

# Appendix 1

*Leadership Commitment*

**RESOLUTION NO. R-3806**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROSENBERG, TEXAS, APPROVING AND ADOPTING A VISION ZERO RESOLUTION AND SAFE STREETS FOR ALL COMPREHENSIVE SAFETY ACTION PLAN FOR THE CITY OF ROSENBERG.**

\* \* \* \* \*

**WHEREAS**, the City deems it necessary and proper and in the best interest of the City to have a Safe Streets For All Comprehensive Safety Action Plan; and

**WHEREAS**, the life and health of all persons living and traveling within the City of Rosenberg are our utmost priority, and no one should die or be seriously injured while traveling on our city streets; and

**WHEREAS**, the Safe System Approach is the concept that traffic deaths and serious injuries on our roadways are unacceptable; and

**WHEREAS**; the Safe System Approach is a holistic strategy aimed at eliminating all traffic fatalities and serious injuries suffered by all road users while increasing safe, healthy, equitable mobility for all; and

**WHEREAS**, traffic crashes are among the leading cause of deaths in the United States; and

**WHEREAS**, approximately 16 people were killed and 89 were seriously injured in the total 4,522 traffic crashes which are reported within the City of Rosenberg from 2019 to 2023; and

**WHEREAS**, the City Council finds that the continued loss of lives on City streets is unacceptable; and

**WHEREAS**, the United States Department of Transportation (USDOT), Texas Department of Transportation (TxDOT), and Houston-Galveston Area Council (H-GAC) have adopted policies to eliminate traffic fatalities and serious injuries; now, therefore

**BE IT RESOLVED BY THE COUNCIL OF THE CITY OF ROSENBERG:**

Section 1. The City Council of the City of Rosenberg hereby commits to support transportation projects and programs to eliminate traffic fatalities and serious injuries in

the city by the year 2050 and hereby adopts the Safe Streets For All Comprehensive Safety Action Plan attached hereto as Exhibit "A" and made part hereof for all purposes.


**PASSED, APPROVED, AND RESOLVED** this 3 day of December 2024.

**ATTEST:**

**APPROVED:**



Danyel Swint, TRMC, **CITY SECRETARY**



William Benton, **MAYOR**



# Comprehensive Safety Action Plan

*Funded by Safe Streets and Roads for All*

City Council Meeting

July 23, 2024

Payton Arens, PE, RSP<sub>21</sub>



**ROSENBERG**  
SAFETY ACTION PLAN

# Safe Streets For All (SS4A) Grants

## Safety Action Plan

- Rosenberg was awarded a FY22 SS4A planning grant to develop a Comprehensive Safety Action Plan
- A **vision zero commitment** is a required component of the CSAP

We're here today to present information on a resolution to eliminate traffic fatalities and serious injuries throughout the City by year 2050.

## Implementation Grant

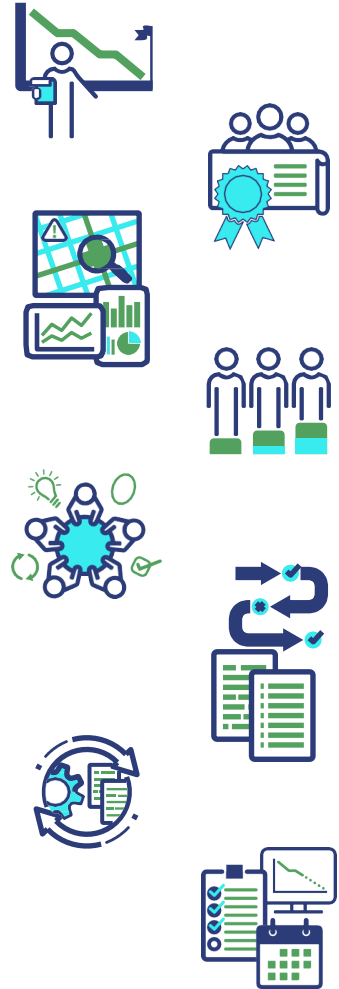
- After adopting the CSAP, the City will be eligible to apply for an SS4A Implementation Grant which enables funding for:
  - Construction of safety projects in the Action Plan
  - Project-level planning, design, and development
  - Implementation of strategies in the Action Plan

# Project Background

- USDOT published the **National Roadway Safety Strategy**
- USDOT's strategy embraces the **Safe System Approach**
- The **Bipartisan Infrastructure Law** established the Safe Streets and Roads for All (SS4A) discretionary program; **\$1 Billion per year for five years (FY22-FY26) was allocated to SS4A projects.**
- In 2023, Rosenberg was awarded a **SS4A Planning Grant** to complete a CSAP for City of Rosenberg.
- The **Comprehensive Safety Action Plan (CSAP)** will be the first step in prioritizing and securing funding for safety improvements throughout Rosenberg across all modes of transportation.
- After adopting the CSAP, the City will be eligible to apply for an **SS4A Implementation Grant.**



# CSAP Key Components



- Leadership commitment and goal setting
- Planning structure
- Safety analysis
- Equity considerations
- Engagement and collaboration
- Strategy and project selections
- Policy and process changes
- Progress and transparency

A **vision zero** commitment is a required component of the CSAP.

The Safety Task Force (**STF**) is charged with overseeing the development of the CSAP.

The project website and public events have been advertised to solicit community feedback.



# Project Schedule

You Are Here

Draft CSAP

Adopt CSAP

Month:		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Description:													
Engagement	Safety Task Force												
	Public Meetings												
	Online												
Safety Analysis													
Equity Analysis													
Public Engagement													
Implementation													

Select focus locations

Select projects



Meeting



Workshop



Survey



Presentation

# Public Engagement



Downtown Event



Family 4<sup>th</sup>

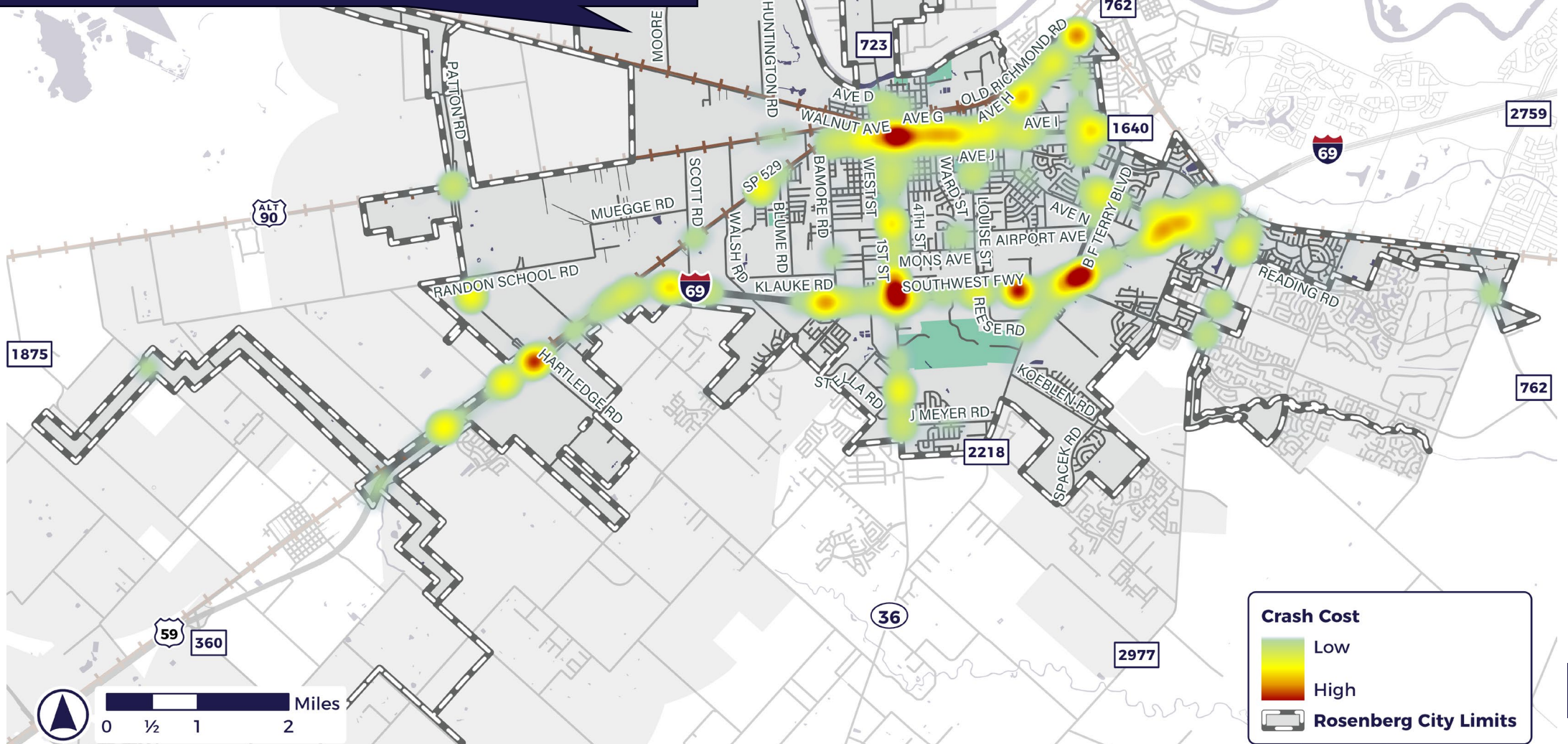


Cinco de Mayo



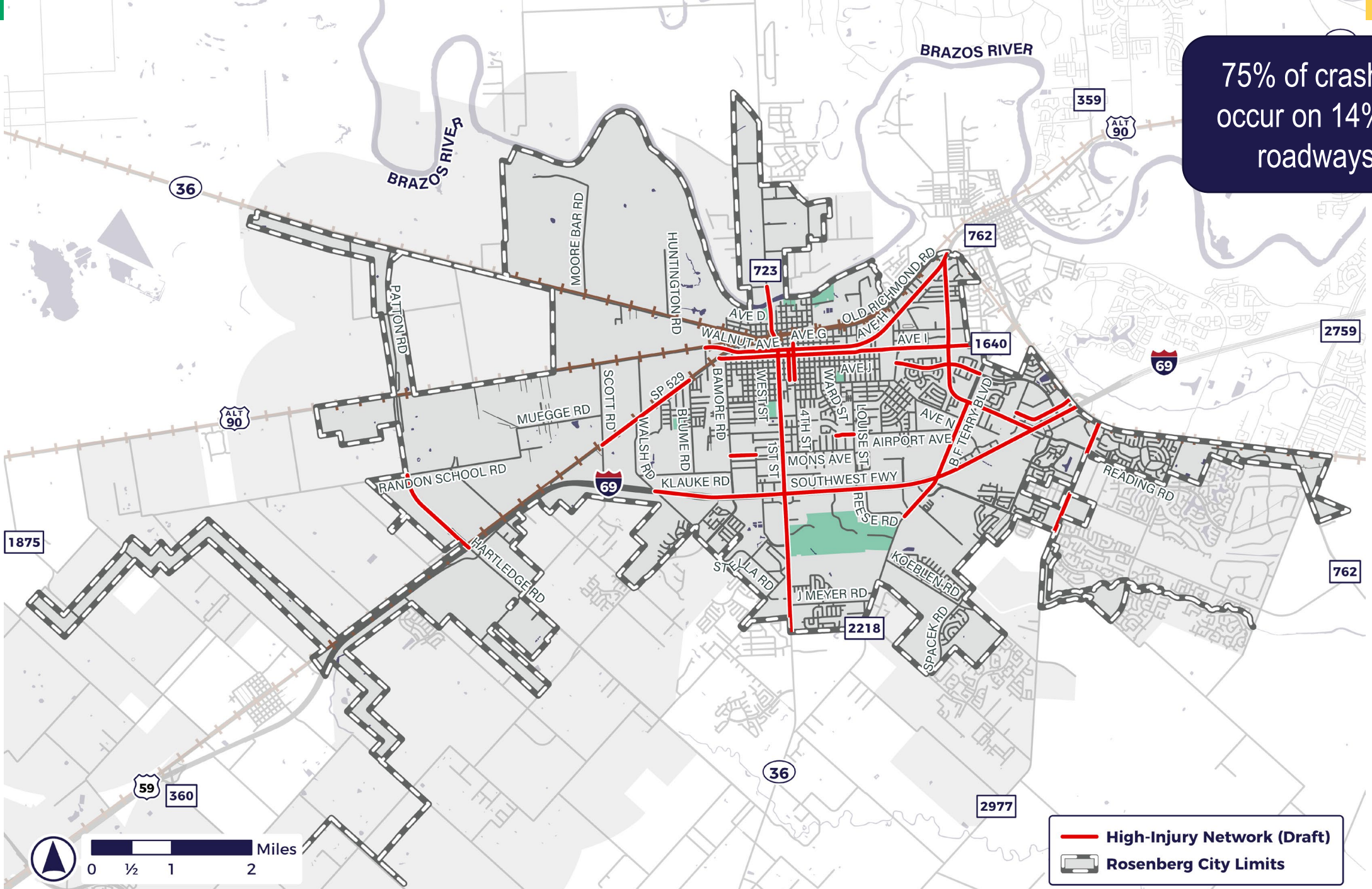
# Crash Location and Severity

16 people were killed and 89 were seriously injured in the total 4,522 traffic crashes which are reported within City of Rosenberg from 2019 to 2023.



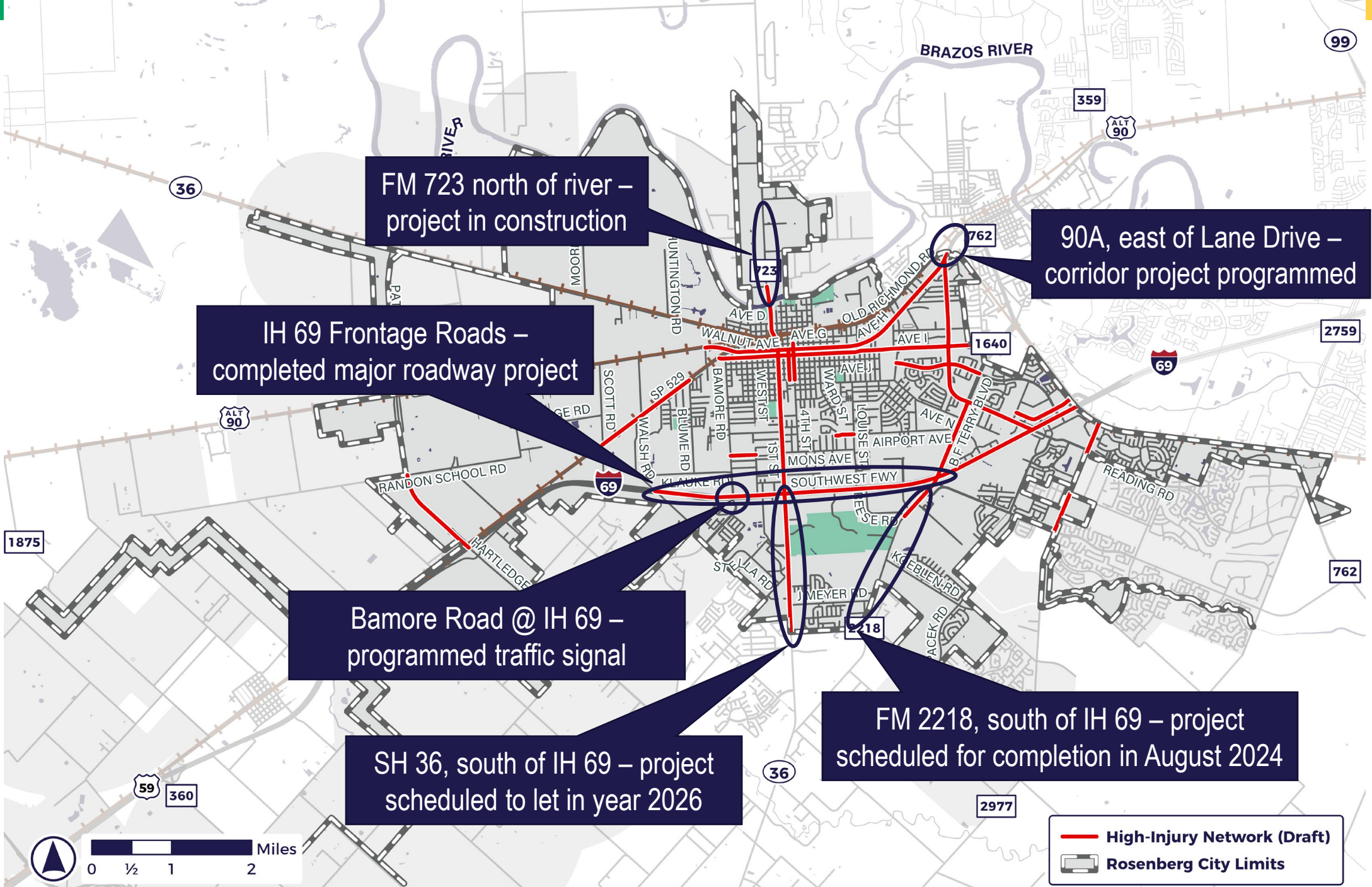
# High Injury Network Map

75% of crashes occur on 14% of roadways

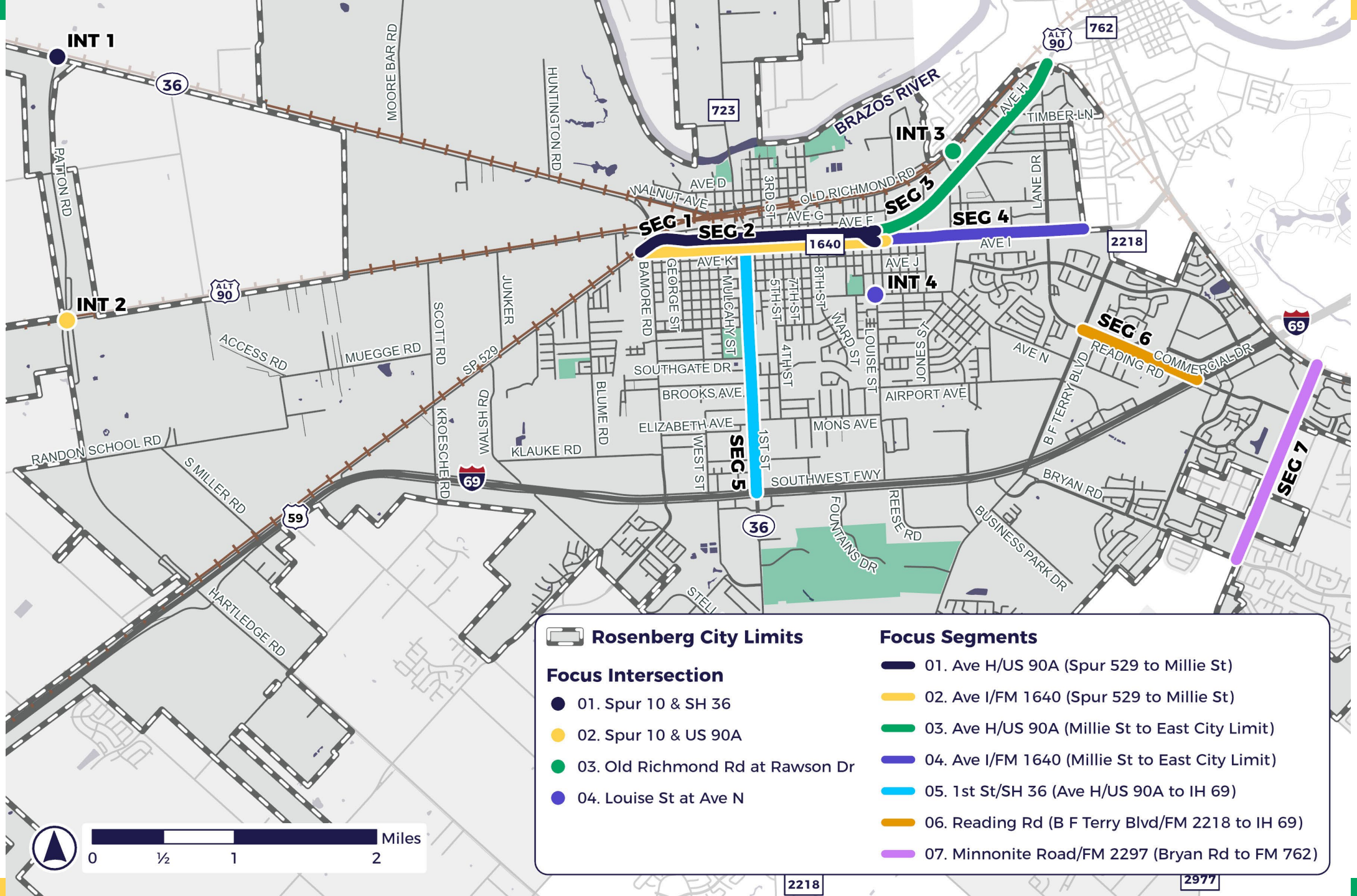


 High-Injury Network (Draft)  
 Rosenberg City Limits

# TxDOT Projects within the High Injury Network



# Focus Location Map



Rosenberg City Limits	<b>Focus Segments</b>
<b>Focus Intersection</b>	01. Ave H/US 90A (Spur 529 to Millie St)
01. Spur 10 & SH 36	02. Ave I/FM 1640 (Spur 529 to Millie St)
02. Spur 10 & US 90A	03. Ave H/US 90A (Millie St to East City Limit)
03. Old Richmond Rd at Rawson Dr	04. Ave I/FM 1640 (Millie St to East City Limit)
04. Louise St at Ave N	05. 1st St/SH 36 (Ave H/US 90A to IH 69)
	06. Reading Rd (B F Terry Blvd/FM 2218 to IH 69)
	07. Minnonite Road/FM 2297 (Bryan Rd to FM 762)



# Systemic Countermeasures



**Install RRFB**



**Install Flashing Yellow Arrow**



**Milled Centerline Rumble Strips**



**Install Sidewalks**



**Install Raised Median**



**Edgeline Treatments**



**Safety Lighting**



**Backplates with Retroreflective Borders**



**Install LED Flashing Chevrons (Curve)**

# Vision Zero Resolution

## Resolution

**WHEREAS**, the life and health of all persons living and traveling within the City of Rosenberg are our utmost priority, and no one should die or be seriously injured while traveling on our city streets;

**WHEREAS**, the Safe System Approach is the concept that traffic deaths and serious injuries on our roadways are unacceptable;

**WHEREAS**, the Safe System Approach is a holistic strategy aimed at eliminating all traffic fatalities and serious injuries suffered by all road users while increasing safe, healthy, equitable mobility for all;

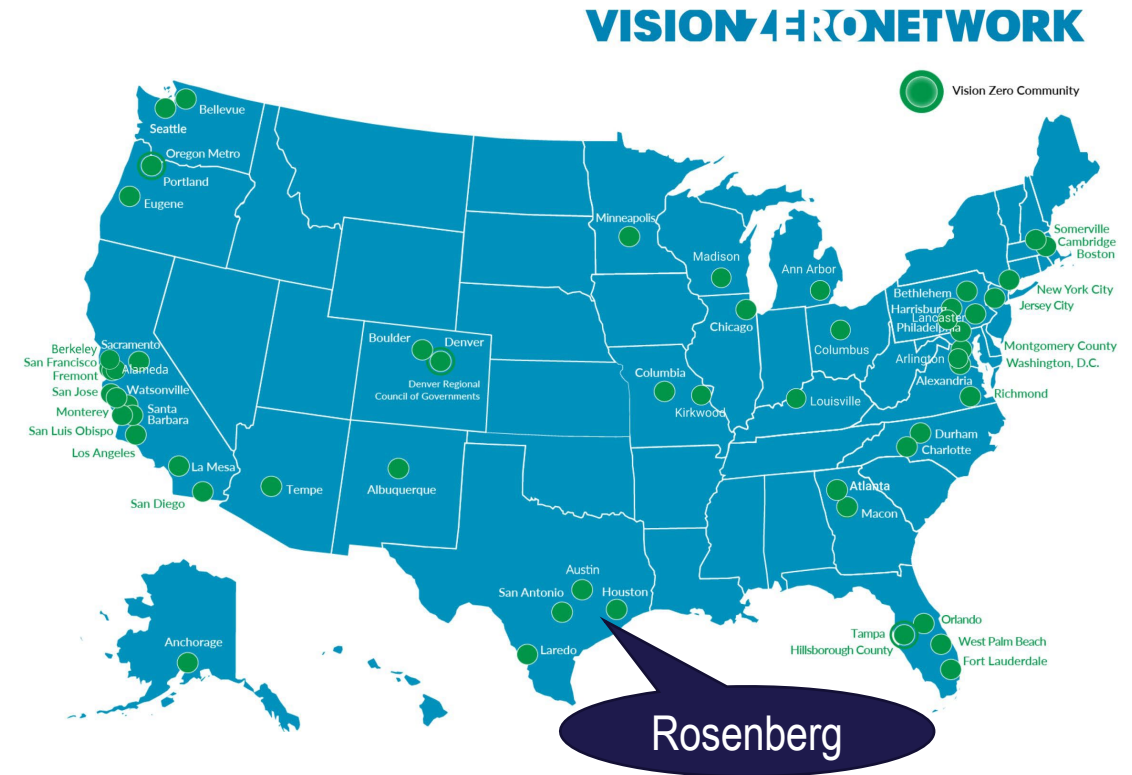
**WHEREAS**, traffic crashes are among the leading cause of deaths in the United States;

**WHEREAS**, approximately 16 people were killed and 89 were seriously injured in the total 4,522 traffic crashes which are reported within City of Rosenberg from 2019 to 2023;

**WHEREAS**, the City Council finds that the continued loss of lives on City streets is unacceptable;

**WHEREAS**, the USDOT, TxDOT, and H-GAC have adopted policies to eliminate traffic fatalities and serious injuries;

NOW, THEREFORE, BE IT RESOLVED THAT THE ROSENBERG CITY COUNCIL COMMITS TO SUPPORT TRANSPORTATION PROJECTS AND PROGRAMS TO ELIMINATE TRAFFIC FATALITIES AND SERIOUS INJURIES IN THE CITY BY THE YEAR 2050.



# Thank You



# Comprehensive Safety Action Plan

*Funded by Safe Streets and Roads for All*

City Council Meeting

October 22, 2024

Payton Arens, PE, RSP<sub>21</sub>



**ROSENBERG**  
SAFETY ACTION PLAN

# Safe Streets For All (SS4A) Grants

## Safety Action Plan

- SS4A planning grant awarded to develop a Safety Action Plan (SAP)
- **Vision zero commitment** is a required component of the SAP

The City should consider a goal to eliminate traffic fatalities and serious injuries throughout the City by year 2050

## Implementation Grant

- Construction of safety projects
- Project-level planning, design, and development
- Implementation of strategies

# Funding Sources





- USDOT SS4A, Implementation Grant
- USDOT SS4A, Planning and Demonstration Grant
- TxDOT Highway Safety Improvement Program (HSIP)
- TxDOT Transportation Alternatives Set-Aside (TA)
- H-GAC Project Selection Process



$\frac{S}{4} \mid \frac{S}{A}$  Safe Streets and Roads For All



# Project Schedule

Month:		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Engagement	Safety Task Force												
	Pop-up Events												
	Online Public Feedback												
Safety Analysis													
Equity Analysis													
Implementation													

Select focus locations

Select projects

Draft CSAP

Adopt CSAP



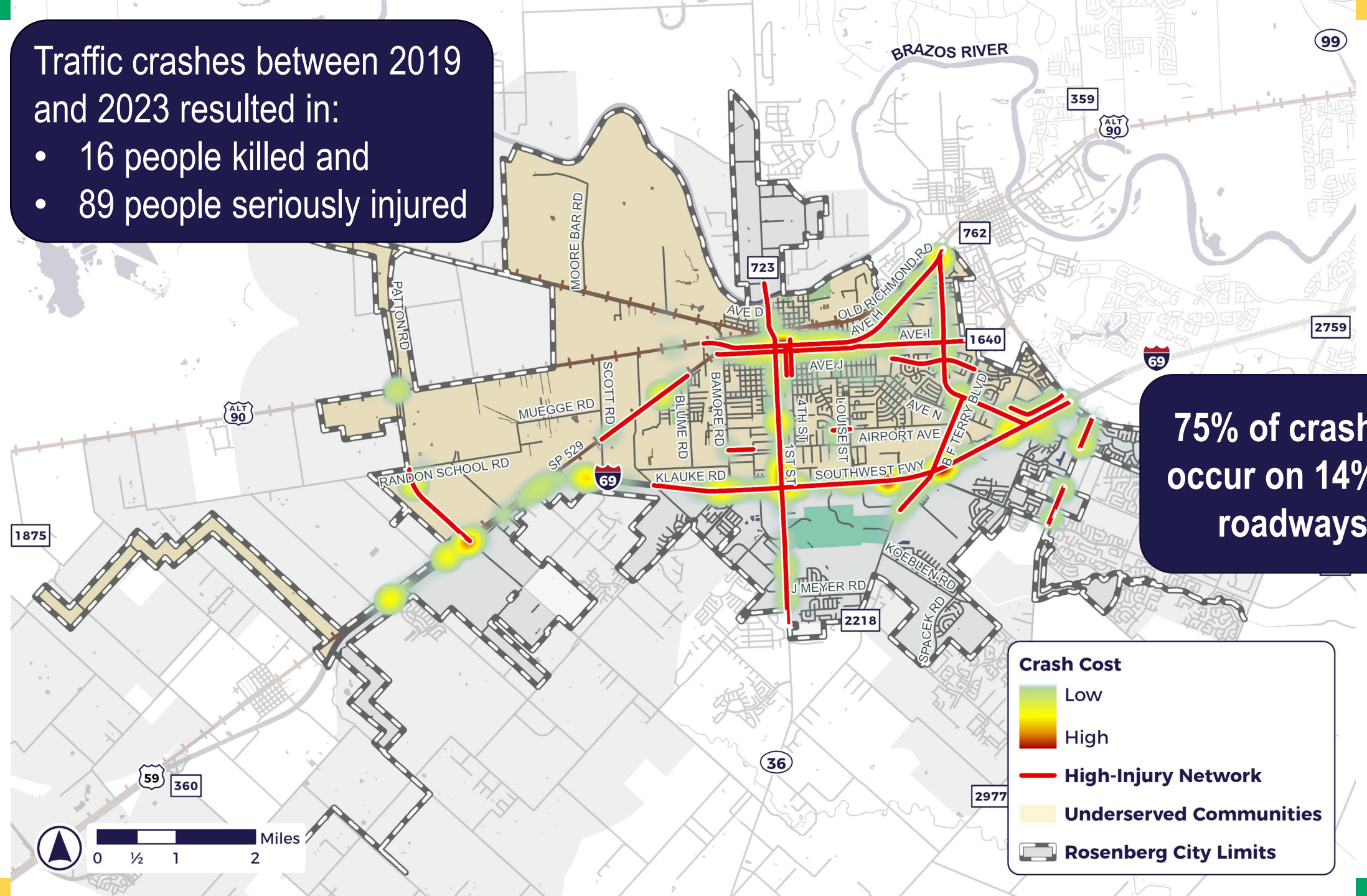
Meeting



Workshop

Traffic crashes between 2019 and 2023 resulted in:

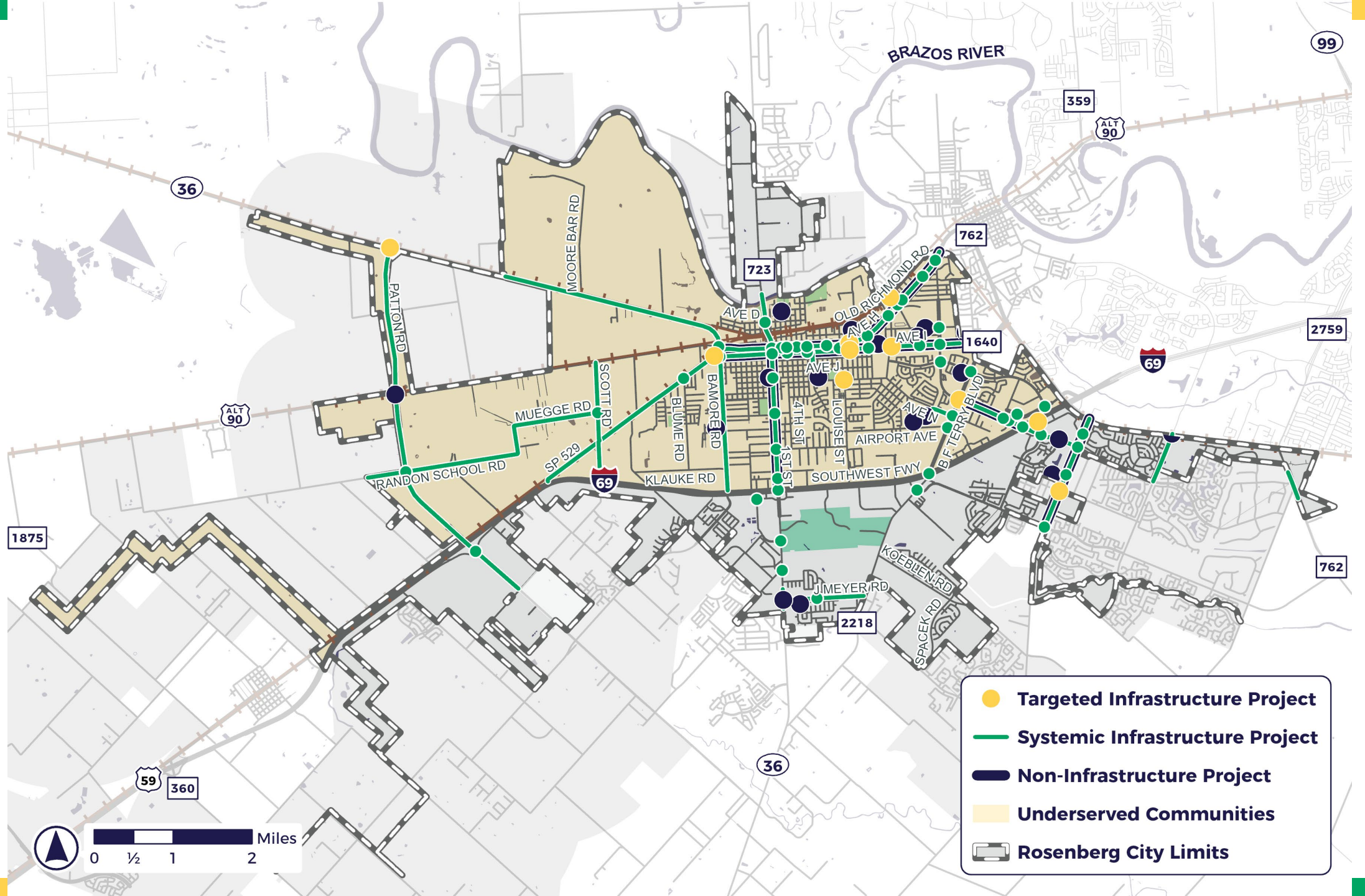
- 16 people killed and
- 89 people seriously injured



75% of crashes occur on 14% of roadways



# Action Plan



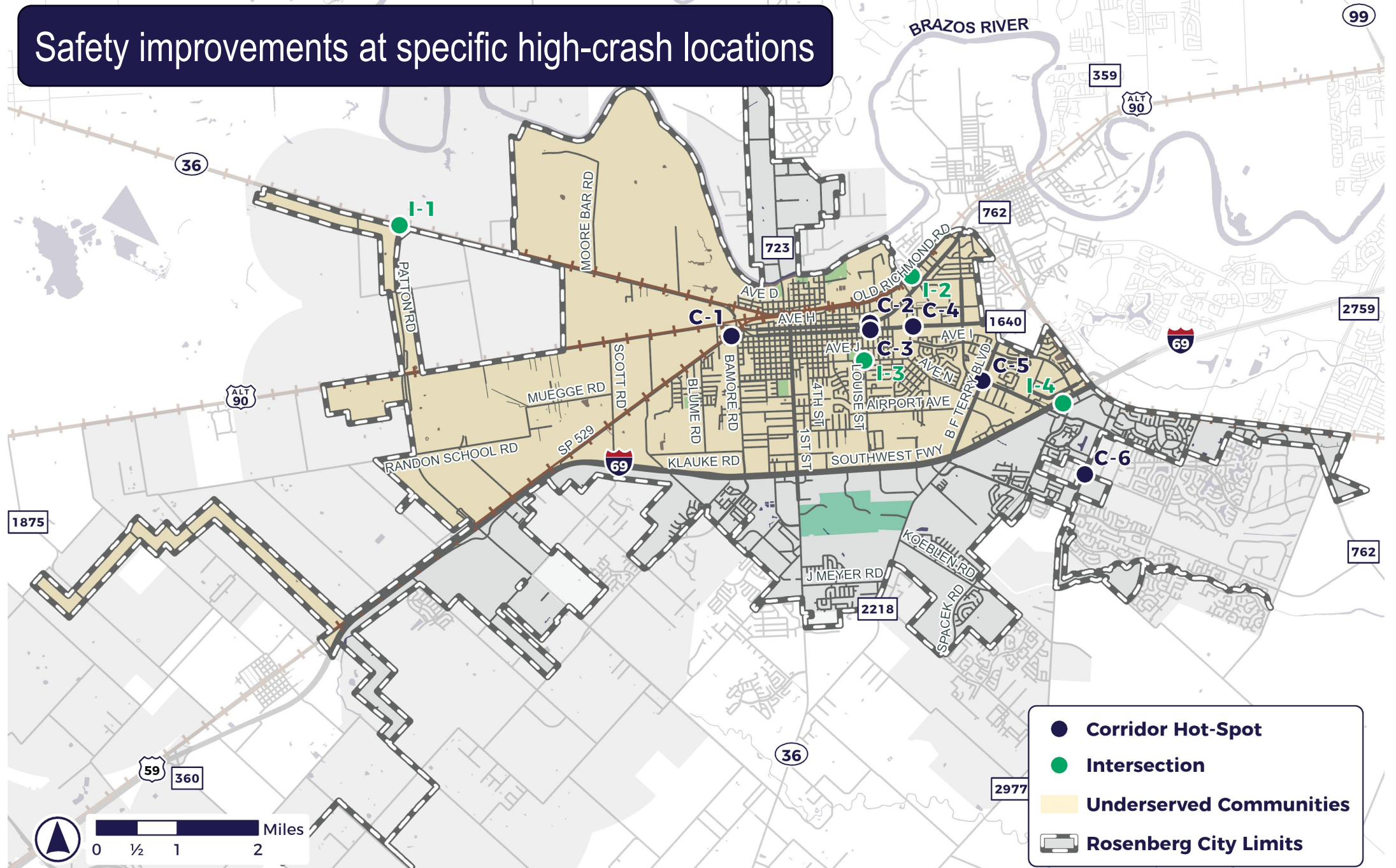
- Targeted Infrastructure Project
- Systemic Infrastructure Project
- Non-Infrastructure Project
- Underserved Communities
- Rosenberg City Limits

# Targeted Infrastructure Projects

# Action Plan – Targeted Infrastructure

ID	Action (What)	Timeframe (When)	Partner Agencies (Who)	Potential Funding Source (How)
C-1	Avenue I & Spur 529/Bamore Rd	2025-2026 Funding/Design 2027-2029 Construction	TxDOT	SS4A Implementation
C-2	Avenue H at Millie Street			
C-3	Avenue I at Millie Street			
C-4	Avenue I & Radio Lane			
C-5	Reading Rd & FM 2218			
C-6	Minonite Rd & Meadow Ln/Rohan Rd			
I-1	Spur 10 & SH 36	2025-2026 Funding 2027-2029 Design 2030+ Construction	TxDOT	TxDOT HSIP
I-2	Old Richmond Rd & Rawson Dr	2025-2026 Funding/Design 2027-2029 Construction	None	
I-3	Louise St & Ave N			
I-4	Spacek Rd & IH 69 EBFR			

## Safety improvements at specific high-crash locations



# C-1. Avenue I (FM 1640) & Spur 529/ Bamore Road

## Project Description:

Modify northbound right-turn channelization at Spur 529 to slow speeds on Avenue I (FM 1640) at Bamore Road.

**Estimated Project Cost: \$425k**

**Estimated Crash Cost Savings: \$725k**

**18 Total Preventable Crashes**

**0 Preventable Fatalities & Serious Injuries**

**Benefit-Cost Ratio: 1.7**

**HSIP SII: 1.8**



# C-2. Avenue H (US 90A) & Millie Street

## Project Description:

Construct dedicated EB left-turn lane. Modify signal to accommodate a protected EBL phase.

**Estimated Project Cost:** \$650k

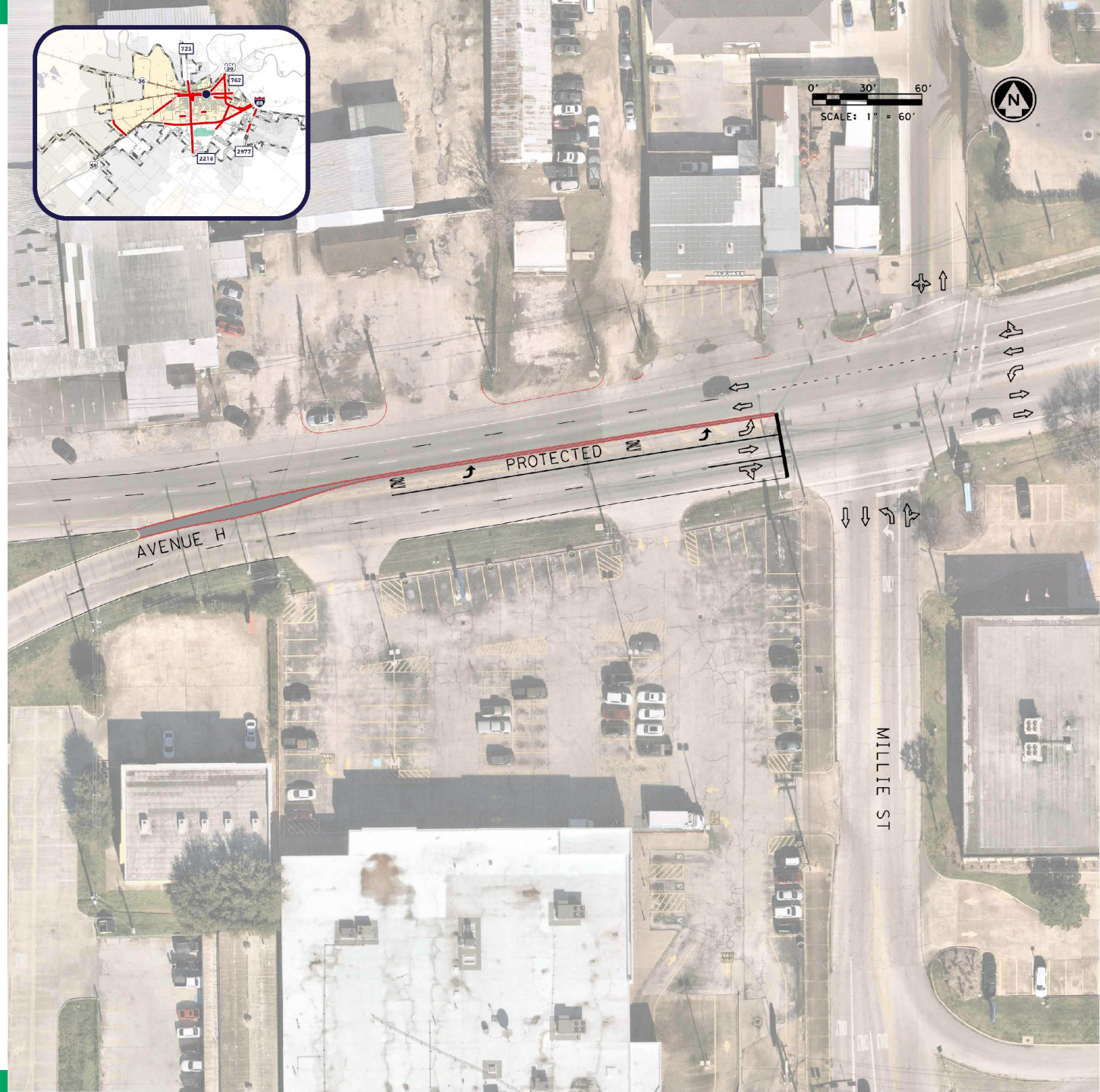
**Estimated Crash Cost Savings:** \$575k

**8 Total Preventable Crashes**

0 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio: 0.9**

**HSIP SII: 0.4**



# C-3. Avenue I (FM 1640) & Millie Street

## Project Description:

Construct raised median on Avenue I to restrict NB left-turn from unsignalized Millie Street.

**Estimated Project Cost:** \$650k

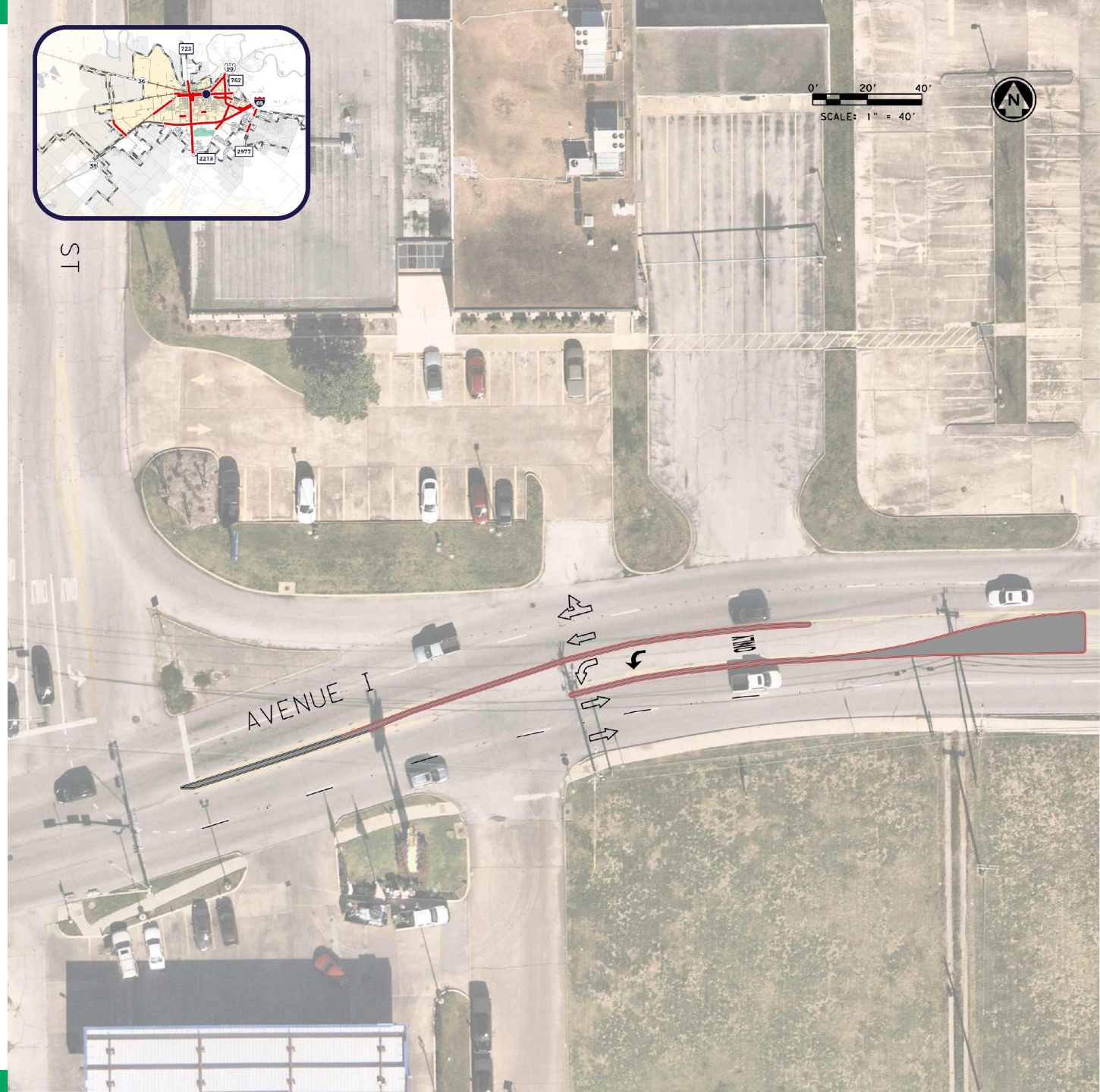
**Estimated Crash Cost Savings:** \$2.0M

31 Total Preventable Crashes

0 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio: 3.1**

**HSIP SII: 2.5**



# C-4. Avenue I (FM 1640) & Radio Lane

## Project Description:

Rebuild signal with mast arms and pedestrian facilities (ramps, crosswalks, signals, and push buttons). Construct sidewalk.

**Estimated Project Cost: \$1.0M**

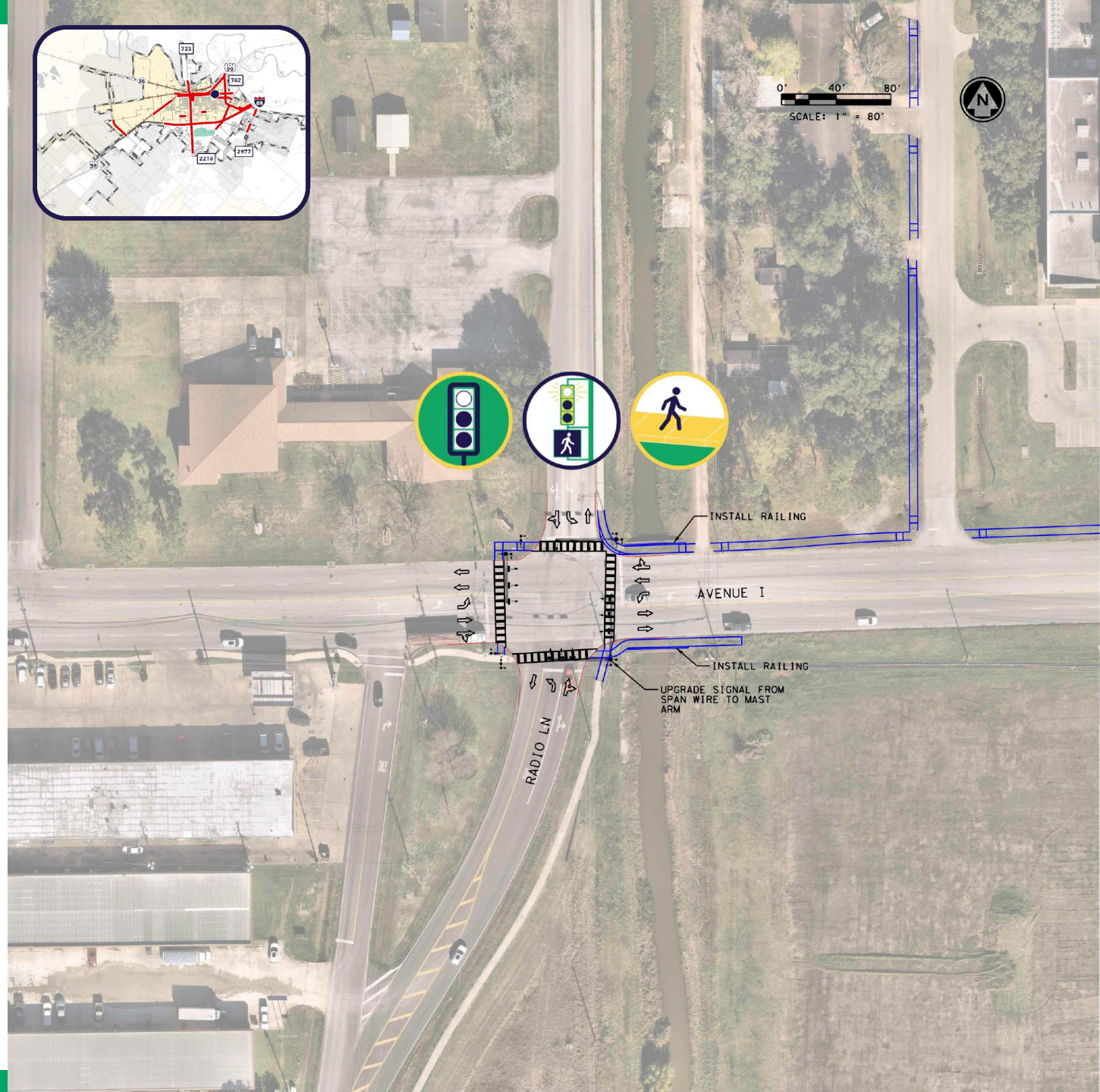
**Estimated Crash Cost Savings: \$800k**

**30 Total Preventable Crashes**

**0 Preventable Fatalities & Serious Injuries**

**Benefit-Cost Ratio: 0.8**

**HSIP SII: 0.3**



# C-5. Reading Road & FM 2218

## Project Description:

Construct a northwestbound left-turn lane along Reading Rd and modify signal to accommodate. Continue roadway widening east to match existing cross-section at Allwright Street.

**Estimated Project Cost:** TBD

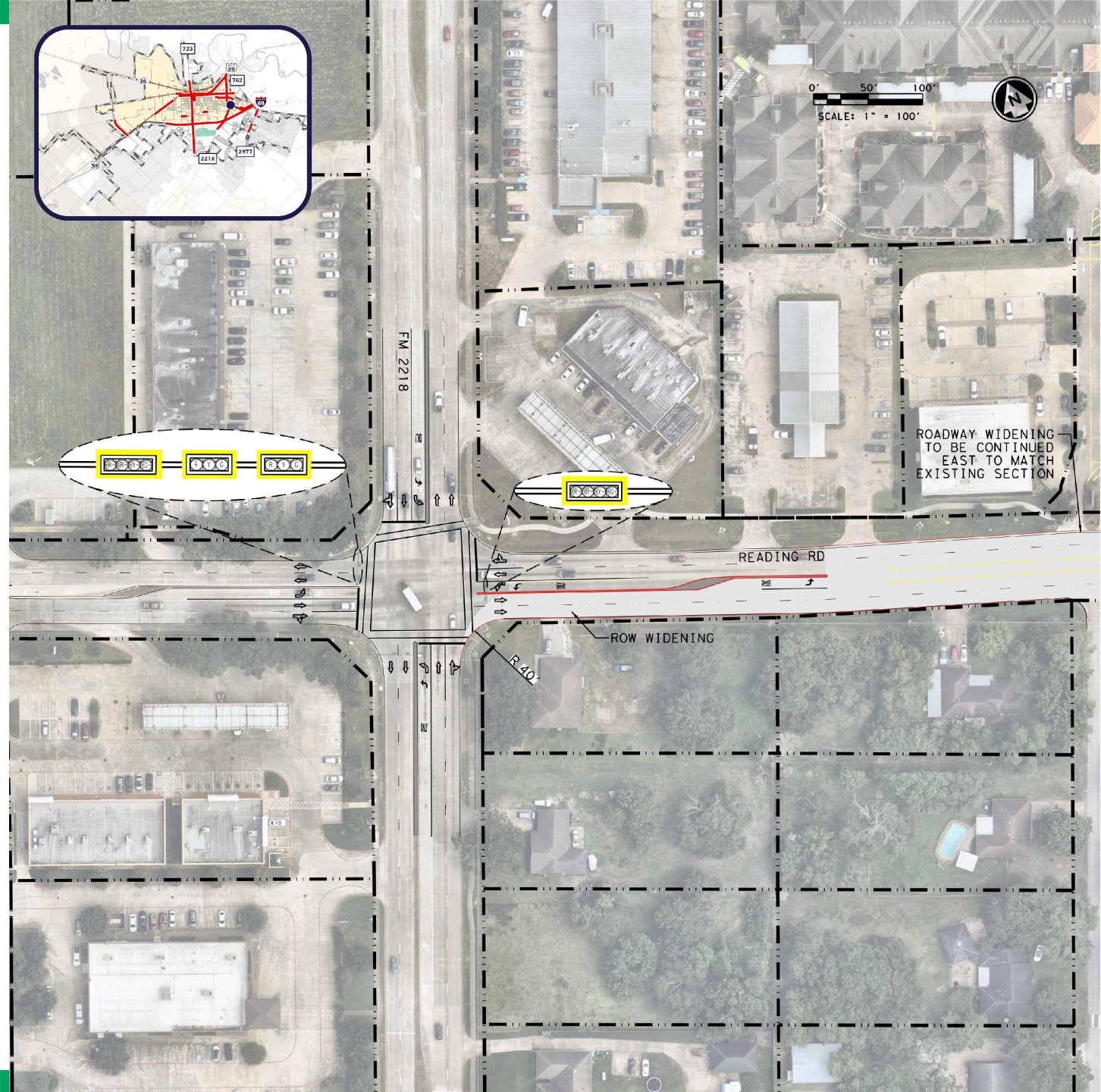
**Estimated Crash Cost Savings:** \$1.4M

61 Total Preventable Crashes

0 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio:** TBD

**HSIP SII:** TBD



# C-6. Minonite Road & Meadow Lane/ Rohan Road

## Project Description:

Add northbound left-turn lane and southbound left-turn lane along Minonite Road.

**Estimated Project Cost: \$900k**

**Estimated Crash Cost Savings: \$1.5M**

18 Total Preventable Crashes

3 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio: 1.7**

**HSIP SII: 3.7**



# I-1. Spur 10 & SH 36

## Project Description:

Reconfigure intersection as a Continuous Green-T.

**Estimated Project Cost: \$1.2M**

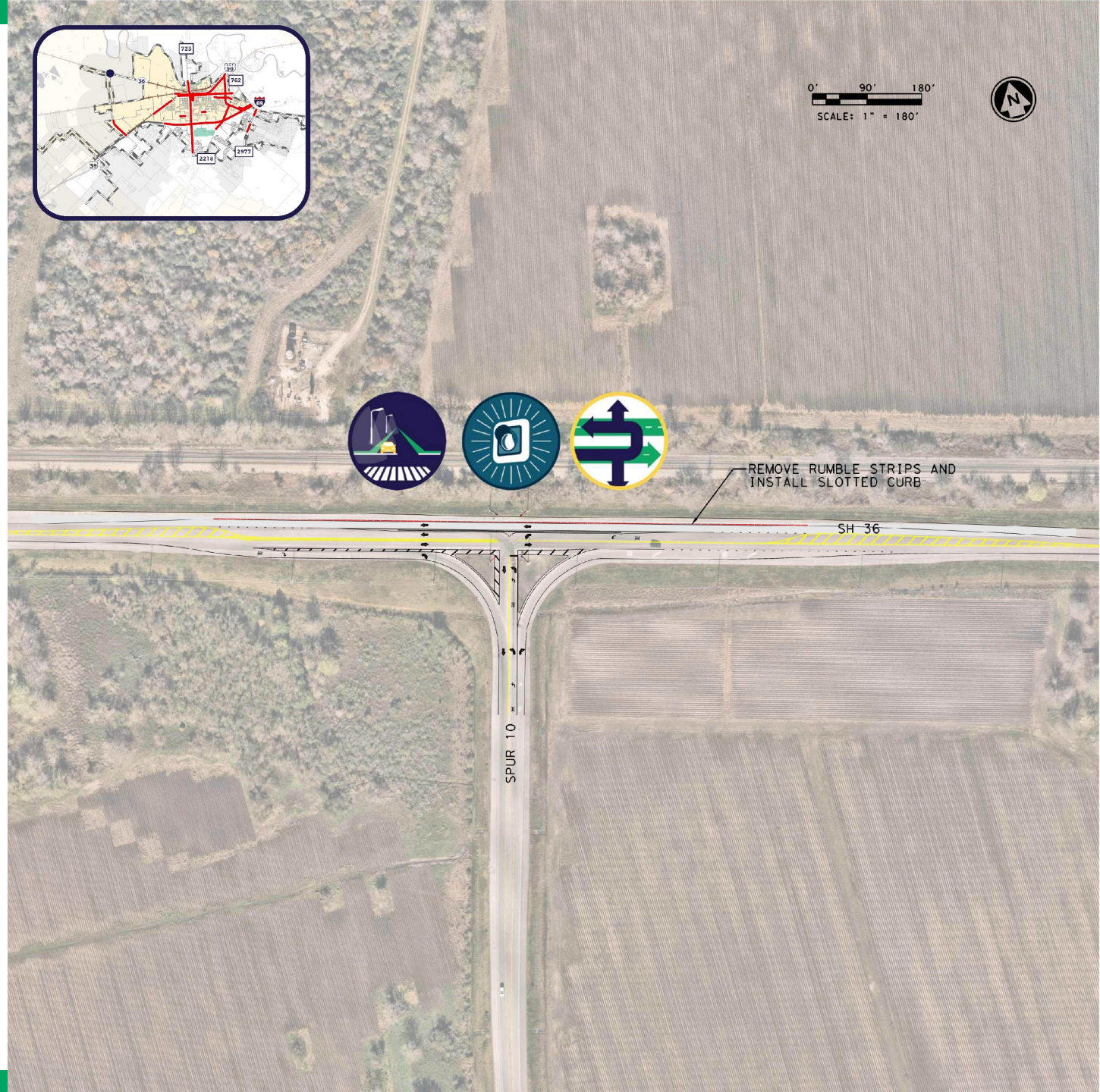
**Estimated Crash Cost Savings: \$9.2M**

31 Total Preventable Crashes

6 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio: 7.8**

**HSIP SII: 16.1**



# I-2. Old Richmond Road & Rawson Drive

## Project Description:

Add eastbound left-turn lane and westbound right-turn lane along Old Richmond Road.

**Estimated Project Cost: \$1.2M**

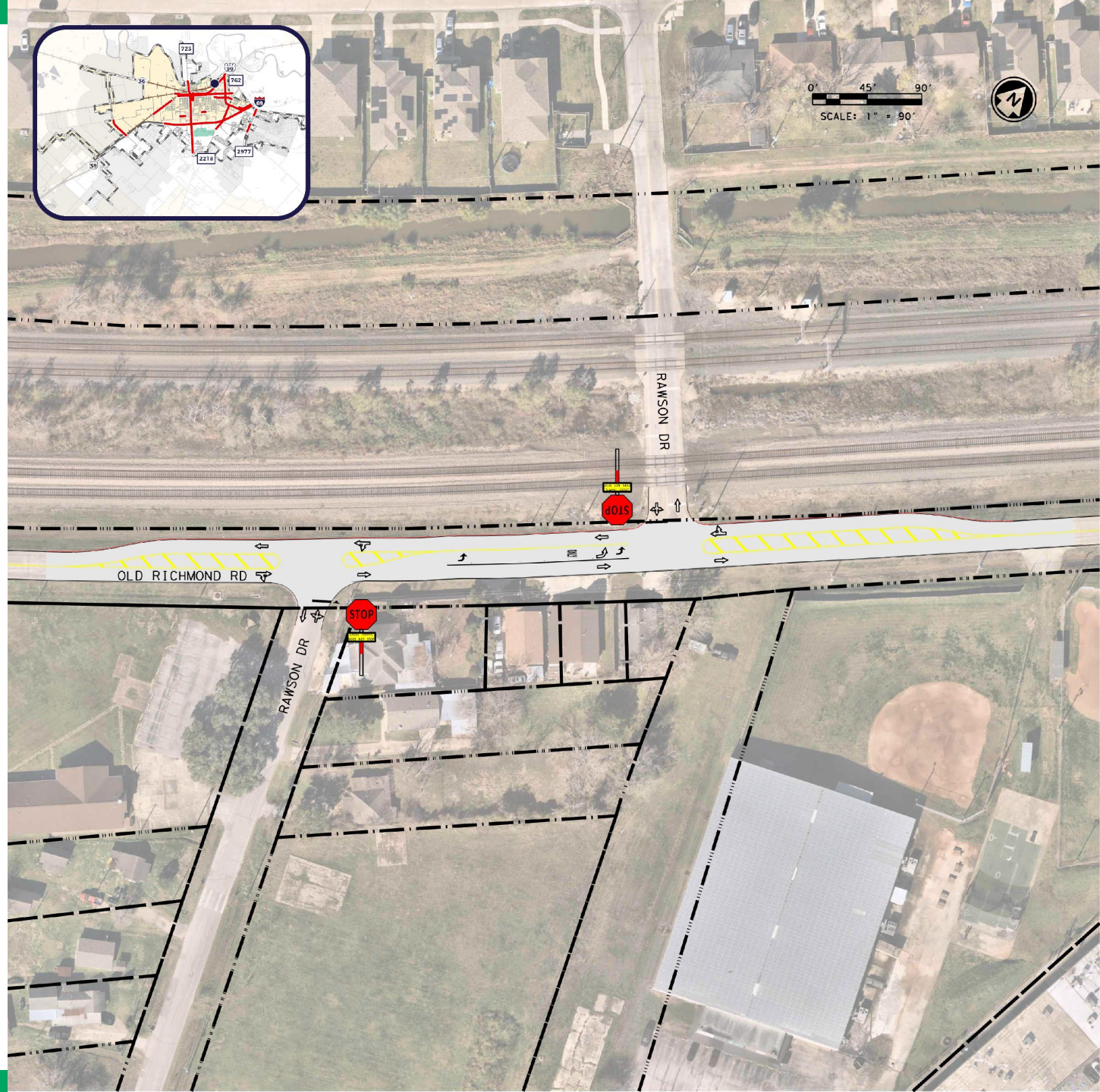
**Estimated Crash Cost Savings: \$100k**

**2 Total Preventable Crashes**

0 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio: 0.1**

**HSIP SII: 0.0**



# I-3. Louise Street & Avenue N

## Project Description:

Realign northbound approach.

**Estimated Project Cost: \$1.2M**

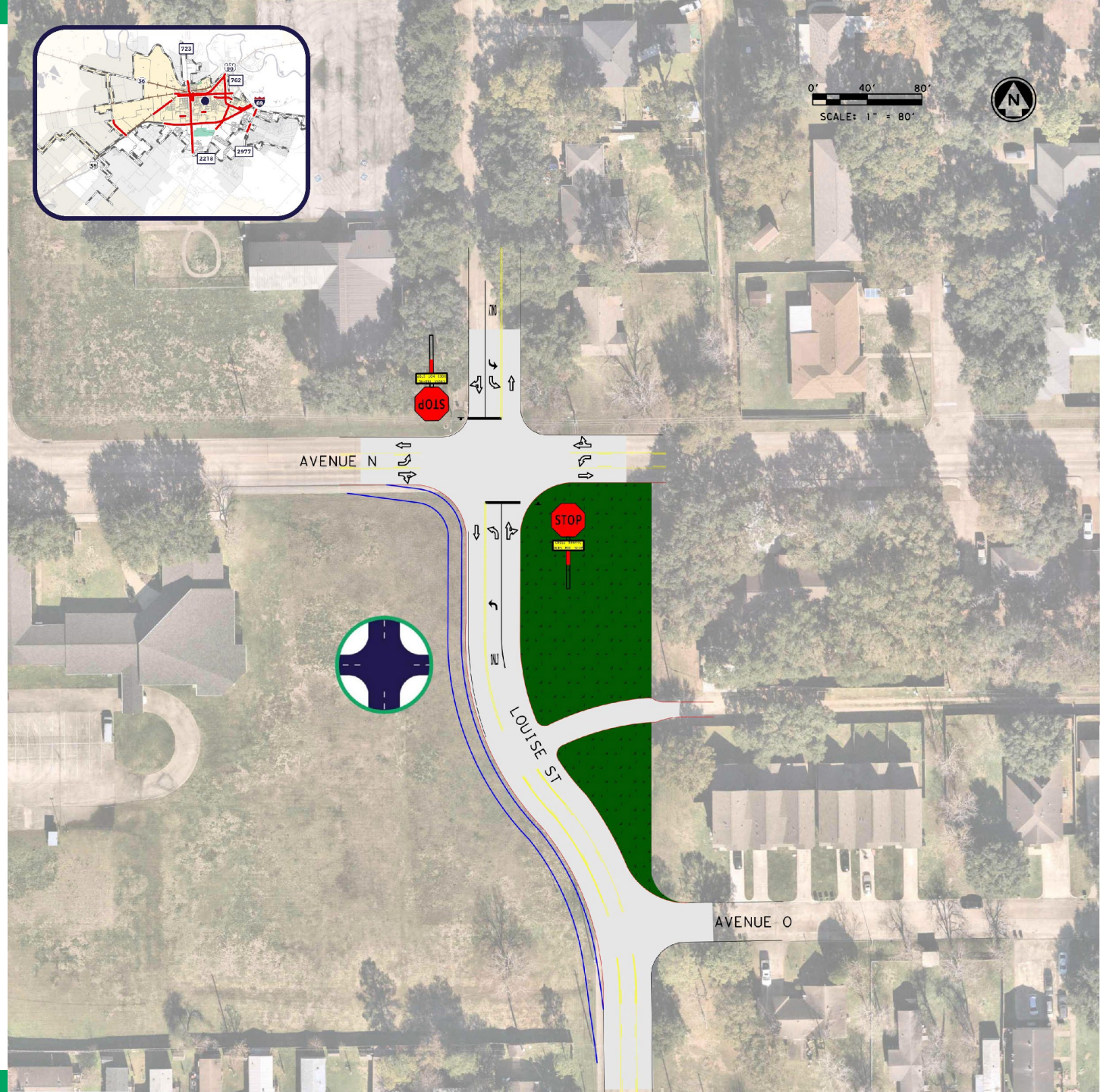
**Estimated Crash Cost Savings: \$250k**

**6 Total Preventable Crashes**

0 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio: 0.2**

**HSIP SII: 0.0**



# I-4. Spacek Road & IH 69 EBFR

## Project Description:

Add striping and signage to clarify EBR lane drop at intersection. Add stop bar and edge line markings to clarify NBR movement. Add vertical posts to make raised island more visible.

**Estimated Project Cost:** \$50k

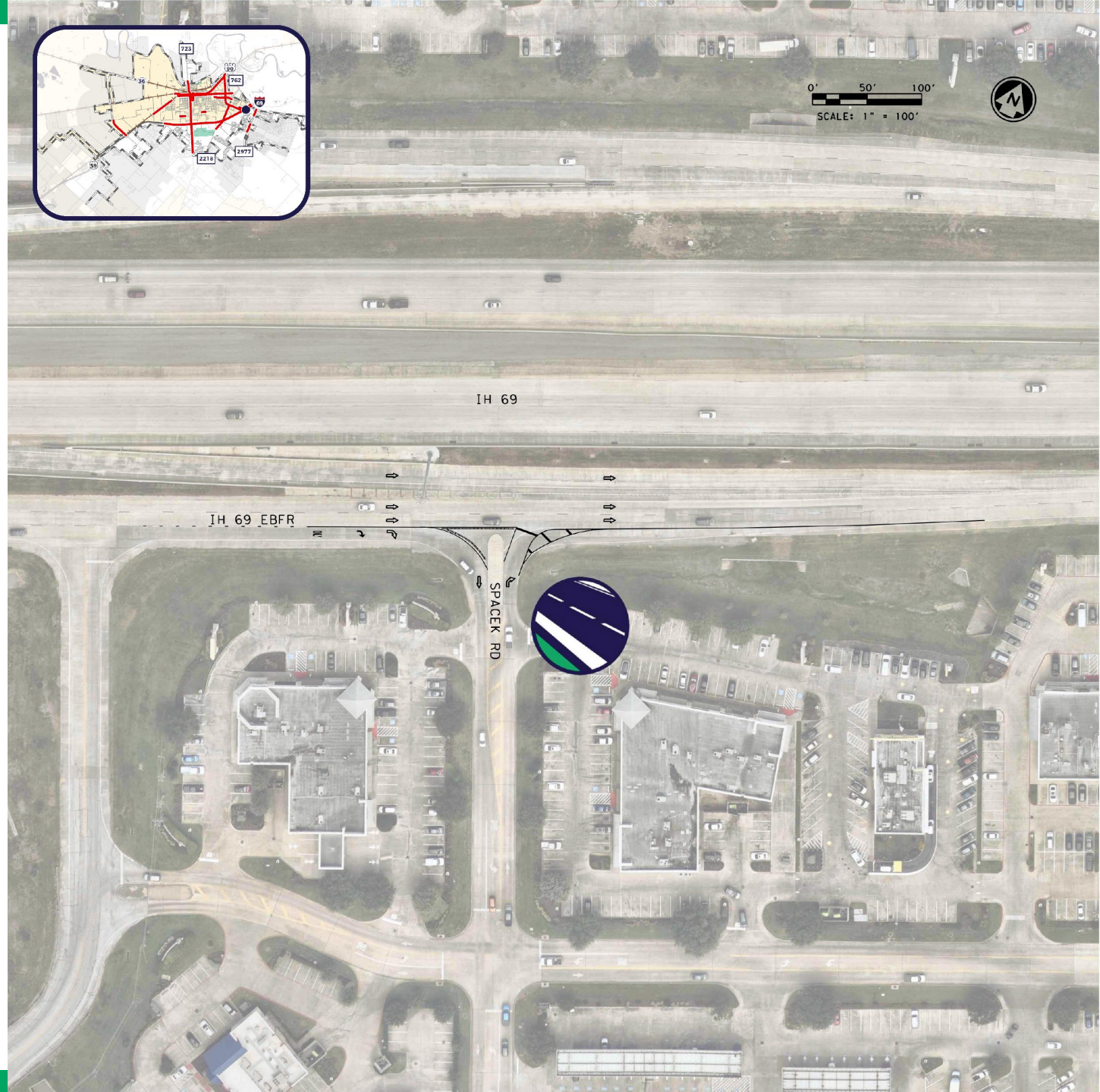
**Estimated Crash Cost Savings:** \$200k

10 Total Preventable Crashes

0 Preventable Fatalities & Serious Injuries

**Benefit-Cost Ratio: 3.9**

**HSIP SII: 2.0**



# Systemic Infrastructure Projects

# Action Plan – Systemic Infrastructure

ID	Action (What)	Timeframe (When)	Partner Agencies (Who)	Potential Funding Source (How)
S-1	Unsignalized Pedestrian Crossing Improvements	2025-2026 Funding/Design 2027-2029 Construction	TxDOT	SS4A Implementation  TxDOT HSIP  TxDOT Transportation Alternatives
S-2	Sidewalks			
S-3	Backplates with Retroreflective Borders			
S-4	Safety Lighting			
S-5	Low-Cost Stop-Controlled Intersection Improvements			



# S-1. Unsignalized Pedestrian Crossing Improvements

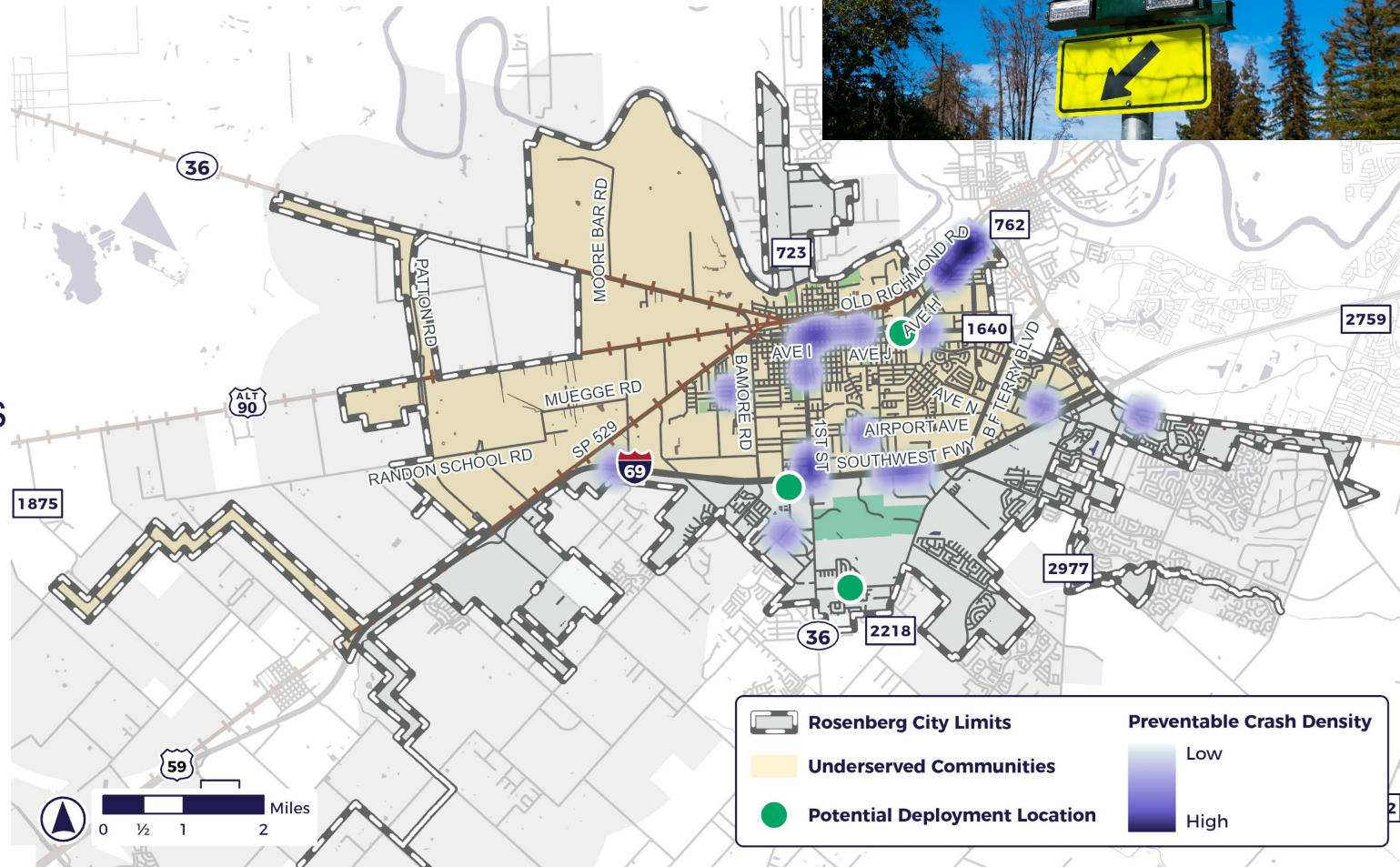
## Project Description:

Install Rectangular Rapid Flashing Beacons (RRFB) and high visibility pedestrian crosswalk markings.

**Potential Locations:** 3 Crossing Locations

**Estimated Unit Cost:** \$70k

**Estimated Total Cost:** \$210k



# S-2. Sidewalks

**Project Description:**  
Install 6' sidewalks.

**Potential Locations:** 20 Miles

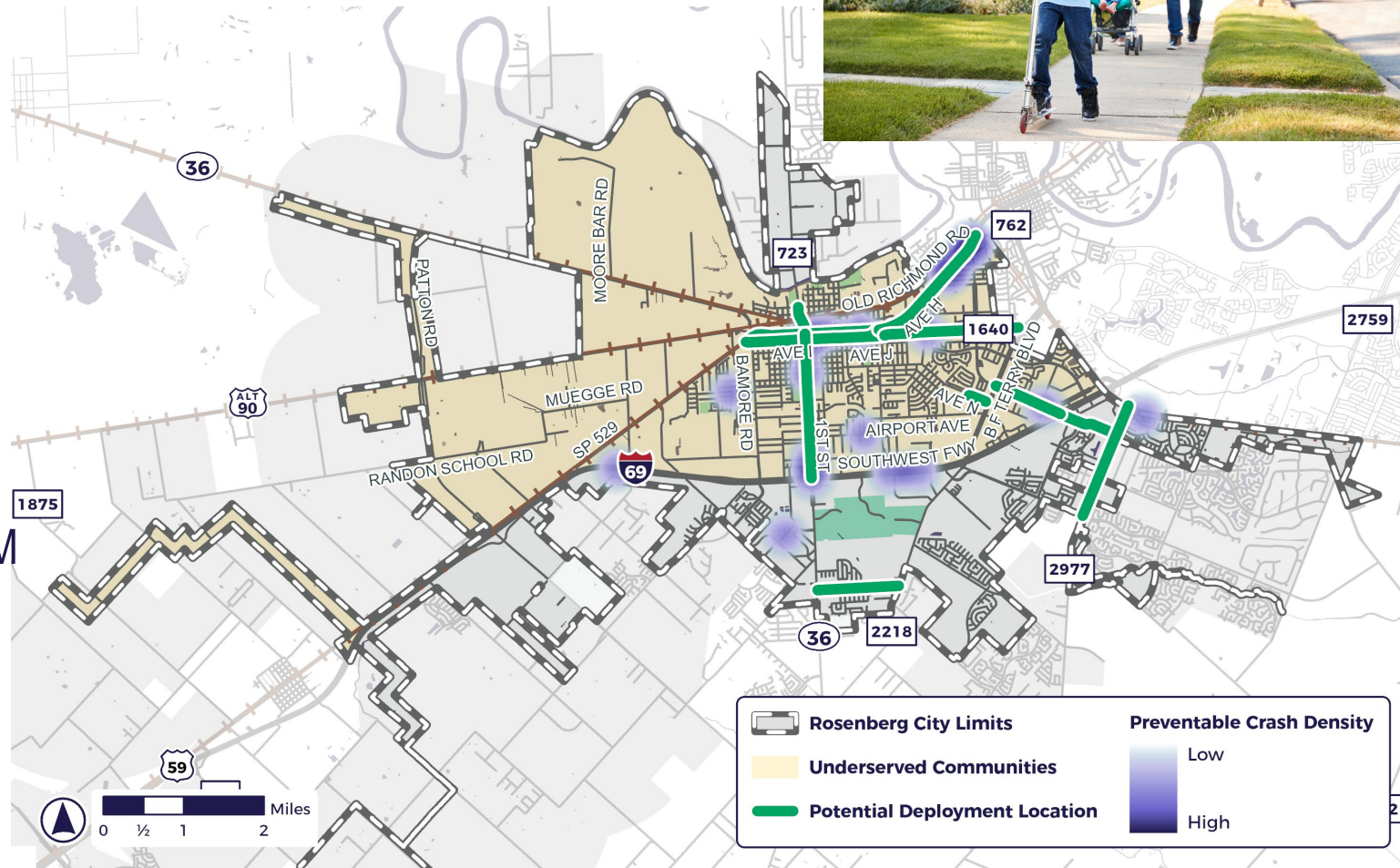
**Estimated Unit Cost:** \$690k

**Estimated Total Cost:** \$13.8M

**Estimated Crash Cost Savings:** \$11.2M

12 Total Preventable Crashes

2 Preventable Fatalities & Serious Injuries



# S-3. Backplates with Retroreflective Borders

## Project Description:

Install backplates with retroreflective borders.

**Potential Locations:** 45 Intersections

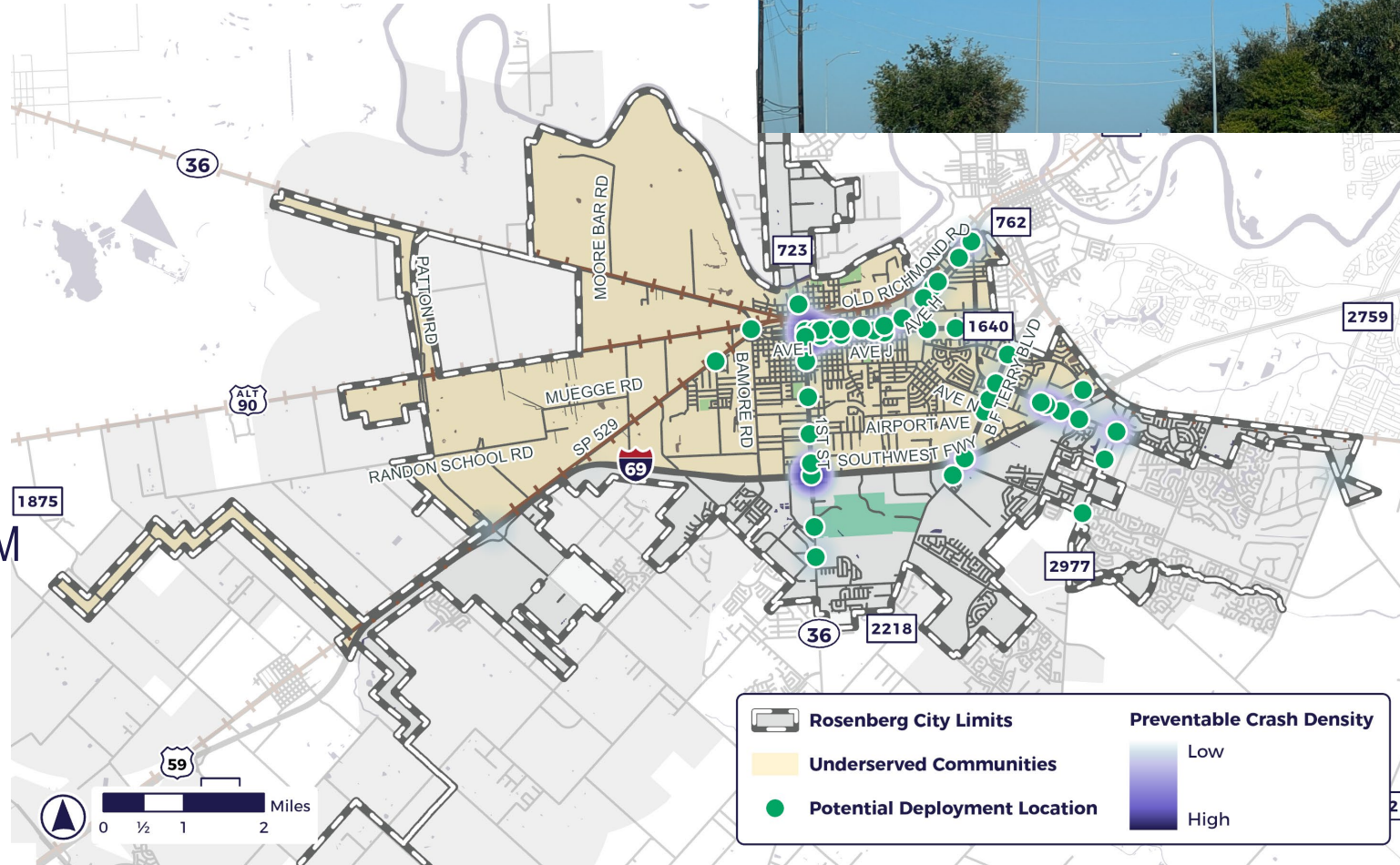
**Estimated Unit Cost:** \$25k

**Estimated Total Cost:** \$1.2M

**Estimated Crash Cost Savings:** \$13.8M

810 Total Preventable Crashes

8 Preventable Fatalities & Serious Injuries



# S-4. Safety Lighting

## Project Description:

Install lighting at intersections along identified roadway segments.

**Potential Locations:** 28 Miles

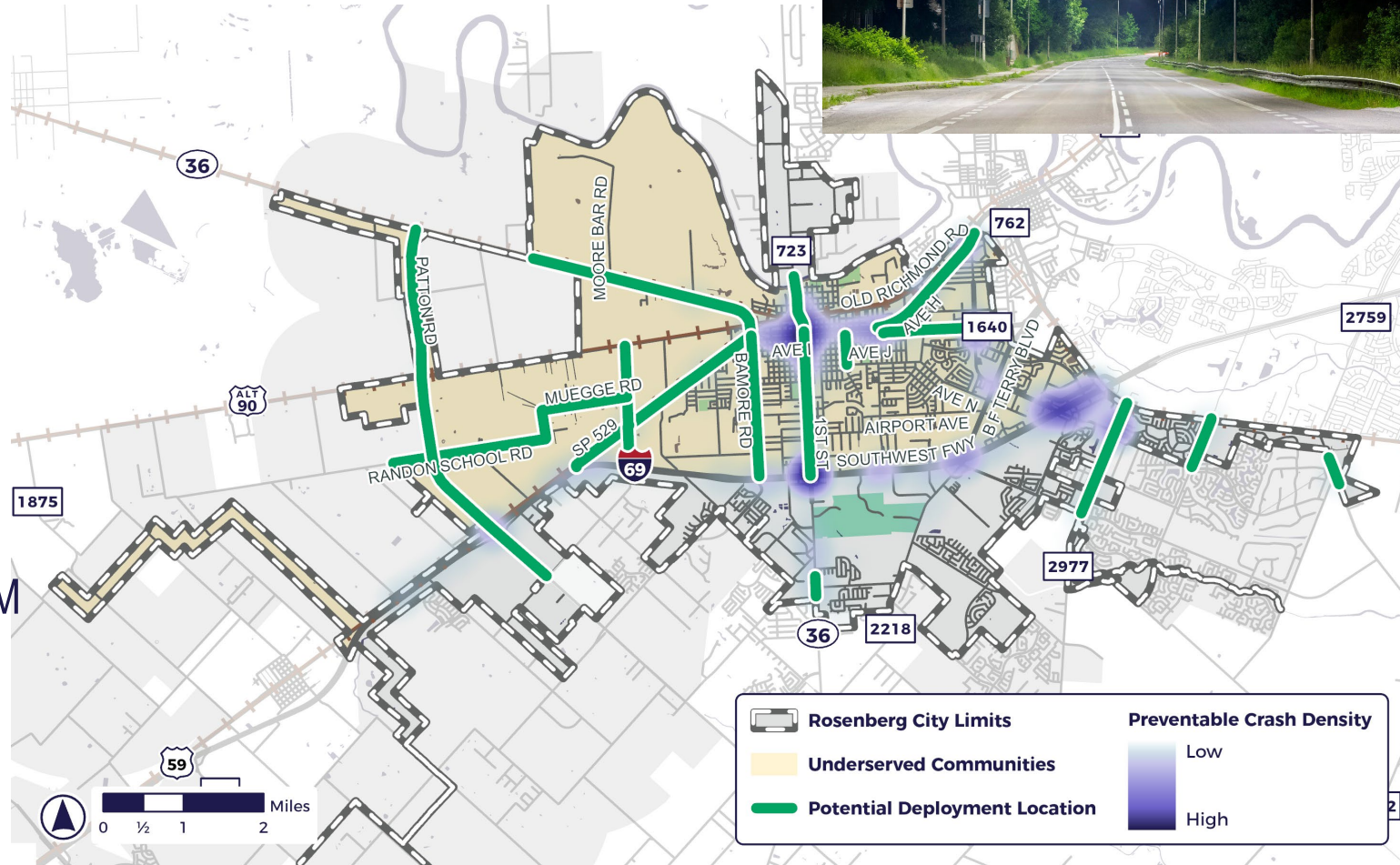
**Estimated Unit Cost:** \$470k

**Estimated Total Cost:** \$13.1M

**Estimated Crash Cost Savings:** \$15.0M

357 Total Preventable Crashes

18 Preventable Fatalities & Serious Injuries



# S-5. Low-Cost Stop-Controlled Intersection Improvements

## Project Description:

Install intersection lighting and low-cost signing/pavement marking improvements.

**Potential Locations:** 10 Intersections

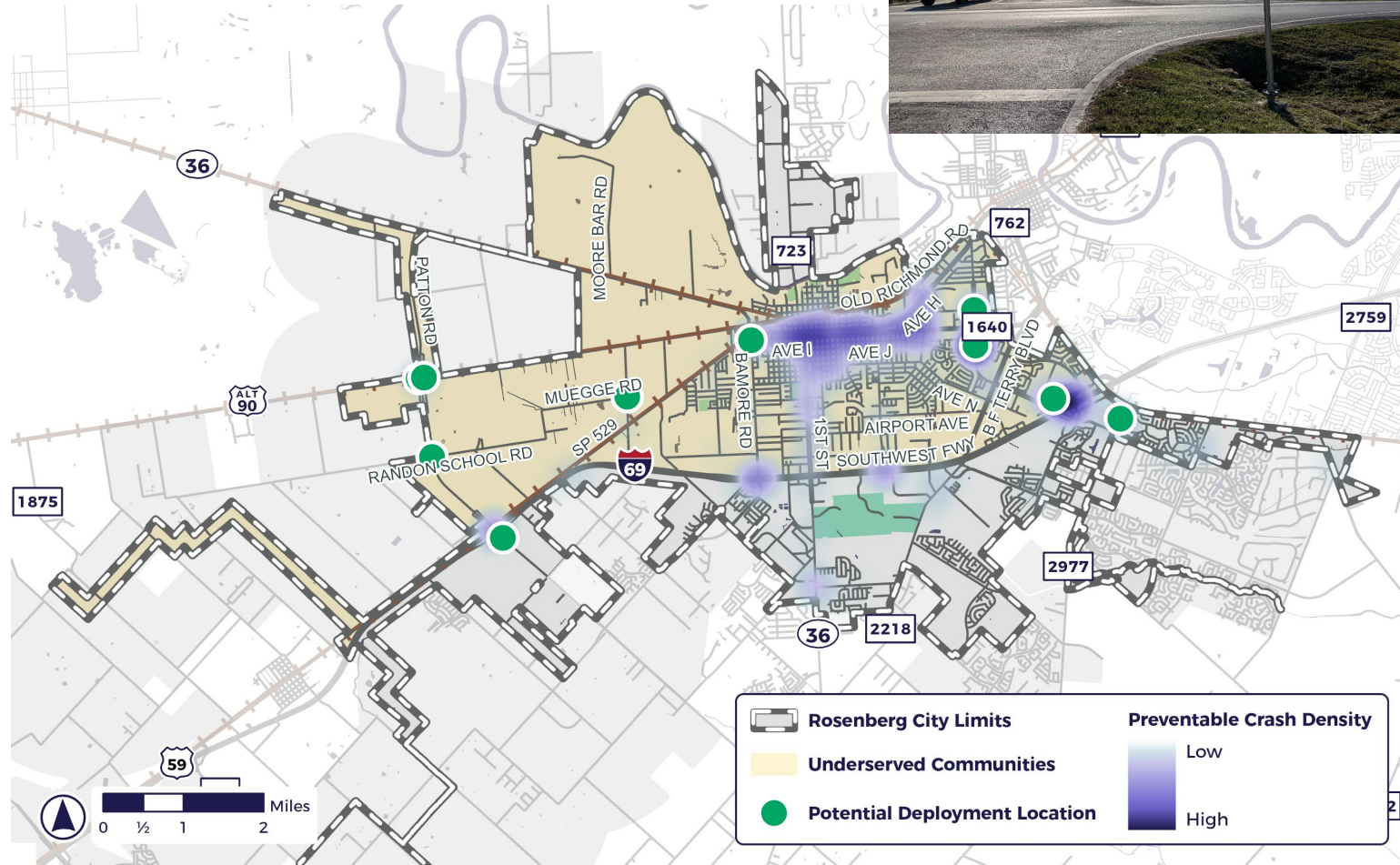
**Estimated Unit Cost:** \$120k

**Estimated Total Cost:** \$1.2M

**Estimated Crash Cost Savings:** \$1.3M

113 Total Preventable Crashes

2 Preventable Fatalities & Serious Injuries

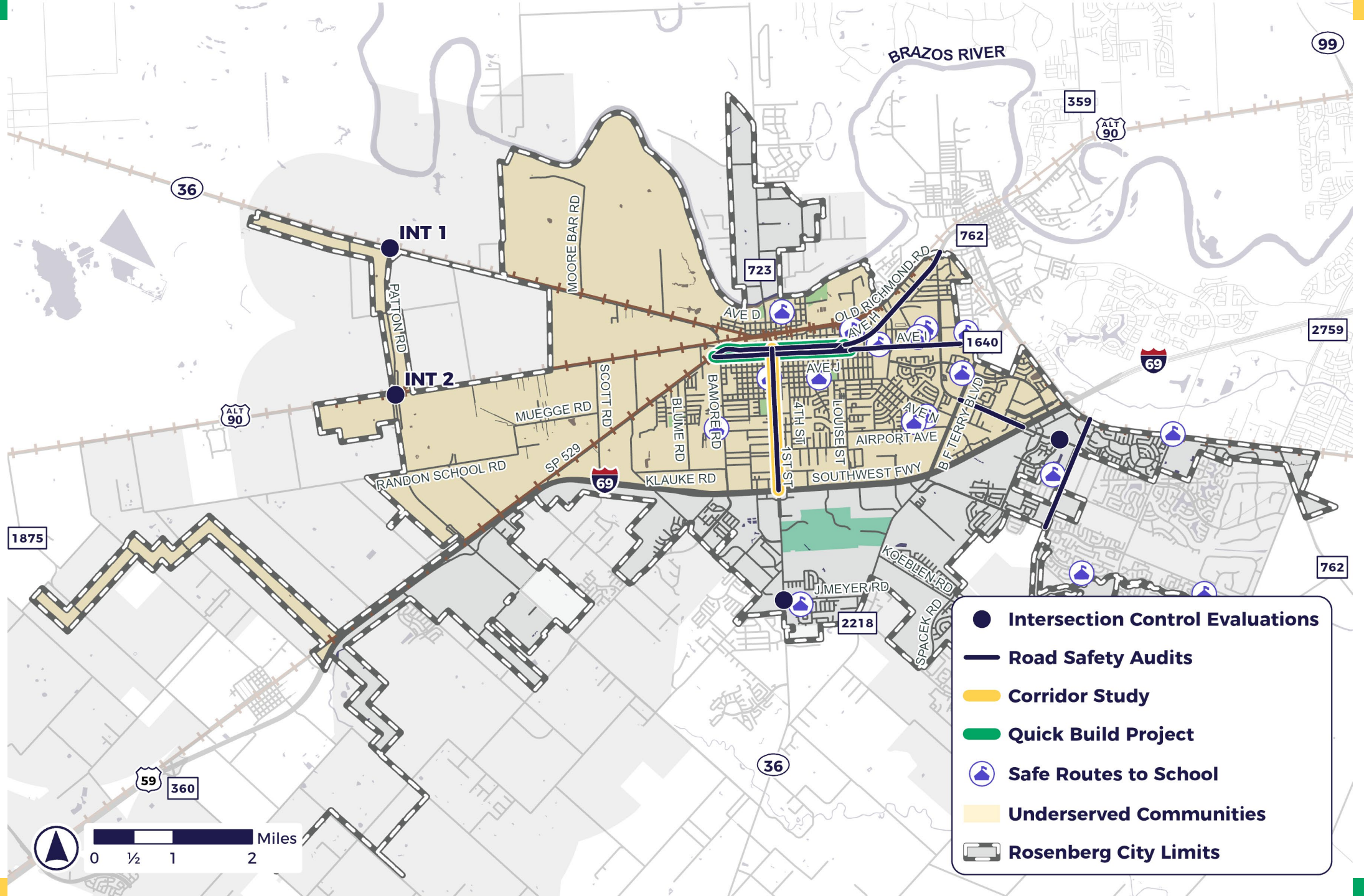


# Non-Infrastructure Projects

# Action Plan – Non-Infrastructure

ID	Action (What)	Timeframe (When)	Partner Agencies (Who)	Potential Funding Source (How)
B-1	Quick-Build Project	2025-2026 Construction	TxDOT	SS4A
B-2	Corridor Study	2025-2026 Planning 2027-2029 Funding 2030+ Design	Rosenberg Development Corporation (RDC)	Demonstration
B-3	Safe Routes to School		Lamar CISD	SS4A Supplemental Planning
B-4	Road Safety Audits		TxDOT	
B-5	Intersection Control Evaluations			
P-1	Policy Working Group		2025-2026 Coordination 2027-2029 Update Code	None
E-1	Publish Crash Performance Outcomes	2025-2026 Coordination 2027+ Annual Reporting	H-GAC	None

# Non-Infrastructure Projects



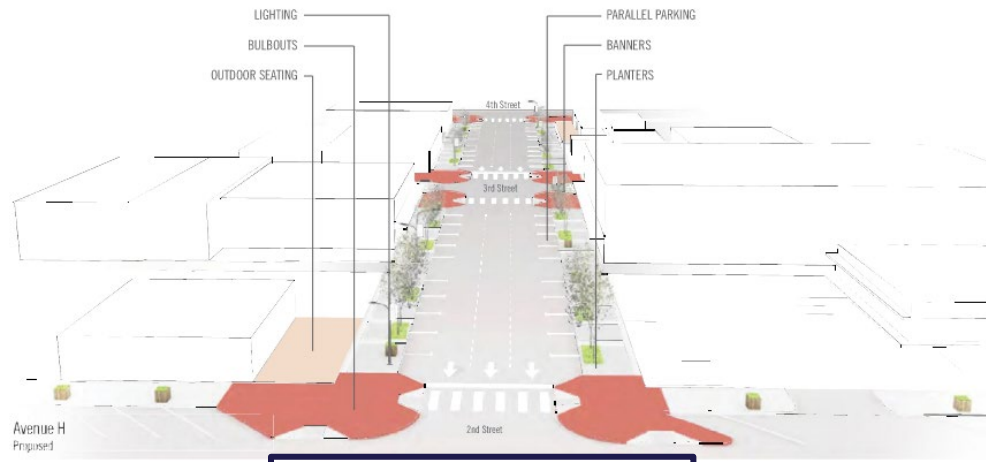
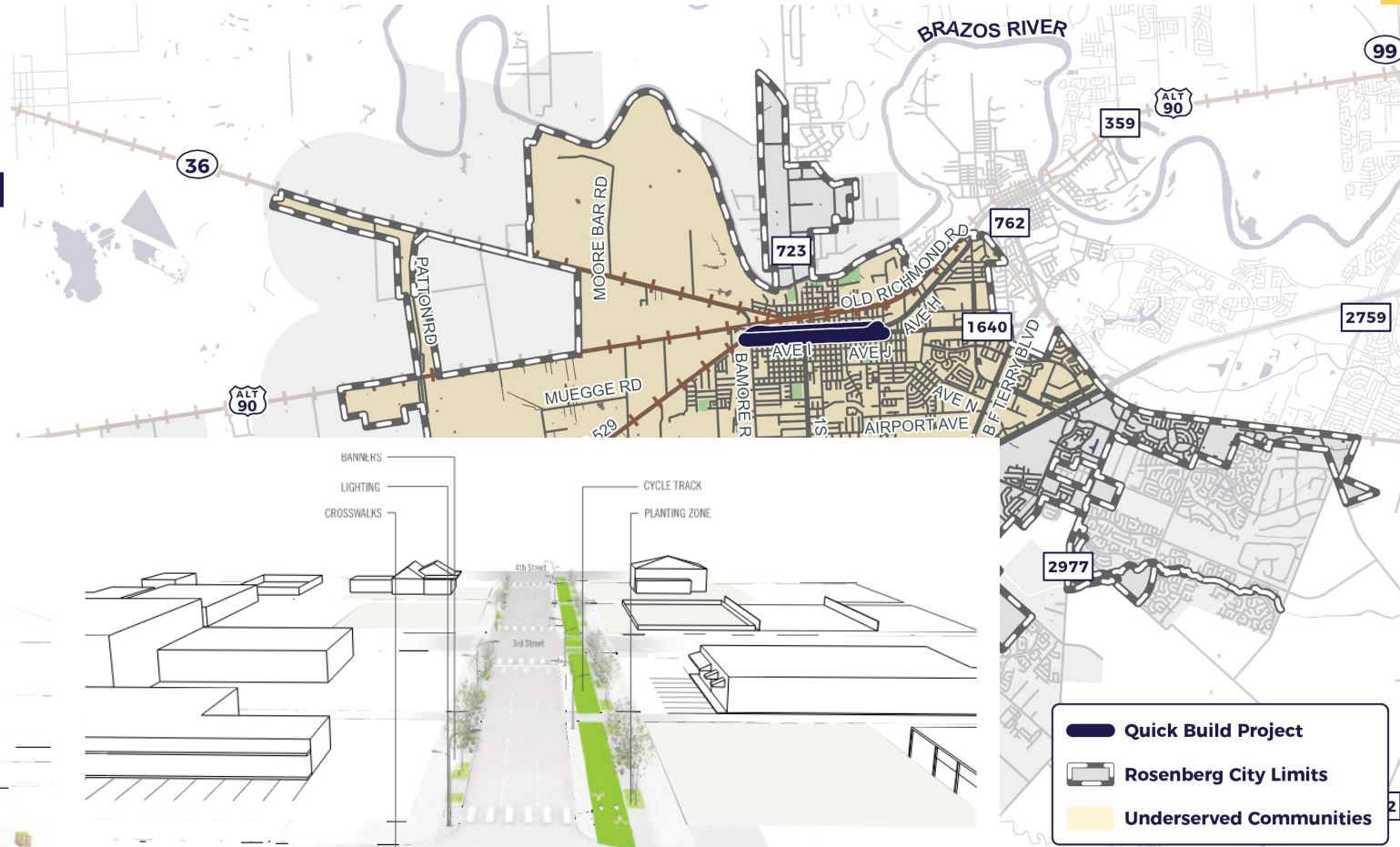
- Intersection Control Evaluations
- Road Safety Audits
- Corridor Study
- Quick Build Project
- 🚶 Safe Routes to School
- 🏠 Underserved Communities
- 🗺️ Rosenberg City Limits

# B-1. Quick-Build Project

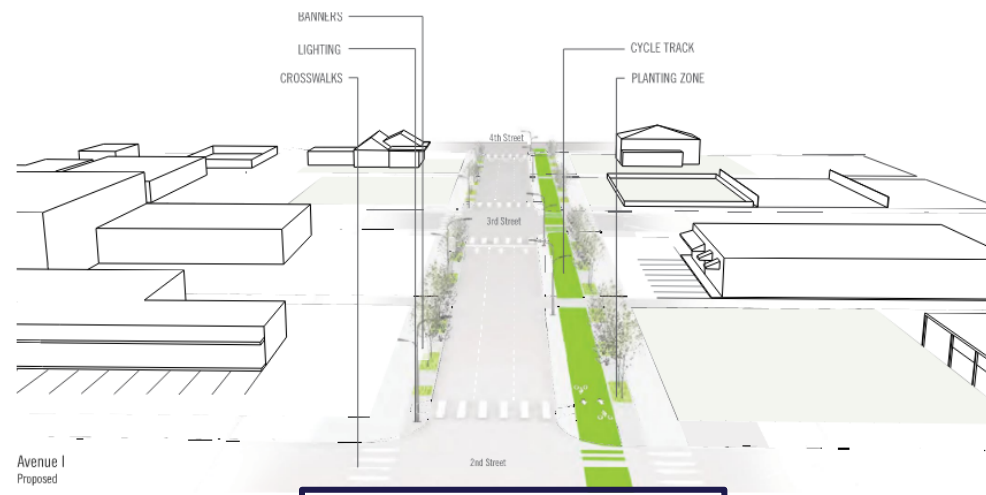
## Along Avenues H & I Between Frost Street & Millie Street

### Project Description:

Implement a quick-build project along Avenue H (US 90A) and Avenue I (FM 1640) to demonstrate the feasibility of narrowing the roadway.



**Avenue H (US 90A)**



**Avenue I (FM 1640)**

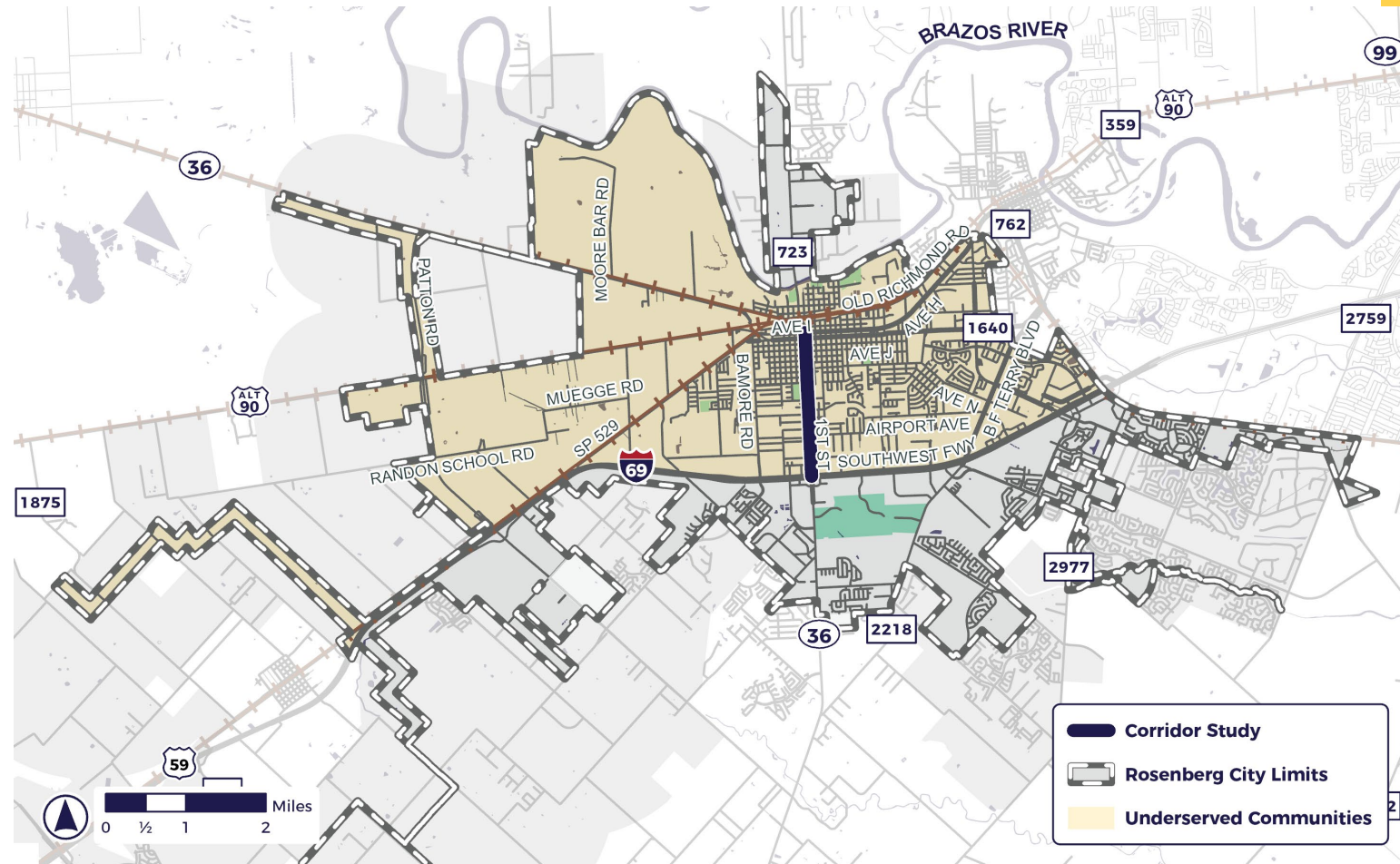
# B-2. Corridor Study

## Along 1<sup>st</sup> Street (SH 36) Between Avenue H (US 90A) and IH 69

### Project Description:

Conduct a study along 1st Street (SH 36) between Avenue H (US 90A) and IH 69 to:

- Determine access management improvements
- Identify pedestrian crossing treatments
- Identify truck patterns and alternate routes
- Evaluate feasibility of extending TWLTL (or median) north of Avenue O
- Resolve turning conflicts at Avenue H (US 90A) and Avenue I (FM 1640)

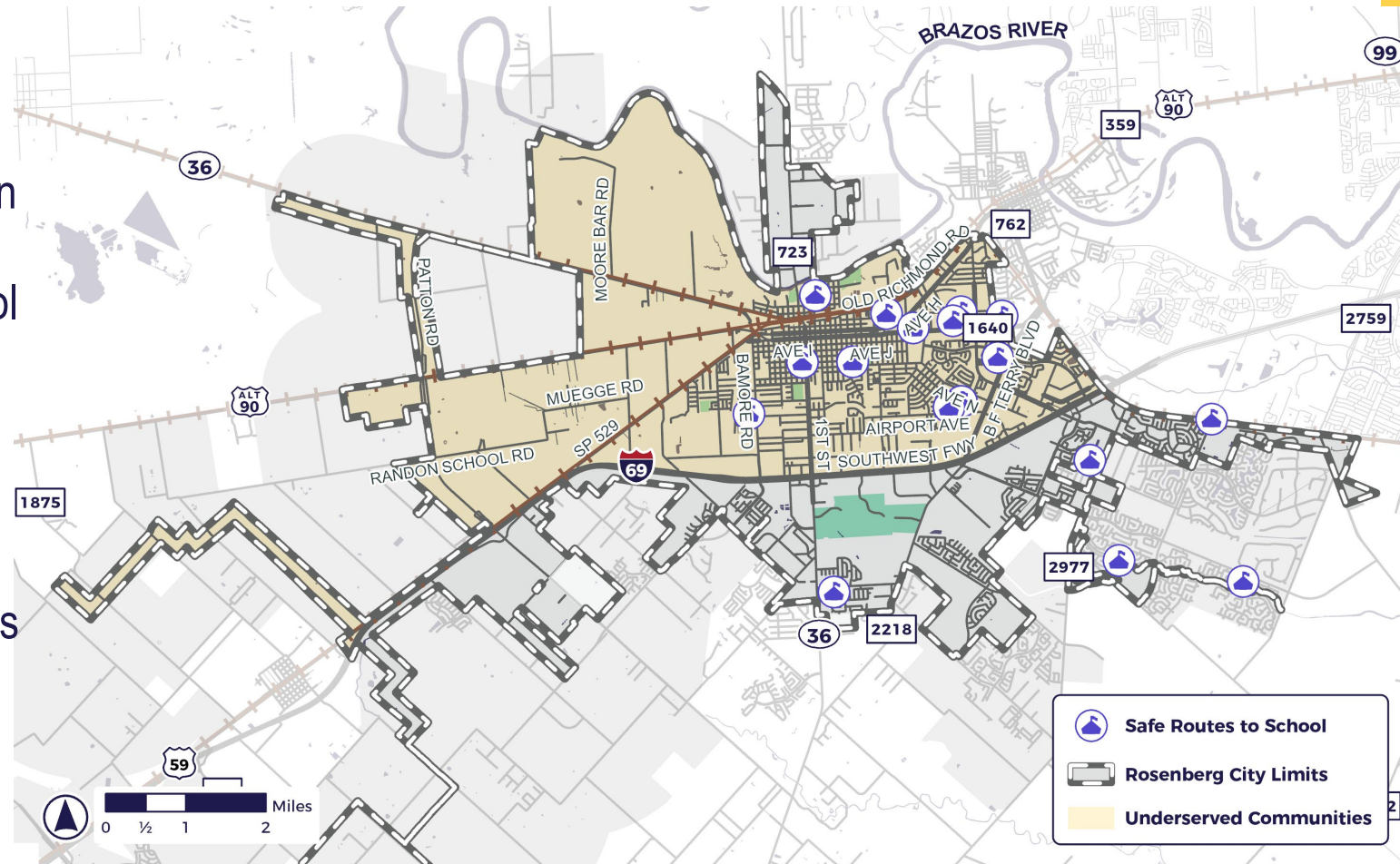


## B-3. Safe Routes to School Study

### Project Description:

Conduct a City-wide Safe Routes to School plan which may:

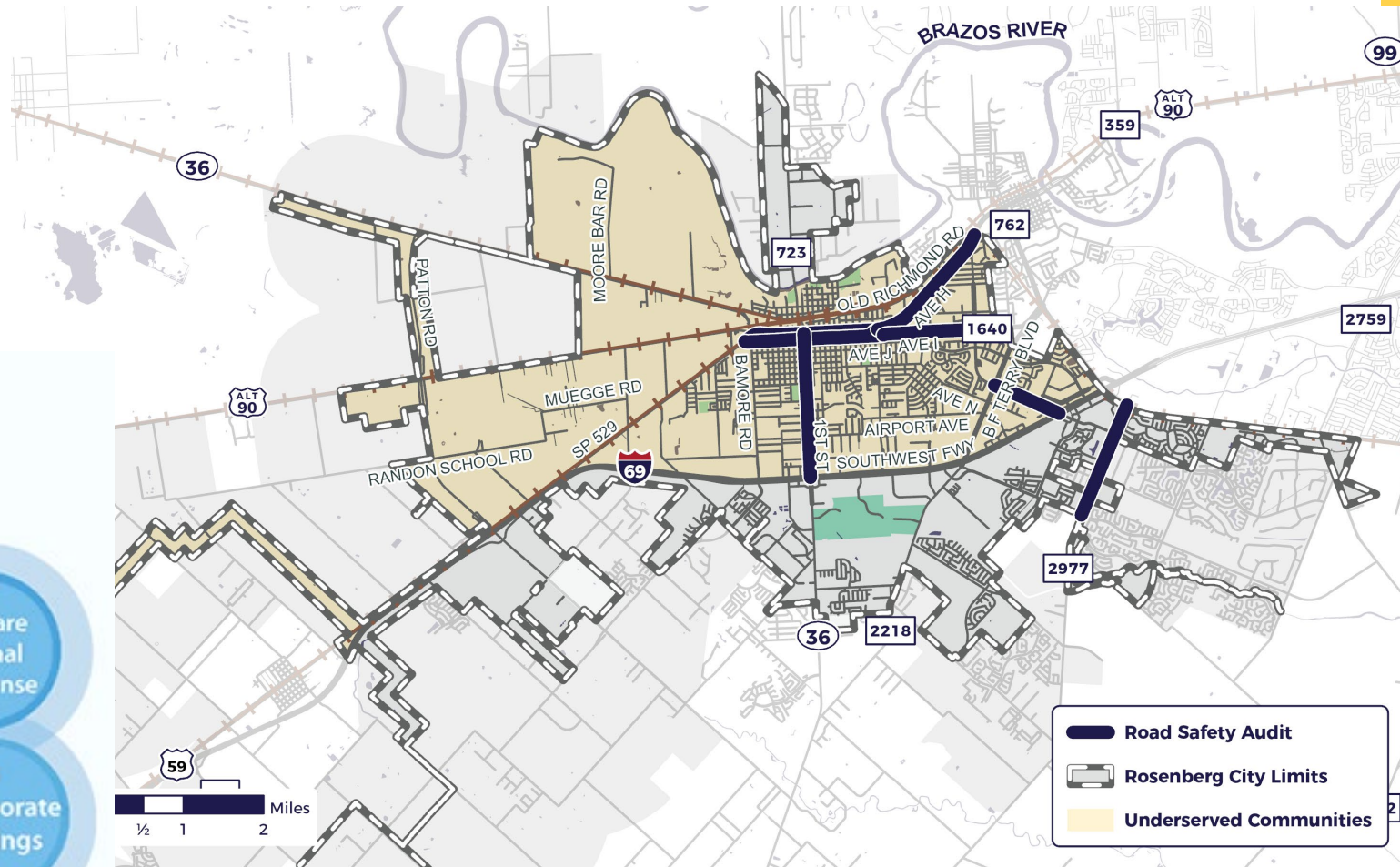
- Identify how children walk and bike to school
- Recommend infrastructure improvements near schools
- Organize school members to participate in activities like painting street art, serving as crossing guards, or leading walk/bike groups
- Establish a process to fund infrastructure near schools



# B-4. Road Safety Audits

## Project Description:

Conduct Road Safety Audits along each of the seven focus corridors.



### Responsibilities

- RSA Team
- Design Team/Project Owner

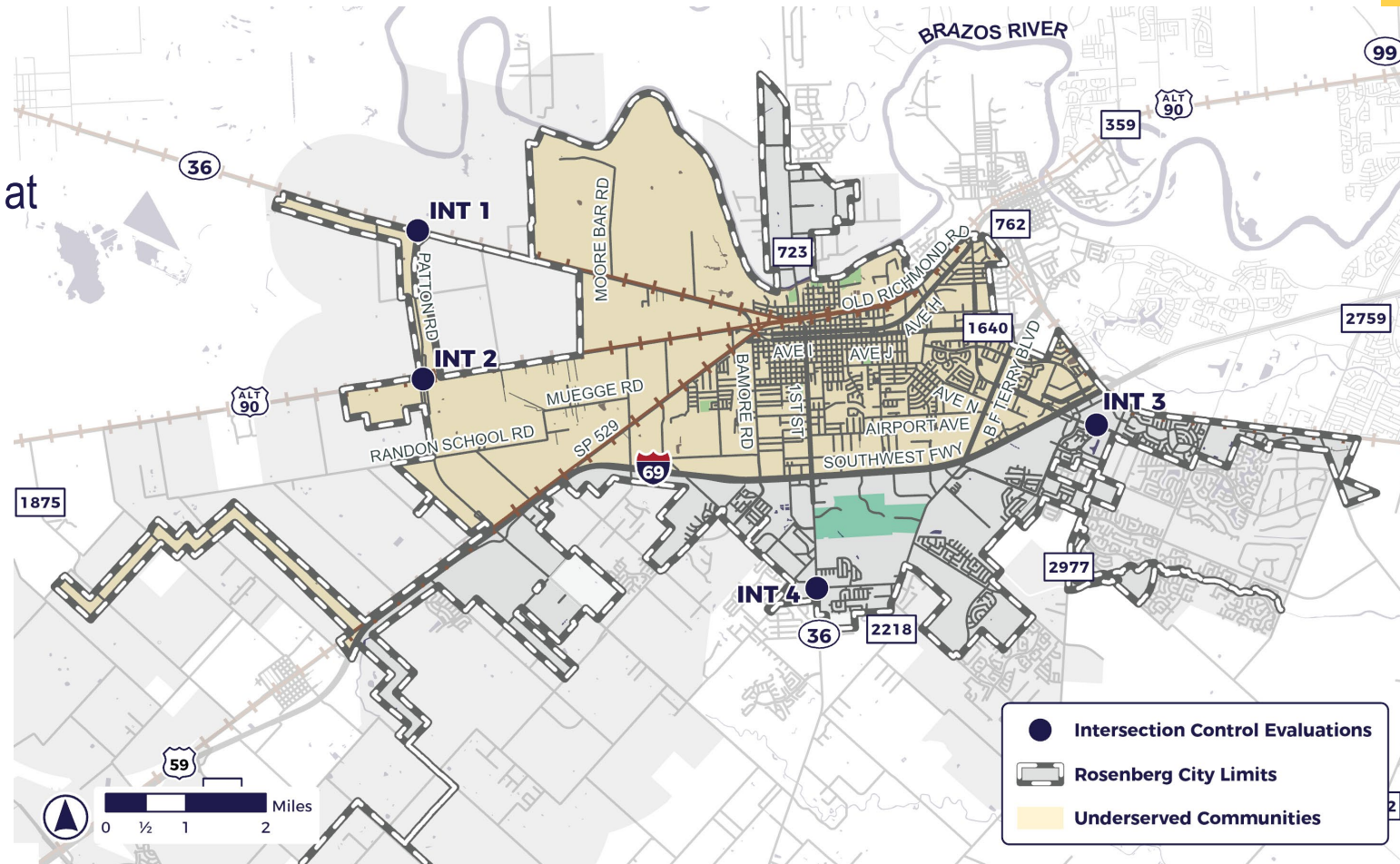


# B-5. Intersection Control Evaluation

## Project Description:

Conduct Intersection Control Evaluations (ICE) at the below locations:

1. Spur 10 & SH 36 (Focus Location)
2. Spur 10 & US 90A (Focus Location)
3. Park Place Boulevard & Reading Road (Public Comment)
4. J Meyer Road & SH 36 (Public Comment)



# Next Steps

- ~~10/7 – Implementation Plan Workshop with STF~~
- ~~10/22 – City Council workshop to present draft Safety Action Plan~~
- 10/24 – Post Safety Action Plan report for public comment
- 11/5 – City Council meeting to adopt VZ resolution
- 12/3 – City Council meeting to adopt Safety Action Plan
  
- February 2025\* – SS4A Implementation Grant Notice of Funding Opportunity (NOFO)
- May 2025\* – SS4A Implementation Grant Application Deadline

\*Date estimated based on 2024 grant schedule

# Vision Zero Resolution

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROSENBERG, TEXAS, APPROVING AND ADOPTING A SAFE STREETS AND ROADS FOR ALL ACTION PLAN.

\* \* \* \* \*

**WHEREAS**, the City Council deems it necessary and proper and in the best interest of the City to have a Safe Streets and Roads For All Action Plan (Plan); and,

**WHEREAS**, the life and health of all persons living and traveling within the City of Rosenberg are our utmost priority, and no one should die or be seriously injured while traveling on our city streets;

**WHEREAS**, the Safe System Approach is the concept that traffic deaths and serious injuries on our roadways are unacceptable;

**WHEREAS**, the Safe System Approach is a holistic strategy aimed at eliminating all traffic fatalities and serious injuries suffered by all road users while increasing safe, healthy, equitable mobility for all;

**WHEREAS**, traffic crashes are among the leading cause of deaths in the United States;

**WHEREAS**, approximately 16 people were killed and 89 were seriously injured in the total 4,522 traffic crashes which are reported within the City of Rosenberg from 2019 to 2023;

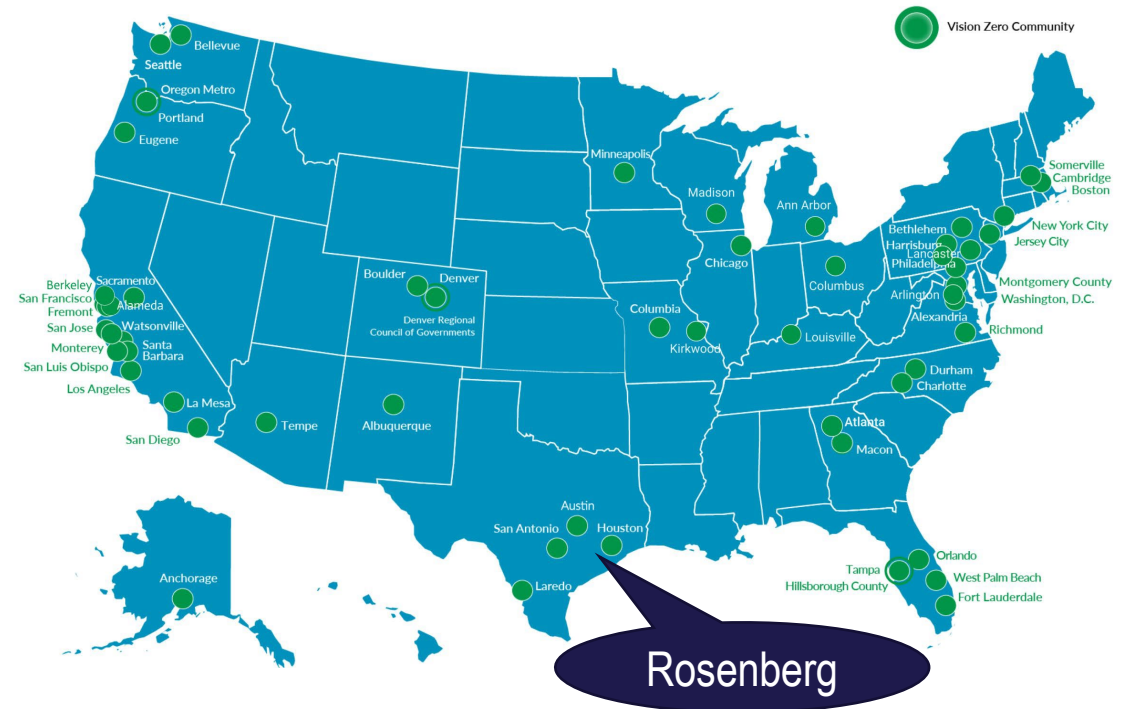
**WHEREAS**, the City Council finds that the continued loss of lives on City streets is unacceptable;

**WHEREAS**, the USDOT, TxDOT, and H-GAC have adopted policies to eliminate traffic fatalities and serious injuries;

## BE IT RESOLVED BY THE COUNCIL OF THE CITY OF ROSENBERG:

Section 1. The City Council of the City of Rosenberg hereby commits to support transportation projects and programs to eliminate traffic fatalities and serious injuries in the city by the year 2050 and hereby adopts the Safe Streets and Roads For All Action Plan attached hereto as Exhibit "A" and made a part hereof for all purposes.

## VISION ZERO NETWORK



# Thank You



# Appendix 2

*Planning Structure*

# Safety Task Force Meeting 1

Monday, March 25, 2024



**ROSENBERG**  
SAFETY ACTION PLAN

# Agenda

- Introductions
- Project Overview
  - Comprehensive Safety Action Plan (CSAP) components
  - Project Tasks
  - Project Schedule
  - Engagement Schedule
- Vision, Goals, and Objectives
- Crash History
- Equity Considerations
- Projects
- Next Steps

# Introductions

- Name
- Organization
- Road safety experience
  - Why is safety a priority?
  - What aspect of road safety interests you?
  - What does a safe street look like?
  - Name a safe street (or an unsafe street)

# Safe Streets For All (SS4A) Grants

## Planning and Demonstration

- Development of comprehensive safety action plans
- Supplemental planning
- Demonstration activities

## Implementation

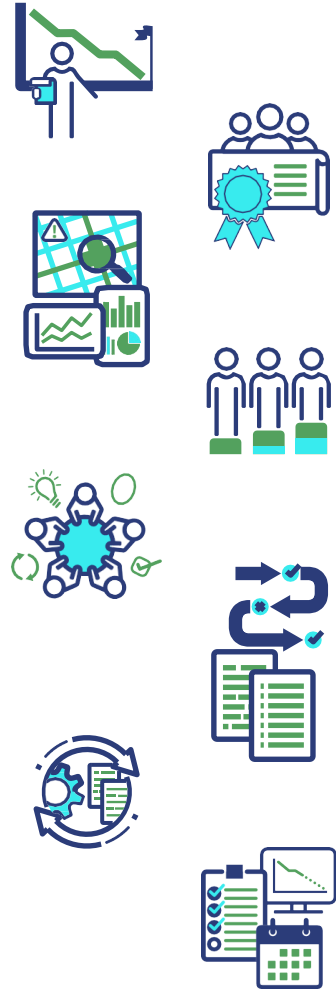
- Implementation of projects and strategies in an Action Plan
- Project-level planning, design and development
- Construction

# Comprehensive Safety Action Plan

- First step in prioritizing and securing funding for safety improvements
- Improve transportation network safety
- Significantly reducing or eliminating roadway fatalities and serious injuries
- Identify projects for implementation



# CSAP Key Components



- Leadership commitment and goal setting
- Planning structure
- Safety analysis
- Equity considerations
- Engagement and collaboration
- Strategy and project selections
- Policy and process changes
- Progress and transparency

**Planning structure** through a committee, task force, implementation group, or similar body charged with oversight of the Action Plan development, implementation, and monitoring.

**Engagement and collaboration** with the public and relevant stakeholders, including the private sector and community groups, that allows for both community representation and feedback.

# Tasks and CSAP Components





Project Task	Comprehensive Safety Action Plan Key Component
1. Project Management	✓ Leadership Commitment and Goal Setting
2. Safety Analysis	✓ Safety Analysis
3. Equity and Resiliency Analysis	✓ Equity Considerations
4. Public Engagement	✓ Planning Structure ✓ Engagement and Collaboration
5. Implementation	✓ Strategy and Project Selections ✓ Policy and Process Changes ✓ Progress and Transparency

# Role of Safety Task Force

- **Participate** and provide input at meetings
- **Answer** questions and encourage dialogue at public meetings
- **Oversee** implementation of CSAP projects














# Schedules

# Project Schedule

Month:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Description:												
STF Engagement												
Safety Analysis												
Equity Analysis												
Public Engagement												
Implementation												



# Engagement Schedule

Month:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
STF Engagement												
Public Engagement (Pop-ups)												
Small Group Engagement								 				
Online Engagement												



Meeting



Workshop



Presentation




In-Field Audit



Survey

# Objectives

# Vision, Goals, and Objectives

 **Objective** – Measurable milestone or checkpoint, which supports the goals and vision



VISION

Goal

Goal

Goal

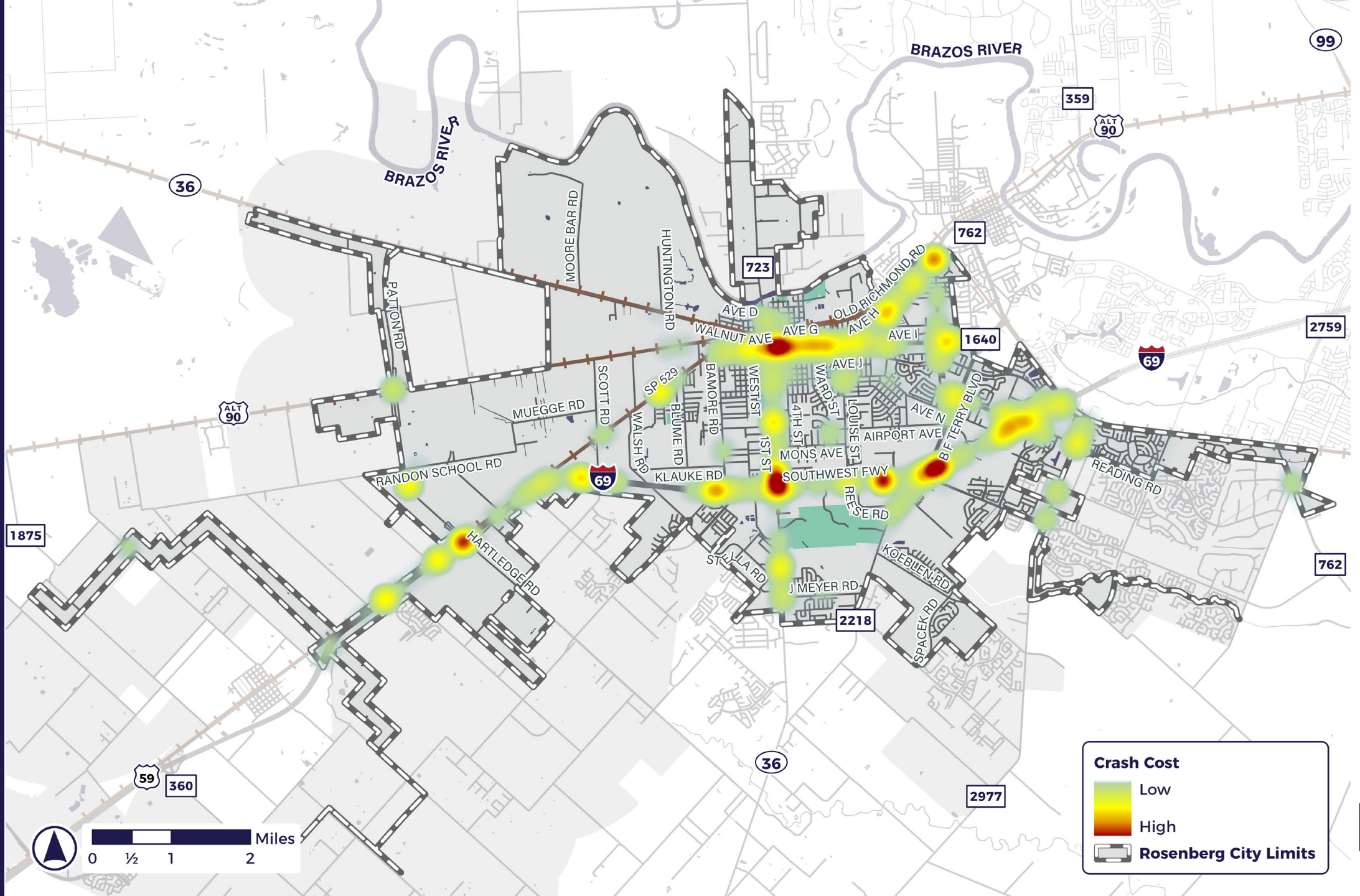
# Goals and Objectives

What are your priorities and objectives for the CSAP?

- The CSAP is a success if... a failure if...
- The process should include...
- The deliverable should look like...
- An outcome should be...

# Crash History

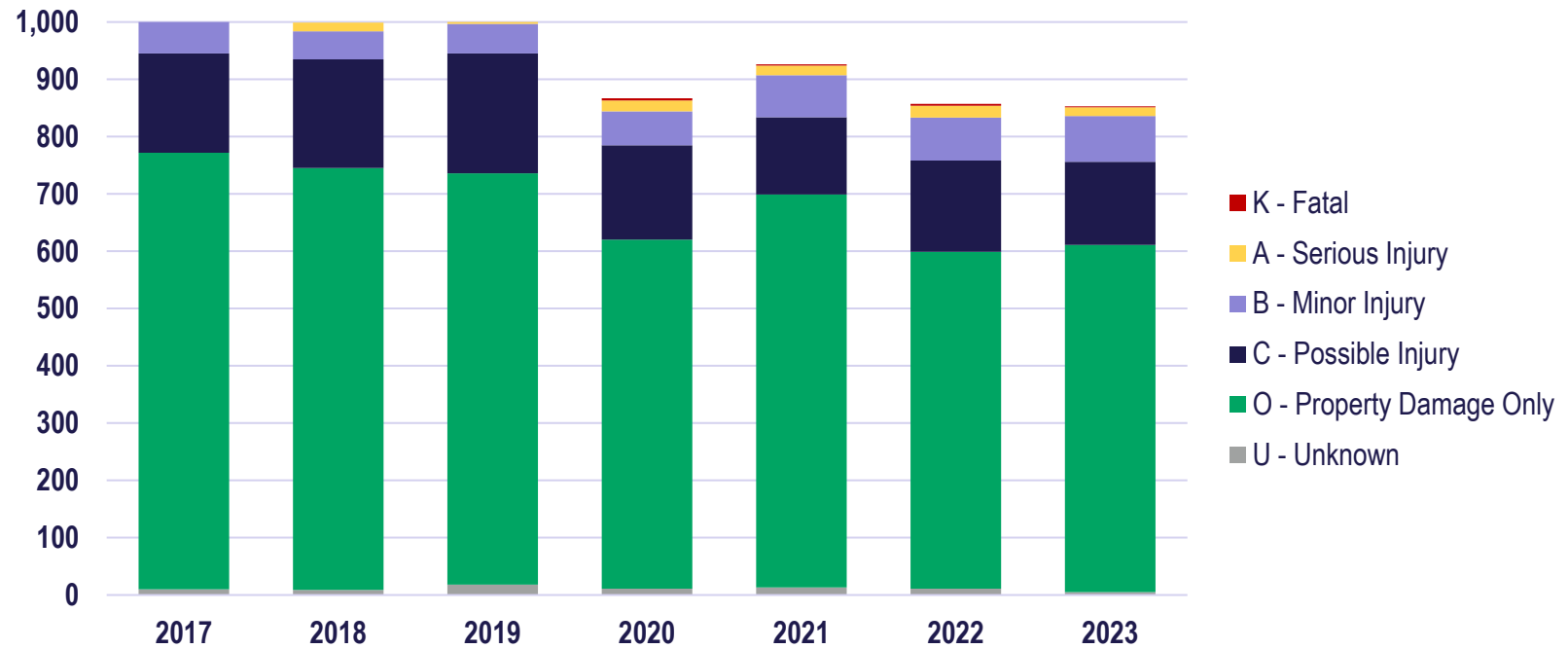
# Crash Location and Severity



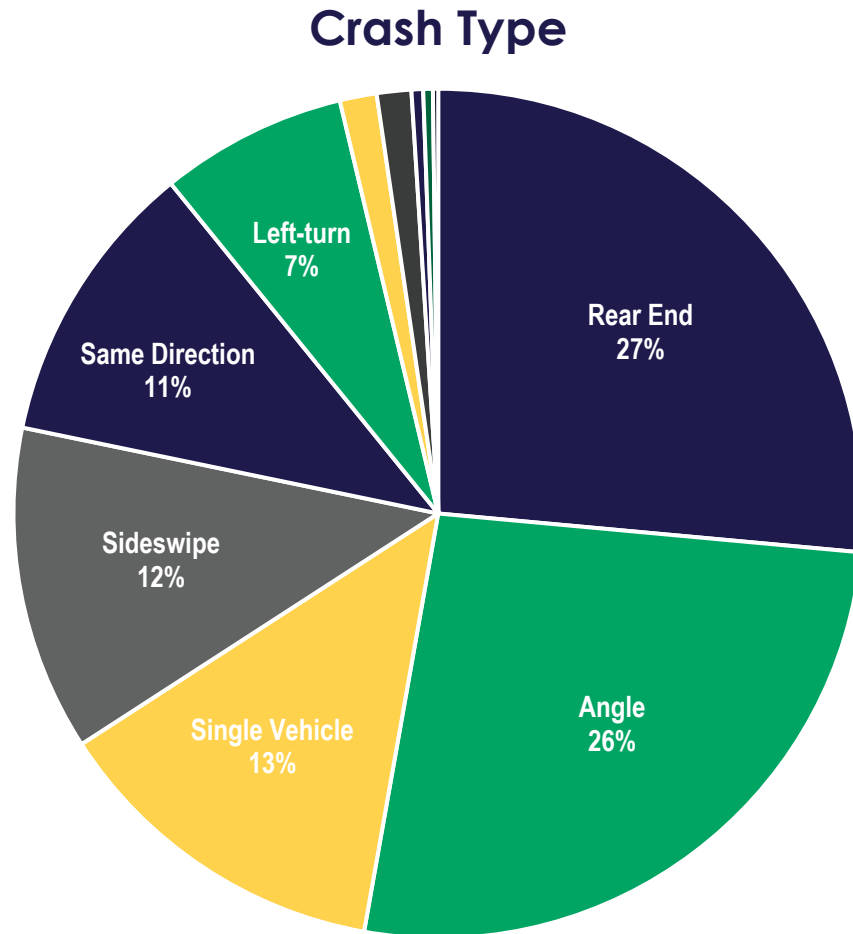
**6,550**  
reported crashes  
from 2017 to 2023

**141**  
fatal and serious  
injury crashes

**\$132M**  
in crash costs  
annually



# Crash Types (All Crashes)

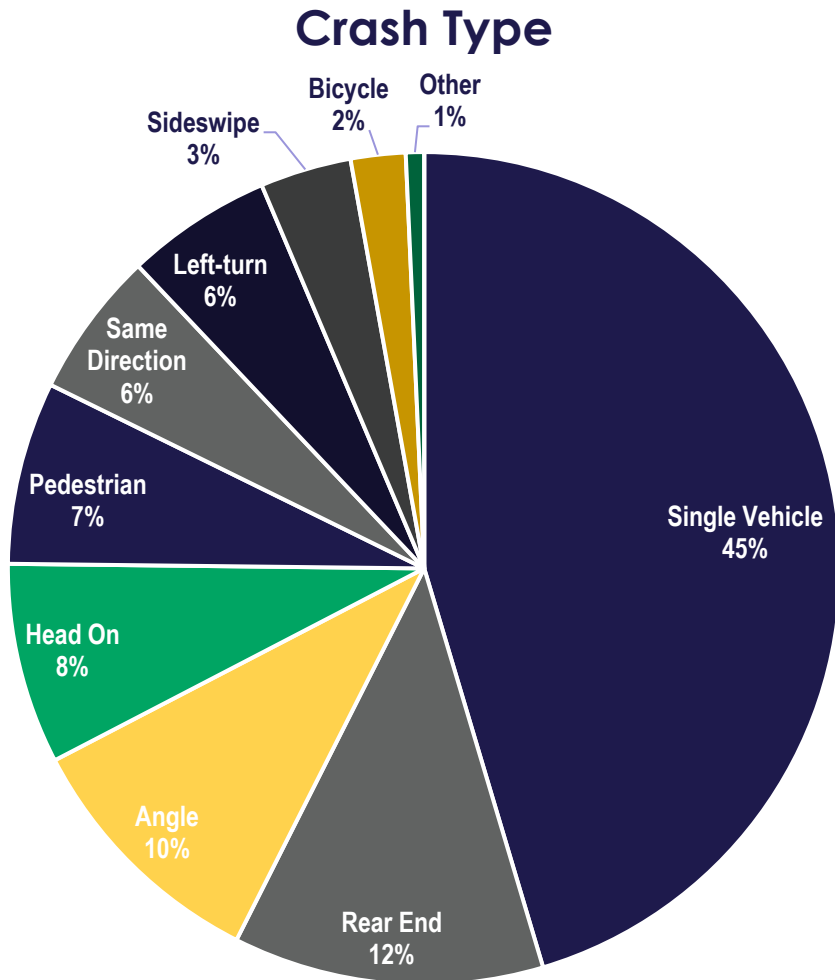


**49%**  
intersection crashes

**73%**  
of crashes occurred  
“on system”

**53**  
bicycle and  
pedestrian crashes  
(1%)

# Crash Types (Fatal and Serious Injury)



**31%**  
intersection crashes



**78%**  
of crashes occurred  
"on system"



**13**  
bicycle and  
pedestrian crashes  
(9%)



Arrows indicate comparison to all crashes percentage

# Crash Tree (Injury Crashes)

Fatal, Serious, and Minor Injury Crashes

**Total Crashes**  
592 (100%)

Roadway Part

**Intersection**  
259 (44%)

**Driveway**  
68 (11%)

**Non-Intersection**  
265 (45%)

Roadway Ownership

**TxDOT**  
197 (33%)

**Other**  
62 (10%)

**TxDOT**  
50 (8%)

**Other**  
18 (3%)

**TxDOT**  
216 (36%)

**Other**  
49 (8%)

Crash Type

	On-System Intersection	Off-System Intersection	On-System Driveway	Off-System Driveway	On-System Segment	Off-System Segment
<b>Single Vehicle</b>	13 (7%)	12 (19%)	2 (4%)	4 (22%)	97 (45%)	32 (65%)
<b>Angle</b>	84 (43%)	26 (42%)	18 (36%)	10 (56%)	-	1 (2%)
<b>Rear End</b>	23 (12%)	10 (16%)	6 (12%)	-	60 (28%)	10 (20%)
<b>Same Direction</b>	28 (14%)	1 (2%)	8 (16%)	2 (11%)	4 (2%)	-
<b>Left-turn</b>	34 (17%)	12 (19%)	8 (16%)	1 (6%)	-	-
<b>Sideswipe</b>	2 (1%)	-	-	-	24 (11%)	2 (4%)
<b>Head On</b>	1 (1%)	-	3 (6%)	-	15 (7%)	3 (6%)
<b>Pedestrian</b>	5 (3%)	1 (2%)	1 (2%)	-	10 (5%)	-
<b>Bicycle</b>	6 (3%)	-	3 (6%)	-	5 (2%)	1 (2%)
<b>Backing</b>	1 (1%)	-	1 (2%)	1 (6%)	-	-
<b>Other</b>	-	-	-	-	1 (<1%)	-
<b>Total</b>	197 (100%)	62 (100%)	50 (100%)	18 (100%)	216 (100%)	49 (100%)

# Crash Tree (Injury Crashes)

Fatal, Serious, and Minor Injury Crashes

**Total Crashes**  
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216 (36%)

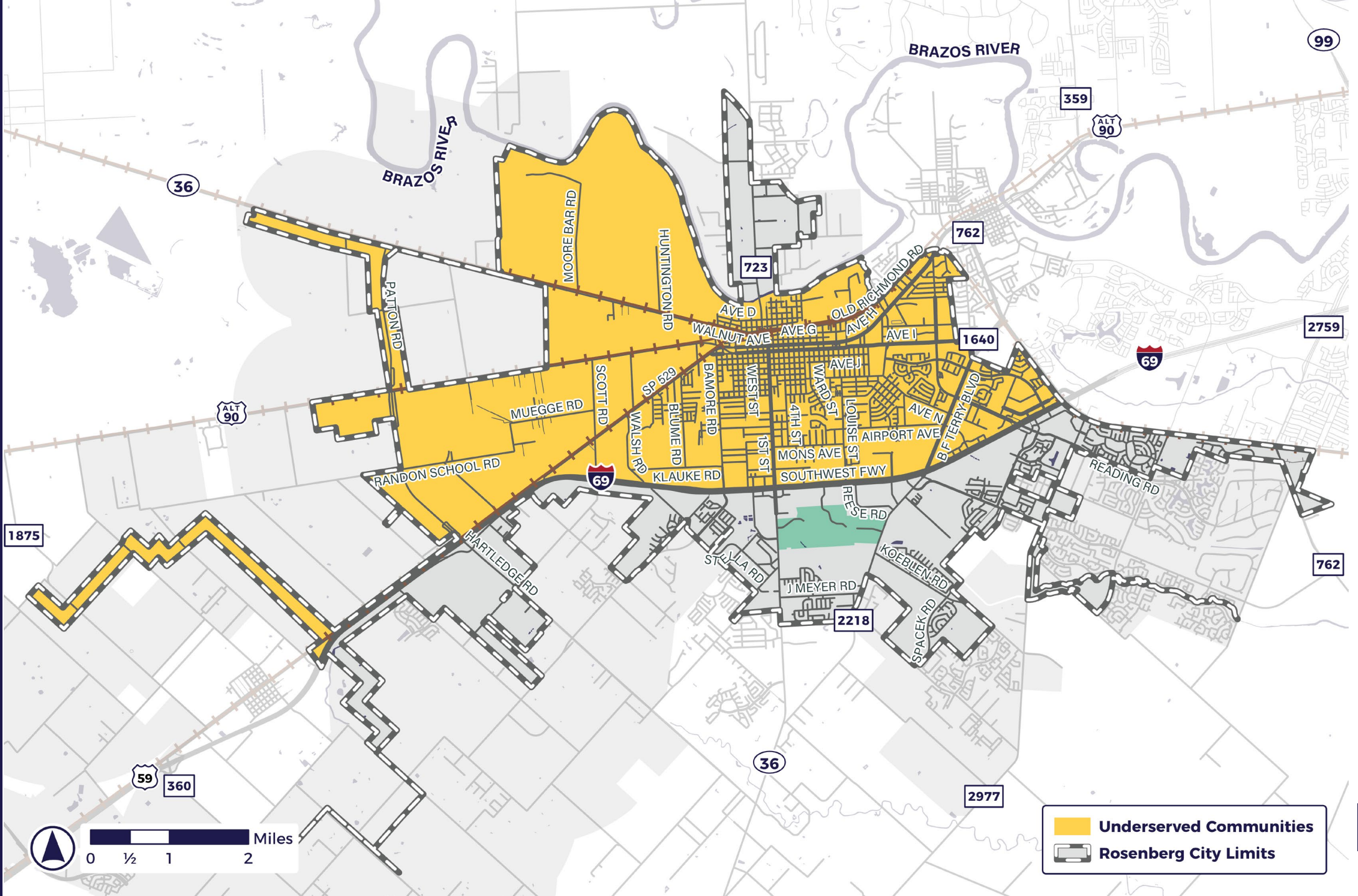
**Other**  
49 (8%)

Crash Type

	On-System Intersection	Off-System Intersection	On-System Driveway	Off-System Driveway	On-System Segment	Off-System Segment
Single Vehicle	13 (7%)	12 (19%)	2 (4%)	4 (22%)	<b>97 (45%)</b>	<b>32 (65%)</b>
Angle	<b>84 (43%)</b>	<b>26 (42%)</b>	<b>18 (36%)</b>	<b>10 (56%)</b>	-	1 (2%)
Rear End	23 (12%)	10 (16%)	6 (12%)	-	60 (28%)	<b>10 (20%)</b>
Same Direction	<b>28 (14%)</b>	1 (2%)	<b>8 (16%)</b>	<b>2 (11%)</b>	4 (2%)	-
Left-turn	<b>34 (17%)</b>	<b>12 (19%)</b>	<b>8 (16%)</b>	1 (6%)	-	-
Sideswipe	2 (1%)	-	-	-	<b>24 (11%)</b>	2 (4%)
Head On	1 (1%)	-	3 (6%)	-	<b>15 (7%)</b>	3 (6%)
Pedestrian	5 (3%)	1 (2%)	1 (2%)	-	<b>10 (5%)</b>	-
Bicycle	6 (3%)	-	<b>3 (6%)</b>	-	5 (2%)	1 (2%)
Backing	1 (1%)	-	1 (2%)	1 (6%)	-	-
Other	-	-	-	-	1 (<1%)	-
<b>Total</b>	197 (100%)	62 (100%)	50 (100%)	18 (100%)	216 (100%)	49 (100%)

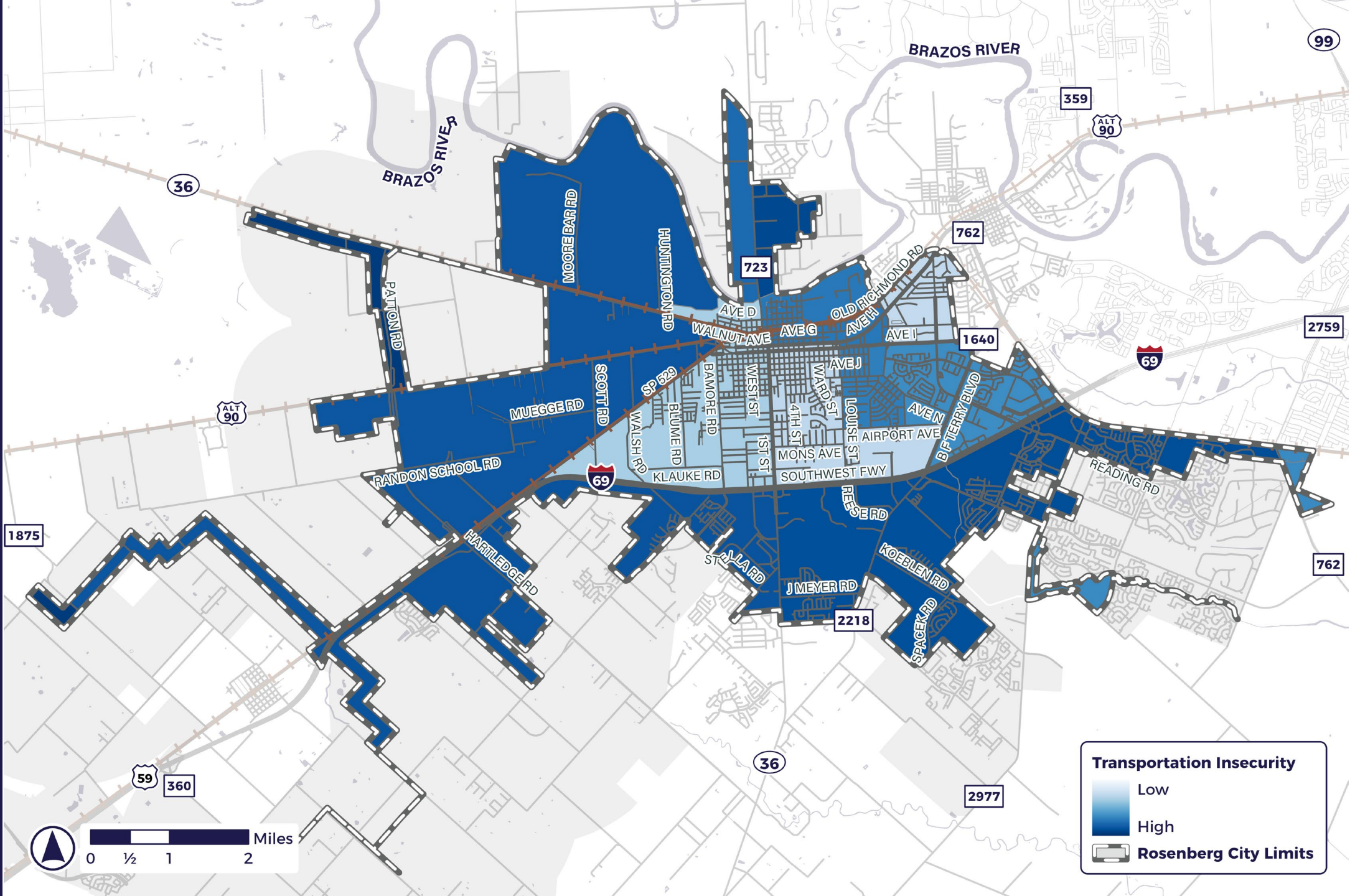
# Equity Considerations

# Underserved Communities



 Underserved Communities  
 Rosenberg City Limits

# Transportation Insecurity



**Transportation Insecurity**

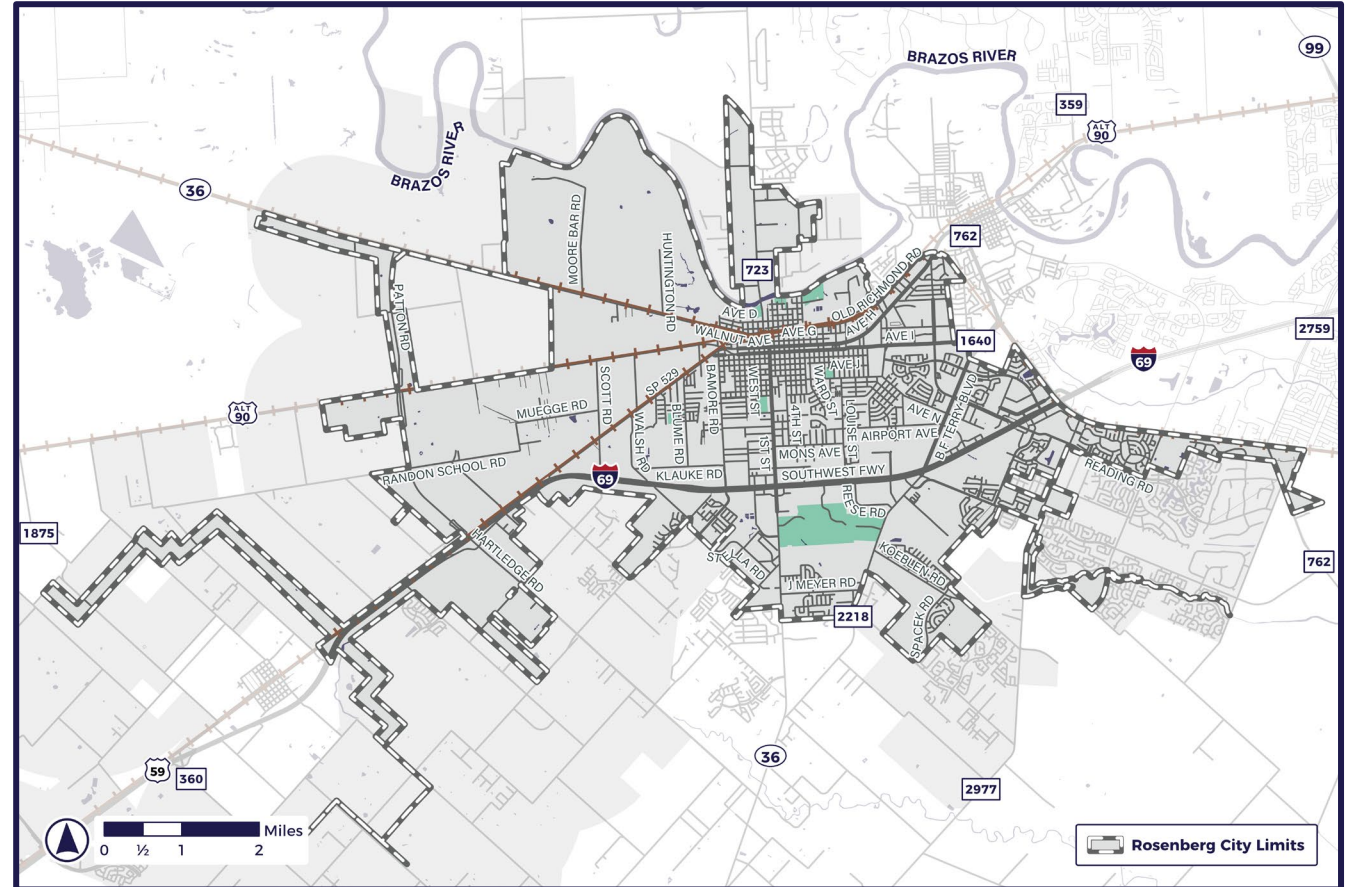
- Low
- High

Rosenberg City Limits

# Projects

# Implementation Plan

The culmination of the Comprehensive Safety Action Plan is an implementation plan of high priority systemic and location-specific safety projects.



# Needs and Projects

## Where are the opportunities to implement road safety projects?

- Project **Type**: Systemwide, Corridor, or Spot / Intersection
- Project **Location**: Road/Intersection Name and limits
- Project **Challenge**: Challenge to implementing the road safety project

# Systemwide

- Examples: rumble strips, refreshed pavement markings, updated signing, repaving, lighting, shoulder enhancements, median treatments, sidewalks
- Typically lower cost (per location) and wider reach (more locations)



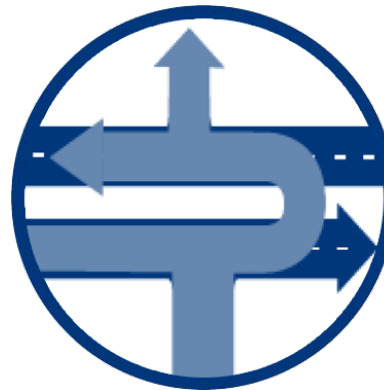
# Corridor

- Roadway configuration changes, like road diets
- Typically higher cost and more transformative, but only for one roadway



# Intersection

- Examples: turn lanes, roundabouts, reduced left-turn conflict intersections, crosswalk enhancements
- Varies by improvement, but typically moderate cost and high impact



# Next Steps

# Next Steps

- Network screening
- Equity analysis
- Identify focus locations

# Upcoming Events

- April
  - Survey Opens
  - Touch-a-Truck (4/20) or Sidewalk Sale (4/26) Pop-up Engagement
  - **Safety Task Force Workshop (consider 4/29)**
- May
  - Cinco de Mayo Festival Pop-up Engagement (5/5)
  - Survey Closes

# Safety Task Force Meeting 2 – Focus Locations

Monday, April 29, 2024



**ROSENBERG**  
SAFETY ACTION PLAN

# Agenda

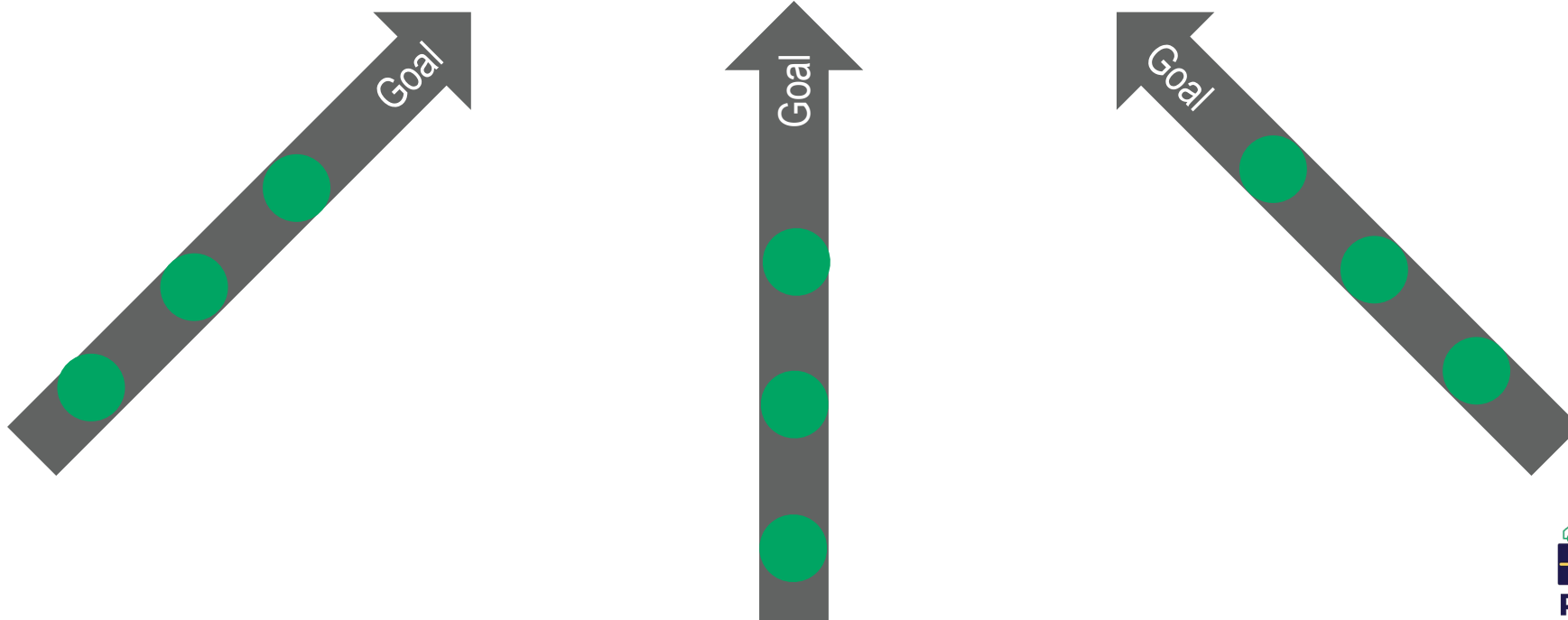
- Vision, Goals, and Objectives
- Equity Analysis
- Network Screening
  - High-Injury Network
  - Focus Area Segments
- Systemic Countermeasures
- What's Next?

# Vision, Goals, and Objectives

# Vision, Goals, and Objectives

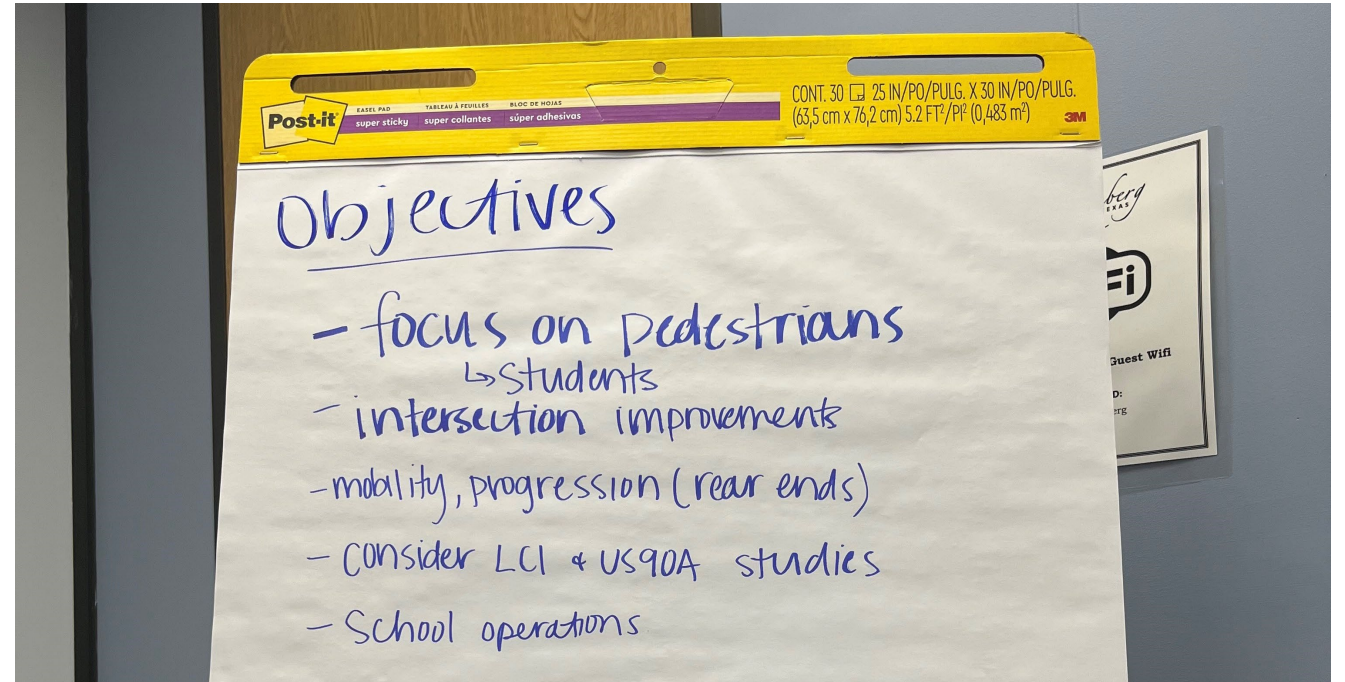


**Objective** – Measurable milestone or checkpoint, which supports the goals and vision



# Goals and Objectives

- **Accommodate all modes of transportation**
  - Reduce bicycle and pedestrian crashes
  - Create safe walking routes to schools
- **Improve mobility through safety**
  - Reduce intersection-related crashes
  - Reduce congestion-related crashes
  - Improve school traffic operations
- **Build upon previous plans and studies**
  - Incorporate previous Livable Centers Initiative (LCI) Study projects
  - Incorporate US 90A Study

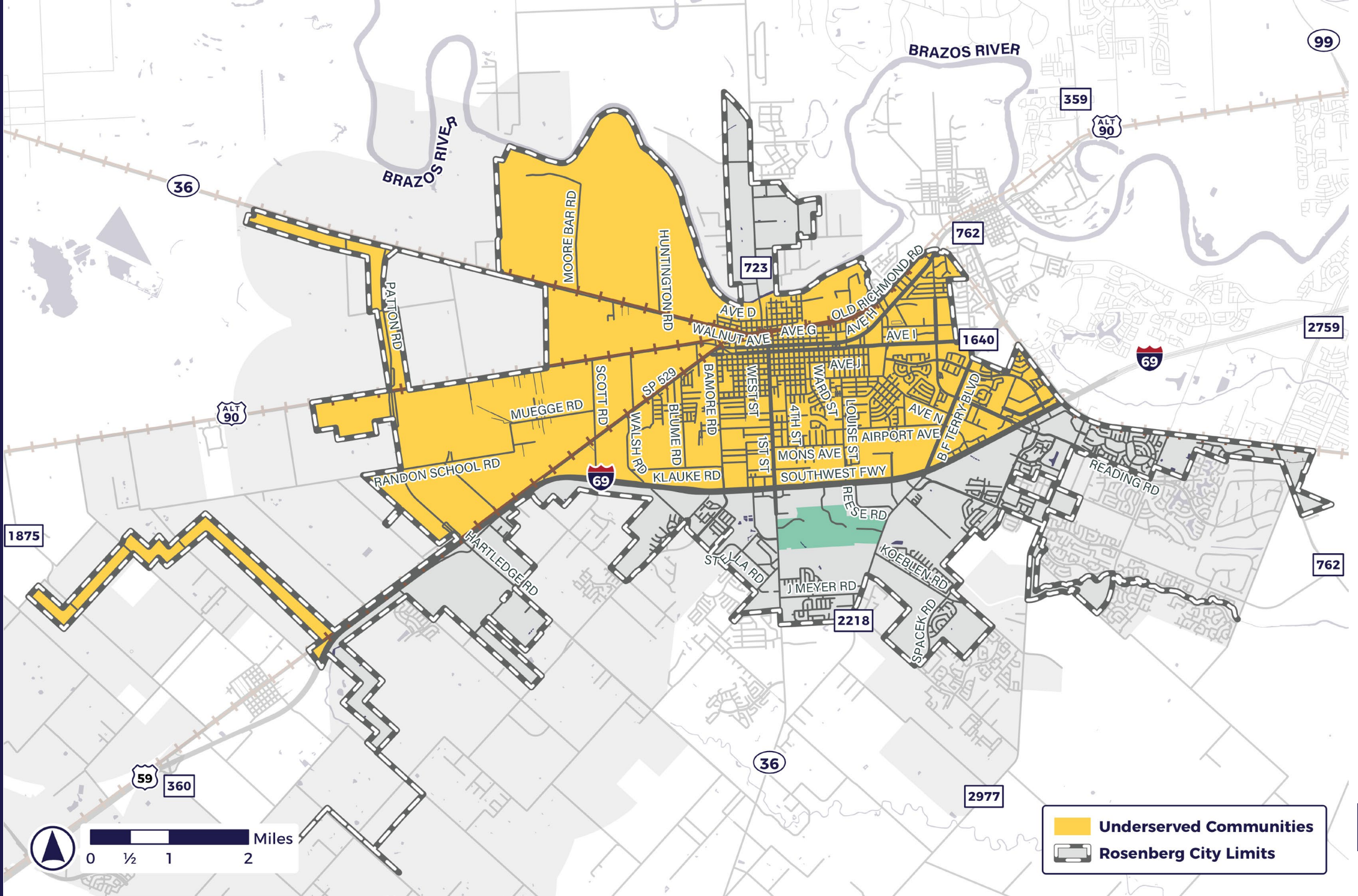


# Vision

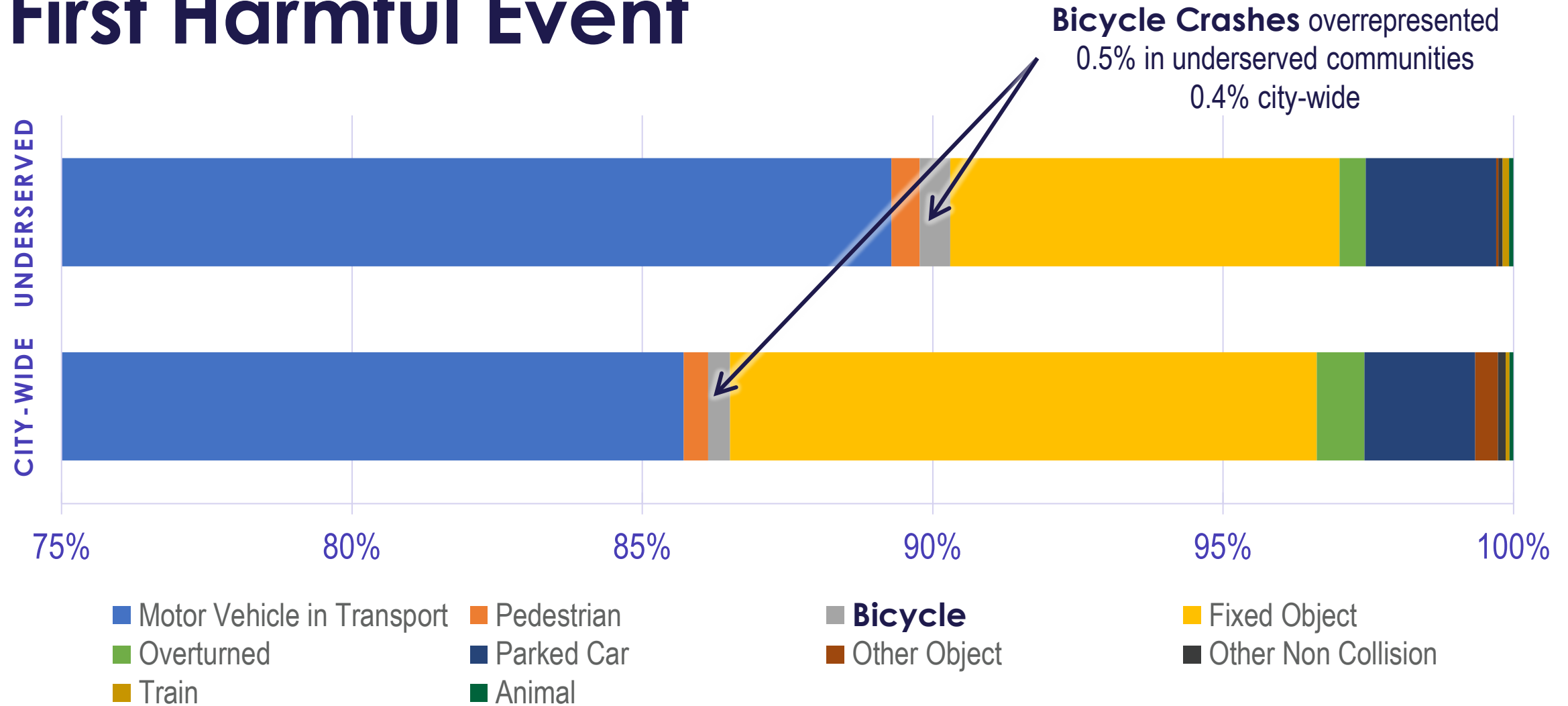
Achieve **zero** traffic fatalities and serious injuries among ***all road users***.

# Equity Analysis

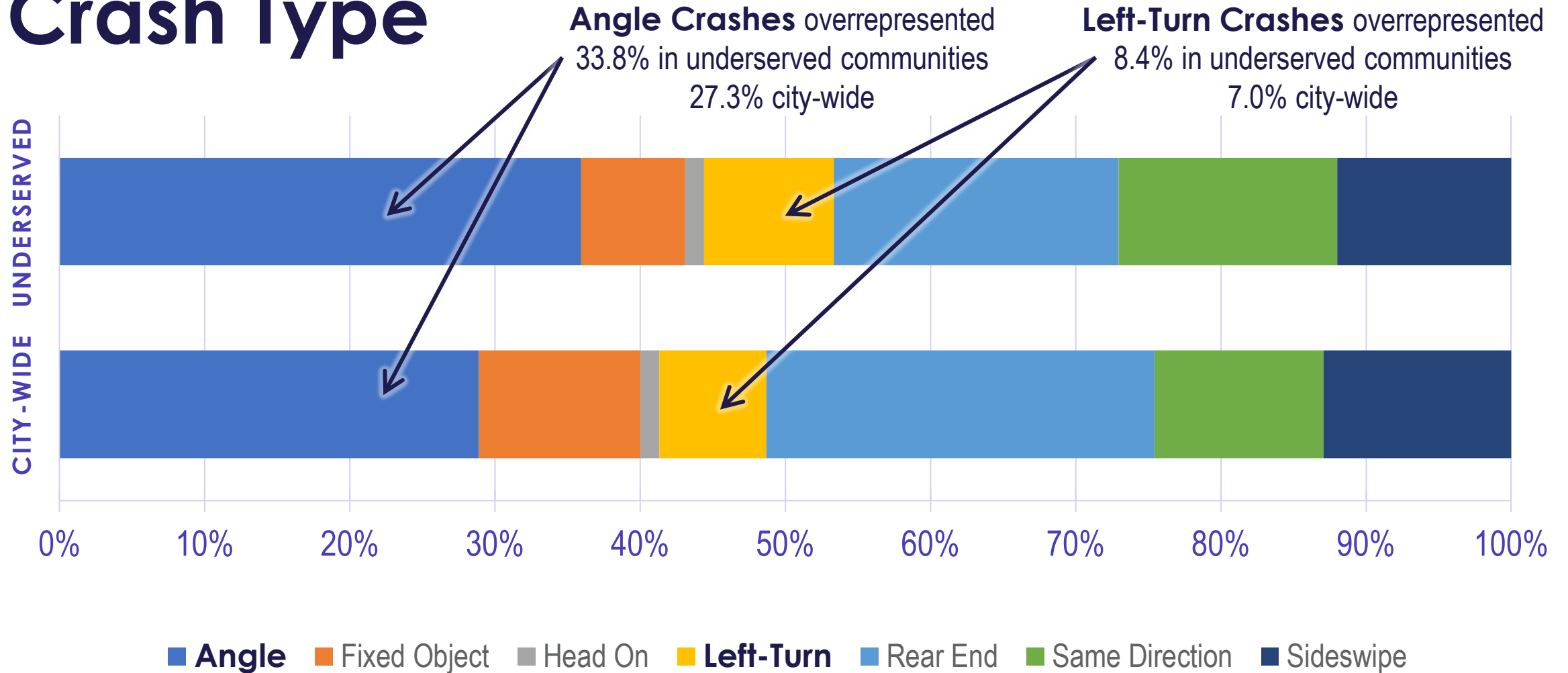
# Underserved Communities



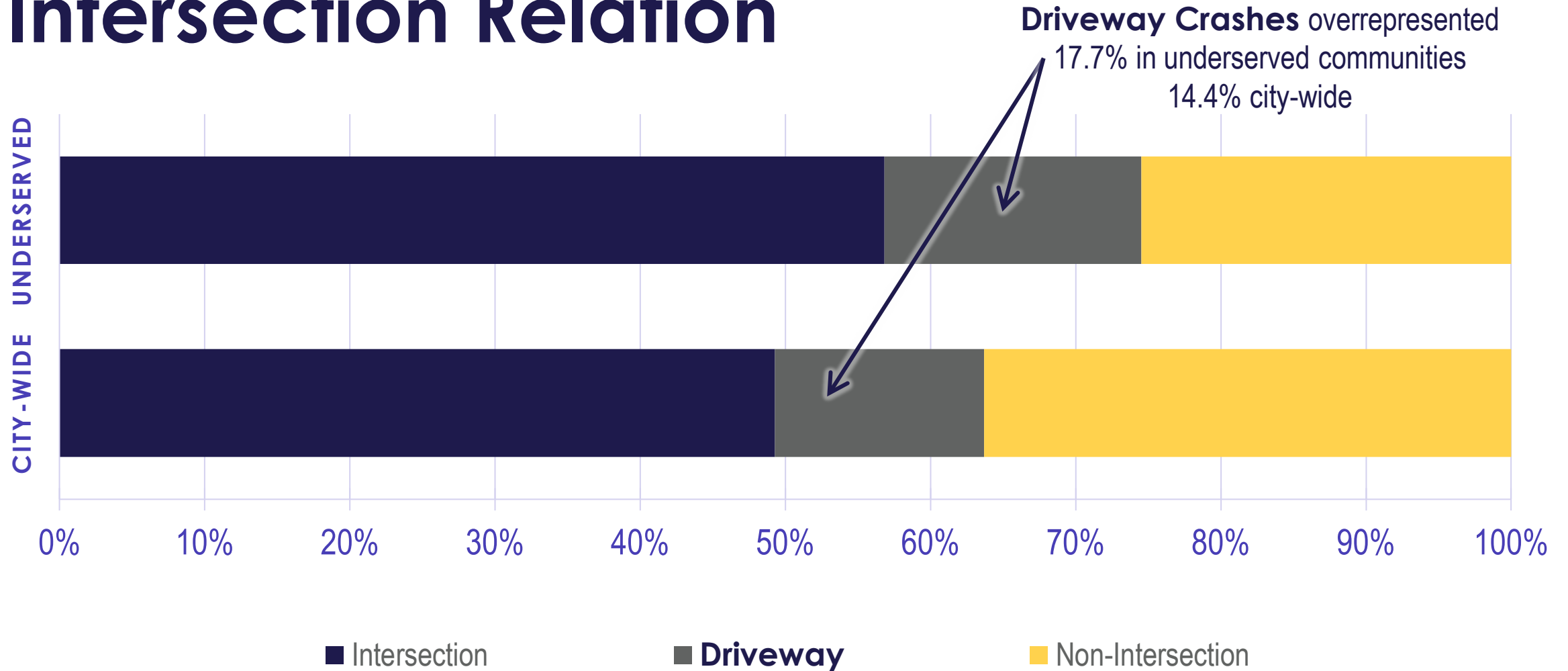
# First Harmful Event



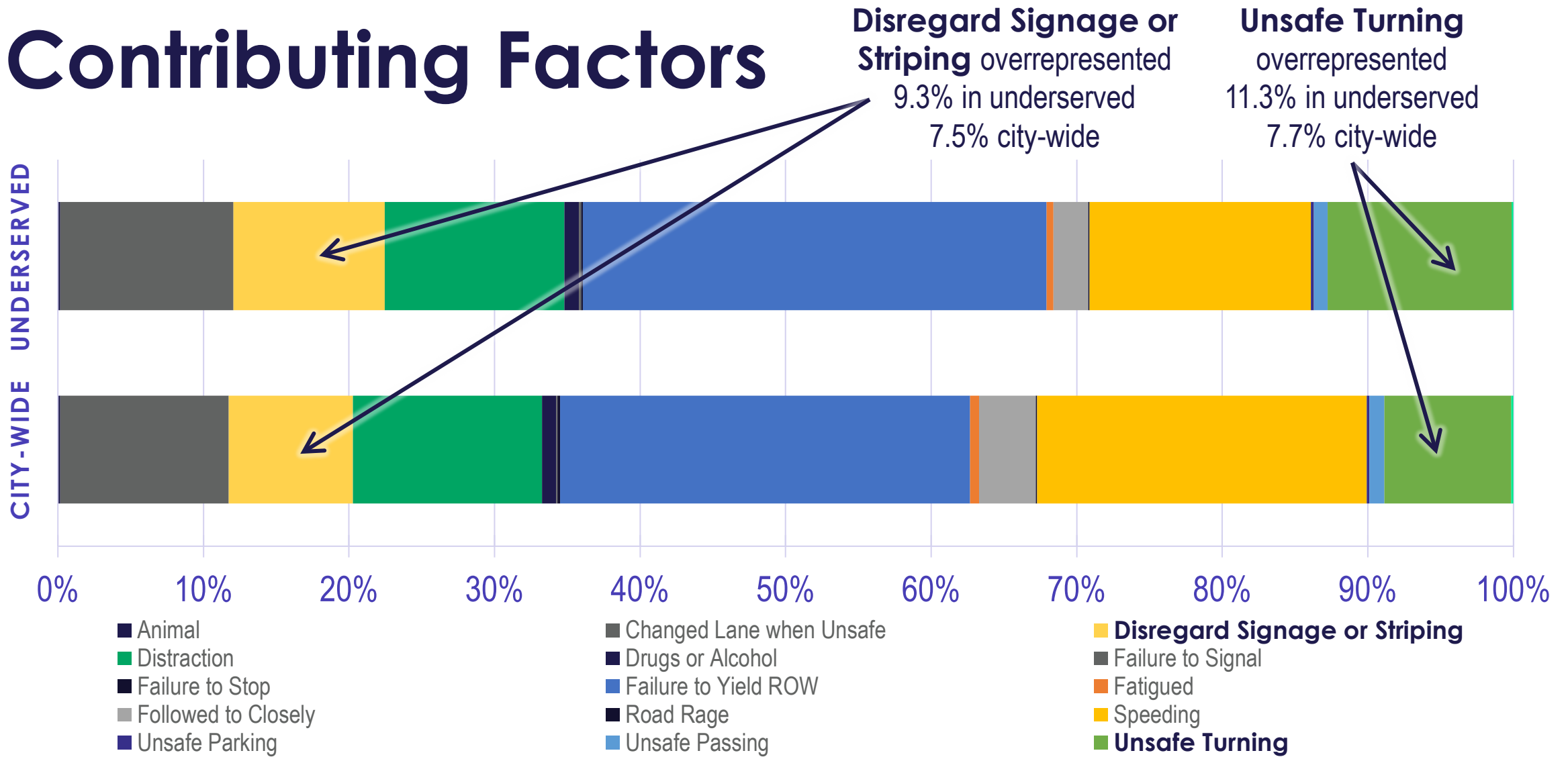
# Crash Type



# Intersection Relation



# Contributing Factors



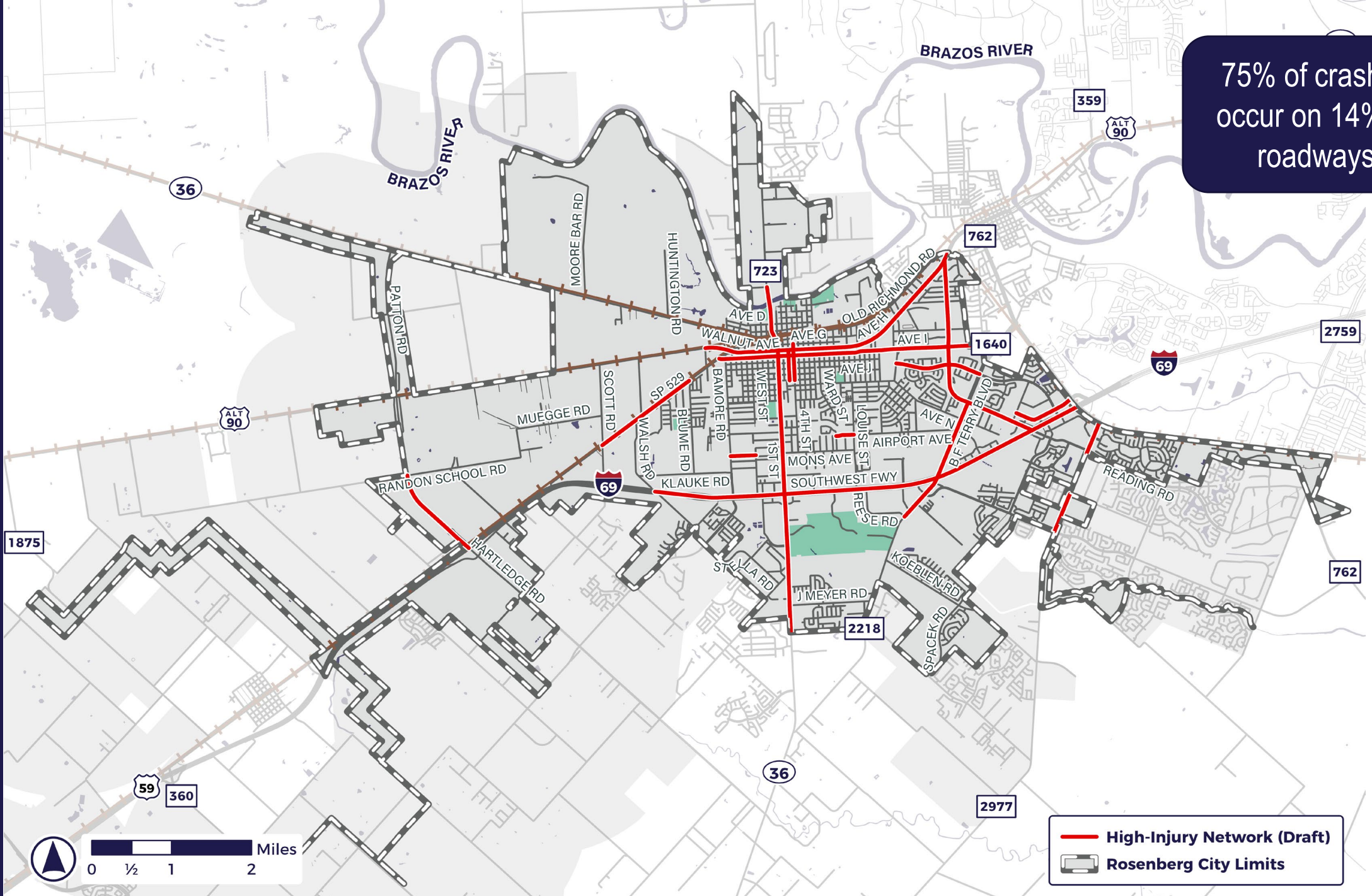
# Network Screening: High Injury Network

# High Injury Network

- A High-Injury Network is...
  - A geospatial identification of higher-risk locations
  - A subset of roadway segments which account for a high percentage of crashes
  - A way to prioritize projects and future improvements based on whether the location is on the high-injury network
  - Considered as part of implementation funding opportunities through SS4A

# Draft High Injury Network Map

75% of crashes occur on 14% of roadways



- High-Injury Network (Draft)
- Rosenberg City Limits

# Draft High Injury Network Statistics

	Length	VMT	Crash Count					Crash Cost (in \$M)	EPDO
			Total	K	A	B	KAB		
<i>Within City Limits Network</i>	-	-	4,522	16	89	339	444	\$696.7	139,363
<i>Freeway Main Lanes (Removed from Analysis)</i>	-	-	560	7	21	53	81	\$180.1	36,015
<b>Total Roadway Network Analyzed</b>	202	966,736	3,934	9	68	286	363	\$515.1	103,046
<b>High-Injury Network</b> (EPDO per CL Mile > 750)	28	488,470	2,969	9	55	242	306	\$432.3	86,473
<b>High-Injury Network Percentage of Total</b> (Non-Freeway)	<b>14%</b>	<b>51%</b>	<b>75%</b>	<b>100%</b>	<b>81%</b>	<b>85%</b>	<b>84%</b>	<b>84%</b>	<b>84%</b>

VMT = Vehicle Miles Traveled

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

EPDO = Equivalent Property Damage Only Crashes

CL Mile = Centerline Mile

# Network Screening: Focus Location Activity

# Focus Location Activity

1. **Objective:** Rank locations based on their potential for crash reduction.
2. Process:
  1. Organize into groups of 3-4
  2. Review statistics tables
  3. Select performance measures/ranking method
  4. Rank locations (top 3-5)
  5. Prepare to discuss your ranking method and top locations

# Roadway Segment Table

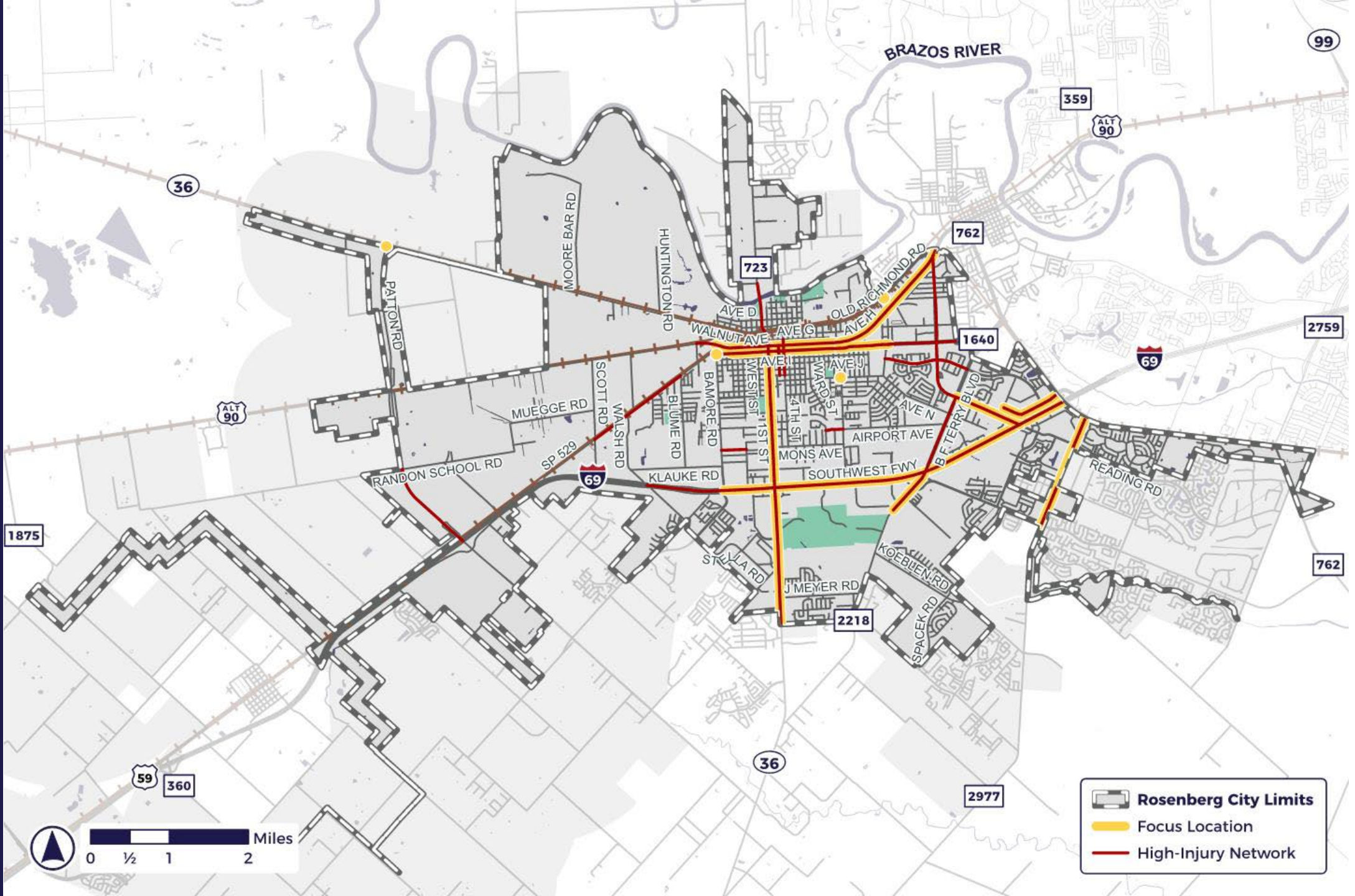
ID	Classification	UC	Length (Miles)	ADT	Crash Rate (per HMVMT)	Crash Cost (\$1M)		EPDO		Ped + Bike		Crash Count	K	A	B	Sum of K, A, B		Sum of K & A	
						Total	Per Mile	Total	Per Mile	Total	Per Mile					Total	Per Mile	Total	Per Mile
1	Principal Arterial	Yes	1.59	11,289	1,130	51.9	32.5	10,371	6,508	2	1.3	371	1	9	27	37	23.2	10	6.3
2	Minor Arterial	Yes	1.64	11,952	873	27.0	16.4	5,391	3,281	1	0.6	313	0	2	30	32	19.5	2	1.2
3	Principal Arterial	Yes	1.73	19,764	430	43.7	25.3	8,748	5,060	9	5.2	268	1	4	31	36	20.8	5	2.9
4	Minor Arterial	Yes	0.63	12,116	864	13.6	21.5	2,719	4,291	2	3.2	121	0	1	15	16	25.3	1	1.6
5	Principal Arterial	Yes	1.80	19,586	669	63.6	35.4	12,719	7,071	5	2.8	430	2	3	31	36	20.0	5	2.8
6	Principal Arterial	No	1.73	16,480	585	26.1	15.0	5,213	3,005	1	0.6	305	0	4	19	23	13.3	4	2.3
7	Frontage Road	No	0.64	20,061	246	11.1	17.3	2,222	3,455	0	0.0	58	0	3	5	8	12.4	3	4.7
8	Frontage Road	No	1.93	25,424	170	29.4	15.2	5,878	3,050	2	1.0	152	1	5	5	11	5.7	6	3.1
9	Frontage Road	No	1.98	17,709	323	47.4	23.9	9,483	4,780	0	0.0	207	2	4	17	23	11.6	6	3.0
10	Minor Arterial	No	0.64	13,500	516	12.1	19.0	2,426	3,808	0	0.0	81	0	4	7	11	17.3	4	6.3
11	Minor Arterial	Yes	0.88	16,754	607	14.9	17.0	2,984	3,398	1	1.1	163	0	0	11	11	12.5	0	0.0
12	Local	Yes	0.78	13,754	578	8.8	11.3	1,763	2,263	0	0.0	113	0	2	6	8	10.3	2	2.6
13	Major Collector	No	1.49	12,838	445	21.5	14.5	4,298	2,893	0	0.0	155	0	4	11	15	10.1	4	2.7

Crashes from TxDOT's CRIS for 2019-2023. Crash Rate per 100 million vehicle miles traveled.

UC = Underserved Community per USDOT | ADT = Average Daily Traffic | EPDO = Equivalent Property Damage Only

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

# Roadway Segment Map



- Rosenberg City Limits
- Focus Location
- High-Injury Network

# Roadway Segment Table

ID	Roadway	From	To	Classification	Length (Miles)	ADT	Crash Rate (per HMVMT)	Crash Cost (\$1M)	EPDO	Ped + Bike	Crash Count	K	A	B
								Total	Total	Total				
1	<b>Avenue H</b>	SH 36	US90A	Principal Arterial	1.59	11,289	1,130	51.9	10,371	2	371	1	9	27
2	<b>Avenue I</b>	SH 36	US90A	Minor Arterial	1.64	11,952	873	27.0	5,391	1	313	0	2	30
3	<b>US 90A (Ave</b>	Ave I	City Limits	Principal Arterial	1.73	19,764	430	43.7	8,748	9	268	1	4	31
4	<b>Avenue I</b>	Price Rd/ Radio Ln	City Limits	Minor Arterial	0.63	12,116	864	13.6	2,719	2	121	0	1	15
5	<b>1st St</b>	Ave H	IH 69	Principal Arterial	1.80	19,586	669	63.6	12,719	5	430	2	3	31
6	<b>SH 36</b>	IH 69	City Limits	Principal Arterial	1.73	16,480	585	26.1	5,213	1	305	0	4	19
7	<b>IH 69</b>	Bamore Rd	SH 36	Frontage Road	0.64	20,061	246	11.1	2,222	0	58	0	3	5
8	<b>IH 69</b>	SH 36	FM 2218	Frontage Road	1.93	25,424	170	29.4	5,878	2	152	1	5	5
9	<b>IH 69</b>	B F Terry Blvd	FM 762	Frontage Road	1.98	17,709	323	47.4	9,483	0	207	2	4	17
10	<b>FM 2218</b>	Reese Rd	IH 69	Minor Arterial	0.64	13,500	516	12.1	2,426	0	81	0	4	7
11	<b>Reading Rd</b>	B F Terry Blvd	IH 69	Minor Arterial	0.88	16,754	607	14.9	2,984	1	163	0	0	11
12	<b>Commercial</b>	Vista Dr	FM 762	Local	0.78	13,754	578	8.8	1,763	0	113	0	2	6
13	<b>Minonite Rd</b>	Bryan Rd	FM 762	Major Collector	1.49	12,838	445	21.5	4,298	0	155	0	4	11

Crashes from TxDOT's CRIS for 2019-2023. Crash Rate per 100 million vehicle miles traveled.

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

# Systemic Countermeasure

# Systemic Countermeasures

## Pedestrian

- Rectangular Rapid Flashing Beacons (RRFB)
- Sidewalks

## Turning Conflicts

- Turn Lanes
- Signal Reconstruction
- Flashing Yellow Arrows
- Realignment (remove offset)
- Raised Medians

## Roadway Departure





- Edgeline Rumble Strips
- Edgeline Pavement Markings
- Centerline Rumble Strips
- Chevrons

## Lighting

- Intersection Lighting
- Roadway Lighting
- Pavement Markings (RPMs for dark crashes)

# What's Next

# Project Schedule

Month:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Description:												
STF Engagement												
Safety Analysis												
Equity Analysis												
Public Engagement												
Implementation												

Select focus locations

Select projects















Meeting



Workshop

# Engagement Schedule

Month:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>STF Engagement</b>												
<b>Public Engagement (Pop-ups)</b>												
<b>Small Group Engagement</b>								 				
<b>Online Engagement</b>												



Meeting



Workshop



Presentation



In-Field Audit



Survey

# Public Engagement To-Date

- Website published
- Online Interactive map and survey opened
- Sugar Rush/Sidewalk Sale Pop-up Engagement (3/27)

## ROSENBERG SAFETY ACTION PLAN

The City of Rosenberg is developing a Safety Action Plan to improve safety on Rosenberg streets. The purpose of the Safety Action Plan is to identify specific infrastructure projects and policy changes to eliminate or significantly reduce fatal and serious injury crashes. This project is made possible with funding from a USDOT Safe Streets and Roads for All (SS4A) Grant.

**Traffic Safety Stats (2017 - 2023)**

- 141 fatal & serious injury crashes
- 55% dark condition fatal & serious injury crashes
- 37 pedestrian & bicycle crashes resulted in injury

**Stay Connected!**

Visit our website for project updates, to provide feedback during public input periods, and to learn more about the project.

Rosenberg-Safe-Streets.com

**Study Process**

This study will include three primary phases. A network screening is performed based on crash history to identify high-crash locations. Safety and equity analyses are then performed to determine opportunities for safety improvements. An implementation plan will detail specific improvements based on the results of safety and equity analyses and community feedback. Your participation is key! Engage with us online and in-person at community events to share your safety concerns and project preferences.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Network Screening												
Safety and Equity Analysis												
Implementation Plan												
Public Engagement												

**ROSENBERG**  
SAFETY ACTION PLAN

### Rosenberg Comprehensive Safety Action Plan

ABOUT
PROVIDE INPUT
UPCOMING EVENTS
DATA DASHBOARD
FAQS

Below are opportunities to provide input and feedback to the project team on street and roadway safety in Rosenberg.

Open

#### Survey

Provide feedback to the project team on which types of safety projects you want to see in your community and how you use the transportation system in Rosenberg.

Start

Open

#### Interactive Map

Drop a marker on the interactive map to show us where there is a road safety problem or if you have ideas for road safety improvements. Use the different types of markers to categorize your comments.

2 contributions so far

## HOW DO YOU RANK SAFETY PROJECT TYPES FOR ROSENBERG?

**RUMBLE STRIPS**

Rumble strips alert drivers when they are departing the roadway. They can reduce run-off-the-road and head on collisions.

**ROADWAY LIGHTING**

Roadway lighting increases visibility at night. It can reduce all crash types that occur in low light.

**RAISED MEDIANS**

Raised medians are barriers that separate opposing lanes of traffic, typically with a curb. They can reduce left turn and single crashes.

**SIDEWALKS**

Sidewalks provide a safe place to walk away from motor vehicles. This can include new sidewalks or improving existing ones.

**RECTANGULAR RAPID FLASHING BEACONS**

Rectangular rapid flashing beacons (RRFBs) alert drivers that a pedestrian is entering or in a crosswalk.

VOTE HERE

ROSENBERG

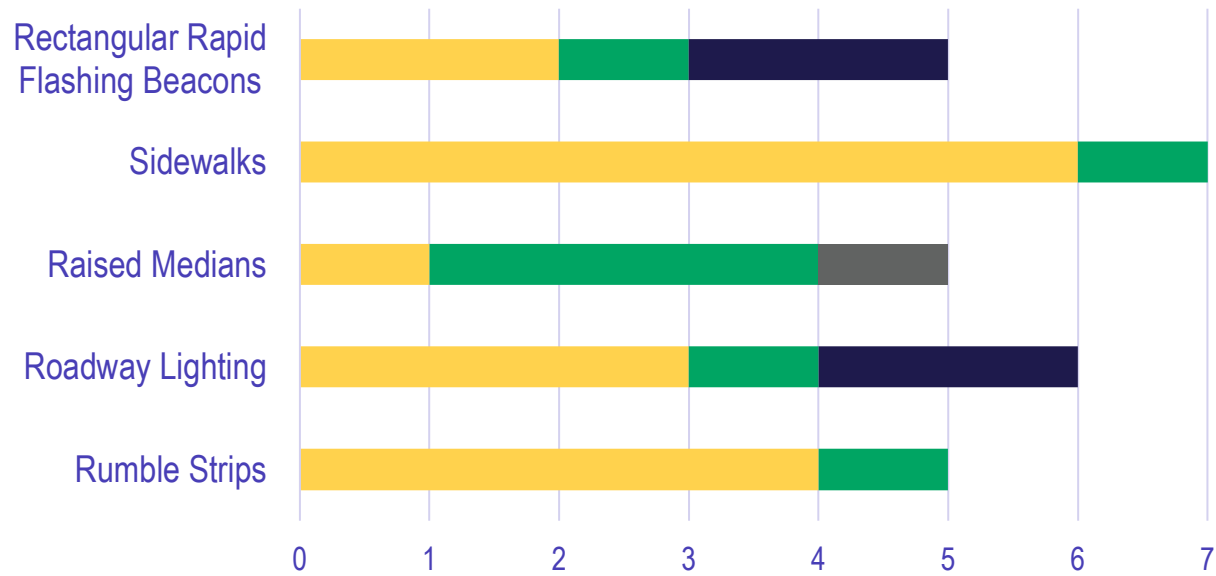
# Sugar Rush/Sidewalk Sale Pop-Up



# Sugar Rush/Sidewalk Sale Pop-Up

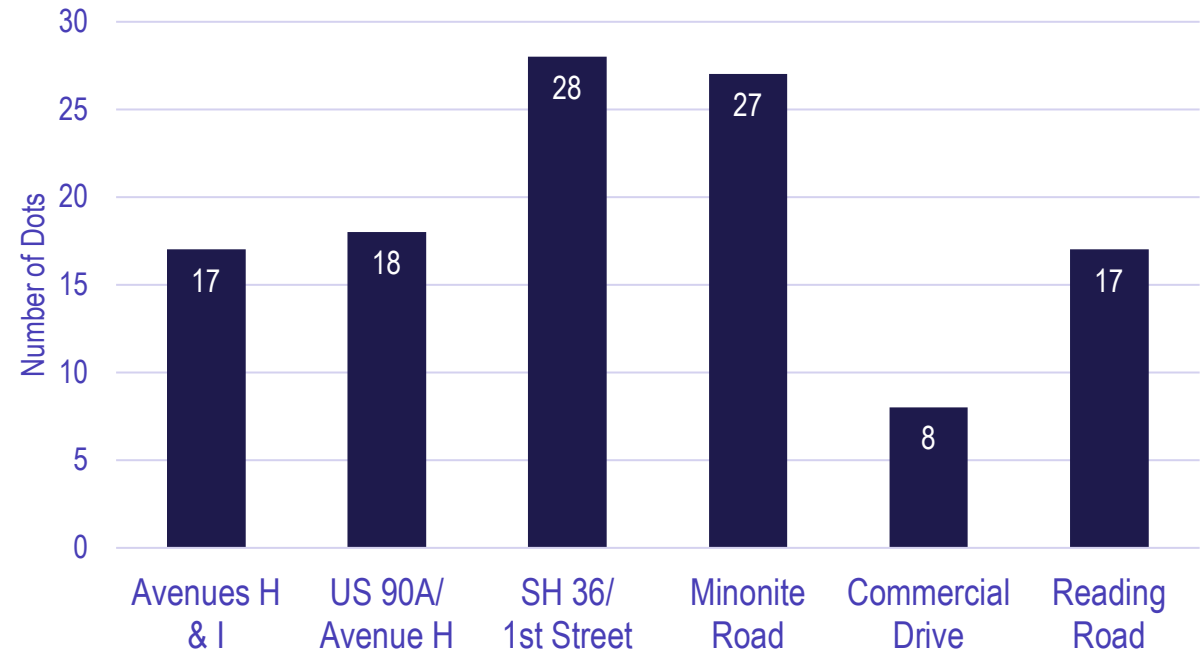
## Countermeasure Rankings

5 Stars 4 Stars 3 Stars 2 Stars



Note: Countermeasure activity had to end early due weather conditions

## Focus Location Feedback



# Focus Locations

## WHAT ARE YOUR TOP 3 FOCUS LOCATIONS FOR SAFETY PROJECTS?



**Avenues H and I**  
(Overpass to Millie Street)



**US 90A/Avenue H**  
(East of Millie Street)



**SH 36/1st Street**  
(Avenue I to I-69)



**Minonite Road**  
(Bryan Road to FM 762)



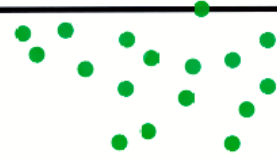
**Commercial Drive**  
(Vista Drive to FM 762)



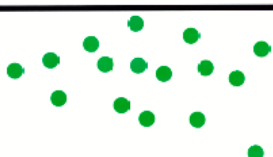
**Reading Road**  
(FM 2218 to I-69)



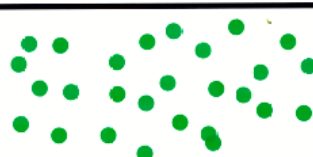
VOTE  
H  
E  
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E



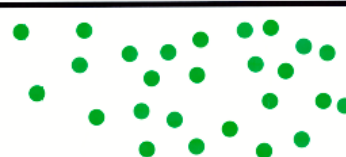
Count: 12



Count: 13



Count: 23



Count: 21



Count: 8



Count: 17

VOTE  
H  
E  
R  
E

# Upcoming Events

- May
  - Cinco de Mayo Festival Pop-up Engagement (5/5)
  - Interactive map and survey close (5/20)
- June
  - Project development
- July
  - Online activity opens
  - Family 4<sup>th</sup> Pop-up Engagement (7/4)
  - Safety Task Force Meeting 3 – Project Prioritization (7/22 or 7/15)

**HOW CAN WE IMPROVE SAFETY IN ROSENBERG?**

Rosenberg-Safe-Streets.com

**ROSENBERG SAFETY ACTION PLAN**

Visit the project website to learn more and to participate in our online engagements!

Rosenberg-Safe-Streets.com

# Next Steps

# Project Selection Workshop

Comprehensive Safety Action Plan

*Funded by Safe Streets and Roads for All*

Safety Task Force - Meeting 3

July 9, 2024

Payton Arens, PE, RSP<sub>21</sub>



**ROSENBERG**  
SAFETY ACTION PLAN

# Agenda

- Project Overview
  - Project Schedule
  - CSAP Components
  - Vision and Goals
- Implementation Plan Framework
- Project Selection Activity
  - Infrastructure
  - Non-Infrastructure

# Project Schedule

You Are Here

Draft CSAP

Adopt CSAP

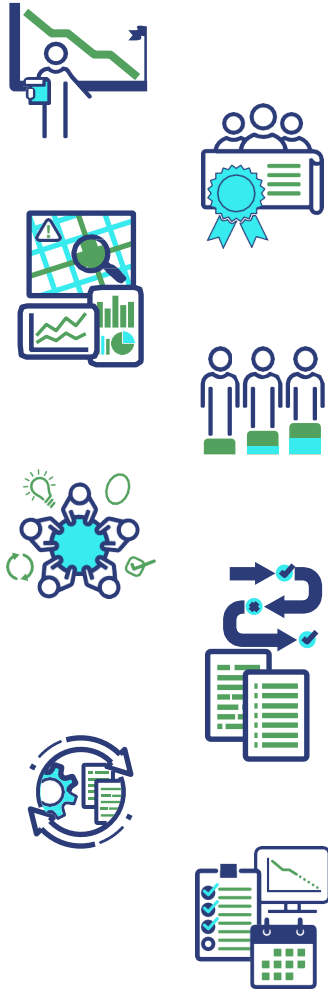
Month:		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Description:													
Engagement	Safety Task Force												
	Public Meetings												
	Online												
Safety Analysis													
Equity Analysis													
Public Engagement													
Implementation													

Select focus locations

Select projects



# CSAP Components



**Complete.** Used to develop list of potential projects and strategies.

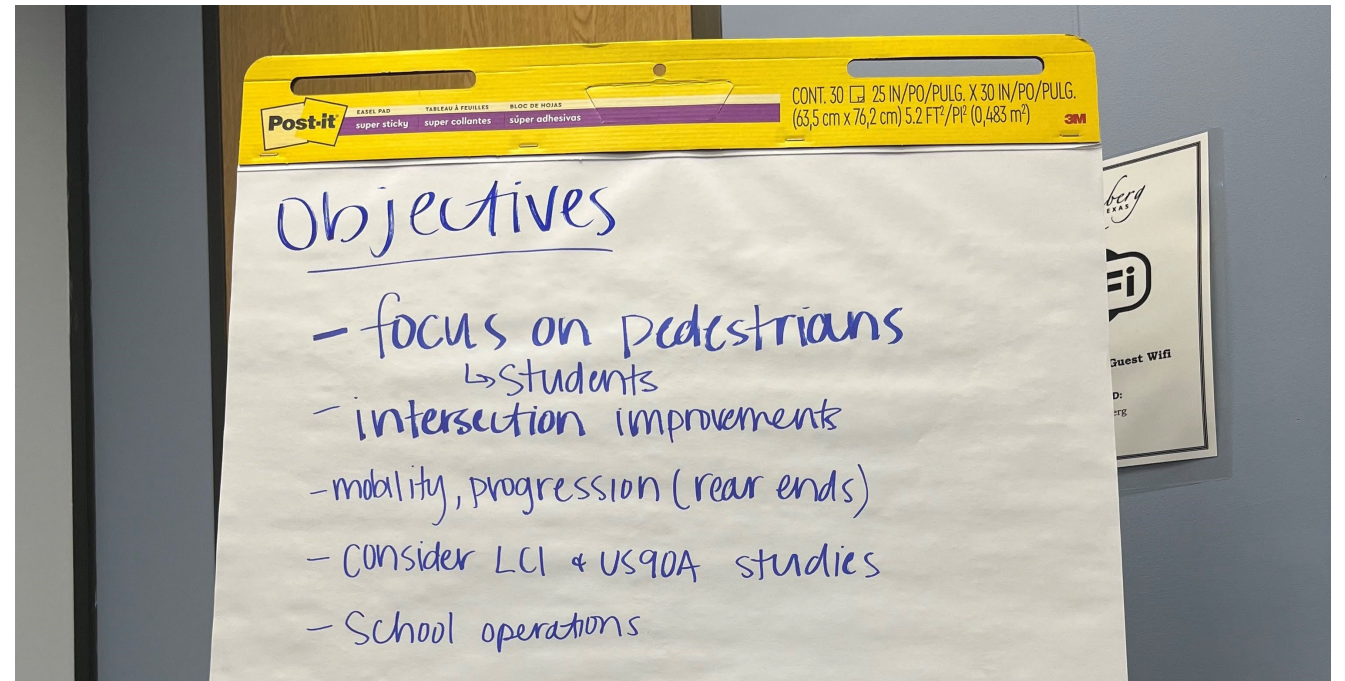
The purpose of today's workshop is to select **infrastructure projects** and **non-infrastructure activities** to guide the development of the implementation plan.

- Leadership commitment and goal setting
- Planning structure
- Safety analysis
- Equity considerations
- Engagement and collaboration
- **Strategy and project selections**
- **Policy and process changes**
- Progress and transparency

# Vision, Goals, and Objectives

**Vision:** Eliminate traffic fatalities and serious injuries in the city by the year 2050.

- **Accommodate all modes of transportation**
  - Reduce bicycle and pedestrian crashes
  - Create safe walking routes to schools
- **Improve mobility through safety**
  - Reduce intersection-related crashes
  - Reduce congestion-related crashes
  - Improve school traffic operations
- **Build upon previous plans and studies**
  - Incorporate previous Livable Centers Initiative (LCI) Study projects
  - Incorporate US 90A Study



# Implementation Plan Framework

# Implementation Plan Framework

## 1. Infrastructure (Activity 1)

- A. Focus Corridors
- B. Focus Intersections
- C. Systemic Projects

## 2. Non-Infrastructure (Activity 2)

- A. Quick Build
- B. Safety Planning
- C. Design Guidance
- D. Operating Procedures

## 3. Anything Else

- Selections will inform the development of the draft implementation plan
- Selections are not the final opportunity to provide input
- All workshop materials will be sent via email
- Input to a draft implementation plan will be provided at the next meeting

**Implementation Framework:** Our comprehensive approach to prevent roadway fatalities and serious injuries includes **infrastructure** and **non-infrastructure** solutions.

# Framework ≈ CSAP Components

Strategy and project selections

Policy and process changes



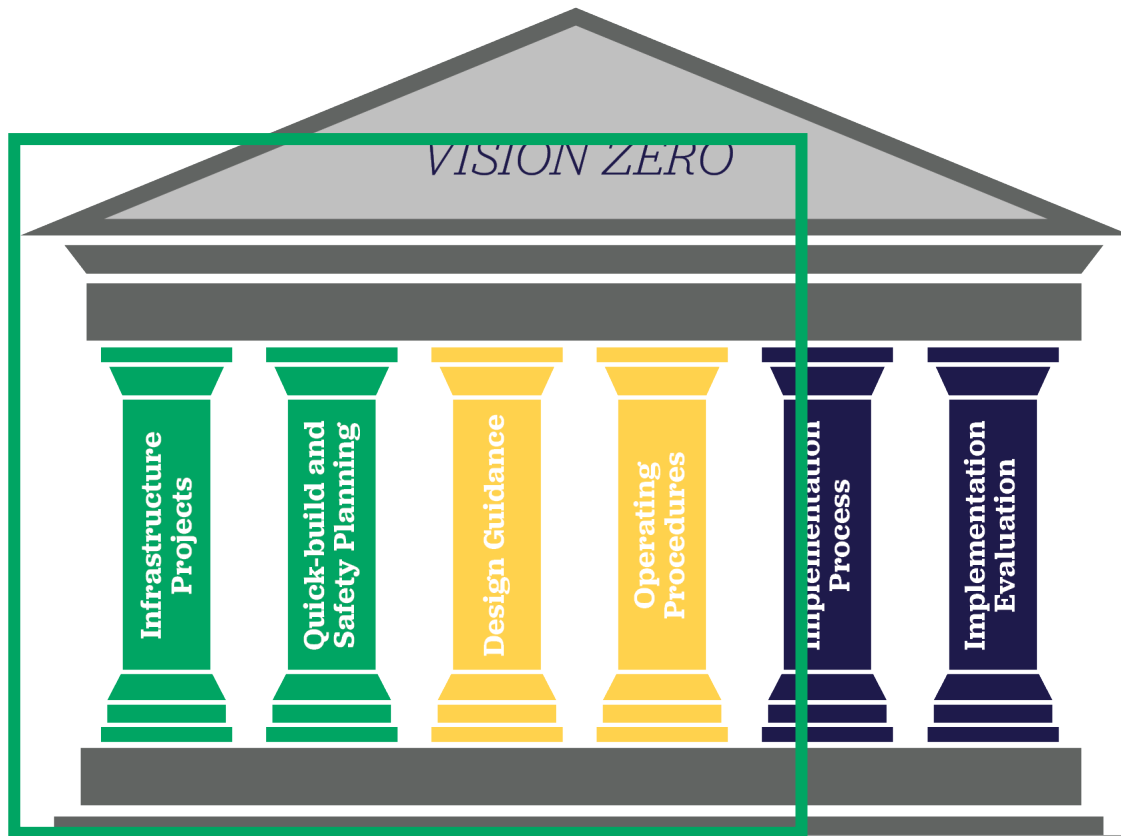
Progress and transparency  
(next meeting)



1. Implement **infrastructure** projects (location-specific and systemic projects).
2. Implement **quick-build** and **safety planning** projects.
3. Update **design guidance** to emphasize safety for all road users.
4. Incorporate the safe system approach into organization **operating procedures**.
5. Organize an **implementation process** to identify, prioritize, and implement safety projects.
6. Monitor action plan progress and publish an **implementation evaluation** of outcomes and efforts.



# Implementation Pillars



*Safe System Approach*



## STRATEGY AND PROJECT SELECTIONS

Implement **infrastructure projects** that are location-specific and systemic projects.

Implement **quick-build** and **safety planning** projects.

## POLICY AND PROCESS CHANGES

Update **design guidance** to emphasize safety for all road users.

Incorporate the safe system approach into organization **operating procedures**.

## PROGRESS AND TRANSPARENCY

Organize an **implementation process** to identify, prioritize, and implement safety projects.

Monitor action plan progress and publish an **implementation evaluation** of outcomes and efforts.

# Infrastructure Activity

# Infrastructure Activity Instructions

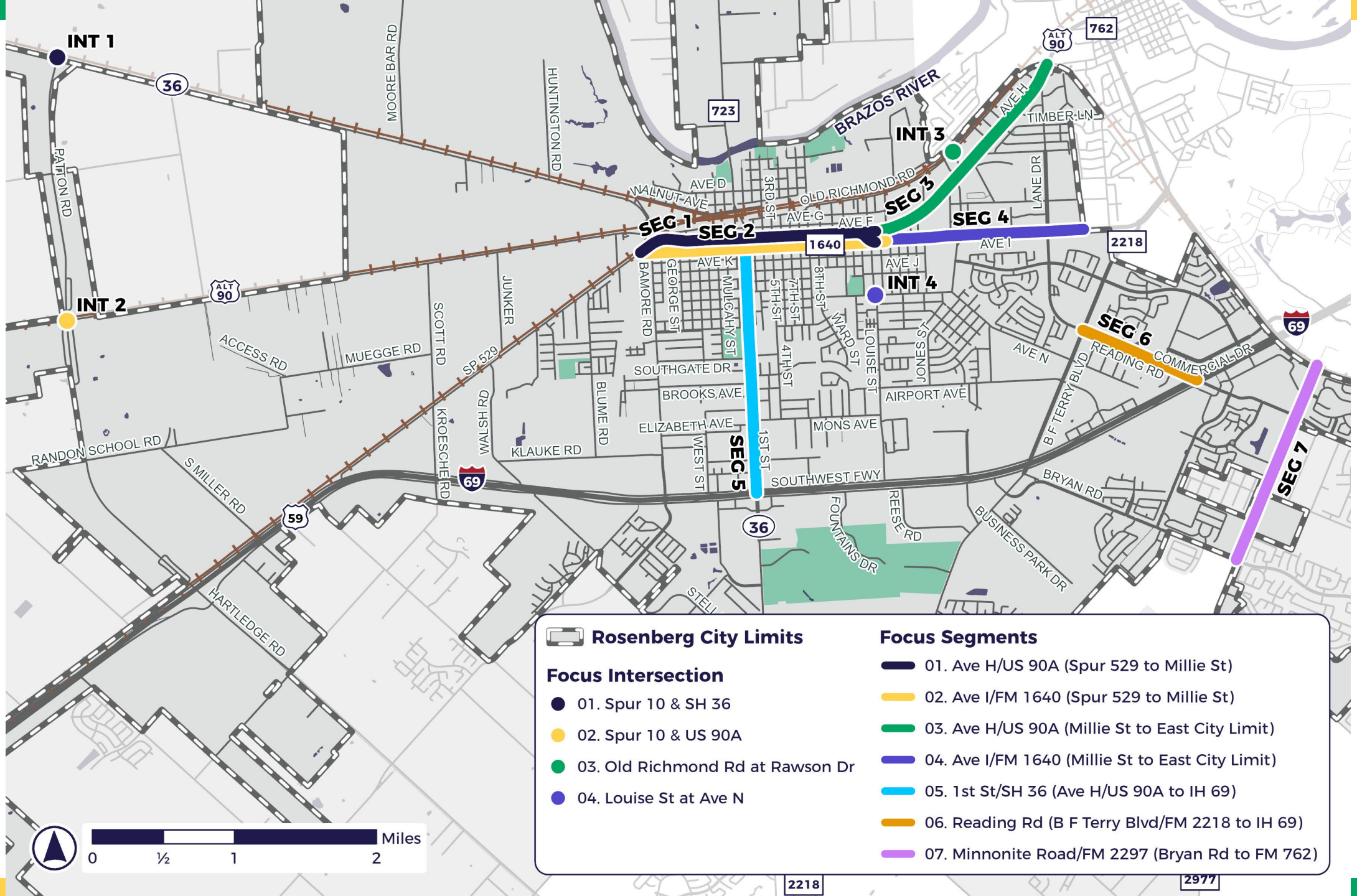
- **Question:** What **infrastructure projects** are the highest priority, and should be evaluated further as the implementation plan is developed?
- **Objective:** Assign a priority/timeframe to each infrastructure project (see infrastructure matrix).
- Project Types:
  - A. Focus Corridors
  - B. Focus Intersections
  - C. Systemic Projects
- How were these projects developed?
  - Data driven (High-Injury Network, safety analysis, and equity analysis)
  - Informed by public input (online map, online survey, and in-person meetings)
  - Committee led (Safety Task Force)

## Infrastructure Matrix

Pillar	2025-2026	2027-2029	2030+
Corridors			
Intersections			
Systemic			

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# Focus Location Map



Rosenberg City Limits	<b>Focus Segments</b>
<b>Focus Intersection</b>	01. Ave H/US 90A (Spur 529 to Millie St)
01. Spur 10 & SH 36	02. Ave I/FM 1640 (Spur 529 to Millie St)
02. Spur 10 & US 90A	03. Ave H/US 90A (Millie St to East City Limit)
03. Old Richmond Rd at Rawson Dr	04. Ave I/FM 1640 (Millie St to East City Limit)
04. Louise St at Ave N	05. 1st St/SH 36 (Ave H/US 90A to IH 69)
	06. Reading Rd (B F Terry Blvd/FM 2218 to IH 69)
	07. Minnonite Road/FM 2297 (Bryan Rd to FM 762)



# Focus Corridors

- 75% of crashes within City of Rosenberg occur on 14% of roadways (XX miles)
- 13 of the highest-crash corridors were evaluated by the Safety Task Force, and focus corridors were identified
- Improvements were identified along **7 focus corridors** (XX miles)
- Corridors account for XX fatal crashes and XX serious injury crashes
- XX miles are on the high-injury network
- X miles in underserved communities

Roadway Segment Table

ID	Roadway	From	To	Classification	Length (Miles)	ADT	Crash Rate (per HVMT)	Crash Cost (\$1M)			Ped + Bike	Crash Count	K	A	B
								Total	Total	Total					
1	Avenue H	SH 36	US90A	Principal Arterial	1.59	11,289	1,130	51.9	10,371	2	371	1	9	27	
2	Avenue I	SH 36	US90A	Minor Arterial	1.64	11,952	873	27.0	5,391	1	313	0	2	30	
3	US 90A (Ave)	Ave I	City Limits	Principal Arterial	1.73	19,764	430	43.7	8,748	9	288	1	4	31	
4	Avenue I	Price Rd/ Radio Ln	City Limits	Minor Arterial	0.63	12,116	864	13.6	2,719	2	121	0	1	15	
5	1st St	Ave H	IH 69	Principal Arterial	1.80	19,586	669	63.6	12,719	5	430	2	3	31	
6	SH 36	IH 69	City Limits	Principal Arterial	1.73	16,480	585	26.1	5,213	1	305	0	4	19	
7	IH 69	Bamore Rd	SH 36	Frontage Road	0.64	20,061	246	11.1	2,222	0	58	0	3	5	
8	IH 69	SH 36	FM 2218	Frontage Road	1.93	25,424	170	29.4	5,878	2	152	1	5	5	
9	IH 69	B F Terry Blvd	FM 762	Frontage Road	1.98	17,709	323	47.4	9,483	0	207	2	4	17	
10	FM 2218	Reese Rd	IH 69	Minor Arterial	0.64	13,500	516	12.1	2,426	0	81	0	4	7	
11	Reading Rd	B F Terry Blvd	IH 69	Minor Arterial	0.88	16,754	607	14.9	2,984	1	163	0	0	11	
12	Commercial	Vista Dr	FM 762	Local	0.78	13,754	578	8.8	1,763	0	113	0	2	6	
13	Minonite Rd	Bryan Rd	FM 762	Major Collector	1.49	12,838	445	21.5	4,298	0	155	0	4	11	

Crashes from TxDOT's CRIS for 2019-2023. Crash Rate per 100 million vehicle miles traveled.  
 UC = Underserved Community per USDOT | ADT = Average Daily Traffic | EPDO = Equivalent Property Damage Only  
 K = Fatal Crash | A = Suspected Serious Injury Crash | B = Suspected Minor Injury Crash

# Focus Intersections

- XX% of crashes within City of Rosenberg occur at intersections
- Intersection crashes are a TxDOT emphasis area
- Improvements were identified at **4 focus intersections**
- X intersections are in underserved communities

## Intersection Safety



Intersection crashes are the second most common type of crash in Texas.

DESCRIPTION	FATALITIES AND SERIOUS INJURIES	CONTRIBUTING FACTORS	WHERE CRASHES OCCUR	DEMOGRAPHICS	STRATEGIES
-------------	---------------------------------	----------------------	---------------------	--------------	------------

Home — Emphasis Areas — Intersection Safety — Description

### THE PROBLEM

An intersection crash is one that occurs within the boundaries of an intersection or in which the first harmful event occurred on an approach to or an exit from an intersection and is related to movement through the intersection. As such the Intersection Safety emphasis area includes crashes at or related to an intersection.

Intersection crashes were identified in 26,879 fatal and serious injury crashes (32% of all fatal crashes) as well as 4,104 fatalities (21% of all fatalities) and 28,480 serious injuries (35% of all serious injuries) from 2017–2021.



**21%**

of fatalities were associated with a crash involving an intersection

### COMBATING THE ISSUE

STRATEGIES

PROGRAMS AND PROJECTS

EMPHASIS AREA TEAM

# Systemic Project Types

1. Pedestrian
2. Turning Conflicts
3. Lane/Roadway Departure
4. Lighting

A crash tree analysis informed the selection of **focus crash types**.

The systemic approach selects low-cost countermeasures to deploy systemwide based on **focus crash types**.

## Systemic Countermeasures

### Pedestrian

- Rectangular Rapid Flashing Beacons (RRFB)
- Sidewalks

### Turning Conflicts

- Turn Lanes
- Signal Reconstruction
- Flashing Yellow Arrows
- Realignment (remove offset)
- Raised Medians

### Roadway Departure

- Edgeline Rumble Strips
- Edgeline Pavement Markings
- Centerline Rumble Strips
- Chevrons

### Lighting

- Intersection Lighting
- Roadway Lighting
- Pavement Markings (RPMs for dark crashes)

# Infrastructure Matrix

Pillar	2025-2026	2027-2029	2030+
Corridors			
Intersections			
Systemic			

# Non-Infrastructure Activity

# Non-Infrastructure Activity Instructions

- **Question:** What **non-infrastructure projects** are the highest priority, and should be evaluated further as the implementation plan is developed?
- **Objective:** Assign a priority/timeframe to each non-infrastructure project (see non-infrastructure matrix).
- Project Types:
  - D. Quick Build
  - E. Safety Planning
  - F. Design Guidance
  - G. Operating Procedures
- How were these projects developed?
  - SS4A Funding Eligibility (CSAP Components)
  - Safe Systems Approach and Pyramid
  - Vision Zero Toolkit (FHWA-SA-23-026)

## Non-Infrastructure Matrix

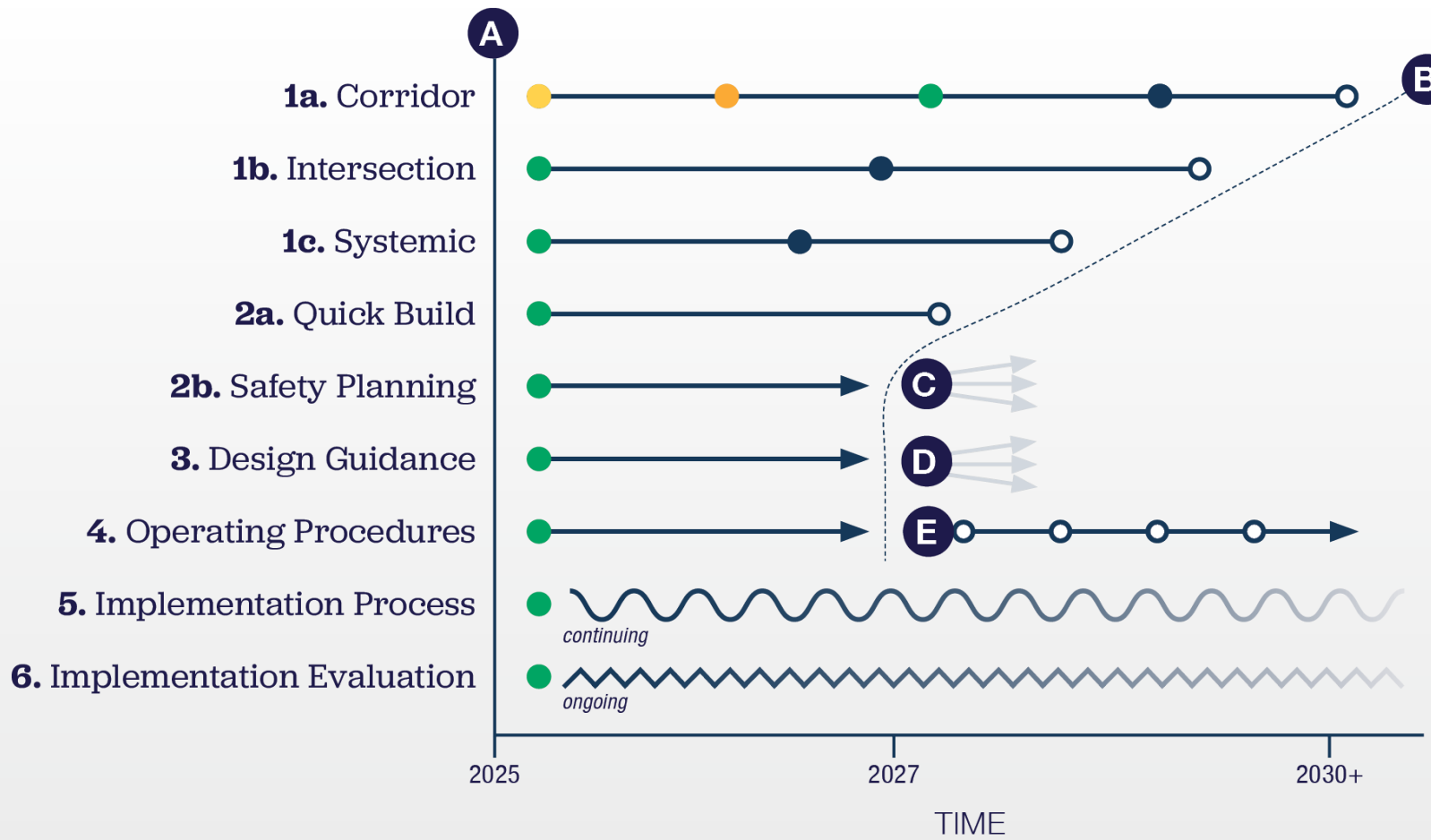
Pillar	2025-2026	2027-2029	2030+
Quick-Build Projects			
Safety Planning			
Design Guidance			
Operating Procedures			

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# Non-Infrastructure Project Types

- **Quick-Build** | Projects utilizing low-cost construction materials (e.g., paint, plastic bollards, signs, and pavement markings) to pilot new materials/methods prior to constructing full-scale permanent infrastructure.
- **Safety Planning** | Projects or activity which develop projects, organize resources, and garner public support for safety (excluding engineering and design).
- **Design Guidance** | Design standards which incorporate safety countermeasures to remove potential roadway conflicts, separate vulnerable road users from traveling vehicles, and/or reduce crash kinetic energy if a crash does occur.
- **Operating Procedures** | Behavioral countermeasures, such as the E's (engagement, education, enforcement, and emergency services), as well as operational countermeasures, such as speed management strategies.

# General Schedule of Implementation



## LEGEND

- A** Begin Implementation
- B** Implementation Complete
- C** Safety plans will identify future infrastructure projects, inform design guidance, and refine operating procedures
- D** Design guidance will shape all future infrastructure projects
- E** Operating procedures complement, and improve, the effectiveness of infrastructure projects
- Funding
- Planning
- Environmental
- Design

# Non-Infrastructure Matrix

Pillar	2025-2026	2027-2029	2030+
Quick-Build Projects			
Safety Planning			
Design Guidance			
Operating Procedures			

# Conclusion

# Budgeting Activity

Pillar	2025-2026	2027-2029	2030+
Corridors			
Intersections			
Systemic			
Quick-Build Projects			
Safety Planning			
Design Guidance			
Operating Procedures			

# Next Steps

- ~~July – Project Selection Workshop with STF~~
  - August/September – Draft Implementation Plan
  - October – Implementation Plan Workshop with STF
  - November – Draft Comprehensive Safety Action Plan Report
  - December – Adopt CSAP (City Council Meeting)
- 
- February 2025\* – SS4A Implementation Grant NOFO
  - May 2025\* – SS4A Implementation Grant Application Deadline

\*Date estimated based on 2024 grant schedule

**Thank you**

# Action Plan Review

Comprehensive Safety Action Plan

*Funded by Safe Streets and Roads for All*

Safety Task Force - Meeting 4

September 18, 2024

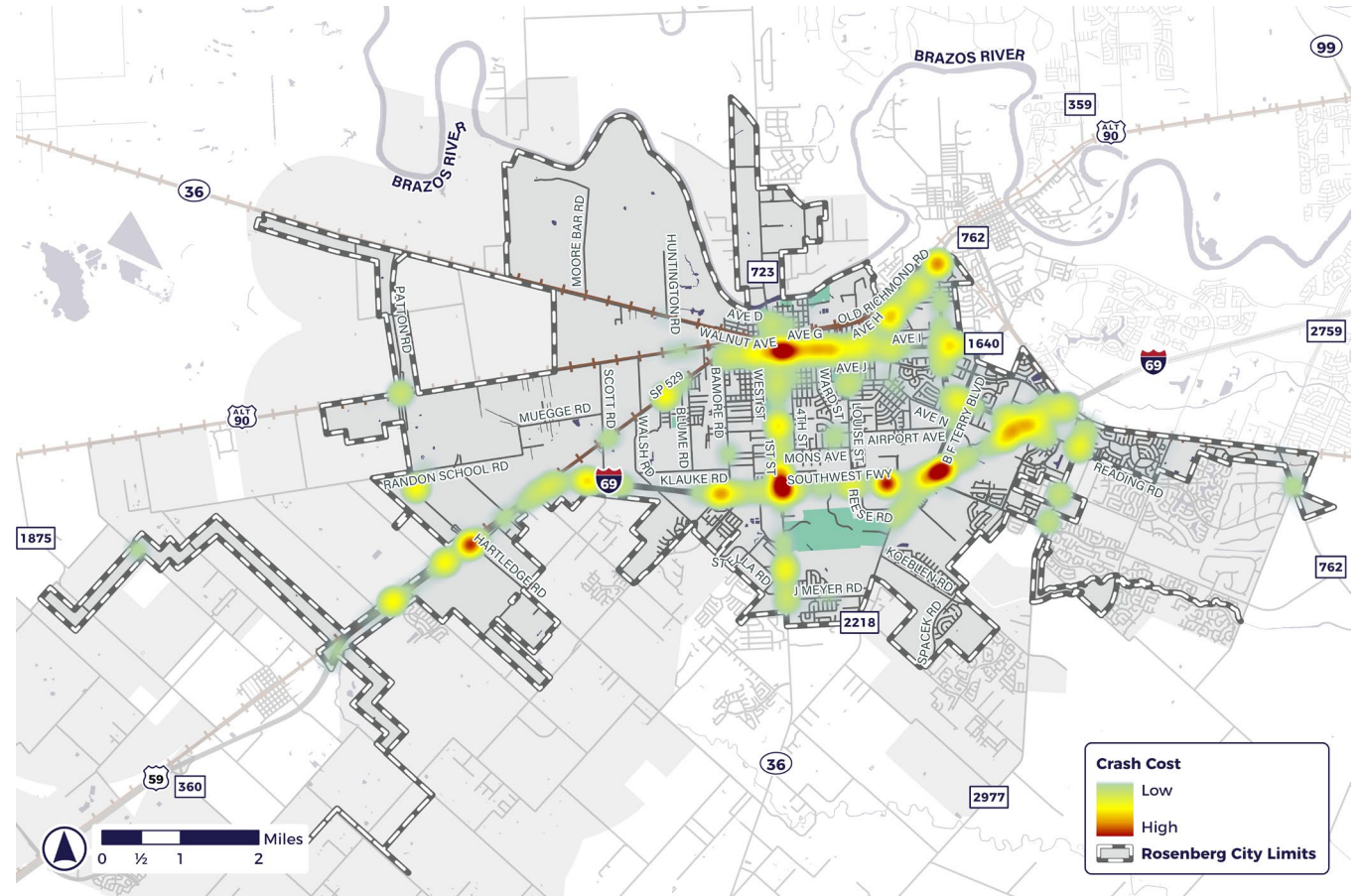
Payton Arens, PE, RSP<sub>21</sub>



**ROSENBERG**  
SAFETY ACTION PLAN

# Agenda

- CSAP Feedback
- Action Plan Feedback
- Progress and Transparency
- Next Steps



# Project Schedule

You Are Here

Adopt CSAP

Month:		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Description:													
Engagement	Safety Task Force												
	Public Meetings												
	Online												
Safety Analysis													
Equity Analysis													
Public Engagement													
Implementation													

Draft CSAP

Select projects

Select focus locations



Meeting



Workshop



Survey



Presentation

# CSAP Components

A **vision zero** commitment will be presented to City Council.

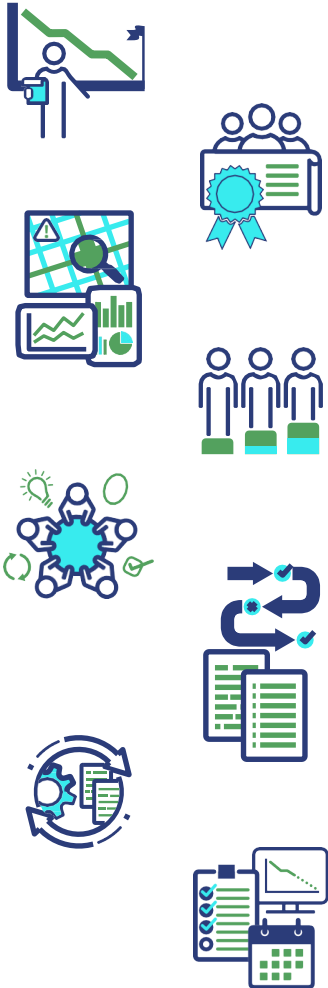
- Leadership commitment and goal setting

**Complete.** Used to develop list of potential projects and strategies.

- Planning structure
- Safety analysis
- Equity considerations
- Engagement and collaboration

The **purpose of today's workshop** is to refine the draft Action Plan.

- **Strategy and project selections**
- **Policy and process changes**
- **Progress and transparency**



**What are your thoughts on the draft CSAP?**

**How can the CSAP be improved?**

**Does the CSAP satisfy our project goals?**

# Vision, Goals, and Objectives

**Figure 2.1** Vision, Goals, and Objectives

**Vision: Eliminate traffic fatalities and serious injuries in the City by the year 2050**

**Goal: Accommodate all modes of transportation**

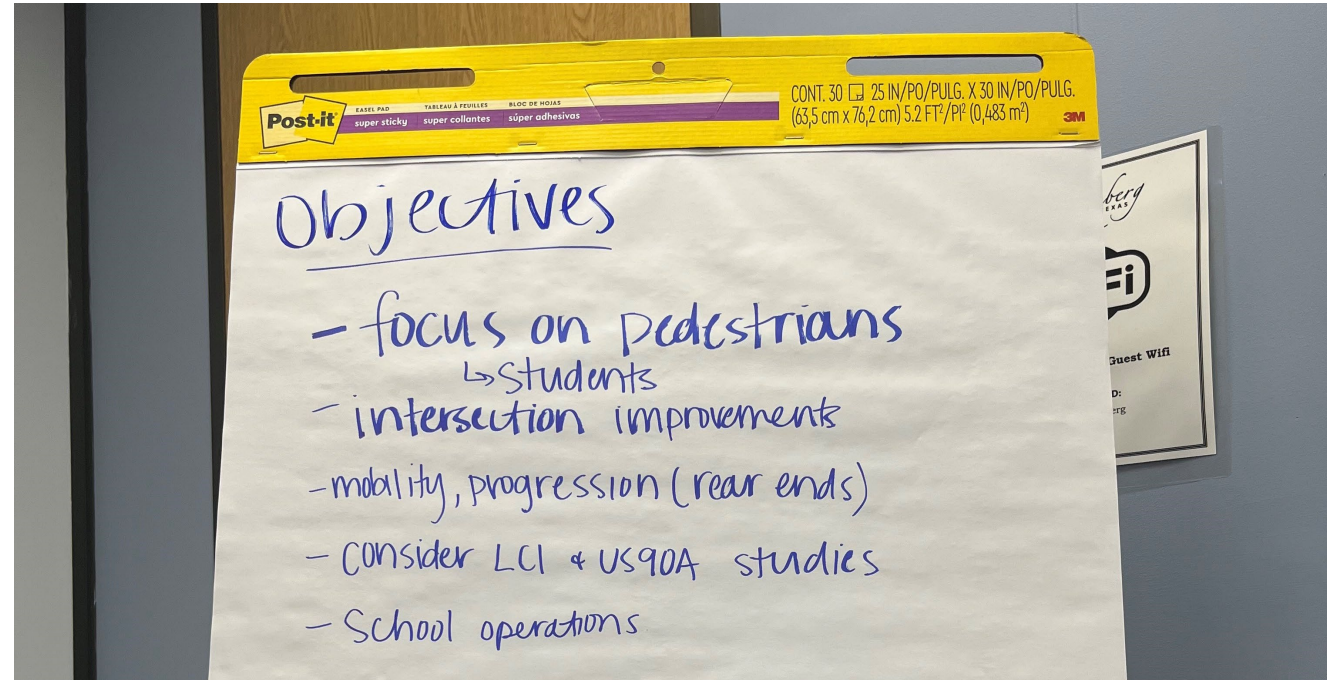
- ▶ Reduce bicycle and pedestrian crashes
- ▶ Create safe walking routes to schools

**Goal: Improve mobility through safety**

- ▶ Reduce intersection-related crashes
- ▶ Reduce congestion-related crashes
- ▶ Improve school traffic operations

**Goal: Build upon previous plans and studies**

- ▶ Incorporate previous Livable Centers Initiative (LCI) Study projects
- ▶ Incorporate US 90A Study



# Framework ≈ CSAP Components

Strategy and project selections

Policy and process changes



Progress and transparency  
*(this meeting)*



1. Implement **infrastructure** projects (location-specific and systemic projects).
2. Implement **quick-build** and **safety planning** projects.
3. Update **design guidance** to emphasize safety for all road users.
4. Incorporate the safe system approach into organization **operating procedures**.
5. Organize an **implementation process** to identify, prioritize, and implement safety projects.
6. Monitor action plan progress and publish an **implementation evaluation** of outcomes and efforts.



Our comprehensive approach to prevent roadway fatalities and serious injuries includes **infrastructure** and **non-infrastructure** solutions.

How can the **Action Plan** be improved?

Does the **Action Plan** reflect our project goals?

What aspects of the **Action Plan** are the least feasible?

What items in the **Action Plan** are the highest priority?

<b>ID</b>	<b>Action (What)</b>	<b>Timeframe (When)</b>	<b>Agencies (Who)</b>	<b>Funding Source (How)</b>
C-1	<b>At Avenue I &amp; Bamore Road - Modify intersection geometry</b>	2025-2026 (funding/design) 2027-2029 (construction)	TxDOT	SS4A Implementation TxDOT HSIP
C-2	<b>At Avenue H/I &amp; Millie Street - Modify intersection geometry and rebuild traffic signal</b>	2025-2026 (funding/design) 2027-2029 (construction)		
C-3	<b>At Avenue I &amp; Radio Lane - Construct sidewalk and install pedestrian facilities</b>	2025-2026 (funding/design) 2027-2029 (construction)		
C-4	<b>Along 1st St, from Avenue H to IH 69 - Install roadway lighting</b>	2025-2026 (funding) 2027-2029 (design) 2030+ (construction)		
C-5	<b>Reading Rd &amp; FM 2218 - Add westbound left-turn lane</b>	2025-2026 (funding/design) 2027-2029 (construction)		
C-6	<b>Minonite Rd &amp; Meadow/Rohan - Add northbound left-turn lane and southbound left-turn lane</b>	2025-2026 (funding/design) 2027-2029 (construction)		
I-1	<b>Spur 10 &amp; SH 36 - Reconfigure intersection as a Continuous Green-T</b>	2025-2026 (funding) 2027-2029 (design) 2030+ (construction)	TxDOT	SS4A Implementation TxDOT HSIP
I-2	<b>Spur 10 &amp; US 90A - Install intersection lighting</b>	2025-2026 (funding/design) 2027-2029 (construction)	TxDOT	
I-3	<b>Old Richmond Rd &amp; Rawson Dr - Add eastbound left-turn lane</b>		City of Rosenberg (only)	
I-4	<b>Louise St &amp; Ave N - Realign northbound approach</b>		City of Rosenberg (only)	

<b>ID</b>	<b>Action (What)</b>	<b>Timeframe (When)</b>	<b>Agencies (Who)</b>	<b>Funding Source (How)</b>
S-1	<b>Install RRFB and high visibility pedestrian crosswalk markings.</b>	2025-2026 (funding/design) 2027-2029 (construction)	TxDOT	SS4A Implementation TxDOT HSIP TxDOT Transportation Alternatives
S-2	<b>Install 6' sidewalks</b>			
S-3	<b>Install flashing yellow arrow</b>			
S-4	<b>Install backplates with retroreflective borders.</b>			
S-5	<b>Install LED flashing chevrons</b>			
S-6	<b>Install roadway lighting</b>			
B-1	<b>Along Avenue H/I, from Spur 529 to Millie Street - Implement quick-build project to demonstrate the practicality of narrowing the roadway</b>	2025-2026 (construction)	TxDOT	SS4A Demonstration
B-2	<b>Along 1st St, from Avenue H to IH 69 - Conduct study to determine access management improvements</b>	2025-2026 (planning/env) 2027-2029 (funding) 2030+ (design)	Rosenberg Development Corporation (RDC)	SS4A Supplemental Planning
P-1	<b>Establish a work group to incorporate policy recommendations into City policies/processes</b>	2025-2026 (coordination) 2027-2029 (update code)	City of Rosenberg (only)	SS4A Supplemental Planning
E-1	<b>Coordinate with H-GAC to publish crash performance outcomes</b>	2025-2026 (coordination) 2027+ (reporting annually)	H-GAC	None

What is the **process** to measure progress (outcome data) over time?

How can the **process** be improved?

**Table 8.1** CSAP Implementation Evaluation Outcome Performance Measures

<b>Outcome Type</b>	<b>Performance Measure</b>	<b>5-Year Average (2019-2023)</b>	<b>2023</b>
Crash Frequency	Total number of traffic fatalities (persons)	3.2	2
	Total number of serious injuries (persons)	20.8	17
	Fatalities per 100,000 population	8.36	5.22
	Serious Injuries per 100,000 population	54.33	44.41
Vulnerable User Crash Frequency	Total number of non-motorized fatalities and serious injuries	2.0	3
	Number of pedestrian fatalities	0.4	1
	Number of pedestrian serious injuries	1.2	1
	Number of bicycle fatalities	0.2	0
	Number of bicycle serious injuries	0.2	1

# Conclusion

# Next Steps

- ~~10/7 – Implementation Plan Workshop with STF~~
- 10/22 – City Council workshop to present draft CSAP
- 11/5 – City Council meeting to adopt VZ resolution
- 11/7 – Post CSAP report for public comment
- 12/3 – City Council meeting to adopt CSAP
  
- February 2025\* – SS4A Implementation Grant NOFO
- May 2025\* – SS4A Implementation Grant Application Deadline

\*Date estimated based on 2024 grant schedule

**Thank you**

# Appendix 3

*Safety Analysis*

# INFRASTRUCTURE EMPHASIS AREAS

## VULNERABLE ROAD USERS

**FATAL & SERIOUS INJURY CRASHES**

TEXAS	13%
ROSENBERG	8%

**CITYWIDE CRASH COST**

8%
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**INSTALL RRFB**  
6 Preventable Fatal & Serious Injury Crashes

**INSTALL SIDEWALKS**  
6 Preventable Fatal & Serious Injury Crashes

## INTERSECTION SAFETY

**FATAL & SERIOUS INJURY CRASHES**

TEXAS	32%
ROSENBERG	30%

**CITYWIDE CRASH COST**

37%
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**INSTALL FLASHING YELLOW ARROW**  
2 Preventable Fatal & Serious Injury Crashes

**INSTALL RAISED MEDIAN**  
37 Preventable Fatal & Serious Injury Crashes

**BACKPLATES WITH RETROREFLECTIVE BORDERS**  
12 Preventable Fatal & Serious Injury Crashes

## ROADWAY & LANE DEPARTURE

**FATAL & SERIOUS INJURY CRASHES**

TEXAS	35%
ROSENBERG	48%

**CITYWIDE CRASH COST**

31%
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**MILLED CENTERLINE RUMBLE STRIPS**  
1 Preventable Fatal & Serious Injury Crashes

**EDGELINE TREATMENTS**  
48 Preventable Fatal & Serious Injury Crashes

**INSTALL LED FLASHING CHEVRONS (CURVE)**  
1 Preventable Fatal & Serious Injury Crashes

## DARK OR UNDERLIT CONDITIONS

**FATAL & SERIOUS INJURY CRASHES**

TEXAS	N/A
ROSENBERG	56%

**CITYWIDE CRASH COST**

41%
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**SAFETY LIGHTING**  
2 Preventable Fatal & Serious Injury Crashes

## WET OR ICY SURFACE CONDITIONS

**FATAL & SERIOUS INJURY CRASHES**

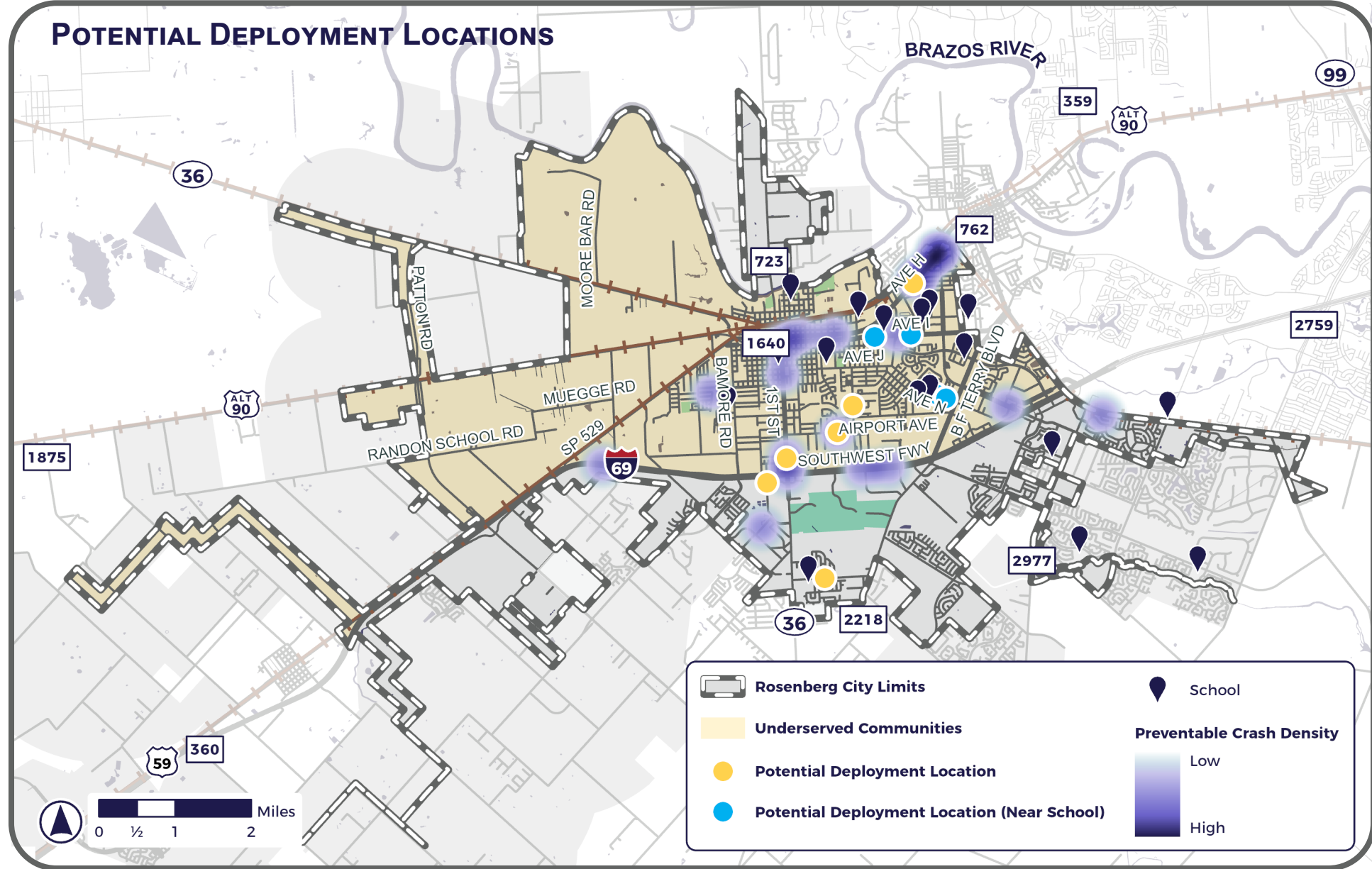
TEXAS	N/A
ROSENBERG	10%

**CITYWIDE CRASH COST**

11%
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**RESURFACING**  
2 Preventable Fatal & Serious Injury Crashes

# INSTALL RECTANGULAR RAPID FLASHING BEACONS (RRFB)



**PROJECT DESCRIPTION:**  
Install Rectangular Rapid Flashing Beacons (RRFB) and high visibility pedestrian crosswalk markings.

**HSIP Work Code(s):** 144, 403

**EXPECTED CRASH REDUCTION:** 52%

**TARGET FACILITY TYPE:** Mid-block or unsignalized crossing locations near schools, parks, transit stops, and other pedestrian destinations.

**IMPROVEMENT COST:** -

**EMPHASIS AREA:** VULNERABLE ROAD USERS

**COUNTERMEASURE PREVENTABLE CRASHES:**  
Pedestrian-involved crashes

- 19 Total
- 2 Fatal Injury
- 4 Serious Injury

**\$35.2 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

**POTENTIAL DEPLOYMENT LOCATIONS:**  
**SCOPE:** 10 Crossing Locations  
**TOTAL IMPROVEMENT COST:** -

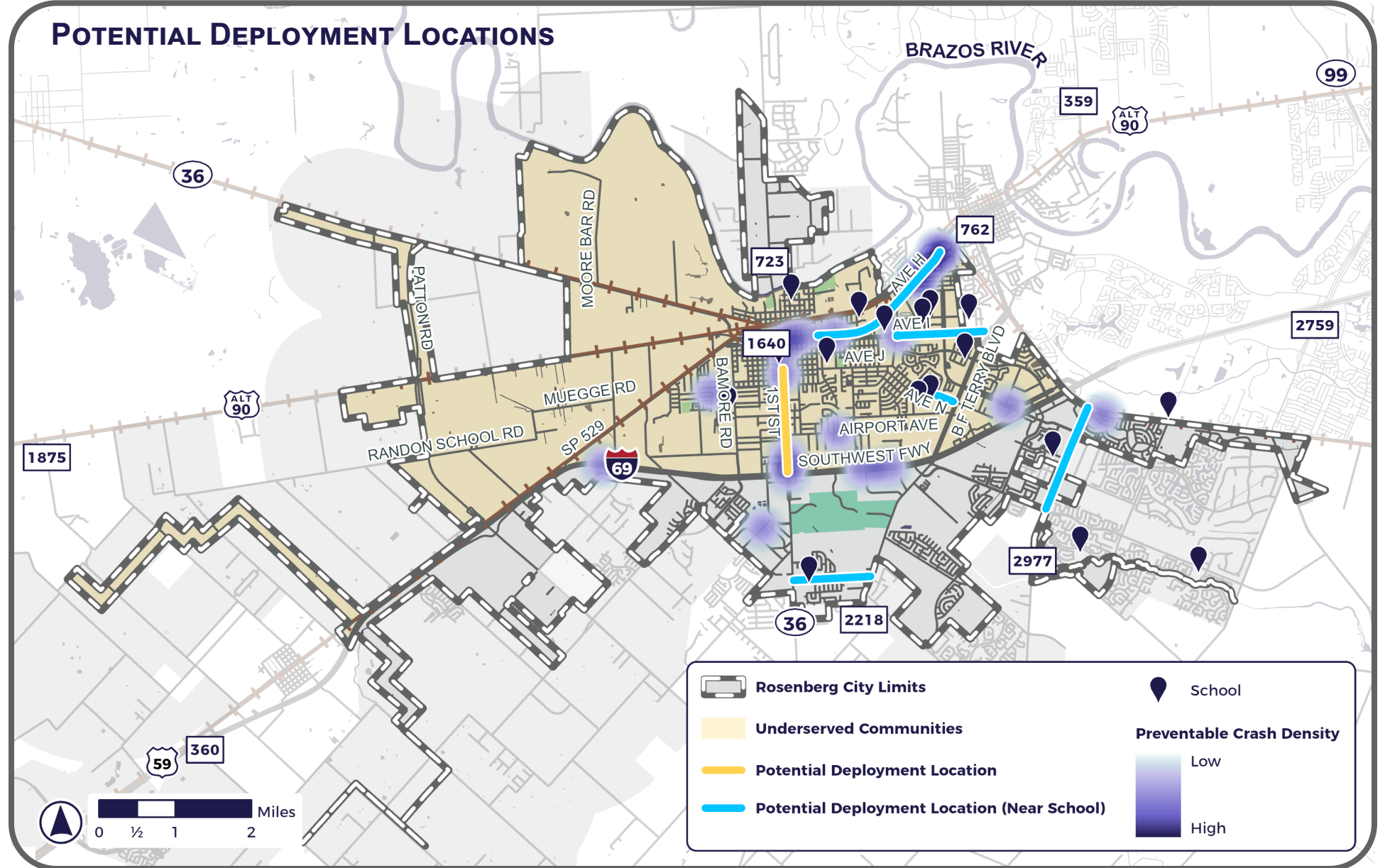
**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:**  
**FATAL & SERIOUS INJURY CRASHES:** 2  
**TOTAL CRASH COST:** \$14.9 M  
**EXPECTED TOTAL BENEFIT:** \$7.8 M

**BENEFIT COST RATIO:** -

**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS**  
 Compared to Total Preventable Crashes

% of Identified Locations within Underserved Communities	80%
Fatal & Serious Injury	42%
Total Crash Cost	50%

# INSTALL SIDEWALKS



#### PROJECT DESCRIPTION:

Install 6' sidewalks

HSIP Work Code(s): 407

EXPECTED CRASH REDUCTION: 65%

TARGET FACILITY TYPE: To fill gaps in existing pedestrian network.

IMPROVEMENT COST: -

#### EMPHASIS AREA: VULNERABLE ROAD USERS

#### COUNTERMEASURE PREVENTABLE CRASHES:

Pedestrian-involved crashes

19 Total

2 Fatal Injury

4 Serious Injury

**\$35.2 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

#### POTENTIAL DEPLOYMENT LOCATIONS:

SCOPE: 7 Miles

TOTAL IMPROVEMENT COST: -

#### PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:

FATAL & SERIOUS INJURY CRASHES: 2

TOTAL CRASH COST: \$16.2 M

EXPECTED TOTAL BENEFIT: \$10.5 M

BENEFIT COST RATIO: -

% of Identified Locations within  
Underserved Communities

66%

#### PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS

Compared to Total Preventable Crashes

Fatal & Serious Injury

46%

Total Crash Cost

50%

# INSTALL FLASHING YELLOW ARROW



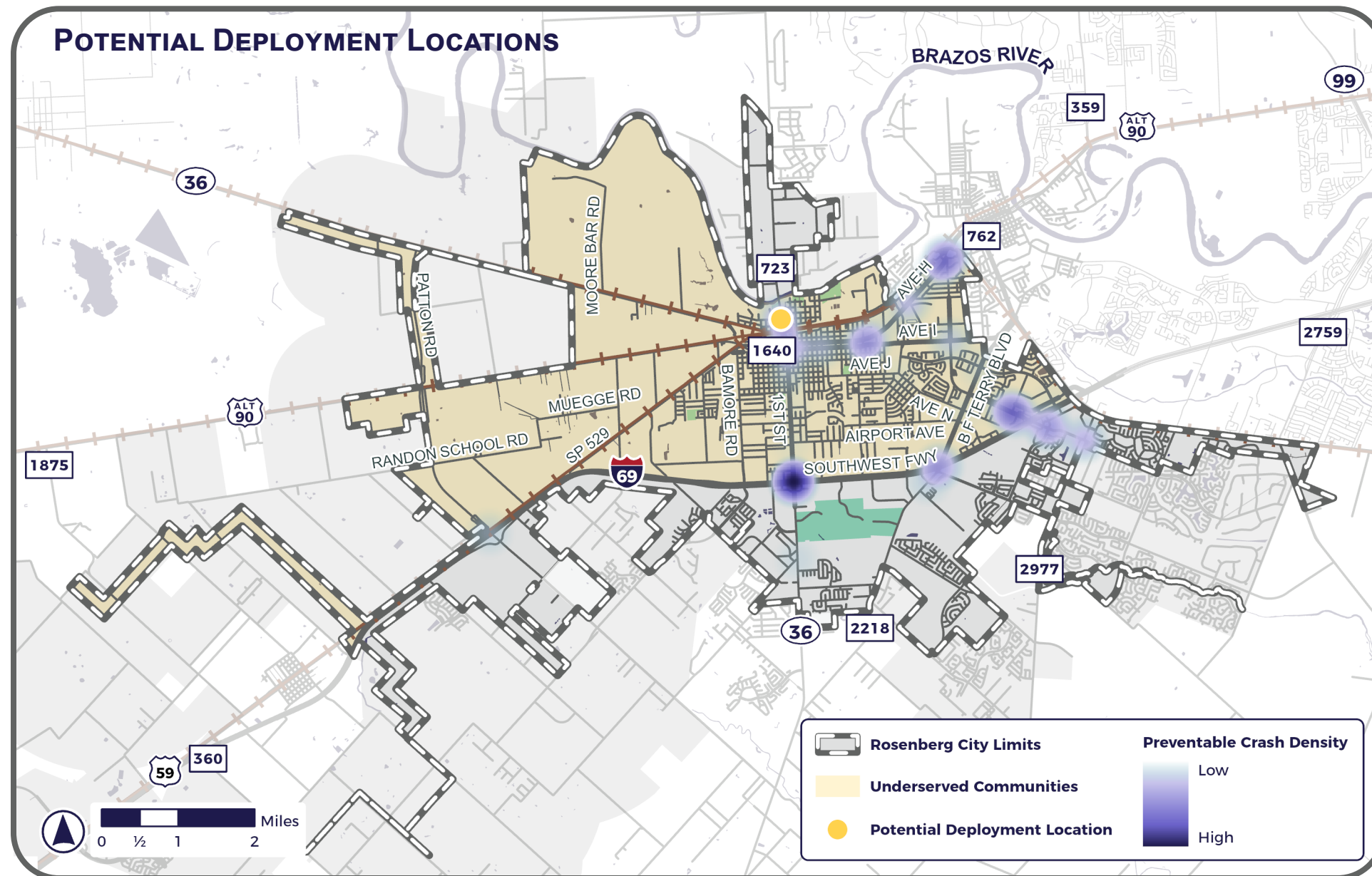
### PROJECT DESCRIPTION:

Improve existing intersection signals by adding a flashing yellow arrow indication and install the LEFT TURN YIELD ON FLASHING YELLOW ARROW (R10-17T) sign to replace green ball indication at intersections with protected-permissive left-turn phasing.

**HSIP WORK CODE(s):** 138

**EXPECTED CRASH REDUCTION:** 41%

**TARGET FACILITY TYPE:** Signalized intersections with protected-permissive left-turn phasing that use a green ball indication for



**EMPHASIS AREA:** INTERSECTION SAFETY

### COUNTERMEASURE PREVENTABLE CRASHES:

Left-turn crashes at signalized intersections

- 142 Total
- 0 Fatal Injury
- 2 Serious Injury

**\$22.7 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

### POTENTIAL DEPLOYMENT LOCATIONS:

**SCOPE:** 1 Signal

**TOTAL IMPROVEMENT COST:** -

### PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:

**FATAL & SERIOUS INJURY CRASHES:** 0

**TOTAL CRASH COST:** \$0.6 M

**EXPECTED TOTAL BENEFIT:** \$0.2 M

**BENEFIT COST RATIO:** -

% of Identified Locations within Underserved Communities

100%

### PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS

Compared to Total Preventable Crashes

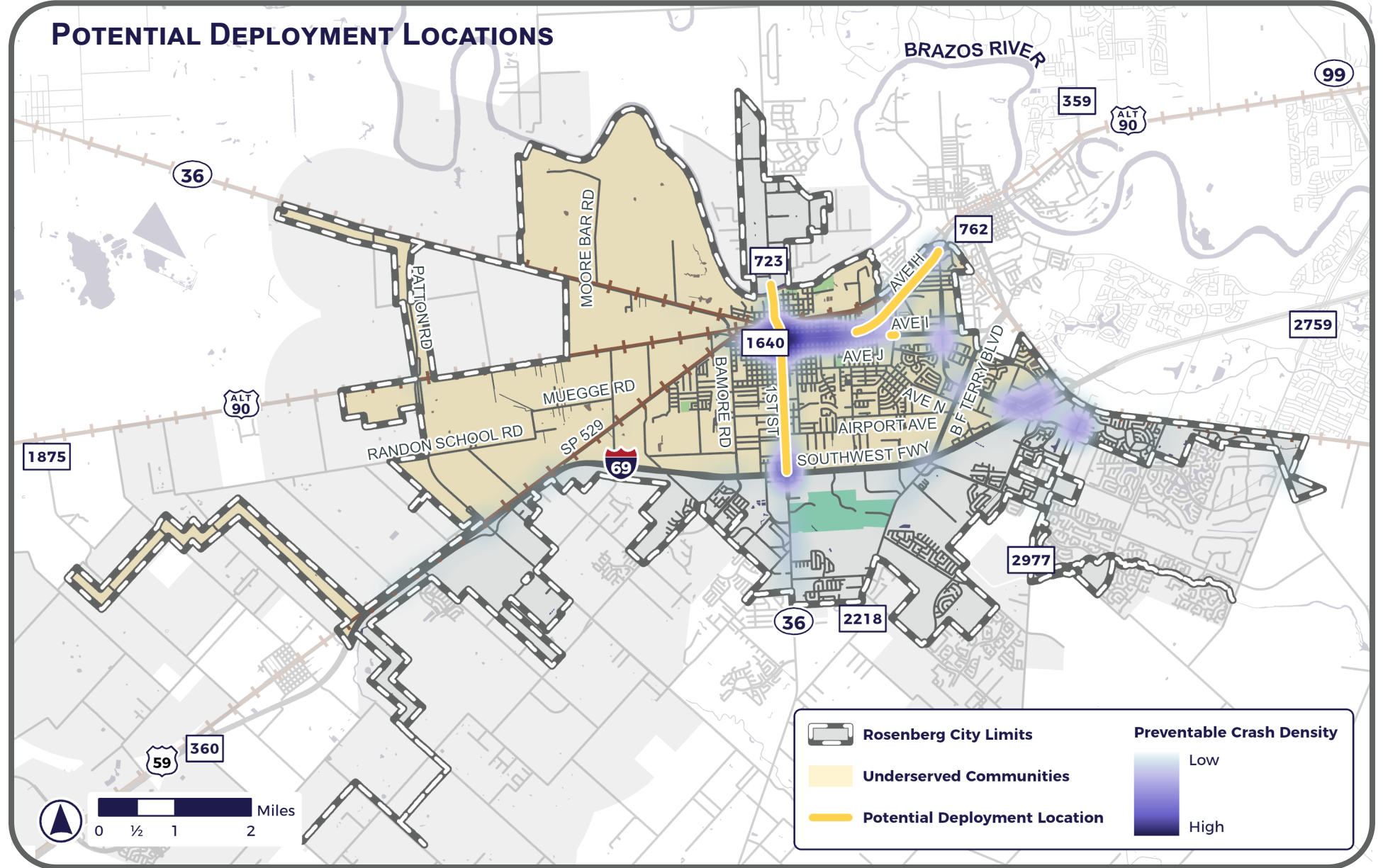
Fatal & Serious Injury

2%

Total Crash Cost

0%

# INSTALL RAISED MEDIAN



**PROJECT DESCRIPTION:**  
Install a roadway divider using barrier curb.

**HSIP Work Code(s):** 203

**EXPECTED CRASH REDUCTION:** 25%

**TARGET FACILITY TYPE:** High volume corridors with frequent driveways.

**IMPROVEMENT COST:** -

**EMPHASIS AREA:** INTERSECTION SAFETY

**COUNTERMEASURE PREVENTABLE CRASHES:**  
Head on, left-turn, angle, and rear end crashes

2922 Total  
4 Fatal Injury  
33 Serious Injury

**\$341.3 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

**POTENTIAL DEPLOYMENT LOCATIONS:**

SCOPE: 4

TOTAL IMPROVEMENT COST: -

**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:**

FATAL & SERIOUS INJURY CRASHES: 3

TOTAL CRASH COST: \$77.1 M

EXPECTED TOTAL BENEFIT: \$19.3 M

BENEFIT COST RATIO: -

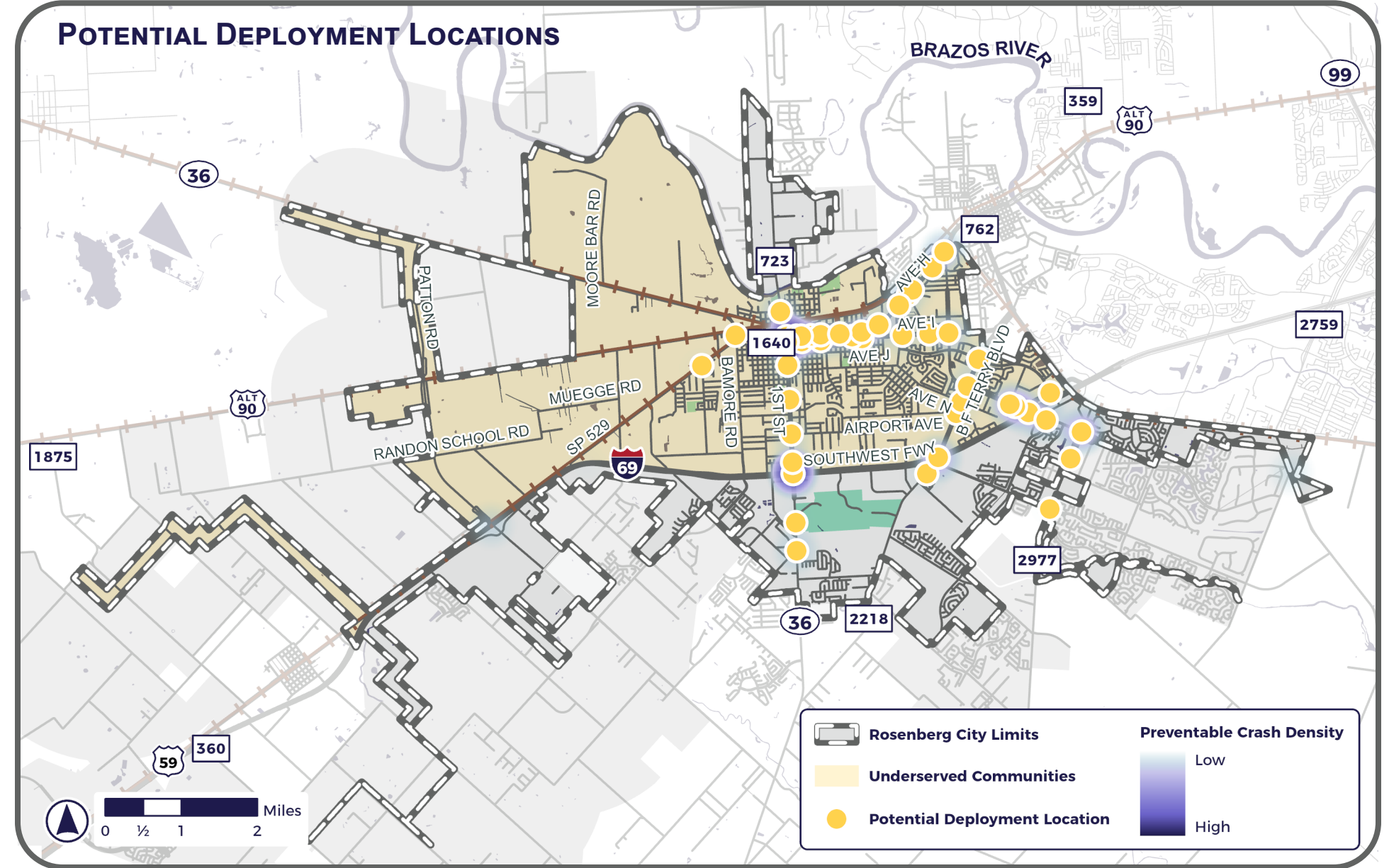
% of Identified Locations within Underserved Communities: **100%**

**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS**  
Compared to Total Preventable Crashes

Fatal & Serious Injury: **23%**

Total Crash Cost: **11%**

# BACKPLATES WITH RETROREFLECTIVE BORDERS



**PROJECT DESCRIPTION:**  
Install backplates with retroreflective borders.

**HSIP Work Code(s):** FHWA Proven Safety Countermeasure

**EXPECTED CRASH REDUCTION:** 15%

**TARGET FACILITY TYPE:** All signalized intersections.

**IMPROVEMENT COST:** -

**EMPHASIS AREA:** INTERSECTION SAFETY

**COUNTERMEASURE PREVENTABLE CRASHES:**  
All crashes at signalized intersections

935 Total  
1 Fatal Injury  
11 Serious Injury

**\$104.5 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

**POTENTIAL DEPLOYMENT LOCATIONS:**  
**SCOPE:** 45 Signals  
**TOTAL IMPROVEMENT COST:** -

**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:**  
**FATAL & SERIOUS INJURY CRASHES:** 8  
**TOTAL CRASH COST:** \$91.9 M  
**EXPECTED TOTAL BENEFIT:** \$13.8 M

**BENEFIT COST RATIO:** -

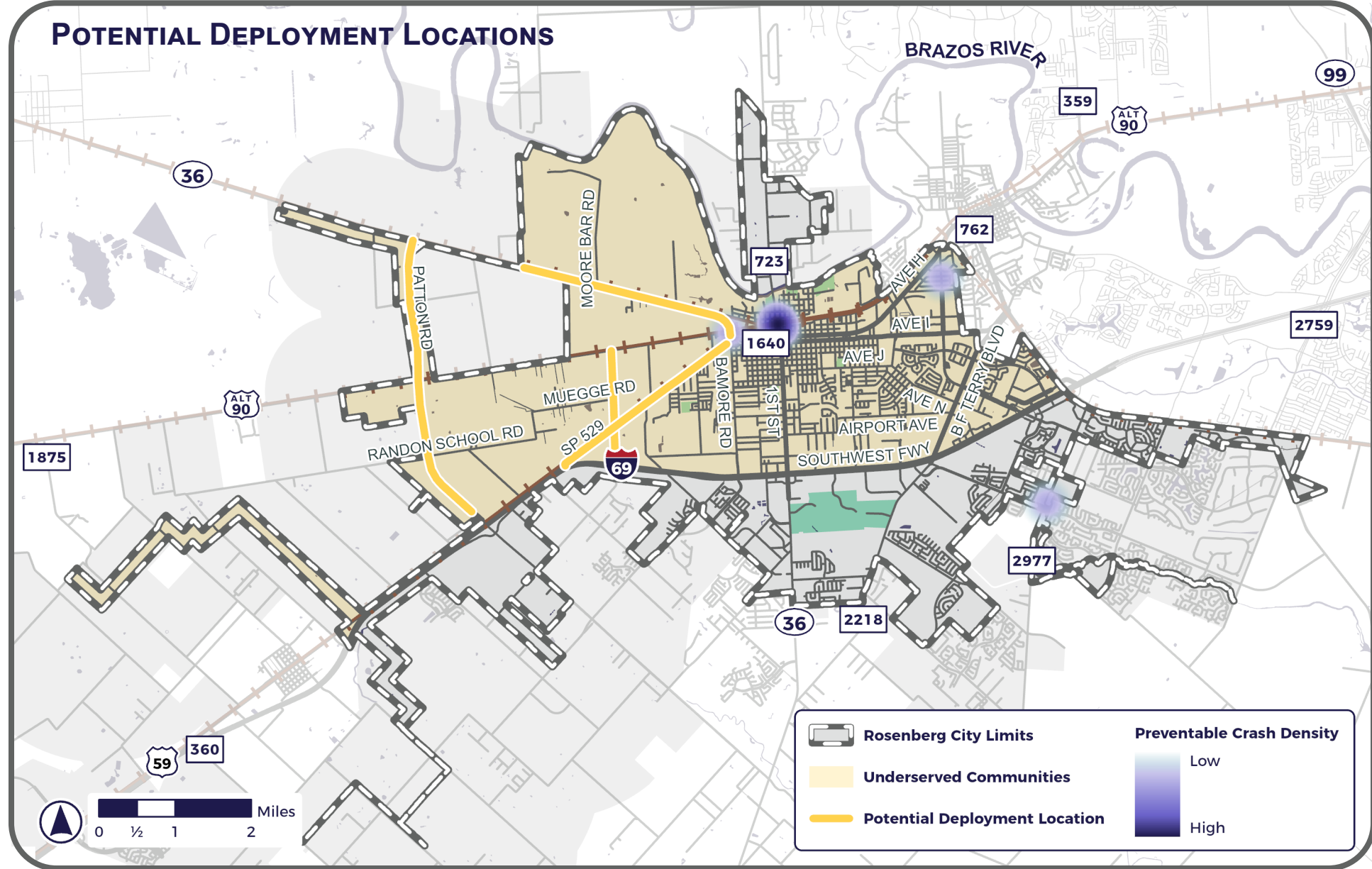
**% of Identified Locations within Underserved Communities** **78%**

**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS Compared to Total Preventable Crashes**

**Fatal & Serious Injury** **88%**

**Total Crash Cost** **75%**

# MILLED CENTERLINE RUMBLE STRIPS



**PROJECT DESCRIPTION:**  
Install centerline rumble strips.

**HSIP Work Code(s):** 542

**EXPECTED CRASH REDUCTION:** 26%

**TARGET FACILITY TYPE:** Undivided roads with speeds  $\geq$  45 mph.

**IMPROVEMENT COST:** -

**EMPHASIS AREA:** ROADWAY & LANE DEPARTURE

**COUNTERMEASURE PREVENTABLE CRASHES:**  
Crashes occurring in the shoulder or median, sideswipe crashes, and head on crashes

- 6 Total
- 0 Fatal Injury
- 1 Serious Injury

**\$2.6 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

<b>POTENTIAL DEPLOYMENT LOCATIONS:</b>	% of Identified Locations within Underserved Communities	<b>100%</b>
SCOPE: 11		
TOTAL IMPROVEMENT COST: -		
<b>PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:</b>	<b>PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS</b> Compared to Total Preventable Crashes	
FATAL & SERIOUS INJURY CRASHES: 0	Fatal & Serious Injury	<b>5%</b>
TOTAL CRASH COST: \$0.1 M	Total Crash Cost	<b>0.0%</b>
EXPECTED TOTAL BENEFIT: \$0.0 M		
<b>BENEFIT COST RATIO:</b> -		

# EDGELINE TREATMENTS



**PROJECT DESCRIPTION:**

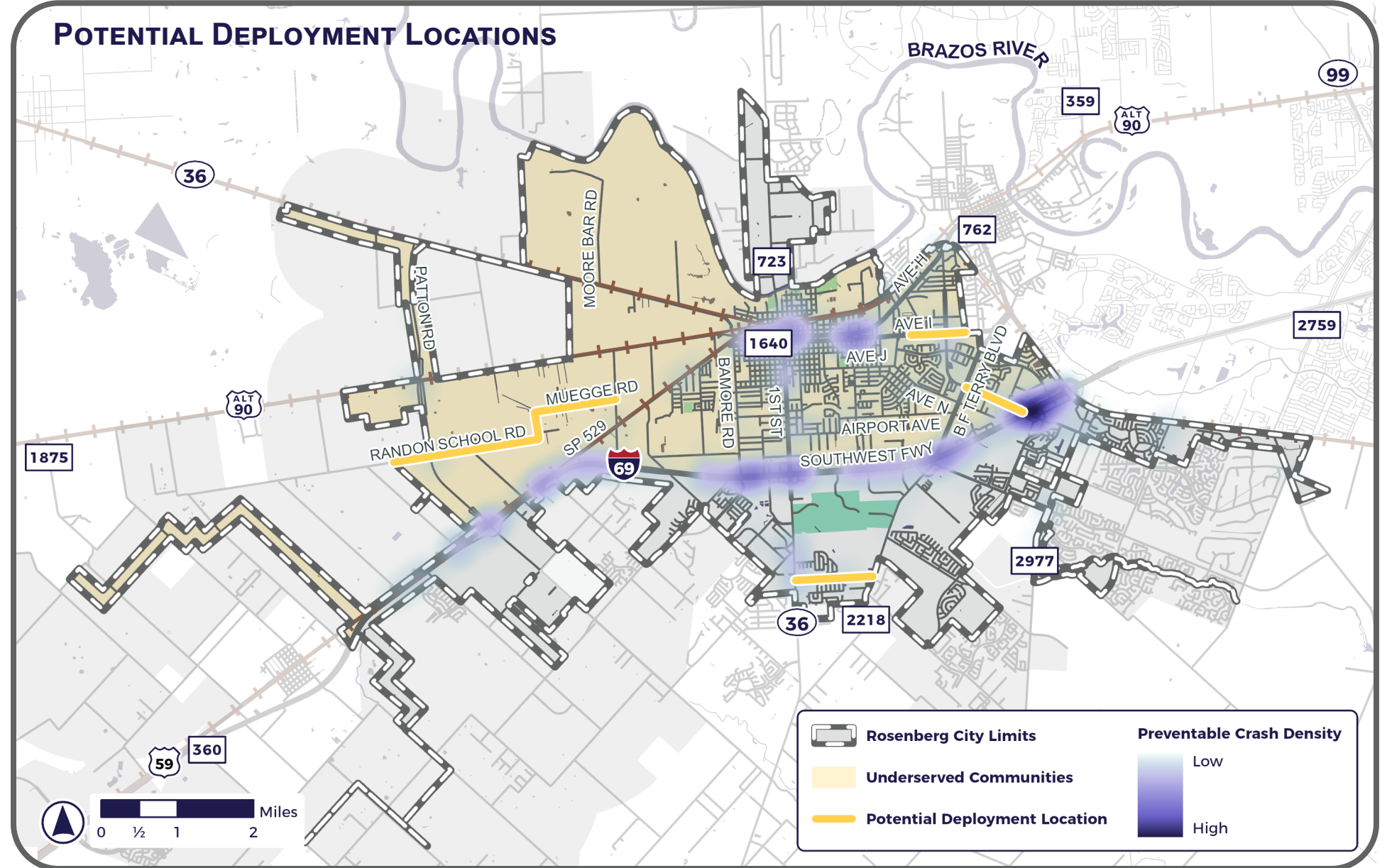
Construct or widen shoulder. Install edgeline rumble strips.

**HSIP Work Code(s):** 402, 532, 536

**EXPECTED CRASH REDUCTION:** 56%

**TARGET FACILITY TYPE:** Ditched roads with speeds  $\geq$  45 mph.

**IMPROVEMENT COST:** -



**EMPHASIS AREA:** ROADWAY & LANE DEPARTURE

**COUNTERMEASURE PREVENTABLE CRASHES:**

Crashes occurring off the roadway, in the shoulder or median and head on crashes

- 503 Total
- 9 Fatal Injury
- 39 Serious Injury

**\$210.8 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

**POTENTIAL DEPLOYMENT LOCATIONS:**

**SCOPE:** 6 Miles  
**TOTAL IMPROVEMENT COST:** -

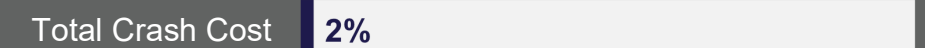


**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:**

**FATAL & SERIOUS INJURY CRASHES:** 1  
**TOTAL CRASH COST:** \$2.7 M  
**EXPECTED TOTAL BENEFIT:** \$1.5 M

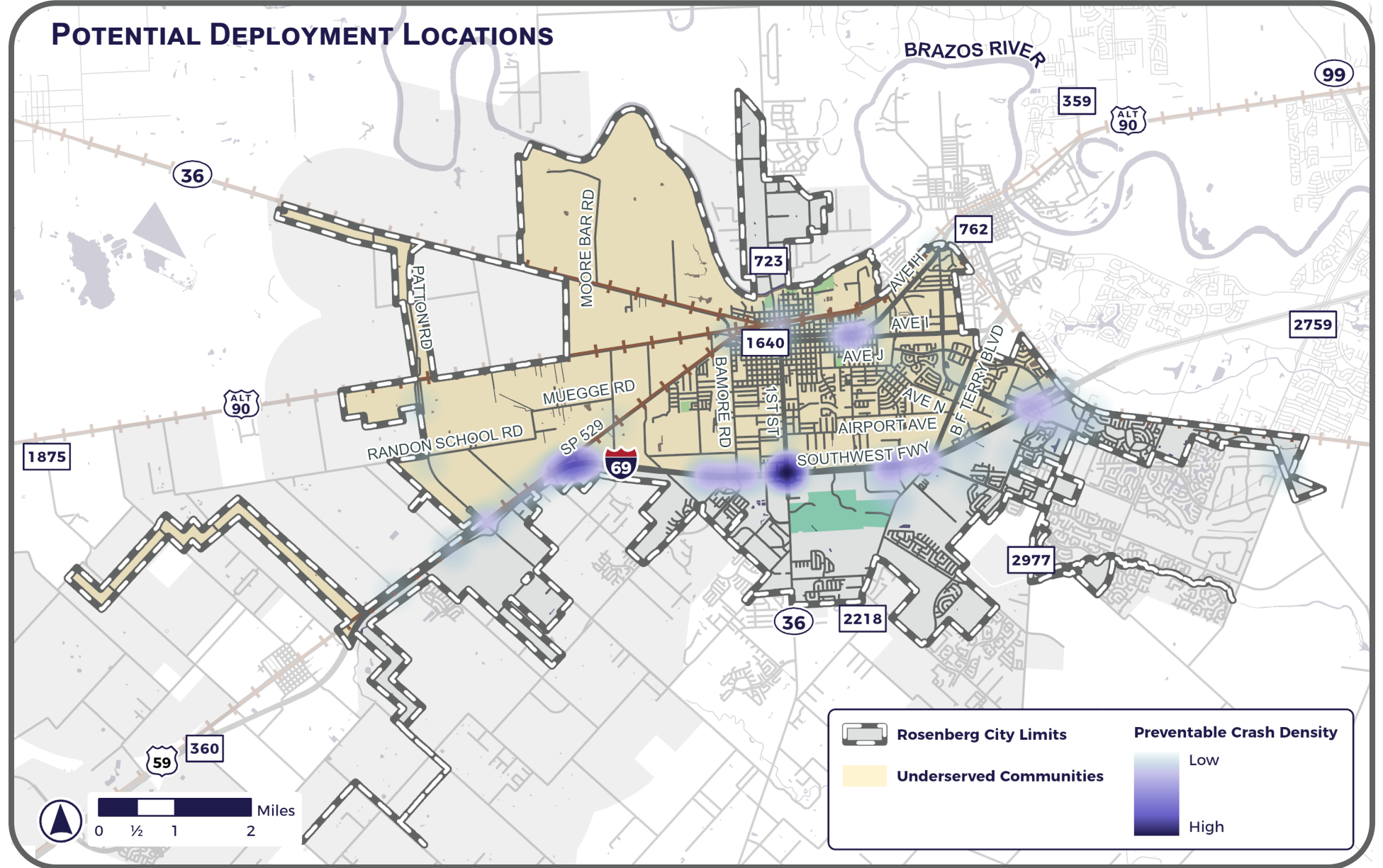
**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS**

Compared to Total Preventable Crashes



**BENEFIT COST RATIO:** -

# INSTALL LED FLASHING CHEVRONS (CURVE)



**PROJECT DESCRIPTION:**  
Install LED flashing chevrons on curve to provide guidance.

**HSIP Work Code(s):** 136

**EXPECTED CRASH REDUCTION:** 35%

**TARGET FACILITY TYPE:** Curved roadway segments with speeds  $\geq 45$  mph.

**IMPROVEMENT COST:** -

**EMPHASIS AREA:** ROADWAY & LANE DEPARTURE

**COUNTERMEASURE PREVENTABLE CRASHES:**  
Crashes involving roadway departure, rear end, and head on crashes occurring on curved roadway segments

- 112 Total
- 1 Fatal Injury
- 6 Serious Injury

**\$31.3 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

**POTENTIAL DEPLOYMENT LOCATIONS:**

# RESURFACING



**PROJECT DESCRIPTION:**

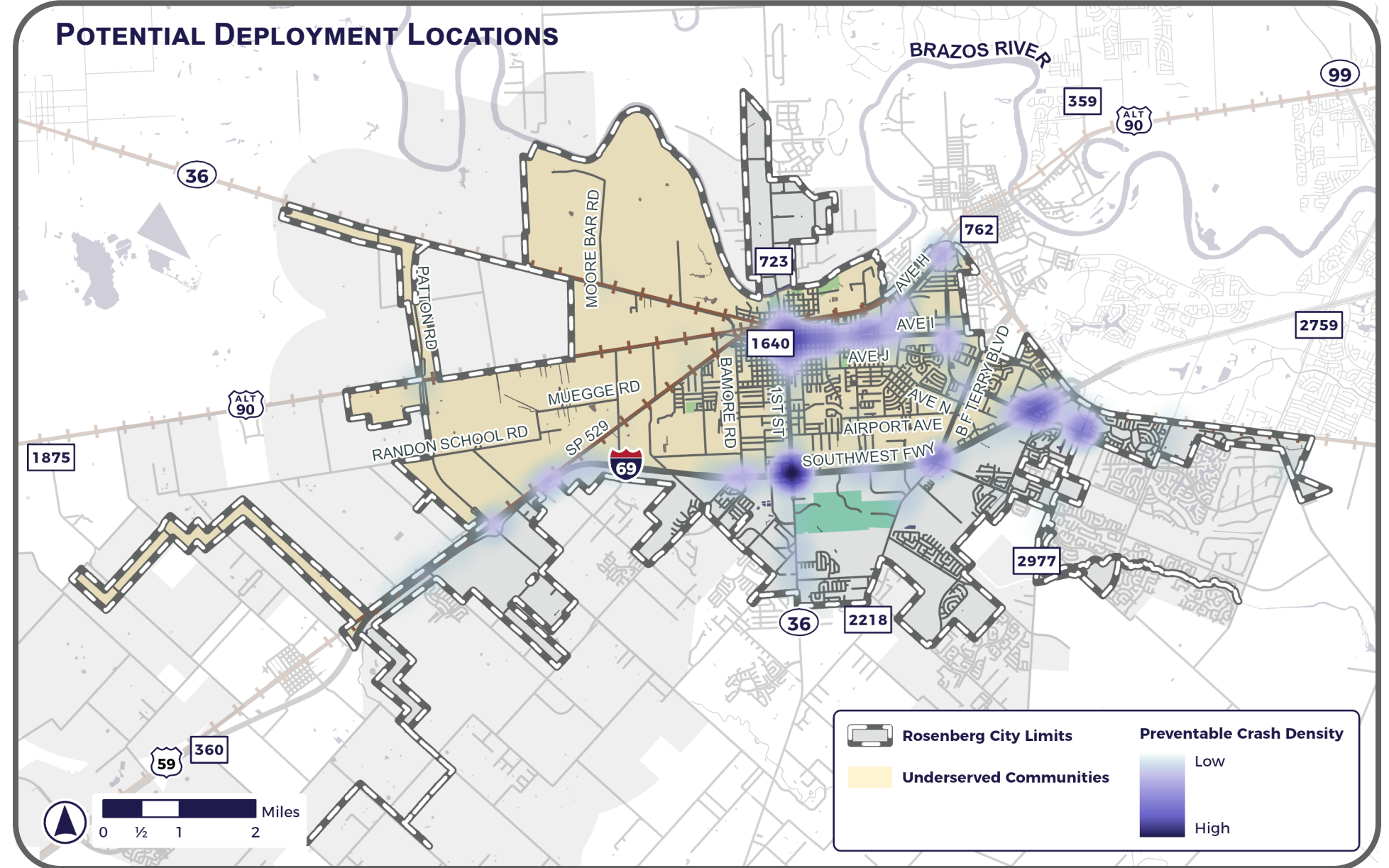
Provide a new roadway surface to increase pavement friction.

**HSIP Work Code(s):** 303

**EXPECTED CRASH REDUCTION:** 30%

**TARGET FACILITY TYPE:** Locations with a high number of surface condition related crashes.

**IMPROVEMENT COST:** -



**EMPHASIS AREA:** WET OR ICY SURFACE CONDITIONS

**COUNTERMEASURE PREVENTABLE CRASHES:**

Crashes occurring where the surface condition was noted as wet, slush, ice, or snow

- 525 Total
- 1 Fatal Injury
- 9 Serious Injury

**\$74.6 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

**POTENTIAL DEPLOYMENT LOCATIONS:**

# SAFETY LIGHTING



**PROJECT DESCRIPTION:**

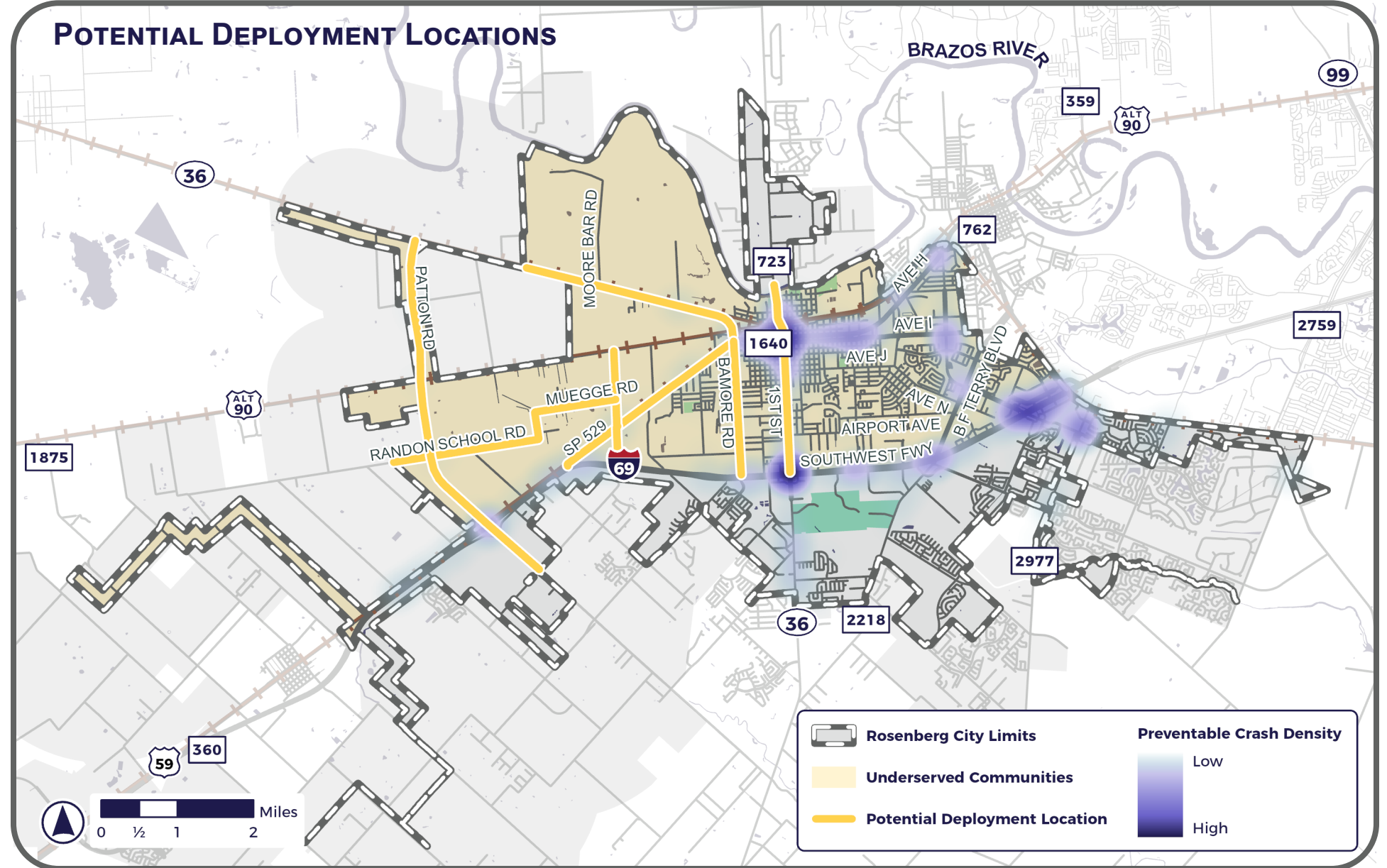
Install roadway lighting

**HSIP Work Code(s):** 304

**EXPECTED CRASH REDUCTION:** 49%

**TARGET FACILITY TYPE:** Locations with a high number of dark lighting condition related crashes.

**IMPROVEMENT COST:** -



**EMPHASIS AREA:** DARK OR UNDERLIT CONDITIONS

**COUNTERMEASURE PREVENTABLE CRASHES:**

Crashes occurring in dark or underlit conditions

- 935 Total
- 9 Fatal Injury
- 49 Serious Injury

**\$278.7 M COUNTERMEASURE PREVENTABLE TOTAL CRASH COST**

**POTENTIAL DEPLOYMENT LOCATIONS:**

**SCOPE:** 16 Miles

**TOTAL IMPROVEMENT COST:** -

**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS:**

**FATAL & SERIOUS INJURY CRASHES:** 5

**TOTAL CRASH COST:** \$50.7 M

**EXPECTED TOTAL BENEFIT:** \$24.8 M

**BENEFIT COST RATIO:** -

% of Identified Locations within Underserved Communities

95%

**PREVENTABLE CRASHES AT IDENTIFIED LOCATIONS**

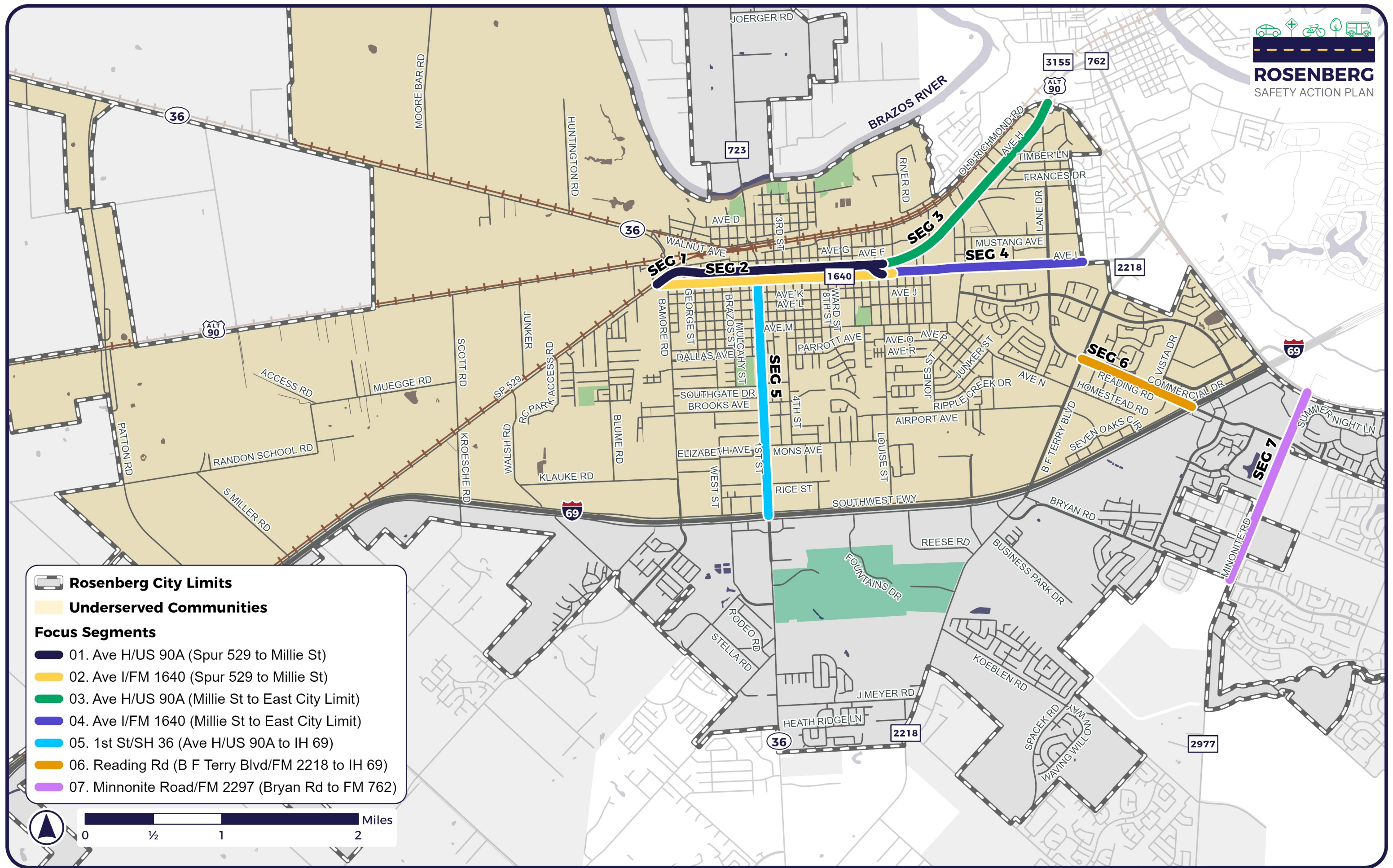
Compared to Total Preventable Crashes

Fatal & Serious Injury

18%

Total Crash Cost

12%

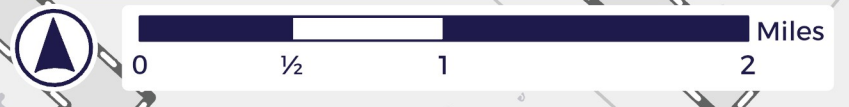


 **Rosenberg City Limits**










 **Underserved Communities**



**Focus Segments**

-  01. Ave H/US 90A (Spur 529 to Millie St)
-  02. Ave I/FM 1640 (Spur 529 to Millie St)
-  03. Ave H/US 90A (Millie St to East City Limit)
-  04. Ave I/FM 1640 (Millie St to East City Limit)
-  05. 1st St/SH 36 (Ave H/US 90A to IH 69)
-  06. Reading Rd (B F Terry Blvd/FM 2218 to IH 69)
-  07. Minnonite Road/FM 2297 (Bryan Rd to FM 762)



# CRASH COST BY EMPHASIS AREA





















Emphasis Area	Study Area <sup>1</sup>	01. Ave H (US 90A) & 02. Ave I (FM 1640) (Spur 529 to Millie St)	03. Ave H (US 90A) (Millie St to Eastern City Limit)	04. Ave I (FM 1640) (Millie St to Eastern City Limit)	05. 1st St (SH 36) (Ave H (US 90A) to IH 69)	06. Reading Rd (B F Terry Blvd (FM 2218) to IH 69)	07. Minnonite Rd (FM 2297) (Bryan Rd to FM 762)
<b>Infrastructure Emphasis</b>							
 Vulnerable Road User	8%	1.1%	10%	3%	21%	1.5%	0.0%
 Intersection Safety	39%	77%	38%	68%	70%	46%	65%
 Roadway & Lane Departure	30%	26%	32%	11%	7%	14%	5%
 Dark or Underlit Conditions	42%	36%	48%	30%	38%	19%	42%
 Wet or Icy Surface Conditions	11%	20%	6%	17%	6%	8%	13%
<b>Behavioral Emphasis</b>							
 Speed Related	28%	20%	10%	20%	31%	28%	40%
 Distracted Driving	10%	14%	13%	15%	11%	17%	7%
 Impaired Driving	8%	4%	5%	12%	2%	2%	3%
 Occupant Protection	20%	21%	28%	4%	1.4%	7%	11%
<b>65+</b> Older Drivers	15%	17%	10%	25%	29%	20%	15%
<b>&lt; 20</b> Younger Drivers	22%	14%	17%	25%	32%	14%	26%


 Indicates emphasis areas slightly overrepresented (>1.5x) compared to City Limits + Focus Areas  
 Indicates emphasis areas overrepresented (>2x) compared to City Limits + Focus Areas


<sup>1</sup>Study Area defined as City of Rosenberg + 250' from Focus Areas

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

# CRASH COST BY CRASH TYPE

Emphasis Area	Study Area <sup>1</sup>	01. Ave H (US 90A) & 02. Ave I (FM 1640) (Spur 529 to Millie St)	03. Ave H (US 90A) (Millie St to Eastern City Limit)	04. Ave I (FM 1640) (Millie St to Eastern City Limit)	05. 1st St (SH 36) (Ave H (US 90A) to IH 69)	06. Reading Rd (B F Terry Blvd (FM 2218) to IH 69)	07. Minnonite Rd (FM 2297) (Bryan Rd to FM 762)
<b>Two Motor Vehicles in Transport</b>	<b>60%</b>	<b>72%</b>	<b>59%</b>	<b>86%</b>	<b>72%</b>	<b>82%</b>	<b>98%</b>
 Right Angle	14%	28%	12%	28%	8%	10%	21%
 Angle	0.6%	0.3%	0.4%	3%	0.3%	2%	0.2%
 Opposite Direction	0.4%	0.1%	0.2%	2%	0.5%	3%	0.1%
 Head-On	6%	0.0%	0.3%	1.3%	0.9%	0.1%	14%
 Left Turn, Opposing	6%	0.5%	21%	20%	10%	9%	12%
 Left-Turn, Angle	5%	0.7%	3%	11%	24%	5%	4%
 Same Direction	0.6%	1.7%	0.0%	0.0%	1.8%	0.5%	0.7%
 Rear End (Stopped)	9%	4%	7%	8%	9%	21%	26%
 Rear End (Moving)	9%	2%	4%	10%	9%	24%	15%
 Rear End (Left-Turn)	4%	20%	0.1%	0.1%	3%	1.1%	2%
 Rear End (Right-Turn)	0.7%	1.6%	0.4%	1.1%	0.9%	0.3%	0.5%
 Right-Turn, Rear End	1.2%	0.5%	1.7%	0.5%	1.1%	3%	0.5%
 Sideswipe	5%	11%	9%	1.4%	4%	3%	1.5%
<b>Other Crash Type</b>	<b>40%</b>	<b>28%</b>	<b>41%</b>	<b>14%</b>	<b>28%</b>	<b>18%</b>	<b>1.9%</b>
 Pedestrian	5%	0.9%	4%	1.3%	20%	1.5%	0.0%
 Bicycle	4%	0.3%	5%	1.9%	0.7%	0.0%	0.0%
 Fixed Object	28%	24%	30%	11%	7%	9%	0.4%
 Parked Car	0.8%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%
 Overturned	1.3%	3%	0.3%	0.0%	0.0%	7%	1.5%
 Single Vehicle	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
 Other	1.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%

 Indicates emphasis areas slightly overrepresented (>1.5x) compared to City Limits + Focus Areas

 Indicates emphasis areas overrepresented (>2x) compared to City Limits + Focus Areas

<sup>1</sup>Study Area defined as City of Rosenberg + 250' from Focus Areas

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

# 1/2. AVE H (US 90A) & AVE I (FM 1640)

SPUR 529 TO MILLIE ST

**ON HIN IN UNDERSERVED COMMUNITY**

**1.9 MILE-LONG SEGMENT**

**ON-SYSTEM MINOR ARTERIAL 4-LANE, ONE-WAY PAIR ROADWAY**

**12,500 VEH PER DAY 35 MPH**

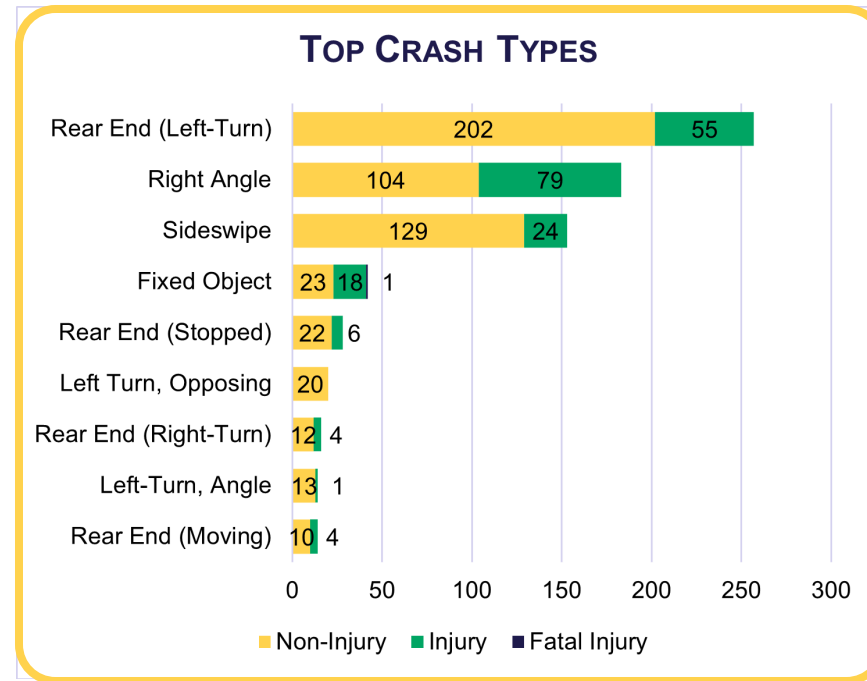
**1,850.2 CRASHES PER HUNDRED MILLION VEHICLE MILES TRAVELED**

**771 TOTAL CRASHES**  
**1 FATAL CRASHES**  
**13 SEVERE INJURY CRASHES**  
**18,267 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**2 PEDESTRIAN INVOLVED CRASHES**  
**1 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

Emphasis Area	% of Crash Cost	
	Study Area	Corridor
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	1.1%
Intersection Safety	39%	77%
Roadway & Lane Departure	30%	26%
Dark or Underlit Conditions	42%	36%
Wet or Icy Surface Conditions	11%	20%
<b>Behavioral Emphasis</b>		
Speed Related	28%	20%
Distracted Driving	10%	14%
Impaired Driving	8%	4%
Occupant Protection	20%	21%
Older Drivers	15%	17%
Younger Drivers	22%	14%



## IMPROVEMENTS



**OTHER**  
Complete Street Improvements. See livable centers study.



**RUMBLE STRIPS**  
Transverse @ EB Off Ramp

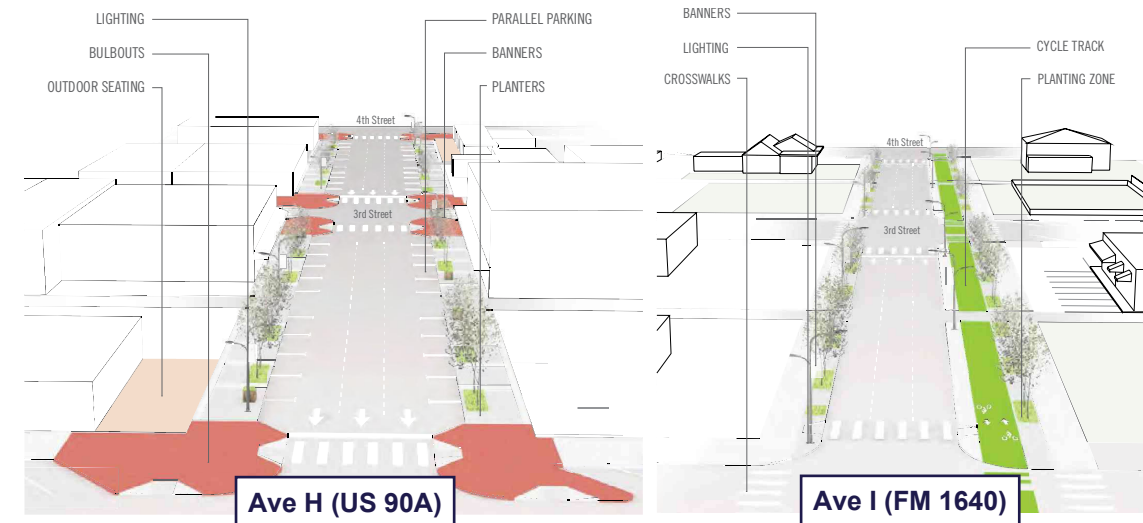


**CONSTRUCT TURN LANE**  
NBL & SBL @ 1st St

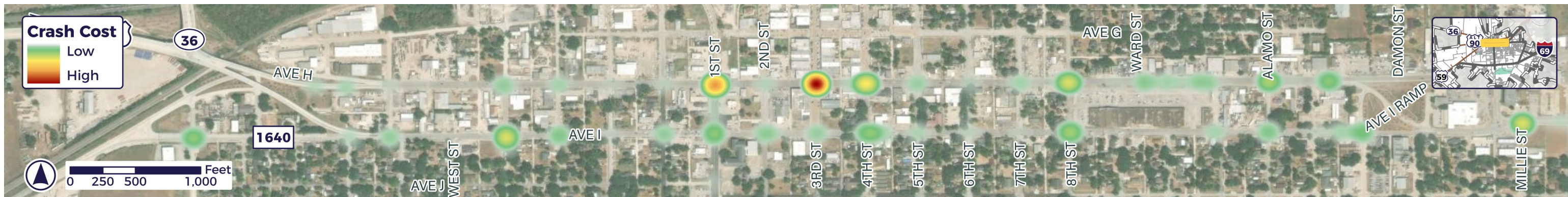


**PAVEMENT MARKINGS**  
Paint highway assignments on pavement @ diverge along Ave I.

### Complete Street Concepts from Livable Centers Study



**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



# 1 Safety improvements and beautification on Avenue H and Avenue I in Greater Downtown

**DESIGNATE CHAMPION OR IMPLEMENTING AGENCY**

**DEPARTMENT: MAIN STREET PROGRAM**

**PERSON: MAIN STREET MANAGER**

**IDENTIFY MOST LIKELY FUNDING SOURCES**

GENERAL FUND BUDGET

CIP

**DEVELOPMENT CORPORATION**

**HOTEL OCCUPANCY TAX**

**TRANSPORTATION FUNDING**

**SPECIAL DISTRICT FINANCING/**

**PUBLIC PRIVATE PARTNERSHIPS**

ECONOMIC DEVELOPMENT INCENTIVES

GRANTS

CORPORATE, PHILANTHROPIC SPONSORS

**DETERMINE REGULATIONS AND STANDARDS SUPPORT**

SUBDIVISION ORDINANCE

LANDSCAPE ORDINANCE

SIGN ORDINANCE

THOROUGHFARE PLAN

PARKS AND REC PLAN

BUILDING CODE

**OTHER: DESIGN STANDARDS TO ELICIT PRIVATE SECTOR RESPONSE**

**IDENTIFY POLICIES, PROGRAMS, OR INITIATIVES TO SUPPORT PROJECT**

MAIN STREET PROGRAM

ECONOMIC DEVELOPMENT POLICY

**IDENTIFY PARTNERSHIPS AND COORDINATION ISSUES**

PRIVATE SECTOR PARTNERS/DEVELOPERS/INVESTORS

PROJECTS THAT CONTRIBUTE ECONOMY OF SCALE

**DETERMINE COORDINATION NEEDED**

TX-DOT

FORT BEND COUNTY

**JUMP START ACTION STEPS**

1 REVIEW AND COORDINATE WITH EXISTING PLANS

2 SEEK FUNDING FOR PRELIMINARY DESIGN

Avenues H and I in the vicinity of downtown are four-lane roadways with two lanes for each eastbound and westbound traffic. An upcoming project proposed by TxDOT, calls for the roads to be converted into a one-way pair, making all four lanes of Avenue H flow to the west and all lanes of Avenue I to flow to the east. The conversion can be accomplished without any significant modifications to the roadway; only re-stripping the existing pavement is necessary, though some geometric improvements would be beneficial to the improvements.

Current and foreseeable demands indicate that traffic operations would be acceptable or better with three lanes on each roadway. A reduced cross-section would also make some of the transitions to one-way traffic at each and easier to address. Reallocating space from a lane of vehicular traffic and allotting some of the current rights-of-way for additional pedestrian improvements as well as introducing bicycle facilities and parking provides an opportunity

to better accommodate all modes of transportation and give people more choices in how they move around. There are several viable options for using the additional space creating through eliminating a lane.

A short-term design for both Avenues would add a bicycle lane and buffer region on the right side of the road. Additionally, completing sidewalks on both sides of the road would greatly improve accessibility to the downtown area. These improvements are practical short-term solutions because they do not require and major roadway construction.

Longer-term solutions can provide higher quality pedestrian and bicycle facilities, additional parking adjacent to downtown retail and improve safety, however they mandate some more significant alterations to the roadway.

Avenue H has a parking lane on both sides of the street, providing downtown additional parking spaces. Avenue I provides a two-way physically separated bike path on the south side of the roadway. Each road has space for a sidewalk on both sides of the street and with all pedestrian and cyclist crossings clearly marked. Bulb-outs at intersections shorten the pedestrian crossing distances and make the pedestrian crossings safer. Upgraded sidewalk paving and landscaping enhance the pedestrian experience and the surrounding areas.



Pedestrian safety can be improved with the introduction of bulb-outs, which can help shorten pedestrian crossing distance, while also making them more visible.



Added parking lanes near downtown would help alleviate parking shortages.



Two parking lanes would utilize right-of-way to create additional parking for downtown.



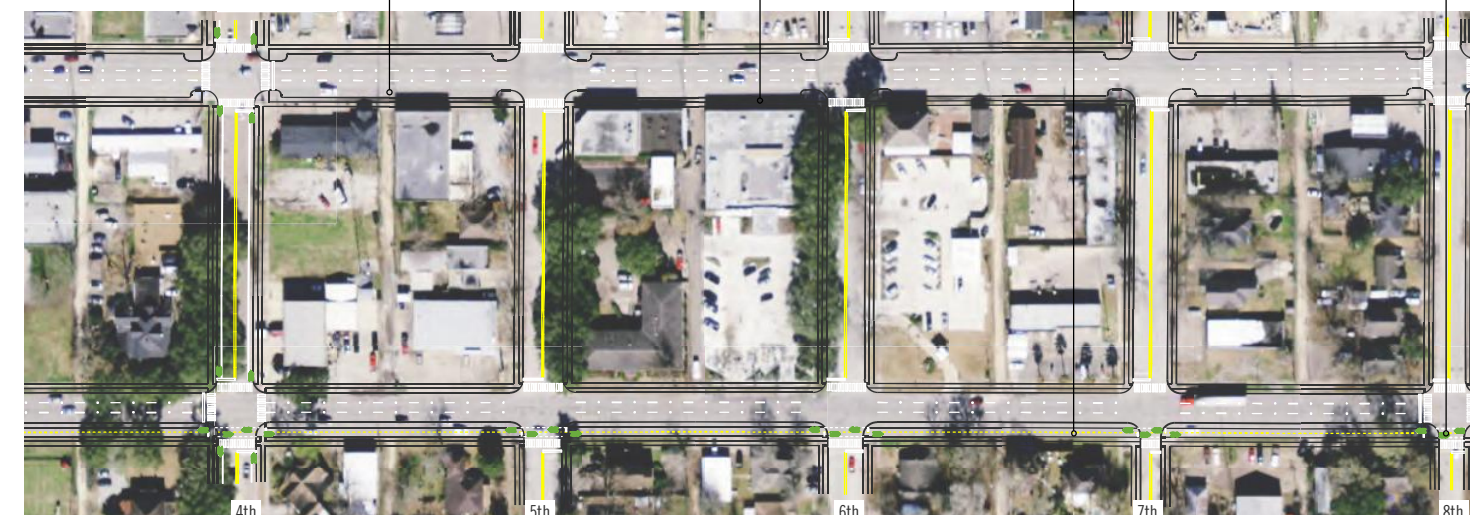
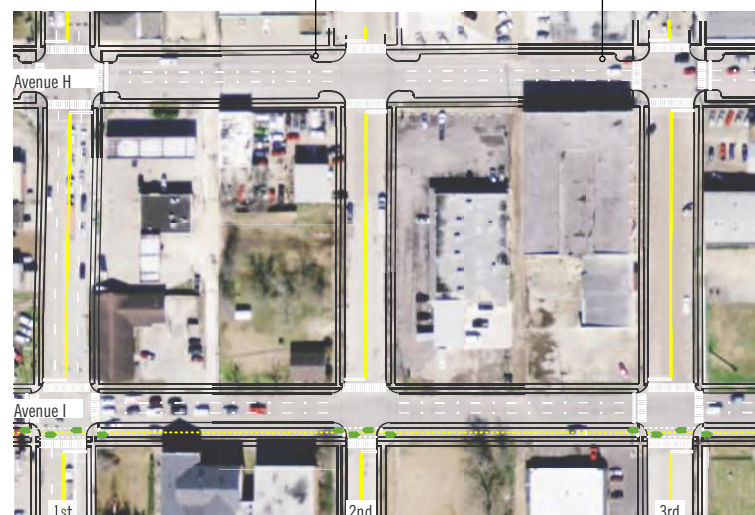
Sidewalks along both sides of all streets provides pedestrians safer and routes to more destinations.



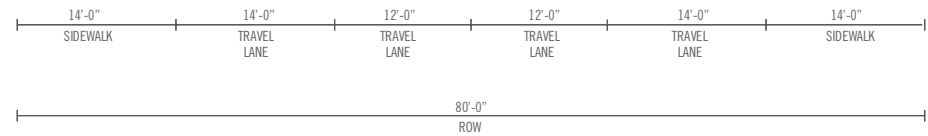
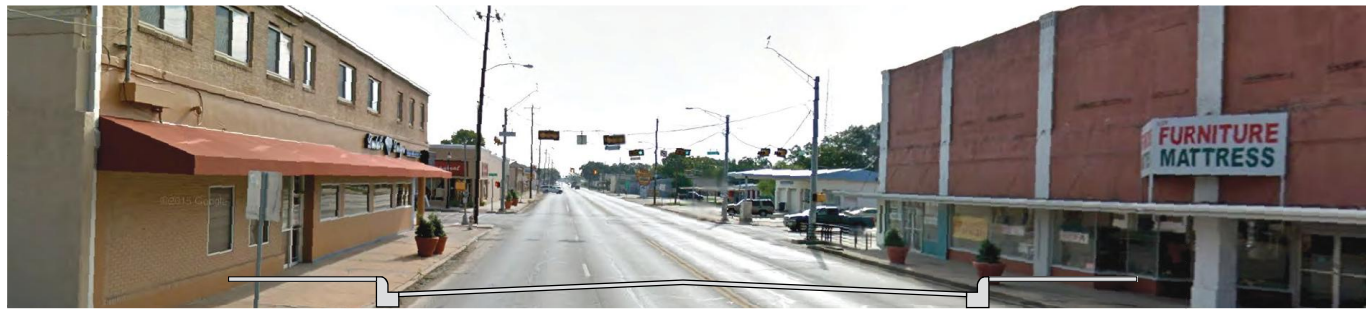
A two-way, physically separated bike path would provide cyclists a safe and comfortable riding option.



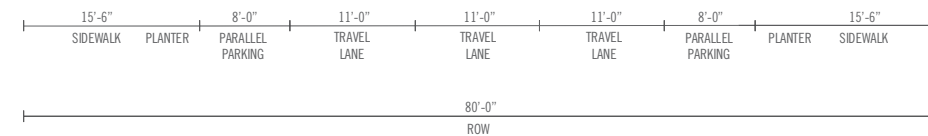
Intersection markings can increase driver awareness of bicycle facilities.



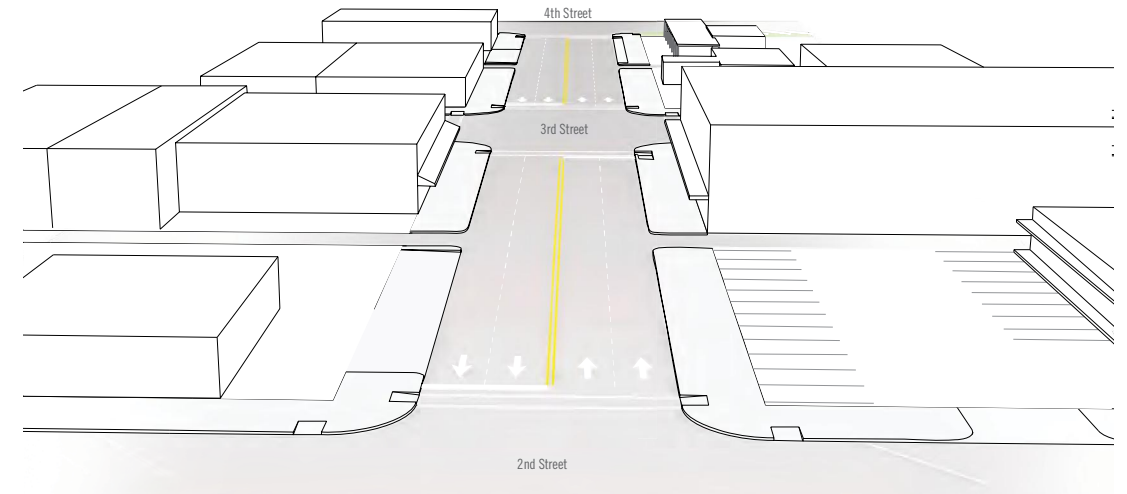
Implementation Framework Checklist  
Highlights indicate what applies to each specific recommendation



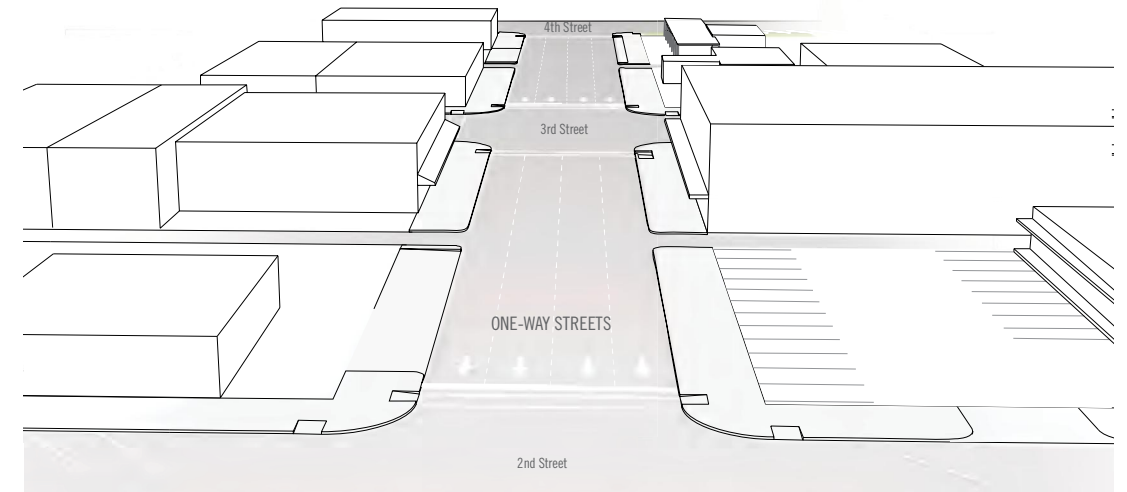
Existing Section on Avenue H @ 3rd St  
Looking East



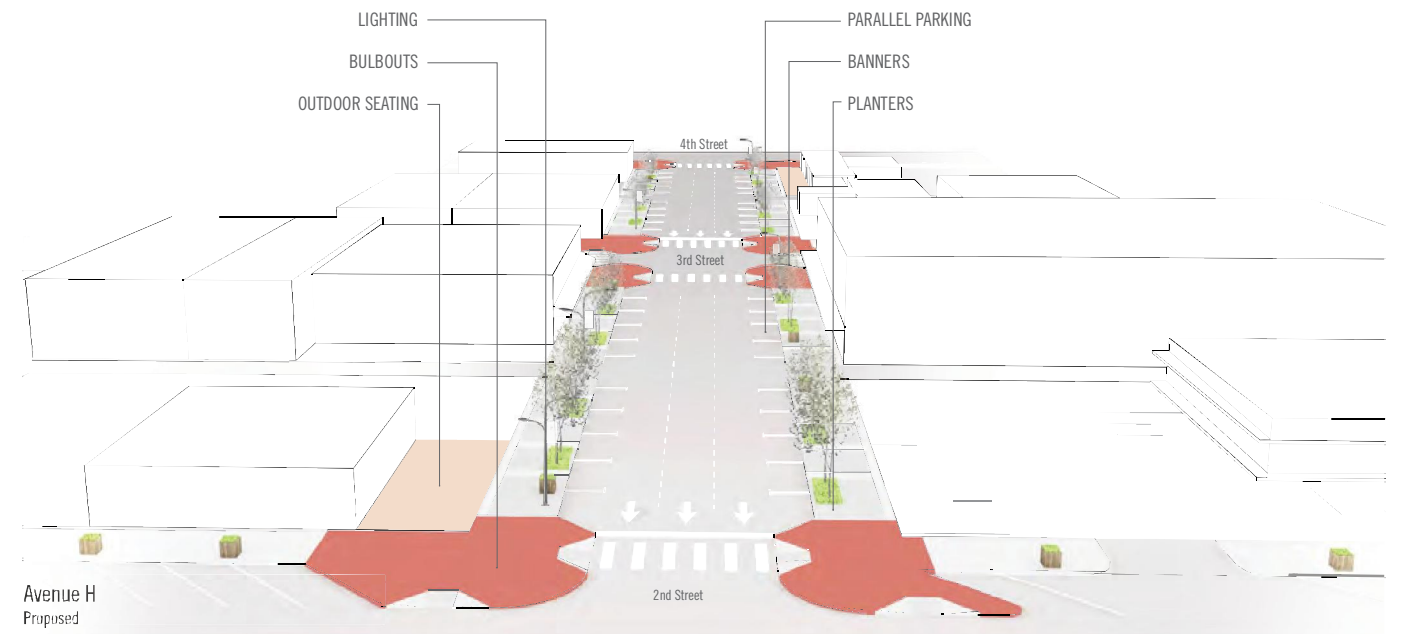
Proposed Section on Avenue H @ 3rd St  
Looking East



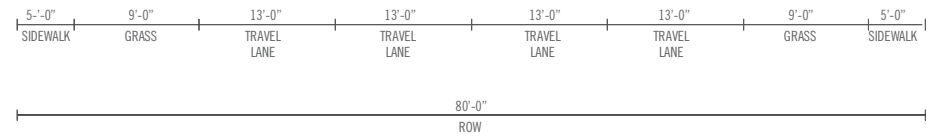
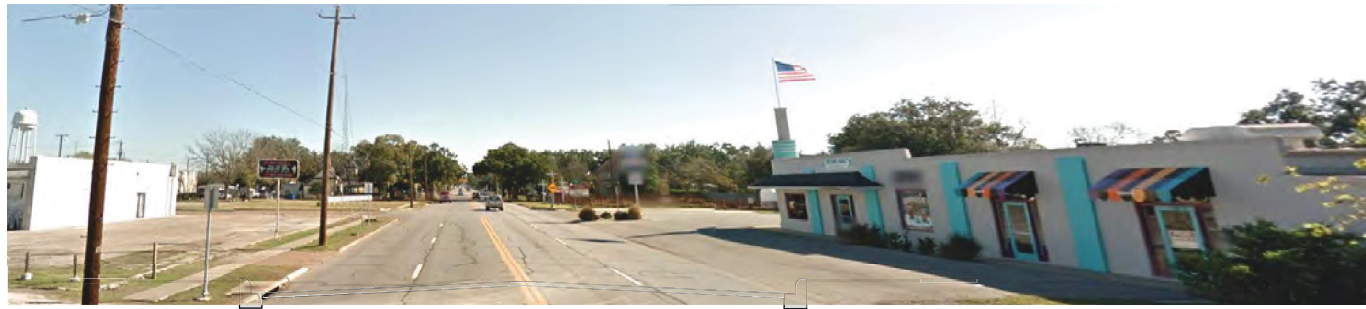
Avenue H  
Existing



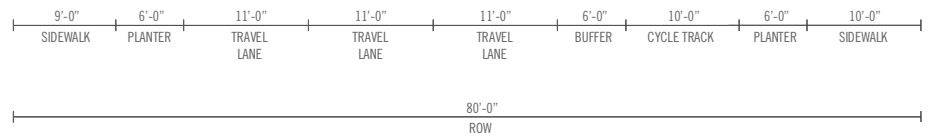
Avenue H  
TxDOT Plan



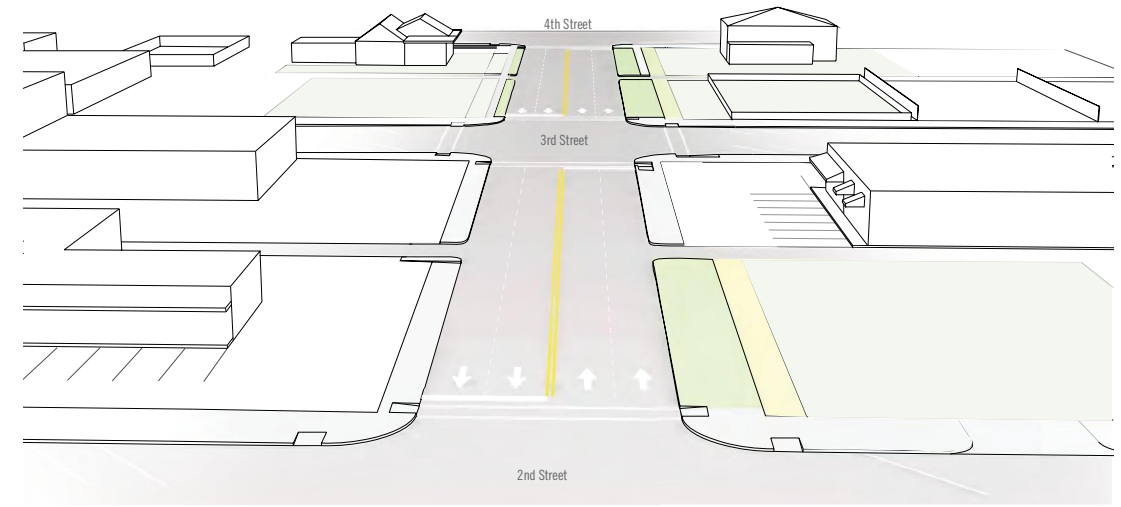
Avenue H  
Proposed



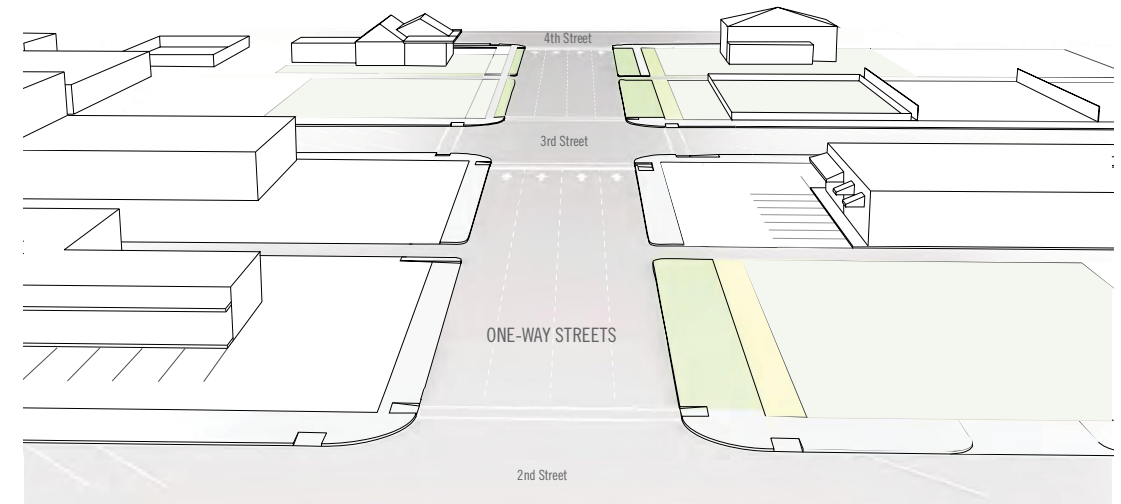
Existing Section on Avenue I @ 3rd St  
Looking East



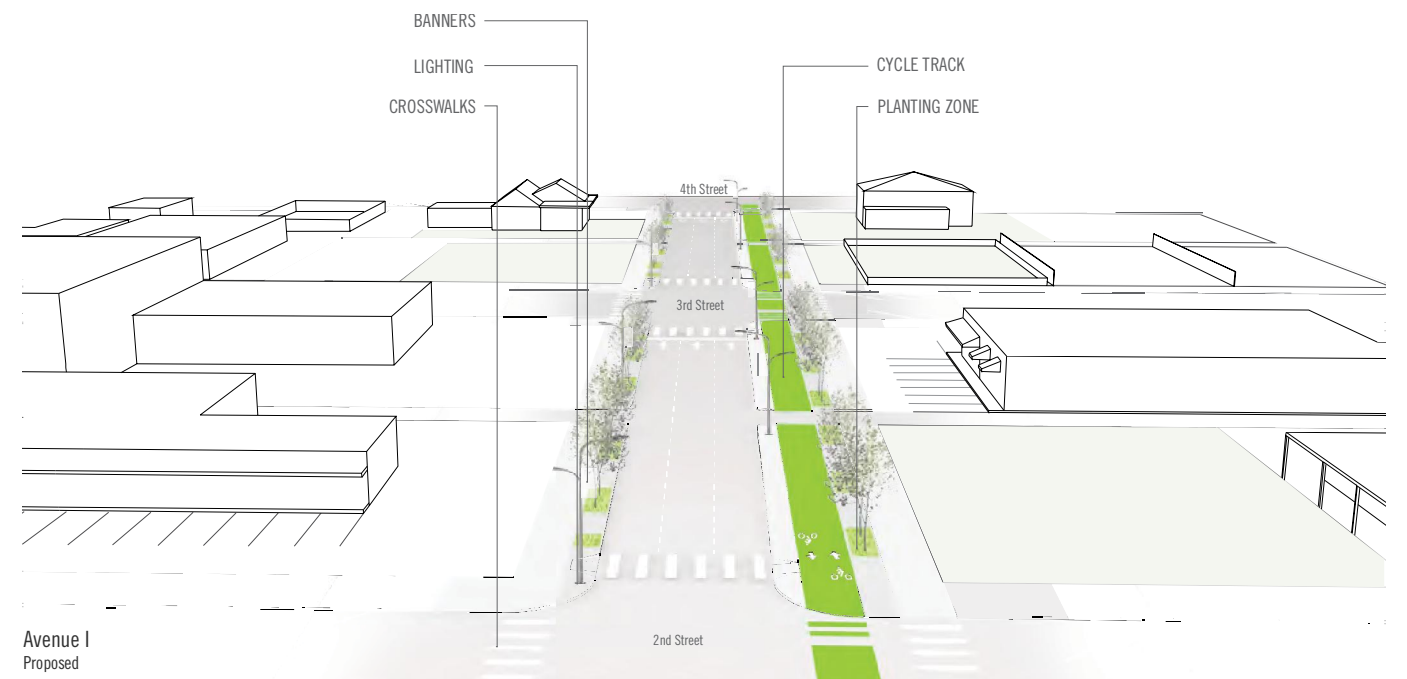
Proposed Section on Avenue I @ 3rd St  
Looking East



Avenue I  
Existing



Avenue I  
TxDOT Plan



Avenue I  
Proposed

# 3. AVENUE H (US 90A)

MILLIE ST TO EASTERN CITY LIMITS

**ON HIN IN UNDERSERVED COMMUNITY**

**1.7 MILE-LONG SEGMENT**

**ON-SYSTEM INTERSTATE 4-LANE, CENTER TWLTL ROADWAY**

**20,000 VEH PER DAY  
40 MPH**

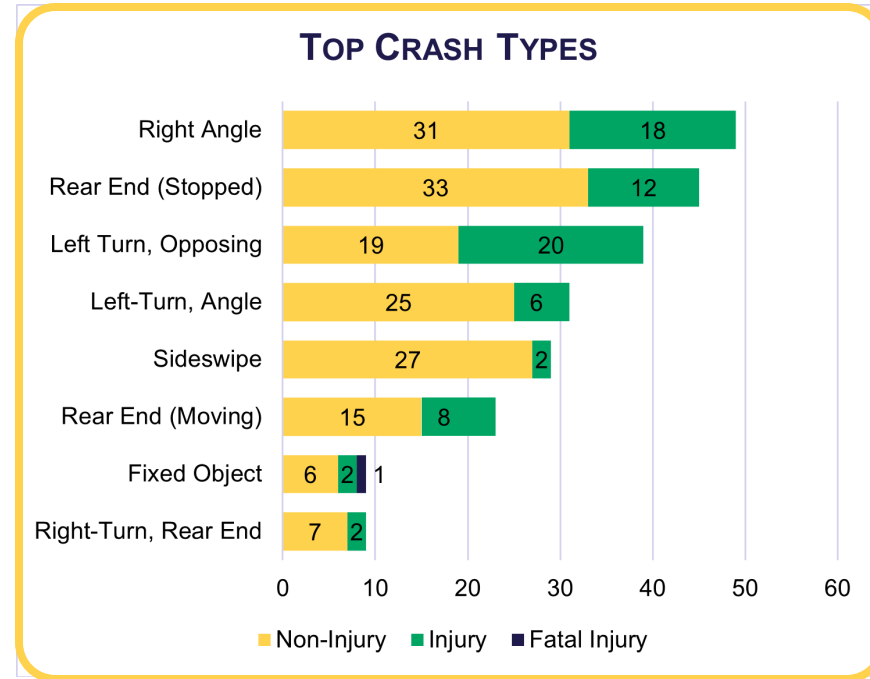
**432.9 CRASHES PER HUNDRED MILLION VEHICLE MILES TRAVELED**

**270 TOTAL CRASHES**  
1 FATAL CRASHES  
4 SEVERE INJURY CRASHES  
**8,797 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**4 PEDESTRIAN INVOLVED CRASHES**  
**5 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

Emphasis Area	% of Crash Cost	
	Study Area	Corridor
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	10%
Intersection Safety	39%	38%
Roadway & Lane Departure	30%	32%
Dark or Underlit Conditions	42%	48%
Wet or Icy Surface Conditions	11%	6%
<b>Behavioral Emphasis</b>		
Speed Related	28%	10%
Distracted Driving	10%	13%
Impaired Driving	8%	5%
Occupant Protection	20%	28%
Older Drivers	15%	10%
Younger Drivers	22%	17%



## IMPROVEMENTS



**TRAFFIC SIGNAL IMPROVEMENTS**  
Convert to mast arm mounted signal



**BACKPLATES WITH RETROREFLECTIVE BORDERS**



**SAFETY LIGHTING**



**PEDESTRIAN CROSSWALK**  
Replace standard crosswalk with continental crosswalks



**PEDESTRIAN SIGNAL**  
Install pedestrian push buttons (APS)



**VERIFY YELLOW CHANGE INTERVALS**



**ACCESS MANAGEMENT**  
Install Raised Median. Referenced in livable centers study.



**SIDEWALKS**  
Install Sidewalks/SUP to address pedestrian crashes.



**PEDESTRIAN CROSSING ISLANDS**  
At key crossing locations.



**INSTALL RRFB**  
At key crossing locations.

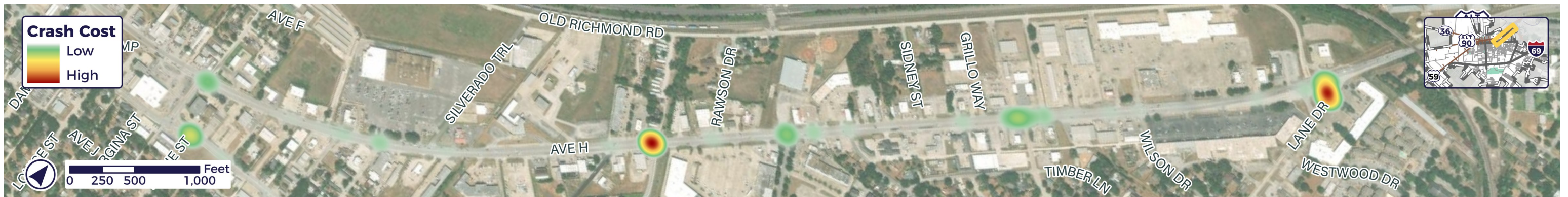


**CONSTRUCT TURN LANE**  
EBL @ Jannetta



**TRAFFIC SIGNAL IMPROVEMENTS**  
@ Janetta

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



# 4. AVENUE I (FM 1640)

MILLIE ST TO EASTERN CITY LIMITS

**ON HIN IN UNDERSERVED COMMUNITY**

**1.4 MILE-LONG SEGMENT**

**ON-SYSTEM MINOR ARTERIAL 4-LANE, CENTER TWLTL ROADWAY**

**12,500 VEH PER DAY 35-45 MPH**

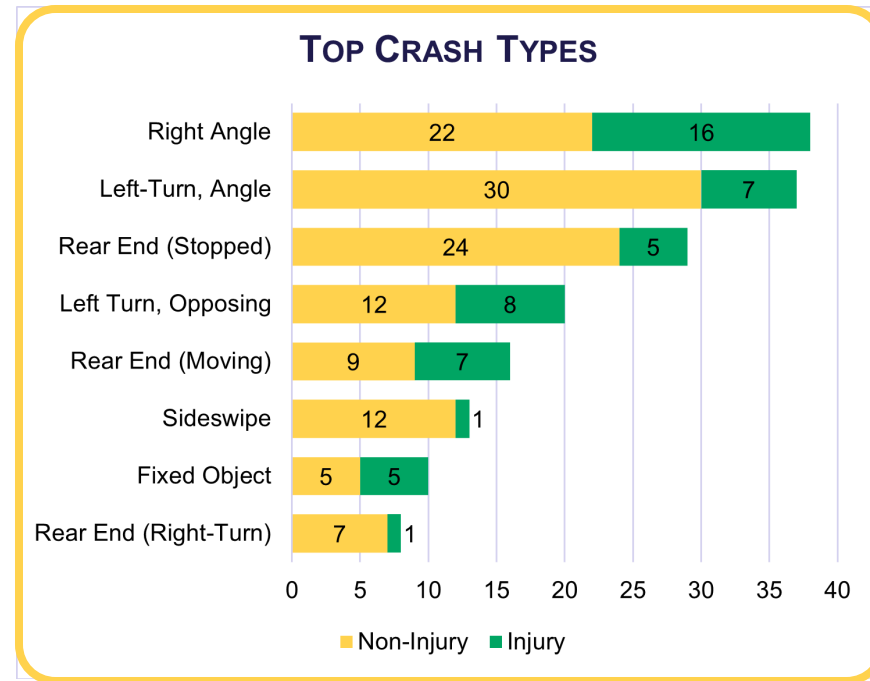
**624.2 CRASHES PER HUNDRED MILLION VEHICLE MILES TRAVELED**

**193 TOTAL CRASHES**  
0 FATAL CRASHES  
1 SEVERE INJURY CRASHES  
**3,817 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**1 PEDESTRIAN INVOLVED CRASHES**  
**2 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

Emphasis Area	% of Crash Cost	
	Study Area	Corridor
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	3%
Intersection Safety	39%	68%
Roadway & Lane Departure	30%	11%
Dark or Underlit Conditions	42%	30%
Wet or Icy Surface Conditions	11%	17%
<b>Behavioral Emphasis</b>		
Speed Related	28%	20%
Distracted Driving	10%	15%
Impaired Driving	8%	12%
Occupant Protection	20%	4%
Older Drivers	15%	25%
Younger Drivers	22%	25%



## IMPROVEMENTS



**TRAFFIC SIGNAL IMPROVEMENTS**  
Convert to mast arm mounted signal



**BACKPLATES WITH RETROREFLECTIVE BORDERS**



**SAFETY LIGHTING**



**PEDESTRIAN CROSSWALK**  
Replace standard crosswalk with continental crosswalks



**PEDESTRIAN SIGNAL**  
Install pedestrian push buttons (APS)



**VERIFY YELLOW CHANGE INTERVALS**



**ACCESS MANAGEMENT**  
Remove EBL @ Millie.  
Install Raised Median @ Select Locations (Ex: Old Radio Ln)



**SIDEWALKS**  
Install Sidewalks/SUP to address bicycle & pedestrian crashes.

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



# 5. 1ST ST (SH 36)

AVENUE H (US 90A) To IH 69

**ON HIN IN UNDERSERVED COMMUNITY**

**1.8 MILE-LONG SEGMENT**

**ON-SYSTEM INTERSTATE 4-LANE, CENTER TWLTL ROADWAY**

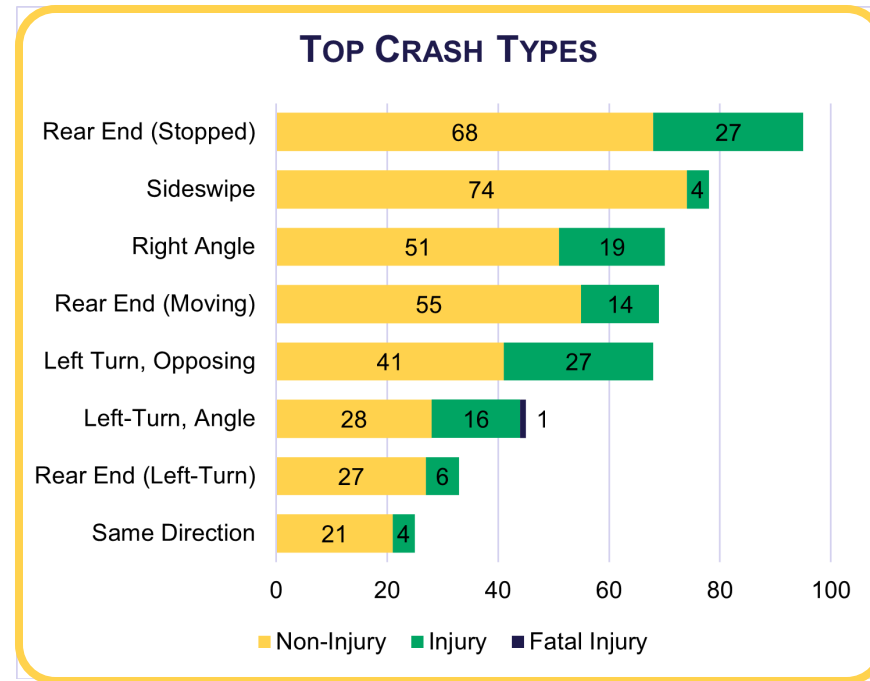
**20,000 VEH PER DAY 35-45 MPH**

**869.4 CRASHES PER HUNDRED MILLION VEHICLE MILES TRAVELED**

**559 TOTAL CRASHES**  
 2 FATAL CRASHES  
 3 SEVERE INJURY CRASHES  
**13,810 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**4 PEDESTRIAN INVOLVED CRASHES**  
**2 BICYCLE INVOLVED CRASHES**

Emphasis Area	% of Crash Cost	
	Study Area	Corridor
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	21%
Intersection Safety	39%	70%
Roadway & Lane Departure	30%	7%
Dark or Underlit Conditions	42%	38%
Wet or Icy Surface Conditions	11%	6%
<b>Behavioral Emphasis</b>		
Speed Related	28%	31%
Distracted Driving	10%	11%
Impaired Driving	8%	1.6%
Occupant Protection	20%	1.4%
Older Drivers	15%	29%
Younger Drivers	22%	32%



Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

## IMPROVEMENTS



**TRAFFIC SIGNAL IMPROVEMENTS**  
 Convert to mast arm mounted signal



**BACKPLATES WITH RETROREFLECTIVE BORDERS**



**SAFETY LIGHTING**



**PEDESTRIAN CROSSWALK**  
 Replace standard crosswalk with continental crosswalks



**PEDESTRIAN SIGNAL**  
 Install pedestrian push buttons (APS)



**VERIFY YELLOW CHANGE INTERVALS**



**ACCESS MANAGEMENT**  
 Install Raised Median @ Select Locations (Ex: Main Ave)



**SIDEWALKS**  
 Install Sidewalks/SUP to address pedestrian crashes.



**PEDESTRIAN CROSSING ISLANDS**  
 At key crossing locations.

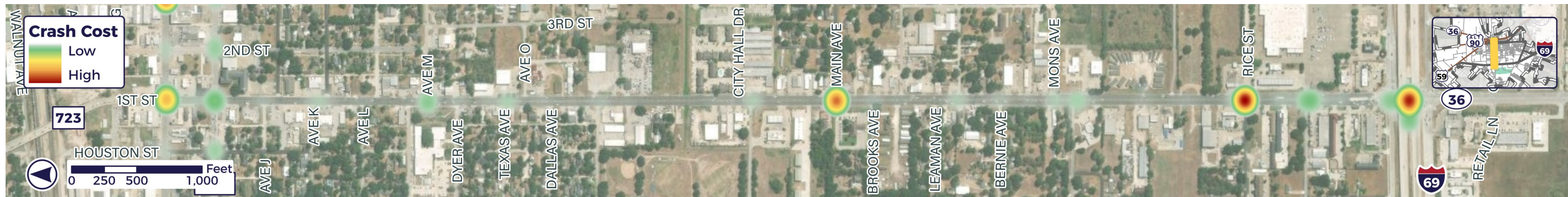


**INSTALL RRFB**  
 At key crossing locations.



**REALIGN INTERSECTION**  
 @ City Hall and Southgate Drive

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



## 6. READING RD

B F TERRY BLVD (FM 2218) TO IH 69

**ON HIN IN UNDERSERVED COMMUNITY**

**0.9 MILE-LONG SEGMENT**

**OFF-SYSTEM MINOR ARTERIAL 4-LANE, CENTER TWLTL ROADWAY**

**17,500 VEH PER DAY 35 MPH**

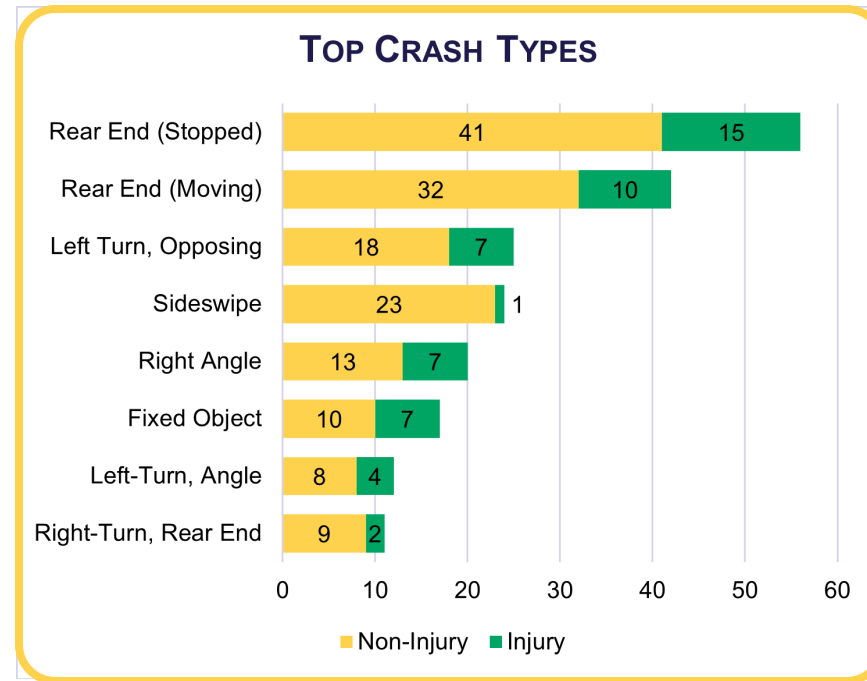
**882.5 CRASHES PER HUNDRED MILLION VEHICLE MILES TRAVELED**

**237 TOTAL CRASHES**  
0 FATAL CRASHES  
2 SEVERE INJURY CRASHES  
**4,463 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**1 PEDESTRIAN INVOLVED CRASHES**  
0 BICYCLE INVOLVED CRASHES

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

Emphasis Area	% of Crash Cost	
	Study Area	Corridor
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	1.5%
Intersection Safety	39%	46%
Roadway & Lane Departure	30%	14%
Dark or Underlit Conditions	42%	19%
Wet or Icy Surface Conditions	11%	8%
<b>Behavioral Emphasis</b>		
Speed Related	28%	28%
Distracted Driving	10%	17%
Impaired Driving	8%	1.7%
Occupant Protection	20%	7%
Older Drivers	15%	20%
Younger Drivers	22%	14%



### IMPROVEMENTS



**BACKPLATES WITH RETROREFLECTIVE BORDERS**



**VERIFY YELLOW CHANGE INTERVALS**



**SIDEWALKS**  
Install Sidewalks/SUP.



**CONSTRUCT TURN LANE**  
WBL @ B F Terry



**SHOULDER IMPROVEMENTS**  
Construct Paved Shoulders (>= 5ft.) to address Fixed Object crashes.



**RUMBLE STRIPS**  
Milled Edgeline Rumble Strips to address Fixed Object crashes.

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



# 7. MINONITE RD (FM 2977)

BRYAN RD TO FM 762

**ON HIN IN UNDERSERVED COMMUNITY**

**1.5 MILE-LONG SEGMENT**

**ON-SYSTEM MAJOR COLLECTOR 2-LANE, UNDIVIDED ROADWAY**

**12,500 VEH PER DAY 45 MPH**

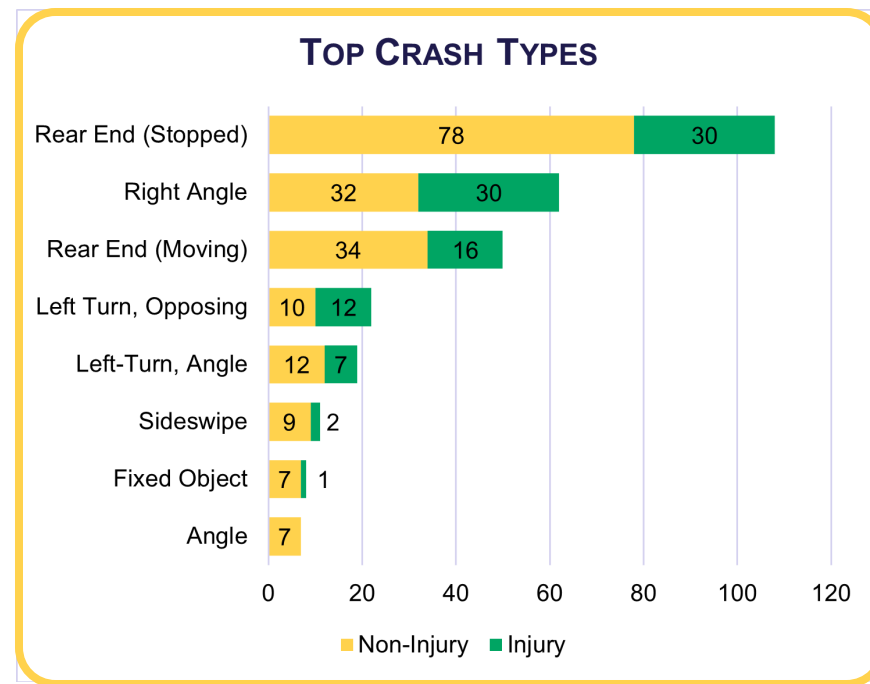
**913.7 CRASHES PER HUNDRED MILLION VEHICLE MILES TRAVELED**

**318 TOTAL CRASHES**  
0 FATAL CRASHES  
4 SEVERE INJURY CRASHES  
**7,901 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**0 PEDESTRIAN INVOLVED CRASHES**  
**0 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of roadway centerline.

Emphasis Area	% of Crash Cost	
	Study Area	Corridor
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	0.0%
Intersection Safety	39%	65%
Roadway & Lane Departure	30%	5%
Dark or Underlit Conditions	42%	42%
Wet or Icy Surface Conditions	11%	13%
<b>Behavioral Emphasis</b>		
Speed Related	28%	40%
Distracted Driving	10%	7%
Impaired Driving	8%	3%
Occupant Protection	20%	11%
Older Drivers	15%	15%
Younger Drivers	22%	26%



## IMPROVEMENTS



**BACKPLATES WITH RETROREFLECTIVE BORDERS**



**VERIFY YELLOW CHANGE INTERVALS**



**SIDEWALKS**  
Install Sidewalks/SUP.



**DYNAMIC SPEED FEEDBACK SIGNS**  
To address Speed-related crashes.



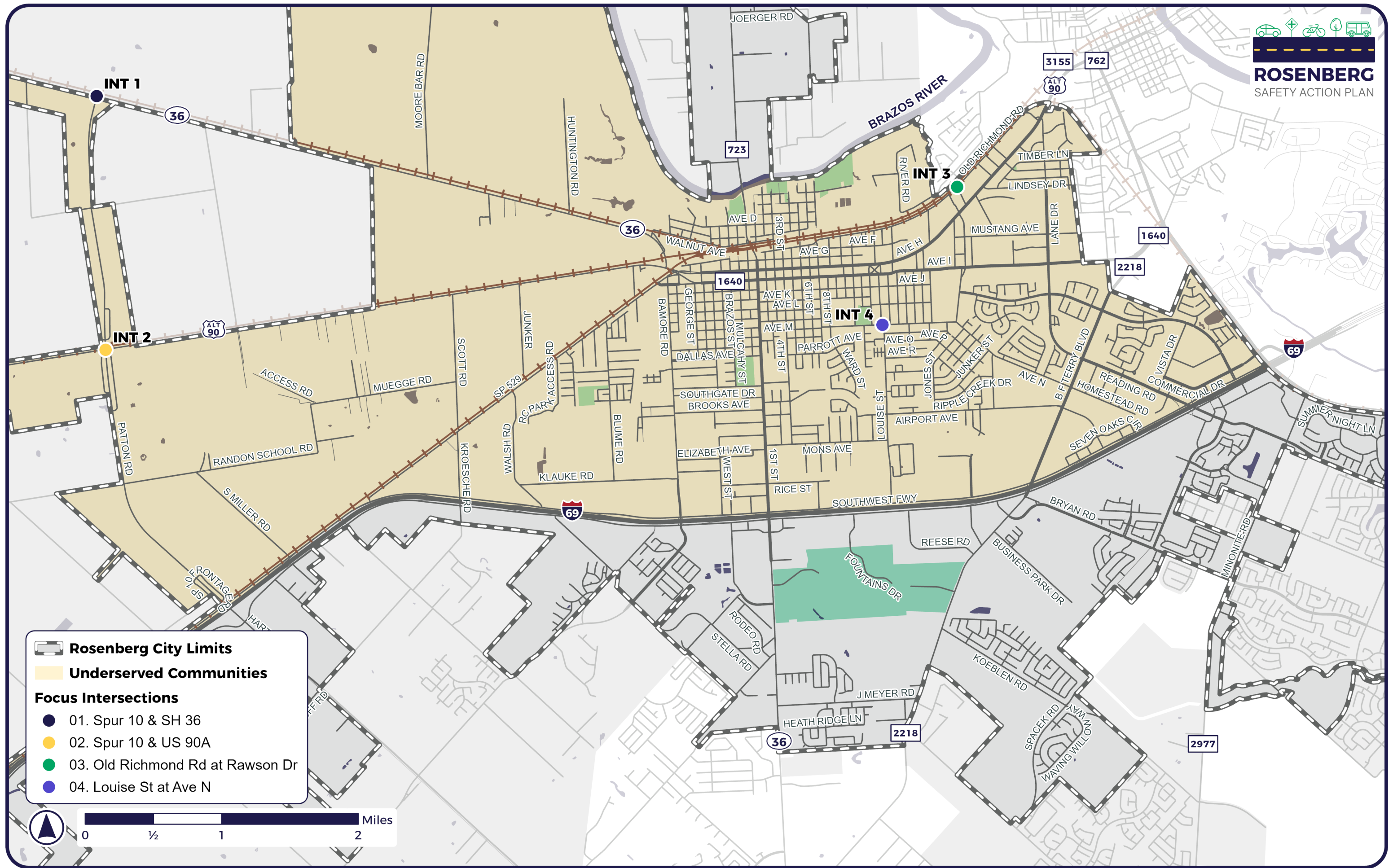
**CONSTRUCT TURN LANE**  
LT @ Meadow Ln/Rohan Rd.





**TRAFFIC SIGNAL TIMING**  
Operate protected-only LT phasing during peak hours @ Reading Rd.

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other








 **Rosenberg City Limits**










 **Underserved Communities**



**Focus Intersections**

-  01. Spur 10 & SH 36
-  02. Spur 10 & US 90A
-  03. Old Richmond Rd at Rawson Dr
-  04. Louise St at Ave N



# CRASH COST BY EMPHASIS AREA





















Emphasis Area	Study Area <sup>1</sup>	1. Spur 10 & SH 36	02. Spur 10 & US 90A	03. Old Richmond Rd & Rawson Dr	04. Louise St & Ave N
<b>Infrastructure Emphasis</b>					
 Vulnerable Road User	8%	0.0%	0.0%	0.0%	0.0%
 Intersection Safety	39%	100%	93%	41%	100%
 Roadway & Lane Departure	30%	1%	1%	0.0%	30%
 Dark or Underlit Conditions	42%	9%	7%	7%	32%
 Wet or Icy Surface Conditions	11%	1%	5%	3%	0.0%
<b>Behavioral Emphasis</b>					
 Speed Related	28%	3%	7%	46%	0.0%
 Distracted Driving	10%	0.1%	0.3%	5%	1%
 Impaired Driving	8%	0.0%	0.0%	0.0%	30%
 Occupant Protection	20%	0.0%	7%	0.0%	0.0%
<b>65+</b> Older Drivers	15%	65%	9%	23%	19%
<b>&lt; 20</b> Younger Drivers	22%	8%	0.3%	36%	2%



 Indicates emphasis areas slightly overrepresented (>1.5x) compared to City Limits + Focus Areas  
 Indicates emphasis areas overrepresented (>2x) compared to City Limits + Focus Areas

<sup>1</sup>Study Area defined as City of Rosenberg + 250' from Focus Areas

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of intersection center.

# CRASH COST BY CRASH TYPE

Emphasis Area	Study Area <sup>1</sup>	1. Spur 10 & SH 36	02. Spur 10 & US 90A	03. Old Richmond Rd & Rawson Dr	04. Louise St & Ave N
<b>Two Motor Vehicles in Transport</b>	<b>60%</b>	<b>99%</b>	<b>92%</b>	<b>81%</b>	<b>70%</b>
 Right Angle	14%	68%	70%	4%	0.0%
 Angle	0.6%	0.0%	0.0%	1.6%	0.0%
 Opposite Direction	0.4%	0.0%	0.0%	1.6%	0.0%
 Head-On	6%	0.7%	0.0%	0.0%	0.0%
 Left Turn, Opposing	6%	9%	0.0%	0.0%	1.4%
 Left-Turn, Angle	5%	18%	9%	25%	68%
 Same Direction	0.6%	1.2%	0.0%	0.0%	0.0%
 Rear End (Stopped)	9%	1.8%	0.3%	7%	0.0%
 Rear End (Moving)	9%	0.0%	7%	39%	0.0%
 Rear End (Left-Turn)	4%	0.0%	5%	0.0%	0.0%
 Rear End (Right-Turn)	0.7%	0.0%	0.0%	0.0%	0.0%
 Right-Turn, Rear End	1.2%	0.0%	0.0%	2%	0.0%
 Sideswipe	5%	0.0%	0.0%	0.0%	0.0%
<b>Other Crash Type</b>	<b>40%</b>	<b>1.1%</b>	<b>8%</b>	<b>19%</b>	<b>30%</b>
 Pedestrian	5%	0.0%	0.0%	0.0%	0.0%
 Bicycle	4%	0.0%	0.0%	0.0%	0.0%
 Fixed Object	28%	1.1%	0.8%	0.0%	30%
 Parked Car	0.8%	0.0%	0.0%	0.0%	0.0%
 Overturned	1.3%	0.0%	0.0%	0.0%	0.0%
 Single Vehicle	0.1%	0.0%	7%	19%	0.0%
 Other	1.3%	0.0%	0.0%	0.0%	0.0%

 Indicates emphasis areas slightly overrepresented (>1.5x) compared to City Limits + Focus Areas  
 Indicates emphasis areas overrepresented (>2x) compared to City Limits + Focus Areas

<sup>1</sup>Study Area defined as City of Rosenberg + 250' from Focus Areas

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of intersection center.

# 1. SPUR 10 & SH 36

**NOT ON HIN IN UNDERSERVED COMMUNITY**

**ON-SYSTEM TWO-WAY STOP CONTROLLED INTERSECTION**

**10,500 TOTAL ENTERING VEH PER DAY NS: 60 MPH | EW: 65 MPH**

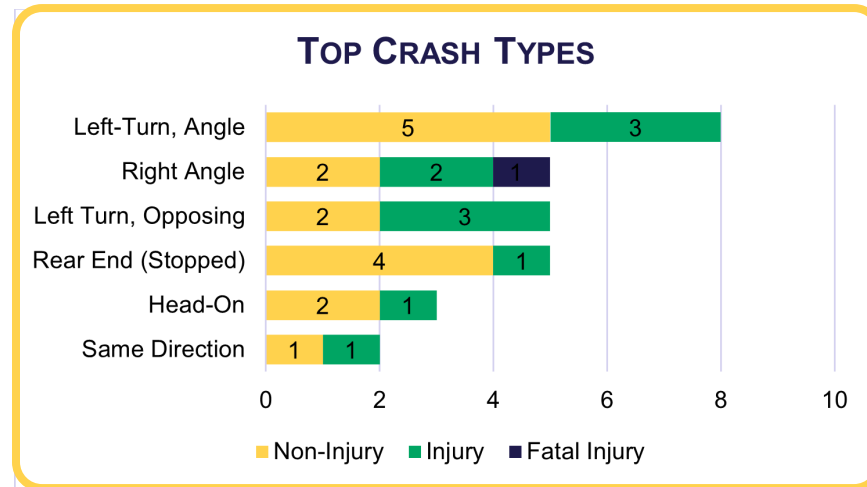
**1.59 CRASHES PER MILLION ENTERING VEHICLES**

**31 TOTAL CRASHES**  
**1 FATAL CRASHES**  
**3 SEVERE INJURY CRASHES**  
**4,392 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**0 PEDESTRIAN INVOLVED CRASHES**  
**0 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of intersection center.

Emphasis Area	% of Crash Cost	
	Study Area	Intersection
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	0.0%
Intersection Safety	39%	100%
Roadway & Lane Departure	30%	1.1%
Dark or Underlit Conditions	42%	9%
Wet or Icy Surface Conditions	11%	0.6%
<b>Behavioral Emphasis</b>		
Speed Related	28%	3%
Distracted Driving	10%	0.1%
Impaired Driving	8%	0.0%
Occupant Protection	20%	0.0%
Older Drivers	15%	65%
Younger Drivers	22%	8%



## IMPROVEMENTS

**SAFETY LIGHTING AT INTERSECTION**  
 29% of crashes occur in dark conditions.

**DYNAMIC SPEED FEEDBACK SIGNS**  
 Speed is a common contributing factor.

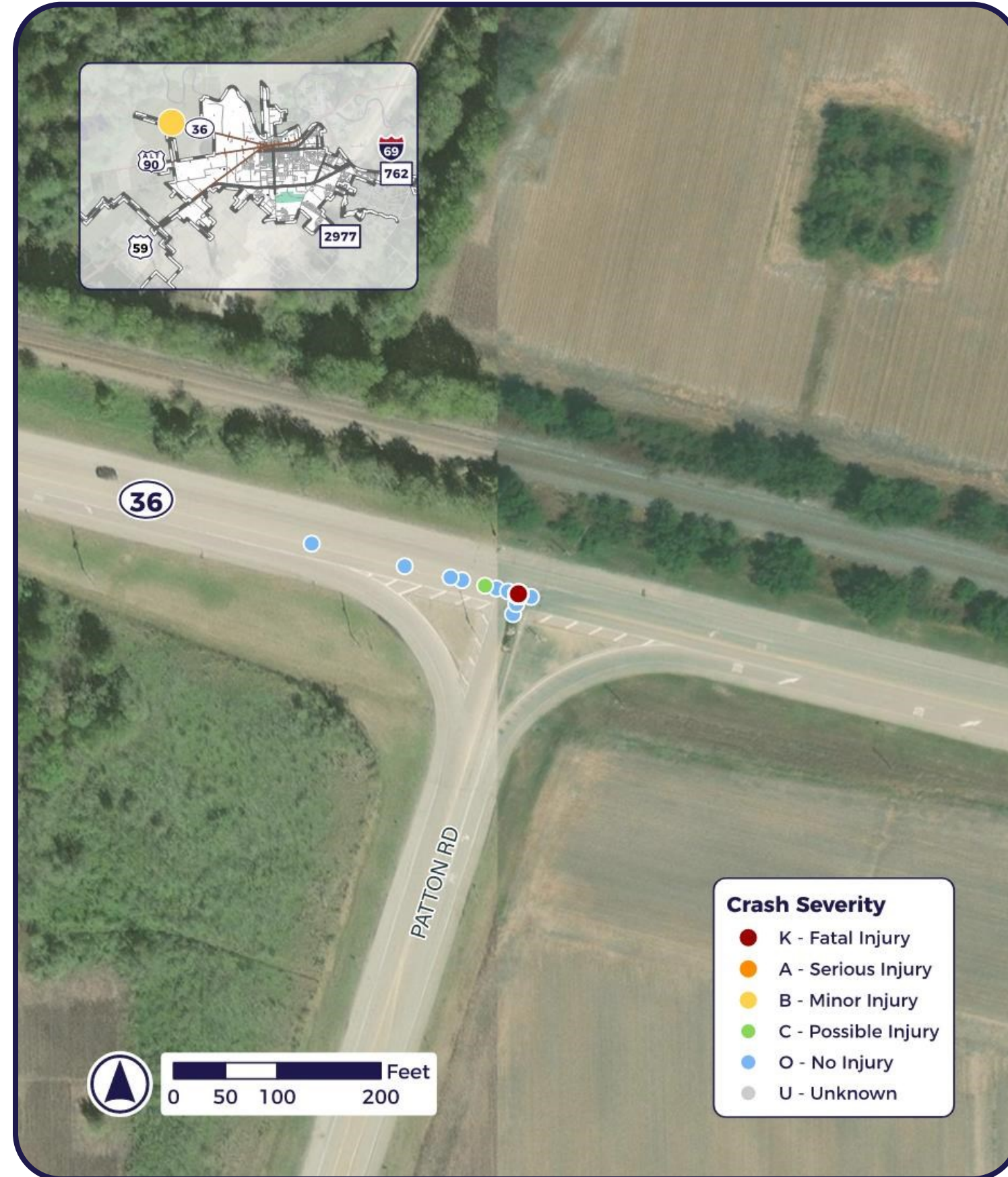
**BACKPLATES WITH RETROREFLECTIVE BORDERS**

**TRAFFIC SIGNS**  
 Install advance warning signals and signs. Consider Intersection Collision Warning System

**INTERSECTION CONTROL EVALUATION**  
 Consider traffic signal or innovative intersection.

**REDUCED LEFT-TURN CONFLICT INTERSECTIONS**  
 Consider Continuous Green T

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



## 2. SPUR 10 & US 90A

**NOT ON HIN IN UNDERSERVED COMMUNITY**

**ON-SYSTEM TWO-WAY STOP CONTROLLED INTERSECTION**

**14,000 TOTAL ENTERING VEH PER DAY**  
NS: 60 MPH | EW: 65 MPH

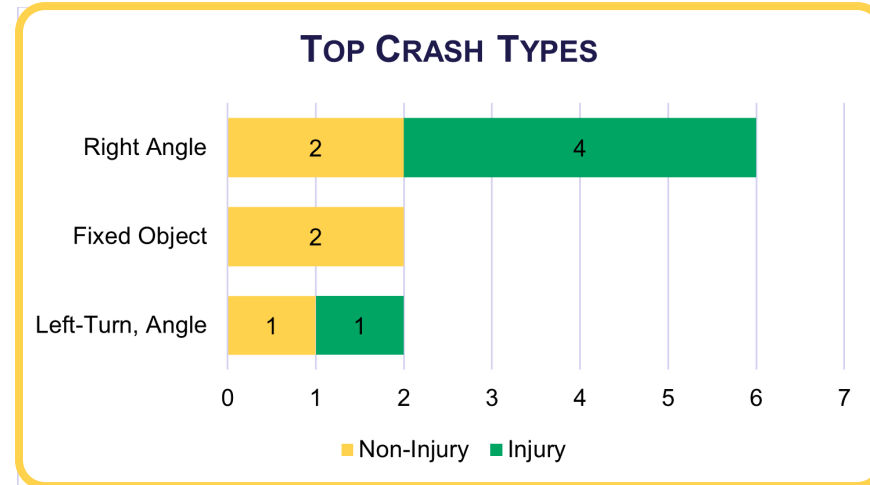
**0.56 CRASHES PER MILLION ENTERING VEHICLES**

**14 TOTAL CRASHES**  
0 FATAL CRASHES  
1 SEVERE INJURY CRASHES  
  
**617 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**0 PEDESTRIAN INVOLVED CRASHES**  
**0 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of intersection center.

Emphasis Area	% of Crash Cost	
	Study Area	Intersection
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	0.0%
Intersection Safety	39%	93%
Roadway & Lane Departure	30%	0.8%
Dark or Underlit Conditions	42%	7%
Wet or Icy Surface Conditions	11%	5%
<b>Behavioral Emphasis</b>		
Speed Related	28%	7%
Distracted Driving	10%	0.3%
Impaired Driving	8%	0.0%
Occupant Protection	20%	7%
Older Drivers	15%	9%
Younger Drivers	22%	0.3%



### IMPROVEMENTS

**SAFETY LIGHTING AT INTERSECTION**

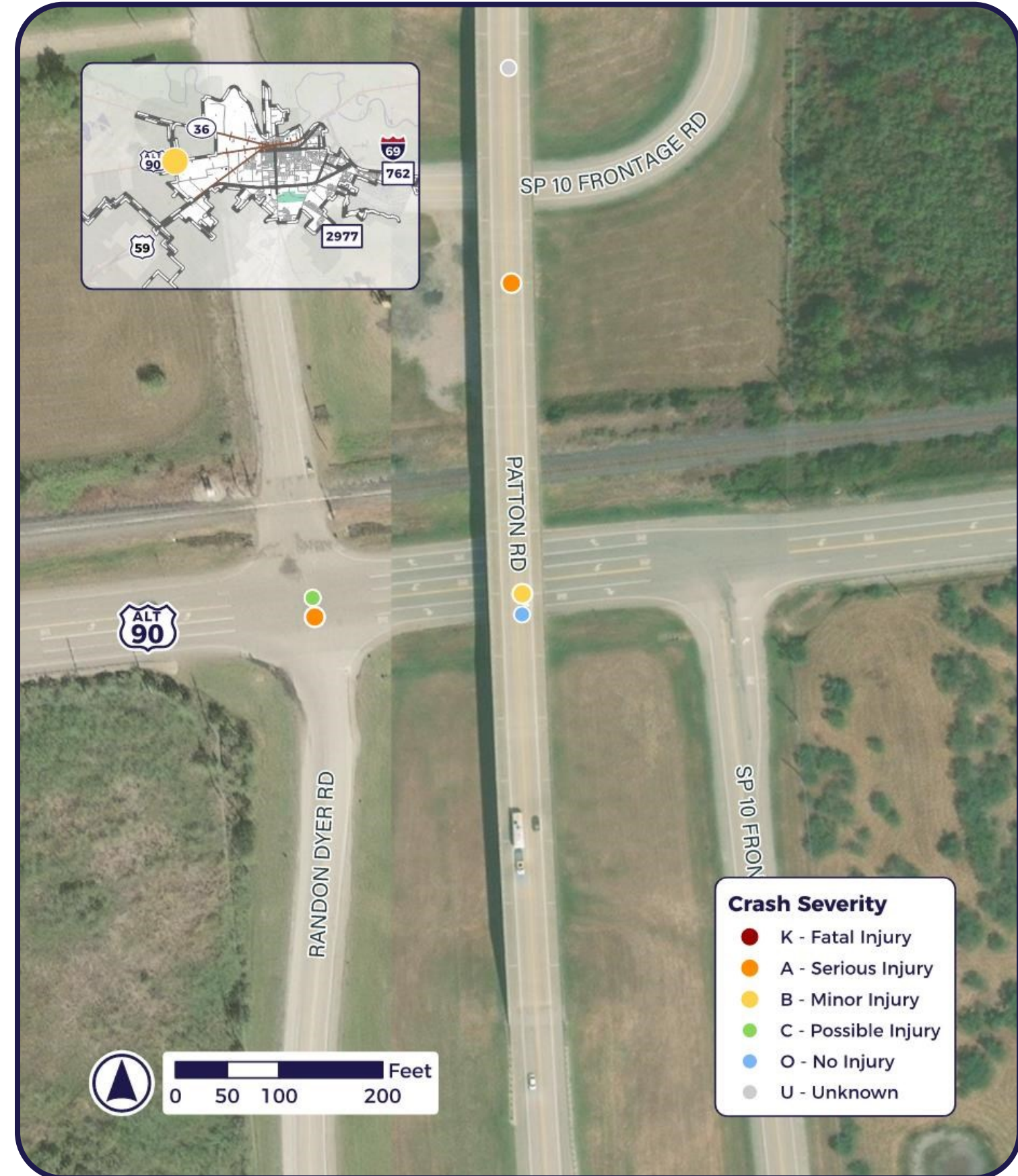
**DYNAMIC SPEED FEEDBACK SIGNS**  
Speed is a common contributing factor.

**TRAFFIC SIGNS**  
Intall advance warning signals and signs. Consider Intersection Collision Warning System

**INTERSECTION CONTROL EVALUATION**  
Consider traffic signal or innovative intersection.

**REDUCED LEFT-TURN CONFLICT INTERSECTIONS**  
Consider Continuous Green T

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



### 3. OLD RICHMOND RD & RAWSON DR

**NOT ON HIN  
IN UNDERSERVED COMMUNITY**

**OFF-SYSTEM  
TWO-WAY STOP CONTROLLED  
INTERSECTION**

**4,000 TOTAL ENTERING VEH PER DAY  
NS: 30 MPH | EW: 35 MPH**

**1.76 CRASHES  
PER MILLION ENTERING VEHICLES**

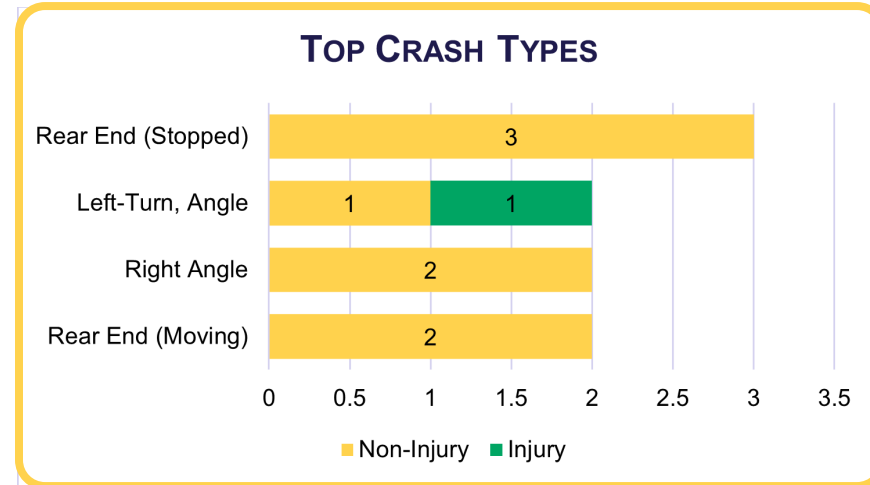
**13 TOTAL CRASHES  
0 FATAL CRASHES  
0 SEVERE INJURY CRASHES**

**124 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**0 PEDESTRIAN INVOLVED CRASHES  
0 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of intersection center.

Emphasis Area	% of Crash Cost	
	Study Area	Intersection
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	0.0%
Intersection Safety	39%	41%
Roadway & Lane Departure	30%	0.0%
Dark or Underlit Conditions	42%	7%
Wet or Icy Surface Conditions	11%	3%
<b>Behavioral Emphasis</b>		
Speed Related	28%	46%
Distracted Driving	10%	5%
Impaired Driving	8%	0.0%
Occupant Protection	20%	0.0%
Older Drivers	15%	23%
Younger Drivers	22%	36%



#### IMPROVEMENTS

**SIDEWALKS**  
Livable centers study identified trail/SUP along Old Richmond Rd.

**CONSTRUCT TURN LANE**  
Construct left-turn lane to allow for storage when rail crossing is occupied.

**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



# 4. LOUISE ST & AVE N

**NOT ON HIN IN UNDERSERVED COMMUNITY**

**OFF-SYSTEM TWO-WAY STOP CONTROLLED INTERSECTION**

**13,000 TOTAL ENTERING VEH PER DAY**  
NS: 30 MPH | EW: 30 MPH

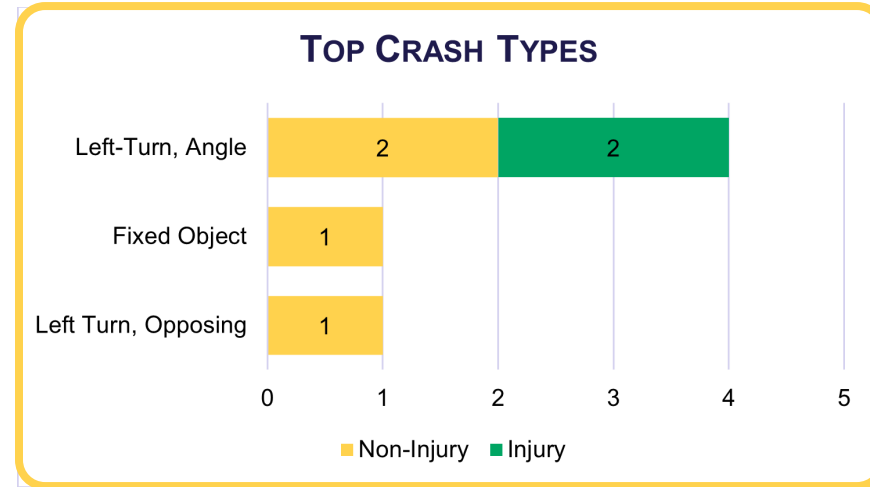
**0.25 CRASHES PER MILLION ENTERING VEHICLES**

**6 TOTAL CRASHES**  
0 FATAL CRASHES  
0 SEVERE INJURY CRASHES  
  
**144 EQUIVALENT PROPERTY DAMAGE ONLY CRASHES**

**0 PEDESTRIAN INVOLVED CRASHES**  
**0 BICYCLE INVOLVED CRASHES**

Crash history from TxDOT CRIS 2019-2023, based on crashes reported within 250 ft of intersection center.

Emphasis Area	% of Crash Cost	
	Study Area	Intersection
<b>Infrastructure Emphasis</b>		
Vulnerable Road User	8%	0.0%
Intersection Safety	39%	100%
Roadway & Lane Departure	30%	30%
Dark or Underlit Conditions	42%	32%
Wet or Icy Surface Conditions	11%	0.0%
<b>Behavioral Emphasis</b>		
Speed Related	28%	0.0%
Distracted Driving	10%	1.4%
Impaired Driving	8%	30%
Occupant Protection	20%	0.0%
Older Drivers	15%	19%
Younger Drivers	22%	2%

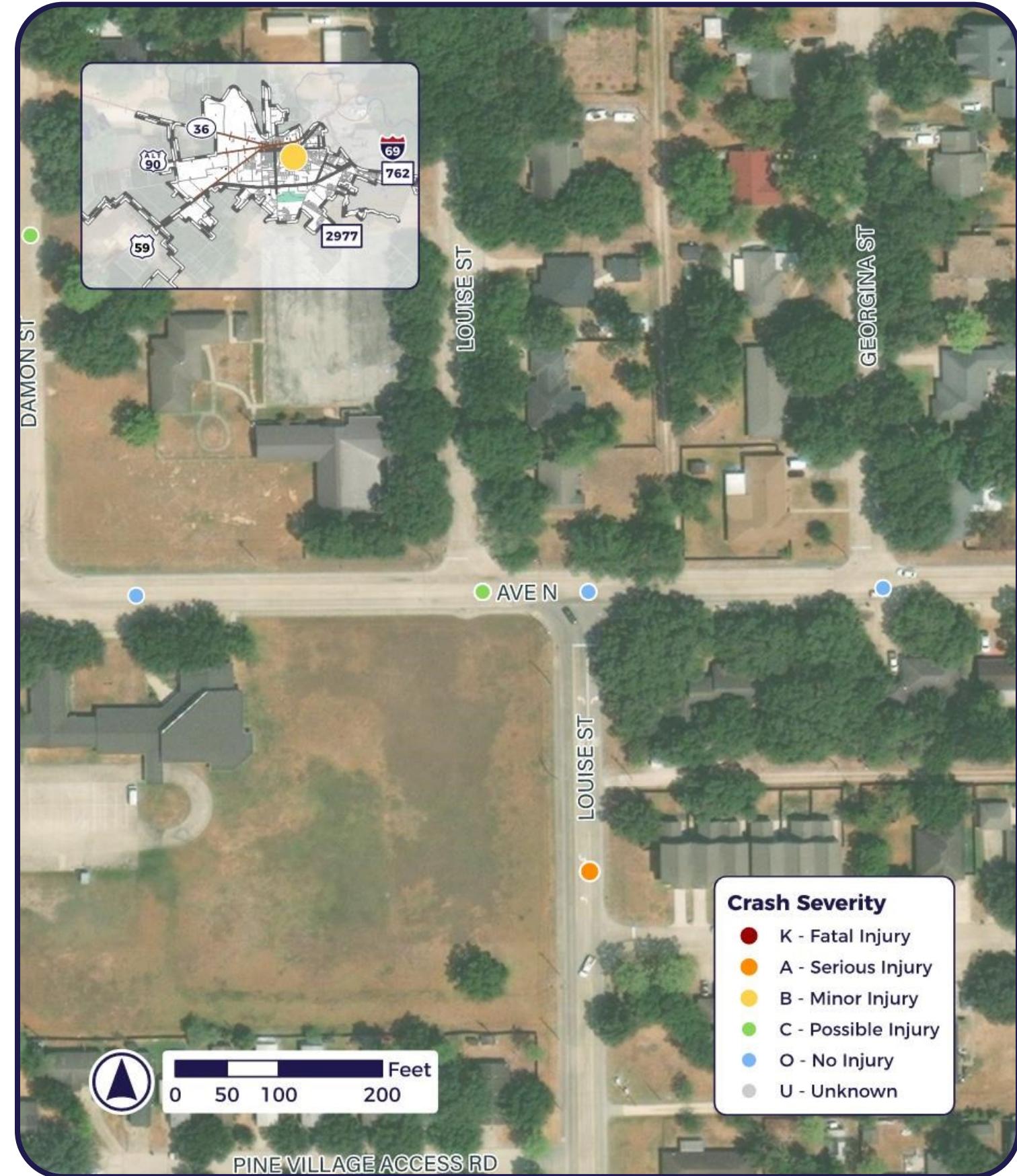


## IMPROVEMENTS

**INTERSECTION CONTROL EVALUATION**

**REALIGN INTERSECTION**

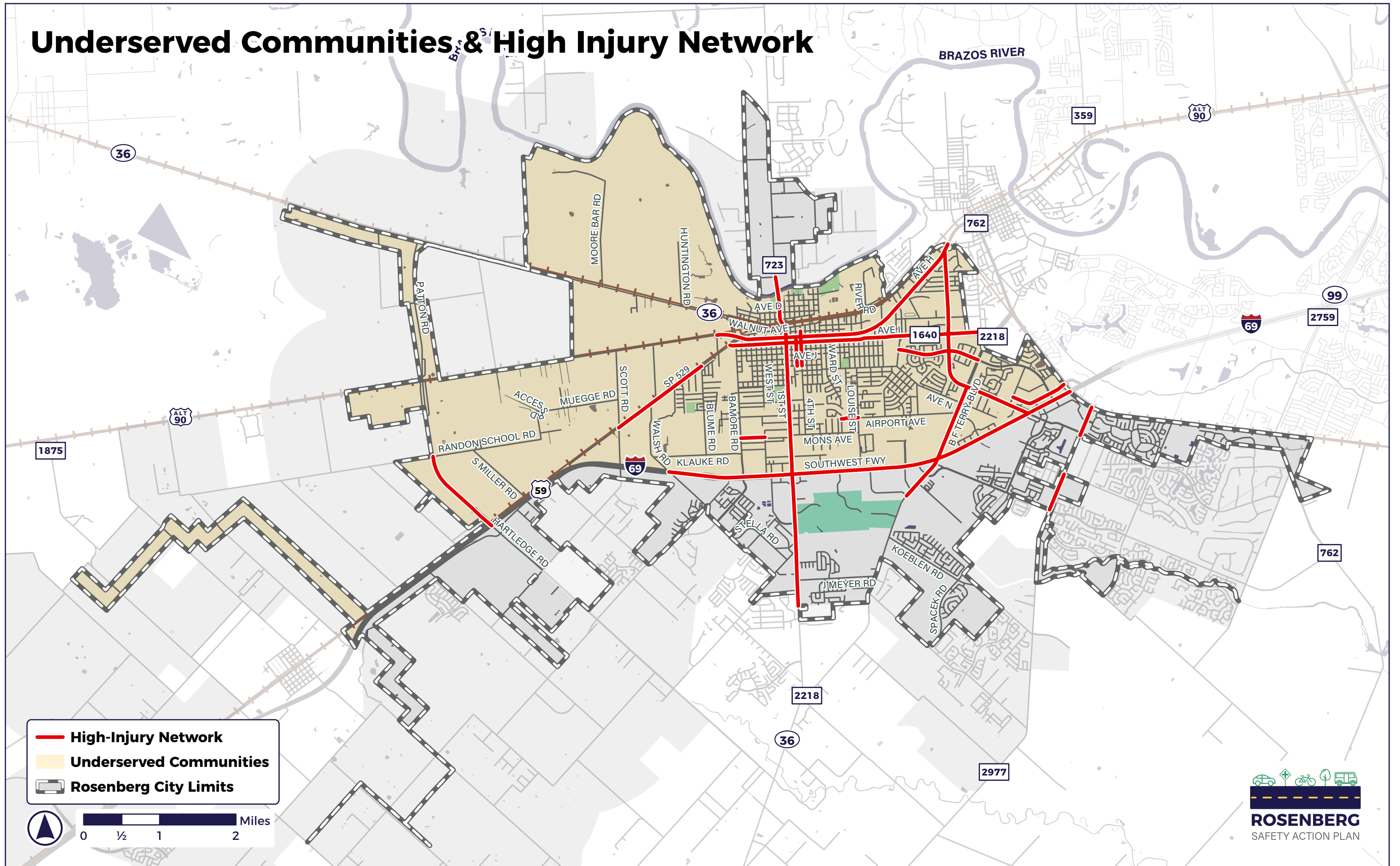
**Legend:** ● = Short Term (0-4 years), ● = Mid-Term (5-9 years), ● = Long-Term (10+ years), ● = Other



# Appendix 4

*Equity Considerations*

# Underserved Communities & High Injury Network



# Appendix 5

*Engagement and Collaboration*

# ROSENBERG SAFETY ACTION PLAN

The City of Rosenberg is developing a Safety Action Plan to improve safety on Rosenberg streets. The purpose of the Safety Action Plan is to identify specific infrastructure projects and policy changes to eliminate or significantly reduce fatal and serious injury crashes. This project is made possible with funding from a USDOT Safe Streets and Roads for All (SS4A) Grant.

## Traffic Safety Stats

(2017 - 2023)

**141 fatal & serious**  
injury crashes

**55% dark condition**  
fatal & serious injury crashes

**37 pedestrian & bicycle**  
crashes resulted in injury

## Stay Connected!

Visit our website for project updates, to provide feedback during public input periods, and to learn more about the project.



 [Rosenberg-Safe-Streets.com](https://Rosenberg-Safe-Streets.com)

## Study Process

This study will include three primary phases. A network screening is performed based on crash history to identify high-crash locations. Safety and equity analyses are then performed to determine opportunities for safety improvements. An implementation plan will detail specific improvements based on the results of safety and equity analyses and community feedback. Your participation is key! Engage with us online and in-person at community events to share your safety concerns and project preferences.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Network Screening												
Safety and Equity Analysis												
Implementation Plan												
Public Engagement												





# ROSENBERG

SAFETY ACTION PLAN

***HOW CAN  
WE IMPROVE  
STREET SAFETY  
IN ROSENBERG?***



[Rosenberg-Safe-Streets.com](https://rosenberg-safe-streets.com)



# ROSENBERG

SAFETY ACTION PLAN

***¿CÓMO PODEMOS  
MEJORAR LA  
SEGURIDAD EN  
LAS CALLES DE  
ROSENBERG?***



[Rosenberg-Safe-Streets.com](https://Rosenberg-Safe-Streets.com)



**Visit the project  
website to learn more  
and to participate in our  
online engagements!**



[Rosenberg-Safe-Streets.com](http://Rosenberg-Safe-Streets.com)



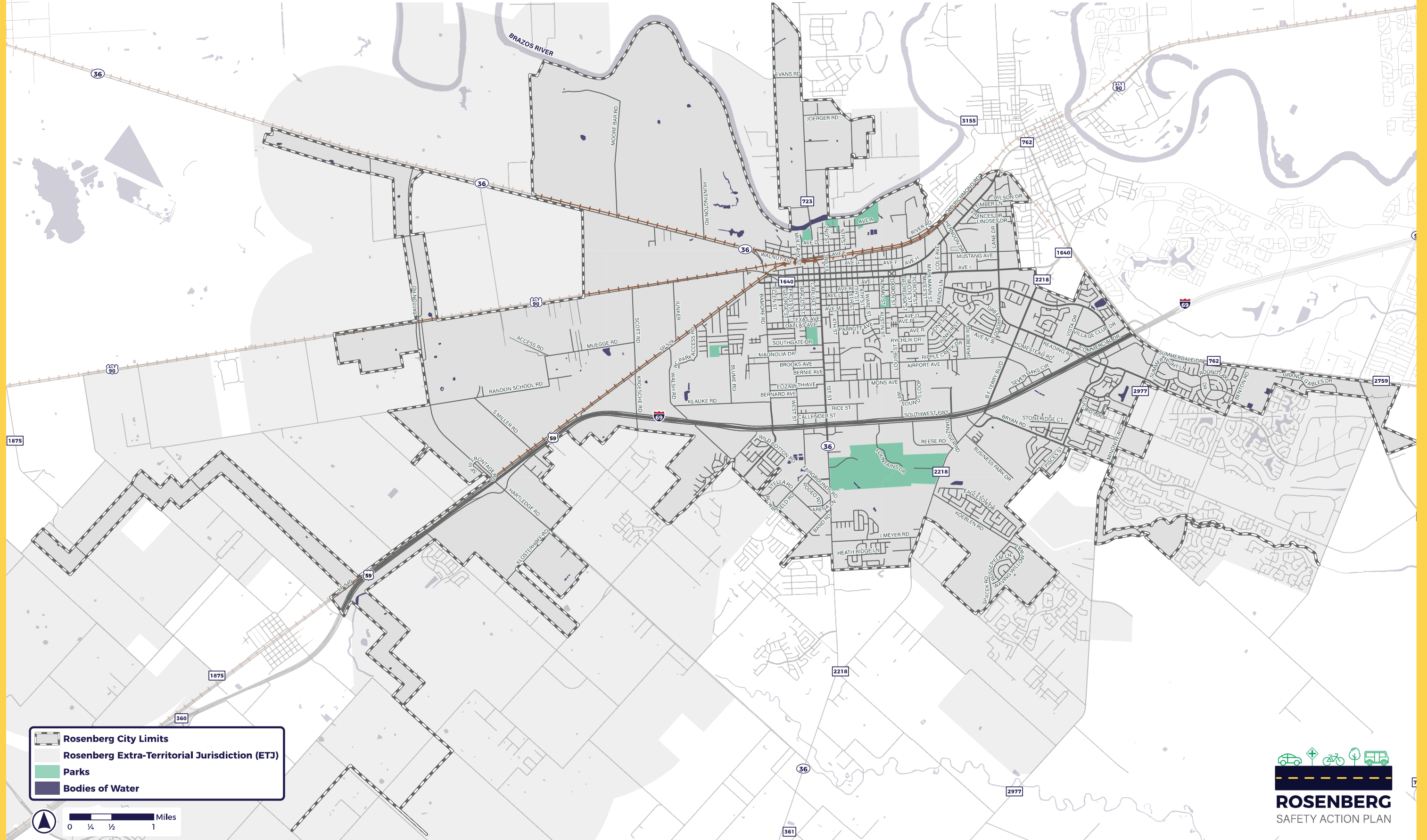
## **ROSENBERG** SAFETY ACTION PLAN

**¡Visite el sitio web del proyecto para obtener más información y participar en nuestros compromisos en línea!**



[Rosenberg-Safe-Streets.com](http://Rosenberg-Safe-Streets.com)

# STUDY AREA: ROSENBERG CITY LIMITS



- Rosenberg City Limits
- Rosenberg Extra-Territorial Jurisdiction (ETJ)
- Parks
- Bodies of Water

0 1/4 1/2 1 Miles

**ROSENBERG**  
SAFETY ACTION PLAN

# HOW DO YOU RANK SAFETY PROJECT TYPES FOR ROSENBERG?

## RUMBLE STRIPS



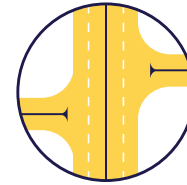
Rumble strips alert drivers when they are departing the roadway. They can reduce run-off-the-road and head on collisions.

## ROADWAY LIGHTING



Roadway lighting increases visibility at night. It can reduce all crash types that occur in low light.

## RAISED MEDIANS



Raised medians are barriers that separate opposing lanes of traffic, typically with a curb. They can reduce left-turn and angle crashes.

## SIDEWALKS



Sidewalks provide a safe place to walk away from motor vehicles. This can include new sidewalks or improving existing ones.

## RECTANGULAR RAPID FLASHING BEACONS



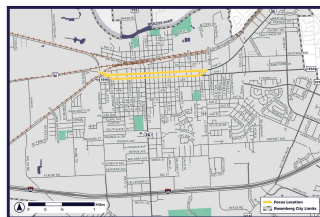
Rectangular rapid flashing beacons (RRFBs) alert drivers that a pedestrian is entering or in a crosswalk.

VOTE  
HERE

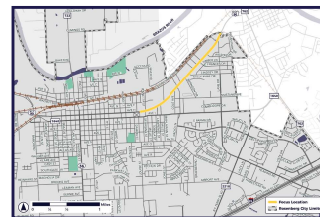
VOTE  
HERE

# WHAT ARE YOUR TOP 3 FOCUS LOCATIONS FOR SAFETY PROJECTS?

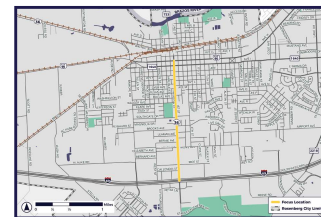
## Avenues H and I (Overpass to Millie Street)



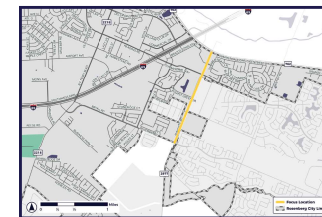
## US 90A/Avenue H (East of Millie Street)



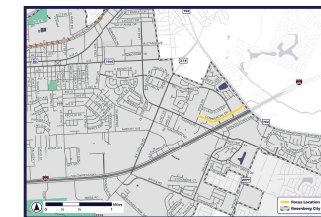
## SH 36/1st Street (Avenue I to I-69)



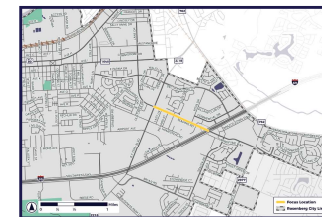
## Minonite Road (Bryan Road to FM 762)



## Commercial Drive (Vista Drive to FM 762)



## Reading Road (FM 2218 to I-69)



VOTE  
HERE

VOTE  
HERE

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Your participation is key to this project! Engage with us online to share your safety concerns and project preferences. Our online survey and interactive map are live until August 30!

## Stay Connected!

Visit our website for project updates, to provide feedback, and to learn more about the project.



[Rosenberg-Safe-Streets.com](https://Rosenberg-Safe-Streets.com)



**ROSENBERG**  
SAFETY ACTION PLAN