



## CITY OF MORRO BAY PUBLIC WORKS ADVISORY BOARD AGENDA

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*The City of Morro Bay provides essential public services and infrastructure to maintain a safe, clean and healthy place for residents and visitors to live, work and play.*

### REGULAR MEETING Wednesday, January 17, 2024 – 5:30 PM Veterans Memorial Hall 209 Surf Street, Morro Bay, CA

*Pursuant to Assembly Bill 361 (2021-22) and Government Code section 54953 this Meeting will be conducted in a hybrid format with both in-person and virtual public participation. Ways to watch this meeting and submit public comment are provided below.*

#### **Public Participation:**

*Public participation is allowed in the following ways:*

- *Community members may attend the meeting in person at the Morro Bay Veterans Hall.*
- *Alternatively, members of the public may watch the meeting and speak during general Public Comment or on a specific agenda item by logging in to the Zoom webinar using the information provided below. Please use the "raise hand" feature to indicate your desire to provide public comment.*

*Please click the link below to join the webinar:*

- <https://us02web.zoom.us/j/82722747698?pwd=aWZpTzcuTHlRTk9xaTlmWVNWRWFUQT09>  
Password: 135692
- *Or Telephone Attendee: 1 (408) 638-0968 or 1 (669) 900-6833 or 1 (346) 248-7799; Webinar ID: 827 2274 7698; Password: 135692; Press \*9 to "Raise Hand" for Public Comment*

- *Members of the public may watch the meeting either on cable Channel 20 or as streamed on the City [website](#).*
- *Community members are encouraged to submit agenda correspondence in advance of the meeting via email to the Public Works Advisory Board at [pwab@morrobayca.gov](mailto:pwab@morrobayca.gov) prior to the meeting. Agenda Correspondence received at [pwab@morrobayca.gov](mailto:pwab@morrobayca.gov) by 10 a.m. on the meeting day will be posted on the City website.*

ESTABLISH QUORUM AND CALL TO ORDER  
MOMENT OF SILENCE  
PLEDGE OF ALLEGIANCE  
ANNOUNCEMENTS  
PUBLIC WORKS DIRECTOR ANNOUNCEMENTS

## PUBLIC COMMENT

Members of the audience wishing to address the Board on City business matters not on the agenda may do so at this time. For those desiring to speak on items on the agenda, but unable to stay for the item, may also address the Board at this time.

### A. CONSENT CALENDAR

Unless an item is pulled for separate action by the Public Works Advisory Board, the following actions are approved without discussion. The public will also be provided an opportunity to comment on consent agenda items.

#### A-1 APPROVAL OF MINUTES FOR THE SEPTEMBER 20, 2023, PUBLIC WORKS ADVISORY BOARD REGULAR MEETING

**Recommendation: Approve as submitted.**

#### A-2 APPROVAL OF MINUTES FOR THE OCTOBER 18, 2023, PUBLIC WORKS ADVISORY BOARD REGULAR MEETING

**Recommendation: Approve as submitted.**

#### A-3 APPROVAL OF MINUTES FOR THE DECEMBER 6, 2023, PUBLIC WORKS ADVISORY BOARD SPECIAL MEETING

**Recommendation: Approve as submitted.**

### B. BUSINESS ITEMS

#### B-1 LOCAL ROADWAY SAFETY PLAN – REVIEW AND DISCUSSION OF DRAFT PLAN

**Recommendation: Staff recommends the Board receive the Draft Local Road Safety Plan (LRSP) and provide input and feedback to Public Works staff and the project consultant (LRSP Team) regarding the content of the document prior to finalization and presentation to City Council for adoption in February. Staff also recommends that the Board approve presentation of the document, once finalized, before the City Council for adoption.**

#### B-2 CONSIDERATION OF INSTALLATION OF A RED CURB TO CREATE A “NO PARKING” ZONE AT 501 SEQUOIA STREET IN FRONT OF THE WEST PARKING LOT AT DEL MAR SCHOOL

**Recommendation: Staff recommends the Board approve the proposed installation of new red curb “No Parking” as presented in front of Del Mar School at the west parking lot entrance.**

#### B-3 CONSIDERATION OF PROPOSED CHANGE TO TRAFFIC FLOW OF WEST DRIVE AISLE TO ONE-WAY BETWEEN MORRO BAY LANDING AND HARBOR DEPARTMENT OFFICE

**Recommendation: Staff recommends the Board support the drive aisle behind Tognazzini’s Dockside up to and around the Harbor Office be changed and marked as one-way traffic from the south at Morro Bay Landing to north at the Harbor Office.**

### C. FUTURE AGENDA ITEMS

### D. ADJOURNMENT

The next Regular Meeting will be held on **Wednesday, February 21, 2024, at 5:30 PM.**

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THIS AGENDA IS SUBJECT TO AMENDMENT UP TO 72 HOURS PRIOR TO THE DATE AND TIME SET FOR THE MEETING. PLEASE REFER TO THE AGENDA POSTED AT THE PUBLIC WORKS DEPARTMENT, 955 SHASTA AVENUE, FOR ANY REVISIONS OR CALL THE DEPARTMENT AT 805-772-6263 FOR FURTHER INFORMATION.

MATERIALS RELATED TO AN ITEM ON THIS AGENDA SUBMITTED TO THE PUBLIC WORKS ADVISORY BOARD AFTER DISTRIBUTION OF THE AGENDA PACKET ARE AVAILABLE FOR PUBLIC INSPECTION UPON REQUEST BY CALLING THE DEPARTMENT AT 805-772-6263.

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, IF YOU NEED SPECIAL ASSISTANCE TO PARTICIPATE IN A CITY MEETING, PLEASE CONTACT THE PUBLIC WORKS DEPARTMENT AT LEAST 24 HOURS PRIOR TO THE MEETING TO ENSURE REASONABLE ARRANGEMENTS CAN BE MADE TO PROVIDE ACCESSIBILITY TO THE MEETING.

*Pursuant to Assembly Bill 361 (2021-22) and Government Code section 54953 this Meeting will be conducted in a hybrid format with both in-person and virtual public participation.*

- |          |                   |                    |
|----------|-------------------|--------------------|
| PRESENT: | Laurie Beale      | Chair              |
|          | John Erwin        | Vice Chair         |
|          | Ian Gaffney       | Board Member       |
|          | Jan Goldman       | Board Member       |
|          | Doug Hill         | Board Member       |
|          | Joe Ingrassia     | Board Member       |
| ABSENT:  | Robert Nava       | Board Member       |
| STAFF:   | Eric Riddiough    | City Engineer      |
|          | Janeen Burlingame | Management Analyst |

**ESTABLISH QUORUM, CALL TO ORDER**

The meeting was called to order at 5:30 PM with all Board members in attendance except for Board member Robert Nava.

**MOMENT OF SILENCE AND PLEDGE OF ALLEGIANCE**

**ANNOUNCEMENTS**

<https://youtu.be/e8U-EwnWyos?si=pla976Xc23ZjHqBH&t=169>

Jan Goldman announced the Books and Beyond event at the Morro Bay Library on Saturday, September 23<sup>rd</sup>, 10:00 AM – 12:00 PM.

John Erwin announced he will be missing the next PWAB meeting.

Eric Riddiough gave an update on the community meeting for the Local Road Safety Plan (LRSP) noting the next LRSP meeting date is to be determined and will be posted on the City’s website under Hot Topics when the date is confirmed and announced at the next PWAB meeting on Wednesday, October 18<sup>th</sup>. He noted the interactive tool on the website for the LRSP is still active through October and encourages the public to use it.

Eric Riddiough welcomed new Board member Doug Hill to the PWAB.

Eric Riddiough announced that the new Public Works Maintenance Manager has started, and Greg Kwolek will be introducing him at the next meeting.

**PUBLIC COMMENT**

[https://youtu.be/e8U-EwnWyos?si=7cT2RXRAED9\\_A\\_Eb&t=466](https://youtu.be/e8U-EwnWyos?si=7cT2RXRAED9_A_Eb&t=466)

The public comment period was opened.

James Worthley, Planning Director for the San Luis Obispo Council of Governments (SLOCOG), spoke of the issues with the gas tax revenues which could help maintain City streets. He noted we need a new path as 25 other counties with 90% of California’s population have passed a dedicated sales tax for transportation that can be leveraged for other state and federal funds. SLOCOG is investigating and identifying what transportation projects are important to the Board and the public noting if there are enough identified items in the region, we may see a sales tax measure go to the voters.

The public comment period was closed.

**A. CONSENT CALENDAR**

[https://youtu.be/e8U-EwnWyos?si=4cXuw8GCoo2Fdzu\\_&t=1006](https://youtu.be/e8U-EwnWyos?si=4cXuw8GCoo2Fdzu_&t=1006)

**A-1 APPROVAL OF MINUTES FOR THE AUGUST 16, 2023, PUBLIC WORKS ADVISORY BOARD REGULAR MEETING**

The public comment period was opened, and seeing none, the public comment period was closed.

MOTION: Jan Goldman moved to approve Item A-1. The motion was seconded by John Erwin and passed. 6-0.

B. BUSINESS ITEMS

<https://youtu.be/e8U-EwnWYos?si=DL1upcwUXvNR3E-C&t=1068>

B-1 SENATE BILL 1 (SB-1) FUNDING PROJECT LIST FOR FY 23/24 PAVEMENT MANAGEMENT PLAN PROJECT

Eric Riddiough presented the staff report.

Discussion, comments, and questions amongst the Board members and staff.

The public comment period was opened, and seeing none, the public comment period was closed.

MOTION: Ian Gaffney moved to recommend the City Council adopt Resolution No. XX-23 approving the Fiscal Year 2023/2-24 project list. The motion was seconded by Jan Goldman and passed 6-0.

B-2 CONTRACT AMENDMENTS WITH CANNON CORPORATION AND ADVANTAGE TECHNICAL SERVICES FOR KINGS AND BLANCA TANKS REHABILITATION PROJECT

<https://youtu.be/e8U-EwnWYos?si=pvjBcLvAOwJWoXRa&t=4518>

Eric Riddiough presented the staff report.

Discussion, comments, and questions amongst the Board members and staff.

The public comment period was opened, and seeing none, the public comment period was closed.

MOTION: John Erwin moved to approve the amendments to the contract as negotiated. The motion was seconded by Ian Gaffney.

Ian Gaffney requested the City hold the contractor liable moving forward for any other staff or consultant/contractor time.

The motion passed 6-0.

C. FUTURE AGENDA ITEMS

<https://youtu.be/e8U-EwnWYos?si=GatJON0llq-idNa1&t=6080>

Local Roadway Safety Plan Workshop

Water Reclamation Facility Indirect Potable Reuse Program

Beachcomber Sewer Main & Beach Tract Sewer Mains Replacement Update

Joe Ingrassia proposed a future discussion regarding the City's tree removal process.

John Erwin proposed an update on FEMA be added to the future agenda items.

Eric Riddiough noted the Local Roadway Safety Plan (LRSP) won't be at the PWAB meeting, and probably will be a stand-alone meeting.

ADJOURNMENT

The meeting adjourned at 7:15 PM. The next Regular Meeting will be held on **Wednesday, October 18, 2023, at 5:30 PM.**

Recorded by:

Gina Arias  
Administrative Technician

*Pursuant to Assembly Bill 361 (2021-22) and Government Code section 54953 this Meeting will be conducted in a hybrid format with both in-person and virtual public participation.*

- |          |                |                                  |
|----------|----------------|----------------------------------|
| PRESENT: | Laurie Beale   | Chair                            |
|          | Robert Nava    | Board Member                     |
|          | Jan Goldman    | Board Member                     |
|          | Joe Ingraffia  | Board Member                     |
|          | Doug Hill      | Board Member                     |
| ABSENT:  | John Erwin     | Vice Chair                       |
|          | Ian Gaffney    | Board Member                     |
| STAFF:   | Greg Kwolek    | Public Works Director            |
|          | Eric Riddiough | City Engineer                    |
|          | Damaris Hanson | Utilities Division Manager       |
|          | Dan Heimel     | Confluence Engineering Solutions |

**ESTABLISH QUORUM, CALL TO ORDER**

The meeting was called to order at 5:32 PM with all Board members in attendance except Board members John Erwin and Ian Gaffney.

**MOMENT OF SILENCE AND PLEDGE OF ALLEGIANCE**

**ANNOUNCEMENTS**

[https://youtu.be/V4nlm65CGxo?si=320F\\_JTY0CKwOllq&t=118](https://youtu.be/V4nlm65CGxo?si=320F_JTY0CKwOllq&t=118)

Greg Kwolek introduced the new Public Works Maintenance Division Manager Carlos Mendoza.

Carlos gave a brief introduction and work history of himself.

**PUBLIC COMMENT - None**

**A. CONSENT CALENDAR**

[https://youtu.be/V4nlm65CGxo?si=hXPV81\\_YskzBzGgy&t=307](https://youtu.be/V4nlm65CGxo?si=hXPV81_YskzBzGgy&t=307)

A-1 CAPITAL PROJECTS UPDATE

A-2 APPROVAL OF EXCUSED ABSENCE REQUEST FOR BOARD MEMBER BEALE

A-3 APPROVAL OF EXCUSED ABSENCE REQUEST FOR BOARD MEMBER ERWIN

The public comment period was opened, and seeing none the public comment period was closed.

MOTION: Jan Goldman moved to approve items A-1, A-2, and A-3. The motion was seconded by Joe Ingraffia and passed 5-0.

**B. BUSINESS ITEMS**

B-1 PRESENTATION OF THE BASIS OF DESIGN REPORT, WATER SUPPLY EVALUATION TECHNICAL MEMORANDUM AND PHASE 1 IMPLEMENTATION STRATEGY RECOMMENDATION FOR THE WATER RECLAMATION FACILITY RECYCLED WATER PROGRAM

[https://youtu.be/V4nIm65CGxo?si=7\\_JbpM6d\\_lxoKdcr&t=385](https://youtu.be/V4nIm65CGxo?si=7_JbpM6d_lxoKdcr&t=385)

Greg Kwolek introduced the item and spoke of a joint meeting with City Council on November 14<sup>th</sup>, at 3 p.m. to discuss the program, noting he wanted to get Board member feedback tonight.

Dan Heimel presented the staff report.

Discussion, comments, and questions amongst Board members and staff.

The public comment period was opened, and seeing none, the public comment period was closed.

The Board will confer directly with City Council at the next joint meeting.

B-2 REVIEW OF LOS OSOS COMMUNITY SERVICES DISTRICT DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION FOR PIPELINE AND INTERTIE PROJECT TO CONNECT TO STATE WATER

<https://youtu.be/V4nIm65CGxo?si=NVIQVjl2xVvYXLo0a&t=6991>

Greg Kwolek presented the staff report.

Discussion, comments, and questions amongst Board members and staff.

The public comment period was opened, and seeing none, the public comment period was closed.

C. FUTURE AGENDA ITEMS

[https://youtu.be/V4nIm65CGxo?si=J35vF\\_Yru4FEnpwS&t=8021](https://youtu.be/V4nIm65CGxo?si=J35vF_Yru4FEnpwS&t=8021)

Greg Kwolek gave an update on the next meetings for the Local Roadway Safety Plan (LRSP).

ADJOURNMENT

The meeting adjourned at 7:48 PM. The next Regular Meeting will be held on **Wednesday, January 17, 2024, at 5:30 PM.**

Recorded by:

Gina Arias  
Administrative Technician

*Pursuant to Assembly Bill 361 (2021-22) and Government Code section 54953 this Meeting will be conducted in a hybrid format with both in-person and virtual public participation.*

- |          |                   |                                  |
|----------|-------------------|----------------------------------|
| PRESENT: | John Erwin        | Vice Chair                       |
|          | Robert Nava       | Board Member                     |
|          | Jan Goldman       | Board Member                     |
|          | Joe Ingraffia     | Board Member                     |
|          | Doug Hill         | Board Member                     |
| ABSENT:  | Laurie Beale      | Chair                            |
|          | Ian Gaffney       | Board Member                     |
| STAFF:   | Eric Riddiough    | City Engineer                    |
|          | Janeen Burlingame | Management Analyst               |
|          | Kyle McGowen      | Kimley-Horn and Associates, Inc. |

**ESTABLISH QUORUM, CALL TO ORDER**

The meeting was called to order at 5:32 PM with all Board members in attendance except for Chair Laurie Beale and Board Member Ian Gaffney.

**SPECIAL MEETING AGENDA**

**I. LOCAL ROADWAY SAFETY PLAN (LRSP) - 3<sup>RD</sup> COMMUNITY MEETING**

<https://youtu.be/d4zEf8Dvlac?si=oDjt3sdxaOkO6QIN&t=105>

Eric Riddiough introduced the item and Kyle McGowen presented the report.

Discussion, comments, and questions amongst the Board members and staff.

The public comment period was opened.

James Spencer Morro Bay resident, expressed appreciation to staff for the workshop on this and presented his concerns regarding speeding issues on Paula Street and Ironwood Avenue, noting the recent speed survey data is not accurate and suggested a stop sign would help slow traffic.

Peggy Mandeville, Morro Bay resident, inquired if the LRSP plan will: 1) note that other plans, like the bike plan and circulation, were reviewed as part of this plan, 2) note issues raised in the Caltrans right of way and if they will be referred to them, 3) be an appendix in the plan showing all comments provided, and 4) include cost estimates with a line item breakdown.

Helene Finger, Morro Bay resident and Civil Engineer, expressed her excitement about the LRSP development, noting she would like to see the plan expanded relating to bike network connection, particularly on Yerba Buena in light of the project connecting to Cayucos and the future development in the Tahiti and Panorama area.

Diane Hutchinson, Morro Bay resident, asked if Ironwood Avenue was considered for improvements on the crash profile, noting she would like to see more Police up there to address speeding issues and if that can't be done, put in speed bumps or a stop sign at Avalon.

Laurel Barton, City Council, commended staff for their efforts and thanked the consultant for looking at the issues on Morro Bay Boulevard to address running stop signs and adding bulb outs and raised crosswalks. She also inquired about the landscape buffer and how it may relate to the current planter boxes out there.

The public comment period was closed.

Discussion, comments, and questions amongst the Board members and staff.

ADJOURNMENT

The meeting adjourned at 6:40 PM.

Recorded by:

Gina Arias  
Administrative Technician



AGENDA NO: B-1  
MEETING DATE: January 17, 2024

# Staff Report

**TO:** Public Works Advisory Board **DATE:** January 8, 2024  
**FROM:** Eric Riddiough, PE – City Engineer  
**SUBJECT:** Local Road Safety Plan – Review and Discussion of Draft Plan

## RECOMMENDATION

Staff recommends the Public Works Advisory Board (PWAB) receive the Draft Local Road Safety Plan (LRSP) and provide input and feedback to Public Works staff and the project consultant (LRSP Team) regarding the content of the document prior to finalization and presentation to City Council for adoption in February. Staff also recommends that the PWAB approve presentation of the document, once finalized, before the City Council for adoption.

## BACKGROUND/ DISCUSSION

An LRSP is a prepared plan part of a comprehensive statewide initiative focused on enhancing traffic safety by coordinating the collaboration of various organizations and stakeholders including the community at large, law enforcement, public works, school districts, state and county transportation agencies, and others. Functioning as a data-driven strategy, the LRSP aims to minimize fatalities and serious injuries resulting from traffic accidents on public roads. This plan establishes a systematic framework for identifying and analyzing safety issues with the proposal of necessary improvements to address these concerns proactively. Funded by Caltrans and the City, a City Council-approved LRSP is mandatory for obtaining grant funds including the Highway Safety Improvement Program (HSIP) Safe Streets 4 All (SS4A), and potentially other safety grant programs, and it enhances a city's competitiveness for other grant opportunities such as Active Transportation, Congested Corridors, or many others. It showcases the City's commitment to road safety, emphasizing a responsive approach to challenges and demonstrating a concerted effort to prioritize and improve overall traffic safety.

The purpose of the LRSP is multifaceted. First, it seeks to comprehensively understand the factors contributing to collisions on public roads. By analyzing these factors, the LRSP aims to present effective strategies to reduce traffic-related injuries. The plan goes beyond analysis by formulating a detailed action plan that prioritizes safety improvements based on identified risks. Additionally, the LRSP serves to enhance the city's competitiveness for safety funding, acknowledging that its implementation is vital to securing resources and support for the proactive enhancement of road safety measures. The LRSP is also designed to be a dynamic document, responsive to both quantitative data and qualitative community feedback. Traffic data provides a foundational understanding of safety issues, but the lived experiences and observations of residents offer a nuanced, fuller perspective. This collaborative approach ensures a more holistic and effective road safety plan. As part of being a dynamic document, it is also required to be updated at least every five years.

The City's LRSP has been shaped by both community input and traffic data to focus efforts and resources on improvements that will reduce crashes, close calls, and improve overall safety for the public. The LRSP development process has integrated valuable input from the community, providing perspectives beyond the limitations of raw data. Three community outreach workshops and meetings were conducted with the first on September 06, 2023, the second on November 09, 2023, and the third at a special PWAB meeting on December 6, 2023. The two workshops were interactive and accommodated a space where residents could come and voice concerns and share their experiences and suggestions related to local traffic safety. Participants could physically write feedback on

Prepared By: ER Dept Review: GK

presentation materials as well as place areas of concern on maps. The special PWAB meeting was beneficial in that additional suggestions and comments were received from the PWAB and the public to be incorporated into preparation of this Draft LRSP. The community and PWAB engagement have been very important for identifying areas of concern that may not be immediately evident through crash data sources.

In addition to the interactive community workshops, the LRSP Team created an online mapping tool available for over 3 months that allowed residents to identify and document areas of concern and make suggestions for improvements. This digital tool provided a convenient alternative for community members who may have been unable to attend the workshops in person. Through the interactive map, residents contributed valuable insights and feedback about specific locations, offering a user-friendly and accessible platform for engagement in the planning and decision-making process. The feedback received from the community has been documented and will be a part of the appendix of the finalized LRSP document.

Following the public outreach and a comprehensive walking tour with agency partners, several prominent issues emerged as focal points for community concern. Among these issues, the most common safety concerns were categorized into the following topics: speeding, the prevalence of cut-through traffic within neighborhoods, frequent disregard for stop signs and traffic lights by drivers, inadequate lighting, and concerns related to pedestrian and bicycle safety. These categories form a critical foundation for further community engagement and collaborative efforts aimed at addressing and enhancing overall traffic safety in the area and are highlighted in the draft LRSP.

The LRSP team introduced a diverse range of solutions and project ideas to address the concerns which are detailed in the LRSP. These solutions encompassed the installation of additional speed limit signs and speed feedback signs/trailers to regulate and monitor vehicle speed. Additionally, traffic calming measures such as speed humps, speed tables, chicanes, chokers, medians, and other physical changes may be proposed to reduce speed and control traffic flow effectively. The implementation of flashing stop signs, yield signs, neighborhood access control, and reduction of turning radius may be suggested to enhance intersection safety and slow down traffic. Other infrastructure improvements including curb extensions (bulb-outs), crosswalk refuge islands, additional sidewalks where appropriate and where gaps occur, and other high-visibility crosswalks may be proposed in areas to prioritize pedestrian safety. Moreover, the plan includes proposed innovative solutions such as pedestrian crossing beacons, dedicated bike lanes, and protected bike lanes to promote and safeguard pedestrians and cyclists. Also, in areas where lack of lighting is of concern and contributing to incidents, infill of streetlights may also be considered. These comprehensive solutions aim to create a safer and more efficient traffic environment.

## **CONCLUSION**

The LRSP document is important in that it gives the City a plan on prioritizing projects related to roadway safety that can be leveraged for obtaining grant funds to address capital improvements that the City may not have funding to support. Staff has provided the Draft Local Road Safety Plan (LRSP) to the PWAB for input and feedback so that the document can be finalized and presented to City Council for adoption in February.

## **ATTACHMENTS**

1. Draft LRSP

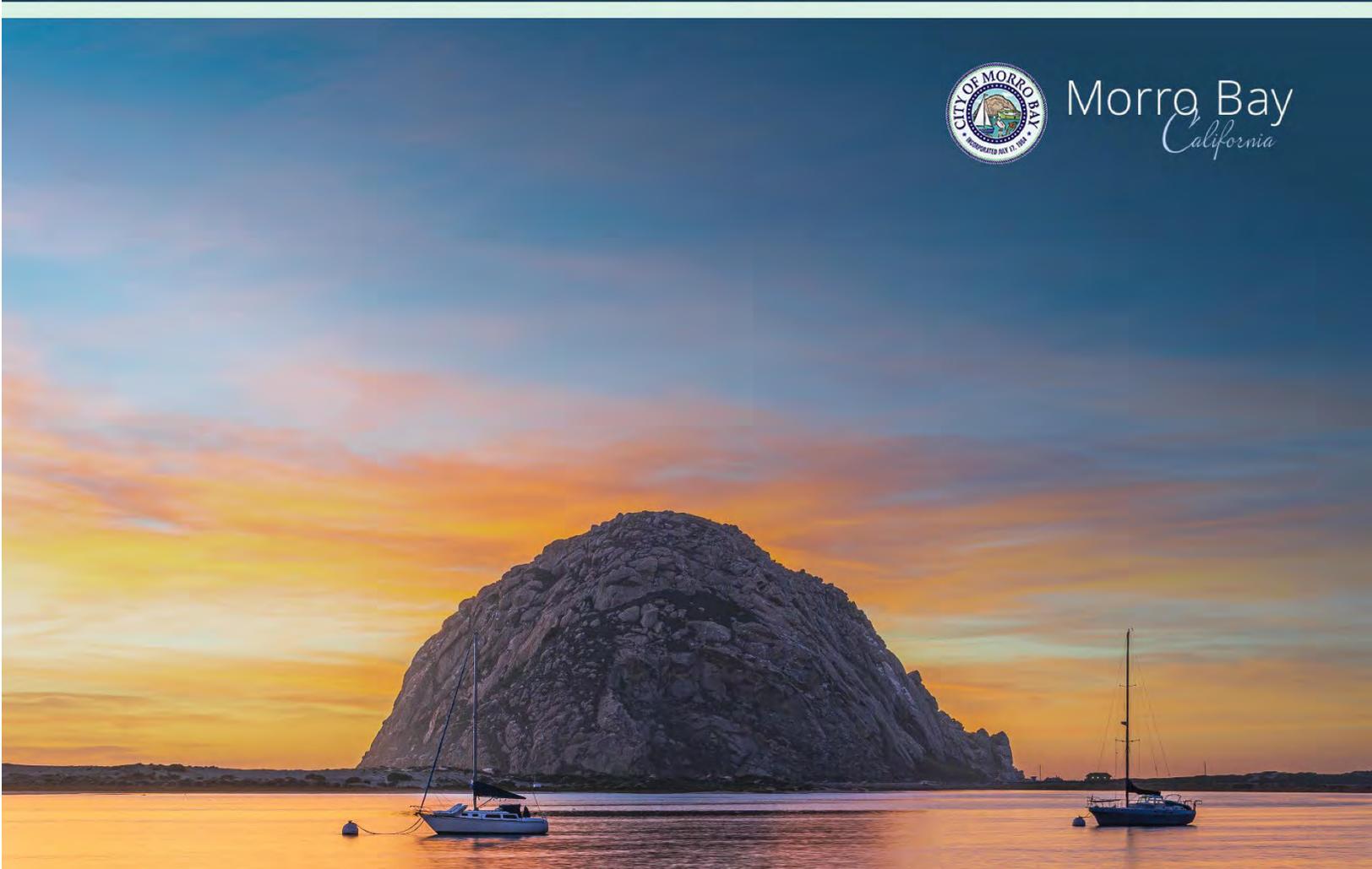


# MORRO BAY

## Local Roadway Safety Plan



Morro Bay  
*California*





## Acknowledgements

The Morro Bay Local Roadway Safety Plan was funded locally and through a grant from the California Department of Transportation (Caltrans). The City of Morro Bay, along with public stakeholders and partner agencies, worked to develop a plan that aims to increase roadway safety for all users of the City's roadway network. The study was managed by City Engineer, Eric Riddiough, and Public Works Director, Greg Kwolek, at the City of Morro Bay, along with members of the public and a public agency working group. A consulting team led by Kimley-Horn assisted the City of Morro Bay and the stakeholder group in preparing this Plan.

## Public Agency Working Group

### City of Morro Bay

- Mayor Carla Wixom
- Mayor Pro Tem Jennifer Ford
- Councilmember Laurel Barton
- Councilmember Cyndee Edwards
- Councilmember Zara Landrum
- Yvonne Kimball - City Manager
- Eric Riddiough, PE – City Engineer
- Greg Kwolek- Public Works Director
- Janeen Burlingame – Management Analyst

### Morro Bay Police Department

- Tony Mosqueda – Police Commander
- Amy Watkins – Police Chief

### San Luis Coastal Unified School District

- Ryan Pinkerton
- Scott Schalde

### Fire Department

- Matt Vierra – Fire Marshall
- Daniel McCrain – Fire Chief

### City of Morro Bay Community Development

- Cindy Jacinth – Planning Manager

### City of Morro Bay Public Works Advisory Board

- John Erwin

### San Luis Obispo Council of Governments

- John DiNunzio – Transportation Planner
- William Johnson – CTAC Member

### Caltrans District 5

- Diane Dostalek – Senior Transportation Engineer

## Consultant Team

### Kimley-Horn:

- Kyle McGowan, AICP
- Mike Colety, PE
- Abbey Ibarra
- Tyler Lindberg, AICP





(Per Section 148 of Title 23, United States Code [23 U.S.C. §148(h) (4)] REPORTS DISCOVERY AND ADMISSION INTO EVIDENCE OF CERTAIN REPORTS, SURVEYS, AND INFORMATION—Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section, shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.)

SIGNED BY \_\_\_\_\_

DRAFT



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## Executive Summary

Morro Bay has created a Local Roadway Safety Plan (LRSP), which identifies a framework to identify, analyze, and develop traffic safety enhancements on the City's roadway network. The LRSP was developed in response to local issues and needs. Through the analysis, this report has identified emphasis areas to inform and further guide safety evaluation and planning for the City's transportation network. The LRSP also analyzes crash data on an aggregate basis as well as at specific locations to identify high-crash locations, high-risk locations, and citywide trends and patterns. The analysis of crash history on the City's transportation network allows for opportunities to:

1. Identify factors in the transportation network that inhibit safety for all roadway users;
2. Improve safety at specific high-crash locations, and;
3. Develop safety measures using the four E's of safety: Engineering, Enforcement, Education, and Emergency Response to encourage safer driver behavior and better severity outcomes.

With this LRSP, the City continues its safety efforts by identifying areas of emphasis and systemic recommendations to enhance safety.

The City's vision is to enhance the transportation network and reduce traffic fatalities and serious injury related crashes, and the goals for the City of Morro Bay include the following:

**Goal #1:** Identify areas with a high risk for crashes.

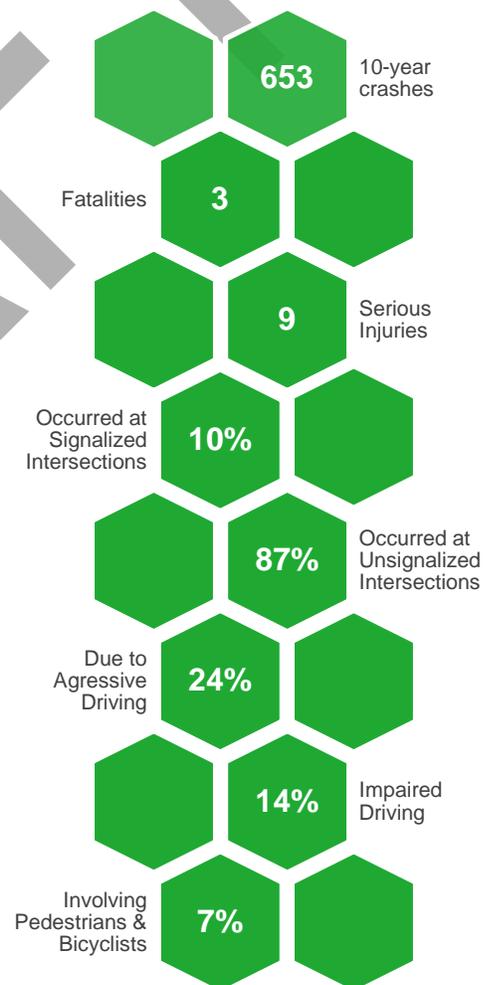
**Goal #2:** Illustrate the value of a comprehensive safety program and the systemic process.

**Goal #3:** Plan future safety improvements for near-, mid- and long-term.

**Goal #4:** Define safety projects for HSIP and other program funding consideration.

This LRSP analyzes the most recent 10-year range of crash data (January 1, 2013 – September 30, 2022) and roadway improvements to assess historic trends, patterns, and areas of increasing concern.

Further, the crash history was analyzed to identify locations with elevated risk of crashes either through their crash histories or their similarities to other locations with more active crash patterns. Using a network screening process,



Source: Morro Bay Crash Database (2017-2022)

locations were identified within the City that will most likely benefit from safety enhancements. Using historic crash data, crash risk factors for the entire network were derived. The outcomes informed the identification and prioritization of engineering and non-infrastructure safety measures to address certain roadway characteristics and related behaviors that contribute to motor vehicle crashes with active transportation users.

Emphasis areas were developed by revisiting the vision and goals developed at the onset of the planning process and comparing them with the trends and patterns identified in the crash analysis.

**Emphasis Area #1: Speeding**

**Emphasis Area #2: Cut-through Traffic**

**Emphasis Area #3: Drivers Ignoring Signals and Stop Signs**

**Emphasis Area #4: Lighting**

**Emphasis Area #5: Pedestrians**

**Emphasis Area #6: Bicyclists**

These locations were identified through the analysis process based on their crash histories, public engagement and input, the observed crash patterns, and their different characteristics to provide the most insight into potential systemic safety countermeasures that the City can employ to achieve the most cost-effective safety benefits. Countermeasures are subjected to a benefit/cost assessment and scored according to their potential return on investment. The potential benefit of these countermeasures at locations with similar design characteristics can then be extrapolated regardless of crash history, allowing for proactive safety enhancements that can prevent future safety challenges from developing. Additionally, this information can be used to help the City apply for grants and other funding opportunities to implement these safety improvements.

Near-term action items were identified to accelerate the City's achievement of the goals and vision of this LRSP. The City can:

- Actively seek other funding opportunities to improve safety for all modal users,
- Collaborate with established safety partners & neighboring municipalities as improvements are made to create a cohesive transportation network, and
- Iteratively evaluate existing and proposed transportation safety programs and capital improvements to design a safer transportation network in Morro Bay.
- These recommendations provide Morro Bay with a look-ahead for safety improvements that can be applied systemically. Additionally, this information can be used to help the City apply for grants and other funding opportunities to implement these safety improvements.

An evaluation and implementation plan was created that identifies actionable items that will help the City achieve the goals and vision set out in this report. This section will lay out next steps for the City to continue to capitalize on the analysis and information provided in this report. It is

recommended that the City Council formally adopt this plan, and to update the plan once every five years.

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## 1. Introduction

This Local Road Safety Plan (LRSP) identifies emphasis areas to inform and guide further safety evaluation of the City's transportation network. The emphasis areas include the type of crash, focused locations, and notable relationships between current efforts and crash history. The LRSP analyzes crash data on an aggregate basis as well as at specific locations to identify high-crash locations, high-risk locations, and city-wide trends and patterns. The analysis of crash history throughout the City's transportation network allows for the following opportunities:

1. Identify factors in the transportation network that inhibit safety for all roadway users,
2. Improve safety at specific high-crash locations, and
3. Develop safety measures using the four E's of safety (Engineering, Enforcement, Education, and Emergency Response) to encourage safer driver behavior and better severity outcomes.

Morro Bay has taken steps to enhance all modal safety throughout the City and with this LRSP, Morro Bay is continuing to prioritize safety in its planning processes. The California Office of Traffic Safety most recently ranked Morro Bay 63 of 103 peer cities in 2020 for traffic injuries after normalizing for population and VMT, which suggests that the City is in the less-impacted half of its group for traffic injuries. Alcohol involved crashes is the lowest ranked in its peer group, followed by crashes with pedestrians under age 15.

Based on University of California Berkeley's Transportation Injury Mapping System (TIMS) and California Department of Transportation (Caltrans) Vehicle Operation Cost Parameters, Morro Bay's economic losses due to traffic injuries amounted to approximately \$53 million from 2013 to 2022. This report identifies factors associated with the most vehicle crashes particular to the City and proposes matching countermeasures to reduce or eliminate those crashes.

The intent of the LRSP is to:

- Create a greater awareness of road safety and risks;
- Reduce the number of fatal and severe-injury crashes;
- Develop lasting partnerships;
- Support for grant/funding applications; and
- Prioritize investments in traffic safety.



## 2. Vision and Goals

The Morro Bay LRSP evaluates the transportation network as well as non-infrastructure programs and policies within the City. Mitigation measures are evaluated using criteria to analyze the safety of road users (drivers, bicyclists, and pedestrians), the interaction of modes, the influences on the roadway network from adjacent municipalities, and the potential benefits of safety countermeasures. Through analysis of historical data and trends, community outreach and input, and proactive identification, safety opportunities can be identified and implemented without relying solely on a reaction and response to crashes as they occur.

As cities across the country have implemented LRSPs and systemically addressed the conditions leading to fatal and severe-injury crashes, the Federal Highway Administration (FHWA) has found that LRSPs effectively improve safety. LRSPs provide a locally developed and customized roadmap to directly address the most common safety challenges in the given jurisdiction. This project's vision, goals, and objectives have been established to reflect discussions with Morro Bay staff, various stakeholders identified by City staff, input from community members, and a review of existing plans/policies in the area.

**VISION:** *To enhance the transportation network for all users to move towards a goal of zero traffic fatalities and serious injuries*

### **Goal #1: Identify areas with a high risk for crashes.**

#### **Objectives:**

- a. Evaluate the City's roadway network for crash activity.
- b. Identify intersections and segments in need of mitigation.
- c. Identify areas of interest with respect to safety concerns for pedestrians and bicycles.

### **Goal #2: Illustrate the value of a comprehensive safety program and the systematic process.**

#### **Objectives:**

- a. Demonstrate the systemic process' ability to identify locations with higher risk for crashes based on present characteristics closely associated with severe crashes.
- b. Demonstrate, through the systemic process, the gaps and data collection activities that can be improved upon.

### **Goal #3: Define safety improvements for the near-, mid- and long-term, including projects for HSIP, SS4A and other program funding consideration.**

#### **Objectives:**



- a. Create the outline for a prioritization process that can be used in forth-coming funding cycles.
- b. Demonstrate the correlation between the proposed safety countermeasures with the Vision Zero Initiative and the California State Highway Safety Plan (SHSP).

## **Goal #4: Identify emphasis areas to prioritize countermeasure application.**

### **Objectives:**

- a. Use systemic crash analysis to identify emphasis areas.
- b. Prioritize emphasis areas for countermeasure development.
- c. Align emphasis areas with City goals & objectives.
- d. Align emphasis areas with current City areas of concern: speeding, cut-through traffic, drivers ignoring stop signs/signals, lighting, pedestrian safety, and bicycle safety.

## **Goal #5: Proposed List of Conceptual Priority Projects for Implementation of Countermeasures.**

### **Objectives:**

- a. Identify conceptual priority projects for implementation.
- b. Identify similar areas where countermeasures can be implemented.
- c. Prioritize these countermeasures for implementation based on cost, effort, and timeline.

## **3. Process**

The primary goal for the City of Morro Bay and their safety partners is to provide safe, sustainable, and efficient mobility choices for their residents and visitors. Through the development and implementation of this LRSP, the City will continue its collaboration with safety partners to identify and discuss safety issues within the community.

Guidance on the LRSP process is provided at both the national (FHWA) and state (Caltrans) level, and both agencies have developed a general framework of data and recommendations for an LRSP.

FHWA encourages the following:

- The establishment of a working group (stakeholders) to participate in developing an LRSP.
- A review of crash, traffic, and roadway data to identify areas of concern.
- The identification of goals, priorities, and countermeasures to recommend improvements at spot locations, systemically, and comprehensively.

Caltrans guidance follows a similar outline with the following steps:

- Establish leadership.



- Analyze the safety data.
- Determine emphasis areas.
- Identify strategies.
- Prioritize and incorporate strategies.
- Evaluate and update the LRSP.

This LRSP documents the results of data and information obtained, including the preliminary vision and goals for the LRSP, existing safety efforts, initial crash analysis, and developed emphasis areas. The LRSP recommendations consider the four E's of traffic safety defined by the California Strategic Highway Safety Plan (SHSP): Engineering, Enforcement, Education, and Emergency Response.

### 3.1 Guiding Manuals

This section describes the analysis process undertaken to evaluate safety within Morro Bay at a systemic level. This report identifies specific locations within the City that will benefit from safety enhancements and derives crash risk factors based on historic crash data using a network screening process. The outcome will inform the identification and prioritization of engineering and non-infrastructure safety measures by addressing certain roadway characteristics and related driving behaviors contributing to crashes. This process uses the latest national and state best practices for statistical roadway analysis described.

#### 3.1.1 Local Roadway Safety Manual

The *Local Roadway Safety Manual: A Manual for California's Local Road Owners* (Version 1.6, April 2022) encourages local agencies to pursue a proactive approach when identifying and analyzing safety issues and preparing to compete for project funding opportunities. A proactive approach is the analyzation of safety in an entire roadway network through either a one-time network wide analysis or a routine analysis of the roadway network.<sup>1</sup>

According to the *Local Roadway Safety Manual* (LRSM), “the California Department of Transportation (Caltrans) – Division of Local Assistance is responsible for administering California’s federal safety funding intended for local safety improvements.”

To provide the most beneficial and competitive funding approach, the analysis leading to countermeasure selection should focus on both intersections and roadway segments and maintain consideration of roadway characteristics and traffic volumes. The result should reflect a list of locations that are most likely to benefit from cost-effective countermeasures, preferably prioritized by benefit/cost ratio. The manual suggests using a mixture of quantitative and qualitative measures to identify and rank locations using both crash frequency and crash rates. These findings should then be screened for crash type and severity patterns to determine the

<sup>1</sup> Local Roadway Safety Manual (Version 1.6) 2022. Page 5.



cause of crashes and the potential effective countermeasures. Qualitative analysis should include field visits and a review of existing roadway characteristics and devices. The specific roadway context can then be used to assess conditions that may decrease safety at the site and at systematic levels.

Countermeasure selection should be supported using Crash Modification Factors (CMFs). These factors are a peer reviewed product of research quantifying the expected rate of crash reduction expected from a given countermeasure. If more than one countermeasure is under consideration, the LRSM provides guidance on appropriate application of CMFs.

### 3.1.2 Highway Safety Manual

The American Association of State Highway and Transportation Officials (AASHTO) *Highway Safety Manual* (HSM), published in 2010, presents a variety of methods for quantitatively estimating crash frequency or severity at a variety of locations.<sup>2</sup> This four-part manual is divided into the following parts: A) Introduction, Human Factors, and Fundamentals, B) Roadway Safety Management Process, C) Predictive Method, D) Crash Modification Factors.

In Chapter 4 of Part B in the HSM, the “Network Screening Process” is a tool for an agency to analyze the entire network and identify/rank locations that are most likely or least likely to realize a reduction in the frequency of crashes.

The HSM identifies five steps in this process:<sup>3</sup>

1. **Establish Focus:** Identify the purpose or intended outcome of the network screening analysis. This decision will influence data needs, the selection of performance measures and the screening method that can be applied.
2. **Identify Network and Establish Reference Populations:** Specify the types of sites or facilities being screened (i.e., segments, intersections, geometrics) and identify groupings of similar sites or facilities.
3. **Select Performance Measures:** There are a variety of performance measures available to evaluate the potential to reduce crash frequency at a site. In this step, the performance measure is selected as a function of the screening focus and the data and analytical tools available.

<sup>2</sup> AASHTO, *Highway Safety Manual*, 2010, Washington D.C., <http://www.highwaysafetymanual.org/Pages/About.aspx>

<sup>3</sup> AASHTO. *Highway Safety Manual*. 2010. Washington, DC. Page 4-2.



4. **Select Screening Method:** There are three principal screening methods described in this chapter (i.e., ranking, sliding window, peak searching). Each method has advantages and disadvantages; the most appropriate method for a given situation should be selected.
5. **Screen and Evaluate Results:** The final step in the process is to conduct the screening and analysis and evaluate the results.

The HSM provides several statistical methods for screening roadway networks and identifying high risk locations based on overall crash histories.

## 3.2 Analysis Techniques

### 3.2.1 Crash and Network Screening Analysis

Intersections and roadways were analyzed using four crash metrics:

- Number of Crashes
- Critical Crash Rate (HSM Ch. 4)
- Probability of Specific Crash Types Exceeding Threshold Proportion (HSM Ch. 4)
- Equivalent Property Damage Only (HSM Ch. 4)

The initial steps of the crash analysis established sub-populations of roadway segments and intersections that have similar characteristics. For this study, intersections were grouped by their control type (Signalized, Unsignalized, or Roundabout) and segments by their roadway category (Other Principal Arterial, Minor Arterial, Collector, or Local Streets). Individual crash rates were calculated for each sub-population. The population level crash rates were then used to assess whether a specific location has more or fewer crashes than expected. These sub-populations were also used to determine typical crash patterns to help identify locations where unusual numbers of specific crash types are seen.

The network screening process ranks intersections and roadway segments by the number of crashes that occurred at each one over the analysis period, and then identifies areas that had more of a given type of crash than would be expected for that type of location. These crash type factors were 1) crash injury (fatal, serious injury, other visible injury, complaint of pain, property damage only), 2) crash type (broadside, rear-end, sideswipe, head-on, hit object, overturned, bicycle, pedestrian, other), 3) environmental factors (lighting, wet roads), 4) driver behavior (aggressive), and 5) driver impairment. With these additional factors, the locations were further analyzed and assigned a new rank.

From the results of the network screening analyses, a short-list of locations was chosen based on crash activity, crash severity, crash patterns, location type, and area of the City of Morro Bay to provide the greatest variety of locations covering the widest range of safety opportunities for safety toolbox development. The intent is to populate the safety toolbox with mitigation measures that will be applicable to most of the crash activity in the city. As a result, ten locations have been selected for mitigation analysis.



## 3.2.2 Statistical Performance Measures

### Critical Crash Rate (CCR)

Reviewing the number of crashes at a location is a method used to understand the cost to society incurred at the local level; however, it does not give a complete indication of the level of risk for those who use that intersection or roadway segment daily. The Highway Safety Manual describes the Critical Crash Rate method which provides a statistical review of locations to determine where risk is higher than that experienced by other similar locations. It is also the first step in analyzing for patterns that may suggest systemic issues that can be addressed at that location, and proactively at others to prevent new safety challenges from emerging.

The Critical Crash Rate compares the observed crash rate to the expected crash rate at a location based on facility type and volume using a locally calculated average crash rate for the specific type of intersection or roadway segment being analyzed. Based on traffic volumes and a weighted citywide crash rate for each facility type, a critical crash rate threshold is established at the 95% confidence level to determine locations with higher crash rates that are unlikely to be random. The threshold is calculated for each location individually based on its traffic volume and the crash profile of similar facilities.

**Figure 1 – Critical Crash Rate Formula**

$$R_{c,i} = R_a + \left[ P \times \sqrt{\frac{R_a}{MEV_i}} \right] + \left[ \frac{1}{(2 \times (MEV_i))} \right]$$

Where,

$R_{c,i}$  = Critical crash rate for intersection  $i$

$R_a$  = Weighted average crash rate for reference population

$P$  =  $P$ -value for corresponding confidence level

$MEV_i$  = Million entering vehicles for intersection  $i$

SOURCE: HIGHWAY SAFETY MANUAL

### DATA NEEDS

CCR can be calculated using:

- Daily entering volume for intersections, or VMT for roadway segments.
- Intersection control types to separate them into like populations.
- Roadway functional classification to separate them into like populations.
- Crash records in GIS or tabular form including coordinates or linear measures.

### STRENGTHS



- Reduces low volume exaggeration.
- Considers variance.
- Establishes comparison threshold.

### **CCR Methodology**

The Process of analyzing the CCR and comparing locations (separately by intersections and segments) is a multi-step process. The following is a high-level description of the process undertaken to develop the initial ranking of locations.

The first step in the process was to establish a city-wide crash rate for each facility population. These populations are broken into two categories with sub-categories:

- Intersection:
  - Signalized
  - Unsignalized
  - Roundabout
- Roadway Classification:
  - Other Principal Arterial
  - Minor Arterial
  - Collector
  - Local

The individual crash rate for each location was then calculated based on the associated traffic volume. This volume was either collected through data count resources or calculated based on the roadway classification. The next step was to establish a Significance Threshold. This Threshold was used to determine what level of exceedance (how much the crash rate exceeded the critical crash rate) a location must have based on traffic volume to provide a high level of confidence that the crash occurring at the location is not random. For this study, a confidence level of 95% was used. The local crash rates were then compared to Significance Threshold to see if each location exceeded the expected CCR and if so, by how much. After this analysis was completed, the locations were ranked by their categories according to that level of exceedance.

### **Equivalent Property Damage Only (EPDO)**

The equivalent property damage only (EPDO) method is described in the Highway Safety Manual. This method assigns weighting factors to crashes based on injury level (severe, injury, property damage only) to develop a property damage only score. In this analysis, the injury crash costs were calculated for each location (based on the latest Caltrans injury costs). This figure is then divided by the injury cost for a property damage only crash. The resulting number is the equivalent number of property damage only crashes at each site. This figure allows all locations to be compared based on injury crash costs. (Highway Safety Manual, Chapter 4).



## Probability

The Highway Safety Manual describes the methodology for determining the probability that crash type is greater than an identified threshold proportion. This helps to identify locations where a crash type is more likely to occur.

## DATA NEEDS

The probability of a specific crash type can be determined using crashes records with location data, and classifications of the locations (intersections or segments) studied.

## STRENGTHS

- Can be used as a diagnostic tool.
- Considers variance in data.
- Not affected by selection bias.

The HSM methodology first determines the frequency of a specific crash type at an individual location, then determines the observed proportion of that crash type relative to all crash types at that location. A threshold proportion is then determined for the specific crash type; HSM suggests utilizing the proportion of the crash type observed in the entire reference population (e.g. throughout the entire City of Morro Bay).

These proportions are then utilized to determine the probability that the proportion of a specific crash type is greater than the long-term expected proportion of that crash type.

**Figure 2 – Probability of Specific Crash Types Exceeding Threshold Proportion**

$$P(p_i > \bar{p}_i^* | N_{observed,i}, N_{observed,i(TOTAL)}) = 1 - \text{betadist}(\bar{p}_i^*, a + N_{observed,i}, \beta + N_{observed,i(TOTAL)} - N_{observed,i})$$

Where:

$\bar{p}_i^*$  = Threshold proportion

$p_i$  = Observed proportion

$N_{observed,i}$  = Observed target crashes for a site  $i$

$N_{observed,i(TOTAL)}$  = Total number of crashes for a site  $i$

SOURCE: HIGHWAY SAFETY MANUAL



### 3.3 Future Analysis

The City will conduct regular crash monitoring as described in **Section 10.2**. The City will then refresh the analysis and update the LRSP every 5 years to maintain eligibility for HSIP funding, as described in **Section 10.2**.

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## 4. Public Engagement and Agency Coordination

Members of the public and local agency partners were included in the development of this report to ensure the local perspective was maintained at the forefront of planning efforts. A public agency working group of City Public Works staff and external representatives from the Morro Bay Police Department, San Luis Coastal Unified School District (SLCUSD), Morro Bay Fire Department, Morro Bay Public Works Advisory Board, San Luis Obispo Council of Government (SLOCOG), and Caltrans District 5.

The members of the public agency partners were called together to offer insight on the safety issues present in the City's transportation network. After the initial network screening and safety analysis, the results were presented to the public in a series of workshops. These workshops helped the project team gain insight into ongoing roadway safety issues in the City and potential solutions. City Public Works, the agency partners, and consultant staff met to discuss potential countermeasures and challenge areas through meetings in the field and virtually. Following these meetings, potential improvements were developed and presented to the public for comment, feedback, and discussion. The public engagement and agency coordination activities are discussed below.

### 4.1 Public Engagement

#### Online Engagement

The City of Morro Bay created a Local Roadway Safety Plan page on the City's website, which included information about the project, notifications about upcoming workshops and events, a project email address, and an interactive mapping activity and survey. The interactive map allowed members of the public to drop pins with categories (speed, bike, pedestrian, signage, etc.) on a map and leave comments and concerns about specific locations. The map also included a survey which asked residents about concerns and priorities. The interactive map and survey were live from September 1, 2023, through December 1, 2023, and the interactive map received 215 comments and the survey received 69 responses. The most common items shared in the map tool and surveys included speeding, cut-through traffic, and pedestrian and bicyclist safety. Specific commonly reported areas of concern included the Morro Bay Blvd and Quintana Rd roundabout, the Highway 1/Highway 41 interchange, and sections of Main Street, Quintana Road, and South Bay Boulevard. The results of the online engagement helped to inform the emphasis areas and potential improvements which are identified later in this report. A summary of the online engagement can be found in **Appendix A** of this report. Even though the map is closed for input, the reported areas on the interactive map can be found at: <https://engagekh.com/morro-bay-lrsp/morro-bay-lrsp-map#/>

#### Public Workshops/Meetings

Three public workshops/meetings were held to help the project team understand public areas of concern, create public awareness of the plan, and to keep members of the public informed with the direction of the plan and the City's response to roadway safety issues from input received



from the public. All workshops/meetings were advertised at least one month prior to the event on the City main page and LRSP website with quick reminders sent out within two weeks of the event on social media, Next Door, and on the City's "Hot Topics" news scroll.

The first public workshop was held on Wednesday, September 6<sup>th</sup>, 2023, at the Veterans Memorial Building. Over 40 members of the public were in attendance. The goal of this workshop was to introduce the project, present the crash analysis and other data, document and discuss resident concerns, and brainstorm potential improvements. The main concerns expressed at this workshop included speeding, cut-through traffic, roadway visibility, and safety issues at specific locations.

The second public workshop was held on Thursday, November 9<sup>th</sup>, 2023, at the Morro Bay Community Center. Between 15-20 members of the public were in attendance. The goal of this workshop was to review major concerns heard from the online map and survey engagement, email correspondence, and phone calls. Additionally, ideas from the first workshop were discussed as well as potential improvements and countermeasures and locations where community members would like to see specific improvements made. Interactive boards were displayed at the workshop, which allowed members of the public to express concerns and pinpoint potential improvements in the City. The results of this workshop along with all of the upfront analysis helped to inform the countermeasure development that is discussed later in this report.

The final public meeting and opportunity for input was held at a special meeting of the Public Works Advisory Board (PWAB) on Wednesday, December 6<sup>th</sup>, 2023, at the Veterans Memorial Building. The goal of this meeting was to present and discuss the refined potential improvements and projects that were identified from data analysis and public input with agency partner feedback before development of the draft LRSP. Members of the PWAB and the public commented and discussed the potential improvements. These comments were documented and utilized by the LRSP team to further refine the projects that were developed for this plan.

The draft LRSP was posted to the City's LRSP website in early January of 2024 for public viewing and comment. Comments were received by the LRSP Team at the project email up until the document was finalized in early February prior to adoption by the City Council.

## **4.2 Agency Working Group Coordination**

Three meetings with the public agency partners working group were held in order to gain the perspective and expertise of local subject matter experts and to help guide the plan as it was being developed.

The first public agency working group meeting was held on Thursday, September 7<sup>th</sup>, 2023. The group was introduced to the project and concerns about roadway safety in Morro Bay were discussed. The working group then performed a field visit and walking tour of various locations through the City including Morro Bay Boulevard, Main Street, and the Embarcadero. The group was also asked to report on the other potential project locations based upon incident history and



provide feedback. The discussions during the field visits and feedback from the working group’s comments helped to inform the project development that will be discussed later in this plan.

The second public agency working group meeting was held virtually on Wednesday, November 15<sup>th</sup>, 2023. The purpose of the meeting was to discuss concerns and issues expressed in the public workshops and to review potential improvements, countermeasures, and projects in more detail.

The third public agency working group meeting was held virtually on Wednesday, January 10<sup>th</sup>, 2024. The draft LRSP was presented and discussed with the group for input as it was made available to the public for comment.

## 5. Existing Efforts

Existing plans, policies, and projects that were recently completed, planned, or on-going were compiled at the start of the LRSP process to gain perspective on the existing efforts for transportation-related improvements within the City. High-level key points regarding transportation improvements and safety-related topics were identified to inform decision making in this LRSP.

**Table 1** outlines the relevant existing City and regional plans and their applicable content.

**Table 2** outlines the relevant existing/past City projects and their timelines (Future projects only reflect those that were established in prior plans such as the 2011 Bike and Ped Master Plan and do not reflect projects proposed with the LRSP).

**Table 1 – Review of Existing City Plans**

Document Name	Transportation Policies/Improvements
Plan Morro Bay General Plan (2021)	<ul style="list-style-type: none"> <li>The Plan Morro Bay is a planning document which serves as a guide to the community’s vision until 2040. This plan has two parts, the Blueprint plan and the Greenprint plan where the first plan considers the development aspects while the latter considers conservation aspects.</li> <li>The Blueprint plan allows the city to better plan the community goals and direct physical, economic, and social development in the community. The plan demonstrates growth goals pertaining to timeline, locations, and directions of growth to better grow and transform into a better-balanced community.</li> <li>The Greenprint plan is a directional framework for utilization, management, and protection of current and future resources. It also plans for conservation of natural habitats, recreational amenities, and the public safety of the community.</li> </ul>



Document Name	Transportation Policies/Improvements
2022 Pavement Management Program Update	<ul style="list-style-type: none"> <li>This plan gives an update on current pavement condition and projected deterioration over time and associated costs and pavement treatments.</li> <li>The program is used as a budgeting tool by analyzing historical data for certain areas to create cost estimates and budgets for project bids by various agencies. The program is also used as an inventory tool to find uses and pavement areas.</li> <li>The program provides useful information on pavement condition and deterioration using attributes such as age, load utilization, and climate effects.</li> </ul>
Morro Bay Bicycle & Pedestrian Master Plan (2011)	<ul style="list-style-type: none"> <li>The City of Morro Bay Bicycle Transportation Plan guides the future development of bicycle facilities and programs in the city that will help residents and visitors of all ages with safe, convenient, and attractive transportation methods. The plan aims to make walking and bicycling within the city an essential component of the community all while increasing circulation.</li> <li>The plan outlines a goal to increase the city's circulation by 50% by 2016.</li> <li>This plan has not been updated in recent years.</li> </ul>
Downtown Waterfront Strategic Plan (2018)	<ul style="list-style-type: none"> <li>The plan outlines how to enhance and connect walkways in Morro Bay's downtown and waterfront areas between 2023 and 2028.</li> <li>The plan outlines visions, goals, and strategies needed to achieve a unified community by implementing certain projects at various locations to upkeep the image of the community by investing in renovations to streets, parks, and buildings. With commitment to the public and private alike, a new partnership will be formed to culture improvements across the area.</li> </ul>
San Luis Obispo County 2021 Active Transportation Plan	<ul style="list-style-type: none"> <li>The County of San Luis Obispo's ATP aims to implement more safety, connectivity, livability, accessibility to transit, coordination and collaboration with local agency plans and their implementations, and increased focus on disadvantaged communities.</li> <li>Specific goals of this plan include zero deaths, increased bicycle and hiking tourism, more safe routes to schools, complete streets, signage development for wayfinding, and connections of significant corridors. The plan also aims to increase transit &amp; rail connectivity to create a more robust transit system.</li> <li>Data collection will also be a vital component of this plan to understand prioritize the most vital projects to the community through better evaluation.</li> </ul>
2023 San Luis Obispo County Regional Transportation Plan	<ul style="list-style-type: none"> <li>The blueprint creates a transportation system that meets mobility needs of residents and visitors while being able to adapt to future needs up until 2045. The different mobility options allow people and goods from various places to be able to utilize the system to suggest improvements to the pedestrian environment in Morro Bay to increase connectivity to planned and existing transit.</li> <li>The plan focuses on land use, housing, and transportation planning to reduce travel times. Issues such as efficiency, equity, accessibility, reliability, sustainability, health, safety, and choice are all addressed in the plan.</li> </ul>



Document Name	Transportation Policies/Improvements
2010 San Luis Obispo County Bikeway Plan	<ul style="list-style-type: none"> <li>The goal of the plan is to connect all communities in the County with Bicycle facilities as well as closing gaps in existing bikeways.</li> <li>The objective to identify and breaks down bicycle barriers for commuting will be accomplished by prioritizing various projects to accomplish set goals for the project.</li> </ul>
2010 Regional Transportation Plan- Preliminary Sustainable Communities Strategy	<ul style="list-style-type: none"> <li>Adopted by the San Luis Obispo Council of Governments (SLOCOG), the plan aimed to promote bicycling to decrease auto-dependency and decrease pollution as well as filling critical gaps to create a connected community.</li> <li>The RTP identifies aims to achieve maintenance of a safe and efficient regional bikeway system to increase non-motorized transportation within the community.</li> </ul>
Parking Management Plan (2007)	<ul style="list-style-type: none"> <li>The plan aims to create alternatives to address parking needs, educate the community on parking costs, and develop a management plan. The management plan aims to utilize current parking spaces more effectively by implementing supply and demand utilization strategies.</li> </ul>

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**Table 2 – Review of Existing/Past City Projects**

Project Name	Timeline	Transportation Policies/Improvements
<b>Current</b>		
Highway 1/Highway 41/Main St Roundabout Project	In Progress	Installation of a roundabout at the intersection of Highway 1/Highway 41/Main Street. Project approval and environmental process underway.
Main St and Quintana Rd Intersection Improvements	In Progress	ADA and pedestrian facility improvements, audible push buttons, integration of bicycle facilities with bicycle path. Design to begin in 2024.
<b>Completed</b>		
Bike-Ped bridge over Morro Creek & connector paths to Atascadero Rd & Embarcadero	Completed	Class I bikeway on Embarcadero Road between Coleman Drive and Atascadero Road with bike-ped bridge over Morro Creek. Sharrows on Atascadero Road.
Safe bike and pedestrian route to Del Mar School on Greenwood	Completed	Safe pedestrian route to Del Mar Elementary School on Greenwood. Crosswalk connecting to dead end with an entrance to Greenwood observed.
San Jacinto and Main/Alder	Completed	Class II bikeway on San Jacinto between Cedar Avenue and Main Street.
Bike-Ped path through Power Plant	Completed	Class I bikeway between Main Street and Atascadero Road.
Bikeway between HS and Hampton Inn/Morro Shores Inn at Atascadero Road	Completed	Class II and Class I bikeways connecting High School to bike path between Atascadero Road and Quintana at Hampton Inn and Morro Shores Inn on Atascadero Road
Connection to future MB/Cayucos Connector Trail - bike route on Sandalwood & Beachcomber	Completed	Sharrows on Sandalwood and Beachcomber. Connect to Yerba Buena and Toro Lane down to North Point Natural Area Parking Lot. Walking trail to hiking path along coast.
Connection to south end of Class 1 MB High School	Completed	Class I bikeway from Southwest end of Cloister Park to Northeast corner of Morro Bay High School.
City Park Transit Hub Improvements	Completed	Transit project that was completed in July 2023 to add ADA accessible transit hub with modern shelters.
Morro Creek Bike & Ped Bridge	Completed	Constructed new bridge to close gap in North Coast Scenic Bikeway south of Lila Keiser Park.



Project Name	Timeline	Transportation Policies/Improvements
Wayfinding Signage Project	Completed	Installation of new updated roadway directional signs in 2022 for guiding the driving and walking public to major City destinations
<b>Future</b>		
Bike Path Gap Closure	Future	Improve bike path, lanes and routes for MBHS through Beach tract towards Cayucos.
CDBG Sidewalk Gap Closures	Future	Construct missing segments of sidewalk to improve ADA access.
Striping Improvements Citywide	Future	Installation of additional bicycle/ped facilities including crosswalks, Class II lanes, sharrow, etc.
San Jacinto and Main/Alder	Future	Add sidewalks on San Jacinto
Provide bike box markings and bike signal loops at San Jacinto, Main & Quintana & Yerba Buena	Future	Class II Bikeways but no bike box markings
ADA compliant ramp up bluff from Embarcadero to Olive Street	Future	In a mission to make Embarcadero more pedestrian-friendly an ADA ramp was proposed to connect Olive Street and Embarcadero.
More marked crosswalks on Main Street south of downtown	Future	Crosswalks still needing marking south of downtown on Main Street include Marina Street, Driftwood Street, Anchor Street, South Street, and Olive Street.
Improve the sidewalk on Main St between Hwy 41 and Radcliffe	Future	Sidewalk improvement have been made as well as meandering sidewalks implemented.
Ped path along Lower State Park Road	Future	No Pedestrian Path observed along Lower State Park Road.

## 6. Data Summary

This section describes the data sources used for the analysis process of this LRSP.

### 6.1 Roadway Network

The California Department of Transportation (Caltrans) California Road System (CRS) GIS database was used to build the base roadway network used for this analysis. Intersections and



roadway segments were divided into control and classification categories so that each set could have its own crash rates and be compared with similar facilities or control type. Functional Classifications were imported from the city's General Plan and confirmed by city staff. Information on intersection traffic control was provided by the city and included in the analysis network. The crash analysis requires each intersection to be classified by type: Signalized, Unsignalized, or Roundabout. **Figure 3** illustrates the City of Morro Bay's roadway functional classification and intersection control type, respectively, as used for this study.

## 6.2 Crash Data

Crash data was collected from Crossroads software for the period from January 1, 2013, through September 30, 2022, displayed in **Figure 4**. Ten years of data are utilized instead of the standard three years to provide more history to evaluate trends or patterns. Analysis of the raw crash data is the first step in understanding the specific and systemic challenges faced throughout the city. Analyzing the ten years of data provided insight on the crash trends and patterns detailed in **Section 7**. The locations of fatal and severe injury crashes are displayed in **Figure 5**. The fatal crash occurring on Highway 41 in November 2022 was included in the dataset.

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**Figure 3 – Functional Classification & Signalized Intersections**

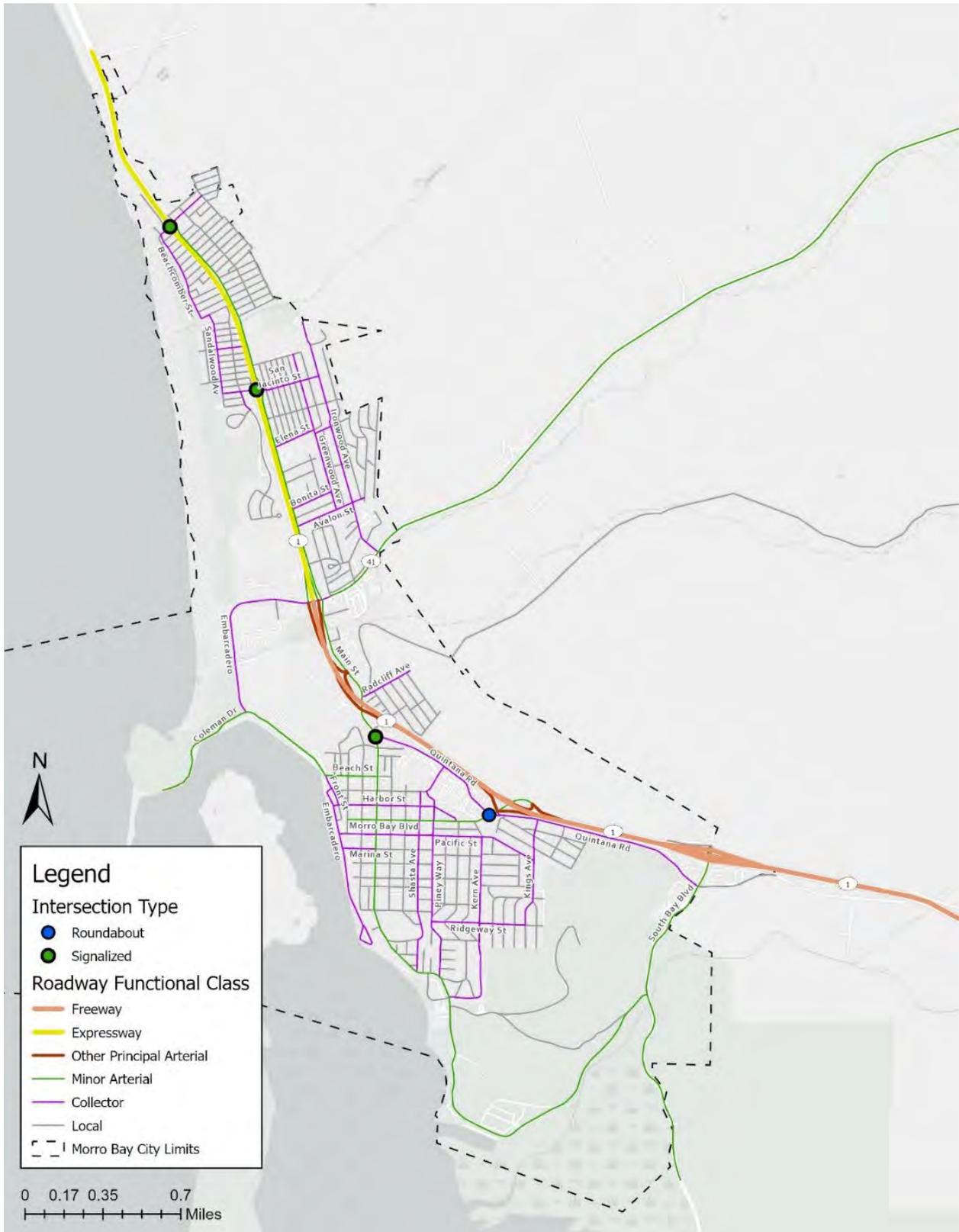
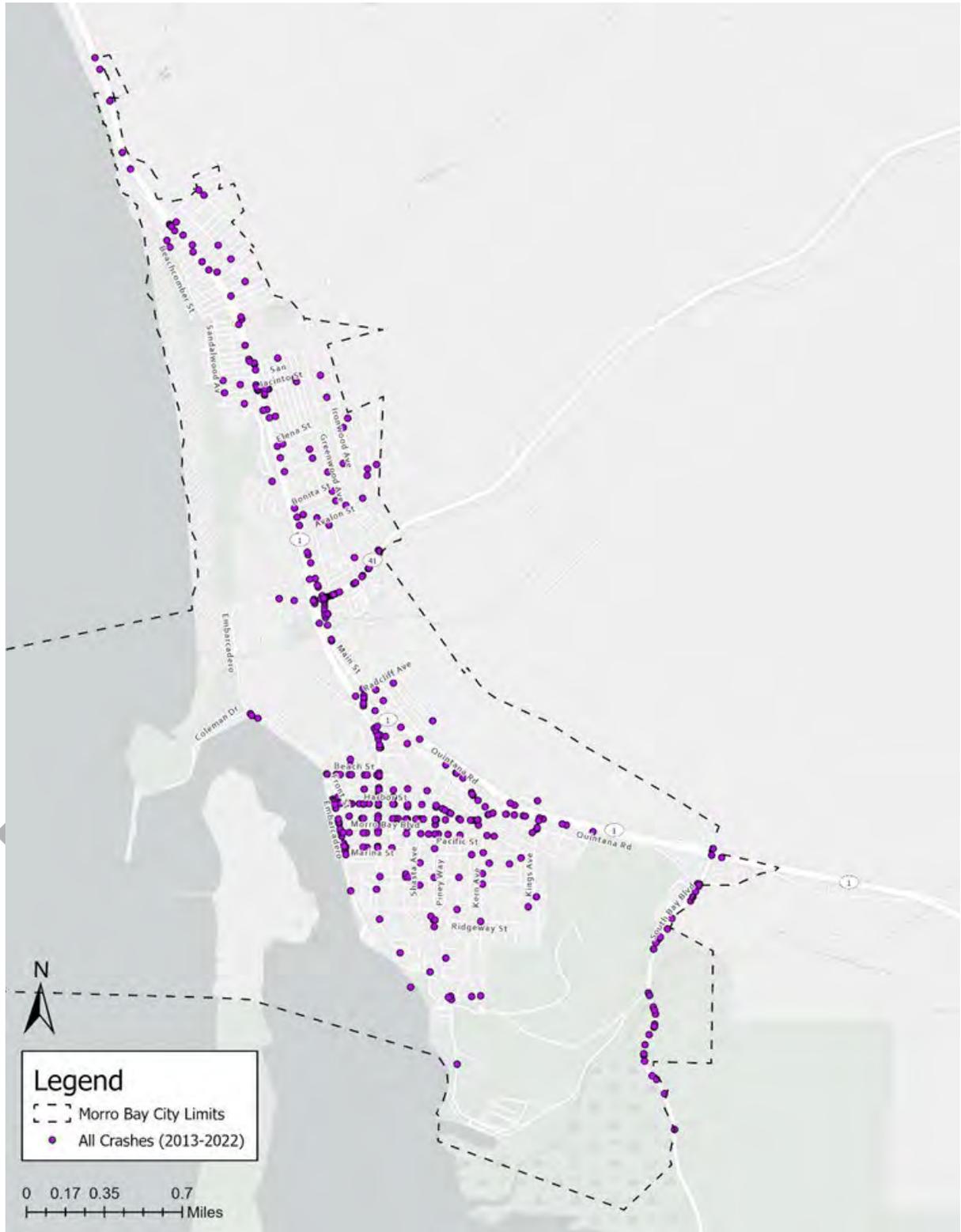


Figure 4 – All Crashes (2013-2022)



**Figure 5 – Fatal & Severe Injury Crashes (2013-2022)**





## 7. Crash Safety Trends

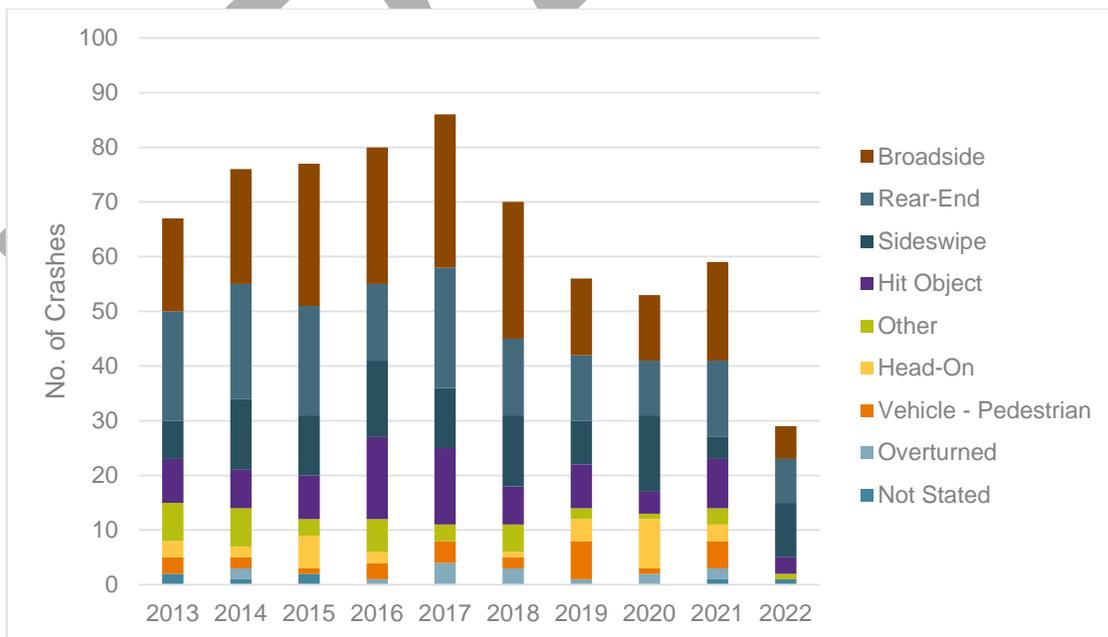
The analysis was conducted using a network screening process for the City-maintained roadway system based on crash records spanning from January 1, 2013 through September 30, 2022. This section contains the results of the analysis, which included the evaluation of Morro Bay’s fatal and serious injury (generally denoted as K+SI) crashes, statewide K+SI crashes, pedestrian crashes, bicycle crashes, crash severity levels, and crash causes.

### 7.1 All Crashes

This report utilized crash data for a ten-year period to provide a better understanding of trends and to reflect the patterns in crashes that have occurred on city streets. Data used for this report was extracted from Crossroads Software on July 24, 2023, and was current as of that date. Crash data from January 1, 2013, through September 10, 2022 (the most recent data available) as reported to Crossroads from the local enforcement indicated that during this time there were 653 crashes recorded within Morro Bay.

During this time, the most common occurring crash types were Broadsides (29%) and Rear-Ends (24%). The total number of crashes gradually increased in the first half of the study period before decreasing in the second half, as shown in **Figure 6**.

**Figure 6 – Crash Type by Year (2013-2022)**



Source: Morro Bay Crossroads Database (2013-2022)



## 7.2 Fatalities & Severe Injuries

During the study period, 3 fatal crashes and 9 severe injury crashes occurred during the study period, as seen in **Figure 5. Table 3** outlines the fatal and severe injury crashes categorized by modes involved.

**Table 3 – Fatal and Severe Injury Crashes Categorized by Modes Involved (2013-2022)**

Involved with	# of Severe Injury Crashes	# of Fatal Crashes
Bicycle	1	1
Fixed Object	2	0
Other Motor Vehicle	3	1
Pedestrian	3	1
<b>Total</b>	<b>9</b>	<b>3</b>

**Figure 7 – Fatal & Severe Injury Crashes (2013-2022)**

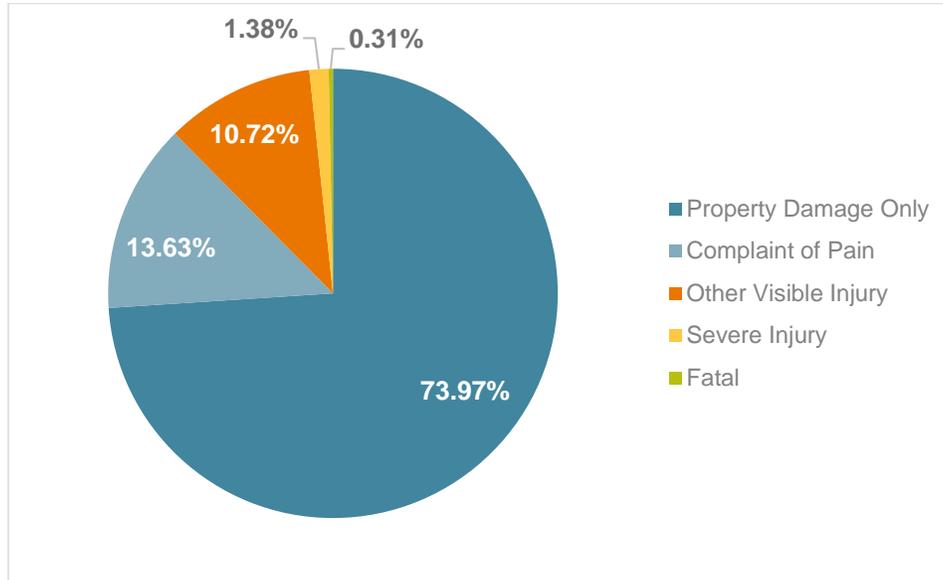


## 7.3 Injury Levels

As shown in **Figure 8**, 73.9% of the crashes reported during the time-period resulted in property damage only. Fatalities and severe injuries totaled 1.7% of all crashes.



**Figure 8 – Crashes by Injury Levels (2013-2022)**



Source: Morro Bay Crossroads Database (2013 – 2022)

## 7.4 Cause of Crash

The highest recorded cause of crashes in Morro Bay during this time period is automobile right-of-way violation at 20.4%, followed by Unsafe Speeds at 16.7% and Driving Under the Influence at 14.2%. Issues with Improper Turning also had a substantial impact on the City, comprising 12.4% of the crashes.

**Table 4 - Cause of Crashes (2013-2022)**

Primary Crash Factor	No. of Crashes	%
Automobile right-of-way violations	133	20.4%
Unsafe Speed	109	16.7%
Driving Under Influence	93	14.2%
Improper Turning	81	12.4%
Unsafe Starting or Backing	58	8.9%
Unknown	30	4.6%
Following too closely	25	3.8%
Traffic Signs and Signals	23	3.5%
Wrong side of Road	20	3.1%



Primary Crash Factor	No. of Crashes	%
Ped R/W Violation	13	2.0%
Other than Driver or Ped	12	1.8%
Pedestrian Violation	11	1.7%
Unsafe Lane Change	9	1.4%
Other	9	1.4%
Other Hazardous Movement	8	1.2%
Improper Passing	7	1.1%
Hazardous Parking	4	0.6%
Other Improper Driving	3	0.5%
Other Equipment	3	0.5%
Impeding Traffic	1	0.2%
Brakes	1	0.2%
<b>Total</b>	<b>653</b>	<b>100%</b>

Source: Morro Bay Police Department Crossroads Database (2013 – 2022)

## 7.5 Vulnerable Users

### 7.5.1 Pedestrian Crashes

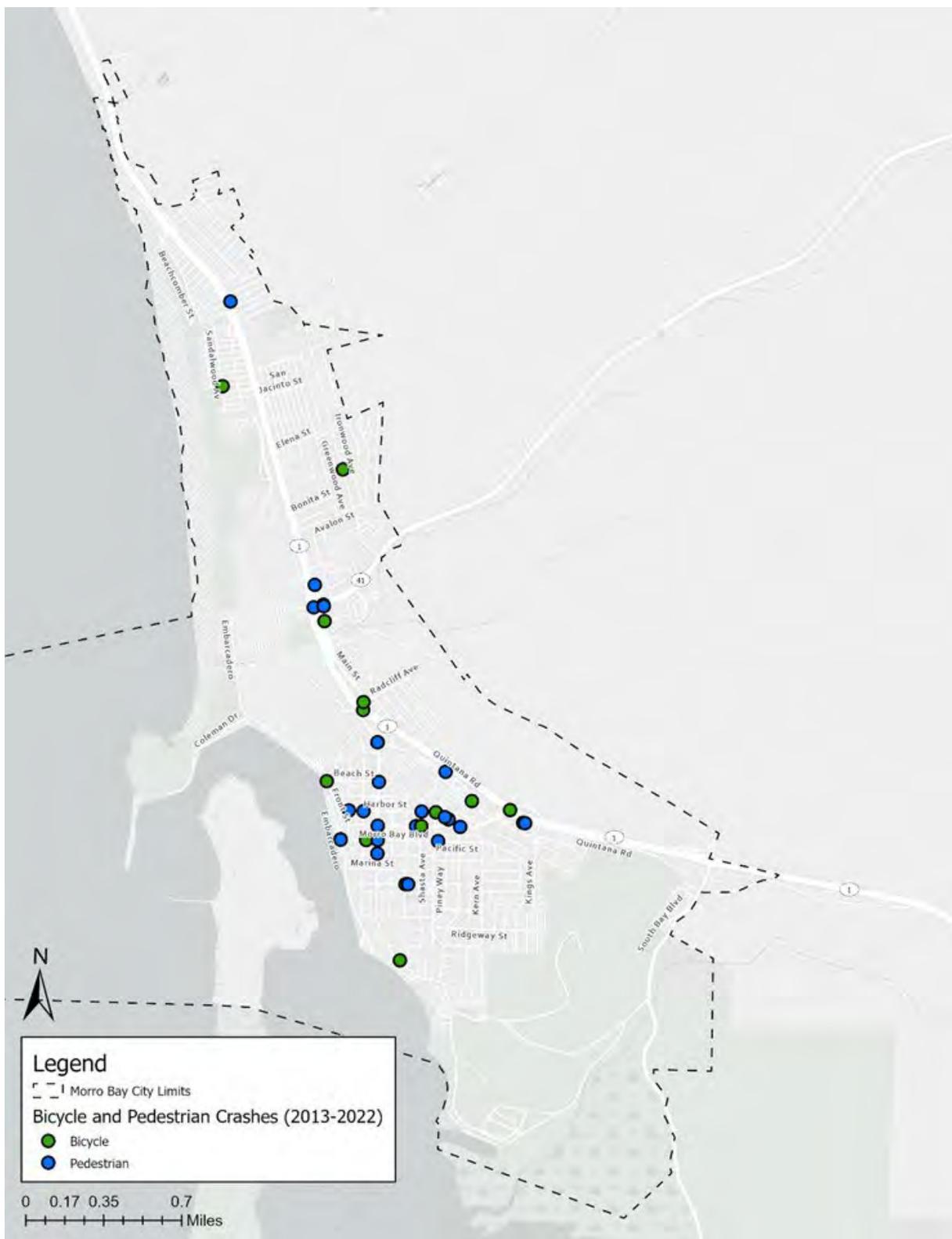
27 pedestrian involved crashes occurred during the study period, resulting in 1 fatal crash, 3 severe injuries, and 17 crashes with some form of reported injury or pain, and 6 pedestrian crashes resulting Property Damage Only. **Figure 9** shows the locations of pedestrian crashes during the study period.

### 7.5.2 Bicycle Crashes

During the study period, 19 crashes involving bicycles were reported. Of these, 1 were fatal, 1 resulted in severe injuries, 14 resulted in some forms of reported injury or pain, and 3 crashes resulted in Property Damage Only. **Figure 9** shows the location of bicycle crashes during the study period.



Figure 9 – Pedestrian & Bicycle Crashes (2013-2022)





## 7.6 Time of Day

Crashes in Morro Bay occurred more in the PM hours versus the AM hours, with 71% of crashes occurred in the PM hours, and 29% occurred in the AM hours. There were two peak periods of crash activity, from 7 AM to 9 AM, and from 11 AM to 5 PM. 12 PM and 5 PM were the most common time for crashes. A significant number of crashes also occurred in the nighttime hours. 28% of crashes occurred at night or during the dusk/dawn hours. 7% of crashes occurred at night where there were no streetlights.

## 7.7 Other Significant Trends

Aggressive driving and impaired driving are two important behavioral factors that often significantly contribute to crash patterns. These areas are studied in the analysis.

Caltrans defines aggressive driving as behaviors that include speeding, tailgating, and running stop signs or red lights. These behaviors contributed to 24% of the crashes in Morro Bay during the study period (2013-2022).

Impaired driving is defined by Caltrans as any instance where a driver, pedestrian, bicyclist, or motorcyclist is under the influence of alcohol, illicit drugs, or prescribed or over-the-counter medication. 18% of the crashes in Morro Bay during the study period (2013-2022) occurred where the driver had been drinking. 14% of the crashes in Morro Bay during the study period were directly related to impairment.

## 7.8 Driver Age

Two groups of drivers typically have a higher impact on the number of crashes. Aging Drivers (age 65 and up) and Young Drivers (ages 15-20) are more often found at fault for crashes they are involved in. The crash data for 2013-2022 period indicated that 21% of the crashes within Morro Bay involved Aging Drivers and 13% involved Young Drivers. These percentages are similar to those seen statewide.

## 7.9 Statewide Comparison

A comparison of fatal & severe injury crash data to the State averages were conducted for data from 2013-2022 (the most recent statewide data available). These numbers may vary slightly from those mentioned previously, due to the differences in the years of the study period. The following are areas where Morro Bay's crash rates are higher or lower than those of the State. These numbers specifically compare the proportion of fatal and serious injury crashes that have the characteristics listed in **Table 5**.



**Table 5 - Comparison of Statewide and Morro Bay Fatal & Severe Injury Crashes (2013-2022)**

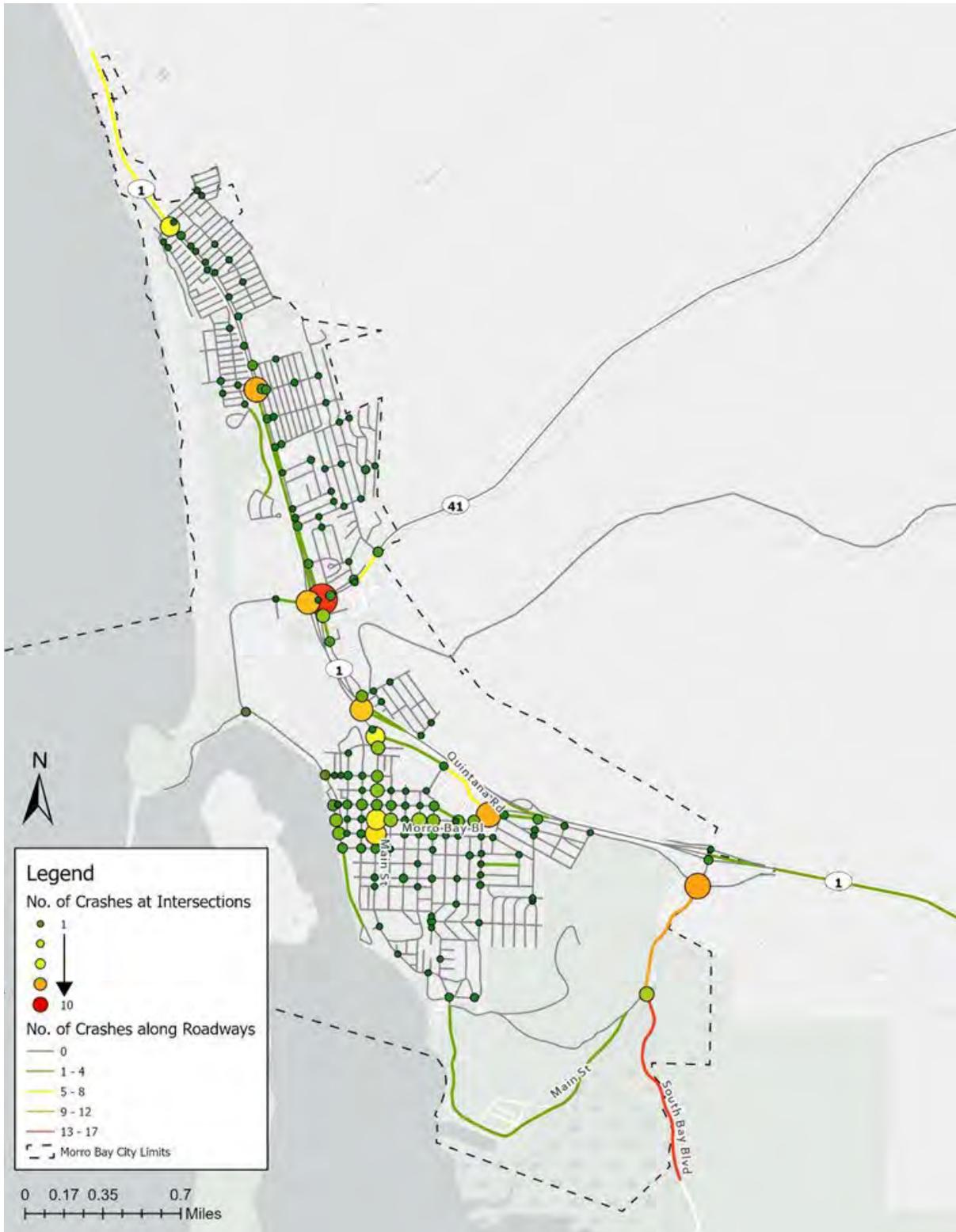
Challenge Areas	Statewide	Morro Bay	% Point Difference
	% of F+SI Crashes (2013-2022)	% of F+SI Crashes (2013-2022)	
<b>Pedestrians</b>	<b>19.2%</b>	<b>36.4%</b>	<b>17.2%</b>
<b>Aging Drivers</b>	<b>12.4%</b>	<b>27.0%</b>	<b>14.9%</b>
<b>Bicyclists</b>	<b>8.3%</b>	<b>18.2%</b>	<b>9.8%</b>
<b>Intersections</b>	<b>23.6%</b>	<b>31.3%</b>	<b>7.6%</b>
<b>Work Zones</b>	<b>1.4%</b>	<b>6.3%</b>	<b>4.8%</b>
<b>Lane Departure</b>	<b>43.3%</b>	<b>43.8%</b>	<b>0.5%</b>
Impaired Driving	25.3%	25.0%	-0.3%
Distracted Driving	5.0%	0.0%	-5.0%
Commercial Vehicles	6.4%	0.0%	-6.4%
Occupant Protection	14.2%	6.3%	-8.0%
Young Drivers	13.1%	0.0%	-13.1%
Aggressive Driving	33.1%	18.8%	-14.3%
Motorcyclists	21.0%	6.3%	-14.7%

## 7.10 Crash Network Screening Analysis Results

Figure 10 shows the results of the crash network screening analysis, with the number of crashes at both intersections and mid-block roadway segments.



Figure 10 – Crash Network Screening Analysis Results (2013-2022)





**Table 6 and 7** show the number of crashes occurring at locations in Morro Bay by crash type for the locations that will be studied further in the Report and highlight locations in which the probability of those crash types exceeding the threshold proportion is greater than 33%.

The tables are ordered by the number of crashes that occurred at that segment or intersection. To be statistically significant, only locations where more than two crashes occurred are represented. At locations with two or less crashes, random chance can account for crash history as much or more than specific roadway characteristics.

The tables are separated into sub-sections visible by the blue gradient. The first two columns, 'Crashes' and 'CCR Differential', represent the level of crash activity in absolute terms, and as relative to other similar locations, respectively.

Per guidance from the Local Roadway Safety Manual (LRSM) each sub-population of locations was ranked according to the number of crashes. The second column shows the CCR, which highlights whether the crash activity was higher or lower than the average for the sub-population based on the individual segment or intersection volume. This volume was either collected through data count resources or calculated based on the roadway classification. All averages used in the CCR calculation were established based on City of Morro Bay crash data to determine what locations might be best to prioritize at the local level. This process highlight's locations of crashes that are unusual for the City to determine Morro Bay's challenge areas, and not problems faced by peer cities that do not apply in Morro Bay. The remaining columns total crashes by type, to evaluate each sub-population and understand what proportion of crashes in the City are of a particular type. The citywide proportion was compared with the local intersection or segment specific proportion to determine which locations have more of a given crash type than would be expected when considering the City average. A confidence level of 95% was used for the CCR Calculations. For this study, two categories of ranges were highlighted:

- **Light Gray:** >50% probability that this crash type is over-represented on this segment/intersection as compared to other characteristically similar locations within the City of Morro Bay. Although these locations have a slightly higher probability of this crash type than their counterparts, they are not necessarily highly significant.
- **Dark Gray:** >75% probability that this crash type is over-represented on this segment/intersection as compared to other characteristically similar locations within the City of Morro Bay. These locations are highly significant in regard to the number of crashes occurring here and should be further investigated.

After this analysis was completed, the locations were ranked against other similar locations within the City by their categories according to the expected proportion of that crash type within Morro Bay. Locations with higher-than-expected crashes of that type were identified by the probability that random chance would not account for exceedances.

Additionally, it should be noted that the columns for Crash Severity, Type, Involved With, and Behavior are additional characteristics of the crashes and should not be counted as a separate crash.



Table 6– Analysis Results: Intersections

Intersection	Crashes	Local CCR Differential <sup>1</sup>	EPDO <sup>2</sup>	Fatal	Serious Injury	Other Visible Injury	Complaint of Pain	PDO	Broadside	Sideswipe	Rear End	Head On	Hit Object	Overtuned	Other	Pedestrian	Bicycle	Aggressive	Distracted	Impaired	Dark	Wet
<b>Signalized Intersections</b>																						
Highway 1/San Jacinto St	21	2.12	66	0	0	2	5	14	1	1	12	2	3	0	1	0	0	10	0	4	0	2
Highway 1/Yerba Buena	15	2.06	65	0	0	1	8	6	3	1	10	0	0	0	0	0	0	11	0	3	0	2
Main St/Quintana Rd	15	-1.51	45	0	0	2	2	11	2	1	6	1	2	0	1	1	1	8	1	1	0	0
<b>Roundabouts</b>																						
Morro Bay Blvd/Quintana Rd	21	-0.52	56	0	0	2	3	16	13	1	3	2	2	0	0	0	0	3	0	3	1	1
<b>Unsignalized Intersections</b>																						
Atascadero Rd/Main St	28	1.47	68	0	0	2	4	22	7	5	10	3	2	0	0	1	1	11	0	4	1	0
S Bay Blvd/Quintana Rd	22	0.69	71	0	0	3	4	15	10	0	7	0	1	1	2	0	0	10	0	3	2	2
Cabrillo Hwy SB On Ramp/Atascadero Rd	20	1.05	208	0	1	2	1	16	9	0	7	0	3	0	0	1	1	5	0	4	2	1
Cabrillo Hwy SB On Ramp/Main St	19	0.26	74	0	0	3	5	11	7	3	3	1	3	0	2	0	2	4	0	2	1	1
Main St/Pacific St	17	0.58	61	0	0	3	3	11	13	3	0	0	0	0	0	1	0	0	0	1	0	2
Main St/Morro Bay Blvd	16	0.14	36	0	0	1	2	13	3	5	2	0	0	1	1	4	0	2	0	1	0	0
S Bay Blvd/State Park Rd	10	-0.09	213	0	1	3	2	4	1	1	2	1	3	1	1	0	0	2	0	2	2	1
Morro Bay Blvd/Shasta Ave	10	0.10	30	0	0	1	2	7	3	2	2	0	0	0	1	1	1	1	0	0	0	1
Main St/Errol St	9	0.11	187	0	1	1	1	6	1	3	3	1	0	1	0	0	1	2	0	0	0	0

# MORRO BAY

## Local Roadway Safety Plan



Intersection	Crashes	Local CCR Differential <sup>1</sup>	EPDO <sup>2</sup>	Fatal	Serious Injury	Other Visible Injury	Complaint of Pain	PDO	Broadside	Sideswipe	Rear End	Head On	Hit Object	Overturned	Other	Pedestrian	Bicycle	Aggressive	Distracted	Impaired	Dark	Wet
Main St/Dunes St	9	0.09	24	0	0	1	1	7	3	2	1	1	1	0	1	0	0	0	0	0	1	0
Morro Bay Blvd/Monterey Ave	9	0.09	9	0	0	0	0	9	1	4	1	0	1	0	2	0	0	0	0	0	0	0
Main St/Surf St	9	0.09	19	0	0	0	2	7	1	1	4	1	1	0	1	0	0	5	0	1	0	0
Embarcadero/Pacific St	8	1.27	27	0	0	2	0	6	3	2	2	0	0	0	0	2	0	0	0	3	0	0
Embarcadero/Centennial Pkwy	8	1.05	8	0	0	0	0	8	0	6	1	0	1	0	0	0	0	1	0	0	0	0
Morro Bay Blvd/Piney Way	8	0.00	13	0	0	0	1	7	5	1	2	0	0	0	0	0	0	2	0	1	0	0
Main St/Radcliff Ave	7	-0.16	17	0	0	1	0	6	3	0	2	0	2	0	0	0	1	2	0	1	0	1
Morro Bay Blvd/Kern Ave	7	-0.02	7	0	0	0	0	7	3	0	1	0	0	0	3	0	0	0	0	0	0	0
Morro Bay Blvd/Harbor St	7	0.01	349	1	1	1	1	3	2	0	1	0	2	0	0	2	1	1	0	1	0	0
Main St/Beach St	7	-0.14	27	0	0	1	2	4	1	3	2	0	0	0	0	1	0	1	0	1	0	0
Harbor St/Morro Ave	6	0.69	21	0	0	1	1	4	3	2	0	0	0	0	0	1	0	0	0	0	0	0
Embarcadero Rd/Harbor St	6	0.87	6	0	0	0	0	6	2	1	2	1	0	0	0	0	0	0	0	2	0	0
Main St/Harbor St	6	-0.14	11	0	0	0	1	5	3	2	1	0	0	0	0	0	0	1	0	1	0	0
Harbor St/Piney Way	5	0.16	10	0	0	0	1	4	3	0	2	0	0	0	0	0	1	2	0	1	0	0
Monterey Ave/Harbor St	5	0.44	5	0	0	0	0	5	3	1	1	0	0	0	0	0	0	1	0	0	0	0
Quintana Rd/Kings Ave	5	0.48	15	0	0	1	0	4	1	1	2	1	0	0	0	0	0	1	0	0	0	0
Main St/San Jacinto St	5	0.16	10	0	0	0	1	4	1	1	2	0	1	0	0	0	0	2	0	0	0	0
Atascadero Rd/Ironwood Ave	5	-0.17	169	0	1	0	0	4	4	0	0	0	0	0	1	0	0	0	0	1	0	0
Atascadero Rd/Sunset Ave	5	-0.09	5	0	0	0	0	5	3	0	1	0	0	0	0	0	0	0	0	0	0	0
Embarcadero Rd/Marina St	5	0.37	5	0	0	0	0	5	0	3	1	0	1	0	0	0	0	0	0	0	0	0

# MORRO BAY

## Local Roadway Safety Plan



Intersection	Crashes	Local CCR Differential <sup>1</sup>	EPDO <sup>2</sup>	Fatal	Serious Injury	Other Visible Injury	Complaint of Pain	PDO	Broadside	Sideswipe	Rear End	Head On	Hit Object	Overturned	Other	Pedestrian	Bicycle	Aggressive	Distractions	Impaired	Dark	Wet
Embarcadero/Front St/Beach St	5	-0.11	178	1	0	1	0	3	0	1	0	0	3	0	1	0	1	1	0	1	0	0
Main St/Preston Ln	5	-0.17	10	0	0	0	1	4	0	0	4	0	1	0	0	0	0	4	0	0	0	0
Main St/Sequoia St	5	0.59	29	0	0	2	1	2	2	0	1	0	1	1	0	0	0	1	0	3	0	0
Cabrillo Hwy/SB On Ramp/S Bay Blvd	4	-0.28	19	0	0	1	1	2	4	0	0	0	0	0	0	0	0	2	0	1	0	0
Main St/Avalon St	4	-0.09	4	0	0	0	0	4	1	0	3	0	0	0	0	0	0	1	0	1	0	0
Atascadero Rd/Mimosa St	4	0.77	9	0	0	0	1	3	2	0	1	0	0	0	1	0	0	1	1	1	0	0
Main St/Hill St	4	-0.08	14	0	0	0	2	2	1	0	2	0	1	0	0	0	0	1	0	1	0	0
Main St/Hill St	4	-0.19	19	0	0	1	1	2	3	0	0	0	0	0	0	1	0	0	0	0	0	0
Harbor St/Market Ave	4	-0.01	14	0	0	1	0	3	2	1	0	0	0	0	0	1	0	0	0	1	0	0
Embarcadero Rd/Coleman Dr	4	-0.04	4	0	0	0	0	4	1	0	0	1	0	0	1	0	0	0	0	1	0	1
San Jacinto/Alder Ave	4	0.19	4	0	0	0	0	4	2	2	0	0	0	0	0	0	0	0	0	1	0	0
Pacific St/Piney Way	4	0.01	4	0	0	0	0	4	1	0	1	1	0	0	0	1	0	2	0	0	0	0
Morro Ave/Marina St	4	0.39	14	0	0	0	2	2	2	1	0	0	1	0	0	0	0	0	0	0	0	0
Ridgeway St/Piney Way	3	-0.04	13	0	0	1	0	2	0	1	0	0	2	0	0	0	0	0	0	1	0	0
Main St/San Joaquin St	3	-0.15	22	0	0	2	0	1	1	0	2	0	0	0	0	0	0	1	0	2	0	0
Main St/Vashon St	3	0.01	3	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	2	0	0
Laurel Ave/Koa Ave	3	0.61	3	0	0	0	0	3	0	2	1	0	0	0	0	0	0	0	0	0	2	0
Quintana Rd/Butte Ave	3	0.01	13	0	0	0	2	1	0	1	2	0	0	0	0	0	0	2	0	1	0	0
Quintana Rd/Kennedy Way	3	-0.28	3	0	0	0	0	3	1	2	0	0	0	0	0	1	0	1	0	0	0	0

# MORRO BAY

## Local Roadway Safety Plan



Intersection	Crashes	Local CCR Differential <sup>1</sup>	EPDO <sup>2</sup>	Fatal	Serious Injury	Other Visible Injury	Complaint of Pain	PDO	Broadside	Sideswipe	Rear End	Head On	Hit Object	Overturned	Other	Pedestrian	Bicycle	Aggressive	Distracted	Impaired	Dark	Wet
Kern Ave/Bradley Ave	3	0.01	13	0	0	1	0	2	0	0	0	1	2	0	0	0	0	2	0	1	0	0
Pacific St/Morro Ave	3	0.10	8	0	0	0	1	2	1	1	0	0	1	0	0	0	1	1	0	0	0	0
Beach St/Market Ave	3	-0.31	3	0	0	0	0	3	0	0	2	0	0	0	1	0	0	1	0	0	0	0
Anchor St/Napa Ave	3	0.31	167	0	1	0	0	2	2	0	0	0	0	0	0	1	1	2	0	0	0	0
Main St/Kern Ave/Bayshore Dr	3	-0.26	18	0	0	1	1	1	0	0	0	1	2	0	0	0	0	0	0	2	1	0
1. Local Critical Crash Rate Differential																						
2. Equivalent Property Damage Only Crashes																						

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Table 7 – Analysis Results: Segments

Facility	Limits	Crashes	Local CCR Differential <sup>1</sup>	EPDO <sup>2</sup>	Fatal	Serious Injury	Other Visible Injury	Complaint of Pain	PDO	Broadside	Sideswipe	Rear End	Head On	Hit Object	Overturned	Other	Pedestrian	Bicycle	Aggressive	Distracted	Impaired	Dark	Wet
<b>Expressway</b>																							
Highway 1	Yerba Buena St - City Limits	5	0.07	25	0	0	1	2	2	0	1	3	0	1	0	0	0	0	3	0	1	2	1
<b>Minor Arterial</b>																							
South Bay Blvd	Park View Rd - City Limits	17	0.34	47	0	0	2	2	13	1	1	0	2	9	3	1	0	0	7	0	6	7	1
South Bay Blvd	Park View Rd - Quintana Rd	10	0.35	183	0	1	1	0	8	0	1	1	1	2	1	4	0	0	3	1	3	4	1
Morro Bay Blvd	Quintana Rd - Highway 1	6	2.05	25	0	0	2	0	4	2	0	1	0	2	0	1	0	1	3	1	2	0	0
Highway 41/Atascadero Rd	Hill St - Ironwood Ave	6	1.50	16	0	0	0	2	4	5	0	0	0	1	0	0	0	0	0	0	1	0	0
Main St	Hill St - Highway 41/Atascadero Rd	3	2.55	172	0	1	0	1	1	0	1	1	0	0	0	0	1	0	1	0	0	1	0
<b>Collector</b>																							
Quintana Rd	Kennedy Way - Morro Bay Bl	7	1.43	22	0	0	0	3	4	3	1	1	0	2	0	0	0	1	1	0	2	0	2
Harbor St	Piney Way - Morro Bay Bl	3	1.92	18	0	0	1	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0
1. Local Critical Crash Rate Differential																							
2. Equivalent Property Damage Only Crashes																							



## 8. Best Practices Evaluation and Emphasis Areas

### 8.1 Best Practices Evaluation

**Table 8** identifies existing plans and policies that were recently completed, or are planned, or on-going within the City of Morro Bay. The intent of this review is to provide an idea of the types of strategies in place or encouraged by the City that may impact the safety analysis process. It will also identify opportunity areas where the City could adopt non-infrastructure countermeasures. This table also ties each topic and enhancement to the emphasis areas that are laid out in **Section 8.2**.

**Table 8 – Summary of Program, Policies, and Practices**

Topic	Initiatives/ Current Status	Opportunities for Implementation or Enhancement
<b>COMMITTEES / ROLES</b>		
<b>Does the City have an Active Transportation Coordinator?</b>	The City does not have an Active Transportation Coordinator.	Adopt an Active Transportation Coordinator role with existing staff or add role; Plan to maintain the role through personnel changes.
<b>Does the City have a Safety or Active Transportation Advisory Committee?</b>	No, but the City has a Public Works Advisory Board (PWAB). This would fall under their purview. The City also has a Citizens Finance Committee.	Continue to have board committee discuss roadway and transportation safety issues and efforts.
<b>Does the City have an Active Transportation Safety Education Program?</b>	No, although it was a proposed project to educate cyclists on rules of the road & bike safety as well as educate drivers about cyclist rights in the 2011 Morro Bay Bicycle & Pedestrian Plan.	Implement education efforts.
<b>POLICY / PLANS</b>		
<b>Does the City have a Complete Streets Plan?</b>	No, but there were complete streets projects included in the Morro Bay Bicycle & Pedestrian Master Plan (2011). Complete streets have not been prioritized by City in planning efforts.	Continue to plan for complete streets improvements as part of regular planning process.
<b>Does the City assess Traffic Impact Fees?</b>	Yes, when there are large developments/projects that create a nexus for fees. The	Continue to assess Traffic Impact Fees and apply funding



Topic	Initiatives/ Current Status	Opportunities for Implementation or Enhancement
	City is currently in the process of updating impact fees as a whole.	to transportation improvements.
<b>Does the City have a Safe Routes to School program?</b>	No	Implement a Safe Routes to School program with funding, utilize crash analyses to refocus efforts
<b>Does the City implement Traffic Calming Policies?</b>	No. Policy not included in Plan Morro Bay but was included in 2016-2017 City Goals and Objectives; planned to complete 2-3 traffic calming projects. No traffic calming policies implemented yet.	Look to implement traffic calming policies where necessary. Some locations mentioned in this plan.
<b>Does the City regularly conduct Speed Surveys?</b>	Yes.	Continue to update as required by California Vehicle Code; Identify opportunities for speed limit reduction per new law, AB 43.
<b>Does the City utilize Warrants for Stop Signs and Signals?</b>	Yes.	Continue to utilize warrants for stop signs and signals
<b>Does the City have Transportation Demand Management (TDM) or Vehicle Miles Travelled (VMT) Reduction policies?</b>	Yes, these are included in the City's General Plan.	Continue to expand efforts to align TDM and VMT reduction policies with state guidelines
<b>Does the City perform Traffic Crash Monitoring?</b>	No.	Utilize Crossroads database for spot monitoring; complete citywide monitor on regular basis
<b>Does the City have an Active Transportation Master Plan?</b>	No, however San Luis Obispo County does have an ATP.	Continue to implement improvements where feasible; develop City Active Transportation Master Plan. City has budgeted funds for development of a future Active Transportation Plan.
<b>Does the City have CAMUTCD-compliant Pedestrian Signal Timing?</b>	The City has aimed to comply with criteria and uniform specifications defined in the MUTCD. Compliance to the maximum was aimed by the 2011 Morro Bay Bicycle and Pedestrian Master Plan.	Continue to update pedestrian signal timing as new standards are developed. Explore the implementation of updated pedestrian and bicycle signal timing and bicycle detection at key locations, specifically



Topic	Initiatives/ Current Status	Opportunities for Implementation or Enhancement
		Quintana / Main signalized intersection.
<b>Does the City implement Crosswalks at high pedestrian locations?</b>	As of late, no new crosswalks have been established in recent years. From this plan, City Engineer may find warrants to designate crosswalks at intersections when deemed appropriate.	Continue to implement these improvements where feasible; keep updated with best practices regarding pedestrian improvements
<b>What type of traffic enforcement does the City conduct?</b>	Standard. Police enforcement is utilized to enforce traffic regulations.	Continue to enforce traffic laws at key locations; Apply for OTS funding to expand enforcement activities
<b>What types of transit does the City have?</b>	Morro Bay has three types of transit which are bus, taxi, and trolley. Morro Bay Fixed Route is a bus system within the city limits that is year-round. Morro Bay Call-A-Ride is a curb-to-curb service for those ¾ of a mile within a fixed route. Morro Bay Trolley is a seasonal fixed route trolley in the downtown and waterfront area.	Identify areas of high transit usage and focus crash analysis efforts at these locations
<b>What types of wayfinding does the City have?</b>	Signage to help navigate residents and visitors to key landmarks, facilities, and parking areas.	Identify areas where wayfinding can be expanded, including pedestrian and destination wayfinding.
<b>DATA COLLECTION / INVENTORY</b>		
<b>Does the City have an Inventory of Pedestrian Signs and Signals?</b>	The City has no inventory of pedestrian signs and signals.	Adopt a process to take inventory of these signals as they are updated/installed; Incorporate inventory into GIS database
<b>Does the City have an Inventory/Mapping of Active Transportation Routes?</b>	The City and SLOCOG have a GIS database of active transportation routes.	Continue to update inventory as active transportation routes are expanded; Incorporate into GIS database
<b>Does the City utilize Crossroads Database for crashes?</b>	Yes. Police Department maintains the Crossroads database using SWITRS data. The city uses the crash	Continue to utilize Crossroads database and regularly update



Topic	Initiatives/ Current Status	Opportunities for Implementation or Enhancement
	database for intersection studies.	
<b>Does the City have Active Transportation Volume Counting?</b>	No, however SLOCOG performs pedestrian and bicycle counts.	Continue to update database of volumes; Incorporate into GIS database for SLOCOG
<b>COORDINATION / FEEDBACK</b>		
<b>What ways can citizens give feedback about roadway safety?</b>	The City has an online and mobile app that allows users to report issues relating to graffiti, potholes, drainage concerns, and more. Citizens can also contact staff via phone, email, or service request online.	Continue to expand ways that citizens can give feedback and make improvements to service request tool if necessary. Incorporate requests into GIS maps to show hotspots for requests.
<b>What types of Coordination with other City organization does your department perform?</b>	City schools are managed by the San Luis Coastal Unified School District. The City engages with the school district routinely on transportation related concerns and has recently engaged with them about the SR-1/SR-41/Main project.	Continue to engage across departments and organizations; continue to involve these organizations in crash analysis and countermeasure development process
<b>What types of Law Enforcement/Emergency Service Engagement does the City perform?</b>	The City has a mobile app allows users to report issues or concerns relating to general concerns, narcotics, and suspicious activity to increase crime prevention and increase on-line reporting.	Continue to engage law enforcement and fire department in roadway safety planning

## 8.2 Emphasis Areas

Emphasis areas represent crash factors that are common in the City and provide the opportunity to reduce the largest number of traffic injuries with strategic investment. Emphasis areas were developed by revisiting the vision and goals of this planning process and comparing them with the trends and patterns identified in the crash analysis.

### 8.2.1 Emphasis Area #1: Speeding

**Description:** Speeding drivers were a major concern of residents and a major cause of crashes (16.7% of crashes were caused by unsafe speed).

#### Goals for Emphasis Area #1:

- Reduce the number of crashes due to speeding.



- Identify hot spots and priority corridors for speeding.
- Reduce speeding on both major streets and local residential streets.
- Apply for funding and implement improvements to address aggressive driving.

### Strategies for Emphasis Area #1:

- Alter road design to encourage slower speeds.
- Intersection improvements aimed at reducing vehicles speeds.
- Increased law enforcement presence near speeding hotspots.
- Increased educational campaigns to reduce speeding.

### 8.2.2 Emphasis Area #2: Cut-through Traffic

**Description:** Cut-through traffic were a major concerns of residents, particularly on local and residential streets. Cut-through traffic is often related to speed drivers as they use local streets to avoid busier main corridors.

### Goal for Emphasis Area #2:

- Reduce cut-through traffic on local streets.
- Work with residents to implement traffic calming improvements.

### Strategies for Emphasis Area #2:

- Implement traffic calming improvements to reduce cut-through traffic.

### 8.2.3 Emphasis Area #3: Drivers Ignoring Signals and Stop Signs

**Description:** Drivers ignoring signals and stop signs was a major concern of residents and the public agency partners and led to 3.5% of the crashes observed in the City. These crashes were more likely to result in serious injuries.

### Goal for Emphasis Area #3:

- Reduce the number of crashes caused by drivers ignoring signals and stop signs.
- Decrease the number of drivers ignoring signals and stop signs.

### Strategies for Emphasis Area #3:

- Increase visibility of stop signs and signals with improvements such as reflective markings and flashing beacons.
- Increase enforcement near stop sign/signal running hot spots.

### 8.2.4 Emphasis Area #4: Lighting

**Description:** Insufficient street lighting was a major concern of residents. 28% of the crashes occurred at night and 7% of crashes occurred in areas where there were no streetlights.

### Goal for Emphasis Area #4:

- Identify areas where additional street lighting can be installed and is warranted and appropriate.
- Increase night-time visibility in areas with pedestrians and bicyclists.

### Strategies for Emphasis Area #4:



- Install additional street lighting where appropriate.
- Regularly review street lighting in issue areas.
- Respond to citizen complaints about street lighting on a regular basis.

### 8.2.5 Emphasis Area #5: Pedestrian Safety

**Description:** Pedestrian safety was a major concern of residents and a major cause of severe injury and fatality crashes in Morro Bay. 3 out of 9 severe injury crashes and 1 out of 2 fatality crashes in Morro Bay involved pedestrians.

#### Goal for Emphasis Area #5:

- Reduce the number and severity of pedestrian crashes in Morro Bay.
- Increase pedestrian safety on Morro Bay streets.
- Increase the visibility of pedestrians.
- Increase cohesiveness of sidewalk network, as appropriate.

#### Strategies for Emphasis Area #5:

- Provide outreach, education, and enforcement programs to encourage safer driver behaviors near pedestrians.
- Install high-visibility crosswalk markings at the intersection of key destinations.
- Provide dedicated pedestrian and bicycle infrastructure to and from bus stops.
- Install adequate street lighting and increase lighting levels in conflict areas.
- Widen street shoulders where appropriate.
- Provide signage (e.g., pedestrian crossing ahead) to help drivers expect to slow down for pedestrians.
- Review sidewalk gaps and close as appropriate.

### 8.2.6 Emphasis Area #6: Bicyclist Safety

**Description:** Bicyclists safety was a major concern of residents and a significant cause of severe injury and fatality crashes in Morro Bay. Bicyclists were involved with 1 severe injury crash and 1 fatality crash.

#### Goal for Emphasis Area #6:

- Reduce the number and severity of bicycle crashes in Morro Bay.
- Increase bicycle safety on Morro Bay streets.
- Increase the visibility of bicyclists.
- Increase cohesiveness of bicycle network

#### Strategies for Emphasis Area #6:

- Provide outreach, education, and enforcement programs to encourage safer driving behaviors near bicyclist.
- Provide signage to help drivers expect to slow down for pedestrians and bikes.
- Install bicycle facilities along key corridors.
- Install additional bicycle markings (including green paint in conflict zones).



- Work closer with local advocacy groups and bicycle clubs to assist in prioritizing bicycle improvements.

## 9. Potential Improvements

This section provides information on general identified issues, crash reduction factors, improvements, and countermeasures identified for the City of Morro Bay, as well as for specific project locations identified as part of this analysis. Potential improvements/countermeasures are based on data analysis, stakeholder input, and site visits.

### 9.1 Improvement (Countermeasure) Selection Process

Part D of the HSM provides information on Crash Modification Factors (CMF) for roadway segments, intersections, interchanges, special facilities, and road networks. CMFs are used to estimate the safety effects of highway improvements, specifically to compare and select highway safety improvements. A CMF less than 1.0 indicates that a treatment has the potential to reduce crashes. A CMF greater than 1.0 indicates that a treatment has the potential to increase crashes. A Crash Reduction Factor (CRF) is directly connected to the CMF and is “mathematically defined as  $(1 - \text{CMF})$  (the higher the CRF, the greater the expected reduction in crashes)<sup>4</sup>.” CMFs can help decision makers weigh potential alternative projects but are only one measure of a project’s value and should be considered part of a larger decision-making process. Furthermore, it is important to note that not all CMFs are as reliable as others. The FHWA maintains a federal depository of CMFs and includes a star rating system to help users determine which CMFs are bolstered by the best and most thorough research. Key factors to consider when applying CMFs include:

1. Selection of an appropriate CMF;
2. Estimation of crashes without treatment;
3. Application of CMFs by type and severity; and,
4. Estimation of the combined effect for multiple treatments.

Examples of Safety Countermeasures can be found through several sources. This Report utilizes the countermeasures found in the California LRSM and the CMF Clearinghouse (CMF CH) website. Countermeasures/improvements are based on the data analysis and site visits. Additional countermeasures were identified for the high-level issues on a city-wide level and are discussed in **Section 9.2**.

### 9.2 Infrastructure Improvements

This evaluation considered citywide trends to identify countermeasures that would likely provide the most benefit with widespread implementation. **Table 9** outlines the citywide safety project

<sup>4</sup> Local Roadway Safety Manual (Version 1.6) 2022. Page 27.



opportunities, which is also referred to as the “Countermeasure Toolbox”. Within the toolbox, the description of the countermeasure along with its Local Roadway Safety Manual (LRSM) ID number is listed. The next column, Crash Reduction Factor (CRF), are “multiplicative factors used to estimate the expected reduction in number of crashes after implementing a given countermeasure at a specific site (the higher the CRF, the greater the expected reduction in crashes).” For improvements that do not have a related countermeasure in the LRSM, a conservative 5% crash reduction factor was estimated. For each of these countermeasures, a planning level benefit/cost analysis was completed.

Applying the benefit/cost at the citywide level was estimated assuming some randomness in crash distribution. The location characteristics, such as whether there is a traffic signal, and the type of crashes, were used at the citywide level to calculate an average cost of crashes that the countermeasure might reduce. The benefit per location was then factored out to a 20-year lifecycle savings, with an Opinion of Project Probable Cost (OPCC) for the initial installation costs and a per-year maintenance cost estimate. The cost shown in **Table 9** should be considered initial planning costs using 2024 dollars and not assumed final. These costs are based on typical construction conditions. Additional costs may be incurred based on unusual factors or other site-specific conditions. Treatments that are eligible for the HSIP set-aside categories are called out in the table.

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Table 9 – Prioritized List of Projects

Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Morro Bay Blvd (Market Ave to Kern Ave)	Curb Extensions (Bulb-Outs) at intersections	NS21PB	35%	\$750,000	4.38	Highway Safety Improvement Program (HSIP), Safe Streets for All (SS4A)	X	
Morro Bay Blvd	High Visibility Crosswalks (all intersections, painted crosswalks at select locations)	NS21PB	35%	\$180,000	9.38	HSIP, SS4A	X	
Morro Bay Blvd	Install Speed Feedback Signage (various locations)	R26	30%	\$68,400	24.68	HSIP, SS4A		
Morro Bay Blvd	Install Sharrows (Class III bike lanes)	-	5%	\$30,000	9.95	HSIP, SS4A		
Morro Bay Blvd	Striping to narrow travel lanes and delineate parking (throughout corridor)	-	5%	\$30,000	9.95	HSIP		

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Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Morro Bay Blvd	Pedestrian warning/yield signage at existing uncontrolled intersections	NS20PB	25%	\$10,000	120.66	HSIP		
Morro Bay Blvd & Kern Ave WB	Reduce lane width	-	5%	\$3,000	1.77	HSIP		
Morro Bay Blvd onto Harbor Blvd St NB	Reduce radius or eliminate the free right turn	-	5%	\$20,000	14.97	HSIP, SS4A		
Morro Bay Blvd & Morro Ave	Install Rectangular Rapid Flashing Beacon (RRFB)	NS22PB	35%	\$30,000	0.31	HSIP	X	
Morro Bay Blvd & Bernardo Ave	Install Rectangular Rapid Flashing Beacon (RRFB)	NS22PB	15%	\$30,000	53.70	HSIP	X	
Morro Bay Blvd & Kern Ave	Install Rectangular Rapid Flashing Beacon (RRFB) and Refuge Island	NS22PB	25%	\$30,000	1.24	HSIP	X	
Morro Bay Blvd	Landscape Buffer of at least 2' between	-	5%	\$250,000	1.13	SS4A		

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## Local Roadway Safety Plan



Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
	sidewalks and travel lanes (throughout)							
Morro Bay Boulevard & Quintana Road Roundabout	Additional signage and striping to reduce driver confusion	-	5%	\$30,000	1.23	SS4A		
Morro Bay Boulevard & Quintana Road Roundabout	Adjust crosswalks to increase pedestrian safety	-	5%	\$7,500	15.14	SS4A		
Embarcadero Rd from Marina St to Beach St	Lower Speed Limits per California Assembly Bill 43 (15-20mph)	-	5%	\$2,500	59.79	City-funded		
Embarcadero Rd from Marina St to Beach St	Implement delivery time restrictions to reduce truck congestion	-	5%	\$1,500	99.64	City-funded		
Embarcadero Rd from Marina St to Beach St	High Visibility Crosswalk Striping	NS21PB	35%	\$50,000	33.74	HSIP, SS4A	X	

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Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Embarcadero Rd from Marina St to Beach St	Curb Extensions (Bulb-Outs) at intersections	NS21PB	35%	\$200,000	8.44	HSIP, SS4A	X	
Embarcadero Rd from Marina St to Beach St	Install Rectangular Rapid Flashing Beacon (RRFB)	R37PB	35%	\$60,000	17.44	HSIP, SS4A	X	
Embarcadero Rd from Marina St to Beach St	Raised Crosswalks	R36PB	35%	\$70,000	14.95	HSIP, SS4A		
Quintana Rd from Main St to Morro Bay Blvd	Median Island with Left Turn Pockets (throughout corridor)	R08	25%	\$53,400	8.06	HSIP, SS4A		
Quintana Rd from Main St to Morro Bay Blvd	Speed Feedback Signage (Various Locations)	R26	30%	\$22,800	8.55	HSIP, SS4A		
Quintana Rd from Main St to Morro Bay Blvd	Raised Pavement Markings along edgelines	-	5%	\$1,500	57.39	HSIP, SS4A		
Quintana Rd from Main St to Morro Bay Blvd	Reduce lane widths	-	5%	\$2,500	34.44	City-funded		

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Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Quintana Rd from Main St to Morro Bay Blvd	Install RRFB between Kennedy Road and Morro Bay Boulevard	R37PB	35%	\$30,000	20.09	HSIP	X	
Quintana Rd from Main St to Morro Bay Blvd	Curve Warning Signage	R24	25%	\$2,400	179.35	HSIP, SS4A		
Quintana Rd from Main St to Morro Bay Blvd	Painted Bike Lanes	R32PB	35%	\$20,000	30.13	HSIP, SS4A		
Quintana Rd from Main St to Morro Bay Blvd	Add speed signs closer to roundabout	-	5%	\$2,000	43.05	SS4A		
Main St and Quintana Rd	Retroreflective Backplates on signal heads	S02	15%	\$12,000	66.24	HSIP		
Main St and Quintana Rd	Review yellow/red timing (all signals)	S03	15%	\$2,500	75.91	HSIP		
Main St and Quintana Rd	High Visibility Crosswalks with Leading Pedestrian Interval (LPI)	S21PB	60%	\$10,000	37.96	HSIP, SS4A		

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Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Main St and Quintana Rd	Green Bicycle Paint near Conflict Points (various locations)	-	5%	\$6,300	42.06	HSIP, SS4A		
Main St and Quintana Rd	Connections to Bike Path (requires diagonal crossing, exclusive phase, and additional signage)	-	5%	\$75,000	0.42	HSIP, SS4A		
Main St and Quintana Rd	Bike Box	S20PB	15%	\$15,000	52.99	HSIP, SS4A		
Main St and Quintana Rd	Reduce large curve radius to encourage lower speed	-	5%	\$20,000	1.58	SS4A		
Main St and Quintana Rd	Advance signal warning signs	S10	30%	\$7,500	211.98	HSIP, SS4A		
Main St north of Highway 41	Reorganize lane widths between NB and SB bike lanes	-	5%	\$200,000	1.86	HSIP, SS4A		

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Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Main St north of Highway 41	Two-Way Cycle track along Main St	-	5%	\$1,750,000	0.21	SS4A, Active Transportation Program (ATP)		
Main St north of Highway 41	Multiuse Path - Bike Lane/Sidewalk	-	5%	\$1,500,000	0.25	SS4A, Active Transportation Program (ATP)		
Quintana Rd & South Bay Blvd	Install Right Turn Pocket SB	NS17	20%	\$15,000	2.98	HSIP		
Quintana Rd & South Bay Blvd	Install Left-Turn Pocket on northbound	NS18	35%	\$15,000	5.21	HSIP		
Quintana Rd & South Bay Boulevard	Install Advanced Signage - Retroreflective or Flashing Beacon	NS09	30%	\$5,000	13.39	HSIP		
Quintana Rd & South Bay Boulevard	Install Flashing Beacon over Intersection	NS08	25%	\$12,000	2.79	HSIP		
Quintana Rd & South Bay Boulevard	Install All-Way Stop (warrant needed, previously did meet warrants)	NS02	50%	\$7,500	14.88	HSIP		
Quintana Rd & South Bay Boulevard	Traffic Signal (warrant needed,	NS03	30%	\$378,000	0.18	HSIP, SS4A		

# MORRO BAY

## Local Roadway Safety Plan



Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
	previously did meet warrants)							
South Bay Blvd from Quintana Rd to City Limits	Close off Park View drive to vehicle traffic (Closed during pandemic, look into permanent closure)	-	5%	\$12,000	28.56	Climate Action Grant, City-funded, State Parks		
South Bay Blvd from Quintana Rd to City Limits	Install rumble/mumble Strips on centerline and edgelines (bicycle considerations needed)	R31	15%	\$50,000	42.83	HSIP		
South Bay Blvd from Quintana Rd to City Limits	Widen Bicycle Lanes or Install Multiuse Path (including bicycle and pedestrians lanes)	-	5%	\$2,000,000 - \$2,500,000 per mile	-	HSIP, SS4A, ATP		
Main St & Radcliffe St (up to Errol St)	Complete sidewalk gap	R34PB	80%	\$216,000	4.39	HSIP, SS4A, ATP, FEMA		

# MORRO BAY

## Local Roadway Safety Plan



Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Main St & Radcliffe St	Signal warrant analysis	-	5%	\$5,000	11.87	City-funded		
Main St & Radcliffe St	Re-align intersection for better sight distance	NS11	20%	\$25,000	9.49	City-funded		
Main St & Radcliffe St	Signage or flashing beacons to alter drivers on Main Street if potential conflicting movements	NS06	15%	\$25,200	7.06	HSIP		
Main St & San Jacinto St	Close off Alder Ave	-	5%	\$25,000	2.10	City-funded		
Main St & San Jacinto St	Install right-turn lane on southbound Main Street at San Jacinto St		5%	\$15,000	20.98	HSIP		
Main St & Yerba Buena St	Install stop sign (review warrants)	NS02	50%	\$12,400	35.59	HSIP		
Main St & Yerba Buena St	Install traffic signal (review warrants)	NS03	30%	\$378,000	0.70	HSIP		
Main St & Yerba Buena St	Install mini-roundabout		5%	\$250,000	0.18	HSIP		

# MORRO BAY

## Local Roadway Safety Plan



Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Main St & Yerba Buena St	Install high-visibility crosswalks	NS21PB	35%	\$50,000	6.18	HSIP, ATP, SS4A	X	
Main St & Yerba Buena St	Install bicycle facilities		5%	\$10,000	4.41	HSIP, ATP		
Main St & Dunes St	Install high-visibility crosswalks and curb-bulb outs	NS21PB	35%	\$100,000	2.21	HSIP, SS4A, ATP	X	
Main St & Dunes St	Install all-way stop (review warrants)	NS02	50%	\$12,400	1.28	HSIP		
Main St & Dunes St	Install 'cross traffic does not stop signage' on minor approaches	-	5%-	\$1,500	10.54	City-funded		
Main St & Piney Wy	Install protected crosswalk (RRFB) across Main St (including curb ramps and bulb-outs)	NS22PB	35%	\$50,000	n/a (there were no pedestrian crashes observed here)	HSIP	X	

# MORRO BAY

## Local Roadway Safety Plan



Location	Improvements	HSIP/ LRSM ID	Crash Reduction Factor	20-year Costs	Benefit-Cost Ratio	Potential Funding Source	Eligible for HSIP Set Aside	Implementation Priority
Main St & Piney Wy	Striping to reduce width of lanes and reduce crossing distance for pedestrians	-	5%	\$5,000	n/a (there were no pedestrian crashes observed here)	City-funded		
Main St & Piney Wy	Realign intersection to reduce speeding	-	5%	\$20,000	n/a (there were no pedestrian crashes observed here)	City-funded		
Main St & Piney Wy	Install speed signs along Main St	R26	30%	\$25,000	n/a (there were no pedestrian crashes observed here)	HSIP, City-funded		
Ironwood Avenue & Paula Avenue	Install stop signs at Paula Avenue (if warranted)	NS02	50%	\$5,000	8.09	HSIP, City-funded		



### 9.3 Traffic Calming Improvements

The reduction of speeding and cut-through traffic on local and neighborhood streets is a priority of the City of Morro Bay. This section provides a toolbox of traffic calming improvements that can be implemented and a general process for implementing them. The crash history and summary of community input found these streets to be the main hot spots that would be candidates for future traffic calming analysis and projects:

- Ironwood Avenue
- San Jacinto Avenue
- Kern Avenue
- Avalon Avenue
- Piney Way
- Sandalwood Avenue

#### Traffic Calming Toolbox

The traffic calming toolbox contains different potential improvements that can be implemented on local and residential streets to calm traffic. The tools are classified as either Tier 1 or Tier 2. Tier 1 solutions consist of tools that are typically low-cost and don't require extensive design or study, which means they are quicker and easier to implement. Tier 2 solutions tend to cost more and require more involved study, design, outreach, and construction processes. **Table 10** shows the improvements, the tiers, and the costs from \$ (least expensive) to \$\$\$ (most expensive). The Traffic Calming Toolbox examples can be found in **Appendix B**.

**Table 10 - Traffic Calming Toolbox**

Traffic Calming Improvement	Project Tier	Cost (\$-\$\$\$)
Striping	Tier 1	\$
Speed Signage	Tier 1	\$
Speed Legends	Tier 1	\$
High Visibility Crosswalks	Tier 1	\$
Signed turn restrictions (neighborhood access control)	Tier 1	\$
Curb Extensions (bulb-outs)	Tier 2	\$\$
Pedestrian Refuge Islands	Tier 2	\$\$
Road diets/toning	Tier 2	\$\$
Mini-roundabout	Tier 2	\$\$
Speed humps	Tier 2	\$
Speed bumps	Tier 2	\$
Speed kidneys	Tier 2	\$
Speed table	Tier 2	\$



Traffic Calming Improvement	Project Tier	Cost (\$-\$\$\$)
Raised Crosswalks	Tier 2	\$\$
Raised Intersections	Tier 2	\$\$
Lateral shifts	Tier 2	\$\$\$
Chicanes/chokers	Tier 2	\$\$\$
Forced turn island (neighborhood access control)	Tier 2	\$\$\$
Diagonal diverter (neighborhood access control)	Tier 2	\$\$\$

## Traffic Calming Implementation Process

Implementing traffic calming features should generally follow the following process:

### 1) Project Initiation

A project would be initiated by a citizen request or identification of an issue by City staff or member of City board. City of Morro Bay Public Works staff will review the location in coordination with the Police Department and determine if traffic calming solutions are appropriate for the issue described. If the traffic and/or safety concern is determined to be outside the purview of Public Works, the request will be referred to the appropriate City Department to investigate other potential solutions.

### 2) Project Identification

After determining that traffic calming improvements are appropriate for the identified issue and location, Public Works staff will conduct a preliminary site assessment to understand the site's context and review any existing safety and traffic data. Public Works staff may also hold a meeting with the residents to gather more information on the issue. Following this process, Public Works staff will determine if Tier 1 (cheaper and quicker) or Tier 2 (more expensive and longer-term) solutions are appropriate.

### 3) Project Recommendations

Following the project identification stage, Public Works staff will review the Traffic Calming Toolbox and use engineering judgement to determine which treatments are appropriate at the location. For Tier 1 projects, Public Works staff can inform residents and work to implement the solutions quickly. Tier 2 solutions require additional study and outreach to select and implement. Public Works staff will first conduct a project scoping to collect the necessary data, such as volumes and crash activity. Public Works staff will then work with the local community to review and screen the potential improvements from the Traffic Calming Toolbox to determine the appropriate project recommendations.

### 4) Project Implementation

Tier 1 projects can be implemented by Public Works depending on available funding and scheduling. Tier 2 projects can be prioritized for funding and implementation based on citizen demand, effectiveness, and cost. Some Tier 2 projects may qualify for and require grant funding, such as HSIP or ATP funding, to be implemented.



## 5) Project Evaluation

Following implementation, Public Works staff should monitor the projects for their effectiveness in calming traffic and potentially preventing crashes. This can include monitoring speed, traffic behavior, and soliciting input from residents. If a Tier 1 project is not deemed effective, the Public Works staff should consider a Tier 2 project or changes to the project. If a Tier 2 project is not deemed effect, Public Works staff should review the toolbox for any additional improvements or changes to the project scope.

### 9.4 Non-Infrastructure Improvements

These identified countermeasures were derived from the crash analysis and build on the actions identified in Section 9.2. These relate to the additional E's of Traffic Safety outside of engineering, which include Enforcement, Education, Emergency Services and Emerging Technologies.

**Table 11 – Non-Engineering Safety Strategy Countermeasures**

PROPOSED COUNTERMEASURE	POTENTIAL PARTNERS	EXAMPLES OF COUNTERMEASURE
<b>ENFORCEMENT</b>		
Increase visibility of enforcement program for speeding and stop sign/signal running	Morro Bay Police Department, California Highway Patrol, California Office of Traffic Safety	<a href="#">CHP's Regulate Aggressive Driving and Reduce Speed (RADARS) program</a>
Increased enforcement near pedestrian and bicyclist activity hot spots	Morro Bay Police Department, California Office of Traffic Safety	Obtain grant funding for additional enforcement of drivers near pedestrian crossings
Increased enforcement near school zones	Morro Bay Police Department, Local school districts, California Office of Traffic Safety	Obtain grant funding for additional personnel in school zones
<b>EDUCATION</b>		
Campaign to target speeding drivers and drivers running	Morro Bay Public Works, SLOCOG	<a href="#">CHP's Regulate Aggressive Driving and Reduce Speed (RADARS) program</a>
Bicycle and pedestrian safety campaign	Morro Bay Public Works, SLOCOG	<a href="#">SCAG's "Go Human" campaign</a>
Coordinate safety education campaigns with SLOCOG	Morro Bay Public Works, SLOCOG	Coordination of safety education with new SLOCOG regional projects
Explore safe routes to school education grants to expand program	School districts, local law enforcement, SLOCOG	<a href="#">Safe Routes to School Program</a> (funded by Caltrans)
<b>EMERGENCY RESPONSE</b>		
Coordinate with emergency services on potential improvements and other safety projects	Morro Bay Police Department, Morro Bay Fire Department, ambulance agencies	Incorporating law enforcement/fire department as stakeholders on transportation improvement projects
Regularly review emergency response data to supplement crash data and identify hot spots	Morro Bay Police Department, Morro Bay Fire Department, ambulance agencies	Adjust safety project development processes to include emergency response and fire department data



## 10. Funding Sources & Next Steps

### 10.1 Funding Sources

Competitive funding resources are available to assist in the development and implementation of safety projects in Morro Bay. The City should continue to seek available funding and grant opportunities from local, state, and federal resources to accelerate their ability to implement safety improvements throughout Morro Bay. This section provides a high-level introduction to some of the main funding programs and grants for which the City can apply.

#### 10.1.1 Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is a federally-funded, Caltrans-managed program that apportions funding as a lump sum for each state, which is then divided among apportioned programs. These flexible funds can be used for projects to preserve or improve safety conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, and other project types. Safety improvement projects eligible for this funding include:

- Curb-extensions
- Pedestrian warning flashing beacons
- High visibility crosswalks
- Other projects listed in the Caltrans Local Road Safety Manual

California's local HSIP focuses on infrastructure projects with national recognized crash reduction factors. Normally HSIP call-for-projects is made at an interval of one to two years. The applicant must be a city, a county, or a tribal government federally recognized within the State of California.

Additional information regarding this program at the Federal level can be found online at: <https://safety.fhwa.dot.gov/hsip/>. California specific HSIP information – including dates for upcoming call for projects - can be found at: <http://www.dot.ca.gov/hq/LocalPrograms/hsip.html>. HSIP Cycle 12 applications are expected to be due in September 2024.

#### 10.1.2 Caltrans Active Transportation Program

Caltrans Active Transportation Program (ATP) is a statewide funding program, created in 2013, consolidating several federal and state programs. The ATP funds projects that encourage increased mode share for walking and bicycling, improve mobility and safety for non-motorized users, enhance public health, and decrease greenhouse gas emissions. Projects eligible for this funding include:

- Bicycle and pedestrian infrastructure projects
- Bicycle and pedestrian planning projects (e.g., safe routes to school)
- Non-infrastructure programs (education and enforcement)

This program funding is provided annually. The ATP call for projects typically comes out in the spring. Information on this program and cycles can be found online at:



<http://www.dot.ca.gov/hq/LocalPrograms/atp/>.

### 10.1.3 California SB 1

The California SB 1 is a landmark transportation investment to rebuild California by fixing neighborhood streets, freeways, and bridges in communities across California and targeting funds toward transit and congested trade and commute corridor improvements.

California's state-maintained transportation infrastructure will receive roughly half of SB 1 revenue: \$26 billion. The other half will go to local roads, transit agencies and an expansion of the state's growing network of pedestrian and cycle routes. Each year, this new funding will be used to tackle deferred maintenance needs both on the state highway system and the local road system, including:

- Local Street and Road Maintenance and Rehabilitation: \$1.5 billion
  - This funding is dedicated to improve local road maintenance, rehabilitation, and/or safety through projects such as restriping and repaving.
- Bike and Pedestrian Projects: \$100 million
  - This will go to cities, counties, and regional transportation agencies to build or convert more bike paths, crosswalks, and sidewalks. It is a significant increase in funding for these projects through the ATP.
- Local Planning Grants: \$25 million

### 10.1.4 California Office of Traffic Safety Grants

This program has funding for projects related to traffic safety, including transportation safety education and encouragement activities. Grants applications must be supported by local crash data (such as the data analyzed in this report) and must relate to the following priority program areas:

- Alcohol Impaired Driving
- Distracted Driving
- Drug-Impaired Emergency Medical Services
- Motorcycle Safety
- Occupant Protection
- Pedestrian and Bicycle Safety
- Police Traffic Services
- Public Relations, Advertising, and Marketing Program
- Roadway Safety and Traffic Records
- 

### 10.1.5 SCAG Sustainable Communities Program



This program is an innovative vehicle for promoting local jurisdictional efforts to test local planning tools. The Sustainable Communities Program (SCP) provides direct technical assistance to SCAG member jurisdictions to complete planning and policy efforts to implement the regional Sustainable Communities Strategies (SCS). Grants are available in the following three categories:

- Integrated Land Use
  - Sustainable Land Use Planning
  - Transit Oriented Development (TOD)
  - Land Use & Transportation Integration
  
- Active Transportation
  - Bicycle Planning
  - Pedestrian Planning
  - Safe Routes to School Plans
  
- Green Region
  - Natural Resource Plans
  - Climate Action Plans (CAPs)
  - Green House Gas (GHG) Reduction programs

### 10.1.6 Safe Streets and Roads for All (SS4A) Grant Program

This program has allocated \$1B annually for the next 3 years for local cities, counties, MPOs, and other roadway owners (excepting state DOTs) for safety improvement grants for safety planning, education, enforcement, and roadway improvements. This program is not benefit / cost based. Evaluation criteria are oriented to the project's alignment with the Safe Systems approach. There is a 20% local match requirement (can be in-kind contribution via staff billable hours). Planning grants are open to any eligible agency and Implementation grants are open to agencies with a completed safety plan such as a Local Roadway Safety Plan. Planning grants are expected to range from \$100K to \$1M and Implementation grants are expected to range from \$1M to \$20M. Grant applications are expected to be due in July 2024.

This Local Roadway Safety Plan serves as the City of Morro Bay's 'Action Plan', making the City eligible for Implementation Grant funding. The responses to the [SS4A Self-Certification Eligibility Worksheet](#) are in **Table 12** below. This Plan answers "yes" to Questions 3, 7, and 9 (all required), and answers "yes" to Questions 1, 2, 4, 6, and 8 (5 out of 4 required remaining questions).



**Table 12 – SS4A Self-Certification Eligibility Table**

No.	Question	Response
1	<p>Are both of the following true?</p> <ul style="list-style-type: none"> <li>• Did a high-ranking official and/or governing body in the jurisdiction publicly commit to an eventual goal of zero roadway fatalities and serious injuries?</li> <li>• Did the commitment include either setting a target date to reach zero, OR setting one or more targets to achieve significant declines in roadway fatalities and serious injuries by a specific date?</li> </ul>	Yes
2	<p>To develop the Action Plan, was a committee, task force, implementation group, or similar body established and charged with the plan’s development, implementation, and monitoring?</p>	Yes – the Public Agency Working Group and the Public Works Advisory Group
3	<p>Does the Action Plan include all of the following?</p> <ul style="list-style-type: none"> <li>• Analysis of existing conditions and historical trends to baseline the level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region;</li> <li>• Analysis of the location where there are crashes, the severity, as well as contributing factors and crash types;</li> <li>• Analysis of systemic and specific safety needs is also performed, as needed (e.g., high risk road features, specific safety needs of relevant road users; and,</li> <li>• A geospatial identification (geographic or locational data using maps) of higher risk locations.</li> </ul>	Yes
4	<p>Did the Action Plan development include all of the following activities?</p> <ul style="list-style-type: none"> <li>• Engagement with the public and relevant stakeholders, including the private sector and community groups;</li> <li>• Incorporation of information received from the engagement and collaboration into the plan; and</li> <li>• Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate.</li> </ul>	Yes
5	<p>Did the Action Plan development include all of the following?</p> <ul style="list-style-type: none"> <li>• Considerations of equity using inclusive and representative processes;</li> <li>• The identification of underserved communities through data; and</li> <li>• Equity analysis, in collaboration with appropriate partners, focused on initial equity impact assessments of the proposed projects and strategies, and population characteristics.</li> </ul>	No
6	<p>Are both of the following true?</p> <ul style="list-style-type: none"> <li>• The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and</li> <li>• The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.</li> </ul>	Yes
7	<p>Does the plan identify a comprehensive set of projects and strategies to address the safety problems in the Action Plan, time ranges when projects and strategies will be deployed, and explain project prioritization criteria?</p>	Yes



No.	Question	Response
8	Does the plan include all of the following? <ul style="list-style-type: none"> <li>A description of how progress will be measured over time that includes, at a minimum, outcome data.</li> <li>The plan is posted publicly online.</li> </ul>	Yes
9	Was the plan finalized and/or last updated between 2018 and June 2024?	Yes, adopted February 2024

### 10.1.7 Infrastructure Investment and Jobs Act

In November 2021, the President signed into law the \$1.2 trillion Infrastructure Investment and Jobs Act. In addition to the SS4A grant program described above, this law provides billions of dollars in additional funding for improvements and investment in the transportation sector nationwide. The law provides \$30 billion in funding over 5 years for competitive RAISE grants for transportation projects, as well as additional funding for repair and environmental mitigation projects. As these grant programs continue to be developed, City can position itself by identifying potential projects and programs to pursue.

## 10.2 Implementation Plan

Once the Local Roadway Safety Plan has been completed, the City can plan to regularly review and monitor crash data for trends and changes. The City can also plan to prioritize and implement certain improvements that were identified in this plan.

### 10.2.1 Monitoring

The City can plan to regularly monitor the success of the LRSP and its related implementations by performing the following steps. This before and after analysis can be performed every second year. The City can also meet with the Morro Bay Police Department on a regular basis to discuss roadway safety issues and compare to the latest crash analysis.

- Pull yearly crash data from Crossroads database to determine year-over-year trend
- Utilize Crossroads or GIS software to review the number of crashes occurring at specific locations. Locations where improvements have been made should receive priority for monitoring.
- Based upon changes in crash activity, determine efficacy of improvements and adjust strategies going forward

### 10.2.2 Analysis Update

The City can plan to update the analysis every two years as part of a monitoring program, as described in **Section 10.2.1**. Every 4 years the City will perform a major update to the analysis and the Local Roadway Safety Plan by performing the following steps. This update will maintain eligibility for the HSIP grant funding for the City. This analysis should continue to focus on both systemic and location-specific safety needs.

1. Obtain updated Statewide Integrated Traffic Records System (SWITRS) crash data from the Crossroads database.



2. Use Excel software to update the crash trend analysis completed in Section 7, continue to compare new crash to historic trends.
3. Update the roadway shapefile with any new or upgraded roadways.
4. Update the intersection shapefile with any new or upgraded intersections.
5. Re-run the GIS crash tool to determine the number of crashes at intersections and roadways within the updated study period. The City can plan to run the crash tool for all crashes, as well as the crash types identified in **Section 3.2**.
6. Update the crash analysis performed in this report, including the crash analysis tables shown in **Section 7.10**.
7. Review the Crash Toolbox to determine if any additional countermeasures should be considered for implementation in the City.

### 10.2.3 Implementation Strategies

The opportunities identified in this report provide systemic and location-specific countermeasures that can be implemented within the City. Implementation will be dictated by funding and available resources, this guidance is preliminary and subject to change. Over the near-term and mid-term, the City can concentrate its efforts on the following emphasis areas.

- Speeding
- Cut-through Traffic
- Drivers Ignoring Signals and Stop Signs
- Lighting
- Pedestrians
- Bicyclists

Analysis conducted at the citywide level indicated that these factors were some of the most frequent influences contributing to crashes within the City. The countermeasure opportunities previously discussed in this report for both systemic and project-specific improvements can be used as a basis for developing projects at locations where addressing these focus areas would be of the most benefit. Projects that address these focused areas citywide can be developed with a high benefit-to-cost ratio (by applying City-wide crash rates), allowing competitive projects to be developed even at sites with little to no direct crash history, but with conditions that might contribute to future crashes. For location-specific improvements, the City can utilize benefit-cost ratio calculations to help prioritize projects as funding and resources become available. The countermeasure/improvement table in **Table 8** also identified a potential prioritization timeline for each improvement, based on cost, effectiveness and feasibility.

This project prioritization process will help the City be ready for the funding opportunities identified in **Section 10.1**. Project prioritization will also help to guide the projects as they are taking into the design and construction project. Coordination with City departments will be key in the completion of these implementations.



The City can also plan to implement the non-engineering improvements identified throughout this report, including actions related to Enforcement, Education, and Emergency Services. These actions will require coordination with internal and external stakeholders, such as City departments, law enforcement, local government organizations, and local community organizations. Early buy-in and engagement from these stakeholders will be key to the success of these actions.

To aid in these actions, the City can assemble a 'Task Force' of representatives from different City departments, such as Public Works, Community Development, and Public Safety. This task force will be instrumental in the monitoring, analysis update, project development and project implementation outlined in this plan.

### 10.3 Next Steps

The City has completed this LRSP to guide the process of future transportation safety improvements for years to come. In addition to the actions identified in the Implementation Plan, the City can perform the following to guide the success of this LRSP and the safety efforts overall.

- Develop investment program to help achieve the City's crash reduction goals.
- Work with state and partner agencies on implementation of large-scale programs and policies.
- Incorporate safety analysis findings in future updates of safety programs.
- Monitor statewide safety priorities, guidance, and funding opportunities.

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## Appendix A – Online Engagement Materials

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# Appendix B – Traffic Calming Implementation Examples

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at intersections to minimize potential vehicle conflicts with pedestrians. In fact, a recent law was passed and took effect January 1, 2024, restricting vehicles from parking next to a cross street as an intersection. Warning citations will start being issued this year with fines not starting until January 1, 2025. This will be the subject of discussion at a future PWAB meeting as it will have impacts citywide on parking.

The attached figure displays a rendering of the appearance of the proposed addition of red curb at this location.

**CONCLUSION**

The proposed modification to parking on Sequoia Street will improve visibility of pedestrians and line-of-sight for vehicles entering the school driveway while having a minimal impact on available parking in the neighborhood.

**ATTACHMENT**

1. Figure Showing Proposed Red Curb at Del Mar School

## FIGURE SHOWING PROPOSED NEW RED CURB AT DEL MAR SCHOOL





AGENDA NO: B-3

MEETING DATE: January 17, 2024

## Staff Report

**TO:** Public Works Advisory Board

**DATE:** December 27, 2023

**FROM:** Ted Schiafone, Harbor Director

**SUBJECT: CONSIDERATION OF PROPOSED CHANGE TO TRAFFIC FLOW OF WEST DRIVE AISLE TO ONE-WAY BETWEEN MORRO BAY LANDING AND HARBOR DEPARTMENT OFFICE**

### **RECOMMENDATION**

Staff recommends that the PWAB support the drive aisle behind Tognazzini's Dockside up to and around the Harbor Office be changed and marked as one-way traffic from the south at Morro Bay Landing to north at the Harbor Office.

### **FISCAL IMPACT**

With the current condition and two-way traffic patterns, there is potential for incidents that could lead to property damage and injury which is a possible liability to the City and users. The costs of implementation are estimated at \$10,000 - \$15,000.

### **BACKGROUND**

The current path of travel on the drive aisle around the Harbor Office, from Morro Bay Landing to Morro Bay Oyster Company, is unmarked and regularly has two-way traffic. This drive aisle is used by large commercial 18-wheel vehicles, garbage trucks, vehicles with trailers, delivery trucks, tourist vehicles and Harbor Patrol vehicles. With no existing sidewalk or marked path, the drive aisle is also used heavily by pedestrians and bicycles to observe the water, visit North T-Pier, and visit restaurants. Often, large groups of children are escorted down this drive aisle on foot for educational field trips to the North T-Pier. The drive aisle directly across the front door of the Harbor Office is used to park emergency Harbor Patrol vehicles during the day. There is a marked yellow curb with signage for that purpose. Due to the width of this drive aisle, two-way traffic cannot be accommodated safely forcing vehicles within a couple feet of the Harbor Office entrance/exit and near misses with those leaving the Harbor Office stepping directly into the path of vehicles. In addition, two-way traffic forces pedestrians up against other buildings, curbs, and the fish landing near Dockside Restaurant.

### **DISCUSSION**

Harbor Staff has had discussions with all contiguous lease-holding businesses that will be affected as well as the Coast Guard regarding the proposed one-way travel path from the south past Morro Bay Landing through the north past Morro Bay Oyster Company. All parties that were consulted are in support of the change to a one-way drive aisle. Marking a one-way drive aisle also will enable the future marking of clear walking paths on each side of the drive aisle, thus improving the safety of pedestrians on the Harbor Walk. Currently all garbage trucks and some delivery trucks already drive this traffic aisle from the proposed south to north path, which will not change their current routine pattern. City staff is confident that all users will adapt quickly to this proposed new arrangement.

Prepared By: TS

Dept Review: ER GK

## **CONCLUSION**

Staff recommends that the PWAB support that the drive aisle behind Tognazzini's Dockside up to and around the Harbor Office be changed and marked as one-way traffic from the south at Morro Bay Landing to north at the Harbor Office.

## **ATTACHMENTS**

1. Figure of Proposed One-Way Traffic Aisle at Harbor Office

