CHAPTER 6.6: CITY OF WACO

2024 WACO MPO SAFETY ACTION PLAN

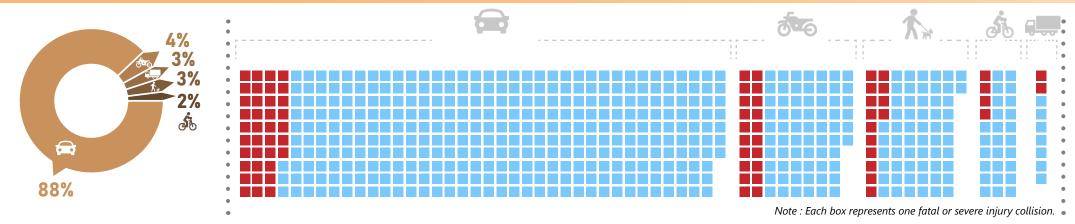
INTRODUCTION

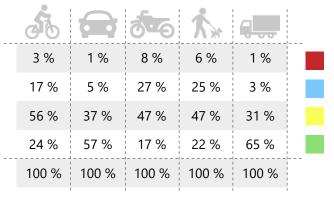
Waco is a city in central Texas along the Brazos River and I-35, halfway between Dallas and Austin. It is the county seat of McLennan County. The city has an estimated population of 138,486 according to the 2020 census. This chapter provides information on the City of Waco's collision statistics from 2014 to 2023. A total of 7,159 collisions occurred on Waco streets in the last 10 years, including 77 fatalities and 495 serious injuries. TxDOT roadways within Waco city limits had 4,995 collisions during the same period, with 49 fatalities and 314 serious injuries. The majority of injury collisions in both City and TxDOT rights-of-way involved possible injuries, with 54 percent each in the City and TxDOT right-of-way.

COLLISIONS 2014 TO 2023	CITY		TxDOT	
Total Collisions	7159	100 %	4995	100 %
Fatal Injury	77	1.08 %	49	0.98 %
Serious Injury	495	6.91 %	314	6.29 %
Minor Injury	2711	37.87 %	1923	38.50 %
Possible Injury	3876	54.14 %	2709	54.23 %
Total Persons Involved	10819	100 %	7936	100 %
Fatal Injury	79	0.73 %	53	0.67 %
Serious Injury	586	5.42 %	369	4.65 %
Minor Injury	3731	34.49 %	2843	35.82 %
Possible Injury	6423	59.37 %	4671	58.86 %

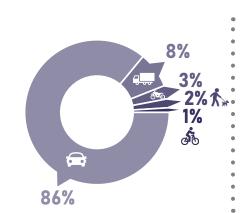


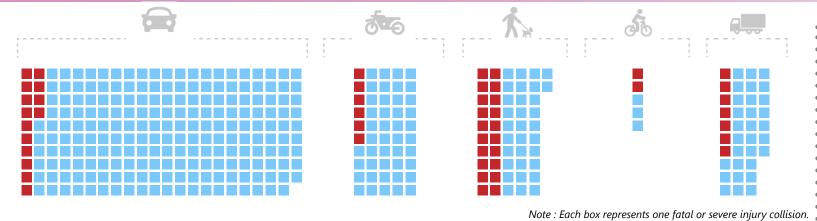
COLLISIONS BY MODE - CITY





COL	LISIO.	NS BY	MODE -	- TxDOT





		*	of o		90
Fatal	2 %	22 %	4 %	0 %	7 %
Seriou	8 %	35 %	27 %	5 %	10 %
Minor	38 %	29 %	52 %	38 %	66 %
Possibl	53 %	14 %	18 %	57 %	17 %
	 100 %	100 %	100 %	100 %	100 %

Injury s Injury Injury le Injury

Fatal Injury

Serious Injury

Minor Injury

Possible Injury

of Waco collision analysis.

2024 WACO MPO SAFETY ACTION PLAN

The following summary provides information on the number of collisions, persons injured, and the proportion of persons involved in collisions based on mode of transportation, age group, and gender. It also draws comparisons between collisions on Waco city streets, CITY OF WACO VS. McLENNAN COUNTY COLLISIONS - RELATIVE SHARES TxDOT facilities, and McLennan County across various categories. On city streets in Waco, there were a total of 7,159 collisions, resulting in 10,819 persons injured. In comparison, TxDOT reported a total of 4,995 collisions resulting in 7,936 persons injured within Waco city limits. Please note that Farm to Market roads are included as city streets within the City

This section also identifies several major collision trends on Waco city streets, including broadside collisions, hit object collisions, right-of-way violations by automobiles, and collisions involving unsafe speeds. On TxDOT roadways, the prominent trends were broadside collisions, rear end collisions, unsafe speed violations, and right-of-way violations by automobiles. A detailed summary analyzing these collision trends is provided in the Collision Profile section of this chapter.

The pie charts below compare the severity of collisions on roadways with different speed limits. Of the speed limits examined, the charts indicate that roads with a 70 mph speed limit accounted for the highest proportion of severe injury collisions while roads with 65 mph accounted for the highest proportion of fatal injury collisions.

> CITY TxDOT 7159 4995

TOTAL COLLISIONS TOTAL COLLISIONS

10819 7936

TOTAL PERSONS INJURED : TOTAL PERSONS INJURED

PERSONS INVOLVED								
		CI	TY		TxDOT			
MODE								
Bicycle	0 %	0 %	1 %	0 %	0 %	0 %	0 %	0 %
Car	0 %	4 %	31 %	57 %	0 %	4 %	33 %	57 %
Motorcycle	0 %	1 %	1 %	0 %	0 %	1 %	1 %	0 %
Pedestrian	0 %	1 %	1 %	1 %	0 %	0 %	0 %	0 %
Truck	0 %	0 %	0 %	1 %	0 %	0 %	1 %	1 %
			AGE					
Below 15	0 %	0 %	3 %	7 %	0 %	0 %	3 %	6 %
15 - 65	1 %	5 %	29 %	47 %	1 %	4 %	30 %	47 %
Above 65	0 %	0 %	3 %	5 %	0 %	0 %	3 %	5 %
GENDER								
Male	1 %	3 %	16 %	25 %	0 %	3 %	16 %	23 %
Female	0 %	2 %	18 %	35 %	0 %	2 %	20 %	35 %

CITY		TxDOT		McLENNAN COUNTY	McLENNAN COUNTY	
		MODE				
Bicycle	2 %	Bicycle	1 %	Bicycle	1 %	
Car	88 %	Car	86 %	Car	85 %	
Motorcycle	3 %	Motorcycle	3 %	Motorcycle	4 %	
Pedestrian	3 %	Pedestrian	2 %	Pedestrian	3 %	
Truck	3 %	Truck	8 %	Truck	7 %	
		FIRST HARMFUL EVENT				
Motor Vehicle in Transport	75 %	Motor Vehicle in Transport	85 %	Motor Vehicle in Transport	72 %	
Fixed Object	13 %	Fixed Object	10 %	Fixed Object	17 %	
Overturned	5 %	Pedestrian	2 %	Overturned	4 %	
MANNER OF COLLISION						
Broadside	53 %	Broadside	44 %	Broadside	42 %	
Hit Object	25 %	Rear End	34 %	Hit Object	28 %	
Rear End	16 %	Hit Object	15 %	Rear End	24 %	
Sideswipe	3 %	Sideswipe	6 %	Sideswipe	5 %	
		VIOLATION CATEGORY				
Automobile Right-of-Way	31 %	Unsafe Speed	24 %	Unsafe Speed	23 %	
Unsafe Speed	17 %	Automobile Right-of-Way	19 %	Automobile Right-of-Way	22 %	
Traffic Signals and Signs	14 %	Traffic Signals and Signs	16 %	Traffic Signals and Signs	12 %	
Distracted Driving	6 %	Following Too Closely	8 %	Distracted Driving	8 %	
Driving/ Bicycling under Influence	5 %	Distracted Driving	6 %	Other Improper Driving	6 %	
Other Unforeseen Reasons	5 %	Other Unforeseen Reasons	5 %	Other Unforeseen Reasons	6 %	
		LOCATION				
Intersection	72 %	Intersection	64 %	Intersection	59 %	
Roadway	28 %	Roadway	36 %	Roadway	41 %	
LIGHTING						
Daylight	70 %	Daylight	75 %	Daylight	70 %	
Dark, Lighted	20 %	Dark, Lighted	18 %	Dark, Lighted	16 %	
Dark, Not Lighted	8 %	Dark, Not Lighted	5 %	Dark, Not Lighted	11 %	

























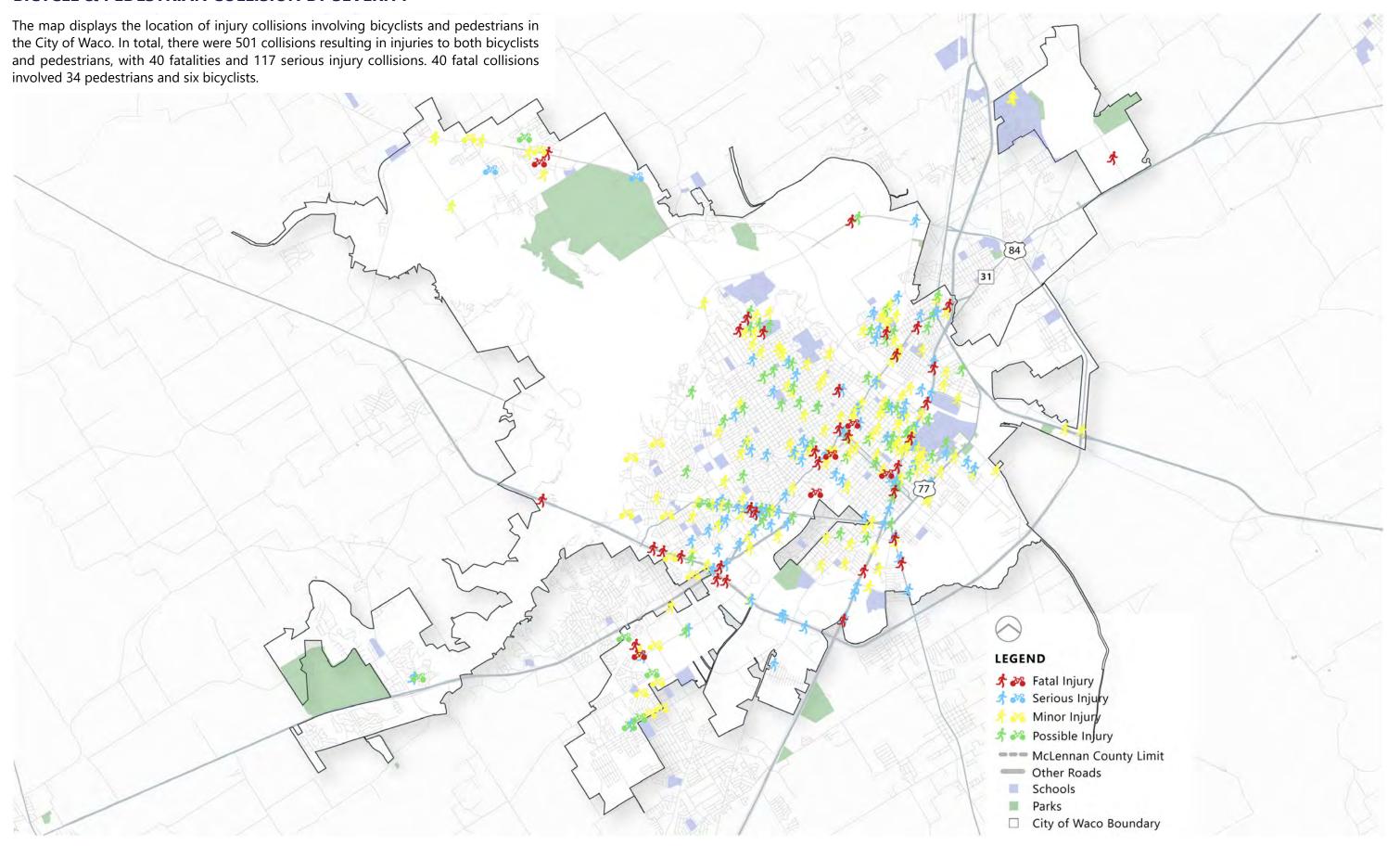




Fatal Injury Serious Injury Minor Injury

Possible Injury

BICYCLE & PEDESTRIAN COLLISION BY SEVERITY



SEVERITY INDEX



2024 WACO MPO SAFETY ACTION PLAN

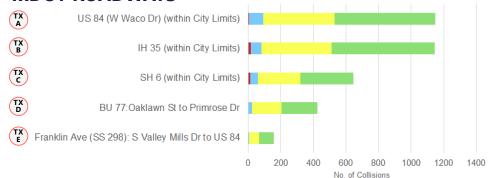
ROADWAYS & INTERSECTIONS

This section lists high risk roadway segments and intersections within the City of Waco. The accompanying graph depicts the name and limits of each roadway along with the number of collisions categorized by severity at that location. A severity index methodology was utilized to identify these high risk spots. This methodology assigns 3 points for each fatal or severe injury collision, 2 points for each minor injury collision, and 1 point for each possible injury collision.

ROADWAYS

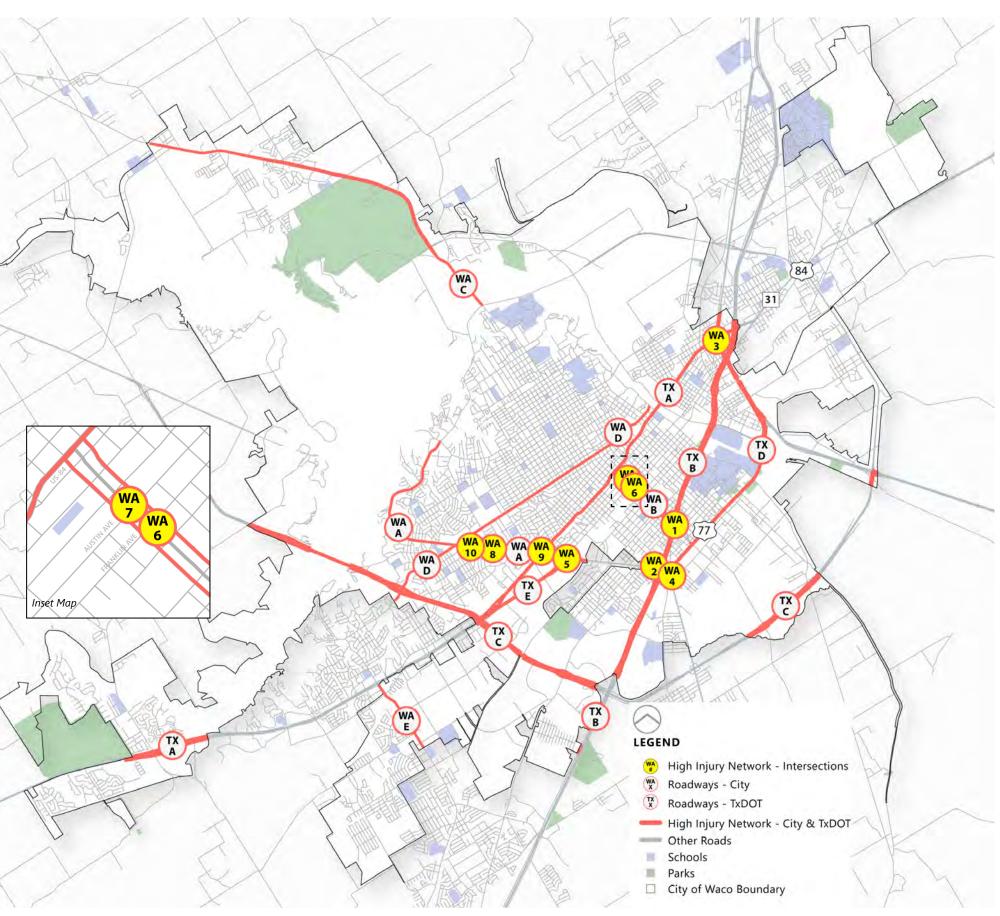


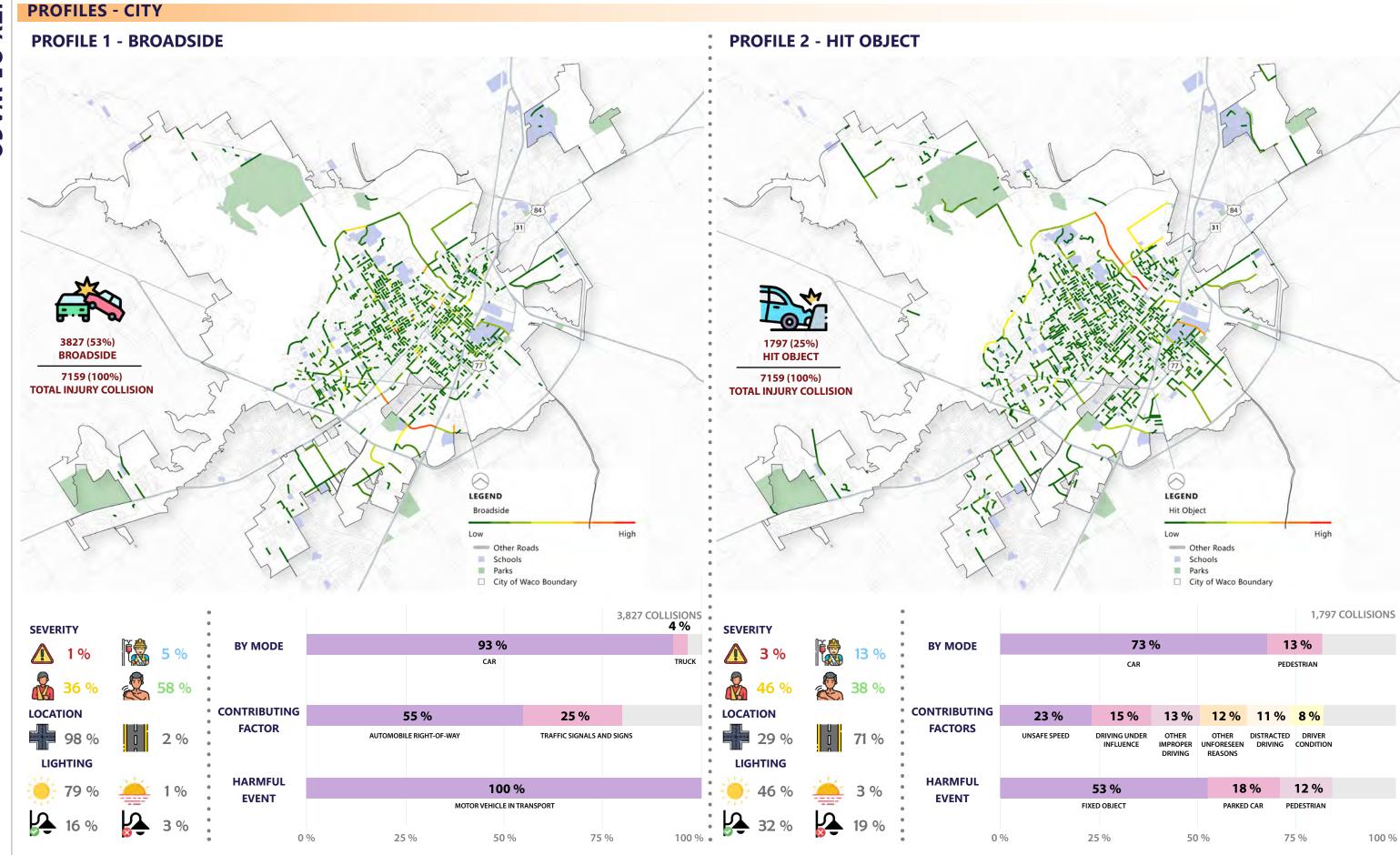
TXDOT ROADWAYS

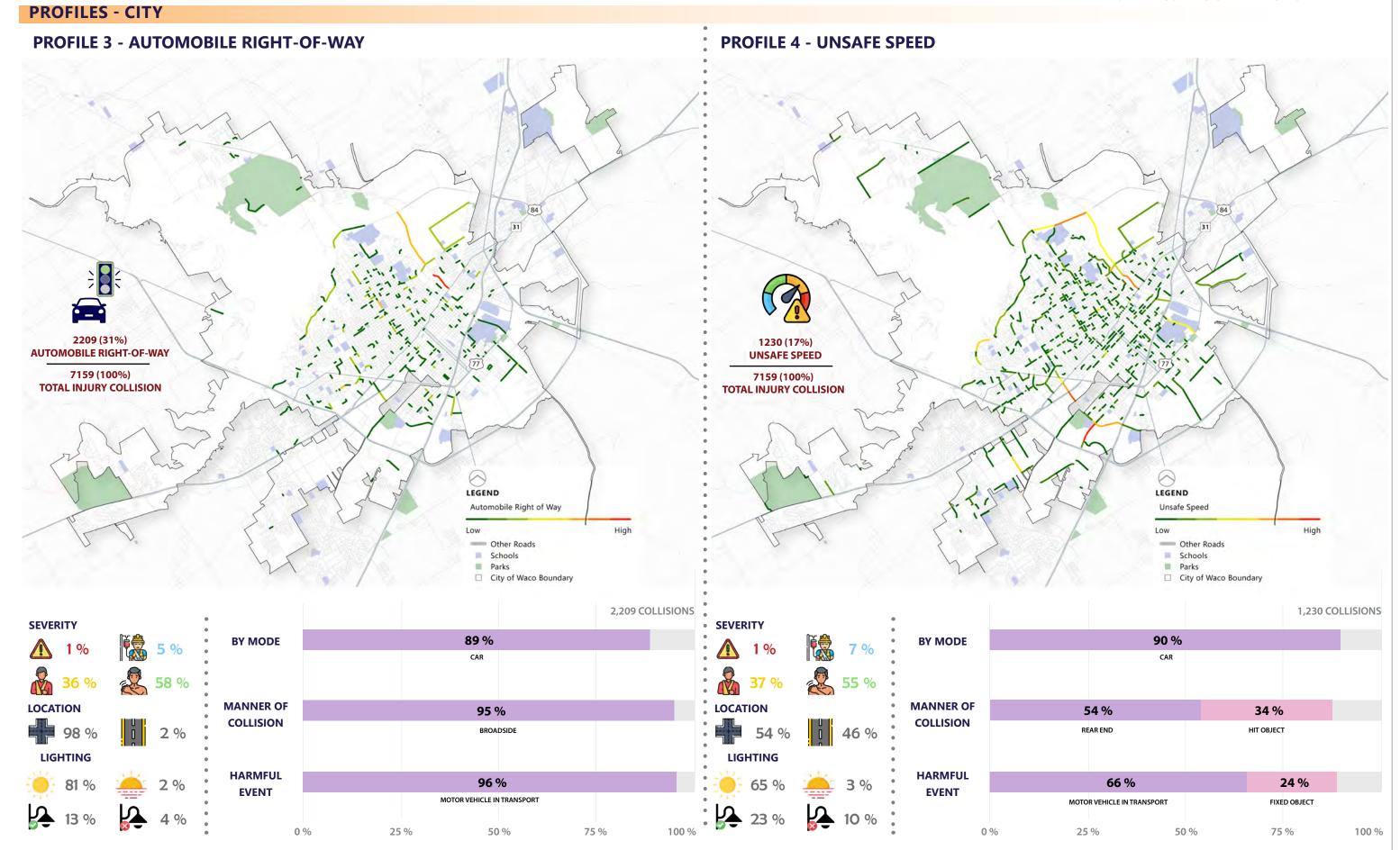


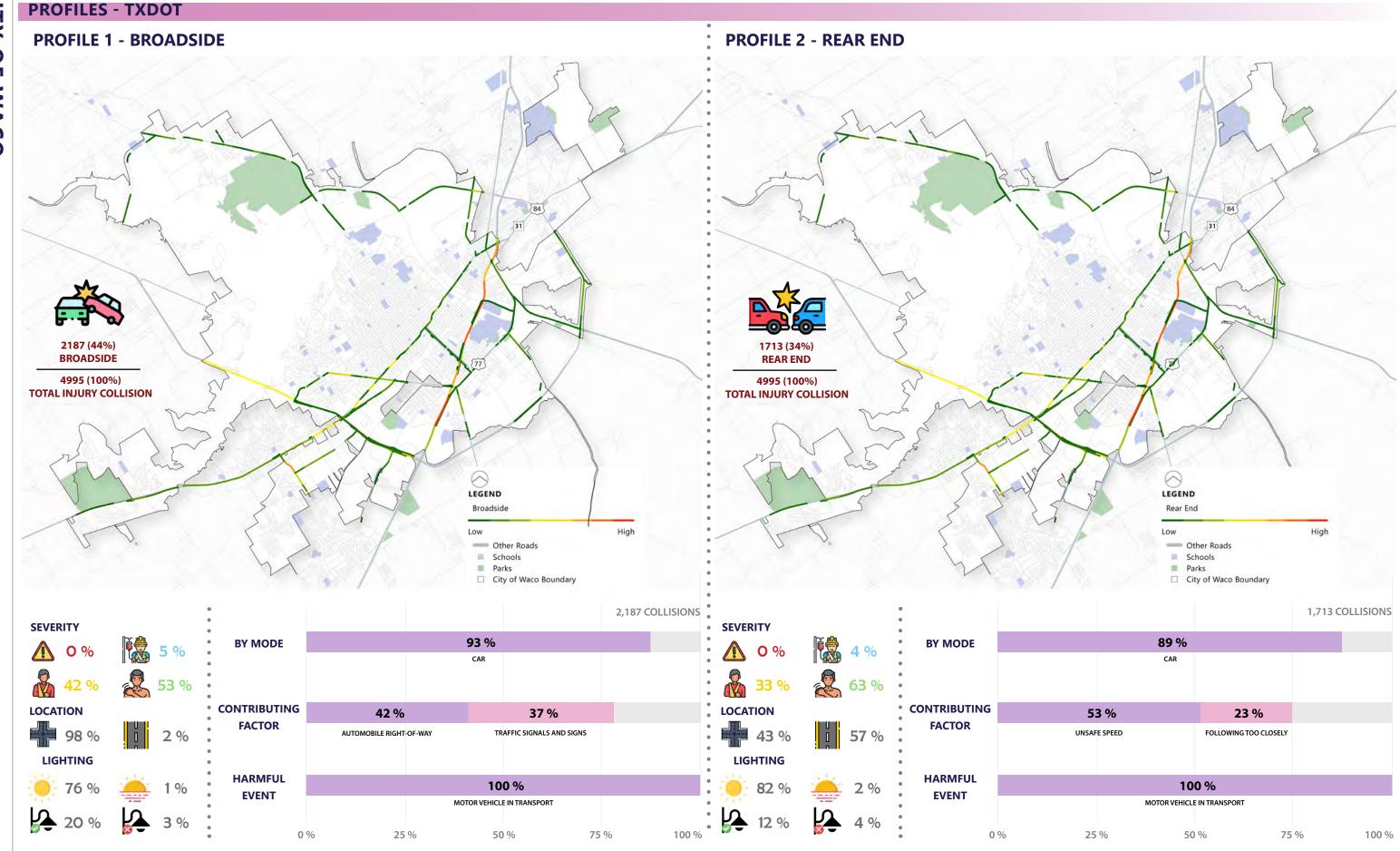
INTERSECTIONS

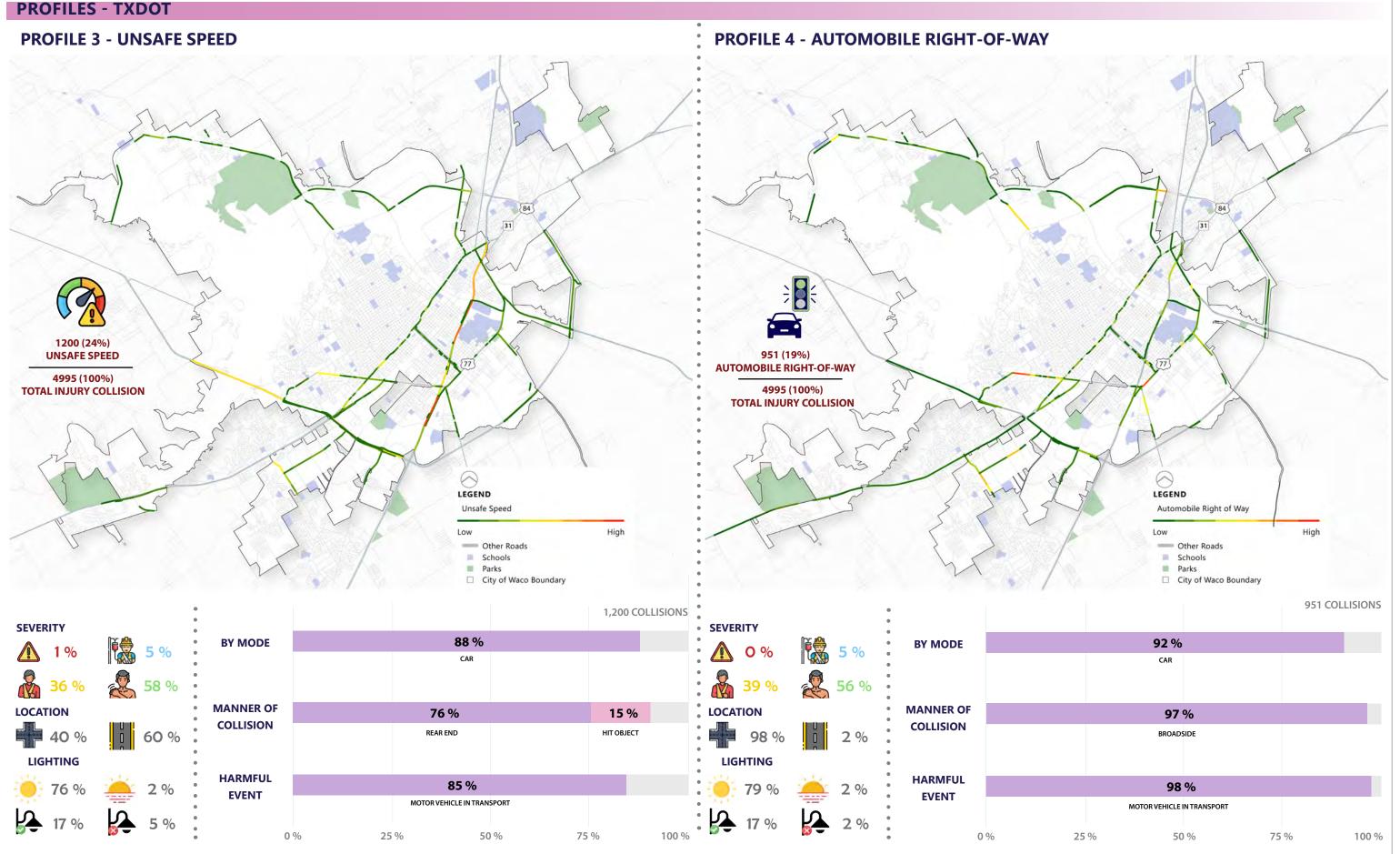


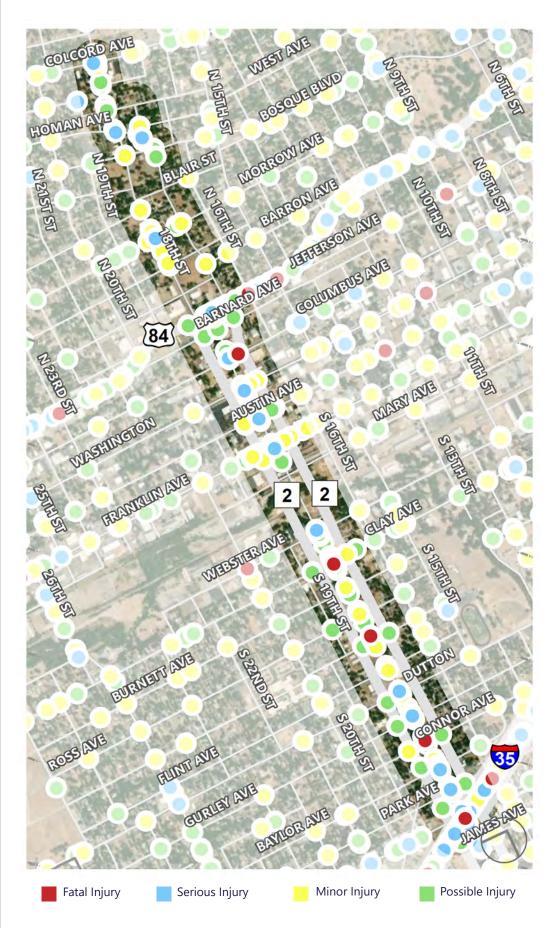












State Loop 2 (17th & 18th Street), a three-lane minor arterial where 17th Street serves northbound traffic and 18th Street serves southbound traffic, runs through commercial, residential, and industrial areas from Colcord Drive to IH 35 Southbound Frontage Road. The speed limits vary from 30 mph to 55 mph along the corridor. This corridor passes by schools including West Avenue Elementary School, Waco Montessori School, Bell's Hill Elementary School, and Cesar Chavez Middle School.

TRENDS INJURY COLLISION STATISTICS 281 **INTERSECTION BROADSIDE DISREGARD OF NIGHTTIME MINOR POSSIBLE SIGNS & SIGNALS** 524 TOTAL COLLISIONS **FATAL** 11 **SERIOUS** 478 **73%** 25% **464 COLLISIONS 384 COLLISIONS 223 COLLISIONS** 130 COLLISIONS 21

EXISTING CONDITIONS

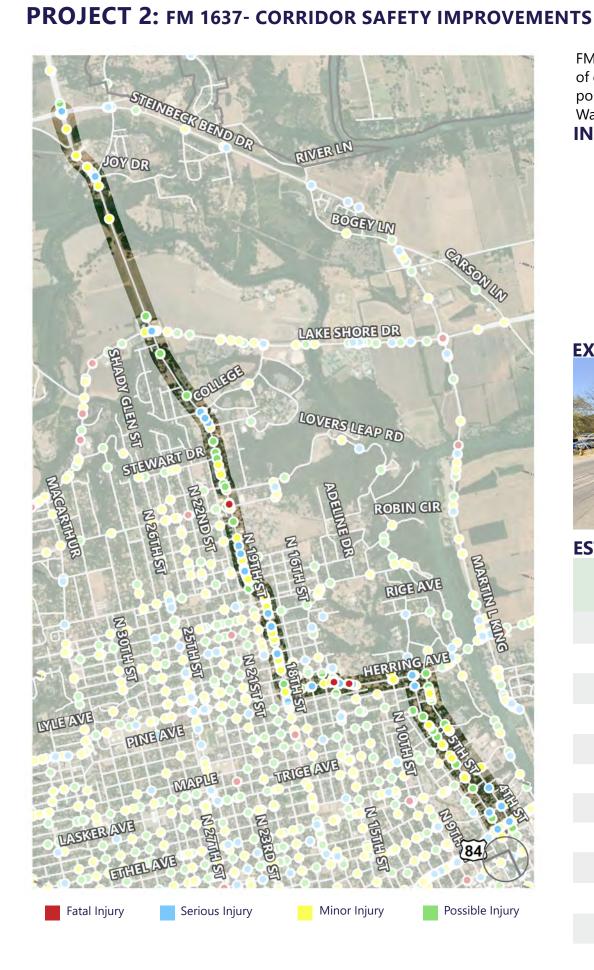


Existing Condition:N 17th St at Morrow Ave facing north

Existing Condition: N 18th St at Blair St facing south



1: 17TH & 18TH ST- CORRIDOR SAFETY IMPROVEMENTS					
_	IMPROVEMENTS	LOCATIONS	ESTIMATED COST		
	Install Buffered Bike Lane	17th St from Bosque Blvd to IH 35	\$213,200		
***	Install Sidewalk	17th 3t hom bosque biva to in 33	\$5,160,900		
	Lane Reduction	18th St from Homan Ave to Colcord Ave	\$24,400		
**	Fill Sidewalk Gaps	Total St Irom Homan Ave to Colcord Ave	\$587,700		
	Install Street Lighting	17th St and 18th St from Colcord Ave to IH 35	\$1,350,100		
		CONTINGENCY COST	\$1,467,300		
		ENGINEERING COST	\$3,081,300		
		TOTAL COST	\$11,884,900		



FM 1637 (China Spring Road, N 19th Street and N 18th Street), a four-lane minor arterial with a center two-way left turn lane, provides access to a mix of commercial, residential, and agricultural areas from Steinbeck Bend Drive to US-84 (Waco Drive). The speed limits vary, with 30 mph through more populated areas and 55 mph in less developed sections along the corridor. This corridor is close to several schools, including Premier High School of Waco, McLennan Community College, Cedar Ridge Elementary School, and North Waco Elementary School.

INJURY COLLISION STATISTICS



TRENDS



EXISTING CONDITIONS

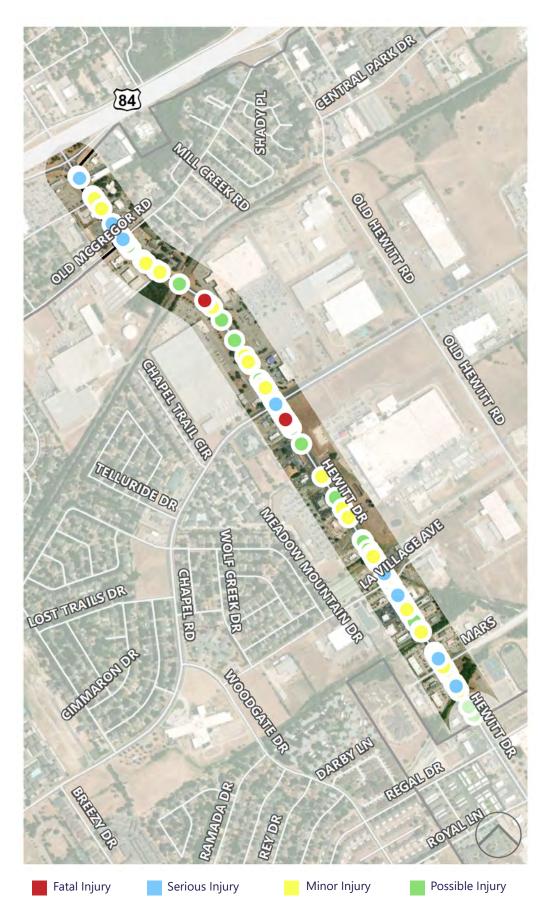


Existing Condition: FM-1637 at Stewart Dr facing north





2: FM 1637- CORRIDOR SAFETY IMPROVEMENTS					
	IMPROVEMENTS	LOCATIONS	ESTIMATED COST		
	Install Street Lighting	From Steinbeck Bend Dr to Lake Shore Dr	\$488,800		
	Install Median	Trom Stembeek bend by to take shore by	\$2,980,800		
	Install Median	18th St and 19th St from Lake Shore Dr to Vivian Ave	\$4,356,200		
***	Fill Sidewalk Gaps & Install Street Lighting	Herring Ave from 18th St to 4th St	\$1,860,100		
	Install Street Lighting	18th St and 19th St from Lake Shore Dr to Herring Ave	\$621,000		
₹ \	Fill Sidewalk Gaps & Speed Feedback Signs	18th St and 19th St from Lake Shore Dr to Herring Ave	\$5,461,900		
	Install Bike Lane	4th St from Herring Ave to US 84 (Waco Dr)	\$70,000		
	Install Street Lighting & Sidewalk & Parking Striping	4th St and 5th St from Herring Ave to US 84 (Waco Dr)	\$4,532,800		
		CONTINGENCY COST	\$4,074,400		
		ENGINEERING COST	\$8,556,100		
		TOTAL COST	\$33,002,100		



Hewitt Drive, a four-lane minor arterial with a center two-way left turn lane, provides access to commercial and industrial areas. The speed limit is set at 45 mph along the entire corridor. Hewitt Drive provides primary access to Midway Middle School.

INJURY COLLISION STATISTICS TRENDS INTERSECTION **REAR END AUTOMOBILE** BROADSIDE **ROW** 107 **POSSIBLE** 204 TOTAL COLLISIONS 2 FATAL 180 32% 47% 46% 74% **SERIOUS**

EXISTING CONDITIONS



Existing Condition:Hewitt Dr at La Village Ave facing south

Existing Condition:Hewitt Dr at Chapel Rd facing north

151 COLLISIONS

95 COLLISIONS



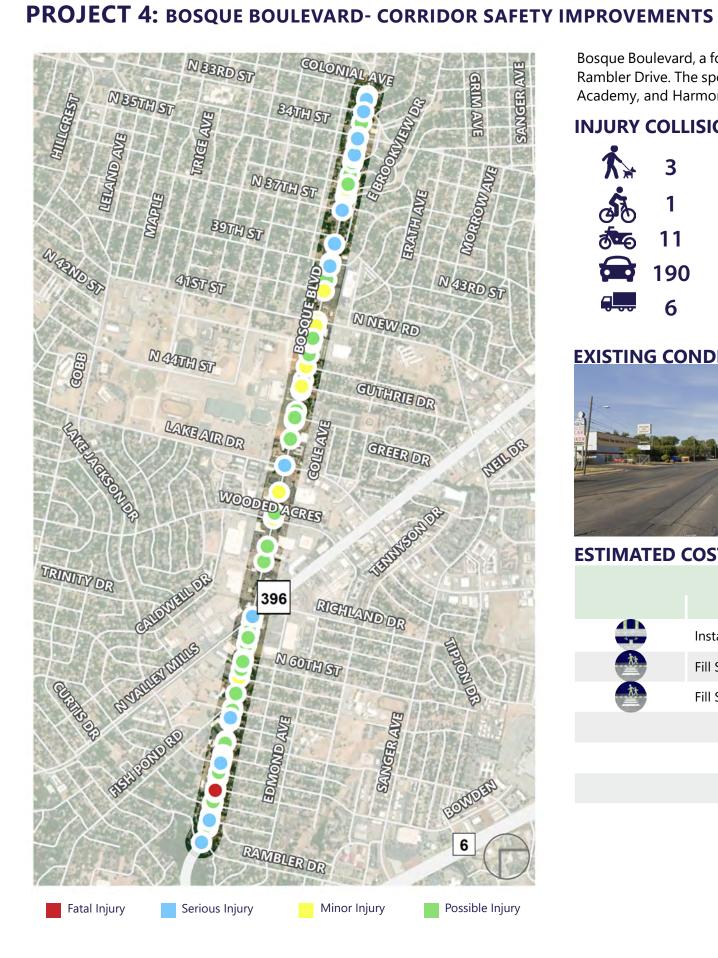
65 COLLISIONS

93 COLLISIONS

ESTIMATED COST OF IMPROVEMENT

MINOR

3: HEWITT DR- COMPLETE STREETS MULTIMODAL PROJECT				
	IMPROVEMENTS	LOCATIONS	ESTIMATED COST	
	Access Management and Install Median		\$2,416,200	
SAU SAU	Speed Feedback Signs		\$34,500	
	Install Street Lighting	From Regal Dr to Waco Dr	\$678,500	
***	Install Sidewalk		\$2,872,300	
	Complete Streets Multimodal Project		\$7,877,500	
		CONTINGENCY COST	\$2,775,800	
		ENGINEERING COST	\$5,829,200	
		TOTAL COST	\$22,484,000	



Bosque Boulevard, a four-lane undivided major arterial, provides access through commercial and residential developments from N Valley Mills Drive to Rambler Drive. The speed limit is set at 35 mph along the corridor. Bosque Boulevard is within 0.25 mile of Parkdale Elementary School, Eagle Christian Academy, and Harmony Science Academy.

INJURY COLLISION STATISTICS



TRENDS



AUTOMOBILE ROW 34% **71 COLLISIONS**

EXISTING CONDITIONS



Existing Condition: Bosque Blvd at N New Rd facing west

Existing Condition: Bosque Blvd at Lake Air Dr facing east

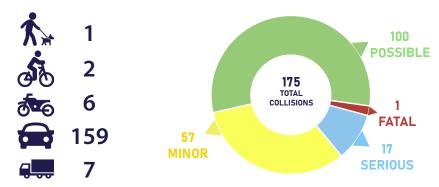


4: BOSQUE BLVD- CORRIDOR SAFETY IMPROVEMENTS				
	IMPROVEMENTS	LOCATIONS	ESTIMATED COST	
	Install Median and Access Management	From N Valley Mills Dr to Colonial Ave	\$4,641,500	
**	Fill Sidewalk Gaps		\$1,544,500	
**	Fill Sidewalk Gaps	From N Valley Mills Dr to Rambler Dr	\$2,306,900	
		CONTINGENCY COST	\$1,698,600	
		ENGINEERING COST	\$3,567,100	
		TOTAL COST	\$13,758,600	



S New Road, a four-lane major arterial with a center two-way left turn lane, provides access through commercial and residential areas from Franklin Avenue to Old Robinson Road. The speed limit is set at 45 mph along the corridor. This corridor provides access to University High School and the Waco ISD Stadium.

INJURY COLLISION STATISTICS



TRENDS





EXISTING CONDITIONS

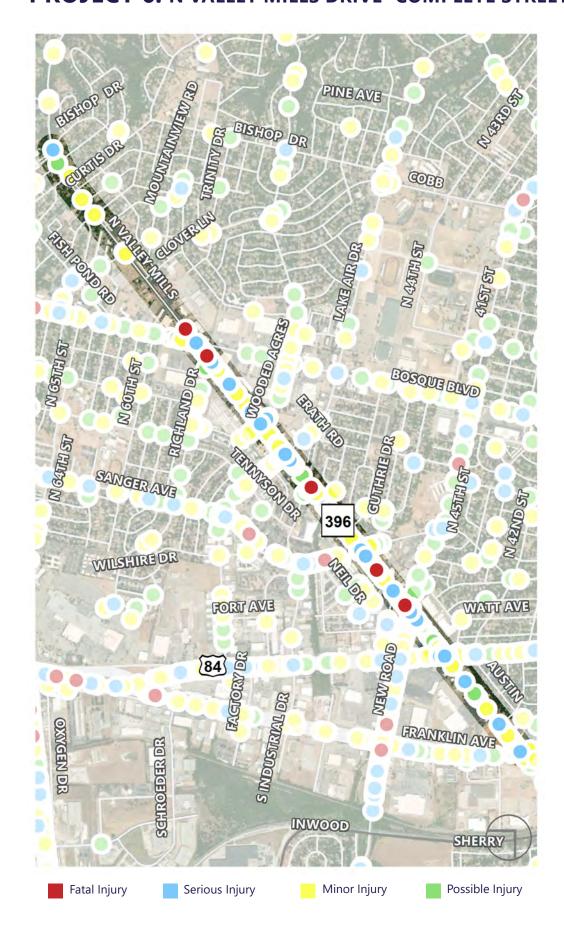


Existing Condition:S New Rd at Creekview Dr facing west

Existing Condition:S New Rd at Rolando Ave facing east



5: S NEW RD- CORRIDOR SAFETY IMPROVEMENTS				
	IMPROVEMENTS	LOCATIONS	ESTIMATED COST	
**	Pedestrian Connectivity Improvements (Sidewalk and Crosswalks)	S New Rd from Franklin Ave to Old Robinson Rd & Beverly Dr from New Rd to Industrial Ave	\$4,556,300	
8 6	Install Median		\$4,953,600	
9 8 3	Install Striping Upgrades	S New Rd from Franklin Ave to Old Robinson Rd	\$152,200	
	Install Street Lighting		\$143,800	
		CONTINGENCY COST	\$1,961,200	
		ENGINEERING COST	\$4,118,500	
		TOTAL COST	\$15,885,600	



N Valley Mills Drive, a four-to six-lane minor arterial with a center two-way left turn lane, runs through a mix of commercial and residential areas from Bishop Drive to Franklin Avenue. The speed limits vary, set at 40 mph from Bishop Drive and New Road and 55 mph between New Road and Franklin Avenue. Schools- including the Valor Preparatory Academy, Eagle Christian Academy, and Harmony Science Academy- are within 0.25 mile of this corridor.

INJURY COLLISION STATISTICS



TRENDS





55%



EXISTING CONDITIONS



Existing Condition: N Valley Mills Dr at Sanger Ave facing west

Existing Condition: N Valley Mills Dr at Clover Ln facing east

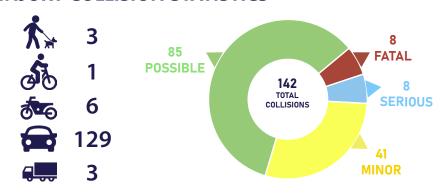


6: N VALLEY MILLS DR- COMPLETE STREET IMPROVEMENTS				
	IMPROVEMENTS	LOCATIONS	ESTIMATED COST	
	Road Diet		\$558,900	
	Access Management and Install Medians		\$3,747,700	
	Street Lighting	N Valley Mills Dr from Bishop Dr to Franklin Ave	\$1,069,500	
SPEED LIMIT ?	Speed Limit Reduction		\$3,800	
**	Pedestrian Connectivity Improvements (Sidewalk and Crosswalks)		\$4,739,700	
		CONTINGENCY COST	\$2,024,000	
		ENGINEERING COST	\$4,250,300	
		TOTAL COST	\$16,393,900	



Lake Shore Drive, a four-lane minor arterial with a center two-way left turn lane, runs through a mix of commercial and residential areas from Mt Carmel Drive to N 19th Street. The speed limits vary, set at 40 mph from Mt Carmel Drive and Hillcrest Drive and 50 mph between Hillcrest Drive and N 19th Street. Lakeshore Drive is within 0.25 mile of Vanguard Preparatory School.

INJURY COLLISION STATISTICS



TRENDS



EXISTING CONDITIONS



Existing Condition:

Lake Shore Dr at Airport Rd facing north

Existing Condition:Lake Shore Dr at Park Lake Dr facing south

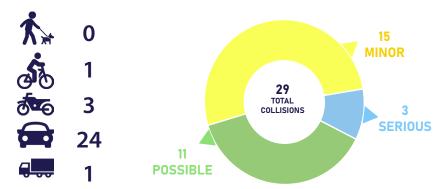


7-A: LAKE SHORE DR- CORRIDOR SAFETY IMPROVEMENTS					
	IMPROVEMENTS	LOCATIONS	ESTIMATED COST		
	Shared Use Path		\$3,606,800		
**	Bridge Improved Pedestrian Access		\$110,400		
	Install Median	From N 19th St to Mt Carmel Dr	\$8,245,000		
	Install Street Lighting		\$1,547,900		
	Improve Sight Distance		\$31,100		
		CONTINGENCY COST	\$1,958,600		
		ENGINEERING COST	\$4,113,100		
		TOTAL COST	\$15,864,600		



Lake Shore Drive/N Valley Mills Drive, a two-lane undivided minor arterial, runs through a mix of residential and recreational areas from Mt Carmel Drive to Bishop Drive. The speed limit is set at 40 mph. Lakeshore Drive is within 0.25 miles of Vanguard Preparatory School.

INJURY COLLISION STATISTICS



TRENDS



EXISTING CONDITIONS



Existing Condition:

N Valley Mills Dr at La Porte Dr facing west

Existing Condition:



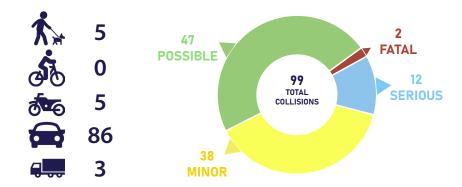
N Valley Mills Dr at Hanover Dr facing east

7-B: LAKE SHORE DR/N VALLEY MILLS DR- CORRIDOR SAFETY IMPROVEMENTS				
_	IMPROVEMENTS	LOCATIONS	ESTIMATED COST	
	Install Street lighting	Mt Carmel Dr to Bishop Dr	\$201,300	
	Minor Streets Sight Distance Improvements		\$15,000	
PRE	Install Speed Feedback Sign		\$34,500	
		CONTINGENCY COST	\$50,200	
		ENGINEERING COST	\$105,400	
		TOTAL COST	\$406,400	

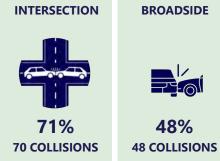
OWNE OAKS DR N INDUSTRIAL DR LAKEAIRDR RICHLAND DR N 53TH ST WILSHIRE DR N 60TH ST N 62ND ST OWEN LM OLD MEGREGORIED AMERICAN PLZ 6 RAMBLER DR Minor Injury Possible Injury

Sanger Avenue, a four-lane minor arterial, provides access through a mix of commercial and residential areas from State Highway 6 to N Valley Mills Drive. The speed limit is set at 30 mph along the corridor. Sanger Avenue provides access to Tennyson Middle School.

INJURY COLLISION STATISTICS



TRENDS



BROADSIDE

48%





EXISTING CONDITIONS



Existing Condition: Sanger Ave at Towne Oaks Dr facing east

> **Existing Condition:** Sanger Ave at N 60th St facing west



8: SANGER AVENUE- SAFETY IMPROVEMENTS				
	IMPROVEMENTS	LOCATIONS	ESTIMATED COST	
	Road Diet Improvements	Sanger Ave from SH 6 to N Valley Mills Dr	\$232,500	
**	Fill Sidewalk Gaps		\$3,747,000	
79tt 25	Speed Feedback Signs		\$34,500	
	Access Management		\$3,479,500	
	Install Street Lighting		\$393,300	
		CONTINGENCY COST	\$1,577,400	
		ENGINEERING COST	\$3,312,500	
		TOTAL COST	\$12,776,700	