

Special Report

Traffic Safety Follow-Up

February 2022



This is a special report to follow up on eight recommendations from three audits we issued to address concerns about mobility and traffic safety in Austin. One recommendation is no longer applicable due to a change in state law. We verified the City implemented the remaining seven recommendations. Since these audits, the City has taken many actions that focus on safety. The Austin Transportation Department (ATD) improved how the City collects crash information. This information helps the City decide where to build safety improvements. ATD also expanded education efforts to target the most dangerous driving behaviors. However, traffic enforcement efforts have declined in the last few years.

Additionally, the City acted to address Austin's rapid growth and mobility challenges. In 2019, the City worked with regional partners to create a plan to guide transportation projects for the next 20 years. Also, the City opened a center to monitor and manage traffic signals in real time. Finally, the City created an office to serve as a point-of-contact for collaborating with other entities to build regional high-capacity transit options. While the rate of people seriously injured in car crashes has been trending downward in Austin since 2016, the rate of people killed in crashes has increased in each of the last three years. This mirrors a nationwide trend that saw a nearly 20 percent increase in fatal crashes in the first half of 2021. Traffic safety remains a critical issue for the City to analyze and address moving forward.

Contents

Objective and Background	2
What We Learned	3
What has the City done to address the issues we identified?	3
Looking Ahead	8
Appendix A - Findings Issued	10
Appendix B - Implementation Status of Recommendations	11
Scope and Methodology	13

Cover: Mobility improvements at the Lamar and St. Johns intersection, courtesy of Austin Transportation Department.

Objective

The objective of this special report was to follow up on recommendations our office issued for three audits related to mobility and traffic safety from 2016 to 2019:

- Transportation Effectiveness, April 2016.
- Traffic Enforcement, August 2018.
- Traffic Safety: Design and Education, September 2019.

Background

Vision Zero is a goal to reach zero severe and fatal injury crashes in Austin by 2025.

We conducted three audits between 2016 and 2019 related to City efforts to address mobility and traffic safety. These audits responded to the City's growing transportation challenges and concerns about traffic safety due to a rise in severe and fatal crashes. Our work focused on City efforts – mainly through the Austin Transportation Department (ATD) and Austin Police Department (APD) – to manage safety through system planning and traffic enforcement. We also looked at design and education efforts stemming from the City's adoption of Vision Zero.

Safety improvements focused on the impacts of the most dangerous "Fatal Four" driving behaviors:

- Speeding
 - Distracted driving
 - Impaired driving
 - Failure to yield
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Our audits identified several areas needing improvement. For example, the City needed better crash data to identify dangerous locations in the City. Using that information, the City needed to do a better job prioritizing those dangerous locations for safety improvements. Also, the City needed to be more strategic in their traffic enforcement and educational efforts. A list of all findings from these audits is included in Appendix A.

If you are interested in following the City's progress to implement recommendations from these audits, as well as audits on other topics, you can visit the [City's open data portal page about audit recommendations](#).

What We Learned

Summary

In response to our prior audit recommendations, the City has taken many actions to address traffic safety such as improving the collection of crash data. Also, the City improved its process for prioritizing locations for safety improvements. It also expanded education efforts to better target the most dangerous driving behaviors. However, traffic enforcement efforts have declined in the last few years.

Additionally, the City acted to address Austin's rapid growth and mobility challenges. In 2019, the City worked with regional partners to develop the Austin Strategic Mobility Plan to guide transportation infrastructure projects for the next 20 years. The City also implemented a Mobility Management Center to monitor and manage traffic signals and other mobility tools in real time. Finally, the City created the Project Connect Office to serve as the City's point-of contact for departmental and interagency collaboration to build regional high-capacity transit options.

While the rate of people seriously injured in car crashes has been trending downward in Austin since 2016, the rate of people killed in car crashes has increased in each of the last three years. This mirrors a nationwide trend that saw a nearly 20 percent increase in fatal crashes in the first half of 2021. Traffic safety remains a critical issue for the City to analyze and address moving forward.

What has the City done to address the issues we identified?

We issued eight recommendations for these three audits. Six recommendations were directly related to traffic safety and two were related to transportation system planning. We verified the City implemented seven of these recommendations. One recommendation is no longer applicable due to a change in state law. A list of all recommendations from these audits is included in Appendix B.

Exhibit 1: The City implemented 7 of 8 recommendations related to mobility and traffic safety. One recommendation no longer applies.

Transportation Effectiveness, 2016



Traffic Enforcement, 2018



Traffic Safety: Design & Education, 2019



Source: Auditor analysis of City actions to address mobility and traffic safety recommendations, December 2021



The Austin Transportation Department implemented all three recommendations.

Transportation Effectiveness Audit (2016)

The first two findings in the 2016 Transportation Effectiveness audit were related to transportation system planning. First, we found that despite recent improvements, the City had not effectively coordinated among internal departments and external partners on transportation issues. Second, we found the City's transportation activities had been largely reactive. Additionally, resource challenges were consistently cited as barriers to meeting industry guidelines and proactively addressing issues.

The third finding in this audit was related to traffic safety. We found the City had not fully utilized crash information to improve traffic safety. While traffic-related crashes had remained relatively constant, the number of fatalities per year had increased significantly from 2011 to 2015. We also did not see coordinated efforts to expand crash data analysis to help identify and target traffic safety solutions.

We recommended the Austin Transportation Department (ATD) develop ways to better communicate and coordinate with internal and external partners. ATD implemented this recommendation by working with internal and external partners to develop the Austin Strategic Mobility Plan (ASMP). Approved by Council in 2019, this plan will guide transportation improvements for the next 20 years. The plan addressed several of the communication and coordination concerns by involving stakeholders in transportation initiatives and planning exercises. In addition, the ASMP has indicators for monitoring coordination and collaboration to ensure their on-going priority. Other City transportation initiatives that served to improve communication and collaboration include:

- Launching a Data and Performance Hub in 2018 which made transportation information more accessible to stakeholders and the public.
- Creating the Mobility Management Center, a central hub that monitors and controls traffic signals and other mobility equipment. This center also facilitates meetings with regional partners such as the Texas Department of Transportation (TxDOT) and the Central Texas Regional Mobility Authority (CTRMA).
- Partnering with other agencies to create the Project Connect Office which serves as the City's single point-of-contact for departmental and interagency collaboration to build high-capacity transit options for the region.

We recommended ATD work with partners to close resource gaps and better leverage existing resources to achieve the City's transportation goals. ATD implemented this recommendation by working with internal and external partners to develop transportation system plans, increase funding for projects, and leverage resources to address gaps. Supporting these efforts, Austin voters approved mobility bonds in 2016, 2018, and 2020 amounting to \$1.34 billion. These bonds provided funding to address mobility infrastructure projects and traffic safety improvements.

As mentioned above, ATD partnered with other regional stakeholders to develop the Austin Strategic Mobility Plan and Corridor Program Office to prioritize the use of bond funds. In addition, ATD is working with TxDOT on I-35 corridor improvement projects. ATD is also working with the Capital Metropolitan Transportation Authority (CapMetro) to refine transit prioritization policies. ATD has addressed resource gaps by contracting out staffing of the Mobility Management Center. This center facilitates real-time analysis of transportation data to keep traffic moving and quickly address traffic problems. Finally, ATD has worked to leverage its technology resources. For example, ATD reports they have fully implemented the Advanced Transportation Management System which is used to monitor and enhance signal timing. ATD says they are now able to meet national best practice standards of retiming one-third of the City's signals every year to ensure mobility is optimized.

We recommended ATD work with the Austin Police Department (APD) to improve access to crash data so the City could better identify issues that could lead to targeted engineering, enforcement, or educational actions.

ATD implemented this recommendation by collaborating with partners to capture more complete crash data and better target enforcement efforts. For example, ATD worked with APD and the Municipal Court to change the way injury crashes resulting from a failure to yield are documented. The change should result in the City more consistently identifying these types of crashes. This is important since the penalty can be enhanced for crashes involving an injury. The change also requires drivers involved in these types of crashes to appear in court instead of only paying a fine. Increasing the consequences for drivers causing these types of crashes may help to reduce their occurrence. Staff reported there were initial challenges implementing this change due to how these crashes are coded in APD's computer system. APD reported that their Technology Unit has made changes so that these crashes can be more easily found and documented in the system. This initiative is ongoing and ATD and APD continue to work together to ensure officers receive training in how to correctly identify and document the causes of crashes.

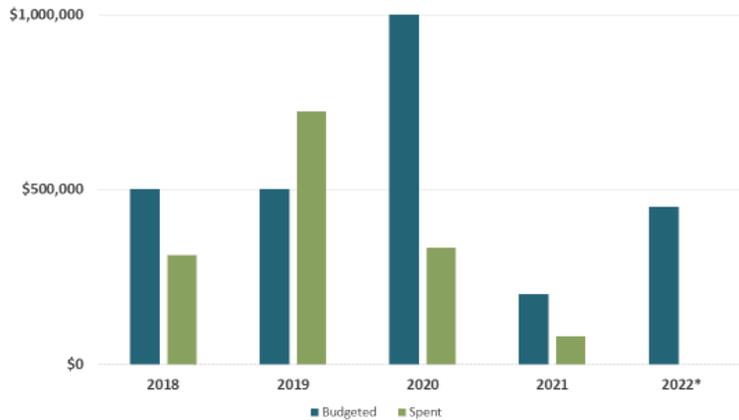
APD also said they created a new reporting process to investigate failure to yield in the right of way crashes involving pedestrians and vulnerable road users. These reporting changes were made in response to the passage of a state law which enhances penalties for these types of crashes when the driver is found criminally negligent.

ATD also partners with many agencies, such as TxDOT and CapMetro, as well as community stakeholders through the Vision Zero Alliance and Vision Zero Leadership Council. These working groups assist the City's efforts to eliminate serious injury and fatal crashes. For example, improved crash data analysis helps ATD identify locations for needed short-term engineering safety treatments. It also helps identify longer-term infrastructure plans. According to ATD, most locations receiving an engineering treatment have seen a reduction in crash rates.

Despite these efforts, ATD and APD staff noted the City is falling short on targeted traffic enforcement efforts. Both departments identified APD staffing constraints as the primary cause. All three audits noted traffic enforcement as a critical tool for reducing dangerous behaviors that often result in crashes. Police officers can use overtime to conduct traffic enforcement activities. ATD reimburses APD for traffic enforcement

efforts in support of Vision Zero. As shown in Exhibit 2, budgeted reimbursement for traffic enforcement increased to \$1M in fiscal year 2020, but only \$333K was spent. In fiscal year 2021, both budgeted and spent amounts declined significantly, reflecting reduced enforcement efforts related to Vision Zero. While the budgeted amount went up in fiscal year 2022, actual spending was not available as of the date of this report.

Exhibit 2: Funds spent on Vision Zero traffic enforcement have declined since fiscal year 2019

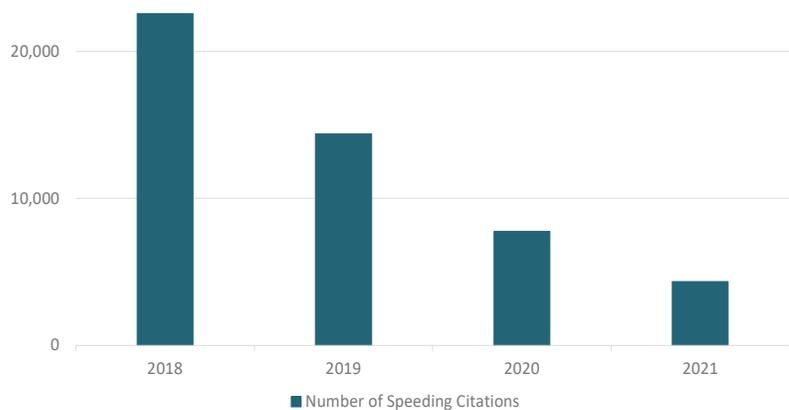


* The amount spent in fiscal year 2022 was not available when this report was published.

Source: Auditor analysis of ATD budget documents related to Vision Zero spending, December 2021

We also analyzed Municipal Court caseload information of speeding citations issued by APD officers since fiscal year 2018. As shown in Exhibit 3, the number of speeding citations issued fell by about 18,000 citations during this time period.

Exhibit 3: APD issued significantly fewer speeding citations each year since fiscal year 2018



Source: Auditor analysis of Municipal Court caseload information from fiscal year 2018 through fiscal year 2021, January 2022

The 2021 Vision Zero Update details the City's efforts in 2019 and 2020 to reduce severe and fatal injury crashes. It also discusses future program initiatives.

ATD and APD staff said they continue to explore innovative approaches to supplement traffic enforcement efforts. However, the 2021 Vision Zero Update stated additional enforcement for speed and impaired driving on high-speed roadways and during overnight and early morning hours remains an outstanding critical need.



This audit recommendation no longer applies due to changes in state law.

Traffic Enforcement Audit (2018)

In this audit, we found that Austin Police Department (APD) officers had limited time for traffic enforcement during regular shifts. We also found APD was using grant funding and red light cameras to supplement enforcement efforts. During this project, APD management said staffing was not adequate to support filling traffic enforcement overtime shifts, either.

The Red Light Camera program was sponsored by several departments including the Austin Transportation Department and Austin Municipal Court. We found that red light cameras appeared to have been successful at reducing the number of crashes at intersections, but some cameras were located at intersections with few overall crashes.

We recommended the Municipal Court work with relevant stakeholders to evaluate current intersection crash data to determine if current red light cameras should be moved or new cameras added. However, this recommendation is no longer applicable. In September 2019, Texas House Bill 1631 banned local authorities from using red light cameras.



The Austin Transportation Department implemented all four recommendations.

Traffic Safety: Design and Education Audit (2019)

In this audit, we issued three findings. First, we found the Austin Transportation Department (ATD) had processes in place for making decisions about infrastructure safety improvements. However, some of those processes could be better aligned with the City's goal of eliminating severe and fatal traffic crashes. Second, similar to a Transportation Effectiveness Audit finding, this audit found ATD lacked some data that would help determine where and how to make City streets safer. Also, decisions related to this process needed to be more clearly documented. Third, we found ATD used various ways to educate the public about traffic safety. However, these efforts could be better targeted to address dangerous behaviors that frequently result in serious crashes.

We recommended ATD ensure the severity of crashes is considered in decisions related to improving safety on City streets. ATD implemented this recommendation by creating and implementing a cost scale. This scale was developed using National Safety Council and Federal Highway Administration guidance. It enables staff to compare the severity of crashes at locations throughout the City to better prioritize projects and initiatives.

A cost scale assigns a dollar value to the crashes occurring at a location based on the number and severity of those crashes.

We recommended ATD improve data related to traffic crashes by working with the Austin Police Department (APD) and other relevant parties to identify ways to improve and collect key data. ATD implemented this recommendation by working with partners to better document crash data. ATD also gathered additional data on the volume of pedestrian and bicycle traffic. As noted above, ATD worked with the Municipal Court and APD in 2020 to change the way "failure to yield with bodily injury" crashes are documented. These crashes are now subject to higher fines and require recipients of such citations to appear in court. Work on this initiative is ongoing.

According to staff, ATD's crash database is now updated daily and staff manually checks each severe and fatal crash to ensure it is identified and has an accurate location. In addition, ATD worked with a consultant in 2019 to estimate pedestrian and bicycle traffic volumes across the City. Permanent devices were installed to count bicycle and pedestrian activity at 16 locations throughout Austin. This data should help ATD better determine what types of traffic safety improvements might be needed at a particular location.

We recommended ATD ensure that decisions related to all roadway improvements are appropriately documented. ATD implemented this recommendation by developing the 2018 Vision Zero Bond Prioritization Process, a comprehensive methodology for spending 2018 Vision Zero Bond funds. This process guides ATD staff in how to identify and prioritize dangerous locations, conduct corresponding crash severity analyses, and recommend treatments to achieve safer outcomes. We reviewed ATD's documentation of this process and found it complete.

We recommended ATD expand traffic safety education efforts by developing and implementing strategies to specifically target dangerous behaviors. ATD implemented this recommendation by expanding its traffic safety education efforts that target dangerous behaviors. In 2019, ATD's Vision Zero Communications Plan created tailored messaging to specifically address the most dangerous, "Fatal Four" driving behaviors: speeding, distracted driving, impaired driving, and failure to yield. ATD has since produced bilingual educational videos for the "Fatal Four" behaviors and shared messaging on social media and other outlets. ATD has also partnered with APD and the Municipal Court to increase enforcement actions for drivers causing crash injuries. In addition, ATD reports they have invested in promoting educational campaigns across multiple channels, including radio, newspapers, Facebook, Spotify, and YouTube. Finally, ATD uses various metrics to gauge how well their outreach campaign is performing.

ATD outreach metrics include amount spent, reach, impressions, and engagement measures such as click-through data, post reactions, and video play counts.

Looking Ahead

Data collected by the Austin Transportation Department's (ATD) Vision Zero program shows that speeding is the primary contributing factor in one quarter of the fatal traffic crashes in Austin. In June 2020, City Council passed a resolution to reduce speed limits in Austin neighborhoods and on core streets to address this key traffic safety factor. In addition, ATD's 2021 Vision Zero Update reports the City has made considerable efforts to scale up engineering solutions, with a focus on safer designs and speed management. ATD staff report these efforts are beginning to show results. According to staff, most locations receiving engineering treatments have seen a reduction in crash rates. While the rate of people seriously injured in car crashes has been trending downward in Austin since 2016, the rate of people killed in car crashes has increased in each of the last three years.

Austin is not alone in this trend. In October 2021, the U.S. Department of Transportation's (USDOT) National Highway Traffic Safety Administration (NHTSA) released a report showing that traffic fatalities nationwide have increased an estimated 18.4% during the first half of 2021 compared to the same period in 2020. Their report cited speeding, failure to use seat belts, and drug and alcohol abuse as contributing factors. As a result, USDOT announced they will be developing a first-ever National Roadway Safety Strategy.

Austin continues to address dangerous driving behaviors through engineering and educational efforts. However, management from ATD and the Austin Police Department (APD) reported that the City's traffic enforcement efforts are falling short as APD works to address current staffing constraints. This is especially challenging as the City's Vision Zero effort calls for more enforcement during critical traffic times and to address speed and impaired driving on high-speed roadways. Coupled with this call for increased traffic enforcement, the Vision Zero program's equity analysis, Safe for All, suggests systemic changes are needed to ensure traffic enforcement is equitable.¹

Finally, the City's ability to reduce and eliminate serious injury and fatal crashes is also dependent on residents doing their part. The Austin Strategic Mobility Plan explains the City's Vision Zero Safe System approach "holds that traffic-related serious injuries and fatalities are a preventable public health issue and that system designers, policymakers, public health professionals, law enforcement, individual road users, and others all share responsibility for improving the safety of our transportation network."² This aligns with comments made by NHTSA Deputy Administrator Dr. Steven Cliff about their recent report, "The report is sobering. It's also a reminder of what hundreds of millions of people can do every day, right now, to combat this: slow down, wear seat belts, drive sober, and avoid distractions behind the wheel."³

¹ <https://storymaps.arcgis.com/stories/4a57b61a0dc9444a9d117dc69f3a898e>

² https://www.austintexas.gov/sites/default/files/files/Transportation/ASMP/ASMP_Chapters/FINAL_ASMP_LowFormatVersion.pdf, page 20

³ <https://www.transportation.gov/briefing-room/usdot-releases-new-data-showing-road-fatalities-spiked-first-half-2021>

Appendix A - Findings Issued

Transportation Effectiveness, April 2016	
Finding 1	Despite recent improvements, the City has not effectively coordinated among City departments and external partners on transportation issues.
Finding 2	The City's transportation activities have been largely reactive and resource challenges were consistently cited as barriers to meeting industry guidelines and proactively addressing issues.
Finding 3	The City has not fully utilized crash information to improve traffic safety.
Finding 4	The City has multiple initiatives to improve transportation effectiveness for the City and the region.

Traffic Enforcement, August 2018	
Finding 1	Austin Police Department (APD) officers have limited time for traffic enforcement during regular shifts. APD uses grant funding and red light cameras to supplement enforcement.
Finding 2	Although revenue from citations partially funds Municipal Court, it can be an inconsistent source of funding.

Traffic Safety: Design and Education, September 2019	
Finding 1	The Austin Transportation Department supports traffic safety by improving intersections with a high number of crashes but could better align these efforts with the City's goal to eliminate fatal and serious injury crashes.
Finding 2	The Austin Transportation Department previously lacked some data that would help determine where and how to make City streets safer, and decisions related to intersection design improvements were not well documented.
Finding 3	The City uses various ways to educate the public about traffic safety, but these efforts could be better targeted to address the dangerous behaviors that frequently result in serious crashes.

Appendix B - Implementation Status of Recommendations

We issued eight recommendations in our mobility and traffic safety audits. We verified the City implemented seven of these recommendations and one recommendation no longer applies.

Transportation Effectiveness, April 2016		
Recommendation 1	To ensure effective stakeholder communication and coordination, the Transportation Director should work both internally across the departments that share responsibility for mobility – Austin Transportation, Austin Police, Public Works, Development Services, Planning and Zoning, and Watershed Protection – and with partner entities to implement and monitor mechanisms that support a culture of continuous communication and coordination and include all stakeholders in key decisions. Where barriers and resource constraints prevent or hinder effective coordination, the Director should engage with the City Manager’s Office to facilitate a timely and effective resolution.	Implemented
Recommendation 2	To ensure the City achieves its mission related to the transportation system, the City’s Transportation Director should work with internal and external partners to identify and address gaps between needs and resources; explore opportunities to leverage resources, including technology and data, on a regional basis; and conduct a periodic analysis of planning and prioritization models.	Implemented
Recommendation 3	To mitigate the impact of crashes and reduce the number of traffic-related fatalities, the Austin Transportation Director, working with the Austin Police Chief, should ensure the City captures and analyzes all relevant crash data, including data from external entities, to identify issues that could lead to targeted engineering, enforcement, or educational actions.	Implemented

Traffic Enforcement, August 2018		
Recommendation 1	Municipal Court should work with relevant stakeholders to evaluate current intersection crash data to determine if current red light cameras should be moved or new cameras added.	No longer applicable due to change in state law*

*Texas House Bill 1631 prohibits the use of red light cameras.

Traffic Safety: Design and Education, September 2019		
Recommendation 1	The Austin Transportation Department Director should ensure that the severity of crashes is considered at all stages of analysis in future decisions related to improving safety on City streets.	Implemented
Recommendation 2	The Austin Transportation Department Director should improve data related to traffic crashes by working with the Austin Police Department (APD) and other relevant parties to identify ways to improve and collect key data. This includes gaining access to all of TxDOT's crash data, working with APD to improve data collection and consistency of data entries, and gathering additional data on pedestrian and bicycle traffic volumes.	Implemented
Recommendation 3	The Austin Transportation Department Director should ensure that decisions related to all roadway improvements are appropriately documented. This includes any methodology used to identify and prioritize dangerous locations, analysis of crashes at selected intersections, and improvements recommended to address safety issues.	Implemented
Recommendation 4	The Austin Transportation Department Director should expand traffic safety education efforts by developing and implementing strategies to specifically target dangerous behaviors.	Implemented

Scope

The project scope included actions taken by City management to respond to the recommendations in audits related to mobility and traffic safety from 2016 to 2019, including:

- Transportation Effectiveness, April 2016.
- Traffic Enforcement, August 2018.
- Traffic Safety: Design and Education, September 2019.

Methodology

To complete this special report, we performed the following steps:

- Interviewed City staff in Austin Transportation Department and Austin Police Department.
- Reviewed Austin Transportation Department press releases, strategic and project plans, crash analysis and safety improvement design methodologies, public safety education campaign materials, and other documents relevant to traffic safety.
- Reviewed news articles, budget information, Council resolutions, and other documents relevant to traffic safety.
- Evaluated City actions to respond to relevant recommendations.

Audit Standards

This project is considered a non-audit project under Government Auditing Standards and was conducted in accordance with the ethics and general standards (Chapters 1-5).

The Office of the City Auditor was created by the Austin City Charter as an independent office reporting to City Council to help establish accountability and improve City services. Special requests are designed to answer specific questions to assist Council in decision-making. We do not draw conclusions or make recommendations in these reports.

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