

Stroll

CITY OF BOERNE

Comprehensive Safety Action Plan

MAY 2026

ADOPTED BY BOERNE CITY COUNCIL
MAY 12, 2026

Safety
Action Plan

BOERNE



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Acknowledgements

The Comprehensive Safety Action Plan was developed by the City of Boerne, as well as agencies, organizations, and stakeholders from the Boerne Area. This report documents a comprehensive set of projects and strategies to eliminate roadway fatalities and serious injuries within Boerne. The information presented herein is planning level only and is not meant to represent the support or commitment of any potential partners.

DISCLAIMER

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23 UNITED STATES CODE SECTION 407

Discovery and admission as evidence of certain reports and surveys

Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

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- **Ty Wolosin** – Council District 1 | Mayor Pro Tem
- **Joe Bateman** – Council District 2

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Acronyms

AADT	Average annual daily traffic
AAMPO	Alamo Area Metropolitan Planning Organization
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ADT	Average daily traffic
BISD	Boerne Independent School District
CIP	Capital Improvement Plan
CMF	Crash Modification Factor
CRIS	Crash Records Information System
CSAP	Comprehensive Safety Action Plan
EPDO	Equivalent Property Damage Only
FHWA	Federal Highway Administration
FY	Fiscal Year
FYA	Flashing Yellow Arrow
HIN	High-Injury Network
HSIP	Highway Safety Improvement Program
HSM	Highway Safety Manual
ICE	Intersection Control Evaluation
IJA	Infrastructure Investment and Jobs Act (Public Law 117-58), also known as the Bipartisan Infrastructure Law
ISA	Intersection Safety Assessment
KAB	The sum of KAB (fatal, serious and minor injury) crashes

	<u>Injury Severity Scale</u> K - Fatal Injury A - Serious (Incapacitating) Injury B - Minor (Non-Incapacitating) Injury C - Possible Injury O - Non Injury, Property Damage Only U - Unknown Severity
KABCO	
LPI	Leading Pedestrian Interval
MMP	Mobility Master Plan
MSA	Metropolitan Statistical Area
MVMT	Million Vehicle Miles Traveled
NRSS	National Roadway Safety Strategy
PHB	Pedestrian Hybrid Beacon
ROW	Right-of-Way
RRFB	Rectangular Rapid Flashing Beacon
SHSP	Strategic Highway Safety Plan
SRTS	Safe Routes to Schools
SS4A	Safe Streets and Roads for All
STF	Safety Task Force
SUP	Shared-Use Path
TEV	Total entering vehicles
TIGER	Transportation Investment Generative Economic Recovery
TxDOT	Texas Department of Transportation
USDOT	United States Department of Transportation
VRU	Vulnerable User Area

Executive Summary

The City of Boerne Comprehensive Safety Action Plan (CSAP) establishes a clear, data-driven roadmap to **eliminate roadway fatalities and serious injuries on City maintained streets over the next 20 years**. Building on the City of Boerne's adopted August 23, 2022 Vision Zero leadership commitment in transportation safety, the CSAP affirms that traffic deaths and serious injuries are preventable and unacceptable and that safety must be proactively embedded into every transportation decision from planning and design to operations and policy.

The CSAP was developed through a multidisciplinary and community-informed process guided by a Safety Task Force composed of City staff, elected officials, regional partners, public safety agencies, school district representatives, and community stakeholders. The plan aligns local priorities with state and federal safety initiatives, including the Texas Strategic Highway Safety Plan (SHSP), the Safe System Approach, and the U.S. Department of Transportation's (USDOT) National Roadway Safety Strategy, ensuring consistency with best practices while tailoring solutions to Boerne's unique Hill Country context.



Figure ES.1. Safe System Approach
Source: Federal Highway Administration (FHWA)

2,342

CRASHES



24

PEDESTRIAN AND BICYCLE RELATED CRASHES



25%

OF FATAL AND SEVERE-INJURY CRASHES INVOLVE VULNERABLE ROAD USERS



48%

OF CRASHES ARE INTERSECTION RELATED



PLANNING STRUCTURE

The vision of the CSAP is to create a transportation system where no one is killed or seriously injured on Boerne’s streets, regardless of age, ability, or mode of travel. Guided by Vision Zero principles and the Safe System Approach, the CSAP establishes a long-term goal of achieving zero roadway fatalities and serious injuries within the next 20 years by prioritizing safety over speed and convenience. This plan advances that vision through data-driven decision-making and identification of proactive safety investments. By focusing on reducing crash severity, protecting vulnerable road users, and targeting high-risk locations, the CSAP provides a clear and accountable framework to deliver measurable safety outcomes and foster a lasting culture of safety throughout the Boerne community.

STRATEGIC PRIORITIES FOR ADVANCING TRANSPORTATION SAFETY

ROADWAY AND INTERSECTION SAFETY

Improve road design and infrastructure through proven safety countermeasures to reduce crash frequency and severity for all road users, including pedestrians, bicyclists, and motorists.

COMMUNITY FOCUSED SAFETY INVESTMENTS

Prioritize safety improvements in locations where crash history and roadway conditions have the greatest impact on community activity, including schools, parks, downtown districts, civic centers, and recreational areas.

PUBLIC EDUCATION AND AWARENESS

Foster a culture of safety through public awareness and promote safe behaviors through educational campaigns, outreach programs, and community events.

DATA-DRIVEN DECISION MAKING AND ACCOUNTABILITY


Guide safety investments using data analysis to identify high-risk areas, measure outcomes, and ensure accountability through ongoing evaluation and transparent reporting.

COLLABORATION AND STRATEGIC PARTNERSHIPS

Leverage the City’s leadership in transportation safety by fostering and strengthening partnerships with government agencies, law enforcement, and community organizations to plan and implement safety strategies.

SAFETY ANALYSIS


A comprehensive analysis of crash data from 2020 to 2024, supplemented by a Downtown Pedestrian Study and community input, identified systemic safety challenges across the roadway network. While fatal crashes are relatively infrequent, injury crashes persist and disproportionately affect vulnerable road users, particularly pedestrians and bicyclists. Forty-eight percent (48%) of all crashes occur at intersections, and a small portion of the roadway network accounts for a majority of fatal and serious injury crashes. These findings reinforce the need to focus on crash severity reduction, not just crash frequency, and to prioritize locations with high pedestrian activity and complex traffic interactions.



Using a critical crash rate methodology consistent with Federal Highway Administration (FHWA) guidance, the City identified a High-Injury Network (HIN) representing approximately 15% of City roadway mileage while capturing the majority of fatal, serious, and vulnerable road user crashes. The HIN provides the analytical foundation for prioritizing investments where they can deliver the greatest safety benefit. The HIN is shown in **Figure ES.2**.



TARGETED APPROACH



Focus locations were selected through a targeted, severity-based process that combined crash history, critical crash rate analysis, public input, and guidance from the Safety Task Force (STF). While priority corridors and intersections within the High-Injury Network (HIN) were identified for further evaluation, downtown Boerne was advanced as a focused pedestrian priority area due to its elevated pedestrian activity, closely spaced intersections, and higher risk of severe outcomes for vulnerable road users.

A dedicated downtown pedestrian evaluation was used to supplement crash data with on-the-ground observations of pedestrian behavior, crossing demand, roadway geometry, and operational conditions, ensuring that locations with high exposure and safety risk were captured even where crash frequency alone was limited. The Downtown Boerne Pedestrian Study is provided in the **Appendix E**. Findings from this targeted approach directly informed the development of location-specific safety recommendations presented in **Chapter 6** of the CSAP.

SYSTEMIC APPROACH

In addition to targeted, location-specific investments, a systemic safety approach was applied to address common risk factors that contribute to fatal and serious injury crashes across the roadway network. Rather than focusing solely on individual high-crash locations, the systemic approach identifies roadway characteristics, behaviors, and conditions that are repeatedly associated with severe crashes and applies proven countermeasures broadly where similar conditions exist. These lower cost, scalable treatments prioritize roadways within the HIN while improving baseline safety citywide, particularly for pedestrians and other vulnerable road users.

The systemic approach complements the downtown pedestrian evaluation and targeted projects by delivering near-term safety benefits, supporting rapid implementation, and reinforcing the Safe System principle that safer outcomes are achieved through redundancy and network-wide risk reduction. Systemic countermeasures and implementation strategies are detailed in **Chapter 6** of the CSAP.

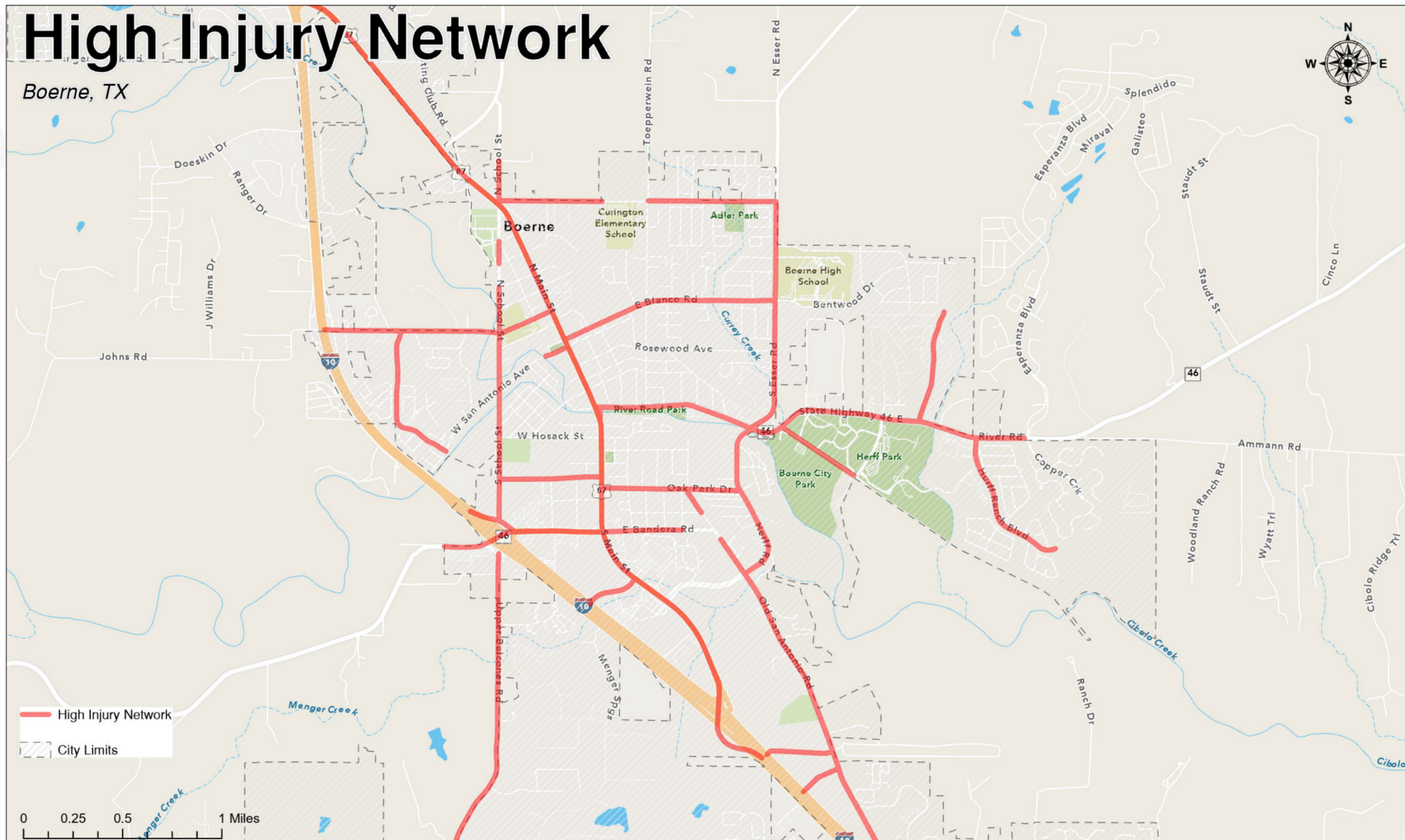


Figure ES.2: High Injury Network | Source: City of Boerne, TxDOT, FHWA; 7/20/2025.

ENGAGEMENT AND COLLABORATION

Public engagement was paramount to the development of the CSAP. Through online surveys, interactive mapping tools, pop-up events, and in-field audits, more than 1,100 mobility-focused responses were collected. **Community members consistently identified intersection safety, downtown conditions, and pedestrian safety as top priorities.** Nearly all intersections and corridors identified by the public fall within the High-Injury Network, validating the data-driven approach and reinforcing alignment between technical analysis and community identified priorities.



		FY 2025						FY 2026					
		JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
ENGAGEMENT	SAFETY TASK FORCE MEETING												
	PUBLIC ENGAGEMENT ACTIVITY												
	ONLINE ACTIVITY												

- STF Workshop (Planning Structure)
- Survey/Public Comment
- Intersection Safety Assessment
- Council Meeting
- Pop-Up Event
- Adoption

IMPLEMENTATION PLAN

The CSAP outlines a balanced implementation program that combines targeted infrastructure projects, systemic safety countermeasures, non-infrastructure initiatives, and policy and process updates. Priority infrastructure projects focus on high-risk intersections and corridors and include proven countermeasures such as roundabouts, improved intersection geometry, pedestrian refuge islands, rectangular rapid flashing beacons (RRFB), and signal upgrades. Systemic improvements such as sidewalks, enhanced pavement markings, flashing yellow arrows, retroreflective signal backplates, and leading pedestrian intervals provide cost-effective opportunities to improve baseline safety across the network. Recognizing that not all safety benefits require immediate capital investment, the plan also advances near-, mid- and long-term non-infrastructure actions, including Safe Routes to School planning, corridor studies, intersection control evaluations, and road safety audits. **These efforts establish a strong foundation for future projects, improve readiness for grant funding, and deliver early safety benefits.**

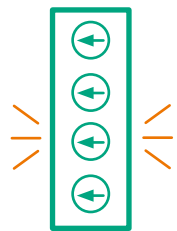
To ensure long-term success, the CSAP recommends policy and procedural updates that institutionalize safety into development review, capital planning, and operations. The plan emphasizes accountability, transparency, and continuous improvement through regular monitoring, annual progress reporting, and updates to the HIN as conditions evolve.

Together, the strategies and actions outlined in this CSAP provides the City with a clear, implementable, and community-supported roadmap to reduce traffic-related fatalities and serious injuries. Since adopting its Vision Zero commitment in August 2022, Boerne has affirmed that safety is a shared responsibility and a core value. Through data-driven investments, strong partnerships, and the integration of safety into everyday decision-making, the City is positioned to make measurable progress toward a transportation system that is safe for all users, regardless of age, ability, or mode of travel.

STRATEGY AND PROJECT SELECTIONS

INFRASTRUCTURE PROJECTS THAT INCLUDE LOCATION-SPECIFIC AND SYSTEMIC IMPROVEMENTS:

- Targeted intersection projects are shown in **Figure ES.3**
- Targeted corridor projects are shown in **Figure ES.3**.
- Systemic projects include:



**FLASHING
YELLOW
ARROW**



SIDEWALKS



**LEADING
PEDESTRIAN
INTERVALS**



**ENHANCED PAVEMENT
MARKINGS**



**RETROREFLECTIVE
BORDERS**

SAFETY PLANNING PROJECTS INCLUDE:

- Safe Routes to School Plan
- Corridor Study – W. Bandera St. from IH-10 to S. Main St. as shown in **Figure ES.3**.
- Intersection Control Evaluations (ICE), as shown in **Figure ES.3**.
- Road Safety Audits (RSA), as shown in **Figure ES.3**.

POLICY AND PROCESS CHANGES

- **Improve roadway and intersection safety** by updating design standards and operational guidance to incorporate proven safety countermeasures, including enhanced crosswalk guidance, modernized traffic signal timing, improved intersection analysis for development along the HIN, and updated roundabout design practices.
- **Prioritize community-focused safety investments** in locations with the greatest safety impact on daily activity, including downtown Boerne, school areas, parks, and civic destinations through pedestrian-focused parking management, Safe Routes to School planning, and continued implementation of ADA accessibility improvements.
- **Strengthen public education and awareness** by promoting safe travel behaviors through community education campaigns, bicycle and roundabout safety outreach, distracted-driving education for students, and youth engagement programs in partnership with Boerne ISD.
- **Advance data-driven decision-making and accountability** by coordinating with regional and state partners, maintaining and regularly updating a community-focused HIN, monitoring pedestrian activity and roadway conditions, and using performance data to guide annual investment priorities.
- **Expand collaboration and strategic partnerships** by formalizing a public-facing transportation safety forum to support Vision Zero implementation, align enforcement and education efforts, and sustain coordinated action among City departments, law enforcement, schools, regional agencies, and community organizations.

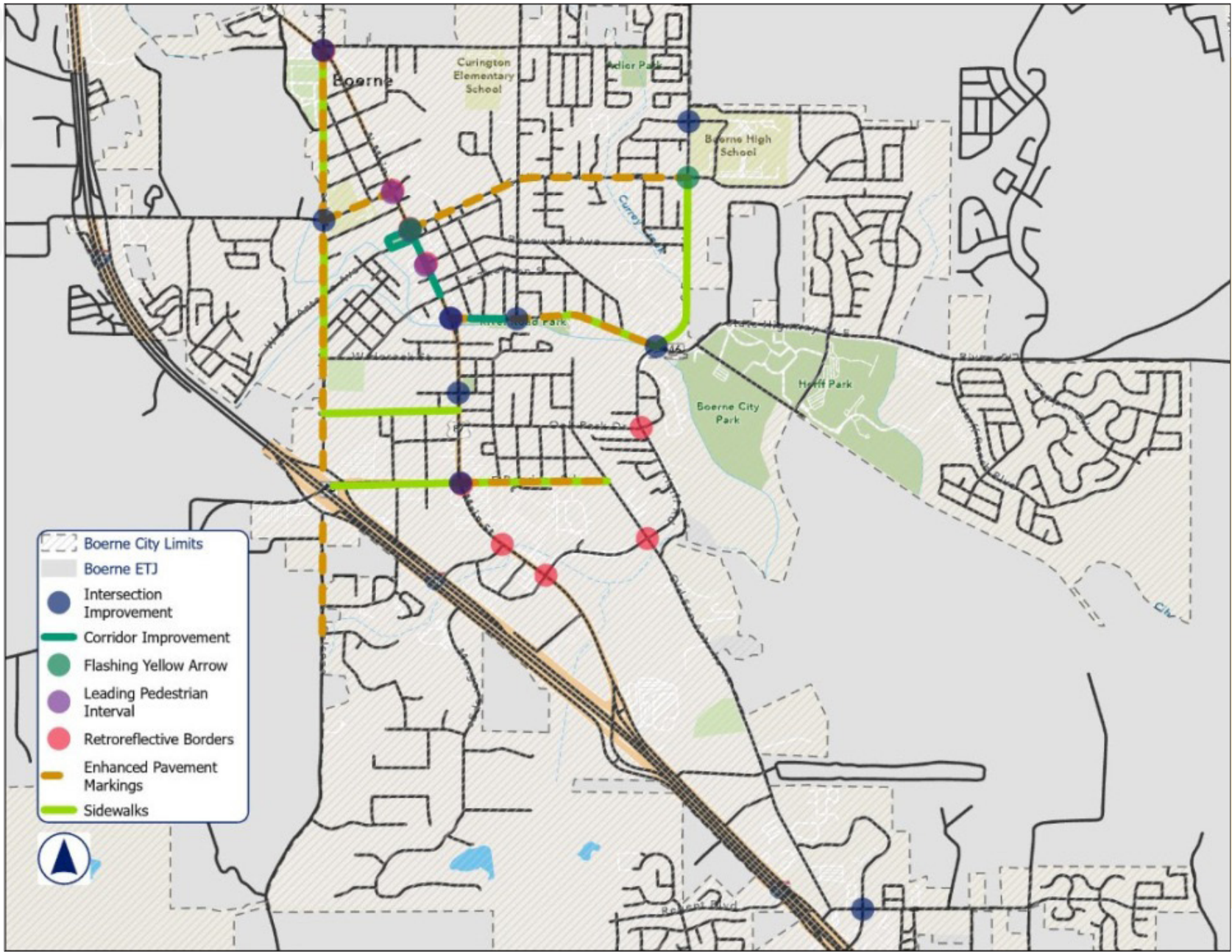


Figure ES.3: Implementation Plan Projects

CHAPTER 1

Leadership Commitment

The City of Boerne is committed to eliminating transportation related fatalities and serious injuries on City maintained roads and reaffirms its **Goal Zero** target within the next 20 years. This commitment builds on the City's Vision Zero resolution, adopted by Boerne City Council on August 23, 2022, and a mini Safety Action Plan adopted through the City's Mobility Master Plan, demonstrating sustained leadership in advancing transportation safety

Through this CSAP, the City affirms that traffic deaths and serious injuries are preventable and that safety is a shared responsibility across planning, engineering, operations, enforcement, and community engagement. Boerne commits to a Safe System approach that emphasizes proactive, data-driven strategies, advances safety outcomes that benefit all users, and establishes accountability, sustained investment, and measurable progress to ensure safe travel for people of all ages and abilities, regardless of how they move.

SAFE STREETS AND ROADS FOR ALL (SS4A) HISTORY

Vision Zero is a global road safety strategy focused on eliminating traffic fatalities and serious injuries by recognizing that crashes are preventable and must be addressed through a multidisciplinary, systems-based approach. First implemented in Sweden in the 1990s, Vision Zero has since been adopted by communities worldwide to create safer, more resilient transportation systems. In Texas, this philosophy was reinforced in May 2019 when the Texas Transportation Commission adopted the Road to Zero policy, directing TxDOT to work toward eliminating traffic fatalities statewide by 2050. This commitment is further advanced through TxDOT's Texas Strategic Highway Safety Plan (SHSP), which establishes a statewide, data-driven framework for reducing roadway fatalities and serious injuries by focusing on priority emphasis areas, proven countermeasures, and coordinated action among transportation agencies, local governments, law enforcement, public health, and community partners.

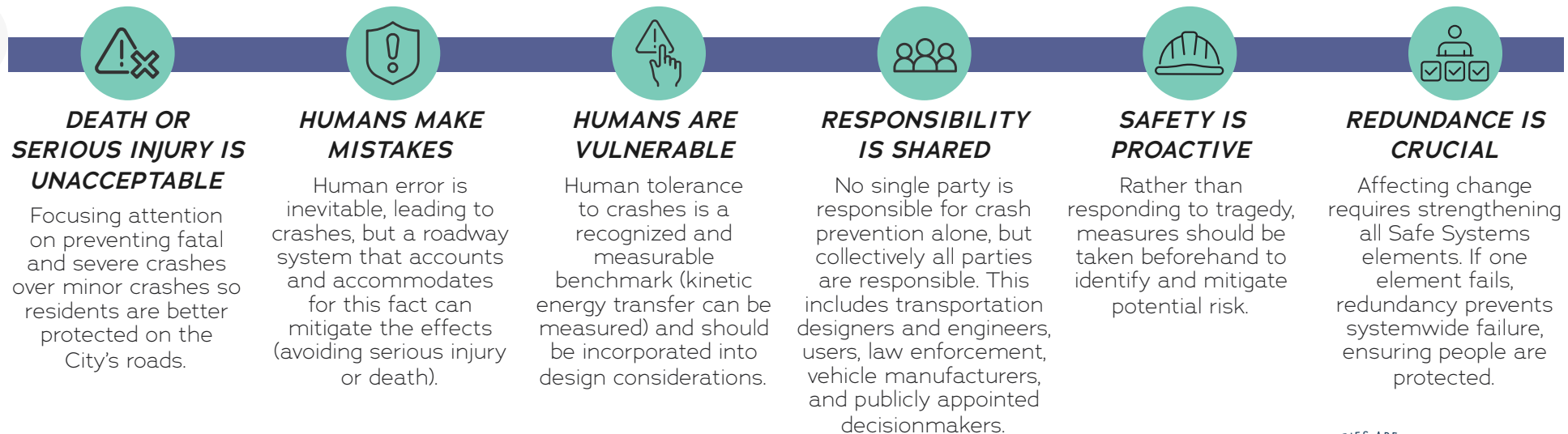
For growing Hill Country communities like Boerne, the goals and strategies outlined in the SHSP are especially relevant, as the community experiences a mix of local traffic and regional through-traffic mixing on rural local roadways and state highways through a vibrant downtown. Aligning local safety efforts with the SHSP helps ensure consistency with statewide priorities while allowing solutions to be tailored to Boerne's unique roadway context and community needs.

At the federal level, the Infrastructure Investment and Jobs Act (IIJA), enacted in November 2021, established the Safe Streets and Roads for All (SS4A) discretionary grant program, providing \$5 billion over five years (2022–2026) to support local and regional efforts to prevent roadway deaths and serious injuries. In support of this program, the U.S. Department of Transportation released the National Roadway Safety Strategy (NRSS) in January 2022, which embraces the Safe System Approach prioritizing roadway designs that reduce the likelihood of crashes and minimize the severity of injuries when crashes do occur. This approach is further reinforced through USDOT's Complete Streets guidance, which promotes roadway designs that safely accommodate all users, regardless of age, ability, or travel mode.

SAFETY GUIDING PRINCIPLES

SAFE SYSTEMS APPROACH

In January 2022, in response to a recent increase in roadway fatalities and the fatality rate, the Office of the Secretary of Transportation published the National Roadway Safety Strategy (NRSS) which describes the major actions USDOT will take to make a meaningful difference in road safety. USDOT’s strategy embraces the Safe System Approach provided as **Figure 1.1**. This approach recognizes shared responsibility among policymakers, system designers, operators, and roadway users, and prioritizes creating a transportation system that is resilient, forgiving, and centered on protecting human life. **There are six key principles that can be utilized to implement the elements of the Safe Systems Approach, and are as follows:**



There are five complementary objectives outlined by the U.S. Department of Transportation (USDOT) that correspond and support implementation of the Safe Systems Approach:

- 1 SAFER PEOPLE** – Encourage safe and responsible behavior by all roadway users and create conditions that support everyone’s ability to travel safely and reach their destination unharmed.
- 2 SAFER ROADS** – Design roadway environments that mitigate human mistakes and account for injury tolerances, encourage safer behaviors, and protect the most vulnerable roadway users.
- 3 SAFER VEHICLES** – Expand the availability and use of vehicle technologies and features that help prevent crashes and minimize the severity of injuries for both occupants and non-occupants.
- 4 SAFER SPEEDS** – Promote safer speeds across all roadway environments through a combination of roadway design, targeted education and outreach, and consistent enforcement.
- 5 POST-CRASH CARE** – Improve crash survivability through timely access to emergency medical services, safe and effective traffic incident management, and protection for first responders and roadway users during incident response.



Figure 1.1: Safe System Approach

TEXAS STRATEGIC HIGHWAY SAFETY PLAN (SHSP)

SAFE SYSTEMS APPROACH

TxDOT built upon these safety frameworks and developed with the Texas Strategic Highway Safety Plan (SHSP) to guide statewide efforts to reduce traffic fatalities and serious injuries through crash data analysis, identification of high-risk locations, and prioritization of evidence-based countermeasures. The SHSP focuses on eight safety emphasis areas most relevant to safety for Texans and promotes coordinated action among state, regional, and local partners to advance the shared goal of zero roadway fatalities. **The eight safety emphasis areas are:**



DISTRACTED DRIVING

Addressing incidents caused by driver distraction, including mobile device use and in-vehicle distractions.



IMPAIRED DRIVING

Reducing incidents where at least one driver was identified as having consumed alcohol, drugs, or other impairing substances.



INTERSECTION SAFETY

Improving safety where crashes occur within the boundary of an intersection or when the first harmful event occurs on an approach to or exit from an intersection.



OCCUPANT PROTECTION

Increasing the use of seat belts, child safety seats, and other occupant protection measures.



ROADWAY AND LANE DEPARTURES

Preventing incidents involving vehicles running off the road or head-on collisions.



SPEED-RELATED

Addressing crashes involving excessive or unsafe speeds as the contributing factor.



VULNERABLE ROAD USERS

Improving safety for pedestrians and bicyclists, who are at greater risk of serious injury.



POST CRASH CARE

Enhancing the survivability of crashes through emergency response, traffic incident management, and efficient crash investigation.

CHAPTER 2

Planning Structure

A clear and transparent planning structure supports the City of Boerne’s Vision Zero commitment by ensuring roadway safety efforts are coordinated between departments, partner agencies, and community stakeholders. This structure defines roles and responsibilities, establishes decision-making and advisory processes, and integrates technical expertise, community input, and leadership direction to guide how safety initiatives are developed, prioritized, and implemented. By providing a consistent framework aligned with state and federal safety principles, including the Safe System Approach, Boerne is positioned to sustain long-term progress toward eliminating traffic fatalities and serious injuries.

PLANNING COMMITTEE MEMBERSHIP

The Safety Task Force (STF) was established to guide development of the Boerne CSAP, build shared understanding and ownership of the plan, and provide critical input at key milestones throughout the planning process. The STF was composed of City of Boerne staff and elected officials, Kendall County elected officials, local independent school district representatives, emergency response team members, along with public representatives including local organizations and business owners, ensuring a multidisciplinary and community-informed perspective. The STF convened for a series of structured meetings and activities to support plan development.

Throughout the process, the STF played an active role as champions of the plan, helping to build internal alignment and community awareness that will carry forward into implementation. During multiple work sessions, the STF collaboratively developed a mission statement that clearly articulates the purpose of the plan and Boerne’s commitment to supporting the safety of all roadway users now and into the future by **achieving zero roadway fatalities and serious injuries on Boerne’s roadways within the next 20 years.**

MEETING 1
Kick-Off & Goal-Setting
July 31, 2025

MEETING 2
Safety Analysis
(High-Injury Network, Downtown Ped Study)
September 11, 2025

MEETING 3
Priority Considerations and Project Selection
October 23, 2025

INTERSECTION SAFETY ASSESSMENT
STF In-Field Review
October 24, 2025



PROJECT TIMELINE

The timeline for STF and Public Meetings for the City's CSAP is shown below:

		FY 2025						FY 2026					
		JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
ACTION PLAN DEVELOPMENT	ACTION PLAN												
	RECOMMENDATIONS												
	IMPLEMENTATIONS										★		★
ENGAGEMENT	SAFETY TASK FORCE MEETING												
	PUBLIC ENGAGEMENT ACTIVITY												★
	ONLINE ACTIVITY												

- STF Workshop (Planning Structure)
- Survey/Public Comment
- Intersection Safety Assessment
- Council Meeting
- Pop-Up Event
- ★ Adoption
- ★ Final Plan

SAFETY ANALYSIS

A comprehensive analysis of crash data from 2020 to 2024, supplemented by a Downtown Pedestrian Study and community input, identified systemic safety challenges across the roadway network. While fatal crashes are relatively infrequent, injury crashes persist and disproportionately affect vulnerable road users, particularly pedestrians and bicyclists. Nearly half of all crashes occur at intersections, and a small portion of the roadway network accounts for a majority of fatal and serious injury crashes. These findings reinforce the need to focus on crash severity reduction, not just crash frequency, and to prioritize locations with high pedestrian activity and complex traffic interactions.

VISION AND GOALS

VISION FRAMEWORK

The vision for the Boerne CSAP, shaped through meaningful community input, provides a clear foundation for creating a safer and more connected transportation system. This vision is organized around three integrated components: **Guiding Principles, Goal Statements, and Actions.**

The Guiding Principles define the City’s core safety themes, emphasizing Safe System design, community-focused mobility, a strong culture of safety, data-informed decision-making, and collaborative partnerships. These principles inform the Goal Statements, which articulate the City of Boerne’s long-term safety objectives. Building on these goals, the Actions identify the practical steps needed to achieve them, including policy and process updates, operational strategies, infrastructure improvements, education efforts, and coordinated partnership initiatives.



The goal statements and associated actions are compiled into an implementation program to guide the City and its partners on the road to zero traffic deaths and serious injuries in the next 20 years.

CSAP GUIDING PRINCIPLES

The Guiding Principles and associated Goal Statements are outlined below. The associated actions for each Guiding Principle can be found in **Chapter 8: Progress and Transparency.**



ROADWAY AND INTERSECTION SAFETY

Improve road design and infrastructure through proven safety countermeasures to reduce crash frequency and severity for all road users, including pedestrians, bicyclists, and motorists.



COMMUNITY FOCUSED SAFETY INVESTMENTS

Prioritize safety improvements in locations where crash history and roadway conditions have the greatest impacts on community activity areas, including schools, parks, downtown districts, civic centers, and recreational areas.



PUBLIC EDUCATION AND AWARENESS

Foster a culture of safety through public awareness about road safety and promote safe behaviors through educational campaigns, outreach programs, and community events.



DATA-DRIVEN DECISION MAKING AND ACCOUNTABILITY

Guide safety investments using data analysis to identify high-risk areas, measure outcomes, and ensure accountability through ongoing evaluation and transparent reporting.



COLLABORATION AND STRATEGIC PARTNERSHIPS

Leverage the City’s leadership in transportation safety by fostering and strengthening partnerships with government agencies, law enforcement, and community organizations to plan, implement, and sustain safety strategies.

CHAPTER 3

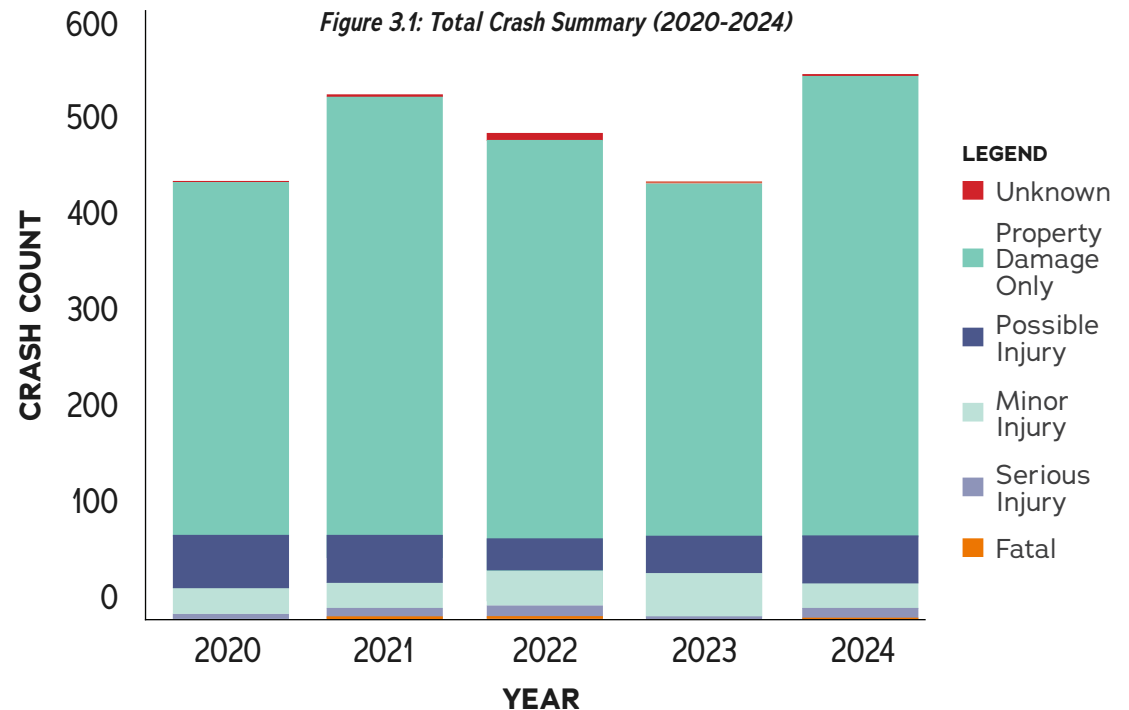
Boerne State of Transportation Safety

An understanding of the City’s current State of Safety is established through a comprehensive, data-driven analysis of crash history, community impacts, existing roadway conditions, key safety observations, and other contributing factors. This analysis is informed by both quantitative data and qualitative insights, including a focused Downtown Pedestrian Study that examines pedestrian activity, crossing behavior, roadway design, and crash patterns within Boerne’s historic downtown. Together, these analyses highlight how roadway safety issues affect residents, visitors, businesses, and overall community vitality, and provide a foundation for identifying priority locations, shaping safety strategies, and guiding project selection throughout the plan.

Findings from the Downtown Pedestrian Study were incorporated into the broader safety analysis by supplementing crash data with on-the-ground observations of pedestrian activity, roadway design, and operational conditions. This information helped identify locations where risk may be elevated due to high pedestrian exposure or design constraints, even where crash history alone is limited. Integrating these insights strengthened the High-Injury Network and informed project prioritization by ensuring that safety strategies address both documented crash patterns and real-world community use.



Figure 3.1: Total Crash Summary (2020-2024)



CITYWIDE CRASH TRENDS

Citywide crash severity trends in Boerne from 2020 through 2024 indicate that the transportation system is characterized by a high proportion of non-injury (N) crashes, with injury crashes comprising a smaller but persistent share of total reported crashes each year. Among injury outcomes, suspected minor injury (B) crashes and possible injury (C) crashes account for the largest proportion and show higher percentages in the most recent years of analysis, indicating a continued presence of moderate-severity crash outcomes across the network.

Suspected serious injury (A) crashes exhibit year-to-year variability, with higher percentages observed in select years, reflecting fluctuations in crash severity rather than a consistent trend. Fatal (K) crashes were infrequent over the five-year period, occurring only in 2021 and 2022; however, even isolated fatal events represent unacceptable outcomes under a Safe System approach.

Overall, these trends highlight the importance of prioritizing strategies that reduce crash severity and mitigate the risk of serious and fatal injuries, consistent with FHWA guidance emphasizing severity-based analysis over crash frequency alone and a focus on protecting vulnerable road users.

YEAR	K FATAL INJURY	A SUSPECTED SERIOUS INJURY	B SUSPECTED MINOR INJURY	C POSSIBLE INJURY	N NOT INJURED	99 UNKNOWN	TOTAL CRASHES
2020	0	4	25	51	340	1	421
2021	2	7	32	40	440	3	524
2022	2	9	38	30	388	5	472
2023	0	3	44	37	302	3	389
2024	1	8	52	33	440	2	536
TOTAL CRASHES	5	31	191	191	1910	14	2342

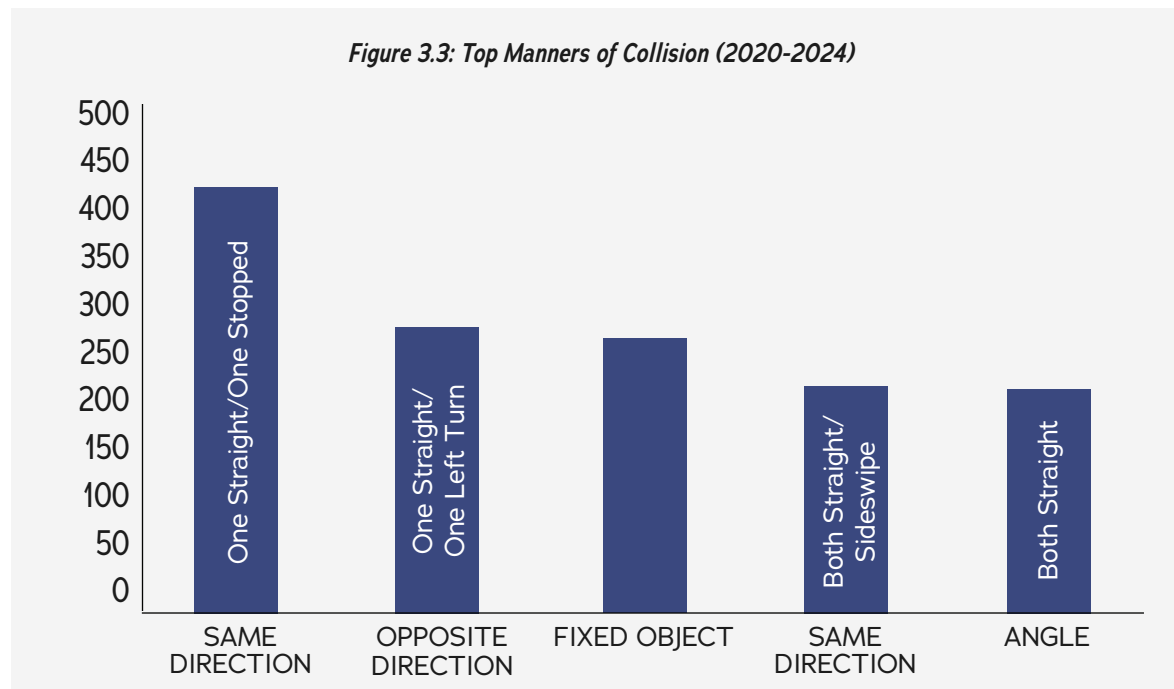
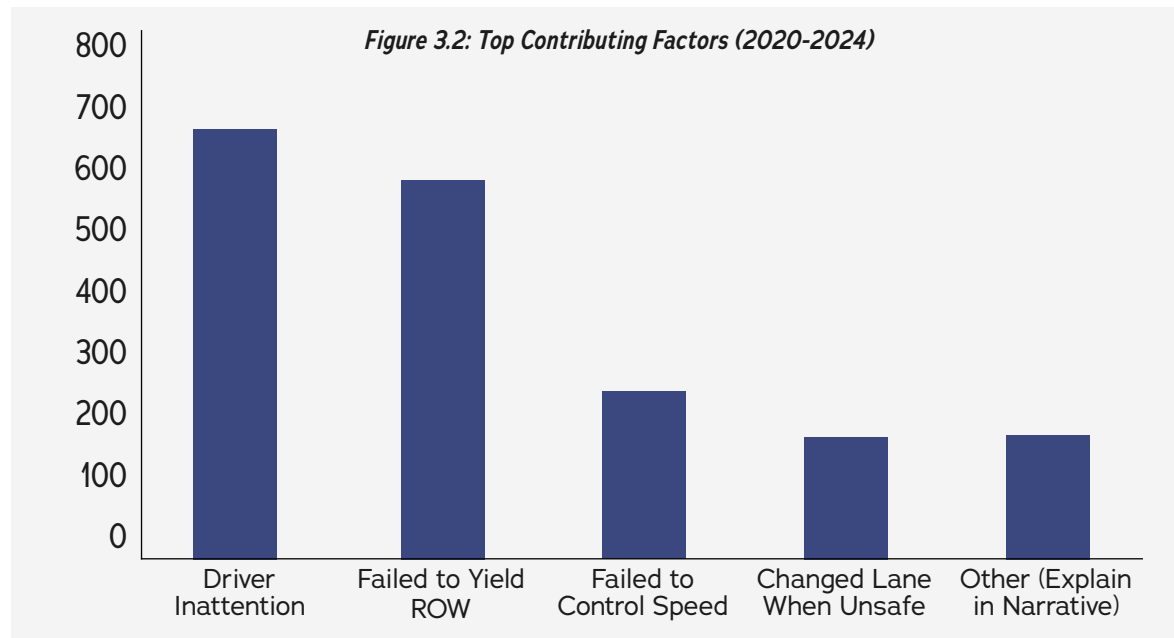
Table 3.1: Total Crashes By Severity (2020 - 2024)



The top contributing factors for crashes in the City for the past five years are represented in **Figure 3.2**. “Distraction” or “Driver Inattention” and “Failed to Yield ROW” are the most cited contributing factor for crashes in Boerne representing 29% and 26% of the crashes, respectively. These contributing factors were listed in more than double the number of crashes when compared to the third most common contributing factor – “Failure to Control Speed” or “Speeding”.

These results identify that the City of Boerne has a unique issue with distraction and failure to yield ROW since more than 25% of its crashes involved these top contributing factors.

The predominant manners of collision for crashes involving vehicles in Boerne are shown in **Figure 3.3**. The most common collision types include ‘Same Direction – One Straight – One Stopped’ (18%), ‘Opposite Direction – One Straight – One Left Turn’ (12%), and Fixed Object (11%). ‘Same Direction – One Straight – One Stopped’ represents rear-end crashes, typically occurring in congested or stop-and-go traffic conditions. ‘Opposite Direction – One Straight – One Left Turn’ describes crashes in which a vehicle making a left turn is struck by an opposing vehicle traveling straight, often at intersections or driveway access points. ‘Fixed Object’ crashes involve a single vehicle striking a non-motorized object, such as roadside infrastructure or other stationary features, and are often associated with roadway lane departure events.



CRASH HEAT MAP

A crash heat map was created to highlight the density of crashes within the City of Boerne from 2020 – 2024 as seen in **Figure 3.4**. This map is a visual representation of the pure density of crash counts at various locations in Boerne. While the crash heat map does not account for traffic volumes, number of lanes, or speed limits, these factors do affect the frequency of crashes.

The highest concentration of crashes occur along IH-10, SH 46, W. Bandera Road and Main Street, particularly in the downtown area between Johns Road and River Road. The largest densities on the crash heat map are near the intersections of River Road & Herff Road/Esser Road and River Road & Main Street. A summary of the crash count from 2020 to 2024 for each crash severity is provided in **Table 3.2**.

CRASH SEVERITY	CRASH COUNT	PERCENTAGE
K – Fatal Injury	5	0.2%
A – Suspected Serious Injury	31	1%
B – Suspected Minor Injury	191	8%
C – Possible Injury	191	8%
N – Not Injured	1910	82%
99 - Unknown	14	0.6%

Table 3.2: Crash Severity Breakdown

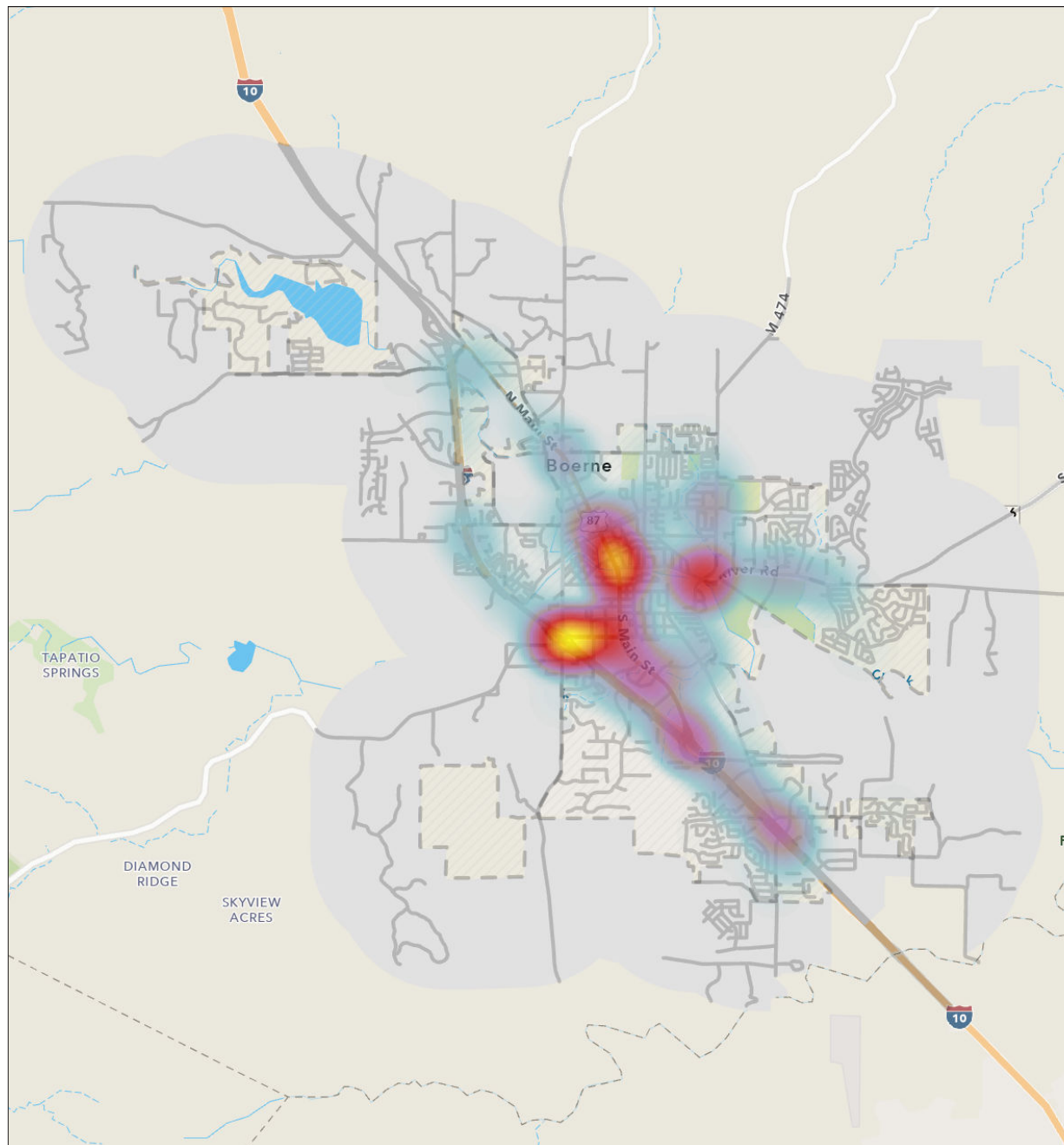


Figure 3.4: Crash Heat Map

HIGH CRASH INTERSECTIONS

Approximately 48% of all the crashes in Boerne occur at intersections. Intersections can easily become safety hazards for all roadway users since these are areas where the most conflicts for vehicles, pedestrians, and bicyclists occur. In the City of Boerne, the intersection at River Rd & Herff Rd had the most crashes over the five-year study period. **Figure 3.4** contains a map that contains the locations of the high crash intersections in the City.

RANK	INTERSECTION	K FATAL INJURY	A SERIOUS INJURY	B SUSPECTED MINOR INJURY	TOTAL NUMBER OF CRASHES
1	River Rd & Herff Rd	0	2	15	107
2	River Rd & Main St	0	1	9	99
3	E. Blanco Rd & Main St	0	0	2	36
4	Christus Pkwy & Main St	0	0	5	33
5	Herff Rd & Main St	0	0	1	29
6	W. Bandera Rd & Main St	0	0	3	26
7	Adler St. & N. School St	0	1	1	24
8	Charger Blvd & River Rd	0	0	4	24
9	Scenic Loop Rd & IH 10	0	0	2	20
10	Plant Ave & E Blanco Rd	0	0	4	18

Table 3.3: High Crash Intersections

*Crashes from 2022-2024

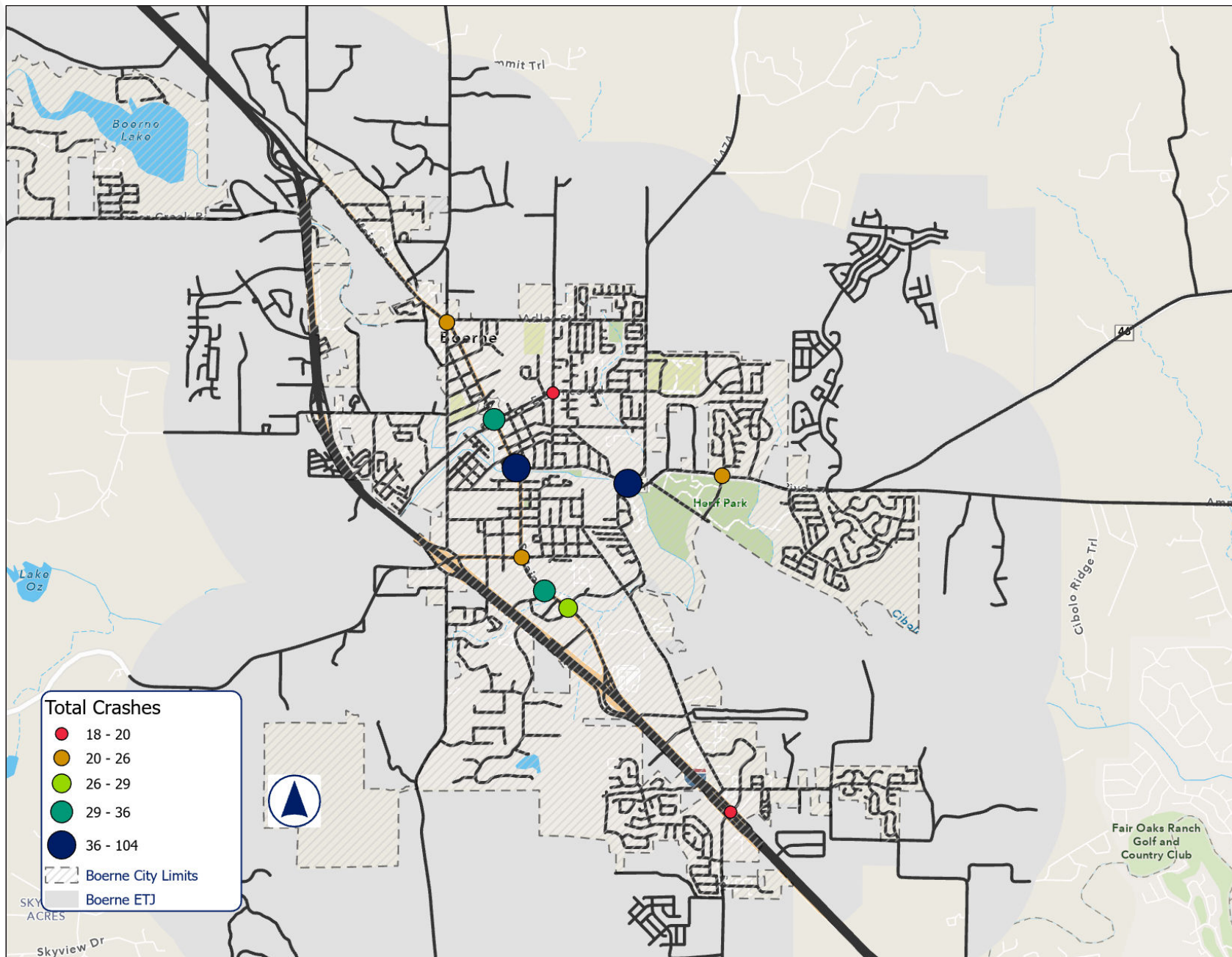


Figure 3.5: High Crash Intersections Map

BICYCLE & PEDESTRIAN CRASHES

During a crash involving vulnerable road users, the most vulnerable to fatal or serious injuries are pedestrian or bicyclist. This fact is consistent with the crash history in Boerne. In the past five years, the City has experienced 16 pedestrian crashes and 8 bicyclist crash as shown in **Figure 3.5**. Of the 24 crashes that involved pedestrians or bicyclists, 18 of them resulted in fatality, suspected serious injury or suspected minor injury.

On average pedestrian and bicycle crashes are more severe than vehicle-only crashes in the City. While only 9% of vehicle-only crashes are fatal (K), suspected serious (A), or suspected minor injury crashes (B), 75% of pedestrian and bicyclist crashes are a KAB crash. A comparison between bicycle/pedestrian and vehicle-only crashes by severity is shown in **Table 3.4**.

CRASH SEVERITY	VEHICLES	BICYCLE/PEDESTRIAN	DIFFERENCE
K – Fatal Injury	0.1%	13%	12.4%
A – Suspected Serious Injury	1%	25%	23.9%
B – Suspected Minor Injury	8%	38%	29.6%
C – Possible Injury	8%	17%	8.6%
N – Not Injured	82%	8%	-74.0%
99 - Unknown	0.6%	0%	-0.6%

Table 3.4: Vehicles by Bicycles & Pedestrian by Crash Severity

There is a notable concentration of pedestrian and bicycle crashes within Boerne’s downtown area, reflecting a convergence of higher pedestrian activity, closely spaced intersections, and access-oriented land uses. Downtown environments typically experience elevated exposure for vulnerable road users due to increased walking and bicycling activity, crossing movements, and interactions with turning vehicles. As a result, even when overall crash frequencies are lower on higher-speed corridors, the risk of serious injury is elevated due to the inherent vulnerability of pedestrians and bicyclists.

This pattern indicates a need for targeted improvements to pedestrian and bicycle facilities in downtown Boerne, including measures that reduce vehicle speeds, improve crossing visibility, and minimize conflict points. A technical memorandum documenting a City of Boerne Downtown Pedestrian Study is included in **Appendix E**.

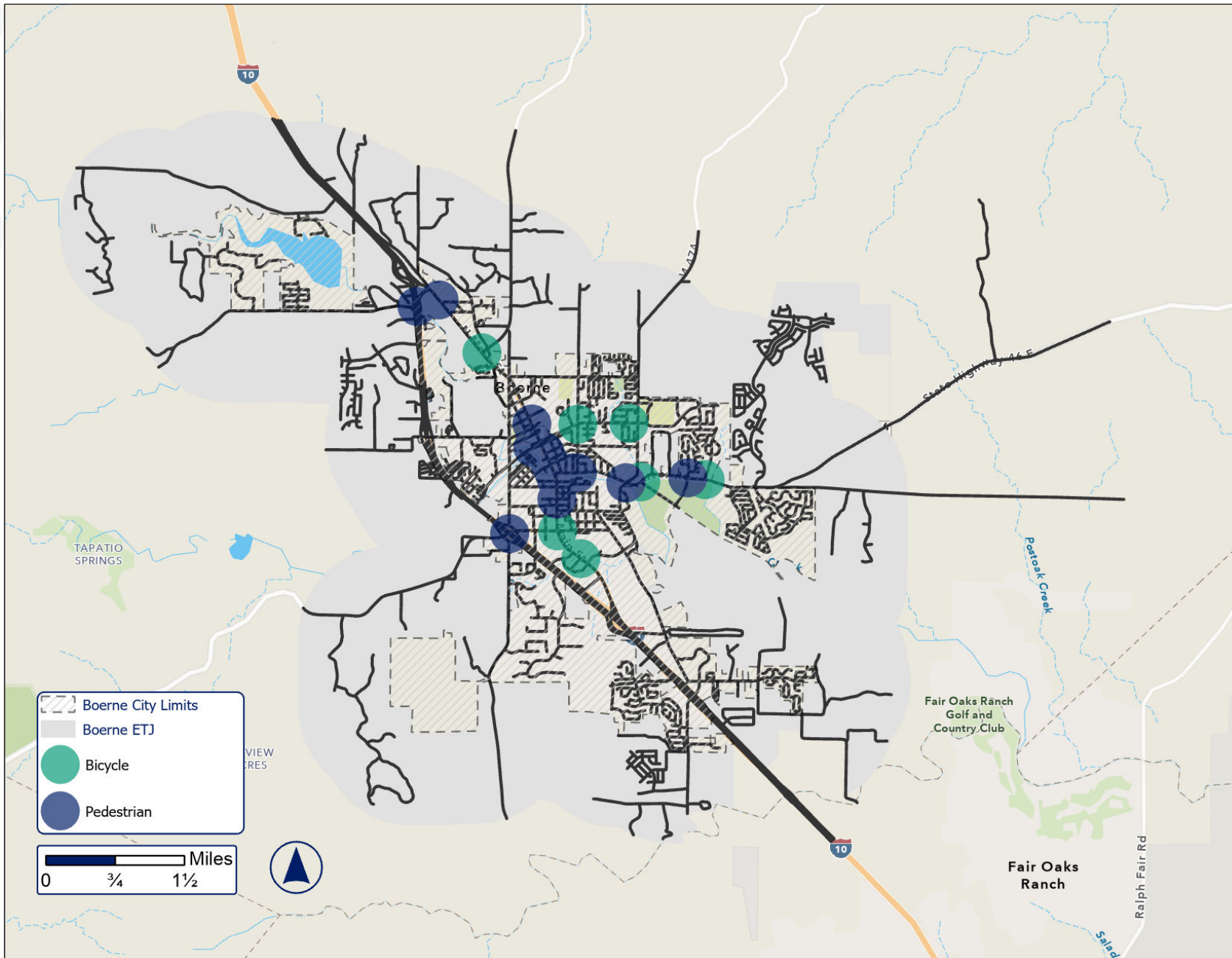


Figure 3.5: Bicycle & Pedestrian Crashes

TRANSIT AND MICROMOBILITY

Fixed-route public transportation service does not currently operate within the City of Boerne. As documented in the 2026 mode-share data in **Figure 3.6**, less than 0.1% of Boerne residents commute by public transportation, reflecting the City’s auto-dependent land-use pattern and the absence of transit or other service providers within the city limits. As a result, transit rider exposure on city-maintained roadways is presently negligible, and transit user crashes are not identifiable as a distinct category in the TxDOT CRIS crash record within the 2020-2024 five-year study period.

While transit related safety risk is currently minimal, the City’s 2018 Master Plan (Action 3.1.6) identifies a future transit station as a long-range goal. As regional demand grows and AAMPO’s Long-Range Transportation Plan evolves, transit access points, park-and-ride facilities, and bus stop infrastructure may introduce new pedestrian exposure and access-road conflicts on city-maintained streets; particularly along IH-10 frontage roads and the W. Bandera corridor. The CSAP’s strategies to improve pedestrian crossings, sidewalk continuity, and intersection safety along these corridors are therefore foundational to supporting future transit access, consistent with USDOT’s Complete Streets guidance.

Micromobility including electric scooters, e-bikes, and personal conveyance devices is not a significant travel mode in Boerne, and no dockless or shared micromobility systems operate within the city limits. However, the growth of privately owned e-bikes among residents using the City’s No.9 Trail and Cibolo Nature trails system and downtown routes is an emerging pattern. The pedestrian and bicycle safety improvements proposed in this CSAP, including enhanced crossings, refuge islands, and sidewalk upgrades, provide the infrastructure foundation that would support safe micromobility use as this mode of transportation grows.

FREIGHT AND COMMERCIAL VEHICLES

Freight and commercial vehicles including semi-trucks, delivery vehicles, and utility service provider vehicles are a key component of the roadway user mix on several City and TxDOT maintained corridors in Boerne. In alignment with the TxDOT freight route system identified in **Figure 3.7**, elevated truck activity is concentrated along IH-10 and associated frontage roads, W. Bandera Road and Business US 87 (Main Street), which functions as a regional through-route. Fixed-object crashes accounting for approximately 11% of all crashes citywide and commonly associated with lane-departure events involving larger vehicles, are most prevalent along W. Bandera Road, a corridor included on the HIN due to its elevated crash rate relative to similar functional classifications. Community input reinforced safety concerns related to commercial vehicle operations, including excessive truck speeds along Main Street and delivery vehicle parking conflicts within the travel lane on Esser Road and Blanco Road. These conditions create increased crash risk and exposure for all road users, particularly pedestrians in downtown and mixed-use areas. While freight operations along IH-10 fall largely outside City jurisdiction, the SS4A framework emphasizes proactive safety improvements at freight transition points such as city-maintained frontage roads, roadway approaches, driveway access areas, and corridors where freight routes interface with pedestrian oriented land uses. These locations present meaningful opportunities for targeted strategies to reduce crash severity, improve multi-modal safety, and better manage commercial vehicle movements within the City’s control.






COMMUTE TRANSPORTATION MODES		PERCENTAGES
PERSONAL VEHICLE		82%
WORK FROM HOME		16.2%
OTHER MEANS OF TRANSPORTATION		0.9%
WALKED		0.07%
PUBLIC TRANSPORTATION		0.1%

Figure 3.6: Boerne Census Mode of Transportation Details

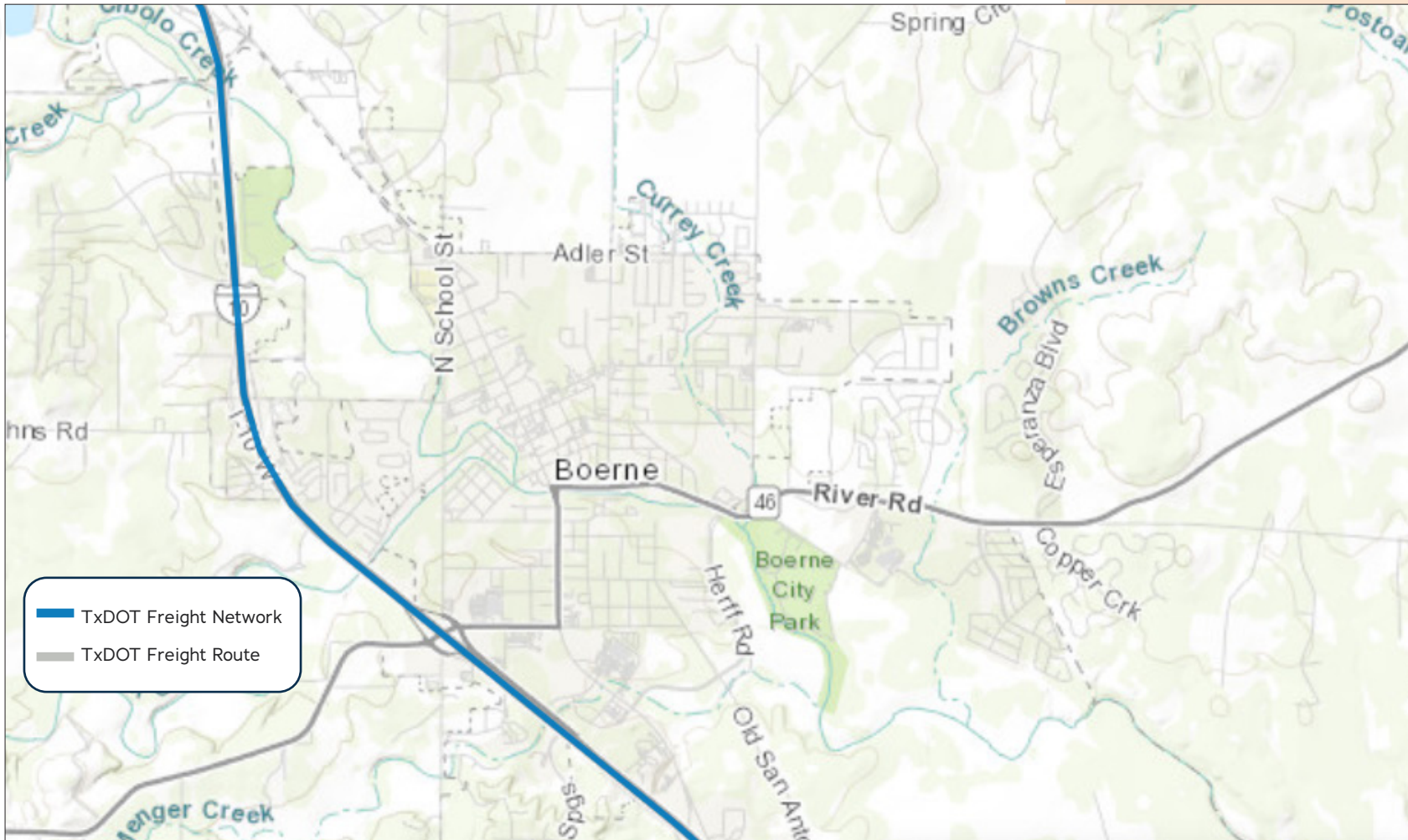


Figure 3.7: TxDOT Texas National Highway Freight Network

CRITICAL CRASH RATE METHOD

The Federal Highway Administration (FHWA) along with American Association of State Highway and Transportation Officials (AASHTO) define the methodology and guidance to calculate crash rates to assist in prioritizing locations where safety improvements are most needed. Outlined in the Highway Safety Manual (HSM), the crash rate method identifies crash hotspots by comparing the observed crash rate at a roadway segment to the expected crash rate based on similar functional classification and traffic volumes. If the observed crash rate exceeds the expected crash rate, the roadway segment is considered to have a crash rate and is considered for the HIN.

An ArcGIS Pro model was created to calculate the crash rate and supporting calculations for each roadway segment in the City. The model assigns crashes to an adjacent segment and performs the calculations. The following section outlines the process used in the calculation of the crash rate using fatal (K), serious injury (A) and suspected minor injury (B) crashes from the previous five years (2020-2024) in Boerne.

CRITICAL CRASH RATE CALCULATION

The following three steps were followed to calculate the crash rate for each road segment in Boerne:



ASSIGNING DATA TO ROAD SEGMENTS

Calculating the crash rate requires three data inputs: roadway functional classification, daily traffic volumes, and crash counts. Since different factors, such as higher traffic volumes, more travel lanes, and higher speed limits, can inflate crash rates, the normalization and comparison of these rates are crucial. The crash rate compares road segments that have similar roadway functional classification and normalizes daily traffic volumes to calculate crashes at a more even level based on their commonalities.



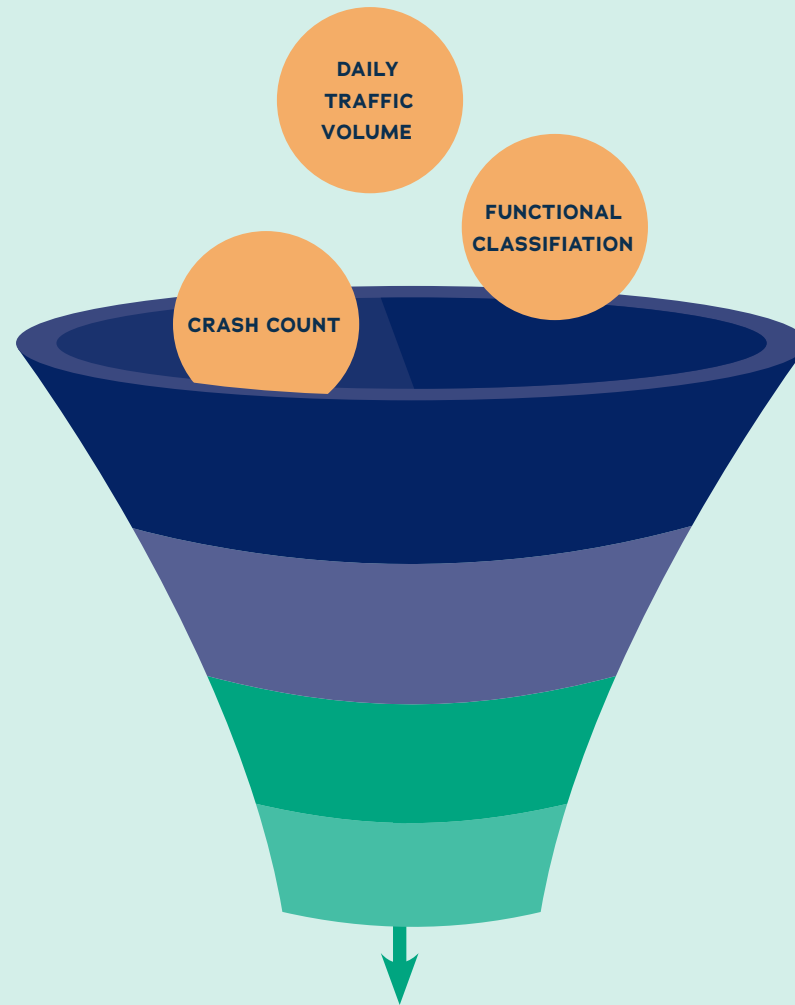
CALCULATE VARIABLES OF CRASH RATE

The crash rates were calculated using the equations outlined in the HSM. The observed crash rate represents the existing KAB crashes on each road segment per million vehicle-miles traveled. For the expected average crash rate per million vehicle-miles traveled calculations, the daily volumes for each functional class were normalized. Furthermore, roadways were only compared to other roadways that were similar; for example, local roads were only compared to local roads. **Figure 3.8** outlines the data inputs needed to calculate the crash rate.



CALCULATE CRASH RATE

The crash rate was calculated and compared to the expected crash rate for similar facilities. A resulting ratio greater than 1.0 indicates that the observed crash rate exceeds the expected rate, meaning the segment experiences more crashes than comparable roadways with the same functional classification. Segments with a ratio of 1.0 or greater were identified as potential High Injury Network (HIN) segments.



CRASH RATE

$$\text{Crash Rate} = \frac{C \times 1,000,000}{AADT \times L \times 365 \times N}$$

Figure 3.8: Critical Crash Rate

HIGH INJURY NETWORK DEVELOPMENT AND RESULTS

A high-injury network (HIN) is defined as a set of roadway segments, intersections, or other transportation facilities that exhibit a disproportionately high occurrence of crashes resulting in fatal or serious injury outcomes. The HIN is identified using traffic crash data and quantitative performance measures that account for crash frequency and severity. The primary purpose of the HIN is to support data-driven prioritization of transportation safety investments and to guide the allocation of limited resources toward locations with the greatest potential for safety benefit.

Identification and prioritization of facilities within the HIN is a critical component of a Safe System based approach to reducing fatal and severe crashes. Establishing the HIN provides a foundational analytical framework that informs subsequent evaluation and selection of safety countermeasures and roadway improvement strategies. The objective of the analysis was to maximize the capture of vehicle-only KAB crashes as well as bicycle and pedestrian KAB crashes while minimizing the total percentage of City maintained roadway mileage included in the network. To refine the initial model output, assumptions were applied to account for roadway segments with limited or incomplete exposure data. Specifically, 15% of total roadway miles were assumed within the analysis to ensure appropriate representation of the overall network. In addition, Interstate Highway 10 (IH-10) was excluded from the HIN, as it falls outside City jurisdiction and is not representative of facilities typically addressed through municipal transportation planning, design, and implementation. These refinements ensured that the resulting HIN reflects facilities over which the City has direct control and can reasonably implement safety improvements.

In addition to the corridor-based analysis, the downtown pedestrian area was included as a **focused component of the HIN due to its higher concentration of pedestrian activity, conflict points, and actively generating land uses**. Although crash frequencies in downtown areas may be lower on a per-segment basis, the elevated exposure of vulnerable road users and the severity potential of conflicts warranted inclusion of this area within the HIN framework. This approach ensures that pedestrian-oriented environments with high safety risk relative to use are appropriately reflected in the City’s safety prioritization process.

The final HIN includes roadway segments exhibiting a concentration of KAB crashes over the most recent five-year analysis period and demonstrating higher than expected crash occurrence relative to the broader network. While not all segments within the HIN experienced a KAB crash, the spatial influence of severe crashes often extends beyond the immediate crash location. To improve network continuity and analytical coherence, gaps between adjacent high-crash segments were filled to better reflect the functional and safety context of the roadway system. Boerne’s HIN consists of approximately 23 miles of roadway that capture 72% of KAB crashes.

A summary of all segments included in the HIN is shown in **Table 3.6**, and a map of the City’s HIN is shown in **Figure 3.9**.

	LENGTH (MILES)	INJURY CRASH COUNT				TOTAL CRASH COUNT
		KAB	K	A	B	
Within City Limits Network	153	227	5	31	191	2,342
High-Injury Network	23	164	2	19	143	1,721
High-Injury Network Percentage of Total	15%	72%	40%	61%	75%	73%

Table 3.5: City of Boerne Crash Summary

K = Fatal Crash | A = Suspected Serious Injury Crash | B = Suspected Minor Injury Crash

ROADWAY	FROM	TO	CLASSIFICATION	LENGTH (MI)	AADT	TOTAL CRASH COUNT	K	A	B	TOTAL CRASHES	CRASH RATE (MVMT)
N Esser	Greyhound Ln	Deer Creek	Collector	0.06	7,322	13	0	0	4	4	4.99
E Blanco	S Esser	Stonegate Rd	Collector	0.12	7,322	31	0	0	4	4	2.49
W Bandera	Wanda	Water St	Arterial	0.25	15,755	12	0	0	12	12	1.67
River Rd	City Park	Sharon	Arterial	0.16	10,748	24	0	0	4	4	1.27
River Rd	Champion	Herff Ranch	Arterial	0.30	7,300	23	0	1	4	5	1.25
S Main	E Theissen	James	Arterial	0.05	19,904	19	0	1	0	1	0.55
River Rd	S Main	Pecan St	Arterial	0.08	12,883	16	0	0	1	1	0.53
W Bandera Bridge	Backage Rd	Backage Rd	Arterial	0.22	56,906	143	1	0	10	11	0.48
S Main	W San Antonio	Rosewood	Arterial	0.18	19,904	31	0	0	3	3	0.46
E Blanco	Saunders	Harz	Collector	0.21	9,200	14	0	0	1	1	0.28

Crashes from TxDOT's CRIS for 2020-2024. Crash Rate per million vehicle miles traveled. Roadway classification is based on the City of Boerne Major Thoroughfare Plan.

AADT = Average Annual Daily Traffic | K = Fatal Crash | A = Suspected Serious Injury Crash | B = Suspected Minor Injury Crash

Table 3.6: Top High-Injury Network Segments

CHAPTER 4

Community-Focused Safety Outcomes for All Road Users

For the City of Boerne CSAP, a community-focused approach guides how safety needs are identified and how future investments are prioritized. This approach recognizes that different areas of the City and different road users experience varying levels of exposure, risk, and access to safety infrastructure, and that safety strategies should be tailored accordingly. Rather than applying uniform solutions citywide, the Plan emphasizes directing resources to locations and user groups where safety concerns are most pronounced such as areas with high pedestrian activity, frequent conflicts with vulnerable road users and vehicles, and a history of severe crashes.

By focusing on local conditions and community needs, the City is better able to address uneven safety challenges, reduce the likelihood of fatal and serious injury crashes, and deliver practical, effective safety improvements that benefit all road users.



COMMUNITY CONCERNS AND IDENTIFICATION OF VULNERABLE POPULATION CENSUS TRACTS

While the City is not located within census tracts designated as USDOT-defined Underserved Communities, this CSAP applies a Safe System Approach consistent with Vision Zero principles. Equity within this plan is defined by observed safety outcomes and exposure, rather than solely by federal demographic thresholds. This approach reflects USDOT guidance and best practices, which recognize that serious and fatal injury risk can be highly localized and context-dependent.

For Boerne, locally underserved areas are identified based on disproportionate safety risk to vulnerable roadway users, including pedestrians, bicyclists, older adults, and people with disabilities who are typically overrepresented in fatal and serious injury crashes. Analysis of local crash data, roadway characteristics, traffic speeds and volumes, and land-use context indicates that downtown Boerne and areas near parks, trailheads, and plaza centers experience higher pedestrian exposure and elevated crash risk compared to other parts of the city. These conditions are driven by concentrated walking activity, frequent street crossings, on-street parking, tourism and special events, and interactions between local traffic and regional through-traffic.

Consistent with Safe System principles, the Plan emphasizes proactive, data-driven identification of risk rather than reactive responses to individual crash locations. Crash history and systemic safety analysis show that fatal and serious injury crashes in Boerne are concentrated:

- Along higher-speed corridors that transition into lower-speed downtown streets,
- At complex or closely spaced intersections, particularly where turning movements and pedestrian crossings overlap, and
- In locations with limited or inconsistent pedestrian and bicycle infrastructure, including gaps in sidewalks, crossings, and accessible facilities.

Although these areas may not meet federal definitions of underserved communities, the **documented concentration of severe crash outcomes and high pedestrian exposure demonstrates a disproportionate safety burden**, particularly in and around downtown Boerne. These findings support targeted safety strategies and investments focused on preventing roadway fatalities and serious injuries, with priority given to locations where vulnerable users are most exposed and at risk.

Figure 4.1 illustrates locally identified vulnerable user areas, highlighting downtown Boerne and other priority corridors and intersections with elevated pedestrian exposure and crash risk.

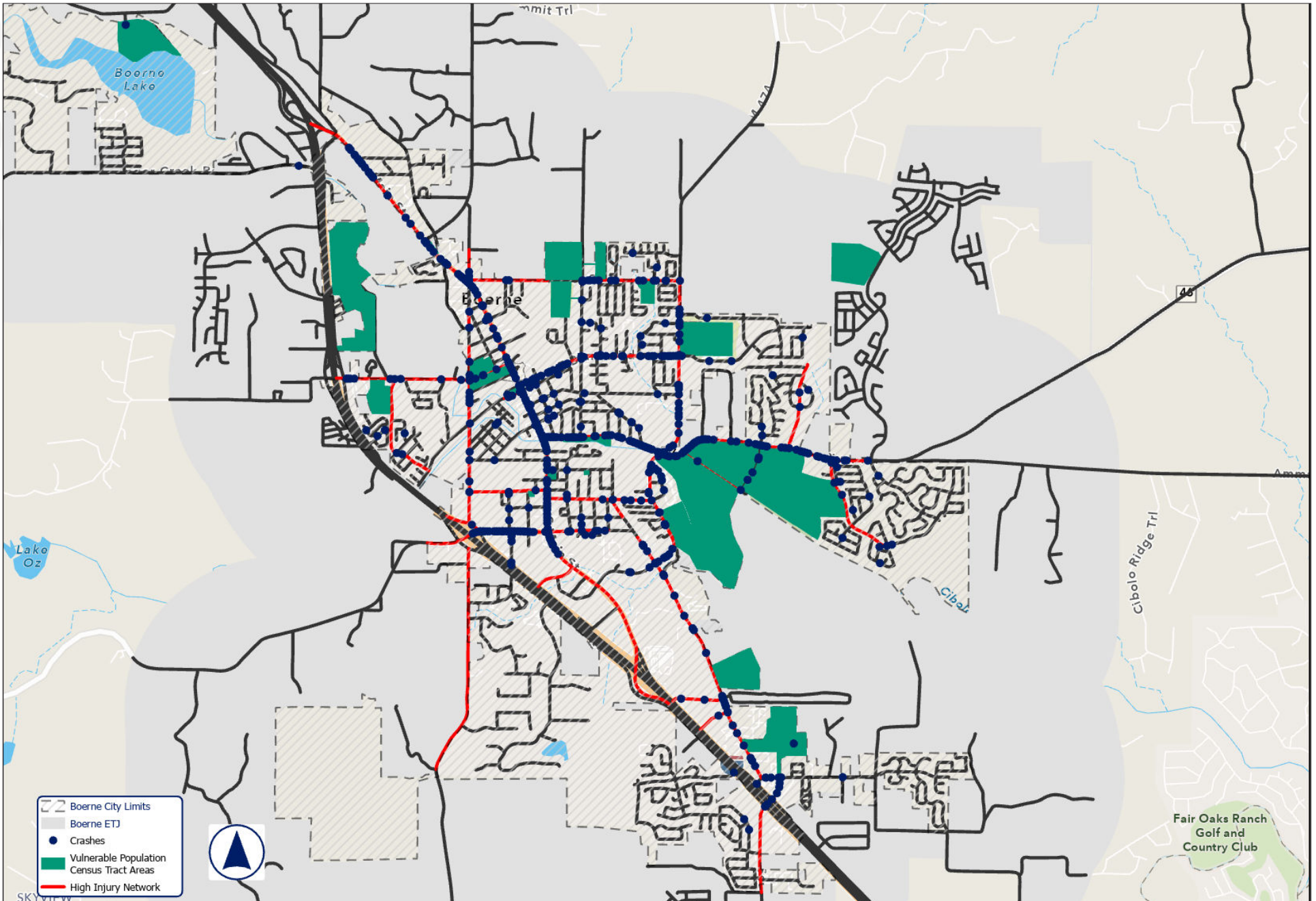


Figure 4.1: Vulnerable Population Census Tract Areas

LOCAL DEMOGRAPHICS, TRAVEL PATTERNS, AND DOWNTOWN CONTEXT

Boerne’s demographic and travel characteristics reflect its role as a **regional destination and growing Hill Country community** within the San Antonio-New Braunfels Metropolitan Statistical Area (MSA). Daily commuting, regional pass-through traffic, tourism, and special events contribute to fluctuating traffic volumes on a roadway network that includes both neighborhood streets and higher-speed state and regional corridors. These travel patterns introduce **higher-speed vehicle traffic into areas with significant pedestrian activity**, particularly in the historic downtown core.

Downtown Boerne functions as a multimodal activity center, with a high concentration of shops, restaurants, civic uses, trails, and community events that generate substantial walking activity throughout the day and evening. Pedestrians frequently cross streets mid-block and at unsignalized intersections, interact with on-street parking maneuvers, and share space with bicyclists and delivery vehicles. When combined with vehicle speeds, turning conflicts, and constrained right-of-way, these conditions increase the likelihood that conflicts may result in severe outcomes for vulnerable users.

Compared to outlying areas of the City, Downtown Boerne exhibits:

- Higher pedestrian exposure, including older adults, visitors unfamiliar with local streets, and people with mobility or visual impairments;
- Short, local trips made on foot or bicycle that intersect with regional traffic; and
- Limited recovery margin in the event of a crash due to lower tolerance for speed and design inconsistencies.

Figures 4.2 and 4.3 summarize travel characteristics, including commute patterns and mode share, to contextualize pedestrian exposure and safety risk within Boerne and its downtown core.

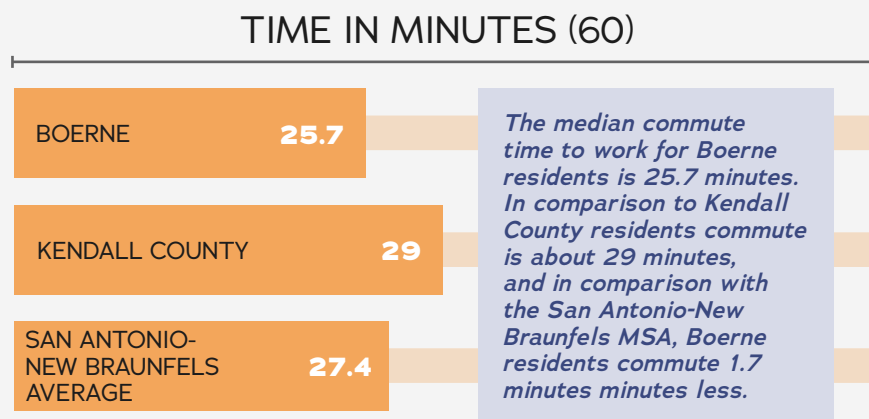


Figure 4.2: Commute Times

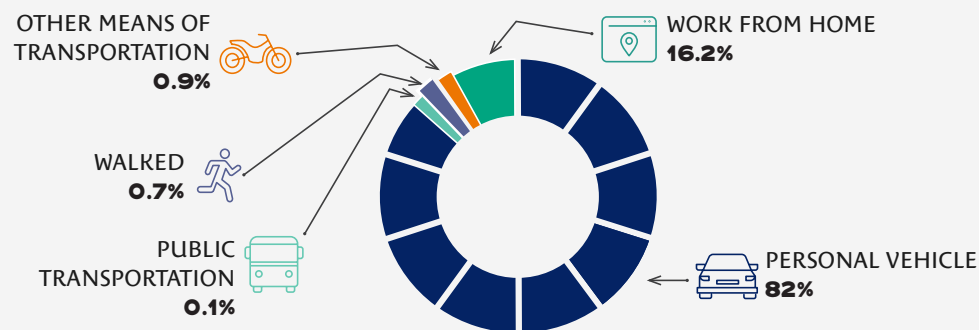


Figure 4.3: Transportation to Work

CRASH HISTORY AND SEVERITY TRENDS IN VULNERABLE POPULATION CENSUS TRACTS

There were 158 total KAB crashes within the vulnerable user area over the last five years (2020-2024), representing approximately 70% of all KAB crashes observed in the City over the same period. Additionally, over the last five years, 21 out of the 24 total bicycle and pedestrian crashes were in the HIN areas (87.5%).

Throughout the City, 9.7% of all crashes are KABs, whereas in disadvantaged census tracts, this number is 9.9%. Although the difference is negligible, the higher percentage of bike and pedestrian KAB crashes within the vulnerable population census tracts suggests disproportionate crash severity, reinforcing the need for targeted safety strategies in these locations.



Figure 4.4: Downtown Boerne

CHAPTER 5

Engagement and Collaboration



Public engagement for the Boerne Comprehensive Safety Action Plan utilized a combination of online tools, in-person pop-up events, and targeted promotional materials to gather input from the community. This approach was intended to reach a broad range of road users and encourage participation from residents, community leaders, and key stakeholders with firsthand knowledge of local transportation conditions.

Engagement activities were designed to capture perspectives on roadway safety across all travel modes, including driving, walking, and bicycling. Feedback collected through surveys, public events, and outreach efforts helped identify safety concerns, high-risk locations, and areas where improvements are most needed.

ONLINE ENGAGEMENT

Online engagement materials prioritized clear communication and ease of participation, allowing community members to provide input at their convenience. Multiple online touchpoints supported continued involvement throughout the planning process and helped maintain consistent communication with residents and stakeholders.

Social Pinpoint was used throughout the development of the Comprehensive Safety Action Plan as a central online hub. The platform provided information on upcoming engagement opportunities, hosted survey links, and served as a repository for plan materials. Through online surveys and interactive maps, Boerne residents had two opportunities to share feedback on transportation safety within the City. Overall, the online engagement effort was well received and generated positive feedback from both residents and stakeholders.

SURVEY

The Boerne CSAP Safety Survey aimed at collecting information on demographics, commute, mode choice, and roadway safety concerns. The survey was comprised of 33 questions. This survey was available on the project website and at the in-person public events, where a postcard was given with a QR code that directed you to the survey on the website.

To capture a comprehensive understanding of community needs and priorities, the City of Boerne placed a strong emphasis on gathering direct public input throughout the planning process. Multiple surveys and engagement activities were evaluated to ensure community perspectives meaningfully informed the Comprehensive Safety Action Plan therefore, reflecting the City’s commitment to understanding how safety improvements will impact residents’ everyday experiences.

Across the Boerne Community Survey, the Boerne ADA Transition Plan Survey, the Boerne Safety Action Plan Survey, the Boerne Market Days CSAP activity, and the Alamo Area Metropolitan Planning Organization (AAMPO) Long Range Transportation Plan exercise, **a total of 1,149 mobility focused responses were collected.**

As shown in the graph on the following page, **Figure 5.2**, 36% of the responses identified pedestrian and vehicle safety as the highest priorities, while 7% of the responses focused on bicycle safety emerging as an additional concern.

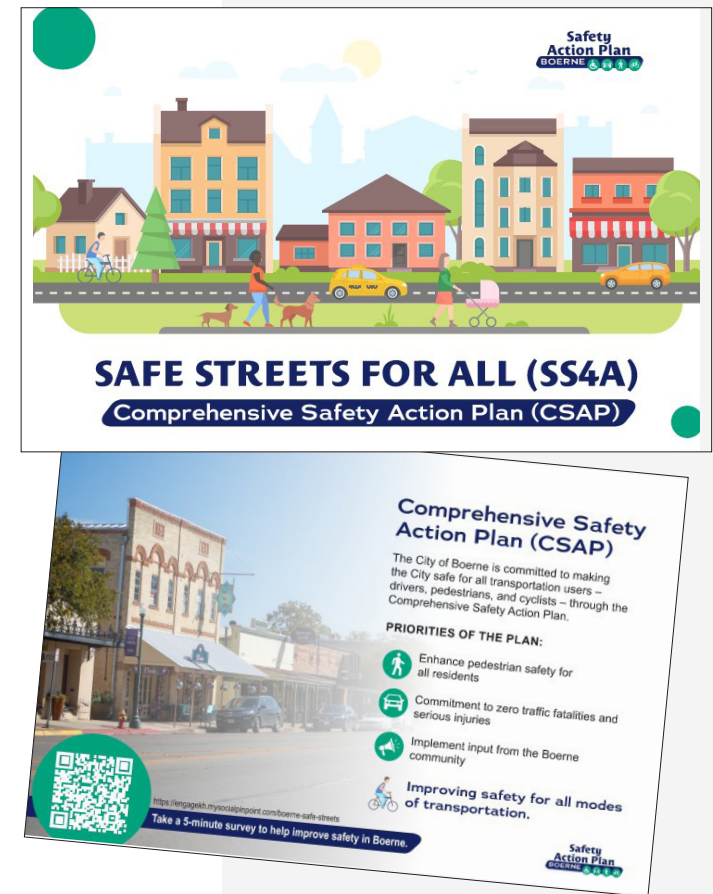


Figure 5.1: CSAP Survey Postcard



Figure 5.2: Mobility Focused Public Responses

To further illustrate these mobility focused priorities, the graph below provides a detailed breakdown of the specific transportation priorities the community wants to focus on. **The results of those selections are presented to the below.**

Systemic Countermeasure Public Responses

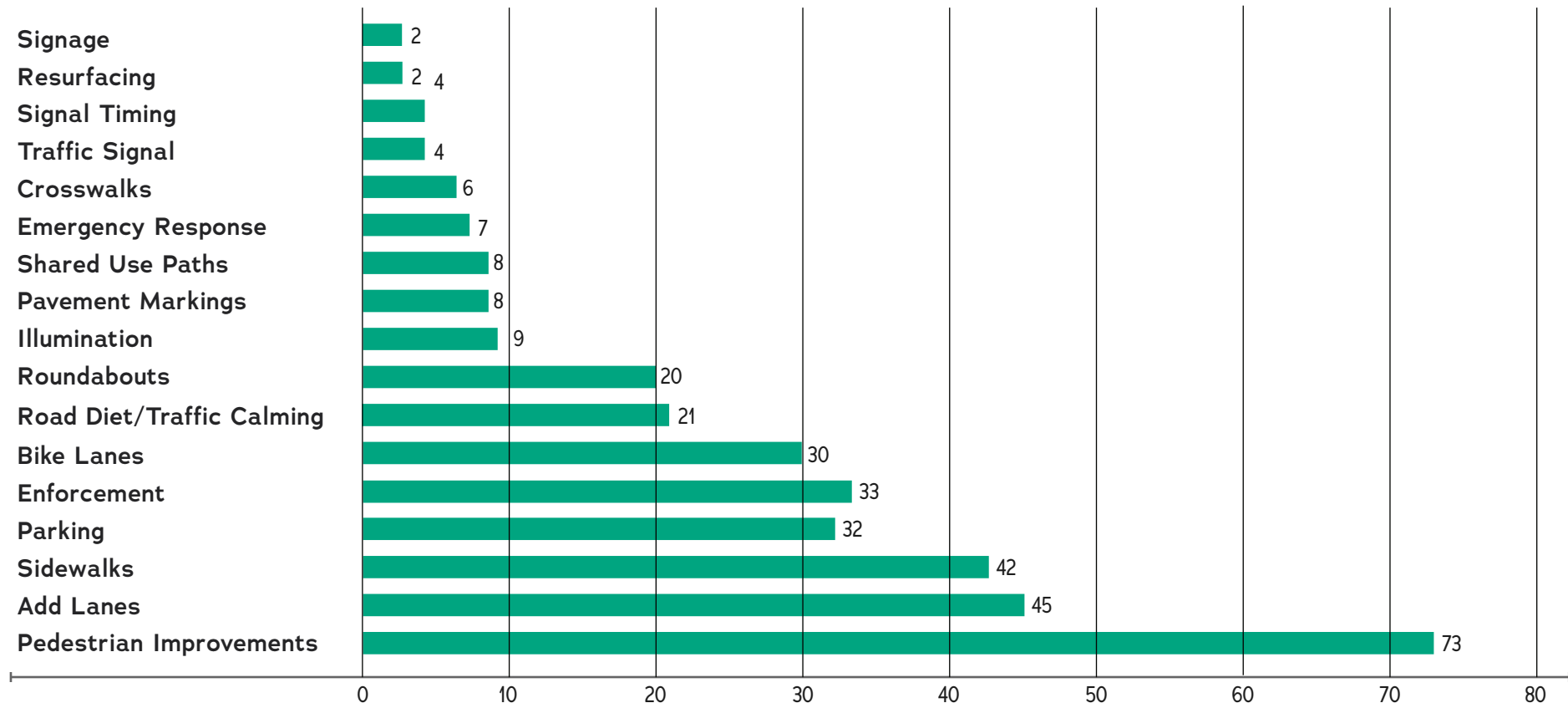


Figure 5.3: Systemic Countermeasure Public Responses



Based on the focus area selection results, intersection safety emerged as the highest-priority emphasis area, followed by safety concerns within the downtown network, particularly along Main Street and River Road.

In addition to selecting focus areas, participants were asked to prioritize specific intersections and corridor segments identified along the HIN. This input was used to further refine and validate priority locations for evaluation and potential countermeasure development. The resulting prioritized intersections and corridors are summarized to the right.

Of the results shown to the right, 98% of the intersections and 71% of the corridors identified by the community fall within the HIN. As part of the survey, participants were also asked to select which systemic countermeasures they would want to see implemented throughout the City of Boerne.

FOCUS INTERSECTIONS	RESPONSES
River Rd & Herff	169
5 Points	18
Main & River Rd	4
SH 46 & Charger	3
IH 10 & SH 46	2
Johns Rd & School Rd	2
Esser & Greyhound	2
Esser & Adler	1
Oak Park & Main	1
Schwepe & Oak Park	1
TOTAL	203

Figure 5.4: Public Identified Focus Intersections

FOCUS CORRIDORS	RESPONSES
Adler St	4
Cascade Caverns	10
Blanco Rd	1
Plant Avenue	4
Old San Antonio	1
Scenic Loop	1
River Rd	21
TOTAL	42

Figure 5.5: Public Identified Focus Corridors

INTERACTIVE MAP

Using interactive maps in the Boerne Safety Action Plan Survey, visitors could provide feedback on the following:

- Where they have experienced near-miss incidents?
- Where they notice pedestrians walking outside of marked crosswalks?
- Where downtown Boerne could benefit from safety countermeasures?
- Where lighting conditions are poor at night?
- Which intersections had poor visibility due to being blocked by landscaping, signage or parked vehicles?

This engagement tool allowed users to place a point on the map and provide their own comment about the location. The image to the right represents a visual example of one of the interactive map questions on the survey.

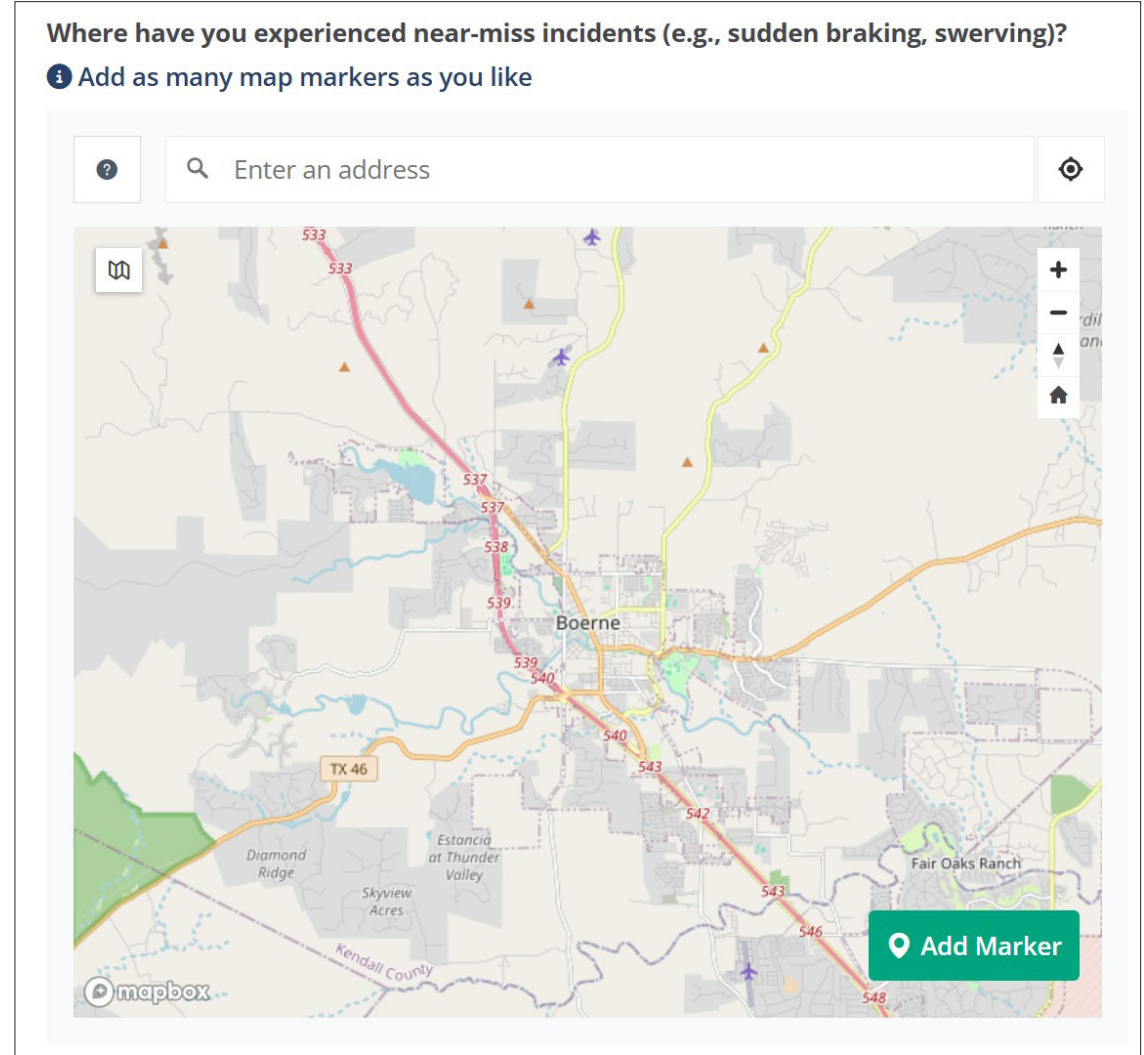


Figure 5.6: Interactive Map Survey Example

IN-PERSON ENGAGEMENT

In-person engagement activities were conducted during periods of heightened community activity to maximize visibility and participation. One such opportunity occurred on Saturday, September 13, 2025, when engagement coincided with Boerne Market Days and a first responder support event (“Tug the Truck”), with active participation from the Boerne Fire Department, Boerne Police Department, and Kendall County Sheriff’s Office. The overlap of these events contributed to elevated pedestrian and vehicle activity across the downtown area and surrounding corridors, creating a highly effective environment for direct outreach. Leveraging this context allowed project staff to engage with a broad cross-section of residents, visitors, and public safety personnel, strengthening the quality and relevance of feedback collected during the in-person engagement effort.

During the pop-up event, participants were asked to identify their top three intersections where they would like to see transportation safety improvements by placing dots on a roll-plot showing multiple intersections throughout the City of Boerne that had been previously prioritized by the Safety Task Force. Participants were also invited to identify desired safety improvements along two downtown roadway segments that are a focus of the Downtown Pedestrian Study: Main Street from Johns Road to Kronkosky and River Road from Main Street to Plant Avenue. For each segment, participants placed sticky notes on separate roll-plot sheets to share specific safety concerns and project ideas. In addition, informational postcards were distributed that provided a brief overview of the Comprehensive Safety Action Plan and included a QR code directing participants to the online survey hosted on the project website.



Figure 5.7: Boerne Market Days Pop-Up

The second in-person engagement activity occurred on October 24, 2025 and consisted of an Intersection Safety Assessment (ISA) field review conducted at two intersections identified by the Safety Task Force as top safety priorities. The intersections of River Road & Herff Road/S. Esser Road and S. Main Street & E. Bandera Road were selected based on their location on the HIN and documented patterns of severe and frequent crashes.

The ISA provided an opportunity for the project team, City representatives, public safety partners and members of the Safety Task Force to observe existing conditions in the field and evaluate how roadway design, traffic control, operations, and surrounding land uses may be contributing to safety concerns for all modes of transportation. Observations focused on identifying potential conflict points, visibility constraints, operational challenges, and vulnerable user crossing conditions. Findings from the ISA were used to inform the identification of targeted, context-sensitive safety improvements and to support the development of data-driven recommendations for inclusion in the CSAP. The ISA pre- and post- assessment documents can be found in the **Appendix C**.



Figure 5.8: Site Visit Team

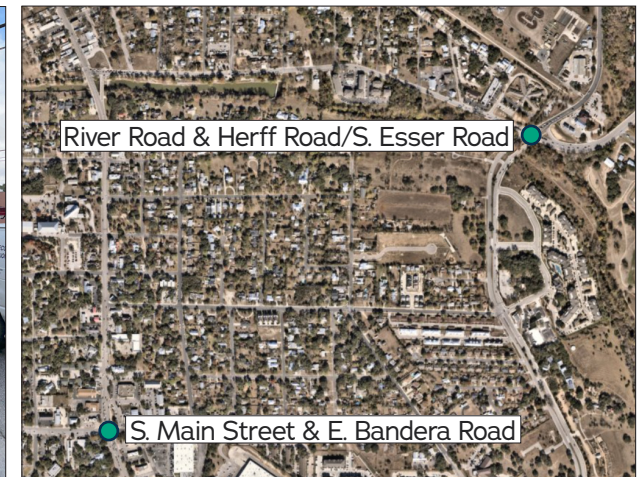


Figure 5.9: Intersection Safety Assessment In-Field Review Locations

CHAPTER 6

Strategy and Project Selections

The CSAP was developed to reduce traffic-related fatalities and serious injuries through data-driven analysis, community engagement, and targeted infrastructure and policy improvements, with particular attention to downtown Boerne and other areas with high pedestrian exposure and elevated safety risk. The CSAP framework includes Strategy and Project Selections, Policy and Process Changes, and Progress and Transparency; and organizes the components of the Plan. All projects and activities are grounded in Safe System Approach principles and draw from the Vision Zero Toolkit (FHWA SA-23-026) and other USDOT guidance.

To identify near-, mid-, and long-term actions, the Safety Task Force participated in an action-planning workshop focused on selecting strategies, projects, policies, and activities. During the workshop, Safety Task Force members reviewed detailed concepts for potential safety improvements along priority corridors, intersections, and downtown activity areas identified as vulnerable user locations. This process allowed participants to identify specific safety needs and opportunities within these high-risk environments. The Safety Task Force then evaluated and discussed each option to develop a prioritized list of improvements.

PROJECTS WERE PRIMARILY PRIORITIZED BASED ON THE FOLLOWING CRITERIA:

- 1** Does the project improve safety, particularly for pedestrians and other vulnerable roadway users?
- 2** Does the project support CSAP goals (accommodate multiple modes, improve mobility, and implement adopted plans)?
- 3** Does the project have strong potential for near-term implementation?



TARGETED INFRASTRUCTURE PROJECTS

Safety analysis, community input, and stakeholder feedback informed the development of planning-level recommendations for focus corridors, priority intersections, and systemic safety countermeasures. The Safety Task Force refined these recommendations to produce a prioritized list of infrastructure projects (**Table 6.1**) for the implementation plan. These projects incorporate proven safety countermeasures designed to address identified crash patterns and create a safer built environment for all users.

Although safety needs were identified along high-crash corridors and intersections, implementing these improvements requires time for planning, environmental review, design, and funding. Accordingly, the infrastructure project list emphasizes safety upgrades along corridors within the HIN and at identified high-crash intersections. Planning level concepts and details for each infrastructure project are summarized in the table below.

	LOCATION	DESCRIPTION	BENEFITS
ID	INTERSECTION PROJECTS		
1	River Rd & Plant Ave	Install a roundabout.	Removes conflict points, improves traffic flow and improves pedestrian safety.
2	Main St & River Rd	Install a southbound left-turn deceleration lane and improve intersection geometry.	Channelizes traffic flow, improves mobility, and removes conflict points.
3	Main St & Adler/School St (5 Points)	Modify traffic signal and reconfigure intersection to add a traffic signal to Adler Street and turn-lanes on Main St.	Controls traffic flow, improves pedestrian safety, and removes conflict points.
4	S. Main St & W. Bandera Rd	Improve intersection geometry on the northeast corner and directionalize pedestrian ramps.	Channelizes traffic flow, improves mobility, removes conflict points, and improves pedestrian safety.
5	Cascade Caverns Rd & Scenic Loop	Install a traffic signal and turn lane.	Controls traffic flow, improves pedestrian safety, and removes conflict points.
ID	CORRIDOR PROJECTS		
1	S. Main St. (E. San Antonio Ave to E. Theissen St)	Install an enhanced pedestrian refuge island, a northbound left-turn lane along S. Main St, a rectangular rapid flashing beacon, and curb extensions.	Improves pedestrian safety, channelizes traffic flow, improves mobility, and removes conflict points.
2	W. Blanco Rd (Main Plaza) (N. Main St to S. Main St)	Partially convert W. Blanco Rd to a one-way street, install a roundabout, a rectangular rapid flashing beacon, and improve pavement markings.	Increases traffic capacity, removes conflict points, improves traffic flow, and improves pedestrian safety.
3	River Rd (Pecan St to Mesquite St)	Install an enhanced crossing pedestrian refuge island and a rectangular rapid flashing beacon.	Improves pedestrian safety.

Table 6.1: Infrastructure Projects

→ **Intersection 1: River Rd & Plant Ave**

PROJECT INFORMATION:

Description: Install a roundabout.

✓ Located on HIN.

Estimated Construction Cost: \$2,030,000

SAFETY IMPACT:

Benefits: Removes conflict points, improves traffic flow and improves pedestrian safety.

Expected Crash Reduction: 35%

Benefit-Cost Ratio: 5.13

PROJECT READINESS:

May Require Utility Relocation

May Require ROW Acquisition

Environmental Impacts: To be Determined




Project Development: Conceptual Design Complete

OTHER PROJECT CONSIDERATIONS:

Roundabout conceptual design was designed consistent with NCHRP guidance that addressed emergency vehicle access, and included stakeholder coordination with the Boerne Fire Department and Police Department to evaluate emergency vehicle clearance at priority intersections.



Figure 6.2: River Rd (SH-46) & Plant Avenue

-  Install Roundabout
-  Install Shared Use Path
-  Parking Enhancements

→ **Intersection 2: Main St & River Rd**

PROJECT INFORMATION:

Description: Install a southbound left-turn deceleration lane and improve intersection geometry.

☑ Located on HIN.

Estimated Construction Cost: \$305,000

SAFETY IMPACT:

Benefits: Channelizes traffic flow, improves mobility, and removes conflict points.

Expected Crash Reduction: 43%

Benefit-Cost Ratio: 490.74

PROJECT READINESS:

May Require Utility Relocation

May Require ROW Acquisition

Environmental Impact: To be Determined

Project Development: Conceptual Design Complete









-  Improve Intersection Geometry
-  Install Raised Median
-  Install Sidewalks
-  Directionalize Pedestrian Ramps
-  Turn Lanes
-  Parking Enhancements

Figure 6.2: Main St & River Rd (SH-46)

→ **Intersection 3: Main St & Adler/School St**

PROJECT INFORMATION:

Description: Modify traffic signal and reconfigure intersection to add a traffic signal to Adler Street and turn-lanes on Main St.

✓ Located on HIN.

Estimated Construction Cost: \$1,200,00

SAFETY IMPACT:

Benefits: Controls traffic flow, improves pedestrian safety, and removes conflict points.

Expected Crash Reduction: 44%

Benefit-Cost Ratio: 8.95

PROJECT READINESS:

Does Not Require Utility Relocation

Does Not Require ROW Acquisition

Project Development: Conceptual Design Complete

Public Engagement: Agency Coordination On-Going

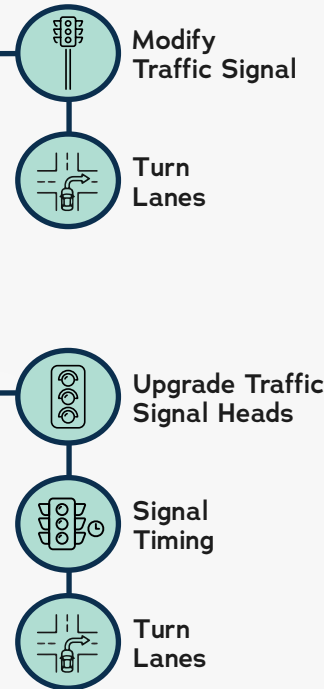


Figure 6.4: Main St & Adler St/School St (5 Points)

→ **Intersection 4: S. Main St & W. Bandera Rd**

PROJECT INFORMATION:

Description: Improve intersection geometry on the northeast corner and directionalize pedestrian ramps.

✓ Located on HIN.

Estimated Construction Cost: \$575,000

SAFETY IMPACT:

Benefits: Channelizes traffic flow, improves mobility, and removes conflict points.

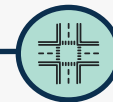
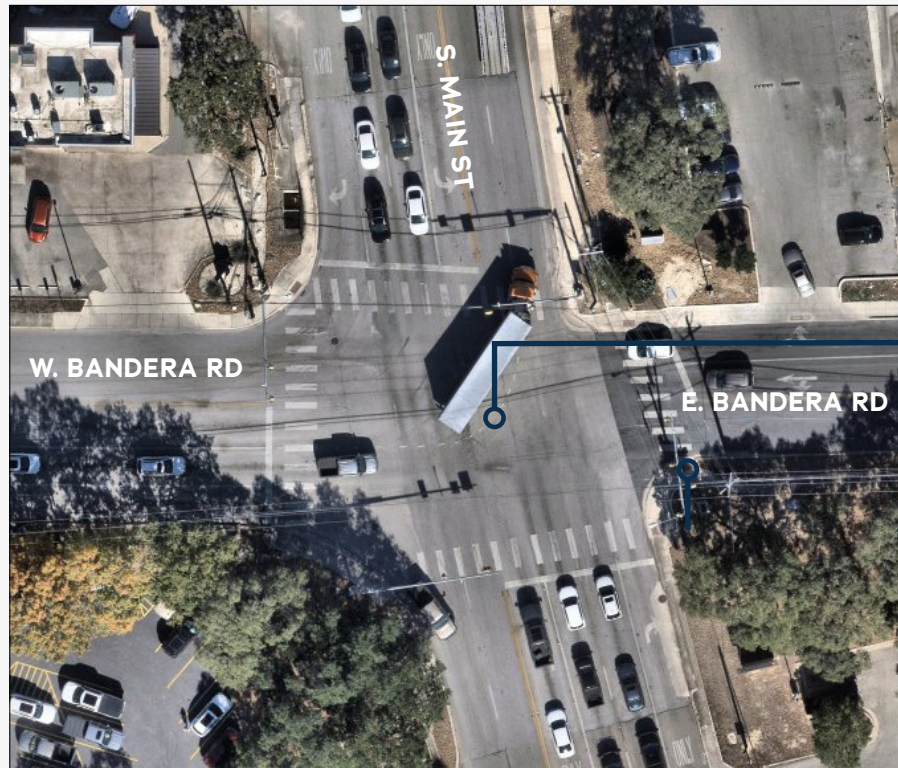
Expected Crash Reduction: 43%

Benefit-Cost Ratio: 21.50

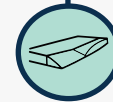
PROJECT READINESS:

May Require Utility Relocation

May Require ROW Acquisition



Improve
Intersection
Geometry



Directionalize
Pedestrian
Ramps

Figure 6.5: S. Main St & W. Bandera Rd

→ **Intersection 5: Cascade Caverns Rd & Scenic Loop**

PROJECT INFORMATION:

Description: Install a traffic signal and turn lane.

Not Located on HIN.

Estimated Construction Cost: \$970,000

SAFETY IMPACT:

Benefits: Controls traffic flow, improves pedestrian safety, and removes conflict points.

Expected Crash Reduction: 44%

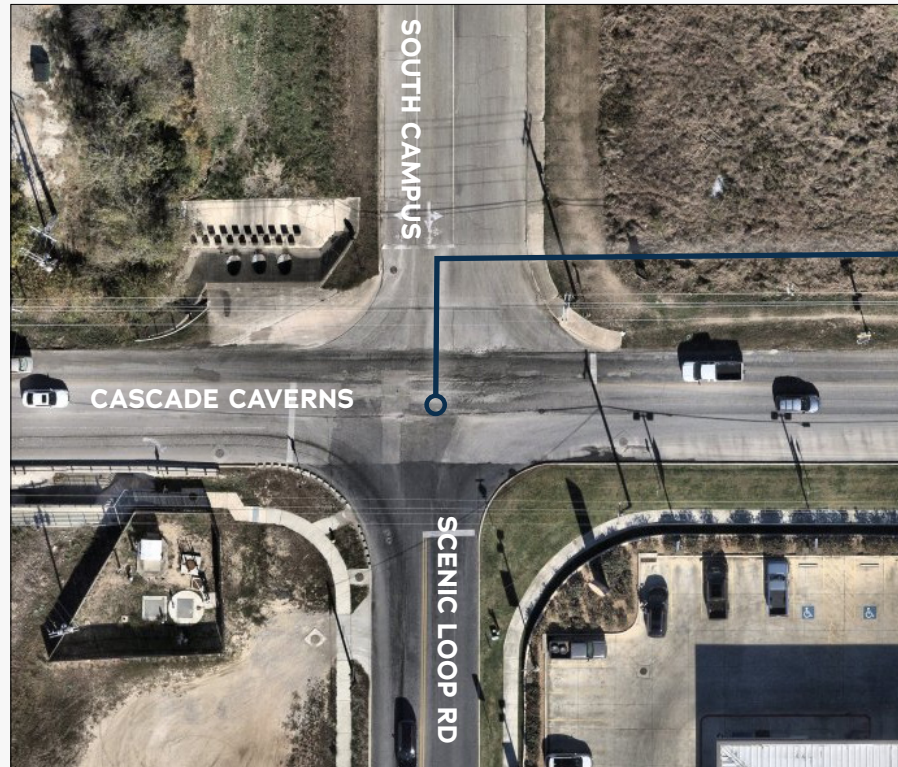
Benefit-Cost Ratio: 2.84

PROJECT READINESS:

Does Not Require Utility Relocation

May Require ROW Acquisition

Environmental Impacts: To be Determined







-  Install Traffic Signal
-  Install Shared Use Path
-  Directionalize Pedestrian Ramps
-  Turn Lanes

Figure 6.6: Cascade Caverns Rd & Scenic Loop

→ Corridor 1: S. Main St

PROJECT LIMITS: FROM E. SAN ANTONIO AVE TO E. THEISSEN ST.

PROJECT INFORMATION:

Description: Install an enhanced pedestrian refuge island, a northbound left-turn lane along S. Main St, a rectangular rapid flashing beacon, and improve pavement markings.

✓ Located on HIN.

Estimated Construction Cost: \$1,040,000

SAFETY IMPACT:

Benefits: Improves pedestrian safety, channelizes traffic flow, improves mobility, and removes conflict points.

Expected Crash Reduction: 89%

Benefit-Cost Ratio: 98.96

PROJECT READINESS:

Does Not Require Utility Relocation

Does Not Require ROW Acquisition

Environmental Impacts: To be Determined

Project Development: Conceptual Design Complete

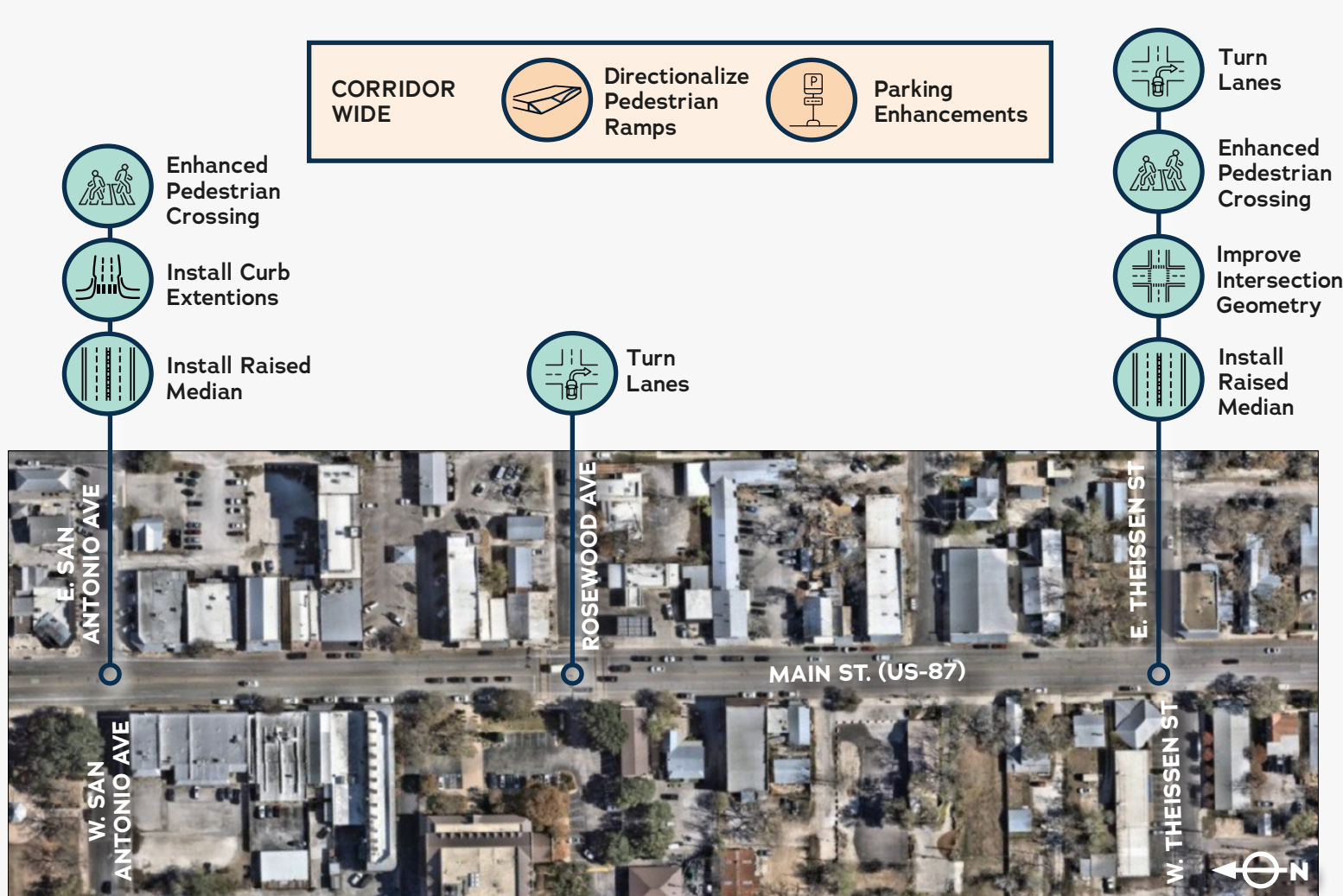


Figure 6.7: S. Main St (E. San Antonio Ave to E. Theissen St)

→ **Corridor 2: W. Blanco Rd (Main Plaza Area- Loop from N. Main St to S. Main St)**

PROJECT LIMITS: LOOP FROM N. MAIN ST TO S. MAIN ST

PROJECT INFORMATION:

Description: Partially convert W. Blanco Rd to a one-way street, install a roundabout, a rectangular rapid flashing beacon, and improve pavement markings.

✓ Located on the HIN.

Estimated Construction Cost: \$960,000

SAFETY IMPACT:

Benefits: Increases traffic capacity, removes conflict points, improves traffic flow, and improves pedestrian safety.

Expected Crash Reduction: 72%

Benefit-Cost Ratio: 5.69

PROJECT READINESS:

May Require Utility Relocation

Does Not Require ROW Acquisition

Environmental Impacts: To be Determined

Project Development: Conceptual Design Complete

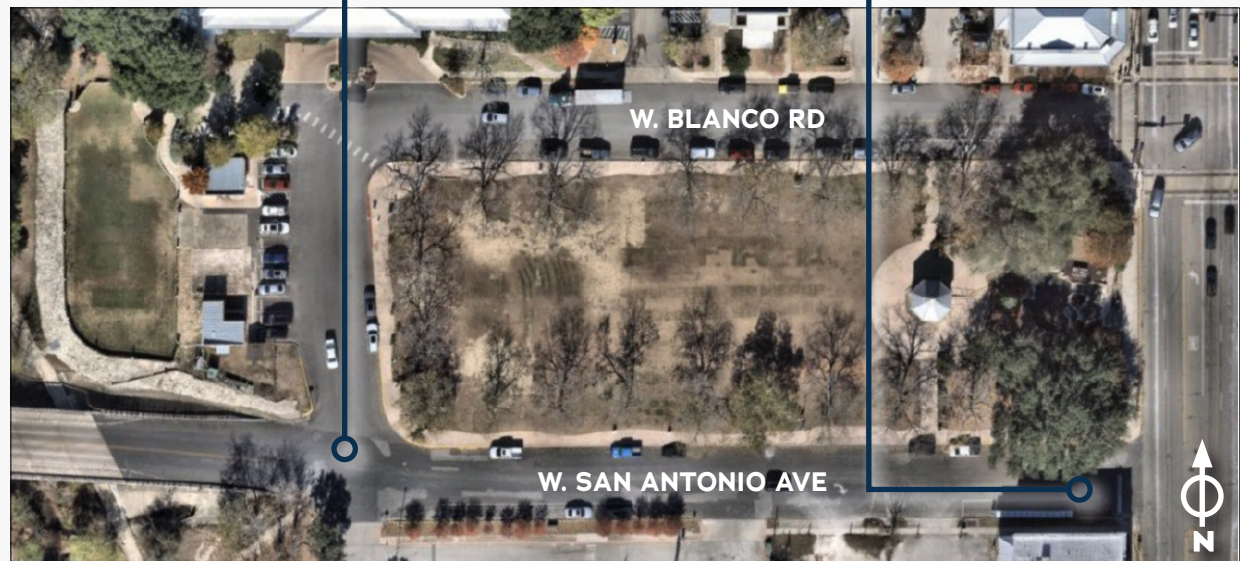
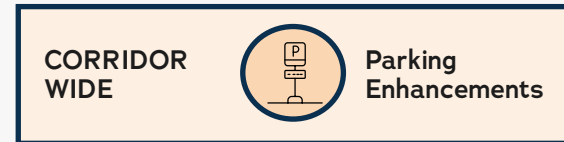


Figure 6.8: W. Blanco Rd (Main Plaza Area - Loop from N Main St to S Main St)

→ **Corridor 3: River Rd**

PROJECT LIMITS: PECAN ST TO MESQUITE ST

PROJECT INFORMATION:

Description: Install an enhanced crossing pedestrian refuge island and a rectangular rapid flashing beacon.

✓ Located on HIN.

Estimated Construction Cost: \$250,000

SAFETY IMPACT:

Benefits: Improves pedestrian safety.

Expected Crash Reduction: 83%

Benefit-Cost Ratio: 183.72

PROJECT READINESS:

Does Not Require Utility Relocation

Does Not Require ROW Acquisition

Environmental Impacts: To be Determined

Project Development: Conceptual Design Complete

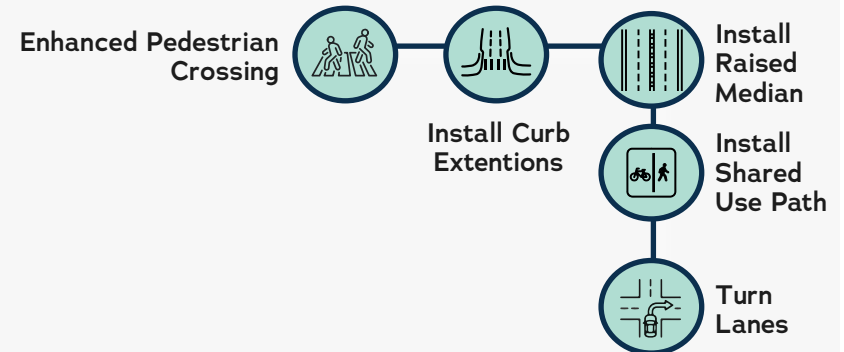


Figure 6.9: River Rd (Pecan St to Mesquite St)

SYSTEMIC COUNTERMEASURES

Systemic safety countermeasures are low-cost, proven treatments that can be deployed broadly across the transportation network to address common crash risk factors rather than individual locations. These countermeasures focus on roadway features and behaviors consistently associated with severe crashes and offer the opportunity for broader safety benefits with faster implementation. In the City of Boerne, systemic countermeasures are intended to complement targeted corridor and intersection-specific projects by improving baseline safety conditions citywide, with emphasis on roadways within the HIN to maximize crash reduction potential and improve safety outcomes for all road users. **Table 6.2** summarizes the systemic countermeasures proposed city-wide.

ID	LOCATION	DESCRIPTION	BENEFITS
1	3 Miles	Install 6-foot sidewalks or 10-foot shared use paths..	Improves pedestrian safety and provides enhanced ADA accessibility.
2	5 Miles	Implement wide edge lines and high contrast crosswalk markings.	Improves driver awareness, pedestrian and driver safety, and improves driver guidance.
3	2 Intersections	Convert existing left-turn permissive-protected movements to flashing yellow arrow.	Reduces opposing left-turn movements, improves driver safety, and reduces delay.
4	9 Intersections	Install backplates with retroreflective borders.	Increase signal visibility, driver safety, and driver awareness.

Table 6.2: Systemic Countermeasure Project List

→ Systemic Improvement 1: Sidewalks/Shared Use Paths

PROJECT INFORMATION:

Description: Install 6-foot sidewalks or 10-foot shared use paths.

Potential Limits: 3 miles

Estimated Construction Cost:
\$900,000

SAFETY IMPACT:

Safe System Approach Element: Safer Roads

Benefits: Improves pedestrian safety and provides enhanced ADA accessibility.

TxDOT HSIP Work Code: 407 and 408

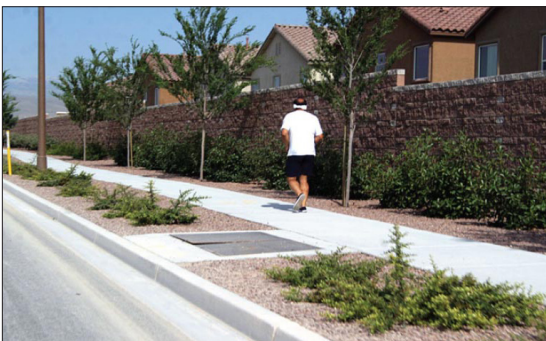
Expected crash Reduction: 50%

PROJECT READINESS:

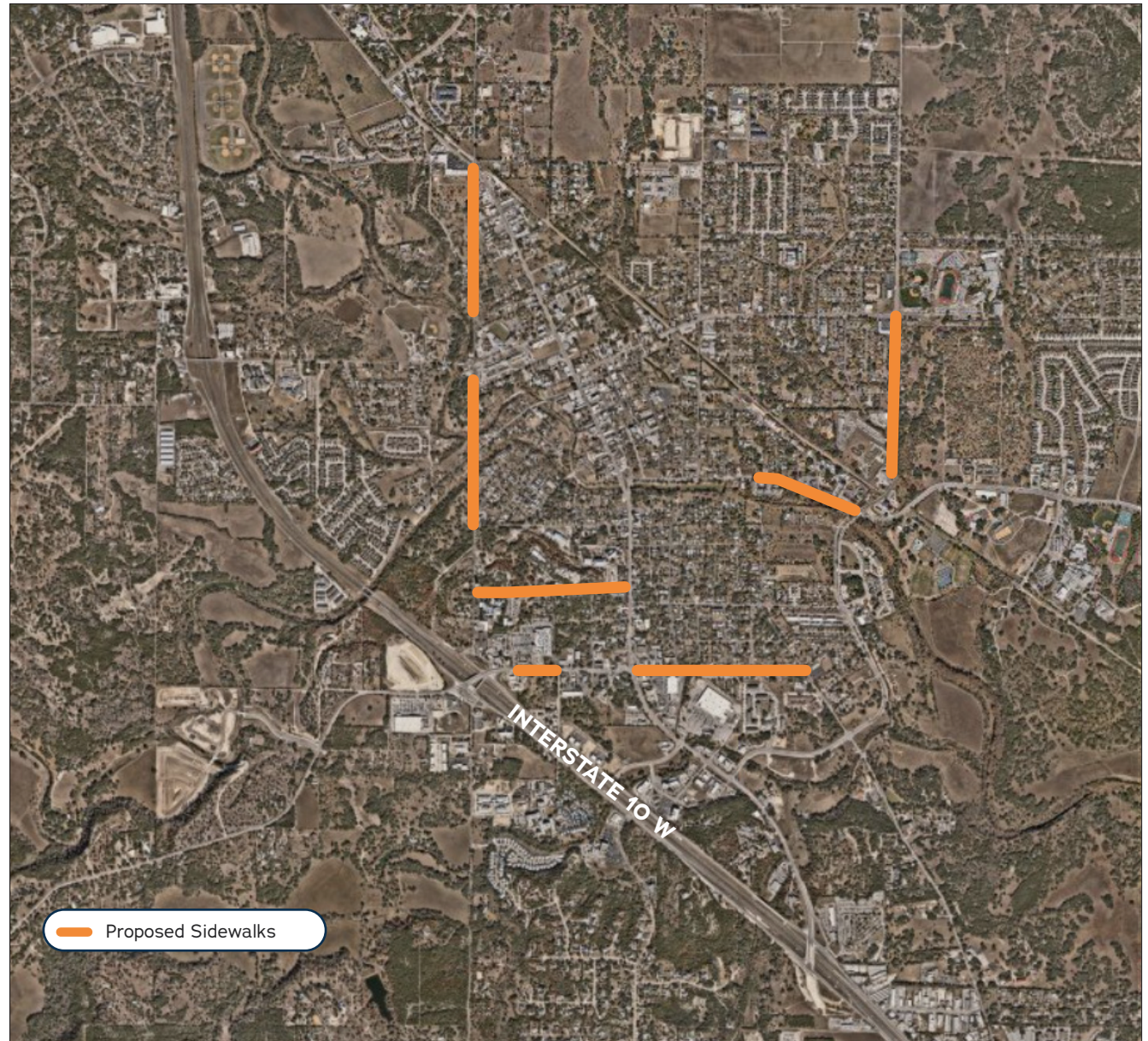
Does Not Require Utility Relocation

Does Not Require ROW Acquisition

Environmental Impacts: To be Determined



Source: FHWA



Source: Nearmap

→ Systemic Improvement 2: Enhanced Pavement Markings

PROJECT INFORMATION:

Description: Implement wide edge lines and high contrast crosswalk markings.

Potential Limits: 5 miles

Estimated Construction Cost: \$200,000

SAFETY IMPACT:

Safe System Approach Element: Safer Roads

Benefits: Implement wide edge lines and high contrast crosswalk markings.

TxDOT HSIP Work Code: 407 and 408

Expected Crash Reduction: 20%

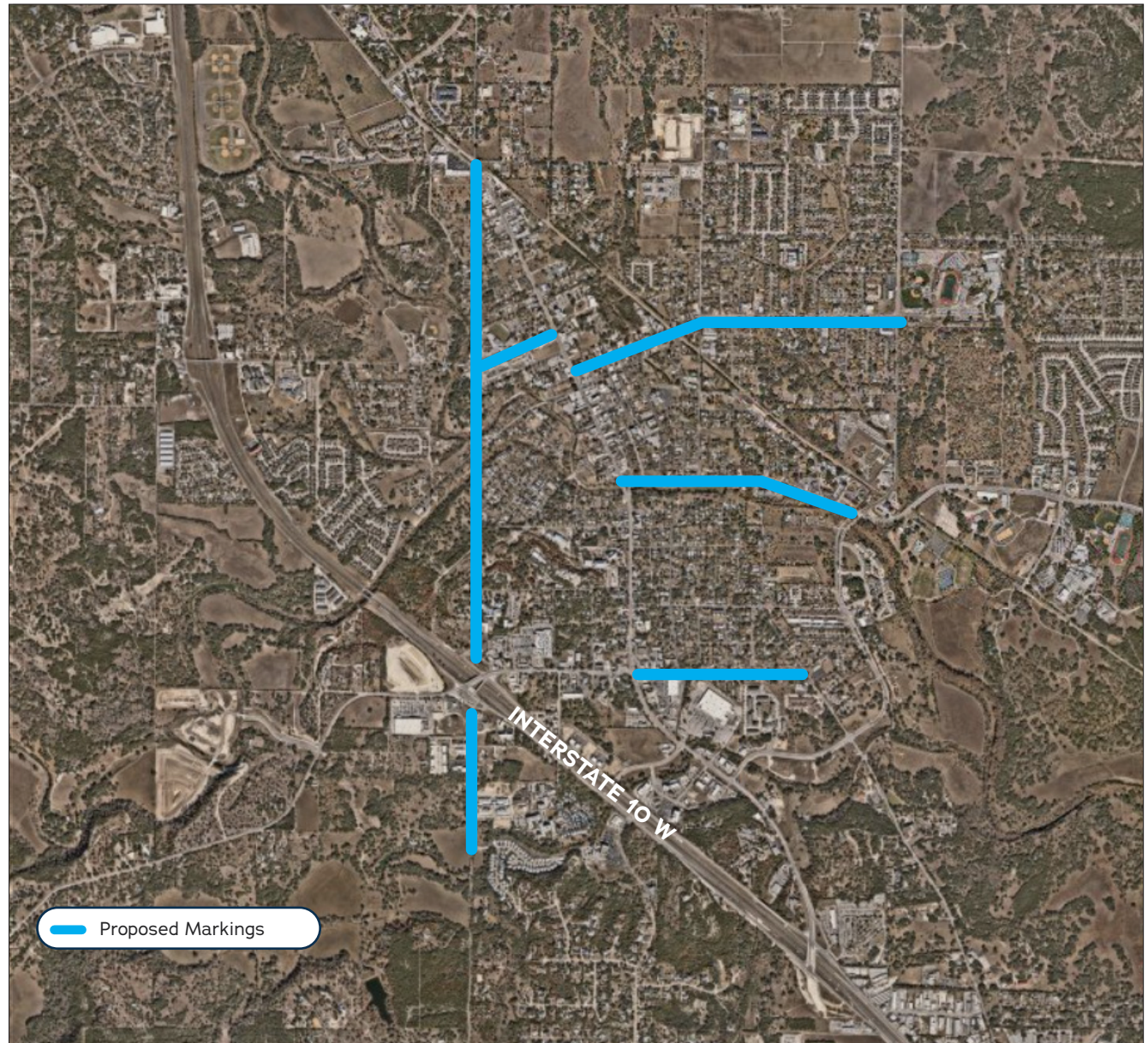
PROJECT READINESS:

Does Not Require Utility Relocation

Does Not Require ROW Acquisition



Source: Texas Transportation Institute



Source: Nearmap

→ Systemic Improvement 3: Flashing Yellow Arrows (FYA)

PROJECT INFORMATION:

Description: Convert existing left-turn permissive-protected movements to flashing yellow arrow.

Potential Locations: 2 Intersections

Estimated Construction Cost: \$50,000

SAFETY IMPACT:

Safe Systems Approach: Safer Roads

Benefits: Reduces opposing left-turn movements, improves driver safety, and reduces delay.

TxDOT HSIP Work Code: 138

Expected Crash Reduction: 40%

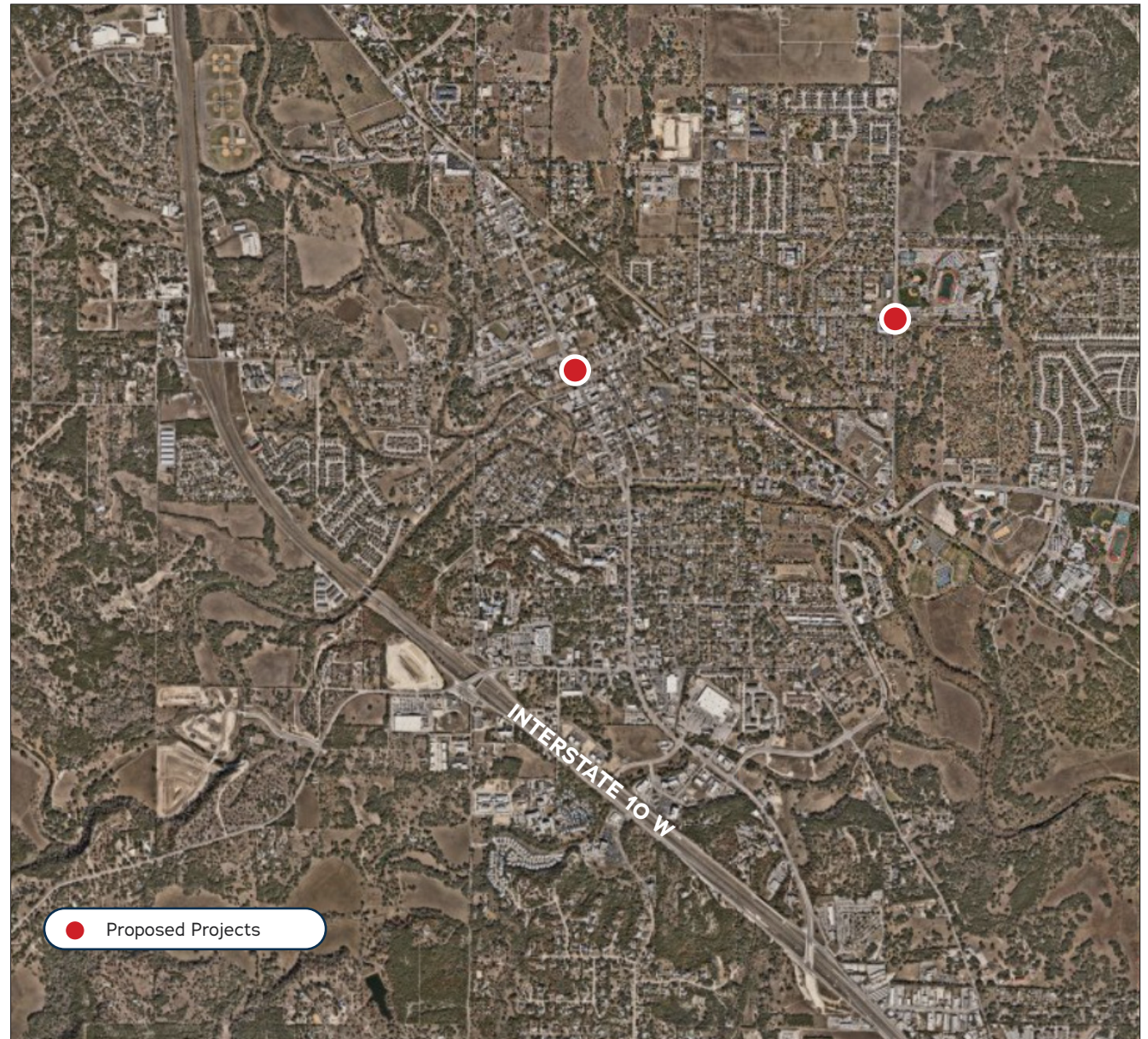
PROJECT READINESS:

Does Not Require Utility Relocation

Does Not Require ROW Acquisition



Source: FHWA



Source: Nearmap

→ Systemic Improvement 4: Retroreflective Borders

PROJECT INFORMATION:

Description: Install backplates with retroreflective borders.

Potential Locations: 9 intersections

Estimated Construction Cost: \$300,000

SAFETY IMPACT:

Safe Systems Approach: Safer Roads

Benefits: Increase signal visibility, driver safety, and driver awareness.

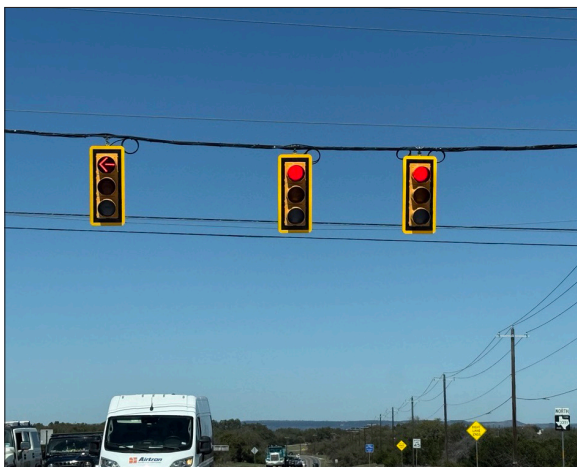
TxDOT HSIP Work Code: 108

Expected Crash Reduction: 10%

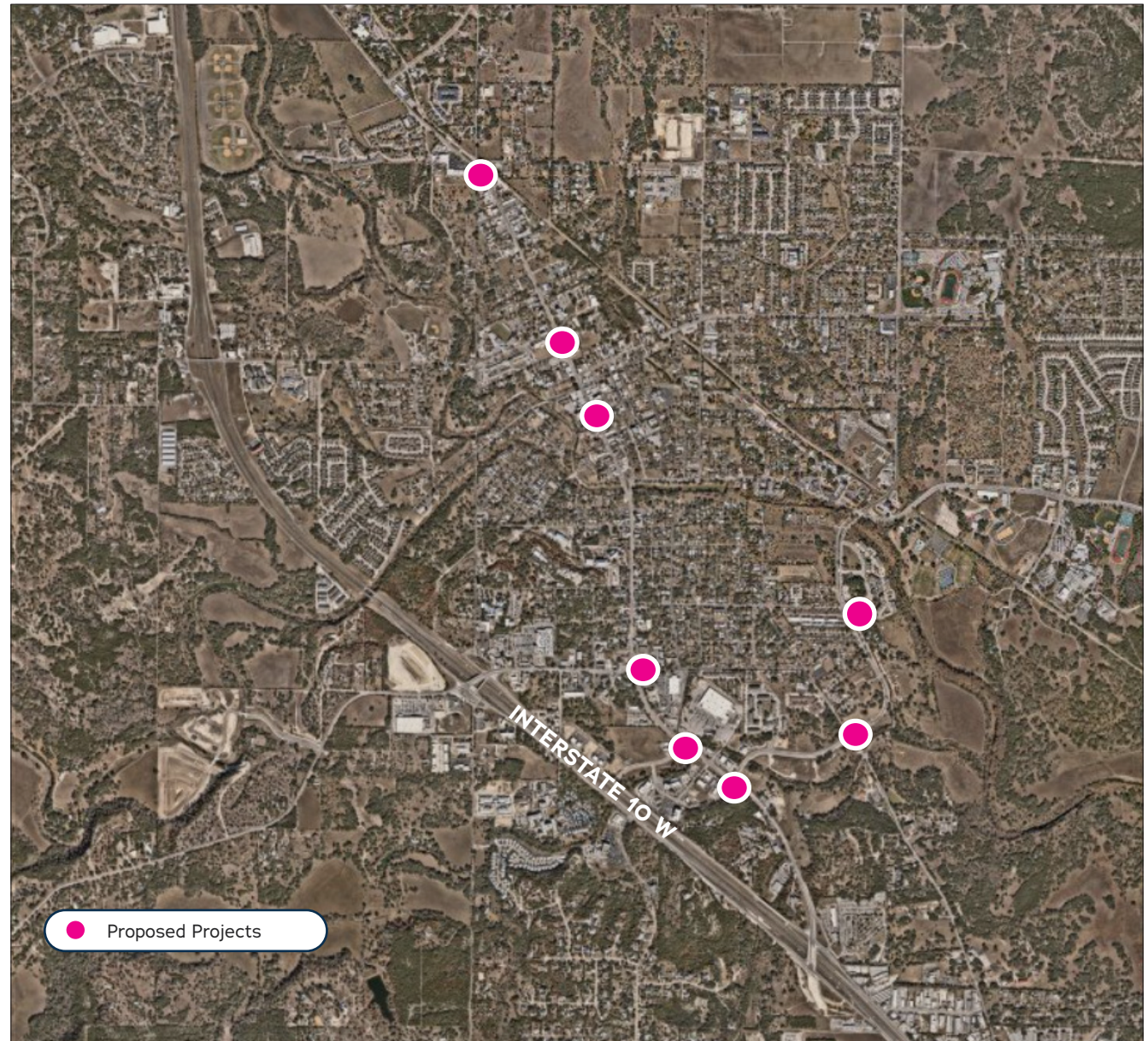
PROJECT READINESS:

Does Not Require Utility Relocation

Does NOT require ROW Acquisition



Location: SH 46 & FM 3351



Source: Nearmap

→ Systemic Improvement 5 | Leading Pedestrian Intervals (LPI)

PROJECT INFORMATION:

Description: Implement leading pedestrian intervals (LPI).

Potential Locations: 4 Intersections.

Estimated Construction Cost: \$50,000

SAFETY IMPACT:

Safe Systems Approach: Safer Roads & Safer People

Benefits: Reduces pedestrian-vehicle conflicts and increases pedestrian safety.

TxDOT HSIP Work Code: 109

Expected Crash Reduction: 16%

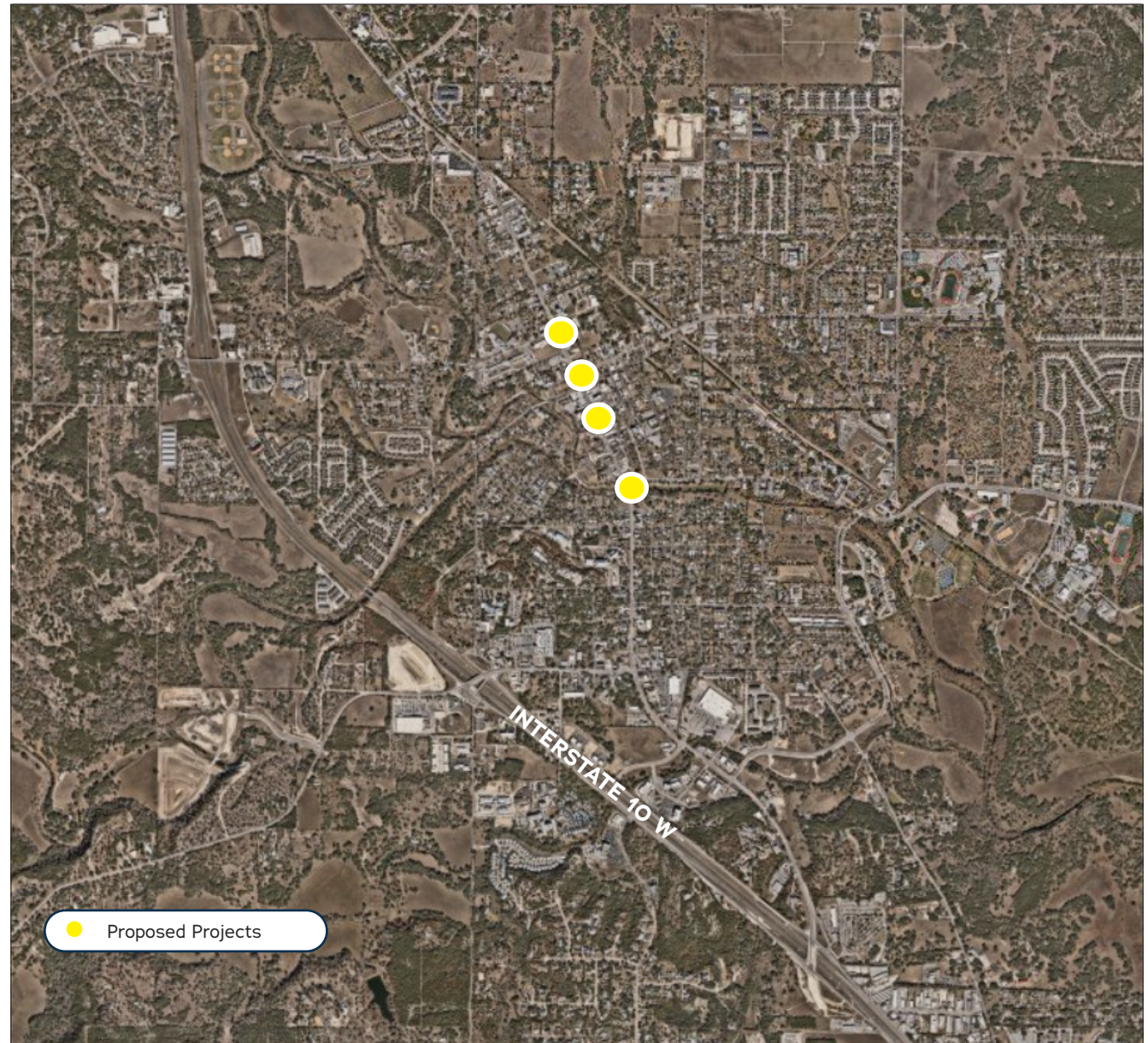
PROJECT READINESS:

Does Not Require Utility Relocation

Does Not Require ROW Acquisition



Source: FHWA



Source: Nearmap

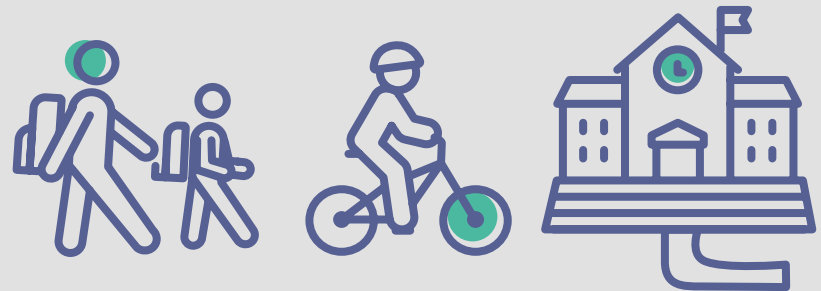
NON-INFRASTRUCTURE PROJECTS

While infrastructure projects are a critical component of the implementation plan, near-term implementation of many capital improvements is constrained by funding availability and project delivery timelines. To advance safety improvements in the short term, the CSAP recommends a suite of non-infrastructure projects that can be implemented more quickly and at lower cost, such as planning efforts, design guidance, policies, procedures, and programmatic activities. These actions are intended to establish a strong foundation for future infrastructure investments while delivering immediate safety benefits.

Planning and quick build non-infrastructure projects recommended for the City of Boerne include:

- Safe Routes to School planning throughout the City of Boerne
- Corridor study along W. Bandera St. from IH-10 Frontage Roads to S. Main St
- Conduct preliminary Intersection Control Evaluations (ICE) for 2 Intersections:
 - » *Main St & Adler School St (5 Points)*
 - » *River Rd & Herff Rd*
- Conduct Road Safety Audits (RSA) for 3 intersections:
 - » *Main St & Kronkowsky St,*
 - » *Esser Rd & Greyhound Ln*
 - » *Johns Rd & N. School St*

SAFE ROUTES
BOERNE SAFE ROUTES TO SCHOOL



SAFE ROUTES TO SCHOOL PLAN

The Safety Task Force identified school-area circulation and safe access for students walking and bicycling as an important objective of this CSAP, particularly given Boerne’s limited roadway connectivity, constrained street grid, and recurring congestion during peak school arrival and dismissal periods. While the documented crash history does not show a concentrated pattern of fatal or serious injury crashes within active school zones, operational challenges such as vehicle queuing, turning conflicts,

and limited pedestrian crossing opportunities create conditions that increase risk for students and families. A Safe Routes to School (SRTS) Plan would provide a proactive framework to evaluate both safety and circulation conditions and to identify improvements around school campuses before severe crashes occur. The development of an SRTS Plan aligns with supplemental planning activities eligible under the SS4A program and complements regional and local safety priorities.

City of Boerne SRTS Vision:

- » Identify focus analysis and improvements at Esser Road & Greyhound Lane and Johns Road & School Street, where school-related traffic activity, turning movements and pedestrian crossings intersect.
- » Identify how students currently walk and bicycle to school and where circulation constraints, connectivity gaps, or traffic conflicts create barriers.
- » Recommend improvements such as sidewalks, enhanced crossings, traffic calming, improved pick-up and drop-off operations, and school zone signage.
- » Support school and community-led initiatives, including walking and biking groups, crossing guard programs, and safety education.
- » Establish a clear process to prioritize and fund pedestrian, bicycle, and operational improvements near schools that also reduce congestion and improve overall traffic flow.

By focusing on education, engagement, planning, and circulation management, an SRTS Plan would improve safety for all roadusers while addressing Boerne’s broader mobility challenges and building long-term community support for active transportation.

GENERAL PROCESS FOR SAFE ROUTES TO SCHOOL PLAN

DATA COLLECTION

- Pulling available information
- Inventorying existing conditions (desktop review)
- School characteristics

VIRTUAL KICK-OFF MEETINGS

- Study area limits
- Study Area scope
- Opportunities and Constraints
- Known Travel Patterns
- Schedule
- Deliverables

FIELD AUDITS

- 1/4 mile of school campus
- Drop-off and pick-up observations
- Walk audit for existing infrastructure

ASSESSMENT AND RECOMMENDATIONS

- Recommendations on engineering
- High-level recommendations for other E’s of SRTS
- OPCCs
- Recommendations focused on engineering improvements
- Opinion of Probable Construction Costs
- Traffic Circulation Plans

REPORTS

- Report of observations and recommendations

CORRIDOR STUDY: W. BANDERA ST. FROM IH-10 FRONTAGE ROADS TO S. MAIN ST

The STF identified targeted corridor planning as a key strategy to advance the goals of the Plan. Crash data obtained from the Texas Department of Transportation’s Crash Records Information System (CRIS) indicates that approximately 200 crashes occurred along W. Bandera Street between the IH-10 frontage roads and S. Main Street over the past five years (2020–2024), including 18 crashes suspected of resulting in minor injury.

While these crashes are distributed throughout the corridor rather than concentrated at a single location, the pattern reflects systemic safety challenges influenced by corridor land-use and access characteristics, including dense commercial development, numerous driveways and access points, closely spaced intersections, and frequent turning movements. These conditions increase the potential for conflicts among vehicles, pedestrians, and bicyclists, supporting the need for a proactive, corridor-wide planning approach rather than isolated, location-specific treatments.

The study would establish a comprehensive framework to evaluate existing conditions and identify strategies to reduce fatal and serious injury risk for all roadway users.

The corridor study would enable the City of Boerne to:

- » Analyze multimodal safety, access, and operational conditions along and across the corridor
- » Identify systemic risk factors related to speeds, access management, crossings, and intersection operations
- » Develop planning-level safety strategies and concept recommendations consistent with the Safe System Approach
- » Coordinate with TxDOT, regional partners, and community stakeholders to align corridor safety priorities
- » Establish a prioritized roadmap to support future project development and SS4A implementation grant applications
- » By focusing on analysis, coordination, and planning rather than immediate construction, the W. Bandera Road Corridor Safety Study would position the City to advance cost-effective, scalable safety improvements and strengthen readiness for future infrastructure investments consistent with the CSAP and SS4A program goals.



Figure 6.10: W. Bandera Road

INTERSECTION CONTROL EVALUATIONS (ICE)

The Safety Task Force identified two complex intersections, Main Street & Adler/School Street (5-Points) and River Road & Herff Road for further evaluation. The combination of geometric complexity, traffic demands, and multimodal activity at these locations creates conditions that merit a proactive evaluation of intersection control strategies. Crash data indicates that intersection-related crashes are a meaningful contributor to risk at both locations. At Main St & Adler/School St (5 Points), a total of 24 crashes were documented within the most recent five-year period (2020-2024), including 1 serious injury crash. At River Road & Herff Road, 104 intersection-related crashes were recorded during the same period, of which included 17 KAB crashes and 2 were pedestrian or bicycle related. The frequency and nature of conflicts at these intersections dictate the need for a systematic evaluation of intersection control and design.

ICE provides a structured, performance-based framework to compare feasible intersection control alternatives based on safety performance, operational efficiency, and multimodal accommodation, while accounting for site constraints and surrounding context. Through this process, the City can assess existing conditions, screen potential alternatives, and identify planning-level concepts that reduce systemic safety risks such as conflict points, vehicle speeds, and pedestrian and bicyclist exposure. By focusing on data-driven evaluation rather than immediate construction, ICE efforts complement corridor-level planning, support coordination with TxDOT and regional partners, and help position projects for future SS4A implementation funding consistent with the CSAP and the Safe System Approach.

ROAD SAFETY AUDITS (RSA)

The Safety Task Force identified specific locations where in-field, multidisciplinary review would provide additional insight into site-specific safety risks that may not be fully captured through desktop analysis alone. Road Safety Audits (RSAs) are particularly well-suited for locations with a history of severe crashes, high levels of vulnerable road user activity, or complex land-use and operational conditions that influence how people travel and interact within the roadway environment.

The intersection of Main Street & Kronkosky Street has experienced a documented pedestrian fatality that occurred in 2022, underscoring the need for a focused evaluation of pedestrian safety, visibility, speeds, and crossing conditions within this area of downtown Boerne. This location is situated within a high-activity context that includes Veterans Plaza, on-street parking, nearby commercial businesses, and regular church and school-related activities, all of which contribute to elevated pedestrian volumes, frequent turning movements, and varied curbside activity throughout the day.

Through the RSA process, the City would conduct on-site field reviews to observe traffic operations, pedestrian and bicycle movements, parking activity, sight distance, signage, lighting, and driver behavior under a range of conditions, including peak activity periods. The audits would identify contributing factors to crashes and near-misses and develop planning-level countermeasure concepts that address both systemic and location-specific safety risks, with particular emphasis on improving safety for pedestrians and other vulnerable road users in this downtown setting.

CHAPTER 7

Policy, Procedures, and Processes

Policy and procedural updates are recommended to support Boerne's goal of eliminating traffic-related fatalities and serious injuries. These changes embed safety considerations into development review, capital planning, and daily operations, ensuring consistent, data-driven decision-making across City departments. Informed by CSAP safety analysis and Safety Task Force input, the recommended updates advance a proactive Safe System approach and strengthen Boerne's ability to reduce risk for all road users.

These policies directly support safety improvements in downtown Boerne and along priority corridors by ensuring that pedestrian activity, access management, and speed management are systematically considered in planning, design, and implementation decisions.

Policy recommendations are organized by each guiding principle identified by the Safety Task Force and based on the Safe Systems approach and the Texas Strategic Highway Safety Plan (SHSP). The recommendations are provided in **Tables 7.1 through 7.5**.



GUIDING PRINCIPLE - ROADWAY AND INTERSECTION SAFETY

→ **GOAL:** Improve road design and infrastructure through proven safety countermeasures to reduce crash frequency and severity for all road users including pedestrians, bicyclists and motorists.

FOCUS AREA	ELEMENT	RECOMMENDED ACTION	LOCAL POLICY, PROCEDURE OR PROCESS
Vulnerable Road Users	Crosswalks	Develop crosswalk guidelines	No existing policy
Intersection Safety	Traffic Signal Guidelines	Develop traffic signal/ traffic signal timing standards that include adding protective left-turn phases, improvement clearance intervals, and/or coordinating signals	No existing policy
	Traffic Impact Analysis (TIA)	Update TIA guidelines to include safety analysis for developments proposed to be located along the HIN which may include ICE efforts at key study intersections for consideration of roundabouts and/or alternative intersection designs.	City of Boerne Engineering Design Manual, Chapter 4
	Roundabouts	Update roundabout design standards for development proposals that include new roundabouts or the retrofit of existing intersections, consistent with applicable NCHRP guidance and design vehicle requirements.	City of Boerne Engineering Design Manual
	Commercial Vehicle / Truck Routes	Advance development of a truck route ordinance to designate preferred commercial vehicle routes and restrict large truck through-movements on Main Street (US 87), consistent with 2018 Master Plan Action 3.1.5	2018 Master Plan Action 3.1.5 not yet implemented

Table 7.1: Guiding Principle - Roadway and Intersection Safety

GUIDING PRINCIPLE - COMMUNITY-FOCUSED SAFETY INVESTMENTS

→ **GOAL:** Prioritize safety improvements in locations where crash history and roadway conditions have the greatest impacts on community activity areas, including schools, parks, downtown districts, civic centers, and recreational areas.

FOCUS AREA	ELEMENT	RECOMMENDED ACTION	LOCAL POLICY, PROCEDURE OR PROCESS
Vulnerable Road Users	Parking	Develop and implement a Downtown Parking Management Program that prioritizes pedestrian safety and access to guide curb management and parking operations	No existing procedure
	Schools	Develop a Safe Routes to School Program for schools in the Boerne Independent School District	No existing plan
	Accessibility	Continue Progressing the ADA Transition Plan	City of Boerne – ADA Transition Plan, January 2024

Table 7.2: Guiding Principle - Community-Focused Safety Investments

GUIDING PRINCIPLE - PUBLIC EDUCATION AND AWARENESS

→ **GOAL:** Foster a culture of safety through public awareness about road safety and promote safe behaviors through educational campaigns, outreach programs, and community events.

FOCUS AREA	ELEMENT	RECOMMENDED ACTION	LOCAL POLICY, PROCEDURE OR PROCESS
Vulnerable Road Users, Intersection Safety	Engagement	Create an education campaign and host Bike and Roundabout Rodeo to educate the public on safe cyclist practices and roundabout use	No existing procedure
Distracted Driving	Education	Develop a distracted driving awareness program aimed at high school students	No existing procedure
Vulnerable Road Users	Engagement	Develop a safety student ambassador program with Boerne ISD to engage high school students in transportation safety messaging and data-collection	No existing procedure

Table 7.3: Guiding Principle - Public Education and Awareness

GUIDING PRINCIPLE - DATA DRIVEN DECISION MAKING AND ACCOUNTABILITY

→ **GOAL:** Guide safety investments using data analysis to identify high-risk areas, measure outcomes and ensure accountability through ongoing evaluation and transparent reporting.

FOCUS AREA	ELEMENT	RECOMMENDED ACTION	LOCAL POLICY, PROCEDURE OR PROCESS
All	Performance Monitoring & Reporting	Coordinate with AAMPO and TxDOT to publish crash performance outcomes	No existing coordination
All	HIN & Data-Driven Prioritization	Maintain a community focused High-Injury Network to regularly update crash history, actively adjust investment priorities annually based on crash data, monitor pedestrian activity and roadway conditions to prioritize downtown projects, infrastructure and non-infrastructure projects, and adjust strategies based on these performances and community feedback	No existing procedure

Table 7.4: Guiding Principle - Data Driven Decision Making and Accountability

GUIDING PRINCIPLE - COLLABORATION AND STRATEGIC PARTNERSHIPS

→ **GOAL:** Leverage the City’s leadership in transportation safety by fostering and strengthening partnerships with government agencies, law enforcement and community organizations to plan, implement, and sustain safety strategies

FOCUS AREA	ELEMENT	RECOMMENDED ACTION	LOCAL POLICY, PROCEDURE OR PROCESS
Intersection Safety	Engagement	Establish a public facing Boerne Transportation Safety Task Force to expand on the Vision Zero and Safe Systems framework to identify safety performance measures, monitor safety transportation progress, and align enforcement priorities within the HIN	Existing Internal Boerne Engineering and Mobility Traffic and Safety Task Force (non-public facing)

Table 7.5: Guiding Principle - Collaboration and Strategic Partnerships

CHAPTER 8

Progress and Transparency

PLAN ADMINISTRATION

The City of Boerne, in coordination with its partners, is responsible for administering and implementing the Plan. City staff will oversee day-to-day implementation, coordination, monitoring, and updates to the Plan to ensure it remains responsive to changing safety conditions and community priorities.

- **CITY DEPARTMENTS:** The Engineering and Mobility Department will serve as the lead department responsible for coordinating implementation activities, tracking progress, maintaining the Implementation Program, and providing regular updates to City Council. Other departments, including Planning, Police, and Parks & Recreation will support implementation within their respective areas of responsibility.
- **CITY COUNCIL:** City Council will review progress updates, provide guidance on priorities, and make decisions related to funding allocations, policy changes, and regulatory actions necessary to advance CSAP strategies and projects.
- **SAFETY TASK FORCE AND PARTNER AGENCIES:** Safety Task Force will continue to play a key role during implementation by supporting City staff, reviewing progress, and providing technical and community-based insight into CSAP actions and initiatives. The Safety Task Force will also help facilitate coordination among City departments, regional partners, TxDOT, and the community to maintain momentum and accountability throughout implementation.

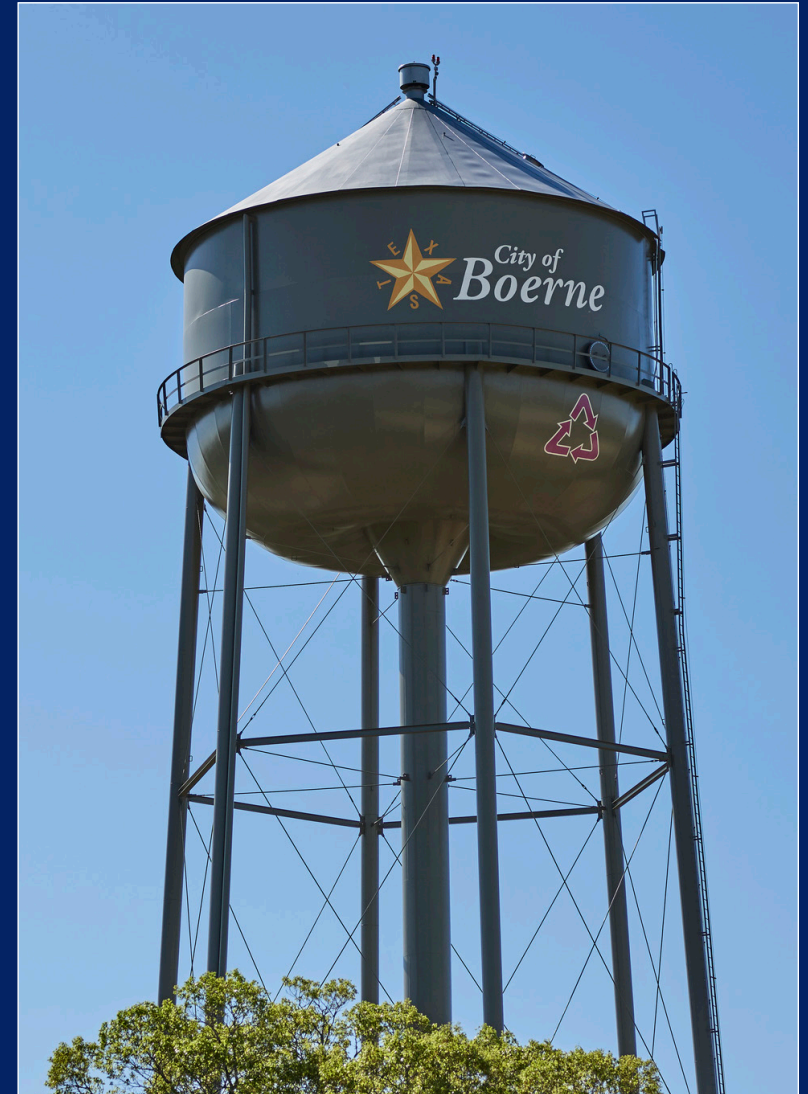


Figure 8.1: City of Boerne Water Tower

MONITORING PROGRESS

Public engagement and transparency are essential to sustaining the momentum of the Plan. To communicate progress and maintain accountability, the City will prepare an annual progress report summarizing implementation status, completed actions, and key accomplishments from the previous year.

The Engineering and Mobility Department will prepare an annual report and present it to City Council.

Progress tracking will be supported by the City’s safety dashboard, which summarizes crash trends and highlights behavioral, design, and environmental factors influencing safety outcomes. As new data becomes available, the dashboard will be updated to illustrate trends, evaluate progress toward CSAP goals, and help inform future projects and policy decisions.

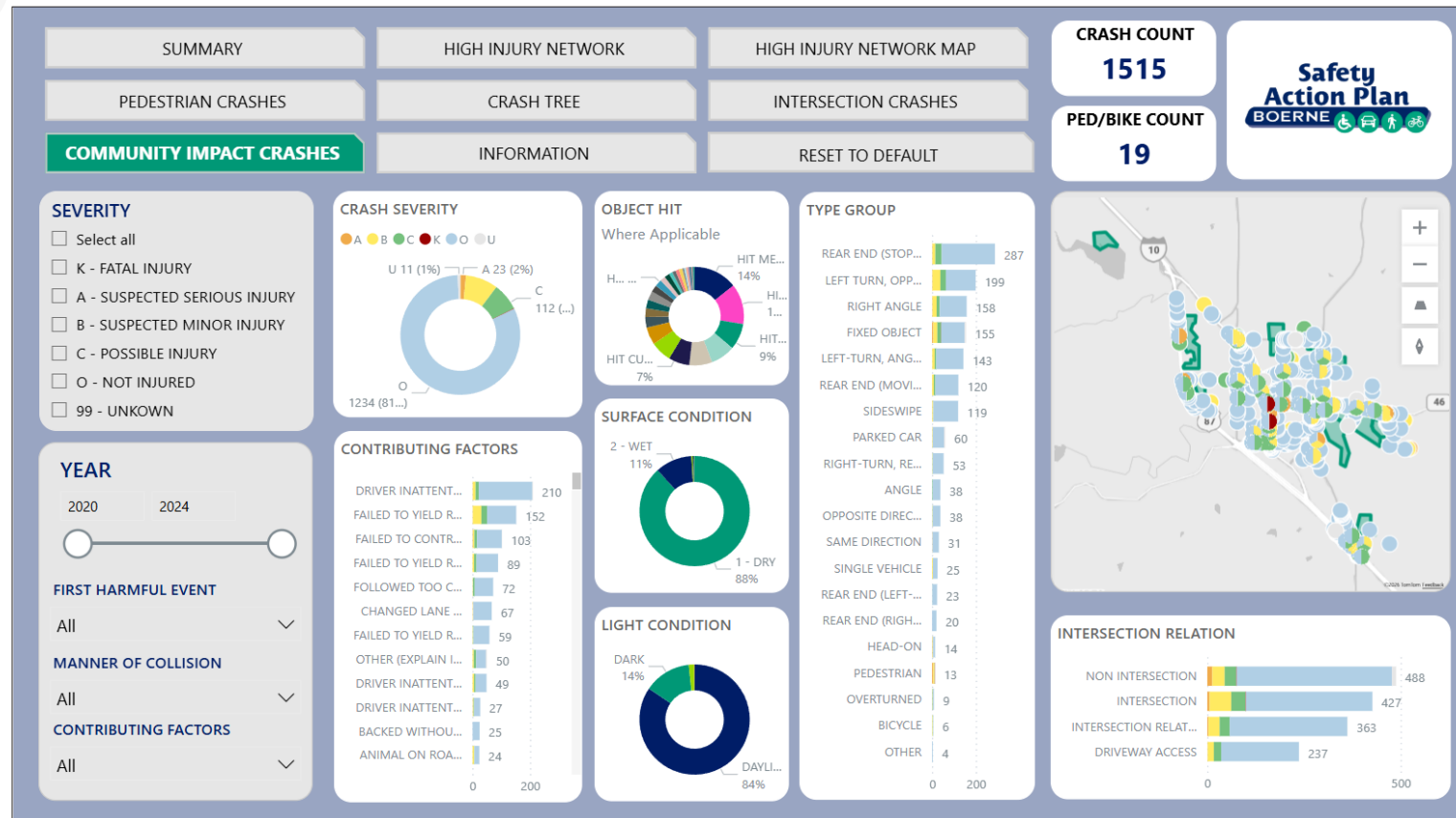


Figure 8.2: Power BI Dashboard

PARTNER AGENCIES

Implementation of the CSA{P will rely on close coordination among local, regional, and institutional partners. Key partners include City departments such as Engineering & Mobility, Police, Fire, Utilities, and Economic Development, working in collaboration with regional and state transportation agencies. Coordination with Kendall County and neighboring jurisdictions is essential to address safety needs along shared corridors and within overlapping transportation networks.

Partnerships with Boerne Independent School District, local businesses, and community organizations will support safety improvements near schools, activity centers, and commercial districts. Ongoing collaboration with regional planning entities will further strengthen data sharing, funding alignment, project delivery, and public engagement. Together, these partnerships will advance Boerne’s Vision Zero and Safe System goals by supporting coordinated, data-driven, and community-focused safety investments.

KEY PARTNER AGENCIES INCLUDE:

- Alamo Area Metropolitan Planning Organization (AAMPO)
- Boerne Chamber of Commerce
- Boerne Downtown District Business Owners
- Boerne Engineering & Mobility Department
- Boerne Economic Development Department
- Boerne Fire Department
- Boerne Police Department
- Boerne Independent School District (BISD)
- Boerne Utilities Department
- Kendall County
- Kendall County, Boerne, Fair Oaks Transportation Committee
- Texas Department of Transportation (TxDOT)

FUNDING SOURCES

The immediate next step for most improvements is to estimate cost of improvements, commit local funds, and submit a grant application. Common funding sources for safety improvement projects include USDOT’s SS4A and TxDOT’s HSIP. Projects funded by FHWA programs will be required to comply with TxDOT Local Government Project procedures.

A brief description of common funding sources for infrastructure safety projects is provided below.

USDOT SS4A IMPLEMENTATION GRANT

Implementation Grants fund projects and strategies identified in an Action Plan that address roadway safety problems. Implementation Grants may also fund supplemental planning and demonstration activities. Applicants must have an existing Action Plan to apply for Implementation Grants or have an existing plan that is substantially similar and meets the eligibility requirements of an Action Plan.

USDOT SS4A PLANNING AND DEMONSTRATION GRANT

Used to develop a Safety Action Plan, conduct supplemental safety planning to enhance an Action Plan, and/or carry out demonstration activities to inform the development of, or an update to, an Action Plan.

TXDOT HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

HSIP grants fund safety engineering improvements on Texas roadways. TxDOT reserves 10% of the funding for use on off-system roadway improvement projects that include countermeasures preapproved by TxDOT.

TXDOT TRANSPORTATION ALTERNATIVES GRANTS (TA)

TA funding sources intended to assist communities in developing non-motorized transportation networks. Eligible activities include planning, engineering, and construction.

CITY OF BOERNE CAPITAL IMPROVEMENT PLAN

Capital projects are major improvements to City facilities and infrastructure. Some projects may require years of planning and construction while others may be completed in a shorter timeframe.



SAFETY PLAN UPDATES AND AMENDMENTS

The CSAP represents a snapshot in time and is intended to be a living document that evolves as conditions change. To ensure the Plan remains effective and aligns with safety outcomes, the Engineering and Mobility Department will provide annual updates to City Council on implementation progress, including recommended refinements to the HIN as crash trends and exposure patterns evolve.

A comprehensive review and update of the CSAP should occur at least every five years to reassess safety trends, evaluate the effectiveness of implemented strategies, and refine actions to support the City’s long-term goal of eliminating traffic-related fatalities and serious injuries.

CHAPTER 9

Safety Action Plan

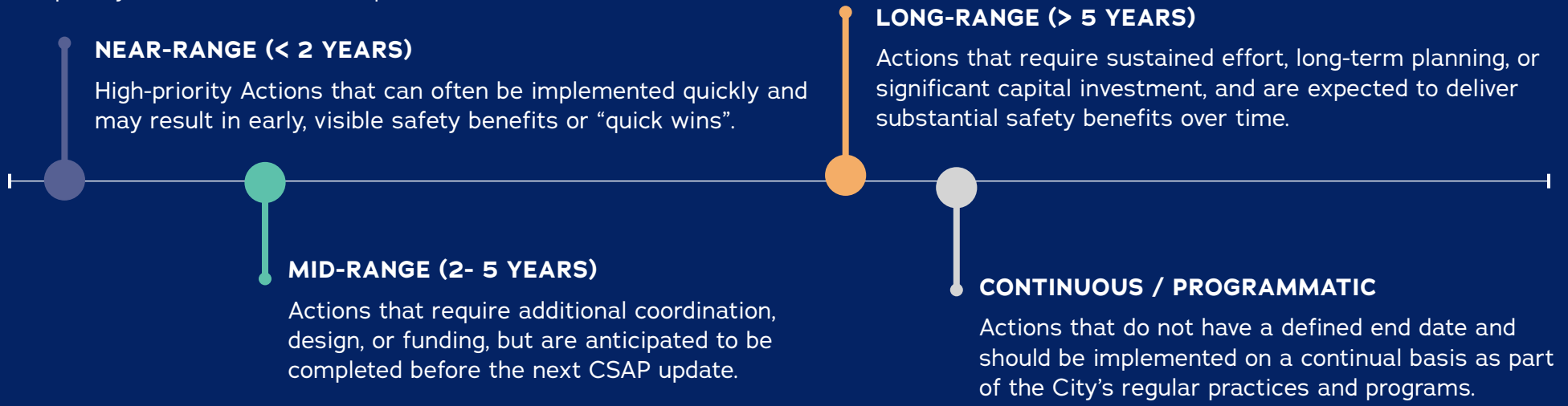
IMPLEMENTATION PLAN SCHEDULE

This Implementation Plan affirms the City’s commitment to the Vision Zero principle that **traffic deaths and serious injuries are preventable and unacceptable**. Rather than treating severe crashes as inevitable outcomes of growth or travel demand, the Plan recognizes that safer streets are achieved through intentional decisions, coordinated action, and sustained investment. Each Action identified in this chapter translates Boerne’s safety vision into specific, measurable, and actionable steps that can be advanced through policy changes, programs, capital improvements, and partnerships.

Collectively, these Actions provide the City with a clear and accountable roadmap for implementation linking data-driven priorities to tangible outcomes on Boerne’s streets. By advancing Actions that are scalable, trackable, and aligned with community values, the City is positioned to make consistent progress toward eliminating fatal and serious injury crashes and creating a transportation system that is safe for all users, regardless of age, ability, or mode of travel.

TIMEFRAME

For each strategy, the associated Actions are assigned an estimated implementation timeframe to support prioritization, funding alignment, and informed decision-making. These timeframes help the City sequence actions and advance safety improvements in a coordinated and timely manner. Implementation timeframes are organized as near-, mid-, and long-range, based on the relative urgency, complexity, and level of effort required.



IMPLEMENTATION SUMMARY

A summary of implementation plan actions and corresponding timeframes are provided as **Table 9.1**. Additional implementation efforts, beyond actions identified below are described in previous sections, should be enacted by local agencies to eliminate roadway fatalities and serious injuries in the next 20 years.

	ACTION	TIMEFRAME	PARTNER	POTENTIAL FUNDING SOURCE
Intersection	River Rd & Plant Ave Install a roundabout	Long	TxDOT	TxDOT HSIP SS4A Implementation
	Main St. & River Rd Install a southbound left-turn deceleration lane and improve intersection geometry	Mid	City of Boerne Boerne Downtown District Business Owners	
	Main St. & Adler/ School St. Modify the traffic signal and reconfigure intersection to add a traffic signal to Adler Street and turn-lanes on Main St	Near	TxDOT	
	S. Main St. & W. Bandera Rd. Improve intersection geometry on the northeast corner and directionalize pedestrian ramps	Mid	City of Boerne	
	Cascade Caverns Rd & Scenic Loop Install a traffic signal and turn-lane	Near	City of Boerne	
Corridors	S. Main St. (E. San Antonio Ave to E. Theissen St) Install an enhanced pedestrian refuge island, a northbound left-turn lane along S. Main St, a rectangular rapid flashing beacon, and curb extensions.	Mid	TxDOT City of Boerne	TxDOT HSIP SS4A Implementation
	River Road (Pecan St to Mesquite St) Install an enhanced crossing pedestrian refuge island and a rectangular rapid flashing beacon	Mid	Boerne Downtown District Business Owners	
	W. Blanco Road (Main Plaza Area- Loop from N. Main St to S. Main St) Partially convert W. Blanco Rd to a one-way street, install a roundabout, a rectangular rapid flashing beacon, and improve pavement markings	Mid	City of Boerne Boerne Downtown District Business Owners	

Table 9.1: Implementation Plan Summary

ACTION		TIMEFRAME	PARTNER	POTENTIAL FUNDING SOURCE
Systemic	Sidewalks	Near	TxDOT City of Boerne Boerne Downtown District Business Owners	TxDOT HSIP SS4A Implementation
	Enhanced Pavement Markings			
	Flashing Yellow Arrow (FYA)			
	Retroreflective Borders			
	Leading Pedestrian Intervals (LPIs)			
Non-Infrastructure	Safe Routes to School Plan Throughout the City	Mid	Boerne ISD	SS4A Supplemental Planning and Demonstration
	Corridor Study (W. Bandera St. from IH-10 to S. Main St.) Conduct a corridor study to determine access management and systemic safety improvements	Long	TxDOT	
	Intersection Control Evaluations (ICE) Conduct intersection control evaluations at Main Street & Adler/School Street (5-Points) and River Road & Herff Road.	Long	City of Boerne	
	Road Safety Audits (RSA) Conduct road safety audits at Main St & Kronkowsky St, Esser Rd & Greyhound Ln, Johns Rd & N. School St	Long	TxDOT City of Boerne Boerne Downtown District Business Owners	

Table 9.1: Implementation Plan Summary (Continued)

Appendices



**Safety
Action Plan**
BOERNE    

APPENDIX A

Leadership Commitment and Resolutions

APPENDIX B

Planning Structure, Safety Task Force Presentations

APPENDIX C

Engagement and Collaboration

APPENDIX D

Safety Analysis

APPENDIX E

Downtown Pedestrian Study

APPENDIX E

Project Selections and Strategies Conceptual Layouts

APPENDIX G

City of Boerne Mobility Master Plan, Safety Action Plan