

2022 LOCAL ROADWAY SAFETY PLAN

Final Report - May 2022





PREPARED FOR City of McFarland







CITY OF MCFARLAND LOCAL ROADWAY SAFETY PLAN

Acknowledgements

The 2022 McFarland Local Roadway Safety Plan was funded through a grant provided by the California Department of Transportation (Caltrans). The City of McFarland, in collaboration with multidisciplinary partner agencies and stakeholders, collaborated to develop a plan that increased roadway safety for people traveling within the City's roadway network. The study was managed by Larry Ronk, Diana Garcia, and Brianahi De Leon of the City's Department of Community Development in coordination with a Stakeholder Working Group (SWG). A consulting team led by Mark Thomas assisted the City of McFarland and the SWG in preparing the plan.

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Executive Summary

The City of McFarland is committed to providing a vibrant quality of life for all residents, businesses, and visitors by delivering quality services, improving efficiency, and removing barriers for future development. The McFarland Local Roadway Safety Plan (LRSP) provides a proactive approach to addressing safety needs on the City's roadway network that enhances the quality of life. The purpose of LRSP is address safety needs among pedestrians, bicyclists, and motorists on City of McFarland managed roadways.

As part of an ongoing effort to identify and implement roadway safety improvements, the LSRP:

- 1. Identifies crash types and locations
- 2. Evaluates crash history affecting all transportation modes
- 3. Plans for focused improvements on local highway safety needs
- 4. Recommends infrastructure and non-infrastructure improvements
- 5. Establishes a Working Group with stakeholders representing multiple disciplines
- 6. Maintains city eligibility for future Highway Safety Improvement Program (HSIP) grant funding opportunities

LRSPs have been proven to reduce fatalities on local roads; hence, implementation of this plan will improve transportation safety for the city, its residents, and its visitors.

The City of McFarland has demonstrated a history of promoting safety and improving the transportation network aligned with the City's General Plan and the LRSP vision. Previous safety planning efforts include the several plans, studies, programs, and infrastructure projects, such as a bicycle master plan, flashing LED stop signs, high-visibility crosswalks, speed feedback signs, and traffic calming measures.

A Stakeholder Working Group (SWG) convened to review crash history data from the most recent ten years available and identified non-infrastructure solutions to enhance roadway safety and reduce collision volumes throughout the City. This LRSP details the process of identifying the City's Vision, Mission, and Goals for the local roadway network. The SWG identified seven Emphasis Areas for targeted crash reductions and determined a series of strategies to reduce collisions using education, enforcement, emergency service, and equity-based approaches. Each Emphasis Area includes goal metrics, to measure success over time, and programming partners who will lead and support implementation of strategies.

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Introduction

The McFarland Local Roadway Safety Plan (LSRP), funded by the California Department of Transportation (Caltrans), guides the City in identifying crash hotspots and implementing safety improvement projects to enhance roadway safety. The LSRP is living document that will be reviewed and updated accordingly during annual stakeholder meetings. The LSRP includes an Executive Summary, Existing Safety Efforts inventory, Citywide Crash Database overview and Emphasis Areas inventory and safety improvements strategies.

Overview

As part of the LRSP, a crash database was developed to identify locations with a history of crashes. The analysis found that 173 police-reported crashes occurred on the City of McFarland transportation network between January 1, 2010 and December 31, 2019. Of these crashes, seven (7) resulted in fatalities or severe injuries (KSI crashes), which represents 4% of all crashes. While the study network experiences an average of 15 crashes and less than 1 fatality per year, the most common KSI crashes was driving on the wrong side of road, representing 29% of KSI crashes.

The LRSP references the City of McFarland 2020 Systemic Safety Analysis Report, which identified 30 crash hotspot locations (20 Intersections and 10 Segments) and prioritized infrastructure improvements for HSIP funding. These hotspot locations include:

Top 20 Intersections

- 1. Sherwood Avenue & Browning Road
- 2. Kern Avenue & Browning Road
- 3. San Juan Street & B Street
- 4. Kern Avenue & 10th Street
- 5. Kern Avenue & 6th Street
- 6. Sherwood Avenue & San Juan Street
- 7. Perkins Avenue Access Ramp & 99 NB Ramp
- 8. Glenwood Avenue & Browning Road
- 9. Taylor Avenue & Mast Avenue
- 10. Robertson Avenue & 3rd Street
- 11. Perkins Avenue & Browning Road
- 12. Sherwood Avenue & 5th Street
- 13. Peerless Street & Fletcher Street
- 14. Marshall Street & B Street
- 15. Perkins Avenue & 3rd Street
- 16. Sherwood Avenue & 2nd Street
- 17. W Perkins Avenue & 2nd Street
- 18. California Avenue & 5th Street
- 19. Perkins Avenue & 10th Street
- 20. California Avenue & 2nd Street



Top 10 Roadway Segments

- 1. San Lucas Street (Sherwood Avenue to B Street)
- 2. San Juan Street (Sherwood Avenue to B Street)
- 3. Elmo Highway (Garzoli Avenue to Davis Avenue)
- 4. Sherwood Avenue (San Juan Street to Browning Road)
- 5. San Juan Street (Kern Avenue to Perkins Avenue)
- 6. Kern Avenue (Browning Road to Wiley Street)
- 7. Garzoli Avenue (Hail Lane to Elmo Highway)
- 8. Kern Avenue (Garzoli Avenue to 5th Street)
- 9. 10th Street (Sherwood Avenue to Kern Avenue)
- 10. Frontage Road (Cliff Avenue to Sherwood Avenue)

Study Parameters

The LRSP evaluates crash history and provides countermeasures for local, collector, and arterial roadways within the City of McFarland. The crash database is a compilation of those that occurred on City managed roadways between January 1, 2010 and December 31, 2019, including roadways proposed for annexation under the City of McFarland 2020 General Plan Update. The Statewide Integrated Traffic Records System (SWITRS) is the primary crash database.

LRSP Development Process

In November 2021, the LRSP project kicked off with a meeting between the City of McFarland Department of Community Development staff and consultants. The meeting agenda included a discussion of the City's goals for the project, confirmed an outreach and engagement schedule, developed a Stakeholder Working Group invitee list, and reviewed initial crash data analysis of the City's roadway network.

A Stakeholder Working Group (SWG) consisting of multi-disciplinary decision-makers and partners guided the plan development including development of implementation strategies to achieve the LRSP's Vision, Mission, and Goals.

SWG member agencies were selected for their relationship to the 4 E's of transportation safety and their ability to coordinate specialized services for the City of McFarland. SWG members customized the LRSP non-infrastructure recommendation, timelines, and responsibilities according to staff and resource availability. At the City's request, stakeholders will convene annually to confirm the LSRP's safety goals and direction.

A total of three (3) SWG meetings occurred on January 11, February 8, and March 8, 2022 to review crash data, define the LRSP's Vision, Mission, and Goals, and organize non-infrastructure (NI) programs to address the emphasis areas. The SWG defined lead and support agencies, resources, communication methods, and implementation timelines for each NI program. SWG members involvement and continued participation are documented through letters of support (see Appendix A).

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Stakeholder Working Group included representatives from the following organizations:

- City of McFarland Community Development Department
- City of McFarland Public Works Department
- City of McFarland Police Department
- McFarland Recreation and Park District
- Kern County Department of Public Works

- Kern County Fire Department
- McFarland Unified School District
- Bike Bakersfield
- Caltrans
- BHT Engineering
- Hall Ambulance

Vision, Mission, and Goals

The LRSP's Vision, Mission, and Goals were developed through collaboration between City representatives and SWG members. The resulting feedback between City staff and SWG members identified the following:

Vision Statement

A high-quality transportation network, free of fatalities, that provides comfort, efficiency, sustainability, and equity for all users.



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Mission Statement

Advance safety improvements while creating a culture of safe travel within the City that values and respects all mobility options and users.

Goals

- 1. Increased use of Active Transportation modes by 50% within five years.
- 2. Implement travel safety education programming Citywide and at schools.
 - 3. Reduce DUI-related crashes by 50% within five years.
 - 4. Submit 100% of citywide crashes to SWITRS.
 - 5. Identify five emergency vehicle response routes for improvement.
- 6. Reduce the amount of all crashes within the City by 50%, annually.
- 7. Achieve zero fatal and severe injury crashes in the city, annually.





Existing Safety Efforts

The City of McFarland has demonstrated a history of promoting safety and improving the transportation network aligned with the City's General Plan and the LRSP vision. Previous safety planning efforts include the several plans, studies, programs, and infrastructure projects.

Plans

2014 City of McFarland Bicycle Master Plan

The City developed its first Bicycle Master Plan, adopted May 2014, to support bicycling as an alternative mode of transportation for work, errand, and recreational trips. The plan provided recommendations for infrastructure projects, non-infrastructure programs, and policies to increase and improve bicycling within the City.

2016 General Plan Safety Element

In May 2016, the City updated the Safety Element to its General Plan to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-induced hazards. The initiative is closely tied to transportation and circulation as well-designed streets and efficient movement of people are imperative during an emergency. The Safety Element identifies Goals and Policies which support the City's preparedness and responsiveness to emergency events.

2016 Local Hazard Mitigation Plan

In October 2016, the City prepared and adopted a Local Hazard Mitigation Plan (LHMP) which identified community policies, actions, and tools for implementation in order to reduce the public's exposure to these hazards, to minimize property damage and community disruption, and to reduce or avoid the costs of disaster relief. City officials, staff, and the public engaged in a 10-Step LHMP Planning Process which involved organizing resources, assessing risk, developing the mitigation plan, drafting the plan, reviewing and revising the plan, and adopting and submitting the plan for approval. The LHMP guides and coordinates mitigation activities and decisions for City staff and citizens thus enhancing the City's ability to communicate and mitigate natural hazard risk.

Studies/Reports

2015 Vehicle, Bicycle and Pedestrian Traffic Counts and Projections Traffic Report

In 2015, the City conducted City-wide traffic volume baseline condition travel counts and developed city-wide traffic volume projections to year 2025. The initiative supports planning around land use, trip generation, trip distribution, and trip assignment on local and regional scales. Intersection turning movements were captured for vehicles, pedestrians, and bicyclists at a total of 39 intersection locations during the morning (7:00am-9:00am), school (2:30pm-4:00pm), and afternoon (4:00pm-6:00pm) peak hours. Additionally, Average Daily Traffic Counts were collected for the same modes at a total of 4 primary crossing locations with State-Route 99. The report provides baseline data for intersection operational analysis, intersection safety reviews, Safe Routes to School programs, City grant applications, and the potential development of a multi-modal City model.



2020 McFarland Transformational Planning Study

In August 2020, the McFarland Tri-Agency (City of McFarland, McFarland Unified School District, and the McFarland Recreation & Parks District) prepared and adopted the City of McFarland Transformational Planning Study. The study's purpose and objective was to reduce carbon emissions, improve air quality, and build resiliency particularly for low-income and disadvantaged communities. Ultimately, the study serves as a guide to help facilitate a project that will strengthen community and economic development while reducing greenhouse gas emissions.

2020 Systemic Safety Analysis Report

In June 2020, the City developed and adopted the City of McFarland Systemic Safety Analysis Report (SSAR) to identify critical locations and crash trends on the City roadway network. The Report analyzed 30 top locations, consisting of 20 intersections and 10 roadway segments, and determined appropriate countermeasures to address each location's safety concerns. Project Cost-Benefit ratios were calculated for one or more improvement combinations for each of the 30 locations, resulting in a list of viable projects that are good candidates for submission to receive funding from the Highway Safety Improvement Program (HSIP).

Programs/Infrastructure Projects

2016 Highway Safety Improvement Program Cycle 8

The City was awarded funding in HSIP Cycle 8 to upgrade stop-controlled intersections along Garzoli Avenue, Perkins Avenue, and 5th Street, which included new solar flashing LED stop signs, traffic striping and markings, solar Speed Limit warning flashing beacons with radar speed feedback, crosswalk with In Roadway warning lights, and upgraded ADA curb ramps. On August 21st, 2020, the City completed the project's implementation.

2021 Highway Safety Improvement Program Cycle 10

The City was awarded funding in HSIP Cycle 10 to upgrade uncontrolled crosswalks at the intersections of W Perkins Avenue/3rd Place, E Perkins Avenue/San Lucas Street, E Perkins Avenue/San Pedro Street, E Sherwood Avenue/Browning Road, and W Kern Avenue/4th Street. The project provides funding to install warning signs, upgrades to high-visibility crosswalks, install missing ADA curb ramps, and add enhanced safety features. The City plans to break ground in late summer to early fall of 2022.

Congestion Mitigation and Air Quality Bicycle Lane Project

The City was awarded funding from the Congestion Mitigation and Air Quality Improvement Program (CMAQ), a Federal program that funds transportation projects and programs that reduce emissions from on road mobile sources. The funding enabled the City to add bicycle lanes to the roadway on E Sherwood Avenue, Mast Avenue, Browning Road, and 5th Street.

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Affordable Housing and Sustainable Communities Bicycle Lane Project

The City was awarded funding from the Affordable Housing and Sustainable Communities Program (AHSC). The program is administered by the State of California to fund land-use, housing, transportation, and land preservations projects to support infill and compact development that reduce greenhouse gas emissions. The City of McFarland will utilize the program funding to implement future bicycle lanes on West Perkins Avenue.

High Visibility Crosswalks

The City upgraded and installed high-visibility crosswalks at 10 locations and a flashing crosswalk at 1 location. The treatment uses patterns, such as continental ladder striping, that are visible to drivers at further distances compared to standard transverse crosswalk striping. High visibility crosswalks were installed at W Sherwood Avenue/5th Street, W. Kern Avenue/3rd Street, W Kern Avenue/5th Street, 5th Street/Robertson, W. Perkins Avenue/5th Street, 5th Street/California, 2nd Street/W Sherwood Avenue, 1st Street/W. Sherwood Avenue, W. Kern Avenue/3rd Street, and Browning Road/E. Perkins Avenue. The flashing crosswalk utilizes the high-visibility crosswalk design and includes the addition of in-road LED flashing lights for additional visibility benefits; it was installed on W Sherwood Avenue in front of McFarland High School.

Flashing Stop Signs

The City installed flashing stop signs at seven locations citywide. These signs utilize flashing LED lights to increase visibility, command driver attention, and help improve compliance at stop-controlled intersections. Locations that received the infrastructure improvement include Sherwood Avenue intersections with Garzoli, 1st Street, 2nd Street, and 5th Street, Perkins Avenue intersections with Browning and 5th Street, and the intersection of Kern Avenue/5th Street.

Speed Feedback Sign

The City installed three speed feedback signs (SFS) at key locations throughout the roadway network. Speed feedback signs, also known as dynamic speed displays, provide drivers with feedback about their speed in relationship to the posted speed limit. When appropriately complemented with police enforcement, SFS can be an effective method for reducing speeds at a desired location. They were installed on Browning Road and W Sherwood Avenue between E Elmo Highway and E Perkins Avenue and on Garzoli Avenue between W Elmo Highway and W Perkins Avenue.

Traffic Signal Implementation

The City installed a Traffic Signal at the intersection of E Sherwood Avenue and Marshall Street to organize the flow of vehicles through the intersection. The signal provides improvements to traffic safety following the development of Blanco Park—a key community destination providing playgrounds, sports fields, and year-round entertainment.

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2015 Kern Avenue Elementary Safe Routes to School Connectivity Project 1

The City submitted and was awarded funding from the California Active Transportation Program (ATP) Cycle 2 for the Kern Avenue Elementary Safe Routes to School Connectivity Project. The project added sidewalks, ADA ramps, crosswalks, and lighting on various streets on the East side of McFarland, including California Avenue, 5th Street, Richards, and on Kern Ave from 3rd St to 4th Street.

2020 Community Development Block Grant

The City submitted and was awarded funding from the California Community Development Block Grant (CDBG) to provide infrastructure improvements, code enforcement staffing, graffiti removal, and a pedestrian and bicycle planning study. Infrastructure improvements included construction of sidewalks, curb and gutter, ADA curb ramps, crosswalks, and lighting on 2nd Street from W. Perkins Avenue to Kern Avenue.





Citywide Crash Data

Crash data is the fundamental to developing a LSRP. Data collection and Data Analysis guide project development and implementation by outlining hotspots and identifying appropriate project applications.

Data Collection

The LRSP was developed using a data-driven approach toward identifying locations and behaviors contributing to crashes on the City's roadway network. Resources utilized include the Statewide Integrated Traffic Records System and Office of Traffic Safety Crash Rankings.

Statewide Integrated Traffic Records System

A crash database was comprised of local police-reported crashes published by the Statewide Integrated Traffic Records System (SWITRS) between January 1, 2010, and December 31, 2019. SWITRS database crashes were assigned geocoordinates from the Transportation Injury Mapping System¹ (TIMS) based on matching Case ID. During screening, few crash incidents needed subsequent identification of geocoordinates based on identified primary road, secondary road, distance from intersection, and direction from intersection.

An evaluation of the records provided a descriptive analysis of crash data at the citywide level and crash density maps for primary crash factors, types of crashes, roadway crashes, intersection crashes, and total crashes. The crash data forms the basis for identifying safety-based countermeasures for implementation at focus corridors and intersections as well as emphasis area recommendations.

Data Limitations

Although the data led to identifying some spot locations and areas with crash trends, it was incomplete

making it difficult to identify patterns throughout the network. One issue was McFarland's lack of complete crash data. SWITRS database shows a reduction in reported crashes in the year 2016 and thereafter. As shown in Figure 1, the average number of crashes per year reported to SWITRS drops from 27 to 3 after 2015, and between 2013 and 2016, there was an average of 32 crashes per year that were recorded by the McFarland Police Department but were not submitted to the statewide database. These crashes do not

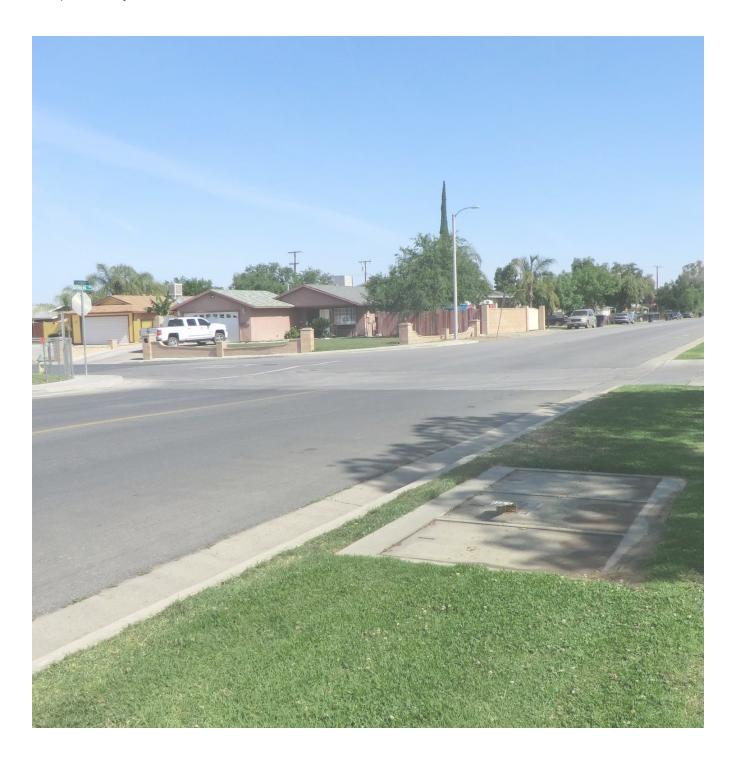
Figure 1 City of McFarland Collisions by Year and Total Average

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¹ TIMS is an online application by SafeTREC that geocodes and assigns coordinates to SWITRS collision data, excluding property damage only collisions.



include party data, which identifies party at fault and victim data such as age, direction of travel, and distractions that may have led to the crash. The missing details create challenges in discerning a complete analysis of the cause of each crash.





Crash Analysis Results

Crash Data Charts

Crash data charts provide graphic illustrations of crash types and primary crash factors (shown in Figures 4 and 5, respectively) that outlined LRSP emphasis areas (Figures 2 and 3). The dataset indicates crashes in McFarland occur at an average of 15 total crashes with less than 1 fatal or severe injury crashes (KSI) per year.

Figure 2 Roadway Classification at Crash Locations

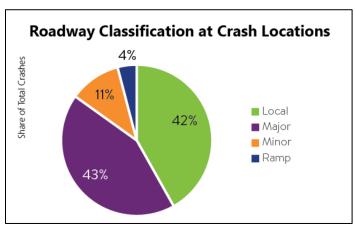


Figure 3 Intersection Control at Crash Locations

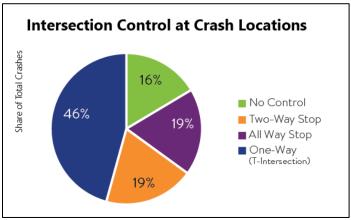


Figure 4 Primary Collision Factors

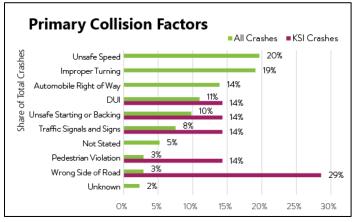
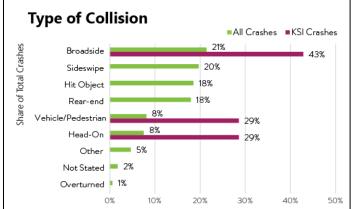


Figure 5 Type of Collision





Crash Data Map

Crashes were mapped using Geographic Information Systems (GIS) software to illustrate the distribution of crashes within the City. **Figure 6** illustrates all crashes that occurred on local roads within the City of McFarland between 2010-2019, and it shows that crashes are generally concentrated in the City's more developed areas, specifically along Sherwood Avenue, and occur along the outer extents of the City such as along Driver Road and Whisler Road.

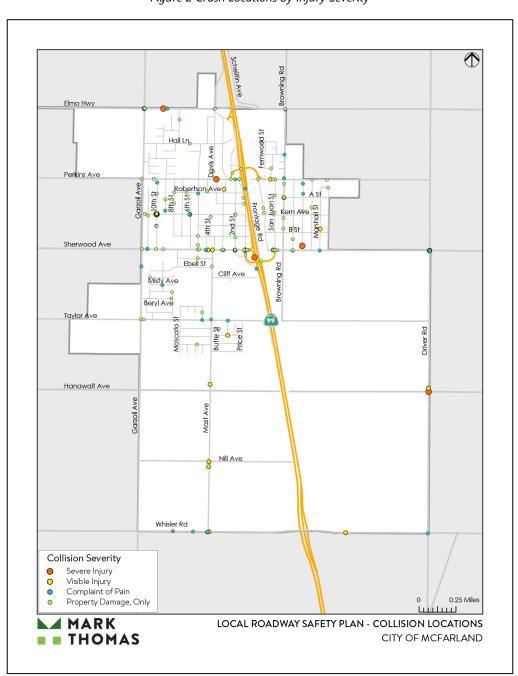


Figure 2 Crash Locations by Injury Severity



Office of Traffic Safety Crash Data

Additional information on citywide crashes is provided by the California Office of Traffic Safety (OTS) who develops annual crash rankings for all California cities and counties. Data for the rankings comes from multiple sources including SWITRS Crash data, California Department of Finance (DOF) population estimates, and Caltrans Daily Vehicle Miles Traveled.

OTS rankings from 2019, the latest year available, indicate that McFarland ranks 78th out of 103 similarly sized jurisdictions (with a larger number indicating positive comparative results). The positive outcome of the statewide OTS rankings indicates the crash history within the City of McFarland is low when compared to cities of similar size. It is worth noting the crash data presented in the OTS rankings is subject to information delivered to the state and may be impacted by any reporting gaps.

Table 1 City of McFarland 2019 Crash Ranking Category

Year	Group	Population (Avg)	Daily Vehicle Miles Traveled
2019	E: 103 Cities, population 10,001-25,000	14,296	71,240

Table 2 City of McFarland Crash Ranking Scores

Type of Crash	Victims Killed and Injured	OTS Ranking
Total Fatal and Injury	0	99/103
Alcohol Involved	0	85/103
Had Been Drinking Driver < 21	0	36/103
Had been Drinking Driver 21-34	0	55/103
Motorcycles	0	74/103
Pedestrians	0	89/103
Pedestrians > 15	0	78/103
Pedestrians 65+	0	68/103
Bicyclists	0	81/103
Bicyclists < 15	0	60/103
Composite	0	76/103
Speed Related	0	87/103
Nighttime (9:00pm-2:59am)	0	79/103
Hit and Run	0	76/103

Table 3 City of McFarland Arrest Rankings

Type of Arrest	Arrests	OTS Ranking*
DUI Arrests	57	78/103

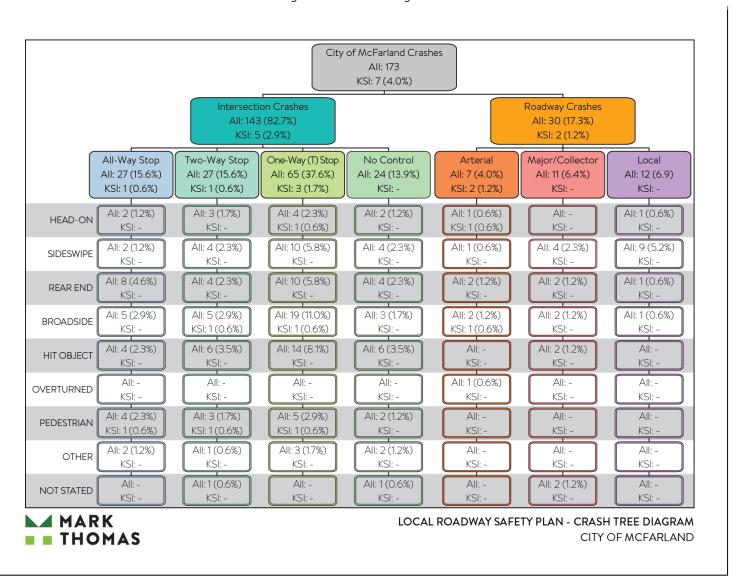
^{*}DUI arrest figures are shown for cities only, not counties. The number of cities ranked against may be different from the number of cities in the other categories. Not all cities report DUI arrests to the Department of Justice.



Crash Tree Diagram

Crash tree diagrams illustrate possible outcomes of events by following the possible paths along the "tree's" branches. As shown in Figure 7, the diagrams illustrate the probability of varying types of crashes as defined by mode, type of crash, primary crash factor, and roadway classification or intersection control device. Crash tree diagrams provide a detailed perspective regarding travel behaviors throughout the network.

Figure 3 Crash Tree Diagram





Emphasis Area Strategies

Emphasis Area 1: Youth-Focused Safety Education and Encouragement

SWG members emphasized the importance of safety for the City's youth population. Programs that increase traffic safety awareness for the youth help reduce conflicts between motor vehicles and the City's youth. Therefore, educating youth around the importance of traffic safety helps to create a Citywide shift toward positive cultural attitudes regarding safety on the City's roadway network. The following goal and strategies will reduce crashes involving pedestrians and bicyclists under the age of 15 as well as crashes caused by young adult drivers.

Goal for Emphasis Area 1:

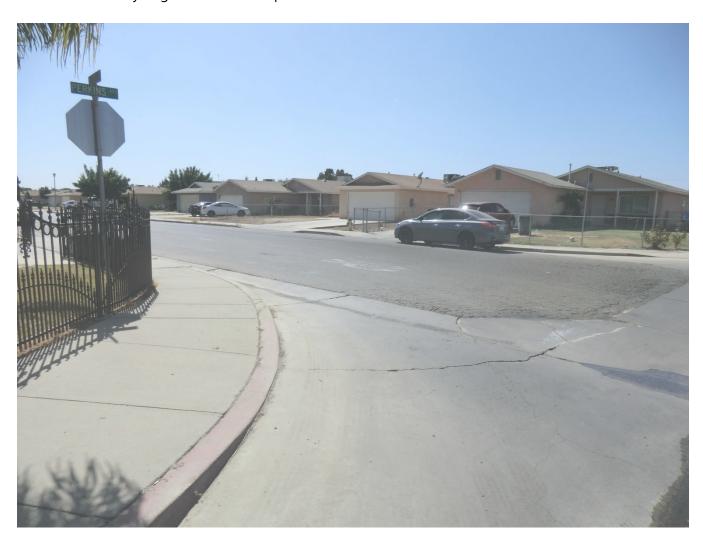
- Reduce transportation-related victims aged 17-and-under 50% by year 2030.
 - Reduce injuries from five (5) per year (10-year average) to less than three (3) per year.
- Strategy 1.1: Focused Safety Training Modules based on School Grade Level. Educational training modules, including either or both in-classroom lessons and blacktop activities, will educate the youth population according to their grade-level. Elementary school students will learn pedestrian safety, such as crossing streets when it is safe to do so. Middle school students will learn the basics of bicycle safety, such as maneuvering a bicycle and using hand signals. High school students will learn about how to safely utilize transit and tips for safe driving. The educational content in each safety training module will be developed based on existing free resources and with input from programming partners. McFarland Unified School District (MUSD) identified coordination and partnership with the McFarland Police Department to implement safety training modules and build trust within the community. MUSD has also identified hosting safety training modules during the academic year and before summer to reinforce student safety during the summer break when more students will spend their days outside walking and bicycling.
- Strategy 1.2 <u>Citywide Encouragement Event.</u> Encouragement events provide opportunities to celebrate traffic safety initiatives and community members who put effort toward making transportation safety a priority. One encouragement event will be held annually to reinforce safety lessons and cultivate culture around traffic safety. The event format will be determined by programming partners and will reference proven methods such as bike-and-ped rodeos, tabling activities, and bike and walk to school events. The encouragement event may occur independently or in conjunction with McFarland Recreation and Park District's existing efforts, such as Bike to Work or School Month in May, Cinco de Mayo, July Fourth, and Christmas.



Strategy 1.3 Apply for Transportation Development Act (TDA) Funding. The Transportation Development Act (TDA) was established to allocate funding for transit and non-transit related purposes that comply with regional transportation plans, and a cut of the funding is earmarked for bicycle and pedestrian facilities. Kern Council of Governments is prioritizing bicycle parking facilities and bicycle safety programs. City staff will apply for TDA funding to supplement transportation safety activities. Eligible activities for funding include paid partnership with local advocacy groups to implement Strategies 1.1 and 1.2.

Programming Partners

- McFarland Unified School District
- McFarland Recreation and Park District
- Bike Bakersfield
- McFarland Police Department
- California Highway Patrol
- Community Organizations and Sponsors



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Emphasis Area 2: Adult and Senior-Focused Safety Education and Encouragement

Educational campaigns and encouragement events contribute to creating a shift toward positive cultural attitudes around safety on the City's roadway network. Based on the crash dataset, unsafe speed is a target primary crash factor. The stakeholder working group also proposed messaging around speed pedestrian safety, speed limits in school zones, and distracted driving.

Education provides resources to foster cultural perspective shifts toward safe driving practices such as deciding to not drink and drive, avoiding distracted driving, protecting vulnerable roadway users, and other driver responsibilities. The City will leverage education efforts to develop partnerships and a coordinated approach to educate the public on transportation safety.

Goal for Emphasis Area 2:

- Reduce speeding related crashes (most common primary crash factor) by 25% by year 2030.
 - Reduce from 3.4 per year (10-year annual average) to 2.6 per year
- Strategy 2.1 Educational Campaigns. Educational campaigns are an effort to raise awareness about safe driving practices and responsibilities. The City will utilize resources provided by the Office of Traffic Safety to provide focused messaging that addresses crash types specific to the City's crash histories. The safety messaging will be defined annually, with input from the stakeholder working group, to address crash factor trends over time. The educational materials will be in different languages, and graphics will be targeted at various community groups to reach a wider range of audience. Messaging of materials will be reviewed annually to address any emerging trends in crash types and causes.
- **Strategy 2.2:** Encouragement Events. Encouragement events provide opportunities to celebrate traffic safety initiatives and community members who put effort toward making transportation safety a priority. Adult and Senior focused event activities include safety challenges, contests, and pledges to commit to safe individual behavior on the roadway. The annual encouragement event may be combined with Strategy 1.2 and/or existing events throughout the community. SWG members expressed interest in hosting an event near schools to focus on speeding and school zone speed limits. Specific activities and formats will be coordinated among programming partners on an annual basis.

Programming Partners

- City of McFarland Department of Community Development
- McFarland Recreation and Park District
- McFarland Chamber of Commerce
- Community Organizations and Sponsors
- Lions Club



Emphasis Area 3: Active Transportation Infrastructure and Education

Active Transportation, such as walking and riding a bicycle, is a key component of the City of McFarland 2020 General Plan Update (GP), Circulation Element. Plan policies include traffic calming, vehicle mile reductions, and developing a City-wide multi-modal network. The Plan specifies a Complete Streets and Pedestrian Corridor network to receive infrastructure treatments that support pedestrian and bicycle activity. Emphasis Area 3 directly supports the GP through improvements toward the built environment and providing educational awareness around safety for bicyclists and pedestrians.

Goal for Emphasis Area 3:

- Reduce pedestrian-involved and bicycle-involved crashes 50% by year 2030.
 - Reduce from 7 crashes per year (10-year annual average) to less than 3 per year.
- Strategy 3.1 Host Safety Training Lessons. The City will host training lessons on safe bicycling covering topics such as but not limited to riding laws and maneuvers, bicycle repair and maintenance, and route selection and preparation. Trainings may also be combined with bike and pedestrian safety festivals, utilizing booth-format outreach, contests, scavenger hunt, and raffles. Grants should be pursued by programming partners to fund staff time and/or equipment. The City and programming partners will explore events such as Learn to Bike and Bike Safety Training for cyclists and pedestrians, and adult and youth cyclists will receive education on rules of the road and safe maneuvers for riding on street. Pedestrians will receive education on safe street crossing, visibility, eye contact with drivers, and other topics as identified in future coordination efforts.
- Strategy 3.2 Prioritize and Implement Projects Identified in the 2020 General Plan Update. The City will collect community feedback to prioritize improvement projects identified in the 2020 GP. Community feedback supports aligning City efforts with community interests while strengthening grant applications for eligibility. Community input can be collected through temporary demonstration events, tabling at community events, and survey mailers to residents among others. The City will apply for grant funding to implement the improvement projects according to prioritization by the community. In addition, the City's Public Works Department will monitor progression of capital improvement projects to identify opportunities where GP improvements can be incorporated.

Programming Partners

- McFarland Department of Public Works
- McFarland Department of Community Development
- McFarland Police Department
- Bike Bakersfield
- Caltrans
- BHT Engineering

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Emphasis Area 4: Targeted DUI-Reduction

Creating cultural perspective changes around driving under the influence coupled with enforcement can reduce rates of intoxicated driving. To further this effort, the City will increase community outreach and increase enforcement efforts to reduce driving under the influence in the community.

Goal for Emphasis Area 4:

- Reduce DUI-related crashes to zero by year 2030.
 - Reduce from two (2) per year (10-year annual average) to zero (0).
- Strategy 4.1 Increase Community Outreach. The City will provide outreach to the community using messaging that upholds values around protecting neighbors, alternative options to driving under the influence, and the individual personal/financial risks of intoxicated driving. Messaging can be incorporated into Strategy 1.1 and Strategy 2.1 for increased outreach efficiency, according to agreement by Stakeholder Working Group agencies, determined at the annual Stakeholder Working Group Meeting. Material messaging will be focused on strategies to avoid drunk driving. A target area for the City is pursuing a designated driver campaign to encourage driving alternatives when under the influence.
- Strategy 4.2 Implement DUI-Patrol and Traffic Stops. DUI-Patrol and Traffic Stops are an initiative to reduce intoxicated driving throughout the community. The City Police Department will focus enforcement efforts around holidays (i.e. Saint Patrick's Day, Cinco de Mayo, Fourth of July, and fall-winter holidays) and typical timeframes (these include the span of time between fall-winter holidays, being Thanksgiving, Christmas, and New Year's) when intoxicated driving increases. During these events, the Police Department may also partner with community advocacy groups to provide alternative rides home. The secondary initiative will help reduce rates of intoxicated driving while also reducing the burden of citations and arrests.

Programming Partners:

- McFarland Police Department
- McFarland Chamber of Commerce
- Community Organizations and Sponsors

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Emphasis Area 5: Crash Data Tracking

As shown in Figure 1 on page 2, the number of crashes reported to the statewide database dropped in 2016 and thereafter, and reliable data plays an important role in identifying traffic safety problems and pursuing improvements. Lack of state-recorded data presents challenges to secure funding from state and federal programs to implement improvements. Fortunately, there are funding opportunities to improve this traffic crash collection process through the California OTS Traffic Records Improvement Project. The initiative to improve traffic records will support the City's efforts to develop crash-reduction programs and apply for state and federal funding.

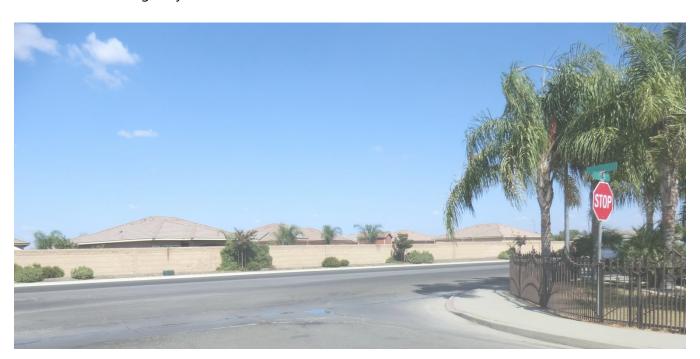
Goal for Emphasis Area 5:

• Submit 100% of crashes to the statewide database.

Strategy 5.1 Apply for Traffic Records Grants. Office of Traffic Safety (OTS) advocates efforts to automate traffic crash database systems and the ability to analyze and map high-crash locations. OTS helps improve and streamline traffic crash database systems, develop and analyze mapping systems to pinpoint high-crash areas and identify crash trends, and promote data sharing and integrate traffic records systems. The OTS grants are used to purchase hardware and software tools to build and improve data collection systems, modernize manual databases, digitize physical reports and print collections, and facilitate enhanced data gathering and data sharing. The City will apply for grant funding annually or on an as-need basis to receive support to achieve the identified goal.

Programming Partners

- McFarland Police Department
- California Highway Patrol



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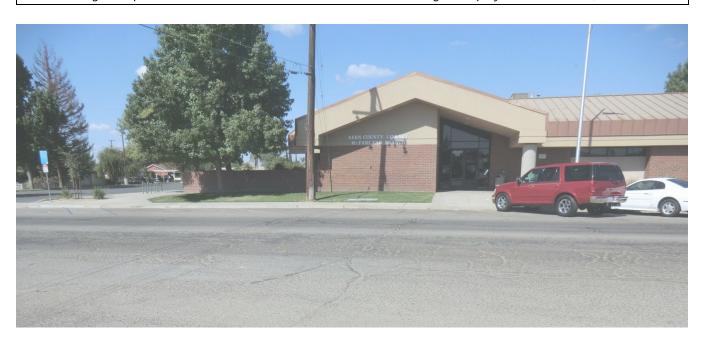


Emphasis Area 6: Implementation of SSAR-Identified Infrastructure Improvement Projects

The City of McFarland 2020 Systemic Safety Analysis Report identified roadway improvements and recommended infrastructure improvements at 30 locations based on crash histories and existing roadway design/geometrics. Due to the limited crash data available—which indicates low crash volumes—the resulting benefit/cost ratios (BCR) calculated per project location were less than the average of awarded projects in past HSIP cycles. While average BCR of past awarded projects is 13, some projects with a BCR of at least 10 have been awarded. Within the identified 30 improvement locations identified, 15 projects have a BCR score of 10 or above. Additionally, requests for exemptions must be made to the Caltrans District 6 Local Assistance Engineer for projects under \$100,000. For this reason, three (3) of the 15 projects are identified for HSIP funds (Table 4), while the remaining 12 are recommended to be constructed with local funding (Table 5). Within the complete list of projects, treatments NS2, NS6/R22, and NS20PB are eligible for HSIP funding when implemented systemically, as identified in Table 6 below.

Table 4 HSIP Eligible Projects

Туре	Location	Total Project BCR	Systemic BCR Treatment
Intersection	Sherwood Avenue & Browning Road	24.78	370.08* (NS2)
Intersection	Kern Avenue & Browning Road	12.39	NA
Roadway San Juan Street (Kern Avenue to Perkins Avenue)		37.64*	NA
#* = Funding exemption must be made to District 6 Local Assistance Engineer (project is <\$100,000)			



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Table 5 Projects Using Local Funding

Туре	Location	Total Project BCR	Systemic BCR Treatment
Intersection	Kern Avenue & 10th Street	15.64	
Intersection	Sherwood Avenue & San Juan Street	35.77	30.91* (NS2)
Intersection	Perkins Access Ramp & SR 99 On/Off Ramp	12.50	10.30* (NS2)
Intersection	Glenwood Avenue & Browning Avenue	5.05	39.22 (NS6)
Intersection	Taylor Avenue & Mast Avenue	10.15	NA (NS6) <i>NA* (NS20PB)</i>
Intersection	Perkins Avenue & Browning Avenue	9.63	
Intersection	Perkins Avenue & 3rd Street	3.18	
Intersection	Perkins Avenue & 2nd Street	8.24	
Intersection	California & 5th Street	6.18	
Intersection	California Avenue & 2nd Street	16.13	16.13* (NS2)
Roadway	Kern Avenue (Browning Road to Wiley Street)	116.97	116.97 (R22)
Roadway	Frontage Road (Cliff Avenue to Sherwood Avenue)	46.70	
#* = Funding exemption must be made to District 6 Local Assistance Engineer (project is <\$100,000)			

Table 6 Project with Treatments Eligible for Systemic HSIP Funding

Туре	Location	NS2	NS6/R22	NS20PB
Intersection	Sherwood Avenue & Browning Road	370.08*		
Intersection	Sherwood Avenue & San Juan Street	30.91*		
Intersection	Perkins Access Ramp & SR 99 On/Off Ramp	10.30*		
Intersection	California Avenue & 2nd Street	16.13*		
Intersection	Glenwood Avenue & Browning Avenue		39.22	
Intersection	Sherwood Avenue & 2nd Street		9.30	
Roadway	Kern Avenue (Browning Road to Wiley Street)		116.97	
Intersection	Taylor Avenue & Mast Avenue		10.15*	
#* = Funding exemption must be made to District 6 Local Assistance Engineer (project is <\$100,000)				

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Goal for Emphasis Area 6:

- Implement three (3) Spot Treatment HSIP Projects by 2030 (Table 4).
- Implement 12 Priority Projects via Local Funding by 2040 (Table 5).
- Implement three (3) Systemic HSIP Projects by 2030 (Table 6).
- Strategy 6.1 Prioritize Projects and Apply for HSIP Funding. The City will establish target years for completing improvements at the 12 intersections, along three (3) roadway segments, and implement three (3) systemic projects. The City may choose to prioritize HSIP projects and complete local funded projects in later years. Timelines to submit and implement HSIP projects should be sequenced to capitalize on resources and efforts. The City will dedicate staff resources toward submitting HSIP application materials to receive funding and oversee implementation efforts.
- Strategy 6.2: Infrastructure Improvements at Newly Annexed Locations. As part of this 2022 LSRP, data analysis identified three (3) intersections with considerable crash volumes, which were not included in the 2020 SSAR analysis: Driver Rd/Sherwood Ave, Driver Rd/Hanawalt Ave, and Mast Ave/Whisler Rd. Future crashes occurring at these locations will be assigned to the City's crash records. The City will investigate opportunities to improve safety at these locations through systemic projects or spot treatments using local funding. Alternatively, the City may conduct comprehensive roadway safety audits to obtain data and calculations to submit for HSIP-funded improvements.

Programming Partners

- McFarland Department of Public Works
- BHT Engineering



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Emphasis Area 7: Streamlined Emergency Vehicle Routes and Response Times

The City of McFarland 2020 Systemic Safety Analysis Report emphasizes that Emergency Medical Services (EMS) is one of the 15 challenge areas defined in the SHSP and a key safety strategy to be addressed. There are two (2) care centers within Kern County: Kern Medical Center (28 miles away) and the emergency treatment center in Delano (7 miles away).

Goal for Emphasis Area 7:

• Identify five (5) emergency vehicle response routes for improvements.

- Strategy 7.1: Coordination Between Emergency Responders. McFarland Police Department provided a preliminary list of locations throughout the City where emergency response vehicles typically travel: the two (2) Highway 99 overpasses connecting the East and West sides of the City, Sherwood Avenue and Perkins Avenue. For north-south travel, vehicles use 2nd Street within the City and Browning or Garzoli on the outer-edges of the City while Kern Avenue / "Downtown" is used for east-west travel. In addition, the intersections of Sherwood and 1st Street are often congested due to fast food restaurants traffic and high school students intersection crossing. The City's emergency responders will coordinate to identify routes for roadway improvements. The working group will communicate any challenges to the City's Department of Public Works with the goal of identifying any needed infrastructure treatments or signage to promote clearance and streamline emergency response.
- Strategy 7.2: Implement Curbside Management. McFarland Police Department frequently receives complaints about vehicular traffic and near-conflicts surrounding McFarland High School, specifically at the intersection of Mast Avenue and Sherwood Avenue where Northbound traffic on Mast Avenue and turning Eastbound on Sherwood Avenue is impacted by high school bus loading and unloading. The High School was not able to hire a crossing guard, as was suggested to increase safety; however, the City can adopt curb management to support reliable transit and safer streets. During students' arrival and dismissal, curbs are access points for students, parents, and teachers, so managing the demands of the curb can efficiently regulate traffic. A concept of curb appeal is designated zones which can be established as school bus loading and unloading areas thus decreasing congestion that would otherwise delay emergency responders. Outside of the drop-off and pick times for school, loading zones can be used for parcel pick-ups and deliveries.

Programming Partners:

- McFarland Police Department
- McFarland Fire Department
- McFarland Department of Public Works
- Ambulance Contractors



Next Steps

The LRSP is a living document and will be updated at minimum of every five (5) years by the City of McFarland Department of Community Development with input from the SWG to review the goals, to measure implementation progress, and to integrate updated crash statistics. In the interim, the City will host an annual project SWG meeting to review the LSRP's direction, process, and progress and weigh in upon upcoming year priorities.

The City of McFarland Department of Community Development will coordinate City departments, local agencies, and regional organizations to apply for funding opportunities. It also will advance strategies and continue partnerships with stakeholders to implement the project emphasis area strategies.



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Appendix A: Letters of Support

March 9, 2022

Larry A Ronk III
Interim Community Development Director
CITY OF MCFARLAND
401 W Kern Avenue
McFarland CA, 93250

RE: Letter of Support for Local Roadway Safety Plan

Dear Mr. Ronk,

On behalf of Bike Bakersfield's Board of Directors we would like to offer this letter of support documenting our support for improving transportation safety in the City of McFarland. Bike Bakersfield has been an active participant during the preparation of the Local Roadway Safety Plan (LRSP) led by the City. We concur with the project vision dedicated to a roadway network that provides safe travel throughout the city.

As a stakeholder involved in the LRSP, our organization representatives have been involved in review of five years of vehicle, pedestrian, and bicycle crash history, identification of potential solutions to address trends, and prioritization of strategies aligned with the project emphasis areas. We applaud the City of McFarland's focus to create a culture of safe travel behaviors and reduce severe and fatal transportation crashes citywide.

To achieve positive outcomes, Bike Bakersfield staff and our Board of Directors commits to continued partnership on the LRSP, including potential involvement through:

- Input on best methods to promote safety during dedicated campaigns (social media, in-school programs, etc.),
- Incorporate partner-provided safety messaging into communications (as appropriate),
- Promotion of safety events and activities to our constituents,
- Written letter of support for future grant pursuits led by City or other partners for LRSP activities, and
- Attendance at annual LRSP Stakeholder Working Group update meeting.

We look forward to continued involvement with the City of McFarland to bring about positive change in the community. If you should have any questions, please do not hesitate to contact our programs director, Asha Chandy, at (661) 703-4168, or by email at Asha@BikeBakersfield.org

Sincerely,

Glenn Hammett

President, Bike Bakersfield

Hun Robarustt



McFarland Unified School District Board of Trustees

Jim Beltran ● David Diaz ● Angel Turrubiates ● Eliseo Garza ● David Arguello

S. Aaron Resendez, Superintendent

March 09, 2022

Larry A Ronk III
Interim Community Development Director
CITY OF MCFARLAND
401 W Kern Avenue
McFarland CA, 93250

RE: Letter of Support for Local Roadway Safety Plan

Dear Mr. Ronk,

On behalf of McFarland Unified School District, we would like to offer this letter of support documenting our support for improving transportation safety in the City of McFarland. McFarland Unified School District has been an active participant during the preparation of the Local Roadway Safety Plan (LRSP) led by the City. We concur with the project vision dedicated to a roadway network that provides safe travel throughout the city.

As a stakeholder involved in the LRSP, our organization representatives have been involved in review of five years of vehicle, pedestrian, and bicycle crash history, identification of potential solutions to address trends, and prioritization of strategies aligned with the project emphasis areas. We applaud the City of McFarland's focus to create a culture of safe travel behaviors and reduce severe and fatal transportation crashes citywide.

To achieve positive outcomes, McFarland Unified School District commits to continued partnership on the LRSP, including potential involvement through:

- Input on best methods to promote safety during dedicated campaigns (social media, in-school programs, etc.),
- Incorporate partner-provided safety messaging into communications (as appropriate),
- Promotion of safety events and activities to our constituents,
- Written letter of support for future grant pursuits led by City or other partners for LRSP activities, and
- Attendance at annual LRSP Stakeholder Working Group update meeting.

We look forward to continued involvement with the City of McFarland to bring about positive change in the community. If you should have any questions, please do not hesitate to contact me at (616) 792-3091, or by email at saresendez@mcfarland.k12.ca.us (email).

Sincerely,

S. Aaron Resendez

Superintendent

McFarland Unified School District 601 Second Street McFarland, CA 93250 Phone: (661) 792-3081 Fax: (661) 792-2447

BHT ENGINEERING, INC.

Civil Engineering & Construction Management

March 25, 2022

Larry A Ronk III Interim Community Development Director CITY OF MCFARLAND 401 W Kern Avenue McFarland CA, 93250

RE: Letter of Support for Local Roadway Safety Plan

Dear Mr. Ronk,

On behalf of BHT Engineering, Inc., we would like to offer this letter of support documenting our support for improving transportation safety in the City of McFarland. BHT Engineering, Inc., has been an active participant during the preparation of the Local Roadway Safety Plan (LRSP) led by the City. We concur with the project vision dedicated to a roadway network that provides safe travel throughout the city.

As a stakeholder involved in the LRSP, our organization representatives have been involved in review of five years of vehicle, pedestrian, and bicycle crash history, identification of potential solutions to address trends, and prioritization of strategies aligned with the project emphasis areas. We applaud the City of McFarland's focus to create a culture of safe travel behaviors and reduce severe and fatal transportation crashes citywide.

To achieve positive outcomes, BHT Engineering, Inc. commits to continued partnership on the LRSP, including potential involvement through:

- Input on best methods to promote safety during dedicated campaigns (social media, inschool programs, etc.),
- Incorporate partner-provided safety messaging into communications (as appropriate),
- Promotion of safety events and activities to our constituents,
- Written letter of support for future grant pursuits led by City or other partners for LRSP activities, and
- Attendance at annual LRSP Stakeholder Working Group update meeting.

We look forward to continued involvement with the City of McFarland to bring about positive change in the community. If you should have any questions, please do not hesitate to contact me at (661) 558-4641, or by email at juan@bhtengineering.com.

Sincerely,

Juan M. Pantoja Principal Engineer

JUAN M. PANTOJA

DEPARTMENT OF TRANSPORTATION DISTRICT 6 OFFICE

1352 WEST OLIVE AVENUE P.O. BOX 12616 FRESNO, CA 93778-2616 PHONE (559) 696-0249 FAX (559) 488-4299 TTY 711 www.dot.ca.gov



March 30, 2022

Larry A Ronk III
Interim Community Development Director
City of McFarland
401 W. Kern Avenue
McFarland, CA 93250

Dear Mr. Ronk:

On behalf of the California Department of Transportation (Caltrans) District 6, Division of Maintenance and Operations, I would like to offer my support of the efforts by the City of McFarland towards improving safety of the local transportation network. I and several members of my staff have been active participants of the Local Roadway Safety Plan (LRSP) being developed for the City.

Caltrans has a vision to eliminate fatalities and serious injuries on California's roadways by 2050 and provide safer outcomes for all communities. The efforts proposed by the City are consistent with the Safe System approach that Caltrans has adopted and is being promoted by the Federal Highway Administration. The proposed actions have been developed to address crash trends found in the safety data and focus on vulnerable users to reduce serious injuries and fatalities citywide.

I welcome continued involvement by my staff and myself to support the road safety efforts by the City. If you have any questions, you may contact me at (559) 696-0249 or by email at <john.liu@dot.ca.gov>.

Sincerely,

JOHN Y. LIU

Deputy District Director

Maintenance and Operations



LRSP Vision:

A high-quality transportation network, free of fatalities, that provides comfort, efficiency, sustainability, and equity for all users.

markthomas.com