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CITY OF BLUE LAKE

CALIFORNIA

111 Greenwood Road

P.O. Box 458

Blue Lake, CA 95525

Blue Lake City Council Agenda

Thursday, July 7, 2022 ~ 6:30 p.m. ~Special Council Meeting

Skinner Store Building-111 Greenwood Road, Blue Lake-Behind City Hall

Zoom Option: The Public May Participate in Person, or Via Zoom at the Link Below:

Join Zoom Meeting

<https://us02web.zoom.us/j/84897363392?pwd=Q1k1Z2RlT3p2ZmdmekZucnNtb1d4QT09>

Meeting ID: 848 9736 3392 Passcode: 842156

Dial by your location: +1 669 444 9171 US

Unless Otherwise Noted, All Items on the Agenda are Subject to Action.

1. **Pledge of Allegiance and Establish a Quorum of the Council**
2. **Approve Agenda**
3. **Public Comment** – *The Public is invited to present petitions, make announcements, or provide other information to the City Council that is relevant to the scope of authority of the City of Blue Lake that is not on the Agenda. The Council may provide up to 15 minutes for this public input session. To assure that each individual presentation is heard, the Council may uniformly impose time limitations of 3 minutes to each individual presentation. The public will be given the opportunity to address items that are on the agenda at the time the Council takes up each specific agenda item.*
4. **Resolution Number 1201-** A Resolution of the City Council of the City of Blue Lake Authorizing Application for Regional Early Action Planning Grant Program Funds-Action
5. **Local Road Safety Plan (LRSP) Adoption-Action**
6. **Future Agenda Items**
7. **Adjourn**

A request for disability-related modification or accommodation, including auxiliary aid or services, may be made by a person with a disability who requires a modification or accommodation in order to participate in the public meeting, by contacting City Manager Amanda Mager, 668-5655, at least 24 hours prior to the commencement of the meeting.



CITY OF BLUE LAKE

Post Office Box 458, 111 Greenwood Road, Blue Lake, CA 95525
Phone 707.668.5655 Fax 707.668.5916

AGENDA REPORT

Item #: 4
Date: July 7, 2022
Item Subject: Resolution Number 1201-Regional Early Action Planning Grant Submission
Submitted By: Mandy Mager, City Manager

General Information:

The Regional Early Action Planning Grants program is administered by the Humboldt County Association of Governments (HCAOG). A portion of the funds will be allocated as a grant program to local jurisdictions to stimulate housing production. The City is requesting REAP funding for the following activities discussed below.

The City is currently in the process of preparing an update for the General Plan Housing Element for the 6th planning cycle, which is being funded through the Local Early Action Planning (LEAP) program. As part of this effort the City needs to prepare an updated Initial Study pursuant to the California Environmental Quality Act. The City does not have funding for completing the CEQA process and is requesting \$15,000 of REAP funding for this task.

The City is also requesting additional funding assistance for the scope of work in the LEAP grant that was awarded to the City. Specifically, the City is requesting \$5,000 for mapping of the City's stormwater system. Lastly, the City is requesting funds from the REAP suballocation for the smaller cities in the County to assist with a survey of Blue Lake residents to identify key housing and service needs in the community. In total, this action would authorize application to the HCAOG for a grant amount of \$29,864.

Background Material Provided: Resolution Number 1201

Fiscal Impact: N/A

Recommended Action: Staff recommends Council Adopt Resolution No. 1201 Authorizing Application for the Regional Early Action Planning (REAP) Grant in the Amount of \$29,864.

Review Information:

City Manager Review: Legal Review: Planner Review: Engineer:

Comments:

RESOLUTION NO. 1201

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BLUE LAKE AUTHORIZING APPLICATION FOR REGIONAL EARLY ACTION PLANNING GRANT PROGRAM FUNDS

WHEREAS, the Humboldt County Association of Governments (HCAOG) is administering the Regional Early Action Planning (REAP) Grant Program; and

WHEREAS, the City may apply for grant funds and technical assistance to support planning efforts that will stimulate housing production; and

WHEREAS, the City's efforts on the Housing Element Update, stormwater system mapping, and survey of housing and service needs meet the objectives of the REAP Program; and

WHEREAS, the environmental effects of the Housing Element Update will be considered in an Initial Study-Mitigated Negative Declaration pursuant to the requirements of the California Environmental Quality Act (CEQA);

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Blue Lake hereby:

1. Directs city staff to submit an application for a REAP Grant in the amount of up to \$20,000 for the Housing Element Update CEQA compliance and stormwater system mapping and in the amount of up to \$9,864 for conducting a survey of housing and service needs in the City;
2. Authorizes the City Manager, of the City of Blue Lake, to accept the award of grant funding and to execute and submit all documents including, but not limited to, applications, agreements, payment requests, and so on, which may be necessary.

AYES:

NAYS:

ABSENT:

ABSTENTIONS:

Dated: _____, 2022

ATTEST:

APPROVED:

City Clerk, City of Blue Lake

Mayor, City of Blue Lake



CITY OF BLUE LAKE

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AGENDA REPORT

Item #: 5
Date: July 7, 2022
Item Subject: Local Road Safety Plan Adoption
Submitted By: Mandy Mager, City Manager

General Information:

The City of Blue Lake was awarded funding to complete a Local Road Safety Plan; this plan will be used to support future road improvement funding requests, along with capital installations to improve user safety.

SHN Engineering has completed the plan and will be presenting the final draft document to the Council and the community for review and adoption.

Background Material Provided: Local Road Safety Plan-Introductory documents; the full document is available for review on the City's website.

Fiscal Impact: N/A

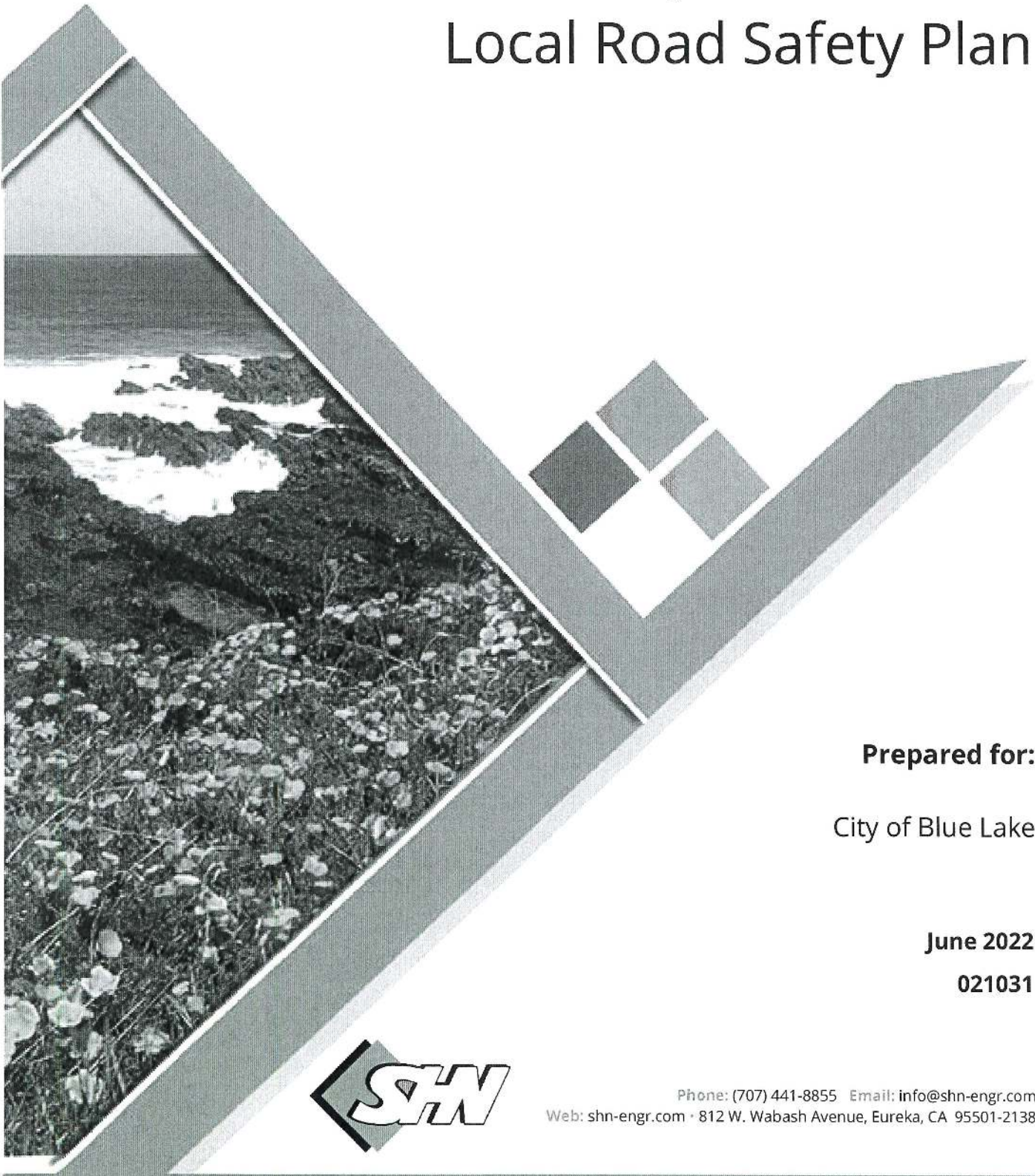
Recommended Action: Adopt the LRSP

Review Information:

City Manager Review: Legal Review: Planner Review: Engineer:

Comments:

City of Blue Lake Local Road Safety Plan



Prepared for:

City of Blue Lake

June 2022

021031



Phone: (707) 441-8855 Email: info@shn-engr.com
Web: shn-engr.com • 812 W. Wabash Avenue, Eureka, CA 95501-2138

Introduction

The City of Blue Lake, in collaboration with SHN, has developed a local road safety plan (LRSP) to improve roadway safety for the many pedestrians, bicyclists, motorists, and others who use the City's roadways. The LRSP process, which has been developed by the Federal Highway Safety Administration, is a data-centric, systematic approach that efficiently identifies areas of concern, diagnoses safety issues in those areas, and provides recommendations for low-cost counter measures to mitigate safety risks (Caltrans, 2022). A roadmap of the process, which has been broken down into six steps, is illustrated below in Figure 1.

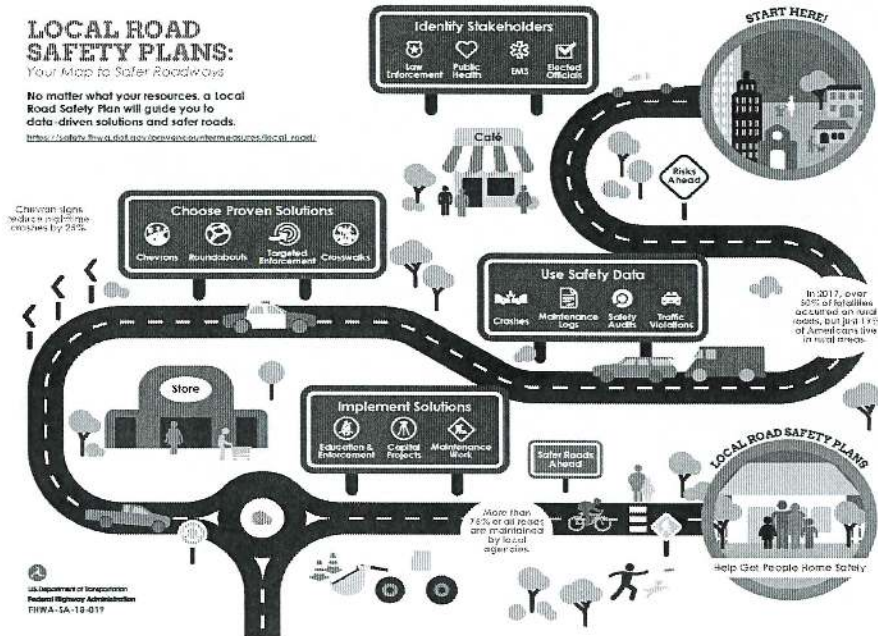


Figure 1. Local Road Safety Plan “Roadmap” (FHWA, 2021)

Explicitly, the six-step process is as follows:

- Step 1: Establish Leadership
- Step 2: Gather and Analyze Safety Data
- Step 3: Determine Emphasis Areas
- Step 4: Identify Strategies
- Step 5: Prioritize and Incorporate Strategies
- Step 6: Evaluate and Update the LRSP

The City of Blue Lake conducted two stakeholder meetings intended to gain targeted input from relevant parties within the City. Additionally, the City published two public surveys intended to capture unreported accidents and near misses experienced by City residents. A site visit was also completed to assess conditions in areas identified through crash data and public surveys. This included Tom Mattson, Director of the Humboldt County Department of Public Works, which shares jurisdiction for the primary collector within the City, Blue Lake Boulevard. Through this outreach, engagement, and data analysis, the City of Blue Lake and SHN have initiated a living document, which will continue to be updated as the City and its road safety needs change over time.



This report begins by summarizing the approach taken in the development of the LRSP and provides a brief description of previous efforts the City has undertaken to improve roadway safety, our community outreach efforts, and development of vision and goals for this process. Following the vision and goals, a summary of the methodology used to collect data and the results of the analysis is provided. A synopsis of the decisions made to address issues identified during the process including strategies and countermeasures follow, along with metrics for successful implementation and plans for moving forward.

Background

Purpose and Need

According to the U.S. Department of Transportation National Highway Traffic Safety Administration, in 2017 there were 34,247 fatal motor vehicle traffic crashes. 15,565 or 45 percent of those crashes occurred in rural areas (U.S. Department of Transportation National Highway Traffic Safety Administration, 2019). Of those crashes, 15,565 or 45 percent occurred in rural areas. It was estimated in 2017 by the American Community Survey from the U.S. Census Bureau that only 19 percent of the U.S. population lived in rural areas. The City of Blue Lake is located in a rural portion of Humboldt County, and the City itself has a mix of roadways that share characteristics with both rural and urban areas. In 2019, there was a fatal motor vehicle crash that occurred along Blue Lake Boulevard.

Based on the most recent census data, the City of Blue Lake has a population of 1,277 but serves a much broader population, which exists on the outskirts of the City, including the communities of Glendale and Korb. The City often receives vehicle traffic from surrounding population hubs (Eureka, Arcata, McKinleyville, etc.) whose residents travel to Blue Lake for recreational or entertainment opportunities (Mad River access, Hatchery Ridge mountain bike [MTB] trails, etc.), Mad River Brewing Co., Blue Lake Parks and Recreation facilities, Dell'Arte Physical Theater, or the nearby Blue Lake Casino and Hotel. Multiple logging companies and gravel mining operations also use the City's roadways to export goods to other areas of the County, which, at times, leads to a challenging dynamic between commercial vehicles and other roadway users. Due to the complex, multi-use nature of the City's roadways, numerous issues concerning safe pedestrian and bicyclist travel have been identified by the City, along with local concerns pertaining to excessive speeds and impaired driving. This LRSP report aims to alleviate these concerns by providing a clear map to the creation of a safe, multimodal experience for all who travel within the City.

Methodology

The State of California is required by federal regulations to have a strategic highway safety plan (SHSP), whose intent is to use data driven analysis to coordinate statewide efforts aimed at reducing accident fatalities and serious injuries on public roadways. California recognizes the importance of local efforts to assist in achieving SHSP goals. The local road safety plan is viewed as the preferable framework through which local jurisdictions can identify and analyze road safety problems and recommend appropriate countermeasures to improve road safety. A community's preparation of an LRSP facilitates the development of local partnerships, prioritizes locations of concern, establishes a list of improvements, and ultimately contributes to the statewide plan.



The California Department of Transportation (Caltrans) administers the local highway safety improvement program (HSIP). Caltrans's goal for the HSIP program is to reduce fatalities and serious injuries on California roadways. This is achieved by awarding funding to qualified applicants for countermeasures aimed at roadway safety improvements. Caltrans announced that for the first time, HSIP Cycle 11 and on, will require an agency to have an adopted LRSP or its equivalent (systemic safety analysis report [SSAR] or vision zero action plan) to be considered eligible to receive funding (Caltrans, 2021).

The Federal Highway Administration's (FHWA) local road safety plan process and guidance was followed by the City of Blue Lake and SHN in the creation of this plan. Each step of the process is outlined in Figure 2.



Figure 2. The LRSP Development Process (Federal Highway Administration, 2021)

Standards and Guidelines

In developing the City of Blue Lake LRSP, the following standards and guidelines were followed:

- "Developing Safety Plans, A Manual for Local Rural Road Owners," Federal Highway Administration, 2012.
- 2018 American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets"
- 2020-2024 California's Strategic Highway Safety Plan (SHSP), "California Safe Roads: 2020-2024 Strategic Highway Safety Plan," Caltrans.
- "Local Roadway Safety, A Manual for California's Local Road Owners," Caltrans, Version 1.5, April 2020.
- "Local Road Safety Plan Do-It-Yourself," Federal Highway Administration, January 2021
- "Proven Safety Countermeasures Initiative," Federal Highway Administration, February 2022.



Current Improvement/Assessment Projects

The following section provides a summary background for prior projects and studies undertaken by the City to improve safety and access for commuters of all types.

Blue Lake Truck Route

The City of Blue Lake, with the assistance of SHN, initiated the Blue Lake Truck Route project to improve roadway safety along the primary transportation corridor within city limits, which includes Greenwood Road, Railroad Avenue, and Hatchery Road up to the Mad River Bridge. After conducting preliminary investigations into the existing route, a city council meeting was held in February of 2021, which included the implementation of a public survey. Once feedback provided by the public and city officials was processed, a conceptual layout of the improvements was generated. A conceptual layout can be seen in Appendix 1.

The project is divided into three phases for the purposes of funding:

1. Greenwood Road
2. Railroad Avenue
3. Hatchery Road

In October 2021, the Transportation Advisory Committee (TAC) approved funding through the State Transportation Improvement Program (STIP) for the Greenwood Road segment of the project. Planned improvements include roadway resurfacing and crosswalk improvements, all of which are meant to promote safer, more efficient pedestrian travel while alleviating congestion near Blue Lake Union Elementary School.

Recommendations to Improve Pedestrian & Bicycle Safety in City of Blue Lake

In June 2017, California Walks and University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC), at the invitation of the City of Blue Lake, facilitated a pedestrian and bicycle safety action-planning workshop. The workshop consisted of an overview of multidisciplinary approaches to improve pedestrian and bicycle safety, walk and bike-ability assessments along two key routes, and small group action-planning discussions to facilitate the development of community-prioritized recommendations to inform Blue Lake's active transportation efforts. This report can be accessed through the Community Pedestrian and Bicycle Safety Training (CPBST) Program geographic information system (GIS) map, through navigating to the Berkeley SafeTREC website and accessing the Community Pedestrian and Bicycle Safety Training Program page, or by contacting the City of Blue Lake directly.

This report identified improvement areas within the City and engaged the community to identify and assess those issues. Interested parties are encouraged to read the full report, which can be found at the City of Blue Lake. A summary of recommendations provided to the City include:

- Conduct a City-wide sidewalk and lighting audit.
- Develop and implement a bicycle network.
- Reduce and/or eliminate conflict zones near Greenwood Road and Blue Lake Boulevard.
- Organize a community clean-up program.
- Engage truck driving companies and truck drivers.
- Installing gateway treatments at City entry points.
- Establish a neighborhood speed watch program.



Blue Lake Rancheria Workshop

In October of 2019, California Walks and University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC), at the invitation of the City of the Blue Lake Rancheria Tribal Government, facilitated a CPBST. The CPBST planning process consisted of assembling a planning committee, reviewing and analyzing existing plans and data, conducting a CPBST site visit, conducting a CPBST workshop, and implementing CPBST actions. This report can be accessed using the CPBST Program GIS map, through navigating to the Berkeley SafeTREC website and accessing the Community Pedestrian and Bicycle Safety Training Program page, or by contacting the City of Blue Lake directly.

Interested parties are encouraged to read the full report, but a summary of recommendations provided to the Blue Lake Rancheria Tribe include:

- Community walks around the Rancheria and nearby communities
- A walking school bus, a supervised group of children walking to and from school together, for children who walk from the Rancheria to Blue Lake Elementary School"
- A pedestrian, bicyclist, and driver education safety campaign on the dangers and consequences of driving under the influence
- Actively trimming bushes in the Rancheria parking lot area that obscure visibility for pedestrians and drivers
- Evaluating the conversion of perpendicular parking stalls in the Rancheria parking lot to angled parking stalls

Hatchery Road Walkability Assessment

In February of 2018, Hatchery Road residents, Blue Lake residents, Redwood Community Action Agency (RCAA), County of Humboldt, and the City of Blue Lake collaborated on a walkability assessment along Hatchery Road. RCAA was contracted by the County of Humboldt for the community walk, observation, holding a workshop, producing a walkability assessment report, and assisting with community coordination with the County. Many recommendations for possible roadway improvements were suggested by RCAA. These were broken down into short-term, mid-term, and long-term infrastructure recommendations. The hatchery road walkability assessment is attached in Appendix 1.

Annie and Mary Rail Trail

The City of Blue Lake segment of the Annie and Mary Rail Trail is part of a larger project intended to connect the cities of Arcata and Blue Lake through the Arcata-Mad River rail corridor. The trail will eventually be the northern tip of the proposed Great Redwood Trail (GRT), a 320-mile-long trail stretching from Marin to Humboldt County.

The Blue Lake segment was implemented in 2021 as a Class 1, non-motorized, multi-use path providing pedestrians, bicyclists, and horseback riders a corridor through the City buffered from vehicular traffic along South Railroad Avenue. The project was funded through Caltrans' Active Transportation Program (ATP). The segment runs from H Street west through the heart of the City and terminates at Chartin Road. Since its implementation, pedestrian and bicyclist use has been high, and reports from citizens have been favorable.



Stakeholders

Development of Working Group

The City of Blue Lake, in partnership with SHN, created a LRSP Stakeholder Working Group whose knowledge regarding transportation, safety, or quality of life in the community were critical in the LRSP's development. This working group was tasked with assisting in the creation and confirmation of the vision, mission, and goals for the report as well as reviewing incident documentation and countermeasure proposals.

The Stakeholder Working Group is split into two groups, those that attended at least one of the working group meetings, and those that were consulted outside of the two official working group meetings:

Group 1 (attended at least one meeting):

- City of Blue Lake (Amanda Mager)
- SHN (Mike Foget, Jared Goebel, Justin Delgado)
- Blue Lake Union Elementary School District (Deann Waldvogel and Dan Orlandi)
- Humboldt County Supervisors (Steve Madrone and Mike Wilson)
- Green Diamond Resource Company (Gary Ryneerson)
- Friends of the Annie and Mary (Ingrid Kosek)
- Humboldt County (Tom Mattson)
- North Fork Lumber Company (Russell Dorvall)

Group 2 (consulted outside of two official meetings):

- Caltrans District 1 (Rachel Barry and Mark Mueller)
- Green Diamond Resource Company (Gary Ryneerson)
- North Fork Lumber Company (Russell Dorvall)
- SHN (Jared Goebel, Justin Delgado, Mike Foget, Jared O'Barr, and Garry Rees)
- City of Blue Lake (Amanda Mager and Glenn Bernald)
- Humboldt County (Tom Mattson)

Group 2 stakeholders were not consulted outside of set meetings due to special privileges, but rather out of desire or unique circumstance. Caltrans District One was consulted on multiple occasions to provide support clarifying the LRSP process and procedures, data collection deficiencies, guidance for setting speed limits, and funding timelines

Green Diamond Resource Company and North Fork Lumber Company met with the City of Blue Lake and SHN to express their shared concerns regarding hazards specifically related to their trucks, collaborating with the City to mobilize Humboldt County on issues, and being good community partners. SHN, the City of Blue Lake, and Humboldt County coordinated a site walk to look at issues relating to road safety along Blue Lake Boulevard. SHN and the City of Blue Lake staff corresponded on numerous occasions to exchange information, schedule meetings, etc.



Stakeholder Working Group Meetings

The City of Blue Lake and SHN hosted two meetings with the stakeholder working group. The first meeting was virtual and the second was in person; their dates and times were as follows:

- October 6, 2021- 4:00 p.m. to 5:30 p.m.
 - a) Introduced the LRSP concept, process, and purpose, outlined the unique difficulties facing Blue Lake and the LRSP, and articulated why this document is important.
- April 19, 2022- 5:30 p.m. to 7:00 p.m.
 - b) Presented vision, mission, goals, final data results, and analysis; covered possible countermeasures for identified locations; collected comments; and covered timeline for document publication.

Appendix 2 presents the two presentations given to the stakeholder working groups. Additionally, the stakeholder working group was invited to provide feedback and comments on the draft local road safety plan document before its finalized version was presented to the City of Blue Lake City Council.

A New Approach

Vision Zero

FHWA partners with other federal U.S. Department of Transportation branches, state departments of transportation (Caltrans), and external organizations to advance the departments goal of reducing transportation related fatalities and serious injuries. In recent years, FHWA has dramatically shifted its approach to traffic safety (Figure 3). In partnership with the Vision Zero Network, FHWA is departing from the status quo in two significant ways:

1. "Vision Zero recognizes that people will sometimes make mistakes, so the road system and related policies should be designed to ensure those inevitable mistakes do not result in severe injuries or fatalities. This means that system designers and policymakers are expected to improve the roadway environment, policies (such as speed management), and other related systems to lessen the severity of crashes." (Vision Zero Network, 2021)
2. "Vision Zero is a multidisciplinary approach, bringing together diverse and necessary stakeholders to address this complex problem. In the past, meaningful, cross-disciplinary collaboration among local traffic planners and engineers, policymakers, and public health professionals has not been the norm. Vision Zero acknowledges that many factors contribute to safe mobility -- including roadway design, speeds, behaviors, technology, and policies -- and sets clear goals to achieve the shared goal of zero fatalities and severe injuries." (Vision Zero Network, 2021)



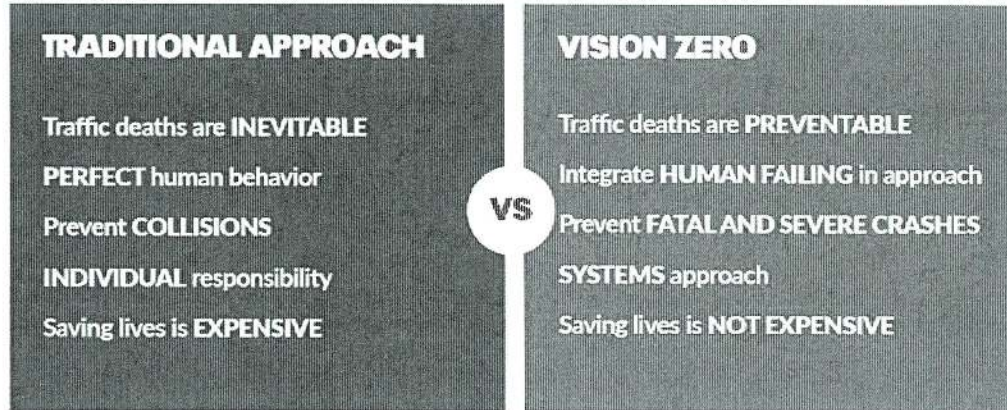


Figure 3. Traditional Approach vs. Vision Zero
(Vision Zero Network, 2021)

Safe System Approach

In an effort to achieve the goals established by Vision Zero, FHWA and its partner agencies developed the Safe System approach. The approach was founded on the idea that humans make mistakes, and that human anatomy limits our abilities to tolerate crash impacts. Six principles form the basis of the Safe System approach: deaths and serious injuries are unacceptable, humans make mistakes, humans are vulnerable, responsibility is shared, safety is proactive, and redundancy is crucial (Figure 4).



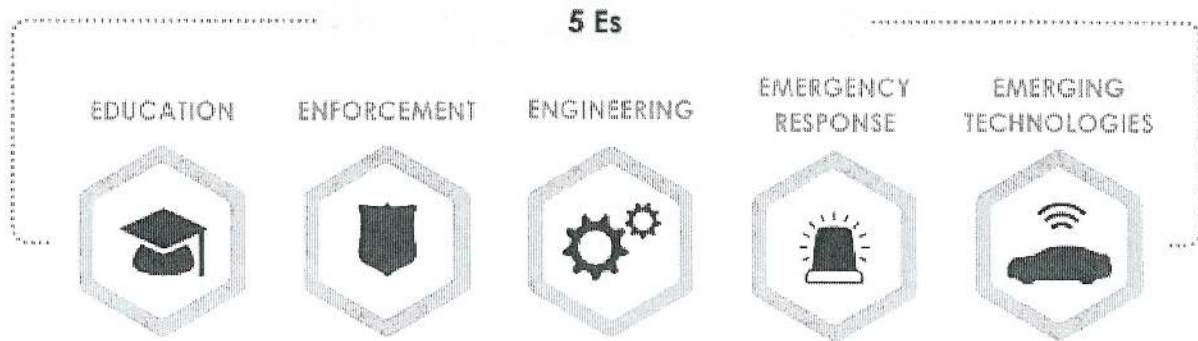
Figure 4. Safe System Approach
(Federal Highway Administration, 2022)



The Five Es

Improving safety on the streets of the City of Blue Lake is achieved through application of strategies intended to combat or prevent safety deficiencies. The State of California's 2020-2024 Strategic Highway Safety Plan lists five overarching strategies (Figure 5) aimed at improving road safety:

1. Education: Educate all road users on safe behaviors.
2. Enforcement: Enforce actions that reduce high-risk behavior.
3. Engineering: Apply effective and/or innovative countermeasures.
4. Emergency Response: Improve emergency response times and actions.
5. Emerging Technologies: Apply emerging technologies to roadway, vehicle, and user.



**Figure 5. The Five Es
(California Department of Transportation, 2020)**

Due to several factors including resources, size, and characteristics, the City of Blue Lake has focused countermeasure efforts on education, enforcement, engineering, and emergency response. This does not mean that emerging technology is ignored as a road safety strategy, rather it has been incorporated into the other four strategies where applicable.

Vision, Mission, and Goals

Vision Statement

A vision statement is an idealized future description of success. This phrase will serve as a trigger to the rest of the vision in the mind of everyone that reads it, Our Vision Statement is as follows:

- Ensure that users of all modes of transportation can safely travel within the City of Blue Lake.

Mission Statement

The mission is the doing component. A mission statement describes what an agency is going to do to achieve its vision. It should energize and focus the City of Blue Lake and its partners on something that everyone can work towards to achieve. Our mission statement is as follows:

- Eliminate traffic hazards through simple, safe, cost-effective methods, to improve the quality of life of transportation users within the City of Blue Lake.



Goals

Creating plan goals to supplement the vision and mission establishes areas of focus to work toward, and creates outputs and outcomes that are measurable.

- Eliminate all traffic fatalities by 2035.
- Reduce problematic pedestrian and vehicle interactions by 25 percent by 2030.
- Improve visibility and sightlines to reduce traffic incidents and near-misses.
- Reduce Impaired driving incidents by 50 percent by 2035.
- Improve partnership with Humboldt County on roads connecting to the City of Blue Lake.
- Collaborate with the school district to ensure safe routes to and from school.
- Work with the Humboldt County Sheriff's Department to foster effective patrols.
- Develop or promote a robust database to help identify areas of concern and the factors that contribute to dangerous travel.
- Improve the City's chances to get outside funding for road improvements and safer commutes.

Challenge Areas

The State of California has identified multiple challenge areas for the 2020-2024 SHSP to focus improvements on, with several listed as high priority. Figure 6 displays these areas of focus.

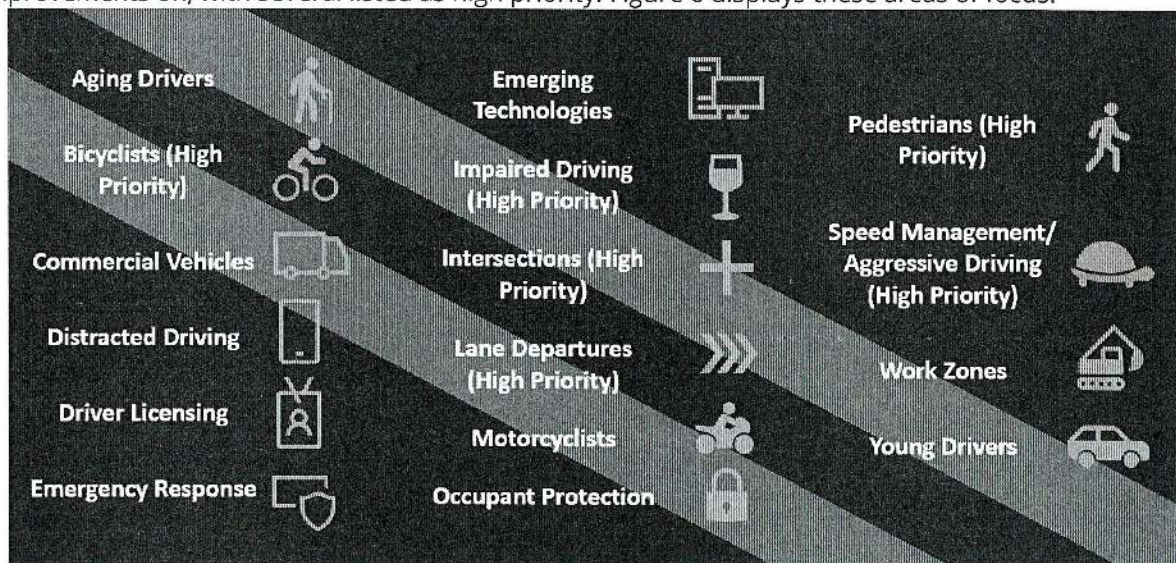


Figure 6. Challenge Areas Identified as Part of the State of California's 2020-2024 SHSP Meant to Prioritize Improvements

Of the State's priority challenge areas, the City of Blue Lake and its stakeholders have identified the following challenge areas to address during the LRSP process, several of which are rated as "high priority" by the State.

- Bicyclists
- Pedestrians
- Commercial Vehicles
- Impaired Driving
- Intersections
- Speed management/Aggressive Driving



Collision/Near Miss Analysis

Project Extent

The formation of a local road safety plan is dependent on data to provide insight into not only the locations and frequency of accidents, but also the causal factors that contribute to them. Identifying these elements helps prioritize the locations where improvements are most needed and assists in the selection of cost-effective countermeasures to mitigate risk.

To perform the data analysis, identification of the study's extents was required. The study area, which is displayed in Figure 7, includes Blue Lake Boulevard from the roundabout at Chartin Road and extends east to the intersection with Railroad Avenue. Notably, jurisdiction for Blue Lake Boulevard is shared between the City and County. At the southern end, the study's extents terminate on Hatchery Road at the bridge crossing Mad River and extends west to follow the boundary between the City and the adjacent Rancheria at Chartin Road.

Data Collection

To determine areas of concern and the factors leading to hazardous conditions, there are several potential data sources that can be examined in the LRSP process. These include public databases populated using law enforcement reports as well as the direct sourcing of additional law enforcement records such as traffic violations. Public surveys and Public Works Department records can also be used to provide further insight into community concerns and the factors that may contribute to collisions and other hazardous conditions.

Databases and Public Entity Records

Three databases were searched during the analysis phase of this project. These included:

1. Statewide Integrated Traffic Records System (SWITRS)
2. Transportation Injury Mapping System (TIMS; UC Berkeley, 2021)
3. Street Stories

Both SWITRS and TIMS use law enforcement records. By law, California law enforcement agencies are required to report incidents to the California Highway Patrol (CHP), a policy that began to be rolled out in 2018; CHP then processes and uploads this data to SWITRS (NASCIO, 2019). The TIMS database subsequently obtains these records and provides maps and statistical tools for local agencies to examine and process this data in a meaningful way.

Unlike SWITRS and TIMS, Street Stories is a tool that permits non-law enforcement entities and individuals to report the location of an incident or near miss and leave comments related to the event.

A search of the three databases listed above for 2015-2020 provided only three collisions within the project extents. All three collisions were located along Blue Lake Boulevard, for which the City shares jurisdiction with Humboldt County. Incident reports were not located on SWITRS or TIMS for incidents within the City limits. Although three incidents were noted in Street Stories, all of these were located outside of the study's extents on Blue Lake Rancheria land.



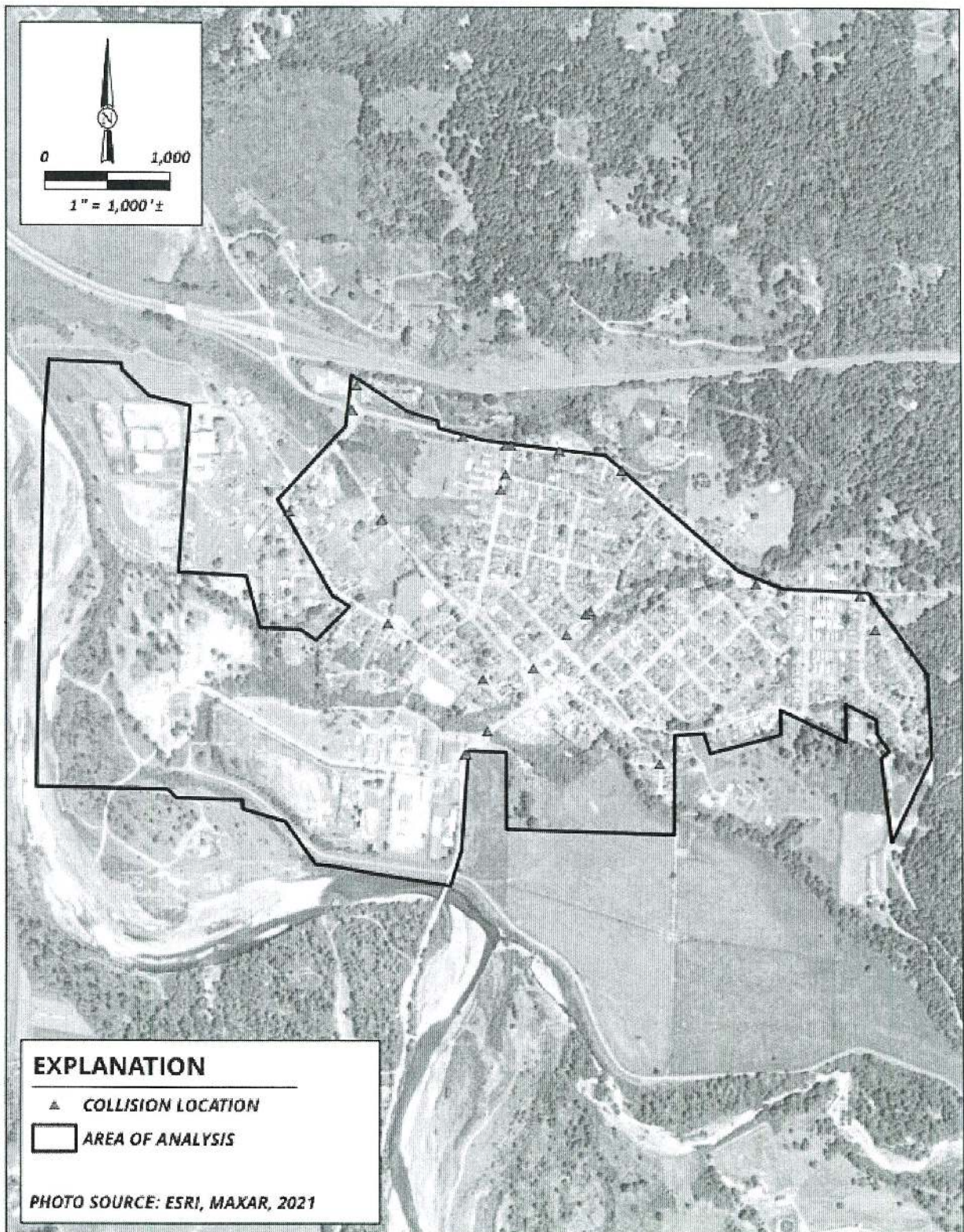


Figure 7. Extent of Analysis



After processing the initial data, correspondence with the City's Public Works Department and the Humboldt County Sheriff's Office, which contracts with the City to provide law enforcement, indicated that several other collisions and traffic-related property damage had occurred within city limits. Thus, additional efforts were undertaken to derive data from other known collisions.

Correspondence with the Humboldt County Sheriff's Office resulted in a list of collisions that occurred between 2018-2021, including dates and locations. Public Works staff were also able to provide known collisions and property damage from their records over the past five years. These included vehicular damage to signs and fire hydrants, as well as other known collisions missing from law enforcement records.

Public Surveys

In an effort to engage the public, the City of Blue Lake and SHN created two public surveys (Appendix 3), one for accidents, and one for near misses. These surveys were posted on the City's Facebook page, website, and local newspaper (Mad River Union), and were distributed at the first stakeholder meeting. These surveys were open for approximately two months. Additionally, flyers advertising these surveys were distributed using email to interested parties and hung in city buildings (Appendix 3).

The public survey asked respondents to report incidents and near misses between 2015-2020. Users were able to provide location, approximate dates, and the factors they felt led to unsafe conditions including driver actions, weather, and suggestions as to how to make improvements.

After the closing of the survey, one additional incident was reported along with 15 near misses, many of which were reported to occur routinely. Notably, some responses to these surveys were excluded from this report because the locations of reports were not within study's extents.

Collisions

The following sections provide a summary of the data analysis performed on known collisions. Because certain funding sources require data to be sourced from law enforcement records, two analyses were performed—an analysis on law enforcement records exclusively, and an analysis of the total dataset, which included public works and survey information. Due to the limited information provided through these records, care was taken to avoid duplicate records by excluding incidents where the potential for duplication existed. Figure 8 (on the next page) provides a heat map indicating the most problematic areas highlighted during the analysis. Numbers shown in white throughout the map indicate the frequency of incidents reported at a specific location.

Law Enforcement Records Analysis

The following section summarizes the law enforcement records used in the LRSP process and is broken down by source. Original documentation can be found in Appendix 4. As stated in the preceding section, no collisions within the city limits were identified in the SWITRS database.



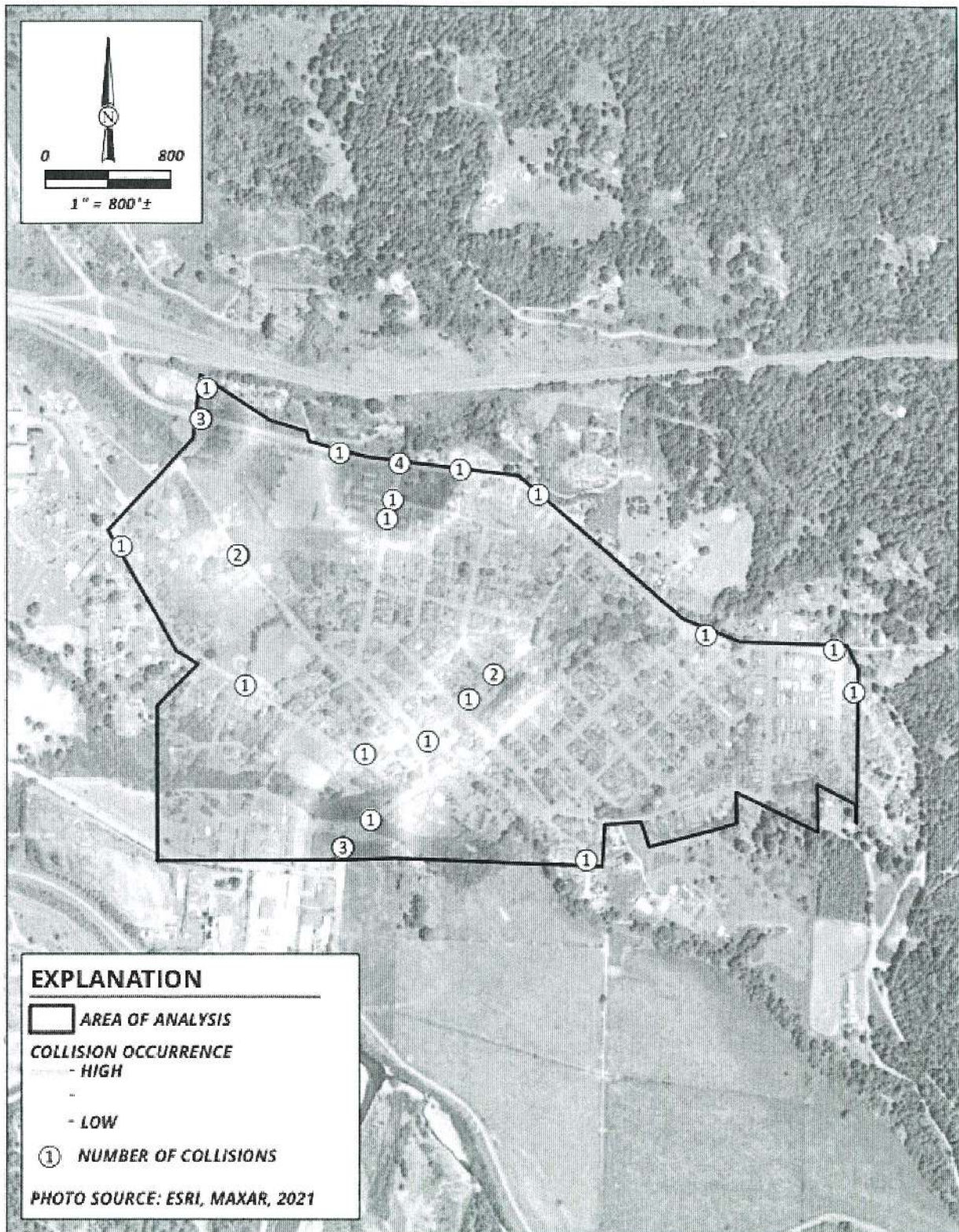


Figure 8. Collision Analysis



TIMS

Three incidents were reported on the Transportation Injury Mapping System (TIMS) database when queried between 2015-2020, the most recent 5-year dataset available. A summary of relevant details from each incident is provided in Table 1.

**Table 1. TIMS^a Database Records 2015-2020 Within The Project Extent
City of Blue Lake LRSP, Blue Lake, CA**

TIMS ID	Date	Intersection	Proximity	Primary Collision Factor	Notes
90019976	9/13/2015	BL Boulevard and Chartin Road	181 feet East	Improper Turning	Proceeding straight; Minor Injury
90090251	1/3/2016	BL Boulevard and Greenwood Road	21 feet West	DUI ^b	Making left turn; Possible Injury
91062620	5/1/2019	BI Boulevard and Davis Street	50 feet East	DUI	Ran off road; Fatal; No alcohol involved

^a TIMS: Transportation Injury Mapping System

^b DUI: driving under the influence

Humboldt County Sherriffs Office

The Humboldt County Sheriff's Office provided a list of traffic incidents occurring between 2018 and 2021. Although locations from each incident were provided, the proximity to the intersection listed could not be derived from the details provided. Thus, incidents located at intersections listed in Table 2 should be assumed to occur at or near the intersection listed, but exact location is indeterminable.

**Table 2. HCSO^a Records 2018-2021 within the Project Extent
City of Blue Lake LRSP, Blue Lake, CA**

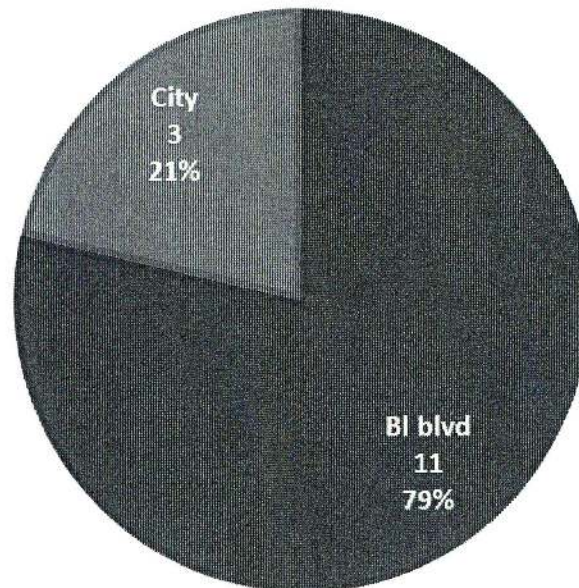
ID	Date	Location
1810200058	10/20/2018	311 G Street
1810290012	10/29/2018	171 Gely Street
1812230057	12/23/2018	Blue Lake Boulevard and Chartin Way
1904070018	4/7/2019	Blue Lake Boulevard and Buckley Road
1904210018	4/21/2019	Blue Lake Boulevard and Greenwood Road
2001090004	1/9/2020	Blue Lake Boulevard and Greenwood Road
2001090005	1/9/2020	Blue Lake Boulevard and Greenwood Road
2010070063	10/7/2020	295 Blue Lake Boulevard
2103150037	3/15/2021	631 Greenwood Road
2105180188	12/23/2018	Blue Lake Boulevard and Chartin Road
2107110005	7/11/2021	Blue Lake Boulevard Roundabout

^a HCSO: Humboldt County Sheriff's Office



Data was divided into three regions:

- 1) incidents occurring along Blue Lake Boulevard,
- 2) incidents occurring along Hatchery Road, and
- 3) incidents occurring throughout the remaining areas of the City excluding Blue Lake Boulevard and Hatchery Road. Figure 9 summarizes the results of the analysis performed on law enforcement data provided to SHN.



**Figure 9. Region of Collisions Provided in Law Enforcement Records
No Incidents in the Hatchery Road Region Were Located in Law Enforcement Records**

Other Data Sources

Public Works

Several incidents were also noted by the City of Blue Lake Public Works Department. These included known traffic incidents as well as multiple instances of property damage, including signage and damage to fire hydrants. Table 3 summarizes the information provided for analysis. The source document provided by Public Works can be found in Appendix 5.

**Table 3. Public Works Incident Reports Within the Project Extent
City of Blue Lake LRSP, Blue Lake, CA**

Location	Type of Incident
Hatchery Road	Sign Hit
Hatchery Road	Sign Hit
Railroad and G Street	Sign Hit
G Street (near 2 nd Avenue)	Sign Hit
Greenwood Road and C Street	Sign Hit
Chartin Road	Fire Hydrant Hit
Chartin Way	Fire Hydrant Hit
Redwood Avenue and Piersall Avenue	Fire Hydrant Hit



**Table 3. Public Works Incident Reports Within the Project Extent
City of Blue Lake LRSP, Blue Lake, CA**

Location	Type of Incident
Hatchery Road	Fire Hydrant Hit
Hatchery Road	Fire Hydrant Hit
S. Railroad Ave	Known Collision
S. Railroad Ave	Known Collision
Blue Lake Boulevard near "I" Street	Known Collision
Chartin Road	Known Collision
Park Avenue and Acacia Drive	Known Collision

Public Survey

Only one incident was noted through the use of the public surveys. This incident occurred on G Street near the post office (between 1st and 2nd Avenues) and resulted in the death of a pet.

Total Collision Dataset

Figure 10 provides a comparison of law enforcement records with the entire dataset, including those sourced from law enforcement, public databases, public works records, and public surveys. Notably, several collisions highlighted by other sources are missing from law enforcement records, which could lead to a misappropriation of resources if not reconciled.

Collision Outcomes

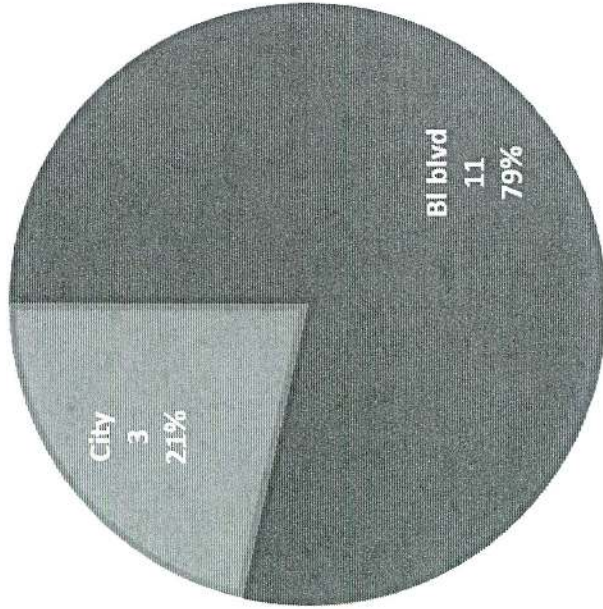
Collision outcomes are important when seeking funding for road improvements because they help establish the justification for proposed projects. Based on the American Association of State Highway and Transportation Officials (AASHTO) "2010 Highway Safety Manual," outcomes are categorized as follows:

- Fatal
- Disabling Injury
- Evident Injury
- Fatal/Injury
- Possible Injury
- Property Damage Only (PDO)

For each category, associated costs are applied to the number of incidents to determine a cost benefit relationship. However, from the results of this data analysis, several sources of collision data did not contain information regarding the outcomes of the incidents listed. Thus, for 50% of the collisions, no known outcome could be attributed to the incident, rendering it impossible to establish the BCR required by some funding agencies.



COLLISIONS- LAW ENFORCEMENT



COLLISIONS - ALL SOURCES

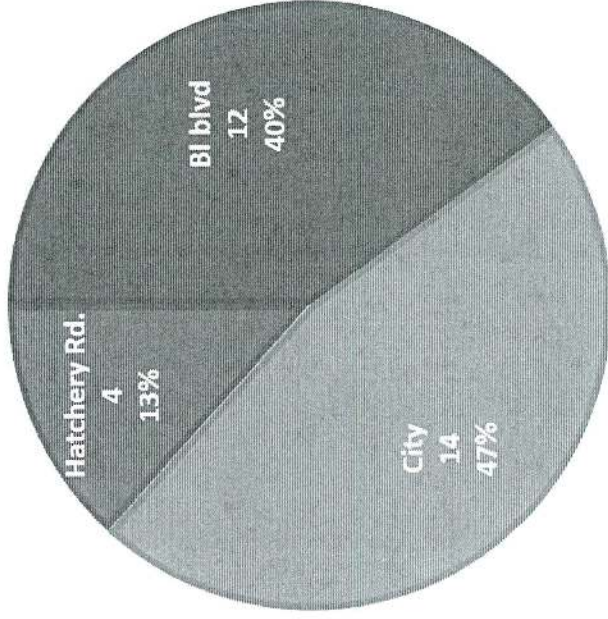


Figure 10. Comparison of Collision Data Analysis from law Enforcement Records (Left) and the Total Dataset (Right), which Includes Law Enforcement, Public Works, and Survey Data



Although incidents reported by the Public Works Department may have resulted in injuries, where data provided by the department identified signage or fire hydrants damage, property damage was recorded as an outcome. Figure 11 summarizes the findings.

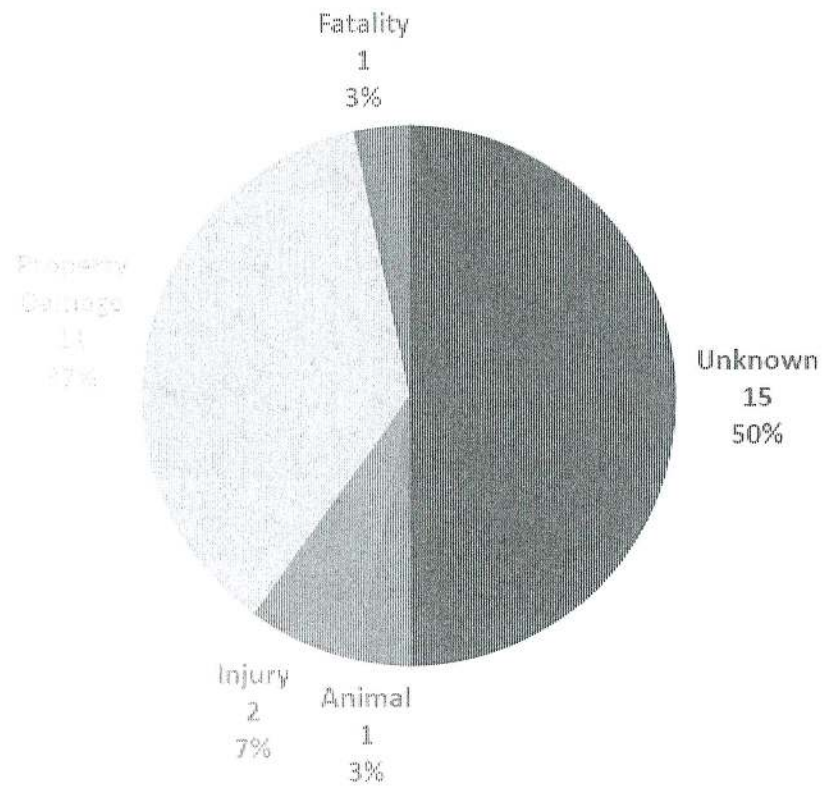


Figure 11. Collision Outcomes Including All Data Sources Used in the LRSP Process



Near Misses Survey Results

The majority of reports regarding near misses occurred along Blue Lake Boulevard. A summary of the survey results can be found in Appendix 6. Figure 12 provides a breakdown of the near misses reports by region. It should be noted that although pet fatalities do not have an associated cost based on the Caltrans "Highway Design Manual," this outcome was reflected in Figure 12.

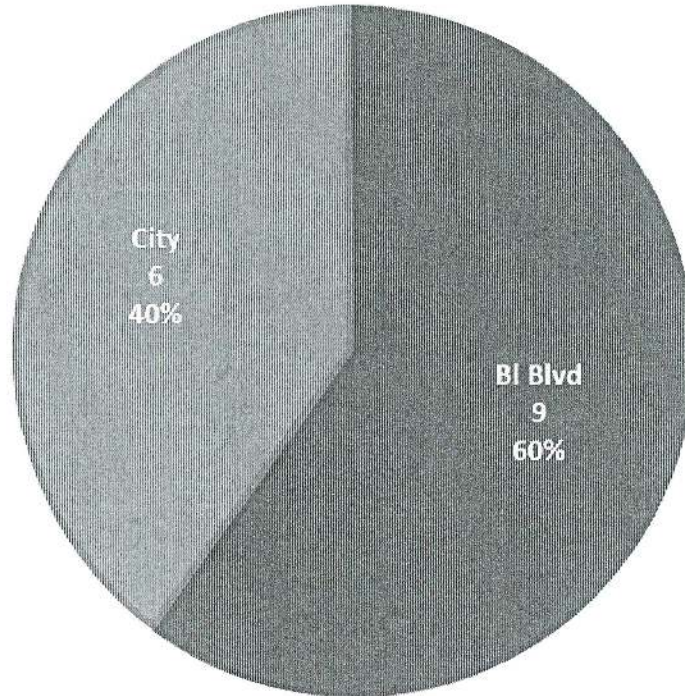


Figure 12. A Summary of Public Survey Information Pertaining to Near Misses Sourced During the LSRP Process



Figure 13 illustrates the frequency of near miss reports at specific locations throughout the project extent. The most frequently reported near misses occurred at two intersections along Blue Lake Boulevard, namely, Greenwood Road and the Acacia Drive/Buckley Road intersection. In both of these cases, issues were noted by respondents as occurring on a routine basis. For other parts of the City, complaints were reported in the area of the safe routes to school passage and along Chartin Road, where some recent improvements have been made, including modifying traffic flow from two-way to one-way, and the addition of speed tables and striping.

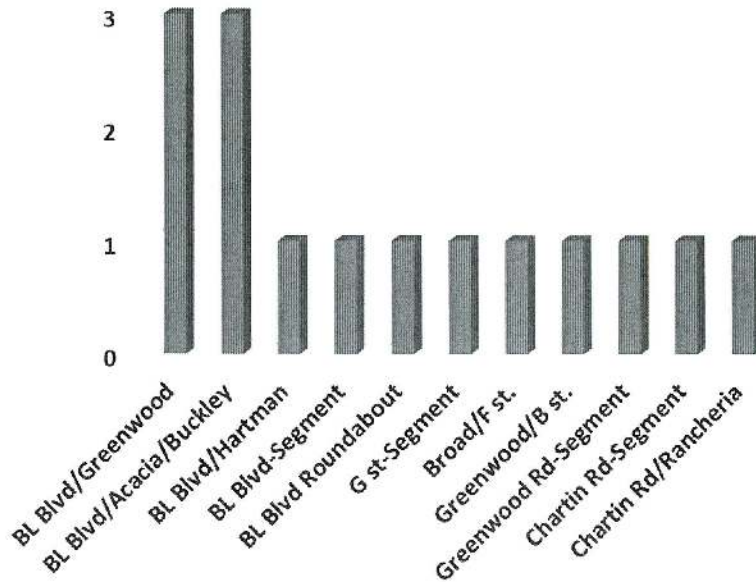


Figure 13. A Summary of Public Survey Near Miss Locations Sourced During the LSRP Process

Causal Factors

In addition to lacking collision outcomes for many of the data considered in this analysis, causal factors were also excluded from the collision reports in many cases, with the exception of data provided through TIMS. Thus, the factors provided in public surveys were used to further elucidate potential reasons incidents and near misses may be occurring.

Notably, in some cases the causal factors selected by survey respondents did not match the formal definition of the violation based on the description provided in the comments section of the survey. In those cases, staff adjusted data to reflect compliance with formal definitions.

Along Blue Lake Boulevard, unsafe speeds and poor visibility were the factors most commonly mentioned in the surveys. Impaired driving (DUI) and improper turning were also frequently noted in the data. Many of the additional factors including impeding traffic, vehicle right-of-way, and improper passing, which includes entering the opposing lane to pass, were related to congestion during school drop-off and pick-up times.

