11.0 CITY OF SELMA

The City of Selma has an approximate population of 24,402.⁵³ The average daily vehicle miles traveled is 167,390, and the City maintains approximately 83 total roadway centerline miles. The major roadways in the city include Golden State Highway and S Highland Avenue, which both run north to south, and Floral Avenue, which runs from east to west. Based on the review of crash data conducted as part of the LRSP, pedestrians and bicyclists are overrepresented in fatal and severe injury crashes. The top three fatal and severe injury collision types in Selma were **vehicle-pedestrian**, **rear end**, and **hit object** crashes; the top three fatal and severe injury primary collision factors were **pedestrian violation**, **automobile right of way**, and **driving under the influence**. The LRSP provides potential engineering, education, emergency services, and enforcement strategies tailored to Selma's crash history and local priorities, as well as performance measures to evaluate progress.

VISION AND GOALS

The City's vision for roadway safety is:



A roadway network that supports safe travel for our community.

The City's roadway safety goals in support of the vision are:

- 1. Perform regular reviews of crash data to identify and prioritize opportunities to reduce crash risk.
- 2. Provide opportunities for citizen engagement in identifying issues and developing solutions for roadway safety across the community.
- 3. Reduce the number of annual fatal and severe injury crashes across all public City roadways by 50 percent by 2026.
- 4. Reduce the number of pedestrian and bicycle crashes on public City roadways by 50 percent by 2026.

^{53 2018} population. Source: California Department of Finance



- 5. Coordinate with traffic safety stakeholders such as fire, police, schools, and parks to exchange information and ideas specific to enhancing roadway safety performance through engineering, enforcement and educational strategies.
- 6. Partner with other local agencies to promote roadway safety.

SAFETY PARTNERS

A variety of agency staff and community partners were involved throughout the development of this LRSP and played an integral role in identifying priorities, providing local context, and reviewing the existing conditions analysis. Many of the strategies identified in this plan will require coordination with these partners and their support of the City's effort to create a culture of roadway safety. Selma's goals reflect the importance of partnering with local agencies, engaging with citizens, and coordinating with traffic safety stakeholders to identify issues and implement solutions. While additional partners may be identified in the future, those involved in development of the LRSP include:

- Selma Rotary
- Adventist Health
- Bringing Broken Neighborhoods Back to Life (BBNBTL)
- Caltrans
- Fresno Council of Governments
- Fresno County Rural Transit
- Kings View Community Services

- Selma Department of Engineering
- Selma Department of Public Works
- Selma District Chamber of Commerce
- Selma Fire Department
- Selma Police Department
- WestCare Foundation

PERFORMANCE MEASURES

Performance measures are used to track progress and a key element of making data-informed decisions. Performance measures that support the City's vision, goals, and emphasis areas include:

- Annual number of crashes (city-wide and at each of the top twenty priority locations)
- Annual number of fatal and severe injury crashes (city-wide and at each of the top twenty priority locations)
- Annual number of pedestrian and bicycle crashes (city-wide and at each of the top twenty priority locations)
- Annual number of rear end crashes (city-wide)
- Annual number of hit object crashes (city-wide)
- Annual number of crashes with a primary collision factor of unsafe speed (city-wide)
- Annual number of crashes with a primary collision factor of driving or bicycling under the influence of alcohol or drugs (city-wide)

- Investments made in roadway safety countermeasures (e.g. dollars spent, grants pursued, partnerships developed)
- Investments made in education and enforcement strategies (e.g. dollars spent, grants pursued, partnerships developed)
- Coordination with other local agencies and/or safety partners (e.g. meetings held, projects pursued)
- Opportunities provided for citizen engagement (e.g. meetings held, public campaigns launched)
- Coordination between first responders and City staff (e.g. meetings held, programs implemented, strategies deployed)

As part of plan implementation, the City will identify a process for annually tracking these performance measures to support future updates to this roadway safety plan.

DATA SUMMARY

The primary data sets used to inform the technical analyses for the City's local road safety plan were crash data and roadway network information. As noted below, future updates could incorporate traffic volume data if widely available for locations across the City. In addition, feedback from a publicly available survey was documented for consideration in identifying issues and improvement strategies.

Public Survey Feedback

Toole Design Group worked with Fresno COG to develop an online survey and interactive webmap to provide the opportunity for public engagement on the LRSP. The goal was to collect both general and geographically specific feedback on safety problems, desired safety improvements in jurisdictions that are part of the MLRSP, as well as voluntary demographic information for Title IV reporting. Both activities were open from August 16, 2021 to September 20, 2021 and sought public feedback on spatial patterns of traffic safety concerns and desired improvements.

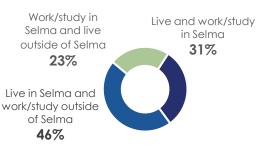
As the primary open public engagement opportunity during MLRSP development, the survey and interactive webmap served a crucial role in illuminating the community's traffic safety concerns and desired traffic safety improvements. Below is a summary of key findings from the online survey and interactive webmap specific to Selma. More information on the methodology and overall findings of the survey are provided in Appendix A.







WHERE PARTICIPANTS WORK AND LIVE





- Lack of safe places to walk, bike, or wait for the bus
- Lack of safe opportunities to cross the street
- Poor lighting or poor visibility
- The survey asked respondents to provide input on the top road safety improvements needed in their communities. While the survey prompted participants to pick three improvements, some selected more than three responses. A total of 41 responses were received for Selma from 13 participants, with the most common desired improvement types including
 - o Maintenance of existing roads and streets (10 responses)
 - o Rural road improvements to prevent run-off-road crashes (6 responses)
 - o Speed enforcement (6 responses)
 - o Bike lanes/bikeways (5 responses)
- Participants dropped points in the webmap in specific locations across Fresno County where they experienced road safety concerns. When leaving a point, participants could select from a list of traffic safety concerns and the kinds of travel impacted, with the ability to select as many responses as applicable. A text box gave participants the option to note what they think would make the location safer. A total of 6 locations were noted in Selma, noting the following traffic safety concerns:
 - Lack of safe places to walk, bike, or wait for the bus (5 responses)
 - Lack of safe opportunities to cross the street (3 responses)
 - o Poor lighting or poor visibility (3 responses)
 - o Crashes or near misses happen here (3 responses)
 - Speeding or aggressive driving (2 responses)
 - o People driving do not obey red lights, stop signs, or turn signals (1 response)
- The survey asked participants where they live and work or study, with the option to select from a list of jurisdictions or outside of Fresno County. The participants who selected Selma included:
 - 4 who live and work/study in Selma
 - o 6 who live in Selma and work/study outside of Selma
 - 3 who work/study in Selma and live outside of Selma



Crash Data

Kittelson worked with Fresno COG to assemble crash data for the City of Selma using the Statewide Integrated Traffic Records System (SWITRS) database, supplemented with location information from the Transportation Injury Mapping System (TIMS) database maintained by SafeTREC at the University of California, Berkeley.

The crash database represents the time period from January 1, 2015 through December 31, 2019 and includes reported crashes that occurred on public streets. Within the assembled regional crash database, a total of 629 reported crashes are located in Selma. Crash severity is coded according to the highest degree of injury exhibited, and the data used for this analysis includes the following coded severity levels (listed in descending order):

- Fatal: death from injuries sustained in the crash.
- Severe Injury: Injuries include, for example, broken bones, severe lacerations, or other injuries that go beyond the reporting officer's assessment of "other visible injuries."
- Other visible injury: An injury, other than those described above, that is evident to observers at the scene of the crash. For example, bruises or minor lacerations.
- Complaint of pain: Internal or other non-visible injuries. For example, a person limps or seems incoherent.
- Property damage only (PDO): No injuries sustained.

Roadway Network Data

Kittelson developed a linear referencing system of all public roadways using the Fresno County roadway centerline file. This dataset was updated to develop a measurement system based on the total road length (as determined by roadway name) to locate crashes to a specific mile point along the network. The master roadway network for the County was used to spatially analyze and prioritize specific locations within each local jurisdiction.

Traffic Volume Data

Traffic volume data was not consistently available at a sufficient level to be able to incorporate into the safety analysis. Future updates to the City's local road safety plan could incorporate traffic volume data, if available, to understand how crash frequency, severity, and type vary at different levels of traffic.



EXISTING ROADWAY SAFETY PERFORMANCE

The findings in this section are based on the crash database, which includes reported crashes from January 1, 2015 through December 31, 2019. It is organized as follows:

- All Road Users
 - Severity by Road User
 - o Year, Month, and Weather
 - o Collision Type
 - o Location, Collision Type, and Severity
 - o Primary Collision Factor
 - o Lighting
 - o Time of Day
- Pedestrian-involved Crashes
 - Year and Month
 - o Pedestrian Action and Location
 - o Lighting
- Bicyclist-involved Crashes
 - o Collision Type
 - o Primary Collision Factor
 - Lighting



All Road Users

This section includes analysis and findings for all reported crashes. Subsequent sections focus exclusively on crashes involving pedestrians and bicyclists.

SEVERITY BY ROAD USER

Table 72 presents reported crashes, organized by severity level and road user. Five of the 11 fatal crashes are vehicle-only crashes; pedestrians or bicyclists were involved with the remaining six fatalities. The most common severity type for both pedestrian and bicycle involved crashes is visible injury.

Table 72: Crash Severity by Road User Involved

Road Users Involved	Fatal (% of column)	Severe Injury (% of column)	Visible Injury (% of column)	Complaint of Pain (% of column)	Property Damage Only (% of column)	Total (% of column)
Pedestrian Involved	3 (10%)	3 (10%)	11 (38%)	10 (35%)	2 (7%)	29 (4.5%)
Bicycle Involved	3 (10%)	1 (3%)	12 (41%)	9 (31%)	4 (15%)	29 (4.5%)
Vehicle Only or Vehicle-Fixed Object	5 (1%)	6 (1%)	50 (9%)	140 (24%)	370 (65%)	571 (91%)
Reported Crashes	11 (100%)	10 (100%)	73 (100%)	159 (100%)	376(100%)	629 (100%)
Severity Share of Reported Crashes	2%	2%	11%	25%	60%	100%

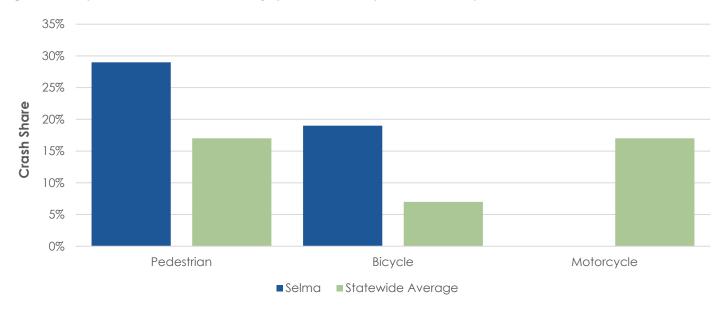
Source: SWITRS, TIMS, Kittelson, 2021.



California's Strategic Highway Safety Plan (SHSP) includes 16 challenge areas to focus statewide resources and efforts. Three of those challenge areas are crashes involving pedestrians, bicyclists, and motorcyclists. The SHSP analyzed the share of fatal and severe injury crashes involving each of these road users. Figure 146 compares crash trends in Selma to the statewide trends reported in the SHSP.

- There is a higher proportion of pedestrian and bicycle crashes among fatal/severe injury crashes in Selma compared to the statewide average.
- City of Selma has no reported fatal/severe motorcycle crashes.

Figure 146: City of Selma Fatal and Severe Injury Crash Shares by Road User Compared to Statewide Trends



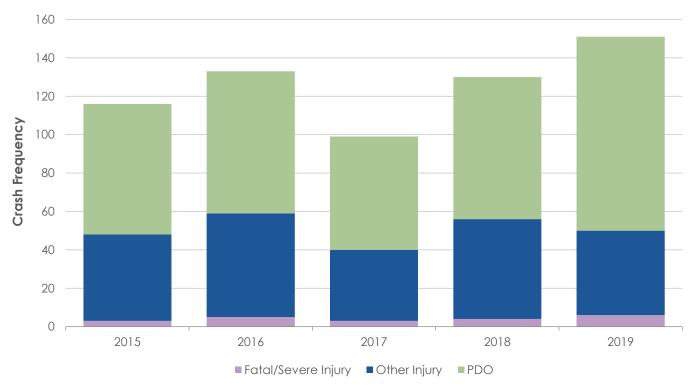
Source: SHRP, SWITRS, TIMS, Kittelson, 2021.



YEAR, MONTH, AND WEATHER

Figure 147 shows year-over-year trends in the data by severity. The annual average number of reported crashes is 126. Except for a notably low number of reported crashes in 2017, year-over-year trends generally indicate an increase in crashes over time. Fluctuations from a single year to the next tend to represent the degree of randomness in crash occurrence and are not necessarily indicative of an overall trend.

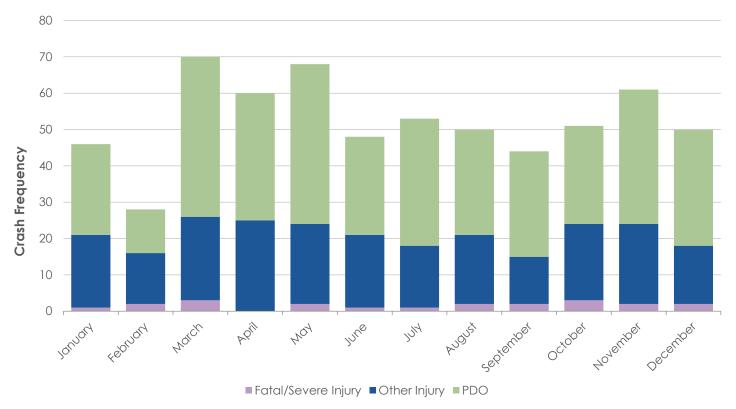
Figure 147: Year-over-Year Trends in Crash Data by Severity



Source: SWITRS, TIMS, Kittelson, 2021.

Figure 148 shows the total monthly crash trends by severity. The average monthly crash frequency is 52. There is some fluctuation in each month near the average. Higher frequencies are observed in March and May and lower frequencies in February.

Figure 148: Crashes by Month and Severity



Source: SWITRS, TIMS, Kittelson, 2021.



Figure 149 illustrates crashes by month weather condition. The most common weather condition, clear weather, is not shown in the chart below to highlight the weather's factor on crash trends. Most crashes occurred in clear conditions (85 percent), while 8 percent in cloudy conditions, 4 percent in rainy conditions, and 1 percent in foggy conditions. Crashes in cloudy conditions are higher in winter between November and March, and rainy conditions peak in the same months to a lesser extent.

25% 20% Share of Crashes by Weather 15% 10% 5% 0% Feb Mar Jun Jul Aug Sep Oct Nov Jan May Dec

Fog

Figure 149: Crashes by Month and Weather Condition

Source: SWITRS, TIMS, Kittelson, 2021.

Note: Only select conditions shown to improve legibility for less frequent weather conditions.

—Cloudy

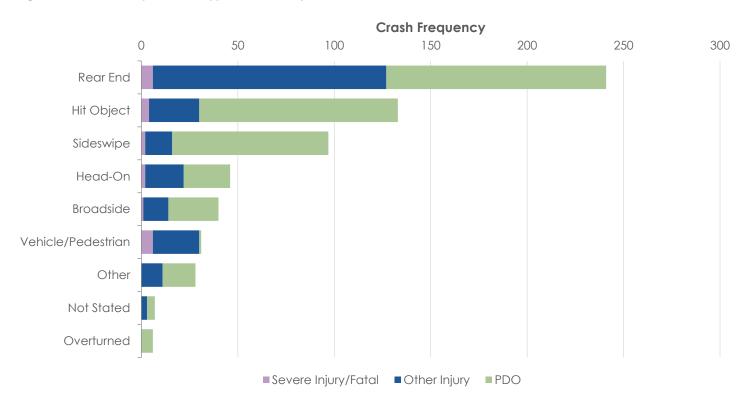


COLLISION TYPE

Figure 150 presents the collision types by severity.

- The most frequent collision types are **rear end** (53 percent of crashes), **hit object** (23 percent), and **sideswipe** (16 percent).
- Among fata/severe injury crashes, the most frequent collision types are vehicle/pedestrian (29 percent), rear end (29 percent), and hit object (19 percent).

Figure 150: Crashes by Collision Type and Severity



Source: SWITRS, TIMS, Kittelson, 2021

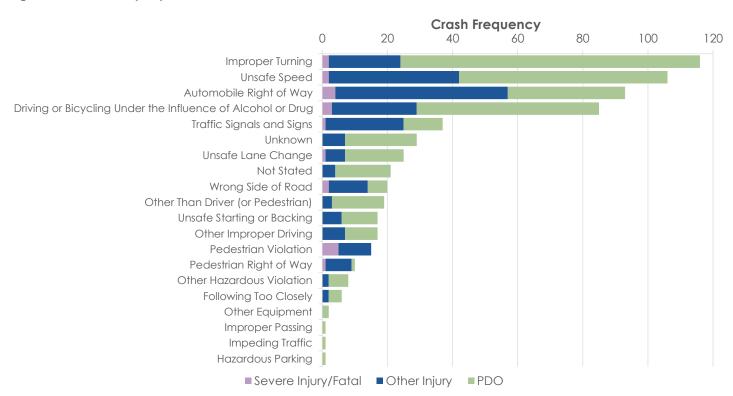


PRIMARY COLLISION FACTOR

Reporting officers identify a primary collision factor (PCF) for each crash. It is up to the officer's judgement and information available at the scene for them to select the factor that is most relevant. Officers select one from among a list of PCFs based on California Vehicle Code (CVC) and road user behavior. Figure 151 presents the most frequently cited PCFs in crashes in Selma.

- The three most common PCFs for all collision types are **improper turning**⁵⁴ (18 percent), **unsafe** speed⁵⁵ (17 percent), and automobile right of way⁵⁶ (15 percent).
- The three most frequently reported PCFs among fatal/severe injury crashes are pedestrian violation⁵⁷, automobile right of way⁵⁶, and driving or bicycling under the influence of alcohol or drugs⁵⁸.

Figure 151: Crashes by Reported PCF



Source: SWITRS, TIMS, Kittelson, 2021.

⁵⁸ Reported PCF based on CVC violation indicating driver was under the influence of alcohol.



⁵⁴ Reported PCF based on CVC violation indicating a failure while turning from a direct course without reasonable safety or not signaling appropriately.

⁵⁵ Reported PCF based on CVC violation indicating unsafe speeding on a highway.

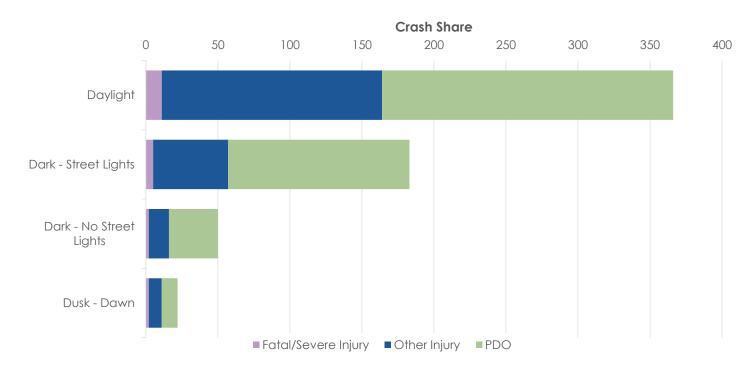
⁵⁶ Reported PCF based on CVC violation indicating a driver turning failed to yield right-of-way to oncoming traffic.

⁵⁷ Reported PCF based on CVC violation indicating a pedestrian failure to yield the right of way to other vehicles.

LIGHTING

Figure 152 shows crashes by reported lighting condition and severity. Over half of reported crashes occurred in daylight and 30 percent of all crashes occurred in the dark with streetlights. Most fatal/severe injury crashes occurred in daylight.

Figure 152: Crashes by Lighting and Severity



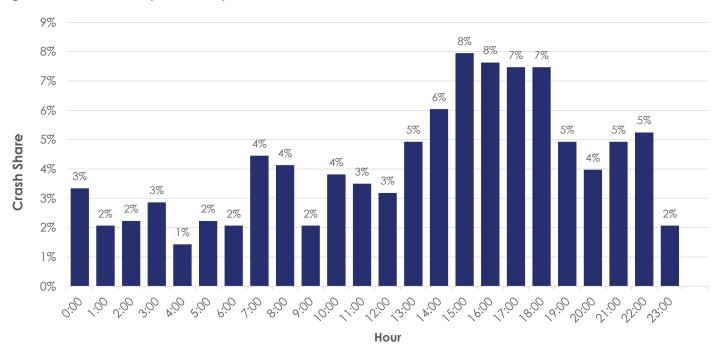
Source: SWITRS, TIMS, Kittelson, 2021.



TIME OF DAY

Figure 153 shows crashes by time of day. Crashes are highest between the hours of 3 PM and 6 PM. Crashes are lowest overnight between 11 PM and 7 AM.

Figure 153: Crash Share by Time of Day



Source: SWITRS, TIMS, Kittelson, 2021.

Pedestrians

This section focuses exclusively on reported crashes involving pedestrians. Table 73 shows the distribution of pedestrian crashes by severity. Crashes resulting in fatalities or severe injuries represent 20 percent of reported pedestrian-involved crashes. Most crashes resulted in some level of injury, while 8 percent resulted in property damage only.

Table 73: Severity by Pedestrians Involved

	Fatal (% of Total)	Severe Injury (% of Total)	Other Injury (% of Total)	Property Damage Only (% of Total)	Total
Pedestrian Involved	3 (10%)	3 (10%)	21 (72%)	2 (8%)	29 (100%)

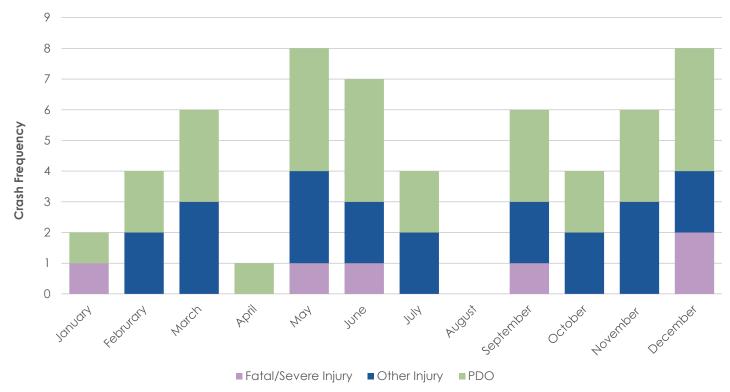
Source: SWITRS, TIMS, Kittelson, 2021.



SEVERITY AND MONTH

Figure 154 shows pedestrian crashes by month and type. Pedestrian crashes are highest during May, June and December, and lowest in August with no crashes. Fatal/severe injury crashes are reported in January, May, June, September, and December.

Figure 154: Pedestrian Crashes by Month and Severity



Source: SWITRS, TIMS, Kittelson, 2021.

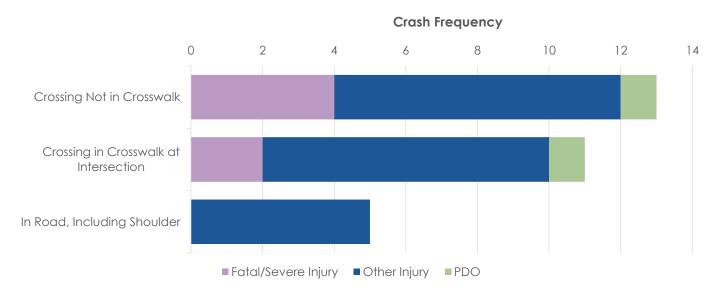


PEDESTRIAN ACTION AND LOCATION

For pedestrian crashes, data is recorded according to the reporting officer's best judgment about the pedestrian's action and location preceding the crash.

Figure 155 reports these trends in the City of Selma. All reported fatal and severe injury crashes occurred when a pedestrian was either crossing not in a crosswalk or crossing in a crosswalk at an intersection.

Figure 155: Pedestrian Crashes by Reported Action/Location and Severity



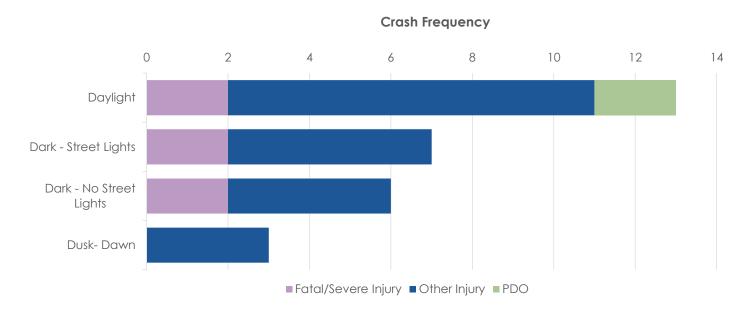
Source: SWITRS, TIMS, Kittelson, 2021.



LIGHTING

Figure 156 shows reported pedestrian crashes by lighting condition. Nearly half (45 percent) of crashes occurred in daylight, while 24 percent occurred in the dark with streetlights, 21 percent occurred in the dark with no streetlights, and 10 percent occurred in dusk-dawn.

Figure 156: Pedestrian Crashes by Lighting Condition and Severity



Source: SWITRS, TIMS, Kittelson, 2021.

Note: "Other injury" includes "Other visible injury" and "Complaint of pain" crashes. "PDO" = property damage only.

Bicyclists

This section focuses exclusively on reported crashes involving bicyclists. Table 74 presents bicyclist-involved crashes organized by severity level. Of the 29 bicyclist crashes in the Selma, 11 percent resulted in fatalities or severe injuries. Most crashes resulted in other injury, and four crashes resulted in property damage only.

Table 74: Bicycle User Involved Crashes by Severity

	Fatal (% of total)	Severe Injury (% of total)	Other Injury (% of total)	Property Damage Only (% of total)	Total (% of total)
Bicycle Involved	3 (10%)	1 (4%)	21 (72%)	4 (14%)	29 (100%)

Source: SWITRS, TIMS, Kittelson, 2021.

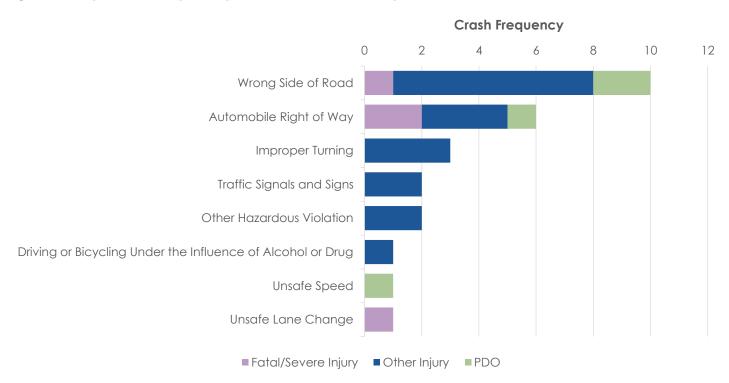


PRIMARY COLLISION FACTOR

Figure 157 shows bicycle-involved crashes by reported PCF.

- The most frequent PCF is **wrong side of road**⁵⁹ at ten crashes followed **by automobile right of way**⁶⁰ at six crashes.
- The most severe outcomes occurred with the PCFs wrong side of road⁵⁹, automobile right of way⁶⁰, and unsafe lane change⁶¹.

Figure 157: Bicycle Crashes by Primary Collision Factor and Severity



Source: SWITRS, TIMS, Kittelson, 2021.

⁶¹ This is a reported PCF that indicated one of several California Vehicle Violation codes indicating driver performed unsafe lane change.



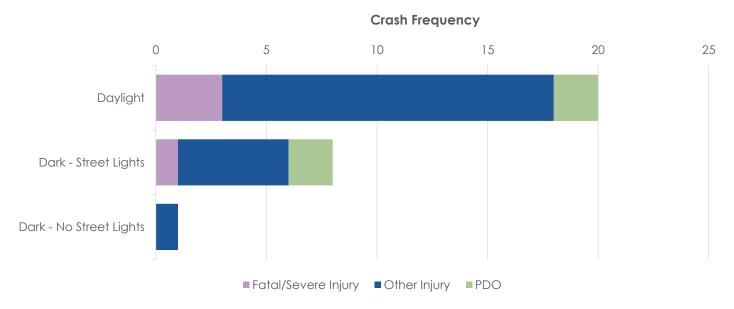
⁵⁹ Reported PCF based on CVC violation indicating the driver/rider was on the wrong side of the road.

⁶⁰ Reported PCF based on CVC violation indicating a driver turning failed to yield right-of-way to oncoming traffic.

LIGHTING

Figure 158 shows bicycle crashes by lighting condition. Just over two thirds of crashes occurred in daylight, while about a third occurred in the dark with streetlights. The majority of fatal and severe injury crashes occurred in daylight.

Figure 158: Bicycle Crashes by Lighting and Severity



Source: SWITRS, TIMS, Kittelson, 2021.



Priority Locations

Kittelson identified priority intersections and segments using the annualized crash severity scores and excess predicted crashes described in the Data Summary and Analysis Approach sections (see the Introduction).

For intersection locations, the crash severity scores ranged from zero (no reported crashes during the five years) to 77.51. Figure 159 shows the results of the crash severity scoring. Figure 160 shows excess predicted crash scores by percentiles for intersection locations. For the half-mile roadway segments, the crash severity scores ranged from zero to 70.02. Crash severity score results for roadway segments are shown in Figure 161. Excess predicted crash score results are shown in Figure 162. Intersections or segments shown as not falling within one of the percentile breaks indicates there were no reported crashes at that location.

Members of the Focus Group for Selma noted that at-grade crossings should also be considered as priority locations for improvement.

Table 75 presents the top twenty locations with the highest crash severity scores.

Table 75. Top 20 Locations based on Crash Severity Score

							Severity		
#	Location	Туре	Crash Severity Score	Total Number of Crashes	Fatal	Severe Injury	Other Visible Injury	Com- plaint of Pain	PDO
1	MCCALL AVE & GOLDRIDGE ST	Unsignalized	77.51	4	0	2	0	1	1
2	FLORAL AVE FROM WEST OF DE WOLF AVE TO EAST OF LEONARD AVE	Segment	70.02	8	2	0	1	1	4
3	MOUNTAIN VIEW AVE FROM WEST OF MCCALL AVE TO EAST OF MCCALL AVE	Segment	68.40	5	1	1	1	0	2
4	WHITSON ST & GAITHER ST	Unsignalized	40.88	5	1	0	0	2	2
5	SECOND ST & YOUNG ST	Unsignalized	40.06	6	0	1	0	1	4
6	FLORAL AVE & FRONT ST	Unsignalized	39.86	5	1	0	0	1	3
7	THOMPSON AVE & FRONT ST	Unsignalized	39.46	3	0	1	0	1	1
8	MITCHELL AVE & NELSON BLVD	Unsignalized	38.65	4	1	0	0	0	3
9	MCCALL AVE & VALLEY VIEW AVE	Unsignalized	38.45	3	0	1	0	0	2
10	THOMPSON AVE & NEBRASKA AVE	Unsignalized	38.45	3	0	1	0	0	2
11	WRIGHT ST & ASPEN ST	Unsignalized	38.05	1	0	1	0	0	0
12	WRIGHT ST & NORTHHILL ST	Unsignalized	38.05	1	0	1	0	0	0
13	MOUNTAIN VIEW AVE FROM EAST OF MCCALL AVE TO WEST OF STATE ROUTE 99	Segment	37.29	15	1	0	4	1	9
14	HIGHLAND AVE FROM NEBRASKA AVE TO ROSE AVE	Segment	36.58	7	1	1	0	3	2



			Cumah	Total			Severity		
#	Location	Туре	Crash Severity Score	Total Number of Crashes	Fatal	Severe Injury	Other Visible Injury	Com- plaint of Pain	PDO
15	WHITSON ST FROM CINEMA WY TO FRONT ST	Segment	35.07	2	1	0	1	0	0
16	HIGHLAND AVE FROM STATE ROUTE 99 to FRONT ST	Segment	34.55	4	1	0	0	1	2
17	DITCH RD FROM DINUBA AVE TO NORTH OF DINUBA AVE	Segment	33.53	4	1	0	0	0	3
18	WHITSON ST FROM GOLDEN STATE BLVD TO 3 RD ST	Segment	33.13	2	0	1	0	0	1
19	WRIGHT ST & FLORAL AVE	Signal	32.24	8	1	0	2	3	2
20	HIGHLAND AVE & FRONT ST & GOLDEN STATE BLVD	Signal	26.73	10	1	0	0	1	8

Note: PDO = Property Damage Only







75-90th Percentile



50-75th Percentile County Boundary

90-95th Percentile

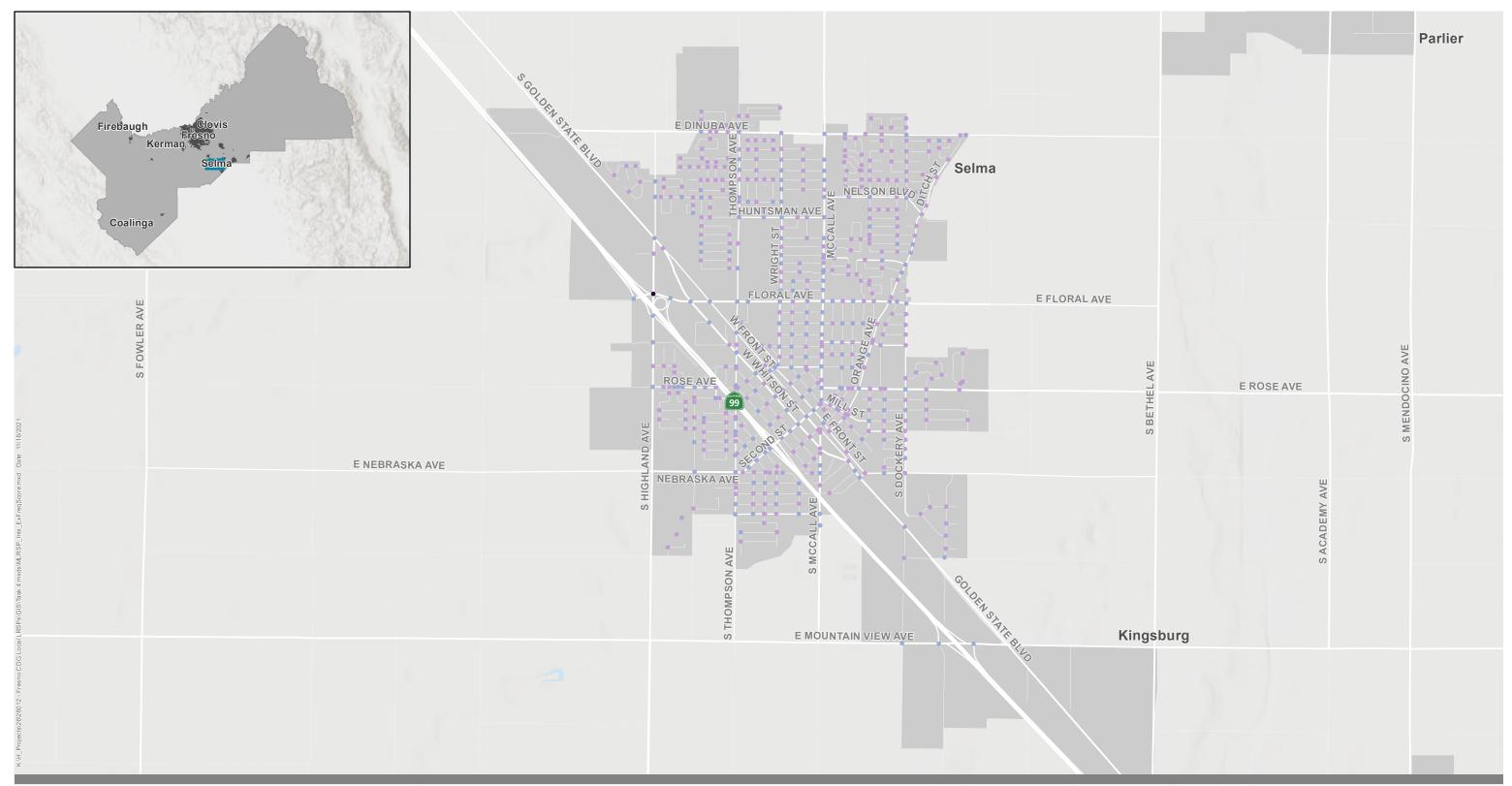
95-100th Percentile

0-50th Percentile

City Limits







Excess Expected Frequency

95-100th Percentile

90-95th Percentile

75-90th Percentile



City Limits

50-75th Percentile

County Boundary

0-50th Percentile



Figure 160





95-100th Percentile

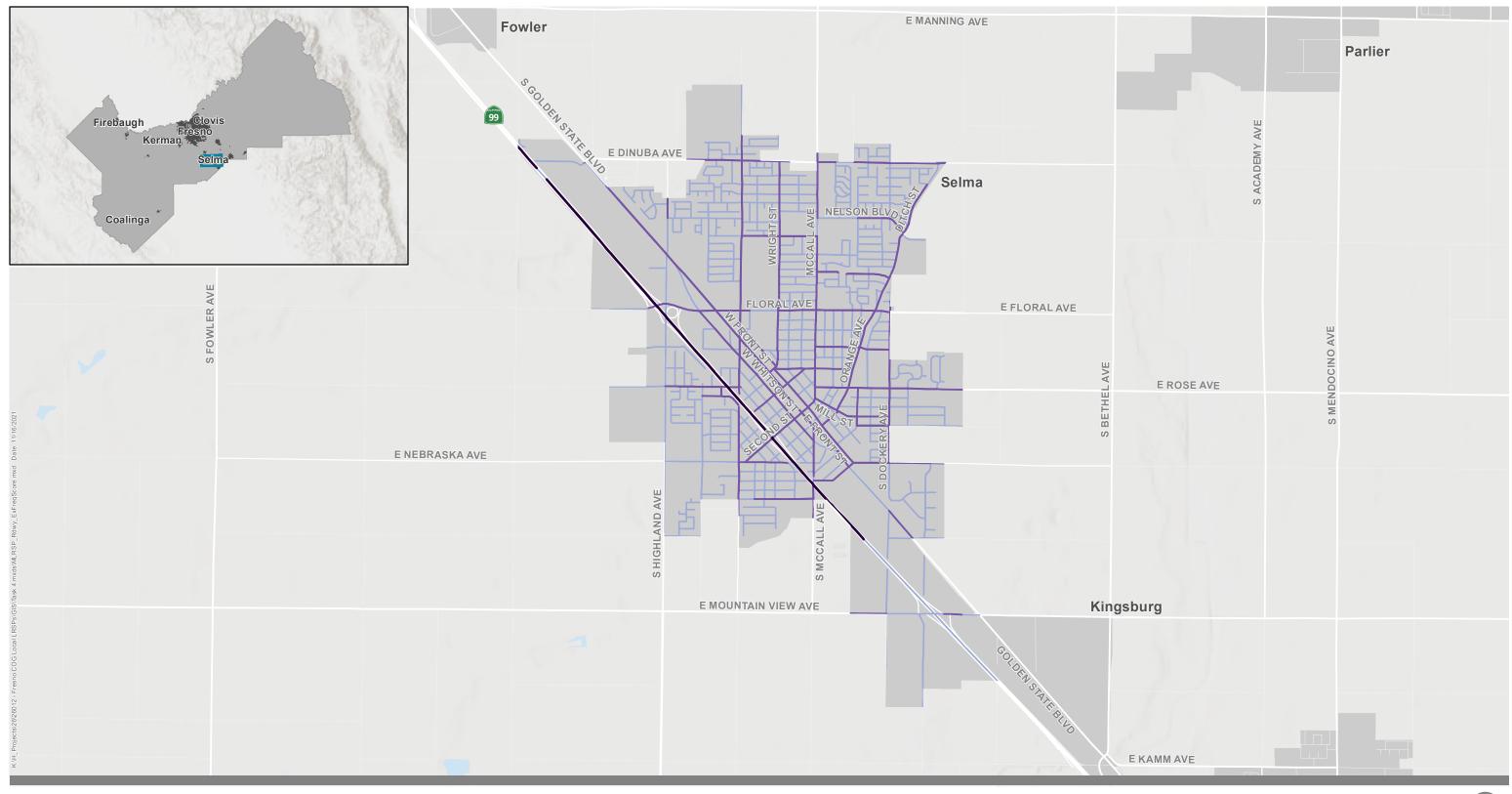
90-95th Percentile

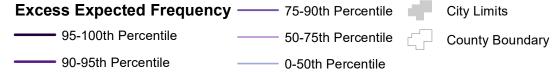
50-75th Percentile

0-50th Percentile

County Boundary

Figure 161









EMPHASIS AREAS

Based on key trends in the crash data, emphasis areas for the City of Selma include pedestrian and bicycle crashes, rear end crashes, hit object crashes, and strategies aimed at unsafe speed and driving under the influence. Each of these areas is further discussed below.

Pedestrian and Bicycle Crashes

Pedestrian and bicycle crashes were identified as a focus area given the overrepresentation of pedestrians and bicyclists in fatal and severe crashes. Of the eleven fatal crashes, three involved a pedestrian and three involved a bicyclist. Of the ten severe injury crashes, three involved a pedestrian and one involved a bicyclist. The most common pedestrian action preceding a crash was crossing the roadway outside a crosswalk, followed by crossing the roadway in a crosswalk. The most frequently cited primary collision factor in bicycle crashes was wrong side of road driving/riding, which could indicate bicyclists riding in the opposite direction from traffic along a shoulder or sidewalk depending on their options for crossing a street to access adjacent land uses. These pedestrian actions and bicyclist behaviors suggest opportunities for improvements to pedestrian and bicycle infrastructure.

Pedestrians and bicyclists are identified as two of the six high priority challenge areas in the California SHSP. These challenge areas "were identified through historical data evaluations and feedback from traffic safety stakeholders across the state" (Caltrans SHSP). The high priorities represent "the greatest opportunity to reduce fatalities and serious injuries across the state" (Caltrans SHSP).

Rear End Crashes

Rear end crashes were identified as a focus area due to the frequency and severity of these collision types. Rear end crashes are the most common collision type and include two of the eleven fatal crashes and four of the ten severe injury crashes. As discussed below under Engineering Strategies, countermeasures are available targeted at rear end crashes.

Hit Object Crashes

Hit object crashes were selected as an emphasis area due to their frequency and severity. They are the second most common collision type and comprise three of the eleven fatal crashes. A variety of roadway countermeasures are available targeted at slowing traffic speeds and reducing hit object crashes.

The California SHSP includes lane departures as one of the six high priorities in California. As indicated in the Caltrans SHSP, "the Lane Departures Challenge Area includes head-on, hit object, and overturned crashes. This includes instances where a vehicle runs off the road or crosses into the opposing lane prior to the collision." These crashes are a high priority due to their severity level.



Driver Behavior

Unsafe speed is the second most frequently reported PCF among all reported crashes and was cited in one fatal crash and one severe injury crash. Driving or bicycling under the influence of alcohol and drugs is the third most common PCF cited in fatal/severe injury crashes. This suggests there are opportunities to address driver behavior through countermeasures that encourage lower speeds and education and enforcement.

The California SHSP also identified speed management/aggressive driving and impaired driving as two of the six high priorities in California, reflecting the potential to reduce fatalities and serious injuries by addressing these challenge areas.

STRATEGIES

The following subsections present engineering, education, emergency services, and enforcement strategies to help improve roadway safety across the City.

Engineering Strategies

The top three fatal and severe injury collision types in Selma were **vehicle-pedestrian**, **rear end**, and **hit object** crashes; the top three fatal and severe injury primary collision factors were **pedestrian violation**, **automobile right of way**, and **driving under the influence**. High priority countermeasures to address these collision types and primary collision factors in Table 76.

Table 76. High Priority Countermeasures

	Countermeasure Name	ID	Crashes Addressed
	Street Lighting	R1	Crashes at night
	Remove or Relocate Fixed Objects Outside of Clear Recovery Zone	R2	Hit Object
	Install Guardrails	R4	Hit Object
	Road Diet	R14	Hit Object
	Widen Shoulder	R15	Hit Object
Roadway Countermeasures	Improve Pavement Friction (High Friction Surface Treatment)	R21	Rear end, hit object
	Install/Upgrade Signs with New Fluorescent Sheeting	R22	Hit Object
	Install Dynamic/Variable Speed Warning Sings	R26	Hit Object
	Install Edgelines and Centerlines	R28	Hit Object
	Install Edgeline Rumble Strips/Stripes	R31	Hit Object
	Install Dynamic Regulatory Speed Warning Signs		Hit Object



	Countermeasure Name	ID	Crashes Addressed
	Add Intersection Lighting at Intersections	\$1/N\$1	Crashes at night
	Improve Signal Hardware: Lenses, Backplates with Retroreflective Border, Mounting Size, Number	\$2	Rear end
	Provide Advanced Dilemma-Zone Detection	\$4	Rear end
Intersection	Install Flashing Beacons as Advance Warning	\$10/N\$9	Rear end
Countermeasures	No Right-Turn on Red		Vehicle-pedestrian
	Install/Upgrade Stop Signs or Intersection Warning/ Regulatory Signs	NS6	All
	Upgrade Intersection Pavement Markings	NS7	All
	Install Splitter Islands for Minor Street Approaches	NS13	Rear end
	Install Bike Lanes	R32PB	Overrepresented bicycle collisioncrashes
	Install Sidewalk/Pathway	R34PB	Vehicle-pedestrian
Pedestrian/Bicycle	Install/Upgrade Pedestrian Crossing with Enhanced Features	R35PB	Vehicle-pedestrian
Countermeasures	Install Raised Medians (or Refuge Islands)	NS19PB	Vehicle-pedestrian
	Install/Upgrade Pedestrian Crossing at Uncontrolled Locations (with Enhanced Safety Features)	NS21PB	Vehicle-pedestrian
	Bike Lane Extension Through Intersections		Overrepresented bicycle crashes
	Bike Boxes		Overrepresented bicycle crashes

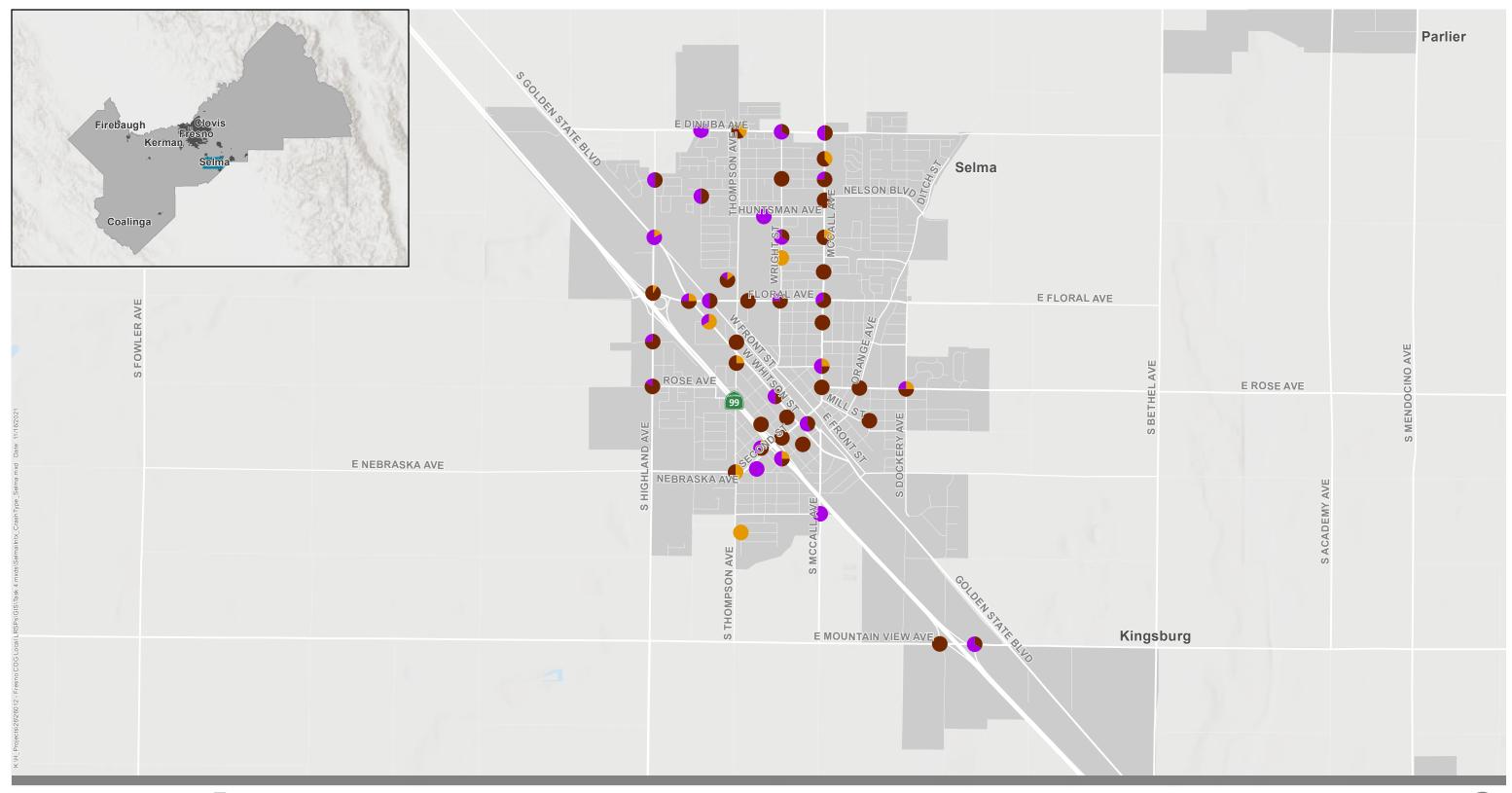
Note: The ID number references the Caltrans Manual Local Road Safety

Appendix B contains the regional Countermeasures Toolbox which includes more detailed information regarding the countermeasures listed above.

The following figures and tables provide data on collision types and factors for the intersections and roadways with the highest crash scores. The locations with the highest crash scores may be top priorities for implementing countermeasures and pursuing grants. Selma can use the information about collision type and factors to identify potential countermeasures to apply, using the information in Table 76.

Figure 163 and Figure 164 present the top priority intersections and breakdown of the top collision types and primary collision factors, respectively. Figure 165 and Figure 166 present the top priority roadways and breakdown of the top collision types and primary collision factors, respectively.





Collision Type

)

City Limits



County Boundary

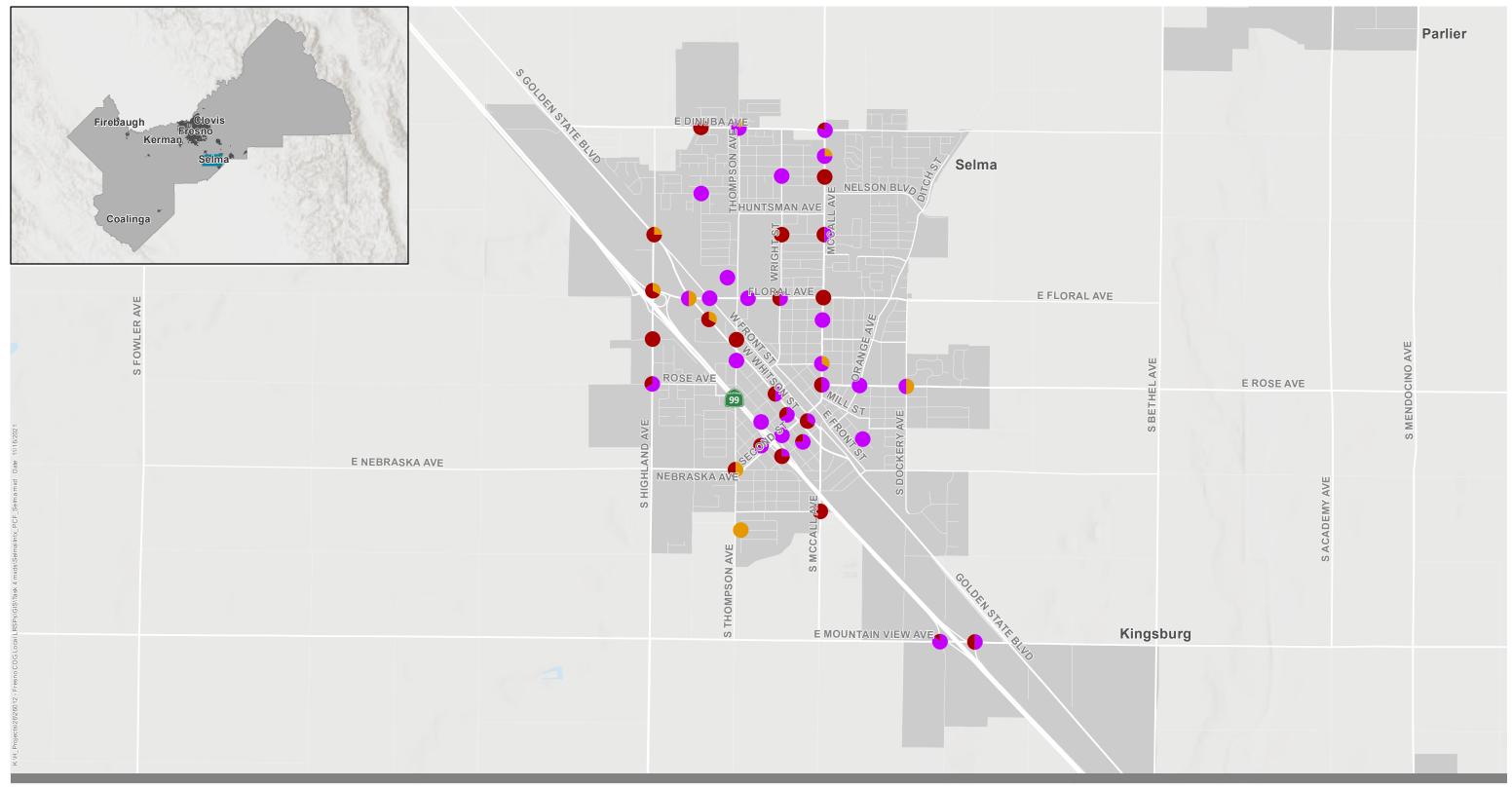


Hit Object



Figure 163

Top Fatal/Severe Injury Intersection Collision Type
Jurisdiction Results: Selma
Fresno Council of Governments



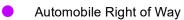
Primary Collision Factors



City Limits



County Boundary



Pedestrian Violation



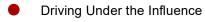


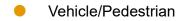


Figure 164

Top Fatal/Severe Injury Intersection Primary Collision Factors
Jurisdiction Results: Selma
Fresno Council of Governments



Collision Type



KITTELSON & ASSOCIATES

Rear End

Hit Object

Priority Roadways



City Limits



County Boundary



Figure 165



Primary Collision Factors

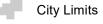
Pedestrian Violation

Automobile Right of Way

Driving Under the Influence

Priority Roadways







County Boundary



Figure 166

Table 77 and Table 78 provide information for the top fifty intersection locations (based on crash severity score), including control type (signalized or unsignalized), crash severity score, and total number of crashes by collision type or primary collision factor.

Table 77. Priority Intersections with Collision Type based on Top 3 Fatal/Severe Injury Collision Types

			Crash	Total		Collisio	п Туре	
#	Location	Control Type	Severity Score	Number of Crashes	Vehicle/ Ped	Rear End	Hit Object	Other
1	MCCALL AVE & GOLDRIDGE ST	Unsignalized	77.51	4	0	3	1	0
2	WHITSON ST & GAITHER ST	Unsignalized	40.88	5	2	0	1	2
3	SECOND ST & YOUNG ST	Unsignalized	40.06	6	0	6	0	0
4	FLORAL AVE & FRONT ST	Unsignalized	39.86	5	0	2	2	1
5	THOMPSON AVE & FRONT ST	Unsignalized	39.46	3	0	1	0	2
6	MITCHELL AVE & NELSON BLVD	Unsignalized	38.65	4	0	1	1	2
7	MCCALL AVE & VALLEY VIEW AVE	Unsignalized	38.45	3	0	0	1	2
8	THOMPSON AVE & NEBRASKA AVE	Unsignalized	38.45	3	1	1	0	1
9	WRIGHT ST & ASPEN ST	Unsignalized	38.05	1	1	0	0	0
10	WRIGHT ST & NORTHHILL ST	Unsignalized	38.05	1	0	1	0	0
11	WRIGHT ST & FLORAL AVE	Signal	32.24	8	0	3	1	4
12	HIGHLAND AVE & FRONT ST & GOLDEN STATE BLVD	Signal	26.73	10	1	0	5	4
13	THOMPSON AVE & FLORAL AVE	Signal	11.98	10	1	5	1	3
14	FLORAL AVE & HIGHLAND AVE	Signal	11.13	21	1	10	0	10
15	THOMPSON AVE & DINUBA AVE	Signal	10.47	8	2	3	0	3
16	MOUNTAIN VIEW AVE & VAN HORN AVE & CA-99 SB OFFRAMP OFF	Unsignalized	10.41	22	0	9	0	13
17	MCCALL AVE & HICKS ST	Unsignalized	10.07	6	2	3	0	1
18	SECOND ST & WHITSON ST	Signal	7.08	10	0	3	4	3
19	HIGHLAND AVE & ROSE AVE	Unsignalized	7.02	6	0	5	1	0
20	MCCALL AVE & NELSON BLVD	Unsignalized	6.71	4	0	3	0	1
21	MCCALL AVE & DINUBA AVE	Unsignalized	6.57	13	0	3	3	7
22	SECOND ST & BAUDER ST	Unsignalized	6.39	7	1	1	2	3
23	DOCKERY AVE & ROSE AVE	Unsignalized	5.99	5	1	2	1	1
24	ORANGE AVE & ROSE AVE	Unsignalized	5.79	4	0	3	0	1
25	SECOND ST & CA-99 SB ONRAMP ON & CA-99 SB OFFRAMP OFF	Unsignalized	5.77	9	1	2	2	4
26	WHITSON ST & FLORAL AVE	Signal	5.07	5	1	2	1	1
27	GAITHER ST & MCCALL AVE	Unsignalized	4.77	4	0	3	0	1
28	ARRANTS ST & MCCALL AVE	Signal	4.36	7	1	1	2	3
29	FLORAL AVE & MCCALL AVE	Signal	4.23	11	0	6	3	2
30	CA-99 NB OFFRAMP OFF & MOUNTAIN VIEW AVE	Unsignalized	3.96	5	0	1	2	2
30	MOUNTAIN VIEW AVE	unsignalizea	3.96	5	U		2	2



			Crash	Total _		Collisio	n Type	
#	Location	Control Type	Severity Score	Number of Crashes	Vehicle/ Ped	Rear End	Hit Object	Other
31	SECOND ST & SYLVIA ST	Unsignalized	3.85	4	0	3	0	1
32	MCCALL AVE & BARBARA ST	Signal	3.85	4	1	2	0	1
33	WRIGHT ST & DINUBA AVE	Unsignalized	3.76	4	0	1	2	1
34	SECOND ST & WILSON ST	Unsignalized	3.56	3	0	0	1	2
35	MCCALL AVE & ALTON ST	Unsignalized	3.56	3	0	2	0	1
36	THOMPSON AVE & CHANDLER ST	Unsignalized	3.36	2	0	0	0	2
37	HIGHLAND AVE & NORTHHILL ST	Unsignalized	3.36	2	0	1	1	0
38	THOMPSON AVE & WHITSON ST	Signal	3.23	6	1	3	0	2
39	HIGHLAND AVE & STILLMAN ST & PEA SOUP ANDERSEN BLVD	Signal	3.23	6	0	3	1	2
40	first st & whitson st	Unsignalized	3.03	5	0	3	0	2
41	MCCALL AVE & ROSE AVE & GRANT ST	Signal	3.03	5	0	3	0	2
42	NORTH ST & WHITSON ST	Unsignalized	2.83	4	0	1	1	2
43	FLORAL AVE & WILLOW AVE	Unsignalized	2.83	4	0	3	0	1
44	WRIGHT ST & BARBARA ST	Unsignalized	2.74	4	0	1	2	1
45	FIRST ST & YOUNG ST	Unsignalized	2.54	3	0	1	0	2
46	huntsman ave & gaynor st	Unsignalized	2.34	2	0	0	2	0
47	DINUBA AVE & MITCHELL AVE	Unsignalized	2.34	2	0	0	1	1
48	MAGNOLIA ST & SAN CARLOS ST	Unsignalized	2.14	1	1	0	0	0
49	LOCUST ST & GROVE ST & CENTER ST	Unsignalized	2.14	1	0	0	0	1
50	LOCUST ST & MILL ST	Unsignalized	2.14	1	0	1	0	0

Note: Other crashes include all crashes that are not coded as one of the top three collision types

Table 78. Priority Intersections with Primary Collision Factor based on Top 3 Fatal/Severe Injury Primary Collision Factors

			Crash	Total		Primary Colli	sion Factor	
#	Location	Control Type	Severity Score	Number of Crashes	Ped Violation	Auto Right of Way	DUI	Other
1	MCCALL AVE & GOLDRIDGE ST	Unsignalized	77.51	4	0	0	1	3
2	WHITSON ST & GAITHER ST	Unsignalized	40.88	5	1	0	2	2
3	SECOND ST & YOUNG ST	Unsignalized	40.06	6	0	3	0	3
4	FLORAL AVE & FRONT ST	Unsignalized	39.86	5	0	2	0	3
5	THOMPSON AVE & FRONT ST	Unsignalized	39.46	3	0	0	1	2
6	MITCHELL AVE & NELSON BLVD	Unsignalized	38.65	4	0	1	0	3
7	MCCALL AVE & VALLEY VIEW AVE	Unsignalized	38.45	3	0	0	1	2
8	THOMPSON AVE & NEBRASKA AVE	Unsignalized	38.45	3	1	0	1	1
9	WRIGHT ST & ASPEN ST	Unsignalized	38.05	1	0	0	0	1
10	WRIGHT ST & NORTHHILL ST	Unsignalized	38.05	1	0	1	0	0



						Primary Colli	sion Factor	
#	Location	Control Type	Crash Severity Score	Total Number of Crashes	Ped Violation	Auto Right of Way	DUI	Other
11	WRIGHT ST & FLORAL AVE	Signal	32.24	8	0	1	1	6
12	HIGHLAND AVE & FRONT ST & GOLDEN STATE BLVD	Signal	26.73	10	1	0	3	6
13	THOMPSON AVE & FLORAL AVE	Signal	11.98	10	0	3	0	7
14	FLORAL AVE & HIGHLAND AVE	Signal	11.13	21	1	0	2	18
15	THOMPSON AVE & DINUBA AVE	Signal	10.47	8	1	5	0	2
16	MOUNTAIN VIEW AVE & VAN HORN AVE & CA-99 SB OFFRAMP OFF	Unsignalized	10.41	22	0	7	1	14
17	MCCALL AVE & HICKS ST	Unsignalized	10.07	6	1	3	0	2
18	SECOND ST & WHITSON ST	Signal	7.08	10	0	1	2	7
19	HIGHLAND AVE & ROSE AVE	Unsignalized	7.02	6	0	2	1	3
20	MCCALL AVE & NELSON BLVD	Unsignalized	6.71	4	0	0	0	4
21	MCCALL AVE & DINUBA AVE	Unsignalized	6.57	13	0	4	1	8
22	SECOND ST & BAUDER ST	Unsignalized	6.39	7	0	1	3	3
23	DOCKERY AVE & ROSE AVE	Unsignalized	5.99	5	1	1	0	3
24	ORANGE AVE & ROSE AVE	Unsignalized	5.79	4	0	3	0	1
25	SECOND ST & CA-99 SB ONRAMP ON & CA-99 SB OFFRAMP OFF	Unsignalized	5.77	9	0	2	1	6
26	WHITSON ST & FLORAL AVE	Signal	5.07	5	1	1	0	3
27	GAITHER ST & MCCALL AVE	Unsignalized	4.77	4	0	1	0	3
28	ARRANTS ST & MCCALL AVE	Signal	4.36	7	1	2	0	4
29	FLORAL AVE & MCCALL AVE	Signal	4.23	11	0	0	1	10
30	CA-99 NB OFFRAMP OFF & MOUNTAIN VIEW AVE	Unsignalized	3.96	5	0	1	1	3
31	SECOND ST & SYLVIA ST	Unsignalized	3.85	4	0	3	1	0
32	MCCALL AVE & BARBARA ST	Signal	3.85	4	0	1	1	2
33	WRIGHT ST & DINUBA AVE	Unsignalized	3.76	4	0	0	0	4
34	SECOND ST & WILSON ST	Unsignalized	3.56	3	0	0	0	3
35	MCCALL AVE & ALTON ST	Unsignalized	3.56	3	0	0	0	3
36	THOMPSON AVE & CHANDLER ST	Unsignalized	3.36	2	0	0	0	2
37	HIGHLAND AVE & NORTHHILL ST	Unsignalized	3.36	2	0	0	0	2
38	THOMPSON AVE & WHITSON ST HIGHLAND AVE & STILLMAN ST &	Signal	3.23	6	0	I	0	5
39	PEA SOUP ANDERSEN BLVD	Signal	3.23	6	0	0	1	5
40	FIRST ST & WHITSON ST	Unsignalized	3.03	5	0	2	1	2
41	MCCALL AVE & ROSE AVE & GRANT ST	Signal	3.03	5	0	1	1	3
42	NORTH ST & WHITSON ST	Unsignalized	2.83	4	0	1	1	2
43	FLORAL AVE & WILLOW AVE	Unsignalized	2.83	4	0	1	0	3
44	WRIGHT ST & BARBARA ST	Unsignalized	2.74	4	0	0	1	3



			Count	Total	Primary Collision Factor				
#	Location	Control Type	Crash Severity Score	Total Number of Crashes	Ped Violation	Auto Right of Way	DUI	Other	
45	FIRST ST & YOUNG ST	Unsignalized	2.54	3	0	1	0	2	
46	HUNTSMAN AVE & GAYNOR ST	Unsignalized	2.34	2	0	0	0	2	
47	DINUBA AVE & MITCHELL AVE	Unsignalized	2.34	2	0	0	2	0	
48	MAGNOLIA ST & SAN CARLOS ST	Unsignalized	2.14	1	1	0	0	0	
49	LOCUST ST & GROVE ST & CENTER ST	Unsignalized	2.14	1	0	1	0	0	
50	LOCUST ST & MILL ST	Unsignalized	2.14	1	0	0	0	1	

Notes: Other crashes include all crashes that are not coded as one of the top three primary collision factors DUI = Driving Under the Influence

Table 79 and Table 80 provide information for the top eight roadway segments (based on crash severity score), including roadway classification, crash severity score, and total number of crashes by collision type or primary collision factor.

Table 79. Priority Roadways Segments with Collision Type based on Top 3 Fatal/Severe Injury Collision Types

#	Location	Classification	Crash Severity Score	Total Number of Crashes	Collision Type			
					Vehicle/ Ped	Rear End	Hit Object	Other
1	E Floral Ave (east of \$ De Wolf Ave to west of \$R 99)	Local	70.02	8	2	3	1	2
2	E Mountain View Ave (S Dockery Ave to SR 99 SB on ramp)	Arterial/Collector	37.29	8	1	1	1	5
3	S Highland Dr (Rose Ave to Nebraska Ave)	Arterial/Collector	36.58	4	1	3	0	0
4	Whitson St (W Front Rd to north of Gaither St)	Arterial/Collector	35.07	2	0	1	0	1
5	S Highland Ave (Art Gonzales Pkwy to SR 99 NB on ramp)	Arterial/Collector	34.55	7	0	2	4	1
6	W Whitson St (3rd St to W Front St)	Arterial/Collector	33.13	2	0	0	1	1
7	E Mountain View Ave (SR 99 to SR 99 NB off ramp)	Arterial/Collector	11.58	14	0	14	0	0
8	Floral Ave (west of Willow Ave to Wright St)	Arterial/Collector	6.71	4	0	4	0	0

Note: Other crashes include all crashes that are not coded as one of the top three collision types



Table 80. Priority Roadways Segments with Primary Collision Factors based on Top 3 Fatal/Severe Injury Primary Collision Factors

#	Location	Classification	Crash Severity Score	Total Number of Crashes	Primary Collision Factor			
					Ped Violation	Auto Right of Way	DUI	Other
1	E Floral Ave (east of S De Wolf Ave to west of SR 99)	Local	70.02	8	2	1	0	5
2	E Mountain View Ave (S Dockery Ave to SR 99 SB on ramp)	Arterial/Collector	37.29	8	1	4	0	3
3	S Highland Dr (Rose Ave to Nebraska Ave)	Arterial/Collector	36.58	4	1	0	1	2
4	Whitson St (W Front Rd to north of Gaither St)	Arterial/Collector	35.07	2	0	0	1	1
5	S Highland Ave (Art Gonzales Pkwy to SR 99 NB on ramp)	Arterial/Collector	34.55	4	0	0	2	2
6	W Whitson St (3rd St to W Front St)	Arterial/Collector	33.13	2	0	0	0	2
7	E Mountain View Ave (SR 99 to SR 99 NB off ramp)	Arterial/Collector	11.58	14	0	7	0	7
8	Floral Ave (west of Willow Ave to Wright St)	Arterial/Collector	6.71	4	0	2	1	1

Notes: Other crashes include all crashes that are not coded as one of the top three primary collision factors DUI = Driving Under the Influence



Education Strategies

Education strategies for Selma are targeted at unsafe speed and driving or bicycling under the influence of drugs or alcohol, given the prevalence of these primary collision factors in crashes. In addition, pedestrian and bicycle crashes were identified as a focus area given

fatal/severe crashes. In addition, pedestrian and bicycle crashes were identified as a focus area given the overrepresentation of pedestrians and bicyclists in fatal and severe crashes.

The Safe Roads Save Lives campaign is a marketing effort led by the Fresno COG, with the goals of:

- Educate all road users on safe transportation behaviors
- Increase safety for people walking and biking
- Highlight behaviors that cause the most crashes in Fresno County—speeding and distracted driving



The campaign Includes branding, social media strategies, print materials, radio and video resources, school resources, and a campaign website. Unincorporated Fresno County may find these materials helpful, especially those related to speeding, watching out for pedestrians, and not using the roadway under the influence of drugs or alcohol.



The following activities are recommended for Selma as they move forward on implementing the Safe Roads Save Lives campaign:

- Identify staff appropriate to attend a presentation by Fresno COG staff about the Safe Roads Save Lives campaign. Appropriate staff members include staff associated with transportation engineering and planning, communications, traffic enforcement, school transportation, and other jurisdictional staff who work with the roadway system.
- Work with school districts to distribute print materials and offer school-related transportation resources. Ensure that school communications are in both English and Spanish.
- Work with public information or communications staff to spread Safe Roads Save Lives materials throughout Selma through the following channels:
 - o Repost and link to Fresno COG posts that refer to the Safe Roads Save Lives campaign.
 - Have print materials (flyers, bumper stickers, pins, and postcards) available at events and community festivals.
 - Post materials at governmental buildings such as City Hall, libraries, DMVs, and other facilities that the public regularly uses.
 - Work with the Fresno COG to identify a radio station to air a Safe Roads Save Lives radio public service announcement (PSA).
 - Have a direct link to Safe Roads Save Lives campaign website on the City's website.

Emergency Services

Emergency service organizations depend on safe roadways and efficient communication processes to reach and effectively respond to emergencies. Each type of emergency services organization that serves Selma – law enforcement, fire, emergency medical services (EMS), California Highway Patrol – work independently and collaboratively to develop procedures that allow them to respond to incidents in their own jurisdictions as well as support others as needed. The following recommendations may help improve emergency services response as the various organizations update procedures and policies and continue to partner on roadway safety efforts:

- All roadway safety projects should be vetted by emergency service organizations to ensure that their design does not hamper access.
- As new emergency service and response procedures are developed, roadway safety improvement opportunities should be identified and implications of changes to response times should be considered.
- Selma staff should participate in periodic coordination calls between emergency response agencies to gather and share recent observations about crashes and hot spots, to understand emergent safety issues that may not have led to policy reports or yet be available through statewide crash reporting systems.



Enforcement

Enforcement strategies can include programs or campaigns specifically focused on changing road user behavior through more visible and active enforcement of existing traffic laws, as well as focusing enforcement in areas that have historically been shown to have higher-than-average crash rates. Typically, the effectiveness of enforcement strategies is temporal, meaning they are effective at changing behavior for a discrete period of time – during and shortly after the increased enforcement activities.

- The following enforcement strategies should be considered for Selma:
- Schedule heightened speed (or other behavior) enforcement checks during strategic times of the year, such as when students return to school or the beginning of fog season.
- Focus speed enforcement efforts in locations with high crash rates.
- Use automatic enforcement, such as red-light cameras or speed feedback signs, especially in school zones.
- Deploy speed feedback signs in areas with high crash rates or speeding citations.

The effectiveness of each strategy should be measured and evaluated, considering the number of staff hours and amount of resources needed. The results should be reviewed and used to refine future enforcement activities.

Enforcement strategies should be undertaken with due caution to avoid inequitable enforcement activities and evaluated to determine the strategy's impact. More details about equitable enforcement can be found on page 8 (Introduction).



EVALUATION AND IMPLEMENTATION

A key part of achieving the City's vision is consistently evaluating roadway safety performance and tracking progress towards the City's goals. The City will develop a process to regularly collect data and information around the performance measures that can be used to assess changes city-wide and at the top priority locations.

As feasible, it is recommended that the City of Selma update this LRSP every three to five years using updated crash data and the performance measures. Comparing the performance measures related to investments made with the crash data should provide a clear indication of the impact of the City's and safety partner's efforts. Future LRSPs may provide new emphasis areas and top priority locations that reflect progress made and new priorities based on trends in the data.

Activities for implementing the plan include:

- Identifying countermeasures and strategies for priority locations based on the crash data.
- Utilizing the Fresno COG Regional Safety Plan to implement regional strategies and share best practices.
- Exploring funding opportunities to implement priority strategies.
- Identifying activities to support the regional Safe Roads Save Lives campaign.
- Identifying enforcement strategies to implement and evaluate.
- Regularly coordinating with safety partner agencies to assess progress, identify opportunities to implement countermeasures and strategies, and identify opportunities for citizen involvement.
- Regularly collecting and organizing data to support evaluation of the LRSP.

