report, collectively showing reductions across all crash types and injury severity levels. Importantly, these investments will continue to pay dividends for our community each and every year, not only in reducing injuries and saving the lives of our family, friends and neighbors, but also reducing costs associated with property damage, hospital bills, emergency response and more.



Vision Zero Analytics is a series of reports sharing innovative research and initiatives conducted by the Austin Transportation and Public Works Department in an effort to significantly reduce fatalities and serious injuries in our community. Questions or comments on this report can be sent to [VisionZero@AustinTexas.gov](mailto:VisionZero@AustinTexas.gov)

